



Sony Ericsson

Component Replacement

- electrical -



Xperia Mini Pro
SK17i, SK17a

CONTENTS

1	Replaceable Components	3
2	Component Placing.....	6
3	Repair Actions	7
	3.1 Shield Can Fence Modifications	7
	3.2 Additional Repair Info	8
4	Revision History	14

*For general information about electrical repair related issues, refer to
1220-1336: Generic Repair Manual - electrical*



1 Replaceable Components

EXPLANATION OF ABBREVIATIONS USED IN THE COLUMN 'COMMENTS' BELOW

COMPONENT LOCATION

P = Primary side

S = Secondary side

MOISTURE SENSITIVITY LEVEL

MSLX (X = 1, 2, 2A, 3, 4, 5, 5A or 6)

For more information on moisture sensitivity levels:

Refer to 1220-1336: Generic Repair Manual – electrical, section 'Moisture & Baking'!

REPAIR METHOD

HA = Hot Air (removal & mounting)

ST = Soldering Tool (removal & mounting)

HA/ST = Hot Air for removal - Soldering Tool for mounting

BGA = BGA Station

BH = Bottom Heater

ADDITIONAL INFORMATION

⇒1 (2,3,4, etc.) = Proceed to 'Additional Repair Info' for further instructions in the indicated section(s).

CALIBRATION

C = Calibration of the phone is required after replacing the component

Calibration to be done by authorized centers only!



Position	Component	Part no.	Comments
B3501	Mic 4.0 Electret	1224-0804	P BGA ⇒1
B5100	Vibrator	1242-1349	P BGA ⇒2
B8000	IC MR sensor	1239-7879	S HA
C1317	Capacitor 1.0 uF +/-10% 25.0 V K0603	1000-0076	P HA ⇒3
C2200	Capacitor 1.0 uF +/-10% 25.0 V K0603	1000-0076	P HA ⇒3
C7603	Capacitor Ceramic 4.7 uF	1200-1678	P HA ⇒4
C7605	Capacitor 1.5 nF +/-10% 50.0 V K0402	1000-6548	P HA ⇒4
E1004	Shielding Can WLAN	1243-0607	P BGA ⇒5
E1005	Shielding Can GPS	1243-0608	P BGA ⇒6
L1000	Ind WW 2.2 uH	1232-8769	P HA
L1001	Ind WW 2.2 uH	1232-8769	P HA
L1002	Ind WW 2.2 uH	1232-8769	P HA
L1003	Ind Chip 4,7 uH 20%	1204-8878	P HA
L1004	Ind WW 2.2 uH	1232-8769	P HA
L1300C	Ind Chip 1.0 uH	1225-8646	P HA ⇒7
L3100	Ind Chip 120.0 nH	1236-1090	S HA
L3501	Inductor Chip	1203-8594	P HA ⇒8
L3502	Inductor Chip	1203-8594	P HA ⇒8
L3503	Ferrite B 1.8 kOhm	1237-6064	P HA ⇒9
L3504	Ferrite B 1.8 kOhm	1237-6064	P HA ⇒9
L3600	Filter	1000-2609	S HA
L3601	Filter	1000-2609	S HA
L3602	Ferrite B 1.8 kOhm	1237-6064	S HA
L3603	Ferrite B 1.8 kOhm	1237-6064	S HA
L3604	Ferrite B 1.8 kOhm	1237-6064	S HA
L3605	Filter 600ohm 0402 0.3A 0.85ohm Bead	1000-2621	P HA ⇒10
L3606	Filter 600ohm 0402 0.3A 0.85ohm Bead	1000-2621	P HA ⇒10
L7600	Ind WW 10, uH	1000-3331	P HA ⇒4
L7610	Ind Chip 0, H	1200-6898	P HA ⇒4
L7801	Ind Chip 1.0 uH +/-20% K2520	1201-5637	P HA
N1303C	ASIC PM Charger with OTG	1237-3321	P HA ⇒7
N2200	IC ESD Prot	1227-8675	P HA ⇒3
N2801C	Mod PA QUAD GSM850/GSM900/DCS/EDGE	1232-2928	P MSL3 BGA C
N2803C	RF Antenna Switch GSM & UMTS/CDMA Dual	1237-2994	P MSL3 HA C
N2900	Mod PA WCDMA 824-849 MHz	1237-1770	P MSL3 HA C ⇒11 (For Band 5)
N2900	Mod PA WCDMA 880-915 MHz	1237-1771	P MSL3 HA C ⇒11 (For Band 8)
N2902	Mod PA WCDMA 1850-1910 MHz	1237-1768	P MSL3 HA C (For Band 2)
N2903	Mod PA WCDMA 1920-1980 MHz	1237-1765	P MSL3 HA C (For Band 1)
N3501	IC Amplifier 500mA	1203-4594	P HA
N3600	ASIC Tjatte3 CSP20	1000-0198	S HA
N5401	MEMS Compass Analog	1228-7182	P HA ⇒4
N7600	IC WL-CSP 6x4 balls	1212-7979	P HA ⇒4
N7800	IC Opto Led Flash driver 600mA	1235-7990	P HA ⇒11
N8100	Mod Radio WLAN/BT/FM	1237-3816	P BGA ⇒12
N8101	Mod PA WLAN 3.0x3.0x0.5mm	1239-7071	P HA ⇒12
N8401	IC Amp	1218-0656	P HA ⇒13
R3611	Resistor 15.0 kOhm	1000-4149	S HA
R3616	Resistor 33.0 kOhm	1000-4154	S HA
S52	Side Switch(volume key, power key)	1001-0060	P HA/ST+BH ⇒14,16



