



Component Replacement

- electrical -



ELM
J10, J10i2

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***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 Device (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 Electrical/

Position	Component	Part no.	Comments
B1401	Osc TCXO 16.368 MHz	1201-6457	P HA C ⇒1(J10i2)
B2100	Crystal32768HZ+-20PPM12.5pF	1000-8271	P HA C
B3100	Mic 4.0 Electret Gettop SOM4013SL-Z422-C3310-HS	1224-0804	P HA ⇒23
B3110	Mic 4.0 Electret Gettop SOM4013SL-Z422-C3310-HS	1224-0804	P HA
C2439	Capacitor	1000-0076	P HA ⇒7
C2440	Capacitor 1.0 uF +/-10% 25.0 V K0603	1000-0076	P HA ⇒2
C2441	Capacitor 10, nF +/-10% 25, V K0402	1000-0057	P HA ⇒2
C4200	Capacitor Ceramic 2.2 uF +/-10% 10.0 V K0603	1000-6872	P HA
C4203	Capacitor 1.0 uF +/-10% 25.0 V K0603	1000-0076	P HA
E1002	Shielding cover for DC-DC	1227-5280	P BGA ⇒3
E1005	Shielding cover _BB	1228-1921	P BGA ⇒4
L1003	Ferrite B 1,5 kOhm 100, mA 0402	1001-1223	P HA ⇒5
L1005	Ferrite B 1,5 kOhm 100, mA 0402	1001-1223	P HA ⇒5
L1200	Ind Chip 2,2 uH 20% K2520	1200-2028	P HA ⇒6
L2200	Ind WW 4,7 uH 20% 3.0X3.0X1.0	1200-2190	P HA
L2202	Inductor Wirewound	1203-0322	P HA
L2401	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒2
L2402	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒2
L2403	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒2
L2404	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒2
L2406	Ind Chip 220, nH K0603	1000-0122	P HA ⇒7
L3100	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒23
L3101	Ferrite B 330, Ohm 600, mA 0603	1201-0706	P HA ⇒8
L3102	Ferrite B 330, Ohm 600, mA 0603	1201-0706	P HA ⇒8
L3103	Ferrite B 0, 0,	1000-0120	P HA ⇒9
L3104	Ferrite B 0, 0,	1000-0120	P HA ⇒9
L3105	Ferrite B 330, Ohm 600, mA 0603	1201-0706	P HA ⇒8
L3106	Ferrite B 330, Ohm 600, mA 0603	1201-0706	P HA ⇒8
L3109	Ferrite B 1, kOhm 200, mA 0402	1201-5128	P HA ⇒23
L4201	Ind WW 22, uH +/-20% 3x3x1mm	1000-3333	P HA
N1200	Pre-bumped Tiger 1	1218-1887	P MSL5A BGA C ⇒10
N1200	Pre-bumped Tiger II Band 1,8	1218-1888	P MSL5A BGA C ⇒10
N1201	IC	1000-7567	S HA
N1202	IC Vreg PLP1612-4	1202-8519	P HA
N1204	ASIC BB QFN 24pin	1225-1336	P HA
N1210	IC Lin WLP-16	1203-5870	P HA ⇒6
N1211	IC Vreg PLP1820-6	1204-5903	P HA ⇒11
N1300	ASIC MS WLCSP61 STLC2690 Cut 4.0	1230-5044	P HA
N1400	ASIC GPS5350 WSP	1201-7557	P HA (J10i2)
N1501	Module WLAN	1225-8208	P BGA ⇒12 (J10i2)
N1510	Mod Radio WLAN R041	1200-6173	P HA ⇒9 (J10i2)
N2205	IC Vreg	1215-2684	P HA ⇒13
N2207	IC Vreg 6-lead 2 x 2.2mm	1224-8749	P HA
N2300	ASIC PM WLAN PMU Flip-chip 20 ball	1203-2790	P HA (J10i2)
N2411	MEMS 3-axis accelerometer BMA120	1211-3461	P HA ⇒8
N2420	IC IF 2,4x2,4x0,6mm 25 Bumps	1230-4432	P HA
N2421	IC ESD Prot UDFN 6 2x2 mm	1200-6309	P HA ⇒2
N3100	IC Amp 9-pin Flip Chip CSP	1203-4594	P HA ⇒11
N3101	ASIC Tjatte3 CSP20	1000-0198	P HA ⇒2
N4010	IC IF	1224-5383	P HA
N4200	Trans N-ch FET	1001-0077	P HA ⇒11
N4406	IC Dri TQFN34-24	1222-7380	P HA ⇒



