



Sony Ericsson

Component Replacement

- electrical -



*ST18i, ST18a, SO-03C,
Xperia™ Ray*



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!



Component Replacement Repair Drawing Additional Soldering Process/

Position	Component	Part no.	Comments
B3502	Mic 3.76 Silicon MEMS analog microphone	1235-5983	S BGA ⇒1
C2200	Capacitor 1.0 uF +/-10% 25.0 V K0603	1000-0076	P HA ⇒2
L1000	Ind WW 2.2 uH	1232-8769	S HA
L1001	Ind WW 2.2 uH	1232-8769	S HA
L1002	Ind WW 2.2 uH	1232-8769	S HA ⇒3
L1003	Ind WW 2.2 uH	1232-8769	S HA
L1004	Ind WW 2.2 uH	1232-8769	S HA
L2400	Ind WW 2.2 uH	1232-8769	P HA
L2852	Ferrite B 1.8 kOhm	1237-6064	S HA ⇒4
L2853	Ferrite B 1.8 kOhm	1237-6064	S HA ⇒4
L3100	Ind Chip 0, H	1200-6898	S HA ⇒5
L3602	Ferrite B 1.8 kOhm	1237-6064	S HA ⇒6
L3603	Ferrite B 1.8 kOhm	1237-6064	S HA ⇒6
L3604	Ferrite B 1.8 kOhm	1237-6064	S HA ⇒6
L7600	Ind WW 10.0 uH	1000-3331	S HA
N1303	ASIC PM Charger with OTG	1237-3321	S HA
N1310	IC Vreg R1154x	1245-5261	P HA ⇒2
N2200	IC ESD Prot	1227-8675	S HA ⇒7
N2801	Mod PA QUAD GSM850/GSM900/DCS/EDGE	1232-2928	P BGA C
N2803	RF Antenna Switch GSM & UMTS/CDMA Dual	1237-2994	P BGA C
N2900	Mod PA WCDMA 824-849 MHz	1237-1770	P HA C For Band125
N2900	Mod PA WCDMA 880-915 MHz	1237-1771	P HA C For Band18
N2902	Mod PA WCDMA 1850-1910 MHz	1237-1768	P HA C For Band125
N2903	Mod PA WCDMA 1920-1980 MHz	1237-1765	P HA C For All Bands
N3501	IC Amplifier 500mA	1203-4594	S HA
N5400	MEMS Compass Analog	1228-7182	S HA ⇒9
N5500	IC Optical Proximity Sensors	1237-6823	S HA ⇒10
N7600	IC WL-CSP 6x4 balls	1212-7979	S HA
N8102	IC Vreg 1,82V 6Mhz	1249-2364	P HA
R9805	Fuse	1234-5250	S HA ⇒19
R9876	Fuse	1234-5250	S HA ⇒19
V3100	Diode Protection 0.7 V SOD-882	1201-2253	S HA ⇒5
V3500	Diode Zener 5, V SOT-723	1203-0201	S HA ⇒11
V4001	Dual ESD protection diode	1000-0399	S HA ⇒4
V4002	ZenerDiode, 5.6V, Pb-free	1001-1864	S HA ⇒4
V4003	ZenerDiode, 5.6V, Pb-free	1001-1864	S HA ⇒6
V4100	IC Switch	1244-3833	S HA ⇒12
V7601	Trans N-ch FET 1.6x1.6x0.55mm	1235-2707	S HA
V9830	IC Switch	1244-3833	S HA ⇒3
X1300	Conn Pogopin Plug 5p	1251-1320	P BGA
X2200	Connector Micro USB	1242-6545	P BGA ⇒13
X2801	Conn Coax Receptacle 0p test switch	1221-6477	S BGA ⇒14
X2802	Connector	1000-8175	S BGA ⇒15
X4100	Micro SD connector	1220-3717	S BGA ⇒16
X7002	Conn BtB Receptacle 34p Panasonic A4S	1224-9689	S BGA ⇒14
X7301	Conn Other Receptacle 24p	1210-3896	S BGA ⇒17
X8401	Conn Coax Receptacle 0p test switch	1221-6477	S BGA ⇒18
X8402	Pogopin Connector 1p	1245-4102	S BGA ⇒19
X8404	Connector Leaf Spring 1p	1238-5879	P HA ⇒3
X8405	Connector Leaf Spring 1p	1238-5879	P HA
X8406	Connector Leaf Spring 1p	1238-5879	P HA
X8407	Connector Leaf Spring 1p	1238-5879	P HA ⇒8
X9800	Connector BtB 60p	1217-1082	S BGA ⇒20



