Date: May, 2007 / Issue 1.0

Service Manual

Model : KE500/ME550c

Service Manual

KE500/ME550c

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1. General Description

The information in this manual is subject to change without notice and should not be construed as a commitment by LGE Inc. Furthermore, LGE Inc.
reserves the right, without notice, to make changes to equipment design as advances in engineering and manufacturing methods warrant.

※ This manual provides the information necessary to install, program, operate and maintain the ME550c.

2. Performance

2.1 Product Name
ME550c : GPRS Class 10 / EDGE Class 10

2.2 Supporting Standard

Item	Feature	Comment
Supporting Standard	EGSM/DCS1800/PCS1900 with seamless handover Phase 2+(include AMR) SIM Toolkit : Class 1,2,3,E	
Frequency Range	EGSM TX : 880 - 915 MHz EGSM RX : 925 - 960 MHz DCS1800 TX : 1710 - 1785 MHz DCS1800 RX : 1805 - 1880 MHz PCS1900 TX : 1850 - 1910 MHz PCS1900 RX : 1930 - 1990 MHz	
Application Standard	WAP 2.0, JAVA 2.0	

2.3 Main Parts : GSM Solution

Item	Part Name	Comment
Digital Baseband	Neptune (D761811BZVL): TI	
Analog Baseband	Triton (TWL3029): TI	
RF Chip	B6PLD: RENESAS	

2.4 HW Feature

Item		Feature	Comment
Form Factor		Slide	
Battery		1) Capacity Standard : Li-Polymer, 800mAh	
		2) Packing Type : Hard Pack	
Size		Standard : 97.0 X 47.0 X 14.9 mm	
Weight		90g	With Battery
Volume		75cc	
PCB		Staggered 10Layers , 0.8t	
Stand by time		250 hrs	@ Paging Period 5
Charging time		3 hrs	@ Power Off / 800mAh
Talk time		Min : 3.0 hrs @ Power Level 7	@ EGSM / 800mAh
RX sensitivity		EGSM : -105 dBm	
		DCS 1800 : -105 dBm	
		PCS 1900 : -105 dBm	
TX output power	**GSM/ GPRS**	EGSM : 33 dBm	Class4 (EGSM)
		DCS 1800 : 30 dBm	Class1 (PCS)
		PCS 1900 : 30 dBm	Class1 (DCS)
	EDGE	EGSM : 27 dBm	E2 (EGSM)
		DCS 1800 : 26 dBm	E2 (PCS)
		PCS 1900 : 26 dBm	E2 (DCS)
GPRS compatibility		GPRS Class 10	
EDGE compatibility		EDGE Class 10	
SIM card type		Plug-In SIM	
		3V /1.8V	
Display		**Main LCD**	
		262K Color TFT (176 x 220)	
		Backlight : White LED	
Built-in Camera		2M CMOS Camera	One button access

2. Performance

Item	Feature	Comment
Status Indicator	None	
Keypad	Alphanumeric Key : 12 Function Key : 9 Side Key : 4 Total No of Keys :25	Function Key: 4 Key Navigation, OK, F1, F2, CLR, SND Side Key : Volume up/down, CAM, PWR/END
ANT	Main : Internal Fixed Type Blue tooth : Internal Fixed Type	
System connector	18 Pin	
Ear Phone Jack	18pin, 4 Pole, Stereo	
PC synchronization	Yes	
Memory	NAND Flash : 1Gbit	
	SDRAM : 512Mbit	
Speech coding	FR, EFR, HR,AMR	
Data & Fax	Built in Data & Fax support	
Vibrator	Built in Vibrator	
Blue Tooth	V2.0, HSP, HFP, OPP, FTP(server),	
	BPP, A2DP, AVRCP	
MIDI (for Buzzer Function)	SW Decoded 64Poly	
Music Player	MP3/ AAC/AAC+	With Graphic EQ
Camcorder	MPEG4, H.263, H.264	
Voice Recording	Yes	
Speaker Phone mode Support	Yes	
Travel Adapter	Yes	
CDROM	Yes	
Stereo Headset	Yes	Optional
Data Cable	Yes	Optional
T-Flash (External Memory)	Yes	Optional

Item	Feature	Comment
RSSI	0 ~ 5 Levels	
Battery Charging	0 ~ 4 Levels	
Key Volume	0 ~ 5 Level	
Audio Volume	1 ~ 5 Level	
Time / Date Display	Yes	NITZ
Multi-Language	Yes	English / French
Quick Access Mode	Phone Book / Message / Camera / My Stuff / Favorite	
PC Sync	Schedule / Phonebook / MEMO / SMS / Download(Photo, file)	
Speed Dial	Yes (2~9)	Voice mail center -> 1 key
Profile	Yes	
CLIP / CLIR	Yes (different melody)	
Phone Book	4 Numbers + 1 Memo + 1 e-mail + Group Select + Picture	Total 1000 Member
Last Dial Number	Yes (40)	
Last Received Number	Yes (40)	
Last Missed Number	Yes (40)	
Search by Number/Name	Name only	
Group	7	Possible Rename
Fixed Dial Number	Yes	
Service Dial Number	Yes	
Own Number	Yes	
Voice Memo	Yes	
Call Reminder	Yes	
Network Selection	Automatic	
Mute	Yes	
Call Divert	Yes	
Call Barring	Yes	
Call Charge (AoC)	No	No for Cingular

2. Performance

Item	Feature	Comment
Call Duration	Yes	
SMS (EMS)	100 (10)	EMS : Release4 (Except Text align)
SMS Over GPRS	Yes	
EMS Melody / Picture Send / Receive / Save	Yes	
MMS MPEG4 / Send / Receive / Save	Yes	
Long Message	MAX 925 Characters	
Cell Broadcast	Yes	
Download	Over the WAP	
Game	YES	
Calendar	Yes	
Memo	50	
Unit Convert	Currency/Area/Length/Volume/Weight/Temperature/Velocity	
Tip Calculator	No	
Wall Paper	Yes	Default 5ea
WAP Browser	Over WAP 2.0	Up Brower Obigo Q-line
Download Melody / Wallpaper	Yes	Over WAP
SIM Lock	Yes	Operator Dependent
SIM Toolkit	Class 1, 2, 3, A-E	
MMS	Yes	Openwave MMS Client
EONS	Yes	
CPHS	Yes	V4.2
ENS	Yes	
Camera	Yes	2M F/F / Digital Zoom : x4
JAVA	Yes	CLDC V1.1 / MIDP V2.0 Download Over WAP
Voice Dial	No	

Item	Feature	Comment
IrDa	No	
Blue tooth	Yes	V2.0 HSP, HFP, OPP, FTP(server), BPP, A2DP, AVRCP
GPRS	Yes	Class 10
EDGE	Yes	Class 10
Hold / Retrieve	No	
Conference Call	Yes	Max. 6
DTMF	Yes	
Memo pad	Yes	
TTY	No	
AMR	Yes	
Sync ML	No	
IM	No	
Email	No	

2.6 Technical Specification

<table>
<tr><th>Item</th><th>Description</th><th colspan="6">Specification</th></tr>
<tr><td>1</td><td>Frequency Band</td><td colspan="6">GSM850
• TX: 824 + n x 0.2 MHz (n=1 ~ 124)
• RX: TX + 45 MHz
GSM900
• TX: 890 + n x 0.2 MHz (n=1 ~ 124)
• 890 + (n-1024) x 0.2 MHz (n=975 ~ 1023)
• RX: TX + 45 MHz
DCS1800
• TX: 1710 + (n-511) x 0.2 MHz (n = 512 ~ 885)
• RX: TX + 95 MHz
PCS1900
• TX: 1850 + (n-511) x 0.2 MHz
• RX: 1930 + (n-511) x 0.2 MHz (n = 512 ~ 810)</td></tr>
<tr><td>2</td><td>Phase Error</td><td colspan="6">RMS < 5 degrees
Peak < 20 degrees</td></tr>
<tr><td>3</td><td>Frequency Error</td><td colspan="6">< 0.1ppm</td></tr>
<tr><td rowspan="20">4</td><td rowspan="20">Power Level</td><td colspan="6">GSM850/GSM900</td></tr>
<tr><td>Level</td><td>Power</td><td>Toler.</td><td>Level</td><td>Power</td><td>Toler.</td></tr>
<tr><td>5</td><td>33 dBm</td><td>±2dB</td><td>13</td><td>17 dBm</td><td>±3dB</td></tr>
<tr><td>6</td><td>31 dBm</td><td>±3dB</td><td>14</td><td>15 dBm</td><td>±3dB</td></tr>
<tr><td>7</td><td>29 dBm</td><td>±3dB</td><td>15</td><td>13 dBm</td><td>±3dB</td></tr>
<tr><td>8</td><td>27 dBm</td><td>±3dB</td><td>16</td><td>11 dBm</td><td>±5dB</td></tr>
<tr><td>9</td><td>25 dBm</td><td>±3dB</td><td>17</td><td>9 dBm</td><td>±5dB</td></tr>
<tr><td>10</td><td>23 dBm</td><td>±3dB</td><td>18</td><td>7 dBm</td><td>±5dB</td></tr>
<tr><td>11</td><td>21 dBm</td><td>±3dB</td><td>19</td><td>5 dBm</td><td>±5dB</td></tr>
<tr><td>12</td><td>19 dBm</td><td>±3dB</td><td></td><td></td><td></td></tr>
<tr><td colspan="6">DCS1800/PCS1900</td></tr>
<tr><td>Level</td><td>Power</td><td>Toler.</td><td>Level</td><td>Power</td><td>Toler.</td></tr>
<tr><td>0</td><td>30 dBm</td><td>±2dB</td><td>8</td><td>14 dBm</td><td>±3dB</td></tr>
<tr><td>1</td><td>28 dBm</td><td>±3dB</td><td>9</td><td>12 dBm</td><td>±4dB</td></tr>
<tr><td>2</td><td>26 dBm</td><td>±3dB</td><td>10</td><td>10 dBm</td><td>±4dB</td></tr>
<tr><td>3</td><td>24 dBm</td><td>±3dB</td><td>11</td><td>8 dBm</td><td>±4dB</td></tr>
<tr><td>4</td><td>22 dBm</td><td>±3dB</td><td>12</td><td>6 dBm</td><td>±4dB</td></tr>
<tr><td>5</td><td>20 dBm</td><td>±3dB</td><td>13</td><td>4 dBm</td><td>±4dB</td></tr>
<tr><td>6</td><td>18 dBm</td><td>±3dB</td><td>14</td><td>2 dBm</td><td>±5dB</td></tr>
<tr><td>7</td><td>16 dBm</td><td>±3dB</td><td>15</td><td>0 dBm</td><td>±5dB</td></tr>
</table>

Item	Description	Specification	
5	Output RF Spectrum (due to modulation)	**GSM900**	
		Offset from Carrier (kHz).	Max. dBc
		100	0.5
		200	-30
		250	-33
		400	-60
		600~ <1,200	-60
		1,200~ <1,800	-60
		1,800~ <3,000	-63
		3,000~ <6,000	-65
		6,000	-71
		DCS1800/PCS1900	
		Offset from Carrier (kHz).	Max. dBc
		100	0.5
		200	-30
		250	-33
		400	-60
		600~ <1,200	-60
		1,200~ <1,800	-60
		1,800~ <3,000	-65
		3,000~ <6,000	-65
		6,000	-73
6	Output RF Spectrum (due to switching transient)	**GSM900**	
		Offset from Carrier (kHz)	Max. (dBm)
		400	-19
		600	-21
		1,200	-21
		1,800	-24

2. Performance

Item	Description	Specification		
6	Output RF Spectrum (due to switching transient)	**DCS1800/PCS1900**		
		Offset from Carrier (kHz).	Max. (dBm)	
		400	-22	
		600	-24	
		1,200	-24	
		1,800	-27	
7	Spurious Emissions	Conduction, Emission Status		
8	Bit Error Ratio	BER (Class II) < 2.439% @-102dBm		
9	Rx Level Report accuracy	±3 dB		
10	SLR	8 ±3 dB		
11	Sending Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	0	-12
		1,000	0	-6
		2,000	4	-6
		3,000	4	-6
		3,400	4	-9
		4,000	0	-
12	RLR	2 ±3 dB		
13	Receiving Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	2	-7
		500	*	-5
		1,000	0	-5
		3,000	2	-5
		3,400	2	-10
		4,000	2	
		* Mean that Adopt a straight line in between 300 Hz and 1,000 Hz to be Max. level in the range.		

Item	Description	Specification	
14	STMR	13 ±5 dB	
15	Stability Margin	> 6 dB	
16	Distortion	dB to ARL (dB)	Level Ratio (dB)
		-35	17.5
		-30	22.5
		-20	30.7
		-10	33.3
		0	33.7
		7	31.7
		10	25.5
17	Side Tone Distortion	Three stage distortion < 10%	
18	<Change> System frequency (13 MHz) tolerance	≤ 2.5ppm	
19	<Change>32.768KHz tolerance	≤ 30ppm	
20	Power consumption	Full power	
		- 340mA(GSM900), < 260mA(DCS/PCS)	
		Standby	
		- Normal mode ? 4.0mA(Max.power)	
		- Using Test mode on DSP Sleep function ? 6mA	
20	Talk Time	GSM900/Lvl 7 (Battery Capacity 800mA) : 180 min GSM900/Lvl 12 (Battery Capacity 800mA) : 300 min PCS1900/Level5 (Battery 800mA) : 310 Min PCS1900/Level10(Battery 800mA) : 390 Min	
21	Standby Time	Under conditions, at least 200 hours: 1. Brand new and full 800mAh battery 2. Full charge, no receive/send and keep GSM in idle mode. 3. Broadcast set off. 4. Signal strength display set at 3 level above. 5. Backlight of phone set off.	
22	Ringer Volume	At least 70 dB under below conditions: 1. Ringer set as ringer. 2. Test distance set as 50 cm	
23	Charge Voltage	Fast Charge : < 550 mA Slow Charge: < 60 mA	

Item	Description	Specification	
24	Antenna Display	Antenna Bar Number	Power
		5	-85 dBm ~
		4	-90 dBm ~ -86 dBm
		3	-95 dBm ~ -91 dBm
		2	-100 dBm ~ -96 dBm
		1	-105 dBm ~ -101 dBm
		0	~ -105 dBm
25	Battery Indicator	Barttey Bar	Voltage
		0(included Blinking)	3.65V~3.35V
		1	3.71V ~ 3.66V
		2	3.78V ~ 3.72V
		3	3.91V ~ 3.79V
		4	4.20V ~ 3.92V
26	Low Voltage Warning	3.60V↓ ±0.03V (Standby)	
		3.50V↓ ±0.03V (Call)	
27	Forced shut down Voltage	3.35±0.03 V	
28	Battery Type	1 Li-polymer Battery, Hardpack Standard Voltage = 3.7 V Battery full charge voltage = 4.2 V Capacity: 800mAh	
27	Travel Charger	Switching-mode charger Input: 100 ~ 240 V, 50/60Hz Out put: 4.8V, 900mA	

3. Circuit Description

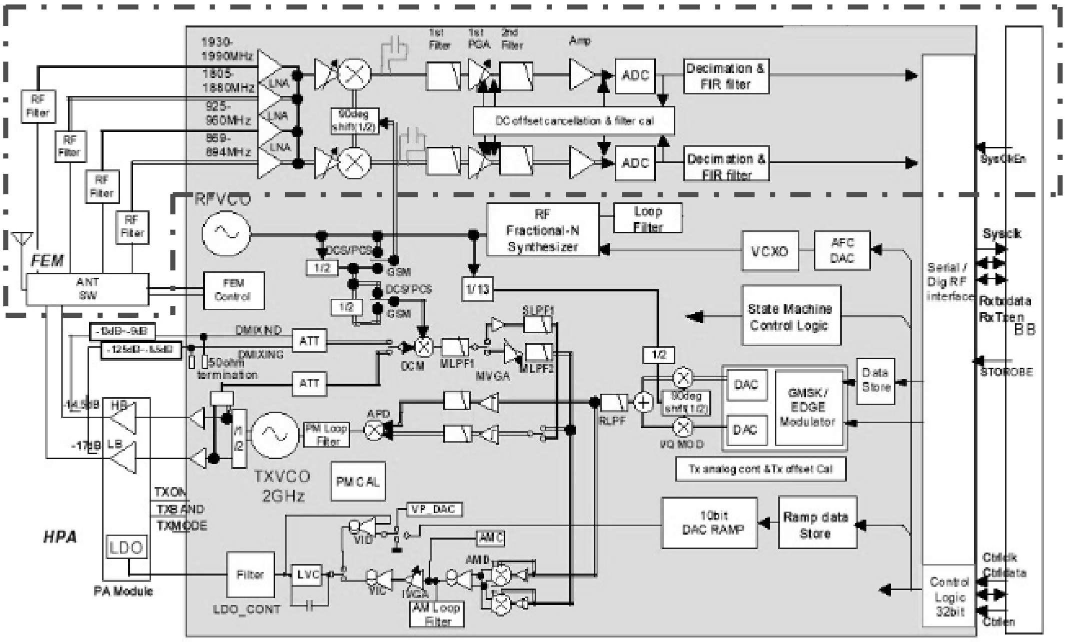
3.1 General Description

The RF part consists of a transmitter, a receiver, a synthesizer, a voltage supply and a DCXO part. The main RF Chipset B6PLD is a highly integrated RF tranceiver IC FOR Digital Interface of GSM 850, GSM900, DCS1800 and PCS1900 quad-band cellualr systems. The B6PLD incorporates EDGE tranceiver apability, quad R low-noise amplifiers(LNSa). Direct conversion mixers, a programmable gain amplifier(PGA) with DC offset and frequency response correction, ADC, Digital filiter, Digital Interface, fully integrated VCOs, an RF fractiona-N synthesiser, a low-noise offset PLL transmitter, Digital modulator, TXDAC, RAMPDAC, and AFCDAC. The B6PLD includes state machine control through serial programming. All functions operate down to 2.67V and are housed in a 72-pin BGA package. Hence the B6PLD can form a small size transceiver handset for quad band EDGE tranceiver.

3.2 RF Part

3.2.1 Receiver Part

The B6PLD receiver supports quad band, so the front-end incorporates four LNAs and two mixers. The incoming RF signals are mixed directly down to I/Q baseband by the front-end bolck. This incorporates four LNAs/four buffers and two Gillbert Cell mixer blocks optimised for operation at 850MHz, 900MHz, 1800MHz and 1900MHz respectively. The front-end block is followed by two closely matched baseband amplifier chains. These include distributed low pass filtering, one switched gain stage and one fixed gain stage. In addition, the baseband section integrates A/D and D/A converters which provide automatic on-chip correction of DC offsets.



<Fig.1> Receiver Part Block Diagram

3.2.1.1 Baseband PGA/Low pass Filter Specifications

The baseband programmable amplifier comprises one stage with variable gain followed by a fixed gain amplifier. The overall gain control range is 36dB with 6dB Steps. The filtering is provided by a single R/C low pass filter with an on-chip capacitor followed by on-chip Chebychev low pass filters. The filters have been specified to achieve maximal group delay flatness in the pass-band combined with the required levels of suppression of interfering signals. The distribution of the gain and filtering has been designed to ensure that the receiver does not compress under blocking conditions. The final fixed gain amplifier is included to match the on-chip levels to the input dynamic range of the ADC.

3.2.1.2 DC offset auto-calibration system

B6PLD implements a system for cancelling the DC offsets in the baseband programmable gain amplifiers(PGA). This prevents a small DC offset at the input giving a large DC offset at the output, even at high gain settings. When the B6PLD receiver is performing an auto-calibration, the sequencer cancels the offsets locally around the PGA, then the Digital filter. The system includes switches to short out the signal path whilst the cancellation is occurring. The switches are opened in sequence as the calibration progresses. For PGA the A/D converter system employs a successive approximation technique and achieves 6 bit resolution. The PGA stage has an associated 6 bit current DAC which cancels the DC offset at the output. The sequencer ensures that on-chip filters have sufficient time to settle before applying correction in the next digital offset cancellation stage.

3.2.2 Transmitter part

The B6PLD transmitter is capable of both GMSK and 8-PSK modulation, to support for conventional GSM and EDGE. B6PLD integrates all loop filters to configure both PM loop and AM loop. See block diagram below.

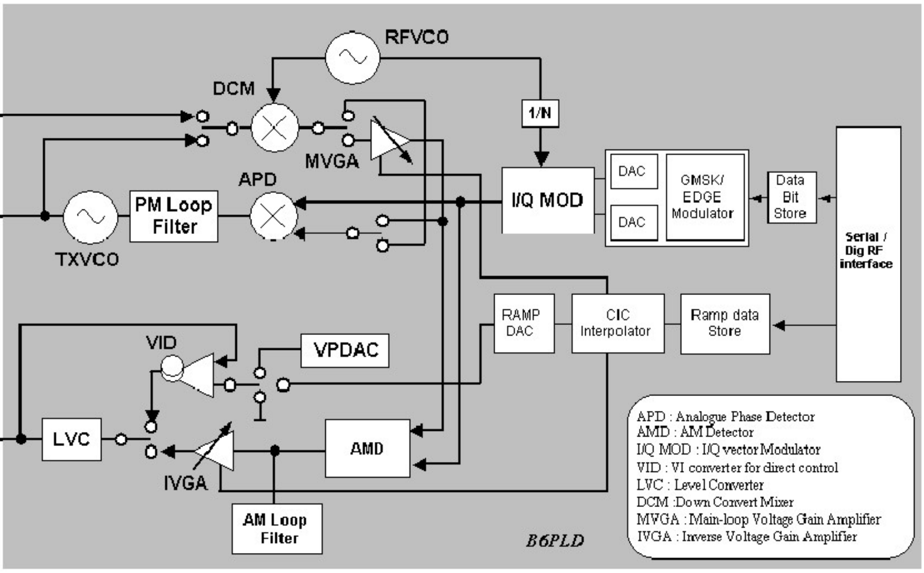


Fig. Simplified Block diagram for Tx part

3.2.2.1 Polar Loop Structure

Three main functions are identified in the transmitter architecture; I/Q vector modulation at IF frequency, amplitude and phase loop at IF/RF frequencies and power amplification.

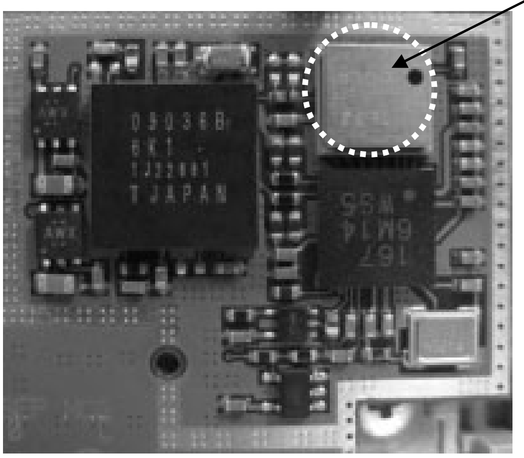
3.2.3 RF Systhesiser

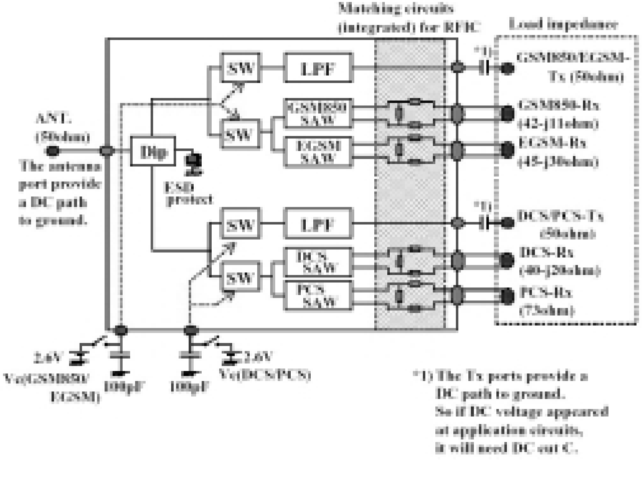
RF Synthesiser

Operating frequency	Rx mode	**GSM850**	3476.8MHz ~ 3575.2MHz
		GSM900	3700.8MHz ~ 3839.2MHz
		DCS1800	3610.4MHz ~ 3759.6MHz
		PCS1900	3860.4MHz ~ 3979.6MHz
	Tx mode ([IF1:IF0]=[0:1])	**GSM850**	3626.48MHz ~ 3734.72MHz
		GSM900	3872.88MHz ~ 4025.12MHz
		DCS1800	3583.27MHz ~ 3739.58MHz
		PCS1900	3876.60MHz ~ 4001.48MHz
	Tx mode ([IF1:IF0]=[1:0])	**GSM850**	3596.50MHz ~ 3703.85MHz
		GSM900	3840.87MHz ~ 3991.85MHz
		DCS1800	3569.11MHz ~ 3724.80MHz
		PCS1900	3861.28MHz ~ 3985.66MHz
	Tx mode ([IF1:IF0]=[1:1])	**GSM850**	3571.53MHz ~ 3678.13MHz
		GSM900	3814.20MHz ~ 3964.13MHz
		DCS1800	3557.22MHz ~ 3712.38MHz
		PCS1900	3848.42MHz ~ 3972.38MHz

3.2.4 Front End Module Specification

3.2.4.1 Block Diagram and Internal Matching Condition





*1) The Tx ports provide a
DC path to ground.
So if DC voltage appeared
at application circuits,
it will need DC cut C.

3.2.4.2 Logic Table for Selction

Select Mode	Vc(GSM850/EGSM)	Vc(DCS/PCS)
GSM850_Rx	Low	Low
EGSM_Rx	Low	Low
GSM850/EGSM_Tx	High	Low
DCS_Rx	Low	Low
PCS_Rx	Low	Low
DCS/PCS_Tx	Low	High

<Table> Band SW Logic Table

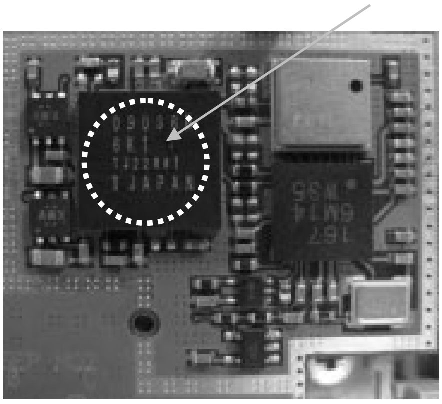
3.2.5 Power Amplifier Module for Quad-band GSM/GPRS/EDGE

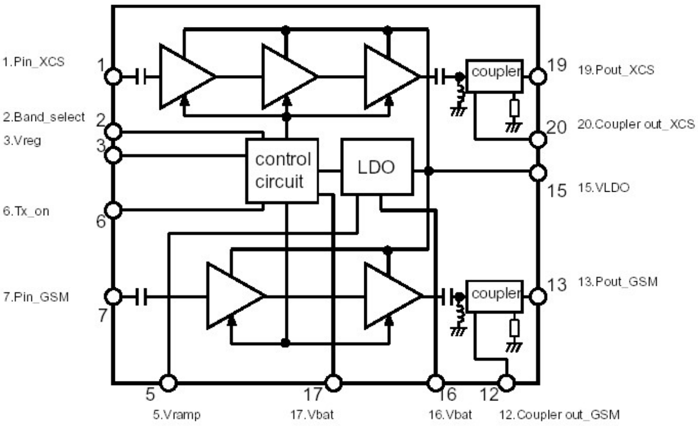
3.2.5.1 PAM Specification

- -. Quad band GSM, GPRS & Ploar Loop EDGE Amplifier
- -. For 3.5V nominal operation
- -. Bulit-in LDO circuit
- -. GPRS Class 12 operation compatible
- -. Integrated directional coupler

3.2.5.2 Circuit Diagram and peripheral components

RPF09036B





3.2.6 Digital Core

3.2.6.1 Digital Interface Block Diagram

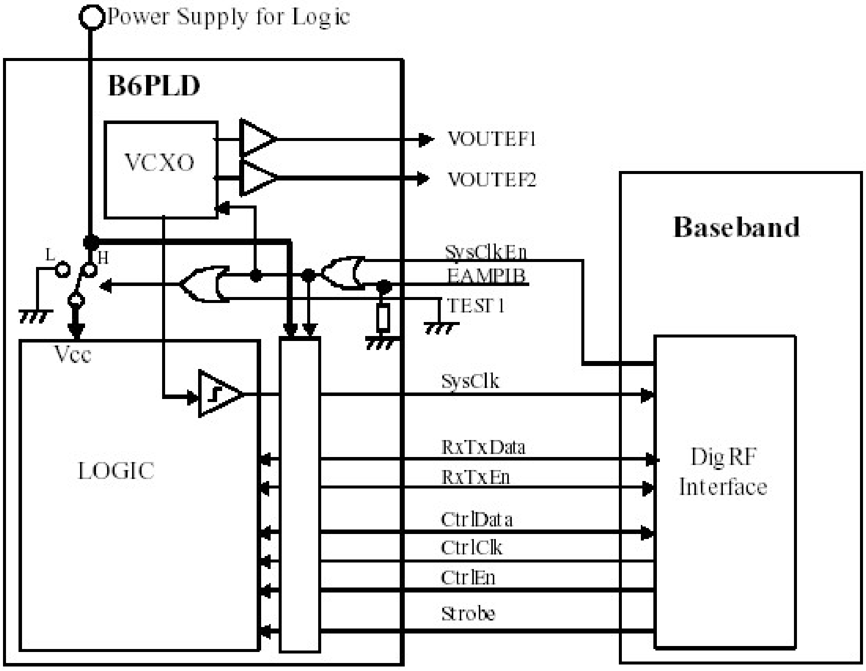


Fig. 1-1 Digital Interface Block Digram

3.2.6.2 Control system and digital interface

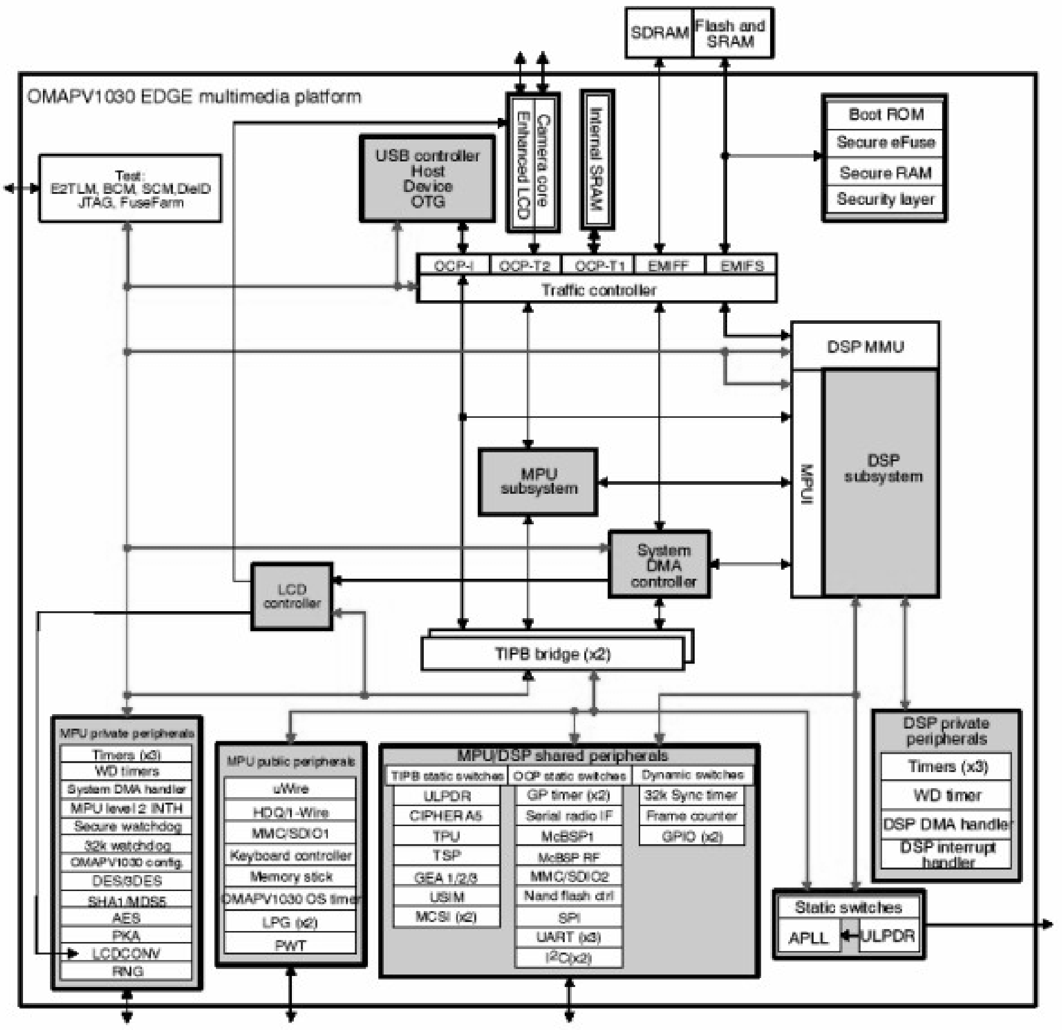
The B6PLD is a RF transceiver IC for GSM850, GSM900, DCS1800 and PCS1900 quad band cellular system, and incorporates EDGE transceiver capability. The B6PLD has a digital interface connection to the baseband processor. This interface complies with the digital interface specification DigRF standard v112.
The digital interface consists of two separate interface connections; (1) the control interface, (2) the data interface, and a system clock on/off control signal and a precise timing singal. These are realized by eight signal lines in B6PLD(Look at Fig1.1 above)

- The control interfce is used to configure the B6PLD for RX and TX operation, transfers of control data for several built-in circuits, and for triggering the events. The control interface comprise a bi-directional 3-wire serial interface with the three signal lines CtrlData, CtrlEn and CtrlClk accessing the control registers in B6PLD by transferring the control words.

- The data interface is used to transfer transmit modulation symbols and receive IQ-sampling data. The data interface comprises a single serial bus with the three signal lines RxTxData, RxTxEn and SysClk. The SysClk is used for system clock to baseband.

- The SsClkEn signal enables the SysClk output and powers the 26MHz oscillator on. When the SysClkEn is negated, the SysClk is held low, and if the TEST1 pin is low by the default settings, the logic power supply by typical 1.8 volts to the internal core logic circuits is also switched off.

3.3 Digital Baseband



<Fig.6> OMAPV1030 Block Diagram

3.3.1 General description

The OMAPV1030 E-GPRS multimedia device belongs to the Texas Instruments OMAP-Vox_ processors family. It combines both a modem engine and an application engine. Memory and CPU resources are shared between modem and application processing.

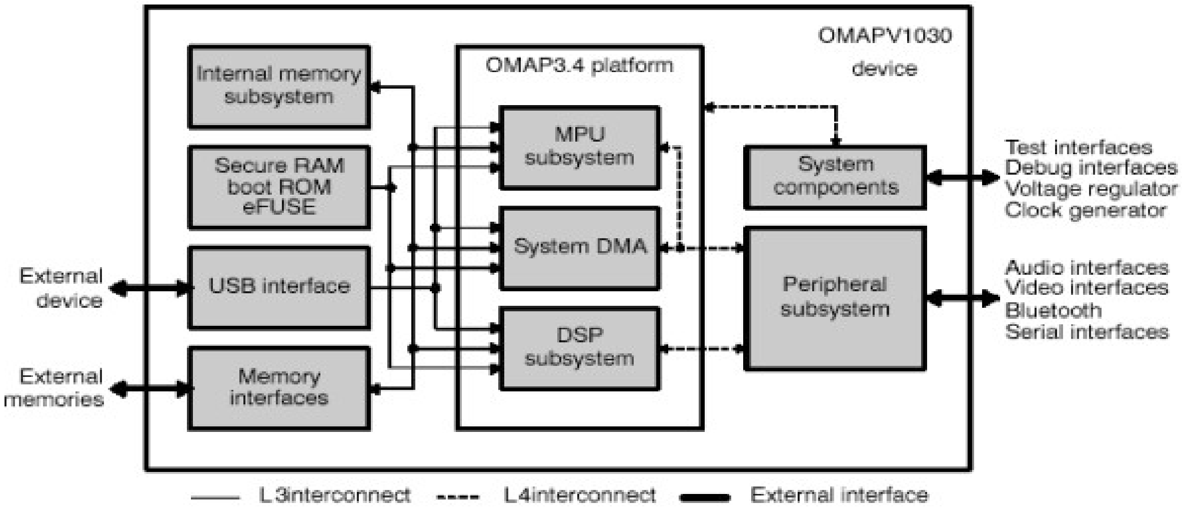
The OMAPV1030 chip is based on the OMAP3.4 architecture and integrates two processor subsystems:

- An MPU subsystem based on an ARM926EJ-S
- A DSP subsystem based on a UMA 2.6 architecture integrating a C55x DSP core The OMAPV1030's silicon process technology is a c027.0 90-nm digital CMOS.

3.3.2 Block Description

The OMAPV1030 E-GPRS multimedia device is based on an OMAP3.4 platform that integrates:
- The MPU subsystem
- The DSP subsystem
- A system DMA
- A traffic controller providing:
- External memory interfaces with:
- A slow interface (EMIFS) to ROM, SRAM, FLASH memories
- A fast interface (EMIFF) to SDRAM memories
- Layer 3 (L3) interconnect made of two OCP target ports (OCP-T1 and OCP-T2) and one OCP initiator port (OCP-I)
- Layer 4 (L4) interconnect made of two DSP peripheral busses (private DSP TIPB and shared DSP TIPB) and two MPU peripheral busses (public MPU TIPB and private MPU TIPB)
- Clock management
- A set of processor peripherals:
- Three 32-bit timers, a 16-bit Watchdog timer, and an interrupt handler for the MPU
- Three 32-bit timers, a 16-bit Watchdog timer, and a 2nd-level interrupt handler for the DSP
- Test and debug interfaces (JTAG, Window Tracer)
- Trace capabilities: ETM9 and Ctools

The other OMAPV1030 modules or subsystems are connected to the OMAP3.4 platform through the L3 and L4 interconnects.



<Fig.7> OMAPV1030 Top-Level Architecture Overview

The OMAP3.4 platform is the computing core of the device. The other OMAPV1030 components are organized as follows:

- The internal memory subsystem is made of a single-port 256K-bit shared internal SRAM.
- The security subsystem is a set of several components, including dedicated a secure mode to run secure applications.
- A master-slave USB module provides an external interface supporting high data transfer rates between the OMAPV1030 and external application
- The memory interfaces provide access to external memories. There are two types of memory controllers:
- SDRAM controller supporting SDR and DDR modes
- General-purpose controller supporting asynchronous and synchronous
- The system components are used to manage system interactions such as interrupts, clock control, reset control, and idle management.
- The peripheral subsystem refers to all the peripherals accessible by the MPU and/or the DSP. They are all OCP- or TIPB-compliant and are connected to the OMAP3.4 platform through the traffic controller or the TIPB busses.

3.3.3 RF Interface (Digital RF Interface)

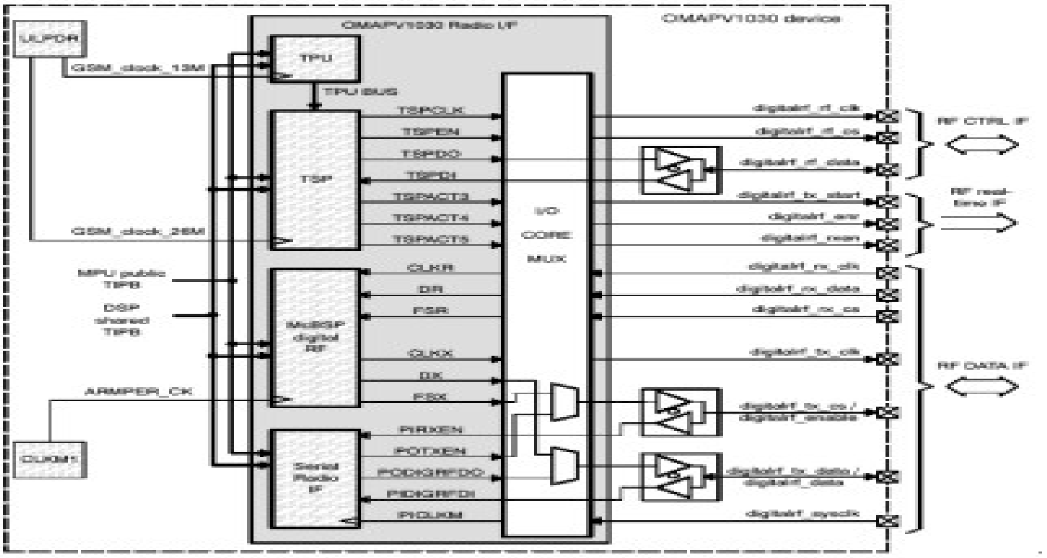
The OMAPV1030 radio interface module of OMAPV1030 device is an interface that carries the following information:

- Transmit symbols from DBB to RF IC
- Receive samples from RF IC to DBB
- Bidirectional information control
- Real-time and activation signals from DBB to RF IC
- System clock

The OMAPV1030 radio interface module of OMAPV1030 device supports two types of radio interfaces.

They differ mainly in the type of data interface:

- The first interface is based on a standard six-wire scheme: three wires for transmit and three for receive.
- The second one is based on a two-wire bidirectional scheme: one wire for data in/out, and one for control receive/transmit.



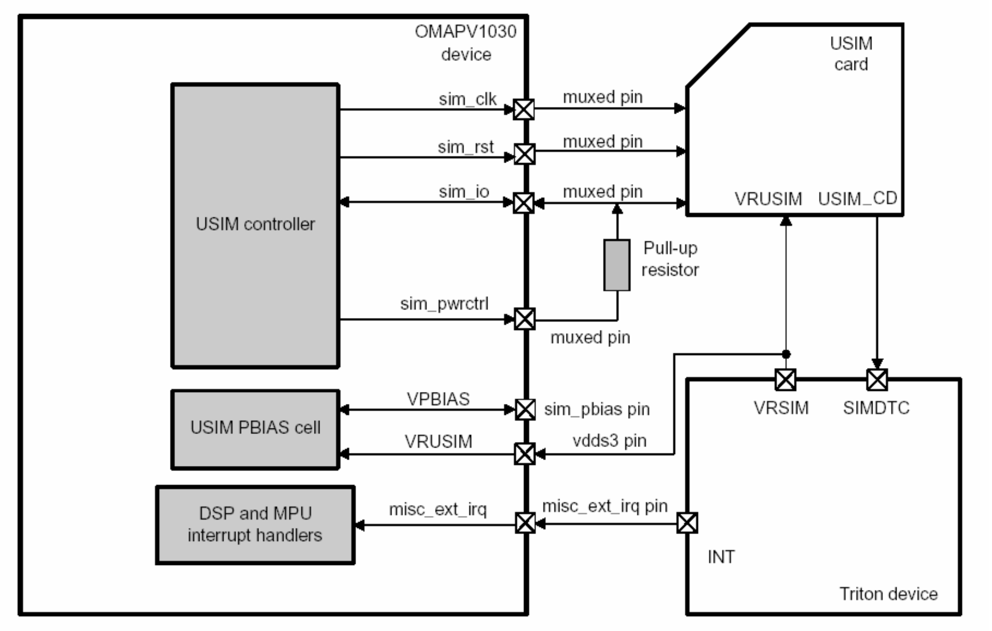
<Fig.8> OMAPV1030 Radio Interface

This implementation is based on the following:

- The time processing unit (TPU) module is a real-time sequencer dedicated to monitoring GSM baseband processing.
- The serial port of the time serial port (TSP) module controls both interfaces.
- The real-time TSPACT signal of the TSP module
- The McBSP digital RF module is used for the six-wire data interface.
- The serial radio interface module is used for the two-wire data interface.
- A system clock interface receives a squared 26-MHz clock from the RF IC.

3.3.4 SIM interface

SIM interface scheme is shown in below.
SIM_IO, SIM_CLK, SIM_RST, SIM_PWRCTRL ports are used to communicate DBB via ABB with plugged sim card and the LDO (VRSIM) in ABB enables operate 1.8V to 2.5V to search SIM card



<Fig.9> SIM Interface

SIM_CLK : SIM Card reference clock **SIM_PWCTRL :** SIM Card power activation
SIM_RST : SIM Card async/sync reset **SIM_IO :** SIM Card bi-directional data line
VRUSIM(Power supply VCC) : 3 V ±10% (class B) or 1.8 V ±10% (class C)
Misc_ext_irq : USIM card presence detection (USIM_CD) purposes.

3.3.5 UART Interface

ME550c has Three UART Drivers as follow :
- UART1 : USB - UART2 : ETM, Calibration - UART3 : AT command, Fax_modem, Bluetooth

UART1(USB)		
Resource	Name	Description
USB_DP	DP	Data
USB_DM	DM	Data
USB_PWR	POWER	USB_POWER
VBUS	VBUS	USB_Detect
UART2 (ETM)		
DEBUG_RX	RX	Receive Data(UART2)
DEBUG_TX	TX	Transmit Data(UART2)
UART3 (Bluetooth)		
UART3_RXD	UART3_RXD	Receive Data
UART3_TXD	UART3_TXD	Transmit Data
UART3_RTS	UART3_RTS	Request To Send
UART3_CTS	UART3_CTS	Clear To Send

<Table.2> UART Interface Spec

3.3.6 GPIO Map

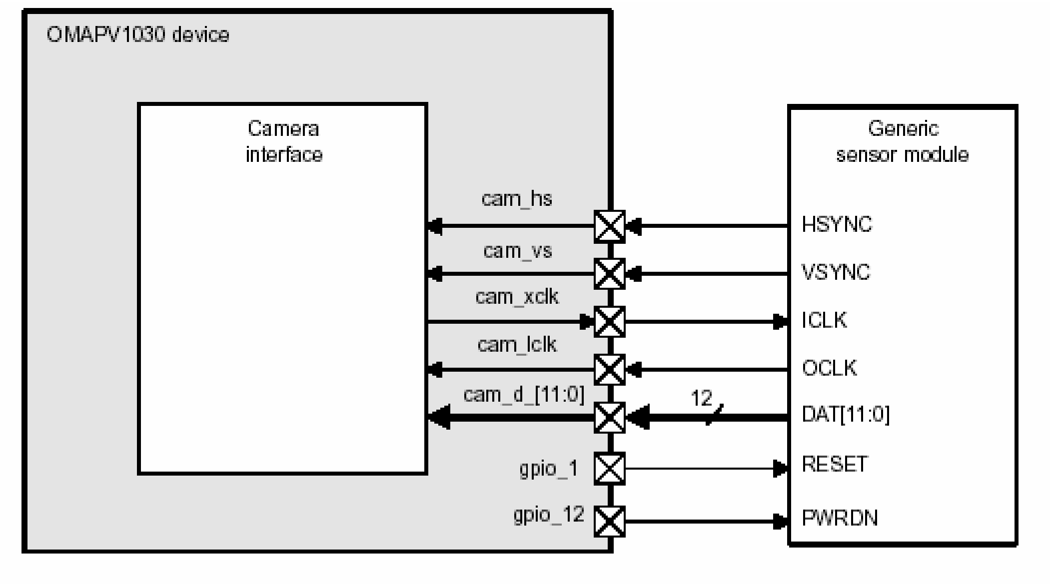
In total 22 allowable resources, ME550c is using 9 resources except 3 resources dedicated to SIM and Memory. ME550c GPIO(General Purpose Input/Output) Map, describing application, I/O state, and enable level, is shown in below table 3.

I/O #	Net Name	I/O	Resource State	Inactive State	Active State
I/O (1)	Not used				
I/O (2)		I	Sysboot	HIGH	LOW
I/O (4)	USB_BOOT_SEL	I	Sysboot	LOW (Giant Plus)	HIGH (Nanya)
I/O (6)		I	Sysboot	HIGH	LOW
I/O (7)	DIF_VSCNC	I	GPIO	LOW	HIGH
I/O (8)	BT_NRST	O	GPIO	LOW (LCD B/L Of f)	HIGH (LCD B/L On)
I/O (9)	CHG_EN	O	GPIO	LOW	HIGH
I/O (10)	VCAM28_EN	O	GPIO	LOW	HIGH
I/O (12)	CAM_RST	O	GPIO	HIGH	LOW
I/O (13)	FM_INT	I	GPIO	HIGH	LOW
I/O (16)	MAIN_KEY_BL_EN	I	Sysboot	LOW	HIGH
I/O (17)	BOOT_SEL	I	GPIO	HIGH	HIGH
I/O (18)	DP_PWON	O	GPIO	LOW	HIGH
I/O(27)	SLIDE	I	GPIO	LOW	HIGH
I/O(32)	SPK_EN	O	GPIO	HIGH	LOW
I/O (33)	Not used	O	GPIO	LOW	HIGH
I/O (42)	VCAM18_EN	I	GPIO	LOW	HIGH
I/O(43)	CHG_STAT	O	GPIO	HIGH	LOW
I/O (46)	CIF_PD	I	GPIO	LOW	HIGH
I/O (47)	JACK_DETECT	O	GPIO	HIGH	LOW
I/O (55)	HOOK_DETECT	O	GPIO	HIGH	LOW
I/O (63)	SPK_EN	O	GPIO	LOW	HIGH

<Table.3> GPIO Map

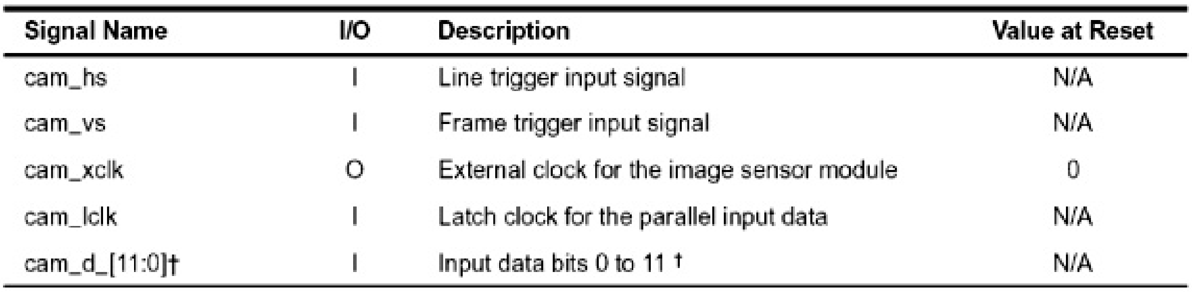
3.3.7 Camera interface

ME550c have a 8-bit parallel camera interface(NOBT Mode) .
This is a general parallel interface with vertical and horizontal synchronization signals.(See. Figure 12) The maximum clock is 96 MHz for 8-bit data data, or 48 MHz for 10- or 12-bit data.



<Fig.10> Generic Parallel Camera Interface

Table7. describes the I/O signals of the generic parallel camera interface.
Figure13, Figure14 show the frame and data timing according to synchronization signals in the parallel NOBT configuration.



Signal Name	I/O	Description	Value at Reset
cam_hs	I	Line trigger input signal	N/A
cam_vs	I	Frame trigger input signal	N/A
cam_xclk	O	External clock for the image sensor module	0
cam_lclk	I	Latch clock for the parallel input data	N/A
cam_d_[11:0]†	I	Input data bits 0 to 11 †	N/A

<Table 4> Generic Parallel Camera Interface

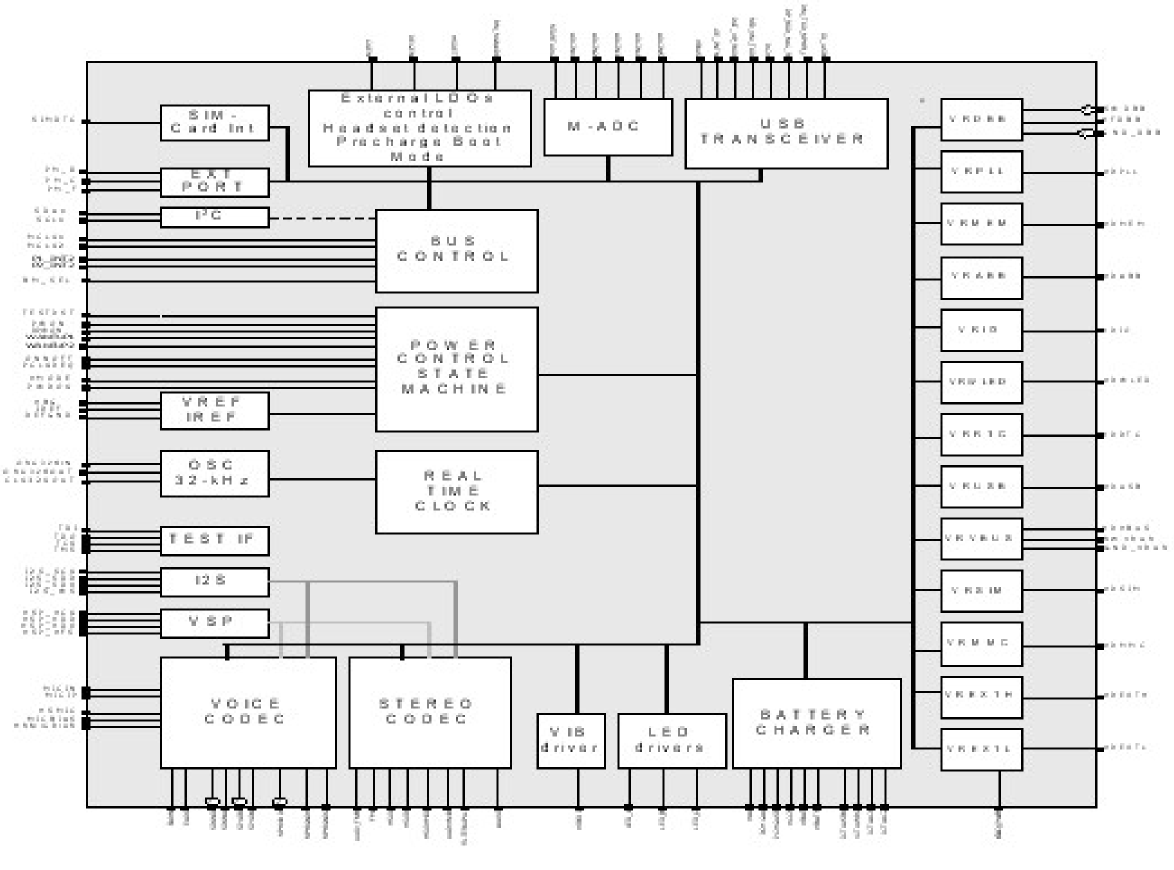
3.4 Analog Baseband

3.4.1 General Description

The TRITON chip is the analog and power management part of the Texas Instruments next generation wireless terminal. These GSM/GPRS/E-GPRS, 3G W-CDMA, CDMA2000 platforms are composed of a digital baseband processor, a RF chip, an application processor OMAP and of different peripheral devices like a LCD panel, a Multi-Media Card, a Bluetooth modem, a GPS modem.

The purpose of the Triton device is to provide to platforms the following resources:

- A power management system
- Power supply resources
- A voice and audio interface
- A battery charger
- A monitoring system
- A real time clock resource
- A USB 2.0 OTG transceiver with a carkit interface
- Three White-LEDs drivers
- A vibrator driver
- A SIM-Card detection
- A thermal shutdown
- An I2C interface
- A JTAG and boundary scan



<Fig.11> TWL3029 Architecture

3.4.2 Audio Signal Processing & Interface

The Audio module consists of a Voice Codec dedicated to mobile telephone terminal application and a Stereo path.

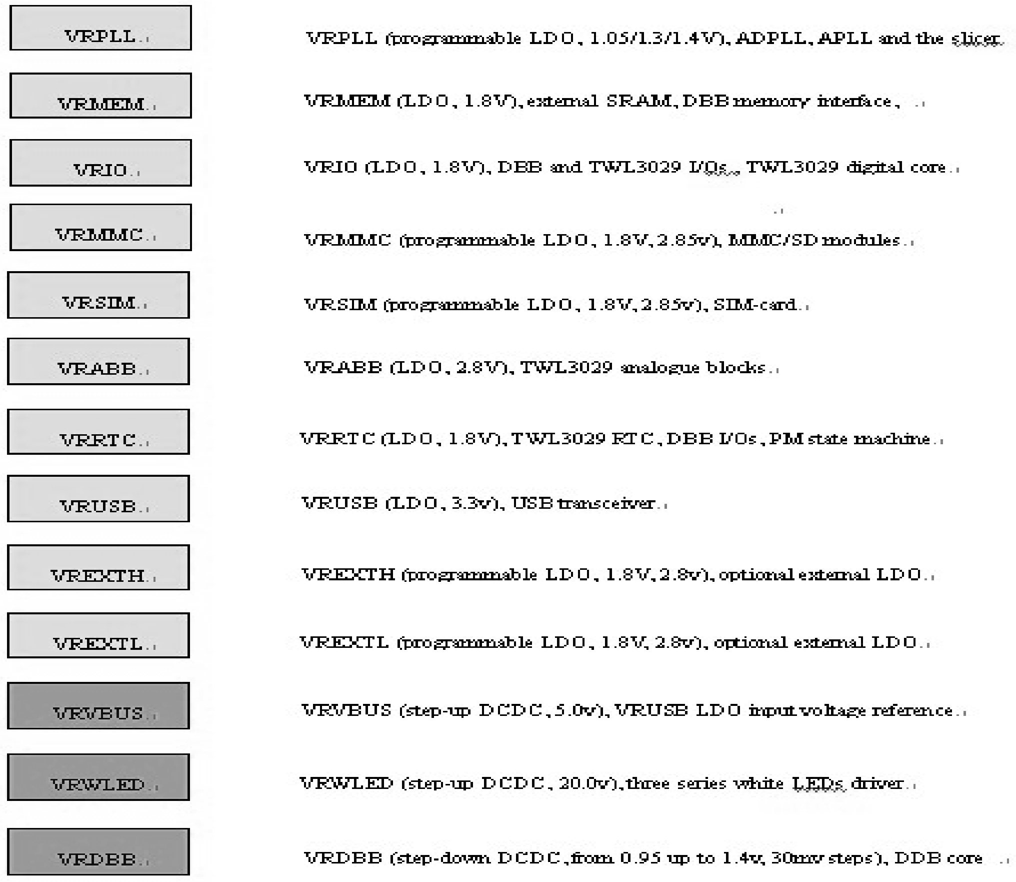
- The Voice Codec circuit processes analog audio components in the uplink path and transmits the converted data to the DSP speech coder through the voice serial port (VSP). In the downlink path, the Voice Codec converts the digital samples of speech data received from the DSP via the VSP port into analog audio signals.