Component Replacement Repair Drawing Electrical/

Position	Component	Part no.	Comments
S7029	Input Switch Side Push	1226-2133	P HA/ST
S7030	Input Switch Side Push	1226-2133	P HA/ST
V2200	Diode Protection 0,	1000-0282	P HA ⇒5
V2202	Trans P-ch FET MLP 2X2-6L	1200-0145	P HA
V2203	LED White 2,04x1,64x0,8	1222-1832	P HA ⇒23
V2412	Diode Zener 15, V SOD523	1000-0272	P HA ⇒2
V2415	Diode Protection 5, V SOD-923	1201-8440	P HA ⇒2
V2416	Diode Protection 5, V SOD-923	1201-8440	P HA ⇒2
V2417	Diode Zener 15, V SOD523	1000-0272	P HA ⇒2
V2475	Diode Schottky 40, V SOD-923	1200-2065	P HA ⇒11
V3101	Diode 0,	1001-0730	P HA ⇒8
V7010	LED White 1.0*0.5*0.2	1209-9311	S HA
V7011	LED White 1.0*0.5*0.2	1209-9311	S HA
V7012	LED White 1.0*0.5*0.2	1209-9311	S HA
V7013	LED White 1.0*0.5*0.2	1209-9311	S HA
V7017	LED White 1.0*0.5*0.2	1209-9311	S HA
V7018	LED White 1.0*0.5*0.2	1209-9311	S HA
W1000	Ant BT light green	1214-3823	P HA ⇒9
W1001	Ant	1213-6112	P HA
W1300	Filter 0.0 0.9 x 0.9 x 0.63 mm BAL-2690D3U V2	1212-8566	P HA (J10i2)
X1200	Conn Coax Plug 6p RF-probe contact	1203-9688	P HA/ST ⇒14
X1201	Conn FPC 5p	1001-6666	P BGA ⇒7
X1202	Conn FPC Receptacle 6p	1202-5167	P BGA ⇒15
X1203	Cam Hr Socket-32PIN	1227-4003	P BGA ⇒16
X1205	Conn Leaf Spring 1p	1228-2251	P HA
X1206	Conn Leaf Spring 1p	1228-2251	P HA ⇒8
X1210	Conn Leaf Spring 1p	1228-2251	P HA ⇒15
X1211	Conn Leaf Spring 1p	1228-2251	P HA ⇒15
X1212	Conn Leaf Spring 1p	1228-2251	P HA ⇒15
X1500	Conn Coax Plug 6p RF-probe contact	1203-9688	P HA/ST ⇒17
X1503	Conn FPC Receptacle 22p Hirose FH29BW	1228-1930	P BGA ⇒24 (J10)
X2201	Conn Leaf Spring 5p Battery	1000-0412	P BGA ⇒18
X2405	Conn I/O Receptacle 12p System Connector	1226-5144	P BGA ⇒19
X4200	Conn BtB Receptacle 24p	1201-5017	P BGA ⇒20
X4210	Card Conn Micro SD	1230-6456	P BGA ⇒21
X4215	Card Conn SIM	1230-1308	P BGA ⇒22
Z1401	Filter SAW 1.575 GHz	1201-7439	P HA (J10i2)
Z2400	Filter 100, MHz K1210	1201-6833	P HA ⇒2

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.

J10 with Video Camera



J10i2 with WIFI and AGPS





3 Repair Actions

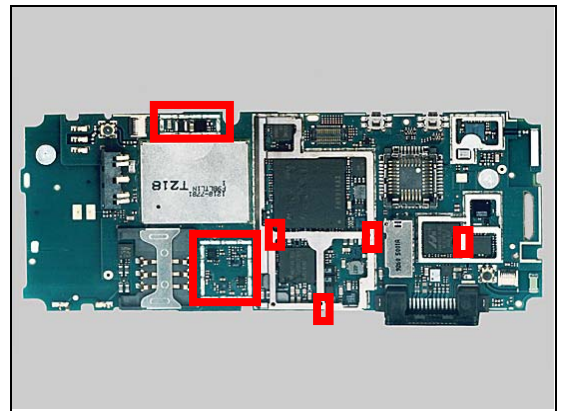
Refer to the Tools Catalogue/Matrix for information about equipment required for PBA repair!

