



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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Test report no. : 4-2927-15-12/08-A
Type identification : EX2008P
Applicant : Sagem Mobiles
FCC ID : M9HEX2008P
Test standards : 47 CFR Part 15

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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:

2008-11-17 Daniel Muyunga

Date

Name

Signature



2008-11-17 Meheza Kpelou Walla

Date

Name

Signature



Technical responsibility for area of testing:

2008-11-17 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:	Sagem Mobiles FR 93 440 349 181
Street:	2 rue du Petit Albi
Town:	95801 Cergy Pontoise Cedex
Country:	France
Telephone:	+33-(0)1-58-11-91-72
Fax:	+33(0)1-5811-14-11
Contact:	Herrn Jean Marquet
E-mail:	jean.marquet@sagem.com
Telephone:	+33(0)1-5811-91-72

1.4 Application details

Date of receipt of order:	2008-06-16
Date of receipt of test item:	2008-08-19
Date of start test:	2008-08-21
Date of end test	2008-11-17
Persons(s) who have been present during the test:	-/-

2 Test standard/s:

47 CFR 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
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3 Technical tests

3.1 Details of manufacturer

Name:	Sagem Mobiles FR 93 440 349 181
Street:	2 rue du Petit Albi
Town:	95801 Cergy Pontoise Cedex
Country:	France

3.1.1 Test item

Kind of test item	:	GSM mobile phone
Type identification	:	EX2008P
S/N serial number	:	354680020001716 conducted sample (EUT) 354680029500221 radiated sample (EUT)
HW hardware status	:	V0X
SW software status	:	E N,WE
Frequency Band [MHz]	:	ISM 2.400 - 2.483,5
Type of Modulation	:	DSSS & OFDM
Number of channels	:	11
Antenna	:	Integrated antenna
Power Supply	:	3.9 V DC by power supply / Li-Ion BDL4C Sanyo
Temperature Range	:	-20 °C to +55 °C

Max. power radiated: 14.35 dBm (DSSS)

Max. power conducted: 18.54 dBm (DSSS)

Max. power radiated: 16.33 dBm (OFDM)

Max. power conducted: 20.02 dBm (OFDM)

FCC ID: M9HEX2008P

3.1.2 EUT operating modes

EUT operating mode no. *)	Description of operating modes	Additional information
Op. 0	Normal mode	Normal temperature and power source conditions
Op. 1		low temperature, low power source conditions
Op. 2		low temperature, high power source conditions
Op. 3		high temperature, low power source conditions
Op. 4		high temperature, high power source conditions

*) EUT operating mode no. is used to simplify the test plan

3.1.3 Extreme conditions testing values

Description	Shortcut	Unit	Value
Nominal Temperature	T _{nom}	°C	+23
Nominal Humidity	H _{nom}	%	50
Nominal Power Source	V _{nom}	V	3.9

Type of power source: DC by power supply / Li-Ion BDL4C Sanyo

Deviations from these values are reported in chapter 2

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

TC identifier	Description	verdict	date	Remark
RF-Testing	FCC Part 15 §15.247	PASS	2008-08-27	-/-

Test Specification Clause	Test Case	Pass	Fail	Not applicable	Not performed
None	Antenna Gain	Yes			
§15.247 (e)	Peak power spectral density	Yes			
§15.247(a)(2)	Spectrum Bandwidth of a DSSS System / 6dB BW	Yes			
§15.247(a)(2)	Spectrum Bandwidth of a DSSS System / 20dB BW	Yes			
§ 15.247 (b)(3)	Maximum output power (conducted)	Yes			
§ 15.247 (b)(3)	Max. peak output power (radiated)	Yes			
§15.247 (d)	Band-edge compliance of conducted emissions	Yes			
§15.205	Band-edge compliance of radiated emissions	Yes			
§15.247 (d)	Spurious Emission - conducted (Transmitter)	Yes			
§ 15.209	Spurious Emission -radiated (Transmitter)	Yes			
§ 15.109	Spurious Emissions-radiated (Receiver)	Yes			
§ 15.209	Spurious Emissions-radiated <30 MHz	Yes			
§ 15.107/207	Conducted Emissions <30 MHz	Yes			

5 RF measurement testing

5.1 Description of test set-up

5.1.1 Radiated measurements

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 confirmed with 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.

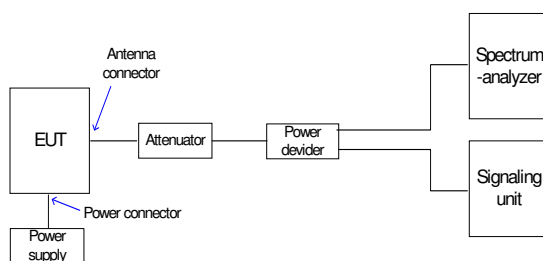
Antennas are confirmed with ANSI C63.2-1996 item 15.

9 kHz - 150 MHz: 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, bi-conical 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 15.209 and 15.207

5.1.2 Conducted measurements

The EUT's RF signal is coupled out by the antenna connector which is supplied by the manufacturer. The signal is connected to the spectrum analyzer. The specific losses for signal path are first checked within a calibration. The measurement readings on the spectrum analyzer are corrected by the specific test set-up loss. The attenuator, power divider, signalling unit and the spectrum analyzer are impedance matched on 50 Ohm.



5.2 Referenced Documents

None

5.3 Additional comments

None

5.4 Antenna gain

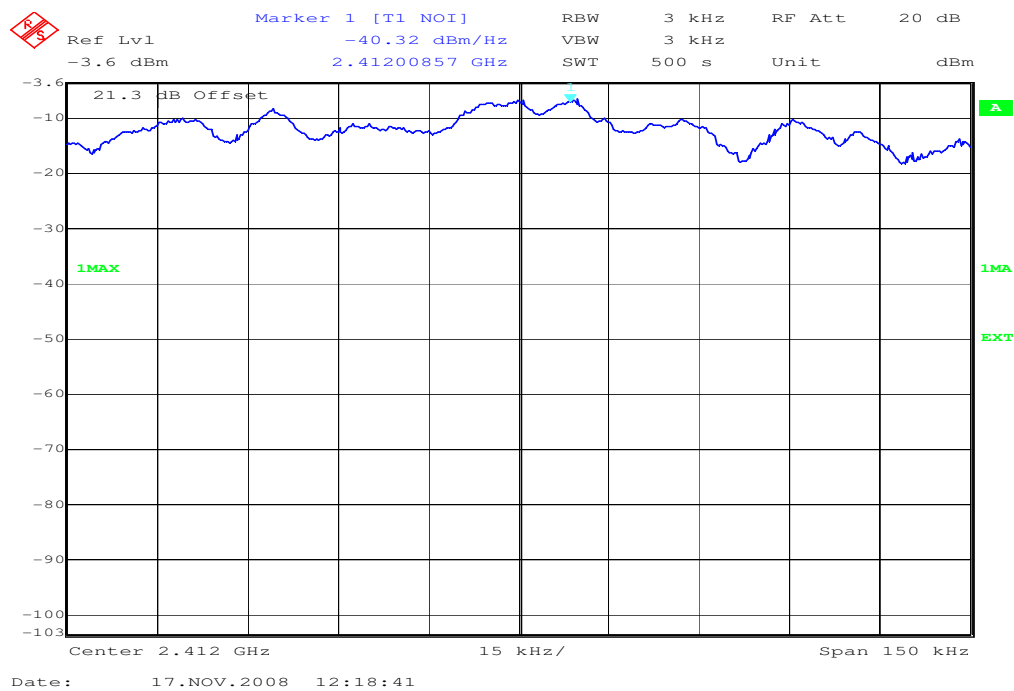
The antenna gain is determined by calculating the difference between the equivalent isotropic radiated power (EIRP) and the conducted output power of the system using DSSS modulation.

	low channel	mid channel	high channel
Conducted power [dBm] (<i>measured</i>)	17.20	17.55	18.54
Radiated power [dBm] (<i>measured</i>)	14.00	14.35	14.11
Gain [dBi] (<i>calculated</i>)	-3.20	-3.20	-4.43

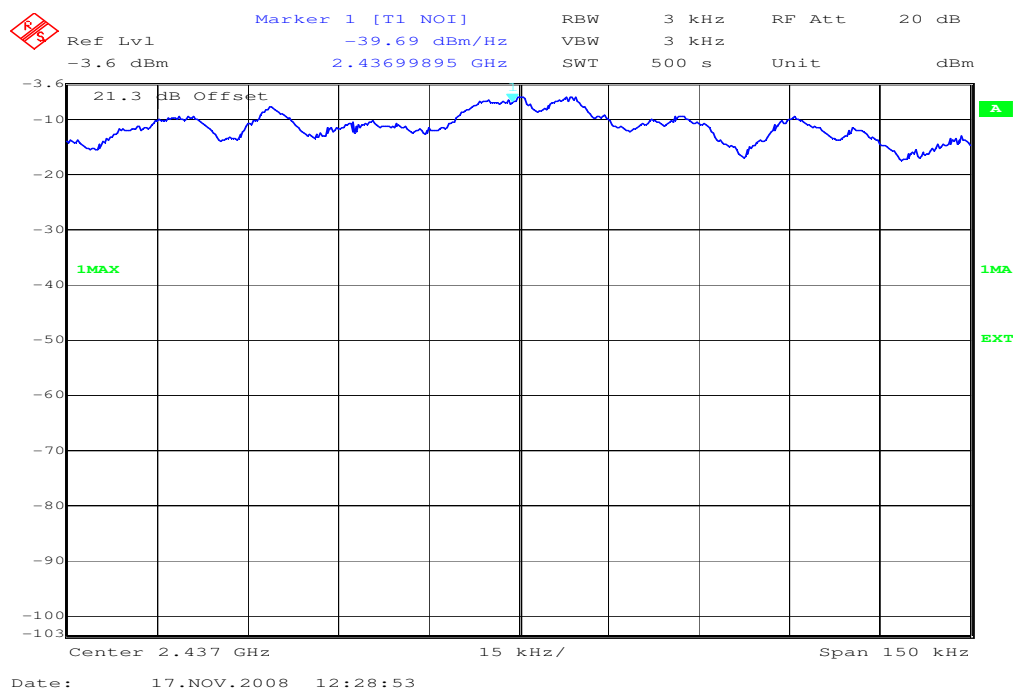
5.5 Peak Power Spectral density (digitally modulated systems) §15.247(e)

DSSS

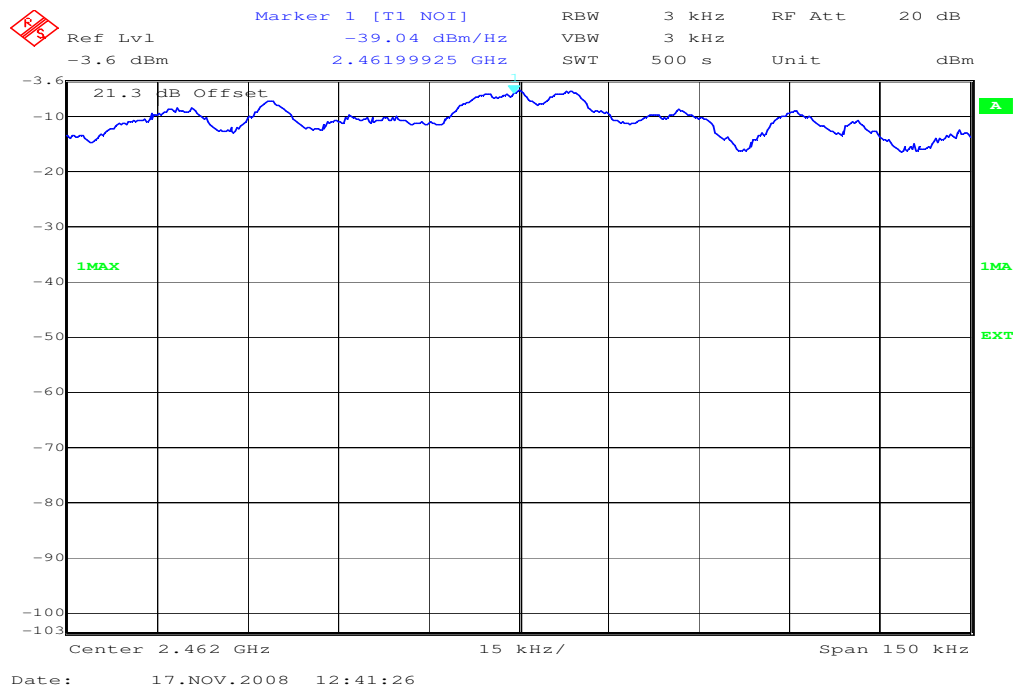
Plot 1:



Plot 2:



Plot 3:



Results:

DSSS:
Plot 1: Power density: - 40.32 dBm/Hz = - 5.52 dBm / 3 kHz
Plot 2: Power density: - 39.69 dBm/Hz = - 4.89 dBm / 3 kHz
Plot 3: Power density: - 39.04 dBm/Hz = - 4.24 dBm / 3 kHz

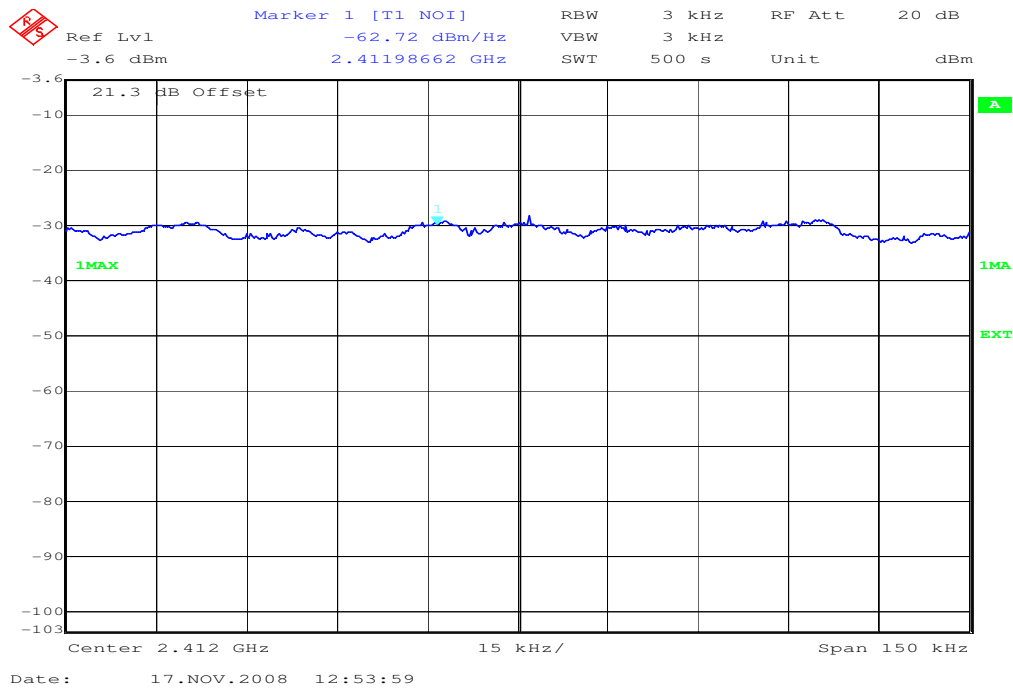
Correction factor from dBm/Hz to dBm/3 kHz is +34.8 dB

Limits:

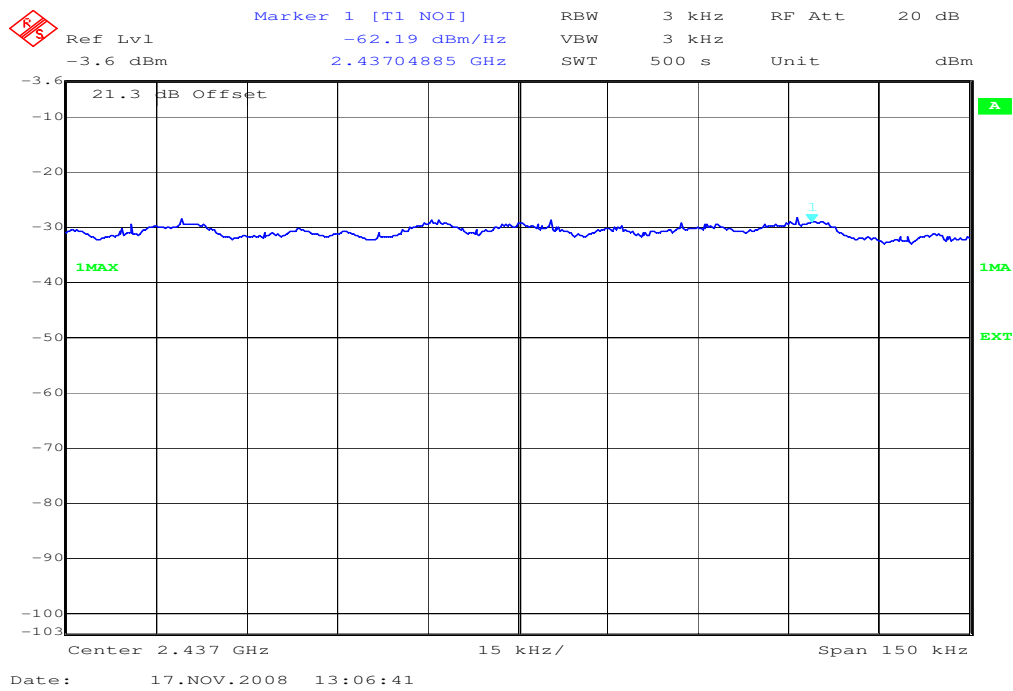
Under normal test conditions only	For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission
-----------------------------------	---

OFDM

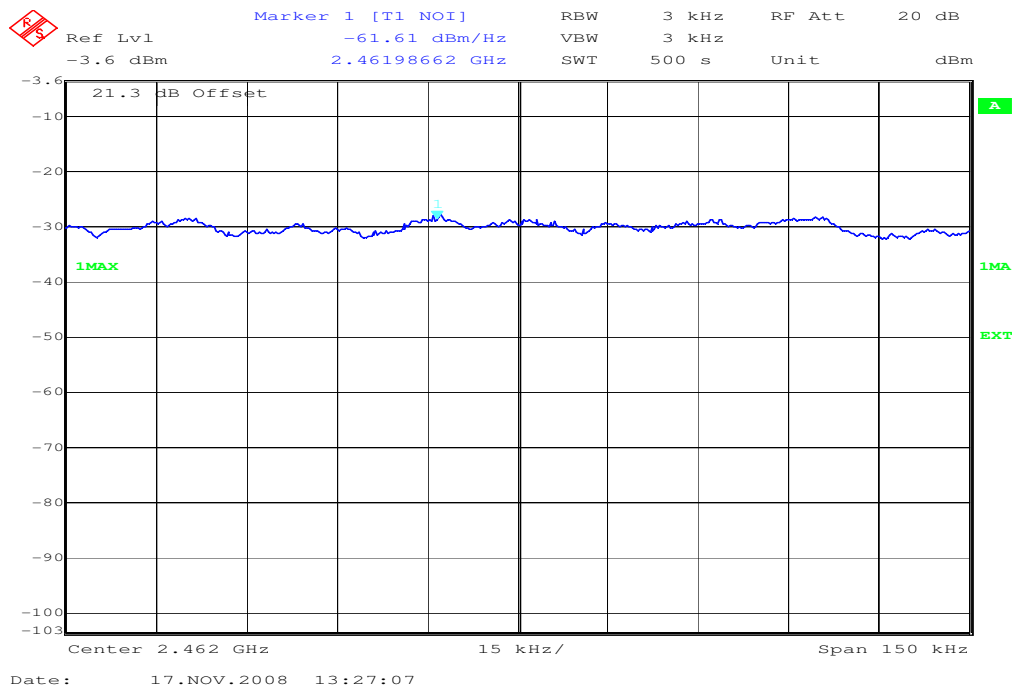
Plot 1:



Plot 2:



Plot 3: (result calculated by the Signal analyzer FSIQ 26 from Rohde & Schwarz)



Results:

OFDM:

Plot 1: Power density: - 62.72 dBm/Hz = - 27.92 dBm / 3 kHz
Plot 2: Power density: - 62.19 dBm/Hz = - 27.39 dBm / 3 kHz
Plot 3: Power density: - 61.61 dBm/Hz = - 26.81 dBm / 3 kHz

Correction factor from dBm/Hz to dBm/3 kHz is +34.8 dB

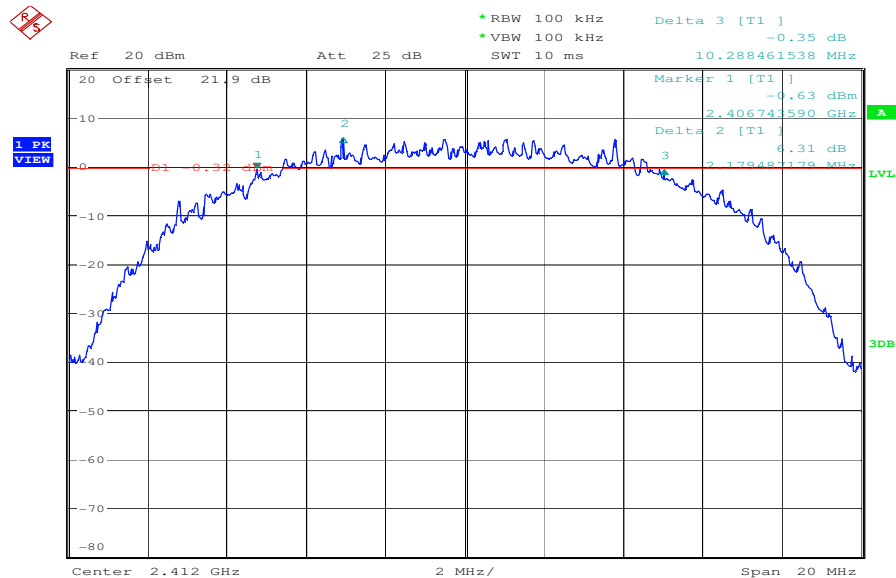
Limits:

Under normal test conditions only	For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission
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5.6 Spectrum Bandwidth of a DSSS System / 6 dB Bandwidth §15.247(a)(2)