Component Replacement (elect)

Position	Component	Part no.	Comments
V3100	Diode Protection 0.7 V SOD-882	1201-2253	S HA
V3500	Diode Zener 5.0 V SOT-723	1203-0201	P HA ⇒8
V4100	IC Switch	1244-3833	P HA ⇒4
V7601	Trans N-ch FET 1.6x1.6x0.55mm	1235-2707	P HA ⇒4
V7602	LED White	1235-4502	S MSL3 HA
V7603	LED White	1235-4502	S MSL3 HA
V7604	LED White	1235-4502	S MSL3 HA
V7605	LED White	1235-4502	S MSL3 HA
X2200	Micro USB Connector	1242-8313	P BGA ⇒15,16
X2800	Conn Leaf Spring Receptacle 1p	1200-2144	P HA
X2801	Conn Coax Receptacle 0p test switch	1221-6477	P BGA
X2802	Conn Leaf Spring Receptacle 1p	1200-2144	P HA
X2803	Conn Leaf Spring Receptacle 1p	1200-2144	P HA
X3501	Conn BtB	1200-2263	P BGA ⇒17
X4000	SIM Card Connector	1242-8650	P BGA ⇒18
X4100	Conn Other Receptacle 12p	1225-1055	P BGA ⇒19
X4101	Micro SD Card Connector	1243-2484	P BGA ⇒20
X7300	Conn Leaf Spring Plug 1p Antenna/GND	1239-2123	P HA
X7302	Conn Other Receptacle 24p	1210-3896	P BGA ⇒21
X7303	Conn Leaf Spring Plug 1p Antenna/GND	1239-2123	P HA
X7304	Conn Leaf Spring Plug 1p Antenna/GND	1239-2123	P HA
X7305	Conn Leaf Spring Plug 1p Antenna/GND	1239-2123	P HA
X8401	Conn Coax Receptacle 0p test switch	1221-6477	P BGA ⇒22
X8420	Conn Leaf Spring Receptacle 1p	1200-2144	P HA ⇒7
X8421	Conn Leaf Spring Receptacle 1p	1200-2144	P HA ⇒7
X8422	Conn Leaf Spring Receptacle 1p	1200-2144	P HA ⇒11
X8423	Conn Leaf Spring Receptacle 1p	1200-2144	P HA ⇒11
Z2200	Filter Ceramic 100.0 MHz	1235-3014	P HA ⇒3
Z8001	Filter SAW 2,4 GHz 1.35*1.05*0.5	1217-3397	P MSL2A HA ⇒12
Z8401	Filter SAW 1,57 GHz	1207-2628	P MSL2A HA ⇒13



2 Component Placing

To access the Component Placing document, double-click the icon below.
Applicable for on-screen viewing only – icon not shown on hard-copies.





