Service Manual

Model : KP260/265

Internal Use Only

Service Manual

KP260/265

Date: August, 2008 / Issue 1.0

Table Of Contents

1. INTRODUCTION

1.1 Purpose

This manual provides the information necessary to repair, calibration, description and download the features of this model.

1.2 Regulatory Information

A. Security

Toll fraud, the unauthorized use of telecommunications system by an unauthorized part (for example, persons other than your company's employees, agents, subcontractors, or person working on your company's behalf) can result in substantial additional charges for your telecommunications services. System users are responsible for the security of own system. There are may be risks of toll fraud associated with your telecommunications system. System users are responsible for programming and configuring the equipment to prevent unauthorized use. The manufacturer does not warrant that this product is immune from the above case but will prevent unauthorized use of common-carrier telecommunication service of facilities accessed through or connected to it.
The manufacturer will not be responsible for any charges that result from such unauthorized use.

B. Incidence of Harm

If a telephone company determines that the equipment provided to customer is faulty and possibly causing harm or interruption in service to the telephone network, it should disconnect telephone service until repair can be done. A telephone company may temporarily disconnect service as long as repair is not done.

C. Changes in Service

A local telephone company may make changes in its communications facilities or procedure. If these changes could reasonably be expected to affect the use of the this phone or compatibility with the network, the telephone company is required to give advanced written notice to the user, allowing the user to take appropriate steps to maintain telephone service.

D. Maintenance Limitations

Maintenance limitations on this model must be performed only by the manufacturer or its authorized agent. The user may not make any changes and/or repairs expect as specifically noted in this manual. Therefore, note that unauthorized alternations or repair may affect the regulatory status of the system and may void any remaining warranty.

E. Notice of Radiated Emissions

This model complies with rules regarding radiation and radio frequency emission as defined by local regulatory agencies. In accordance with these agencies, you may be required to provide information such as the following to the end user.

F. Pictures

The pictures in this manual are for illustrative purposes only; your actual hardware may look slightly different.

G. Interference and Attenuation

Phone may interfere with sensitive laboratory equipment, medical equipment, etc.Interference from unsuppressed engines or electric motors may cause problems.

H. Electrostatic Sensitive Devices

ATTENTION

Boards, which contain Electrostatic Sensitive Device (ESD), are indicated  by the sign. Following information is ESD handling:

- Service personnel should ground themselves by using a wrist strap when exchange system boards.
- When repairs are made to a system board, they should spread the floor with anti-static mat which is also grounded.
- Use a suitable, grounded soldering iron.
- Keep sensitive parts in these protective packages until these are used.
- When returning system boards or parts like EEPROM to the factory, use the protective package as described.

1.3 Abbreviations

For the purposes of this manual, following abbreviations apply:

APC	Automatic Power Control
BB	Baseband
BER	Bit Error Ratio
CC-CV	Constant Current - Constant Voltage
DAC	Digital to Analog Converter
DCS	Digital Communication System
dBm	dB relative to 1 milli watt
DSP	Digital Signal Processing
EEPROM	Electrical Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge
FPCB	Flexible Printed Circuit Board
GMSK	Gaussian Minimum Shift Keying
GPIB	General Purpose Interface Bus
GSM	Global System for Mobile Communications
IPUI	International Portable User Identity
IF	Intermediate Frequency
LCD	Liquid Crystal Display
LDO	Low Drop Output
LED	Light Emitting Diode
OPLL	Offset Phase Locked Loop

PAM	Power Amplifier Module
PCB	Printed Circuit Board
PGA	Programmable Gain Amplifier
PLL	Phase Locked Loop
PSTN	Public Switched Telephone Network
RF	Radio Frequency
RLR	Receiving Loudness Rating
RMS	Root Mean Square
RTC	Real Time Clock
SAW	Surface Acoustic Wave
SIM	Subscriber Identity Module
SLR	Sending Loudness Rating
SRAM	Static Random Access Memory
PSRAM	Pseudo SRAM
STMR	Side Tone Masking Rating
TA	Travel Adapter
TDD	Time Division Duplex
TDMA	Time Division Multiple Access
UART	Universal Asynchronous Receiver/Transmitter
VCO	Voltage Controlled Oscillator
VCTCXO	Voltage Control Temperature Compensated Crystal Oscillator
WAP	Wireless Application Protocol

2. PERFORMANCE

2.1 H/W Features

Item	Feature	Comment
Standard Battery	Li-ion, 3.7V 900mAh	
Talk time	Up to 240min : GSM Tx Level 7	
Stand by time	Up to 350 hours (Paging Period: 5, RSSI: -85 dBm)	
Charging time	Approx. 3 hours	
RX Sensitivity	-102dBm	
TX output power	GSM850, GSM900 : 32.5dBm(Level 5), DCS , PCS: 29.5dBm(Level 0)	
GPRS compatibility	Class 10	
SIM card type	3V	
Display	MAIN : TFT 128 x 160 pixel 262K Color	
Status Indicator	Hard icons. Key Pad 0 ~ 9, #, *, Up/Down/Left/Right/Ok Navigation Key Menu Key, Clear Key, Confirm Key, Send Key , PWR Key, Volume Key, Camera-Hot Key	
ANT	Internal	
EAR Phone Jack	Yes (Stereo)	
PC Synchronization	Yes	
Speech coding	EFR/FR/HR	
Data	Yes	
Vibrator	Yes	
Loud Speaker	Yes	
Voice Recoding	Yes	
Microphone	Yes	
Speaker/Receiver	Receiver 11X 07, Speaker : 12 X 18	
Travel Adapter	Yes	
MIDI	40poly SW MIDI	
Camera	1.3M	

2.2 Technical Specification (KP265c,d)

<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 + 0.2 x (n-127) MHz
• RX: 869 + 0.2 x (n-127) MHz (n = 128 ~ 251)
GSM900 (EGSM)
• TX: 890 + (n-1024) x 0.2 MHz
• RX: 935 + (n-1024) x 0.2 MHz (n=975~1024)
GSM900 (PGSM)
• TX: 890 + (n-1024) x 0.2 MHz
• RX: 935 + (n-1024) x 0.2 MHz (n=1~124)
DCS1800
• TX: 1710 + (n-512) x 0.2 MHz
• RX: 1805 + (n-512) x 0.2 MHz (n=512~885)
PCS1900
• TX: 1810 + (n-512) x 0.2 MHz
• RX: 1905 + (n-512) x 0.2 MHz (n=512~885)</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">< 0.1 ppm</td></tr>
<tr><td rowspan="20">4</td><td rowspan="20">Power Level</td><td colspan="6">GSM850/EGSM900</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	EDGE Max. Power	Not support	
6	EDGE Modulation Accuracy	Not support	
7	Output RF Spectrum (due to modulation)	**GSM850/EGSM900**	
		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
8	Output RF Spectrum (due to switching transient)	**GSM850/EGSM900**	
		Offset from Carrier (kHz)	Max. (dBm)
		400	-19
		600	-21
		1,200	-21
		1,800	-24

2. PERFORMANCE

Item	Description	Specification		
8	Output RF Spectrum (due to switching transient)	**PCS**		
		Offset from Carrier (kHz).	Max. (dBm)	
		400	-22	
		600	-24	
		1,200	-24	
		1,800	-27	
9	Spurious Emissions	Conduction, Emission Status		
		Radiation, Emission Status		
10	Bit Error Ratio	**GSM850/EGSM900** BER (Class II) < 2.439% @-102dBm		
		DCS1800/PCS1900 BER (Class II) < 2.439% @-102dBm		
11	RX Level Report Accuracy	2 ±3 dB		
12	SLR	8 ±3 dB		
13	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	-
14	RLR	-4 ±3 dB		
15	Receiving Response (Type 3.2)	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-6	7
		200	2	7
		300	2	-9
		1,000	2	-7
		3,400	2	-12
		4,000	2	-

Item	Description	Specification
16	STMR	> 17 dB
17	Echo Loss	> 40 dB
18	Idle Noise Sending	< -64 dBm0p
19	Idle Noise Receiving	< -36 dBm0p
20	Power consumption	Max. power < 300mA @GSM850, PL=5 < 230mA @PCS, PL=0
		Standby < 5.5mA @PP2 < 3.3mA @PP5 < 2.7mA @PP9
		Bluetooth < 5.0mA @ Bluetooth on (Standby) < 300mA @ Bluetooth connected (Call)
		FM radio < 40mA @ FM Radio Operation (AVG)
		Backup Battery (Without Main Battery) Normal Power Off : < 5uA Emergency Power Off : < 15uA
21	Talk Time	4 hr., Min.@GSM850/ESGSM900, PL=5 6 hr., Min.@GSM850/EGSM900, PL=12 4.5 hr., Min.@DCS/PCS, PL=0 7 hr., Min.@DCS/PCS, PL=10
22	Standby Time	400 hr., Min.@PP9 350 hr., Min.@PP5
		- Full charge, no receive/send and keep GSM in idle mode. Broadcast set off. Signal strength display set at 3 levelabove. Backlight of phone set off.
23	Ringer Volume(TBD)	At least 55 dB under below conditions:
		1. Ringer set as ringer.
		2. Test distance set as 1 m.

2. PERFORMANCE

Item	Description	Specification	
24	Charge Current	Fast Charge : < 450 mA Slow Charge: < 80 mA	
25	Charging Time	Under 3 hr.	
26	Antenna Display	Antenna Bar Number	Power
		5	-92 dBm ~
		4	-100 dBm ~ -93 dBm
		3	skip
		2	-103 dBm ~ -101 dBm
		1	-105 dBm ~ -104 dBm
		0	~ -105 dBm
27	Battery Indicator	Battery Bar Number	Voltage
		1 → 0	3.42V ± 0.05V
		2 → 1	3.55V ± 0.05 V
		3 → 2	3.7V ± 0.05 V
		3	4.2V
28	Low Voltage Warning(TBD)	3.42 ± 0.05 V (Call)	
		3.42 ± 0.05 V (Standby)	
29	Forced shut down Voltage	3.33 ± 0.05V	
30	Battery Type	Main Battery : Li-ion, 900mAh, Inner Pack Back-up Battery : Lithium, 1mAh	
31	Travel Charger	Input: 100 ~ 240 V, 50/60Hz Output: 5.6V, 400mA	

3. TECHNICAL BRIEF

3.1 Power Amplifier module (SKY77318, U501)

The SKY77318 Power Amplifier Module (PAM) is designed in a low profile (1.2 mm), compact form factor for quad-band cellular handsets comprising GSM850/900, DCS1800, and PCS1900 operation.
The PAM also supports Class 12 General Packet Radio Service (GPRS) multi-slot operation.
The module consists of separate GSM PA and DCS1800/PCS1900 PA blocks, impedance-matching circuitry for 50 Ω input and output impedances and a Power Amplifier Control (PAC) block with an internal current-sense resistor. The custom BiCMOS integrated circuit provides the internal PAC function and interface circuitry. Fabricated onto a single Gallium Arsenide (GaAs) die, one Heterojunction Bipolar Transistor (HBT) PA block supports the GSM bands and the other supports the DCS1800 and PCS1900 bands. Both PA blocks share common power supply pins to distribute current.

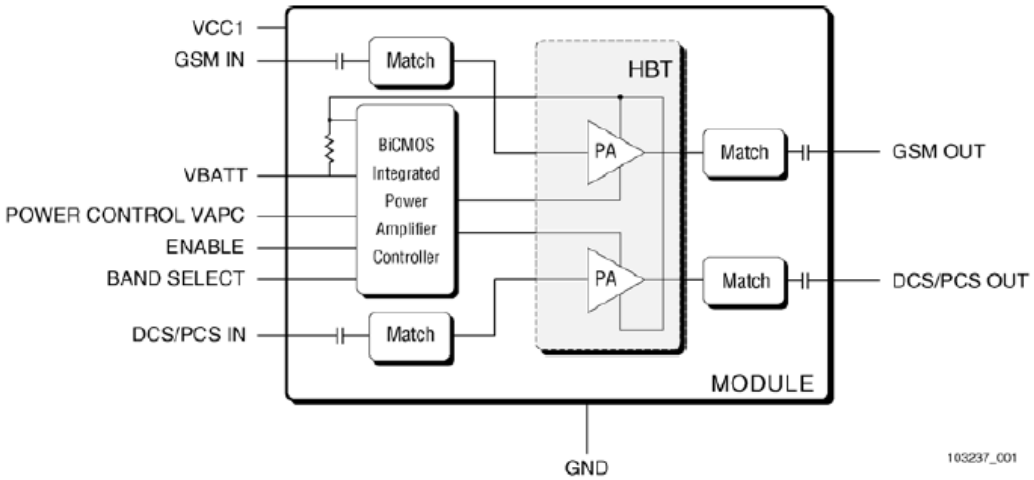


Figure 3.1 Functional Block Diagram

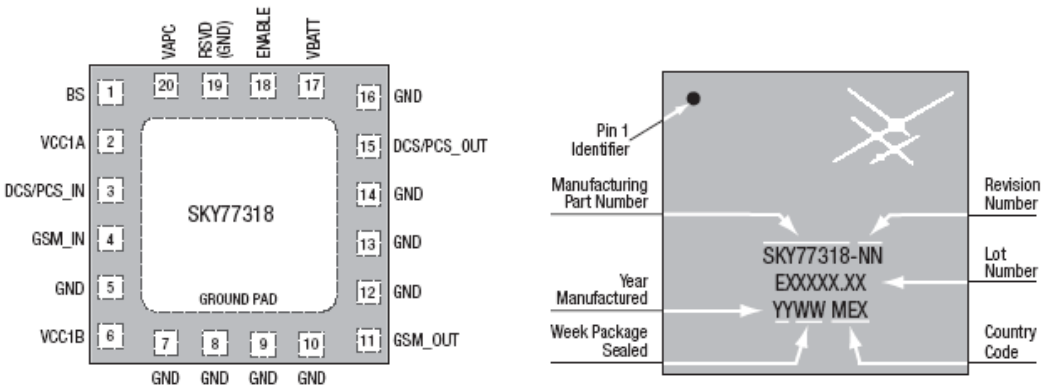


Figure 3.2 Pad configuration (Top view) and case marking

Pin	Name	Description
1	BS	Band Select
2	VCC1A	VCC (to GSM 1st stage, DCS/PCS 1st stages, BiCMOS PAC)
3	DCS/PCS_IN	RF input 1710–1910 MHz (DCS1800, PCS1900)
4	GSM_IN	RF input 880–915 MHz (GSM)
5	GND	RF and DC Ground
6	VCC1B	VCC (to GSM 2nd stage, DCS/PCS 2nd stages)
7	GND	RF and DC Ground
8	GND	RF and DC Ground
9	GND	RF and DC Ground
10	GND	RF and DC Ground
11	GSM_OUT	RF Output 880–915 MHz (GSM)
12	GND	RF and DC Ground
13	GND	RF and DC Ground
14	GND	RF and DC Ground
15	DCS/PCS_OUT	RF Output 1710–1910 MHz (DCS1800, PCS1900)
16	GND	RF and DC Ground
17	VBATT	Battery input to high side of internal sense resistor
18	ENABLE	BiCMOS Enable
19	RSVD(GND)	RF and DC Ground
20	VAPC	Power Control Bias Voltage
GND PAD	GND	Ground Pad, device underside

Table 3.1 Pad description

3.2 FEM(LMSP43QA-538, FL500)

Quadband Front end modlue for 850/900/1800/1900

	ANT_SW1	ANT_SW2
GSM850_EGSM TX	H	H
DCS_PCS TX	L	H
GSM850 RX	H	L
EGSM900 RX	H	L
DCS1800 RX	L	L
PCS1900 RX	L	L

Table 3.2 Mode Control logic

3.3 Transceiver (AD6548, U502)

The AD6548 provides a highly integrated direct conversion radio solution that combines, on a single chip, all radio and power management functions necessary to build the most com-pact GSM radio solution possible. The only external components required for a complete radio design are the Rx SAWs, PA, Switchplexer and a few passives enabling an extremely small cost effective GSM Radio solution. The AD6548 uses the industry proven direct conversion receiver architecture of the OthelloTM family. For Quad band applications the front end features four fully integrated programmable gain differential LNAs. The RF is then down converted by quad-rature mixers and then fed to the baseband programmable-gain amplifiers and active filters for channel selection. The Receiver output pins can be directly connected to the baseband analog processor. The Receive path features automatic calibration and tracking to remove DC offsets. The transmitter features a translation-loop architecture for directly modulating baseband signals onto the integrated TX VCO.

The translation-loop modulator and TX VCO are extremely low noise removing the need for external SAW filters prior to the PA. The AD6548 uses a single integrated LO VCO for both the receive and the transmit circuits. The synthesizer lock times are optimized for GPRS applications up to and including class 12.

AD6548 incorporates a complete reference crystal calibration system. This allows the external VCTCXO to be replaced with a low cost crystal. No other external components are required. The AD6548 uses the traditional VCTCXO reference source. The AD6548 also contains on-chip low dropout voltage regulators (LDOs) to deliver regulated supply voltages to the functions on chip, with a battery input voltage of between 2.9V and 5.5V. Comprehensive power down options are included to minimize power consumption in normal use. A standard 3 wire serial interface is used to program the IC. The interface features low-voltage digital interface buffers compatible with logic levels from 1.6V to 2.9V.

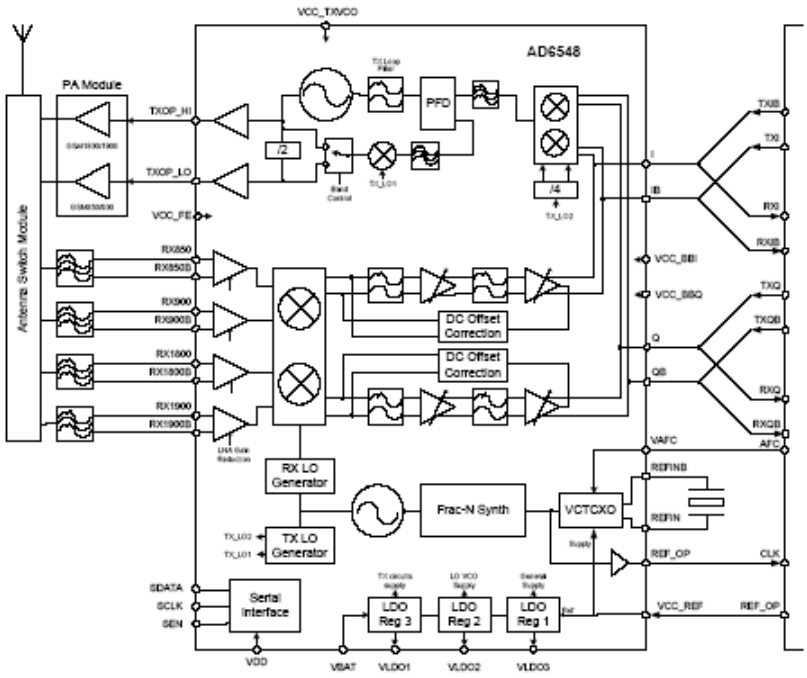
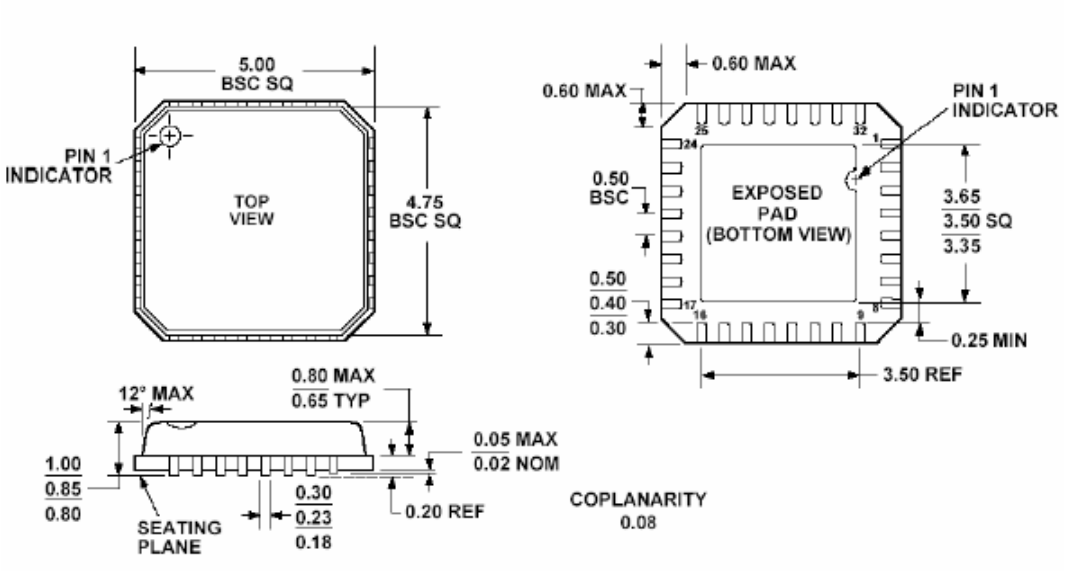


Figure 3.3 AD6548 Block Diagram



GOMPLIANT TO JEDEC STANDARDS MO-220-VHHD-2

No	Name	Description	No	Name	Description
1	VCC_FE	Front end supply (IP)	17	VCC_REF	Reference Oscillator Supply (IP)
2	I	I baseband input/output	18	VAFC/ N/C	AD6548 Crystal Freq control (IP) AD6549: Spare Pin
3	IB	I baseband input/output	19	REFIN	Crystal Connection
4	VCC_BBI	Baseband I, TX path supply (IP)	20	REFINB	Crystal Connection
5	SDATA	Serial port data	21	REF_OP	Reference Frequency Output
6	SCLK	Serial port clock	22	QB	Q baseband input/output
7	SEN	Serial port enable	23	Q	Q baseband input/output
8	N/C	Not connected	24	VCC_BBQ	Baseband Q supply (IP)
9	VLDO3	TX LDO Output (1)	25	RX1900B	PCS 1900 LNA input
10	TXOP_LO	Transmit O/P (850/900MHz)	26	RX1900	PCS 1900 LNA input
11	TXOP_HI	Transmit O/P (1800/1900MHz)	27	RX1800B	DCS 1800 LNA input
12	VCC_TXVCO	TX VCO supply (1)	28	RX1800	DCS 1800 LNA input
13	VDD	Serial interface supply	29	RX900B	E-GSM LNA input
14	VBAT	Battery I/P for LDO reg's	30	RX900	E-GSM LNA input
15	VLDO1	LDO regulator Output (2)	31	RX850B	GSM 850 LNA input
16	VLDO2	LO VCO Supply (3)	32	RX850	GSM 850 LNA input

Table 1 AD6548/9 Pin Descriptions

Notes:

1. Supply regulated by internal LDO3 and should not be connected to any other supply
2. Internally connected as Synth supply (Counters + SDM + Charge pump)
3. Supply regulated by internal LDO2 and should not be connected to any other supply

3.4 26 MHz Clock (Crystal, X500)

The 26 MHz clock (X401) consists of a XO (Crystal Oscillator) which oscillates at a frequency of 26 MHz. The AD6548 requires only an external low cost crystal as the frequency reference. The circuitry to oscillate the crystal and tune its frequency is fully integrated. The Oscillator is a balanced implementation requiring the crystal to be connected across 2 pins. There is a programmable capacitor array included for coarse tuning of fixed offsets (e.g. crystal manufacturing tolerance), and an integrated varactor for dynamic control. The oscillator is designed for use with a 26MHz crystal. Dedicated control software ensures excellent frequency stability under all circumstances.

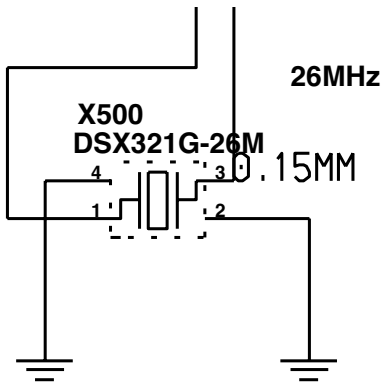
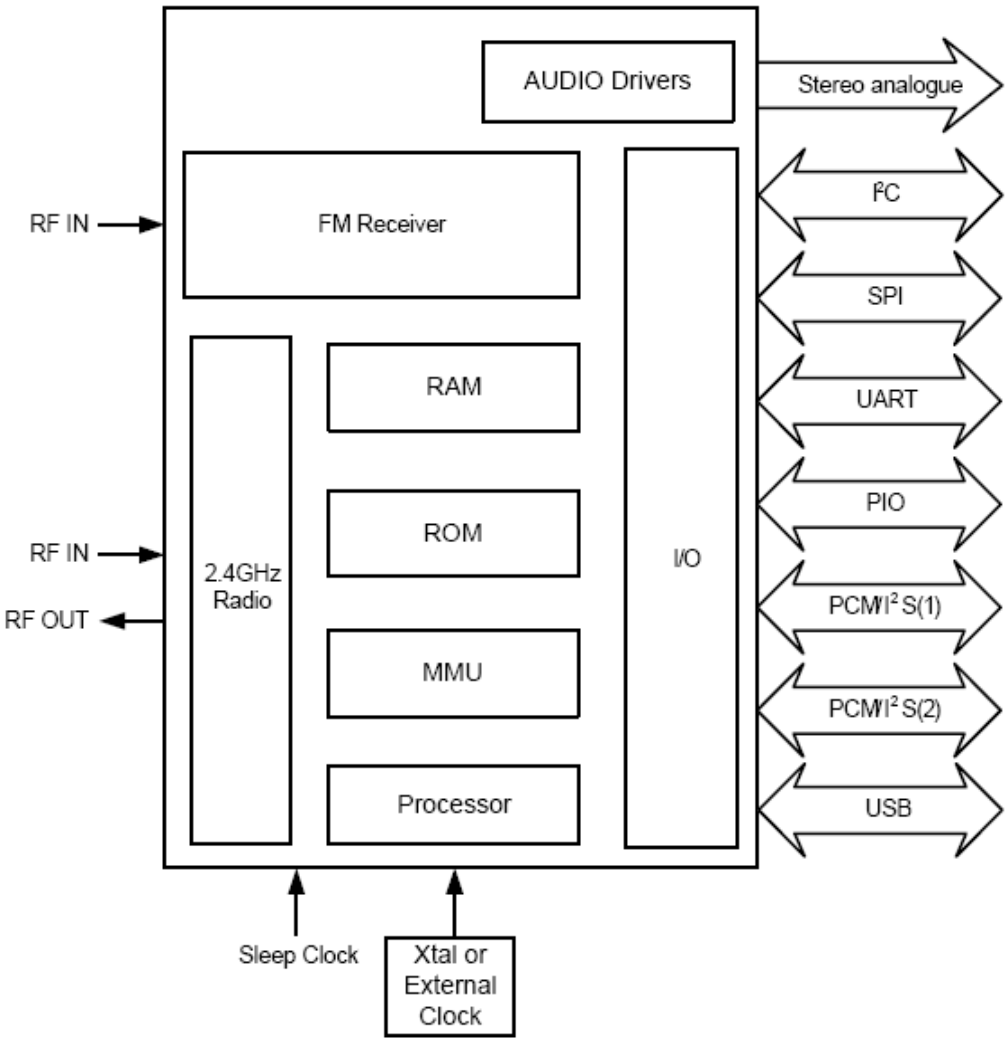


Figure 3.4 CRYSTAL CIRCUIT DIAGRAM

3.5 BT Module with integrated FM tuner(BC5-FM, U500)

The BlueCore5-FM BGA is a single-chip radio and baseband IC for Bluetooth 2.4GHz systems including enhanced data rates (EDR) to 3Mbits/s. It includes an integrated FM receiver with stereo audio output stage and an RDS demodulator.
With the on-chip CSR Bluetooth software stack, it provides a fully compliant Bluetooth system to v2.1 + EDR of the specification for data and voice communications.



3.6 Baseband Processor (AD6726, U103)

- **AD6726 is an ADI designed processor**
- **AD6726 consists of**

1. Control Processor Subsystem including:
- 32-bit MCU ARM7TDMI® Control Processor
- 78 MHz operation at 1.8V
- 2Mb of on-chip System SRAM Memory

2. DSP Subsystem including:
- 16-bit Fixed Point DSP Processor
- 91 MIPS[1] at 1.8V
- Data and Program SRAM
- Program Instruction Cache
- Full Rate, Enhanced Full Rate and Half Rate
- Speech Encoding/Decoding
- Capable of Supporting AMR & PDC Speech Algorithms

3. Peripheral Functions
- Parallel and Serial Display Interface
- USB 2.0 Full Speed device Interface
- Keypad Interface
- Support for Burst and Page Mode Flash
- 1.8V and 3.0V, 64 kbps SIM Interface
- Universal System Connector Interface
- Data Services Interface
- SD/Multimedia Card Interface

4. Other
- Supports 13 MHz and 26 MHz Input Clocks
- 1.8V Typical Core Operating Voltages
- 361-Ball Package (13x13mm) , 0.65mm Ball pitch

5. The AD6726 baseband transmit section supports the following mobile station GMSK modulation power classes:
- GSM 900/850 power classes 4 and 5,
- DCS 1800 power classes 1 and 2, and
- PCS 1900 power classes 1 and 2

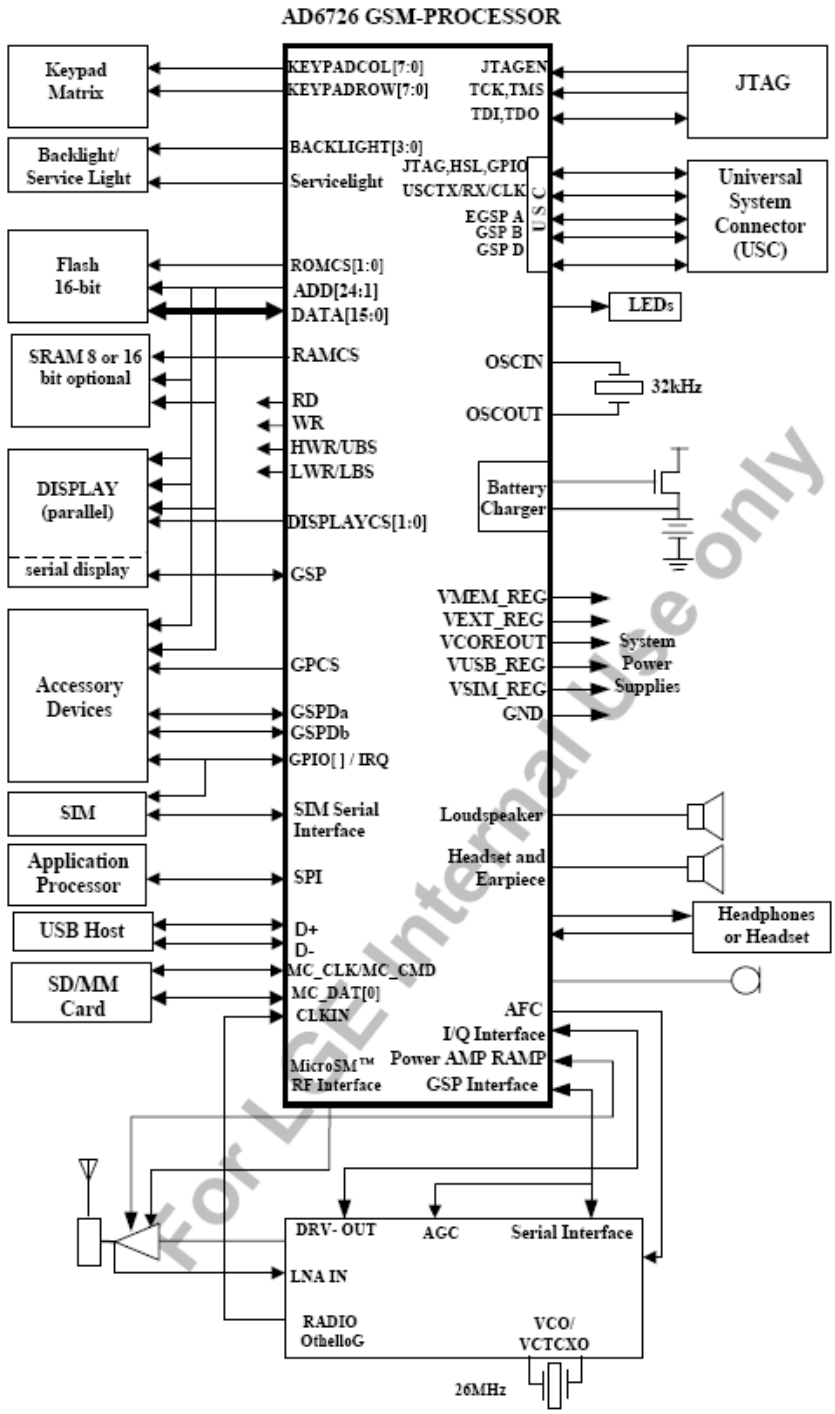


Figure 3.5 SYSTEM INTERCONECTION OF AD6726 EXTERNAL INTERFACE

3.6.1 Interconnection with external devices

A. RTC block interface

Countered by external X-TAL
32.768kHz oscillator supplies on-chip Real Time Clock circuitry

B. LCD module interface

The LCD module is controlled via mobile media processor AIT716
If AIT716 is in the state of by-pass mode, the LCD control signals from AD6726 are by-passed through AIT716.
In operating mode, the AIT716 controls the LCD module through nLCD_CS, nLCD_RS, nLCD_WR, L_DATA07~L_DATA00.

Signals	Description
nLCD_CS	MAIN LCD driver chip enable. MAIN LCD driver IC has own CS pin
LCD_ID	Identify LCD module maker
LCD_RESET	This pin resets LCD module. This signal comes from AD6726 directly.
nLCD_WR	Enable writing to LCD Driver.
nLCD_RS	This pin determines whether the data to LCD module are LCD command or data.
2V8_MM	2.8V is supplied to LCD driver IC.

Table 3.5.B LCD CONTRON SIGNALS DISCRIPTION

The backlight of LCD module is controlled by AD6726 via AAT2845.
The control signals related to Backlight LED are given as follows.

Signals	Description
MLED	Current source for backlight LED
LCD_DIM_CTRL	Control LCD backlight level in 16 steps
MLED[1:4]	This pins are returned-paths for backlight LED current source (MLED)

Table 3.5.B2 DESCRIPTION OF LCD BACKLIGHT LED CONTROL

C. RF interface

The AD6726 control RF parts through PA_BAND, ANT_SW1, ANT_SW2, ANT_SW3 , CLKON , PA_EN, S_EN, S_DATA, S_CLK

Signals	Description
PA_BAND (GPIO 0)	PAM Band Select
ANT_SW1 (GPO 9)	Antenna switch Band Select
ANT_SW2 (GPO 10)	Antenna switch Band Select
PA_EN (GPO 16)	PAM Enable/Disable
S_EN (GPO 19)	PLL Enable/Disable
S_DATA (GPO 20)	Serial Data to PLL
S_CLK (GPO 21)	Clock to PLL

Table 3.5.C RF CONTROL SIGNALS DESCRIPTION

D. SIM interface

The AD6726 provides SIM Interface Module. The AD6726 checks status periodically during established call mode whether SIM card is inserted or not, but it doesn't check during deep Sleep mode. In order to communicate with SIM card, 3 signals SIM_DATA, SIM_CLK, SIM_RST(GPIO_23) are required. The descriptions about the signals are given by bellow Table 3-5 in detail.

Signals	Description
SIM_DATA	This pin receives and sends data to SIM card. This model can support 3.0 volt and 1.8 volt interface SIM card.
SIM_CLK	Clock 3.25MHz frequency.
SIM_RST (GPIO_23)	Reset SIM block

Table 3.5.D SIM CONTROL SIGNALS DESCRIPTION

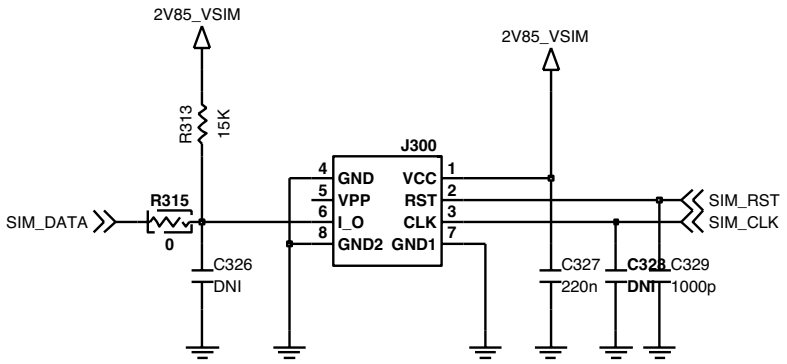


Figure 3.5.D2 SIM Interface of AD6726

E. LDO Block

There are 9 LDOs in the AD6726.

- 1V8_VCORE : supplies Digital baseband Processor core and AD6726 digital core(1.8V, 80mA)
- 2V8_VMEM : supplies external memory and the interface to the external memory on the digital baseband processor (2.8V, 150mA)
- 2V8_VEXT : supplies Radio digital interface and high voltage interface (2.8V, 200mA)
- 2V85_VSIM : supplies the SIM interface circuitry on the digital processor and SIM card (2.85V,1.8V, 20mA)
- 1V8_VRTC : supplies the Real-Time Clock module (1.8 V, 20 μA)
- 2V5_VMIC : supplies the microphone interface circuitry (2.5 V, 2 mA)
- 2V75_VVCXO: supplies the voltage controlled crystal oscillator (2.75 V, 10 mA)
- VUSB : supplies USB interface circuitry(3.2V, 20mA)
- 1V8_VGP : supplies VDD_IO1 & VDD_IO4 of MMP(1.8V, 40mA)

3.7 Display and Interface

Properties	Spec.	Unit
Active Screen Size	28.032mm(W) x 35.04mm(H)	mm
Color Depth	262K TFT	colors
Resolution	128 X 160	Pixels

Controlled by nLCD_CS, LCD_RESET, nLCD_RS, nLCD_WR, L_DATA00~L_DATA07

• L_MAIN_LCD_CS : MAIN LCD driver chip enable. MAIN LCD driver IC has own CS pin

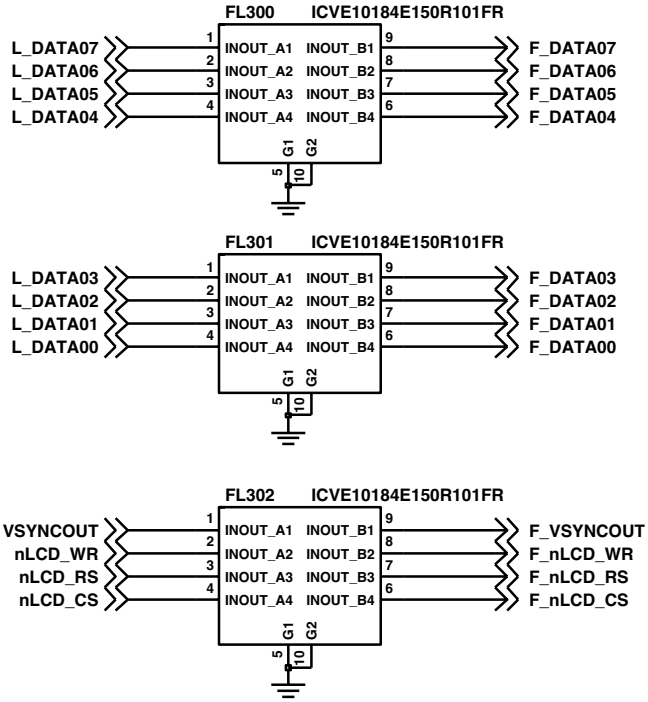
• LCD_RESET : This pin resets LCD module. This signal comes from AD6726 directly.

• LCD_RS: This pin determines whether the data to LCD module are display data or control data.

• LCD_WR : Write control Signal

• L_DATA00~L_DATA07 : Parallel data lines.

• LCD_ID : reserved



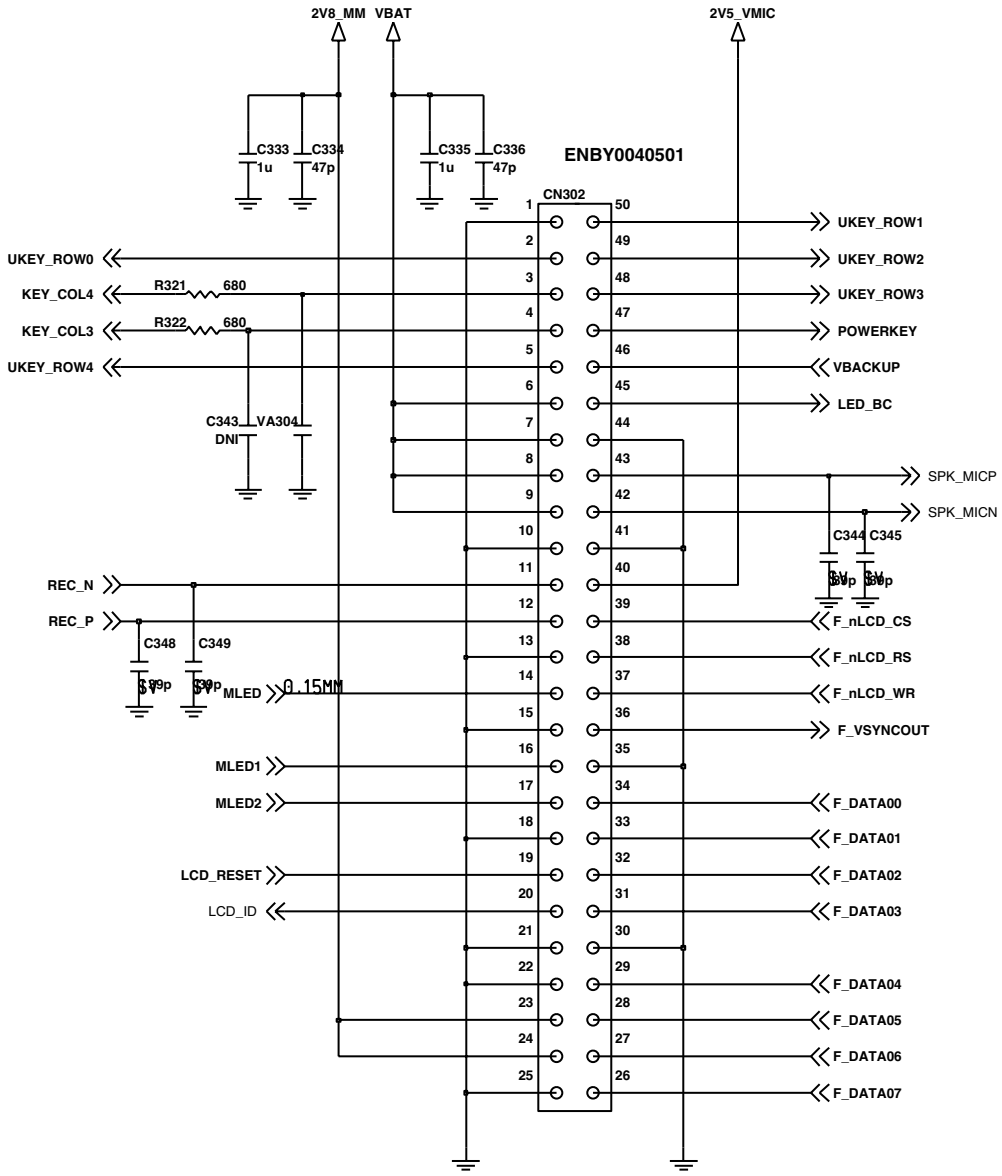


Figure 3.6 LCD INTERFACE CIRCUIT

3.8 Camera Interface(AIT716 , U400)

This model has a built-in 1.3M SXGA (1280 x 1024) camera module. And the camera produces JPG pictures. Camera module is controlled by AIT716. Interface is done by I2C and YCbCr format. I2C is a control signal and YCbCr is real data interface signal.

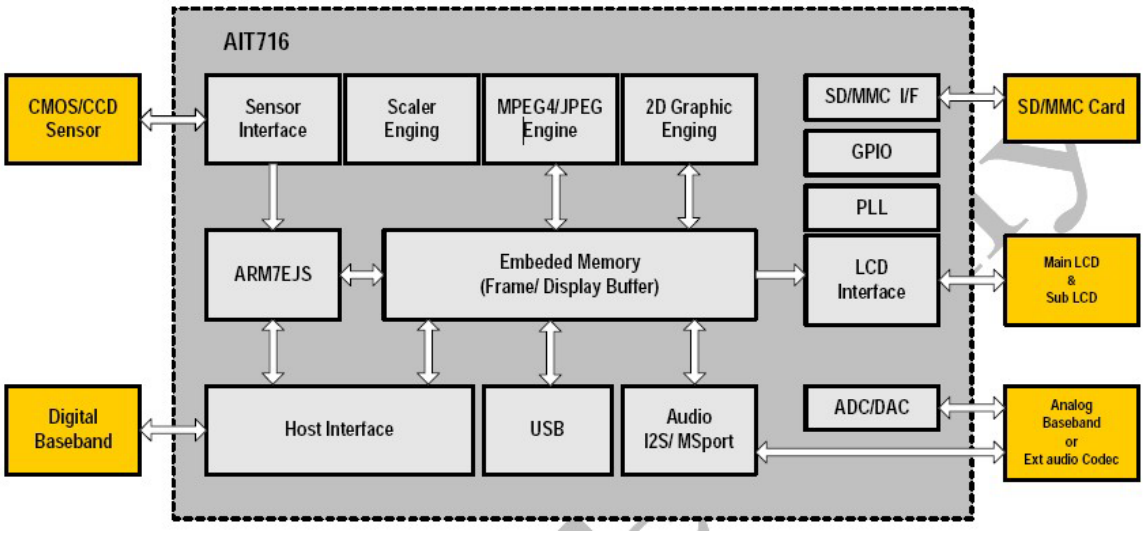


Figure 3.7.1 AIT716 BLOCK DIAGRAM

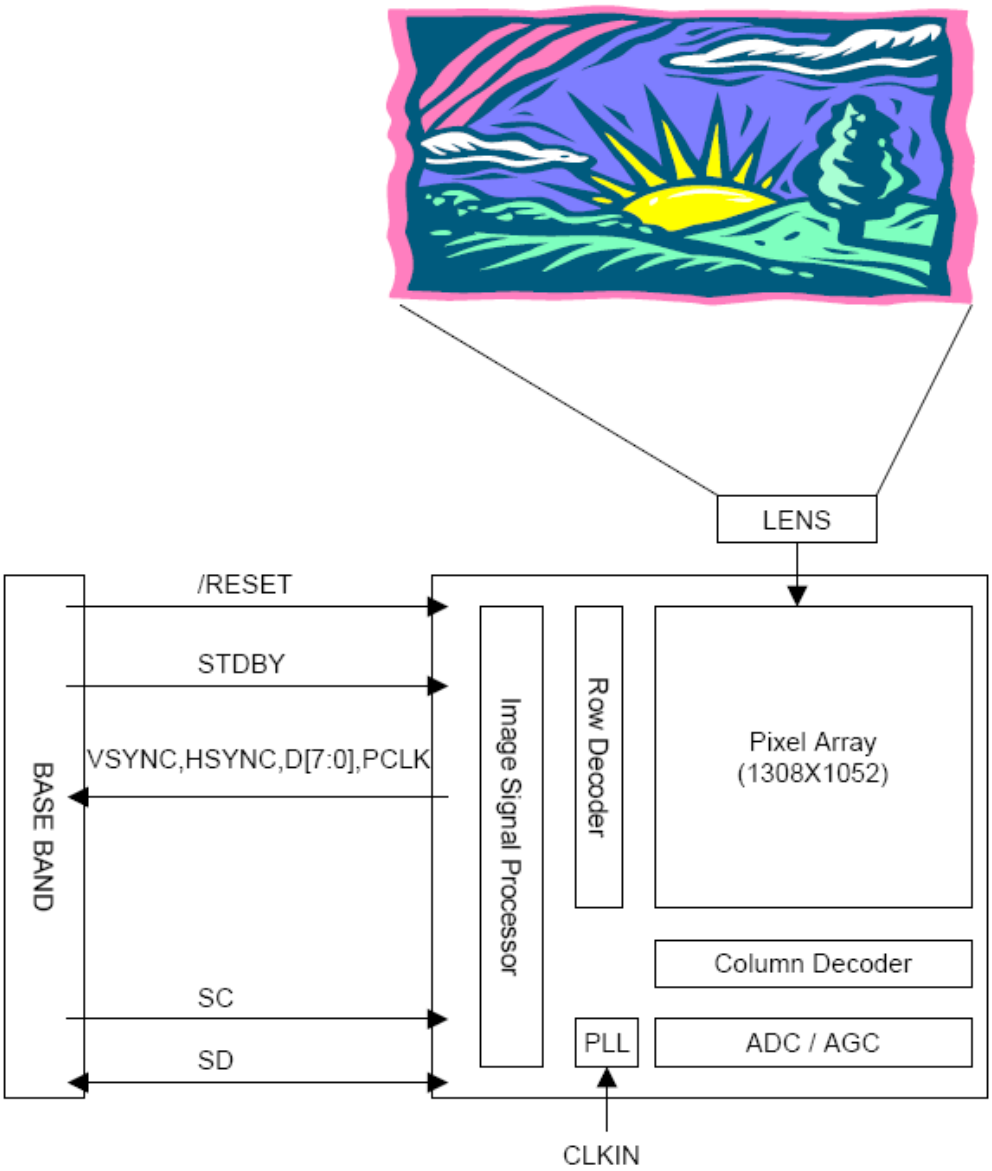


Figure 3.7.2 SENSOR CHIP BLOCK DIAGRAM

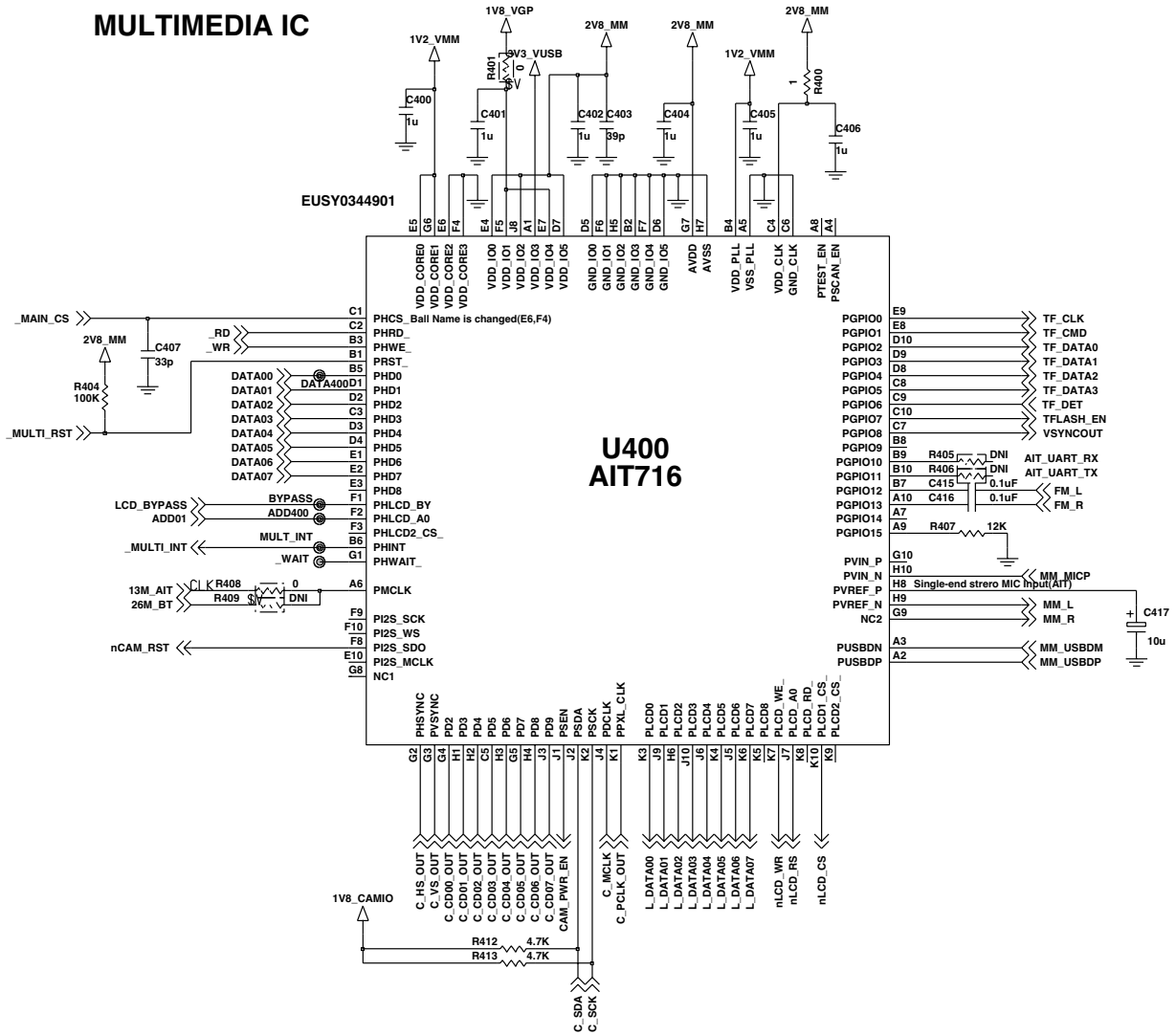


Figure 3.7.3 AIT716 CIRCUIT

3.9 Keypad Switches and Scanning

The key switches are metal domes, which make contact between two concentric pads on the keypad layer of the PCB when pressed. There are 25 switches (Normal Key 22EA, Volume up down and camera side key, connected in a matrix of 5 rows by 5 columns, as shown in Figure 3-8, except for the power switch (END), which is connected independently. Functions, the row and column lines of the keypad are connected to ports of AD6726. The columns are outputs, while the rows are inputs and have pull-up resistors built in. When a key is pressed, the corresponding row and column are connected together, causing the row input to go low and generate an interrupt. The columns/rows are then scanned by AD6726 to identify the pressed key.