3.1 Shield Can Fence Modifications

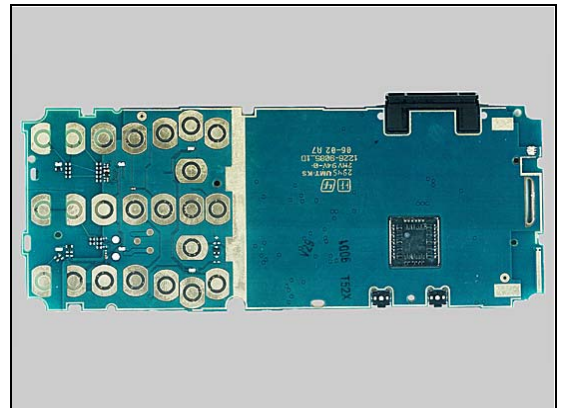
Refer to the pictures below of the primary and secondary sides for repairs that require the Shield Can Fence to be modified:

- 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



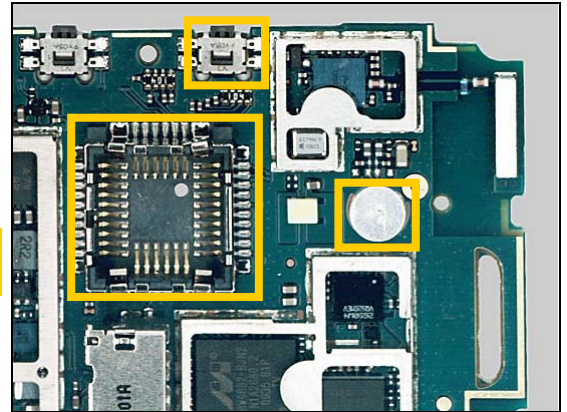
Repair Actions

3.2 Additional Repair Info

1

B1401

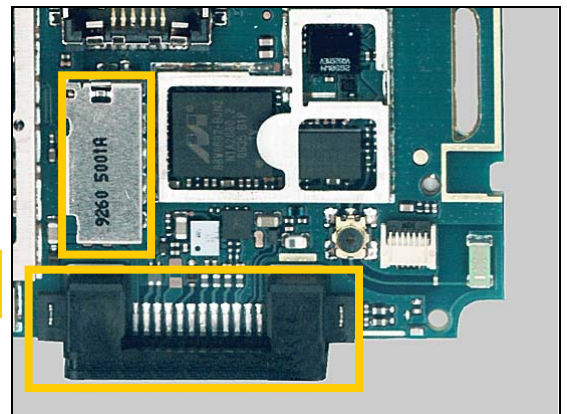
Protect camera holder, switch and Microphone with capton tape!



2

C2440, C2441, L2401, L2402, L2403, L2404, N2421, N3101, V2412, V2415, V2416, V2417, Z2400

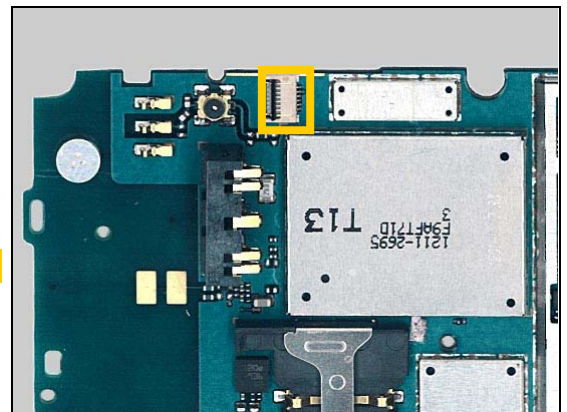
Protect system connector and memory holder with capton tape!



3

E1002

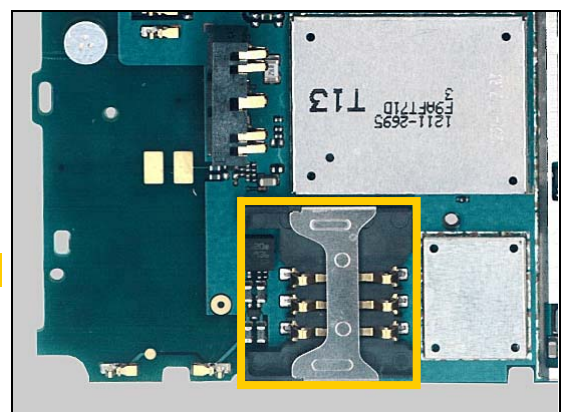
Protect zif connector with capton tape!



