Deutscher
Akkreditierungs
Rat

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# 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.: 3463A-1 (IC)**
**Certification ID: DE 0001**
**Accreditation ID: DE 0002**

**Accredited Bluetooth® Test Facility (BQTF)**
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*Inc. and any use of such marks by Cetecom ICT is under license*

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| | | |
|---|---|---|
| **Annex to Test report no.:** | | **2-4883-08-02/08** |
| **Type identification :** | | **AAA-1042081-BV** |
| **Applicant** | : | **Sony Ericsson Mobile Communications AB** |
| **Test standards** | . | **47 CFR Part 15** |
| | | **RSS 210 Issue 7** |

# Table of contents

# 1 General information

## 1.1 Notes

The test results of this test report relate exclusively to the test item specified in 1.5. 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:**

| 2008-02-11 | Detlev Gillmann | |
|---|---|---|
| Date | Name | Signature |

**Technical responsibility for area of testing:**

| 2008-02-11 | 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: 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

| Name: | Sony Ericsson Mobile Communications AB |
|---|---|
| Street: | Nya Vattentornet |
| Town: | 22188 Lund |
| Country: | Sweden |
| Telephone: | +46-46-19-3000 |
| Fax: | +46-46-19-3295 |
| Contact: | Mr. Peter Lindeborg |
| E-mail: | peter.lindeborg@sonyericsson.com |
| Telephone: | +46-46-212-6180 |

## 1.4  Application details

| | |
|---|---|
| Date of receipt of order: | 2008-02-06 |
| Date of receipt of test item: | 2008-02-06 |
| Date of start test: | 2008-02-10 |
| Date of end test | 2008-02-11 |
| 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 Vattentornet** |
| Town: | **22188 Lund** |
| Country: | **Sweden** |

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

**No.: 1      Standard charger CST - 75      with                  AAA-1042081-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

| Section in this Report | Test Name | Verdict |
|---|---|---|
| 5.1 | Conducted limits<br>CFR Part 15.207, 15.107<br>RSS 210, Issue 7,  Section 6.6 , 7.4 | Pass |
| 5.2 | Receiver spurious emission radiated (Idle mode)<br>CFR Part SUBCLAUSE § 15.109<br>RSS 210, Issue 7,  Section  7.3 Receiver<br>Spurious Emissions (Radiated) | 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: | RSS 210, Issue 7,  Section 6.6 , 7.4 |

**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

EUT:                                      :    AC/DC  Standard charger CST-75
                                                (with mobile AAA-1042081-BV)
Power AC (measured)      :    115 V / 60 Hz
Manufacturer:                    :    Sony Ericsson Mobile Communications AB
Operating Condition       :    Idle mode
Test Site:                             :    Room 006 (Shielded chamber)
Operator:                            :    Gillmann
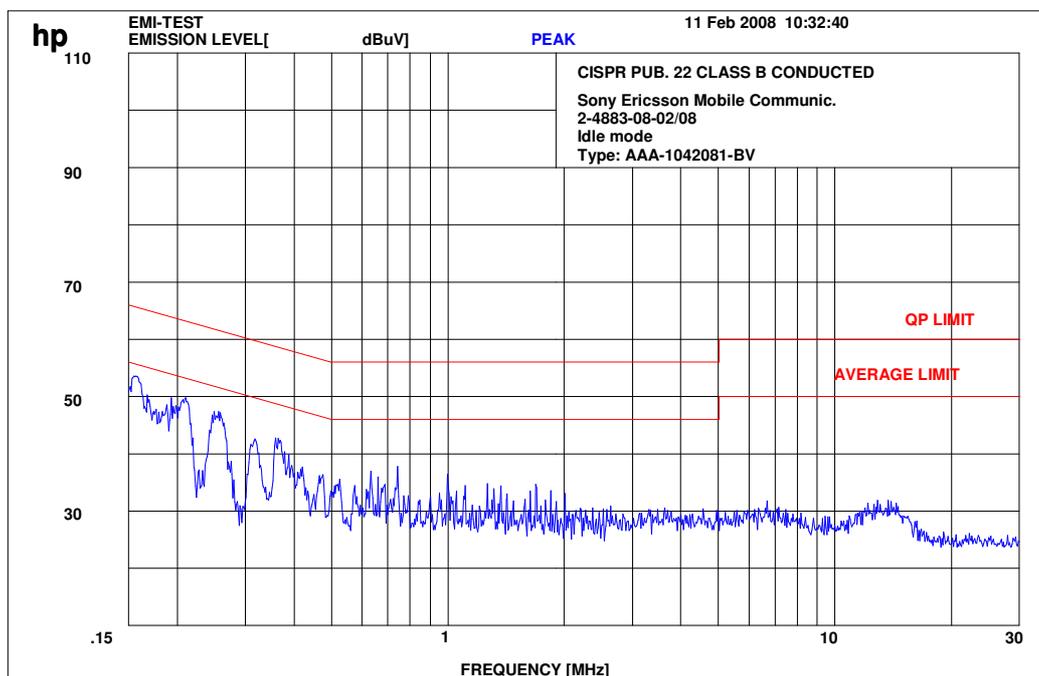


