

SAMSUNG

UMTS TELEPHONE

SGH-Z360

SERVICE *Manual*

UMTS TELEPHONE



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**SAMSUNG
ELECTRONICS**



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10. Reference data

1. Safety Precautions

1-1. Repair Precaution

- Repair in Shield Box, during detailed tuning.
Take specially care of tuning or test,
because specificity of cellular phone is sensitive for surrounding interference(RF noise).
- Be careful to use a kind of magnetic object or tool,
because performance of parts is damaged by the influence of magnetic force.
- Surely use a standard screwdriver when you disassemble this product,
otherwise screw will be worn away.
- Use a thicken twisted wire when you measure level.
A thicken twisted wire has low resistance, therefore error of measurement is few.
- Repair after separate Test Pack and Set because for short danger (for example an overcurrent and furious flames of parts etc) when you repair board in condition of connecting Test Pack and tuning on.
- Take specially care of soldering, because Land of PCB is small and weak in heat.
- Surely tune on/off while using AC power plug, because a repair of battery charger is dangerous when tuning ON/OFF PBA and Connector after disassembling charger
- Don't use as you pleases after change other material than replacement registered on SEC System.
Otherwise engineer in charge isn't charged with problem that you don't keep this rules.

1-2. ESD(Electrostatically Sensitive Devices) Precaution

Several semiconductor may be damaged easily by static electricity. Such parts are called by ESD (Electrostatically Sensitive Devices), for example IC,BGA chip etc. Read Precaution below.

You can prevent from ESD damage by static electricity.

- Remove static electricity remained your body before you touch semiconductor or parts with semiconductor. There are ways that you touch an earthed place or wear static electricity prevention string on wrist.
- Use earthed soldering steel when you connect or disconnect ESD.
- Use soldering removing tool to break static electricity. , otherwise ESD will be damaged by static electricity.
- Don't unpack until you set up ESD on product. Because most of ESD are packed by box and aluminum plate to have conductive power,they are prevented from static electricity.
- You must maintain electric contact between ESD and place due to be set up until ESD is connected completely to the proper place or a circuit board.

2. Specification

2-1. GSM General Specification

	EGSM 900	DCS1800	PCS1900	W-CDMA2100
Freq. Band[MHz] Uplink/Downlink	880~915 925~960	1710~1785 1805~1880	1850~1910 1930~1990	1920~1980 2110~2170
ARFCN range	0~124 & 975~1023	512~885	512~810	UL:9612~9888 DL:10562~10838
Tx/Rx spacing	45MHz	95MHz	80MHz	190MHz
Mod. Bit rate/ Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us	3.84Mcps
Time Slot Period/Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms	Frame length : 10ms Slot length : 0.667ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK	QPSK HQPSK
MS Power	33dBm~5dBm	30dBm~0dBm	30dBm~0dBm	24dBm ~ - 50dBm
Power Class	4 (max +33dBm)	1 (max +30dBm)	1 (max +30dBm)	3 (max +24dBm)
Sensitivity	-102dBm	-100dBm	-100dBm	-106.7dBm
TDMA Mux	8	8	8	NA
Cell Radius	35Km	2Km	2Km	2Km

2-2. GSM TX power class

TX Power control level	GSM900	TX Power control level	DCS1800	TX Power control level	PCS1900
5	33±2 dBm	0	30±3 dBm	0	30±3 dBm
6	31±2 dBm	1	28±3 dBm	1	28±3 dBm
7	29±2 dBm	2	26±3 dBm	2	26±3 dBm
8	27±2 dBm	3	24±3 dBm	3	24±3 dBm
9	25±2 dBm	4	22±3 dBm	4	22±3 dBm
10	23±2 dBm	5	20±3 dBm	5	20±3 dBm
11	21±2 dBm	6	18±3 dBm	6	18±3 dBm
12	19±2 dBm	7	16±3 dBm	7	16±3 dBm
13	17±2 dBm	8	14±3 dBm	8	14±3 dBm
14	15±2 dBm	9	12±4 dBm	9	12±4 dBm
15	13±2 dBm	10	10±4 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4dBm	11	8±4dBm
17	9±3dBm	12	6±4 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm	14	2±5 dBm
		15	0±5 dBm	15	0±5 dBm

3. Product Function

Main Function

- GPRS Class 10
- EGPRS Class E2
- GSM 900MHz & DCS1800MHz & 1900MHz & WCDMA FDD1
- Triple Vocoder (HR, FR, EFR)
- Slide type
- Built-in Digital Camera (1.3 Mega/VGA CMOS Sensor)
- AMLCD (262K TFT colors)
- Sending Photo & Video by MMS or E-Mail
- Downloadable Game via JAVA
- 64 Polyphonic Ring Tone
- WAP 2.0 Browser (Including xHTML/WCSS MP, w/HTTP)
- Video Telephony
- External Memory Card Socket(T-flash)

4. Array course control

4-1. Software Adjustments



1. JIG: Download, Trace, Calibration, etc
2. RF test cable: RF test
3. Test cable: JIG to phone
4. TA (Travel Adaptor)
5. Data Link Cable : USB cable
6. Serial cable: PC to JIG

4-2. Software Downloading

4-2-1. Downloading Binary Files

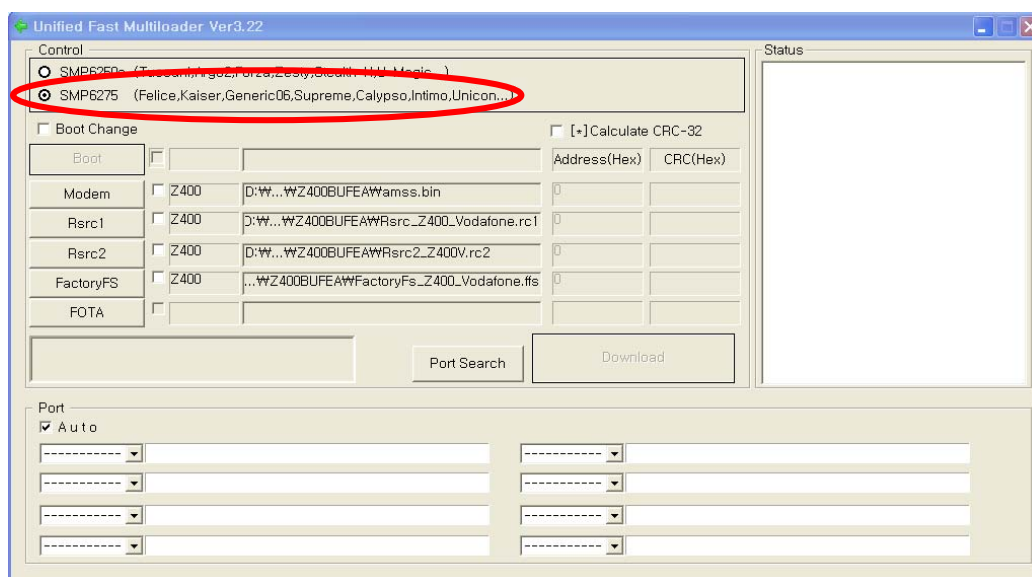
- Four binary files for downloading Z360
 - amss.bin : Modem binary for communication function
 & Mocha binary for user interface and various application
 - Rsrc_Z360_Orange.rc1: Files need for each application
 - Rsrc2_Z360.rc2 : Power on/off animation
 - FactoryFs_Z360_Orange.ffs : Default file system to be put into in initial production

4-2-2. Pre-requisite for Downloading

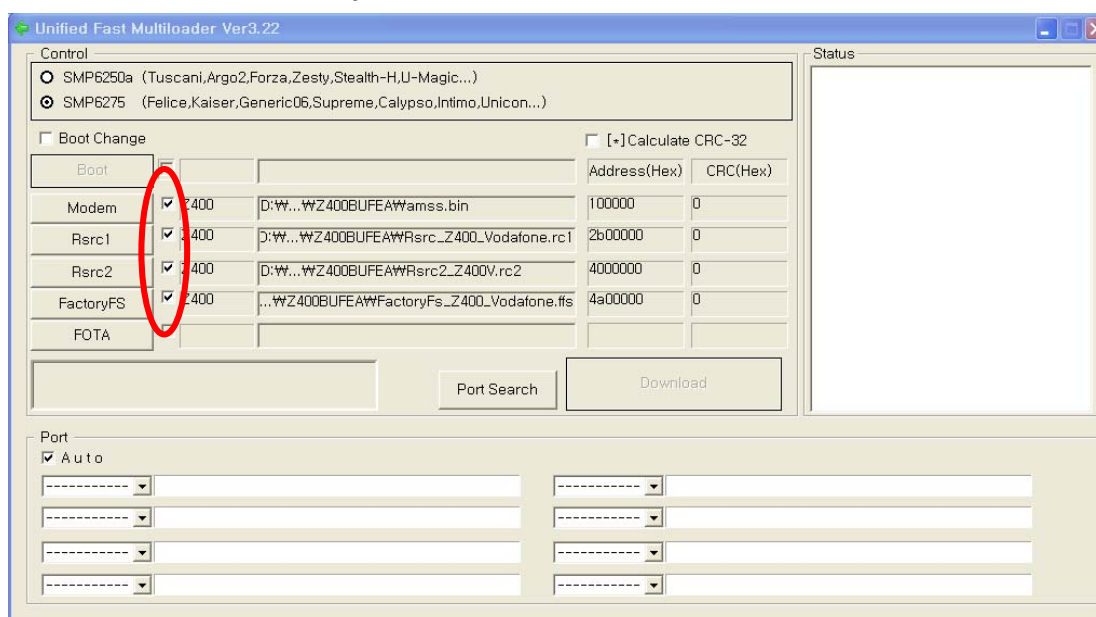
- Downloader Program([FastMultiLoader V3.28.exe](#))
- SGH-Z360 Mobile Phone
- USB Data Link Cable
- Binary files

4-2-3. S/W Downloader Program

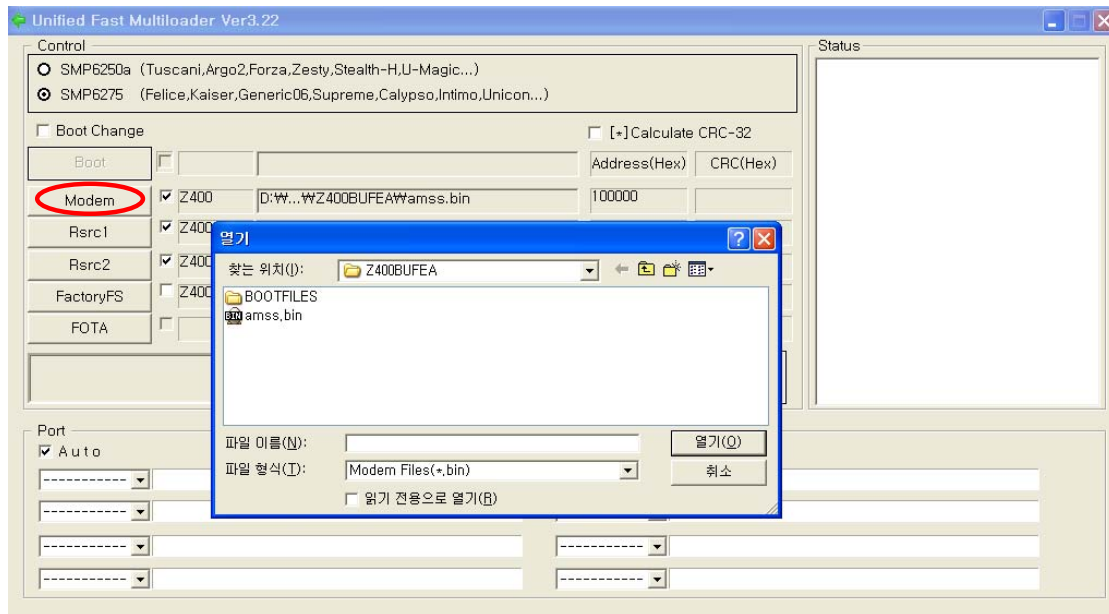
1. Boot the Z360 by pressing 'Power ON key' + 'Number 9 key' at the same time-
If you do properly, you can see the following message on sub LCD "SGH-Z360
DOWNLOAD"
2. Load the binary download program by executing the "**FastMultiLoader V3.22.exe**". And
then Check the SMP6275.



3. Select the check box what you want to download.

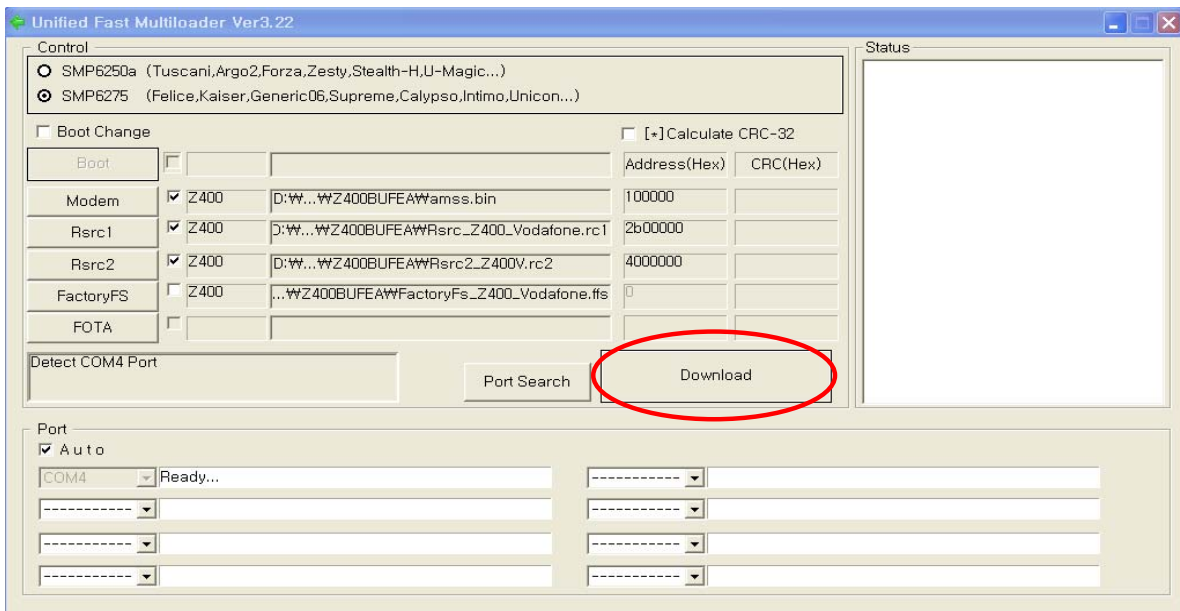


4. Select the binary file what you want to download



* Up to eight ports are supported.