The Voice Codec supports a 8kHz (default narrowband mode) to a 16kHz(wideband mode) sampling frequency.

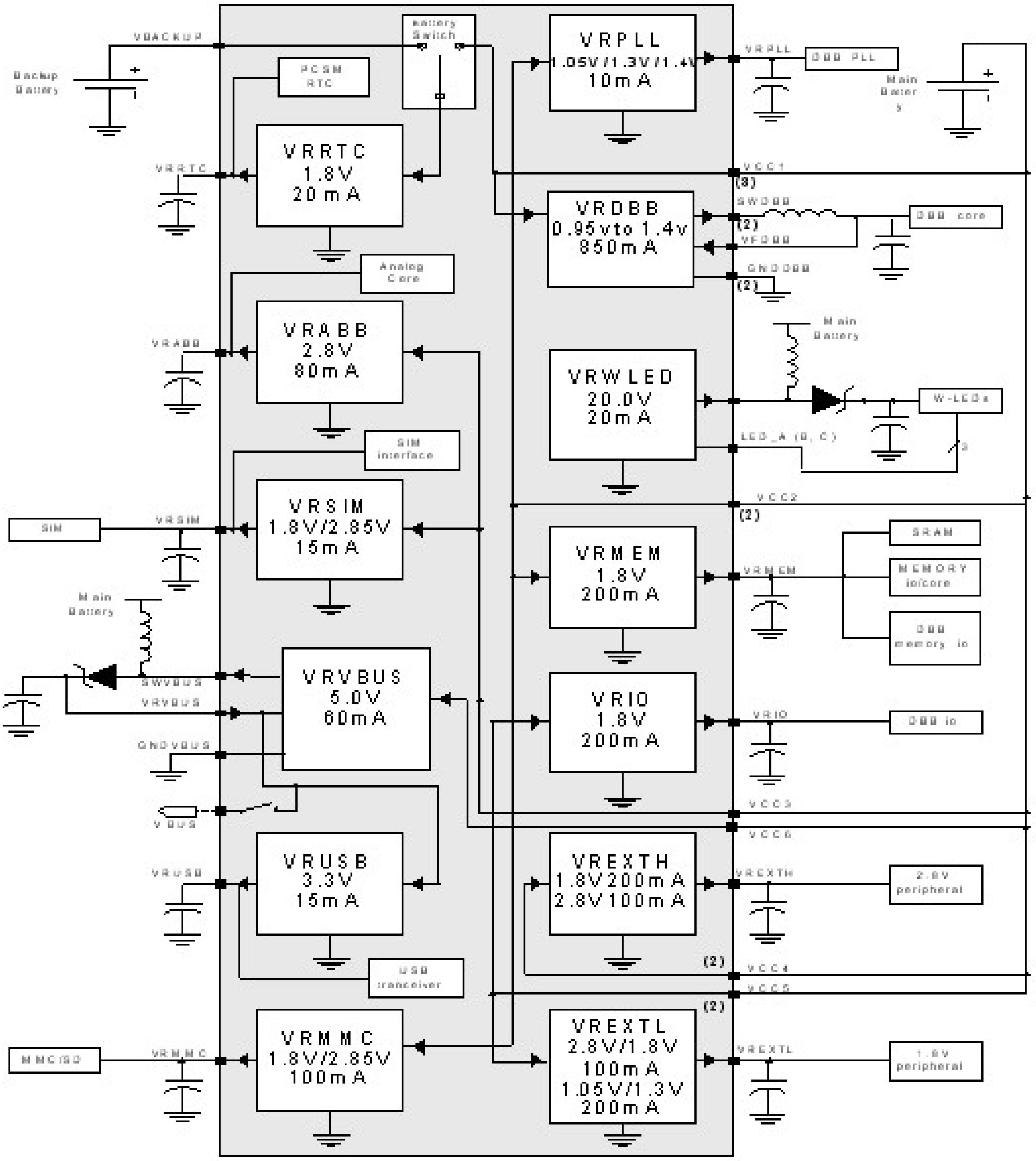
- The Stereo path converts audio digital samples received from the I2S serial interface into analog audio. It supports all standard frequencies from 8kHz to 48kHz (8, 11.025, 12, 22.05, 24, 32, 44.1 and 48kHz).
- Two included PLLs provide the suitable system clocks to the Voice and Stereo circuitry (ADC, DACS, Digital Filters, Digital interfaces). The Audio module supports 3 possible input master clocks : 12MHz, 13MHz and 19.2MHz.

3.4.3 Power Resources

The power supply module of Triton generates the different power supplies required by Triton, the processors and the external peripherals.



VRPLL	VRPLL (programmable LDO, 1.05/1.3/1.4V), ADPLL, APLL and the slicer.
VRMEM	VRMEM (LDO, 1.8V), external SRAM, DBB memory interface,
VRIO	VRIO (LDO, 1.8V), DBB and TWL3029 I/Os., TWL3029 digital core
VRMMC	VRMMC (programmable LDO, 1.8V, 2.85v), MMC/SD modules
VRSIM	VRSIM (programmable LDO, 1.8V, 2.85v), SIM-card
VRABB	VRABB (LDO, 2.8V), TWL3029 analogue blocks
VRRTC	VRRTC (LDO, 1.8V), TWL3029 RTC, DBB I/Os, PM state machine
VRUSB	VRUSB (LDO, 3.3v), USB transceiver
VREXTH	VREXTH (programmable LDO, 1.8V, 2.8v), optional external LDO
VREXTL	VREXTL (programmable LDO, 1.8V, 2.8v), optional external LDO
VRVBUS	VRVBUS (step-up DCDC, 5.0v), VRUSB LDO input voltage reference
VRWLED	VRWLED (step-up DCDC, 20.0v), three series white LEDs driver
VRDBB	VRDBB (step-down DCDC, from 0.95 up to 1.4v, 30mv steps), DDB core



<Fig.12> Power Supply Scheme

3.4.4 Monitoring ADC

The monitoring ADC (MADC) consists of a 10-bit analog-to-digital converter (ADC) combined with an 11- input analog multiplexer. The ADC implementation consists of a successive approximation conversion.

Five of the eleven inputs are available externally (ADIN1..5), and the remaining six inputs are dedicated to die temperature measurement, main battery voltage, backup battery voltage, charger voltage, charger current monitoring and USB Vbus voltage. Three external inputs (ADIN1..3) are standard inputs. The two others (ADIN4..5) which are associated with current sources, are intended for battery temperature and battery type measurements.

ADC 8 channels		
Resource	Name	Description
VCHG	VCHG	Charging Management
VBAT	VBAT	
ICTL	ICTL	
ADIN1	TEMP_SENSE	Temperature Sensing
ADIN2	JACK_TYPE	Remote control’s Detect- Now No Use
ADIN3		
ADIN4	REMOTE_ADC	Remote control’s function (play, stop,etc..)- Now No Use
ADIN5	BATT_TEMPS	Battery Detect

<Table.5> ADC Channel Spec

3.4.5 Switch ON/OFF

ME550c Power State : Defined 4cases as follow
- Power-ON : mobile is powered by main battery or backup battery.
- Power-OFF : mobile isn’t any battery.
- Switch-ON : mobile is powered and waken up from switch-off state.
- Switch-OFF : mobile is powered to maintain only the permanent function(ULPD).

To enter into Switch-ON state, one of following 4 condition is satisfied.
- PWR-ON pushed after a debouncing time of 30ms.
- ON_REMOTE : After debouncing, when a falling edgeis detected on RPWON pin.
- IT_WAKE_UP : When a rising edge is detected on RTC_ALARM pin.
- CHARGER_IC :When a charger voltage is above VBAT+0.4V on VCHG.

3.4.6 Memories

- 512Mbit NAND Flash + 512Mbit DDR RAM

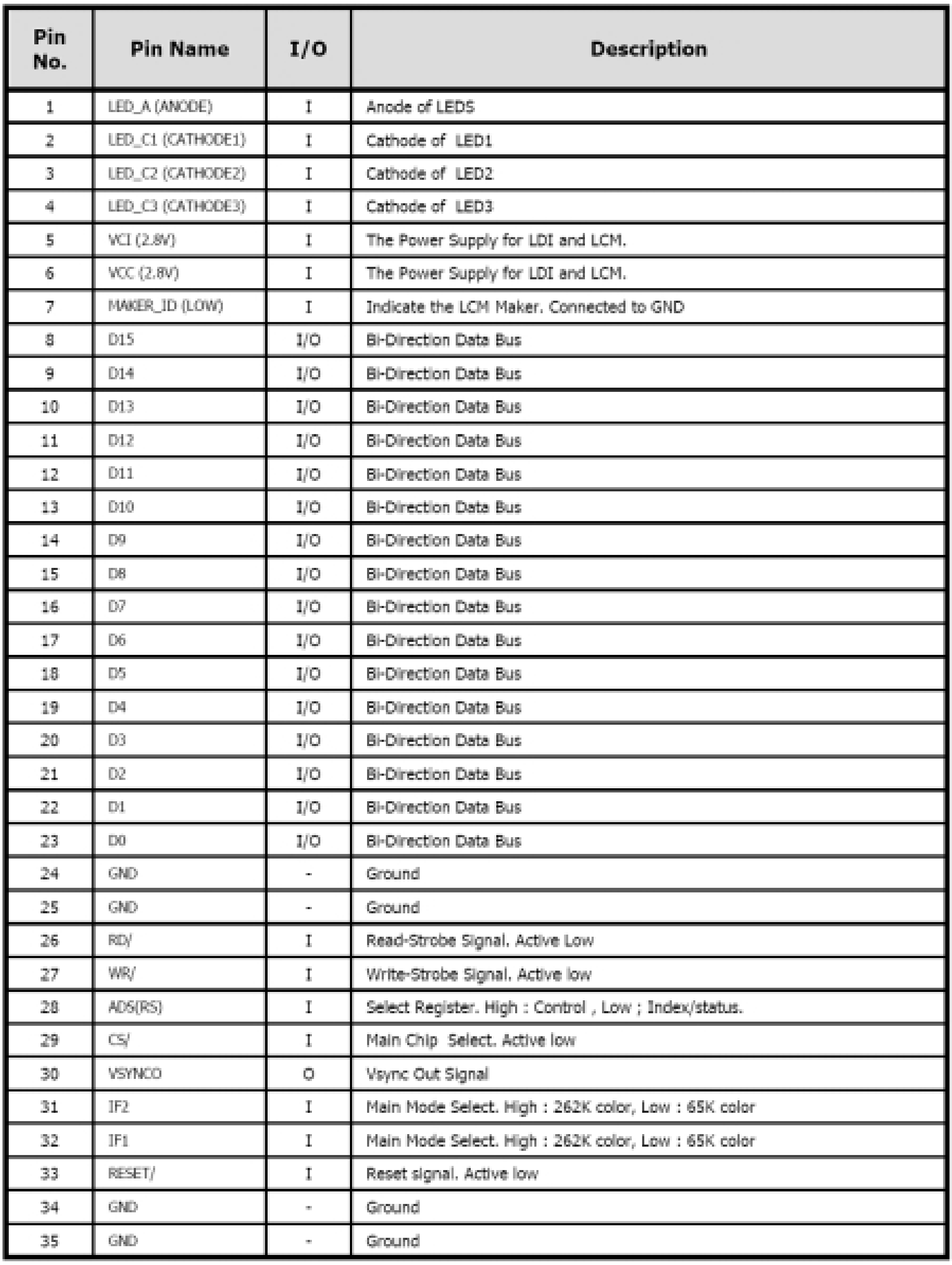
3.4.7 LCD Module

The NM200CND module is a Color Active Matrix Liquid Crystal Display with an Light Emission Diode (LED) Back Light system. The matrix employs a-Si Thin Film Transistor as a active element.
It is a transmissive type display operating in the normally white mode. This TFT-LCD has a 2.0 inch diagonally measured active display area with QCIF+ resolution(176 x RGB x 220 pixels).
Each pixel is divided into Red, Green, Blue sub-pixels or dots which are arranged in vertical stripes. Gray scale or the brightness of the dots color is determined with a 6 bit gray scale signal for each dot, thus, presenting a palette of more than 262,144 colors.

3.4.7.1 General Description

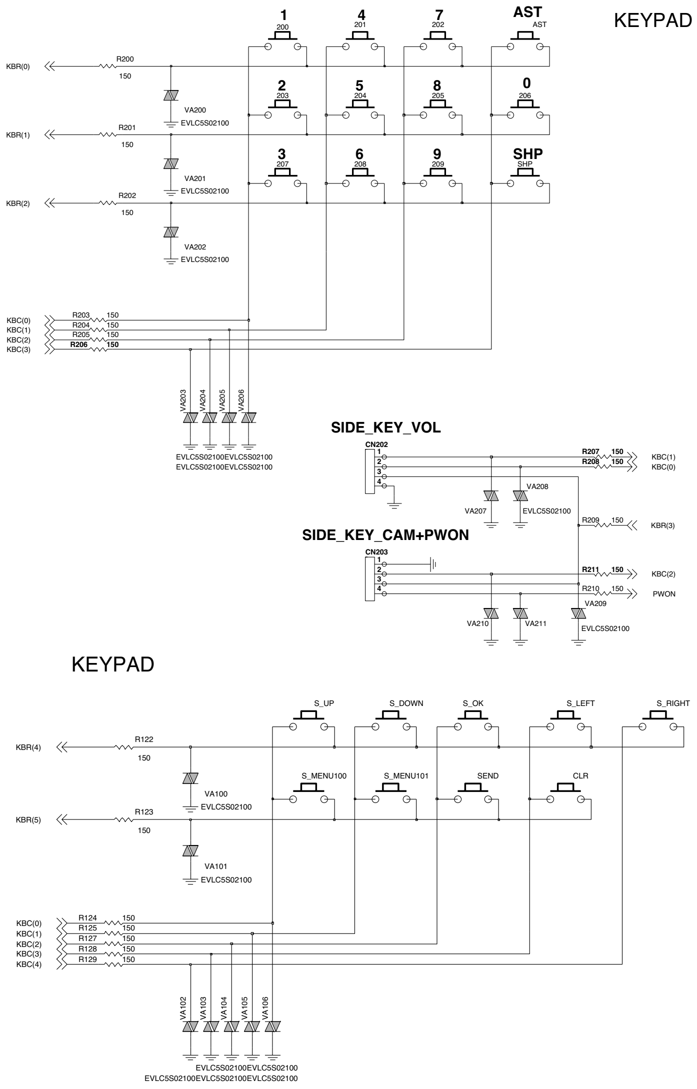
Properties	Spec. of Main LCD	Unit
Active screen size	31.68(H)*39.6(V)	mm
Viewing area size	33.08(H)*41.0(V)	mm
Color depth	262,000 colors	-
Resolution	176 x RGB x 220	-
Pixel format	RGB Vertical Stripe	-
Dot pitch	0.06(H)*0.18(V)	mm
Display operating mode	Transmissive type	-
User viewing angle	6	O’ clock

3.4.7.2 LCD module pin map description



Pin No.	Pin Name	I/O	Description
1	LED_A (ANODE)	I	Anode of LEDS
2	LED_C1 (CATHODE1)	I	Cathode of LED1
3	LED_C2 (CATHODE2)	I	Cathode of LED2
4	LED_C3 (CATHODE3)	I	Cathode of LED3
5	VCI (2.8V)	I	The Power Supply for LDI and LCM.
6	VCC (2.8V)	I	The Power Supply for LDI and LCM.
7	MAKER_ID (LOW)	I	Indicate the LCM Maker. Connected to GND
8	D15	I/O	Bi-Direction Data Bus
9	D14	I/O	Bi-Direction Data Bus
10	D13	I/O	Bi-Direction Data Bus
11	D12	I/O	Bi-Direction Data Bus
12	D11	I/O	Bi-Direction Data Bus
13	D10	I/O	Bi-Direction Data Bus
14	D9	I/O	Bi-Direction Data Bus
15	D8	I/O	Bi-Direction Data Bus
16	D7	I/O	Bi-Direction Data Bus
17	D6	I/O	Bi-Direction Data Bus
18	D5	I/O	Bi-Direction Data Bus
19	D4	I/O	Bi-Direction Data Bus
20	D3	I/O	Bi-Direction Data Bus
21	D2	I/O	Bi-Direction Data Bus
22	D1	I/O	Bi-Direction Data Bus
23	D0	I/O	Bi-Direction Data Bus
24	GND	-	Ground
25	GND	-	Ground
26	RD/	I	Read-Strobe Signal. Active Low
27	WR/	I	Write-Strobe Signal. Active low
28	ADS(RS)	I	Select Register. High : Control , Low ; Index/status.
29	CS/	I	Main Chip Select. Active low
30	VSYNCO	O	Vsync Out Signal
31	IF2	I	Main Mode Select. High : 262K color, Low : 65K color
32	IF1	I	Main Mode Select. High : 262K color, Low : 65K color
33	RESET/	I	Reset signal. Active low
34	GND	-	Ground
35	GND	-	Ground

3.4.8 Keypad Map description



<Fig.13> Keypad schematic

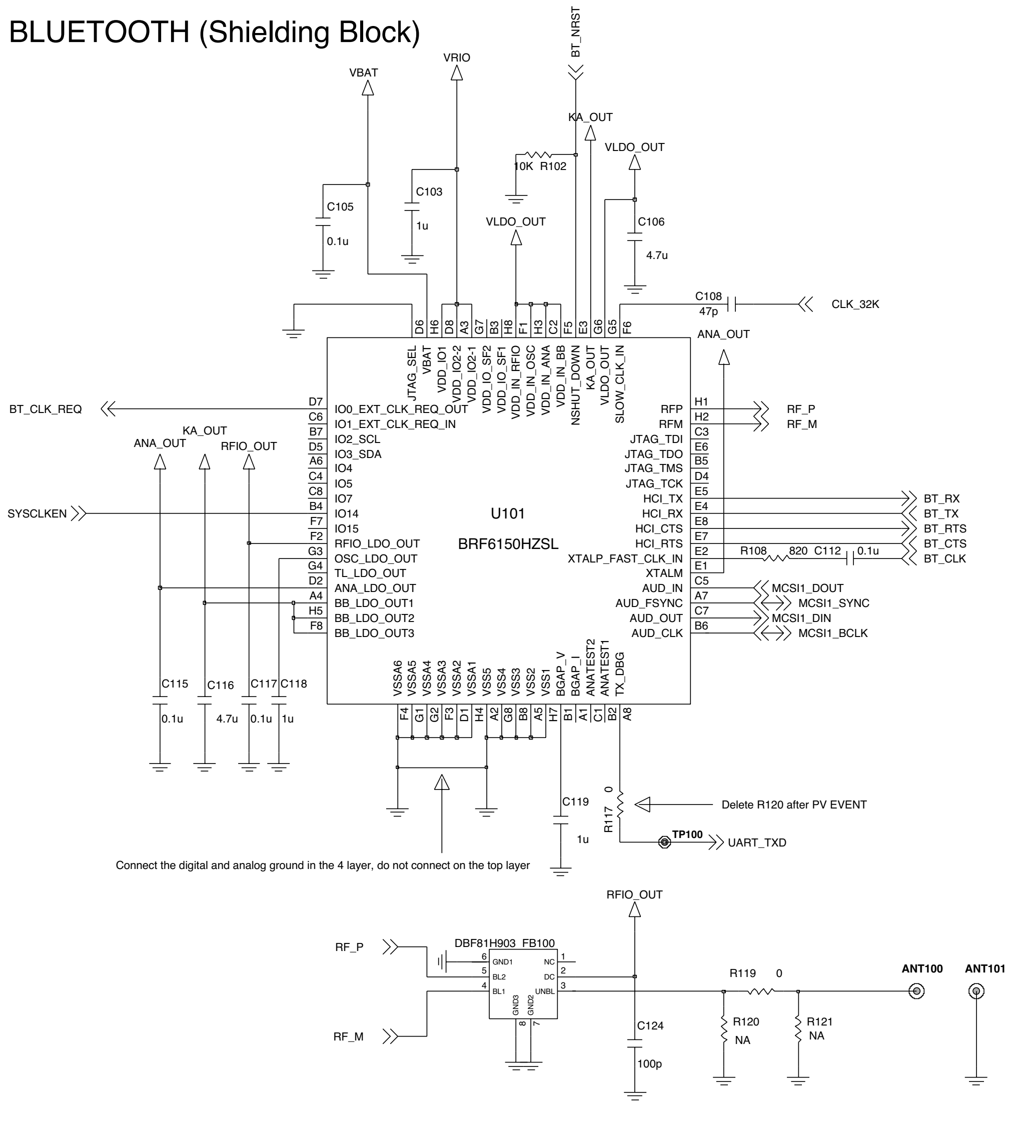
	KBC0	KBC1	KBC2	KBC3	KBC4
KBR0	1	4	7	*	
KBR1	2	5	8	0	
KBR2	3	6	9	3	
KBR3	VOL_UP	VOL_DOWN	CAMERA	#	
KBR4	HOT_UP	HOT_DOWN	O.K	HOT_LEFT	HOT_RIGHT
KBR5	SOFT_LEFT	SOFT_RIGHT	SEND	CLR	

3.4.9 Bottom System Connector

Pin #	ME550c	Description
	18Pin	
1	FM_ANT	FM_RADIO ANTENNA
2	HSMICIP/HOOK DETECT	HEAD SET
3	JACK_TYPE	HAED SET
4	HSO_L	CHARGING (VCHG)
5	HSO_R	CHARGING (VCHG)
6	UART3_TX/USB_DP	USB/UART3 (Transmit Data)
7	UART3_RX/USB_DM	USB/UART3 (Receive Data)
8	JACK_DETECT	HEAD SET
9	VBAT	BAT T ERY(+4.2V)
10	VBAT	BATTERY(+4.2V)
11	RPWON	REMOT E POWER ON
12	VCHG_IN	CHARGING (VCHG)
13	VGHG_IN	CHARGING (VCHG)
14	UART3_DSR	UART3 (Transmit Data)
15	VBUS	USB POWER(+5.0 V)
16	UART2_TX	TEST : UART2 (Transmit Data)
17	UART2_RX	TEST : UART2 (Receive Data)
18	GND	GND

3.5 Bluetooth Interface

3.5.1 Bluetooth Circuit



3.5.2 Pin Description

Pin	Description
CLOCKS/GLOBAL SIGNALS	
SLOW-CLK_IN	32.768.kHz clock input
XTALM	Negative fast crystal in
XTALP/FAST_CLK_IN	Positive fast crystal in/fast clock input
RADIO FREQUENCY INTERFACE	
RFP	Receiver/transmit differential RF I/O
RFM	Receiver/transmit differential RF/IO
POWER MANAGEMENT	
VLDC_OUT	Very-low drop-output voltage
KA_OUT	Keep alive output
NSHUT_DOWN	Devices shutdoun input(active low) alsoacts as power-on reset
POWER SUPPLY	
VBAT	Battery power supply
VDD_IO1	Power supply for I/O
BB_LDO_OUT1	Baseband LDO output
ANA_LDO_OUT	Analog LDO output
RFIO_LDO_OUT	RFIO LDO output, power source for RF elements
OSC_LDO_OUT	OSC LDO output
VDD_IN_BB	Baseband LDO input voltage
BGAP_V	BGAP reference voltage
BGAP_I	BGAP reference current(used olny for test)
GROUND	
VSS	Digital ground
VSSA	Analog ground/RF analog ground
I/O NAME	
AUD_CLK	Input-when external codec is configured as master(default configuration)
AUD_FSYNC	
AUD_IN	
AUD_OUT	High Z with PD, except when transmitting voice samples
GPIO0	EXT_CLK_REQ_OUT
GPIO1	EXT_CLK_REQ_IN
HCI UART INTERFACE	
HCI_RX	HCI UART data receive
HCI_TX	HCI UART data transmit

3.5.3 Bluetooth circuit Description

One chip Bluetooth Module U302(BRF6150) supports the following feature.
-Bluetooth®1.2
Support A2DP, HFP,HSP
Adaptive Frequency Hopping (AFH)
Fast connection
Extended SCO-All New Paket Types
Scatter Mode
Quality-Of-Service Improvements
LMP Improvements
Synchronization
-UART Interface
Baud Rate: 115.2kbps (default)
-USB Interface v.2.0
-PCM Interface

It is powered by direct battery and VRIO of ABB(U101).
Fast CLK 26MHz and Slow CLK 32kHz from ABB(U101) are used for operating clock.
BT Module interface with DBB(U102) through UART and PCM port and radiate RF signal through BT Antenna.

3.5.4 Bluetooth Block Diagram

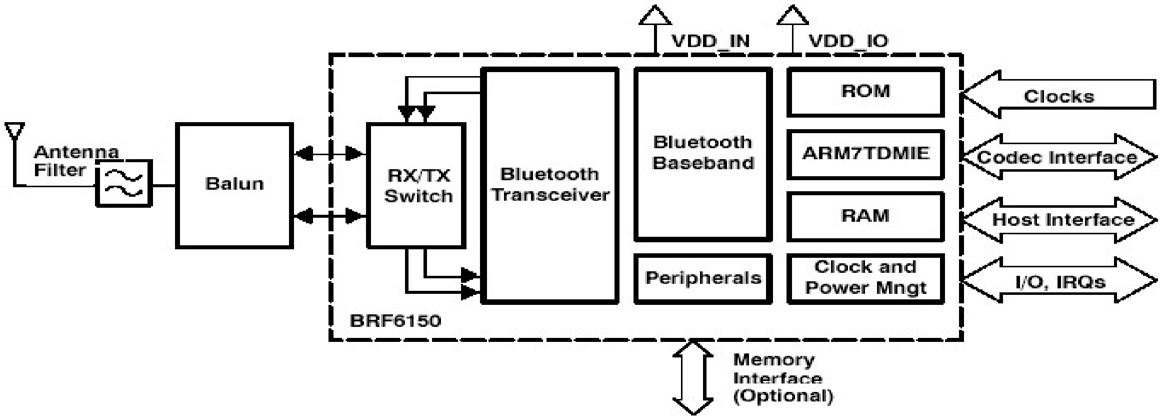
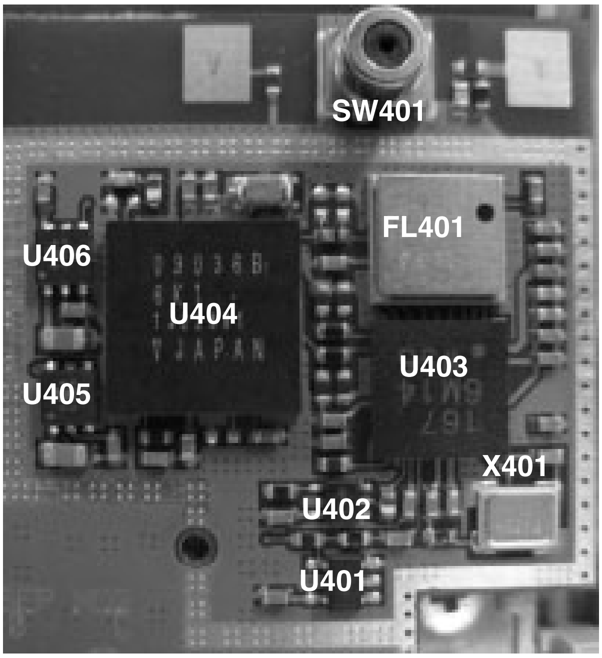


Figure 2-1. BRF6150 Block Diagram

4. TROUBLE SHOOTING

4.1 RF Part Technical Brief

4.1.1 RF Part Component



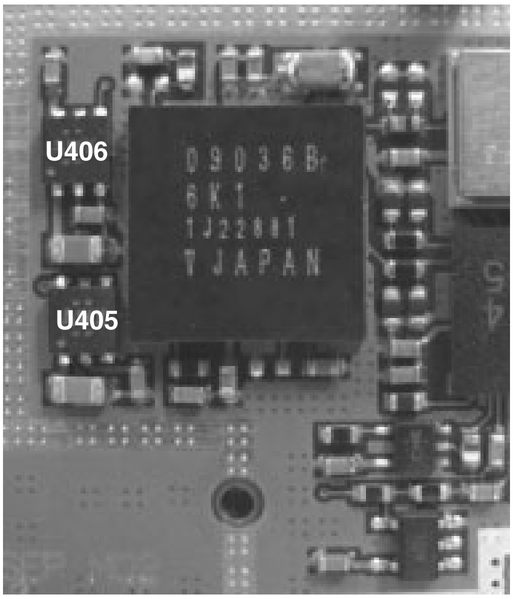
▶ Part Description

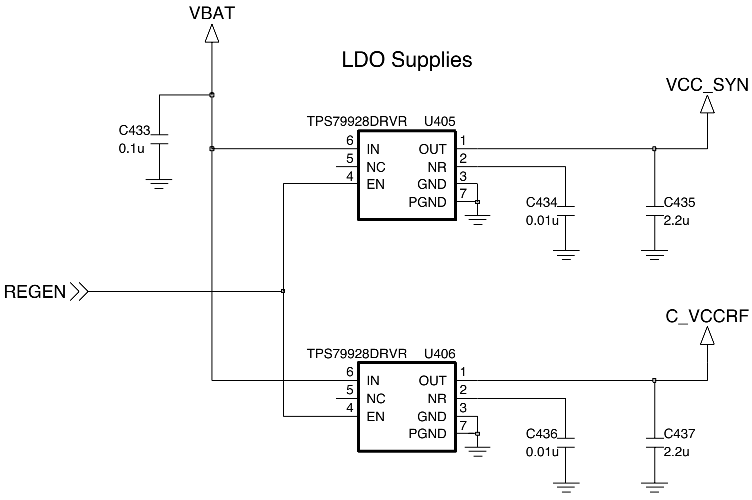
SW401 : Mobile Switch Connector
U401 : BT_CLK Buffer
U402 : SysCLK Buffer
U403 : RF Transceiver(B6PLD)
U404 : Power Amplifier Module(RPF09036B)
U405 : 2.8V Regulator
U406 : 2.8V Regulator
FL401 : Front End Module(HWXR693)
X401 : DCXO-26MHz Clock

4.1.2 Part Description

4.1.2.1 Regulator

Supply 2.8V to RF part

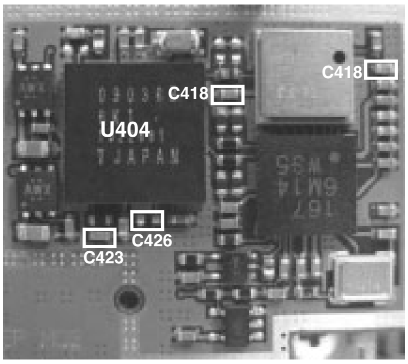




<Fig.1> Regulator Circuit Diagram

4.1.2.2 Power Amplifier Module (RPF09036B)

Select the RX / TX path and amplifier the power.



▶ Part Description

Front End Module Switch Control

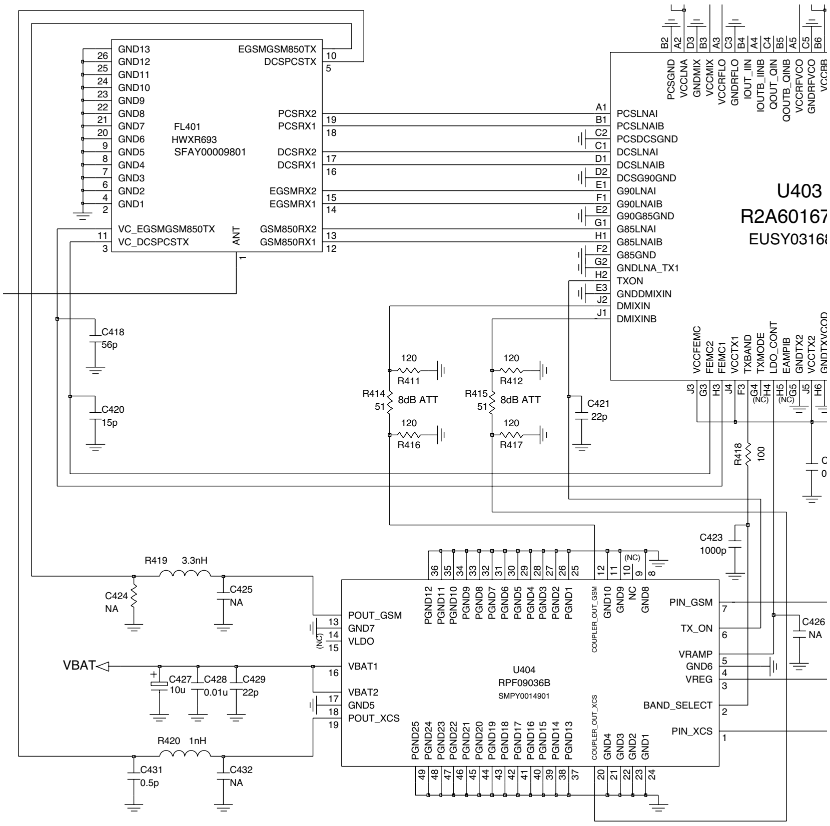
C426 : VRAMP

C423 : BAND_SELECT

C418 : Vc_EGSMGSM850_Tx

C420 : Vc_DCSPCS_Tx

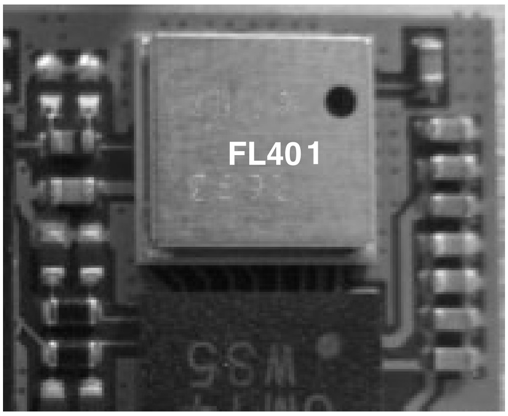
Application	Mode	Vtxon	Vband
GSM850 / GSM900	GMSK	High	High
	EDGE	High	High
DCS1800 / PCS1900	GMSK	High	Low
	EDGE	High	Low

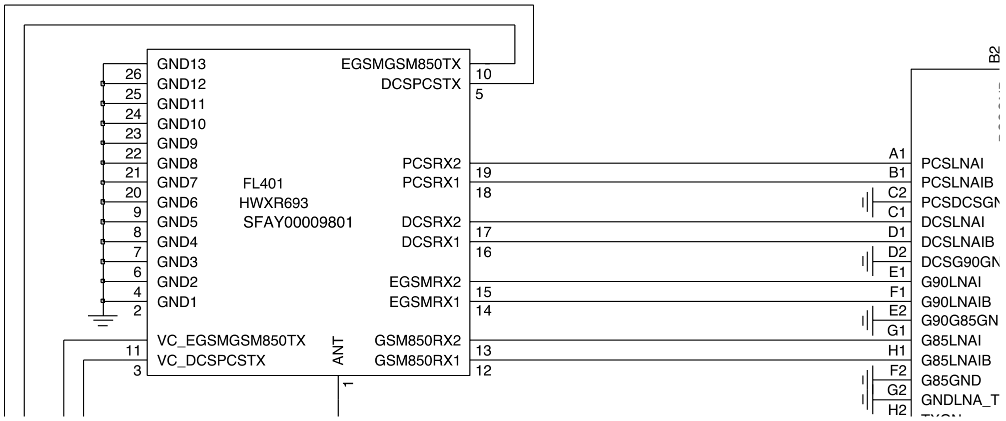


<Fig.2> PAFEM Circuit Diagram

4.1.2.3 SAW Filter Bank

Pass wanted signal and include LNA matching circuit.

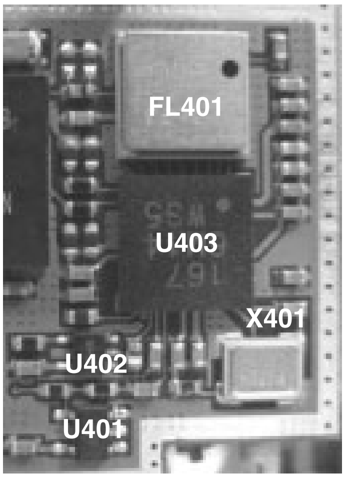


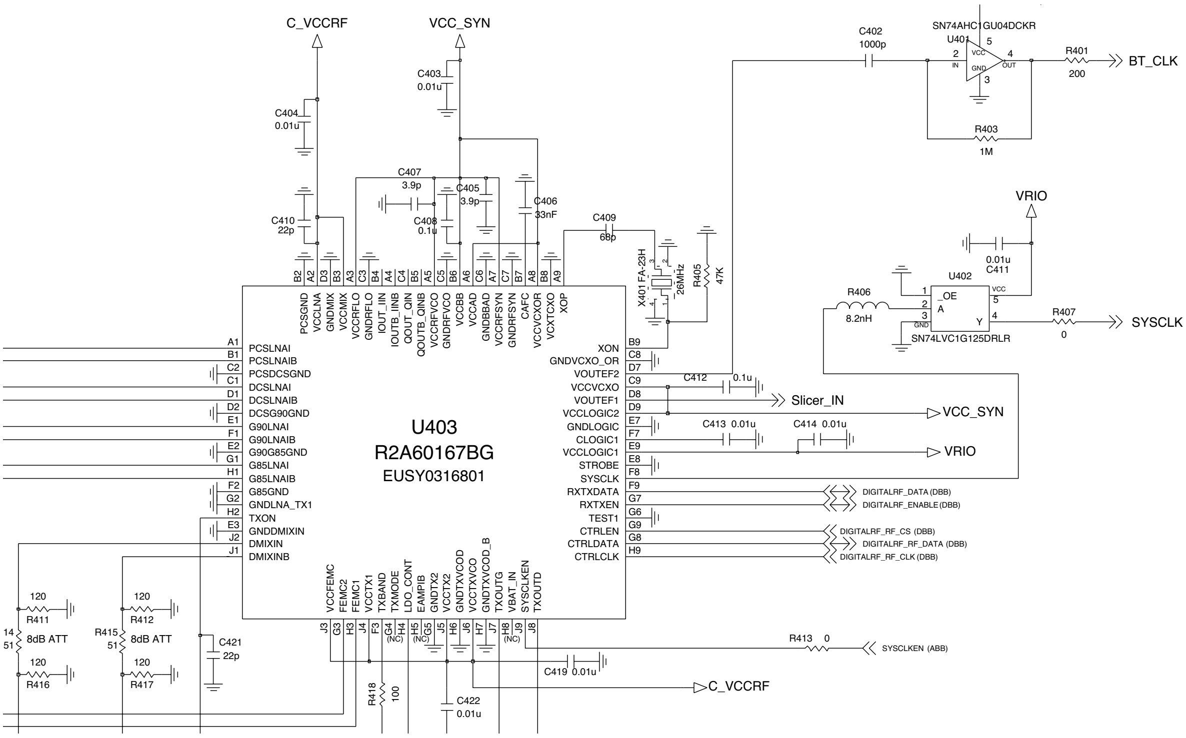


<Fig.3> SAW Filter Bank Circuit Diagram

4.1.2.4 RF Transceiver (B6PLD)

Digital Interface to Baseband. Integrate LNA and VCO circuit.

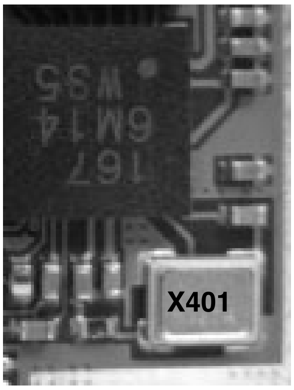


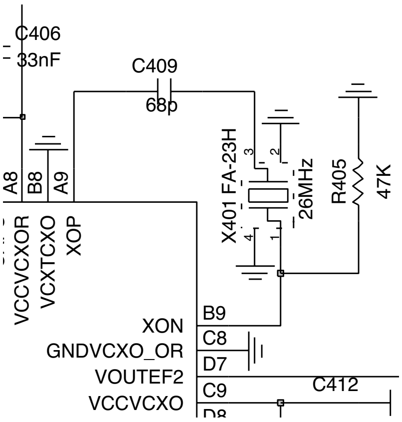


<Fig.4> RF Transceiver Circuit Diagram

4.1.2.5 DCXO

Produce RF and BB reference Clock - 26MHz Clock.

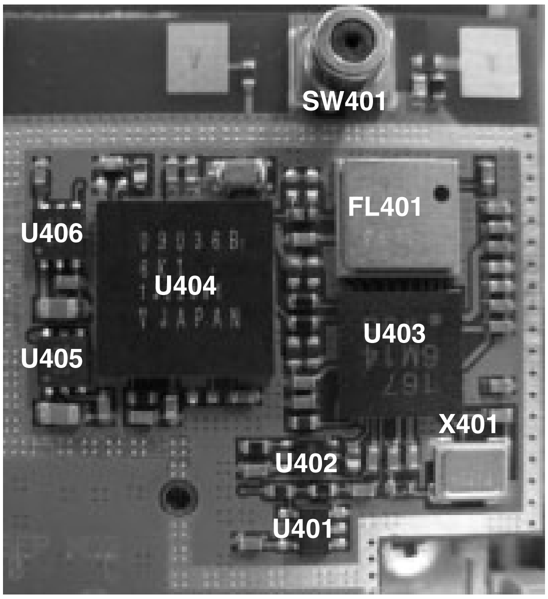


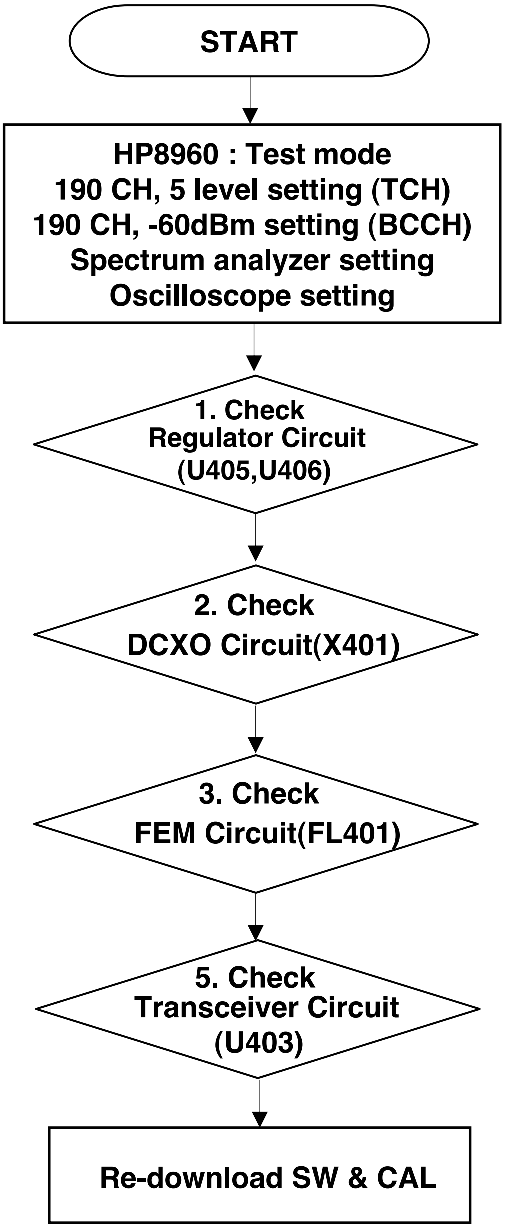


<Fig.5> DCXO Circuit Diagram

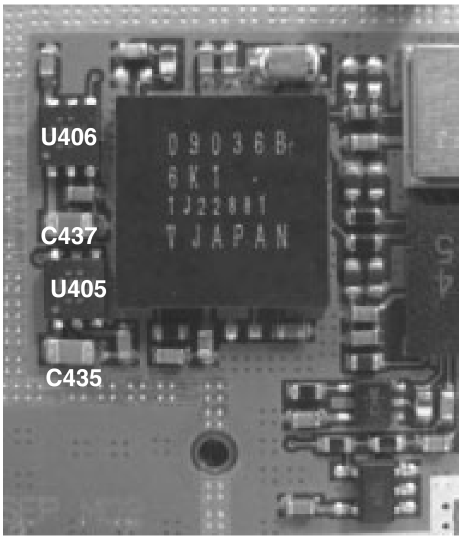
4.2 RF Part Trouble shooting

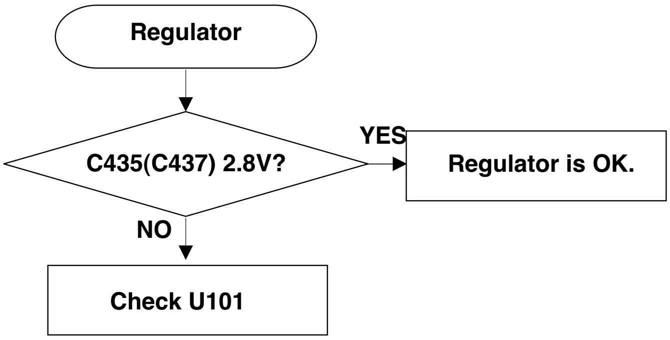
4.2.1 RF Receiving Path Trouble Shooting

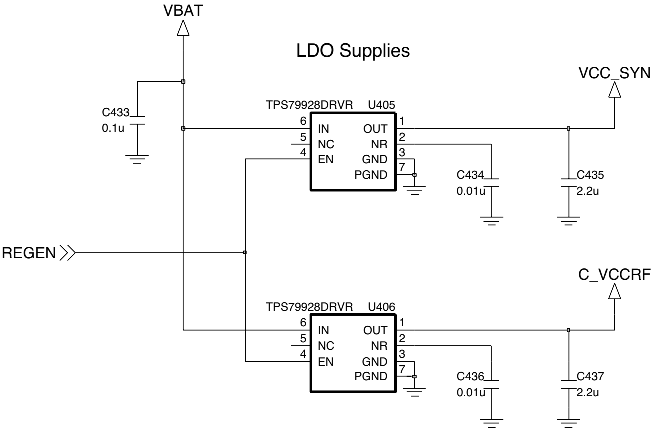




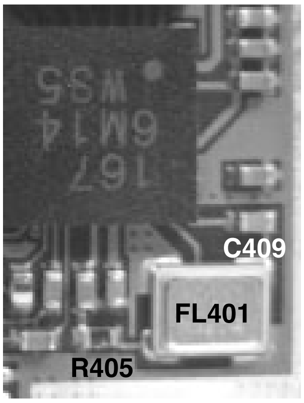
4.2.1.1 Regulator Circuit

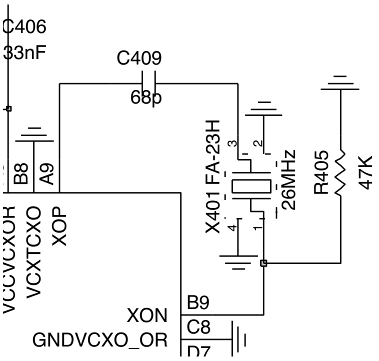




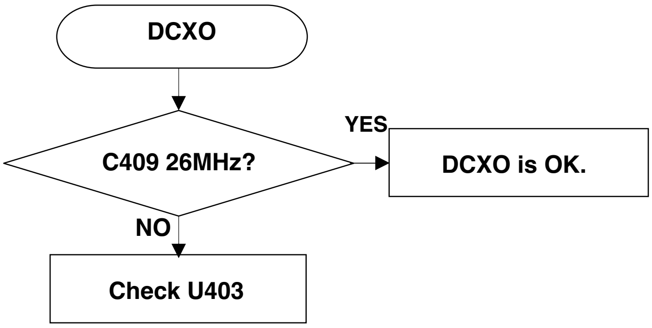


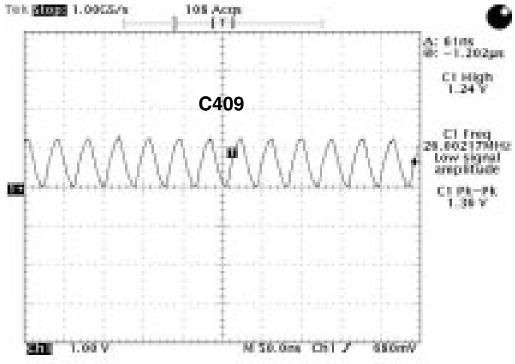
4.2.1.2 DCXO Circuit



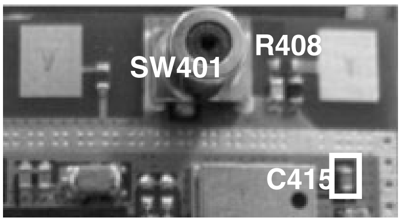


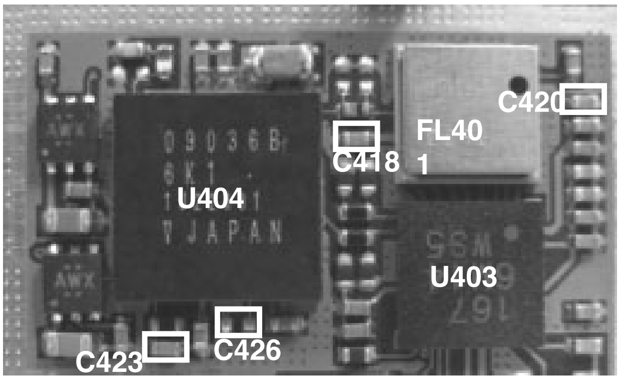
<Fig.2> DCXO Circuit Diagram

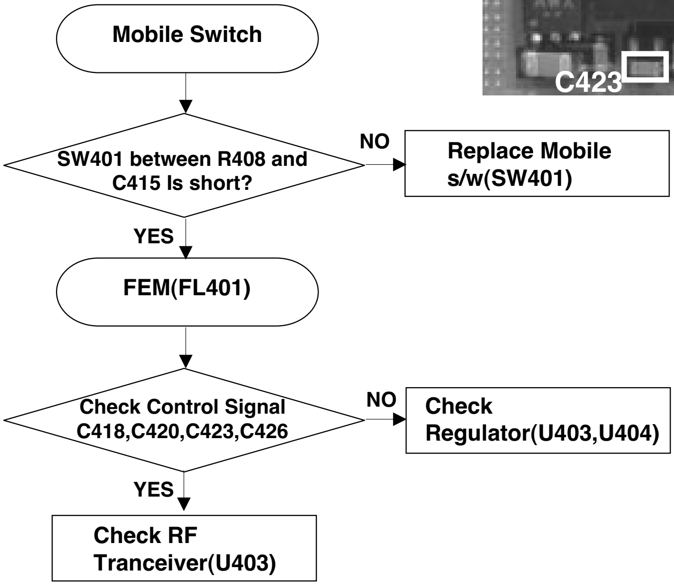


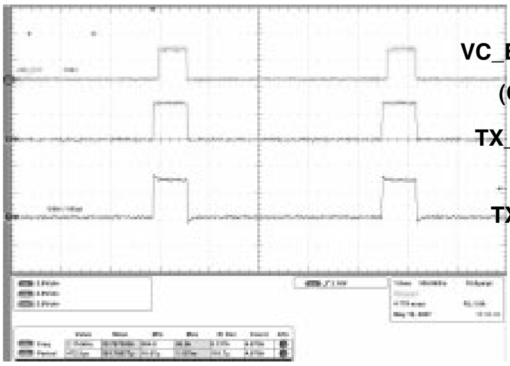


4.2.1.3 Mobile Switch & PAM & FEM Circuit



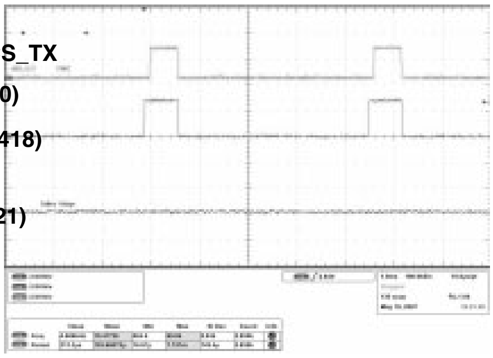






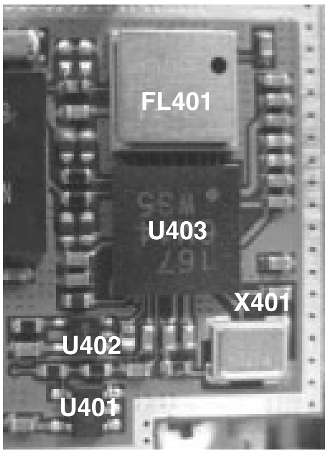
VC_EGSM/DCS_TX
(C418/C420)
TX_BAND(R418)
TX_ON(C421)

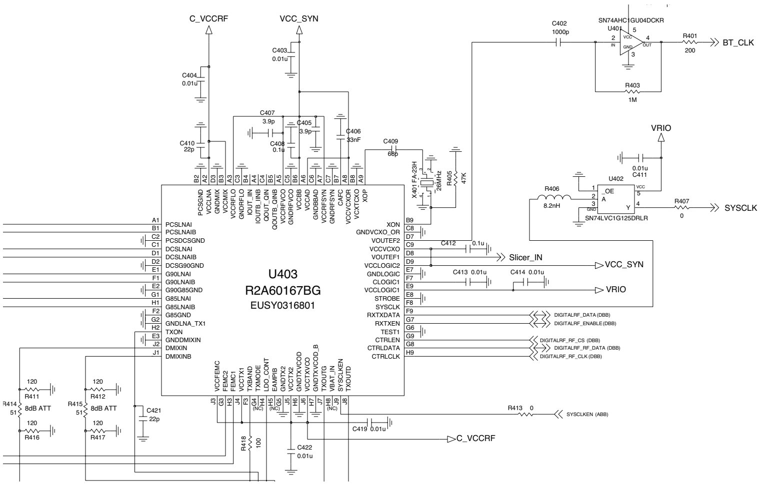
<GSM850>

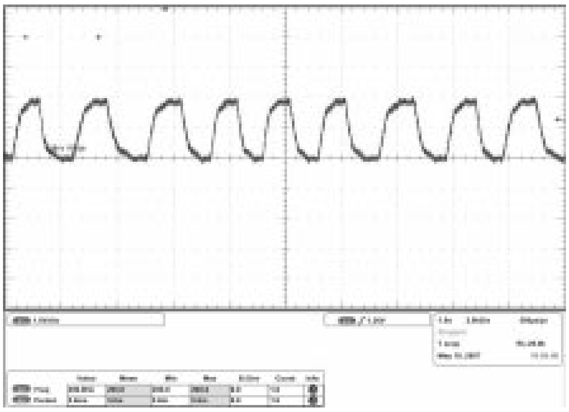


<PCS1900>

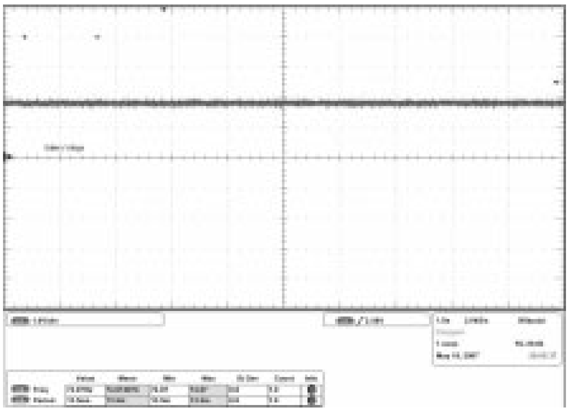
4.2.1.4 RF Main Transceiver Circuit





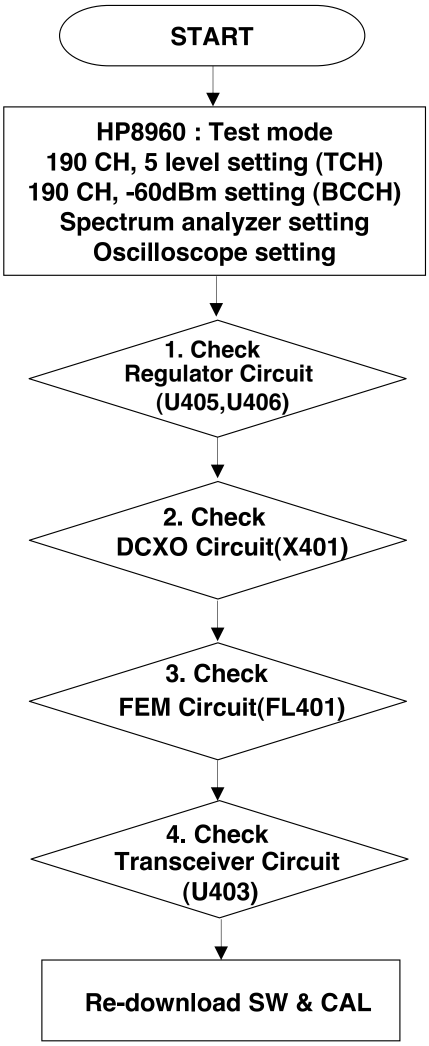


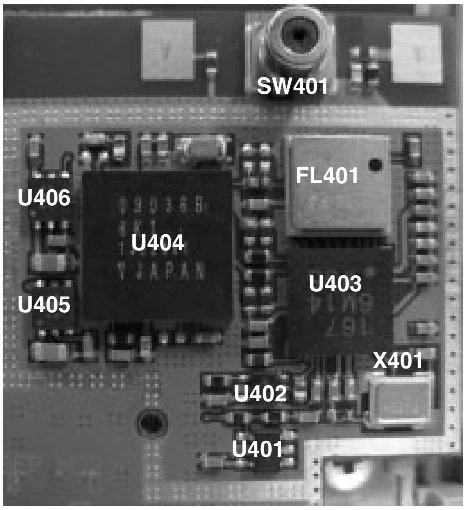
SYSCLK



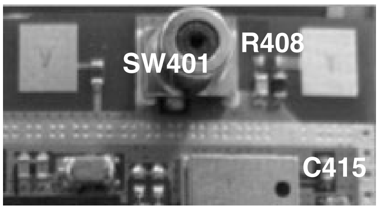
SYSCLKEN

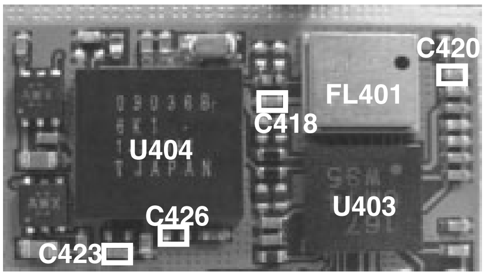
4.2.2 RF Transmitting Path Trouble Shooting

