



## **Accredited testing-laboratory**

**DAR registration number: DAT-P-176/94-D1**

**Federal Motor Transport Authority (KBA)  
DAR registration number: KBA-P 00070-97**

**Recognized by the Federal Communications Commission**

**Anechoic chamber registration no.: 90462 (FCC)**

**Anechoic chamber registration no.: 3462C-1 (IC)**

**Certification ID: DE 0001**

**Accreditation ID: DE 0002**

**Accredited Bluetooth® Test Facility (BQTF)**

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### **Annex to Test**

**report no. : 1-1065-14-02/09**  
**Type identification : AAD-3880008-BV**  
**Applicant : Sony Ericsson Mobile Communications AB**  
**FCC ID : PY7A3880008**  
**IC Certification No : 4170B-A3880008**  
**Test standards : 47 CFR Part 15**  
**ICES-003 Issue 4**

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## 1 General information

### 1.1 Notes

The test results of this test report relate exclusively to the test item specified in 3.1.1. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

#### Test laboratory manager:

**2009-03-11**

**Jakob Reschke**



Date

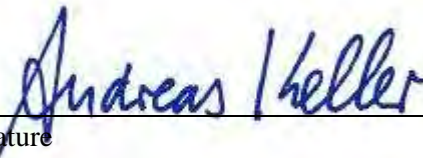
Name

Signature

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**2009-03-11**

**Andreas Keller**



Date

Name

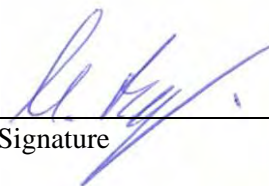
Signature

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#### Technical responsibility for area of testing:

**2009-03-11**

**Michael Berg**



Date

Name

Signature

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## 1.2 Testing laboratory

**CETECOM ICT Services GmbH**

**Untertürkheimer Straße 6 - 10**

**66117 Saarbrücken**

**Germany**

**Phone: + 49 681 5 98 - 0**

**Fax: + 49 681 5 98 - 9075**

**e-mail: info@ICT.cetecom.de**

**Internet: http://www.cetecom-ict.de**

**State of accreditation:** The test laboratory (area of testing) is accredited according to  
**DIN EN ISO/IEC 17025**  
**DAR registration number: DAT-P-176/94-D1**

**Accredited by:** Federal Motor Transport Authority (KBA)  
**DAR registration number: KBA-P 00070-97**

**Testing location, if different from CETECOM ICT Services GmbH:**

**Name :**  
**Street :**  
**Town :**  
**Country :**  
**Phone :**  
**Fax :**

## 1.3 Details of applicant

<b>Name:</b>	<b>Sony Ericsson Mobile Communications AB</b>
<b>Street:</b>	<b>Mobilvägen 10</b>
<b>Town:</b>	<b>22188 Lund</b>
<b>Country:</b>	<b>Sweden</b>
<b>Telephone:</b>	<b>+46-46-19-3000</b>
<b>Fax:</b>	<b>+46-10-800-2441</b>
<b>Contact:</b>	<b>Peter Lindeborg</b>
<b>E-mail:</b>	<b>peter.lindeborg@sonyericsson.com</b>
<b>Telephone:</b>	<b>+46-10-802-43 68</b>

## 1.4 Application details

<b>Date of receipt of order:</b>	<b>2009-02-26</b>
<b>Date of receipt of test item:</b>	<b>2009-03-03</b>
<b>Date of start test:</b>	<b>2009-03-03</b>
<b>Date of end test</b>	<b>2009-03-11</b>
<b>Persons(s) who have been present during the test:</b>	<b>-/-</b>

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## **2 Technical tests**

### **2.1 Details of manufacturer**

Name:	<b>Sony Ericsson Mobile Communications AB</b>
Street:	<b>Mobilvägen 10</b>
Town:	<b>22188 Lund</b>
Country:	<b>Sweden</b>

### **2.2 Test item(s) and test configuration**

**No.: 1      Standard Charger CST-75      with      AAD-3880008-BV**

### **3 Summary of Measurement Results and list of all performed test cases**

- No deviations from the technical specifications were ascertained**
- There were deviations from the technical specifications ascertained

<b>Section in this Report</b>	<b>Test Name</b>	<b>Verdict</b>
5.1	Conducted limits CFR Part 15.207, 15.107 ICES-003 Issue 4	Pass
5.2	Unwanted emissions CFR Part SUBCLAUSE § 15.109 ICES-003 Issue 4	Pass

## **4 Measurements and results**

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 9 kHz to 20 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber.

