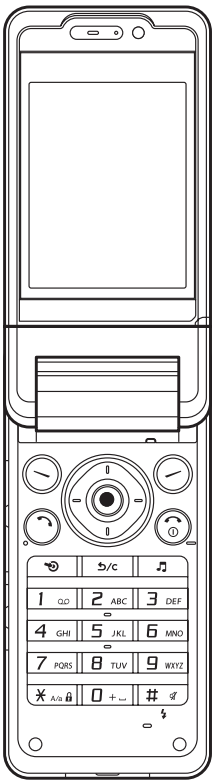
SHARP SERVICE MANUAL

No. S8524JNJ500//

3G(UMTS)/GSM/GPRS PHONE

MODEL 903SH



INTERNAL MODEL NAME	SELECTION CODE	DESTINATION: COLOUR	INTERNAL MODEL NAME	SELECTION CODE	DESTINATION: COLOUR
JNJ500A	A	Australia	JNJ500P	P	Portugal
JNJ500B	B	Hungary	JNJ500R	R	Ireland
JNJ500C	C	Switzerland	JNJ500S	S	Spain
JNJ500D	D	Greece	JNJ500T	T	Italy
JNJ500E	E	U.K.	JNJ500U	U	Belgium
JNJ500F	F	France	JNJ500W	W	Sweden
JNJ500G	G	Germany	JNJ500X	X	South Africa
JNJ500H	H	Netherlands	JNJ500Z	Z	New Zealand
JNJ500K	K	Austria			

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified should be used.

- Caution
  Risk of explosion if battery is replaced by an incorrect type, dispose of used batteries according to the instruction.

CONTENTS

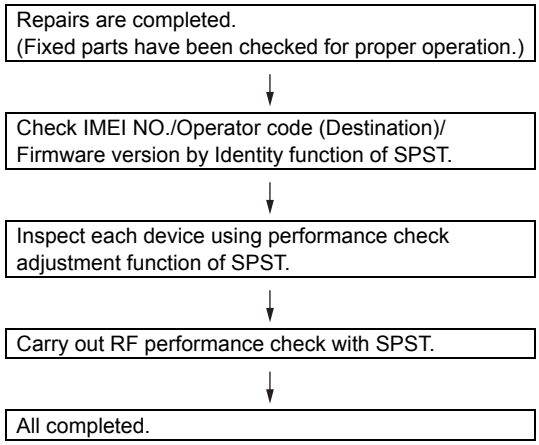
Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

SERVICING CONCERNS

1. When requested, back-up user's handset data using SPST (SHARP Programme Support Tool). Otherwise, before servicing, warn the user that data in the memory may be lost during repairs.
2. Upgrade the firmware to the latest version using SPST before returning the handset to the customer.
3. After repairs, inspect the handset (phone) according to the following flowchart.



4. When storing or transporting a PWB, put it into a conductive bag or wrap it in aluminum foil. (C-MOS IC may be damaged by electrostatic charges.)
5. Do not leave fingerprints, etc. on ornamental parts including a cabinet, especially clear windows for main and external displays. Wear fingerstalls to avoid this.
   Also, ensure not to leave fingerprints on the surface of main and external display panels.
6. To prevent oxidation which causes connection problems, do not touch any terminals on the electric board, microphone, vibrator, earpiece and speaker.
   When handling these parts, wear fingerstalls. Should you touch these parts, clean them with a soft dry cloth.
   Always wear fingerstalls when handling a shield case on the electric board. Otherwise oxidation may occur causing handset performance deterioration.
7. The FPC is a precision device. Handle it carefully to prevent any damages.
8. Do not expose the moisture sensor to liquids.
   If the sheet gets wet, red ink runs. In this case, replace the sheet with a new one.
   Be careful about your perspiration.
9. Before you disassemble or reassemble handset, make sure to remove the Li-Ion battery.
10. Be sufficiently careful with static electricity of integrated circuits and other circuits. Wear static electricity prevention bands whilst servicing.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

① Employing lead-free solder

This model employs lead-free solder.
This is indicated by the “LF” symbol printed on the PWB and in the service manual.
The suffix letter indicates the alloy type of the solder.

Example:

Indicates lead-free solder of tin, silver and copper.

② Using lead-free solder

When repairing a PWB with the “LF” symbol, only lead-free solder should be used. (Using normal tin/lead alloy solder may result in cold soldered joints and damage to printed patterns.)
As the melting point of lead-free solder is approximately 40ºC higher than tin/lead alloy solder, it is recommended that a dedicated bit is used, and that the iron temperature is adjusted accordingly.

③ Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is higher and has poorer wettability (flow), to prevent damage to the land of the PWB, extreme care should be taken not to leave the bit in contact with the PWB for an extended period of time. Remove the bit as soon as a good flow is achieved.
The high content of tin in lead free solder will cause premature corrosion of the bit.
To reduce wear on the bit, reduce the temperature or turn off the iron when it is not required.
Leaving different types of solder on the bit will cause contamination of the different alloys, which will alter their characteristics, making good soldering more difficult.
It will be necessary to clean and replace bits more often when using lead-free solder. To reduce bit wear, care should be taken to clean the bit thoroughly after each use.

CHAPTER 1. GENERAL DESCRIPTION

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

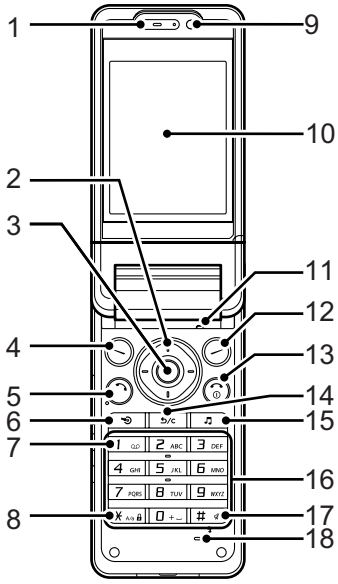
[1] Specifications

General:	Quad - band (W-CDMA/GSM 900 MHz/ DCS 1800 MHz/PCS 1900MHz) GPRS-enabled WAP, MMS, SMS
Dimensions (folded, excluding the aerial) (W x H x D):	50.0 x 108.7 x 28.5 mm
Weight:	148 g
Battery operating temperature:	0°C - 40°C
Charging temperature:	5°C - 35°C
Main display:	Display dimensions: 2.41 inch Resolution: 240 x 320 pixels LCD display: TFT 262,144 colours with back-light LCD back light: LED back light white colour LEDs
Camera:	CCD 3M pixels built-in camera Zoom: 2x optical zoom + AF Digital max x40 Lens: (Wide) F2.8, f = 5.0 mm (Tele) F4.1, f = 9.7 mm
Sub Camera:	CMOS 110K pixels built-in camera Lens: F2.8, f = 1.7 mm
Sound:	64-polyphonic ring melodies Stereo Speakers
Mobile light:	3 colours (RGB) + White
External DC supply voltage:	5.2 V
Battery:	3.7 V, 900 mAh, Li-Ion
Standby time:	Up to 300 hours (3G mode) Up to 290 hours (GSM mode)
Talk time:	Up to 150 minutes (3G mode)) Up to 240 minutes (GSM mode)
Others:	Side key Infrared port 1.2 L/P (maximum distance 20 cm) Connector for AC charger and data cable

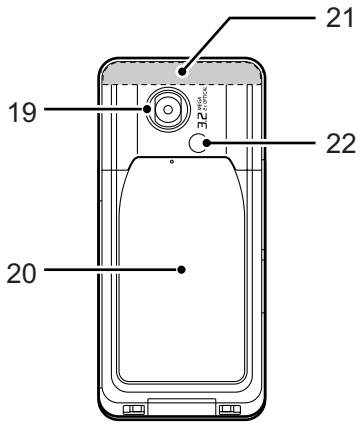
Battery running time depends on the battery and SIM card as well as the network conditions and usage.

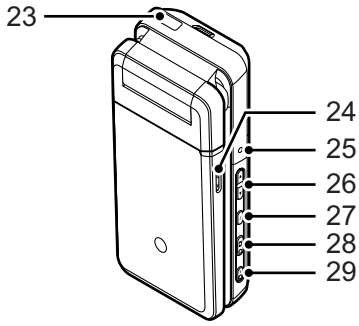
Specifications for this model are subject to change without prior notice.

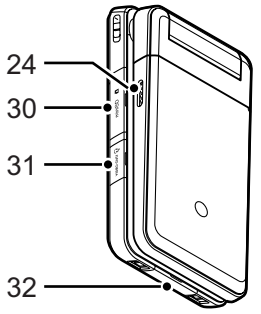
[2] Names of parts



1. **Earpiece**
2. **Navigation Keys (Arrow Keys):**
   - Moves cursor to highlight a menu item, etc.
   - **Up/Down arrow keys:** Displays Contacts List entries in standby.
   - **Left arrow key:** Displays the message inbox in standby.
   - **Right arrow key:** Displays the monthly or weekly calendar in standby.
3. **Centre Key:** Displays Main menu in standby, and executes functions.
4. **Left Soft Key:** Executes the function in the lower left of the screen. Displays Messaging menu in standby.
5. **Send/Redial Key:** Makes or accepts calls, displays the call logs in standby.
6. **Shortcut Key:** Opens the shortcut menu to access the desired applications.
7. **Voicemail Key:** Press and hold to connect to the Voicemail centre (depending on the SIM card).
8. *** /Shift Key:** Switches character case between four modes: Abc, ABC, 123 and abc on the text entry screen. Press in standby to enter P, ?, – or *. Press and hold in standby to lock the keypad.
9. **Sub Camera (Internal Camera)**
10. **Main Display**
11. **Microphone (for the viewer position of the display)**
12. **Right Soft Key:** Executes the function in the lower right of the screen. Accesses “Vodafone live!” by opening the browser in standby.
13. **End/Power Key:** Ends a call and turns power on/off.
14. **Clear/Back Key:** Clears the characters to the left of the cursor, returns to the previous screen, etc.
15. **Music Key:** Displays Music menu in standby.
16. **Keypad**
17. **#/Silent Key:** Displays symbol screen on the text entry screen. Press and hold to switch languages on the text entry screen. Turns the flash/auxiliary light on or off in camera mode. Press and hold in standby to switch Profiles settings between the mode most recently activated and Silent mode.
18. **Microphone**







19. Camera (External Camera)

20. Battery Cover

21. Built-in Aerial: Warning: Do not cover the top of the phone with your hand when in use as this may interfere with the performance of the built-in aerial.

22. Mobile Light: Used as a flash or an auxiliary light in camera mode.

23. Infrared Port: Sends and receives data via infrared.

24. Stereo Speakers

25. Small Light: Used for the battery charge indicator, Event Light and Status Light.

26. Side Keys (/): (These two keys work in reverse with the viewer position of the display.) Moves the highlight up or down. Press in standby or during a call to increase or decrease the earpiece volume.

27. Menu Key: Executes the function in the lower left of the screen in the viewer position of the display.

28. Camera Key: Displays the Main menu when pressed in standby, then executes a highlighted function in the viewer position of the display. Press and hold to activate the camera. Press during an incoming call alert to answer the call in the viewer position of the display.

29. Cancel Key: Executes the function in the lower right of the screen in the viewer position of the display. Press and hold in standby to turn the mobile light on. You can change the light colours by pressing or when the mobile light is on. Press and hold to reject an incoming call. Press during an incoming call alert to send a busy tone to the caller in the viewer position of the display. Press to end the call in the viewer position of the display.

30. Memory Card Slot Cover

31. VIDEO OUT/Stereo Handsfree Connector

32. External Connector: Used to connect either the charger or a USB data cable.

[3] List of Menu Functions

Menu No./ Main Menu	Menu No./ Sub Menu1
1 Entertainment	1 Games & Applications 2 TV & Video
2 Vodafone live!	1 Vodafone live! 2 Enter URL 3 Bookmarks 4 Alert Inbox 5 My Saved Page 6 Access History 7 Browser Settings 8 What's New? 9 Music* 10 Games 11 Ringtones 12 Pictures 13 News 14 Sport
3 Music	1 Last Played Music/Currently Playing 2 My Music 3 Browse Music Store*
4 Messaging	1 Create Message 2 Inbox 3 Drafts 4 Sent 5 Outbox 6 Vodafone Messenger 7 Templates 8 Media Album* 9 Messaging Settings 10 Memory Status
5 Camera	
6 My Items	1 Pictures 2 Sounds & Ringtones 3 Games & Applications 4 Videos 5 Text Templates 6 Other Documents 7 Memory Status
7 Organiser & Tools	1 Calendar 2 Alarms 3 Calculator 4 Voice Recorder 5 Scanner 6 E-Book 7 Stopwatch 8 Tasks 9 World Clock 10 Countdown Timer 11 Expenses Memo 12 Phone Help

* This menu is not available with some service providers.

Menu No./ Main Menu	Menu No./ Sub Menu1
8 Contacts	1 Contacts List 2 Call Voicemail 3 Manage Category 4 Speed Dial List 5 My Contact Details 6 Contact Groups 7 Synchronise 8 Settings 9 Manage Contacts
9 Call Log	1 All Calls 2 Dialled Numbers 3 Missed Calls 4 Received Calls 5 Call Timers 6 Data Counter 7 Call Costs**
10 Connectivity	1 Bluetooth 2 Infrared 3 Network Settings 4 Flight Mode 5 Internet Settings 6 Memory Card
11 SIM Application	
12 Settings	1 Profiles 2 Display Settings 3 Sound Settings 4 Date & Time 5 Language 6 Call Settings 7 Video Call Settings 8 Security 9 Master Reset

** Depends on SIM card contents.

Note for the menu indications for the Postcard, Media Album and other services

- The menu indications for the Postcard, Media Album and other services vary in the United Kingdom and Ireland as follows:

Current indications in the user guide	Indications in United Kingdom	Indications in Ireland
"Postcard"	"live! Postcard"	(Not available)
"Additional Information"	"Additional information"	"Additional Information"
"Street & Number"	"Address"	"Street & Number"
"State/Province"	"County"	"State/Province"
"Postal Code"	"Post Code"	"Postal Code"
"Media Album"	"live! Studio"	"Picture Album"
"To Media Album"	"To live! Studio"	"To Picture Album"
"What's New?"	"New"	"New"

[4] Optional Accessories

- Lithium-Ion Battery (XN-1BT70)
- Cigarette Lighter Charger (XN-1CL30)
- USB Data Cable (XN-1DC30)
- AC Charger (XN-1QC30, XN-1QC31, XN-1QC32)
- External Antenna Cable (XN-1AT90)
- Audio Remote-Controller (XN-1AR90)
- Car Holder (XN-1CH91)
- Desktop Holder (XN-1DH91)
- Stereo Headset (XN-1HS90)
- Handsfree Microphone Unit (XN-1HU90)
- Video Cable (XN-1VC90)

The above accessories may not be available in all regions.
For details, please contact your dealer.

CHAPTER 2. ADJUSTMENTS, PERFORMANCE CHECK, AND FIRMWARE UPGRADE

[1] SHARP Programme Support Tool (SPST)

SPST (SHARP Programme Support Tool) allows you to adjust settings, conduct performance checks, and upgrade the firmware.

1. Installation/uninstallation

- Do not change the installation structures (see "**3. SPST tools**").
- SPST cannot be installed on a PC if Windows Installer is not supported.
- The SPST installer does not include MFC that is required to run SPST. If not already installed, install MFC (DLLs including MFC42.DLL).

1.1. System requirements

The following are required for installation.

- OS: Windows 2000 Professional (SP3 or SP4) or Windows XP Home/Professional (SP1) *1
- PC: IBM/PC compatible *2
- HDD: 200 MB available space (or more)
- RAM: 256 MB or more (512 MB recommended)
- COM port: Windows compatible serial port
- Display resolution:

  XGA or higher

  Basically use the default settings in Display Properties, however, small system font size is recommended. *3

  (Display Properties → Settings → Advanced → General → Display → Font size)
- Recommended devices for serial connection between a PC and handsets (phones): *4, *5

  The PC's serial port

  PCI serial expansion card

  USB-UART serial conversion cable *6

Notes

*1: SPST does not run on Windows 95, 98, 98 SE, and Me. The behaviour is not guaranteed on Windows XP Media Center Edition/Tablet Edition and in the Virtual PC environment. Also, its compatibility with upcoming operating systems and service packs is not guaranteed.

*2: A brand name product is recommended. Minimum requirements: 1 GHz Pentium III processor and 256 MB of RAM, and compatibility with USB 2.0 specification for use of USB-UART serial conversion cables.

*3: Depending on the font size, the screen layout may change, or some characters or other portions may not be displayed on a XGA screen.

*4: Use only the specified PCI serial expansion card and USB-UART cables. Currently, no specific PCMCIA card is recommended.

*5: Transfer rate is 115 Kbps when using a PC's standard serial port. When using a PCI/PCMCIA card or USB-UART conversion cable, its maximum transfer rate (115 Kbps, 230 Kbps or 460 Kbps) can be selected.

*6: Use cables of a single manufacturer.

[Important] Restrictions for stable operation of Windows/PC (IBM/PC compatible)

When using multiple USB-UART conversion cables, do not connect more than 2 cables (IO-DATA) or 3 cables (NEC) to a USB-HUB/BUS, and do not change the connection of cables.
Do not connect other USB devices to the PC.
Whilst the PC is in use, avoid connecting/disconnecting cables and USB devices for stable serial communication for Windows/driver.

*** SPST may run in other environments, however, the system may become unstable.**

1.2. Procedure

1.2.1 Installing SPST

Execute the "SPST-903SH703SH-V**-Type*.msi".

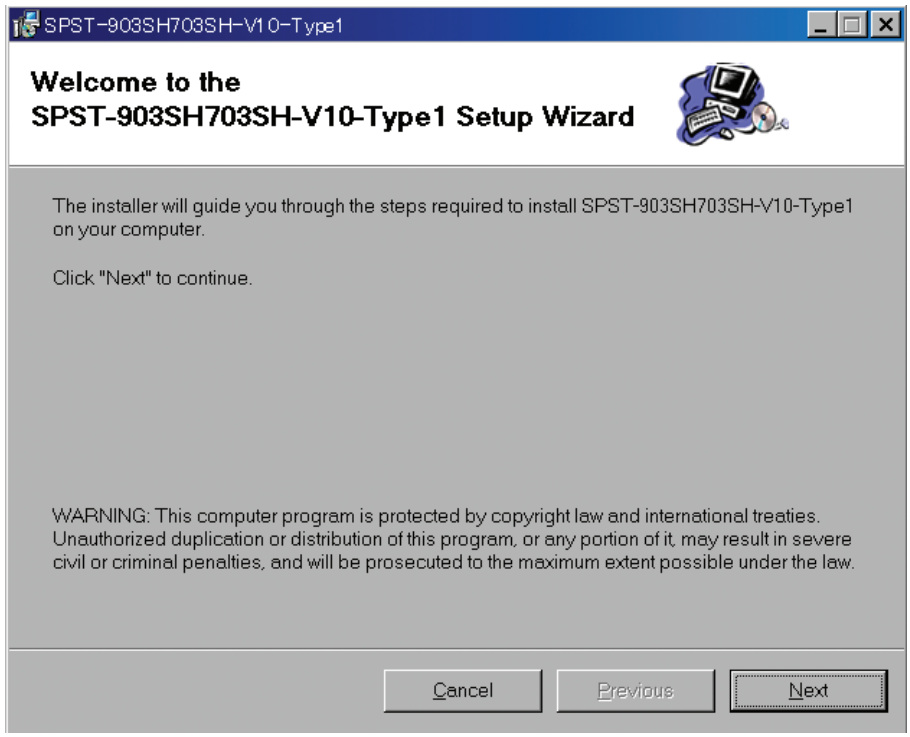
[Note]

When an older version of SPST has already been installed, uninstall it first as follows:
In the Control Panel, click Add/Remove Programs and remove the SPST-903SH703SH-V**-Type*.

* The SPST installer named differently with every release according to the format below.

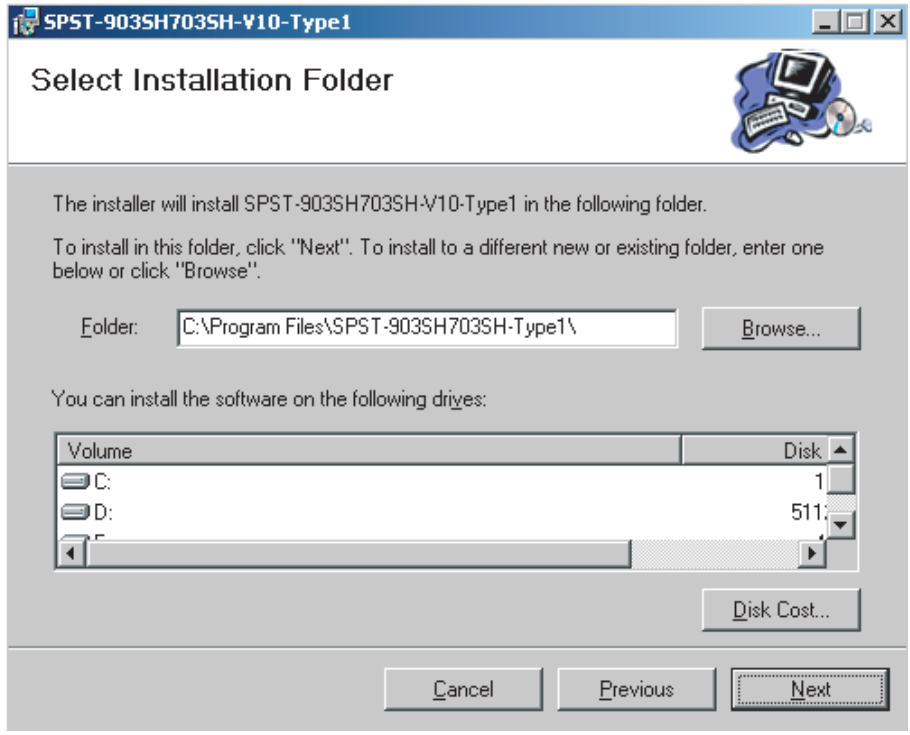
SPST-903SH703SH-V**-Type*.msi (**: version number, *: integer starting at 1)

1) Setup screen



- Click Next to proceed.
- To cancel the installation, click Cancel.

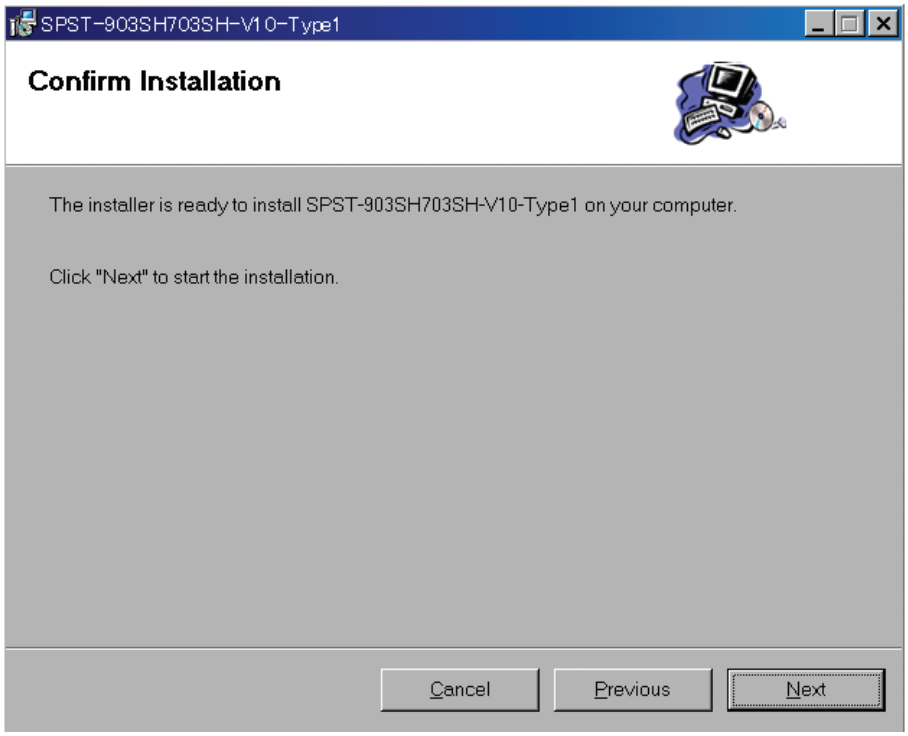
2) Location selection screen



- Click Next to proceed.
- To cancel the installation, click Cancel.

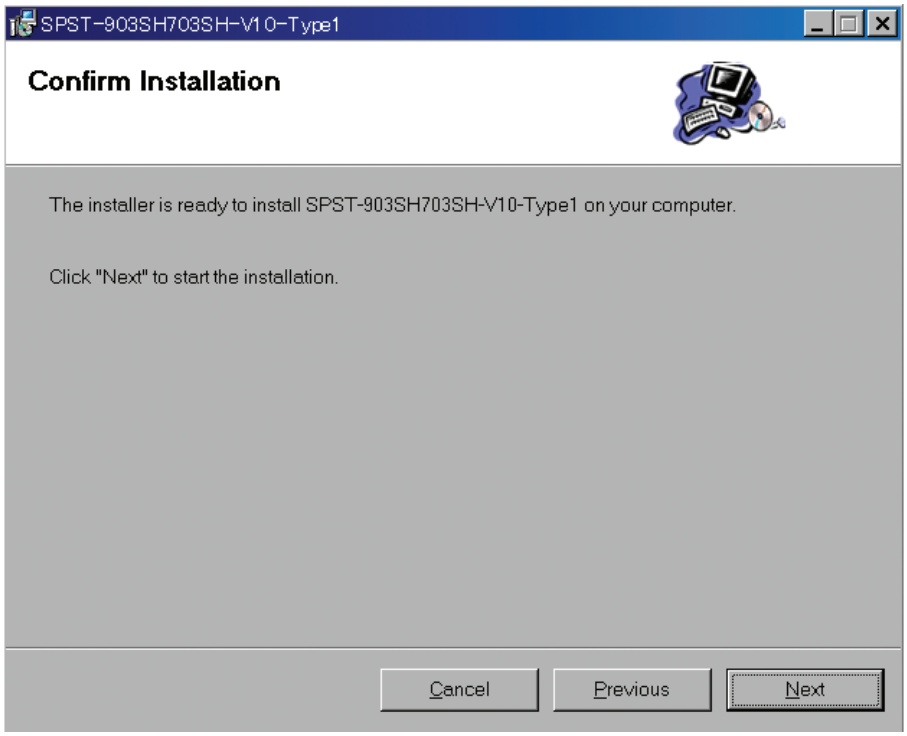
[Note]
Do not change the folder.

3) Confirmation screen



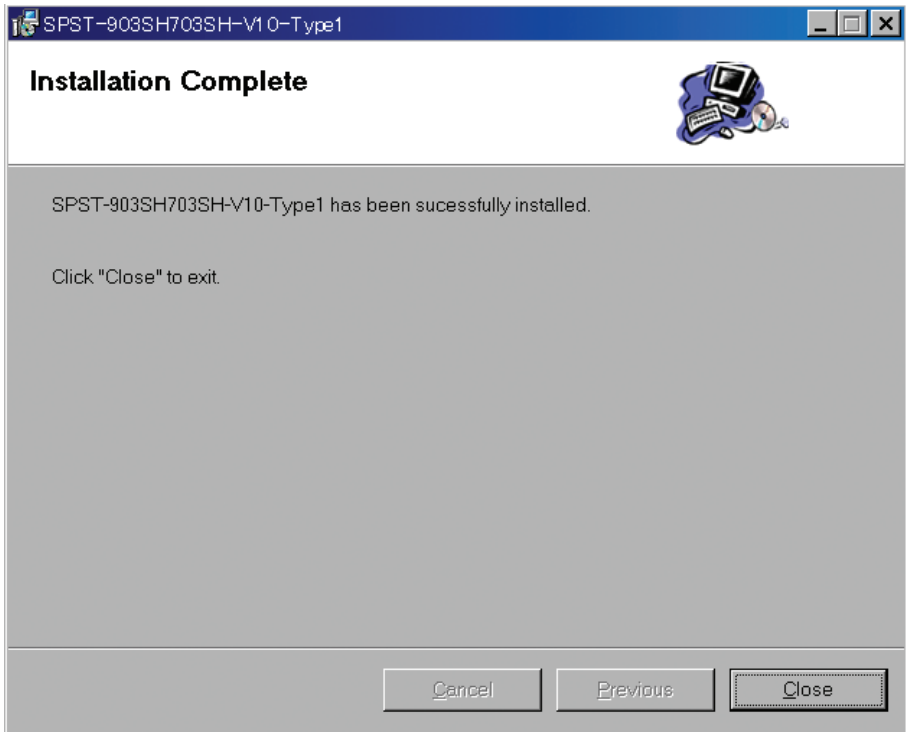
- Click Next to proceed.
- To cancel the installation, click Cancel.

4) Progress screen



- Wait until the installation is completed.
- To cancel the installation, click Cancel.

5) Complete screen



- The above screen appears when the installation has been successfully completed.
- Click Close to exit.

1.2.2 Starting SPST

- To start SPST, double-click the SPST.exe file in the destination folder.
- SPST does not automatically create a shortcut on the Start menu or on the desktop. Create one manually if necessary.

1.2.3 Uninstalling SPST

To uninstall SPST, click Add/Remove Programs in the Control Panel, then select one and delete it.

2. Other requirements

The following devices/drivers are required.

- Dongle (WIBU-KEY) and the dongle driver
  * This dongle is available at the international market support section.
- USB driver for 703SH/903SH HandsetManager
  Install this driver from HandsetManager CD-ROM.
- MCPC-USB cable
  This cable is required for HandsetManager.

- Communication cable (10 pin flat cable)

- AC charger and fully charged battery

[Note]

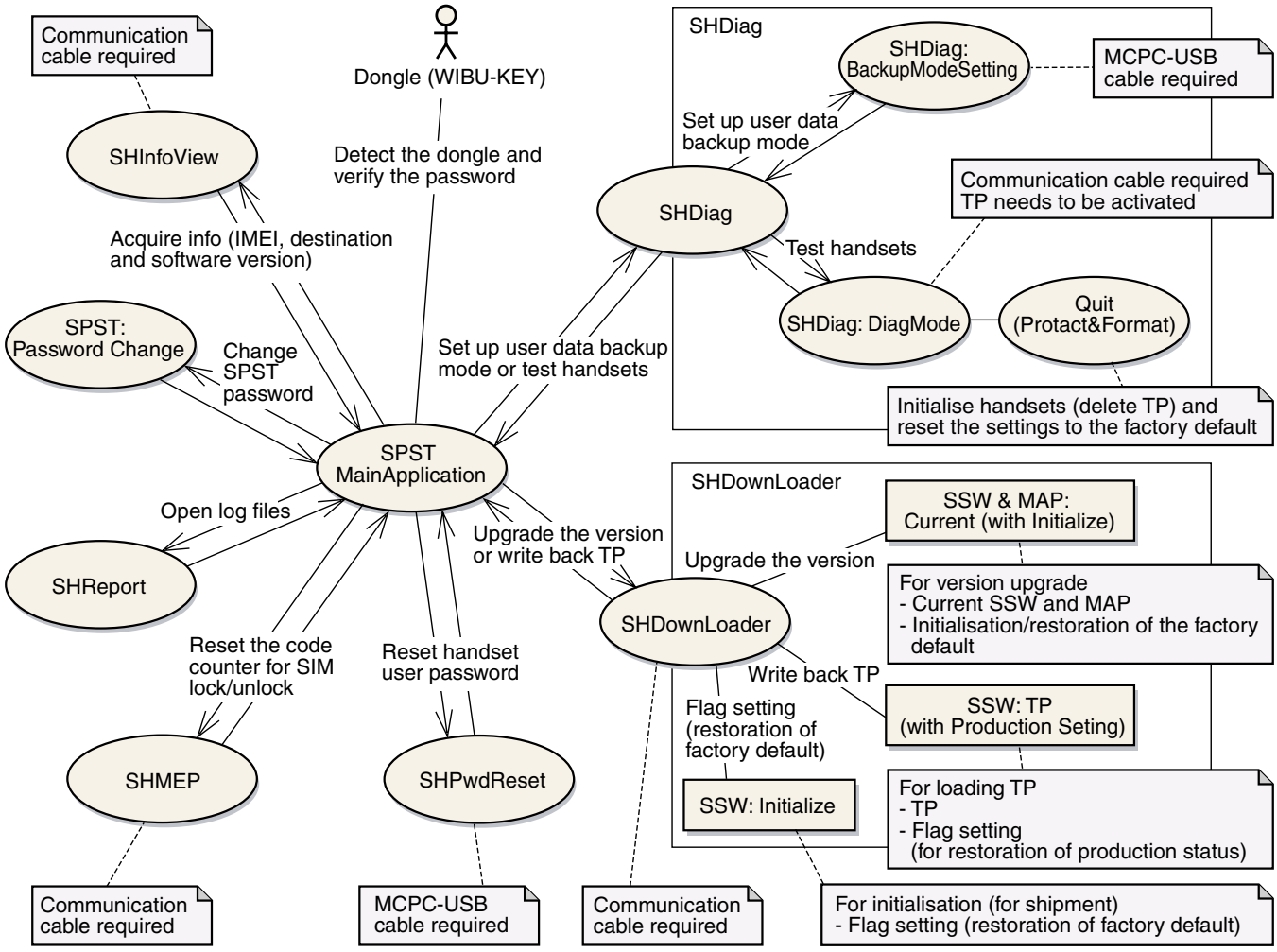
MCPC-Serial cable (GX30 Firmware Upgrade cable) used for 802SH/902SH is not required.

3. SPST tools

- See below to learn about SPST tools.

SPST:	Main application
SHDownLoader:	Utility to update/upgrade handset (phone) data/software
SHDiag:	Utility to test/adjust handsets (phones)
SHInfoView:	Utility to view handset (phone) information
SHMEP:	Utility to reset handset (phone) MEPLOCK counter
SHPwdReset:	Utility to reset user password
SHReport:	Viewer to open SPST operation logs

[Interrelationships between tools]



[Note]

The user data backup tool is not included in this version of SPST.

4. Executing SPST

Insert the dongle into a USB port and double-click the SPST.exe file to start SPST.

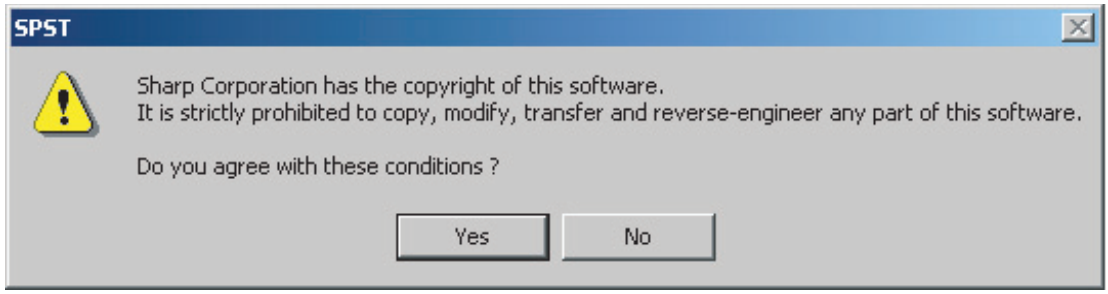
[Note]

SPST does not start until the dongle is recognised.

See below for sample screens.

4.1. Copyright information

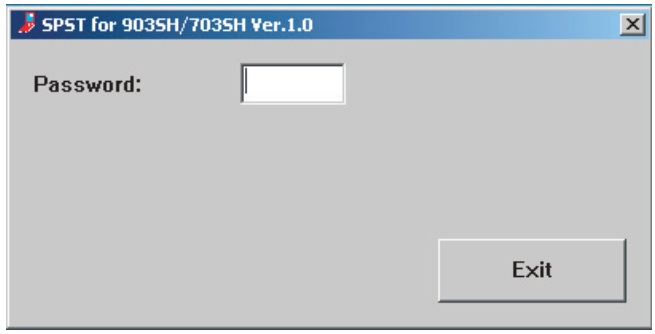
After start-up, a description of the copyright held by Sharp Corporation appears.



To agree to the conditions, click Yes to proceed to the password entry screen.

If you do not agree, click No. SPST closes.

4.2. Password entry screen



Enter the specified password and press the Enter key on the keyboard to proceed.

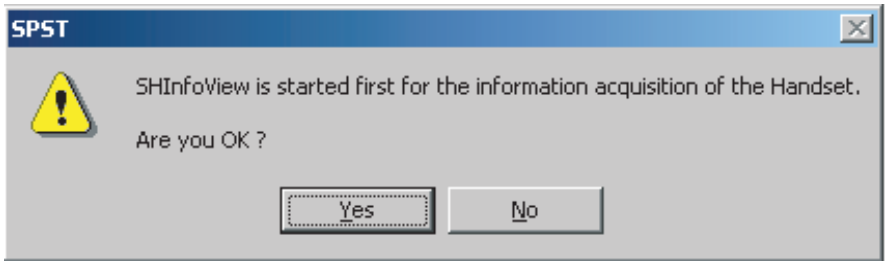
The default password is SPST.

To close SPST, click Exit.

If the password is incorrect, the following screen appears. Click OK and re-enter the password.

4.3. SHInfoViewer start-up confirmation

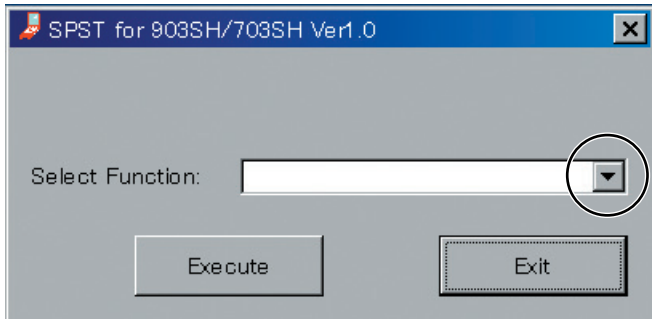
When the password is verified, the following message appears asking whether to start SHInfoViewer for acquiring handset (phone) data.



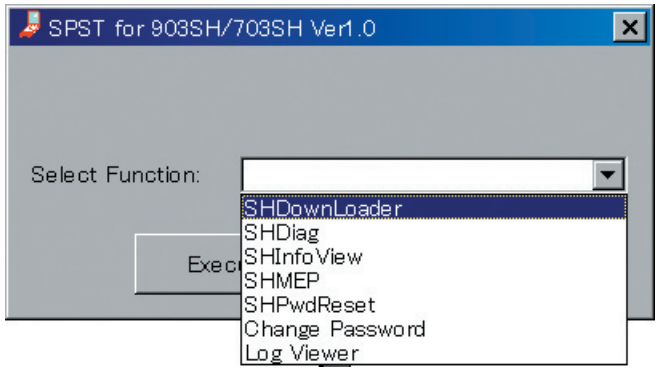
To acquire handset (phone) information, click Yes to start SHInfoViewer.

If not, click No to skip to SPST function selection screen.

4.4. Function selection screen



Click the down arrow in the combo box to open the function list.



SHDownLoader:	Utility to update/upgrade handset (phone) data/software
SHDiag:	Utility to test/adjust handsets (phones)
SHInfoViewer:	Utility to view handset (phone) information
SHMEP:	Utility to reset handset (phone) MEPLOCK counter
SHPwdReset:	Utility to reset user password
Change Password:	Function to change SPST password
Log Viewer:	Viewer to open SPST operation logs (also named SHReport)

Select a function and click Execute.

To close SPST, click Exit.

4.5. Functions

4.5.1 SHDownLoader

1) Overview

Use this tool to update/upgrade handset (phone) data/software, or to load a test programme (TP) to use with SHDiag.

1. Requirements

   The following are required to use SHDownLoader.

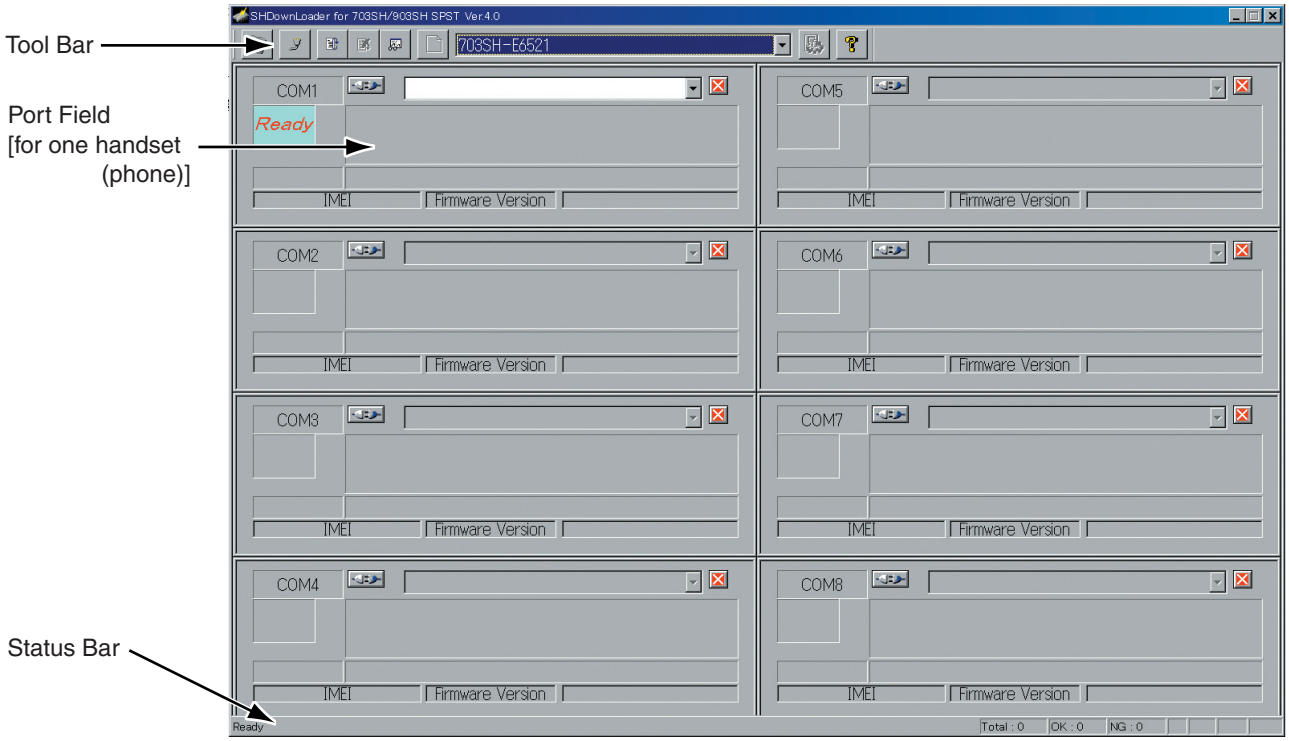
   [Required devices]

   - Communication cable (10 pin flat cable)
   - AC charger

2) Screen description

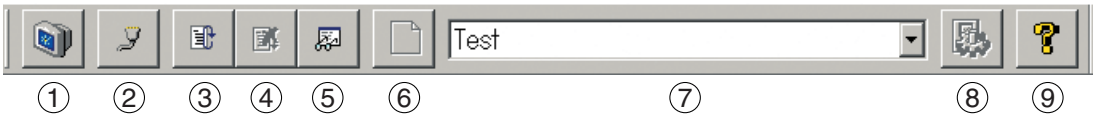
After start-up of SHDownLoader, the following screen appears.

1. SHDownLoader main screen



2. Tool Bar

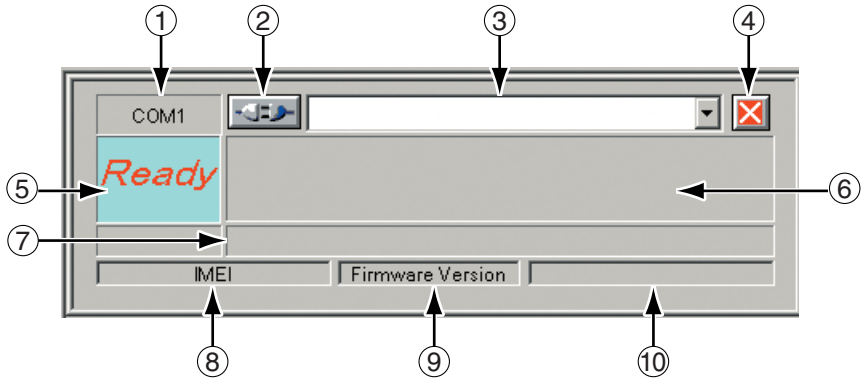
   The following control buttons are located on Tool Bar.



①	[Exit Application]	Closes SHDownLoader.
②	[Setup Option]	Access to option settings.
③	[Start All Ports]	Starts the write operation for all ports.
④	[Stop All Ports]	Stops the write operation for all ports.
⑤	[View Actual Result]	Displays operation results.
⑥	[Create Profile]	Click to create a new profile. (disabled for SHDownLoader bundled with SPST)
⑦	[Select Profile]	Click to select a profile.
⑧	[Edit Profile]	Click to edit profiles. (disabled for SHDownLoader bundled with SPST)
⑨	[View Application Information]	Displays SHDownLoader information (version, etc.).

3. Port Field

Screen description:



①	[Port Name]	Displays a (logical) port name.
②	[Connect]	Executes a selected function for a selected port
③	[Select Function]	Click to select a function.
④	[Stop]	Aborts the process for a selected port.
⑤	[Status]	Displays the status.

Unprocessable | Processable | In the process | Successful complete | Cancelled/aborted

⑥	[Information]	Displays process information
⑦	[Rate/Progress]	Shows a progress bar and a percentage.
⑧	[IMEI]	Displays handset (phone) IMEI.
⑨	[Firmware Version]	Displays SHDownLoader information (version, etc.).
⑩	[Version]	Displays handset (phone) Version Code.

4. Status Bar

①	Tips/information appears when you place the mouse cursor on a button on Tool Bar.
②	Total number of updated handsets (phones) appears.
③	Total number of nondefective updated handsets (phones) appears.
④	Total number of defective updated handsets (phones) appears.

3) Option settings

Option settings need be configured the first time you use SHDownLoader or when a serial port connection is changed.

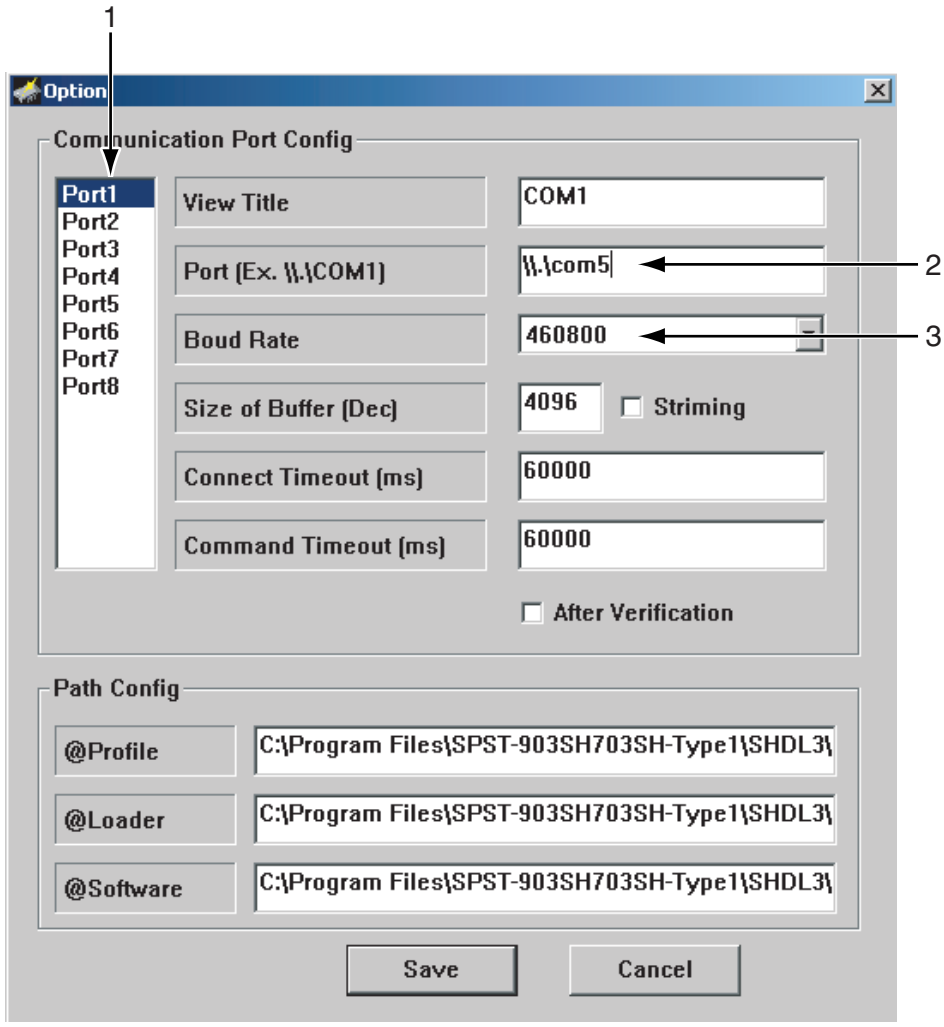
Click [Setup Option] on Tool Bar to open the Option screen and follow these steps.

1. Select a port from the list.
2. Enter the name of the serial port on the corresponding system device as \\.\COM? in single-byte alphanumerics.
3. Select an appropriate baud rate for the serial port.

Repeat these for other ports as necessary, and click Save to save settings when you are finished.

* Do not change information in other fields.

Sample Option screen



When settings are configured correctly, the corresponding Port Field status changes to Ready on SHDownLoader main screen.

* Note that when a USB-UART cable is in use, assigned COM ports may vary depending on the environment.

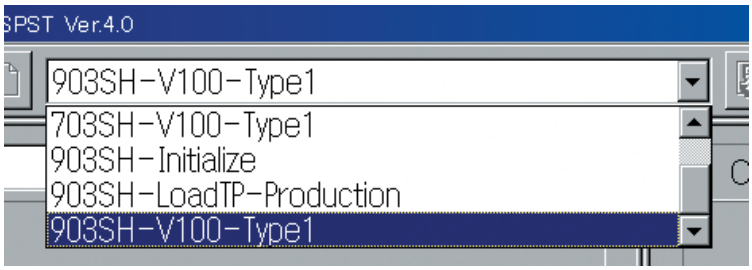
4) Executing SHDownLoader

1. Software update procedure

Remove the battery from the handset (phone) and connect it with a PC via the communication cable.



Start SHDownLoader, and select a profile from [Select Profile] (combo box) on Tool Bar.

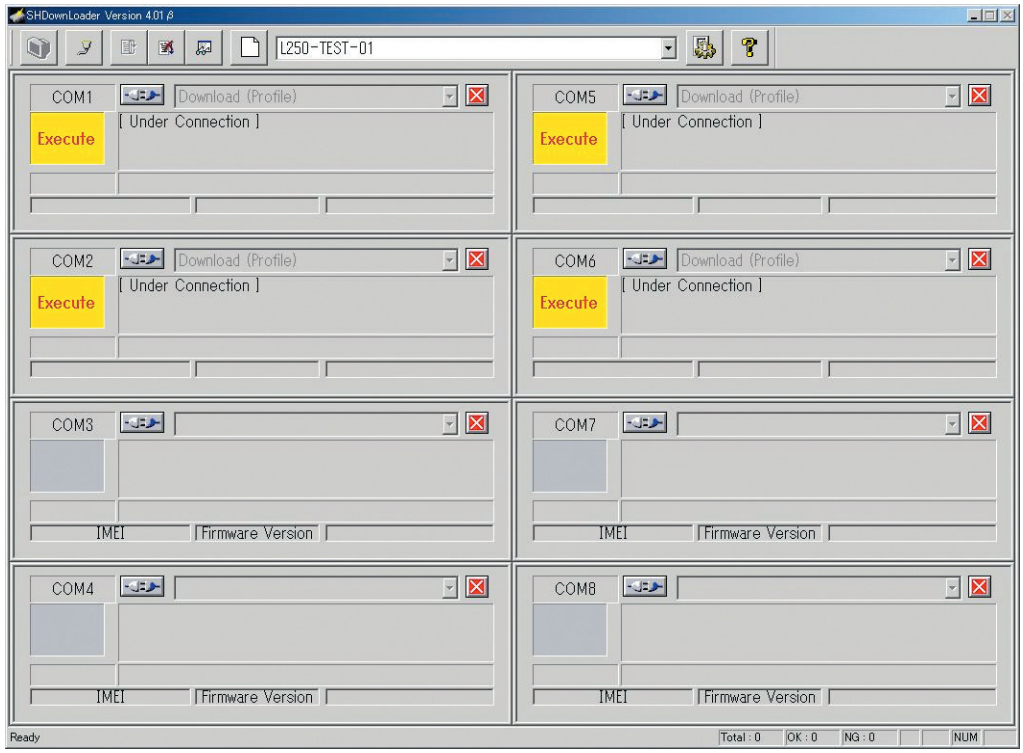


[About profiles]

These are included profiles.

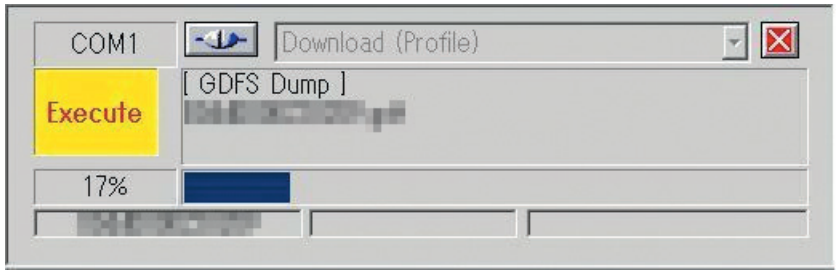
903SH-Vxxx-Type*.prfl:	Profile to upgrade the version of 903SH (xxx: software version)
903SH-Initialize.prfl:	Profile to set up initialisation for 903SH
903SH-LoadTP-Production.prfl:	Profile to load TP for 903SH

After selecting a profile, click [Start All Ports] on Tool Bar.



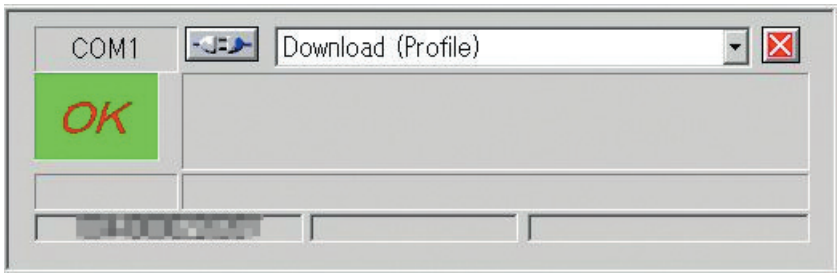
To start the write operation, click [Connect] in Port Field or [Start All Ports] on Tool Bar. Execute and [Under Connection] appear in [Status] and [Information] in Port Field respectively for all the ports specified in option settings, and handsets (phones) are ready to be connected or turned on.

Click [Start All Ports], and within a minute, connect the AC charger to each handset (phone).

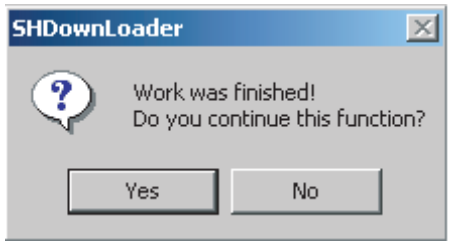


Handsets (Phones) are updated according to the profile content. Information and progress of the process appear in [Information] and [Rate/ Progress] in Port Field respectively.

OK appears when update is completed.



When the write operation for a profile is successfully completed, the following message appears asking whether to continue to use SHDown-Loader or not.



Click Yes to continue to use SHDownLoader.

If not, click No to close it. SPST function selection screen returns.

When you are finished with the write operation, disconnect the communication cable and the AC charger from the handset (phone).

2. Other features

To stop the write operation all at once, click [Stop All Ports] on Tool Bar.

(It may take up to a minute before the operation stops.)

To stop the write operation for each port individually, click [Stop] in Port Field.

(It may take up to a minute before the operation stops.)

To try to execute the write operation for inactive ports again, click [Connect] in Port Field or [Start All Ports] on Tool Bar.

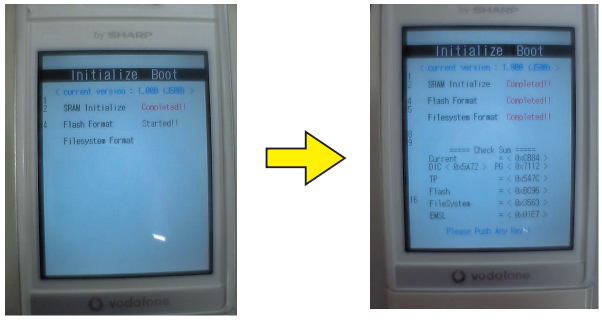
5) Handset (Phone) initialisation

Initialise the handset (phone) after upgrading its software or setting up initialisation.

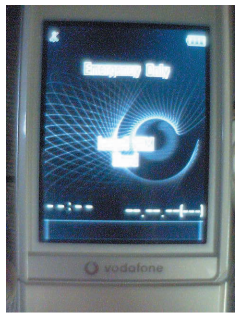
The handset (phone) needs to be turned on/off once for Initialize Boot and a normal boot (twice in total).

1. Insert the battery into the handset (phone).
   * Make sure the battery is charged enough to complete the 10-minute initialisation.
2. Press Power Key to turn on the handset (phone).
3. Initialize Boot screen opens and after approx. 10 minutes, initialisation is completed.

(Initialize Boot starts) (Initialize Boot completed)



4. Press Power Key to turn off the handset (phone).
5. Press Power Key to turn on the handset (phone) for a normal boot.
6. Wait until the stand-by screen appears.



7. Press Power Key to turn off the handset (phone).

6) Note about loading TP

TP is loaded to the user data area on the handset (phone), and saved user data is deleted. Back up important data before loading TP.

4.5.2 SHDiag

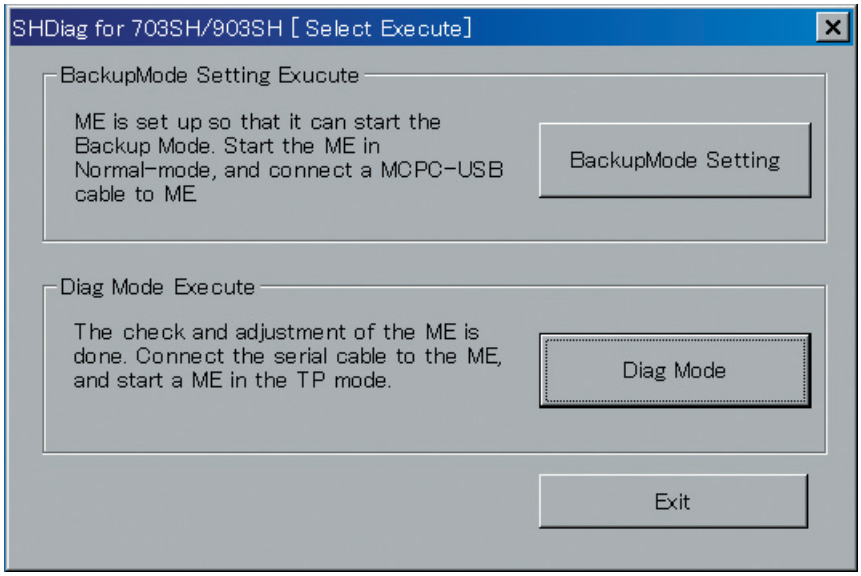
1) Overview

Use this tool to test/adjust handsets (phones) and to activate user data backup mode.

2) Screen description

1. Selecting execution mode

   Select SHDiag on SPST function selection screen. After start-up, the following screen appears.



   When you click Exit, SHDiag closes and SPST function selection screen returns.

BackupMode Setting

By default, user data backup mode cannot be activated by pressing 0, 6 and Power Key at the same time. Executing BackupMode Setting allows you to start the handset (phone) in user data backup mode. To back up/restore user data, use the user data backup tool (separately available).

Diag Mode

In this mode, you can test/adjust handsets (phones) by using handset (phone) TP. Load TP by using SHDownLoader.

After loading TP, make sure the handset (phone) is turned off, and press 2 and Power Key at the same time to start the handset (phone) in TP mode.

[Note]

TP is loaded to the user data area on the handset (phone), and saved user data is deleted. Back up important data before loading TP.

3) Overview of BackupMode Setting

The following are procedures and sample screens for executing BackupMode Setting.

1. Requirements

   The following are required to execute BackupMode Setting.

   [Required devices]

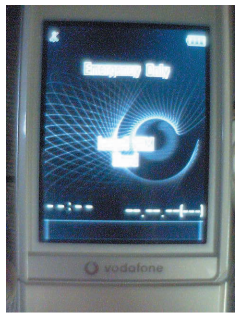
   - MCPC-USB cable
   - Battery
   - HandsetManager-USB driver (AT Command Port driver)

   [Handset (Phone) status]

   - Normal boot-enabled

2. Preparation

Turn on the handset (phone) to enter the standby-mode. (*1)

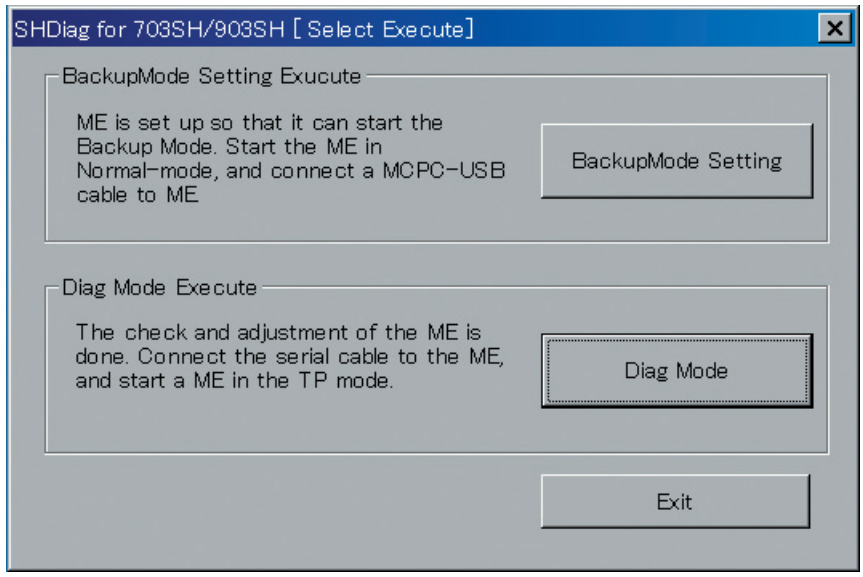


*1: After Power On graphics (Vodafone logo, Openwave logo, etc.), the stand-by screen appears. A prompt for clock setting or network setup may appear on the screen.

Connect the handset (phone) with a PC via the MCPC-USB cable.

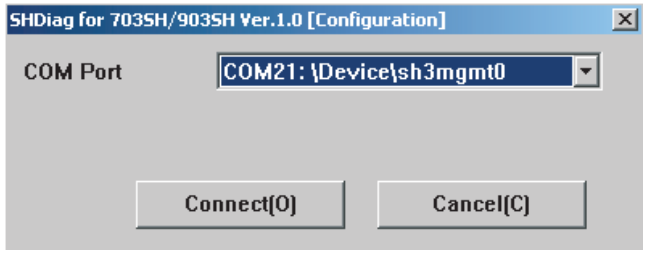
3. Executing BackupMode Setting

After connecting the handset (phone) with a PC via the MCPC-USB cable, click BackupMode Setting.



4. Selecting a COM port

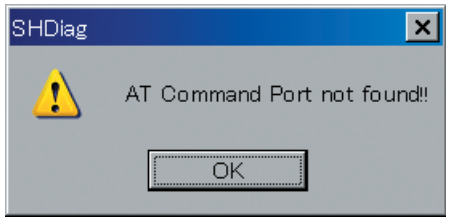
   The following COM port selection screen appears.



   For BackupMode Setting, only AT Command Port is selectable.

   To recognise AT Command Port, start the handset (phone) (normal boot) and connect it with a PC via the MCPC-USB cable beforehand.

   If AT Command Port is not recognised and no other port is available, the following error message appears.



   Possible causes:

   - HandsetManager-USB driver (AT Command Port driver) is not installed.
   - MCPC-USB cable is not connected.
   - Handset (Phone) is turned off.

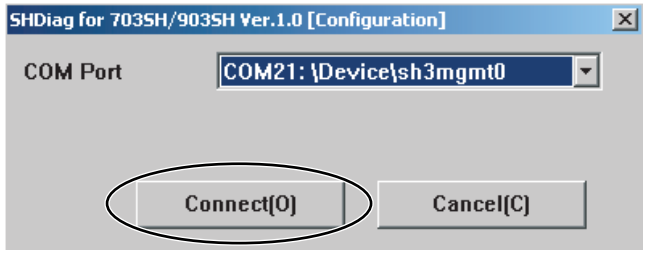
   Find out the cause and take an action.

   When you click OK, execution mode selection screen returns.

5. Connecting via a selected COM port

   After selecting a COM port, click Connect to proceed.

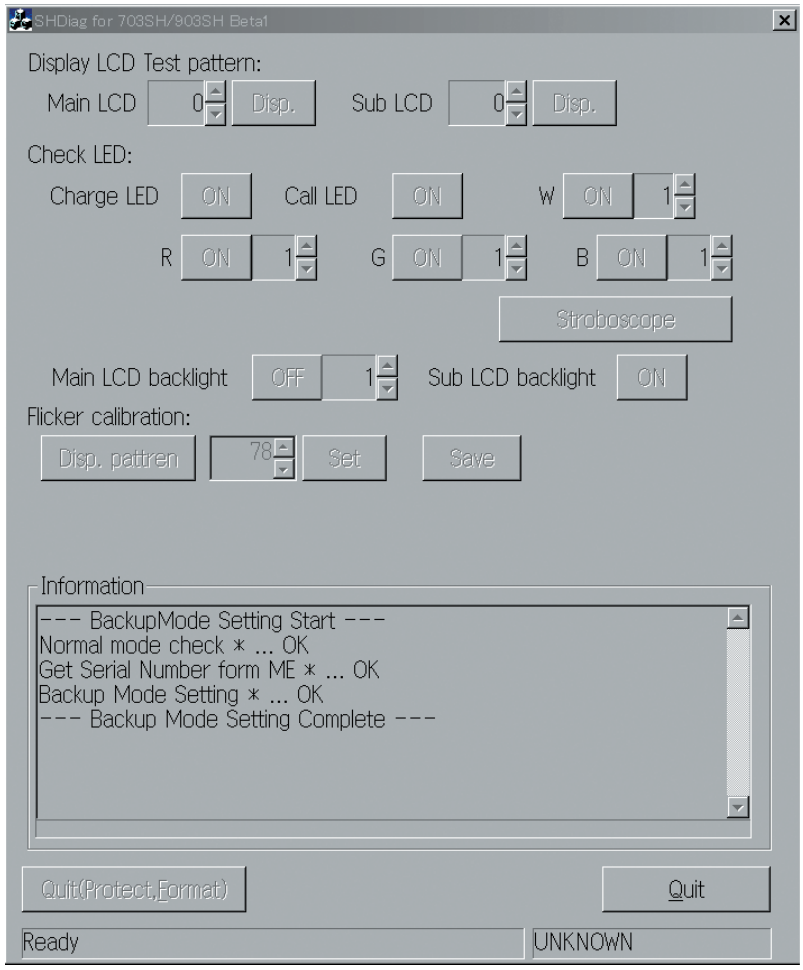
   When you click Cancel, execution mode selection screen returns.



6. SHDiag screen for BackupMode Setting

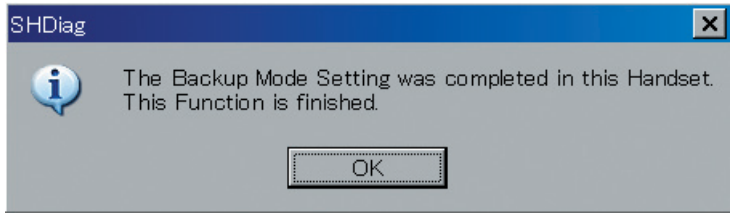
   The Information section shows the command sequence.

   Buttons for Diag Mode are disabled.



7. Completion of BackupMode Setting

   The following message appears when BackupMode Setting is successfully completed.



   When you click OK, SHDiag closes and SPST function selection screen returns.

   The handset (phone) is turned off.

   Now you can start the handset (phone) in user data backup mode by pressing 0, 6 and Power Key at the same time, and can back up/restore user data by using the user data backup tool (separately available).

   [Tip]

   After turning off the handset (phone) in user backup mode, it cannot be activated by pressing 0, 6 and Power Key at the same time. To enable the key-based activation method, execute BackupMode Setting again.

4) Overview of Diag Mode

The following are procedures and sample screens for executing Diag Mode.

1. Requirements

   The following are required to execute Diag Mode.

   [Required devices]

   - Communication cable (10 pin flat cable)
   - Battery and AC charger

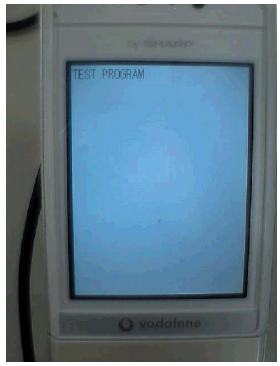
   [Handset (Phone) status]

   - Able to activate TP

2. Preparation

   Load TP by using SHDownLoader.

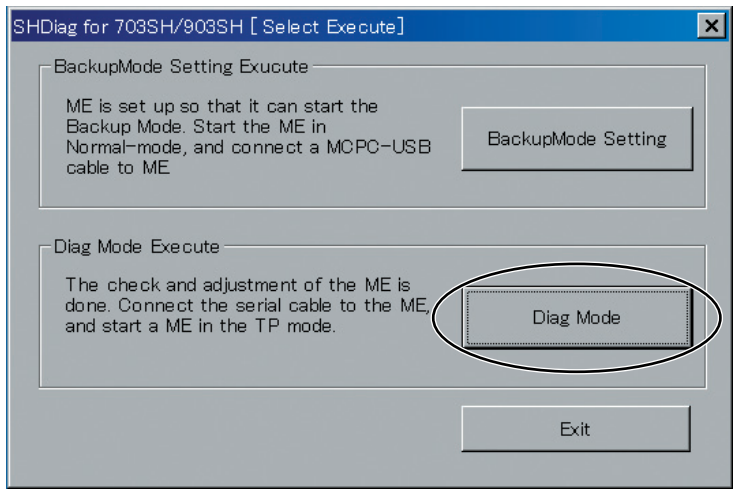
   After loading TP, make sure the handset (phone) is turned off then press 2 and Power Key at the same time to start the handset (phone) in TP mode.



   Connect the handset (phone) with a PC via the communication cable.

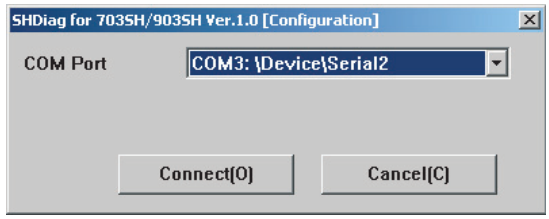
3. Executing Diag Mode

   After connecting the handset (phone) with a PC via the communication cable, click Diag Mode.



4. Selecting a COM port

   The following COM port selection screen appears.



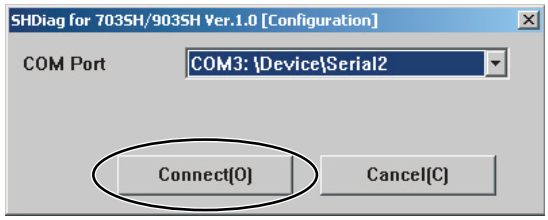
   For Diag Mode, only serial ports are available.

   Select one connected with the handset (phone).

5. Connecting via a selected COM port

   After selecting a COM port, click Connect to proceed.

   When you click Cancel, execution mode selection screen returns.

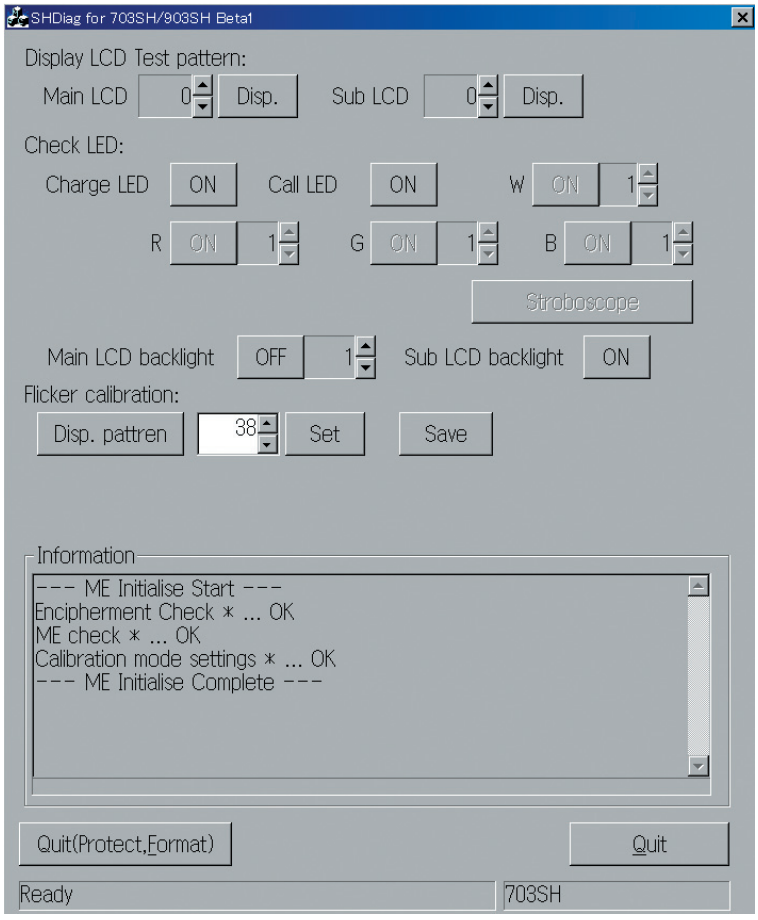


   * Baud rate is fixed to 115200 bps.

6. SHDiag screen for Diag Mode

   When communication is established and initialisation is completed (“-- ME Initialise Complete ---” appears), buttons for Diag Mode are enabled.

   Use ‘Flicker calibration’ for adjustment as necessary.



   Some buttons/items may be disabled depending on the connected handset (phone) model.

   'Sub LCD' under 'Display LCD Test pattern', and 'Sub LCD backlight' under 'Check LED' are disabled.

[Display LCD Test pattern]

Select a test pattern from 'Main LCD' (for the main LCD) or from 'Sub LCD' (for the sub LCD).

Click spin buttons to select a test pattern, and click Disp. to show it on the handset (phone).

Main LCD

No.	Pattern
0	TEST PROGRAM
1	White
2	Red
3	Green
4	Blue
5	Black
6	Colour scale
7	Greyscale
8	8-step gradation

Sub LCD

No.	Pattern
0	TEST PROGRAM
1	White
2	Black
3	XX/XX --:--
4	Houndstooth
5	Houndstooth (negative/positive reversal)

[Check LED]

Turn on/off the backlight and adjust the brightness for Charge LED (red), Call LED (green), white LED, RGB LED, and LCD.

To turn on/off Charge LED or Call LED, click ON/OFF.

For the white LED, use the button next to 'W'. Click ON/OFF to turn on/off the backlight, and use spin buttons to adjust the brightness.

