Service Manual

Model : LG600G

Internal Use Only

Service Manual

LG600G

Date: May, 2008 / Issue 1.0

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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 matb 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 800mAh	
Talk time	Up to 200min : GSM Tx Level 7	
Stand by time	Up to 200 hours (Paging Period: 5, RSSI: -85 dBm)	
Charging time	Approx. 2.5 hours	
RX Sensitivity	GSM, EGSM: -102dBm, DCS: -102dBm, PCS: -102dBm	
TX output power	GSM, EGSM: 32.5dBm(Level 5), DCS , PCS: 29.5dBm(Level 0)	
GPRS compatibility	Class 10	
SIM card type	3V,1.8V Small	
Display	MAIN : TFT 128 × 160 pixel 65K Color SUB : MONO STN 96 × 64	
Status Indicator	Hard icons. Key Pad 0 ~ 9, #, *, Up/Down/Left/Right/Ok Navigation Key Menu Key, Clear Key, Back Key, Confirm Key Send Key, Volume Key, PWR Key, Camera Key, Hot Key	
ANT	Internal	
EAR Phone Jack	Yes (mono)	
PC Synchronization	Yes	
Speech coding	EFR/FR/HR	
Data and Fax	Yes	
Vibrator	Yes	
Loud Speaker	No	
Voice Recoding	Yes	
Microphone	Yes	
Speaker/Receiver	One way speaker	
Travel Adapter	Yes	
MIDI	SW MIDI (Mono SPK)	
Camera	VGA	
Bluetooth	Yes	

2.2 Technical Specification

<table>
<tr><th>Item</th><th>Description</th><th colspan="6">Specification</th></tr>
<tr><td>1</td><td>Frequency Band</td><td colspan="6">GSM850
• TX: 824 + n x 0.2 MHz
• RX: 935 + n x 0.2 MHz (n=1~124)
PCS
• TX: 1850 + (n-512) x 0.2 MHz
• RX: 1930+ (n-1512) x 0.2 MHz (n=512~810)</td></tr>
<tr><td>2</td><td>Phase Error</td><td colspan="6">RMS < 5 degrees
Peak < 20 degrees</td></tr>
<tr><td>3</td><td>Frequency Error</td><td colspan="6">< 0.1 ppm</td></tr>
<tr><td rowspan="20">4</td><td rowspan="20">Power Level</td><td colspan="6">GSM850</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">PCS</td></tr>
<tr><td>Level</td><td>Power</td><td>Toler.</td><td>Level</td><td>Power</td><td>Toler.</td></tr>
<tr><td>0</td><td>30 dBm</td><td>±2dB</td><td>8</td><td>14 dBm</td><td>±3dB</td></tr>
<tr><td>1</td><td>28 dBm</td><td>±3dB</td><td>9</td><td>12 dBm</td><td>±4dB</td></tr>
<tr><td>2</td><td>26 dBm</td><td>±3dB</td><td>10</td><td>10 dBm</td><td>±4dB</td></tr>
<tr><td>3</td><td>24 dBm</td><td>±3dB</td><td>11</td><td>8 dBm</td><td>±4dB</td></tr>
<tr><td>4</td><td>22 dBm</td><td>±3dB</td><td>12</td><td>6 dBm</td><td>±4dB</td></tr>
<tr><td>5</td><td>20 dBm</td><td>±3dB</td><td>13</td><td>4 dBm</td><td>±4dB</td></tr>
<tr><td>6</td><td>18 dBm</td><td>±3dB</td><td>14</td><td>2 dBm</td><td>±5dB</td></tr>
<tr><td>7</td><td>16 dBm</td><td>±3dB</td><td>15</td><td>0 dBm</td><td>±5dB</td></tr>
</table>

Item	Description	Specification	
5	Output RF Spectrum (due to modulation)	**GSM850**	
		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
		DCS/PCS	
		Offset from Carrier (kHz).	Max. [dBc]
		100	0.5
		200	-30
		250	-33
		400	-60
		600 ~ 1,200	-60
		1,200 ~ 1,800	-60
		1,800 ~ 3,000	-65
		3,000 ~ 6,000	-65
		6,000	-73
6	Output RF Spectrum (due to switching transient)	**GSM850, EGSM**	
		Offset from Carrier (kHz)	Max. [dBm]
		400	-19
		600	-21
		1,200	-21
		1,800	-24

2. PERFORMANCE

Item	Description	Specification		
6	Output RF Spectrum (due to switching transient)	**DCS/PCS**		
		Offset from Carrier (kHz)		Max. [dBm]
		400		-22
		600		-24
		1,200		-24
		1,800		-27
7	Spurious Emissions	Conduction, Emission Status		
8	Bit Error Ratio	**GSM850** BER (Class II) < 2.439% @-102 dBm **PCS** BER (Class II) < 2.439% @-102 dBm		
9	RX Level Report Accuracy	±3 dB		
10	SLR	8 ±3 dB		
11	Sending Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	0	-12
		1,000	0	-6
		2,000	4	-6
		3,000	4	-6
		3,400	4	-9
		4,000	0	-
12	RLR	2 ±3 dB		
13	Receiving Response	Frequency (Hz)	Max.(dB)	Min.(dB)
		100	-12	-
		200	0	-
		300	2	-7
		500	*	-5
		1,000	0	-5
		3,000	2	-5
		3,400	2	-10
		4,000	2	
		*Mean that Adopt a straight line in between 300 Hz and 1,000 Hz to be Max. level in the range.		

Item	Description	Specification	
14	STMR	13 ±5 dB	
15	Stability Margin	> 6 dB	
16	Distortion	dB to ARL (dB)	Level Ratio (dB)
		-35	17.5
		-30	22.5
		-20	30.7
		-10	33.3
		0	33.7
		7	31.7
		10	25.5
17	Side Tone Distortion	Three stage distortion < 10%	
18	System frequency (13 MHz) tolerance	≤ 2.5 ppm	
19	32.768KHz tolerance	≤ 30 ppm	
20	Ringer Volume	At least 65 dBspl under below conditions: 1. Ringer set as ringer. 2. Test distance set as 50 cm	
21	Charge Current	Fast Charge : < 600 mA Slow Charge : < 120 mA	
22	Antenna Display	Bar Number	Power
		5	-85 dBm ~
		4	-90 dBm ~ -86 dBm
		3	-95 dBm ~ -91 dBm
		2	-100 dBm ~ -96 dBm
		1	-105 dBm ~ -101 dBm
		0	~ -105 dBm
23	Battery Indicator	Battery Bar Number	Voltage
		0	3.56V ± 0.05 V
		1	3.66V ± 0.05 V
		2	3.74V ± 0.05 V
		3	3.85V ± 0.05 V
		4	3.86V ± 0.05 V ~

2. PERFORMANCE

Item	Description	Specification
24	Low Voltage Warning	3.56 ± 0.05 V (Call) every 1 minutes 3.50 ± 0.05 V (Standby)
25	Forced shut down Voltage	3.35 ± 0.05V
26	Battery Type	Li-Ion Battery Standard Voltage = 3.7 V Battery full charge voltage = 4.2 V Capacity: 830mAh
27	Travel Charger	Switching-mode charger Input: 100 ~ 240 V, 50/60 Hz Output: 5.2 V, 800 mA

3. TECHNICAL BRIEF

3.1 SKY77517 TX-RX iPAC™ FEM for Dual-Band GSM/GPRS (U501)

Description

The SKY77517 is a Transmit and receive front-end-module (FEM) with Integrated Power Amplifier Control (iPAC™) for dual-band cellular handsets comprising GSM850 and PCS1900 operation. Designed in a low profile, compact form factor, the SKY77517 offers a complete Transmit VCO-to-Antenna and Antenna-to-Receive SAW filter solution. The FEM also supports class 12 General Packet Radio Service (GPRS) multi-slot operation.

The module consists of a GSM850 PA block and a PCS1900 PA block, impedance-matching circuitry for 50 Ω input and output impedances, TX harmonics filtering, high linearity and low insertion loss PHEMT RF switches, diplexer and a Power Amplifier Control (PAC) block with internal current sense resistor. A custom BiCMOS integrated circuit provides the internal PAC function and decoder circuitry to control the RF switches. The two Heterojunction Bipolar Transistor (HBT) PA blocks are fabricated onto a single Gallium Arsenide (GaAs) die. One PA block supports the GSM850 band and the other PA block supports the PCS1900 band. Both PA blocks share common power supply pads to distribute current. The output of each PA block and the outputs to the two receiver pads are connected to the antenna pad through PHEMT RF switches and a diplexer. The GaAs die, PHEMT die, Silicon (Si) die and passive components are mounted on a multi-layer laminate substrate. The assembly is encapsulated with plastic overmold.

Band selection and control of transmit and receive modes are performed using two external control pads. Refer to the functional block diagram in Figure 3.1.1 below. The band select pad (BS) selects between GSM and PCS modes of operation. The transmit enable (TX_EN) pad controls receive or. transmit mode of the respective RF switch (TX = logic 1). Proper timing between transmit enable (TX_EN) and Analog Power Control (VRAMP) allows for high isolation between the antenna and TX_VCO while the VCO is being tuned prior to the transmit burst.

The SKY77517 is compatible with logic levels from 1.2V to VCC for BS and TX_EN pads, depending on the level applied to the VLOGIC pad. This feature provids additional flexibility for the designer in the selection of FEM interface control logic.

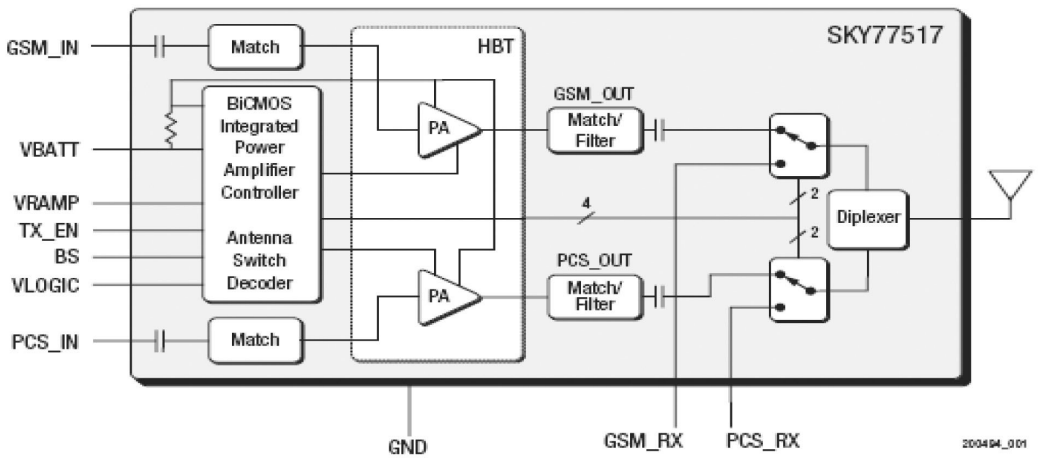


Figure 3.1.1 Functional Block Diagram

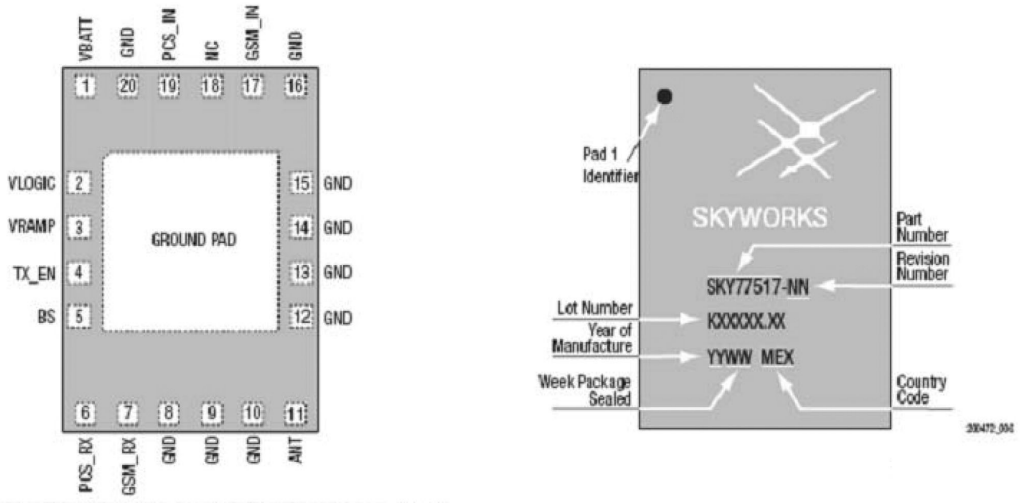


Figure 3.1.2 SKY77517 FEM Package Pad configuration -20-Pad Leadless (Top view) and Typical case marking

Pin	Mame	Description
1	VCATT	Battery input voltage
2	VLOGIC	Control logic level selection/Standby control
3	VRAMP	Analog power control voltage input
4	TX_EN	TX/RX select (mode control)
5	BS	Band Select (mode control)
6	PCS_RX	PCS Receive RF Output (1930-1990 MHz)
7	GSM_RX	GSM Receive RF Output (869-894 MHz)
8-1	GND	RF and DC Ground
11	ANT	RF_IN/RF_OUT to Antenna
12-16	GND	RF and DC Ground
17	GSM_IN	RF input 824-849 MHz
18	NC	No Connect
19	PCS_IN	RF input 1850-1910 MHz
20	GND	RF and DC Ground
GND PADS	GROUND GRID	Ground Pads, module underside

Table 3.1.3 Pad description

Mode	VLOGIC	Input Control Bits	
		TX_En	BS
STANDBY	0	X1	X1
GSM_RX	1	0	0
PCS_RX	1	0	1
GSM_TX	1	1	0
PCS_TX	1	1	1

Table 3.1.4 SKY77517 Mode Control logic

3.2 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.

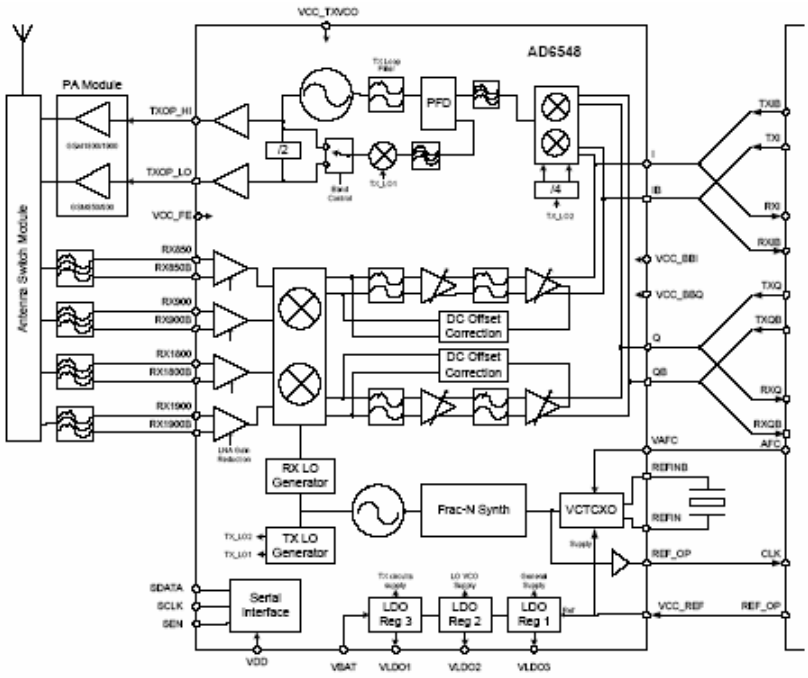
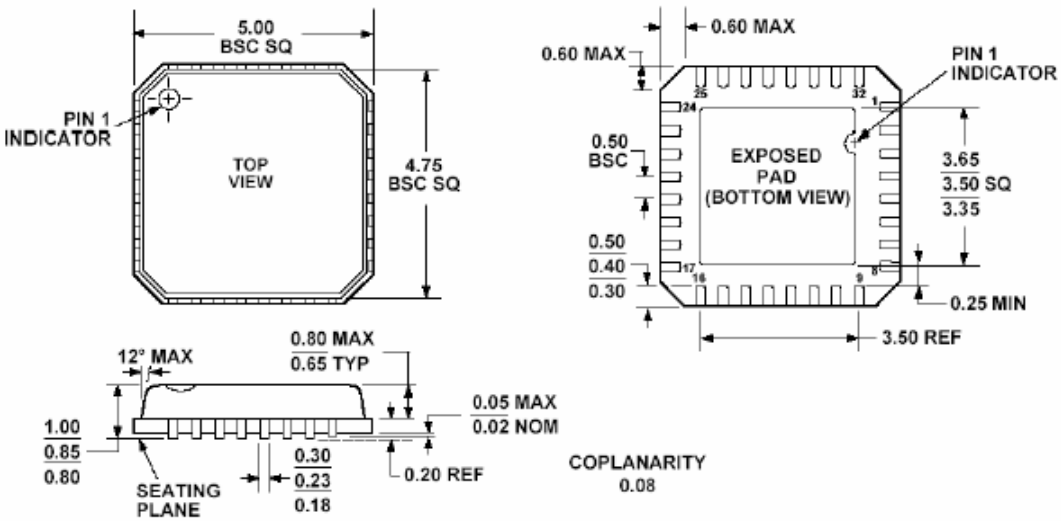


Figure 3.2.1 AD6548 Block Diagram

3. TECHNICAL BRIEF



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 3.2.2 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

3.3 26 MHz Clock (Crystal, X500)

The 26 MHz clock (X500) 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.

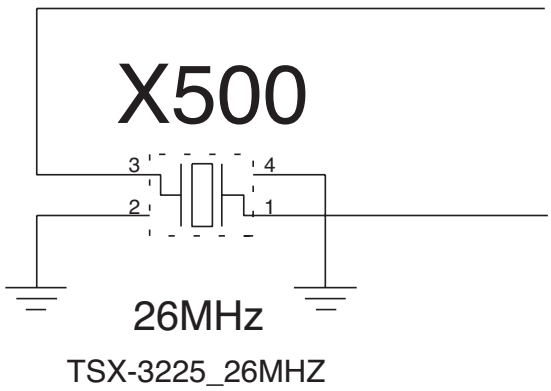


Figure 3.3 CRYSTAL CIRCUIT DIAGRAM

3.4 Baseband Processor (AD6724, U104)

• AD6724 is an ADI designed processor

• AD6724 consists of

1. Control Processor Subsystem including:
   32-bit MCU ARM7TDMI® Control Processor
   39 MHz operation at 1.8V
   1Mb 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
   Keypad Interface
   Flash Memory Interface
   Page-Mode Flash Support
   1.8V and 3.0V, 64 kbps SIM Interface
   Universal System Connector Interface
   Data Services Interface
   Battery Interface (e.g. Dallas)
4. Other
   Supports 13 MHz and 26 MHz Input Clocks
   1.8V Typical Core Operating Voltages
   264-Ball Package (17x17mm) , 0.65mm Ball pitch
5. The AD6724 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

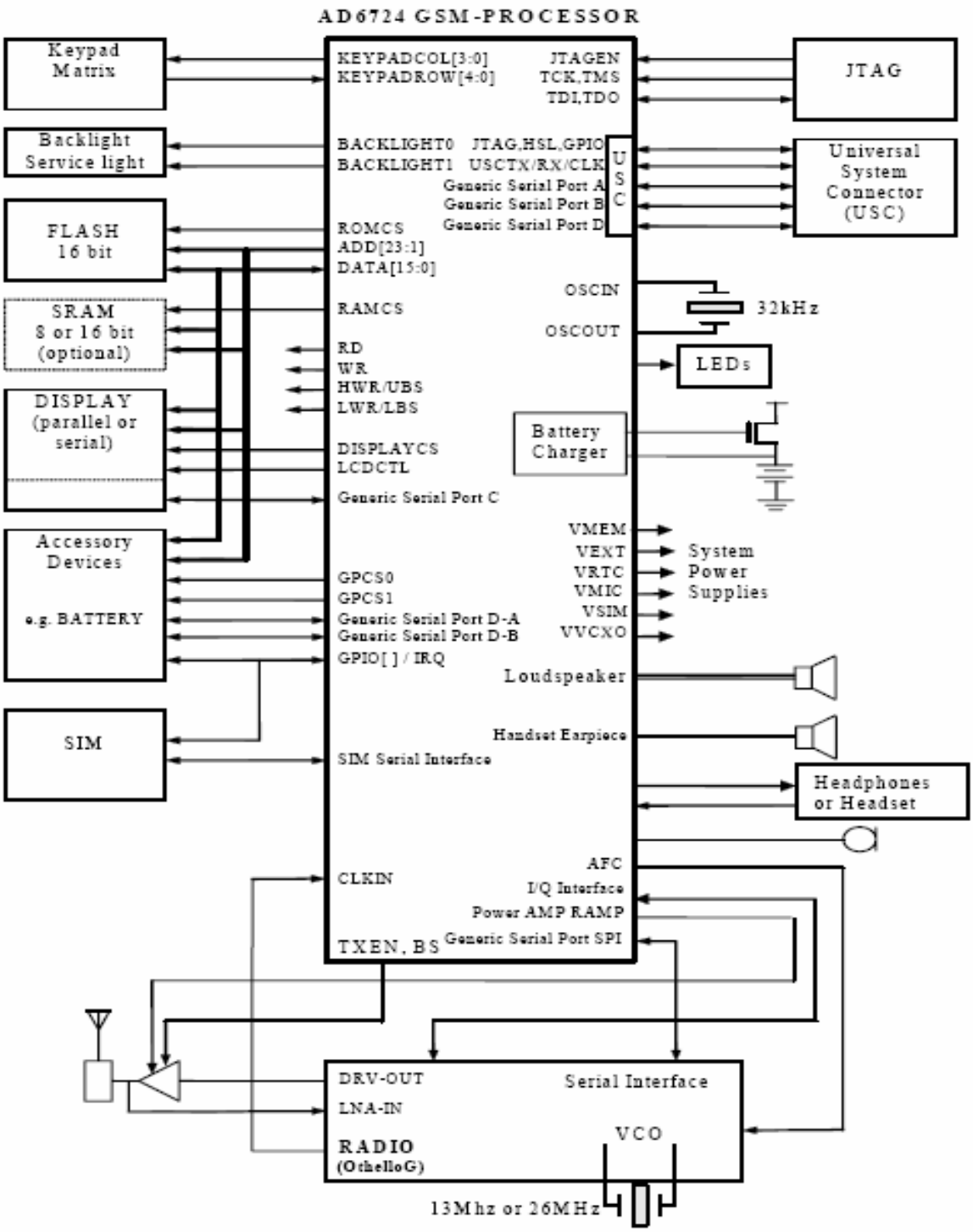


Figure 3.4 SYSTEM INTERCONECTION OF AD6720 EXTERNAL INTERFACE

3.4.1 Interconnection with external devices

A. RTC block interface

Countered by external X-TAL
The X-TAL oscillates 32.768KHz

B. LCD module interface

The LCD module is controlled by CAMERA IC, AIT701G If AIT701G is in the state of by-pass mode, the LCD control signals from AD6724 are by-passed through AIT701G.
In operating mode, the AIT701G controls the LCD module through L_MAIN_LCD_CS, L_SUB_LCD_CS, LCD_RESET, LCD_RS, LCD_WR, LCD_RD, L_DATA[15-00], 2V8_VCAM, IF_MODE, LCD_ID[1:3].

Signals	Description
nLCD_MAIN_CS	MAIN LCD driver chip enable. MAIN LCD driver IC has own CS pin
L_SUB_LCD_CS	SUB LCD driver chip enable. SUB LCD driver IC has own CS pin
LCD_ID	Select LCD module maker(2.4V : NEODIS, 0V : LGIT)
LCD_RESET	This pin resets LCD module. This signal comes from AD6720 directly.
LCD_WR_OUT	Enable writing to LCD Driver.
LCD_RD	Enable reading to LCD Driver.
LCD_RS_OUT	This pin determines whether the data to LCD module are display data or control data. LCD_RS can select 16 bit parallel bus.
2V8_AIT_BT	2.8V voltage is supplied to LCD driver IC.
IF_MODE	Select 16bits or 8bits interface mode for MAIN LCD. For the future

Table 3.4.1.B LCD CONTRON SIGNALS DISCRIPTION

The backlight of LCD module is controlled by AD6724 via AAT3155.
The control signals related to Backlight LED are given bellow.

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

Table 3.4.1.B2 DESCRIPTION OF LCD BACKLIGHT LED CONTROL

C. RF interface

The AD6724 control RF parts through PA_BAND, ANT_SW, CLKON , PA_EN, S_EN, S_DATA, S_CLK

Signals	Description
PA_BAND (GPO 3)	PAM Band Select
ANT_SW (GPO 9)	Antenna switch Band Select
PA_EN (GPO 11)	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 AD6724 provides SIM Interface Module. The AD6724 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 3.4.1.D 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 3.4.1.D SIM CONTROL SIGNALS DESCRIPTION

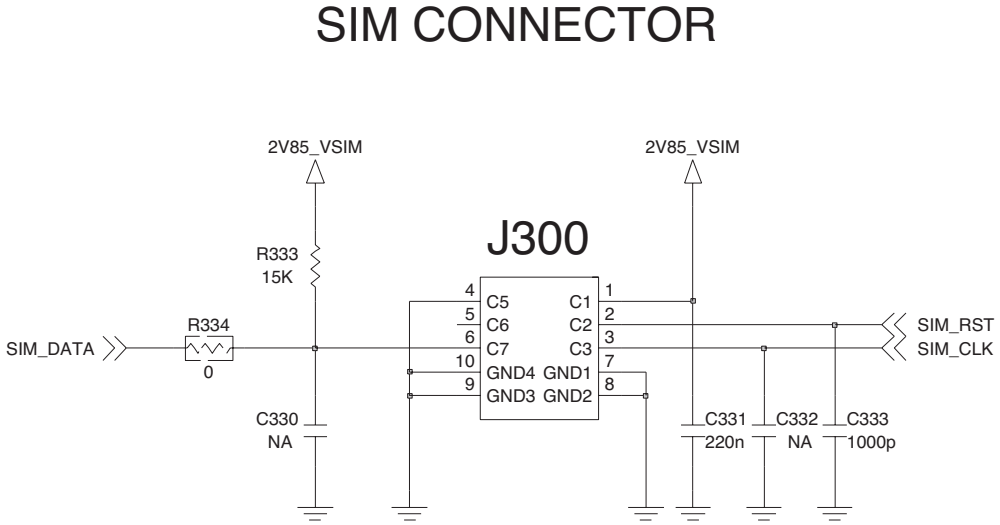


Figure 3.4.1.D2 SIM Interface of AD6720

E. LDO Block

There are 8 LDOs in the AD6724.

- VCORE : supplies Digital baseband Processor core and AD6724 digital core(1.8V, 80mA)
- VMEM : supplies external memory and the interface to the external memory on the digital baseband processor (2.8V, 150mA)
- VEXT : supplies Radio digital interface and high voltage interface (2.8V, 200mA)
- VSIM : supplies the SIM interface circuitry on the digital processor and SIM card (2.85V,1.8V, 20mA)
- VRTC : supplies the Real-Time Clock module (1.8 V, 20 •ÏA)
- VABB : supplies the analog portions of the AD6724
- VMIC : supplies the microphone interface circuitry (2.5 V, 2 mA)
- VVCXO : supplies the voltage controlled crystal oscillator (2.75 V, 10 mA)

F. Battery Charging Block

1. It can be used to charge Lithium Ion batteries.
   Charger initialization, trickle charging, and Li-Ion charging control are implemented in hardware.
2. Charging Process
   - Check charger is inserted or not
   - If AD6724 detects that Charger is inserted, the CC-CV charging starts.
   - Exception : When battery voltage is lower than 3.2V, the precharge (low current charge mode) starts firstly.
   - And the battery voltage reach to 3.2V the CC-CV charging starts.
3. Pins used for charging
   - VCHG : charger supply.
   - GATEDRIVE : charge DAC output
   - ISENSE : charge current sense input
   - VBATSENSE : battery voltage sense input.
   - BATTYPE : battery type identification input
   - REFCHG : voltage reference output
4. TA (Travel Adaptor)
   - Input voltage: AC 100V ~ 240V, 50~60Hz
   - Output voltage: DC 5.6V
   - Output current: Max 400mA
5. Battery
   - Li-ion battery (Max 4.2V, Nom 3.7V)
   - Standard battery: Capacity - 800mAh

PRE CHARGING

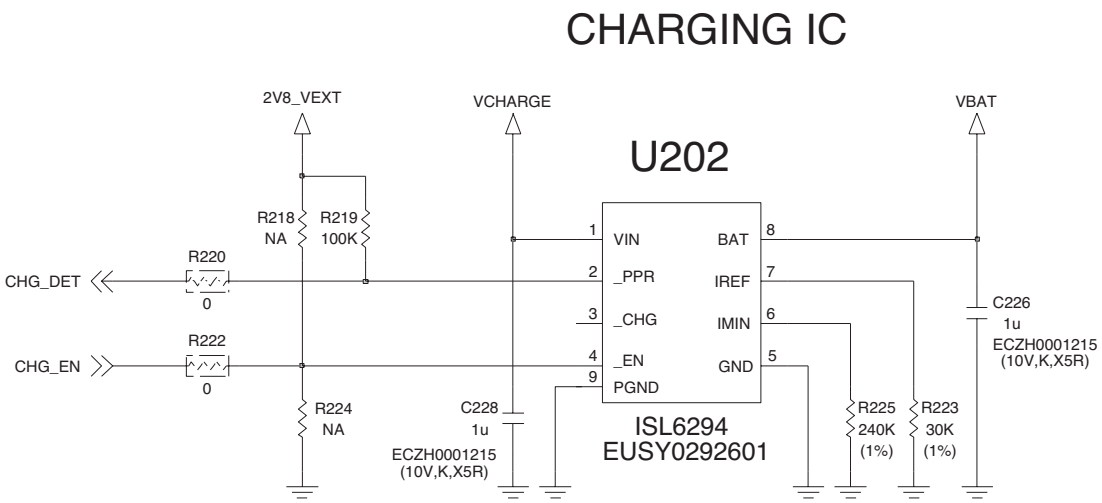


Figure 3.4.1.F1 CIRCUIT FOR BATTERY CHARGING

NORMAL CHARGING

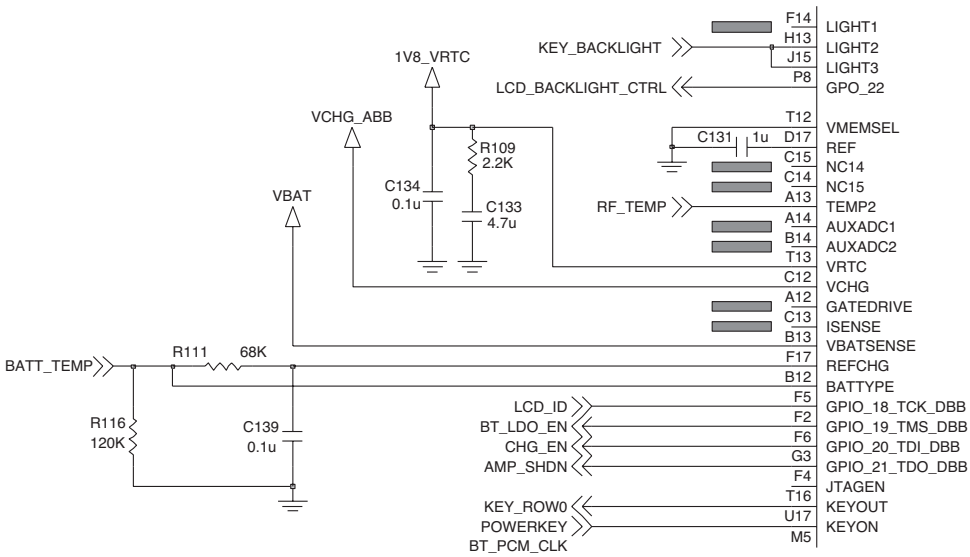


Figure 3.4.1.F2 CIRCUIT FOR BATTERY CHARGING

3.5 Display and Interface

• Main LCD

Properties	Spec.	Unit
Active Screen Size	28.032mm(W) x 35.04mm(H)	mm
Color Depth	65,000	colors
Resolution	128 x RGB x 160	dots

• Sub LCD

Properties	Spec.	Unit
Active Screen Size	18.902mm(W) x 13.43mm(H)	mm
Color Depth	2	colors
Resolution	96 x 64 (mono) Pixels	dots

Controlled by L_MAIN_LCD_CS, L_SUB_LCD_CS, LCD_RESET, LCD_RS, LCD_WR, LCD_RD, IFMODE, L_DATA[00:15] ports

- 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 AD6720 directly.
- LCD_RS: This pin determines whether the data to LCD module are display data or control data.
- LCD_WR : Write control Signal
- LCD_RD : Read control Signal. But this pin used only for debugging.
- L_DATA[00:15] : Parallel data lines.
- LCD_ID[1:2] : LCD type selection signals
  - LCD_ID1 : LCD maker(2.4V is NEODIS, 0V is LGIT)
  - LCD_ID[2:3] : for the future using
- For using 262K color, data buses should be 16 bits.

3. TECHNICAL BRIEF

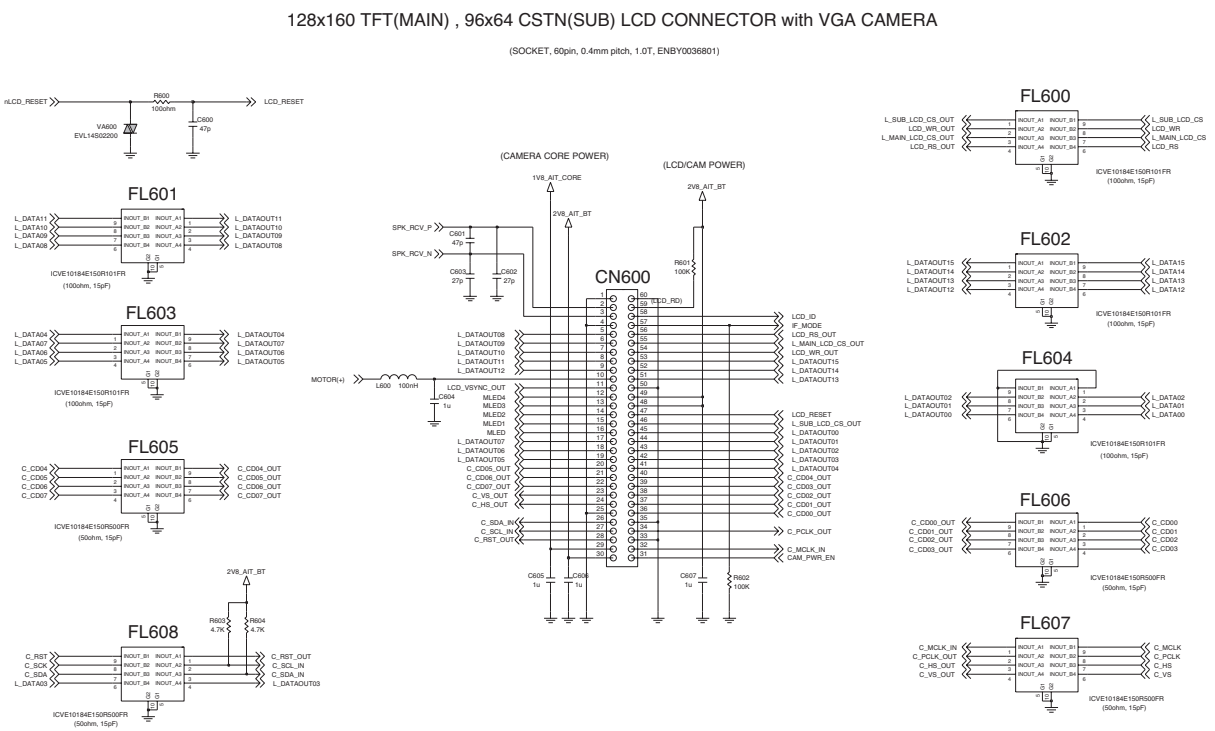


Figure 3.5 LCD INTERFACE CIRCUIT

3.6 Camera Interface(AIT701G, U402)

This model has a built-in VGA(640 x 480) camera module. And the camera produces JPG pictures. Camera module is controlled by AIT701G. Interface is done by I2C and YCbCr format. I2C is a control signal and YCbCr is real data interface signal.

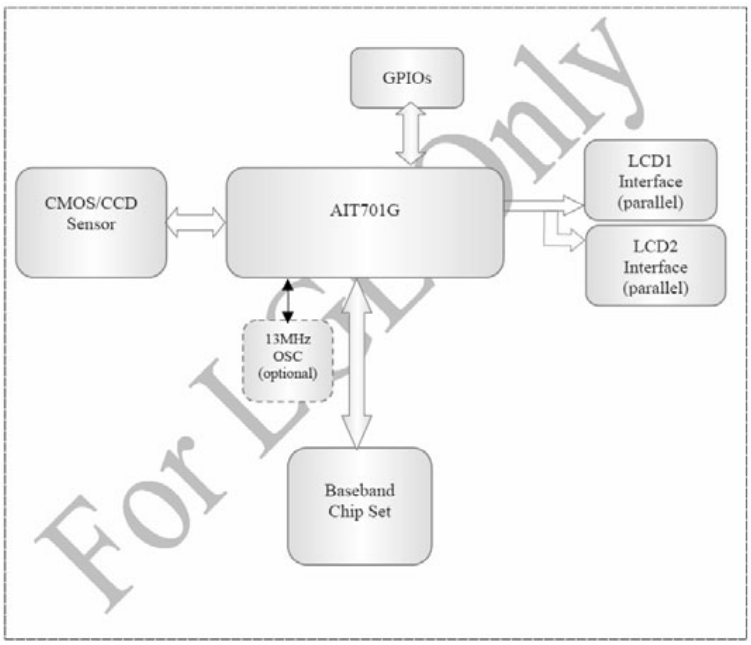


Figure 3.6.1 AIT701G BLOCK DIAGRAM

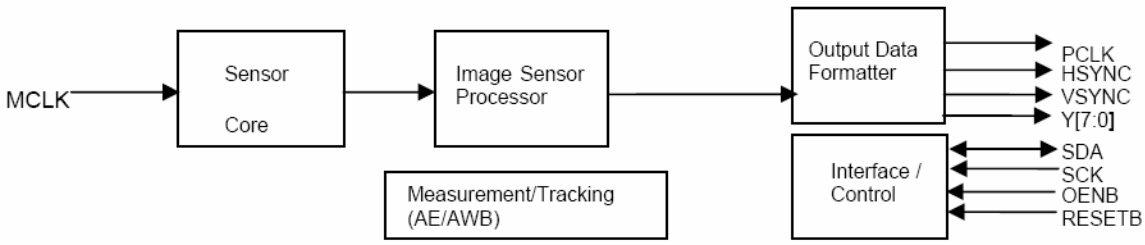


Figure 3.6.2 SENSOR CHIP BLOCK DIAGRAM

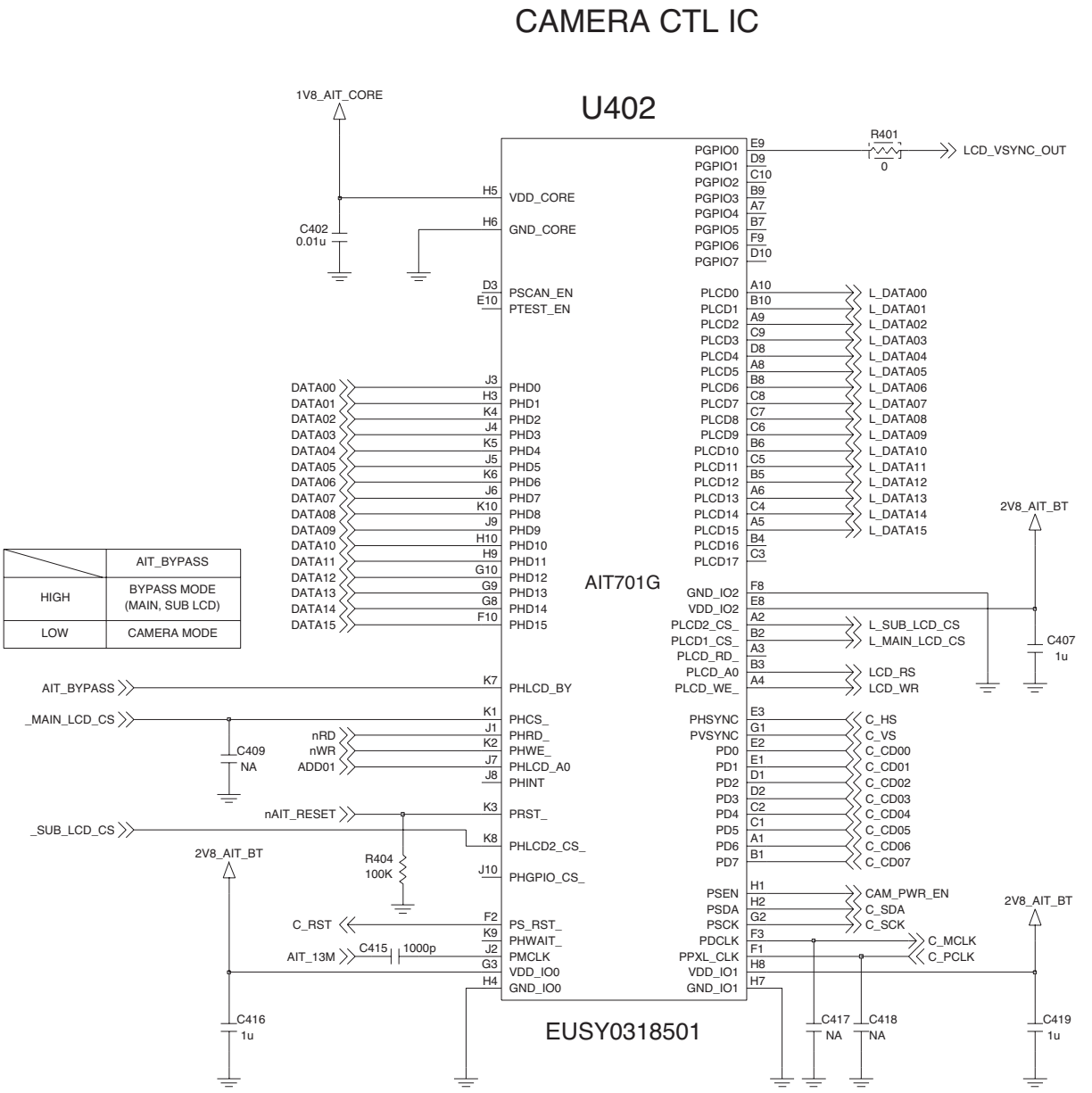


Figure 3.6.3 AIT701G CIRCUIT

3.7 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 26 switches (Normal Key 24EA, Volume up down side key), connected in a matrix of 5 rows by 5 columns, as shown in Figure 3-7, except for the power switch (SW300), which is connected independently. Functions, the row and column lines of the keypad are connected to ports of AD6724. The columns are outputs, while the rows are inputs and have pullup 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 AD67240 to identify the pressed key.