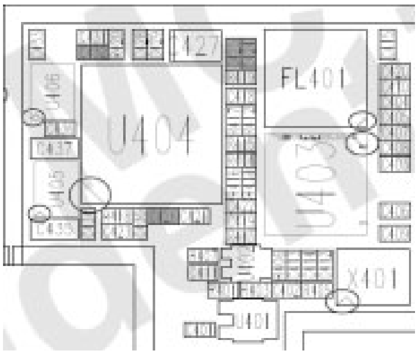


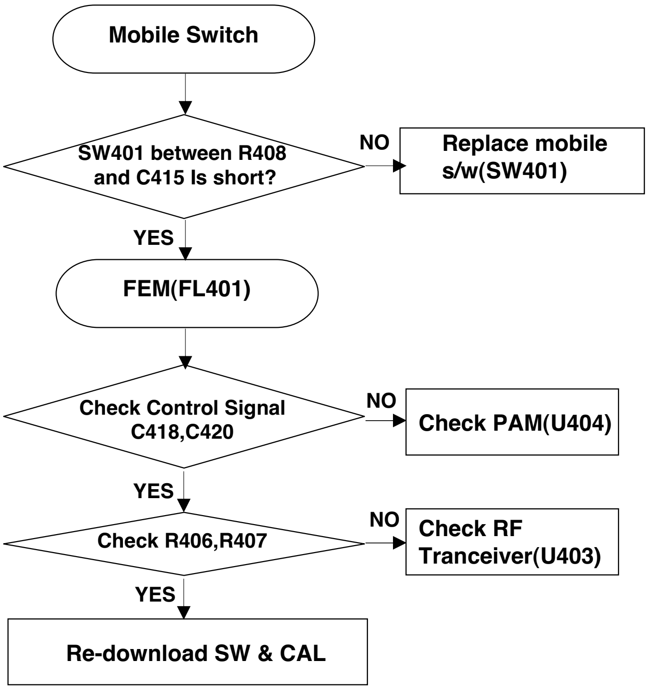


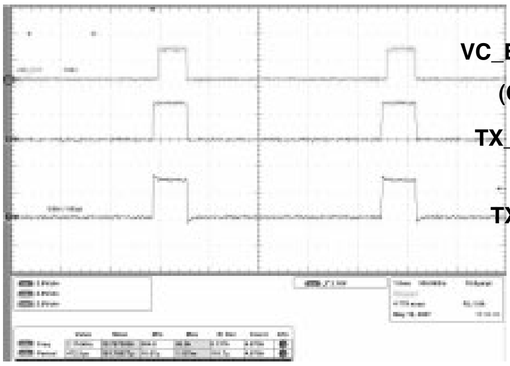
4.2.2.1 Mobile Switch & PAM & FEM Circuit



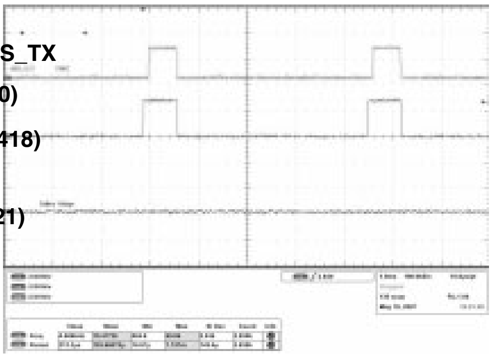






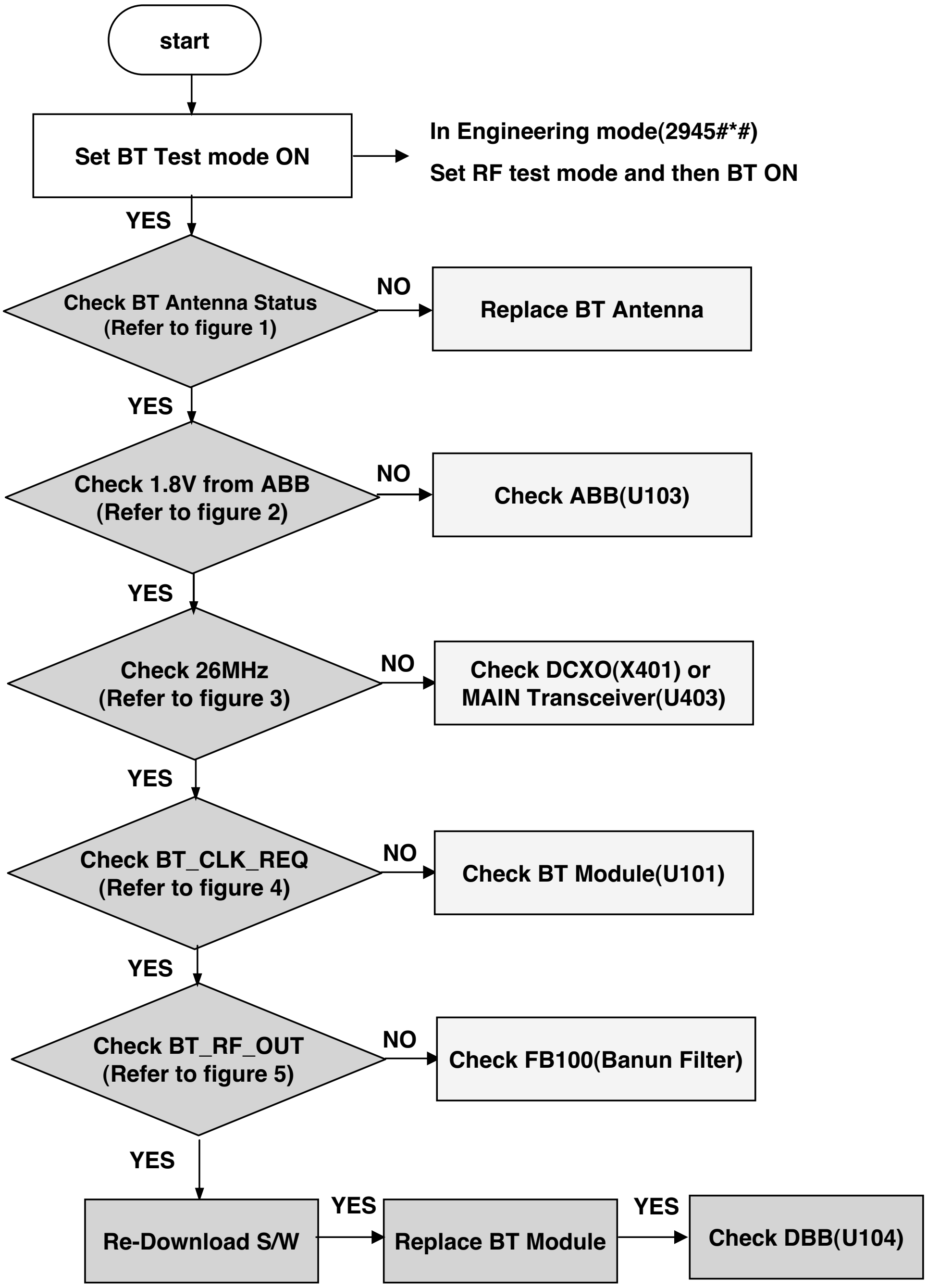


GSM900



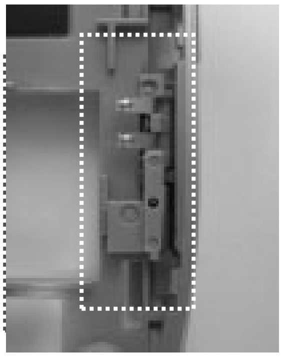
DCS

4.3 Bluetooth Trouble Shooting



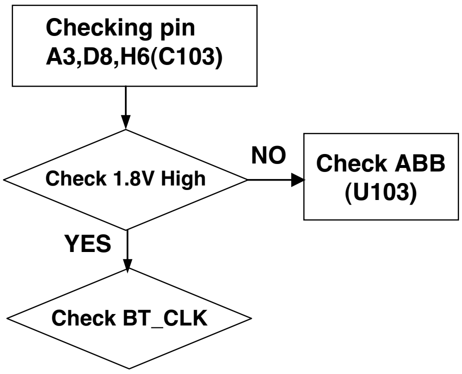
4.3.1 Checking BT Antenna

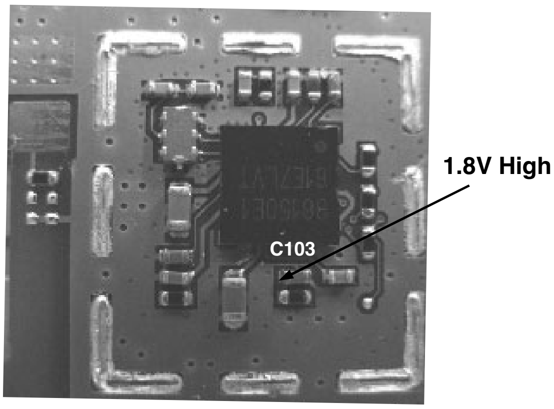
4.3.1.1 Visual Inspection



<Fig. 1>

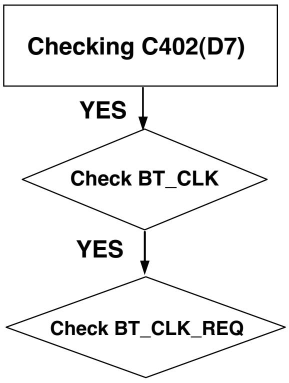
4.3.1.2 Checking BT VRIO

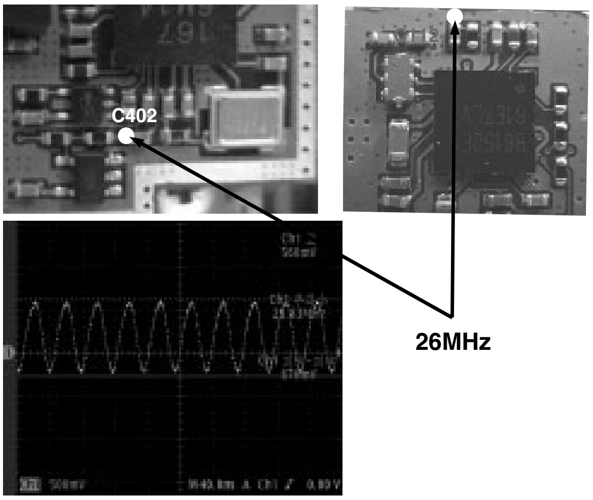




<Fig. 2>

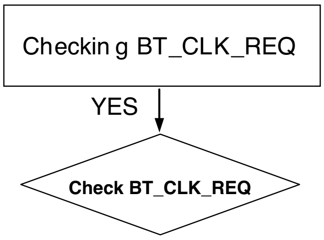
4.3.1.3 Checking BT_CLK

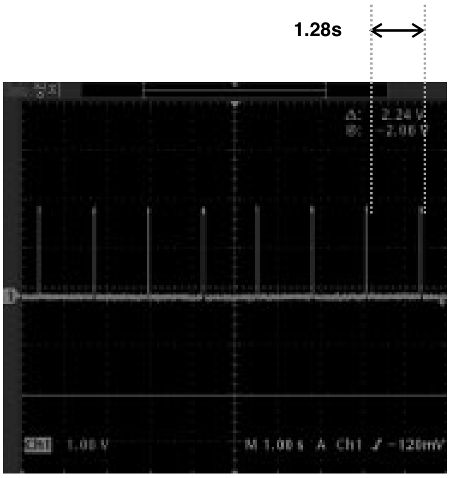




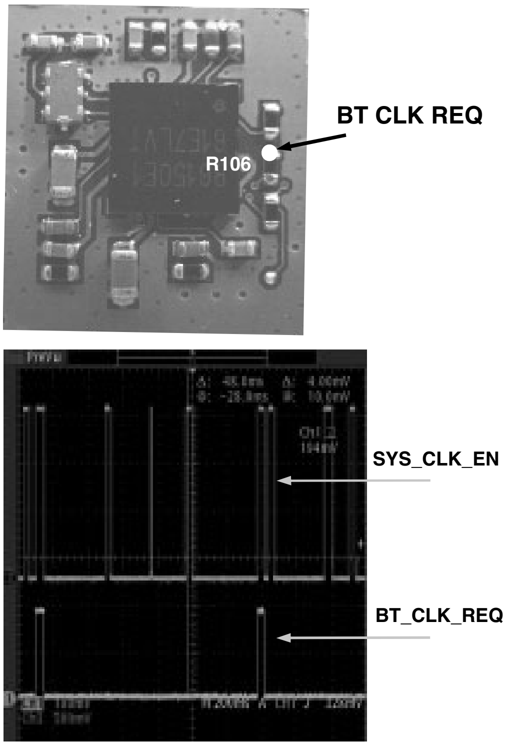
<Fig. 3>

4.3.1.4 Checking BT CLK REQ



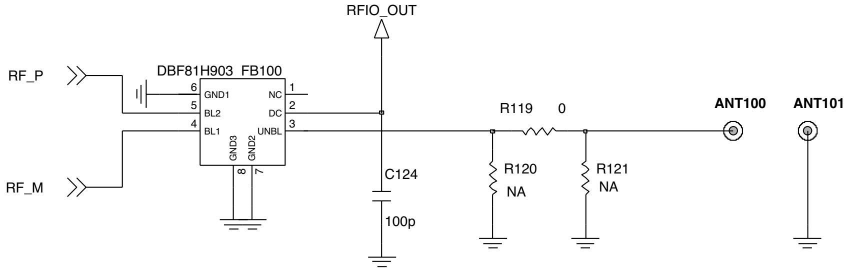


<Fig. 3>

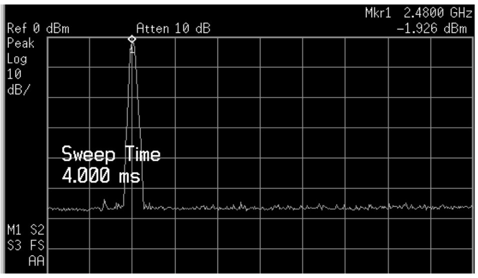


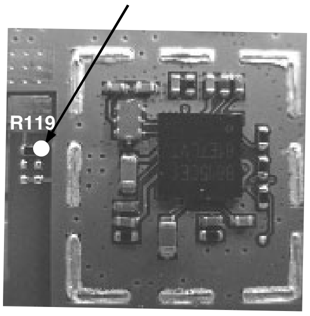
<Sleep Mode>

4.3.1.5 Checking BT RF OUT



Check with Spectrum Analyzer in BT Equipment connection status.





4.4 Baseband Part Troubleshooting

4.4.1 Power On Trouble

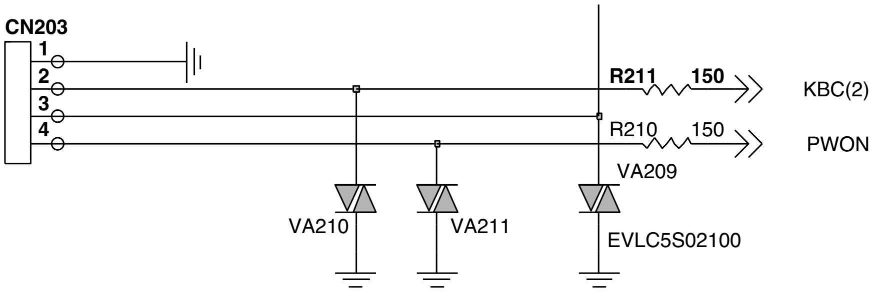
4.4.1.1 Power-On Trouble Troubleshooting

- Power-On Sequence
  - Connecting Battery
  - Power-On Key Detection
  - Pwon signal goes to ABB and then ABB resets DBB by ONNOFF signal
  - ONNOFF turns low(0v) to High (2.8V) and it resets DBB (Neptune)
  - All LDOs (internal LDOs of ABB and external LDOs) are turned on

- Check Points
  - Battery Voltage
  - Power-On Key Detection (Pwon signal)
  - Output of LDOs

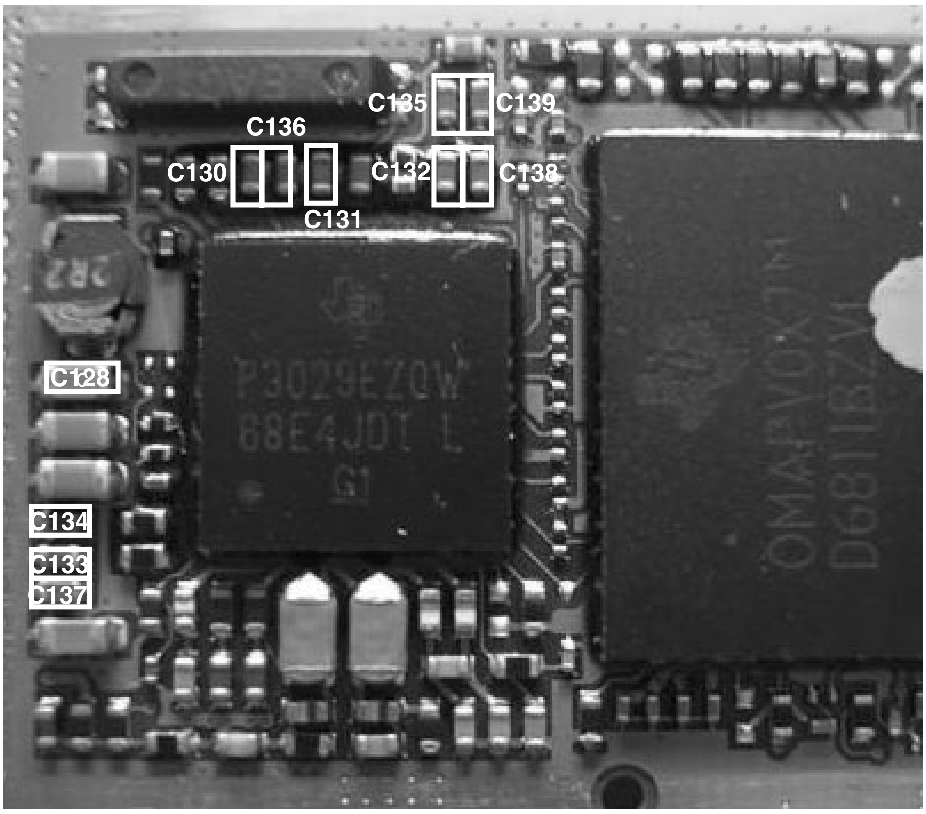
- Trouble Shooting Setup
  - Connect PIF-UNION to the phone.
  - Set the TI-remote switch at PIF-UNION off.

- Trouble Shooting Procedure
  - Check Battery Voltage
  - END_KEY Dome Switch condition& Side FPCB conditon
  - Check the output voltages of all LDOs.



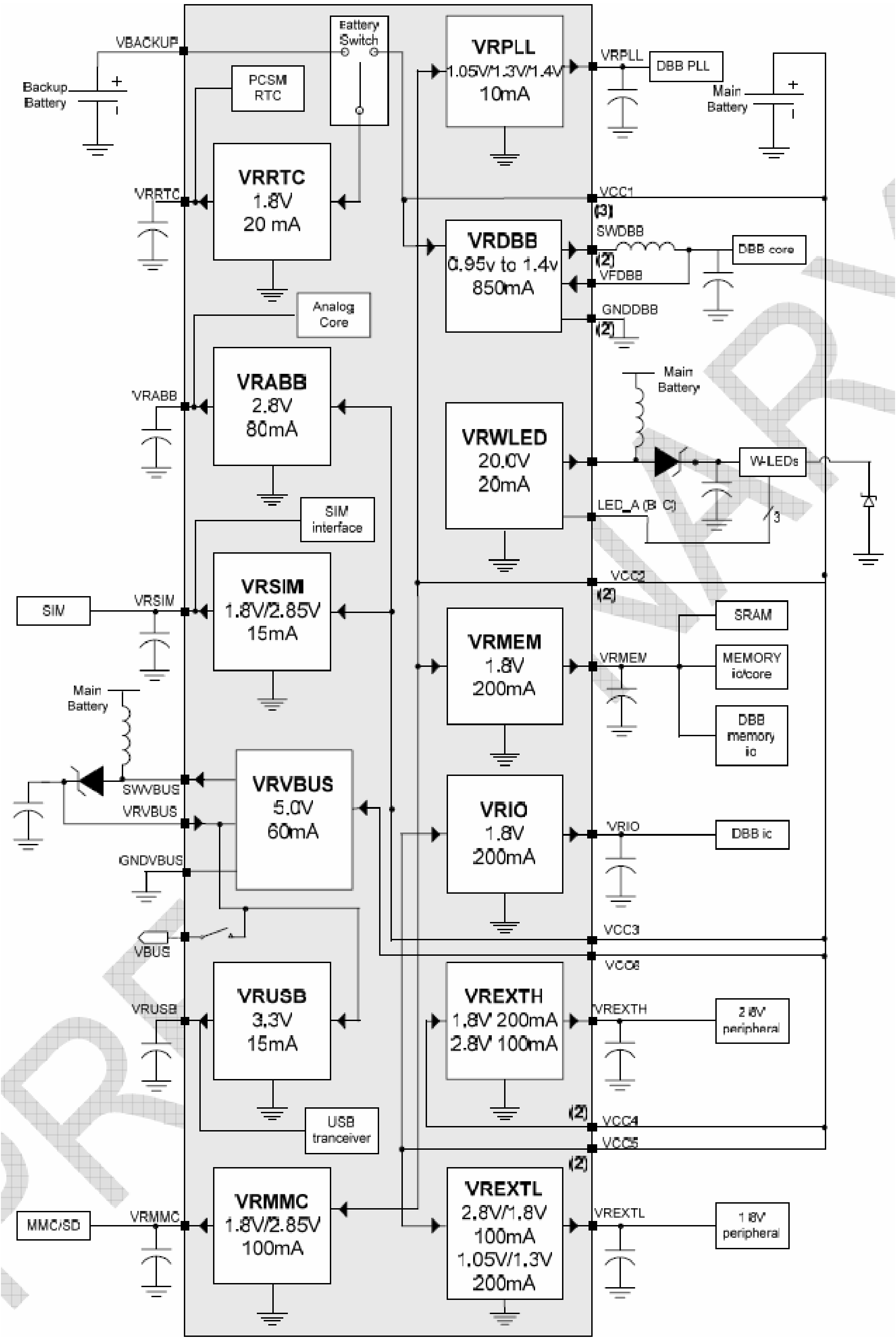
<Fig. 1>

4.4.2 Check Point

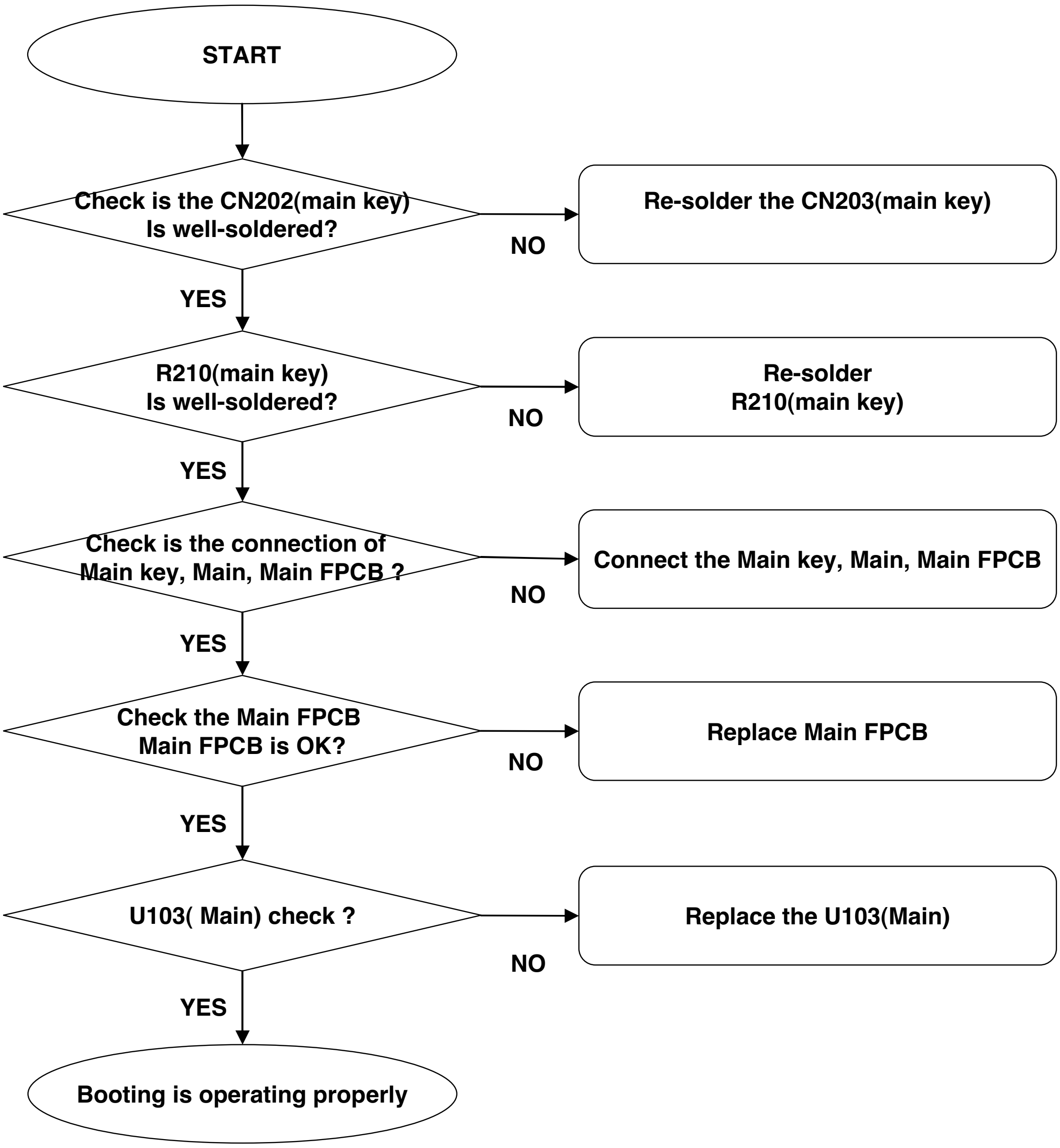


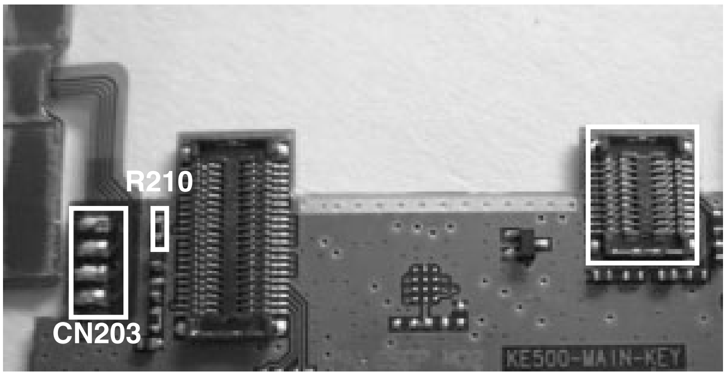
<Fig. 2> Triton Power Supplies

C128 : VRDBB =>1.4V/1.08V
C130 : VREXTL =>1.8V or 0V , Not used
C131 : VREXTH => 2.8V, TEMP_SENSE
C132 : VRMMC => 2.85V, T-flash
C133 : VRSIM =>1.8 / 2.85V, SIM
C134 : VRUSB =>3.3v
C135 : VRRTC => 1.8v
C136 : VRIO => 1.8v
C137 : VRABB => 2.8v
C138 : VRMEM => 1.8v
C138 : VRPLL => 1.3v / 1.4v



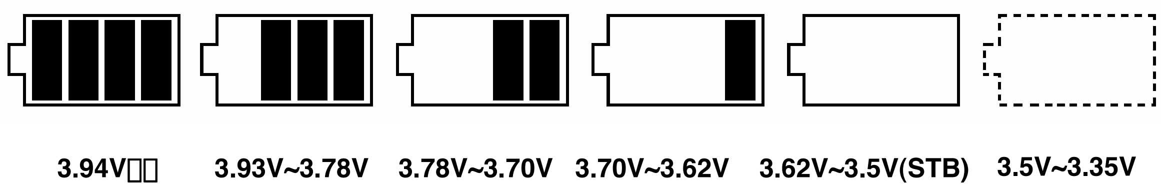
<Fig. 2.1> Triton Power Supplies


START
Check is the CN202(main key)
Is well-soldered?
NO
Re-solder the CN203(main key)
YES
R210(main key)
Is well-soldered?
NO
Re-solder
R210(main key)
YES
Check is the connection of
Main key, Main, Main FPCB ?
NO
Connect the Main key, Main, Main FPCB
YES
Check the Main FPCB
Main FPCB is OK?
NO
Replace Main FPCB
YES
U103(Main) check ?
NO
Replace the U103(Main)
YES
Booting is operating properly


R210
CN203
KE500-MAIN-KEY

4.4.3 Charging Trouble Shooting

- Charging method : CC-CV
- Charger Detection Voltage : About 4.0V
- Charging Time : About 2H under
- Charging Current : About 550mA
- Cut-off Current : 80mA
- Low Battery Alarm
  - Talk mode : 3.62V
  - Standby mode : 3.50V
- Switch-Off Voltage : 3.35
- Charging Temperature ADC Range
  - ~ -20˚C : Small charging operation
  - -20˚C ~ 60˚C : Charging
  - 60˚C ~ : Not charging operation small charging operation



*STB : Standby mode

(※ When talk mode, the battery icon starts blinking below 3.62V level)

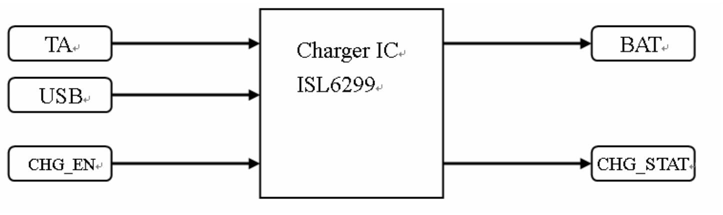
4.4.4 Charging Current

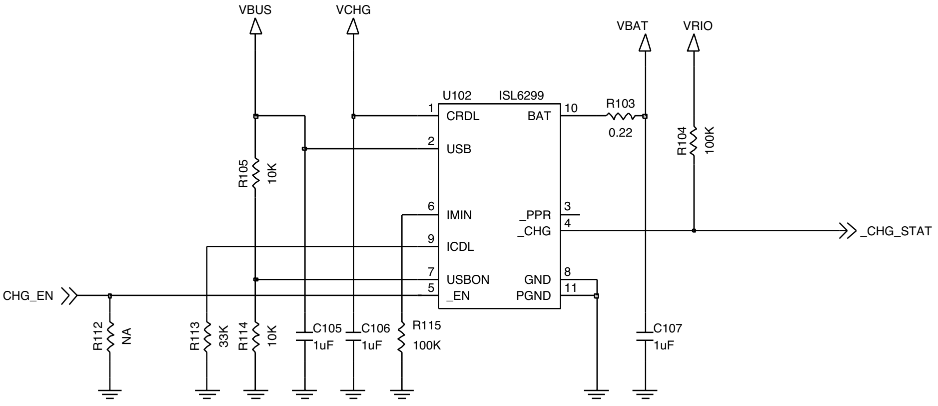
- Charging Procedure
  - Connecting TA & Charger Detection
  - Control the charging Current by CHARGER IC
  - Charging Current flow into the Battery

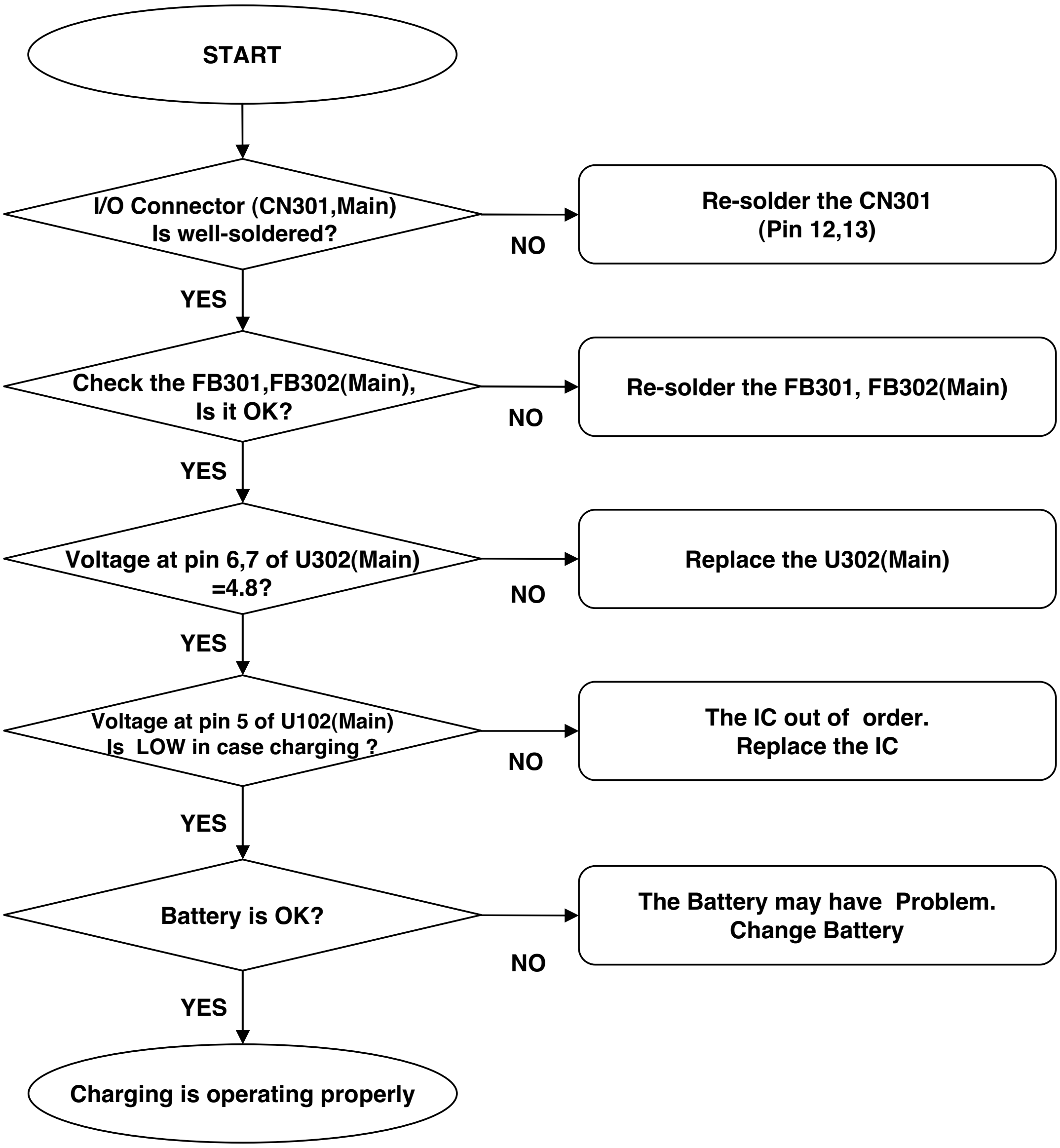
- Check Points
  - Connection of TA
  - Charger IC
  - Battery

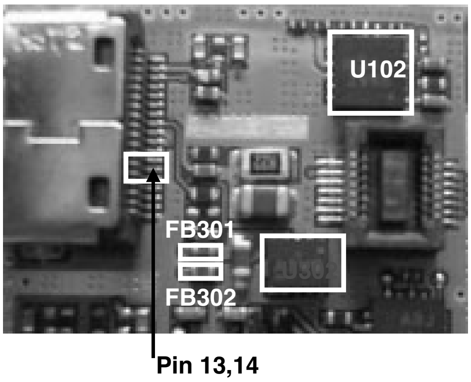
- Trouble Shooting Setup
  - Connect Battery & TA to the handset

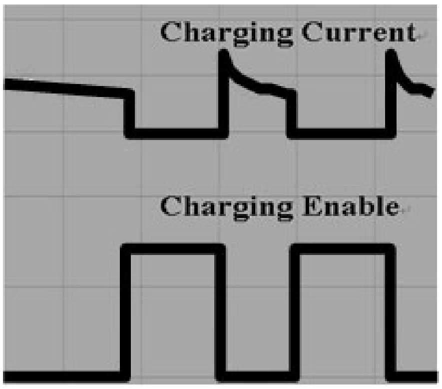
- Trouble Shooting Procedure
  - Check the charger connector
  - Check the charging current path
  - Check the battery





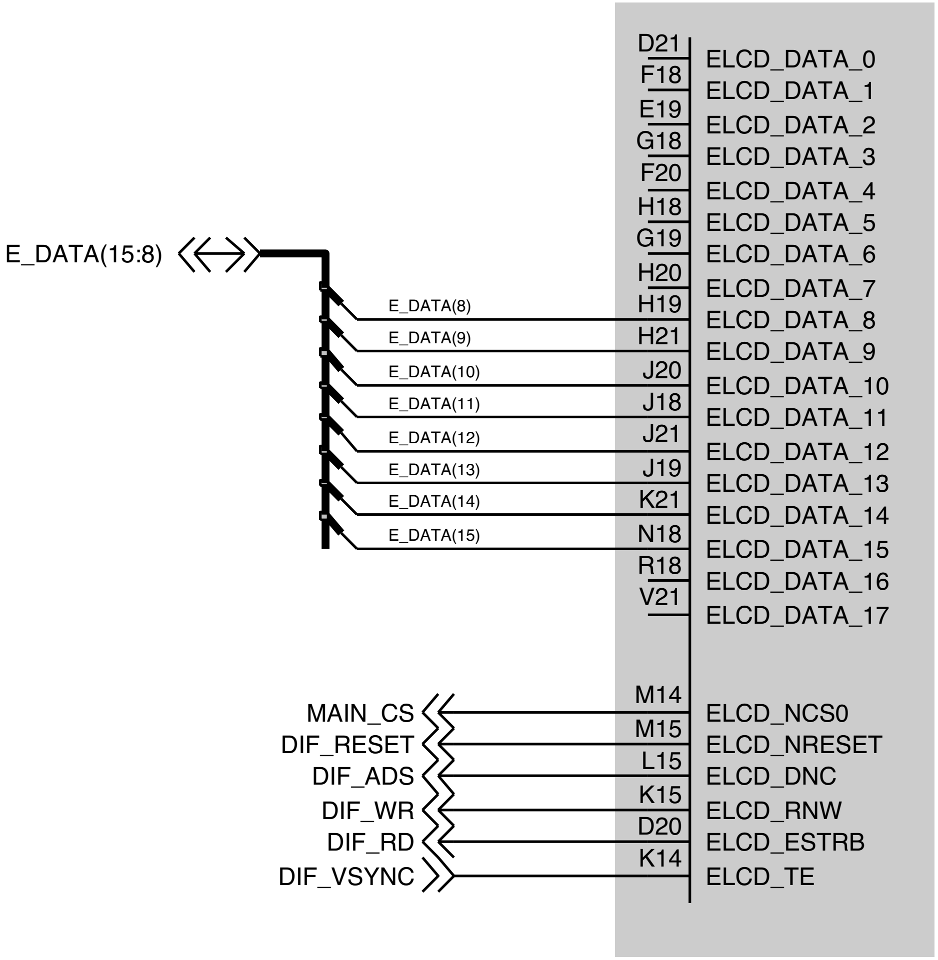

START
I/O Connector (CN301,Main)
Is well-soldered?
NO
Re-solder the CN301
(Pin 12,13)
YES
Check the FB301,FB302(Main),
Is it OK?
NO
Re-solder the FB301, FB302(Main)
YES
Voltage at pin 6,7 of U302(Main)
=4.8?
NO
Replace the U302(Main)
YES
Voltage at pin 5 of U102(Main)
Is LOW in case charging ?
NO
The IC out of order.
Replace the IC
YES
Battery is OK?
NO
The Battery may have Problem.
Change Battery
YES
Charging is operating properly


U102
FB301
FB302
Pin 13,14


Charging Current
Charging Enable

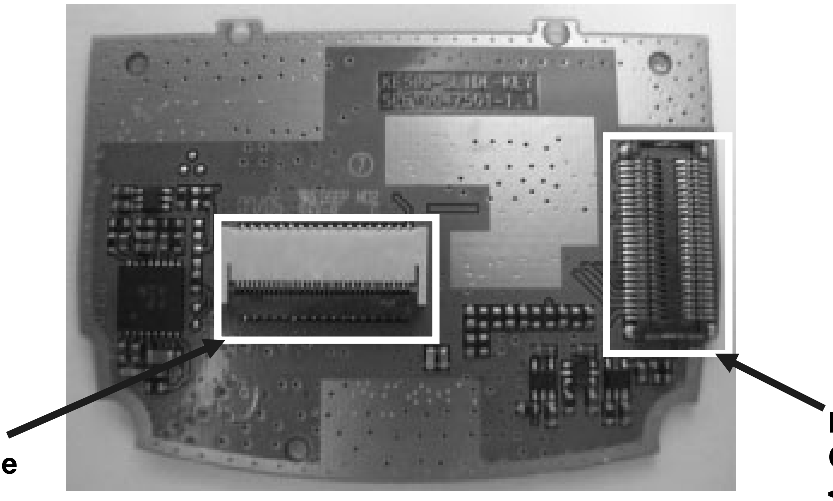
4.5 LCD Display Trouble

- LCD Control signals from Main Board
  - DIF_RESET, MAIN_CS, DIF_ADS, DIF_WR, DIF_RD, DIF_VSYNC, E_DATA(15~8)



- Check Point
  - The Assembly status of the LCD Module
  - The Soldering of connector
  - The FPCB which connects the LCD Module
- Trouble Shooting Setup
  - Connect PIF Jig, and Power on

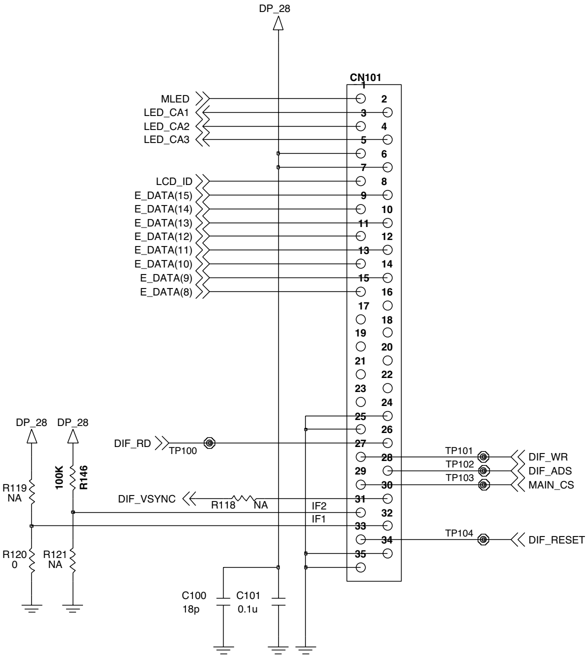
4.5.1 Check Point #1 - Slide key PCB



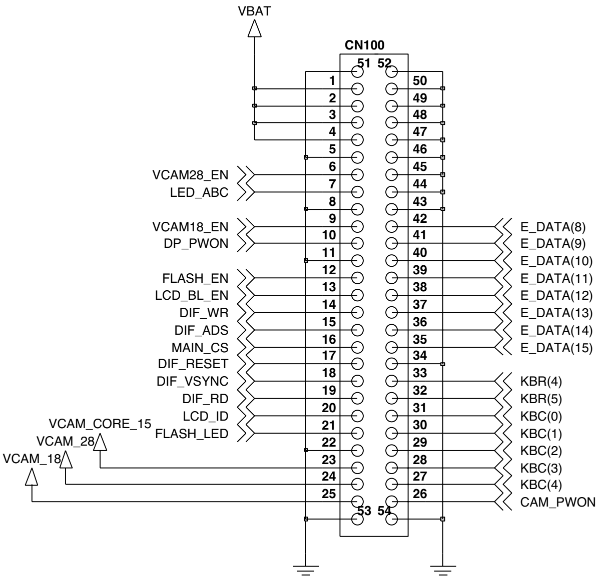
LCD module Connector

FPCB Connector < CN101 >

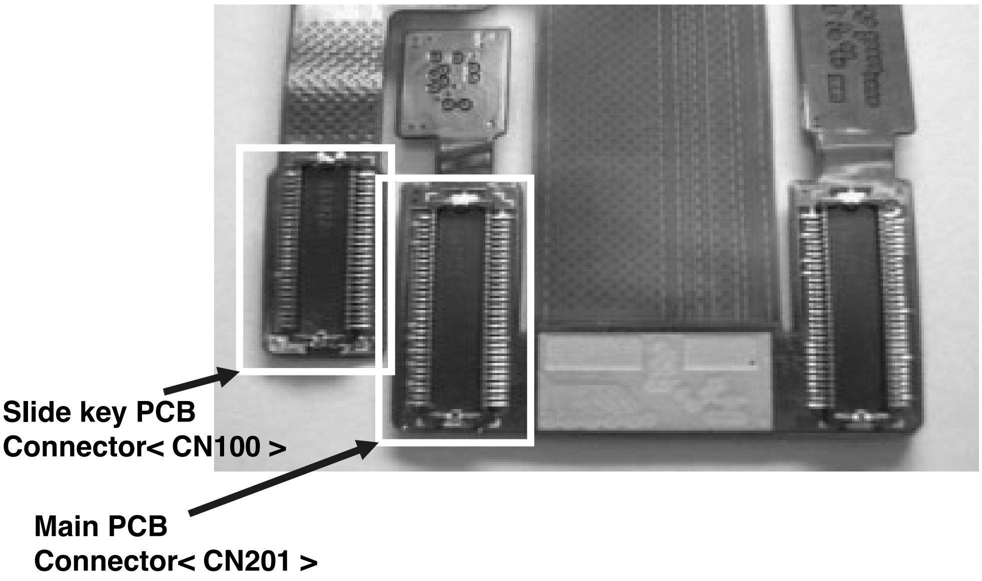
< CN101 Connection of Slide key PCB >



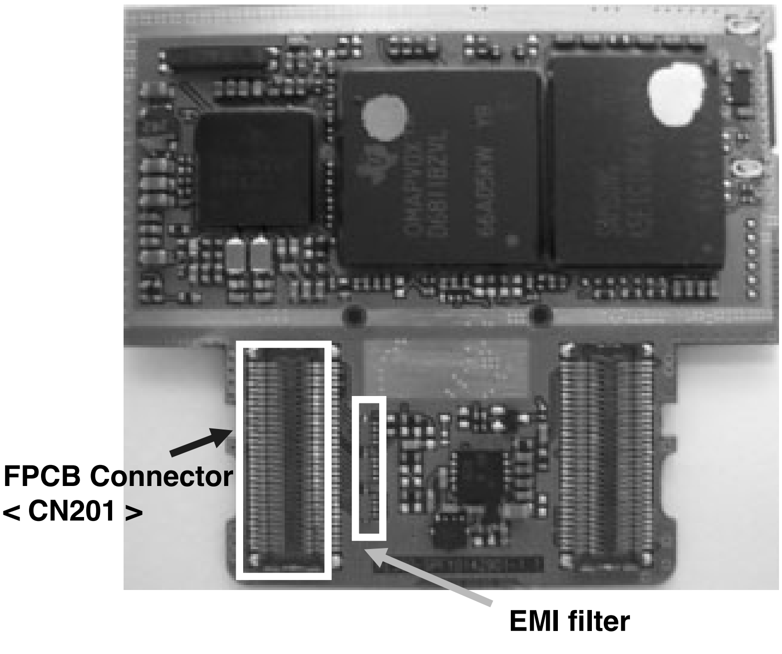
< CN100 Connection of Slide key PCB >

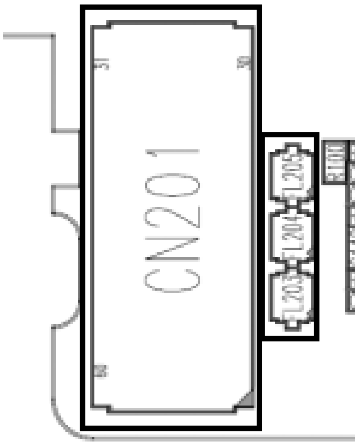


4.5.2 Check Point #2 - FPCB

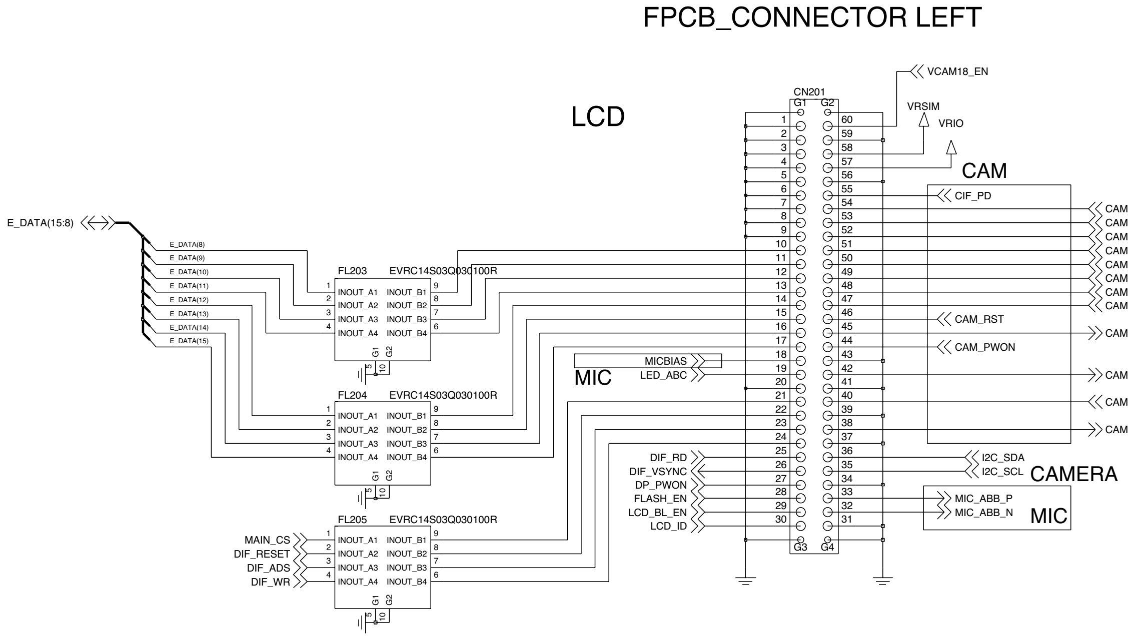


4.5.3 Check Point #3 - Main PCB

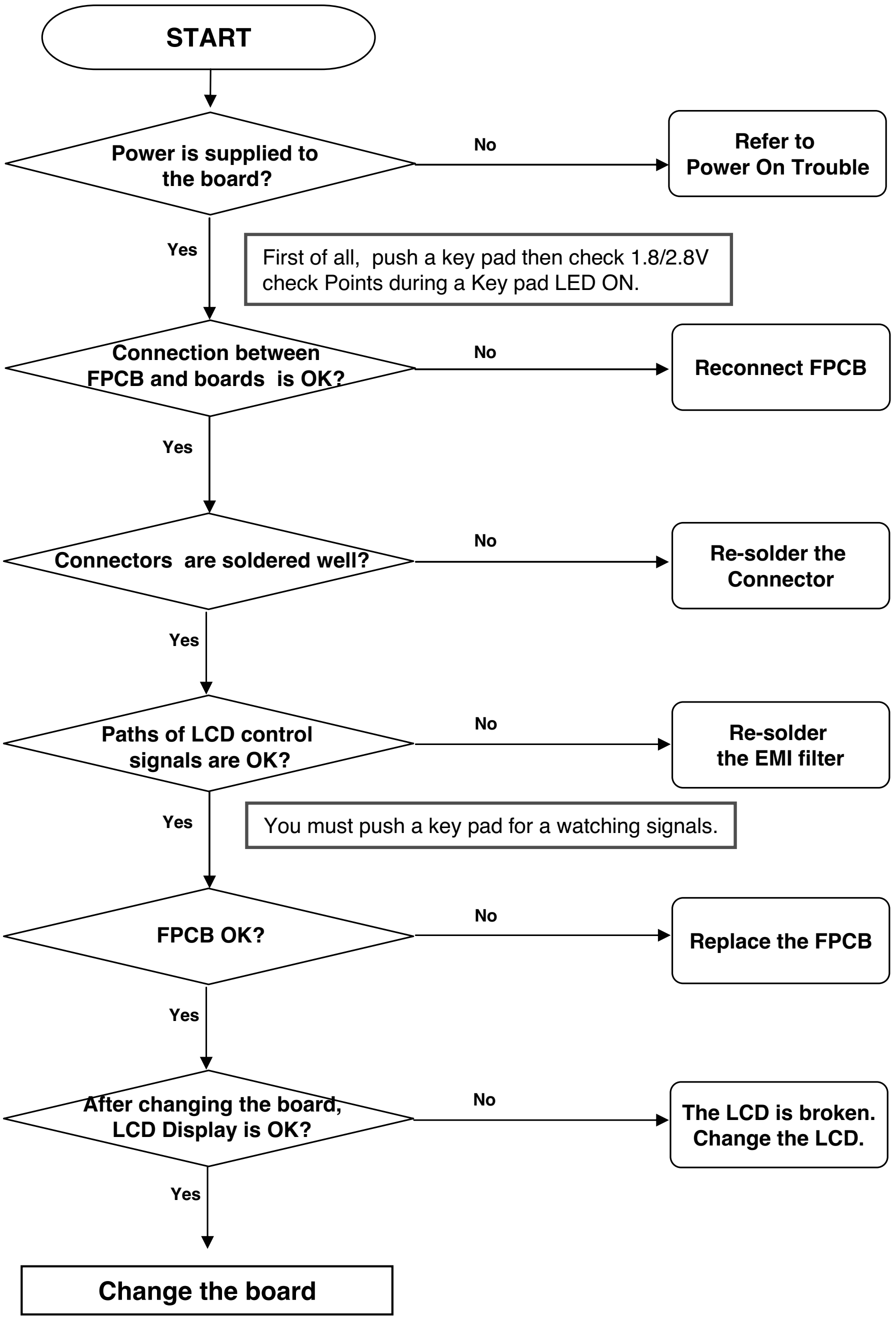




< CN201 Connection of Main PCB >

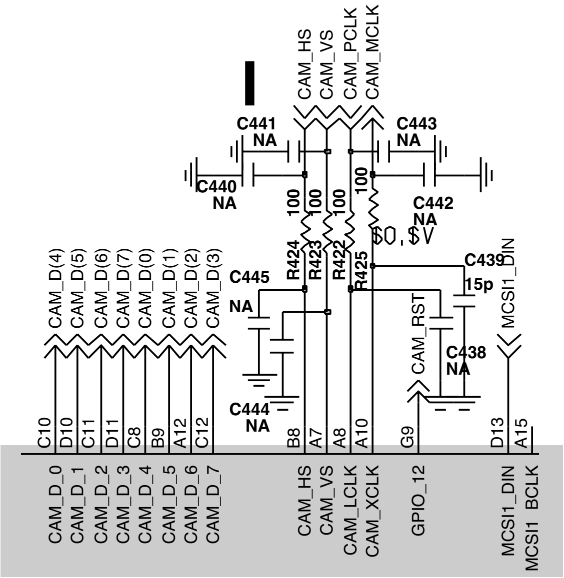


- You must check signals LCD Connector Side of a Main FPCB because you could check final signal states through EMI Filter, connector, FPCB and etc.