5. Now press the button 'DownLoad'.

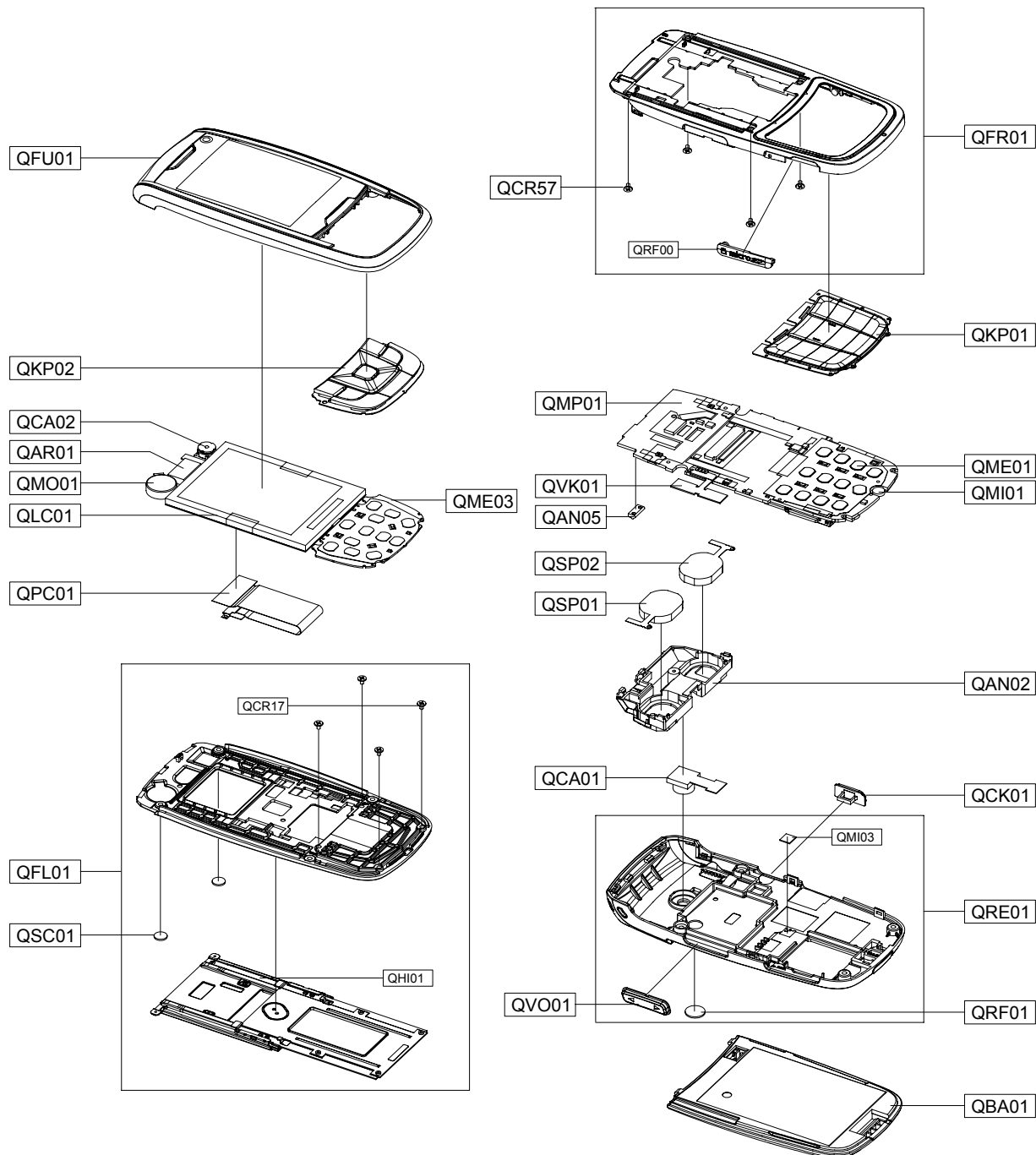


6. When downloading is complete, UE reboot automatically.

- If there is difference in FactoryFs.bin, UE will format file system automatically.

5. Exploded View/Disassembly&Assembly Instructions

5-1. Cellular phone Exploded View



5-2. Cellular phone Parts list

Design LOC		Description	SEC CODE
QAN02		INTENNA-SGHZ360	GH42-00972A
QAN05		ASSY MEC-INTENNA CONTACT	GH75-08168A
QAR01		AUDIO-RECEIVER	3009-001230
QBA01		BATTERY-900MA, BLACK ,ENG,M	GH43-02582A
QCA01		UNIT-CAMERA	GH59-03651A
QCA02		UNIT-VGA CAMERA	GH59-03473A
QCK01		PMO-CAMERA KEY V2	GH72-33700A
QCR57		SCREW-MACHINE	6001-002001
QFU01		ASSY CASE-SLIDE UPPER	GH98-02041A
QKP01		ASSY KEYPAD-MAIN(XET/D_GRY)	GH98-02045A
QKP02		ASSY KEYPAD-SUB(XET/D_GRY)	GH98-02046A
QLC01		LCD-MAIN SGH-Z360	GH07-00986A
QME01		UNIT-MAIN KEY DOME SHEET	GH59-03570A
QME03		UNIT-MENU KEY FPCB	GH59-03476A
QMI01		MICROPHONE-ASSY	GH30-00301A
QMO01		MOTOR DC-SGHZ130	GH31-00154C
QMP01		PBA MAIN-SGHZ360	GH92-03025A
QPC01		MEA-SLIDE CABLE KIT	GH97-06641A
QRF01		MPR-SHEET RF CAP	GH74-26197A
QSC01		MPR-SHEET SCREW CAP	GH74-26199A
QSP01		MICRO SPEAKER	3001-002045
QSP02		MICRO SPEAKER	3001-002046
QVK01		UNIT-VOLUME KEY	GH59-03472A
QVO01		PMO-VOLUME KEY	GH72-31081A
QFL01		ASSY CASE-SLIDE LOWER	GH98-02042A
	QCR17	SCREW-MACHINE	6001-001460
	QHI01	ASSY HINGE-SLIDE	GH98-02613A
QRE01		ASSY CASE-REAR	GH98-02454A
	QMI03	RMO-RUBBER IMC	GH73-08203A
QFR01		ASSY CASE-FRONT	GH98-02043A
	QRF00	PMO-COVER MEMORY V2	GH72-33701A

Description	Sec Code
SCREW-TAPPING	6002-001285
SCREW-TAPPING	6002-001285
SCREW-TAPPING	6002-001285
BAG PE	6902-000634
CBF INTERFACE-DATA LINK CABLE	GH39-00444A
ADAPTOR-SGHD800 TA(EU)	GH44-01060A
S/W CD-SGH-Z360 SAMSUNG PC STU	GH46-00289A
UNIT-EARPHONE(BLK)	GH59-02499A
SPRING ETC-LOCKER BATT	GH61-00271A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(P)-WATER SOAK	GH68-02026A
LABEL(R)-PALLET FTM	GH68-08573M
LABEL(P)-FTM MP3	GH68-11249A
LABEL(R)-MAIN(FRAN)	GH68-12115A
MANUAL USERS-ORANGE FRENCH	GH68-12248A
MANUAL USERS-FTM FRENCH QSG	GH68-12253A
BOX-UNIT(ORANGE)	GH69-04344A
CUSHION-CASE(EU)	GH69-04345A
PMO-COVER EAR V2	GH72-35503A
MPR-BOHO VINYL KEY PAD	GH74-17373A
MPR-INSU TAPE	GH74-22279A
MPR-GASK TAPE	GH74-24796A
MPR-TAPE PBA INS J TAC	GH74-25600A
MPR-TAPE	GH74-27146A
MPR-TAPE	GH74-27146A
MPR-GASK TAPE	GH74-27148A
MPR-GASK TAPE SUB	GH74-27149A
MPR-INSU TAPE	GH74-27150A
MPR-INSU TAPE	GH74-27151A
MPR-INSU TAPE BACK UP	GH74-27152A
MPR-INSU TAPE BACK UP	GH74-27152A
MPR-SPONGE VIB	GH74-27157A
MPR-SPONGE INTENNA	GH74-27158A
MPR-SPONGE SPK L	GH74-27159A
MPR-SPONGE SPK R	GH74-27160A
MPR-GASK TAPE	GH74-27299A
MPR-GASK TAPE	GH74-27300A
MPR-INSU TAPE	GH74-27302A
MPR-INSU TAPE	GH74-27303A
MPR-INSU TAPE	GH74-27304A
MPR-TAPE SUB CONN	GH74-28126A
MPR-VINYL BOHO UPPER 2	GH74-28411A
MPR-SPONGE LCD 3	GH74-28412A
MPR-SPONGE DECO LOWER	GH74-28571A
MPR-SPONGE FRONT	GH74-28572A
MPR-INSU TAPE	GH74-28609A

5-3. Disassembly and Assembly Instructions

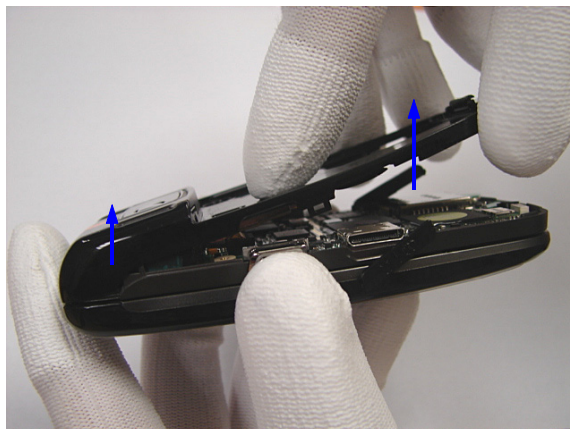
— Disassembly

1



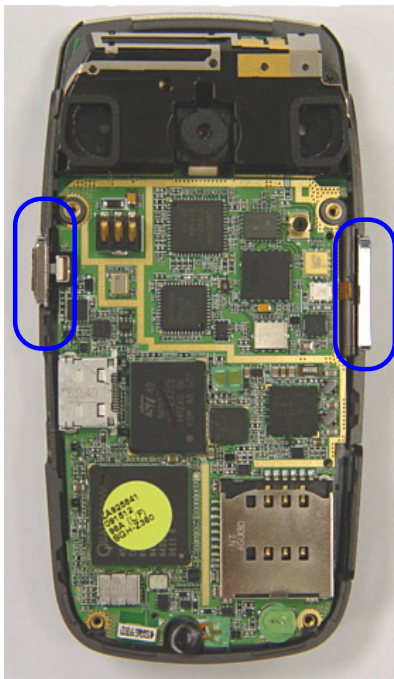
1) Unscrew 4 POINTS.

2



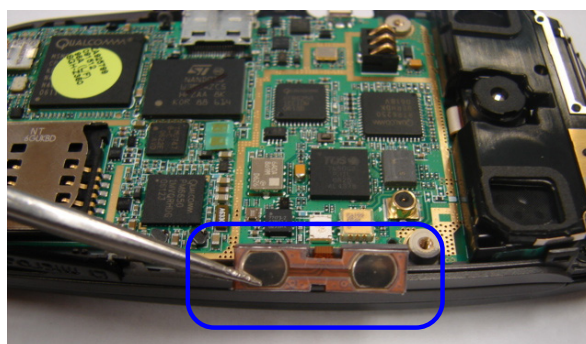
1) When you detach the COVER, please be cautious not to damage to the REAR COVER.

3



1) Remove the SIDE KEY

4



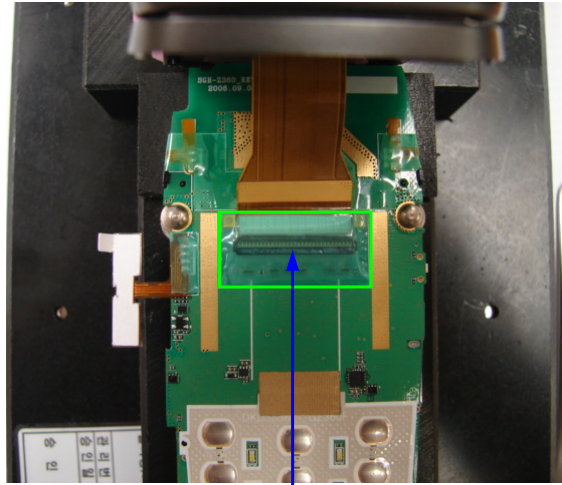
1) Remove the VOLUME KEY F-PCB
(Please be careful not to damage the F-PCB)

5



1) Push the green circle of the picture then PCB LOCKING would be unfastened so that PBA will be separated from the Front.

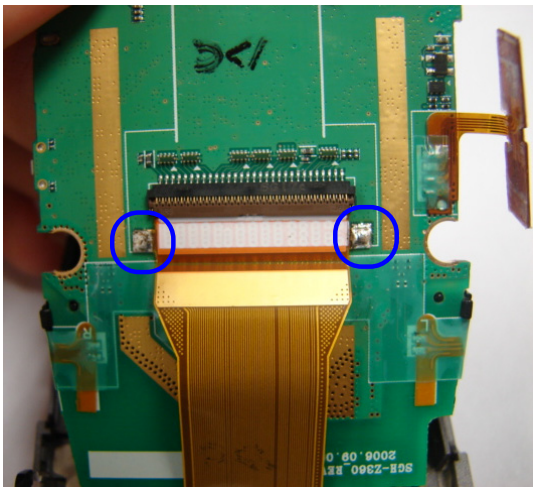
6



Take off the Insulation TAPE with tweezers.

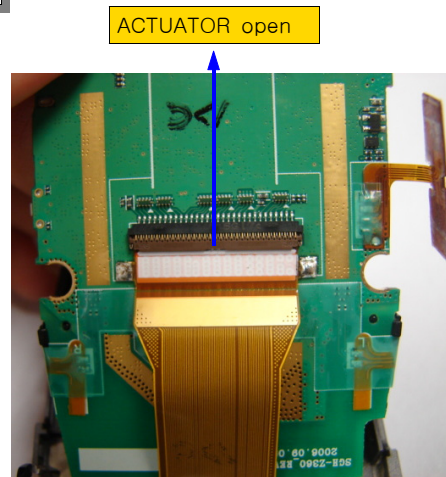
1) Take off the Insulation TAPE with tweezers.

7



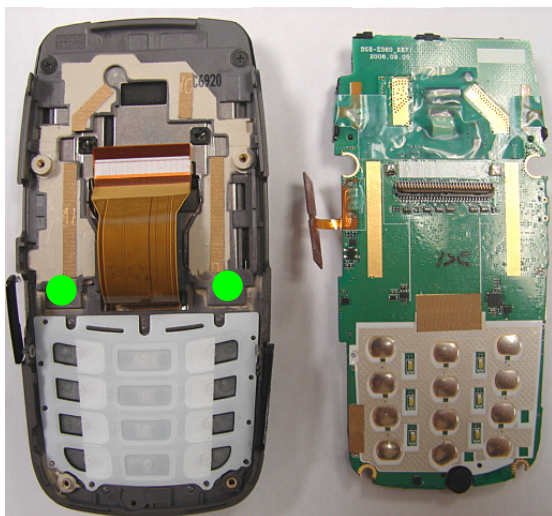
1) Melt down both sides of Slide F-pcb Soldering pads and separate them from the board.

8



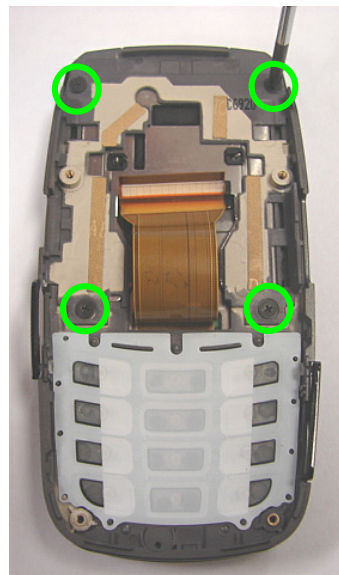
1) Open up the Actuator along the blue colored direction arrow and detach the F-PCB.

