SIEMENS
mobile

Xelibri 5, Xelibri 6 and Xelibri 7

Level 2.5

Repair Documentation

Table of Contents:

1 Introduction

This manual is intended to help you carry out repairs on level 2.5, meaning limited component repairs. Failure highlights are documented and should be repaired in the local workshops.

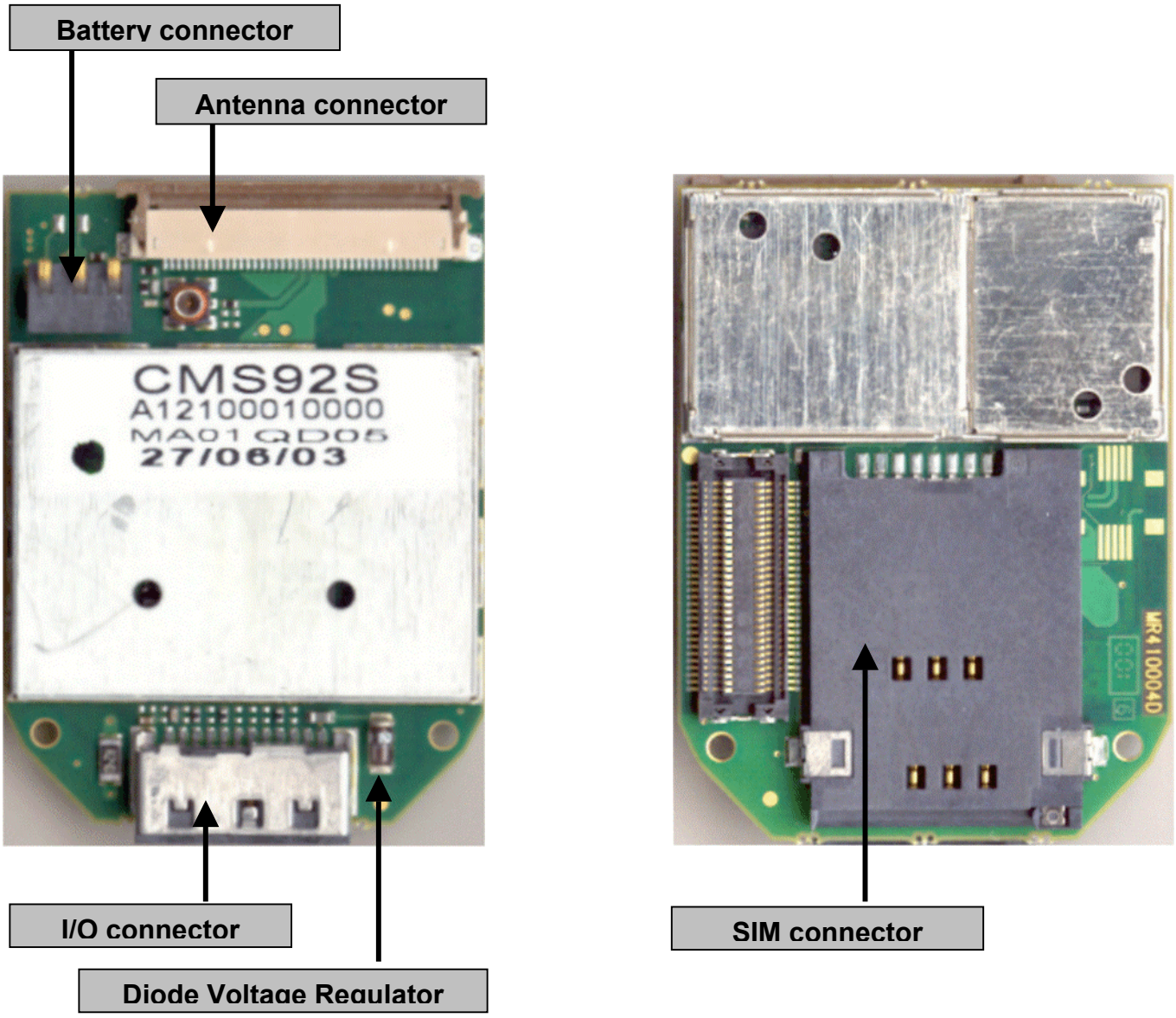
It must be noted that all repairs have to be carried out in an environment set up according to the ESD (Electrostatic Discharge Sensitive Devices) regulations defined in international standards.