START
Power is supplied to the board?
No
Refer to Power On Trouble
Yes
First of all, push a key pad then check 1.8/2.8V check Points during a Key pad LED ON.
Connection between FPCB and boards is OK?
No
Reconnect FPCB
Yes
Connectors are soldered well?
No
Re-solder the Connector
Yes
Paths of LCD control signals are OK?
No
Re-solder the EMI filter
Yes
You must push a key pad for a watching signals.
FPCB OK?
No
Replace the FPCB
Yes
After changing the board, LCD Display is OK?
No
The LCD is broken. Change the LCD.
Yes
Change the board

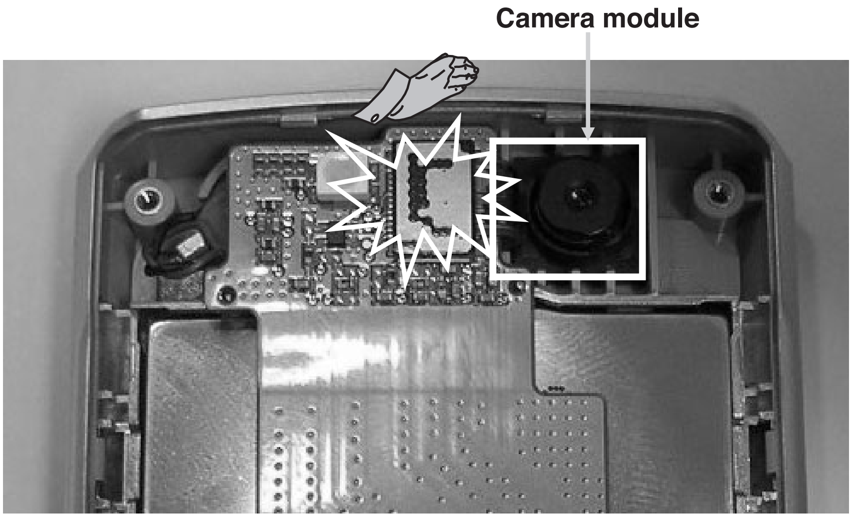
4.6 Camera Trouble Shooting

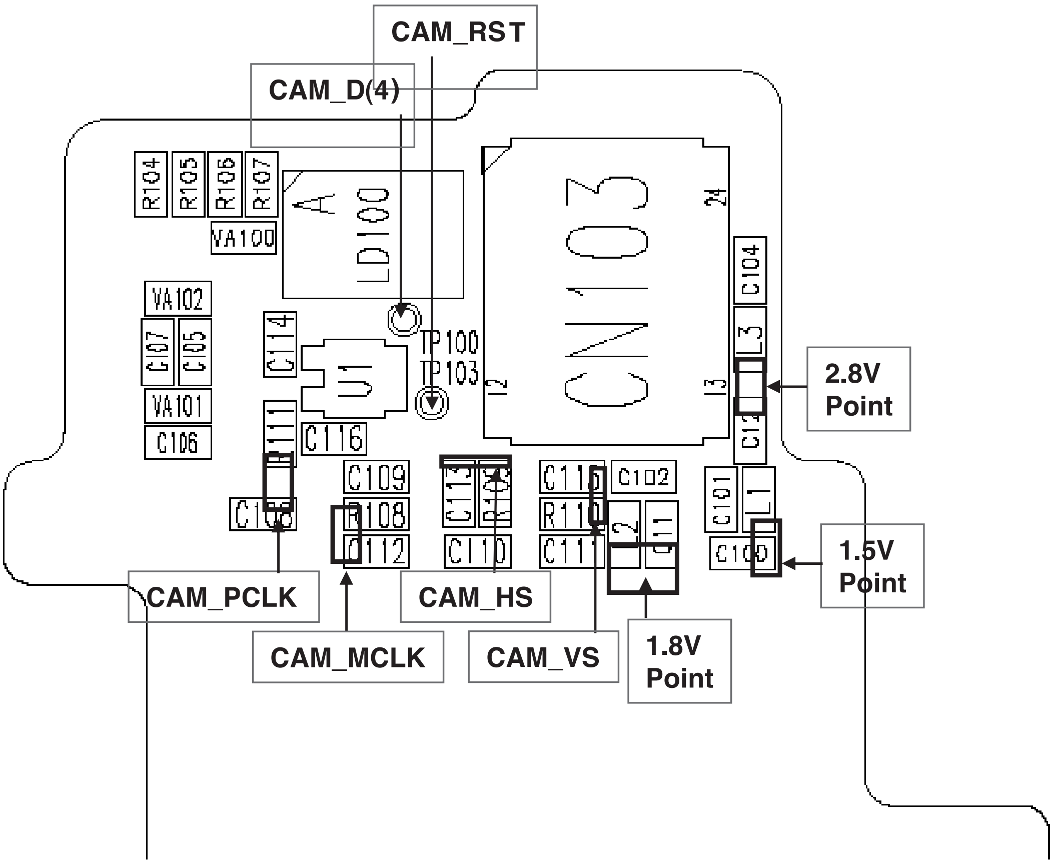
- Camera signals from Main Board
  - CAM_RST, CAM_MCLK, CAM_PCLK, CAM_VS, CAM_HS, CAM_D(0) ~ D(7)



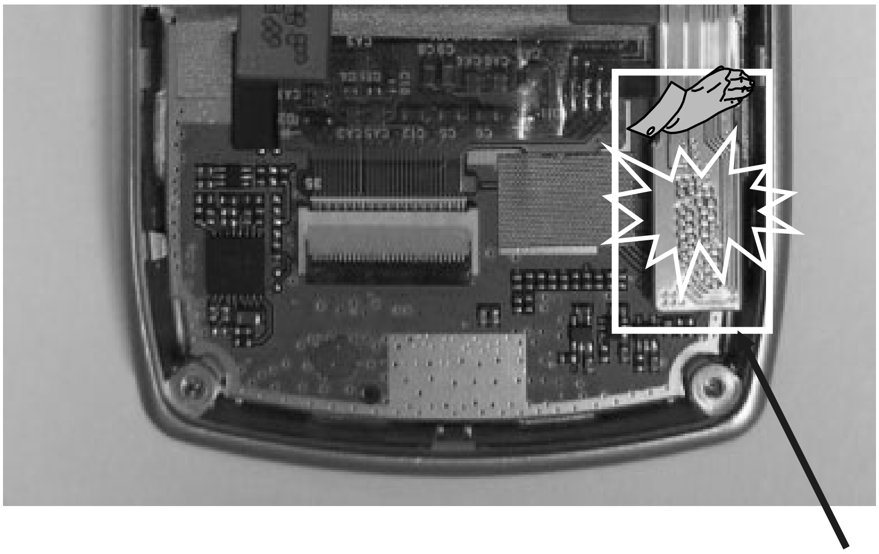
- Camera signals from Main Board
  - Check the power supply
  - Check the soldering of Components
  - Check the CAMERA signals
- Trouble Shooting Setup
  - Enter the engineering mode.
  - Go to menu ‘2.Baseband -> 3.Camera -> 1.Main LCD Preview’

4.6.1 Check Point #1 - Connection of Camera Module

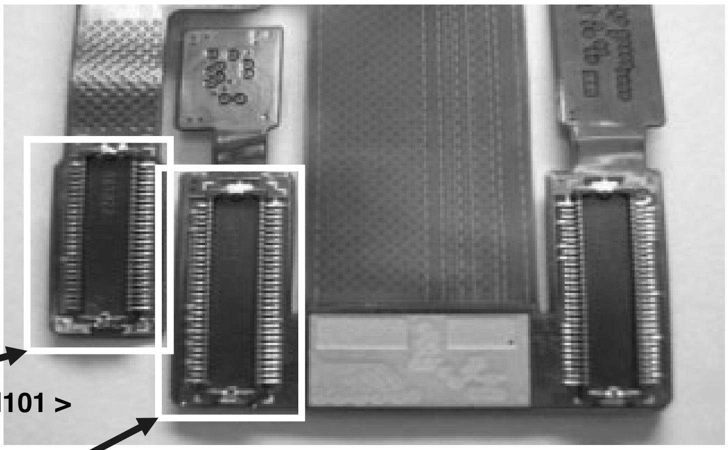




4.6.2 Check Point #2 - Connection of Slide PCB Connector



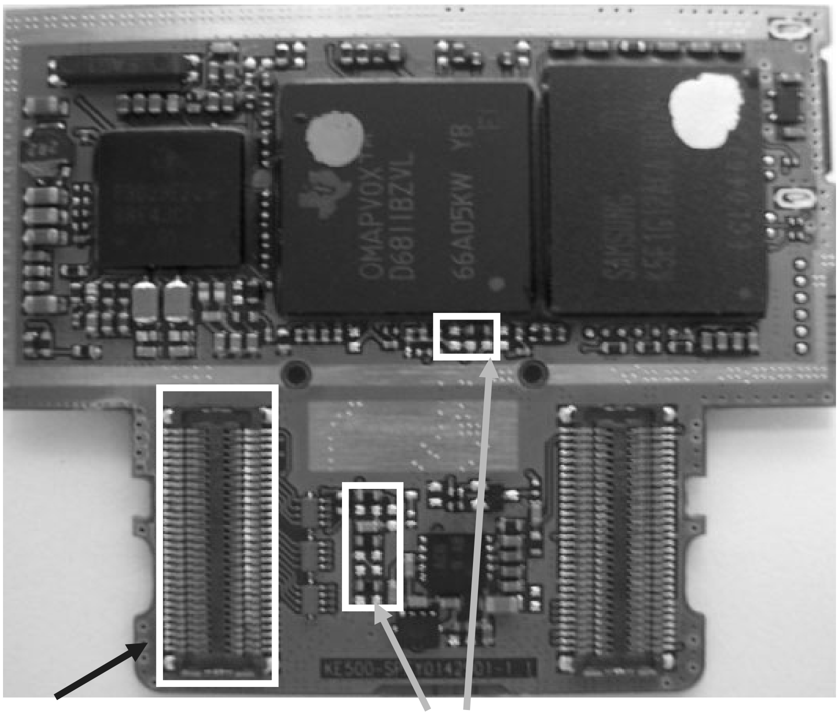
Slide PCB
Connector< CN100 >



Slide PCB
Connector< CN101 >
of FPCB

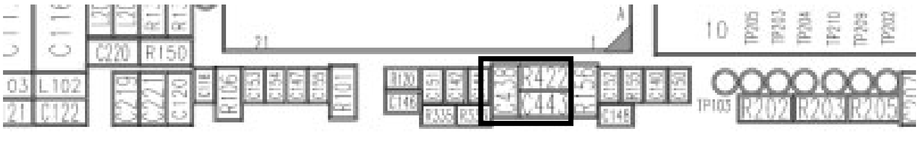
Main PCB
Connector< CN102 >
of FPCB

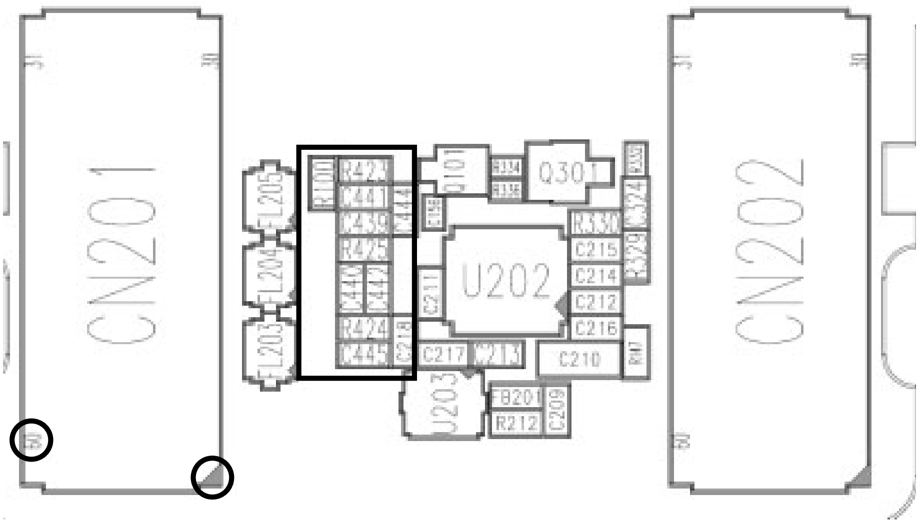
4.6.3 Check Point #3 - Main PCB



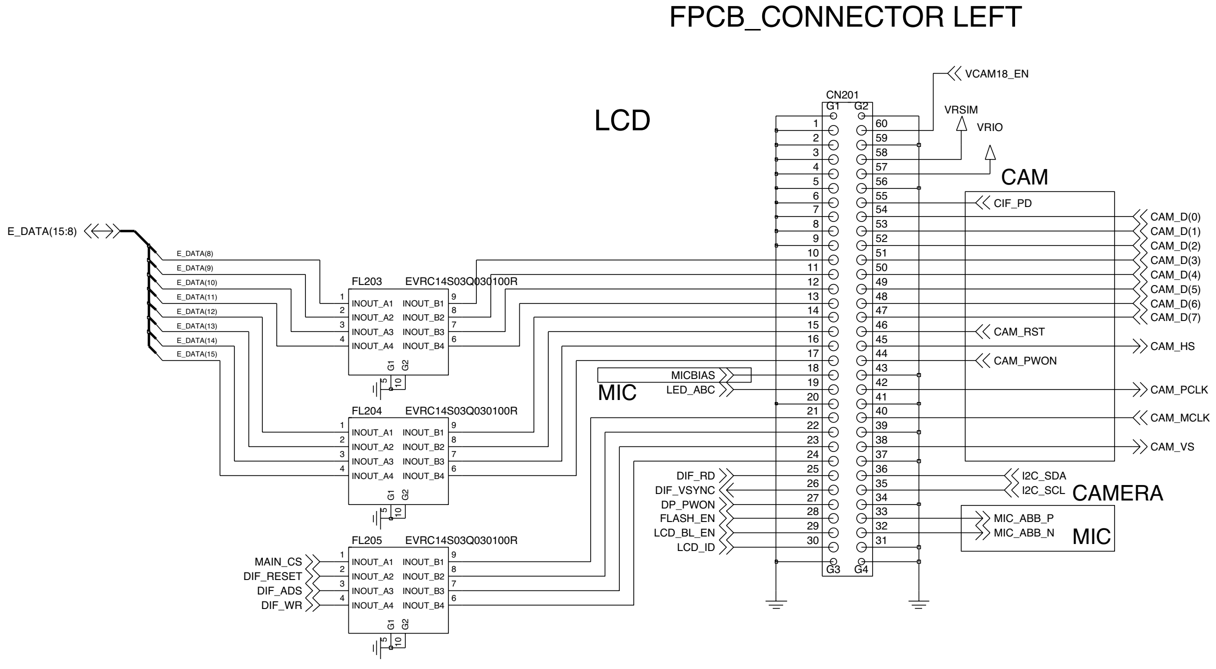
Main Connector< CN201>

Camera Control Signal (CAM_MCLK, PCLK, HS,VS)

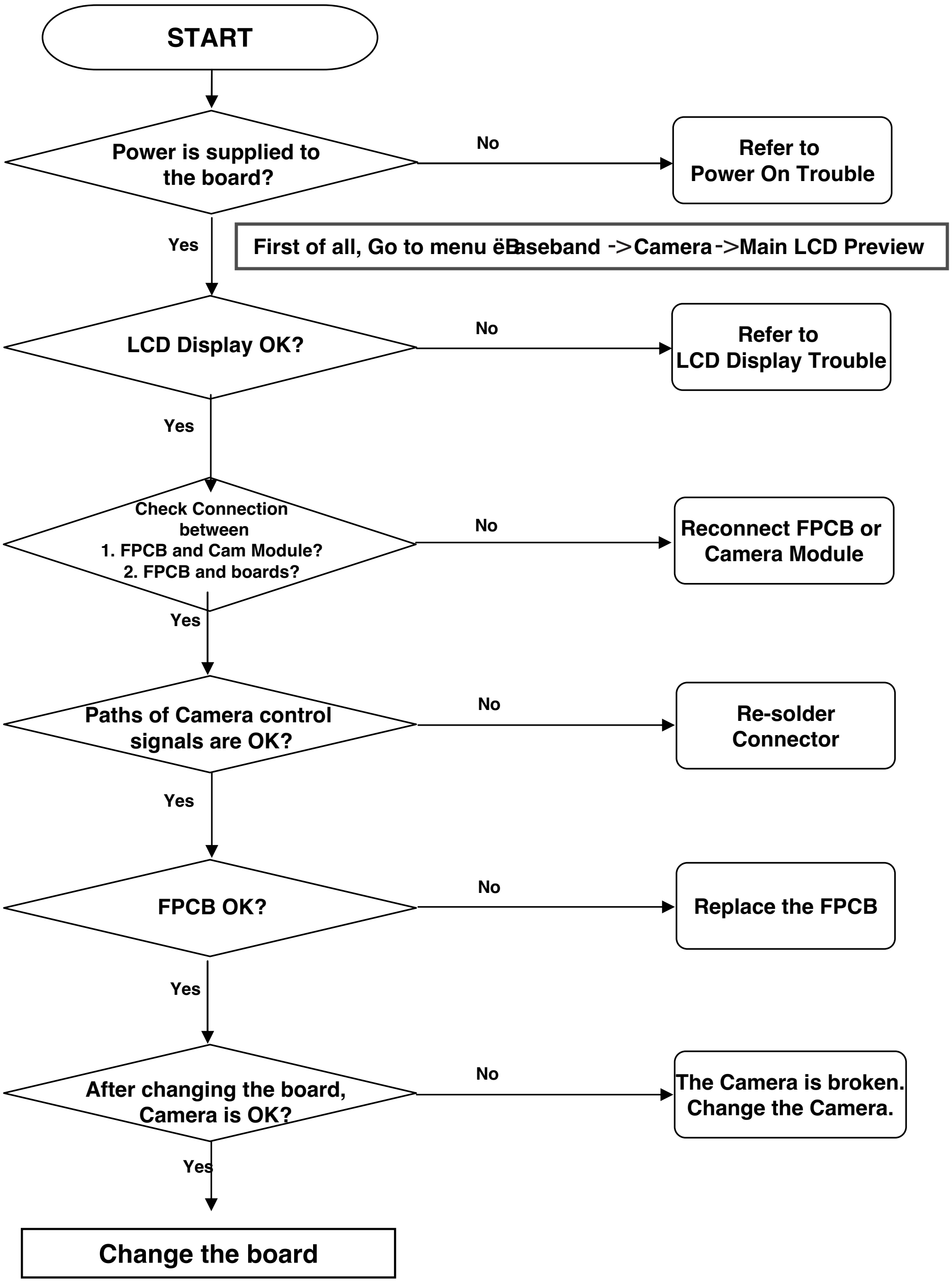




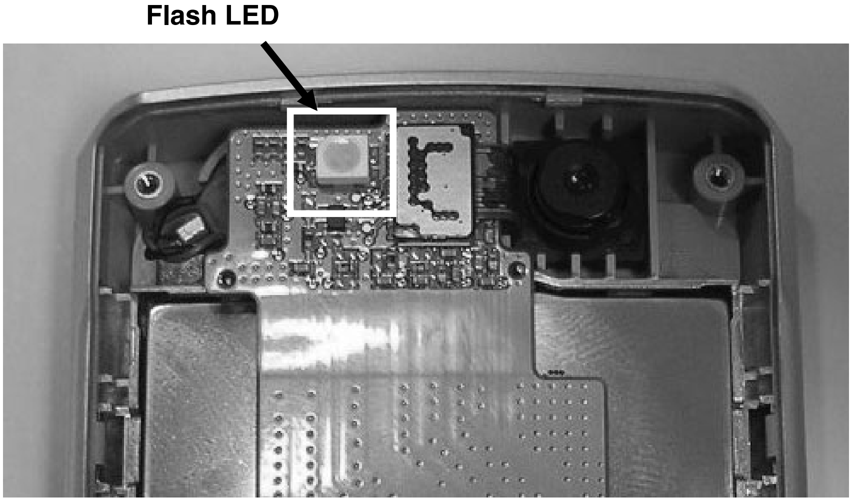
< CN201 Connection of Main PCB >

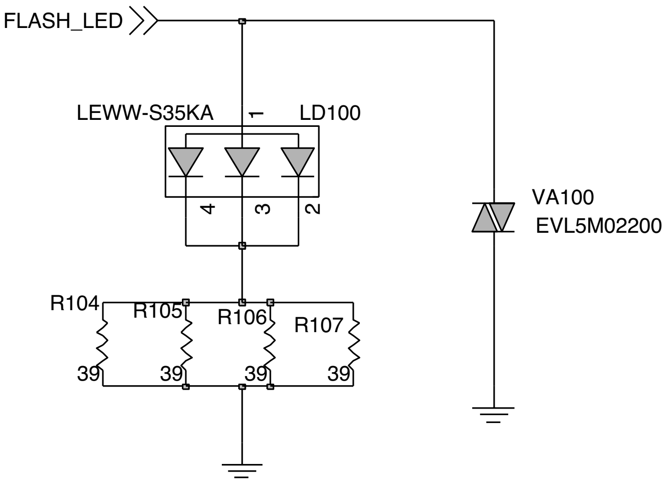


- You must check camera signals at a Connector Side of a Main FPCB because you could check final signal states through connector, FPCB and etc.


START
Power is supplied to the board?
No
Refer to Power On Trouble
Yes
First of all, Go to menu ëBaseband ->Camera->Main LCD Preview
LCD Display OK?
No
Refer to LCD Display Trouble
Yes
Check Connection between
1. FPCB and Cam Module?
2. FPCB and boards?
No
Reconnect FPCB or Camera Module
Yes
Paths of Camera control signals are OK?
No
Re-solder Connector
Yes
FPCB OK?
No
Replace the FPCB
Yes
After changing the board, Camera is OK?
No
The Camera is broken. Change the Camera.
Yes
Change the board

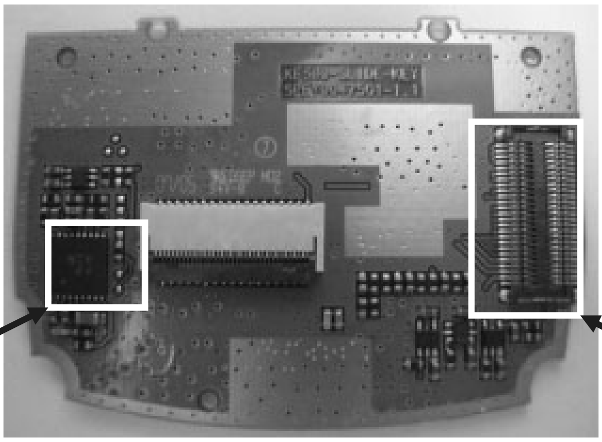
4.7 Flash LED Trouble Shooting





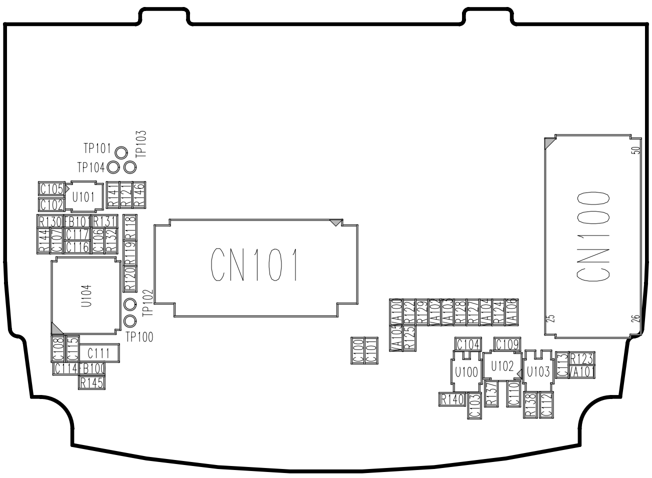
- Check Point
  - Check the connection status
  - Check the soldering of Componets
  - Check the FLASH_LED signal

4.7.1 Check Point #1 - Slide key PCB

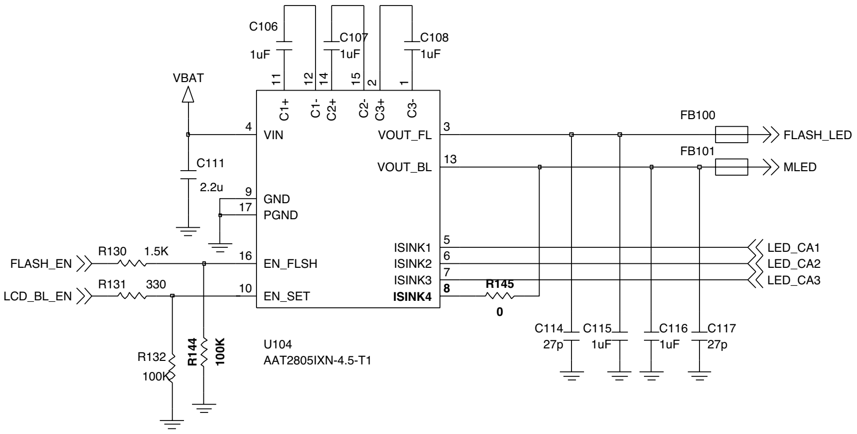


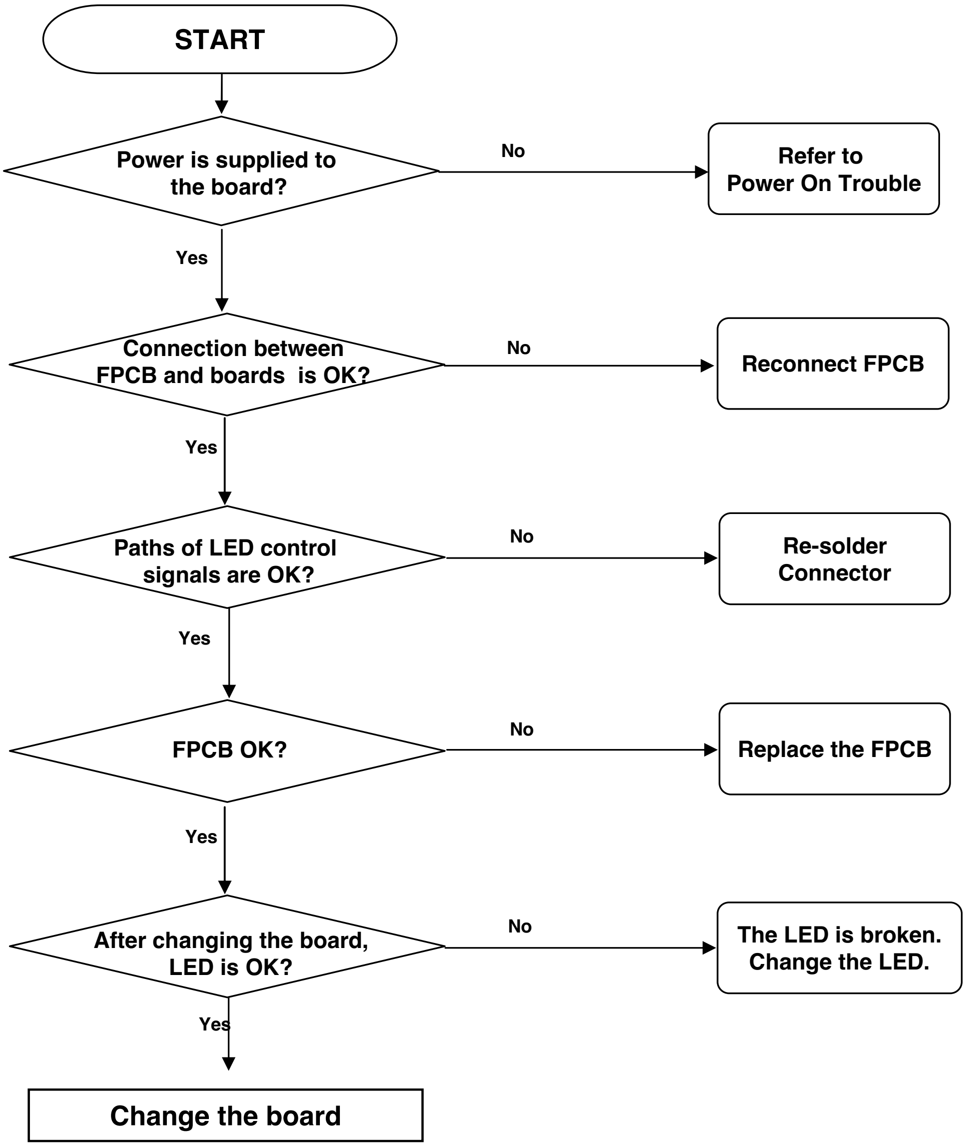
Charge pump IC (Control Flash LED)

FPCB Connector < CN101 >



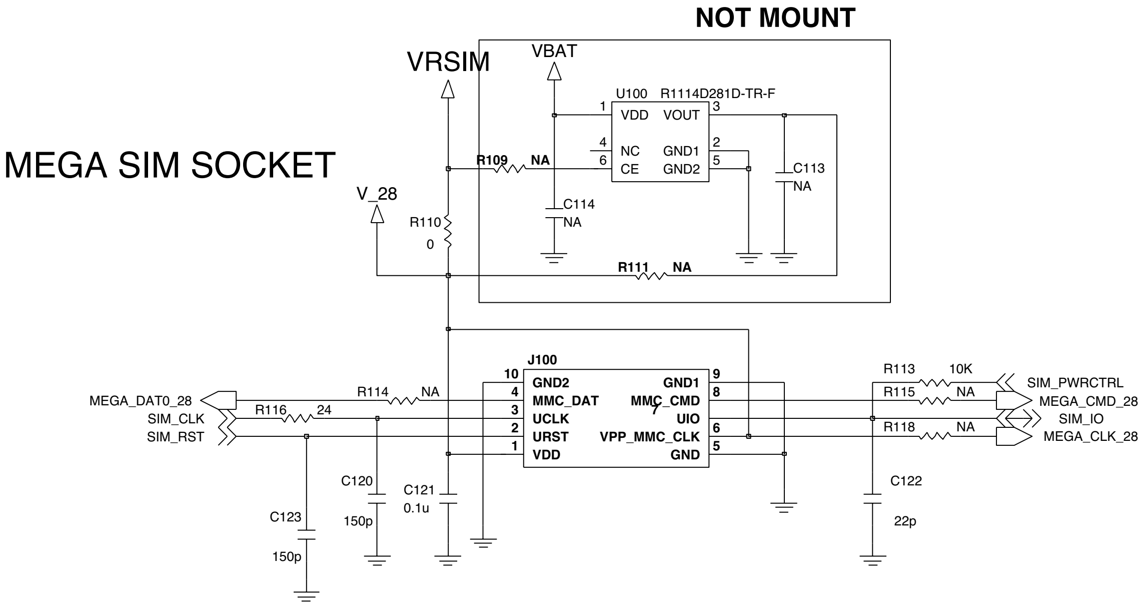
< U104 Connection of Slide key PCB >



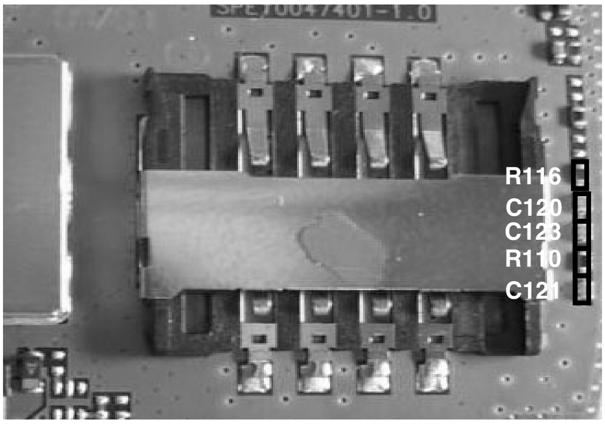

START
Power is supplied to the board?
No
Refer to Power On Trouble
Yes
Connection between FPCB and boards is OK?
No
Reconnect FPCB
Yes
Paths of LED control signals are OK?
No
Re-solder Connector
Yes
FPCB OK?
No
Replace the FPCB
Yes
After changing the board, LED is OK?
No
The LED is broken. Change the LED.
Yes
Change the board

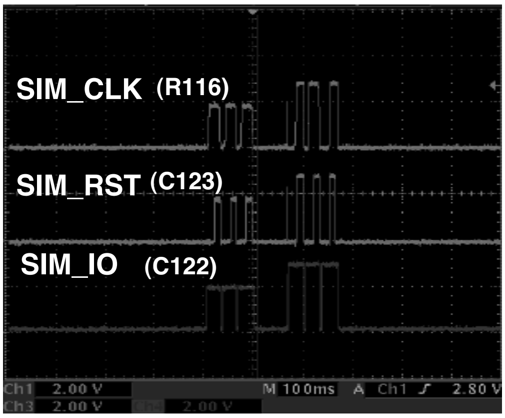
4.8 SIM Detect Trouble Shooting

SIM interface scheme is shown below.
SIM_IO, SIM_CLK, SIM_RST ports are used to communicate DBB with ABB and the Charge Pump in ABB enables 1.8V/3V SIM operation.



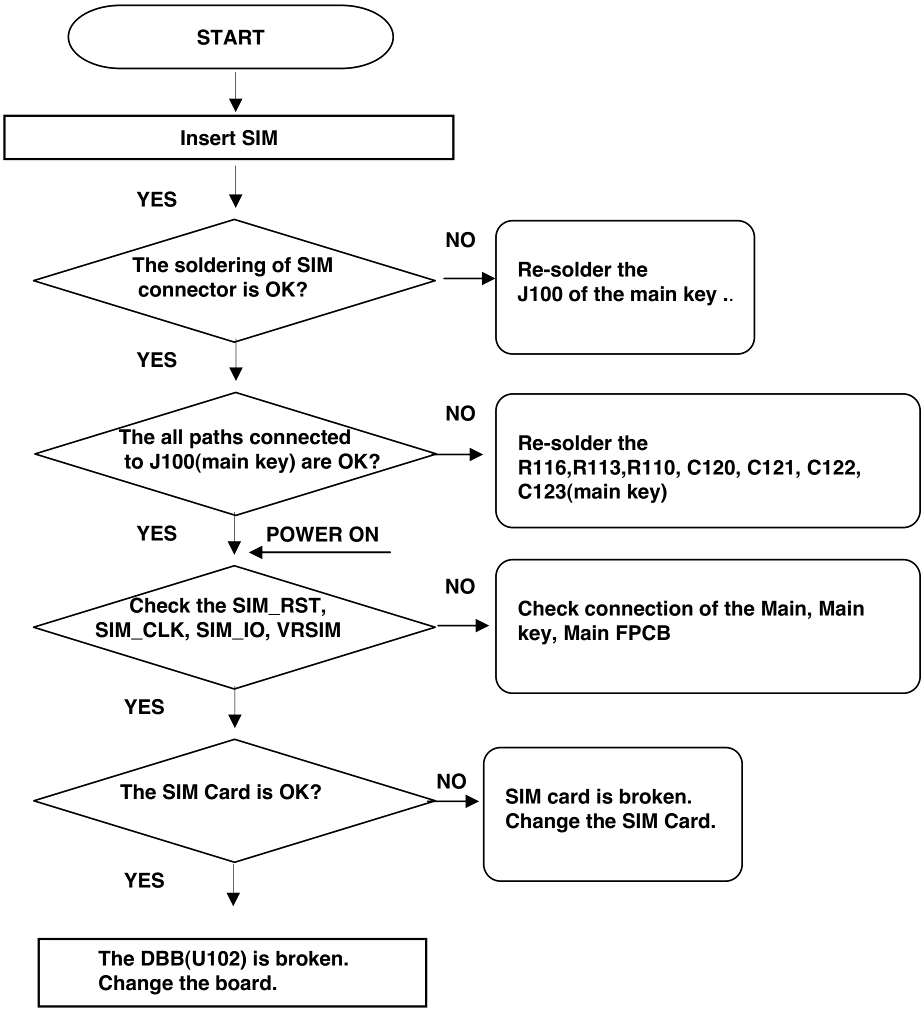
<Fig.1> SIM Circuit Diagram





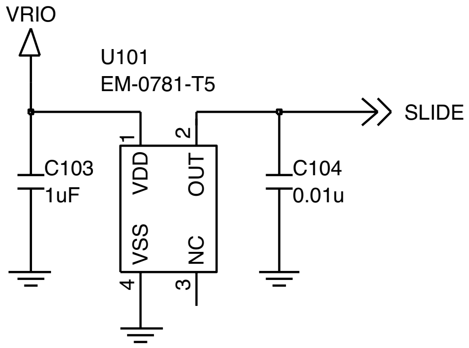
SIM_CLK : SIM Card reference clock
SIM_RST : SIM Card async/sync reset
SIM_IO : SIM Card bi-directional data line
SIM_PWRCTRL : SIM Card power activation
SIM_RnW : SIM Card data line direction
SIM_CD : SIM Card presence detection

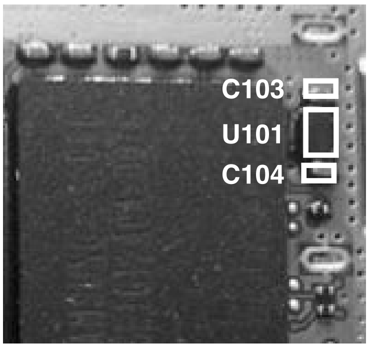
- Connection between SIM and DBB
  - SIM_CLK, SIM_IO, SIM_RST, SIM_PWRCTRL
- Check Points
  - Contact between SIM and socket
  - Soldering of SIM socket
- Trouble Shooting
  - Insert the SIM into socket
  - Connect PIF_UNION Jig to the phone, and Power on
- Trouble Shooting Procedure
  - Check the power supply
  - Check the soldering of SIM socket
  - Check the SIM

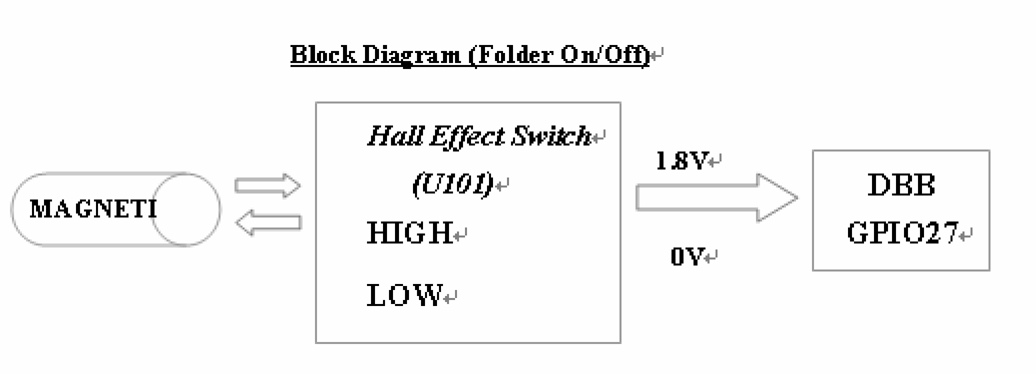

START
Insert SIM
YES
The soldering of SIM connector is OK?
NO
Re-solder the J100 of the main key ..
YES
The all paths connected to J100(main key) are OK?
NO
Re-solder the R116,R113,R110, C120, C121, C122, C123(main key)
YES
POWER ON
Check the SIM_RST, SIM_CLK, SIM_IO, VRSIM
NO
Check connection of the Main, Main key, Main FPCB
YES
The SIM Card is OK?
NO
SIM card is broken. Change the SIM Card.
YES
The DBB(U102) is broken. Change the board.

4.9 Slide Up/Down and Trouble Shooting

Slide Operation scheme is shown below.







4.9.1 Slide Operation(ON/OFF)

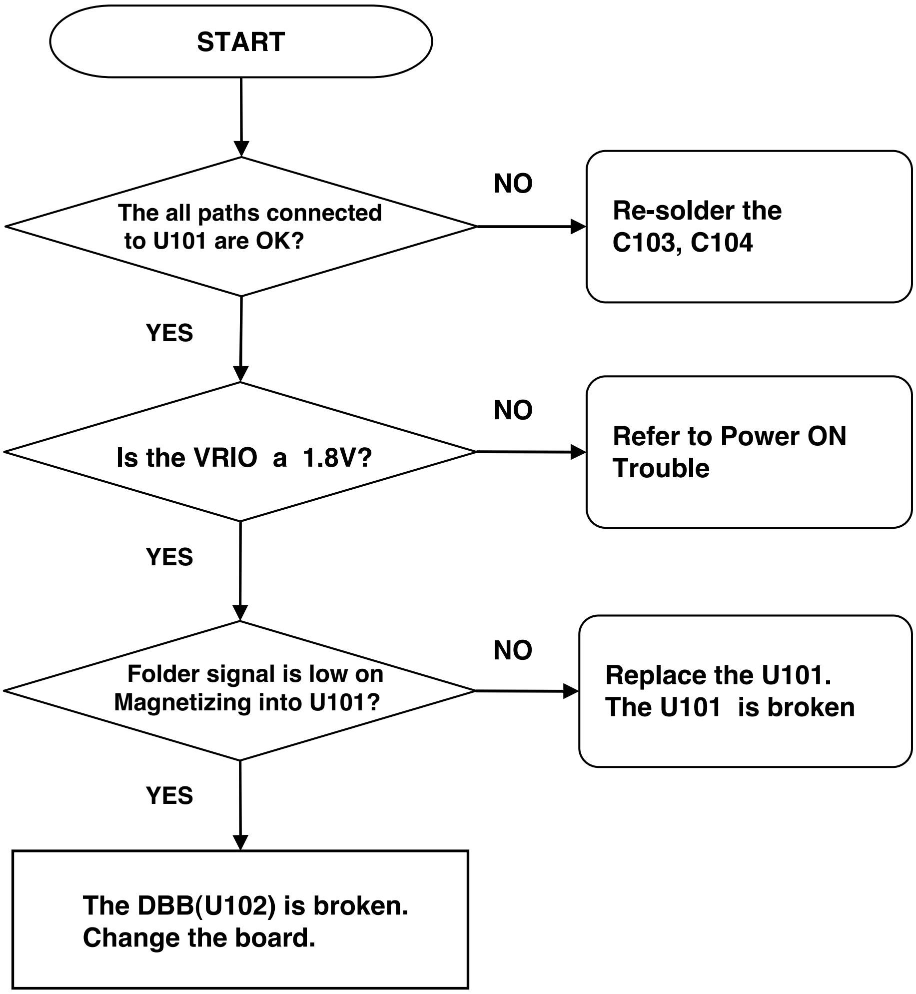
- There is a magnet to detect the slide status, opened or closed.
- If a magnet is down to the hall-effect switch(U502) the voltage at pin 1 of U502 goes to 0V. Otherwise, 1.8V
- This Slide signal is delivered to DBB, and the status of Slide is reported.

- **Slide Signal Status**

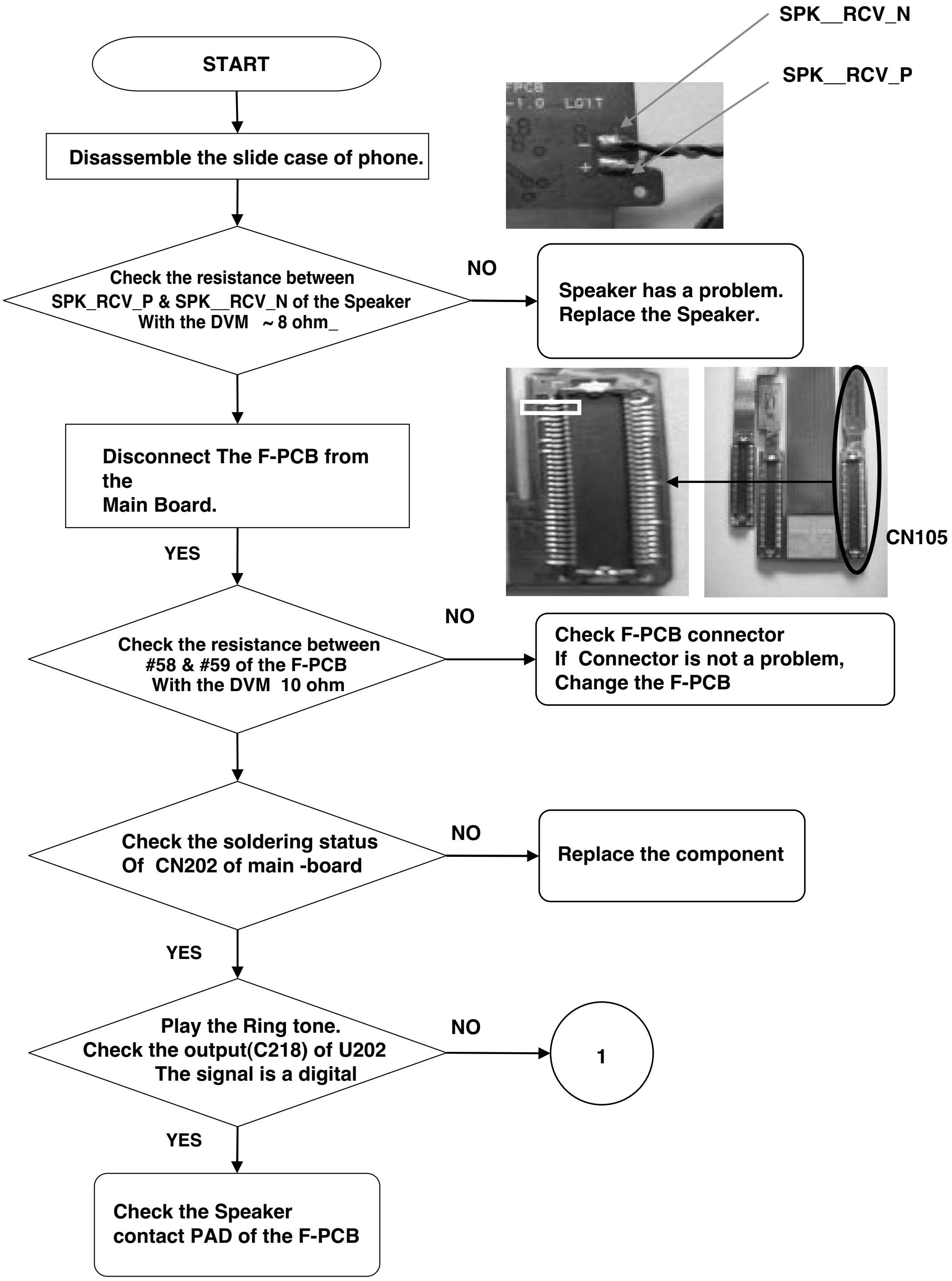
  L : Down (Magnetized) => Slide Down

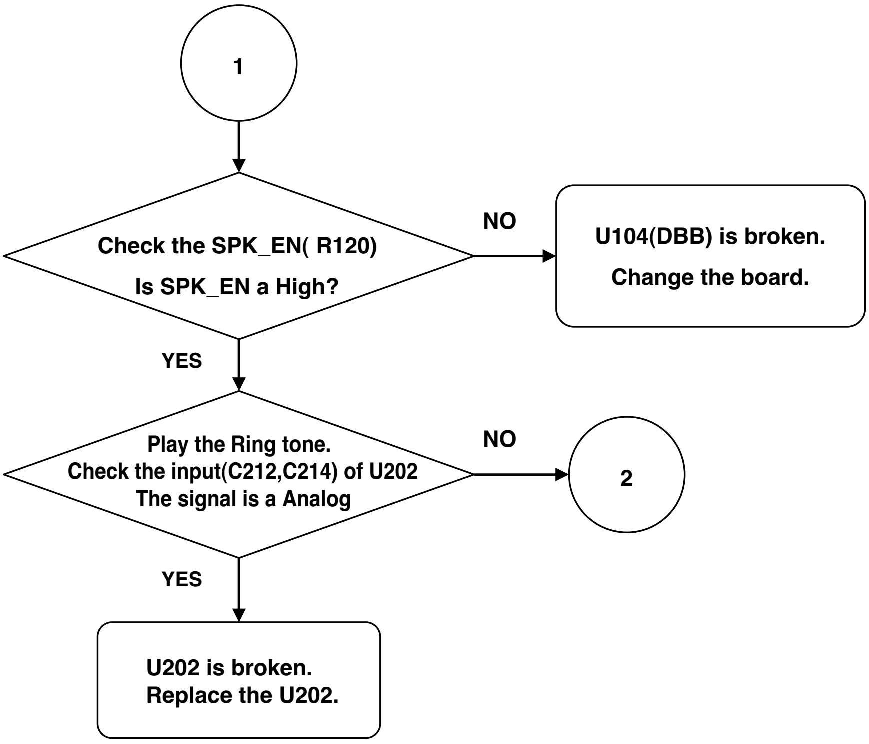
  H : Up (Not magnetized) => Slide Up

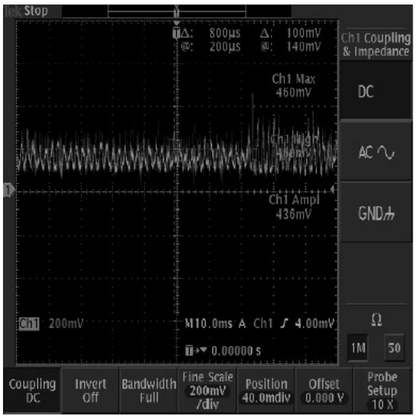
4.9.2 Slide Trouble (ON/OFF)

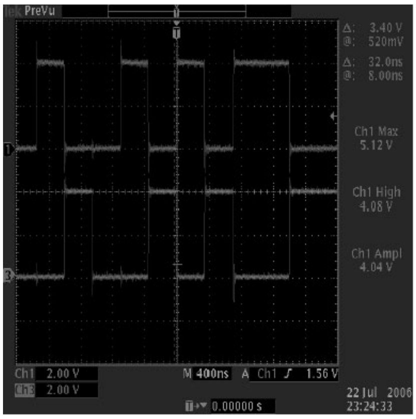


4.10 Speaker/Receiver Trouble Shooting (Common Path)



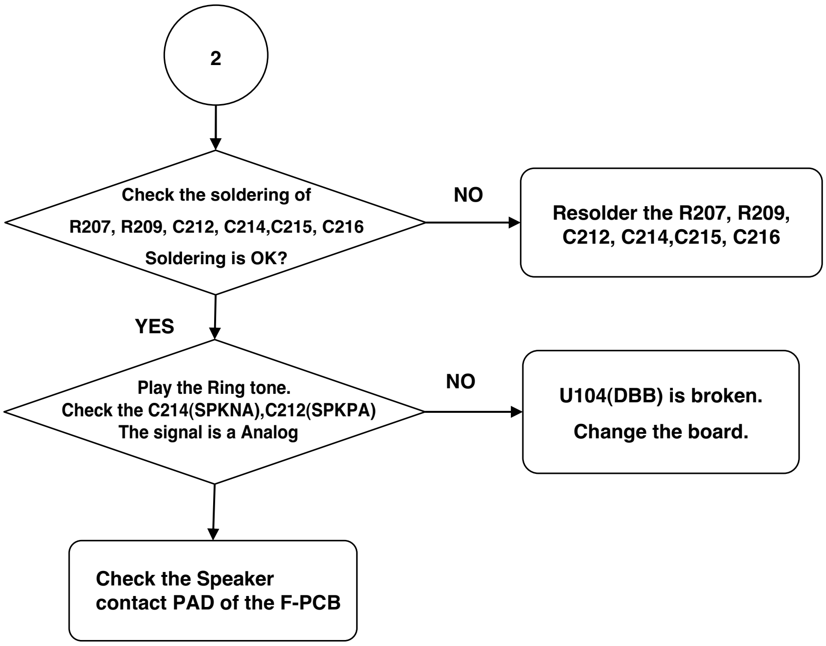


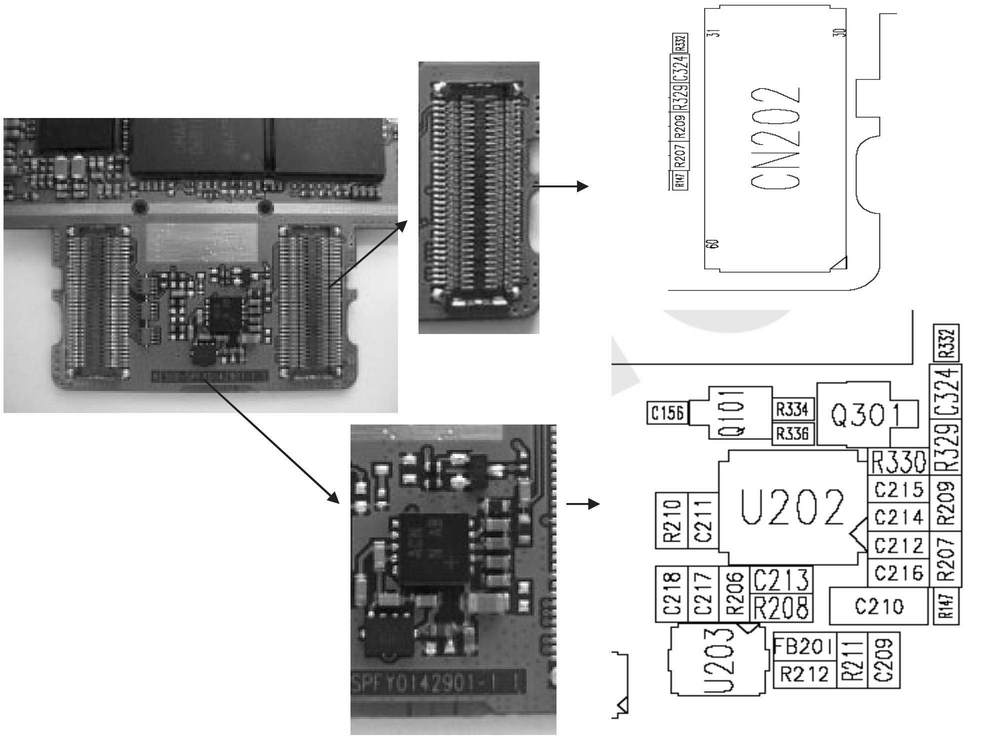




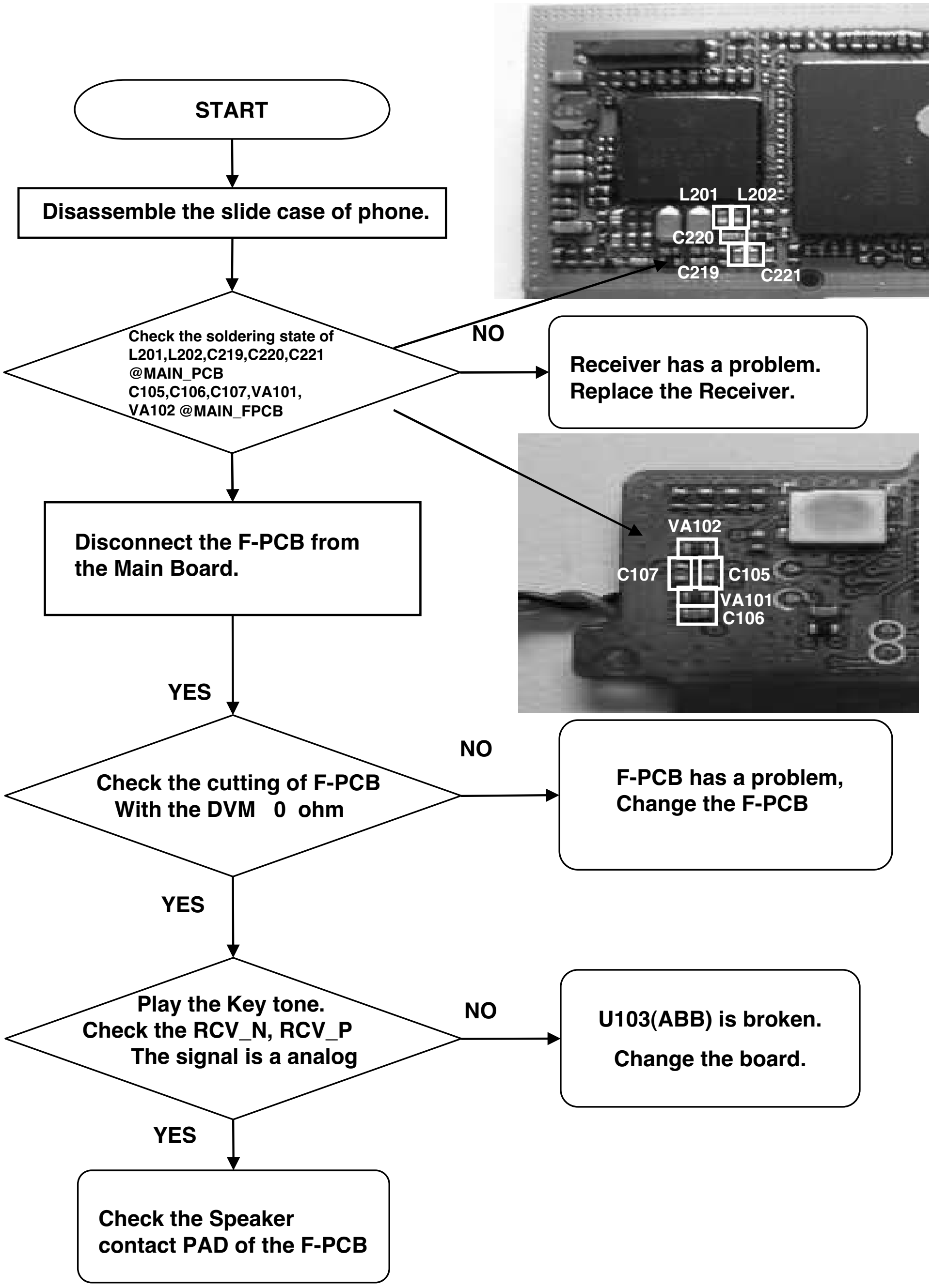
<Fig.1> INPUT(C212) of U202

<Fig.2> OUTPUT(C218)of U202


2
Check the soldering of
R207, R209, C212, C214,C215, C216
Soldering is OK?
NO
Resolder the R207, R209, C212, C214,C215, C216
YES
Play the Ring tone.
Check the C214(SPKNA),C212(SPKPA)
The signal is a Analog
NO
U104(DBB) is broken.
Change the board.
Check the Speaker contact PAD of the F-PCB

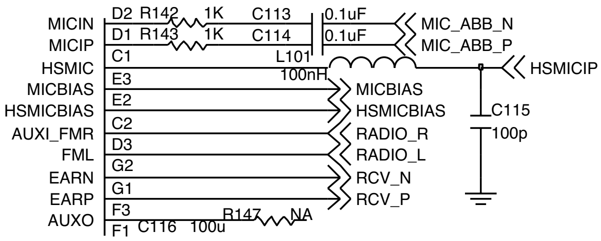

CN202
31
30
60
R147
R207
R209
R329
C324
R332
C156
Q101
R334
R336
Q301
U202
R330
C215
C214
C212
C216
R210
C211
C218
C217
R206
C213
R208
C210
U203
FB201
R212
R211
C209
SPFY0142901-1

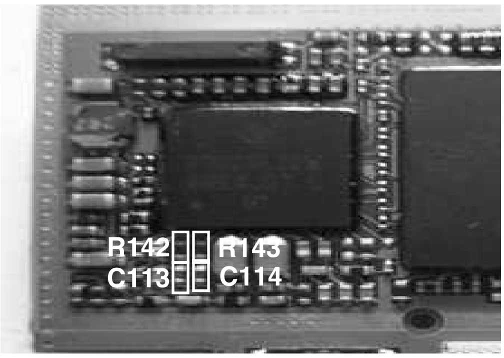
4.11 Speaker/Receiver Trouble Shooting (Acoustic Path)

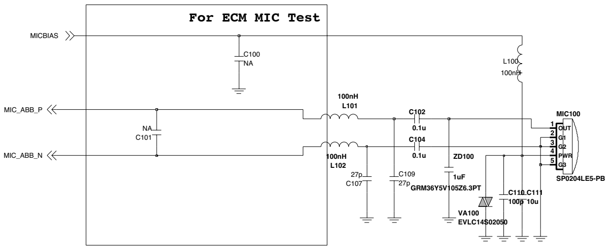


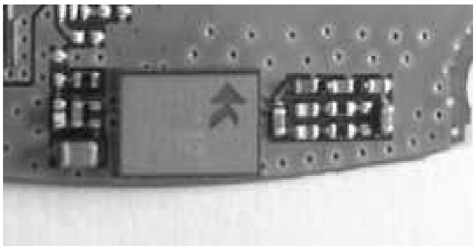
4.12 MIC Trouble Shooting

- MIC Operation scheme is shown below.