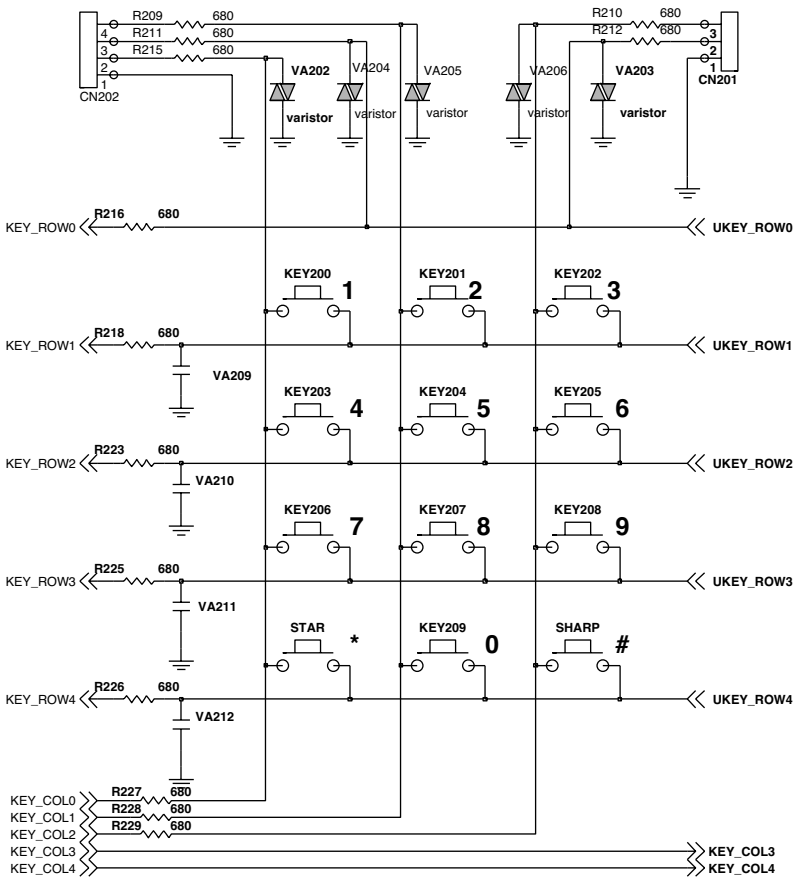
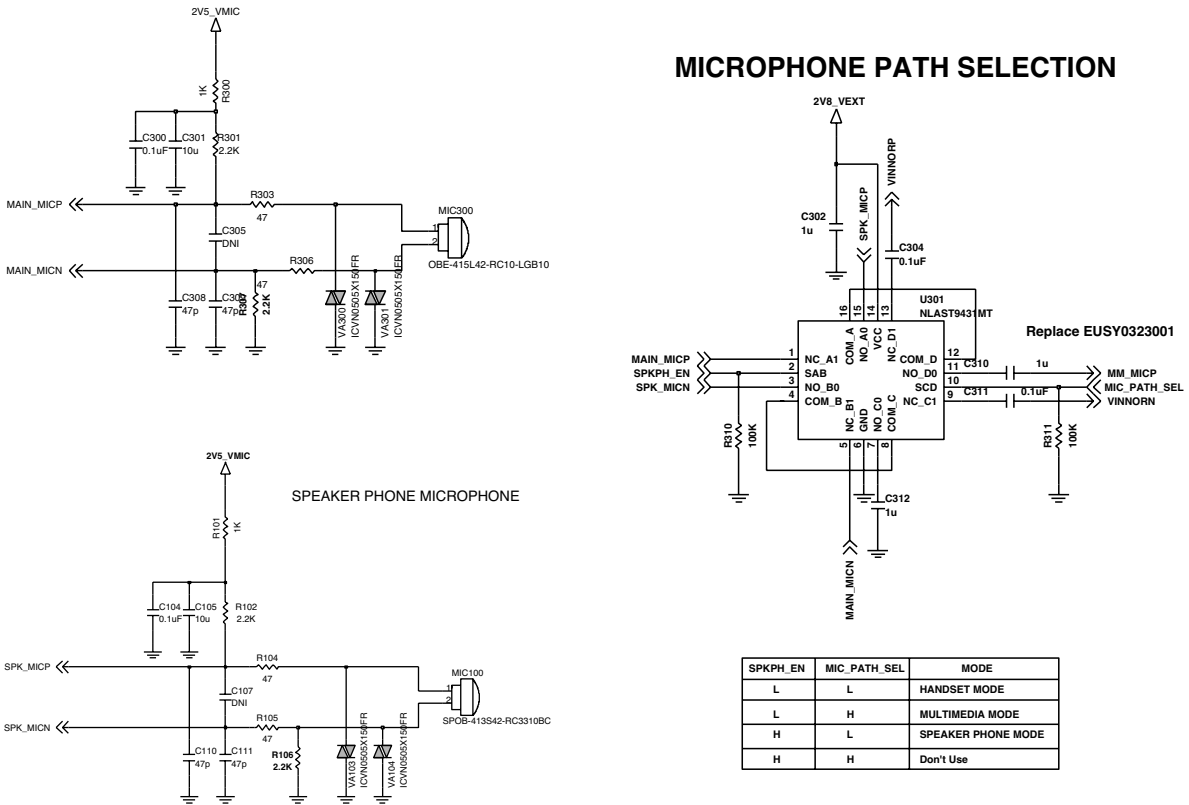


Figure 3.8 Keypad Switches and Scanning

3.10 Microphone

Two microphones are placed in the Front cover and beside receiver. One is for normal voice call & multimedia functions, and the other is for speakerphone mode voice call. These microphones are switched by analog switch(U301), which connects audio inputs from the two microphones to main baseband chip and MMP. The audio signal is passed to MIC_N and MIC_P pins of AD6726. The voltage supply VMIC is output from AD6726, and is a biased voltage for the MIC_P. The MIC_P and MIC_N signals are then A/D converted by the voice band ADC part of AD6726. The digitized speech (PCM 8KHz ,16KHz) is then passed to the DSP section of AD6726 for processing (coding, interleaving etc). For multimedia functions, these signal processing is done by MMP(AIT716).



SPKPH_EN	MIC_PATH_SEL	MODE
L	L	HANDSET MODE
L	H	MULTIMEDIA MODE
H	L	SPEAKER PHONE MODE
H	H	Don't Use

Figure 3.9 Connection between Microphone, AD6726 and AIT716

3.11 Main Speaker

Main Speaker is the output device for all acoustic functions, which are speakerphone, MIDI ringtone, FM radio, Music play and etc. The speaker is driven by audio amplifier(IC200).

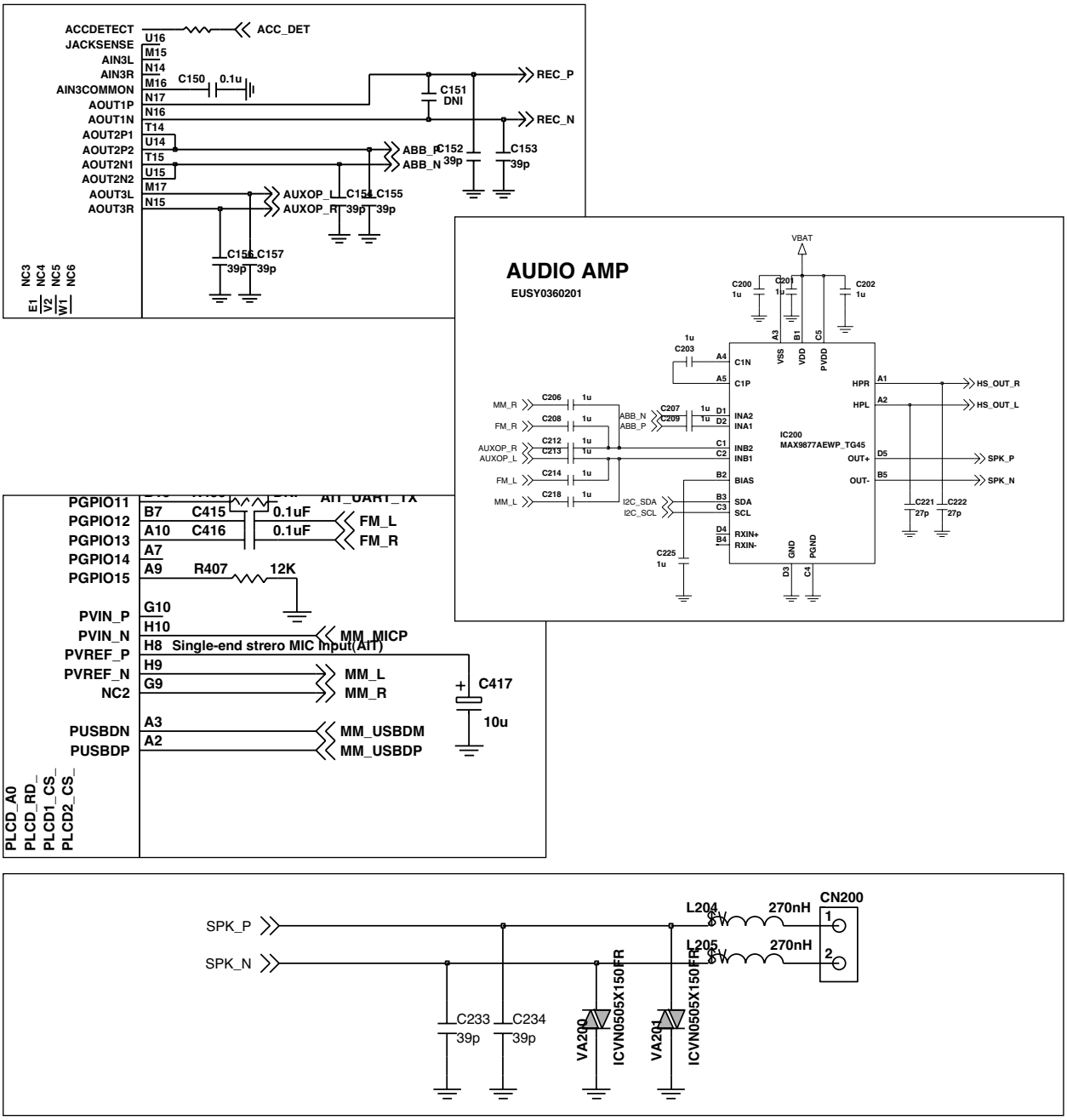


Figure 3.10 Connection between Speaker, Amp and AD6726 & AIT716

3.12 Headset Interface

This phone has 6 electrodes for headset interface, such as GND, AUXIP, AUXIN, HS_OUT_L, HS_OUT_R, JACK_DETECT and ACC_DET.

Switching from Receiver to Headset Jack

If jack is inserted, JACK_DETECT goes from high to low.
Audio path is switched from receiver to earphone by JACK_DETECT interrupt.

Switching from Headset Jack to Receiver

If jack is removed, JACK_DETECT goes from low to high.
Audio path is switched from earphone to receiver by JACK_DETECT interrupt.

Hook detection

If hook-button is pressed, ACC_DET is changed from high to low.
This is detected by ACC_DETECT of AD6726
And then hook is detected.

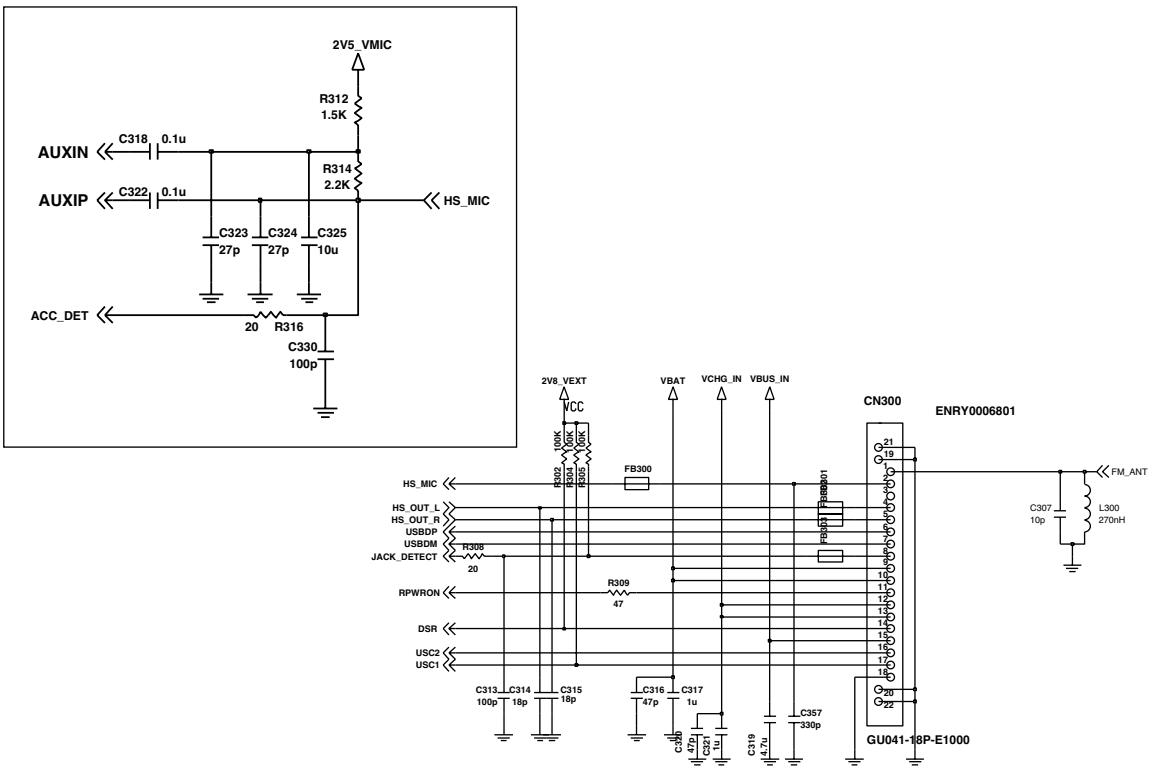


Figure 3.11 HEADSET JACK INTERFACE

3.13 Key Back-light Illumination

In key back-light illumination, there are 2 white LEDs in Main Board and 4 LEDs in Upper board, which are controlled by KEY_BACKLIGHT1 and KEY_BACKLIGHT3 each on AD6726,

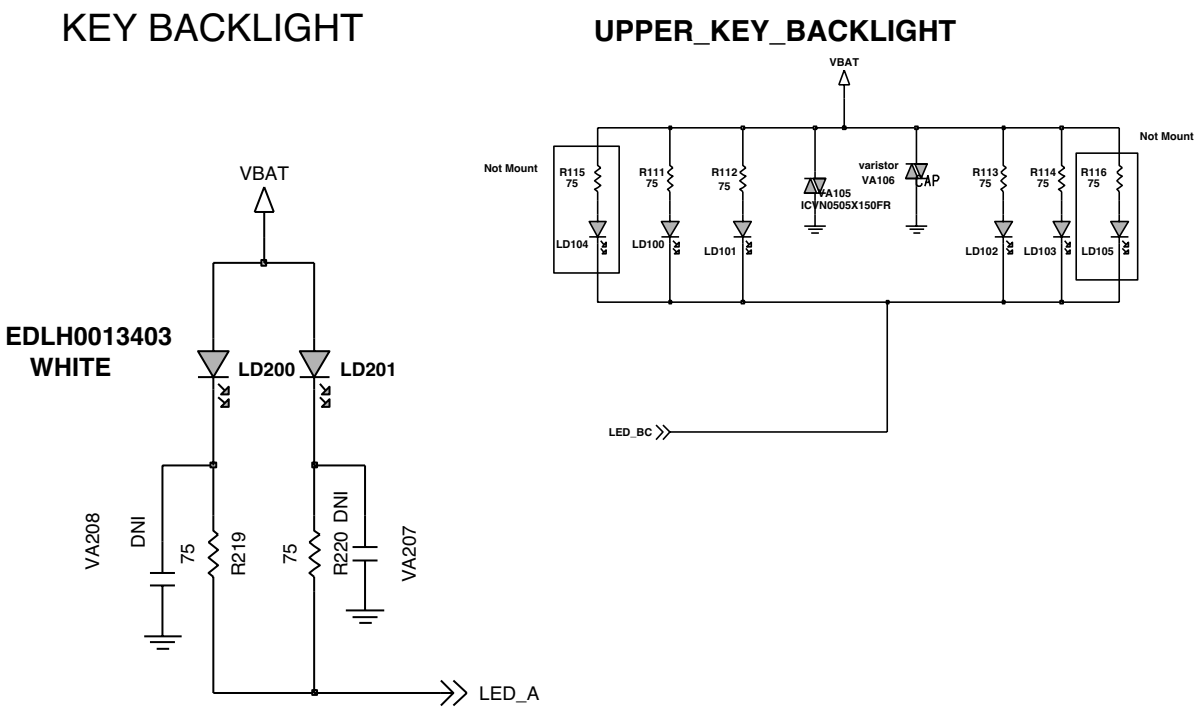


Figure 3.12 KEY BACK-LIGHT ILLUMINTION

3.14 LCD Back-light Illumination

LCD backlight LEDs is controlled by AD6726 via AAT2845, U404. MLED is the charge pump output to drive LCD backlight LEDs, and MLED1 & MLED2 are current sink ports.

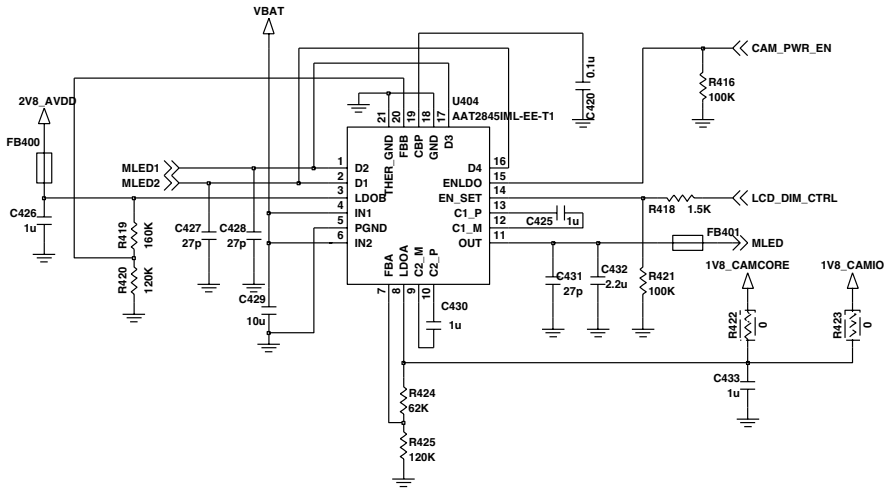


Figure 3.13 MAIN LCD BACKLIGHT ILLUMINATION

3.15 VIBRATOR

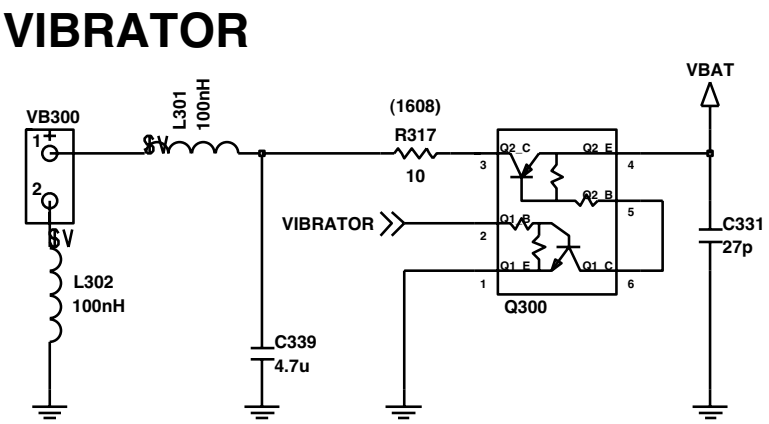


Figure 3.14 Vibrator

3.16 Battery Charging

The ISL9221 accepts two power inputs, normally one from a USB port and the other from a TA.

Charging Process

- Connecting TA & Charger Detection
- Control the charging Current by U203(Charger IC)
- Charging Current flows into the Battery.

Pins of U304 used for charging

- VDC : Charger supply.
- VUSB_IN : USB charging supply.
- IMIN: IMIN is the programmable input for the end-of-charge current.
- IVDC: Program the TA charge current during the constant current mode.
- IUSB : Program the USB charge current during the constant current mode.
- _EN :Enable logic input
- BAT : Charger output pin.
- USB_BYP : Output pin from USB bypass circuitry
- VDC_BYP : Output Pin of Linear Regulator

TA (Travel Adaptor)

- Input voltage: AC 100V ~ 250V, 63Hz
- Output voltage: DC 5.6V
- Output current: Max 400mA

Battery

- Li-ion battery (Max 4.2V, Nom 3.7V)
- Standard battery: Capacity - 900mAh

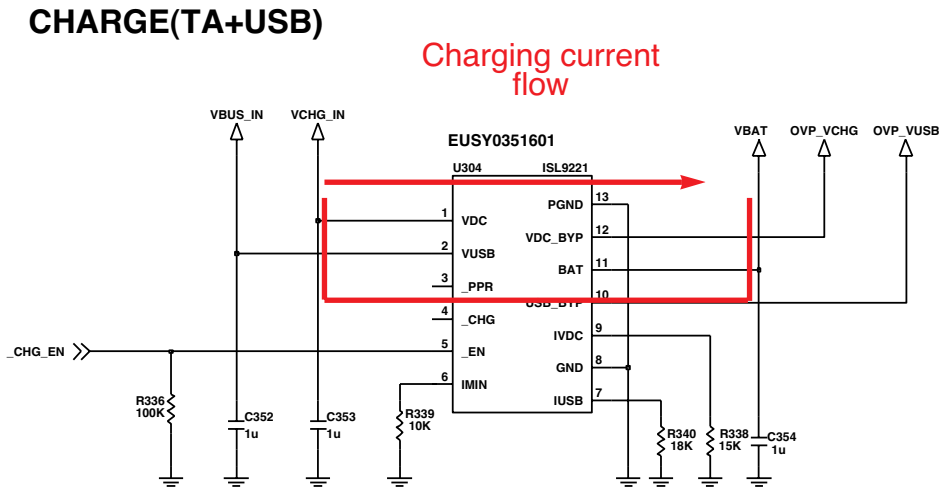


Figure 3.15 CIRCUIT FOR BATTERY CHARGING

4. TROUBLE SHOOTING

4.1 RF Component

TEST POINT

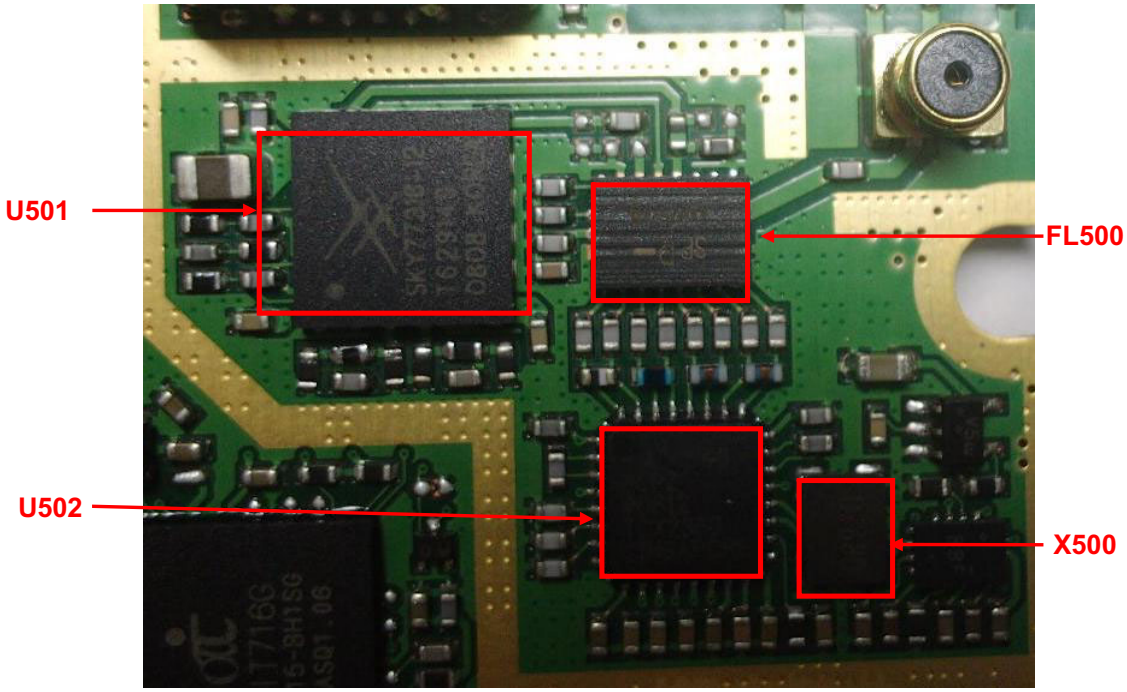
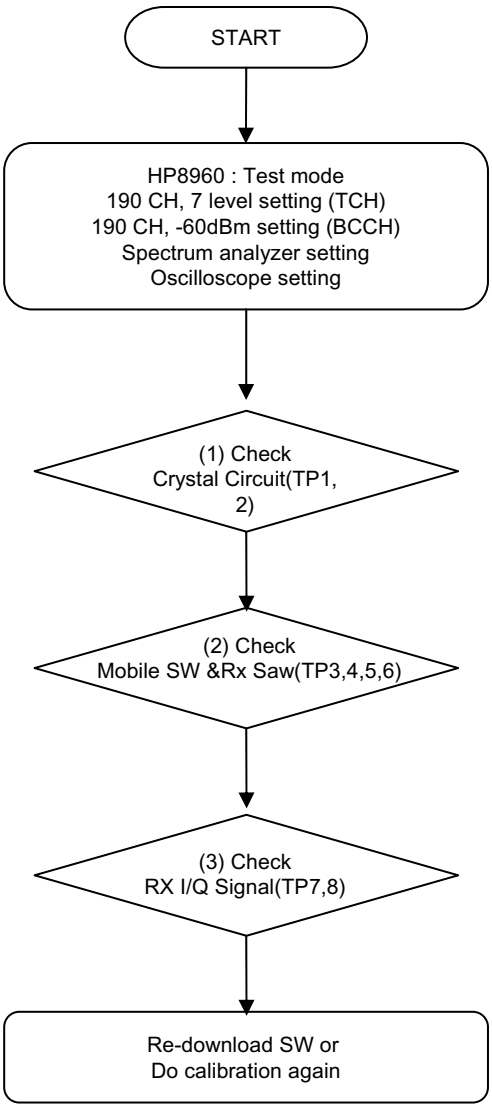


Figure 4.1

U501	PAM (SKY77318)
U502 (AD6548)	RF Main Chip (Transceiver)
X500	Crystal, 26MHz Clock
FL500	FEM

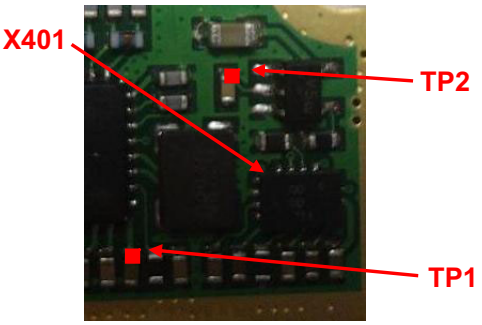
4.2 RX Trouble

CHECKING FLOW

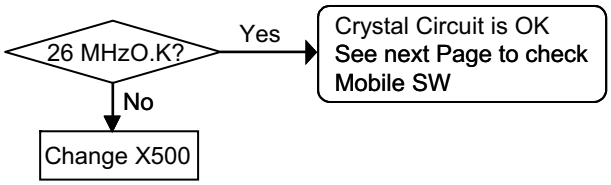


(1) Checking Crystal Circuit

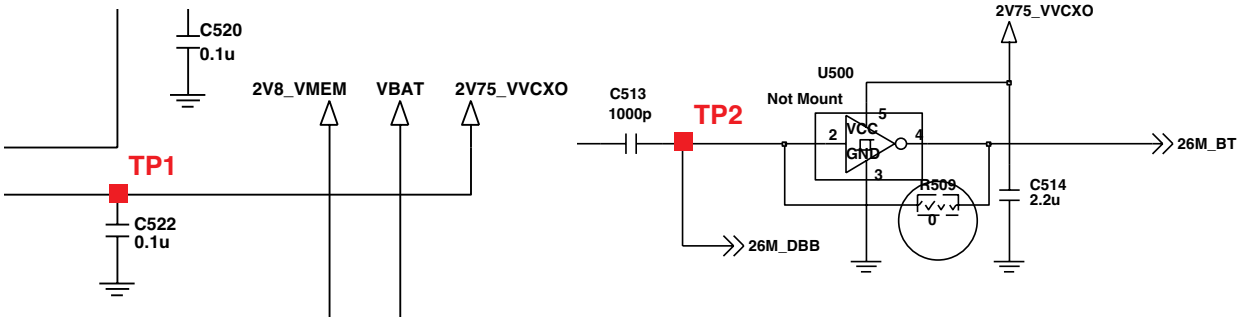
TEST POINT



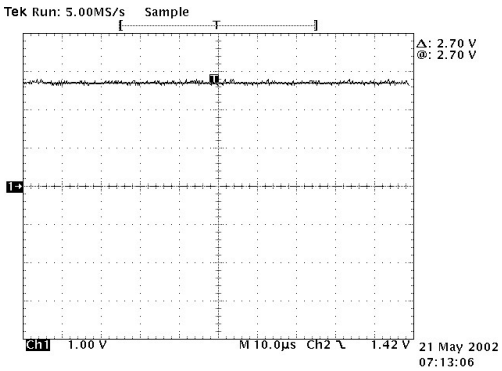
CHECKING FLOW



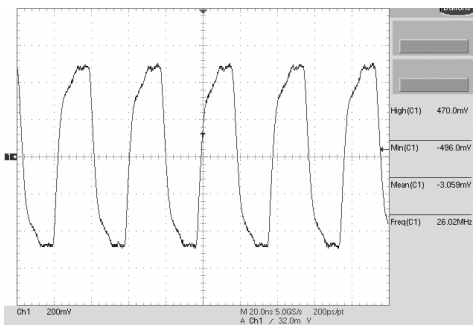
CIRCUIT



WAVEFORM



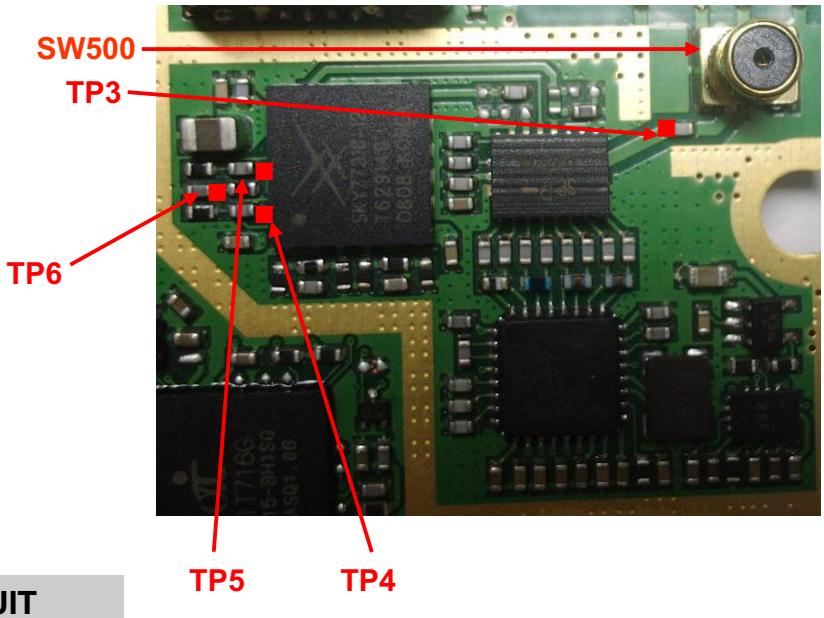
Graph 4.2.1(a)



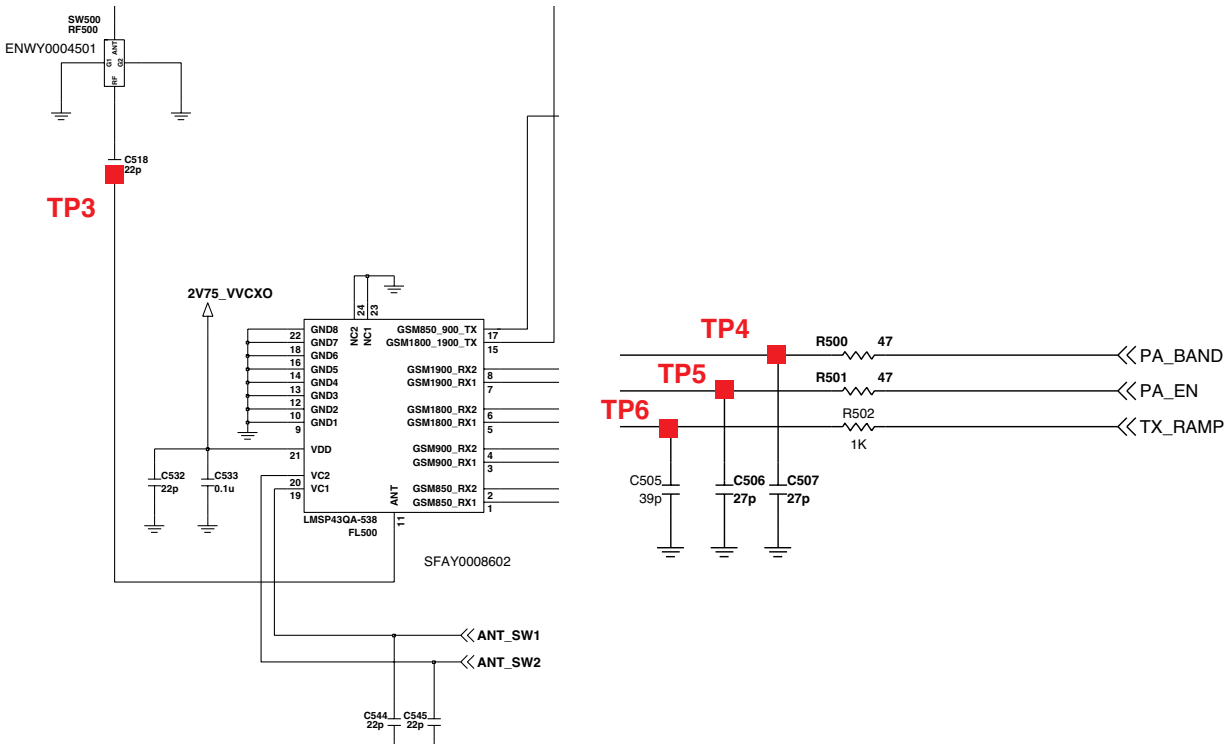
Graph 4.2.1(b)

(2) Checking Mobile SW & Rx SAW filter

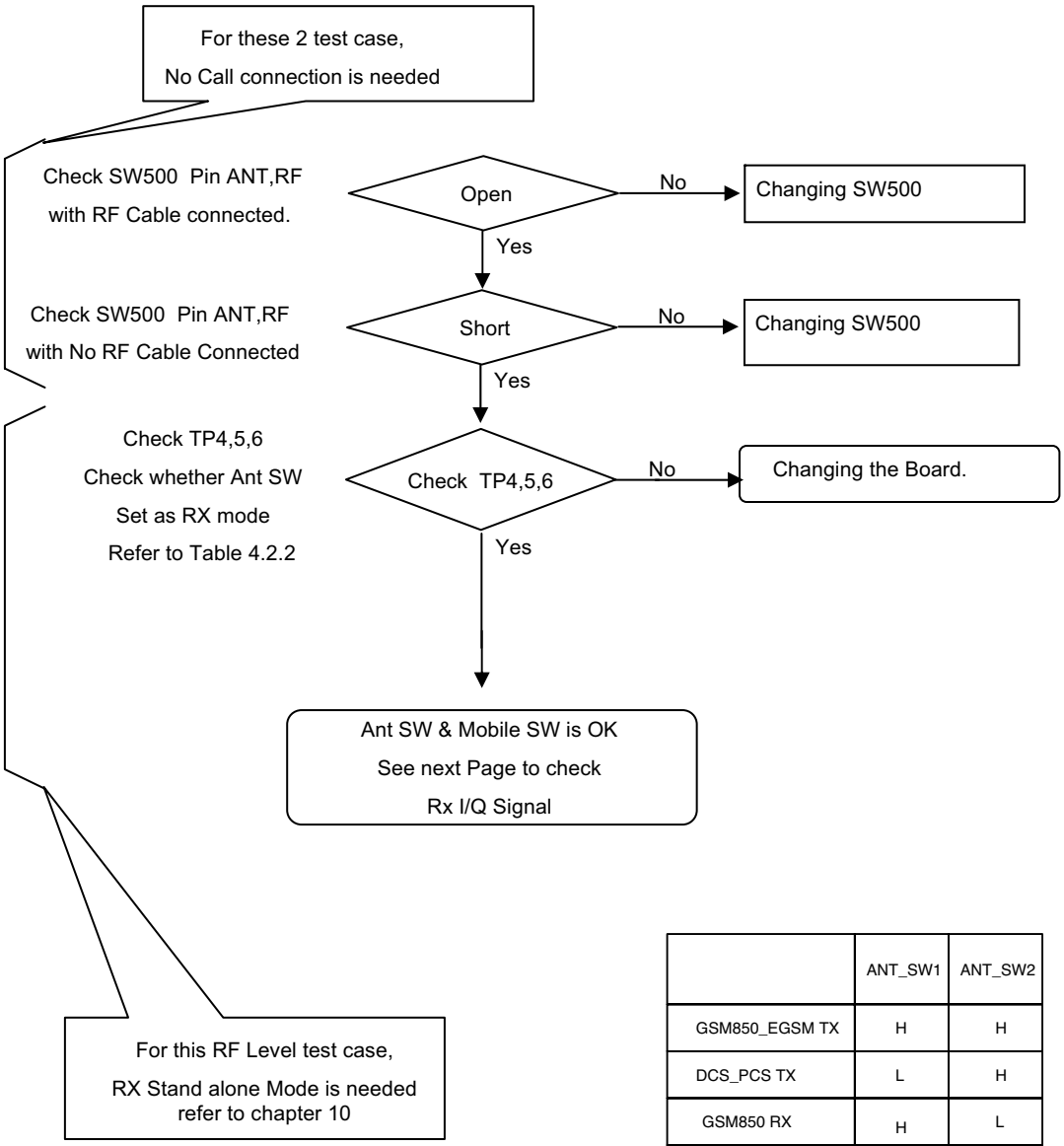
TEST POINT



CIRCUIT



CHECKING FLOW



	ANT_SW1	ANT_SW2
GSM850_EGSM TX	H	H
DCS_PCS TX	L	H
GSM850 RX	H	L
EGSM900 RX	H	L
DCS1800 RX	L	L
PCS1900 RX	L	L

(3) Checking RX I/Q

TEST POINT

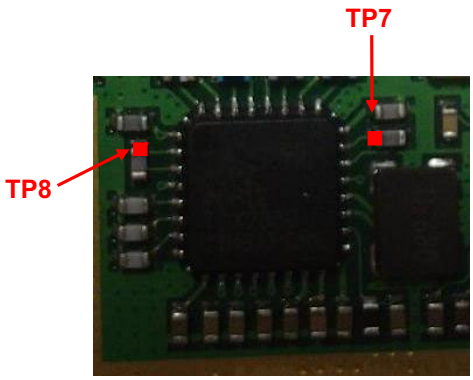
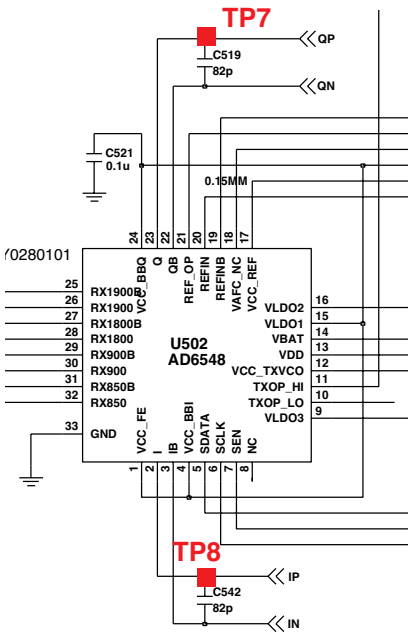
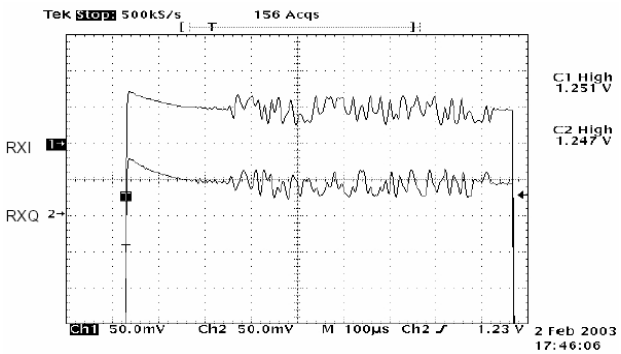