9



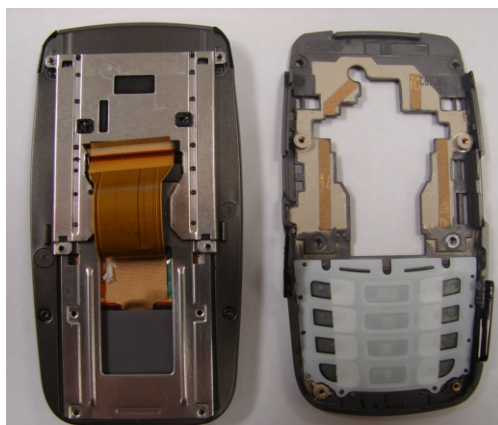
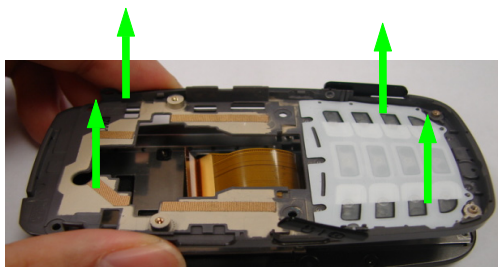
- 1) Separate the PBA from the Front.
- 2) Take off 2 INSU BACKUP TAPE POINTs with tweezers.

10



- 1) Unscrew 4 POINTs.

11



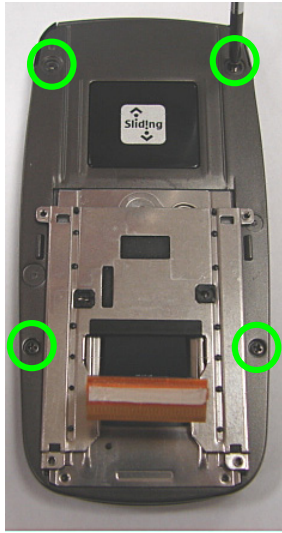
- 1) Lift up the FRONT then it would be separated from the case

12



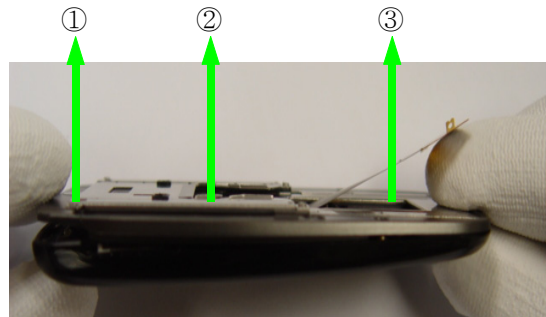
- 1) Remove the SCREW COVERS with tweezers.

13



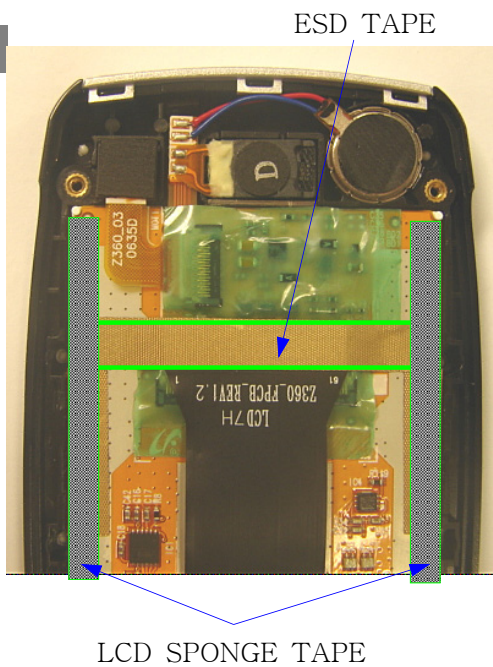
1) Unscrew 4 POINTs.

14



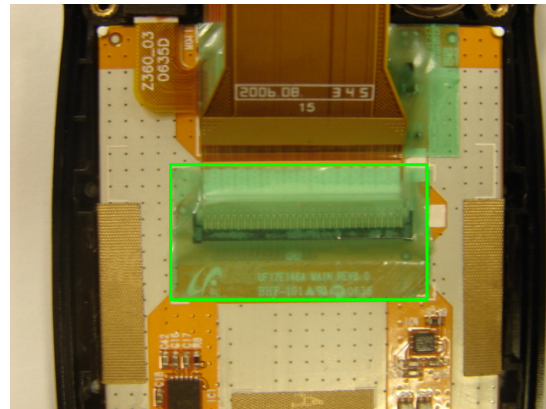
1) Separate the upper part from the lower part.

15



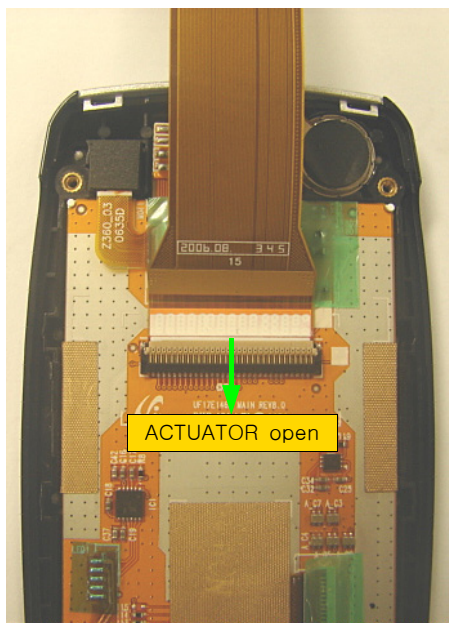
1) Take off the 2 points of LCD SPONGE which are located on the both side of LCD.
2) Detach ESD tape with tweezers.

16



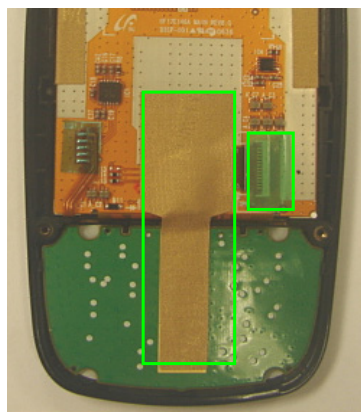
1) Remove the insulation tape with tweezers.

17



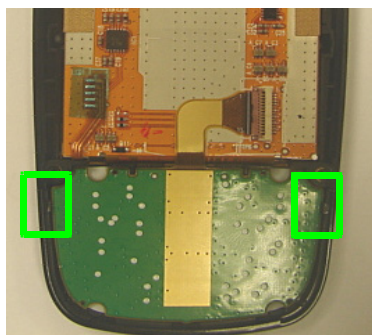
1) Open up the Actuator and separate Slide F-pcb by pulling it.

18



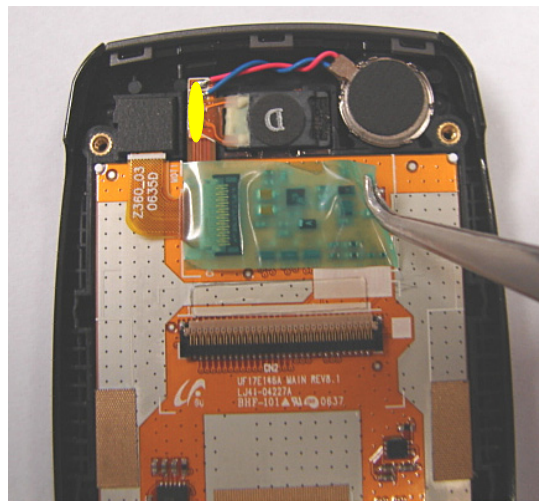
1) Remove the conductive tape with tweezers.
Take off the insulation tape which is on the SUB KEY connector.

19



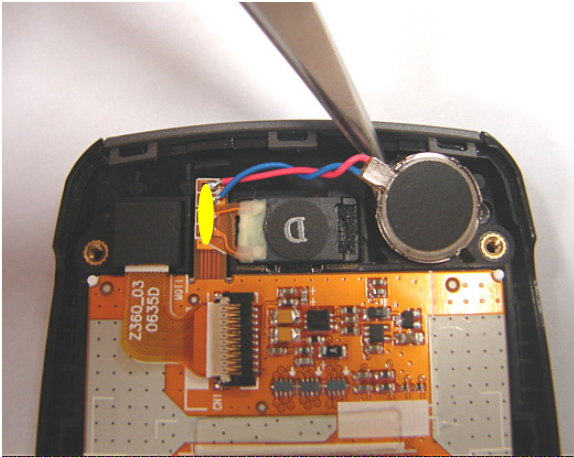
1) Separate the SUB KEY from Slide Upper by pulling both of green squared LOCKERS.

20



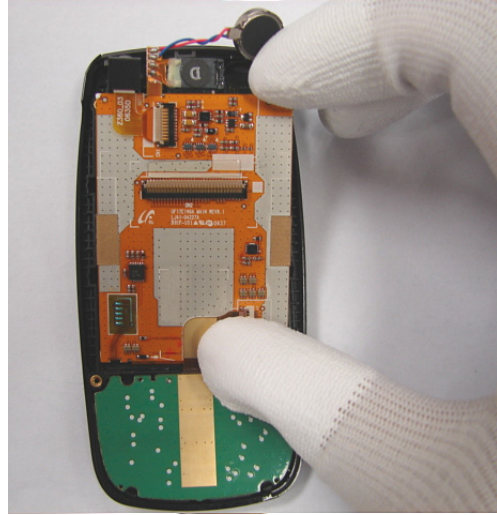
1) Take off the insulation Tape with tweezers.

21



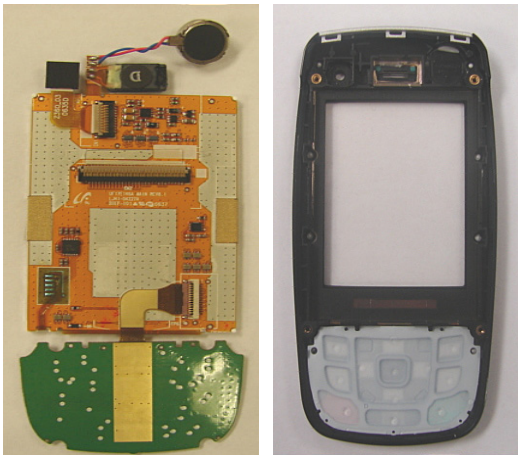
1) Lift up the vibrator with tweezers.

22



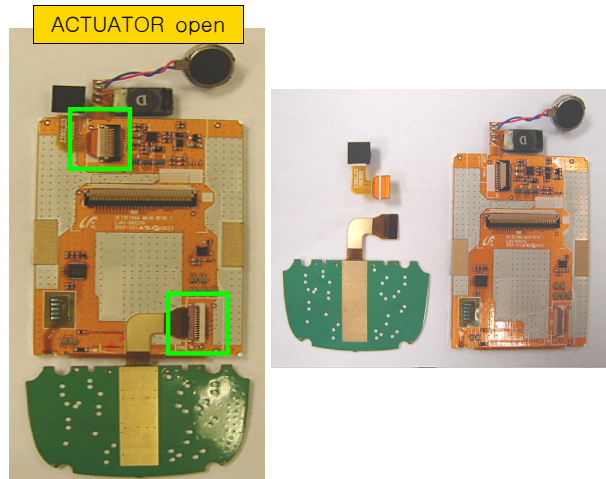
1) Pick the upper side of LCD module and lift up it.

23



1) Separate the SUB KEY from Slide upper by pulling right and left side of the LOCKER.

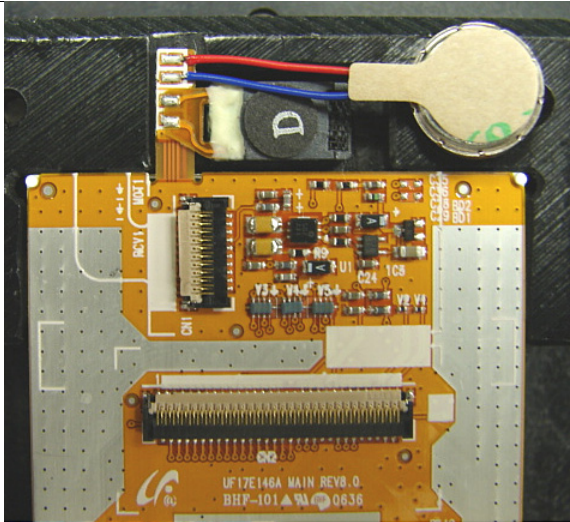
24



1) Open up the the green squared Actuators of the VGA camera and the SUB KEY. Separate them from the LCD.

— Assembly

1

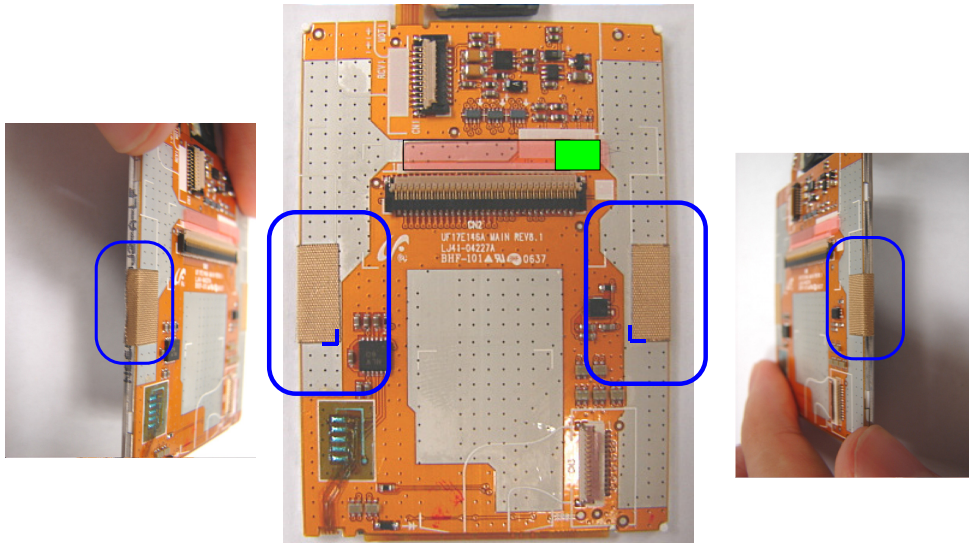


Work Guide

- A. Check out the exterior condition of LCD
- B. Receiver Soldering
- C. Motor Soldering

NO	Part Number	CODE	Detail	Quantity
1	LCD	GH07-00986A	LCD-MAIN SGH-Z360	1
2	MOTOR	GH31-00154A	DC-SGH-Z130	1
	RECEIVER	3009-001230	AUDIO RECEIVER 32Ω	1

2

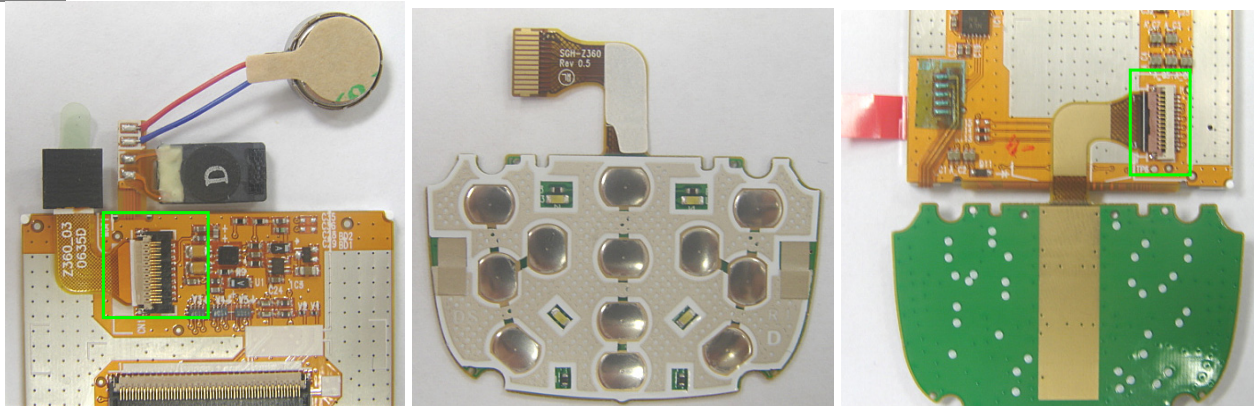


Work Guide

- A. Attach the conductive tape along the reference silk line which is white colored.
- B. Attach the FPCB TAPE and the not sticky part of it must be on the right-hand side.
(You can see the green square and it shows the not sticky part of FPCB TAPE.)
- C. Attach the GASKET TAPES on the right and left side. They must be followed by reference silk line as well. (The both side of GASKET TAPES must not cross the part of LCD VIEW.)