For the RGB LED, use the buttons next to 'R', 'G' and 'B' for each colour. Click ON/OFF to turn on/off the backlight, and use spin buttons to adjust the brightness.

To turn on the strobe, turn on the RGB LED and click Stroboscope.

For the LCD backlight, use the button next to 'Main LCD Backlight' (for the main LCD) or 'Sub LCD Backlight' (for the sub LCD). Click ON/OFF to turn on/off the backlight, and use spin buttons to adjust the brightness.

[Flicker Calibration]

Adjust the flicker of the main LCD.

Click Disp. Pattern to show flicker adjustment screen.

Use spin buttons to select a value.

To try the selected value, click Set.

To apply the value, click Save.

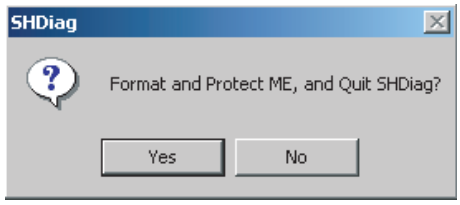
7. Exiting Diag Mode

The following describes “Quit” operations for Diag Mode of SHDiag.

Quit(Protect,Format)

Click this to close the application and reset handset (phone) settings to the factory default.

After clicking it, the following message appears.



Click Yes to proceed. Initialize Boot [initialisation of handset (phone)] starts and SHDiag closes.

When you click No, Diag Mode returns.

(Initialize Boot starts)

[Note]

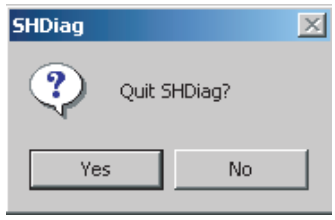
Initialisation deletes TP and user data.

If the handset (phone) needs to be returned to the user, restore the user data by using BackupMode Setting of SHDiag and the user data backup tool.

Quit

Click this to close the application and turn off the handset (phone).

After clicking it, the following message appears.



Click Yes to proceed. The handset (phone) turns off and SHDiag closes.

When you click No, Diag Mode returns.

[Note]

After the “QUIT” operation above, the flag setting (for tests in the production status) remains with TP left in the user data area.

If the handset (phone) needs to be returned to the user, execute Quit (Protect,Format) to initialise the handset (phone) and user data area, then restore the user data by using BackupMode Setting of SHDiag and the user data backup tool.

4.5.3 SHInfoView

1) Overview

Use this tool to acquire and show handset (phone) information (IMEI, software version and destination).

2) Screen description

1. Requirements

   The following are required to use SHInfoView.

   [Required devices]

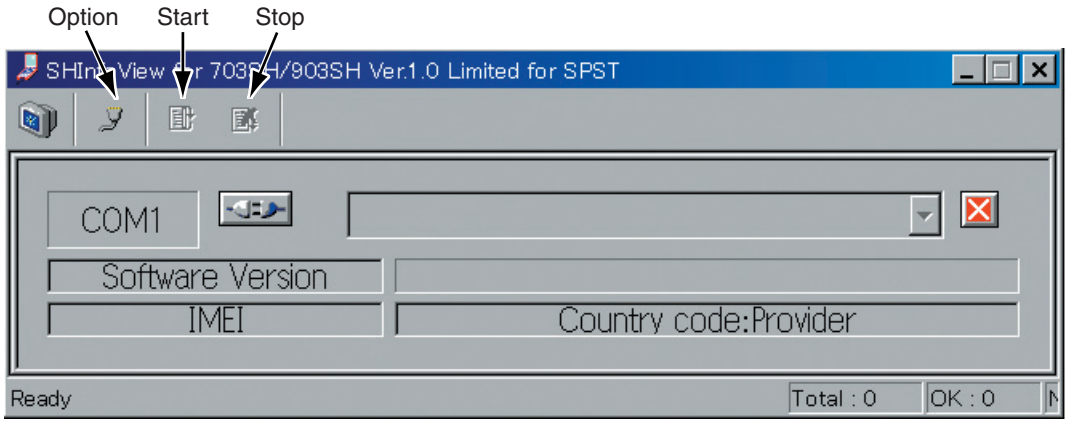
   - Communication cable (10 pin flat cable)
   - AC charger (recommended to use)

2. Remove the battery and connect the handset (phone) with a PC via the communication cable.



3. Starting SHInfoView

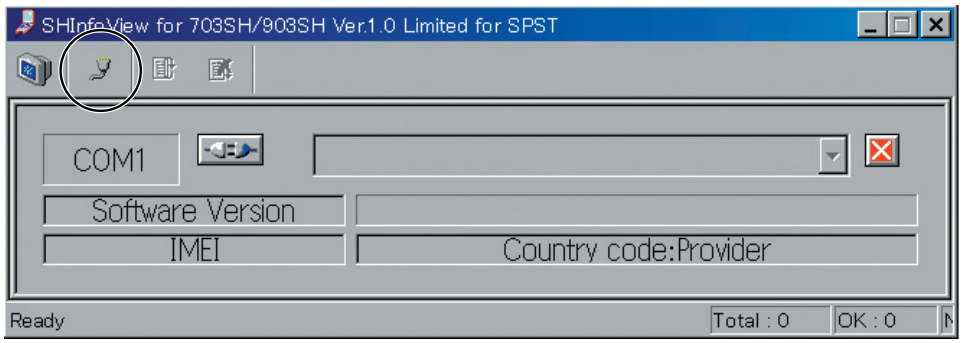
   Select SHInfoView on SPST function selection screen. After start-up, the following main screen appears.



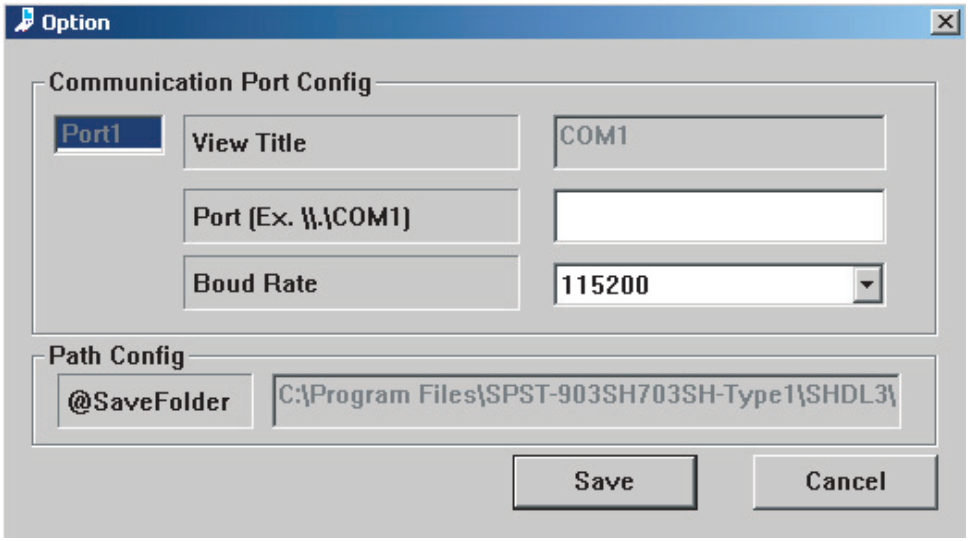
4. Option settings

Port settings need be configured for the first time you use SHInfoView.

Click [Option] to proceed.



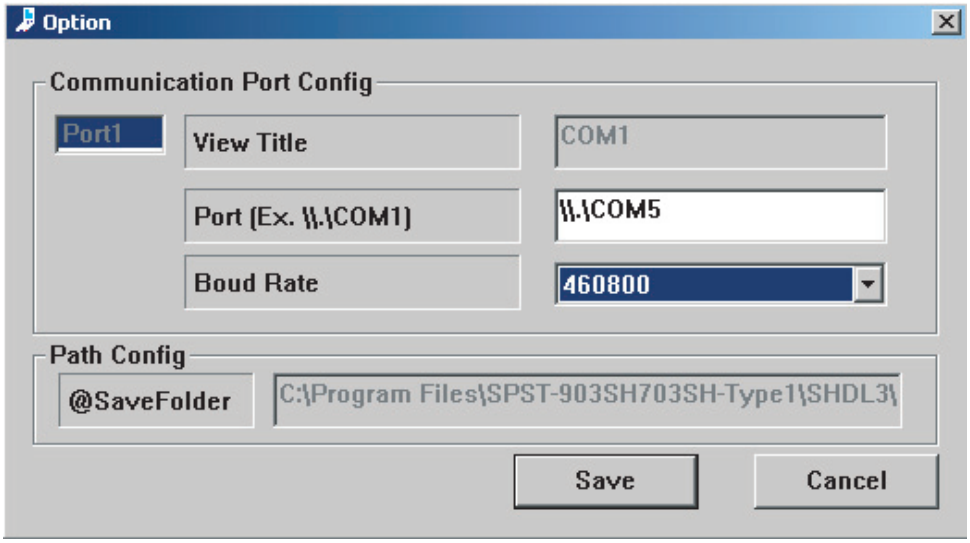
The following screen appears.



Enter the name of the port connected with the communication cable, and select a baud rate.

Enter the port name as \\.\COM? in single-byte alphanumerics.

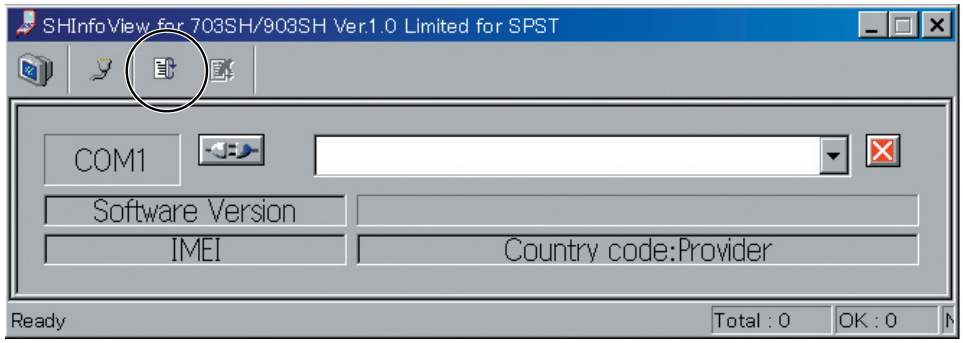
E.g. A baud rate of 460800 bps is set for COM5.



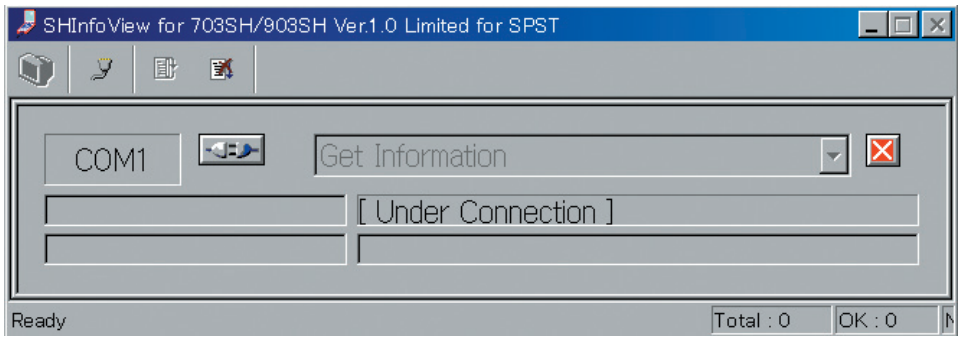
After completing the setting, click Save.

5. Executing SHInfoView

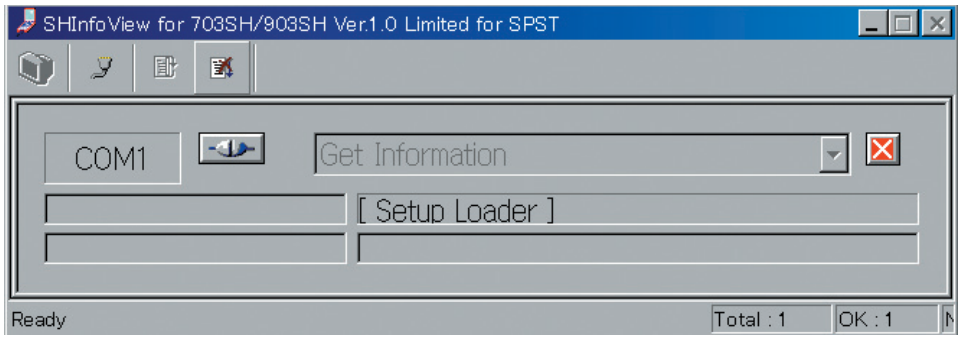
When the port setting is correct, [Start] button is enabled.



When you click [Start], SHInfoView is ready for connection.

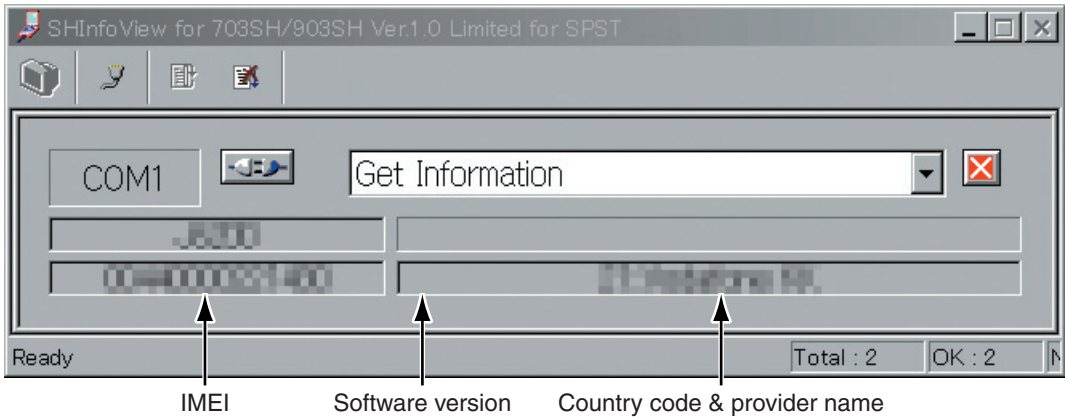


Connect the AC charger to the handset (phone). SHInfoView starts to acquire handset (phone) information.

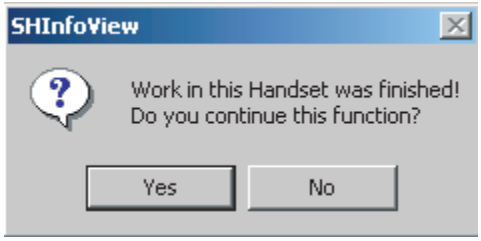


6. After SHInfoView operation

Acquired handset (phone) information appears on the main screen as follows.



When handset (phone) information is successfully acquired, the following message appears asking whether to continue to use SHInfoView or not.



Click Yes to continue to use SHInfoView.

If not, click No to close it. SPST function selection screen returns

4.5.4 SHMEP

1) Overview

This tool supports the SIM lock/unlock feature.

To lock/unlock SIM on the handset (phone), you must enter the code authorised by Sharp Corporation. If the code is incorrectly entered five times, the handset (phone) SIM lock/unlock feature will be disabled. To enable the feature, reset the code counter by using this tool.

Note that this tool is for resetting the code counter only and does not lock/unlock SIM directly.

2) Screen description

1. Requirements

The following are required to use SHMEP.

[Required devices]

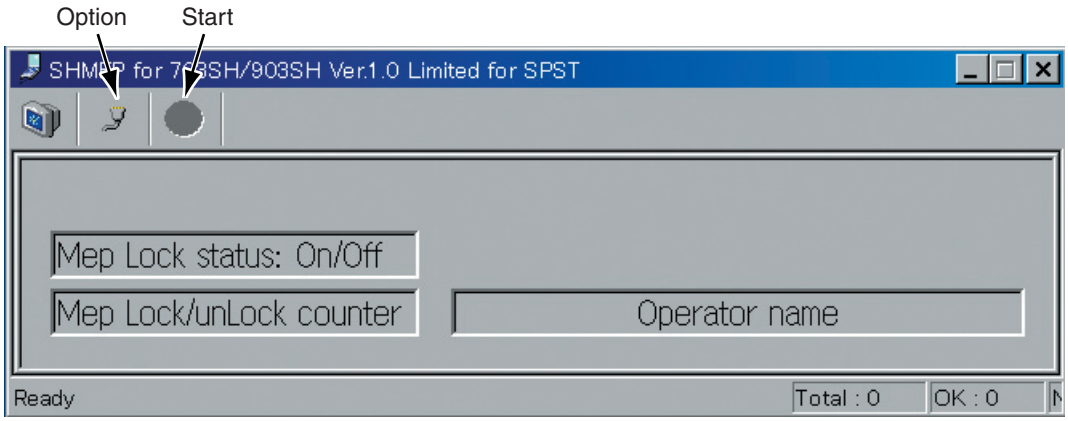
- Communication cable (10 pin flat cable)
- AC charger (recommended to use)

2. Preparation

Remove the battery and connect the handset (phone) with a PC via the communication cable.

3. Starting SHMEP

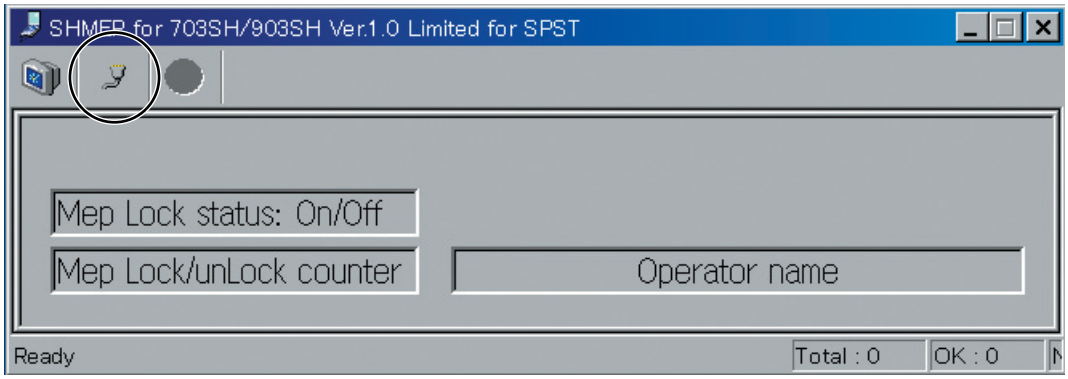
Select SHMEP on SPST function selection screen. After start-up, the following main screen appears.



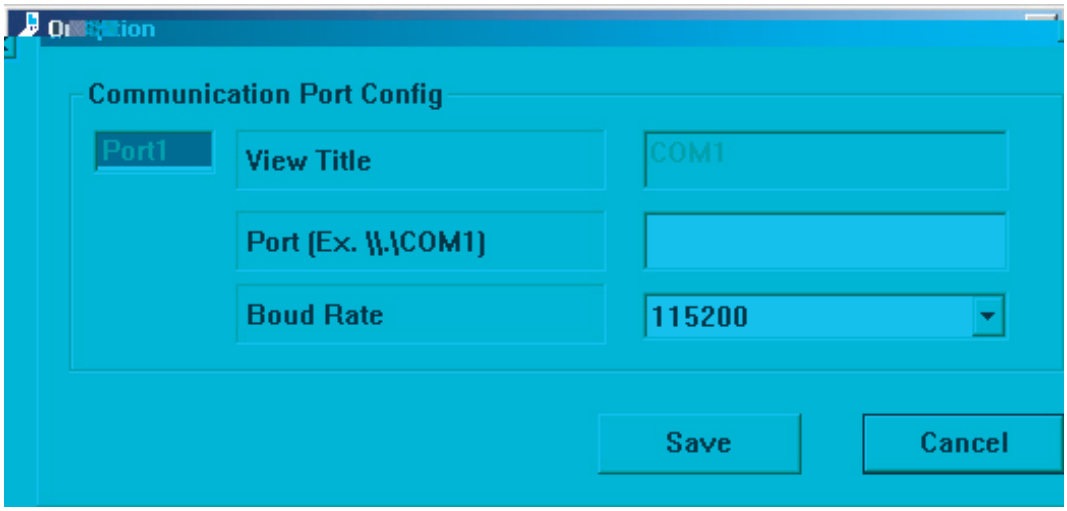
4. Option settings

Port settings need be configured for the first time you use SHMEP.

Click [Option] to proceed.



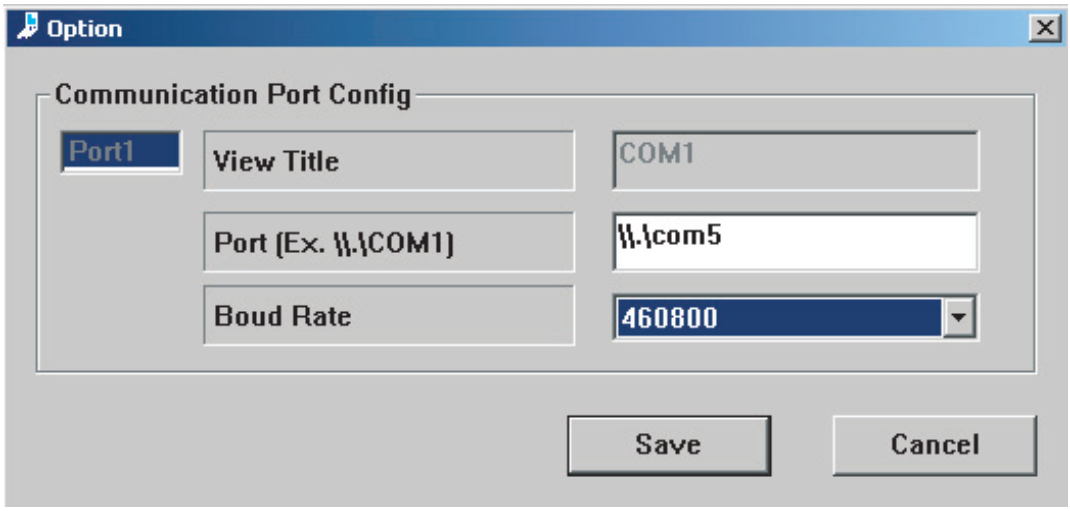
The following screen appears.



Enter the name of the port connected with the communication cable, and select a baud rate.

Enter the port name as \\.\COM? in single-byte alphanumerics.

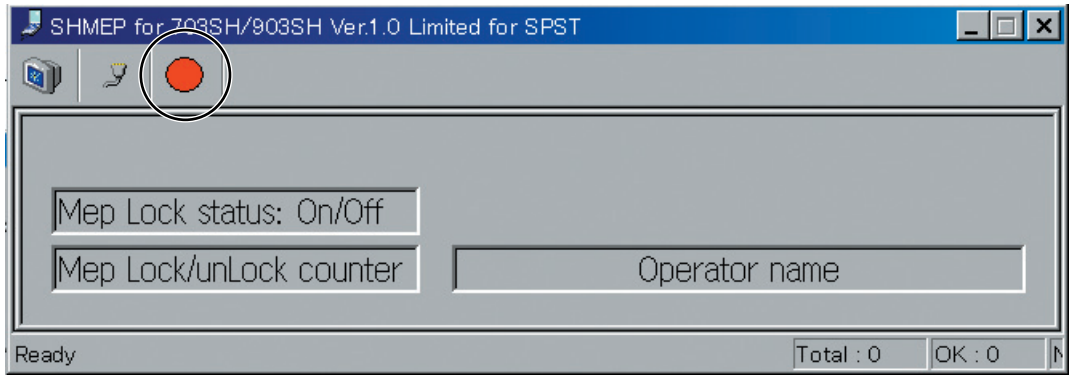
E.g. A baud rate of 460800 bps is set for COM5.



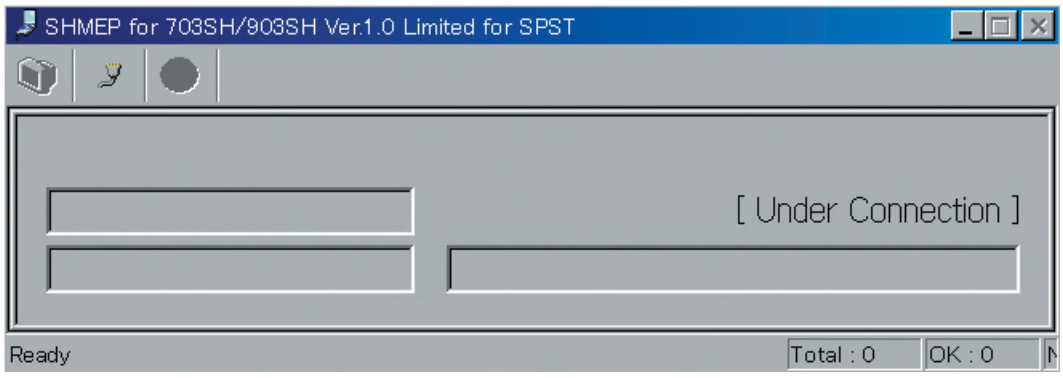
After completing the setting, click Save.

5. Executing SHMEP

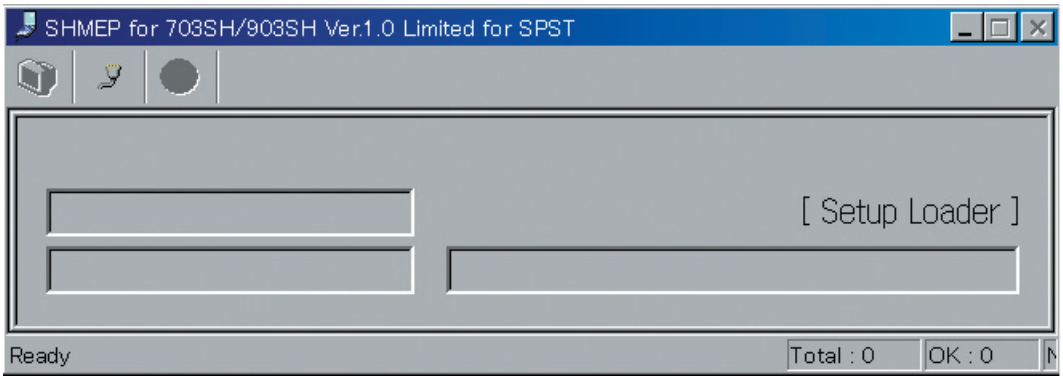
When the port setting is correct, [Start] button is enabled.



When you click [Start], SHMEP is ready for connection.



Connect the AC charger to the handset (phone). SHMEP starts to reset the code counter.



6. After SHMEP operation

Either of the following appears to show the result.

Successful completion

The handset (phone) SIM lock/unlock feature is restored.

Failure

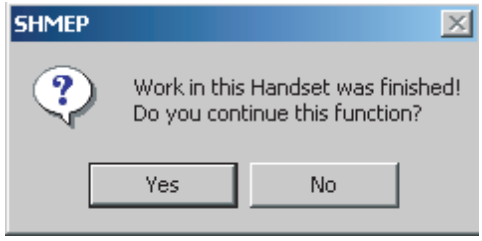
SHMEP has failed to read the profile.

Time out [due to no serial communication established with the handset (phone)]

Aborted

The code counter is already reset. (You can enter the code up to five times.)

When SHMEP operation is successfully completed or aborted, the following message appears asking whether to continue to use SHMEP or not.



Click Yes to continue to use SHMEP.

If not, click No to close it. SPST function selection screen returns.

4.5.5 SHPwdReset

1) Overview

Use this tool to reset the user password specified on the handset (phone).

The user password is reset to 9999 (default).

2) Screen description

The following are procedures and sample screens for executing SHPwdReset.

1. Requirements

   The following are required to use SHPwdReset.

   [Required devices]

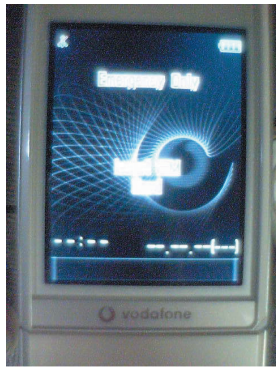
   - MCPC-USB cable
   - Battery
   - HandsetManager-USB driver (AT Command Port driver)

   [Handset (Phone) status]

   - Normal boot-enabled

2. Preparation

   Turn on the handset (phone) to enter the standby-mode. (*1)



*1: After Power On graphics (Vodafone logo, Openwave logo, etc.), the stand-by screen appears. A prompt for clock setting or network setup may appear on the screen.

Connect the handset (phone) with a PC via the MCPC-USB cable.

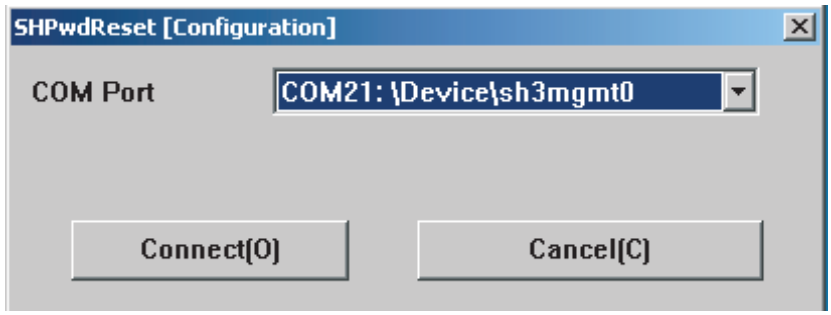
3. Executing SHPwdReset

Select SHPwdReset on SPST function selection screen and click Execute. The following message appears.

Turn on the handset (phone) and enter the stand-by mode. Make sure the handset (phone) is connected with a PC via the MCPC-USB cable and click OK.

4. Selecting a COM port

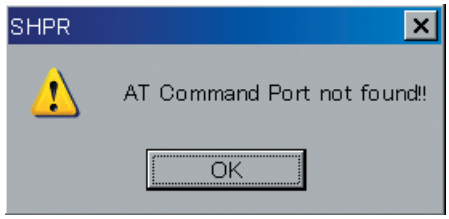
The following COM port selection screen appears.



On this screen, only AT Command Port is selectable.

To recognise AT Command Port, start the handset (phone) (normal boot) and connect it with a PC via the MCPC-USB cable beforehand.

If AT Command Port is not recognised and no other port is available, the following error message appears.



Possible causes:

- HandsetManager-USB driver (AT Command Port driver) is not installed.
- MCPC-USB cable is not connected.
- Handset (Phone) is turned off.

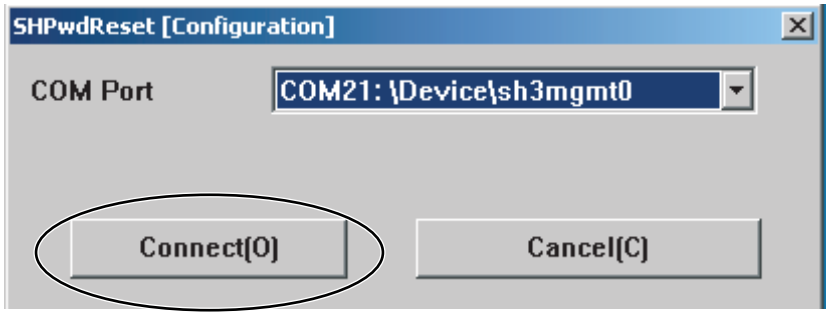
Find out the cause and take an action.

When you click OK, SHPwdReset closes and SPST function selection screen returns.

5. Connecting via a selected COM port

   After selecting a COM port, click Connect to proceed.

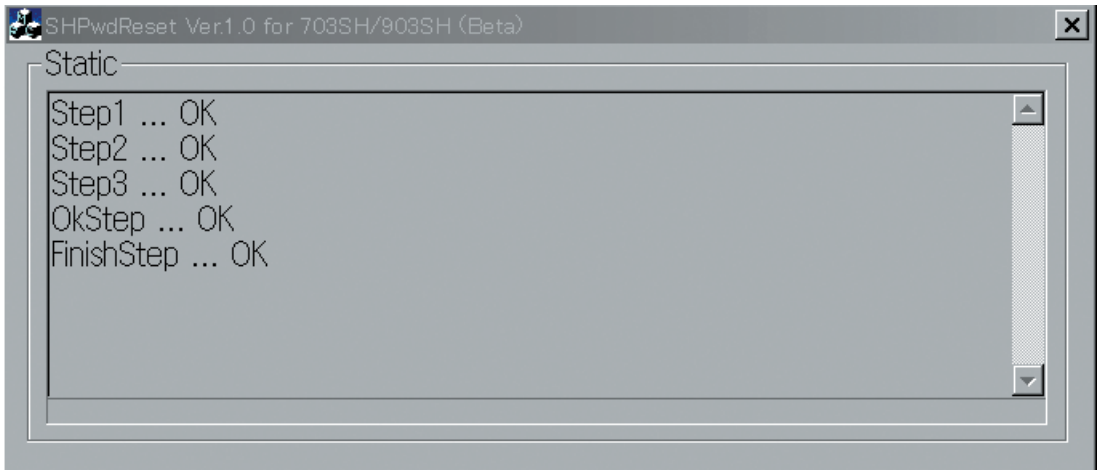
   When you click Cancel, SHPwdReset closes and SPST function selection screen returns.



6. SHPwdReset screen

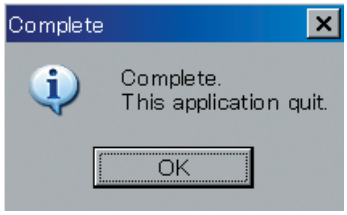
   When communication is established, a command sequence for resetting the password is executed.

   When “FinishStep ... OK” appears, SHPwdReset operation is successfully completed.



7. After SHPwdReset operation

   The following message appears for successful completion.

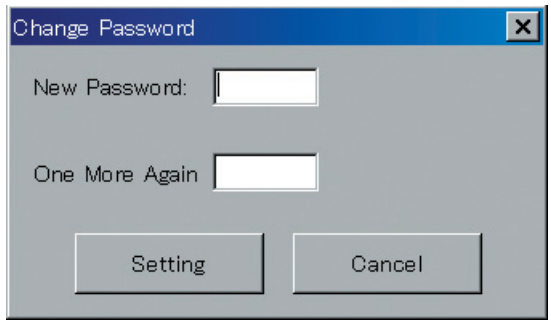


   When you click OK, SHPwdReset closes and SPST function selection screen returns.

4.5.6 Change Password

Use this function to change SPST password.

Change Password screen



In New Password field, enter up to 8 alphanumerics (case sensitive) and some symbols.

Enter the same password in One More Again field for confirmation, and click Setting.

To cancel changing the password, click Cancel.

When Setting or Cancel is clicked, SPST function selection screen appears.

4.5.7 Log Viewer (SHReport)

1) Overview

Use this tool to open SPST operation logs.

(SHReport is the only tool for this purpose.)

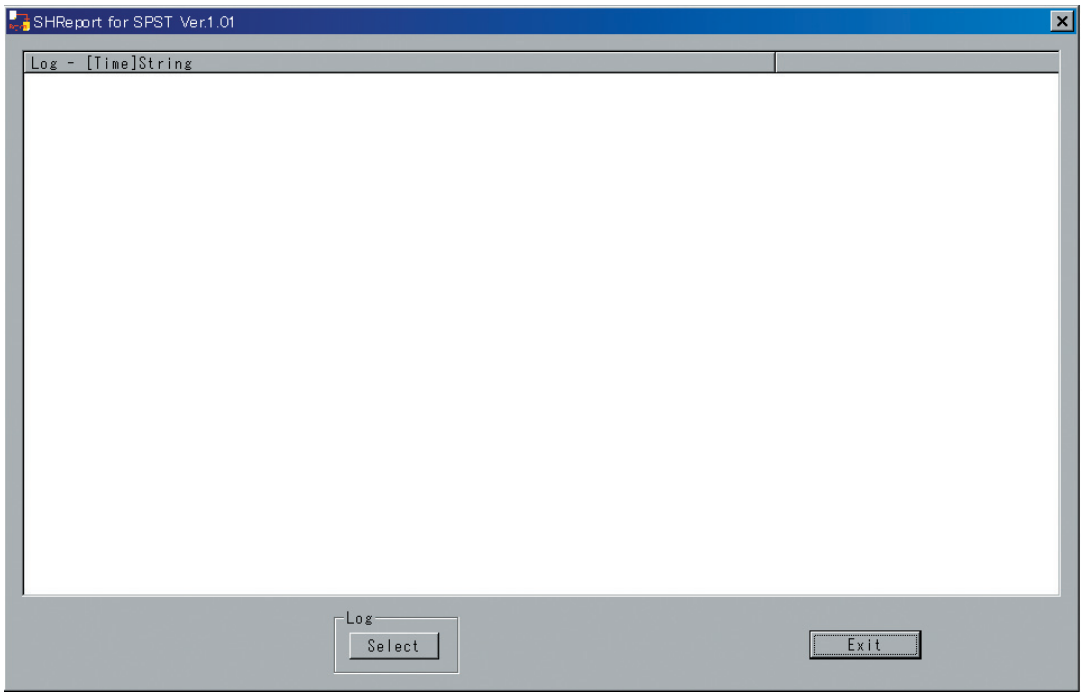
2) Screen description

1. Starting SHReport

   Select Log Viewer on SPST function selection screen and click Execute.

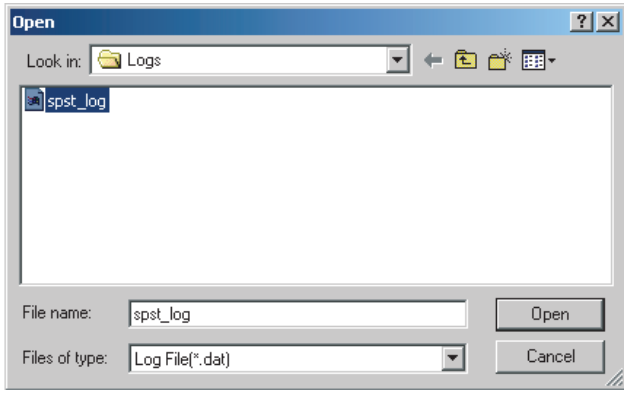
2. SHReport initial screen

   No operation log appears on the initial screen. To view operation logs, click Log-Select, select a log file and open it.



3. Log file selection screen

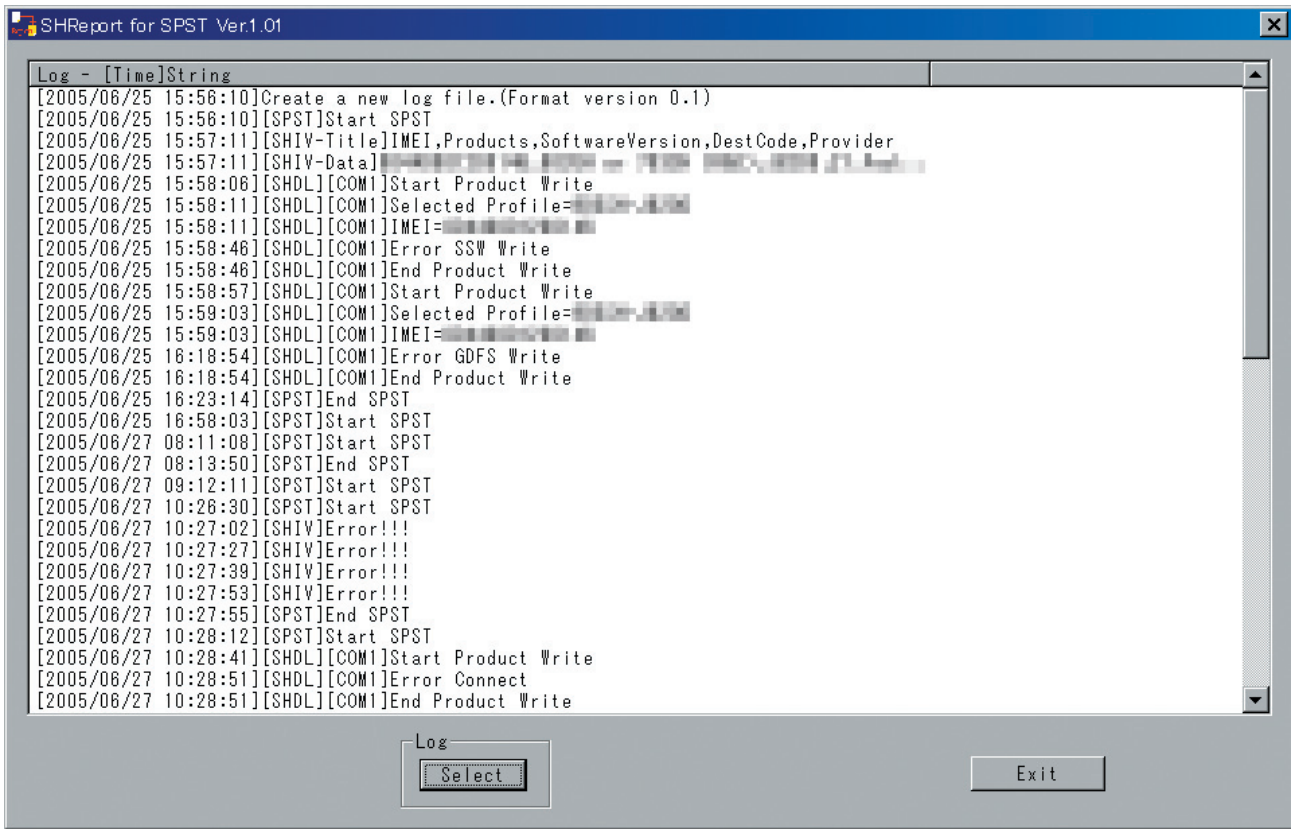
When you click Log-Select, the Open dialog box appears with Logs folder specified.



Select the spst_log.dat file and click Open.

4. Log viewer

Contents in the spst_log.dat file appear.



When you click Exit, SHReport closes and SPST function selection screen returns.

3) Log contents

See the tables below for log contents.

SPST

Header	Strings	Status	Note
[SPST]	Start SPST	Starting SPST	
[SPST]	End SPST	Closing SPST	

SHInfoView

Header	Strings	Status	Note
[SHIV-Title]	IMEI, Products, SoftwareVersion, DestCode, Provider	Handset (Phone) information (title)	
[SHIV-Data]	<IMEI>, <Products>, <SoftwareVersion>, <Dest-Code>, <Provider>	Handset (Phone) information (data)	
[SHIV]	Error!!!	Failure to acquire data	

SHDownLoader

Header	Strings	Status	Note
[SHDL][COM*]	Start Product Write	Starting write operation	* in [COM*]: a number (1-8)
[SHDL][COM*]	IMEI=**********	IMEI number	* in [COM*]: a number (1-8)
[SHDL][COM*]	Selected Profile=<ProfileName>	Selected profile	* in [COM*]: a number (1-8)
[SHDL][COM*]	No error	Write operation succeeded	* in [COM*]: a number (1-8)
[SHDL][COM*]	End Product Write	Write operation completed	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error GDFS Setup	Write operation: error in GFDS Setup	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error IMEI Check	Write operation: error in IMEI Check	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Profile Show	Write operation: error in Profile Show	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error BT Address Backup	Write operation: error in BT Address Backup	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Latest Profile Show	Write operation: error in Latest Profile Show	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error GDFS Backup	Write operation: error in GDFS Backup	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error SSW Write	Write operation: error in SSW Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Production LoaderA	Write operation: error in Production LoaderA	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error GDFS Write	Write operation: error in GDFS Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error BT Address Write	Write operation: error in BT Address Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Profile Write	Write operation: error in Profile Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error IMEI Restore	Write operation: error in IMEI Restore	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error SIMLock Write	Write operation: error in SIMLock Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Full Signature Write	Write operation: error in Full Signature Write	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Disconnect	Write operation: error in Disconnect	* in [COM*]: a number (1-8)
[SHDL][COM*]	Error Connect	Write operation: error in Connect	* in [COM*]: a number (1-8)

SHMEP

Header	Strings	Status	Note
[SHMEP]	IMEI=**********	IMEI No.	
[SHMEP]	Provider=<DestCode>: <Provider>	Destination code: provider/operator name	
[SHMEP]	Notice. This handset (phone) is not locked.	SIM: unlocked	
[SHMEP]	Notice. This handset (phone) is locked.	SIM: locked	
[SHMEP]	Error. Invalid data.	SIM: locked improperly (error)	
[SHMEP]	No error. The counter of lock was already default.	The code counter is already reset; SHMEP operation is not required.	
[SHMEP]	No error. The counter of lock was initialised.	The code counter is reset.	
[SHMEP]	Error. GDFS read error.	Aborted whilst reading GDFS	
[SHMEP]	Error. GDFS write error.	Aborted whilst writing GDFS	
[SHMEP]	Error. Signature error.	GDFS: signature error	

SHDiag

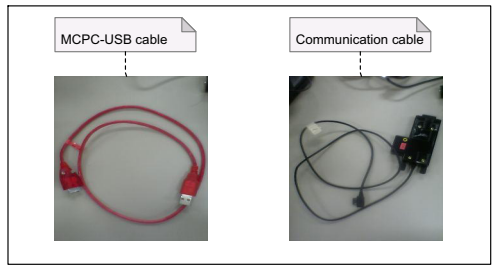
Header	Strings	Status	Note
[SHDG]	IMEI=**********	IMEI No.	During BackupMode Setting
[SHDG]	BackupMode Setting Start	Starting BackupMode Setting	
[SHDG]	Diag Mode Start	Starting Diag Mode	
[SHDG]	Sequence stopped.: No error	Sequence stopped (aborted)	
[SHDG]	Sequence stopped.: Error	Sequence stopped (aborted)	
[SHDG]	Sequence start.: Display test pattern to Main LCD	Sequence started: Display test pattern to Main LCD	
[SHDG]	Sequence start.: Display test pattern to Sub LCD	Sequence started: Display test pattern to Sub LCD	
[SHDG]	Sequence start.: Turn ON Charge LED	Sequence started: Turn on Charge LED	
[SHDG]	Sequence start.: Turn OFF Charge LED	Sequence started: Turn off Charge LED	
[SHDG]	Sequence start.: Turn ON Call LED	Sequence started: Turn on Call LED	
[SHDG]	Sequence start.: Turn OFF Call LED	Sequence started: Turn off Call LED	
[SHDG]	Sequence start.: Turn ON Red LED	Sequence started: Turn on Red LED	
[SHDG]	Sequence start.: Turn OFF Red LED	Sequence started: Turn off Red LED	
[SHDG]	Sequence start.: Turn ON Green LED	Sequence started: Turn on Green LED	
[SHDG]	Sequence start.: Turn OFF Green LED	Sequence started: Turn off Green LED	
[SHDG]	Sequence start.: Turn ON Blue LED	Sequence started: Turn on Blue LED	
[SHDG]	Sequence start.: Turn OFF Blue LED	Sequence started: Turn off Blue LED	
[SHDG]	Sequence start.: Stroboscope ON	Sequence started: Stroboscope on	
[SHDG]	Sequence start.: Turn ON Main LCD back light	Sequence started: Turn on Main LCD backlight	
[SHDG]	Sequence start.: Turn OFF Main LCD back light	Sequence started: Turn off Main LCD backlight	
[SHDG]	Sequence start.: Turn ON Sub LCD back light	Sequence started: Turn on Sub LCD backlight	
[SHDG]	Sequence start.: Turn OFF Sub LCD back light	Sequence started: Turn off Sub LCD backlight	
[SHDG]	Sequence start.: Change brightness of Red LED	Sequence started: Change brightness of Red LED	
[SHDG]	Sequence start.: Change brightness of Green LED	Sequence started: Change brightness of Green LED	
[SHDG]	Sequence start.: Change brightness of Blue LED	Sequence started: Change brightness of Blue LED	
[SHDG]	Sequence start.: Change brightness of Main LCD back light	Sequence started: Change brightness of Main LCD backlight	
[SHDG]	Sequence start.: Change brightness of Sub LCD back light	Sequence started: Change brightness of Main LCD backlight	
[SHDG]	Sequence start.: Display Flicker calibration pattern	Sequence started: Display Flicker calibration pattern	
[SHDG]	Sequence start.: Set Flicker calibration value	Sequence started: Set Flicker calibration value	
[SHDG]	Sequence start.: Save Flicker calibration value	Sequence started: Save Flicker calibration value	
[SHDG]	Quit.	Click Yes for “Quit SHDiag?”	
[SHDG]	Format and Protect ME, and Quit.	Click Yes for “Format and Protect ME, and Quit SHDiag?”	
[SHDG]	<SerialPort> Error: Unknown error occurred in Serial Communication.	Serial port error	
[SHDG]	<SerialPort> Error: Serial Communication is Disabled.	Serial port error	
[SHDG]	<SerialPort> Error: Serial Communication is not ready.	Serial port error	
[SHDG]	<SerialPort> Error: Memory Problem occurred in Serial Communication.	Serial port error	
[SHDG]	<SerialPort> Error: COM Port is not opened.	Serial port error	
[SHDG]	<SerialPort> Error: Failed to open COM Port.	Serial port error	
[SHDG]	<SerialPort> Error: Failed to close COM Port.	Serial port error	
[SHDG]	<SerialPort> Error: COM Port failed to send.	Serial port error	

SHPwdReset

Header	Strings	Status	Note
[SHPR]	IMEI=**********	IMEI No.	
[SHPR]	No error	Successfully completed	
[SHPR]	Error	Aborted	
[SHPR]	<SerialPort> Error: Unknown error occurred in Serial Communication.	Serial port error	
[SHPR]	<SerialPort> Error: Serial Communication is Disabled.	Serial port error	
[SHPR]	<SerialPort> Error: Serial Communication is not ready.	Serial port error	
[SHPR]	<SerialPort> Error: Memory Problem occurred in Serial Communication.	Serial port error	
[SHPR]	<SerialPort> Error: COM Port is not opened.	Serial port error	
[SHPR]	<SerialPort> Error: Failed to open COM Port.	Serial port error	
[SHPR]	<SerialPort> Error: Failed to close COM Port.	Serial port error	
[SHPR]	<SerialPort> Error: COM Port failed to send.	Serial port error	

5. Annex: Basic work flowcharts

Basic work flowcharts for upgrading the software version.



Remove SIM and SD cards from ME.

Start

Get information from ME

Function : SHInfoView
Cable : Communication cable (Baud Rate 115 k - 460 kbps)
Power supply : Charger or battery
Time : 1 min

ME power turns on properly?

No

Repair it in another method.

Abort

Yes

Need repair ?

No

Yes

Back up user data

[BackupMode Setting]
Function : SHDiag - BackupMode Setting
Cable : MCPC-USB
Power supply : Battery
Time: 1 min

[Backup of user data]
Function : USERDATA BACKUP TOOL (another tool)
Cable : MCPC-USB
Power supply : Battery
Time: 10 min

Download TP

Function : SHDownLoader
Cable : Communication cable
Power supply : Charger
Time : 5 min

Repair

Function : SHDiag - Diag mode
Cable : Communication cable (Baud Rate 460 kbps)
Power supply : Battery
Time : ?

1

Version upgrade necessary?

No

Was InitializeBoot started by Quit(Protect, Format) of SHDiag?

Yes

No

Function : SHDownLoader
Cable : Communication cable (Baud Rate 460 kbps)
Power supply : Charger
Time : 1 min

Yes

Function : SHDownLoader
Cable : Communication cable (Baud Rate 460 kbps)
Power supply : Charger
Time : 20 min

Upgrade software (with flag setting for initialisation)

Flag setting (for initialisation) only

2

ME InitializeBoot

Turn on and off ME power twice.

[1st time: InitializeBoot]
Time: 7 - 9 min

[2nd time: Normal mode boot]
Time: 1 min

User data restoration necessary?

No

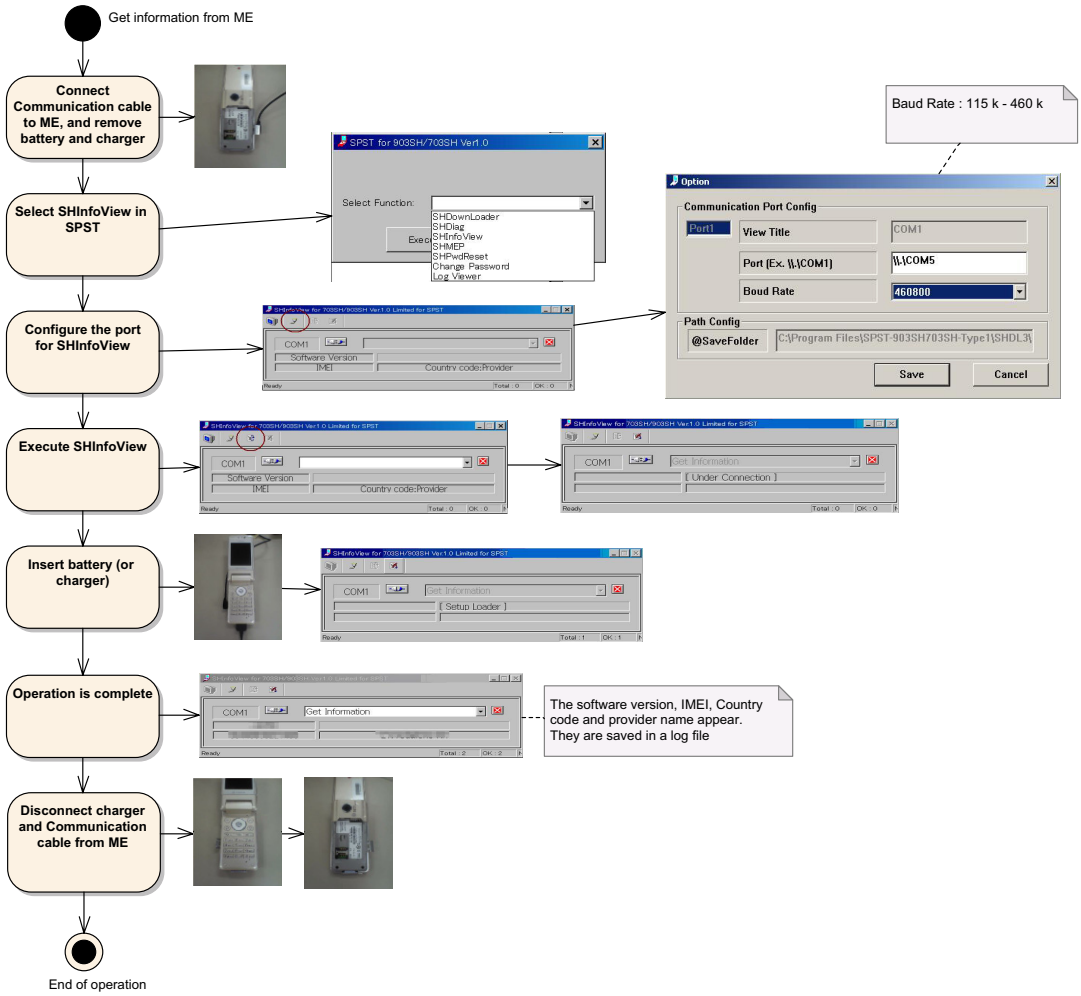
Yes

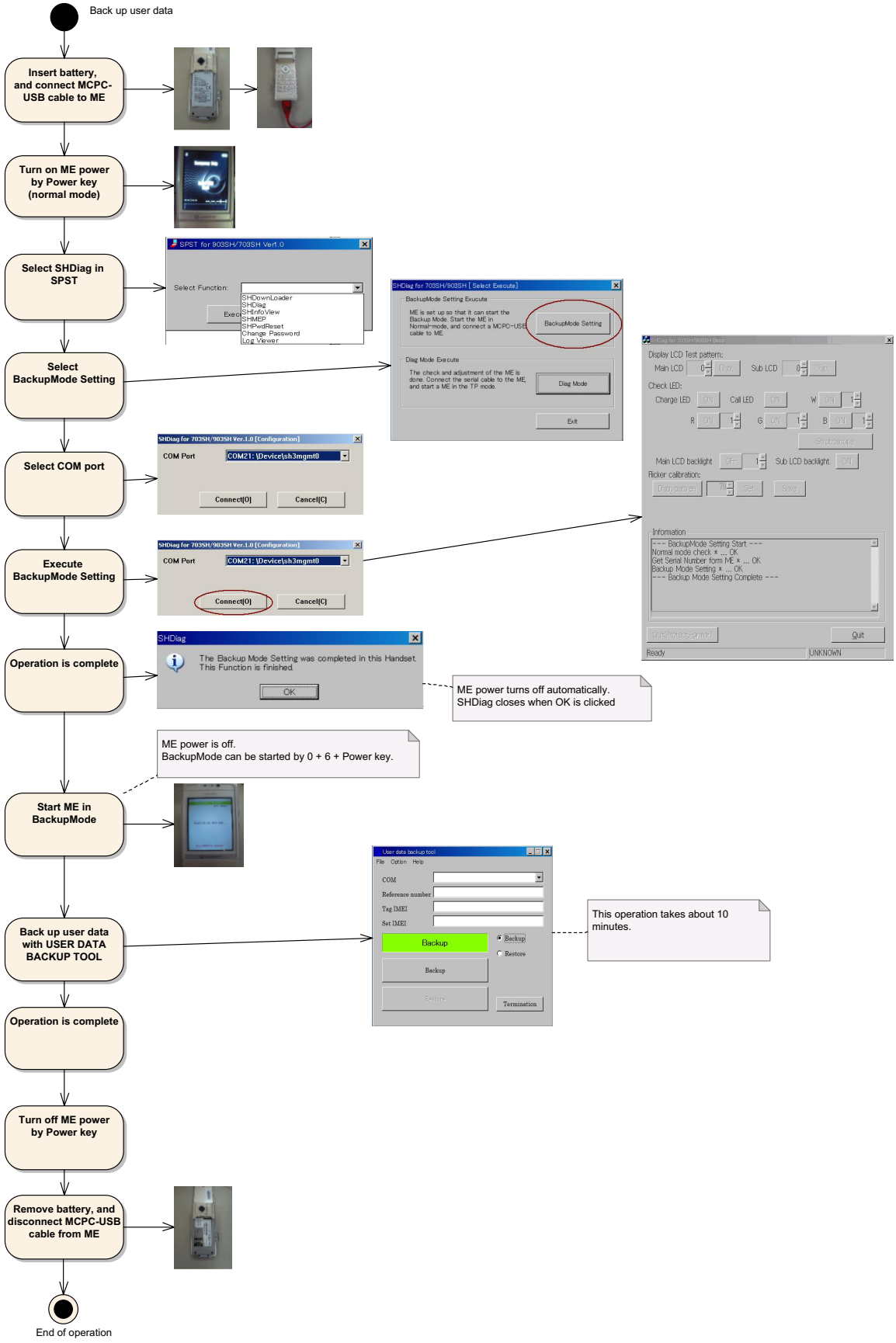
Restore user data

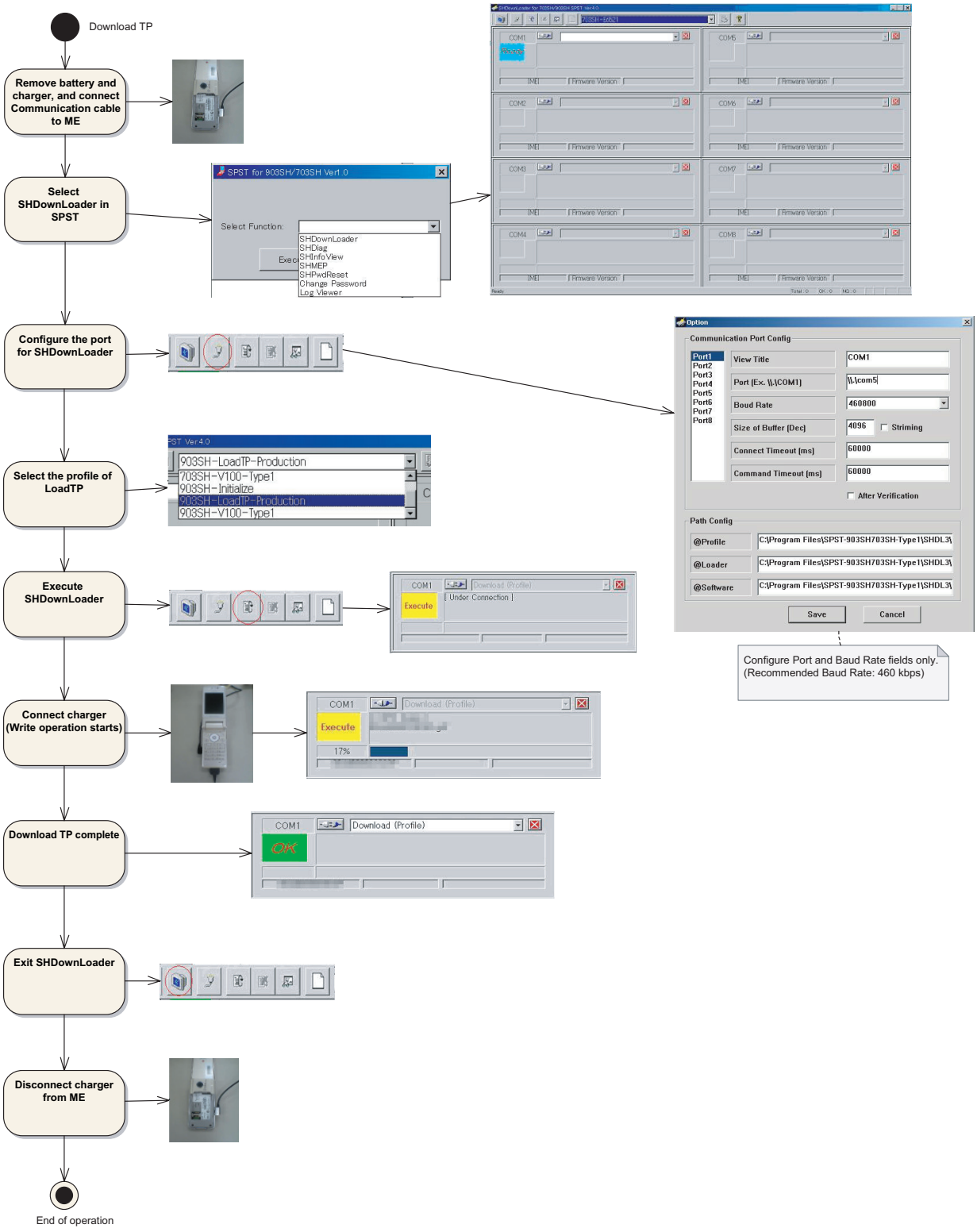
[BackupMode Setting]
Function : SHDiag - BackupMode Setting
Cable : MCPC-USB
Power supply : Battery
Time : 1 min

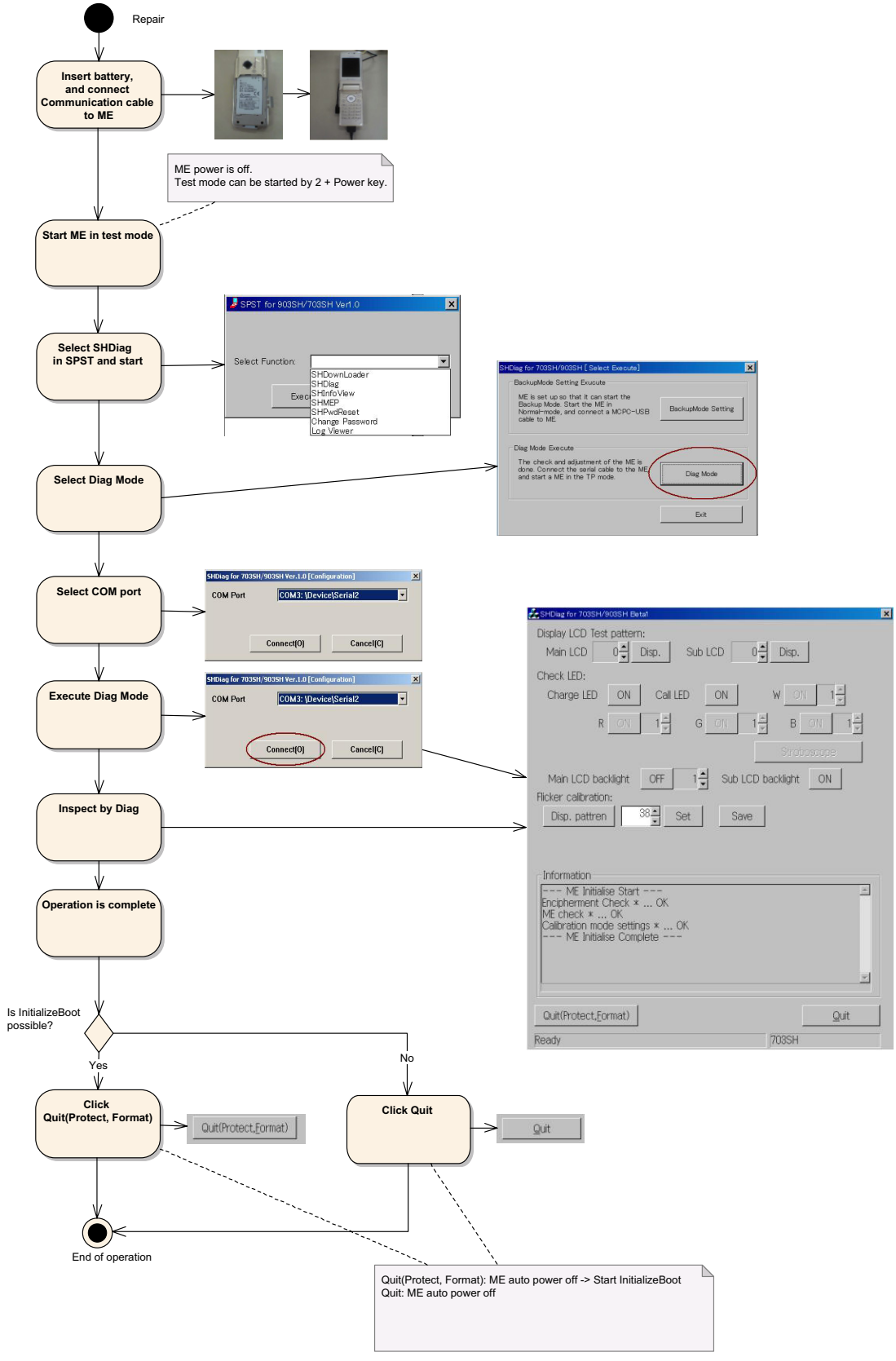
[User data restoration]
Function : USERDATA BACKUP TOOL (another tool)
Cable : MCPC-USB
Power supply : Battery
Time : >20 min

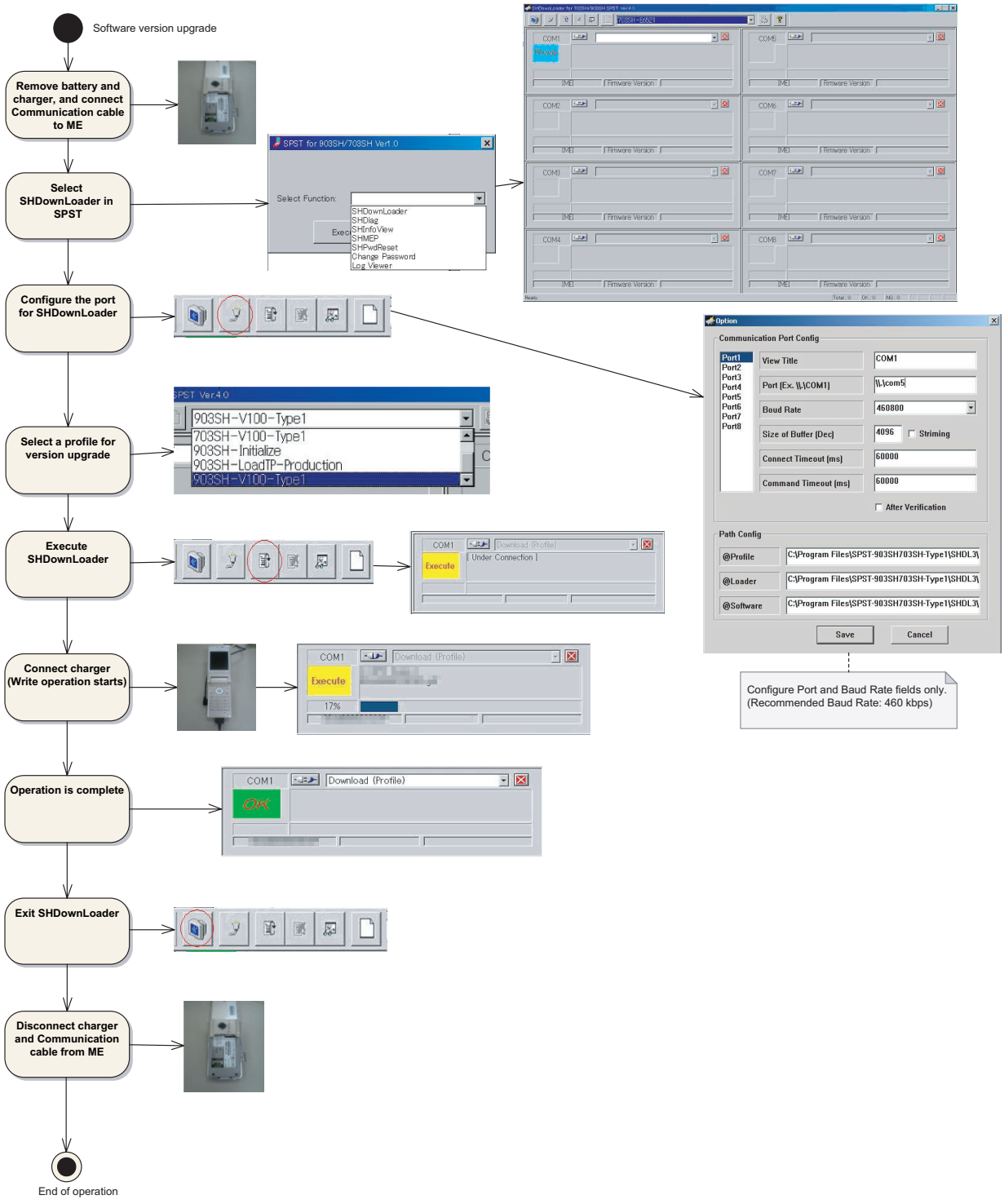
End

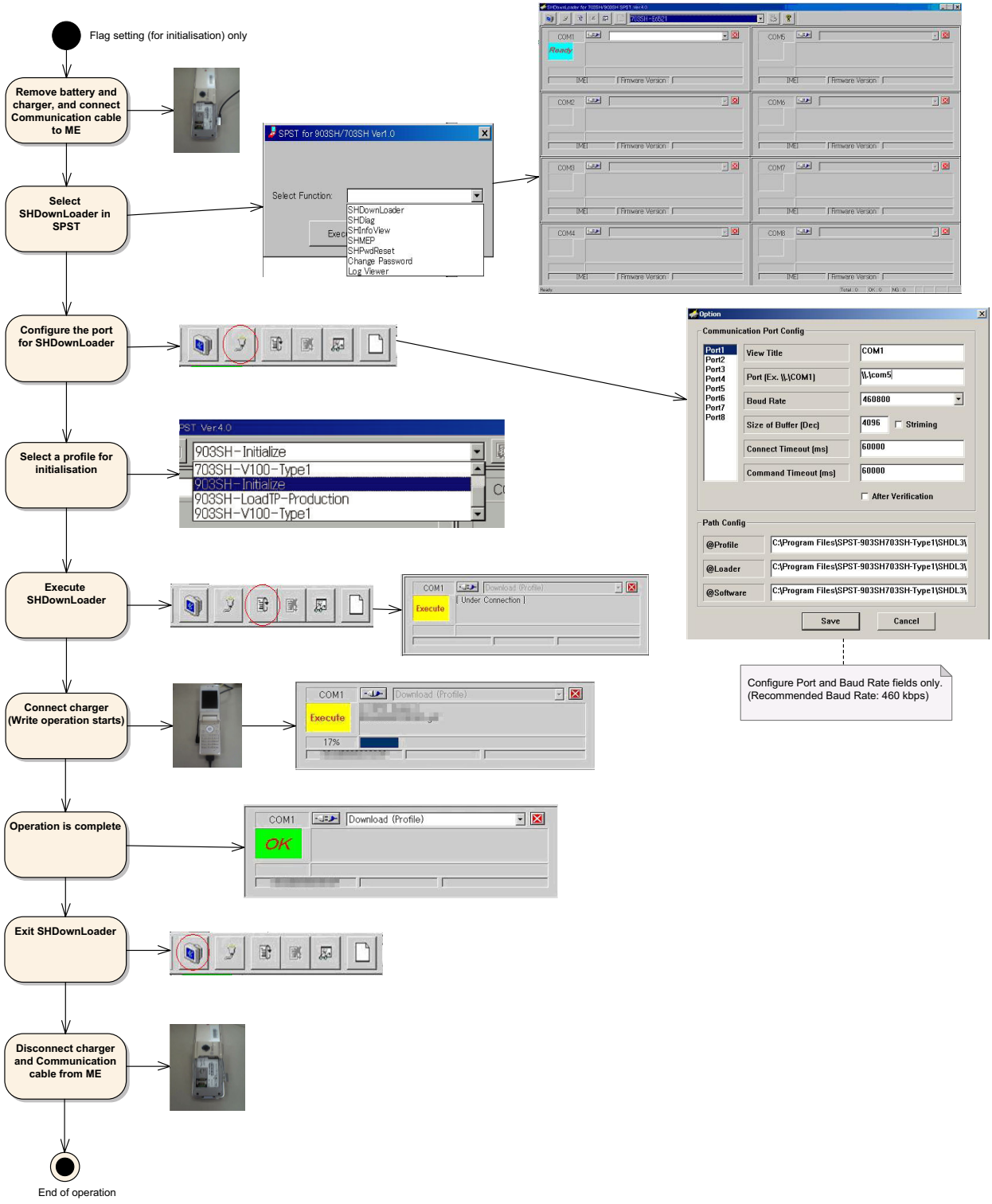


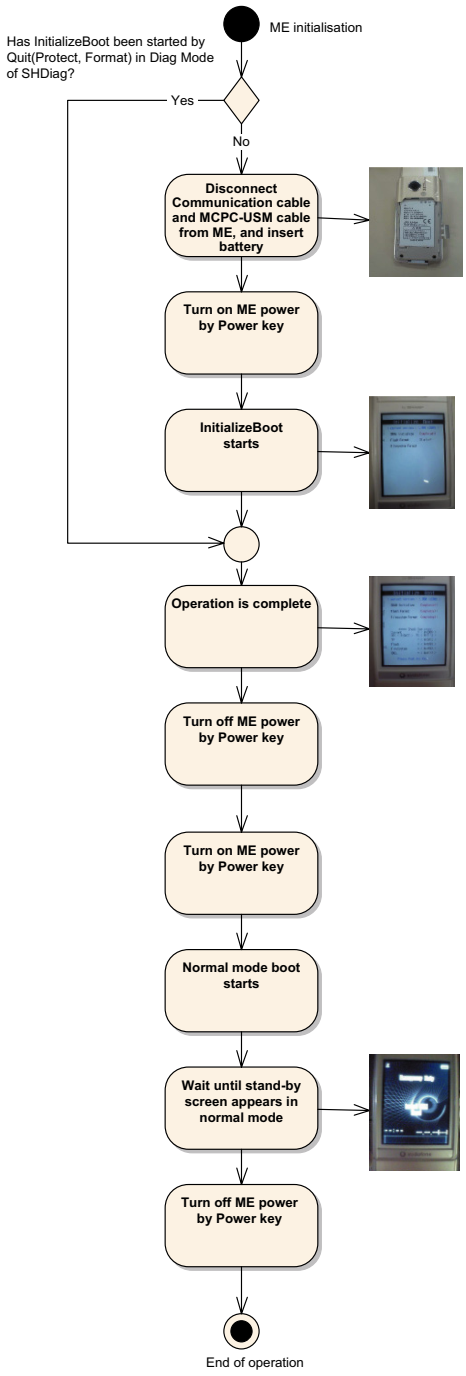

Back up user data
Insert battery, and connect MCPC-USB cable to ME
Turn on ME power by Power key (normal mode)
Select SHDiag in SPST
SPST for 903SH/703SH Ver1.0
Select Function:
SHDownLoader
SHDiag
SHInfoView
SHMEP
SHPwdReset
Change Password
Log Viewer
Select BackupMode Setting
SHDiag for 703SH/903SH [Select Execute]
BackupMode Setting Exucute
BackupMode Setting
Diag Mode Execute
Diag Mode
Exit
Select COM port
SHDiag for 703SH/903SH Ver.1.0 [Configuration]
COM Port
COM21: \Device\sh3mgmt0
Connect(O)
Cancel(C)
Execute BackupMode Setting
Operation is complete
SHDiag
The Backup Mode Setting was completed in this Handset.
This Function is finished.
OK
ME power turns off automatically.
SHDiag closes when OK is clicked
Display LCD Test pattern:
Main LCD
Sub LCD
Check LED:
Charge LED
Call LED
Main LCD backlight
Sub LCD backlight
Flicker calibration:
Information
--- BackupMode Setting Start ---
Normal mode check × ... OK
Get Serial Number form ME × ... OK
Backup Mode Setting × ... OK
--- Backup Mode Setting Complete ---
Quit
Ready
UNKNOWN
ME power is off.
BackupMode can be started by 0 + 6 + Power key.
Start ME in BackupMode
Back up user data with USER DATA BACKUP TOOL
User data backup tool
File Option Help
COM
Reference number
Tag IMEI
Set IMEI
Backup
Restore
Termination
This operation takes about 10 minutes.
Operation is complete
Turn off ME power by Power key
Remove battery, and disconnect MCPC-USB cable from ME
End of operation