Figure 4.2.3

CIRCUIT

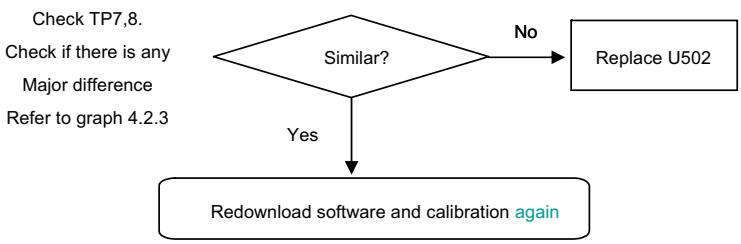


WAVEFORM



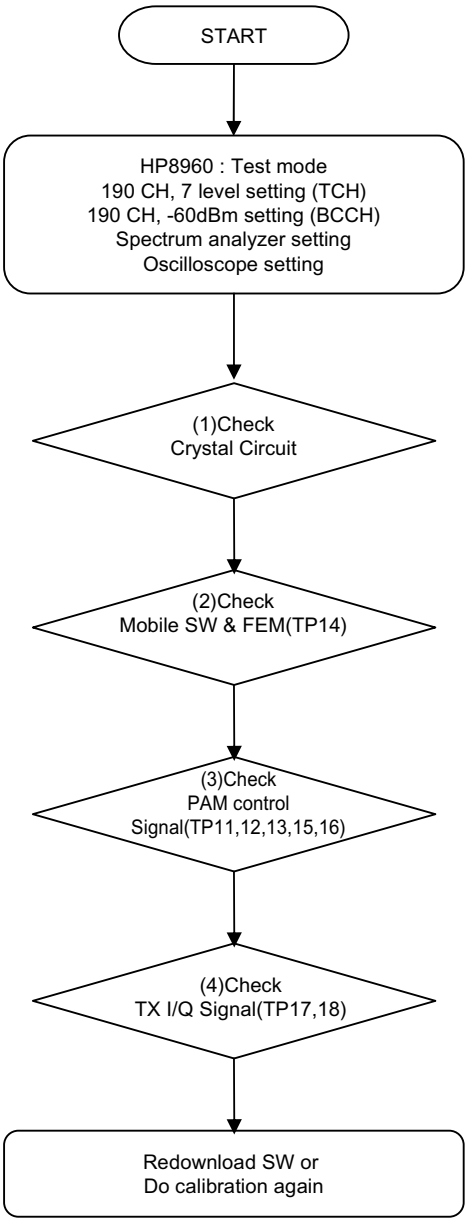
Graph 4.2.3

CHECKING FLOW



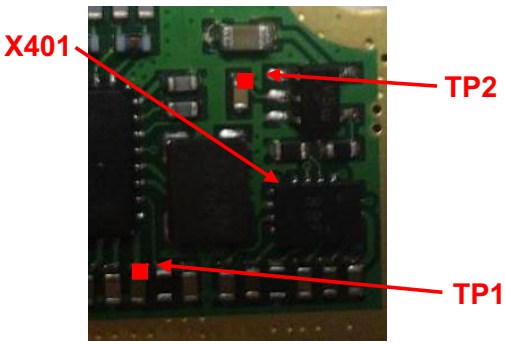
4.3 TX Trouble

CHECKING FLOW

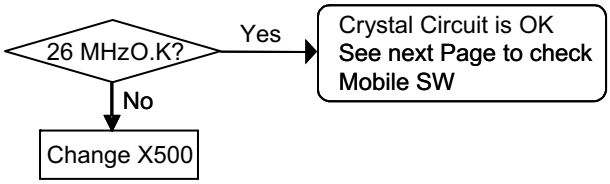


(1) Checking Crystal Circuit

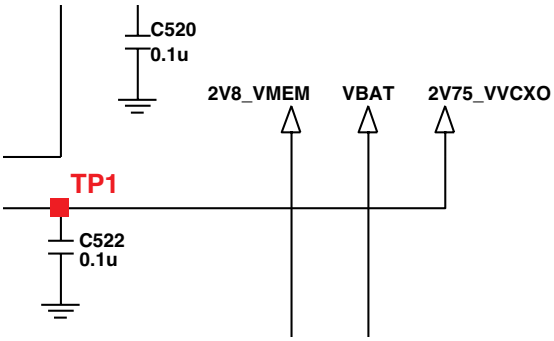
TEST POINT

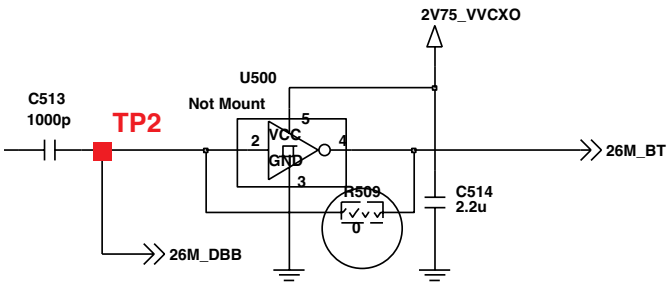


CHECKING FLOW

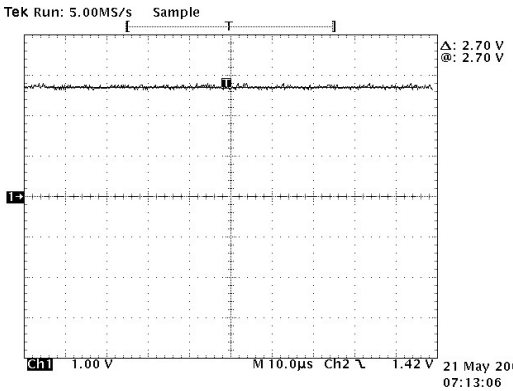


CIRCUIT

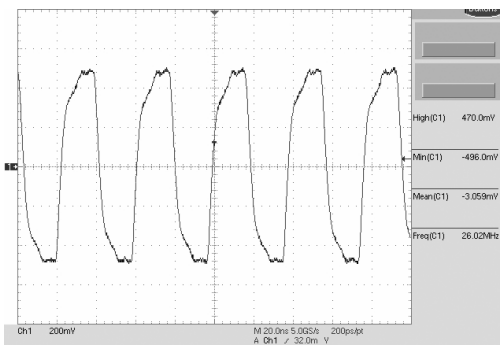




WAVEFORM



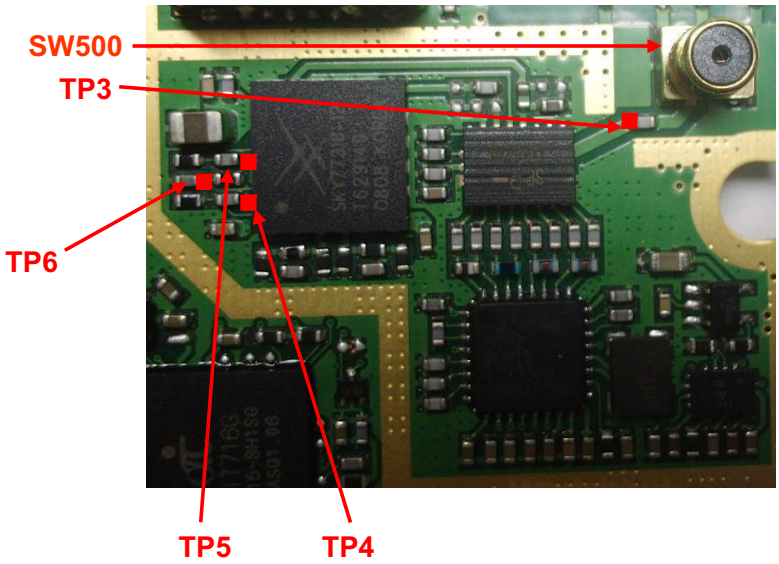
Graph 4.2.1(a)



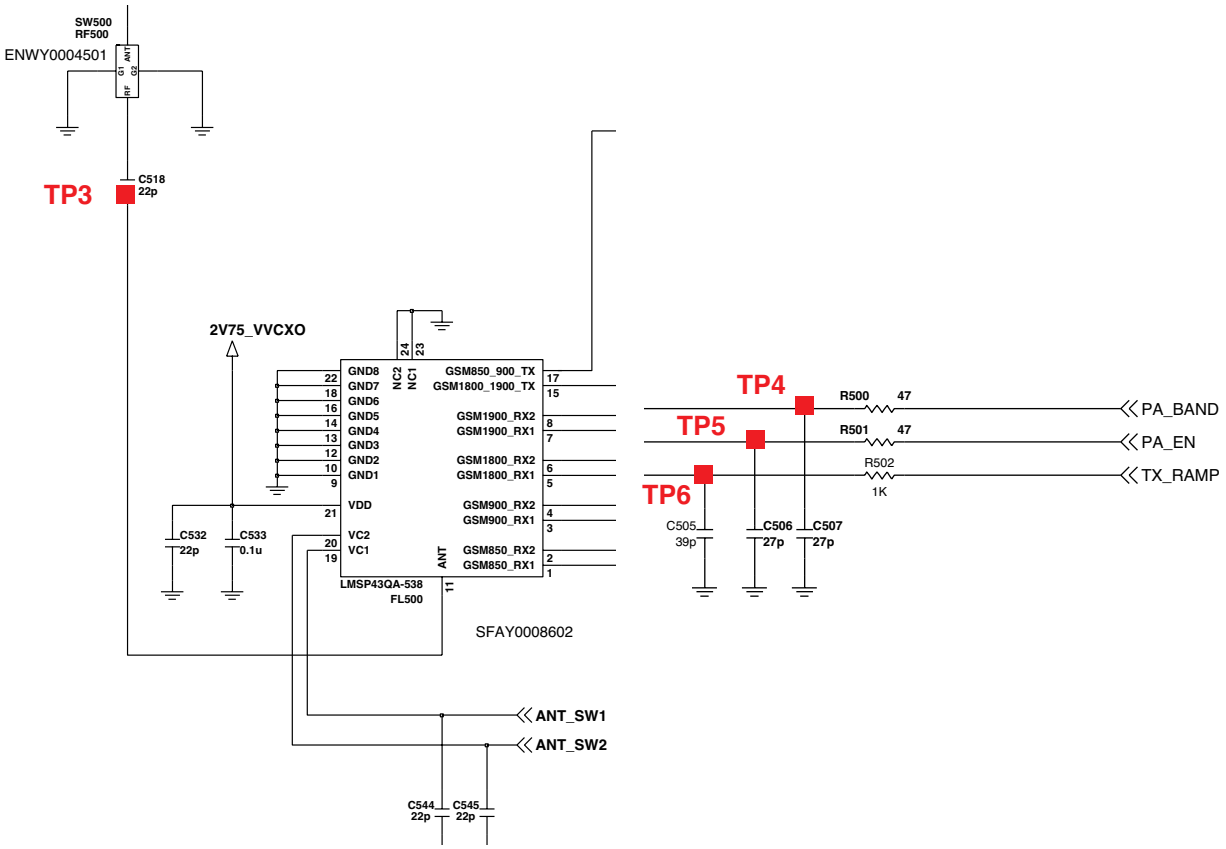
Graph 4.2.1(b)

(2) Checking Mobile SW & FEM

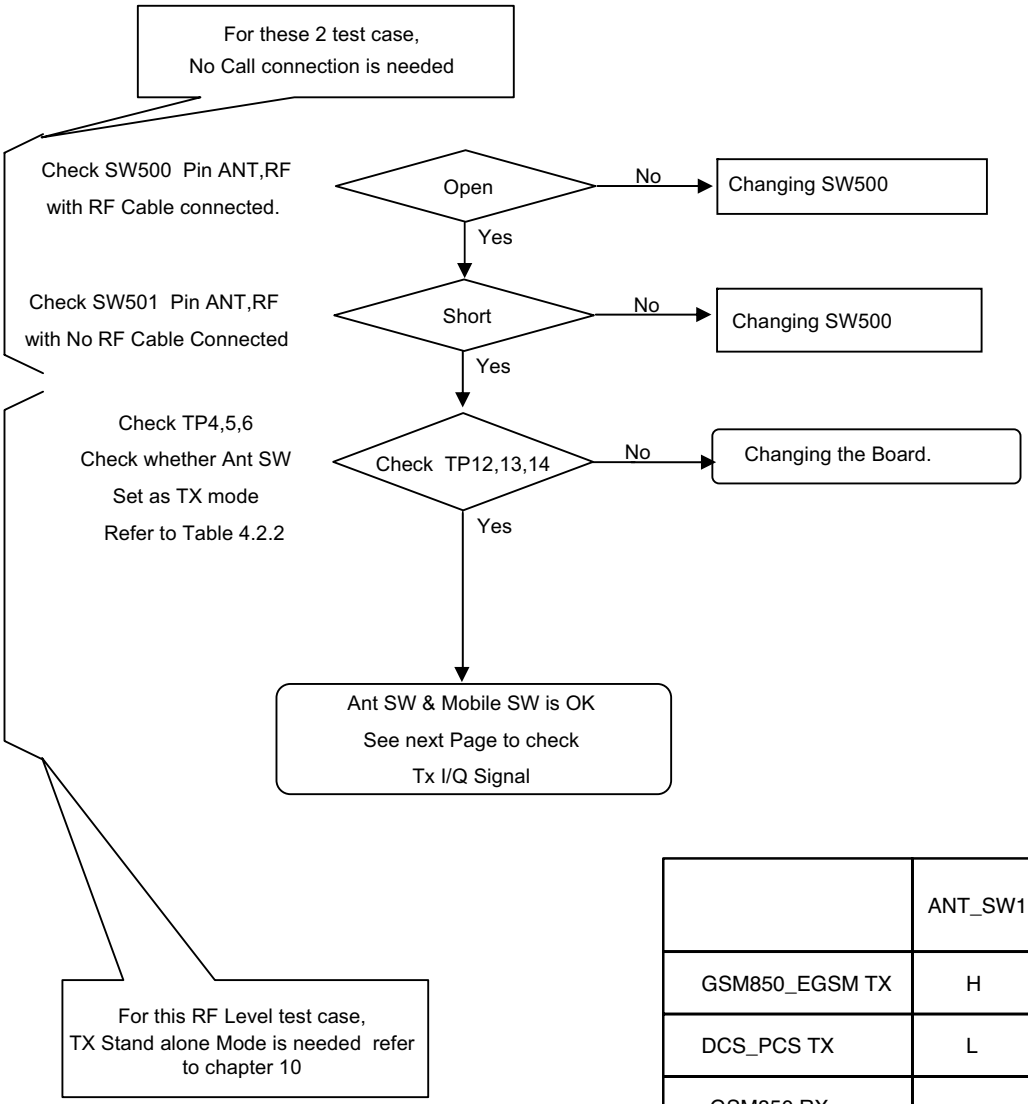
TEST POINT



CIRCUIT



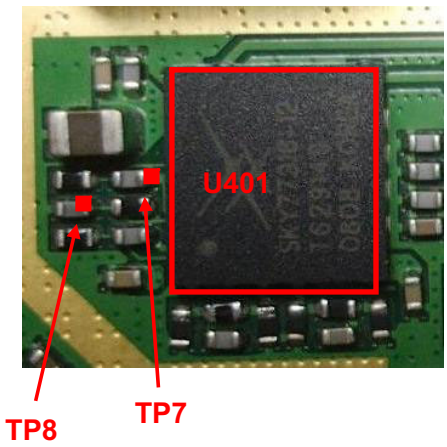
CHECKING FLOW



	ANT_SW1	ANT_SW2
GSM850_EGSM TX	H	H
DCS_PCS TX	L	H
GSM850 RX	H	L
EGSM900 RX	H	L
DCS1800 RX	L	L
PCS1900 RX	L	L

(3) Checking PAM Control Signal

TEST POINT



CIRCUIT

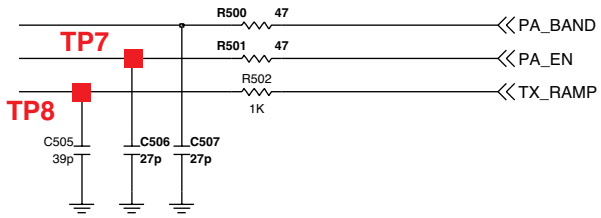
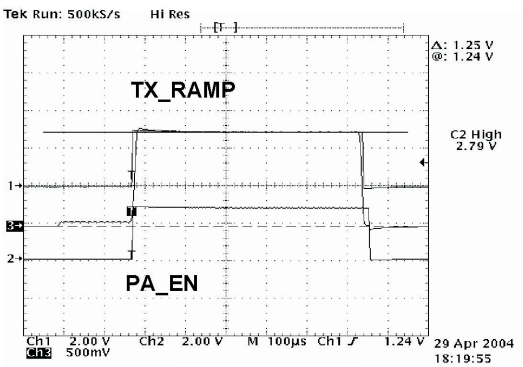


Figure 4.3.3

WAVEFORM



Graph 4.3.3

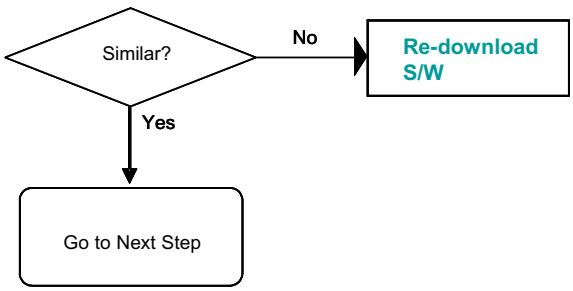
CHECKING FLOW

Check TP7,8

Check if there is

Any Major Difference or not

Refer to Graph 4.3.3



(4) Checking TX I/Q

TEST POINT

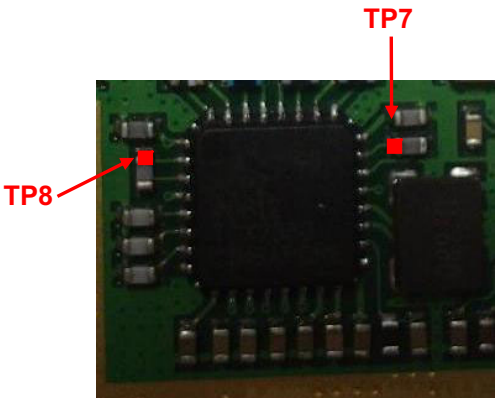
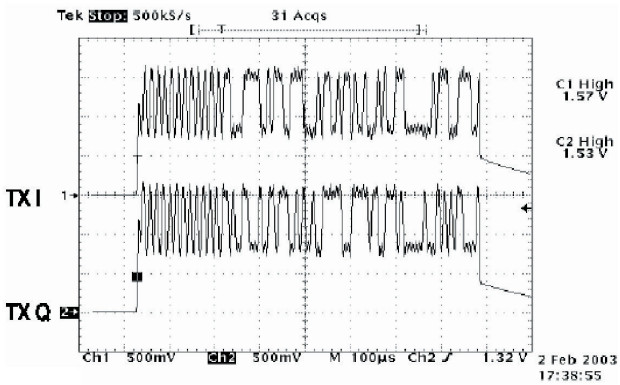


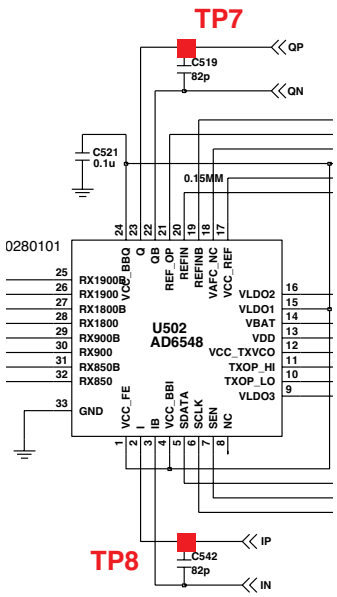
Figure 4.2.3

WAVEFORM

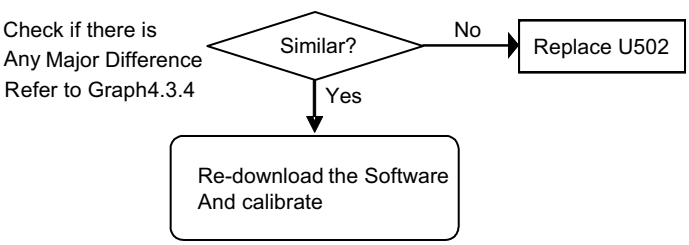


Graph 4.3.4

CIRCUIT

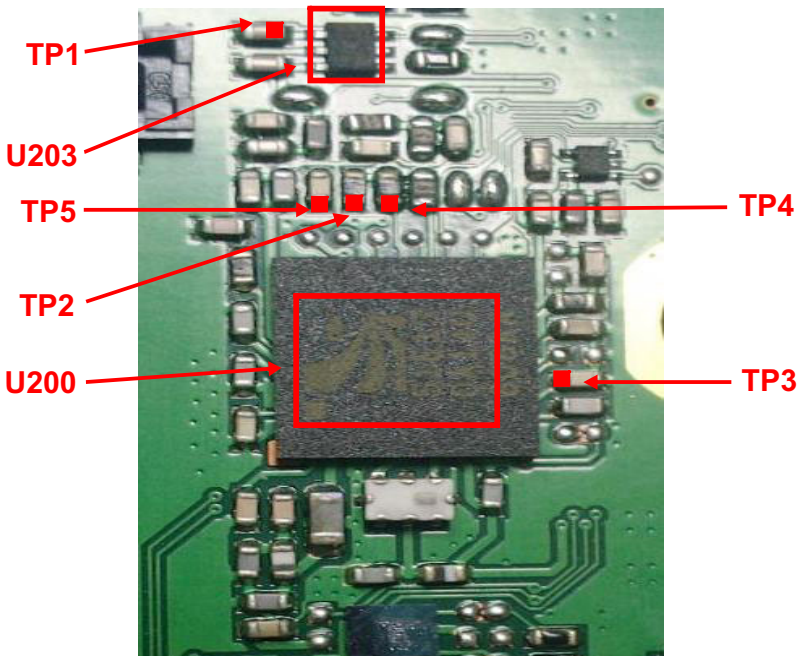


CHECKING FLOW

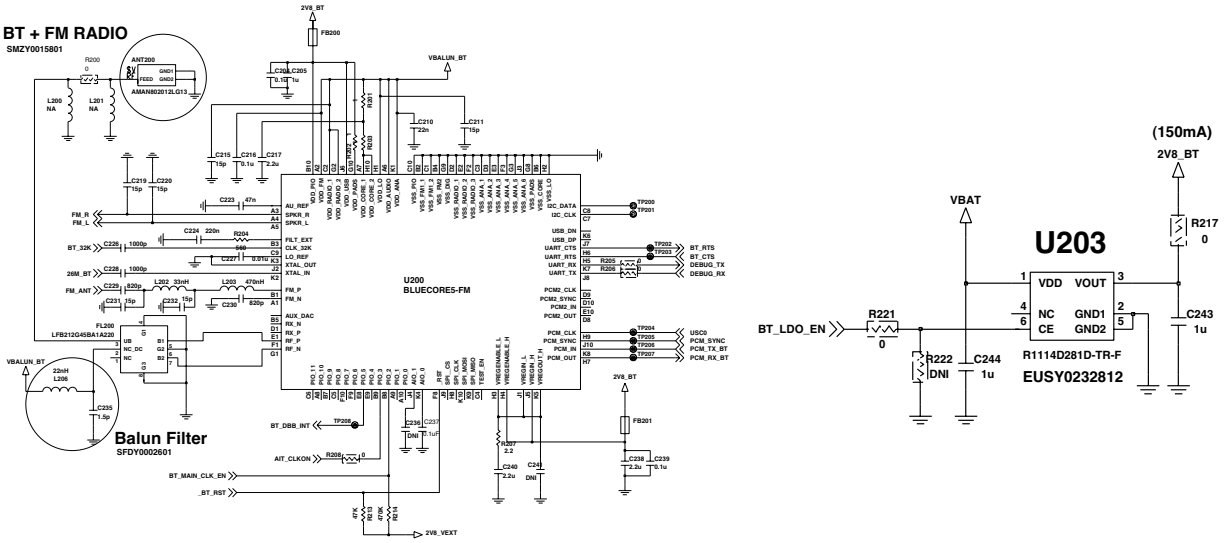


4.4 Bluetooth + FM Radio

TEST POINT

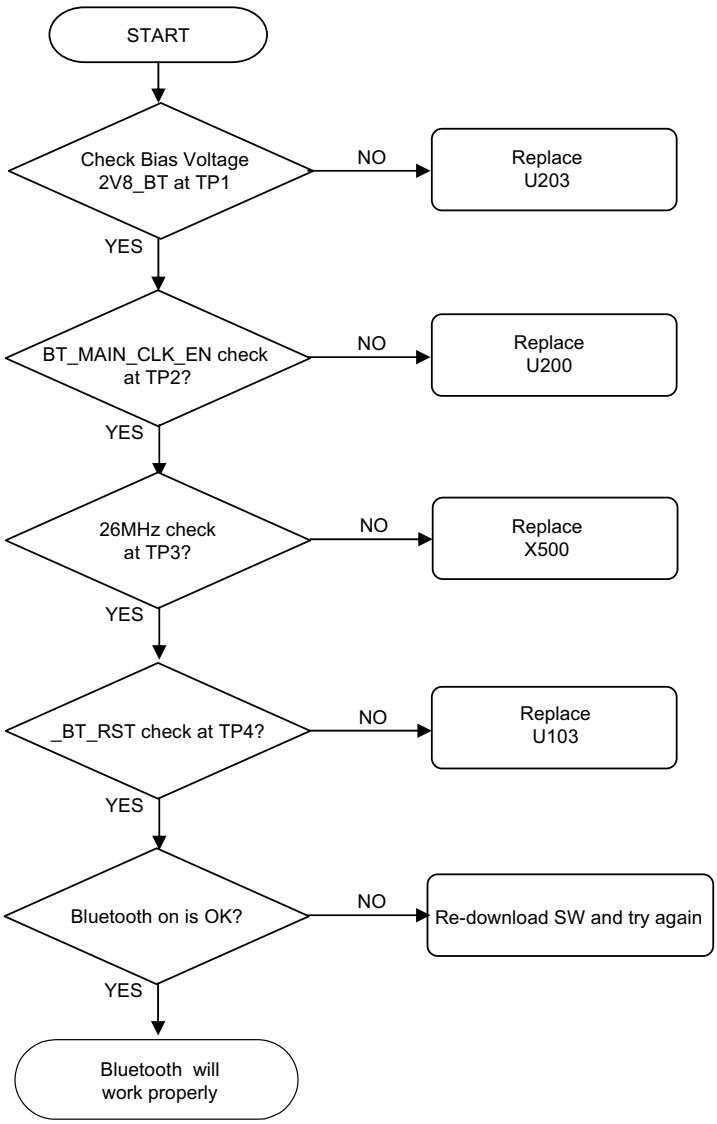


CIRCUIT



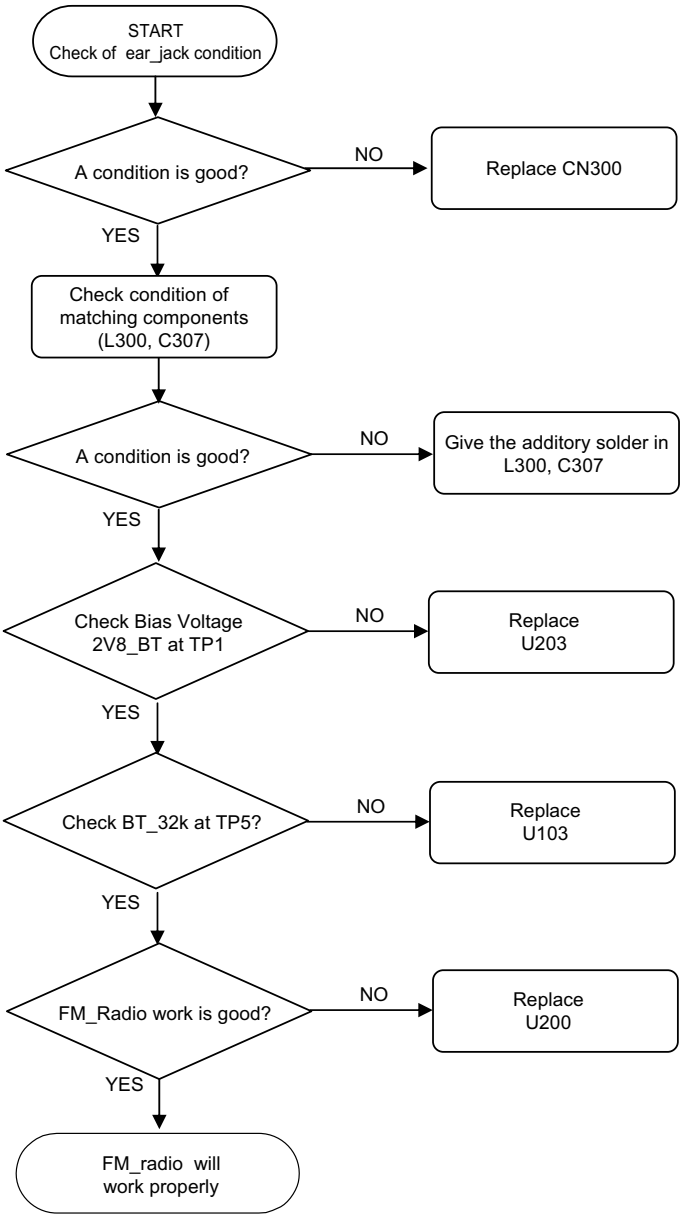
Bluetooth

CHECKING FLOW



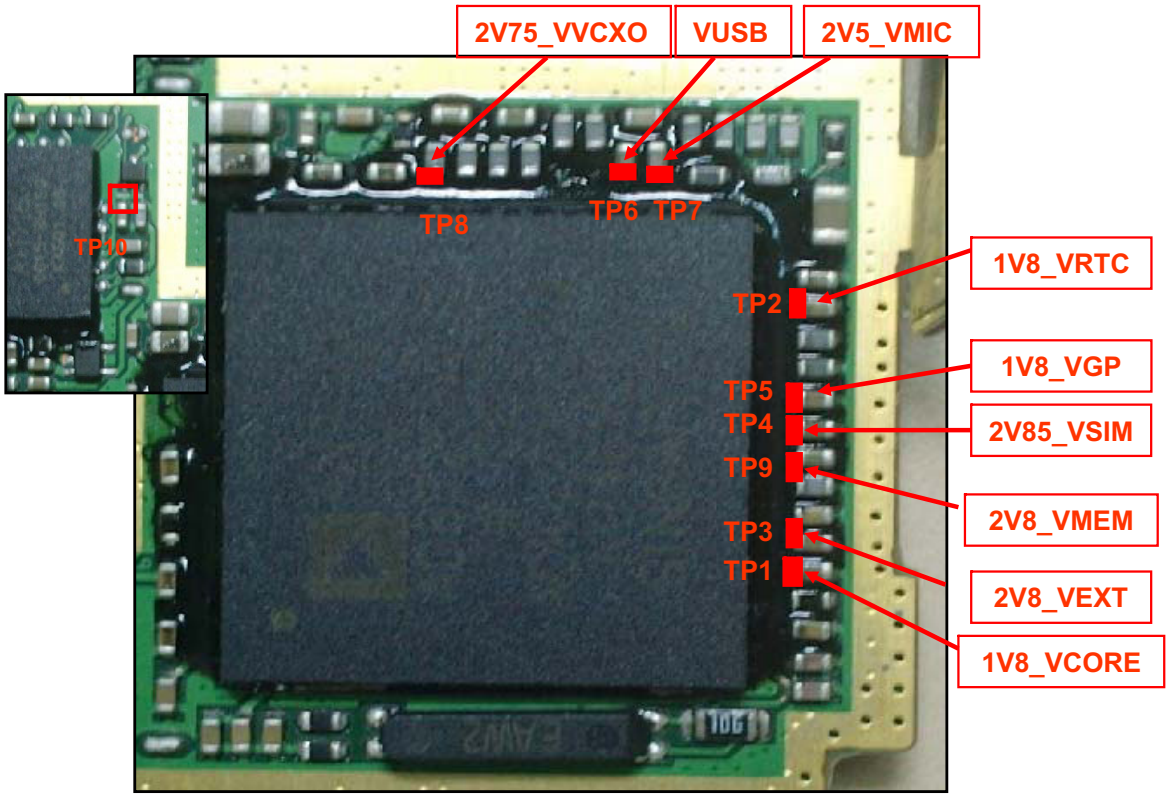
FM Radio

CHECKING FLOW

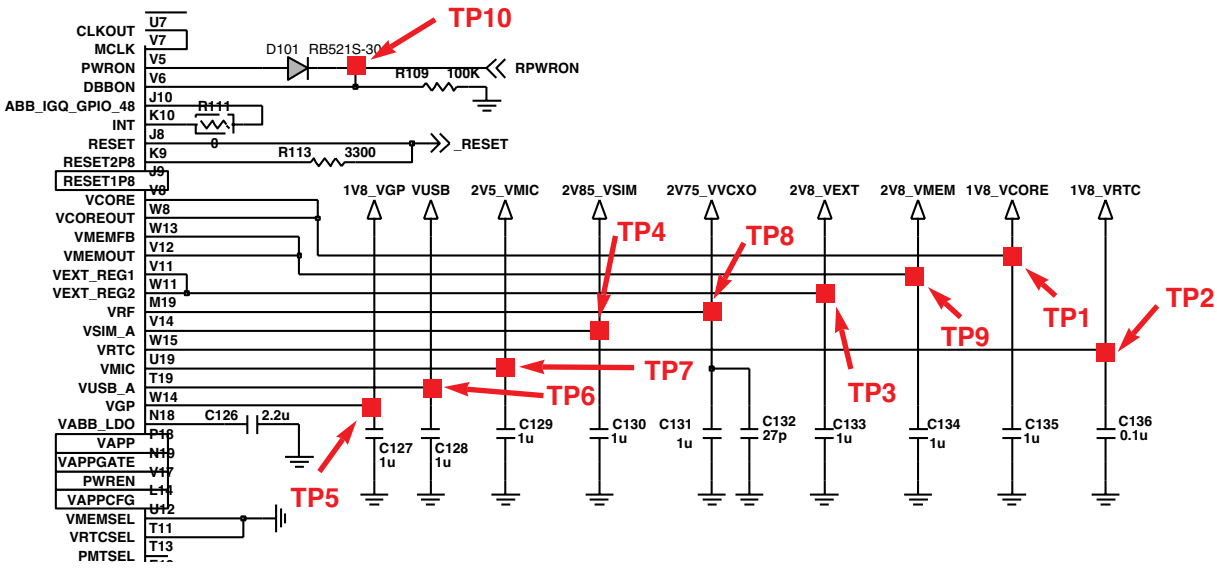


4.5 Power On Trouble

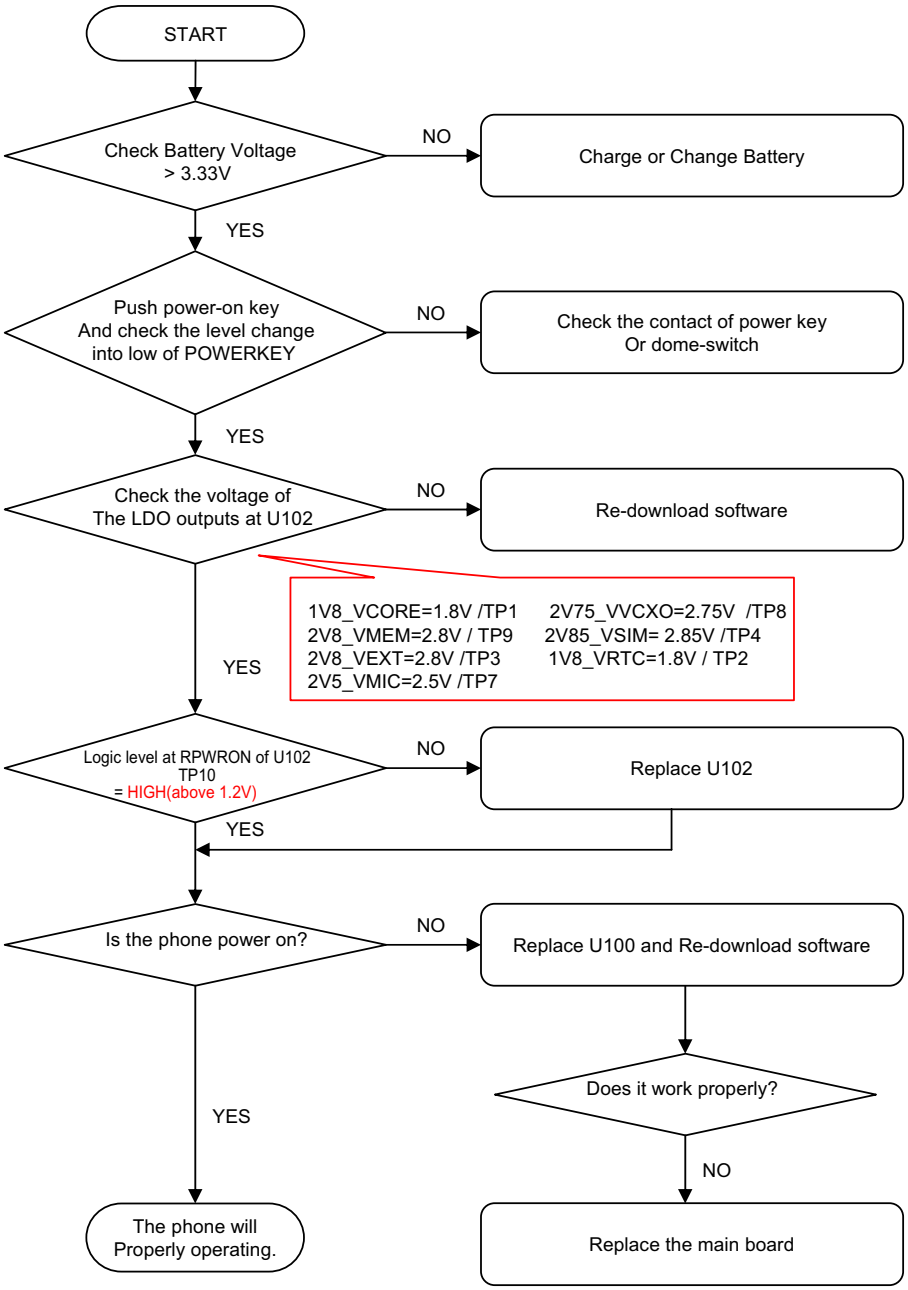
TEST POINT



CIRCUIT



CHECKING FLOW



4.6 Charging Trouble

TEST POINT

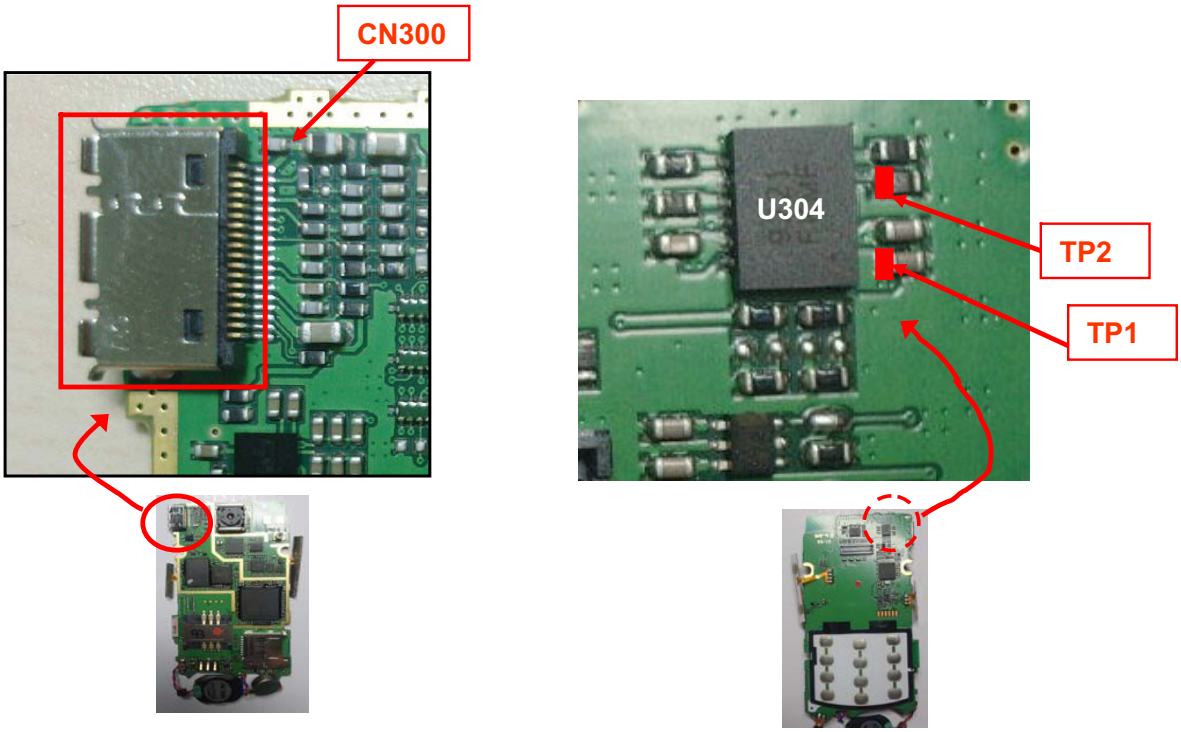
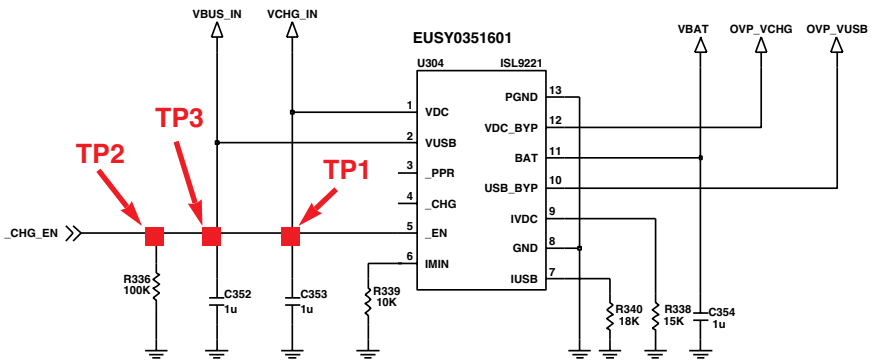


Figure 4.5

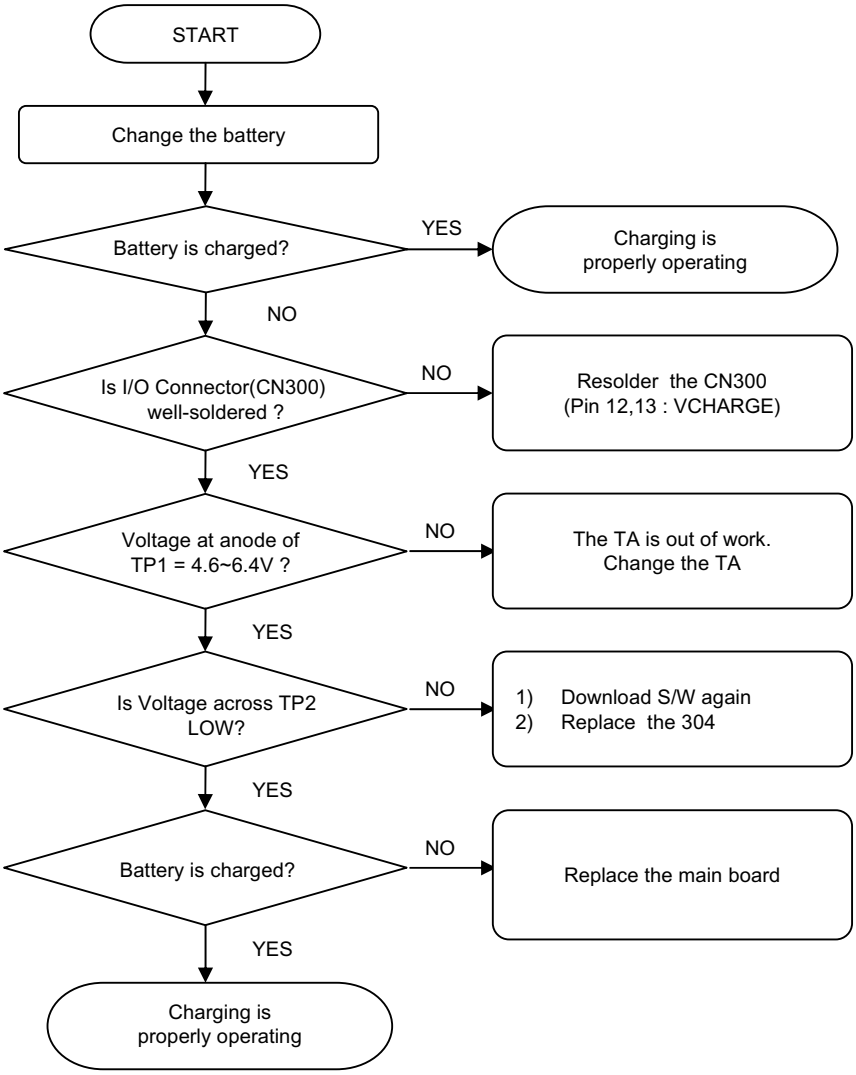
CIRCUIT

CHARGE(TA+USB)



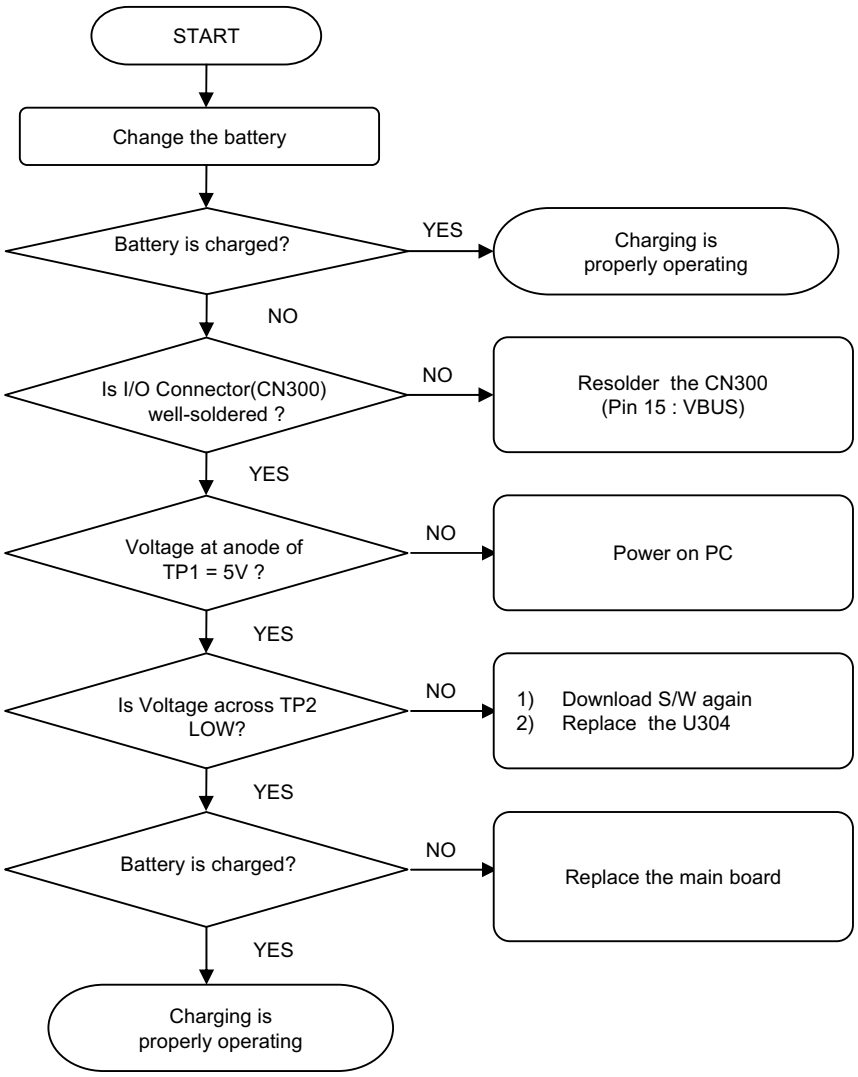
CHECKING FLOW

CASE : TA charge



CHECKING FLOW

CASE : USB charge



4.7 Vibrator Trouble

TEST POINT

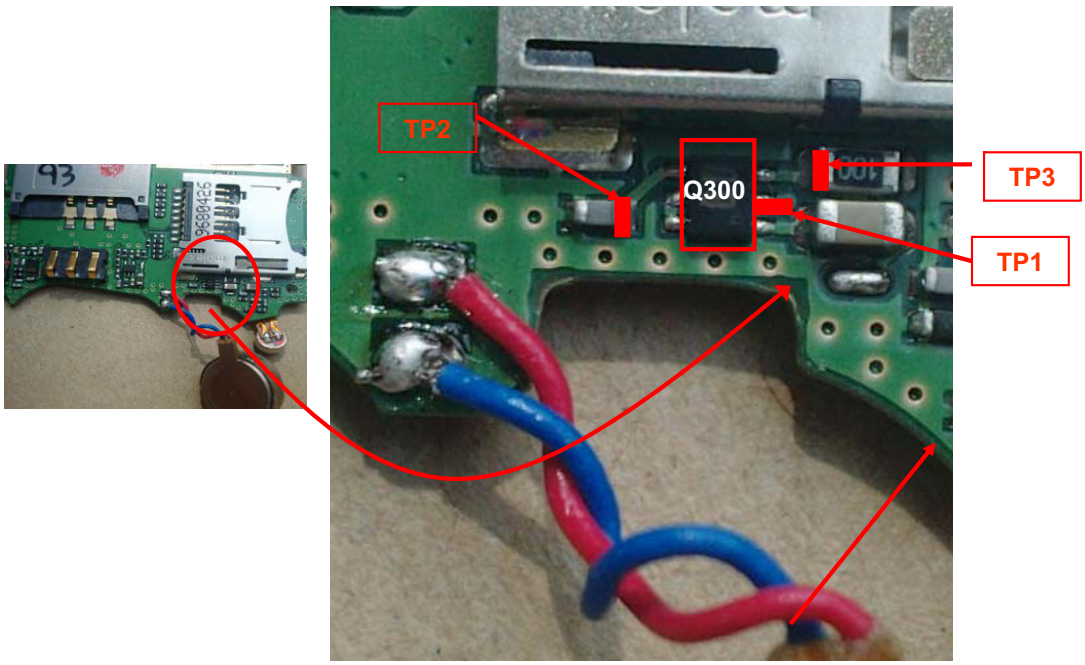
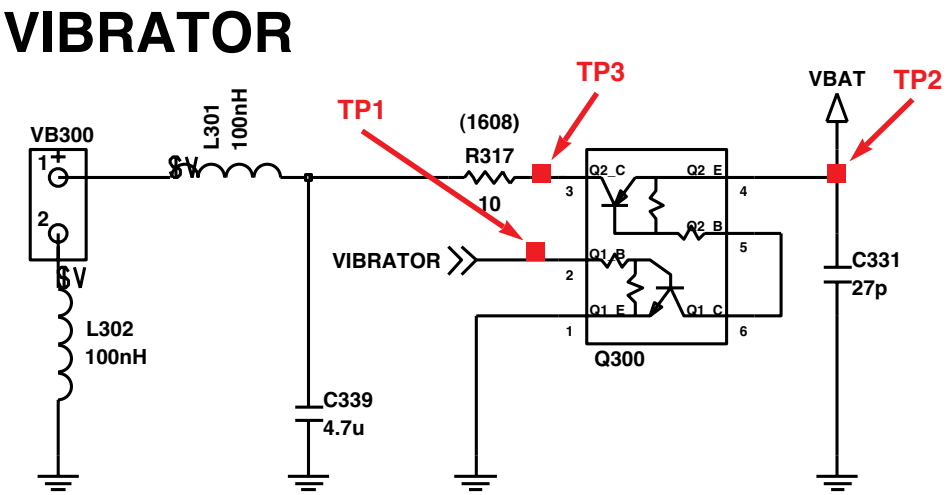