4

E1005

Protect sim connector with capton tape!

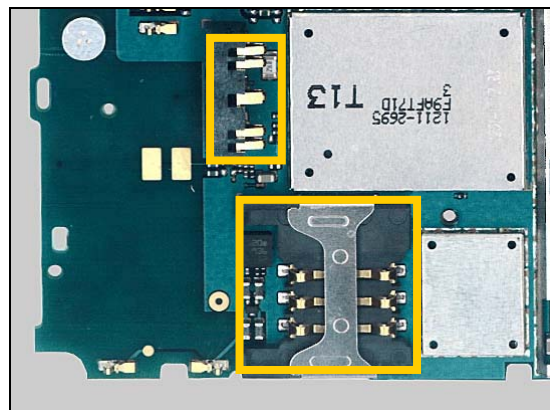


Repair Actions

5

L1003, L1005, V2200

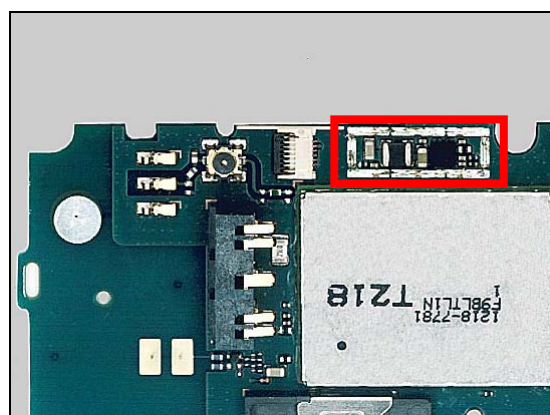
Protect battery connector and sim holder with capton tape!



6

L1200, N1210

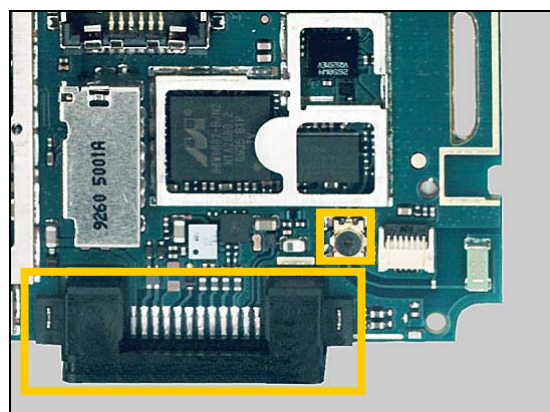
Remove shield can E1002 before repair!



7

C2439, L2406, X1201

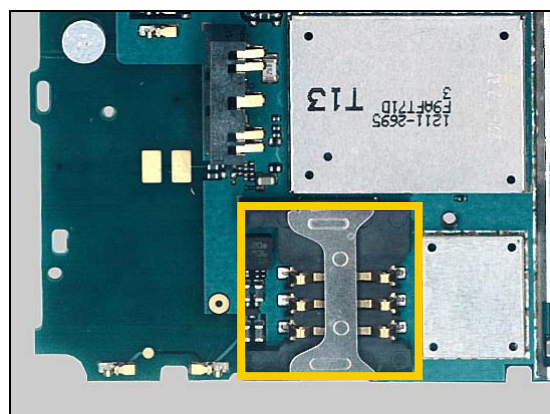
Protect system connector and connector with capton tape!



8

L3101, L3102, L3105, L3106, N2411, V3101, X1206

Protect sim holder with capton tape!