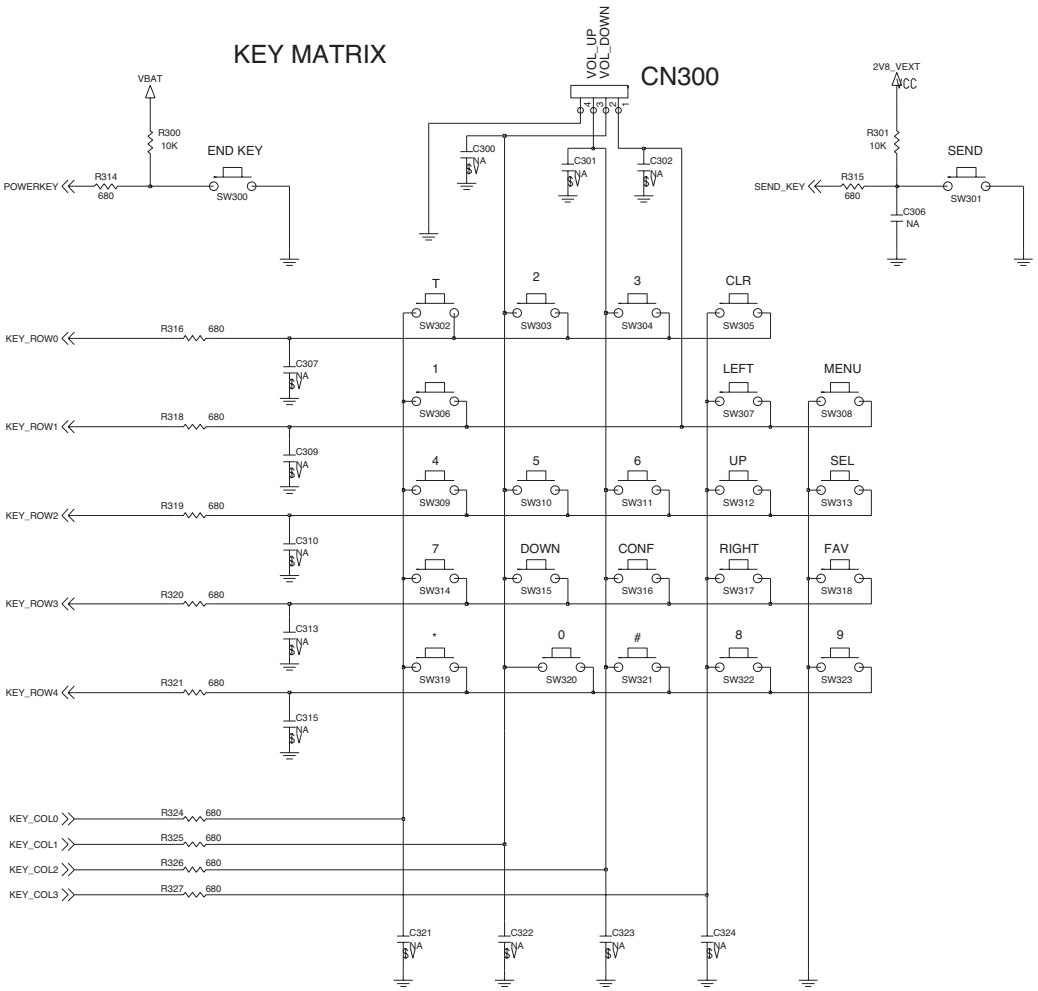


Figure 3.7 Keypad Switches and Scanning

3.8 Microphone

The microphone is placed to the Front cover and contacted to main PCB. The audio signal is passed to VINNORP and VINNORN pins of AD6724. The voltage supply VMIC is output from AD6724, and is a biased voltage for the VINNORP. The VINNORP and VINNORN signals are then A/D converted by the voice band ADC part of AD6724.The digitized speech (PCM 8KHz ,16KHz) is then passed to the DSP section of AD6724 for processing (coding, interleaving etc).

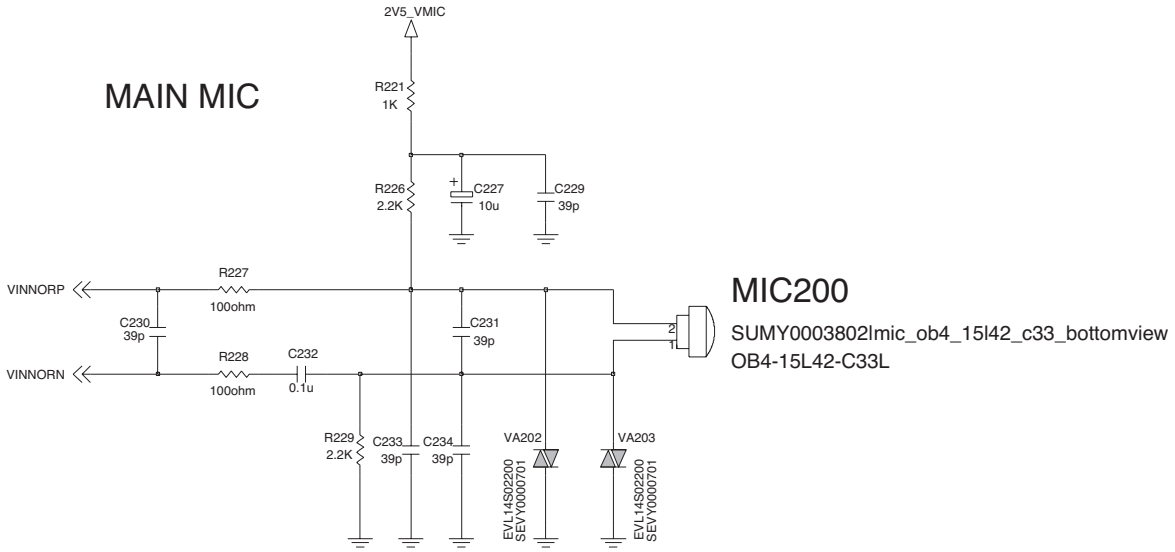


Figure 3.8 Connection between Microphone and AD6724

3.9 Main Speaker

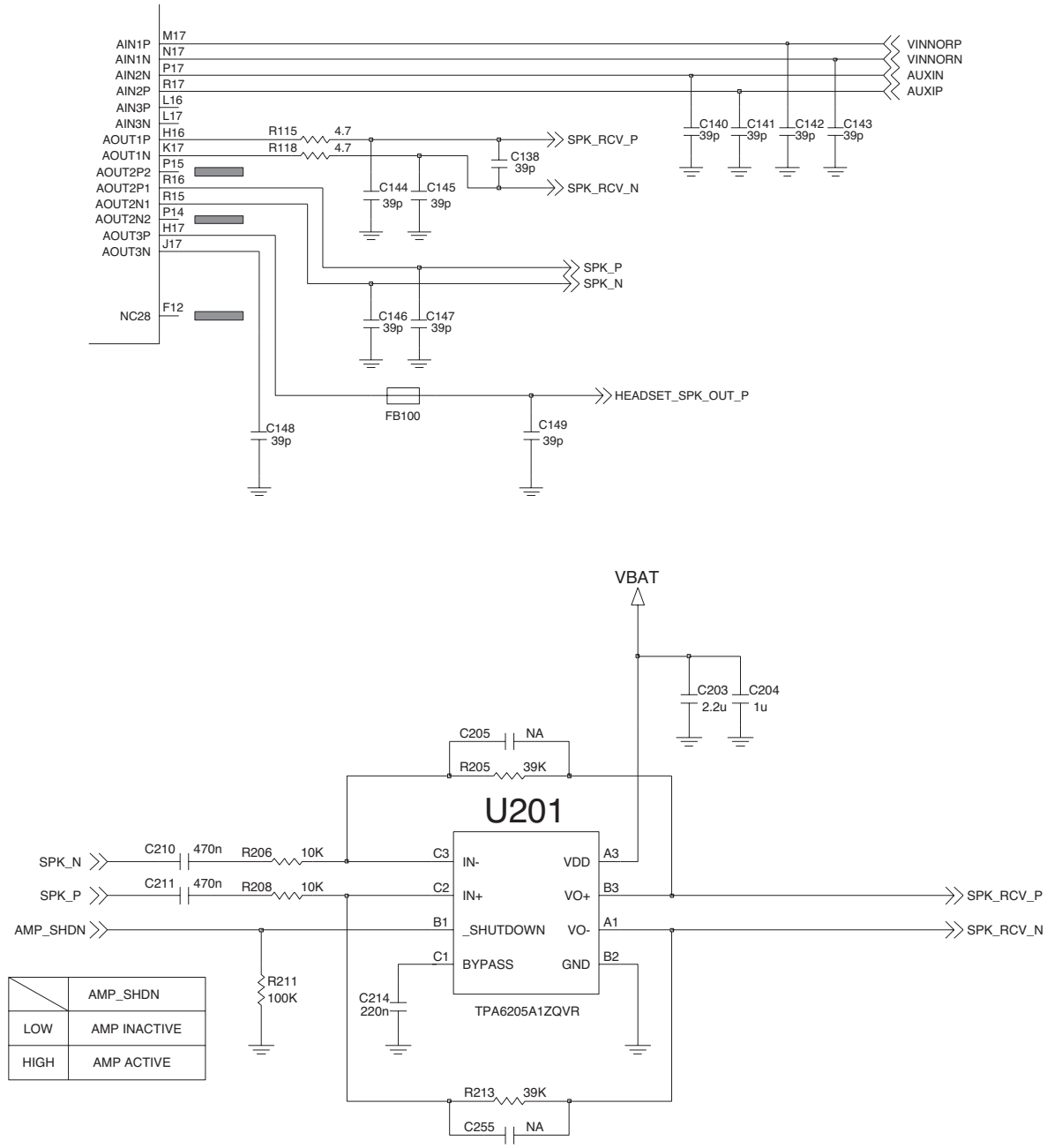


Figure 3.9 Connection between Speaker, Amp and AD6724

3.10 Headset Interface

This phone has 6 electrodes such as GND, AUXIP, AUXIN (this pin is floating), AUXOP, JACK_DETECT, HOOK_DETECT. This type supports mono sound

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

Hook detection
not available to use at LG600G

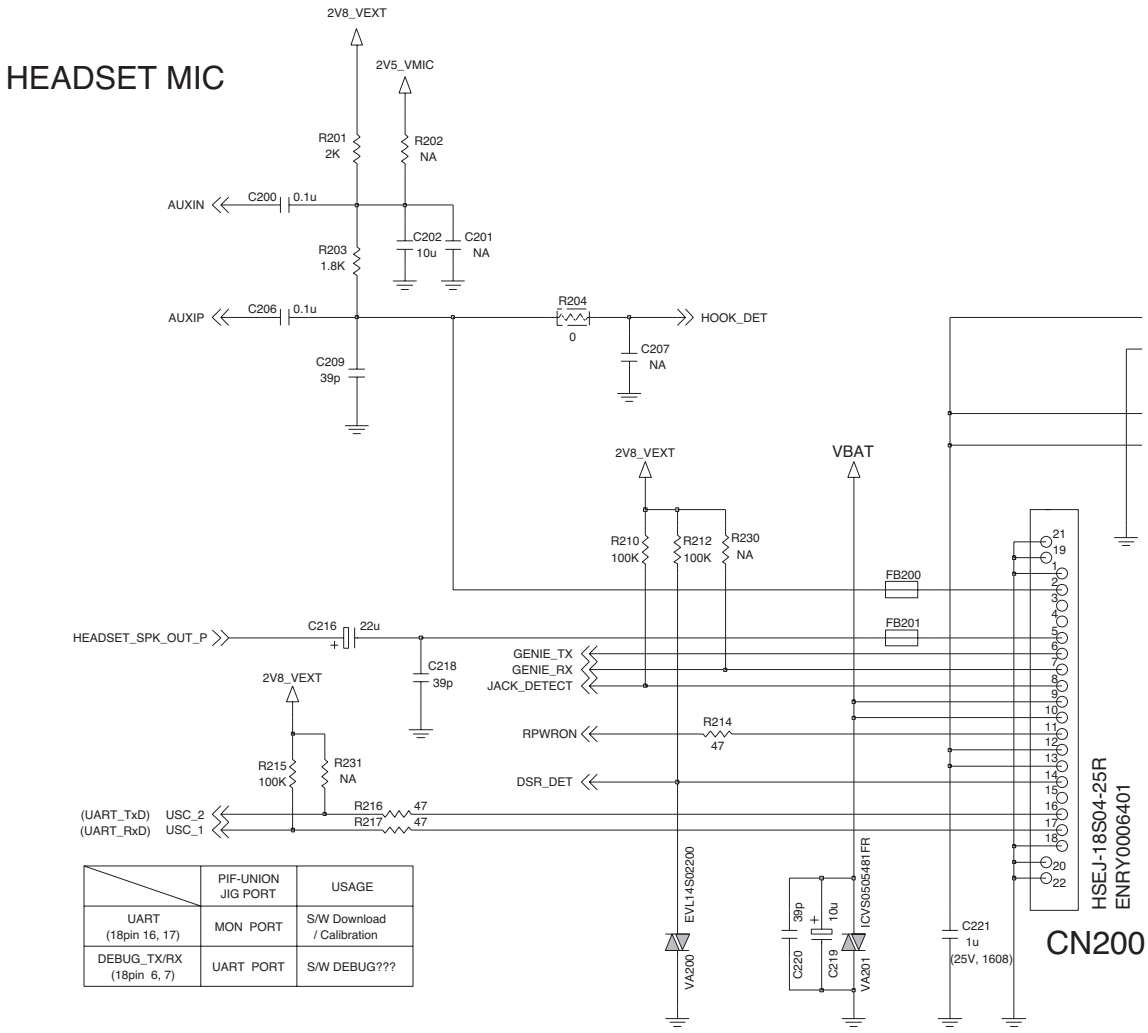


Figure 3.10 HEADSET JACK INTERFACE

3.11 Key Back-light Illumination

In key back-light illumination, there are 12 Blue LEDs in Main Board, which are driven by KEY_BACKLIGHT signal from AD6724.

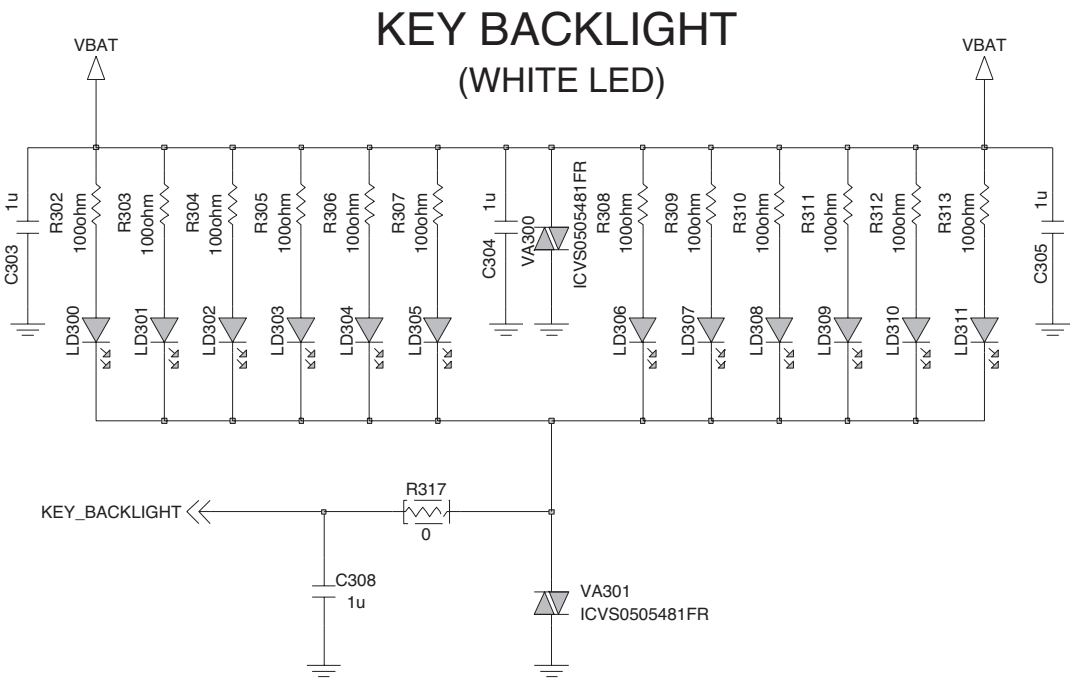


Figure 3.11 KEY BACK-LIGHT ILLUMINTION

3.12 LCD Back-light Illumination

LCD backlight LEDs is controlled by AD6724(GPO_22) via AAT3155, U300.

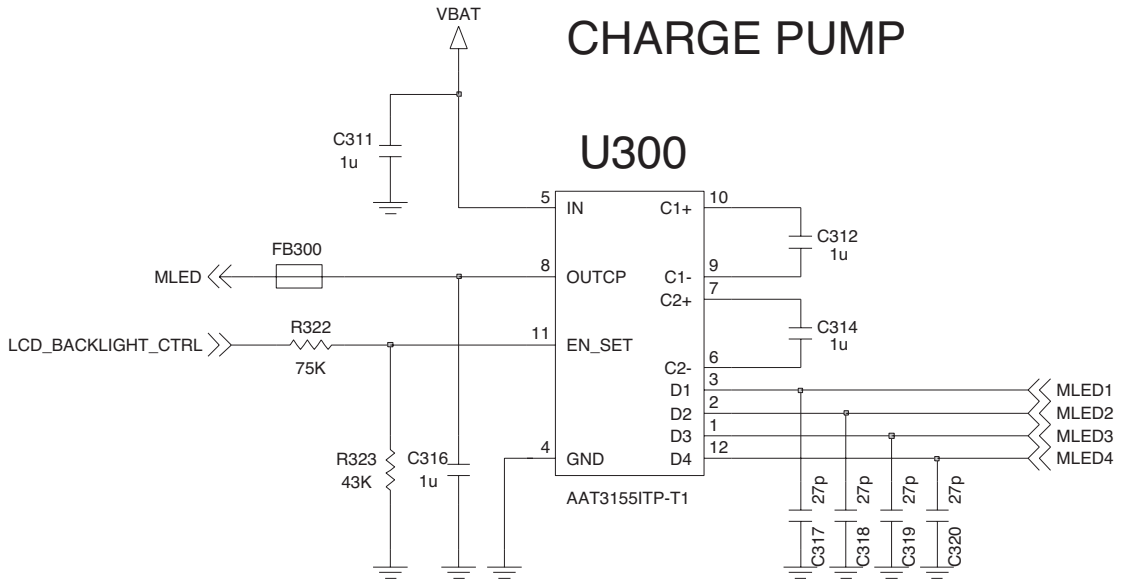


Figure 3.12 MAIN LCD BACKLIGHT ILLUMINATION

3.13 VIBRATOR

The vibrator is placed in the folder cover and contacted to LCD MODULE. The vibrator is driven from VIBRATOR (GPIO_0) of AD6724

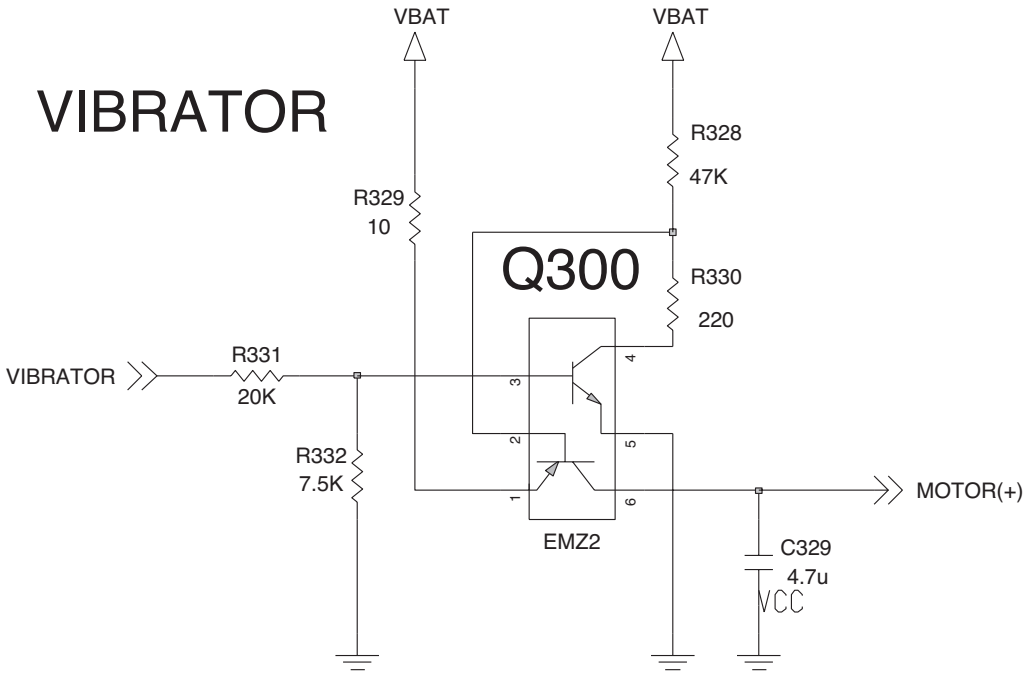
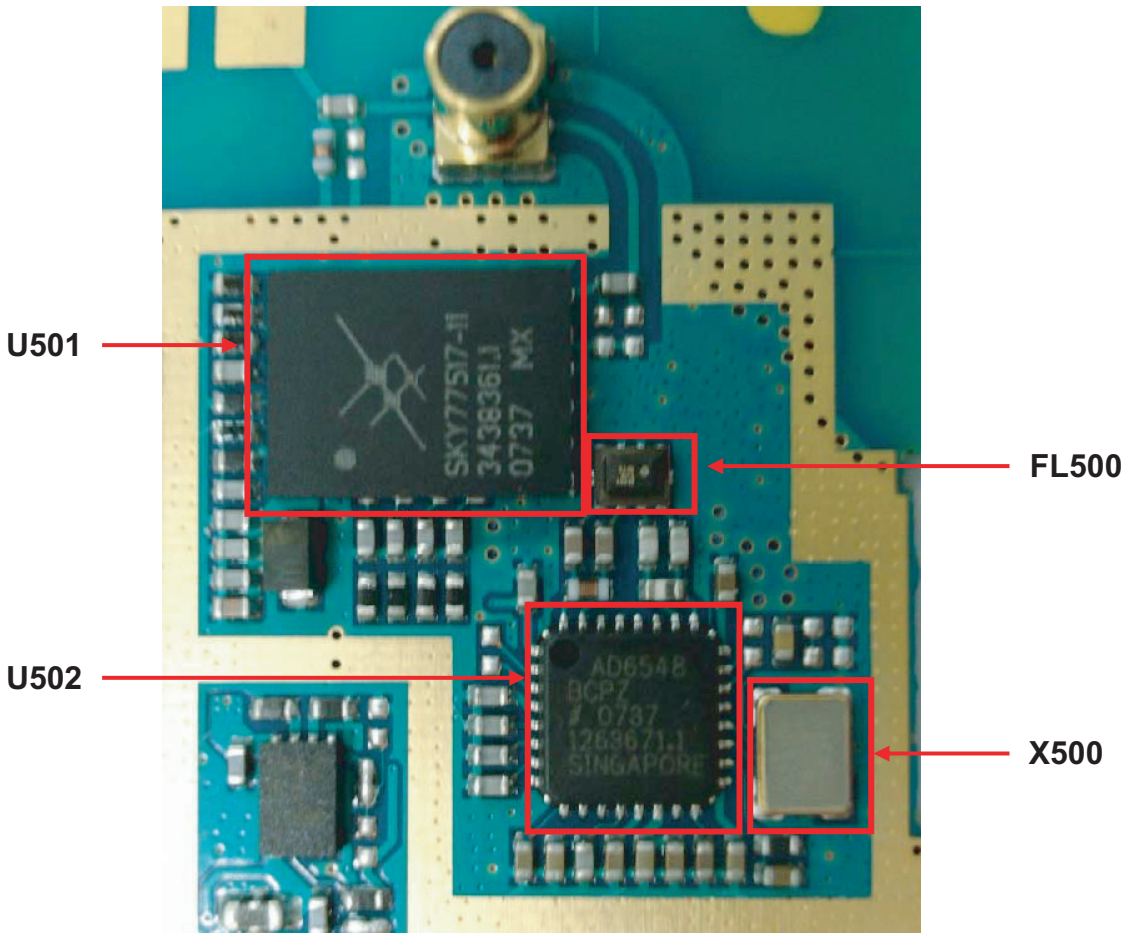


Figure 3.13 Vibrator

4. TROUBLE SHOOTING

4.1 RF Component

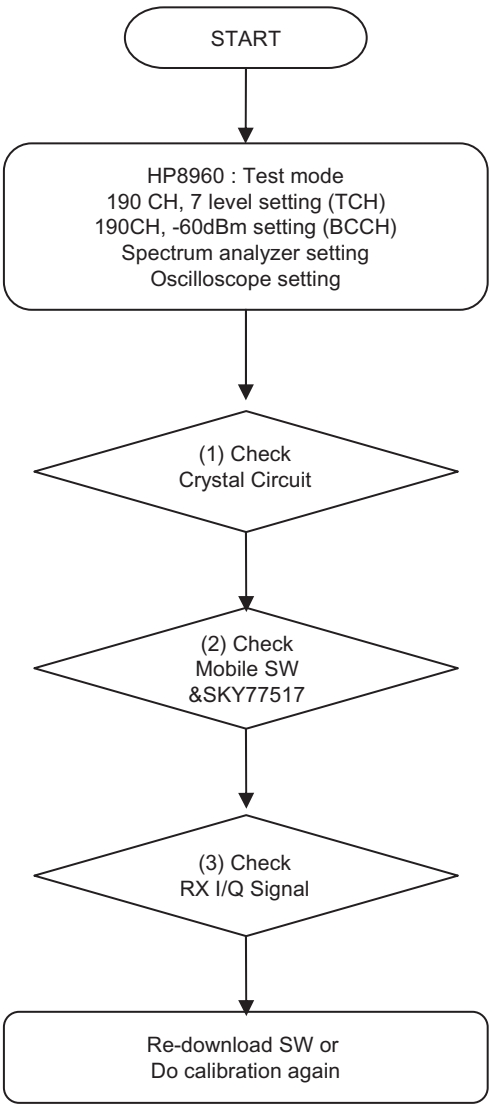
TEST POINT



U501	Power Amp Module (SKY77517)
U502 (AD6548)	RF Main Chip (Transceiver)
X500	Crystal, 26MHz Clock
FL500	SAW Filter

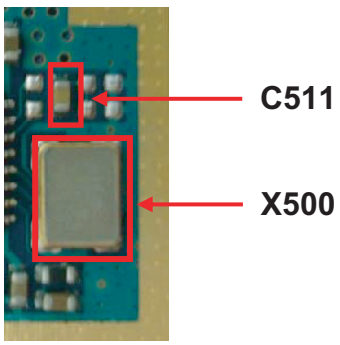
4.2 RX Trouble

CHECKING FLOW

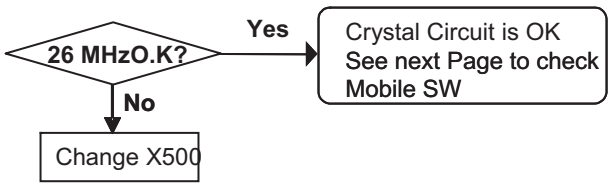


(1) Checking Crystal Circuit

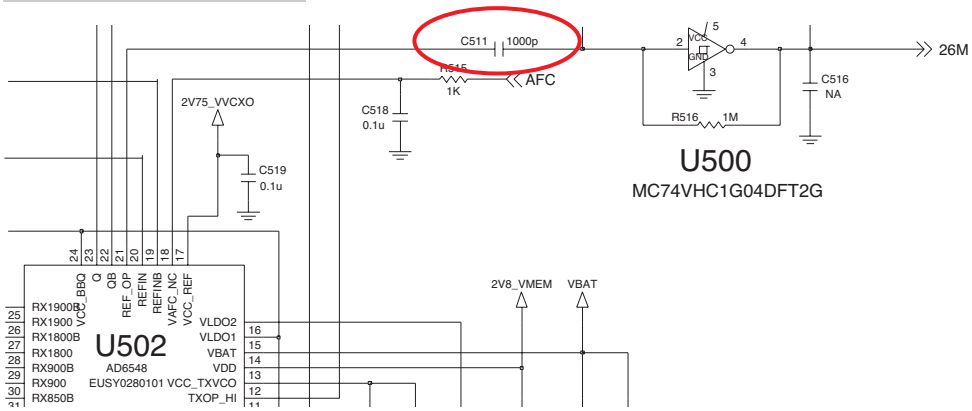
TEST POINT



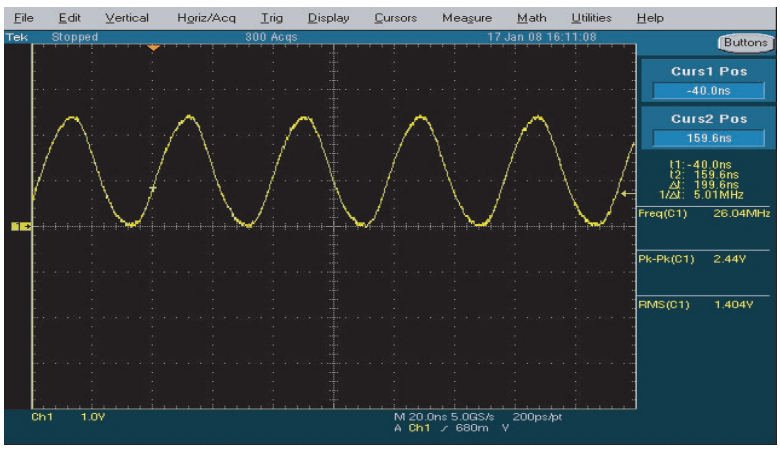
CHECKING FLOW



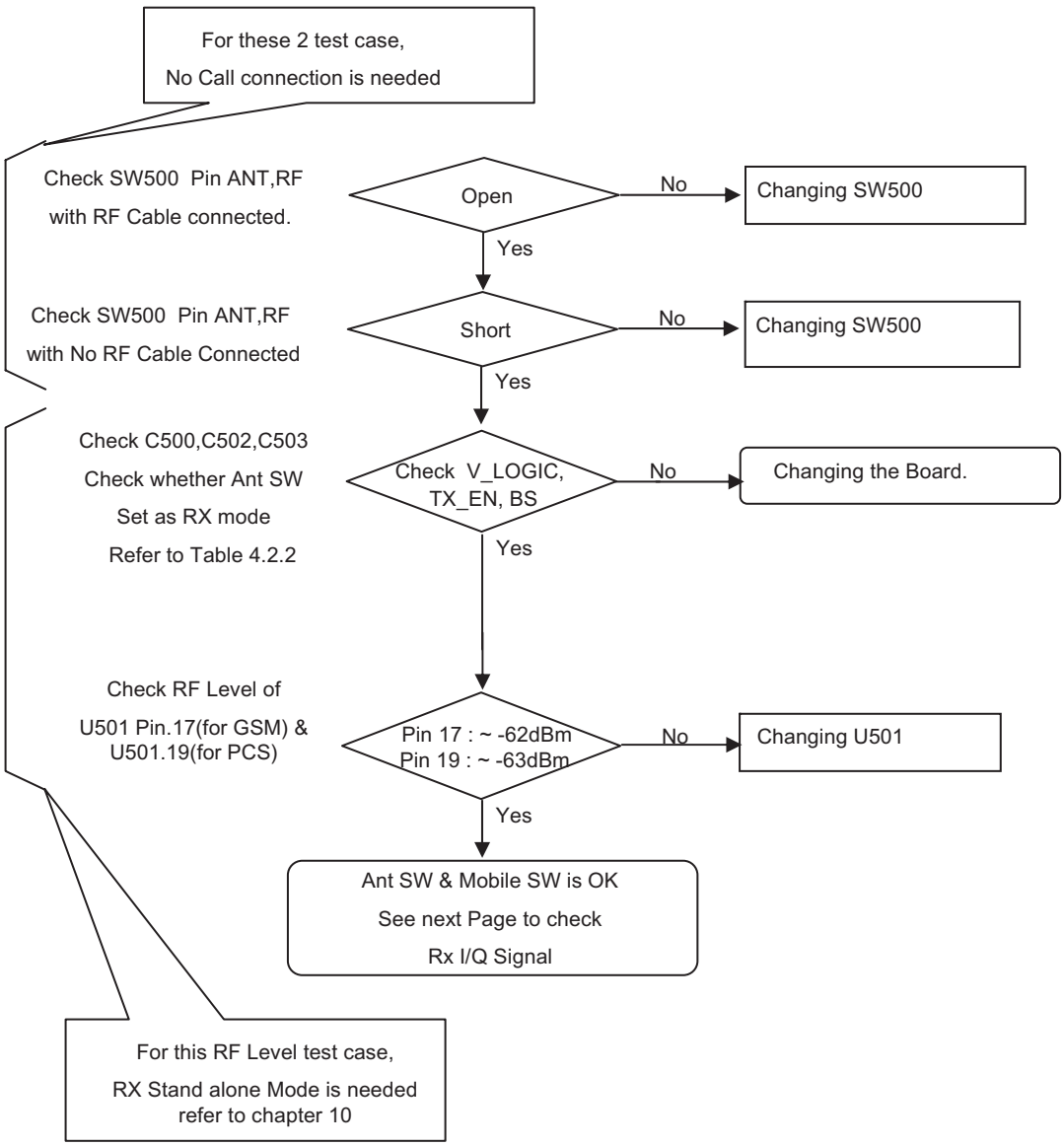
CIRCUIT



WAVEFORM



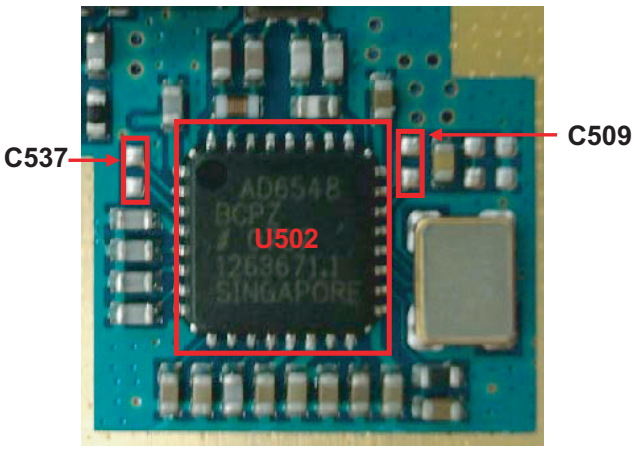
Checking Flow



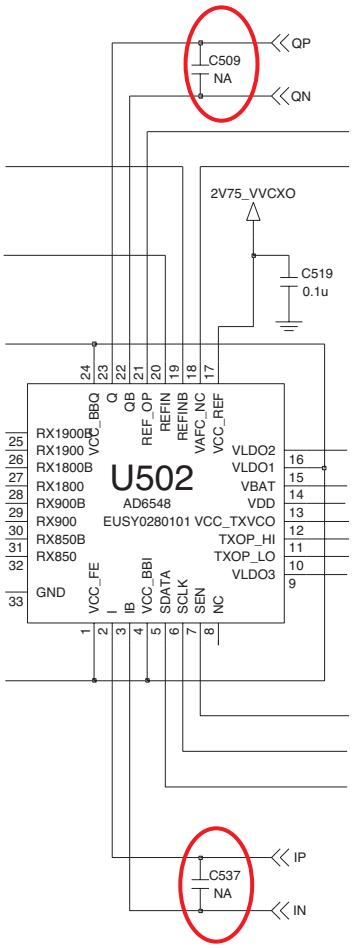
MODE	ANT_SW1	PA_EN	PA_BAND
GSM850 RX	H	L	L
PCS1900 RX	H	L	H
GSM850 TX	H	H	L
PCS1900 TX	H	H	H