NO	Part Name	CODE	Size	Quantity
1	GASKET TAPE	GH74-24796A	5*6	2
2	MPR-TAPE(FPCB)	GH74-27146A	18*3	1

3

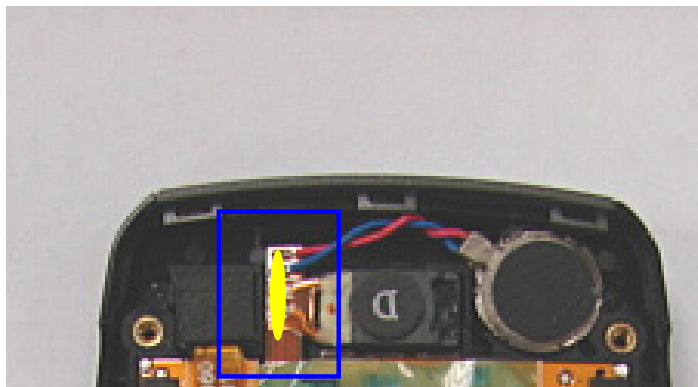


Work Guide

- A. Insert VGA CAMERA Module into LCD Socket.
 B. Insert MENU KEY FPCB into LCD Socket.

NO	Part Name	CODE	Detail	Quantity
1	VGA CAMERA	GH59-03473A	UNIT VGA CAMERA	1
2	NEMU KEY PCB	GH59-03476A	MENU KEY FPCB Z360	1

4

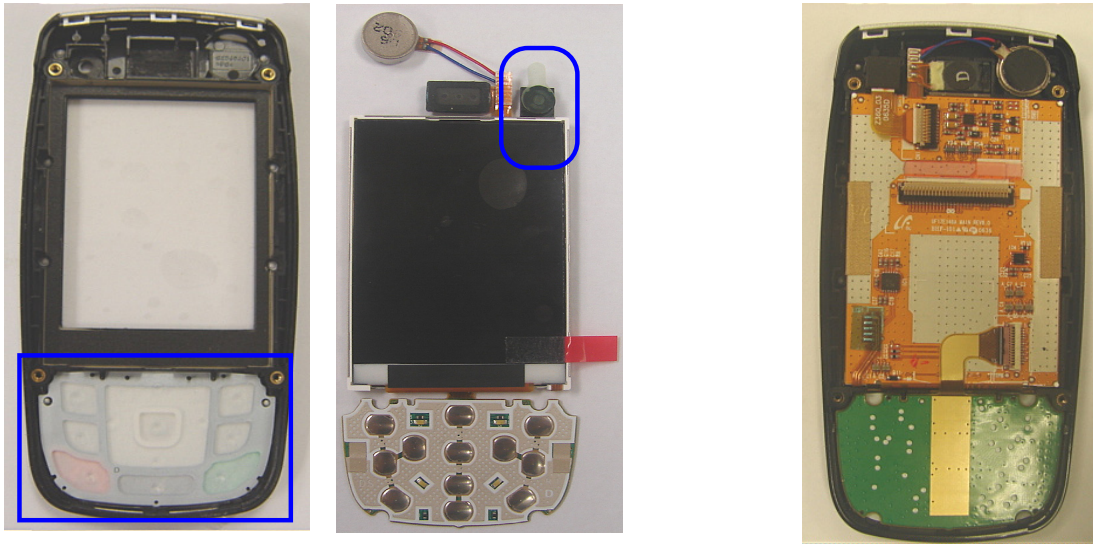


Work guide

- A. Bond the part of Soldering with yellow glue.

NO	Part Name	CODE	Size	Quantity
1	Bonding	common used	common used	1

5

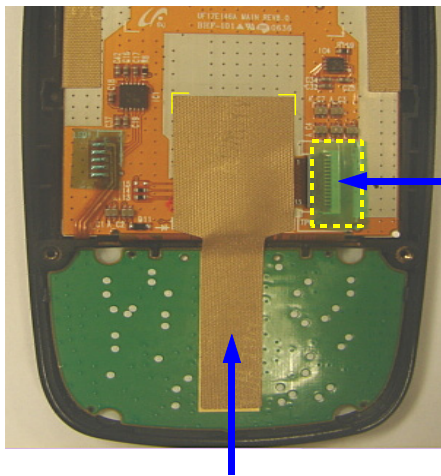


Work Guide

- A. Fix the Sub key on the Slide Upper.
 B. Put together LCD ASS'Y and Slide Upper like the right-hand side picture.

NO	Part Name	CODE	규격	Quantity
1	Slide Upper	GH98-02041A	ASSY CASE-SILDE UPPER	1
2	SUB key pad	-	It depends on countries.	1

6



< Attach INSU TAPE >

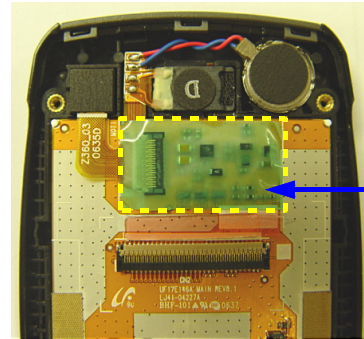
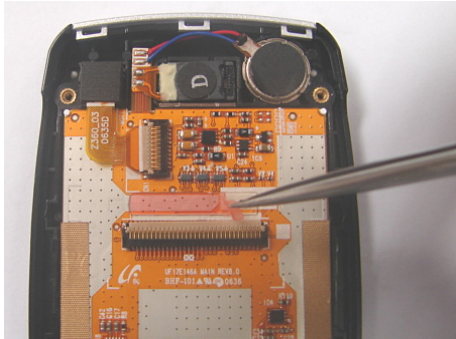
< Attach SUB GASK TAPE >

Work Guide

- A. Attach GASKET TAPE firmly.
 B. Attach INSU TAPE. (See the picture.)

NO	Part Name	CODE	Size	Quantity
1	GASK TAPE SUB	GH74-27149A	SUB GASKET TAPE 13.5*43	4
2	INSU TAPE	GH74-27302A	INSU TAPE 12*7	1

7

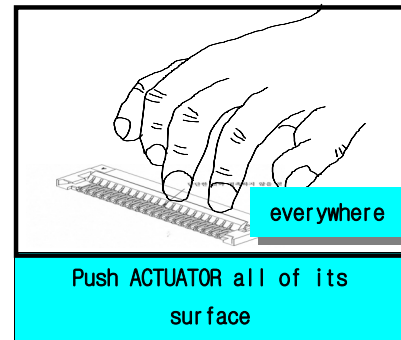
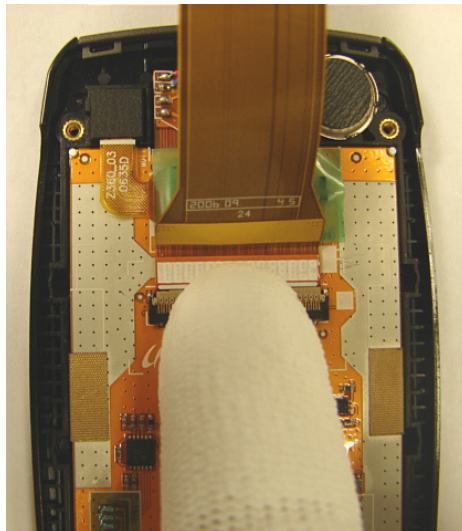


Work Guide

- A. Remove the cover of the connector fixing tape.
 B. Attach the INSU TAPE like the right-hand side picture.

NO	Part Name	CODE	Size	Quantity
1	INSU TAPE	GH74-27146A	18*3	1

8

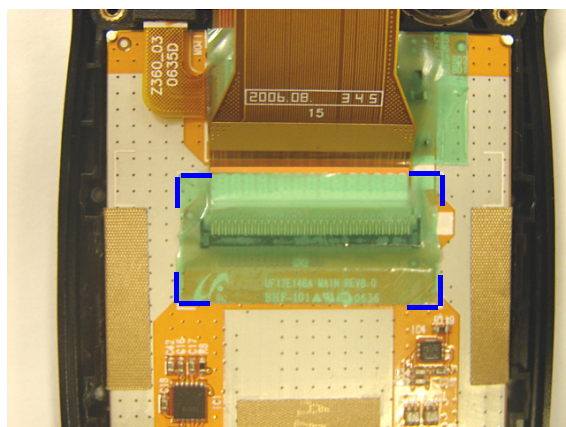


Work Guide

- A. Insert the F-PCB CABLE into the connector and push the Actuator to fix the F-PCB.

NO	Part Name	CODE	Size	Quantity
1	Z360 FPCB CABLE	GH41-01362A	18.6*79.2	1

9

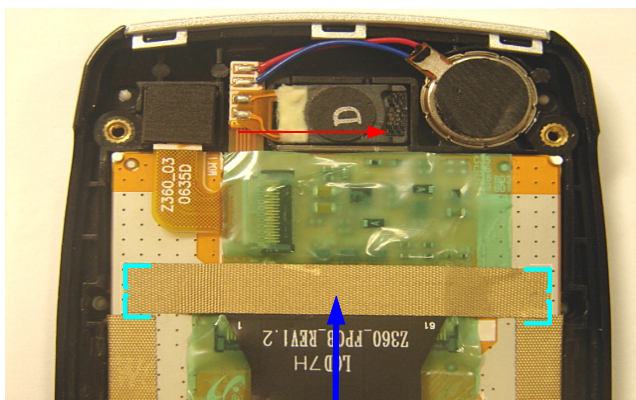


Work Guide

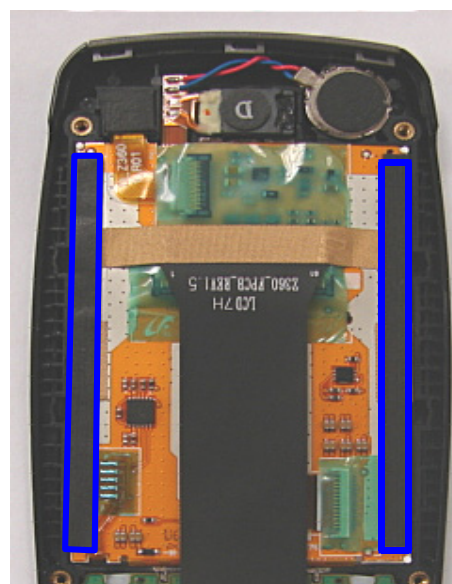
A. Attach the INSU TAPE.

NO	Part Name	CODE	Size	Quantity
1	INSU TAPE	GH74-27150A	24.5*12.5	1

10



< Attach GASK TAPE >



< Attach LCD SPONGE >

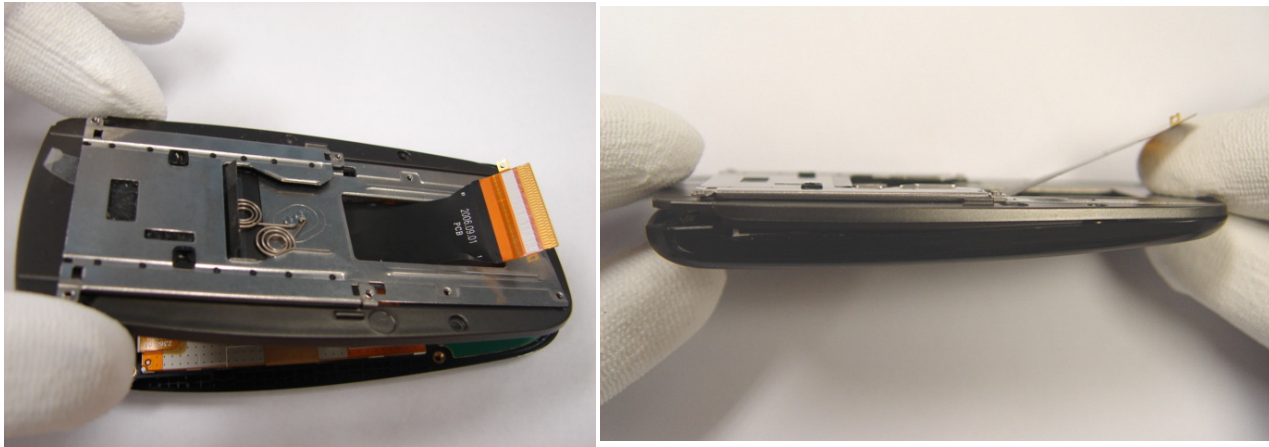
Work Guide

A. Attach the GASK TAPE like the left-hand side picture.

B. Attach the LCD SPONGES left and right side of LCD.

NO	Part Name	CODE	Size	Quantity
1	GASK TAPE	GH74-27148A	36*5	1
2	LCD SPONGE-3	GH74-28412A	2.5*50*0.3T	2

11

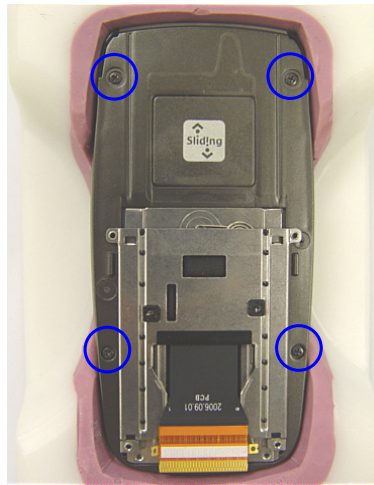


Work Guide

A. Put the F-PCB through the hole of Slide lower.
 B. Assemble the lower side of Slide Lower first then push the upper side of it.