3 Repair Actions

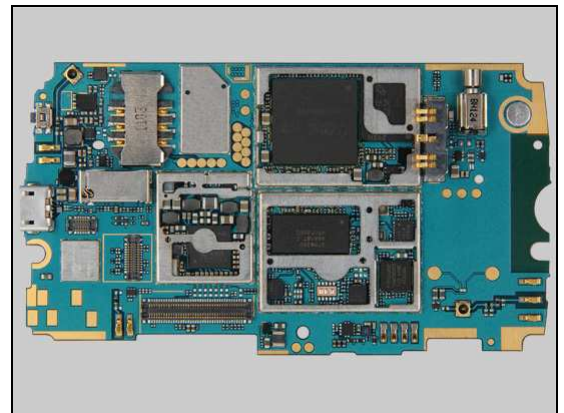
Refer to the Tools Catalogue/Matrix for information about equipment required for PBA repair!

3.1 Shield Can Fence Modifications

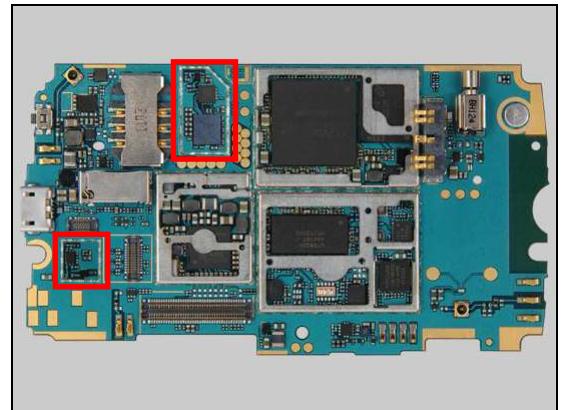
Refer to the pictures below of the primary and secondary sides for repairs that require the Shield Can Fence to be modified:

- the shield can lid has to be removed
- the red symbols show where the frame should be cut to enable rework
- after rework the height of the frame should not be affected
- it should not be visible that rework has been carried out when the lid has been mounted

