



# Component Replacement

- electrical -



*Xperia™ X8*

*E15i, E15a, E16i, E16a*

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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 (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!**

### REMOVE SENSITIVITY PARTS

Due to the temperature sensitivity, the camera has to be removed before any repair action is done on the PBA. The Earspeaker and the Dome sheet has also to been removed when there is a risk for them to be heated. Please follow the Replacement instruction in the Working instruction.



Component Replacement Repair Drawing Additional Soldering Process/

Position	Component	Part no.	Comments
B3500	Mic 4.0 Electret	1224-0804	P BGA ⇒ 1
B5100	Vibrator	1218-9713	P BGA ⇒ 2
C1306	Capacitor Ceramic 1,0 uF +/-10% 25,0 V K	1000-0076	S HA
C7103	Capacitor Ceramic 1,0 uF +/-10% 25,0 V K	1000-0076	P HA
C8140	Capacitor 2.2 uF +/-20% 6.3 V K0402	1000-6901	P HA
L1000	Ind WW 4.7 uH	1226-6894	P HA
L1001	Ind WW 4.7 uH	1226-6894	P HA
L1002	Ind WW 4.7 uH	1226-6894	P HA
L1003	Ind WW 4.7 uH	1226-6894	P HA
L1350	Ind Chip 1.0 uH	1225-8646	P HA
L3102	Ind Chip 120.0 nH	1236-1090	S HA ⇒ 3
L3503	Inductor Chip	1203-8594	S HA
L3504	Inductor Chip	1203-8594	S HA
L3600	Inductor	1200-0317	S HA ⇒ 3
L3601	Inductor	1200-0317	S HA ⇒ 3
L3602	Inductor	1200-0317	S HA ⇒ 3
L3603	Filter	1000-2609	S HA ⇒ 3
L3604	Filter	1000-2609	S HA ⇒ 3
L7100	Inductor	1000-3333	P HA
L8140	Ind Chip 1.5 uH	1218-0127	P HA
N1000	IC Linear	1224-6892	P HA
N2800	ASIC RF QFN-68 8x8x0.9mm	1229-6139	P BGA C
N2801	RF Antenna QUAD 850/900/1800/1900/UMTS	1223-8454	P HA + BH or BGA C
N2803	Radio GSM Tx SAW GSM850/GSM900	1229-0242	P HA C
N2810	Mod PA GSM	1223-8455	P HA + BH or BGA C
N2901	Mod PA WCDMA 1920-1980MHz	1227-8690	P HA C [for band 1]
N2904	Mod PA WCDMA 880-915MHz	1227-8743	P HA C [for band 8]
N2904	Mod PA WCDMA 824-849MHz	1227-8745	P HA C [for band 5]
N2905	Mod PA WCDMA 1850-1910MHz	1227-8704	P HA C [for band 2]
N3500	IC Amp	1217-2694	P HA
N3600	ASIC Tjatte3 CSP20	1000-0198	S HA ⇒ 3
N5400	MEMS Compass Analog	1228-7182	P HA
N5500	IC 8-pin QFN	1217-4125	P HA ⇒ 4
N5503	Light Sensor	1000-7567	P HA
N7100	IC Driver LED White 12-Bump uSMD	1230-5154	P HA
N7401	IC Vreg PLP1010-4	1202-5945	P HA ⇒ 5
N8000	Mod PA WLAN 3.0 x 3.0 x 0.50mm	1239-7071	P HA
N8100	Mod Radio Bluetooth + FM YFV, WLAN 5.0 x	1219-6481	P BGA
N8101	IC Vreg	1232-0901	P HA
N8300	IC IF BGA-48	1223-7180	P HA
N8401	Filter Dpx 1.575 GHz TX 2.45 GHz RX	1225-2213	P HA
N8402	IC Amp	1218-0656	P HA
R3601	Resistor 5.1 kOhm 50mW	1000-4138	S HA ⇒ 3
S5200	Input Switch	1001-0060	P HA/ST + BH
S5201	Side push switch	1000-7670	P HA/ST + BH
S5202	Side push switch	1000-7670	P HA/ST + BH
S5203	Side push switch	1000-7670	P HA/ST + BH



