



Working Instructions, HVC/Electrical

Applicable for Z600/Z608

1	Replacement of parts	2
1.1	RF Transceiver, Ingela (IC200).....	2
1.2	Power supply, Victoria (IC600).....	3
1.3	Audio I/O buffer, Tjatte (IC601)	5
1.4	Audio amp (IC603).....	6
1.5	Digital I/O buffer, Knatte (IC604).....	7
1.6	Front end module, Antenna switch (CP200)	8
1.7	Power amplifier (CP201).....	9
2	Reflow profiles	11
3	Revision History	12



1 Replacement of parts

1.1 RF Transceiver, Ingela (IC200)

The shielding can cover must be removed from the board when changing the components.

Calibration can only be done by authorized repair centers (SERP).

Process Tools

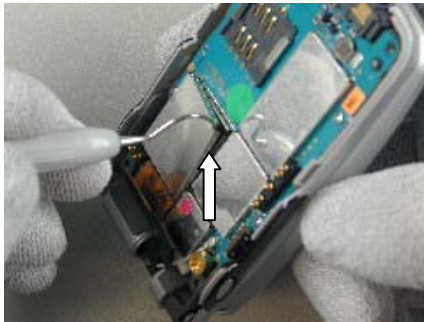
- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

Equipment

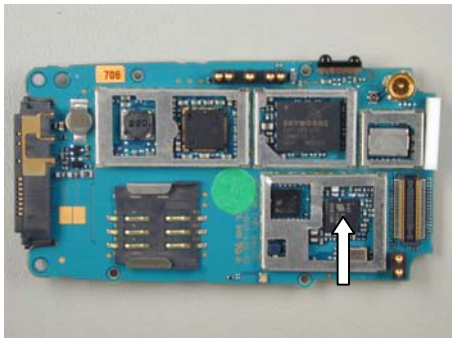
- ESD-gloves (cotton gloves)
- ESD-wristband

Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.1</i>	Remove the shielding can cover with a dentist hook. Start in a corner and pull until the shielding can cover is loose. <i>(fig.1)</i>	Removed shielding can covers cannot be reused and must be scrapped.



#	Figure	Instruction	Note
2	 <i>fig.2</i>	<p>Change the component.</p> <p>Use IR reflow or air reflow.</p> <p>Mount the shielding can cover with your fingers. Press all sides of the shielding can cover until you hear a “click”</p>	<p>The guideline is a recommendation. The profile is strongly depending on the replacement equipment</p>

- Assemble the phone as described in Working Instructions 3/00021-1/FEA 209 544/80 (2 Reassembly upper & lower cabinets, step 4-9).

1.2 Power supply, Victoria (IC600)

The shielding can cover must be removed from the board when changing the components.

Calibration can only be done by authorized repair centers (SERP).

Process Tools

- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux


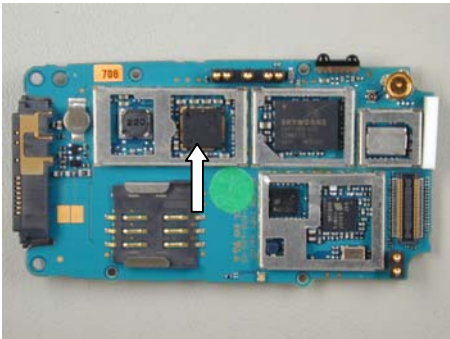
Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband



Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.3</i>	Remove the shielding can cover with a dentist hook. Start in a corner and pull until the shielding can cover is loose. <i>(fig.3)</i>	Removed shielding can covers cannot be reused and must be scrapped.
2	 <i>fig.4</i>	Change the component. Use IR reflow or air reflow. Mount the shielding can cover with your fingers. Press all sides of the shielding can cover until you hear a “click” <i>(fig.4)</i>	The guideline is a recommendation. The profile is strongly depending on the replacement equipment

- Assemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (2 Reassembly upper & lower cabinets, step 4-9).



1.3 Audio I/O buffer, Tjatte (IC601)

Process Tools

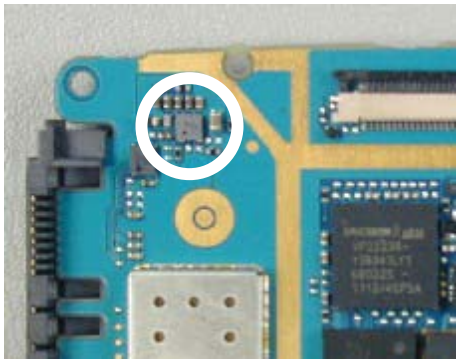
- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband

Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.5</i>	Change the component. Use IR reflow or air reflow. (fig.5)	The guideline is a recommendation. The profile is strongly depending on the replacement equipment

- Assemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (2 Reassembly upper & lower cabinets, step 4-9).



