



Accredited testing-laboratory

DAR registration number: DGA-PL-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. : 1-1954-04-02/10
Type identification : AAD-3880080-BV
Applicant : Sony Ericsson Mobile Communications AB
FCC ID : PY7A3880080
IC Certification No : 4170B-A3880080
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:

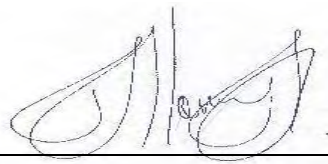
2010-02-10

Daniel Muyunga

Date

Name

Signature



Technical responsibility for area of testing:

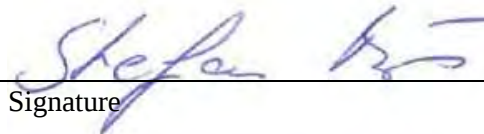
2010-02-10

Stefan Bös

Date

Name

Signature



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: DGA-PL-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

Name:	Sony Ericsson Mobile Communications AB
Street:	Nya Vattentornet
Town:	22188 Lund
Country:	Sweden
Telephone:	+46-46-19-3000
Fax:	+46-10-800-2441
Contact:	Mr. Johan Wedin
E-mail:	Johan.Wedin@sonyericsson.com
Telephone:	

1.4 Application details

Date of receipt of order:	2010-02-01
Date of receipt of test item:	2010-01-21
Date of start test:	2010-01-21
Date of end test	2010-02-10
Persons(s) who have been present during the test:	

2 Technical tests

2.1 Details of manufacturer

Name:	Sony Ericsson Mobile Communications AB
Street:	Nya Vattentorget
Town:	22188 Lund
Country:	Sweden

2.2 Test item(s) and test configuration

No.: 1	Standard Charger CST 75	with	AAD-3880080-BV
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2.3 Test item

Kind of test item	:	Mobile Phone 850/900/1800/1900/UMTS/FDD 1/FDD 8/ HSDPA/HSUPA/BT2.1+EDR/A-GPS
Type identification	:	AAD-3880080-BV
Serial Number	:	Rad. : BX9017225Z, BX9017228M Cond. : BX90175NMD, BX901722E7
Frequency	:	1850.2 – 1909.8 MHz and 824.2 – 848.8 MHz
Antenna Type	:	Internal antenna
Power supply (normal)	:	DC by Battery BST-43

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

Section in this Report	Test Name	Verdict
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, active loop antenna.

150 kHz - 30 MHz: Quasi Peak measurement, 9 kHz Bandwidth, active 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

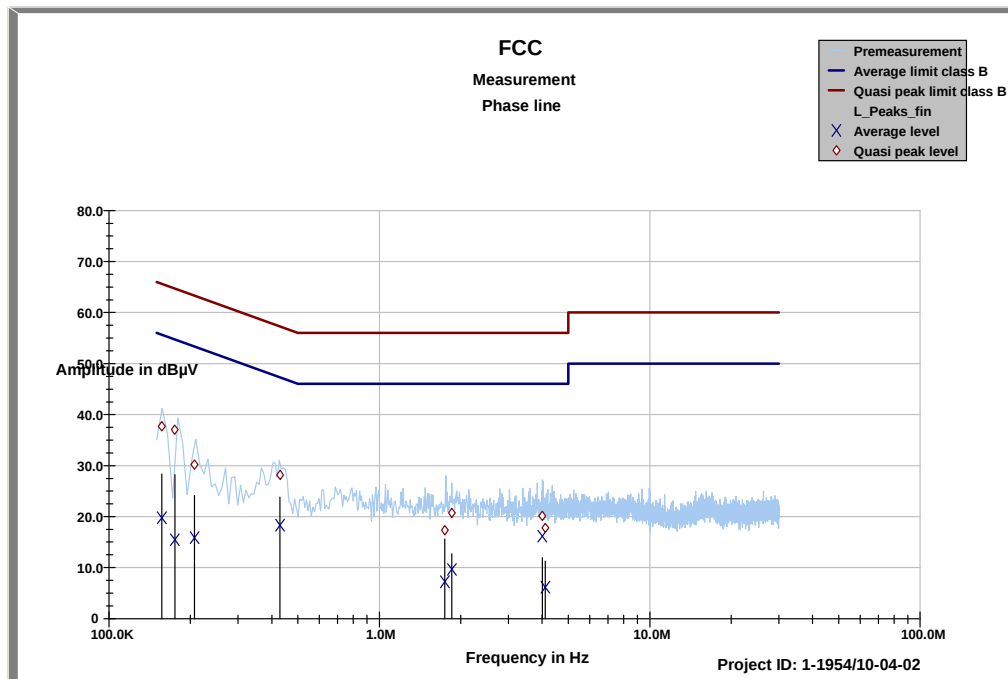
Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 - 30	60	50