Upper  Limit LINE CISPPR 22  QP
Lower Limit  LINE CISPPR 22  AV

Setting :           150 kHz - 30 MHz: Quasi Peak measurement,  9kHz Bandwidth,
                        L1 and N – system  ( max. Hold)

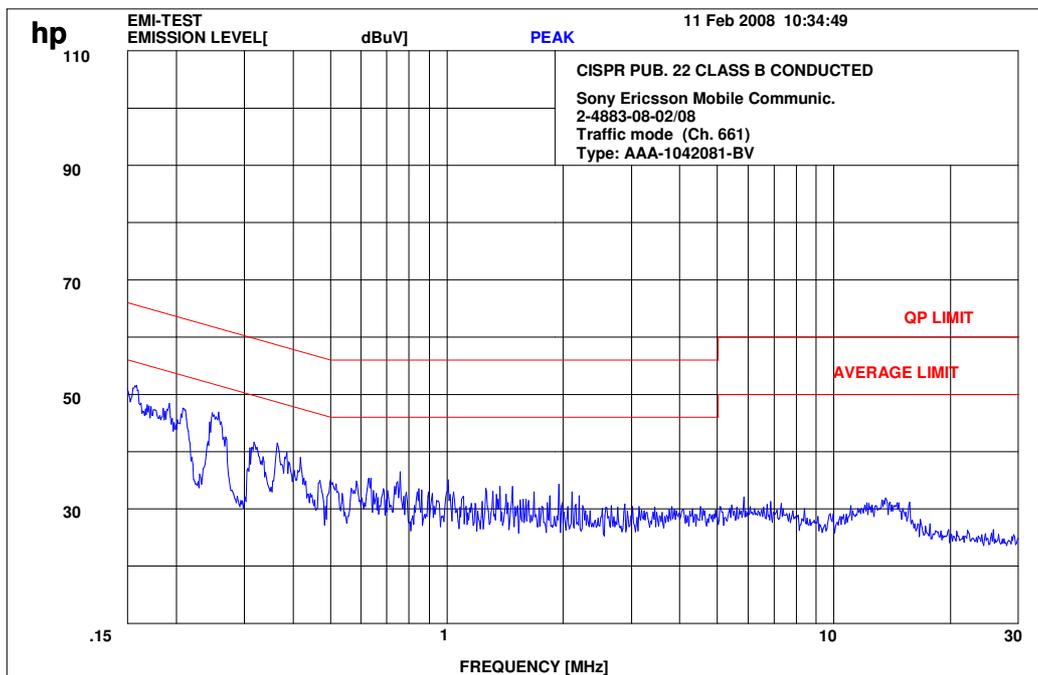EUT:                                    :    AC/DC  Standard charger CST-75
                                             (with mobile AAA-1042081-BV)
Power AC (measured)    :    115 V / 60 Hz
Manufacturer:                 :    Sony Ericsson Mobile Communications AB
Operating Condition      :    Traffic mode  (Ch. 661)
Test Site:                         :    Room 006 (Shielded chamber)
Operator:                        :    Gillmann



Upper  Limit LINE CISPPR 22  QP
Lower Limit  LINE CISPPR 22  AV

Setting :            150 kHz - 30 MHz: Quasi Peak measurement,  9kHz Bandwidth,
                        L1 and N – system  ( max. Hold)

