



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)

*The Bluetooth word mark and logos are owned by the Bluetooth SIG,
Inc. and any use of such marks by Cetecom ICT is under license*

Annex to Test

report no. : 4-3049-01-02/08
Type identification : EC400 / EC400g
Applicant : Sony Ericsson Mobile Communications
FCC ID : PY7F3232012 / PY7F3232012
IC Certification No : 4170B-F3232012 / 4170B-F3232012
Test standards : 47 CFR Part 15



Table of contents

- 1 General information.....3**
 - 1.1 Notes3
 - 1.2 Testing laboratory4
 - 1.3 Details of applicant4
 - 1.4 Application details4
- 2 Test standard/s:5**
- 3 Technical tests6**
 - 3.1 Details of manufacturer6
 - 3.2 Test item(s) and test configuration6
- 4 Summary of Measurement Results and list of all performed test cases7**
- 5 Measurements and results8**
- 6 Annex A: FCC Part 15 Subpart B9**
 - 6.1 Conducted Limits9
 - 6.2 Receiver spurious emission radiated (Idle mode)15
- 7 Test equipment and ancillaries used for tests41**
- 8 Photographs of the Test Set-up.....44**
- 9 Photographs of the EUT47**

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:

2008-06-19

Bertolino Marco



Date

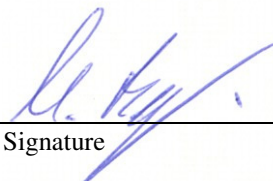
Name

Signature

Technical responsibility for area of testing:

2008-06-19

Michael Berg



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
Street:	7001 Development Drive
Town:	Research Triangle Park, NC 27709
Country:	USA
Telephone:	
Fax:	+1-919-472-6030
Contact:	Louis Le
E-mail:	Louis.Le@Sonyericsson.com
Telephone:	+1-919-472-1431

1.4 Application details

Date of receipt of order:	2008-05-13
Date of receipt of test item:	2008-05-19
Date of start test:	2008-05-19
Date of end test:	2008-06-19
Persons(s) who have been present during the test:	-/-

2 Test standard/s:

FCC Part 15

2007-09

Title 47 of the Code of Federal Regulations; Chapter I-
Federal Communications Commission
subchapter A - general, Part 15-Radio frequency devices

3 Technical tests

3.1 Details of manufacturer

Name:	Sony Ericsson Mobile Communications
Street:	7001 Development Drive
Town:	Research Triangle Park, NC 27709
Country:	USA

3.2 Test item(s) and test configuration

No.: 1	EC400 / EC400g FP1 R1A032	with	Initialization board
	S/N: BDX0002NL0		S/N: 10-DA015291
	IMEI: 004401071829960		Power supply
			Model: FSY050300UU74-1
No.: 2			
No.: 3			
No.: 4			
No.: 5			
No.: 6			
No.: 7			
No.: 8			
No.: 9			
No.: 10			

4 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
6.1	Conducted limits CFR Part 15.207, 15.107 RSS 210, Issue 7, Section 6.6 , 7.4	Pass
6.2	Receiver spurious emission radiated (Idle mode) CFR Part SUBCLAUSE § 15.109 RSS 210, Issue 7, Section 7.3 Receiver Spurious Emissions (Radiated)	Pass

5 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

6 Annex A: FCC Part 15 Subpart B

6.1 Conducted Limits

Reference

FCC:	CFR Part 15.207, 15.107
IC:	RSS 210, Issue 7, Section 6.6 , 7.4

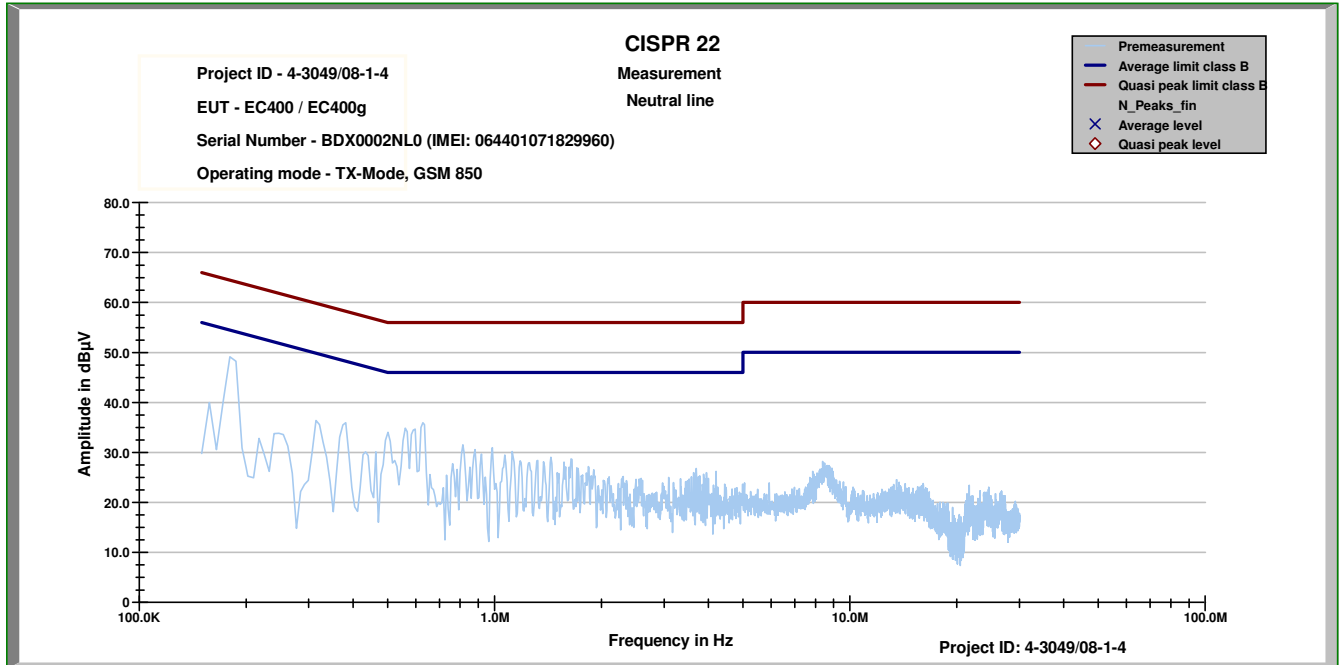
Limits: § 15.107 / 15.207

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	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