Jigs, Tools and Working materials for all described repairs are hot air blower, soldering gun, tweezers, flux and solder

If you have any questions regarding the repair procedures or technical questions about the spare parts do not hesitate to contact our technical support team in Kamp-Lintfort, Germany:

Tel.: +49 2842 95 4666
Fax: +49 2842 95 4302
E-mail: st-support@siemens.com

2 X5, X6 AND X7 Level2.5 Component Location



3 BATTERY CONNECTOR

3.1 Fault Description

3.1.1 Fault Symptoms for customers:

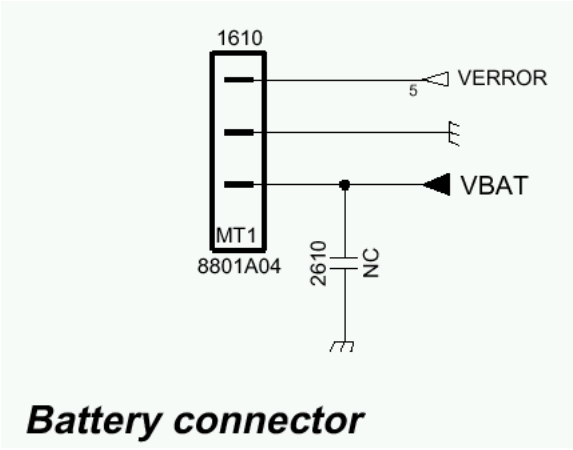
Can't power on under normal operation
Can't charge by this handset when power off

3.1.2 Fault Symptom on GSM Tester:

This fault cannot be detected with a GSM Tester

3.1.3 Component Information

The connector (1610) is a battery connector with 3 contacts. During power on, 3.5 V to 4.2V is supplied to the handset via V Bat. VERROR is provided to the Battery, go into the Power Management Unit control charge.



Battery connector

3.2 Repair Documentation

3.2.1 Description of procedure

3.2.1.1 Diagnosis

Visually check pins for oxidation or deformity. Measure pins to test points (Vbat, GND, Verror) with a multimeter to check for continuity. For the pin Vbat and GND can use the printing of component

3.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective connector. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new connector on the PCBA. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

3.2.1.3 Test

Switch on the handset after repair

3.2.2 List of material

3.2.2.1 Components

Battery connector
Part-Number: L36158-A54-C215

3.2.2.2 Special tools

Multimeter

4 I/O CONNECTOR

4.1 Fault Description

4.1.1 Fault Symptoms for customers:

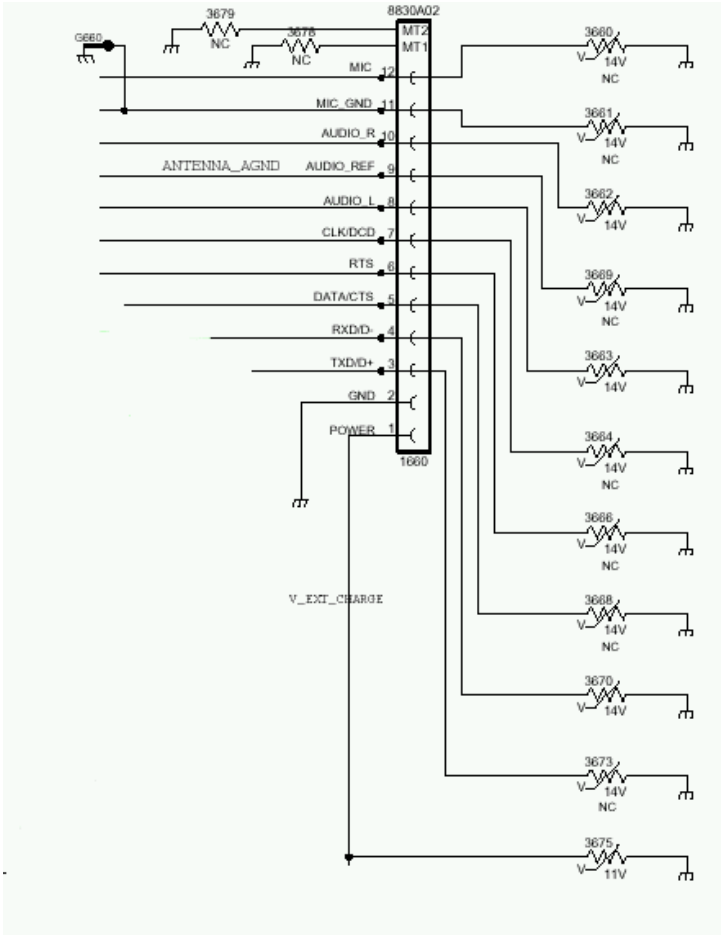
Cannot charge the handset

4.1.2 Fault Symptom on GSM Tester:

This fault cannot be detected with a GSM Tester

4.1.3 Component Information

The connector (1660) is I/O connector (12 contacts) used the adapter charger.
The adapter charger uses the pIn1 for V_EXTERNAL _Charge and PIN 2 GND BOTTOM