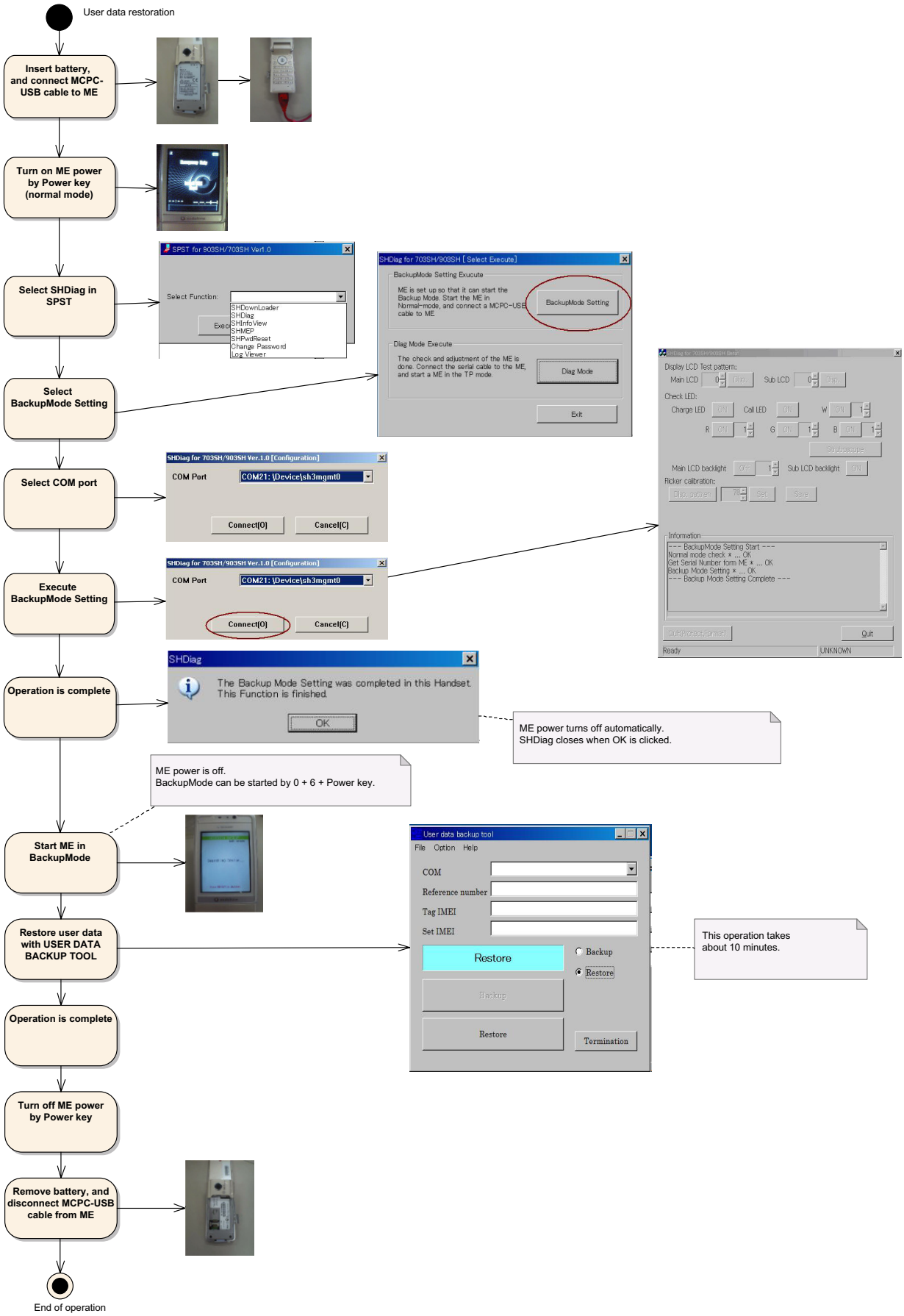



Repair
Insert battery, and connect Communication cable to ME
ME power is off.
Test mode can be started by 2 + Power key.
Start ME in test mode
Select SHDiag in SPST and start
SPST for 903SH/703SH Ver1.0
Select Function:
SHDownLoader
SHDiag
SHInfoView
SHMEP
SHPwdReset
Change Password
Log Viewer
Select Diag Mode
SHDiag for 703SH/903SH [Select Execute]
BackupMode Setting Excute
ME is set up so that it can start the Backup Mode. Start the ME in Normal-mode, and connect a MCPC-USB cable to ME
BackupMode Setting
Diag Mode Execute
The check and adjustment of the ME is done. Connect the serial cable to the ME and start a ME in the TP mode.
Diag Mode
Exit
Select COM port
SHDiag for 703SH/903SH Ver.1.0 [Configuration]
COM Port
COM3: \Device\Serial2
Connect(O)
Cancel(C)
Execute Diag Mode
Inspect by Diag
SHDiag for 703SH/903SH Beta!
Display LCD Test pattern:
Main LCD
Disp.
Sub LCD
Check LED:
Charge LED
Call LED
W
R
G
B
Stroboscope
Main LCD backlight
OFF
Sub LCD backlight
Flicker calibration:
Disp. pattren
Set
Save
Information
--- ME Initialise Start ---
Encipherment Check * ... OK
ME check * ... OK
Calibration mode settings * ... OK
--- ME Initialise Complete ---
Quit(Protect,Format)
Quit
Ready
703SH
Operation is complete
Is InitializeBoot possible?
Yes
No
Click Quit(Protect, Format)
Quit(Protect,Format)
Click Quit
Quit
End of operation
Quit(Protect, Format): ME auto power off -> Start InitializeBoot
Quit: ME auto power off




Flag setting (for initialisation) only
Remove battery and charger, and connect Communication cable to ME
Select SHDownLoader in SPST
SPST for 903SH/703SH Ver1.0
Select Function:
SHDownLoader
SHDiag
SHInfoView
SHMEP
SHPwdReset
Change Password
Log Viewer
Configure the port for SHDownLoader
Option
Communication Port Config
Port1
Port2
Port3
Port4
Port5
Port6
Port7
Port8
View Title
COM1
Port (Ex. \\.\COM1)
\\.\com5
Boud Rate
460800
Size of Buffer (Dec)
4096
Striming
Connect Timeout (ms)
60000
Command Timeout (ms)
60000
After Verification
Path Config
@Profile
C:\Program Files\SPST-903SH703SH-Type1\SHDL3\
@Loader
C:\Program Files\SPST-903SH703SH-Type1\SHDL3\
@Software
C:\Program Files\SPST-903SH703SH-Type1\SHDL3\
Save
Cancel
Configure Port and Baud Rate fields only.
(Recommended Baud Rate: 460 kbps)
Select a profile for initialisation
903SH-Initialize
703SH-V100-Type1
903SH-Initialize
903SH-LoadTP-Production
903SH-V100-Type1
Execute SHDownLoader
COM1
Download (Profile)
Execute
[Under Connection]
Connect charger (Write operation starts)
COM1
Download (Profile)
Execute
17%
Operation is complete
COM1
Download (Profile)
OK
Exit SHDownLoader
Disconnect charger and Communication cable from ME
End of operation


ME initialisation
Has InitializeBoot been started by Quit(Protect, Format) in Diag Mode of SHDiag?
Yes
No
Disconnect Communication cable and MCPC-USM cable from ME, and insert battery
Turn on ME power by Power key
InitializeBoot starts
Operation is complete
Turn off ME power by Power key
Turn on ME power by Power key
Normal mode boot starts
Wait until stand-by screen appears in normal mode
Turn off ME power by Power key
End of operation


User data restoration
Insert battery, and connect MCPC-USB cable to ME
Turn on ME power by Power key (normal mode)
Select SHDiag in SPST
SPST for 903SH/703SH Ver1.0
Select Function:
SHDownLoader
SHDiag
SHInfoView
SHMEP
SHPwdReset
Change Password
Log Viewer
Select BackupMode Setting
SHDiag for 703SH/903SH [Select Execute]
BackupMode Setting Exucute
ME is set up so that it can start the Backup Mode. Start the ME in Normal-mode, and connect a MCPC-USB cable to ME.
BackupMode Setting
Diag Mode Execute
The check and adjustment of the ME is done. Connect the serial cable to the ME, and start a ME in the TP mode.
Diag Mode
Exit
Select COM port
SHDiag for 703SH/903SH Ver.1.0 [Configuration]
COM Port
COM21: \Device\sh3mgmt0
Connect(O)
Cancel(C)
Execute BackupMode Setting
Operation is complete
SHDiag
The Backup Mode Setting was completed in this Handset.
This Function is finished.
OK
ME power turns off automatically.
SHDiag closes when OK is clicked.
Display LCD Test pattern:
Main LCD
Sub LCD
Check LED:
Charge LED
Call LED
Main LCD backlight
Sub LCD backlight
Flicker calibration:
Information
--- BackupMode Setting Start ---
Normal mode check × .... OK
Get Serial Number form ME × .... OK
Backup Mode Setting × .... OK
--- Backup Mode Setting Complete ---
Quit
Ready
UNKNOWN
ME power is off.
BackupMode can be started by 0 + 6 + Power key.
Start ME in BackupMode
Restore user data with USER DATA BACKUP TOOL
User data backup tool
File Option Help
COM
Reference number
Tag IMEI
Set IMEI
Restore
Backup
Backup
Restore
Termination
This operation takes about 10 minutes.
Operation is complete
Turn off ME power by Power key
Remove battery, and disconnect MCPC-USB cable from ME
End of operation

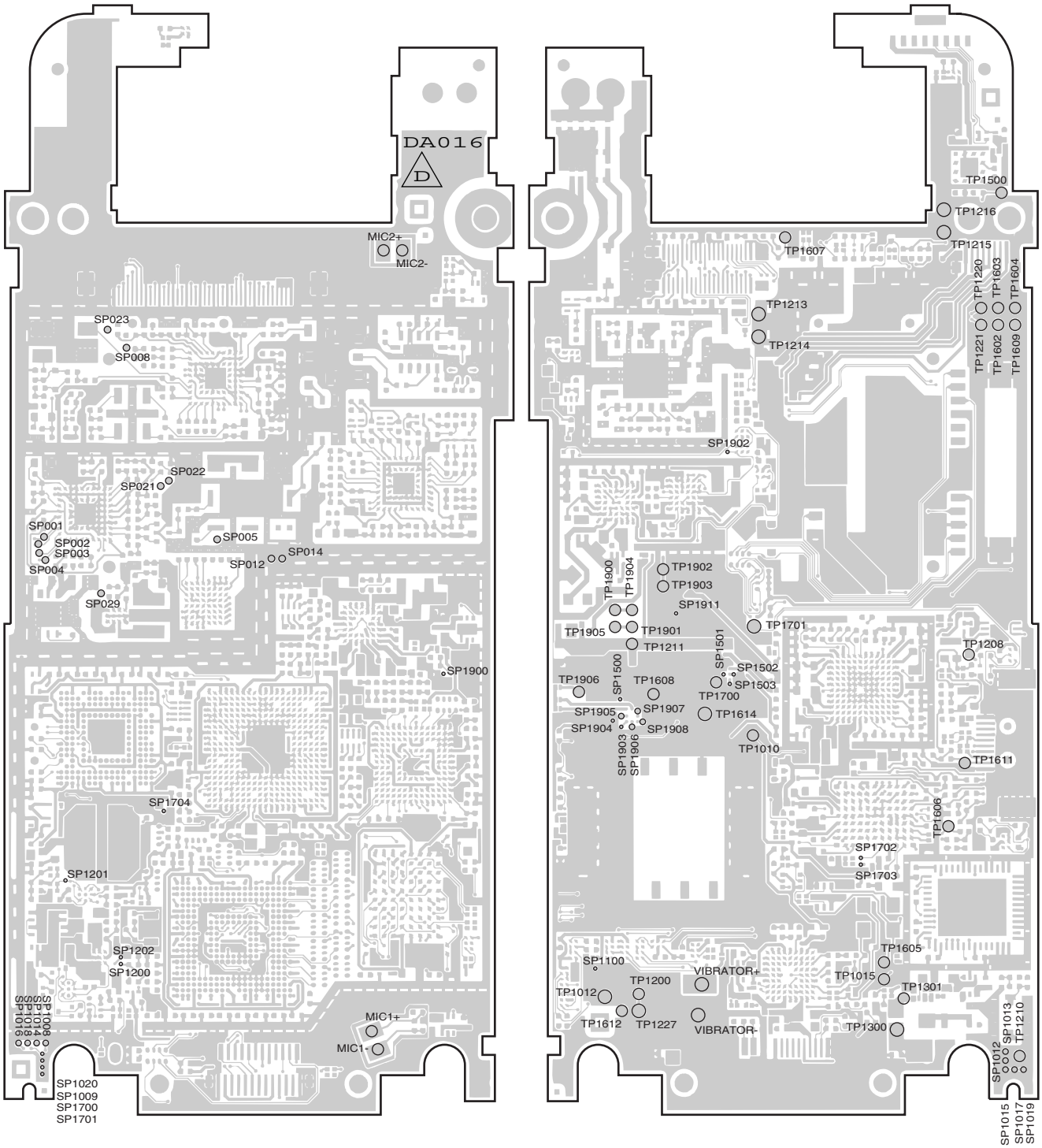
[2] Test points

Main PWB

No.	Checker	Ref.	Name	ϕ	Output		Input	Function	Remarks
1	O	TP1010	SYSCLK2	1	IC1000	→	IC101	13 MHz	
2	O	TP1012	TPIN	1.2		→	IC1000	Test mode setting (Low)	
3	O	TP1015	RTCCLK	1	IC1000	→	IC1001 IC1200 IC1400	32.768 kHz	
4	O	TP1200	VRTC15	1	IC1206	→	IC1000	1.5 V power supply	
5	O	TP1208	PRGDET	1		→	Q1204	Loader mode	
6	O	TP1210	VCHG	1	Q1205	→	Q1200 D1200 Q1208	Protection circuit check	
7	O	TP1211	VBATIB	1	IC1203 CN1200	→		Power supply for baseband	
8	O	TP1213	VBATIB	1.2	CN1200	→		Power supply	
9	O	TP1214	VBATIB	1.2	CN1200	→		Power supply	
10	O	TP1215	GND	1.2		→		Earth	
11	O	TP1216	GND	1.2		→		Earth	
12	O	TP1220	BEARP	1	IC1200	→	EAR	Receiver P	
13	O	TP1221	BEARN	1	IC1200	→	XEAR	Receiver N	
14	O	TP1227	ONSWA	1.2		→	IC1200	Start factor (Power Key)	
15	O	TP1300	VDCIO	1.2	CN1300	→	Q1205	External power supply (Charger)	
16	O	TP1301	VBUS	1	CN1300	→	IC1501	VBUS (USB)	
17	O	TP1500	SYSCLK1	1	IC1000	→	IC1108 IC1500 IC1502	13 MHz	
18	O	TP1602	SP-R2	1	IC1700	→	CN3003	Speaker2 R-ch	
19	O	TP1603	SP-R1	1	IC1700	→	CN3003	Speaker1 R-ch	
20	O	TP1604	SP-L2	1	IC1700	→	CN3004	Speaker2 L-ch	
21	O	TP1605	JEARR	1	IC1600	→	JK1600	Head set receiver R-ch	
22	O	TP1606	JEARL	1	IC1600	→	JK1600	Head set receiver L-ch	
23	O	TP1607	MIC2+	1	MIC2+	→	IC1200	MIC2	
24	O	TP1608	MIC2-	1	MIC2-	→	GND	MIC Earth	
25	O	TP1609	SP-L1	1	IC1700	→	CN3004	Speaker1 L-ch	
26	O	TP1611	JMIC	1	JK1600	→	IC1200	Head set MIC	
27	O	TP1612	MIC1+	1	MIC1+	→	IC1200	MIC1	
28	O	TP1614	UART0RX	1.2	JK1600	→	IC1000 IC1602	UART Rx and Optical recording	
29	O	TP1700	BECLK	1	IC1500	→	IC1700	27 MHz	
30	O	TP1701	UART0TX	1.2	IC1000 IC1700	→	JK1600	UART Tx and Video output	
31	O	TP1900	RVDDN8	1	IC1906	→	CN1900	-8 V power supply for camera	
32	O	TP1901	RVDD15	1	IC1906	→	CN1900	15 V power supply for camera	
33	O	TP1902	RGB+	1	IC1906 D1900	→	CN1901	Power supply for mobile light (LED)	
34	O	TP1903	RGB+	1	IC1906 D1900	→	CN1901	Power supply for mobile light (LED)	
35	O	TP1904	RVDDN8	1	IC1906	→	CN1900	-8 V power supply for camera	
36	O	TP1905	RVDD15	1	IC1906	→	CN1900	15 V power supply for camera	
37	O	TP1906	CCV12	1	IC1906	→	IC1900	1.2 V power supply for camera DSP	

MAIN PWB-A
(FRONT SIDE)

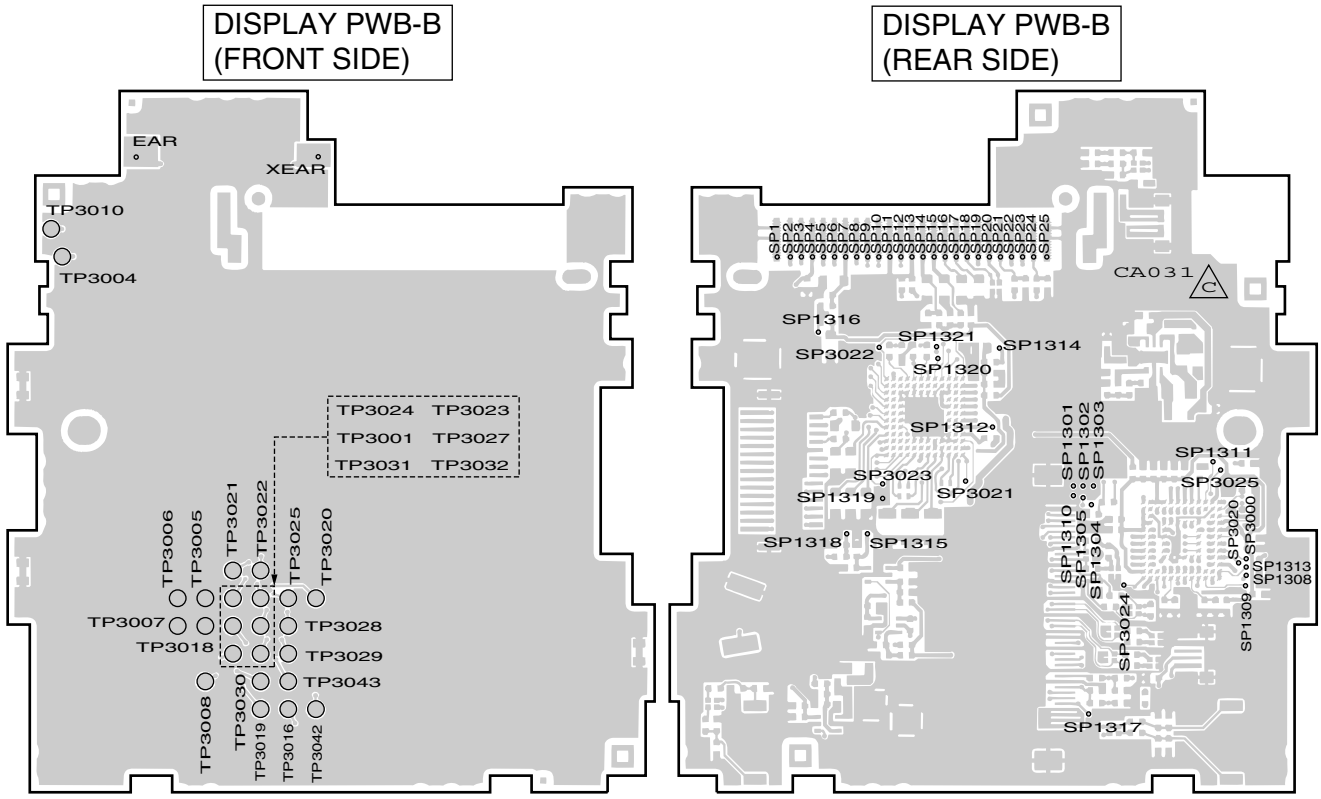
MAIN PWB-A
(REAR SIDE)



TEST POINT 1

Display PWB

No.	Checker	Ref.	Name	ϕ	Output		Input	Function	Remarks
1	O	TP3016	VBATIB	1.2	CN1200	→	IC3002 IC3003 IC3004	Battery	
2	O	TP3018	GND	1.2		→		Earth	
3	O	TP3005	GND	1.2		→		Earth	
4	O	TP3006	GND	1.2		→		Earth	
5	O	TP3007	GND	1.2		→		Earth	
6	O	TP3025	ORCAINT	1.2	IC3000	→	IC1500	LCD INT Signal	
7	O	TP3019	LCDRST	1.2	IC1500	→	IC3000	LCD RESET Signal	
8	O	TP3042	POW_CE	1.2	IC1200	→	IC3002 IC3004	REG CE Signal	
9		TP3043	POW_ECO	1.2	IC1000	→	IC3002 IC3003 IC3004	REG ECO Mode Control Signal	
10	O	TP3020	TXVDON	1.2	IC1500	→	IC3000	VD-LINK ON/OFF Control	
11	O	TP3021	VTX1DP	1.2	IC1500	→	IC3000	VD-LINK operational data input	
12	O	TP3022	VTX1DN	1.2	IC1500	→	IC3000	VD-LINK operational data input	
13	O	TP3023	VTX1CKP	1.2	IC1500	→	IC3000	VD-LINK operating clock input	
14	O	TP3024	VTX1CKN	1.2	IC1500	→	IC3000	VD-LINK operating clock input	
15	O	TP3008	LCDCLK	1.2	IC1500	→	IC3000	Display clock (6.5 MHz)	
16	O	TP3027	VRX1DP	1.2	IC3000	→	IC1500	VD-LINK operational data output	
17	O	TP3028	VRX1DN	1.2	IC3000	→	IC1500	VD-LINK operational data output	
18	O	TP3029	VRX1CKP	1.2	IC3000	→	IC1500	VD-LINK operating clock output	
19	O	TP3032	VRX1CKN	1.2	IC3000	→	IC1500	VD-LINK operating clock output	
20	O	TP3001	SUBVS	1.2	Sub camera	→	IC1500	Sub camera vertical sync signal	
21	O	TP3004	LED+	1.2	IC3011	→	TP3004	Display backligh +,white LED boost output	
22	O	TP3010	LED-	1.2	TP3010	→	IC3011	Display backligh -,white LED feed-back circuit	
23	O	TP3030	I2CCLKB	1.2	IC1500	→	IC3000 Sub camera	I2C clock	
24	O	TP3031	I2CDATB	1.2	IC1500	↔	IC3000 Sub camera	I2C data	



TEST POINT 2

[3] Troubleshooting

1. No voice is heard and playback is impossible.

1.1. Earpiece

Is the signal sent to R3036 and R3037?
YES → C3055 and C3105 are defective. Otherwise the earpiece is defective, or in poor contact with the Display PWB-B.
NO ↓

Is the signal sent to R3034?
YES → R3034, R3036 and R3037 are defective.
NO ↓

Is the signal sent to L1502 and L1503?
YES → The coaxial cable is defective, or in poor contact with the connector.
NO ↓

Is the signal sent to R1213 and R1235?
YES → R1213, R1235, L1502 and L1503 are defective.
NO ↓

IC1200 is defective.

1.2. Handsfree

Is the signal sent to TP1605 and TP1606?
YES → JK1600, the handsfree earpiece, L1603 and L1604 are defective.
NO ↓

Is the signal sent to R1614?
YES → R1614, R1620, R1621, R1623, C1622, C1623, Q1700, Q1701, R1717, C1720, C1721, R1715 and R1716 are defective.
NO ↓

Is the signal sent to C1612?
YES → IC1600, C1612 and R1607 are defective.
NO ↓

IC1200 is defective.

2. Voice transmission/recording is impossible.

2.1. Built-in microphones 1 and 2

Is 2.2 V or more applied to TP1607 and TP1612?
NO → Is 2.2 V or more applied to C1624?
NO → IC1200 is defective.

YES ↓ C1627, C1630, IC1200 or the microphone is defective.

YES ↓ C1624, R1626, R1628, R1629, R1631, C1605, C1626, C1629 and C1631 are defective.

2.2. Headphones

Is 2.2 V or more applied to TP1611?
NO → Is 2.2 V or more applied to C1624?
NO → IC1200 is defective.

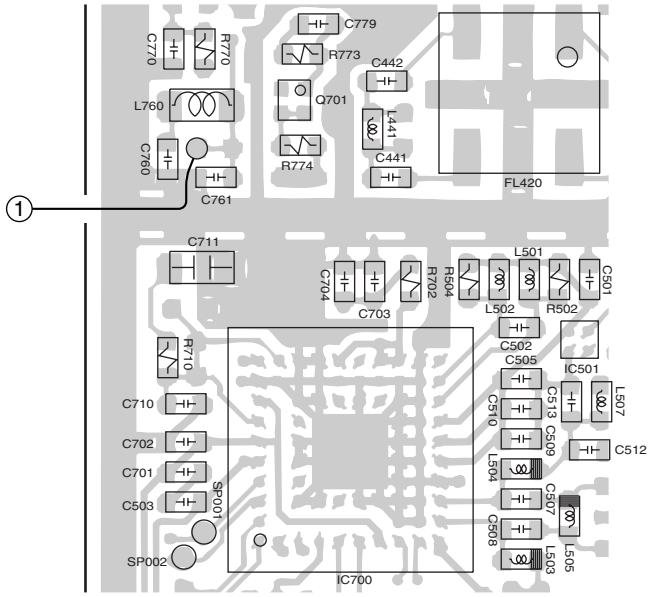
YES ↓ L1600, L1601, C1632, C1634, R1615, JK1600 and the headphones are defective. Otherwise, JK1600 is in poor contact with the socket.

YES ↓ C1624, R1624, R1625, C1625, L1600, C1634 and L1601 are defective.

3. Power does not turn on.

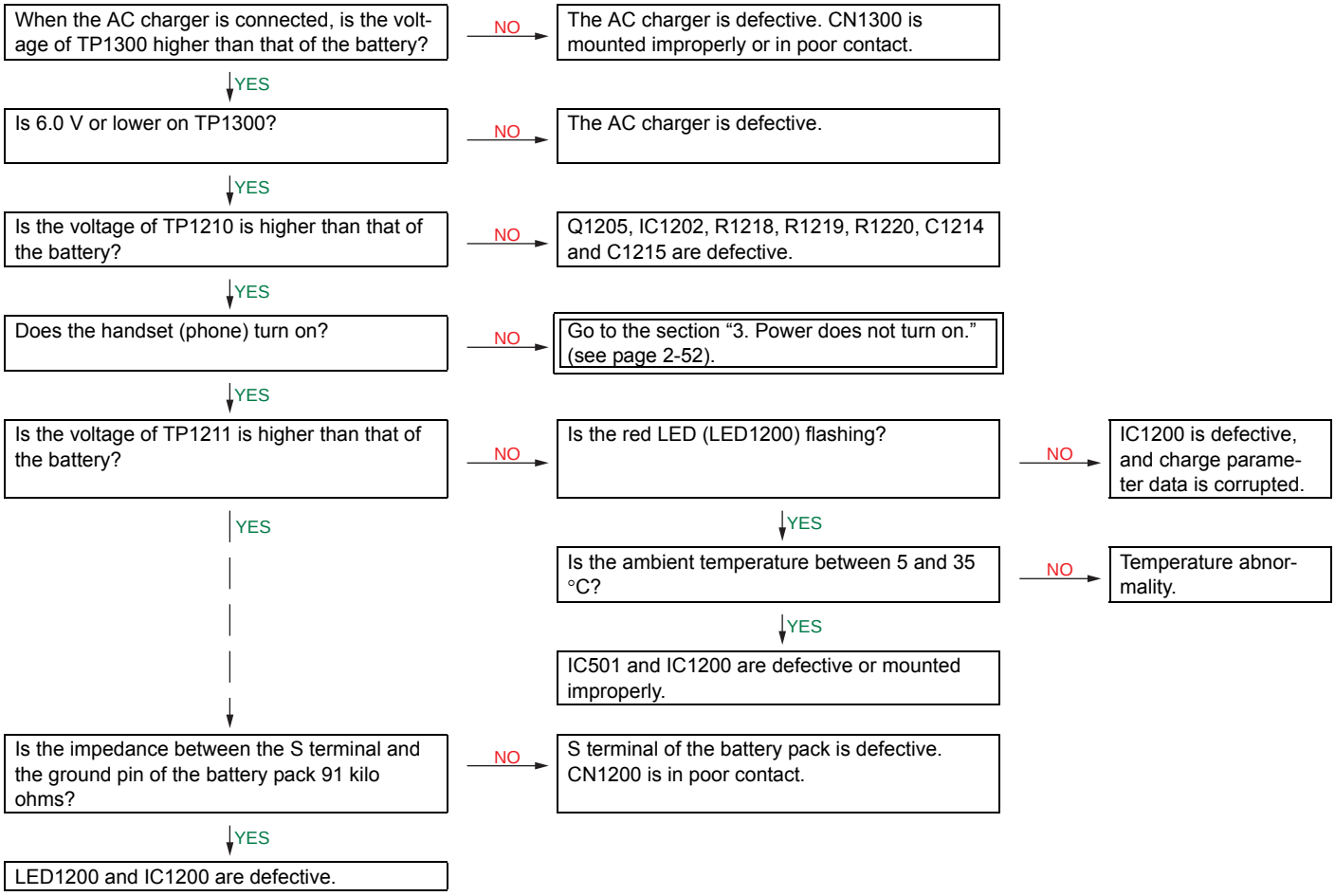
Is the voltage of the battery 3.6 V or more?	NO →	The battery is dead, defective, or deteriorated.
↓YES		
Is 3.6 V or more (approximately the same as the battery voltage) on TP1213 and TP1214?	NO →	The battery terminal CN1200 is mounted improperly or in poor contact.
↓YES		
Is 3.6 V or more (approximately the same as the battery voltage) on TP1211?	NO →	Fuse FS1200 is blown, resistance R1227 is defective, or power amplifier IC300 is defective.
↓YES		
Does MCLK (point ①) oscillate at 13 MHz?	NO →	IC400 and peripheral circuits are defective.
↓YES		
Is 1.5 V applied to R1210 when the Power key is pressed?	NO →	IC1200, Q1201 and L1200 are defective or mounted improperly.
↓YES		
Is 1.5 V supplied from TP1200?	NO →	IC1206 is defective or mounted improperly.
↓YES		
Is 32.768 kHz supplied from RTCCLK (TP1015)?	NO →	IC1000 and X1000 are defective or mounted improperly.
↓YES		
IC1000, IC1100 and IC1200 are defective or mounted improperly.		

MAIN PWB-A (FRONT SIDE)

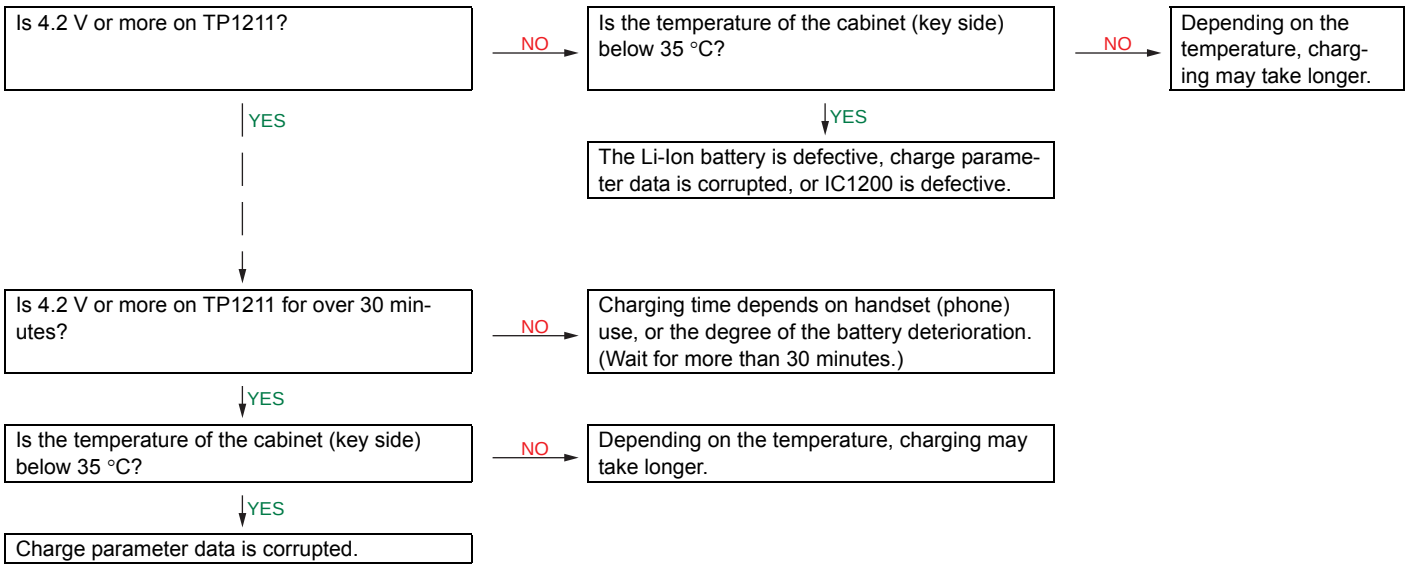


4. Battery does not charge/Charging does not complete.

4.1. Battery does not charge.



4.2. Charging does not complete.



5. System settings are reset.

Is SP1200 at high level (2.75 V) when the Power key is pressed with 3.7 V applied to the battery terminal (TP1213)?
NO → Go to the section "3. Power does not turn on." (see page 2-52).
YES ↓
Is the S terminal normal? (Impedance: 91 kilo ohms)
NO → IC1200 or the battery is defective or the battery is mounted improperly.
YES ↓
Is the SIM card recognised?
NO → Connection to the SIM card is instantaneously interrupted.
YES ↓
Are the battery terminals clean?
NO → Connection to the battery terminal is instantaneously interrupted.
YES ↓
The software has a problem, or IC1100 parts are defective.

6. Clock settings are reset.

Is 1.5 V applied to TP1200 with 3.7 V applied to the battery terminal (TP1213)?
NO → IC1206, R1242 and C1241 are defective, or mounted improperly.
YES ↓
Is 1.0 V or more on C1213 and D1203 with the battery terminal (TP1213) disconnected?
NO → Is the voltage of the back-up battery 1.0 V or more?
NO → The back-up battery is defective or deteriorated, or earth short circuit.
YES ↓
Is the voltage of SP1318 1.0 V or more?
NO → The back-up battery is mounted improperly.
YES ↓
CN3000 and CN1501 are defective, or the coaxial cable is broken.
YES ↓
IC1000 is defective.

7. Vibrator does not work.

Is 3.0 V applied between VIBRATOR+ and VIBRATOR- in the vibrator operation mode when the vibrator is removed?
YES → Is 3.0 V applied between VIBRATOR+ and VIBRATOR- in the vibrator operation mode when the vibrator is attached?
NO → The vibrator is defective.
NO ↓
YES ↓
The vibrator is in poor contact with the PWB land. Otherwise the vibrator is defective, or there is clogging caused by foreign objects.
Is the control signal sent to SP1900?
YES → IC1906 and the soldering jumper of R1954 are defective.
NO ↓
IC1600 is defective.

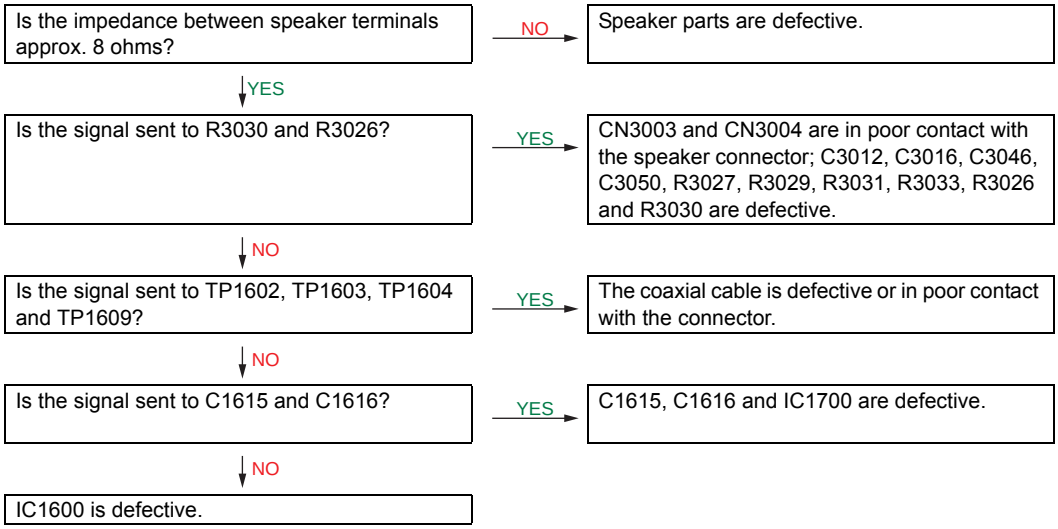
8. Speaker does not work.

When both voice and ring tones are not heard from the speaker, check the items of 8.1.

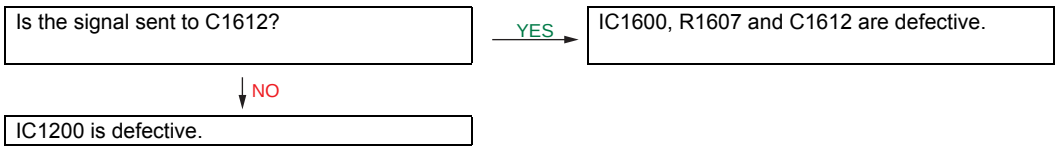
When ring tones are heard from the speaker but voice is not, check the items of 8.2.

When voice is heard from the speaker but ring tones are not, IC1600 is defective.

8.1. Both voice and ring tones are not heard from the speaker



8.2. Ring tones are heard from the speaker but voice is not



9. The display does not appear on Main Display.

Is the Main Display FPC securely locked to CN3002?
NO → Unlock it, and then reinsert and lock it.
YES ↓

Replace Main Display.
Does the display appear?
NO → Are the following Main Display parts in good condition?
IC3001, C3019, C3025, C3036, C3037, C3038, C3072, C3074, C3075, C3077, C3078, C3079, C3080, C3081, C3082, C3086, C3091, C3102, C3104, R3020, R3022, R3035, R3049, R3065, R3067, R3068
NO → The Main Display parts are not mounted properly.
YES ↓

Main Display unit is defective.

Is 2.9 V ± 0.1 V applied to SP1314 and R3049?
Is 1.8 V ± 0.1 V applied to SP1316 and R3067?
NO → Ⓐ
YES ↓

Is the waveform from R3020 a 6.5 MHz pulse wave?
NO → R3020, C3038 and IC3000 are mounted improperly or parts are defective.
YES ↓

Is the voltage on R3068 between -5.2 V and -4.9 V?
Is the voltage on R3035 between 9.5 V and 10.4 V?
NO → IC3001, R3068, C3019, R3035 and C3086 are mounted improperly, or parts are defective.
YES ↓

Is the waveform sent to pins 2 to 13 of CN3002?
NO → IC3001 is mounted improperly or parts are defective.
YES ↓

CN3002 socket parts are defective, or the Display PWB-B pattern is broken.

Ⓐ ↓

Is the voltage on R3025 3.2 V or more?
NO → The battery is defective or not set; the battery needs to be charged; the coaxial cable socket is mounted improperly; the coaxial cable is broken; the Main PWB-A is defective.
YES ↓

Is the waveform of TP3008 a rectangular wave?
NO → L3008 and R3001 are mounded improperly; the coaxial cable socket is mounted improperly; the coaxial cable is broken; the Main PWB-A is defective.
YES ↓

Is the voltage on TP3042 1.8 V ± 0.1 V?
NO → C3110 and C3111 are mounded improperly; the coaxial cable socket is mounted improperly; the coaxial cable is broken; the Main PWB-A is defective.
YES ↓

Replace the Display PWB-B. Does the display appear?
NO → The coaxial cable is broken; the Main PWB-A is defective.
YES ↓

Parts of R3000, R3004, R3005, R3006, R3063, L3000, L3001, L3002, L3003, C3026, C3027, C3031, C3032, C3033, C3034, C3035, C3040, C3048, C3049 or IC3000 are defective, or mounted improperly.

10. Camera (External camera) does not operate.

The camera does not operate. Enter the test mode.

↓

Replace the camera module with a normal one.

↓

Is the image through the camera lens properly displayed? —YES→ The camera module is defective.

↓ NO

Replace the Main PWB-A with a normal one to activate the camera.

↓

Is the image through the camera lens properly displayed? —YES→ The Main PWB-A is defective.

11. Sub camera (Internal camera) does not operate.

Replace the Display PWB-B with a normal one to activate the sub camera.

↓

Is the image through the sub camera lens properly displayed? —YES→ The Display PWB-B is defective. Find the cause.

↓ NO

Replace the coaxial cable with a normal one to activate the sub camera.

↓

Is the image through the sub camera lens properly displayed? —YES→ The coaxial cable is defective.

↓ NO

Replace the Main PWB-A with a normal one to activate the sub camera.

↓

Is the image through the sub camera lens properly displayed? —YES→ The Main PWB-A is defective.

↓ NO

Replace the Main PWB-A with a normal one to activate the sub camera.

↓

Is the image through the sub camera lens properly displayed?

↓ YES

The Display PWB-B is defective.

12. The display backlight does not turn on.

Is the fuse FS3000 mounted properly? Is there conduction through the fuse?
- NO → FS3000 is mounted improperly or blown.
- YES ↓

Is the voltage applied to FS3000 when the voltage is applied to the battery terminals?
- NO → CN1501, CN3000, L3012 and D3000 are mounted improperly; parts are defective; the flexible PWB is broken.
- YES ↓

Is 1.8 V ± 0.1 V applied to R3013?
- NO → IC3000 is mounted improperly, or parts are defective.
- YES ↓

Is the LED flexible PWB (Display unit) properly inserted into CN3005?
- NO → The LED flexible PWB (Display unit) is inserted improperly.
- YES ↓

Is the Display backlight turned on when the LED flexible PWB (Display unit) is replaced?
- NO → IC3011 is mounted improperly, or parts are defective.
- YES ↓

The parts of the LED flexible PWB (Display unit) are defective.

13. The Key backlight does not turn on.

Does the power turn on?
- NO → Go to the section “3. Power does not turn on.” (see page 2-52).
- YES ↓

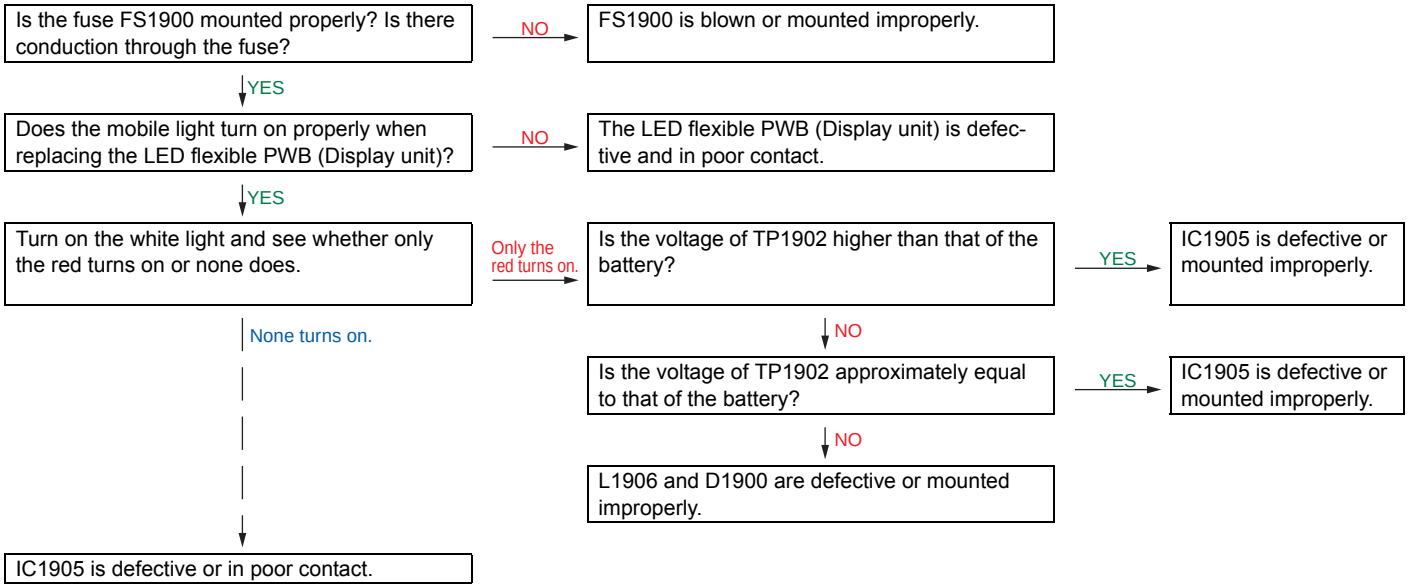
Do all the Key backlight LEDs remain off?
- NO → The disabled LEDs are defective. Otherwise, the resistances corresponding to the disabled LEDs are mounted improperly.
- YES ↓

Is there 2.75 V of electric potential difference between pins 3 to 6 of R1061?
- NO → IC1000 is mounted improperly.
- YES ↓

Is 0 V applied to pins 2 and 11 of CN1000?
- NO → Q1001 is mounted improperly.
- YES ↓

CN1000 is mounted improperly; the flexible PWB is broken; poor contact.

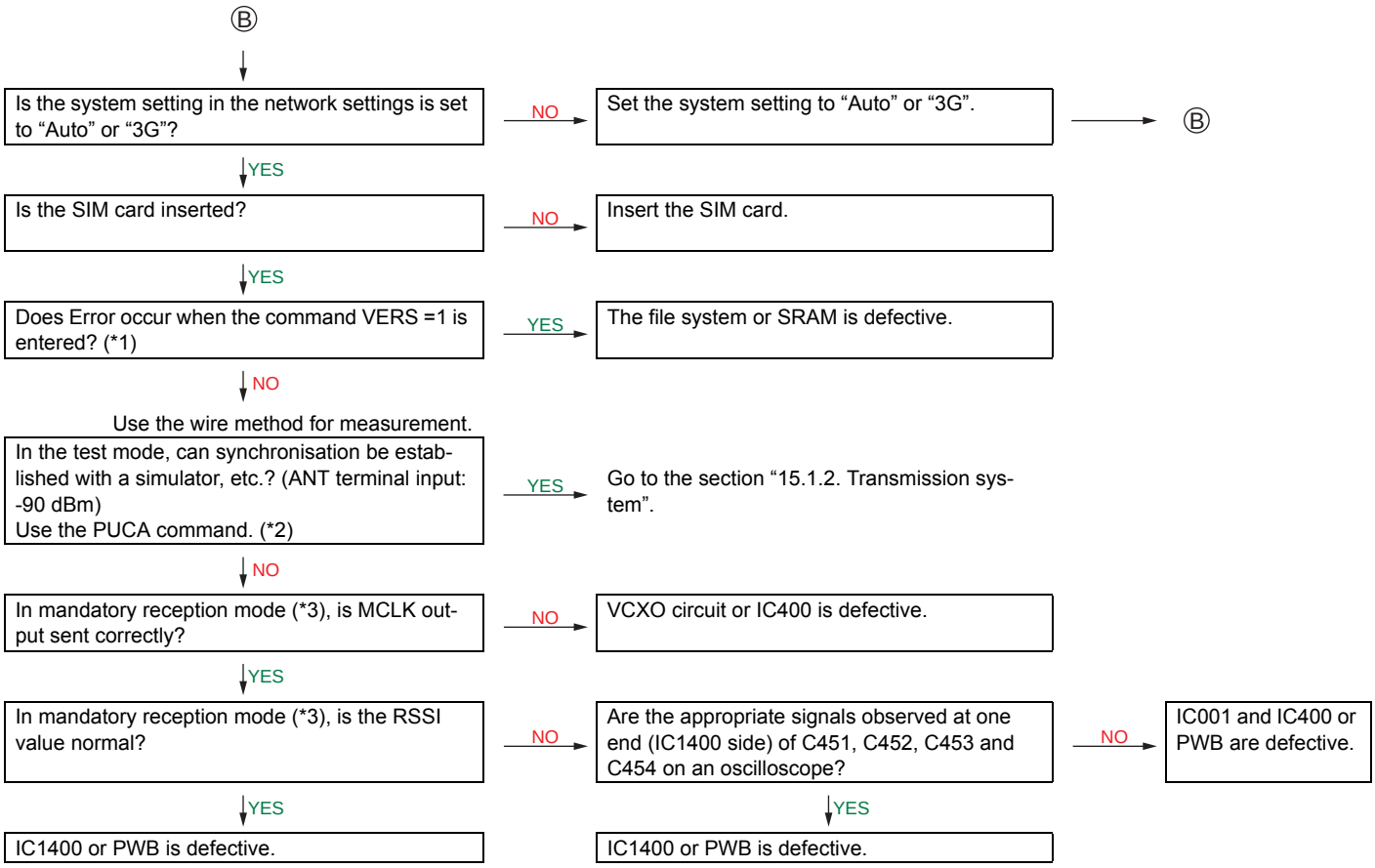
14. Mobile Light does not turn on.



15. Out-of-range appears and no transmission/reception is available.

15.1. In the Japan mode (W-CDMA), “out-of-range” appears, and no transmission/reception is available.

15.1.1 Reception system

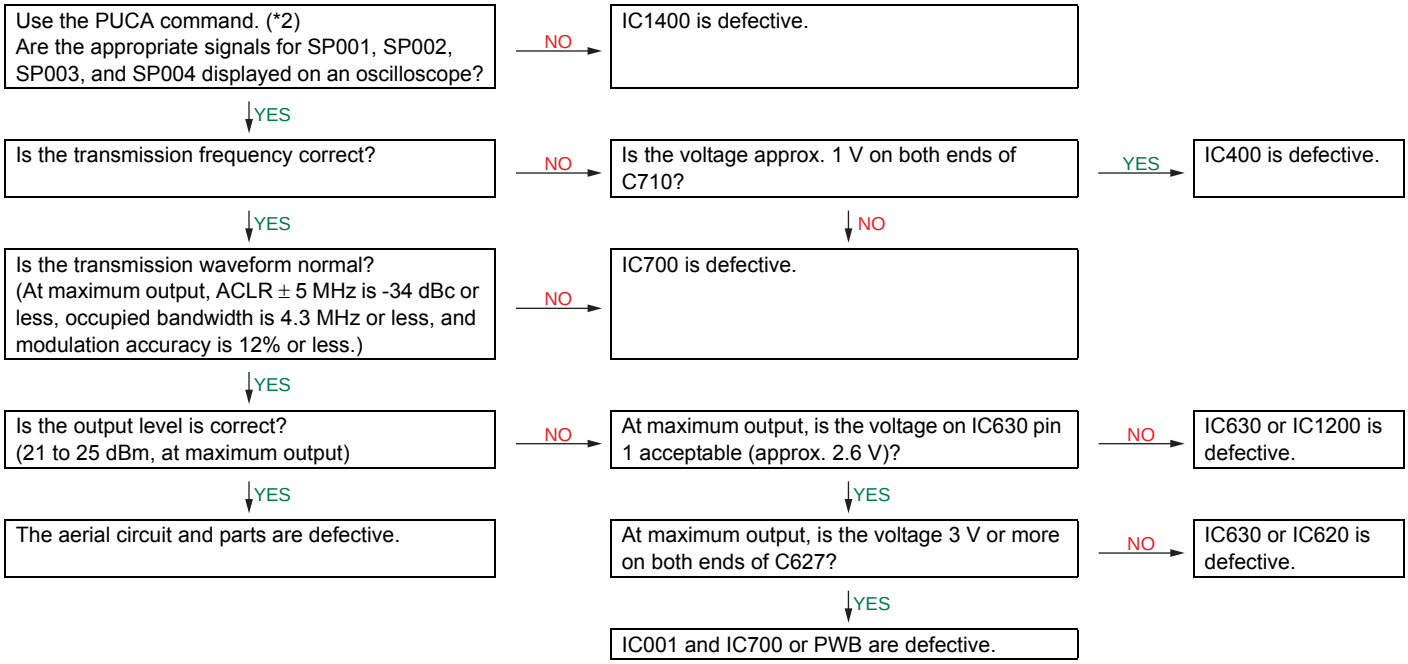


*1: The command input procedure will be described later.

*2: Check both “Yes” and “No” items when the PUCA command is not available due to the lack of a simulator (such as MT8820A made by Anritsu) or other necessary devices.

*3: The command input procedure will be described later.

15.1.2 Transmission system



Additional information 1: Out-of-range display for W-CDMA
<Setting examples for MT8820A>

Parameter group	Parameter	Setting	Remarks
Common	Call Processing	Off	
	Test Loop Mode	Off	
	UL Frequency	9887ch 1977.4MHz	Measurement-dependent
	DL Frequency	10837ch 2167.4MHz	Measurement-dependent
	Frequency Separation	190MHz	
	Input Level	25dBm (at maximum output)	Level is measurement-dependent
	Output Level	-70dBm	Level is measurement-dependent
	AWGN	Off	
	Sequential Output	Off	
	External Loss(Main DL)	On	Offset required
	External Loss(Main UL)	On	Offset required
	External Loss(Aux)	Off	
	Channel Coding	reference measurement channel	
	DTCH Data Pattern	PN9	
	DCCH Data Pattern	PN9	
	Prioritised RABs DL Max. Rate	12.2kbps	
Physical Channel Parameter	Primary Scramble Code	8	Changeable
	Channel Level Unit	Ior	
	CPICH Power(CPICH_Ec/Ior)	-3.3dB On	
	P-CCPCH Power(P-CCPCH_Ec/Ior)	-5.3dB On	
	SCH Power(SCH_Ec/Ior)	-5.3dB On	
	PICH Power(PICH_Ec/Ior)	-8.3dB On	
	Channelization Code	100	
	DPCH Power(DPCH_Ec/Ior)	-10.3dB On	
	Secondary Scrambling Code		
	Stand Alone DCCH	0	
	RAB	0	
	Timing Offset	0	
	Channelization Code		
	Stand Alone DCCH	30	
	RAB	5	
	S-CCPCH	Off	
	AICH	Off	
	Uplink Physical Channel		
	PRACH Preamble Scrambling Code	0	
	DPCH Scrambling Code	1	
	Scrambling Code Type	Long	
Call Processing Parameter			OFF
Tx Measurement Setup Parameter	Occupied Bandwidth		
	Detect Mode	Average	
	OBW Ratio	99%	
	Spectrum Emission Mask		
	Detect Mode	Average	
	Template [Template Setup]		
	Level of RBW: 30kHz		
	2.5MHz	-35dBc	
	3.5MHz	-50dBc	
	Level of RBW: 1MHz		
	3.5MHz	-35dBc	
	7.5MHz	-49dBc	
	Lower Limit	-50dBm/3.84MHz	
	Additional limit	Non	
	Modulation Analysis		
	Storage Mode	Latest	
	Long Span Code Search	OFF	
	Measuring Object	W-CDMA	

Parameter group	Parameter	Setting	Remarks
Rx Measurement Setup Parameter	Bit Error Rate		
	Number of Sample	10000 bit	
	BER Upper Limit	10%	
	Measurement Input	RF Loopback	
	Ext.BER.Input Polarity		Not used
	Ext.BER.Input Clock		Not used
	Voice Channel		Not used
	Block Error Rate		Not used
	BER/BLER Timeout Length	10sec	
Fundamental Measurement Parameter	Power measurement	On Average count 1	
	Frequency Error	On Average count 1	
	Occuupied Bandwidth	On Average count 1	
	Specturm Emission Mask	On Average count 1	
	Adjacent Channel Power	On Average count 1	
	Modulation Analysis	On Average count 1	
	Peak Code Domain Error	On Average count 1	
	BER	On	
	BLER	Off	

Additional information 2: Out-of-range display for W-CDMA

1) VERS command

<Start the test programme.>

VERS = 1

<Check the response.>

2) PUCA command

<Start the test programme.>

MODE=4

WWDL=0

WWDL=1

WWDL=2

WRST=1

PUCA = 1,10837,0,2,5,8,15

(* When MT8820A is used, set up the measurement equipment according to the setting examples for MT8820A.)

<Measurement.>

PUCA = 0 (Measurement is complete.)

WRST = 0

POFF

<Turn off the power.>

3) Mandatory reception mode

<Send CW, 2167.4 MHz from SG.>

<Start the test programme.>

MODE=4

WWDL=0

WWDL=1

WWDL=2

WRXC=10832

TCMP=2,0

RXPW=0

<Check RSSI.>

WRST = 0 (Measurement is complete.)

POFF

<Turn off the power.>

15.2. In the overseas mode (GSM), “out-of-range” appears, and no transmission/reception is available.

Is the system setting set to “Auto” or “GSM”? — NO → Change the setting in the network settings to “Auto” or “GSM”.

↓YES

Is the SIM card inserted? — NO → Insert the SIM card.

↓YES

Go to the section “15.2.1. Reception system”.

15.2.1 Reception system

Are 4 reception bars displayed?
* Set the BCCH/TCH level of a simulator to -80 dBm in EGSM band. — YES → Go to the section “15.2.2. Transmission system”.

↓NO

Is the voltage approx. 2.75 V applied to VCCA/VCCB line? — NO → IC1000, IC1200 and Main PWB-A are defective.

↓YES

Is the EGSM band received signal sent to IC100 pins 4 and 5? — YES → IC100, IC101 and IC1000 are defective.

↓NO

Is the EGSM band received signal sent from IC001 pin 1? — YES → FL110 is defective.

↓NO

s the EGSM band received signal sent to IC001 pin 7? — YES → IC001 is defective.

↓NO

Is the EGSM band received signal sent to FL003 (FL004) pin 3? — YES → FL003 (FL004) or IC004 is defective.

↓NO

CN903 (CN1300) is defective.

15.2.2 Transmission system

Does IC100 oscillate at the frequency of the EGSM band transmitted signal? — NO → IC100, IC400, X770 and IC1000 are defective.

↓YES

Is the IQ signal sent to IC100 pins 49, 50, 51, and 52? — NO → IC1000 and Main PWB-A are defective.

↓YES

Is the EGSM band transmitted signal sent to IC300 pin 4? — NO → IC100 and FL330 are defective.

↓YES

Is the EGSM band transmitted signal sent to IC001 pin 13? — NO → IC300 and IC1200 is defective.

↓YES

Is the EGSM band transmitted signal sent to FL003 (FL004) pin 1? — NO → IC001 or IC004 is defective.

↓YES

Is the EGSM band transmitted signal sent to FL003 (FL004) pin 3? — NO → FL003 (FL004) is defective.

↓YES

CN903 (CN1300) is defective.

15.3. In the overseas mode (DCS/PCS), “out-of-range” appears, and no transmission/reception is available.

Is the system setting set to “Auto” or “GSM”? — NO → Change the setting in the network settings to “Auto” or “GSM”.

↓YES

Is the SIM card inserted? — NO → Insert the SIM card.

↓YES

Go to the section “15.3.1. Reception system”.

15.3.1 Reception system

Are 4 reception bars displayed?
* Set the BCCH/TCH level of a simulator to -80 dBm in DCS (PCS) band. — YES → Go to the section “15.3.2. Transmission system”.

↓NO

Is the voltage approx. 2.75 V applied to VCCA/VCCB line? — NO → IC1000, IC1200 and Main PWB-A are defective.

↓YES

Is the DCS (PCS) band received signal sent to IC100 pins 13 and 21 (1 and 2)? — YES → IC100, IC101 and IC1000 are defective.

↓NO

Is the DCS (PCS) band received signal sent from IC001 pin 2 (3)? — YES → FL100 (FL120) is defective.

↓NO

Is the DCS (PCS) band received signal sent to IC001 pin 7? — YES → IC001 is defective.

↓NO

Is the DCS (PCS) band received signal sent to FL003 (FL004) pin 3? — YES → FL003 (FL004) or IC004 is defective.

↓NO

CN903 (CN1300) is defective.

15.3.2 Transmission system

Does IC100 oscillate at the frequency of the DCS (PCS) band transmitted signal? — NO → IC100, IC400, X770 and IC1000 are defective.

↓YES

Is the IQ signal sent to IC100 pins 49, 50, 51, and 52? — NO → IC1000 and Main PWB-A are defective.

↓YES

Is the DCS (PCS) band transmitted signal sent to IC300 pin 3? — NO → IC100 and FL331 are defective.

↓YES

Is the DCS (PCS) band transmitted signal sent to IC001 pin 12? — NO → IC300 and IC1200 are defective.

↓YES

Is the DCS (PCS) band transmitted signal sent to FL003 (FL004) pin 1? — NO → IC001 or IC004 is defective.

↓YES

Is the DCS (PCS) band transmitted signal sent to FL003 (FL004) pin 3? — NO → FL003 (FL004) is defective.

↓YES

CN903 (CN1300) is defective.

16. miniSD™ memory card is not recognised.

Prepare a good-quality miniSD™ memory card. [*1]

[*1] Use the specified, formatted miniSD™ memory card for 903SH. It does not matter if data exists or not.

↓

Is the inserted miniSD™ memory card recognised? — YES → The user's miniSD™ memory card is defective.

↓ NO

Check for proper fit of CN1600. Is there any problem? — NO → CN1600 has poor fit.

↓ YES

Is 2.9 V applied to C1533? — NO → IC1501 is defective.

↓ YES

Is the signal sent to R1617, and clock to R1528, respectively? — NO → IC1500 is defective.

↓ YES

Is the signal sent to R1619? — NO → miniSD™ memory card is in poor contact with CN1600.

↓ YES

miniSD™ memory card data is defective.

17. Music on miniSD™ memory card cannot be played.

[Music is not heard through the handsfree]

Is music heard from the speaker? — NO → IC1600 or IC1500 is defective.

↓ YES

Go to the section "1. No voice is heard and playback is impossible. [Handsfree]" (see page 2-51).

18. SIM card is not recognised.

Is the SIM card fully inserted?
NO → The SIM card is improperly inserted.
YES ↓

Is the SIM card connector (CN1201) terminal deformed?
NO → The SIM card connector (CN1201) is defective.
YES ↓

Is the SIM card recognised when inserted into a properly working handset?
NO → The SIM card is defective.
YES ↓

Is “Insert SIM Card” displayed when the power is turned on without the SIM card?
NO → The software has a problem.
YES ↓

Is 3.0 V applied to C1235 (upper terminal) and R1240 (lower terminal) immediately after the power is turned on?
NO → IC1000 and IC1200 are defective or mounted improperly.
YES ↓

Is clock sent from R1238 (upper terminal)? Is the signal sent from R1240 (lower terminal)?
NO → IC1000 and IC1200 are defective or mounted improperly.
YES ↓

R1238 is defective or mounted improperly.

19. Bluetooth communication is impossible.

A connection cannot be established via Bluetooth.
YES ↓

Is the voltage of approx. 2.9 V applied to R1052?
NO → IC1002 is defective.
YES ↓

Is pin 45 of IC1001 (RESET signal) always at “High”?
NO → IC1000 is defective.
YES ↓

Are pulse signals sent to pin 43 of IC1001 (BT_UARTTX signal)?
NO → IC1000 is defective.
YES ↓

IC1001 is defective.

Phone can be connected to Bluetooth headset, but sound is not heard.
YES ↓

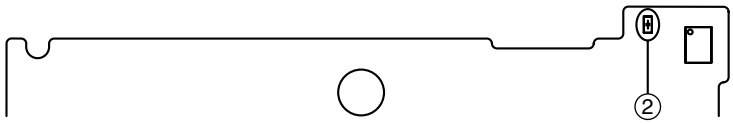
Is the signal waveform sent to R1029 (PCM-DATB) periodically?
NO → IC1000 is defective.
YES ↓

Is the signal waveform sent to R1026 (PCM-DATA) periodically?
NO → IC1001 is defective.
YES ↓

IC1000 is defective. Or IC1001 is defective.

20. MR sensor does not perform open/close detection.

Is the magnet inserted into the Cabinet, Hinge A?
NO → Recheck the MR sensor after inserting the magnet.
YES ↓
Is 2.75 V applied to C1643?
NO → IC1200 is improperly mounted.
YES ↓
Is 2.75 V applied to ②?
NO → CN1000 is improperly mounted; the flexible PWB is in poor contact or broken.
YES ↓
IC001 is improperly mounted.



KEY FPC UNIT PWB-E

21. MR sensor does not perform rotation detection.

Is the magnet inserted into the Cabinet, Hinge A?
NO → Recheck the MR sensor after inserting the magnet.
YES ↓
Is 3.7 V applied to C3002?
NO → The coaxial cable socket is not fully inserted; the coaxial cable is broken.
YES ↓
Is 2.9 V applied to C3044?
NO → IC3003 is improperly mounted.
YES ↓
Is the marking stamped on the flexible PWB?
NO → Check that the flexible PWB is fully inserted. CN3001 is defective; the contact pin is broken.
YES ↓
IC001 is improperly mounted; the flexible PWB is broken.

CHAPTER 3. DISASSEMBLY AND REASSEMBLY

[1] Servicing Concerns

1. For disassembling

1. Do not remove the board of baseband section by pulling external interface connector not to damage the board.
2. Shield case is attached on shield case holder with no space. Do not remove together with shield case holder. If you do, you cannot attach it again because they are soldered and in such a case, you should take the electric pattern on the board as well.

2. For reassembling

1. Make sure that all ornamental parts have no scratch and clean.
2. Make sure that you can open and close handset (phone) smoothly and hear hinges click.
3. Make sure that display panel is placed in a proper position without inclination.
4. Make sure that all three battery terminals protrude evenly.
5. Make sure that the pawl of aerial is upside.

- **FASTENING TORQUE (Referential Value)**

• Back Cabinet (Key)/ Front Cabinet (Key)* • Back Cabinet (Display)/ Front Cabinet (Display)*	13.8 to 15.7 N • cm (1.4 to 1.6 Kgf • cm)
• Main PWB-A	9.8 to 11.8 N • cm (1.0 to 1.2 Kgf • cm)
• Hinge Cover • Cabinet, Hinge A/ Cabinet, Hinge B	8.8 to 10.8 N • cm (0.9 to 1.1 Kgf • cm)

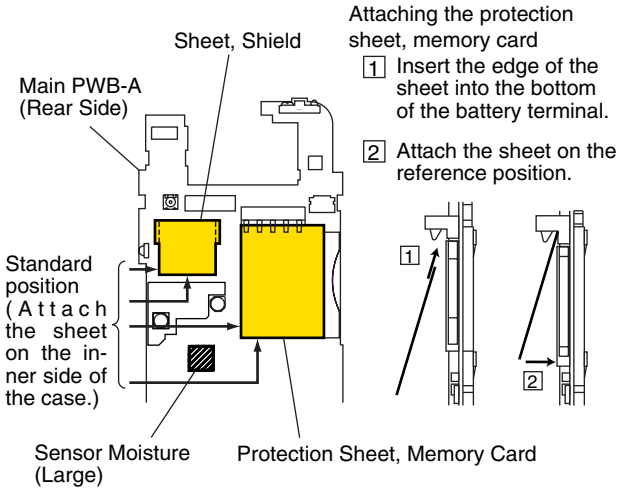
* The reference value is measured when an electric screwdriver (HIOS CL4000) is used.

- **SOLDERING SPECIFICATION**

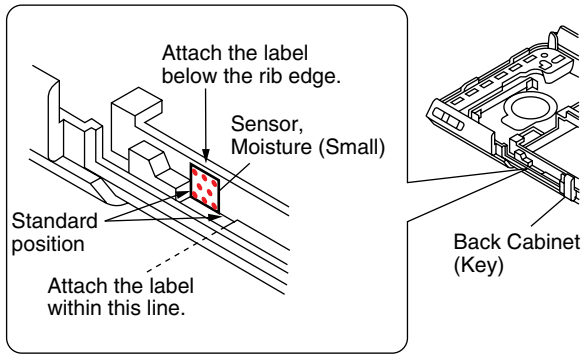
  Soldering iron must be set to 380° C for 5 seconds.

- **STANDARD POSITION OF ATTACHMENT**

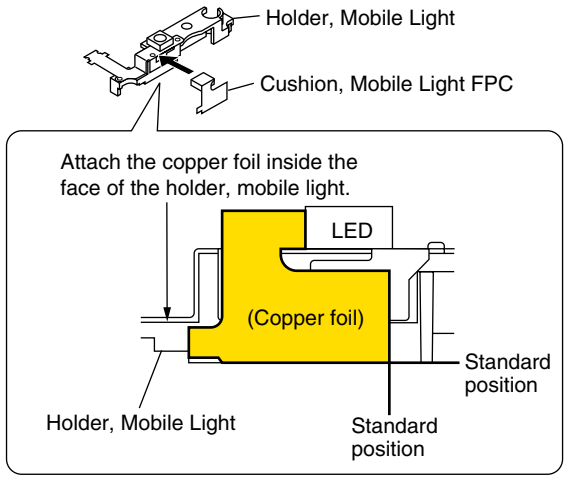
  When replacing the following labels (marked with ▭), be sure to place new ones on the specified positions.



[Sheet, Shield/Protection Sheet, Memory Card]



[Sensor, Moisture (Small)]



[Cushion, Mobile Light FPC]

[2] Disassembly and reassembly

- To reassemble, reverse the procedure.

STEP	REMOVAL	PROCEDURE		FIG.
1	Back Cabinet (Display) Assembly	1. Battery Cover	(A1)x1	1
		2. Li-Ion Battery	(A2)x1	
		3. Open the handset.		2
		4. Screw Cover	(A3)x2	
		5. Screw (Green)	(A4)x2	
		6. Screw (Silver)	(A5)x4	
		7. Hook	(A6)x4	3
2	Main Display	1. Socket	(B1)x1	4
		2. Hook	(B2)x2	
3	Display PWB-B/MR Sensor FPC PWB-D	1. Socket	(C1)x2	5
		2. Solder	(C2)x1	
		3. Flat Cable	(C3)x3	
		4. Hook	(C4)x1	
		5. Hook	(C5)x1	

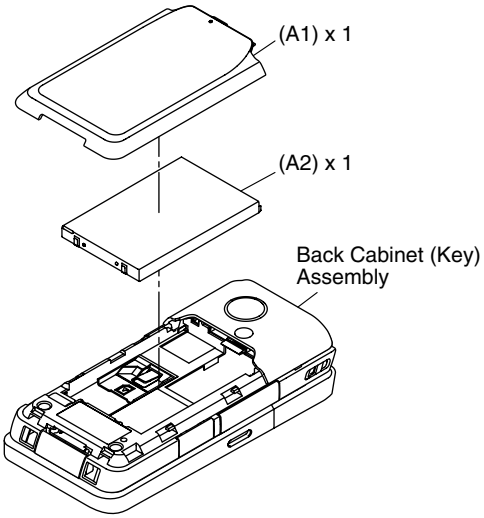


Figure 1

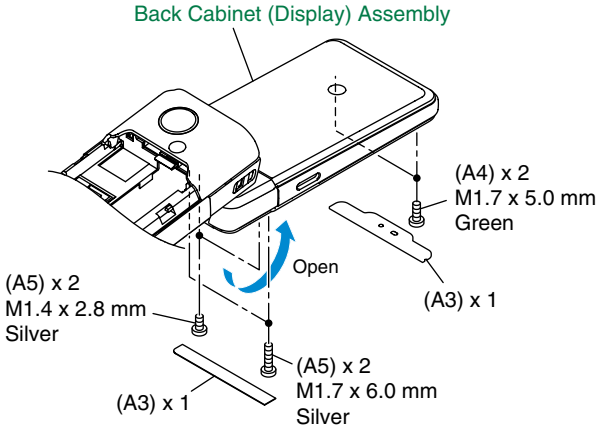


Figure 2

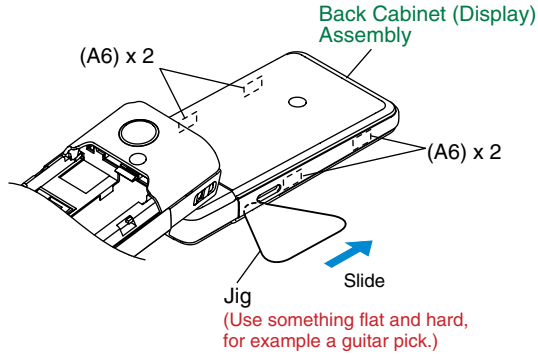


Figure 3

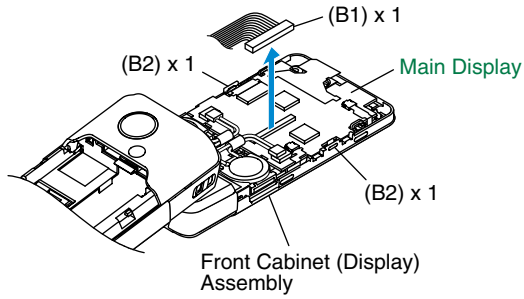


Figure 4

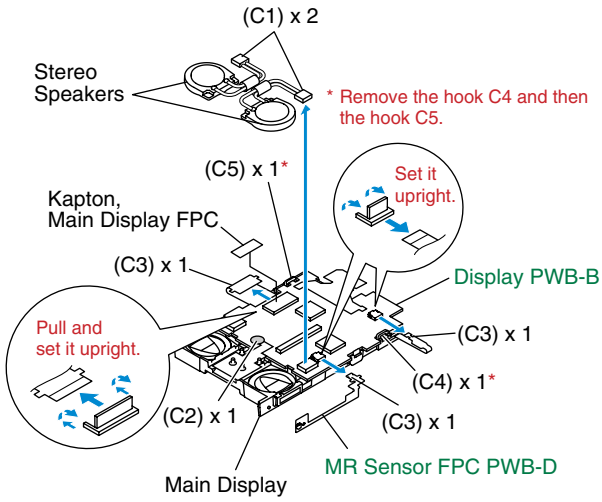
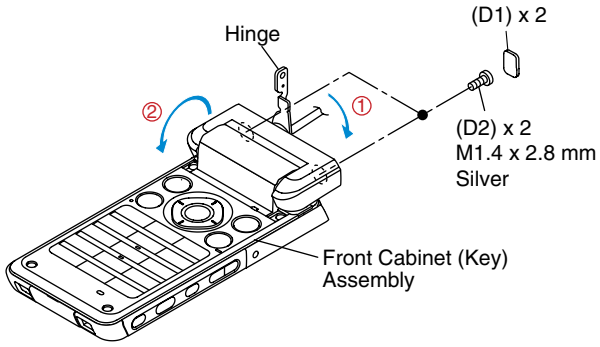


Figure 5

CONFIDENTIAL

STEP	REMOVAL	PROCEDURE		FIG.
4	Cabinet, Hinge A/Cabinet, Hinge B	1. Screw Cover	(D1)x2	6
		2. Screw (Silver)	(D2)x2	
		3. Hook	(D3)x4	7
5	Back Cabinet (Key) Assembly	1. Screw Cover	(E1)x2	8
		2. Screw (Silver)	(E2)x2	
		3. Screw (Black)	(E3)x2	
		4. Hook	(E4)x5	9
		5. Hook	(E5)x2	
		6. Hook	(E6)x2	



Remove the screws D2 (silver) and fold the hinge in the direction ①. Then fold the entire hinge in the direction ②.