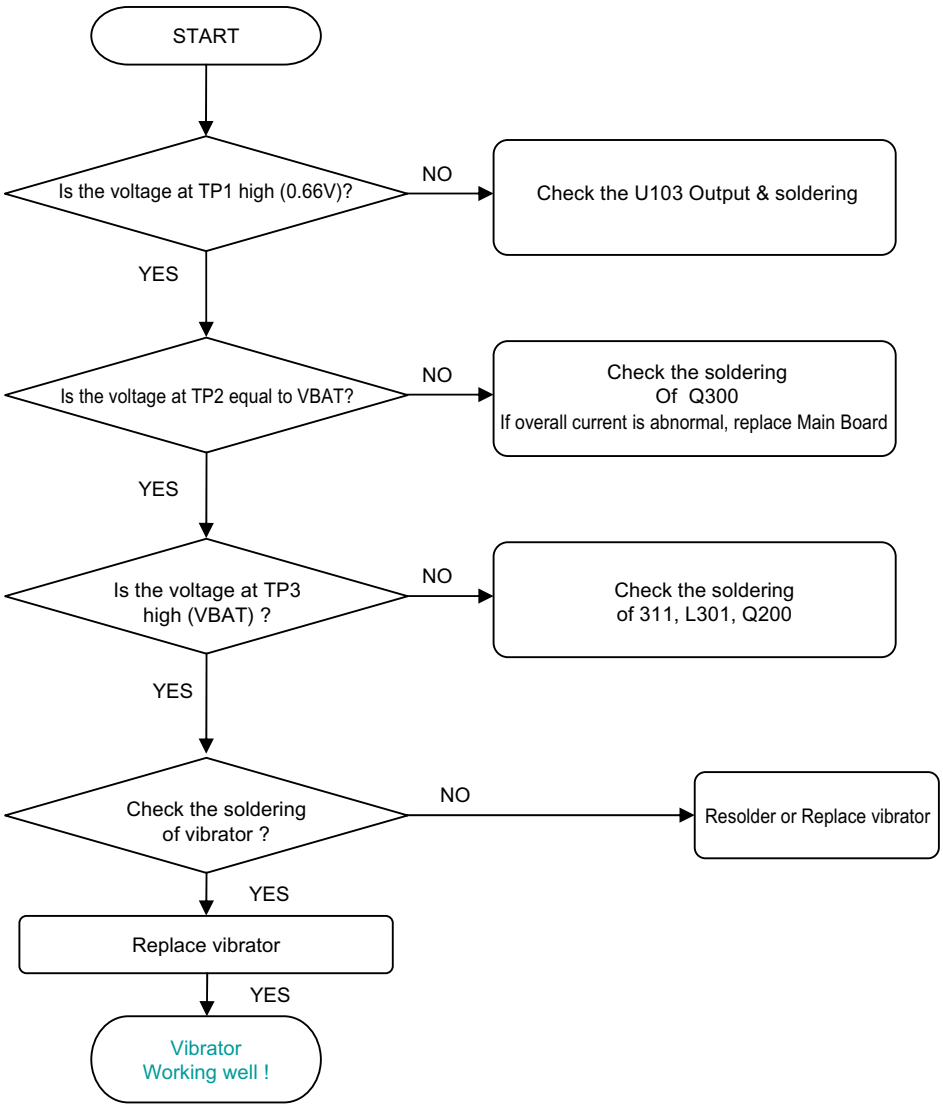
Figure 4.6

TEST POINT



CIRCUIT

SETTING : Enter the engineering mode, and set vibrator on at vibration of BB test menu



4.8 LCD Trouble

TEST POINT

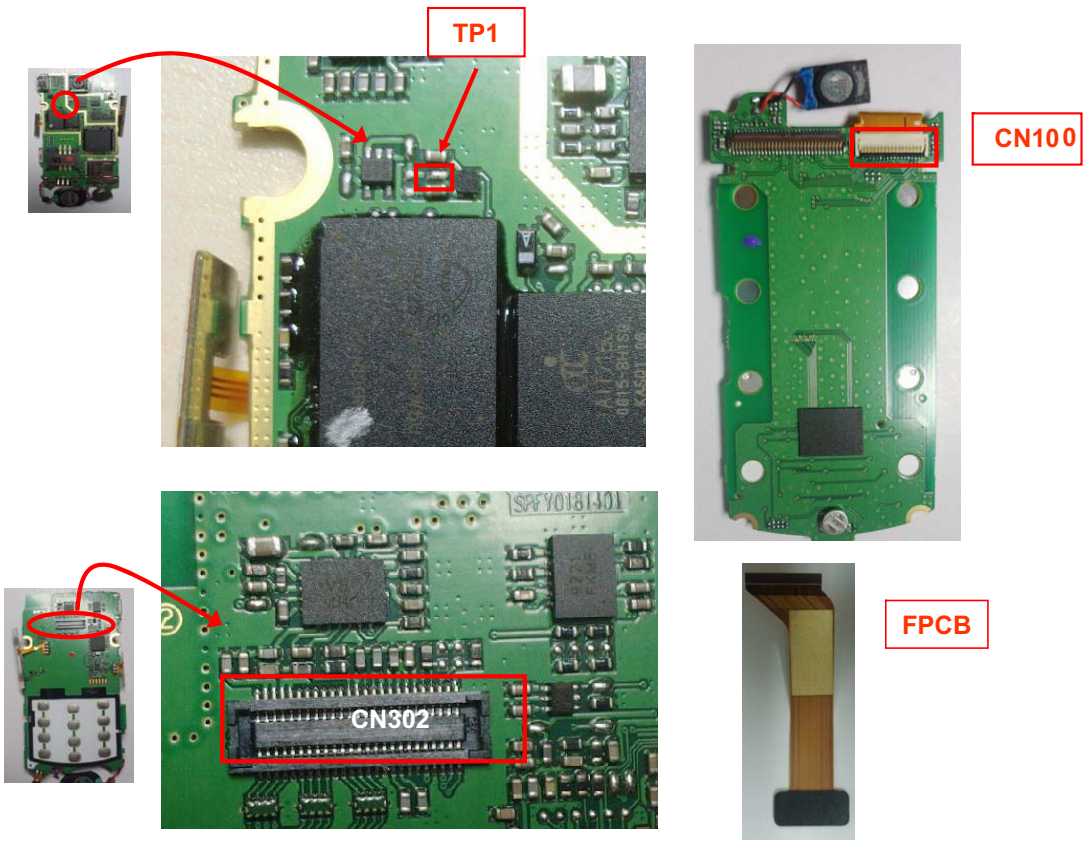
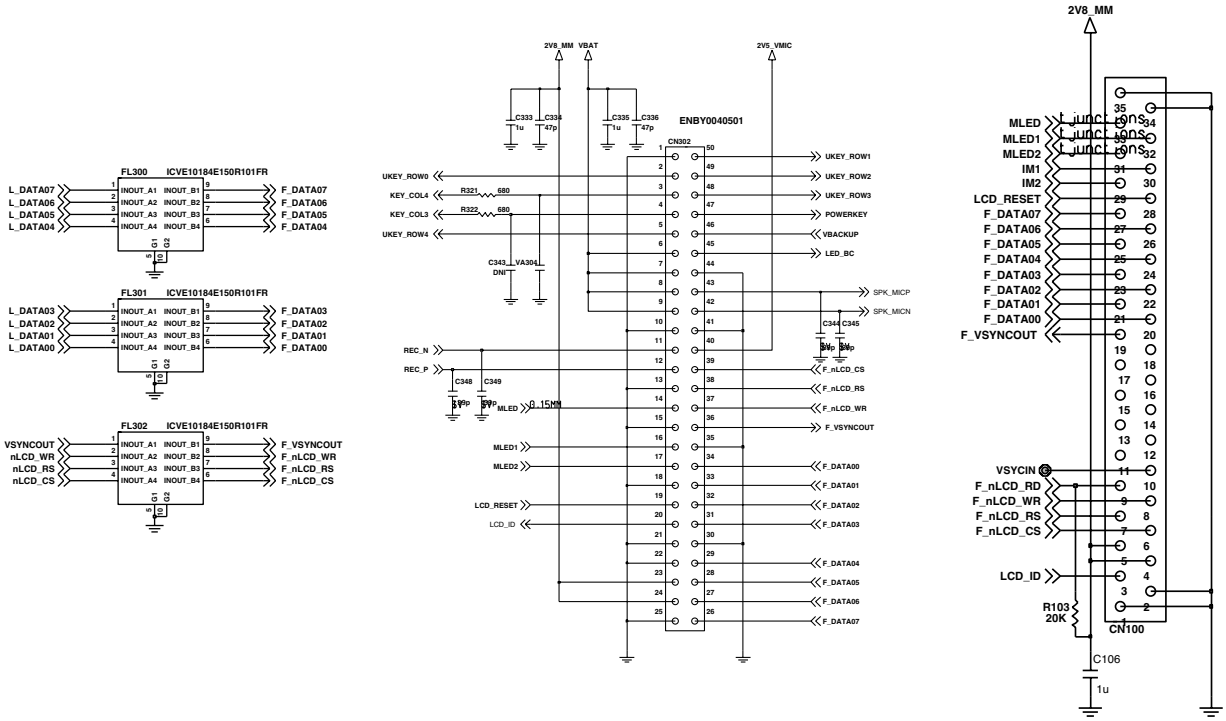
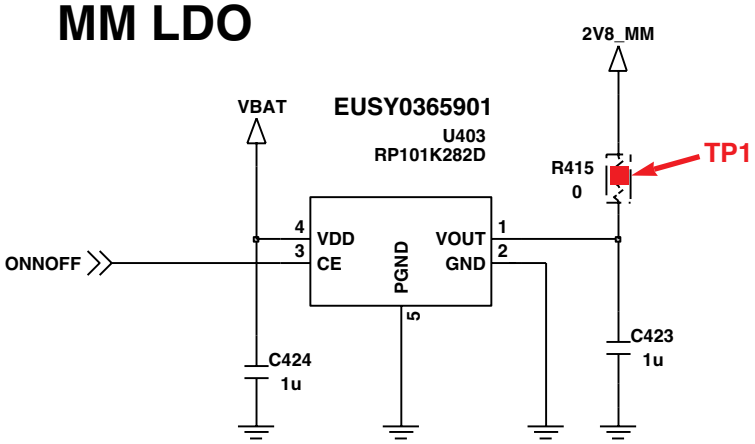


Figure 4.8

CIRCUIT

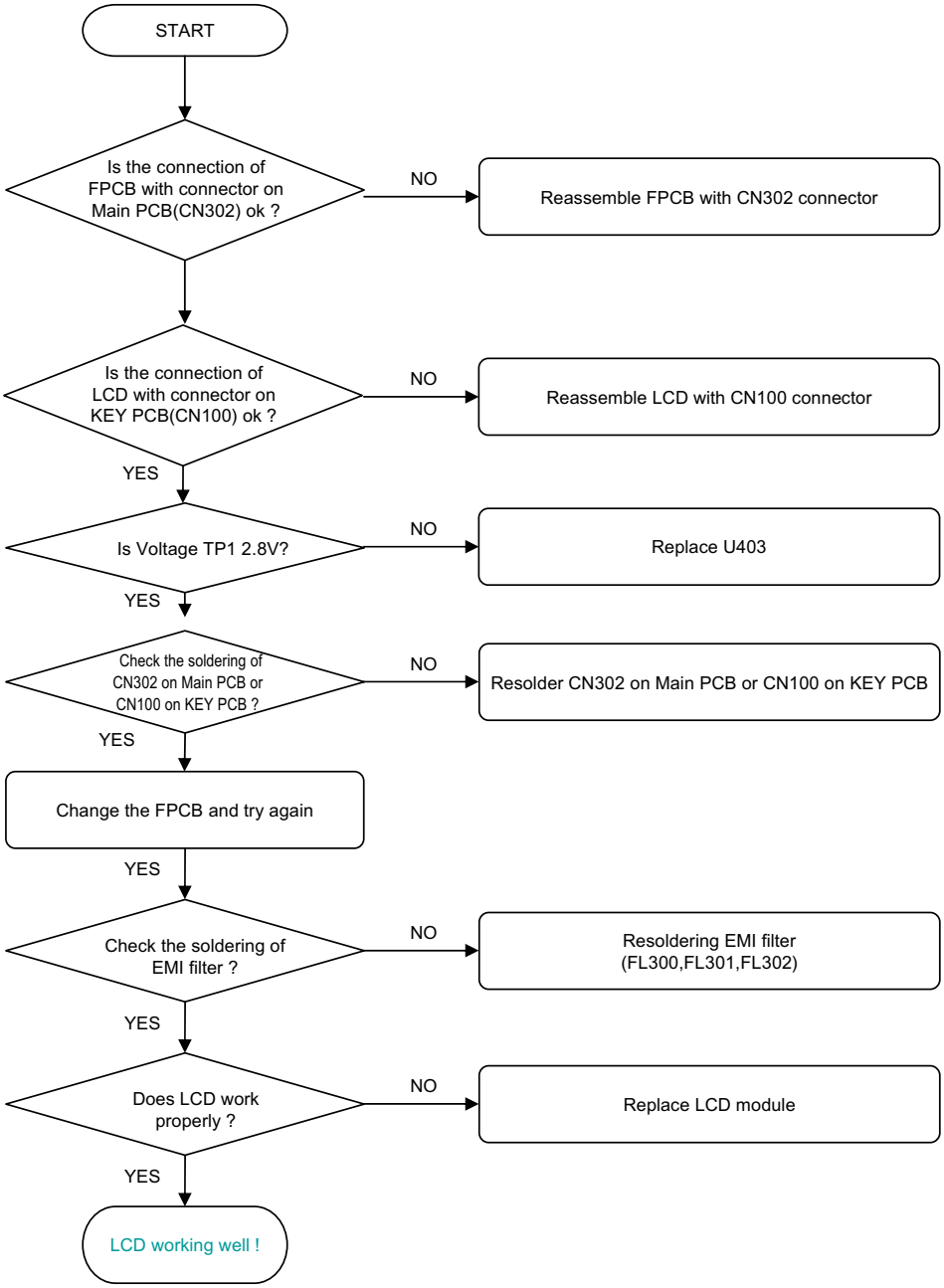


MM LDO



4. TROUBLE SHOOTING

CHECKING FLOW



4.9 Camera Trouble

TEST POINT

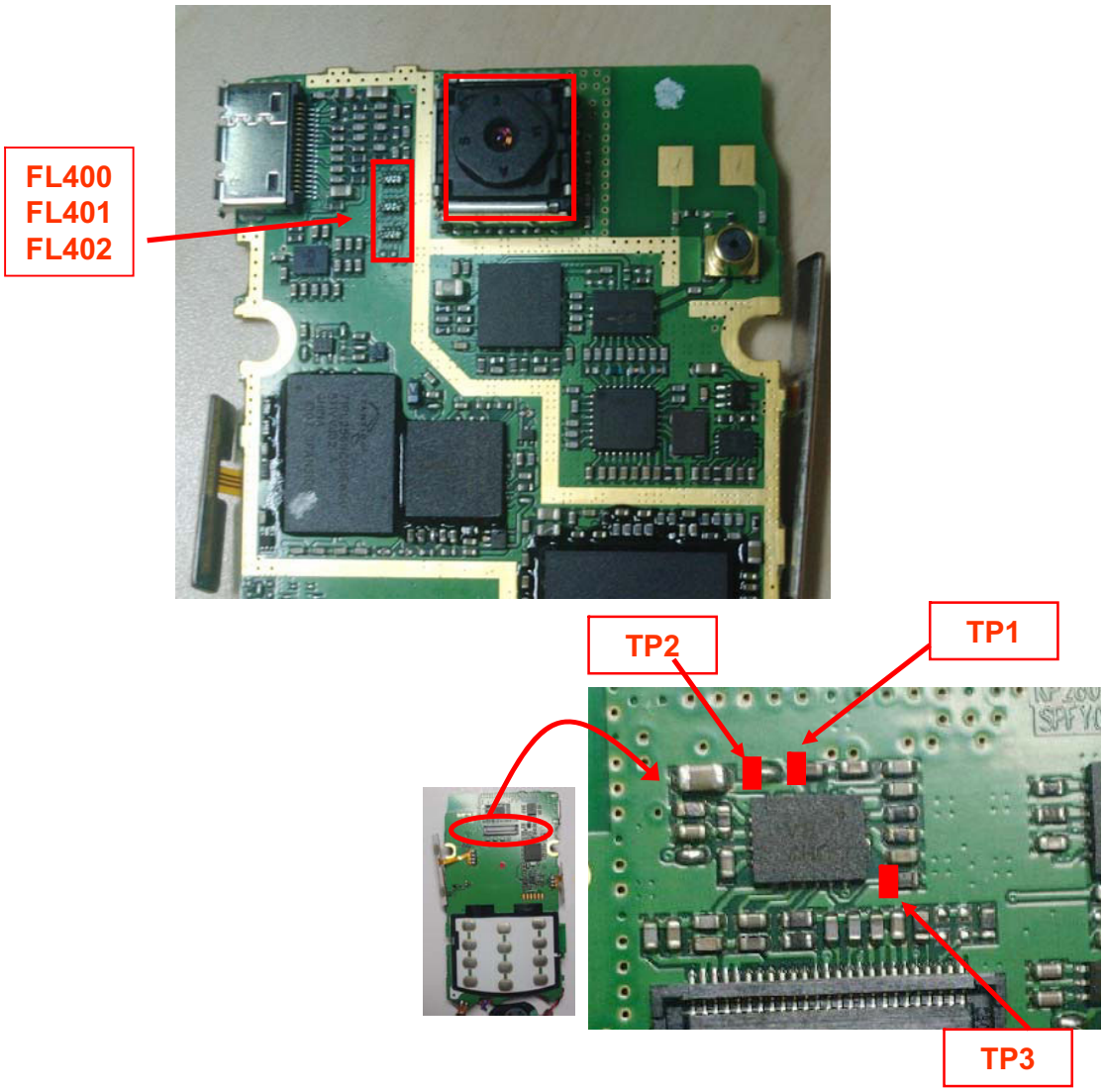
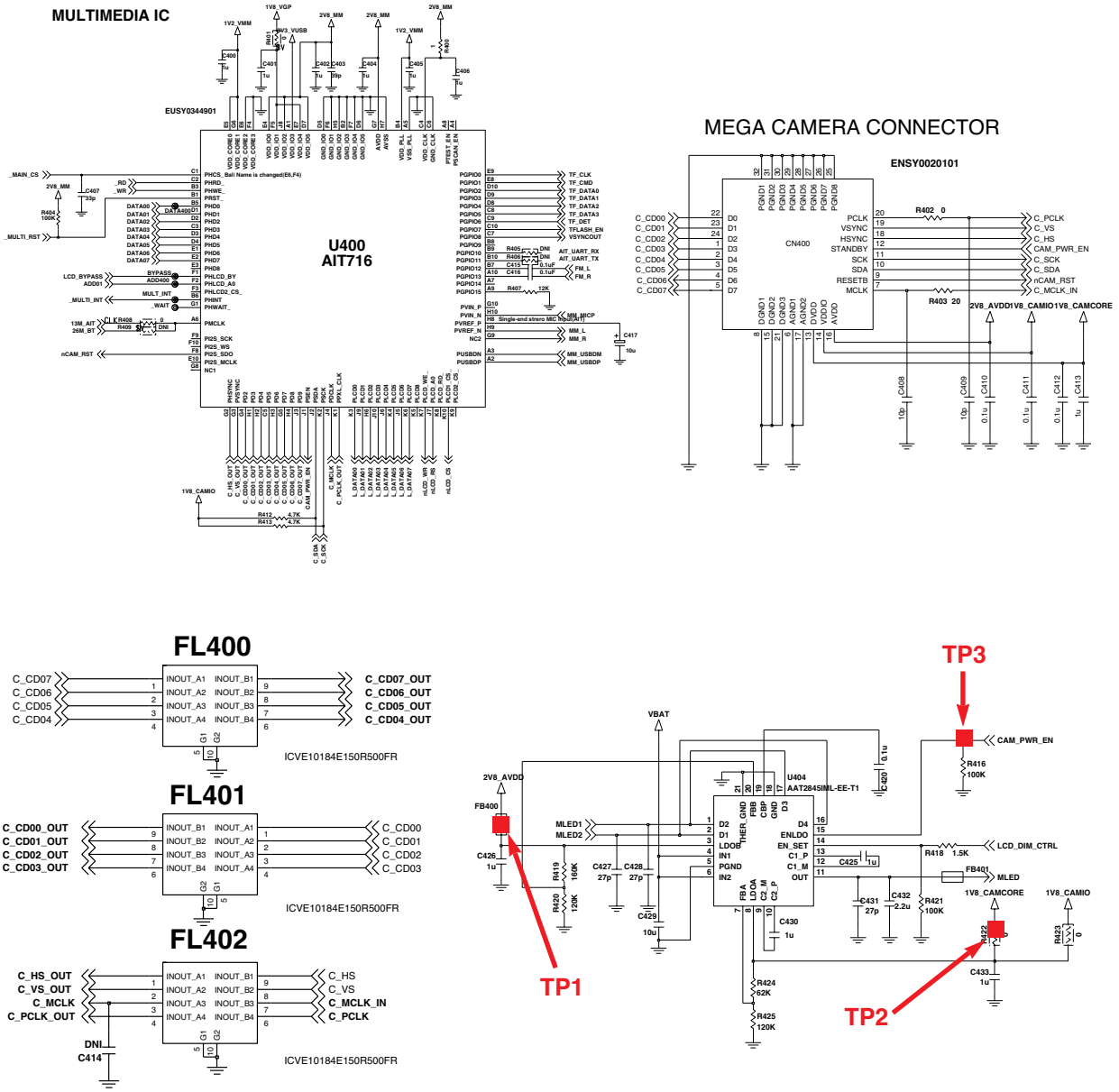
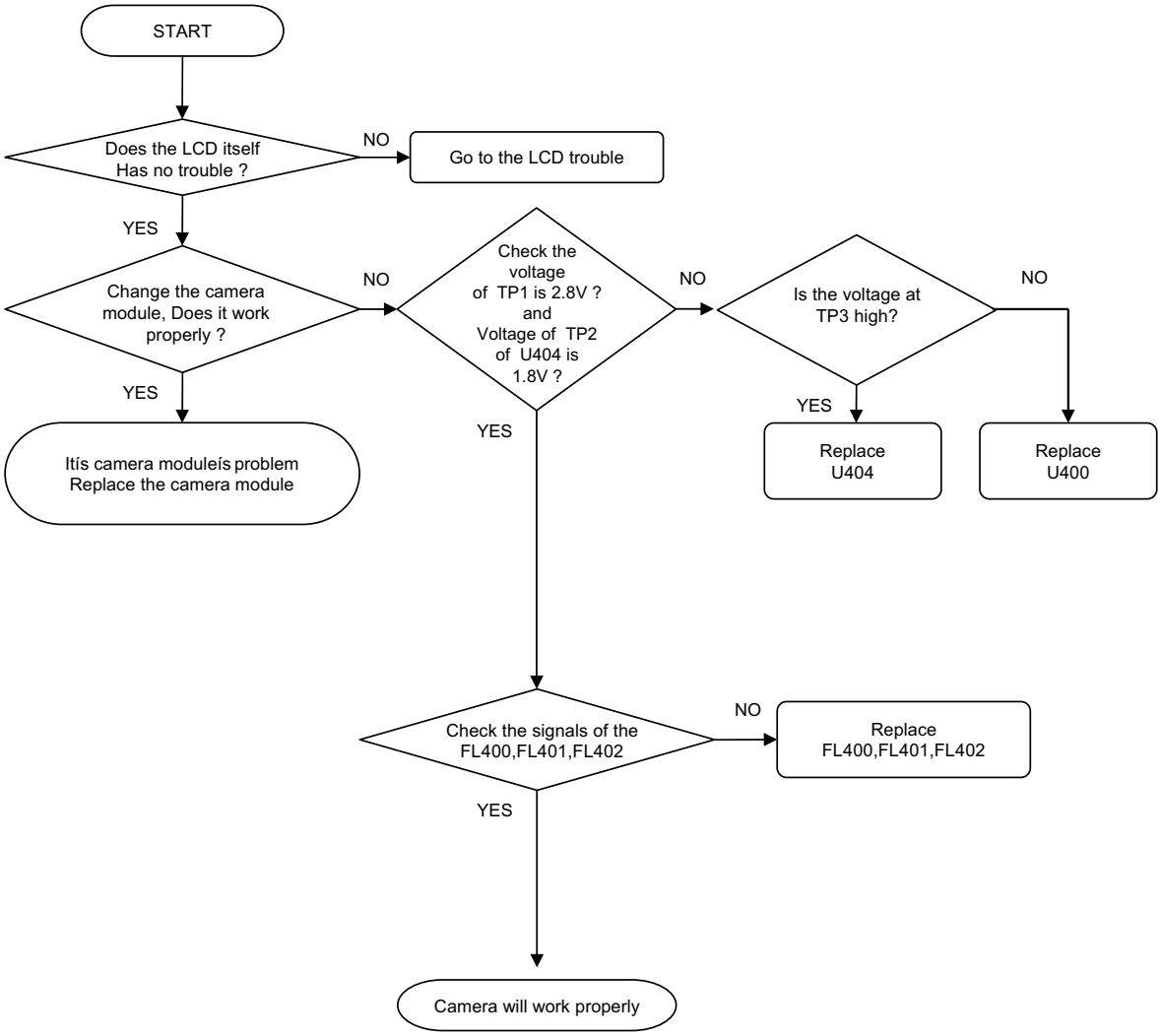


Figure 4.8

CIRCUIT



CHECKING FLOW



4.10 Speaker Trouble

TEST POINT

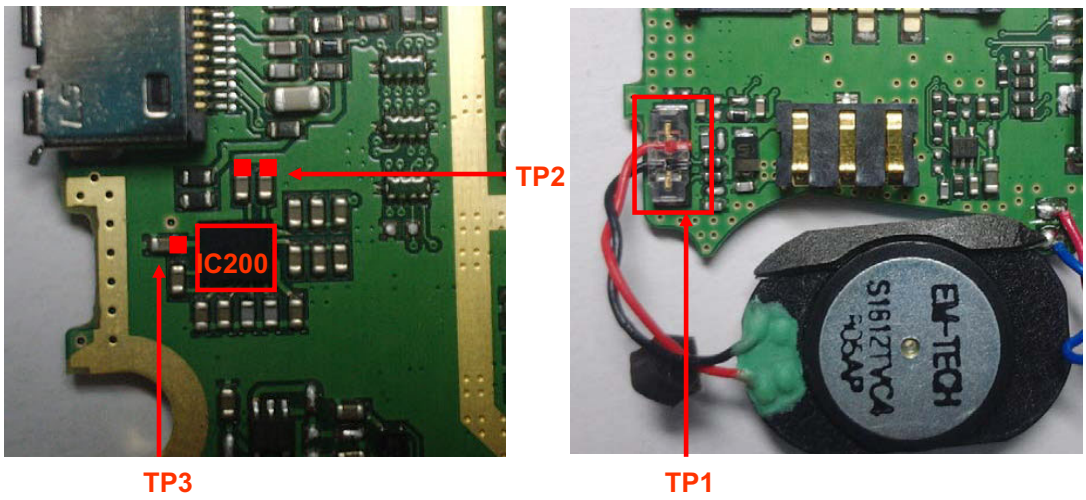
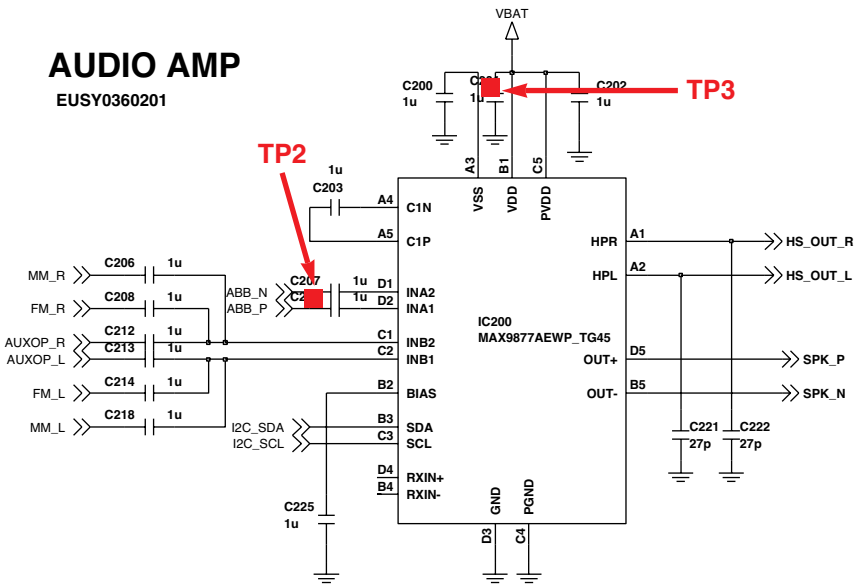
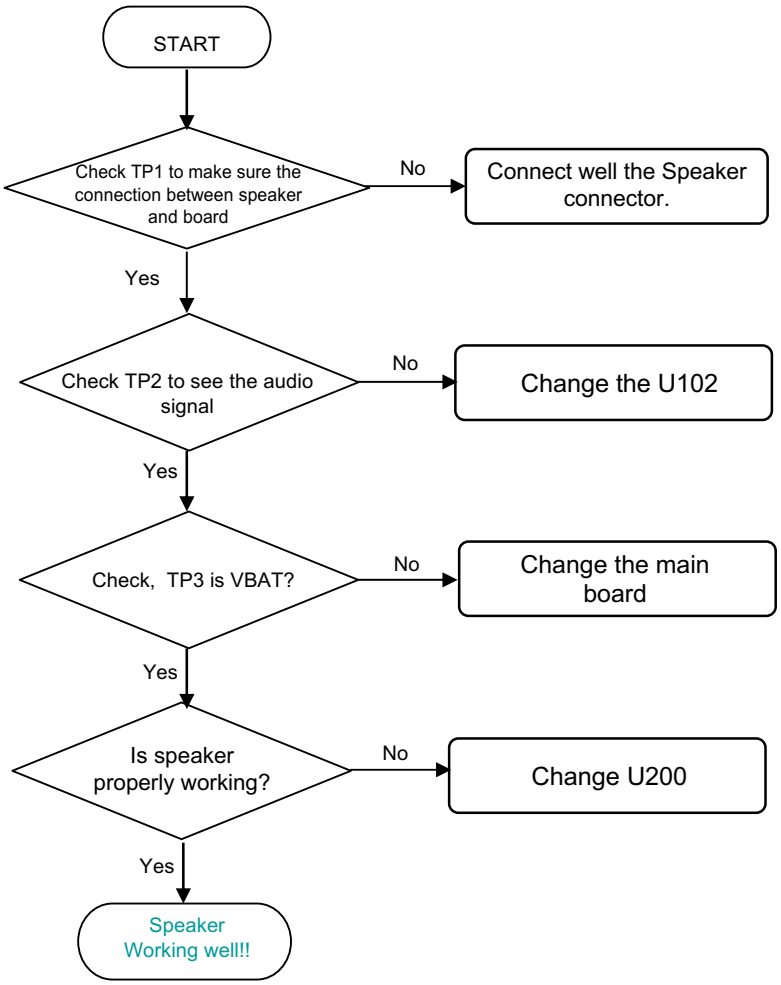


Figure 4.9

CIRCUIT



CHECKING FLOW



4.11 SIM Card Interface Trouble

TEST POINT

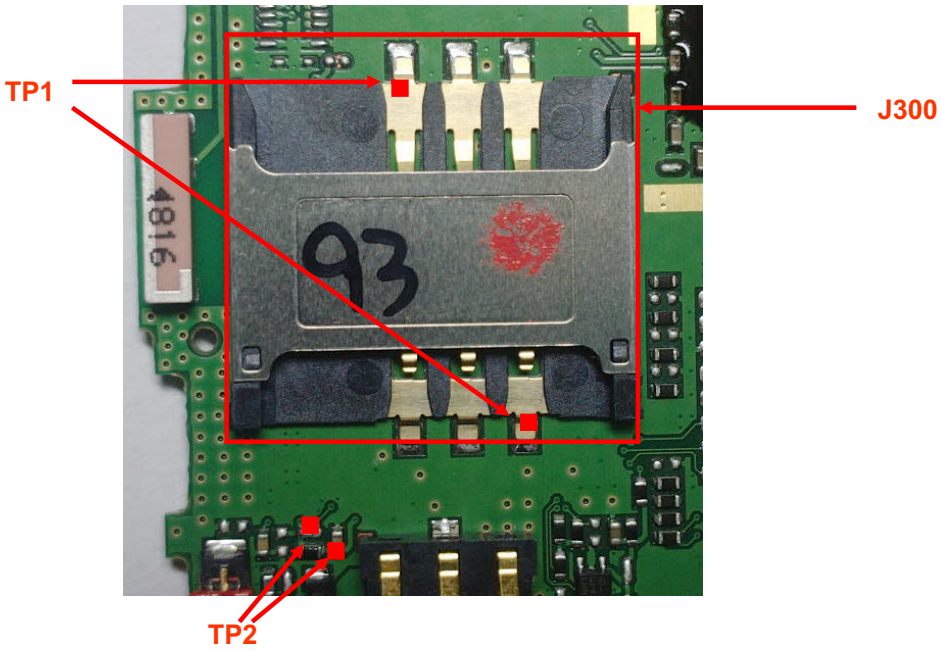
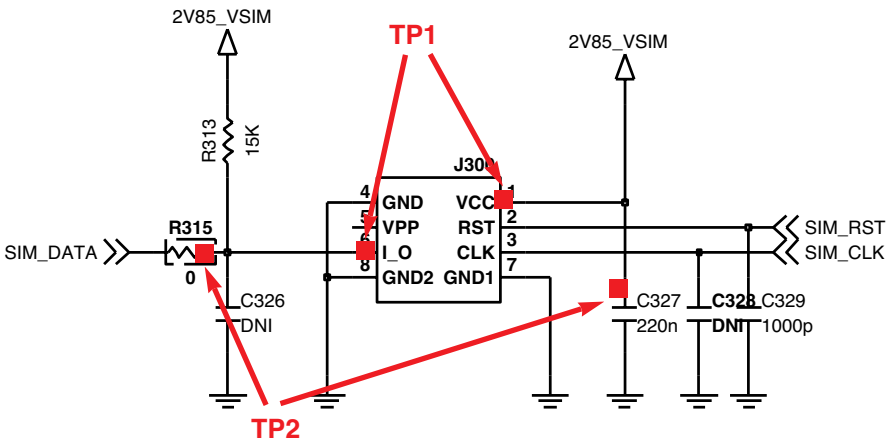
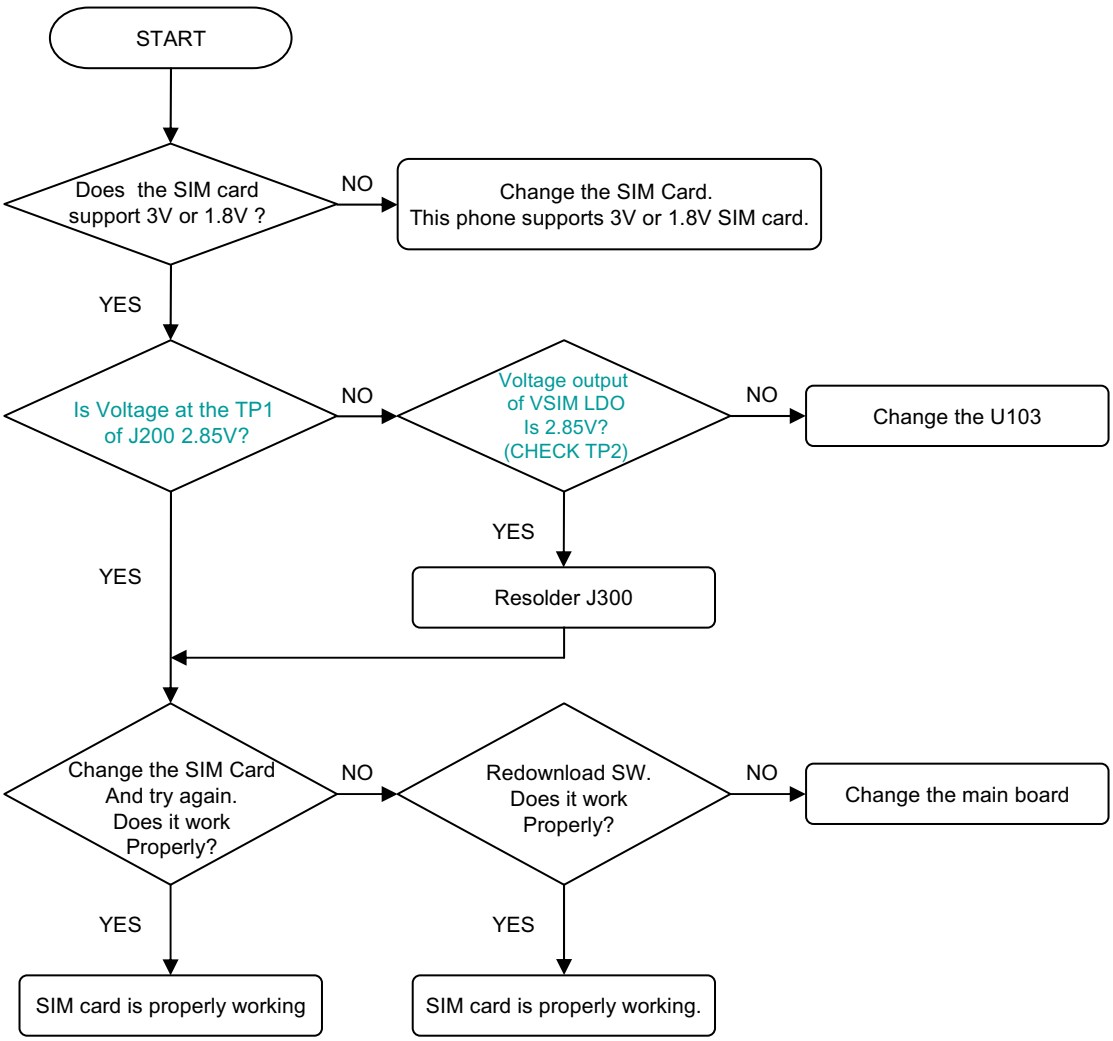


Figure 4.11

CIRCUIT



CHECKING FLOW



4.12 Earphone Trouble

TEST POINT

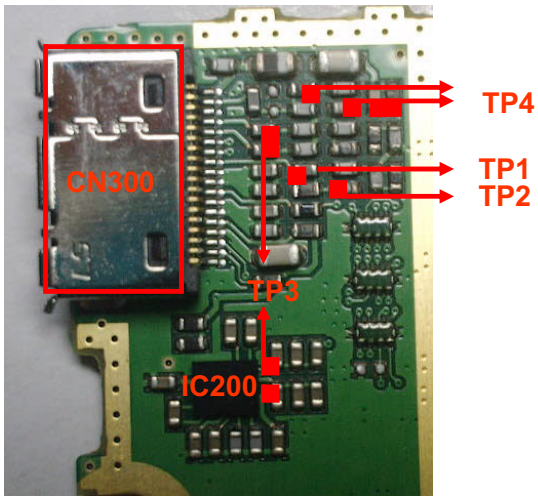


Figure 4.11

CIRCUIT

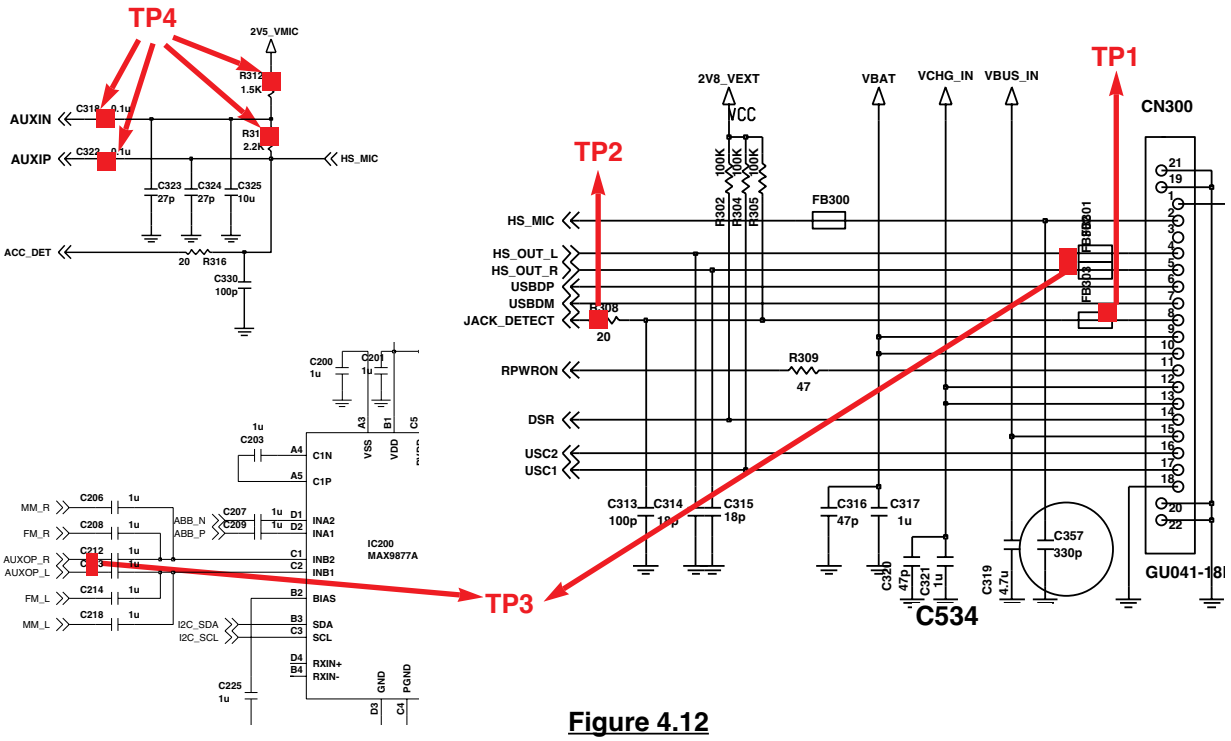
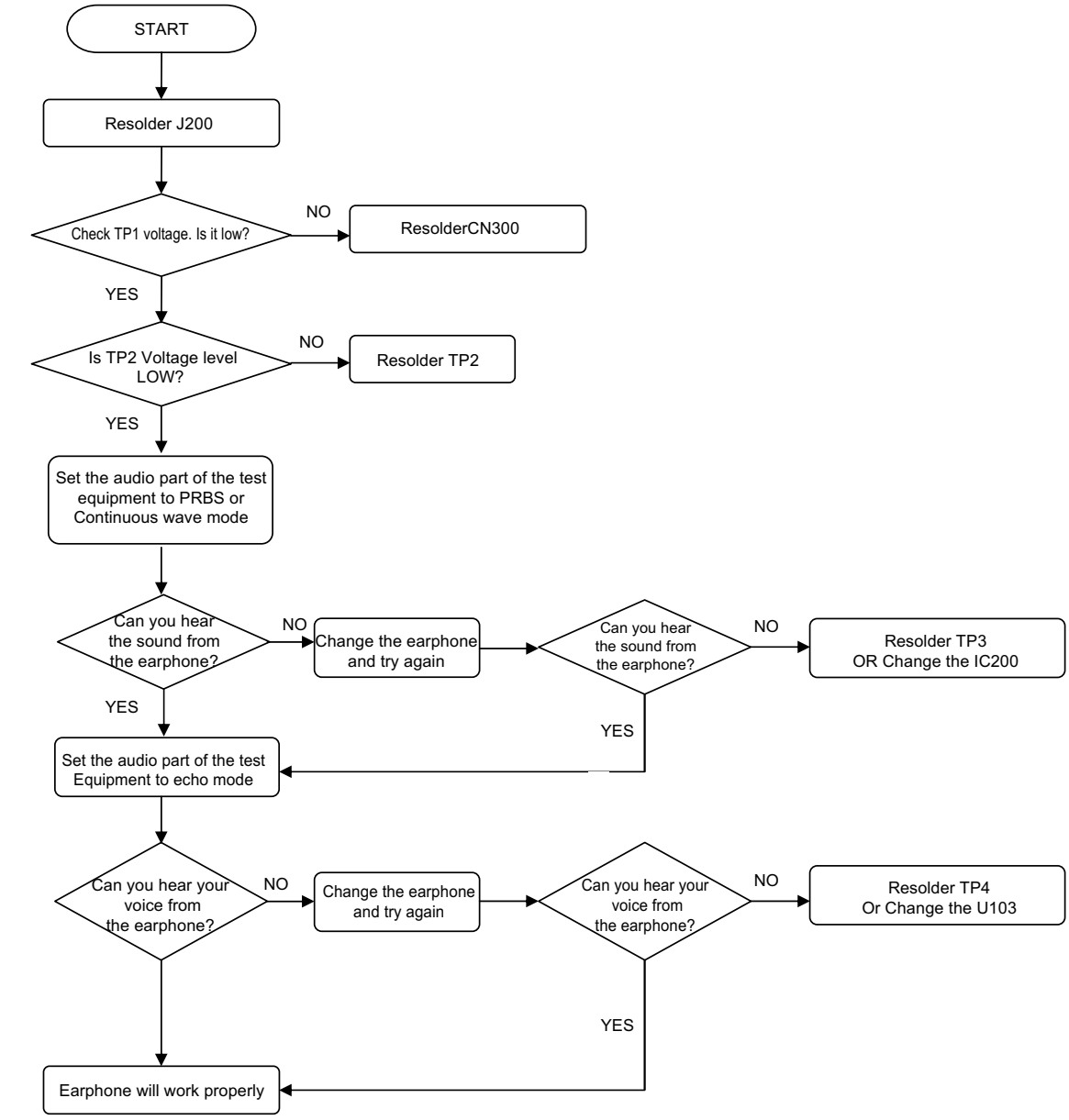