(2) Checking RX I/Q

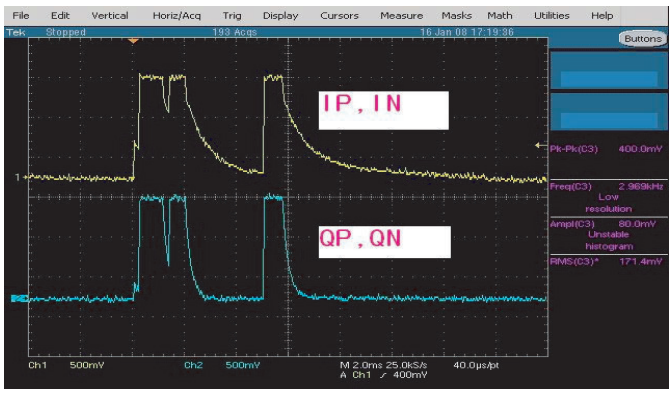
TEST POINT



CIRCUIT

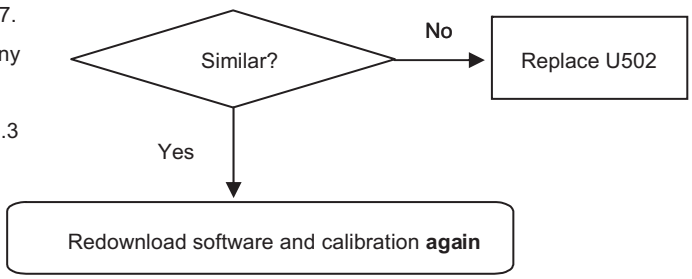


WAVEFORM



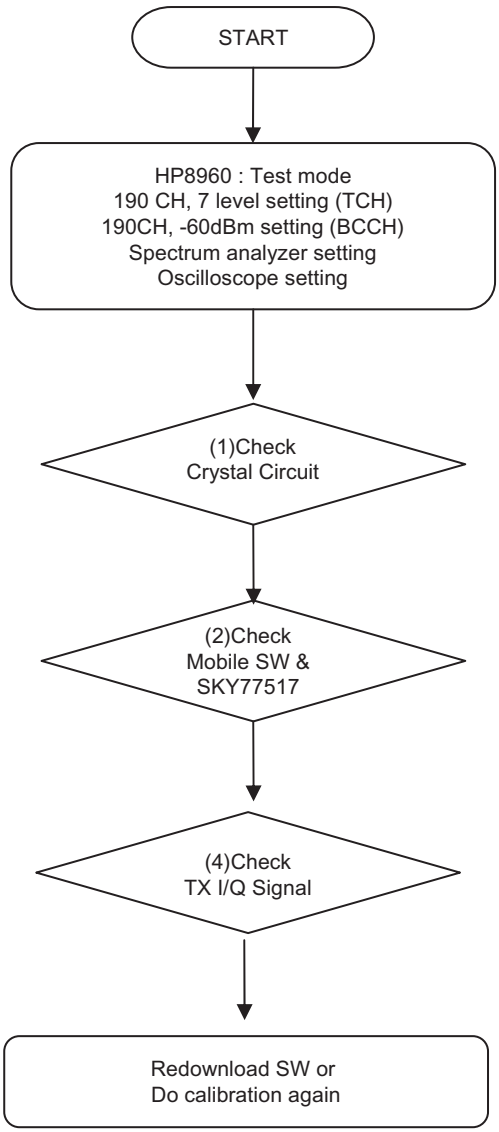
CHECKING FLOW

Check C509, C537.
Check if there is any
Major difference
Refer to graph 4.2.3



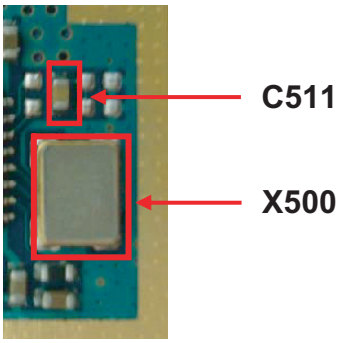
4.3 TX Trouble

CHECKING FLOW

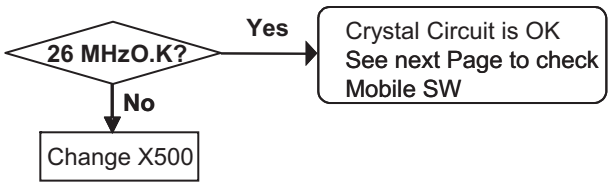


(1) Checking Crystal Circuit

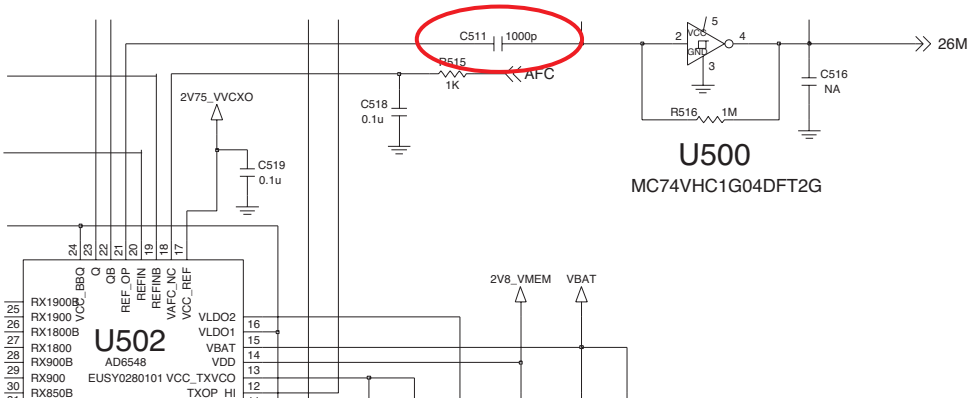
TEST POINT



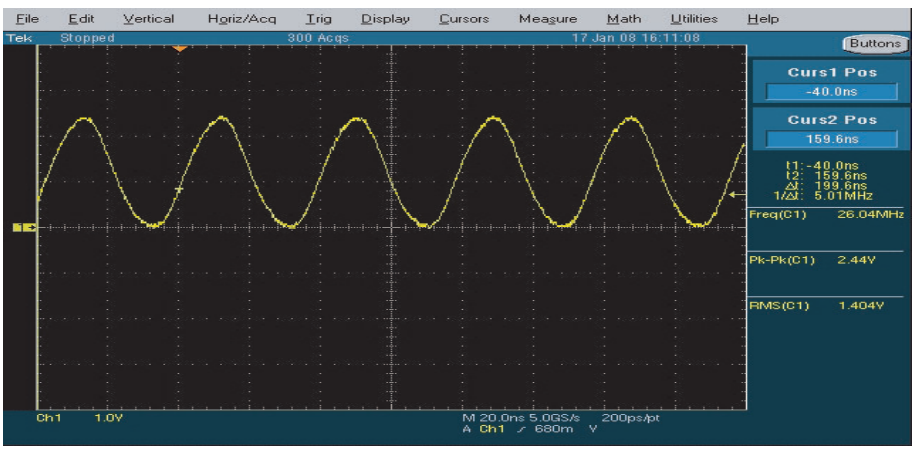
CHECKING FLOW



CIRCUIT

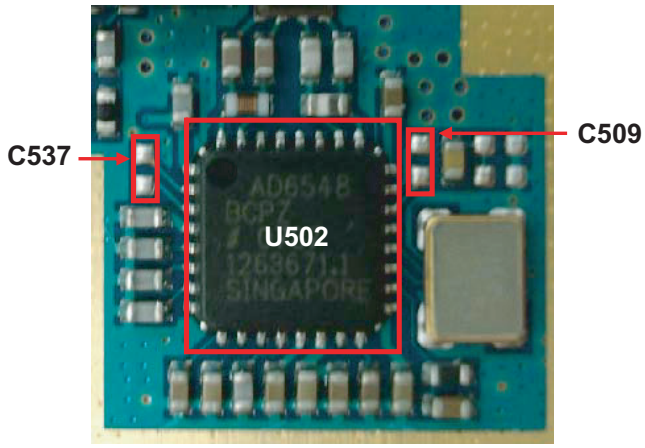


WAVEFORM

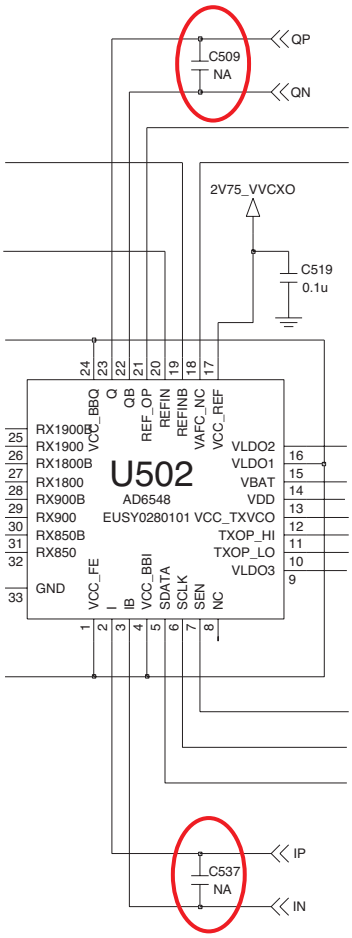


(2) Checking TX I/Q

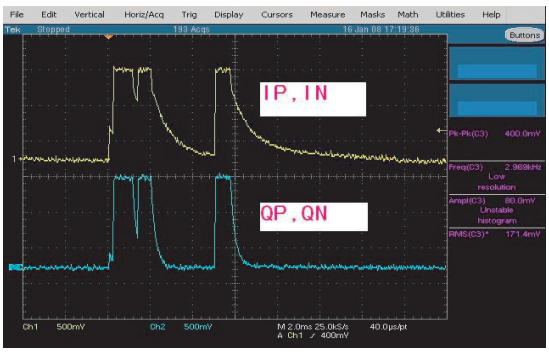
TEST POINT



CIRCUIT

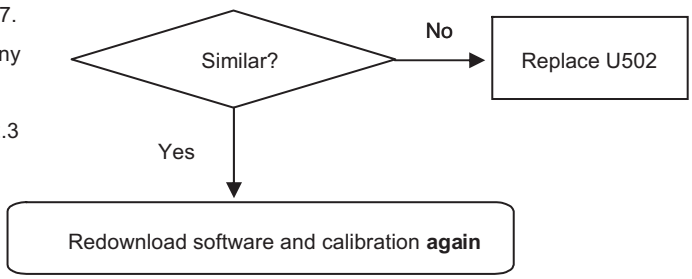


WAVEFORM



CHECKING FLOW

Check C509, C537.
Check if there is any
Major difference
Refer to graph 4.2.3



4.4 Power On Trouble

TEST POINT

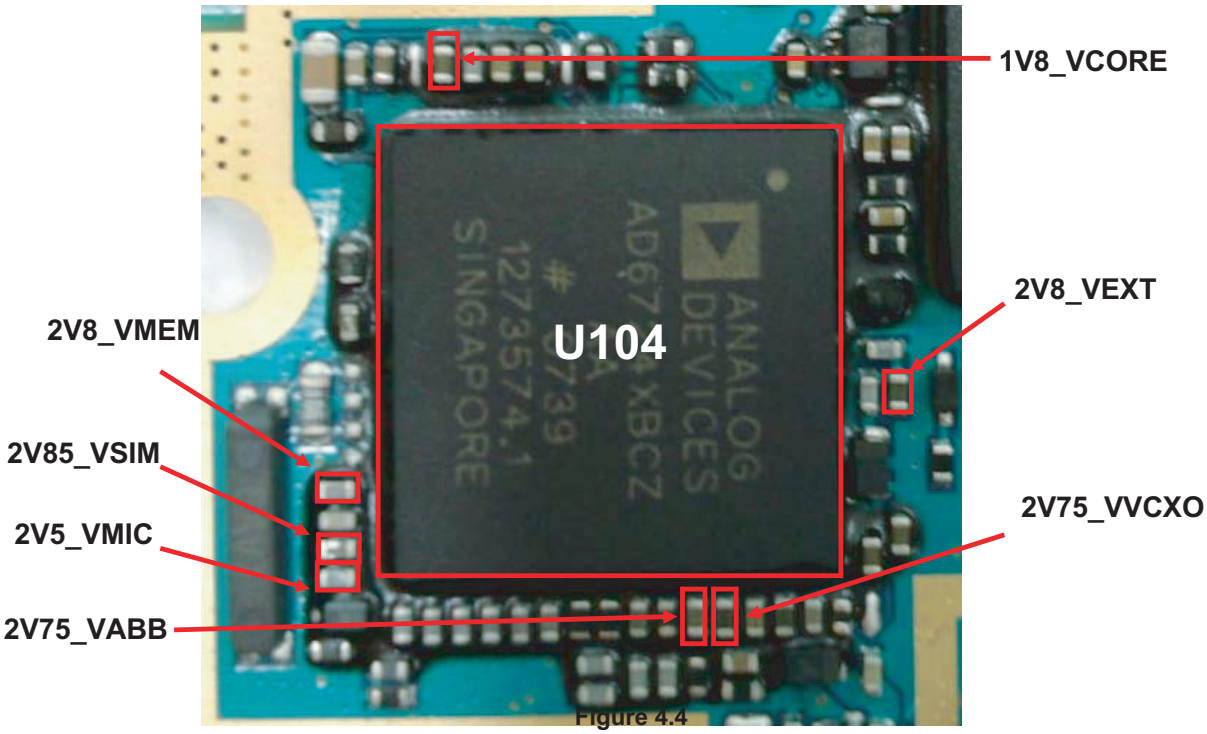
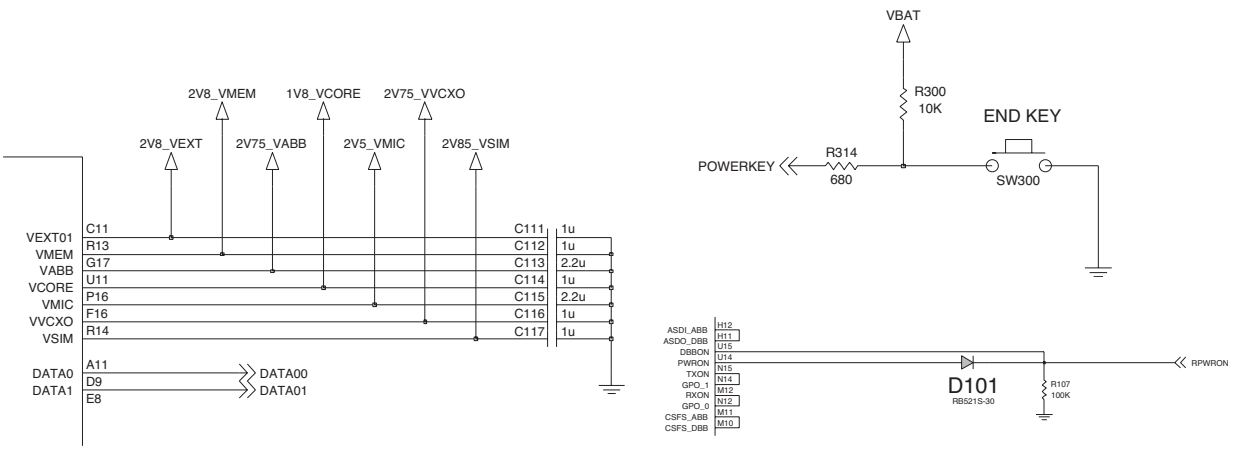
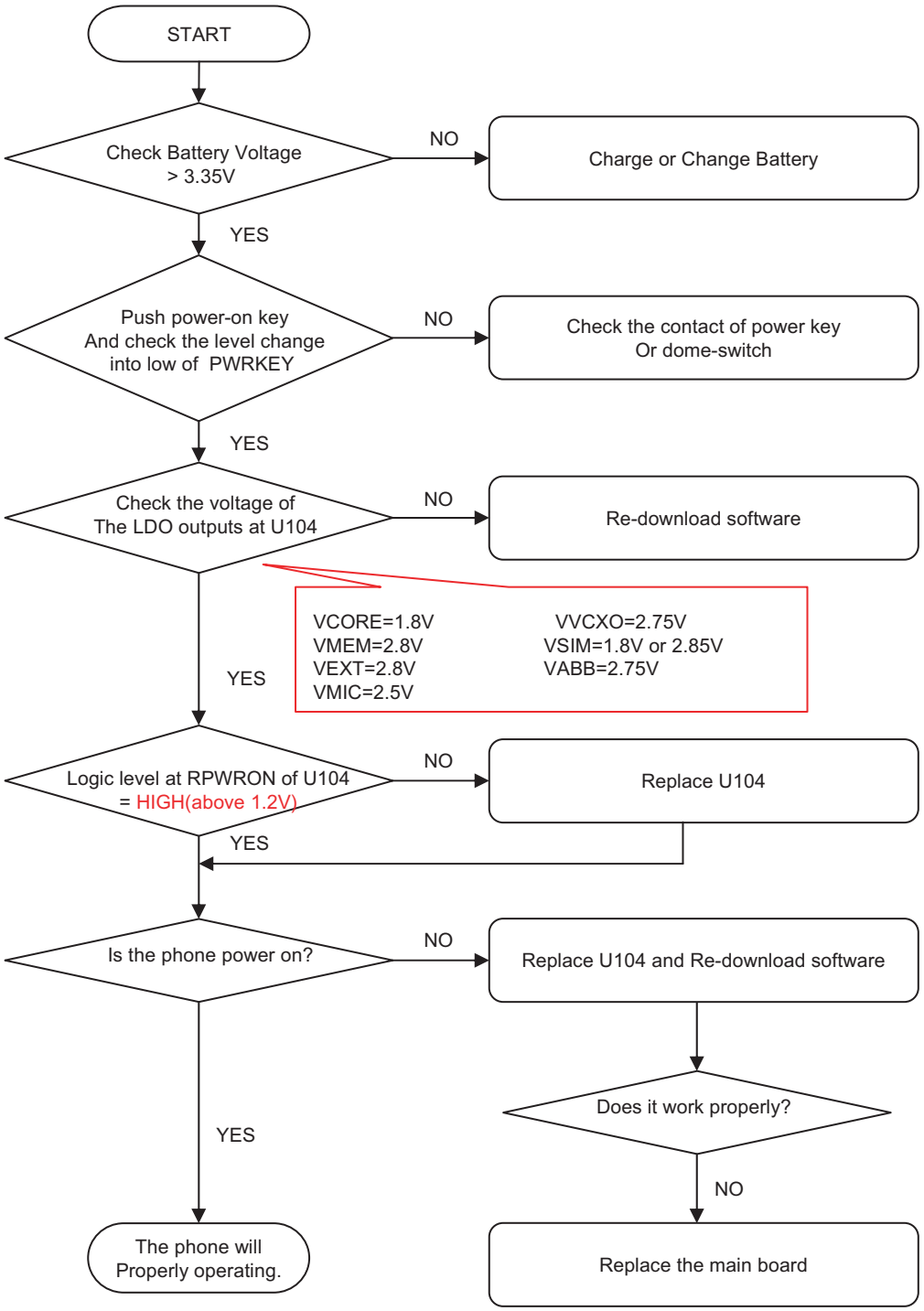


Figure 4.4

CIRCUIT

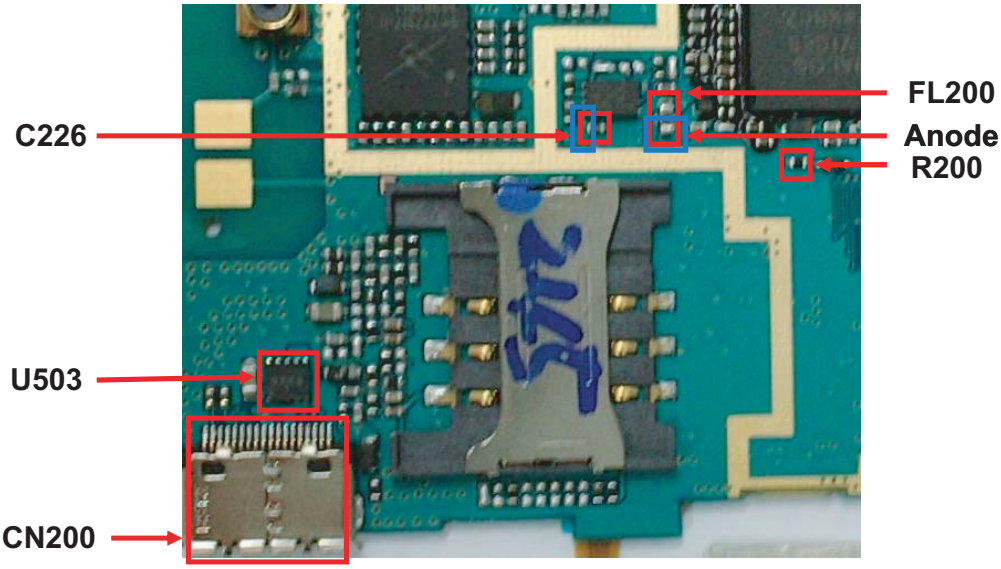


CHECKING FLOW

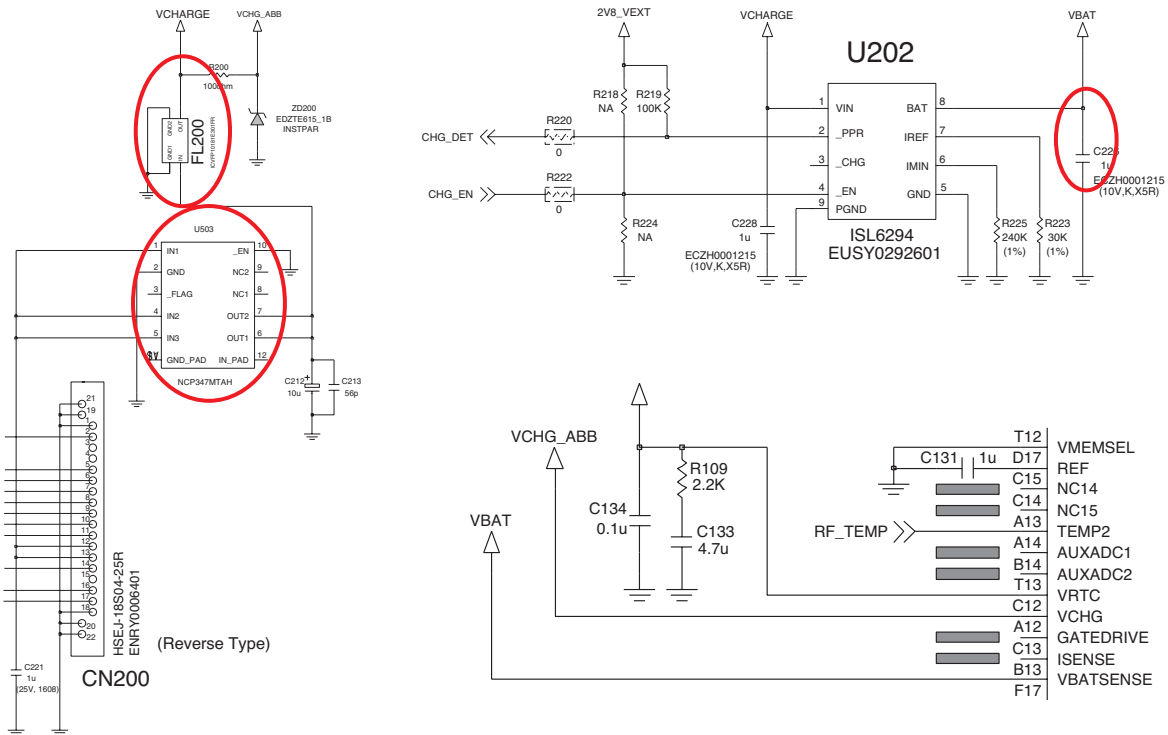


4.5 Charging Trouble

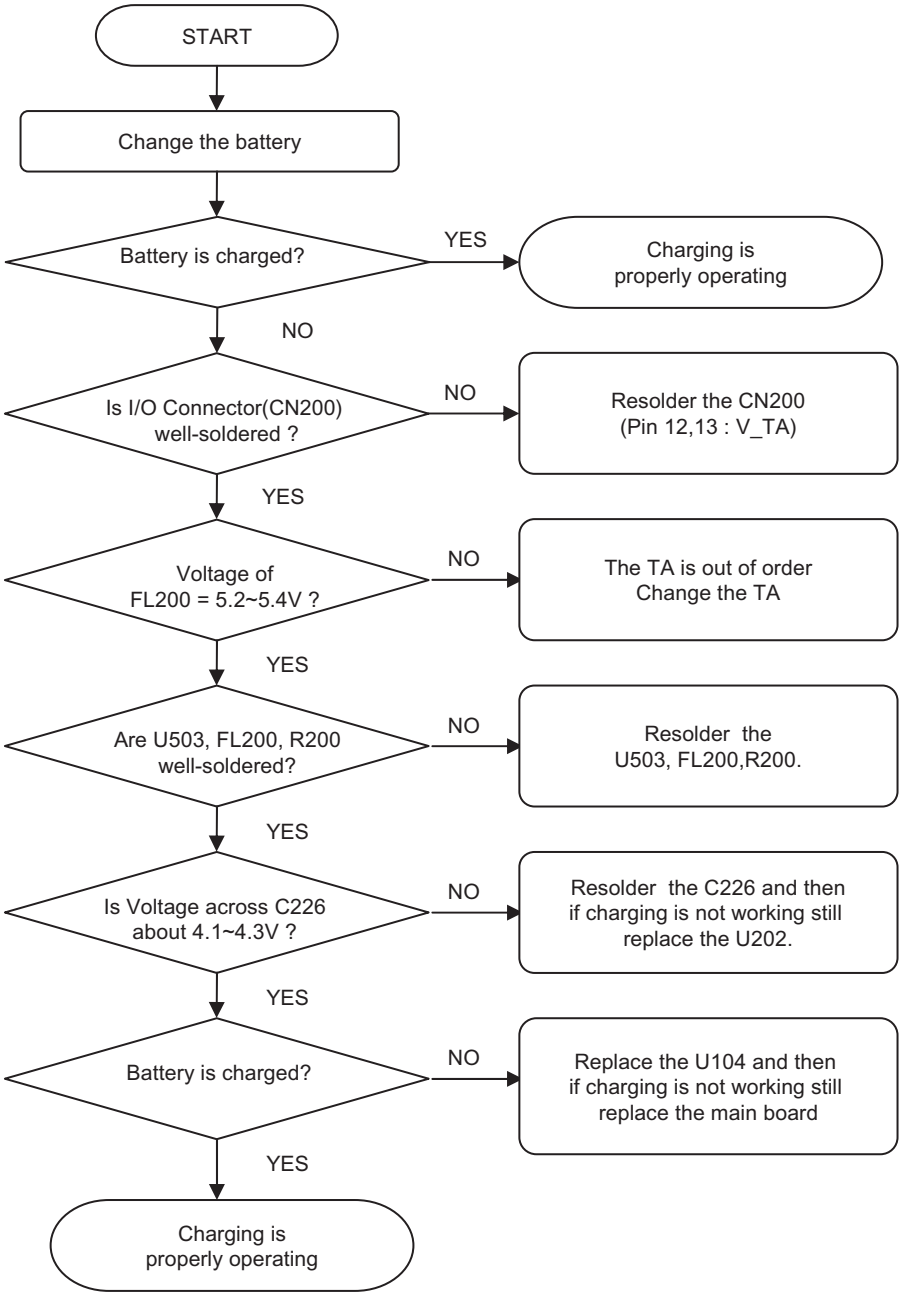
TEST POINT



CIRCUIT

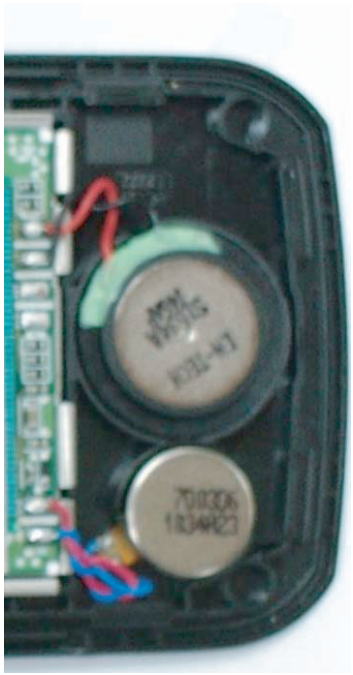


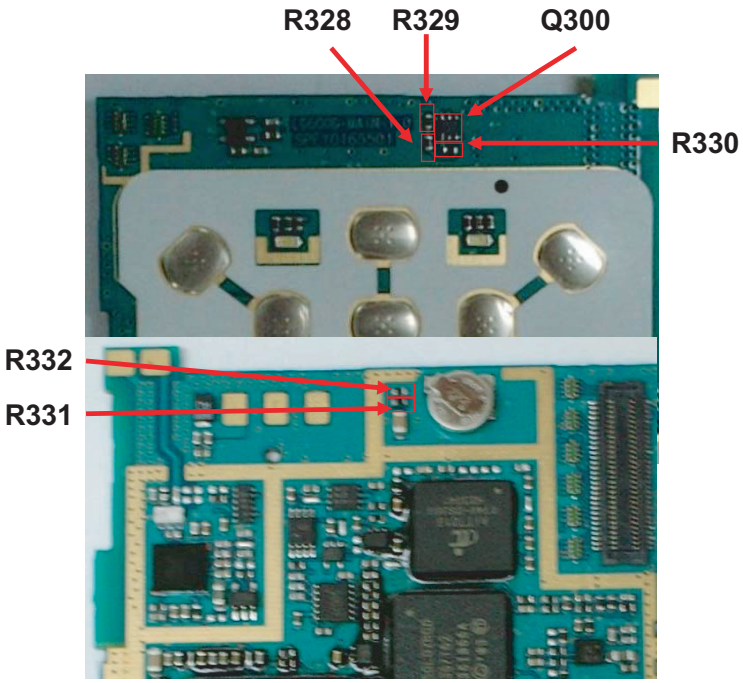
Checking Flow



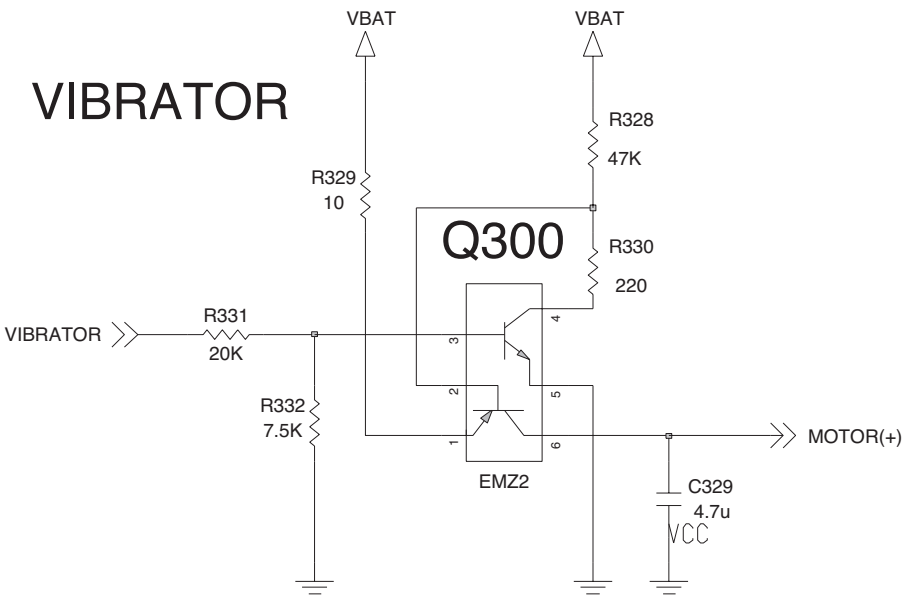
4.6 Vibrator Trouble

TEST POINT



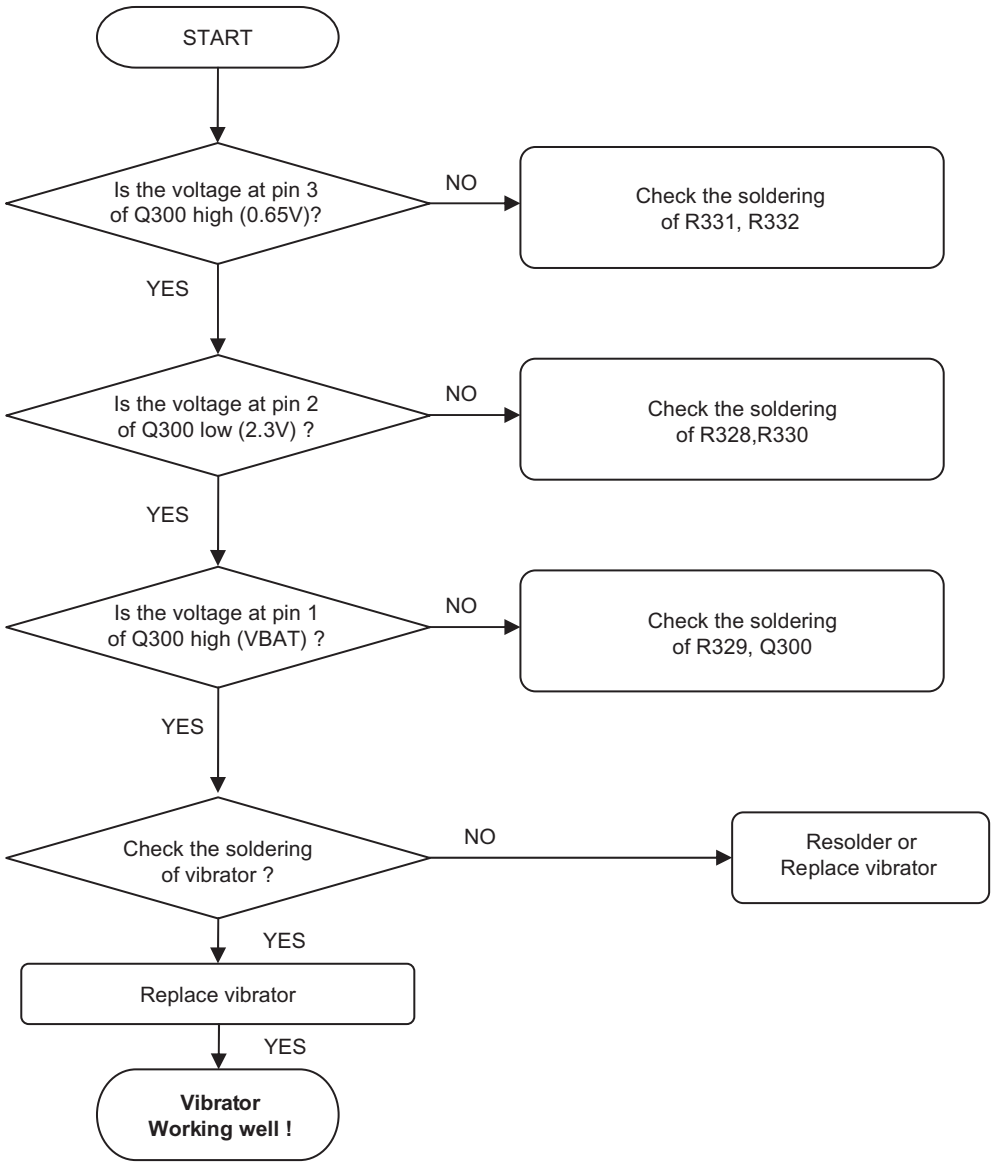


CIRCUIT



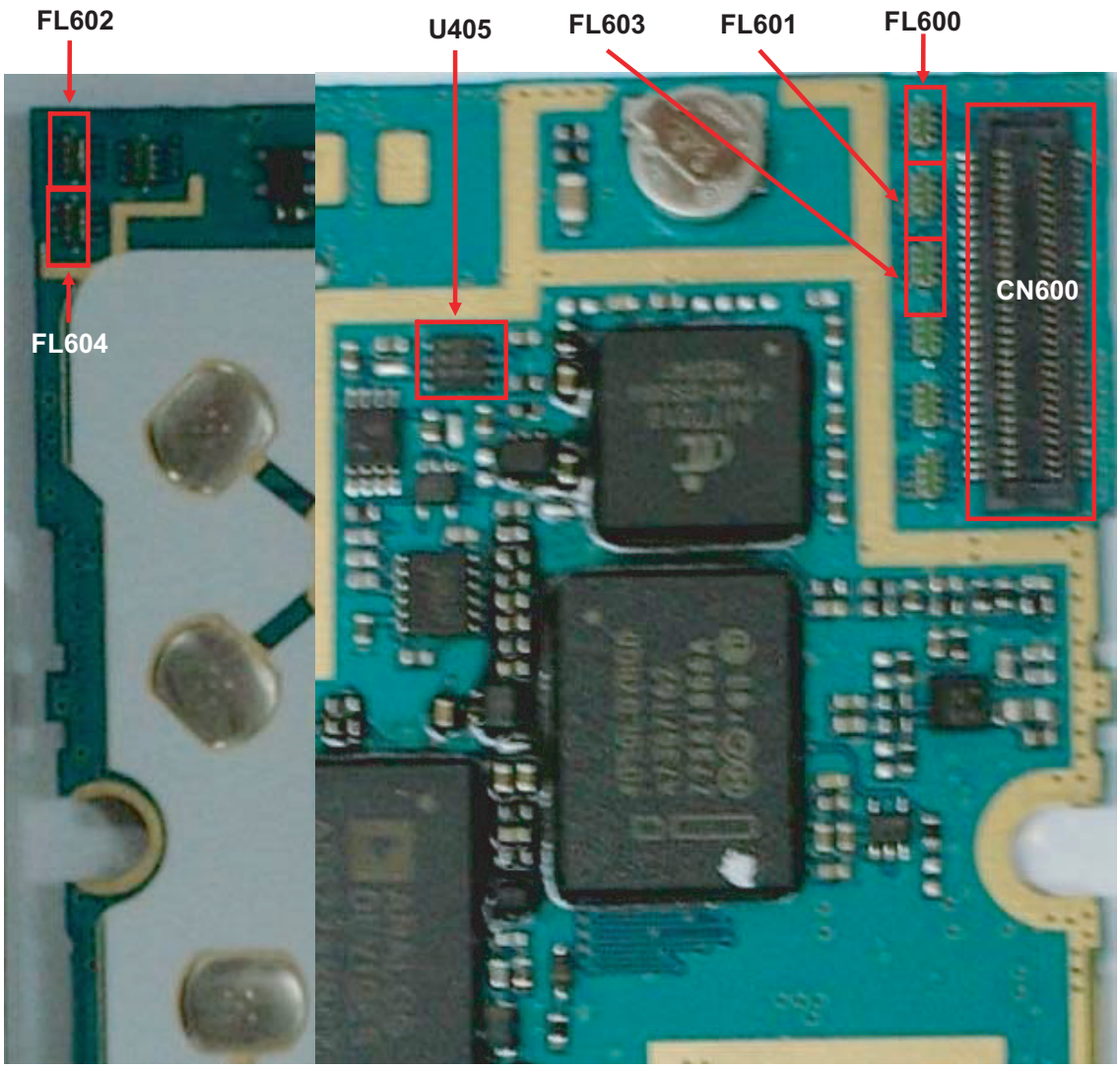
CHECKING FLOW

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



4.7 LCD Trouble

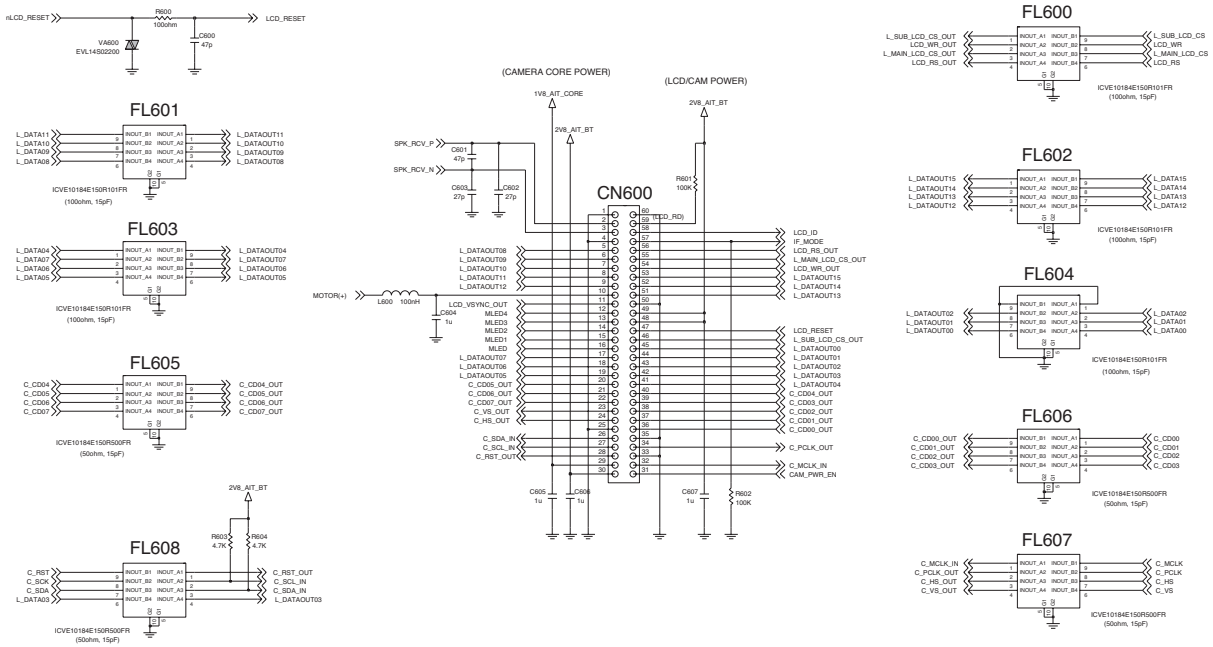
TEST POINT



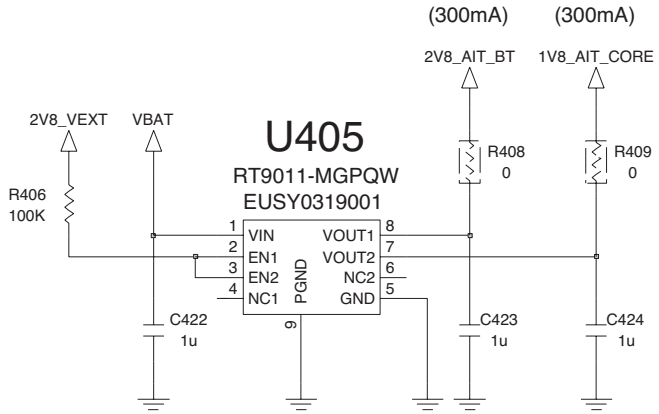
CIRCUIT

128x160 TFT(MAIN) , 96x64 CSTN(SUB) LCD CONNECTOR with VGA CAMERA

(SOCKET, 60pin, 0.4mm pitch, 1.0T, ENBY0036801)