1.4 Audio amp (IC603)

Process Tools

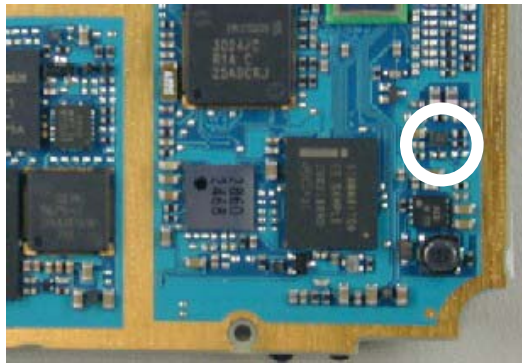
- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband

Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.6</i>	Change the component. Use IR reflow or air reflow. (fig.6)	The guideline is a recommendation. The profile is strongly depending on the replacement equipment.

- Assemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (2 Reassembly upper & lower cabinets, step 4-9).



1.5 Digital I/O buffer, Knatte (IC604)

Process Tools

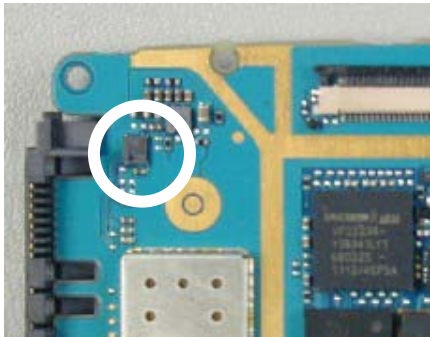
- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband

Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.7</i>	Change the component. Use IR reflow or air reflow. <i>(fig.7)</i>	The guideline is a recommendation. The profile is strongly depending on the replacement equipment.

- Assemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (2 Reassembly upper & lower cabinets, step 4-9).



1.6 Front end module, Antenna switch (CP200)

The shielding can cover must be removed from the board when changing the components.

Calibration can only be done by authorized repair centers (SERP).

Process Tools

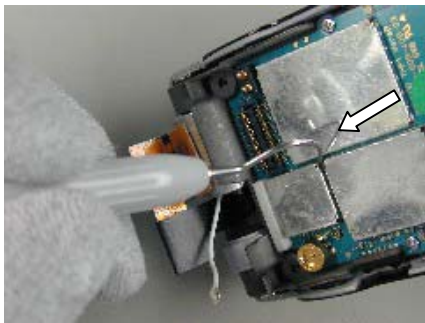
- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

Equipment

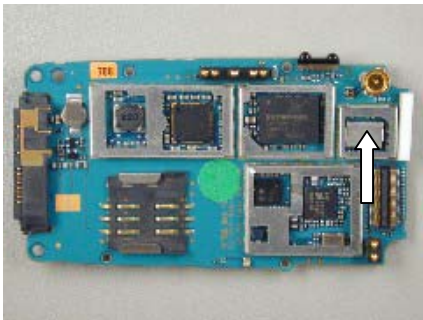
- ESD-gloves (cotton gloves)
- ESD-wristband

Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.8</i>	Remove the shielding can cover with a dentist hook. Start in a corner and pull until the shielding can cover is loose. (fig.8)	Removed shielding can covers cannot be reused and must be scrapped.



#	Figure	Instruction	Note
2	 <i>fig.9</i>	<p>Change the component.</p> <p>Use IR reflow or air reflow.</p> <p>Mount the shielding can cover with your fingers. Press all sides of the shielding can cover until you hear a “click”</p> <p>(fig.9)</p>	<p>The guideline is a recommendation. The profile is strongly depending on the replacement equipment</p>

- Assemble the phone as described in Working Instructions 3/00021-1/FEA 209 544/80 (2 Reassembly upper & lower cabinets, step 4-9).

1.7 Power amplifier (CP201)

The shielding can cover must be removed from the board when changing the components.

Calibration can only be done by authorized repair centers (SERP).