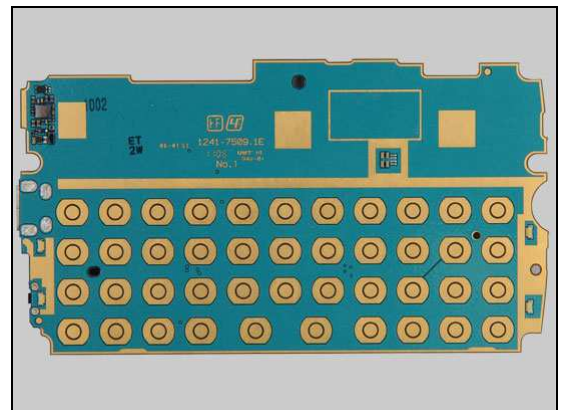
Primary side



*Primary side
(without the two fixed Shielding Cans)*



Secondary side





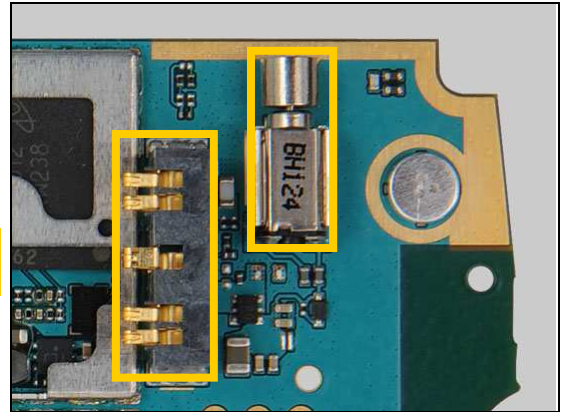
Repair Actions

3.2 Additional Repair Info

1

B3501

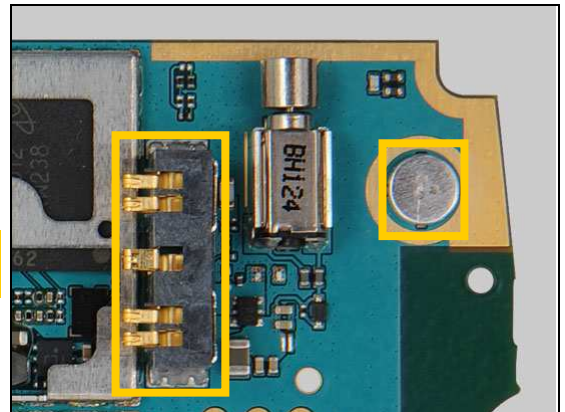
Protect the battery connector and the Vibrator with capton tape!



2

B5100

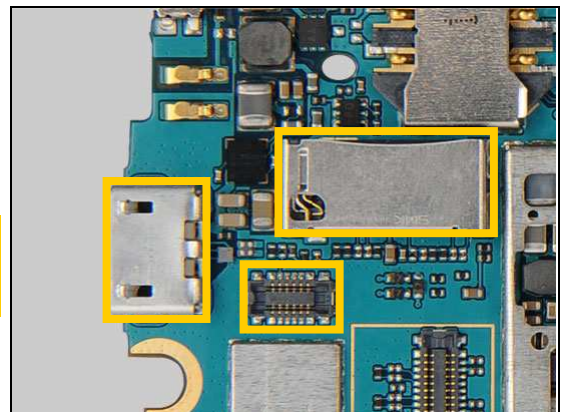
Protect the battery connector and the Microphone with capton tape!



3

C1317, C2200, N2200, Z2200

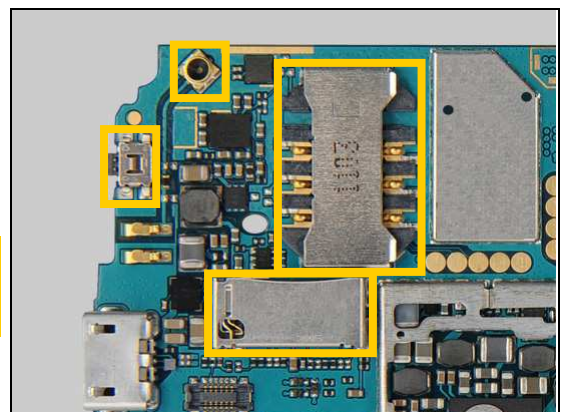
Protect the Micro USB connector, the Micro SD card connector and the Flash LED FPC connector with capton tape!



4

C7603, C7605, L7600, L7610, N5401, N7600, V4100, V7601

Protect the Side Switch, the RF connector, the Micro SD card connector and the SIM card connector with capton tape!