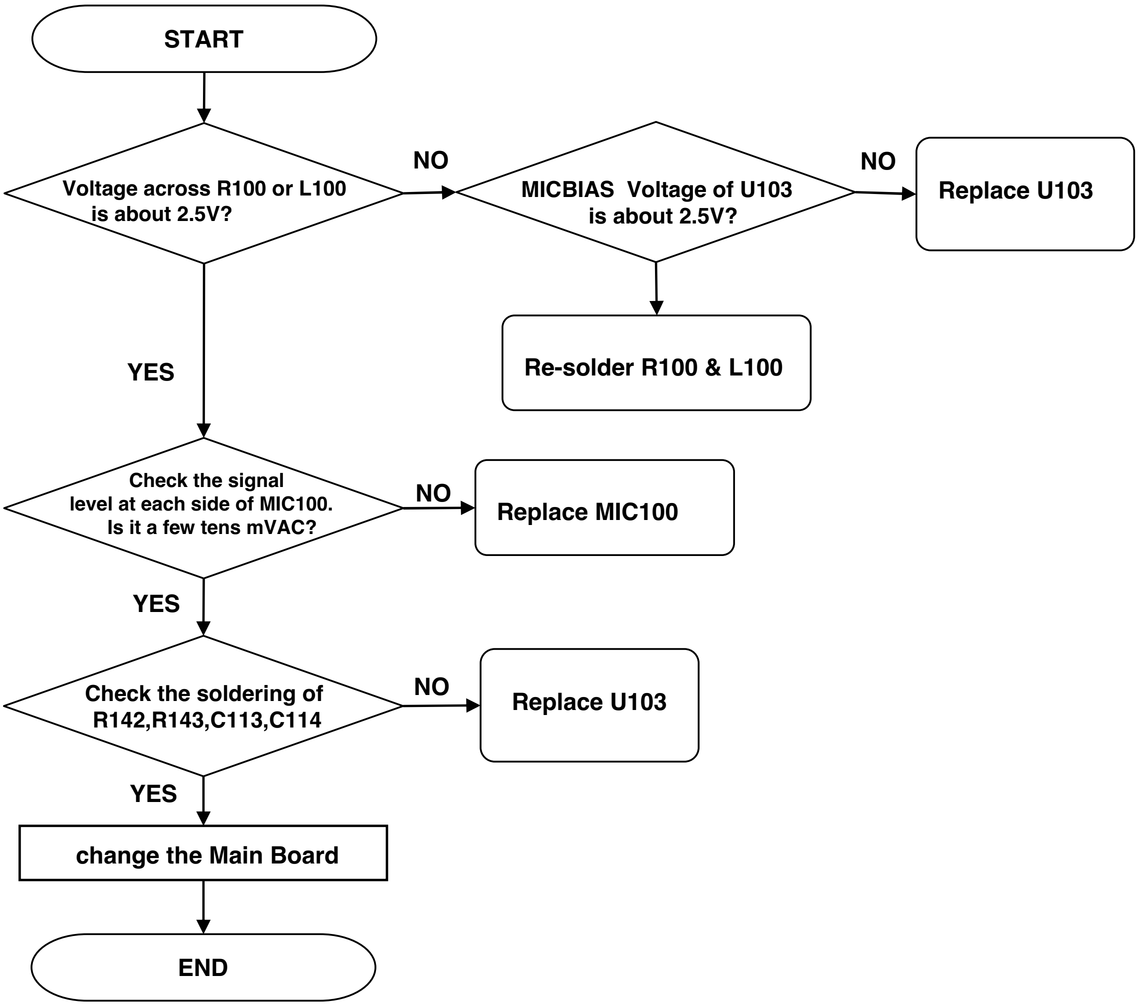




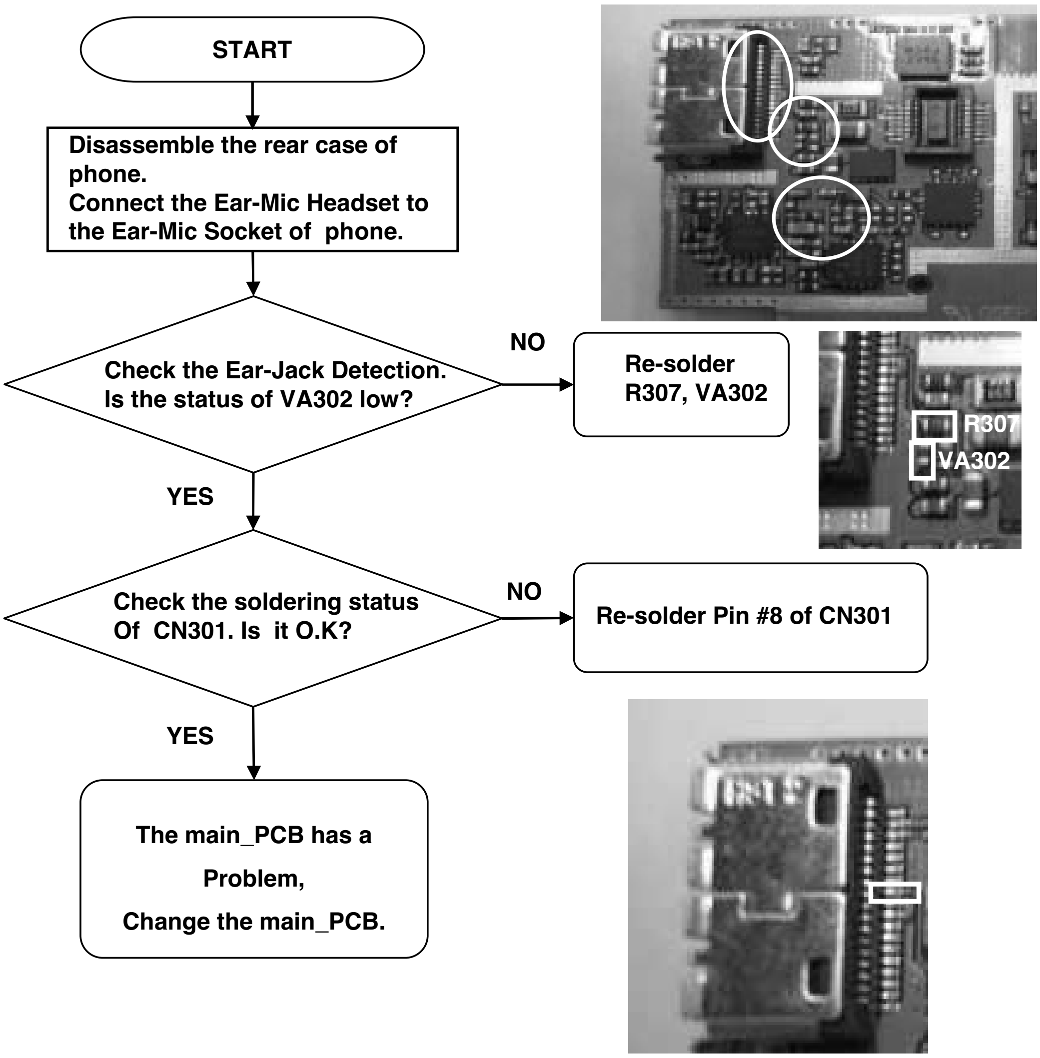


- MIC signal flow
  - MIC is enable by MICBIAS
  - MICBIAS Signal from ABB(U103).
  - MICIN, MICIP signal from MIC(MIC100)
- Check Point
  - MIC bias
  - Audio Signal level of the Microphone
  - Soldering of Components

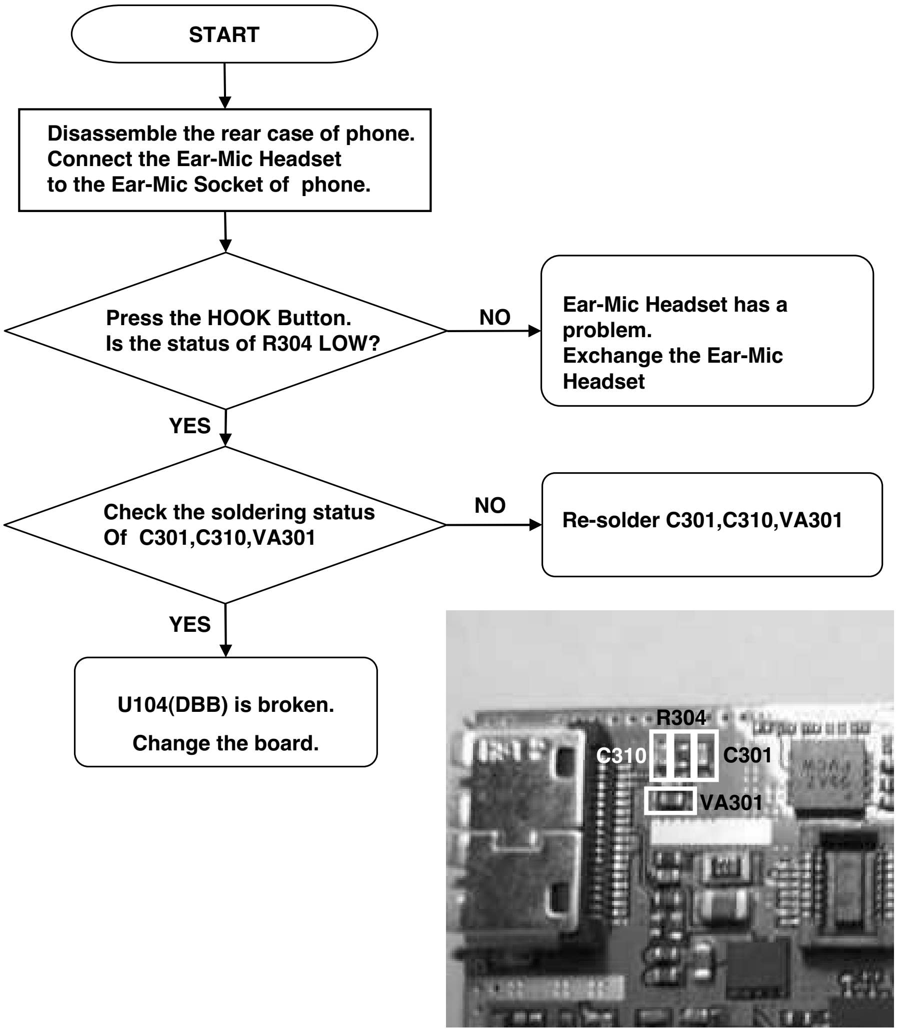
- MIC Trouble


START
Voltage across R100 or L100 is about 2.5V?
NO
MICBIAS Voltage of U103 is about 2.5V?
NO
Replace U103
Re-solder R100 & L100
YES
Check the signal level at each side of MIC100. Is it a few tens mVAC?
NO
Replace MIC100
YES
Check the soldering of R142,R143,C113,C114
NO
Replace U103
YES
change the Main Board
END

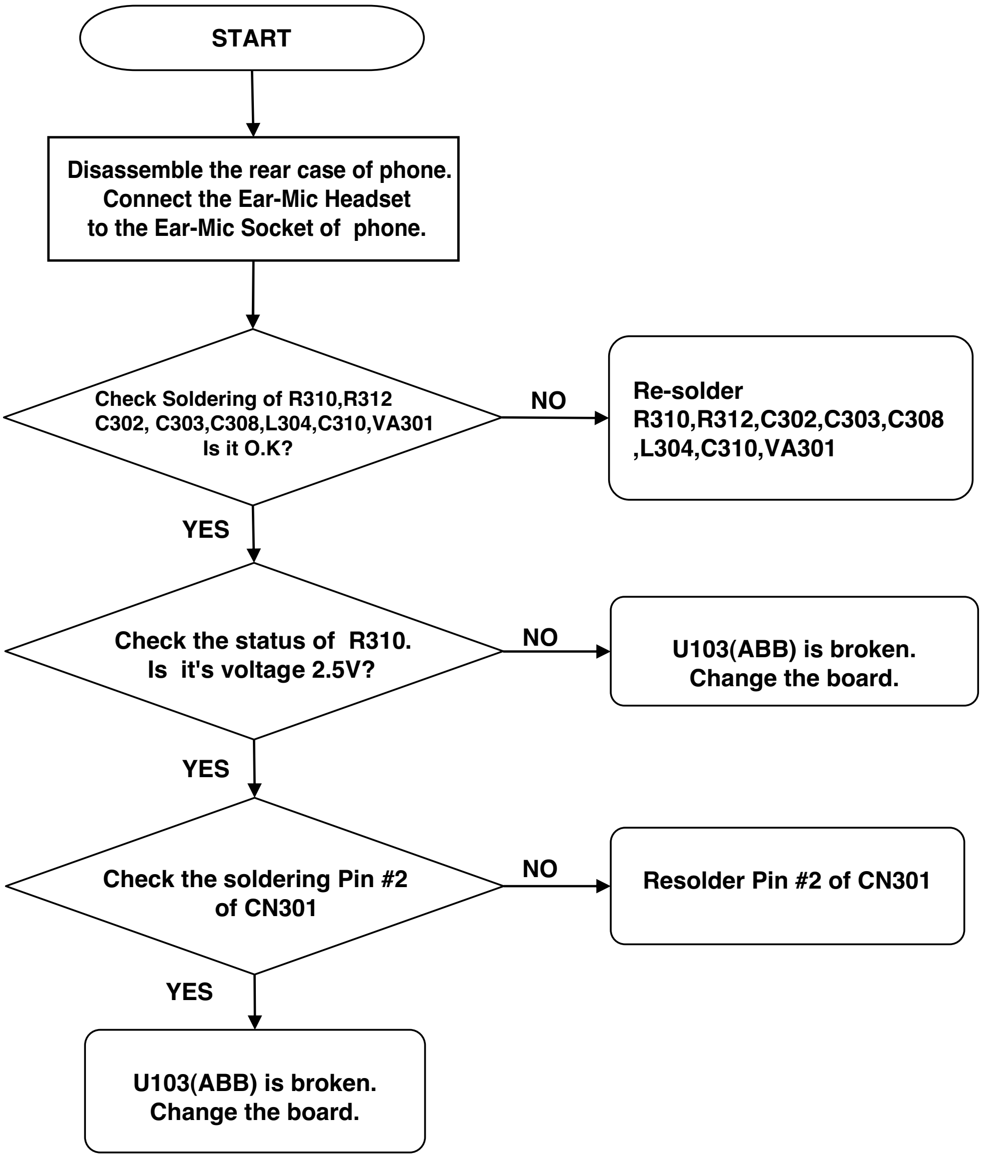
4.13 Ear-Mic Jack Detection Trouble Shooting



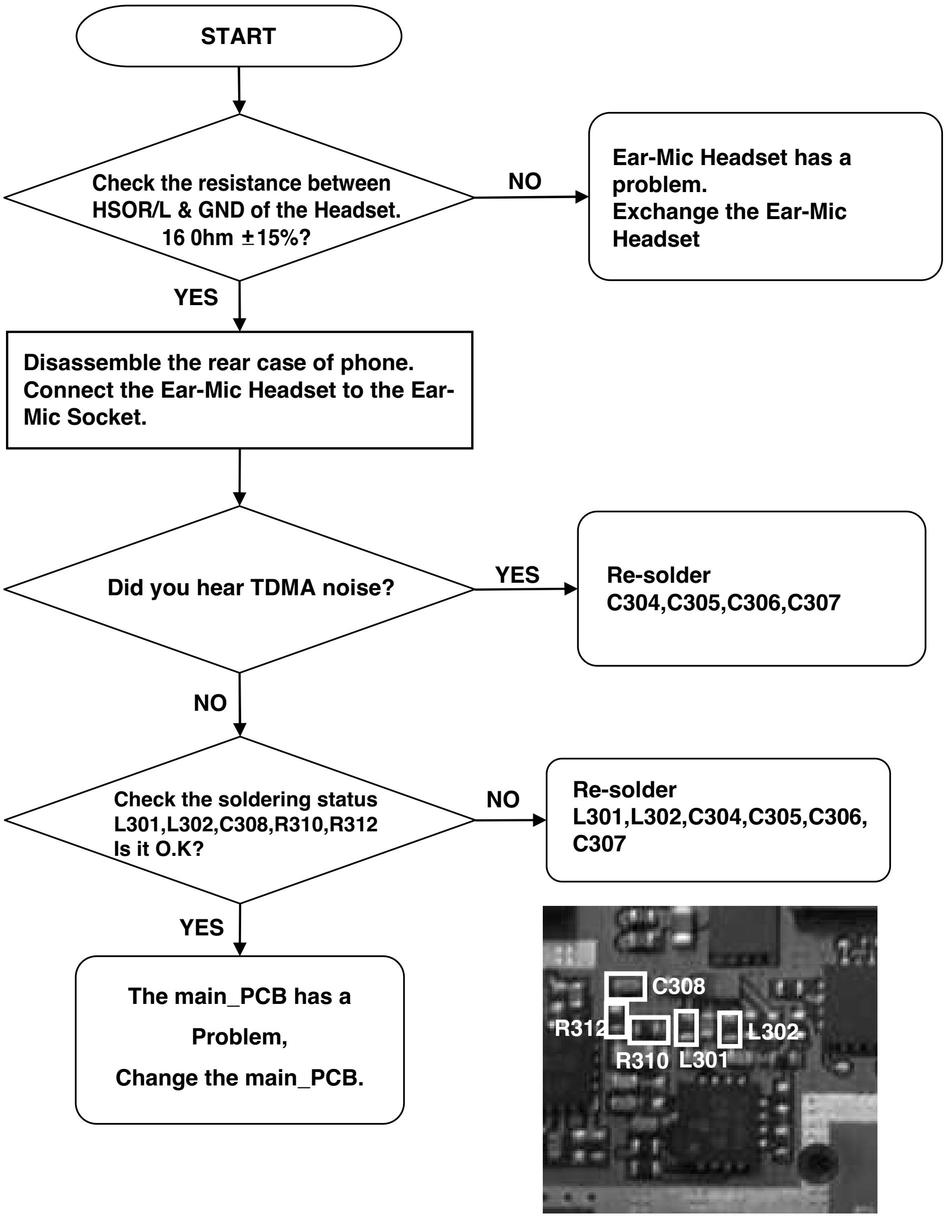
4.14 Ear-Mic Hook Detection Trouble Shooting



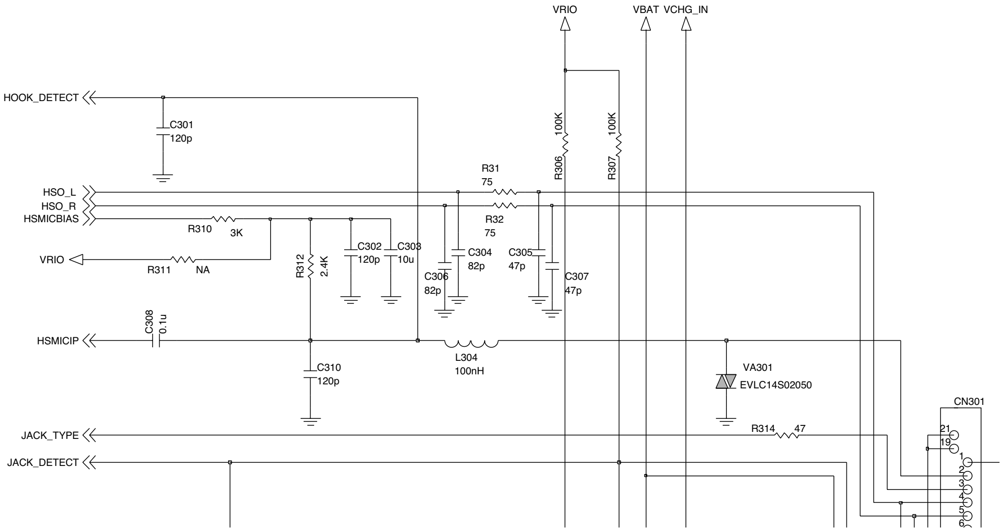
4.15 Ear-Mic Headset MIC Trouble Shooting

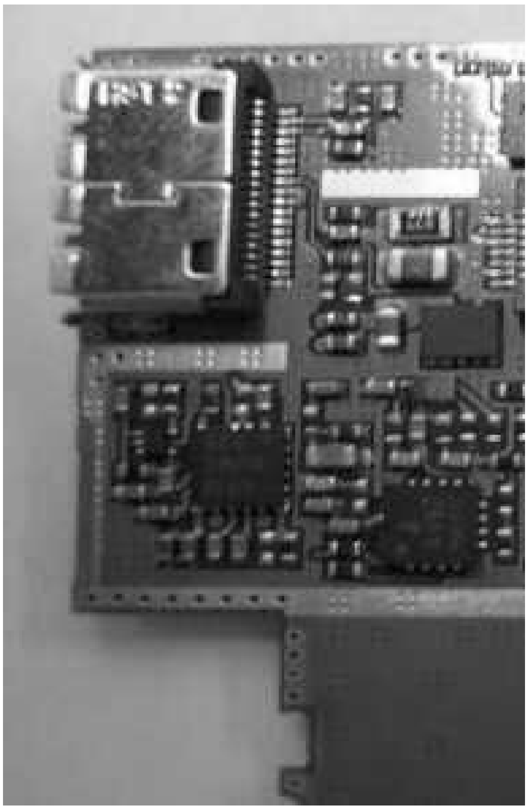


4.16 Ear-Mic Headset HSOR/HSOL Trouble Shooting

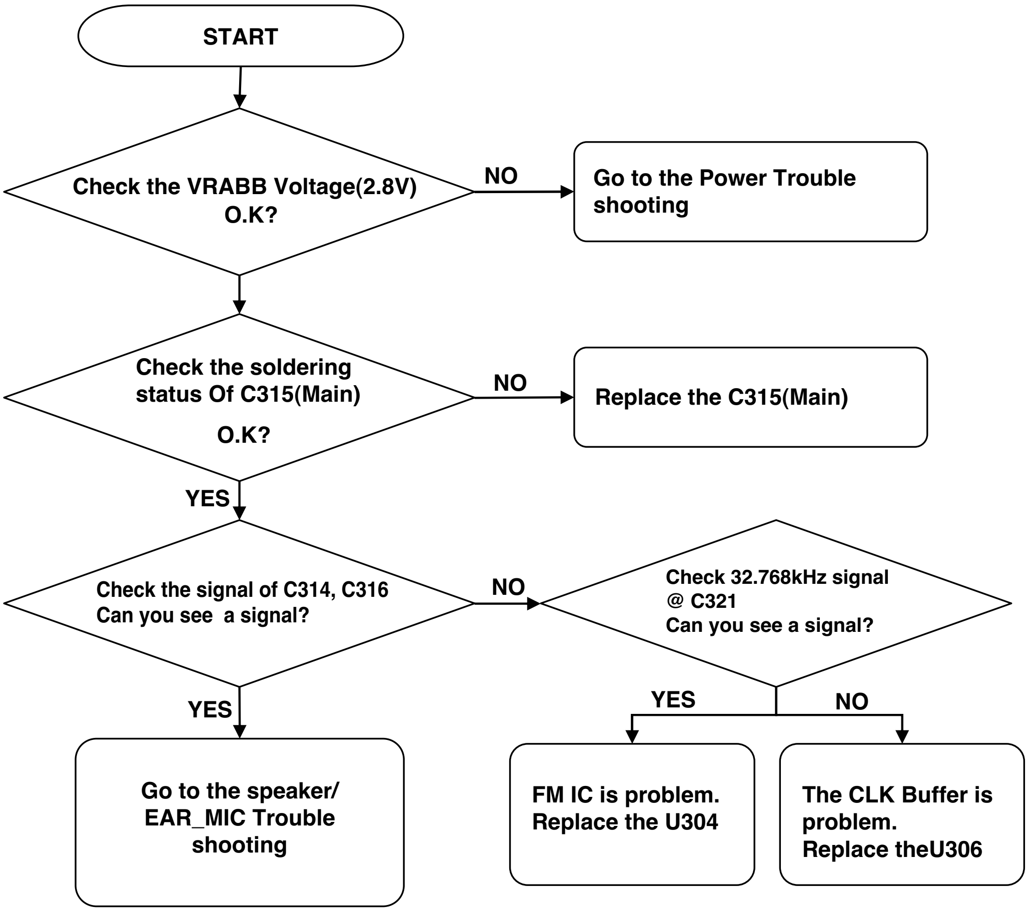


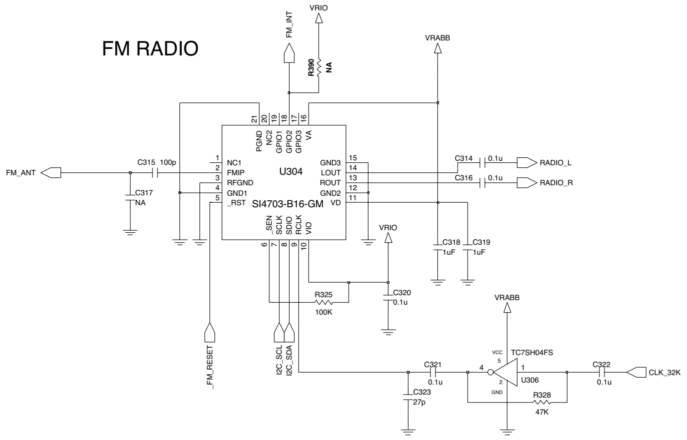
- Ear-Mic Headset Operation scheme is shown below.

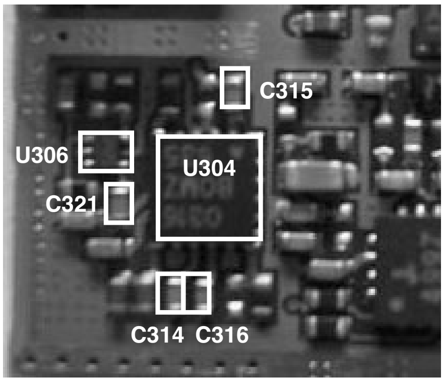




4.17 FM-Radio Trouble Shooting

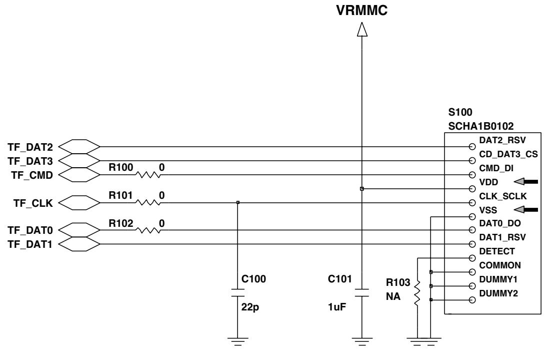


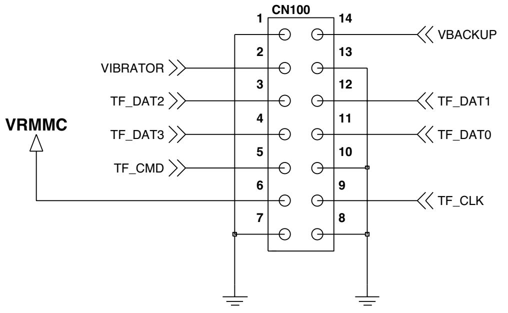


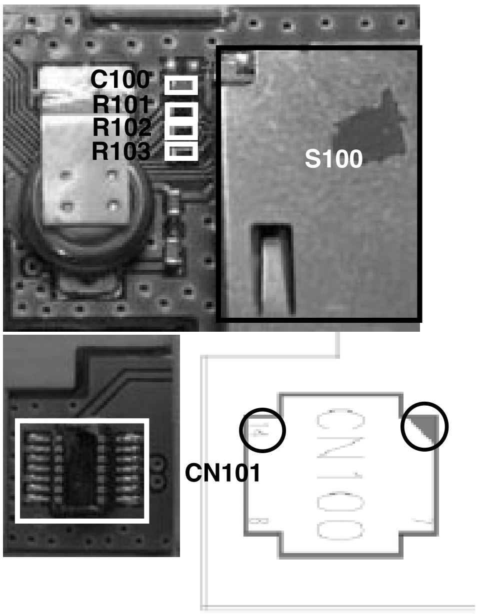


4.18 Transflash Trouble Shooting

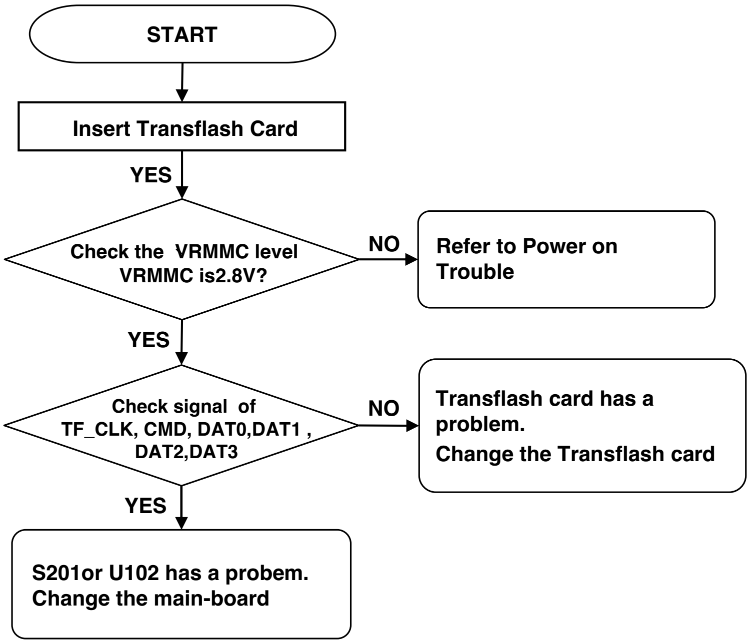
- Transflsh Operation scheme is shown below.



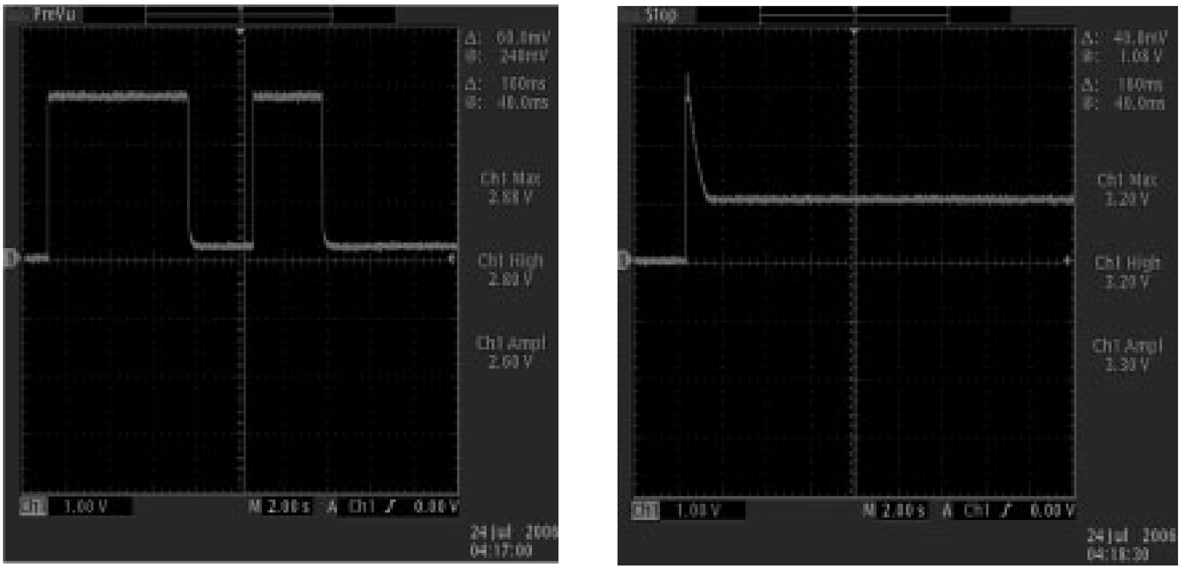




- Transflash Trouble

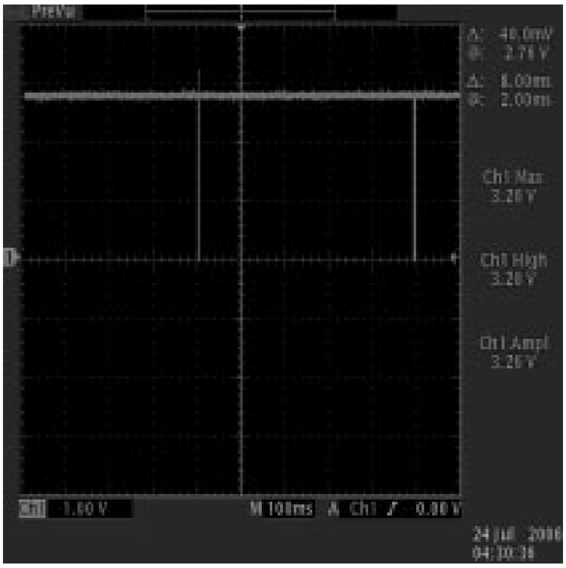


- VRMMC Signal(Power ON)



<VRMMC Signal when T-Flash is inserted>

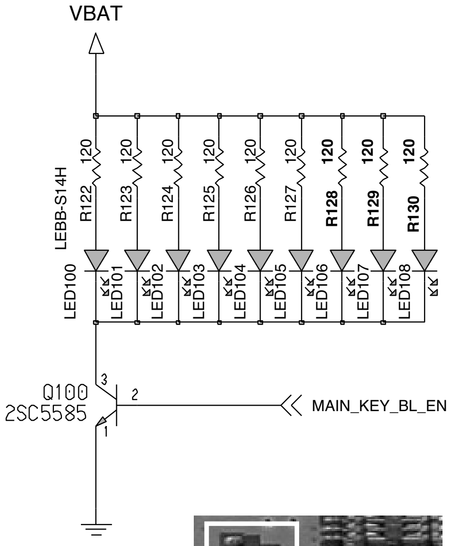
- TF_DAT0 Signal (Music Play)

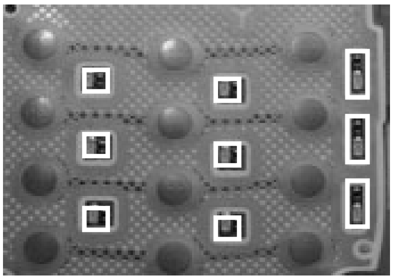


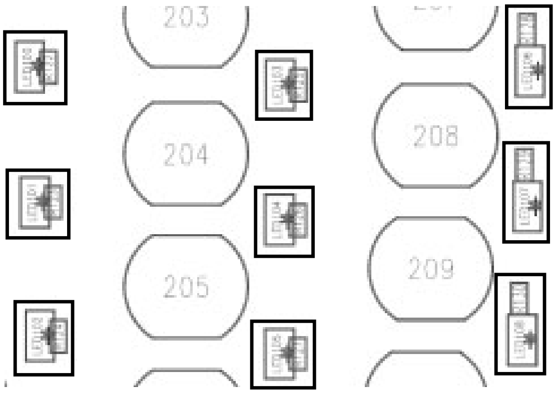
<TF_DAT0 Signal while T-Flash is read>

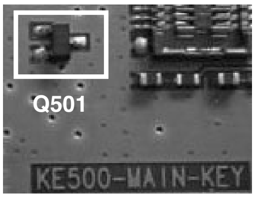
4.19 Main Key Backlight LED Trouble Shooting

- Keypad backlight LED Operation scheme is shown below.









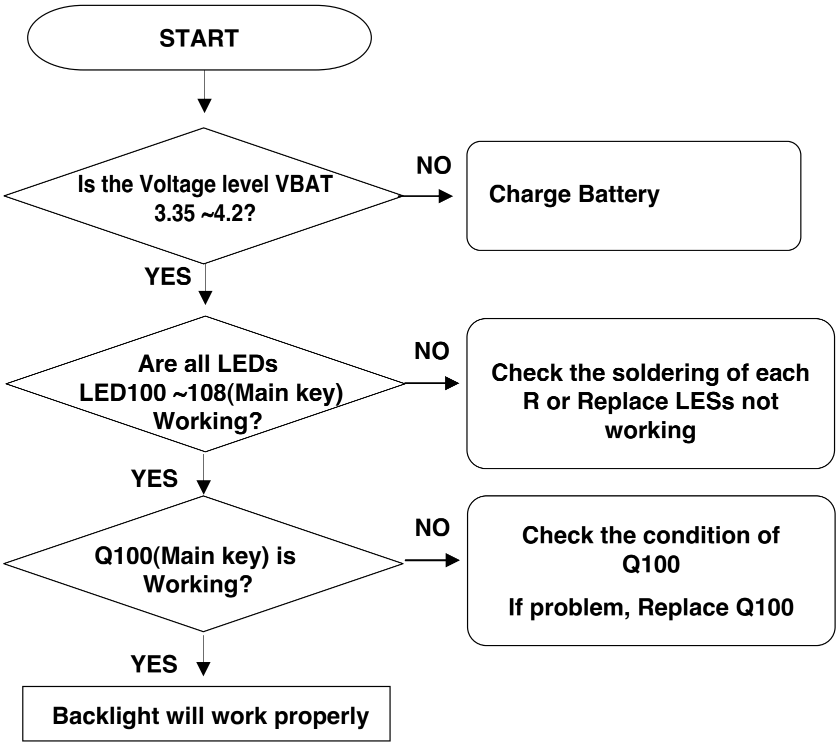
- Backlight operation

  - Keypad backlight LED is controlled with MAIN_KEY_BL_EN signal
  - MAIN_KEY_BL_EN signal from DBB(U102)
  - The LEDs are forward biased and turned on

- Check Point

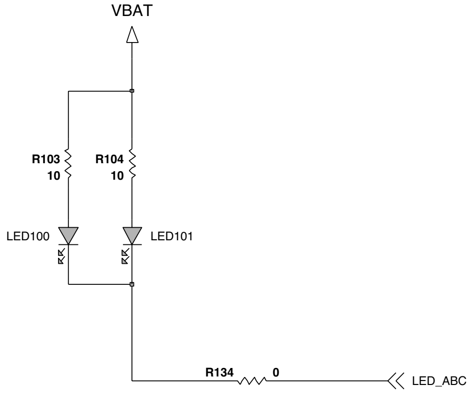
  - VBAT level (3.35 ~4.2V)
  - LEDs
  - Q100(Main key)
  - Main key, Main, Main FPCB connection

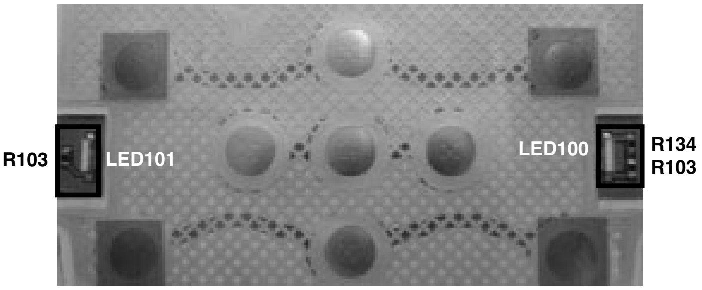
- MAIN KEY Backlight LED Trouble



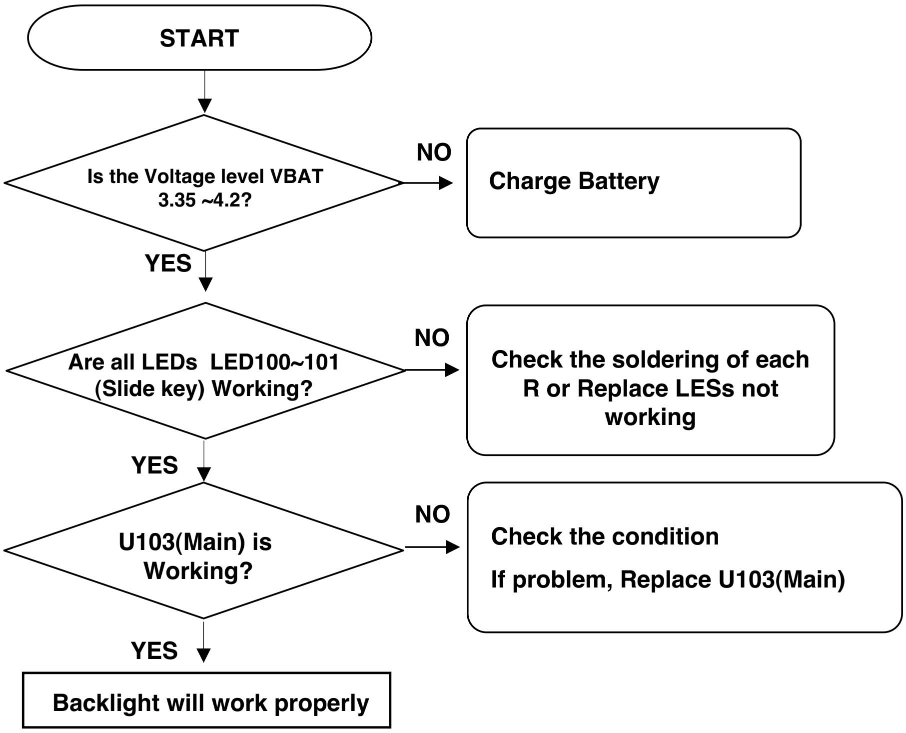
4.20 Slide Key Backlight LED Trouble Shooting

- Slide backlight LED Operation scheme is shown below.



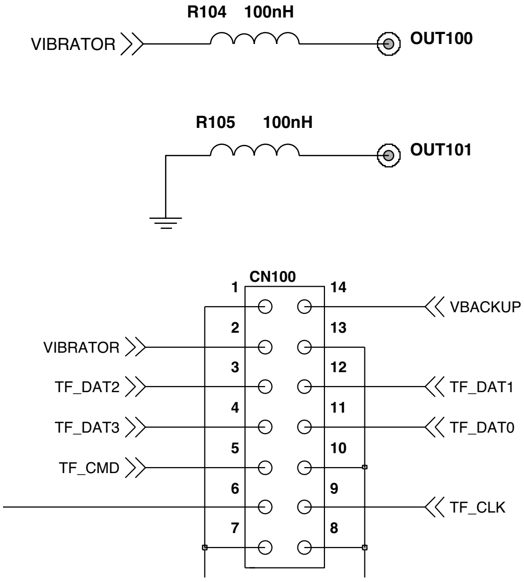


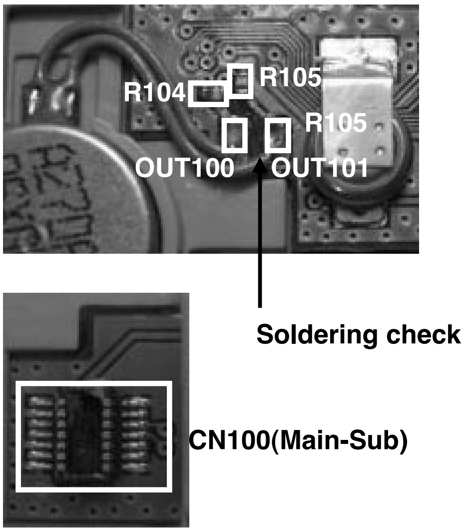
- Slide Backlight operation
  - Slide backlight LED is controlled with LED_ABC signal
  - LED_ABC signal from ABB(U102)
  - The LEDs are forward biased and turned on
- Check Point
  - VBAT level (3.35 ~4.2V)
  - LEDs



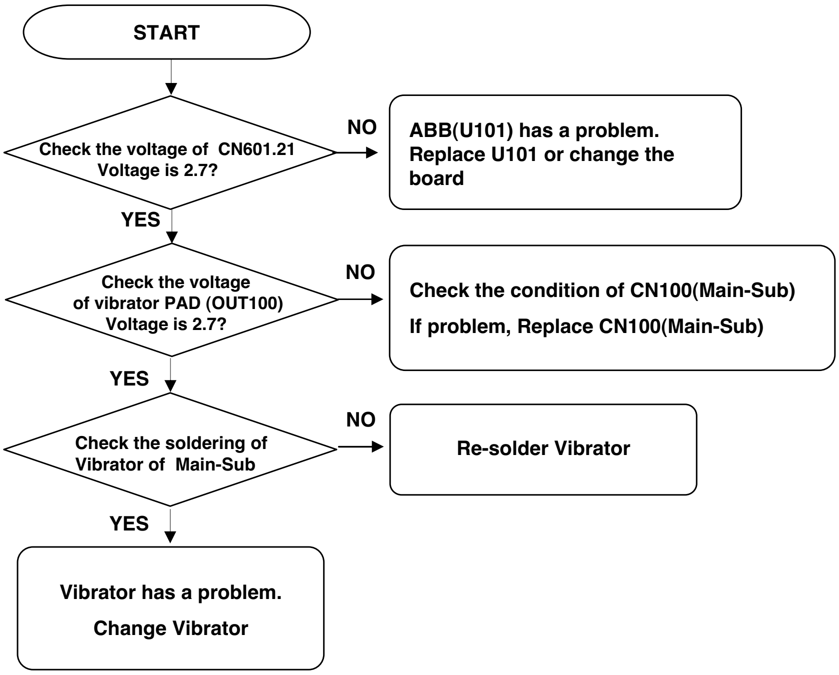
4.21 Vibrator Trouble Shooting

- Vibrator operation scheme is shown below





- Vibrator Trouble



5. Downloading Software

5.1 The purpose of downloading software

5.1.1 To make a phone operate at the first manufacturing

- A phone = Hardware + Software
- A phone cannot operate with hardware alone.
- The hardware with the suitable software can operate properly.

5.1.2 To upgrade the software of the phone

- The software of the phone may be changed to enhance the performance of the phone.
- The older version software of the phone can be replaced to the newer version.

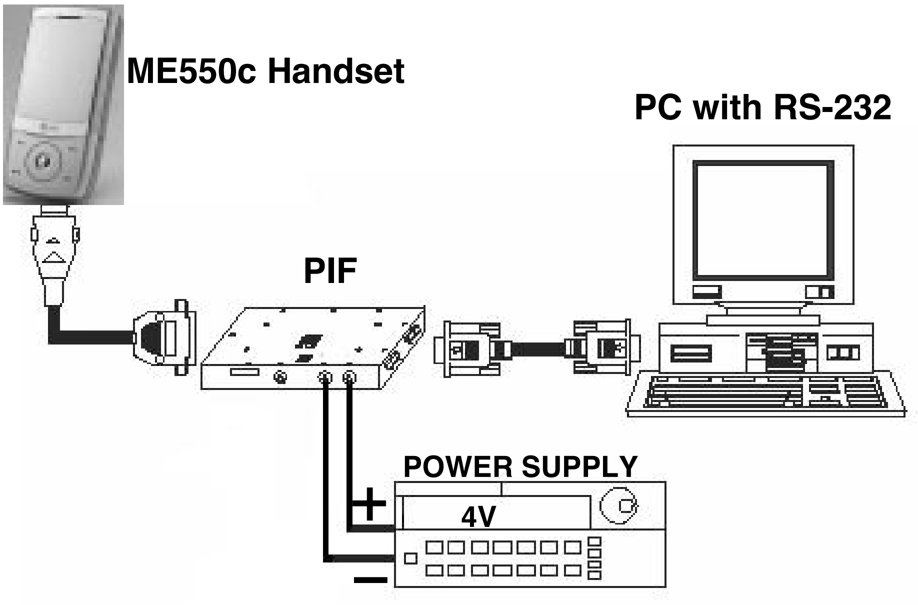
5.2 The Environment of Downloading Software.

5.2.1. In case of using the USB Data Kit

a. The Preparation
  - Target Handset (ME550c)
  - USB Data kit
  - Battery

b. IBM compatible PC supporting USB with Windows 98 or newer If you use data kit, you should have a battery with the voltage above 3.7V

5.2.2 In case of using the PIF(MON Port)

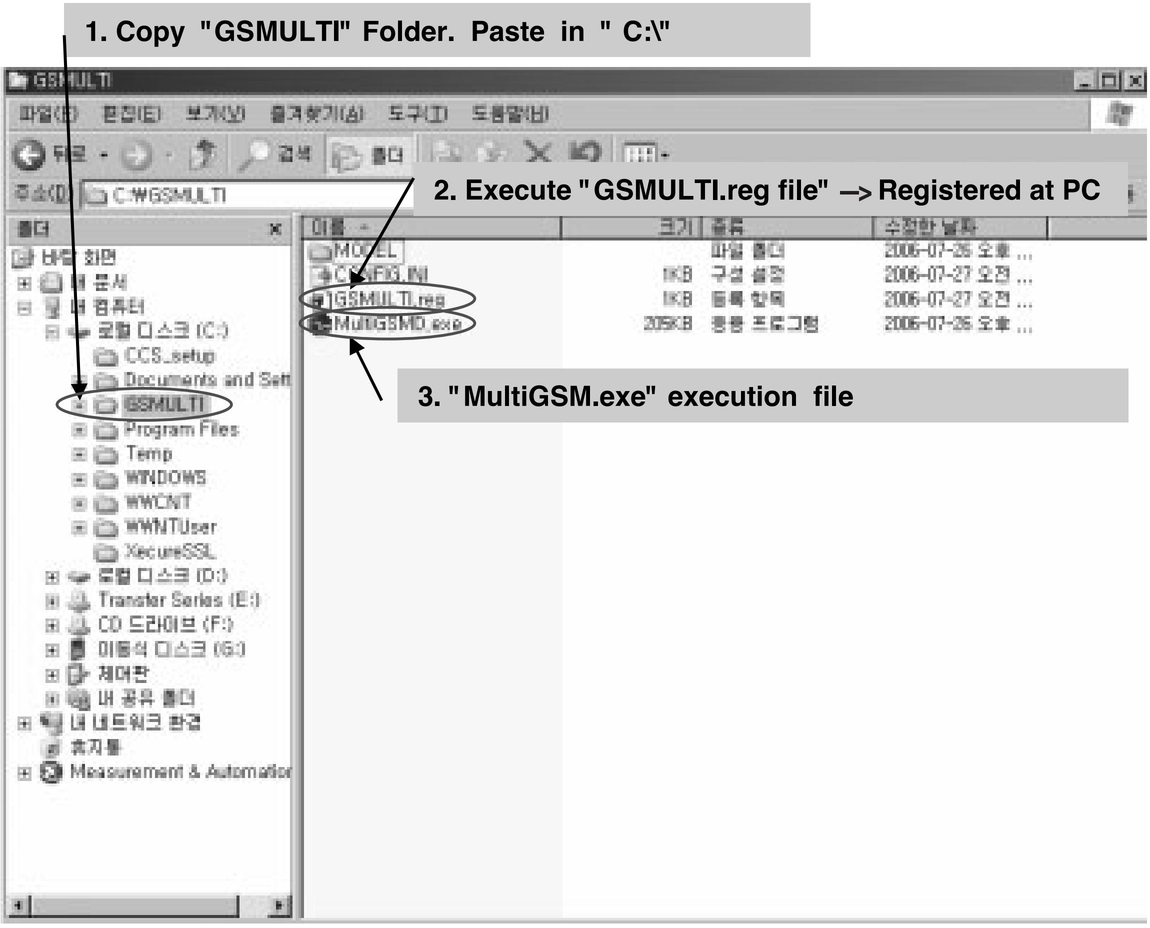


a. Preparation
  - Target Handset (ME550c)
  - PIF
  - RS-232 Cable and PIF-to-Phone interface Cable
  - Power Supply or Battery

b. IBM compatible PC supporting RS-232 with Windows 98 or newer If you use battery, you should have a battery with the voltage above 3.7V.