Component Replacement Repair Drawing Additional Soldering Process/

Position	Component	Part no.	Comments
Z2200	Filter Ceramic 100.0 MHz	1235-3014	S HA ⇒10
Z8001	Filter SAW 2,4 GHz 1.35*1.05*0.5	1217-3397	P HA
Z8401	Filter SAW 1,57 GHz	1207-2628	S HA ⇒4
Z8402	Filter 1.575 GHz	1238-0509	S HA ⇒21
Z9800	Filter Ceramic 0.0	1227-0418	S HA ⇒22
Z9801	Filter Ceramic 0.0	1227-0418	S HA ⇒22
Z9802	Filter Ceramic 0.0	1227-0418	S HA ⇒22
Z9803	Filter Ceramic 100.0 MHz	1235-3014	S HA ⇒23
Z9804	Filter Ceramic 100.0 MHz	1235-3014	S HA ⇒23
Z9805	Filter Ceramic 100.0 MHz	1235-3014	S HA ⇒23



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

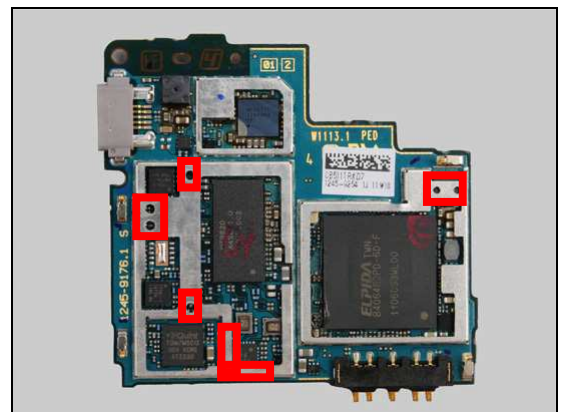
Refer to the Tools Catalogue/Matrix for information about equipment required for PBA repair!

3.1 Shield Can Fence Modifications

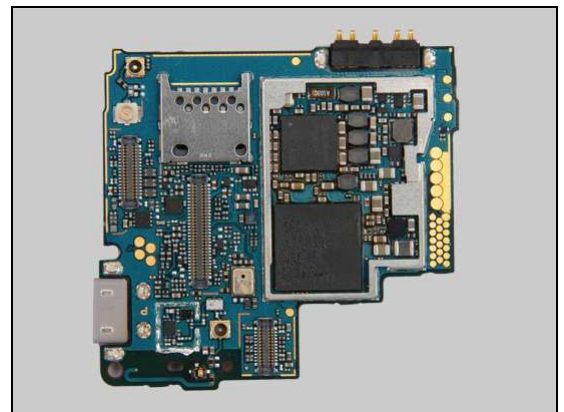
Refer to the pictures below of the primary and secondary sides for repairs that require the Shield Can Fence to be modified:

- 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



Secondary side





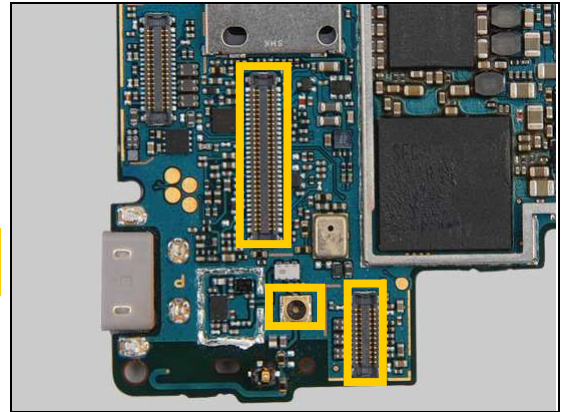
Repair Actions

3.2 Additional Repair Info

1

B3502

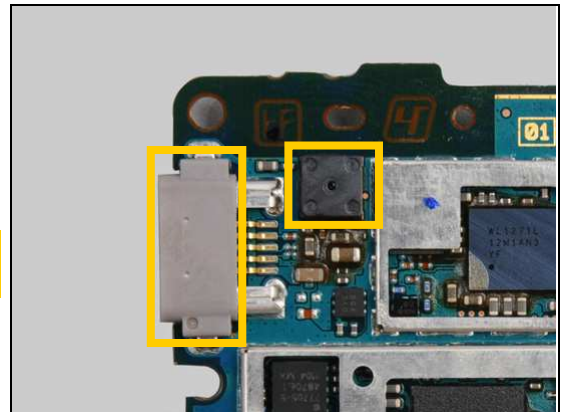
Protect the two BtB connectors and Coax connector with capton tape!



2

C2200, N1310

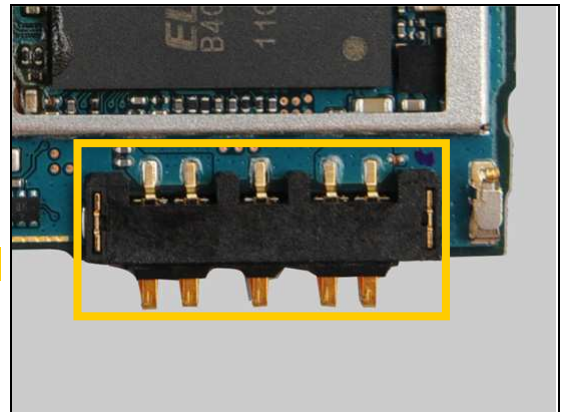
Protect the Micro USB connector and Camera with capton tape!



3

L1002, V9830, X8404

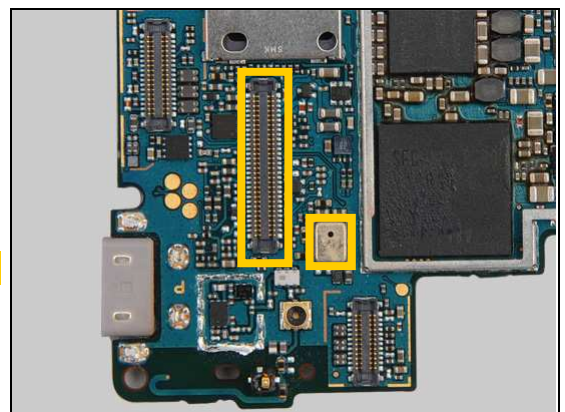
Protect the Pogopin connector with capton tape!



4

L2852, L2853, V4001, V4002, Z8401

Protect the BtB connector and mic with capton tape!