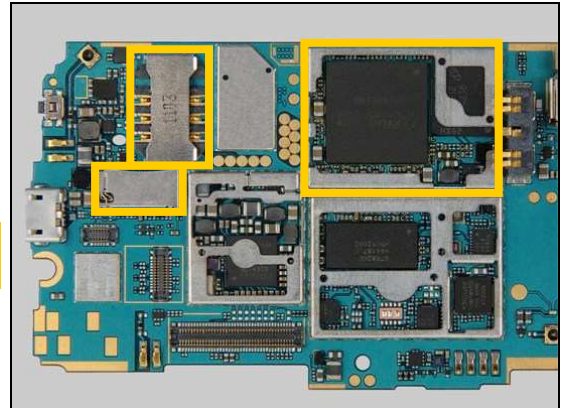


Repair Actions: Additional Repair Info

5

E1004

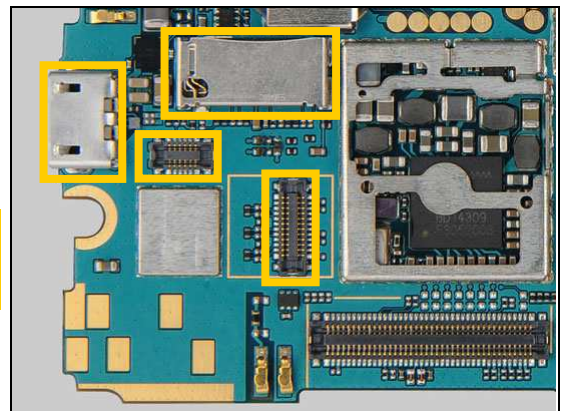
Protect the SIM card connector, the Micro SD card connector and DBB shielding can with capton tape!



6

E1005

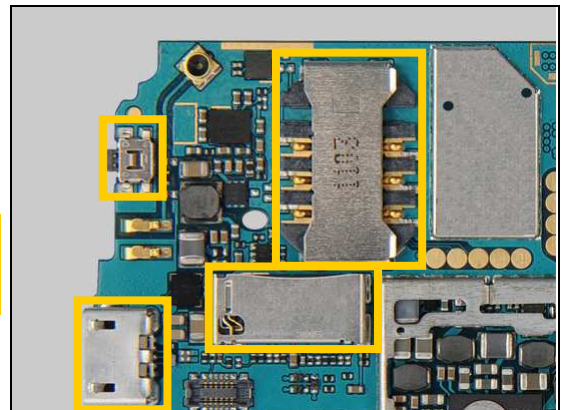
Protect the Flash LED FPC connector, the main camera connector, the Micro USB connector and the Micro SD card connector with capton tape!



7

L1300C, N1303C, X8420, X8421

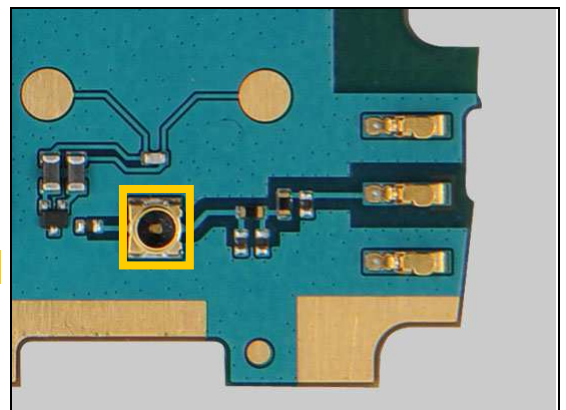
Protect the Micro SD card connector and the Micro USB connector, the Side Switch and the SIM card connector with capton tape!



8

L3501, L3502, V3500

Protect the RF connector with capton tape!



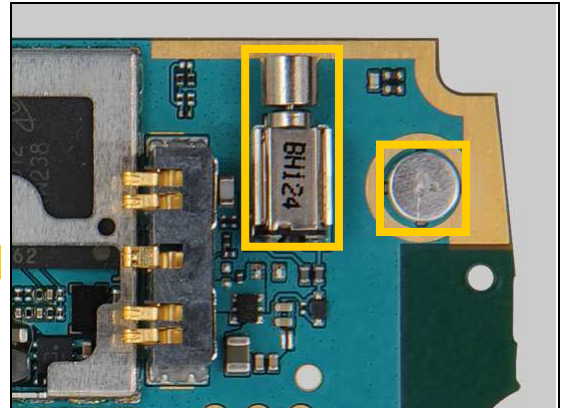


Repair Actions: Additional Repair Info

9

L3503, L3504

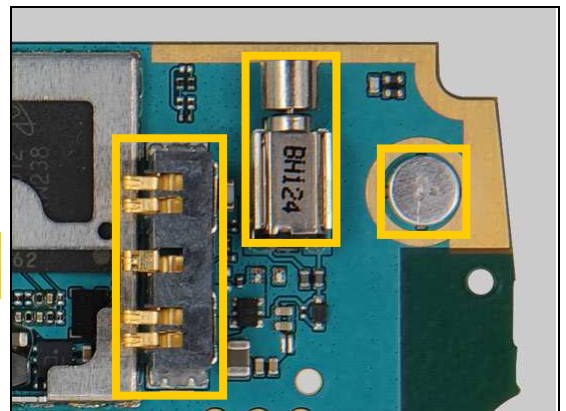
Protect the Microphone and Vibrator with capton tape!