Process Tools

- Dentist hook.
- BGA replacement equipment
- Pair of tweezers
- Solder cleaning wiper (Tin wick)
- Solder paste
- Gel flux

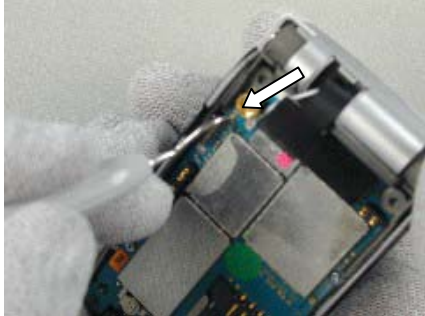
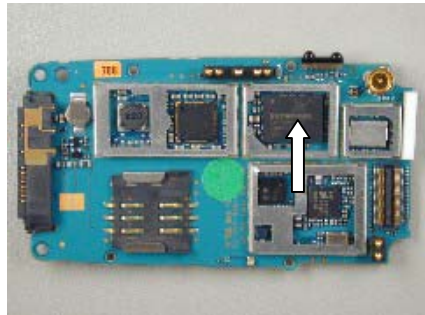
Equipment

- ESD-gloves (cotton gloves)
- ESD-wristband



Instructions

- Disassemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (1 Disassembly upper & lower cabinets, step 1-9).

#	Figure	Instruction	Note
1	 <i>fig.10</i>	Remove the shielding can cover with a dentist hook. Start in a corner and pull until the shielding can cover is loose. <i>(fig.10)</i>	Removed shielding can covers cannot be reused and must be scrapped.
2	 <i>fig.11</i>	Change the component. Use IR reflow or air reflow. Mount the shielding can cover with your fingers. Press all sides of the shielding can cover until you hear a “click” <i>(fig.11)</i>	The guideline is a recommendation. The profile is strongly depending on the replacement equipment

- Assemble the phone as described in *Working Instructions 3/00021-1/FEA 209 544/80* (2 Reassembly upper & lower cabinets, step 4-9).



2 Reflow profiles

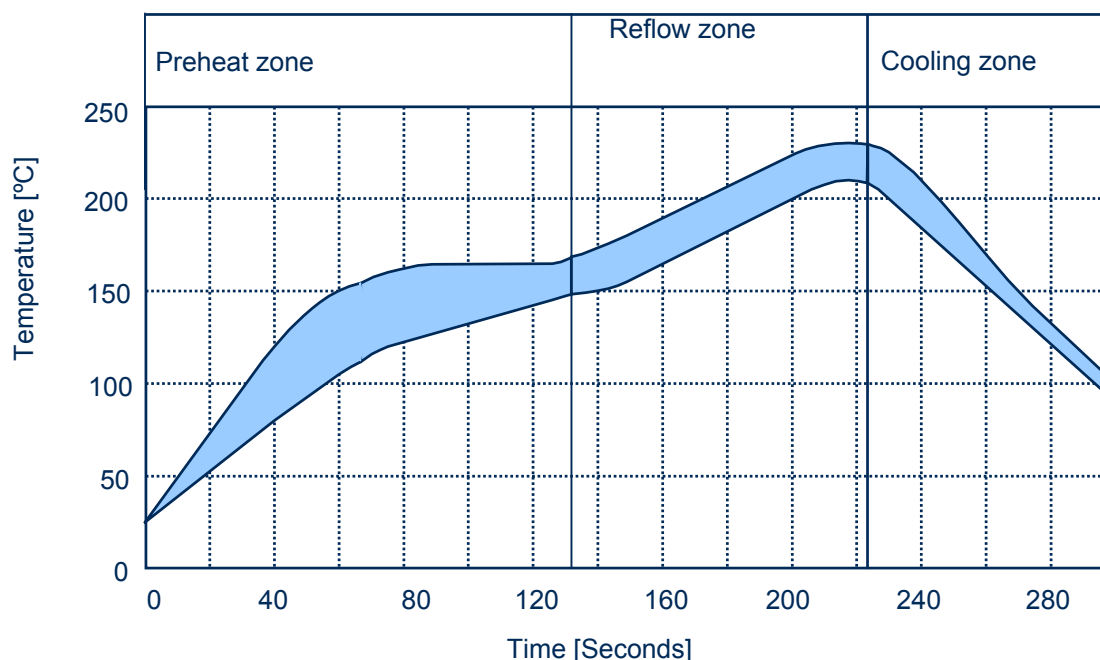
These values are strongly depending on the BGA replacement equipment.

Nozzle type will be chosen after the outer size of the actual component. Make sure the nozzle does not affect any near placed components.

NOTE:

These values are recommendations and may have to be changed depending on the type of equipment.

General reflow profile sn/pb



Ramp rate	< 3°C/sec
Ramp rate cooling zone	< 6°C/sec
Time above liquidus	60-150 sec
Minimum temperature	215°C
Maximum temperature	225°C or 235°C for 10-20 sec
Total time	Appr. 4-7 min

* The higher temperature in case the board has extremely high ΔT .



3 Revision History

Rev.	Date	Changes / Comments
A	2003-09-17	First release