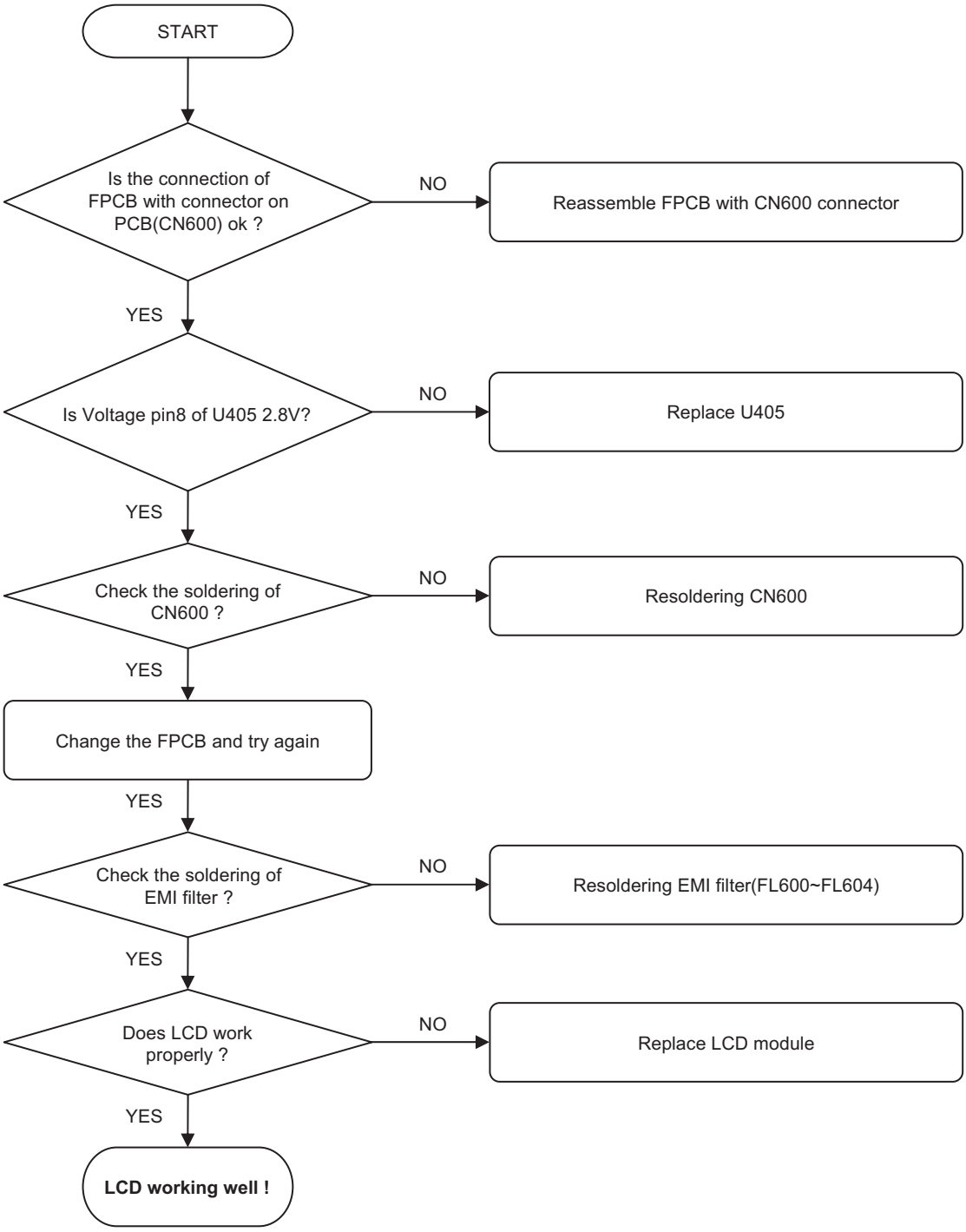


AIT POWER LDO



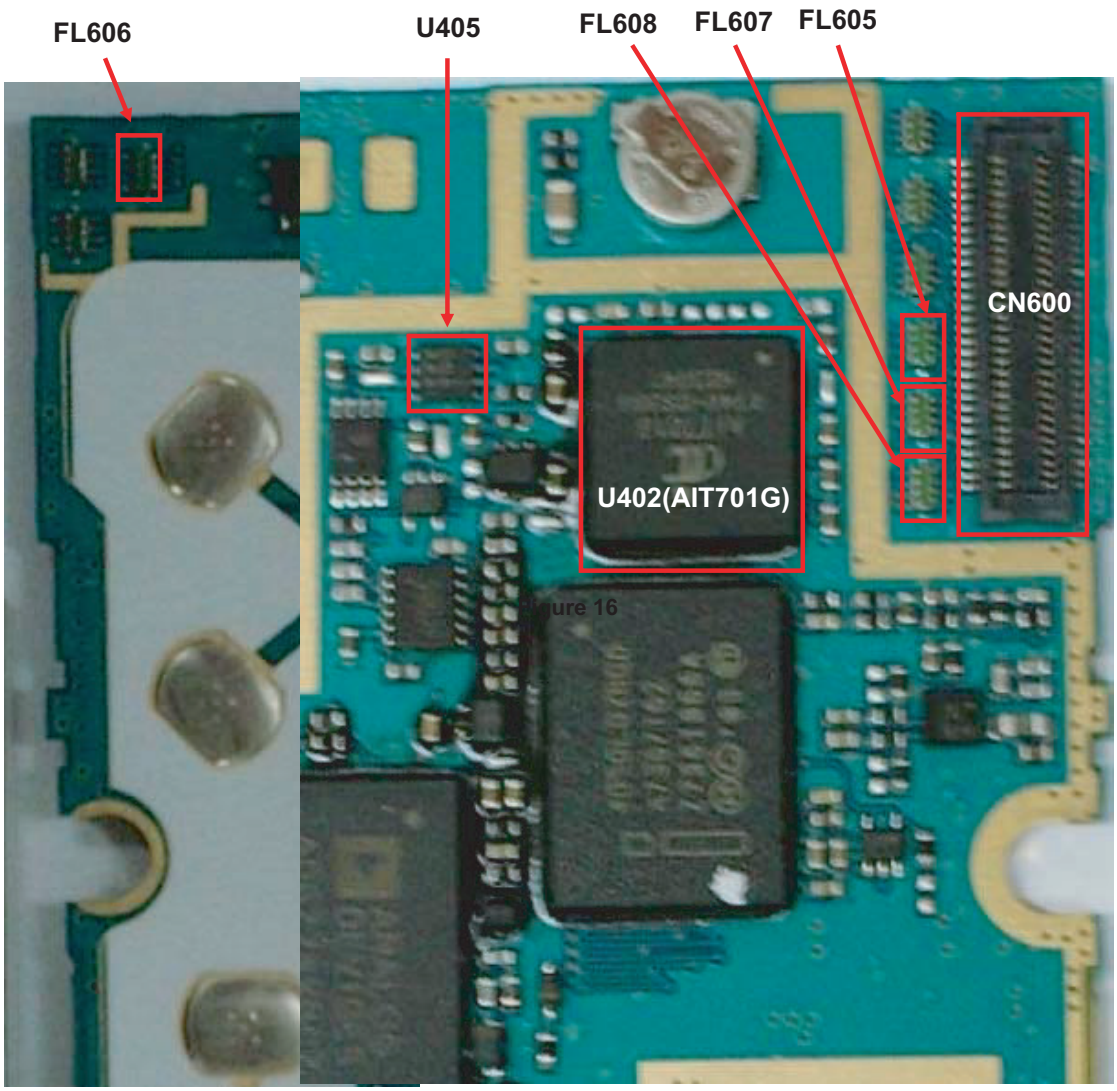
4. TROUBLE SHOOTING

CHECKING FLOW



4.8 Camera Trouble

TEST POINT

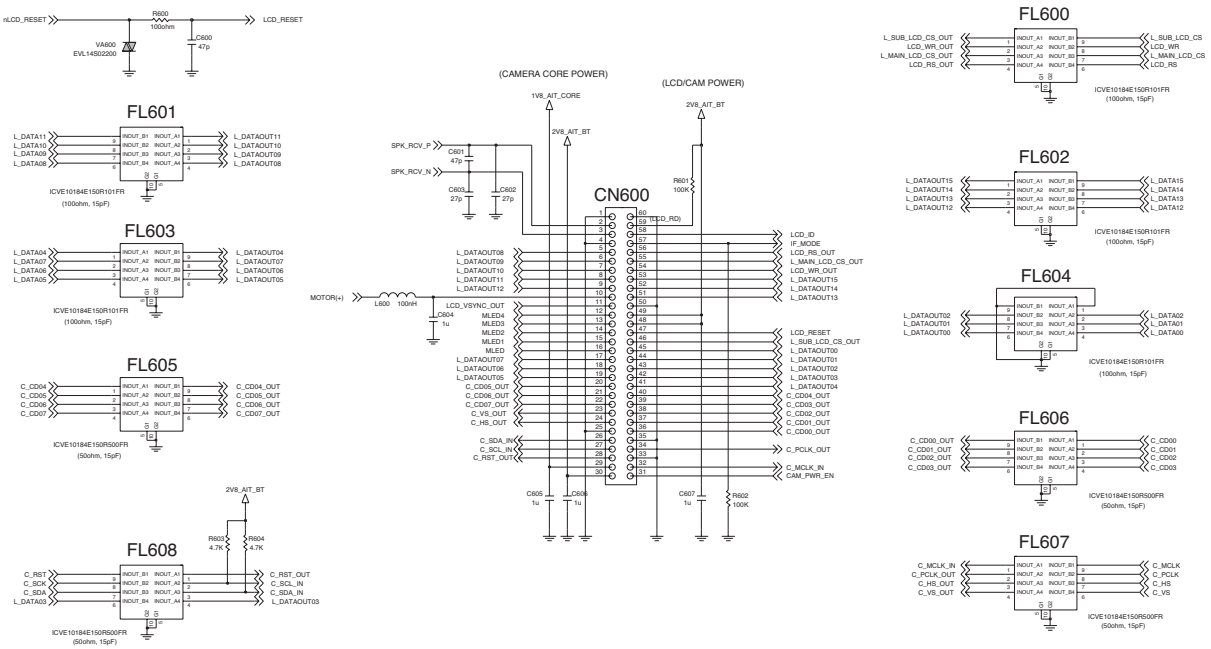


ure 16

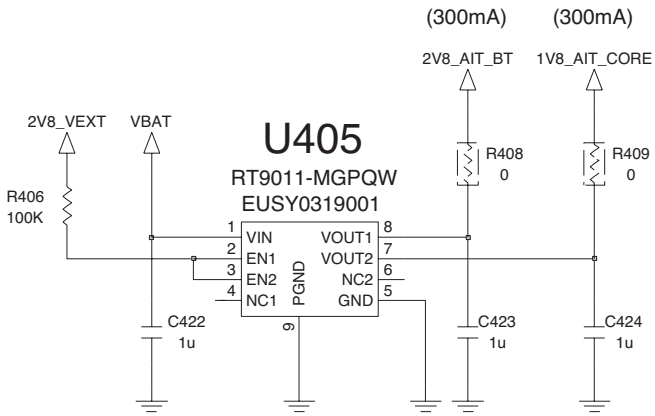
CIRCUIT

128x160 TFT(MAIN) , 96x64 CSTN(SUB) LCD CONNECTOR with VGA CAMERA

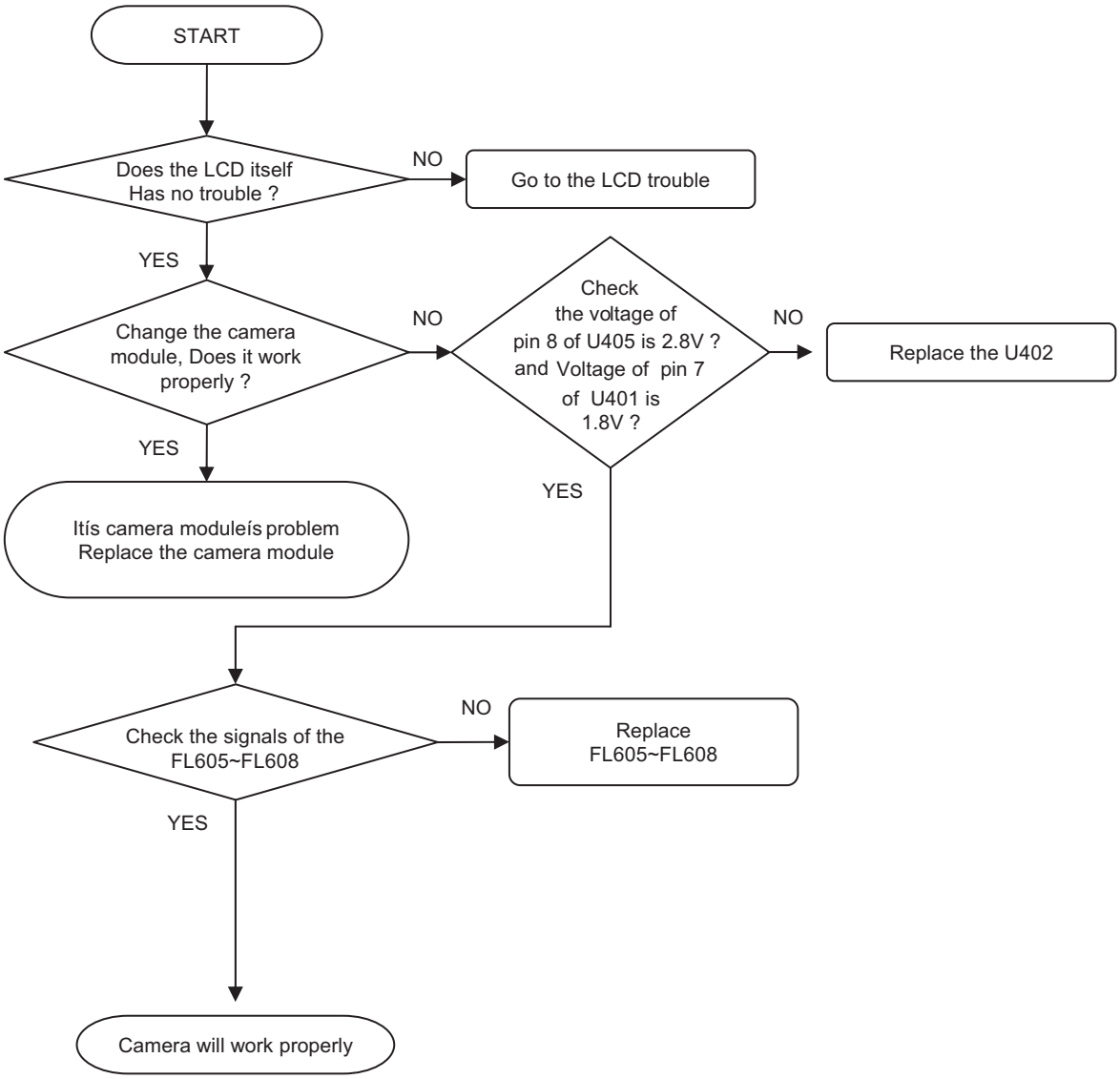
(SOCKET, 60pin, 0.4mm pitch, 1.0T, ENBY0036801)