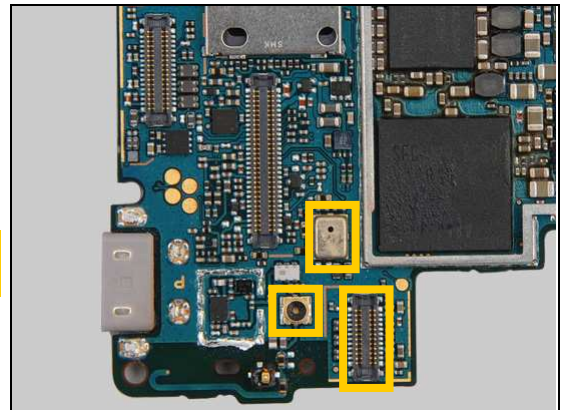


Repair Actions: Additional Repair Info

5

L3100, V3100

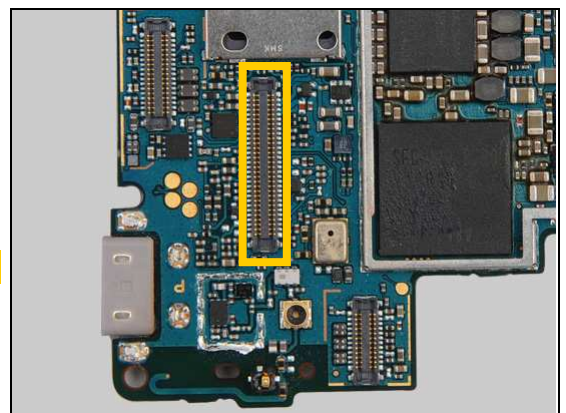
Protect the BtB connector, mic and Coax connector with capton tape!



6

L3602, L3603, L3604, V4003

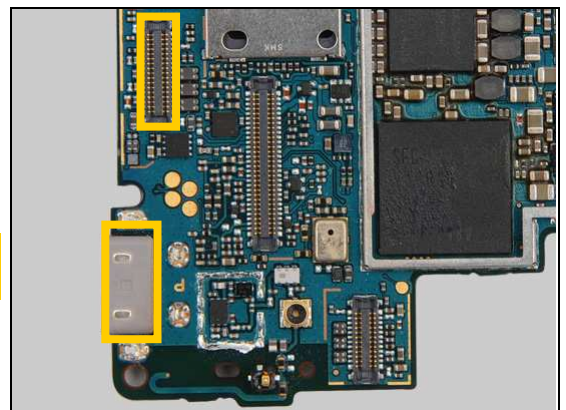
Protect the BtB connector with capton tape!



7

N2200

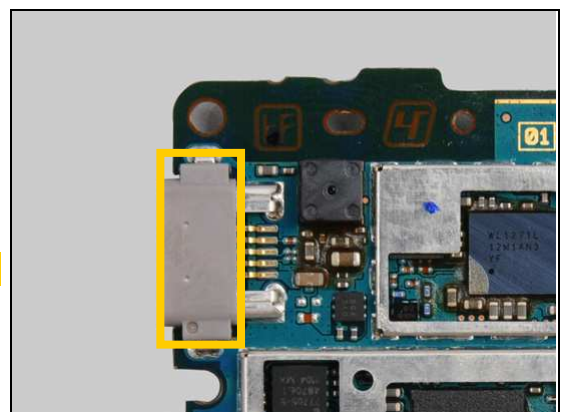
Protect the Micro USB connector and BtB connector with capton tape!



8

N2900, X8407

Protect the Micro USB connector with capton tape!



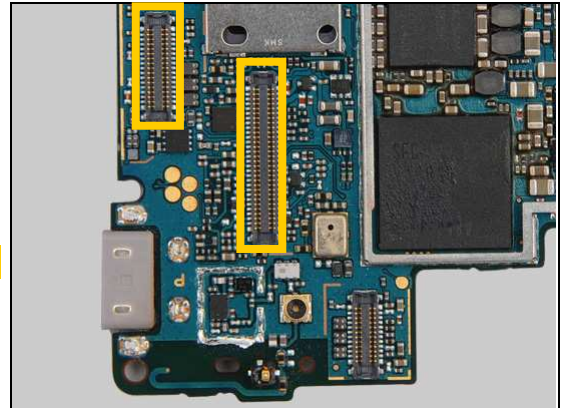


Repair Actions: Additional Repair Info

9

N5400

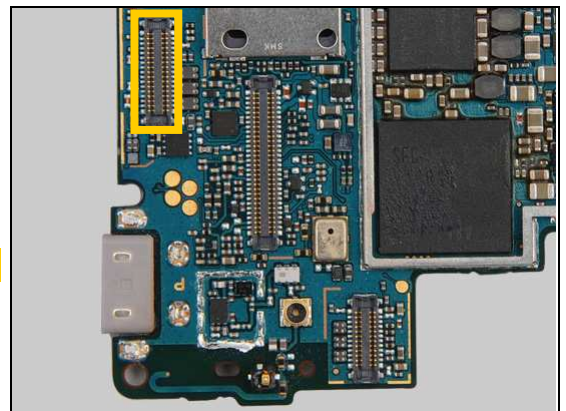
Protect the two BtB connectors with capton tape!