Figure 6

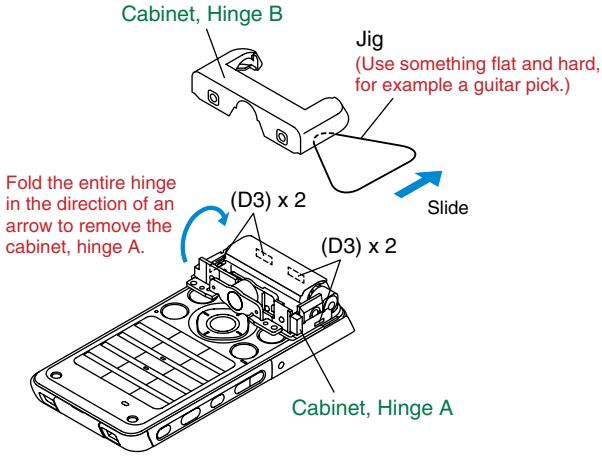


Figure 7

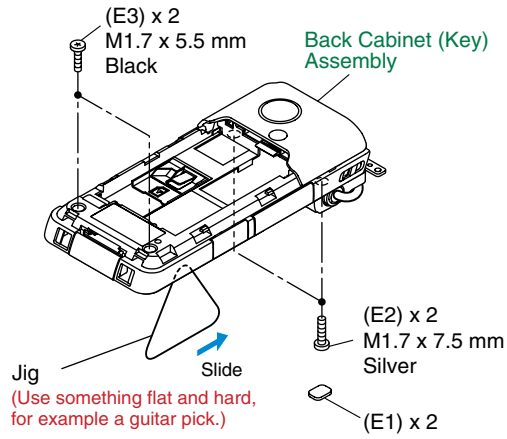
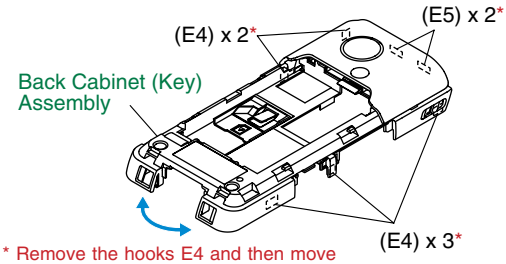


Figure 8



* Remove the hooks E4 and then move the back cabinet (key) assembly right and left to remove the hooks E5.

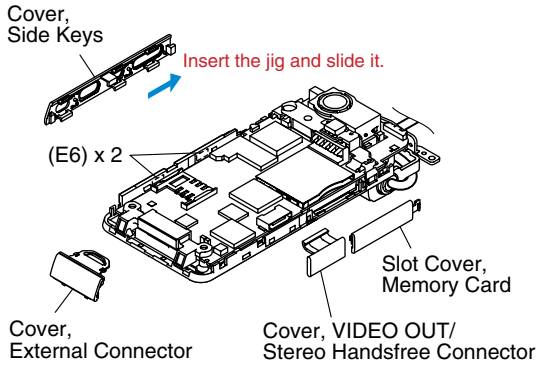


Figure 9

STEP	REMOVAL	PROCEDURE		FIG.
6	Hinge Cover	1. Screw Cover	(F1)x1	10
		2. Screw (Black)	(F2)x2	
		3. Hook	(F3)x4	
7	Front Cabinet (Key) Assembly	1. Hook	(G1)x2	11
8	Holder, Main PWB	1. Hook	(H1)x5	12
		2. Flat Cable	(H2)x1	
9	Holder, Mobile Light	1. Hook	(J1)x2	13
		2. Flat Cable	(J2)x1	
10	Holder, Camera	1. Socket	(K1)x1	13
		2. Hook	(K2)x3	
11	Hinge	1. Screw (Black)	(L1)x1	13
		2. Socket	(L2)x1	
		3. Hook	(L3)x2	

For assembly of the camera, refer to “Assembly procedure for the camera” (3-5).

For the Hinge, refer to
“Precautions for installing the coaxial cable” (3-6).

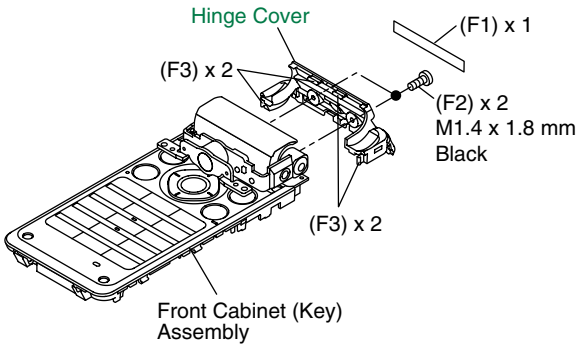


Figure 10

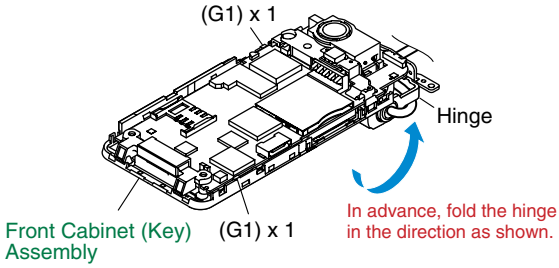


Figure 11

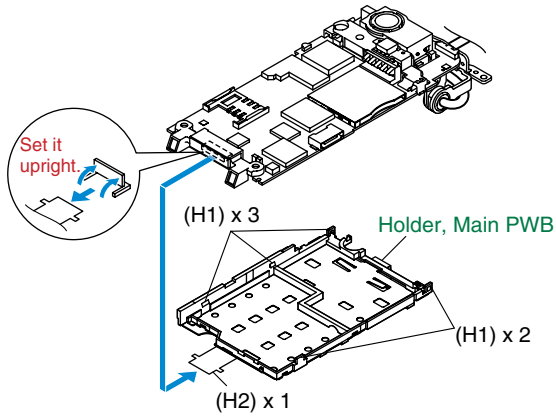


Figure 12

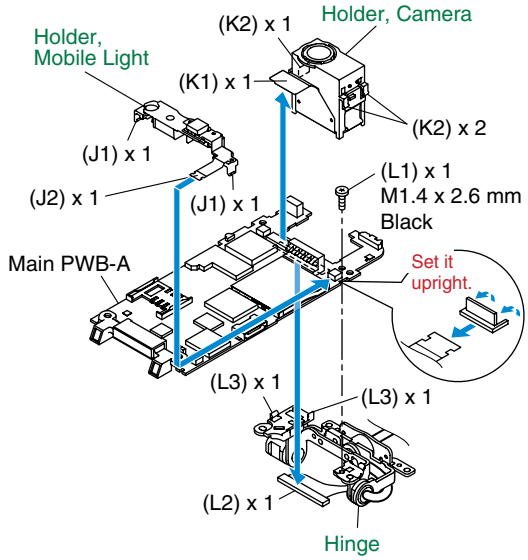
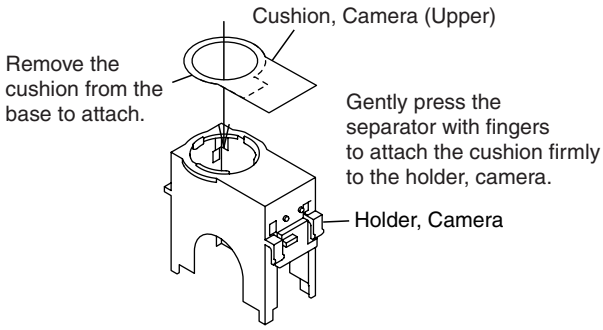
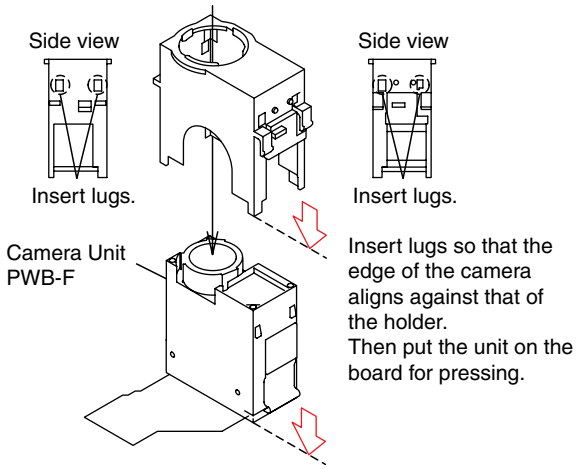
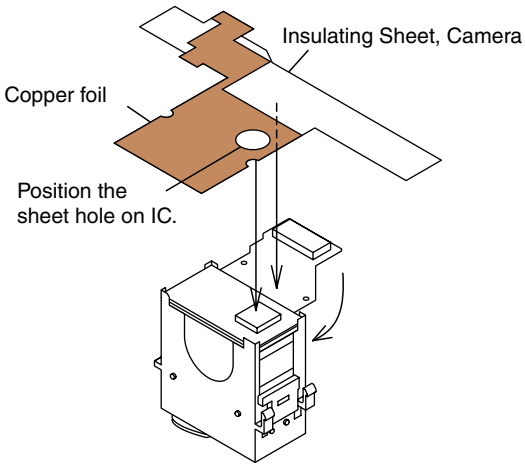


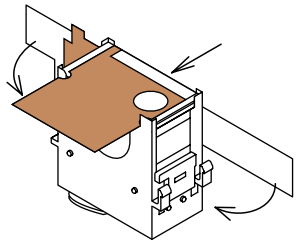
Figure 13

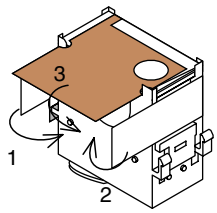
[3] Assembly procedure for the camera



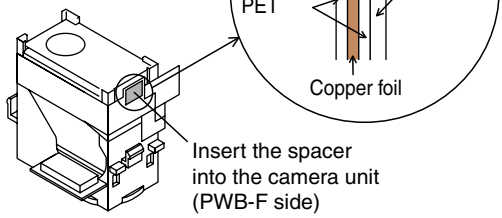




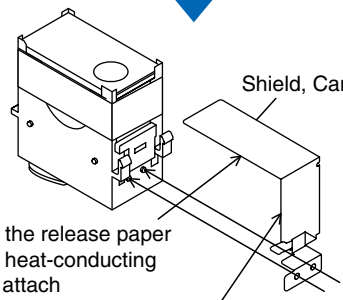




After attaching the insulating sheet, remove the blue base in the order of 1, 2 and 3.

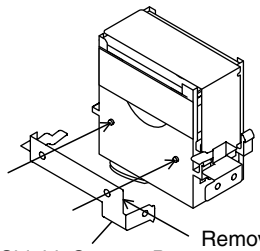


Insert the spacer into the camera unit (PWB-F side)

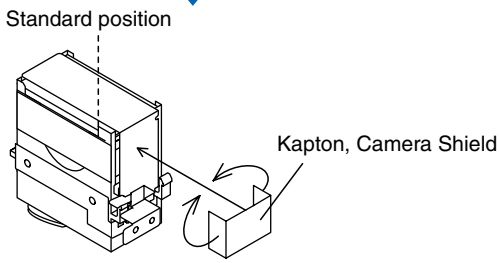


Remove the release paper from the heat-conducting sheet to attach the shield, camera A.

Remove the release paper from the two-sided tape to attach the shield, camera A.



Remove the release paper from the two-sided tape to attach the shield, camera B.

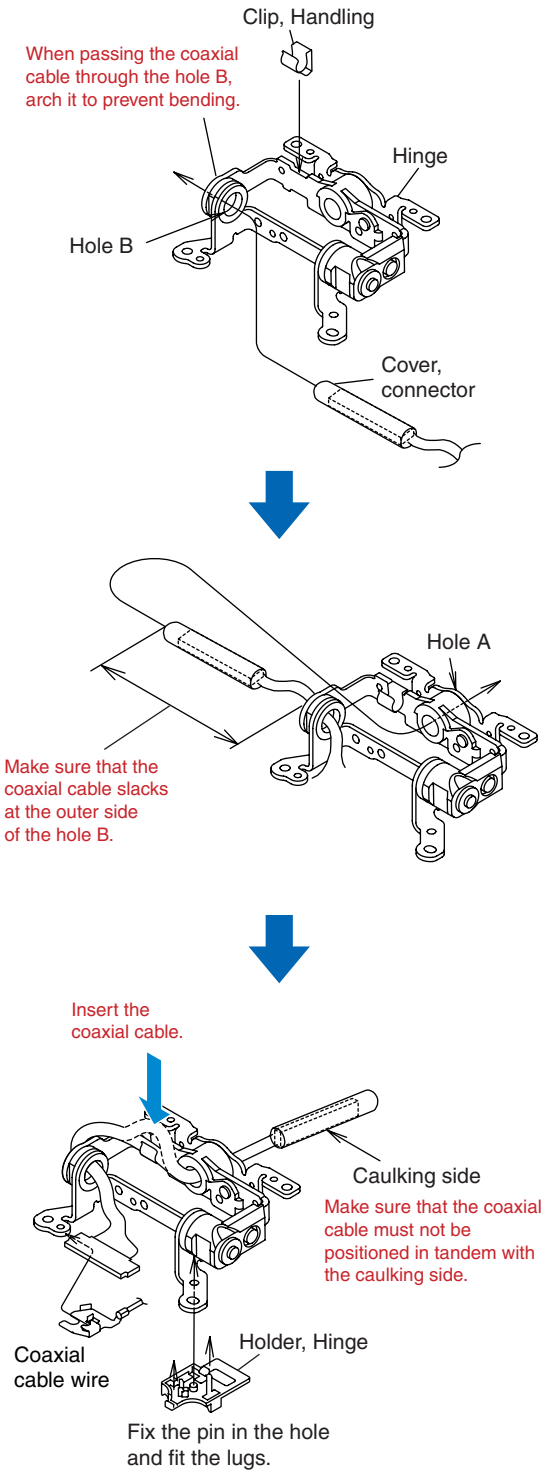


[4] Precautions for installing the coaxial cable

Attach the cover, connector before installing the coaxial cable.

After the installation, remove the cover, connector.

Part Code	Description
PCOVPA003AFZZ	Cover, Connector



CHAPTER 4. DIAGRAMS

[1] Block diagram

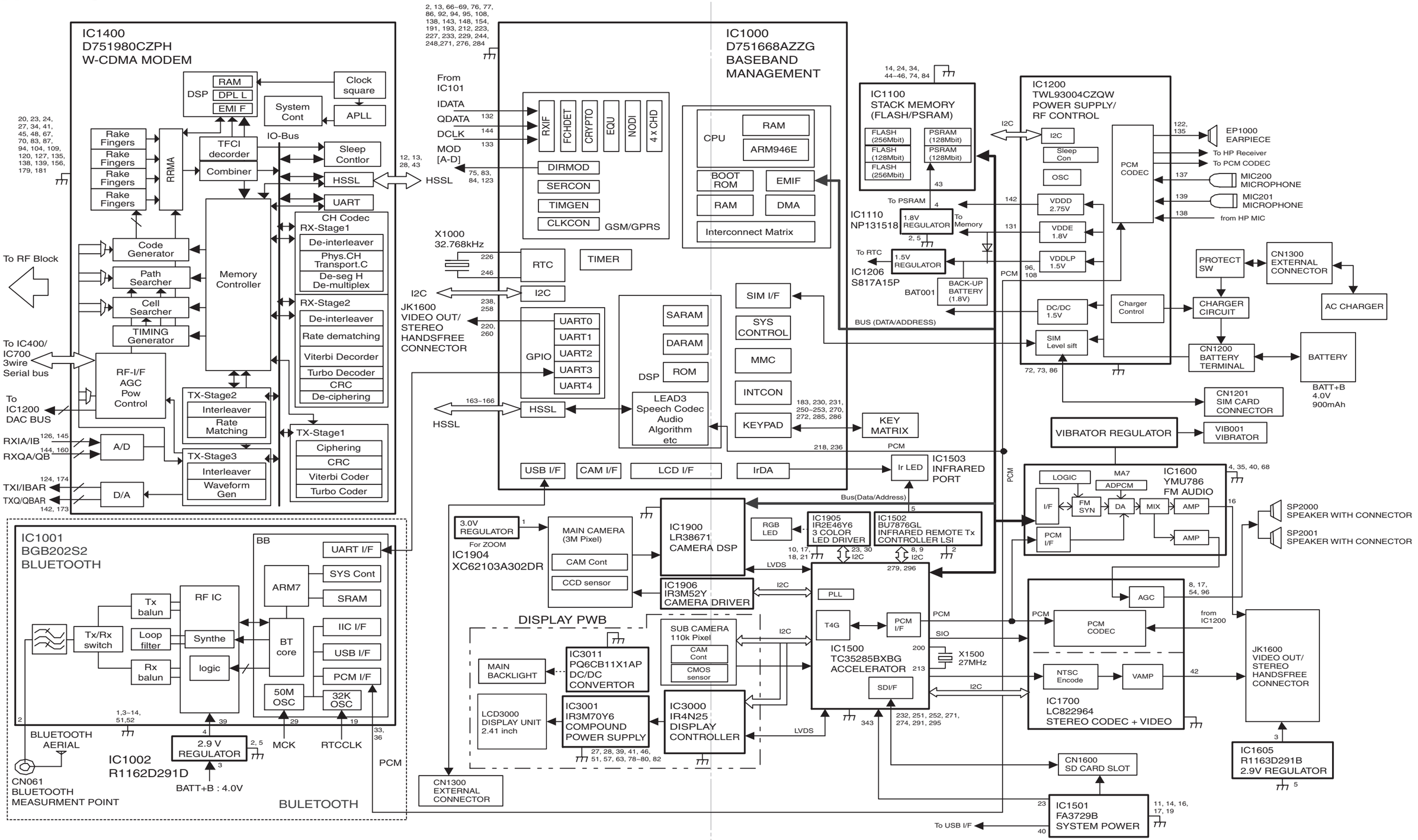


Figure 1 MAIN BLOCK DIAGRAM

[W-CDMA RF]

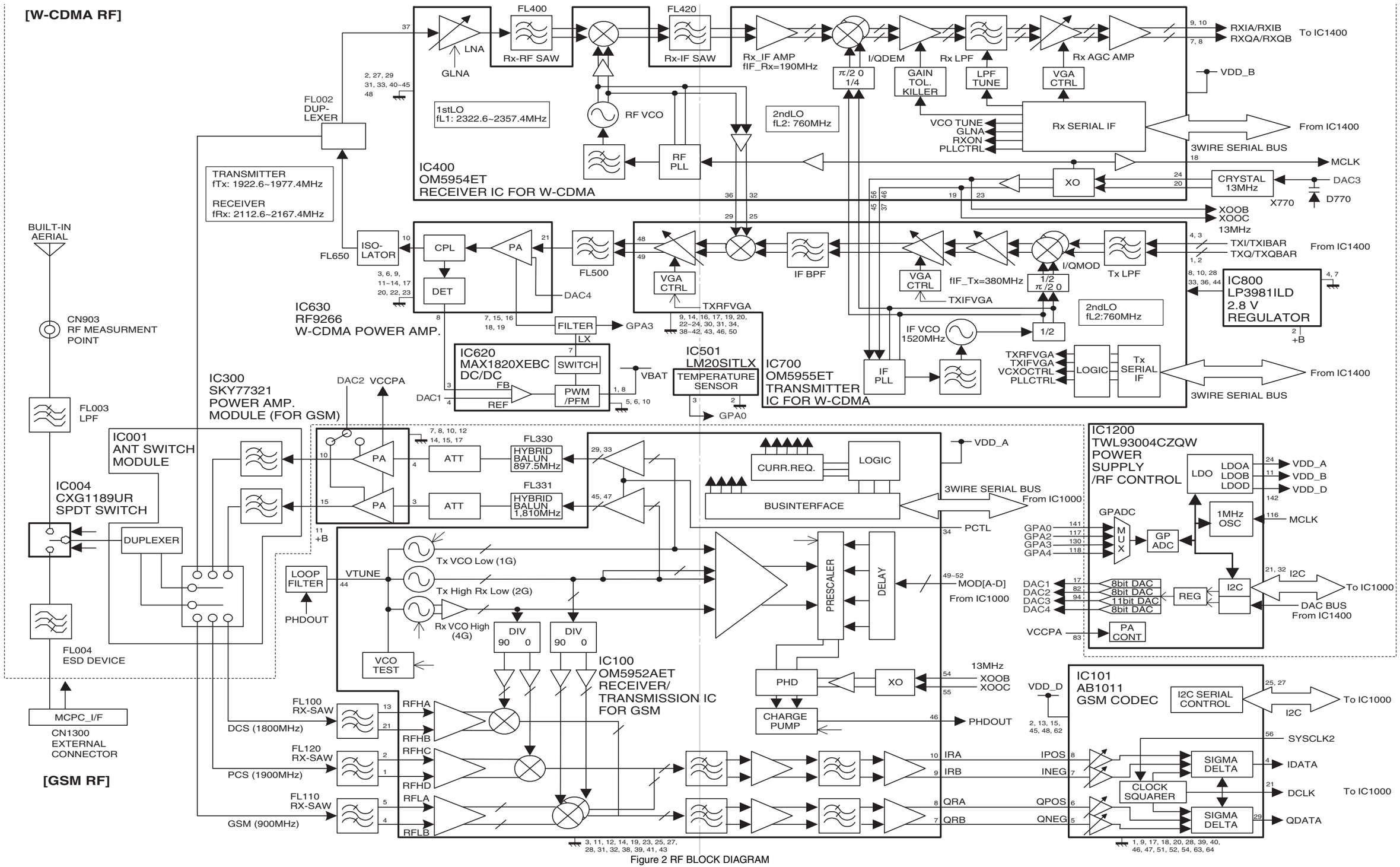


Figure 2 RF BLOCK DIAGRAM

CHAPTER 5. SCHEMATIC DIAGRAM AND WIRING SIDE OF P.W.BOARD

[1] Notes on schematic diagram

- Resistor:

  Letters K and M are prefixed to ohm (unit of resistance).
  K means 1000 ohms and M means 1000 kohms.

- Capacitor:

  P is an abbreviation for “pico” and a farad (unit of capacitance) without P means “microfarad”. Expressions “capacitance/withstand voltage” are used for electrolytic capacitors.

  (CH), (RH), (UJ): Temperature compensation

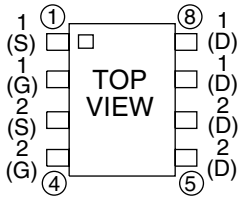
  (ML): Mylar type

  (S): Styrol type

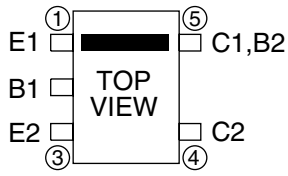
  (PP): Polypropylene type

- The voltage of each section is obtained by measuring between the section and chassis using a digital multimeter [handset (phone) out of range].
- Conditions: SIM card inserted, power on, in stand-by mode (opened)
- Schematic diagram and Wiring Side of P.W. Board for this model are subject to change for improvement without prior notice.
- Parts marked with “ ⚠ ” are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

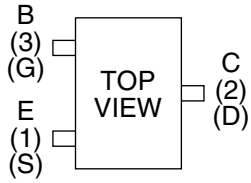
[2] Types of transistor and LED



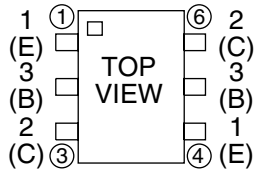
ECH8603



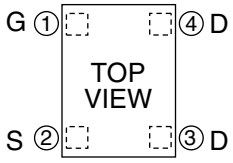
RN47A4 JEF



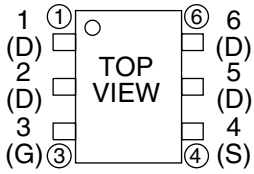
KRC407 V
KRC417 V



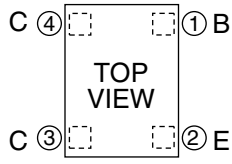
EMT1
HN1C03 FUZ



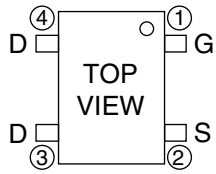
EC4403 C
EC4404 C



SCH1302
SCH1306
SI1555 DL

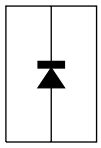


EC3201 C



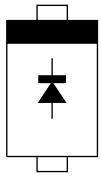
EC4301 C
EC4401 C

TOP VIEW



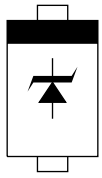
SB0503EJ
SS0503EJ
SS1003EJ

TOP VIEW



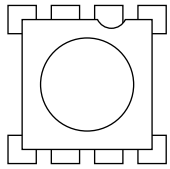
1SS413
1SS416
BBY58-02V
KDR720E
RB521S30

TOP VIEW



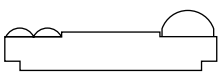
RSB6.8S

TOP VIEW



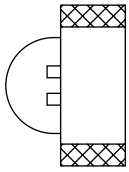
GM5MW052

TOP VIEW



GP2W3240

TOP VIEW

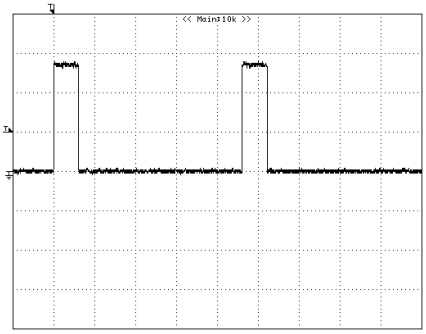


BRPY121F

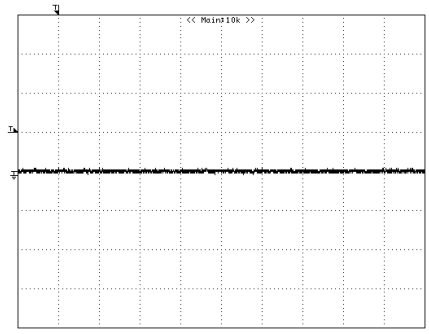
[3] Waveforms of circuit

GSM

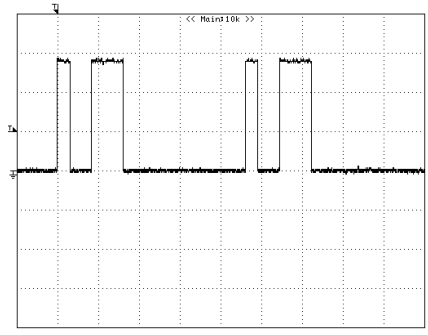
1 C001 EGSM (Talking)
(CH1=1V, 1ms/div)



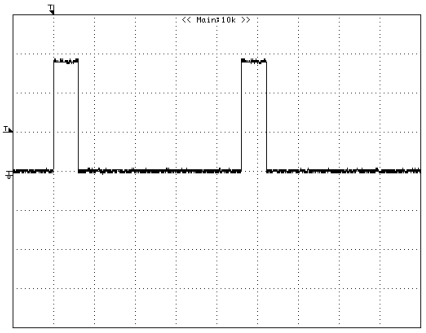
5 C331 EGSM (Talking)
(CH1=1V, 1ms/div)



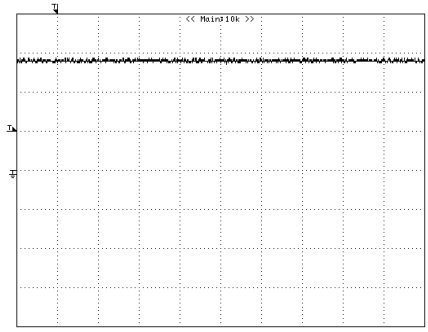
9 C113 EGSM/DCS/PCS (Stand-by)
(CH1=1V, 1ms/div)



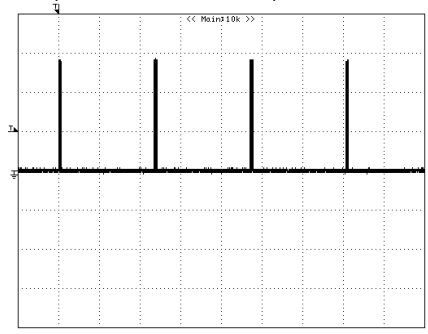
2 C002 DCS (Talking)
(CH1=1V, 1ms/div)



6 C331 DCS/PCS (Talking)
(CH1=1V, 1ms/div)

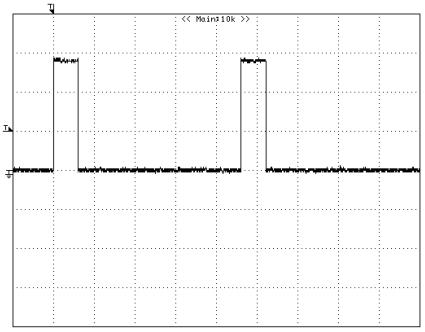


10 C113 EGSM/DCS/PCS (Out-of-range)
(CH1=1V, 200ms/div)

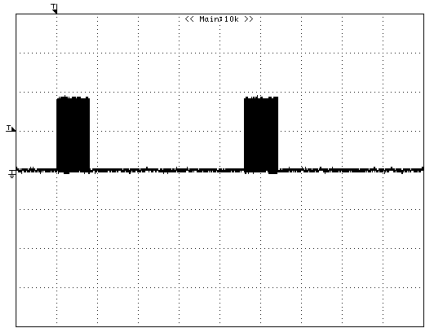


W-CDMA

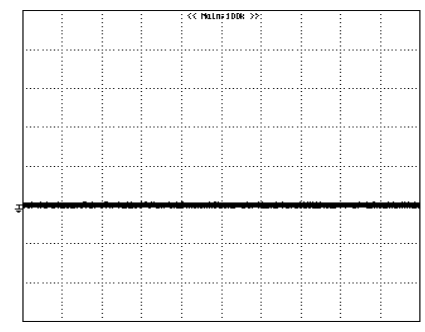
3 C003 DCS (Talking)
(CH1=1V, 1ms/div)



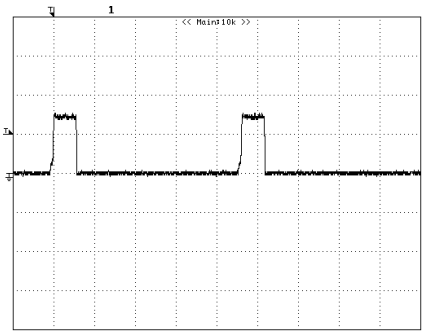
7 R213 (IC1000側) EGSM/DCS/PCS (Talking)
(CH1=1V, 1ms/div)



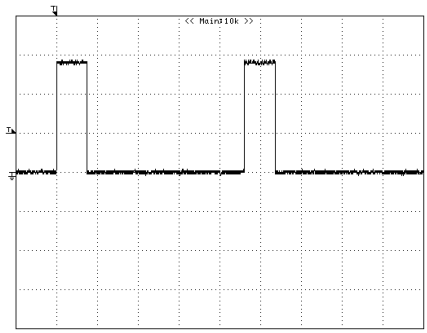
11 SP029 TX_ON (Stand-by)
(CH1=1V, 1s/div)



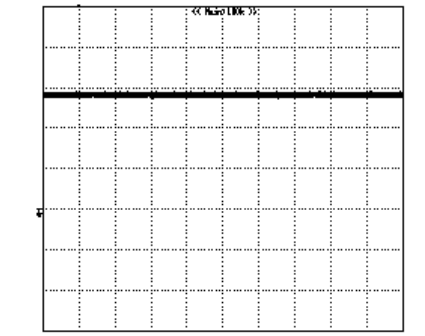
4 C327 EGSM/DCS/PCS (Talking)
(CH1=1V, 1ms/div)



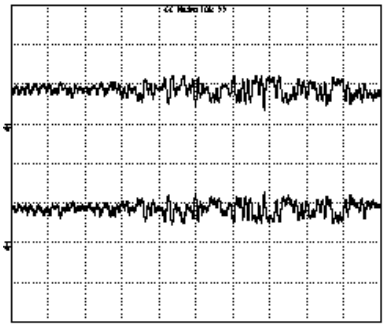
8 C335 EGSM/DCS/PCS (Talking)
(CH1=1V, 1ms/div)



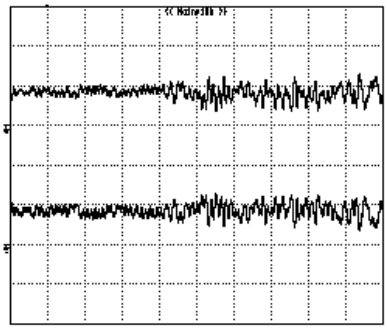
12 SP029 TX_ON (Talking)
(CH1=1V, 1s/div)



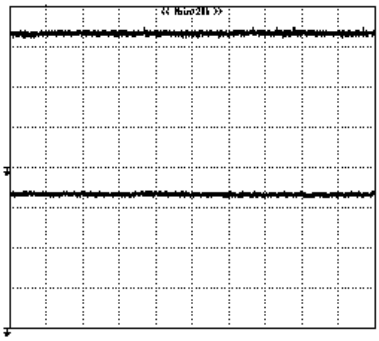
⑬ C451 RXIA
(Receiving W-CDMA modulated waves)
C452 RXIB
(Receiving W-CDMA modulated waves)
(CH1, CH2=200mV, 5μs/div)



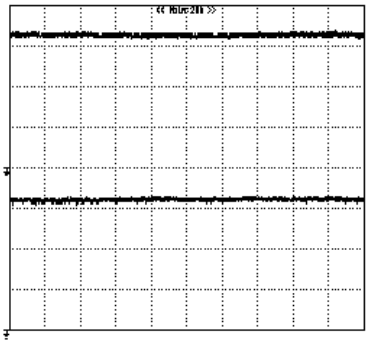
⑭ C453 RXQA
(Receiving W-CDMA modulated waves)
C454 RXQB
(Receiving W-CDMA modulated waves)
(CH1, CH2=200mV, 5μs/div)



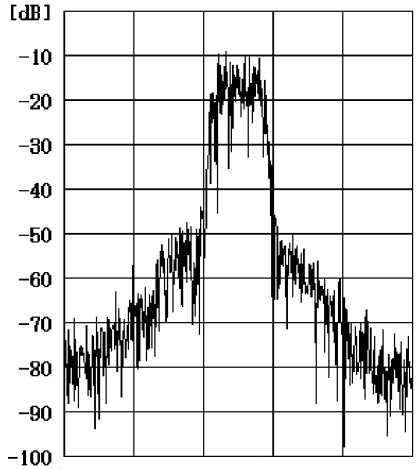
⑮ SP001 TXIA
(Transmitting W-CDMA modulated waves)
SP002 TXIB
(Transmitting W-CDMA modulated waves)
(CH1, CH2=200mV, 10μs/div)



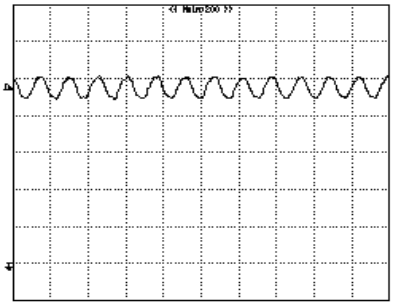
⑯ SP003 TXQA
(Transmitting W-CDMA modulated waves)
SP004 TXQB
(Transmitting W-CDMA modulated waves)
(CH1, CH2=200mV, 10μs/div)



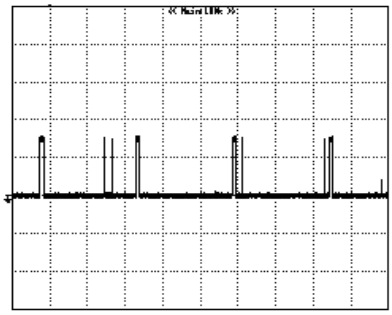
⑰ CN903 (RF output)
(9862ch, Pout=23dBm)



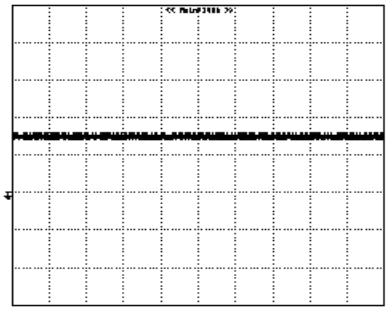
⑱ C761 MCLK (Talking)
(CH1=500mV, 100ns/div)



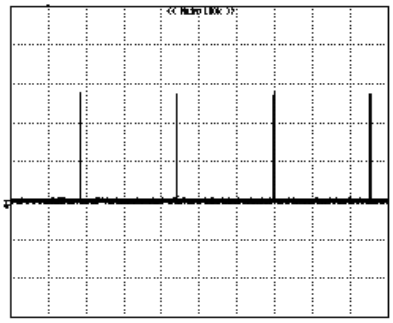
⑲ R011 RF_CLKREQ (Stand-by)
(CH1=1V, 1s/div)



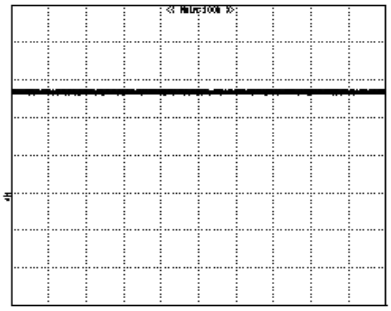
⑳ R011 RF_CLKREQ (Talking)
(CH1=1V, 1s/div)



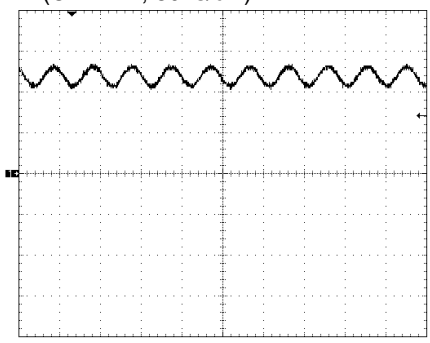
㉑ SP023 RX_ON (Stand-by)
(CH1=1V, 1s/div)



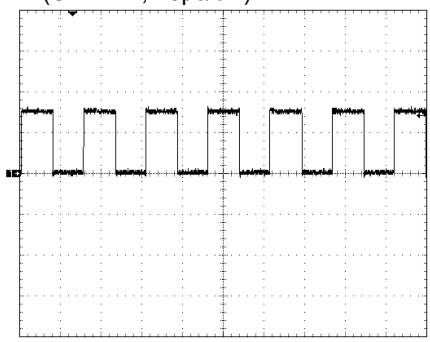
㉒ SP023 RX_ON (Talking)
(CH1=1V, 1s/div)



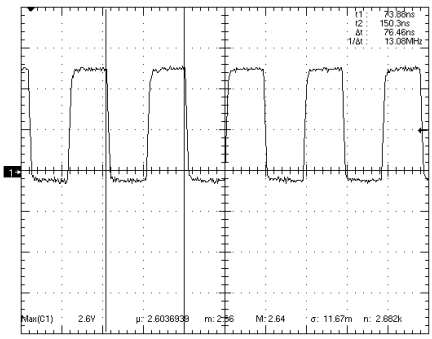
㉓ C1015 (Right) MCLK (Talking)
(CH1=1V, 80ns/div)



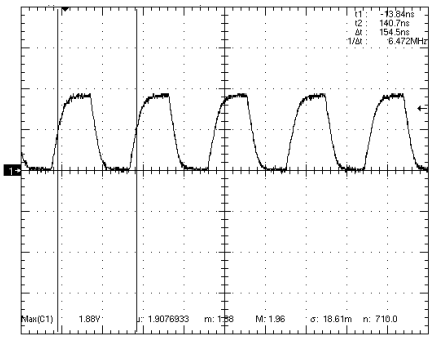
㉔ TP1015 RTCCLK (Power on)
(CH1=1V, 20µs/div)



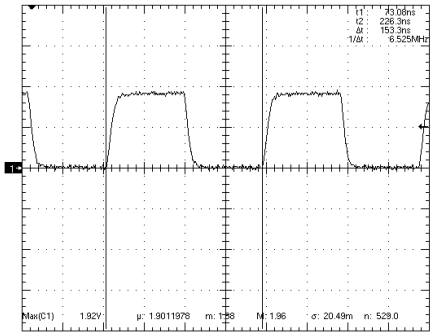
㉕ TP1500 SYSCLK1 (Display turned on)
(CH1=1V, 40ns/div)



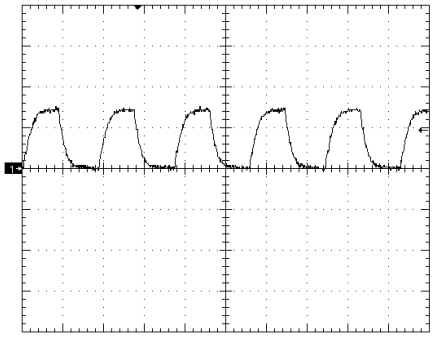
㉖ FL1500 (Right) LCDCLK (Display turned on)
(CH1=1V, 80ns/div)



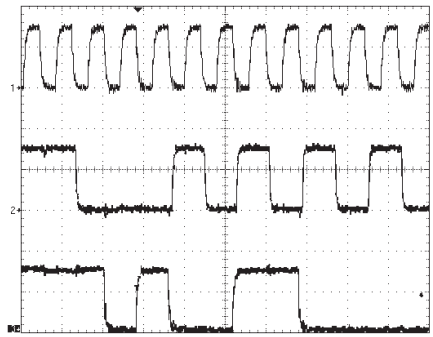
㉗ FL1501 (Right) CAMCLK
(Camera active)
(CH1=1V, 40ns/div)



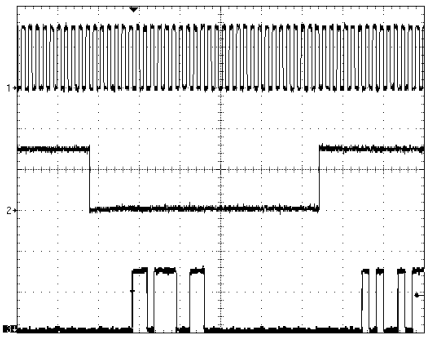
㉘ TP1700 BECLK
(Sending video call image)
(CH1=2V, 20ns/div)



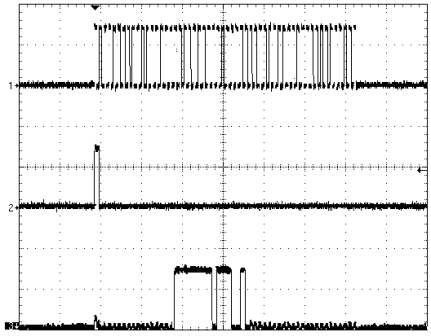
㉙ C1529 (Right) SDCLK (Playing music)
R1619 (Upper, the second from the right)
SDDATA0 (Playing music)
R1617 (Upper) SDCMD (Playing music)
(CH1, CH2, CH3=2V, 80ns/div)



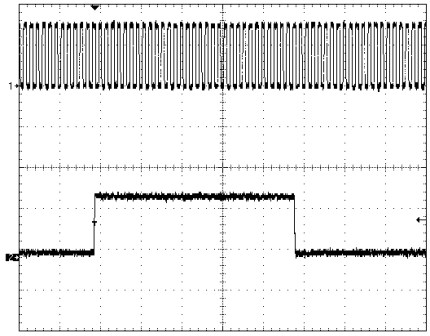
㉚ R1556 (Left) BICK (Playing music)
R1503 (Left) LRCK (Playing music)
R1555 (Upper) ADSDO (Playing music)
(CH1, CH2, CH3=2V, 20µs/div)



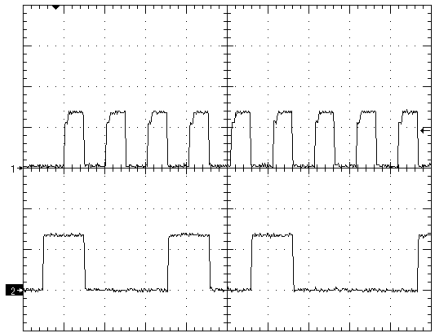
㉛ R1029 (Right, the second from the top)
PCMCLK (Talking)
R1029 (Right, the third from the top)
PCMSYN (Talking)
R1029 (Right, the first from the top)
PCMDATA (Talking)
(CH1, CH2, CH3=2V, 10µs/div)



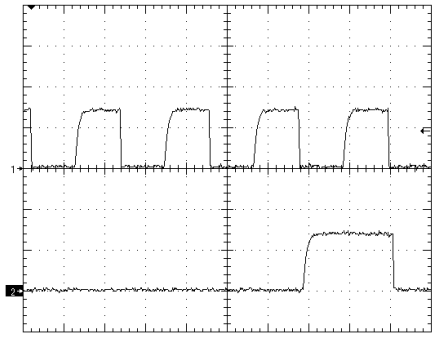
㉜ R1238 (Lower) SIMCLK
(Accessing SIM after power-on)
C1236 (Lower) SIMDAT
(Accessing SIM after power-on)
(CH1, CH2=2V, 2µs/div)



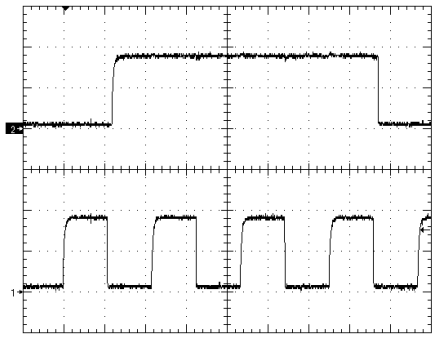
33 R1044 (Left, upper)
M_I2CCLK (Display turned on)
R1044 (Left, lower)
M_I2CDAT (Display turned on)
(CH1, CH2=2V, 10µs/div)



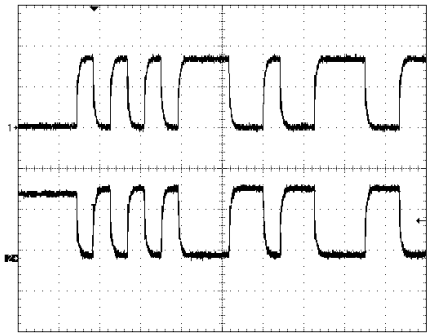
34 R1524 (Upper, left) I2CDATA
(Mobile light on/camera active)
R1524 (Upper, right) I2CCLKA
(Mobile light on/camera active)
(CH1, CH2=2V, 2µs/div)



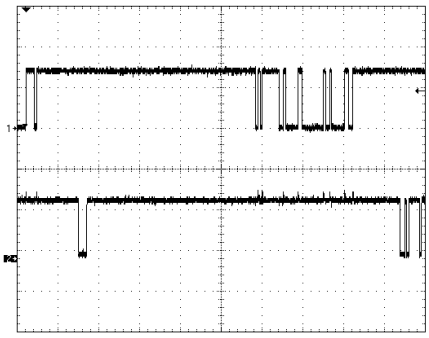
35 R1530 (Lower) I2CDATB
(Display turned on/sub camera active)
R1523 (Lower) I2CCLKB
(Display turned on/sub camera active)
(CH1, CH2=1V, 2µs/div)



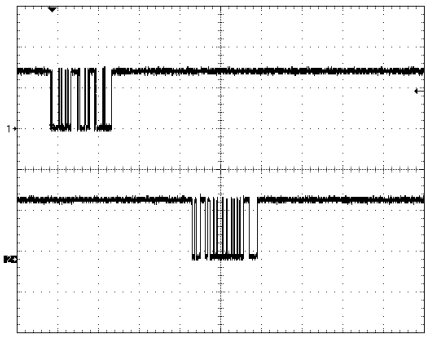
36 R1304 (Lower) USBDM
(Connected to PC)
R1305 (Right) USBDP
(Connected to PC)
(CH1, CH2=2V, 200ns/div)



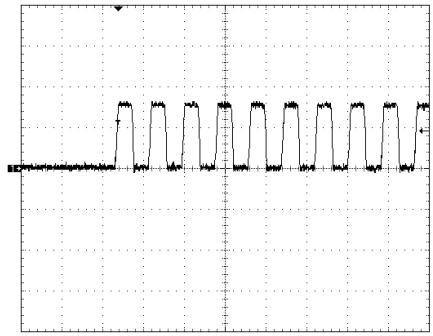
37 TP1701 (Right) UART0TX
(Display remote active)
TP1614 (Right) UART0RX
(Display remote active)
(CH1, CH2=2V, 1ms/div)



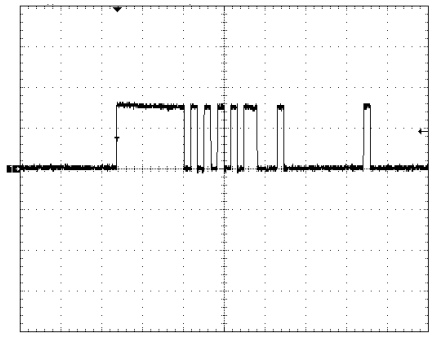
38 IC1001 (43Pin) BT_UARTTX
(Turning on the power)
IC1001 (42Pin) BT_UARTRX
(Turning on the power)
(CH1, CH2=2V, 400µs/div)



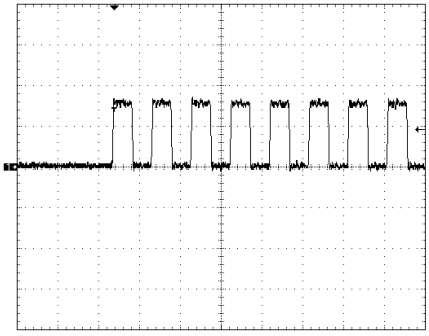
39 R1063 (Left, the second from the top)
HSSLTXCLK (Talking)
(CH1=1V, 80ns/div)



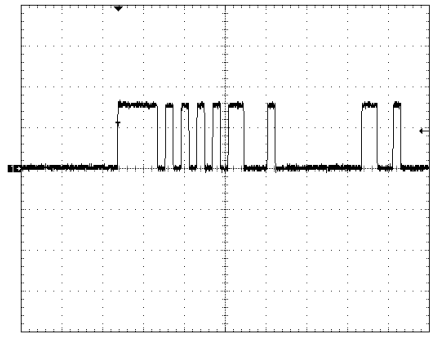
40 R1063 (Left, the third from the top)
HSSLTX (Talking)
(CH1=1V, 400ns/div)



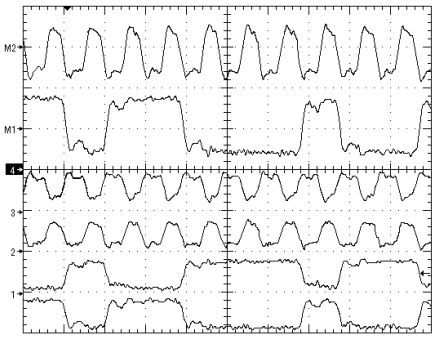
41 R1063 (Left, top) HSSLRXCLK (Talking)
(CH1=1V, 80ns/div)



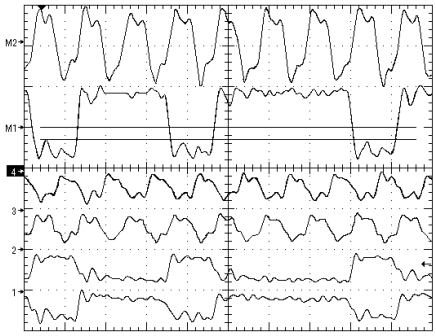
42 R1063 (Left, bottom) HSSLRX (Talking)
(CH1=1V, 400ns/div)



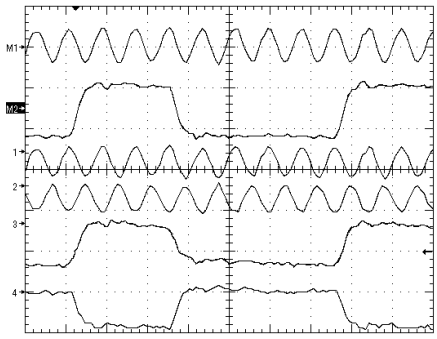
43 C1501 (Upper) VRX1DN
(Sub camera active)
C1501 (Lower) VRX1DP
(Sub camera active)
C1517 (Lower) VRX1CKN
(Sub camera active)
C1517 (Upper) VRX1CKP
(Sub camera active)
(CH1, CH2, CH3, CH4=200mV, 20ns/div)



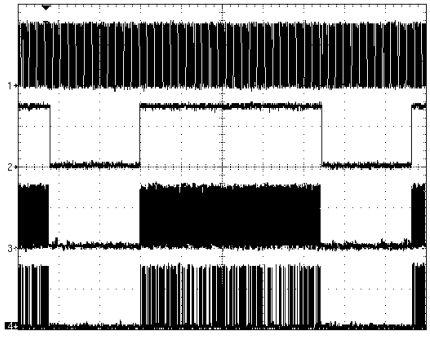
44 C1521 (Upper) VRX2DN
(Camera active)
C1521 (Lower) VRX2DP
(Camera active)
C1520 (Upper) VRX2CKN
(Camera active)
C1520 (Lower) VRX2CKP
(Camera active)
(CH1, CH2, CH3, CH4=300mV, 10ns/div)



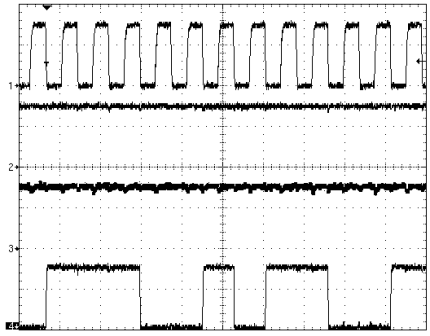
45 C1560 (Lower) VTX1CKP
(Display turned on)
C1559 (Left) VTX1CKN
(Display turned on)
C1562 (Lower) VTX1DP
(Display turned on)
C1561 (Lower) VTX1DN
(Display turned on)
(CH1, CH2, CH3, CH4=300mV, 10ns/div)



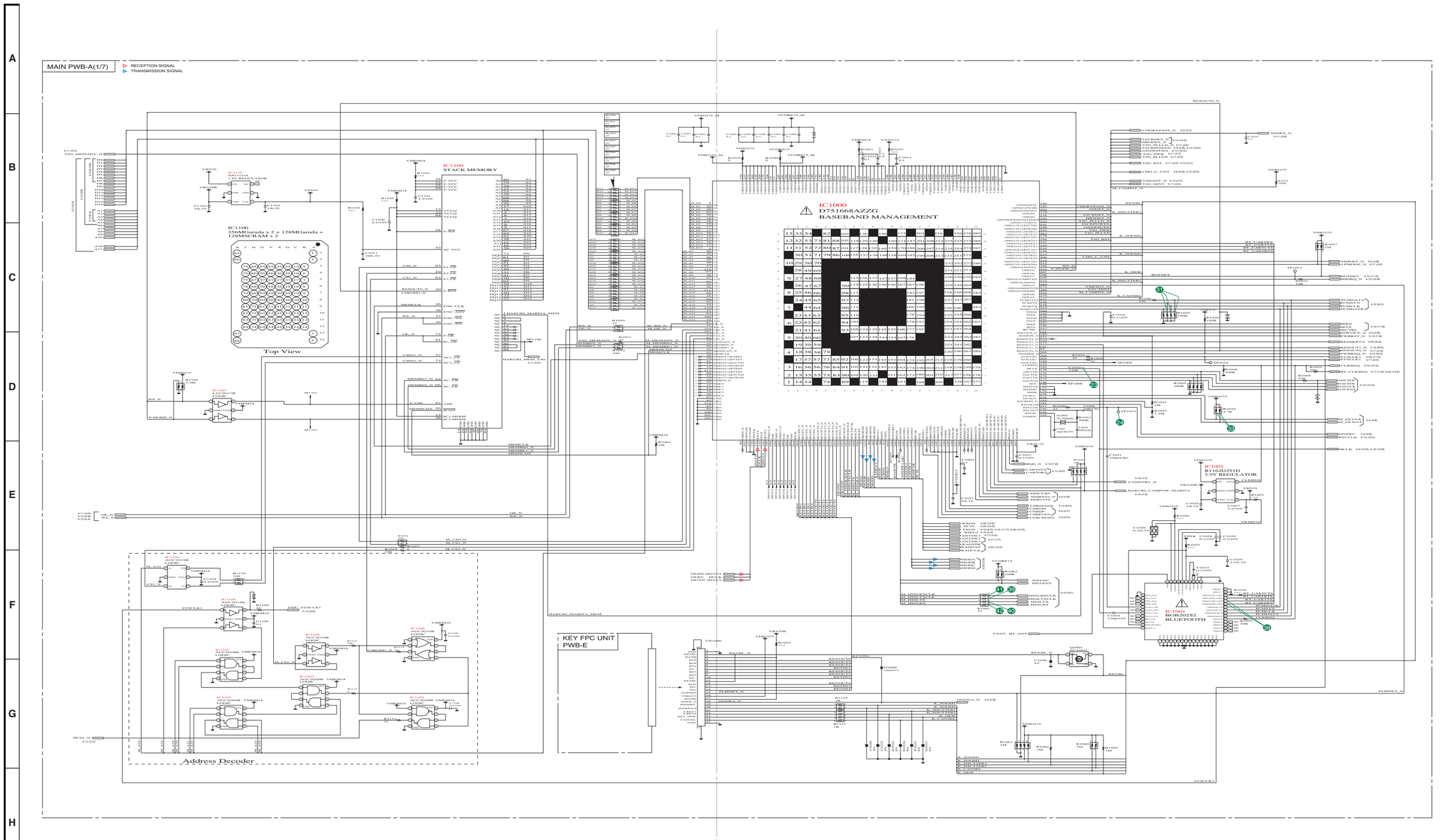
46 SP22 PCLK (Sub camera started up)
SP4 VSYNC (Sub camera started up)
SP23 HSYNC (Sub camera started up)
SP5 D0 (Sub camera started up)
(CH1, CH2, CH3, CH4=2V, 10ms/div)



47 SP22 PCLK (Sub camera started up)
SP4 VSYNC (Sub camera started up)
SP23 HSYNC (Sub camera started up)
SP5 D0 (Sub camera started up)
(CH1, CH2, CH3, CH4=2V, 400ns/div)



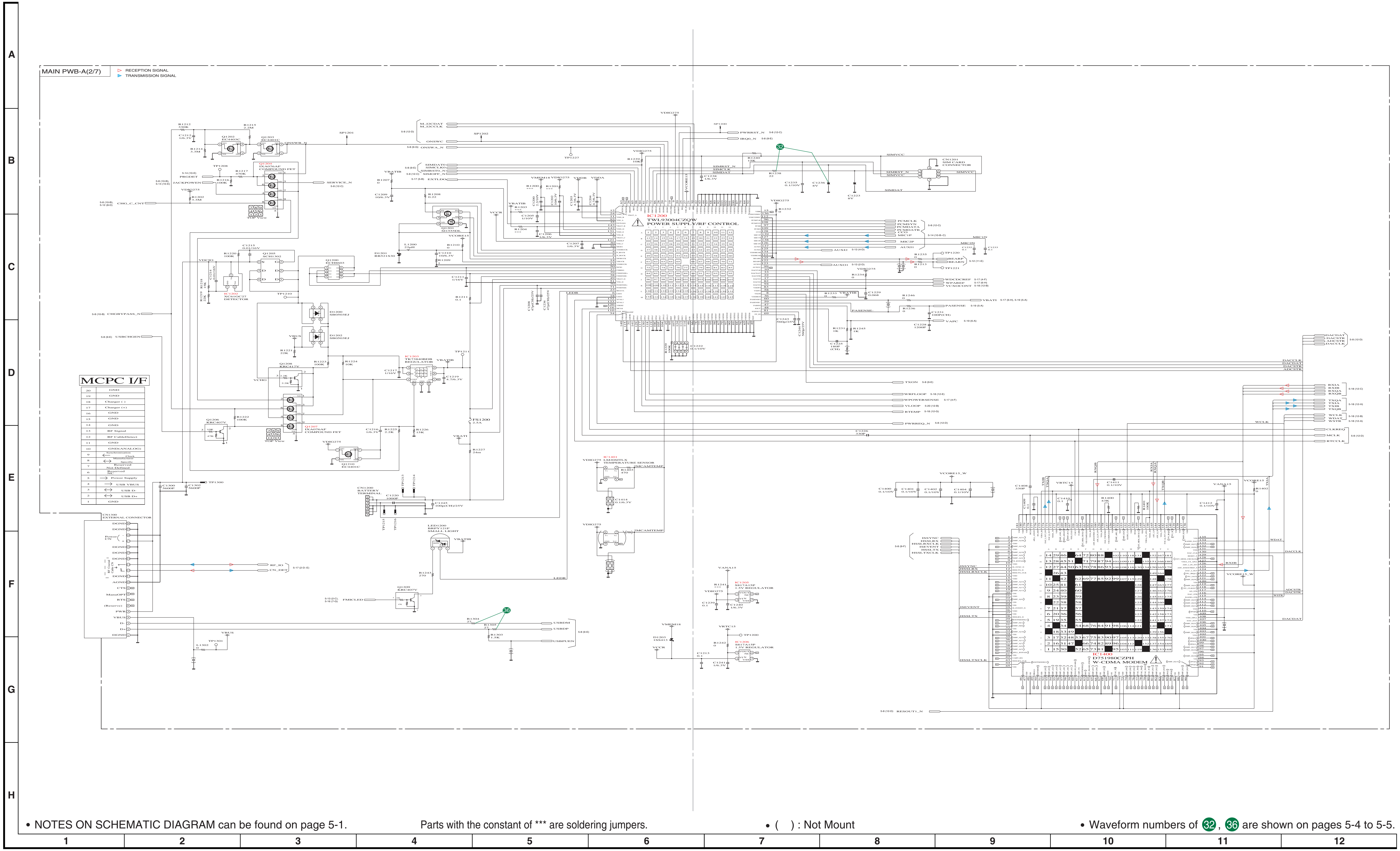
[4] Schematic diagram (Main 1/7)



- NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.
- Parts with the constant of *** are soldering jumpers.
- ( ) : Not Mount
- Waveform numbers of 23, 24, 31, 33, 38 to 42 are shown on pages 5-4 to 5-5.

CONFIDENTIAL

[5] Schematic diagram (Main 2/7)



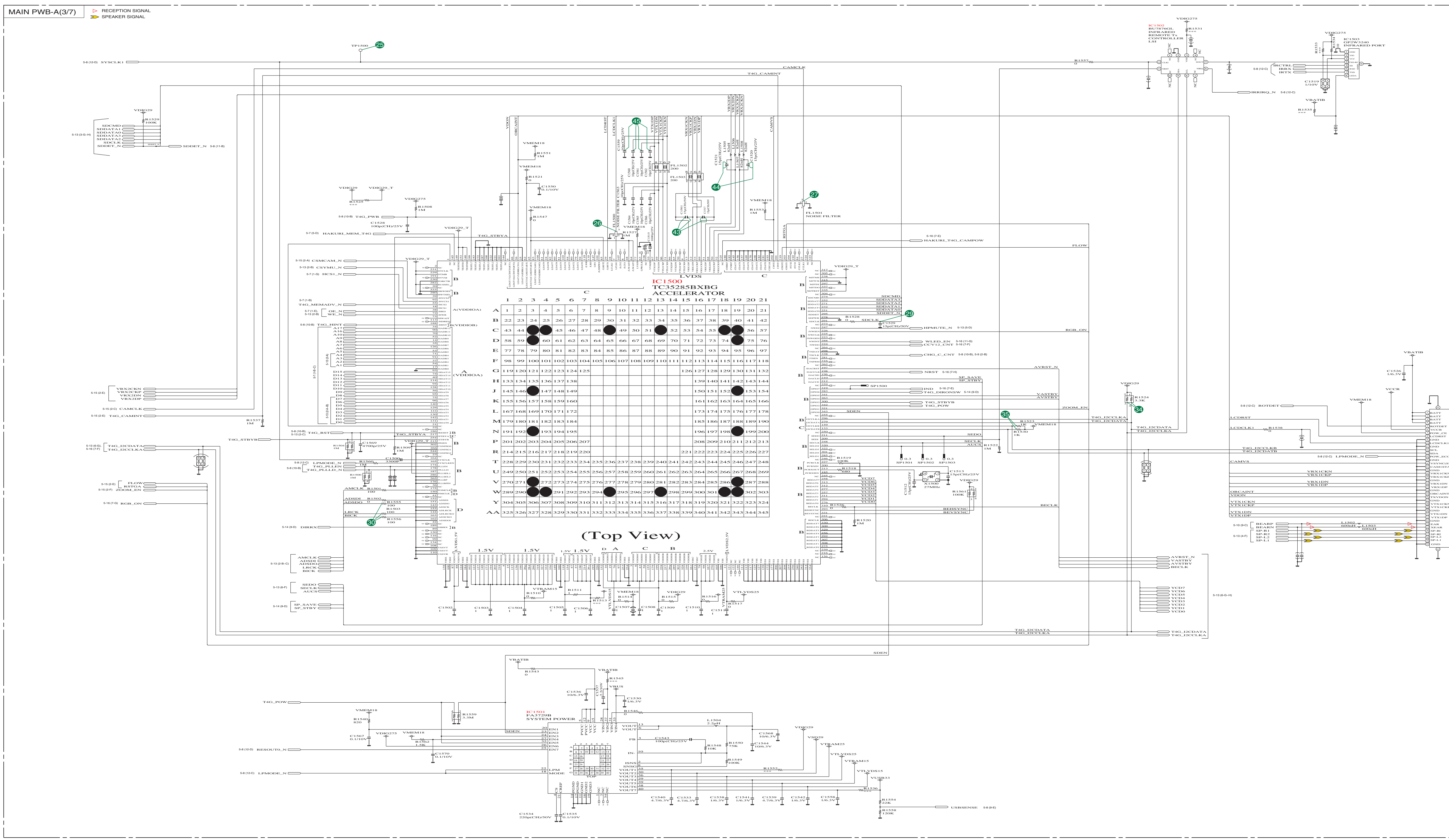
• NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.

Parts with the constant of *** are soldering jumpers.

• ( ) : Not Mount

• Waveform numbers of 32, 36 are shown on pages 5-4 to 5-5.

[6] Schematic diagram (Main 3/7)

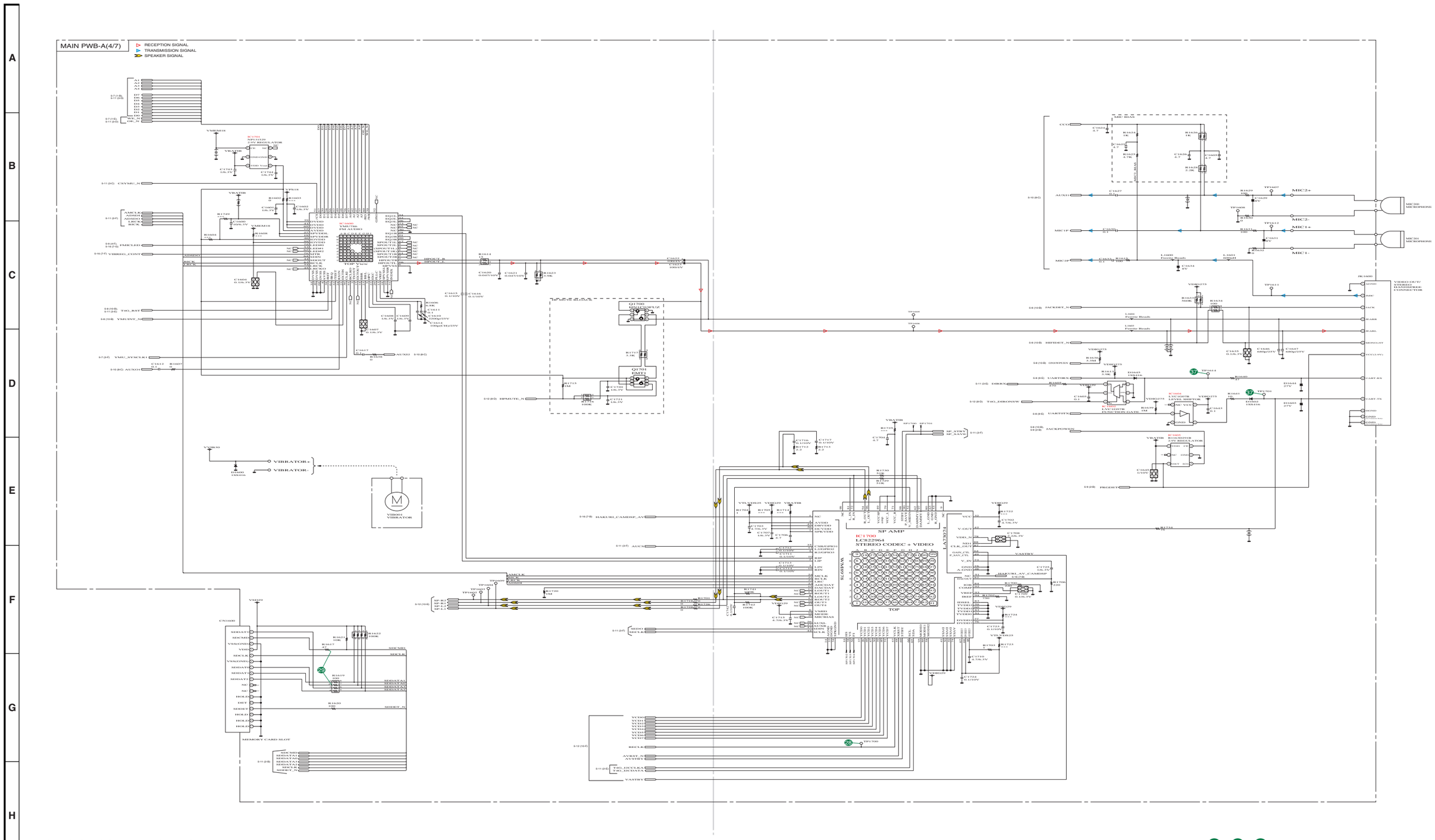


A B C D E F G H

1 2 3 4 5 6 7 8 9 10 11 12

• NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1. Parts with the constant of *** are soldering jumpers. • ( ) : Not Mount • Waveform numbers of 25 to 27, 29, 30, 34, 35, 43 to 45 are shown on pages 5-4 to 5-6.

[7] Schematic diagram (Main 4/7)



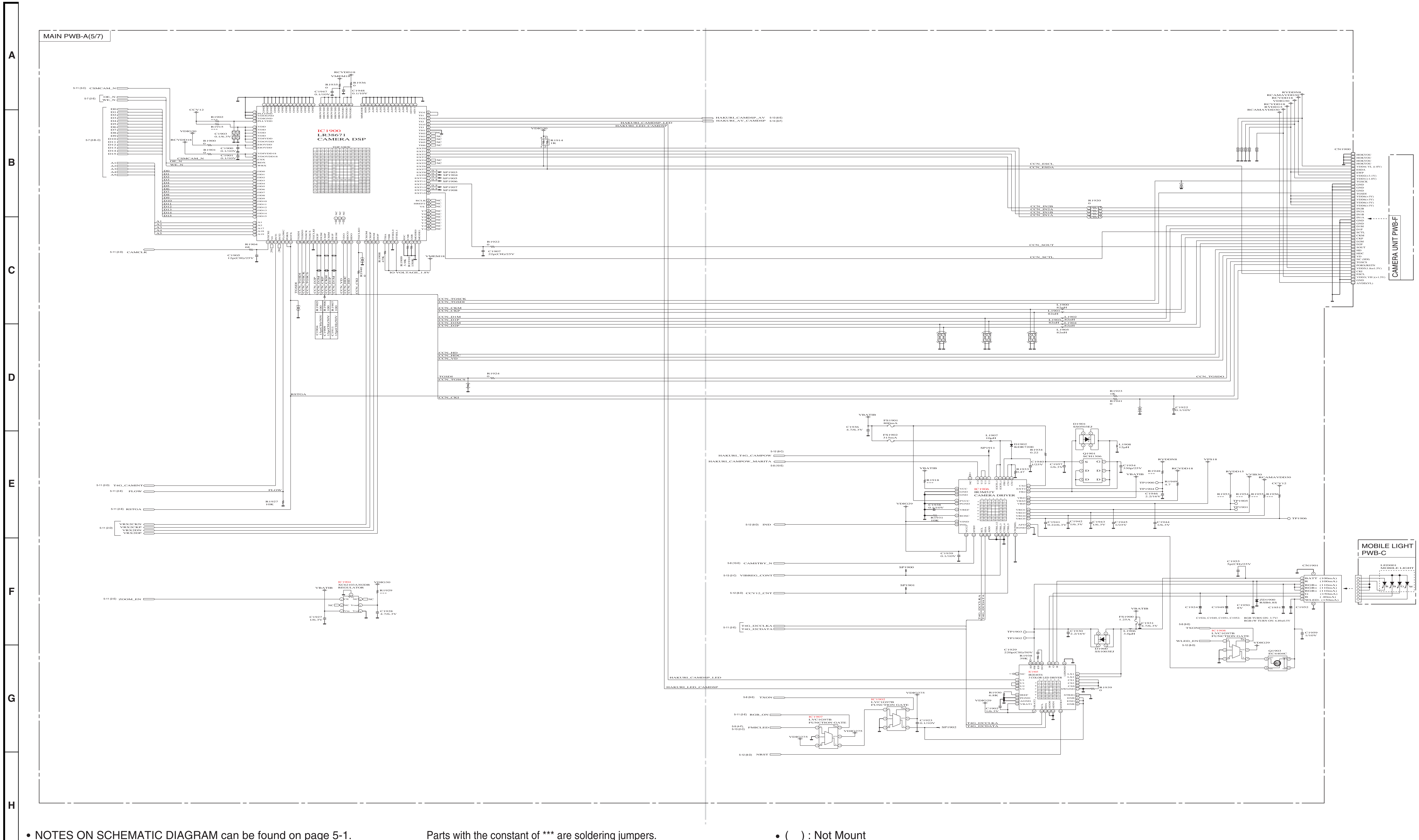
• NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.

Parts with the constant of *** are soldering jumpers.

• ( ) : Not Mount

• Waveform numbers of 28, 29, 37 are shown on pages 5-4 to 5-5.