AIT POWER LDO

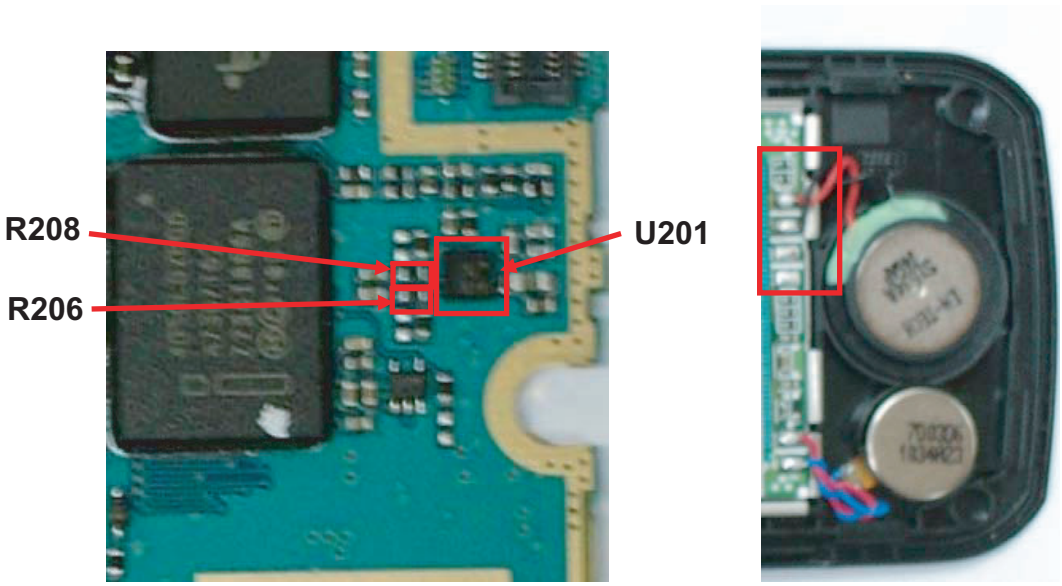


CHECKING FLOW

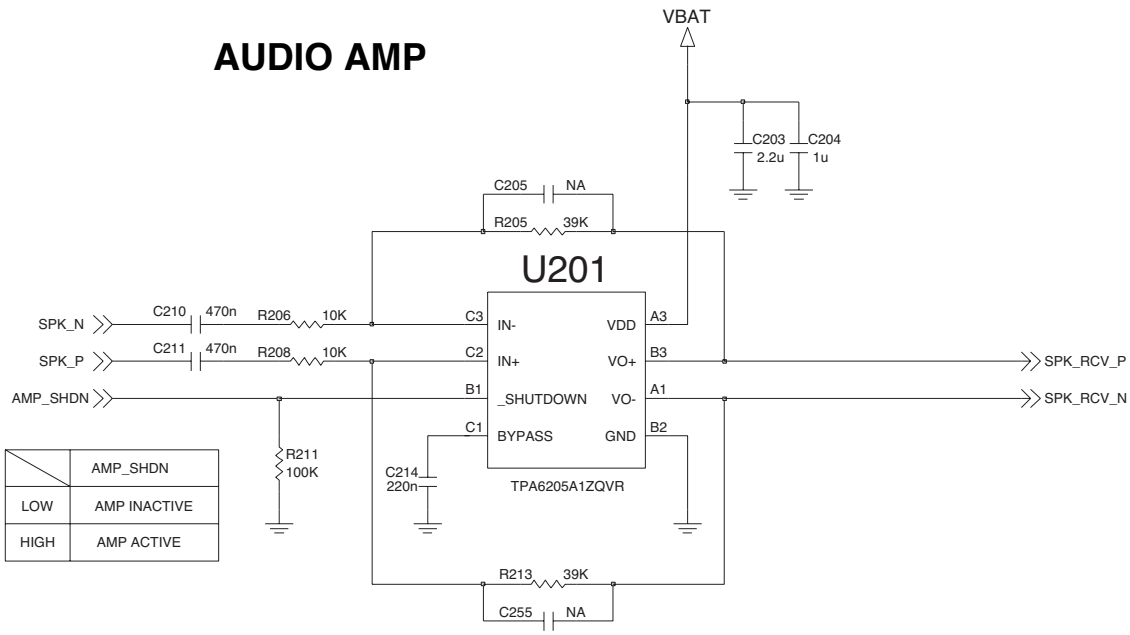


4.9 Speaker Trouble

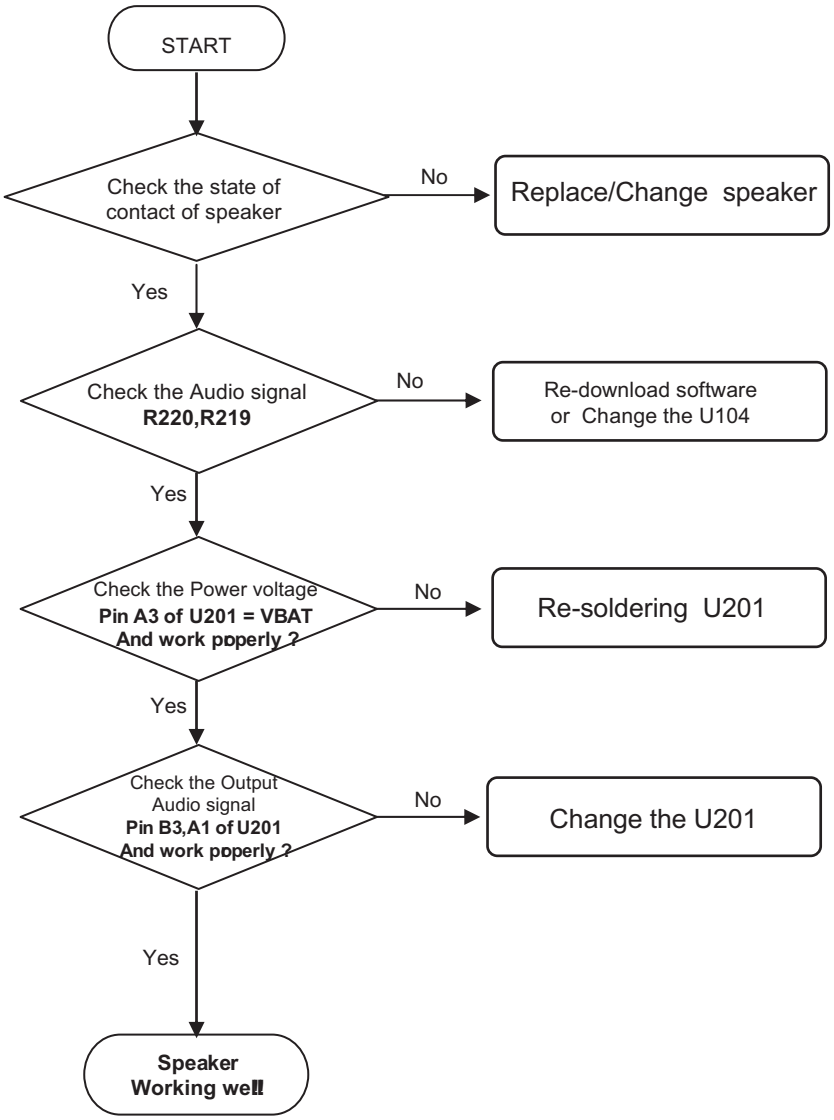
TEST POINT



CIRCUIT

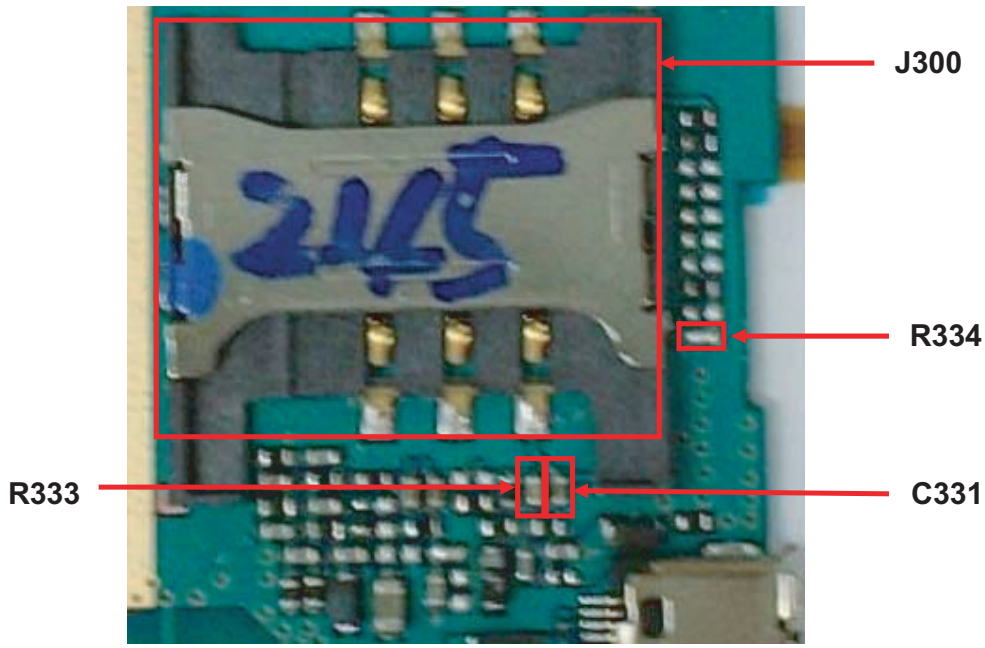


CHECKING FLOW



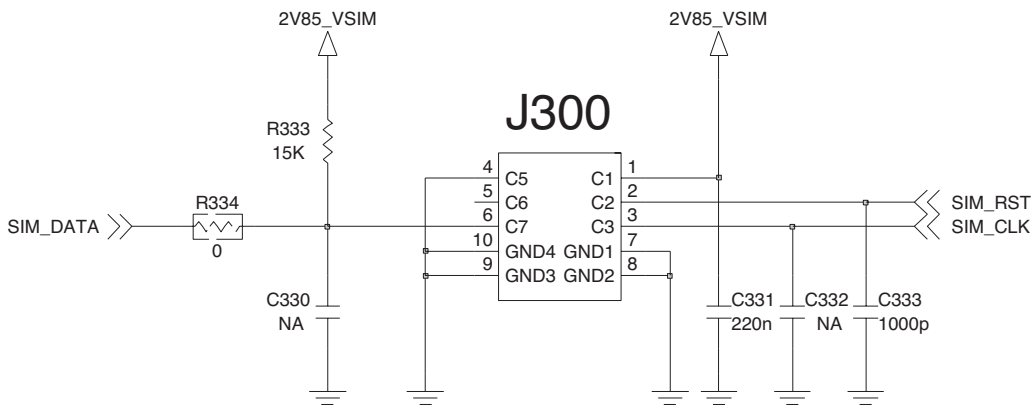
4.10 SIM Card Interface Trouble

TEST POINT

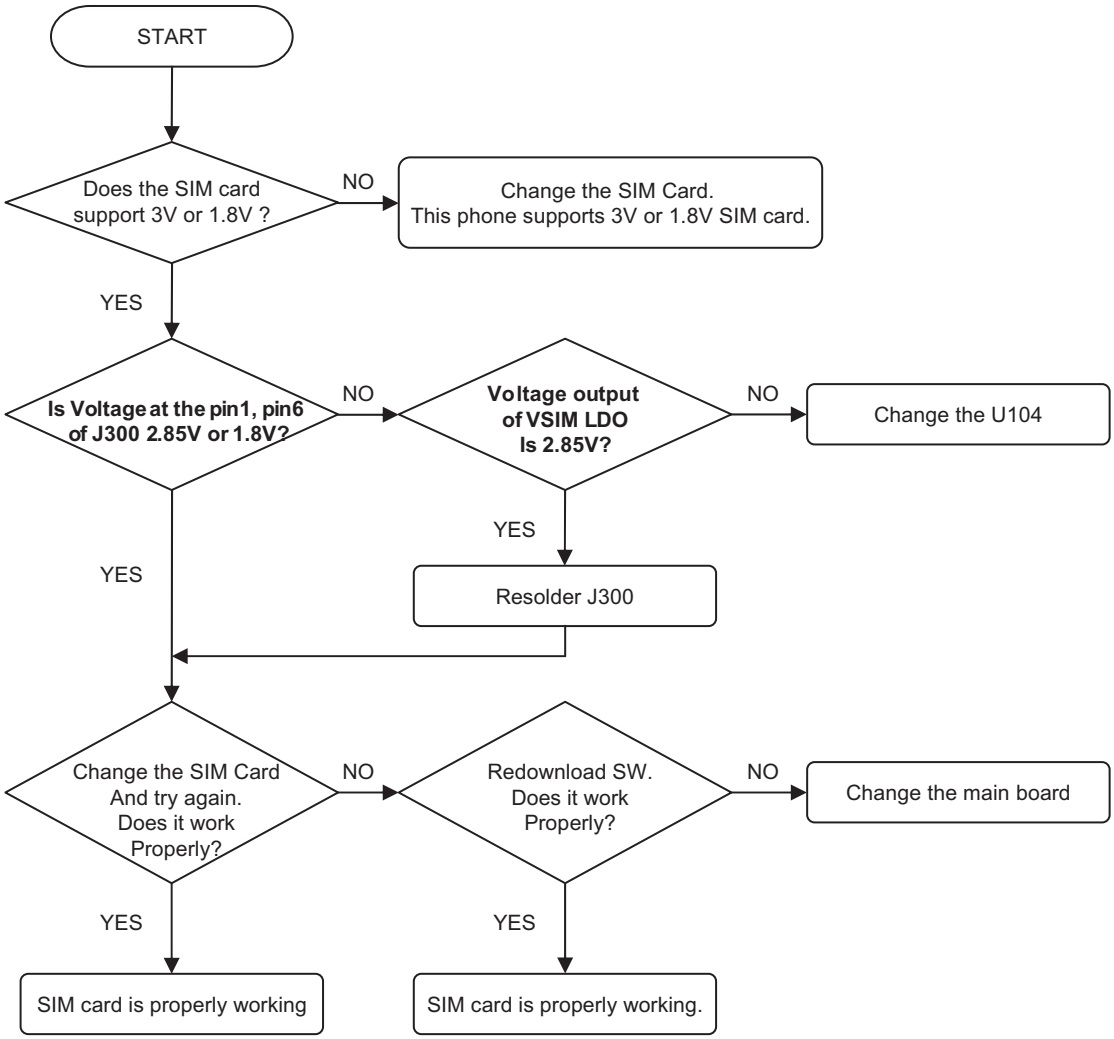


CIRCUIT

SIM CONNECTOR

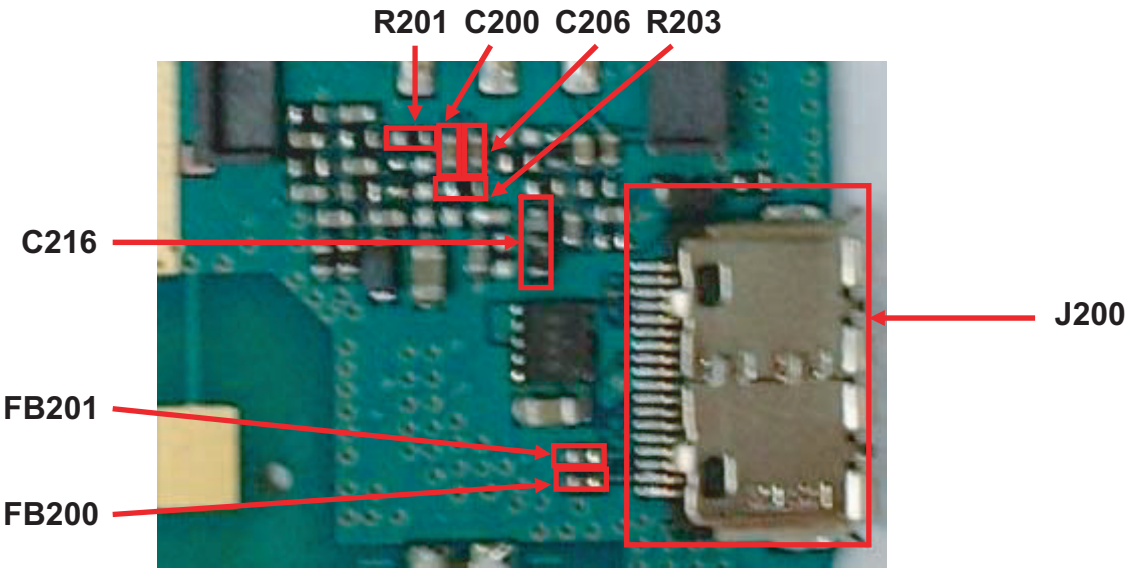


CHECKING FLOW

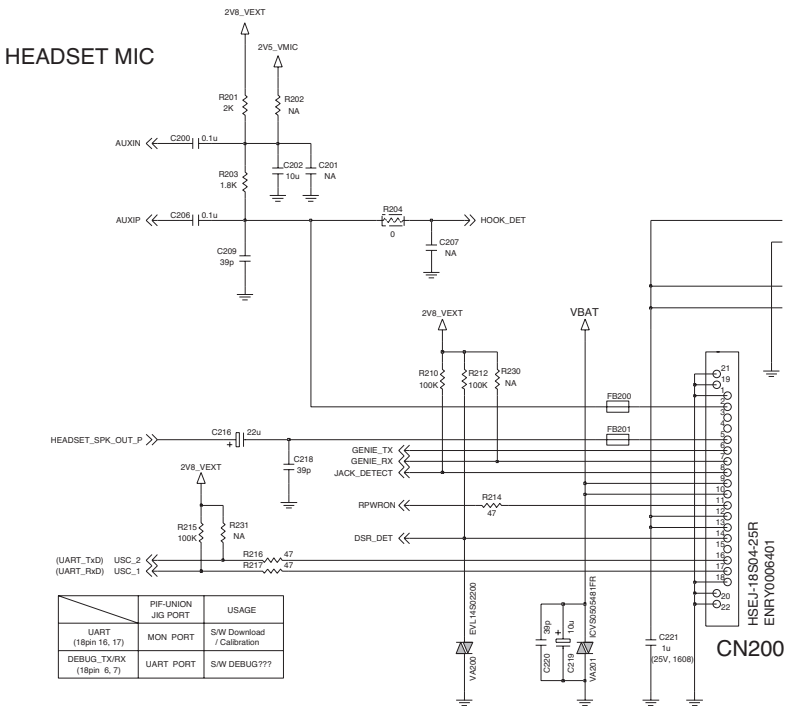


4.11 Earphone (Headset mic) Trouble

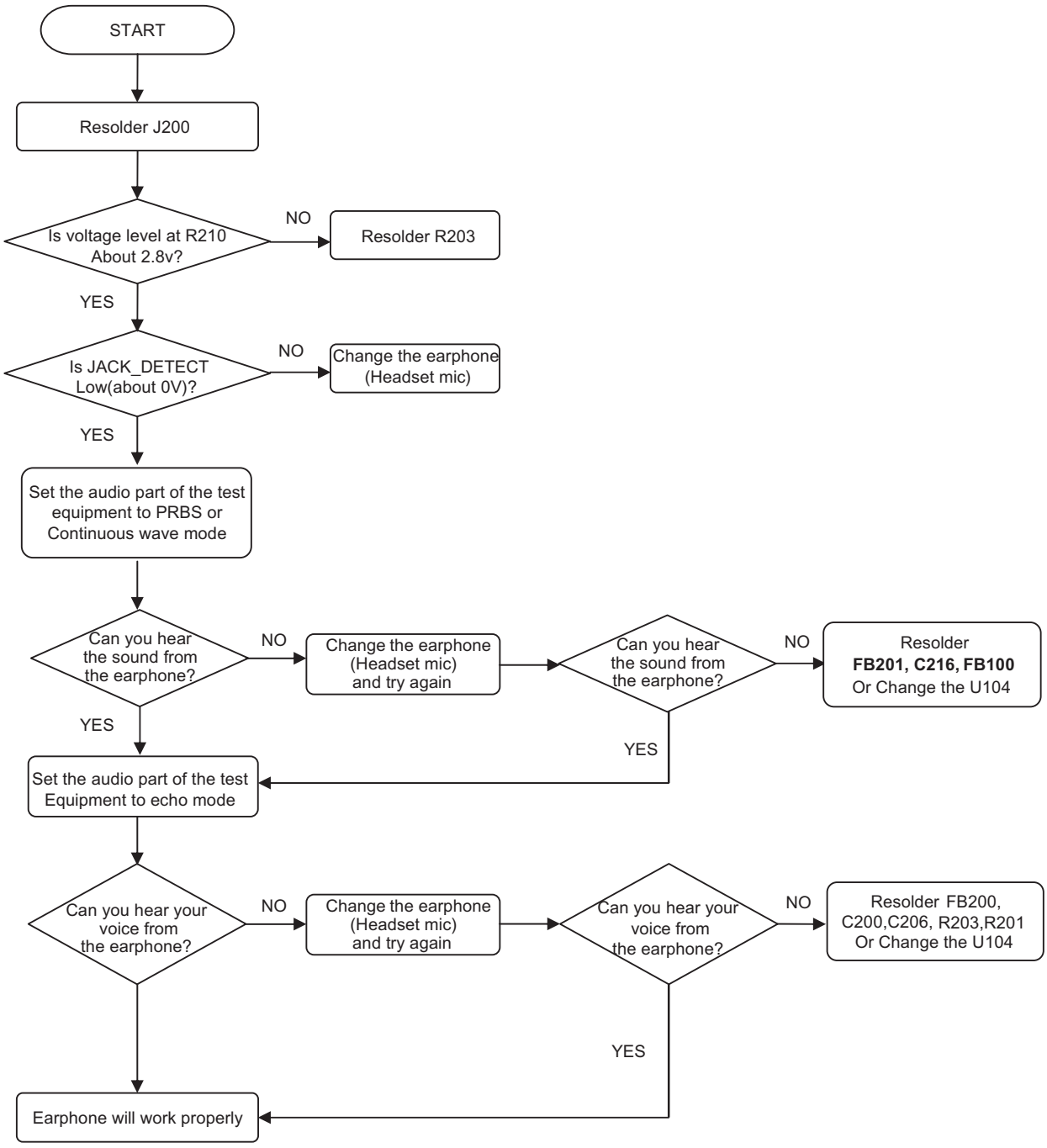
TEST POINT



CIRCUIT

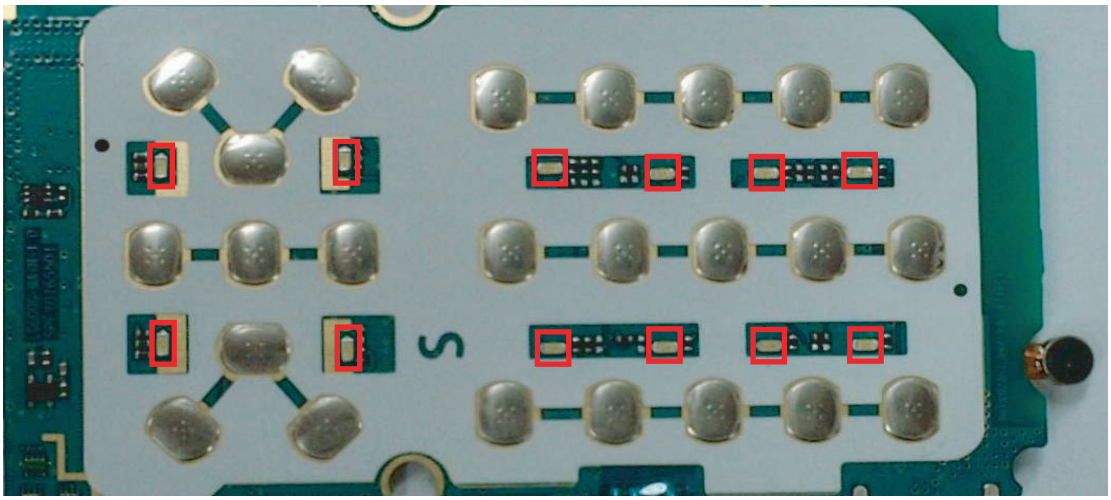


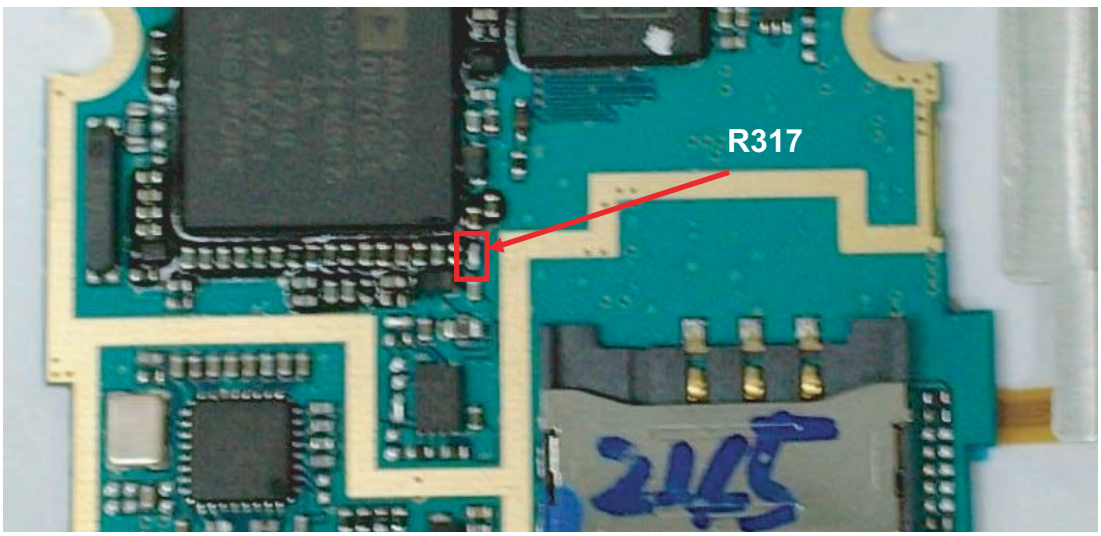
CHECKING FLOW



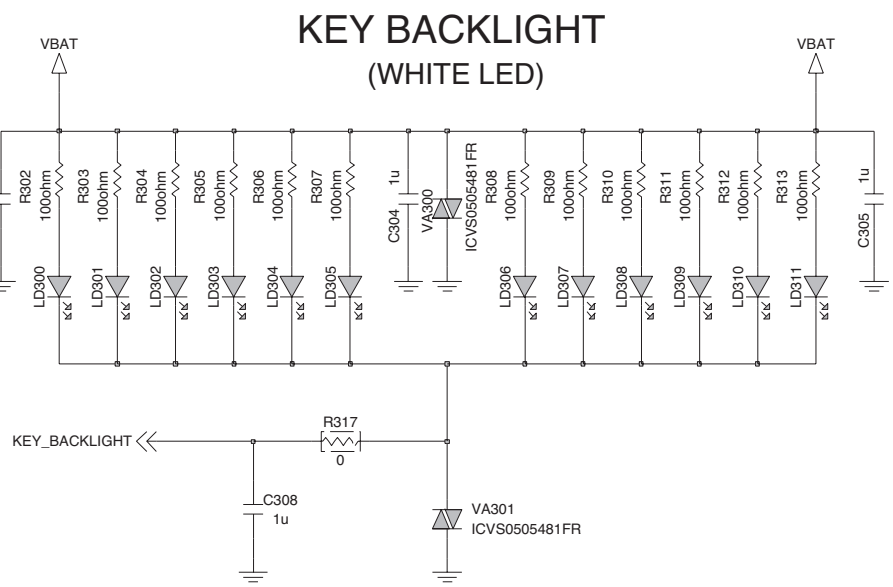
4.12 KEY backlight Trouble

TEST POINT

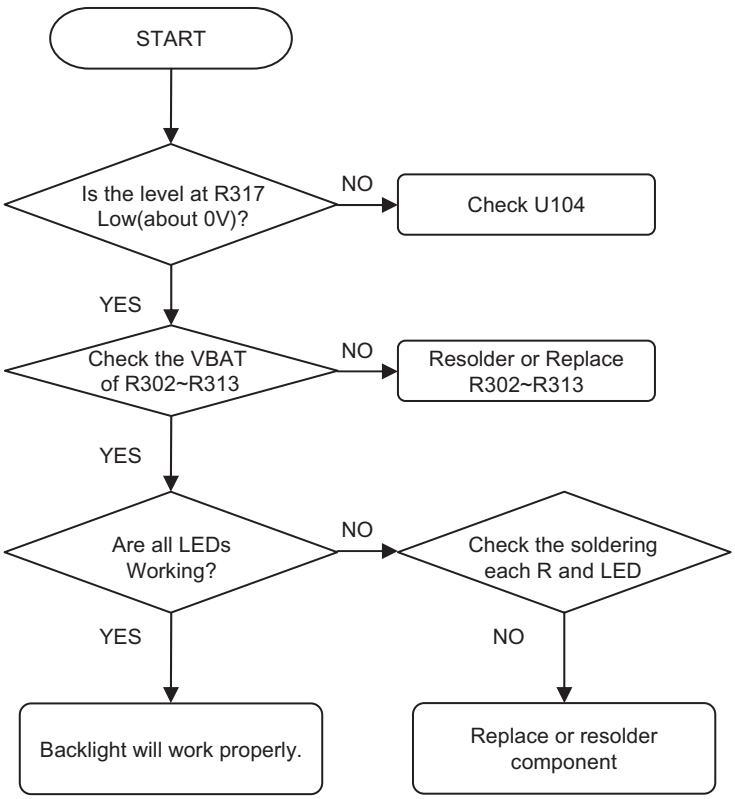




CIRCUIT

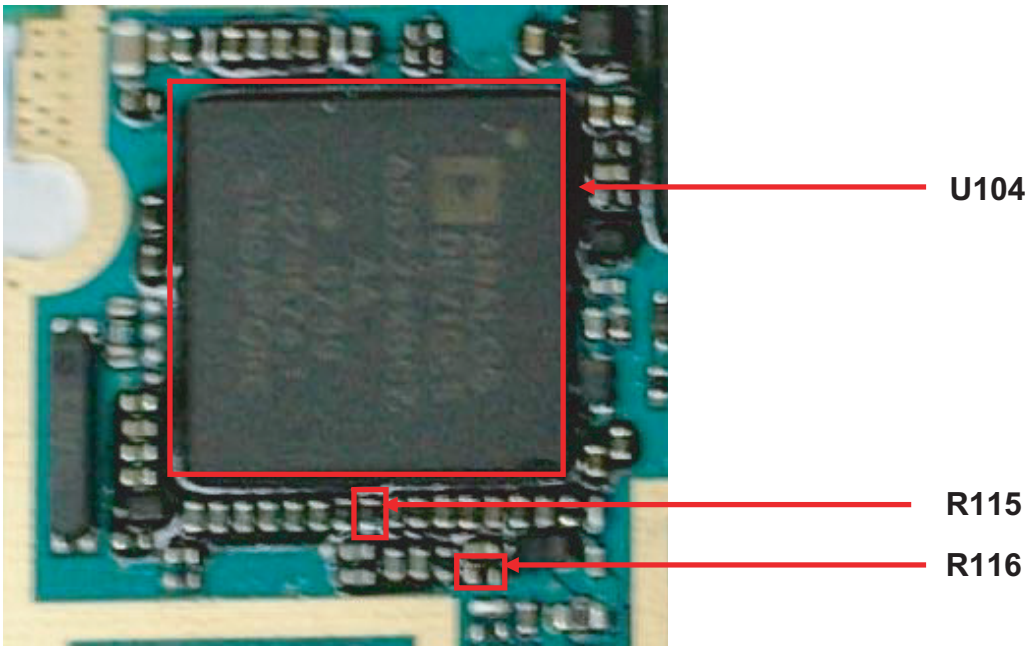


CHECKING FLOW

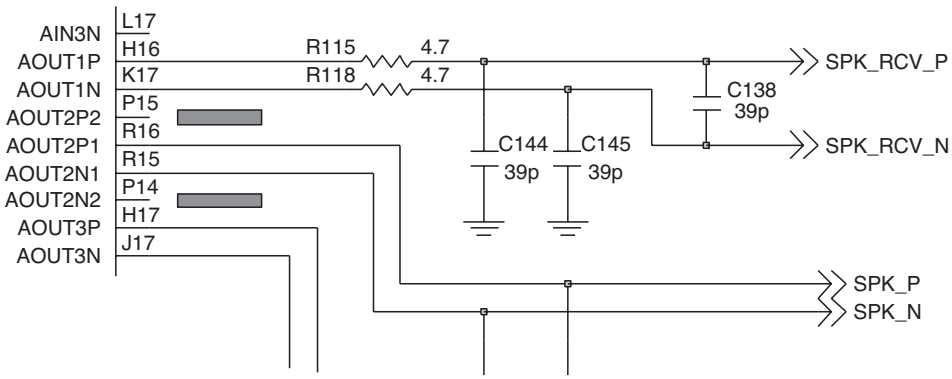


4.13 Receiver Trouble

TEST POINT



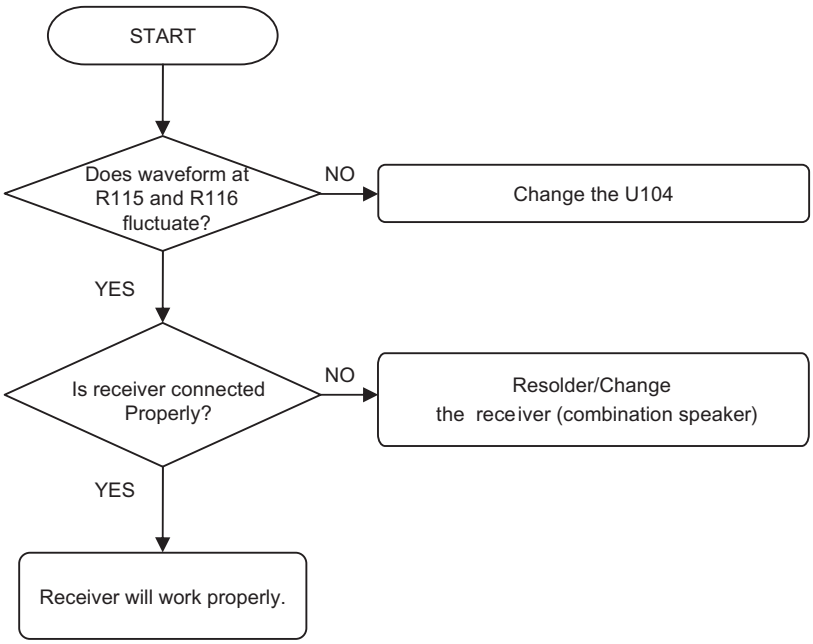
CIRCUIT



CHECKING FLOW

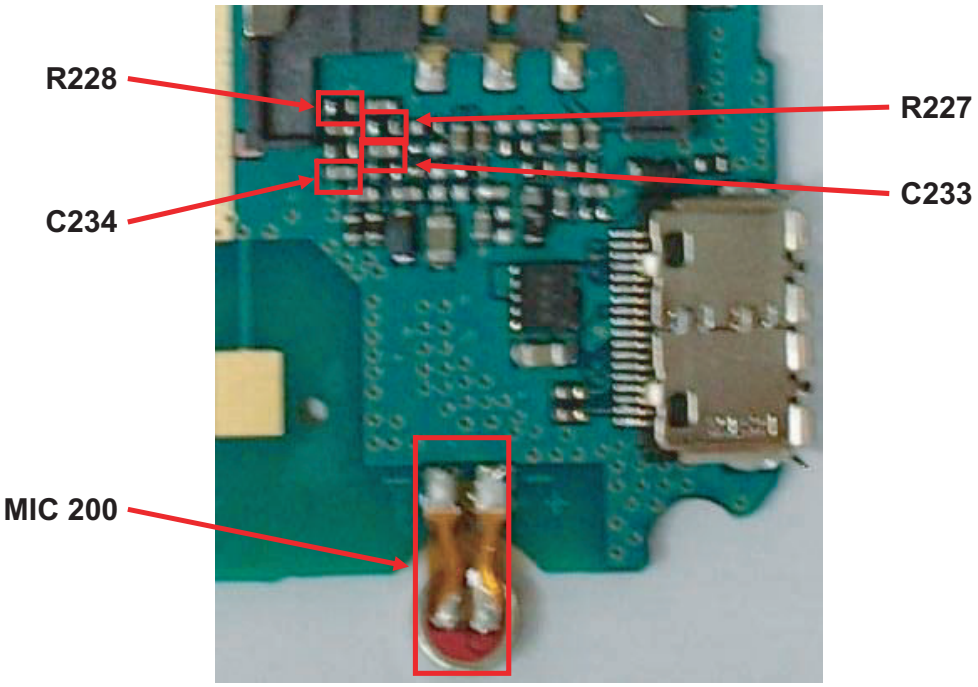
SETTING : After initialize Agilent 8960, Test GSM850, PCS mode

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

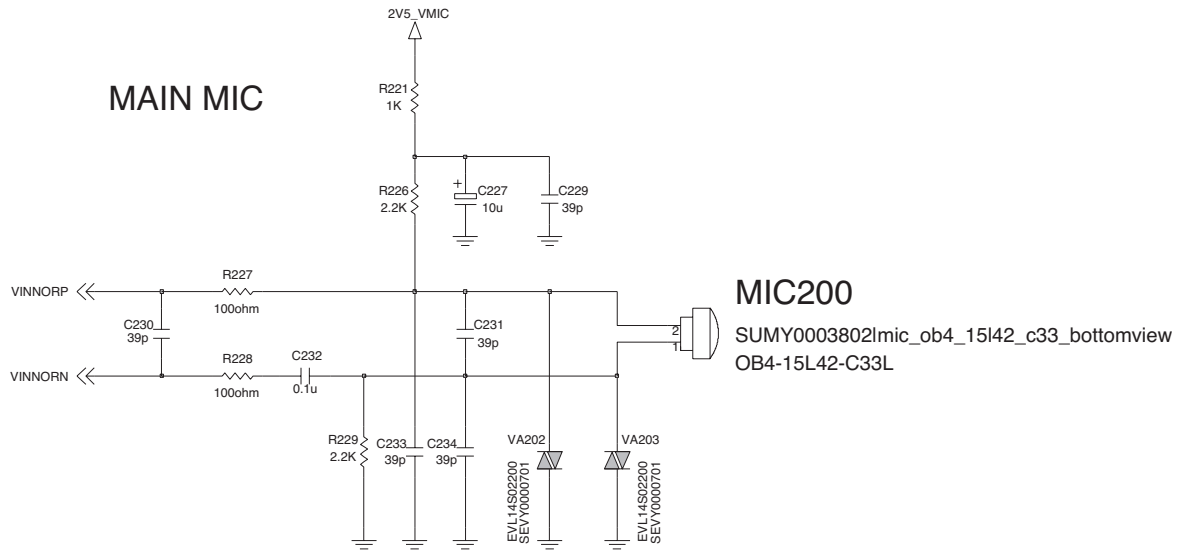


4.14 Microphone Trouble

TEST POINT

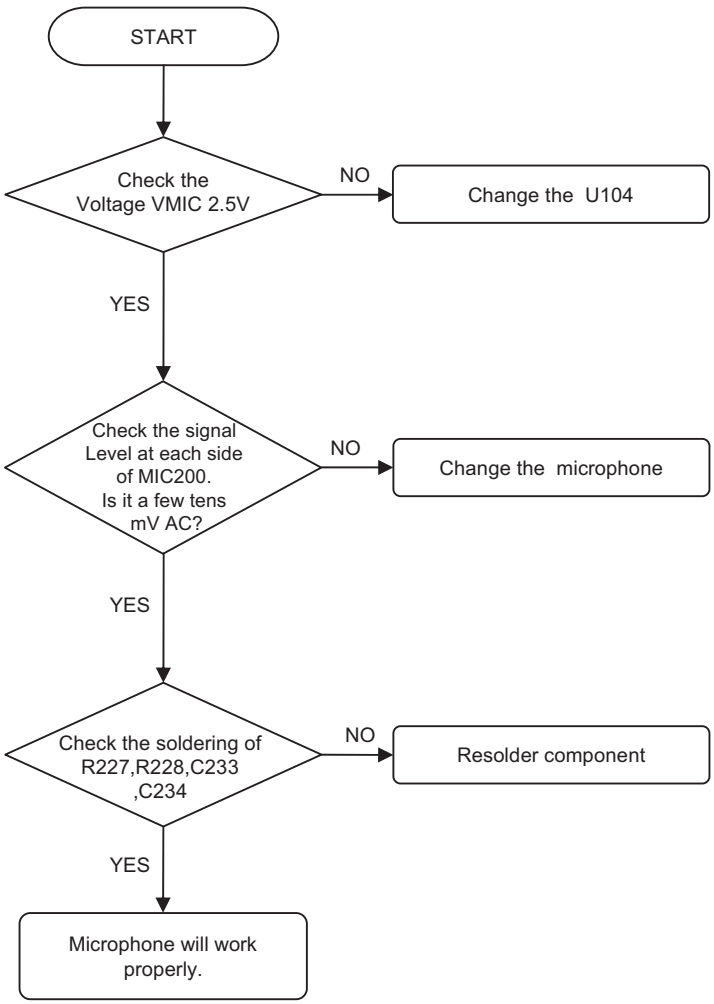


CIRCUIT



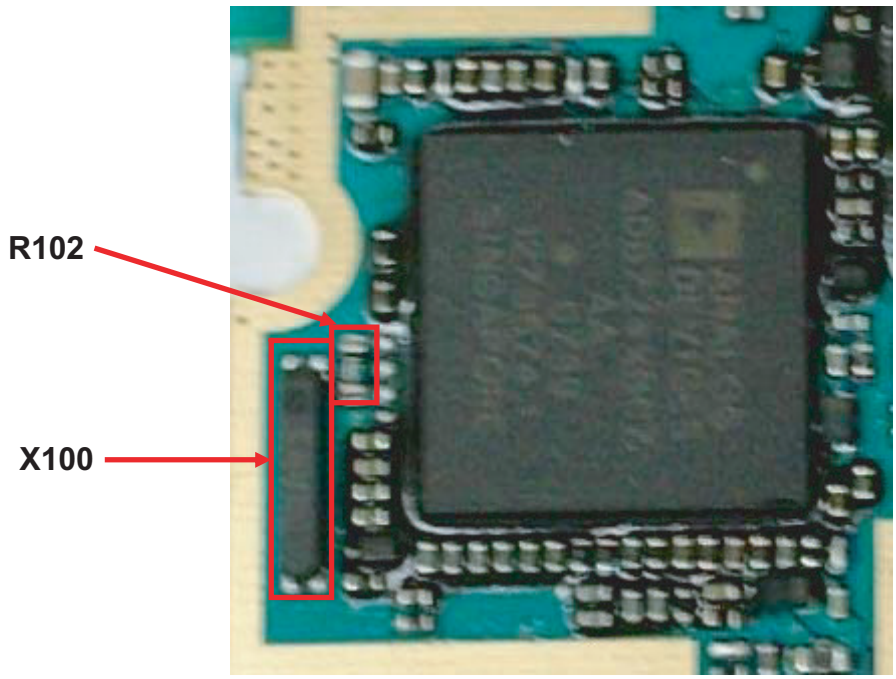
CHECKING FLOW

SETTING : After initialize Agilent 8960, Test GSM850, PCS mode

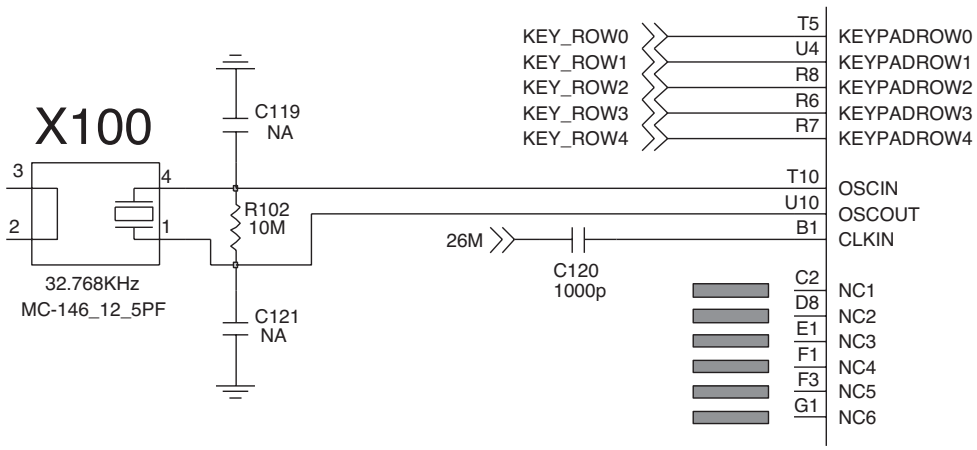


4.15 RTC Trouble

TEST POINT

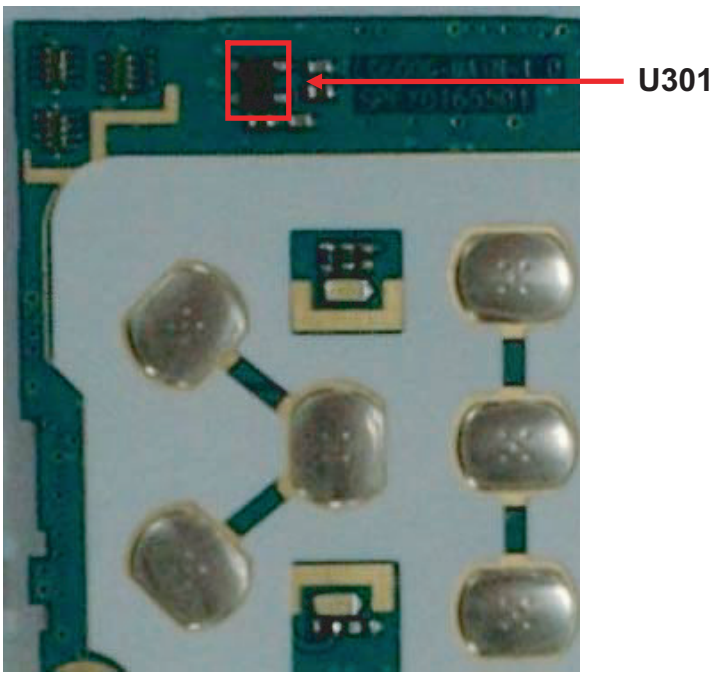


CIRCUIT



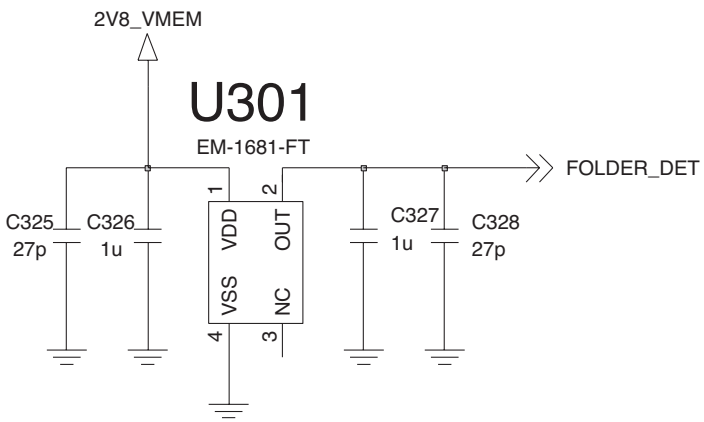
4.16 Folder on/off Trouble

TEST POINT



CIRCUIT

FLIP SWITCH



5. DOWNLOAD

5.1 Download

A. Download Setup

Figure 5.1 describes Download setup

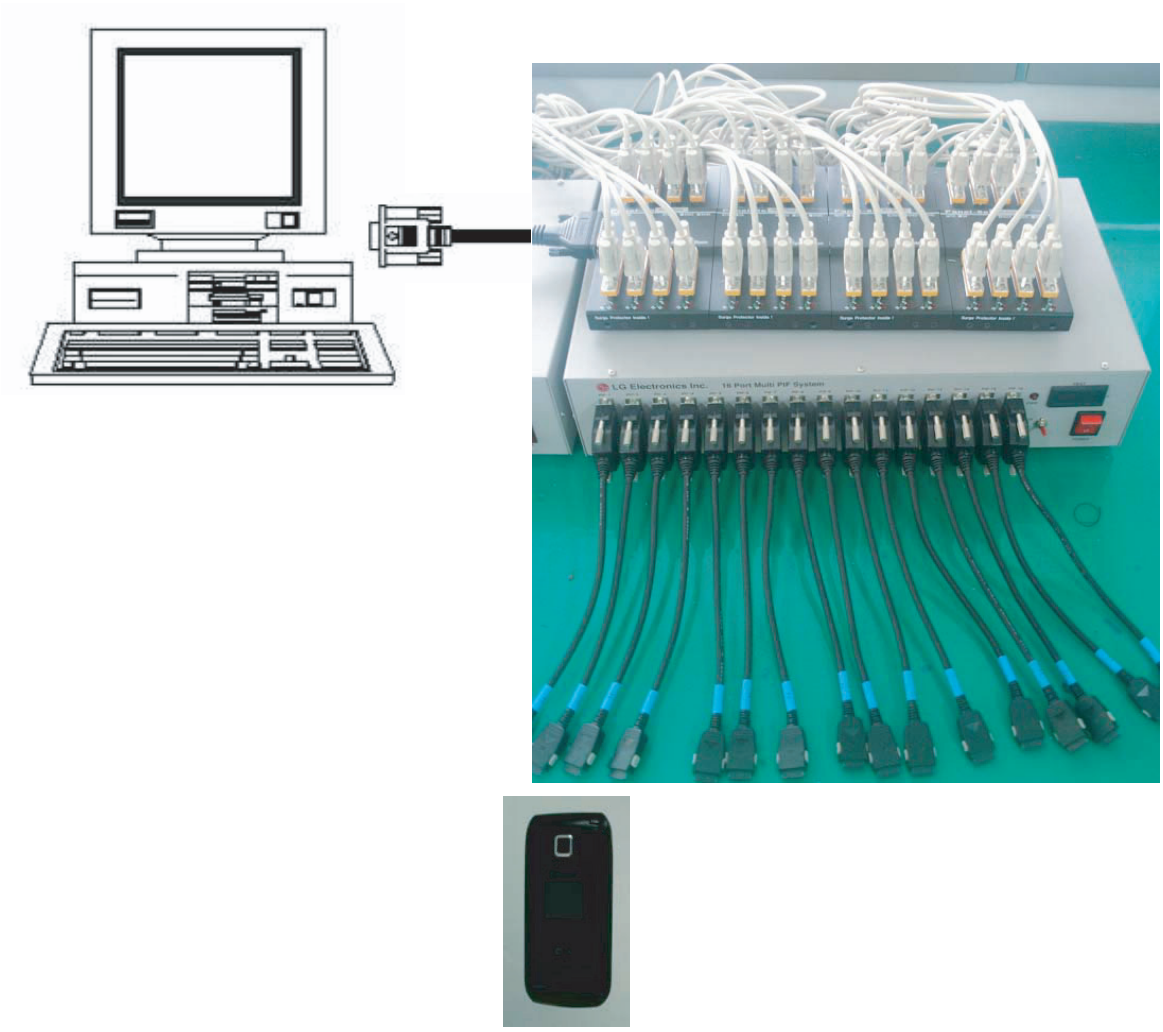
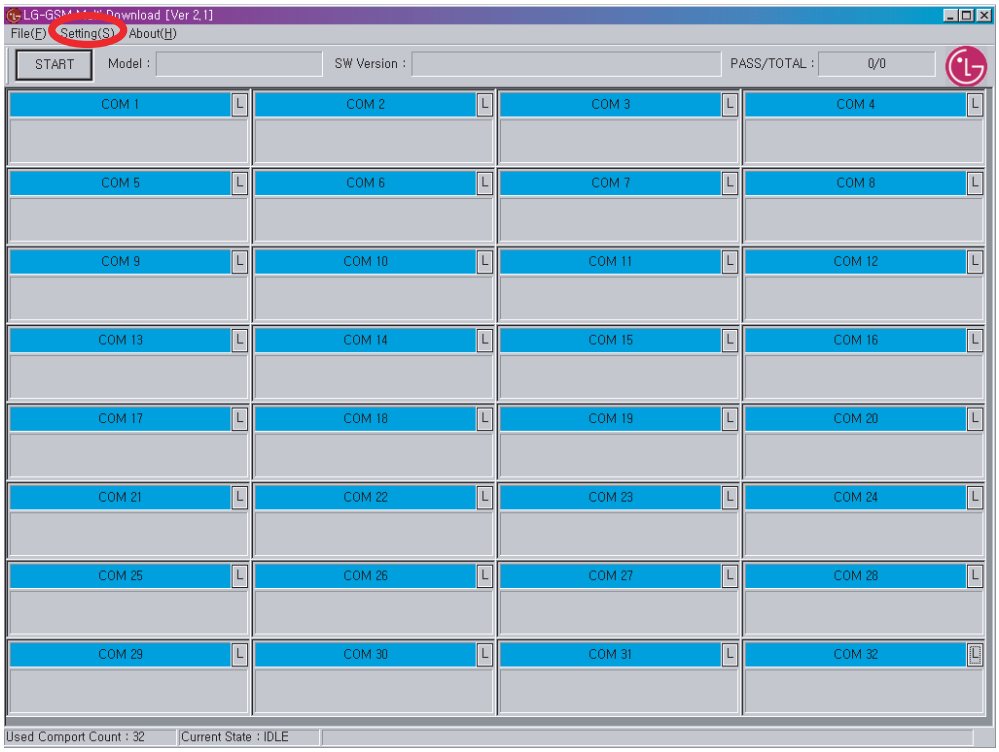


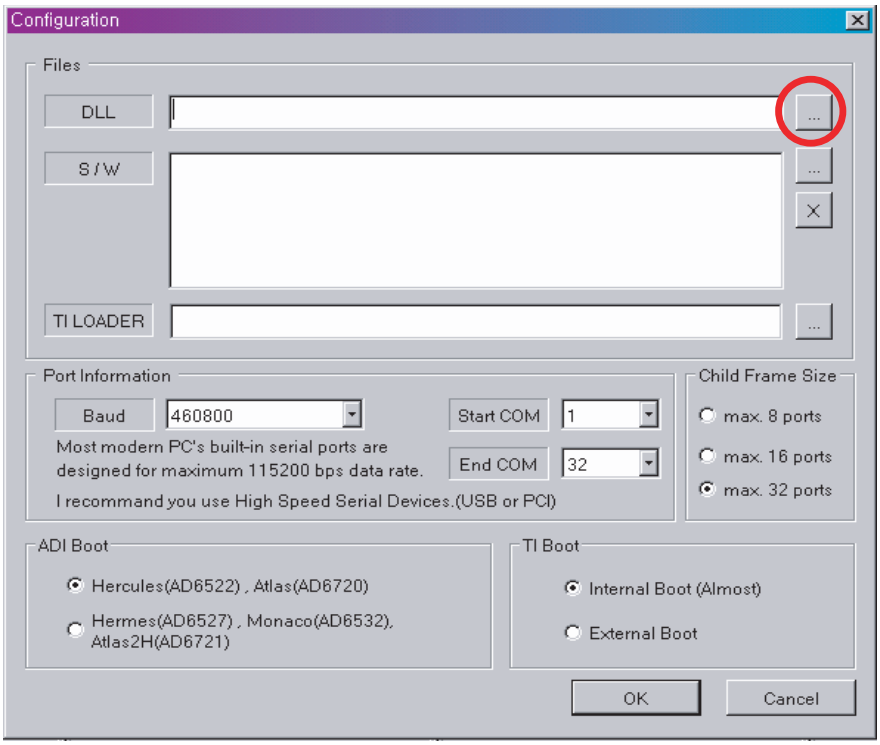
Figure 5.1 Download Setup

B. Multi Download Procedure

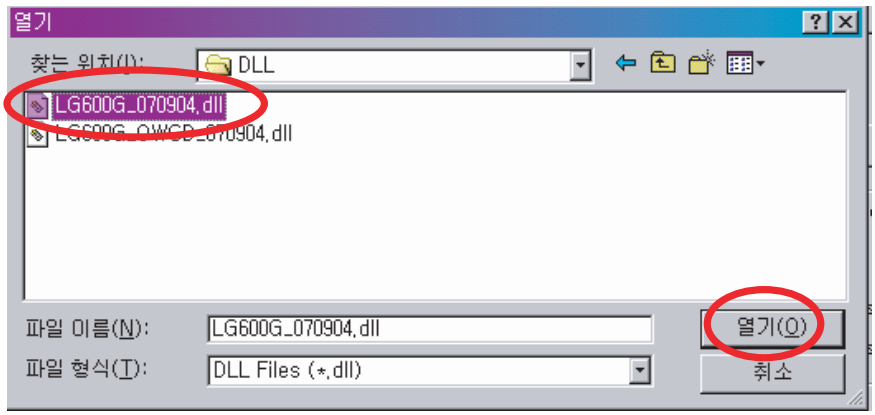
1. Run GSM Multi Download program and select Setting



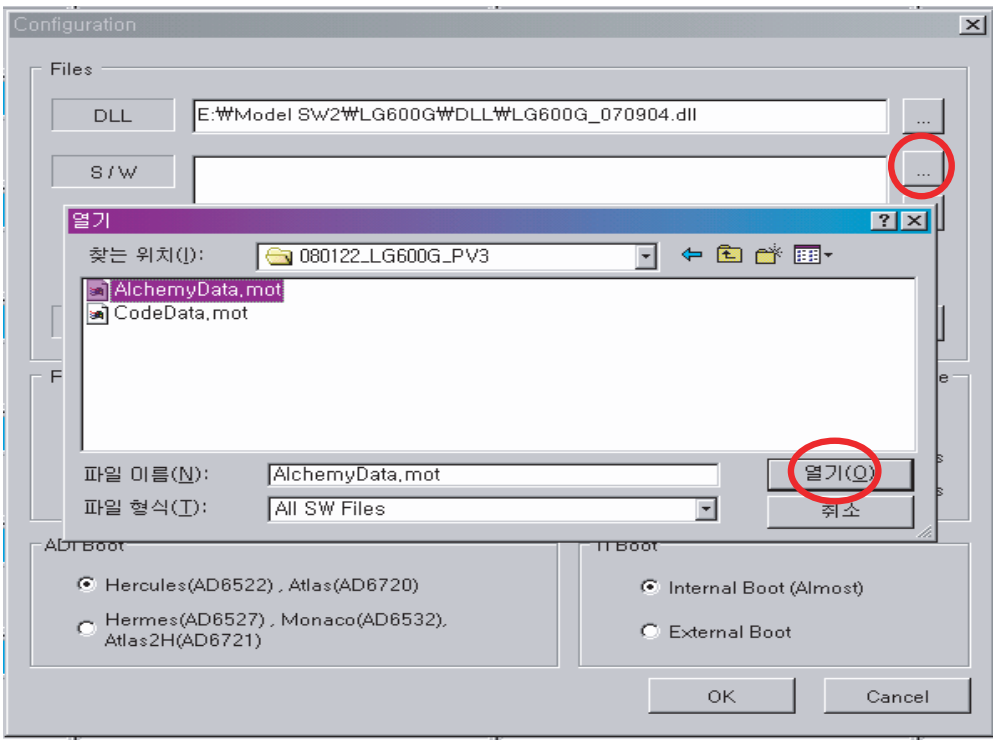
2. Select Configuration from the menu and you may see this window



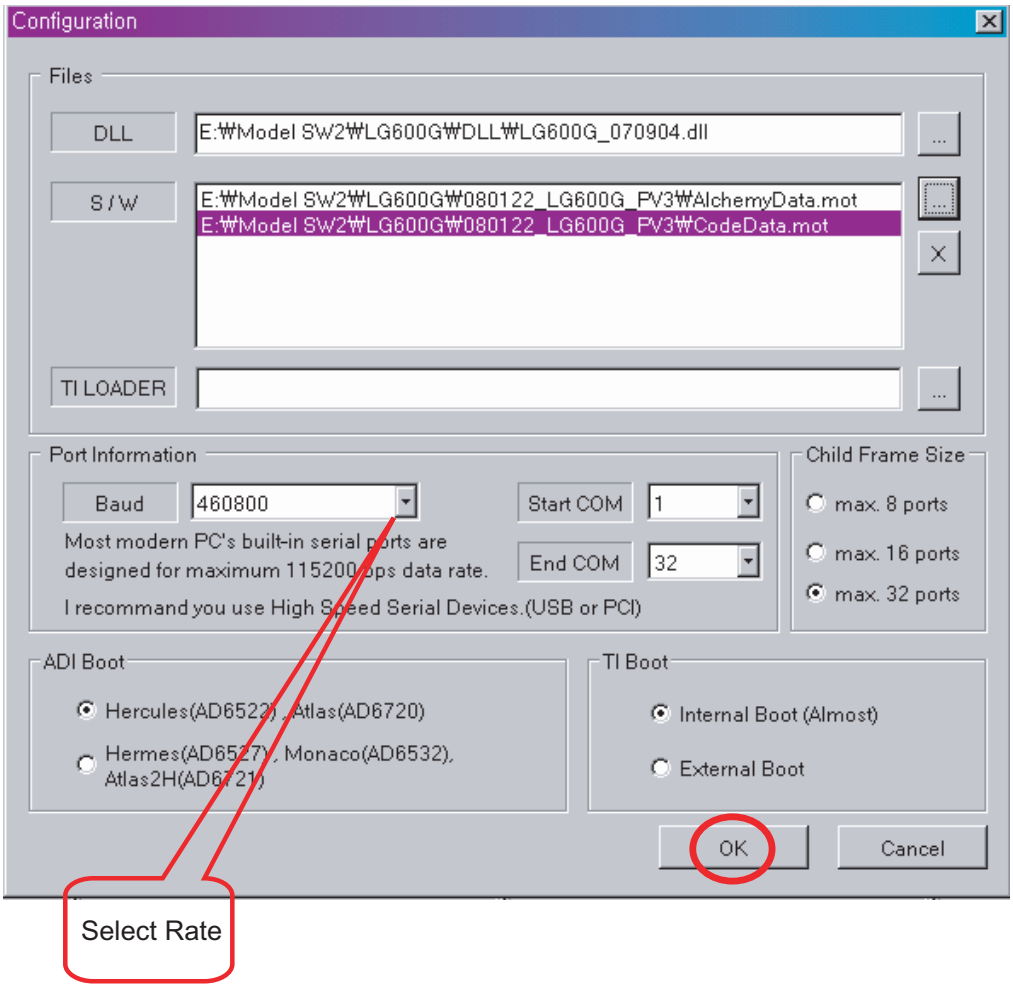
3. Press ... key to select DLL file and press Open



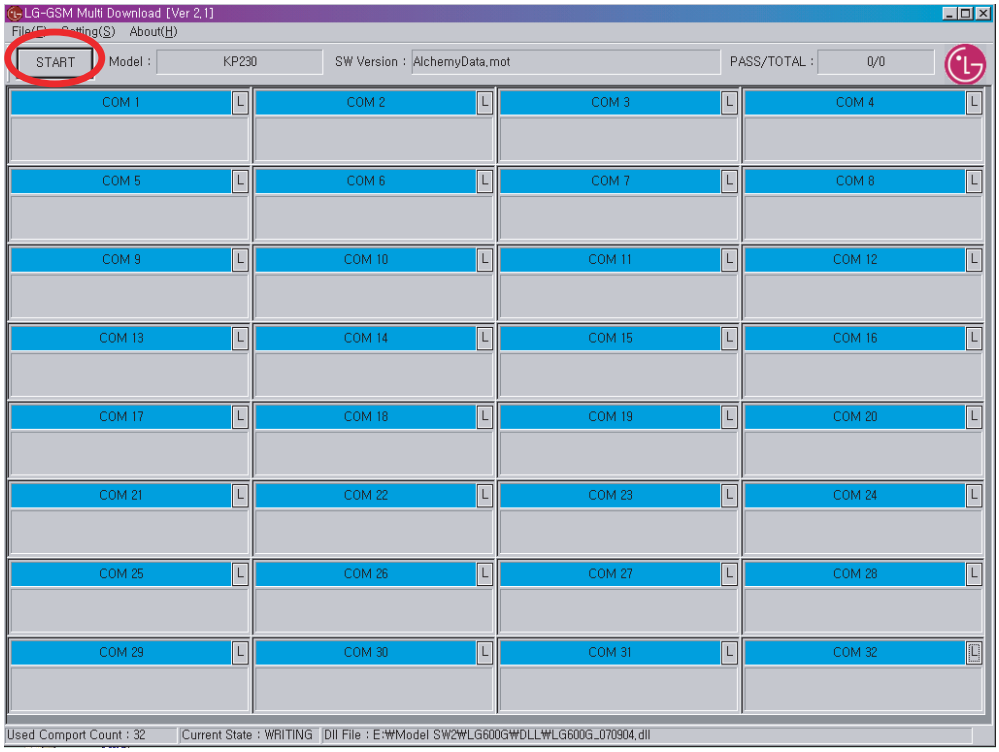
4. Press ... key to select the mot files
5. Select AlchemyData.mot and press open
6. Repeat step 4-5 to select CodeData.mot