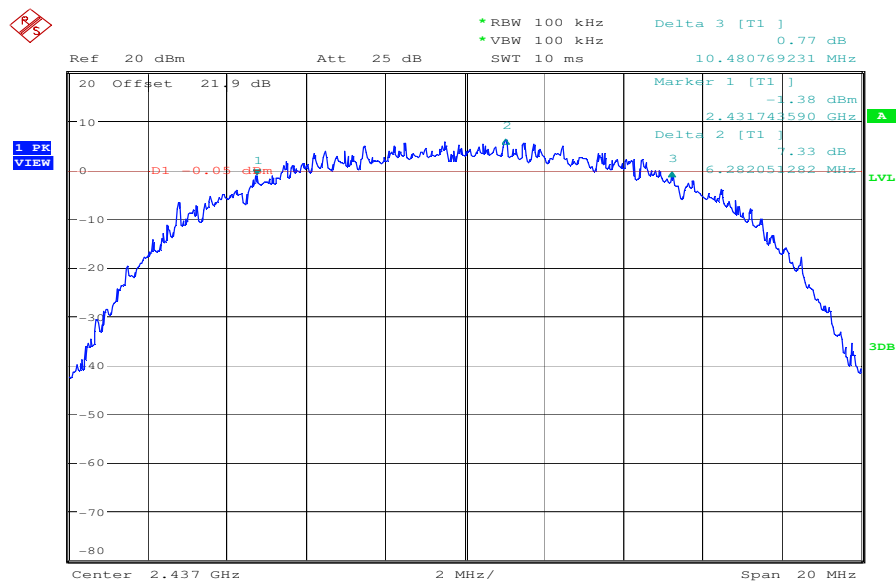
DSSS

Plot 1:



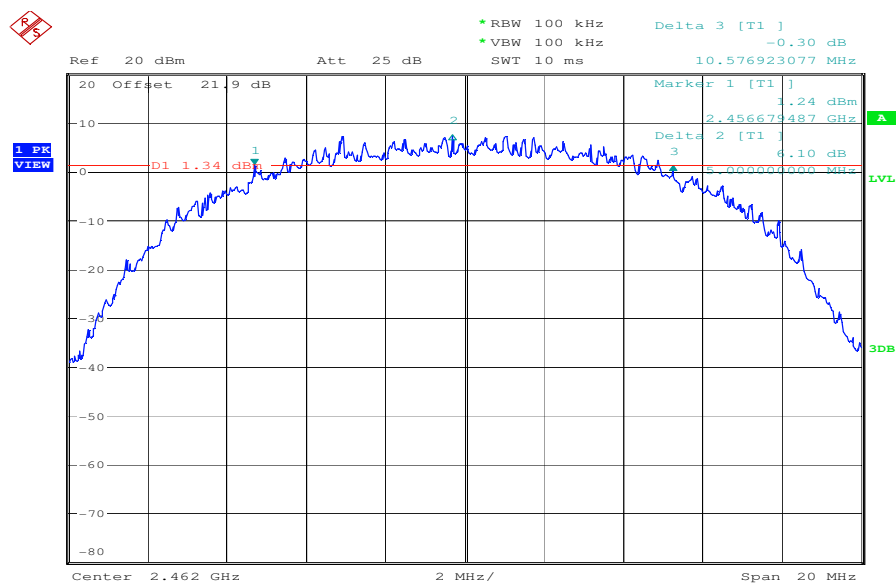
Date: 23.AUG.2008 12:44:58

Plot 2:



Date: 23.AUG.2008 12:51:21

Plot 3:



Date: 23.AUG.2008 12:56:14

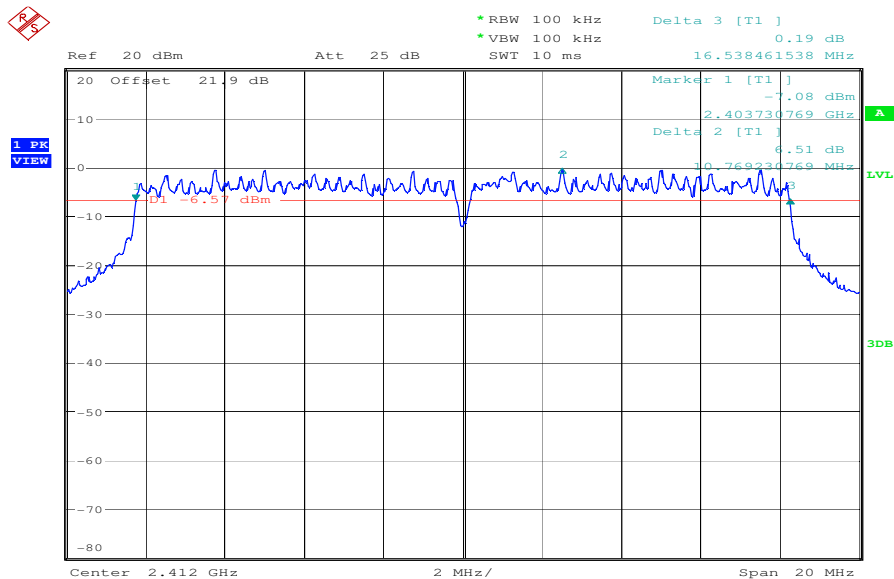
Results:

Test conditions		6 dB BANDWIDTH [MHz]		
		2412	2437	2462
Frequency [MHz]				
T _{nom}	V _{nom}	10.20	10.40	10.50
Measurement uncertainty		± 1 kHz		

RBW: 100 kHz / VBW 100 kHz

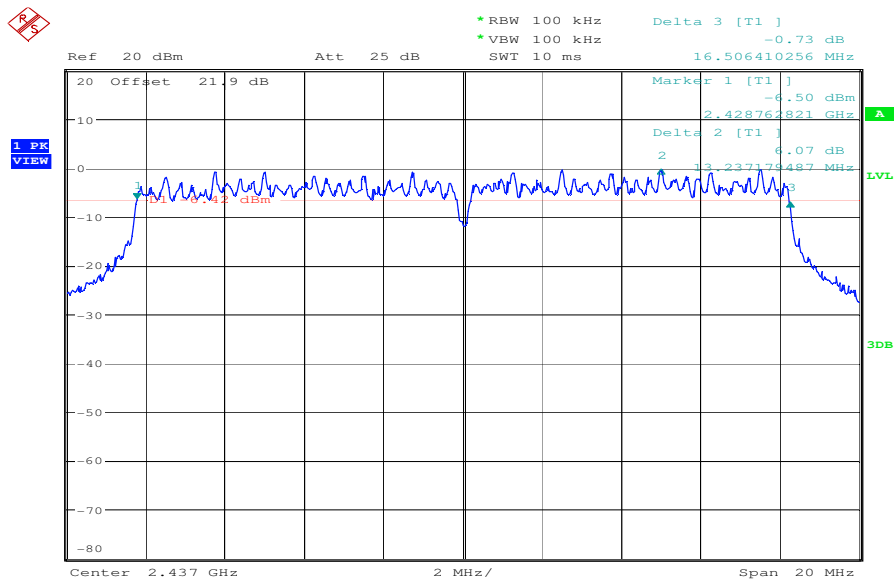
OFDM

Plot 1:



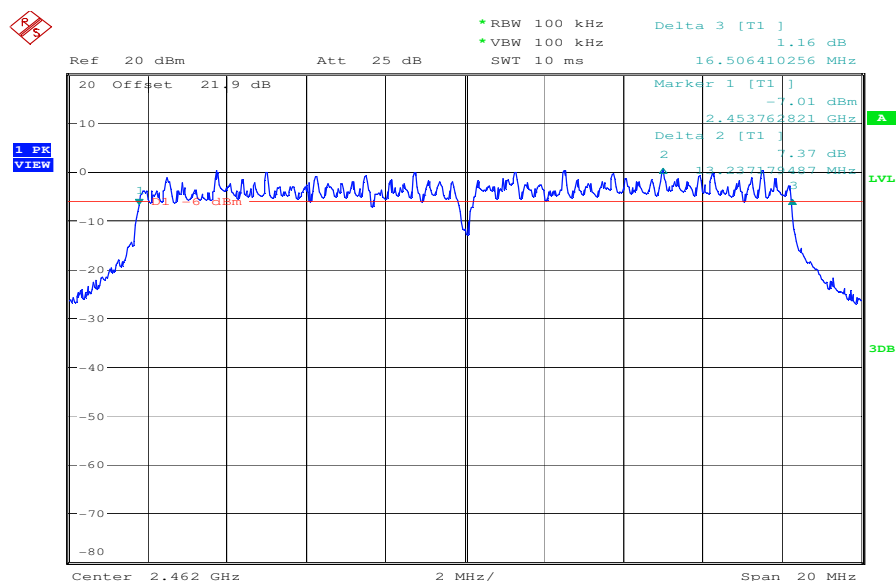
Date: 23.AUG.2008 11:32:59

Plot 2:



Date: 23.AUG.2008 11:39:37

Plot 3:



Date: 23.AUG.2008 11:44:04

Results:

Test conditions		6 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T _{nom}	V _{nom}	16.50	16.50	16.50
Measurement uncertainty		± 1 kHz		

RBW: 100 kHz / VBW 100 kHz

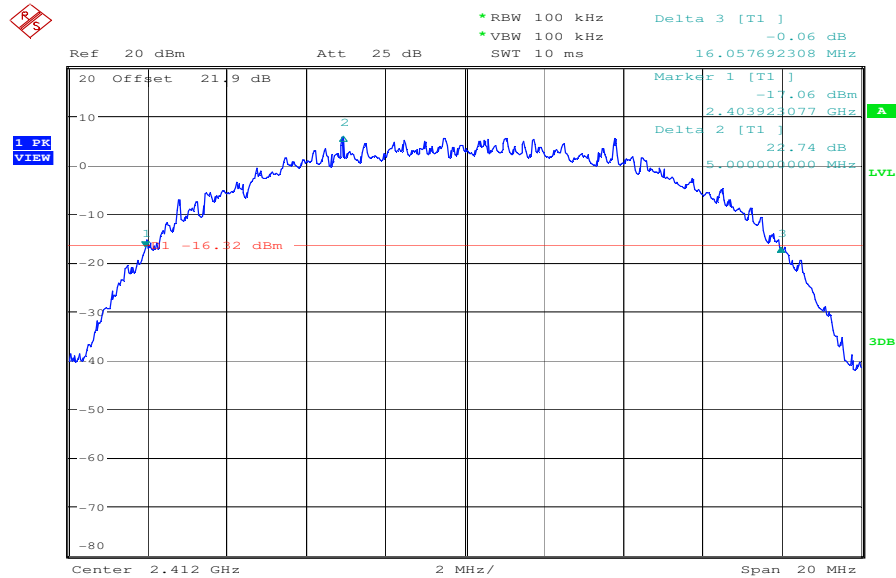
Limits:

Under normal test conditions only	> 500 kHz
-----------------------------------	-----------

5.7 Spectrum Bandwidth of a DSSS System / 20 dB Bandwidth

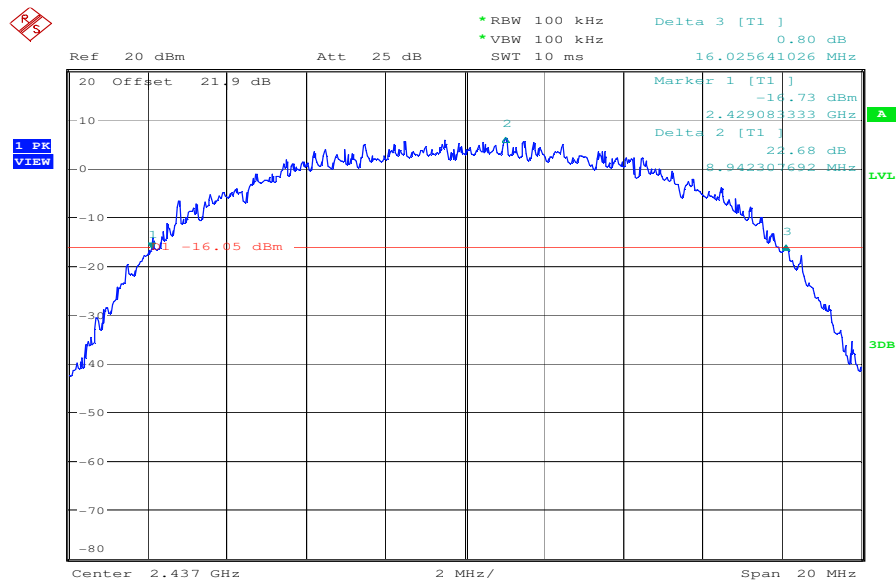
DSSS

Plot 1:



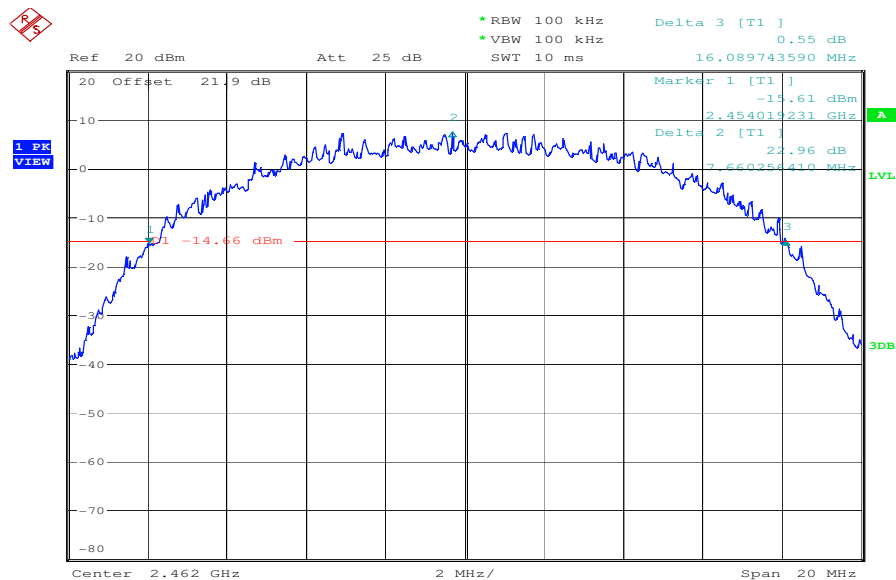
Date: 23.AUG.2008 12:48:49

Plot 2:



Date: 23.AUG.2008 12:52:37

Plot 3:



Date: 23.AUG.2008 12:57:19

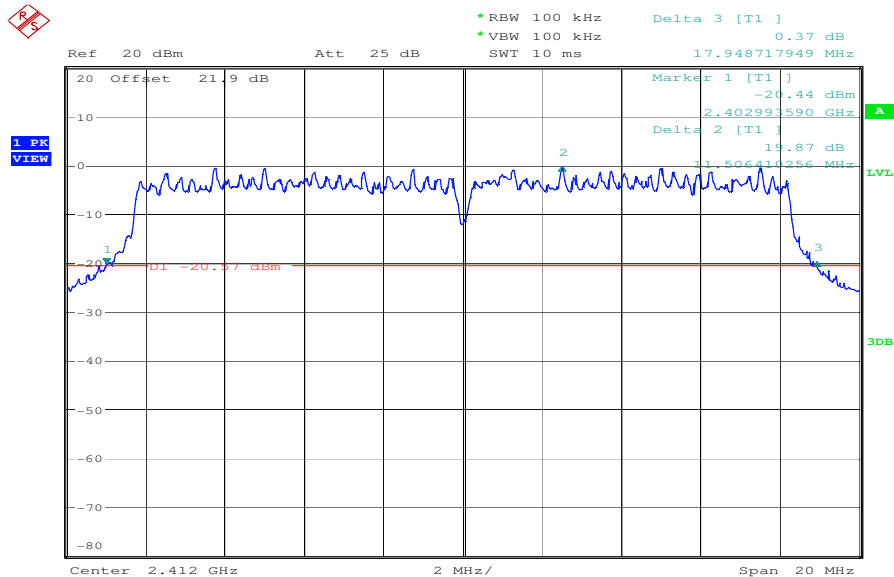
Results:

Test conditions		20 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T _{nom}	V _{nom}	16.00	16.00	16.00
Measurement uncertainty		± 1 kHz		

RBW: 100 kHz / VBW 100 kHz

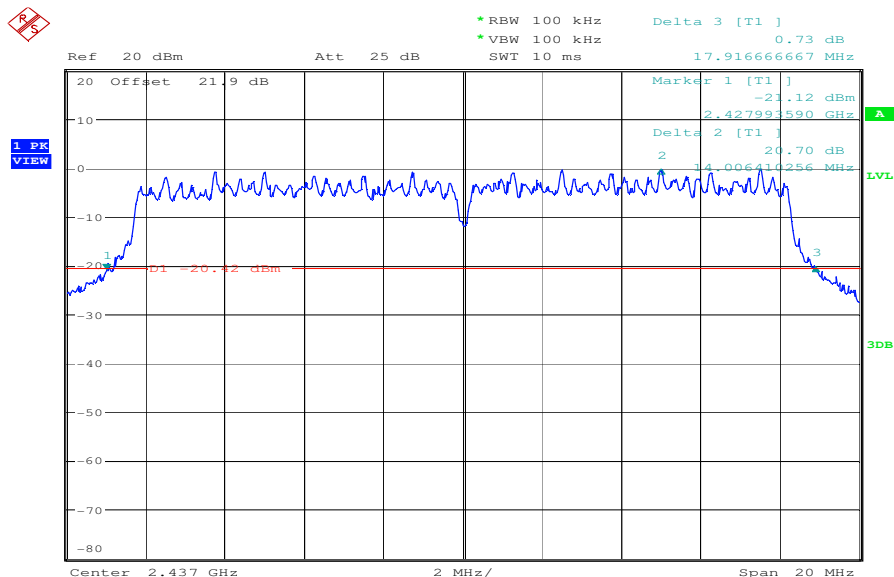
OFDM

Plot 1:



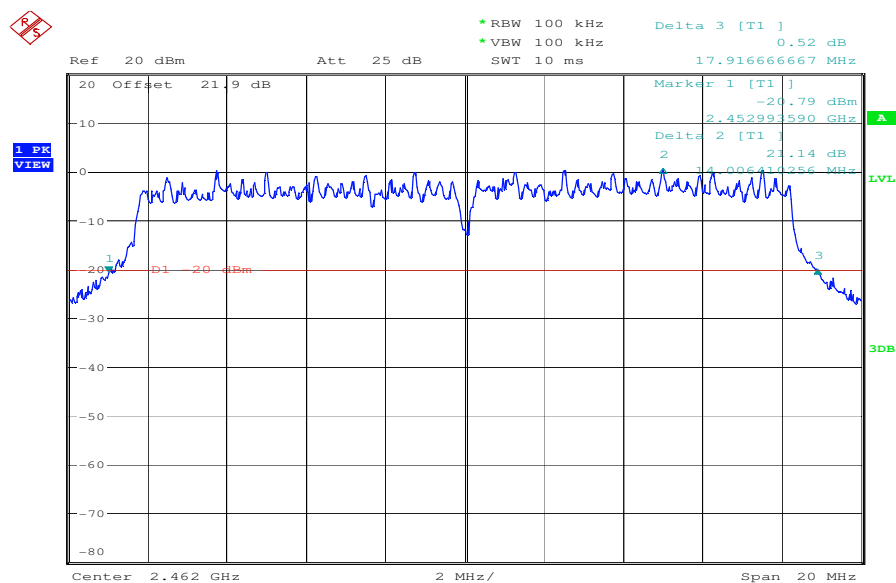
Date: 23.AUG.2008 11:36:16

Plot 2:



Date: 23.AUG.2008 11:40:55

Plot 3:



Date: 23.AUG.2008 11:45:47

Results:

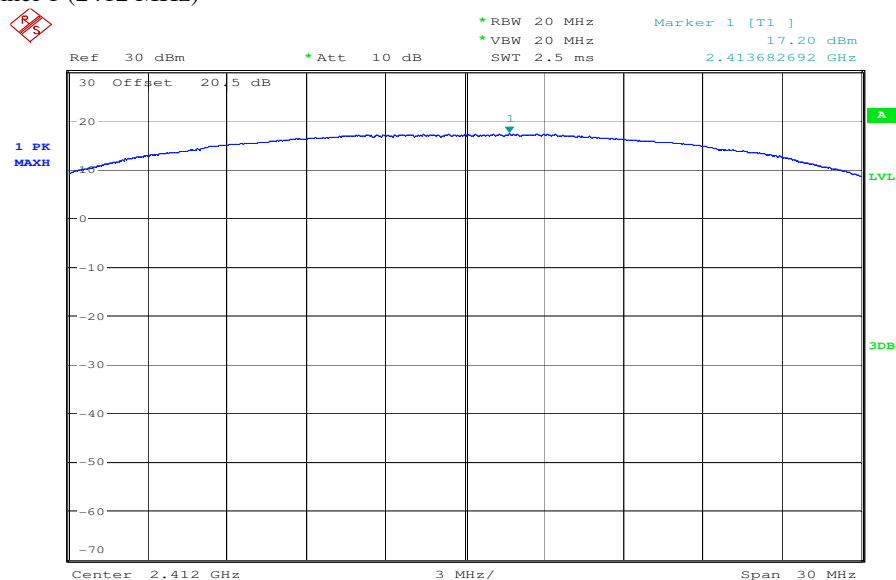
Test conditions		20 dB BANDWIDTH [MHz]		
Frequency [MHz]		2412	2437	2462
T _{nom}	V _{nom}	18.00	18.00	18.00
Measurement uncertainty		± 1 kHz		

RBW: 100 kHz / VBW 100 kHz

5.8 Maximum output power (conducted) §15.247 (b)(3)

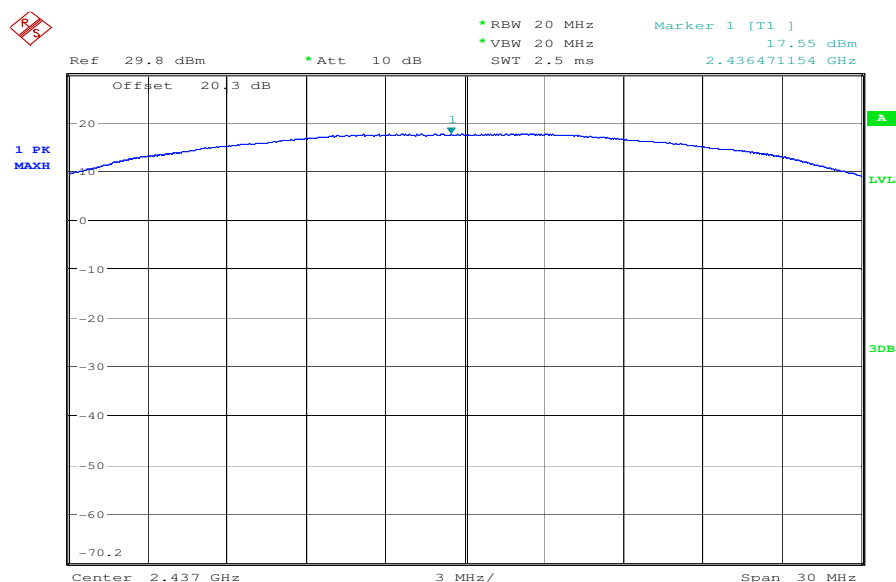
DSSS

Plot 1: Channel 1 (2412 MHz)