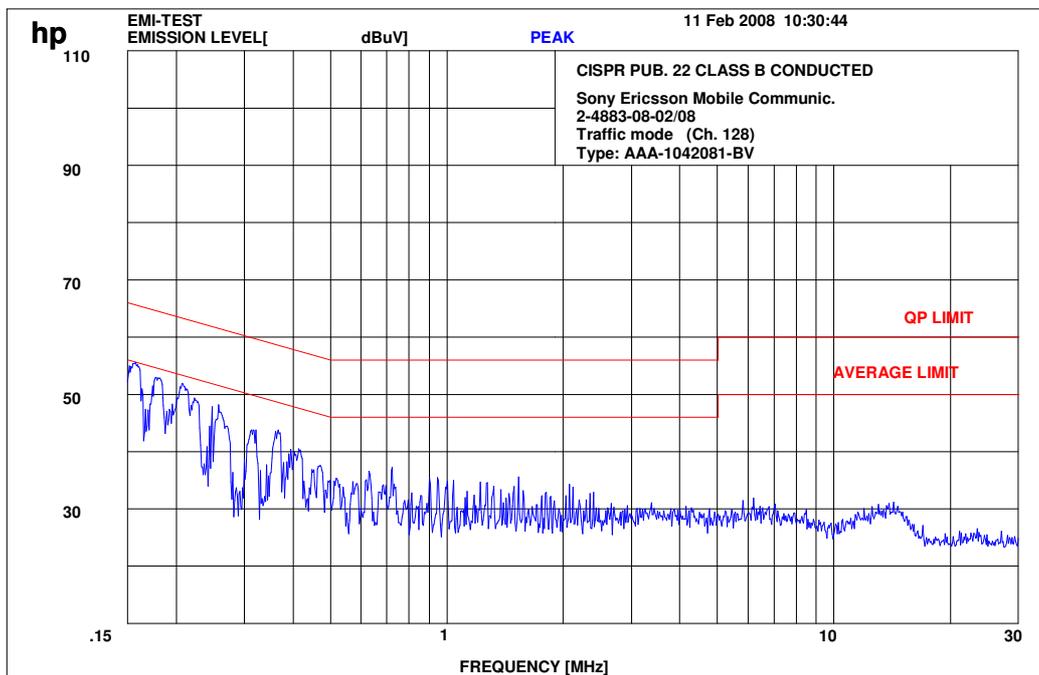EUT:                              :    AC/DC  Standard charger CST-75
                                       (with mobile AAA-1042081-BV)
Power AC (measured)    :    115 V / 60 Hz
Manufacturer:                :    Sony Ericsson Mobile Communications AB
Operating Condition      :    Traffic mode  (Ch. 128)
Test Site:                        :    Room 006 (Shielded chamber)
Operator:                        :    Gillmann



Upper  Limit LINE CISPPR 22  QP
Lower Limit  LINE CISPPR 22  AV

Setting :         150 kHz - 30 MHz: Quasi Peak measurement,  9kHz Bandwidth,
                  L1 and N – system  ( max. Hold)

## 5.2 Receiver spurious emission radiated (Idle mode)

**Reference**

| | |
|---|---|
| FCC: | CFR Part SUBCLAUSE § 15.109 |
| IC: | RSS 210, Issue 7,  Section  7.3 Receiver Spurious Emissions (Radiated) |

| SPURIOUS EMISSIONS LEVEL (µV/m) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Idle Mode | | | Idle Mode | | | | | |
| 850 MHz | | | 1900 MHz | | | MHz | | |
| F [MHz] | Detector | Level [µV/m] | F [MHz] | Detector | Level [µV/m] | F [MHz] | Detector | Level [µV/m] |
| No peaks detected | | | No peaks detected | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Measurement uncertainty | | | ±3 dB | | | | | |

f < 1 GHz : RBW/VBW: 100 kHz          f ≥ 1GHz : RBW/VBW: 1 MHz

**Limits**                                                                 **SUBCLAUSE § 15.109**

| Frequency (MHz) | Field strength (µV/m) | Measurement distance (m) |
|---|---|---|
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| above 960 | 500 | 3 |

## Idle Mode (30 MHz - 1 GHz)

| | |
|---|---|
| EUT: | AAA-1042081-BV + CAA0002001-BV |
| Serial Number: | TP8I070126 + 2206W48 403515 |
| Test Description: | FCC part 15 class B @ 10 m |
| Operating Conditions: | Idle 1900 |
| Operator Name: | Folz |
| Comment: | Powered with AC 115V/ 60Hz |