[8] Schematic diagram (Main 5/7)



• NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1. Parts with the constant of *** are soldering jumpers. • ( ) : Not Mount

[9] Schematic diagram (Main 6/7)

MAIN PWB-A(6/7)

RECEPTION SIGNAL

TRANSMISSION SIGNAL

Power

IC800 LP3981ILD 2.8V REGULATOR

BUILT-IN AERIAL

ANT 900MHz

ANT 1800~2100MHz

ANT901 AERIAL TERMINAL

RF MEASURMENT POINT

IC006 LVC2G04B 2 CIRCUIT INVERTER GATE

CONTROL LOGIC (IC004)

CTLA	CTLB	ON STATE
L	H	RF1-RF2
H	L	RF1-RF3

IC004 CXG1189UR SPDT SWITCH

IC001 AERIAL SWITCH MODULE

IC003 RN47A4JEF

Q702 EC4301C

Q703 EC3201C

CONTROL LOGIC (IC001)

	VC3 (ANTSW3)	VC2 (ANTSW2)	VC1 (ANTSW1)
UMTS	L	L	L
EGSMRx	L	L	L
EGSMTx	H	L	L
GSM1800Rx	L	H	L
GSM1800/1900Tx	L	H	H
GSM1900Rx	L	L	H

FL002 DUPLEXER

Transmitter f_tx:1922.6 - 1977.4MHz

Receiver f_rx:2112.6 - 2167.4MHz

FL650 ISOLATOR

IC620 MAX1820XEBC DC/DC

IC630 RF9266 W-CDMA POWER AMP.

IC400 OM5954ET RECEIVER IC FOR W-CDMA

IC700 OM5955ET TRANSMITTER IC FOR W-CDMA

FL500 Tx-RFSAW (W-CDMA)

Q701 EC3201C

FL420 Rx-IFSAW (W-CDMA)

FL400 Rx-RFSAW (W-CDMA)

IC501 LM20SITLX TEMPERATURE SENSOR

- NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.
- ( ) : Not Mount
- Waveform numbers of 1 to 3, 11 to 22 are shown on pages 5-2 to 5-3.

[10] Schematic diagram (Main 7/7)

MAIN PWB-A(7/7)

RECEPTION SIGNAL

TRANSMISSION SIGNAL

GSM block

From RF port(BT module) to ANT

POWER CIRCUITS

IC300
SKY77321
POWER AMP. MODULE
(FOR GSM)

IC100
OM5952AET
RECEIVER/TRANSMISSION IC FOR GSM

IC101
AB1011
GSM CODEC

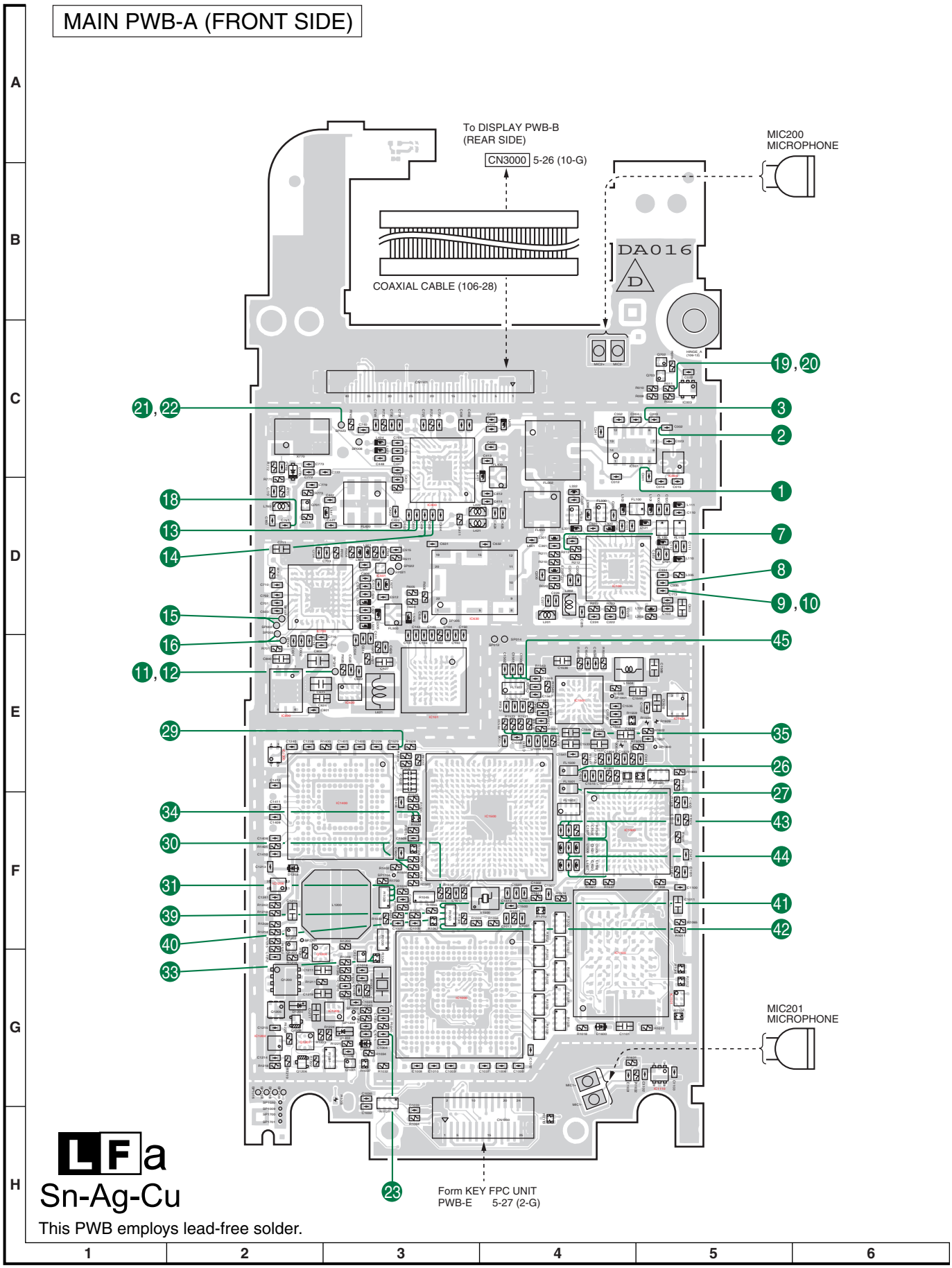
BLUETOOTH AERIAL

CN061
BLUETOOTH MEASURMENT POINT

- NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.
- ( ) : Not Mount
- Waveform numbers of 4 to 10 are shown on page 5-2.

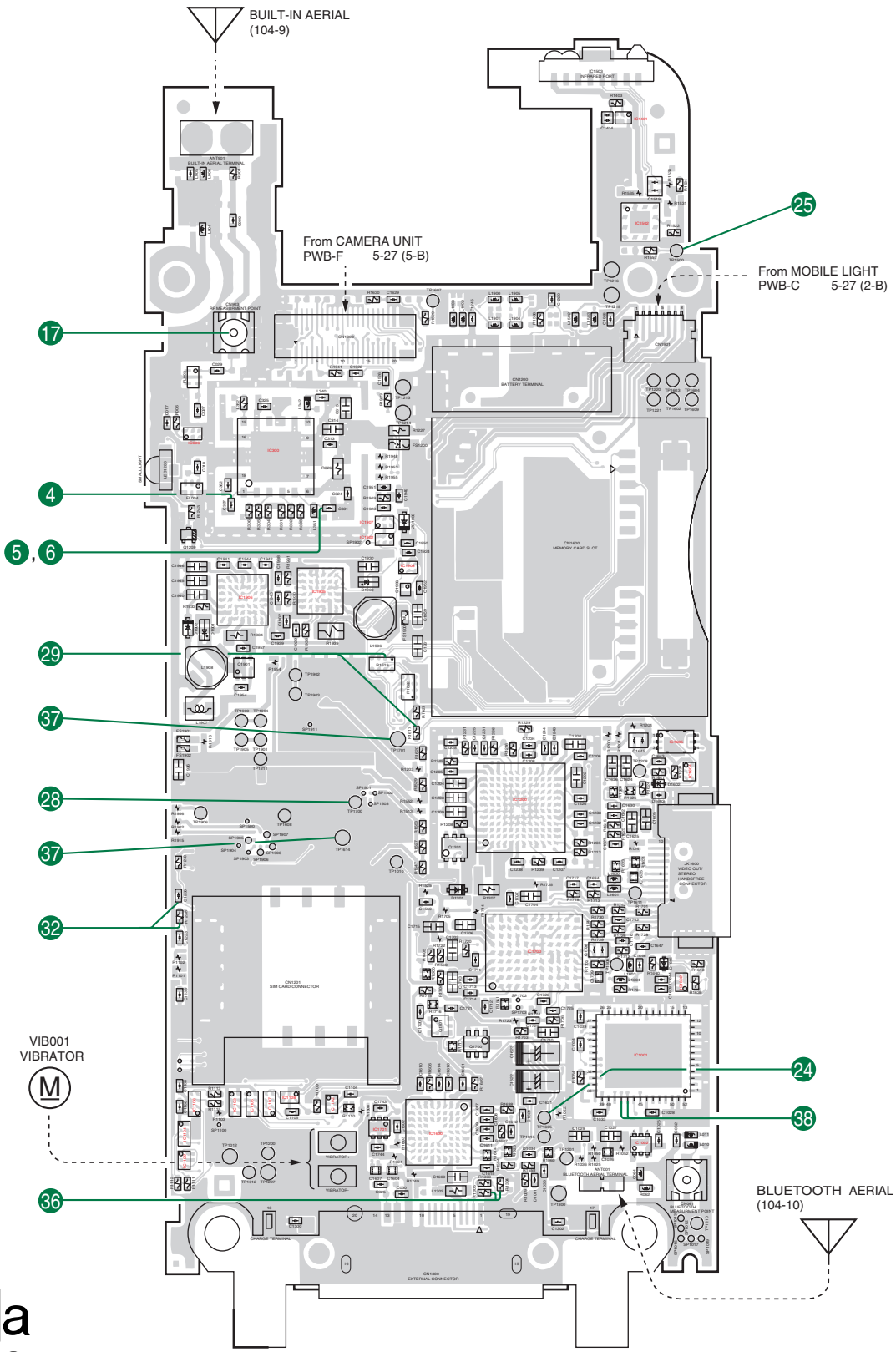
[11] Wiring side of P.W.Board (Main)

MAIN PWB-A (FRONT SIDE)



LFa
Sn-Ag-Cu
This PWB employs lead-free solder.

MAIN PWB-A (REAR SIDE)

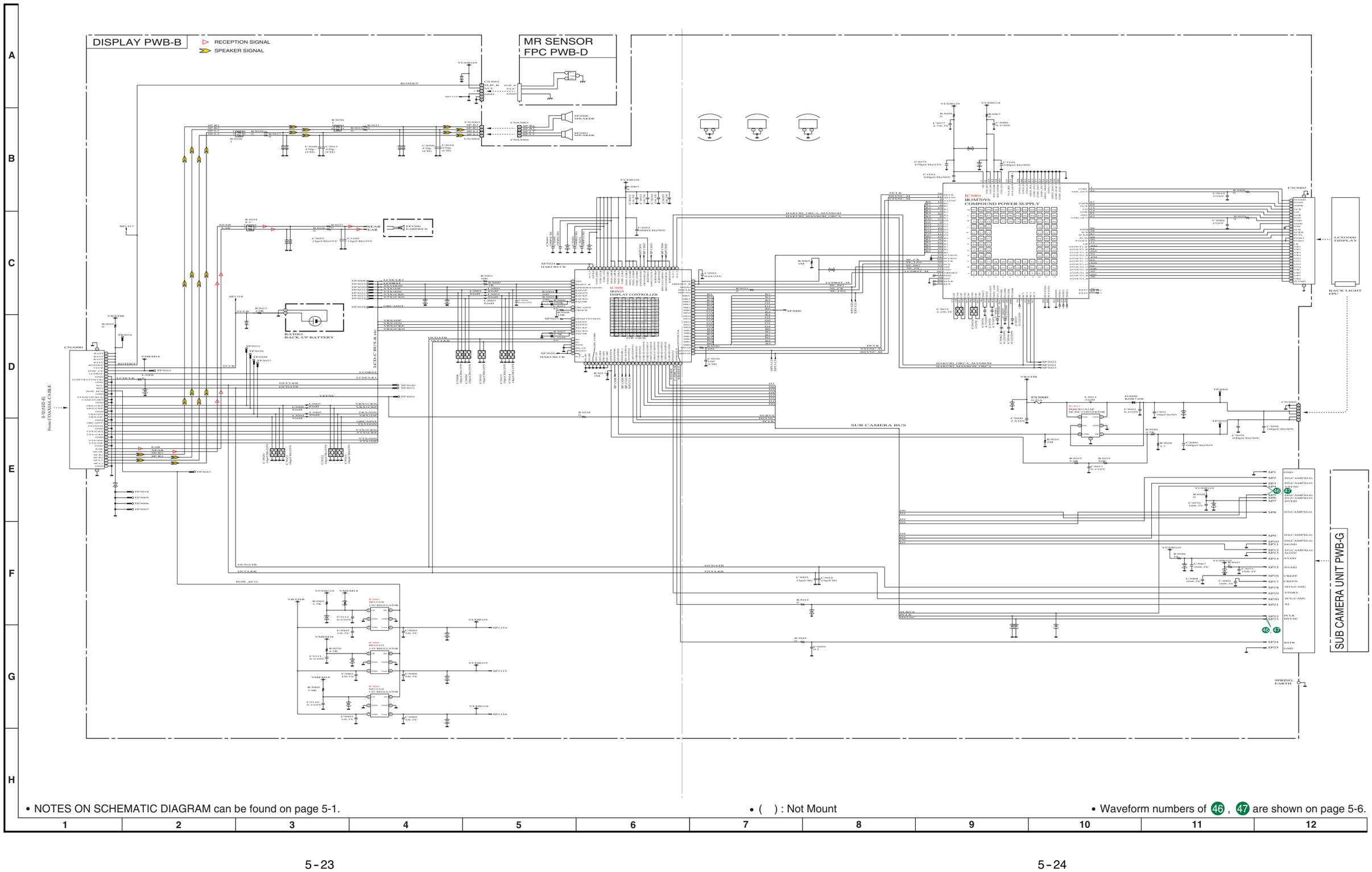


LFa
Sn-Ag-Cu
This PWB employs lead-free solder.

• Waveform numbers of 1 to 45 are shown on pages 5-2 to 5-6.

7	8	9	10	11	12

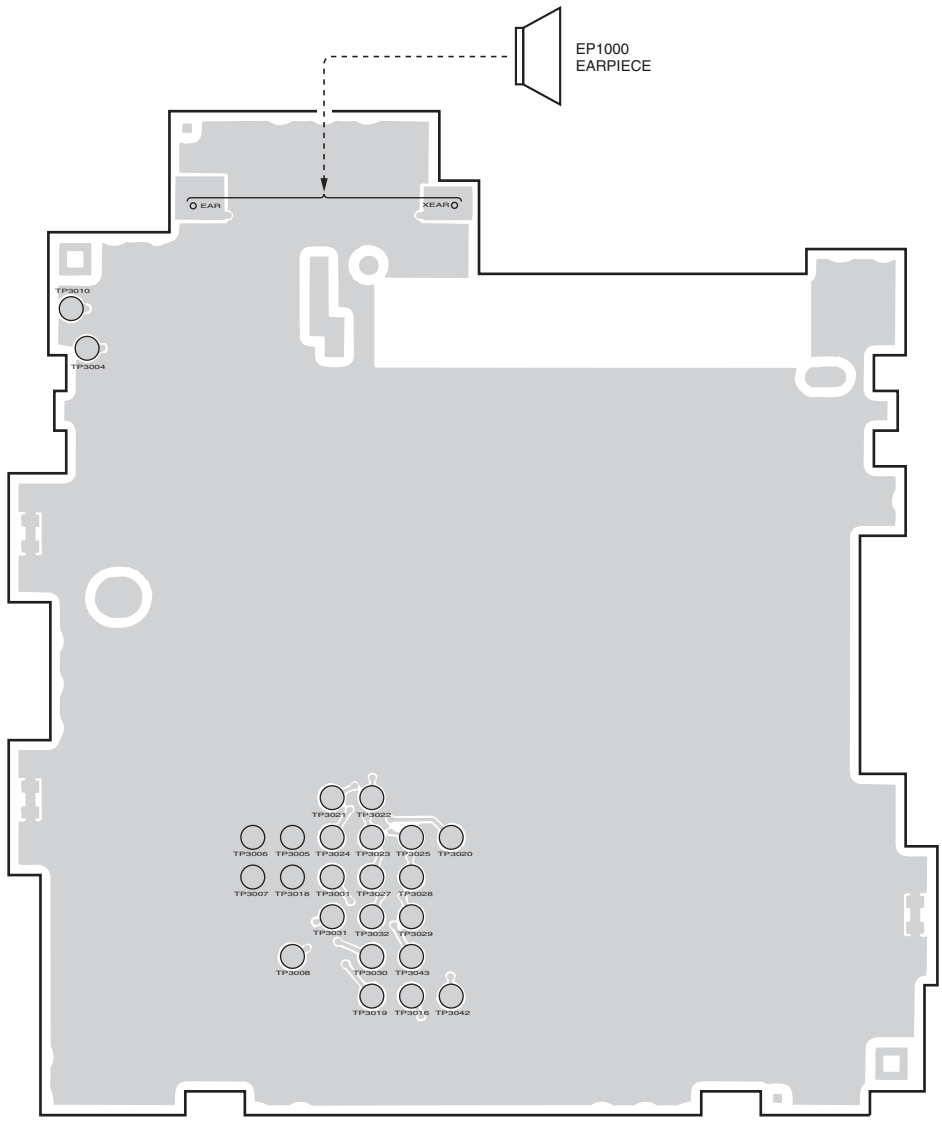
[12] Schematic diagram (Display)



- NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.
- ( ) : Not Mount
- Waveform numbers of 46 , 47 are shown on page 5-6.

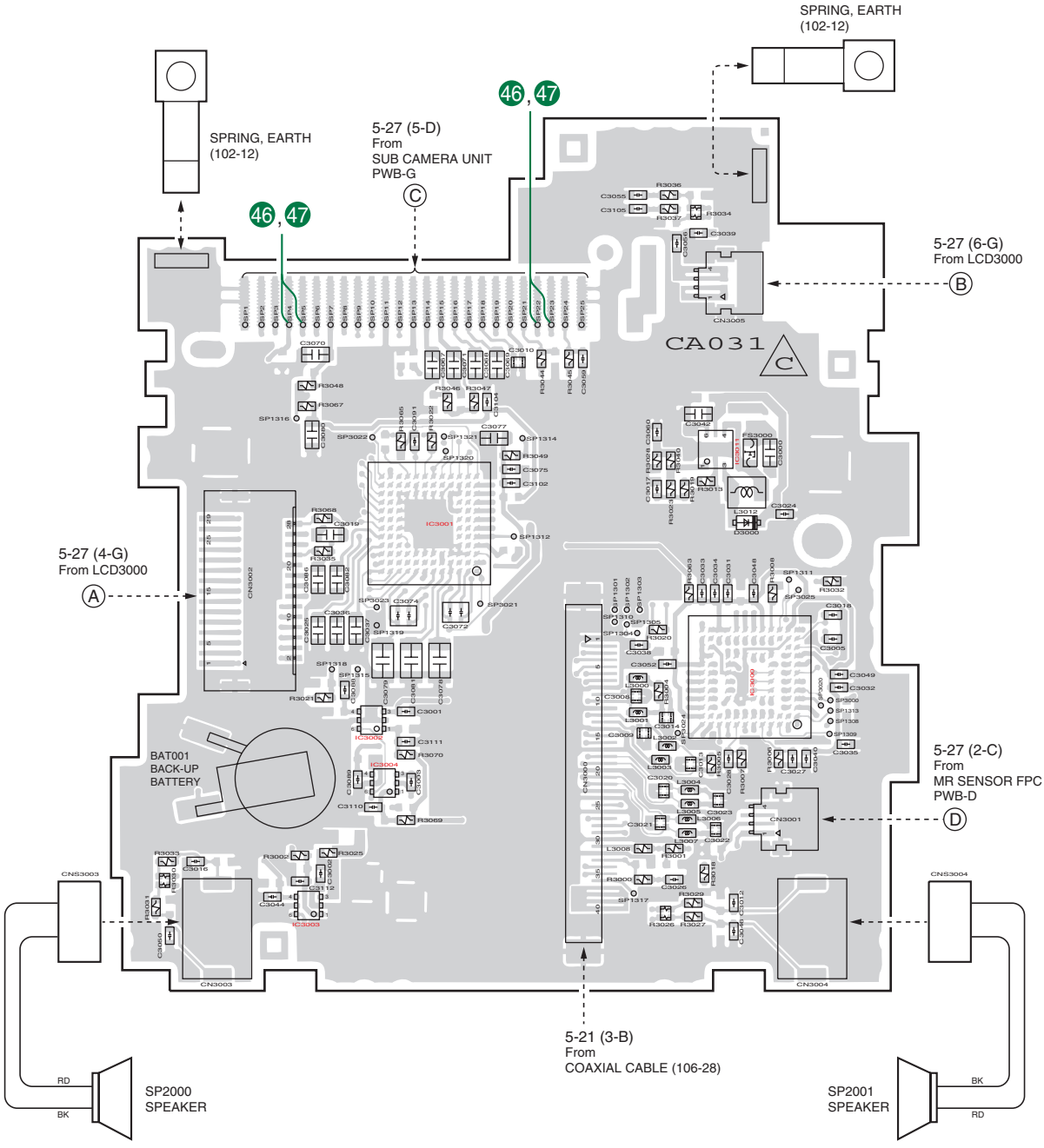
[13] Wiring side of P.W.Board (Display)

DISPLAY PWB-B (FRONT SIDE)



LFa
Sn-Ag-Cu
This PWB employs lead-free solder.

DISPLAY PWB-B (REAR SIDE)



COLOR TABLE	BR BROWN	RD(R) RED	OR ORANGE	YL YELLOW	GR GREEN	BL BLUE	VL VIOLET	GY GRAY	WH(W) WHITE	BK BLACK	PK PINK

LFa

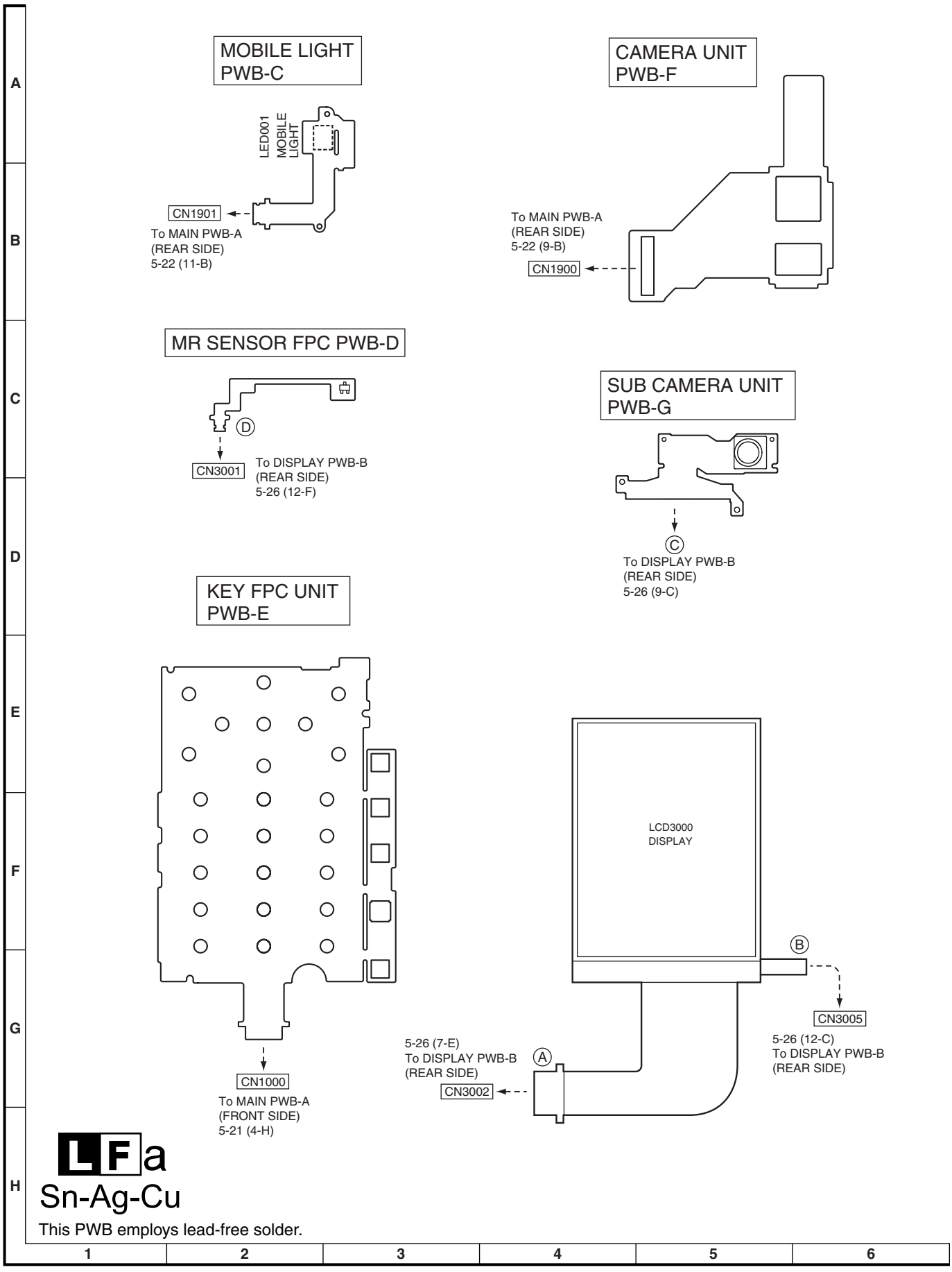
Sn-Ag-Cu

This PWB employs lead-free solder.

• Waveform numbers of 46 to 47 are shown on page 5-6.

7	8	9	10	11	12

[14] Wiring side of P.W.Board (Other)



[15] Voltage value

IC003							
PIN NO.	VOLTAGE						
	W-CDMA	EGSM Tx	EGSM Rx	DCS Tx	DCS Rx	PCS Tx	PCS Rx
1	0.00V	0.00V	0.00V	0.00V	0.00V	0.00V	0.00V
2	0.00V	2.79V	0.00V	0.00V	0.00V	0.00V	0.00V
3	2.77V	2.76V	2.77V	2.78V	2.78V	2.77V	2.77V
4	0.00V	2.69V	0.00V	0.00V	0.00V	0.00V	0.0V
5	2.75V	0.03V	2.76V	2.76V	2.76V	2.76V	2.76V

IC004			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0.00V	7	0.00V
2	1.91V	8	1.94V
3	0.00V	9	0.00V
4	0.00V	10	0V/2.79V
5	1.95V	11	0.00V
6	0.00V	12	2.79V/0V

IC501	
PIN NO.	VOLTAGE
1	N.C
2	0.00V
3	Approx. 1.35V
4	2.79V

IC800			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	2.80V	5	1.14V
2	1.66V	6	Approx. 2.78V
3	2.80V	7	0.00V
4	0.00V		

Measuring conditions

· Operating condition: Standby (Main Display: On; Backlight: slightly lighted)
· BATT voltage: 4.20 V

MAIN PWB-A

IC1001			
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0.00V	27	1.80V
2	0.00V	28	0.00V
3	0.00V	29	-100~350mV *3
4	0.00V	30	0.00V
5	0.00V	31	1.80V
6	0.00V	32	1.80V
7	0.00V	33	0.00V
8	0.00V	34	0.00V
9	0.00V	35	0.00V
10	0.00V	36	0.00V
11	0.00V	37	1.80V
12	0.00V	38	2.75V
13	0.00V	39	2.90V
14	0.00V	40	950mV
15	0.00V	41	2.75V
16	0.00V	42	0.00V
17	0.00V	43	2.75V
18	0~700mV *1	44	0.00V
19	-250~1000mV *2	45	2.75V
20	0.00V	46	1.80V
21	0.00V	47	1.80V
22	0.00V	48	0.00V
23	1.80V	49	1.80V
24	1.80V	50	0.00V
25	1.50V	51	0.00V
26	1.80V	52	0.00V

IC1002	
PIN NO.	VOLTAGE
1	2.75V
2	0.00V
3	4.20V
4	2.90V
5	0.00V
6	1.50V

IC1110	
PIN NO.	VOLTAGE
1	2.90V
2	0.00V
3	4.20V
4	1.80V
5	0.00V
6	0.00V

IC1202	
PIN NO.	VOLTAGE
1	0.00V
2	0.00V
3	0.00V

IC1205	
PIN NO.	VOLTAGE
1	1.50V
2	2.75V
3	0.00V
4	0.00V

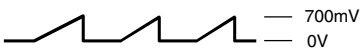
IC1206	
PIN NO.	VOLTAGE
1	1.50V
2	1.60V
3	0.00V
4	0.00V

IC1701	
PIN NO.	VOLTAGE
1	1.80V
2	0.00V
3	4.20V
4	2.90V
5	0.00V
6	0.00V

IC1605	
PIN NO.	VOLTAGE
1	4.20V
2	0.00V
3	0.00V
4	0.00V
5	0.00V
6	0.00V

IC1904	
PIN NO.	VOLTAGE
1	0.00V
2	0.00V
3	4.20V
4	0.00V
5	0.00V
6	0.00V

*1 : Waveforms of circuit



*2 : Waveforms of circuit

*3 : Waveforms of circuit

DISPLAY PWB-B

IC3003	
PIN NO.	VOLTAGE
1	1.80V
2	0.00V
3	4.20V
4	2.90V
5	0.00V
6	2.75V

IC3002	
PIN NO.	VOLTAGE
1	1.80V
2	0.00V
3	4.20V
4	2.50V
5	0.00V
6	2.75V

IC3004	
PIN NO.	VOLTAGE
1	1.80V
2	0.00V
3	4.20V
4	1.80V
5	0.00V
6	2.75V

IC3011	
PIN NO.	VOLTAGE
1	95mV
2	0.00V
3	4.15V
4	4.17V
5	9.10V
6	1.80V

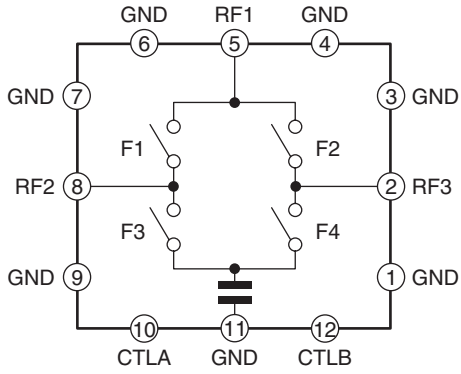
• NOTES ON SCHEMATIC DIAGRAM can be found on page 5-1.

CHAPTER 6. OTHERS

[1] Function table of IC

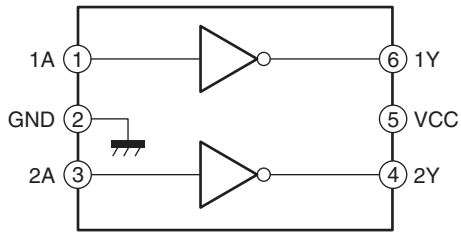
IC004 VHICXG1189U-1L (CXG1189UR): SPDT SWITCH

Pin No.	Terminal name	Input/Output	Description of terminal
1	GND	-	Earth
2	RF3	Input/Output	RF input/output 824-2170MHz
3	GND	-	Earth
4	GND	-	Earth
5	RF1	Input/Output	RF input/output 824-2170MHz
6	GND	-	Earth
7	GND	-	Earth
8	RF2	Input/Output	RF input/output 824-2170MHz
9	GND	-	Earth
10	CTLA	Input	Path control voltage A
11	GND	-	Earth
12	CTLB	Input	Path control voltage B



IC006 VHILVC2G04B-1R (LVC2G04B): 2 CIRCUIT INVERTER GATE

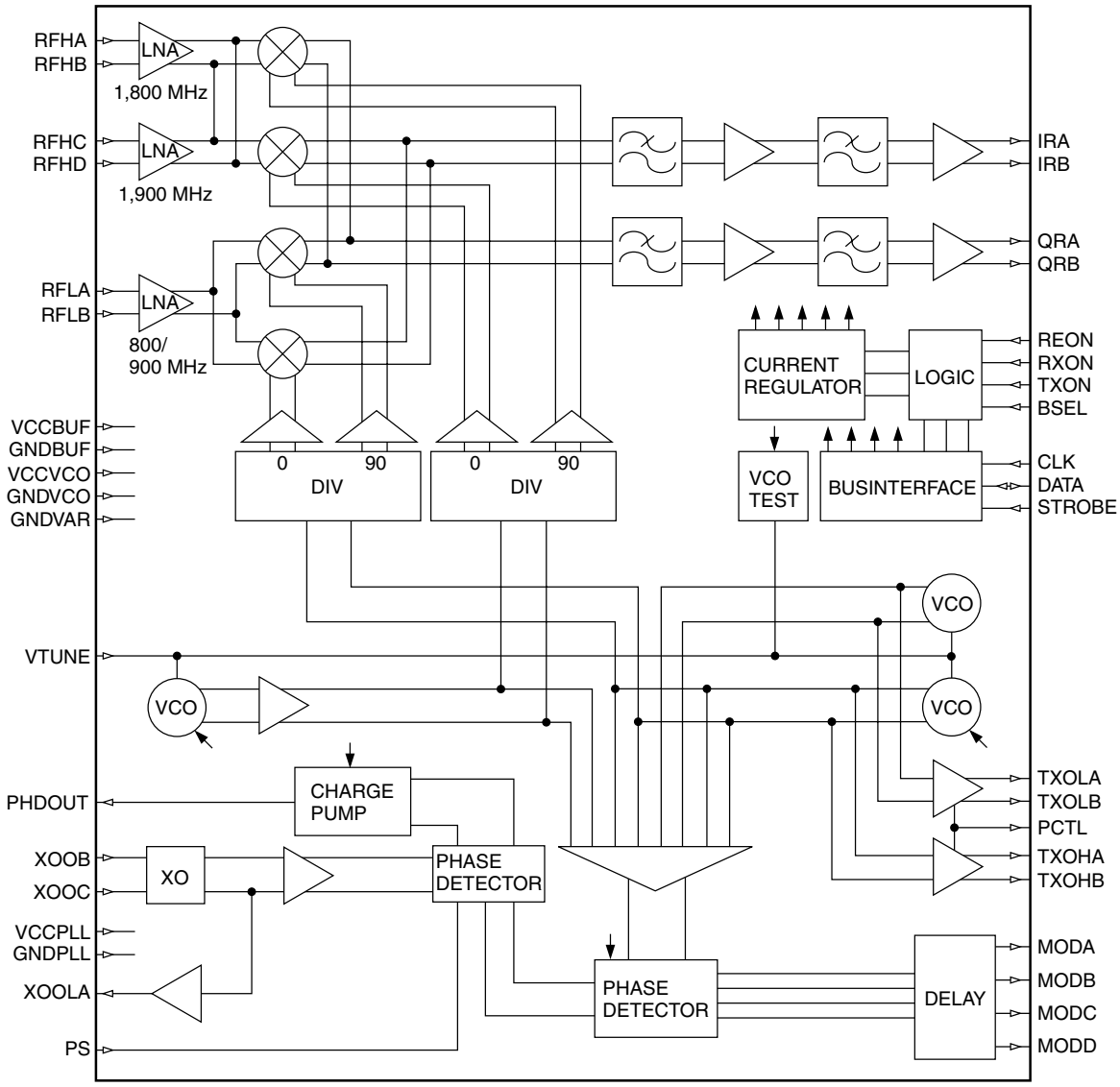
Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	GND	-	Earth
3	2A	Input	Input
4	2Y	Output	Output
5	VCC	-	Power supply
6	1Y	Output	Output



IC100 (OM5952AET): RECEIVER/TRANSMISSION IC FOR GSM

Pin No.	Terminal name	Input/Output	Description of terminal
1	RFHD	Input	GSM 1,900 MHz RF input
2	RFHC	Input	GSM 1,900 MHz RF input
3	GNDRF	–	Earth for RF part
4	RFLB	Input	GSM 900 MHz or GSM 800 MHz RF input
5	RFLA	Input	GSM 900 MHz or GSM 800 MHz RF input
6	VCCRF	–	Supply for RF part
7	QRB	Output	Q-channel output
8	QRA	Output	Q-channel output
9	IRB	Output	I-channel output
10	IRA	Output	I-channel output
11	GNDRF	–	Earth for RF part
12	GNDVCO	–	Earth for VCO part
13	RFHA	Input	GSM 1,800 MHz RF input
14	GND PLANE	–	Flex-film earth plane
15	REON	Input	Hardware power on for reference and bus part
16	CLK	Input	Serial bus clock input
17	DATA	Input/Output	Serial bus data input/output
18	STROBE	Input	Serial bus strobe input
19	GNDCVO	–	Earth for VCO part
20*	NC	–	Must not be connected. Bond wire exists. (Not used)
21	RFHB	Input	GSM 1,800 MHz band RF input
22	TXON	Input	Hardware power on for transmit part
23	GNDVCO	–	Earth for VCO part
24*	NC	–	Not used
25	GNDRF	–	Earth for RF part
26	RXON	Input	Hardware power on for receive part
27	GNDVCO	–	Earth for VCO part
28	GNDVCO	–	Earth for VCO part
29	TXOLB	Output	GSM 800/900 MHz Tx output
30	BSEL	Input	Hardware band select control input
31	GNDVCO	–	Earth for VCO part
32	GNDVCO	–	Earth for VCO part
33	TXOLA	Output	GSM 800/900 MHz Tx output
34	PCTL	Output	Tx power control output
35	GNDVAR	–	Earth for varactors
36	VCCVCO	Input	Supply for VCO part
37	VCCBUF	Input	Supply for Tx input part
38	GNDBUF	Input	Earth for Tx input part
39	GND PLANE	–	Connected to flex film earth plane
40*	PS	–	Test output (Not used)
41	GNDPLL	–	Earth for prescaler, phase detector and XO
42*	XOOLA	Output	XO output (Not used)
43	GNDPLL	–	Earth for prescaler, phase detector and XO
44	VTUNE	Input	Tuning input for VCOs
45	TXOHB	Output	GSM 1,800/1,900 MHz Tx output
46	PHDOUT	Output	Phase detector output
47	TXOHA	Output	GSM 1,800/1,900 MHz Tx output
48*	NC	–	Not used
49	MODA	Output	Prescaler modulus control output
50	MODB	Output	Prescaler modulus control output
51	MODC	Output	Prescaler modulus control output
52	MODD	Output	Prescaler modulus control output
53	VCCPLL	Input	Supply for prescaler, phase detector and XO
54	XOOB	Input	XO input A
55	XOOC	Input	XO input B
56*	NC	–	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC101 (AB1011): GSM CODEC

Pin No.	Terminal name	Input/Output	Description of terminal
1	VSS	–	Earth (substrate)
2	VDD	–	VCC
3*	DAC03	–	Internally connected, high impedance (floating) (Not used)
4	IDAT	Output	Output from ADC I-channel
5	QRB	Input	Differential input to the ADC Q-channel
6	QRA	Input	Differential input to the ADC Q-channel
7	IRB	Input	Differential input to the ADC I-channel
8	IRA	Input	Differential input to the ADC I-channel
9	VSS	–	Earth
10	DEC4	–	Reference de-coupling
11*	DAC02	–	Internally connected, high impedance (floating) (Not used)
12	RXSTR	Input	Power up for the ADCs
13	VDD	–	VCC
14*	GPA1	–	Internally connected, high impedance (floating) (Not used)
15	VDD	–	VCC
16*	GPA0	–	Internally connected, high impedance (floating) (Not used)
17	DACDAT	–	Internally connected to earth (pull-down)
18	DACCLK	–	Internally connected to earth (pull-down)
19*	DAC01	–	Internally connected, high impedance (floating) (Not used)
20	VSS	–	Earth
21	DCLK	Output	Output clock from ADCs
22*	GPA2	–	Internally connected, high impedance (floating) (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
23*	GPA3	–	Internally connected, high impedance (floating) (Not used)
24*	GPA4	–	Internally connected, high impedance (floating) (Not used)
25	I2CCLK	Input	Input clock of I2C bus
26	RESETB	Input	Power reset to the AB1011
27	I2CDAT	Input	Bi-directional I2C data
28	DACSTR	–	Internally connected to earth (pull-down)
29	QDAT	Output	Output from ADC Q-channel
30*	GPA5	–	Internally connected, high impedance (floating) (Not used)
31*	GPA7	–	Internally connected, high impedance (floating) (Not used)
32*	GPA6	–	Internally connected, high impedance (floating) (Not used)
33	DEC5	–	Reference de-coupling
34	DEC1	–	Reference de-coupling
35	REXT	–	Reference resistance
36*	AUXI1	–	Internally connected, high impedance (floating) (Not used)
37*	GPCLK	–	Internally connected, high impedance (floating) (Not used)
38*	GPDAT	–	Internally connected, high impedance (floating) (Not used)
39	ADSTR	–	Internally connected to earth (pull-down)
40	VSS	–	Earth
41	AVDD	–	VCC
42*	CCO	–	Internally connected, high impedance (floating) (Not used)
43*	MICIP	–	Internally connected, high impedance (floating) (Not used)
44	VSS	–	Earth
45	VDD	–	VCC
46	PCMCLK	–	Internally connected to earth (pull-down)
47	VSS	–	Earth
48	VDD	–	VCC
49*	MICIN	–	Internally connected, high impedance (floating) (Not used)
50*	NC	–	Not used
51	VSS	–	Earth
52	VSS	–	Earth
53*	BEARP	–	Internally connected, high impedance (floating) (Not used)
54	PCMSYN	–	Internally connected to earth (pull-down)
55*	PCMUL	–	Internally connected, high impedance (floating) (Not used)
56	MCLK (SYSCLK2)	Input	System clock input
57*	NC	–	Not used
58	DEC2	–	Reference de-coupling
59	DEC3	–	Reference de-coupling
60*	AUXO2	–	Internally connected, high impedance (floating) (Not used)
61*	BEARN	–	Internally connected, high impedance (floating) (Not used)
62	VDD	–	VCC
63	PCMDL	–	Internally connected to earth (pull-down)
64	VSS	–	Earth

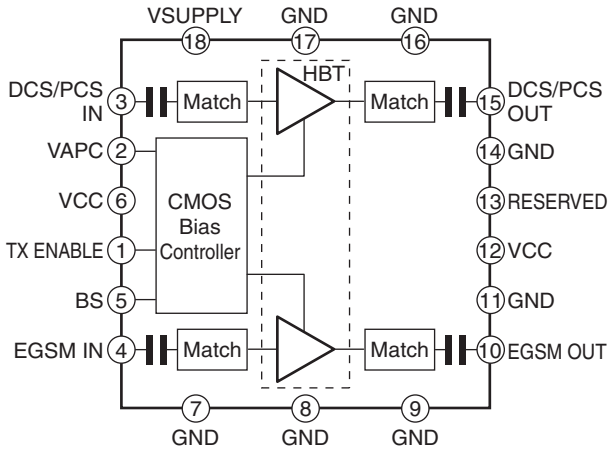
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

A8 IRA	B8 GPA0	C8 GPA4	D8 GPA6	E8 VSS	F8 VDD	G8 MCLK	H8 VSS
A7 IRB	B7 VDD	C7 GPA3	D7 GPA7	E7 ADSTR	F7 VSS	G7 PCMUL	H7 PCMDL
A6 QRA	B6 GPA1	C6 GPA2	D6 GPA5	E6 GPDAT	F6 PCMCLK	G6 PCMSYN	H6 VDD
A5 QRB	B5 VDD	C5 DCLK	D5 QDAT	E5 GPCLK	F5 VDD	G5 BEARP	H5 BEARN
A4 IDAT	B4 RXSTR	C4 VSS	D4 DACSTR	E4 AUXI1	F4 VSS	G4 VSS	H4 AUXO2
A3 DAC03	B3 DAC02	C3 DAC01	D3 I2CDAT	E3 REXT	F3 MICIP	G3 VSS	H3 DEC3
A2 VDD	B2 DEC4	C2 DACCLK	D2 RESETB	E2 DEC1	F2 CCO	G2 NC	H2 DEC2
A1 VSS	B1 VSS	C1 DACDAT	D1 I2CCLK	E1 DEC5	F1 AVDD	G1 MICIN	H1 NC

IC300 RH-IXA079AFZZL (SKY77321): POWER AMP. MODULE (FOR GSM)

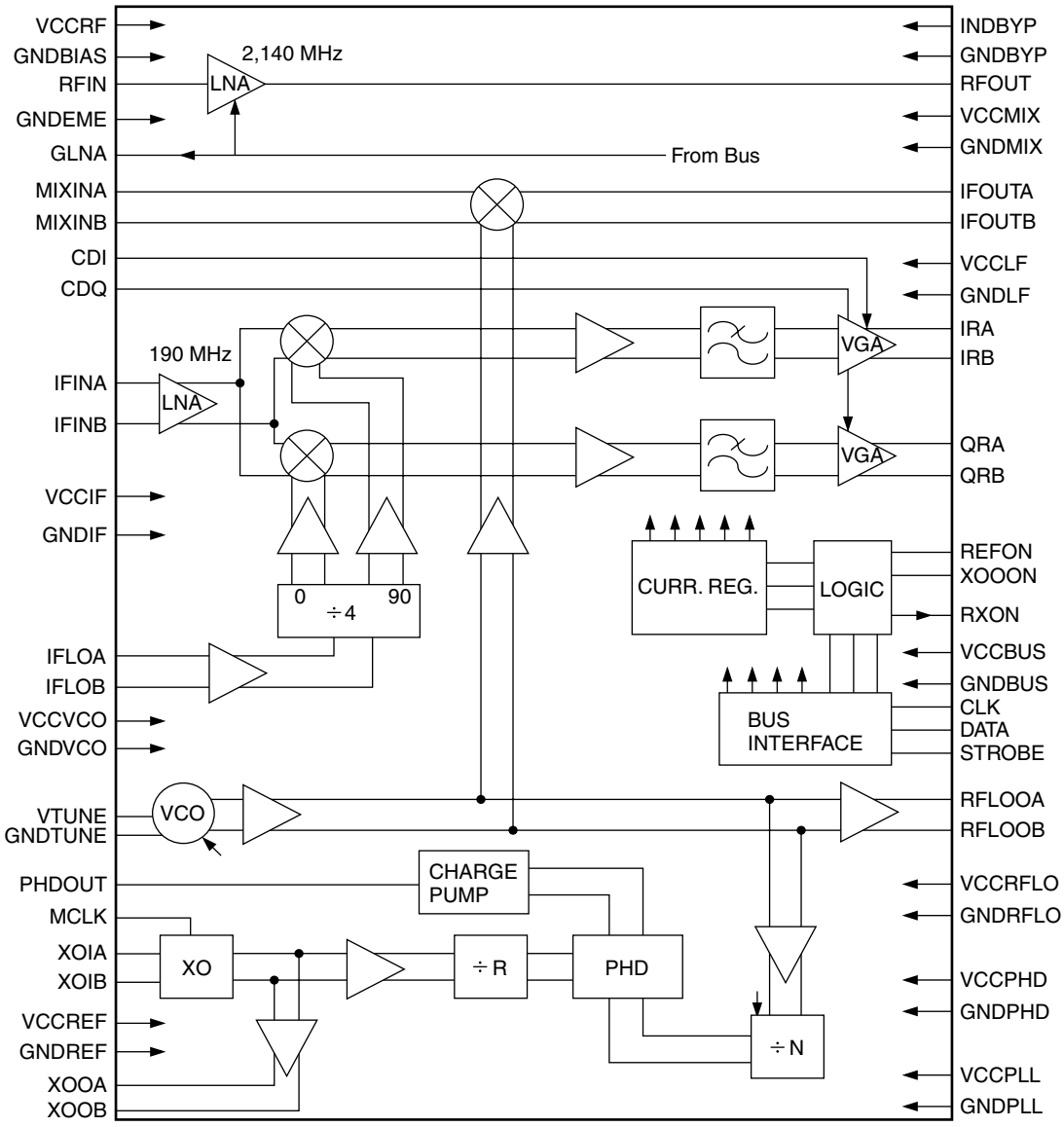
Pin No.	Terminal name	Input/Output	Description of terminal
1	Tx ENABLE	Input	Transmit enable
2	VAPC	Input	Power control bias voltage
3	DCS/PCS IN	Input	RF input 1710 - 1910 MHz
4	EGSM IN	Input	RF input 880 - 915 MHz
5	BS	Input	Band select
6	VCC	-	DC supply
7	GND	-	RF and DC earth
8	GND	-	RF and DC earth
9	GND	-	RF and DC earth
10	EGSM OUT	Output	RFoutput 880 - 915 MHz
11	GND	-	RF and DC earth
12	VCC	-	Final stage DC supply
13*	RESERVED	-	Reserved (Not used)
14	GND	-	RF and DC earth
15	DCS/PCS OUT	Output	RF output 1710 - 1910 MHz
16	GND	-	RF and DC earth
17	GND	-	RF and DC earth
18	VSUPPLY	-	DC supply for CMOS bias controller

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC400 (OM5954ET): RECEIVER IC FOR W-CDMA

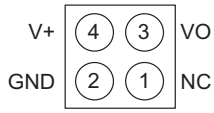
Pin No.	Terminal name	Input/Output	Description of terminal
1	IFOUTA	Output	IF output A (balanced)
2	GNDMIX	–	Earth for RF mixer
3	VCCIF	–	Supply for IF
4	IFINA	Input	IF input A (balanced)
5	IFINB	Input	IF input B (balanced)
6	VCCLF	–	Supply for baseband part
7	QRA	Output	Q-channel output
8	QRB	Output	Q-channel output
9	IRA	Output	I-channel output
10	IRB	Output	I-channel output
11	IFOUTB	Output	IF output B (balanced)
12	VCCREF	–	Supply for reference
13	VCCMIX	–	Supply for RF mixer
14	GNDIF	–	Earth for IF mixer
15	CDQ	–	External capacitor connection for baseband DC compensation loop (Q-channel)
16	CDI	–	External capacitor connection for baseband DC compensation loop (I-channel)
17	GNDLF	–	Earth for baseband part
18	MCLK	Output	XO master clock output
19	XOOA	Output	XO output A (balanced)
20	XOIA	Input	XO input A (balanced)
21	MIXINA	Input	RF mixer input A (balanced)
22	DATA	Input	Serial bus data input
23	XOOB	Output	XO output B (balanced)
24	XOIB	Input	XO input B (balanced)
25	MIXINB	Input	RF mixer input B (balanced)
26	CLK	Input	Serial bus clock input
27	GNDREF	–	Earth for reference
28	VCCBUS	–	Supply for data bus
29	GNDBIAS	–	Earth for bias
30	STROBE	Input	Serial bus strobe input
31	GNDBUS	–	Earth for data bus
32	IFLOA	Input	IFLO input A (balanced)
33	GNDEME	–	Earth for RF LNA
34	GLNA	Output	Gain control output for external RF LNA parts
35	REFON	Input	Hardware power on for ref.
36	IFLOB	Input	IFLO input B (balanced)
37	RFIN	Input	RF LNA input
38	XOOON	Input	Hardware power on for XO output
39	RXON	Output	Hardware power control output for external receiver parts
40	GNDPLL	–	Earth for PLL
41	GNDPHD	–	Earth for phase detector
42	GNDTUNE	–	Earth for varactor
43	GNDVCO	–	Earth for VCO
44	GNDRFLO	–	Earth for RFLO
45	GNDBYP	–	Earth for bypass RF LNA
46	RFLOOA	Output	RFLO output A (balanced)
47	VCCRF	–	Supply for RF LNA
48	INDBYP	–	Earth for RF LNA inductor bypass
49	RFOUT	Output	RF LNA output
50	VCCPLL	–	Supply for PLL
51	VCCPHD	–	Supply for phase detector
52	PHDOUT	Output	Phase detector output
53	VTUNE	Input	Tuning input for VCOs
54	VCCVCO	–	Supply for VCO
55	VCCRFLO	–	Supply for RFLO
56	RFLOOB	Output	RFLO output B (balanced)



IC501/IC1401 VHILM20SITN-1R (LM20SITLX) : TEMPERATURE SENSOR

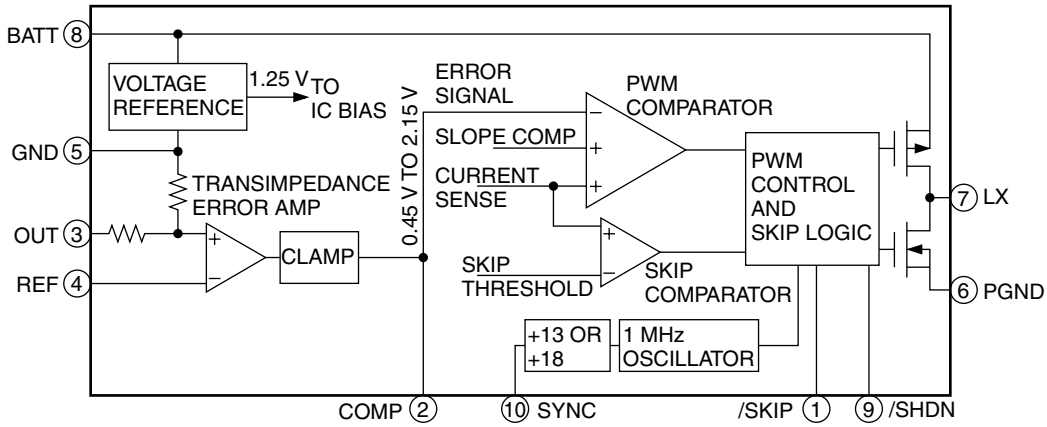
Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2	GND	-	Earth
3	VO	Output	Output
4	V+	-	Power supply

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



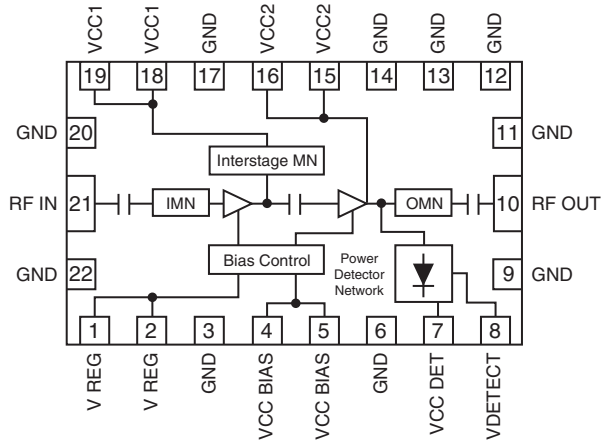
IC620 (MAX1820XEBC): DC/DC

Pin No.	Terminal name	Input/Output	Description of terminal
1	/SKIP	Input	PWM/Skip-mode input
2	COMP	–	Compensation
3	OUT	Input	Output voltage sense input
4	REF	Input	External reference input
5	GND	–	Earth
6	PGND	–	Power earth
7	LX	Output	Inductor connection
8	BATT	Input	Supply voltage input
9	/SHDN	Input	Active-low, shutdown control input
10	SYNC	Input	Clock synchronisation input



IC630 (RF9266): W-CDMA POWER AMP.

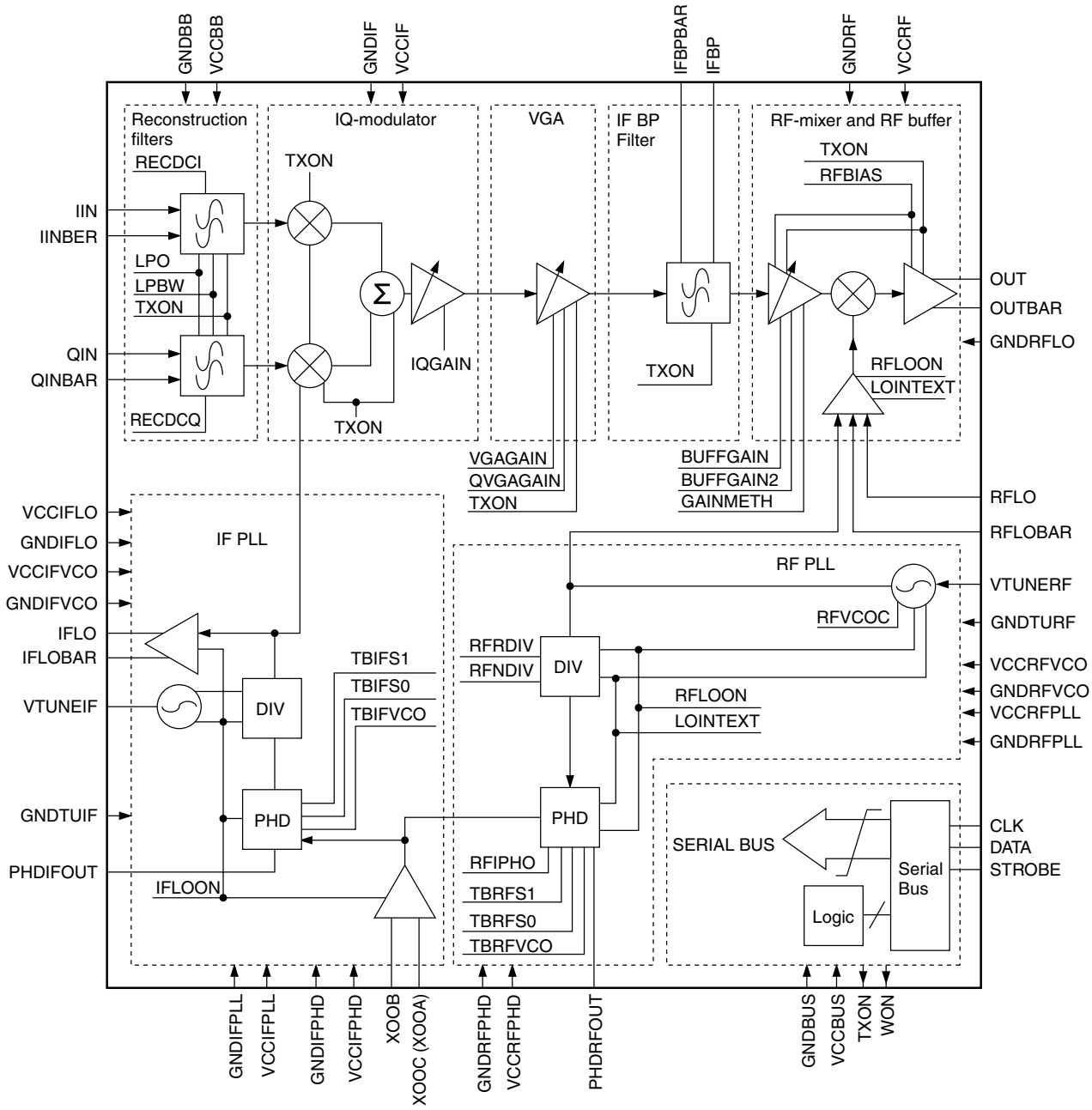
Pin No.	Terminal name	Pin No.	Terminal name
1	V REG	12	GND
2	V REG	13	GND
3	GND	14	GND
4	VCC_BIAS	15	VCC2
5	VCC_BIAS	16	VCC2
6	GND	17	GND
7	VCC DET	18	VCC1
8	V DETECT	19	VCC1
9	GND	20	GND
10	RF OUT	21	RF IN
11	GND	22	GND



IC700 (OM5955ET): TRANSMITTER IC FOR W-CDMA

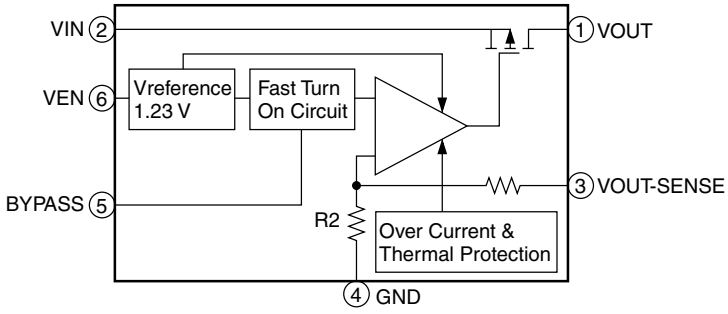
Pin No.	Terminal name	Input/Output	Description of terminal
1	QINBAR	Input	Negative quadrature phase input signal
2	QIN	Input	Positive quadrature phase input signal
3	IINBAR	Input	Negative in phase input signal
4	IIN	Input	Positive in phase input signal
5	VCCBB	–	VCC for baseband blocks
6	VCCIFPHD	–	VCC for IF PLL charge pump
7	PHDIFOUT	Output	IF PLL charge pump output
8	VCCIFPLL	–	VCC for IF PLL
9	GNDIFVCO	–	Earth for IF VCO
10	VCCIFVCO	–	VCC for IF VCO
11	XOOB	Input	Reference frequency input (13 MHz)
12	VTUNEIF	Input	IF VCO voltage tuning input
13	XOOC (XOOA)	Input	Reference frequency input (13 MHz)
14	GNDBB	–	Earth for baseband blocks
15	CLK	Input	Serial bus clock input
16	GNDIFPHD	–	Earth for IF PLL charge pump
17	GNDIFPLL	–	Earth for IF PLL
18*	WON	Output	Logic output to control aerial switch (Not used)
19	GNDIFVCO	–	Earth for IF VCO
20	GNDTUIF	–	Earth for IF VCO varactor
21	VCCBUS	–	VCC for bus and logic blocks
22	GNDBUS	–	Earth for bus and logic blocks
23	GNDRFPHD	–	Earth for RF PHD
24	GNDIFVCO	–	Earth for IF VCO
25	IFLO	Output	Positive IF LO frequency output
26	DATA	Input	Serial bus data input
27	TXON	Output	Hard wired TX ON logic output
28	VCCRFPHD	–	VCC for RF PHD
29	IFLOBAR	Input	Negative IF LO frequency input
30	GNDIFLO	–	Earth for IF LO
31	GNDRFPLL	–	Earth for RF VCO
32*	PHDRFOUT	Output	RF PLL charge pump output (Not used)
33	VCCIFLO	–	VCC for IF LO
34	GNDRFLO	–	Earth for RF LO
35	STROBE	Input	Serial bus strobe input
36	VCCRFPLL	–	VCC for RF VCO
37	RFLO	Input	Positive RF mixer LO input
38	GNDRFLO	–	Earth for RF LO
39	GNDRF	–	Earth for RF parts
40	GNDRF	–	Earth for RF parts
41	GNDRF	–	Earth for RF parts
42	GNDIF	–	Earth for intermediate frequency parts
43	GNDRFVCO	–	Earth for RF VCO
44	VCCRFVCO	–	VCC for RF VCO
45	RFLOBAR	Input	Negative RF mixer LO input
46	GNDTURF	–	Earth for RF VCO varactor
47	VCCRF	–	VCC for RF parts
48	OUT	Output	Positive RF frequency output
49	OUTBAR	Output	Negative RF frequency output
50	GNDRF	–	Earth for RF parts
51	VCCRF	–	VCC for RF parts
52	VCCRF	–	VCC for RF parts
53	VCCIF	–	VCC for intermediate frequency parts
54	IFBP	–	IF filter tank port
55	IFBPBAR	–	IF filter negative tank port
56*	VTUNERF	Input	RF VCO voltage tuning input (Not used)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC800 VHI3981D28N-1R (LP3981ILD): 2.8 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	VOUT	Output	Output Voltage of the LDO
2	VIN	Input	Input Voltage of the LDO
3	VOUT-SENSE	Output	Output. Voltage Sense Pin
4	GND	–	Common Earth
5	BYPASS	–	Optional bypass capacitor for noise reduction
6	VEN	Input	Enable Input Logic, Enable High



IC1000 (D751668AZZG): BASEBAND MANAGEMENT

Pin No.	Terminal name	Input/Output	Description of terminal
1	D15	Input/Output	Data bit 15
2	VSSE112	-	Earth
3	VDDE112	-	Power supply
4	VDDE110	-	Power supply
5	D0	Input/Output	Data bit 0
6	VDDC16	-	Power supply
7	VDDE106	-	Power supply
8	VDDE104	-	Power supply
9	VDDC11	-	Power supply
10	VDDC13	-	Power supply
11	VDDE209	-	Power supply
12*	PDID4/ UARTRX6	-	PDI data bit 4/UART6 receive (Not used)
13	VSSE209	-	Earth
14	VDDC14	-	Power supply
15	D14	Input/Output	Data bit 14
16	D11	Input/Output	Data bit 11
17	D8	Input/Output	Data bit 8
18	D5	Input/Output	Data bit 5
19	VDDC17	-	Power supply
20	D1	Input/Output	Data bit 1
21	VDDE108	-	Power supply
22	MEMADV_N	Output	External memory interface (active low)
23	CS2_N	Output	Chip-select signal 2 (active low)
24	VDDC06	-	Power supply
25	A12	Output	Address bit 12
26	A9	Output	Address bit 9
27	A6	Output	Address bit 6
28	VDDE102	-	Power supply
29	A2	Output	Address bit 2
30*	PDID0/ UARTRX5	-	PDI data bit 0/UART5 receive (Not used)
31*	PDID3/ UARTRTS5	-	PDI data bit 3/UART5 ready to send (Not used)
32*	PDID7/ UARTRTS6	-	PDI data bit 7/UART6 ready to send (Not used)
33	VDDE208	-	Power supply
34	MEMBE0_N	Output	External memory interface (active low)
35	VDDE101	-	Power supply
36	D13	Input/Output	Data bit 13
37	D9	Input/Output	Data bit 9
38	D6	Input/Output	Data bit 6
39	D4	Input/Output	Data bit 4
40	D2	Input/Output	Data bit 2
41	WE_N	Output	White enable signal (active low)
42	A24	Output	Address bit 24
43	A21	Output	Address bit 21
44	A19	Output	Address bit 19
45	A16	Output	Address bit 16
46	A13	Output	Address bit 13
47	A10	Output	Address bit 10
48	A5	Output	Address bit 5
49	A4	Output	Address bit 4
50	A1	Output	Address bit 1
51*	PDID2/ UARTCTS5	-	PDI data bit 2/UART5 clear to send (Not used)
52*	PDIC0	-	PDI control bit 0 (Not used)
53*	PDIC2	-	PDI control bit 2 (Not used)
54*	PDIC3	-	PDI control bit 3 (Not used)
55	MEMWAIT_N	Input	External memory wait command
56	MEMBE1_N	Output	External memory interface (active low)
57	D12	Input/Output	Data bit 12
58	D10	Input/Output	Data bit 10
59	D7	Input/Output	Data bit 7

Pin No.	Terminal name	Input/Output	Description of terminal
60	D3	Input/Output	Data bit 3
61	OE_N	Output	Output enable signal (active low)
62	CS3_N	Output	Chip-select signal 3 (active low)
63	A22	Output	Address bit 22
64	A18	Output	Address bit 18
65	A15	Output	Address bit 15
66	VSSE104	-	Earth
67	A8	Output	Address bit 8
68	VSSE102	-	Earth
69	VSSE210	-	Earth
70*	PDID1/UARTTX5	-	PDI data bit 0/UART5 transmit (Not used)
71*	PDIC1	-	PDI control bit 1 (Not used)
72*	PDIRES_N	-	PDI reset (active low) (Not used)
73	VDDC05	-	Power supply
74	VDDDM	-	Power supply
75	DIRMOD0	Output	Direct modulation bit 0
76	VSSDM	-	Earth
77	VSSE100	-	Earth
78*	KEYBALL	-	Device key (Not used)
79*	PDIC4	-	PDI control bit 4 (Not used)
80*	CIRES_N	-	Resolution (active low) (Not used)
81	CID0	-	Data bit 0
82	CID1	-	Data bit 1
83	DIRMOD3	Output	Direct modulation bit 3
84	DIRMOD2	Output	Direct modulation bit 2
85	RESOUT0_N	Output	Reset signal 0 (active low)
86	VSSE208	-	Earth
87	CID3	-	Data bit 3
88	CID4	-	Data bit 4
89	RFDAT	Output	Radio frequency data
90	RXON	Output	Receive on
91	TXON	Output	Transmit on
92	VSSE200	-	Earth
93	MEMCLK	Input/Output	External memory clock
94	VSSE108	-	Earth
95	VSSE106	-	Earth
96	A17	Output	Address bit 17
97	A11	Output	Address bit 11
98	A3	Output	Address bit 3
99*	PDID6/ UARTCTS6	-	PDI data bit 6/UART6 clear to send (Not used)
100	CID5	-	Data bit 5
101	CID6	-	Data bit 6
102	CID7	-	Data bit 7
103	CIHSYNC	-	Horizontal synchronisation
104	VDDE200	-	Power supply
105	BANDSEL0	Output	Band select signal 0
106	RFSTR	Output	Radio frequency strobe
107	CS1_N	Output	Chip-select signal 1 (active low)
108	VSSE110	-	Earth
109	A23	Output	Address bit 23
110	A20	Output	Address bit 20
111	A14	Output	Address bit 14
112	A7	Output	Address bit 7
113*	PDID5/UARTTX6	-	PDI data bit 5/UART6 transmit (Not used)
114	CID2	-	Data bit 2
115	CIVSYNC	-	Vertical synchronisation
116	CIPCLK	-	Clock
117	USBPUEN	Output	USB interface
118	VDDC10	-	Power supply
119	ANTSW3	Output	Aerial switch control bit 3
120*	ANTSW0	-	Aerial switch control bit 0 (Not used)
121	ANTSW2	Output	Aerial switch control bit 2
122	ANTSW1	Output	Aerial switch control bit 1
123	DIRMOD1	Output	Direct modulation bit 1

Pin No.	Terminal name	Input/Output	Description of terminal
124	CS0_N	Output	Chip-select signal 0 (active low)
125	MMCCMD	-	MultiMediaCard command
126	USBDP	Input/Output	USB interface
127	VSSUSB	-	Earth
128	MMCDAT	-	MultiMediaCard data
129	USBDM	Input/Output	USB interface
130	VDDUSB	-	Power supply
131	VDDC15	-	Power supply
132	IDATA	Input	I channel data
133	DCLK	Input	Data clock
134	BANDSEL1	Output	Band select signal 1
135	RFCLK	Output	Radio frequency clock
136	MSBS	-	Memory Stick interface
137	MSSDI0	-	Memory Stick interface
138	VSSMC	-	Earth
139	MSSCLK	-	Memory Stick clock
140	VDDMC	-	Earth
141	RESOUT1_N	Output	Reset signal 1 (active low)
142	SERVICE_N	Input	System control interface (active low)
143	VSSE00	-	Earth
144	QDATA	Input	Q channel data
145	PCTL	Output	-
146*	NC0	-	Not used
147*	SIMRST1_N	-	SIM reset 1 (active low) (Not used)
148	VSSE211	-	Earth
149	MMCCLK	-	MultiMediaCard clock
150	VDDC12	-	Power supply
151	VDDE00	-	Power supply
152	ISSYNC_N	Input/Output	Synchronisation signal (active low)
153	ISEVENT_N	Input/Output	-
154	VSSE01	-	Earth
155	CLKREQ	Input/Output	Master clock request signal from Bluetooth
156	GPIOO0/FM	Input/Output	General I/O pin 00/FM
157	IRCTRL	Output	IrDA control
158*	SIMCLK1	-	SIM clock 1 (Not used)
159*	SIMDAT1	-	SIM data 1 (Not used)
160	VDDC04	-	Power supply
161	VDDC01	-	Power supply
162	VDDE01	-	Power supply
163	HSSLRXCLK	Output	High speed serial link, receive clock
164	HSSLTXCLK	Input	High speed serial link, transmit clock
165	HSSLTX	Output	High speed serial link, transmit
166	HSSLRX	Input	High speed serial link, receive
167	GPIO24/ UARTRX3	Input/Output	General I/O pin 24/Receive line from Bluetooth to UART3
168	GPIO34/JOGXA	Input/Output	General I/O pin 34/Jog dial XA
169	SIMDAT0	Input/Output	SIM data 0
170	SIMRST0_N	Output	SIM reset 0 (active low)
171	SIMCLK0	Output	SIM clock 0
172	VDDE207	-	Power supply
173	DACDAT	Output	Digital to analogue converter, data
174	DACCLK	Output	Digital to analogue converter, clock signal
175	DACSTR	Output	Digital to analogue converter, strobe signal
176	ADCSTR	Output	Analogue to digital converter, strobe signal
177	RESOUT2_N	Output	Reset signal 2 to Bluetooth (active low)
178	GPIO04	Input/Output	General I/O pin 04
179	GPIO22/ UARTCTS2	Input/Output	General I/O pin 22/GSP (UART2 clear to send)
180	TEMU0_N	Input/Output	System JTAG and SCAN interface (active low)
181	RTCDCON	Output	RTC power on
182	MCLK	Output	Main 13 MHz system clock
183	KEYOUT0_N	Output	Keypad out 0
184	GPIO23/ UARTRTS2	Input/Output	General I/O pin 23/GSP (UART2 ready to send)
185	GPIO01/PWM8	Input/Output	General I/O pin 01/PWM bit 8

Pin No.	Terminal name	Input/Output	Description of terminal
186	IRTX	Input	IrDA transmit
187	IRRX	Input	IrDA receive
188	VDDC07	-	Power supply
189	RESPOW_N	Input	System control interface
190	SYSCLK0	Output	System clock 0
191	VSSE201	-	Earth
192	GPIO03	Input/Output	General I/O pin 03
193	VSSE203	-	Earth
194	TMS	Input	System JTAG and SCAN interface
195	VSSRTC	-	Power supply
196	VDDC02	-	Power supply
197	TSYP	-	Touchscreen interfaxce
198	VDDA2	-	Power supply
199	GPIO41/USB-PUEN	Input/Output	General I/O pin 41/USB PU enable
200	GPIO40/USBV-BUS	Input/Output	General I/O pin 40/USB V bus
201	VDDC18	-	Power supply
202	GPIO02/PWM10	Input/Output	General I/O pin 02/PWM bit 10
203	SYSCLK1	Output	System clock 1
204	SYSCLK2	Output	System clock 2
205	PWRREQ_N	Output	System control interface (active low)
206	GPIO31/ UARTTX4	Input/Output	General I/O pin 31/Security module IF (UART4 transmit)
207	GPIO36	Input/Output	General I/O pin 36
208	GPIO37	Input/Output	General I/O pin 37
209	VDDE201	-	Power supply
210	RESOUT3_N	Output	Reset signal 3 (active low)
211*	RESOUT4_N	-	Reset signal 4 (active low) (Not used)
212	VSSE202	-	Earth
213	GPIO30/ UARTRX4	Input/Output	General I/O pin 30/Security module IF (UART4 receive)
214	GPIO32/ UARTCTS4	Input/Output	General I/O pin 32/Security module IF (UART4 clear nto send)
215	GPIO33/ UARTRTS4	Input/Output	General I/O pin 33/Security module IF (UART4 ready to send)
216	GPIO35/JOGXB	Input/Output	General I/O pin 35/Jog dial XB
217	IRQ0_N	Input	Interrupt request 0 (active low)
218	PCMCLK	Input/Output	PCM clock signal to Bluetooth
219	PCMDATB	Input/Output	MPPCM, data B
220	GPIO10/ UARTRX0	Input/Output	General I/O pin 10/Accessory control bus (UART0 receive)
221	GPIO12/ UARTCTS0	Input/Output	General I/O pin 12/UART0 clear to send
222	GPIO17/ UARTRTS1	Input/Output	General I/O pin 17/RS232 EDB (UART1 ready to send)
223	VSSE204	-	Earth
224	TRST_N	Input	System JTAG and SCAN interface (active low)
225	TEMU1_N	Input/Output	System JTAG and SCAN interface (active low)
226	RTCIN	Input	RTC in
227	VSSA0	-	Earth
228	TSYM	-	Touchscreen interfaxce
229	VSSA2	-	Earth
230	KEYIN3_N	Input	Keypad in 3
231	KEYOUT4_N	Output	Keypad out 4
232	GPIO42/MSINS	Input/Output	General I/O pin 42
233	VSSE206	-	Earth
234	GPIO26/ UARTCTS3	Input/Output	General I/O pin 26/Clear to send signal from Bluetooth to UART3
235	VDDE206	-	Power supply
236	PCMSYN	Input/Output	PCM frame synchronisation signal to Bluetooth
237	PCMDATA	Input/Output	MPPCM, data A
238	I2CSDA	Input/Output	I2C data
239	GPIO07/ TGBUZZ	Input/Output	General I/O pin 07/Tone generator buzzer output