The receiving antennas are conforming to specifications ANSI C63.2-1996 clause 15 and ANSI C63.4-2003 clause 4.1.5. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test set-ups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received.

The wanted and unwanted emissions are received by spectrum analysers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.4-2003 clause 4.2.

Antennas are conforming to ANSI C63.2-1996 item 15.

9 kHz – 150 kHz ,Quasi Peak measurement, 200 Hz Bandwidth, passive loop antenna.

150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, passive loop antenna.

30 MHz - 200 MHz: Quasi Peak measurement, 120 KHz Bandwidth, biconical antenna

200MHz - 1GHz: Quasi Peak measurement, 120 KHz Bandwidth, log periodic antenna

>1GHz: Average, RBW 1MHz, VBW 10 Hz, wave guide horn

All measurement settings are according to FCC 15.109 and 15.107

## 5 Annex A: FCC Part 15 Subpart B

### 5.1 Conducted Limits

#### Reference

FCC:	CFR Part 15.207, 15.107
IC:	ICES-003 Issue 4

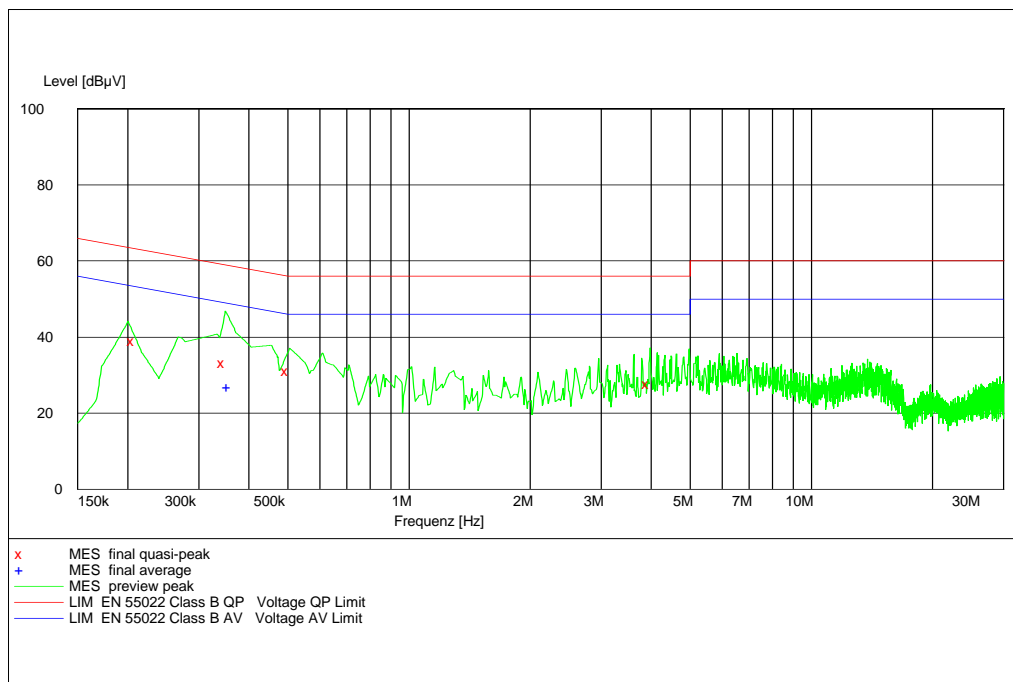
Limits: § 15.107 / 15.207

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

\* Decreases with the logarithm of the frequency

Plot 1:

Idle Mode: 150 kHz – 30 MHz





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## 5.2 Unwanted emissions

### Reference

FCC:	CFR Part SUBCLAUSE § 15.109
IC:	ICES-003 Issue 4

### Measurement Results

SPURIOUS EMISSIONS LEVEL (dB $\mu$ V/m)								
Idle mode			-/-			-/-		
f (MHz)	Detector	Level (dB $\mu$ V/m)	f (MHz)	Detector	Level (dB $\mu$ V/m)	f (MHz)	Detector	Level (dB $\mu$ V/m)
No critical peaks found								
Measurement uncertainty			$\pm 3$ dB					

f < 1 GHz : RBW/VBW: 100 kHz

f  $\geq$  1GHz : RBW/VBW: 1 MHz

H = Horizontal ; V= Vertical

For measurement distance see table below

**Limits:** § 15.109

Frequency (MHz)	Field strength (dB $\mu$ V/m)	Measurement distance (m)
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

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## Plot 1: (30 MHz to 4 GHz)

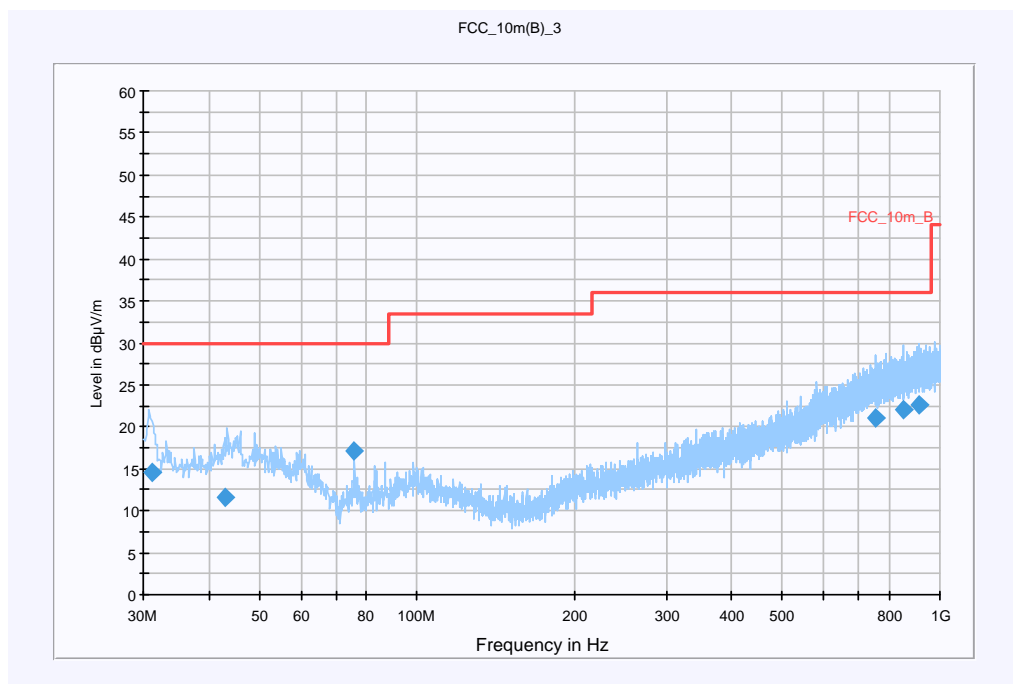
### Common Information

EUT:	AAD-3880008-BV	+ CAA-0002001-BV
Serial Number:	T261F006YJ	IMEI: 00440107-746201-4 + unknown
Test Description:	FCC Part 15 B	
Operating Conditions:	idle / charging	
Operator Name:	LANGER	
Comment:	AC 115 V / 60Hz	

### Scan Setup: STAN\_Fin [EMI radiated]

Hardware Setup:	Electric Field (NOS)
Level Unit:	dB $\mu$ V/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1 GHz	QuasiPeak	120 kHz	15 s	Receiver