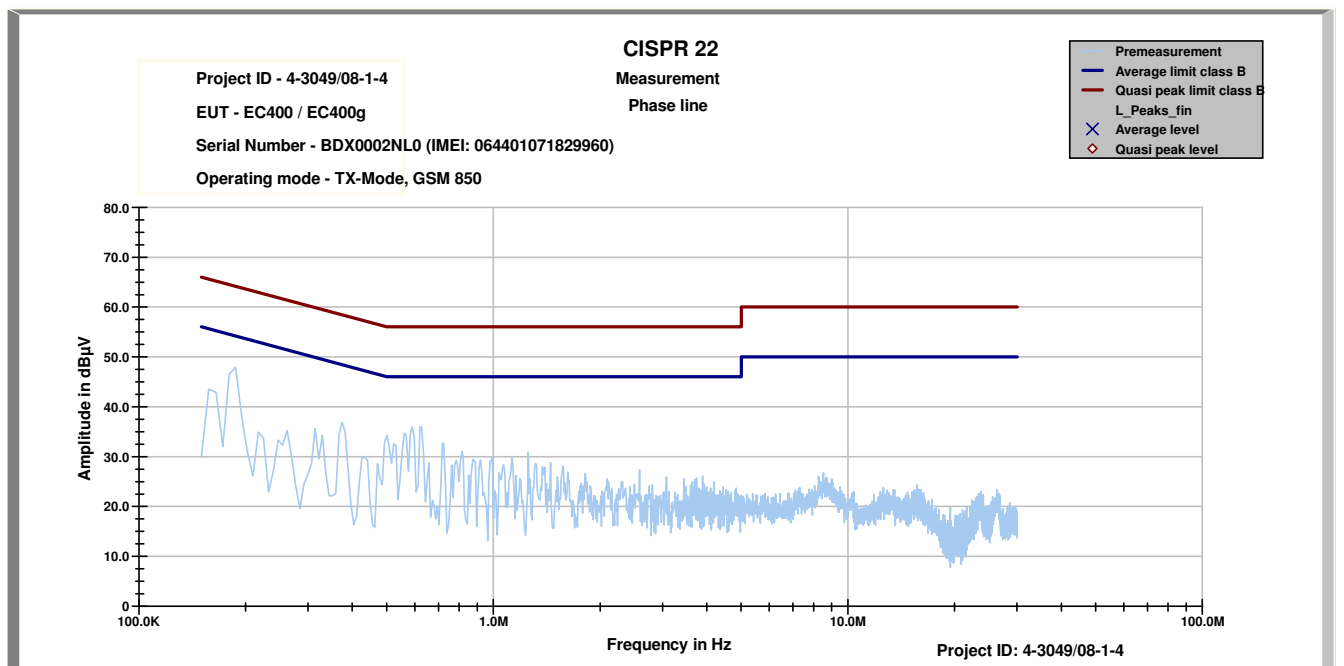
Plot 1: 850 GSM

Neutral line: 150 kHz – 30 MHz

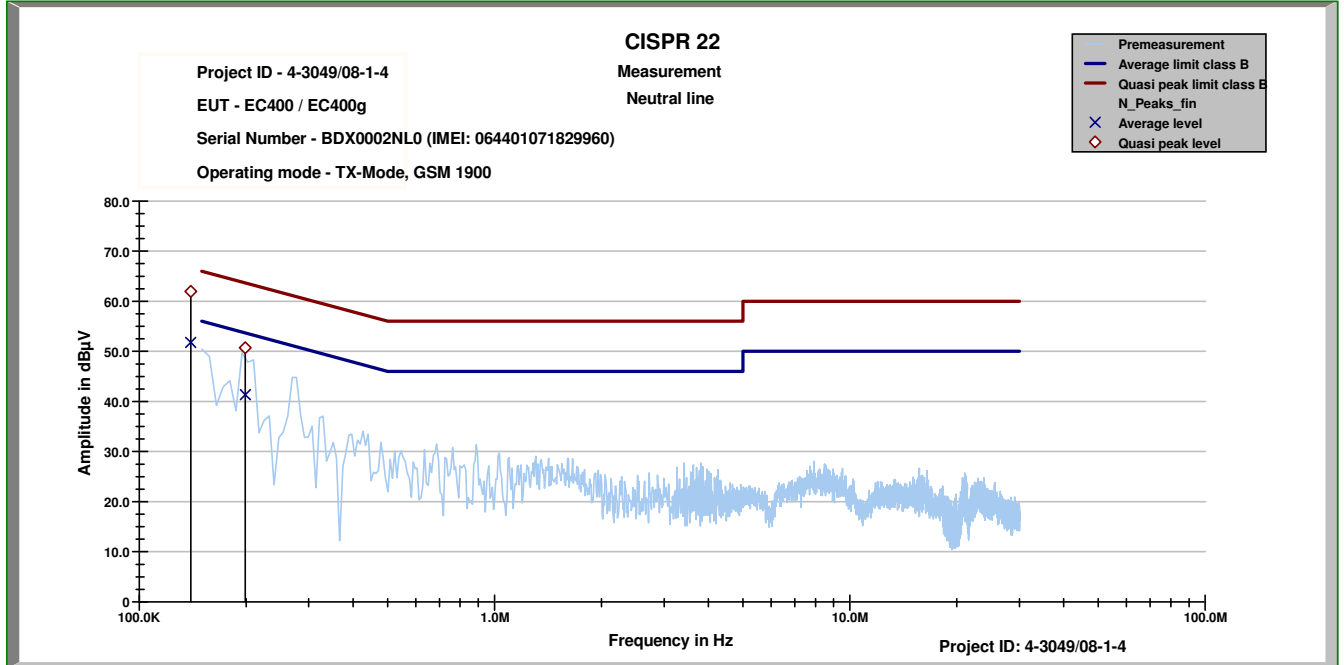


Plot 2: 850 GSM

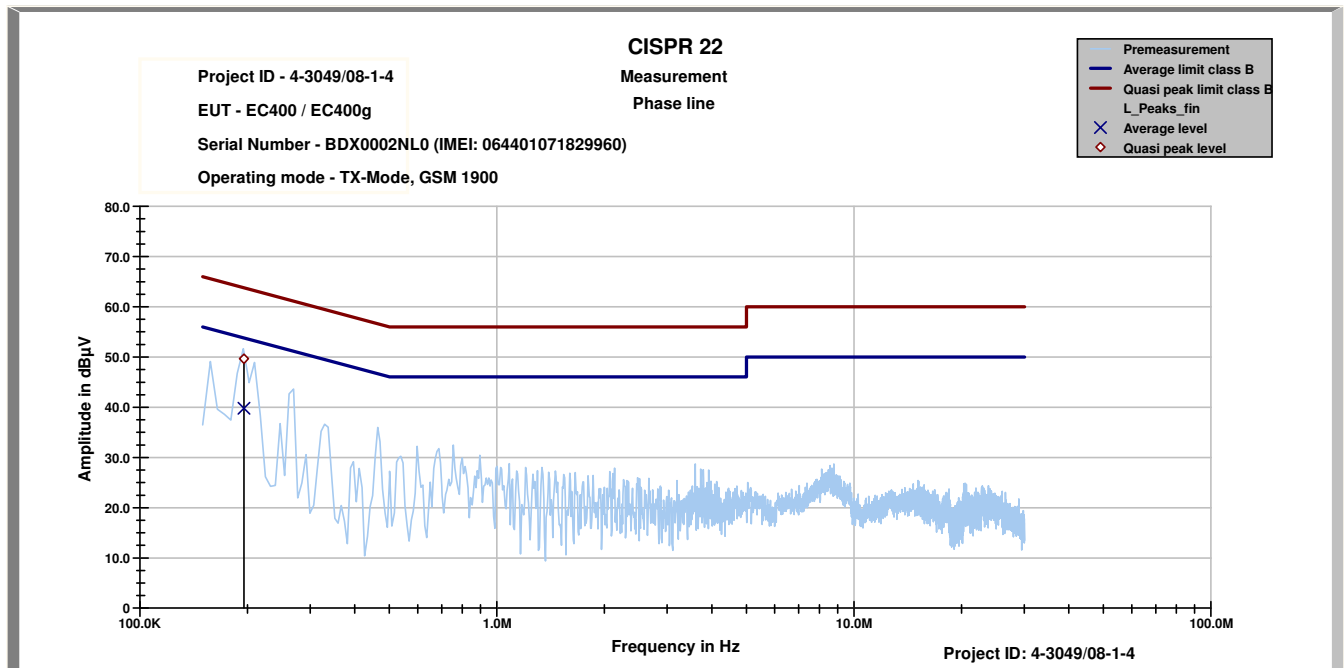
Phase line: 150 kHz – 30 MHz



Plot 3: 1900 GSM
 Neutral line: 150 kHz – 30 MHz

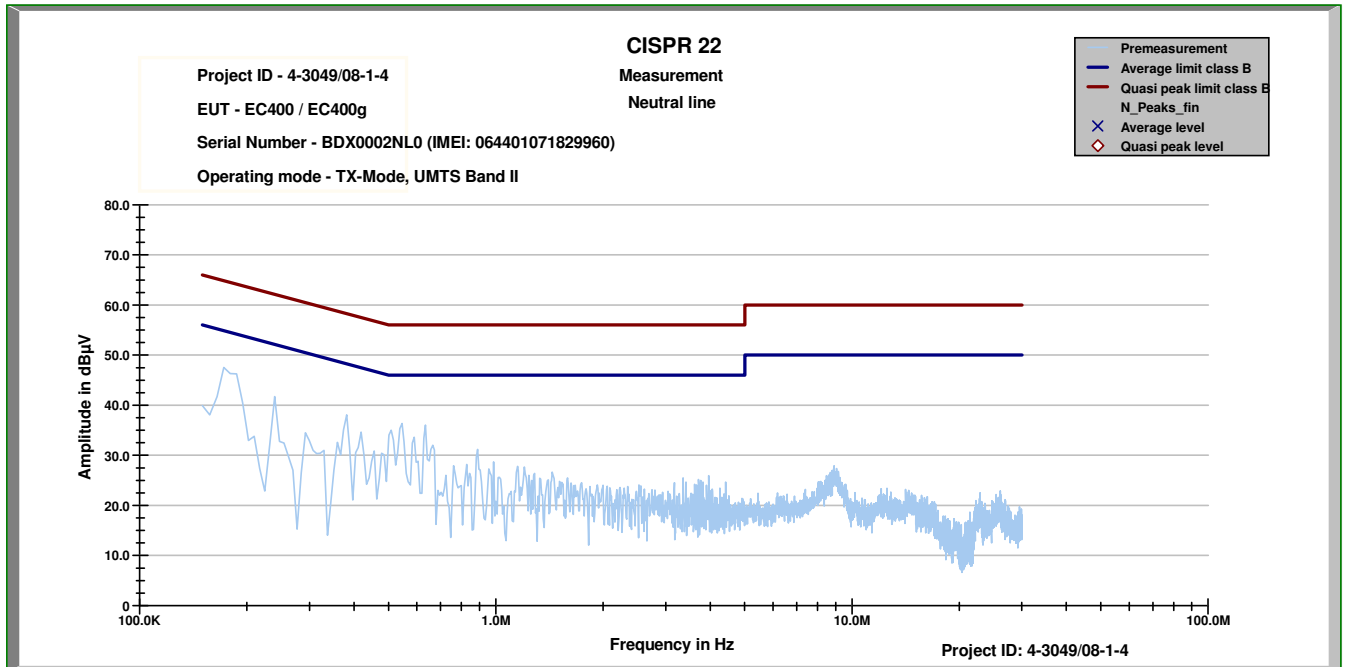


Plot 4: 1900 GSM
 Phase line: 150 kHz – 30 MHz



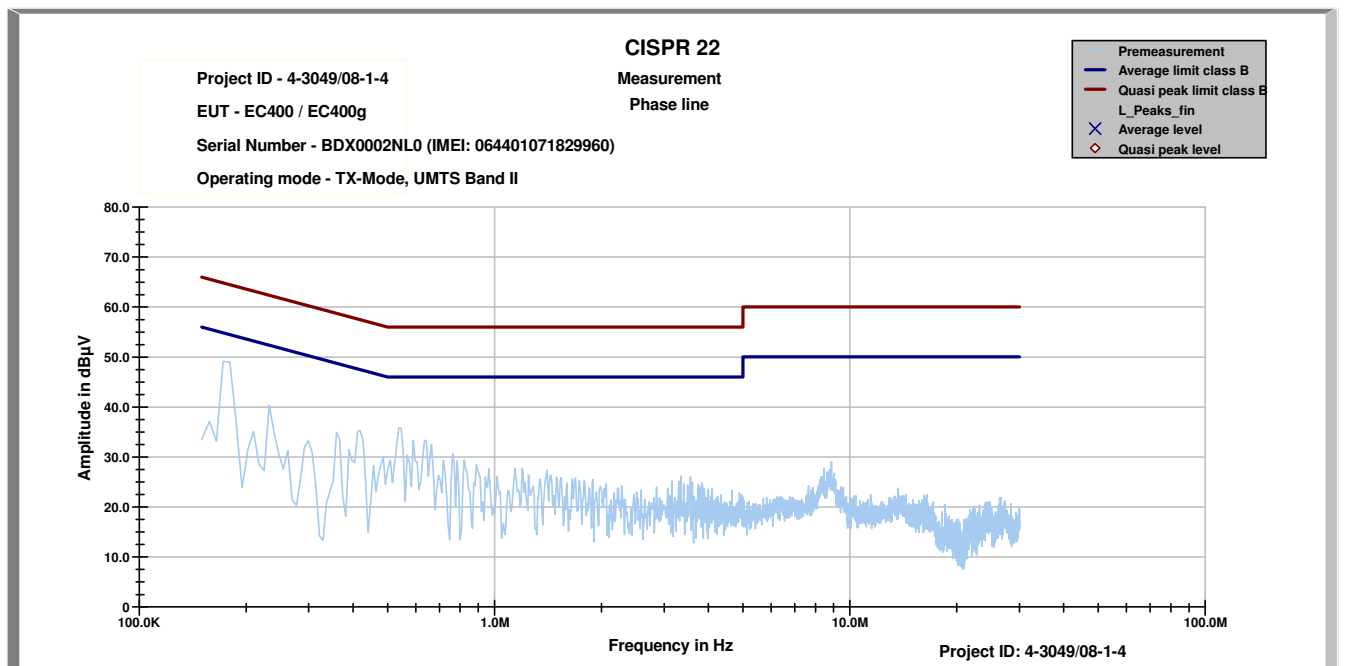
Plot 5: UMTS Band II

Neutral line: 150 kHz – 30 MHz

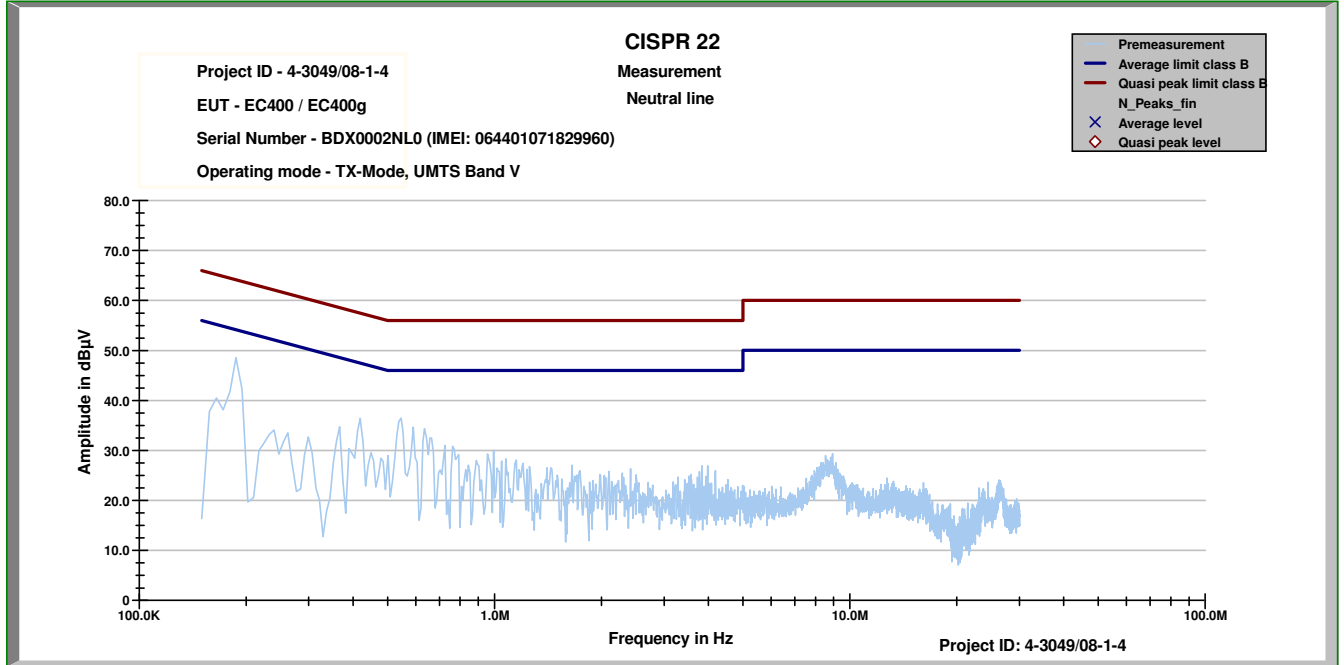


Plot 6: UMTS Band II

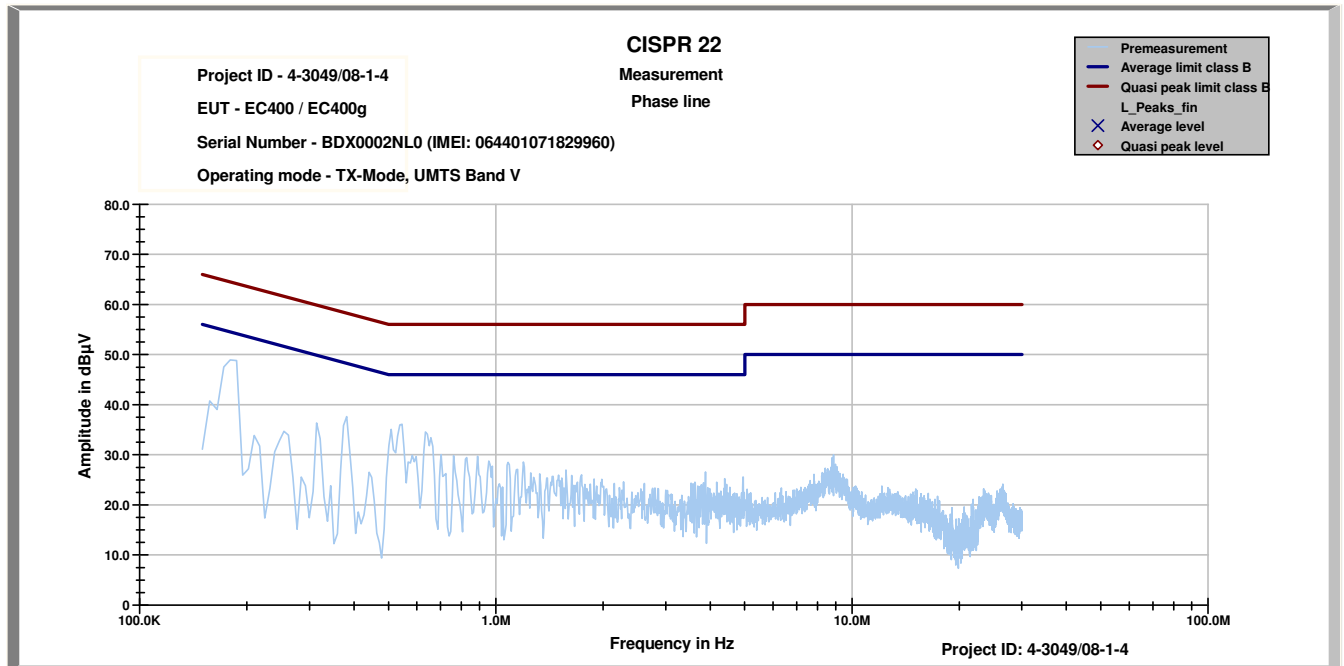
Phase line: 150 kHz – 30 MHz



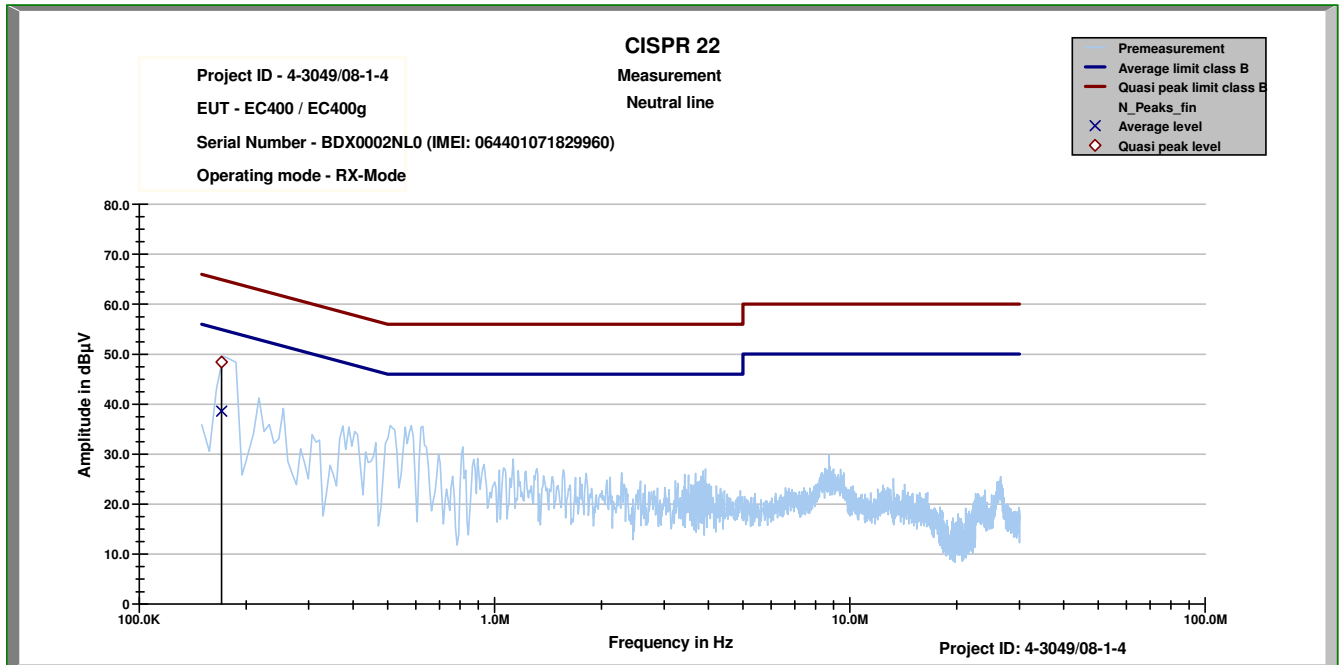
Plot 7: UMTS Band V
Neutral line: 150 kHz – 30 MHz