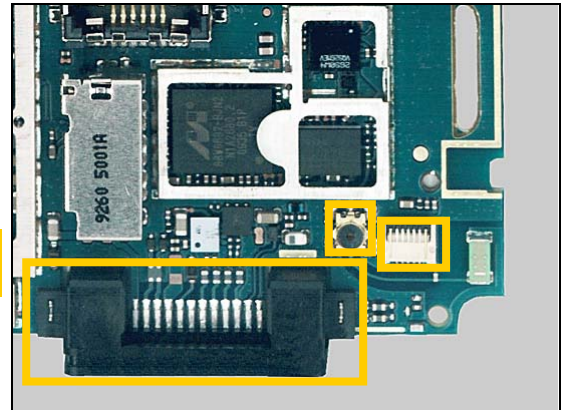


Repair Actions

9

L3103, L3104, N1510 W1000

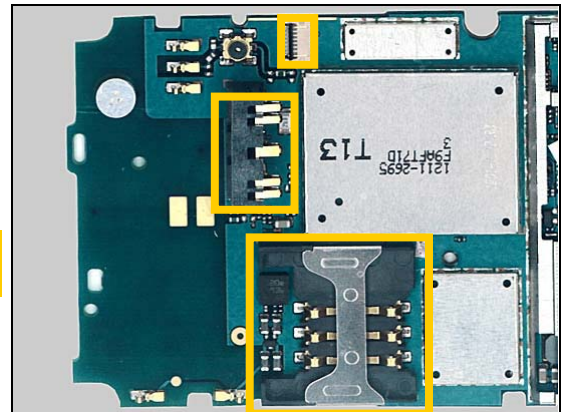
Protect system connector, zif connector and connector with capton tape!



10

N1200

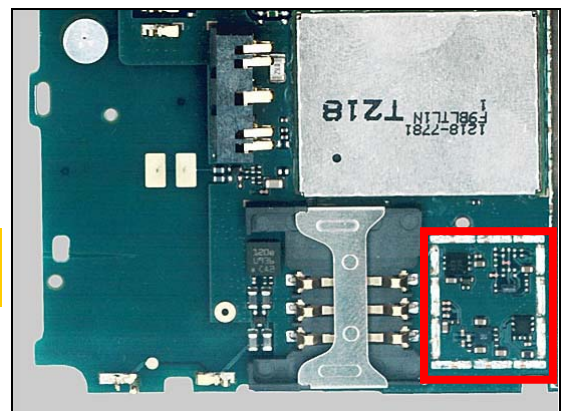
Protect sim connector, battery connector and zif connector with capton tape!



11

N1211, N3100, N4200, V2475

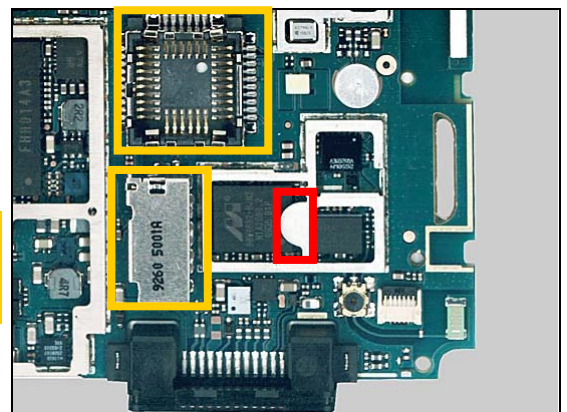
Remove shield can E1005 before repair!
Protect sim holder with capton tape!



12

N1501

Cut the shield fence as shown!
Protect memory holder and camera holder r with capton tape!



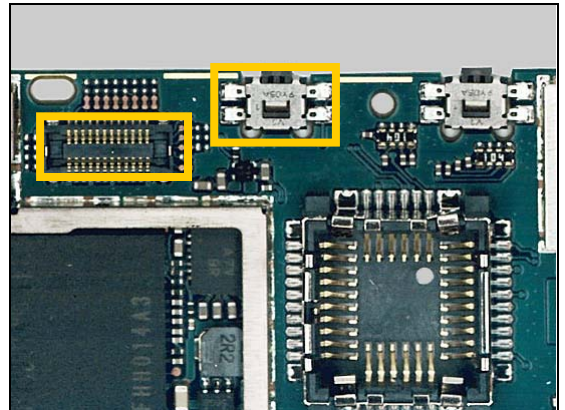


Repair Actions

13

N2205

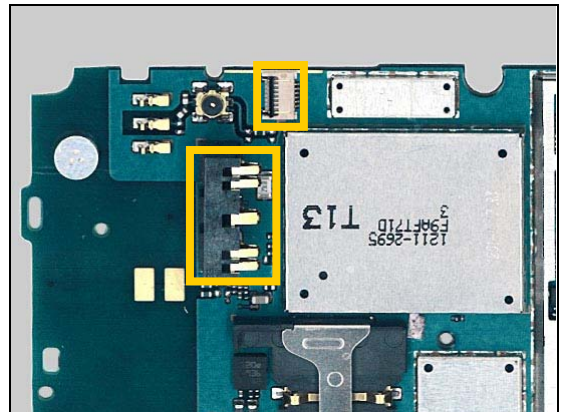
Protect BtB connector and switch with capton tape!