### Final Result 1

Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
31.183350	14.5	15000.000	120.000	181.0	V	132.0	12.7	15.5	30.0	
43.116600	11.6	15000.000	120.000	109.0	V	182.0	13.5	18.4	30.0	
75.978950	17.2	15000.000	120.000	220.0	V	50.0	9.4	12.8	30.0	
755.424450	21.1	15000.000	120.000	98.0	H	42.0	24.2	14.9	36.0	
851.902950	22.0	15000.000	120.000	220.0	V	130.0	25.1	14.0	36.0	
911.087100	22.7	15000.000	120.000	129.0	H	27.0	25.7	13.3	36.0	

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## Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0109)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

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## 6 Test equipment and ancillaries used for tests

To simplify the identification on each page of the test equipment used, on each page of the test report, each item of test equipment and ancillaries such as cables are identified (numbered) by the Test Laboratory, below.

All reported calibration intervals are calibrations according to the EN/ISO/IEC 17025 standard. These calibrations were performed from an accredited external calibration laboratory.

Additional to these calibrations the laboratory performed comparison measurements with other calibrated systems and performed a weekly chamber inspection.

All used devices are connected with a 10 MHz external reference.

According to the manufacturers' instruction is it possible to establish a calibration interval for the FSP unit of 24 month, if the device has an external 10 MHz reference.

### *Anechoic chamber A:*

No.	Instrument/Ancillary	Manufacturer	Type	Serial-No.	Internal identification
<b>Radiated emission in chamber A</b>					
A-1	Spectrum Analyzer	Rohde & Schwarz	ESU26	100037	300003555
A-2	Signal Generator	Rohde & Schwarz	SMR20B11	1104.0002.20	300003593
A-3	RF System Panel	Rohde & Schwarz	TS RSP	---	300003556
A-4	Relais Matrix	Rohde & Schwarz	PSN	860673/009	300001385
A-5	Horn Antenna	EMCO	3115	9709-5290	300000212
A-6	Bilog.-Log. Antenna	Schwarzbeck	VULB 9163	02/00	300003696
A-7	Notch Filter GSM 900	Wainwright	WRCD 901.9/903.1EE	9	---
A-8	Notch Filter GSM 1800	Wainwright	WRCD 1747/1748-5EE	1	---
A-9	Notch Filter GSM 1900	Wainwright	WRCB 1879.5/1880.5EE	9	---
A-10	Notch Filter GSM 850	Wainwright	WRCT 837-0.2/50-8EE	1	---
A-11	Notch Filter UMTS	Wainwright	WRCD 1800/2000-0.2/40-5EEK	2	---
A-12	Notch Filter ISM 2400	Wainwright	WRCG 2400/2483-2375/2505-50/10SS	26	---
A-13	High Pass Filter 1.1 GHz	Wainwright	WHK 1.1/15G-10SS	---	---
A-14	High Pass Filter 2.6 GHz	Wainwright	WHKX 2.6/18G-12SS	---	---
A-15	High Pass Filter 7 GHz	Wainwright	WHKX 7.0/18G-8SS	---	---
A-14	Amplifier	Miteq	AFS4-00201800-15-10P-6	US42-0050 2650-28-5A	300003204
A-16	Controller	Inn co	CO 2000	2020507	---
A-17	DC Power Supply	Hewlet Packard	HP6632A	---	300000924
A-18	Computer	F+W	---	---	300003303

### *Anechoic chamber F:*

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Control Computer	F+W	FW0502032	300003303	-/-	-/-	-/-
2	Trilog Antenna VULB 9163	Schwarzbeck	295	300003787	01.04.2008	24	01.04.2010
3	Amplifier - 0518C-138	Veritech Microwave Inc.	-/-	-/-	-/-	-/-	-/-
4	Switch - 3488A	HP		300000368	-/-	-/-	-/-
5	EMI Test receiver - ESCI	R&S	100083	300003312	31.01.2007	24	31.01.2009
6	Turntable Controller - 1061 3M	EMCO	1218	300000661	-/-	-/-	-/-
7	Tower Controller 1051 Controller	EMCO	1262	300000625	-/-	-/-	-/-
8	Tower - 1051	EMCO	1262	300000625	-/-	-/-	-/-
10	Ultra Notch-Filter Rejected band Ch. 62	WRCD	9	-/-	-/-	-/-	-/-