10

L3605, L3606

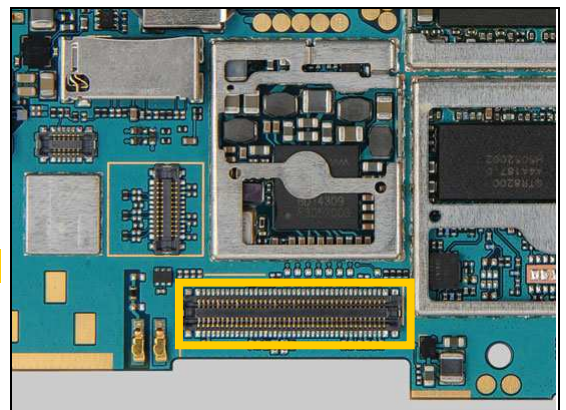
Protect the battery connector, the Microphone and the Vibrator with capton tape!



11

N2900, N7800, X8422, X8423

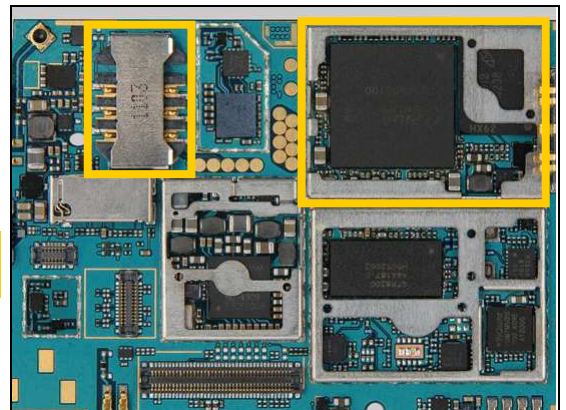
Protect the Hinge FPC connector with capton tape!



12

N8100, N8101, Z8001

Protect the SIM card connector and DBB shielding can with capton tape!



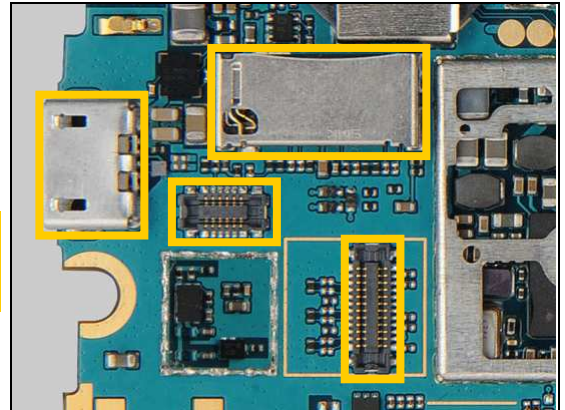


Repair Actions: Additional Repair Info

13

N8401, Z8401

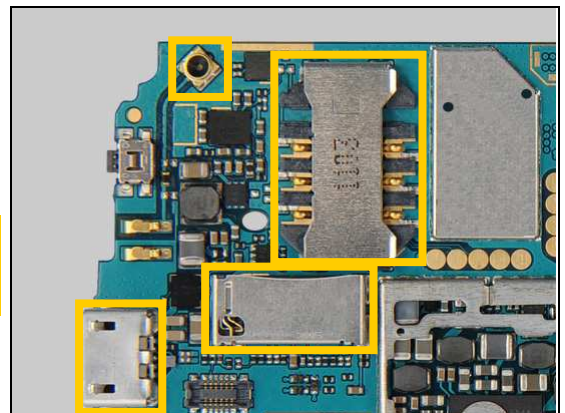
Protect the Micro SD card connector, the Flash LED FPC connector, the main camera connector and the Micro USB connector with capton tape!