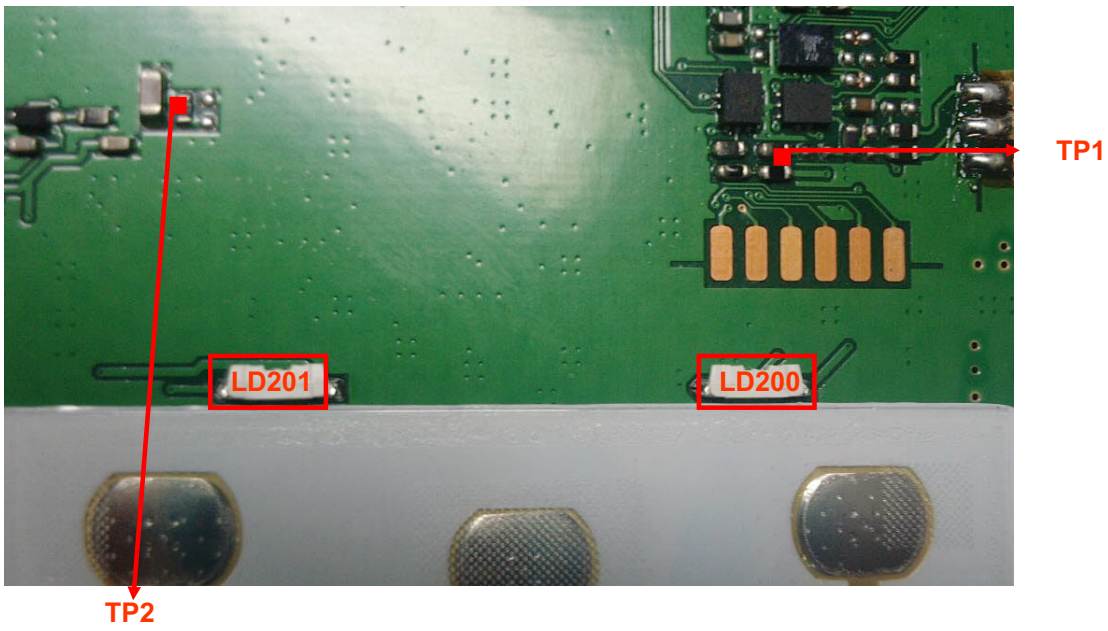
Figure 4.12

CHECKING FLOW



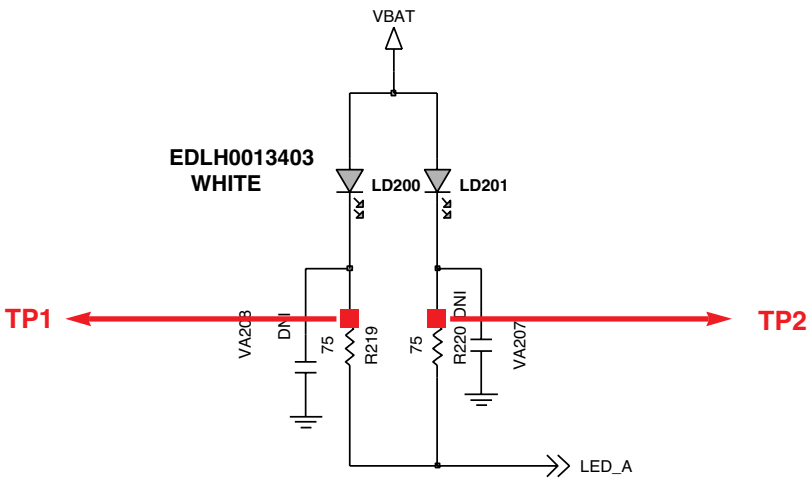
4.13 KEY backlight Trouble

TEST POINT

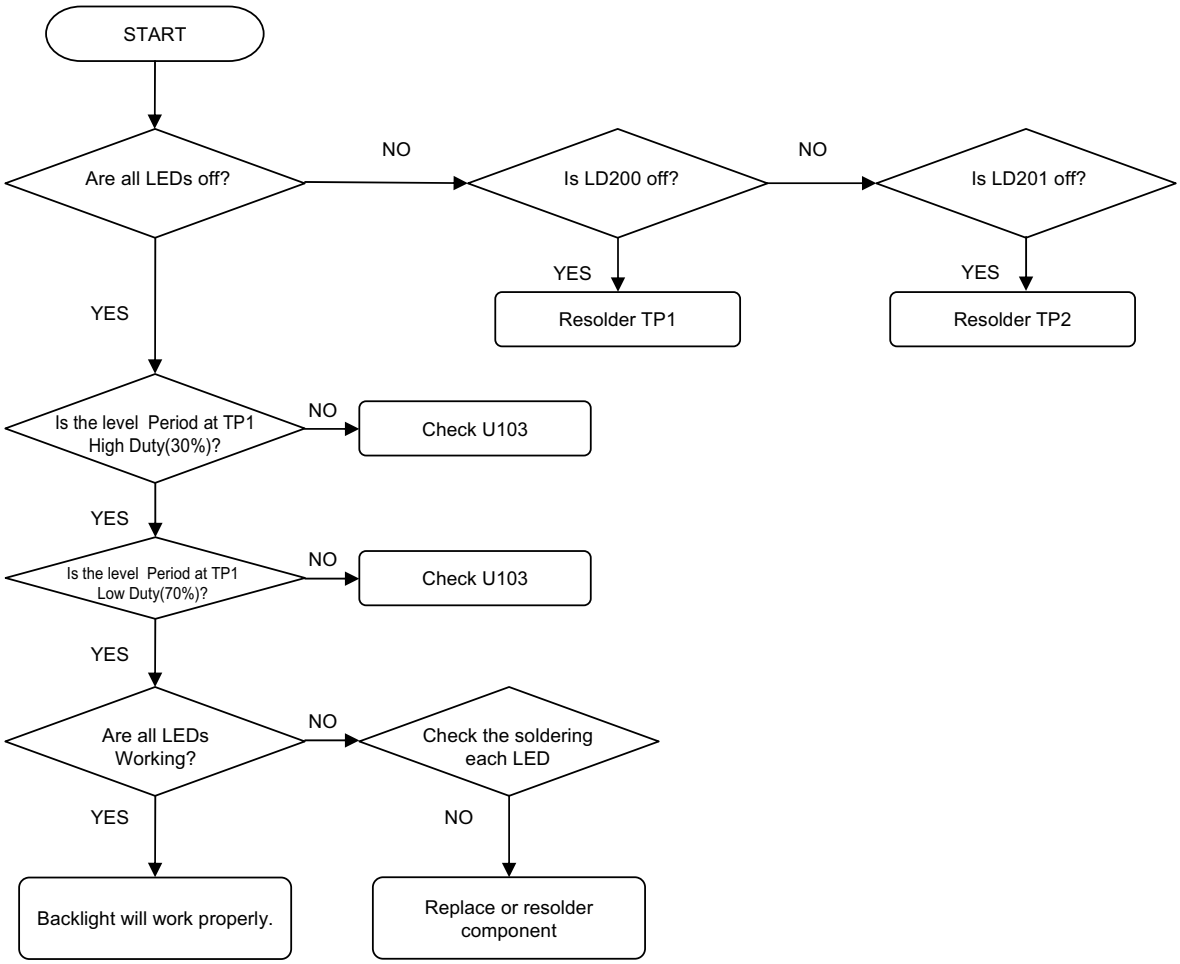


CIRCUIT

KEY BACKLIGHT



CHECKING FLOW



4.14 Receiver Trouble

TEST POINT

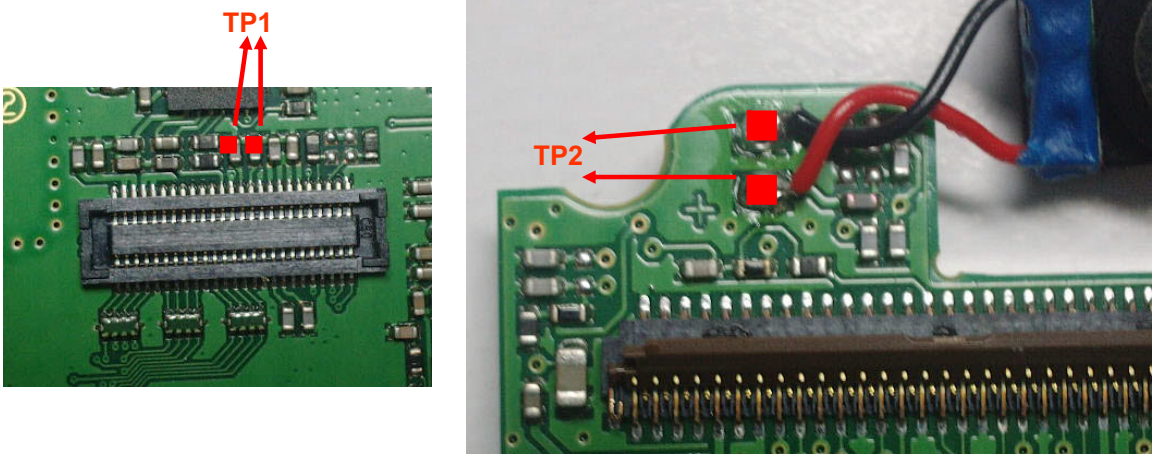
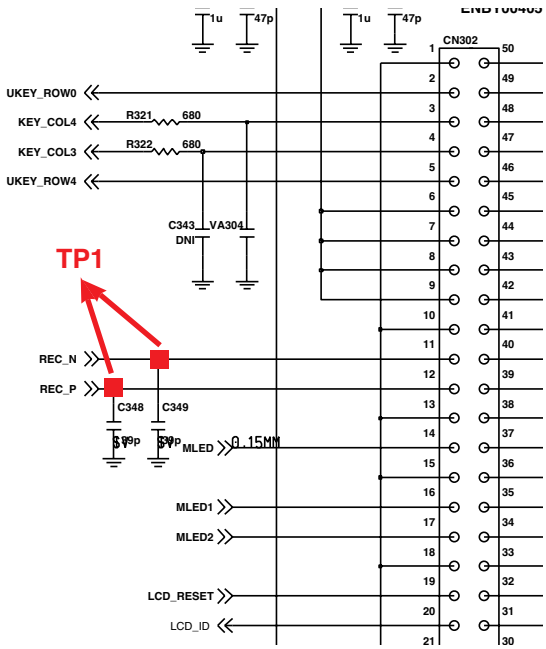
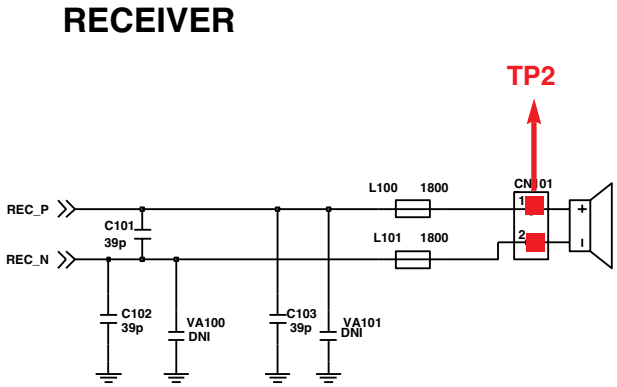


Figure 4.13

CIRCUIT

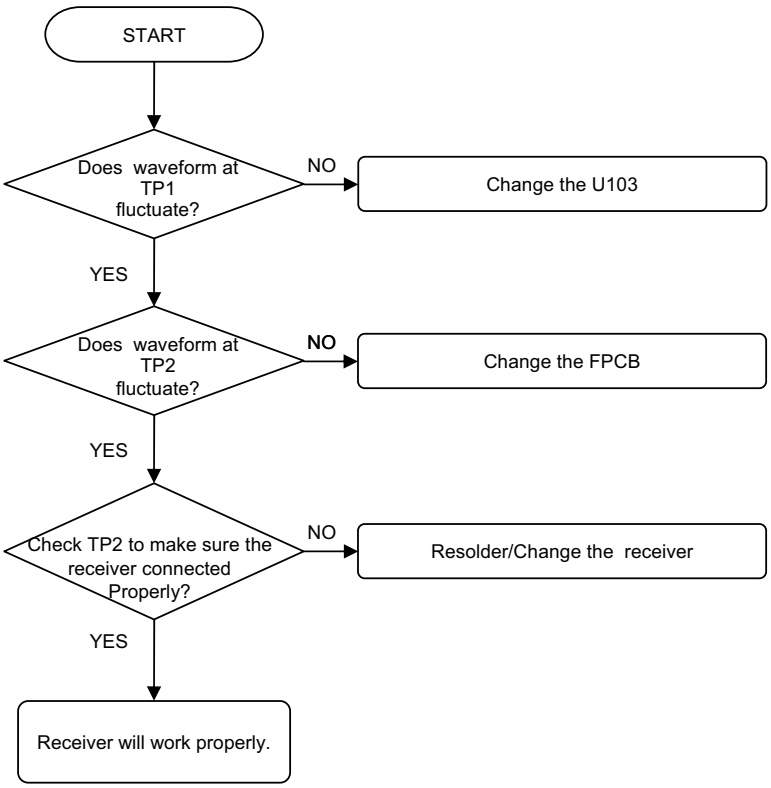




CHECKING FLOW

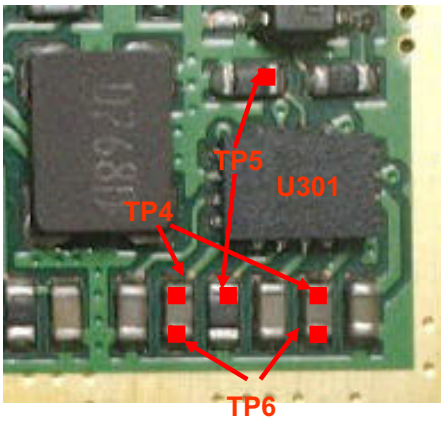
SETTING : After initialize Agilent 8960, Test GSM900, DCS,PCS mode

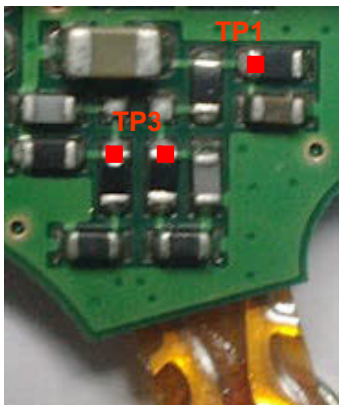
Set the property of audio as PRBS or continuous wave. Set the receiving volume of mobile as Max.



4.15 Microphone Trouble

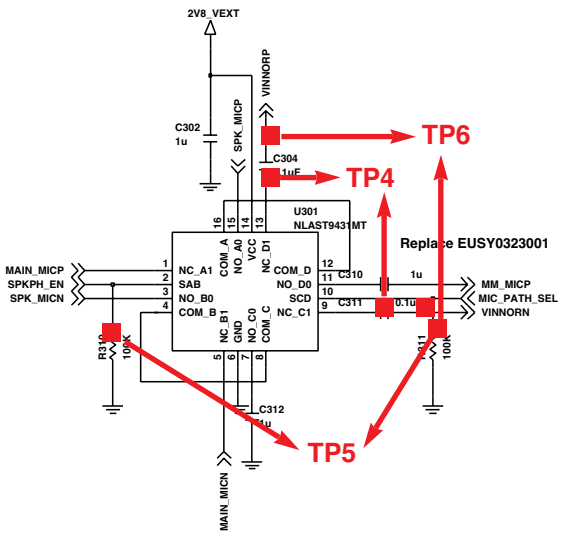
TEST POINT

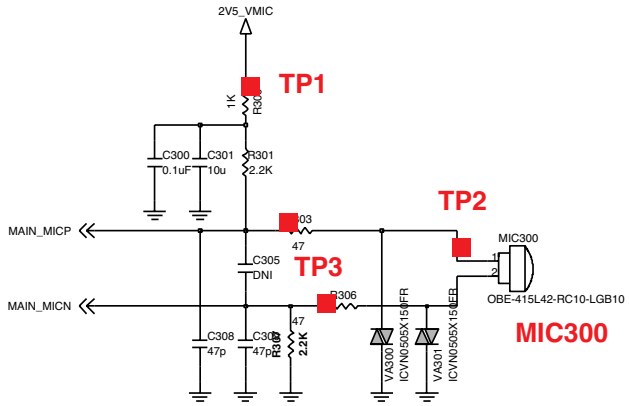




CIRCUIT

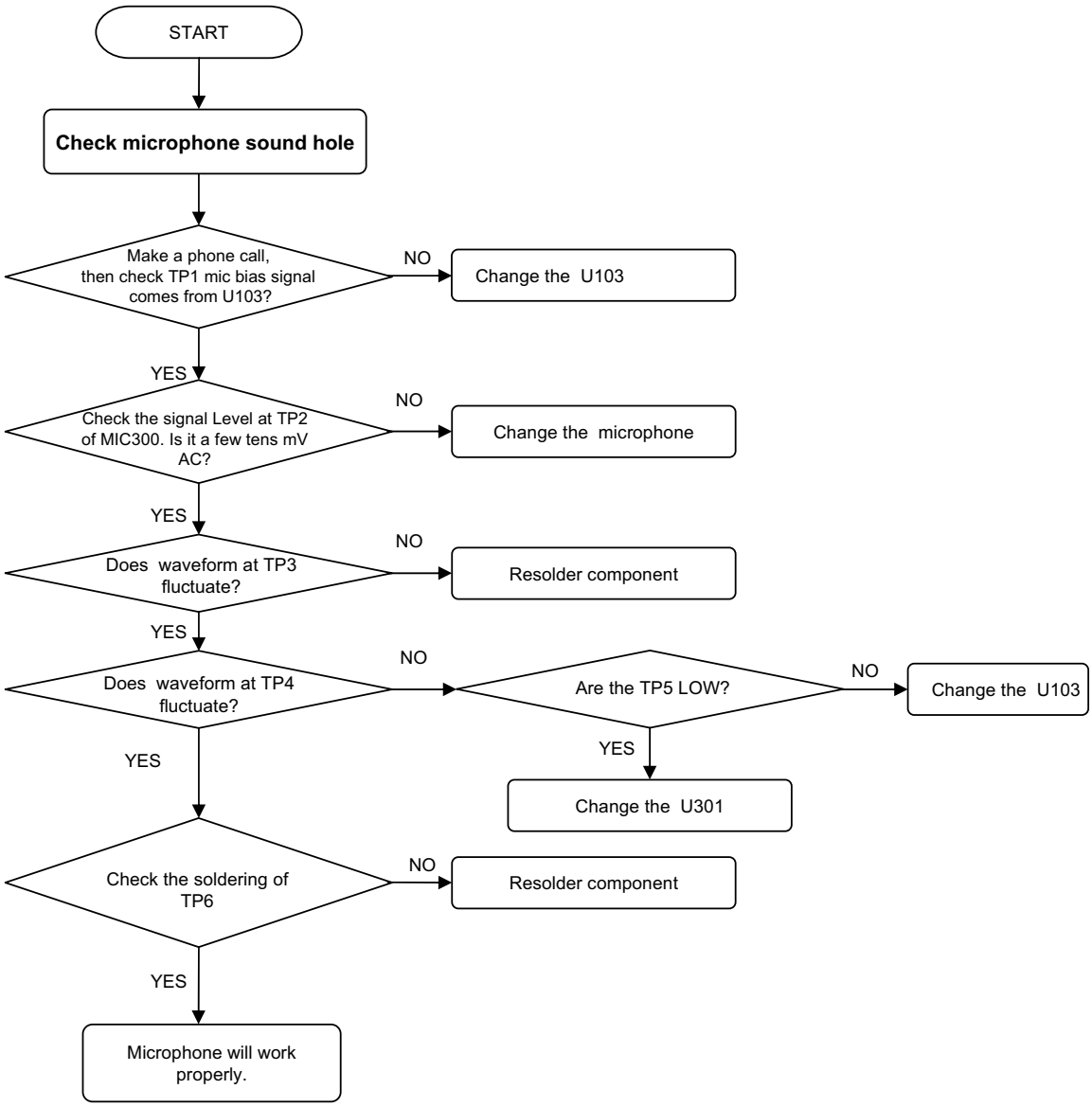
MICROPHONE PATH SELECTION





CHECKING FLOW

SETTING : After initialize Agilent 8960, Test GSM900, DCS, PCS mode



4.16 RTC Trouble

TEST POINT

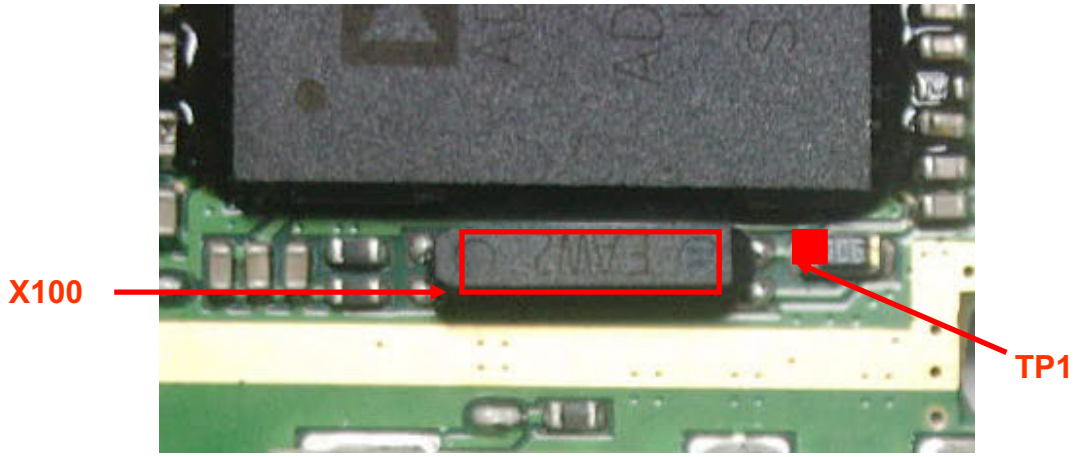
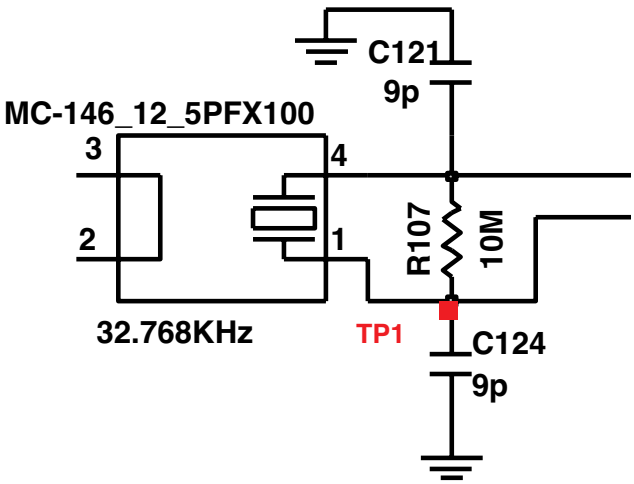
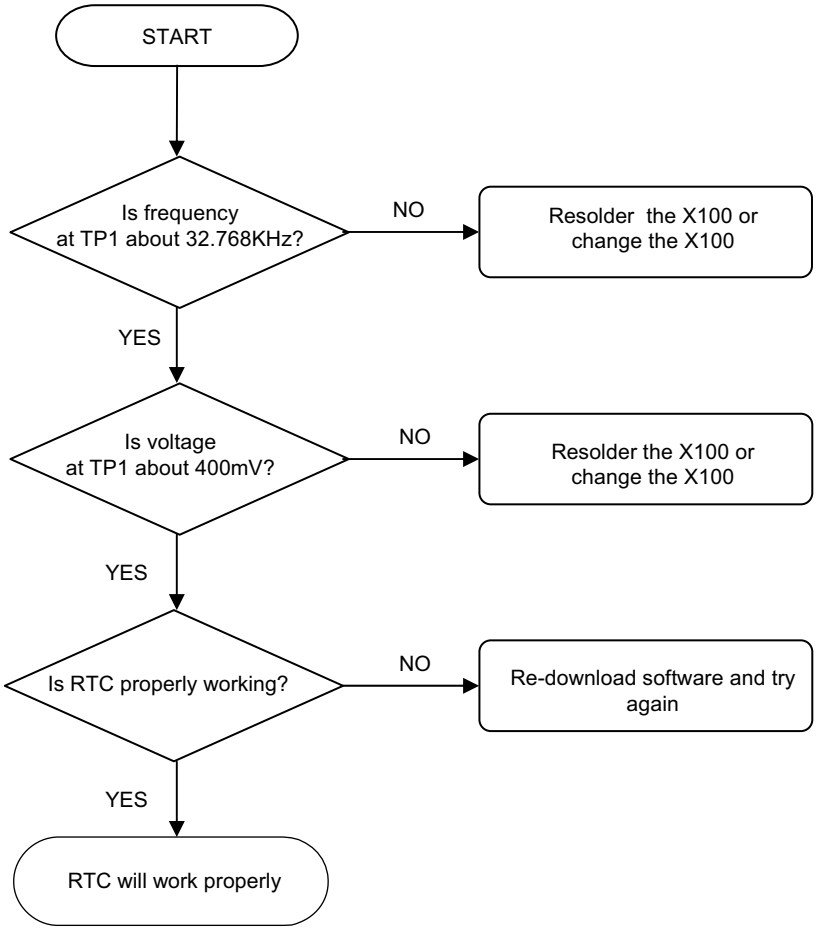


Figure 4.15

CIRCUIT



CHECKING FLOW



4.17 Slide open/close Trouble

TEST POINT

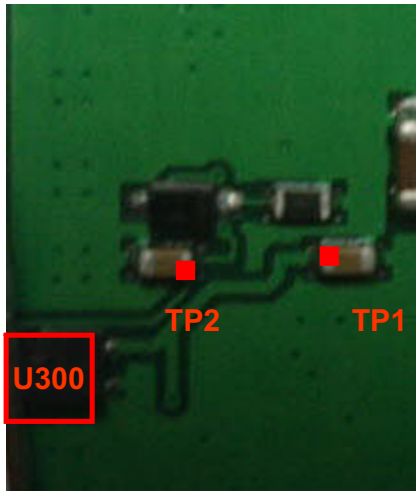
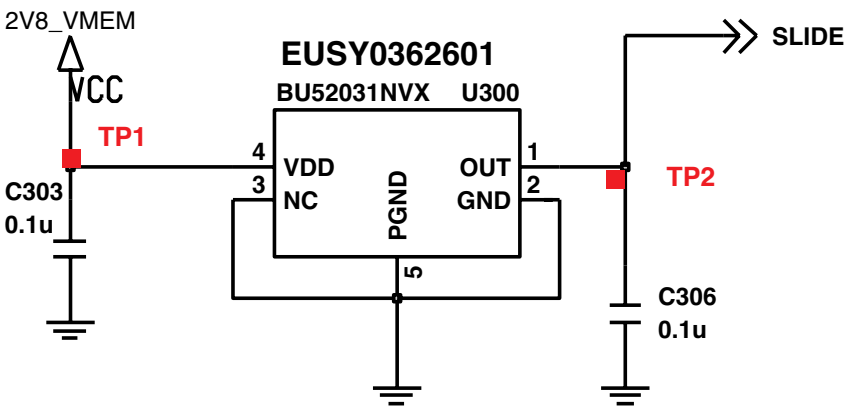
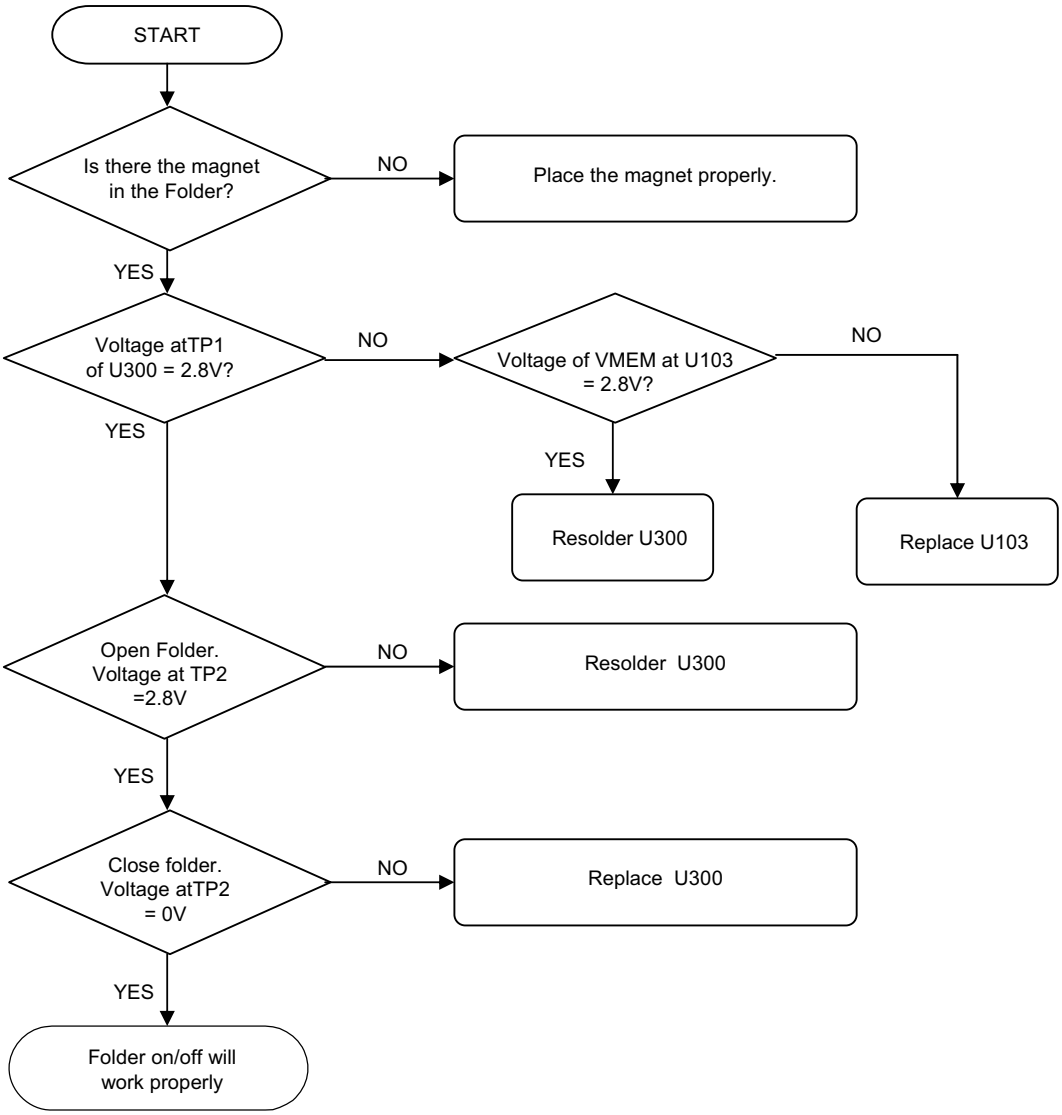


Figure 4.17

CIRCUIT



CHECKING FLOW



4.18 Micro SD Trouble

TEST POINT

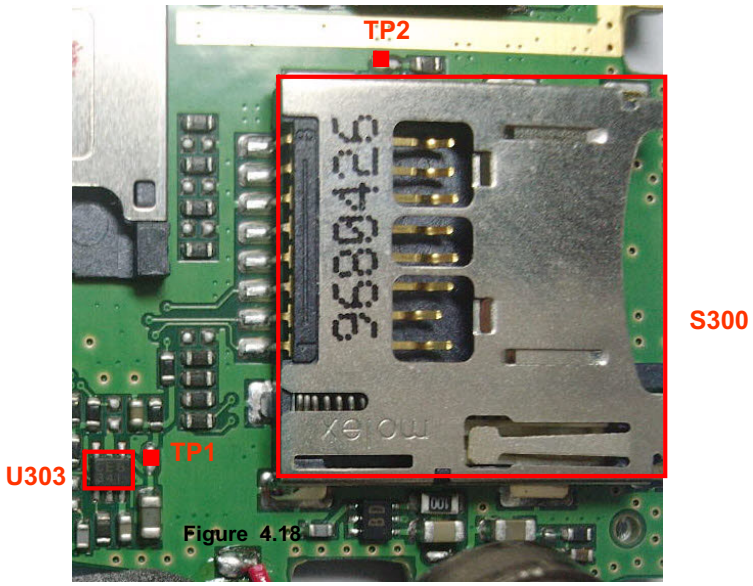
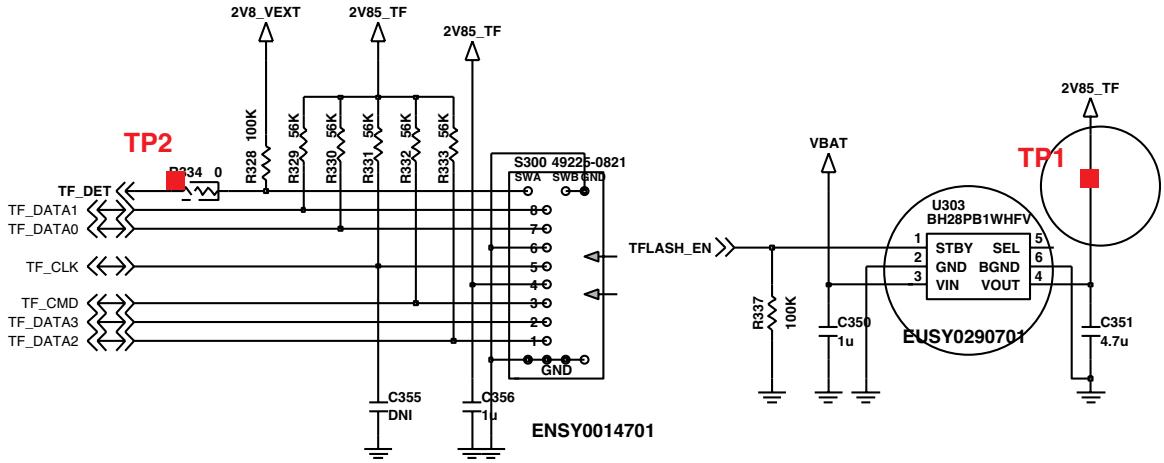


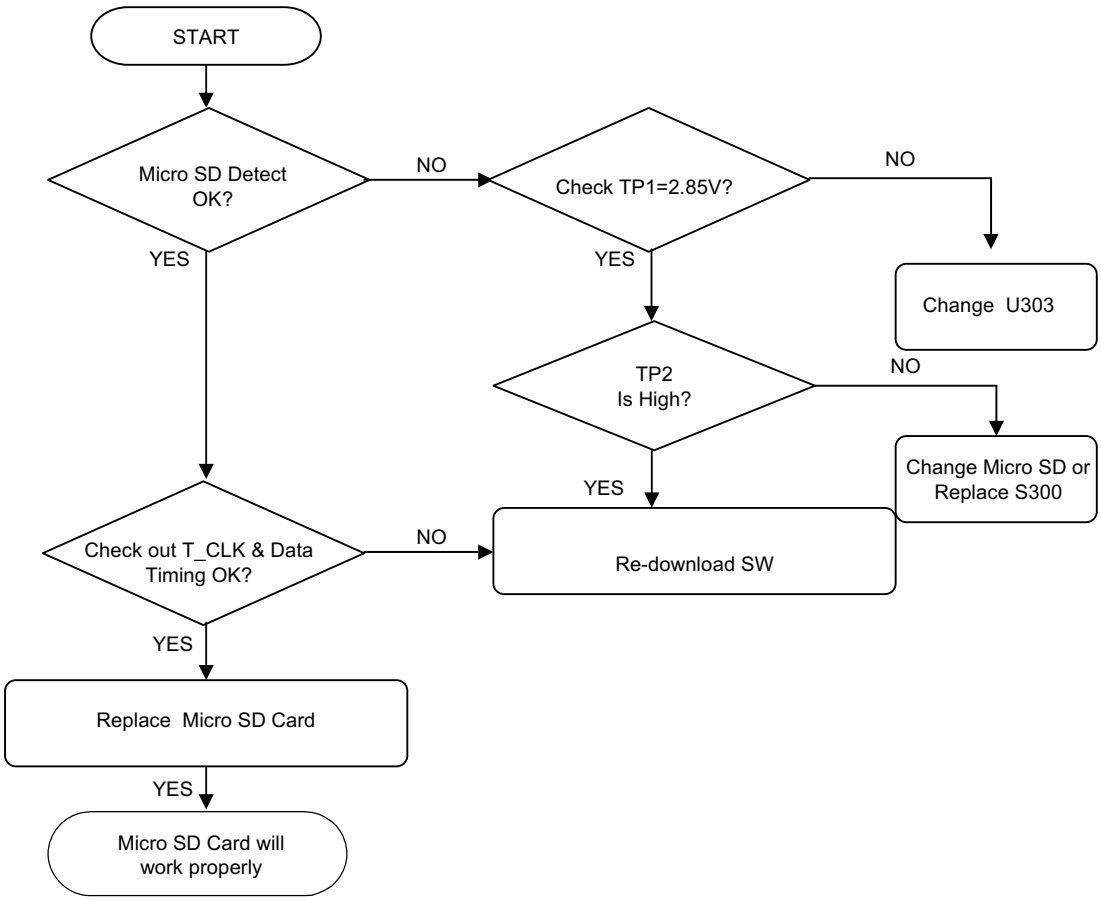
Figure 4.18

CIRCUIT

u-SD CARD



CHECKING FLOW



5. DOWNLOAD

5.1 Download

A. Download Setup

Figure 5.1 describes Download setup

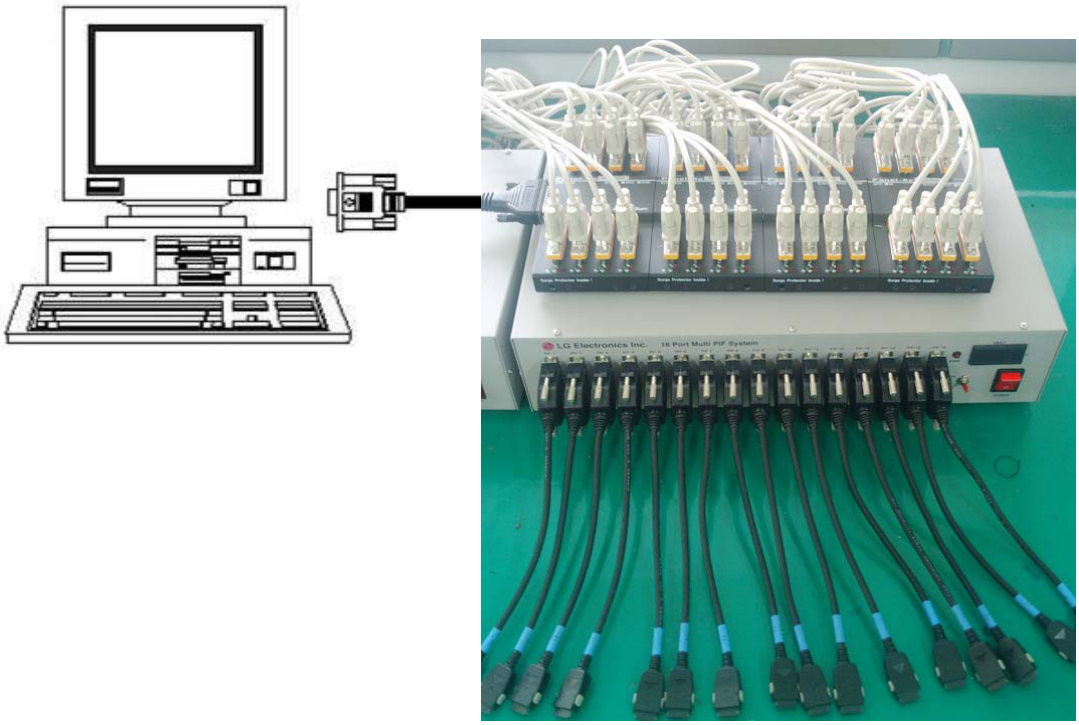
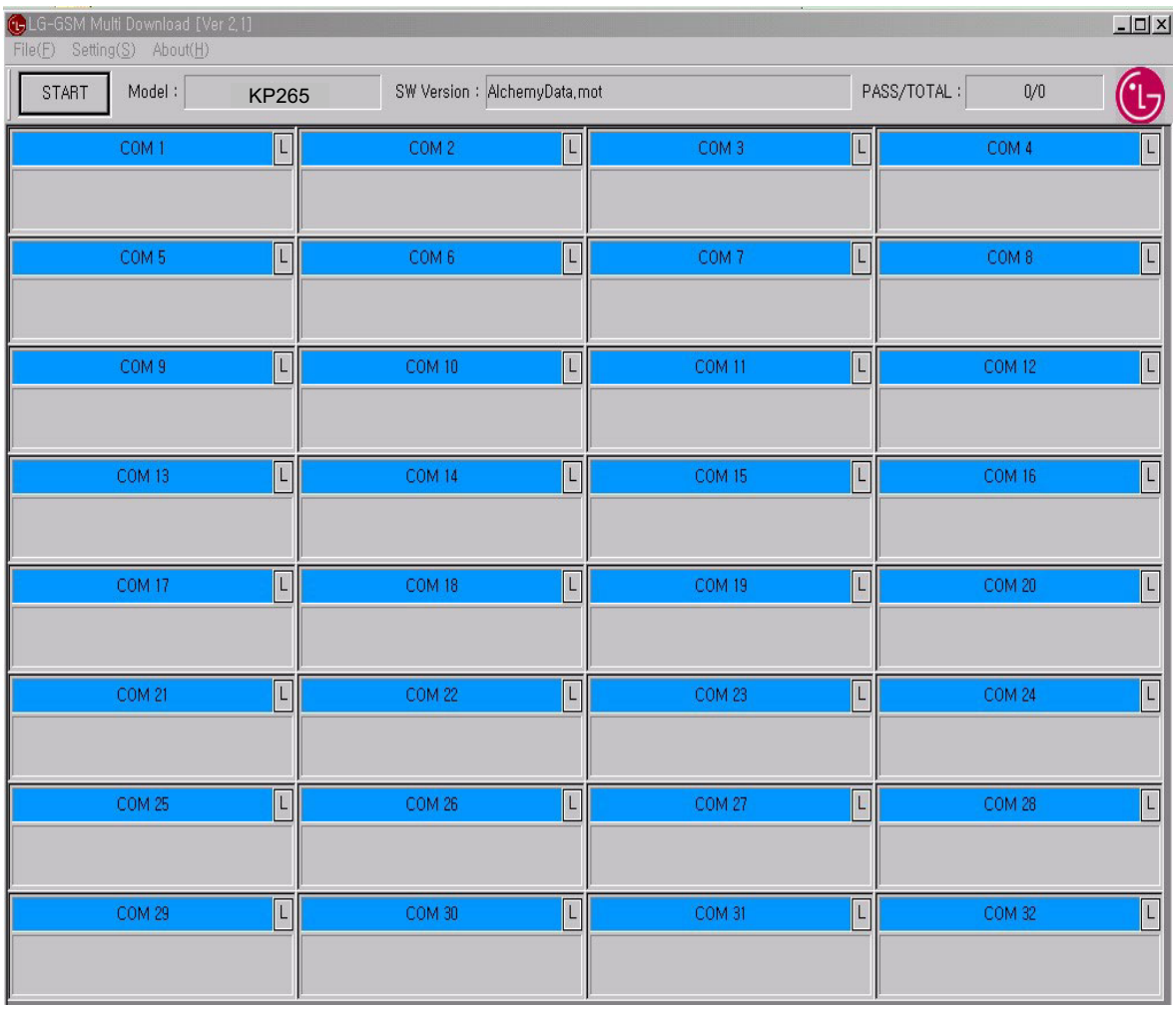


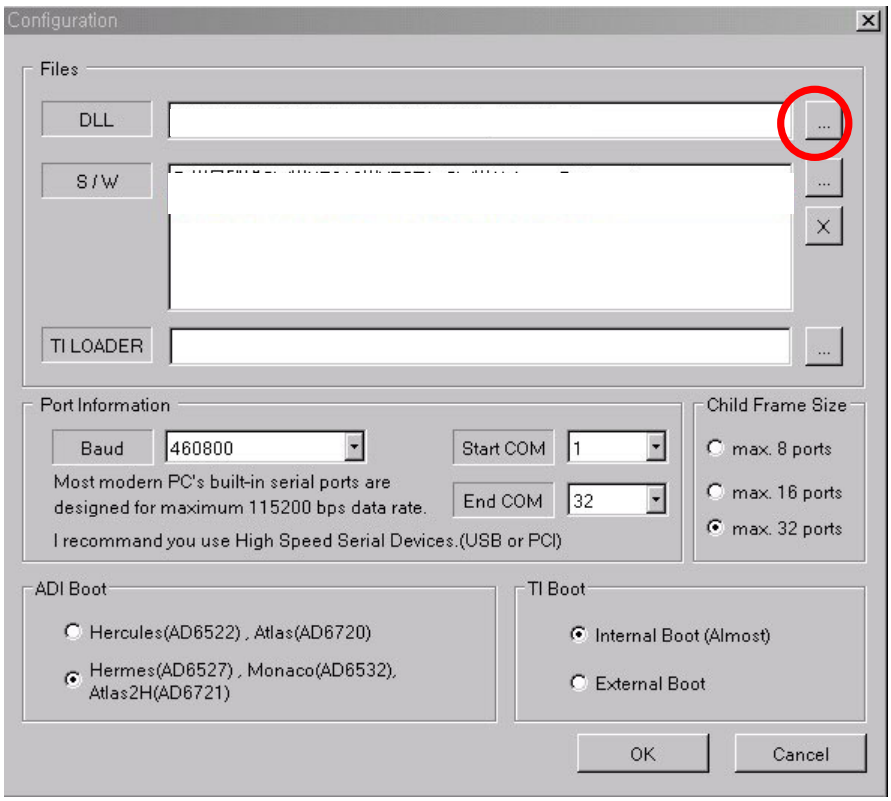
Figure 5.1 Download Setup

B. Multi Download Procedure

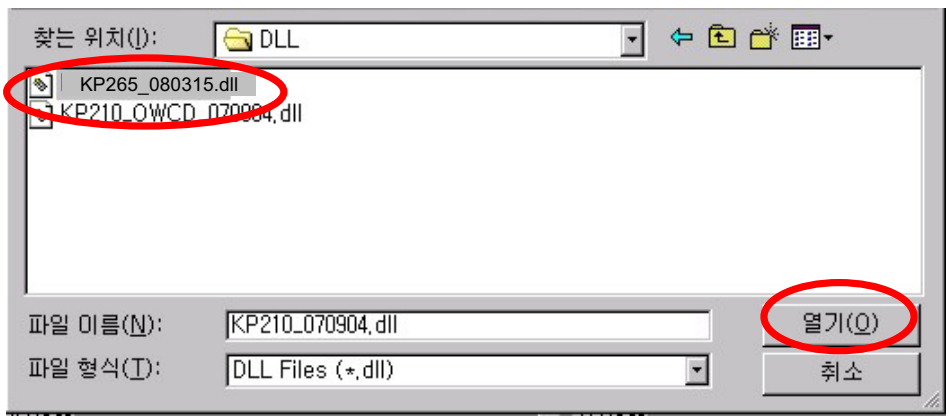
1. Run GSM Multi Download program and select Setting



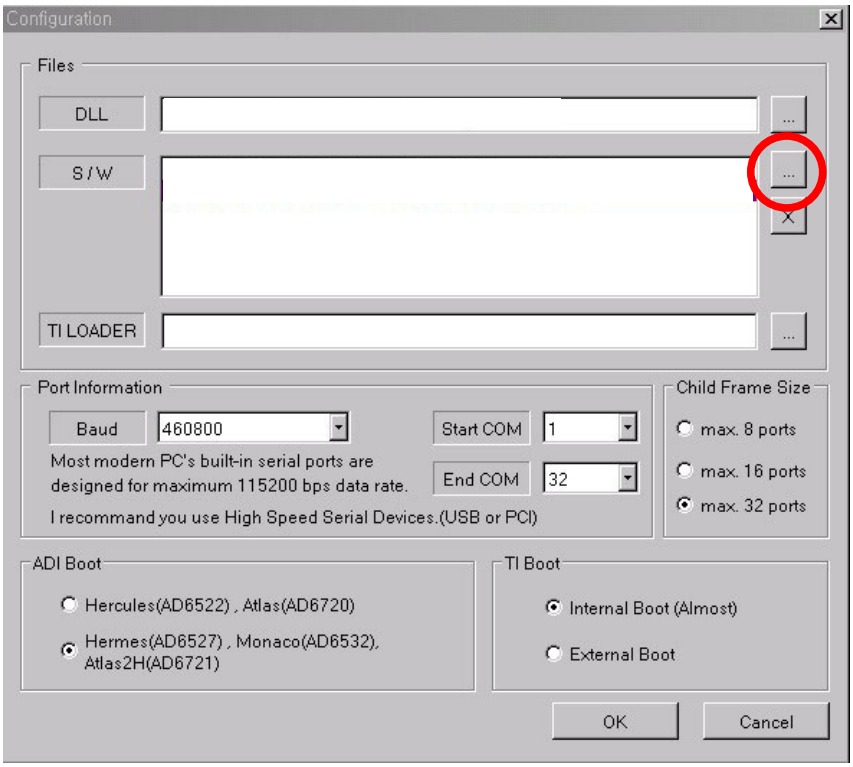
2. Select Configuration from the menu and you may see this window



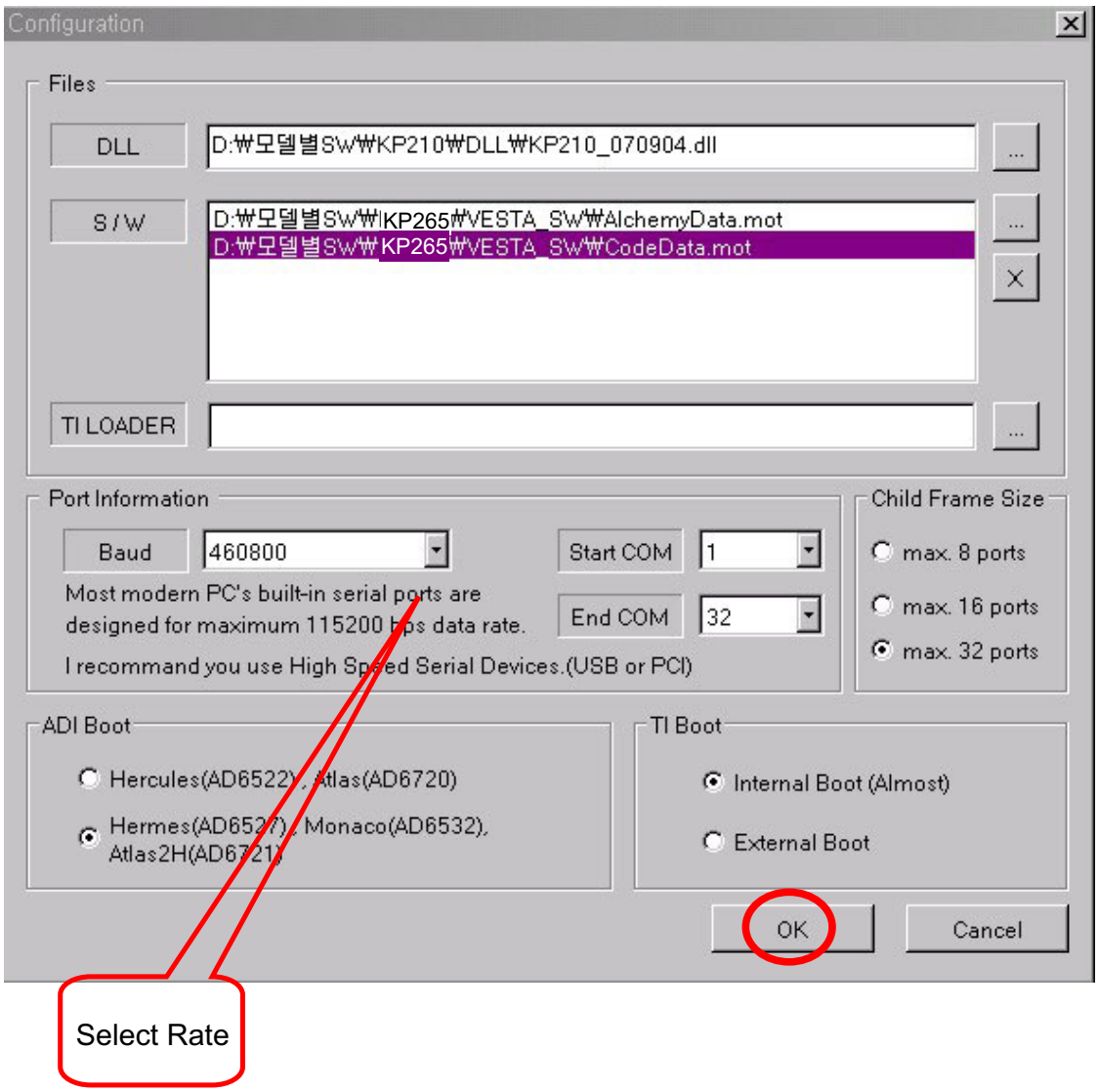
3. Press ... key to select DLL file and press Open



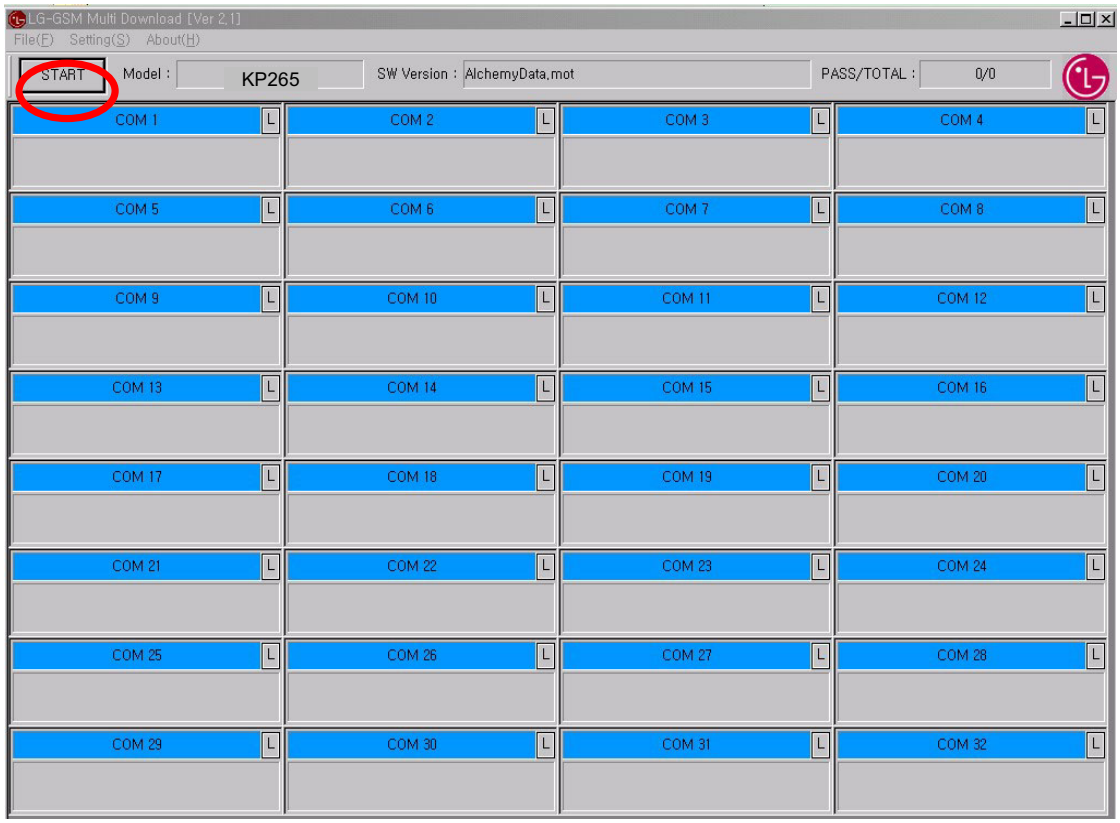
4. Press [...] key to select the mot files
5. Select AlchemyData.mot and press open
6. Repeat step 4-5 to select CodeData.mot

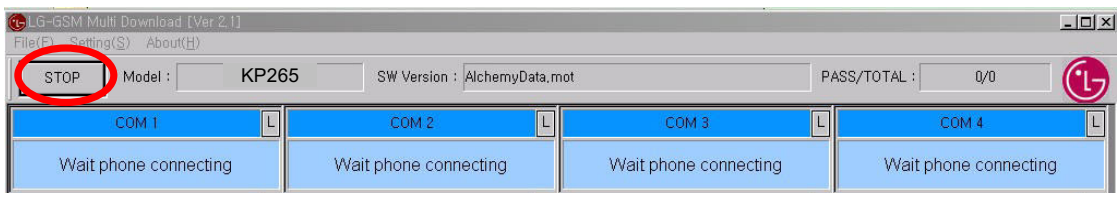


7. Check if the ADI option is set to Hermes
8. Press OK to end Configuration



9. Press START to execute download
10. Once downloading is started, press STOP button to keep from re-downloading after downloading is completed.