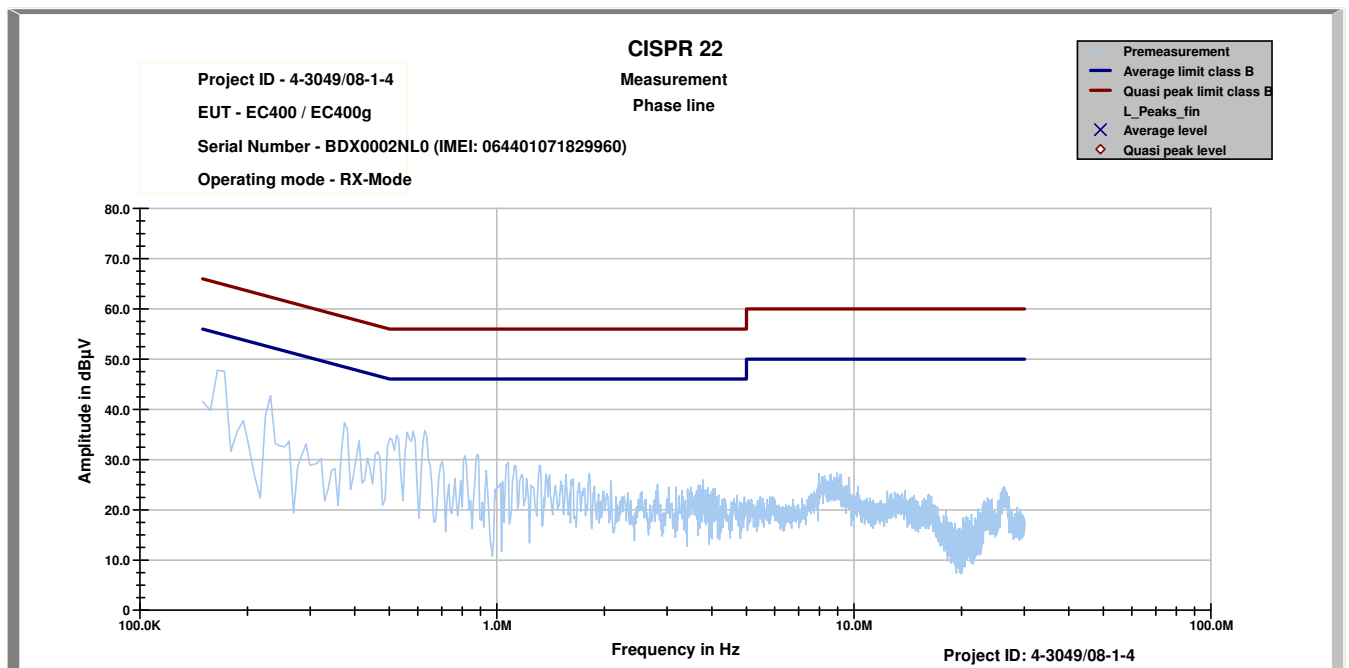
Plot 8: UMTS Band V
Phase line: 150 kHz – 30 MHz



Plot 9: Idle mode valid for all technologies
Neutral line: 150 kHz – 30 MHz



Plot 10: Idle mode valid for all technologies
Phase line: 150 kHz – 30 MHz



6.2 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 ($\mu\text{V/m}$)								
Idle mode			MHz			MHz		
F [MHz]	Detector	Level [$\mu\text{V/m}$]	F [MHz]	Detector	Level [$\mu\text{V/m}$]	F [MHz]	Detector	Level [$\mu\text{V/m}$]
No critical peaks detected.								
Measurement uncertainty			± 3 dB					

$f < 1$ GHz : RBW/VBW: 100 kHz

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

Limits

SUBCLAUSE § 15.109

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

GSM 850 (EC400g)

Idle-Mode (30 MHz - 1 GHz)

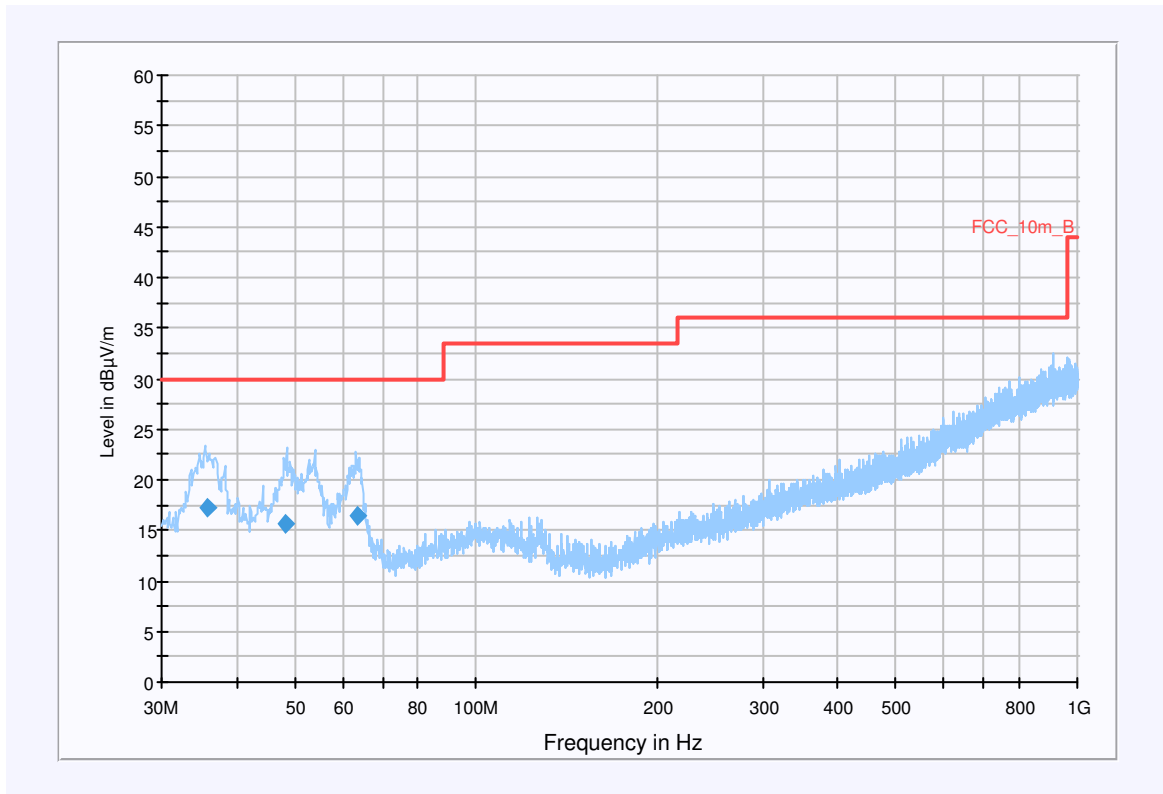
Information

EUT: EC400g
 Serial Number: BDY0002NLO (IMEI: 064401071829960)
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: idle GSM 850
 Operator Name: Hennemann
 Comment: - / -

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: EMI radiated\Electric Field (NOS)
 Level Unit: dB μ V/m
Subrange **Detectors** **IF Bandwidth** **Meas. Time** **Receiver**
 30MHz - 1GHz QuasiPeak 120kHz 15s Receiver

FCC_1GHz



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
35.784450	17.2	1000.000	120.000	120.0	V	335.0	13.2	12.8	30.0	
48.321400	15.7	1000.000	120.000	120.0	V	221.0	13.6	14.3	30.0	
63.528200	16.4	1000.000	120.000	120.0	V	26.0	11.1	13.6	30.0	

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

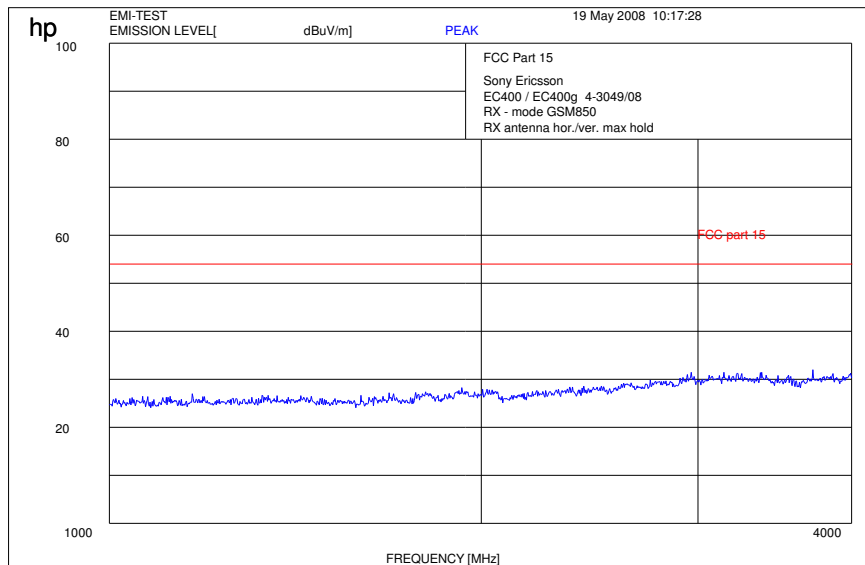
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

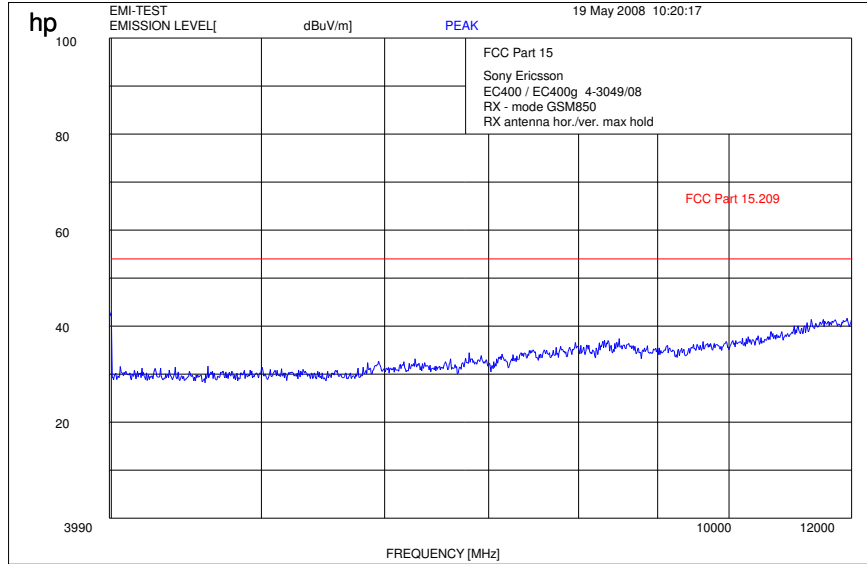
Turntable: Turntable [EMCO Turntable]
@ GPIB0 (ADR 9)

Idle-Mode (1 MHz - 4 GHz)



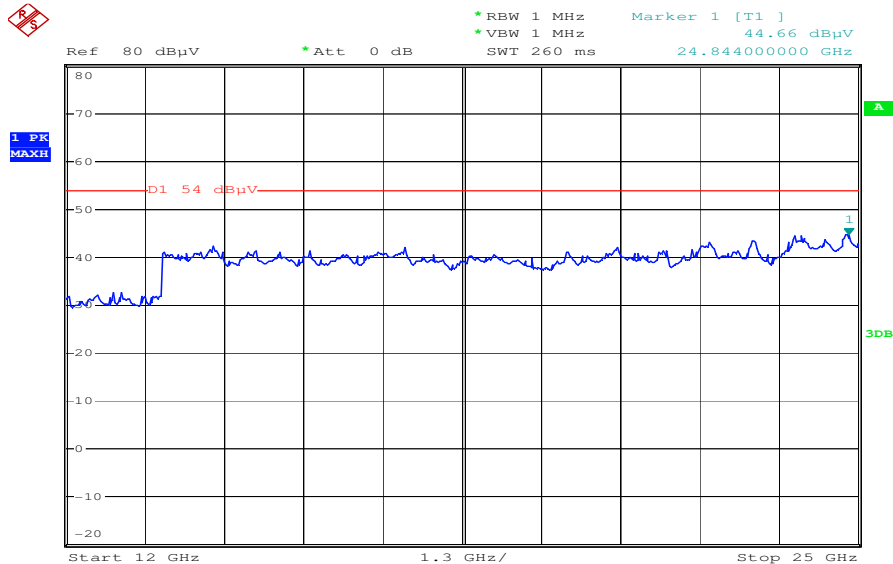
$f \geq 1\text{GHz}$: RBW / VBW: 1 MHz

Idle-Mode (4 GHz – 12.0 GHz)



$f \geq 4\text{GHz}$: RBW / VBW: 1 MHz

Idle-Mode (12 GHz - 25 GHz)



Date: 31.MAY.2008 10:15:49

PCS 1900 (EC400g)

Idle Mode (30 MHz - 1 GHz)