* Decreases with the logarithm of the frequency

Plot 1:

Idle Mode: 150 kHz – 30 MHz

Phase line



10:30:28 AM, Tuesday, February 02, 2010

Frequency MHz	Quasi peak level dBμV	Margin quasi peak dBμV	Average level dBμV	Margin average dBμV
0.1569	37.71	27.92	19.74	36.06
0.17515	37.04	27.67	15.47	39.81
0.20717	30.21	33.11	15.86	38.50
0.42926	28.15	29.11	18.30	29.72
1.7457	17.34	38.66	7.24	38.76
1.8537	20.70	35.30	9.65	36.35
4.0019	20.14	35.86	16.14	29.86
4.1056	17.77	38.23	6.14	39.86

EUT - AAD-3880080-BV

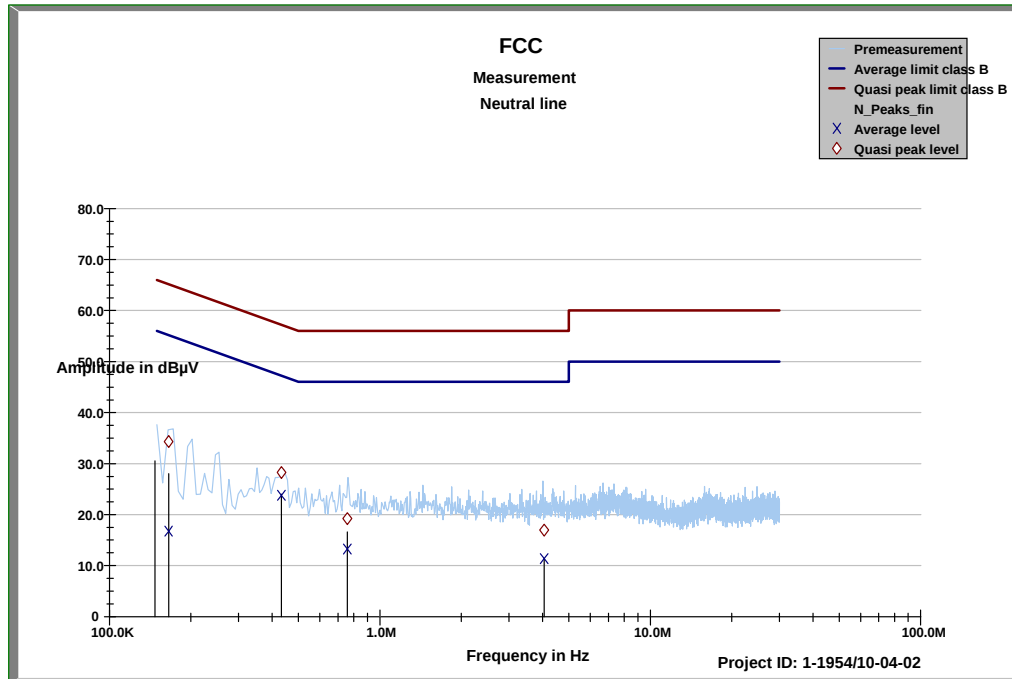
Serial Number - BX 901 7228 M 00440107-993249-3

Operating mode - GSM idle / charging + GPS Rx

Plot 2:

Idle Mode: 150 kHz – 30 MHz

Neutral line



10:30:28 AM, Tuesday, February 02, 2010

Frequency MHz	Quasi peak level dBµV	Margin quasi peak dBµV	Average level dBµV	Margin average dBµV
0.16555	34.30	30.88	16.74	38.82
0.43261	28.25	28.95	23.77	24.15
0.75774	19.20	36.80	13.26	32.74
4.0487	16.95	39.05	11.38	34.62