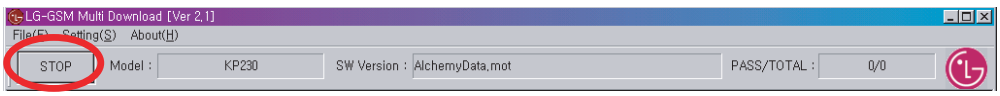


7. Check if the ADI option is set to Hermes
8. Press OK to end Configuration



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

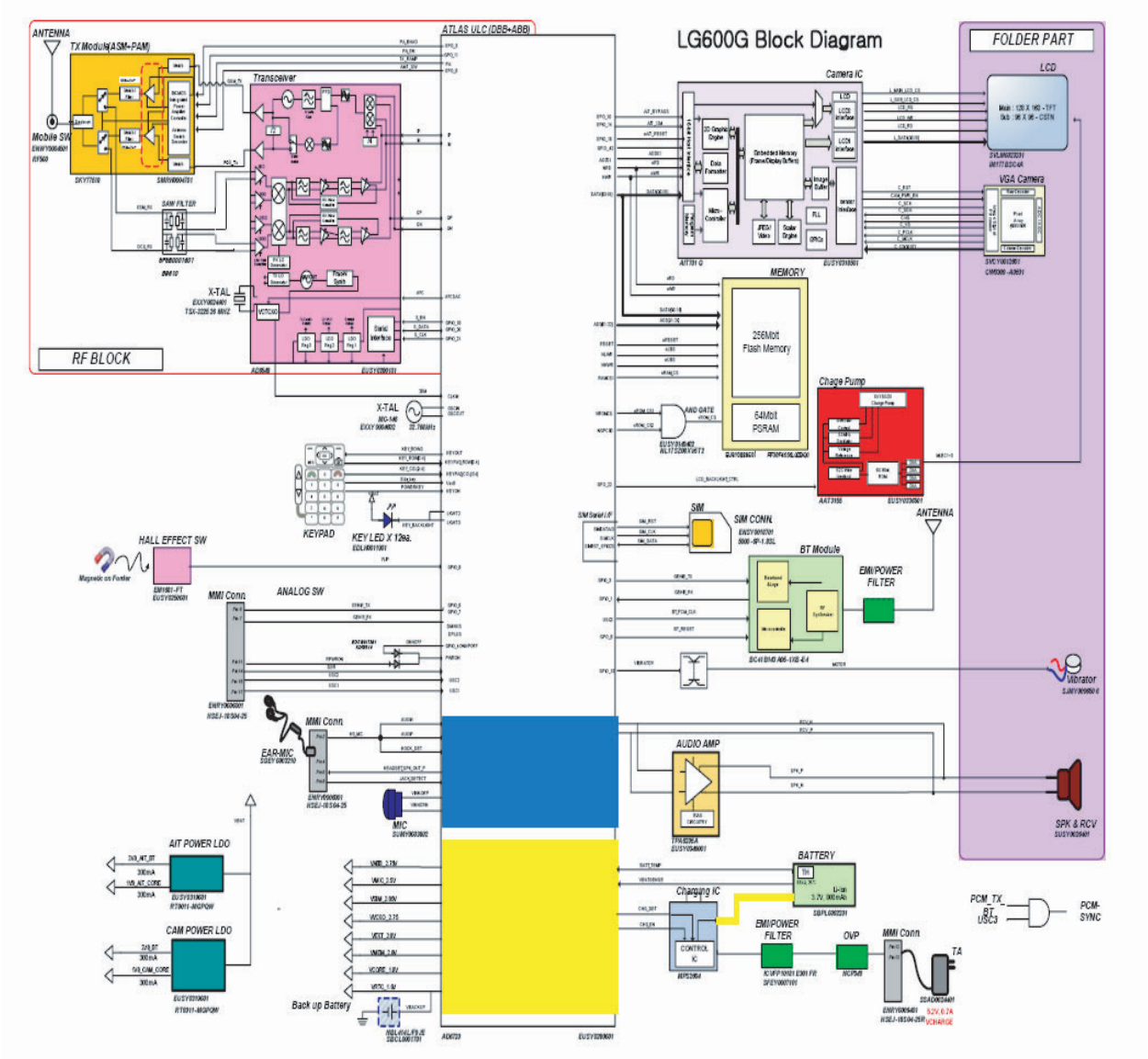
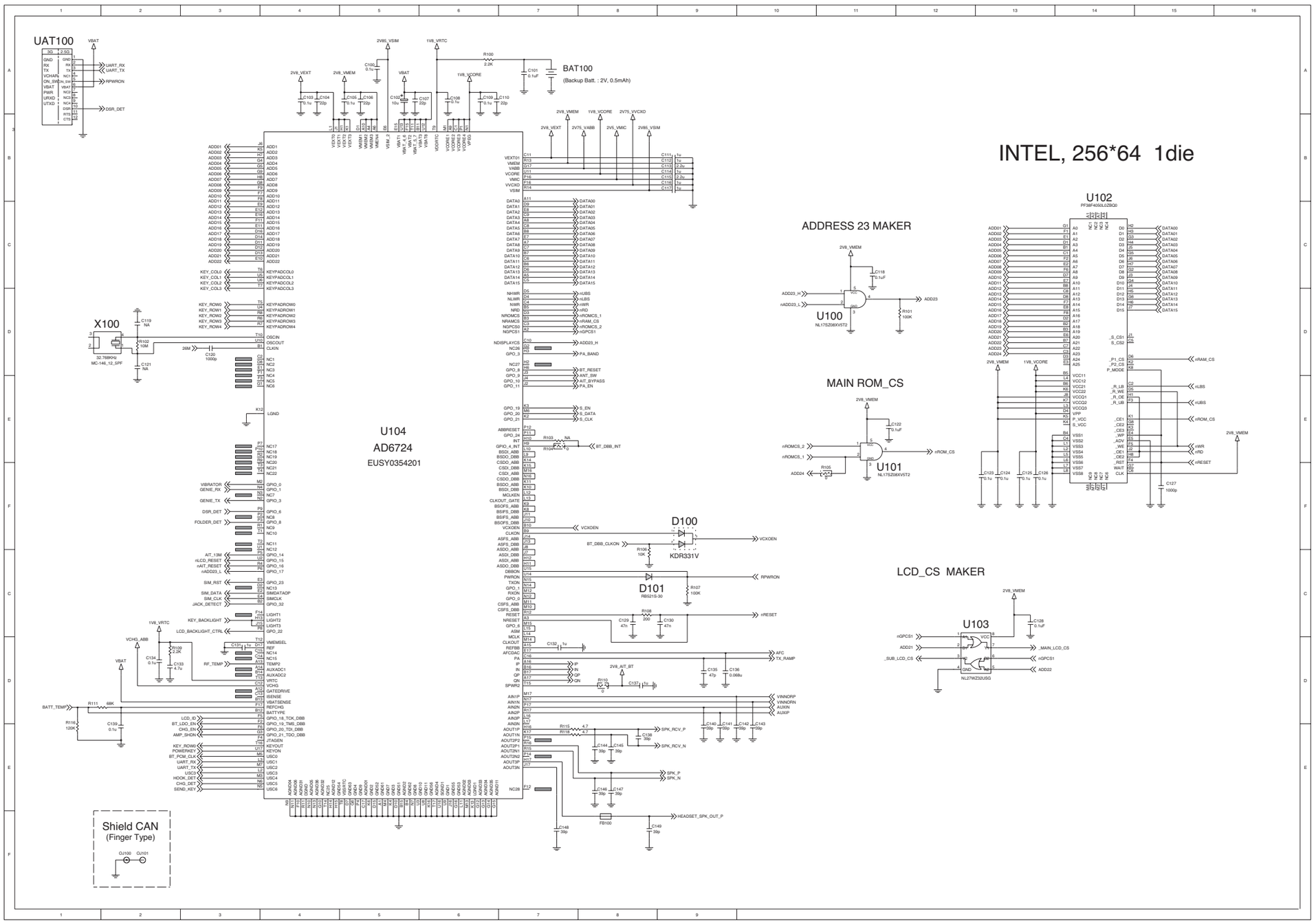
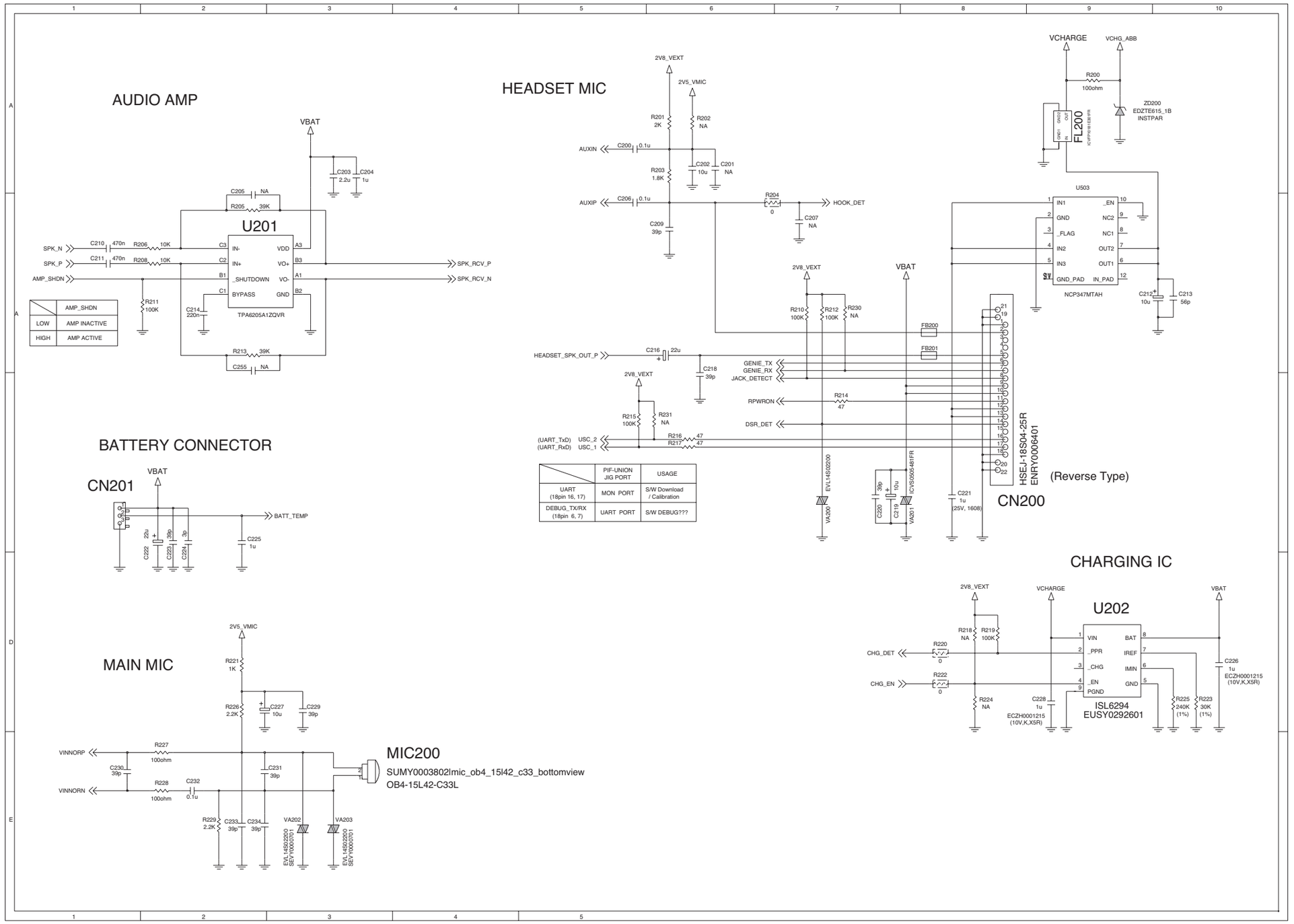


Figure 8.1 LG-LG600G Block Diagram

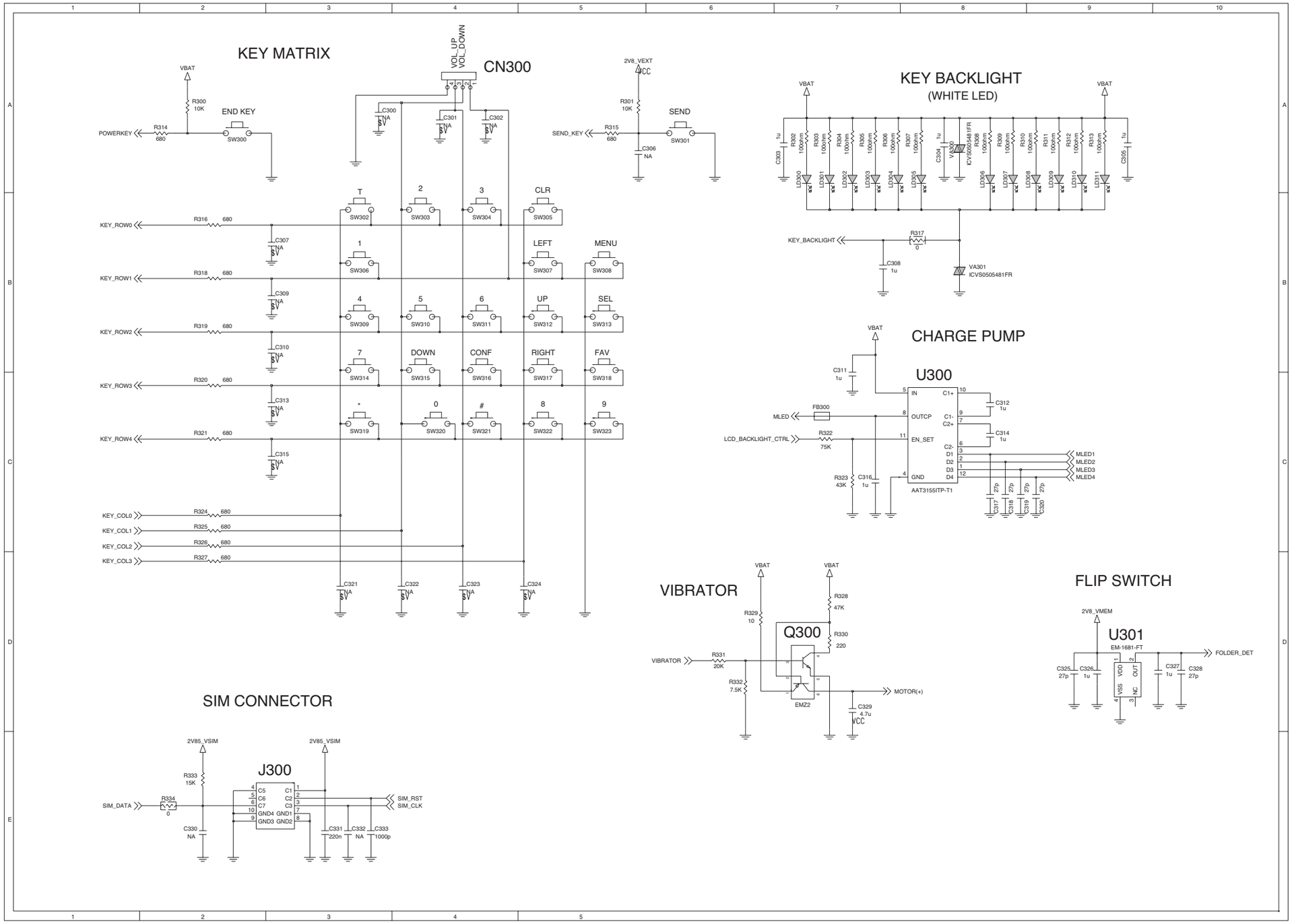
7. CIRCUIT DIAGRAM



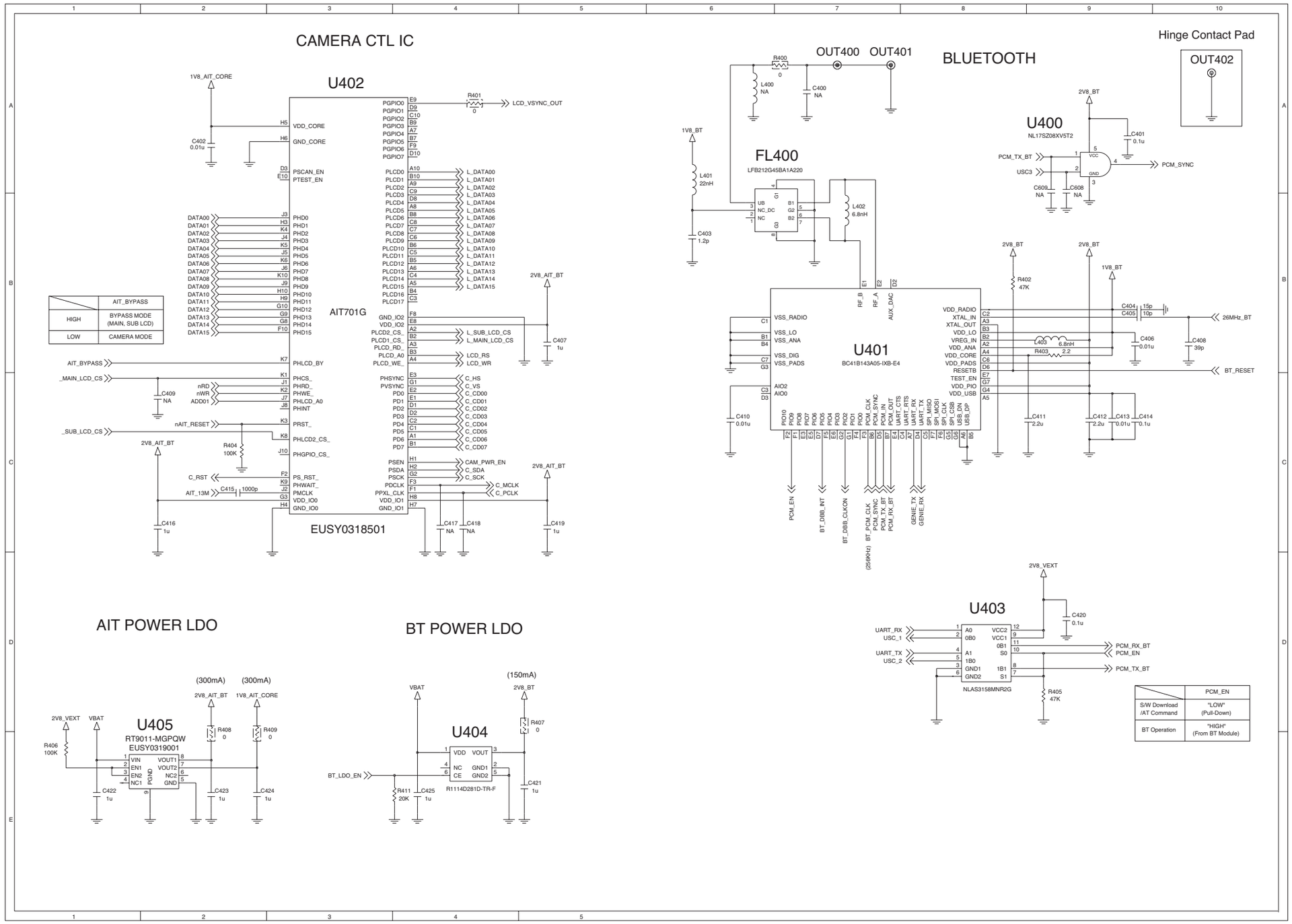
7. CIRCUIT DIAGRAM



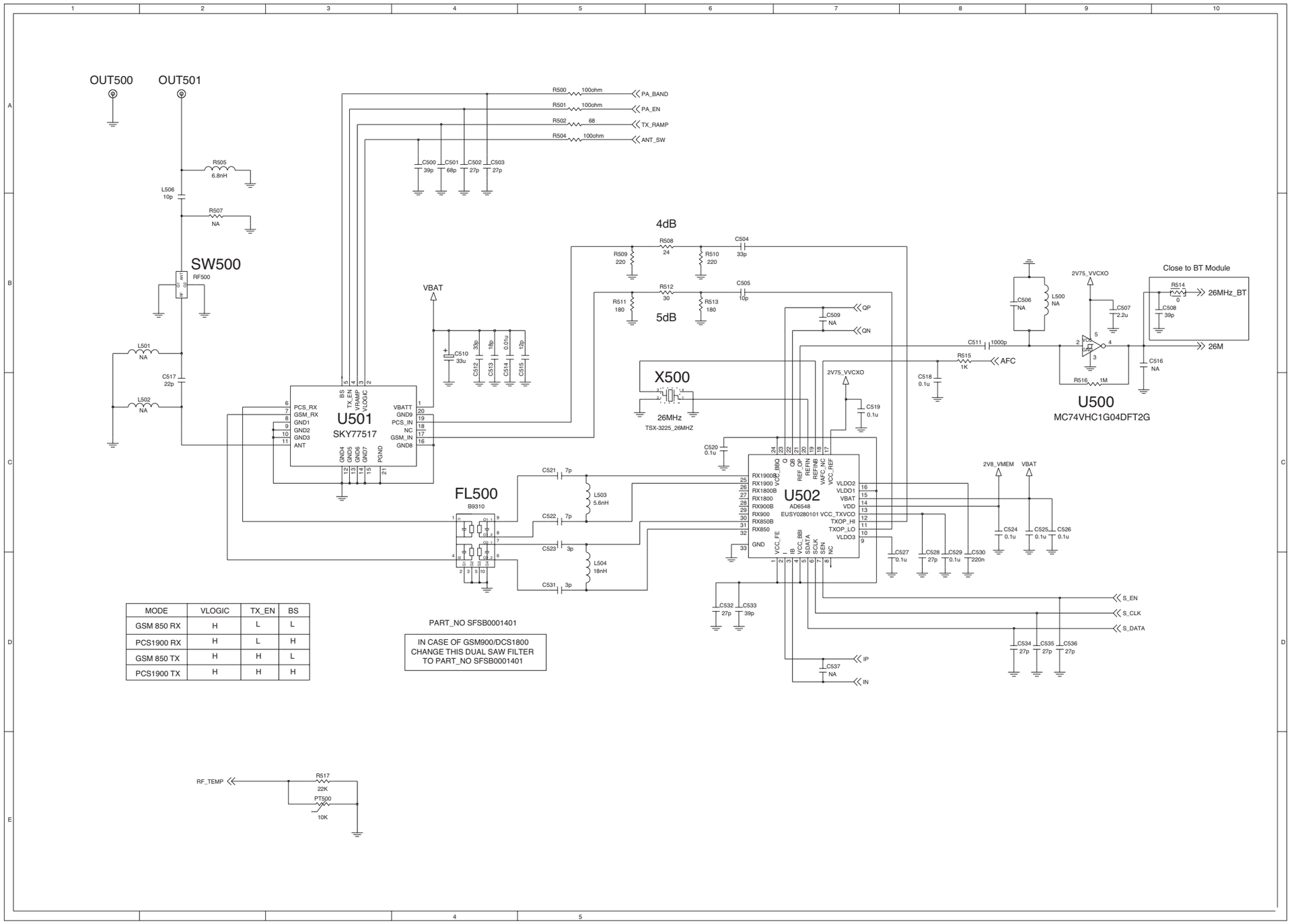
7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM



7. CIRCUIT DIAGRAM

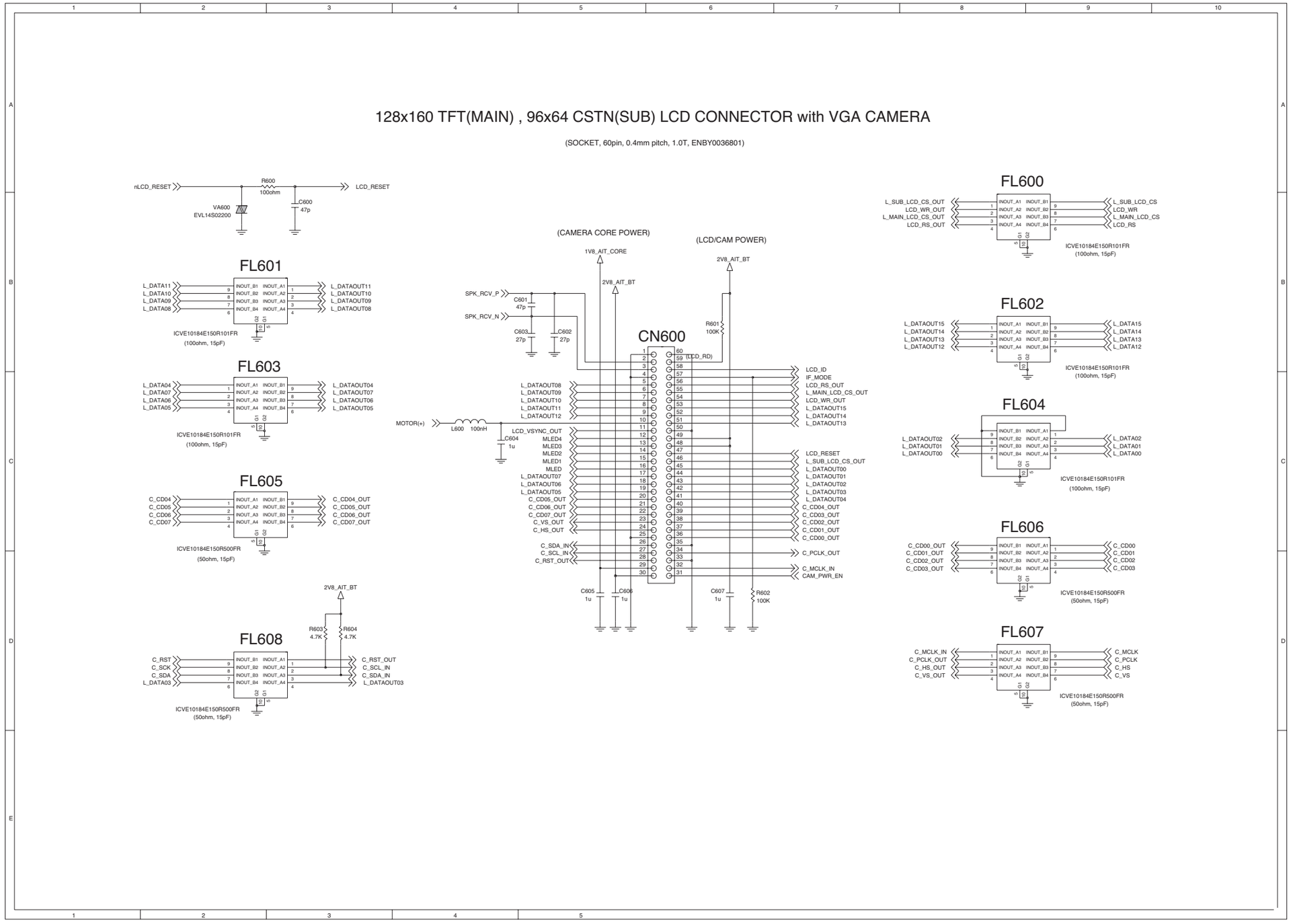


MODE	VLOGIC	TX_EN	BS
GSM 850 RX	H	L	L
PCS1900 RX	H	L	H
GSM 850 TX	H	H	L
PCS1900 TX	H	H	H

PART_NO SFSB0001401

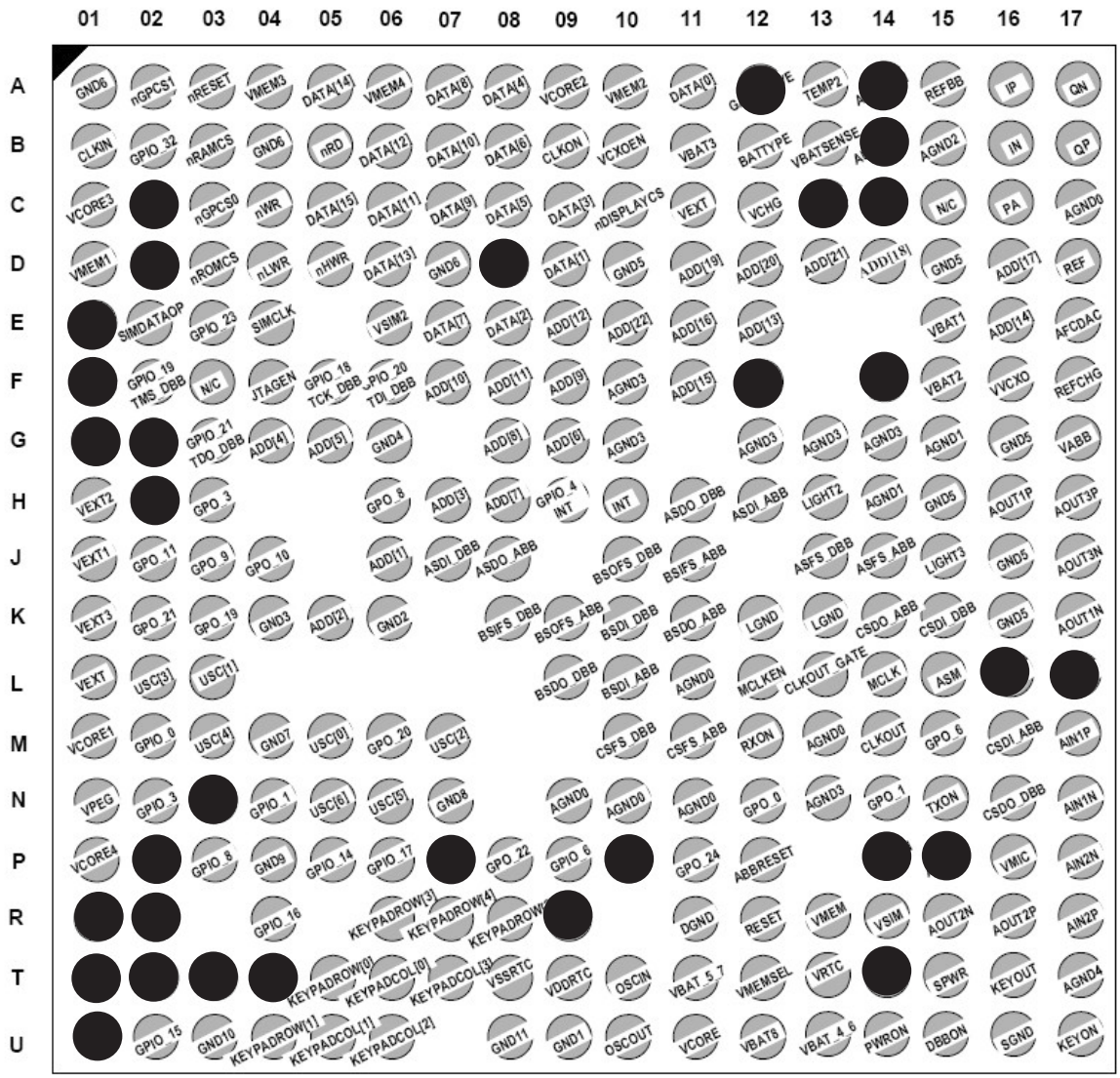
IN CASE OF GSM900/DCS1800
CHANGE THIS DUAL SAW FILTER
TO PART_NO SFSB0001401

7. CIRCUIT DIAGRAM



8. BGA IC Pin Check

U104,AD6724(EUSY0354201)

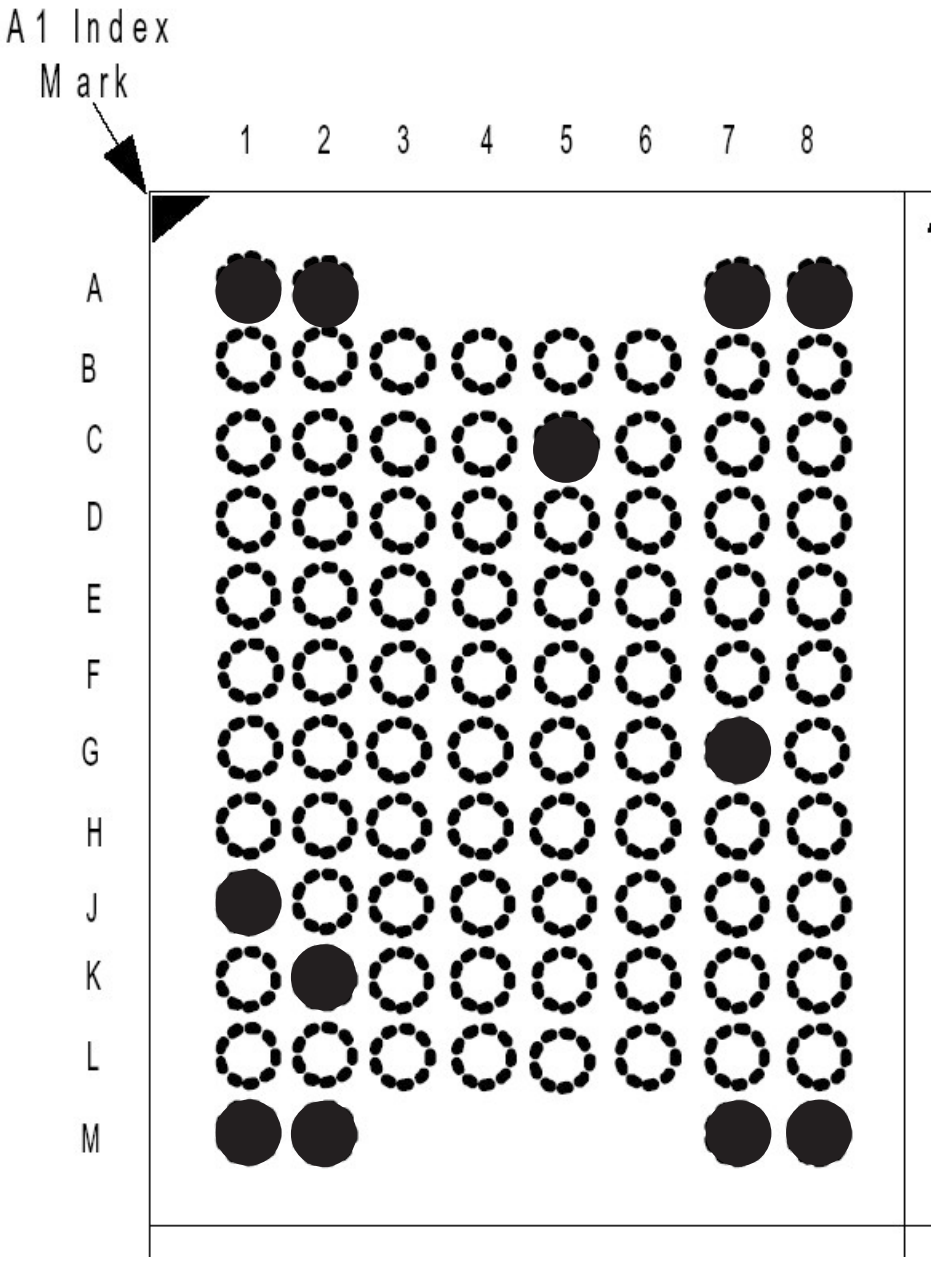


○ **USE**

● **NOT IN USE**

8. BGA IC Pin Check

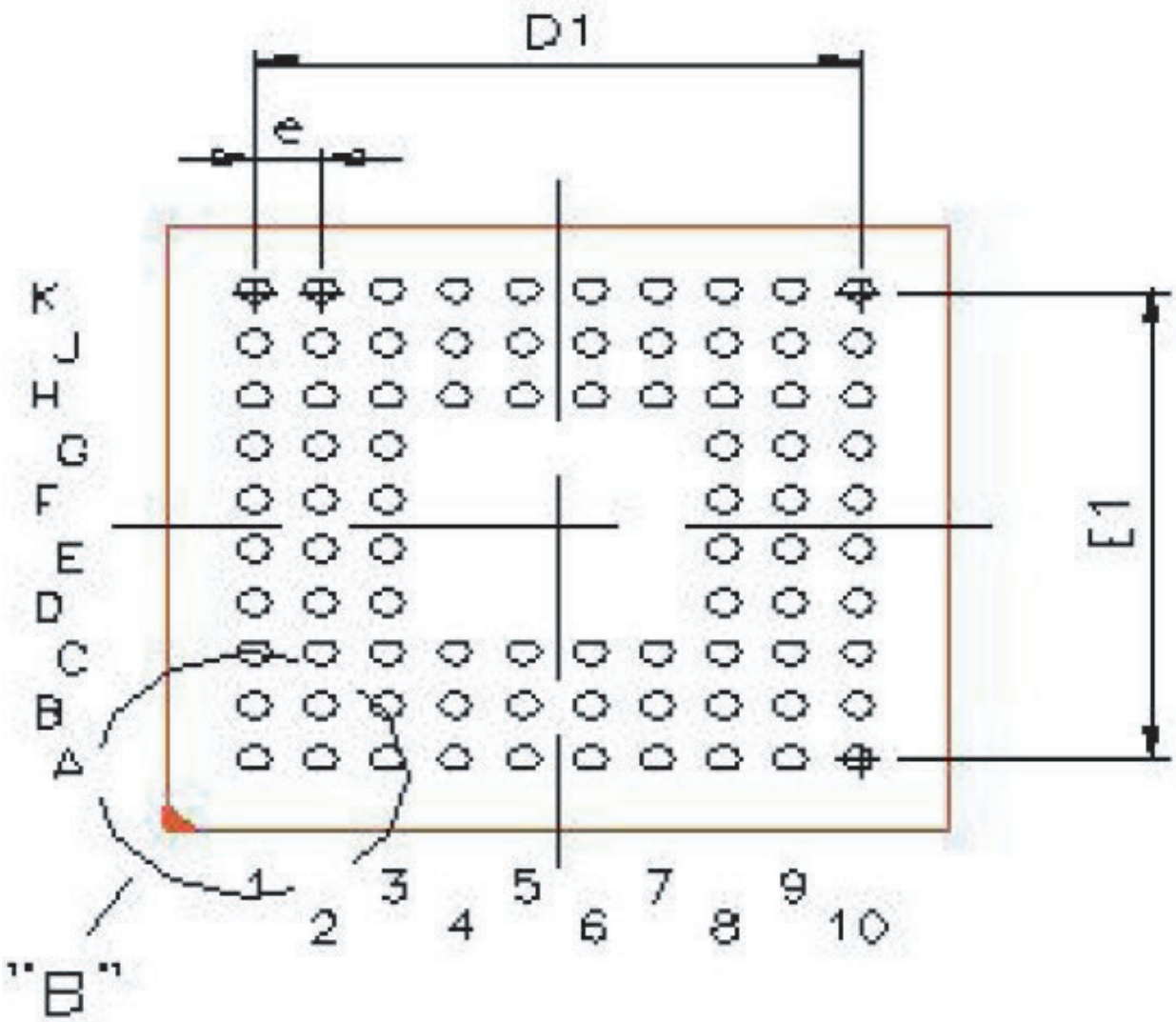
U102, PF38F4050L0ZBQ0(EUSY0229501)



◯ **USE**

● **NOT IN USE**

U402,AIT701G(EUSY0318501)

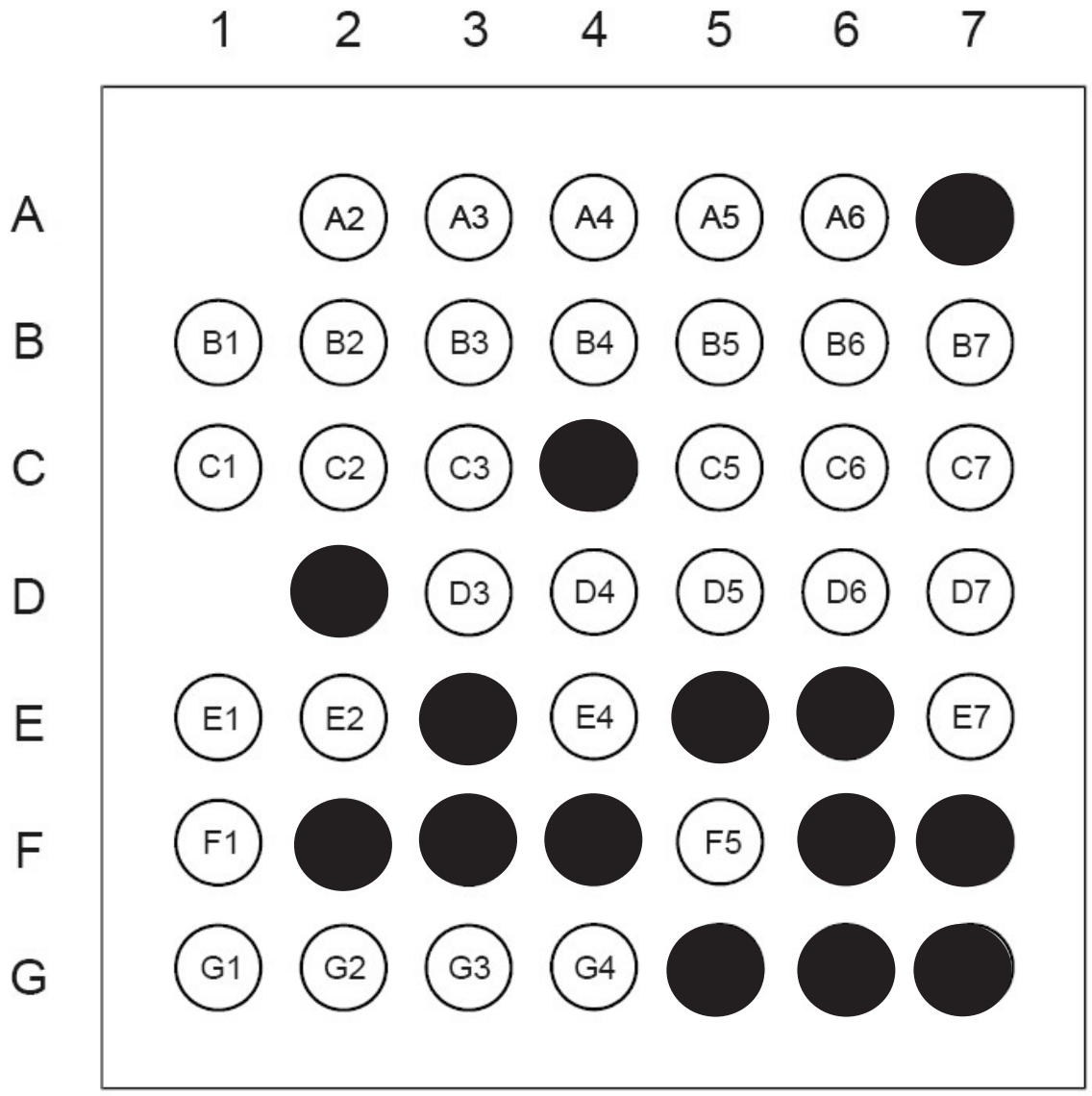


○ **USE**

● **NOT IN USE**

8. BGA IC Pin Check

U401, BC41B143A06-IJB-E4(EUSY0293901)