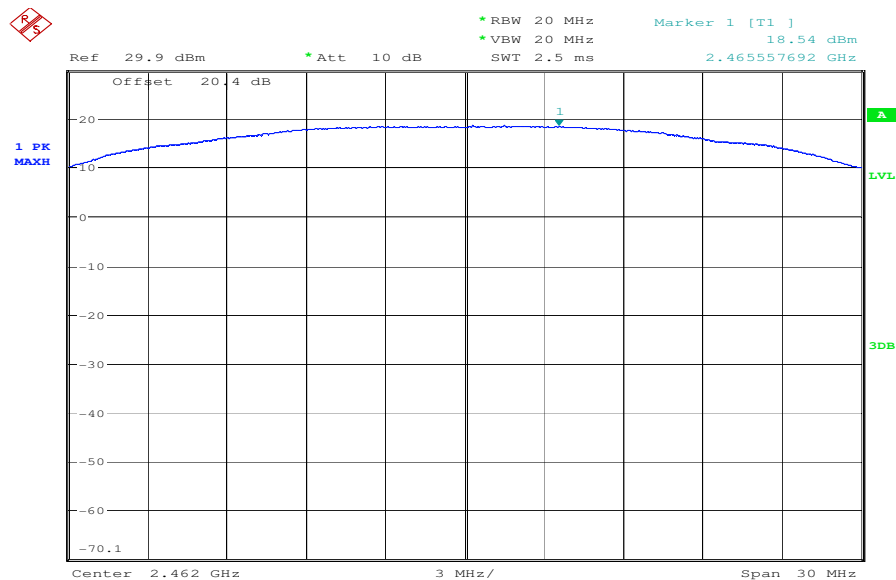
Date: 26.AUG.2008 11:11:19

Plot 2: Channel 6 (2437 MHz)



Date: 26.AUG.2008 11:12:32

Plot 3: Channel 11 (2462 MHz)



Date: 26.AUG.2008 11:08:13

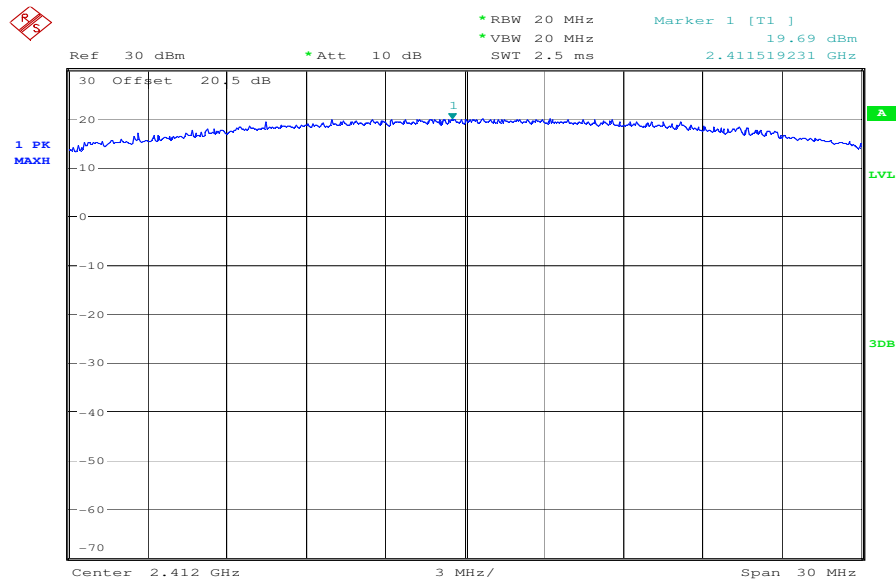
Results:

Test conditions		Max. peak output power [dBm]			
Frequency [MHz]		2412		2437	2462
T _{nom}	V _{nom}	PK	17.20	17.55	18.54
Measurement uncertainty		± 3dB			

RBW / VBW: 10 MHz

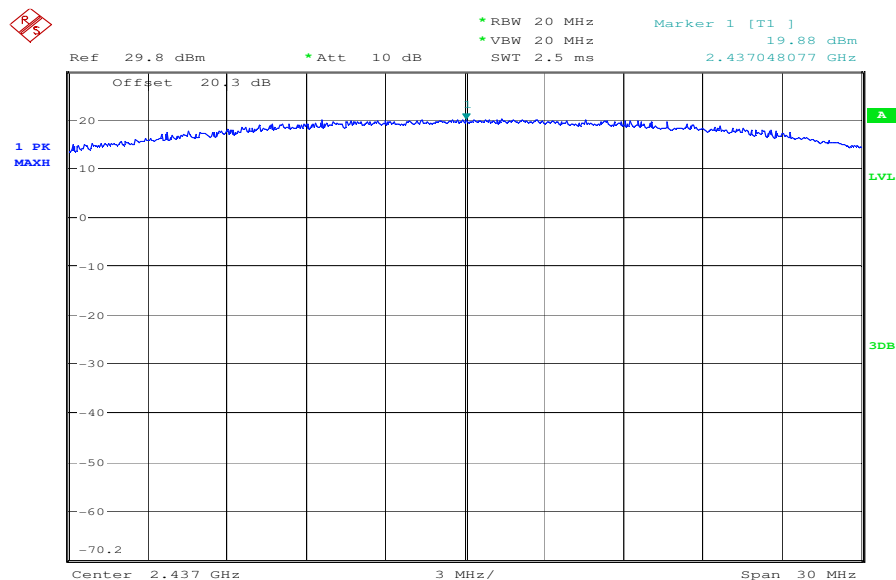
OFDM

Plot 1: Channel 1 (2412 MHz)



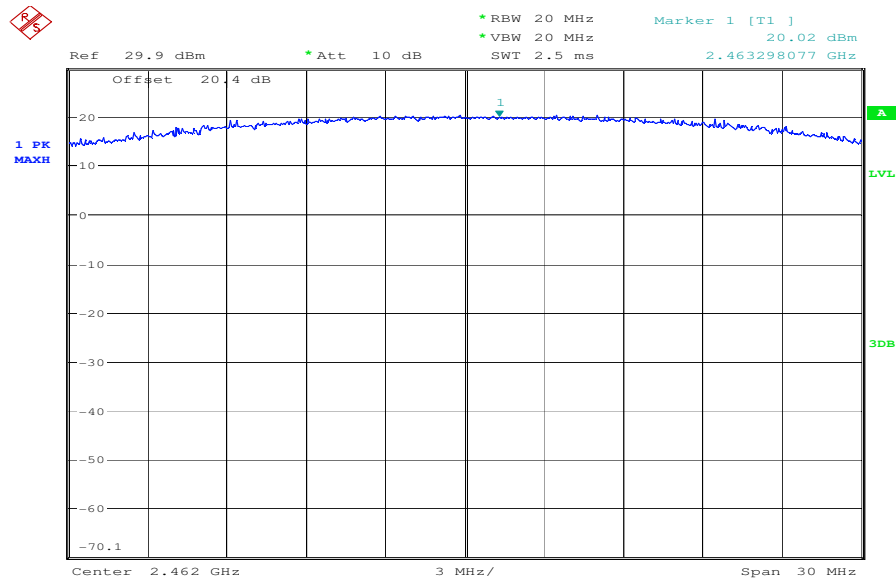
Date: 26.AUG.2008 11:00:49

Plot 2: Channel 6 (2437 MHz)



Date: 26.AUG.2008 11:02:35

Plot 3: Channel 11 (2462 MHz)



Date: 26.AUG.2008 11:06:05

Results:

Test conditions		Max. peak output power [dBm]			
Frequency [MHz]		2412		2437	2462
T _{nom}	V _{nom}	PK	19.69	19.88	20.02
Measurement uncertainty		±3dB			

RBW / VBW: 10 MHz

Limits:

Under normal test conditions only, for frequency range 2400-2483.5 MHz	Max. 1.0 Watt / 30 dBm
--	------------------------

5.9 Max. peak output power (radiated) §15.247 (b)(3)

DSSS

Results:

Test conditions		Max. peak output power EIRP [dBm]		
Frequency [MHz]		2412	2437	2462
T _{nom}	V _{nom}	14.00	14.35	14.11
Measurement uncertainty		±3dB		

RBW / VBW: 20 MHz

Measured at a distance of 3m

OFDM

Results:

Test conditions		Max. peak output power EIRP [dBm]		
Frequency [MHz]		2412	2437	2462
T _{nom}	V _{nom}	16.33	15.47	15.12
Measurement uncertainty		±3dB		

RBW / VBW: 20 MHz

Measured at a distance of 3m

Limits:

Under normal test conditions only, for frequency range 2400-2483.5 MHz	Max. 1.0 Watt
--	---------------

MPE calculation

These equations are generally accurate in the far field of an antenna but will over predict power density in the near field, where they could be used for making a “worst case” prediction.

$$S = PG/4\pi R^2$$

where S = power density (in appropriate units, e.g. mW/cm²)
P = power input to the antenna (in appropriate units e.g. mW)
G = power gain of the antenna in the direction of interest relative to the isotropic radiator
R = distance to the centre of radiation of the antenna (appropriate units e.g. cm)

Or

$$S = EIRP/4\pi R^2$$

where EIRP = equivalent isotropically radiated power

Calculation:

(Calculated for max. EIRP)

EIRP: 16.33 dBm (43 mW)

calculated at distance of 20 cm:

$$\text{power density} = 43/4\pi 20^2 = 0.00854 \text{ mW/ cm}^2$$

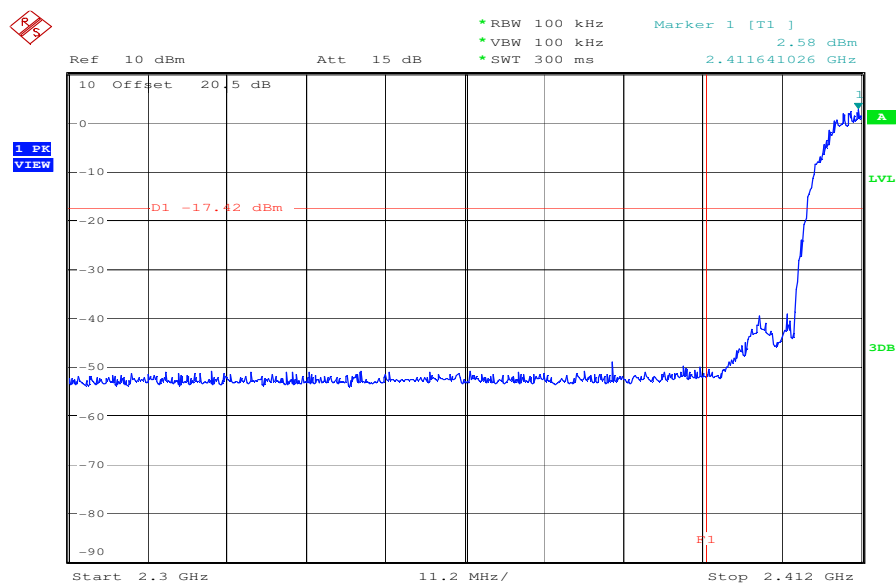
Limit:

1mW/ cm² is the reference level for general public exposure according to the OET Bulletin 65,
Edition 97-01 Table 1.

5.10 Band-edge compliance of conducted emissions §15.247 (d)

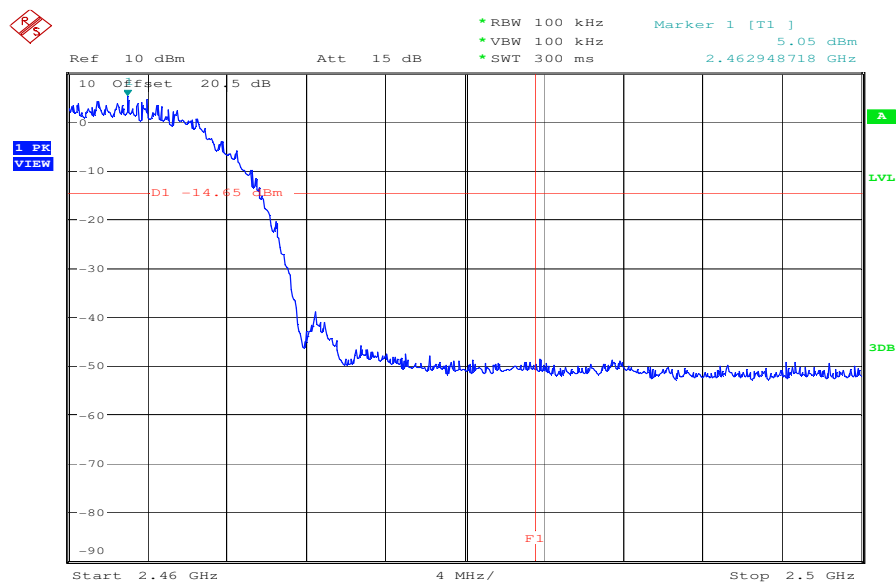
DSSS

Plot 1: lowest channel



Date: 23.AUG.2008 13:24:43

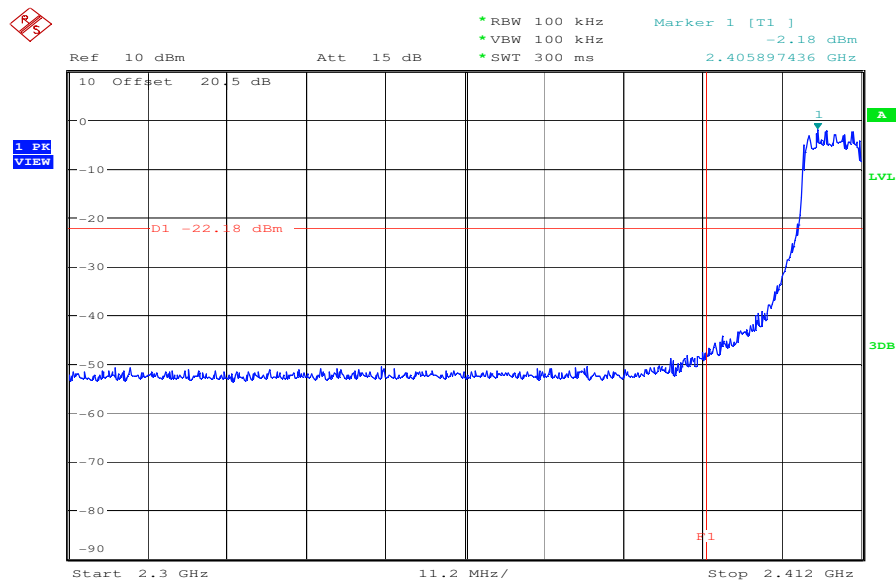
Plot 2: highest channel



Date: 23.AUG.2008 13:30:12

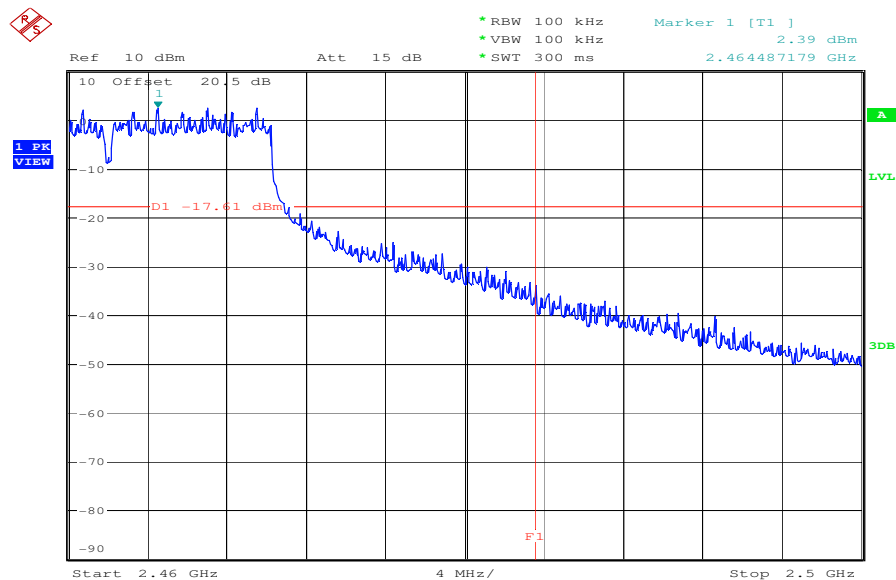
OFDM

Plot 3: lowest channel



Date: 23.AUG.2008 13:17:24

Plot 4: highest channel



Date: 23.AUG.2008 13:33:02

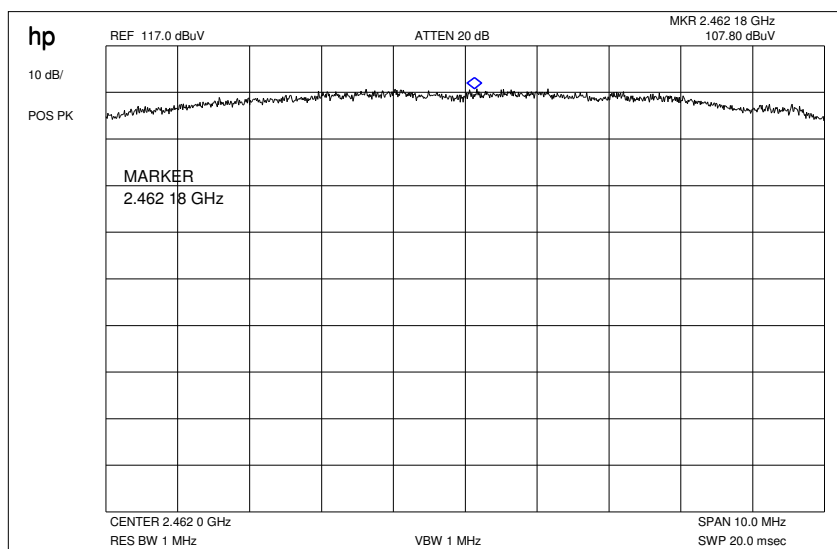
Limits:

Under normal test conditions only	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 5.205(c)).
-----------------------------------	--

5.11 Band-edge compliance of radiated emissions §15.205

DSSS

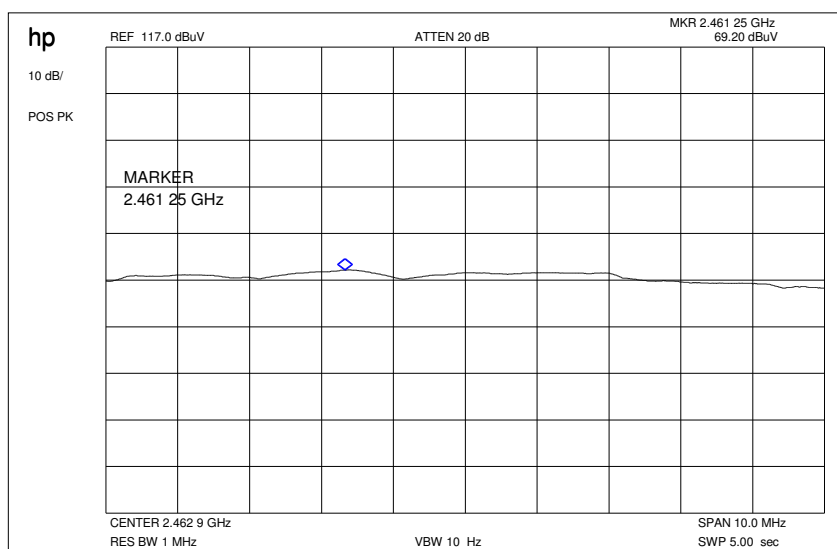
Plot 1: Max field strength in 3m distance (single frequency) peak



Result:

Frequency	Meter reading	Correction factor	Results
2462 MHz	107.80 dB μ V	-6.4 dB	101.40 dB μ V at 3 m

Plot 2: Max field strength in 3m distance (single frequency) average

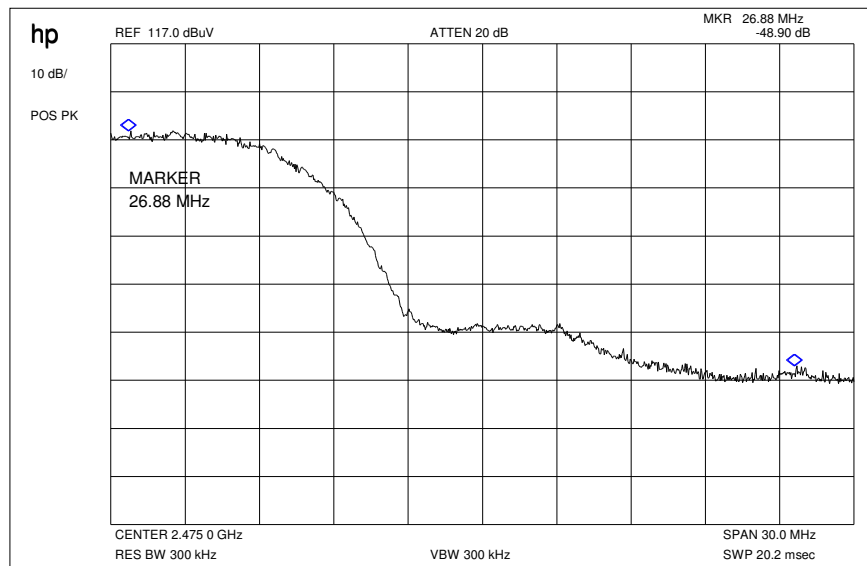


Result:

Frequency	Meter reading	Correction factor	Results
2462 MHz	69.20 dB μ V	-6.4 dB	62.80 dB μ V at 3 m

Measured at 11 Mbit/s; Maximum duty cycle in this test mode was ~10%

Plot 3: Marker-Delta Method RBW/VBW = 1% of span



Result:

Marker-Delta-Value: 48.90 dB

This measurement was made to show that the behaviour of the system is conform to FCC 15.205 (restricted bands)

Results & Limits:

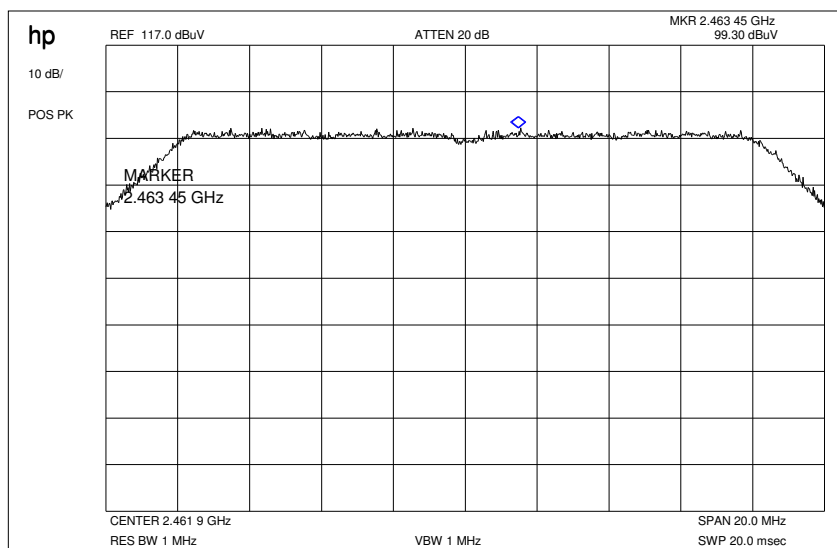
Radiated field strength

The field strength was measured with an EMI measuring receiver and 1 MHz RBW / VBW for peak and with 1MHz RBW / 10Hz VBW for average at a distance of 3m.

high channel (DSSS)	setup	measured value (3m)	correction factor (3m)	calculated value (3m)
Max. peak value	1 MHz RBW 1 MHz VBW	107.8 dB μ V/m	-6.4 dB	101.4 dB μ V/m
Max. average value	1 MHz RBW 10 Hz VBW	69.2 dB μ V/m	-6.4 dB	62.8 dB μ V/m
Delta value	Peak 300 kHz RBW/VBW	48.90 dB		
Value at band edge	limit 54 dB μ V/m			13.9 dB μ V/m
Statement:				Complies

OFDM

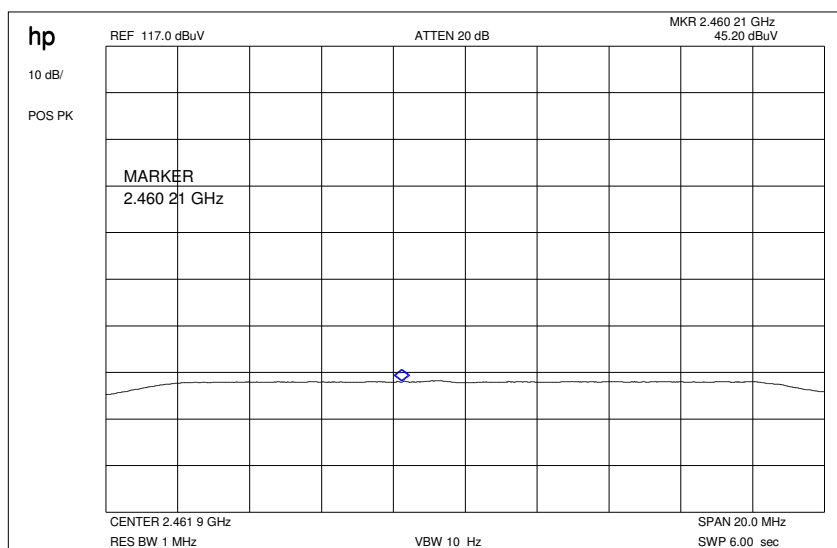
Plot 1: Max field strength in 3m distance (single frequency) peak



Result:

Frequency	Meter reading	Correction factor	Results
2462 MHz		-6.4 dB	99.3 dB μ V at 3 m

Plot 2: Max field strength in 3m distance (single frequency) average

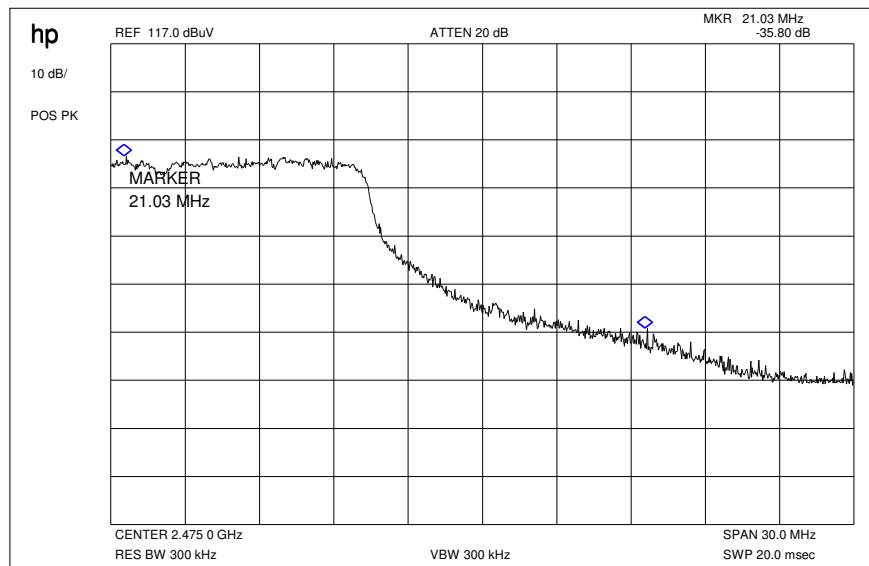


Result:

Frequency	Meter reading	Correction factor	Results
2462 MHz		-6.4 dB	45.20 dB μ V at 3 m

Measured at 54 Mbit/s; Maximum duty cycle in this test mode was ~10%

Plot 3: Marker-Delta Method RBW/VBW = 1% of span



Result:

Marker-Delta-Value: 35.8 dB

This measurement was made to show that the behaviour of the system is conform to FCC 15.205 (restricted bands)

Results & Limits:

Radiated field strength

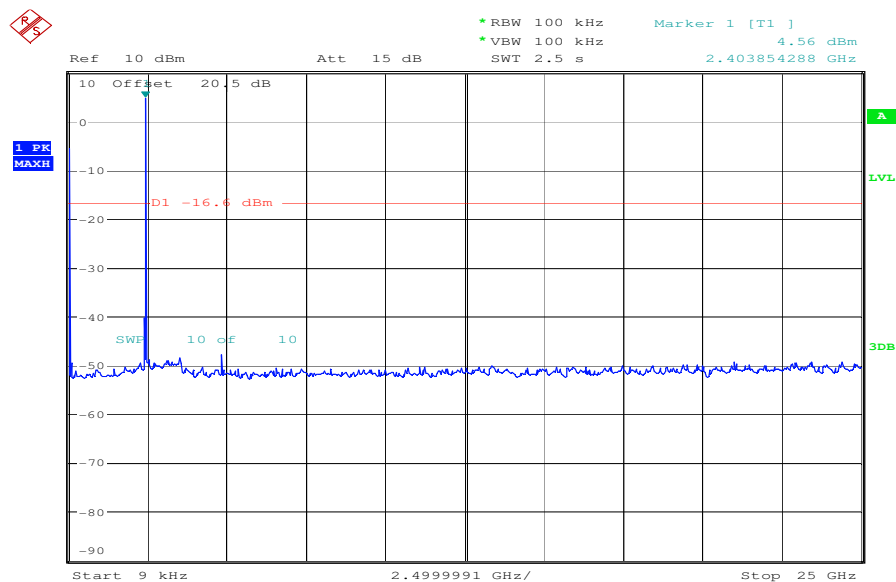
The field strength was measured with an EMI measuring receiver and 1 MHz RBW / VBW for peak and with 1MHz RBW / 10Hz VBW for average at a distance of 3m.

high channel (OFDM)	setup	measured value (3m)	correction factor (3m)	calculated value (3m)
Max. peak value	1 MHz RBW 1 MHz VBW	99.3 dB μ V/m	-6.4 dB	92.9 dB μ V/m
Max. average value	1 MHz RBW 10 Hz VBW	45.2 dB μ V/m	-6.4 dB	38.80 dB μ V/m
Delta value	Peak 300 kHz RBW/VBW	35.2 dB		
Value at band edge	limit 54 dB μ V/m			3.6 dB μ V/m
Statement:				Complies

5.12 Spurious Emissions - conducted (Transmitter) §15.247 (c)

DSSS

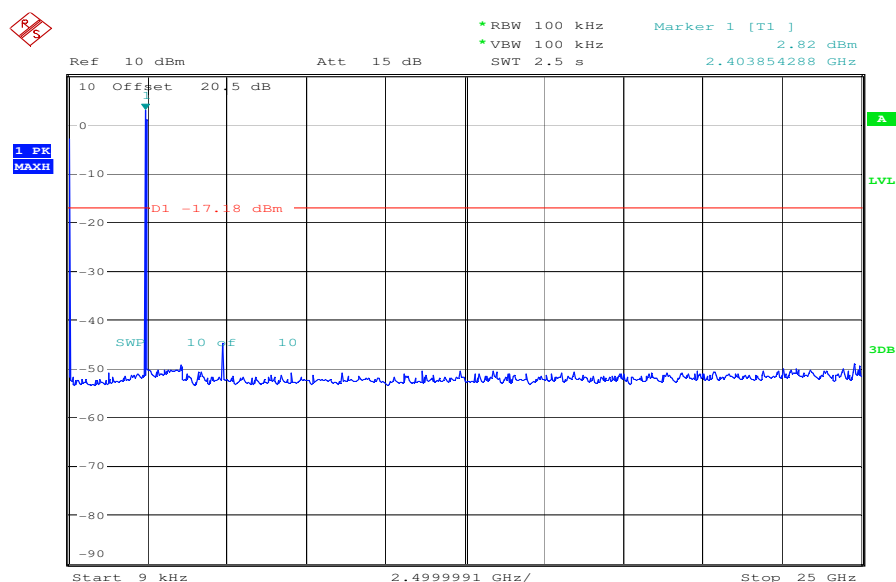
Plot 1: Lowest Channel



Date: 23.AUG.2008 14:14:30

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

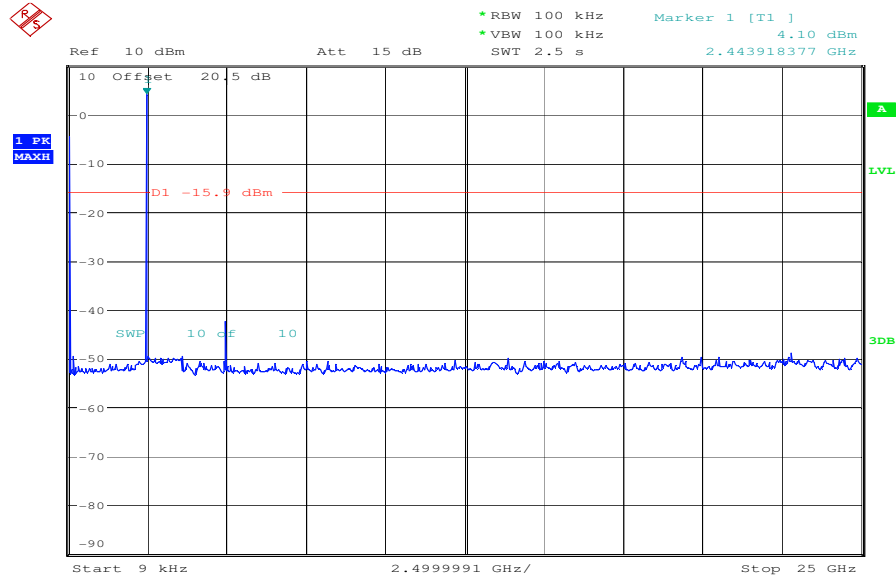
Plot 2: Middle Channel



Date: 23.AUG.2008 14:26:02

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

Plot 3: Highest Channel



Date: 23.AUG.2008 14:19:05

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

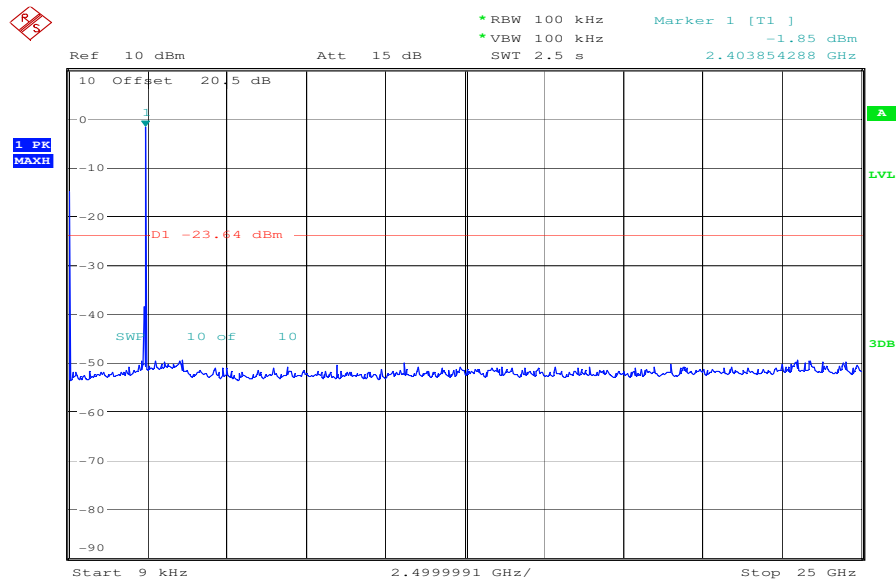
Result & Limits:

Emission Limitations					
f [MHz]		amplitude of emission [dBm]	limit max. allowed emission power	actual attenuation below frequency of operation [dB]	results
2412		17.20	30 dBm	-	Operating frequency
No critical peak detected !			-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
2437		17.55	30 dBm		Operating frequency
No critical peak detected !			-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
2462		18.54	30 dBm		Operating frequency
4924		-42 dBm	-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
Measurement uncertainty			± 3dB		

F < 1 GHz: RBW: 100 kHz VBW: 100 kHz
 F > 1 GHz: RBW: 1 MHz VBW: 1 MHz

OFDM

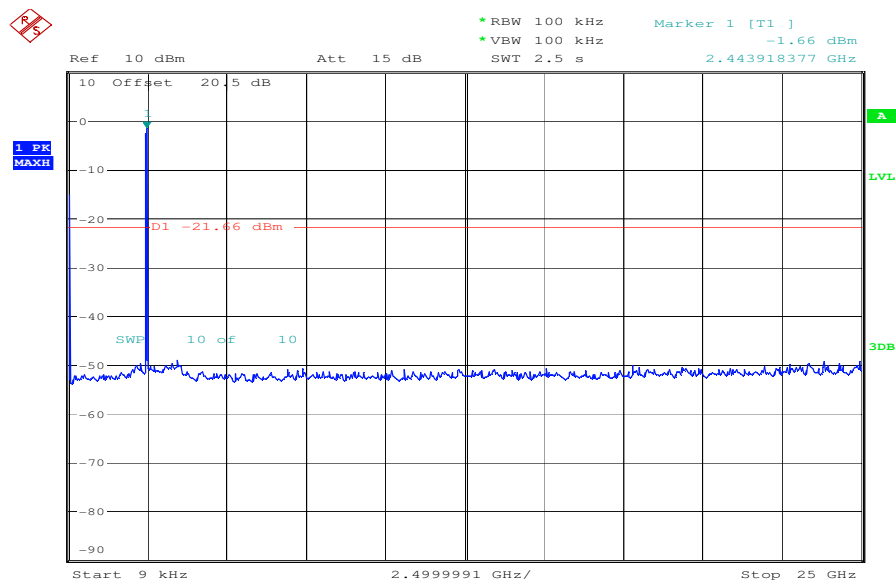
Plot 1: Lowest Channel



Date: 23.AUG.2008 13:53:05

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

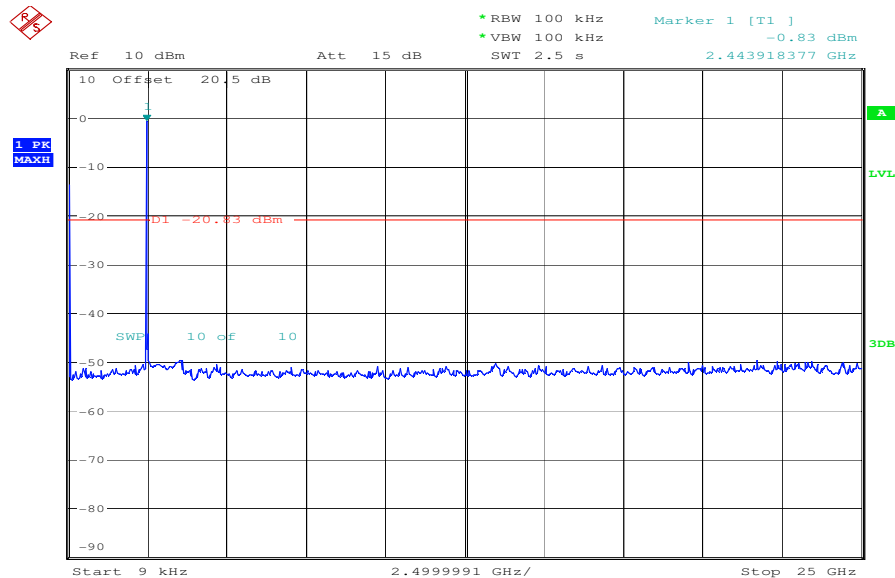
Plot 2: Middle Channel



Date: 23.AUG.2008 13:51:05

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

Plot 3: Highest Channel



Date: 23.AUG.2008 13:56:36

The peak at the left site of the plot is the local oscillator from the spectrum analyzer and not a spurious emission.

Result & Limits:

Emission Limitations					
f [MHz]		amplitude of emission [dBm]	limit max. allowed emission power	actual attenuation below frequency of operation [dB]	results
2412		19.69	30 dBm	-	Operating frequency
No critical peak detected !			-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
2437		19.88	30 dBm		Operating frequency
No critical peak detected !			-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
2462		20.02	30 dBm		Operating frequency
No critical peak detected !			-20 dBc	>20 dB	pass
				>20 dB	pass
				>20 dB	pass
Measurement uncertainty		± 3dB			

F < 1 GHz: RBW: 100 kHz VBW: 100 kHz
 F > 1 GHz: RBW: 1 MHz VBW: 1 MHz

Under normal test conditions only	In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
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Note: For emissions that fall into restricted bands you find the radiated emissions later in the report.

5.13 Spurious Emissions - radiated (Transmitter) §15.209

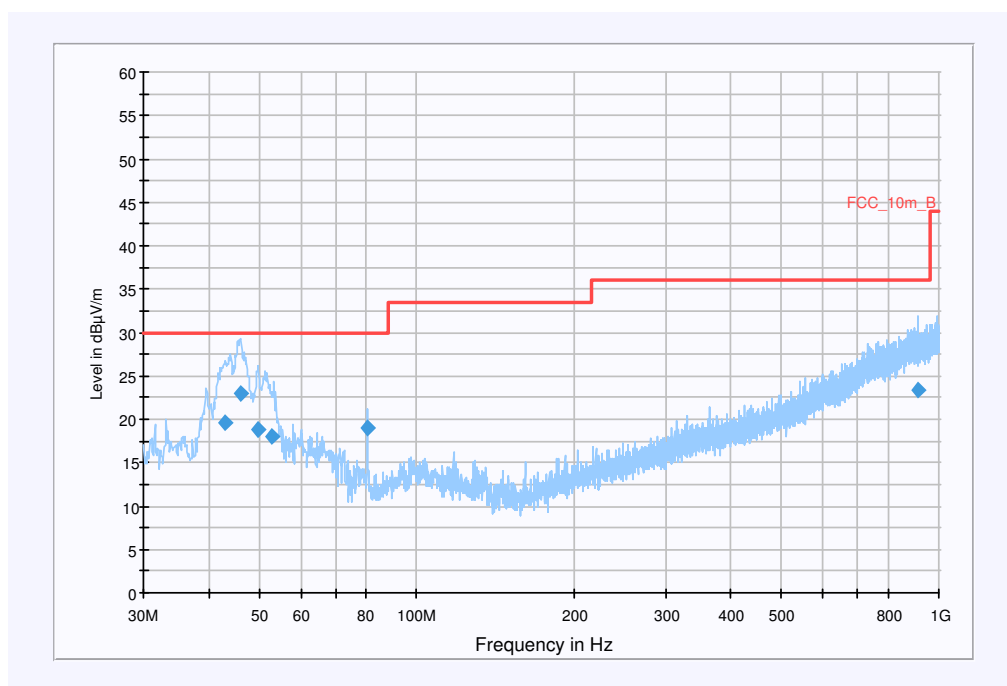
DSSS

Plot 1: 0.03 - 1 GHz (lowest channel)

EUT:	EX2008P
Serial Number:	354680029500221
Test Description:	FCC part 15 class B @ 10m
Operating Conditions:	WLAN B-mode channel 01
Operator Name:	Folz
Comment:	Powered with AC 115V / 60 Hz
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

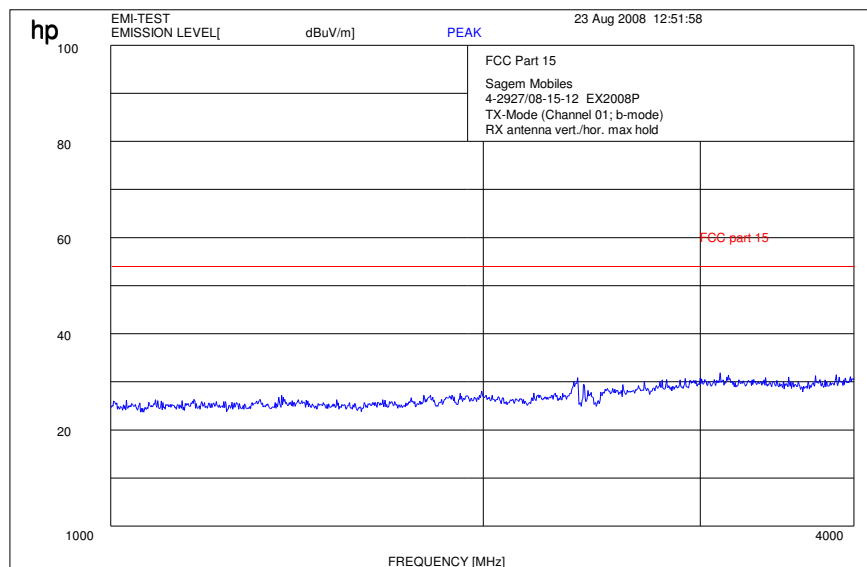


Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)
42.945500	19.6	15000.000	120.000	122.0	V	243.0	13.5
46.169850	23.0	15000.000	120.000	126.0	V	23.0	13.5
49.621550	18.9	15000.000	120.000	200.0	V	233.0	13.6
52.902650	18.1	15000.000	120.000	100.0	V	260.0	13.3
80.467500	19.0	15000.000	120.000	165.0	V	143.0	9.5
914.798300	23.4	15000.000	120.000	316.0	V	17.0	26.2