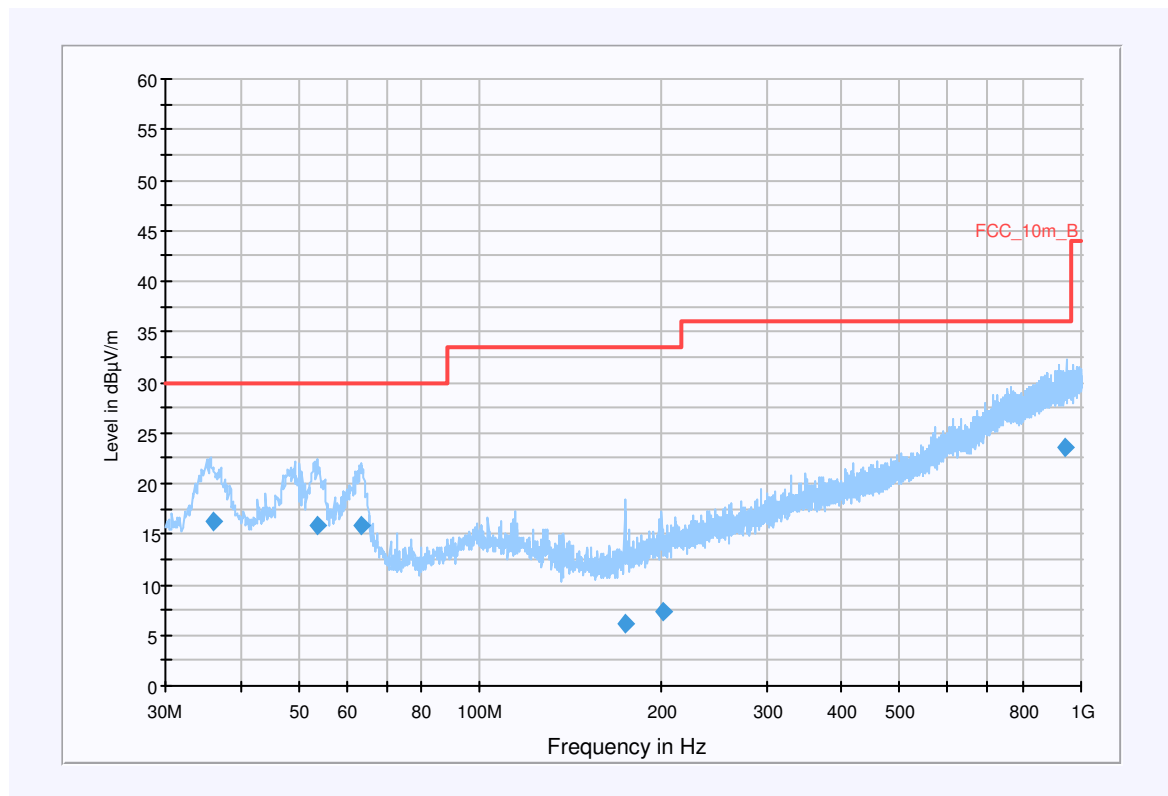
Information

EUT: EC400g
 Serial Number: BDY0002NLO (IMEI: 064401071829960)
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: idle GSM 1900
 Operator Name: Hennemann
 Comment: - / -

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: EMI radiated\Electric Field (NOS)
 Level Unit: dB μ V/m
Subrange **Detectors** **IF Bandwidth** **Meas. Time** **Receiver**
 30MHz - 1GHz QuasiPeak 120kHz 15s Receiver

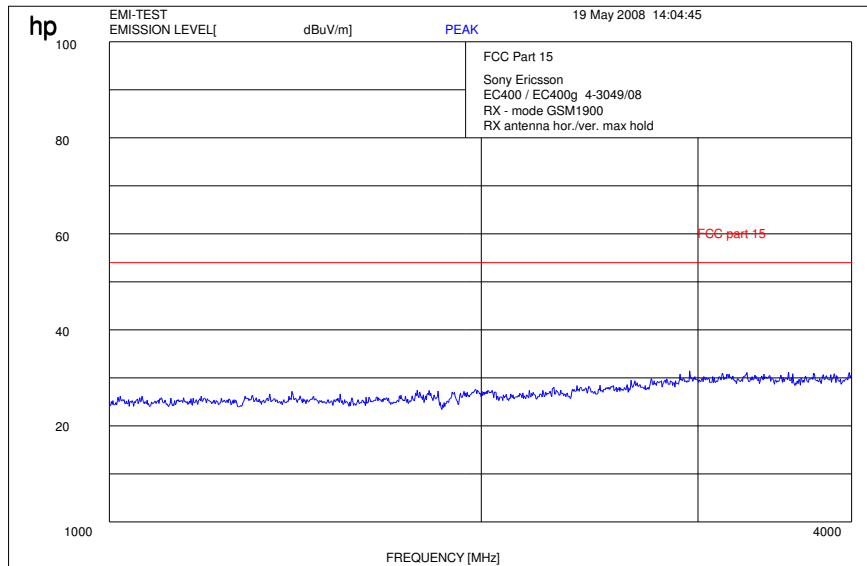
FCC_1GHz



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
36.101650	16.2	1000.000	120.000	120.0	V	139.0	13.3	13.8	30.0	
53.667800	15.8	1000.000	120.000	120.0	V	218.0	13.3	14.2	30.0	
63.551400	15.9	1000.000	120.000	120.0	V	153.0	11.1	14.1	30.0	
...

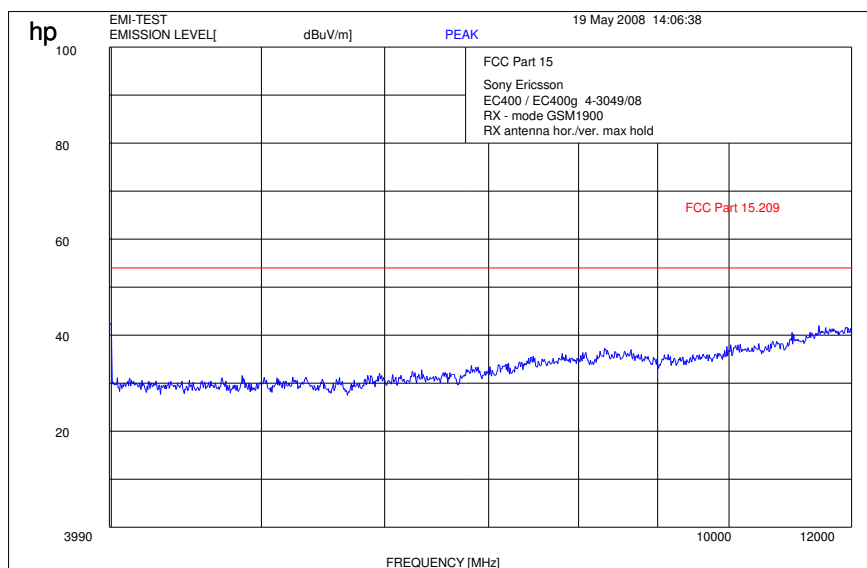
Idle Mode (1 MHz - 4 GHz)



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

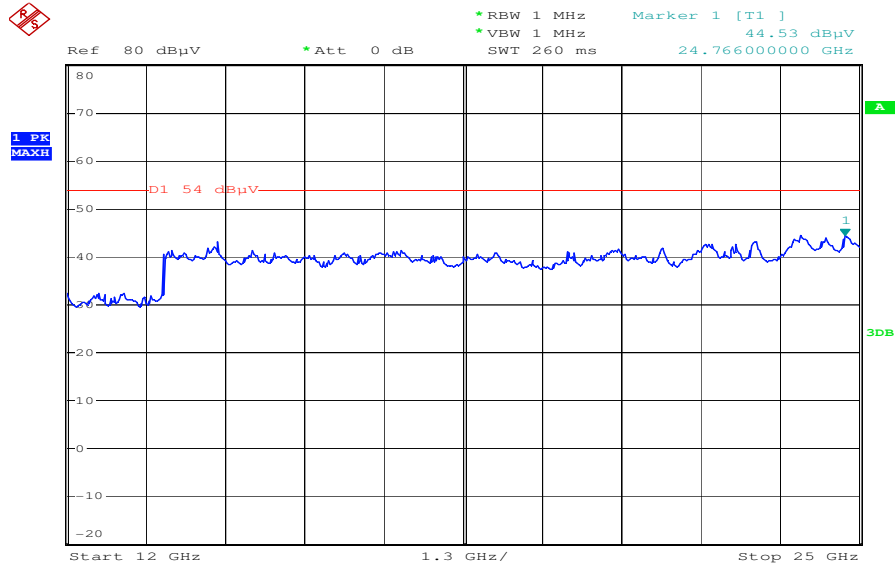
$f \geq 1 \text{ GHz} : \text{RBW} / \text{VBW} : 1 \text{ MHz}$

Idle Mode (4 GHz – 12.0 GHz)



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

Idle Mode (12 GHz - 25 GHz)



Date: 31.MAY.2008 10:13:31

WCDMA Band II (EC400g)

Idle Mode (30 MHz - 4 GHz)

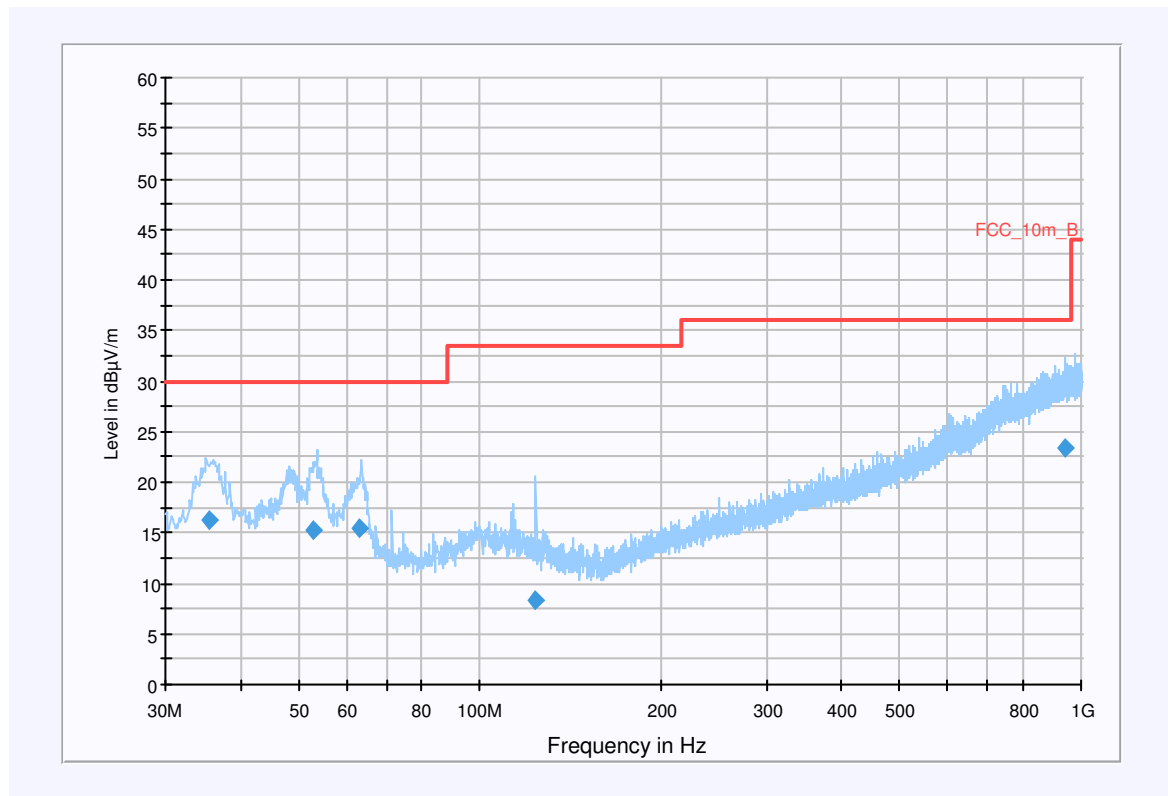
Information

EUT: EC400g
 Serial Number: BDY0002NLO (IMEI: 064401071829960)
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: idle FDD II
 Operator Name: Hennemann
 Comment: - / -

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_1GHz



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
35.374900	16.3	1000.000	120.000	120.0	V	30.0	13.2	13.7	30.0	
53.044200	15.2	1000.000	120.000	120.0	V	-1.0	13.3	14.8	30.0	
63.017450	15.5	1000.000	120.000	120.0	V	20.0	11.2	14.5	30.0	
...