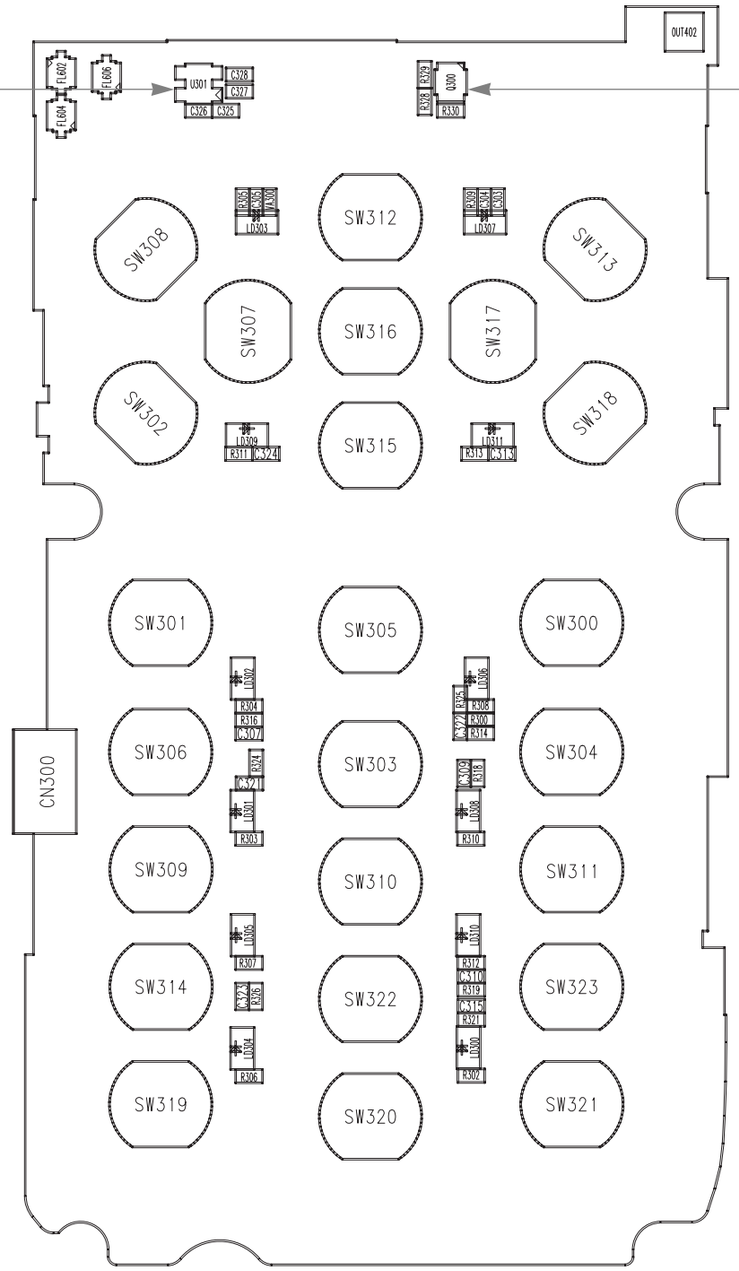


○ **USE**

● **NOT IN USE**

9. PCB LAYOUT

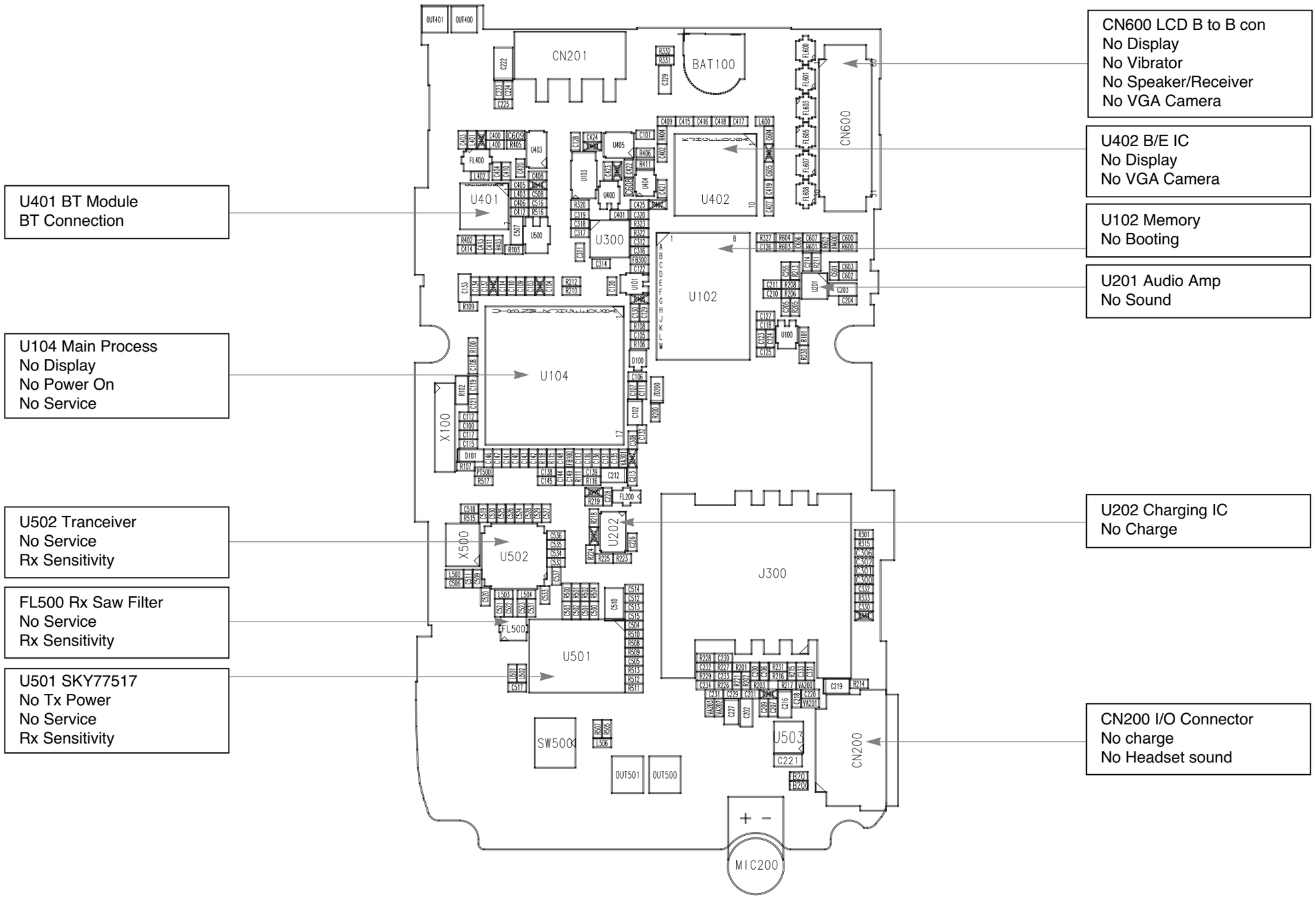
U301 FLIP Switch
No Flip Detection



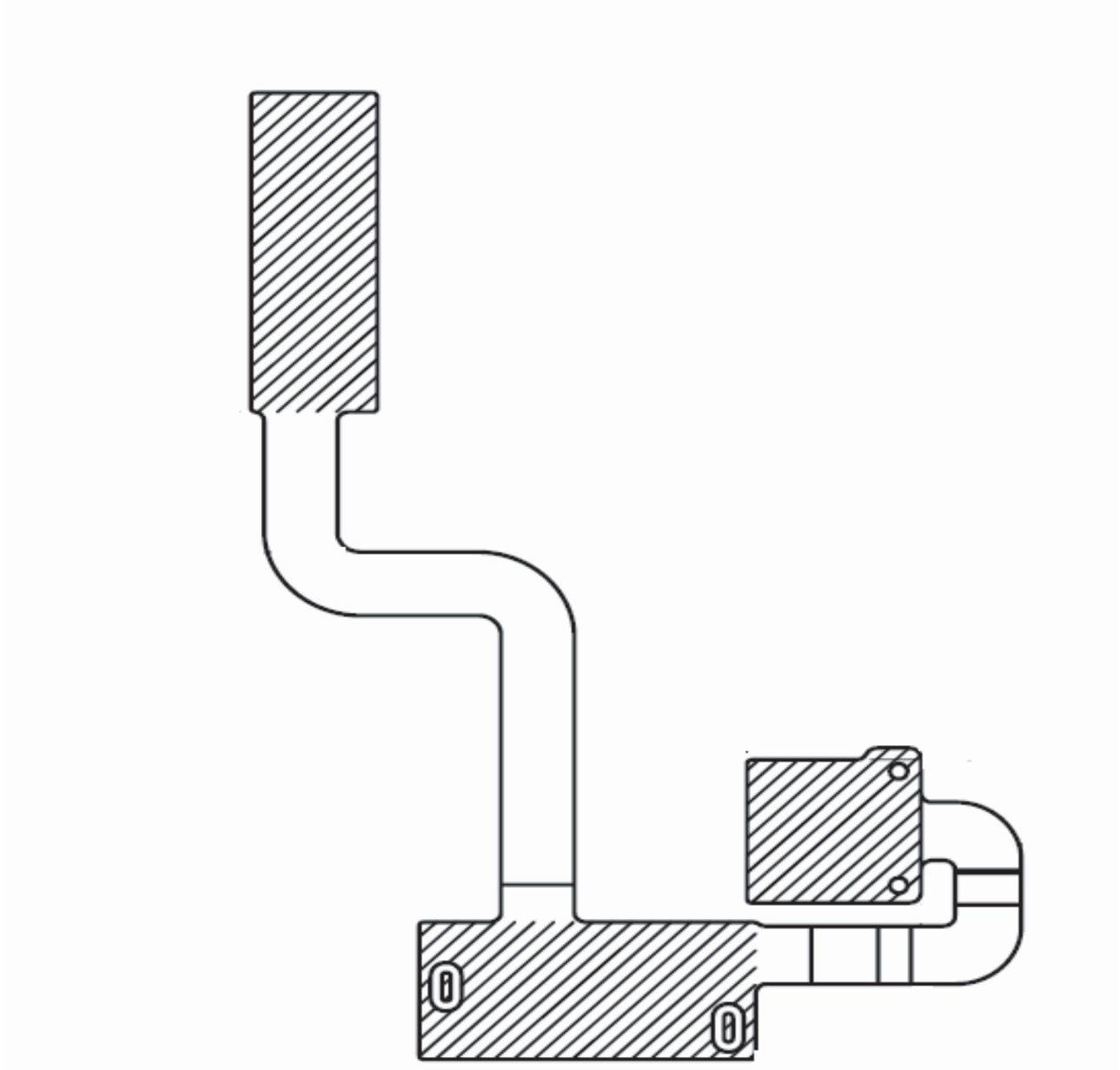
Q300 Vibratr TR
NO Vibator

LG600G-MAIN-TOP-1.0

7. CIRCUIT DIAGRAM

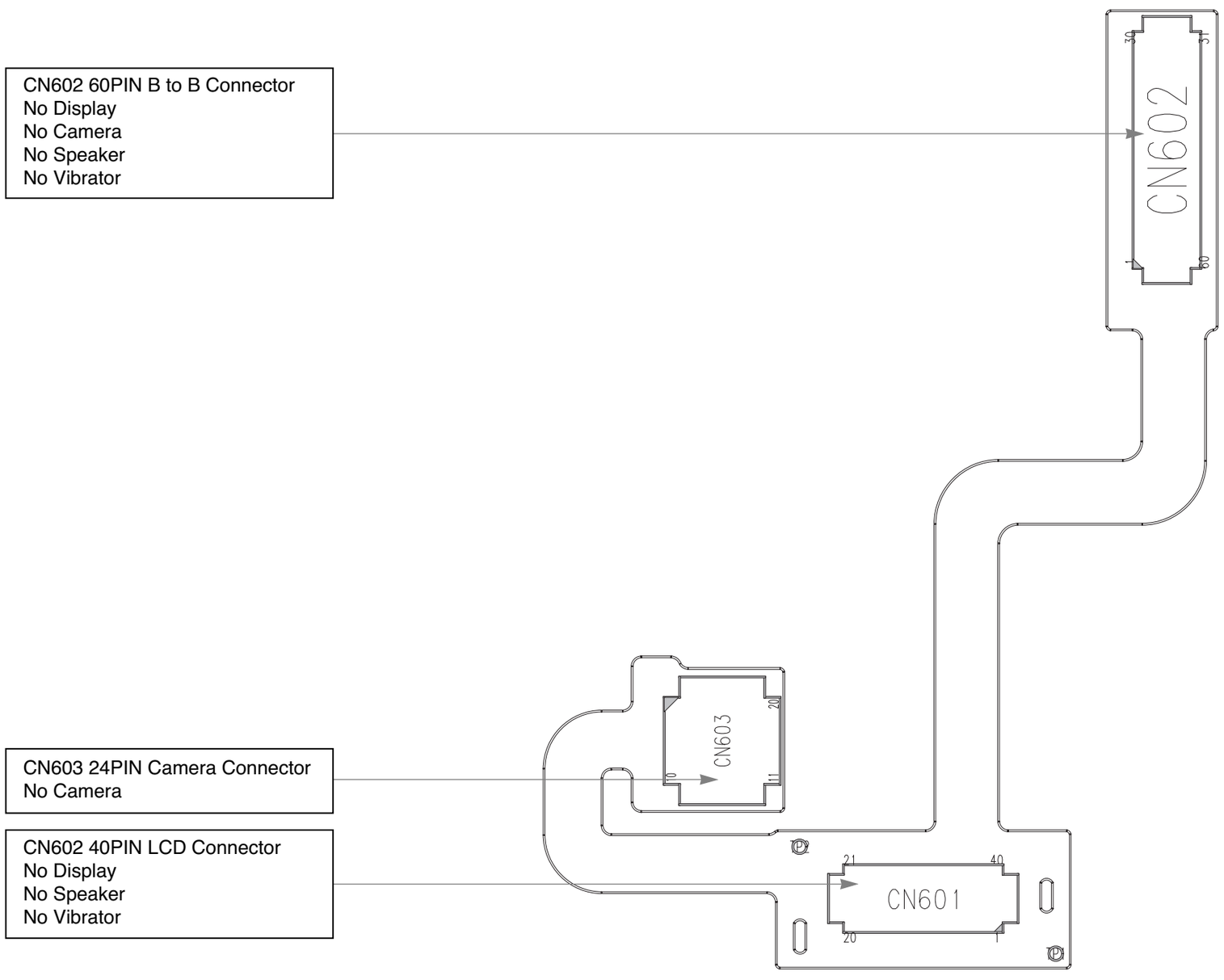


7. CIRCUIT DIAGRAM



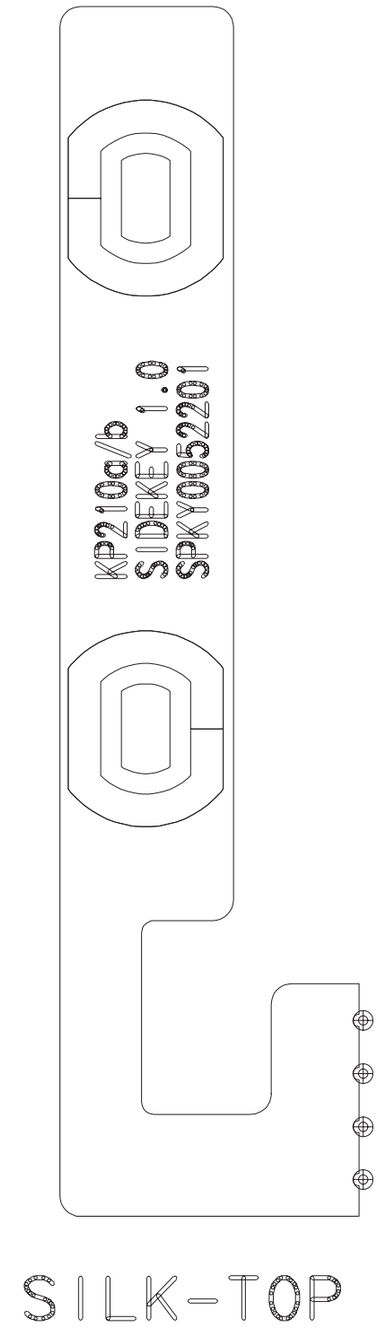
LG600G-FPCB-1.0_4M-BTM

7. CIRCUIT DIAGRAM



LG600G-FPCB-1.0_4M-BTM

7. CIRCUIT DIAGRAM



SILK-TOP

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.

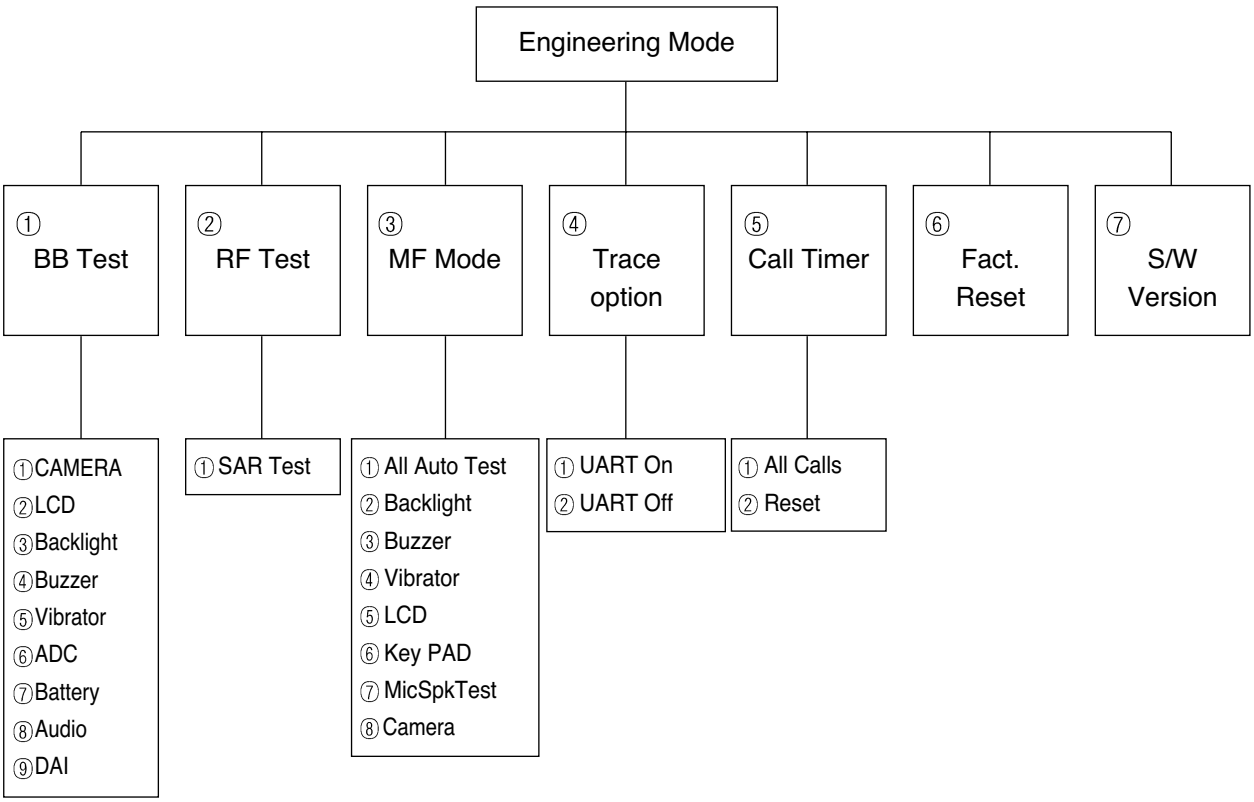
B. Access Codes

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 BB Test [MENU 1]

10.1.1 CAMERA

This menu is to test the Camera.
1) Main LCD preview : It shows the picture on Main LCD.

10.1.2 LCD

1) Brightness
2) COLOUR : WHITE, RED, GREEN, BLUE, BLACK

10.1.3 Backlight

This menu is to test the LCD Backlight.
1) Backlight on : LCD Backlight on.
2) Backlight off : LCD Backlight off.
3) Backlight value : This controls brightness of Backlight. When entering into the menu, the present backlight-value in the phone is displayed. Use Left/Right key to adjust the level of brightness. The value of the brightness set at last will be saved in the NVRAM.

10.1.4 Buzzer

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.

10.1.5 Vibrator

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

10.1.6 ADC (Analog to Digital Converter)

This displays the value of each ADC.
1) MVBAT ADC : Main Voltage Battery ADC
2) AUX ADC : Auxiliary ADC
3) TEMPER ADC : Temperature ADC

10.1.7 BATTERY

1) 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
2) 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

10.1.8 Audio

This is NOT a necessary menu to be used by neither engineers nor users.

10.1.9 DAI (Digital Audio Interface)

This menu is to set the Digital Audio Interface Mode for Speech Transcoder and Acoustic testing.
1) DAI AUDIO : DAI audio mode
2) DAI UPLINK : Speech encoder test
3) DAI DOWNLINK : Speech decoder test
4) DAI OFF : DAI mode off

10.2 RF Test [MENU 2]

10.2.1 SAR test

This menu is to test the Specific Absorption Rate.
1) SAR test on : Phone continuously process TX only. Call-setup equipment is not required.
2) SAR test off : TX process off

10.3 MF mode [MENU 3]

This manufacturing mode is designed to do the baseband test automatically. Selecting this menu will process the test automatically, and phone displays the previous menu after completing the test.

10.3.1 All auto test

LCD, Backlight, Vibrator, Buzzer, Key Pad, Mic & Speaker

10.3.2 Backlight

LCD Backlight is on for about 1.5 seconds at the same time, then off.

10.3.3 Buzzer

This menu is to test the volume of Melody. It rings in the following sequence. Volume 1, Volume 2, Volume 3, Volume 0 (mute), Volume 4, Volume 5.

10.3.4 Vibrator

Vibrator is on for about 1.5 seconds.

10.3.5 LCD

1) LCD
Main LCD screen resolution tests horizontally and vertically one by one and fills the screen.

10.3.6 Key pad

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.

10.3.7 MicSpk Test

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

10.3.8 Camera Test

This menu is to test camera(preview and capture automatically.)

10.4 Trace option [MENU 4]

This is NOT a necessary menu to be used by neither engineers nor users.

10.5 Call timer [MENU 5]

This menu is to set the Digital Audio Interface Mode for Speech Transcoder and Acoustic testing.
1) All calls : This displays total conversation time. User cannot reset this value.
2) Reset settings : This resets total conversation time to this, [00:00:00].

10.6 Fact. Reset [MENU 6]

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.

10.7 S/W version

This displays software version stored in the phone.

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 : 38400
- 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 GSM (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 GSM 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

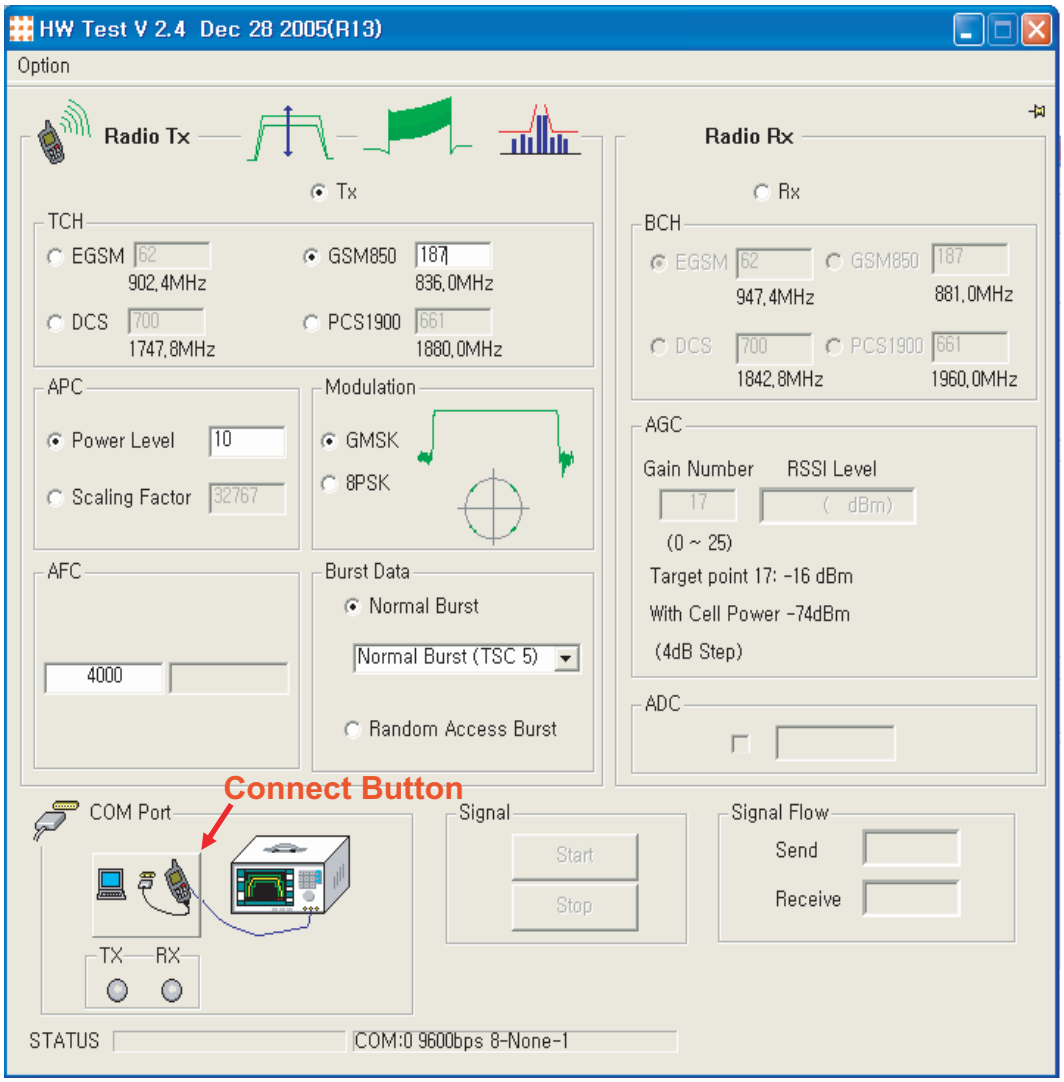


Figure 11.3.1 HW test program

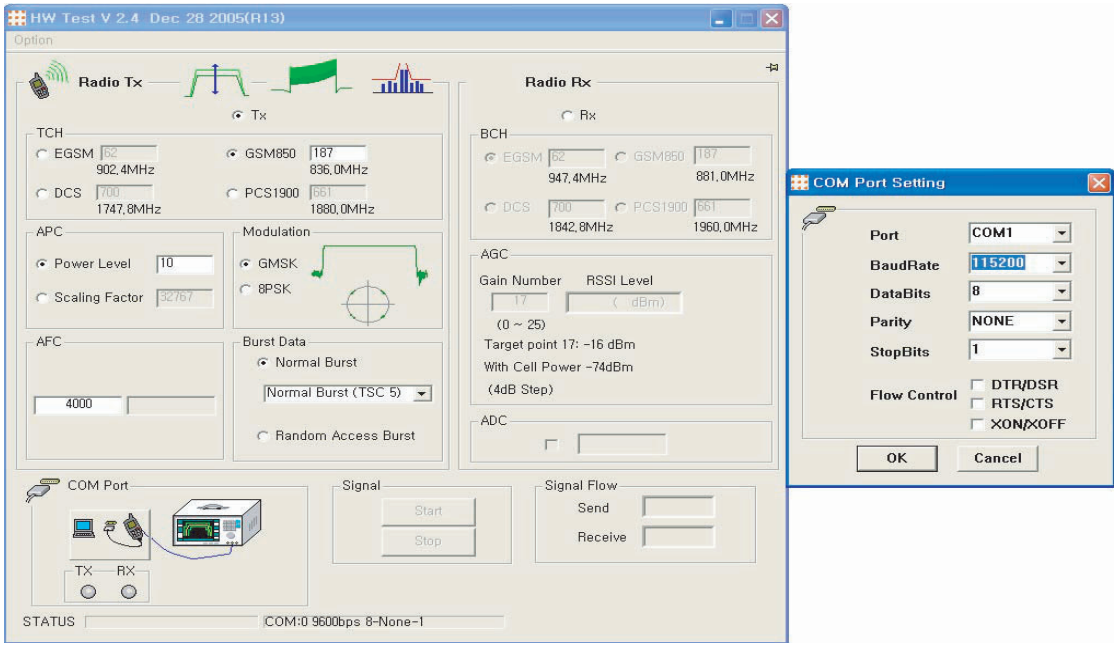


Figure 11.3.2 HW test setting

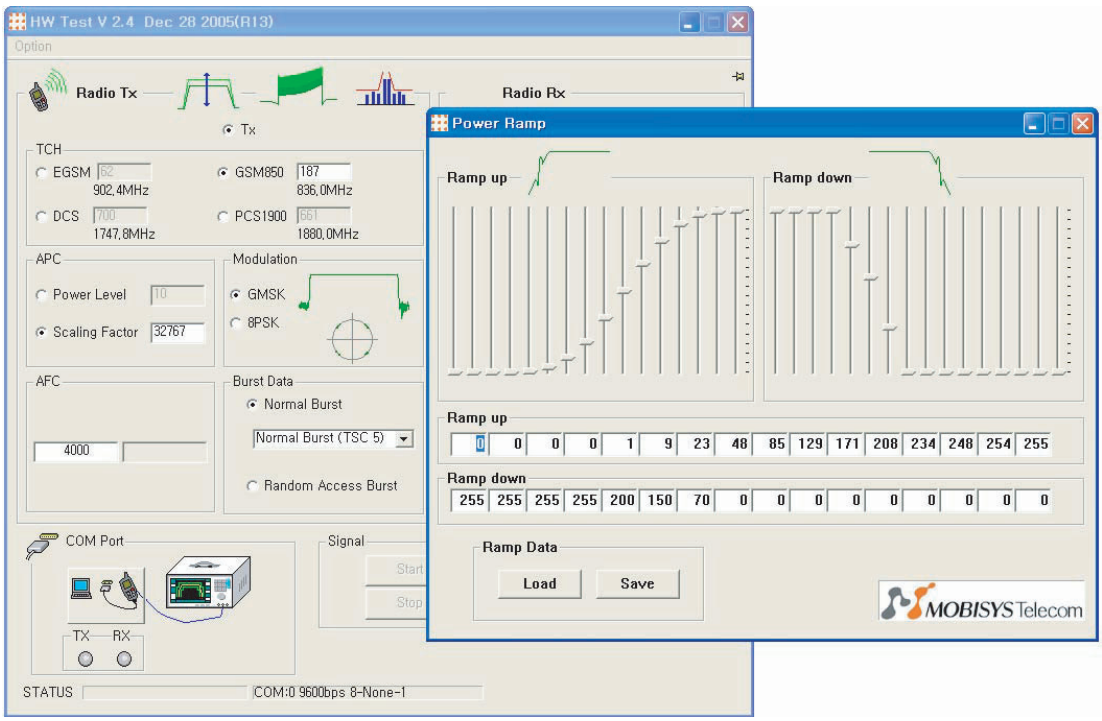


Figure 11.3.3 Ramping profile

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 12.2.1 Calibration Equipment List.

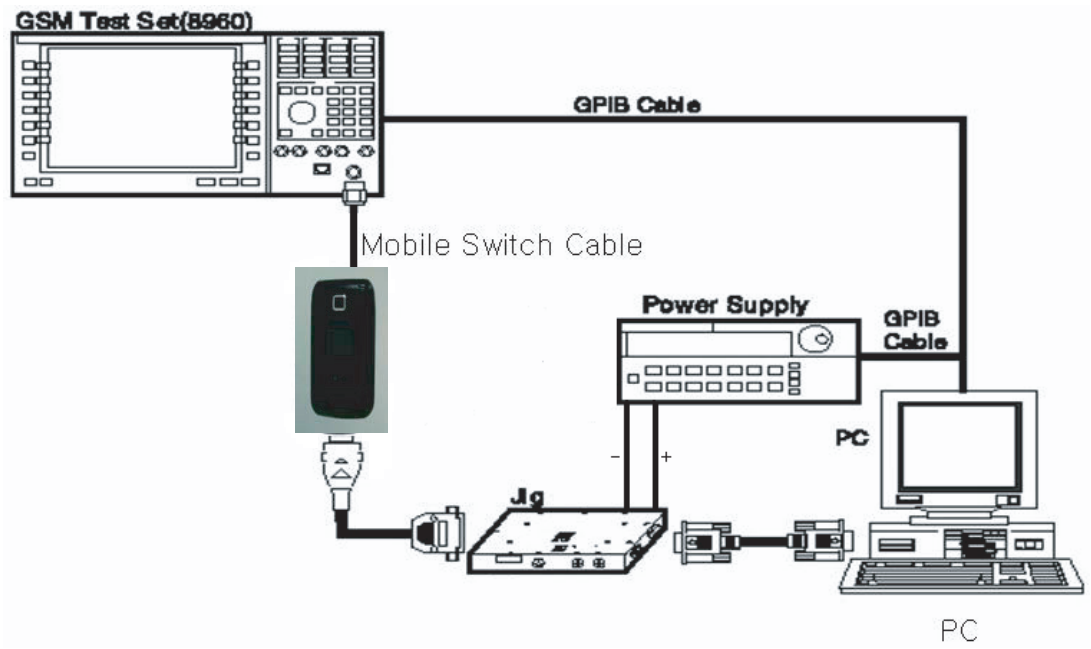


Figure 12.2.1 Equipment Setup

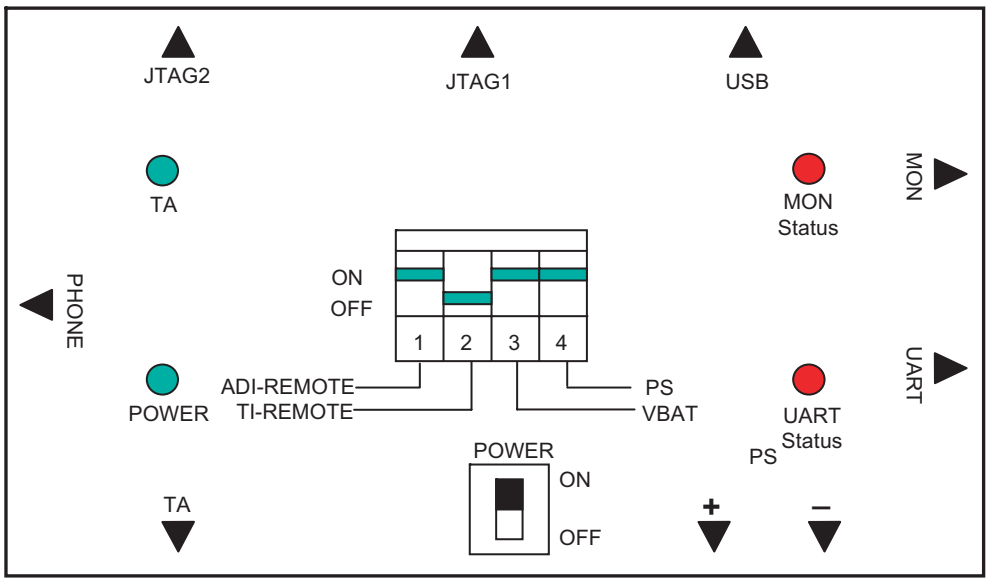


Figure 12.2.2 The top view of Test JIG

12.3 Test Jig Operation

Power Source	Description
Power Supply	Usually 4.0V

Table 12.3.1 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 12.3.2 Jig DIP Switch

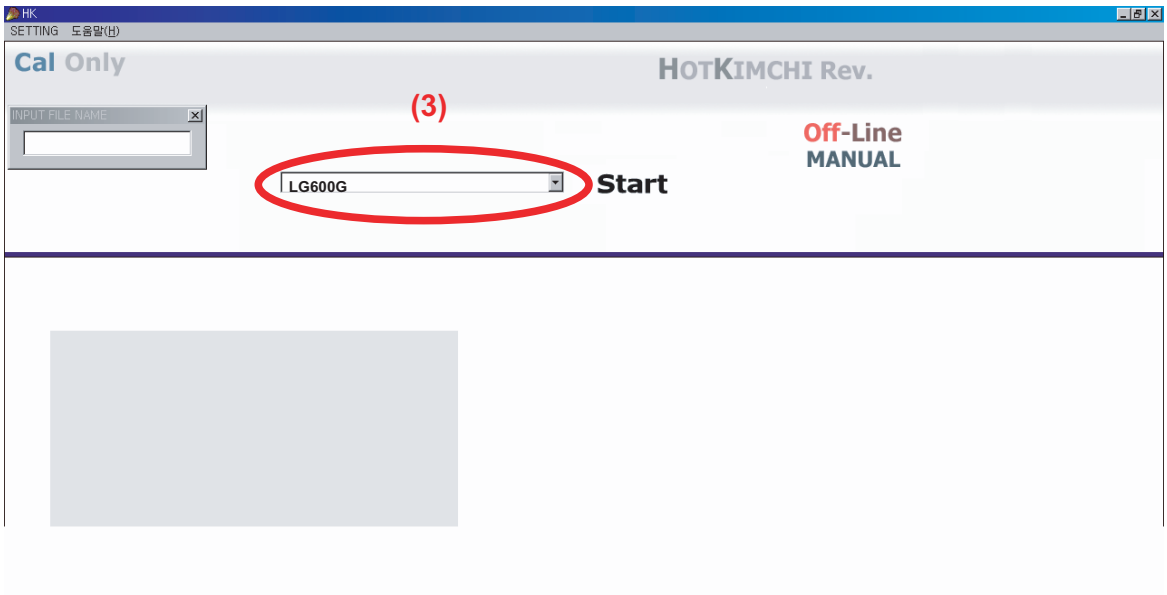
LED Number	Name	Description
LED 1	Power	Power is provided for Test Jig
LED 2	TA	Indicate charging state of the phone battery
LED 3	UART	Indicate data transfer state through the UART port
LED 4	MON	Indicate data transfer state through the MON port

Table 12.3.3 LED Description

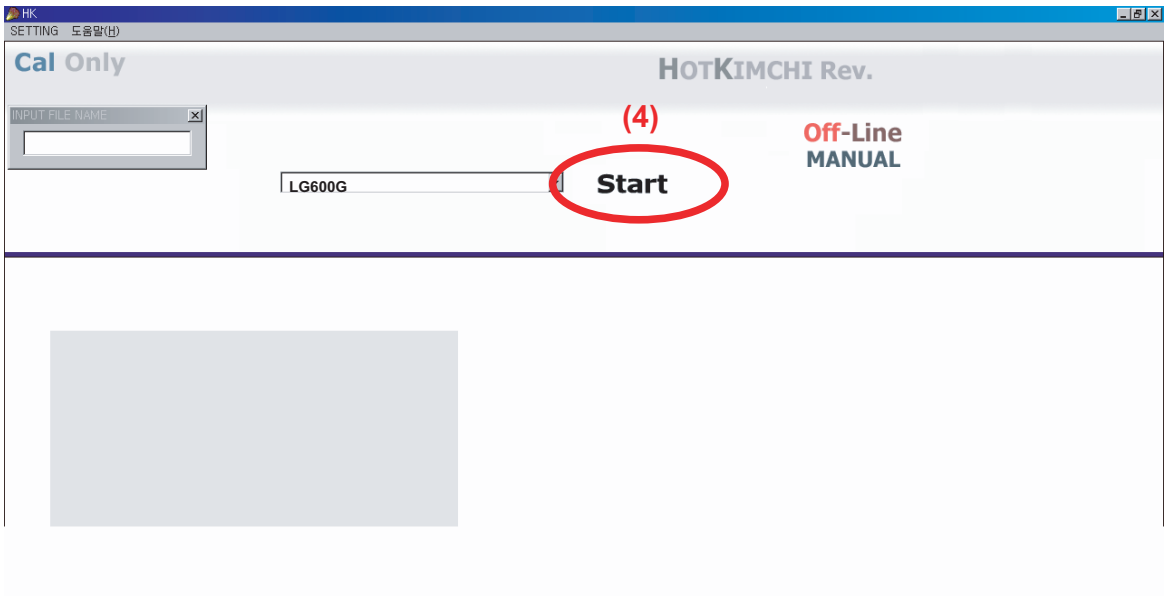
1. Connect as Fig 6-2(RS232 serial cable is connected between COM port of PC and MON port of TEST JIG, in general)
2. Set the Power Supply 4.0V
3. Set the 3rd, 4th of DIP SW ON state always
4. Press the Phone power key, if the Remote ON is used, 1st ON state

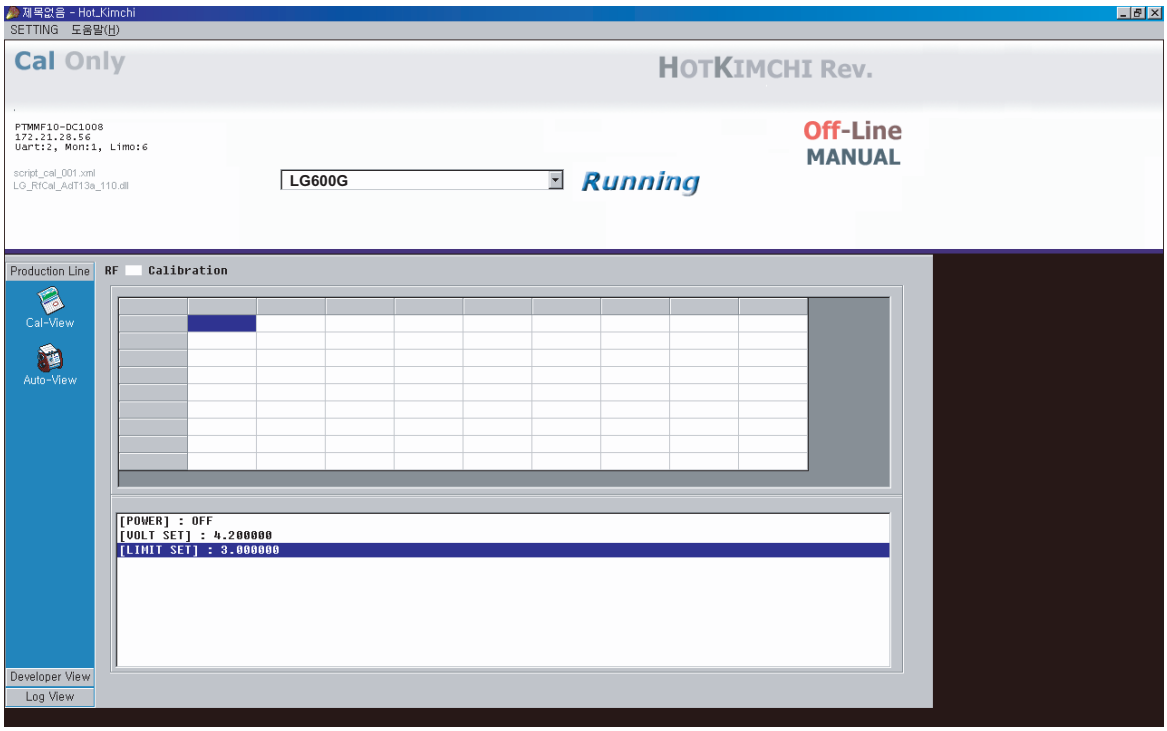
12.4 Procedure

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 LG600G!