EUT - AAD-3880080-BV

Serial Number - BX 901 7228 M 00440107-993249-3

Operating mode - GSM idle / charging + GPS Rx

5.2 Unwanted emissions

Reference

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

Measurement Results

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
37.317000	21.6	15000.000	120.000	98.0	V	100.0	13.4	8.4	30.0
55.345500	23.6	15000.000	120.000	268.0	V	281.0	13.0	6.4	30.0
607.755000	18.8	15000.000	120.000	200.0	H	213.0	21.4	17.2	36.0
827.201550	21.8	15000.000	120.000	98.0	H	50.0	24.7	14.2	36.0
927.780150	23.1	15000.000	120.000	389.0	H	325.0	25.8	12.9	36.0
1239.653178	36.1	1.000	1000.000	100.0	V	76.0	-2.6	17.9	54.0
7748.080049	39.2	1.000	1000.000	100.0	V	164.0	3.2	14.8	54.0

$f < 1 \text{ GHz}$: RBW/VBW: 100 kHz

$f \geq 1 \text{ GHz}$: RBW/VBW: 1 MHz

H = Horizontal ; V= Vertical

For measurement distance see table below

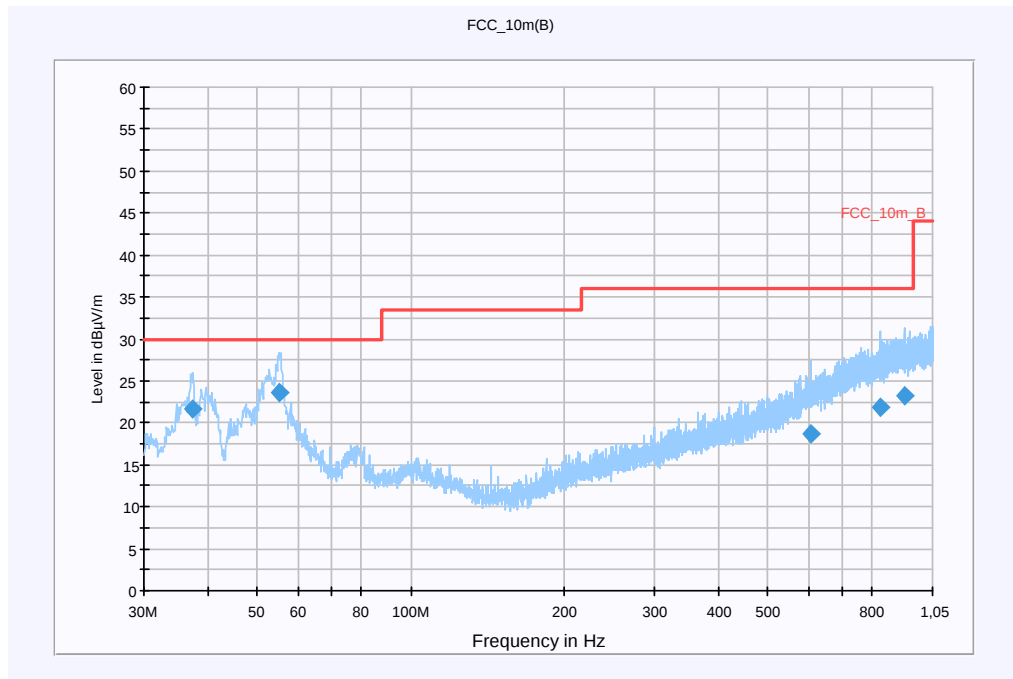
Limits: § 15.109

Frequency (MHz)	Field strength (dBµV/m)	Measurement distance (m)
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

Plot 1: Idle-Mode (30 MHz - 1 GHz)

Common Information

EUT:	AAD-3880080-BV
Serial Number:	BX 901 7228 M 00440107-993249-3
Test Description:	FCC Part 15B < 1GHz
Operating Conditions:	idle + GPS
Operator Name:	LANGER
Comment:	powered via Travel adaptor



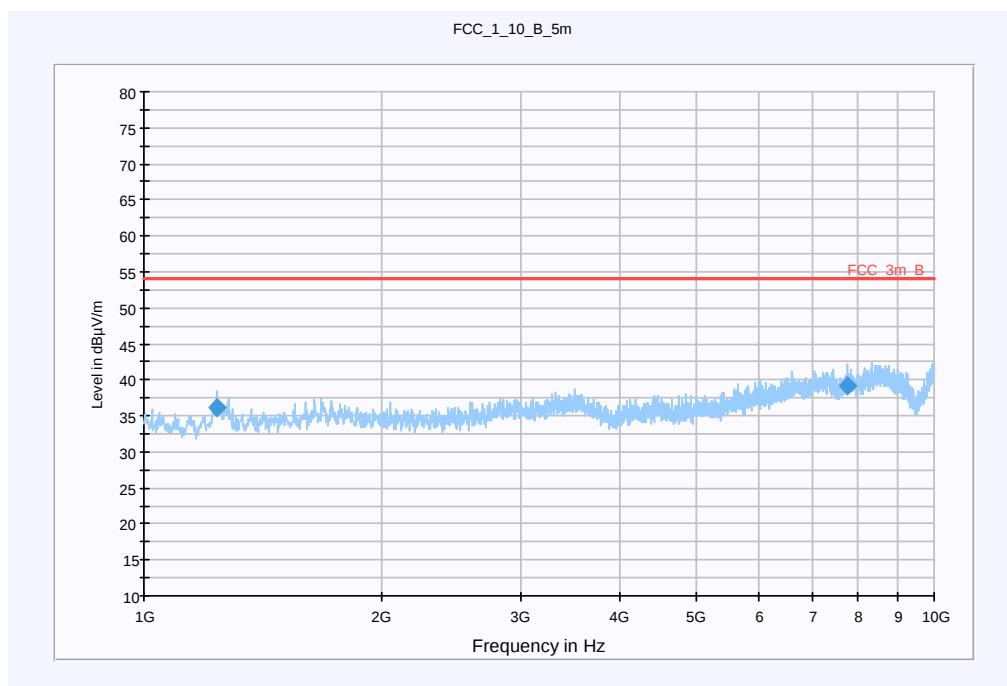
$f < 1 \text{ GHz}$: RBW/VBW: 100/120 kHz

$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

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 (0909)
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

Plot 2: Idle-Mode (1 GHz - 10 GHz)



$f < 1 \text{ GHz}$: RBW/VBW: 100/120 kHz

$f \geq 1 \text{ GHz}$: RBW / VBW 1 MHz

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.

No.	Equipment	Type	Manufact.	Serial No.	INV. No Cetecom	Kal. Art	Last Calibration	Next Calibration
1	Switch-Unit	3488A	HP Meßtechnik	2719A14505	300000368	g		
2	Netzgerät	6032A	HP Meßtechnik	2920A04466	300000580	k	06.01.2009	06.01.2011
3	software	SPS_PHE 1.4f	Spitzberger & Spieß	B5981; 5D1081;B5979	300000210	k	03.09.2001	03.09.2003
4	EMI-Mesempfänger	ESCI 1166.5950.03	R&S	100083	300003312	k	08.01.2010	08.01.2012
5	Analysator-Referenz-System (Harmonics u. Flicker)	ARS 16/1	SPS	A3509 07/0 0205	300003314	k	06.06.2007	06.06.2009
6	Amplifier	JS42-00502650-28-5A	MITEQ	1084532	300003379	ev		
7	Antennenmast	Model 2175	ETS-LINDGREN	64762	300003745	izw		
8	Steuergerät	Model 2090	ETS-LINDGREN	64672	300003746	izw		
9	Interface-Box für Drehtisch	Model 105637	ETS-LINDGREN	44583	300003747	izw		
10	Breitbandantenne	VULB9163	Schwarzbeck	295	300003787	k	01.04.2008	01.04.2010
11	Spectrum-Analyzer	FSU26	R&S	200809	300003874	k	08.01.2010	08.01.2012
12	Universal Communication Tester	CMU 200	R&S	103992	300003231	vIKI!	04.06.2008	04.06.2010

No.	Instrument/Ancillary	Manufacturer	Type	Serial-No.	Internal identification
Conducted emission in chamber G					
G-1	EMI Receiver	Hewlett Packard	8542 E	3617A00170	300000568
G-2	V-ISN	Rohde & Schwarz	ESH 3-Z5	892475/017	300002209
G-2a	V-ISN	Rohde & Schwarz	ESH 2-Z5	892602/024	300000587
G-3	2-Wire ISN	Schaffner	ISN T200	19075	300003422
G-4	4-Wire ISN	Schaffner	ISN T400	22325	300003423
G-5	Shielded wire ISN	Schaffner	ISN ST08	22583	300003433
G-6	Unshielded 8 wire ISN	Teseq	ISN T800	26113	300003833
G-7	Unshielded 8 wire ISN	Teseq	ISN T8-Cat. 6	26374	300003851
G-8	RF Current probe	FCC	F-33-4	46	300003257
G-9	V-ISN	Schaffner	ISN PLC-150	21579	300003318
G-10	V-ISN	Schaffner	ISN PLC-25-30	21584	300003319
G 10a	PLC Filter	TESEQ	Filter PLC	23436	300003598
G 10b	Coupling unit 75 Ohm	Fiedler	AC	----	300003272.04