Pin No.	Terminal name	Input/Output	Description of terminal
240	GPIO13/ UARTRTS0	Input/Output	General I/O pin 13/UART0 ready to send
241	GPIO16/ UARTCTS1	Input/Output	General I/O pin 16/RS232 EDB (UART1 clear to send)
242	GPIO20/ UARTRX2	Input/Output	General I/O pin 20/GSP (UART2 receive)
243	TCK	Input	System JTAG and SCAN interface
244	VSSE02	-	Earth
245	RTCBDIS_N	Input	RTC power down
246	RTCOUT	Output	RTC out
247	RTCCLK	Output	32,768 kHz real time clock output to Bluetooth
248	VSSA1	-	Earth
249	TSXP	-	Touchscreen interfaxce
250	KEYIN2_N	Input	Keypad in 2
251	KEYIN4_N	Input	Keypad in 4
252	KEYOUT3_N	Output	Keypad out 3
253	KEYOUT5_N	Output	Keypad out 5
254	GPIO46	Input/Output	General I/O pin 46
255	GPIO25/ UARTTX3	Input/Output	General I/O pin 25/Transmit line from UART3 to Bluetooth
256	GPIO27/ UARTRTS3	Input/Output	General I/O pin 27/Request to send signal from UART3 to Bluetooth
257	VDDC08	-	Power supply
258	I2CSCL	Input/Output	I2C clock signal
259	GPIO06/ PWMTEST-MODE	Input/Output	General I/O pin 06/PWM test mode select
260	GPIO11/ UARTTX0	Input/Output	General I/O pin 11/Accessory control bus (UART0 transmit)
261	GPIO14/ UARTRX1	Input/Output	General I/O pin 14/RS232 EDB (UART1 receive)
262	VDDE204	-	Power supply
263	GPIO21/ UARTTX2	Input/Output	General I/O pin 21/GSP (UART2 transmit)
264	RTCK	Output	-
265	TDI	Input	System JTAG and SCAN interface
266	VDDE02	-	Power supply
267	VDDA0	-	Power supply
268	TSXM	-	Touchscreen interfaxce
269	VDDC03	-	Power supply
270	KEYIN1_N	Input	Keypad in 1
271	VSSE205	-	Earth
272	KEYOUT2_N	Output	Keypad out 2
273	VDDE205	-	Power supply
274	GPIO44/ MMCPOW	Input/Output	General I/O pin 44/MultiMediaCard power
275	GPIO47	Input/Output	General I/O pin 47
276	VSSE207	-	Earth
277	VDDE202	-	Power supply
278	GPIO05	Input/Output	General I/O pin 05
279	VDDE203	-	Power supply
280	GPIO15/ UARTTX1	Input/Output	General I/O pin 15/RS232 EDB (UART1 transmit)
281	VDDC09	-	Power supply
282	TDO	Output	System JTAG and SCAN interface
283	VDDRTC	-	Power supply
284	VDDA1	-	Earth
285	KEYIN0_N	Input	Keypad in 0
286	KEYOUT1_N	Output	Keypad out 1
287	VDDC00	-	Power supply
288	GPIO45/SIMOFF	Input/Output	General I/O pin 45/SIM 1 off (active low)
289	GPIO43	Input/Output	General I/O pin 43

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

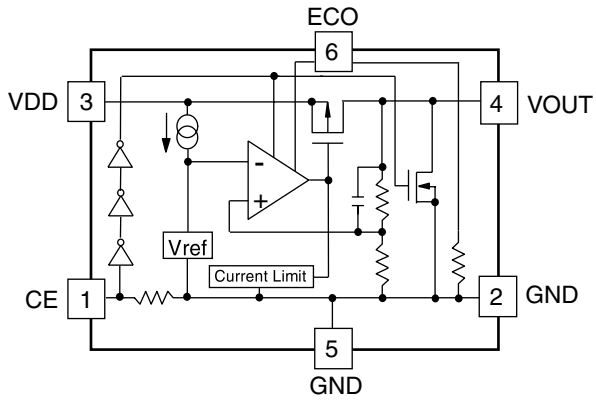
IC1001 VHIBGB202S2-1L (BGB202S2): BLUETOOTH

Pin No.	Terminal name	Input/Output	Description of terminal
1	GND	-	Earth
2	ANT	Input/Output	Aerial input/output
3	GND	-	Earth
4	GND	-	Earth
5	GND	-	Earth
6	GND	-	Earth
7	GND	-	Earth
8	GND	-	Earth
9	GND	-	Earth
10	GND	-	Earth
11	GND	-	Earth
12	GND	-	Earth
13	GND	-	Earth
14	GND	-	Earth
15*	GP_CLK	Output	General purpose clock (Not used)
16	VBAT	Input	Battery measurement voltage input
17	VANLI	Input	8-bit A/D input
18*	XTAL2_LPO	Output	Low power crystal oscillator (Not used)
19	XTAL1_LPO	Input	Low power crystal oscillator
20	GPIO[1]	Input/Output	I2C_SDA
21	GPIO[0]	Input/Output	I2C_SCL
22*	VANLO	Output	Analogue voltage source output (Not used)
23*	GPIO[13]	Input/Output	General purpose I/O 13 (Not used)
24*	GPIO[11]	Input/Output	General purpose I/O 11 (Not used)
25	GPIO[10]	Input/Output	General purpose I/O 10
26	1.8 V DECOUP	-	VDD18 decoupling
27	POR_ DISABLE	Input	Power-On Reset disable input
28*	XTAL2_SYS	Output	System clock crystal oscillator (Not used)
29	XTAL1_SYS	Input	System clock crystal oscillator
30*	REF_CLK	Output	Synthesiser reference frequency (Not used)
31*	GPIO[12]	Input/Output	General purpose I/O 12 (Not used)
32*	GPIO[14]	Input/Output	General purpose I/O 14 (Not used)
33	GPIO[7] FSC_IP	Input	General purpose I/O 7 PCM/IOM frame sync
34	GPIO[9] DB_IP	Input/Output	General purpose I/O 9 Bidirectional PCM/IOM data line B (default: input)
35	GPIO[6] DA_IP	Input/Output	General purpose I/O 6 Bidirectional PCM/IOM data line A (default: output)
36	GPIO[8] DCLK_IP	Input	General purpose I/O 8 PCM/IOM data clock
37	VDD18	Input	1.8 V I/O supply voltage
38	VDD_IOV	Input	Variable I/O supply voltage
39	VDDIORF	Input	RF supply voltage
40	VREG18	Output	1.8 V regulated output voltage
41	GPIO[3] RTS_UART	Input	General purpose I/O 3 UART request-to-send input
42	GPIO[5] RXD_UART	Input	General purpose I/O 5 UART receive input
43	GPIO[4] TXD_UART	Output	General purpose I/O 4 UART transmit output
44	GPIO[2] CTS_UART	Output	General purpose I/O 2 UART clear-to-send output
45	RESET_N	Input	Reset input (active LOW)
46	1.8 V DECOUP	-	VDD18 decoupling
47*	TMS_JTAG	Input	JTAG test mode select (Not used)
48*	TDO_JTAG	Output	JTAG test data output (Not used)
49*	TDI_JTAG	Input	JTAG test data input (Not used)
50	TCK_JTAG	Input	JTAG test clock
51	GND	-	Earth
52	GND	-	Earth

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1002 VHIR116229D-1L (R1162D291D): 2.9 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	CE	Input	Chip enable
2	GND	-	Earth
3	VDD	Input	Input chip enable
4	VOUT	Output	Output
5	GND	-	Earth
6	ECO	Input	High speed/low consumption selector switch

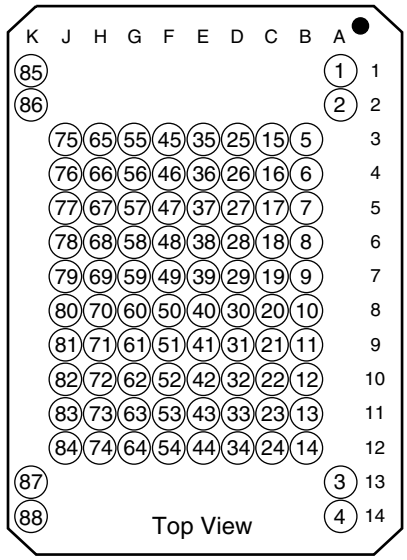


IC1100 : STACK MEMORY

Pin No.	Terminal name	Input/Output	Description of terminal
1*	HAKURI_ MARITA_MEN (NC)	Input/Output	General I/O pin 16/RS232 EDB (UART1 clear to send)
2*	NC	-	Not used
3*	NC	-	Not used
4*	NC	-	Not used
5	A11	Input	Address input (common)
6	A12	Input	Address input (common)
7	A13	Input	Address input (common)
8	A15	Input	Address input (common)
9	A16	Input	Address input (common)
10	F2-/CE	Input	Chip enable input
11*	NC	-	Not used
12	VCCQ	-	Power supply
13	SC1-MODE	Input	Sleep state input (Smart Combo RAM 1, 2)
14	GND	-	Earth
15	A21	Input	Address input (common)
16	A22	Input	Address input (common)
17	A9	Input	Address input (common)
18	A10	Input	Address input (common)
19	A14	Input	Address input (common)
20	/WAIT	Output	Wait output
21	DQ7	Input/Output	Data input/output (common)
22	DQ15	Input/Output	Data input/output (common)
23	VCCQ	-	Power supply
24	GND	-	Earth
25	F-VCC	-	Power supply
26	F/SC-CLK	Input	Clock input (common)
27	SC1_/CE	Input	Chip enable input
28	A20	Input	Address input (common)
29	A8	Input	Address input (common)
30	DQ13	Input/Output	Data input/output (common)
31	DQ14	Input/Output	Data input/output (common)
32	DQ6	Input/Output	Data input/output (common)
33	F-VCC	-	Power supply
34	GND	-	Earth

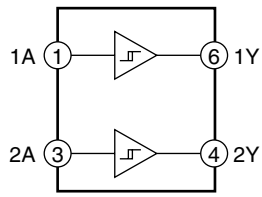
Pin No.	Terminal name	Input/Output	Description of terminal
35	F-VCC	-	Power supply
36	SC2-MODE	Input	Sleep state input (Smart Combo RAM 1, 2)
37	F/SC-/WE	Input	Write enable input
38	F/SC-/ADV	Input	Address varied input (common)
39	F/SC-/WE	Input	Write enable input
40	DQ5	Input/Output	Data input/output (common)
41	DQ12	Input/Output	Data input/output (common)
42	DQ4	Input/Output	Data input/output (common)
43	SC-VCC	-	Power supply
44	GND	-	Earth
45	GND	-	Earth
46	GND	-	Earth
47	VPP	Input	Power voltage detect terminal
48	F-/WP	Input	Write protect input
49	F-/RST	Input	Reset input
50	DQ10	Input/Output	Data input/output (common)
51	DQ3	Input/Output	Data input/output (common)
52	DQ11	Input/Output	Data input/output (common)
53*	NC	-	Not used
54	F-VCC	-	Power supply
55	A19	Input	Address input (common)
56	A23	Input	Address input (common)
57*	NC	-	Not used
58*	NC	-	Not used
59	SC_/UB	Input	Byte enable input
60	DQ2	Input/Output	Data input/output (common)
61	DQ1	Input/Output	Data input/output (common)
62	DQ9	Input/Output	Data input/output (common)
63	F3-/CE	Input	Chip enable input
64	VCCQ	-	Power supply
65	A18	Input	Address input (common)
66	SC_/LB	Input	Byte enable input
67	A17	Input	Address input (common)
68	A7	Input	Address input (common)
69	A6	Input	Address input (common)
70	DQ8	Input/Output	Data input/output (common)
71	DQ0	Input/Output	Data input/output (common)
72	F-/OE	Input	Output enable input (Flash)
73	SC2_CE	Input	Chip enable input
74	GND	-	Earth
75	A4	Input	Address input (common)
76	A5	Input	Address input (common)
77	A3	Input	Address input (common)
78	A2	Input	Address input (common)
79	A1	Input	Address input (common)
80	A0	Input	Address input (common)
81	SC_/OE	Input	Output enable input
82*	NC	-	Not used
83	F1-/CE	Input	Chip enable input
84	GND	-	Earth
85*	NC	-	Not used
86*	NC	-	Not used
87*	NC	-	Not used
88*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



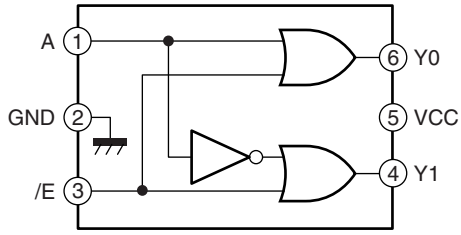
IC1101 VHILVC2G17B-1R (LVC2G17B): LOGIC

Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	GND	-	Earth
3	2A	Input	Input
4	2Y	Output	Output
5	VCC	-	Power supply
6	1Y	Output	Output



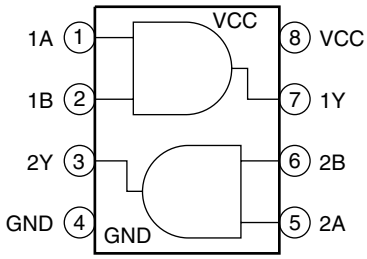
IC1102 VHIAUC1G19B-1R (AUC1G19B): LOGIC

Pin No.	Terminal name	Input/Output	Description of terminal
1	A	Input	Input
2	GND	-	Earth
3	/E	Input	Input
4	Y1	Output	Output
5	VCC	-	Power supply
6	Y0	Output	Output



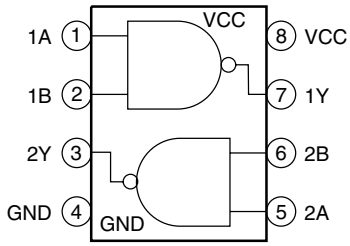
IC1103/IC1105/IC1107 VHIAUC2G08B-1L (AUC2G08B): LOGIC

Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	1B	Input	Input
3	2Y	Output	Output
4	GND	-	Earth
5	2A	Input	Input
6	2B	Input	Input
7	1Y	Output	Output
8	VCC	-	Power supply



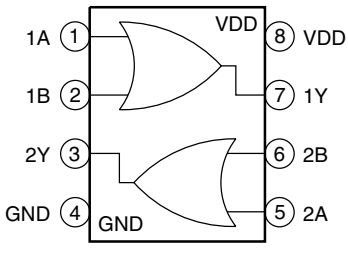
IC1104 VHIAUC2G00B-1L (AUC2G00B): LOGIC

Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	1B	Input	Input
3	2Y	Output	Output
4	GND	-	Earth
5	2A	Input	Input
6	2B	Input	Input
7	1Y	Output	Output
8	VCC	-	Power supply



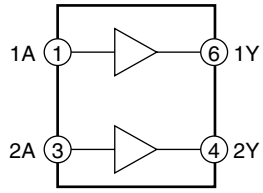
IC1106 VHIAUC2G32B-1L (AUC2G32B): LOGIC

Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	1B	Input	Input
3	2Y	Output	Output
4	GND	-	Earth
5	2A	Input	Input
6	2B	Input	Input
7	1Y	Output	Output
8	VCC	-	Power supply



IC1108/IC1109 VHIAUC2G34B-1R (AUC2G34B): LOGIC

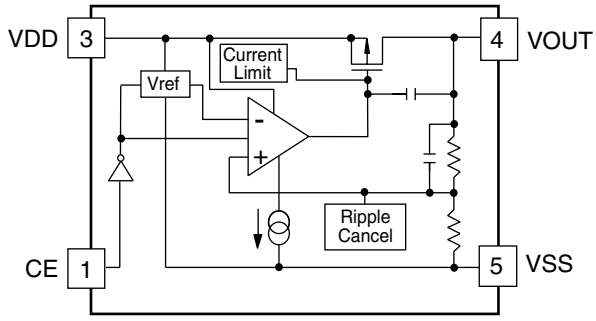
Pin No.	Terminal name	Input/Output	Description of terminal
1	1A	Input	Input
2	GND	-	Earth
3	2A	Input	Input
4	2Y	Output	Output
5	VCC	-	Power supply
6	1Y	Output	Output



IC1110/IC3004 VHINP131518-1L (NP131518): 1.8 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	CE	-	Chip enable
2	VSS	-	Earth
3	VDD	Input	Input
4	VOUT	Output	Output
5	VSS	-	Earth
6*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



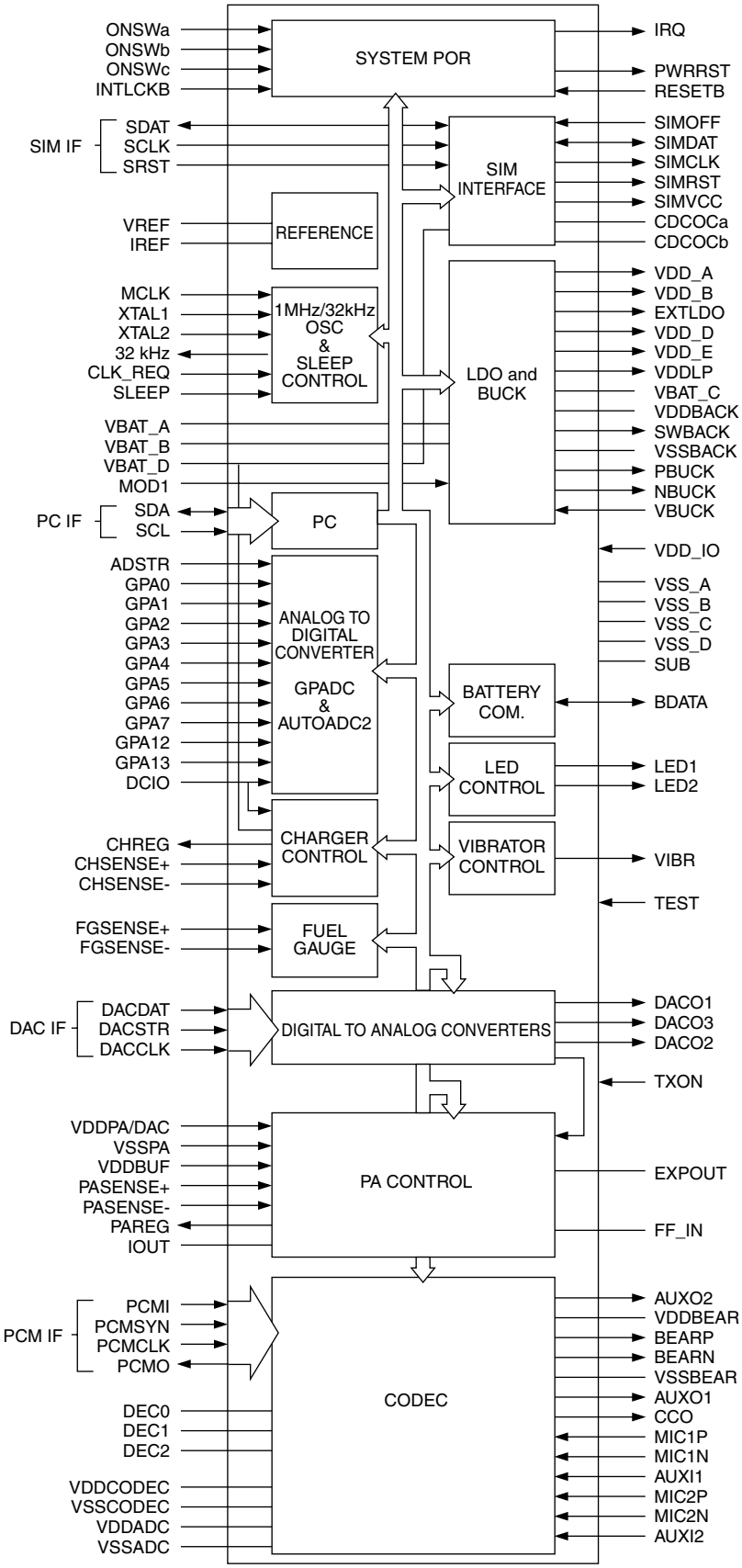
IC1200 RH-IXA046AFZZQ (TWL93004CZQW): POWER SUPPLY/RF CONTROL

Pin No.	Terminal name	Input/Output	Description of terminal
1	SWBUCK	Output	Buck converter switch output
2	VDDBUCK	-	Buck converter switch supply
3	VBAT_C	-	Supply pin for vibrator, BUCK converter, BUCK digital and FET drivers
4	P_BUCK	Output	Gate drive for BUCK with external PMOSFET
5	N_BUCK	Output	Gate drive for BUCK with external NMOSFET
6	LED1	Output	Trickle charge indicator. Withstands DCIO voltage
7	ONSWC	Input	On switch activates the circuit
8	TXON	Input	PA control block enable signal
9	RESETB	Input	Reset of everything except regulators
10	DACCLK	Input	DAC input clock
11	VDD_B	-	Supply output
12	VBAT_A	-	Supply pin for 2.75 v regulators
13	VSSBUCK	-	Buck converter switch earth
14	VBUCK	Input	Buck voltage input
15*	VIBR	Output	Vibrator driver switch (Not used)
16	MOD1	Input	MOD pin selects VDDLP and VBUCK
17	DACO1	Output	DAC01 8 - bit output
18	LED2	Output	Withstands VBAT voltage
19*	INTLCKB	Input	Generates an interrupt when logically (Not used)
20	RWRRST	Output	Power on reset
21	SCL	Input	I2C clock
22	DACSTR	Input	DAC input strobe
23	BDATA	Input/Output	Bi-directional serial data or current output
24	VDD_A	-	Supply output
25	IRQ	Output	Interrupt request output
26*	SIMOFF	Input	Initiates SIM pins turn off sequence (Not used)
27	VDD_IO	-	Power supply for I/O pins
28	ONSWA	Input	On switch activates the circuit
29	ONSWB	Input	On switch activates the circuit
30	VSS_C	-	Supply pin reference/earth,BUCK analogue and digital control
31	ADCSTR	Input	ADC strobe
32	SDA	Input/Output	I2C bi-directional serial data
33	DACDAT	Input	DAC input serial data
34	SLEEP	Input	Sleep mode input
35	EXTLDO	Output	Controls external LDO
36	VDDBUF	-	Supply pin PA buffer
37	CHREG	Output	Pass transistor control
38	CHSENSE-	Input	Current sensing input negative
39	CHSENSE+	Input	Current sensing input positive
40	TEST	-	Must always be connected to earth. Used only in test mode
41	VSSTH16	-	Thermal earth pin
42	VSSTH17	-	Thermal earth pin
43	VSSTH18	-	Thermal earth pin
44	VSSTH19	-	Thermal earth pin
45	GPA13	Input	ADC input
46	SUB	-	Die substrate
47	PAREG	Output	PA control signal
48	IOUT	-	Loop filter connection for current regulation
49	VBAT_D	-	Supply pin for the charger, SIM and BUCK analogue
50	DCIO	-	External supply. Activates the circuit
51	VSS_D	-	Supply pin reference/earth CHARGER, PCMI/PCMO and BUCK analogue
52	VSSTH31	-	Thermal earth pin
53	VSSTH4	-	Thermal earth pin
54	VSSTH5	-	Thermal earth pin
55	VSSTH6	-	Thermal earth pin
56	VSSTH7	-	Thermal earth pin
57	VSSTH20	-	Thermal earth pin
58	VSSPA	-	Supply pin reference/earth PA buffer
59	PASENSE-	Input	Current sensing input negative
60	PASENSE+	Input	Current sensing input positive
61	SIMVCC	-	Supply output
62*	CDCDCB	-	Connection to external capacitor (Not used)
63*	CDCDCA	-	Connection to external capacitor (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
64	VSSTH30	-	Thermal earth pin
65	VSSTH15	-	Thermal earth pin
66	VSSTH1	-	Thermal earth pin
67	VSSTH8	-	Thermal earth pin
68	VSSTH21	-	Thermal earth pin
69	FF_IN	-	External filter capacitor
70	FGSENSE+	Input	Fuel gauge current sensing input positive
71	FGSENSE-	Input	Fuel gauge current sensing input negative
72	SIMCLK	Output	Output serial clock
73	SIMRST	Output	Output serial reset
74	VSS_B	-	Supply pin reference/earth SIM, charger digital and PCM test digital
75	VSSTH29	-	Thermal earth pin
76	VSSTH14	-	Thermal earth pin
77	VSSTH3	-	Thermal earth pin
78	VSSTH2	-	Thermal earth pin
79	VSSTH9	-	Thermal earth pin
80	VSSTH22	-	Thermal earth pin
81	EXPOUT	-	External filter capacitor
82	DACO2/4	Output	DAC02 8 - bit output
83	VDDPA	-	Supply pin PA control and DACs
84	SDAT	Input/Output	Bi-directional serial data
85	SRST	Input	Input serial reset
86	SIMDAT	Input/Output	Bi-directional serial data
87	VSSTH28	-	Thermal earth pin
88	VSSTH13	-	Thermal earth pin
89	VSSTH12	-	Thermal earth pin
90	VSSTH11	-	Thermal earth pin
91	VSSTH10	-	Thermal earth pin
92	VSSTH23	-	Thermal earth pin
93	VSS_A	-	Supply pin reference/earth, DACs, VREF, LDOs, PA, OVUN comparator and UART
94	DACO3	Output	DAC03 11 - bit output
95	IREF	-	Reference current setting resistor
96	PCMCLK	Input	PCM input clock
97	PCMI	Input	PCM input seriao data
98	SCLK	Input	Input serial clock
99*	AUXO2	Output	Auxiliary output 2 (Not used)
100	VSSTH27	-	Thermal earth pin
101	VSSTH26	-	Thermal earth pin
102	VSSTH25	-	Thermal earth pin
103	VSSTH24	-	Thermal earth pin
104	GPA12	Input	ADC input
105	GPA7	Input	ADC input
106	GPA6	Input	ADC input
107	VREF	-	Referrence voltage de-coupling capacitor
108	PCMSYN	Input	PCM input sync
109	PCMO	Output	PCM output seriao data
110	CLK_REQ	Input	External clock present
111	VSSBEAR	-	Supply pin for BEAR and RX
112	VSSCODEC	-	Supply pin reference/earth CODEC
113	DEC1	Input	CODEC pesudo differential input of AUXI2
114	DEC2	-	CODEC reference voltage de-coupring capacitor
115	VSSADC	-	Supply pin reference/earth analogue ADC
116	MCLK	Input	External clock input
117	GPA2	Input	ADC input
118	GPA4	Input	ADC input
119	GPA5	Input	ADC input
120*	32KHZ	Output	32kHz output (Not used)
121	VDDLP	-	Low power supply output
122	BEARN	Output	Earphone speaker negative
123	AUXO1	Output	Auxiliary output 1 (headphones)
124	DEC0	Input	CODEC pesudo differential input of AUXI1
125	AUXI2	Input	Auxiliary input 2
126	MIC2N	Input	Microphone 2 negative input
127	MIC1N	Input	Microphone 1 negative input

Pin No.	Terminal name	Input/Output	Description of terminal
128	CCO	Output	Microphone supply
129	GPA1	Input	ADC input
130	GPA3	Input	ADC input
131	VDD_E	-	Supply output
132	XTAL1	Input	32kHz input
133	XTAL2	-	Earth
134	VDDBEAR	-	Supply pin for BEAR and RX
135	BEARP	Output	Earphone speaker positive
136	VDDCODEC	-	Supply pin CODEC
137	AUXI1	Input	Auxiliary input 1
138	MIC2P	Input	Microphone 2 positive input
139	MIC1P	Input	Microphone 1 positive input
140	VDDADC	-	Supply pin analogue ADC
141	GPA0	Input	ADC input
142	VDD_D	-	Supply output
143	VBAT_B	-	Supply pin for 2.75 v regulators

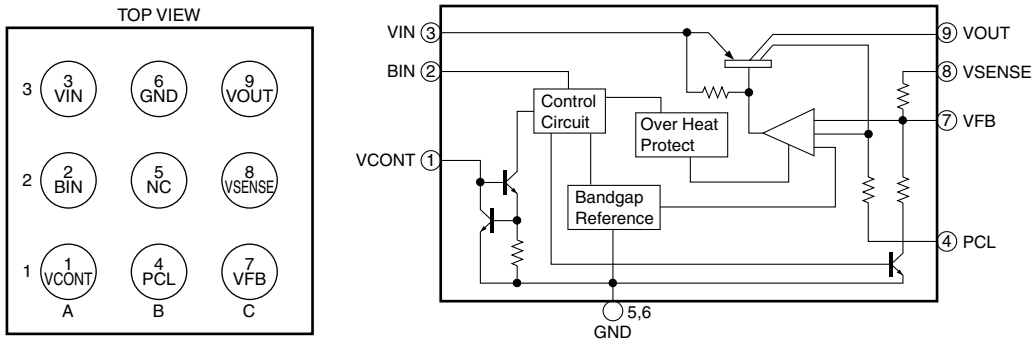
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1203 VHITK73840G-1L (TK73840BDB): REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	VCONT (ON/OFF)	Input	Power control
2	BIN (PE)	Input	Power enable
3	VIN (Vin)	Input	Power supply
4	PCL (ACL)	Input	Current setting
5	NC (GND)	–	Earth
6	GND (GND)	–	Earth
7*	VFB (Vfb)	Input	Not used
8	VSENSE (PC)	Output	Power output
9	VOUT (Vout)	Output	Power output

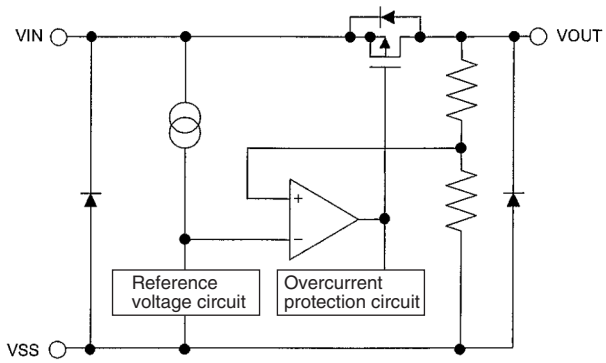
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1205/IC1206 VHIS817A15P-1R (S817A15P): 1.5 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	VOUT	Output	Output voltage
2	VIN	Input	Input
3	VSS	-	Earth
4*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1400 (D751980CZPH): W-CDMA MODEM

Pin No.	Terminal name	Input/Output	Description of terminal
1*	EMIF_A[21]	Output	EMIF address bus (Not used)
2*	EMIF_A[20]	Output	EMIF address bus (Not used)
3	VDD	-	Power supply
4*	EMIF_A[14]	Output	EMIF address bus (Not used)
5	VDD	-	Power supply
6*	EMIF_A[10]	Output	EMIF address bus (Not used)
7*	EMIF_A[9]	Output	EMIF address bus (Not used)
8*	EMIF_A[2]	Output	EMIF address bus (Not used)
9*	CS_BYPASS	Input	Control input signal to select between application and bypass mode (Not used)
10	VDD	-	Power supply
11	IS_SYNC_N	Input/Output	Inter system synchronisation strobe
12	HSSLTX_D	Output	HSSL data output
13	HSSLTX_CLK	Input	HSSL clock transmitter clock input
14	VDD	-	Power supply
15	VDD	-	Power supply
16*	EMIF_A[23]	Output	EMIF address bus (Not used)
17*	EMIF_A[19]	Output	EMIF address bus (Not used)
18*	EMIF_A[17]	Output	EMIF address bus (Not used)
19*	EMIF_A[12]	Output	EMIF address bus (Not used)
20	VSS	-	Earth
21	VDD	-	Power supply
22*	EMIF_A[4]	Output	EMIF address bus (Not used)
23	VSS	-	Earth
24	VSS	-	Earth
25	IS_EVENT_N	Input/Output	Inter system synchronisation interrupt
26	VDD	-	Power supply
27	VSS	-	Earth
28	HSSLRX_D	Input	HSSL data input
29*	BOOTMODE[1]	Input	Detemines how the chip will boot (Not used)
30*	EMIF_D[1]	Input/Output	EMIF data bus(Not used)
31*	EMIF_D[0]	Input/Output	EMIF data bus(Not used)
32	VSS	-	Earth
33*	EMIF_A[18]	Output	EMIF address bus (Not used)
34	VSS	-	Earth
35*	EMIF_A[15]	Output	EMIF address bus (Not used)
36*	EMIF_A[11]	Output	EMIF address bus (Not used)
37*	EMIF_A[7]	Output	EMIF address bus (Not used)
38*	EMIF_A[5]	Output	EMIF address bus (Not used)
39*	EMIF_A[3]	Output	EMIF address bus (Not used)
40*	APLL_BYPASS	Input	Not used
41	VSS	-	Earth
42*	UART_RX	Input	UART data in (Not used)
43	HSSLRX_CLK	Output	HSSL receiver clock that is user for clocking the transmitter
44*	BOOTMODE[3]	Input	Detemines how the chip will boot (Not used)
45	VSS	-	Earth
46*	BOOTMODE[0]	Input	Detemines how the chip will boot (Not used)
47	VDD	-	Power supply
48	VSS	-	Earth
49*	IDBALL	-	Not used
50*	TESTMODE	Input	External signal to force the chip into ASIC terst mode (Not used)
51	VDD	-	Power supply
52*	EMIF_D[5]	Input/Output	EMIF data bus(Not used)
53*	EMIF_D[3]	Input/Output	EMIF data bus(Not used)
54*	EMIF_A[22]	Output	EMIF address bus (Not used)
55*	EMIF_A[16]	Output	EMIF address bus (Not used)
56*	EMIF_A[13]	Output	EMIF address bus (Not used)
57*	EMIF_A[8]	Output	EMIF address bus (Not used)
58*	EMIF_A[6]	Output	EMIF address bus (Not used)
59*	EMIF_A[1]	Output	EMIF address bus (Not used)
60*	ANALOG_ENABLE	Input	Not used
61*	UART_TX	Output	UART data out (Not used)
62*	BOOTMODE[2]	Input	Detemines how the chip will boot (Not used)
63*	EMU1	Input/Output	TITM specific signals for configuring chip modes (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
64*	EXT_FRAME_STROBE	Output	Spare pin for test (Not used)
65*	EMIF_D[7]	Input/Output	EMIF data bus(Not used)
66*	EMIF_D[6]	Input/Output	EMIF data bus(Not used)
67	VSS	-	Earth
68*	EMIF_D[2]	Input/Output	EMIF data bus(Not used)
69*	EMU0	Input/Output	TITM specific signals for configuring chip modes (Not used)
70	VSS	-	Earth
71*	JTAG_TDI	Input	JTAG interface serial data in (Not used)
72	VDD	-	Power supply
73	VDD	-	Power supply
74*	EMIF_D[9]	Input/Output	EMIF data bus(Not used)
75*	EMIF_D[8]	Input/Output	EMIF data bus(Not used)
76*	EMIF_D[4]	Input/Output	EMIF data bus(Not used)
77*	JTAG_TDO	Output	JTAG interface serial data out (Not used)
78*	JTAG_TMS	Input	JTAG interface mode signal (Not used)
79*	JTAG_TRSTN	Input	Asynchronous reset of the test and emulation control logic (Not used)
80*	JTAG_TCK	Input	JTAG interface data clock (Not used)
81*	EMIF_D[11]	Input/Output	EMIF data bus(Not used)
82*	EMIF_D[12]	Input/Output	EMIF data bus(Not used)
83	VSS	-	Earth
84*	EMIF_D[10]	Input/Output	EMIF data bus(Not used)
85*	GPO[7]	Input/Output	General purpose output (Not used)
86*	GPO[6]	Input/Output	General purpose output (Not used)
87	VSS	-	Earth
88	VDD	-	Power supply
89*	EMIF_D[13]	Input/Output	EMIF data bus(Not used)
90*	EMIF_D[14]	Input/Output	EMIF data bus(Not used)
91*	EMIF_D[15]	Input/Output	EMIF data bus(Not used)
92*	GPO[5]	Output	General purpose output (Not used)
93*	GPO[4]	Output	General purpose output (Not used)
94	VSS	-	Earth
95*	EMIF_D[18]	Input/Output	EMIF data bus(Not used)
96	VDD	-	Power supply
97*	EMIF_D[16]	Input/Output	EMIF data bus(Not used)
98*	EMIF_D[17]	Input/Output	EMIF data bus(Not used)
99*	GPO[1]	Input/Output	General purpose output (Not used)
100*	GPO[2]	Input/Output	General purpose output (Not used)
101*	GPO[3]	Input/Output	General purpose output (Not used)
102	VDD	-	Power supply
103*	EMIF_D[19]	Input/Output	EMIF data bus(Not used)
104	VSS	-	Earth
105*	EMIF_D[20]	Input/Output	EMIF data bus(Not used)
106*	EMIF_D[22]	Input/Output	EMIF data bus(Not used)
107	DAC_DAT	Output	Serial interface data
108	VDD_DPLL	-	Power supply for the DPLL
109	VSS	-	Earth
110*	GPO[0]	Output	General purpose output (Not used)
111	VDD	-	Power supply
112*	EMIF_D[21]	Input/Output	EMIF data bus(Not used)
113*	EMIF_D[24]	Input/Output	EMIF data bus(Not used)
114*	EMIF_D[25]	Input/Output	EMIF data bus(Not used)
115	RADIO_STR	Output	Serial interface strobe
116	DAC_STR	Output	Serial interface strobe
117	AD_STR	Output	ADC strobe (start conversion)
118*	CPU_CLKOUT	Output	DSP clock out (Not used)
119*	EMIF_D[23]	Input/Output	EMIF data bus(Not used)
120	VSS	-	Earth
121*	EMIF_D[30]	Input/Output	EMIF data bus(Not used)
122*	CPU_IACK	Input/Output	Interrupt acknowledge signal (Not used)
123*	CPU_IRQ[1]	Input/Output	Interrupt request signals to the DSP (Not used)
124	DAC_I_OUT	Output	I data to radio
125	ADC_RXEXTREF_N	Output	Negative external reference
126	ADC_I_IN_INV	Input	Inverted I data from radio
127	VSSA_CS_APLL	-	Earth for clock squarer and APLL

Pin No.	Terminal name	Input/Output	Description of terminal
128*	EXT_MEM_UBUS[10]	Input/Output	Spare pin for test (Not used)
129	RESET_N	Input	System reset
130	DAC_CLK	Output	Serial interface clock
131	VDD	-	Power supply
132*	EMIF_D[26]	Input/Output	EMIF data bus(Not used)
133*	EMIF_D[27]	Input/Output	EMIF data bus(Not used)
134	RADIO_DAT	Output	Serial interface data
135	VSS	-	Earth
136	VDD	-	Power supply
137*	EMIF_D[28]	Input/Output	EMIF data bus(Not used)
138	VSS	-	Earth
139	VSS	-	Earth
140*	CPU_XF	Output	For observational purposes only (Not used)
141*	CPU_IRQ[0]	Input/Output	Interrupt request signals to the DSP (Not used)
142	DAC_Q_OUT_INV	Output	Inverted Q datato radio
143	VSSA_TX	-	Analogue earth
144	ADC_Q_IN	Input	Q data from radio
145	ADC_I_IN	Input	I data from radio
146	VDDA_BG	-	Analogue power supply
147	VDDA_CS_APLL	-	Power supply for the analogue part of the clock squarer and APLL
148	VDD	-	Power supply
149*	EXT_MEM_UBUS[12]	Input/Output	Spare pin for test (Not used)
150	HCLK	Input	Test clock
151	VDD	-	Power supply
152	RADIO_CLK	Output	Serial interface clock
153*	EMIF_D[29]	Input/Output	EMIF data bus(Not used)
154	VDD	-	Power supply
155*	EMIF_ARE_N	Input/Output	EMIF read strobe (Not used)
156	VSS	-	Earth
157	VSS-COMPLEXIO	-	Earth
158	DAC_TXEXTRES	Output	External resistor
159	VSSA_RX	-	Analogue earth
160	ADC_Q_IN_INV	Input	Inverted Q data from radio
161	ADC_RXEXTREF_P	Output	Positive external reference
162	VSSA_BG	-	Analogue earth
163	VSS-COMPLEXIO	-	Earth
164*	EXT_MEM_UBUS[11]	Input/Output	Spare pin for test (Not used)
165	CLKRQ	Input/Output	External clock request
166	CLK32	Input	Slow clock, known as realtime clock (RTC)Å@
167	VDD_CLK32	-	Power supply for 32kHz clock
168*	EMIF_D[31]	Input/Output	EMIF data bus(Not used)
169*	EMIF_AREADY	Input/Output	ENIF ready (Not used)
170*	EMIF_AWE_N	Input/Output	EMIF write strobe (Not used)
171	VDD	-	Power supply
172	VDDA_TX	-	Analogue power supply
173	DAC_Q_OUT	Output	Q data to radio
174	DAC_I_OUT_INV	Output	Inverted I data to radio
175	VDDA_RX	-	Analogue earth
176	BG_REF	Input	Bandgap reference voltage
177*	APLL_ATEST1	Output	Anarogue output for measuring the bias voltage or the VCO control voltage during analogue test(Not used)
178	MCLK	Input	Main clock
179	VSS	-	Earth
180	VDD	-	Power supply
181	VSS	-	Earth

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1500 (TC35285BXBG): ACCELERATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2*	NC	-	Not used
3	VDDIOC	-	IO power supply (3.0 V) ON
4	VDD1D	-	Core power supply (1.5 V) ON/OFF
5	LDAT17(LCDSTART1)	Input/Output	Display I/F data bus 17
6	VDDIOC	-	IO power supply (3.0 V) ON
7	LCLK1	Output	Display 1 clock
8*	LCS1/	Output	Display 1 chip select (Not used)
9*	VTX2CKN	Output	VD-link Tx 2 clock VD-link negative output(Not used)
10	VVMID	Input/Output	VD-link pin for noise filter capacitor Tx reference voltage
11	VDDV2R	-	2.5 Vpower supply for VD-link Rx
12	VRX1DN	Input	VD-link Rx 1 data VD-link negative intput
13	VRX1DP	Input	VD-link Rx 1 data VD-link positive intput
14	HADR8	Input	Host I/F address bus 8
15	VDD1D	-	Core power supply (1.5 V) ON/OFF
16	VDDIOA	-	IO power supply (1.8 V) ON
17	HADR0	Input	Host I/F address bus 0
18	HCS1/	Input	Host I/F chip select 1 (clock input)
19	VDDIOA	-	IO power supply (1.8 V) ON
20*	NC	-	Not used
21*	NC	-	Not used
22*	NC	-	Not used
23*	NC	-	Not used
24*	LDAT8	Input/Output	Display I/F data bus 8 (Not used)
25	LDAT14(ERRLCD2)	Input/Output	Display I/F data bus 14
26	LDAT15(ERRLCD1)	Input/Output	Display I/F data bus 15
27	CCLK1	Output	Camera 1 clock
28*	LCLK2	Output	Display 2 clock (Not used)
29	LRST1/	Output	Display 1 reset/GPIO
30*	VTX2CKP	Output	VD-link Tx 2 clock VD-link positive output (Not used)
31	VTX1CKN	Output	VD-link Tx 1 clock VD-link negative output
32	VRX2CKN	Input	VD-link Rx 2 clock VD-link nagative intput
33	VRX1CKP	Input	VD-link Rx 1 clock VD-link positive intput
34	HADR12	Input	Host I/F address bus 12
35	HADR7	Input	Host I/F address bus 7
36*	NC	-	Not used
37	HADR2	Input	Host I/F address bus 2
38	HRD/	Input	Host I/F read command
39*	HVCS2/	Output	Virtual chip select output 2 (Not used)
40	HDAT13	Input/Output	Host I/F data bus 13
41*	NC	-	Not used
42*	NC	-	Not used
43	VDDIOC	-	IO power supply (3.0 V) ON
44*	LDAT3	Input/Output	Display I/F data bus 3 (Not used)
45	LDAT12(CAM2START)	Input/Output	Display I/F data bus 12
46*	LDAT16(LCDSTART2)	Input/Output	Display I/F data bus 16 (Not used)
47	VDD1P	-	Core power supply (1.5 V) ON
48	LWAIT2/	Input	Display 2 wait/interrupt
49	VTX1DN	Output	VD-link Tx 1 data VD-link negative output
50	VRX2CKP	Input	VD-link Rx 2 clock VD-link positive intput
51	VRX2DP	Input	VD-link Rx 2 data VD-link positive intput
52	HADR9	Input	Host I/F address bus 9
53	HADR5	Input	Host I/F address bus 5
54	HADR1	Input	Host I/F address bus 1
55	HCS2/	Input	Host I/F chip select 2 (clock input)
56	HDAT9	Input/Output	Host I/F data bus 9
57	VDD1P	-	Core power supply (1.5 V) ON
58	VDDIOC	-	IO power supply (3.0 V) ON
59*	LDAT0	Input/Output	Display I/F data bus 0 (Not used)
60*	LDAT6	Input/Output	Display I/F data bus 6 (Not used)
61*	LDAT9	Input/Output	Display I/F data bus 9 (Not used)
62	LDAT13(CAM1START)	Input/Output	Display I/F data bus 13
63*	LPRCLK	Output	Display panel refresh clock (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
64	LWAIT1/	Input	Display 1 wait/interrupt
65*	VTX2DN	Output	VD-link Tx 2 data VD-link negative output(Not used)
66	VTX1CKP	Output	VD-link Tx 1 clock VD-link positive output
67	VTX1DP	Output	VD-link Tx 1 data VD-link positive output
68	VRX2DN	Input	VD-link Rx 2 data VD-link negative intput
69	VRX1CKN	Input	VD-link Rx 1 clock VD-link nagative intput
70	HADR10	Input	Host I/F address bus 10
71	HADR4	Input	Host I/F address bus 4
72	HWR/	Input	Host I/F write command
73*	HWAIT/	Output	Host I/F wait (Not used)
74	HDAT14	Input/Output	Host I/F data bus 14
75	HDAT7	Input/Output	Host I/F data bus 7
76	VDDIOA	-	IO power supply (1.8 V) ON
77	LVSIN	Input	Display I/F vertical sync signal input
78	VDD2E	-	DRAM power supply (2.5 V) ON/OFF
79*	LDAT1	Input/Output	Display I/F data bus 1 (Not used)
80*	LDAT2	Input/Output	Display I/F data bus 2 (Not used)
81*	LDAT5	Input/Output	Display I/F data bus 5 (Not used)
82*	LDAT7	Input/Output	Display I/F data bus 7 (Not used)
83*	LDAT11(ERRCAM1)	Input/Output	Display I/F data bus 11 (Not used)
84*	CCLK2	Output	Camera 2 clock (Not used)
85	LRST2/	Output	Display 2 reset/GPIO
86*	VTX2DP	Output	VD-link Tx 2 data VD-link positive output (Not used)
87	VDDV1T	-	1.5 Vpower supply for VD-link Tx
88	VDDV1R	-	1.5 Vpower supply for VD-link Rx
89*	NC	-	Not used
90	HADR11	Input	Host I/F address bus 11
91	HADR3	Input	Host I/F address bus 3
92	HVCS1/	Output	Virtual chip select output 1
93	HDAT15	Input/Output	Host I/F data bus 15
94	HDAT11	Input/Output	Host I/F data bus 11
95	HDAT8	Input/Output	Host I/F data bus 8
96	HDAT6	Input/Output	Host I/F data bus 6
97	VDDIOA	-	IO power supply (1.8 V) ON
98	VDD2E	-	DRAM power supply (2.5 V) ON/OFF
99*	NC	-	Not used
100	VSSE	-	Earth for DRAM
101*	LDISPEN/	Output	Display I/F display enable (Not used)
102	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
103*	LDAT4	Input/Output	Display I/F data bus 4 (Not used)
104*	LDAT10(ERRCAM2)	Input/Output	Display I/F data bus 10 (Not used)
105	VSS	-	Common earth for digital
106	VSS	-	Common earth for digital
107*	LCS2/	Output	Display 2 chip select(Not used)
108	VSSVT	-	Earth for VD-link Tx
109	VSSVT	-	Earth for VD-link Tx
110	VSSVR	-	Earth for VD-link Rx
111	VSS	-	Common earth for digital
112	VSS	-	Common earth for digital
113*	HDREQ/	Output	Host I/F bus request (Not used)
114	HDAT12	Input/Output	Host I/F data bus 12
115	VDD1D	-	Core power supply (1.5 V) ON/OFF
116*	NC	-	Not used
117	VSS	-	Common earth for digital
118	VDD1C	-	PLL power supply (1.5 V)
119*	LWR/	Input/Output	Display I/F write command/HSYNC (Not used)
120*	NC	-	Not used
121*	NC	-	Not used
122*	NC	-	Not used
123	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
124	VSSE	-	Earth for DRAM
125	VSS	-	Common earth for digital
126	HADR6	Input	Host I/F address bus 6
127	VSS	-	Common earth for digital

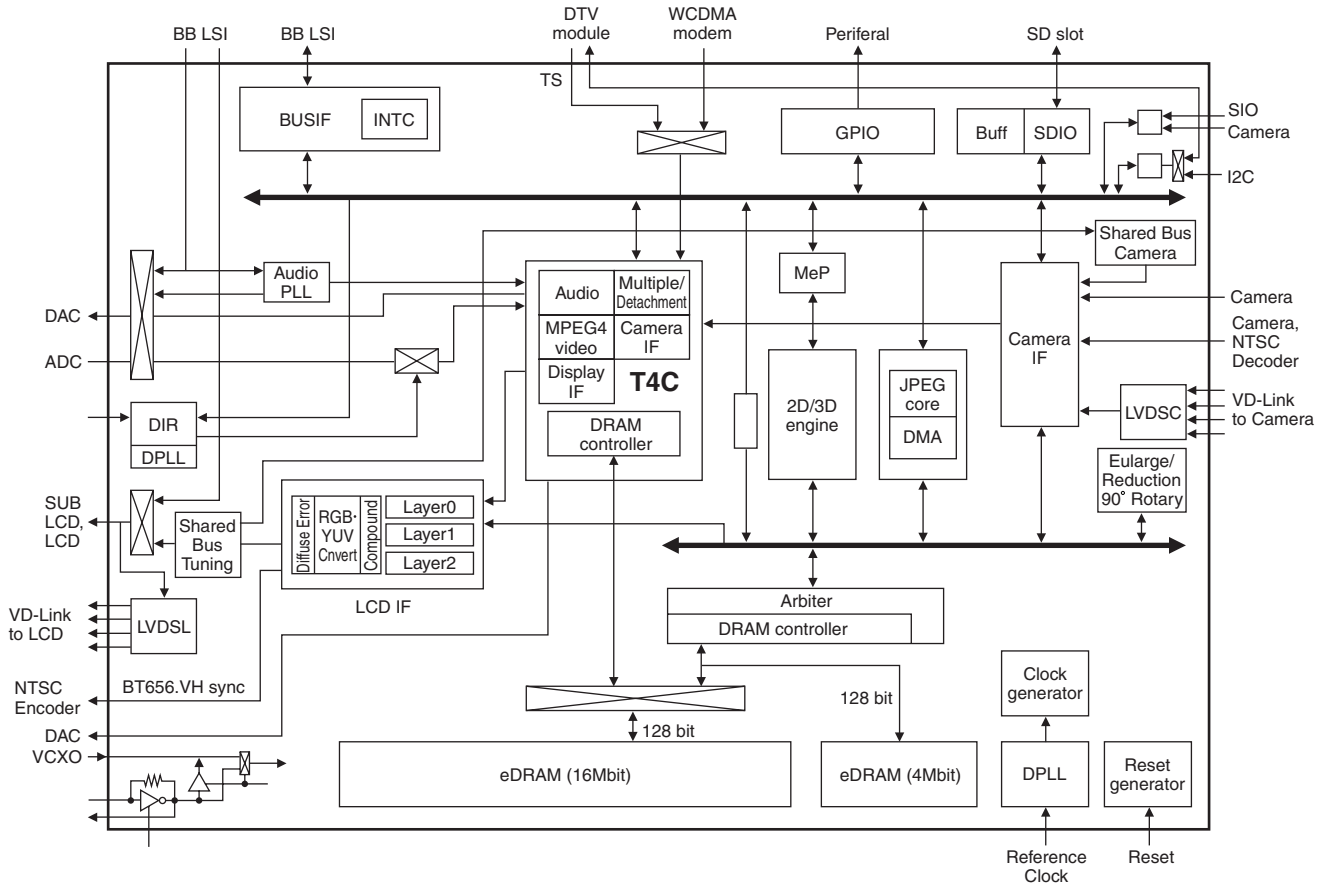
Pin No.	Terminal name	Input/Output	Description of terminal
128	HDAT10	Input/Output	Host I/F data bus 10
129	HDAT4	Input/Output	Host I/F data bus 4
130	HDAT2	Input/Output	Host I/F data bus 2
131	HDAT0	Input/Output	Host I/F data bus 0
132	VDDIOD	-	IO power supply (1.8 - 3.0 V) ON
133	I2CDATB	Input/Output	I2C data B
134*	NC	-	Not used
135*	LRD/	Input/Output	Display I/F read command/VSYNC (Not used)
136	VDD1D	-	Core power supply (1.5 V) ON/OFF
137	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
138	VSSE	-	Earth for DRAM
139	VSS	-	Common earth for digital
140	HDAT5	Input/Output	Host I/F data bus 5
141	HDAT3	Input/Output	Host I/F data bus 3
142	HDAT1	Input/Output	Host I/F data bus 1
143	ADSCK	Input	Audio serial clock input
144	ADLRCKO	Output	Audio L/R clock output
145	CDAT7	Input	Camera I/F data bus 7
146*	NC	-	Not used
147*	LRS	Input/Output	Display I/F resister select/dot clock (Not used)
148	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
149	VSSE	-	Earth for DRAM
150	PIMCLK	Input	Audio PLL master clock input
151	ADSDO	Output	Audio serial data output
152	ADSDI	Input	Audio serial data input
153	ADLRCK	Input	Audio L/R clock input
154	VDD1C	-	PLL power supply (1.5 V)
155	VDDIOC	-	IO power supply (3.0 V) ON
156*	NC	-	Not used
157	CDAT5	Input	Camera I/F data bus 5
158	CDAT6	Input	Camera I/F data bus 6
159	I2CCLKB	Input/Output	I2C clock B
160	VSSE	-	Earth for DRAM
161	VSSC	-	Earth (APLL/DPLL)
162	ADSDOI	Input	Audio serial bypass data input
163	ADSCKO	Output	Audio serial clock output
164	SYSCLK	Input	System clock input
165	SYSCLKEN	Input	System clock enable
166	VDD1P	-	Core power supply (1.5 V) ON
167	VDD2E	-	DRAM power supply (2.5 V) ON/OFF
168	CDAT2	Input	Camera I/F data bus 2
169	CDAT4	Input	Camera I/F data bus 4
170	CDAT3	Input	Camera I/F data bus 3
171	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
172	VSS	-	Common earth for digital
173	VSSC	-	Earth (APLL/DPLL)
174	PLLEN	Input	Pll enable
175	POMCLK	Output	Audio PLL master clock output
176	PLLBPIN	Input/Output	Pll bypass input
177	VSS	-	Common earth for digital
178	PLLLD/	Input	Pll load
179	VDDIOC	-	IO power supply (3.0 V) ON
180	CHREF	Input	Camera I/F HREF
181	CDAT0	Input	Camera I/F data bus 0
182	CDAT1	Input	Camera I/F data bus 1
183	CVREF	Input	Camera I/F VREF
184	VSSE	-	Earth for DRAM
185	PCRXIEN	Input	Program clock reference Xtal buffer enable
186	RESET/	Input	System reset input
187	PLLSEL1	Input	Pll select
188	HINT/	Output	Host I/F interrupt request
189	DIRRX	Input	DIR data input
190	VDD1D	-	Core power supply (1.5 V) ON/OFF
191*	DTVM	Output	eDRAM test monitor pin (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
192*	CCS1/	Output	Camera 1 chip select/GPIO (Not used)
193	CDCLK	Input	Camera I/F dot clock
194	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
195	VSSE	-	Earth for DRAM
196*	DACSD	Output	DAC serial data/GPIO (Not used)
197	DACRST/	Output	DAC reset/GPIO
198	DACCLK	Output	DAC clock/GPIO
199	VDDIOB	-	IO power supply (3.0 V) ON
200	PCRXIN	Input	Program clock reference Xtal input
201	CINT1	Input	Camera 1 interrupt request
202	CINT2	Input	Camera 2 interrupt request/GPIO
203	CRST1/	Output	Camera 1 reset/GPIO
204*	CCS2/	Output	Camera 2 chip select/GPIO (Not used)
205	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
206	VSS	-	Common earth for digital
207	VSS	-	Common earth for digital
208	VSS	-	Common earth for digital
209	SEDI	Input	Serial data input/GPIO
210	DACLD	Output	DAC load/GPIO
211	SEDO	Output	Serial data output/GPIO
212	DACCE	Output	DAC chip enable/GPIO
213	PCRXOUT	Output	Program clock reference Xtal output
214	VDD1P	-	Core power supply (1.5 V) ON
215	PDEN/	Input	Pulldown enable (Low : enable/High : disable)
216*	NC	-	Not used
217	STBYA/	Input	Standby input A
218	VDD1E	-	DRAM power supply (1.5 V) ON/OFF
219	CRST2/	Output	Camera 2 reset/GPIO
220	VSSE	-	Earth for DRAM
221	TESTL1	Input	Test pin
222	TESTL2	Input	Test pin
223*	NWOEN/	Input	Network data output enable/SYNC/GPIO (Not used)
224	NWDO	Output	Network ldata output/GPIO
225*	NWCLK	Input	Network clock input/GPIO (Not used)
226	NWIEN/	Input	Network I/F data input enable/SYNC/GPIO
227	PCRCLK	Input/Output	Program clock reference clock input/output
228	VDDIOB	-	IO power supply (3.0 V) ON
229	DTMB	Input	eDRAM test mode select
230	PORCTR	Input	eDRAM test signal input
231	DTCLK	Input	eDRAM test clock input
232	SDDAT1	Input/Output	SD card data buss 1
233	VSSE	-	Earth for DRAM
234	VSSE	-	Earth for DRAM
235	VSS	-	Common earth for digital
236	VSS	-	Common earth for digital
237	VDDIOB	-	IO power supply (3.0 V) ON
238	MJTMS	Input	Mep JTAG mode select
239*	NC	-	Not used
240	VSS	-	Common earth for digital
241*	NC	-	Not used
242	VSS	-	Common earth for digital
243	TESTL6	Input	Test pin
244	CONFIG2	Input	Configuration
245*	NC	-	Not used
246*	NC	-	Not used
247	NWDI	Input	Network I/F data input/GPIO
248	SECLK	Output	Serial clock
249	TESTH2	Input	Test pin
250*	NC	-	Not used
251	SDDAT0	Input/Output	SD card data buss 0
252	SDDAT3	Input/Output	SD card data buss 3
253	TESTH1	Input	Test pin
254	STBYB/	Input	Standby input B
255*	NC	-	Not used

Pin No.	Terminal name	Input/Output	Description of terminal
256	BDDAT4	Input	Bt656 decoder data bus 4
257*	BEDAT3	Output	Bt656 encoder data bus 3 (Not used)
258*	BEDAT7	Output	Bt656 encoder data bus 7 (Not used)
259*	NC	-	Not used
260	VDD1D	-	Core power supply (1.5 V) ON/OFF
261	VDD1P	-	Core power supply (1.5 V) ON
262*	NC	-	Not used
263	GPIO4	Input/Output	Generic purpose IO 4
264*	NC	-	Not used
265	PLLBP	Input	Pll bypass
266	CONFIG1	Input	Configuration
267	TESTL0	Input	Test pin
268	TESTL3	Input	Test pin
269	VDDIOB	-	IO power supply (3.0 V) ON
270	VDD2E	-	DRAM power supply (2.5 V) ON/OFF
271	SDDAT2	Input/Output	SD card data buss 2
272	TESTL5	Input	Test pin
273*	NC	-	Not used
274	SDCMD	Input/Output	SD card command
275	BDDAT0	Input	Bt656 decoder data bus 0
276*	BEDAT0	Output	Bt656 encoder data bus 0 (Not used)
277*	BEDAT4	Output	Bt656 encoder data bus 4 (Not used)
278	SDPWR	Input	SD card protect for write
279	I2CDATA	Input/Output	I2C data A/GPIO
280	HWTSEL	Input	Host wait select
281*	TSEN/	Input	TS data enable (Not used)
282	BUSSEL	Input	Bus mode select
283*	GPIO6	Input/Output	Generic purpose IO 6 (Not used)
284	VDD1D	-	Core power supply (1.5 V) ON/OFF
285*	SELD1	Output	Serial enable/GPIO (Not used)
286	PLLSEL2	Input	Pll select
287	TESTL4	Input	Test pin
288*	NWINT	Input	Network I/F interrupt request/GPIO (Not used)
289	VDDIOB	-	IO power supply (3.0 V) ON
290	VDD1D	-	Core power supply (1.5 V) ON/OFF
291	SDCLK	Output	SD card clock
292	BDDAT3	Input	Bt656 decoder data bus 3
293	BEHSYNC	Input/Output	Bt656 encoder horizontal SYN
294*	BEDAT1	Output	Bt656 encoder data bus 1 (Not used)
295	SDDET/	Input	SD card detect
296	I2CCLKA	Input/Output	I2C clock A/GPIO
297	MJTDI	Input	Mep JTAG data input
298	TSDAT	Input	TS I/F data
299	TESTL7	Input	Test pin
300	GPIO3	Input/Output	Generic purpose IO 3
301*	SELD2	Output	Serial enable/GPIO (Not used)
302	CONFIG0	Input	Configuration
303	VDDIOB	-	IO power supply (3.0 V) ON
304*	NC	-	Not used
305*	NC	-	Not used
306	BDCLK	Input	Bt656 decoder clock
307	BDDAT2	Input	Bt656 decoder data bus 2
308	BDDAT1	Input	Bt656 decoder data bus 1
309	BDDAT6	Input	Bt656 decoder data bus 6
310	BECLK	Input/Output	Bt656 encoder clock
311*	BEDAT2	Output	Bt656 encoder data bus 2 (Not used)
312*	BEDAT5	Output	Bt656 encoder data bus 5 (Not used)
313*	BEDAT6	Output	Bt656 encoder data bus 6 (Not used)
314	VSS	-	Common earth for digital
315	MJTCK	Input	Mep JTAG clock
316*	TSFRM	Input	TS frame sync (Not used)
317*	NC	-	Not used
318	VDD1D	-	Core power supply (1.5 V) ON/OFF
319*	GPIO7	Input/Output	Generic purpose IO 7 (Not used)

Pin No.	Terminal name	Input/Output	Description of terminal
320	SELD4	Output	Serial enable/GPIO
321*	GPIO1	Input/Output	Generic purpose IO 1 (Not used)
322*	SELD3	Output	Serial enable/GPIO (Not used)
323*	NC	-	Not used
324*	NC	-	Not used
325*	NC	-	Not used
326*	NC	-	Not used
327	VDD1D	-	Core power supply (1.5 V) ON/OFF
328	VDDIOB	-	IO power supply (3.0 V) ON
329	BDDAT5	Input	Bt656 decoder data bus 5
330	BDDAT7	Input	Bt656 decoder data bus 7
331	BEVSYNC	Input/Output	Bt656 encoder vertical SYN
332	VDD1D	-	Core power supply (1.5 V) ON/OFF
333	HBWSEL	Input	Host bus width select
334	VSS	-	Common earth for digital
335	MJTRST/	Input	Mep JTAG reset
336	VDD1D	-	Core power supply (1.5 V) ON/OFF
337*	MJTDO	Output	Mep JTAG data output (Not used)
338*	TSCLK	Input	TS I/F clock (Not used)
339	VDDIOB	-	IO power supply (3.0 V) ON
340	TESTH0	Input	Test pin
341	GPIO5	Input/Output	Generic purpose IO 5
342	GPIO2	Input/Output	Generic purpose IO 2
343	GPIO0	Input/Output	Generic purpose IO 0
344*	NC	-	Not used
345*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1501 (FA3729B): SYSTEM POWER

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2	ISNS	Input	LDO load detection terminal
3	FB	Output	Error amplifier output
4	CS	-	Soft start terminal
5	PVCC	-	Power system power supply input
6	VOUT	Output	DC/DC converter driver output
7*	NC	-	Not used
8	SNSG	-	DC/DC converter detection resistance earth
9	VCC	-	Circuit system power supply input
10	IN-	Input	Error amplifier inverting input
11	GND1	-	Earth
12	PVCC	-	Power system power supply input
13	VOUT	Output	DC/DC converter driver output
14	PGND	-	Power earth
15	VCC	-	Circuit system power supply input
16	GND2	-	Earth
17	PGND	-	Power earth
18	MODE	Input	Output PchMOS slew mode signal input
19	GND3	-	Earth
20	EN1	Input	LDO_1 enable terminal
21	CREF	-	Reference voltage capacitor connection terminal
22	LPM	Input	Low Power Mode signal input
23	EN2	Input	LDO_2 enable terminal
24	EN3	Input	LDO_3 enable terminal
25	EN7	Input	LDO_7 enable terminal
26	EN6	Input	LDO_6 enable terminal
27	EN4	Input	LDO_4 enable terminal
28	VIN1	Input	LDO_1, LDO_3 power supply input
29	VOUT4	Output	LDO_4 output
30	VOUT2	Output	LDO_2 output
31	VIN3	Input	LDO_5, LDO_6 power supply input
32	EN5	Input	LDO_5 enable terminal
33	VIN4	Input	LDO_7 power supply input
34*	NC	-	Not used
35	VOUT1	Output	LDO_1 output
36	VOUT3	Output	LDO_3 output
37	VIN2	Input	LDO_2, LDO_4 power supply input
38	VOUT6	Output	LDO_6 output
39	VOUT5	Output	LDO_5 output
40	VOUT7	Output	LDO_7 output

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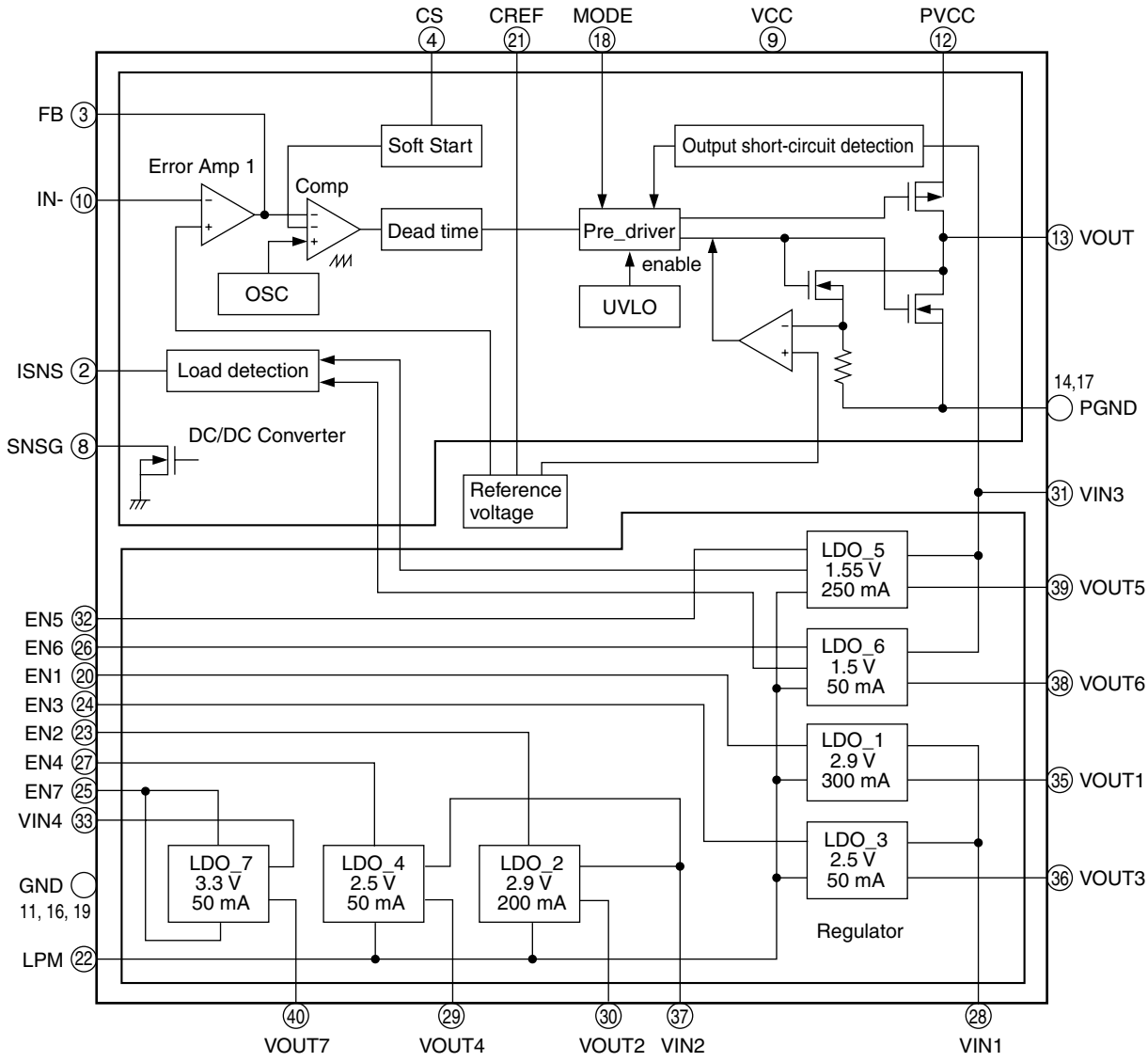

IC1502 (BU7876GL): INFRARED REMOTE Tx CONTROLLER LSI

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	–	Mount reinforcement pin (Not used)
2	GND	–	Earth
3	VDD	–	Power supply
4*	NC	–	Mount reinforcement pin (Not used)
5	DOUT	Output	Data output
6	NIRQ	Output	Interrupt output (LOW: interrupt generation)
7*	NC	–	Mount reinforcement pin (Not used)
8	SCL	Input	IIC bus serial clock (SQL)
9	SDA	Input/Output	IIC bus serial data input/output
10*	NC	–	Mount reinforcement pin (Not used)
11	NRST	Input	Reset pin (LOW: reset)
12	CLK1	Input	Reference clock input

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC1600 VHIYMU786++-1L (YMU786):FM AUDIO

Pin No.	Terminal name	Input/Output	Description of terminal
1*	(SPOUT1R)	Output	Internally connected to No. 11 terminal. No. 11 terminal is used as SPOUT1R terminal. (Not used)
2*	SPOUT2R	Output	R-ch speaker connection terminal 2 (Not used)
3	TXOUT	Output	Transmitted voice analogue output terminal
4	AVSS	-	Analogue earth
5	HPC	-	Capacitance connection terminal for preventing headphone pop noise
6	HPVSS	-	Earth for headphone amplifier
7	HPOUTR	Output	R-ch headphone output terminal
8*	SPOUT2L	Output	L-ch speaker connection terminal 2 (Not used)
9*	(SPOUT1L)	Output	Internally connected to No. 17 terminal. No. 17 terminal is used as SPOUT1L terminal. (Not used)
10	SPVSSR	-	Analogue earth for R-ch speaker amplifier
11*	SPOUT1R	Output	R-ch speaker connection terminal 1 (Not used)
12	AVDD	-	Analogue power supply (2.70 to 3.30 V)
13	VREF	-	Analogue reference voltage terminal
14	BBR	-	Capacitance connection terminal for R-ch bus boost (0.1 μF)
15*	EXTOUT	Output	External analogue output terminal (Not used)
16	HPOUTL	Output	L-ch headphone output terminal
17*	SPOUT1L	-	L-ch speaker connection terminal 1 (Not used)
18	SPVSSL	-	Analogue earth for L-ch speaker amplifier
19	SPVDDR	-	Analogue power supply for R-ch speaker amplifier (AVDD to 4.50 V)
20	EQ3R	-	R-ch equaliser terminal 3
21	EQ2R	-	R-ch equaliser terminal 2
22	EXC	-	Capacitance connection terminal for preventing external output pop noise (1 μF)
23	BBL	Output	Capacitance connection terminal for L-ch bus boost (0.1 μF)
24	RXIN	Input	Received voice analogue input terminal
25	EXTIN	Input	External analogue input terminal
26	EQ3L	-	L-ch equaliser terminal 3
27	SPVDDL	-	Analogue power supply for L-ch speaker amplifier (AVDD to 4.50 V)
28	EQ1R	-	R-ch equaliser terminal 1
29	PLLC	-	PLL capacitance connection terminal for sound source
30	(DVSS)	-	Earth
31*	INDEX	-	Index terminal (Not used)
32	/TEST	Input	Terminal for LSI test
33	EQ2L	-	L-ch equaliser terminal 2
34	EQ1L	-	L-ch equaliser terminal 1
35	DVSS	-	Digital earth
36	CLKI	Input	Clock input terminal
37	A3	Input	CPU interface address signal 3
38	/RST	Input	Hardware reset input
39	DVDD	-	Digital core power supply (1.65 to 1.95 V)
40	DVSS	-	Digital earth
41	DVDD	-	Digital core power supply (1.65 to 1.95 V)
42	A1	Input	CPU interface address signal 1
43	A0	Input	CPU interface address signal 0
44*	SDOUT	Output	Data output for digital audio output (Not used)
45*	LRCKO	Output	LR clock for digital audio output (Not used)
46	IOVDD2	-	Power supply for terminal (DVDD to 3.30 V)
47	A2	Input	CPU interface address signal 2
48	D6	Input/Output	CPU interface data bus 6
49	D5	Input/Output	CPU interface data bus 5
50	D1	Input/Output	CPU interface data bus 1
51	/CS	Input	CPU interface chip select
52*	GPIO0	Input/Output	GPIO port (Not used)
53*	LED#1	Output	External LED control terminal #1 (Not used)
54	LRCK	Input/Output	LR clock for external audio input
55*	BCLKO	Output	BIT clock for digital audio output (Not used)
56	D7	Input/Output	CPU interface data bus 7
57	D4	Input/Output	CPU interface data bus 4
58	D2	Input/Output	CPU interface data bus 2
59	IOVDD	-	Terminal power supply for CPU interface
60	/RD	Input	CPU interface read enable
61	/IRQ	Output	Interrupt output