14

S52

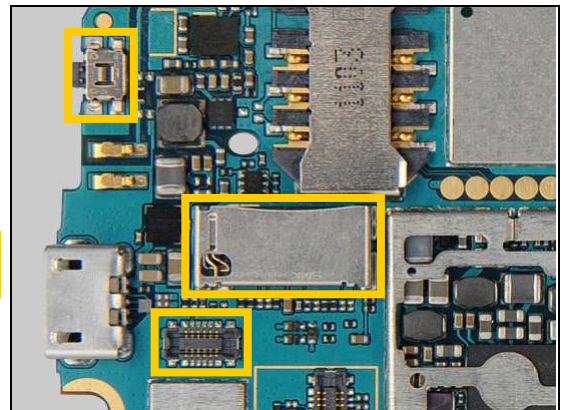
Protect the Micro USB connector, the RF connector, the Micro SD card connector and the SIM card connector with capton tape!



15

X2200

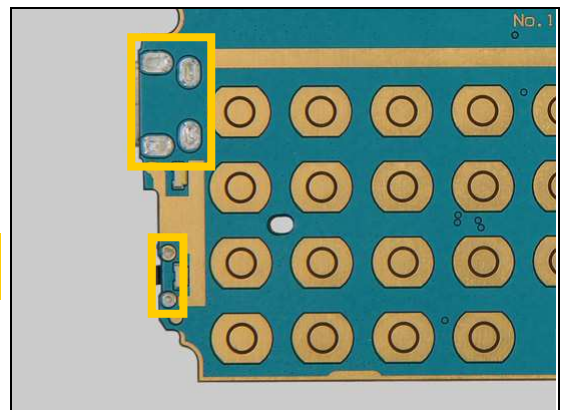
Protect the Side Switch, the Flash LED FPC connector and the Micro SD card connector with capton tape!



16

S52, X2200

Add solder in the holes with Soldering Iron after mounting!



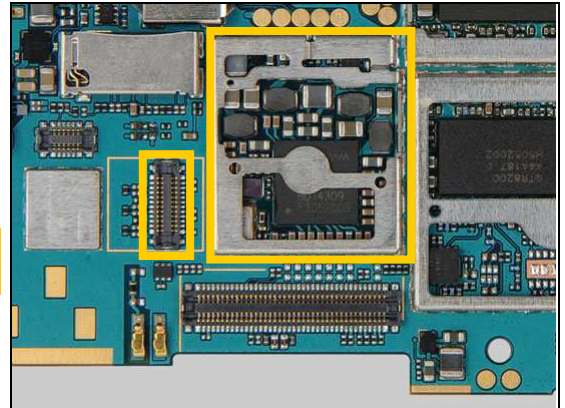


Repair Actions: Additional Repair Info

17

X3501

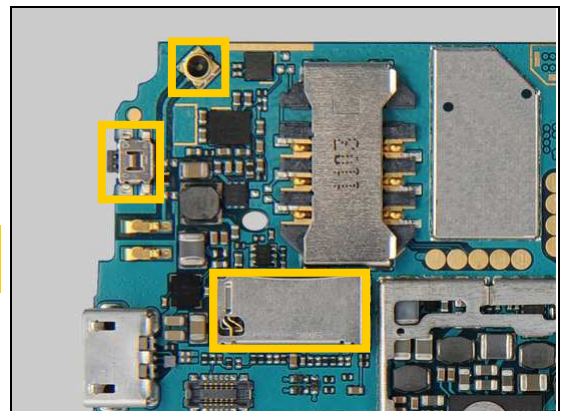
Protect the main camera connector and ABB shielding can with capton tape!