### Scan Setup: STAN_Fin [EMI radiated]

| | |
|---|---|
| Hardware Setup: | EMI radiated\Electric Field (NOS) |
| Level Unit: | dBµV/m |

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

### FCC_10m_Fast_1GHz (B)
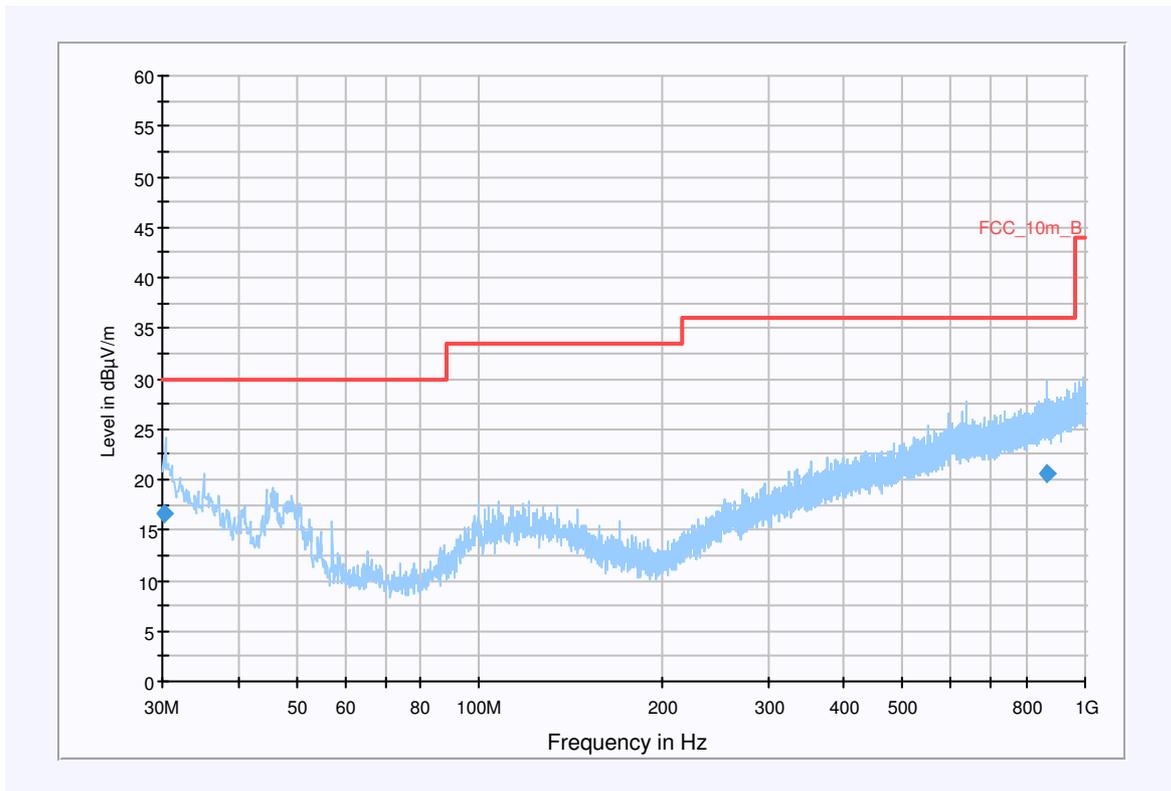


### Final Measurement Detector 1

| Frequency (MHz) | QuasiPeak (dBµV/m) | Meas. Time (ms) | Bandwidth (kHz) | Antenna height (cm) | Polarity | Turntable position (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| 30.199858 | 16.6 | 15000.000 | 120.000 | 100.0 | V | 177.0 | 18.0 | 13.4 | 30.0 | |
| 866.620250 | 20.6 | 15000.000 | 120.000 | 250.0 | V | 232.0 | 23.6 | 15.4 | 36.0 | |

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

Subrange 1
   Frequency Range:                  30MHz - 2GHz

   Receiver:                          Receiver [ESCI 3]
                                    @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
   Signal Path:                    without Notch
                                    FW 1.0
   Antenna:                        Chase Broadband BiLog Antenna CBL 6112
                                    SN 2110, FW A, CAL 07.01.2009
                                    Correction Table (vertical): Chase Broadband BiLog Antenna CBL 6112
                                    Correction Table (horizontal): Chase Broadband BiLog Antenna CBL 6112
                                    Correction Table: Cabel with switch (1007)
   Antenna Tower:               Tower [EMCO 2090 Antenna Tower]
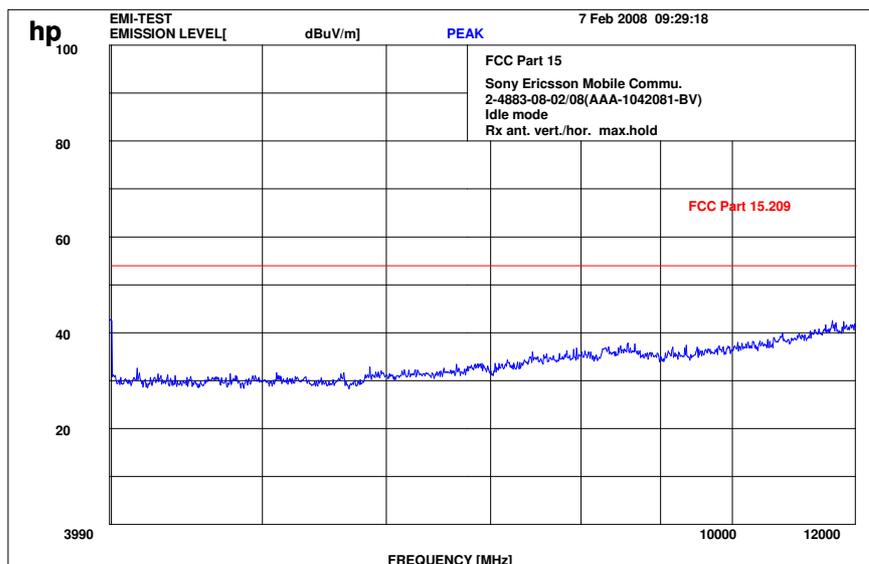                                    @ GPIB0 (ADR 8), FW REV 3.12

   Turntable:                        Turntable [EMCO Turntable]
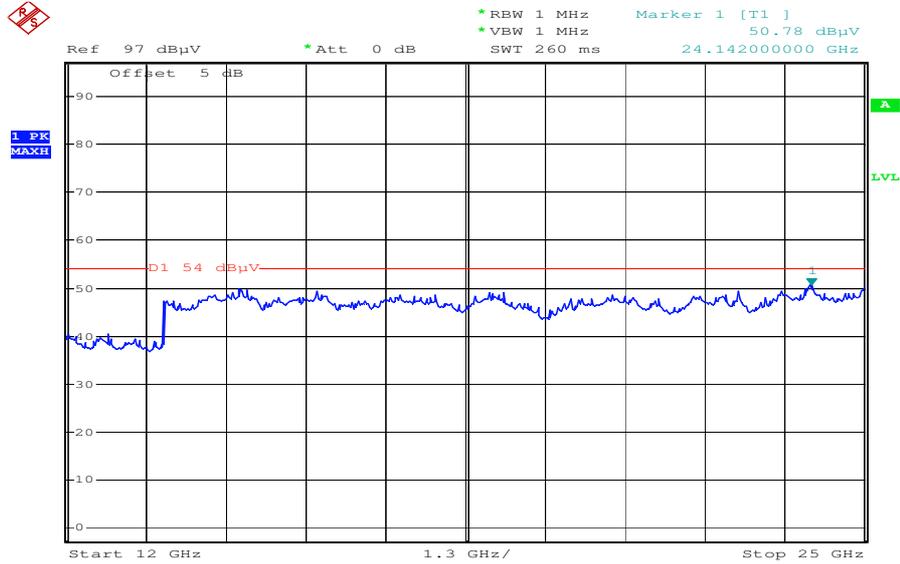                                    @ GPIB0 (ADR 9)

**Idle Mode (1 MHz - 4 GHz)**
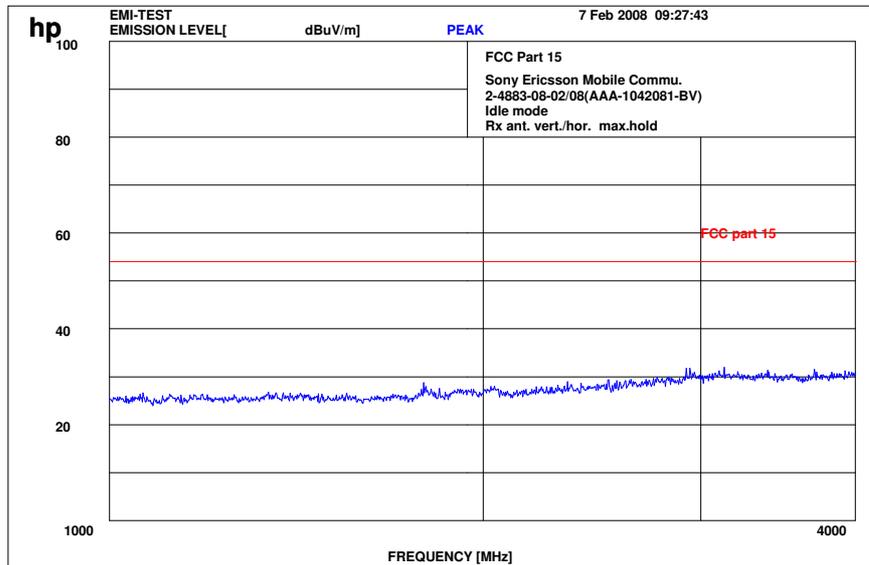


f ≥ 1GHz : RBW / VBW 1 MHz

**Idle Mode (4 GHz – 12.0 GHz)**



f ≥ 1GHz : RBW / VBW 1 MHz

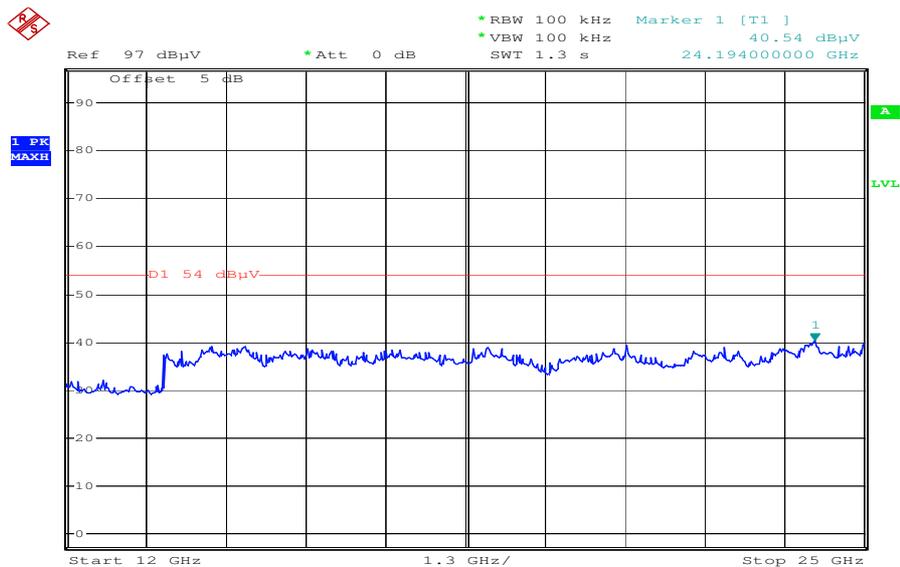## Idle Mode (12 GHz - 25 GHz)



```
                                          *RBW 1 MHz    Marker 1 [T1 ]
                                          *VBW 1 MHz            50.78 dBµV
          Ref  97 dBµV        *Att  0 dB   SWT 260 ms     24.142000000 GHz
              Offset  5 dB
```

Date: 7.FEB.2008  14:21:44

f ≥ 1GHz : RBW / VBW 1 MHz

## Idle Mode (12 GHz - 25 GHz)



```
                                          *RBW 100 kHz   Marker 1 [T1 ]
                                          *VBW 100 kHz          40.54 dBµV
          Ref  97 dBµV        *Att  0 dB   SWT 1.3 s      24.194000000 GHz
              Offset  5 dB
```

Date: 7.FEB.2008  14:22:08

f ≥ 1 GHz : RBW/VBW: 100 kHz