Pin No.	Terminal name	Input/Output	Description of terminal
62*	LED#2	Output	External LED control terminal #2 (Not used)
63	BCLK	Input/Output	BIT clock for digital audio input
64	SDIN	Input	Data input for digital audio input
65*	NC	-	Not used
66	D3	Input/Output	CPU interface data bus 3
67	D0	Input/Output	CPU interface data bus 0
68	DVSS	-	Digital earth
69	DVDD	-	Digital core power supply (1.65 to 1.95 V)
70	/WR	Input	CPU interface write enable
71	MTR	Output	External vibrator control terminal
72	LED#0	Output	External LED control terminal #0
73*	NC	-	Not used

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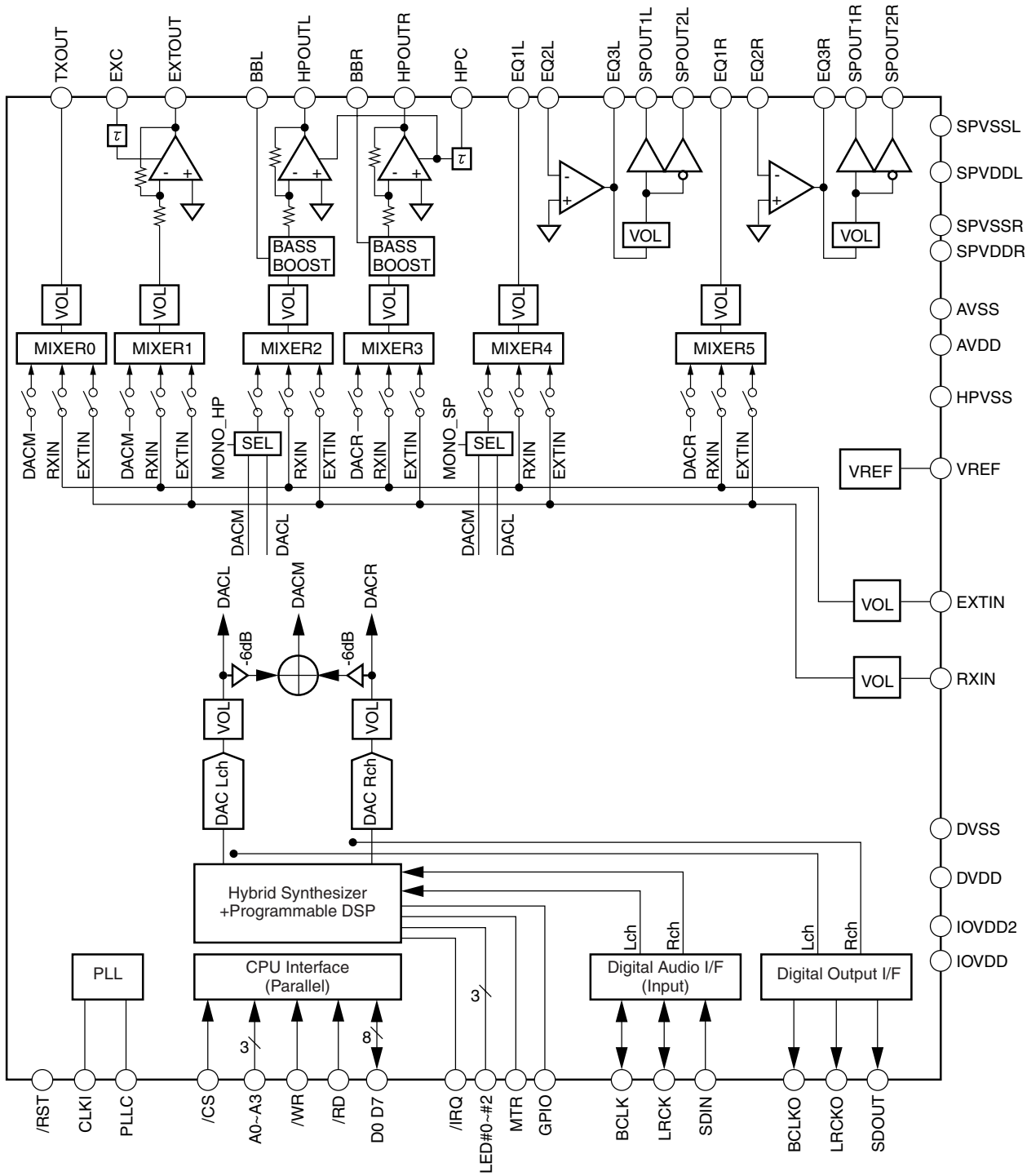
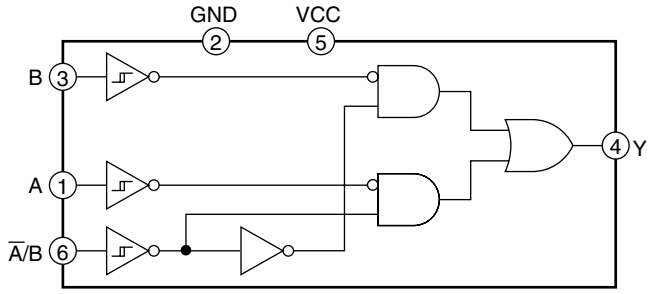


IC1602/IC1902/IC1907/IC1908 VHILVC1G97B-1R (LVC1G97B): FUNCTION GATE

Pin No.	Terminal name	Input/Output	Description of terminal
1	A	Input	Input
2	GND	-	Earth
3	B	Input	Input
4	Y	Output	Output
5	VCC	-	Power supply
6	/A/B	Input	Input



IC1604 VHILVC1G07B-1R (LVC1G07B): LEVEL SHIFTOR

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2	A	Input	Input
3	GND	-	Earth
4	Y	Output	Output
5	VCC	-	Power supply

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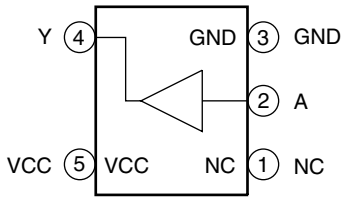
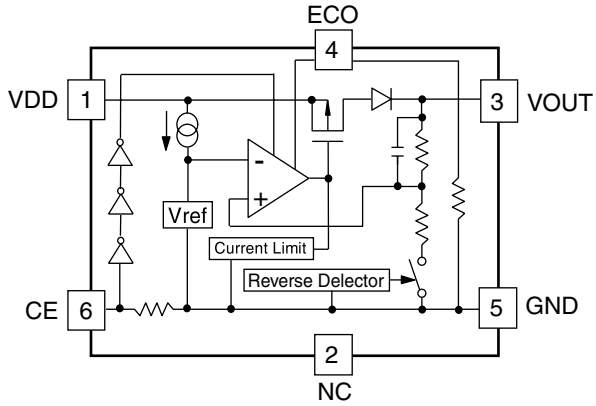


IC1605 VHIR116329B-1L (R1163D291B): 2.9 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	VDD	Input	Input
2*	NC	-	Not used
3	VOUT	Output	Output
4	ECO	Input	High speed/low consumption selector switch
5	GND	-	Earth
6	CE	Input	Chip enable

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1700 (LC822964): STEREO CODEC+VIDEO

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2	LIP	Input	Microphone preamplifier positive input (L-ch)
3	LIN	Input	Microphone preamplifier negative input (L-ch)
4	AVDD	-	Analogue power supply
5	R2/GPIO3	Input	Line input (R-ch)
6	VMID	-	ADC reference voltage
7	SPKVDD	-	Speaker amplifier power supply
8	LOUT2	Output	2nd line output (L-ch)
9*	NC	-	Not used
10	RIP	Input	Microphone preamplifier positive input (R-ch)
11	L2/GPIO2	Input	Line input (L-ch)
12*	LOUT1	Output	Headphone output (L-ch) (Not used)
13*	ROUT1	Output	Headphone output (R-ch) (Not used)
14	AGND	-	Analogue earth
15*	DACDAT	Input	Not used
16*	OUT3	-	Headphone pseudo earth (Not used)
17	ROUT2	Output	2nd line output (R-ch)
18	MODE	Input	CPU I/F system select
19	RIN	Input	Microphone preamplifier negative input (R-ch)
20*	MICBIAS	-	Microphone bias (Not used)
21	BCLK	Input	ADC bit clock
22	LRC	Input	ADC sample rate clock
23	ADCDAT	Output	ADC digital audio data output
24	MCLK	Input	Master clock input
25*	OUT4	-	Headphone pseudo earth (Not used)
26*	AUXL	Input	AUX input (L-ch) (Not used)
27*	AUXR	Input	AUX input (R-ch) (Not used)
28	A-GND	-	Analogue earth
29	YCD1	Input	YC multiplex data (MSB)
30	YCD4	Input	YC multiplex data (MSB)
31	YCD7	Input	YC multiplex data (MSB)
32	VCC	-	Power supply
33	DGND	-	Digital system earth
34	SPKGND	-	Speaker amplifier earth
35	CSB/GPIO1	Input	Three-wire CPU I/F chip select
36	DCVDD	-	Digital core power supply
37	YCD0	Input	YC multiplex data (LSB)
38	VS	Output	Vertical sync signal (output in MASTER mode)
39	YCD5	Input	YC multiplex data (MSB)
40	YCD6	Input	YC multiplex data (MSB)
41	DVSS	-	Digital system earth
42	VOUT	Output	Video output
43	SDIN	Input	Three-wire CPU I/F data
44	SCLK	Input	Three-wire CPU I/F clock
45	DBVDD	-	Digital I/O power supply
46	YCD2	Input	YC multiplex data (MSB)
47	YCD3	Input	YC multiplex data (MSB)
48	XRST	Input	Reset (0: reset)
49	P_SAV_CTL	Input	Power saving mode switch
50	DVSS	-	Digital system earth
51	TVD0	-	Test (LSB)
52	V_MID_IN	Input	Reference voltage input
53	R_GND	-	Speaker amplifier earth (R-ch)
54	R_OUT	Output	Inverting amplifier output (R-ch)
55	HS	Output	Horizontal sync signal (output in MASTER mode)
56	FI	Output	Field flag (output in MASTER mode)
57	VCLK	Input	2x dot clock (27MHz/24.54MHz)
58	MODE2	Input	MODE setting (MSB)
59	DVSS	-	Digital system earth
60	TVD2	-	Test (MSB)
61	TVD1	-	Test (MSB)
62	CAPR	Input	Auxiliary pin for preventing oscillation (R-ch)
63	SPGND	-	Small-signal earth

Pin No.	Terminal name	Input/Output	Description of terminal
64	GAIN_CTL	Input	Fixed to earth (fixed to 6 dB)
65	SDA	Input	I2C data
66	SCL	Input	I2C clock
67	DVDD25	-	Digital core power supply (2.5 V)
68	DVDD25	-	Digital core power supply (2.5 V)
69	VSTBY	Input	Stand-by (1: input buffer LOCK)
70	TVD3	-	Test (MSB)
71	VCCR	-	Speaker amplifier power supply (R-ch)
72	R_IN	Input	Inverting amplifier input (R-ch)
73	V_IN	Input	Video input
74	AVSS	-	Analogue earth
75	GND	-	Earth
76	DVDD3	-	Digital I/O power supply (3.0 V)
77	DVDD3	-	Digital I/O power supply (3.0 V)
78	VCC_N	Output	Negative VCC
79	VCCL	-	Speaker amplifier power supply (L-ch)
80	L_GND	-	Speaker amplifier earth (L-ch)
81	L_IN	Input	Inverting amplifier input (L-ch)
82	DACOUT	Output	DAC output
83	IDSEL	Input	ID address select (0: 0 x 40, 1: 0 x 42)
84	IOB	-	DAC IOB
85	AVDD25	-	Analogue DAC power supply (2.5 V)
86	MODE1	Input	MODE setting (MSB)
87	CLK_OUT	Output	Clock output
88	ND1	Output	Charge transfer
89	VCCSPamp	-	Small-signal power supply
90	P_SAVE	Input	Power save (0: power save)
91*	NC	-	Not used
92	COMP	-	DAC COMP
93	VREF	-	DAC VREF
94	IREF	-	DAC IREF
95	MODE0	Input	MODE setting (LSB)
96	L_OUT	Output	Inverting amplifier output (L-ch)
97	CAPL	Input	Auxiliary pin for preventing oscillation (L-ch)
98	STBY	Input	Stand-by (0: stand-by)
99*	NC	-	Not used

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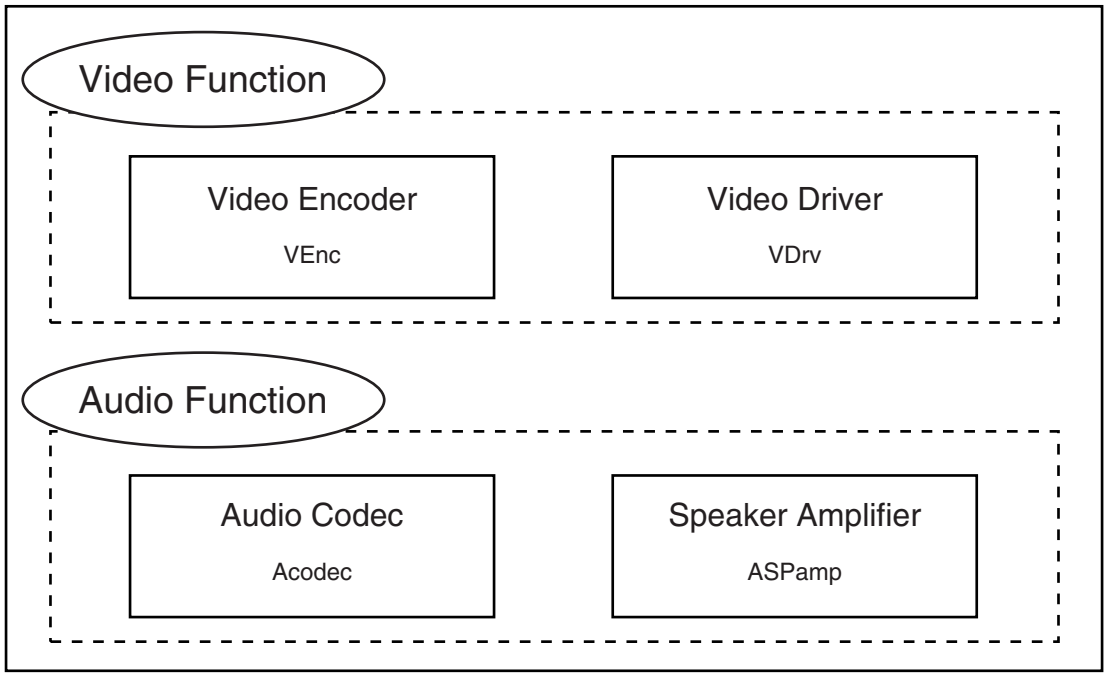
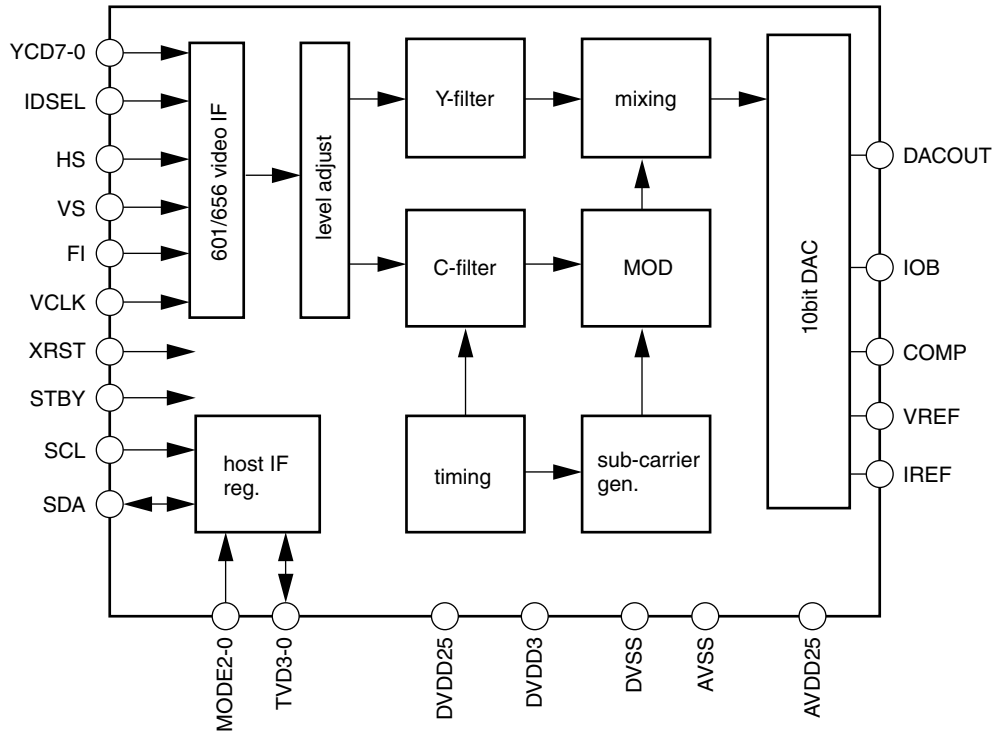
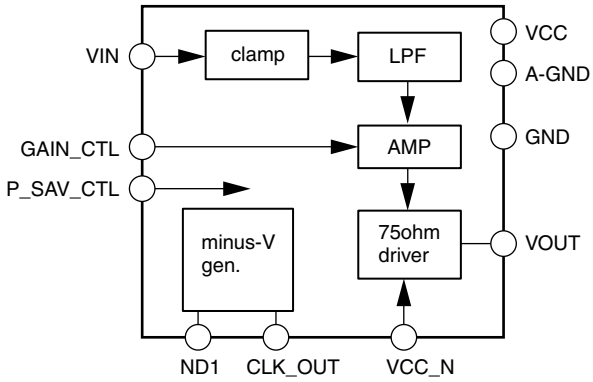


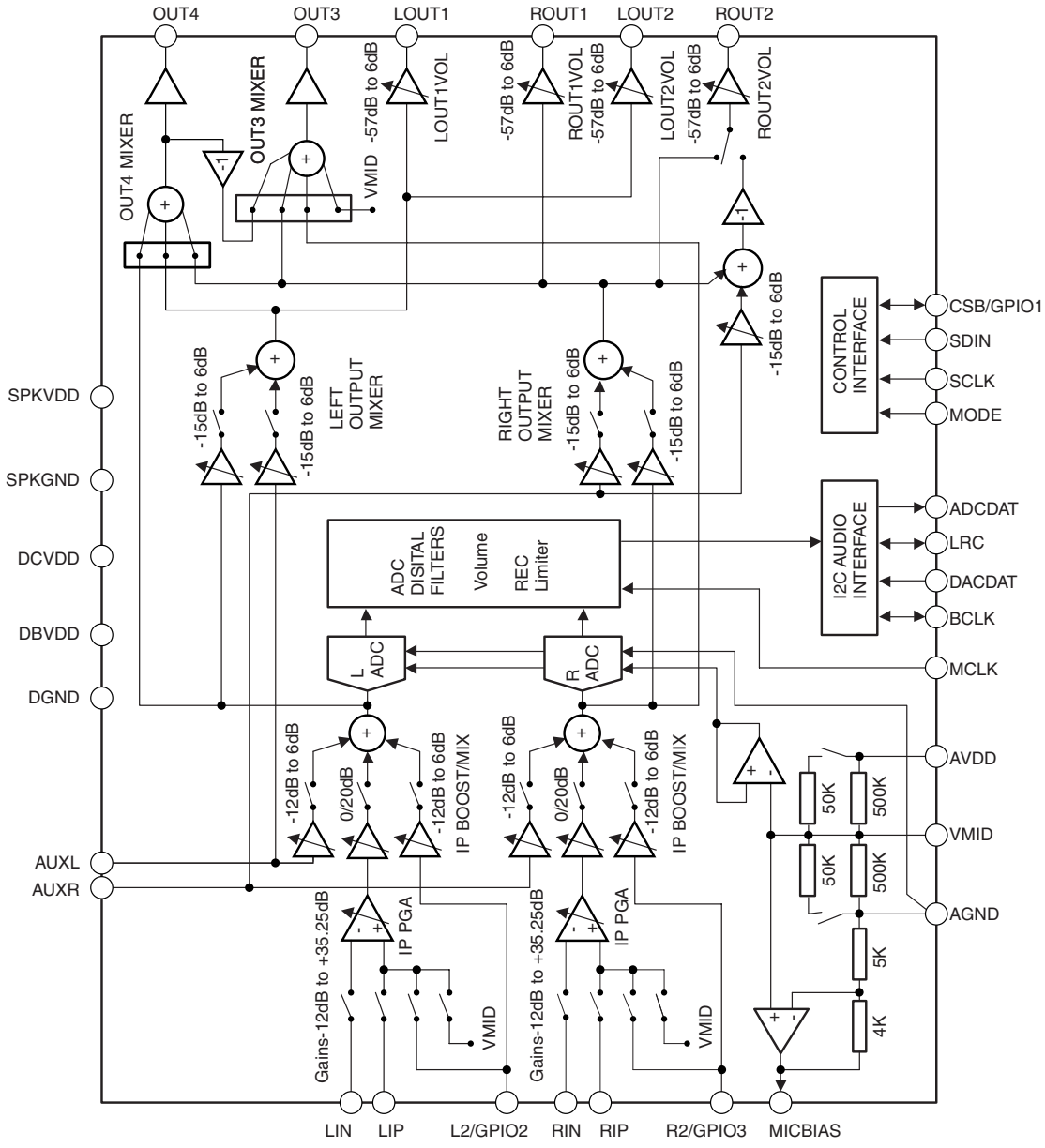
BLOCK DIAGRAM



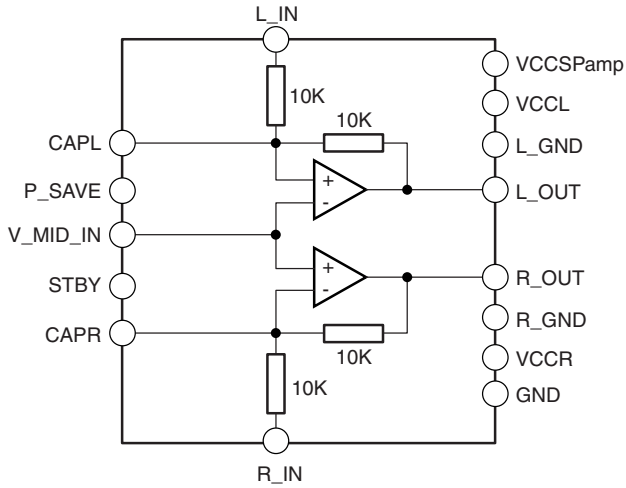
Video Encoder



Video Driver



Audio Codec

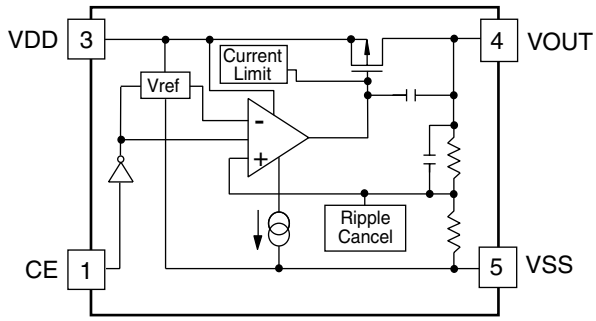


Speaker Amplifier

IC1701/IC3003 VHINP131529-1L (NP131529):2.9 V REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	CE	-	Chip enable
2	VSS	-	Earth
3	VDD	Input	Input
4	VOUT	Output	Output
5	VSS	-	Earth
6*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC1900 (LR38671): CAMERA DSP
[CPU mode]

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC	-	Not used
2	VDIVDD	-	Data for high-speed serial input 2
3	GSR	-	Clock for high-speed serial input
4	DI1P	Input	Data for high-speed serial input 1
5	GND	-	Earth
6	EXT13	Input/Output	SIO input/general purpose I/O 13
7	EXT10	Input/Output	General purpose I/O 10
8	EXT8	Input/Output	General purpose I/O 8
9	EXT7	Input/Output	General purpose I/O 7
10*	EXT5	Input/Output	General purpose I/O 5 (Not used)
11	EXT2	Input/Output	Motor B + output/general purpose I/O 2
12	GND	-	Earth
13	GND	-	Earth
14	TI3	Input	Connect to TO3 (No. 81)
15	VDOGND	-	Output VD-Link Earth
16	VDIVDD18	-	Internal core power supply (+1.2V)
17	DI2P	Input	Data for high-speed serial input 2
18	CKIP	Input	Clock for high-speed serial input
19	DI1M	Input	Earth for high-speed serial input
20	EXT14	Input/Output	SIO output/general purpose I/O 14
21	EXT11	Input/Output	General purpose I/O 11
22	VDD	-	Internal core power supply (+1.2V)
23	EXT6	Input/Output	General purpose I/O 6
24*	EXT4	Input/Output	Motor stand-by output/general purpose I/O 4 (Not used)
25	EXT0	Input/Output	Motor A + output/general purpose I/O 0
26	TGCLKO	Output	TG system clock output
27	AD10	Input	Set to L level
28	AD8	Input	Set to L level
29	CSR	-	3.9 k ohms bias resistor
30	CKOM	Output	Output VD-Link clock output
31	PLLGND	-	Earth
32	DI2M	Input	150 k ohms bias resistor
33	CKIM	Input	Data for high-speed serial input 1
34	EXT15	Input/Output	HP detection output/general purpose I/O 15
35	EIOVDD	-	External control power supply (+3.1V)

Pin No.	Terminal name	Input/Output	Description of terminal
36	EXT9	Input/Output	General purpose I/O 9
37	EIOVDD	-	External control power supply (+3.1V)
38	EXT1	Input/Output	Motor A - output/general purpose I/O 1
39	AD11	Input	Set to L level
40	AD9	Input	Set to L level
41	AD7	Input	Set to L level
42	AD5	Input	Set to L level
43	VDOVDD	-	Output VD-Link core power supply (+1.2V)
44	DOM	Output	Output VD-Link data output
45	CKOP	Output	Output VD-Link clock output
46	AD6	Input	Set to L level
47	AD4	Input	Set to L level
48	AD2	Input	Set to L level
49	TO1	Output	Connect to TI1 (No. 72)
50	GND	-	Earth
51	DOP	Output	Output VD-Link data output
52	PLLVDD	-	PLL power supply (+1.2V)
53	VDIGND	-	Earth for high-speed serial input
54	EXT12	Input/Output	HP detection input/general purpose I/O 12
55	GND	-	Earth
56	EXT3	Input/Output	Motor B - output/general purpose I/O 3
57	TIOVDD	-	TG control power supply (+1.8 or 3.1V)
58	AD3	Input	Set to L level
59	AD0	Input	Set to L level
60	TIOVDD	-	TG control power supply (+1.8 or 3.1V)
61*	Y0	Input/Output	Digital image data output (Not used)
62	TH1	Input	Set to L level.
63	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
64	VDOVDD18	-	Output VD-Link power supply (+1.8V)
65	AD1	Input	Set to L level
66	TGSDO	Output	TG serial control data output
67	TGSDI	Input	TG debug input
68	TGSCK	Output	TG serial control clock output
69*	Y2	Input/Output	Digital image data output (Not used)
70*	Y1	Input/Output	Digital image data output (Not used)
71*	Y3	Input/Output	Digital image data output (Not used)
72	TI1	Input	Connect to TO1 (No. 49)
73	VDD	-	Internal core power supply (+1.2V)
74	TGCLKI	Input	Set to L level
75	GND	-	Earth
76	TGSCS	Output	TG serial control CS output
77	VDD	-	Internal core power supply (+1.2V)
78*	Y4	Input/Output	Digital image data output (Not used)
79	GND	-	Earth
80*	Y5	Input/Output	Digital image data output (Not used)
81	TO3	Output	Connect to TI3 (No. 14)
82	VDI	Input	Set to L level
83	VDO	Output	TG vertical sync output
84	HDI	Input	Set to L level
85*	Y6	Input/Output	Digital image data output (Not used)
86*	Y7	Input/Output	Digital image data output (Not used)
87	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
88*	HREF2	Input/Output	Digital image horizontal valid signal output (Not used)
89	MMODE	Input	Set to L level
90	TIOVDD	-	TG control power supply (+1.8 or 3.1V)
91	HDO	Output	TG horizontal sync output 1
92	HDCO	Output	TG horizontal sync output 2
93	GND	-	Earth
94*	VS	Input/Output	Digital image vertical valid signal output (Not used)
95*	RCLK	Input/Output	Digital image clock output (Not used)
96*	TH4	Input	Set to L level or open (Not used)
97	OD0	Input/Output	Host access data
98	OD5	Input/Output	Host access data
99	OD10	Input/Output	Host access data

Pin No.	Terminal name	Input/Output	Description of terminal
100	OD14	Input/Output	Host access data
101	THB	Input	Set to H level
102	STSEL0	Input	I/O switching for Y0-7, VS, HREF2 and RCLK when resetting
103	IOC	Input	Normal I/O switching for Y0-7, VS, HREF2 and RCLK
104	GND	-	Earth
105*	TH2	Input	Set to L level or open (Not used)
106	GND	-	Earth
107	MODE0	Input	Host access mode control
108	RSTX	Input	Reset input (active L)
109	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
110	STSEL1	Input	Set to H level
111*	TH3	Input	Set to L level or open (Not used)
112	MODE1	Input	Host access mode control
113*	TH5	Input	Set to L level or open (Not used)
114	RDX	Input/Output	HOSTIF RD signal
115*	INT2	Output	Interrupt 2 (CBREQ) (Hi level immediately after cancelling reset) (Not used)
116	OD3	Input/Output	Host access data
117	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
118	GND	-	Earth
119	THA	Input	Debug CPU interrupt
120	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
121	A2	Input/Output	Host access address
122	A19	Input	Host access address
123	PORX	Input	Reset input (Connect to RSTX)
124	GND	-	Earth
125	CSX	Input/Output	Host access CS signal
126	WRX	Input	Host access WR signal
127	FLOWC	Input	Flow control
128	HIOVDD	-	Host access power supply (+1.8 or 3.1V)
129	OD1	Input/Output	Host access data
130*	TH6	Input	Set to L level or open (Not used)
131	OD6	Input/Output	Host access data
132	OD9	Input/Output	Host access data
133	VDD	-	Internal core power supply (+1.2V)
134	OD13	Input/Output	Host access data
135	GND	-	Earth
136	A17	Input	Host access address
137	A18	Input	Host access address
138	EXCKI	Input	System clock input
139*	NC	-	Not used
140	TO2	Output	Connect to TI2 (No. 151)
141	INT1	Output	Interrupt 1 (CINT)
142	GND	-	Earth
143	OD2	Input/Output	Host access data
144	OD4	Input/Output	Host access data
145	OD7	Input/Output	Host access data
146	OD8	Input/Output	Host access data
147	OD11	Input/Output	Host access data
148	OD12	Input/Output	Host access data
149	OD15	Input/Output	Host access data
150	A1	Input/Output	Host access address
151	TI2	Input	Connect to TO2 (No. 140)
152*	NC	-	Not used

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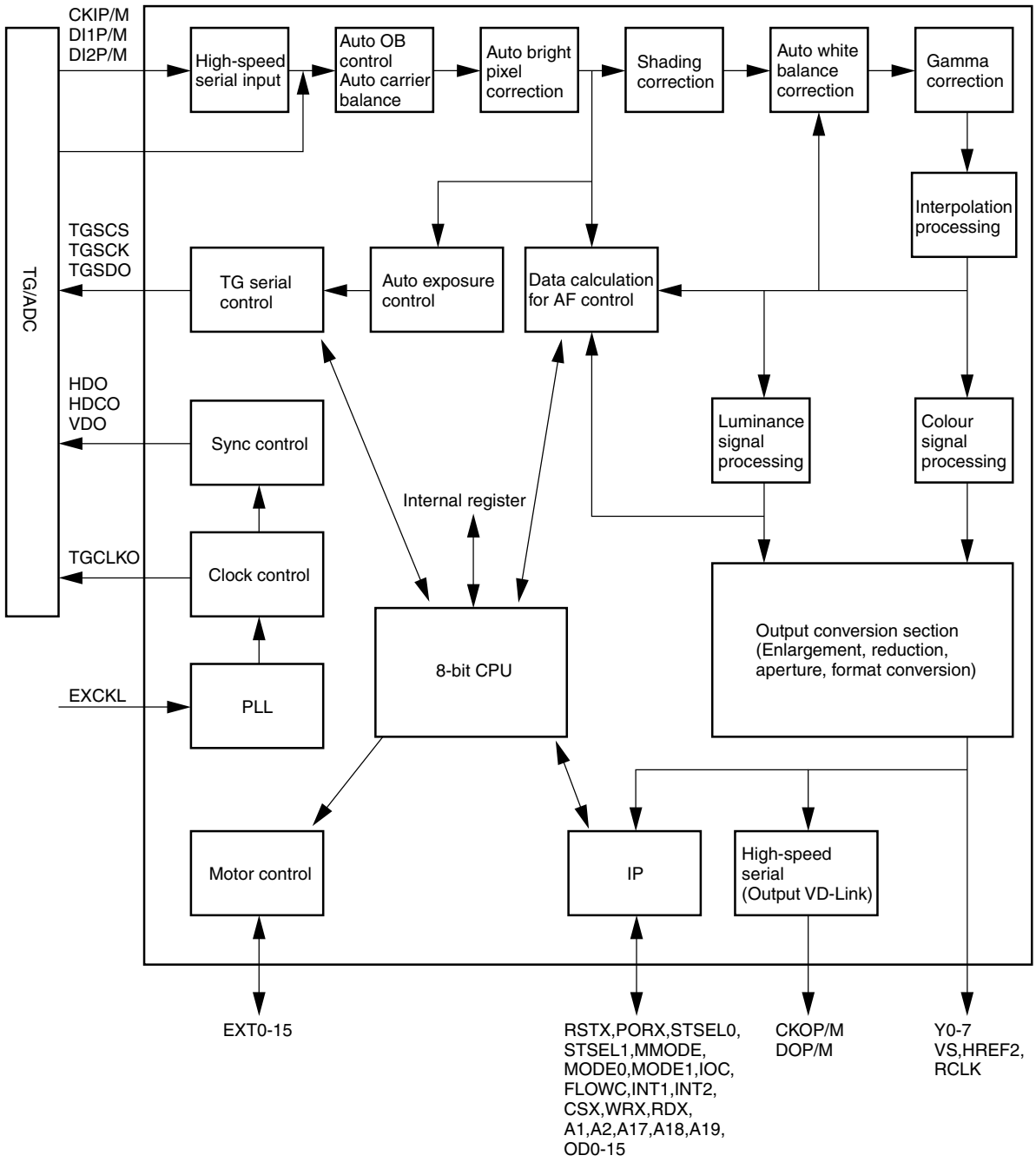
CKIP/M
DI1P/M
DI2P/M
High-speed serial input
Auto OB control Auto carrier balance
Auto bright pixel correction
Shading correction
Auto white balance correction
Gamma correction
Interpolation processing
TG/ADC
TGSCS
TGSCK
TGSDO
TG serial control
Auto exposure control
Data calculation for AF control
HDO
HDCO
VDO
Sync control
Luminance signal processing
Colour signal processing
Internal register
TGCLKO
Clock control
Output conversion section (Enlargement, reduction, aperture, format conversion)
8-bit CPU
EXCKL
PLL
Motor control
IP
High-speed serial (Output VD-Link)
EXT0-15
RSTX,PORX,STSEL0, STSEL1,MMODE, MODE0,MODE1,IOC, FLOWC,INT1,INT2, CSX,WRX,RDX, A1,A2,A17,A18,A19, OD0-15
CKOP/M
DOP/M
Y0-7
VS,HREF2, RCLK

IC1904 VHIXC621030-1L (XC62103A302DR): REGULATOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	CE	Input	ON/OFF Control
2*	NC	-	Not used
3	VIN	Input	Supply Voltage Input
4	VSS	-	Earth
5	VOUT	Output	Output
6*	NC	-	Not used

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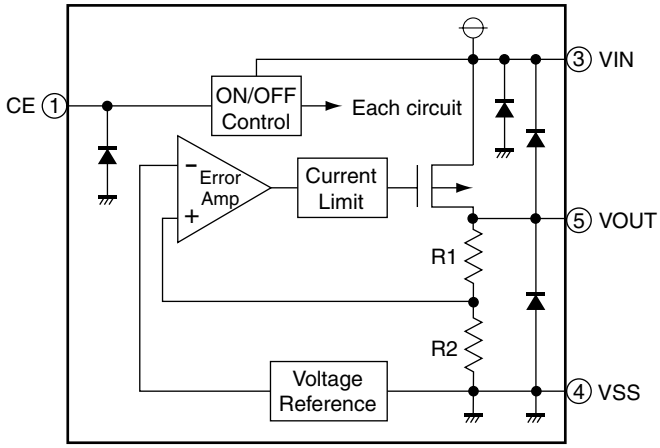

IC1905 VHIIR2E46Y+-1L (IR2E46Y6): 3 COLOR LED DRIVER

Pin No.	Terminal name	Input/Output	Description of terminal
1*	U1	-	Not used
2	ENG	Input	Enable input for G pin
3	ENB	Input	Enable input for B pin
4	LX1	Input	SW Tr. drain
5	LX2	Input	SW Tr. drain
6*	U2	-	Not used
7	R	Output	RED LED constant current output
8	VDD2	-	Power supply (digital)
9	ENR	Input	Enable input for R pin
10	PGND	-	Power earth
11	CS1	Output	SW Tr. source
12	CS2	Output	SW Tr. source
13	G	Output	GREEN LED constant current output
14	B	Output	BLUE LED constant current output
15*	NC	-	Not used
16	CSS	Input	SW Tr. source (or current sensing pin)
17	SWGND	Input	SW Tr. source (or current sensing pin)
18	LEDGND	-	Earth
19	ADD1	Input	I2C address expansion pin
20	E0	Output	Error amplifier output
21	AGND	-	Analogue circuit earth
22	STRIG	Input	Strobe timer trigger input
23	SDA	Input/Output	I2C data I/O
24	XSTBY	Input	Stand-by input
25*	EI	Input	Error amplifier reference input (Not used)
26	FB	Input	Output voltage feedback input
27	ES	Input	Error amplifier inverting input
28*	U1	-	Not used
29	ADD0	Input	I2C address expansion pin
30	SCL	Input	I2C clock
31	IREF	Output	Connection for reference current setting resistor
32	VDD1	Input	Power supply (analogue)
33*	U2	-	Not used

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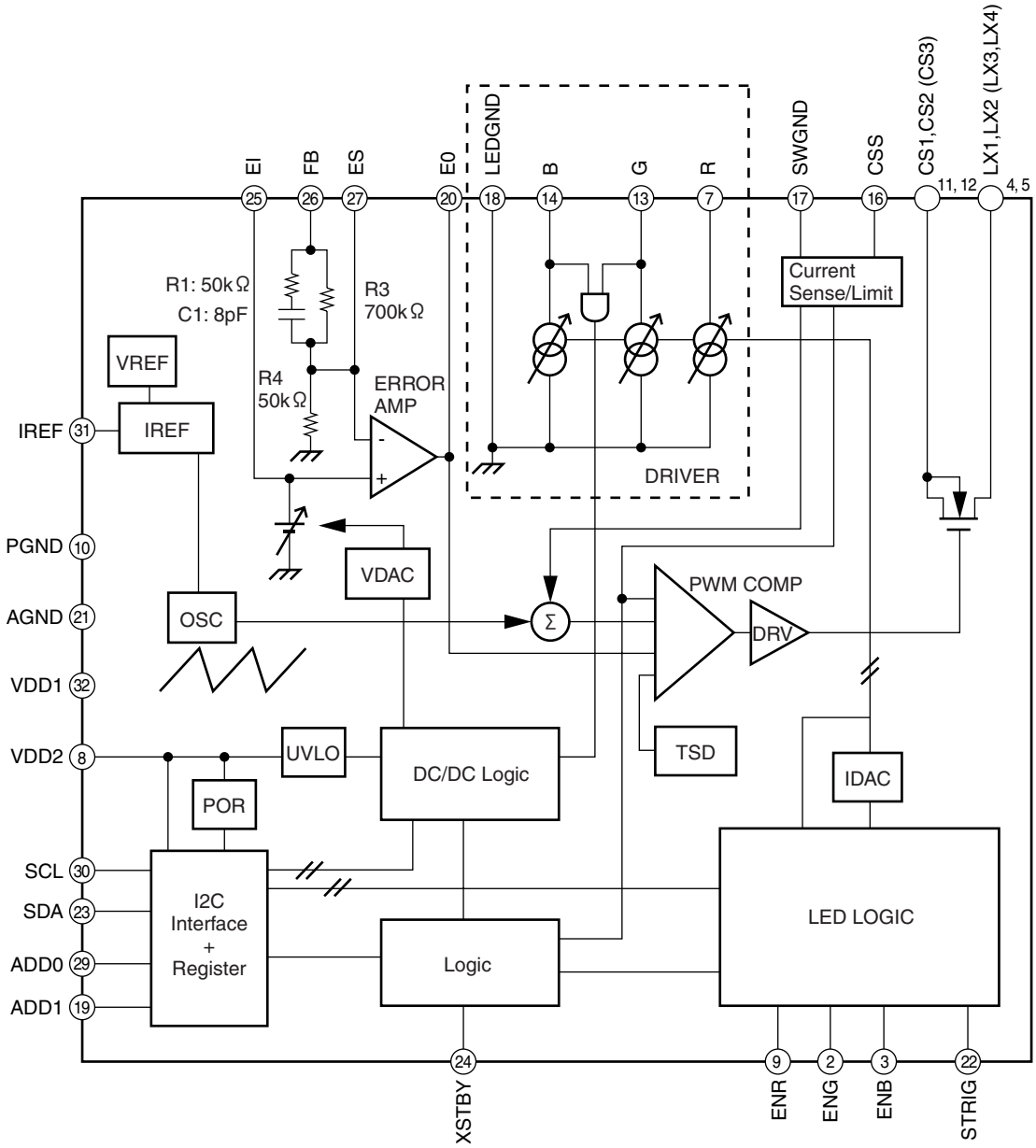
EI
FB
ES
E0
LEDGND
B
G
R
SWGND
CSS
CS1,CS2 (CS3)
LX1,LX2 (LX3,LX4)
25
26
27
20
18
14
13
7
17
16
11, 12
4, 5
R1: 50kΩ
C1: 8pF
R3
700kΩ
R4
50kΩ
ERROR
AMP
Current
Sense/Limit
VREF
IREF
IREF 31
DRIVER
PGND 10
VDAC
AGND 21
OSC
Σ
PWM COMP
DRV
VDD1 32
VDD2 8
UVLO
DC/DC Logic
TSD
IDAC
POR
SCL 30
SDA 23
ADD0 29
ADD1 19
I2C
Interface
+
Register
Logic
LED LOGIC
24
9
2
3
22
XSTBY
ENR
ENG
ENB
STRIG

IC1906 VHIIR3M52Y+-1L (IR3M52Y): CAMERA DRIVER

Pin No.	Terminal name	Input/Output	Description of terminal
1*	U1	-	Not used
2	CH5SEL	Input	Pin for switching CH5_ linear regulator output voltage
3	EXT2	Output	Output pin for CH2_Pch. MOSFET drive driver
4	PVCC	Input	Power supply pin for switching transistor drive driver
5	EXTL1	Output	Drain pin for internal switching transistor (Nch)
6	EXTL1	Output	Drain pin for internal switching transistor (Nch)
7*	U2	-	Not used
8	AFO	Output	Current output pin for current driver
9	IGND	-	Earth for current driver
10	ADD	Input	I2C bus sub address setting pin
11	CS2	-	Voltage monitor pin for limiting CH2_ current
12	PGND	-	Earth for switching transistor drive driver
13	CS1	-	Voltage monitor pin for limiting CH1_ current
14	CS1	-	Voltage monitor pin for limiting CH1_ current
15	SDA	Input	I2C bus data I/O pin
16	SCL	Input	I2C bus clock I/O pin
17*	NC	-	Not used
18	VRO1	Output	CH1_ regulator output pin
19	FB1	-	Pin for CH1_ switching regulator output voltage detection input and for linear regulator input pin
20	VCC2	Input	I2C power supply pin
21	VRO3	Output	CH3_ linear regulator output pin
22	STBY	Input	Stand-by pin
23	VREF	-	Reference voltage output pin
24	VRI3	Input	CH3/CH4_ linear regulator input pin
25	VRO4	Output	CH4_ linear regulator output pin
26	VCC	Input	Power supply
27	ROSC	-	Current setting resistor connection pin
28	VRS5	Output	VRI5 switch output pin
29	CTRL5	Input	CH5_ linear regulator ON/OFF control pin
30	CTRL4	Input	CH4_ linear regulator ON/OFF control pin
31	GND	-	Earth
32	CTRL3	Input	CH3_ linear regulator ON/OFF control pin
33	VIND	Input	Hi level setting pin for IND pin
34	IND	Input	Shutdown INDICATOR output pin
35*	U1	-	Not used
36	VRI5	Input	CH5_ linear regulator input pin
37	VRO5	Output	CH5_ linear regulator output pin
38	GND	-	Earth
39	FB2	-	Pin for CH2_ switching regulator output voltage detection input
40	CTRL12	Input	ON/OFF control pin for CH1/2_ switching regulator and 15 V output linear regulator
41*	U2	-	Not used

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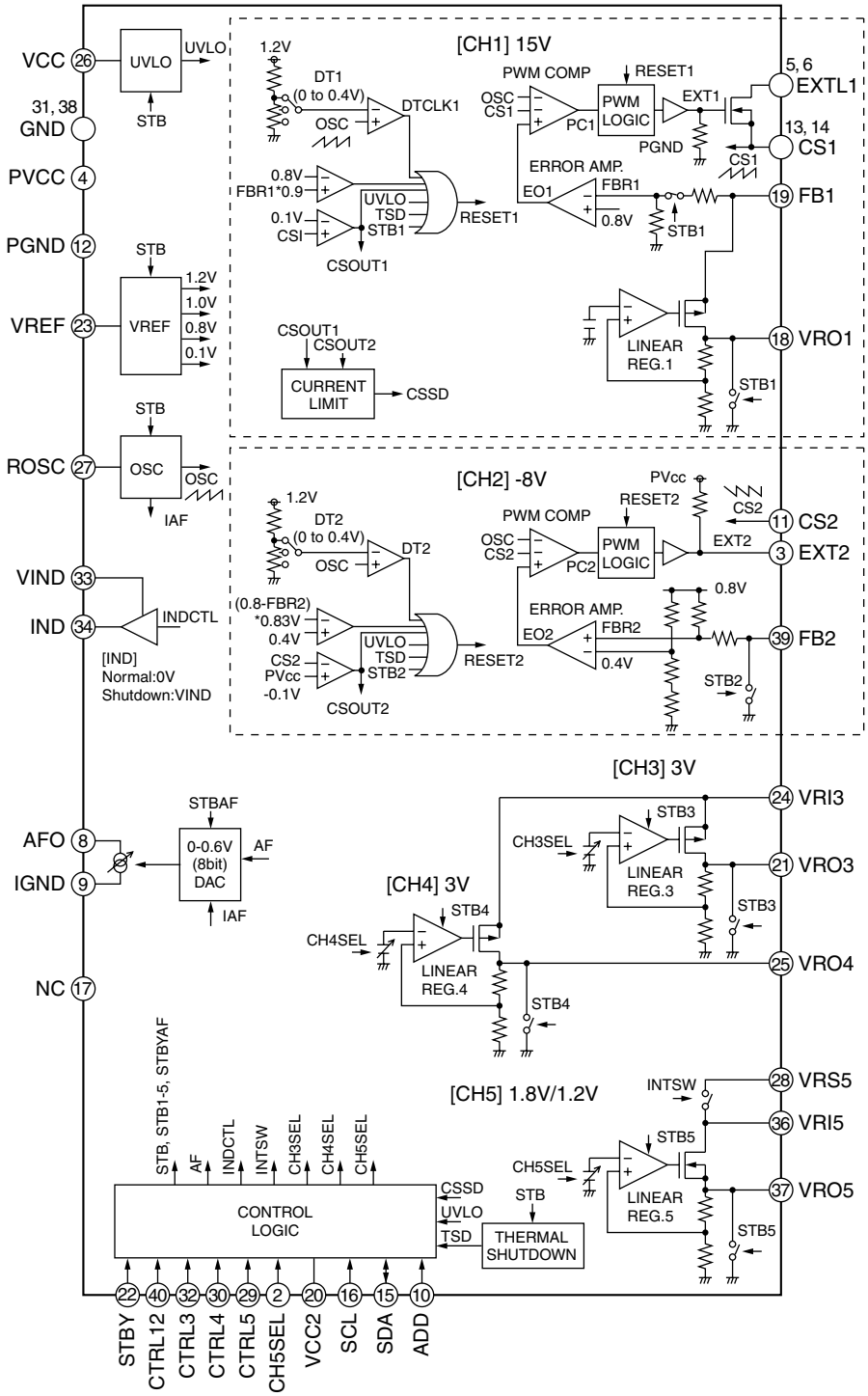


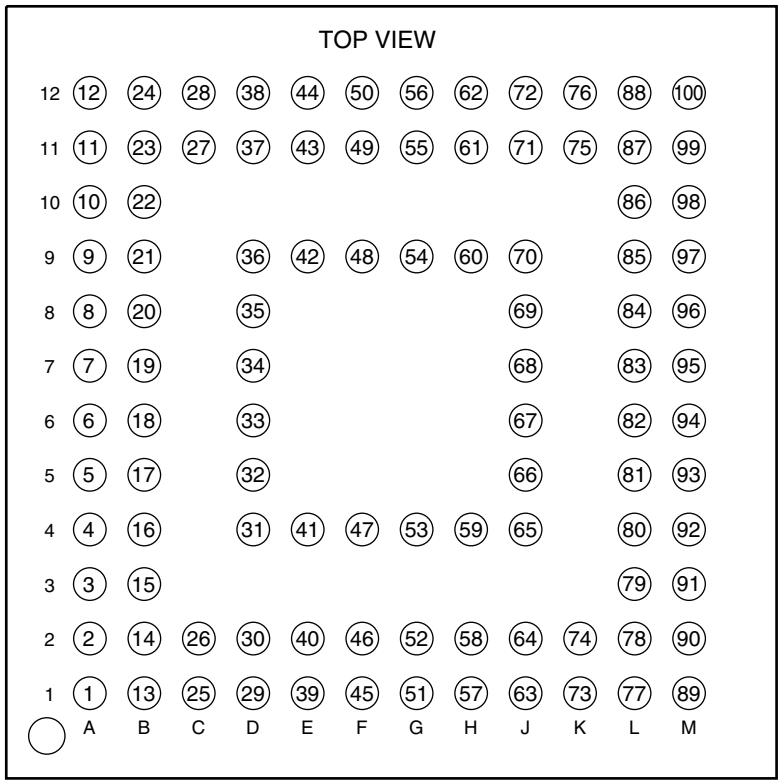
IC3000 (IR4N25): DISPLAY CONTROLLER

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC.0	-	Peel test (Not used)
2	VDD_CORE	-	I/O power supply (core)
3	GPO26/MB_2	Output	General purpose output/image data
4	RXDTP	Input	Rx VD-Link data (positive)
5	RXGSR	-	Rx VD-Link gain adjustment
6	VDD_VD	-	Rx/Tx VD-Link power supply
7	TXCKN	Output	Tx VD-Link clock (negative)
8	TXCSR	-	Tx VD-Link current adjustment
9	TXDTN	Output	Tx VD-Link data (negative)
10	TXDTP	Output	Tx VD-Link data (positive)
11	VDD_CORE	-	I/O power supply (core)

Pin No.	Terminal name	Input/Output	Description of terminal
12*	NC.3	-	Peel test (Not used)
13	GPO2/SCS1	Output	General purpose output/serial IF chip select
14	GPO3/PWM	Output	PWM 3 MHz-100 Hz duty variable
15	GPO4/PWMP	Output	General purpose output
16	RXDTN	Input	Rx VD-Link data (negative)
17	RXCKP	Input	Rx VD-Link clock (positive)
18	RXCKN	Input	Rx VD-Link clock (negative)
19	TXCKP	Output	Tx VD-Link clock (positive)
20	GPO6/SCS2	Output	General purpose output
21	GPO7/MCLK	Output	General purpose output
22	GND_GRC	-	I/O earth (C)
23	GPO8/CSCLK	Output	Low speed clock: 3-27 MHz
24	VDD_GRC	-	I/O power supply (C)
25	VDD_GRB	-	I/O power supply (B)
26	GPO5/PWMN	Output	General purpose output
27	CAMVS/GPO24	Input/Output	Sub camera sync signal/general purpose output
28	CAMCLK/GPO15	Input/Output	Sub camera transfer clock
29	MHSYNC	Output	Image H-Sync signal output
30	MVSYNC	Output	Image V-Sync signal output
31	MR2	Output	Image data (R) output
32	MDCLK	Output	Image transfer clock output
33	GND_GRB	-	I/O earth (B)
34	GND_CORE	-	I/O earth (core)
35	GND_VD	-	Rx/Tx VD-Link earth
36	CAMDATA3/GPO19	Input/Output	Sub camera data/general purpose output
37	CAMDATA0/GPO16	Input/Output	Sub camera data/general purpose output
38	CAMHS/GPO25	Input/Output	Sub camera sync signal/general purpose output
39	MR0	Output	Image data (R) output
40	MR1	Output	Image data (R) output
41	MR5	Output	Image data (R) output
42	CAMDATA7/GPO23	Input/Output	Sub camera data/general purpose output
43	CAMDATA2/GPO18	Input/Output	Sub camera data/general purpose output
44	CAMDATA1/GPO17	Input/Output	Sub camera data/general purpose output
45	MR3	Output	Image data (R) output
46	MR4	Output	Image data (R) output
47	MG2	Output	Image data (G) output
48	KSCAN2/GPO14	Output	Key strobe/general purpose output
49	CAMDATA5/GPO21	Input/Output	Sub camera data/general purpose output
50	CAMDATA4/GPO20	Input/Output	Sub camera data/general purpose output
51	MG0	Output	Image data (G) output
52	MG1	Output	Image data (G) output
53	MG5	Output	Image data (G) output
54	GND_GRB	-	I/O earth (B)
55	KSCAN0/GPO12	Output	Key strobe/general purpose output
56	CAMDATA6/GPO22	Input/Output	Sub camera data/general purpose output
57	MG3	Output	Image data (G) output
58	MG4	Output	Image data (G) output
59	SCL	Input	I2C clock
60	MSDI	Input	MSIO data input
61	KSCAN1/GPO13	Output	Key strobe/general purpose output
62	VDD_CORE	-	I/O power supply (core)
63	VDD_GRA	-	I/O power supply (A)
64	GPIO1	Input/Output	General purpose I/O
65	GND_GRA	-	I/O earth (A)
66	RESET_B	Input	System reset
67	MB0	Output	Image data (B) output
68	GND_CLK	-	PLL/CR oscillation earth
69	MB4	Output	Image data (B) output
70	MSCLK	Output	MSIO clock
71	KSENSE1	Input	Key input/general purpose input
72	KSENSE0	Input	Key input/general purpose input
73	GPIO0/RXVDON	Input/Output	General purpose I/O/Rx VD-Link On/Off control
74	ORCAINT	Output	Interrupt
75	GND_GRD	-	I/O earth (D)

Pin No.	Terminal name	Input/Output	Description of terminal
76	KSENSE2	Input	Key input/general purpose input
77	SDA	Input/Output	I2C data
78	TESTIN	Input	IC test
79*	GPO0/TXVDON	Output	General purpose output/Tx VD-Link On/Off control (Not used)
80	XIN	Input	External clock input
81	MB1	Output	Image data (B) output
82	MB2	Output	Image data (B) output
83	MB5	Output	Image data (B) output
84	MSCSO	Output	MSIO chip select
85	GPO11/SCS3	Output	General purpose output
86	GPO10/SDO	Output	General purpose output
87	GPO9/SCLK	Output	General purpose output
88	KSENSE3	Input	Key input/general purpose input
89*	NC.1	-	Peel test (Not used)
90	VDD_GRA	-	I/O power supply (A)
91*	GPO1/GPCLK	Output	High speed clock: 13.5-54 MHz (Not used)
92	CROCR	-	Resistance connection for CR oscillation
93	VDD_CLK	-	PLL/CR oscillation power supply
94	MB3	Output	Image data (B) output
95	MSDO	Output	MSIO data output
96	MRESET_B	Output	System reset output
97	VDD_GRB	-	I/O power supply (B)
98	VDD_CORE	-	I/O power supply (core)
99	VDD_GRD	-	I/O power supply (D)
100*	NC.2	-	Peel test (Not used)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

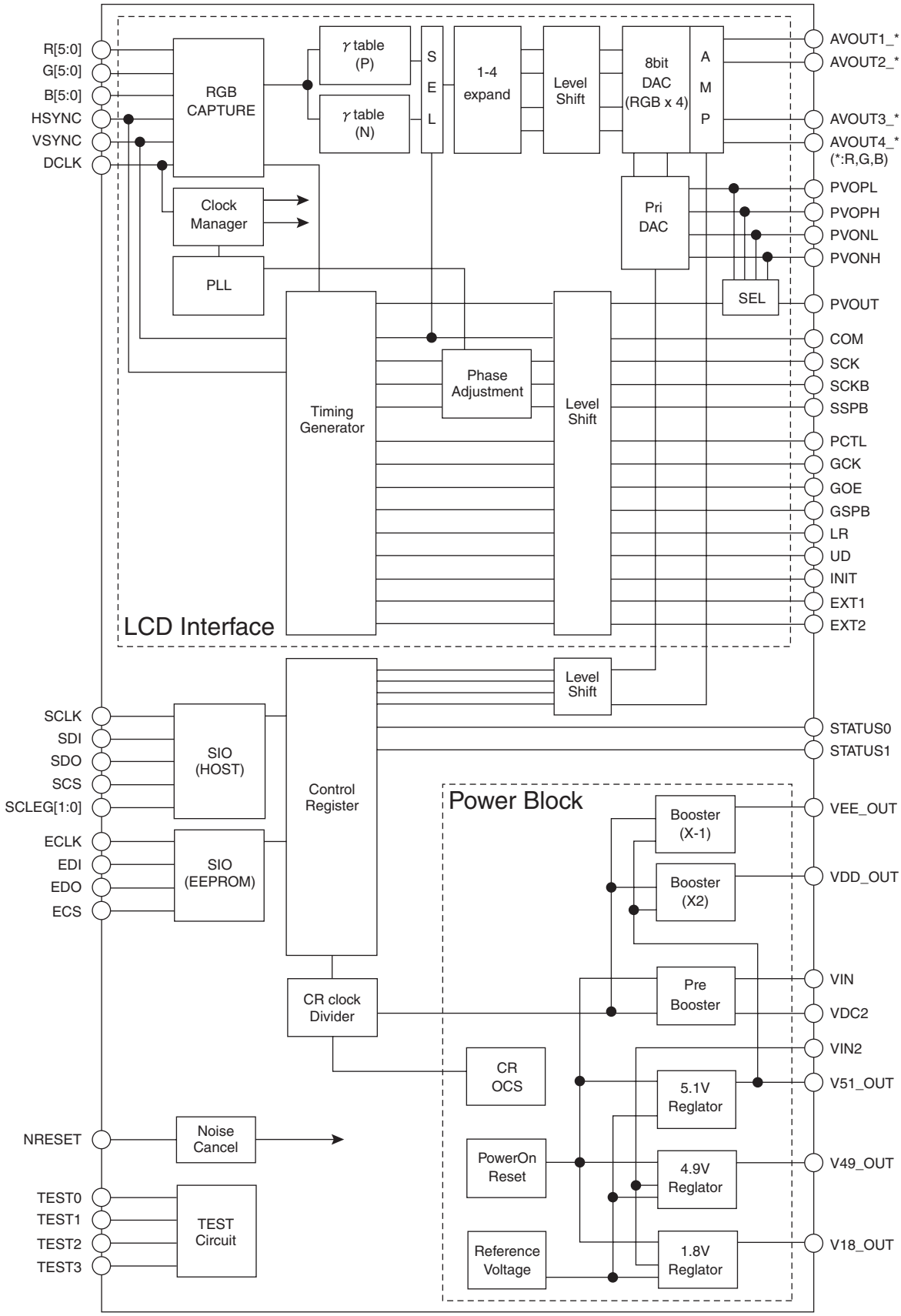


IC3001 (IR3M70Y6): COMPOUND POWER SUPPLY

Pin No.	Terminal name	Input/Output	Description of terminal
1*	NC1	-	Not used
2	VIN	Input	2.7 - 3.3 V input power supply
3	COM	Output	COM signal output
4	VDD_DIO	-	Digital I/O power supply
5	VSYNC	Input	Vertical synchronous signal (Adjust the internal register settings to select active level from high and low.)
6	R1	Input	Image data input, compatible with (R)AVOUT*_R
7	R3	Input	Image data input, compatible with (R)AVOUT*_R
8	R5	Input	Image data input, compatible with (R)AVOUT*_R
9	G1	Input	Image data input, compatible with (G)AVOUT*_G
10	G3	Input	Image data input, compatible with (G)AVOUT*_G
11	G5	Input	Image data input, compatible with (G)AVOUT*_G
12*	NC2	-	Not used
13	C1P(C1)	-	Flying capacitor (C1) connection (+)
14	C1N(C1)	-	Flying capacitor (C1) connection (-)
15	V18_SEL	Input	Select 1.8 V power supply for digital core (0: external input, 1: 1.8 V internal regulator to be used)
16	DCLK	Input	Image data transfer clock (Adjust the internal register settings to select active edge from positive and negative.)
17	HSYNC	Input	Horizontal synchronous signal (Adjust the internal register settings to select active level from high and low.)
18	R0	Input	Image data input, compatible with (R)AVOUT*_R
19	R2	Input	Image data input, compatible with (R)AVOUT*_R
20	R4	Input	Image data input, compatible with (R)AVOUT*_R
21	G0	Input	Image data input, compatible with (G)AVOUT*_G
22	G2	Input	Image data input, compatible with (G)AVOUT*_G
23	G4	Input	Image data input, compatible with (G)AVOUT*_G
24	B0	Input	Image data input, compatible with (B)AVOUT*_B
25	C2N(C2)	-	Flying capacitor (C2) connection (-)
26	C2P(C2)	-	Flying capacitor (C2) connection (+)
27	GND_DC1	-	Charge pump ground
28	GND_D	-	Digital system ground
29*	TEST3	Output	Digital system test output (Not used)
30*	TEST1	Output	Digital system test output (Not used)
31*	V18_OUT	Output	1.8 V output for digital core (Not used)
32	VDD_DCORE	-	Power supply for digital core
33*	TEST2	Output	Digital system test output (Not used)
34	VDD_DCORE	-	Power supply for digital core
35	VDD_DIO	-	Digital I/O power supply
36	B1	Input	Image data input, compatible with (B)AVOUT*_B
37	VIN2	Input	Power supply (VDC2) input for regulator
38	VDC2	Output	Precharge Pump output
39	GND_5	-	5 V system ground
40	VDD_PLL	-	PLL power supply
41	GND_PLL	-	PLL ground
42	B2	Input	Image data input, compatible with (B)AVOUT*_B
43	V51_OUT	Output	5.1 V output
44	V49_OUT	Output	DAC power supply output (4.9 V output)
45	VDD_AIO	-	Power supply for analogue signal processing system
46	GND_D	-	Digital system ground
47	B3	Input	Image data input, compatible with (B)AVOUT*_B
48	B4	Input	Image data input, compatible with (B)AVOUT*_B
49	C4P(C8)	-	Flying capacitor (C8) connection (+)
50	C4N(C8)	-	Flying capacitor (C8) connection (-)
51	GND_VREF	-	Reference voltage ground
52	SCLEG0	Input	Setting SCK active edge/SCS active level
53	B5	Input	Image data input, compatible with (B)AVOUT*_B
54	SDI	Input	Serial data input
55	VEE_OUT	Output	-5.1 V output
56	C3N(C6)	-	Flying capacitor (C6) connection (-)
57	GND_DC2	-	Charge pump ground
58	SCLEG1	Input	Setting SCK active edge/SCS active level
59	SCS	Input	Chip select

Pin No.	Terminal name	Input/Output	Description of terminal
60	SCLK	Input	Serial clock
61	C3P(C6)	-	Flying capacitor (C6) connection (+)
62	VDD_OUT	Output	10.2 V output
63	GND_DC3	-	Charge pump ground
64	STATUS1	Input	Status input
65	STATUS0	Input	Status input
66	NRESET	Input	System reset
67	GSPB	Output	Gate Start Pulse
68	GCK	Output	Gate Clock
69*	EXT2	Output	External signal (Not used)
70	EDI	Input	EEPROM serial data input
71*	EDO	Output	EEPROM serial data output (Not used)
72	SDO	Output	Serial data output
73	UD	Output	Up/Down select
74	GOE	Output	Gate Output Enable
75*	NC	-	Not used
76*	EXT1	Output	Extend signal (Not used)
77	LR	Output	Left/Right select
78	GND_DAC1	-	DAC ground
79	GND_DAC2	-	DAC ground
80	GND_DAC3	-	DAC ground
81	TEST0	Input	Digital system test input (Connect to the ground.)
82	GND_D	-	Digital system ground
83*	ECS	Output	EEPROM chip select (Not used)
84*	ECLK	Output	EEPROM serial clock (Not used)
85	INIT	Output	Panel initialize signal
86	SSPB	Output	Source start pulse
87	SCKB	Output	Source clock (inversion)
88	PVONL	-	Precharge setting voltage output (negative, situated below)
89	PVOPH	-	Precharge setting voltage output (positive, situated below)
90	PVOUT	Output	Precharge video output
91	AVOUT2_R	Output	Analogue video output (ch2-R)
92	AVOUT4_R	Output	Analogue video output (ch4-R)
93	AVOUT2_G	Output	Analogue video output (ch2-G)
94	AVOUT4_G	Output	Analogue video output (ch4-G)
95	AVOUT2_B	Output	Analogue video output (ch2-B)
96	AVOUT4_B	Output	Analogue video output (ch4-G)
97*	NC4	-	Not used
98	SCK	Output	Source clock (normal rotation)
99	PCTL	Output	Precharge control
100	PVONH	-	Precharge setting voltage output (negative, situated above)
101	PVOPL	-	Precharge setting voltage output (positive, situated below)
102	AVOUT1_R	Output	Analogue video output (ch1-R)
103	AVOUT3_R	Output	Analogue video output (ch3-R)
104	AVOUT1_G	Output	Analogue video output (ch1-G)
105	AVOUT3_G	Output	Analogue video output (ch3-G)
106	AVOUT1_B	Output	Analogue video output (ch1-B)
107	AVOUT3_B	Output	Analogue video output (ch3-B)
108*	NC3	-	Not used

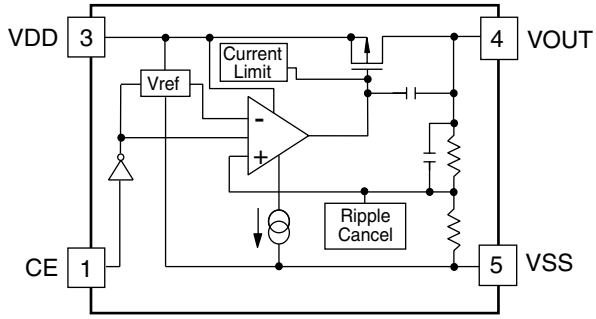
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.