10

N5500, Z2200

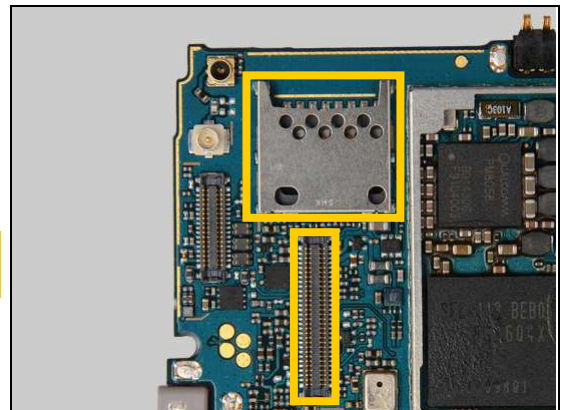
Protect the BtB connector with capton tape!



11

V3500

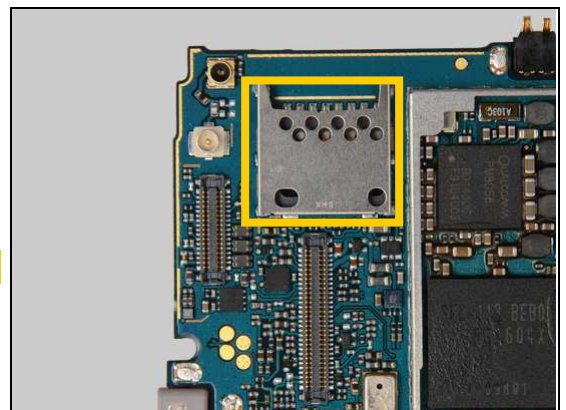
Protect the Micro SD connector and BtB connector with capton tape!



12

V4100

Protect the Micro SD connector with capton tape!



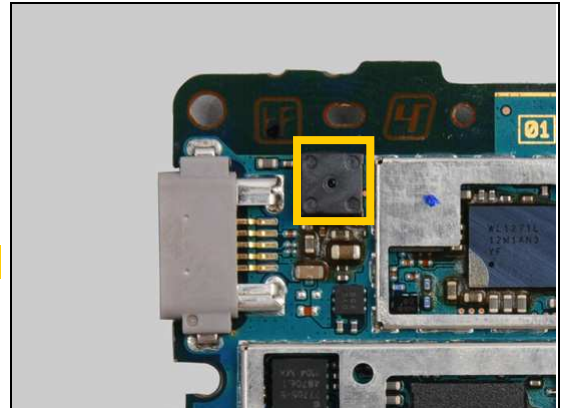


Repair Actions: Additional Repair Info

13

X2200

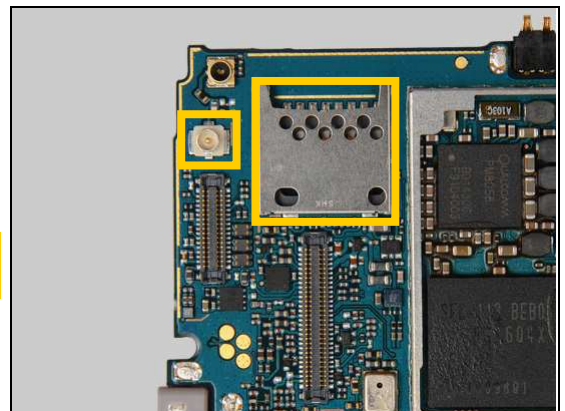
Protect the camera with capton tape!