NO	품 명	CODE	규 격	수량
1	Slide Lower	GH98-02042A	Z360	1

12



Work Guide

A. SCREW 4 POINTs.

NO	Part Name	CODE	Size	Quantity
1	SCREW	6002-001285	M1.4*L3.0	4

13

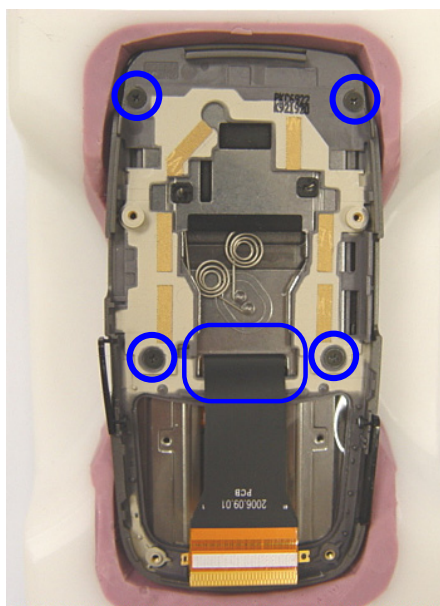


Work Guide

A. Attach 2 SCREW CAP POINTs.

NO	Part Number	CODE	Size	Quantity
1	SCREW CAP	GH74-26199A	P14.3	2

14

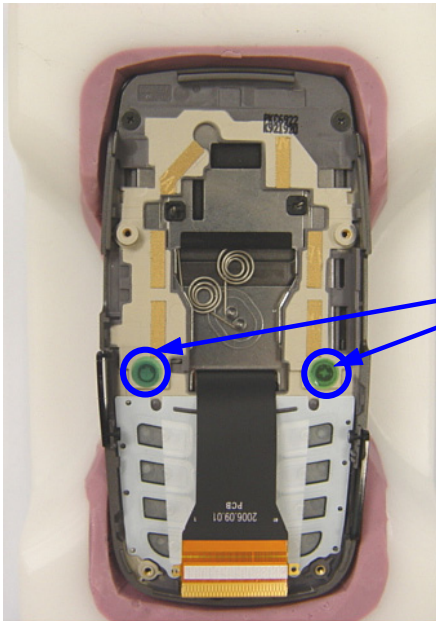


Work Guide

A. Combine FRONT COVER with SLIDE HINGE.(F-PCB must come out from upper side of FRONT COVER)
B. SCREW 4 POINTs.

NO	Part Name	CODE	Size	Quantity
1	FRONT COVER	GH98-02043A	Z360 BLK	1
2	SCREW	6001-002001	M1.4*L1.5	4

15



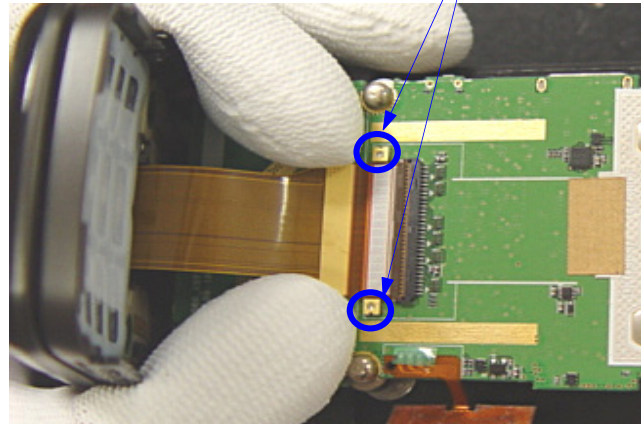
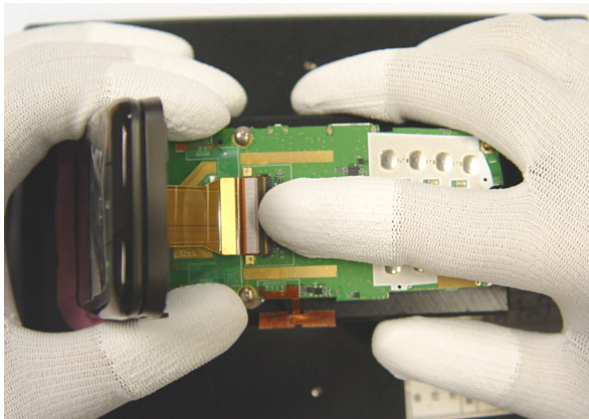
Attach 2 points of
BACK UP INSU TAPE.

Work Guide

- A. Fix the 3*4 KEY.
B. Attach BACK UP INSU TAPES on the screws.

NO	Part Name	CODE	Size	Quantity
1	BACK UP INSU TAPE	GH74-27152A	P 15.5	2
2	3*4 KEY PAD	GH98-02045A	XET/D_GRY	1

16



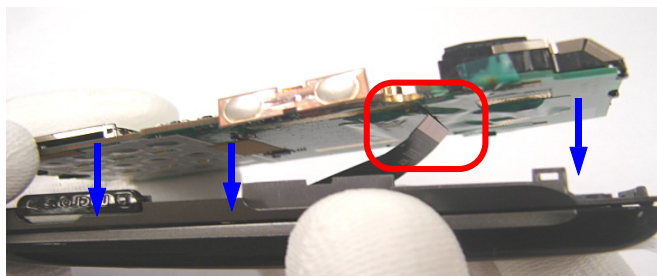
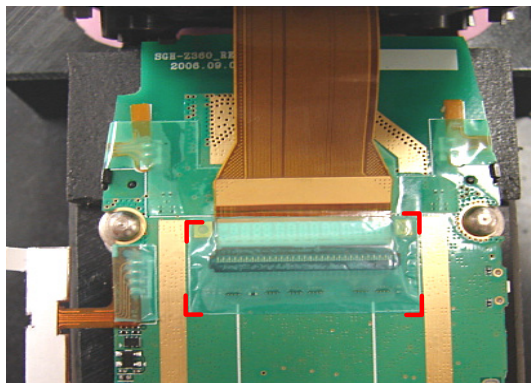
Soldering

Work Guide

- A. Insert Slide F-PCB into PBA Board Connector.
B. Push the Actuator to fix the F-PCB.
C. Solder 2 points of F-PCB.

NO	Part Name	CODE		Quantity
1	PBA Ass'y	GH92-03025A	SGH-Z360 PBA	1
2	Slide Ass'y	GH97-06229A	Z360 BLK	1

17

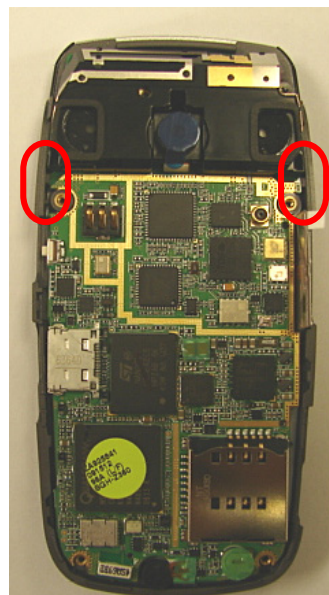


Work Guide

- A. Attach the connector INSU TAPE.
B. Attach the PBA firmly on the FRONT CASE.

NO	품 명	CODE	규 격	수량
1	INSU TAPE	GH74-27150A	24.5*12.5	1

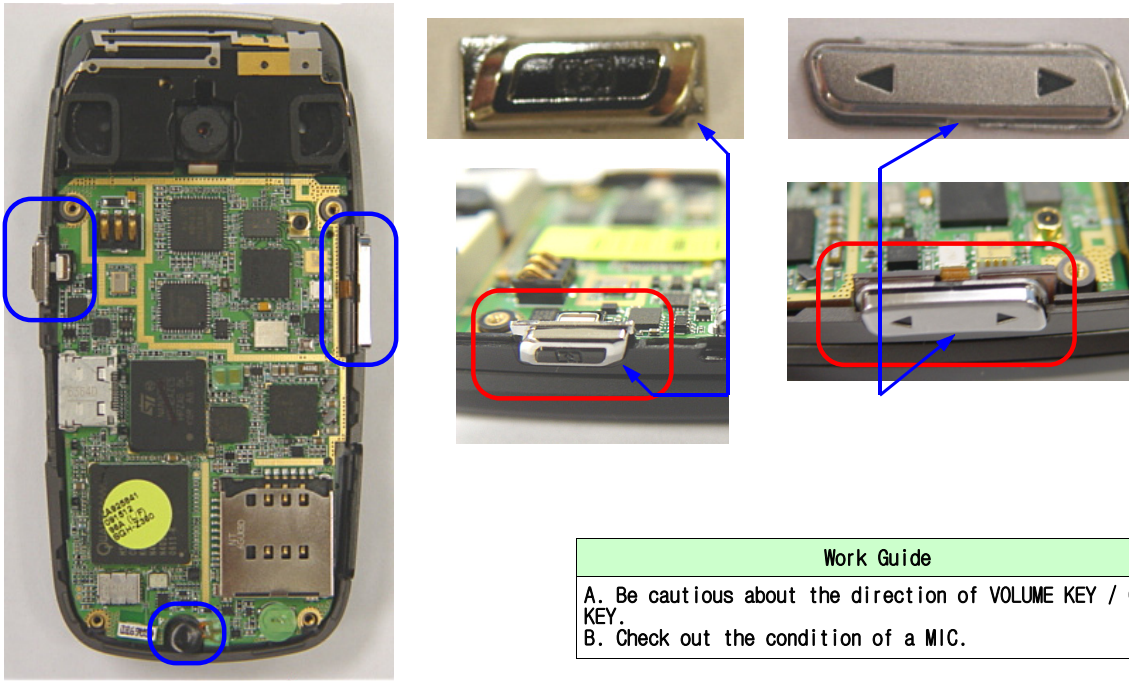
18



Work Guide

- A. Make sure that SIDE KEY PCB is attached beside the Wall correctly.
B. Push the left and right sides of PBA so that BOARD would be hooked on the LOCKER.

19

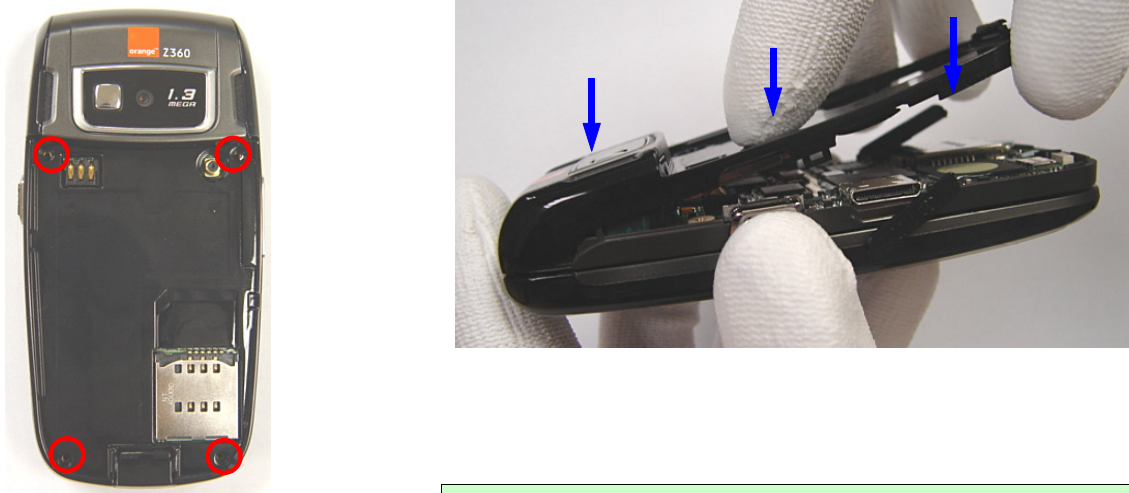


Work Guide

- A. Be cautious about the direction of VOLUME KEY / CAM KEY.
 B. Check out the condition of a MIC.

NO	Part Name	CODE	Size	Quantity
1	VOLUME KEY	GH74-27150A	24.5*12.5	1
2	CAMERA KEY	GH72-33700A	Z360 ABS	1

20



< SCREW 4 Points>

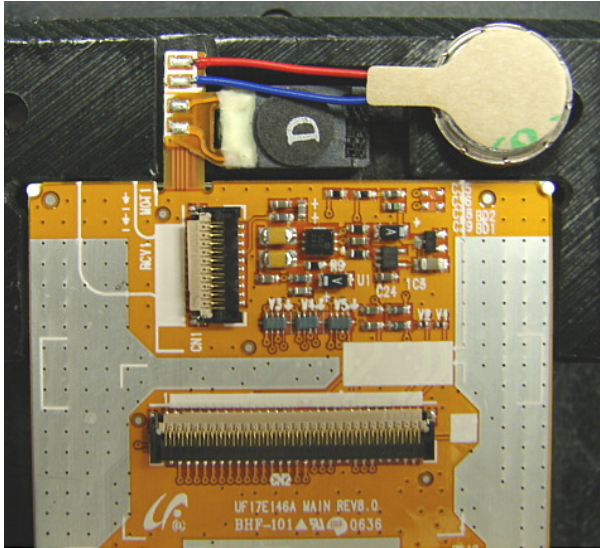
Work Guide

- A. Assemble REAR CASE.
 B. SCREW 4 POINTS.

NO	Part Name	CODE	Size	Quantity
1	REAR CASE	GH97-06382A	REAR BLK Z360	1
2	SCREW	6002-001285	M1.4*L3.0	4

– LCD KIT Assembly

1

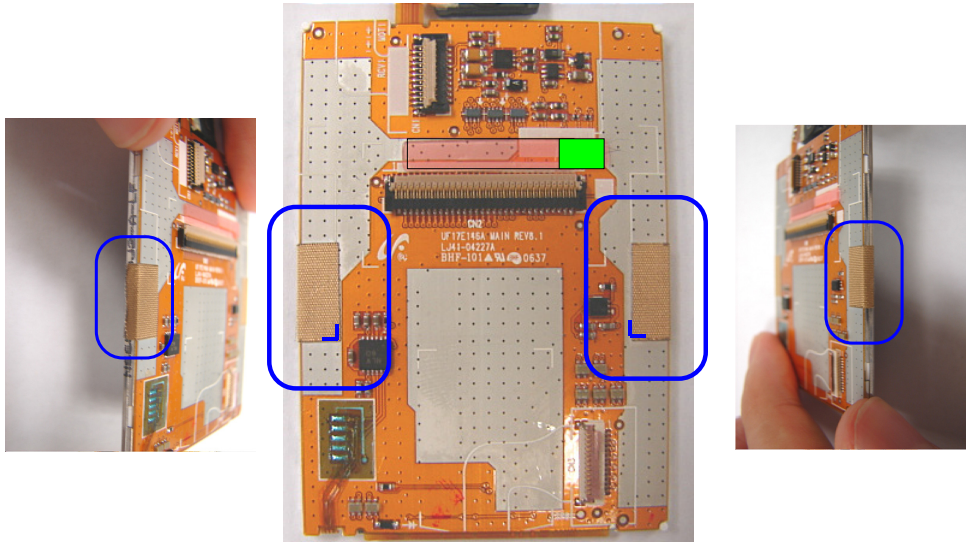


Work Guide

- A. Check out the exterior condition of LCD
- B. Receiver Soldering
- C. Motor Soldering

NO	품 명	CODE	규 격	수량
1	LCD	GH07-00986A	LCD-MAIN SGH-Z360	1

2

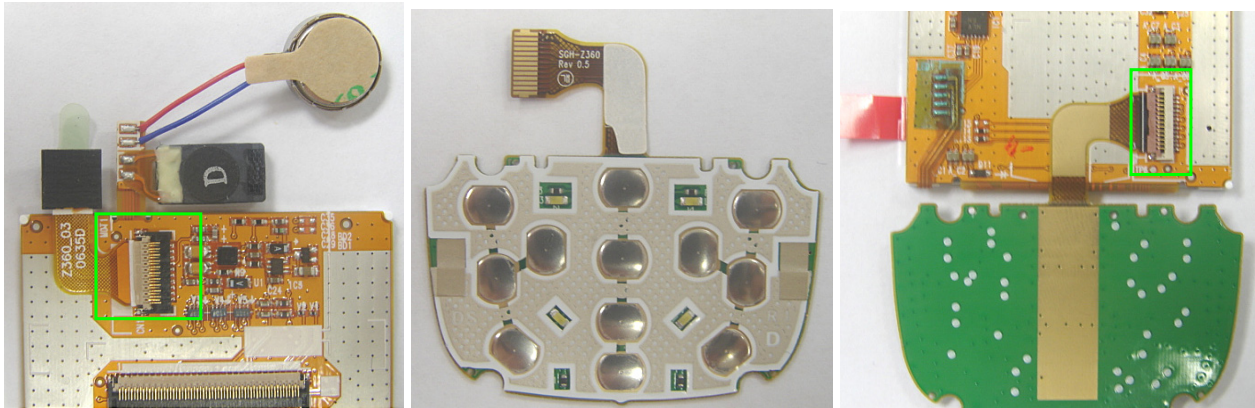


Work Guide

- A. Attach the conductive tape along the reference silk line which is white colored.
- B. Attach the FPCB TAPE and the not sticky part of it must be on the right-hand side.
(You can see the green square and it shows the not sticky part of FPCB TAPE.)
- C. Attach the GASKET TAPES on the right and left side. They must be followed by reference silk line as well. (The both side of GASKET TAPES must not cross the part of LCD VIEW.)