R[5:0]
G[5:0]
B[5:0]
HSYNC
VSYNC
DCLK
RGB CAPTURE
γ table (P)
γ table (N)
S E L
1-4 expand
Level Shift
8bit DAC (RGB x 4)
A M P
AVOUT1_*
AVOUT2_*
AVOUT3_*
AVOUT4_*
(*:R,G,B)
Clock Manager
PLL
Pri DAC
PVOPL
PVOPH
PVONL
PVONH
SEL
PVOUT
COM
SCK
SCKB
SSPB
Timing Generator
Phase Adjustment
Level Shift
PCTL
GCK
GOE
GSPB
LR
UD
INIT
EXT1
EXT2
LCD Interface
Level Shift
SCLK
SDI
SDO
SCS
SCLEG[1:0]
SIO (HOST)
STATUS0
STATUS1
ECLK
EDI
EDO
ECS
SIO (EEPROM)
Control Register
Power Block
Booster (X-1)
VEE_OUT
Booster (X2)
VDD_OUT
Pre Booster
VIN
VDC2
VIN2
CR clock Divider
CR OCS
5.1V Reglator
V51_OUT
NRESET
Noise Cancel
PowerOn Reset
4.9V Reglator
V49_OUT
TEST0
TEST1
TEST2
TEST3
TEST Circuit
Reference Voltage
1.8V Reglator
V18_OUT

IC3002 VHINP131525-1L (NP131525):2.5 V REGULATOR

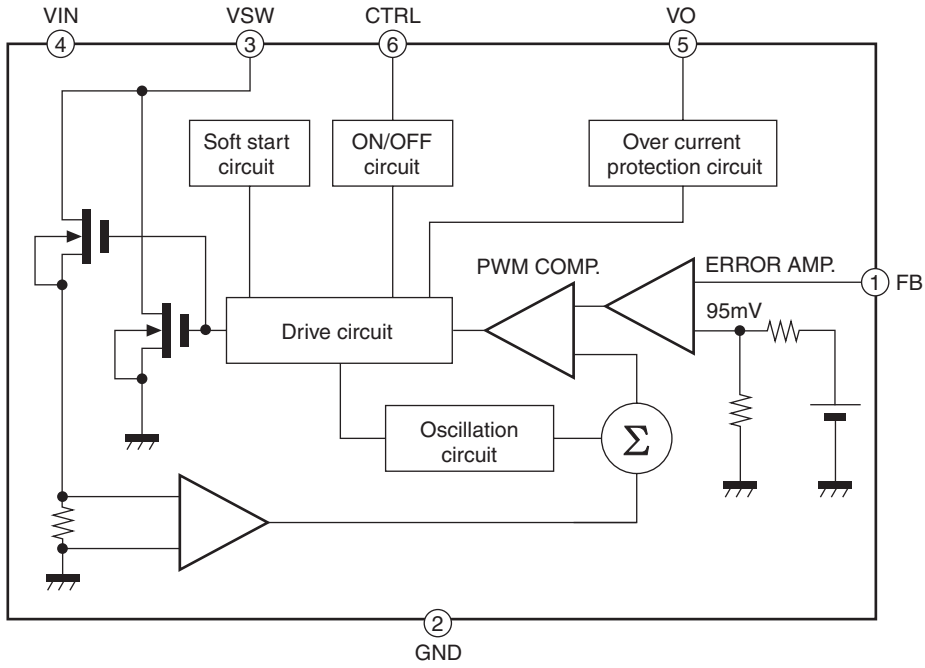
Pin No.	Terminal name	Input/Output	Description of terminal
1	CE	-	Chip enable
2	VSS	-	Earth
3	VDD	Input	Input
4	VOUT	Output	Output
5	VSS	-	Earth
6*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

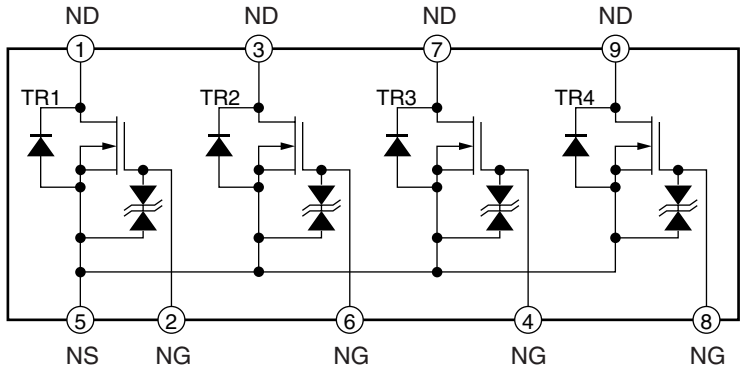


IC3011 VHIPQ6CB11X-1L (PQ6CB11X1AP): DC/DC CONVERTOR

Pin No.	Terminal name	Input/Output	Description of terminal
1	FB	Input	Feed back
2	GND	-	Earth
3	VSW	Output	Switch
4	VIN	Input	Input power supply
5	VO	Output	Over current detection
6	CTRL	Input	Control



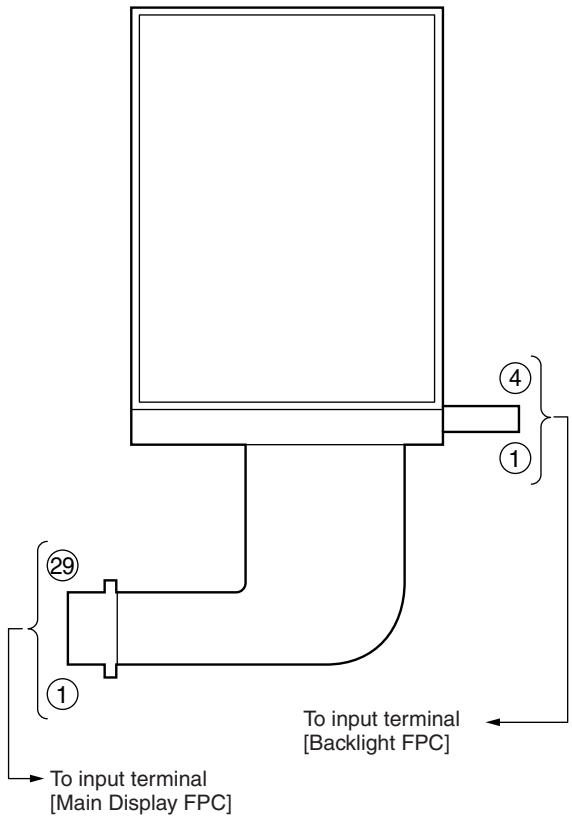
Q1204/Q1207 RH-IXA076AFZZR (IXA076AF): COMPOUND FET



[2] Function table of Display

Main Display (LCD3000:RUITKA068AF02)
[Main Display FPC]

Pin No.	Terminal name	Input/ Output	Description of terminal
1	TCOM1	Input	Common potential input pin
2	VB4	Input	Video signal (blue, 4-layer)
3	VB3	Input	Video signal (blue, 4-layer)
4	VB2	Input	Video signal (blue, 4-layer)
5	VB1	Input	Video signal (blue, 4-layer)
6	VG4	Input	Video signal (green, 4-layer)
7	VG3	Input	Video signal (green, 4-layer)
8	VG2	Input	Video signal (green, 4-layer)
9	VG1	Input	Video signal (green, 4-layer)
10	VR4	Input	Video signal (red, 4-layer)
11	VR3	Input	Video signal (red, 4-layer)
12	VR2	Input	Video signal (red, 4-layer)
13	VR1	Input	Video signal (red, 4-layer)
14	LR	Input	Scan direction switch signal for the shift register comprising the source driver
15	PVID1	Input	Precharge signal
16	PVID2	Input	Precharge signal
17	PCTL	Input	Precharge line control signal
18	SCKB	Input	Inverted signal of SCK
19	SCK	Input	Clock signal of the shift register comprising the source driver
20	VSS	-	Low side ground power supply for all circuits
21	SSPB	Input	Start signal of the shift register comprising the source driver
22	VDD	-	Positive power supply for the driver in the panel
23	INIT	Input	Initialise signal
24	GOE	Input	Gate pulse output control signal
25	UD	Input	Scan direction switch signal for the shift register comprising the gate driver
26	GCK	Input	Clock signal of the shift register comprising the gate driver
27	GSPB	Input	Start signal of the shift register comprising the gate driver
28	GVSS	-	Negative power supply for the driver in the panel
29	TCOM2	Input	Common potential input pin



[Backlight FPC]

Pin No.	Terminal name	Input/ Output	Description of terminal
1	ANODE	-	Backlight LED anode
2	ANODE	-	Backlight LED anode
3	CATHODE	-	Backlight LED cathode
4	CATHODE	-	Backlight LED cathode

SHARP PARTS GUIDE

No. S8524JNJ500//

3G(UMTS)/GSM/GPRS PHONE

MODEL 903SH

CONTENTS

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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	NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
	[1] INTEGRATED CIRCUITS					
⚠	IC004	VHiCXG1189U-1L	AG			SPDT Switch,CXG1189UR
	IC006	VHiLVC2G04B-1R	AD			2 Circuit Inverter Gate,LVC2G04B
⚠	IC100	--------	-			This Parts is Supplied with Cabinet Parts 106
⚠	IC101	--------	-			This Parts is Supplied with Cabinet Parts 106
⚠	IC300	RH-iXA079AFZZL	AS			Power AMP.Module (For GSM),SKY77321
⚠	IC400	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC501	VHiLM20SiTN-1R	AD			Temperature Sensor,LM20SITLX
	IC620	--------	-			This Parts is Supplied with Cabinet Parts 106
⚠	IC630	--------	-			This Parts is Supplied with Cabinet Parts 106
⚠	IC700	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC800	VHi3981D28N-1R	AG			2.8V Regulator,LP3981ILD
⚠	IC1000	--------	-			This Parts is Supplied with Cabinet Parts 106
⚠	IC1001	VHiBGB202S2-1L	AX			Bluetooth,BGB202S2
	IC1002	VHiR116229D-1L	AD			2.9V Regulator,R1162D291D
	IC1100	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1101	VHiLVC2G17B-1R	AD	N		Logic,LVC2G17B
	IC1102	VHiAUC1G19B-1R	AE			Logic,AUC1G19B
	IC1103	VHiAUC2G08B-1L	AD			Logic,AUC2G08B
	IC1104	VHiAUC2G00B-1L	AD			Logic,AUC2G00B
	IC1105	VHiAUC2G08B-1L	AD			Logic,AUC2G08B
	IC1106	VHiAUC2G32B-1L	AD			Logic,AUC2G32B
	IC1107	VHiAUC2G08B-1L	AD			Logic,AUC2G08B
	IC1108	VHiAUC2G34B-1R	AD	N		Logic,AUC2G34B
	IC1109	VHiAUC2G34B-1R	AD	N		Logic,AUC2G34B
	IC1110	VHiNP131518-1L	AD			1.8V Regulator,NP131518
⚠	IC1200	RH-iXA046AFZZQ	AV			Power Supply/RF Control,TWL93004CZQW
	IC1202	VHiXC61GC27-1L	AC			Detector,XC61GC27
	IC1203	VHiTK73840G-1L	AF			Regulator,TK73840BDB
	IC1205	VHiS817A15P-1R	AD			1.5V Regulator,S817A15P
	IC1206	VHiS817A15P-1R	AD			1.5V Regulator,S817A15P
⚠	IC1400	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1401	VHiLM20SiTN-1R	AD			Temperature Sensor,LM20SITLX
	IC1500	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1501	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1502	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1600	VHiYMU786++-1L	BA	N		FM Audio,YMU786
	IC1602	VHiLVC1G97B-1R	AC	N		Function Gate,LVC1G97B
	IC1604	VHiLVC1G07B-1R	AC			Level Shiftor,LVC1G07B
	IC1605	VHiR116329B-1L	AE			2.9V Regulator,R1163D291B
	IC1700	--------	-	N		This Parts is Supplied with Cabinet Parts 106
	IC1701	VHiNP131529-1L	AD			2.9V Regulator,NP131529
	IC1900	--------	-			This Parts is Supplied with Cabinet Parts 106
	IC1902	VHiLVC1G97B-1R	AC	N		Function Gate,LVC1G97B
	IC1904	VHiXC621030-1L	AE			Regulator,XC62103A302DR
	IC1905	VHiiR2E46Y+-1L	AM	N		3 Color LED Driver,IR2E46Y6
	IC1906	VHiiR3M52Y+-1L	AN			Camera Driver,IR3M52Y
	IC1907	VHiLVC1G97B-1R	AC	N		Function Gate,LVC1G97B
	IC1908	VHiLVC1G97B-1R	AC	N		Function Gate,LVC1G97B
	IC3000	--------	-			This Parts is Supplied with Cabinet Parts 107
	IC3001	--------	-			This Parts is Supplied with Cabinet Parts 107
	IC3002	VHiNP131525-1L	AD			2.5V Regulator,NP131525
	IC3003	VHiNP131529-1L	AD			2.9V Regulator,NP131529
	IC3004	VHiNP131518-1L	AD			1.8V Regulator,NP131518
	IC3011	VHiPQ6CB11X-1L	AE			DC/DC Convertor, PQ6CB11X1AP
	Q1204	RH-iXA076AFZZR	AE	N		Compound FET,IXA076AF
	Q1207	RH-iXA076AFZZR	AE	N		Compound FET,IXA076AF
	[2] TRANSISTORS					
	IC003	VSRN47A4JEF-1L	AB			Silicon,NPN/PNP,RN47A4 JEF
	Q701	VSEC3201C++-1L	AC			Silicon,NPN,EC3201 C
	Q702	VSEC4301C++-1L	AB			Silicon NPN,EC4301 C
	Q703	VSEC3201C++-1L	AC			Silicon,NPN,EC3201 C
	Q1001	VSEC4401C++-1L	AB			Silicon MOS,EC4401 C
	Q1200	VSECH8603++-1L	AF			Silicon MOS,ECH8603
	Q1201	VSSi1555DL+-1L	AD			FET,SI1555 DL
	Q1202	VSEC4403C++-1L	AC			Silicon MOS,EC4403 C
	Q1203	VSEC4401C++-1L	AB			Silicon MOS,EC4401 C
	Q1205	VSSCH1302++-1R	AD			FET,SCH1302
	Q1206	VSKRC407V++-1L	AB	N		Digital,NPN,KRC407 V
	Q1208	VSKRC417V++-1L	AB	N		Digital,NPN,KRC417 V
	Q1209	VSKRC407V++-1L	AB	N		Digital,NPN,KRC407 V
	Q1210	VSEC4401C++-1L	AB			Silicon MOS,EC4401 C
	Q1700	VSHN1C03FUZ-1L	AD			Silicon,NPN,HN1C03 FUZ
	Q1701	VSEMT1+++++-1R	AC			Digital,PNP,EMT1
	Q1901	VSSCH1306++-1R		N		FET,SCH1306
	Q1903	VSEC4404C++-1L	AC			Silicon MOS,EC4404 C

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[3] DIODES					
D770	VHCPBY5802V-1L	AC			Variable Capacitance,BBY58-02V
D1000	VHD1SS413++-1L	AB	N		Silicon,1SS413
D1200	VHDSB0503EJ-1R	AC			SB Diode,SB0503EJ
D1201	VHDRB521S30-1-	AB			Silicon,RB521S30
D1202	VHDSB0503EJ-1R	AC			SB Diode,SB0503EJ
D1203	VHD1SS413++-1L	AB	N		Silicon,1SS413
D1600	VHD1SS416++-1L	AB	N		Silicon,1SS416
D1602	VHD1SS416++-1L	AB	N		Silicon,1SS416
D1645	VHD1SS416++-1L	AB	N		Silicon,1SS416
D1900	VHDSS1003EJ-1R	AC	N		Silicon,SS1003EJ
D1901	VHDSS0503EJ-1R	AC	N		Silicon,SS0503EJ
D1902	VHDKDR720E+-1L	AB			Silicon,KDR720E
D3000	VHDKDR720E+-1L	AB			Silicon,KDR720E
IC1503	VHPGP2W3240-1R	AL			Infrared Port,GP2W3240
LED001	VHPGM5MW052-1L	AQ			Mobile Light,GM5MW052
LED1200	VHPBRPY121F-1L	AD			LED,Green/Red,BRPY121F
ZD1900	VHERSB6R8S+-1L	AC			Zener,6.8V,RSB6.8S
[4] FILTERS					
FL002	RFiLRA044AFZZL	AN			Duplexer
FL003	RFiLRA043AFZZR	AD			LPF
FL004	RFiLR0256AFZZL	AE			ESD Device
FL100	RFiLRA047AFZZL	AF			Rx SAW (DCS)
FL110	RFiLRA046AFZZL	AE			Rx SAW (GSM)
FL120	RFiLRA048AFZZL	AF			Rx SAW (PCS)
FL330	RBLN-A001AFZZL	AD			Balun,897.50 MHz
FL331	RBLN-A002AFZZL	AD			Balun,1810.00 MHz
FL400	RFiLRA020AFZZL	AG			Rx-RFSAW (W-CDMA)
FL420	RFiLRA031AFZZL	AK			Rx-IFSAW (W-CDMA)
FL500	RFiLRA021AFZZL	AG			Tx-RFSAW (W-CDMA)
FL650	RiSOPA006AFZZR	AH			Isolator
FL1500	RFiLNA012AFZZN	AC			Noise Filter
FL1501	RFiLNA012AFZZN	AC			Noise Filter
⚠ IC001	RFiLRA030AFZZL	AP			Aerial Switch Module
[5] COILS					
C064	VPBZNT10S0000-	AA			1 nH
L010	VPMQNT22S0000L	AA			2.2 nH
L011	VPMQNT22S0000L	AA			2.2 nH
L100	VPMQNT47S0000L	AA			4.7 nH
L101	VPMQNT39S0000L	AA			3.9 nH
L110	VPMQNS18J0000L	AB			18 nH
L111	VPMQNS18J0000L	AB			18 nH
L120	RCiLZ0369AFZZN	AB			68 nH
L121	VPMQNS15J0000L	AA			15 nH
L122	VPMQNT47S0000L	AA			4.7 nH
L200	RCiLZ0369AFZZN	AB			68 nH
L201	VPMFN5R6K0000-	AB			5.6 μH
L202	VPBNN101K0000T	AB			100 μF
L301	RCiLZ0369AFZZN	AB			68 nH
L330	VPMQNS47J0000L	AA			47 nH
L331	VPMNMS10J0000N	AA			10 nH
L332	RCiLZ0369AFZZN	AB			68 nH
L336	RCiLZ0369AFZZN	AB			68 nH
L342	VPMQNT33S0000L	AA			3.3 nH
L351	RCiLZ0369AFZZN	AB			68 nH
L401	VPMQNT27S0000L	AA			2.7 nH
L411	VPMQNT68J0000L	AA			6.8 nH
L421	VPCDMS47G0000-	AC			47 nH
L422	VPCDMS47G0000-	AC			47 nH
L423	VPMQNT47S0000L	AA			4.7 nH
L424	VPMQNT47S0000L	AA			4.7 nH
L441	VPCHMR10J0000-	AC			100 nH
L501	VPCHMS18H0000-	AC			18 nH
L502	VPCHMS18H0000-	AC			18 nH
L503	VPMQNT56S0000L	AA			5.6 nH
L504	VPMQNT56S0000L	AA			5.6 nH
L505	VPMQNS10J0000L	AA			10 nH
L506	VPMQNS10J0000L	AA			10 nH
L507	RCiLZ0369AFZZN	AB			68 nH
L621	RCiLCA004AFZZN	AE			Choke,6.8 μH
L760	VPMFN1R0K0000-	AB			1.0 μH
L904	VPBZNS22J0000-	AA			22 nH
L906	VPBZNT27S0000-	AA			2.7 nH
L1200	RCiLZ0396AFZZN	AE			22 μH
L1502	RCiLZ0387AFZZN	AB			Ferrite Beads,600 nH
L1503	RCiLZ0387AFZZN	AB			Ferrite Beads,600 nH
L1504	RCiLCA016AFZZN	AD	N		Choke,2.2 μH
L1505	VPCAMS82J0000-	AC			82 nH
L1506	VPCAMS82J0000-	AC			82 nH
L1507	VPCAMS82J0000-	AC			82 nH
L1508	VPCAMS82J0000-	AC			82 nH
L1600	RCiLZ1088YCZZ-	AC			Ferrite Beads
L1601	RCiLZ0387AFZZN	AB			Ferrite Beads,600 nH
L1603	RCiLZ1088YCZZ-	AC			Ferrite Beads

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[5] COILS					
L1604	RCiLZ1088YCZZ-	AC			Ferrite Beads
L1900	VPCAMS82J0000-	AC			82 nH
L1901	VPCAMS82J0000-	AC			82 nH
L1902	VPCAMS82J0000-	AC			82 nH
L1903	VPCAMS82J0000-	AC			82 nH
L1904	VPCAMS82J0000-	AC			82 nH
L1905	VPCAMS82J0000-	AC			82 nH
L1906	RCiLZA037AFZZN	AD	N		3.0 µ H
L1907	RCiLCA017AFZZN	AC	N		Choke,10 µ H
L1908	RCiLZA033AFZZN	AD	N		12 µ H
L3000	VPCAMS82J0000-	AC			82 nH
L3001	VPCAMS82J0000-	AC			82 nH
L3002	VPCAMS82J0000-	AC			82 nH
L3003	VPCAMS82J0000-	AC			82 nH
L3004	VPCAMS82J0000-	AC			82 nH
L3005	VPCAMS82J0000-	AC			82 nH
L3006	VPCAMS82J0000-	AC			82 nH
L3007	VPCAMS82J0000-	AC			82 nH
L3012	RCiLCA022AFZZN	AC	N		Choke,22 µ H
R062	VPBZNT15S0000-				1.5 nH
[6] VARIABLE RESISTORS					
C1030	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1032	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1036	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1223	VHV10080MBB-1N	AB			Varistor,Voltage:8V
C1236	VHV10080MCB-1N	AB			Varistor,Voltage:8V
C1629	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1631	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1634	VHV10080MAB-1N	AB			Varistor,Voltage:8V
C1924	VHV0402L14G-1N	AB	N		Varistor,RGB TURN ON:3.7V/RGB+W TURN ON:6.89± 0.5V
C1949	VHV0402L14G-1N	AB	N		Varistor,RGB TURN ON:3.7V/RGB+W TURN ON:6.89± 0.5V
C1950	VHV10080MCB-1N	AB			Varistor,Voltage:8V
C1951	VHV0402L14G-1N	AB	N		Varistor,RGB TURN ON:3.7V/RGB+W TURN ON:6.89± 0.5V
C1952	VHV0402L14G-1N	AB	N		Varistor,RGB TURN ON:3.7V/RGB+W TURN ON:6.89± 0.5V
C3027	VHV10080MBB-1N	AB			Varistor,Voltage:8V
C3028	VHV10080MBB-1N	AB			Varistor,Voltage:8V
D1011	VHV10080MAB-1N	AB			Varistor,Voltage:8V
D1033	VHV10080MAB-1N	AB			Varistor,Voltage:8V
D1034	VHV10080MAB-1N	AB			Varistor,Voltage:8V
D1035	VHV10080MAB-1N	AB			Varistor,Voltage:8V
D1603	VHV10270MBB-1N	AB			Varistor,Voltage:27V
D1644	VHV10270MBB-1N	AB			Varistor,Voltage:27V
[7] VIBRATORS					
X770	RCRSC0062AFZZL	AH			Crystal,13 MHz
X1000	RCRSC0064AFZZN	AH			Crystal,32.768 kHz
X1500	RCRSCA003AFZZL	AK			Crystal,27 MHz
[8] ARRAY PARTS					
C1026	VCKYRK0JB104MT	AB	N		Array,0.1 µ F
C1222	VCKYCJ1AB104KT	AB	N		Array,0.1 µ F
C1414	VCKYRK0JB104MT	AB	N		Array,0.1 µ F
C1519	VCKYCH1AB105KT	AB			Array,1 µ F
C1604	VCKYRK0JB104MT	AB	N		Array, 0.1 µ F
C1607	VCKYRK0JB104MT	AB	N		Array,0.1 µ F
C1635	VCKYRK0JB104MT	AB	N		Array,0.1 µ F
C1645	VCKYCH1AB105KT	AB			Array,1 µ F
C1708	VCKYCH0JB225MT	AC	N		Array,2.2 µ F
C1709	VCKYRK0JB104MT	AB	N		Array,0.1 µ F
C3008	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3009	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3010	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3013	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3014	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3020	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3021	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3022	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3023	VCCCRK1EH180KT		N		Array,18 pF (CH)
C3072	VCKYCH0JB225MT	AC	N		Array,2.2 µ F
C3074	VCKYCH1AB105KT	AB			Array,1 µ F
FL1502	RFiLNA021AFZZN	AE			Array,200 ohms
FL1503	RFiLNA021AFZZN	AE			Array,200 ohms
R1000	VRS-CG1JF470JT	AA			Array,47 ohms
R1001	VRS-CG1JF470JT	AA			Array,47 ohms
R1002	VRS-CG1JF470JT	AA			Array,47 ohms
R1003	VRS-CG1JF470JT	AA			Array,47 ohms
R1004	VRS-CG1JF470JT	AA			Array,47 ohms
R1005	VRS-CG1JF470JT	AA			Array,47 ohms
R1006	VRS-CG1JF470JT	AA			Array,47 ohms
R1007	VRS-CG1JF470JT	AA			Array,47 ohms
R1008	VRS-CG1JF470JT	AA			Array,47 ohms
R1009	VRS-CG1JF470JT	AA			Array,47 ohms
R1010	VRK-SD1FF470JY	AB	N		Array,47 ohms

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[8] ARRAY PARTS					
R1012	VRK-SD1FF101JY	AB	N		Array,100 ohm
R1016	VRK-SD1FF221JY	AB	N		Array,220 ohms
R1029	VRS-CG1JF104JT	AC			Array,100 kohm
R1037	VRK-SD1FF105JY	AB	N		Array,1 Mohm
R1038	VRS-CG1JF105JT				Array,1 Mohm
R1044	VRK-SD1FF472JY	AB	N		Array,4.7 kohms
R1045	VRS-CG1JF104JT	AC			Array,100 kohm
R1060	VRK-SD1FF105JY	AB	N		Array,1 Mohm
R1061	VRS-CG1JF105JT				Array,1 Mohm
R1062	VRK-SD1FF104JY	AB	N		Array,100 kohm
R1063	VRS-CG1JF220JT	AA			Array,22 ohms
R1104	VRK-SD1FF335JY	AB	N		Array,3.3 Mohms
R1110	VRK-SD1FF101JY	AB	N		Array,100 ohm
R1119	VRK-SD1FF102JY	AB	N		Array,1 kohm
R1121	VRS-CG1JF102JT				Array,1 kohm
R1500	VRK-SD1FF105JY	AB	N		Array,1 Mohm
R1504	VRK-SD1FF105JY	AB	N		Array,1 Mohm
R1524	VRK-SD1FF332JY	AB	N		Array,3.3 kohms
R1559	VRK-SD1FF335JY	AB	N		Array,3.3 Mohms
R1561	VRK-SD1FF104JY	AB	N		Array,100 kohm
R1614	VRK-SD1FF150JY	AB	N		Array,15 ohms
R1619	VRS-CG1JF101JT	AA			Array,100 ohm
R1622	VRS-CG1JF104JT	AC			Array,100 kohm
R1623	VRK-SD1FF392JY	AB	N		Array,3.9 kohms
R1626	VRK-SD1FF102JY	AB	N		Array,1 kohm
R1628	VRK-SD1FF222JY	AB	N		Array,2.2 kohms
R1633	VRK-SD1FF564JY	AB	N		Array,560 kohms
R1634	VRK-SD1FF101JY	AB	N		Array,100 ohm
R1716	VRK-SD1FF104JY	AB	N		Array,100 kohm
R1717	VRK-SD1FF332JY	AB	N		Array,3.3 kohms
R1914	VRK-SD1FF102JY	AB	N		Array,1 kohm
R1920	VRS-CG1JF000JT	AA			Array,0 ohm
R3026	VRK-SD1FF1R0JY	AB	N		Array,1 ohm
R3030	VRK-SD1FF1R0JY	AB	N		Array,1 ohm
R3034	VRK-SD1FF8R2JY	AB	N		Array,8.2 ohms
[9] CAPACITORS					
C001	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C002	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C003	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C004	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C010	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C012	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C014	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C015	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C017	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C022	VCKYCZ1EB102KT	AB			0.001 μF,25V
C023	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C025	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C027	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C029	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C030	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C062	VCCCCZ1EH1R0CT	AA			1 pF (CH),25V
C100	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C101	VCCCCZ1EH5R0CT	AA			5 pF (CH),25V
C102	VCCCCZ1EH5R0CT	AA			5 pF (CH),25V
C103	VCKYCZ1CB103KT	AB			0.01 μF,16V
C104	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C110	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C111	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C112	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C113	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C120	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C121	VCCCCZ1EH3R0CT	AA			3 pF (CH),25V
C122	VCCCCZ1EH3R0CT	AA			3 pF (CH),25V
C140	VCKYCZ1AB683KT	AB			0.068 μF,10V
C141	VCKYCZ1AB683KT	AB			0.068 μF,10V
C142	VCKYCZ1AB683KT	AB			0.068 μF,10V
C143	VCKYCZ1AB683KT	AB			0.068 μF,10V
C144	VCKYCZ1AB683KT	AB			0.068 μF,10V
C150	VCKYCZ1CB103KT	AB			0.01 μF,16V
C156	VCKYCZ1CB103KT	AB			0.01 μF,16V
C201	VCKYCZ1CB103KT	AB			0.01 μF,16V
C205	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C206	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C221	RC-KZ3008AFZZL	AA			0.01 μF,25V
C222	RC-KZ3005AFZZL	AA			560 pF,50V
C223	RC-KZ3004AFZZL	AA			330 pF,50V
C224	RC-KZ3006AFZZL	AA			0.0012 μF,50V
C225	RC-KZ3007AFZZL	AA			0.0018 μF,50V
C226	VCKYCZ1EB102KT	AB			0.001 μF,25V
C227	VCKYCZ1EB102KT	AB			0.001 μF,25V
C313	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C314	RC-KZ3032AFZZN	AD			10 μF,6.3V
C315	RC-KZ3032AFZZN	AD			10 μF,6.3V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] CAPACITORS					
C324	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C325	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C327	VCCCCZ1EH330JT	AB			33 pF (CH),25V
C330	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C331	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C332	VCCCCZ1EH330JT	AB			33 pF (CH),25V
C333	VCCCCZ1EH330JT	AB			33 pF (CH),25V
C334	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C335	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C341	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C352	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C356	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C361	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C362	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C401	VCCCCZ1EH4R0CT	AA			4 pF (CH),25V
C402	VCKYCZ1EB102KT	AB			0.001 μ F,25V
C403	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C404	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C407	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C412	VCCCCZ1EH1R0CT	AA			1 pF (CH),25V
C413	VCCCCZ1EH1R0CT	AA			1 pF (CH),25V
C414	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C422	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C423	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C424	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C425	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C431	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C441	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C442	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C444	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C447	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C448	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C451	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C452	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C453	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C454	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C501	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C502	VCCCCZ1HJ2R2BT	AA			2.2 pF (CH),50V
C503	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C504	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C505	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C507	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C508	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C509	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C510	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C511	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C512	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C513	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C514	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C515	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C601	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C602	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C622	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C623	RC-KZ1315AFZZN	AC			10 μ F,6.3V
C624	RC-KZ1308AFZZT	AD			4.7 μ F,6.3V
C626	VCKYCZ1EB331KT	AA			330 pF,25V
C627	RC-KZ1308AFZZT	AD			4.7 μ F,6.3V
C628	VCKYCZ1EB102KT	AB			0.001 μ F,25V
C631	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C632	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C635	VCKYCZ1EB102KT	AB			0.001 μ F,25V
C701	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C702	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C703	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C704	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C710	VCCCCZ1EH151JT	AB			150 pF (CH),50V
C711	VCKYCY1HB332KT	AA			0.0033 μ F,50V
C714	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C715	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C716	VCCCCZ1EH5R0CT	AA			5 pF (CH),25V
C720	VCKYCZ1EB562KT	AA			0.0056 μ F,25V
C721	VCKYCZ1EB391KT	AA			390 pF,25V
C730	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C731	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C740	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C741	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C750	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C751	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C760	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C761	VCCCCZ1EH121JT	AB			120 pF (CH),25V
C770	VCKYCZ1EB103KT	AA			0.01 μ F,25V
C772	VCKYCZ1EB331KT	AA			330 pF,25V
C773	VCCCCZ1HH5R0BT	AA			5 pF (CH),50V
C776	VCCCCZ1HH5R0BT	AA			5 pF (CH),50V
C777	VCCCCZ1EH470JT	AB			47 pF (CH),25V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] CAPACITORS					
C778	VCCCCZ1EH560JT	AB			56 pF (CH),25V
C779	VCCCCZ1EH151JT	AB			150 pF (CH),50V
C800	VCKYCY1CB104KT	AA			0.1 μ F,16V
C801	VCKYCZ1CB333KT	AB			0.033 μ F,16V
C802	RC-KZ1315AFZZN	AC			10 μ F,6.3V
C803	RC-KZ1308AFZZT	AD			4.7 μ F,6.3V
C900	VCCCCZ1EH120JT	AB			12 pF (CH),25V
C1000	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1001	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1002	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1003	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1004	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1005	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1006	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1007	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1008	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1010	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1011	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1012	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1013	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1014	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1015	VCKYCZ1EB331KT	AA			330 pF,25V
C1016	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1018	VCCCCZ1EH180JT	AB			18 pF (CH),25V
C1019	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1020	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1021	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1023	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1024	VCKYCZ1EB331KT	AA			330 pF,25V
C1025	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1027	VCKYCY1AB225KT	AB			2.2 μ F,10V
C1028	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1029	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1033	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1037	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1039	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1100	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1101	VCKYCY1AB225KT	AB			2.2 μ F,10V
C1102	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1103	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1104	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1105	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1106	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1108	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1200	VCKYCY1AB225KT	AB			2.2 μ F,10V
C1202	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1203	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1204	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1205	VCKYCY1AB105KT	AB			1 μ F,10V
C1206	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1207	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1208	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C1209	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1210	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1211	VCKYCY1CF105ZT				1 μ F,16V
C1212	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1213	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1214	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C1215	VCKYCZ1CB103KT	AB			0.01 μ F,16V
C1216	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1217	VCKYCY1CF105ZT				1 μ F,16V
C1219	RC-KZ1329AFZZ	AC			4.7 μ F,6.3V
C1220	VCKYCZ1EB102KT	AB			0.001 μ F,25V
C1225	VCCCCZ1EH181JT	AA			180 pF (CH),25V
C1226	VCKYCZ1EB331KT	AA			330 pF,25V
C1228	VCKYCZ1EB122KT	AB			0.0012 μ F,25V
C1229	VCKYCZ1AB683KT	AB			0.068 μ F,10V
C1231	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1232	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1233	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1234	VCCCCZ1EH470JT	AB			47 pF (CH),25V
C1235	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1238	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1239	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1240	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1241	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1243	VCKYCZ1EB561KT	AB			560 pF,25V
C1244	VCKYCZ1EB561KT	AB			560 pF,25V
C1245	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1300	VCKYCZ1EB562KT	AA			0.0056 μ F,25V
C1302	VCKYCZ1EB562KT	AA			0.0056 μ F,25V
C1400	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1401	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1402	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1404	VCKYCZ1AB104KT	AA			0.1 μ F,10V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] CAPACITORS					
C1408	VCKYCZ1EB331KT	AA			330 pF,25V
C1409	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1410	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1411	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1412	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1500	VCKYCZ1EB332KT	AA			0.0033 μ F,25V
C1501	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1502	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1503	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1504	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1505	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1506	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1507	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1508	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1509	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1510	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1511	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1512	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C1513	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C1515	VCKYCZ1EB102KT	AB			0.001 μ F,25V
C1517	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1520	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C1521	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C1526	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1528	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1529	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1530	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1533	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1534	VCCCCZ1HH221JT	AA			220 pF (CH),50V
C1535	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1536	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1537	VCKYCY1AB225KT	AB			2.2 μ F,10V
C1538	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1539	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1540	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1541	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1542	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1543	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1544	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1550	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1558	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1559	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1560	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1561	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1562	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1563	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1564	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1565	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1566	VCCCCZ1EH100DT	AB			10 pF (CH),25V
C1567	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1568	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1569	VCKYCZ1EB472KT	AB			0.0047 μ F,25V
C1570	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1600	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C1601	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1602	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1603	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1605	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1608	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1609	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C1610	VCKYCZ1EB222KT	AA			0.0022 μ F,25V
C1611	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1612	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1614	VCCCCZ1EH101JT	AB			100 pF (CH),25V
C1615	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1616	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1617	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1620	VCKYCZ1AB473KT	AB			0.047 μ F,10V
C1621	VCKYCZ1AB473KT	AB			0.047 μ F,10V
C1622	RC-SZ1160AFZZL	AD			100 μ F,4V,Tantalum,Electrolytic
C1623	RC-SZ1160AFZZL	AD			100 μ F,4V,Tantalum,Electrolytic
C1624	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1625	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1626	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1627	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1630	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1632	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1643	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C1646	VCKYCZ1EB681KT	AA			680 pF,25V
C1647	VCKYCZ1EB681KT	AA			680 pF,25V
C1702	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1703	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1704	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1706	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C1707	VCKYCZ0JB105KT	AB			1 μ F,6.3V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] CAPACITORS					
C1710	RC-KZ1329AFZZN	AC			4.7 μF,6.3V
C1711	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1712	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1713	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1714	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1715	RC-KZ1329AFZZN	AC			4.7 μF,6.3V
C1716	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1717	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1720	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1721	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1723	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1724	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1725	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1742	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1743	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1744	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1900	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1901	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1902	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1903	VCKYRK0JB104MT	AB	N		0.1 μF,6.3V
C1904	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1905	VCCCCZ1EH120JT	AB			12 pF (CH),25V
C1907	VCCCCZ1EH220JT	AA			22 pF (CH),25V
C1909	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1911	VCCCCZ1HH150JT	AA			15 pF (CH),50V
C1922	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1923	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1927	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1928	RC-KZ1329AFZZN	AC			4.7 μF,6.3V
C1929	VCCCCZ1HH221JT	AA			220 pF (CH),50V
C1930	RC-KZ1327AFZZN	AB			2.2 μF,16V
C1931	RC-KZ1329AFZZN	AC			4.7 μF,6.3V
C1936	RC-KZ1329AFZZN	AC			4.7 μF,6.3V
C1938	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1939	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1940	VCKYCY1EB105KT	AB			1 μF,25V
C1941	RC-KZ1299AFZZN	AB			0.22 μF,6.3V
C1942	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1943	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1944	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1945	VCKYCY1EB105KT	AB			1 μF,25V
C1946	RC-KZ1327AFZZN	AB			2.2 μF,16V
C1947	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1948	VCKYCZ1AB104KT	AA			0.1 μF,10V
C1954	VCKYCZ1EB331KT	AA			330 pF,25V
C1955	VCCCCZ1EH5R0CT	AA			5 pF (CH),25V
C1957	VCKYCZ0JB105KT	AB			1 μF,6.3V
C1959	VCKYCY1AB105KT	AB			1 μF,10V
C3000	RC-KZ1327AFZZN	AB			2.2 μF,16V
C3001	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3002	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3003	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3005	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C3012	VCCCCZ1EH471JT	AB			470 pF (CH),25V
C3016	VCCCCZ1EH471JT	AB			470 pF (CH),25V
C3017	VCKYCZ1AB104KT	AA			0.1 μF,10V
C3018	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C3019	RC-KZ1317AFZZN	AB			1 μF,16V
C3024	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3025	VCKYCY1AB224KT	AA			0.22 μF,10V
C3026	VCKYCZ1EB103KT	AA			0.01 μF,25V
C3031	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3032	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3033	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3034	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3035	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3036	VCKYCY1AB224KT	AA			0.22 μF,10V
C3037	VCKYCY1AB224KT	AA			0.22 μF,10V
C3038	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C3039	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3040	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3042	VCKYCY1EB104KT	AA			0.1 μF,25V
C3044	VCKYCZ0JB105KT	AB			1 μF,6.3V
C3046	VCCCCZ1EH471JT	AB			470 pF (CH),25V
C3048	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3049	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3050	VCCCCZ1EH471JT	AB			470 pF (CH),25V
C3052	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3055	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C3056	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3059	VCKYCZ1AB104KT	AA			0.1 μF,10V
C3060	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3067	RC-KZ3032AFZZN	AD			10 μF,6.3V
C3068	RC-KZ3032AFZZN	AD			10 μF,6.3V
C3069	RC-KZ3032AFZZN	AD			10 μF,6.3V

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[9] CAPACITORS					
C3070	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C3071	RC-KZ3032AFZZN	AD			10 μ F,6.3V
C3075	VCCCCZ1EH471JT	AB			470 pF (CH),25V
C3077	RC-KZ1329AFZZN	AC			4.7 μ F,6.3V
C3078	RC-KZ2000AFZZT	AC			4.7 μ F,10V
C3079	RC-KZ2000AFZZT	AC			4.7 μ F,10V
C3080	VCKYCY1AB104KT	AC			0.1 μ F,10V
C3081	RC-KZ2000AFZZT	AC			4.7 μ F,10V
C3082	VCKYCY1AB224KT	AA			0.22 μ F,10V
C3086	RC-KZ1317AFZZN	AB			1 μ F,16V
C3088	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C3089	VCKYCZ0JB105KT	AB			1 μ F,6.3V
C3091	VCKYCZ1EB103KT	AA			0.01 μ F,25V
C3102	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3104	VCCCCZ1HH101JT	AB			100 pF (CH),50V
C3105	VCCCCZ1EH150JT	AA			15 pF (CH),25V
C3110	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C3111	VCKYCZ1AB104KT	AA			0.1 μ F,10V
C3112	VCKYCZ1AB104KT	AA			0.1 μ F,10V
L340	VCCCCZ1EH1R5CT	AB			1.5 pF (CH),25V
L601	VCCCCZ1EH1R0BT				1 pF (CH),25V
L905	VCCCCZ1HK1R9BT	AB	N		1.9 pF (CH),50V
[10] RESISTORS					
L203	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
L335	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
L352	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
L1302	VRS-CY1JB000JT	AA			0 ohm,Jumper,0.8x1.55mm,Green
L3008	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R002	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R006	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R008	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R009	VRS-CZ1JB335JT	AA			3.3 Mohms,1/16W
R010	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R011	VRS-CZ1JB563JT	AA			56 kohms,1/16W
R140	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R210	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R211	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R212	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R213	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R220	VRS-CZ1JB561JT	AA			560 ohms,1/16W
R222	VRS-CZ1JB121JT	AB			120 ohms,1/16W
R223	VRS-CZ1JB391JT	AA			390 ohms,1/16W
R301	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R302	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R303	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R304	VRS-CZ1JB391JT	AA			390 ohms,1/16W
R305	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R306	VRS-CZ1JB391JT	AA			390 ohms,1/16W
R326	RR-NZA003AFZZN	AB			51 mohms,1/5W
R411	VRS-CZ1JB152JT	AA			1.5 kohms,1/16W
R430	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R502	VRS-CZ1JB681JT	AB			680 ohms,1/16W
R504	VRS-CZ1JB681JT	AB			680 ohms,1/16W
R511	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R604	VRS-CZ1JB391JT	AA			390 ohms,1/16W
R605	VRS-CZ1JB120JT	AA			12 ohms,1/16W
R606	VRS-CZ1JB391JT	AA			390 ohms,1/16W
R626	VRS-CZ1JB333JT	AB			33 kohms,1/16W
R627	VRS-CZ1JB393JT	AB			39 kohms,1/16W
R628	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R701	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R702	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R710	VRS-CZ1JB472JT	AB			4.7 kohms,1/16W
R720	VRS-CZ1JB562JT	AB			5.6 kohms,1/16W
R730	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R740	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R770	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R771	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R772	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R773	VRS-CZ1JB153JT	AA			15 kohms,1/16W
R774	VRS-CZ1JB122JT	AA			1.2 kohms,1/16W
R901	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1011	VRS-CZ1JB470JT	AA			47 ohms,1/16W
R1017	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1018	VRS-CZ1JB221JT	AA			220 ohms,1/16W
R1019	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1020	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1021	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1022	--------	-			Soldering Jumper
R1024	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1025	--------	-			Soldering Jumper
R1026	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R1028	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1030	VRS-CZ1JB104JT	AA			100 kohm,1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] RESISTORS					
R1032	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1034	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1035	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1036	--------	-			Soldering Jumper
R1040	VRS-CZ1JB470JT	AA			47 ohms,1/16W
R1041	VRS-CZ1JB394JT	AA			390 kohms,1/16W
R1042	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1043	VRS-CZ1JB135JT	AA			1.3 Mohms,1/16W
R1046	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1048	VRS-CZ1JB221JT	AA			220 ohms,1/16W
R1050	--------	-			Soldering Jumper
R1052	--------	-			Soldering Jumper
R1054	VRS-CZ1JB203JT	AA			20 kohms,1/16W
R1055	--------	-			Soldering Jumper
R1058	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1059	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1064	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1065	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1101	--------	-			Soldering Jumper
R1102	--------	-			Soldering Jumper
R1103	--------	-			Soldering Jumper
R1109	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1111	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1112	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1113	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1115	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1200	--------	-			Soldering Jumper
R1201	--------	-			Soldering Jumper
R1202	VRS-CZ1JB335JT	AA			3.3 Mohms,1/16W
R1203	--------	-			Soldering Jumper
R1204	--------	-			Soldering Jumper
R1207	VRS-CY1JB000JT	AA			0 ohm,Jumper,0.8x1.55mm,Green
R1208	VRS-CZ2AVR22JN	AA	N		0.22 ohms,1/10W
R1209	VRS-CZ1JB1R0JT	AA			1 ohm,1/16W
R1210	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1211	VRNRCZ2CJR10FN	AB	N		0.1 ohm,1/6W
R1212	VRS-CZ1JB334JT	AA			330 kohms,1/16W
R1213	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1214	VRS-CZ1JB335JT	AA			3.3 Mohms,1/16W
R1215	VRS-CZ1JB225JT	AA			2.2 Mohms,1/16W
R1216	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1217	VRS-CZ1JB474JT	AB			470 kohms,1/16W
R1218	VRS-CZ1JB153JT	AA			15 kohms,1/16W
R1219	VRS-CZ1JB223JT	AA			22 kohms,1/16W
R1220	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1221	VRS-CZ1JB223JT	AA			22 kohms,1/16W
R1222	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1223	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1224	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1225	VRS-CZ1JB222JT	AB			2.2 kohms,1/16W
R1226	VRS-CZ1JB153JT	AA			15 kohms,1/16W
R1227	RR-NZA004AFZZN	AB	N		24 mohms,1/5W
R1229	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1231	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1232	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1233	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1234	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1235	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1236	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1238	VRS-CZ1JB220JT	AB			22 ohms,1/16W
R1239	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1240	VRS-CZ1JB153JT	AA			15 kohms,1/16W
R1241	--------	-			Soldering Jumper
R1242	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1243	VRS-CZ1JB271JT	AA			270 ohms,1/16W
R1245	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1246	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1303	VRS-CZ1JB152JT	AA			1.5 kohms,1/16W
R1304	VRS-CZ1JB270JT	AA			27 ohms,1/16W
R1305	VRS-CZ1JB270JT	AA			27 ohms,1/16W
R1400	VRS-CZ1JB433JT	AA			43 kohms,1/16W
R1401	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1402	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1403	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R1501	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1502	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1503	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1508	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1509	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1510	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1511	VRS-CZ1JB1R0JT	AA			1 ohm,1/16W
R1513	--------	-			Soldering Jumper
R1514	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1515	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1516	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm

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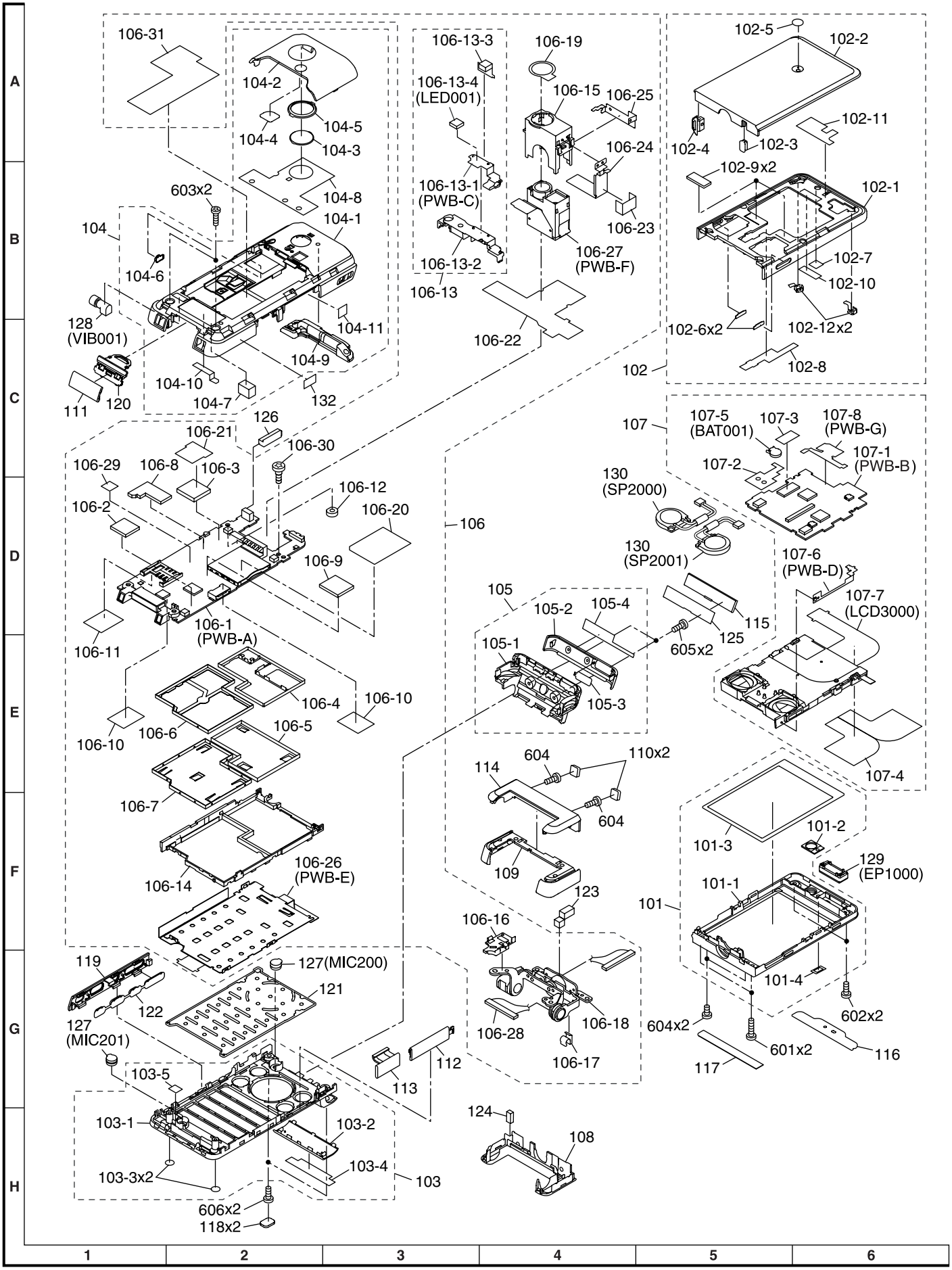
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] RESISTORS					
R1517	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1518	VRS-CZ1JB681JT	AB			680 ohms,1/16W
R1519	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1520	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1521	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1522	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1523	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1525	--------	-			Soldering Jumper
R1526	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1527	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1528	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1529	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1530	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1531	--------	-			Soldering Jumper
R1533	--------	-			Soldering Jumper
R1534	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R1535	--------	-			Soldering Jumper
R1536	--------	-			Soldering Jumper
R1537	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1538	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1540	VRS-CZ1JB821JT	AA			820 ohms,1/16W
R1543	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1545	--------	-			Soldering Jumper
R1546	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1547	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1548	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1549	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1550	VRS-CZ1JB753JT	AA			75 kohms,1/16W
R1551	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1552	--------	-			Soldering Jumper
R1553	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1554	VRS-CZ1JB223JT	AA			22 kohms,1/16W
R1555	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1556	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1557	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1558	VRS-CZ1JB124JT	AB			120 kohms,1/16W
R1560	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1562	VRS-CZ1JB152JT	AA			1.5 kohms,1/16W
R1602	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1603	--------	-			Soldering Jumper
R1604	--------	-			Soldering Jumper
R1605	VRS-CZ1JB471JT	AA			470 ohms,1/16W
R1606	VRS-CZ1JB682JT	AA			6.8 kohms,1/16W
R1607	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1608	--------	-			Soldering Jumper
R1613	VRS-CZ1JB392JT	AB			3.9 kohms,1/16W
R1615	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1617	VRS-CZ1JB470JT	AA			47 ohms,1/16W
R1620	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1621	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1624	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1625	VRS-CZ1JB472JT	AB			4.7 kohms,1/16W
R1629	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1630	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1631	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1632	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1636	VRS-CZ1JB335JT	AA			3.3 Mohms,1/16W
R1638	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1639	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1640	VRS-CZ1JB470JT	AA			47 ohms,1/16W
R1641	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R1700	VRS-CZ1JB221JT	AA			220 ohms,1/16W
R1701	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1702	VRS-CZ1JB751JT				750 ohms,1/16W
R1703	VRS-CZ1JB1R0JT	AA			1 ohm,1/16W
R1704	VRS-CZ1JB1R0JT	AA			1 ohm,1/16W
R1705	--------	-			Soldering Jumper
R1706	VRS-CZ1JB221JT	AA			220 ohms,1/16W
R1712	VRS-CZ1JB2R2JT	AA			2.2 ohms,1/16W
R1713	VRS-CZ1JB2R2JT	AA			2.2 ohms,1/16W
R1714	--------	-			Soldering Jumper
R1715	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1718	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1720	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R1722	--------	-			Soldering Jumper
R1723	--------	-			Soldering Jumper
R1724	--------	-			Soldering Jumper
R1725	--------	-			Soldering Jumper
R1726	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1728	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1729	VRS-CZ1JB513JT	AA			51 kohms,1/16W
R1730	VRS-CZ1JB513JT	AA			51 kohms,1/16W
R1734	VRS-CZ1JB750FT	AA			75 ohms,1/16W
R1741	VRS-CZ1JB104JT	AA			100 kohm,1/16W
R1742	VRS-CZ1JB104JT	AA			100 kohm,1/16W

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[10] RESISTORS					
R1749	--------	-			Soldering Jumper
R1900	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1901	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1902	--------	-			Soldering Jumper
R1904	VRS-CZ1JB680JT	AA			68 ohms,1/16W
R1905	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1906	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1907	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R1908	VRS-CZ1JB473JT	AA			47 kohms,1/16W
R1909	VRS-CZ1JB392JT	AB			3.9 kohms,1/16W
R1910	VRS-CZ1JB154JT	AA			150 kohms,1/16W
R1915	--------	-			Soldering Jumper
R1918	--------	-			Soldering Jumper
R1922	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1923	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R1924	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1927	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1929	--------	-			Soldering Jumper
R1930	VRS-CZ1JB682FT	AA			6.8 kohms,1/16W
R1931	VRS-CZ1JB103JT	AA			10 kohm,1/16W
R1933	VRS-CZ2AVR47JN	AA			0.47 ohms,1/10W
R1934	VRS-CY2BBR22JT	AA	N		0.22 ohms,1/8W
R1935	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1936	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1938	VRS-CZ1JB393JT	AB			39 kohms,1/16W
R1939	VRS-TV2AB000JT				0 ohm,Jumper,1.25x2mm,Green
R1940	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1941	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R1948	--------	-			Soldering Jumper
R1949	VRS-CZ1JB4R7JT	AA			4.7 ohms,1/16W
R1953	--------	-			Soldering Jumper
R1954	--------	-			Soldering Jumper
R1955	--------	-			Soldering Jumper
R1956	--------	-			Soldering Jumper
R3000	VRS-CZ1JB102JT	AA			1 kohm,1/16W
R3001	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R3002	VRS-CZ1JB272JT	AA			2.7 kohms,1/16W
R3004	VRS-CZ1JB101DT	AA			100 ohm,1/16W
R3005	VRS-CZ1JB101DT	AA			100 ohm,1/16W
R3006	VRS-CZ1JB224JT	AA			220 kohms,1/16W
R3007	VRS-CZ1JB272JT	AA			2.7 kohms,1/16W
R3008	VRS-CZ1JB153JT	AA			15 kohms,1/16W
R3013	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R3018	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3019	VRS-CZ1JB562JT	AB			5.6 kohms,1/16W
R3020	VRS-CZ1JB101JT	AB			100 ohm,1/16W
R3021	VRS-CZ1JB392JT	AB			3.9 kohms,1/16W
R3022	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3023	VRS-CZ1JB823JT	AB			82 kohms,1/16W
R3025	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3027	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3028	VRS-CZ1JB4R7JT	AA			4.7 ohms,1/16W
R3029	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3031	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3032	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R3033	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3035	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3036	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3037	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3040	VRS-CZ1JB472JT	AB			4.7 kohms,1/16W
R3044	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3045	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3046	VRS-CZ1JB100JT	AA			10 ohm,1/16W
R3047	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3048	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3049	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3063	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3065	VRS-CZ1JB105JT	AB			1 Mohm,1/16W
R3067	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3068	VRS-CZ1JB000JT	AB			0 ohm,Jumper,0.5x1.0mm
R3069	VRS-CZ1JB392JT	AB			3.9 kohms,1/16W
R3070	VRS-CZ1JB472JT	AB			4.7 kohms,1/16W
[11] OTHER CIRCUITRY PARTS					
ANT001	QTANZA005AFZZL	AC			Terminal,Bluetooth Aerial
ANT901	QCNTAA019AFZZN	AF			Terminal,Aerial
BAT001	RDNTLA006AFPZ	AG	N		Battery,Back-Up
CN061	QCNCWA070AFZZL	AE			Measurment Point,Bluetooth
CN903	QCNCWA070AFZZL	AE			Measurment Point,RF
CN1000	QCNCWA062AF25L	AG	N		Socket,25Pin
CN1200	QCNTAA022AFZZL	AH			Terminal,Battery
CN1201	QSOCZA006AFZZL	AG			Connector,SIM Card
CN1300	QCNCWA075AFZZL	AQ	N		External Connector
CN1501	QCNCWA034AF40L	BA			Socket,40Pin
CN1600	QCNCWA004AF17L	AM			Memory Card Slot

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[11] OTHER CIRCUITRY PARTS					
CN1900	QCNCWA010AF40N	AG			Socket,40Pin
CN1901	QCNCWA022AF08R	AF			Socket,8Pin
CN3000	QCNCWA034AF40L	BA			Socket,40Pin
CN3001	QCNCWA011AF04R	AE			Socket,4Pin
CN3002	QCNCWTi29AFZZL	AK			Socket,29Pin
CN3003	QCNCWA041AFZZL	AE			Socket,2Pin
CN3004	QCNCWA041AFZZL	AE			Socket,2Pin
CN3005	QCNCWA022AF04R	AE			Socket,4Pin
CNS3003	--------	-	N		This Parts is Supplied with SP2000
CNS3004	--------	-	N		This Parts is Supplied with SP2001
EP1000	RPHODA015AFZZ	AK	N		Earpiece
FS1200	QFS-L252KAFZZN	AB	N		Fuse,2.5 A
FS1900	QFS-L132CAFZZN	AC			Fuse,1.25 A
FS1901	QFS-L801AAFZZN	AC	N		Fuse,800 mA
FS1902	QFS-L321AAFZZN	AC			Fuse,315 mA
FS3000	QFS-L251KAFZZN	AB	N		Fuse,0.25A
JK1600	QCNCWA017AFZZL	AF			Connector,VIDEO OUT/Stereo Handsfree
LCD3000	RUiTKA068AF02	BR	N		Main Display
MIC200	RMiCCA005AFZZ	AL			Microphone
MIC201	RMiCCA005AFZZ	AL			Microphone
SP2000	RSP-ZA020AFZZ	AN	N		Stereo Speaker
SP2001	RSP-ZA020AFZZ	AN	N		Stereo Speaker
VIB001	RMOTVA009AFZZ	AK	N		Vibrator

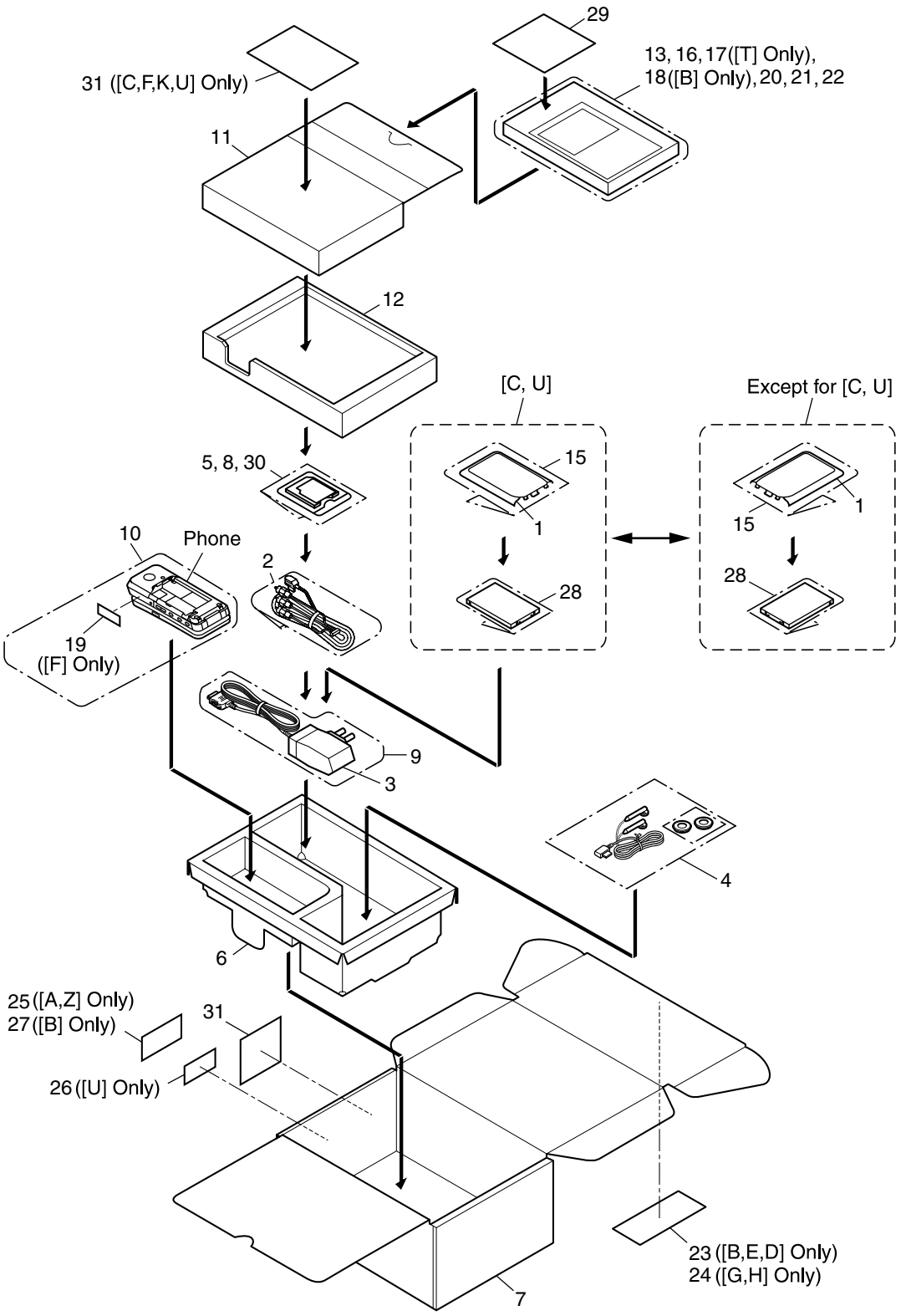
[12] EXPLODED PARTS



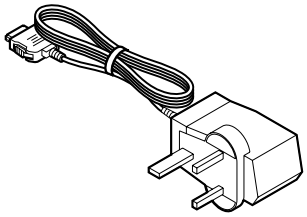
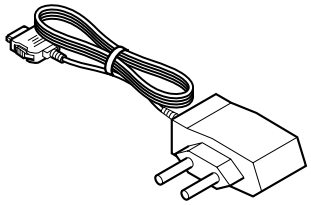
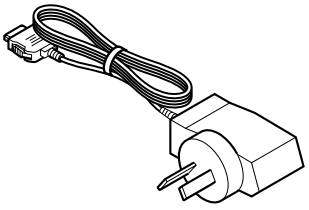
NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[12] EXPLODED PARTS					
101	DCABAW256AFSE	AZ	N		Front Cabinet (Display)Assembly
101-1	--------	-			Front Cabinet (Display) (Not Replacement Item)
101-2	PCUSSA263AFZZ	AC	N		Cushion,Sub Camera (Upper)
101-3	PCUSSA267AFZZ	AF	N		Cushion,Main Display
101-4	PSHEZA244AFZZ	AD			Sheet,Leak
102	DCABBW256AFSC	AZ	N		Back Cabinet (Display)Assembly [C]
102	DCABBW256AFSE	AZ	N		Back Cabinet(Display)Assembly(Except for [C,F,K,U]
102	DCABBW256AFSF	AZ	N		Back Cabinet (Display)Assembly [F]
102	DCABBW256AFSK		N		Back Cabinet (Display)Assembly [K]
102	DCABBW256AFSU	AZ	N		Back Cabinet (Display)Assembly [U]
102-1	--------	-			Back Cabinet (Display) (Not Replacement Item)
102-2	GCOVAA183AFSA	AR			Cover,Back Cabinet (Display)(Except for [C,F,K,U])
102-2	GCOVAA262AFSA		N		Cover,Back Cabinet (Display) [K]
102-2	GCOVAA263AFSA		N		Cover,Back Cabinet (Display) [C,F]
102-2	GCOVAA265AFSA		N		Cover,Back Cabinet (Display) [U]
102-3	GCOVHA097AFSA	AD	N		Sheet,Back Cabinet (Display),A
102-4	GCOVHA098AFSA	AD	N		Protection Cover,Back Cabinet (Display)
102-5	HBDGZA004AFSA	AF			Badge,Speach (Except for [C,F,U])
102-5	HBDGZA007AFSA	AF	N		Badge,Speech [F,U]
102-5	HBDGZA009AFSC		N		Badge,Speech [C]
102-6	HDECBA008AFSA	AE	N		Decoration Plate,Speaker
102-7	PCUSSA264AFZZ	AB	N		Cushion,Sub Camera (Lower)
102-8	PCUSSA285AFZZ	AB	N		Cushion,Connector (CN3000)
102-9	PCUSSA310AFZZ	AA	N		Cushion,Back Cabinet (Display)
102-10	PCUSSA339AFZZ	AB	N		Cushion,Sub Camera FPC
102-11	PSHEFA047AFZZ	AD	N		Sheet,Back Cabinet (Display),B
102-12	QTANPA005AFZZ	AE			Spring,Earth
103	DCABCW256AFSC	AX	N		Front Cabinet (Key)Assembly [C]
103	DCABCW256AFSE	AX	N		Front Cabinet (Key)Assembly (Except for [C,F,K,U])
103	DCABCW256AFSF	AX	N		Front Cabinet (Key)Assembly [F]
103	DCABCW256AFSK		N		Front Cabinet (Key)Assembly [K]
103	DCABCW256AFSU	AX	N		Front Cabinet (Key)Assembly [U]
103-1	--------	-			Front Cabinet (Key) (Not Replacement Item)
103-2	GCOVAA216AFSA	AH	N		Cover,Front Cabinet (Key)
103-3	GCOVHA063AFSA	AC	N		Screw Cover,Front Cabinet (Key)
103-4	PSHEFA039AFZZ	AC	N		Tape,Front Cabinet (Key)
103-5	TLABZ2783AFZZ	AA			Sensor,Moisture (Small)
104	DCABDW256AFSE	AZ	N		Back Cabinet (Key)Assembly
104-1	--------	-			Back Cabinet (Key) (Not Replacement Item)
104-2	GCOVAA209AFSA	AL	N		Cover,Back Cabinet (Key)
104-3	GMADZA004AFSA	AF	N		Window,Camera
104-4	GMADZA005AFSA	AE	N		Window,Mobile Light
104-5	HDECQA052AFSA	AF	N		Decoration Plate,Camera
104-6	HiNDPA004AFSA	AC	N		Cover,Small Light
104-7	PCUSSA312AFZZ	AA	N		Cushion,Bluetooth Aerial
104-8	PSHEFA035AFZZ	AF	N		Tape,Back Cabinet (Key)
⚠ 104-9	QANTWA014AFZZ	AK	N		Built-in Aerial
⚠ 104-10	QANTWA018AFZZ	AD	N		Bluetooth Aerial
104-11	TLABZ2783AFZZ	AA	N		Sensor,Moisture (Small)
105	DCOVAW256AFSE	AU	N		Hinge Cover Assembly
105-1	--------	-			Hinge Cover (Not Replacement Item)
105-2	GCOVAA208AFSA	AH	N		Belt,Hinge Cover
105-3	GMADZA006AFSA	AD	N		Window,Infrared Port
105-4	PSHEFA034AFZZ	AB	N		Tape,Hinge Cover Belt
106	DKAGKW256AFSA		N		Board Unit (Main) [A]
106	DKAGKW256AFSB		N		Board Unit (Main) [B]
106	DKAGKW256AFSC		N		Board Unit (Main) [C]
106	DKAGKW256AFSD		N		Board Unit (Main) [D]
106	DKAGKW256AFSE		N		Board Unit (Main) [E]
106	DKAGKW256AFSF		N		Board Unit (Main) [F]
106	DKAGKW256AFSG		N		Board Unit (Main) [G]
106	DKAGKW256AFSH		N		Board Unit (Main) [H]
106	DKAGKW256AFSK		N		Board Unit (Main) [K]
106	DKAGKW256AFSP		N		Board Unit (Main) [P]
106	DKAGKW256AFSR		N		Board Unit (Main) [R]
106	DKAGKW256AFSS		N		Board Unit (Main) [S]
106	DKAGKW256AFST		N		Board Unit (Main) [T]
106	DKAGKW256AFSU		N		Board Unit (Main) [U]
106	DKAGKW256AFSW		N		Board Unit (Main) [W]
106	DKAGKW256AFSX		N		Board Unit (Main) [X]
106	DKAGKW256AFSZ		N		Board Unit (Main) [Z]
⚠ 106-1	--------	-			Main (Not Replacement Item) (PWB-A)
⚠ 106-2	PSLDMA078AFZZL	AD			Shield Case,Frame
⚠ 106-3	PSLDMA119AFZZL	AD			Shield Case,Frame
⚠ 106-4	PSLDMA127AFZZL	AF			Frame,RF Shield Case
⚠ 106-5	PSLDMA128AFZZ	AE			Cover,RF Shield Case
⚠ 106-6	PSLDMA132AFZZL	AF	N		Frame,BBK Shield Case
⚠ 106-7	PSLDMA133AFZZ	AF	N		Cover,BBK Shield Case
⚠ 106-8	PSLDMA134AFZZL	AD	N		Shield Case,Frame
⚠ 106-9	PSLDMA146AFZZL	AD	N		Shield Case,Frame
106-10	PSPAZA047AFZZ	AA	N		Spacer A
106-11	PSPAZA048AFZZ	AA	N		Spacer B
106-12	QCNTAA017AFZZN	AD			Spacer,Hinge
106-13	DUNTMW256AF01	AK			Mobile Light (PWB-C)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[12] EXPLODED PARTS					
106-13-1	--------	-			This Parts is Supplied with Cabinet Parts 106-13
106-13-2	LHLDFA020AFZZ	AC	N		Holder,Mobile Light
106-13-3	PCUSSA353AFZZ	AD	N		Cushion,Mobile Light FPC
106-13-4	VHPGM5MW052-1L	AQ			Mobile Light,GM5MW052 (LED001)
106-14	LHLDFA019AFZZ	AD	N		Holder,Main PWB
106-15	LHLDZA169AFZZ	AC	N		Holder,Camera
106-16	LHLDZA189AFZZ	AC	N		Holder,Hinge
106-17	LPLTMA024AFZZ	AC	N		Clip,Handling
106-18	MHNG-A010AFZZ	AX	N		Hinge
106-19	PCUSSA265AFZZ	AE	N		Cushion,Camera (Upper)
106-20	PSHEZA442AFZZ	AB	N		Protection Sheet,Memory Card
106-21	PSHEZA503AFZZ	AB	N		Sheet,Shield
106-22	PSHEZA505AFZZ	AH	N		Insulating Sheet,Camera
106-23	PSHEZA528AFZZ	AB	N		Kapton,Camera Shield
106-24	PSLDCA017AF01	AG	N		Shield,Camera A
106-25	PSLDCA018AFZZ	AF	N		Shield,Camera B
106-26	RUiTKA065AFZZ	AZ	N		Key FPC UNIT (PWB-E)
106-27	RUiTKA067AFZZ	BY	N		Camera Unit (PWB-F)
106-28	RUiTZA037AFZZ	BB	N		Coaxial Cable
106-29	TLABZ2595AFZZ	AA			Sensor Moisture (Large)
106-30	LX-BZA013AFF9	AB	N		Screw (1.4x2.6),Black
106-31	TSPC-A292AFZZ		N		Label,Specifications (Except for [A,X,Z])
106-31	TSPC-A293AFZZ		N		Label,Specifications [A,Z]
106-31	TSPC-A295AFZZ		N		Label,Specifications [X]
107	DHAiZW256AFSE	BX	N		Board Unit (Display)
⚠ 107-1	--------	-			Display (Not Replacement Item) (PWB-B)
107-2	PSHEMA006AFZZ	AB	N		Copper Foil,Main Display
107-3	PSHEZA547AFZZ	AB	N		Kapton,Main Display FPC
107-4	PSLDMA153AFZZ	AF	N		Sheet,Shield
107-5	RDNTLA006AFPZ	AG	N		Battery,Back-Up (BAT001)
107-6	RUiTKA064AFZZ	AK			MR Sensor FPC (PWB-D)
107-7	RUiTKA068AF02	BR	N		Main Display (LCD3000)
107-8	RUiTKA070AFZZ	AZ	N		Sub Camera Unit (PWB-G)
108	GCABEA092AFSA	AK	N		Cabinet,Hinge A
109	GCABFA092AFSA	AK	N		Cabinet,Hinge B
110	GCOVAA160AFSD	AC			Screw Cover,Hinge A
111	GCOVAA184AFSA	AG	N		Cover,External Connector
112	GCOVAA185AFSA	AH	N		Slot Cover,Memory Card
113	GCOVAA186AFSA	AH	N		Cover, VIDEO OUT/Stereo Handsfree Connector
114	GCOVAA202AFSA	AK	N		Cover,Cabinet,Hinge B
115	GCOVAA203AFSA	AH	N		Screw Cover,Hinge B
116	GCOVAA204AFSA	AG	N		Screw Cover,Main Display,Upper
117	GCOVAA205AFSA	AE	N		Screw Cover,Main Display,Lower(Except for [C,F,K,U
117	GCOVAA261AFSA	AE	N		Screw Cover,Main Display,Lower [C,F,K,U]
118	GCOVAA207AFSA	AC	N		Screw Cover,Front Cabinet (Key)
119	GCOVAA210AFSA	AH	N		Cover,Side Keys
120	GCOVZA005AFSA	AD	N		Hinge,External Connector Cover
121	JKNBZA094AFSA		N		Button,10 Key
122	JKNBZA068AFSA	AK	N		Side Keys
123	PGSK-A001AFZZ	AC			Gasket
124	PMAGZA004AFZZ	AE			Magnet
125	PSHEFA040AFZZ	AD	N		Tape,Screw Cover,Hinge B
126	PSHEZA440AFZZ	AD			Cushion Sheet
127	RMiCCA005AFZZ	AL			Microphone (MIC200,201)
128	RMOTVA009AFZZ	AK	N		Vibrator (VIB001)
129	RPHODA015AFZZ	AK			Earpiece (EP1000)
130	RSP-ZA020AFZZ	AN	N		Stereo Speakers (SP2000,2001)
132	TLABZA075AF0T	AC			Label,Qualcomm
601	LX-EZ0184AFZZ	AB			Screw (M1.7x6),Silver
602	LX-EZ0195AF05	AB			Screw (M1.7x5),Green
603	LX-EZ0196AFZZ	AB			Screw (M1.7x5.5),Black
604	LX-EZA004AFZZ	AB			Screw (M1.4x2.8),Silver
605	LX-EZA006AFZZ	AB			Screw (M1.4x1.8),Black
606	LX-EZA010AFFN	AB			Screw (M1.7x7.5),Silver

[13] ACCESSORIES/PACKING PARTS



AC Charger

RADPTA014AF01	RADPTA015AF01	RADPTA016AF01
		

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[13] ACCESSORIES/PACKING PARTS					
1	GFTABA038AFSA	AN	N		Battery Cover (Except for [C,F,K,U])
1	GFTABA051AFSA		N		Battery Cover [K]
1	GFTABA052AFSA		N		Battery Cover [C,F]
1	GFTABA054AFSA		N		Battery Cover [U]
2	QPLGJA005AFZZ	**			Video Cable (Except for [C,F,U])
2	QPLGJA006AFZZ	**			Video Cable [C,F,U]
⚠ 3	RADPTA014AF01	**			AC Charger [E,R] (XN-1QC70)
⚠ 3	RADPTA015AF01	**			AC Charger (Except for [A,E,R,Z]) (XN-1QC71)
⚠ 3	RADPTA016AF01	**			AC Charger [A,Z] (XN-1QC72)
4	RPHÖHA006AF01	AW			Stereo Handsfree
5	RUNTZ0886AF01	AM			Adaptor,miniSD(TM) Memory Card
6	SPAKAA051AFZZ	AH			Packing Add. (Except for [C,U])
6	SPAKAA053AFZZ	AH			Packing Add. [C,U]
7	SPAKCA198AFZZ	AN	N		Packing Case [C,F,K,U]
7	SPAKCA344AFZZ		N		Packing Case [A,B,D,E,P,R,S,W,X,Z]
7	SPAKCA345AFZZ		N		Packing Case [G,H,T]
8	SPAKP1236AFZZ	AA			Polyethylene Bag,miniSD(TM) Memory Card
9	SPAKP1252AFZZ	AC			Polyethylene Bag,AC Charger
10	SPAKP1284AFZZ	AC			Polyethylene Bag,Phone
11	SPAKPA018AFZZ	AN	N		Accessories Box (Except for [C,F,G,H,T,U]
11	SPAKPA019AFZZ	AN	N		Accessories Box [G,H,T]
11	SPAKPA020AFZZ	AN			Accessories Box [F]
11	SPAKPA025AFZZ	AN			Accessories Box [C,U]
12	SPAKXA103AFZZ	AG			Pad,Division (Except for [C,U])
12	SPAKXA147AFZZ	AG	N		Pad,Division [C,U]
13	SSAKAA004AFZZ	AA			Polyethylene Bag,User Guide (Except for [C,U])
13	SSAKA0022AFZZ	AA	N		Polyethylene Bag,User Guide [C,U]
15	SSAKH0329AFZZ	AA			Polyethylene Bag,Battery Cover
16	TCADHA150AFZZ		N		Quick Start Guide [A,B,E,R,X,Z]
16	TCADHA151AFZZ		N		Quick Start Guide [S]
16	TCADHA152AFZZ		N		Quick Start Guide [D]
16	TCADHA153AFZZ		N		Quick Start Guide [W]
16	TCADHA154AFZZ		N		Quick Start Guide [P]
16	TCADHA155AFZZ		N		Quick Start Guide [G]
16	TCADHA156AFZZ		N		Quick Start Guide [T]
16	TCADHA157AFZZ		N		Quick Start Guide [H]
17	TCADZ0263AFZZ	AC	N		Card,Free Service ([T]Only)
18	TCADZA073AFZZ		N		DOC Copy ([B]Only)
19	TCAUHA017AFZZ		N		Label,Stereo Handsfree Caution ([F]Only)
20	TCAUZA013AFZZ	AB			Caution Sheet,Video Cable
21	TGANEA016AFZA				Guarantee [E]
21	TGANEA019AFZA				Guarantee [R]
21	TGANEA021AFZA				Guarantee [A,Z]
21	TGANGA005AFZA		N		Guarantee [K]
21	TGANiA004AFZA				Guarantee [T]
21	TGANSA001AFZA				Guarantee [S]
21	TGANZA033AFZA				Guarantee [D]
21	TGANZA035AFZA				Guarantee [P]
21	TGANZA037AFZA				Guarantee [W]
21	TGANZA039AFZA				Guarantee [H]
21	TGANZA041AFZZ	AD	N		Guarantee [C]
21	TGANZA042AFZA		N		Guarantee [U]
22	TiNSEA087AFZZ		N		User Guide [B,E,R,X]
22	TiNSEA088AFZZ		N		User Guide [A,Z]
22	TiNSEA089AFZZ		N		User Guide [C (English)]
22	TiNSEA090AFZZ		N		User Guide [U (English)]
22	TiNSFA037AFZZ		N		User Guide [F]
22	TiNSFA039AFZZ		N		User Guide [C (French)]
22	TiNSFA040AFZZ		N		User Guide [U (French)]
22	TiNSGA041AFZZ		N		User Guide [G]
22	TiNSGA042AFZZ		N		User Guide [K]
22	TiNSGA043AFZZ		N		User Guide [C (German)]
22	TiNSHA018AFZZ		N		User Guide [H]
22	TiNSHA023AFZZ		N		User Guide [U (Dutch)]
22	TiNSiA025AFZZ		N		User Guide [T]
22	TiNSiA026AFZZ		N		User Guide [C (Italian)]
22	TiNSPA020AFZZ		N		User Guide [P]
22	TiNSSA021AFZZ		N		User Guide [S]
22	TiNSWA020AFZZ		N		User Guide [W]
22	TiNSZA034AFZZ		N		User Guide [D]
23	TLABZ2793AFZZ	AA			Sheet,Security ([B,D,E] Only)
24	TLABZA044AFZZ	AC			Sheet,Transparent ([G,H]Only)
25	TLABZA053AFZZ	AB	N		Label,ATIC ([A,Z]Only)
26	TLABZA061AFZZ	AC	N		Label,Battery ([U]Only)
27	TLABZA099AFZZ		N		Label,Hungary ([B]Only)
⚠ 28	UBATiA019AF01	**			Lithium Ion Battery (XN-1BT70)
29	UDSKAA045AF01		N		CD-ROM (Except for [C,F,G,H,K,T,U])
29	UDSKAA046AF01		N		CD-ROM [G,H,T]
29	UDSKAA047AF01		N		CD-ROM [C,F,K,U]
30	UiMC-A011AF01	BG			miniSD(TM) Memory Card (Except for [C,F,U])
30	UiMC-A015AF01		N		miniSD(TM) Memory Card [C,F,U]
31	--------	-			Label,Case

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
[14] P.W.B. ASSEMBLY					
PWB-A	－－－－－－－－	－			Main (Not Replacement Item)
PWB-B	－－－－－－－－	－			Display (Not Replacement Item)
PWB-C	DUNTMW256AF01	AK			Mobile Light
PWB-D	RUiTKA064AFZZ				MR Sensor FPC (PWB-D)
PWB-E	RUiTKA065AFZZ	AZ	N		Key FPC UNIT
PWB-F	RUiTKA067AFZZ	BY			Camera Unit
PWB-G	RUiTKA070AFZZ	AZ			Sub Camera Unit

– MEMO –

CONFIDENTIAL

SHARP

SHARP CORPORATION
Communication Systems Group
Customer Satisfaction Promotion Center
Higashihiroshima, Hiroshima 739-0192, Japan

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