18

X4000

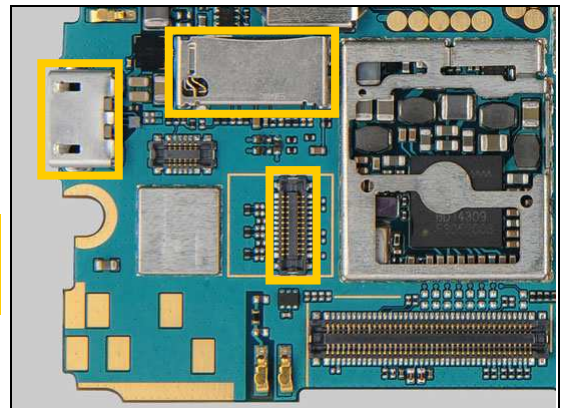
Protect the Side Switch, the Micro SD connector and the RF connector with capton tape!



19

X4100

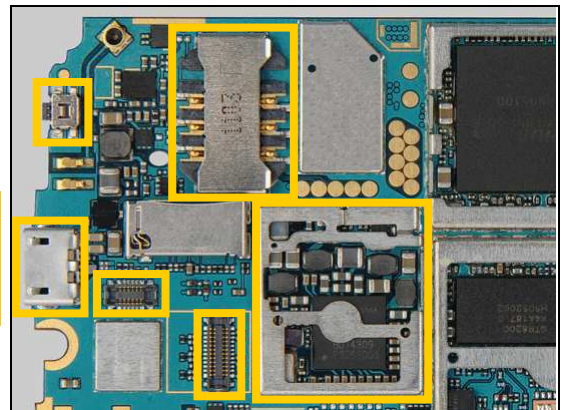
Protect the Micro USB connector, the Micro SD card connector and the main camera connector with capton tape!



20

X4101

Protect the SIM card connector, the Side Switch, the Micro USB connector, the Flash LED FPC connector, the main camera connector and ABB shielding can with capton tape!



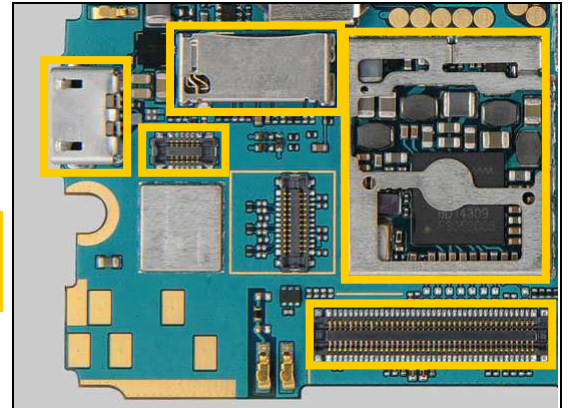


Repair Actions: Additional Repair Info

21

X7302

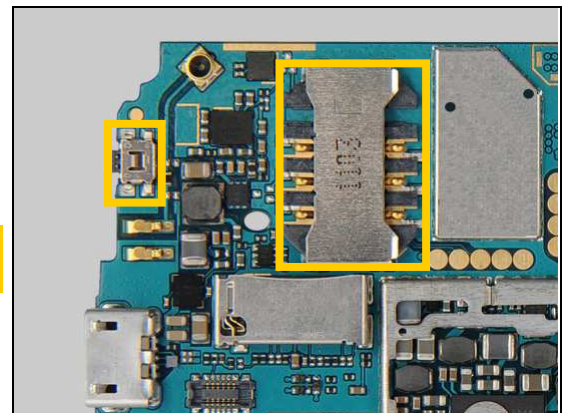
Protect the Micro USB connector, the Flash LED FPC connector, the Micro SD card connector, the Hinge FPC connector and ABB shielding can with capton tape!



22

X8401

Protect the SIM card connector and the Side Switch with capton tape!





4 Revision History

Rev.	Date	Changes / Comments
1	2011-Jul-12	Initial release
2	2011-Aug-02	Change repair method of N2803C from BGA to HA.
3	2011-Aug-19	No change