NO	Part Name	CODE	Size	Quantity
1	GASKET TAPE	GH74-24796A	5*6	2
2	MPR-TAPE(FPCB)	GH74-27146A	18*3	1

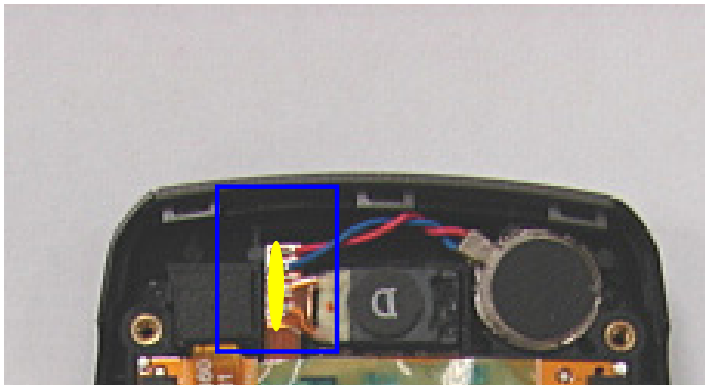
3



Work Guide

- A. Insert the VGA CAMERA Module into the LCD Socket.
B. Insert the MENU KEY FPCB into the LCD Socket.

4

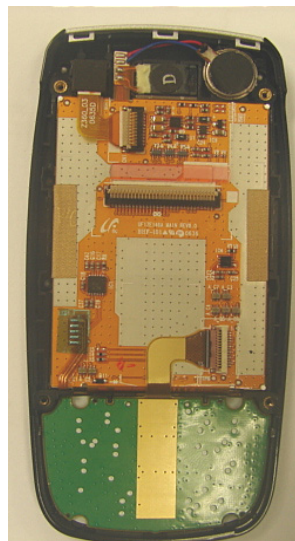
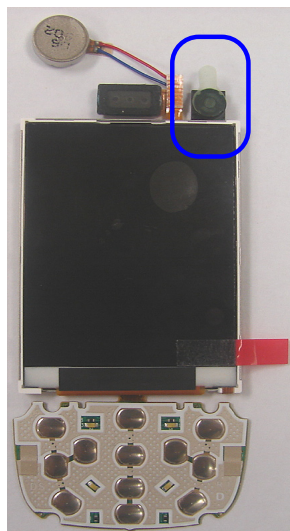


Work Guide

- A. Bond the part of Soldering with yellow glue.

NO	Part Name	CODE	Size	Quantity
1	Bonding	common used	common used	1

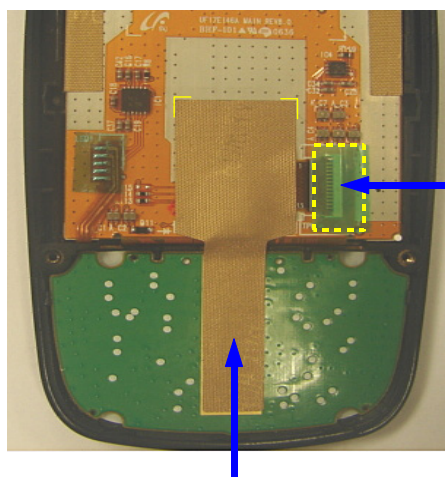
5



Work Guide

- A. Fix the Sub key on the Slide Upper.
- B. Put together LCD ASS'Y and Slide Upper like the right-hand side picture.

6



< Attach INSU TAPE >

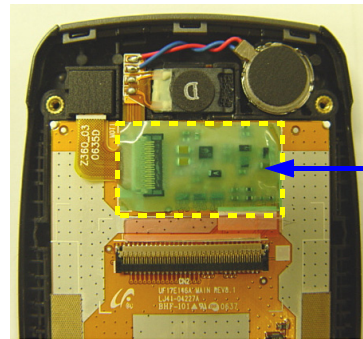
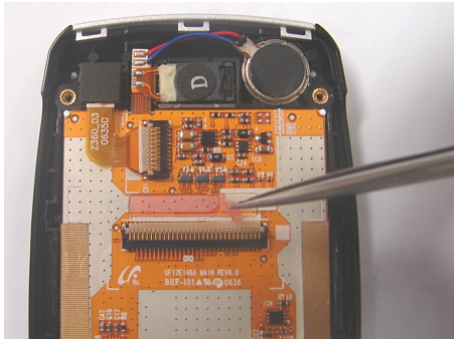
< Attach SUB GASK TAPE >

Work Guide

- A. Attach GASKET TAPE firmly.
- B. Attach INSU TAPE.
(See the picture.)

NO	Part Number	CODE	Size	Quantity
1	GASK TAPE SUB	GH74-27149A	SUB GASKET TAPE 13.5*43	4
2	INSU TAPE	GH74-27302A	INSU TAPE 12*7	1

7



insu tape

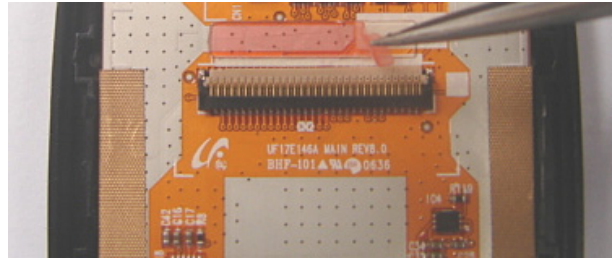
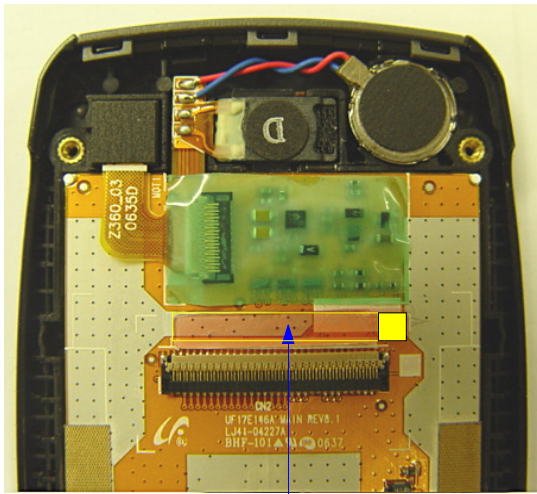
Work Guide

- 가. Remove the cover of the connector fixing tape.
나. Attach the INSU TAPE like the right-hand side picture.

NO	Part Name	CODE	Size	Quantity
1	INSU TAPE	GH74-27146A	18*3	1

— Slide FPCB KIT Assembly

1



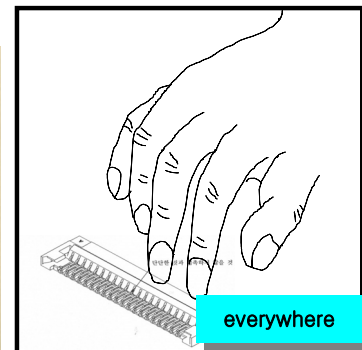
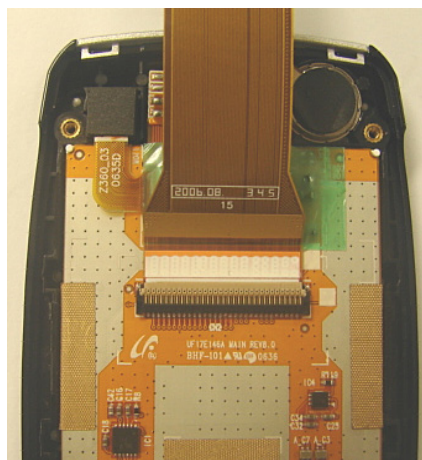
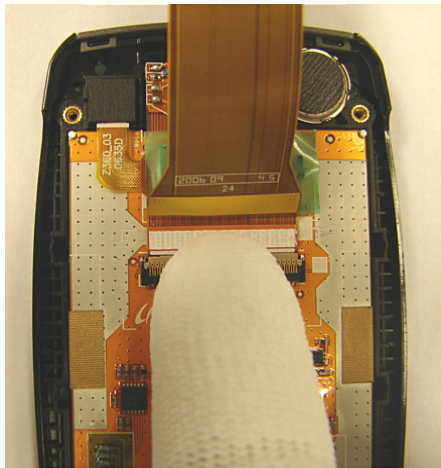
TAPE

Work Guide

- A. Attach the FPCB TAPE and the not sticky part of it must be on the right-hand side.
(You can see the yellow square and it shows the not sticky part of FPCB TAPE.)
- B. Remove the cover of the connector fixing tape. (the)

NO	품 명	CODE	규 격	수량
1	TAPE	GH74-27146A	18*3*T0.4	1

2



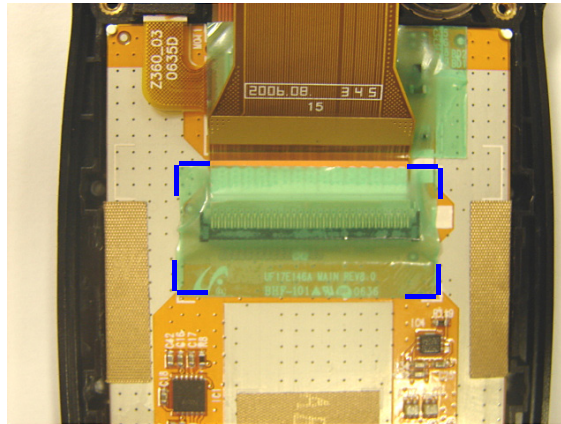
Push ACTUATOR all of its surface.

Work Guide

- A. Insert the F-PCB CABLE into the connector and push the Actuator to fix the F-PCB.

NO	Part Name	CODE	Size	Quantity
1	Slide F-PCB	GH41-01362A	18.6*79.2	1

3

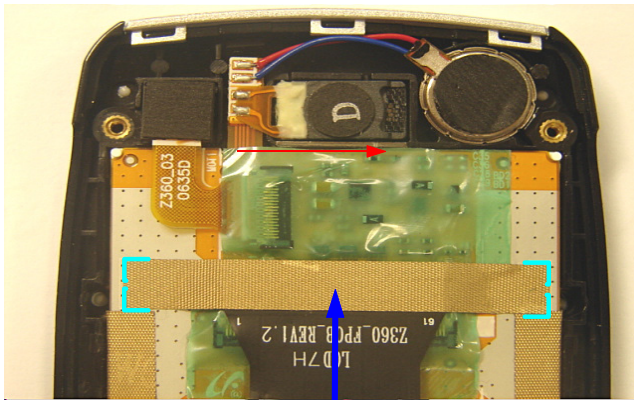


Work Guide

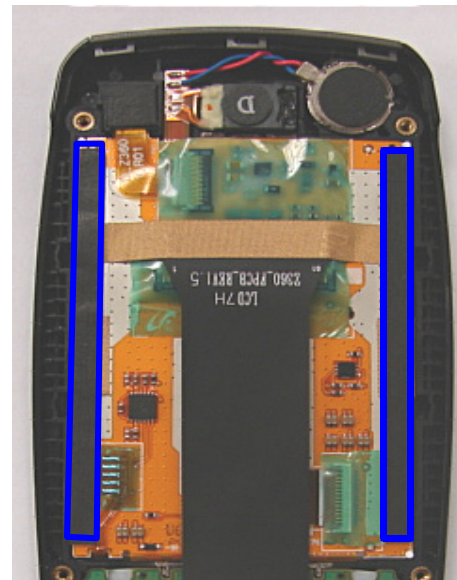
A. Attach the INSU TAPE.