14

X2801, X7002

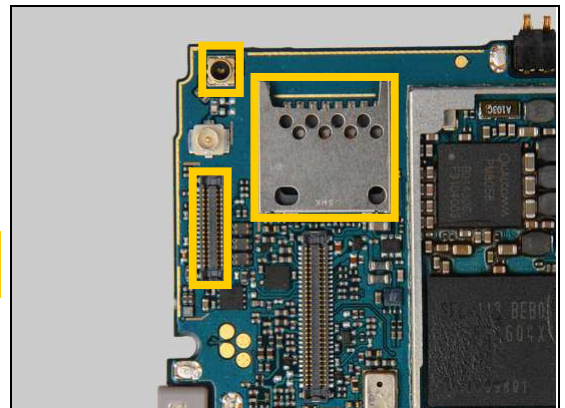
Protect the Micro SD connector and Coax connector with capton tape!



15

X2802

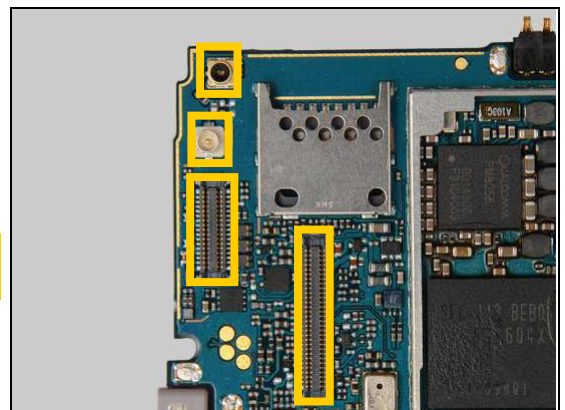
Protect the Micro SD connector, Coax connector and BtB connector with capton tape!



16

X4100

Protect the two Coax connectors and two BtB connectors with capton tape!



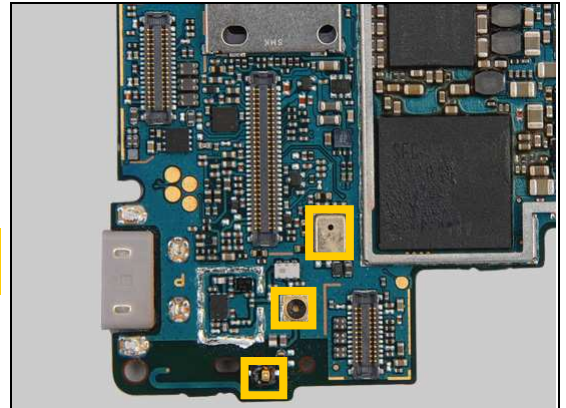


Repair Actions: Additional Repair Info

17

X7301

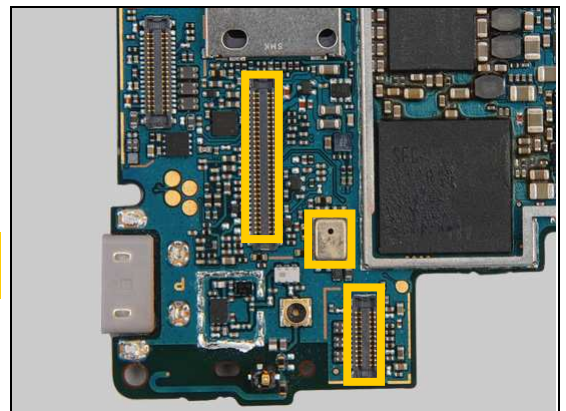
Protect the mic, Coax connector and pogopin connector with capton tape!



18

X8401

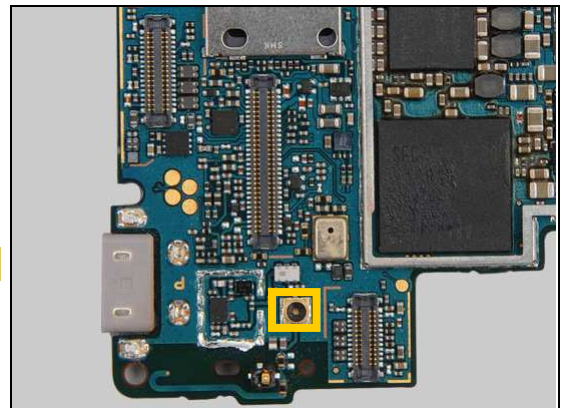
Protect the two BtB connectors and mic with capton tape!