*Component Replacement Repair Drawing Additional Soldering Process/*

Position	Component	Part no.	Comments
V1300	Diode	1000-0282	P HA
V2200	Diode Protection 5.0 V	1220-8901	S HA
V3500	Dual ESD protection diode	1000-0399	S HA ⇒ 7
V3602	Trans P-ch FET	1201-9257	S HA ⇒ 3
V4000	Trans P-ch FET	1202-9494	S HA ⇒ 7
V4001	Diode Protection 5.0 V	1220-8901	S HA ⇒ 7
V4003	Diode	1201-8440	S HA ⇒ 7
V5101	LED Red/Green/Blue	1230-2194	P HA
V5500	Diode	1223-2957	P HA
V5501	LED	1223-3002	P HA
V7100	Diode Schottky 0, SOD523	1000-0087	P HA
X1001	Conn Leaf Spring 1p	1202-1053	P HA
X1003	Conn Leaf Spring 1p	1202-1053	P HA ⇒ 6
X1004	Conn Leaf Spring 1p	1202-1053	P HA ⇒ 8
X1005	Screw Nut Soldered	1239-3879	S HA + BH ⇒ 9
X1006	Conn Leaf Spring Antenna conn	1200-2144	S HA ⇒ 13
X1300	Connector Battery 5p	1232-1629	S BGA
X2800	Conn Leaf Spring Antenna conn	1200-2144	S HA
X2801	Conn Leaf Spring Antenna conn	1200-2144	S HA
X2804	Conn Coax Plug 6p RF-probe contact	1203-9688	S HA/ST + BH or BGA
X3502	Clip Ear Speaker	1231-7483	S HA/ST + BH ⇒ 10
X3503	Clip Ear Speaker	1231-7483	S HA/ST + BH ⇒ 11
X4000	Conn SIM	1232-1490	S BGA ⇒ 12
X4100	Conn Micro SD	1235-5781	S BGA ⇒ 7
X5300	Conn FPC Receptacle 6p FH33-6S-0.5SH	1204-9167	P BGA
X7000	Conn FPC 23p	1225-0025	P BGA
X7300	Camera Socket	1220-0574	S BGA ⇒ 7
X8400	Conn Leaf Spring Antenna conn	1200-2144	S HA
X8401	Conn Coax Plug 6p RF-probe contact	1203-9688	S HA/ST + BH or BGA
X8402	Conn Leaf Spring Antenna conn	1200-2144	S HA
Z2200	Filter 100.0 MHz	1224-6060	S HA
Z8000	Filter Cer RF 2.45 GHz Bluetooth/W-LAN	1228-7102	P HA
Z8400	Filter SAW 1.575 GHz	1211-5714	P HA
Z8401	Filter SAW 1,575 GHz	1201-7439	P HA



## 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

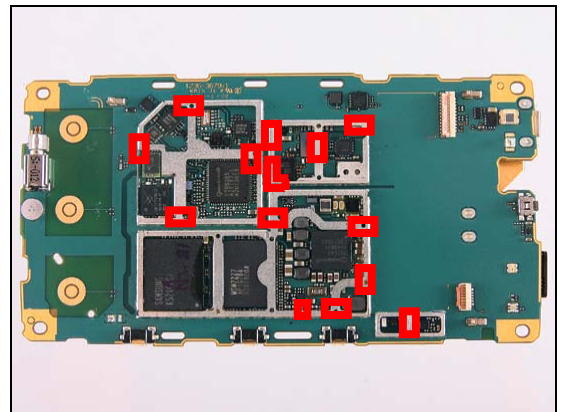
**Refer to the Tools Catalogue/Matrix for information about equipment required for PBA repair!**

### 3.1 Shield Can Fence Modifications

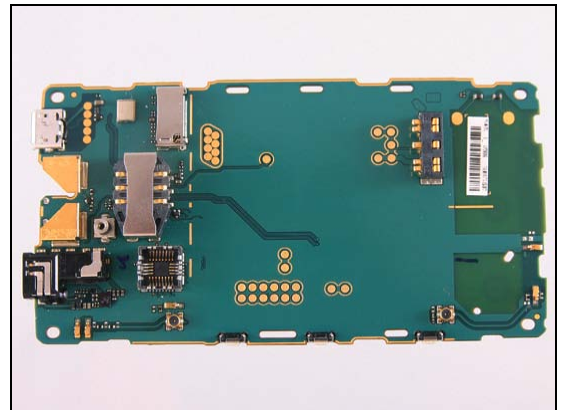
Refer to the pictures below of the primary and secondary sides for repairs that require the Shield Can Fence to be modified:

- 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*





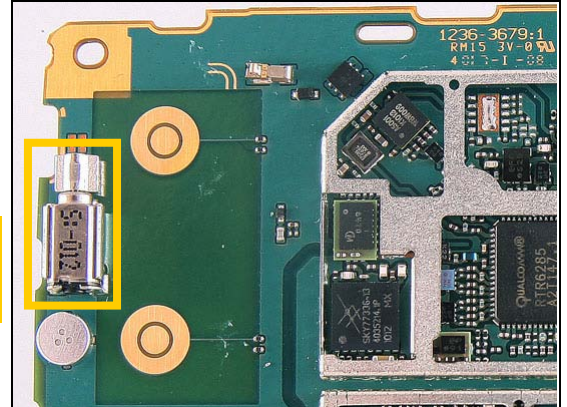
## Repair Actions

### 3.2 Additional Repair Info

1

**B3500**

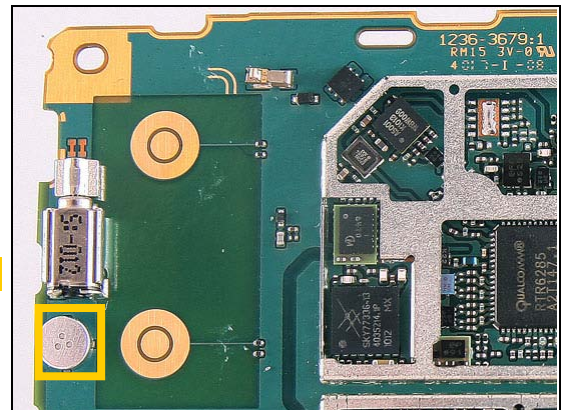
***Protect the vibrator with capton tape!***  
***Protect the microphone with capton tape when the microphone is remounted***



2

**B5100**

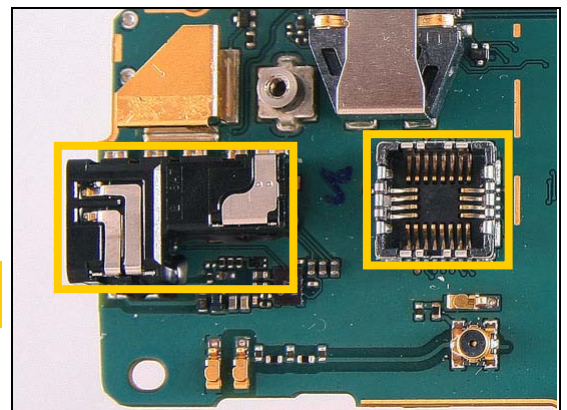
***Protect the microphone with capton tape!***



3

**L3102, L3600, L3601, L3602, L3603, L3604, N3600, R3601, V3602**

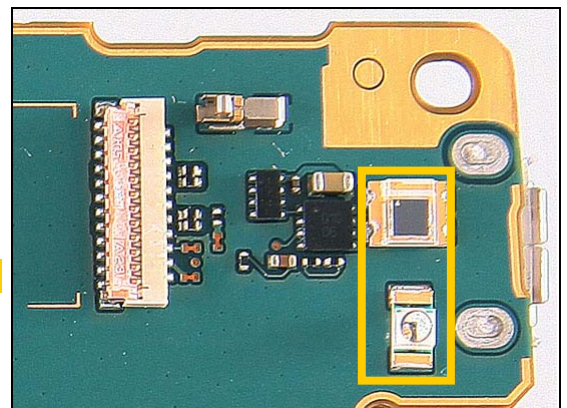
***Protect the audio jack and camera socket with capton tape!***