6. BLOCK DIAGRAM

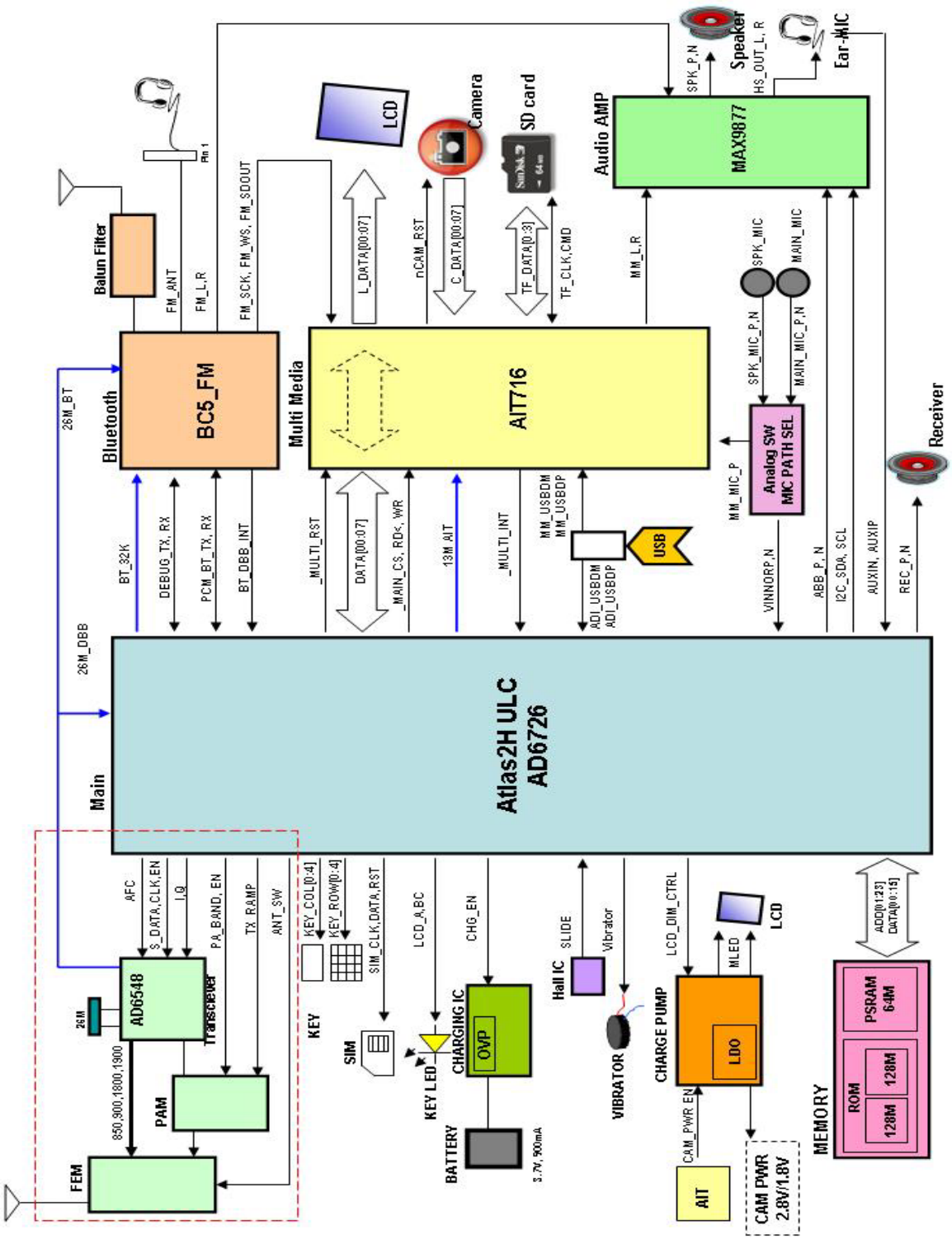
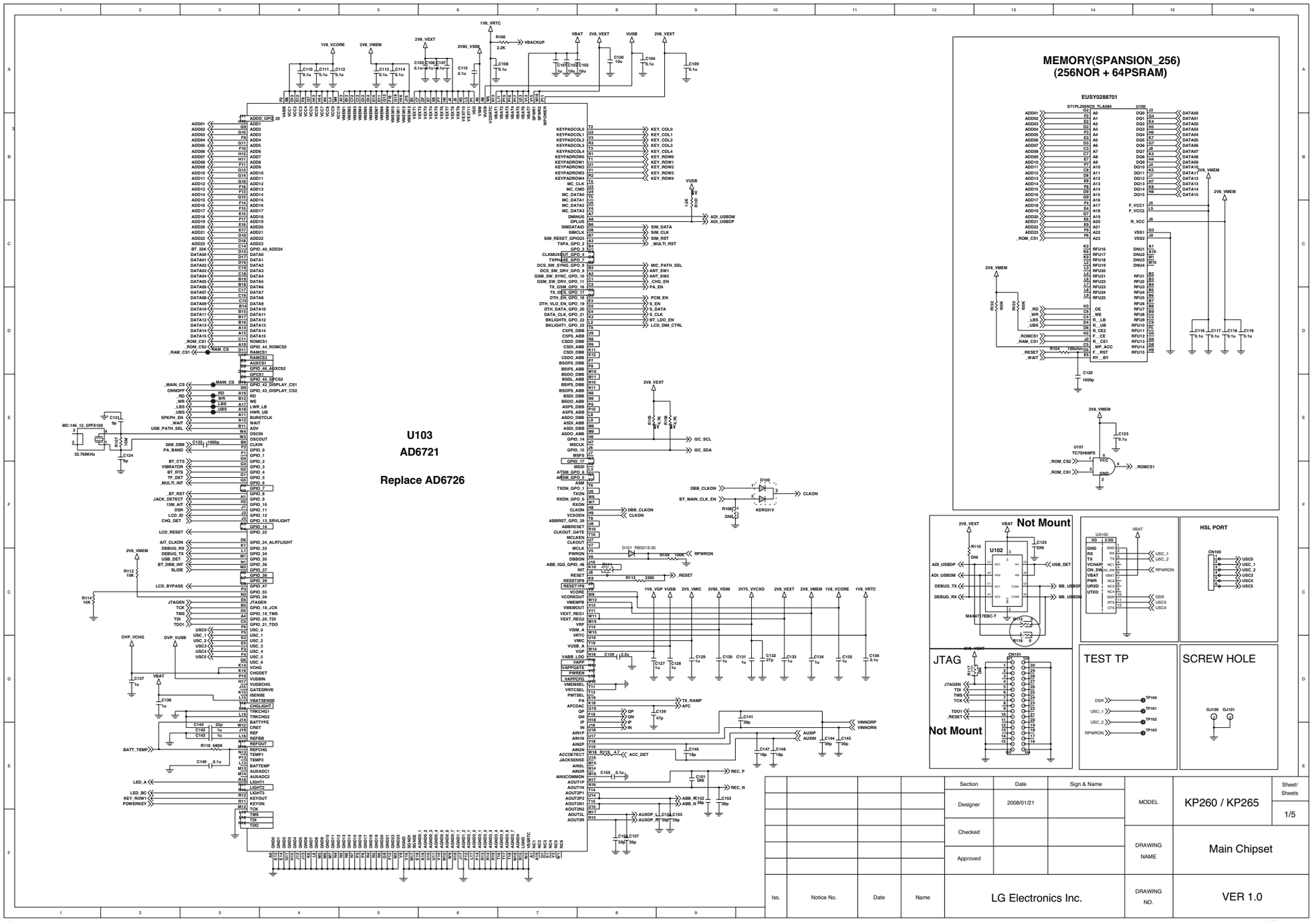
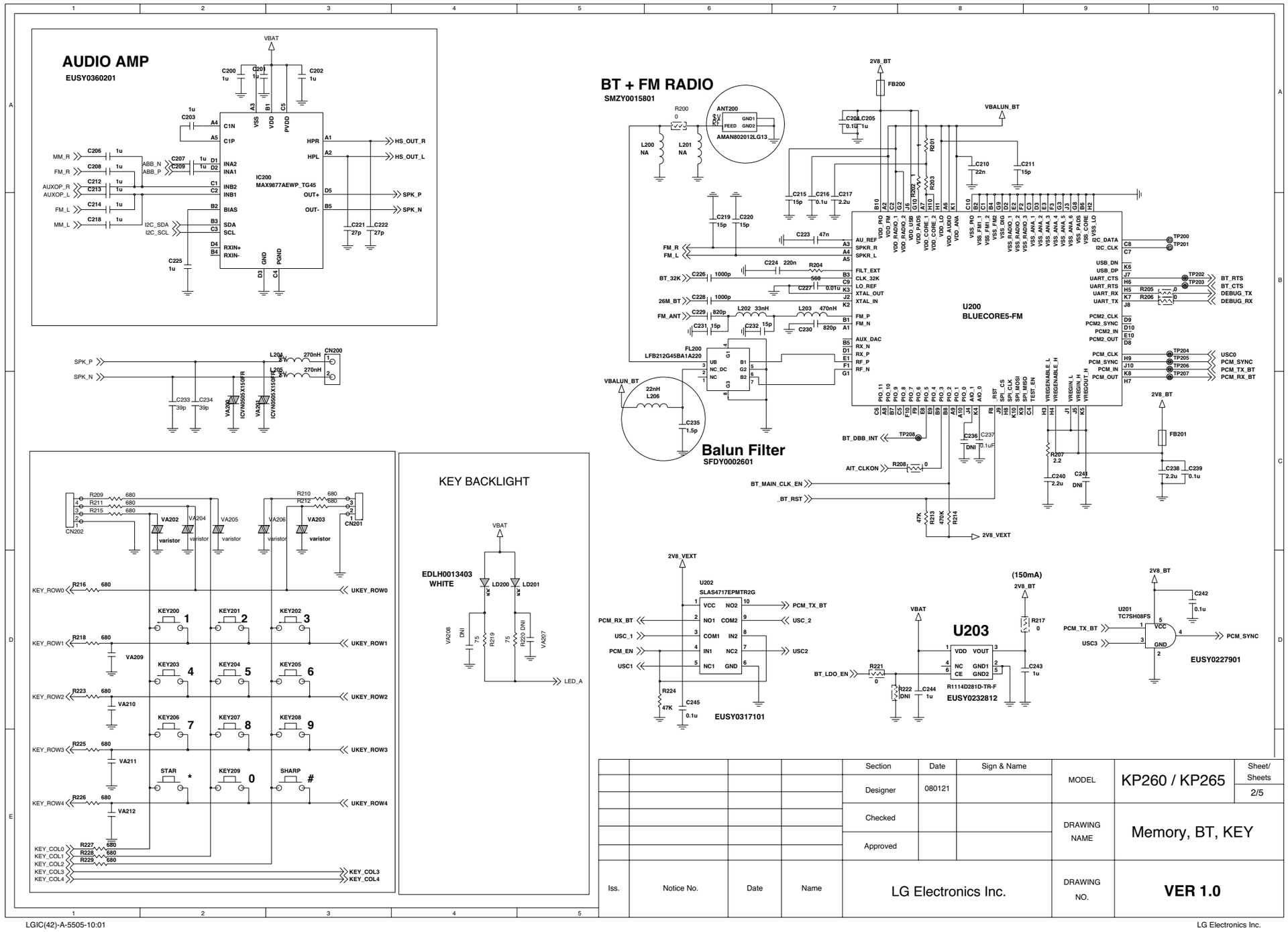


Figure 6.1 LG-KP235 Block Diagram

7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

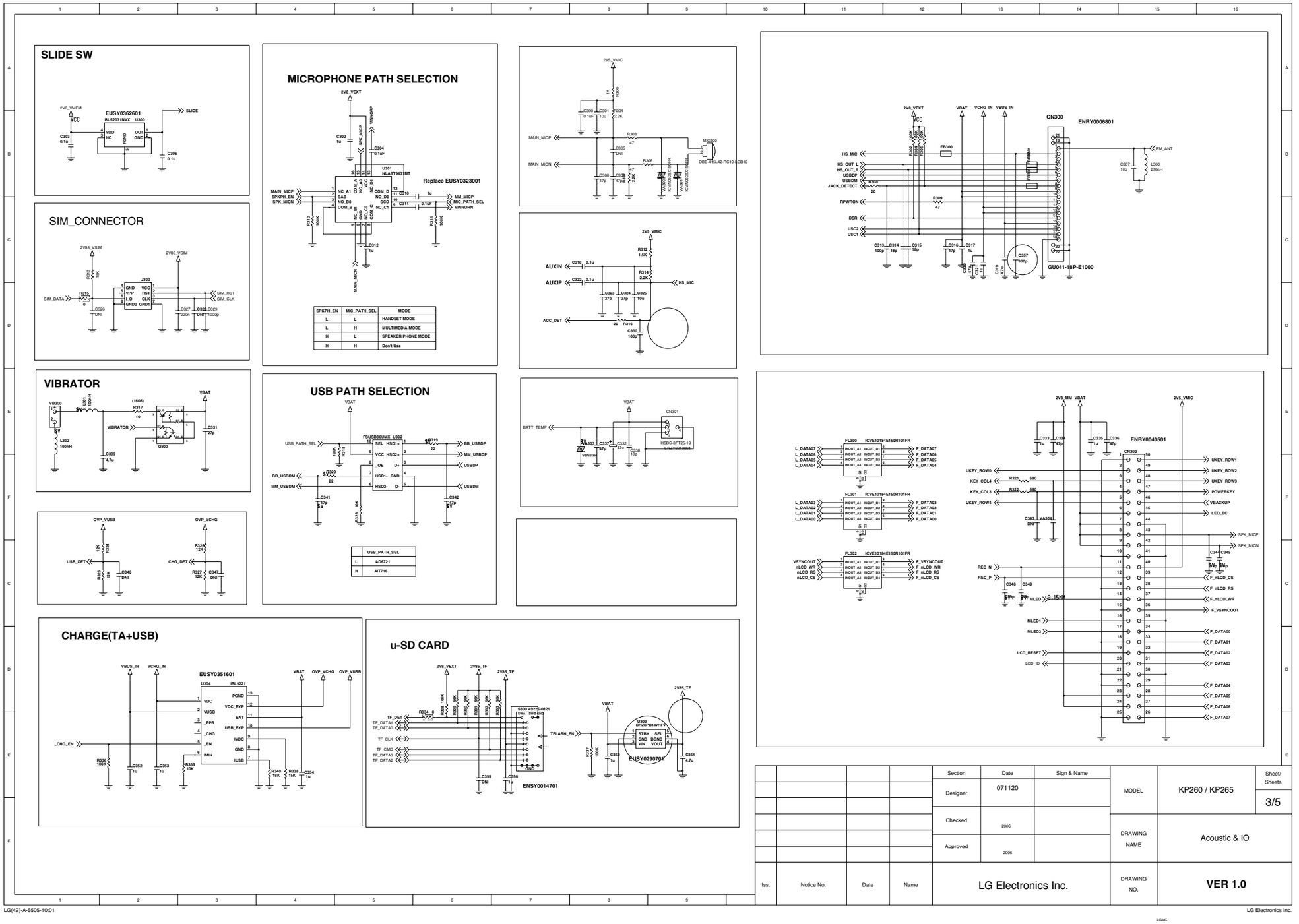


				Section	Date	Sign & Name	MODEL	KP260 / KP265	Sheet/ Sheets
				Designer	080121				2/5
				Checked			DRAWING NAME	Memory, BT, KEY	
				Approved					
Iss.	Notice No.	Date	Name	LG Electronics Inc.			DRAWING NO.	**VER 1.0**	

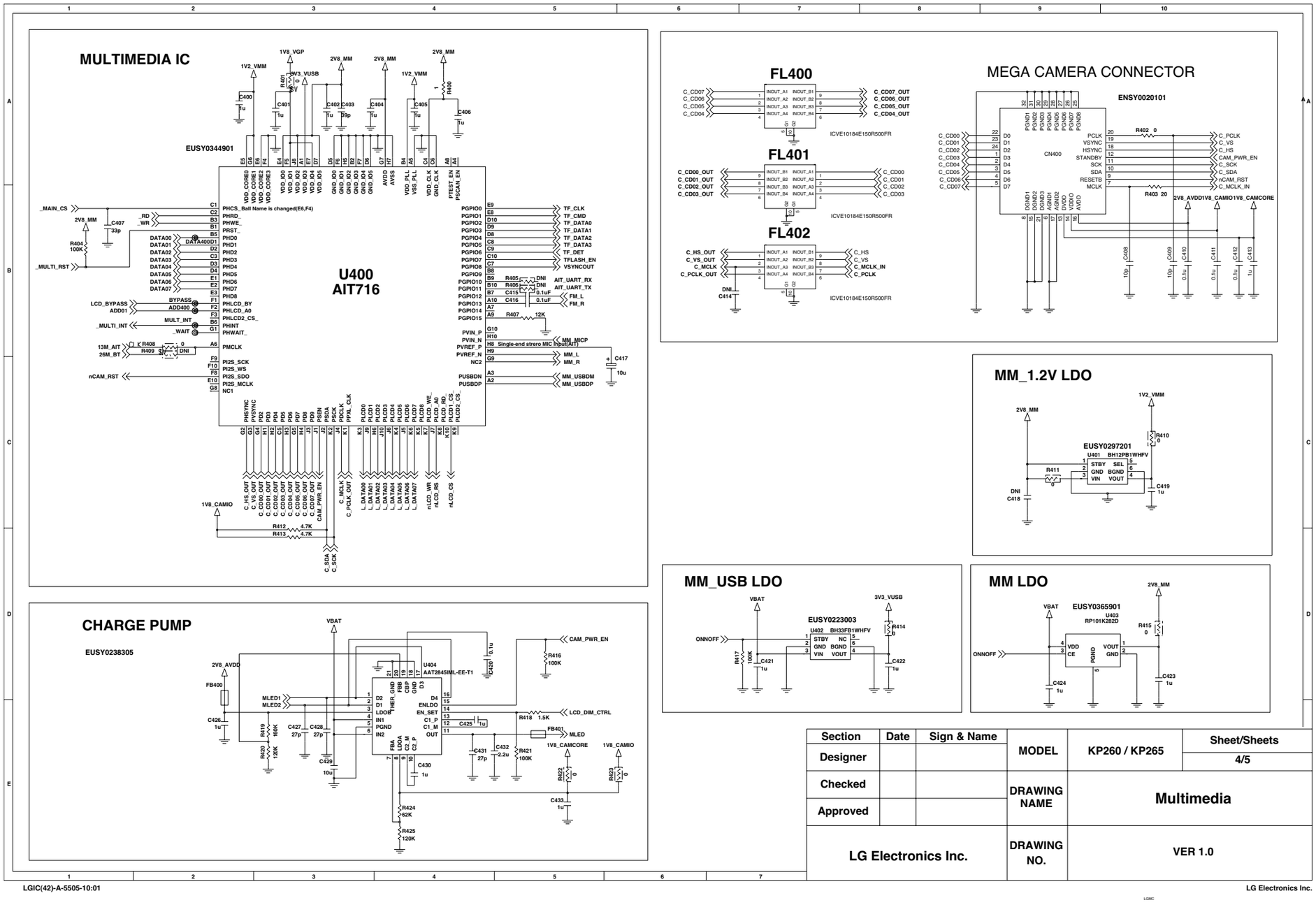
LGIC(42)-A-5505-10:01

LG Electronics Inc.

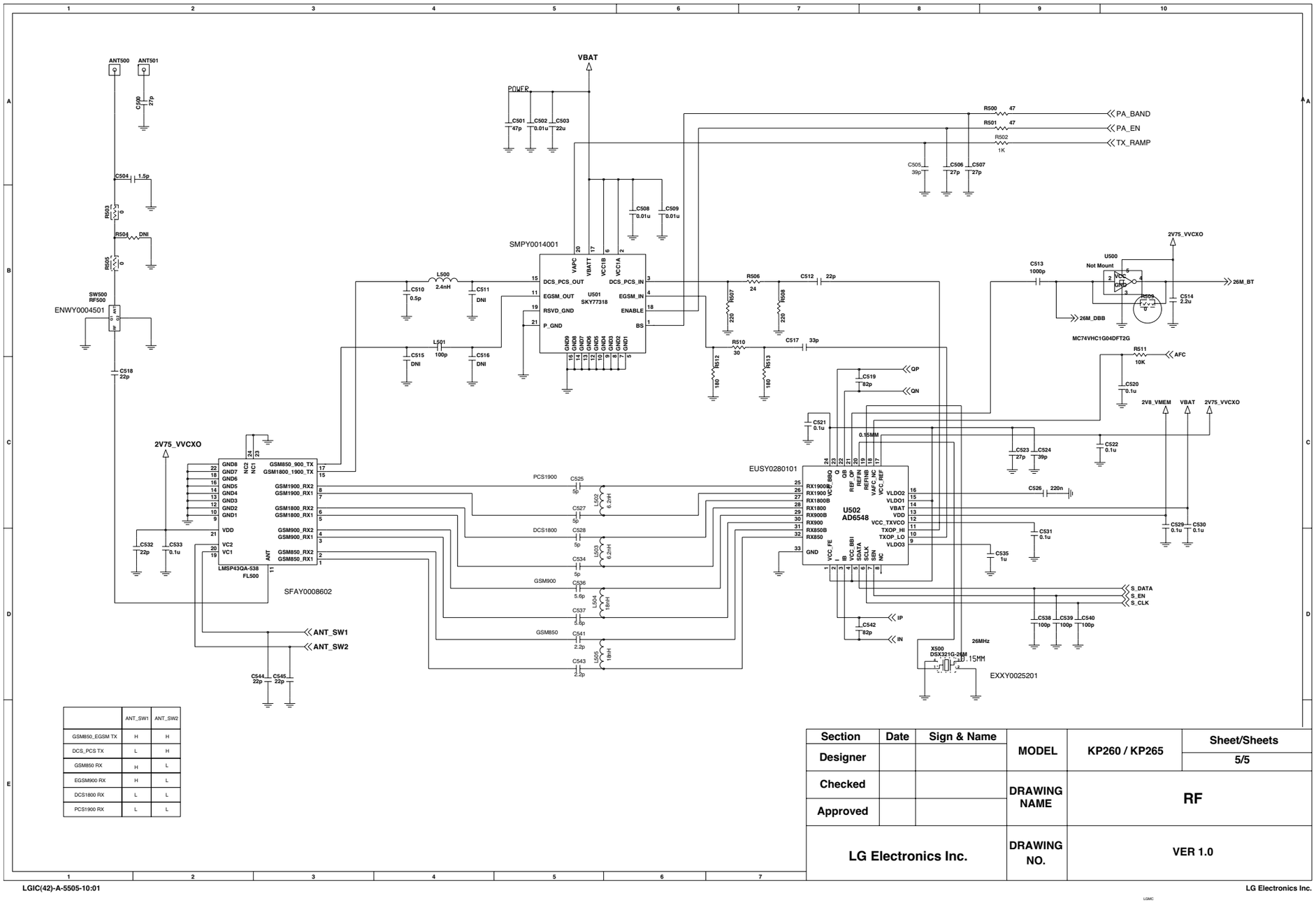
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



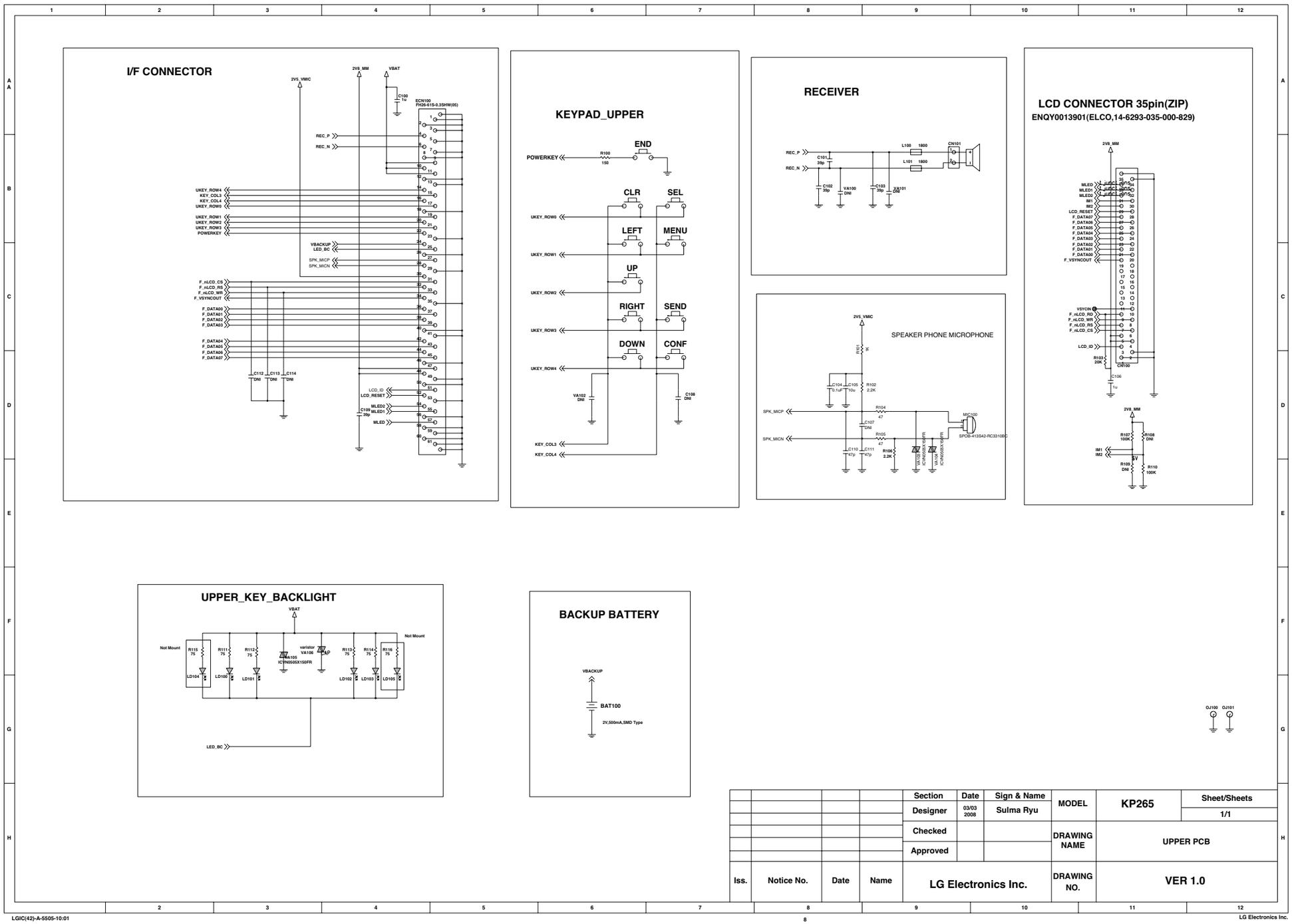
	ANT_SW1	ANT_SW2
GSM850_EGSM TX	H	H
DCS_PCS TX	L	H
GSM850 RX	H	L
EGSM900 RX	H	L
DCS1800 RX	L	L
PCS1900 RX	L	L

Section	Date	Sign & Name	MODEL	KP260 / KP265	Sheet/Sheets
Designer					5/5
Checked			DRAWING NAME	RF	
Approved					
LG Electronics Inc.			DRAWING NO.	VER 1.0	

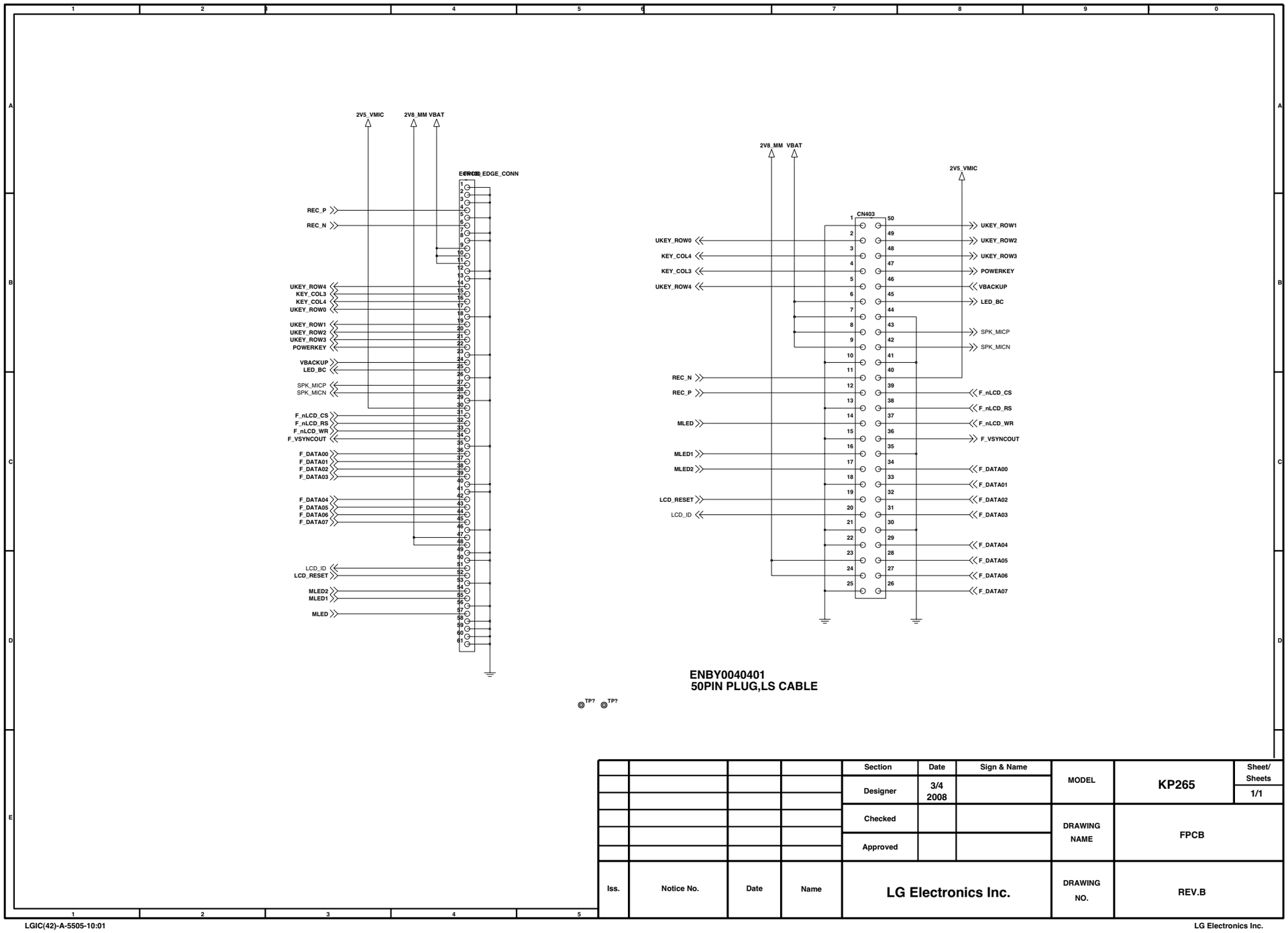
LGIC(42)-A-5505-10:01

LG Electronics Inc.

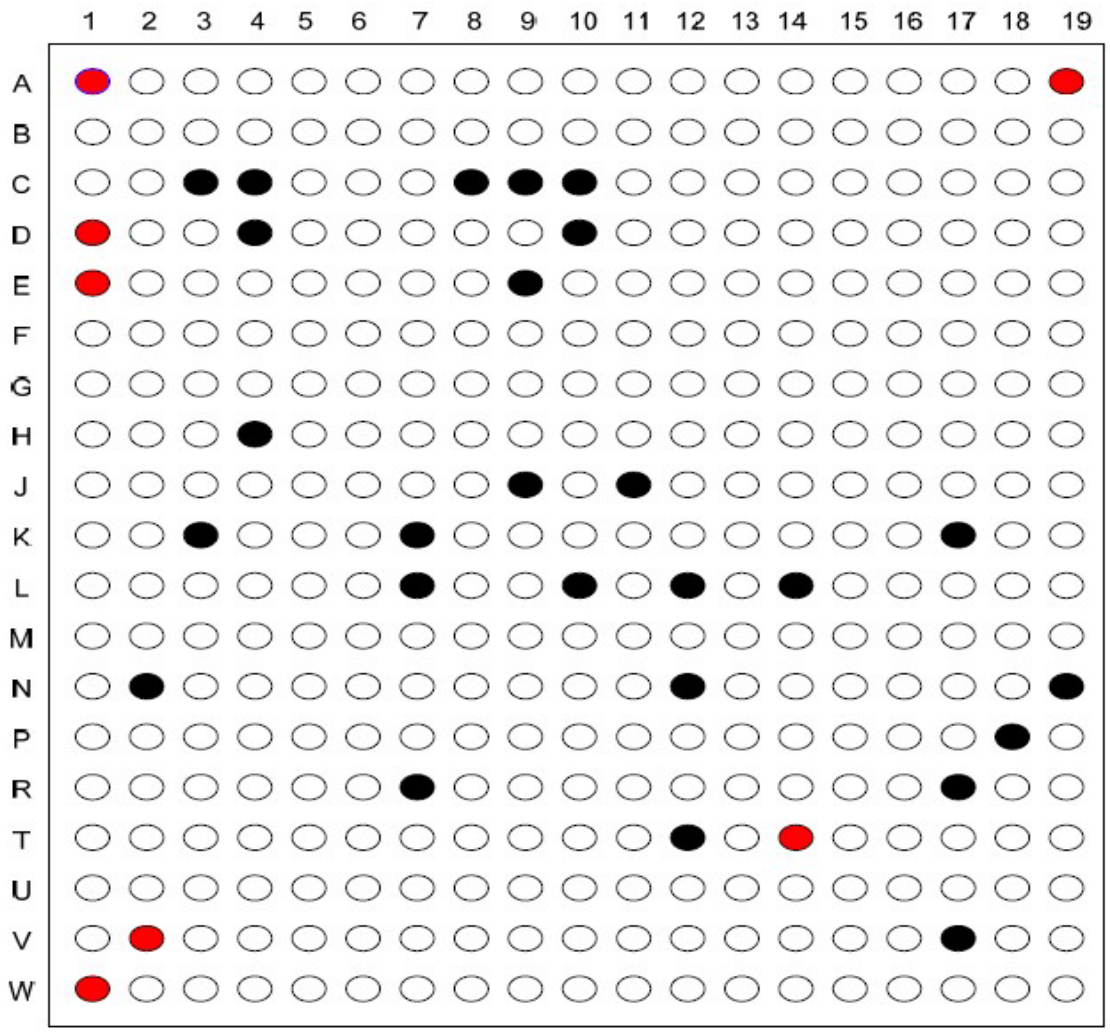
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

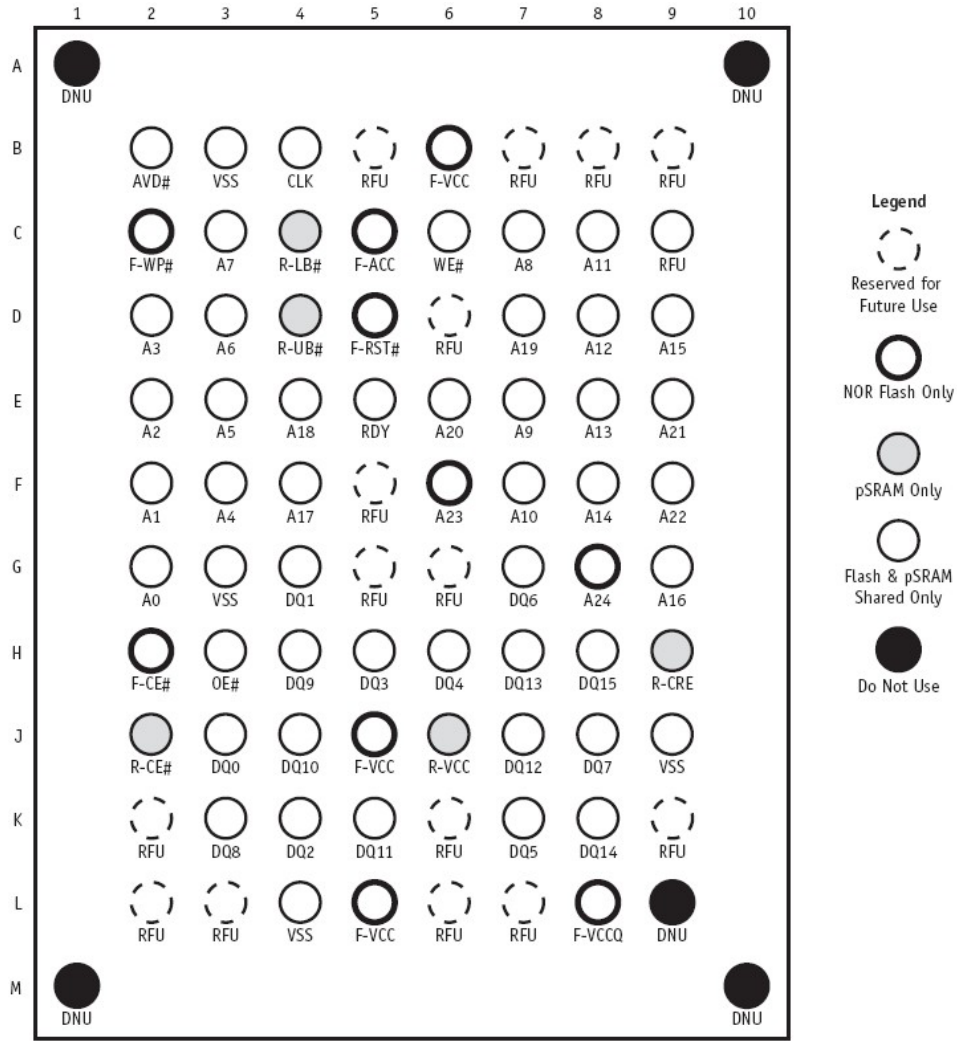


8. BGA IC Pin Check



U103 AD6726 (EUSY0364401) Top View ● And ● Not use

8. BGA IC Pin Check



U101 EUSY0288701 S71PL256NC0_TLA084

K1	K2	K3	K4	K5	K6	K7	K8	K9	K10
PPXL_CLK	PSCK	PLCD0	PLCD5	PLCD8	PLCD7	PLCD_WE_	PLCD_RD_	PLCD2_CS_	PLCD1_CS_
J1	J2	J3	J4	J5	J6	J7	J8	J9	J10
PSEN	PSDA	PD9	PDCLK	PLCD6	PLCD4	PLCD_A0	VDD_IO2	PLCD1	PLCD3
H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
PD3	PD4	PD6	PD8	GND_IO2	PLCD2	AVSS	VREF	AU_LOUT	AU_RIN
G1	G2	G3	G4	G5	G6	G7	G8	G9	G10
PHWAIT_	PHSYNC	PVSYNC	PD2	PD7	VDD_CORE	AVDD	PI2S_SDI	AU_ROUT	AU_LIN
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
PHLCD_BY	PHLCD_A0	PHLCD2_CS_	GND_CORE	VDD_IO1	GND_IO1	GND_IO4	PI2S_SDO	PIS_SCK	PI2S_WS
E1	E2	E3	E4	E5	E6	E7	E8	E9	E10
PHD6	PHD7	PHD8	VDD_IO0	VDD_CORE	GND_CORE	VDD_IO4	PGPIO1	PGPIO0	PI2S_MCLK
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
PHD1	PHD2	PHD4	PHD5	GND_IO0	GND_IO5	VDD_IO5	PGPIO4	PGPIO3	PGPIO2
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
PHCS_	PHRD_	PHD3	VDD_CLK	PD5	GND_CLK	PGPIO8	PGPIO5	PGPIO6	PGPIO7
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
PRST_	GND_IO3	PHWE_	VDD_PLL	PHD0	PHINT	PGPIO12 (AUX_L)	PGPIO9	PGPIO10	PGPIO11
A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
VDD_IO3	PUSBDP	PUSBDN	PSCAN_EN	VSS_PLL	PMCLK	PGPIO14	PTEST_EN	RREF	PGPIO13 (AUX_R)

U400 EUSY0344901 AIT716 **Bottom View**

8. BGA IC Pin Check

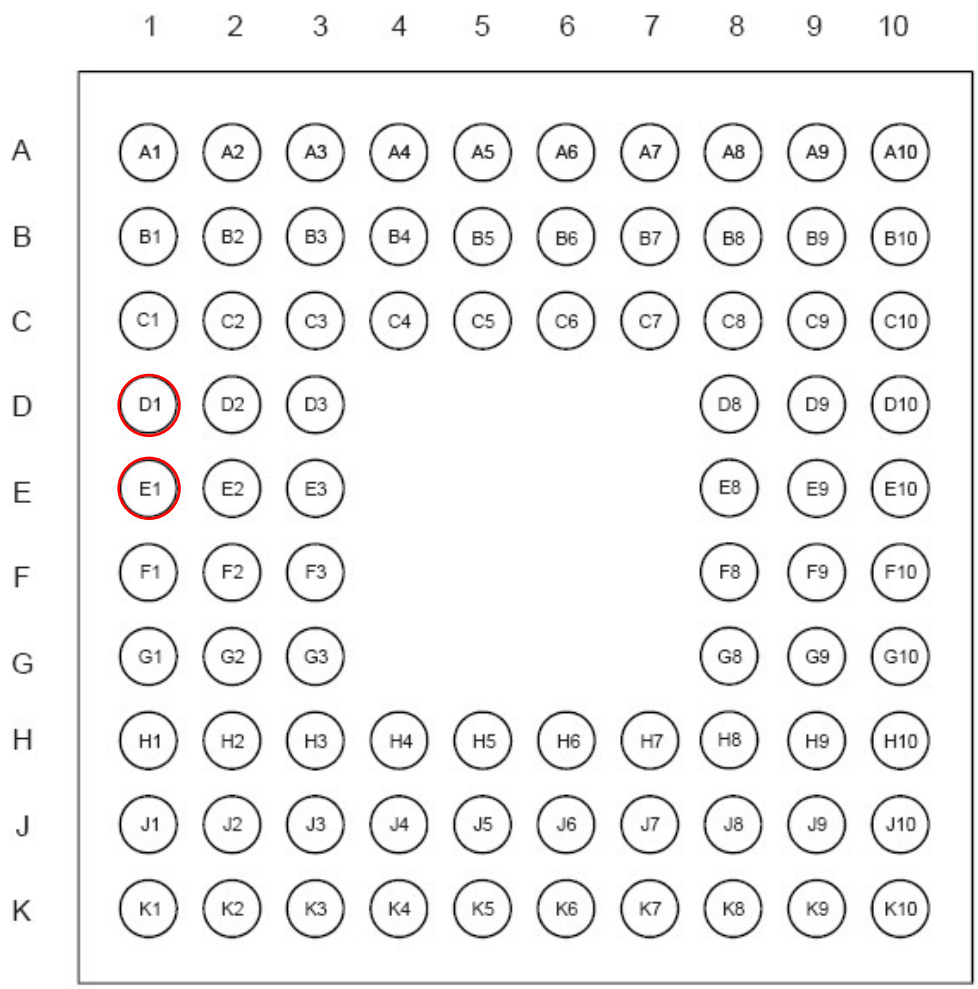


Figure 3.1: BlueCore5-FM BGA Device Pinout

U200 SMZY0015801 BLUECORE5-FM ◯Not use (NC Pin)

7. CIRCUIT DIAGRAM

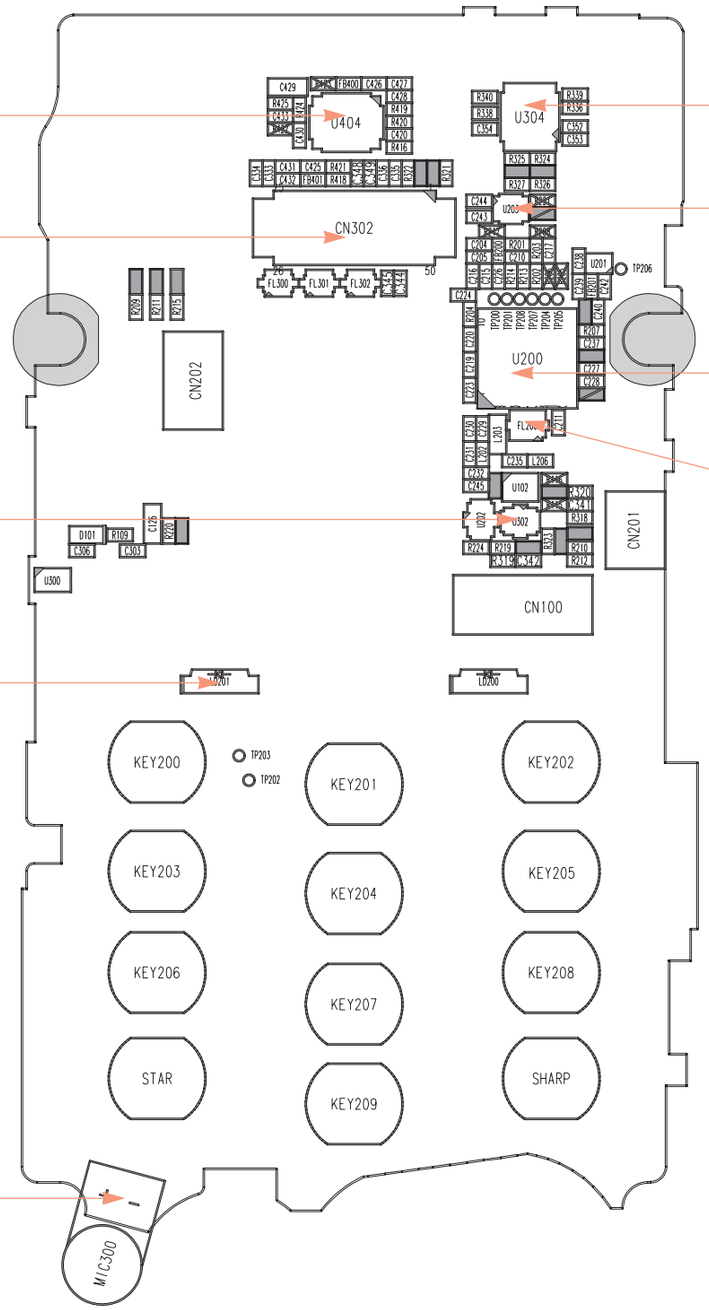
U404 Charge Pump
No LCD backlight
No Camera