NO	Part Name	CODE	Size	Quantity
1	INSU TAPE	GH74-27150A	24.5*12.5	1

4



< Attach GASK TAPE >



< Attach LCD SPONGE >

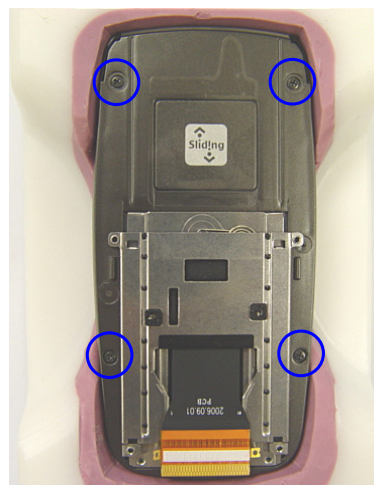
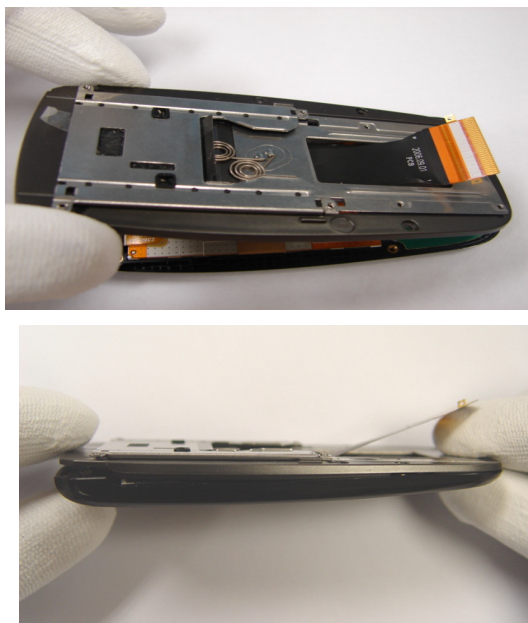
Work Guide

A. Attach the GASK TAPE like the left-hand side picture.

B. Attach the LCD SPONGES left and right side of LCD.

NO	Part Name	CODE	Size	Quantity
1	GASK TAPE	GH74-27148A	36*5	1
2	LCD SPONGE-3	GH74-28412A	2.5*50*0.3T	2

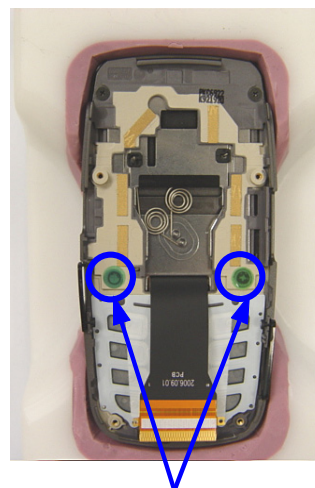
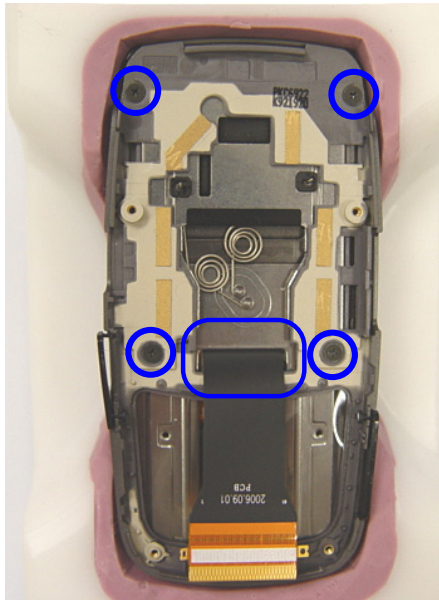
5



Work Guide

A. Put the F-PCB through the hole of Slide lower.
B. Assemble the lower side of Slide Lower first then push the upper side of it.

6



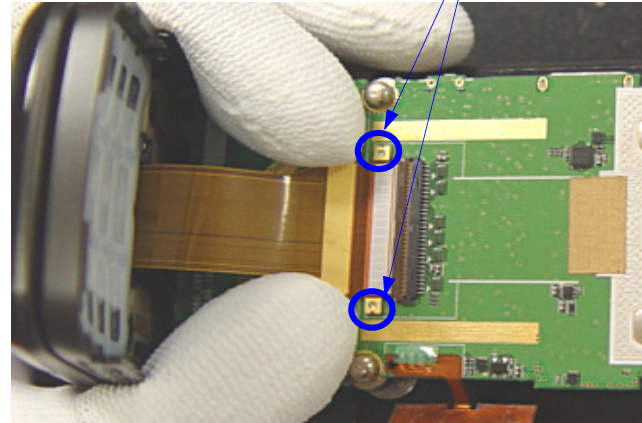
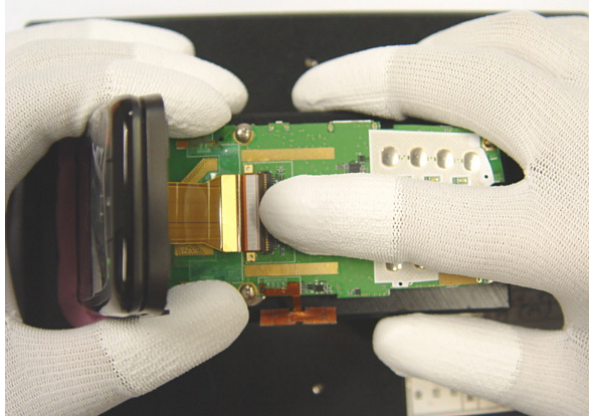
Attach 2 Points of BACK
UP INSU TAPE

Work Guide

A. Attach 2 SCREW CAP POINTs.
B. Combine FRONT COVER with SLIDE HINGE.(F-PCB must come out from upper side of FRONT COVER)
C. SCREW 4 POINTs.
D. Fix the 3*4 KEY.
E. Attach BACK UP INSU TAPES on the screws.

NO	Part Name	CODE	Size	Quantity
1	BACK UP INSU TAPE	GH74-27152A	P 15.5	2

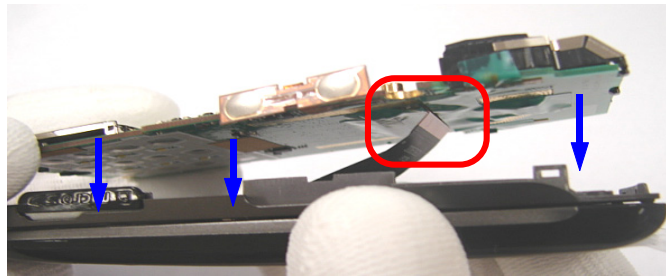
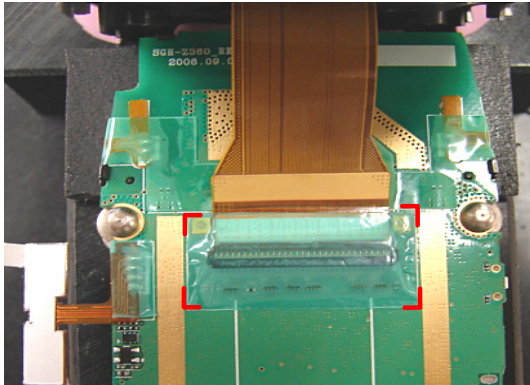
7



Work Guide

- A. Insert Slide F-PCB into PBA Board Connector.
 B. Push the Actuator to fix the F-PCB.
 C. Solder 2 points of F-PCB.

8



Work Guide

- A. Attach the connector INSU TAPE.
 B. Attach the PBA firmly on the FRONT CASE.

NO	품 명	CODE	규 격	수량
1	INSU TAPE	GH74-27150A	24.5*12.5	1

6. MAIN Electrical Parts List

Design LOC	Description	SEC Code	STATUS
ANT100,ANT101	NPR-CONTACT ANT	GH71-05666A	SM
BANT300	COMP-SMD	4202-001215	SM
BAT500	BATTERY	4302-001180	SM
BTC401	CONNECTOR-HEADER	3711-006026	SM
BTU300	RF-MODULE	4709-001398	SM
C100	C-CERAMIC,CHIP	2203-002982	SM
C101	C-CERAMIC,CHIP	2203-006123	SM
C102	C-CERAMIC,CHIP	2203-001124	SM
C103,C106,C123,C127	C-CERAMIC,CHIP	2203-005808	SM
C104,C121,C157,C217	C-CERAMIC,CHIP	2203-005806	SM
C105,C109,C112,C113	C-CERAMIC,CHIP	2203-005682	SM
C110,C111,C116,C120	C-CERAMIC,CHIP	2203-006423	SM
C114,C200,C202,C214	C-CERAMIC,CHIP	2203-005736	SM
C115,C117,C119,C122	C-CERAMIC,CHIP	2203-005682	SM
C118,C146,C149	C-CERAMIC,CHIP	2203-006379	SM
C124,C126,C153,C166	C-CERAMIC,CHIP	2203-005732	SM
C125,C129,C134,C137	C-CERAMIC,CHIP	2203-005682	SM
C128,C130,C135,C136	C-CERAMIC,CHIP	2203-006423	SM
C131	C-CERAMIC,CHIP	2203-000725	SM
C132	C-CERAMIC,CHIP	2203-000836	SM
C138,C139,C141,C165	C-CERAMIC,CHIP	2203-005682	SM
C140,C142,C205,C320	C-CERAMIC,CHIP	2203-006838	SM
C143,C155,C220,C230	C-CERAMIC,CHIP	2203-006423	SM
C145,C147,C207,C318	C-CERAMIC,CHIP	2203-005729	SM
C150	C-CERAMIC,CHIP	2203-005727	SM
C151	C-CERAMIC,CHIP	2203-006642	SM
C152	C-CERAMIC,CHIP	2203-001033	SM
C156,C201,C203,C218	C-CERAMIC,CHIP	2203-006194	SM
C169,C208,C209,C212	C-CERAMIC,CHIP	2203-005682	SM
C170	C-CERAMIC,CHIP	2203-005446	SM
C211	C-CERAMIC,CHIP	2203-005288	SM
C213,C216,C227,C251	C-CERAMIC,CHIP	2203-005682	SM
C215	C-CERAMIC,CHIP	2203-006120	SM
C219,C229,C503,C507	C-CERAMIC,CHIP	2203-005736	SM
C221,C226,C238,C329	C-CERAMIC,CHIP	2203-005806	SM
C222,C225	C-CERAMIC,CHIP	2203-006846	SM
C224	C-CERAMIC,CHIP	2203-000330	SM
C228	C-CERAMIC,CHIP	2203-006556	SM
C231,C233,C237,C250	C-CERAMIC,CHIP	2203-006423	SM
C232,C234,C518,C522	C-CERAMIC,CHIP	2203-006305	SM
C235,C236,C311,C333	C-CERAMIC,CHIP	2203-006194	SM
C300,C301,C313	C-CERAMIC,CHIP	2203-005725	SM
C302,C653	C-CERAMIC,CHIP	2203-006668	SM
C303,C305,C306,C308	C-CERAMIC,CHIP	2203-006423	SM
C304,C309	C-CERAMIC,CHIP	2203-006617	SM
C307,C319,C324,C328	C-CERAMIC,CHIP	2203-005682	SM
C310	C-CERAMIC,CHIP	2203-005480	SM

Design LOC	Description	SEC Code	STATUS
C312,C314,C315,C316	C-CERAMIC,CHIP	2203-006423	SM
C317,TA600,TA601	C-TA,CHIP	2404-001377	SM
C322	C-CERAMIC,CHIP	2203-000233	SM
C325,C326,C410,C501	C-CERAMIC,CHIP	2203-006838	SM
C327,C369	C-CERAMIC,CHIP	2203-006825	SM
C330,C331,C332,C342	C-CERAMIC,CHIP	2203-005806	SM
C334,C335,C336,C337	C-CERAMIC,CHIP	2203-006194	SM
C338,C339,C349,C350	C-CERAMIC,CHIP	2203-006194	SM
C340,C357,C362,C363	C-CERAMIC,CHIP	2203-006423	SM
C341,C354,C377,C380	C-CERAMIC,CHIP	2203-005682	SM
C343,C344,C345,C346	C-CERAMIC,CHIP	2203-005806	SM
C347,C348,C355,C403	C-CERAMIC,CHIP	2203-005806	SM
C351,C352,C353,C356	C-CERAMIC,CHIP	2203-006194	SM
C358,C359,C360,C361	C-CERAMIC,CHIP	2203-006194	SM
C364,C365,C366,C370	C-CERAMIC,CHIP	2203-006423	SM
C367,C368,C371,C404	C-CERAMIC,CHIP	2203-006194	SM
C372,C373,C374,C375	C-CERAMIC,CHIP	2203-006423	SM
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C381,C400,C414,C546	C-CERAMIC,CHIP	2203-006562	SM
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C523,C524,C708	C-CERAMIC,CHIP	2203-006838	SM
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C551,R514	C-CERAMIC,CHIP	2203-006562	SM
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C557,C558,C559,C560	C-CERAMIC,CHIP	2203-005682	SM
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C709,C710	C-CERAMIC,CHIP	2203-006423	SM
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C720,C721,C722,C723	C-CERAMIC,CHIP	2203-005729	SM
C724,C725	C-CERAMIC,CHIP	2203-005729	SM
C729,C730	C-CERAMIC,CHIP	2203-005682	SM
C731	C-CERAMIC,CHIP	2203-005742	SM
CK700	SWITCH-TACT	3404-001303	SM
CN300	CONNECTOR-CARD EDGE	3709-001465	SM
CN701	CONNECTOR-FPC/FFC/PIC	3708-002222	SM
D300,D301,D302	DIODE-TVS	0406-001256	SM
D500,D501,D601	DIODE-SWITCHING	0401-001141	SM
F200	FILTER-SAW	2904-001629	SM
F201	FILTER	2910-000010	SM
F202	FILTER-SAW	2904-001623	SM
F701,F704,F708,F711	FILTER-EMI SMD	2901-001409	SM
F709	FILTER-EMI SMD	2901-001413	SM
F712,F713,F714,F715	FILTER-EMI SMD	2901-001409	SM
IFC400	CONNECTOR-SOCKET	3710-002442	SM
ISO200	RF-MODULE	4709-001408	SM
L102,L602,L603,L604	INDUCTOR-SMD	2703-003004	SM
L103,L105,L203	INDUCTOR-SMD	2703-002903	SM
L104,L120	INDUCTOR-SMD	2703-002870	SM
L106	INDUCTOR-SMD	2703-002910	SM
L109	INDUCTOR-SMD	2703-002955	SM
L111,L125,L126,L131	CORE-FERRITE BEAD	3301-001756	SM
L112,L114,L117,L118	INDUCTOR-SMD	2703-002819	SM
L115	INDUCTOR-SMD	2703-002795	SM
L121,L129	INDUCTOR-SMD	2703-002900	SM
L122,L123	INDUCTOR-SMD	2703-002793	SM