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

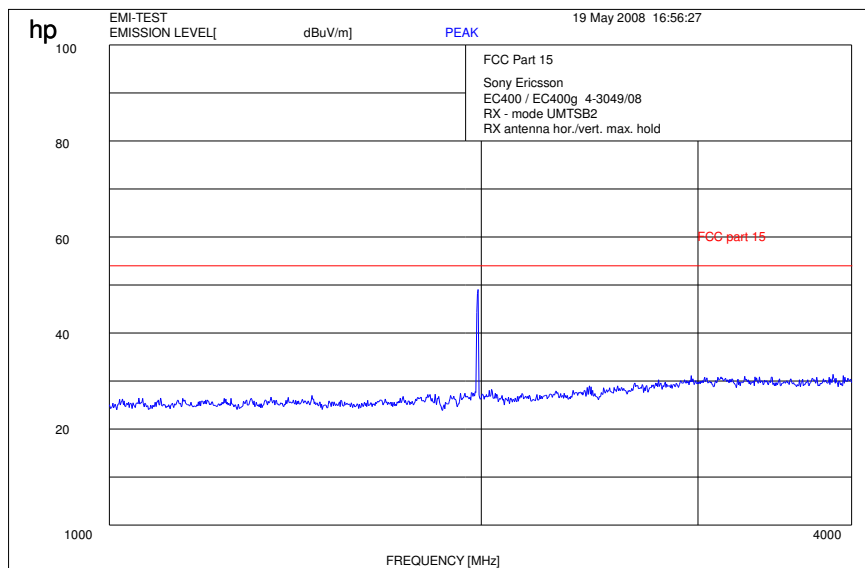
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

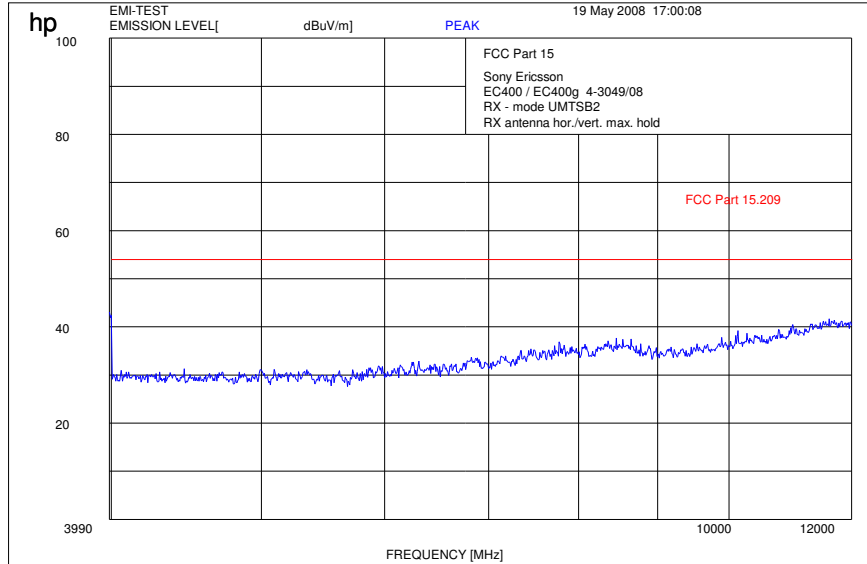
Turntable: Turntable [EMCO Turntable]
@ GPIB0 (ADR 9)

Idle Mode (1 GHz - 4 GHz)



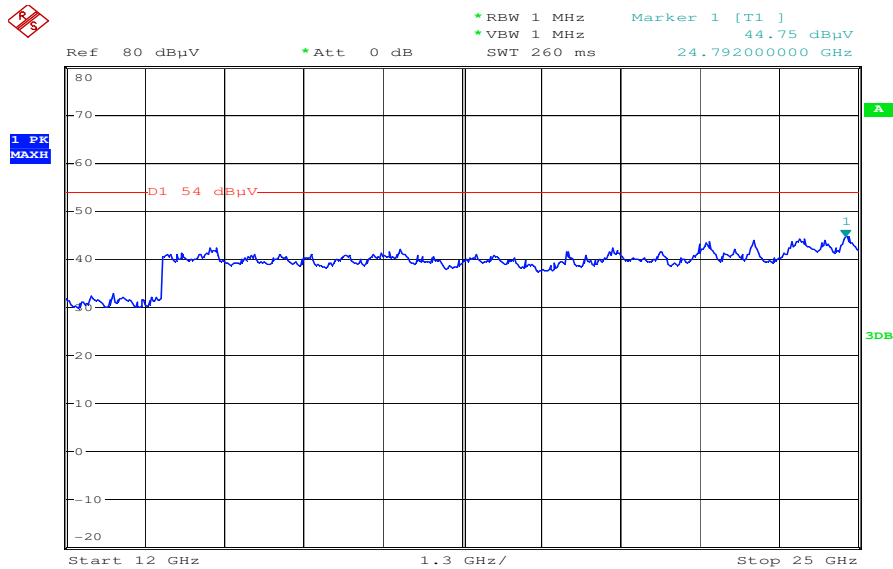
f ≥ 1GHz : RBW / VBW: 1 MHz

Idle Mode (4 GHz – 12.0 GHz)



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

Idle Mode (12 GHz - 25 GHz)



Date: 31.MAY.2008 08:49:30

WCDMA Band V (EC400g)

Idle-Mode (30 MHz - 1 GHz)
Information

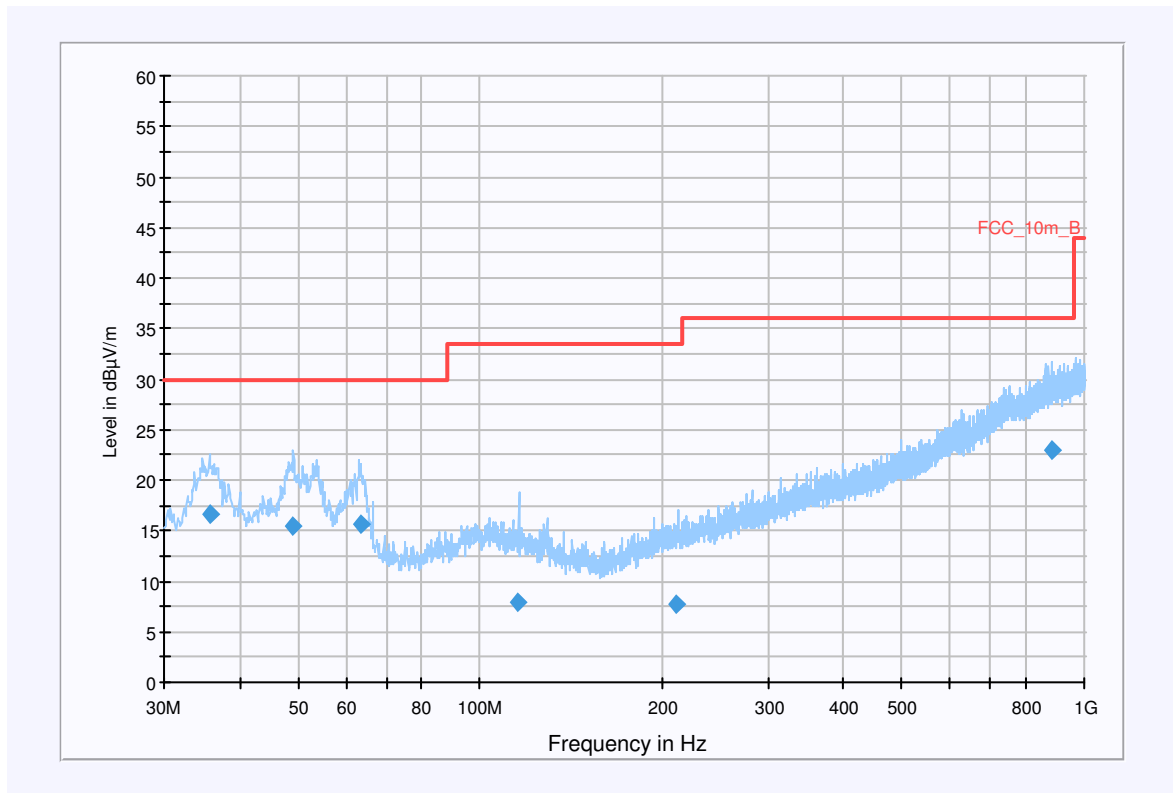
EUT: EC400g
 Serial Number: BDX0002NLO (IMEI: 064401071829960)
 Test Description: FCC part 15 class B @ 10 m
 Operating Conditions: idle FDD V
 Operator Name: Hennemann
 Comment: -/-

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_Short_1GHz



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
35.682850	16.6	1000.000	120.000	120.0	V	268.0	13.2	13.4	30.0	
49.141100	15.4	1000.000	120.000	120.0	V	232.0	13.6	14.6	30.0	
63.419800	15.7	1000.000	120.000	120.0	V	-1.0	11.1	14.3	30.0	
115.454300	7.9	1000.000	120.000	120.0	V	0.0	11.0	25.6	33.5	
212.040850	7.7	1000.000	120.000	120.0	H	21.0	12.3	25.8	33.5	
884.116050	23.0	1000.000	120.000	120.0	V	111.0	25.9	13.0	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

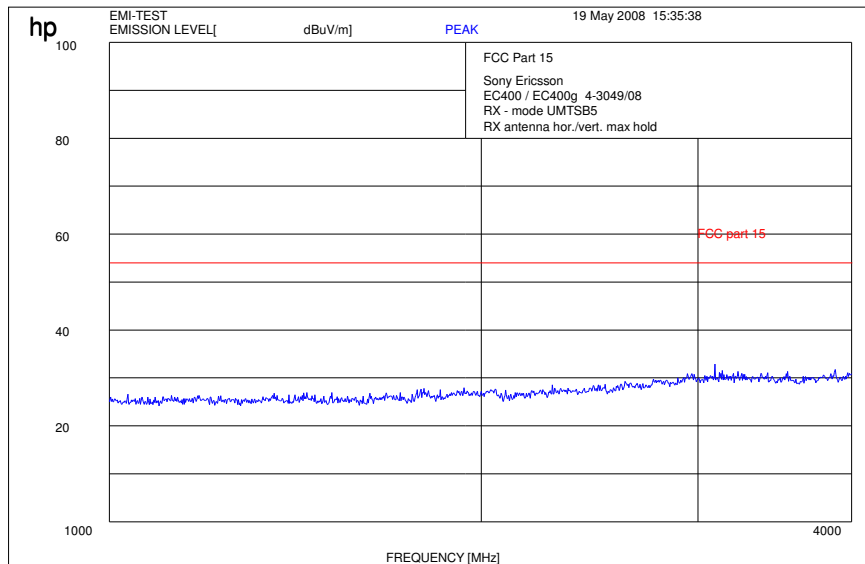
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

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

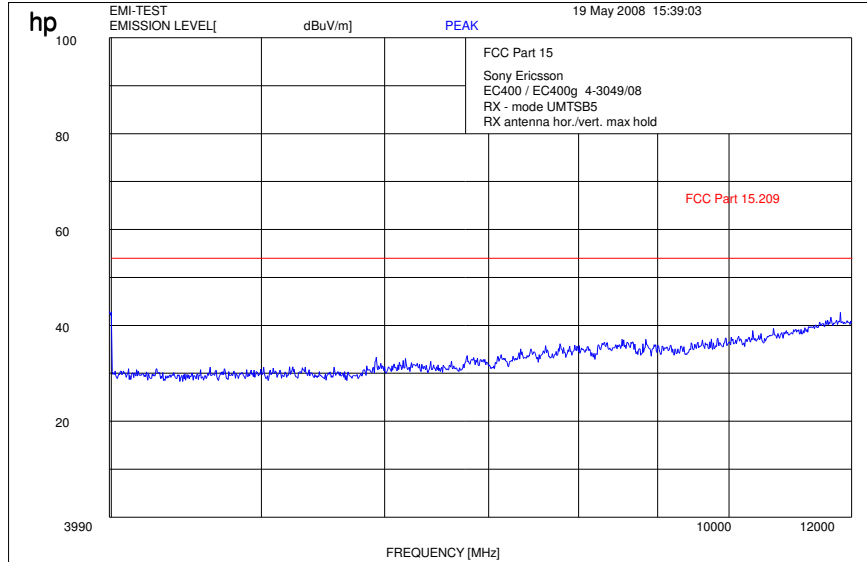
Idle-Mode (30 MHz - 4 GHz)



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

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

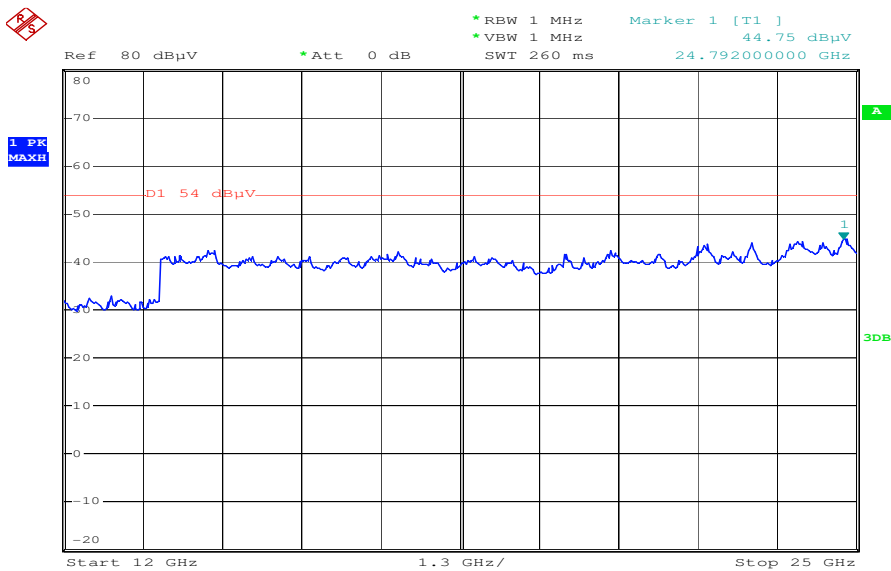
Idle-Mode (4 GHz – 12.0 GHz)



f < 1 GHz : RBW / VBW: 100 kHz

f ≥ 1GHz : RBW / VBW: 1 MHz

Idle-Mode (12 GHz - 25 GHz)



Date: 31.MAY.2008 08:49:30

GSM 850 (EC400)

Idle-Mode (30 MHz - 1 GHz)

Information

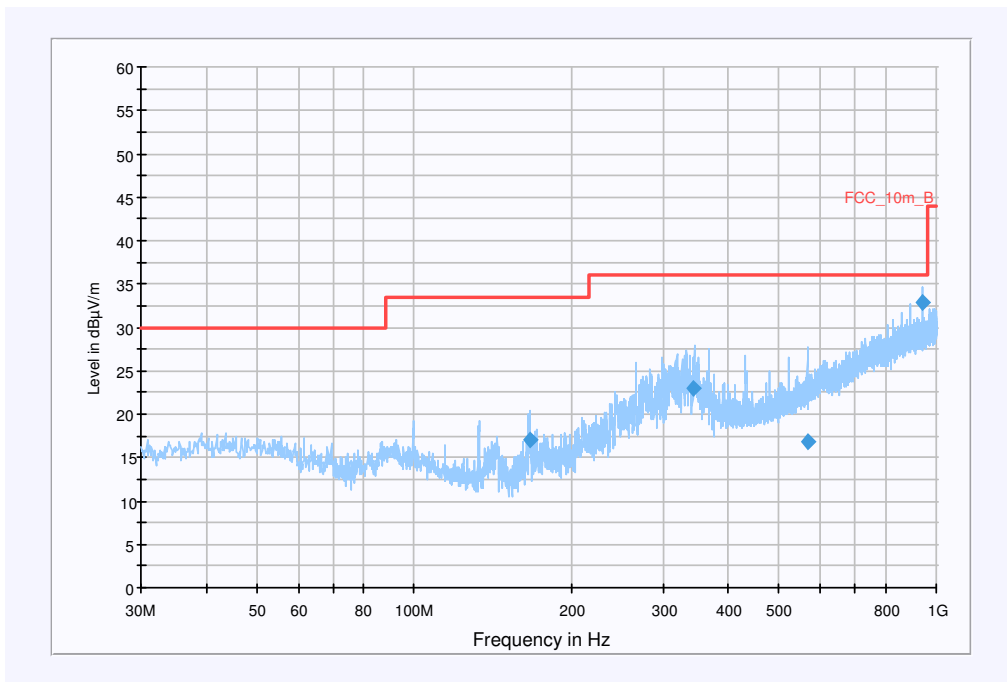
EUT: EC400+ Active ExpressCard/34 Adapter
 Serial Number: BD311044FP
 Test Description: FCC @ 10 m
 Operating Conditions: Idle 850
 Operator Name: DON
 Comment: Powered with AC 115V/60 Hz (PC)