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

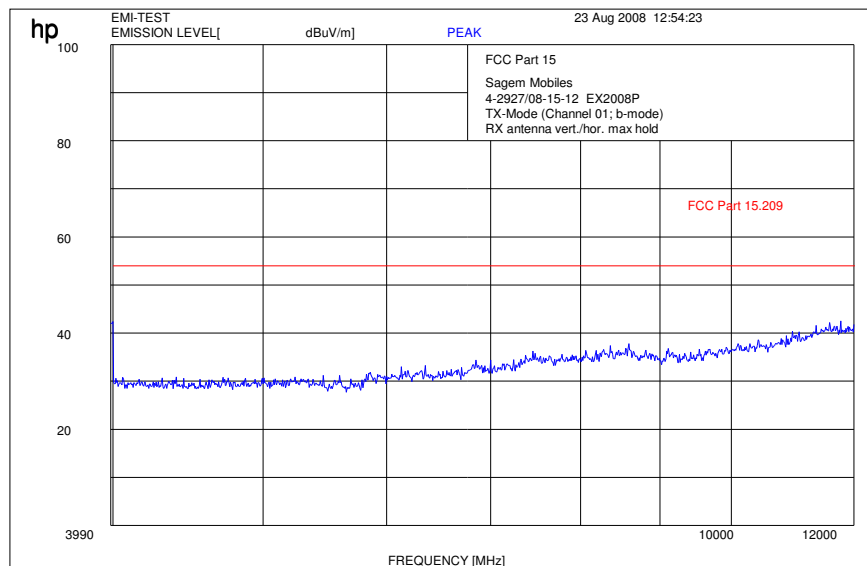
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 2: 1 - 4 GHz (lowest channel)

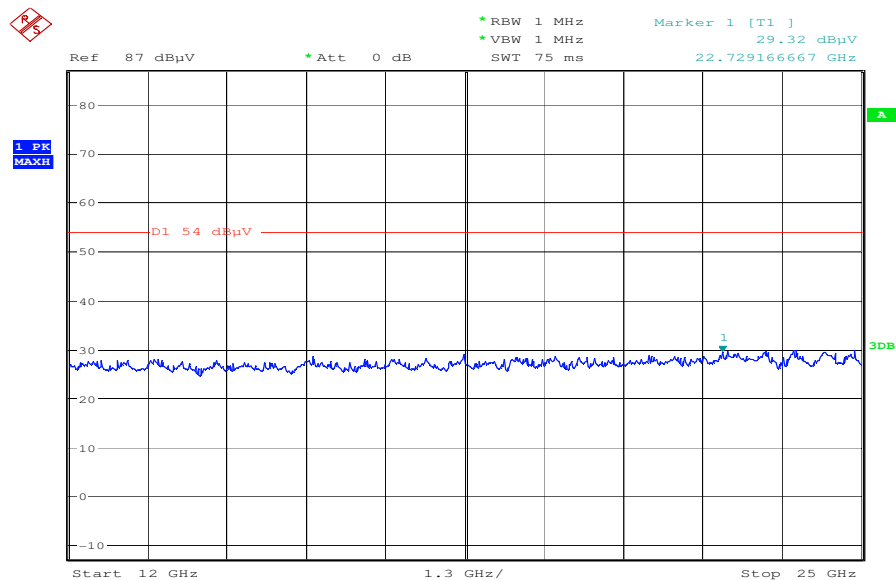


Carrier suppressed with a band rejection filter

Plot 3: 4- 12 GHz (lowest channel)



Plot 4: 12- 25 GHz (valid for all channels)

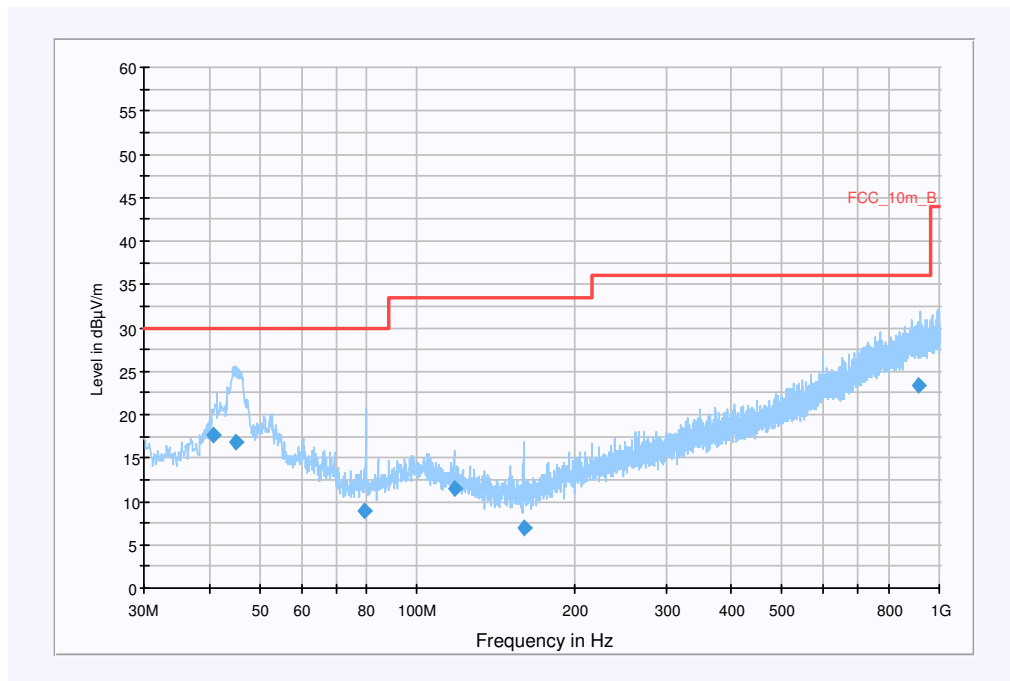


Date: 23.AUG.2008 14:32:01

Plot 5: 0.03 - 1 GHz (middle channel)

EUT:	EX2008P
Serial Number:	354680029500221
Test Description:	FCC part 15 class B @ 10m
Operating Conditions:	WLAN B-mode channel 06
Operator Name:	Folz
Comment:	Powered with AC 115V / 60 Hz
Hardware Setup:	EMI radiated\Electric Field (NOS)
Level Unit:	dBμV/m

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

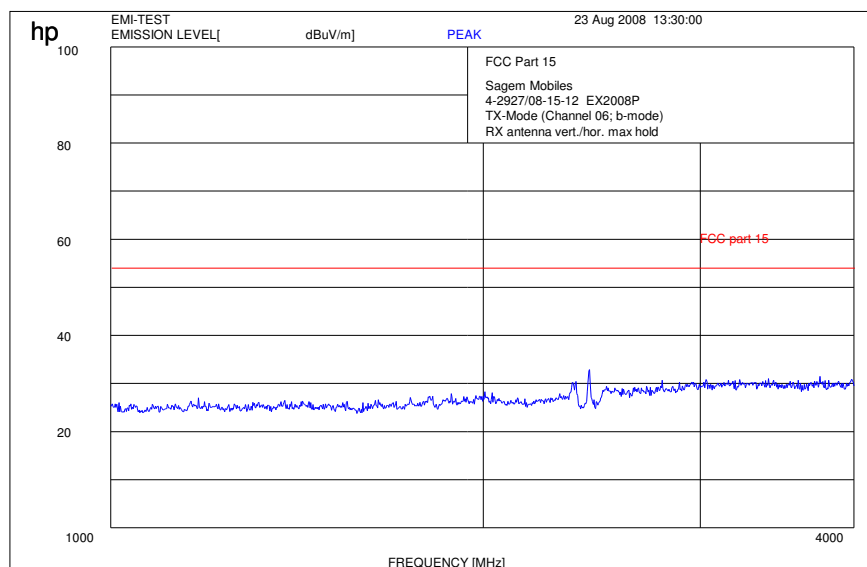
FCC_1GHz

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
40.820000	17.7	15000.000	120.000	172.0	V	50.0	13.6	12.3	30.0
45.148800	16.8	15000.000	120.000	186.0	V	-1.0	13.5	13.2	30.0
79.481100	8.9	15000.000	120.000	261.0	V	61.0	9.4	21.1	30.0
117.730600	11.4	15000.000	120.000	176.0	V	272.0	10.8	22.1	33.5
159.987250	7.0	15000.000	120.000	200.0	V	14.0	9.5	26.5	33.5
914.834650	23.4	15000.000	120.000	400.0	H	239.0	26.2	12.6	36.0

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

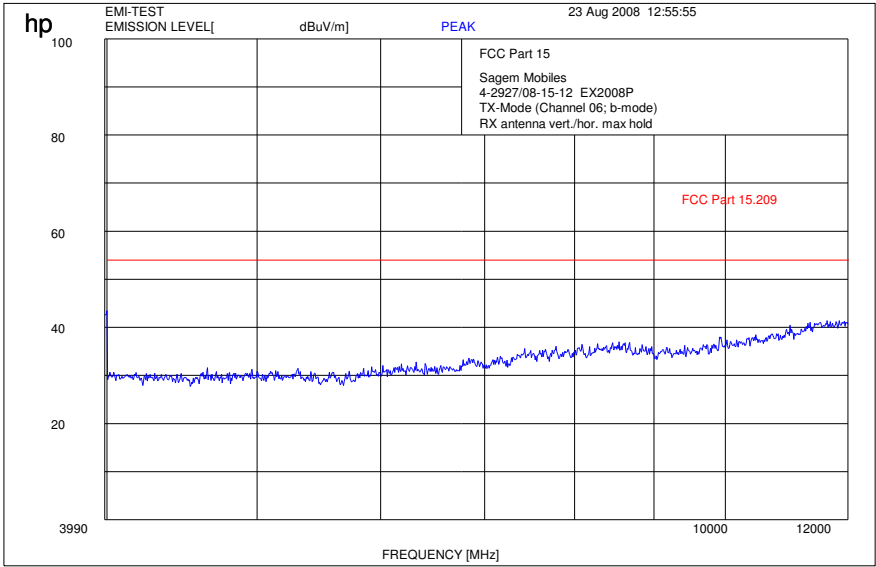
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 6: 1 - 4 GHz (middle channel)



Carrier suppressed with a band rejection filter

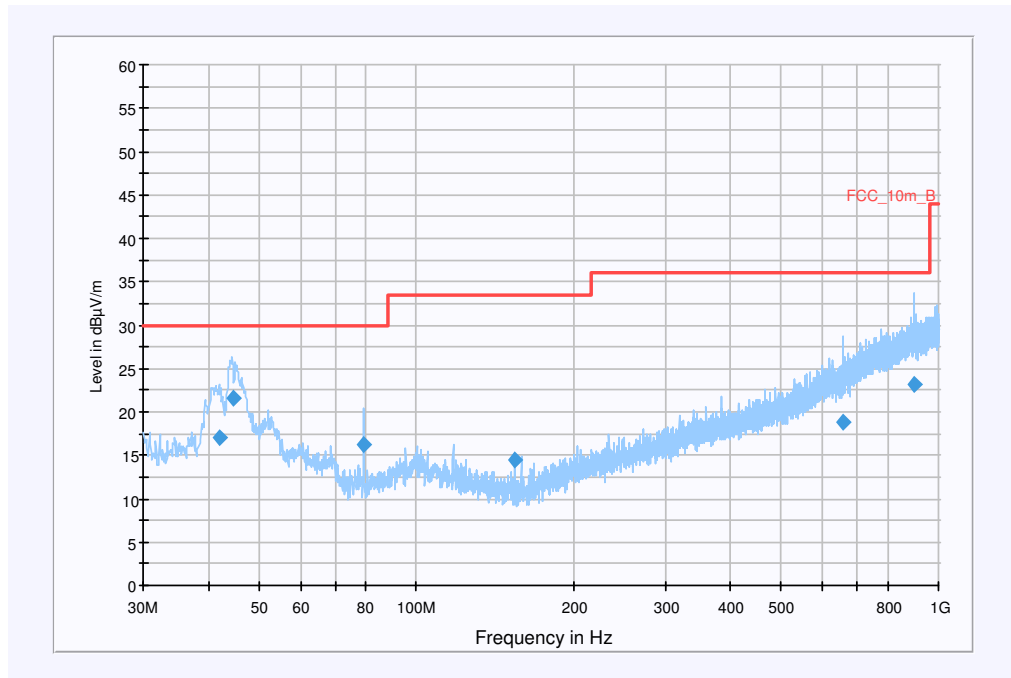
Plot 7: 4- 12 GHz (middle channel)



Plot 8: 0.03 - 1 GHz (highest channel)

EUT:	EX2008P
Serial Number:	354680029500221
Test Description:	FCC part 15 class B @ 10m
Operating Conditions:	WLAN B-mode channel 11
Operator Name:	Folz
Comment:	Powered with AC 115V / 60 Hz
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

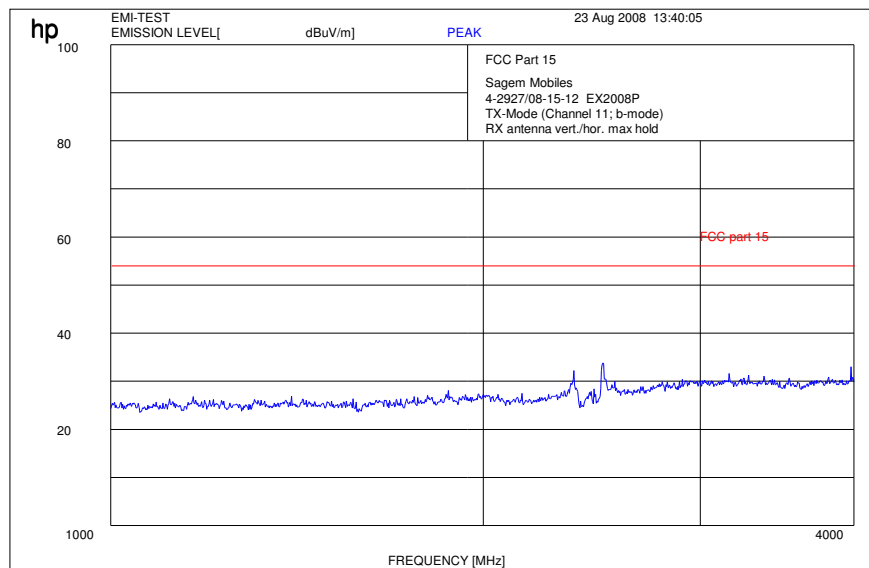
FCC_1GHz

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)
42.111100	17.0	15000.000	120.000	141.0	V	137.0	13.6	13.0	30.0
44.717350	21.6	15000.000	120.000	200.0	V	130.0	13.5	8.4	30.0
79.226000	16.2	15000.000	120.000	400.0	V	61.0	9.4	13.8	30.0
154.054500	14.5	15000.000	120.000	152.0	V	225.0	9.3	19.0	33.5
656.781600	18.9	15000.000	120.000	114.0	V	65.0	21.7	17.1	36.0
897.341250	23.2	15000.000	120.000	200.0	H	173.0	26.1	12.8	36.0

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

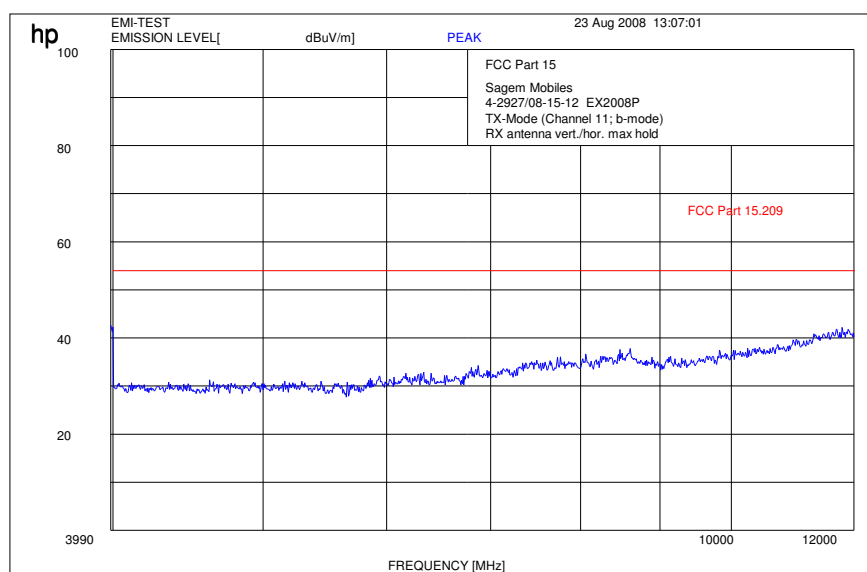
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 9: 1 - 4 GHz (highest channel)



Carrier suppressed with a band rejection filter

Plot 10: 4- 12 GHz (highest channel)



Results:

SPURIOUS EMISSIONS LEVEL §15.209								
2412 MHz			2437 MHz			2462 MHz		
Frequency [MHz]	Detector	Level [dBμ V/m]	Frequency [MHz]	Detector	Level [dBμ V/m]	Frequency [MHz]	Detector	Level [dBμ V/m]
No critical peaks detected !			No critical peaks detected !			No critical peaks detected !		
Measurement uncertainty			±3 dB					

f < 1 GHz : RBW/VBW: 100 kHz

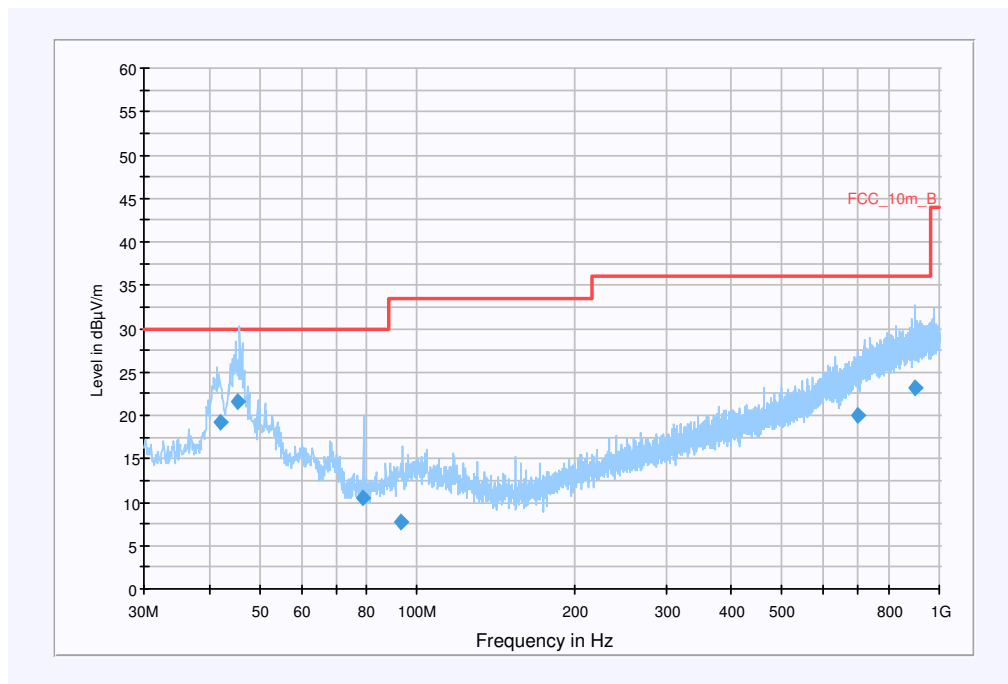
f ≥ 1GHz : RBW/VBW: 1 MHz

OFDM

Plot 1: 0.03 - 1 GHz (lowest channel)

EUT: EX2008P
 Serial Number: 354680029500221
 Test Description: FCC part 15 class B @ 10m
 Operating Conditions: WLAN G-mode channel 01
 Operator Name: Folz
 Comment: Powered with AC 115V / 60 Hz
 Hardware Setup: EMI radiated\Electric Field (NOS)
 Level Unit: dBμV/m

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

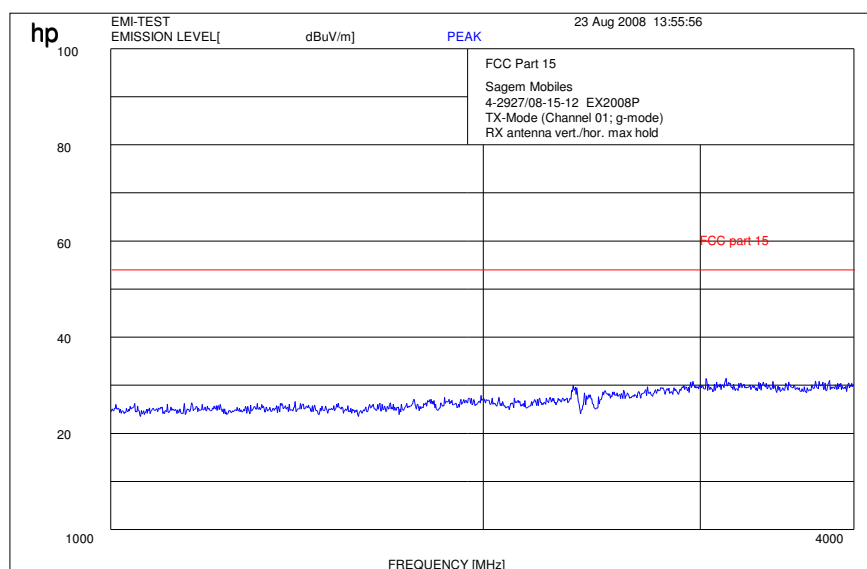
FCC_1GHz

Frequency (MHz)	QuasiPeak (dBμ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμ V/m)
41.996900	19.2	15000.000	120.000	100.0	V	233.0	13.6	10.8	30.0
45.350350	21.7	15000.000	120.000	151.0	V	226.0	13.5	8.3	30.0
79.012650	10.4	15000.000	120.000	317.0	V	141.0	9.4	19.6	30.0
93.060000	7.6	15000.000	120.000	152.0	V	35.0	11.4	25.9	33.5
698.886550	20.0	15000.000	120.000	227.0	V	14.0	22.9	16.0	36.0
897.309750	23.1	15000.000	120.000	284.0	H	298.0	26.1	12.9	36.0