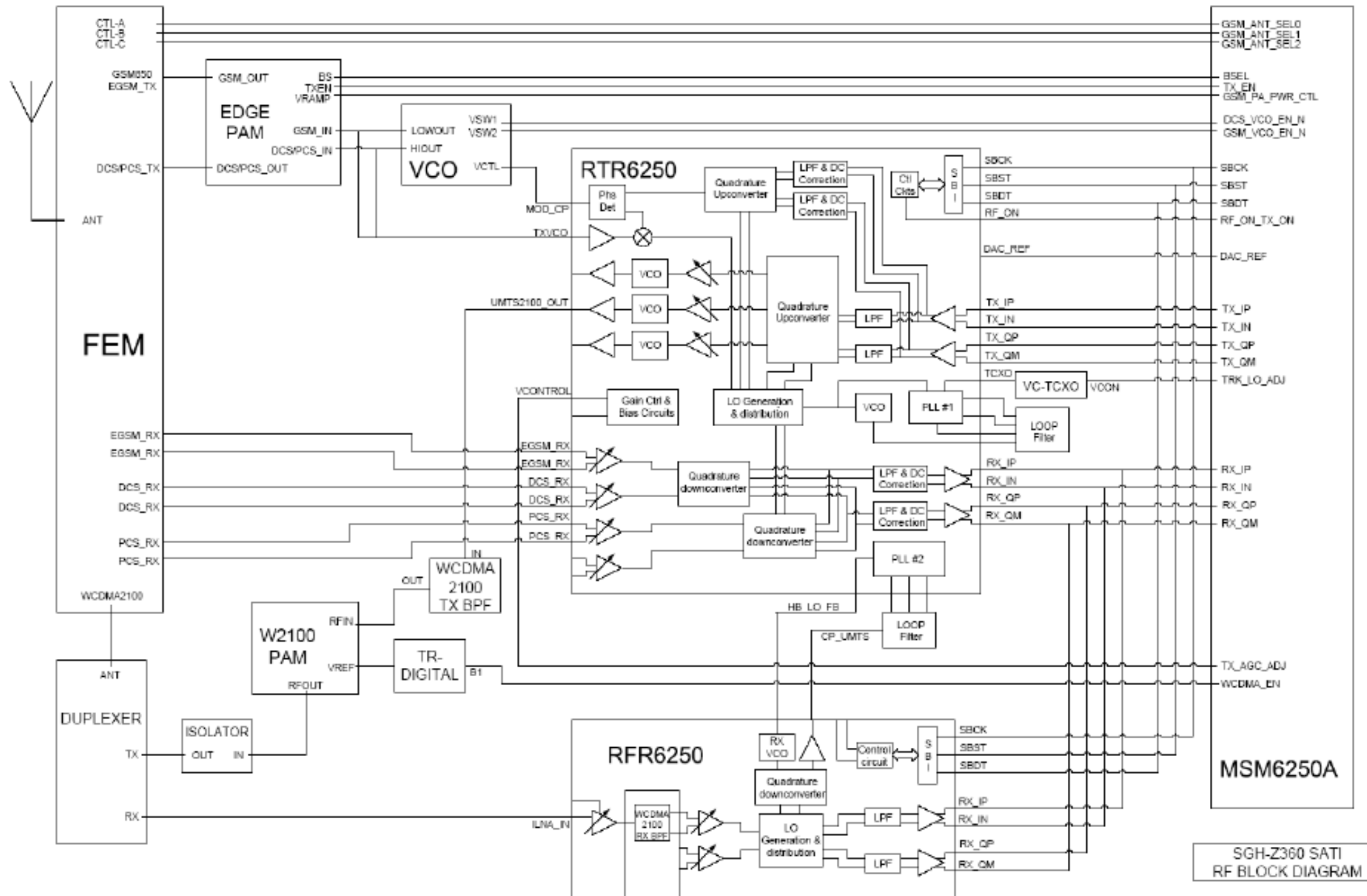
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L204	INDUCTOR-SMD	2703-001751	SM
L205	INDUCTOR-SMD	2703-002313	SM
L206,L600,L601,L705	CORE-FERRITE BEAD	3301-001756	SM
L207	INDUCTOR-SMD	2703-002506	SM
L300,L301,L302,L700	CORE-FERRITE BEAD	3301-001534	SM
L400,L401	CORE-FERRITE BEAD	3301-001778	SM
L502,L503	INDUCTOR-SMD	2703-002872	SM
L605	INDUCTOR-SMD	2703-003004	SM
L701,L702,L703,L704	CORE-FERRITE BEAD	3301-001534	SM
LED700,LED701,LED702	LED	0601-001819	SM
LED703,LED704,LED706	LED	0601-001819	SM
OSC100	OSCILLATOR-VCO	2806-001380	SM
OSC200	OSCILLATOR-VCTCXO	2809-001280	SM
OSC300	RESONATOR-CERAMIC	2802-001182	SM
OSC500	CRYSTAL-UNIT	2801-004339	SM
Q200	TR-DIGITAL	0504-001151	SM
Q500	TR-DIGITAL	0504-001113	SM
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R105,R116,R121,R126	R-CHIP	2007-008045	SM
R107,R204	R-CHIP	2007-009374	SM
R108,R109,R110,R111	R-CHIP	2007-008419	SM
R112,R115	R-CHIP	2007-008531	SM
R113	R-CHIP	2007-001325	SM
R114	R-CHIP	2007-000145	SM
R117	R-CHIP	2007-008785	SM
R118	R-CHIP	2007-009201	SM
R119,R120	R-CHIP	2007-008581	SM
R122,R327,R328	R-CHIP	2007-008588	SM
R123,R124	R-CHIP	2007-008579	SM
R125	R-CHIP	2007-001292	SM
R127	R-CHIP	2007-008806	SM
R128,R411,R416,R512	R-CHIP	2007-000171	SM
R200,R206,R401,R402	R-CHIP	2007-008542	SM
R201	R-CHIP	2007-001217	SM
R202,R309	R-CHIP	2007-007318	SM
R203,R205	R-CHIP	2007-008045	SM
R300,R301,R302,R307	R-CHIP	2007-008516	SM
R303,R305,R404,R413	R-CHIP	2007-009170	SM
R304,R409,R410	R-CHIP	2007-008419	SM
R306	R-CHIP	2007-008049	SM
R308,R319,R320,R322	R-CHIP	2007-008516	SM
R310	R-CHIP	2007-007135	SM
R311	R-CHIP	2007-008765	SM

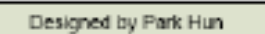
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R317,R318,R326	R-CHIP	2007-009171	SM
R323,R324,R330,R400	R-CHIP	2007-008516	SM
R405,R406,R407,R516	R-CHIP	2007-008542	SM
R408,R602,R603,R604	R-CHIP	2007-008548	SM
R412,R414	R-CHIP	2007-009111	SM
R415	R-CHIP	2007-008052	SM
R418,R502	R-CHIP	2007-008516	SM
R501	R-CHIP	2007-008483	SM
R503	R-CHIP	2007-007310	SM
R504	R-CHIP	2007-001298	SM
R505	R-CHIP	2007-007468	SM
R506,R509,R515	R-CHIP	2007-008486	SM
R507	R-CHIP	2007-007132	SM
R508	R-CHIP	2007-009081	SM
R510	R-CHIP	2007-007528	SM
R511,R600,R601,R606	R-CHIP	2007-009212	SM
R513	R-CHIP	2007-001156	SM
R519,R609,R708,R709	R-CHIP	2007-008542	SM
R605	R-CHIP	2007-008548	SM
R607	R-CHIP	2007-009212	SM
R610,R618	R-CHIP	2007-008798	SM
R611,R612,R614,R616	R-CHIP	2007-008297	SM
R613	R-CHIP	2007-007313	SM
R615,R617	R-CHIP	2007-000159	SM
R619,R620	R-CHIP	2007-000148	SM
R700,R701,R702,R703	R-CHIP	2007-009199	SM
R704,R706	R-CHIP	2007-009199	SM
R710,R711,R712	R-CHIP	2007-008542	SM
RFS100	CONNECTOR-COAXIAL	3705-001358	SM
SLC700	CONNECTOR-FPC/FFC/PIC	3708-002194	SM
TA154,TA402	C-TA,CHIP	2404-001474	SM
TA501,TA502,TA604	C-TA,CHIP	2404-001381	SM
TA602,TA603	C-TA,CHIP	2404-001348	SM
TH300	THERMISTOR	1404-001224	SM
U100	IC	1205-002645	SM
U101	IC	1201-002288	SM
U102	COMP-SMD	2911-000060	SM
U200	IC	1209-001577	SM
U201	IC	1201-002325	SM
U202	IC	1205-002781	SM
U300	IC	1009-001020	SM
U301	IC	0801-003076	SM
U400,U607	IC	1001-001349	SM
U405	DIODE-ARRAY	0407-001038	SM
U501	IC	1203-004102	SM

Design LOC	Description	SEC Code	STATUS
U502	IC	1203-003815	SM
U503	IC	1203-003823	SM
U504	IC	1203-003748	SM
U505	IC	1203-003737	SM
U506	IC	1205-002784	SM
U600,U601	IC	1001-001265	SM
U602	IC	1204-002587	SM
U603	IC	0801-003031	SM
U608,ZD400,ZD401	DIODE-TVS	0406-001237	SM
UCP303	IC	1205-002790	SM
UME401	MEMORY	1108-000071	SM
V600,V601,V602,V603	VARISTOR	1405-001177	SM
V700,V701,V705,V706	VARISTOR	1405-001177	SM
V707	VARISTOR	1405-001177	SM
ZD402,ZD705	DIODE-TVS	0406-001210	SM
ZD403	DIODE-ZENER	0403-001427	SM
ZD404	DIODE-ZENER	0403-001547	SM
ZD601,ZD700,ZD701	DIODE-TVS	0406-001237	SM

7. Block Diagrams

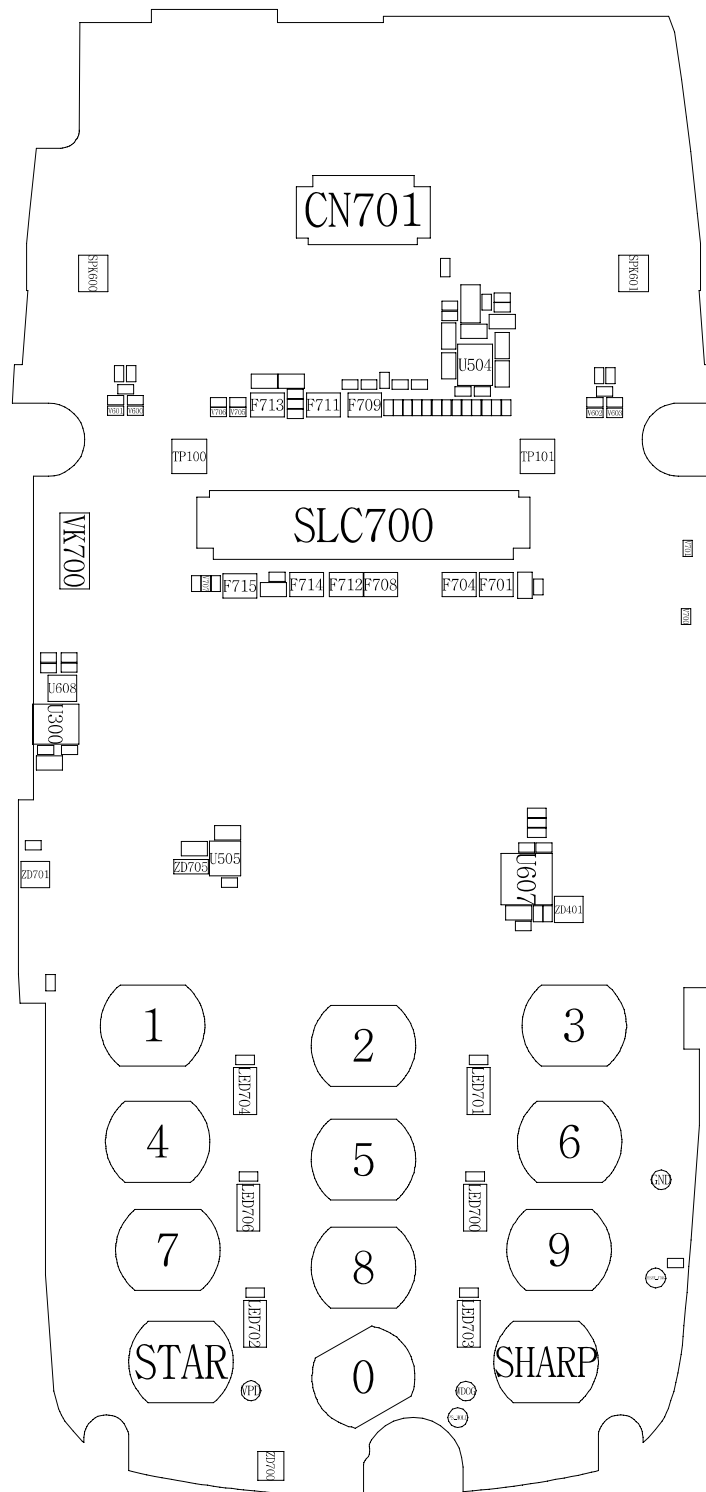
7-1. RF Solution Block Diagram



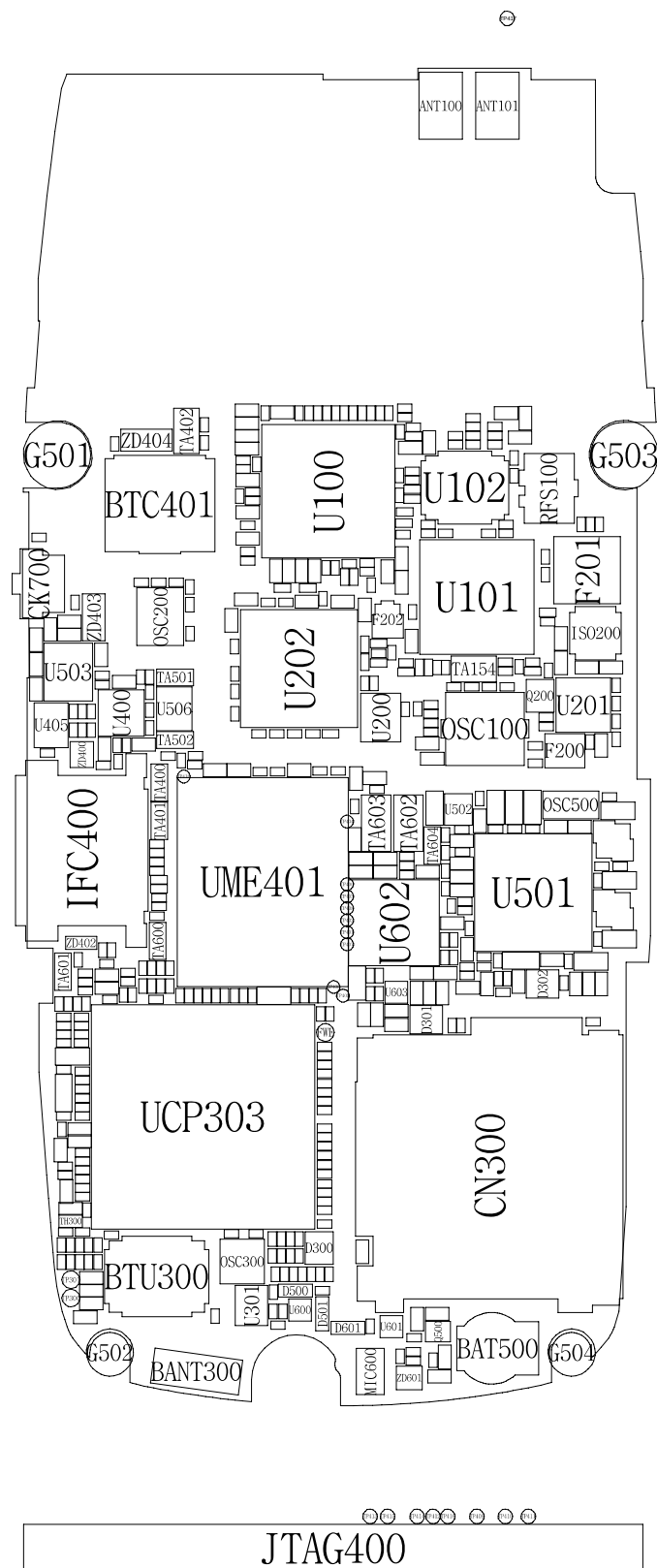


8. PCB Diagrams

Top



Bottom



10. Reference data

Reference Abbreviate

- **AAC**: Advanced Audio Coding.
- **AVC** : Advanced Video Coding.
- **BER** : Bit Error Rate
- **BPSK**: Binary Phase Shift Keying
- **CA** : Conditional Access
- **CDM** : Code Division Multiplexing
- **C/I** : Carrier to Interference
- **DMB** : Digital Multimedia Broadcasting
- **EN** : European Standard
- **ES** : Elementary Stream
- **ETSI**: European Telecommunications Standards Institute
- **MPEG**: Moving Picture Experts Group
- **PN** : Pseudo-random Noise
- **PS** : Pilot Symbol
- **QPSK**: Quadrature Phase Shift Keying
- **RS** : Reed-Solomon
- **SI** : Service Information
- **TDM** : Time Division Multiplexing
- **TS** : Transport Stream