4

**N5500**

***Protect the LED and the diod with capton tape!***





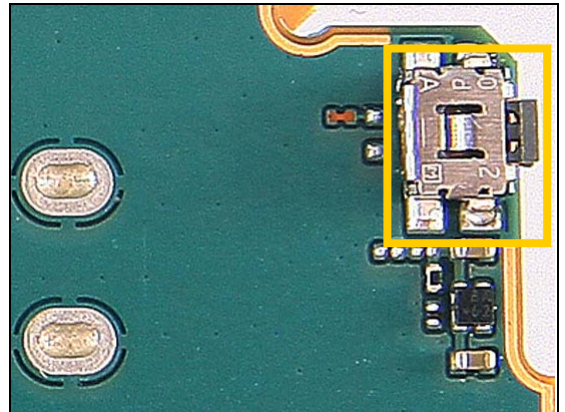


## Repair Actions: Additional Repair Info

5

N7401

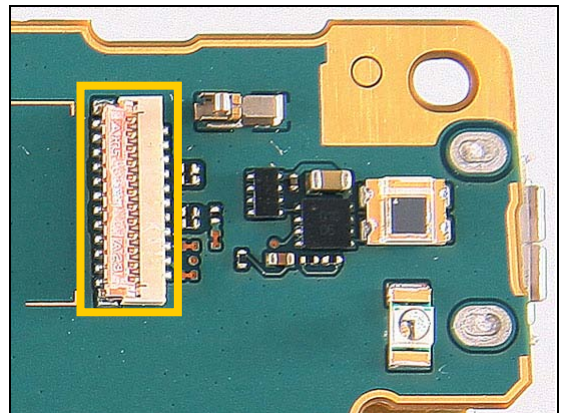
**Protect the switch with capton tape!**



6

X1003

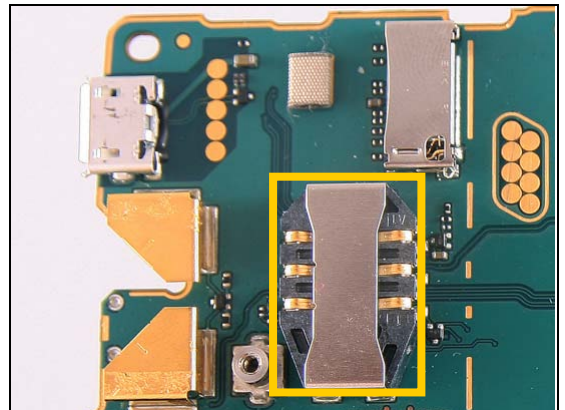
**Protect the ZIF connector with capton tape!**



7

V3500, V4000, V4001, V4003, X4100, X7300

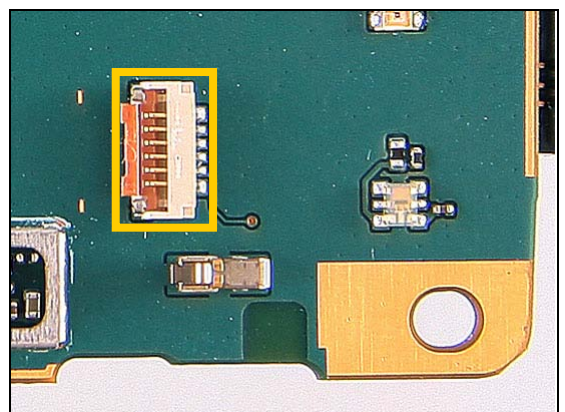
**Protect the SIM connector with capton tape!**