CN302 Slide Conn.
No Display
No Receiver
No Mic for Spk phone
No Multi Key

U302 USB Analog
S/W
No USB

LD200, LD201 LED
No KEY backlight

MIC300 MIC
No MIC



KP260-MAIN-1.0-TOP

U304 Charging IC
No charging

U203 BT LDO
BT & FM mode
No BT & FM Radio

U200 BT & FM
BT Connection & FM radio
No Service

FL200 Balun Filter
BT Tx & Rx
No Service

9. PCB LAYOUT

CN300 MMI Conn.
No Charging
No Ear-Mic
No USB

IC200 Audio Amp.
No SPK.
No MP3

U403 MM LDO
No U400

U100 Memory
No Boot

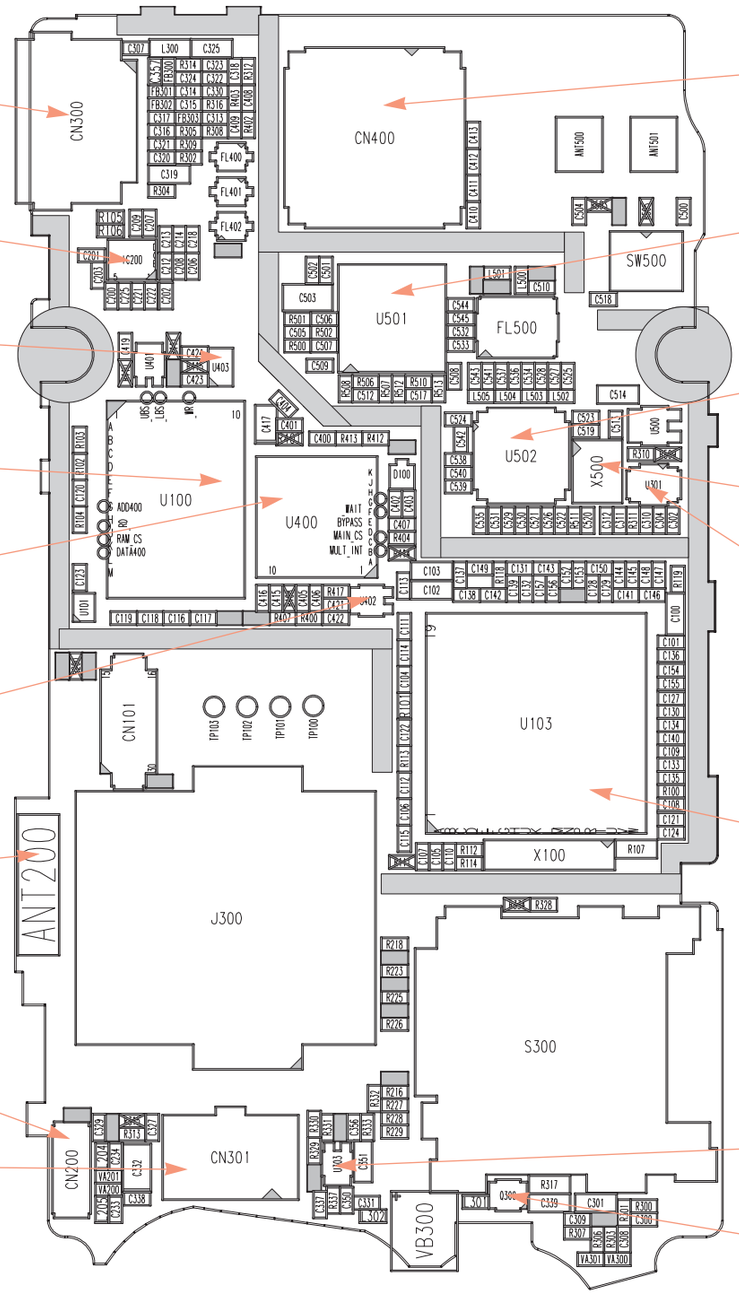
U400 Multi Media
Chip
No Display
No MP3
No camera

U402 USB LDO
No USB

ANT200 BT Antenna
BT Tx & Rx
No Service

CN200 SPK
Conn.
No Speaker

CN301 Battery
Conn.
No Power on



CN400 Camera Conn.
No Camera

U501 PAM
GSM Tx Power
No Service

U502 Transceiver
GSM Rx Sensitivity
& Tx Power
No Service

FL500 FEM
GSM Rx Sensitivity
& Tx Power
No Service

X500 Crystal
26Mhz Reference
Clock
No Service

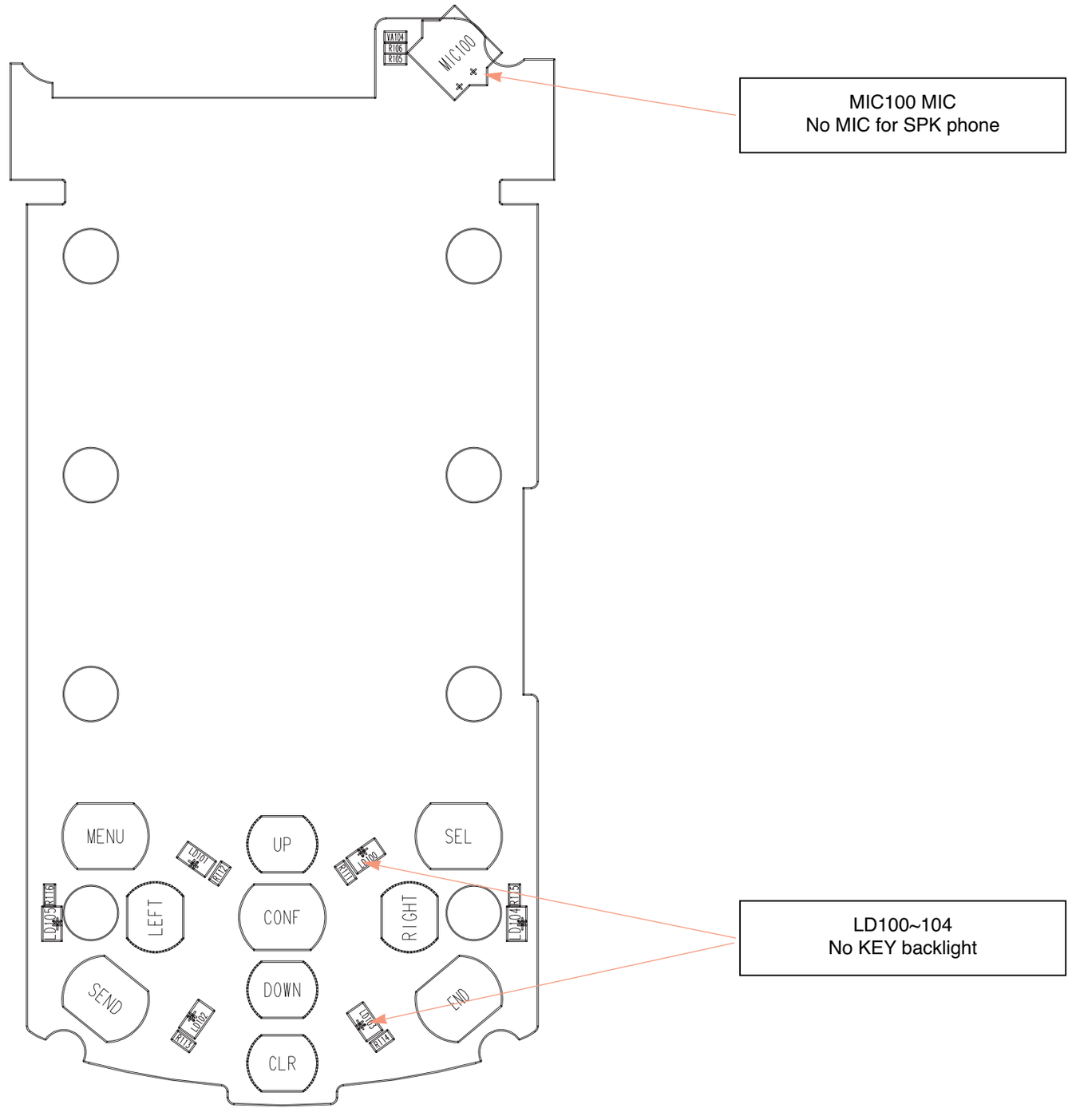
U103 Main IC
No Boot
No Power on
No Service
Reset

U303 T-flash
LDO.
No T-flash

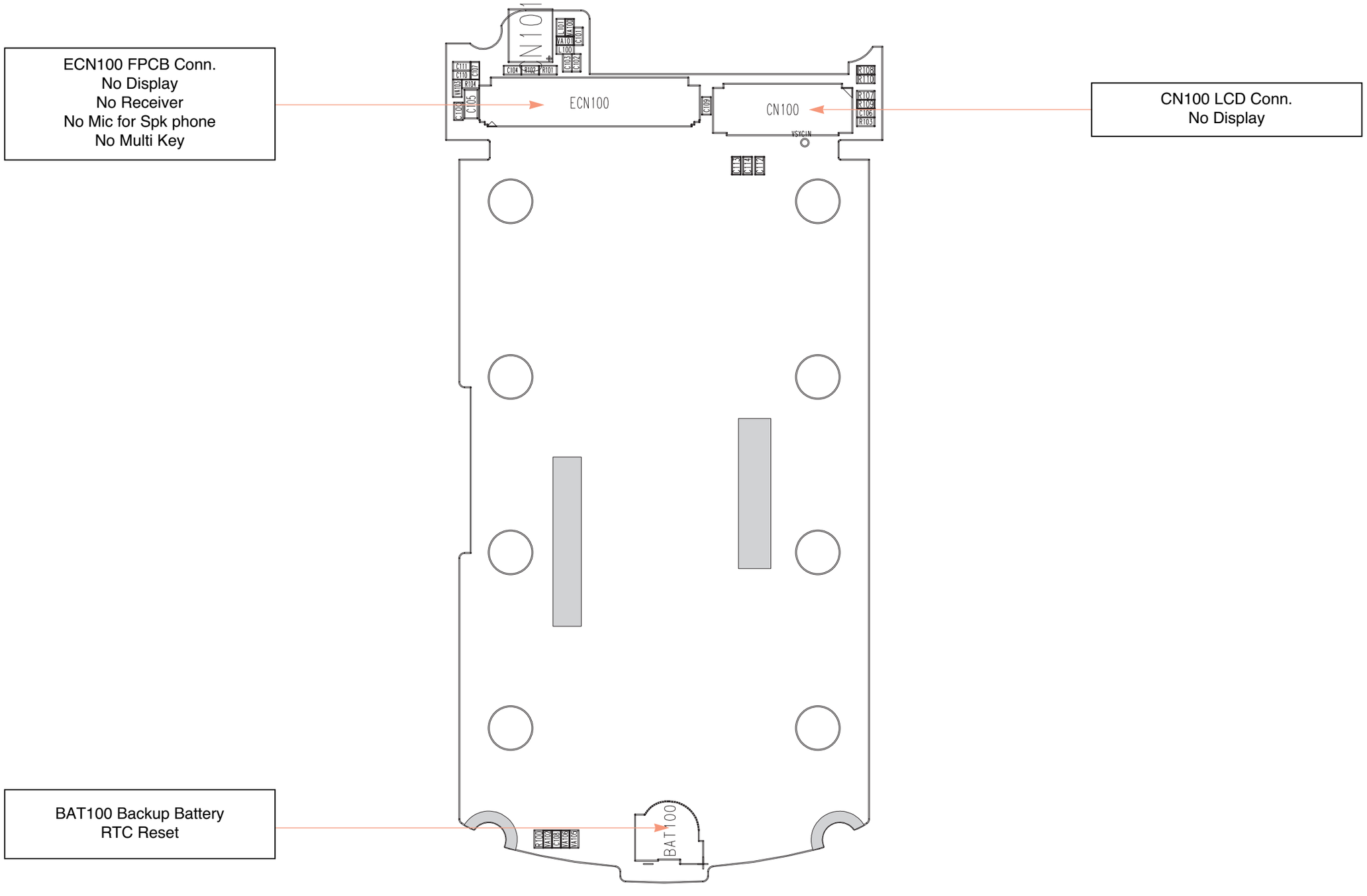
Q300 Vibrator Tr.
No Vibrator

KP260-MAIN-1.0-BOT

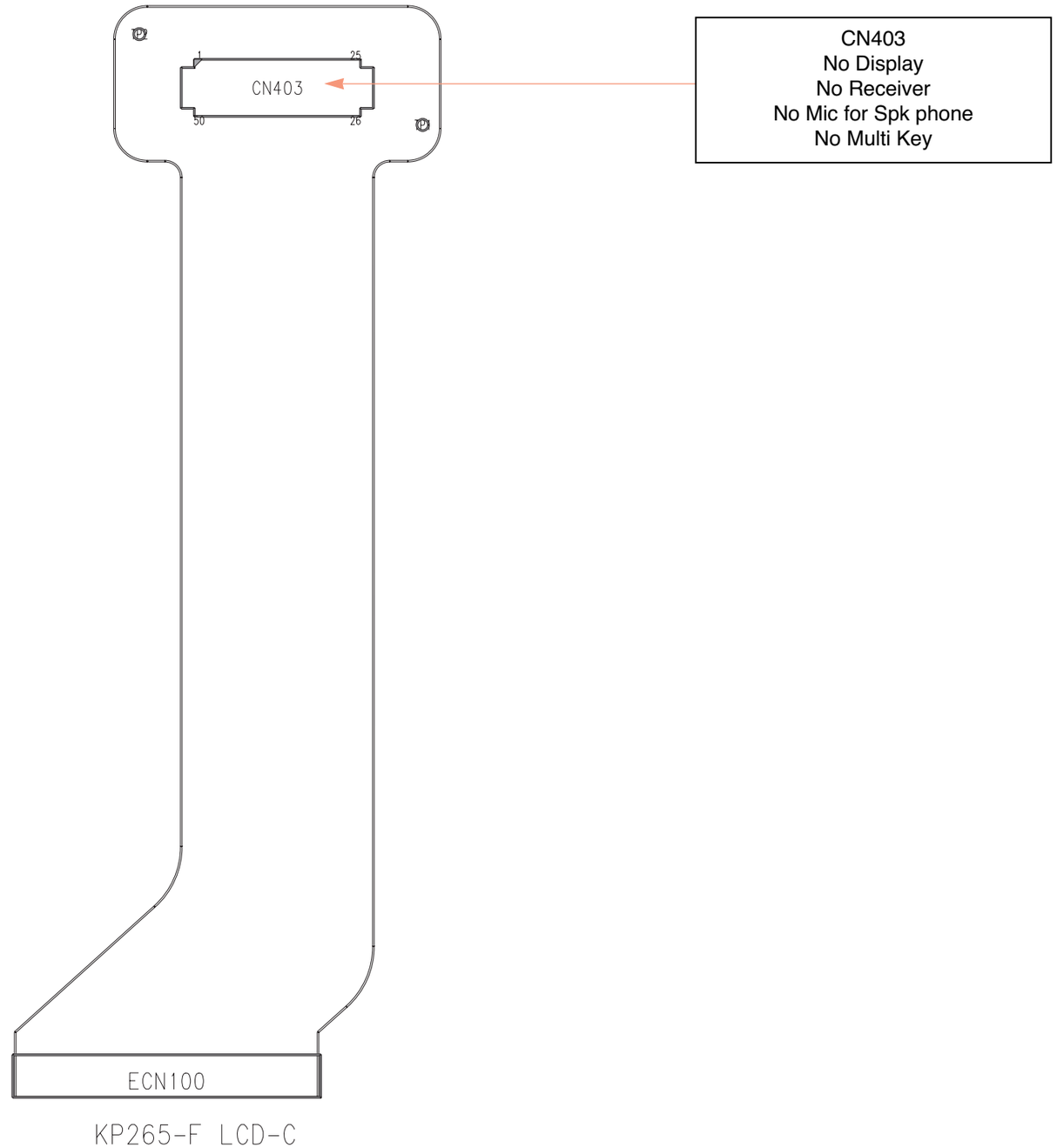
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



10. ENGINEERING MODE

A. About Engineering Mode

Engineering mode is designed to allow a service man/engineer to view and test the basic functions provided by a handset.

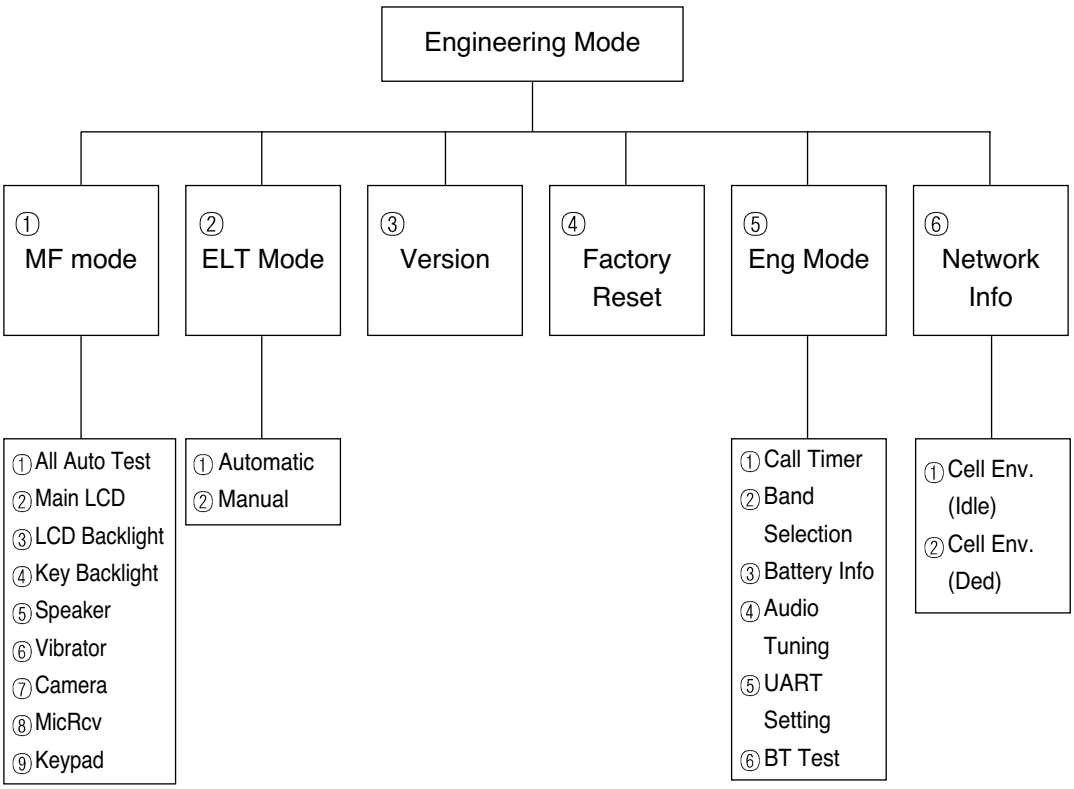
B. Access Codes

The key sequence for switching the engineering mode on is 2945#*#. Pressing END will switch back to non-engineering mode operation.

C. Key Operation

Use Up and Down key to select a menu and press ‘select’ key to progress the test. Pressing ‘back’ key will switch back to the original test menu.

D. Engineering Mode Menu Tree



10.1 MF Mode [MENU 1]

10.1.1 All Auto Test

This Function mode is designed to do the baseband test automatically. Selecting this menu will process the test automatically (LCD, Backlight, Vibrator, Buzzer, Key Pad, Mic & Speaker, Camera preview.), and phone displays the previous menu after completing the test.

10.1.2 Main LCD

This menu is to test the LCD Color display and Grey scale
1) Color : WHITE, RED, GREEN, BLUE, BLACK
2) Grey : 16 level. from black to white

10.1.3 LCD Backlight

This menu is to test the LCD Backlight.
1) Backlight on : LCD Backlight on.
2) Backlight off : LCD Backlight off.

10.1.4 Key Backlight

This menu is to test the KEY Backlight.
1) On : KEY Backlight on.
2) Off : Key Backlight off.

10.1.5 Speaker

This menu is to test the melody sound.
1) Melody on : Melody sound is played through the speaker.
2) Melody off : Melody sound is off.

10.1.6 Vibrator

This menu is to test the vibration mode.
1) Vibrator on : Vibration mode is on.
2) Vibrator off : Vibration mode is off.

10.1.7 Camera

This menu is to test camera operation.
1) Preview : Camera Preview displays.
2) Flash on : Camera Flash LED turns on.
3) Flash off : Camera flash LED turns off.

10.1.8 MicRcv

The sound from MIC is recorded for about 3 seconds, then it is replayed on the speaker automatically.

10.1.9 KeyPad

When a pop-up message shows ‘Press Any Key’, you may press any keys including side keys, but not [Soft2 Key]. If the key is working properly, name of the key is displayed on the screen. Test will be completed in 15 seconds automatically.

10.2 ELT Mode [MENU 2]

10.2.1 Automatic

10.2.2 Manual

10.3 Version [MENU 3]

This displays software version stored in the phone.

10.4 Factory Reset [MENU 4]

This Factory Reset menu is to format data block in the flash memory and this procedure set up the default value in data block.

Attention

① Fact. Reset (i.e.Factory Reset) should be only used during the Manufacturing process.
② Servicemen should NOT progress this menu, otherwise some of valuable data such as Setting value, RF Calibration data, etc. cannot be restored again.

10.5 Eng Mode [MENU 5]

Engineering mode is designed to allow a service man/engineer to view and test the basic functions provided by a handset.

10.5.1 Call Timer

This displays total conversation time. This value is never reset even after Factory Reset.

10.5.2 Band Selection

This menu is designed to allow a service man/engineer to select band and test.

10.5.3 Battery info

1) TEMP Cal : This displays the value of Temperature Calibration. The following menus are displayed in order : TEMP_HIGH_LIMIT, TEMP_HIGH_RECHARGE_LMT, TEMP_LOW_RECHARGE_LMT, TEMP_LOW_LIMIT

2) Bat Cal : This displays the value of Battery Calibration. The following menus are displayed in order : BAT_LEV_4V, BAT_LEV_3_LIMIT, BAT_LEV_2_LIMIT, BAT_LEV_1_LIMIT, BAT_IDLE_LI MIT, BAT_INCALL_LIMIT, SHUT_DOWN_VOLTAGE, BAT_RECHARGE_LMT

3) MVBAT ADC : This displays Battery voltage ADC.

4) AUX ADC : This displays AUX ADC.

5) TEMPER ADC : This displays temperature ADC.

10.5.4 Audio Tuning

Audio Tuning mode is designed to allow a engineer to view and tune the audio parameter.

1st Menu	2nd Menu	3rd Menu	4th Menu	5th Menu
1. Handset 2. Headset 3. Speakerphone 4. Bluetooth	1 Uplink Gain	1. Analog Gain 2. Digital Gain	0 ~ 22.5 dB 0x0000 ~ 0xFFFF	
	2 Downlink Gain	1. Analog Gain 2. Digital Gain	12 ~ -48 dB 0x0000 ~ 0xFFFF	
	3 Sidetone Gain	0 ~ 100		
	4. Filter tables	1. default table 2. test table1 3. test table2 4. test table3 5. test table4 6. test table5		
	5. Echo Canceller	1. Uplink	1. aecMode 2. aecMicThreshold 3. aecResidualThreshold 4. aecMaxStepSize 5. aecEnableCoefUpdate 6. aecEnableNlp 7. aecNlpAttenuation 8. aecEnableComfortNoise 9. aecDlUlDelay 10. aecMinLemCouplingFactor 11. aecMinLineCouplingFactor	1. Enable / 2. Disable 0x0000 ~ 0xFFFF 0x0000 ~ 0xFFFF 0x0000 ~ 0x4000 1. Enable / 2. Disable 1. Enable / 2. Disable 0x0000 ~ 0x7FFF 1. Enable / 2. Disable 0x0000 ~ 0xFFFF 0x0000 ~ 0x7FFF 0x0000 ~ 0xFFFF
			12. aecTailControlGainTable	1. default table 2. test table 1 3. test table 2 4. test table 3
		2. Downlink	1. aecCtrl 2. aecCnfg	1. Enable / 2. Disable 0x0000 ~ 0xFFFF

10.5.5 UART Setting

This menu is designed to allow a service man/engineer to UART path.

1) AUTO

2) Cal / Debug

3) AT CMD

4) STATUS

10.5.6 BT Test

This menu is to test BT operation.

1) Audio Test

2) RF Trst

10.6 Network Info [MENU 6]

This displays Cell Enviroment.

10.6.1 Cell Env. (Idle)

10.6.2 Cell Env. (Ded)

11. STAND ALONE TEST

11.1 Introduction

This manual explains how to examine the status of RX and TX of the model.

A. Tx Test

TX test - this is to see if the transmitter of the phones is activating normally.

B. Rx Test

RX test - this is to see if the receiver of the phones is activating normally.

11.2 Setting Method

A. COM port

a. Move your mouse on the “Option” button, then click the right button of the mouse and select “Com setting”.

b. In the “Dialog Menu”, select the values as explained below.
- Port : select a correct COM port
- Baud rate : 115000
- Leave the rest as default values

B. Tx

1. Selecting Channel
   - Select one of GSM or DCS/PCS Band and input appropriate channel.
2. Selecting APC
   a. Select either Power level or Scaling Factor.
   b. Power level
   - Input appropriate value GSM850 (between 5~19) or DCS/PCS (between 0~15)
   c. Scaling Factor
   - A ‘Ramp Factor’ appears on the screen.
   - You may adjust the shape of the Ramp or directly input the values.

C. Rx

1. Selecting Channel
   - Select one of GSM850 or DCS/PCS Band and input appropriate channel.
2. Gain Control Index (0~ 26) and RSSI level
   - See if the value of RSSI is close to -16dBm when setting the value between 0 ~ 26 in Gain Control Index.
   - Normal phone should indicate the value of RSSI close to -16dBm.

11.3 Means of Test

a. Select a COM port
b. Set the values in Tx or Rx
c. Select band and channel
d. After setting them all above, press connect button.
e. Press the start button

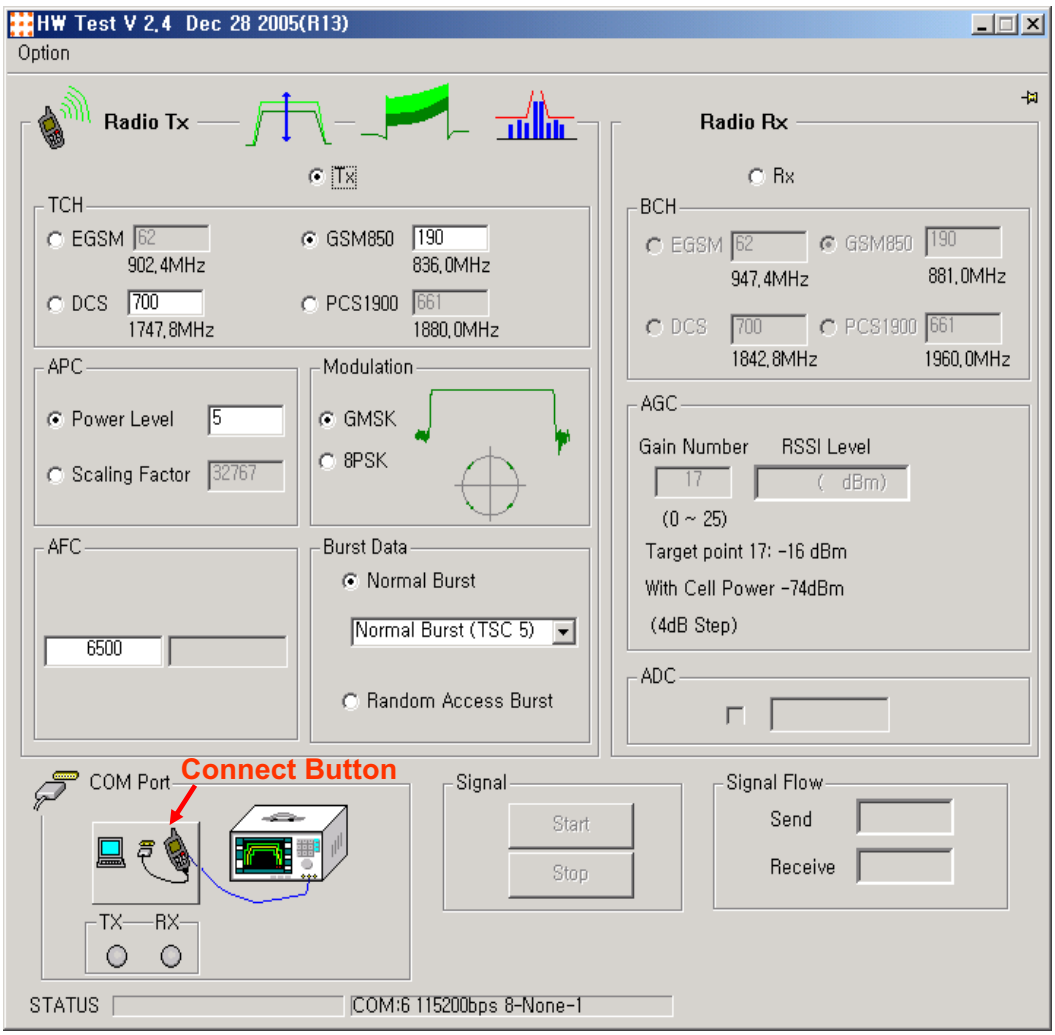


Figure 11.3.1 HW test program

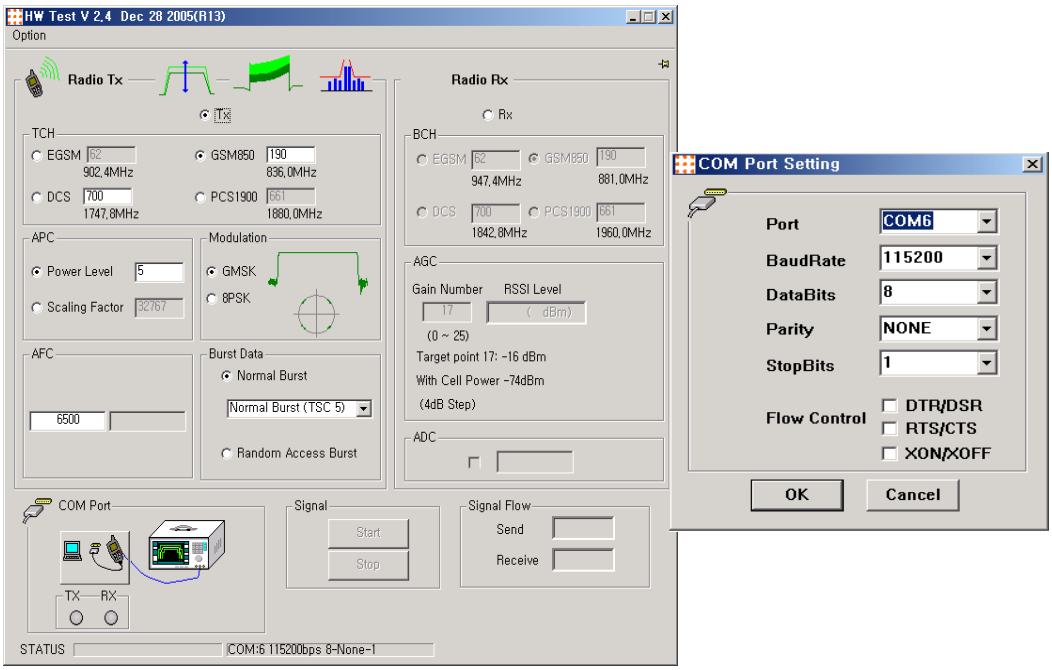


Figure 11.3.2 HW test setting

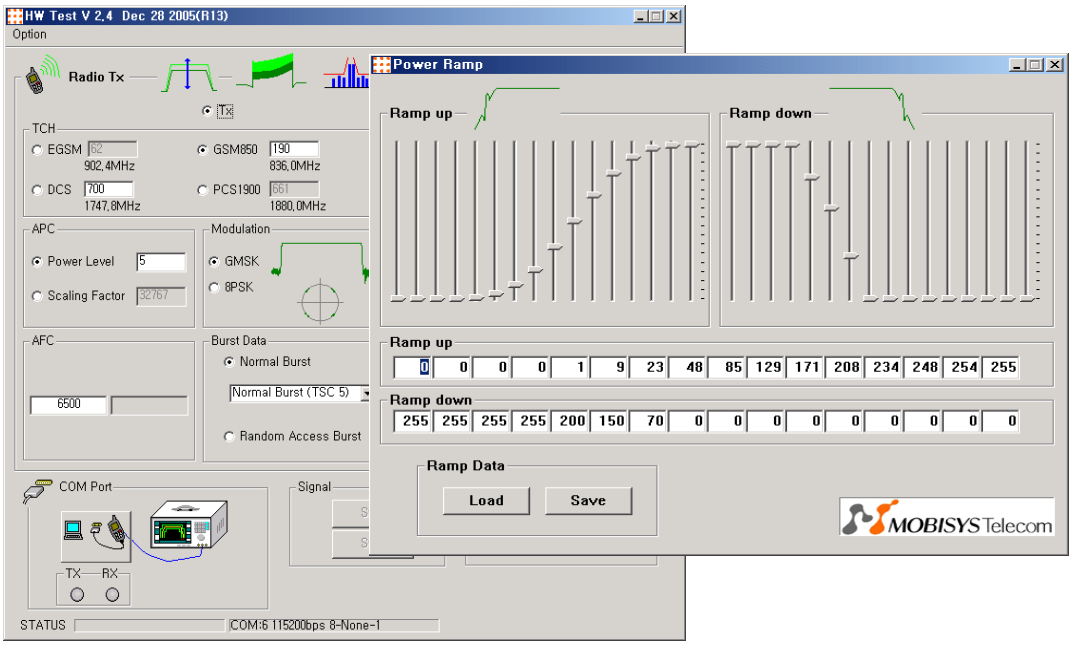


Figure 11.3.3 Ramping profile

12. AUTO CALIBRATION

12.1 Overview

Auto-cal (Auto Calibration) is the PC side Calibration tool that perform Tx, Rx and Battery Calibration with Agilent 8960(GSM call setting instrument) and Tektronix PS2521G(Programmable Power supply). Auto-cal generates calibration data by communicating with phone and measuring equipment then write it into calibration data block of flash memory in GSM phone.

12.2 Equipment List

Equipment for Calibration	Type / Model	Brand
Wireless Communication Test Set	HP-8960	Agilent
RS-232 Cable and Test JIG		LG
RF Cable		LG
Power Supply	HP-66311B	Agilent
GPIO interface card	HP-GPIB	Agilent
Calibration & Final test software		LG
Test SIM Card		
PC (for Software Installation)	Pentium II class above 300MHz	

Table 11.2.1 Calibration Equipment List.

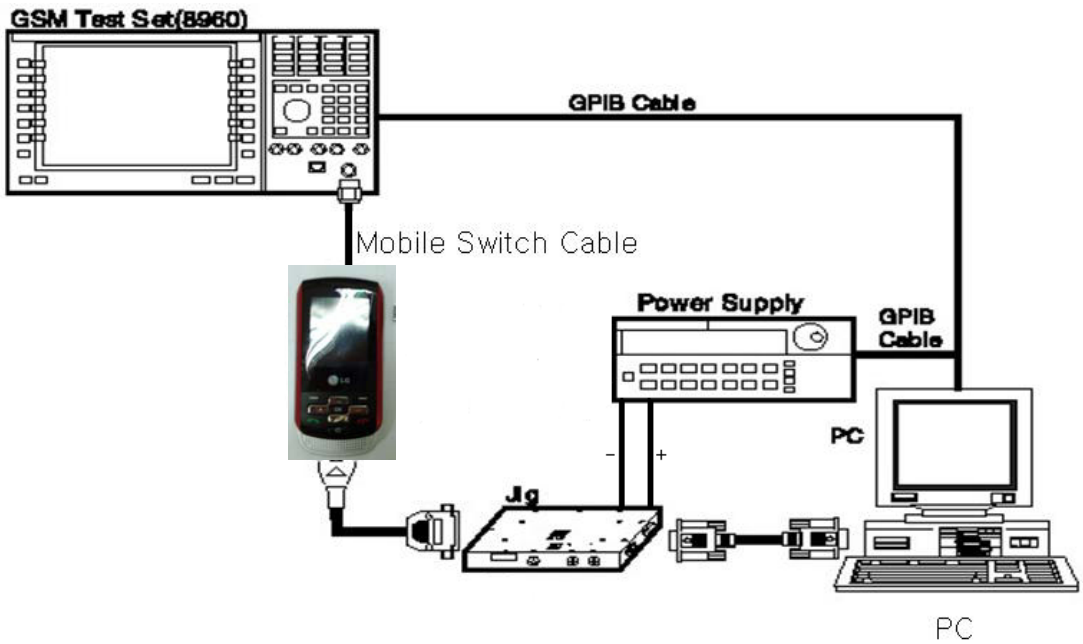


Figure 11.2.1 Equipment Setup

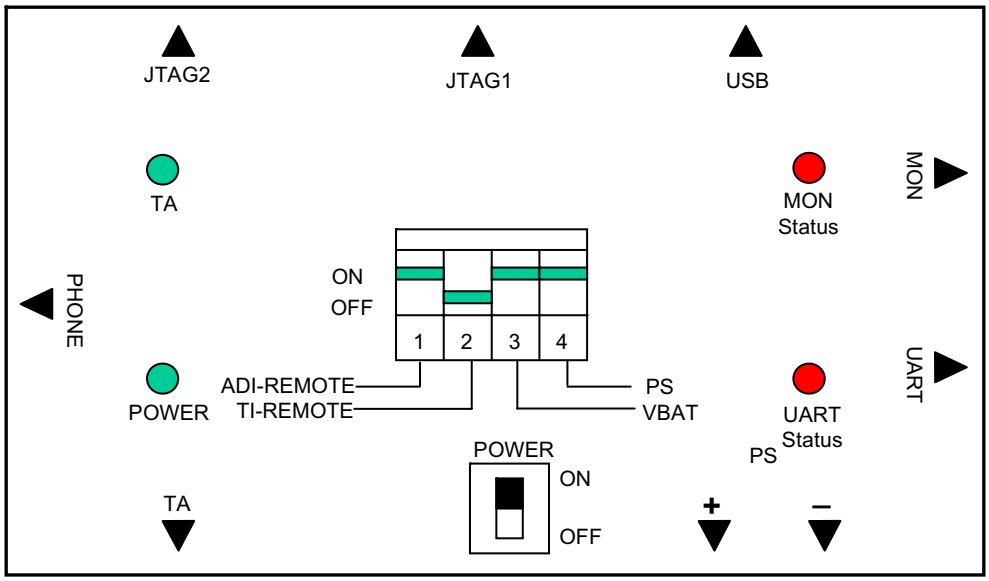


Figure 11.2.2 The top view of Test JIG

12.3 Test Jig Operation

Power Source	Description
Power Supply	Usually 4.0V

Table 12-2 Jig Power

Switch Number	Name	Description
Switch 1	ADI-REMOTE	In ON state, phone is awaked. It is used ADI chipset.
Switch 2	TI-REMOTE	In ON state, phone is awaked. It is used TI chipset.
Switch 3	VBAT	Power is provided for phone from battery
Switch 4	PS	Power is provided for phone from Power supply

Table 12-3 Jig DIP Switch

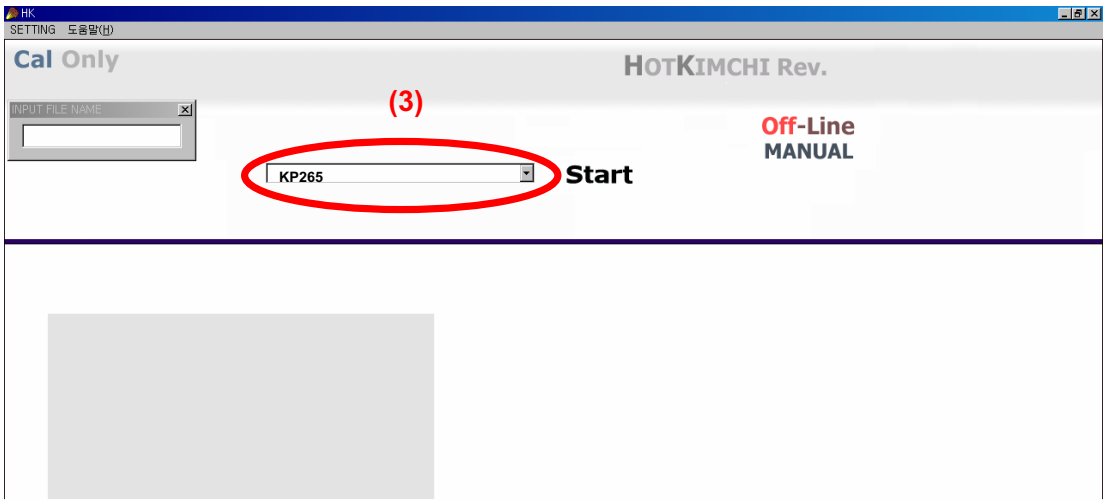
LED Number	Name	Description
LED 1	Power	Power is provided for Test Jig
LED 2	TA	Indicate charging state of the phone battery
LED 3	UART	Indicate data transfer state through the UART port
LED 4	MON	Indicate data transfer state through the MON port

Table 12-4 LED Description

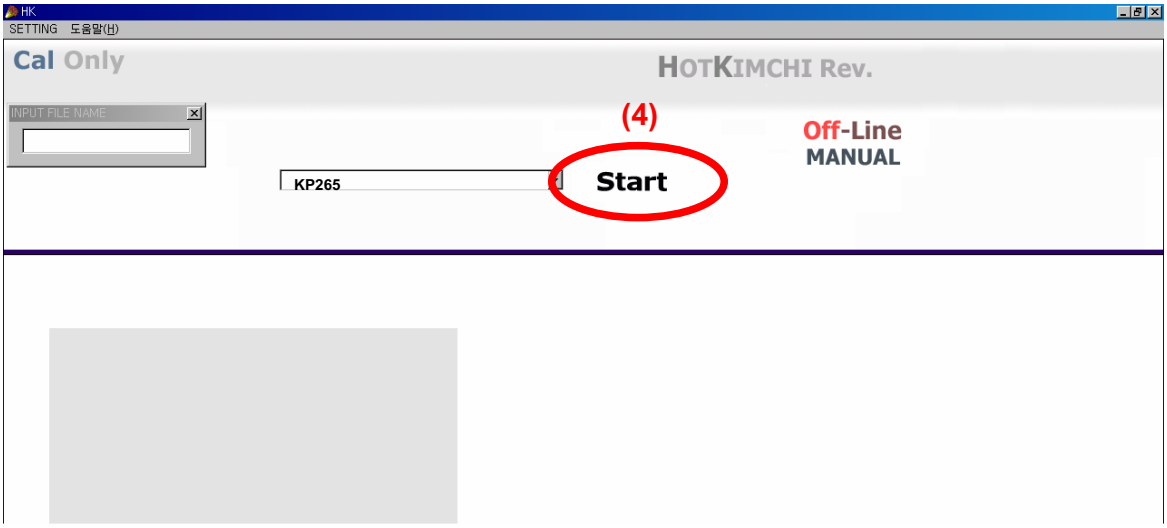
1. Connect as Fig 6-2(RS232 serial cable is connected between COM port of PC and MON port of TEST JIG, in general)
2. Set the Power Supply 4.0V
3. Set the 3rd, 4th of DIP SW ON state always
4. Press the Phone power key, if the Remote ON is used, 1st ON state

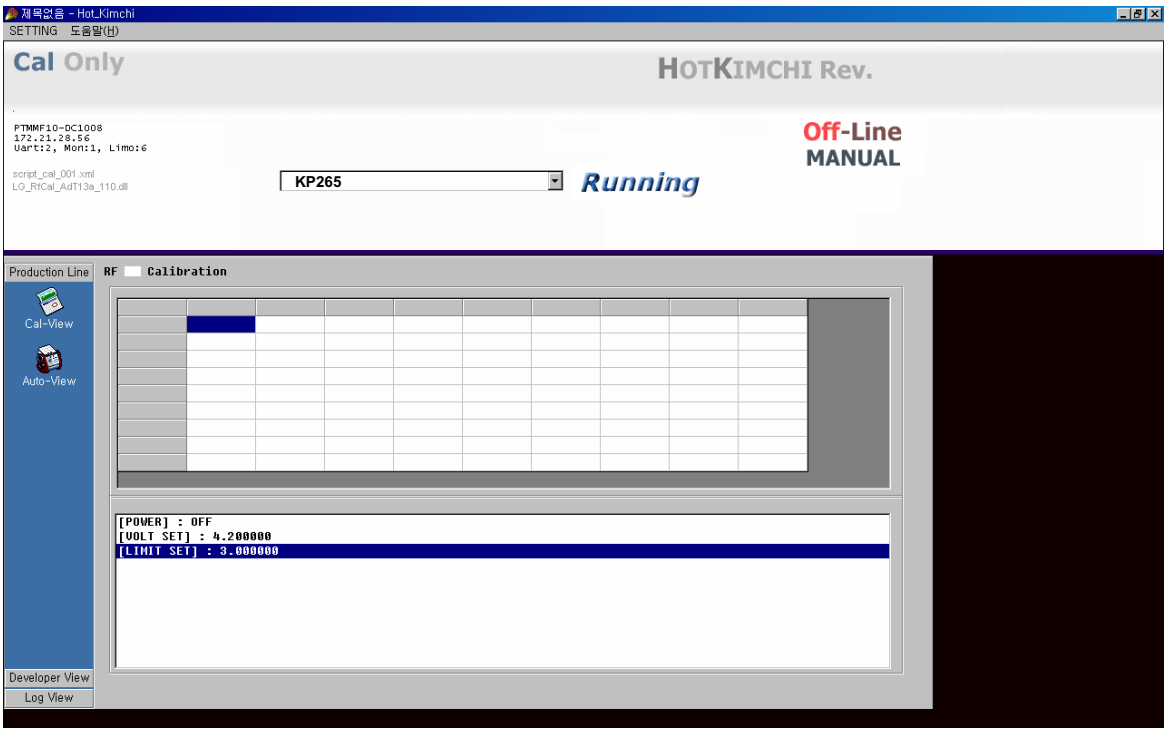
12.4 Procedure

1. Connect as Fig 12.2.2 (RS232 serial cable is connected between COM port of PC and MON port of TEST JIG, in general.)
2. Run Hot_Kimchi.exe to start calibration.
3. From the Calibration menu, Select KP265!



4. Press Calibration START





12.5 AGC

This procedure is for Rx calibration.
In this procedure, We can get RSSI correction value. Set band EGSM and press Start button the result window will show correction values per every power level and gain code and the same measure is performed per every frequency.

12.6 APC

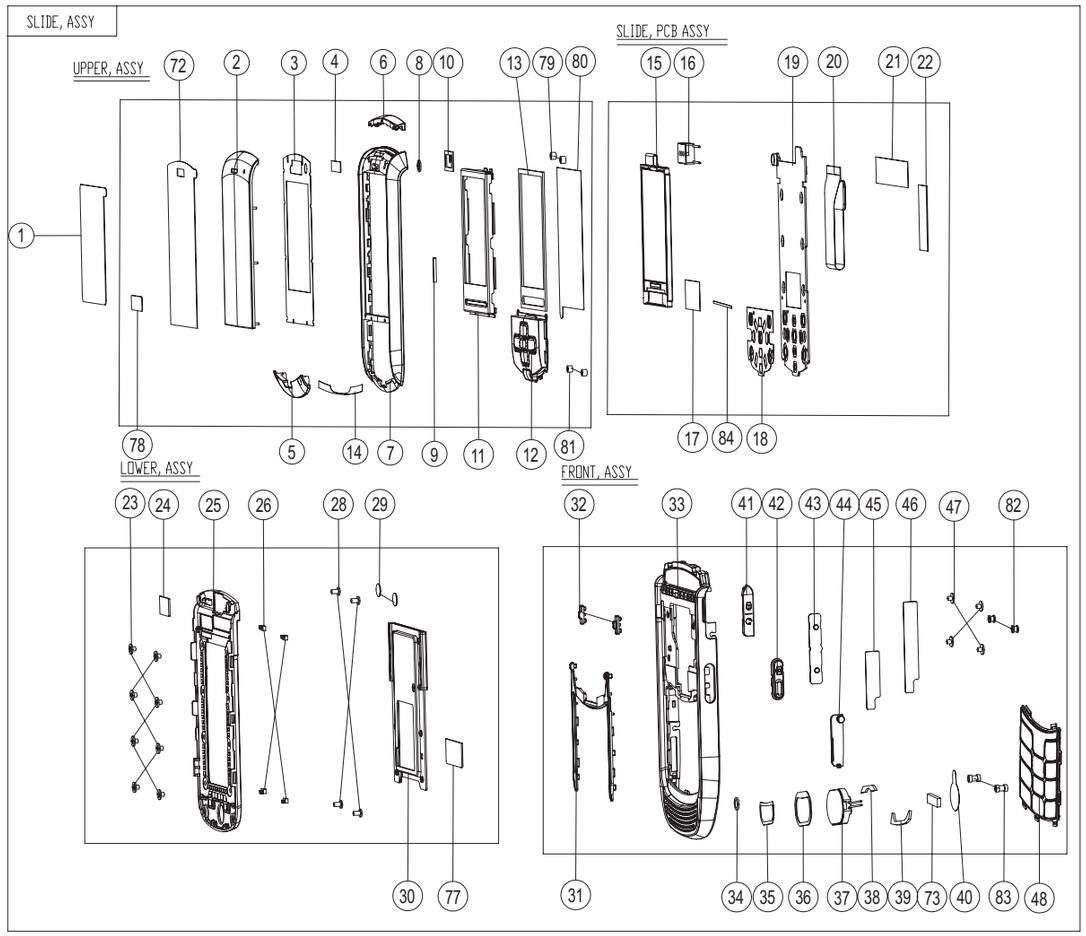
This procedure is for Tx calibration.
In this procedure you can get proper scale factor value and measured power level.