14

X1200

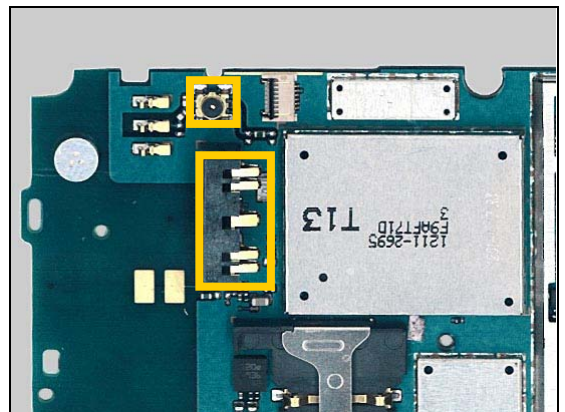
Protect battery connector and zif connector with capton tape!



15

X1202, X1210, X1211, X1212

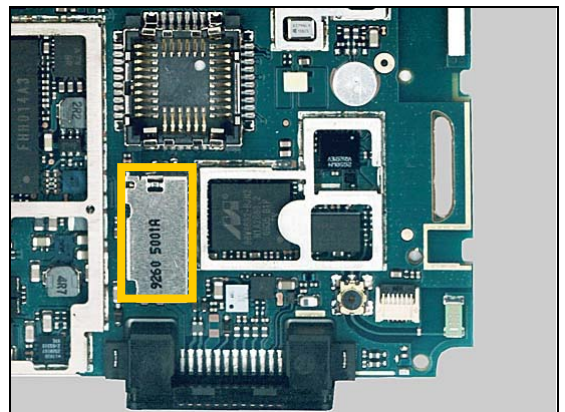
Protect battery connector and connector with capton tape!



16

X1203

Protect memory holder with capton tape!

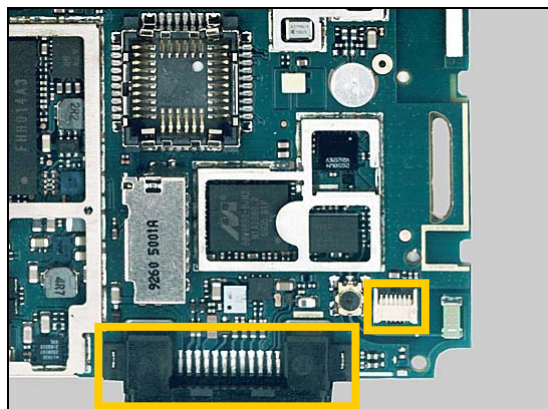


Repair Actions

17

X1500

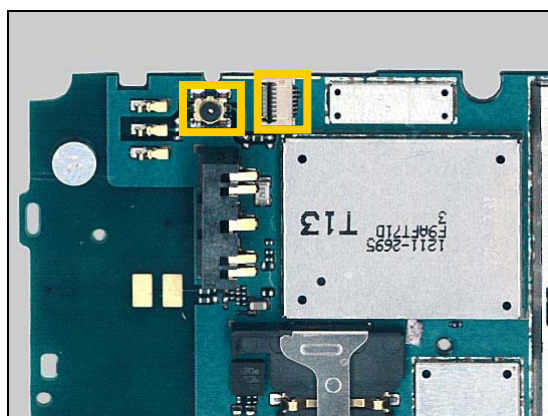
Protect system connector and zif connector with capton tape!



18

X2201

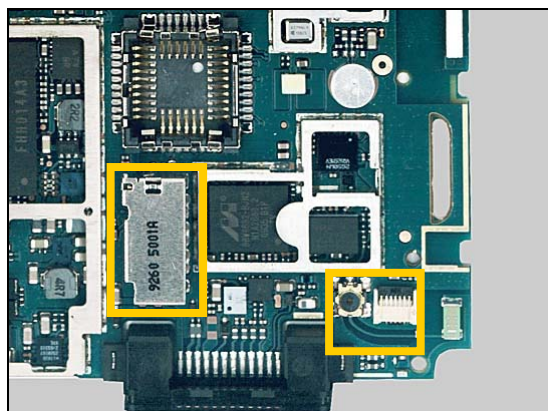
Protect connector and zif connector with capton tape!