8

X1004

**Protect the ZIF connector with capton tape!**



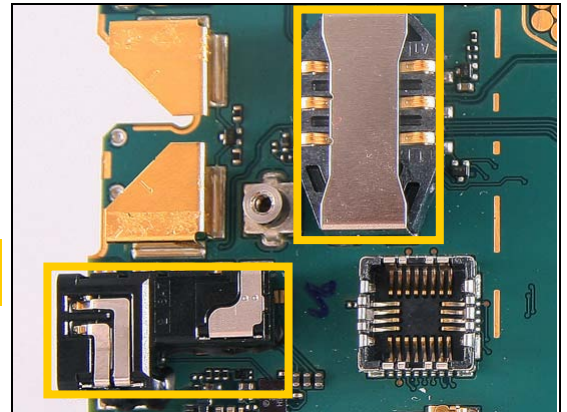


## Repair Actions: Additional Repair Info

9

X1005

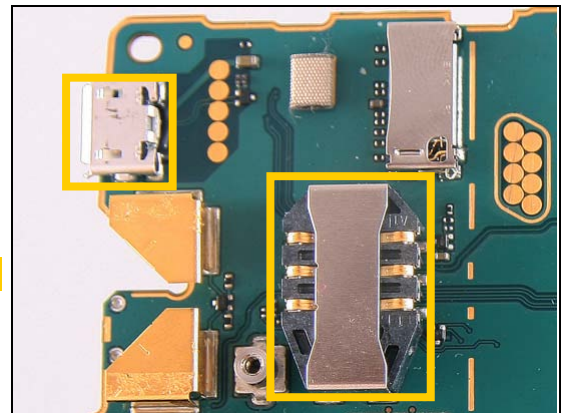
**Protect the audio jack and SIM connector with capton tape!**



10

X3502

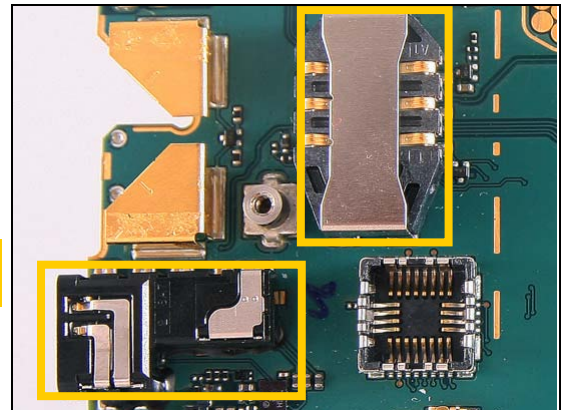
**Protect the USB and SIM connectors with capton tape!**



11

X3503

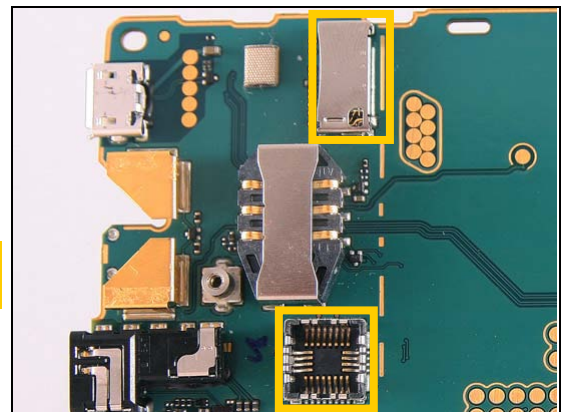
**Protect the SIM connector and the audio jack with capton tape!**



12

X4000

**Protect the camera socket and the micro SD connector with capton tape!**



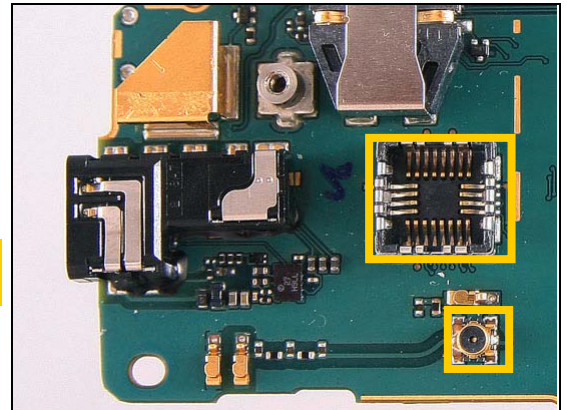


## Repair Actions: Additional Repair Info

13

X1006

**Protect the RF connector and camera socket with capton tape!**





## 4 Revision History

Rev.	Date	Changes / Comments
1	2010-Sep-27	Initial release
2	2011-Jan-05	Corrected frequency bands for 1227-8704 and 1227-8745
3	2011-May-16	Two new commercial models included - E16i and E16a 1000-8271 (B2000) removed due to SI 18292-XXXXX
4	2011-Sep-20	Added C8140