4.2 Repair document

4.2.1 Description of procedure

4.2.1.1 Diagnosis

Visually check pins for oxidation or deformity. Visual inspection of the fittings and I/O pads solder joints (short circuit, leak, poor brightness). Measure pins (diode zener pos 6640) to pins (Vexternal charge, GND) with a multimeter to check for continuity

4.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective connector. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new connector on the PCBA. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

4.2.1.3 Test

Plug the adapter charger and check if there is a signal on the pin 12 of I/O connector

4.2.2 List of material

4.2.2.1 Components

I/O connector
Part-Number: L36334-Z93-C303

4.2.2.2 Special tools

Multimeter

5 ANTENNA CONNECTOR

5.1 Fault Description

5.1.1 Fault Symptoms for customers:

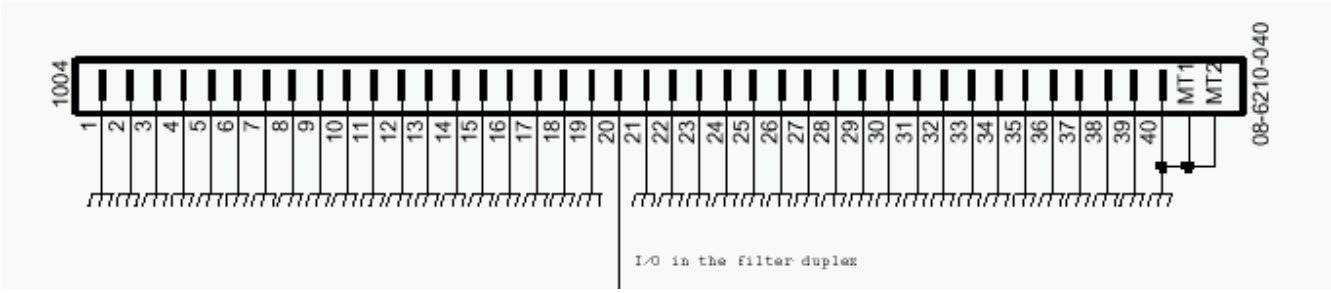
No Location update possible
RX/TX level problems
Network search

5.1.2 Fault Symptom on GSM Tester:

No Location update possible
RX/TX level problems

5.1.3 Component Information

The connector (1004) is connected (40 contacts) used for Flex antenna. All the pins are ground expect the pin 20



5.2 Repair document

5.2.1 Description of procedure

5.2.1.1 Diagnosis

Visually check pins for oxidation or deformity. Visual inspection of the fittings and I/O pads solder joints (short circuit, leak, poor brightness). Measure pins to test points with a multimeter to check for continuity

5.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective connector. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new connector on the PCBA. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

5.2.2 Test

Plug the antenna and check if there is a reception signal.

5.2.3 List of material

5.2.3.1 Components

Board to board connector
Part-Number: L36158-A54-C215

5.2.3.2 Special tools

Multimeter

6 SIM CARD CONNECTOR

6.1 Fault Description

6.1.1 Fault Symptoms for customers:

Handset doesn't accept the SIMcard.