5.3 Download Procedure

5.3.1 Computer Program file -> MultiGSM.EXE Click



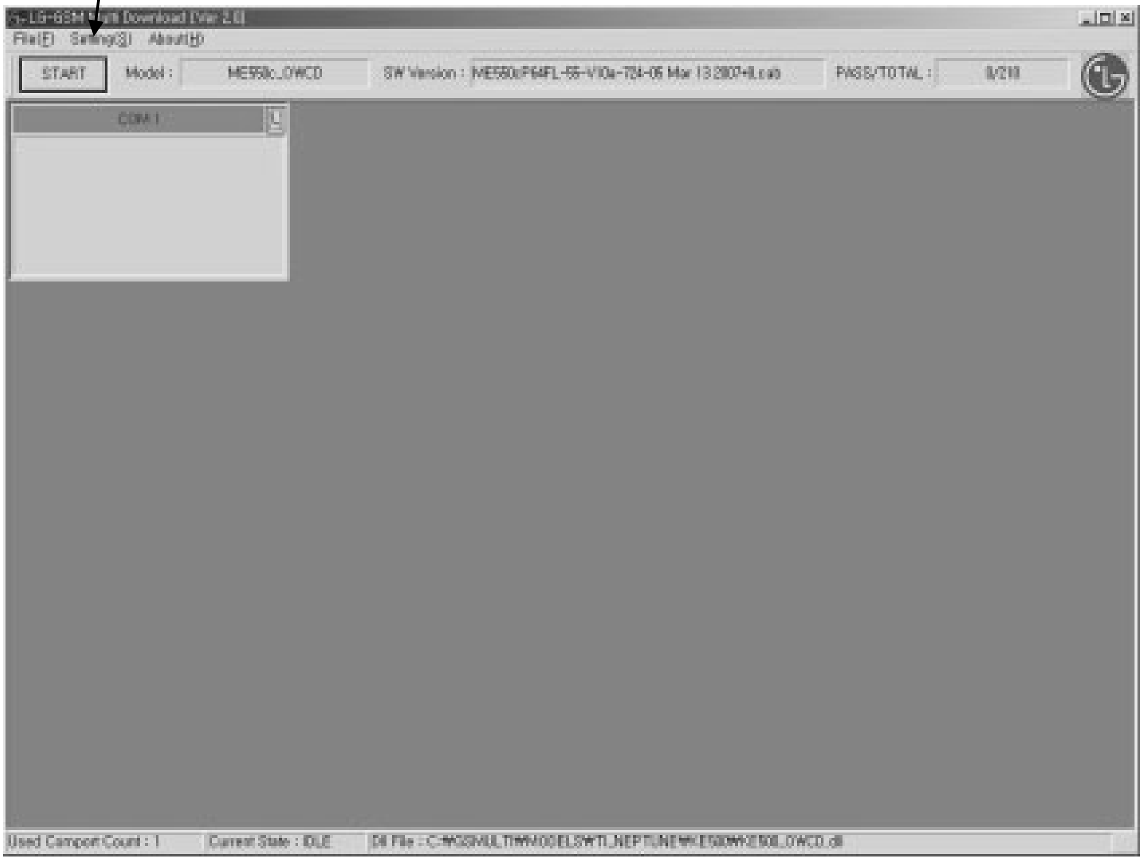
1. Copy "GSMULTI" Folder. Paste in " C:\"

2. Execute "GSMULTI.reg file" –> Registered at PC

3. "MultiGSM.exe" execution file

5.3.2 Click the “Setting” button.
Then, choose Configuration which is going to download.

4. Munu "Setting" -> "Configuration"



Model : ME550c_OWCD

SW Version : ME550cP64FL-55-V10a-724-05 Mar 13 2007+0.cab

PASS/TOTAL : 0/210

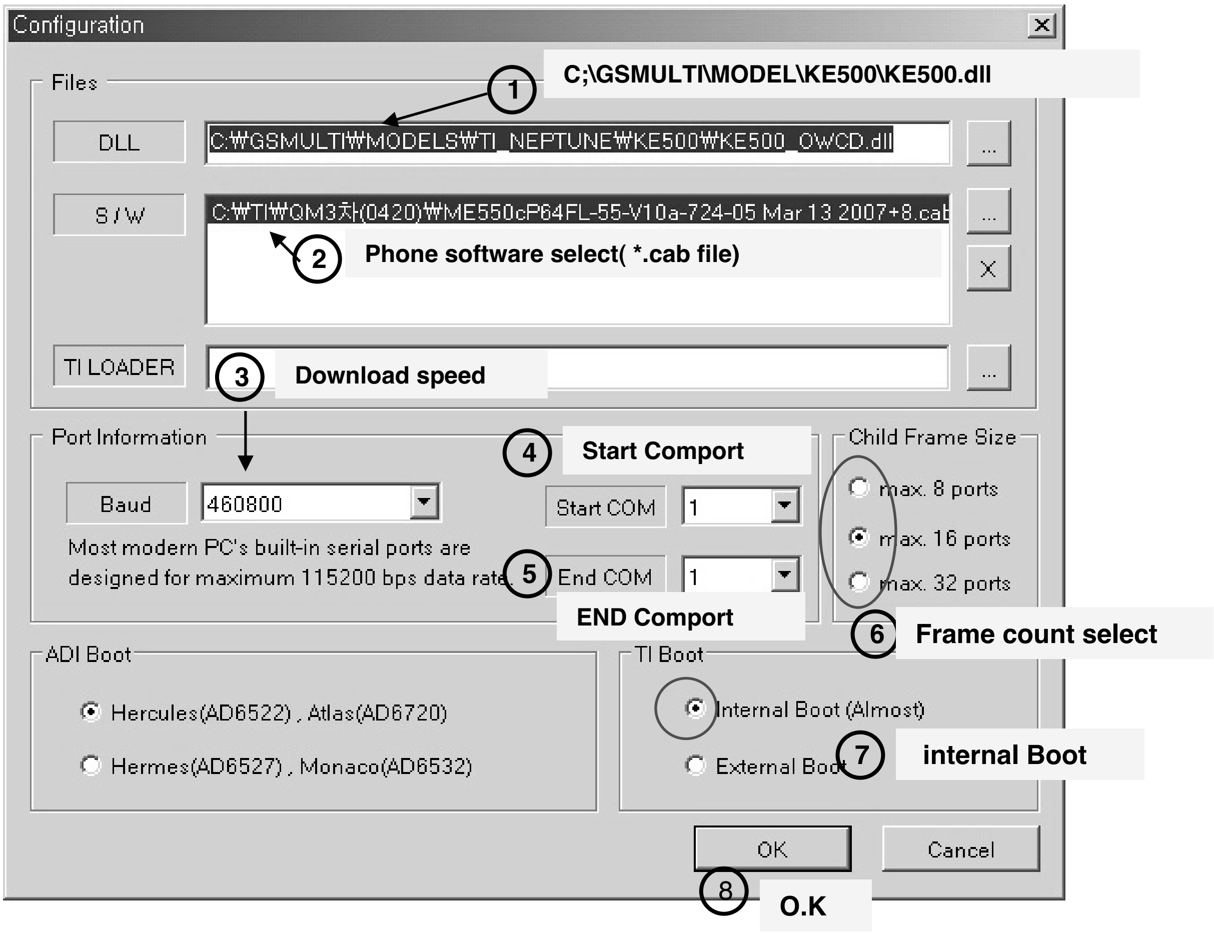
Used Comport Count : 1

Current State : IDLE

Dll File : C:₩GSMULTI₩MODELS₩TI_NEPTUNE₩KE500₩E500_OWCD.dll

5.3.3 Computer Program file -> MultiGSM.EXE Click

5. Configuration : select values like below



DLL: C:₩GSMULTI₩MODELS₩TI_NEPTUNE₩KE500₩KE500_OWCD.dll

S / W: C:₩TI₩QM3차(0420)₩ME550cP64FL-55-V10a-724-05 Mar 13 2007+8.cab

Baud: 460800

Most modern PC's built-in serial ports are designed for maximum 115200 bps data rate.

Start COM: 1

End COM: 1

Child Frame Size:
- ○ max. 8 ports
- ● max. 16 ports
- ○ max. 32 ports

ADI Boot:
- ● Hercules(AD6522) , Atlas(AD6720)
- ○ Hermes(AD6527) , Monaco(AD6532)

TI Boot:
- ● Internal Boot (Almost)
- ○ External Boot

① C;\GSMULTI\MODEL\KE500\KE500.dll

② Phone software select(*.cab file)

③ Download speed

④ Start Comport

⑤ END Comport

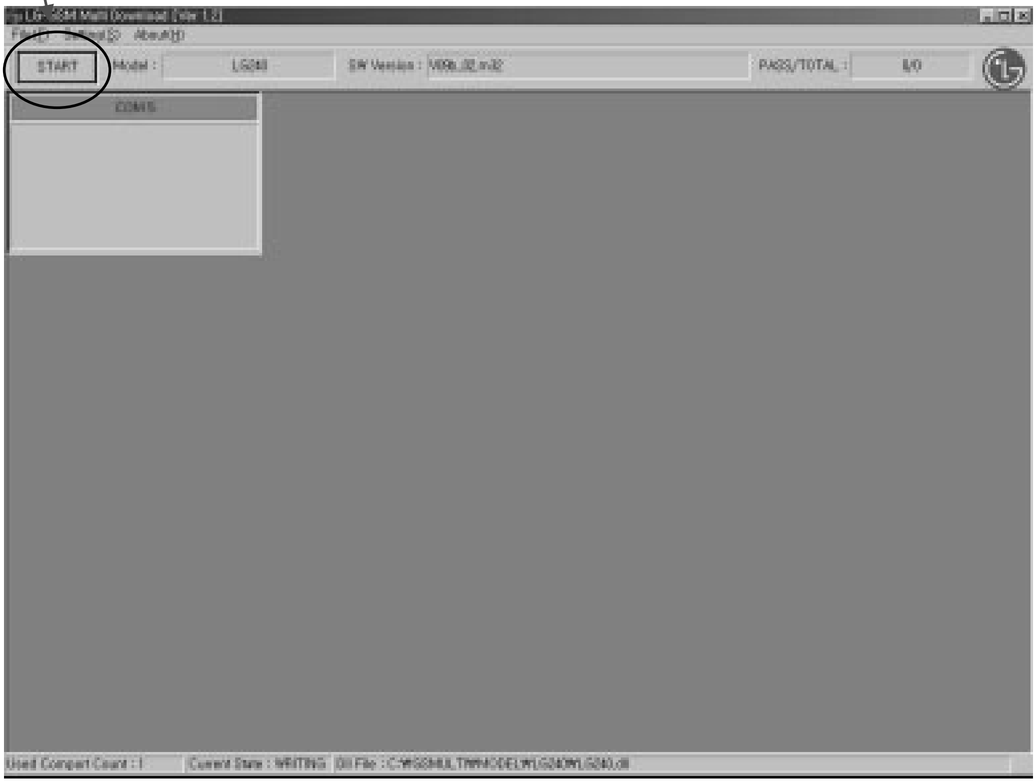
⑥ Frame count select

⑦ internal Boot

⑧ O.K

5.3.4 Computer Program file -> MultiGSM.EXE Click

6. Press the " START" button



Model : LG240

SW Version : V09b_02_m32

PASS/TOTAL : 0/0

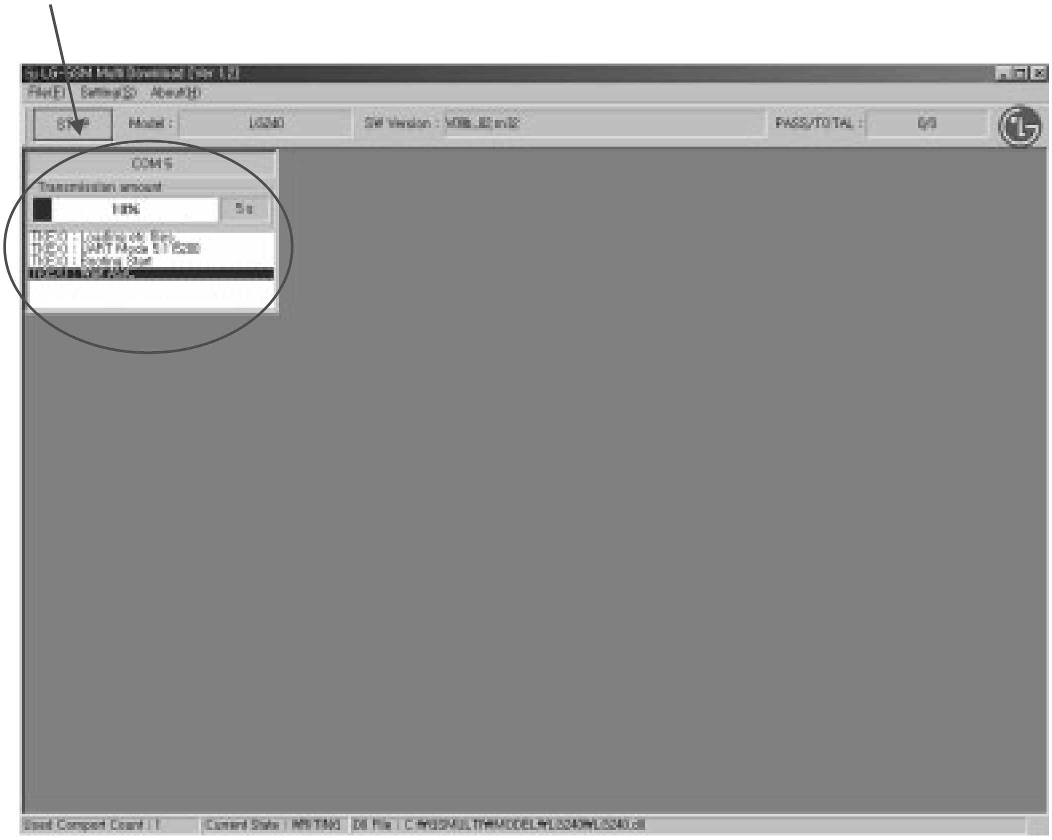
Used Comport Count : 1

Current State : WRITING

Dll File : C:₩GSMULTI₩MODEL₩LG240₩LG240.dll

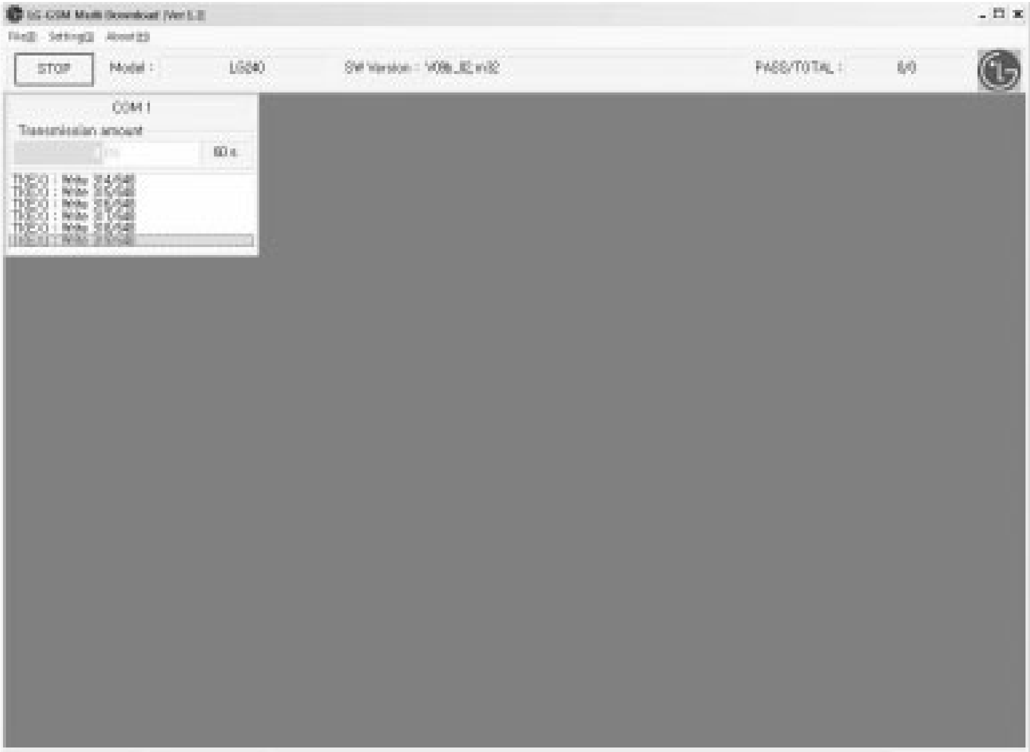
5.3.5 After “Start Button”, Which Stand-by condition

7. Stand-by condition –>" TI(EX) : Wait ASIC" is displayed –> connect the Phone



5.3.6 SW downloading condition

Downloading : Start



Model : LG240

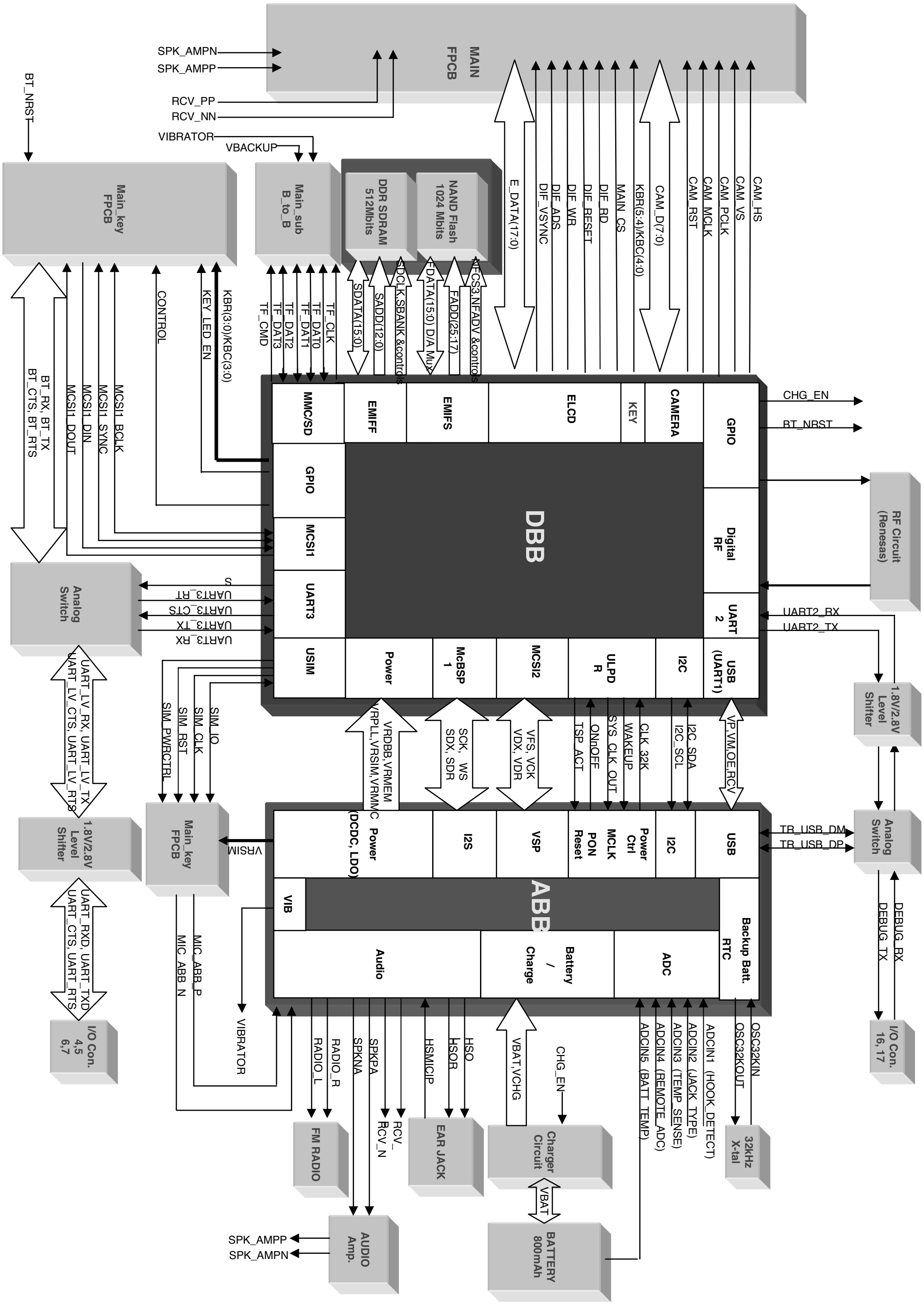
PASS/TOTAL : 0/0

5.3.7 SW downloading END condition

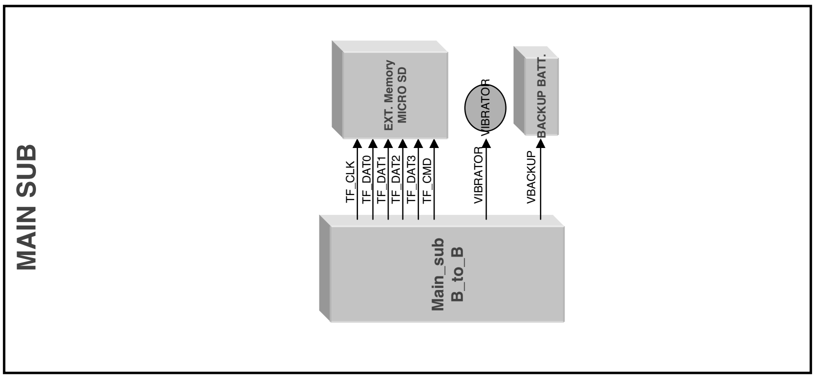
Downloading : END

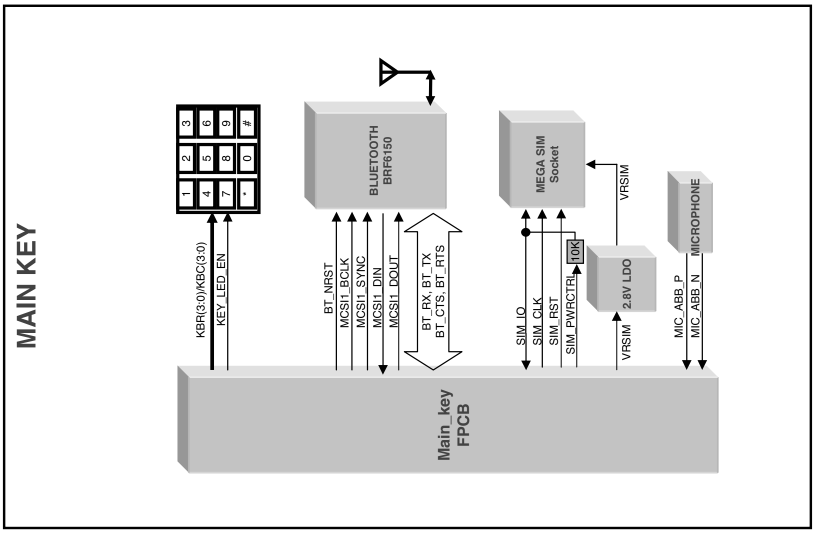
6. BLOCK DIAGRAM

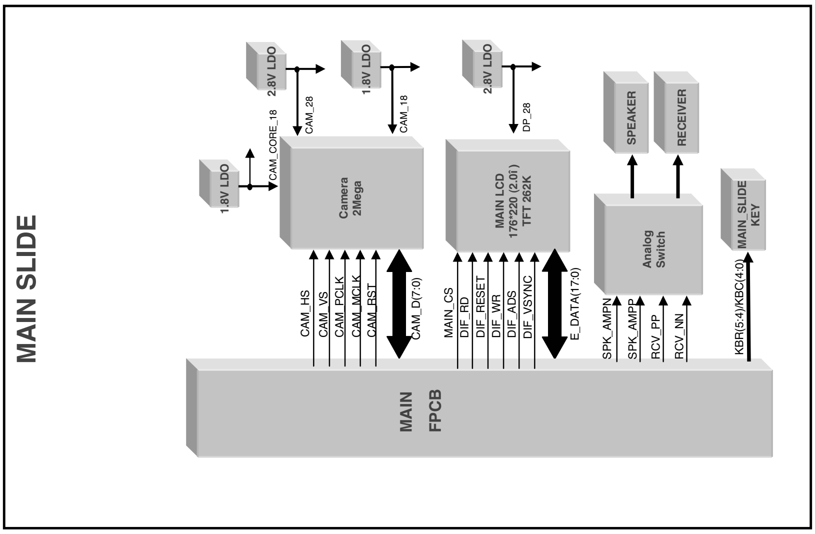
ME550c Block Diagram (Baseband)



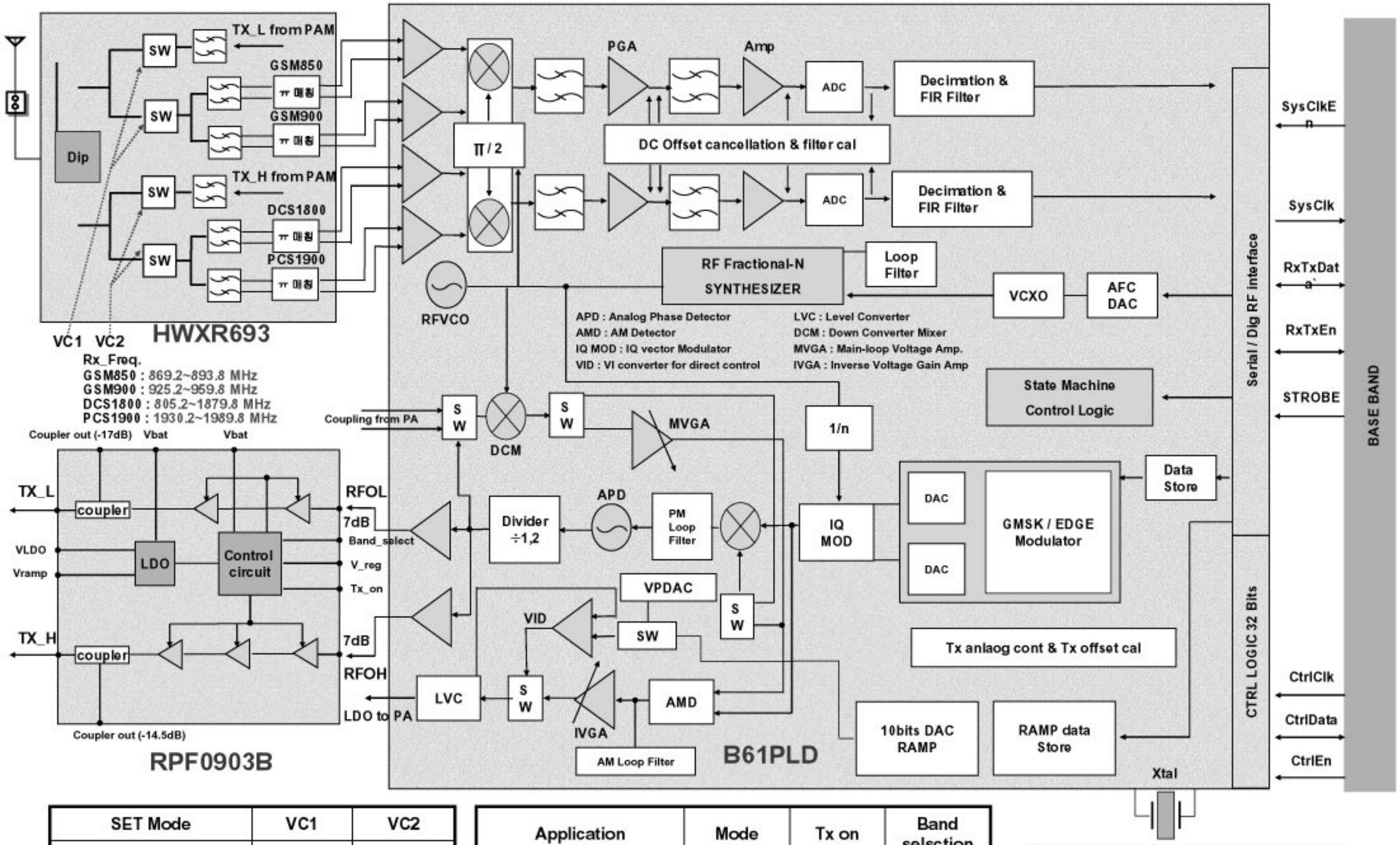
ME550c Block Diagram (Baseband)







6. BLOCK DIAGRAM

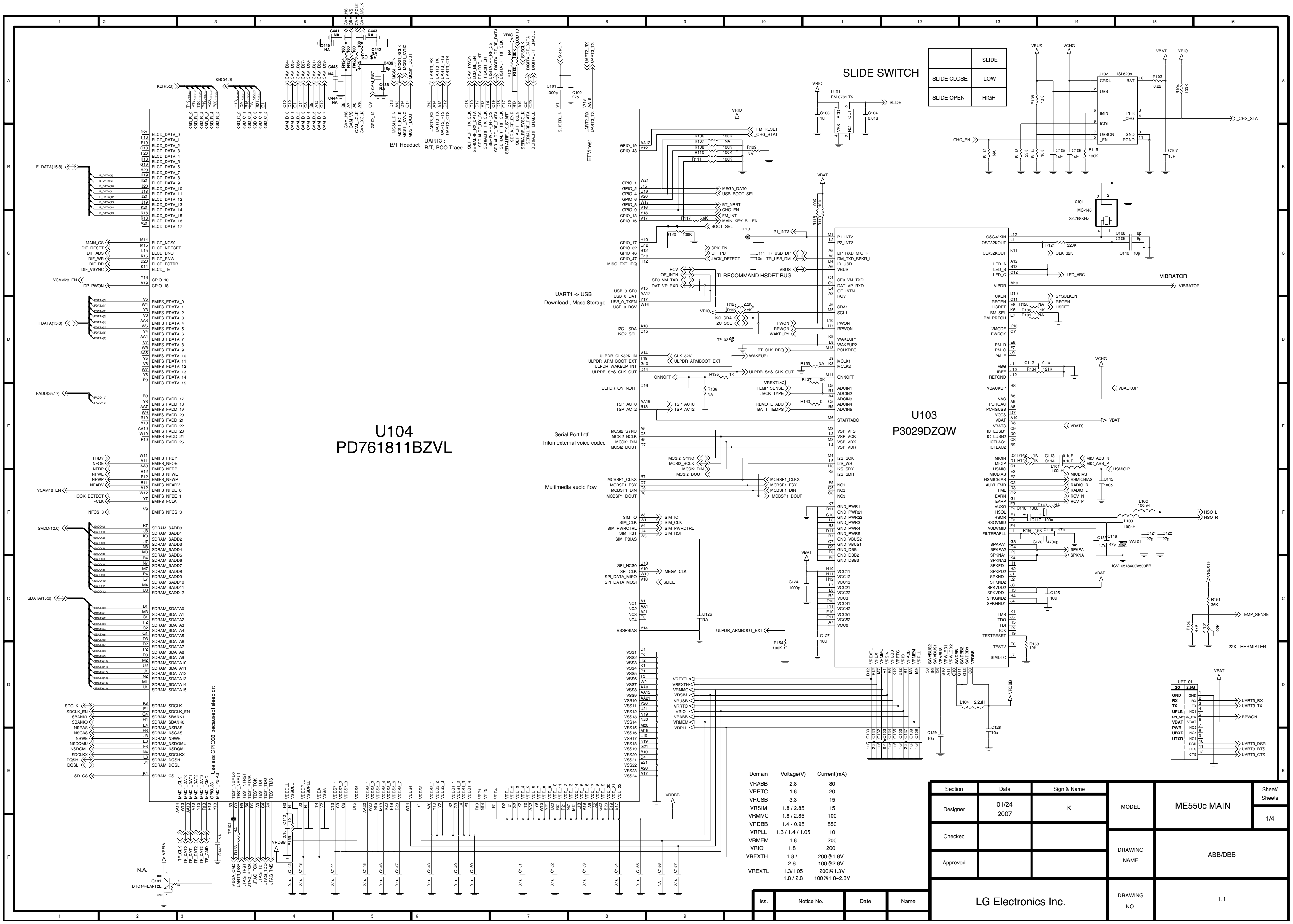


SET Mode	VC1	VC2
GSM850_RX	Low	Low
GSM900_RX	Low	Low
GSM850/900_TX	High	Low
DCS1800_RX	Low	Low
PCS1900_RX	Low	Low
DCS/PCS_TX	Low	High

Application	Mode	Tx on	Band selsction
GSM850 / GSM900	GMSK	High	High
	EDGE	High	High
DCS1800 / PCS1900	GMSK	High	Low
	EDGE	High	Low

TX_Freq.
GSM850 : 824 ~ 849 MHz
GSM900 : 880 ~ 910 MHz
DCS1800 : 1710 ~ 1785 MHz
PCS1900 : 1850 ~1910 MHz

7. CIRCUIT DIAGRAM



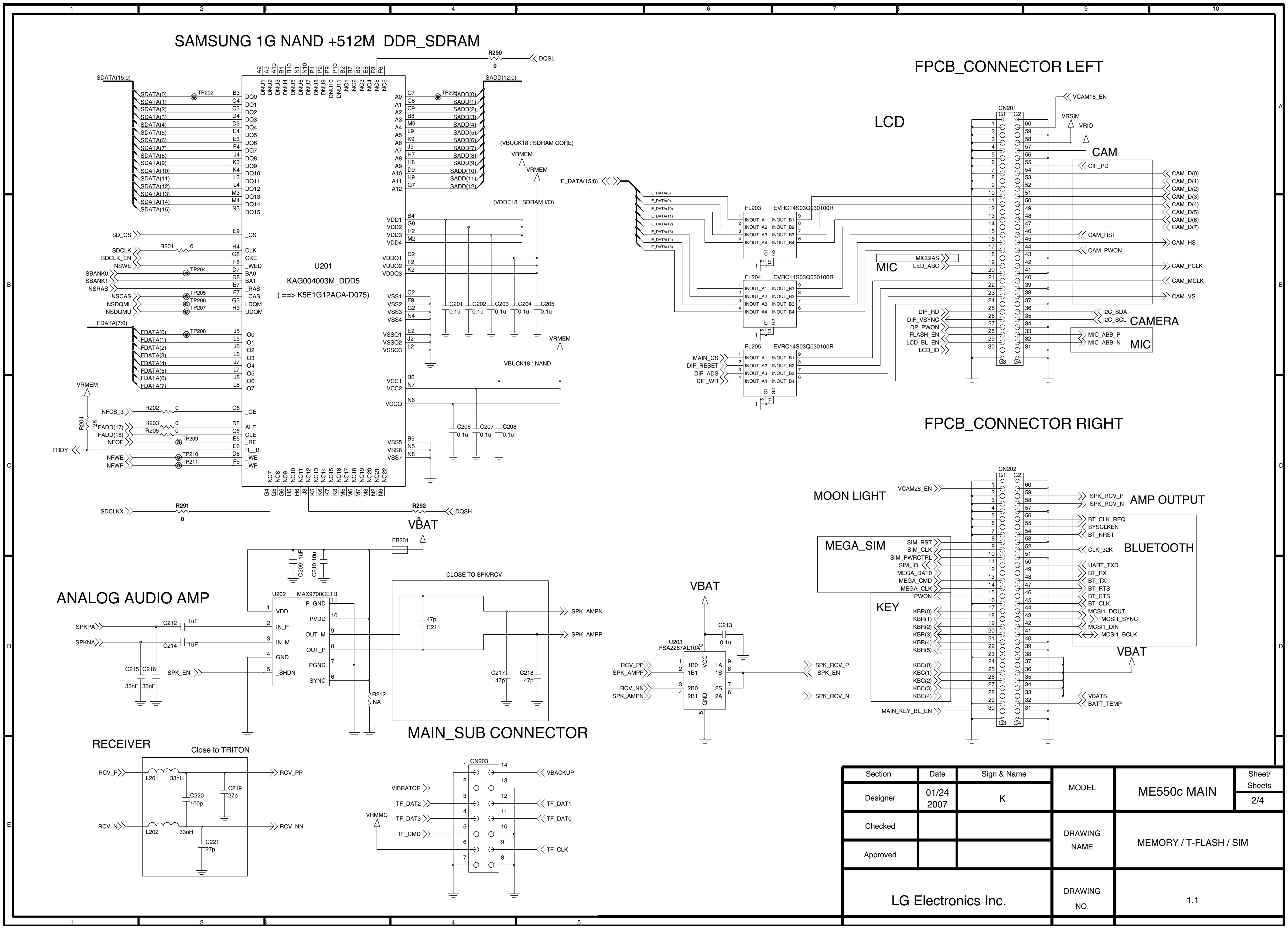
	SLIDE
SLIDE CLOSE	LOW
SLIDE OPEN	HIGH

Domain	Voltage(V)	Current(mA)
VRABB	2.8	80
VRRTC	1.8	20
VRUSB	3.3	15
VRSIM	1.8 / 2.85	15
VRMMC	1.8 / 2.85	100
VRDBB	1.4 - 0.95	850
VRPLL	1.3 / 1.4 / 1.05	10
VRMEM	1.8	200
VRIO	1.8	200
VREXTH	1.8 / 2.8	200@1.8V 100@2.8V
VREXTL	1.3/1.05 1.8 / 2.8	200@1.3V 100@1.8~2.8V

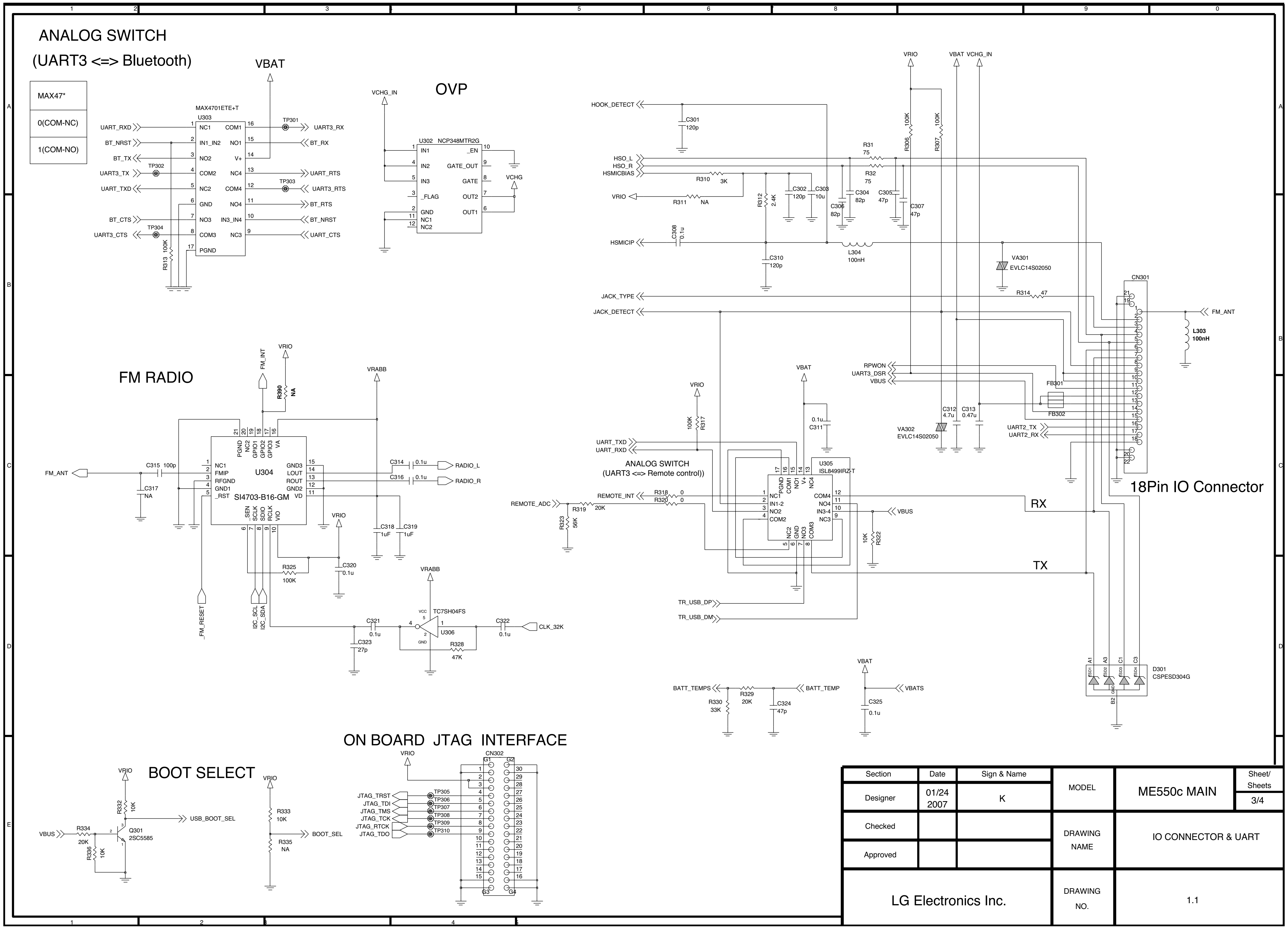
Section	Date	Sign & Name	MODEL	ME550c MAIN	Sheet/ Sheets
Designer	01/24 2007	K			1/4
Checked			DRAWING NAME	ABB/DBB	
Approved					
LG Electronics Inc.			DRAWING NO.	1.1	

Iss.	Notice No.	Date	Name

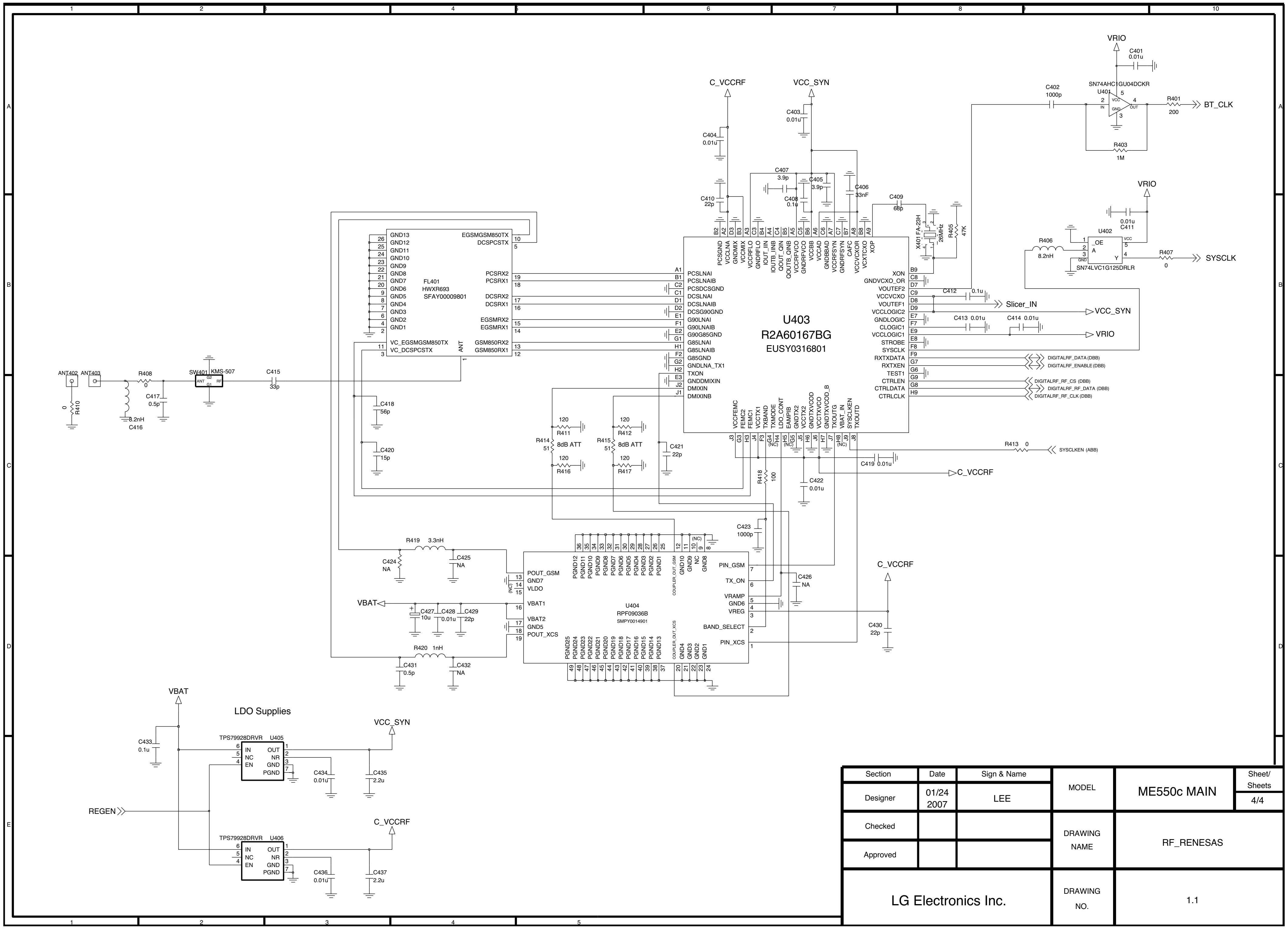
7. CIRCUIT DIAGRAM



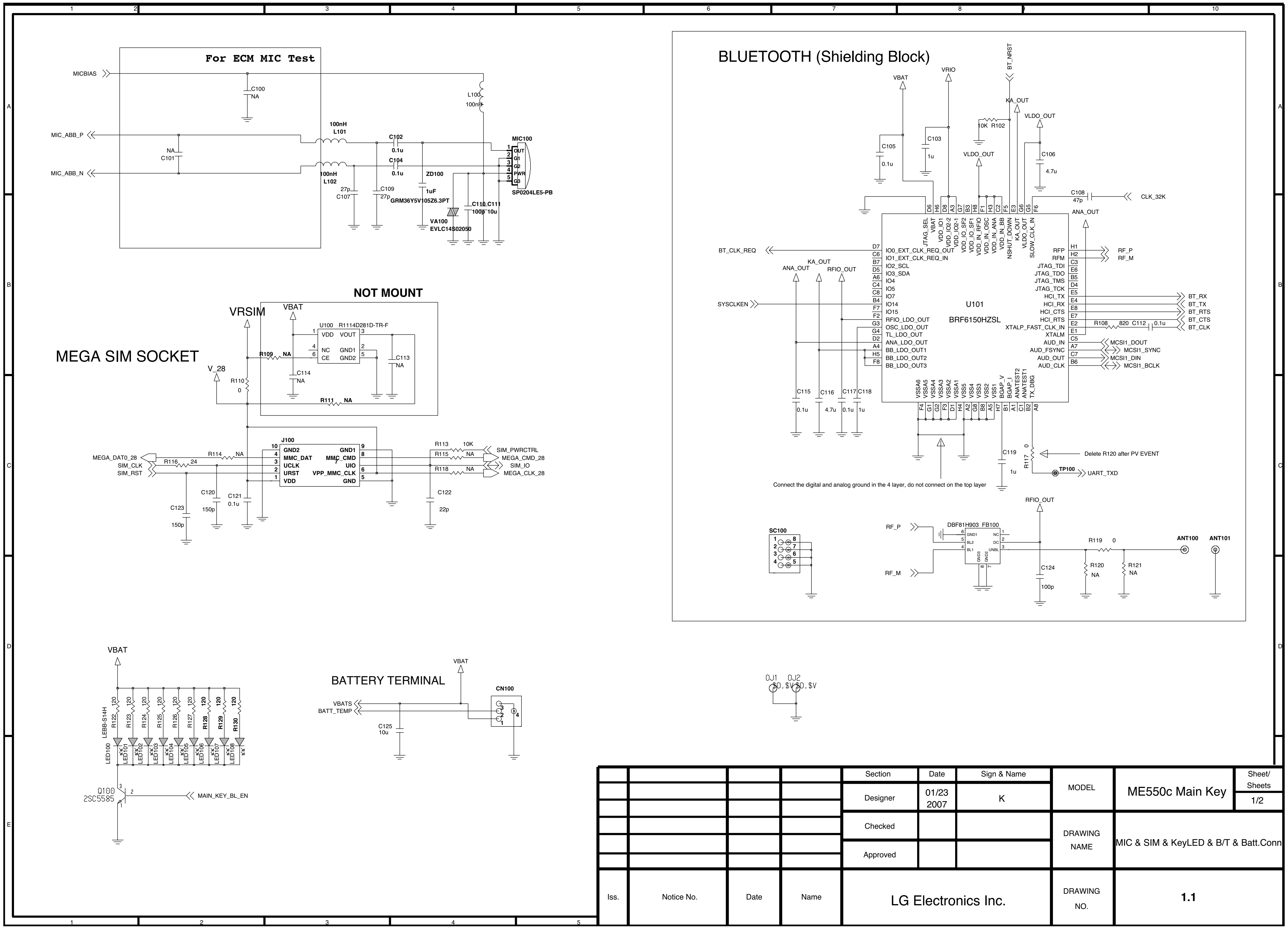
7. CIRCUIT DIAGRAM



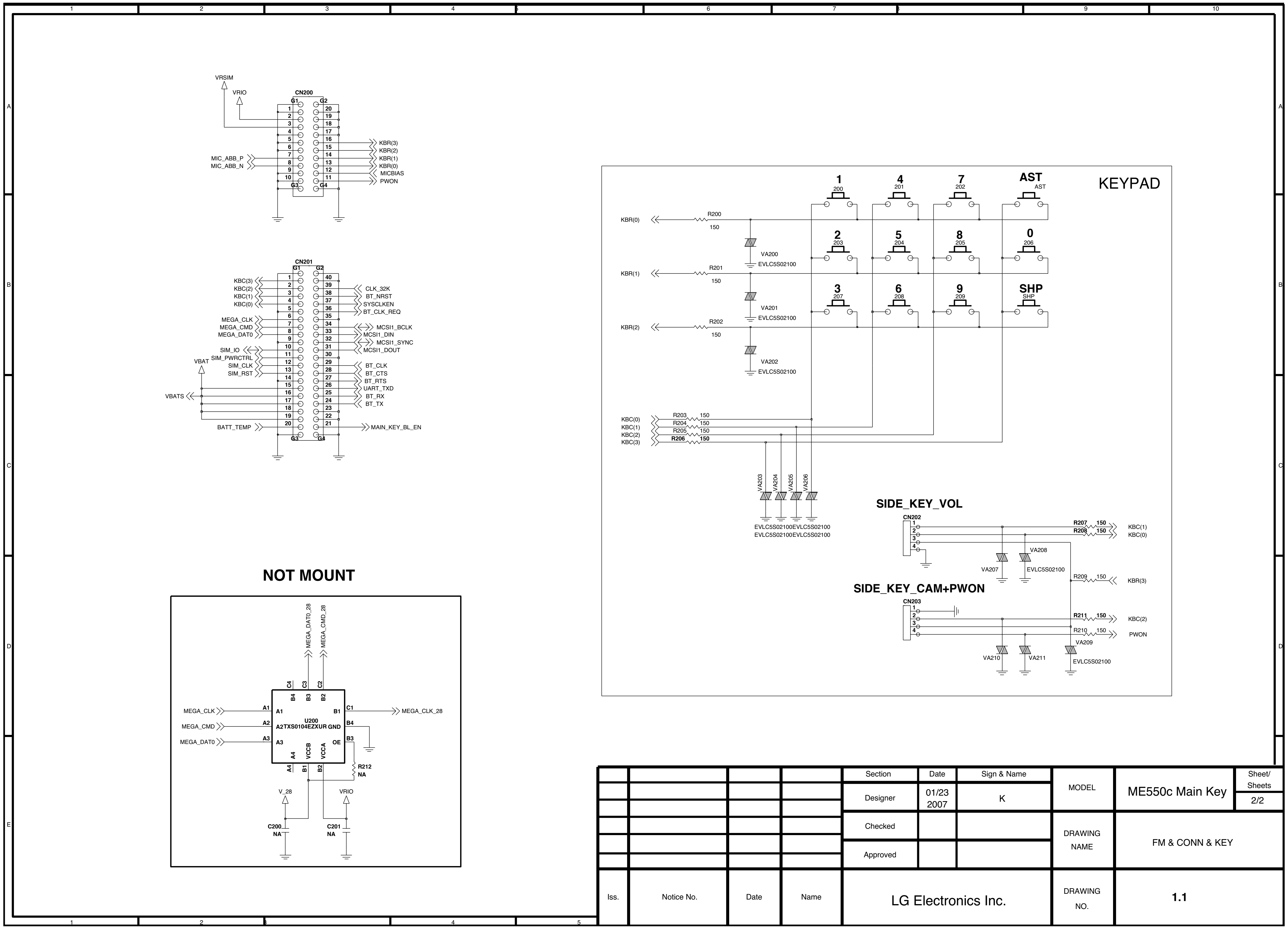
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

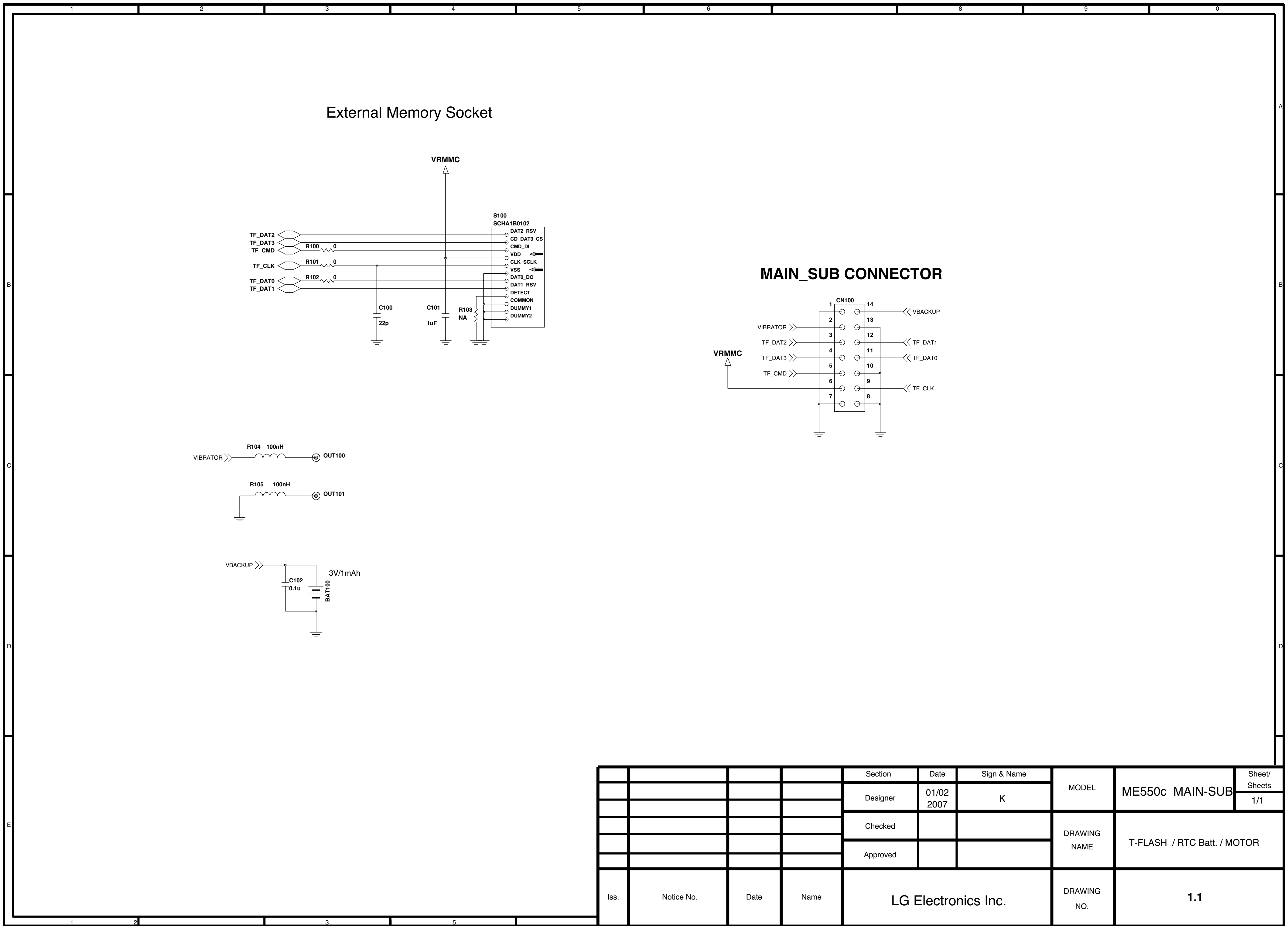


7. CIRCUIT DIAGRAM



				Section	Date	Sign & Name	MODEL	ME550c Main Key	Sheet/ Sheets
				Designer	01/23 2007	K			2/2
				Checked			DRAWING NAME	FM & CONN & KEY	
				Approved					
Iss.	Notice No.	Date	Name	LG Electronics Inc.			DRAWING NO.	1.1	