19

X8402

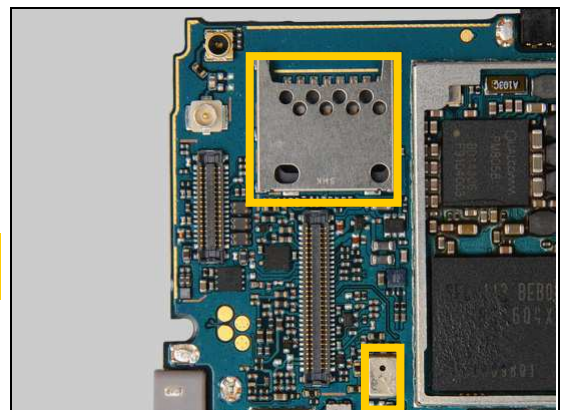
Protect the Coax connector with capton tape!



20

X9800

Protect the Micro SD connector and mic with capton tape!



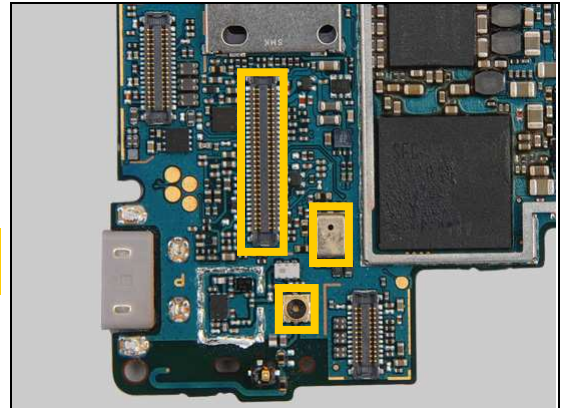


Repair Actions: Additional Repair Info

21

Z8402

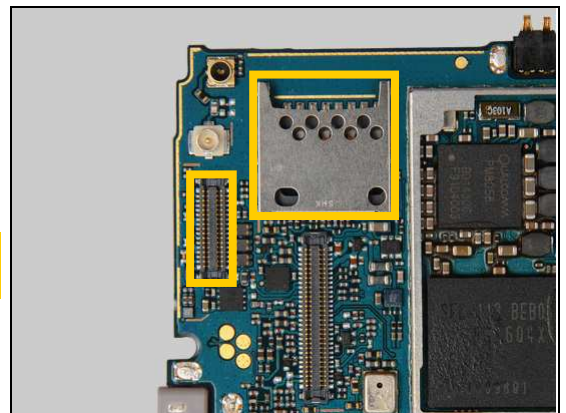
Protect the Coax connector, BtB connector and mic with capton tape!



22

Z9800, Z9801, Z9802

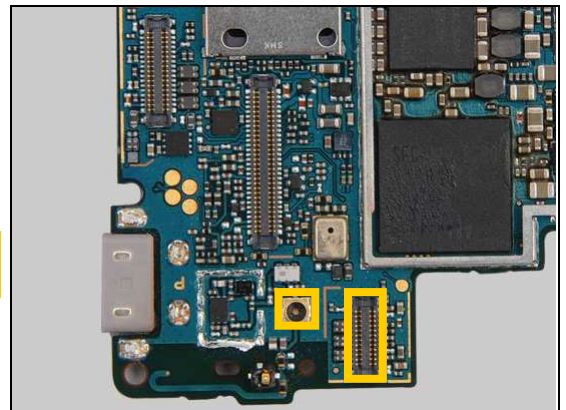
Protect the Micro SD connector and BtB connector with capton tape!



23

Z9803, Z9804, Z9805

Protect the Coax connector and BtB connector with capton tape!





4 Revision History

Rev.	Date	Changes / Comments
1	2011-Aug-11	Released
2	2012-Mar-01	System Error
3	2012-Mar-01	R9805 Added
4	2012-April-25	R9876 Added
5	2012-April-26	N7600 Added