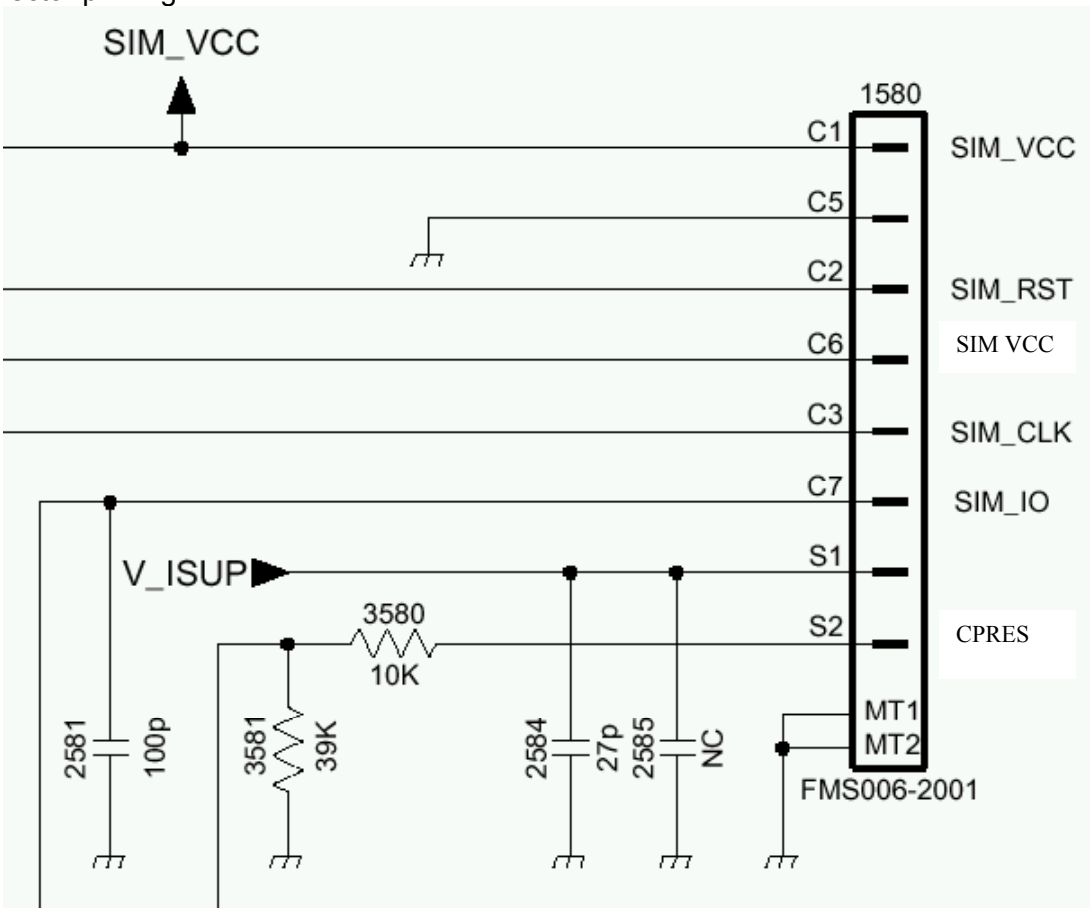
6.1.2 Fault Symptom on GSM Tester

This fault cannot be detected with a GSM Tester

6.1.3 Component Information

The connector (1580) is connector (8 contacts) used to link with SIM card.

SIM connector pinning



6.2 Repair document

6.2.1 Description of procedure

6.2.1.1 Diagnosis

Visually check pins for oxidation or deformity. Visual inspection of the fittings and I/O pads solder joints (short circuit, leak, poor brightness). Measure pins to test points with a multimeter to check for continuity

6.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective connector. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new connector on the PCBA. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

6.2.1.3 Test

Retest handset after repair.

6.2.2 List of material

6.2.2.1 Components

Sim Card connector
Part-Number: L36197-F5117-F297

6.2.2.2 Special tools

Multimeter

7 Diode Voltage Regulator

7.1 Fault Description

7.1.1 Fault Symptoms for customers:

Normally no special complain from customer. Desoldered or damaged components during a connector rework.

7.1.2 Fault Symptom on GSM Tester

. This fault cannot be detected with a GSM Tester

7.2 Repair document

7.2.1 Description of procedure

7.2.1.1 Diagnosis

Visual inspection of the solder joints (bad soldering, poor brightness, no joint, bad placement, no component).

7.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective diode. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new diode on the PCBA. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

7.2.1.3 Test

Retest handset after repair.

7.2.2 List of material

7.2.2.1 Components

Diode Voltage Regulator
Part-Number: L36197-F5098-F685

8 Receiver - Loudspeaker (only X6)

8.1 Fault Description

8.1.1 Fault Symptoms for customers:

The caller can't hear any voice

8.1.2 Fault Symptom on GSM Tester

This fault cannot be detected with a GSM Tester

8.1.3 Component Information

The loudspeaker is placed in the upper part of the clam shell, near display.

8.2 Repair document

8.2.1 Description of procedure

8.2.1.1 Diagnosis

Visual inspection of the solder joints (bad soldering, poor brightness, no joint, bad placement, no component).

8.2.1.2 Repair by component change

Use a hot air nozzle to remove the defective loudspeaker. *Do not apply an excessive heat and flow to avoid destroying the adjoining solder joints.* Level the solder joint on the pads (eventually add solder). Secure new loudspeaker on the flex cable. Reheat the solder on the pads with a fine-tipped soldering iron to allow the solder to flow on the connector's pins.

8.2.1.3 Test

Retest handset after repair.

8.2.2 List of material

8.2.2.1 Components

Receiver - Loudspeaker
Part-Number: L36197-F5117-F296