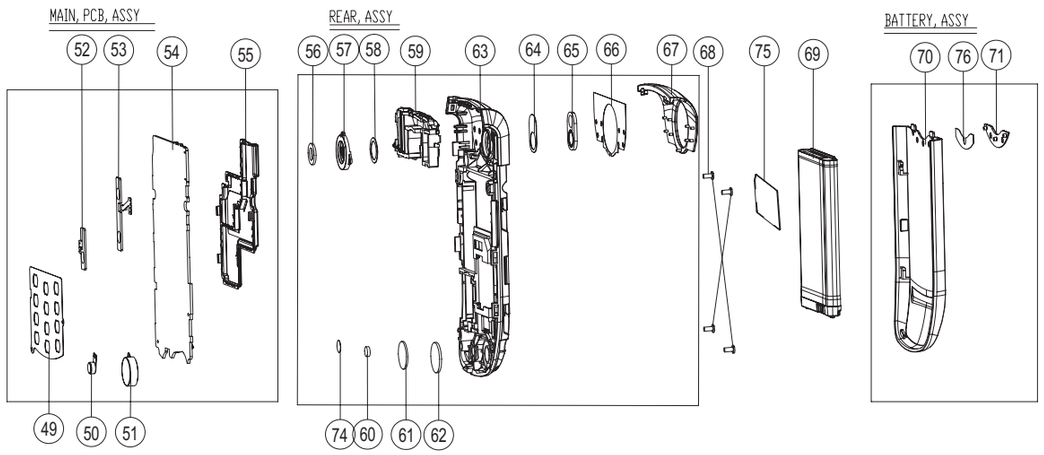
12.7 ADC

This procedure is for battery calibration.
You can get main Battery Config Table and temperature Config Table will be reset.

13. EXPLODED VIEW & REPLACEMENT PART LIST

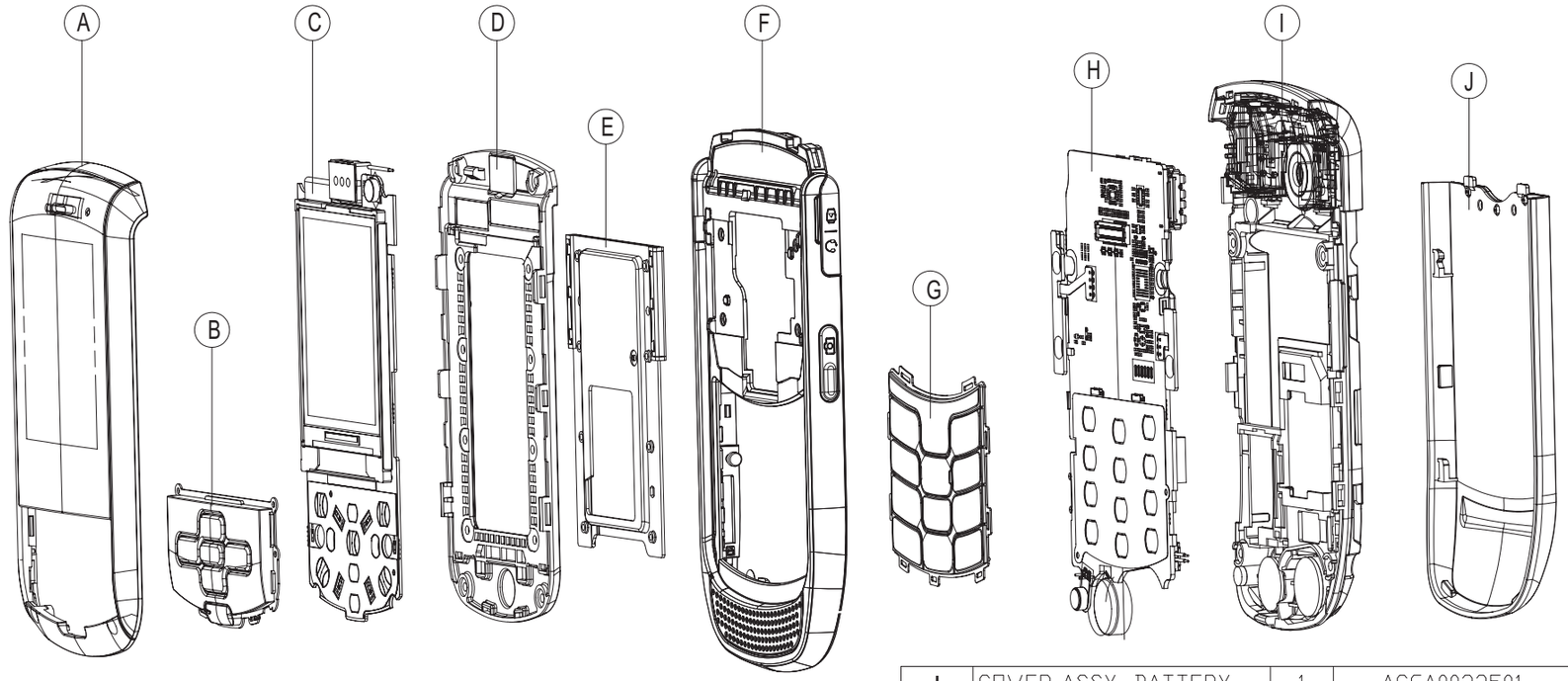
13.1 EXPLODED VIEW





NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
84	PAD KEY PCB	1	MPBZ0216601	
83	INSERT_FRONT_BOTTOM	2	MICZ0021501	
82	INSERT_FRONT_TOP	2	MICE0002001	
81	INSERT_DECO_BOTTOM	2	MICC0010001	
80	TAPE_REMOVAL	1	MTAB0256801	
79	INSERT_UPPER	2	MICE0000401	
78	LABEL, FID	0.1	MLAZ0038303	
77	PAD, SLIDE PCB	1	MPBZ0214201	
76	TAPE, DECO BATTERY	1	MTAA0165401	
75	LABEL, MODEL	1	MLAK0018622	
74	LABEL, A/S	1	MLAB0001102	
73	PAD WIRE, FRONT	1	MPBZ0211701	
72	TAPE, PROTECTION WINDOW	1	MTAB0248501	
71	DECO, BATTERY	1	MDAY0038801	
70	COVER, BATTERY	1	MCJA0068001	
69	BATTERY PACK	1	SBPL0090902	
68	SCREW MACHINE	4	GMEY0011201	
67	DECO, REAR	1	MDAK0015201	
66	TAPE, DECO REAR	1	MTAA0159401	
65	WINDOW, CAMERA	1	MWAE0035401	
64	TAPE, WINDOW CAMERA	1	MTAA0161901	
63	COVER, REAR	1	MCJN0085701	
62	PAD, SPEAKER	1	MPBN0056101	
61	PAD, MOTOR	1	MPBJ0054101	
60	PAD, MIKE (REAR)	1	MPBH0038201	
59	INTENNA	1	SNGF0036802	
58	TAPE DECO, CAMERA	1	MTAK0011601	
57	DECO, CAMERA	1	MCCZ0028601	
56	PAD, CAMERA	1	MPBT0057701	
55	CAN, SHIELD	1	MCBA0031801	
54	MAIN PCB	1	SAFF0182801	
53	SIDE DOME VOLUME	1	SPKY0060101	
52	SIDE DOME CAMERA	1	SPKY0060001	
51	MOTOR	1	SJMY0007106	
50	MIC	1	SUMY0007102	
49	DOME ASSY, METAL(MAIN)	1	ADCA0081501	
48	BUTTON ASSY,MAIN	1	ABGF0004301	
47	SCREW, MACHINE	4	GMEY0017801	
46	INSULATOR (VOLUME)	1	MIDZ0167601	
45	INSULATOR (CAMERA)	1	MIDZ0167701	
44	CAP, SD CARD	1	MCCG0013101	
43	BUTTON SIDE, VOLUME	1	MBJL0059401	
42	BUTTON SIDE, CAMERA	1	MBJL0059501	
41	CAP, RECEPTACLE	1	MCCE0044101	
40	TAPE, MOTOR	1	MTAF0018501	
39	PAD, LEAKAGE DOWN	1	MPBN0059301	
38	PAD, LEAKAGE TOP	1	MPBN0059101	
37	SPEAKER	1	SUSY0027501	
36	PAD, SPEAKER	1	MPBN0059001	
35	FILTER, SPEAKER	1	MFBC0040501	
34	FILTER, MIC	1	MFBD0030801	
33	COVER, FRONT	1	MCJK0088801	
32	GUIDE, LEFT	1	MGDA0013701	
31	DECO, FRONT	1	MDAG0038201	
30	RAIL ASSY, SLIDE	1	AHFB0003103	
29	CAP, SCREW	2	MCCH0130001	
28	SCREW MACHINE	4	GMEY0017001	
26	STOPPER	4	MSGY0024301	
25	COVER SLIDE, LOWER	1	MCJV0016201	
24	PAD, RECEIVER	1	MPBM0022801	
23	SCREW MACHINE	8	GMEY0017801	
22	GASKET FORM	1	MGAD0170001	
21	INSULATOR SLIDE PCB	1	MIDZ0175601	
20	FPCB MAIN	1	SACY0075101	
19	SLIDE PCB	1	SAEE0030001	
18	DOME ASSY, METAL(SUB)	1	ADCA0081401	
17	TAPE, LCD	1	MTAZ0217101	
16	RECEIVER	1	SURY0013901	
15	LCD, MODULE	1	SVLM0025102	
14	TAPE DECO UPPER BOTTOM	1	MTAA0168001	
13	PAD, LCD	1	MPBG0078301	
12	BUTTON ASSY, SUB	1	ABGG0003601	
11	BRACKET, LCD	1	MBFF0019301	
10	PAD, RECEIVER	1	MPBM0022901	
9	MAGNET, SWITCH	1	MMAA0008701	
8	PAD, MIKE (UPPER)	1	MPBH0038001	
7	COVER SLIDE, UPPER	1	MCJW0019601	
6	DECO SLIDE, TOP	1	MDAP0003201	
5	DECO SLIDE, BOTTOM	1	MDAP0003301	
4	FILTER, RECEIVER	1	MFBB0026301	
3	TAPE, WINDOW	1	MTAD0087601	
2	WINDOW, LCD	1	MWAC0100401	
1	TAPE, PROTECTION	1	MTAB0233701	

ASS'Y EXPLODED VIEW



J	COVER ASSY, BATTERY	1	ACGA0022501	
I	COVER ASSY, REAR	1	ACGM0112801	
H	PCB ASSY, MAIN	1	SAFY0268201	
G	BUTTON ASSY,MAIN	1	ABGF0004302	
F	COVER ASSY, FRONT	1	ACGK0112701	
E	RAIL ASSY, SLIDE	1	AHFB0003103	
D	COVER ASSY, SLIDE(LOWER)	1	ACGR0016401	
C	PCB ASSY, KEYPAD	1	SAEY0062801	
B	BUTTON ASSY, SUB	1	ABGG0003601	
A	COVER ASSY, SLIDE(UPPER)	1	ACGS0019901	
NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK

13.2 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	Spec	Color	Remark
1		GSM(SLIDE)	TGLL0018201		Red	
2	AAAY00	ADDITION	AAAY0321901		Red	
3	ACGA00	COVER ASSY,BATTERY	ACGA0022501		Red	J
4	MCJA00	COVER,BATTERY	MCJA0068001	MOLD, PC LUPOY SC-1004A, , , , ,	Red	70
4	MDAY00	DECO	MDAY0038801	MOLD, PC LUPOY SC-1004A, , , , ,	Red	71
4	MTAA00	TAPE,DECO	MTAA0165401	COMPLEX, (empty), , , , ,	Without Color	76
2	APEY00	PHONE	APEY0603501		Red	
3	ACGM00	COVER ASSY,REAR	ACGM0112801		Red	I
4	MCCZ00	CAP	MCCZ0028601	MOLD, PC LUPOY SC-1004A, , , , ,	Without Color	57
4	MCJN00	COVER,REAR	MCJN0085701	MOLD, PC LUPOY SC-1004A, , , , ,	Red	63
4	MDAK00	DECO,REAR	MDAK0015201	MOLD, PC LUPOY SC-1004A, , , , ,	Red	67
4	MLAB00	LABEL,A/S	MLAB0001102	C2000 USASV DIA 4.0	White	74
4	MPBH00	PAD,MIKE	MPBH0038201	COMPLEX, (empty), , , , ,	Without Color	60
4	MPBJ00	PAD,MOTOR	MPBJ0054101	COMPLEX, (empty), , , , ,	Without Color	61
4	MPBN00	PAD,SPEAKER	MPBN0056101	COMPLEX, (empty), , , , ,	Without Color	62
4	MPBT00	PAD,CAMERA	MPBT0057701	COMPLEX, (empty), , , , ,	Without Color	56
4	MPBU00	PAD,CONNECTOR	MPBU0027501	COMPLEX, (empty), , , , ,	Without Color	
4	MTAA00	TAPE,DECO	MTAA0159401	COMPLEX, (empty), , , , ,	Without Color	66
4	MTAA01	TAPE,DECO	MTAA0161901	COMPLEX, (empty), , , , ,	Without Color	64
4	MTAK00	TAPE,CAMERA	MTAK0011601	COMPLEX, (empty), , , , ,	Without Color	58
4	MWAE00	WINDOW,CAMERA	MWAE0035401	CUTTING, PMMA MR 200, 0.1t, , , ,	Without Color	65
3	ACGQ00	COVER ASSY,SLIDE	ACGQ0026501		Red	
4	ABGF00	BUTTON ASSY,MAIN	ABGF0004302		Silver	G, 48

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
4	ABGG00	BUTTON ASSY,SUB	ABGG0003601	FUNCTION	Without Color	B, 12
4	ACGK00	COVER ASSY,FRONT	ACGK0112701		Red	F
5	MBJL00	BUTTON,SIDE	MBJL0059401	COMPLEX, (empty), , , , ,	Without Color	43
5	MBJL01	BUTTON,SIDE	MBJL0059501	COMPLEX, (empty), , , , ,	Without Color	42
5	MCCE00	CAP,RECEPTACLE	MCCE0044101	MOLD, Urethane Rubber S190A, , , , ,	Without Color	41
5	MCCG00	CAP,MULTIMEDIA CARD	MCCG0013101	MOLD, Urethane Rubber S190A, , , , ,	Without Color	44
5	MCJK00	COVER,FRONT	MCJK0088801	MOLD, PC LUPOY SC-2302, , , , ,	82	33
6	MICE00	INSERT,NUT	MICE0002001	CUTTING, BeCu, , , , ,	Gold	
6	MICZ00	INSERT	MICZ0021501	M1.4 * 2.0	Black	83
5	MDAG00	DECO,FRONT	MDAG0038201	MOLD, POM LUCEL N109-LD, , , , ,	Black	31
5	MFBC00	FILTER,SPEAKER	MFBC0040501	COMPLEX, (empty), , , , ,	Without Color	35
5	MFBD00	FILTER,MIKE	MFBD0030801	COMPLEX, (empty), , , , ,	Without Color	34
5	MGDA00	GUIDE,LEFT	MGDA0013701	MOLD, POM LUCEL N109-LD, , , , ,	Black	32
5	MIDZ00	INSULATOR	MIDZ0167601	COMPLEX, (empty), , , , ,	Without Color	46
5	MIDZ01	INSULATOR	MIDZ0167701	COMPLEX, (empty), , , , ,	Without Color	45
5	MPBN00	PAD,SPEAKER	MPBN0059001	COMPLEX, (empty), , , , ,	Without Color	36
5	MPBN01	PAD,SPEAKER	MPBN0059101	COMPLEX, (empty), , , , ,	Without Color	38
5	MPBN02	PAD,SPEAKER	MPBN0059301	COMPLEX, (empty), , , , ,	Without Color	39
5	MPBZ03	PAD	MPBZ0211701	COMPLEX, (empty), , , , ,	Without Color	73
5	MTAF00	TAPE,MOTOR	MTAF0018501	COMPLEX, (empty), , , , ,	Without Color	40
4	ACGR00	COVER ASSY, SLIDE(LOWER)	ACGR0016401		Red	D
5	MCJV00	COVER,SLIDE(LOWER)	MCJV0016201	MOLD, PC LUPOY SC-2302, , , , ,	Red	25
5	MIDZ00	INSULATOR	MIDZ0185501	COMPLEX, (empty), , , , ,	Without Color	
5	MMAA00	MAGNET,SWITCH	MMAA0008701	COMPLEX, (empty), , , , ,	Without Color	9

Level	Location No.	Description	Part Number	Spec	Color	Remark
5	MPBM00	PAD,RECEIVER	MPBM0022801	COMPLEX, (empty), , , , ,	Without Color	10, 24
5	MSGY00	STOPPER	MSGY0024301	MOLD, Urethane Rubber S190A, , , , ,	Without Color	26
4	ACGS00	COVER ASSY, SLIDE(UPPER)	ACGS0019901		Red	A
5	MBFF00	BRACKET,LCD	MBFF0019301	PRESS, STS, , , , ,	Without Color	11
5	MCJW00	COVER,SLIDE(UPPER)	MCJW0019601	MOLD, PC LUPOY SC-1004A, , , , ,	Red	7
6	MICE00	INSERT,NUT	MICE0000401	CUTTING, Bs, , , , ,	Without Color	79
5	MDAP00	DECO,SLIDE(UPPER)	MDAP0003201	MOLD, PC LUPOY SC-1004A, , , , ,	Without Color	6
5	MDAP01	DECO,SLIDE(UPPER)	MDAP0003301	MOLD, PC LUPOY SC-1004A, , , , ,	Without Color	5
6	MICC00	INSERT,FRONT(UPPER)	MICC0010001	D2.2 L2.0 KURL 45	Gold	81
5	MFBB00	FILTER,RECEIVER	MFBB0026301	COMPLEX, (empty), , , , ,	Without Color	4
5	MPBG00	PAD,LCD	MPBG0078301	COMPLEX, (empty), , , , ,	Without Color	13
5	MPBH00	PAD,MIKE	MPBH0038001	COMPLEX, (empty), , , , ,	Without Color	8
5	MPBM00	PAD,RECEIVER	MPBM0022901	COMPLEX, (empty), , , , ,	Without Color	
5	MTAA00	TAPE,DECO	MTAA0168001	COMPLEX, (empty), , , , ,	Without Color	14
5	MTAB00	TAPE,PROTECTION	MTAB0256801	COMPLEX, (empty), , , , ,	Without Color	80
5	MTAB01	TAPE,PROTECTION	MTAB0248501	COMPLEX, (empty), , , , ,	Without Color	72
5	MTAD00	TAPE,WINDOW	MTAD0087601	COMPLEX, (empty), , , , ,	Without Color	3
5	MWAC00	WINDOW,LCD	MWAC0100401	MOLD, PMMA HI835M, , , , ,	Red	2
6	BFAA00	FILM,INMOLD	BFAA0095201	; ,BLACK , , ,	Black	
4	AHFB00	HINGE ASSY,SLIDE	AHFB0003103	35H37C Black	Black	E, 30
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]		28
4	GMEY01	SCREW MACHINE,BIND	GMEY0017801	1.4 mm,1.4 mm,MSWR3 ,B ,+ , ,; ,BWH ,- ,3.5 , ,A-5052 ,BN ,F/W ,B	Without Color	23, 47
4	MCCH00	CAP,SCREW	MCCH0130001	COMPLEX, (empty), , , , ,	Without Color	29
4	MGAD00	GASKET,SHIELD FORM	MGAD0170001	COMPLEX, (empty), , , , ,	Without Color	22

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
4	MIDZ00	INSULATOR	MIDZ0175601	COMPLEX, (empty), , , , ,	Without Color	21
4	MIDZ01	INSULATOR	MIDZ0184501	COMPLEX, (empty), , , , ,	Without Color	
4	MLAZ00	LABEL	MLAZ0038303	PRINTING, (empty), , , , ,	White	78
4	MPBZ00	PAD	MPBZ0214201	COMPLEX, (empty), , , , ,	Without Color	77
4	MPBZ01	PAD	MPBZ0216601	COMPLEX, (empty), , , , ,	Without Color	84
4	MTAB00	TAPE,PROTECTION	MTAB0233702	COMPLEX, (empty), , , , ,	Without Color	1
4	MTAZ00	TAPE	MTAZ0217101	COMPLEX, (empty), , , , ,	Without Color	17
6	ADCA00	DOME ASSY,METAL	ADCA0081401	SLIDE	Without Color	18
3	GMEY00	SCREW MACHINE,BIND	GMEY0011201	1.4 mm,3 mm,MSWR3(BK) ,N ,+ ,NYLOK	Without Color	68
3	MLAK00	LABEL,MODEL	MLAK0018622	PRINTING, (empty), , , , ,	Without Color	75
5	ADCA00	DOME ASSY,METAL	ADCA0081501	MAIN	Without Color	49
5	MCBA00	CAN,SHIELD	MCBA0031801	PRESS, STS, , , , ,	Without Color	55
5	MLAZ00	LABEL	MLAZ0038301	PID Label 4 Array	Without Color	

<Main component>

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

Level	Location No.	Description	Part Number	Spec	Color	Remark
4	SNGF00	ANTENNA,GSM,FIXED	SNGF0036802			59
5	SUSY00	SPEAKER	SUSY0027505	ASSY ,8 ohm,90 dB,1812 mm,3.4T 15mm elco8040 ,; , , , , , , ,CONNECTOR		37
4	SACY00	PCB ASSY,FLEXIBLE	SACY0075101			20
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0069701			
6	SACD00	PCB ASSY,FLEXIBLE,SMT TOP	SACD0058101			
7	CN101	CONNECTOR,BOARD TO BOARD	ENBY0040401	50 PIN,0.4 mm,ETC , ,H=1.0, Plug		
6	SPCY00	PCB,FLEXIBLE	SPCY0139501	POLYI ,0.3 mm,DOUBLE ,KP265 F-LCD ,; , , , , , , , , ,		
4	SAEY00	PCB ASSY,KEYPAD	SAEY0062801			C
5	SAEB00	PCB ASSY, KEYPAD,INSERT	SAEB0025901			
5	SAEE00	PCB ASSY,KEYPAD,SMT	SAEE0030001		Red	19
6	SAEC00	PCB ASSY,KEYPAD,SMT BOTTOM	SAEC0028701			
7	BAT100	BATTERY,CELL,LITHIUM	SBCL0001701	2 V,0.5 mAh,CYLINDER ,Reflow type BB, Max T 1.67, phi 4.8, Pb-Free		
7	C100	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C101	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
7	C102	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
7	C103	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
7	C104	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
7	C105	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
7	C106	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
7	C109	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
7	C110	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	C111	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
7	CN100	CONNECTOR,FFC/FPC	ENQY0013901	35 PIN,0.3 mm,STRAIGHT , , ,; , ,0.30MM ,FPC ,STRAIGHT ,BOTH ,SMD ,R/TP ,[empty] ,		
7	ECN100	CONNECTOR,FFC/FPC	ENQY0010102	61 PIN,0.3 mm,ETC ,AU ,H::1.0MM		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
7	L100	FILTER,BEAD,CHIP	SFBH0008102	1800 ohm,1005 ,Bead		
7	L101	FILTER,BEAD,CHIP	SFBH0008102	1800 ohm,1005 ,Bead		
7	R100	RES,CHIP,MAKER	ERHZ0000420	150 ohm,1/16W ,J ,1005 ,R/TP		
7	R101	RES,CHIP	ERHY0003201	1000 ohm,1/16W ,F ,1005 ,R/TP		
7	R102	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
7	R103	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
7	R104	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
7	R107	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	R110	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
7	VA103	VARISTOR	SEVY0004101	5.6 V, ,SMD ,360pF, 1005		
7	VA105	VARISTOR	SEVY0004101	5.6 V, ,SMD ,360pF, 1005		
6	SAED00	PCB ASSY,KEYPAD,SMT TOP	SAED0028101			
7	LD100	DIODE,LED,CHIP	EDLH0011901	WHITE ,1608 ,R/TP ,PB-FREE(ZENER)		
7	LD101	DIODE,LED,CHIP	EDLH0011901	WHITE ,1608 ,R/TP ,PB-FREE(ZENER)		
7	LD102	DIODE,LED,CHIP	EDLH0011901	WHITE ,1608 ,R/TP ,PB-FREE(ZENER)		
7	LD103	DIODE,LED,CHIP	EDLH0011901	WHITE ,1608 ,R/TP ,PB-FREE(ZENER)		
7	MIC100	MICROPHONE	SUMY0010507	UNIT ,42 dB,4*1.35 ,SMD		
7	R105	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
7	R106	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
7	R111	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
7	R112	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
7	R113	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
7	R114	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
7	VA104	VARISTOR	SEVY0003901	5.5 V, ,SMD ,Vdc 5.5, Vb 8, Cp 420, 1.0*0.5*0.6 , ,5.5 , ,480 ,1.0*0.5*0.6 ,[empty] ,SMD ,R/TP		
6	SPFY00	PCB,KEYPAD	SPEY0056701	FR-4 ,0.5 mm,Dobule , ,; , , , , , , , , ,		
4	SURY00	RECEIVER	SURY0013901			16
4	SVLM00	LCD MODULE	SVLM0025102	MAIN ,1.77"(128*160) ,34*48.1*1.9 ,262k ,TFT ,TM ,LGDP4513 ,		15
3	SAFY00	PCB ASSY,MAIN	SAFY0268201			H
4	SAFB00	PCB ASSY,MAIN,INSERT	SAFB0087201			
5	SJMY00	VIBRATOR,MOTOR	SJMY0007106	3 V,.08 A,10*3.0T ,17mm ,; ,3V , , ,12000 rpm , , , ,		51

Level	Location No.	Description	Part Number	Spec	Color	Remark
5	SPKY01	PCB,SIDEKEY	SPKY0060001	POLYI ,0.2 mm,DOUBLE , F-SK-CAM,; , , , , , , , , ,		52
5	SPKY02	PCB,SIDEKEY	SPKY0060101	POLYI ,.2 mm,DOUBLE ,F-SK-VOL ,; , , , , , , , , ,		53
5	SUMY00	MICROPHONE	SUMY0007102	FPCB ,-42 dB,4*1.5 ,FPCB ,; , , ,OMNI ,1.5TO5V , ,FPC		50
5	SVCY00	CAMERA	SVCY0017601	CMOS ,MEGA ,1.3M, Siliconfile(1/4"), 8x8x5t, Socket Type		
4	SAFF00	PCB ASSY,MAIN,SMT	SAFF0182801			54
5	SAFC00	PCB ASSY,MAIN,SMT BOTTOM	SAFC0111601			
6	ANT200	ANTENNA,MOBILE,FIXED	SNMF0036201	3:1 ,-4 dB,Pb-free_Chip_BT Class1 ,; ,SINGLE ,-4 ,50 ,3:1		
6	C100	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C101	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C102	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C103	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C104	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C105	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C106	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C107	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C108	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C109	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C110	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C111	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C112	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C113	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C114	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C115	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C116	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C117	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C118	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C119	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C120	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C121	CAP,CHIP,MAKER	ECZH0000810	9 pF,50V ,D ,NP0 ,TC ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C122	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C123	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C124	CAP,CHIP,MAKER	ECZH0000810	9 pF,50V ,D ,NP0 ,TC ,1005 ,R/TP		
6	C127	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C128	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C129	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C130	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C131	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C132	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C133	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C134	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C135	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C136	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C137	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C138	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C139	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C140	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C141	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C142	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C143	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C144	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C145	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C146	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C147	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C148	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C149	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C150	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C152	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C153	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C154	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C155	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C156	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C157	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C200	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C201	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C202	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C203	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C206	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C207	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C208	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C209	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C212	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C213	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C214	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C218	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C221	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C222	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C225	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C233	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C234	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C300	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C301	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C302	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C304	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C307	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C308	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C309	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C310	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C311	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C312	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C313	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C314	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C315	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C316	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C317	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C318	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C319	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C320	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C321	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C322	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C323	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C324	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C325	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C327	CAP,CHIP,MAKER	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C329	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C330	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C331	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C332	CAP,TANTAL,CHIP	ECTH0005203	33 uF,10V ,M ,STD ,2012 ,R/TP ,; , ,[empty] ,[empty] , ,[empty] , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C337	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C338	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C339	CAP,CERAMIC,CHIP	ECCH0007802	4.7 uF,10V ,M ,X5R ,TC ,1608 ,R/TP		
6	C350	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C351	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C356	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C357	CAP,CERAMIC,CHIP	ECCH0000137	330 pF,50V ,K ,X7R ,HD ,1005 ,R/TP		
6	C400	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C401	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C402	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C403	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C404	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C405	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C406	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C407	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C408	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C409	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C410	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C411	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C412	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C413	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C415	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C416	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C417	CAP,TANTAL,CHIP	ECTH0003701	10 uF,6.3V ,M ,L_ESR ,1608 ,R/TP		
6	C419	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C421	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C422	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C423	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C424	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C500	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C501	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C502	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C503	CAP,CERAMIC,CHIP	ECCH0000393	22000000 pF,6.3V ,M ,X5R ,HD ,2012 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,1.25 mm		
6	C504	CAP,CHIP,MAKER	ECZH0000822	1.5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C505	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C506	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C507	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C508	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C509	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C510	CAP,CHIP,MAKER	ECZH0001002	0.5 pF,50V ,B ,NP0 ,TC ,1005 ,R/TP		
6	C512	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C513	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C517	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C518	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C519	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C520	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C521	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C522	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C523	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C524	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C525	CAP,CHIP,MAKER	ECZH0000806	5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C526	CAP,CHIP,MAKER	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C527	CAP,CHIP,MAKER	ECZH0000806	5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C528	CAP,CHIP,MAKER	ECZH0000806	5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C529	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C530	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C531	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C532	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C533	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C534	CAP,CHIP,MAKER	ECZH0000806	5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C535	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C536	CAP,CERAMIC,CHIP	ECCH0000185	5.6 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C537	CAP,CERAMIC,CHIP	ECCH0000185	5.6 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C538	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C539	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C540	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C541	CAP,CERAMIC,CHIP	ECCH0000901	2.2 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C542	CAP,CERAMIC,CHIP	ECCH0000127	82 pF,50V,J,NP0,TC,1005,R/TP		
6	C543	CAP,CERAMIC,CHIP	ECCH0000901	2.2 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C544	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C545	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	CN200	CONNECTOR,ETC	ENZY0016601	2 PIN,1.0 mm,ETC , ,H=1.4		
6	CN300	CONNECTOR,I/O	ENRY0006801	18 PIN,0.4 mm,ETC , , ,; ,18 ,0.40MM ,ANGLE ,RECEPTACLE ,SMD ,R/TP ,		
6	CN301	CONNECTOR,ETC	ENZY0019801	3 PIN, mm,ETC , ,3 PIN, 1.9 mm, ETC , ,Battery Connector		
6	CN400	CONN,SOCKET	ENSY0020101	24 PIN,ETC , ,0.9 mm,		
6	D100	DIODE,SWITCHING	EDSY0017301	VSM ,15 V,100 mA,R/TP ,PB-FREE		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	FB300	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB301	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB302	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB303	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FL400	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	FL401	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	FL402	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	FL500	FILTER,SEPERATOR	SFAY0008602	850,900 ,1800.1900 , dB, dB, dB, dB,4532 ,GSM QUAD FEM FOR RENESAS RFIC		
6	IC200	IC	EUSY0360201	CSP ,20 ,R/TP ,Class D(mono) + Capless HP + A/S ,; ,IC,Audio Sub System		
6	J300	CONN,SOCKET	ENSY0018101	6 PIN,ETC , ,2.54 mm,H=1.5		
6	L204	INDUCTOR,CHIP	ELCH0010402	270 nH,M ,1005 ,R/TP ,CHIP		
6	L205	INDUCTOR,CHIP	ELCH0010402	270 nH,M ,1005 ,R/TP ,CHIP		
6	L300	INDUCTOR,CHIP	ELCH0001556	270 nH,J ,1608 ,R/TP ,		
6	L301	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L302	INDUCTOR,CHIP	ELCH0004727	100 nH,J ,1005 ,R/TP ,		
6	L500	INDUCTOR,CHIP	ELCH0003828	2.4 nH,J ,1005 ,R/TP ,MLCI		
6	L501	CAP,CHIP,MAKER	ECZH0000813	100 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	L502	INDUCTOR,CHIP	ELCH0009106	6.2 nH,J ,1005 ,R/TP ,coil type		
6	L503	INDUCTOR,CHIP	ELCH0009106	6.2 nH,J ,1005 ,R/TP ,coil type		
6	L504	INDUCTOR,CHIP	ELCH0001402	18 nH,J ,1005 ,R/TP ,Pb Free		
6	L505	INDUCTOR,CHIP	ELCH0001402	18 nH,J ,1005 ,R/TP ,Pb Free		
6	Q300	TR,BJT,ARRAY	EQBA0004902	TES6 ,200 mW,R/TP ,NPN/PNP dual, Vo1=50V, Io1=100mA, Vo2=-50V,Io2=-100mA		
6	R100	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R101	RES,CHIP,MAKER	ERHZ0000529	1.5 Kohm,1/16W ,J ,1005 ,R/TP		
6	R102	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R103	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R104	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R105	RES,CHIP	ERHY0000254	4.7K ohm,1/16W,J,1005,R/TP		
6	R106	RES,CHIP	ERHY0000254	4.7K ohm,1/16W,J,1005,R/TP		
6	R107	RES,CHIP	ERHY0000512	10M ohm,1/16W,J,1608,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R108	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R111	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R112	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R113	RES,CHIP,MAKER	ERHZ0000465	3300 ohm,1/16W ,J ,1005 ,R/TP		
6	R114	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R117	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R118	RES,CHIP,MAKER	ERHZ0000537	680000 ohm,1/16W ,F ,1005 ,R/TP		
6	R119	RES,CHIP,MAKER	ERHZ0000488	4.7 ohm,1/16W ,J ,1005 ,R/TP		
6	R200	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R216	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R218	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R223	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R225	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R226	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R227	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R228	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R229	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R300	RES,CHIP	ERHY0003201	1000 ohm,1/16W ,F ,1005 ,R/TP		
6	R301	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R302	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R303	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R304	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R305	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R306	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R307	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R308	RES,CHIP,MAKER	ERHZ0000435	20 ohm,1/16W ,J ,1005 ,R/TP		
6	R309	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R310	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R311	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R312	RES,CHIP,MAKER	ERHZ0000529	1.5 Kohm,1/16W ,J ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R313	RES,CHIP,MAKER	ERHZ0000422	15 Kohm,1/16W ,J ,1005 ,R/TP		
6	R314	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R315	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R316	RES,CHIP,MAKER	ERHZ0000435	20 ohm,1/16W ,J ,1005 ,R/TP		
6	R317	RES,CHIP,MAKER	ERHZ0000702	10 ohm,1/10W ,J ,1608 ,R/TP		
6	R328	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R329	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R330	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R331	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R332	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R333	RES,CHIP	ERHY0000275	56K ohm,1/16W,J,1005,R/TP		
6	R334	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R337	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R400	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R401	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R402	RES,CHIP,MAKER	ERHZ0000401	0 ohm,1/16W ,J ,1005 ,R/TP		
6	R403	RES,CHIP,MAKER	ERHZ0000435	20 ohm,1/16W ,J ,1005 ,R/TP		
6	R404	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R405	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R406	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R407	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R408	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R410	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R411	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R412	RES,CHIP	ERHY0000254	4.7K ohm,1/16W,J,1005,R/TP		
6	R413	RES,CHIP	ERHY0000254	4.7K ohm,1/16W,J,1005,R/TP		
6	R414	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R415	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R417	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R500	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R501	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R502	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R503	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R505	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R506	RES,CHIP,MAKER	ERHZ0000522	24 ohm,1/16W ,J ,1005 ,R/TP		
6	R507	RES,CHIP	ERHY0003501	220 ohm,1/16W ,J ,1005 ,R/TP		
6	R508	RES,CHIP	ERHY0003501	220 ohm,1/16W ,J ,1005 ,R/TP		
6	R509	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R510	RES,CHIP,MAKER	ERHZ0000457	30 ohm,1/16W ,J ,1005 ,R/TP		
6	R511	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R512	RES,CHIP,MAKER	ERHZ0000429	180 ohm,1/16W ,J ,1005 ,R/TP		
6	R513	RES,CHIP,MAKER	ERHZ0000429	180 ohm,1/16W ,J ,1005 ,R/TP		
6	S300	CONN,SOCKET	ENSY0014701	8 PIN,ETC , ,1.1 mm,H=1.95, Reverse		
6	SW500	CONN,RF SWITCH	ENWY0004501	,SMD , dB,H=3.6, Straight type		
6	U100	IC	EUSY0288701	BGA ,84 PIN,ETC ,256(1die flash)*64(PSRAM), 3V, 8x11.6x1.2mm, 84ball, Pb-Free		
6	U101	IC	EUSY0227901	SON5-P-0.35(fSV) ,5 PIN,R/TP ,2-INPUT AND GATE, Pb Free		
6	U103	IC	EUSY0364401	BGA ,361 ,R/TP ,ATLAS 2H ULC ,; ,IC,Digital Baseband Processor		
6	U301	IC	EUSY0323001	WQFN ,16 PIN,R/TP ,2.6*1.8*0.8		
6	U303	IC	EUSY0290701	HVSOF5 ,5 PIN,R/TP ,150mA, 2.8V, Auto Power Save LDO		
6	U400	IC	EUSY0344901	BGA ,100 PIN,R/TP ,2M,QCIF30,MP3,USB2.0,7*7 Size ,; ,IC,Digital Signal Processors		
6	U401	IC	EUSY0297201	HVSOF5 ,5 PIN,R/TP ,1.2V, 150mA Auto Power Detect LDO		
6	U402	IC	EUSY0223003	HVSOF5 ,5 PIN,R/TP ,150mA CMOS LDO WITH OUTPUT CONTROL / 3.3V		
6	U403	IC	EUSY0365901	DFN1612-4B ,4 ,R/TP ,300mA 2.8V LDO ,; ,IC,LDO Voltage Regulator		
6	U501	PAM	SMPY0014001	35.5 dBm,56 %, A, dBc, dB,6x6x1.15 ,SMD ,Tri Band		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	U502	IC	EUSY0280101	LFCSP-32 ,32 PIN,R/TP ,GSM QUAD BAND TRANSCEIVER, Othello G.		
6	VA200	VARISTOR	SEVY0004101	5.6 V, ,SMD ,360pF, 1005		
6	VA201	VARISTOR	SEVY0004101	5.6 V, ,SMD ,360pF, 1005		
6	X100	X-TAL	EXXY0004602	.032768 MHz,20 PPM,12.5 pF,65000 ohm,SMD ,6.9*1.4*1.3 ,		
6	X500	X-TAL	EXXY0025201	26 MHz,10 PPM,11 pF,60 ohm,SMD ,3.2*2.5*0.75 ,exclusive use at ADI RFIC ,; , ,10PPM , , , ,SMD ,P/TP		
5	SAFD00	PCB ASSY,MAIN,SMT TOP	SAFD0110201			
6	C126	CAP,CERAMIC,CHIP	ECCH0005603	2.2 uF,10V ,K ,X5R ,TC ,1608 ,R/TP		
6	C204	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C205	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C210	CAP,CERAMIC,CHIP	ECCH0000179	22 nF,16V ,K ,X5R ,HD ,1005 ,R/TP		
6	C211	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C215	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C216	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C217	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C219	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C220	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C223	CAP,CERAMIC,CHIP	ECCH0002002	47000 pF,10V ,K ,B ,HD ,1005 ,R/TP		
6	C224	CAP,CHIP,MAKER	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C226	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C227	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C228	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C229	CAP,CHIP,MAKER	ECZH0001126	820 pF,50V ,K ,X7R ,HD ,1005 ,R/TP		
6	C230	CAP,CHIP,MAKER	ECZH0001126	820 pF,50V ,K ,X7R ,HD ,1005 ,R/TP		
6	C231	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C232	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C235	CAP,CHIP,MAKER	ECZH0000822	1.5 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C237	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C238	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C239	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C240	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	C242	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C243	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C244	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C245	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C303	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C306	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C333	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C334	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C335	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C336	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C341	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C342	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C344	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C345	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C348	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C349	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C352	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C353	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C354	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C420	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C425	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C426	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C427	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C428	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C429	CAP,CERAMIC,CHIP	ECCH0005604	10000000 pF,6.3V ,M ,X5R ,TC ,1608 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,0.8 mm		
6	C430	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C431	CAP,CERAMIC,CHIP	ECCH0000117	27 pF,50V,J,NP0,TC,1005,R/TP		
6	C432	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C433	CAP,CERAMIC,CHIP	ECCH0004904	1 uF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	CN302	CONNECTOR,BOARD TO BOARD	ENBY0040501	50 PIN,0.4 mm,ETC , ,H=1.0, Socket		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	D101	DIODE,SWITCHING	EDSY0011901	EMD2 ,30 V,1 A,R/TP ,VF=1.5V(IF=200mA) , IR=30uA(VR=10V)		
6	FB200	FILTER,BEAD,CHIP	SFBH0008101	600 ohm,1005 ,		
6	FB201	FILTER,BEAD,CHIP	SFBH0008101	600 ohm,1005 ,		
6	FB400	FILTER,BEAD,CHIP	SFBH0008101	600 ohm,1005 ,		
6	FB401	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FL200	FILTER,DIELECTRIC	SFDY0002601	2450 MHz,2.0*1.25*1.0 ,SMD ,2400M~2500M, IL 3.8, 8pin, U-B, 34.2_j95, BT (CSR BC41B143A) ,; ,BPF ,2450 ,100 ,SMD ,R/TP		
6	FL300	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL301	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL302	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	L202	INDUCTOR,CHIP	ELCH0004730	33 nH,J ,1005 ,R/TP ,		
6	L203	INDUCTOR,CHIP	ELCH0003823	470 nH,K ,1608 ,R/TP ,chip coil,PBFREE		
6	L206	INDUCTOR,CHIP	ELCH0001413	22 nH,J ,1005 ,R/TP ,PBFREE		
6	LD200	DIODE,LED,CHIP	EDLH0013403	WHITE ,ETC ,R/TP ,3.8*1.2*0.6T ,; ,[empty] ,2.9~3.2V ,20mA ,1200~1400mcd , ,126mW ,[empty] ,[empty] ,2P		
6	LD201	DIODE,LED,CHIP	EDLH0013403	WHITE ,ETC ,R/TP ,3.8*1.2*0.6T ,; ,[empty] ,2.9~3.2V ,20mA ,1200~1400mcd , ,126mW ,[empty] ,[empty] ,2P		
6	R109	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R115	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R116	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R201	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R202	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R203	RES,CHIP,MAKER	ERHZ0000434	1 ohm,1/16W ,J ,1005 ,R/TP		
6	R204	RES,CHIP,MAKER	ERHZ0000496	560 ohm,1/16W ,J ,1005 ,R/TP		
6	R205	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R206	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R207	RES,CHIP,MAKER	ERHZ0000456	2.2 ohm,1/16W ,J ,1005 ,R/TP		
6	R208	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R209	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R210	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R211	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R212	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R213	RES,CHIP,MAKER	ERHZ0000287	47 Kohm,1/16W ,F ,1005 ,R/TP		
6	R214	RES,CHIP,MAKER	ERHZ0000487	470 Kohm,1/16W ,J ,1005 ,R/TP		
6	R215	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R217	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R219	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
6	R220	RES,CHIP,MAKER	ERHZ0000509	75 ohm,1/16W ,J ,1005 ,R/TP		
6	R221	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R222	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R224	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R318	RES,CHIP,MAKER	ERHZ0000204	100 Kohm,1/16W ,F ,1005 ,R/TP		
6	R319	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R320	RES,CHIP,MAKER	ERHZ0000441	22 ohm,1/16W ,J ,1005 ,R/TP		
6	R321	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R322	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R323	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R324	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R325	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R326	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R327	RES,CHIP,MAKER	ERHZ0002401	12 Kohm,1/16W ,J ,1005 ,R/TP		
6	R336	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R338	RES,CHIP	ERHY0000128	15K ohm,1/16W,F,1005,R/TP		
6	R339	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R340	RES,CHIP	ERHY0000129	18K ohm,1/16W,F,1005,R/TP		
6	R409	PCB ASSY,MAIN,PAD OPEN	SAFO0000501	0OHM_1005_DNI		
6	R416	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R418	RES,CHIP,MAKER	ERHZ0000529	1.5 Kohm,1/16W ,J ,1005 ,R/TP		
6	R419	RES,CHIP	ERHY0008402	160 Kohm,1/16W ,F ,1005 ,R/TP		

Level	Location No.	Description	Part Number	Spec	Color	Remark
6	R420	RES,CHIP,MAKER	ERHZ0000213	120 Kohm,1/16W ,F ,1005 ,R/TP		
6	R421	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R422	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R423	PCB ASSY,MAIN,PAD SHORT	SAFP0000501			
6	R424	RES,CHIP,MAKER	ERHZ0000308	62 Kohm,1/16W ,F ,1005 ,R/TP		
6	R425	RES,CHIP,MAKER	ERHZ0000213	120 Kohm,1/16W ,F ,1005 ,R/TP		
6	SPFY	PCB,MAIN	SPFY0181401	FR-4 ,0.8 mm,BUILD-UP 8 ,KP260 MAIN ,; , , , , , , , , ,		
6	U200	MODULE,ETC	SMZY0015801	84 Ball 0.5pitch, BGA , Bluetooth+FM (6.0*6.0*1.0)		
6	U201	IC	EUSY0227901	SON5-P-0.35(fSV) ,5 PIN,R/TP ,2-INPUT AND GATE, Pb Free		
6	U202	IC	EUSY0317101	WQFN ,10 PIN,R/TP ,1.8*1.4*0.75		
6	U203	IC	EUSY0232812	SON1612-6 ,6 PIN,R/TP ,2.8V, 150mA LDO		
6	U300	IC	EUSY0362601	SSON004 ,4 ,R/TP ,Hall IC ,; ,IC,CMOS		
6	U302	IC	EUSY0338301	uMLP ,10 PIN,R/TP ,High Speed USB Siwitch 2.0 3.7pF 6.5ohm 1.4X1.8		
6	U304	IC	EUSY0351601	DFN ,12 PIN,R/TP ,Dual Charger IC (Bypass) ,; ,IC,Charger		
6	U404	IC	EUSY0238305	QFN ,20 PIN,R/TP ,4Ch+2LDO,3X4		

13. EXPLODED VIEW & REPLACEMENT PART LIST

13.3 Accessory

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

Level	Location No.	Description	Part Number	Spec	Color	Remark
3	SBPL00	BATTERY PACK,LI-ION	SBPL0090901	3.7 V,900 mAh,1 CELL,PRISMATIC ,U510 BATT, Europe label, Pb-Free ,; ,3.7 ,900mAh ,0.2C ,PRISMATIC ,50x34x46 , ,BLACK ,Innerpack ,Europe Label	Black	69
3	SGEY00	EAR PHONE/EAR MIKE SET	SGEY0003719	; ,RMS 20mW(0.56V,RMS) ,16 ohm +/- 2.4 ohm 1KHZ ,116dB +/- 3dB 1KHZ,3mW ,116dB 1KHZ ,96dB 100HZ ,[empty] ,BLACK ,18P MMI CONNECTOR ,Earphone,Stereo		
3	SSAD00	ADAPTOR,AC-DC	SSAD0028501	100-240V ,5060 Hz,5.6 V,0.4 A,GOST ,AC-DC Adaptor ,; ,150Vac~350Vac ,5.6V (+/-0.8V) ,400mA ,5060 , ,WALL 2P ,I/O CONNECTOR ,		
		ADAPTOR,AC-DC	SSAD0028502	100-240V ,5060 Hz,5.6 V,.4 A,GOST ,AC-DC Adaptor ,; ,150Vac~350Vac ,5.6V +/-0.8V ,400mA ,5060 , ,WALL 2P ,I/O CONNECTOR ,		

Note