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

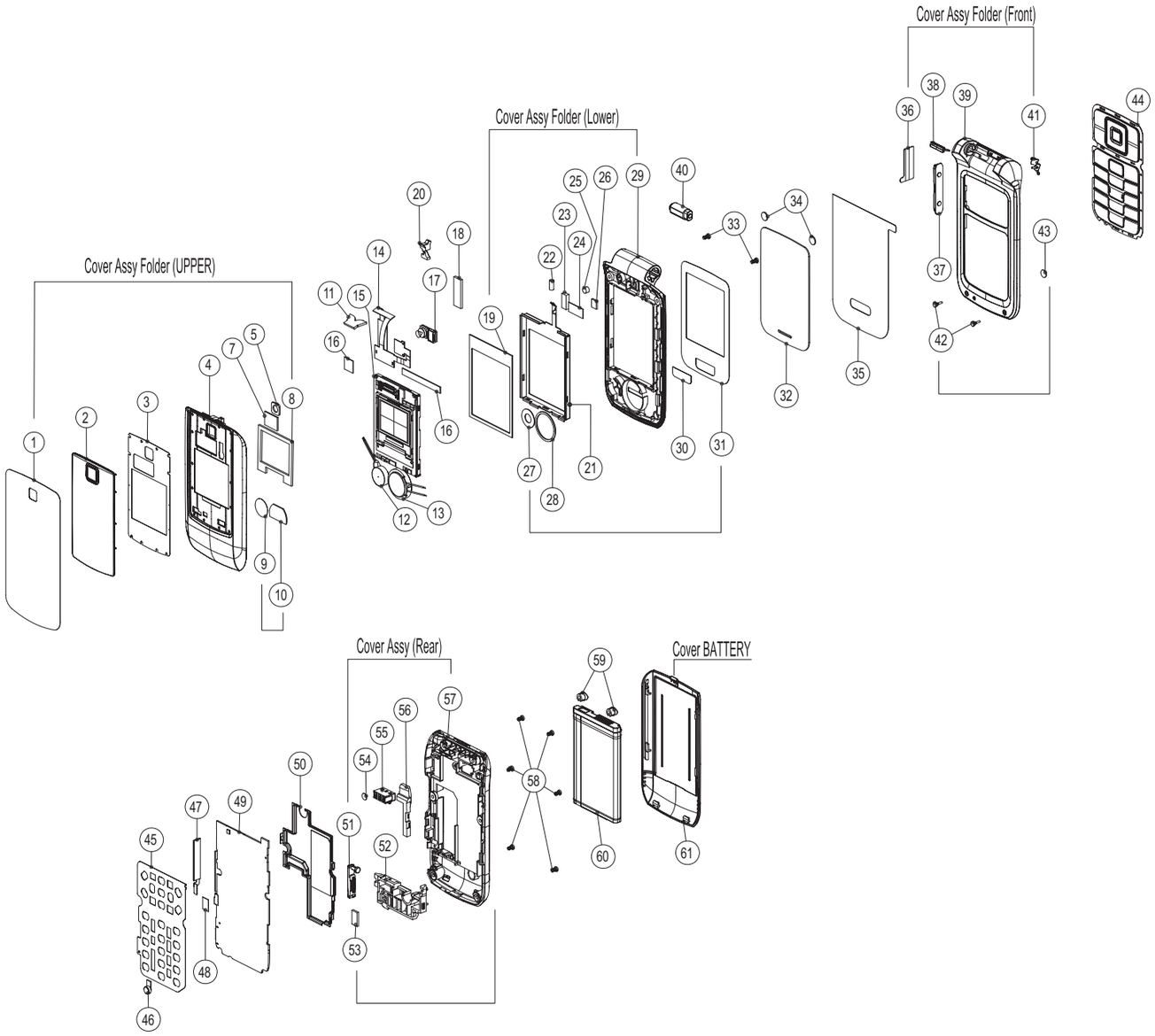
This procedure is for Tx calibration.
In this procedure you can get proper scale factor value and measured power level.

12.7 ADC

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

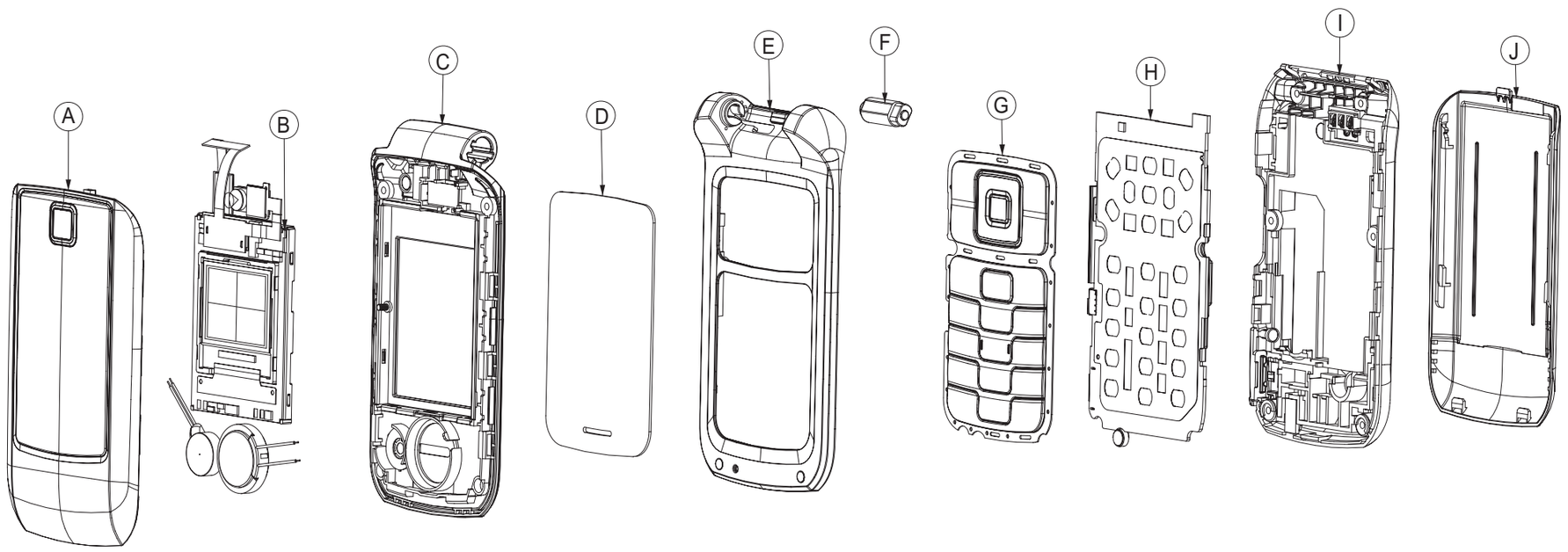
13. EXPLODED VIEW & REPLACEMENT PART LIST

13.1 EXPLODED VIEW



NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
61	COVER BATTERY	1	MCJA0050901	
60	BATTERY	1	SBPL0092201	
59	CAP SCREW (REAR)	2	MCCH0114301	
58	SCREW MACHINE(1.4*3.0)	6	GMEY0011201	
57	COVER REAR	1	MCJN0073501	
56	B/T ANTENNA	1	SNGF0030202	
55	CONNECTOR ETC(BATTERY)	1	ENZY0015701	
54	LABEL A/S	1	MLAB0000601	
53	PAD MIKE	1	MPBH0036301	
52	INTENNA	1	SNGF0031601	
51	CAP EARPHONE JACK	1	MCCC0048901	
50	SHIELD CAN	1	MCBA0024201	
49	PCB MAIN	1	SPFY0165501	
48	INSULATOR SIDE KEY SOLDER	1	MIDZ0154701	
47	PCB SIDE KEY	1	SPKY0052201	
46	MICROPHONE	1	SUMY0007102	
45	DOME SHEET	1	ADCA0071301	
44	KEYPAD	1	MBJA0025601	
43	FILTER MIKE	1	MFBD0027101	
42	BUMPER	2	MBHY0003520	
41	TERMINAL PIN	1	MTCB0011501	
40	HINGE FOLDER	1	MHFD0016201	
39	COVER FRONT	1	MCJK0077901	
38	STOPPER HINGE	1	MSGB0022601	
37	BUTTON SIDE	1	MBJL0045902	
36	TAPE PROTECTION	1	MTAB0199301	
35	TAPE PROTECTION(MAIN)	1	MTAB0199401	
34	CAP SCREW (FOLDER)	2	MCCH0116201	
33	SCREW MACHINE(1.4*3.0)	2	GMEY0011201	
32	WINDOW LCD MAIN	1	MWAC0092001	
31	TAPE WINDOW MINE	1	MTAD0077001	
30	FILTER SPEAKER	1	MFBC0035401	
29	COVER LOWER	1	MCJH0040701	
28	PAD SPEAKER (LOWER)	1	MPBN0048801	
27	PAD MOTOR (LOWER)	1	MPBJ0048701	
26	PAD CAMERA (LOWER)	1	MPBT0050201	
25	MAGNET SWITCH	1	MMAA0001601	
24	TAPE CAMERA	1	MTAK0004401	
23	PAD FLEXIBLE PCB	1	MPBF0026201	
22	HOLDER	1	MHGZ0029601	
21	BRACKET LCD	1	MBFF0015401	
20	FOOT	1	MFDY008002	
19	PAD LCD (MAIN)	1	MPBG0069201	
18	GASKET FPCB (MAIN)	1	MPBF0026201	
17	CAMERA MODULE	1	SVCY0012601	
16	PAD LCD D-IC (MAIN)	1	MPBZ0197001	
15	LCD MODULE	1	SVLM0023201	
14	PCB ASSY FLEXIBLE	1	SPCY0117901	
13	SPEAKER	1	SUSY0025601	
12	VIBRATOR MOTOR	1	SJMY0006507	
11	PAD FLEXCIBLE PCB	1	MPBF0030701	
10	PAD SPEAKER (UPPER)	1	MPBN0048701	
9	TAPE MOTOR (UPPER)	1	MTAF0014701	
8	PAD LCD (SUB)	1	MPBQ0033801	
7	PAD CONNECTOR	1	MPBU0018101	
6	PAD CONNECTOR CAMERA	1	MPBU0018201	
5	PAD CAMERA	1	MPBT0050101	
4	COVER FOLDER UPPER	1	MCJJ0049901	
3	TAPE WINDOW (SUB)	1	MTAE0032901	
2	WINDOW ASSY LCD	1	AWAB0029601	
1	LG600G TAPE PROTECTION(SUB)	1	MTAB0199501	

ASS'Y EXPLODED VIEW



NO.	DESCRIPTION	Q'TY	DRAWING NO.	REMARK
J	COVER, BATTERY		MCJA0050901	
I	COVER ASSY, REAR		ACGM0097601	
H	PCB ASSY, MAIN		SAFY0233603	
G	KEY PAD		MBJA0025601	
F	HINGE,FOLDER		MHFD0016201	
E	COVER ASSY, FRONT		ACGK0096701	
D	WINDOW, MAIN		MWAC0092001	
C	COVER ASSY, FOLDER (LOWER)		ACGH0050401	
B	LCD MODULE		SVLM0023201	
A	COVER ASSY, FOLDER (UPPER)		ACGJ0066101	

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.	Desctiption	Part Number	Spec	Color	Remark
1		GSM(FOLDER)	TGFF0028812		Black	
2	AAAY00	ADDITION	AAAY0283601		Black	
3	MCJA00	COVER,BATTERY	MCJA0050901	MOLD, PC LEXAN 121R, , , , ,	Without Color	
2	APEY00	PHONE	APEY0485701		Black	
3	ACGG00	COVER ASSY,FOLDER	ACGG0085101		Black	
4	ACGH00	COVER ASSY,FOLDER(LOWER)	ACGH0050401		Black	
5	ABFZ00	BRACKET ASSY	ABFZ0014101			
6	MBFF00	BRACKET,LCD	MBFF0015401	PRESS, STS, , , , ,	Without Color	
6	MHGZ00	HOLDER	MHGZ0029601	CUTTING, NS, , , , ,	Black	
5	MCJH00	COVER,FOLDER(LOWER)	MCJH0040701	MOLD, PC LEXAN 121R, , , , ,	Without Color	
5	MFBC00	FILTER,SPEAKER	MFBC0035401	CUTTING, EPDM, , , , ,	Black	
5	MHFD00	HINGE,FOLDER	MHFD0016201	PRESS, STS, , , , ,	Black	
5	MMAA00	MAGNET,SWITCH	MMAA0001601	7100 magnetic	Silver	
5	MPBF00	PAD,FLEXIBLE PCB	MPBF0026201	CUTTING, EPDM, , , , ,	Black	
5	MPBG00	PAD,LCD	MPBG0069201	CUTTING, EPDM, , , , ,	Black	
5	MPBJ	PAD,MOTOR	MPBJ0053801	CUTTING, EPDM, , , , ,	Black	
5	MPBN00	PAD,SPEAKER	MPBN0048801	CUTTING, EPDM, , , , ,	Black	
5	MPBT00	PAD,CAMERA	MPBT0050201	CUTTING, EPDM, , , , ,	Black	
5	MTAD00	TAPE,WINDOW	MTAD0077001	CUTTING, EPDM, , , , ,	Black	
5	MTAK00	TAPE,CAMERA	MTAK0004401	CUTTING, EPDM, , , , ,	Black	
4	ACGJ00	COVER ASSY,FOLDER(UPPER)	ACGJ0066101		Black	
5	AWAB00	WINDOW ASSY,LCD	AWAB0029601		Black	
6	MWAF00	WINDOW,LCD(SUB)	MWAF0038701	COMPLEX, (empty), , , , ,	Without Color	
5	MCJJ00	COVER,FOLDER(UPPER)	MCJJ0049901	MOLD, PC LEXAN 121R, , , , ,	Without Color	
5	MPBJ00	PAD,MOTOR	MPBJ0048701	CUTTING, EPDM, , , , ,	Black	
5	MPBN00	PAD,SPEAKER	MPBN0048701	CUTTING, EPDM, , , , ,	Black	
5	MPBQ00	PAD,LCD(SUB)	MPBQ0033801	CUTTING, EPDM, , , , ,	Black	
5	MPBT00	PAD,CAMERA	MPBT0050101	CUTTING, EPDM, , , , ,	Black	
5	MPBU00	PAD,CONNECTOR	MPBU0018001	CUTTING, EPDM, , , , ,	Black	
5	MTAB00	TAPE,PROTECTION	MTAB0199501	CUTTING, EPDM, , , , ,	Black	
5	MTAE00	TAPE,WINDOW(SUB)	MTAE0032901	CUTTING, STS, , , , ,	Black	
4	ACGK00	COVER ASSY,FRONT	ACGK0096701		Black	

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
5	MBHY00	BUMPER	MBHY0003516	MOLD, Urethane Rubber S190A, , , , ,	Purple	
5	MBJL00	BUTTON,SIDE	MBJL0045902		Black	
5	MCJK00	COVER,FRONT	MCJK0077901	MOLD, PC LEXAN 121R, , , , ,	Without Color	
5	MFBD00	FILTER,MIKE	MFBD0027101	CUTTING, EPDM, , , , ,	Black	
5	MSGB00	STOPPER,HINGE	MSGB0022601	COMPLEX, (empty), , , , ,	Without Color	
5	MTAB00	TAPE,PROTECTION	MTAB0199301	CUTTING, EPDM, , , , ,	Black	
5	MTCB00	TERMINAL,PIN	MTCB0011501	PRESS, STS, , , , ,	Without Color	
4	GMEY00	SCREW MACHINE,BIND	GMEY0011201	1.4 mm,3 mm,MSWR3(BK) ,N ,+ ,NYLOK	Without Color	
4	MBJA00	BUTTON,DIAL	MBJA0025602		Silver	
4	MCCH00	CAP,SCREW	MCCH0116201	CUTTING, EPDM, , , , ,	Black	
4	MFDY00	FOOT	MFDY0008002		Silver	
4	MLAC00	LABEL,BARCODE	MLAC0003401	EZ LOOKS(user for mechanical)	Without Color	
4	MPBF00	PAD,FLEXIBLE PCB	MPBF0030701	CUTTING, EPDM, , , , ,	Black	
4	MPBU00	PAD,CONNECTOR	MPBU0018101	CUTTING, EPDM, , , , ,	Black	
4	MPBU01	PAD,CONNECTOR	MPBU0018201	CUTTING, EPDM, , , , ,	Black	
4	MPBZ00	PAD	MPBZ0197001	CUTTING, EPDM, , , , ,	Black	
4	MTAB00	TAPE,PROTECTION	MTAB0199401	CUTTING, EPDM, , , , ,	Black	
4	MTAG00	TAPE,BUTTON	MTAG0007901	CUTTING, EPDM, , , , ,	Black	
4	MWAC00	WINDOW,LCD	MWAC0092001	COMPLEX, (empty), , , , ,	Black	
4	MCCC00	CAP,EARPHONE JACK	MCCC0048901	COMPLEX, (empty), , , , ,	Without Color	
4	MCJN00	COVER,REAR	MCJN0073501	MOLD, PC LEXAN 121R, , , , ,	Without Color	
4	MLAB00	LABEL,A/S	MLAB0001102	C2000 USASV DIA 4.0	White	
4	MPBH00	PAD,MIKE	MPBH0036301	CUTTING, EPDM, , , , ,	Black	
3	MCCH00	CAP,SCREW	MCCH0114301	COMPLEX, (empty), , , , ,	Without Color	
3	MLAK00	LABEL,MODEL	MLAK0006901	PRINTING, (empty), , , , ,	White	
5	MCBA00	CAN,SHIELD	MCBA0024202		Without Color	
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.	Desctiption	Part Number	Spec	Color	Remark
6	BFAA00	FILM,INMOLD	BFAA0076301	; ,SILVER ,- ,- ,-	Color Unfixed	
4	SACY00	PCB ASSY,FLEXIBLE	SACY0063205			
5	SACE00	PCB ASSY,FLEXIBLE,SMT	SACE0057505			
6	SACC00	PCB ASSY,FLEXIBLE,SMT BOTTOM	SACC0036301			
7	CN601	CONNECTOR,BOARD TO BOARD	ENBY0035901	40 PIN,0.4 mm,ETC , ,H=1.0, Plug		
7	CN602	CONNECTOR,BOARD TO BOARD	ENBY0036701	60 PIN,0.4 mm,ETC , ,H=1.0, Plug		
7	CN603	CONNECTOR,BOARD TO BOARD	ENBY0019501	20 PIN,.4 mm,ETC , ,H=1.5, Socket		
6	SPCY00	PCB,FLEXIBLE	SPCY0117901	POLYI , mm,MULTI-4 , ,; , , , , , , , , ,		
4	SJMY00	VIBRATOR,MOTOR	SJMY0006507	3 V,0.08 A,10*3.45 ,25mm		
4	SUSY00	SPEAKER	SUSY0025601	ASSY ,8 ohm,90 dB,16 mm,3.4T, Wire15mm ,; , , , , , , ,WIRE		
4	SVCY00	CAMERA	SVCY0012601	CMOS ,VGA ,MAGNACHIP 1/7.4"		
4	SVLM00	LCD MODULE	SVLM0023201	MAIN ,1.77"(128*160)_Sub 1.04"(96*64)CSTN ,33.8*46.24*3.5 ,262k ,TFT ,TM ,LGDP4513_ST7628 ,with SUS NTSC_60% Sub CSTN_SII		
3	ACGM00	COVER ASSY,REAR	ACGM0097601		Black	
4	ENZY00	CONNECTOR,ETC	ENZY0015701	3 PIN,3 mm,ETC , ,H=6.5		
4	SNGF01	ANTENNA,GSM,FIXED	SNGF0030202	3.0 ,-2.0 dBd,, ,internal, bluetooth ,; ,SINGLE ,-2.0 ,50 ,3.0		
4	SNGF02	ANTENNA,GSM,FIXED	SNGF0031601	3.0 ,-2.0 dBd,, ,internal, GSM850/1900 ,; ,DUAL ,-2.0 ,50 ,3.0		
3	GMEY00	SCREW MACHINE,BIND	GMEY0011201	1.4 mm,3 mm,MSWR3(BK) ,N ,+ ,NYLOK	Without Color	
3	SAFY00	PCB ASSY,MAIN	SAFY0233603		Blue	
4	SAFB00	PCB ASSY,MAIN,INSERT	SAFB0077604		Blue	
5	ADCA00	DOME ASSY,METAL	ADCA0071301	KP210 VIVSV, DOME SHEET	White	
5	MIDZ00	INSULATOR	MIDZ0154701	CUTTING, EPDM, , , , ,	Green	
5	SPKY00	PCB,SIDEKEY	SPKY0052201	POLYI ,0.65 mm,DOUBLE , ,; , , , , , , , , ,		
5	SUMY00	MICROPHONE	SUMY0007102	FPCB ,-42 dB,4*1.5 ,FPCB ,; , , ,OMNI ,1.5TO5V , ,FPC		
4	SAFF00	PCB ASSY,MAIN,SMT	SAFF0152602		Blue	
5	SAFC00	PCB ASSY,MAIN,SMT BOTTOM	SAFC0099302		Blue	
6	BAT100	BATTERY,CELL,LITHIUM	SBCL0001701	2 V,0.5 mAh,CYLINDER ,Reflow type BB, Max T 1.67, phi 4.8, Pb-Free		
6	C100	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C101	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C102	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP ,; , ,[empty] ,[empty] , ,-55TO+125C , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C103	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C104	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C105	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C106	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C107	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,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,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C111	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C112	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C113	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C114	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C115	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C116	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C117	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C118	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C120	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C122	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C123	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C124	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C125	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C126	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C127	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C128	CAP,CHIP,MAKER	ECZH0004402	100000 pF,16V ,Z ,X7R ,TC ,1005 ,R/TP , , ,[empty] ,[empty] ,[empty] ,[empty] ,[empty] ,[empty]		
6	C129	CAP,CERAMIC,CHIP	ECCH0000163	47 nF,10V,K,X5R,HD,1005,R/TP		
6	C130	CAP,CERAMIC,CHIP	ECCH0000163	47 nF,10V,K,X5R,HD,1005,R/TP		
6	C131	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C132	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C133	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C134	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C135	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C136	CAP,CHIP,MAKER	ECZH0003124	68 nF,16V ,K ,X7R ,HD ,1005 ,R/TP		

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C137	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C138	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C139	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C140	CAP,CERAMIC,CHIP	ECCH0000120	39 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	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C143	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,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	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C147	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C148	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C149	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C200	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C202	CAP,CERAMIC,CHIP	ECCH0005604	10 uF,6.3V ,M ,X5R ,TC ,1608 ,R/TP		
6	C203	CAP,CHIP,MAKER	ECZH0001421	2.2 uF,6.3V ,K ,X5R ,HD ,1608 ,R/TP		
6	C204	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C206	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C209	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C210	CAP,CHIP,MAKER	ECZH0001217	470 nF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C211	CAP,CHIP,MAKER	ECZH0001217	470 nF,6.3V ,K ,X5R ,TC ,1005 ,R/TP		
6	C212	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP ,; , ,[empty] ,[empty] , ,-55TO+125C , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C213	CAP,CHIP,MAKER	ECZH0000841	56 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C214	CAP,CHIP,MAKER	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C216	CAP,TANTAL,CHIP	ECTH0004101	22 uF,6.3V ,M ,STD ,1608 ,R/TP		
6	C218	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C219	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP ,; , ,[empty] ,[empty] , ,-55TO+125C , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C220	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C221	CAP,CHIP,MAKER	ECZH0003503	1 uF,25V ,K ,X5R ,HD ,1608 ,R/TP		
6	C222	CAP,TANTAL,CHIP	ECTH0005703	22 uF,10V ,M ,L_ESR ,2012 ,R/TP ,; , ,[empty] ,[empty] , ,[empty] , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C223	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C224	CAP,CERAMIC,CHIP	ECCH0000104	3 pF,50V,C,NP0,TC,1005,R/TP		
6	C225	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C226	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C227	CAP,TANTAL,CHIP	ECTH0004807	10 uF,10V ,M ,STD ,1608 ,R/TP ,; , ,[empty] ,[empty] , ,-55TO+125C , ,[empty] ,[empty] ,[empty] ,[empty]		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C228	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C229	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C230	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C231	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C232	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,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	C311	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C312	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C314	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C316	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C317	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C318	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C319	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C320	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C329	CAP,CERAMIC,CHIP	ECCH0006201	4.7 uF,6.3V ,K ,X5R ,TC ,1608 ,R/TP		
6	C331	CAP,CHIP,MAKER	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C333	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C401	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C402	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C403	CAP,CERAMIC,CHIP	ECCH0000701	1.2 pF,50V ,C ,NP0 ,TC ,1005 ,R/TP		
6	C404	CAP,CERAMIC,CHIP	ECCH0000112	15 pF,50V,J,NP0,TC,1005,R/TP		
6	C405	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C406	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C407	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C408	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C410	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C411	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C412	CAP,CERAMIC,CHIP	ECCH0000198	2.2 uF,6.3V ,M ,X5R ,TC ,1005 ,R/TP		
6	C413	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C414	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C415	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C416	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C419	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C420	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C421	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C422	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C423	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C424	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C425	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C500	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C501	CAP,CHIP,MAKER	ECZH0000844	68 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C502	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C503	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C504	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C505	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	C507	CAP,CHIP,MAKER	ECZH0001421	2.2 uF,6.3V ,K ,X5R ,HD ,1608 ,R/TP		
6	C508	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C510	CAP,TANTAL,CHIP	ECTH0005501	33 uF,10V ,M ,L_ESR ,2012 ,R/TP ,; , ,[empty] ,[empty] , ,-55TO+125C , ,[empty] ,[empty] ,[empty] ,[empty]		
6	C511	CAP,CERAMIC,CHIP	ECCH0000143	1 nF,50V,K,X7R,HD,1005,R/TP		
6	C512	CAP,CHIP,MAKER	ECZH0000830	33 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C513	CAP,CERAMIC,CHIP	ECCH0000113	18 pF,50V,J,NP0,TC,1005,R/TP		
6	C514	CAP,CERAMIC,CHIP	ECCH0000155	10 nF,16V,K,X7R,HD,1005,R/TP		
6	C515	CAP,CHIP,MAKER	ECZH0000816	12 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C517	CAP,CERAMIC,CHIP	ECCH0000115	22 pF,50V,J,NP0,TC,1005,R/TP		
6	C518	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C519	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C520	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C521	CAP,CERAMIC,CHIP	ECCH0000108	7 pF,50V,D,NP0,TC,1005,R/TP		
6	C522	CAP,CERAMIC,CHIP	ECCH0000108	7 pF,50V,D,NP0,TC,1005,R/TP		
6	C523	CAP,CERAMIC,CHIP	ECCH0000104	3 pF,50V,C,NP0,TC,1005,R/TP		
6	C524	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C525	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C526	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C527	CAP,CHIP,MAKER	ECZH0003103	0.1 uF,10V ,K ,X7R ,HD ,1005 ,R/TP		
6	C528	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,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	ECZH0001216	220 nF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C531	CAP,CERAMIC,CHIP	ECCH0000104	3 pF,50V,C,NP0,TC,1005,R/TP		
6	C532	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C533	CAP,CERAMIC,CHIP	ECCH0000120	39 pF,50V,J,NP0,TC,1005,R/TP		
6	C534	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C535	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C536	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C600	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C601	CAP,CERAMIC,CHIP	ECCH0000122	47 pF,50V,J,NP0,TC,1005,R/TP		
6	C602	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C603	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C604	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C605	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C606	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C607	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	CN200	CONNECTOR,I/O	ENRY0006401	18 PIN,0.4 mm,ANGLE , ,H=2.5, Reverse Type		
6	CN600	CONNECTOR,BOARD TO BOARD	ENBY0036801	60 PIN,0.4 mm,ETC , ,H=1.0, Socket		
6	D100	DIODE,SWITCHING	EDSY0017301	VSM ,15 V,100 mA,R/TP ,PB-FREE		
6	D101	DIODE,SWITCHING	EDSY0011901	EMD2 ,30 V,1 A,R/TP ,VF=1.5V(IF=200mA) , IR=30uA(VR=10V)		
6	FB100	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB200	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB201	FILTER,BEAD,CHIP	SFBH0008105	1800 ohm,1005 ,Chip bead ,; ,1800ohm ,; ,[empty] ,R/TP		
6	FB300	FILTER,BEAD,CHIP	SFBH0007102	10 ohm,1005 ,Ferrite Bead		
6	FL200	FILTER,EMI/POWER	SFEY0007101	SMD ,1CH,1608Feedthru ESD/EMI filter for power Pb-free		
6	FL400	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	FL500	FILTER,SAW,DUAL	SFSB0001301	881.5 MHz,25 MHz,1.8 dB,30 dB,1960 MHz,60 MHz,2.3 dB,12 dB,2.0*1.6*0.68 ,SMD ,869M~894M,1930M~1990M,10p,B,150_82,150_18,GSM 850+PCS Rx ,; ,881.5, 1960 ,2.0*1.6*0.68 ,SMD ,R/TP		
6	FL600	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL601	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL603	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL605	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	FL607	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	FL608	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	J300	CONN,SOCKET	ENSY0018701	6 PIN,ETC , ,2.54 mm,H=1.8		
6	L401	INDUCTOR,CHIP	ELCH0001413	22 nH,J ,1005 ,R/TP ,PBFREE		
6	L402	INDUCTOR,CHIP	ELCH0001408	6.8 nH,J ,1005 ,R/TP ,Pb Free		
6	L403	INDUCTOR,CHIP	ELCH0001408	6.8 nH,J ,1005 ,R/TP ,Pb Free		
6	L503	INDUCTOR,CHIP	ELCH0001054	5.6 nH,S ,1005 ,R/TP ,PBFREE		
6	L504	INDUCTOR,CHIP	ELCH0009105	18 nH,J ,1005 ,R/TP ,COIL		

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	L506	CAP,CERAMIC,CHIP	ECCH0000110	10 pF,50V,D,NP0,TC,1005,R/TP		
6	L600	INDUCTOR,CHIP	ELCH0005009	100 nH,J ,1005 ,R/TP ,		
6	PT500	THERMISTOR	SETY0006301	NTC ,10000 ohm,SMD ,1005, 3350~3399k, J, R/T, PBFREE		
6	R100	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R101	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R102	RES,CHIP	ERHY0000512	10M ohm,1/16W,J,1608,R/TP		
6	R106	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R107	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R108	RES,CHIP,MAKER	ERHZ0000527	200 ohm,1/6W ,J ,1005 ,R/TP		
6	R109	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R111	RES,CHIP,MAKER	ERHZ0000312	68 Kohm,1/16W ,F ,1005 ,R/TP		
6	R115	RES,CHIP,MAKER	ERHZ0000488	4.7 ohm,1/16W ,J ,1005 ,R/TP		
6	R116	RES,CHIP,MAKER	ERHZ0000213	120 Kohm,1/16W ,F ,1005 ,R/TP		
6	R118	RES,CHIP,MAKER	ERHZ0000488	4.7 ohm,1/16W ,J ,1005 ,R/TP		
6	R200	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R201	RES,CHIP,MAKER	ERHZ0000437	2 Kohm,1/16W ,J ,1005 ,R/TP		
6	R203	RES,CHIP	ERHY0003401	1800 ohm,1/16W ,J ,1005 ,R/TP		
6	R205	RES,CHIP,MAKER	ERHZ0000476	39 Kohm,1/16W ,J ,1005 ,R/TP		
6	R206	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R208	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R210	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R211	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R212	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R213	RES,CHIP,MAKER	ERHZ0000476	39 Kohm,1/16W ,J ,1005 ,R/TP		
6	R214	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R215	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R216	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R217	RES,CHIP,MAKER	ERHZ0000483	47 ohm,1/16W ,J ,1005 ,R/TP		
6	R219	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R221	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R223	RES,CHIP,MAKER	ERHZ0003001	30 Kohm,1/16W ,F ,1005 ,R/TP		
6	R225	RES,CHIP,MAKER	ERHZ0000252	240 Kohm,1/16W ,F ,1005 ,R/TP		
6	R226	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R227	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R228	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R229	RES,CHIP,MAKER	ERHZ0000443	2200 ohm,1/16W ,J ,1005 ,R/TP		
6	R301	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	R315	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R320	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R322	RES,CHIP	ERHY0000277	75K ohm,1/16W,J,1005,R/TP		
6	R323	RES,CHIP	ERHY0000272	43K ohm,1/16W,J,1005,R/TP		
6	R327	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R331	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
6	R332	RES,CHIP,MAKER	ERHZ0000533	7.5 Kohm,1/16W ,J ,1005 ,R/TP		
6	R333	RES,CHIP,MAKER	ERHZ0000422	15 Kohm,1/16W ,J ,1005 ,R/TP		
6	R402	RES,CHIP,MAKER	ERHZ0000287	47 Kohm,1/16W ,F ,1005 ,R/TP		
6	R403	RES,CHIP,MAKER	ERHZ0000456	2.2 ohm,1/16W ,J ,1005 ,R/TP		
6	R404	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R405	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R406	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R411	RES,CHIP,MAKER	ERHZ0000438	20 Kohm,1/16W ,J ,1005 ,R/TP		
6	R500	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R501	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R502	RES,CHIP,MAKER	ERHZ0000504	68 ohm,1/16W ,J ,1005 ,R/TP		
6	R504	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R505	INDUCTOR,CHIP	ELCH0009109	6.8 nH,J ,1005 ,R/TP ,chip coil		
6	R508	RES,CHIP,MAKER	ERHZ0000522	24 ohm,1/16W ,J ,1005 ,R/TP		
6	R509	RES,CHIP,MAKER	ERHZ0000242	220 ohm,1/16W ,F ,1005 ,R/TP		
6	R510	RES,CHIP,MAKER	ERHZ0000242	220 ohm,1/16W ,F ,1005 ,R/TP		
6	R511	RES,CHIP,MAKER	ERHZ0000327	180 ohm,1/16W ,F ,1005 ,R/TP		
6	R512	RES,CHIP,MAKER	ERHZ0000457	30 ohm,1/16W ,J ,1005 ,R/TP		
6	R513	RES,CHIP,MAKER	ERHZ0000327	180 ohm,1/16W ,F ,1005 ,R/TP		
6	R515	RES,CHIP,MAKER	ERHZ0000404	1 Kohm,1/16W ,J ,1005 ,R/TP		
6	R516	RES,CHIP,MAKER	ERHZ0000205	1 Mohm,1/16W ,F ,1005 ,R/TP		
6	R517	RES,CHIP,MAKER	ERHZ0000244	22 Kohm,1/16W ,F ,1005 ,R/TP		
6	R600	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R601	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R602	RES,CHIP,MAKER	ERHZ0000406	100 Kohm,1/16W ,J ,1005 ,R/TP		
6	R603	RES,CHIP,MAKER	ERHZ0000485	4700 ohm,1/16W ,J ,1005 ,R/TP		
6	R604	RES,CHIP,MAKER	ERHZ0000485	4700 ohm,1/16W ,J ,1005 ,R/TP		
6	SW500	CONN,RF SWITCH	ENWY0004501	,SMD , dB,H=3.6, Straight type		
6	U100	IC	EUSY0149402	SOT-553 ,5 PIN,R/TP ,Single 2 Input AND Gate		
6	U101	IC	EUSY0149402	SOT-553 ,5 PIN,R/TP ,Single 2 Input AND Gate		

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	U102	IC	EUSY0229501	88 BALL MATRIX SCSP (8*11*1.2) ,80 PIN,R/TP ,256M + 64M PSRAM / IO 3.0V / BOTTOM BOOT / PB FREE		
6	U103	IC	EUSY0154001	US8 ,8 PIN,R/TP ,Dual 2-Input OR Gate, Pb Free		
6	U104	IC	EUSY0354201	BGA ,264 PIN,R/TP ,GSM/GPRS Baseband ,; ,IC,Digital Baseband Processor		
6	U201	IC	EUSY0349001	BGA ,8 PIN,R/TP ,Class AB SPK AMP ,; ,IC,Audio Amplifier		
6	U202	IC	EUSY0292601	DFN ,8 PIN,R/TP ,Li-ion charger IC, 8 Ld 2 x 3 DFN, Pb-free		
6	U300	IC	EUSY0336501	TSOPJW ,12 PIN,R/TP ,		
6	U400	IC	EUSY0149402	SOT-553 ,5 PIN,R/TP ,Single 2 Input AND Gate		
6	U401	IC	EUSY0293901	CSP ,47 PIN,R/TP ,Bluetooth Single Chip(3.8*4.0*0.7)		
6	U402	IC	EUSY0318501	BGA ,84 PIN,R/TP ,7x7, VGA Camera Backend IC		
6	U403	IC	EUSY0254201	DFN ,12 PIN,R/TP ,Dual SPDT Analog Switch(Pb Free)		
6	U404	IC	EUSY0232812	SON1612-6 ,6 PIN,R/TP ,2.8V, 150mA LDO		
6	U405	IC	EUSY0319001	WDFN-8L ,8 PIN,R/TP ,300mA/300mA 2.8V/1.8V Dual LDO		
6	U500	IC	EUSY0196901	SC70-5 ,5 PIN,R/TP ,Single Inverter, Pb Free		
6	U501	RF MODULE,HANDSET	SMRH0004701	MHz, MHz,Dual band for US ,ASM+TxModule		
6	U502	IC	EUSY0280101	LFCSP-32 ,32 PIN,R/TP ,GSM QUAD BAND TRANSCEIVER, Othello G.		
6	U503	IC	EUSY0354101	QFN ,10 PIN,R/TP ,OVLO 6.8-7.6 ,; ,IC,Charger		
6	VA200	VARISTOR	SEVY0000701	14 V, ,SMD ,120pF, 1005		
6	VA201	VARISTOR	SEVY0007901	5.6 V,20% ,SMD ,PB-FREE(480pF)		
6	VA202	VARISTOR	SEVY0000701	14 V, ,SMD ,120pF, 1005		
6	VA203	VARISTOR	SEVY0000701	14 V, ,SMD ,120pF, 1005		
6	VA301	VARISTOR	SEVY0007901	5.6 V,20% ,SMD ,PB-FREE(480pF)		
6	VA600	VARISTOR	SEVY0000701	14 V, ,SMD ,120pF, 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	EXXY0024401	26 MHz,10 PPM,10 pF,.5 ohm,SMD ,32*25*0.6 ,. ,. ,. ,10PPM ,10 ,. ,. ,SMD ,P/TP		
6	ZD200	DIODE,ZENER	EDNY0013602	EMD2 ,5.1 V,150 mW,R/TP , ,; , ,[empty] , , ,[empty] ,[empty] ,[empty] ,[empty]		
5	SAFD00	PCB ASSY,MAIN,SMT TOP	SAFD0098502		Blue	
6	C303	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C304	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C305	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C325	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	C326	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		
6	C327	CAP,CHIP,MAKER	ECZH0001215	1 uF,10V ,K ,X5R ,TC ,1005 ,R/TP		

13. EXPLODED VIEW & REPLACEMENT PART LIST

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	C328	CAP,CHIP,MAKER	ECZH0000826	27 pF,50V ,J ,NP0 ,TC ,1005 ,R/TP		
6	FL602	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL604	FILTER,EMI/POWER	SFEY0010501	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (100Ohm,15pF), Pb-free		
6	FL606	FILTER,EMI/POWER	SFEY0011601	SMD ,SMD ,18 V,4ch. EMI_ESD Filter (50 Ohm,15pF)		
6	LD300	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD301	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD302	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD303	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD304	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD305	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD306	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD307	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD308	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD309	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD310	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	LD311	DIODE,LED,CHIP	EDLH0004501	BLUE ,1608 ,R/TP ,		
6	Q300	TR,BJT,ARRAY	EQBA0002701	EMT6 ,150 mW,R/TP ,NPN, PNP, 150 mA		
6	R300	RES,CHIP,MAKER	ERHZ0000405	10 Kohm,1/16W ,J ,1005 ,R/TP		
6	R302	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R303	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R304	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R305	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R306	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R307	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R308	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R309	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R310	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R311	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R312	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R313	RES,CHIP	ERHY0003301	100 ohm,1/16W ,J ,1005 ,R/TP		
6	R314	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R316	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R318	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R319	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R321	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R324	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
6	R325	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R326	RES,CHIP,MAKER	ERHZ0000505	680 ohm,1/16W ,J ,1005 ,R/TP		
6	R328	RES,CHIP,MAKER	ERHZ0000486	47 Kohm,1/16W ,J ,1005 ,R/TP		
6	R329	RES,CHIP,MAKER	ERHZ0000402	10 ohm,1/16W ,J ,1005 ,R/TP		
6	R330	RES,CHIP	ERHY0003501	220 ohm,1/16W ,J ,1005 ,R/TP		
6	SPFY00	PCB,MAIN	SPFY0165501	FR-4 ,0.8 mm,BUILD-UP 6 , ,; , , , , , , , , ,		
6	U301	IC	EUSY0250001	Leaded ,4 PIN,R/TP ,Hall IC		
6	VA300	VARISTOR	SEVY0007901	5.6 V,20% ,SMD ,PB-FREE(480pF)		

13.3 Accessory

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

Level	Location No.	Desctiption	Part Number	Spec	Color	Remark
3	SBPL00	BATTERY PACK,LI-ION	SBPL0093402	3.7 V,800 mAh,1 CELL,PRISMATIC ,LG300G North America BATT, Pb-Free ,; ,3.7V ,800mAh ,0.2C ,PRISMATIC ,50x34x46 , ,BLACK ,Innerpack ,Latin America Label	Black	
3	SSAD00	ADAPTOR,AC-DC	SSAD0028101	100-240V ,5060 Hz,5.6 V,.4 A,UL, CSA ,AC-DC Adaptor ,; ,85Vac~264Vac ,5.6V +/-0.8V ,400mA ,5060 , ,WALL 2P ,I/O CONNECTOR ,		

Note