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_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
166.589900	17.0	15000.000	120.000	200.0	V	325.0	9.9	13.0	30.0	
343.584250	23.1	15000.000	120.000	278.0	H	168.0	16.0	12.9	36.0	
566.005500	16.9	15000.000	120.000	318.0	V	137.0	20.1	19.1	36.0	
941.192250	32.8	15000.000	120.000	115.0	H	222.0	26.4	3.2	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

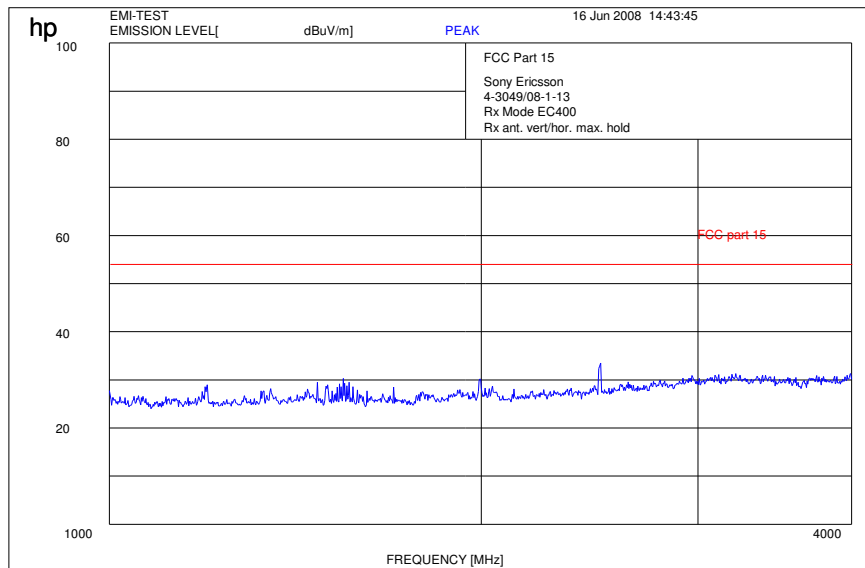
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

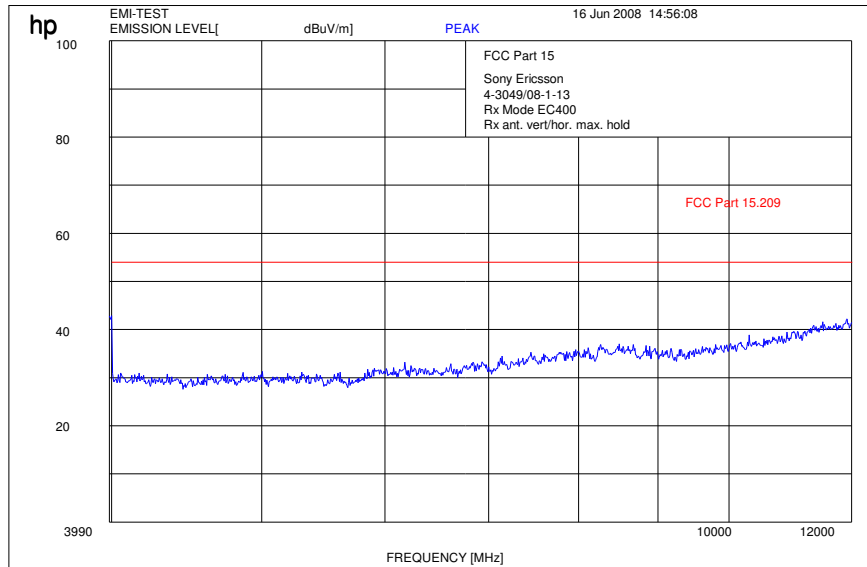
Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

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

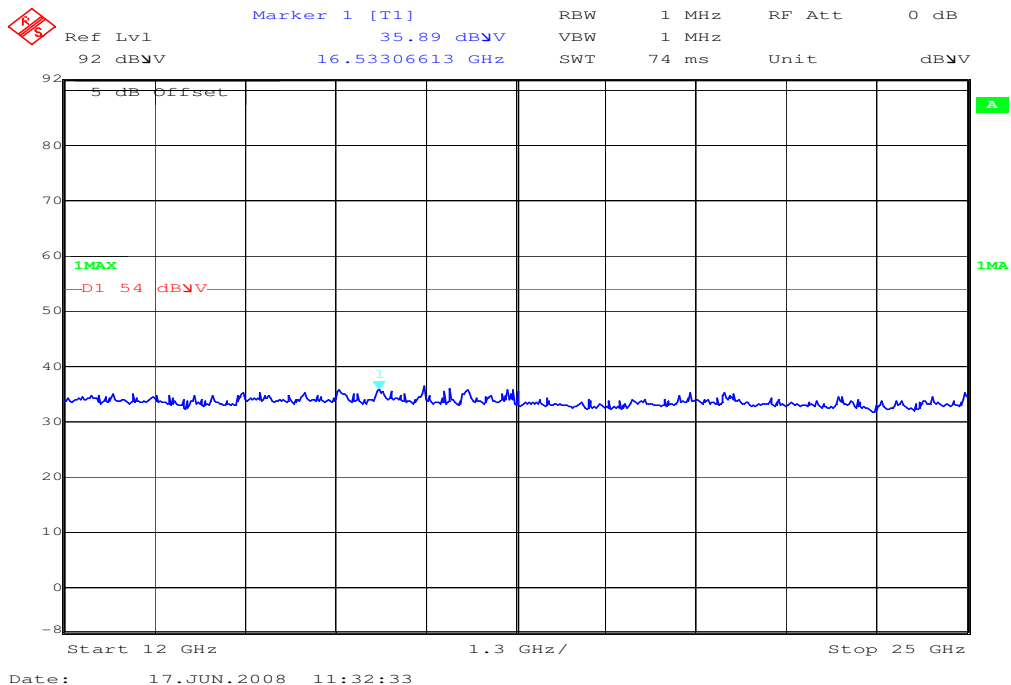
Idle mode (1 GHz to 4 GHz)



Idle mode (4GHz to 12 GHz)



Idle mode (12GHz to 25 GHz)



PCS 1900 (EC400)

Idle mode (30 MHz to 1 GHz)

Information

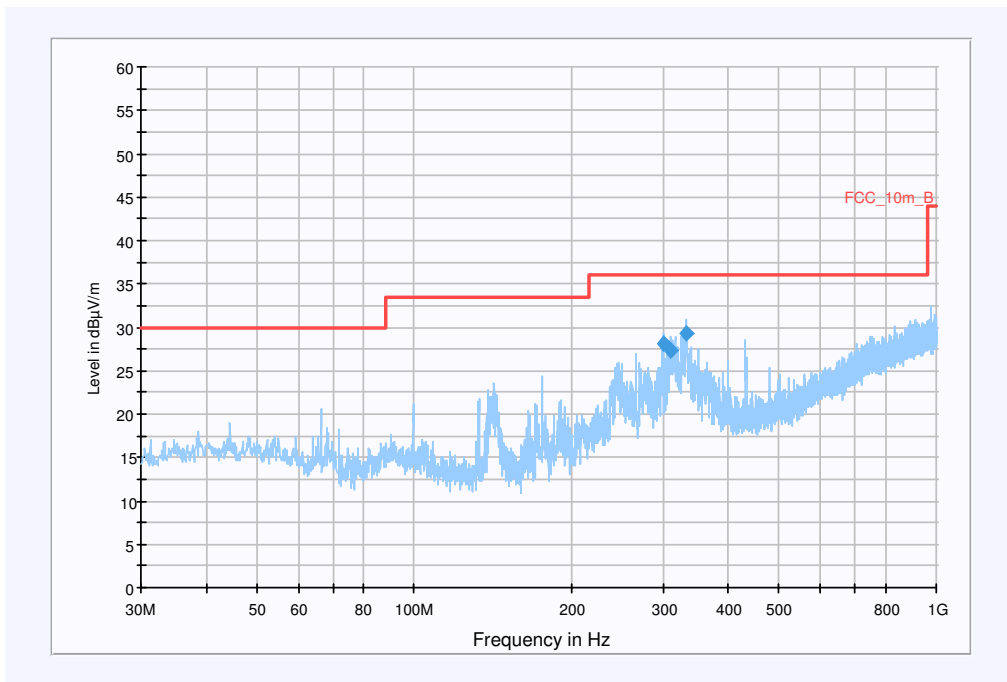
EUT: EC400+ Active ExpressCard/34 Adapter
 Serial Number: BD311044FP
 Test Description: FCC part 15 class B @ 10m
 Operating Conditions: IDLE 1900
 Operator Name: DON
 Comment: Powered with AC: 115 V / 60 Hz

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_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
299.818950	28.1	15000.000	120.000	378.0	H	180.0	14.7	7.9	36.0	
309.547100	27.4	15000.000	120.000	367.0	H	171.0	15.0	8.6	36.0	
330.887000	29.4	15000.000	120.000	386.0	H	76.0	15.7	6.6	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

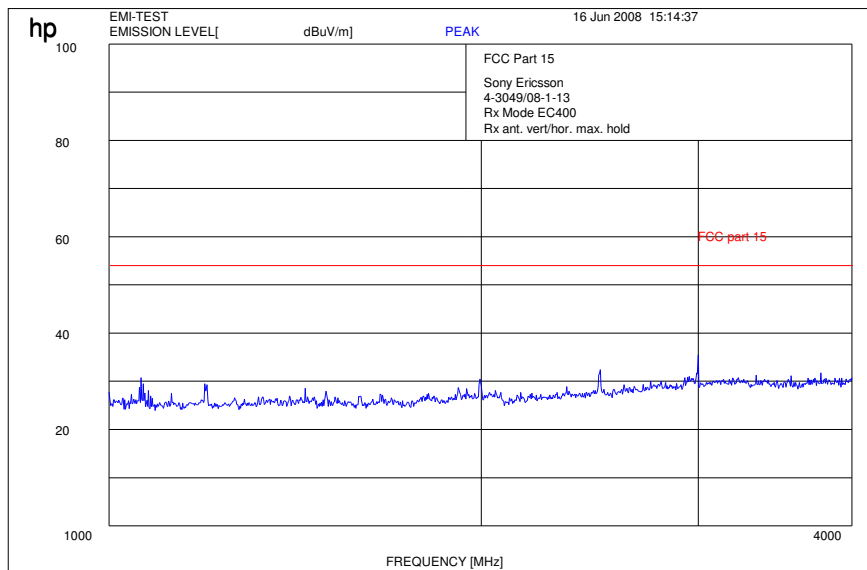
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

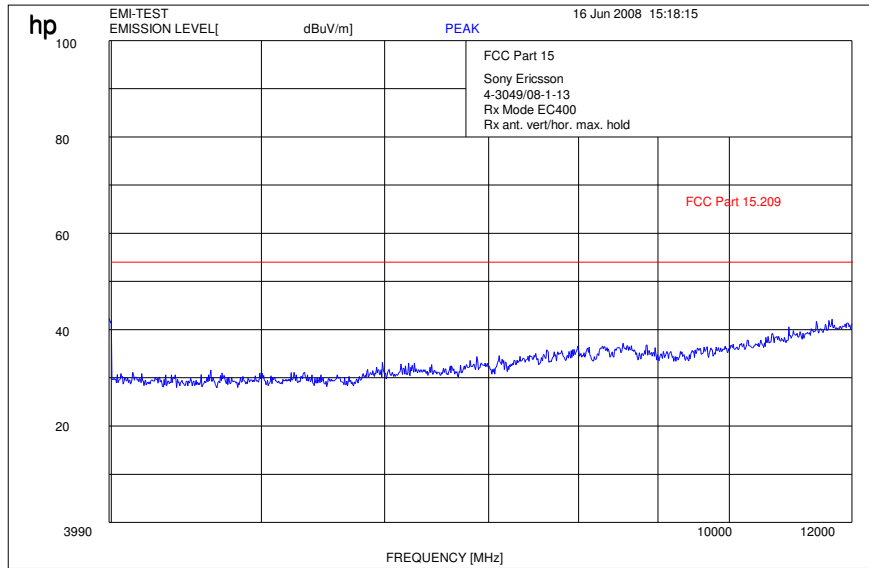
Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

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

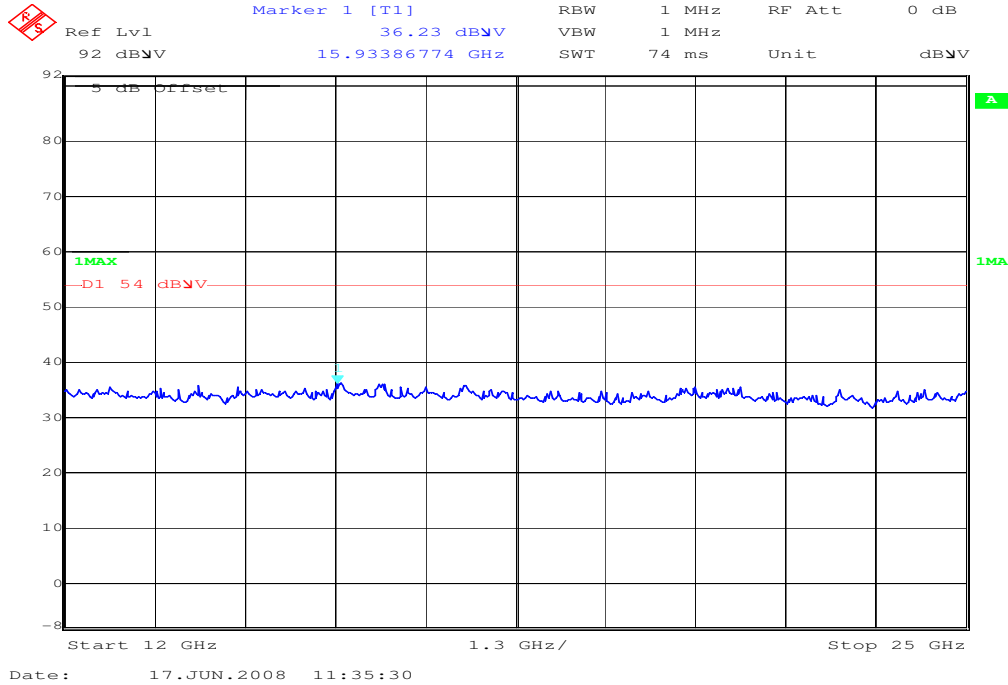
Idle mode (1 GHz to 4 GHz)



Idle mode (4GHz to 12 GHz)



Idle mode (12GHz to 25 GHz)



WCDMA Band II (EC400)

Idle mode (30 MHz to 1 GHz)

Information

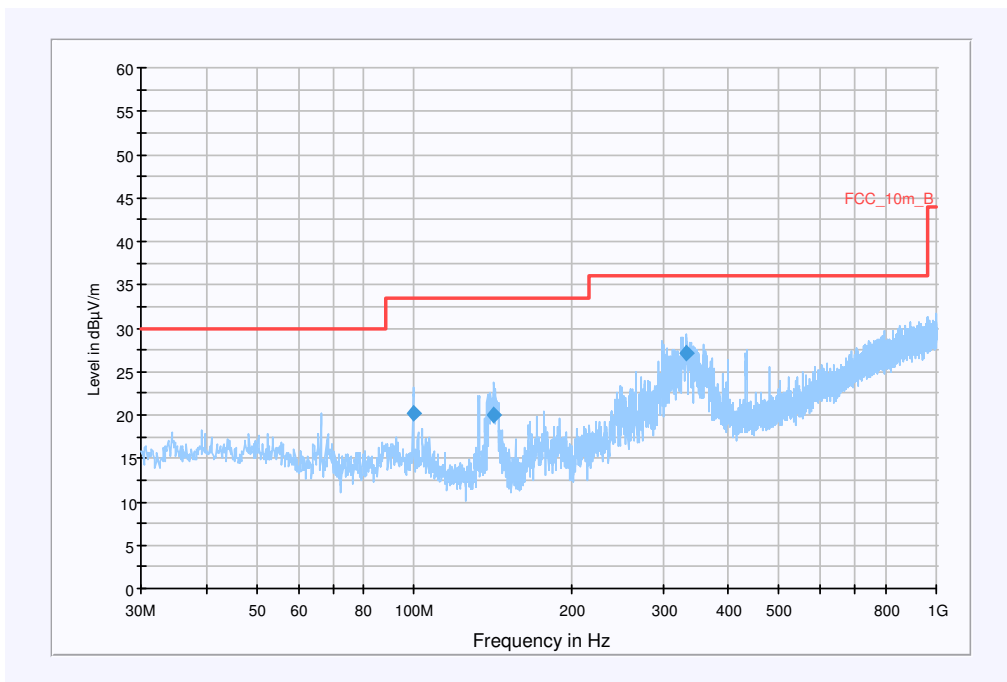
EUT: EC400+ Active ExpressCard/34 Adapter
 Serial Number: BD311044FP
 Test Description: FCC part 15 class B @ 10m
 Operating Conditions: UMTS Band 2
 Operator Name: DON
 Comment: Powered with AC: 115 V / 60 Hz

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_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
99.570750	20.2	15000.000	120.000	140.0	V	0.0	12.2	13.3	33.5	
142.450350	20.1	15000.000	120.000	137.0	V	-1.0	9.0	13.4	33.5	
331.440600	27.2	15000.000	120.000	285.0	H	153.0	15.7	8.8	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

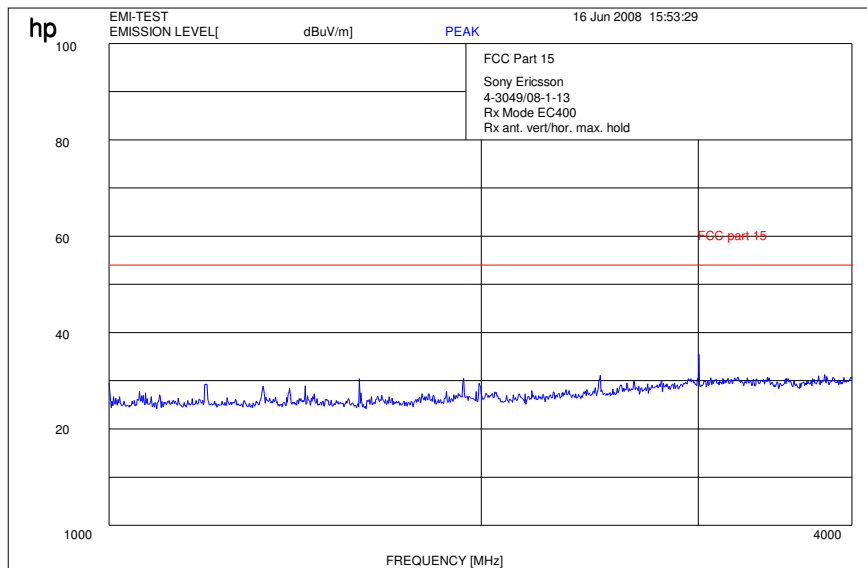
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

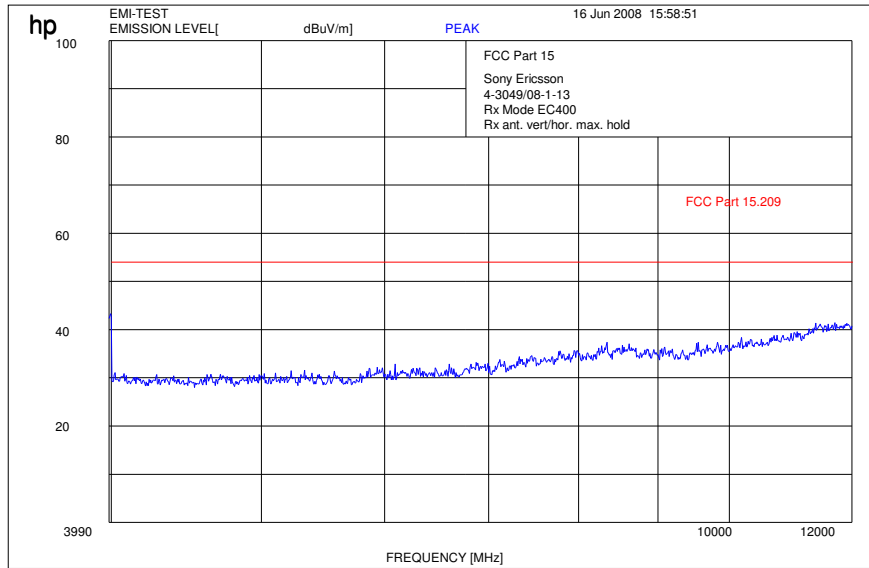
Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

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

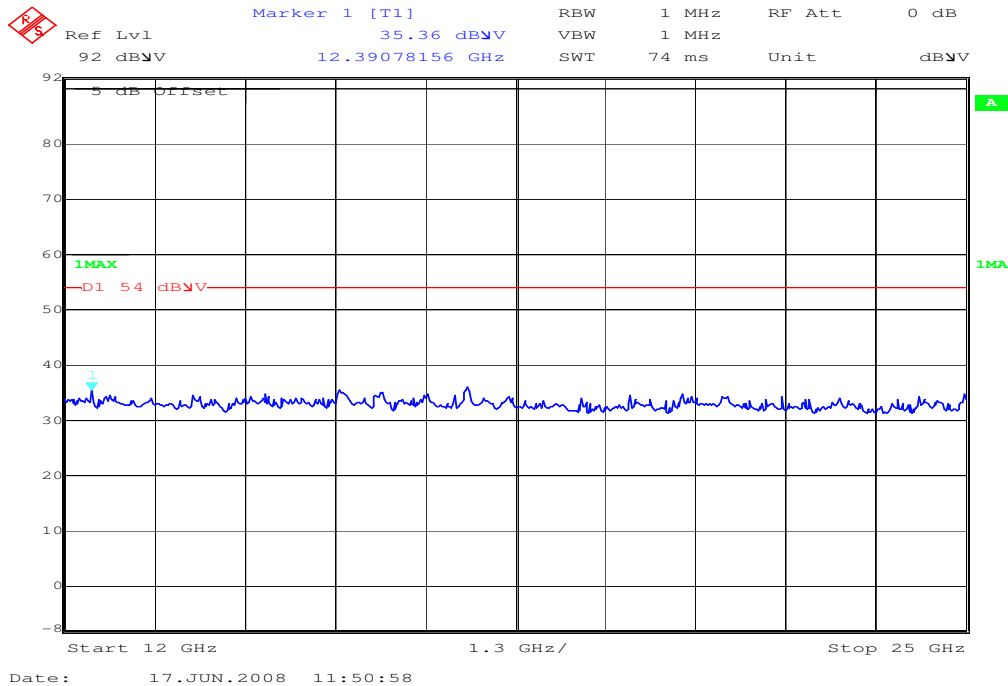
Idle mode (1 GHz to 4 GHz)



Idle mode (4GHz to 12 GHz)



Idle mode (12GHz to 25 GHz)



WCDMA Band V (EC400)

Idle-Mode (30 MHz - 1 GHz)

Information

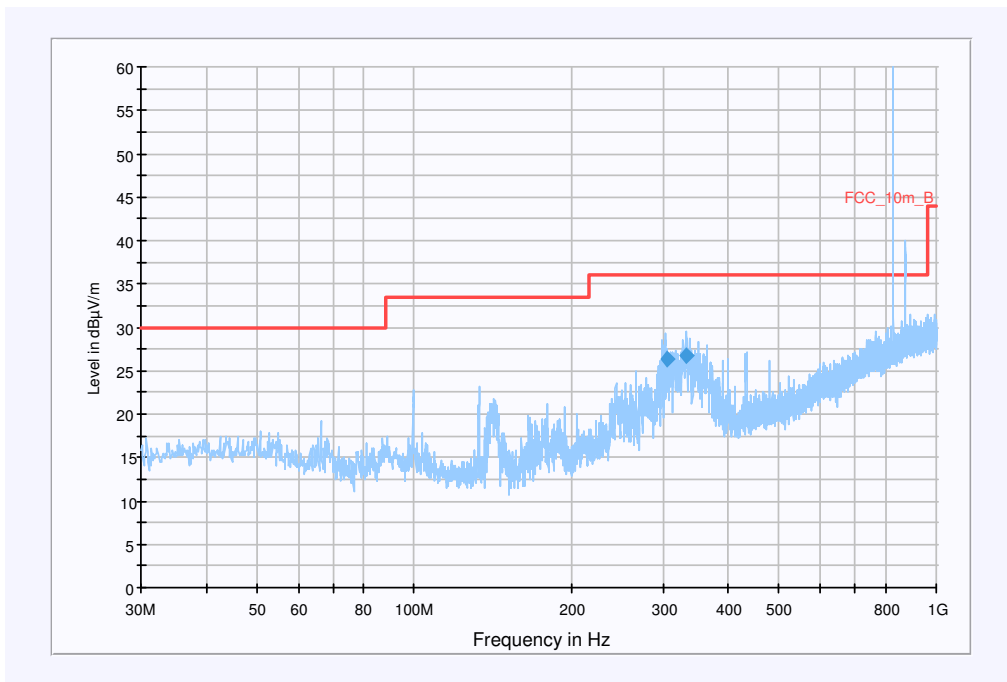
EUT: EC400+ Active ExpressCard/34 Adapter
 Serial Number: BD311044FP
 Test Description: FCC part 15 class B @ 10m
 Operating Conditions: UMTS Band 5
 Operator Name: DON
 Comment: Powered with AC: 115 V / 60 Hz

Scan Setup: STAN_Fin [EMI radiated]

Hardware Setup: EMI radiated\Electric Field (NOS)
 Level Unit: dB μ V/m

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

FCC_10m_1GHz (B)



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Comment
304.187000	26.2	15000.000	120.000	367.0	H	163.0	14.8	9.8	36.0	
331.805300	26.7	15000.000	120.000	400.0	H	191.0	15.7	9.3	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

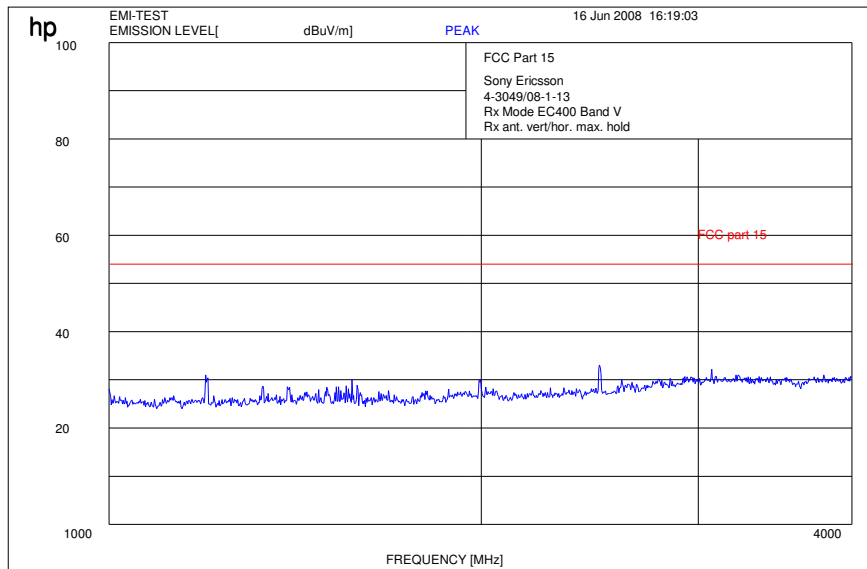
Signal Path: without Notch
FW 1.0

Antenna: VULB 9163
SN 9163-295, FW ---, CAL 08.04.2010
Correction Table (vertical): VULP6113
Correction Table (horizontal): VULP6113
Correction Table: Cabel with switch (0408)

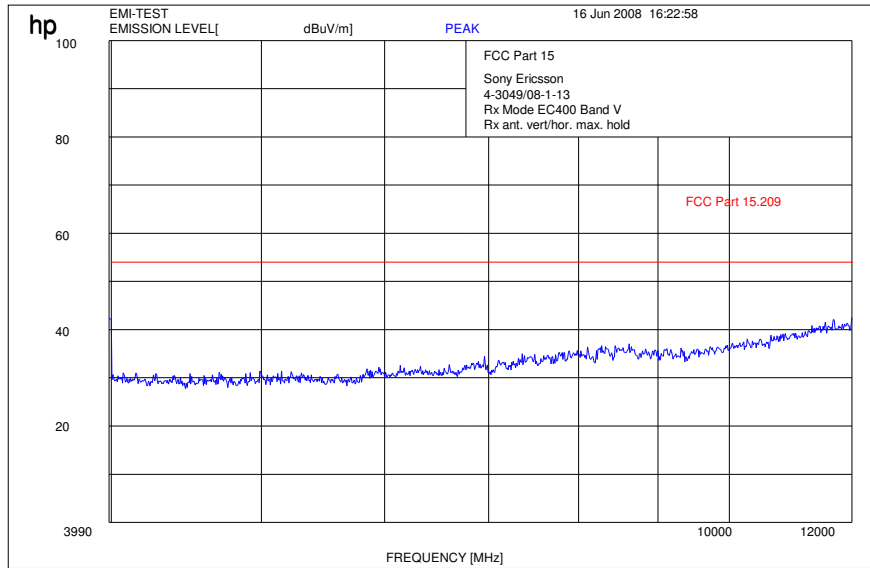
Antenna Tower: Tower [EMCO 2090 Antenna Tower]
@ GPIB0 (ADR 8), FW REV 3.12

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

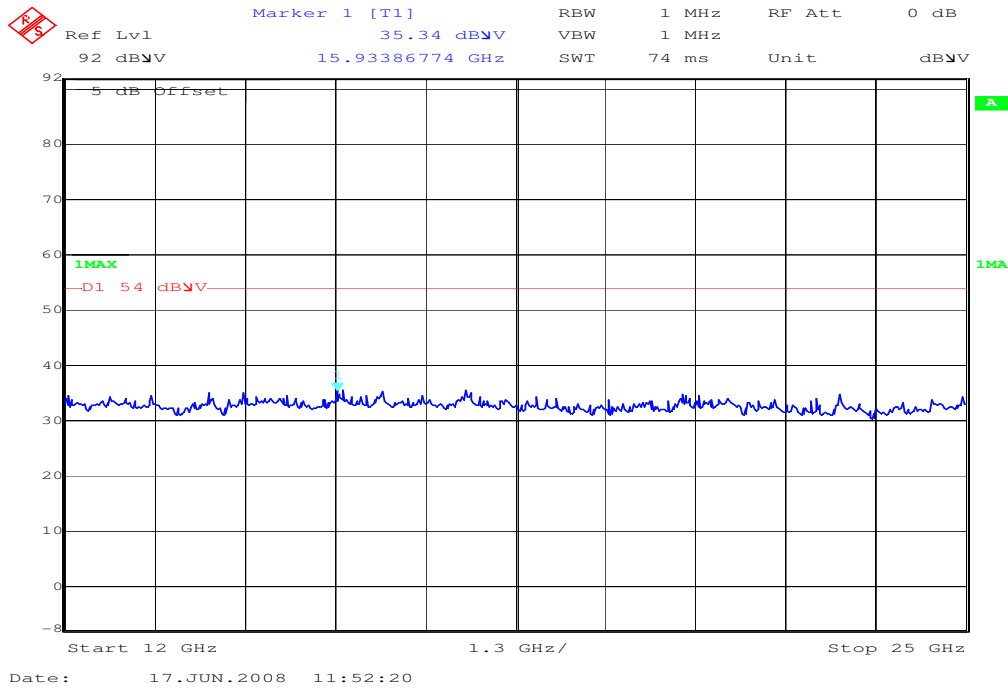
Idle mode (1 GHz to 4 GHz)



Idle mode (4GHz to 12 GHz)



Idle mode (12GHz to 25 GHz)



7 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.

Anechoic chamber C:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Anechoic chamber	MWB	87400/02	300000996	Monthly verification		
2	System-Rack 85900	HP I.V.	*	300000222	n.a.		
3	Measurement System 1						
4	Spektrum Analyzer 8566B	HP	2747A05306	300001000	05.10.2006	24	05.10.2008
5	Spektrum Analyzer Display 85662A	HP	2816A16541	300002297	05.10.2006	24	05.10.2008
6	Quasi-Peak-Adapter 85650A	HP	2811A01131	300000999	05.10.2006	24	05.10.2008
7	RF-Preselector 85685A	HP	2837A00779	300000218	08.11.2006	24	08.11.2008
8	PC Vectra VL	HP		300001688	n.a.		
9	Software EMI	HP		300000983	n.a.		
10	Measurement System 2						
11	FSP 30	R&S	100623	ICT 300003464	05.10.2007	24	15.10.2009
12	PC	F+W			n.a.		
13	TILE	TILE			n.a.		
14	Biconical antenna	EMCO	S/N: 860 942/003		Monthly verification (System cal.)		
15	Log. Period. Antenna 3146	EMCO	2130	300001603	Monthly verification (System cal.)		
16	Double Ridged Antenna HP 3115P	EMCO	3088	300001032	Monthly verification (System cal.)		
17	Active Loop Antenna 6502	EMCO	2210	300001015	Monthly verification (System cal.)		
18	Power Supply 6032A	HP	2818A03450	300001040	12.05.2007	36	12.05.2010
19	Busisolator	Kontron		300001056	n.a.		
20	Leitungsteiler 11850C	HP		300000997	Monthly verification (System cal.)		
21	Power attenuator 8325	Byrd	1530	300001595	Monthly verification (System cal.)		
22	Band reject filter WRCG1855/1910	Wainwright	7	300003350	Monthly verification (System cal.)		
23	Band reject filter WRCG2400/2483	Wainwright	11	300003351	Monthly verification (System cal.)		

System Rack Room 005 :

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	FSP 30	R&S		300003575	02.04.2007	24	02.04.2009
2	CBT	R&S	100313	300003516	24.10.2006	24	24.10.2008
3	Switch Matrix	HP		300000929	n.a.		
4	Power Supply	HP	3041A00544	300002270	13.05.2007	36	13.05.2010
5	Signal Generator	R&S	836206/0092	300002680	30.05.2007	36	30.05.2010

Signalling Units:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	CBT	R&S	100313	300003516	24.10.2006	24	24.10.2008
2	CBT	R&S	100185	300003416	21.02.2006	24	21.02.2008
3	CMU-200	R&S	103992	300003231	27.04.2007	12	27.04.2008

4	CMU-200	R&S	106240	300003321	02.05.2006	24	02.05.2008
---	---------	-----	--------	-----------	------------	----	------------

SRD Laboratory Room 002:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	System Controller PSM 12	R&S	835259/007	3000002681-00xx	n.a.		
2	Memory Extension PSM-K10	R&S	To 1	3000002681	n.a.		
3	Operating Software PSM-B2	R&S	To 1	3000002681	n.a.		
4	19" Monitor		22759020-ED	3000002681	n.a.		
5	Mouse		LZE 0095/6639	3000002681	n.a.		
6	Keyboard		G00013834L461	3000002681	n.a.		
7	Spectrum Analyser FSIQ 26	R&S	835540/018	3000002681-0005	01.08.2006	24	01.08.2008
8	Tracking Generator FSIQ-B10	R&S	835107/015	3000002681	s.No.7		
10	RF-Generator SMIQ03 (B1 Signal)	R&S	835541/056	3000002681-0002	01.08.2006	36	01.08.2009
11	Modulation Coder SMIQ-B20	R&S	To 10	3000002681	s.No.10		
12	Data Generator SMIQ-B11	R&S	To 10	3000002681	s.No.10		
13	RF Rear Connection SMIQ-B19	R&S	To 10	3000002681	s.No.10		
14	Fast CPU SM-B50	R&S	To 10	3000002681	s.No.10		
15	FM Modulator SM-B5	R&S	835676/033	3000002681	s.No.10		
16	RF-Generator SMIQ03 (B2 Signal)	R&S	835541/055	3000002681-0001	01.08.2006	36	01.08.2009
17	Modulation Coder SMIQ-B20	R&S	To 16	3000002681	s.No.16		
18	Data Generator SMIQ-B11	R&S	To 16	3000002681	s.No.16		
19	RF Rear Connection SMIQ-B19	R&S	To 16	3000002681	s.No.16		
20	Fast CPU SM-B50	R&S	To 16	3000002681	s.No.16		
21	FM Modulator SM-B5	R&S	836061/022	3000002681	s.No.16		
22	RF-Generator SMP03 (B3 Signal)	R&S	835133/011	3000002681-0003	01.08.2006	36	01.08.2009
23	Attenuator SMP-B15	R&S	835136/014	3000002681	S.No.22		
24	RF Rear Connection SMP-B19	R&S	834745/007	3000002681	S.No.22		
25	Power Meter NRVD	R&S	835430/044	3000002681-0004	01.08.2006	24	01.08.2008
26	Power Sensor NRVD-Z1	R&S	833894/012	3000002681-0013	01.08.2006	24	01.08.2008
27	Power Sensor NRVD-Z1	R&S	833894/011	3000002681-0010	01.08.2006	24	01.08.2008
28	Rubidium Standard RUB	R&S		3000002681-0009	01.08.2006	24	01.08.2008
29	Switching and Signal Conditioning Unit SSCU	R&S	338864/003	3000002681-0006	01.08.2006	24	01.08.2008
30	Laser Printer HP Deskjet 2100	HP	N/A	3000002681-0011	n.a.		
31	19" Rack	R&S	11138363000004	3000002681	n.a.		
32	RF-cable set	R&S	N/A	3000002681	n.a.		
33	IEEE-cables	R&S	N/A	3000002681	n.a.		
34	Sampling System FSIQ-B70	R&S	835355/009	3000002681	s.No.7		
35	RSP programmable attenuator	R&S	834500/010	3000002681-0007	01.08.2006	24	01.08.2008
36	Signalling Unit	R&S	838312/011	3000002681	n.a.		
37	NGPE programmable Power Supply for EUT	R&S	192.033.41	3000002681			
38	Climatic box VT 4002	Heraeus Vötsch	58566046820010	300003019	11.05.2007	24	11.05.2009
39	Signaling Unit CMU200	R&S	832221/0055	300002862	12.01.2006	24	12.01.2008
40	Power Splitter 6005-3	Inmet Corp.	none	300002841	23.12.2006	24	23.12.2008
41	SMA Cables SPS-1151-985-SPS	Insulated Wire	different	different	n.a.		
42	CBT32 with EDR Signaling Unit	R&S					

43	Coupling unit	Narda	N/A	--	n.a.		
44	2xSwitch Matrix PSU	R&S	872584/021	300001329	n.a.		
45	RF-cable set	R&S	N/A	different	n.a.		
46	IEEE-cables	R&S	N/A	--	n.a.		

Anmerkung: 3000002681-00xx als Systeme inventarisiert

SRD Laboratory Room 005:

No	Equipment/Type	Manuf.	Serial Nr.	Inv. No. Cetecom	Last Calibration	Frequency (months)	Next Calibration
1	Spektrum Analyzer 8566B	HP	2747A05275	300000219	08.11.2006	24	08.11.2008
2	Spektrum Analyzer Display 85662A	HP	2816A16497	300001690	08.11.2006	24	08.11.2008
3	Quasi-Peak-Adapter 85650A	HP	2811A01135	300000216	08.11.2006	24	08.11.2008
4	Power Supply	Heiden	003202	300001187	12.05.2007	36	12.05.2010
5	Power Supply	Heiden	1701	300001392	12.05.2007	36	12.05.2010

Anechoic chamber F:

No.	Instrument/Ancillary	Manufacturer	Type	Serial-No.	Internal identification
Radiated emission in chamber F					
F-1	Control Computer	F+W		FW0502032	300003303
F-2	Bilog antenna	Chase	CBL 6112A	2110	300000573
F-3a	Amplifier	Veritech Microwave Inc.	0518C-138	- / -	- / -
F-4b	Switch	HP	3488A	- / -	300000368
F-5	EMI Test receiver	R&S	ESCI	100083	300003312
F-6	Turntable Controller	EMCO	1061 3M	1218	300000661
F-7	Tower Controller	EMCO	1051 Controller	1262	300000625
F-8	Tower	EMCO	1051 Tower	1262	300000625
F-9	Ultra Notch-Filter Rejected band Ch. 62	WRCD		9	
Radiated immunity in chamber F					
F-10	Control Computer	F+W		FW0502032	300003303
F-11	Signal Generator	R&S	SML 03	102519	300003407
F-12	RF-Amplifier	ar	50W1000	12932	300001438
F-13	Directional Coupler	ar	DC 3010	12708	300001428
F-14	Logper Antenna	R&S	HL023A1	323704/016	300001476
F-15	RF-Amplifier	ar	60S1G3	313649	300003410
F-16	Directional Coupler	ar	DC7144A	312786	300003411
F-17	Horn Antenna	ar	AT 4002	19739	300000633
F-18	Power Meter	R&S	NRV	860327/024	F033
F-19	Power sensor	R&S	URV5-Z2	839080/005	300002844.02
F-20	Power sensor	R&S	URV5-Z2	830755/057	F032
Harmonics and flicker in front of chamber F					
F-21	Flicker and Harmonics Test System	Spitzenberger & Spies	PHE4500/B I PHE4500/B II	B5983 B5984	300000210
F-22	Control Unit	Spitzenberger & Spies	STE	B5980	300000210
F-23	Power Amplifier	Spitzenberger & Spies	EP 4500/B	B5976	300000210
F-24	Conect Panel	Spitzenberger & Spies	Conect panel	B5982	300000210
F-25	Power Supply	Spitzenberger & Spies	NT-EP 4500	B3977	300000210
F-26	Additional transformer	Spitzenberger & Spies	UT-EP 4500	B5978	300000210
F-27	Analyzer Reference System	Spitzenberger & Spies	ARS 16/1	A3509 07/0 0205	300003314
F-26	Power Supply	Hewlett Packard	6032 A	2920 A 04466	300000580