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

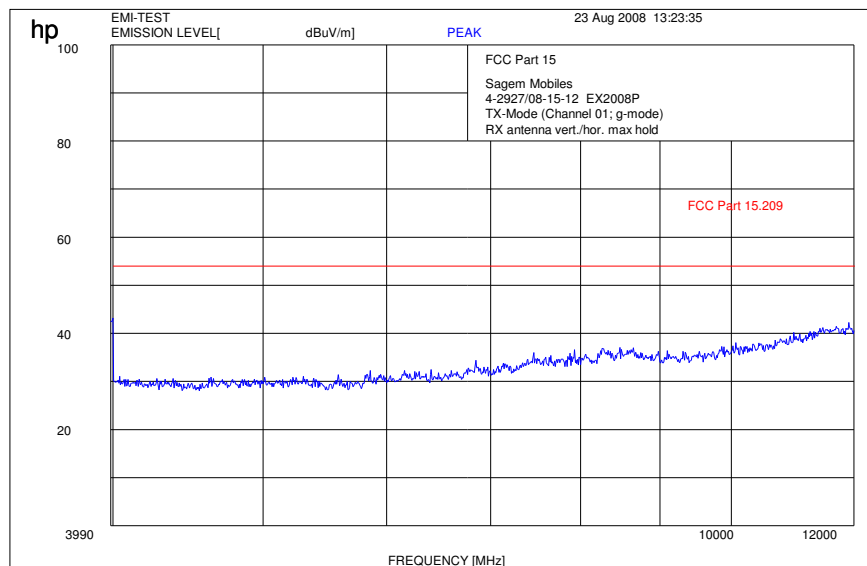
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 2: 1 - 4 GHz (lowest channel)

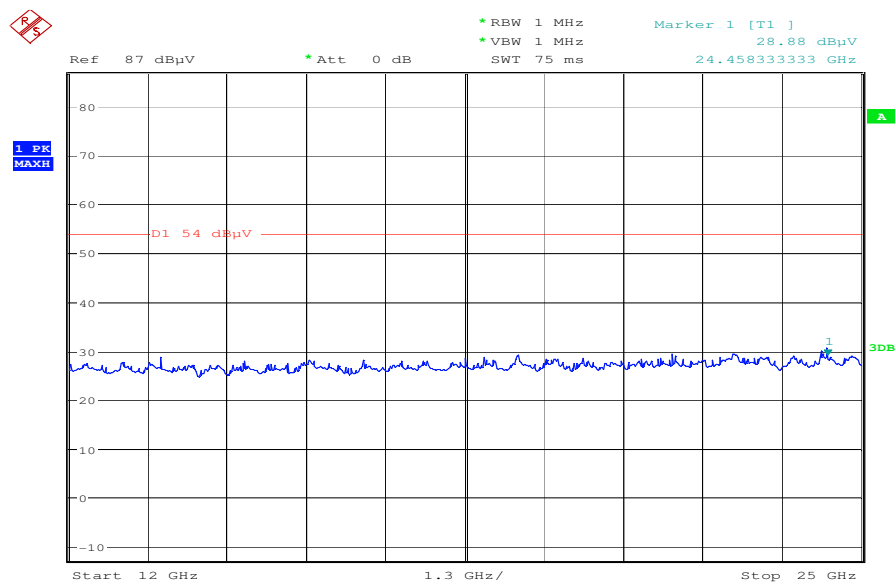


Carrier suppressed with a band rejection filter

Plot 3: 4- 12 GHz (lowest channel)



Plot 4: 12- 25 GHz (valid for all channels)

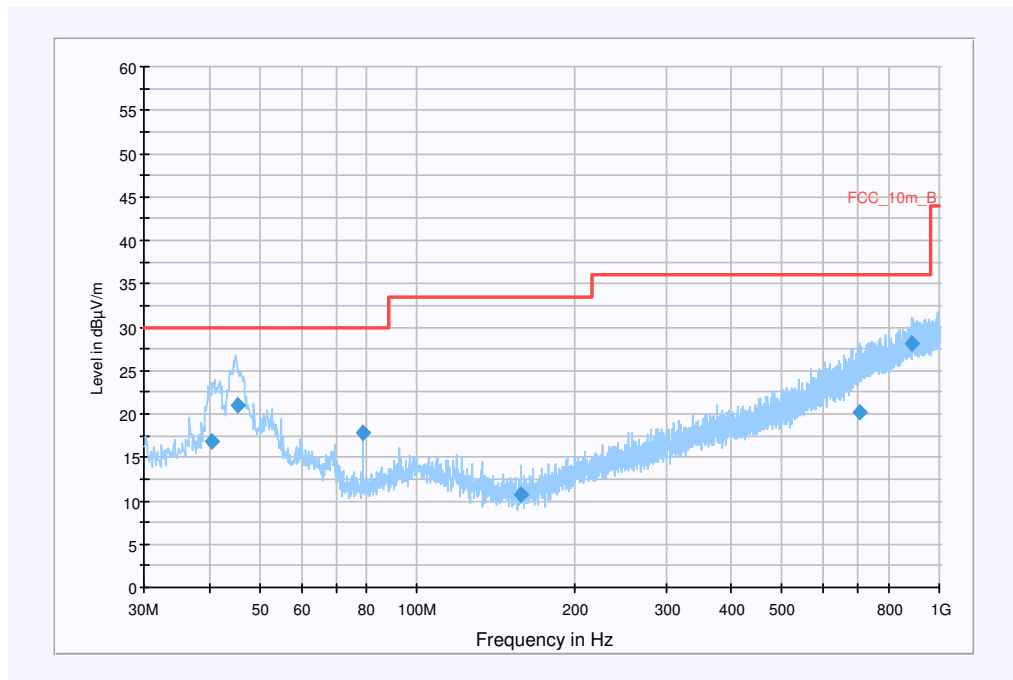


Plot 5: 0.03 - 1 GHz (middle channel)

EUT:	EX2008P
Serial Number:	354680029500221
Test Description:	FCC part 15 class B @ 10m
Operating Conditions:	WLAN G-mode channel 06
Operator Name:	Folz
Comment:	Powered with AC 115V / 60 Hz
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

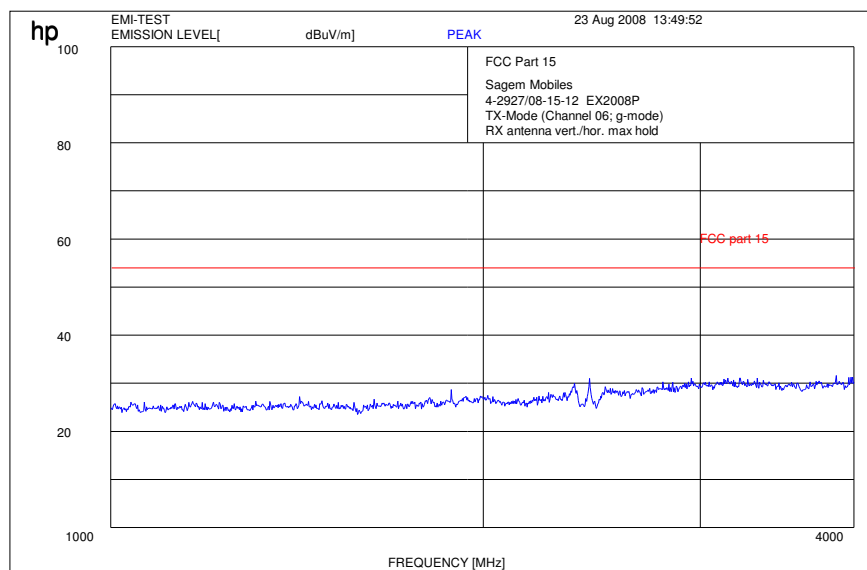


Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
40.489350	16.8	15000.000	120.000	153.0	V	36.0	13.6	13.2	30.0
45.362400	20.9	15000.000	120.000	200.0	V	173.0	13.5	9.1	30.0
78.771750	17.8	15000.000	120.000	236.0	V	55.0	9.4	12.2	30.0
157.571050	10.7	15000.000	120.000	114.0	V	60.0	9.4	22.8	33.5
701.810250	20.1	15000.000	120.000	400.0	V	297.0	22.9	15.9	36.0
881.590100	28.2	15000.000	120.000	135.0	H	270.0	25.8	7.8	36.0

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

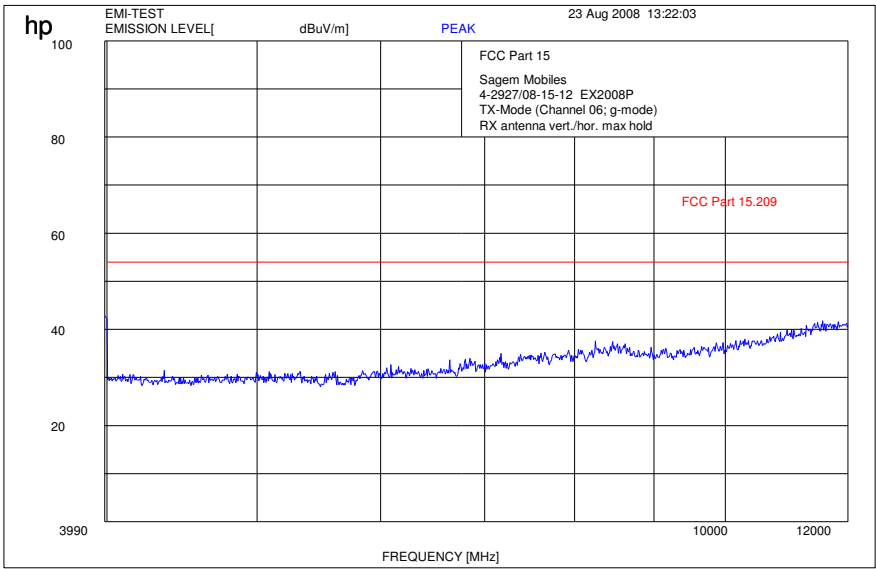
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 6: 1 - 4 GHz (middle channel)



Carrier suppressed with a band rejection filter

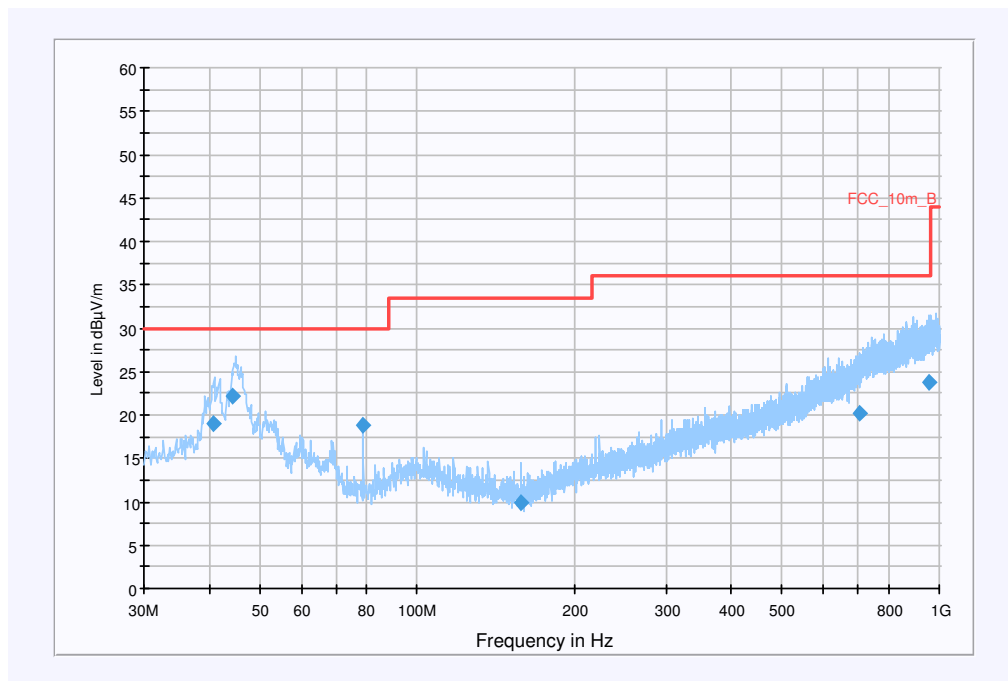
Plot 7: 4- 12 GHz (middle channel)



Plot 8: 0.03 - 1 GHz (highest channel)

EUT:	EX2008P
Serial Number:	354680029500221
Test Description:	FCC part 15 class B @ 10m
Operating Conditions:	WLAN G-mode channel 11
Operator Name:	Folz
Comment:	Powered with AC 115V / 60 Hz
Hardware Setup:	EMI radiated\Electric Field (NOS)
Level Unit:	dBµV/m

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

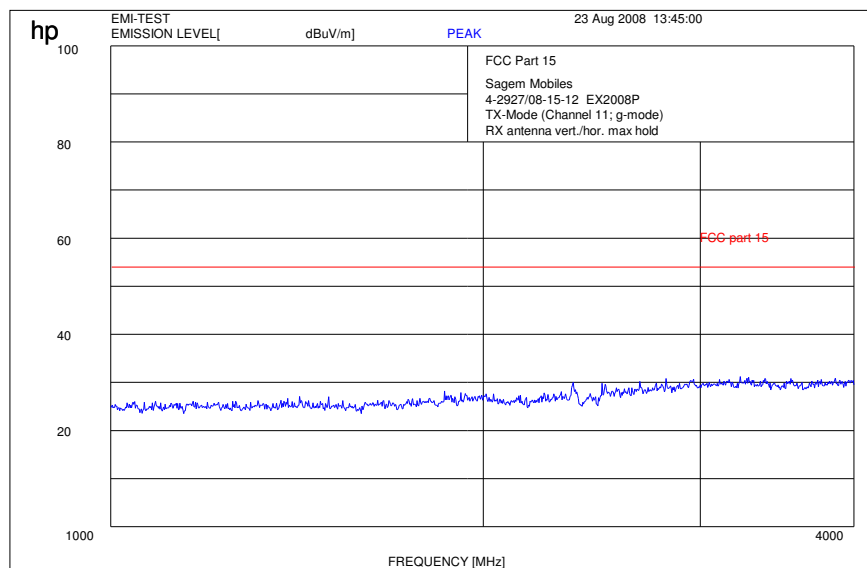
FCC_1GHz

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
40.668900	19.0	15000.000	120.000	123.0	V	1.0	13.6	11.0	30.0
44.495150	22.1	15000.000	120.000	100.0	V	15.0	13.5	7.9	30.0
78.802050	18.7	15000.000	120.000	215.0	V	50.0	9.4	11.3	30.0
157.657700	9.9	15000.000	120.000	200.0	V	50.0	9.4	23.6	33.5
703.512050	20.2	15000.000	120.000	136.0	V	18.0	23.0	15.8	36.0
957.991900	23.7	15000.000	120.000	200.0	V	138.0	26.5	12.3	36.0

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

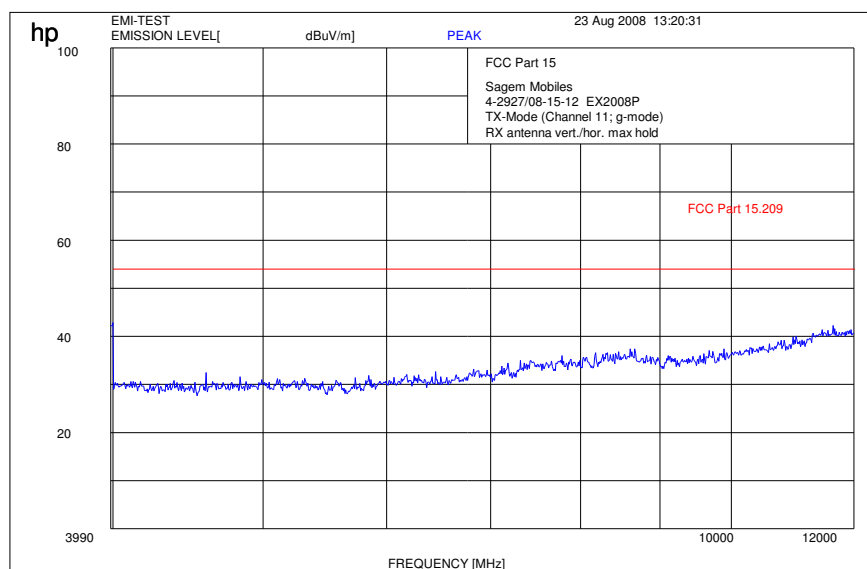
Subrange 1	
Frequency Range:	30MHz - 2GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 3.32, CAL 07.01.2009
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW ---, CAL 08.04.2010 Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction 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), FW REV 3.12

Plot 9: 1 - 4 GHz (highest channel)



Carrier suppressed with a band rejection filter

Plot 10: 4- 12 GHz (highest channel)



Results:

SPURIOUS EMISSIONS LEVEL §15.209								
2412 MHz			2437 MHz			2462 MHz		
Frequency [MHz]	Detector	Level [dBμV/m]	Frequency [MHz]	Detector	Level [dBμV/m]	Frequency [MHz]	Detector	Level [dBμV/m]
No critical peaks detected !			No critical peaks detected !			No critical peaks detected !		
Measurement uncertainty			±3 dB					

f < 1 GHz : RBW/VBW: 100 kHz

f ≥ 1GHz : RBW/VBW: 1 MHz

Limits:

§ 15.247 (c)

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Limits:

§ 15.109

Frequency (MHz)	Field strength (dB μ 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

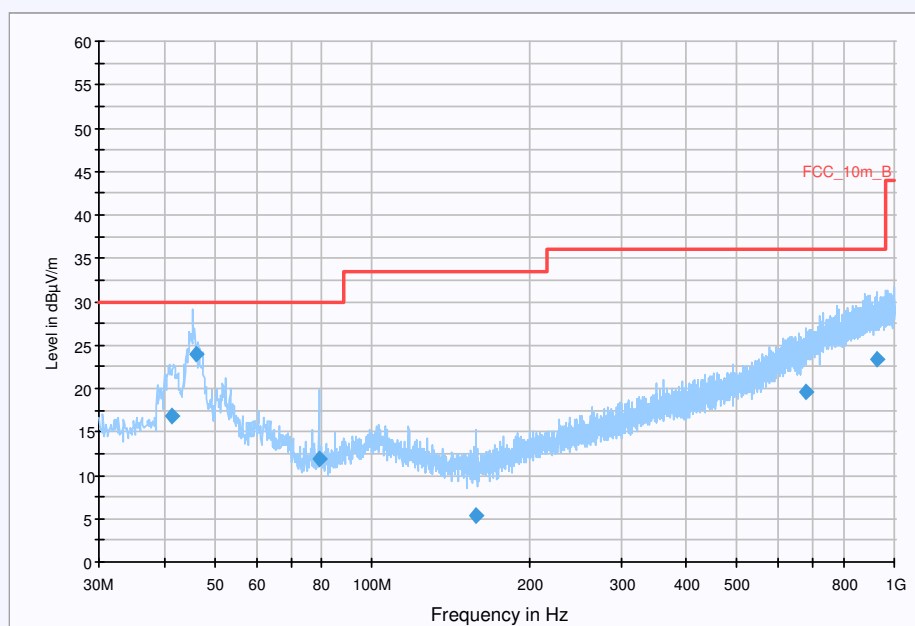
5.14 Spurious Emissions - radiated (Receiver) §15.109 / 209

Plot 1: 0.03 - 1 GHz vertical / horizontal (receiver)

EUT: EX2008P
 Serial Number: 354680029500221
 Test Description: FCC part 15 class B @ 10m
 Operating Conditions: WLAN RX-Mode
 Operator Name: Folz
 Comment: Powered with AC 115V / 60 Hz
 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

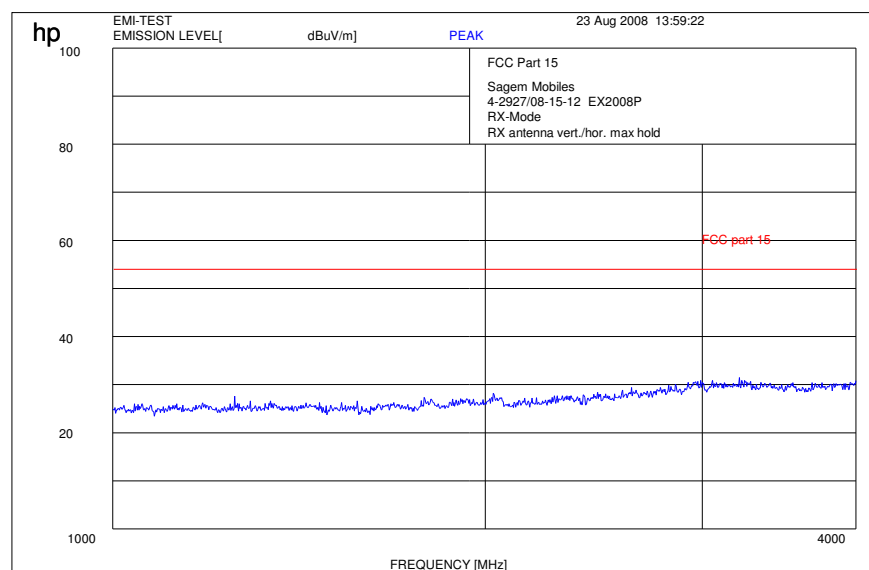


Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
41.396700	16.9	15000.000	120.000	115.0	V	209.0	13.6	13.1	30.0
45.910550	23.9	15000.000	120.000	100.0	V	0.0	13.5	6.1	30.0
79.625800	11.8	15000.000	120.000	370.0	V	55.0	9.4	18.2	30.0
158.336800	5.3	15000.000	120.000	200.0	V	38.0	9.4	28.2	33.5
678.806500	19.5	15000.000	120.000	100.0	H	23.0	22.3	16.5	36.0
925.577850	23.4	15000.000	120.000	348.0	H	323.0	26.3	12.6	36.0