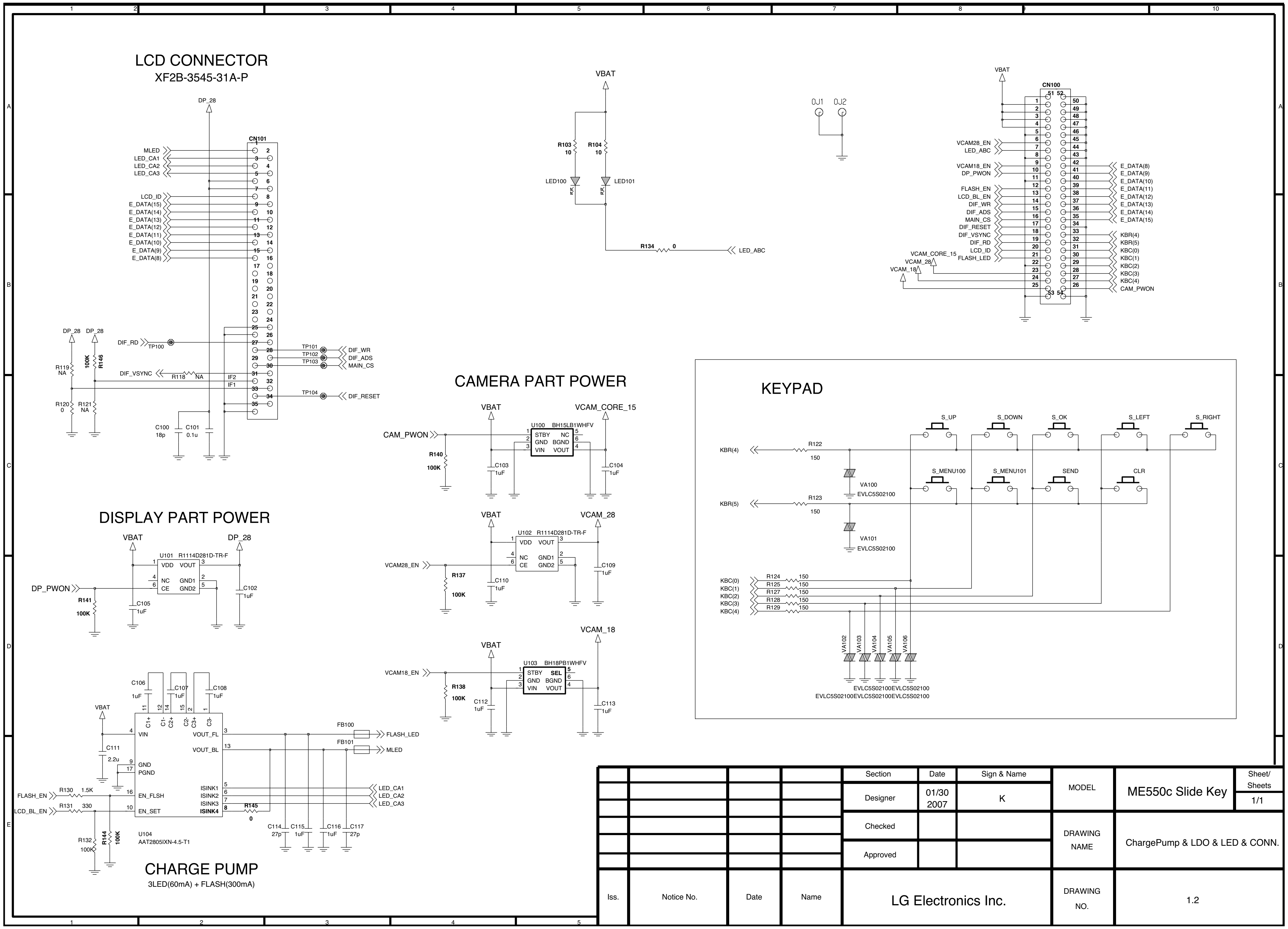
7. CIRCUIT DIAGRAM



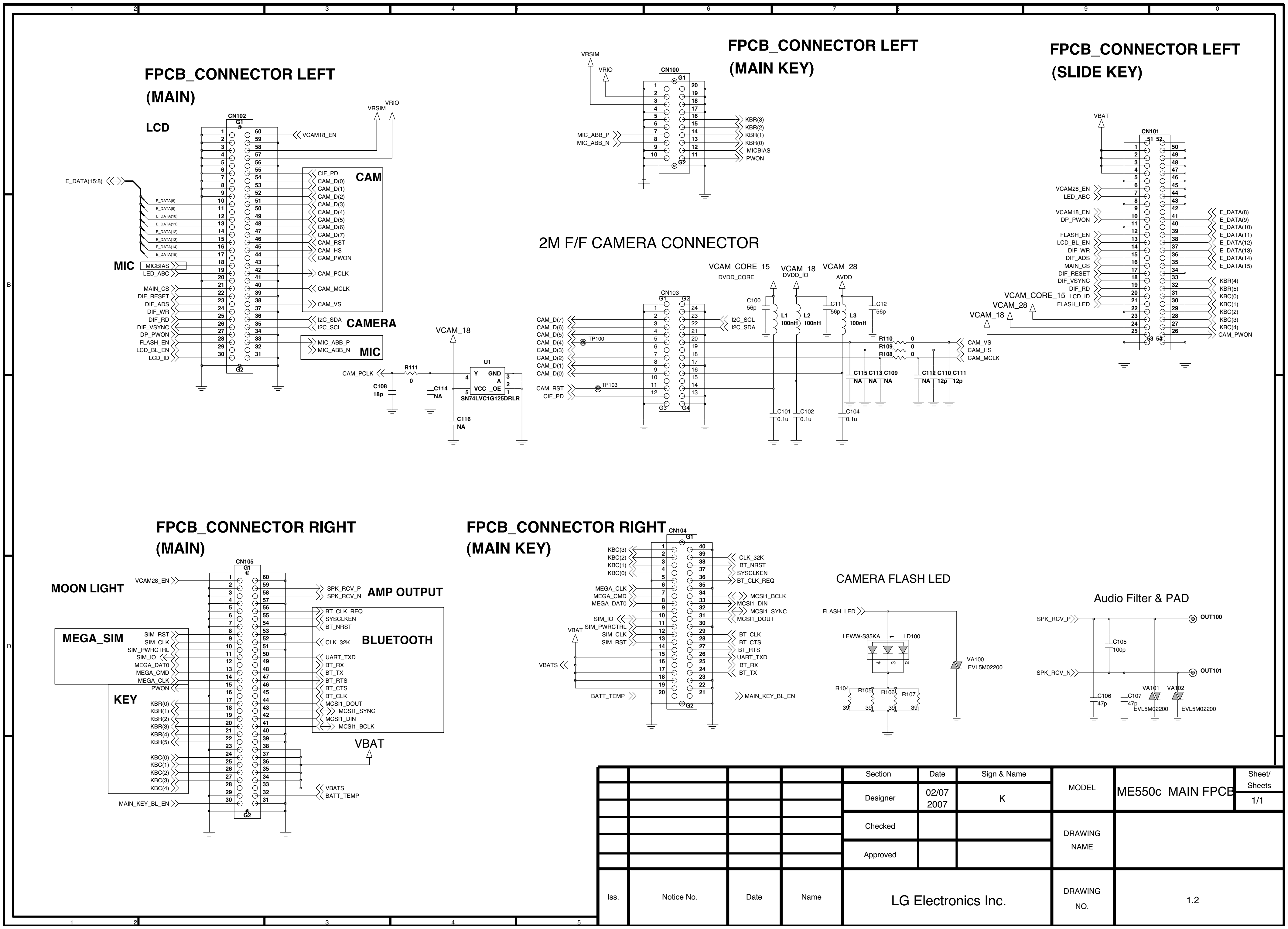
Section	Date	Sign & Name	MODEL	ME550c MAIN-SUB	Sheet/ Sheets	
Designer	01/02 2007	K			1/1	
Checked			DRAWING NAME	T-FLASH / RTC Batt. / MOTOR		
Approved						

Iss.	Notice No.	Date	Name	LG Electronics Inc.	DRAWING NO.	1.1

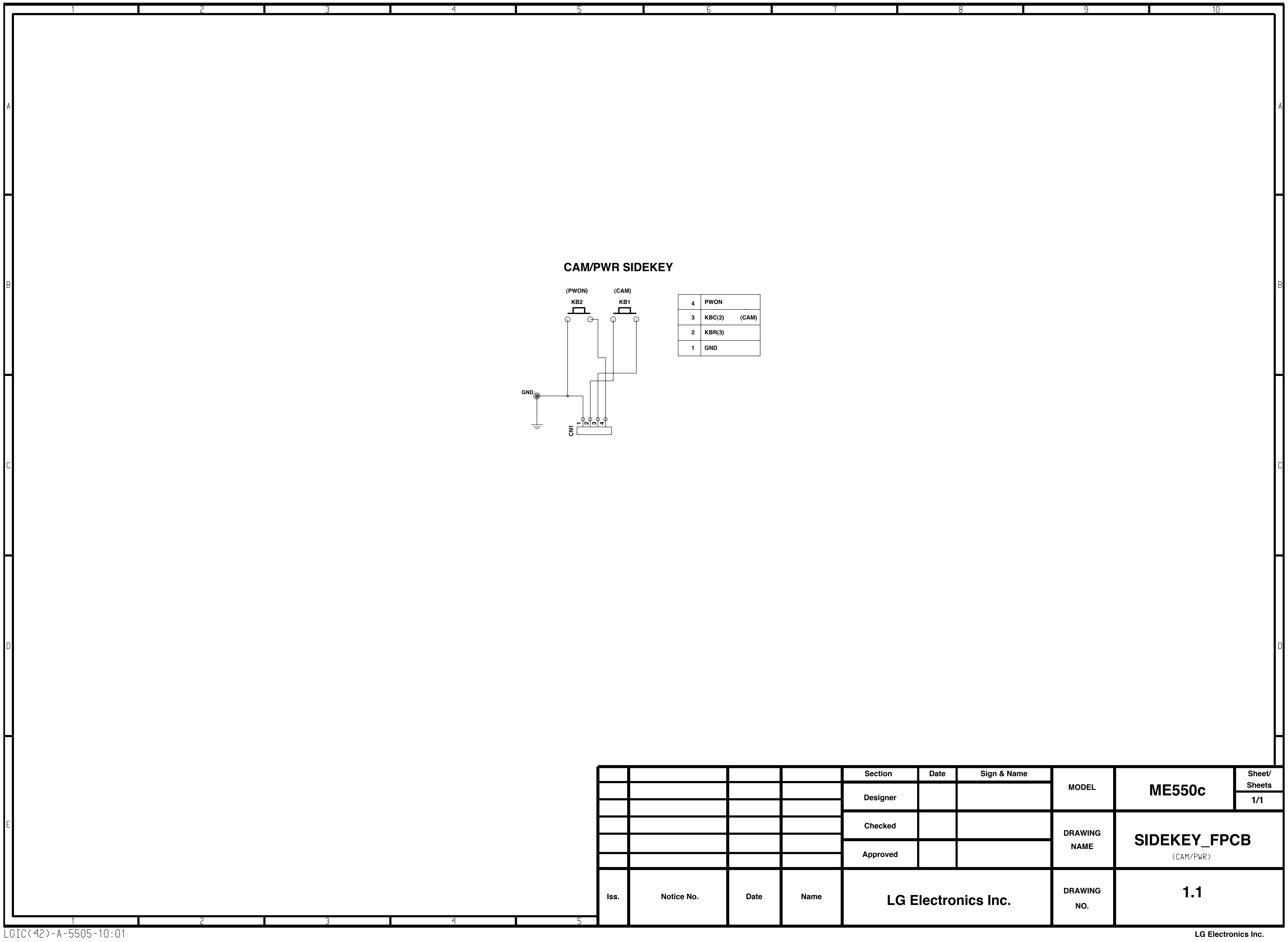
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

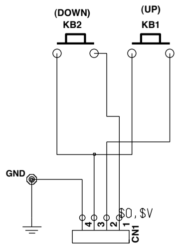


7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

VOLUME SIDEKREY



4	GND	
3	KBR(3)	
2	KBC(0)	(UP)
1	KBC(1)	(DOWN)

				Section	Date	Sign & Name	MODEL
				Designer			
				Checked			
				Approved			
Iss.	Notice No.	Date	Name	LG Electronics Inc.			

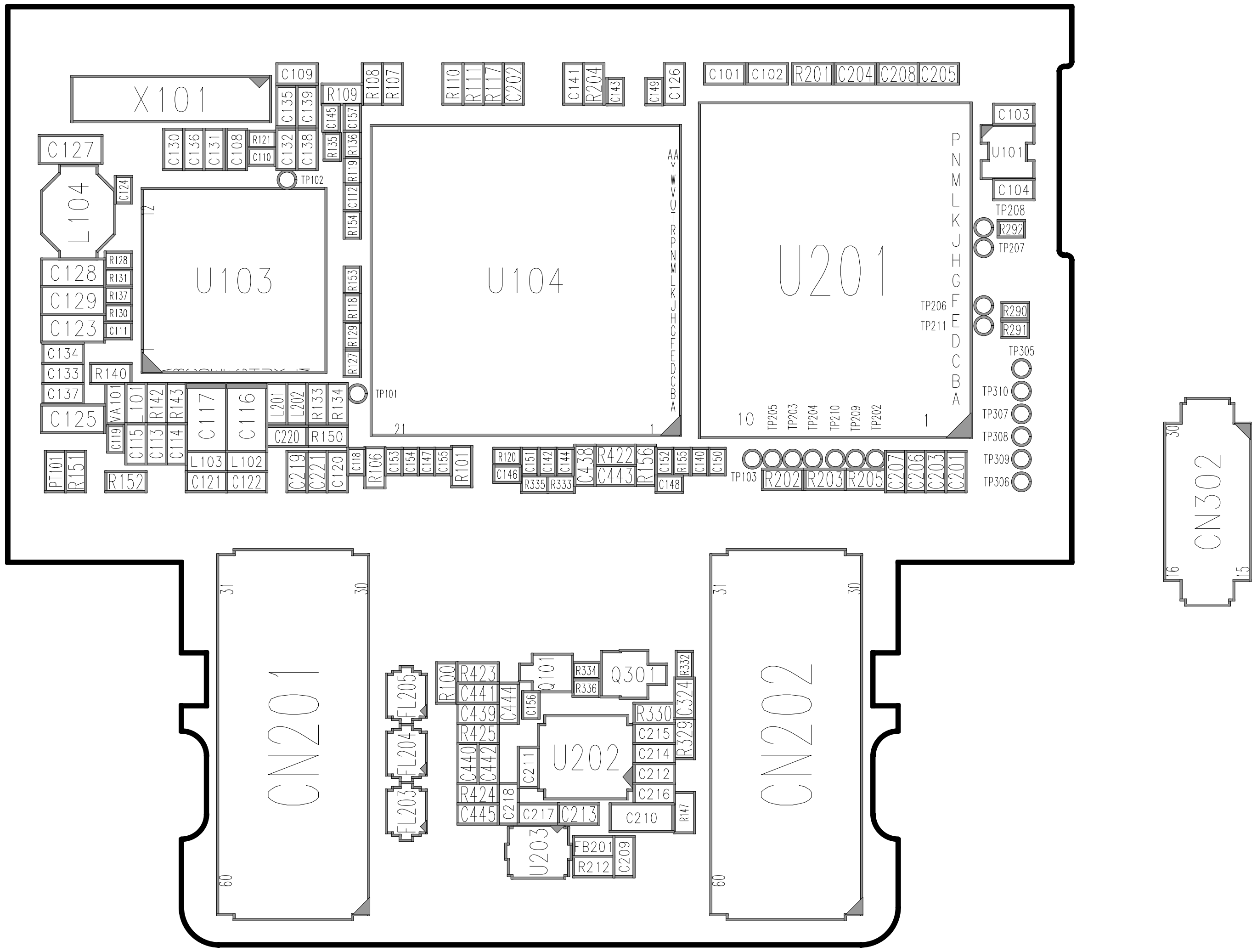
MODEL	ME550c	Sheet/ Sheets 1/1
DRAWING NAME	SIDEKEY_FPCB (VOLUME)	
DRAWING NO.	1.0	

LGIC(42)-A-5505-10:01

LG Electronics Inc.

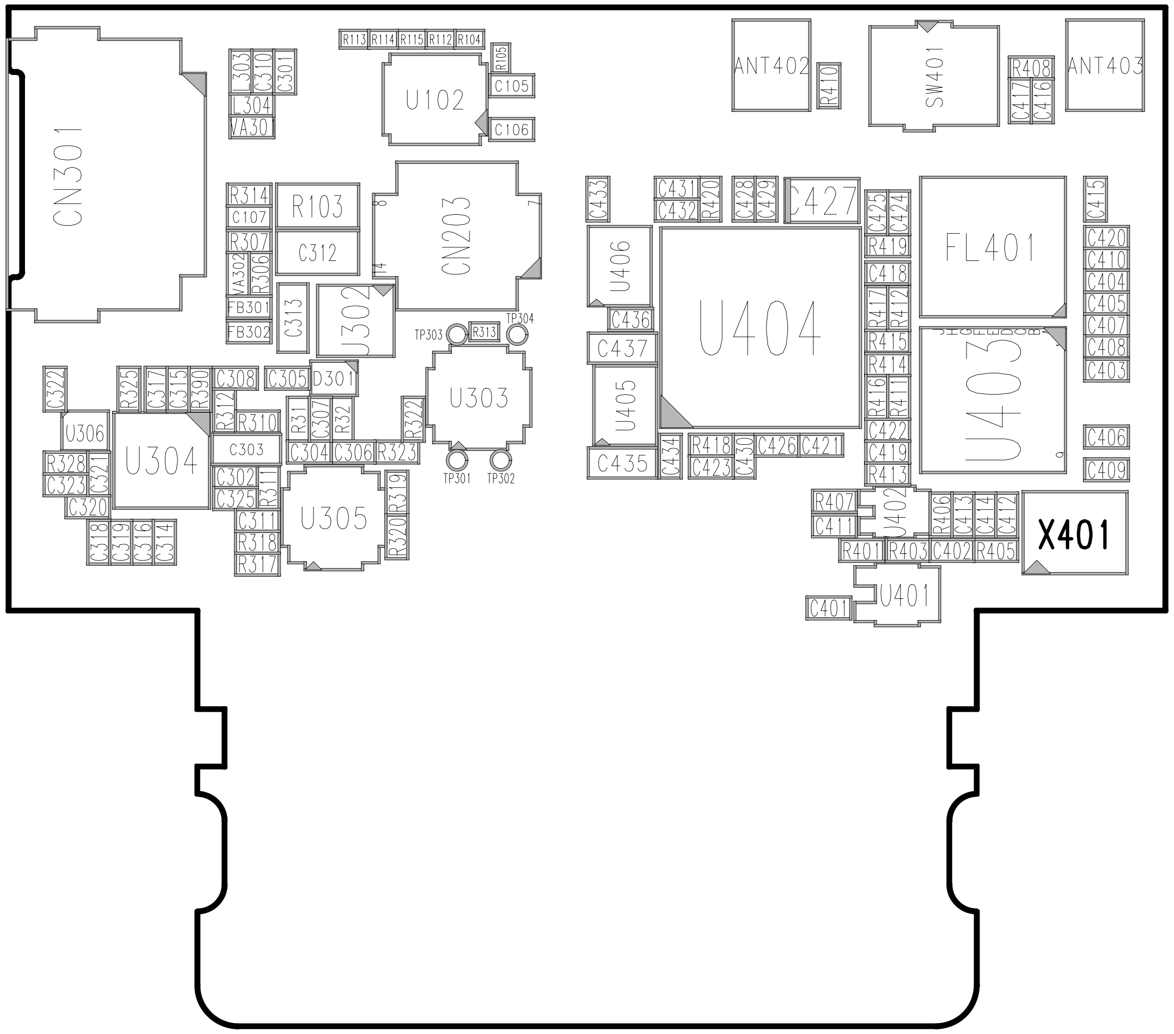
8. PCB LAYOUT

KE500-MAIN-SPFY0142901-1.1-TOP

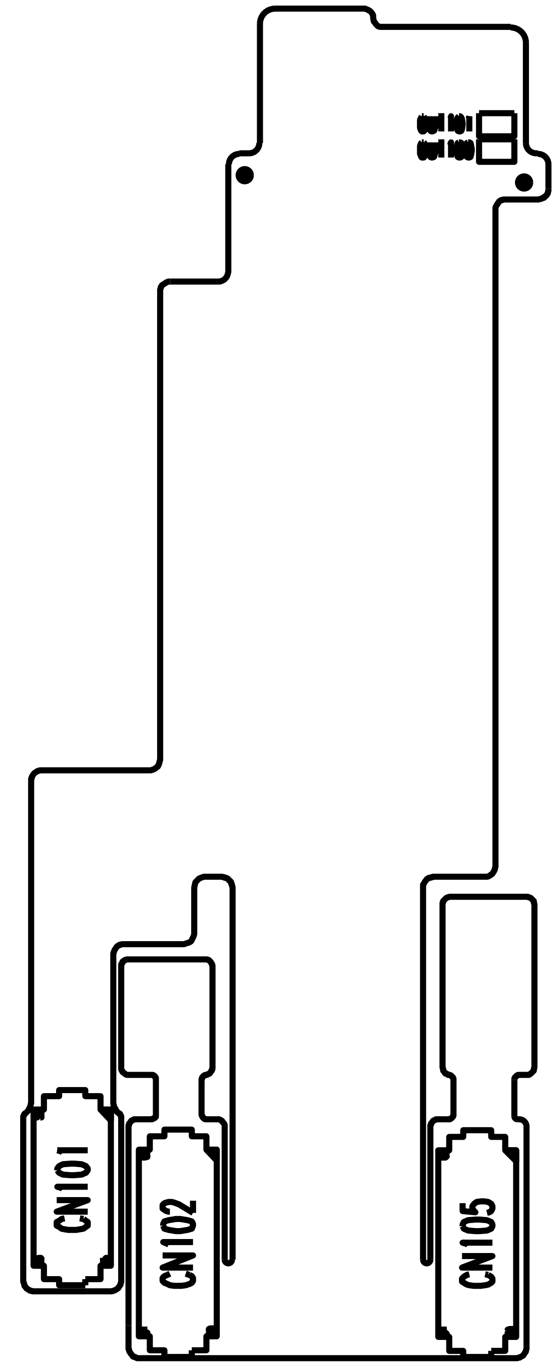


8. PCB LAYOUT

KE500-MAIN-SPFY0142901-1.1-BTM

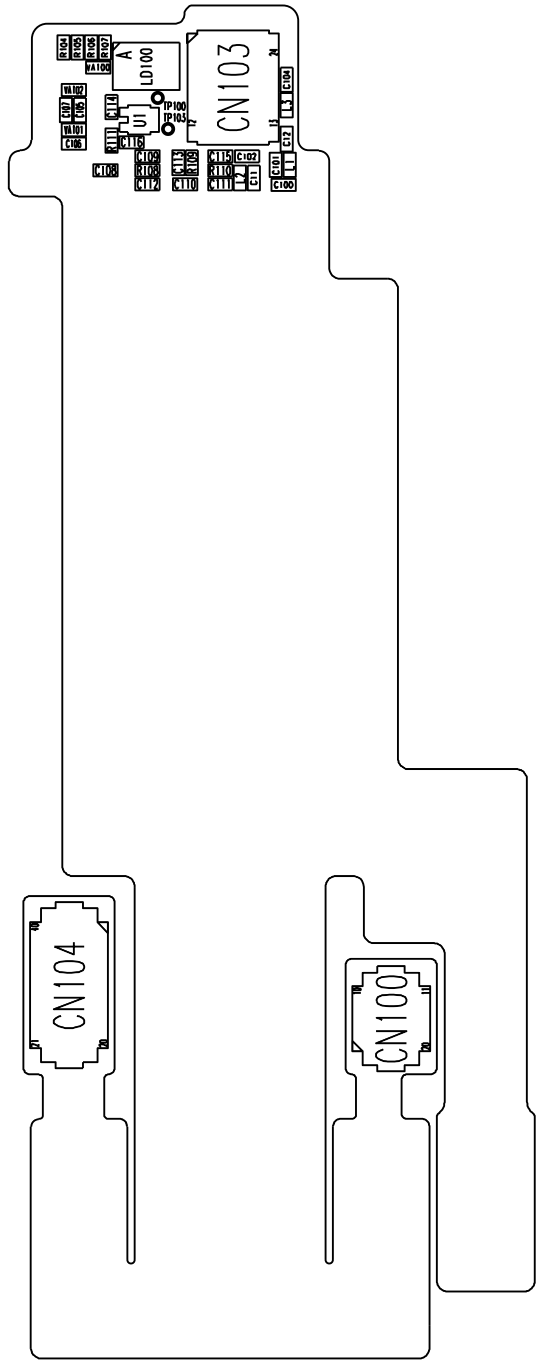


8. PCB LAYOUT



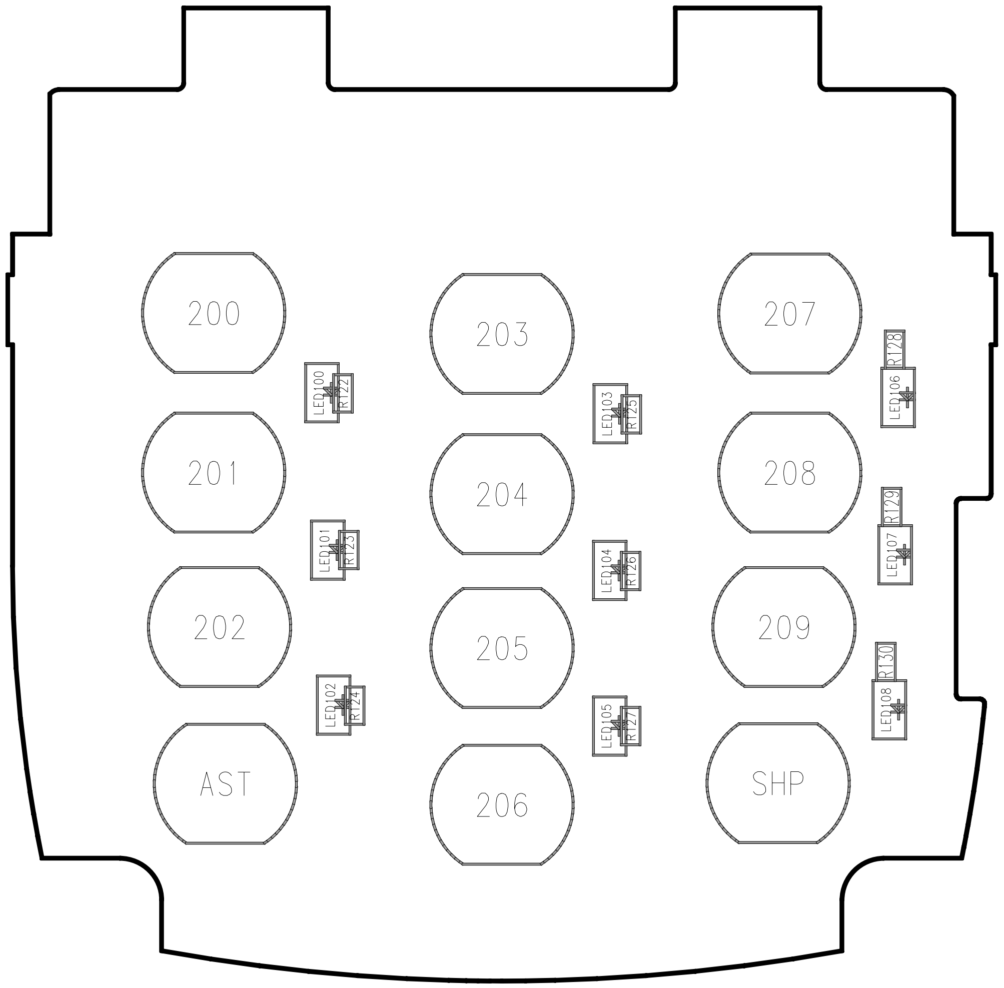
KE500-FPCB-SPCY0098301-1.1-TOP

8. PCB LAYOUT



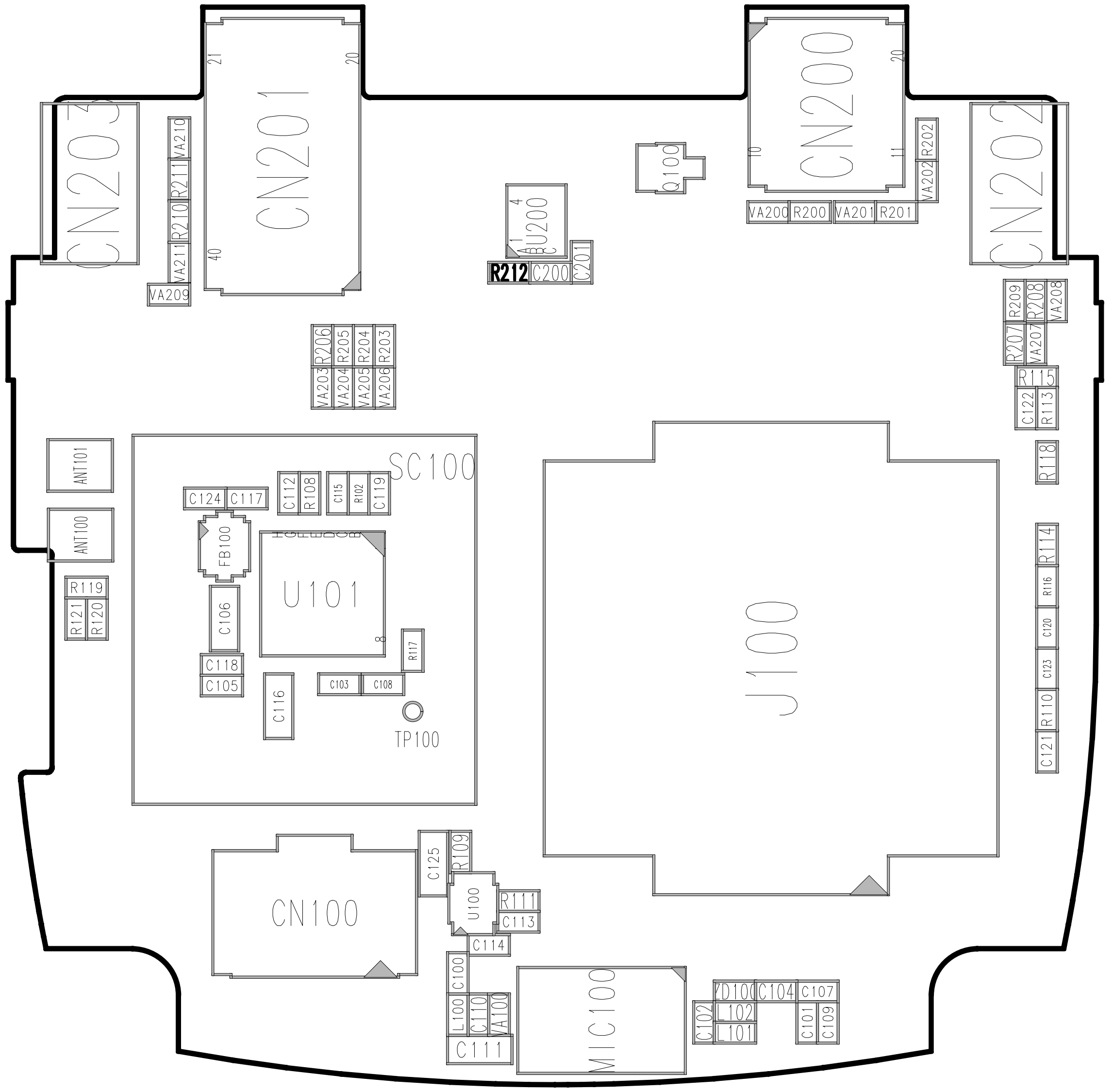
KE500-FPCB-SPCY0098301-1.1-BOT

8. PCB LAYOUT



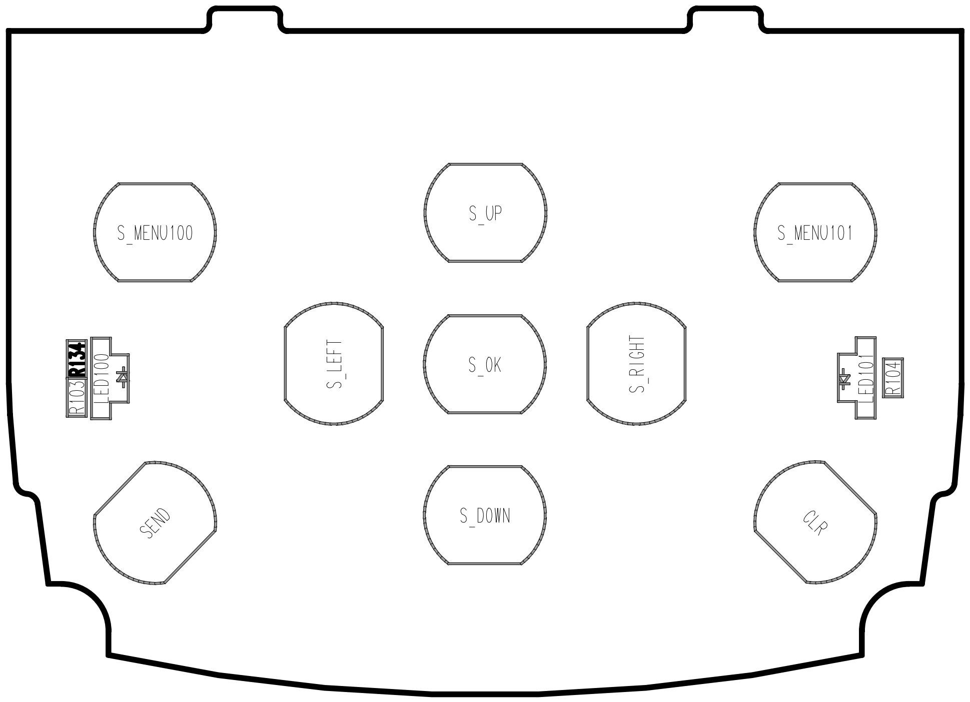
KE500-MAIN-KEY-1.1-TOP

8. PCB LAYOUT



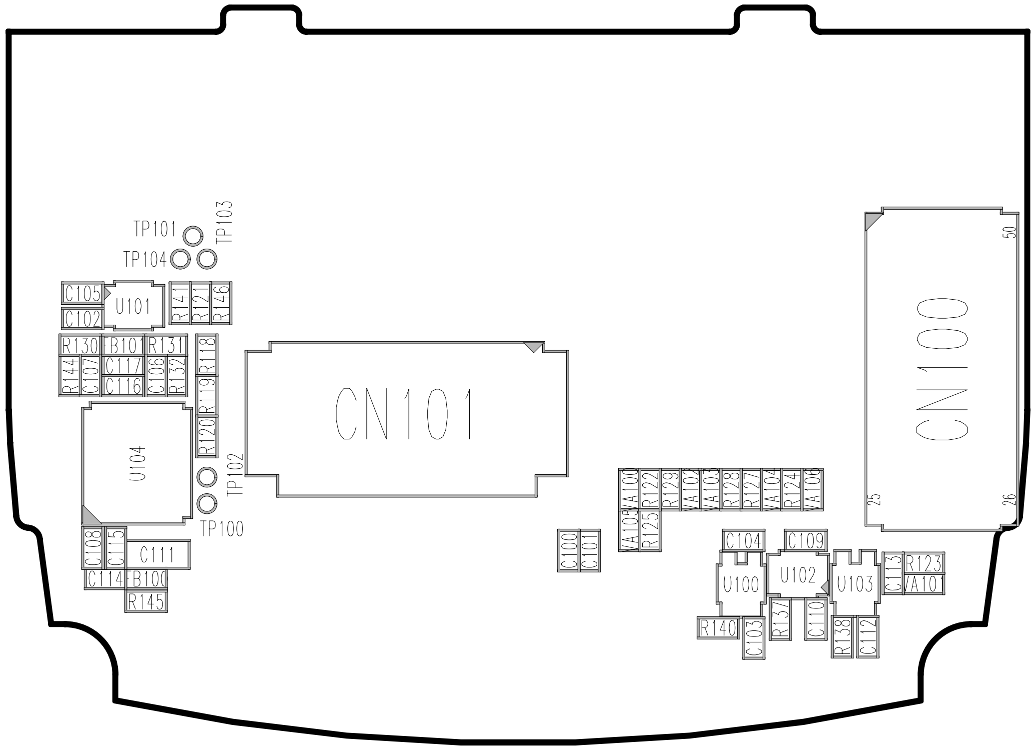
KE500-MAIN-KEY-1.1-BTM

8. PCB LAYOUT



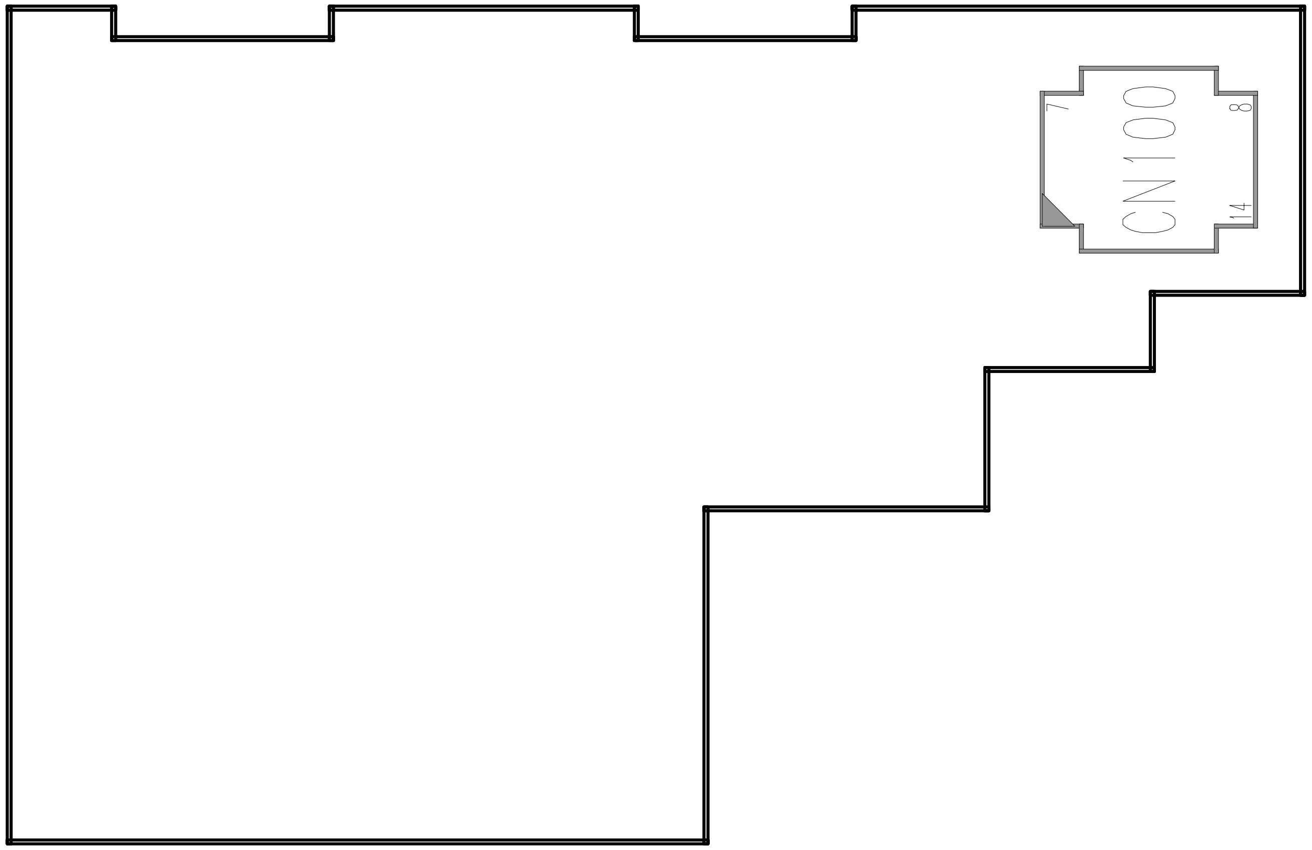
KE500-SLIDE-KEY-SPEY0047501-1.1-TOP

8. PCB LAYOUT



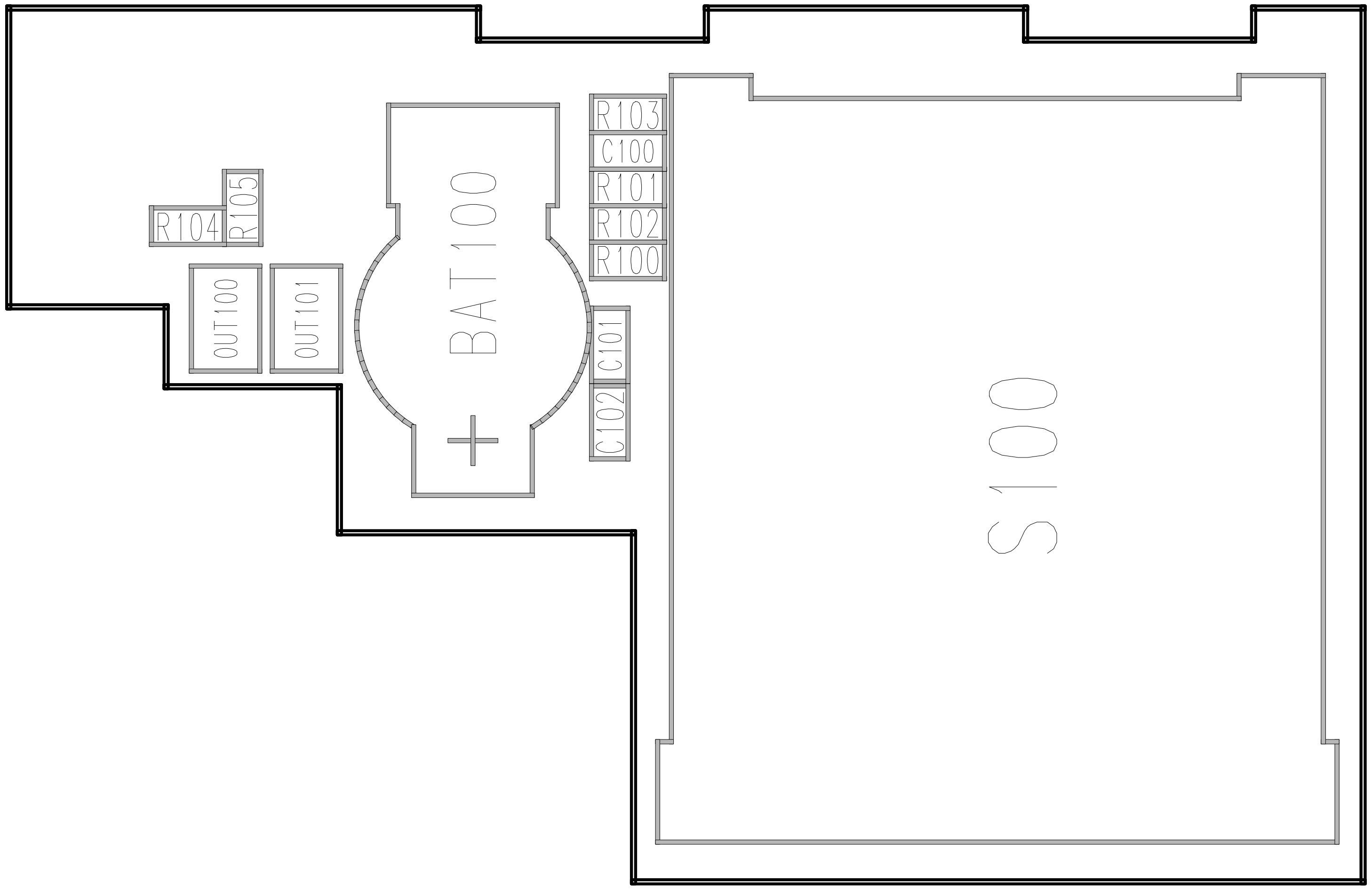
KE500-SLIDE-KEY-SPEY0047501-1.1-BTM

8. PCB LAYOUT



KE500-MAIN_SUB-SPJY0038901-1.1-TOP

8. PCB LAYOUT



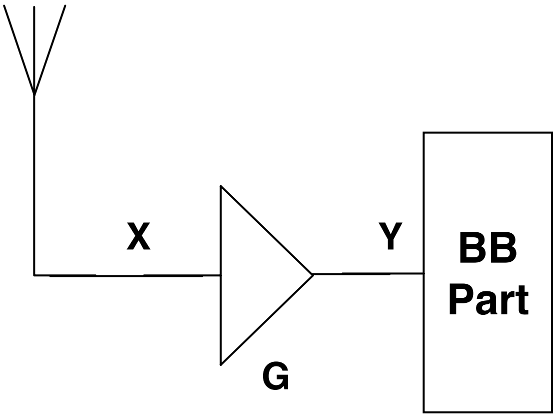
KE500-MAIN_SUB-SPJY0038901-1.1-BTM

9. RF Calibration

9.1 What's the Rx Calibration?

9.1.1 Find proper AGC Gain to make the same Rx Power fed into the Base Band Part regardless of Antenna Input Level

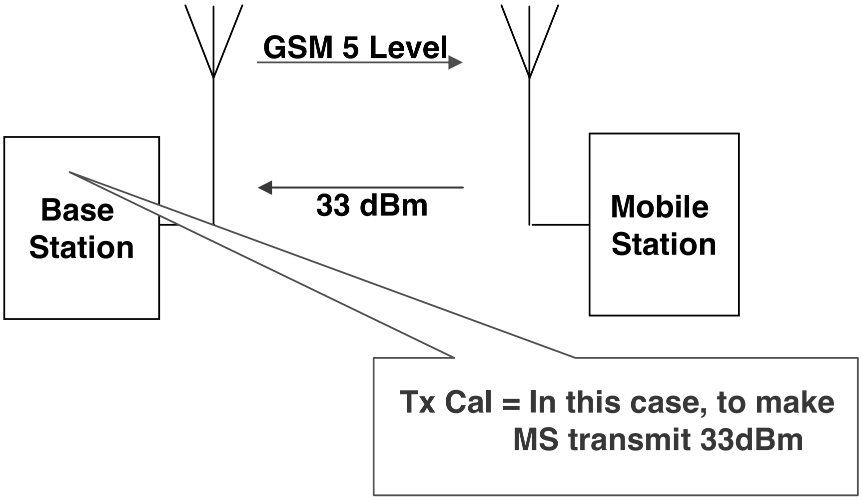
9.1.2 Can make report correct RSSI level



X(Input Level)+G(Gain)=Y

9.2 What's the Tx Calibration?

9.2.1 To make Tx Power Level transmitted properly following the information of Base Station



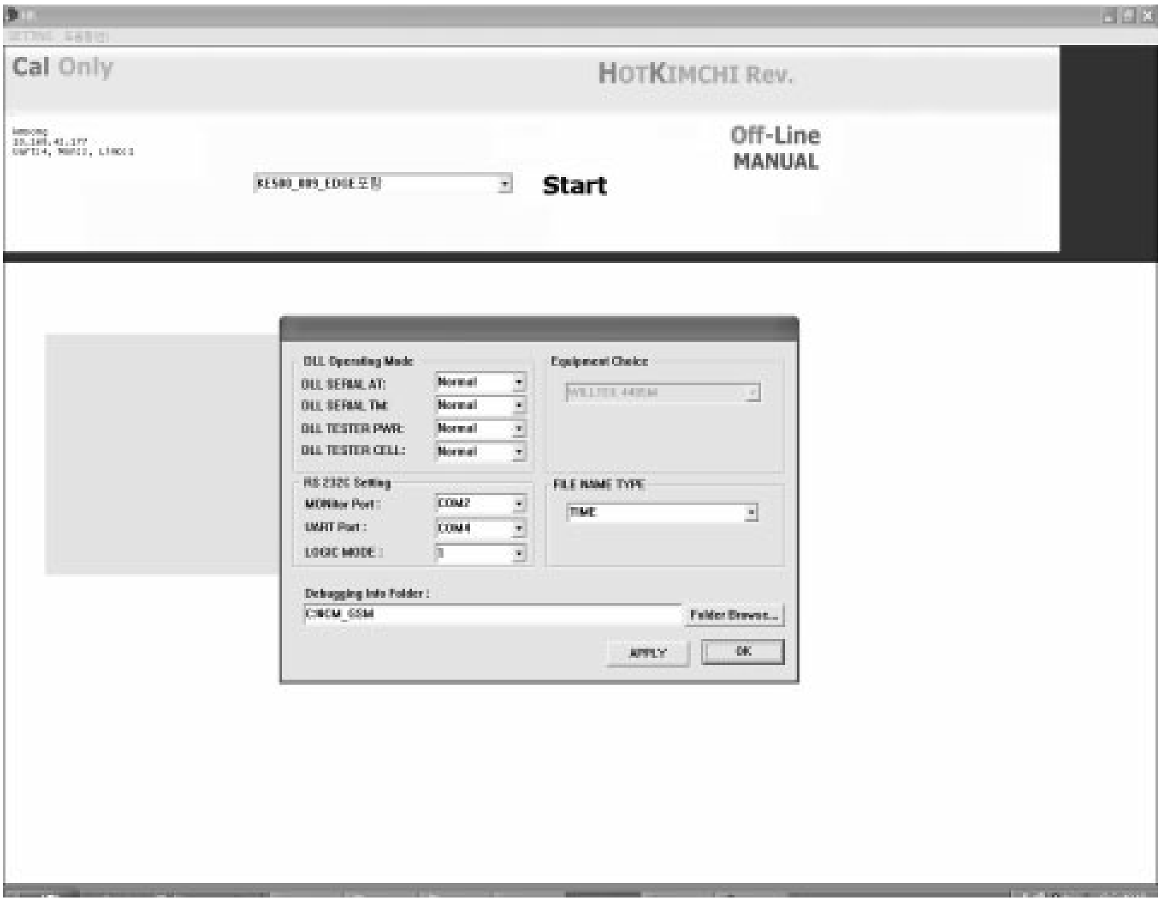
9.3 Calibration program - HOT_KIMCHI

9.3.1 Calibration Program (HOT_KIMCHI)

- Under windows 2k or XP
- PIF JIG Support Agilent 8960 Test Set

9.3.2 Required Equipments

- Test PC with PCMCIA slot
- GPIB card
- E5515C(Agilent 8960 series)
- Power supply



KE500_009_EDGE모칭

DLL Operating Mode
DLL SERIAL AT: Normal
DLL SERIAL TM: Normal
DLL TESTER PWR: Normal
DLL TESTER CELL: Normal

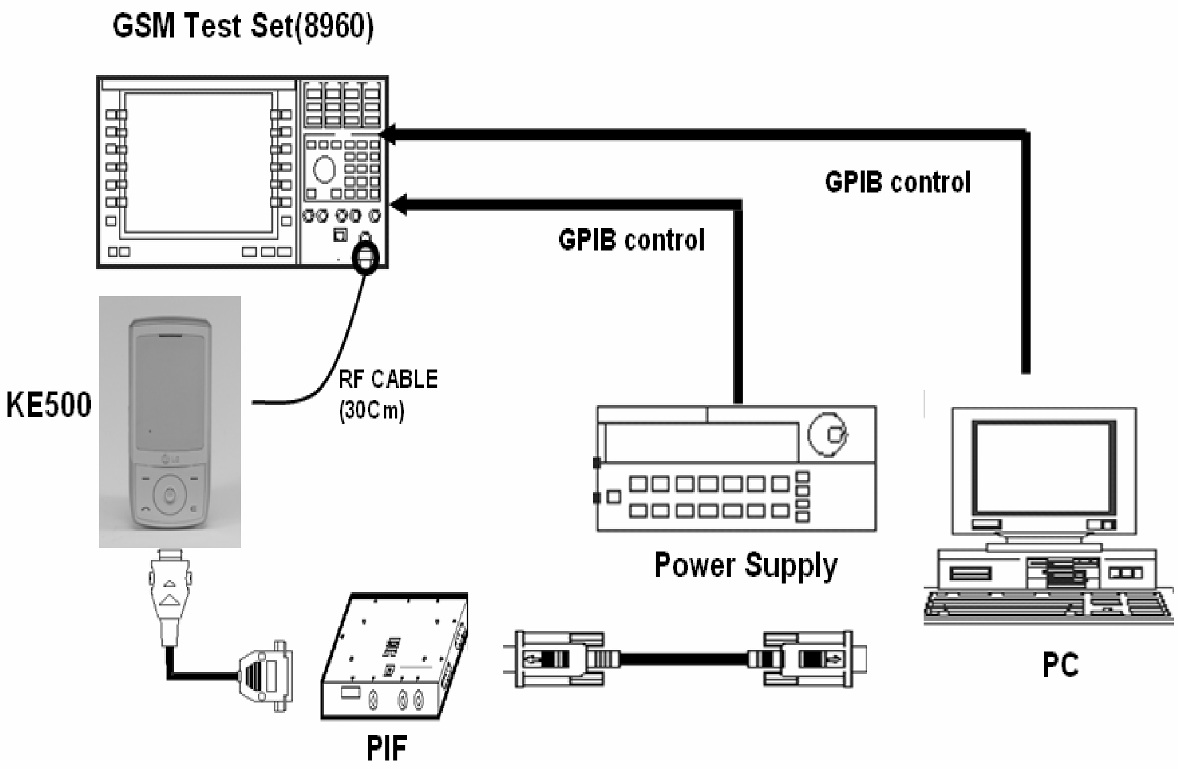
Equipment Choice

RS 232C Setting
MONitor Port : COM2
UART Port : COM4
LOGIC MODE : 1

FILE NAME TYPE
TIME

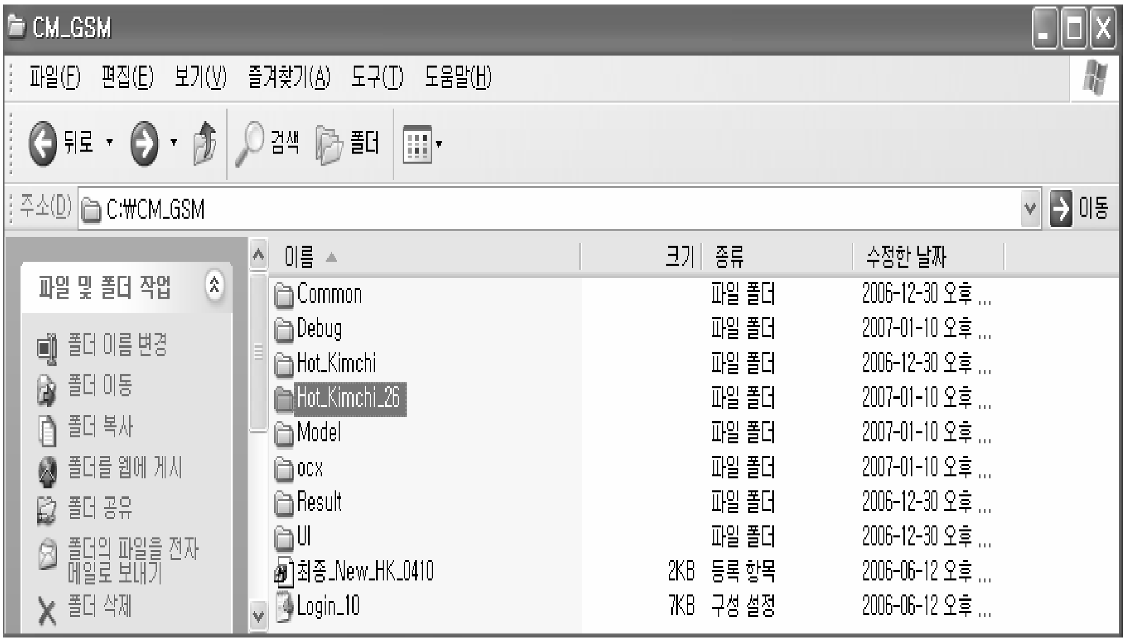
Debugging Info Folder :
C:\HCM_GSM

9.3.3 Calibration Equipment Setup



9.3.4 Calibration program - HOT_KIMCHI

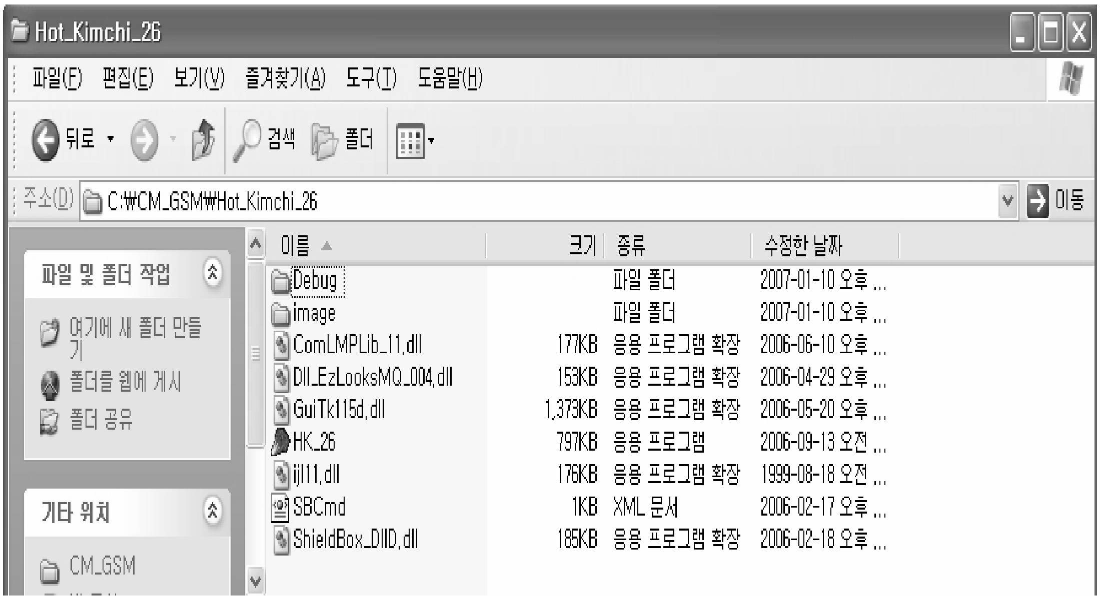
9.3.4.1 Open the HOT_KIMCHI folder



C:₩CM_GSM

이름	크기	종류	수정한 날짜
Common		파일 폴더	2006-12-30 오후 ...
Debug		파일 폴더	2007-01-10 오후 ...
Hot_Kimchi		파일 폴더	2006-12-30 오후 ...
Hot_Kimchi_26		파일 폴더	2007-01-10 오후 ...
Model		파일 폴더	2007-01-10 오후 ...
ocx		파일 폴더	2007-01-10 오후 ...
Result		파일 폴더	2006-12-30 오후 ...
UI		파일 폴더	2006-12-30 오후 ...
최종_New_HK_0410	2KB	등록 항목	2006-06-12 오후 ...
Login_10	7KB	구성 설정	2006-06-12 오후 ...