19

X2405

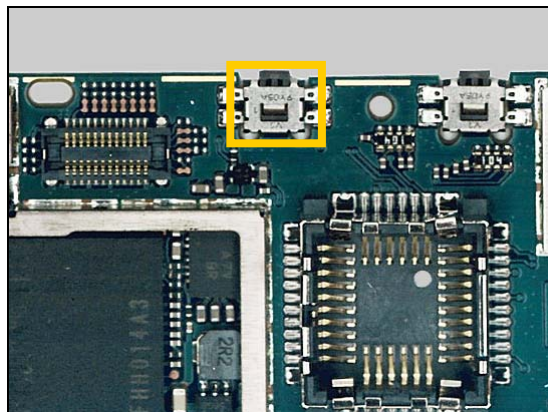
Protect memory connector, connector and zif connector with capton tape!



20

X4200

Protect switch with capton tape!

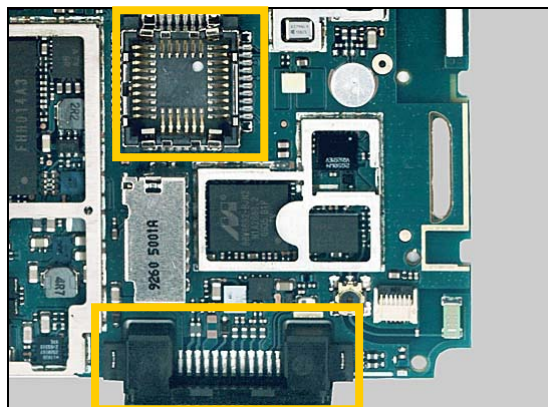


Repair Actions

21

X4210

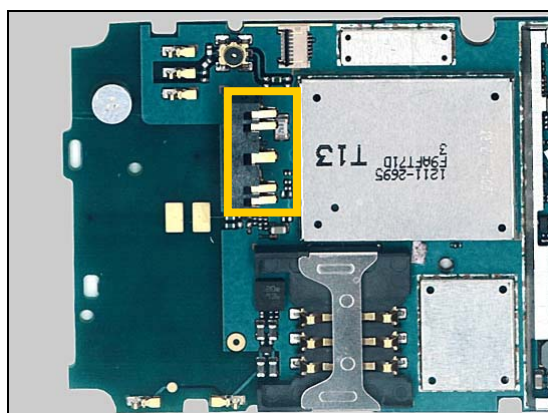
Protect system connector and camera holder with capton tape!



22

X4215

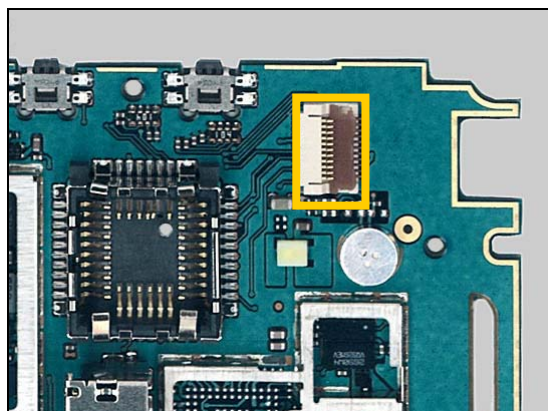
Protect battery connector with capton tape!



23(only for J10)

B3100, L3100, L3109, V2203

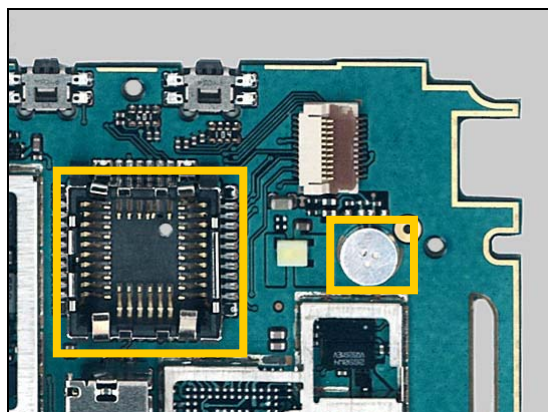
Protect zif connector with capton tape!



24(only for J10)

X1503

Protect switch, camera holder and microphone with capton tape!





4 Revision History

Rev.	Date	Changes / Comments
1	2010-Mar-5	1 st release
2	2010-Mar-14	Add identifier to N2300 and Z1401