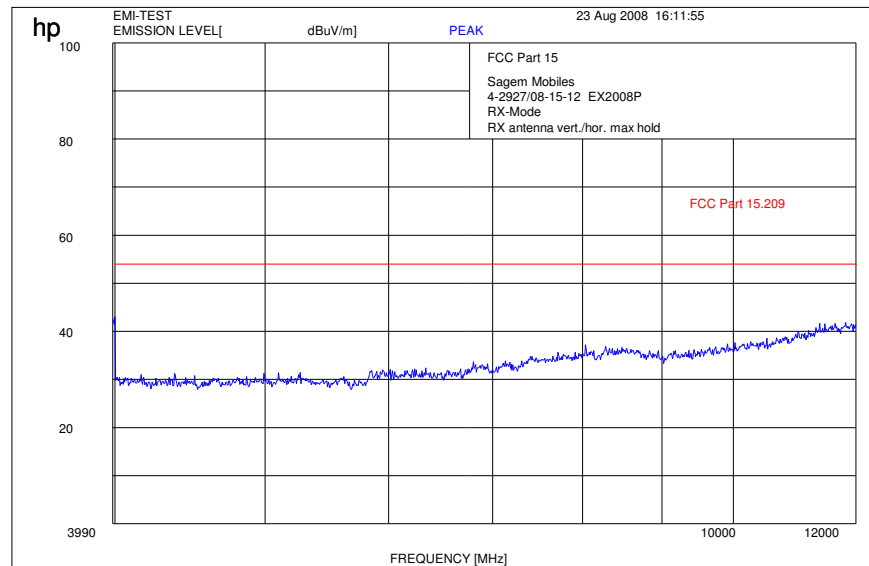
Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]

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), FW REV 3.12

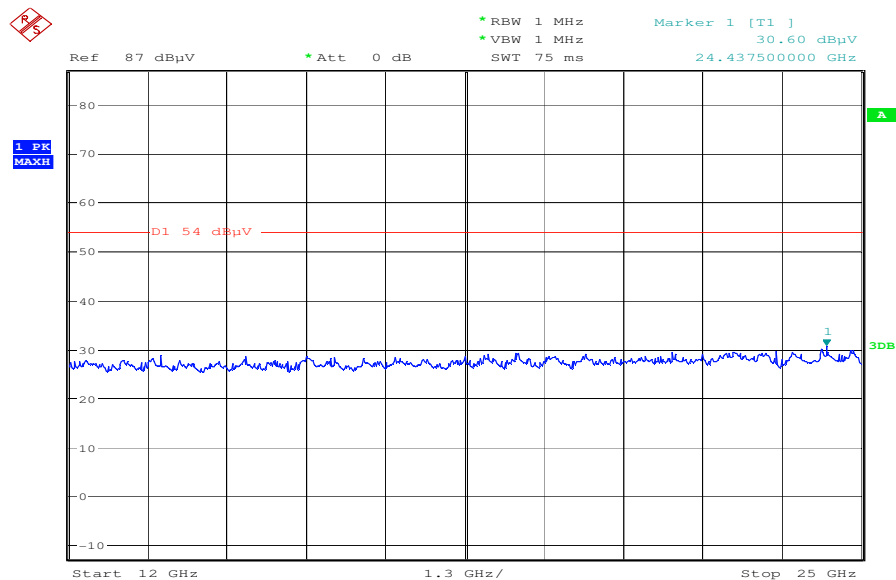
Plot 2: 1 - 4 GHz vertical / horizontal (receiver)



Plot 3: 4- 12 GHz (receiver)



Plot 4: 12- 25 GHz (receiver)



Date: 23.AUG.2008 14:40:46

Results:

Spurious Emissions level [dB μ V/m]		
Frequency [MHz]	Detector	Level [dB μ V/m]
No critical peak detected !		
Measurement uncertainty		± 3 dB

 $f < 1$ GHz : RBW/VBW: 100 kHz $f \geq 1$ GHz : RBW/VBW: 1 MHz

See above plots

Measurement distance see table

Limits:

§ 15.109

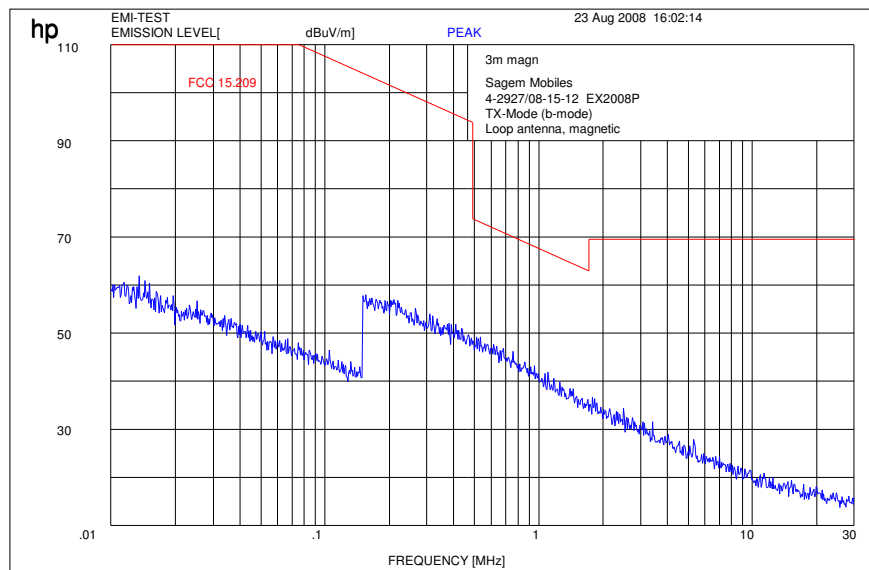
Frequency (MHz)	Field strength (dB μ V/m)	Measurement distance (m)
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
above 960	54.0	3

5.15 Spurious Emissions - radiated <30 MHz §15.209

Measured at 3 m distance.

Values recalculated with 40 dB/decade according to FCC rules.

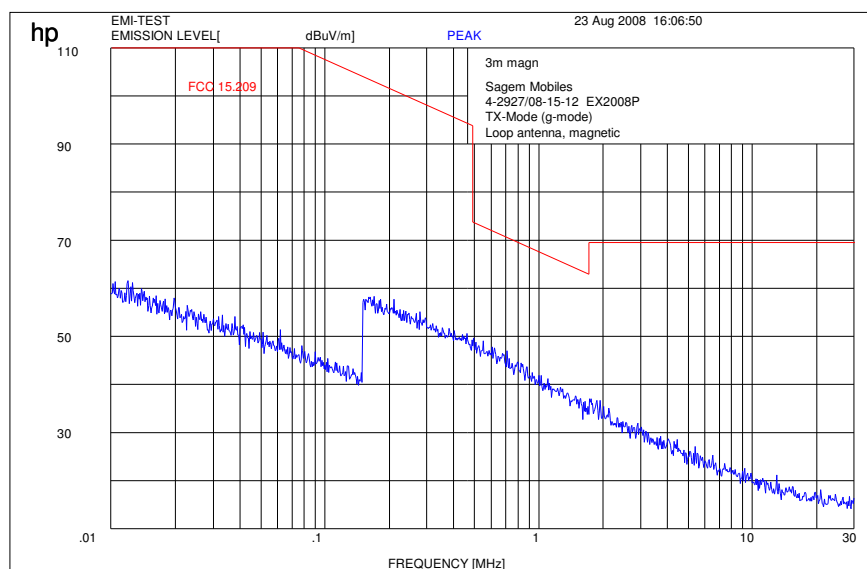
Plot 1: DSSS



Limits:

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30 / 29.5 dB $\mu\text{V/m}$	30
30 - 88	100 / 40 dB $\mu\text{V/m}$	3
88 - 216	150 / 43.5 dB $\mu\text{V/m}$	3
216 - 960	200 / 46 dB $\mu\text{V/m}$	3
above 960	54 dB $\mu\text{V/m}$	3

Plot 2: OFDM



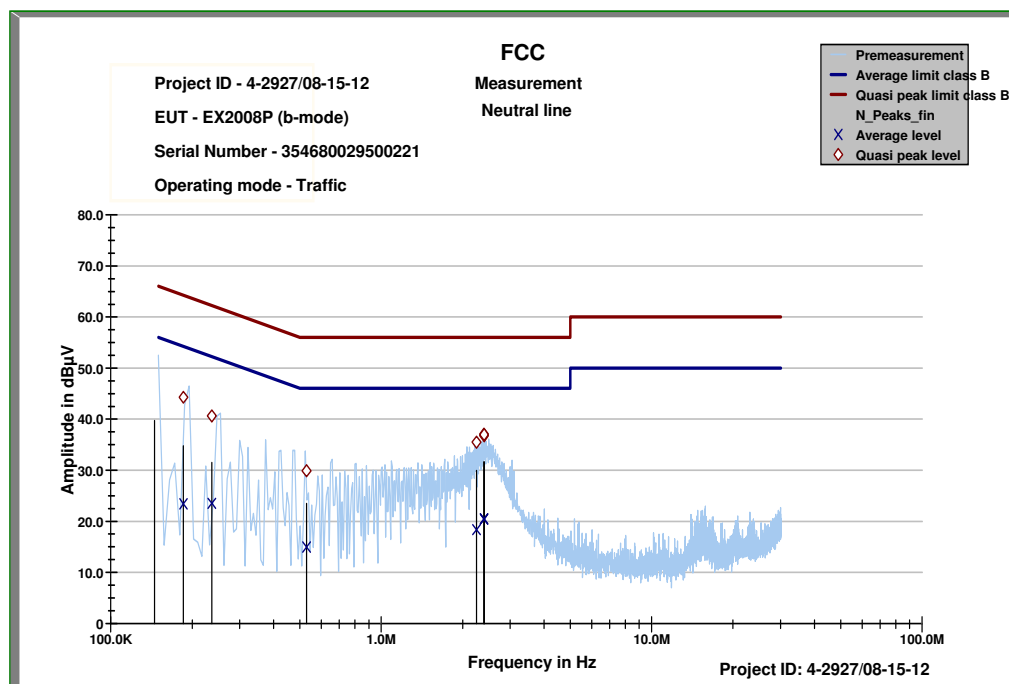
Limits:

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30 / 29.5 dB $\mu\text{V/m}$	30
30 - 88	100 / 40 dB $\mu\text{V/m}$	3
88 - 216	150 / 43.5 dB $\mu\text{V/m}$	3
216 - 960	200 / 46 dB $\mu\text{V/m}$	3
above 960	54 dB $\mu\text{V/m}$	3

5.16 Conducted Emissions <30 MHz §15.107/207

DSSS

Plot 1: CISPR 22 (Neutral line)

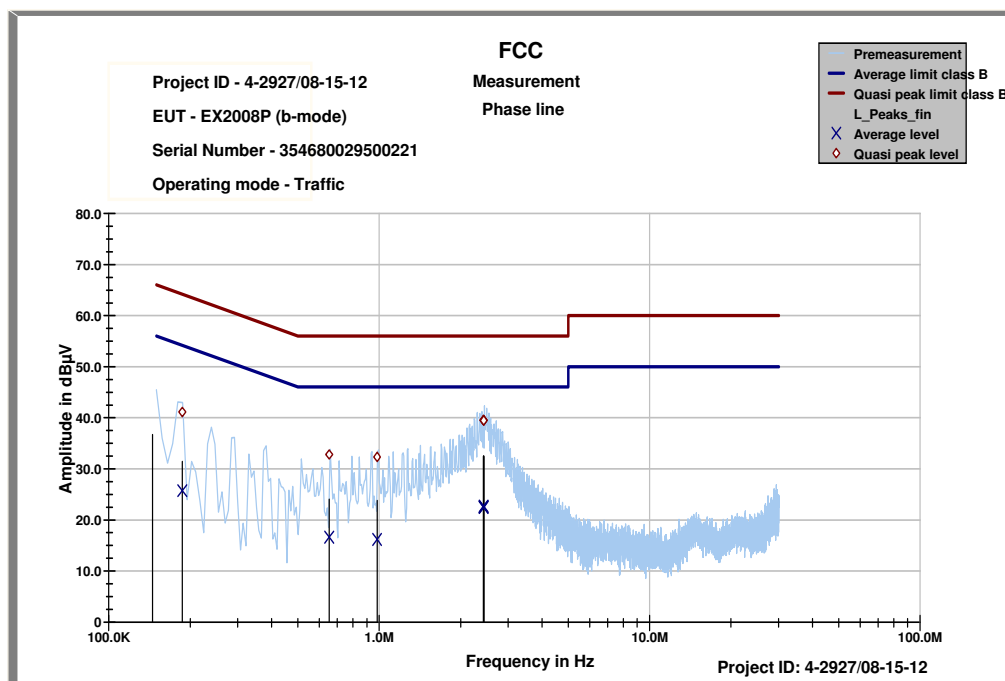


Frequency	Quasi peak level	Margin quasi peak	Average level	Margin average
MHz	dBμV	dBμV	dBμV	dBμV
0.1856	44.27	19.96	23.39	31.59
0.2364	40.63	21.59	23.51	30.02
0.5294	29.87	26.13	14.93	31.07
2.2504	35.48	20.52	18.35	27.65
2.3978	37.05	18.95	20.49	25.51
2.3995	36.73	19.27	20.44	25.56
2.4004	36.95	19.05	20.42	25.58

Limits:

Under normal test conditions only	See plots
-----------------------------------	-----------

Plot 2: CISPR 22 (Phase line)



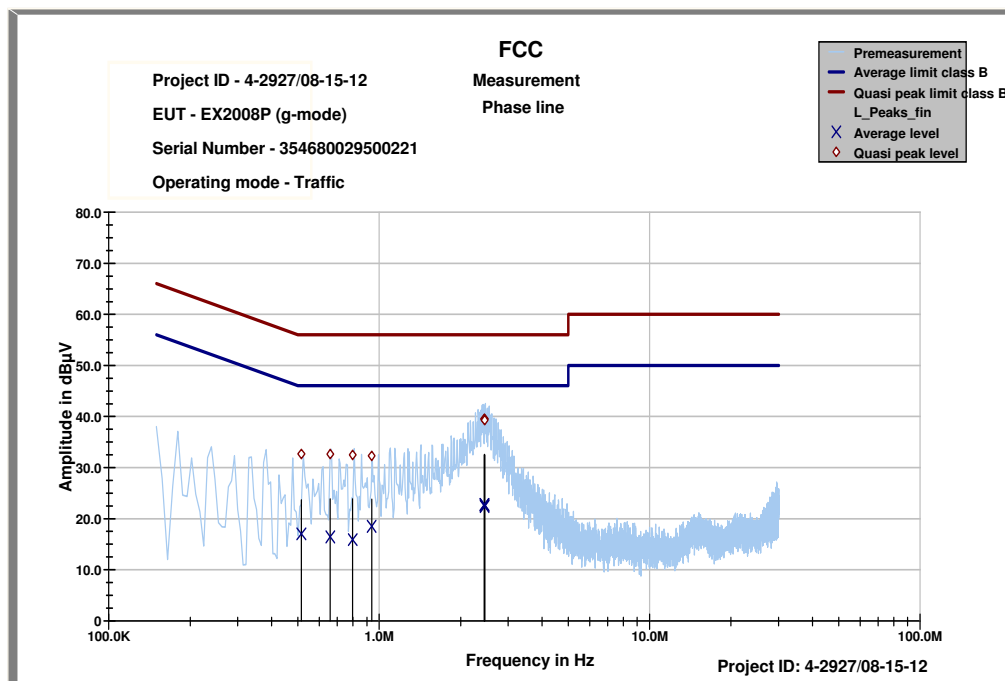
Frequency	Quasi peak level	Margin quasi peak	Average level	Margin average
MHz	dBµV	dBµV	dBµV	dBµV
0.1870	41.12	23.05	25.72	29.22
0.6531	32.81	23.19	16.63	29.37
0.9817	32.33	23.67	16.17	29.83
2.4286	39.53	16.47	22.52	23.48
2.4304	39.54	16.46	22.72	23.28
2.4327	39.49	16.51	22.44	23.56
2.4337	39.47	16.53	22.58	23.42

Limits:

Under normal test conditions only	See plots
-----------------------------------	-----------

OFDM

Plot 1: CISPR 22 (Phase Line)

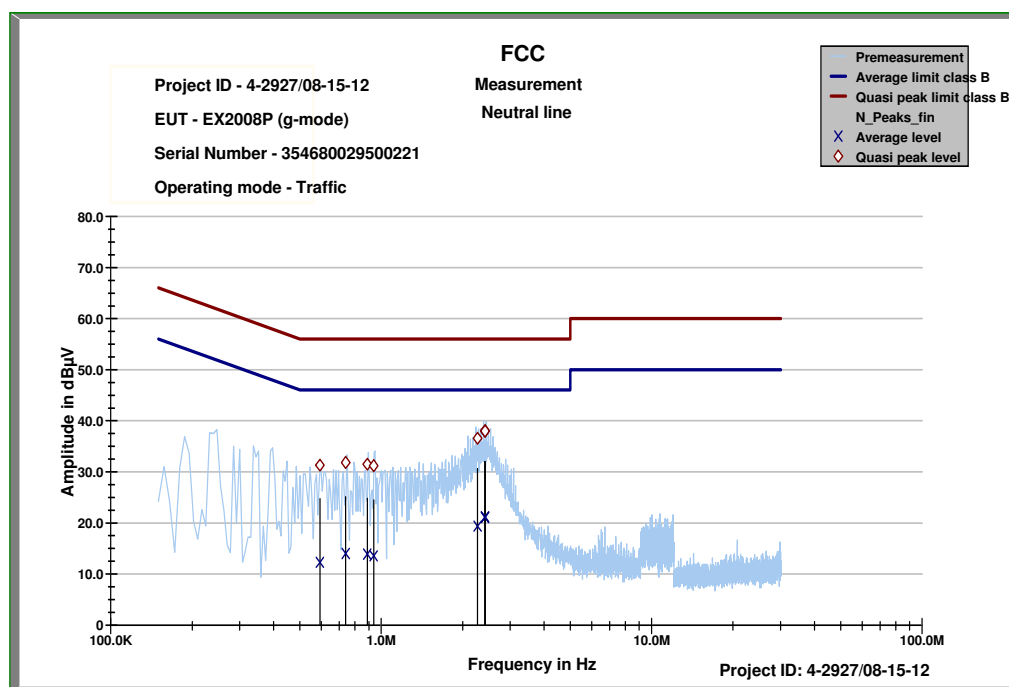


Frequency	Quasi peak level	Margin quasi peak	Average level	Margin average
MHz	dBµV	dBµV	dBµV	dBµV
0.5154	32.67	23.33	17.01	28.99
0.6589	32.64	23.36	16.42	29.58
0.7977	32.46	23.54	15.88	30.12
0.9373	32.30	23.70	18.48	27.52
2.4456	39.44	16.56	22.75	23.25
2.4502	39.56	16.44	22.73	23.27
2.4515	39.49	16.51	22.53	23.47
2.4530	39.27	16.73	22.39	23.61

Limits:

Under normal test conditions only	See plots
-----------------------------------	-----------

Plot 2: CISPR 22 (Neutral Line)



Frequency MHz	Quasi peak level dBμV	Margin quasi peak dBμV	Average level dBμV	Margin average dBμV
0.5933	31.30	24.70	12.27	33.73
0.7392	31.82	24.18	13.99	32.01
0.8878	31.49	24.51	13.88	32.12
0.9377	31.19	24.81	13.55	32.45
2.2713	36.56	19.44	19.35	26.65
2.4178	37.93	18.07	21.09	24.91
2.4194	38.03	17.97	21.11	24.89
2.4200	37.98	18.02	21.19	24.81

Limits:

Under normal test conditions only	See plots
-----------------------------------	-----------

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.

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.)		

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			
39	Power Splitter 6005-3	Inmet Corp.	none	300002841	23.12.2006	24	23.12.2008
40	SMA Cables SPS-1151-985-SPS	Insulated Wire	different	different	n.a.		
41	CBT32 with EDR Signaling Unit	R&S					
42	Coupling unit	Narda	N/A	--	n.a.		
43	2xSwitch Matrix PSU	R&S	872584/021	300001329	n.a.		
44	RF-cable set	R&S	N/A	different	n.a.		
45	IEEE-cables	R&S	N/A	--	n.a.		