9.3.4.2 Execute Program (HOT_KIMCHI)

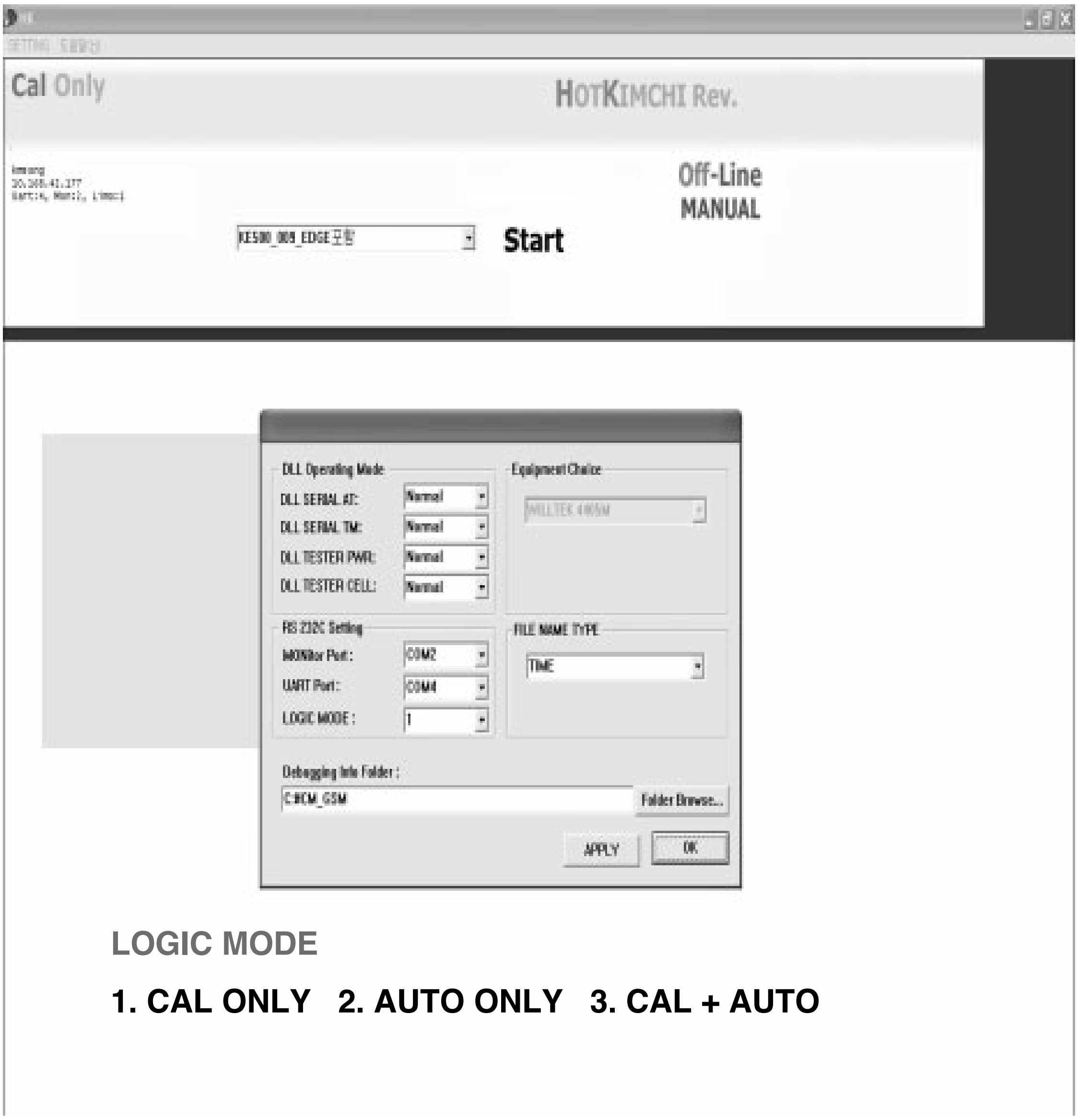


C:₩CM_GSM₩Hot_Kimchi_26

이름	크기	종류	수정한 날짜
Debug		파일 폴더	2007-01-10 오후 ...
image		파일 폴더	2007-01-10 오후 ...
ComLMPLib_11.dll	177KB	응용 프로그램 확장	2006-06-10 오후 ...
Dll_EzLooksMQ_004.dll	153KB	응용 프로그램 확장	2006-04-29 오후 ...
GuiTk115d.dll	1,373KB	응용 프로그램 확장	2006-05-20 오후 ...
HK_26	797KB	응용 프로그램	2006-09-13 오전 ...
ijl11.dll	176KB	응용 프로그램 확장	1999-08-18 오전 ...
SBCmd	1KB	XML 문서	2006-02-17 오후 ...
ShieldBox_DllD.dll	185KB	응용 프로그램 확장	2006-02-18 오후 ...

9.3.4.3 Set the “SETTING” menu

9.3.4.4 Click the “START”



KE500_009_EDGE포함

DLL Operating Mode
DLL SERIAL AT: Normal
DLL SERIAL TM: Normal
DLL TESTER PWR: Normal
DLL TESTER CELL: Normal

Equipment Choice

RS 232C Setting
MONitor Port : COM2
UART Port : COM4
LOGIC MODE : 1

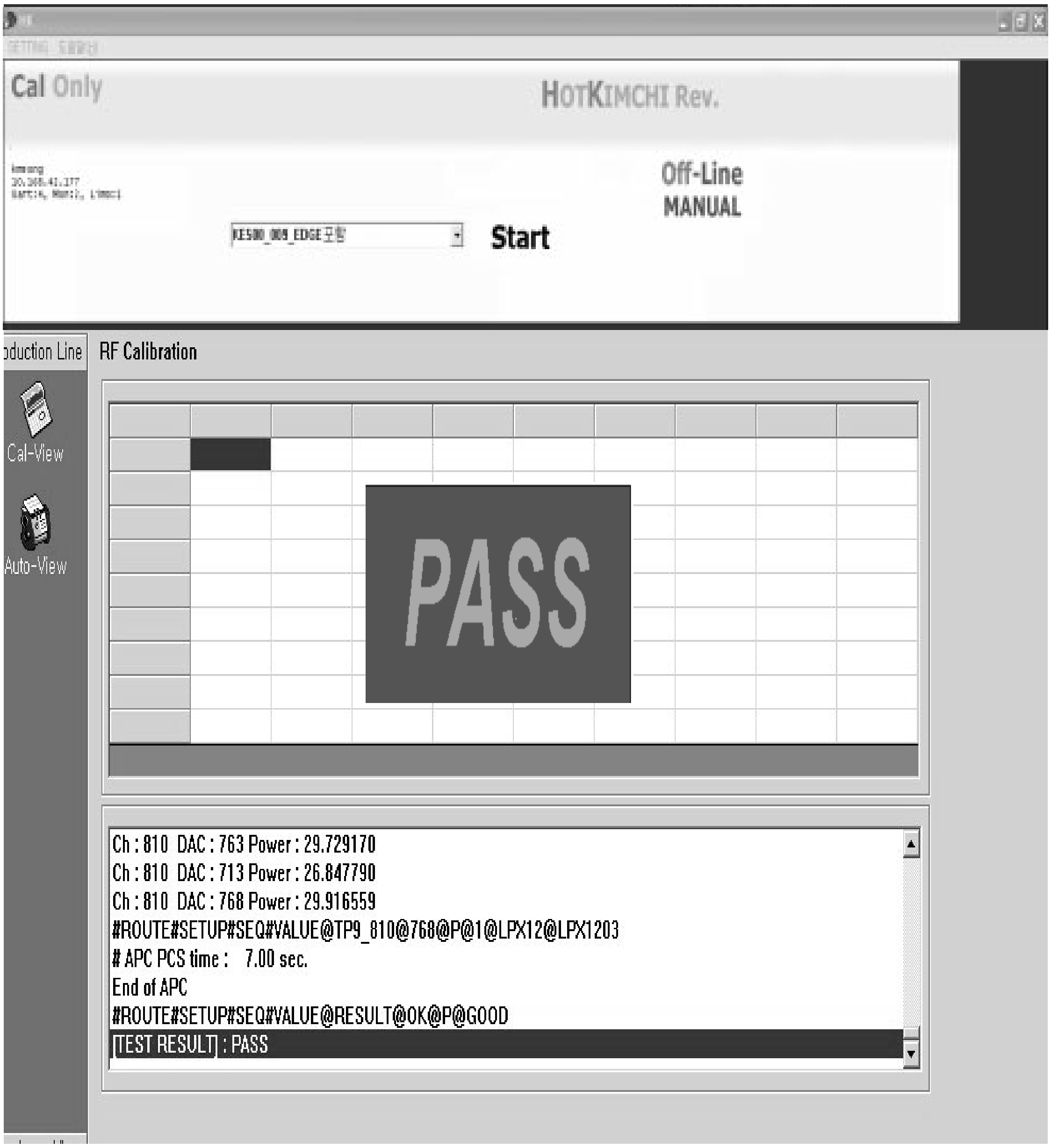
FILE NAME TYPE: TIME

Debugging Info Folder : C:\HCM_GSM

LOGIC MODE

1. CAL ONLY 2. AUTO ONLY 3. CAL + AUTO

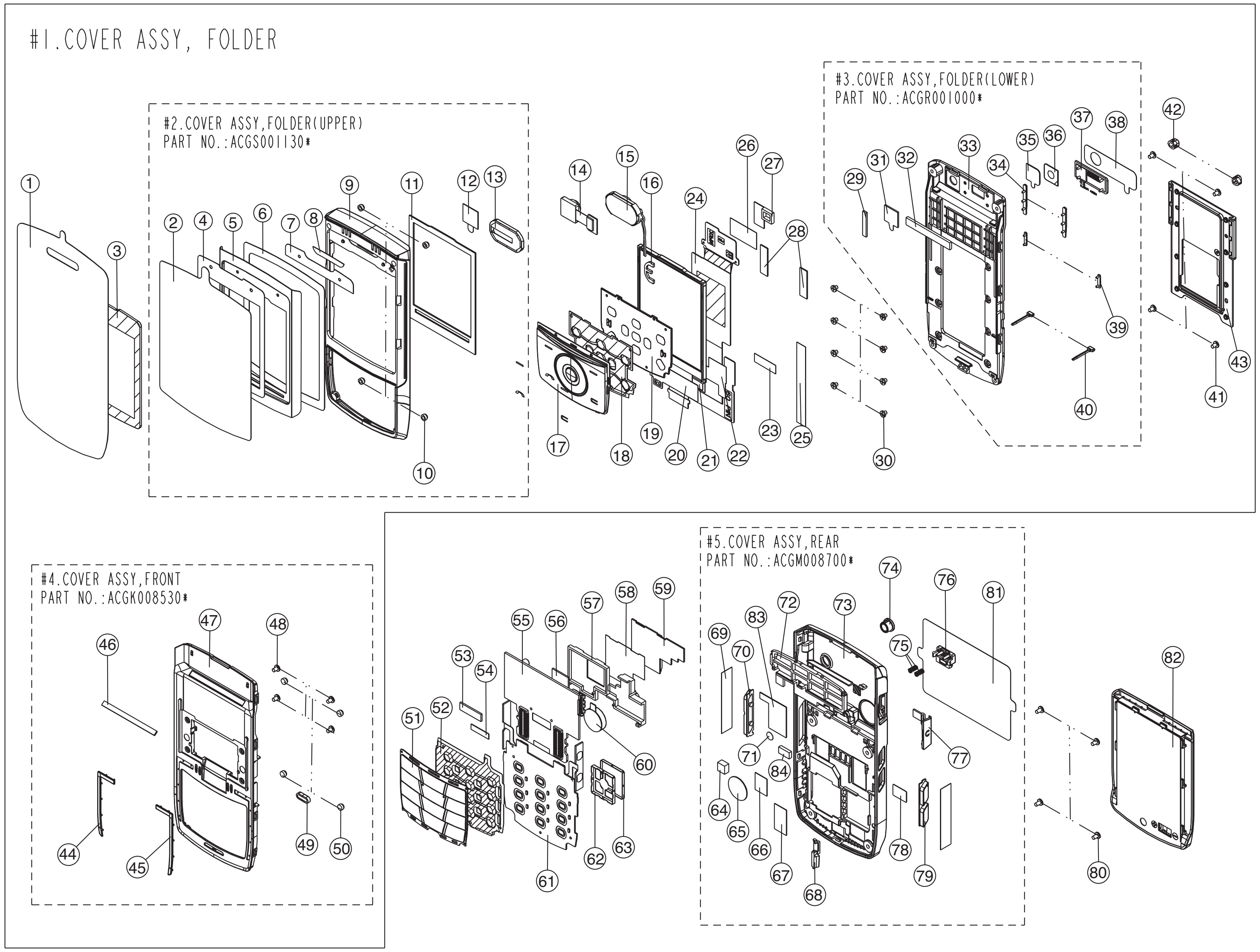
9.3.4.5 Check “[TEST RESULT] : PASS”



```
Ch : 810  DAC : 763 Power : 29.729170
Ch : 810  DAC : 713 Power : 26.847790
Ch : 810  DAC : 768 Power : 29.916559
#ROUTE#SETUP#SEQ#VALUE@TP9_810@768@P@1@LPX12@LPX1203
# APC PCS time :    7.00 sec.
End of APC
#ROUTE#SETUP#SEQ#VALUE@RESULT@OK@P@GOOD
[TEST RESULT] : PASS
```

10. EXPLODED VIEW & REPLACEMENT PART LIST

10.1 EXPLODED VIEW



NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
84	PAD_PCB_SUB	1	MPBZ0181702	
83	PAD_T_FLASH	1	MPBZ0181802	
82	BATTARY_ASSY	1	SBPP002260*	
81	TAPE PROTECTION REAR COVER	1	MTAB0167801	
80	SCREW MACHINE,BIND	4	GMEY0017001	
79	SIDE KEY END	1	MBJL0039101	
78	PLATE MIC REAR	1	MPFZ0028001	
77	CAP EAR JACK	1	MCCC0043301	
76	BATT LOCKER	1	MLEA0037701	
75	SPRING	2	MSDZ0002901	
74	CAP MOBILE SW	1	MCCF0042101	
73	COVER REAR	1	MCJN0065101	
72	ANTENNA,GSM,FIXED	1	SNGF0022302	ME550d:SNGF0025102
71	LABEL,A/S	1	MLAB0000601	
70	SIDE KEY VOL	1	MBJN0012001	
69	TAPE PROTECTION SIDE KEY	2	MTAG0003001	
68	ANTENNA,GSM,FIXED BT	1	SNGF0023202	
67	PAD MAIN CONN L	1	MPBZ0181801	
66	PAD MAIN CONN S	1	MPBZ0181701	
65	PAD (MOTOR)	1	MPBZ0184501	
64	PAD_REAR_SUB_PCB_CONN	1	MPBU0000201	
63	SHIELD CAN BT	1	MCBA0016201	
62	SHIELD CAN BT SMT	1	MCBA0016301	
61	MAIN_KEY_PCB	1	SAEY0054801	
60	TAPE MAIN MOTOR	1	MTAF0011501	
59	MAIN_SUB_PCB	1	SAJY0023001	
58	TAPE MAIN SHIELD FRAME	1	MTAC0043601	
57	MAIN SHIELD FRAME	1	MFEA0014601	
56	PAD SHIELD FRAME CHIP	1	MPBU0002101	
55	MAIN_PCB	1	SAFY020****	
54	PAD GUIDE FPCB	1	MPBF0021001	
53	TAPE (MAIN PCB FPCB)	1	MTAZ0141202	
52	DIAL_METAL_DOME_ASSY	1	ADCA0063601	
51	DIAL_KEY_ASSY	1	ABGA00077**	
50	INSERT	4	MICZ0030801	
49	PAD MAIN MIC	1	MPBH0028601	
48	SCREW MACHINE,BIND	4	GMZZ0021901	
47	COVER FRONT	1	MCJK0069101	
46	PAD FRONT BUMPER	1	MPBZ0176001	
45	MAIN FRONT KEY POM R	1	MGDB0003701	
44	MAIN FRONT KEY POM L	1	MGDA0008101	
43	HINGE_SLIDE	1	AHFB0002904	
42	CAP SCREW	2	MCCH0101601	
41	SCREW MACHINE,BIND	4	GMEY0017001	
40	BUMPER SLIDE LOWER	2	MSGY0021101	
39	GUIDE SLIDE SIDE	2	MGDA0008001	
38	TAPE PROTECTION DECO CAMERA	1	MTAB0156801	
37	DECO CAMERA	1	MDAD0028801	
36	LENS CAMERA	1	MLCD0007801	
35	TAPE CAMERA LENS	1	MTAZ0183901	
34	GUIDE SLIDE	2	MGDA0007901	
33	COVER SLIDE LOWER	1	MCJV0010201	
32	PAD LOWER LCD BACK	1	MPBG0062701	
31	PAD CAMERA	1	MPBT0038401	
30	SCREW MACHINE,BIND	8	GMZZ0021901	
29	MAGNET	1	MMAA0000901	
28	PAD HINGE FPCB FIXING	2	MPBZ0176501	
27	PAD_FLASH_LED	1	MPBZ0174701	
26	TAPE FPCB REV	1	MTAC0049201	
25	TAPE_LOWER_SCREW	1	MIDZ0133301	
24	MAIN_FPCB	1	SACY0055701	
23	TAPE_ZIP_CONN	1	MTAC0046301	
22	GASKET LCD SLIDE PCB	1	MGAZ0056701	
21	TAPE LCD FPCB	1	MTAZ0193001	
20	LCD	1	SVLM0024001	
19	SLIDE_PCB	1	SAEY0054901	
18	SLIDE DOME SHEET	1	ADCA0063501	
17	KEYPAD_ASSY_SUB	1	MKAC001030*	
16	PAD RECEIVER	1	MPBF0019801	
15	RECEIVER(SPEAKER)	1	SUSY0026701	
14	CAMERA	1	SVCY0012701	
13	FILTER SPEAKER	1	MFBB0022701	
12	TAPE CAMERA	1	MTAZ0183801	
11	PAD LCD	1	MPBG0057301	
10	SLIDE_INSERT	4	MICZ0030801	
9	COVER SLIDE UPPER	1	MCJW0011901	
8	FILTER RECEIVER	1	MFBB0020701	
7	TAPE DECO	1	MTAA0132301	
6	TAPE DECO HEAT ADHESIVE	1	MTAA0132001	
5	SLIDE_DECO_WINDOW	1	MDAL000790*	
4	TAPE MAIN WINDOW	1	MTAD0065101	
3	MAIN_WINDOW	1	MWAC0076301	
2	TAPE PROTECTION DECO WINDOW	1	MTAB0156601	
1	TAPE_PROTECTION_SLIDE	1	MTAB0169001	

10.2 Replacement Parts <Mechanic component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Description	Part Number	Specification	Color	Remark
1		GSM(SLIDE)	TGLL0011204		Silver	
2	AAAY00	ADDITION	AAAY0238301		Silver	
3	ENSY00	CONN,SOCKET	ENSY0015401	9 PIN,ETC , , mm,SD Adaptor for TFR		
2	APEY00	PHONE	APEY0410403		Silver	
3	ABGA00	BUTTON ASSY,DIAL	ABGA0007711	KE500_DIAL_KEYPAD_MIDDLE_AMERICA_ENGLISH_OPEN	Silver	51
3	ACGM00	COVER ASSY,REAR	ACGM0087002	ME550c CLRSV REAR ASSY	Silver	
4	MBJL00	BUTTON,SIDE	MBJL0039101	COMPLEX, (empty), , , , ,	Silver	79
4	MBJN00	BUTTON,VOLUME	MBJN0012001	COMPLEX, (empty), , , , ,	Silver	70
4	MCCC00	CAP,EARPHONE JACK	MCCC0043301	COMPLEX, (empty), , , , ,	Silver	77
4	MCJN00	COVER,REAR	MCJN0065101	MOLD, PC LUPOY SC-1004A, , , , ,	Silver	73
4	MLAB00	LABEL,A/S	MLAB0000601	HUMIDITY STICKER	Without Color	71
4	MLEA00	LOCKER,BATTERY	MLEA0037701	MOLD, PC LUPOY SC-1004A, , , , ,	Silver	76
4	MPBU00	PAD,CONNECTOR	MPBU0000201	COMPLEX, (empty), , , , ,	Black	64
4	MPBZ00	PAD	MPBZ0181701	COMPLEX, (empty), , , , ,	Black	66
4	MPBZ01	PAD	MPBZ0181801	COMPLEX, (empty), , , , ,	Black	67
4	MPBZ02	PAD	MPBZ0184501	COMPLEX, (empty), , , , ,	Without Color	65
4	MPBZ05	PAD	MPBZ0181702	COMPLEX, (empty), , , , ,	Black	84
4	MPBZ06	PAD	MPBZ0181802	COMPLEX, (empty), , , , ,	Silver	83
4	MPFZ00	PLATE	MPFZ0028001	COMPLEX, (empty), , , , ,	Silver	78
4	MSDZ00	SPRING	MSDZ0002901	COMPLEX, (empty), , , , ,	Without Color	75
4	MTAB00	TAPE,PROTECTION	MTAB0167801	COMPLEX, (empty), , , , ,	Without Color	81
4	MTAG00	TAPE,BUTTON	MTAG0003001	COMPLEX, (empty), , , , ,	Black	69
3	ACGQ00	COVER ASSY,SLIDE	ACGQ0017002	ME550c CLRSV COVER ASSY,SLIDE	Silver	
4	ACGK00	COVER ASSY,FRONT	ACGK0085301		Silver	
5	MCJK00	COVER,FRONT	MCJK0069101	MOLD, PA MXD6 RENY NXG5945S, , , , ,	Silver	47
5	MGDA00	GUIDE,LEFT	MGDA0008101	MOLD, POM LUCEL FW-700A, , , , ,	Silver	44
5	MGDB00	GUIDE,RIGHT	MGDB0003701	MOLD, POM LUCEL FW-700A, , , , ,	Silver	45
5	MICZ00	INSERT	MICZ0030801	COMPLEX, (empty), , , , ,	Silver	

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
5	MPBH00	PAD,MIKE	MPBH0028601	COMPLEX, (empty), , , , ,	Without Color	49
5	MPBZ00	PAD	MPBZ0176001	COMPLEX, (empty), , , , ,	Without Color	46
4	ACGR00	COVER ASSY, SLIDE(LOWER)	ACGR0010001	KE500 SLIDE LOWER ASSY	Silver	
5	MCJV00	COVER,SLIDE(LOWER)	MCJV0010201	MOLD, PA MXD6 RENY NXG5945S, , , , ,	Silver	33
5	MDAD00	DECO,CAMERA	MDAD0028801	MOLD, ABS MP-211, , , , ,	Silver	37
5	MGDA00	GUIDE,LEFT	MGDA0008001	MOLD, POM TX-31, , , , ,	Silver	39
5	MGDA01	GUIDE,LEFT	MGDA0007901	MOLD, POM TX-31, , , , ,	Silver	34
5	MLCD00	LENS,CAMERA	MLCD0007801	CUTTING, Quartz Glass, , , , ,	Silver	36
5	MMAA00	MAGNET,SWITCH	MMAA0000901	G7000 12x2x0.7t	Metal Silver	29
5	MPBG00	PAD,LCD	MPBG0062701	COMPLEX, (empty), , , 1.1, ,	Without Color	32
5	MPBT00	PAD,CAMERA	MPBT0038401	COMPLEX, (empty), 0.8T, , , ,	Silver	31
5	MSGY00	STOPPER	MSGY0021101	MOLD, Urethane Rubber S190A, , , , ,	Silver	40
5	MTAB00	TAPE,PROTECTION	MTAB0156801	COMPLEX, (empty), , , , ,	Silver	38
5	MTAZ02	TAPE	MTAZ0183901	COMPLEX, (empty), , , , ,	Silver	35
4	ACGS00	COVER ASSY, SLIDE(UPPER)	ACGS0011301	KE500 FRASV SLIDE UPPER ASSY	Silver	
5	MCJW00	COVER,SLIDE(UPPER)	MCJW0011901	MOLD, PC LEXAN EXL4419, , , , ,	Silver	9
5	MDAL00	DECO,WINDOW	MDAL0007901	PRESS, STS, 0.3T, , , ,	Silver	5
5	MFBB00	FILTER,RECEIVER	MFBB0020701	COMPLEX, (empty), , , , ,	Silver	8
5	MICZ00	INSERT	MICZ0030801	COMPLEX, (empty), , , , ,	Silver	10,50
5	MPBG00	PAD,LCD	MPBG0057301	COMPLEX, (empty), , , , ,	Silver	11
5	MPBN00	FILTER,RECEIVER	MFBB0022701	COMPLEX, (empty), , , , ,	Without Color	13
5	MTAA00	TAPE,DECO	MTAA0132001	COMPLEX, (empty), 0.15T, , , ,	Silver	6
5	MTAA01	TAPE,DECO	MTAA0132301	COMPLEX, (empty), , , , ,	Silver	7
5	MTAB00	TAPE,PROTECTION	MTAB0156601	COMPLEX, (empty), , , , ,	Silver	2
5	MTAD00	TAPE,WINDOW	MTAD0065101	COMPLEX, (empty), , , , ,	Silver	4
5	MTAZ00	TAPE	MTAZ0183801	COMPLEX, (empty), 0.1T, , , ,	Silver	12
4	AHFB00	HINGE ASSY,SLIDE	AHFB0002904	35H37B Silver	Silver	43
4	GMEY00	SCREW MACHINE,BIND	GMEY0017001	1.4 mm,2.3 mm,SWCH18A ,N ,SQR , ,; ,BH ,[empty] ,2.7mm ,2.3mm +0.0mm,-0.2mm ,SWRCH ,WHITE ,[empty] ,[empty]		41,80
4	GMEY03	SCREW MACHINE	GMZZ0021901	3.0 mm,1.5 mm,SWCH18A ,N ,+ ,- ,	Black	30,48
4	MCCH00	CAP,SCREW	MCCH0101601	EXTRUSION, LDPE, , , , ,	Silver	42

Level	Location No.	Description	Part Number	Specification	Color	Remark
4	MGAD00	GASKET	MGAZ0056701	COMPLEX, (empty), , , , ,	Without Color	22
4	MIDZ00	INSULATOR	MIDZ0133302	COMPLEX, (empty), , , , ,	Without Color	
4	MKAC00	KEYPAD,FUNCTION	MKAC0010301	COMPLEX, (empty), , , , ,	Silver	17
4	MLAC00	LABEL,BARCODE	MLAC0003401	EZ LOOKS(user for mechanical)	Without Color	
4	MPBF00	PAD,FLEXIBLE PCB	MPBF0019801	COMPLEX, (empty), , , , ,	Silver	16
4	MPBZ00	PAD	MPBZ0174701	COMPLEX, (empty), , , , ,	Without Color	27
4	MPBZ04	PAD	MPBZ0176501	COMPLEX, (empty), , , , ,	Without Color	28
4	MTAB02	TAPE,PROTECTION	MTAB0169001	COMPLEX, (empty), , , , ,	Without Color	1
4	MTAC00	TAPE,SHIELD	MTAC0046301	COMPLEX, (empty), , , , ,	Without Color	23
4	MTAC01	TAPE,SHIELD	MTAC0046401	COMPLEX, (empty), , , , ,	Without Color	
4	MTAC02	TAPE,SHIELD	MTAC0049201	COMPLEX, (empty), , , , ,	Without Color	26
4	MTAZ00	TAPE	MTAZ0193001	COMPLEX, (empty), , , , ,	Without Color	21
4	MWAC00	WINDOW,LCD	MWAC0076301	CUTTING, PMMA RH20 MH21 Flat 001, 1.0, , , ,	Silver	3
6	ADCA00	DOME ASSY,METAL	ADCA0063501	KE500 METAL DOME ASSY SUB	Silver	18
3	GMEY00	SCREW MACHINE,BIND	GMEY0017001	1.4 mm,2.3 mm,SWCH18A ,N ,SQR , ,; ,BH ,[empty] ,2.7mm ,2.3mm +0.0mm,-0.2mm ,SWRCH ,WHITE ,[empty] ,[empty]		
3	MCCF00	CAP,MOBILE SWITCH	MCCF0042101	COMPLEX, (empty), , , , ,	Silver	74
3	MLAK00	LABEL,MODEL	MLAK0006901			
5	ADCA00	DOME ASSY,METAL	ADCA0063601	KE500 FRASV MAIN KEY METAL DOME ASSY	Silver	52
5	MCBA00	CAN,SHIELD	MCBA0016201	PRESS, STS, , , , ,	Silver	63
6	SC100	CAN,SHIELD	MCBA0016301	PRESS, STS, , , , ,	Silver	62
5	MIDZ	INSULATOR	MIDZ0141202	COMPLEX, (empty), , , , ,	Without Color	
5	MPBF00	PAD,FLEXIBLE PCB	MPBF0021001	COMPLEX, (empty), , , , ,	Black	54
5	MTAZ00	TAPE	MTAZ0141202	COMPLEX, (empty), , , , ,	Without Color	53
8	MFEA00	FRAME,SHIELD	MFEA0014601	MOLD, PC LUPOY SC-1004A, , , , ,	Silver	57
8	MTAF00	TAPE,MOTOR	MTAF0011501	COMPLEX, (empty), , , , ,	Without Color	60
7	MPBU00	PAD,CONNECTOR	MPBU0002101	COMPLEX, (empty), , , , ,	Black	56
7	MTAC00	TAPE,SHIELD	MTAC0043601	COMPLEX, (empty), , , , ,	Without Color	58

Level	Location No.	Description	Part Number	Specification	Color	Remark
5	MLAZ00	LABEL	MLAZ0038301	PID Label 4 Array	Without Color	

10.2 Replacement Parts <Main component>

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Description	Part Number	Specification	Color	Remark
3	SMZY00	MODULE,ETC	SMZY0014203	512MB MicroSD		
4	SNGF01	ANTENNA,GSM,FIXED	SNGF0022302	3.0 ,-2.0 dBd,, ,internal, GSM900/1800/1900 ,; ,TRIPLE ,-2.0 ,50 ,3.0		72
4	SNGF02	ANTENNA,GSM,FIXED	SNGF0023202	3.0 ,-2.0 dBd,, ,internal, bluetooth ,; ,SINGLE ,-2.0 ,50 ,3.0		68
4	SACY00	PCB ASSY,FLEXIBLE	SACY0055701			24
5	SACB00	PCB ASSY, FLEXIBLE,INSERT	SACB0035401			
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0050201			
6	SACC00	PCB ASSY,FLEXIBLE,SMT BOTTOM	SACC0030201			
7	C100	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C101	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
7	C102	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
7	C104	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
7	C105	CAP,CERAMIC,CHIP	ECCH0000128	100 pF,50V,J,NP0,TC,1005,R/TP		
7	C106	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	C107	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	C108	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
7	C11	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C110	CAP,CHIP,MAKER	ECZH0000816	12 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C111	CAP,CHIP,MAKER	ECZH0000816	12 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C12	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	CN100	CONNECTOR,BOARD TO BOARD	ENBY0016701	20 PIN,0.4 mm,STRAIGHT ,AU ,0.9 STACKING,MALE		
7	CN103	CONNECTOR,BOARD TO BOARD	ENBY0020401	24 PIN,0.4 mm,ETC , ,H=0.9, Socket		
7	CN104	CONNECTOR,BOARD TO BOARD	ENBY0020201	40 PIN,0.4 mm,ETC , ,H=0.9, Header		
7	L1	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
7	L2	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
7	L3	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
7	LD100	DIODE,LED,MODULE	EDLM0005501	R,G,B ,3 LED,3.5*2.8*1.8 ,R/TP ,Flash LED		
7	R104	RES,CHIP,MAKER	ERHZ0000473	39 ohm,1/16W ,J ,1005 ,R/TP		

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
7	R105	RES,CHIP,MAKER	ERHZ0000473	39 ohm,1/16W ,J ,1005 ,R/TP		
7	R106	RES,CHIP,MAKER	ERHZ0000473	39 ohm,1/16W ,J ,1005 ,R/TP		
7	R107	RES,CHIP,MAKER	ERHZ0000473	39 ohm,1/16W ,J ,1005 ,R/TP		
7	R108	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R109	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R110	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R111	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	U1	IC	EUSY0245902	DRL ,5 PIN,R/TP ,SINGLE,BUFFER,3STATE,1.7X1.7		
7	VA100	VARISTOR	SEVY0003901	5.5 V, ,SMD ,480pF, 1005		
7	VA101	VARISTOR	SEVY0003901	5.5 V, ,SMD ,480pF, 1005		
7	VA102	VARISTOR	SEVY0003901	5.5 V, ,SMD ,480pF, 1005		
6	SACD00	PCB ASSY,FLEXIBLE,SMT TOP	SACD0040901			
7	CN101	CONNECTOR,BOARD TO BOARD	ENBY0022401	50 PIN,0.4 mm,ETC , ,H=0.9, Header		
7	CN102	CONNECTOR,BOARD TO BOARD	ENBY0020202	60 PIN,0.4 mm,STRAIGHT ,AU ,STACKING HEIGHT 0.9 / HEADDER FOR KEYPAD TO MAIN		
7	CN105	CONNECTOR,BOARD TO BOARD	ENBY0020202	60 PIN,0.4 mm,STRAIGHT ,AU ,STACKING HEIGHT 0.9 / HEADDER FOR KEYPAD TO MAIN		
7	SPCY00	PCB,FLEXIBLE	SPCY0098301	POLYI , mm,MULTI-4 , ,; , , , , , , , , ,		
4	SAEY00	PCB ASSY,KEYPAD	SAEY0054901			19
5	SAEB00	PCB ASSY, KEYPAD,INSERT	SAEB0019201			
5	SAEE00	PCB ASSY,KEYPAD,SMT	SAEE0022601			
6	SAEC00	PCB ASSY,KEYPAD,SMT BOTTOM	SAEC0020801			
7	C100	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
7	C101	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
7	C102	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C103	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C104	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C105	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C106	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C107	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C108	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C109	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C110	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C111	CAP,CERAMIC,CHIP	ECCH0005602	2.2 uF,16V ,K ,X5R ,HD ,1608 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
7	C112	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C113	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C114	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	C115	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C116	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
7	C117	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
7	CN100	CONNECTOR,BOARD TO BOARD	ENBY0022501	50 PIN,0.4 mm,ETC , ,H=0.9, Socket		
7	CN101	CONNECTOR,FFC/FPC	ENQY0010901	35 PIN,0.3 mm,ETC , ,H=1.2		
7	FB100	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
7	FB101	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
7	R120	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R122	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R123	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R124	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R125	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R127	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R128	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R129	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R130	RES,CHIP	ERHY0000244	1.5K ohm,1/16W,J,1005,R/TP		
7	R131	RES,CHIP,MAKER	ERHZ0000464	330 ohm,1/16W ,J ,1005 ,R/TP		
7	R132	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R137	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R138	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R140	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R141	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R144	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R145	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	R146	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	U100	IC	EUSY0223001	HVSOF5 ,5 PIN,R/TP ,150mA CMOS LDO WITH OUTPUT CONTROL / 1.5V		
7	U101	IC	EUSY0232812	SON1612-6 ,6 PIN,R/TP ,2.8V, 150mA LDO		
7	U102	IC	EUSY0232812	SON1612-6 ,6 PIN,R/TP ,2.8V, 150mA LDO		
7	U103	IC	EUSY0297101	HVSOF5 ,5 PIN,R/TP ,1.8V 150mA Auto power detect LDO		
7	U104	IC	EUSY0238302	TDFN44-16 ,16 PIN,R/TP ,4LED, Flash(up to 250mA)Charge pump,PBFREE		

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
7	VA100	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA101	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA102	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA103	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA104	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA105	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
7	VA106	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	SAED00	PCB ASSY,KEYPAD,SMT TOP	SAED0020801			
7	LED100	DIODE,LED,CHIP	EDLH0011101	BLUE ,ETC ,R/TP ,2.1*0.6*1.0t(SideView)		
7	LED101	DIODE,LED,CHIP	EDLH0011101	BLUE ,ETC ,R/TP ,2.1*0.6*1.0t(SideView)		
7	R103	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
7	R104	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
7	R134	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
7	SPEY00	PCB,KEYPAD	SPEY0047501	FR-4 , mm,BUILD-UP 4 , ,; , , , , , , , , ,		
4	SUSY00	SPEAKER	SUSY0026701	ASSY ,8 ohm,88 dB, mm,WIRE 15mm ,; , , , , , ,18*10*3T ,WIRE		15
4	SVCY00	CAMERA	SVCY0012701	CMOS ,MEGA ,2M FF, FPCB, Samsung 1/4"		14
4	SVLM00	LCD MODULE	SVLM0024001	MAIN ,176*220 (2.0") ,37.5*50*1.9(T) ,262k ,TFT ,TM ,S1D19501E ,SUS		20
3	SAEY00	PCB ASSY,KEYPAD	SAEY0054801			61
4	SAEB00	PCB ASSY, KEYPAD,INSERT	SAEB0019101			
5	SPKY00	PCB,SIDEKEY	SPKY0044201	POLYI , mm,DOUBLE , ,; , , , , , , , , ,		
5	SPKY01	PCB,SIDEKEY	SPKY0044301	POLYI ,0.2 mm,DOUBLE , ,; , , , , , , , , ,		
4	SAEE00	PCB ASSY,KEYPAD,SMT	SAEE0022501			
5	SAEC00	PCB ASSY,KEYPAD,SMT BOTTOM	SAEC0020701			
6	C102	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C103	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C104	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C105	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C106	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C107	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C108	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C109	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C110	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	C111	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C112	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C115	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C116	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C117	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C118	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C119	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C120	CAP,CERAMIC,CHIP	ECCH0000187	150 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C121	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C122	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C123	CAP,CERAMIC,CHIP	ECCH0000187	150 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C124	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C125	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	CN100	CONNECTOR,ETC	ENZY0017701	3 PIN,2.5 mm,ETC , ,H=1.4		
6	CN200	CONNECTOR,BOARD TO BOARD	ENBY0016601	20 PIN,0.4 mm,STRAIGHT ,AU ,0.9 STACKING HEIGHT		
6	CN201	CONNECTOR,BOARD TO BOARD	ENBY0020301	40 PIN,0.4 mm,ETC , ,H=0.9, Socket		
6	FB100	FILTER,SAW	SFSY0026401	2441 MHz,2.0*1.3*1.0 ,SMD ,Pb-free_Wibro		
6	J100	CONN,SOCKET	ENSY0016901	8 PIN,ETC , ,2.54 mm,H=1.5		
6	L100	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L101	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L102	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	MIC100	MICROPHONE	SUMY0010602	UNIT ,-42 dB,6.15*3.76*1.25 ,Silicon mic , ,-42 ,300 ,OMNI ,[empty] ,6.15*3.76*1.25 ,SMD		
6	Q100	TR,BJT,NPN	EQBN0007101	EMT3 ,0.15 W,R/TP ,LOW FREQUENCY		
6	R102	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R108	RES,CHIP,MAKER	ERHZ0000513	820 ohm,1/16W ,J ,1005 ,R/TP		
6	R110	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R113	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R116	RES,CHIP,MAKER	ERHZ0000522	24 ohm,1/16W ,J ,1005 ,R/TP		
6	R117	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R119	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R200	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R201	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R202	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	R203	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R204	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R205	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R206	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R207	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R208	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R209	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R210	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	R211	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
6	U101	IC	EUSY0200202	uBGA ,64 PIN,R/TP ,Bluetooth CMOS Sigle-chip(BRF6150 Ver2.23)		
6	VA100	VARISTOR	SEVY0001001	14 V, ,SMD ,50pF, 1005		
6	VA200	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA201	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA202	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA203	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA204	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA205	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA206	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA207	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA208	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA209	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA210	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	VA211	VARISTOR	SEVY0005202	5.5 V,+-30 ,SMD ,1005, 100 pF, Pb free		
6	ZD100	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
5	SAED00	PCB ASSY,KEYPAD,SMT TOP	SAED0020701			
6	LED100	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED101	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED102	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED103	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED104	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED105	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED106	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		
6	LED107	DIODE,LED,CHIP	EDLH0006001	Blue ,1608 ,R/TP ,Blue SMD LED		

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	R122	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R123	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R124	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R125	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R126	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R127	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R128	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R129	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	SPEY00	PCB,KEYPAD	SPEY0047401	FR-4 , mm,BUILD-UP 6 , ,; , , , , , , , , ,		
3	SAFY00	PCB ASSY,MAIN	SAFY0221101			55
4	SAFB00	PCB ASSY,MAIN,INSERT	SAFB0069501			
5	SAJY00	PCB ASSY,SUB	SAJY0023001		Silver	59
6	SAJB00	PCB ASSY,SUB,INSERT	SAJB0010201		Silver	
7	AFBA00	FRAME ASSY,SHIELD	AFBA0006801	KE500 FRASV SHIELD FRAME ASSY	Without Color	
7	SJMY00	VIBRATOR,MOTOR	SJMY0008401	3 V,80 mA,10*2.7 ,17mm		
6	SAJE00	PCB ASSY,SUB,SMT	SAJE0017401		Silver	
7	SAJC00	PCB ASSY,SUB,SMT BOTTOM	SAJC0015801		Silver	
8	BAT100	BATTERY,CELL,LITHIUM	SBCL0001305	3 V,1 mAh,COIN ,SMT Temp.260 degree. PB-Free B/B		
8	C100	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
8	C101	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
8	C102	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
8	R100	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
8	R101	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
8	R102	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
8	R104	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
8	R105	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
8	S100	CONN,SOCKET	ENSY0015801	8 PIN,ETC , ,1.1 mm,H=1.9, Detect Pin		
7	SAJD00	PCB ASSY,SUB,SMT TOP	SAJD0017901		Silver	
8	CN100	CONNECTOR,BOARD TO BOARD	ENBY0032401	14 PIN,0.4 mm,ETC , ,H=1.5, Header		
8	SPJY00	PCB,SUB	SPJY0038901	FR-4 , mm,DOUBLE , ,; , , , , , , , , ,		
4	SAFF00	PCB ASSY,MAIN,SMT	SAFF0142101			
5	SAFC00	PCB ASSY,MAIN,SMT BOTTOM	SAFC0087801		Silver	
6	C105	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	C106	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C107	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C301	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		
6	C302	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		
6	C303	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C304	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C305	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C306	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C307	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C308	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C310	CAP,CERAMIC,CHIP	ECCH0000129	120 pF,50V,J,NP0,TC,1005,R/TP		
6	C311	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C312	CAP,CERAMIC,CHIP	ECCH0005704	4700000 pF,10V ,K ,X5R ,HD ,2012 ,R/TP		
6	C313	CAP,CHIP,MAKER	ECZH0001503	0.47 uF,10V ,Z ,Y5V ,HD ,1608 ,R/TP		
6	C314	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C315	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C316	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C318	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C319	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C320	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C321	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C322	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C323	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C325	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C401	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C402	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C403	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C404	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C405	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C406	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C407	CAP,CERAMIC,CHIP	ECCH0000195	3.9 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C408	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C409	CAP,CHIP,MAKER	ECZH0000844	68 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C410	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	C411	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C412	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C413	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C414	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C415	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C416	INDUCTOR,CHIP	ELCH0005016	8.2 nH,J ,1005 ,R/TP ,		
6	C417	CAP,CHIP,MAKER	ECZH0001002	0.5 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C418	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C419	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C420	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C421	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C422	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C423	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C427	CAP,TANTAL,CHIP,MAKER	ECTZ0004202	10 uF,10V ,M ,STD ,2012 ,R/TP		
6	C428	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C429	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C430	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C431	CAP,CHIP,MAKER	ECZH0001002	0.5 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C433	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C434	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C435	CAP,CHIP,MAKER	ECZH0001421	2.2 uF,6.3V ,K ,X5R ,HD ,1608 ,R/TP		
6	C436	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C437	CAP,CHIP,MAKER	ECZH0001421	2.2 uF,6.3V ,K ,X5R ,HD ,1608 ,R/TP		
6	CN203	CONNECTOR,BOARD TO BOARD	ENBY0035201	14 PIN,0.4 mm,ETC , ,H=2.0, Socket		
6	CN301	CONNECTOR,I/O	ENRY0006401	18 PIN,0.4 mm,ANGLE , ,H=2.5, Reverse Type		
6	D301	DIODE,TVS	EDTY0006701	CSP ,15 KV,200 mW,R/TP ,4 CHANNEL ESD ARRAY		
6	FB301	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
6	FB302	FILTER,BEAD,CHIP	SFBH0000903	600 ohm,1005 ,		
6	FL401	FILTER,SEPERATOR	SFAY0009801	850.900,, ,1800.1900 , dB, dB, dB, dB,ETC ,5.4x4.0x1.2 Size, Quad Band FEM, with RENESAS RF		
6	L303	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L304	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	R103	RES,CHIP	ERHY0008701	0.22 ohm,1/4W ,J ,2012 ,R/TP		
6	R104	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R105	RES,CHIP	ERHY0009303	10 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		

10. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	R113	RES,CHIP	ERHY0009560	33 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R114	RES,CHIP	ERHY0009303	10 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R115	RES,CHIP	ERHY0009536	100 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R306	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R307	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R31	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
6	R310	RES,CHIP,MAKER	ERHZ0000459	3 Kohm,1/16W ,J ,1005 ,R/TP		
6	R312	RES,CHIP	ERHY0000248	2.4K ohm,1/16W,J,1005,R/TP		
6	R313	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R314	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R317	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R318	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R319	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
6	R32	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
6	R320	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R322	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R323	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R325	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R328	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R401	RES,CHIP,MAKER	ERHZ0000527	200 ohm,1/6W ,J ,1005 ,R/TP		
6	R403	RES,CHIP,MAKER	ERHZ0000205	1 Mohm,1/16W ,F ,1005 ,R/TP		
6	R405	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R406	INDUCTOR,CHIP	ELCH0004705	8.2 nH,J ,1005 ,R/TP ,		
6	R407	RES,CHIP	ERHY0000101	0 ohm,1/16W,F,1005,R/TP		
6	R408	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R410	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R411	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R412	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R413	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R414	RES,CHIP,MAKER	ERHZ0000490	51 ohm,1/16W ,J ,1005 ,R/TP		
6	R415	RES,CHIP,MAKER	ERHZ0000490	51 ohm,1/16W ,J ,1005 ,R/TP		
6	R416	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R417	RES,CHIP,MAKER	ERHZ0000411	120 ohm,1/16W ,J ,1005 ,R/TP		
6	R418	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	R419	INDUCTOR,CHIP	ELCH0003826	3.3 nH,S ,1005 ,R/TP ,chip		
6	R420	INDUCTOR,CHIP	ELCH0004703	1 nH,S ,1005 ,R/TP ,		
6	SW401	CONN,RF SWITCH	ENWY0003301	,SMD ,0.4 dB,		
6	U102	IC	EUSY0254701	DFN 3*3*0.9 ,10 PIN,R/TP ,Charger IC, I Max 1A, Wall Adaptor/USB Charger		
6	U302	IC	EUSY0319201	DFN ,10 PIN,R/TP ,OVP		
6	U303	IC	EUSY0271201	TQFN ,16 PIN,R/TP ,Quad Analog switch, Pb Free		
6	U304	IC	EUSY0324301	QFN ,20 PIN,R/TP ,FM Tuner(RDS), 3*3*0.57, Pb Free		
6	U305	IC	EUSY0251101	QFN ,16 PIN,R/TP ,Ultra Low Ron Dual DPDT Analog switch, Pb Free		
6	U306	IC	EUSY0278501	SON5-P-0.50 ,5 PIN,R/TP ,INVERTER GATE, Pb Free		
6	U401	IC	EUSY0077201	SC70 ,5 PIN,R/TP ,Inverter Gate, Pb Free		
6	U402	IC	EUSY0245902	DRL ,5 PIN,R/TP ,SINGLE,BUFFER,3STATE,1.7X1.7		
6	U403	IC	EUSY0316801	BGA ,72 PIN,R/TP ,EDGE Tranceiver, 5X5 Size, B6PLD		
6	U404	PAM	SMPY0014901	dBm, %, A, dBc, dB, ,SMD , ,; , , , , , , , ,R/TP ,R/TP ,		
6	U405	IC	EUSY0292201	SON-6 ,6 PIN,R/TP ,200mA, 2.8V, RF LDO		
6	U406	IC	EUSY0292201	SON-6 ,6 PIN,R/TP ,200mA, 2.8V, RF LDO		
6	VA301	VARISTOR	SEVY0001001	14 V, ,SMD ,50pF, 1005		
6	VA302	VARISTOR	SEVY0001001	14 V, ,SMD ,50pF, 1005		
6	X401	X-TAL	EXXY0019501	26 MHz,10 PPM,8 pF,50 ohm,SMD ,3.2*2.5*0.6 ,		
5	SAFD00	PCB ASSY,MAIN,SMT TOP	SAFD0087001		Silver	
6	C101	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C102	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C103	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C104	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C108	CAP,CERAMIC,CHIP	ECCH0000109	8 pF,50V,D,NP0,TC,1005,R/TP		
6	C109	CAP,CERAMIC,CHIP	ECCH0000109	8 pF,50V,D,NP0,TC,1005,R/TP		
6	C110	CAP,CERAMIC,CHIP	ECCH0009514	10 pF,25V ,D ,X7R ,HD ,0603 ,R/TP		
6	C111	CAP,CERAMIC,CHIP	ECCH0009106	10 nF,16V ,K ,X7R ,TC ,0603 ,R/TP		
6	C112	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C113	CAP,CHIP,MAKER	ECZH0004402	0.1 uF,16V ,Z ,NP0 ,TC ,1005 ,R/TP		
6	C114	CAP,CHIP,MAKER	ECZH0004402	0.1 uF,16V ,Z ,NP0 ,TC ,1005 ,R/TP		
6	C115	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C116	CAP,TANTAL,CHIP,MAKER	ECTZ0004208	100 uF,4V ,M ,L_ESR ,2012 ,R/TP		
6	C117	CAP,TANTAL,CHIP,MAKER	ECTZ0004208	100 uF,4V ,M ,L_ESR ,2012 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	C118	CAP,CERAMIC,CHIP	ECCH0009201	47 nF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C119	CAP,CERAMIC,CHIP	ECCH0009508	47 pF,25V ,J ,NP0 ,TC ,0603 ,R/TP		
6	C120	CAP,CHIP,MAKER	ECZH0001106	4700 pF,25V ,K ,X7R ,HD ,1005 ,R/TP		
6	C121	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C122	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C123	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C124	CAP,CERAMIC,CHIP	ECCH0009512	1000 pF,25V ,K ,X7R ,HD ,0603 ,R/TP		
6	C125	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C127	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C128	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C129	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C130	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C131	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C132	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C133	CAP,CHIP,MAKER	ECZH0001213	0.47 uF,6.3V ,Z ,Y5V ,TC ,1005 ,R/TP		
6	C134	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C135	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C136	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C137	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C138	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C139	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C140	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C142	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C143	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C144	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C145	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C146	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C147	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C148	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C149	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C150	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C151	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C152	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C153	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	C154	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C155	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C157	CAP,CERAMIC,CHIP	ECCH0009101	0.1 uF,6.3V ,K ,X5R ,TC ,0603 ,R/TP		
6	C201	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C202	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C203	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C204	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C205	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C206	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C207	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C208	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C209	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C210	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C211	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C212	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C213	CAP,CERAMIC,CHIP	ECCH0000182	0.1 uF,10V ,K ,X5R ,HD ,1005 ,R/TP		
6	C214	CAP,CHIP,MAKER	ECZH0003202	1 uF,6.3V ,Z ,Y5V ,HD ,1005 ,R/TP		
6	C215	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C216	CAP,CERAMIC,CHIP	ECCH0000161	33 nF,16V,K,X7R,HD,1005,R/TP		
6	C217	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C218	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C219	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C220	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C221	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C324	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C439	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	CN201	CONNECTOR,BOARD TO BOARD	ENBY0020402	60 PIN,0.4 mm,STRAIGHT ,AU ,STACKING HEIGHT 0.9 / SOCKET FOR KEYPAD TO MAIN		
6	CN202	CONNECTOR,BOARD TO BOARD	ENBY0020402	60 PIN,0.4 mm,STRAIGHT ,AU ,STACKING HEIGHT 0.9 / SOCKET FOR KEYPAD TO MAIN		
6	FB201	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FL203	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL204	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	FL205	FILTER,EMI/POWER	SFEY0013201	SMD ,1608 ,EMI-ESD Filter, 4ch, 14V, 15pF, 100ohm		
6	L101	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	L102	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L103	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	L104	INDUCTOR,SMD,POWER	ELCP0009403	2.2 uH,M ,2.8*2.6*1 ,R/TP ,power inductor		
6	L201	INDUCTOR,CHIP	ELCH0005006	33 nH,J ,1005 ,R/TP ,		
6	L202	INDUCTOR,CHIP	ELCH0005006	33 nH,J ,1005 ,R/TP ,		
6	PT101	THERMISTOR	SETY0006501	NTC ,22000 ohm,SMD ,1005, ECTH 1005 Series, Pb Free		
6	Q301	TR,BJT,NPN	EQBN0007101	EMT3 ,0.15 W,R/TP ,LOW FREQUENCY		
6	R100	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R106	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R108	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R110	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R111	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R117	RES,CHIP,MAKER	ERHZ0000499	5600 ohm,1/16W ,J ,1005 ,R/TP		
6	R118	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R119	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R120	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R121	RES,CHIP	ERHY0009518	220 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R127	RES,CHIP	ERHY0009516	2.2 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R129	RES,CHIP	ERHY0009516	2.2 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R130	RES,CHIP	ERHY0009504	1 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R134	RES,CHIP,MAKER	ERHZ0004201	121000 ohm,1/16W ,F ,1005 ,R/TP		
6	R135	RES,CHIP	ERHY0009504	1 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R137	RES,CHIP	ERHY0009303	10 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R140	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R142	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R143	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R150	RES,CHIP	ERHY0000128	15K ohm,1/16W,F,1005,R/TP		
6	R151	RES,CHIP,MAKER	ERHZ0000472	36 Kohm,1/16W ,J ,1005 ,R/TP		
6	R152	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R153	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R154	RES,CHIP	ERHY0009506	100 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R155	RES,CHIP	ERHY0009502	10 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R201	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R202	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Specification	Color	Remark
6	R203	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R204	RES,CHIP,MAKER	ERHZ0000437	2 Kohm,1/16W ,J ,1005 ,R/TP		
6	R205	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R290	RES,CHIP	ERHY0009501	0 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R291	RES,CHIP	ERHY0009501	0 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R292	RES,CHIP	ERHY0009501	0 ohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R329	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
6	R330	RES,CHIP,MAKER	ERHZ0000466	33 Kohm,1/16W ,J ,1005 ,R/TP		
6	R332	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R333	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R334	RES,CHIP	ERHY0009554	20 Kohm,1/20W(0.05W) ,F ,0603 ,R/TP		
6	R336	RES,CHIP	ERHY0009505	10 Kohm,1/20W(0.05W) ,J ,0603 ,R/TP		
6	R422	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		
6	R423	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		
6	R424	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		
6	R425	RES,CHIP,MAKER	ERHZ0000201	100 ohm,1/16W ,F ,1005 ,R/TP		
6	SPFY00	PCB,MAIN	SPFY0142901	FR-4 , 0.8mm,STAGGERED-10 , ,; , , , , , , , , ,		
6	U101	IC	EUSY0313401	QFN ,4 PIN,R/TP ,1.8X1.2X0.5 size wide input voltage Hall Switch		
6	U103	IC	EUSY0266502	PBGA ,143 PIN,R/TP ,Triton, Analog Base Band		
6	U104	IC	EUSY0266401	PBGA ,293 PIN,R/TP ,Neptune, E-GPRS-MPU + C54x DSP		
6	U201	IC	EUSY0335801	L10.5W13H1.4 ,107 PIN,R/TP ,1GbNAND 1.8V+512DDR SDRAM 16BIT		
6	U202	IC	EUSY0340401	TDFN ,10 PIN,R/TP ,Class D Audio AMP ,; ,IC,Audio Amplifier		
6	U203	IC	EUSY0303501	MicroPak ,10 PIN,R/TP ,1.6*2.1mm		
6	VA101	VARISTOR	SEVY0004401	18 V, ,SMD ,40pF, 1005		
6	X101	X-TAL	EXXY0004601	.032768 MHz,20 PPM,7 pF,65000 ohm,SMD ,6.9*1.4*1.3 ,		

10.3 Accessory

Note: This Chapter is used for reference, Part order is ordered by SBOM standard on GCSC

Level	Location No.	Description	Part Number	Specification	Color	Remark
3	MCEZ00	CASE	MCEZ0001201	SD Card Case	Without Color	
3	SBPP00	BATTERY PACK,LI-POLYMER	SBPP0022602	3.7 V,800 mAh,1 CELL,PRISMATIC ,ME550d Latin Ame. BATT, Pb-Free ,; ,3.7 ,800 ,0.2C ,PRISMATIC ,50x34x38 , ,TITAN SILVER ,Hard Pack ,Latin America Label		82
3	SGDY00	DATA CABLE	SGDY0010901	LG-US03K ,18pin USB DataCable		
3	SGEY00	EAR PHONE/EAR MIKE SET	SGEY0003615	; ,. ,. ,. ,. ,. ,[empty] ,[empty] ,18P MMI CONNECTOR ,SILVER COLOR		
3	SSAD00	ADAPTOR,AC-DC	SSAD0022201	100-240V ,5060 Hz,4.8 V,0.9 A,NOM ,AC-DC ADAPTOR		
Alternate		ADAPTOR,AC-DC	SSAD0022202	100-240V ,5060 Hz,4.8 V,0.9 A,NOM ,AC DC ADAPTOR		

Note

Note