Note: 3000002681-00xx inventoried as a system

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	9163-295	-/-	-/-	30.04.2008	24	30.04.2010
3	Amplifier - 0518C-138	Veritech Micro-wave Inc.	-/-	-/-	-/-	-/-	-/-
4	Switch - 3488A	HP		300000368	-/-	-/-	-/-
5	EMI Test receiver - ESCI	R&S	100083	300003312	31.01.2009	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	-/-	-/-	-/-	-/-

7 Photographs of the Test Set-up

Photo documentation

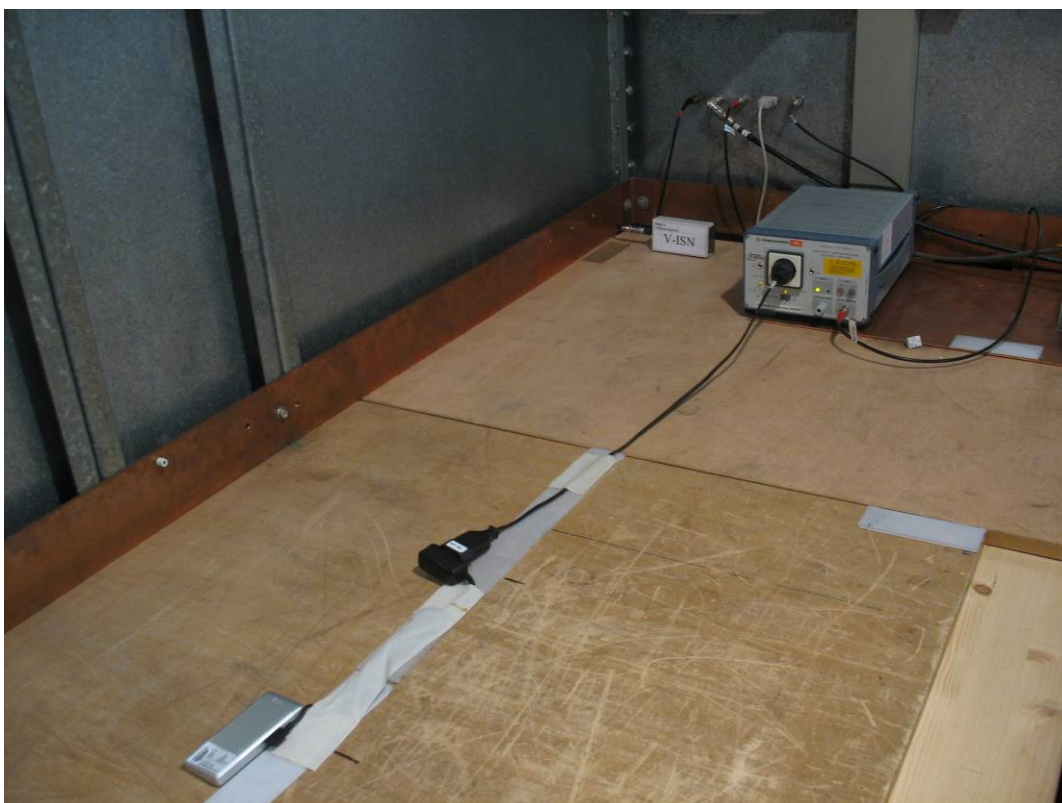
Photo 1:



Photo 2:



Photo 3:



8 Photographs of the EUT

Photo documentation

Photo 4:



Photo 5:



Photo 6:

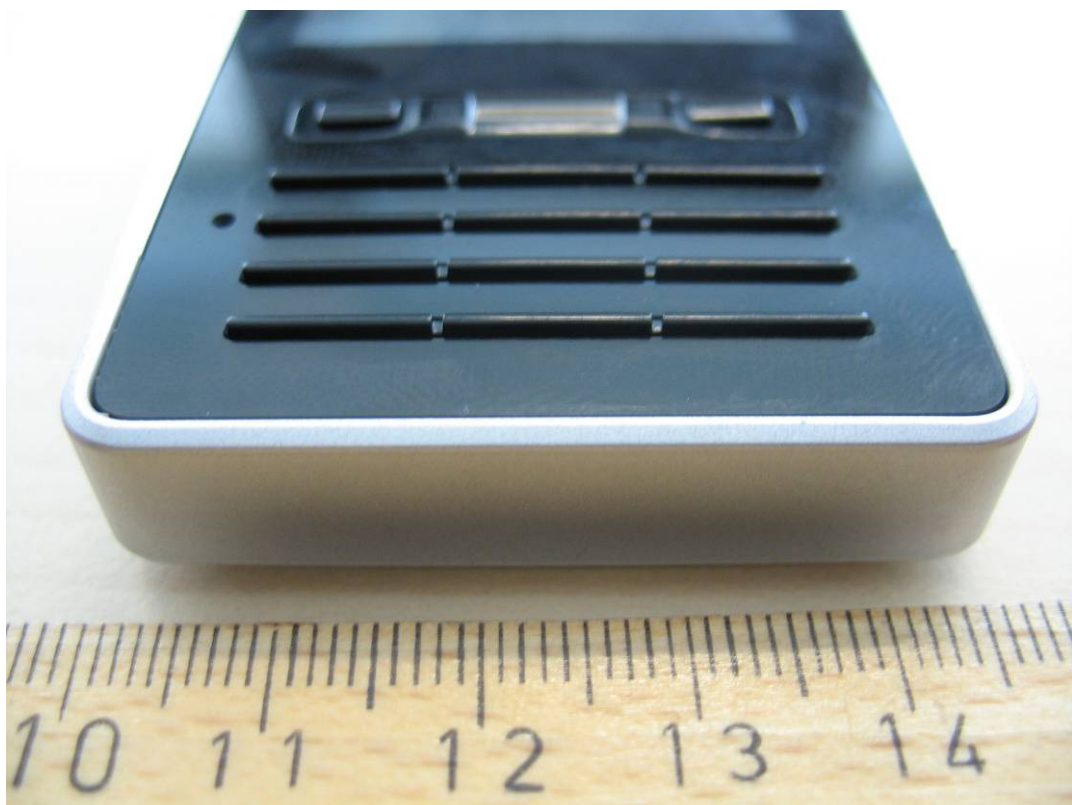


Photo 7:



Photo 8:

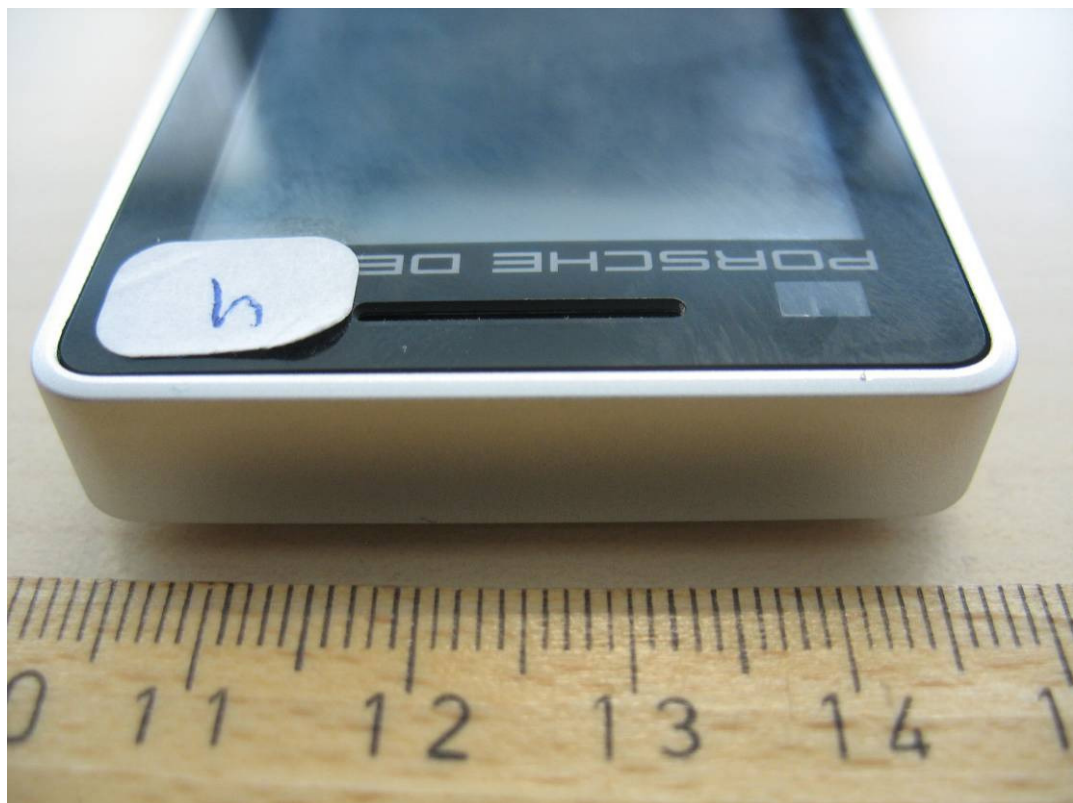


Photo 9:



Photo 10:



Photo 11:



Photo 12:

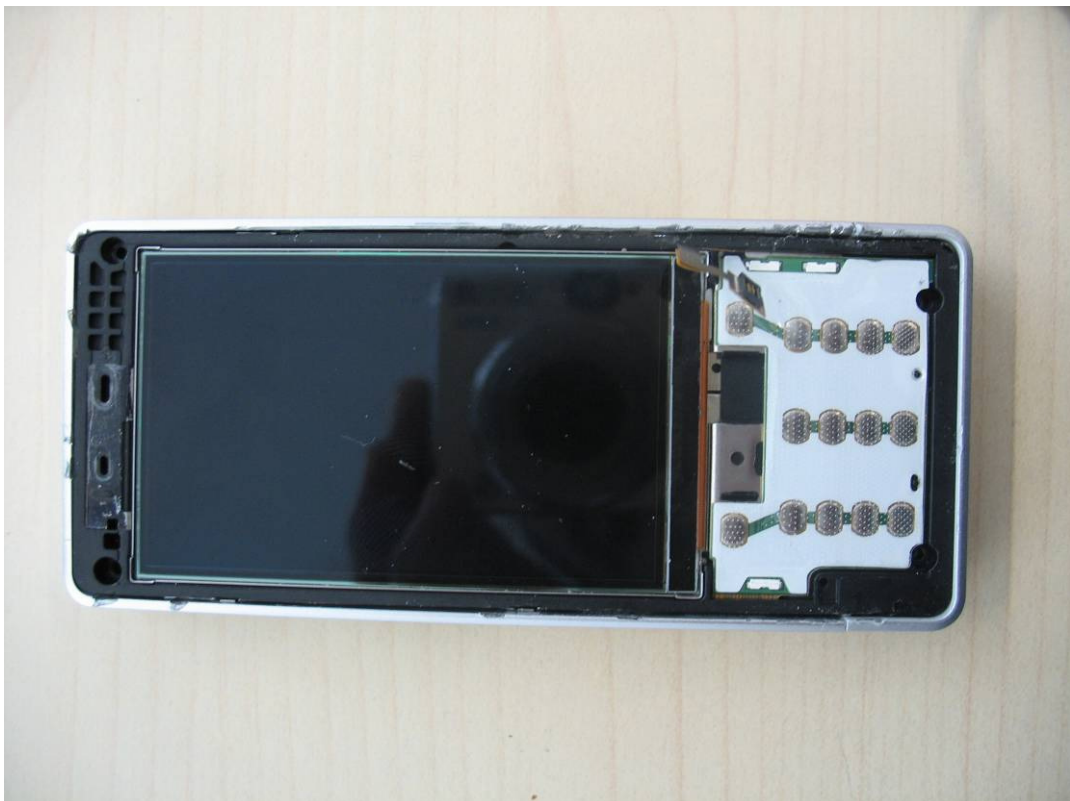


Photo 13:



Photo 14:



Photo 15:



Photo 16:

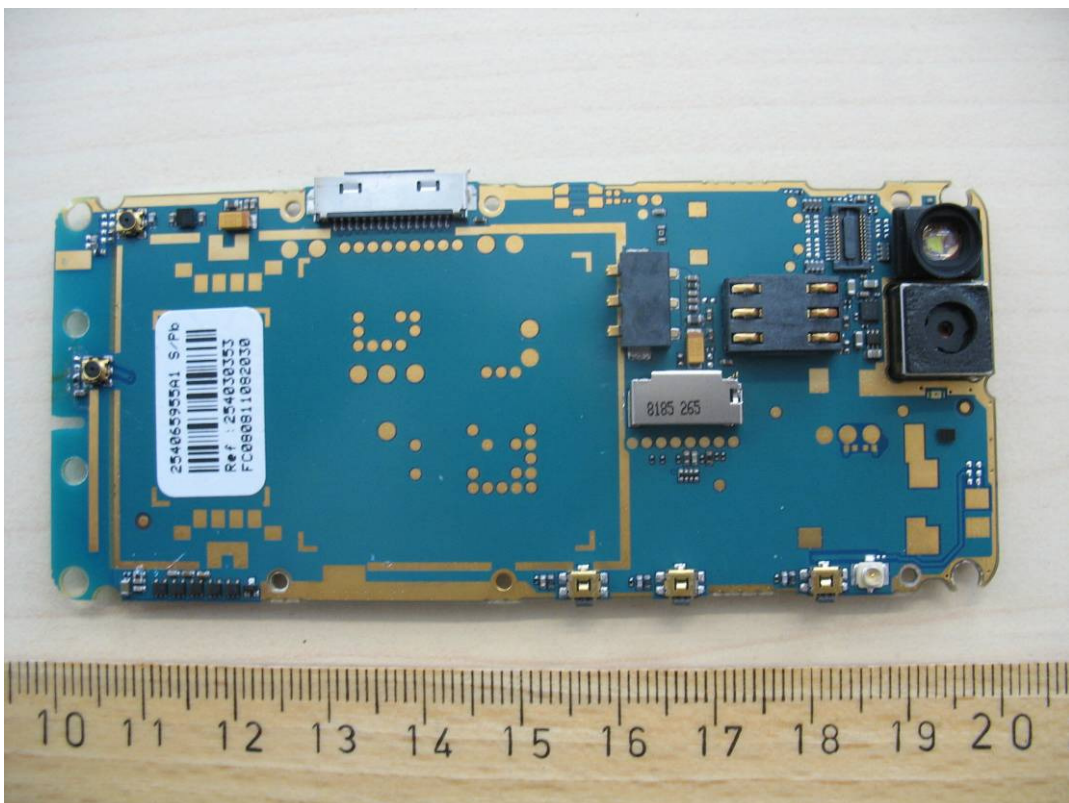


Photo 17:

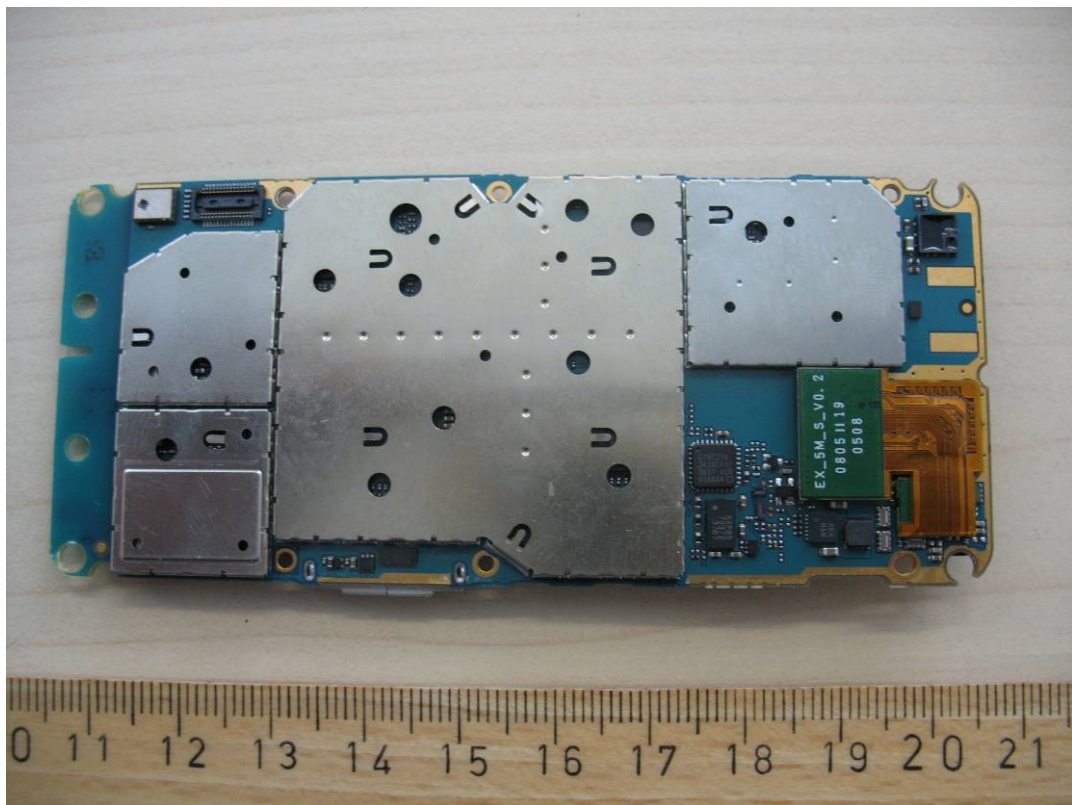


Photo 18:

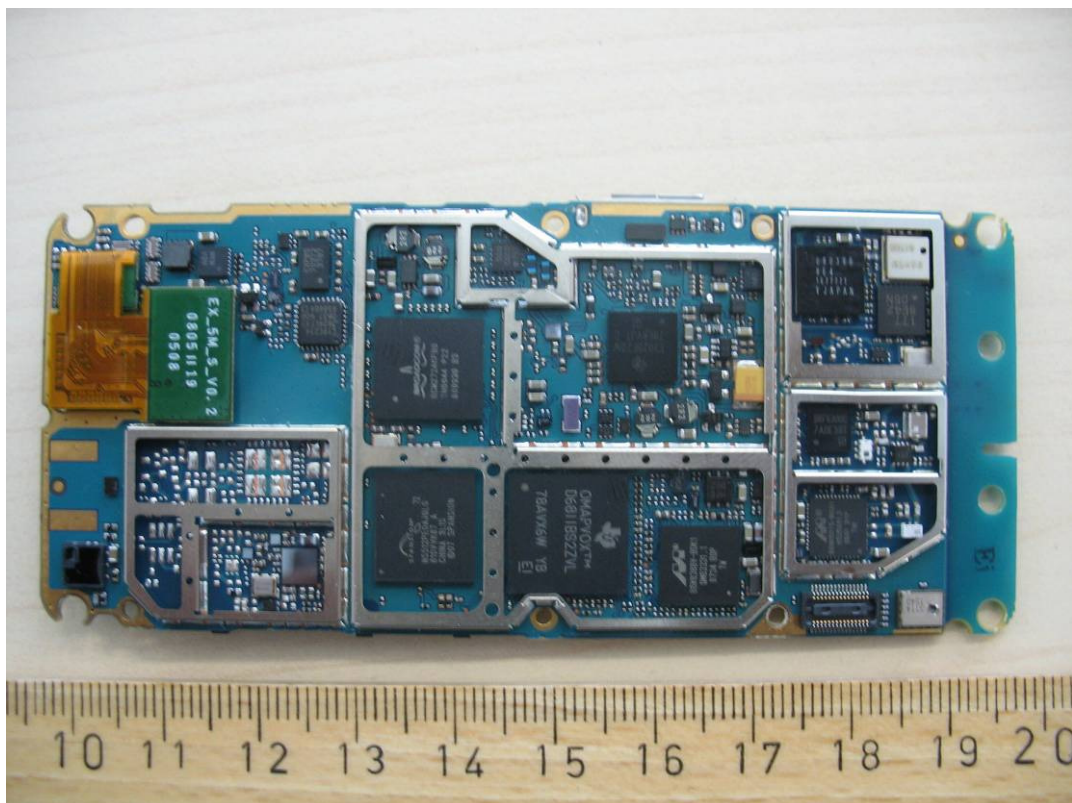


Photo 19:

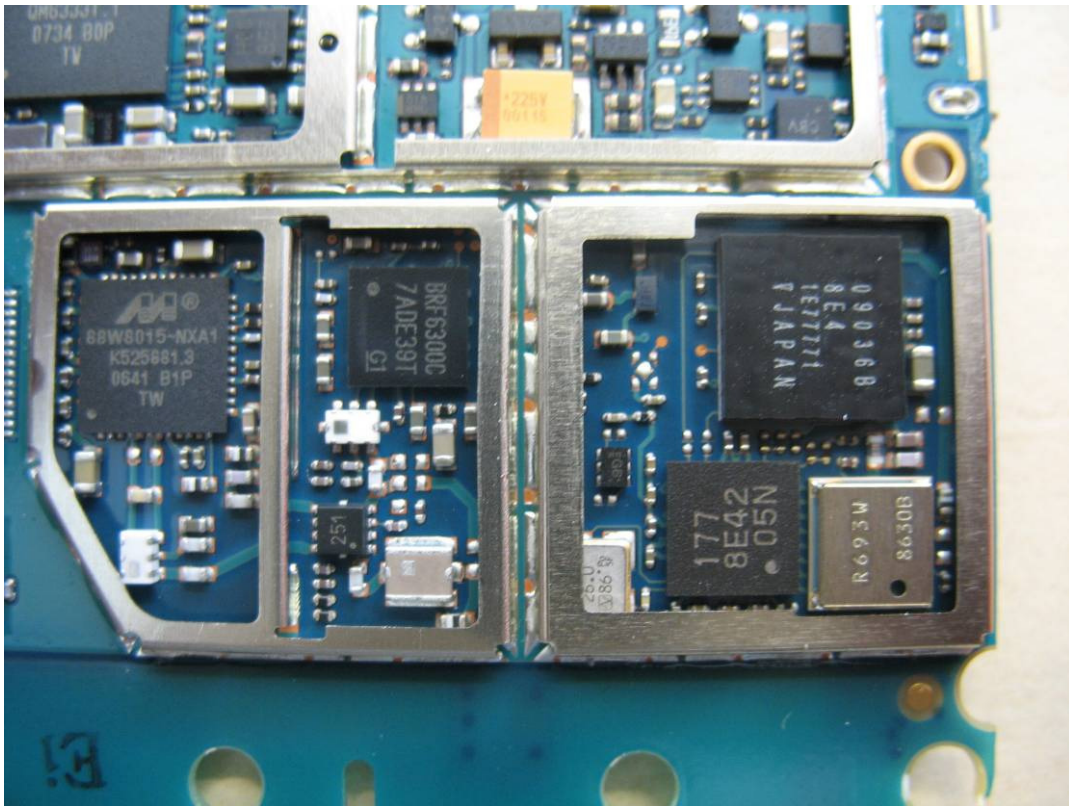


Photo 20:

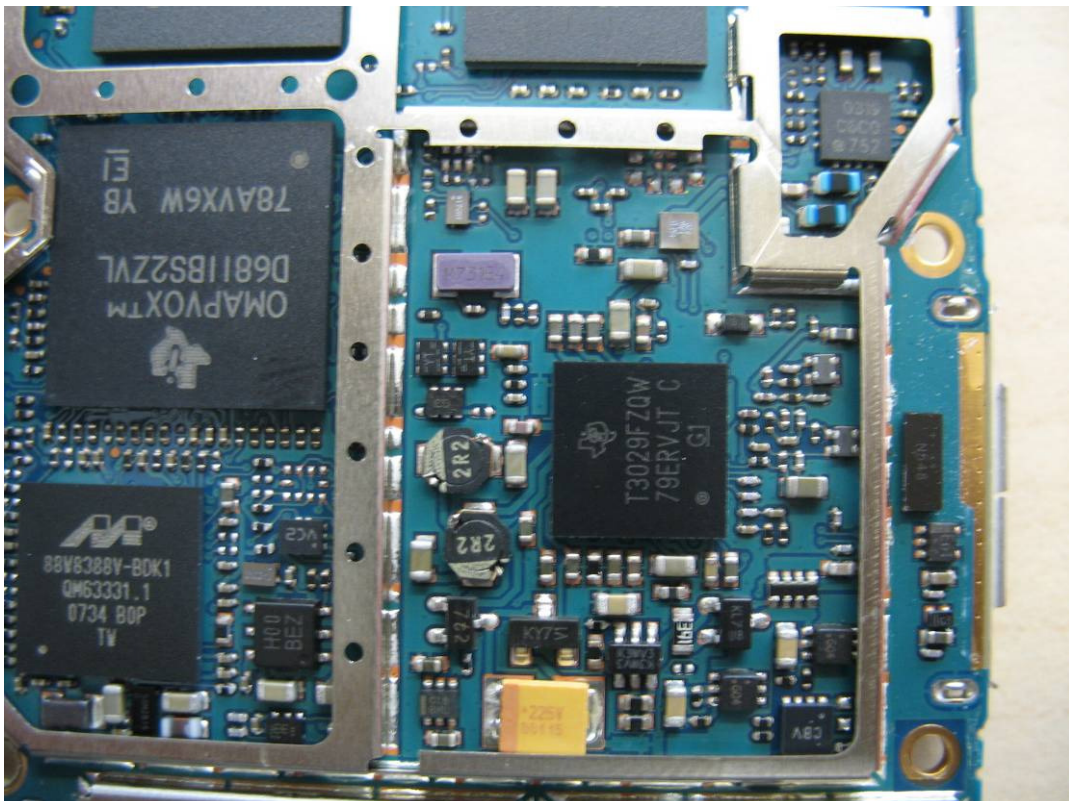


Photo 21:

