Test report no. : 151006-8

Item tested : WH1

Type of equipment : WLAN Handset

FCC ID : BXZWH1

Client : Ascom Sweden AB

FCC Part 15.407

Unlicensed National Information Infrastructure Devices

RSS-210, Issue 7

Low-power Licence-exempt Radiocommunication Devices
(All Frequency Bands): Category I Equipment

4 November 2010

Authorized by : .....

Geir Antonsen
Technical Verificator

CONTENTS

1 GENERAL INFORMATION

1.1 Testhouse Info

Name :	Nemko AS
Address :	Nemko Kjeller Instituttveien 6, Box 96 NO-2027 Kjeller, NORWAY
Telephone :	+47 64 84 57 00
Fax :	+47 64 84 57 05
E-mail:	comlab@nemko.com
FCC test firm :	994405
IC OATS :	2040D-1
Total Number of Pages:	98

1.2 Client Information

Name :	Ascom Sweden AB
Address :	P.O.Box 8783, SE-402 76 Gothenburg
Telephone :	+46 31 559300
Fax :	+46 31 552031

Contact:

Name :	Johan Comstedt
Telephone :	+46 31 559114
E-mail :	johan.comstedt@ascom.se

1.3 Manufacturer

Name :	/
Address :	/

2 Test Information

2.1 Test Item

Name :	Ascom
Model/version :	WH1-AAAA; WH1-EABA; WH1-EACA
FCC ID :	BXZWH1
Industry Canada ID :	3724B-WH1
Serial number :	Radiated Sample: T26103XMG8 Conducted Sample: T26103XBN5
Hardware identity and/or version:	F1
Software identity and/or version :	2.1.3
Tested to IC Radio Standard (RSS) :	RSS-210 Issue 7, and RSS-GEN, Issue 2
Test Site IC Reg. Number :	IC 2040D-1
Frequency Ranges :	5180 – 5240 MHz: 4 channels 5260 – 5320 MHz: 4 channels 5500 – 5805 MHz: 15 channels
Operating Modes :	802.11a 802.11n (20 MHz BW)
Type of Modulation :	Digital (OFDM - Orthogonal frequency-division multiplexing)
Conducted Output Power :	5180 – 5240 MHz: 26 mW 5260 – 5320 MHz: 55 mW 5500 – 5700 MHz: 35 mW 5745 – 5805 MHz: 13 mW
Emission Designators :	802.11a: 16M7W7D 802.11n: 17M7W7D
Transmitter Spurious (worst case) :	72.0 dBµV/m (11.0 GHz, Pk Det.) 52.0 dBµV/m (11.0 GHz, Av Det.) -30.8dBm (11.0GHz, e.i.r.p radiated)
Receiver Spurious (worst case) :	-68.5 dBm (3.843 GHz, Conducted)
Antenna Connector :	None
Number of Antennas :	1
Antenna Diversity Supported :	No
Power Supply :	Secondary Battery, 3.7V Li-Polymer
Desktop Charger :	DC3 with AC Adaptor FW7600

Description of Test Item

The tested equipment is a cordless telephone handset using Voice over WiFi technology.

Exposure Evaluation

The EUT is a portable device and is designed to be held to ear or worn in a belt clip when used. A test reports with the measured SAR values for both configurations are submitted with the application.

2.2 Test Environment

2.2.1 Normal test condition

Temperature:	23.5 – 25.8 °C
Relative humidity:	31.4 – 40.4 %
Normal test voltage:	3.7 V DC

The values are the limit registered during the test period.

2.3 Test Period

Item received date:	2010-05-31
Test period :	from 2010-05-31 to 2010-07-28

3 TEST REPORT SUMMARY

3.1 General

Manufacturer: Ascom Sweden AB

Model No.: WH1

All measurements are traceable to national standards.

The tests were conducted for the purpose of demonstrating compliance with FCC CFR 47 Part 15E, Industry Canada RSS-210 Issue 7, and RSS-GEN, Issue 2.

All tests were conducted in accordance with ANSI C63.4-2009 and ANSI C63.10-2009.

The radiated tests were made in a semi-anechoic chamber at measuring distances of 3m and 10m. The band-edge tests were performed in a fully-anechoic chamber at a measuring distance of 3m.

☒ New Submission ☒ Production Unit

☐ Class II Permissive Change ☐ Pre-production Unit

NII Equipment Code ☐ Family Listing

THIS TEST REPORT APPLIES ONLY TO THE ITEM(S) AND CONFIGURATIONS TESTED.

Deviations from, additions to, or exclusions from the test specifications are described in "Summary of Test Data".

TEST REPORT 151006-8

TESTED BY: Frode Sveinsen DATE: 11 August 2010

Frode Sveinsen, Chief engineer

3.2 Test Summary

Name of test	FCC Part 15 reference	RSS-210, Issue 7 reference	Result
Supply Voltage Variations	15.31(e)	8 (RSS-GEN)	Complies
Antenna Requirement	15.203	7.1.4 (RSS-GEN)	Complies
Power Line Conducted Emission	15.107(a) 15.207(a)	7.2.2 (RSS-GEN)	Complies
Maximum Output Power	15.407(a)	A9.2	Complies
Power Spectral Density	15.407(a)	A9.2 A9.5(2)	Complies
Peak Excursion of Modulation Envelope	15.407(a)	/	Complies
Unwanted Emissions	15.407(b)	A9.3	Complies
Discontinuation of Transmission	15.407(c)	A9.5(4)	NT[1]
Frequency Stability	15.407(g)	A9.5(5)	Complies
Transmit Power Control	15.407(h)	A9.2	Complies
Dynamic Frequency Selection	15.407(h)	A9.4	Complies
Radiated Emissions	15.205 15.209	A9.3	Complies

[1] See manufacturers declaration

[2] DFS tests are not covered by this report.

3.3 Description of modification for Modification Filing

Not applicable.

3.4 Comments

All measurements were done with the EUT powered by a fully charged battery.

3.5 Family List Rational

Not Applicable.

3.6 Antenna Requirement

Is the antenna detachable? ☐ Yes ☒ No

If detachable, is the antenna connector non-standard? ☐ Yes ☐ No

Type of antenna connector: N/A

Ref. FCC §15.203

4 TEST RESULTS

4.1 Power Line Conducted Emissions

Para. No.: 15.207 (a)

Test Performed By: Tore Løvlien	**Date of Test: 31 May 2010**

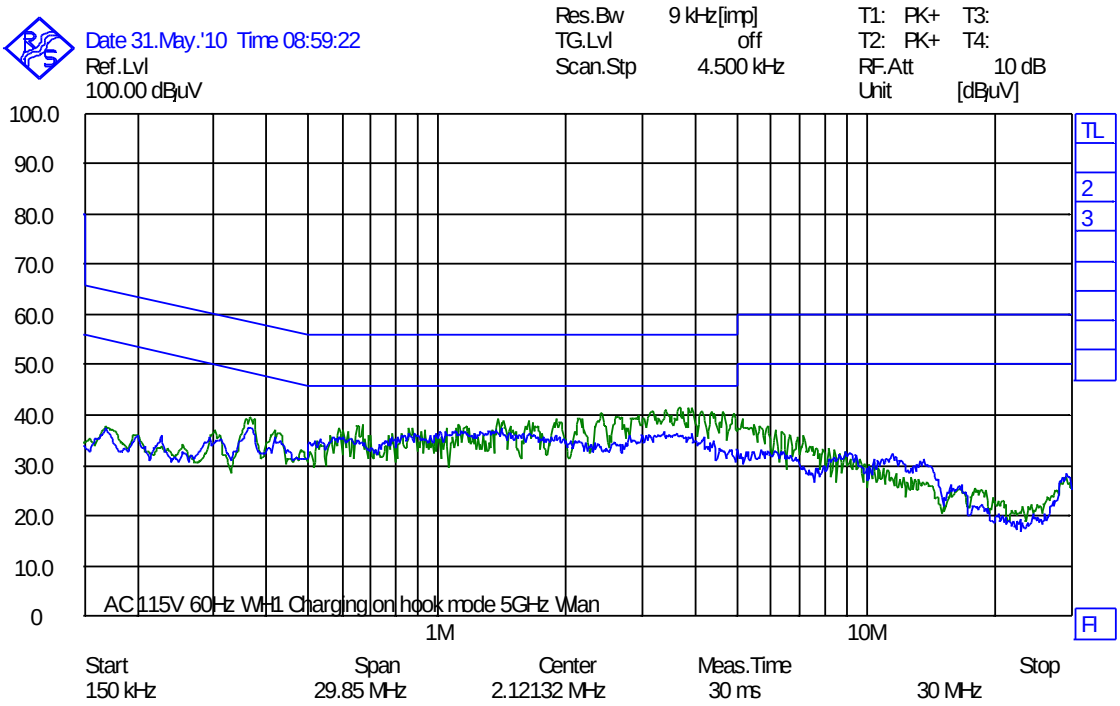
Measurement procedure: **ANSI C63.4-2009 using 50 µH/50 ohms LISN.**

Test Results: **Complies.**

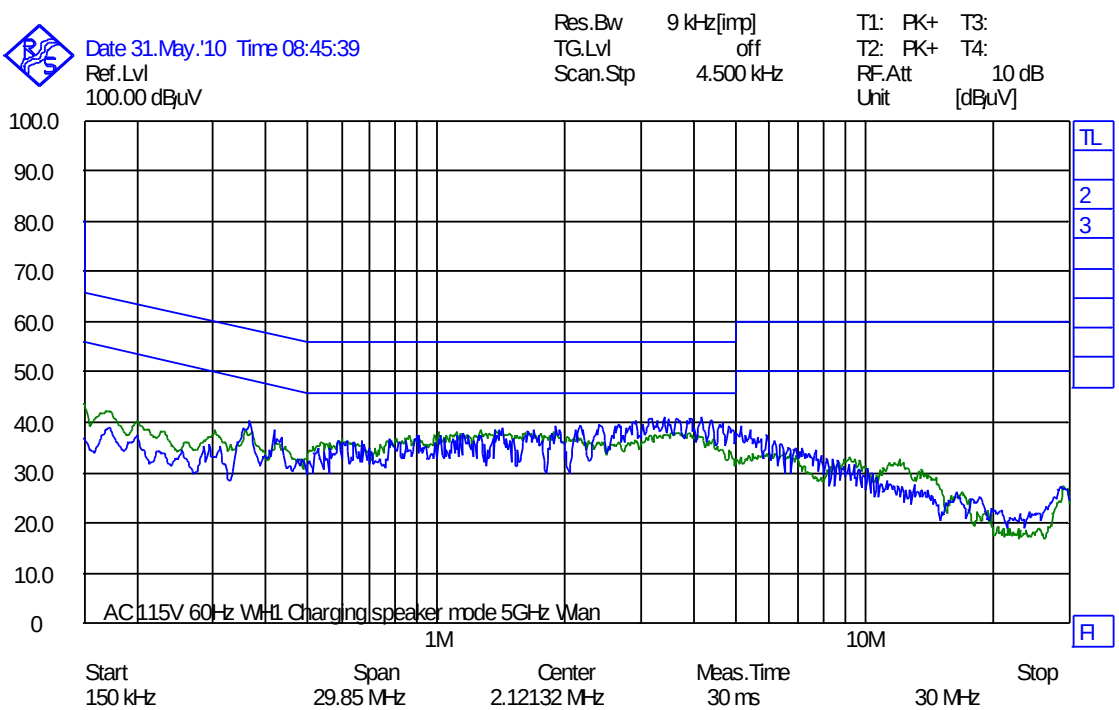
Measurement Data: **See attached graph, (Peak detector).**

Highest measured value (L1 and N): All emissions are below the Average Limit even when measured with Peak Detector.

Frequency	Detector	Measured value	Limit	Margin
KHz	Peak/QP/AV	dBµV	dBµV	dB
/	QP	/	/	/
/	AV	/	/	/
/	QP	/	/	/
/	AV	/	/	/



On Hook, Charging



Off-Hook, Speaker Mode, Charging

4.2 Maximum Conducted Output Power

Para. No.: 15.407(a)

Test Results: Complies

Measurement Data:

Ch. No.	Nominal Frequency (MHz)	Maximum Output Power 802.11a, 6 Mbps		
		Conducted (dBm)	Radiated (dBm)	Antenna Gain (dBi)
36	5180	13.9	12.4	-1.5
40	5200	14.0	/	/
44	5220	14.0	/	/
48	5240	13.8	12.1	-1.7
52	5260	17.4	14.3	-3.1
56	5280	16.1	/	/
60	5300	16.3	/	/
64	5320	16.6	13.6	-3.0
100	5500	13.8	13.1	-0.7
104	5520	15.2	/	/
108	5540	14.7	/	/
112	5560	14.8	/	/
116	5580	14.0	/	/
120	5600	13.8	15.4	1.5
124	5620	14.1	/	/
128	5640	12.1	/	/
132	5660	11.9	/	/
136	5680	12.0	/	/
140	5700	8.0	9.6	1.6
149	5745	7.4	9.1	1.5
153	5765	10.4	/	/
157	5785	10.2	/	/
161	5805	9.3	12.1	+2.8

The EUT operates continuously; therefore method 1 of ANSI C63.10-2009 clause 6.10.3 was used.

Emission Bandwidth *B* is 19.3 MHz for 802.11a 6Mbps

Power limits:

Frequency Band	Power limit	
5150 – 5250 MHz	Less than the lesser of 50mW or 4 dBm + 10 log *B*	16.9
5250 – 5350 MHz	Less than the lesser of 250 mW or 11 dBm + 10 log *B*	23.9
5470 – 5725 MHz		
5725 – 5825 MHz	Less than the lesser of 1 Watt (30 dBm) or 17 dBm + 10 log *B*	29.9

B is the 26 dB emission bandwidth in MHz

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power from the intentional radiator shall be reduced below the stated value above by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Para. No.: 15.407(a)

Test Results: Complies

Measurement Data:

Ch. No.	Nominal Frequency (MHz)	Maximum Output Power 802.11n, MCS0		
		Conducted (dBm)	Radiated (dBm)	Antenna Gain (dBi)
36	5180	14.1	12.1	-2.0
40	5200	14.1	/	/
44	5220	14.2	/	/
48	5240	14.1	12.1	-2.0
52	5260	17.2	14.3	-2.9
56	5280	16.9	/	/
60	5300	16.5	/	/
64	5320	16.6	13.7	-2.9
100	5500	12.1	12.3	+0.2
104	5520	15.4	/	/
108	5540	14.9	/	/
112	5560	14.8	/	/
116	5580	14.2	/	/
120	5600	13.9	15.3	+1.4
124	5620	14.1	/	/
128	5640	12.6	/	/
132	5660	12.3	/	/
136	5680	12.4	/	/
140	5700	8.2	10.2	+2.0
149	5745	7.5	9.7	+2.2
153	5765	11.3	/	/
157	5785	9.7	/	/
161	5805	9.4	12.1	+2.7

The EUT operates continuously; therefore method 1 of ANSI C63.10-2009 clause 6.10.3 was used.

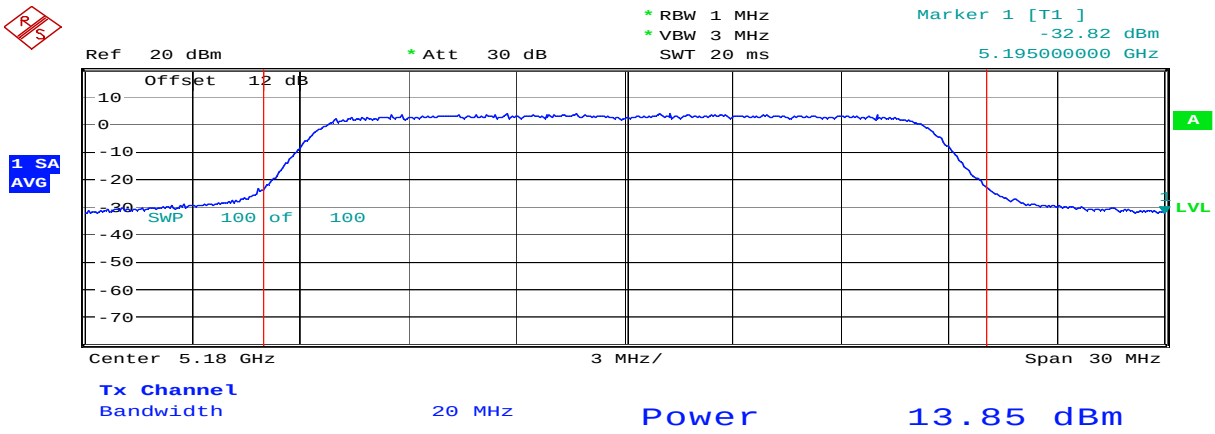
Emission Bandwidth *B* is 19.6 MHz for 802.11n MCS0

Power limits:

Frequency Band	Power limit	
5150 – 5250 MHz	Less than the lesser of 50mW or 4 dBm + 10 log *B*	16.9
5250 – 5350 MHz	Less than the lesser of 250 mW or 11 dBm + 10 log *B*	23.9
5470 – 5725 MHz		
5725 – 5825 MHz	Less than the lesser of 1 Watt (30 dBm) or 17 dBm + 10 log *B*	29.9

B is the 26 dB emission bandwidth in MHz

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power from the intentional radiator shall be reduced below the stated value above by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



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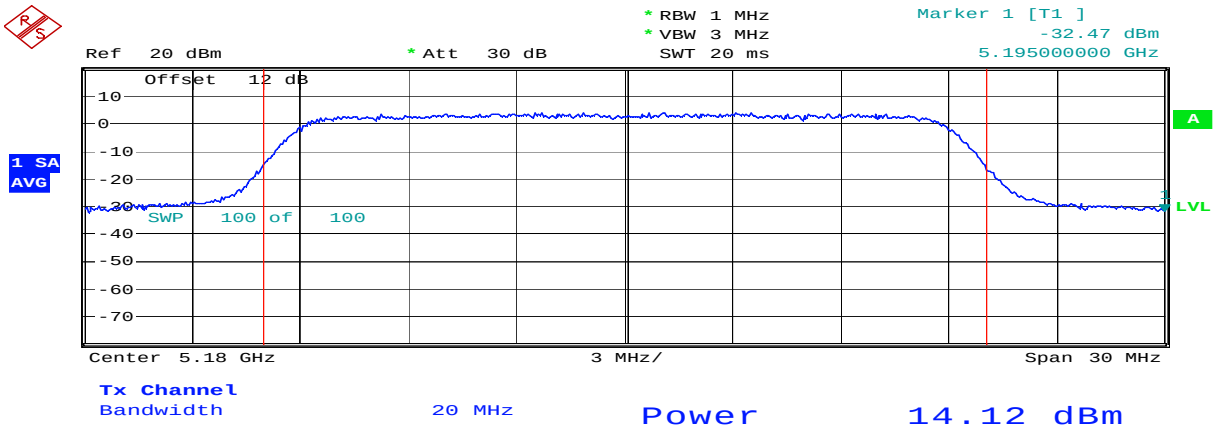
Output Power, 5180 MHz, Method 1, 802.11a 6Mbps, Conducted



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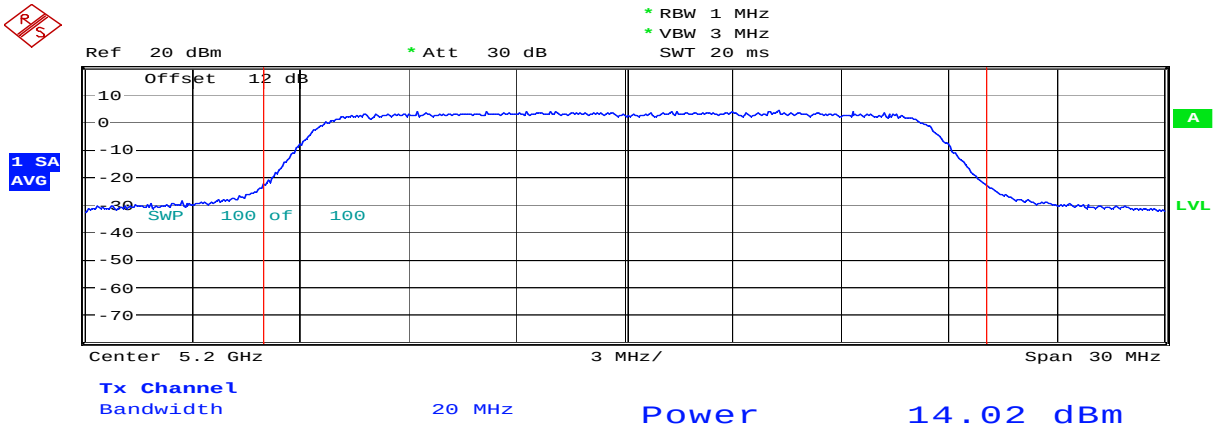

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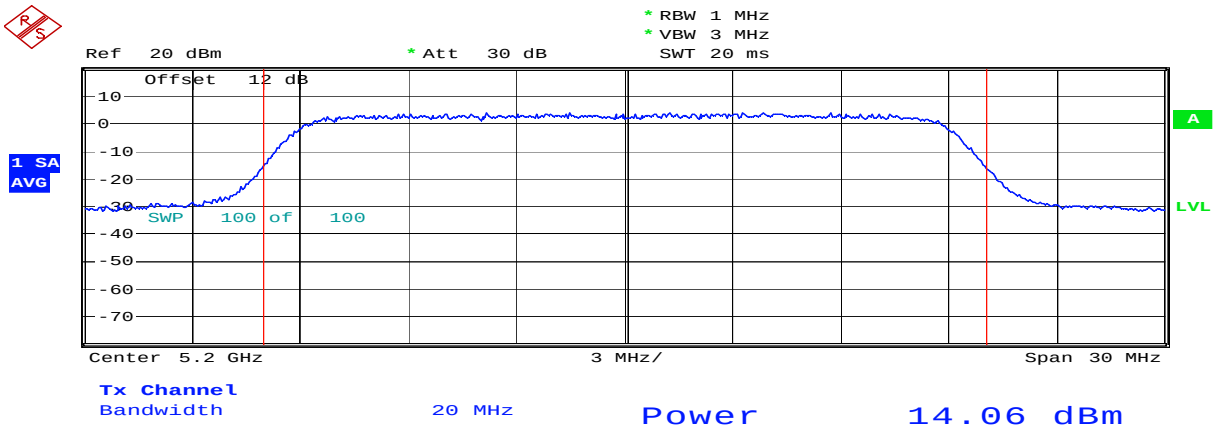

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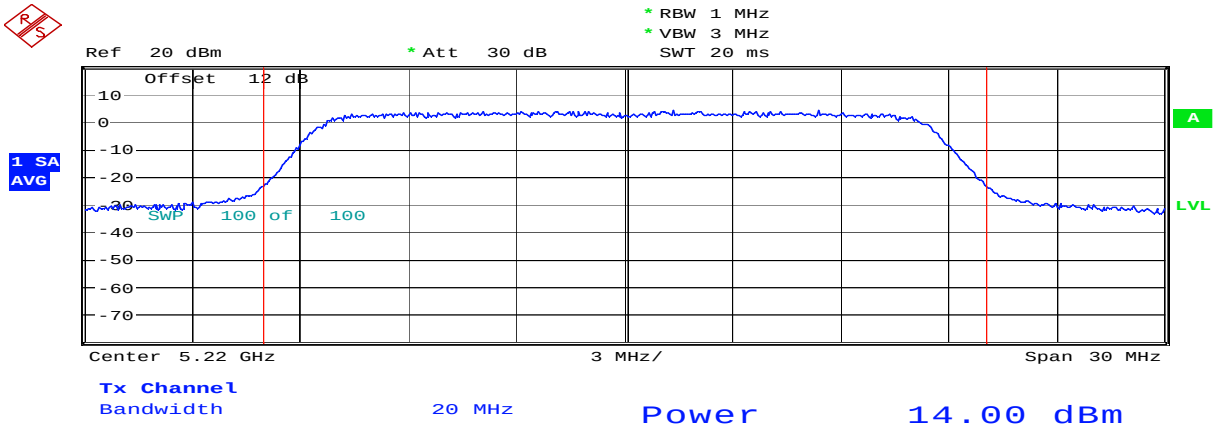

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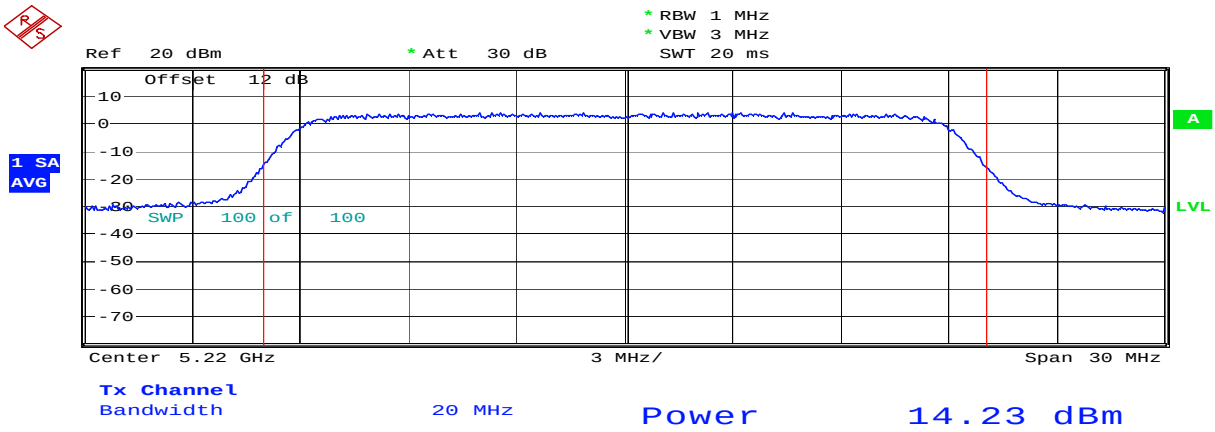
Output Power, 5220 MHz, Method 1, 802.11a 6Mbps, Conducted



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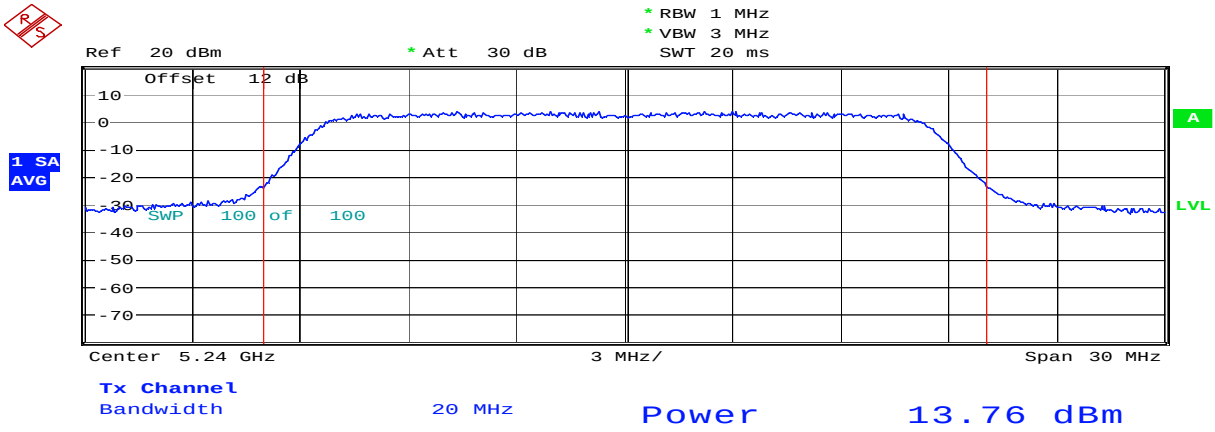
Output Power, 5220 MHz, Method 1, 802.11n MCS0, Conducted



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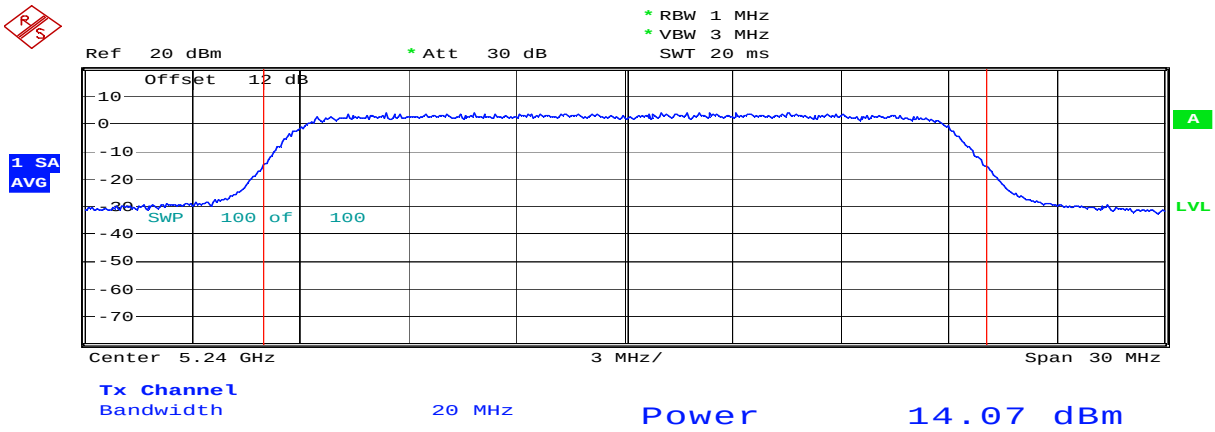

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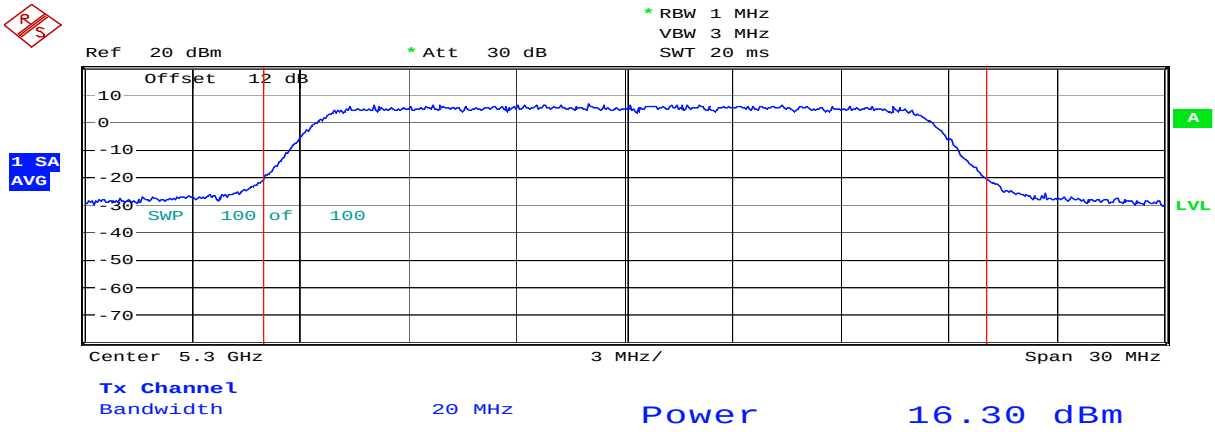

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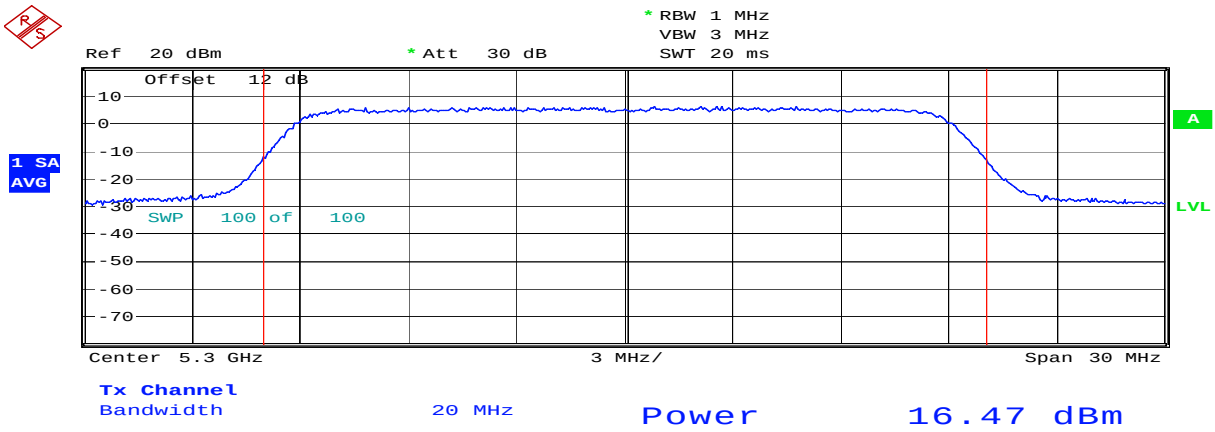

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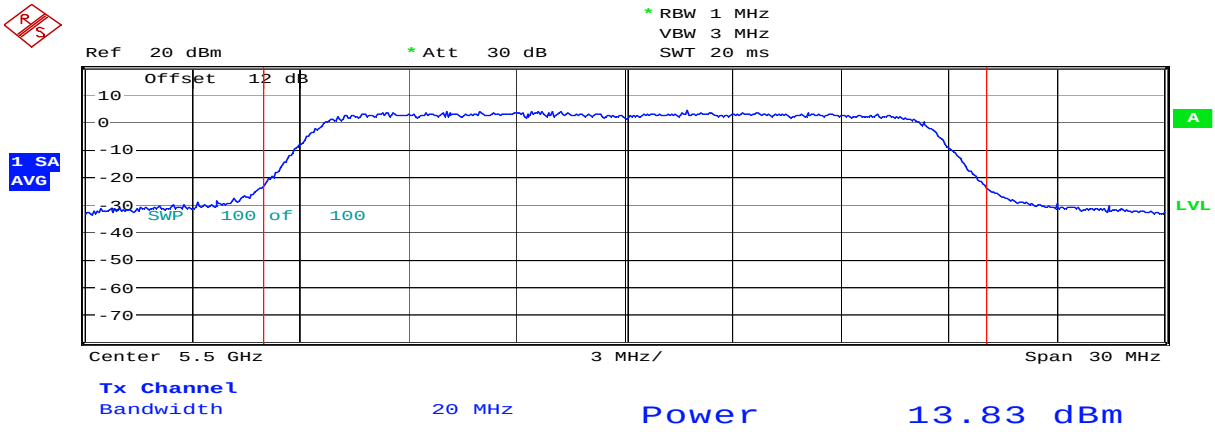

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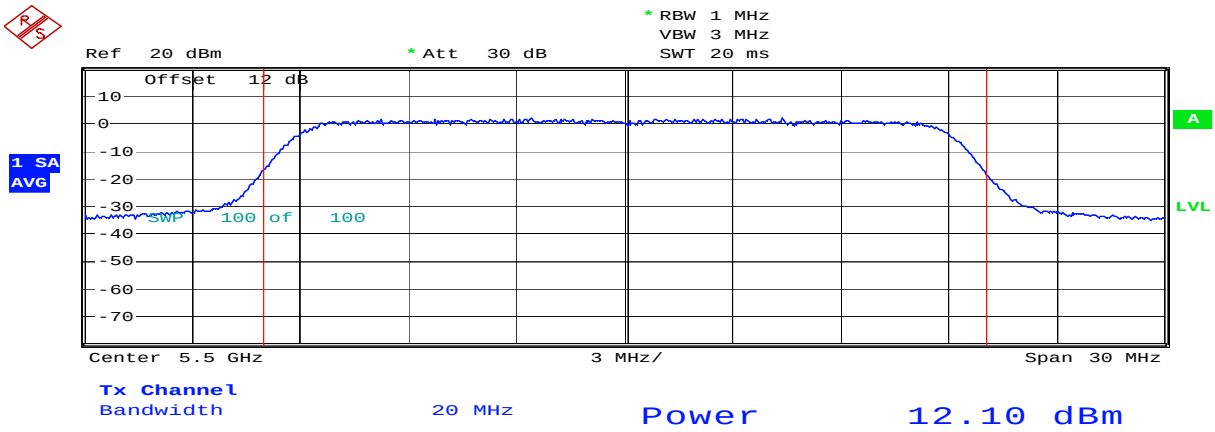

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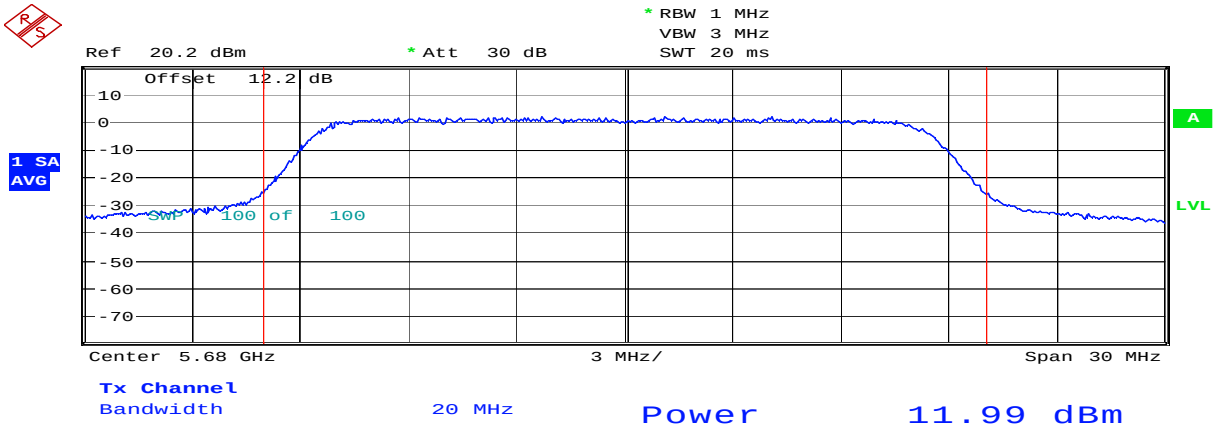

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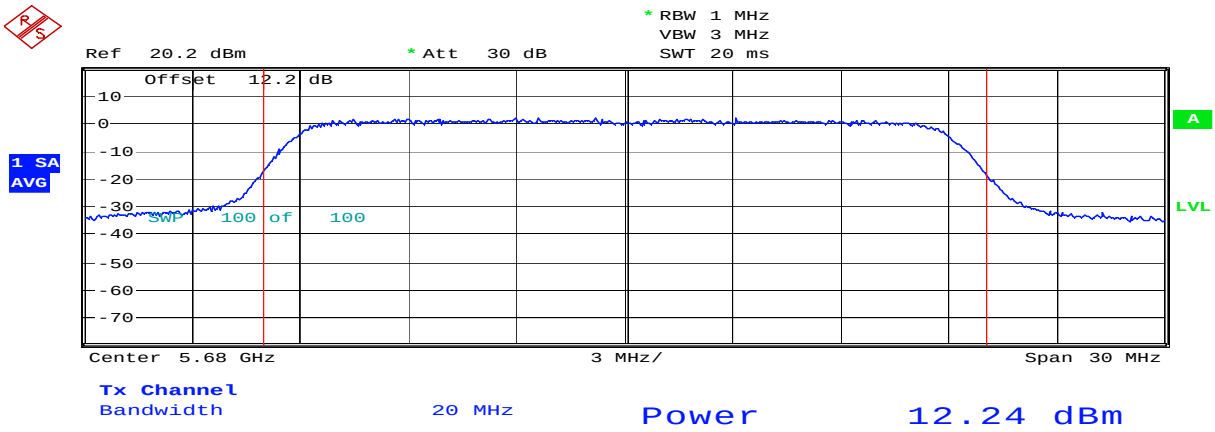

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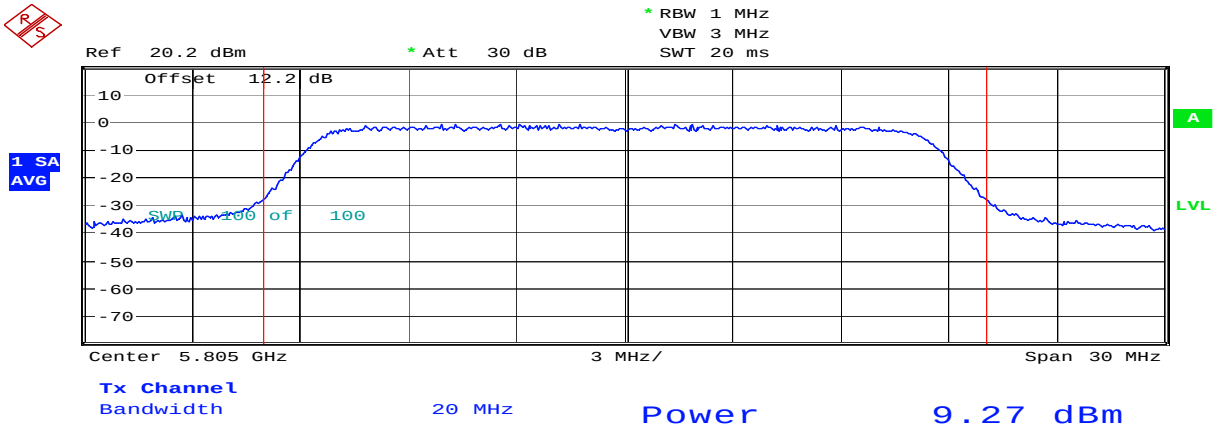

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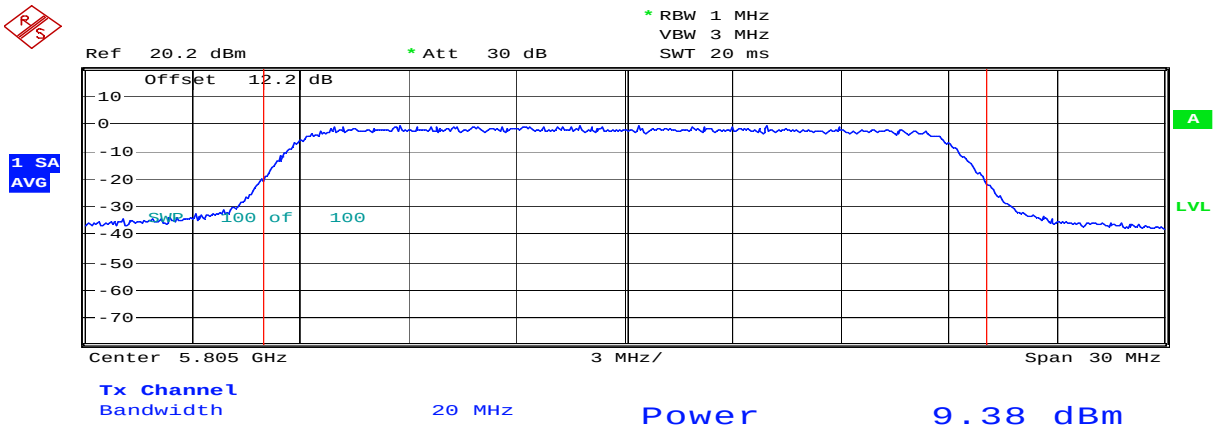

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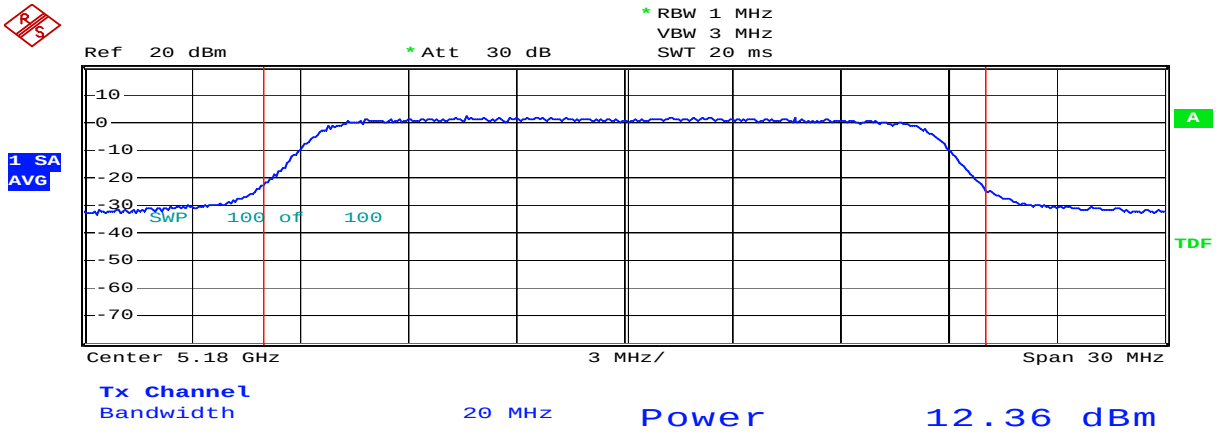

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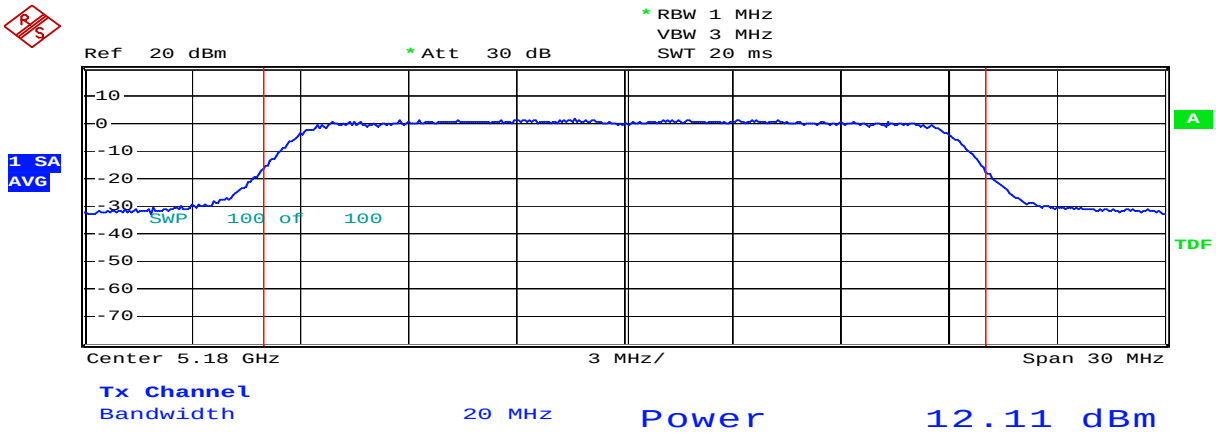

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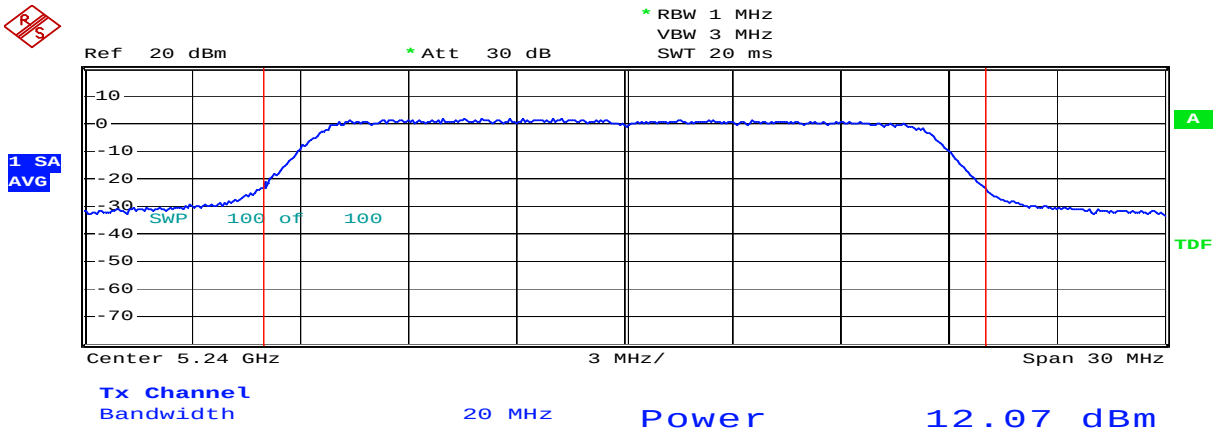

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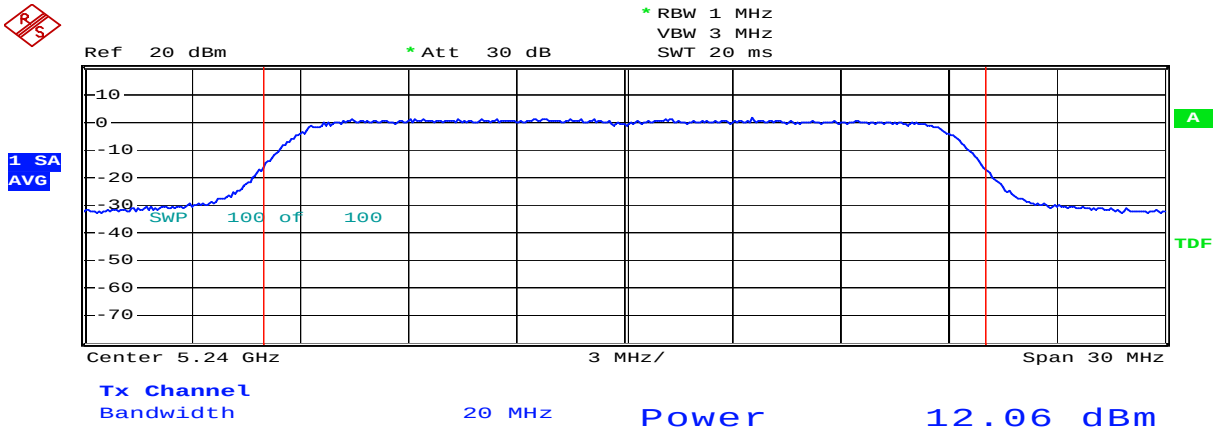

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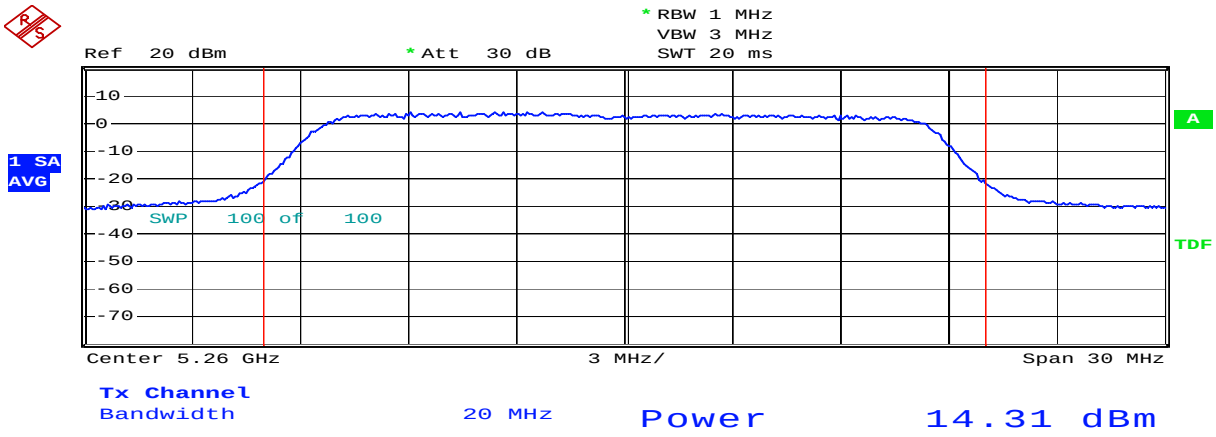

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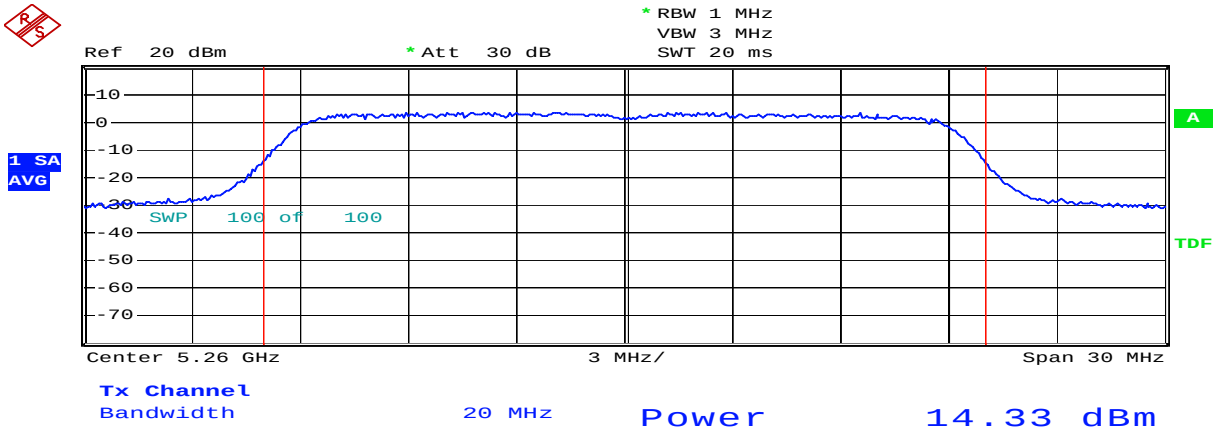

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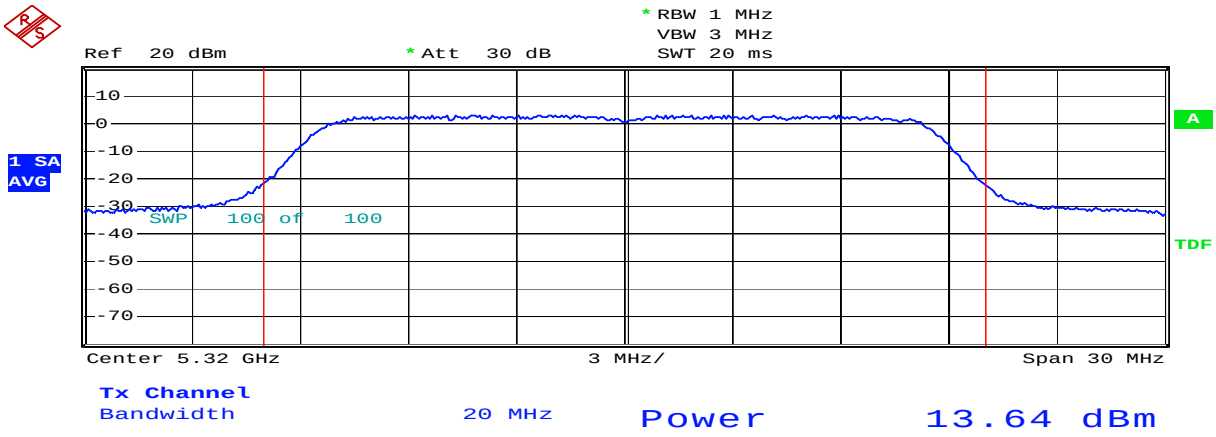
Output Power, 5260 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



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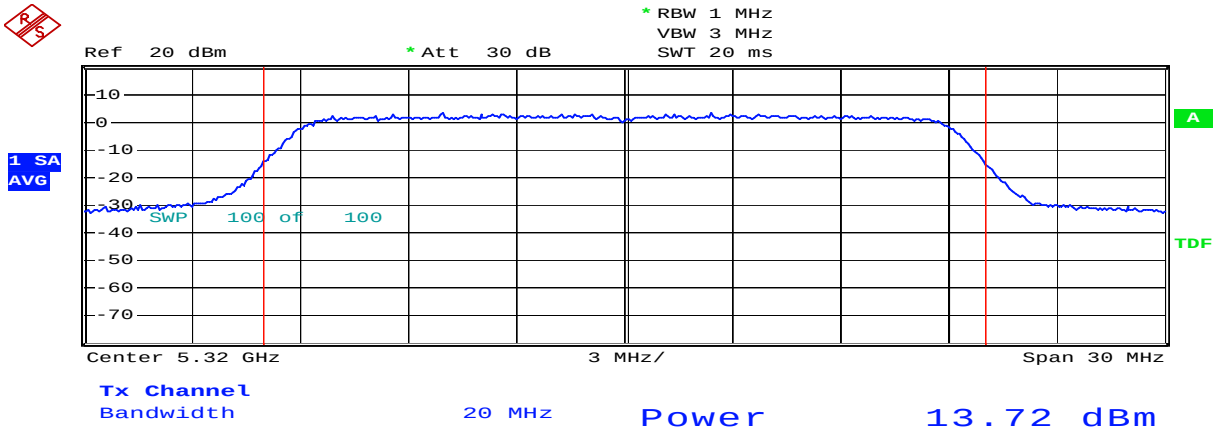

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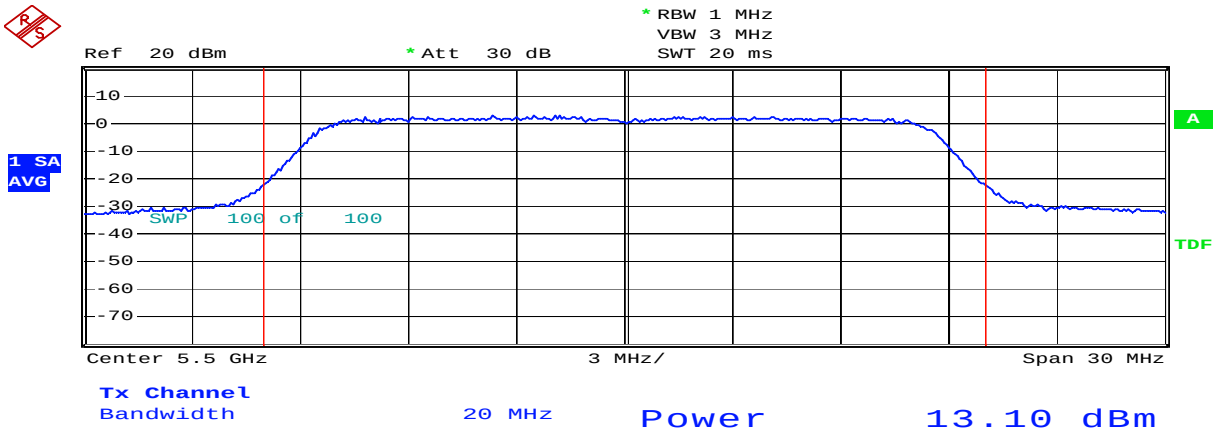
Output Power, 5320 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



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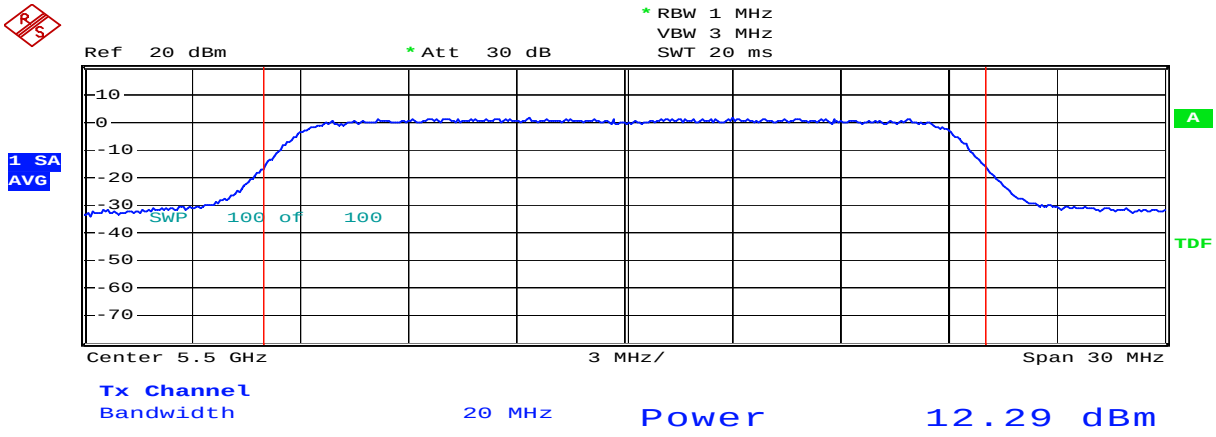
Output Power, 5500 MHz, Method 1, 802.11a 6Mbps, Radiated (Max: EUT H1, HP)



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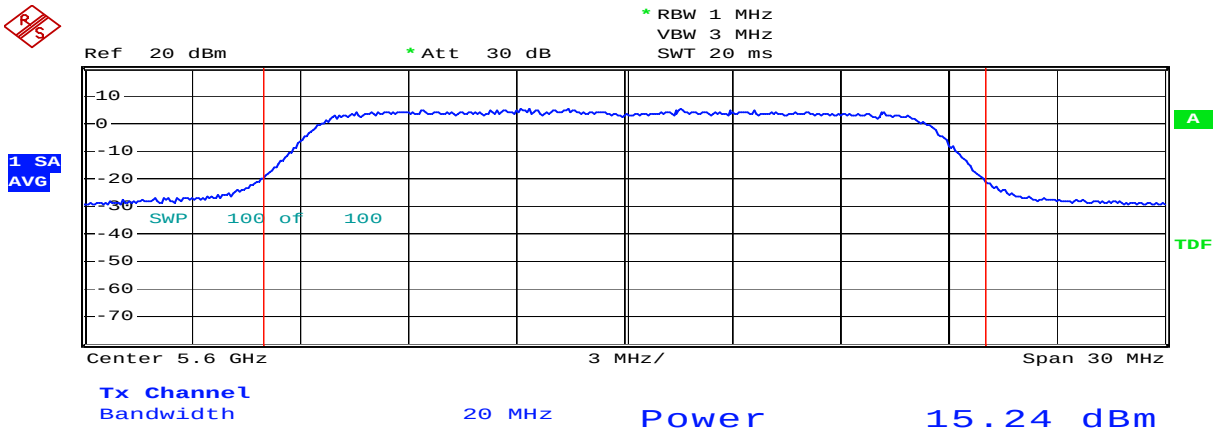
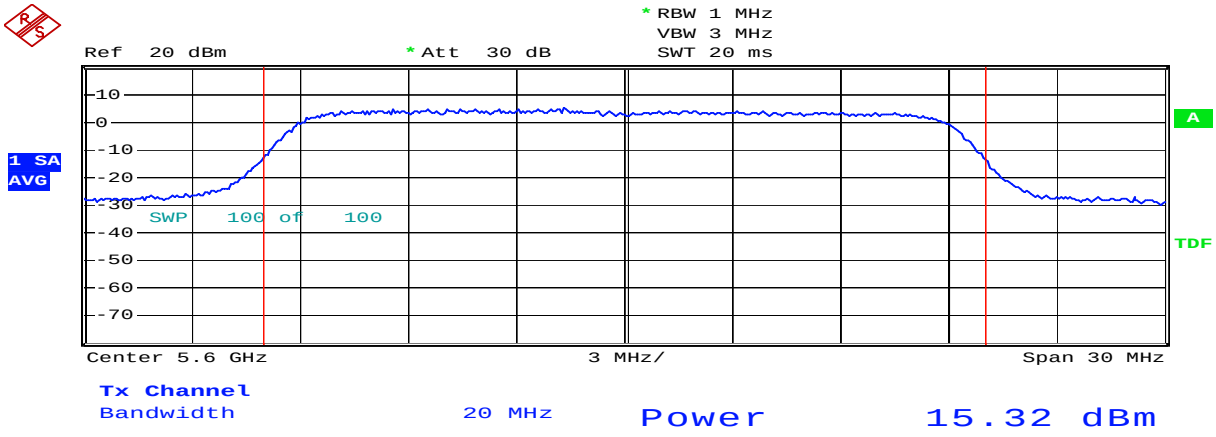
Output Power, 5500 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



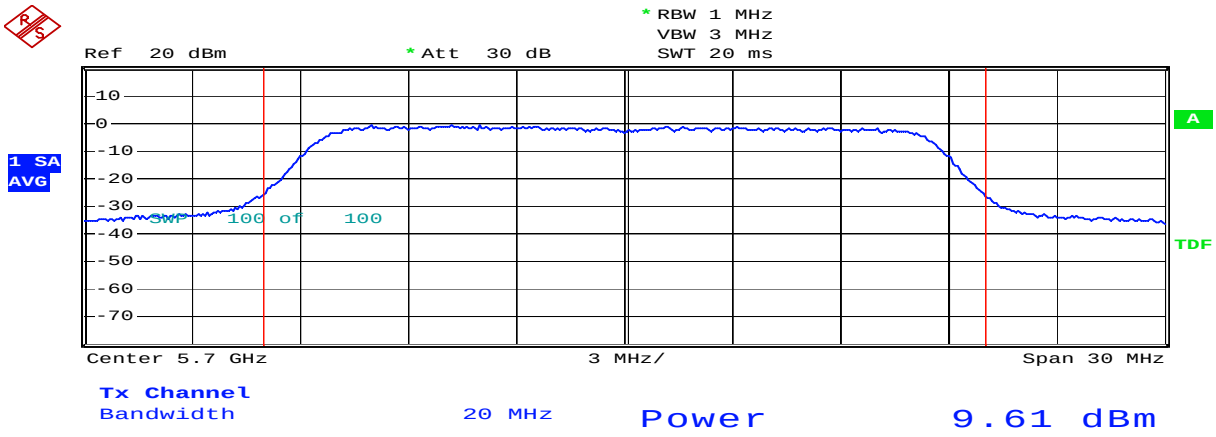
Date: 22.OCT.2010 16:29:50

Output Power, 5600 MHz, Method 1, 802.11a 6Mbps, Radiated (Max: EUT H1, HP)



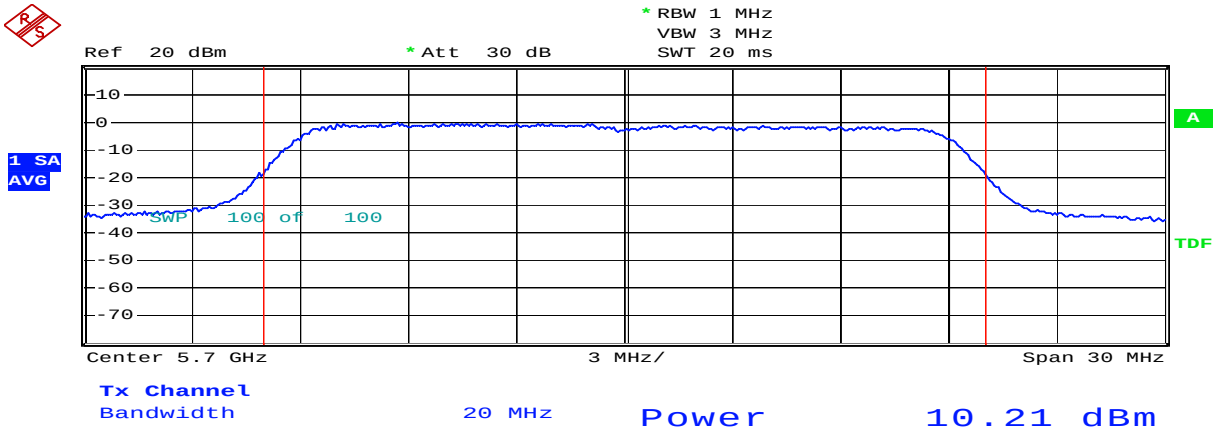
Date: 22.OCT.2010 16:31:47

Output Power, 5600 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



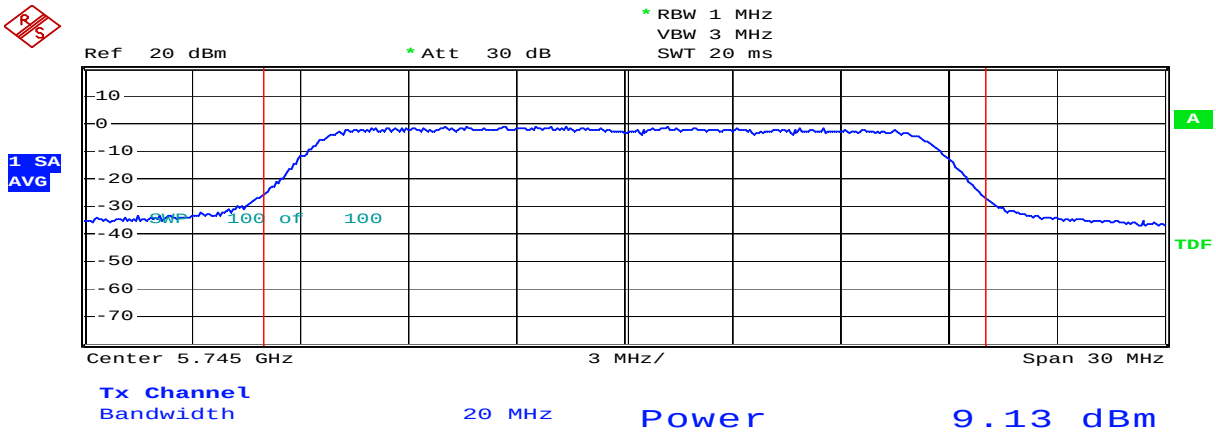
Date: 22.OCT.2010 16:33:44

Output Power, 5700 MHz, Method 1, 802.11a 6Mbps, Radiated (Max: EUT H1, HP)



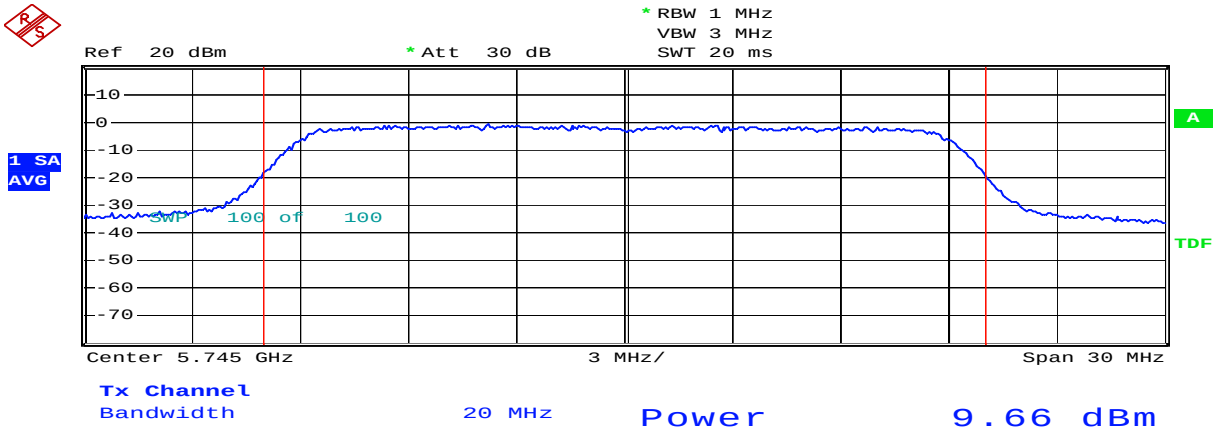
Date: 22.OCT.2010 16:35:20

Output Power, 5700 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



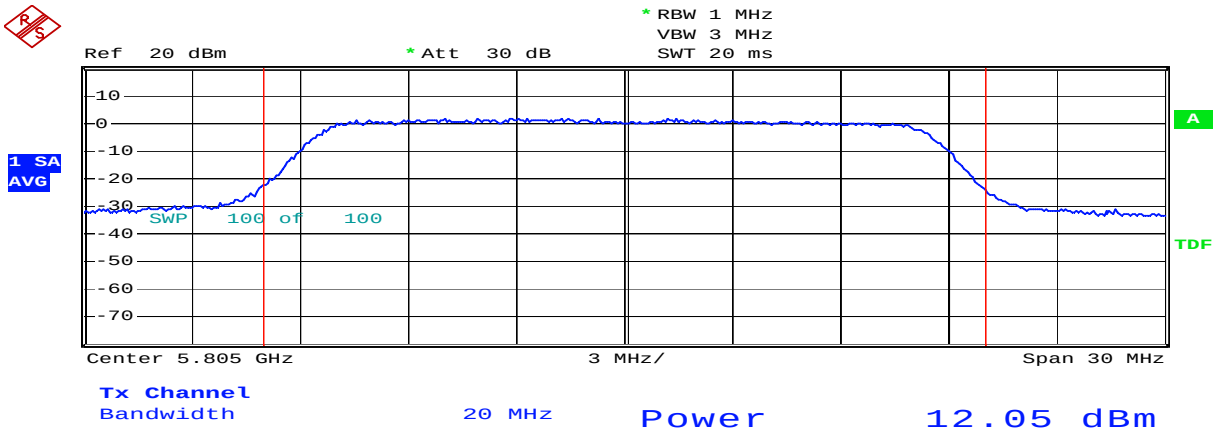
Date: 22.OCT.2010 16:36:49

Output Power, 5745 MHz, Method 1, 802.11a 6Mbps, Radiated (Max: EUT H1, HP)



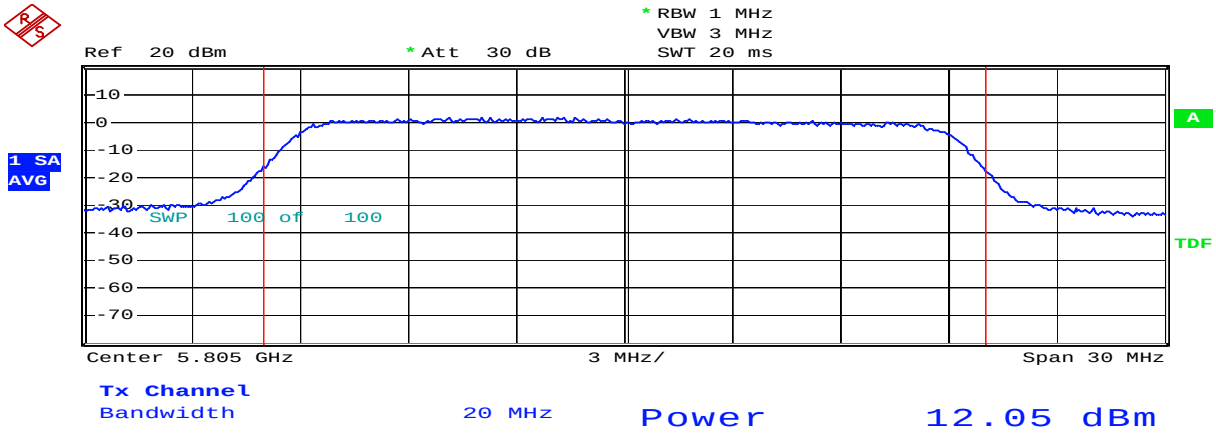
Date: 22.OCT.2010 16:38:08

Output Power, 5745 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)



Date: 22.OCT.2010 16:50:44

Output Power, 5805 MHz, Method 1, 802.11a 6Mbps, Radiated (Max: EUT H1, HP)



Date: 22.OCT.2010 16:52:05

Output Power, 5805 MHz, Method 1, 802.11n MCS0, Radiated (Max: EUT H1, HP)

4.3 Average Output Power

Measurement Data:

Ch. No.	Nominal Frequency (MHz)	Maximum Output Power dBm	
		802.11a, 6 Mbps	802.11n, MCS0
36	5180	17.7	17.1
40	5200	17.5	17.5
44	5220	17.7	17.1
48	5240	17.4	17.1
52	5260	19.5	19.5
56	5280	19.4	19.6
60	5300	19.5	19.8
64	5320	18.9	19.3
100	5500	15.7	14.6
104	5520	17.7	18.2
108	5540	17.7	18.2
112	5560	17.0	17.4
116	5580	16.7	16.9
120	5600	16.6	17.6
124	5620	16.1	17.4
128	5640	15.6	16.3
132	5660	15.1	15.6
136	5680	13.9	14.3
140	5700	10.2	10.6
149	5745	9.6	10.0
153	5765	12.7	13.9
157	5785	12.5	12.9
161	5805	11.7	12.1

The measurements were performed with an averaging power meter.

The EUT was transmitting continuously during this test.

Requirements:

No requirements. These results are reported only to show consistency with the SAR report.

4.4 Emission Bandwidth *B*

Para. No.: 15.407(a)

Test Results: Complies

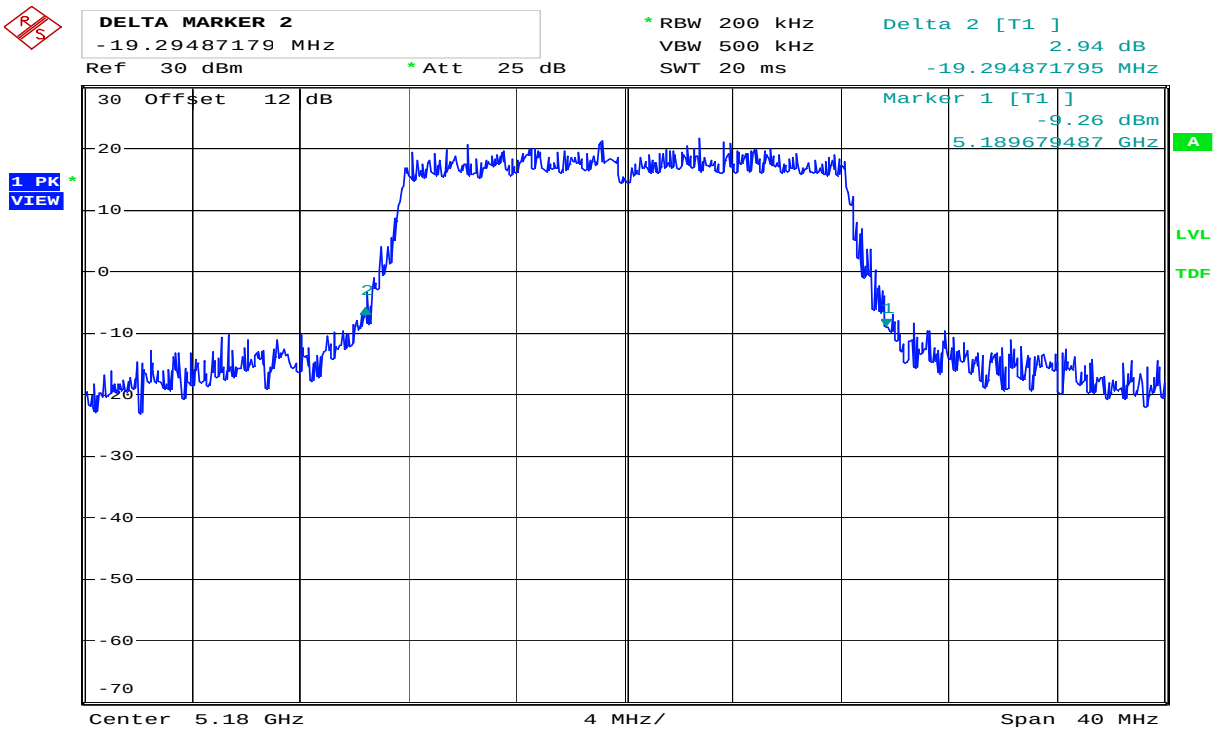
Measurement Data:

Ch. No.	Nominal Frequency (MHz)	26dB Bandwidth Measured Values (MHz)	
		802.11a 6Mbps	802.11n MCS0
36	5180	19.3	19.9
64	5320	19.3	20.1
104	5520	19.6	19.6
153	5765	19.6	19.9

The nominal Emissions Bandwidth is 20 MHz.

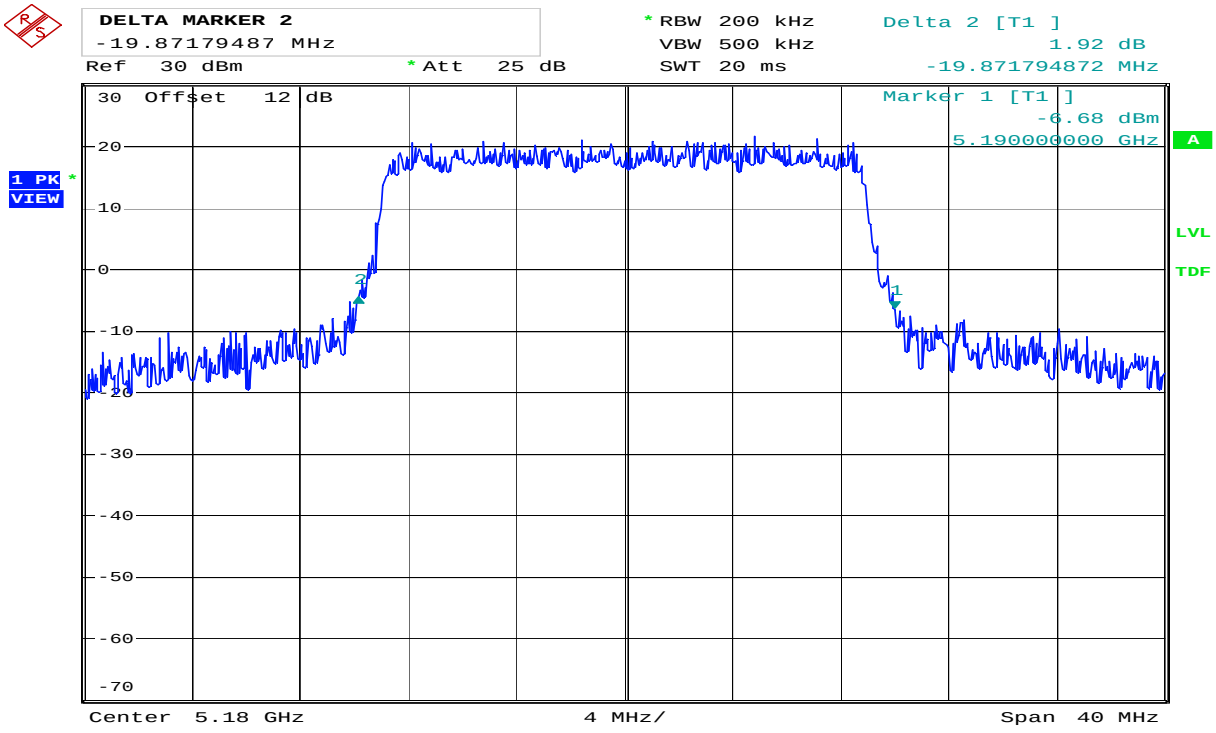
Limit:

No requirements as long as the emissions are within the band-edges.



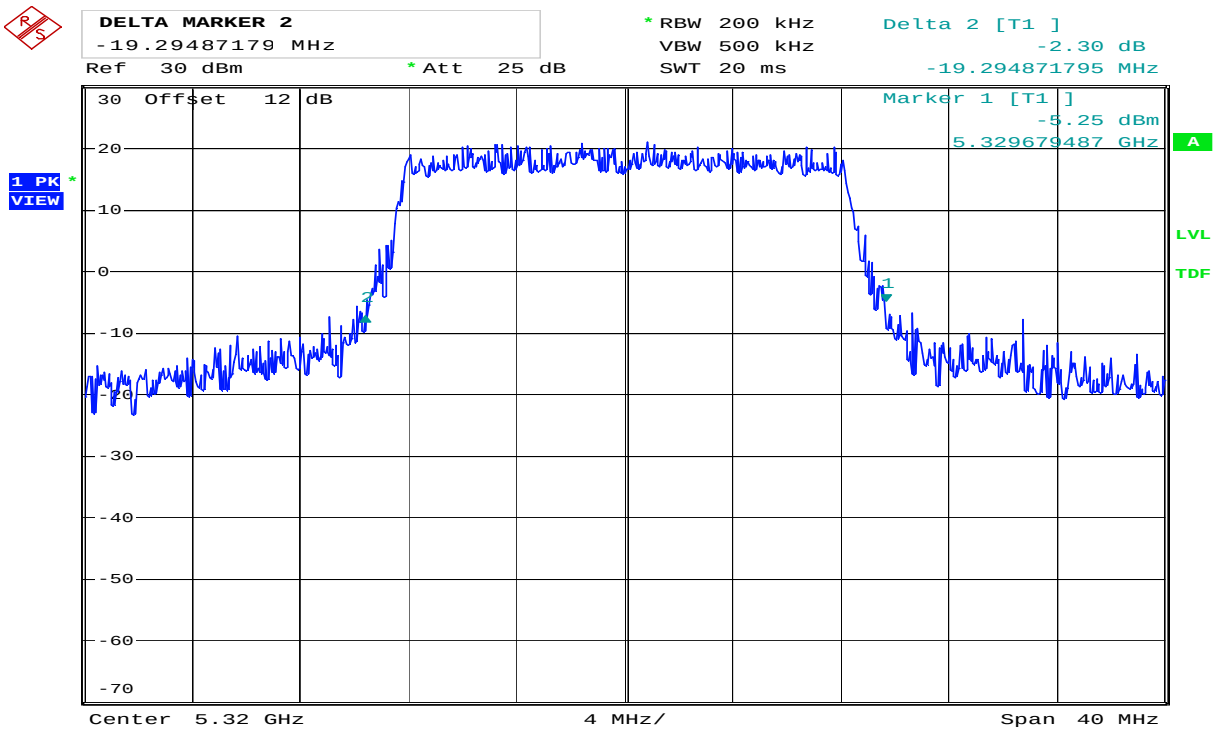
Date: 29.JUN.2010 14:26:05

Emission Bandwidth *B*, 5180 MHz, 802.11a 6Mbps



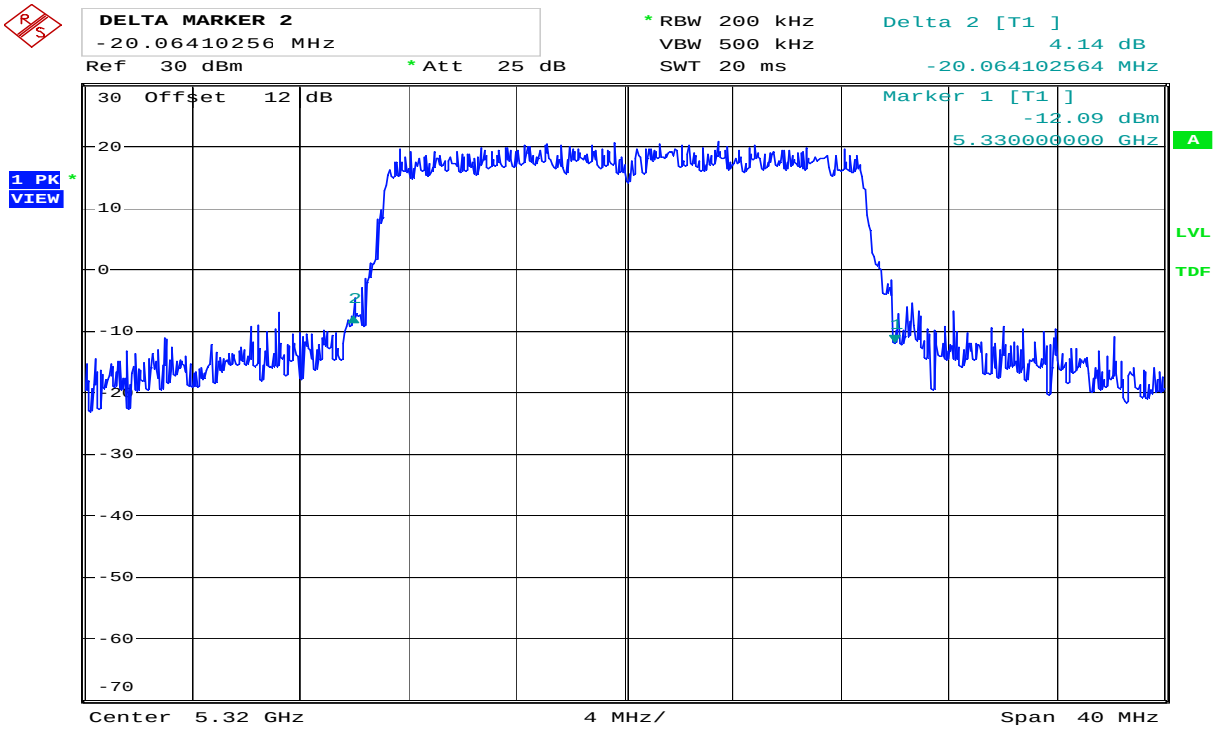
Date: 29.JUN.2010 14:23:50

Emission Bandwidth *B*, 5180 MHz, 802.11n MCS0



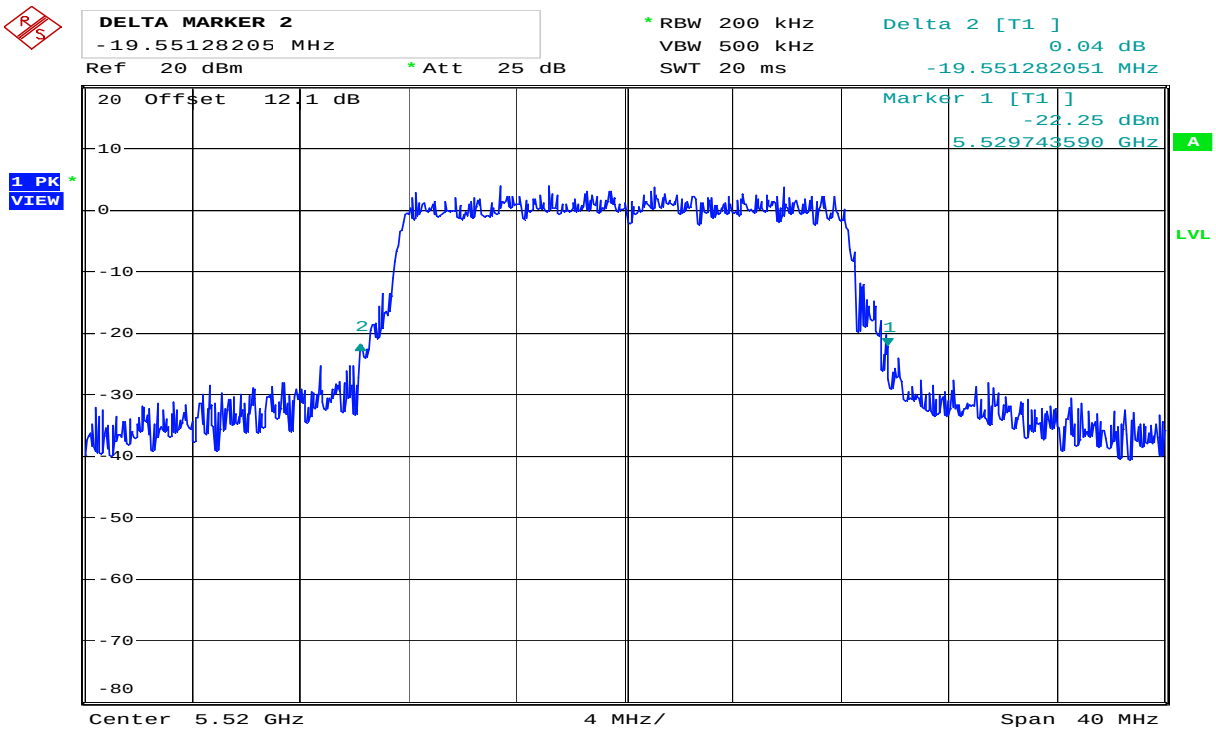
Date: 29.JUN.2010 14:28:12

Emission Bandwidth *B*, 5320 MHz, 802.11a 6Mbps



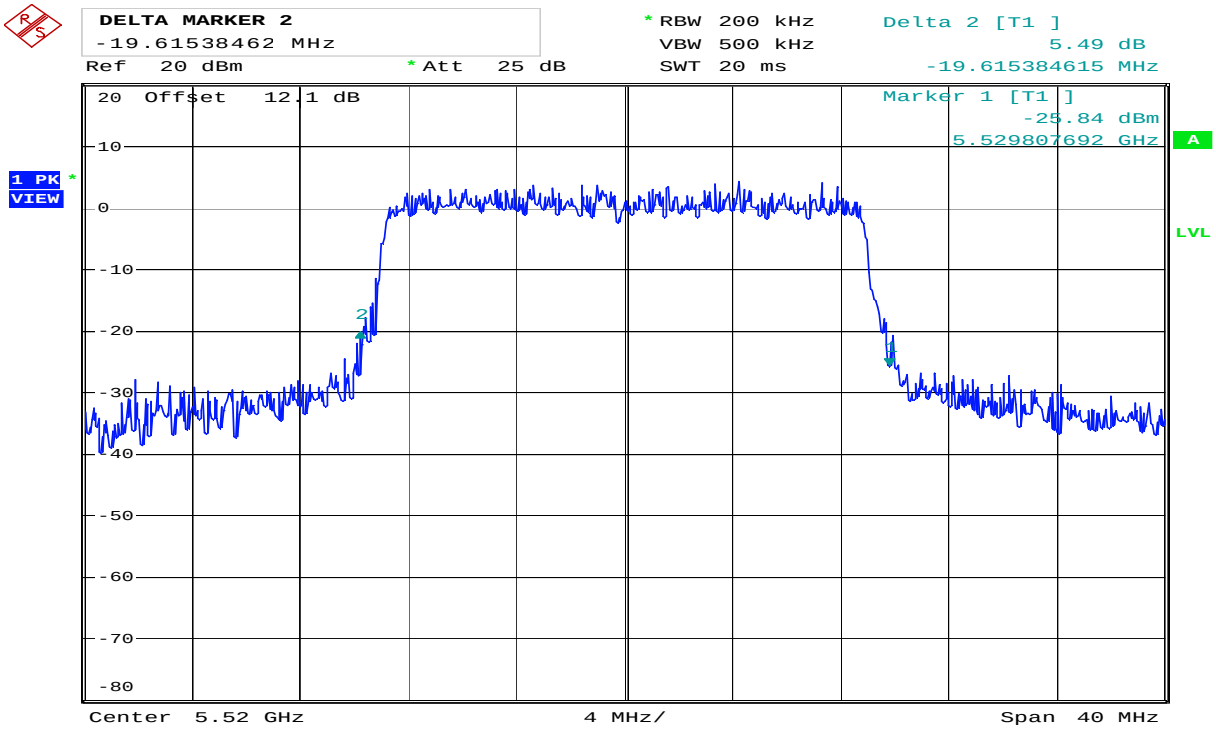
Date: 29.JUN.2010 14:29:29

Emission Bandwidth *B*, 5320 MHz, 802.11n MCS0



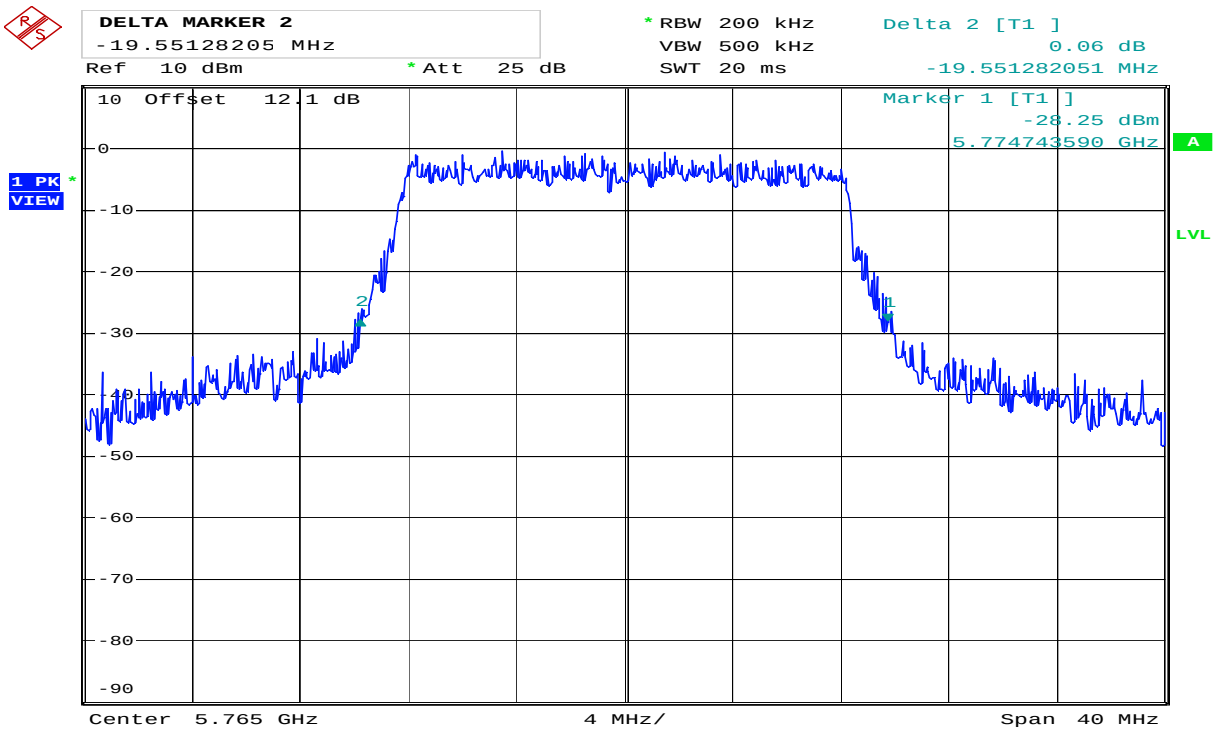
Date: 19.OCT.2010 12:53:27

Emission Bandwidth *B*, 5520 MHz, 802.11a 6Mbps



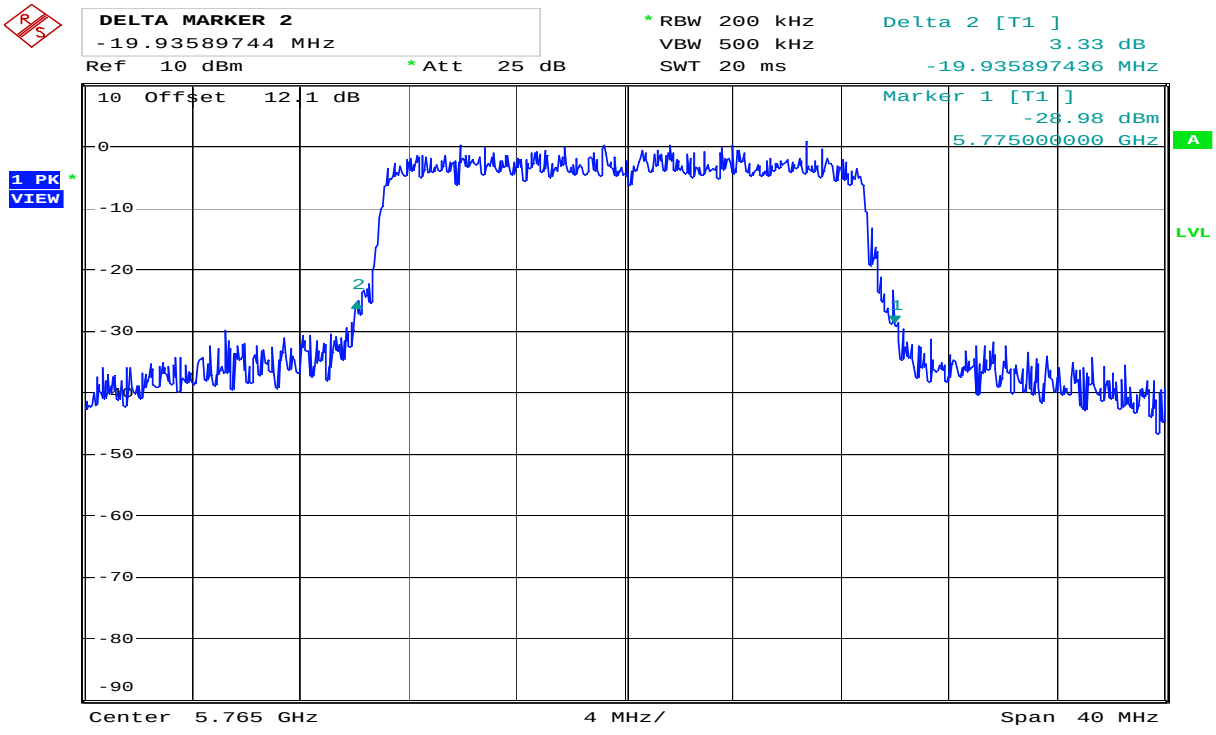
Date: 19.OCT.2010 12:57:03

Emission Bandwidth *B*, 5520 MHz, 802.11n MCS0



Date: 19.OCT.2010 12:59:39

Emission Bandwidth *B*, 5765 MHz, 802.11a 6Mbps



Date: 19.OCT.2010 13:01:15

Emission Bandwidth *B*, 5765 MHz, 802.11n MCS0

4.5 Peak Power Spectral Density

Para. No.: 15.407(a)

Test Results: Complies

Measurement Data:

Ch. No.	Nominal Frequency (MHz)	Measured Value (dBm)		
		802.11a 6Mbps	802.11n MCS0	Limit
36	5180	3.6	3.9	4.0
40	5200	3.8	3.4	
44	5220	3.6	3.7	
48	5240	4.0	3.7	
52	5260	5.7	5.9	11.0
64	5320	4.3	4.1	
100	5500	0.6	-0.9	
104	5520	5.5	5.7	
140	5700	-4.9	-4.4	
153	5765	1.0	0.7	17.0

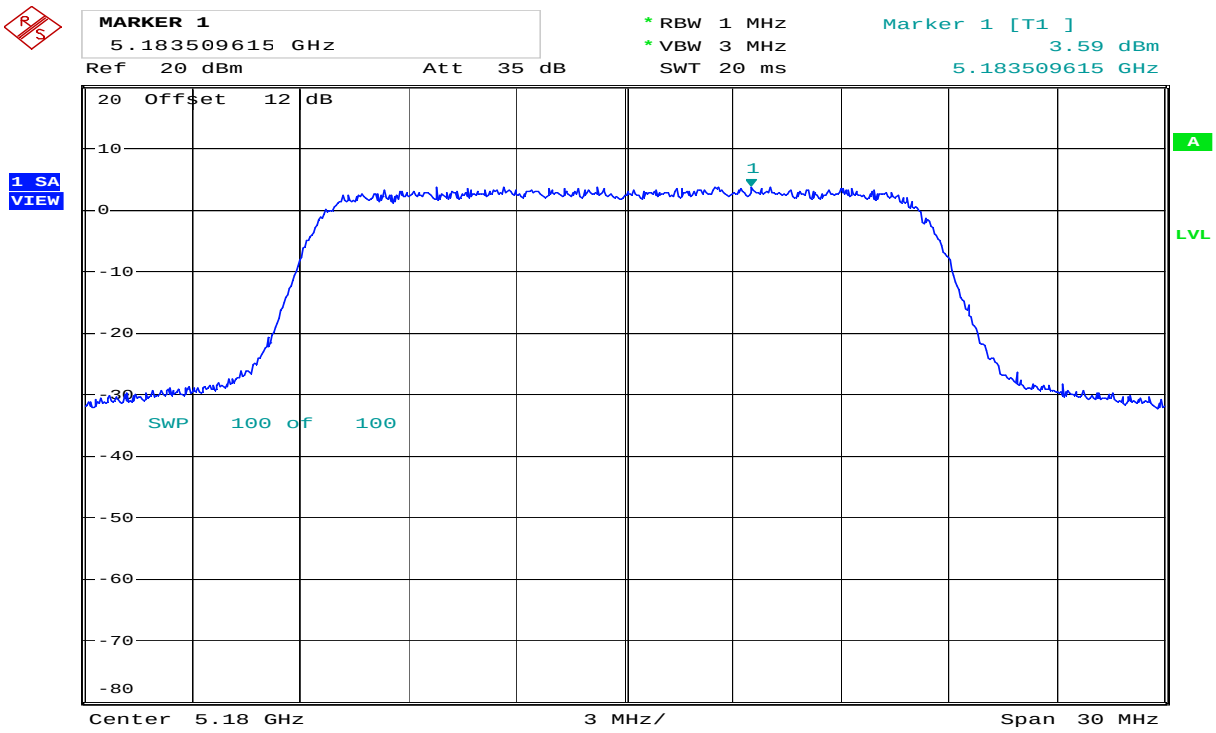
The test was performed using method 2 as described in ANSI C63.10-2009.

Power method 1 settings were used for the second trace.

Power Spectral Density limits:

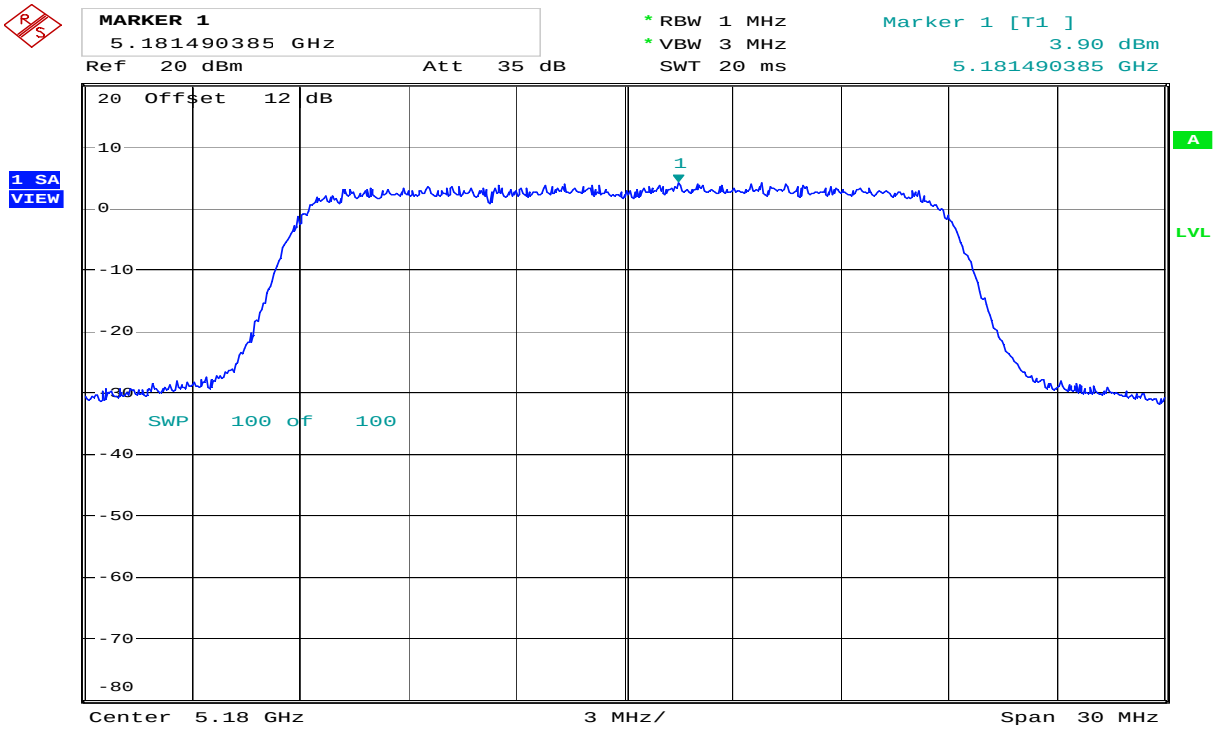
Frequency Band	Power Spectral Density limit
5150 – 5250 MHz	Less than 4 dBm in any 1 MHz band
5250 – 5350 MHz	Less than 11 dBm in any 1 MHz band
5470 – 5725 MHz	Less than 11 dBm in any 1 MHz band
5725 – 5825 MHz	Less than 17 dBm in any 1 MHz band

If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density from the intentional radiator shall be reduced below the stated value above by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



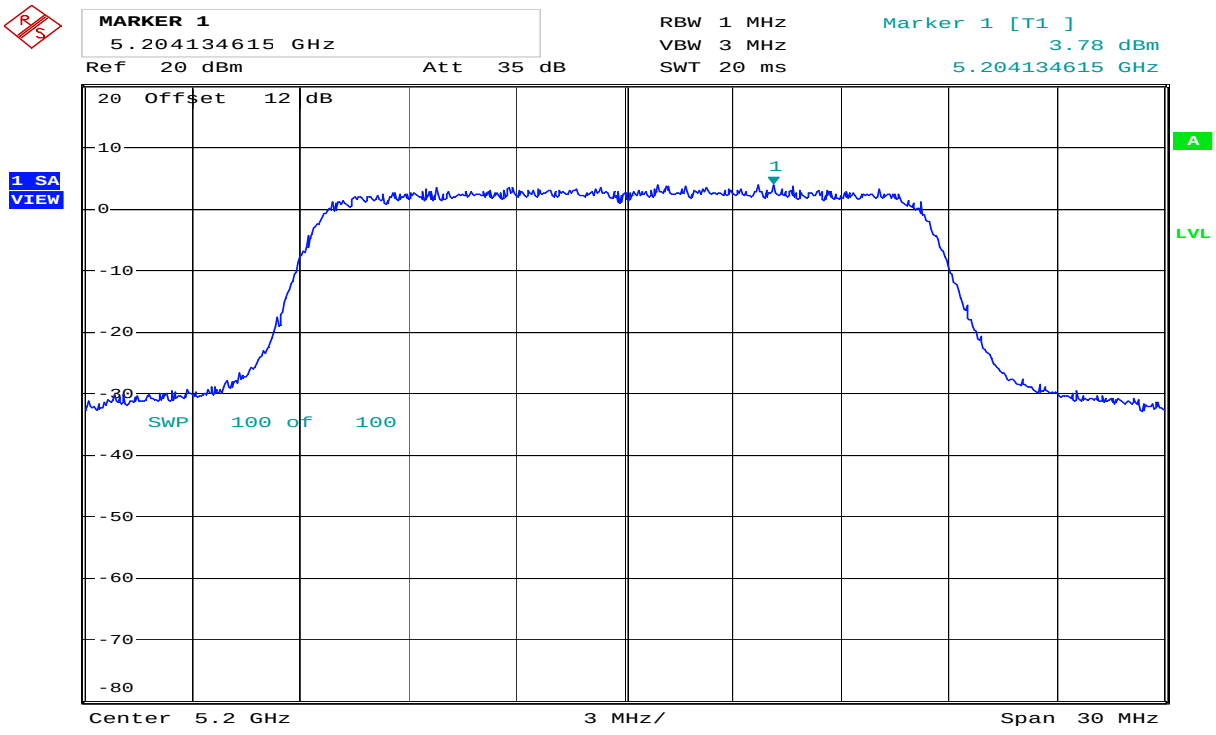
Date: 26.JUL.2010 14:38:55

Power Spectral Density, 5180 MHz, 802.11a - 6Mbps, Method 2



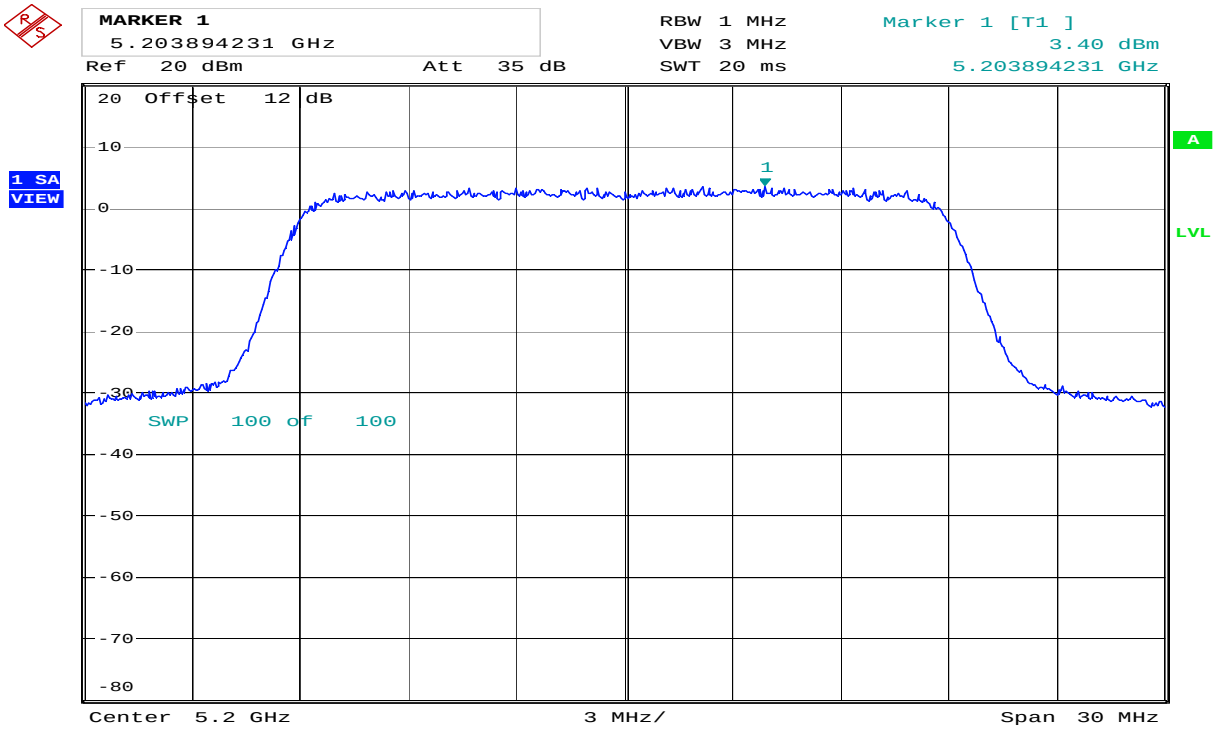
Date: 26.JUL.2010 14:40:18

Power Spectral Density, 5180 MHz, 802.11n – MCS0, Method 2



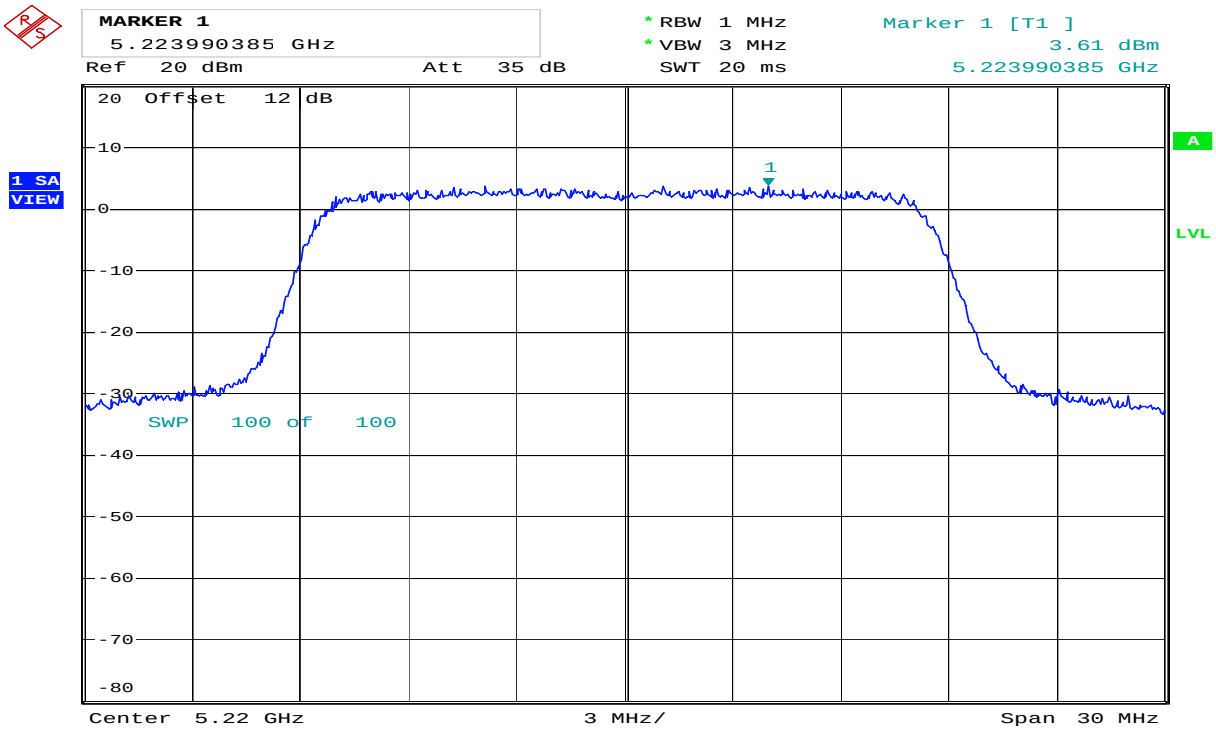
Date: 23.JUL.2010 14:10:33

Power Spectral Density, 5200 MHz, 802.11a - 6Mbps, Method 2



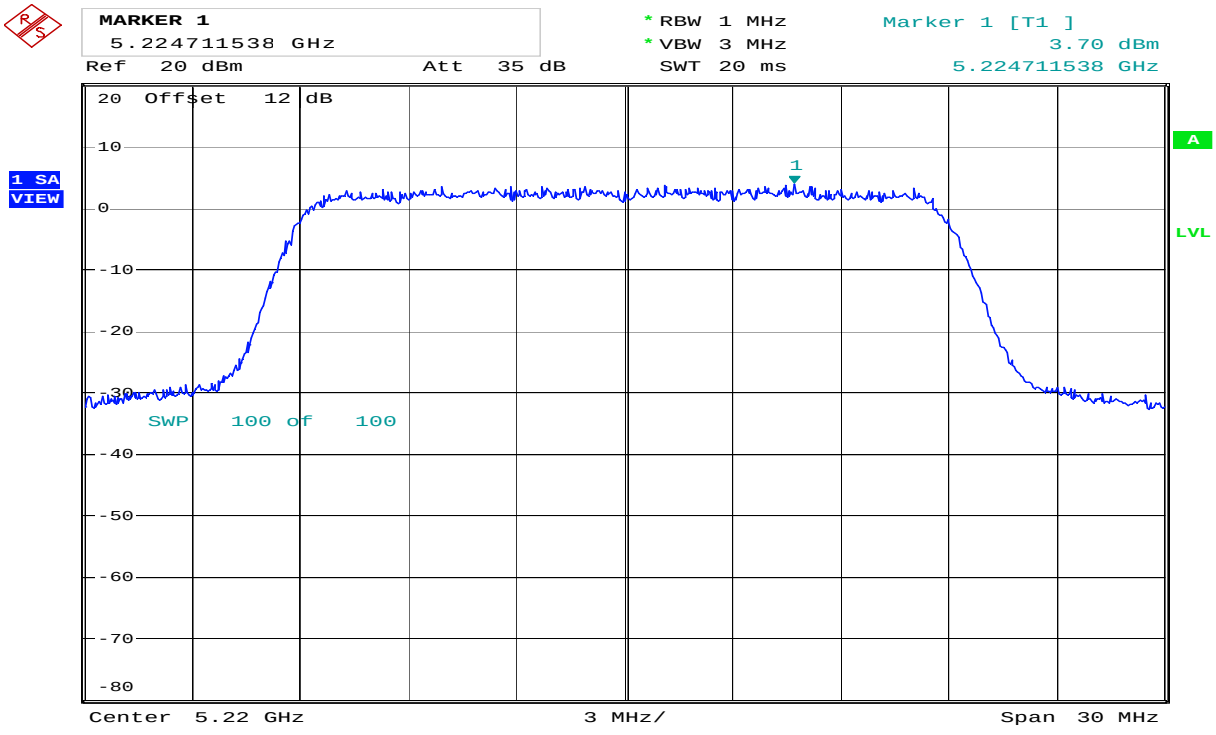
Date: 23.JUL.2010 14:12:00

Power Spectral Density, 5200 MHz, 802.11n – MCS0, Method 2



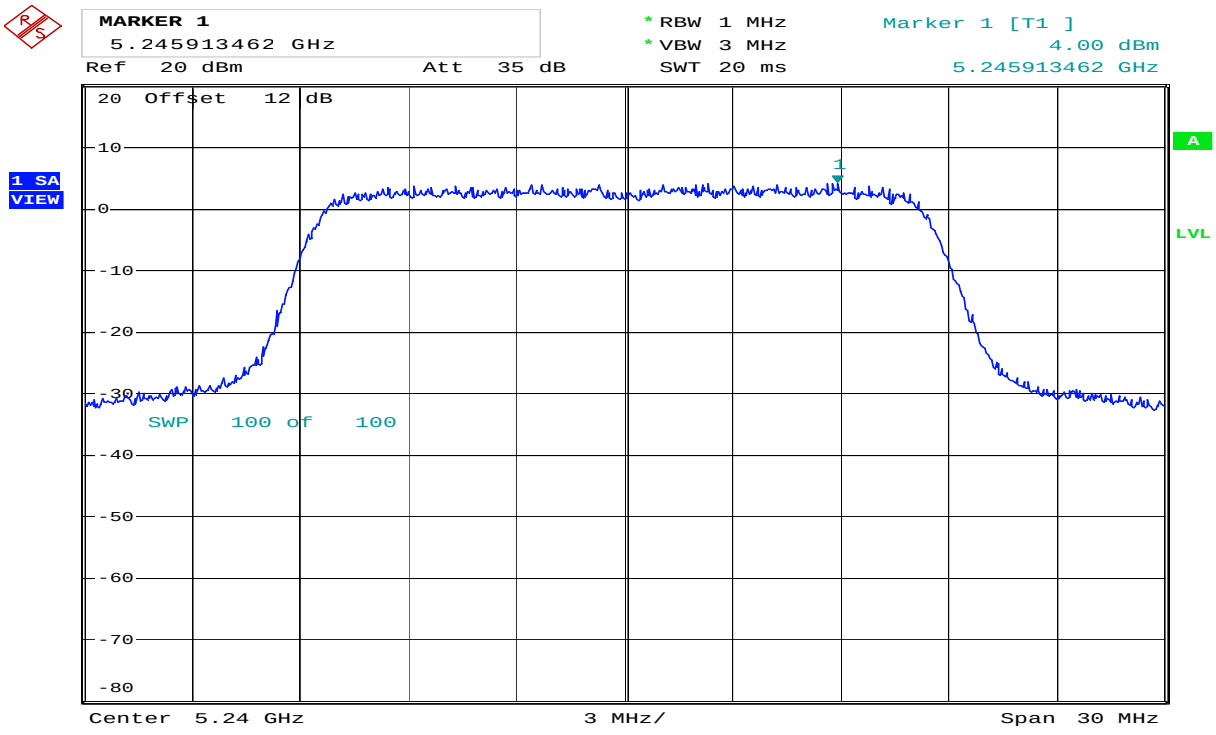
Date: 26.JUL.2010 14:41:51

Power Spectral Density, 5220 MHz, 802.11a - 6Mbps, Method 2



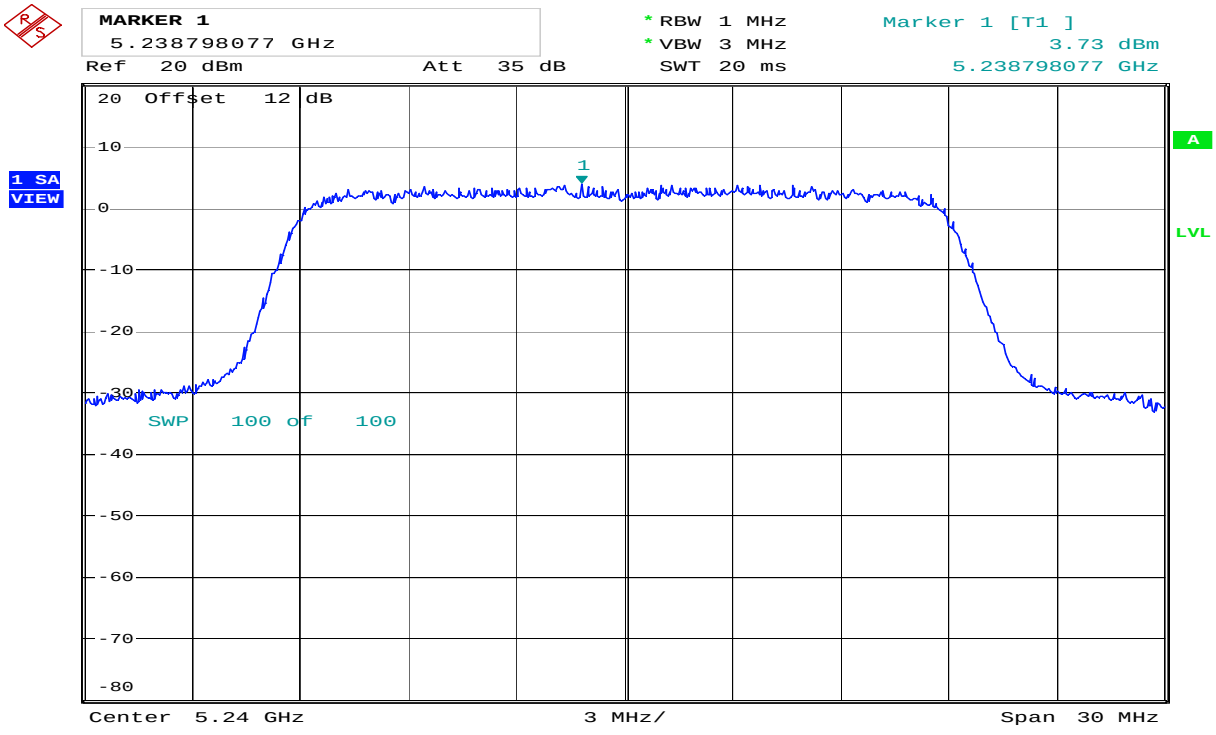
Date: 26.JUL.2010 14:42:47

Power Spectral Density, 5220 MHz, 802.11n – MCS0, Method 2



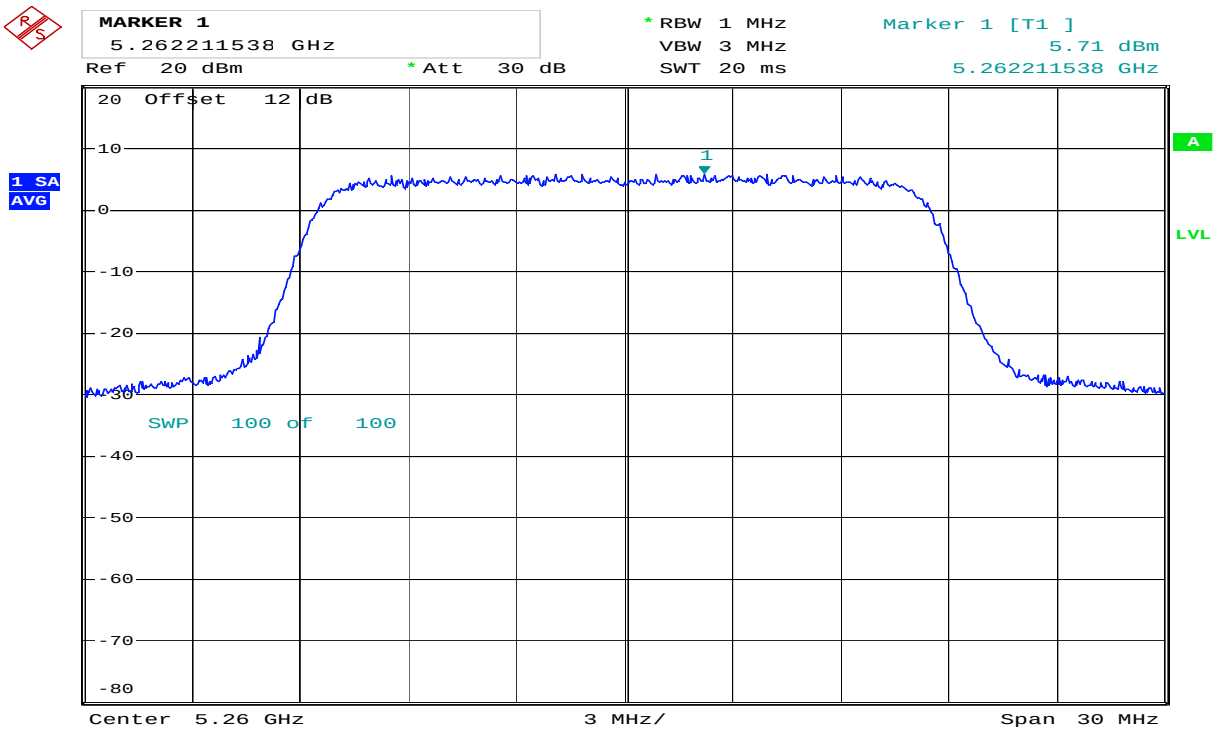
Date: 26.JUL.2010 14:45:52

Power Spectral Density, 5240 MHz, 802.11a - 6Mbps, Method 2



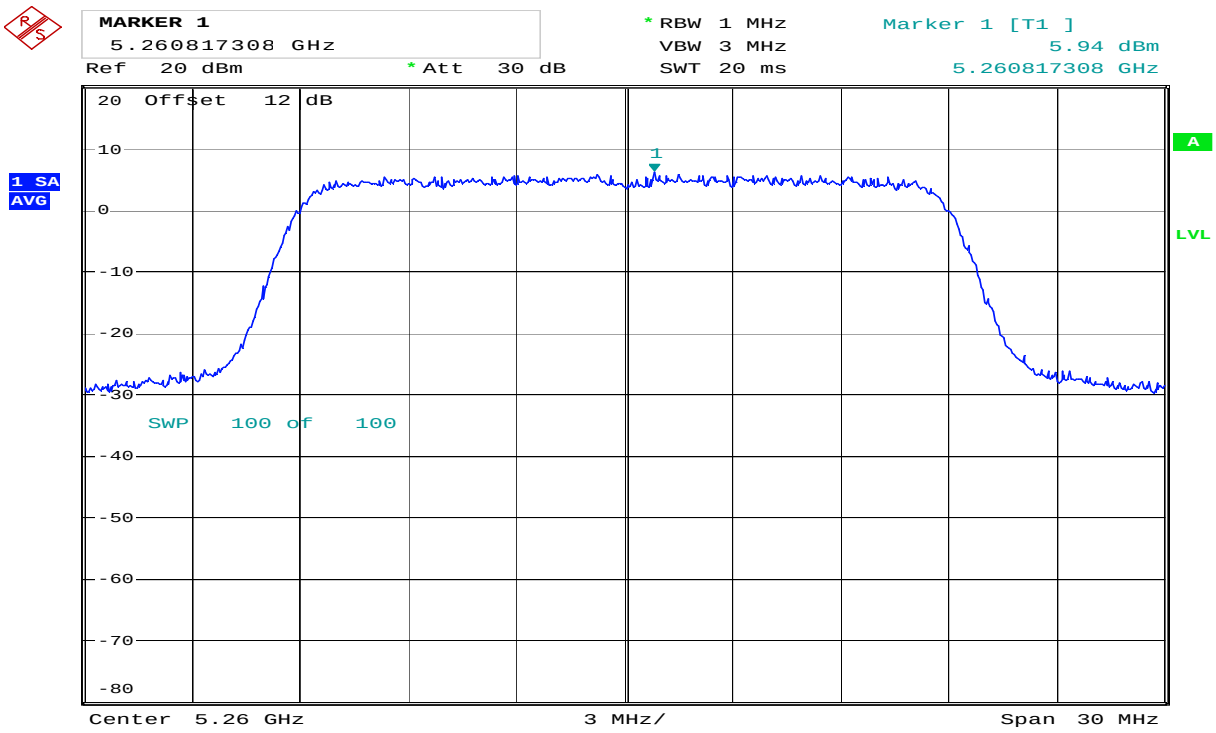
Date: 26.JUL.2010 14:46:41

Power Spectral Density, 5240 MHz, 802.11n – MCS0, Method 2



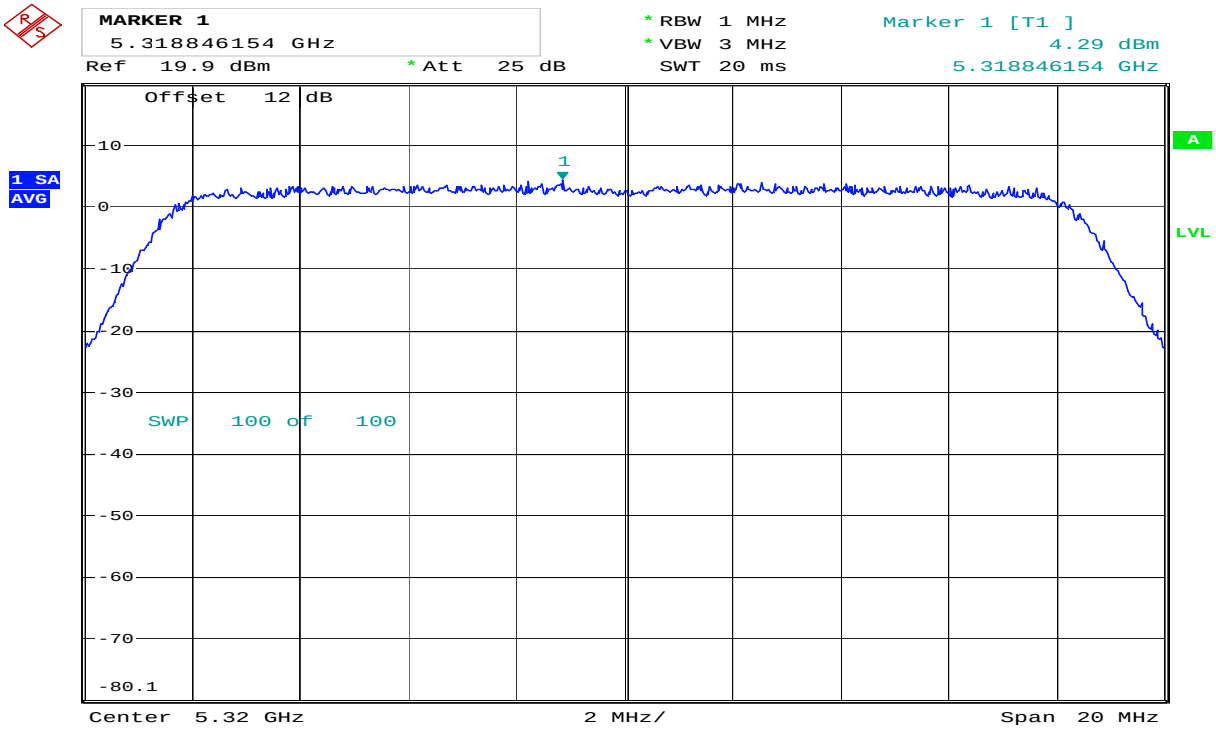
Date: 22.JUL.2010 17:06:15

Power Spectral Density, 5260 MHz, 802.11a - 6Mbps, Method 2



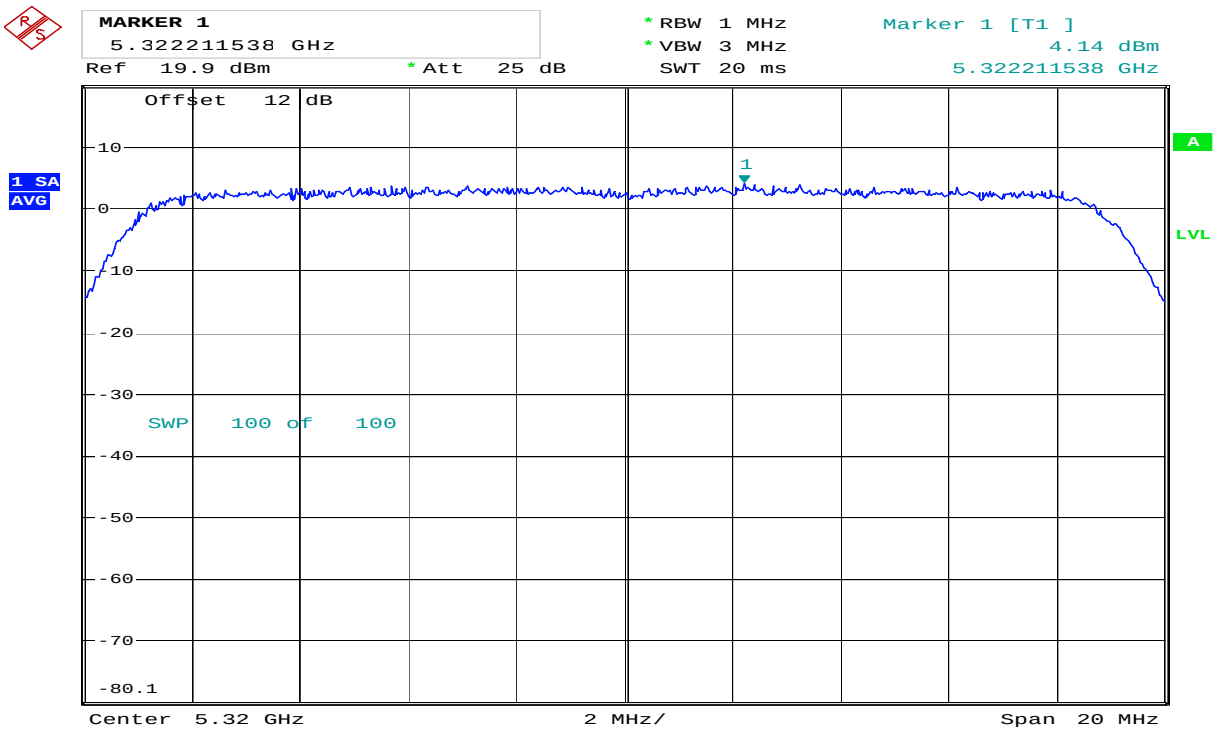
Date: 22.JUL.2010 17:07:25

Power Spectral Density, 5260 MHz, 802.11n – MCS0, Method 2



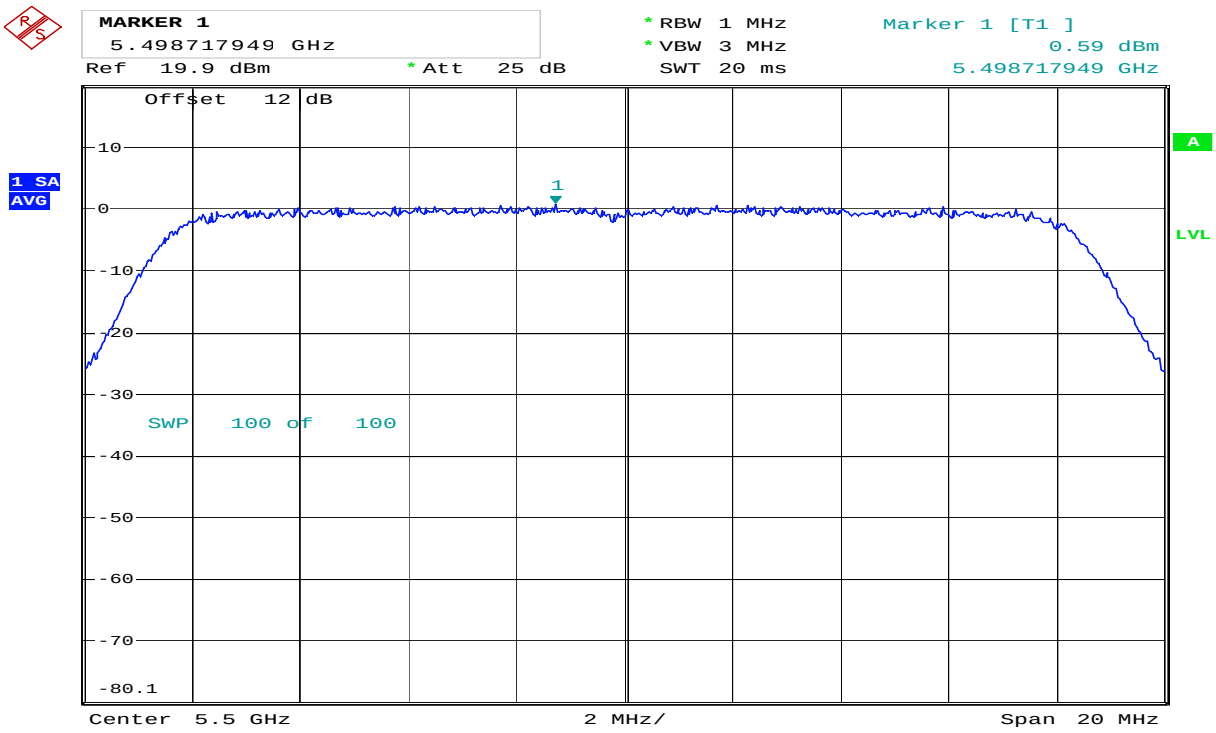
Date: 14.JUL.2010 11:30:04

Power Spectral Density, 5320 MHz, 802.11a - 6Mbps, Method 2



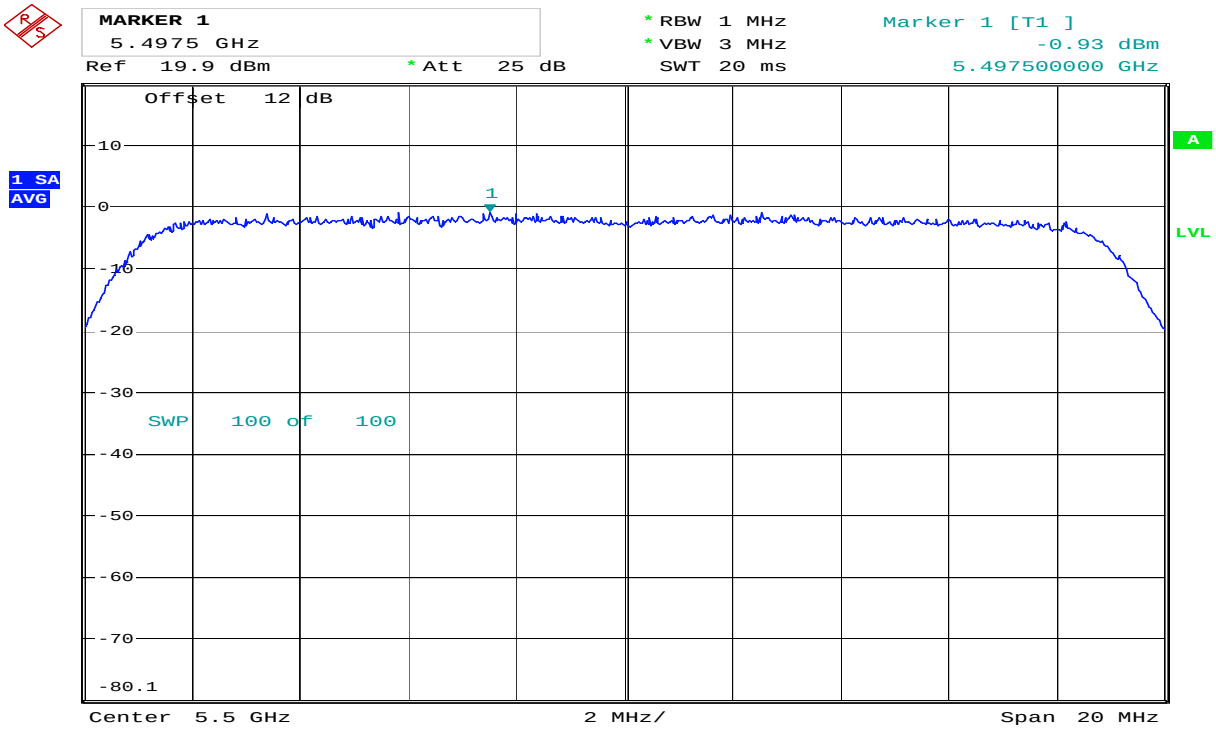
Date: 14.JUL.2010 11:31:36

Power Spectral Density, 5320 MHz, 802.11n – MCS0, Method 2



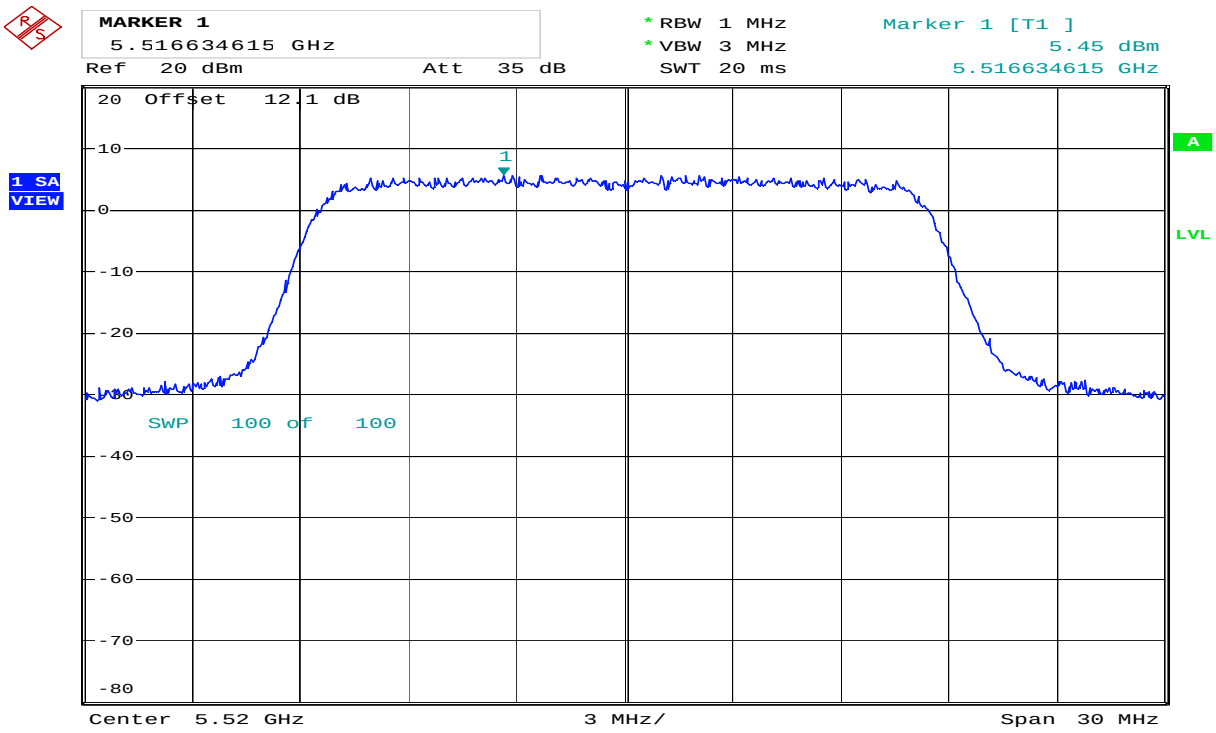
Date: 14.JUL.2010 11:32:55

Power Spectral Density, 5500 MHz, 802.11a - 6Mbps, Method 2



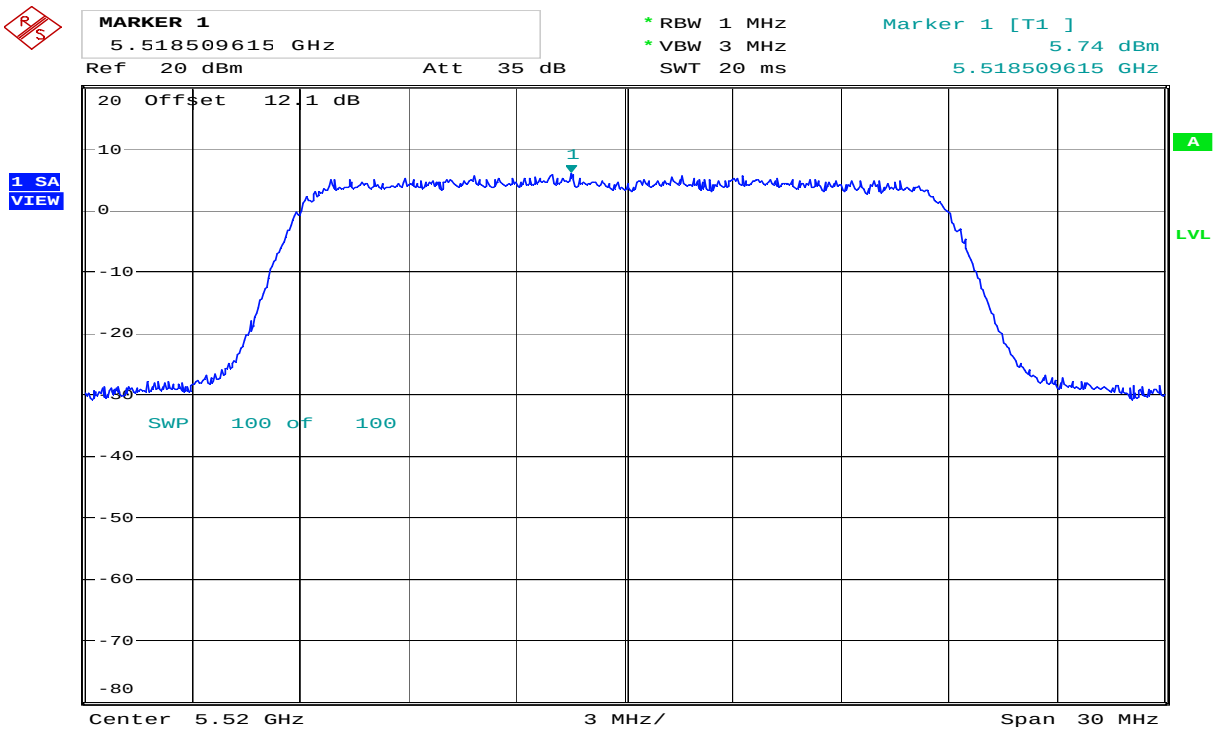
Date: 14.JUL.2010 11:35:40

Power Spectral Density, 5500 MHz, 802.11n – MCS0, Method 2



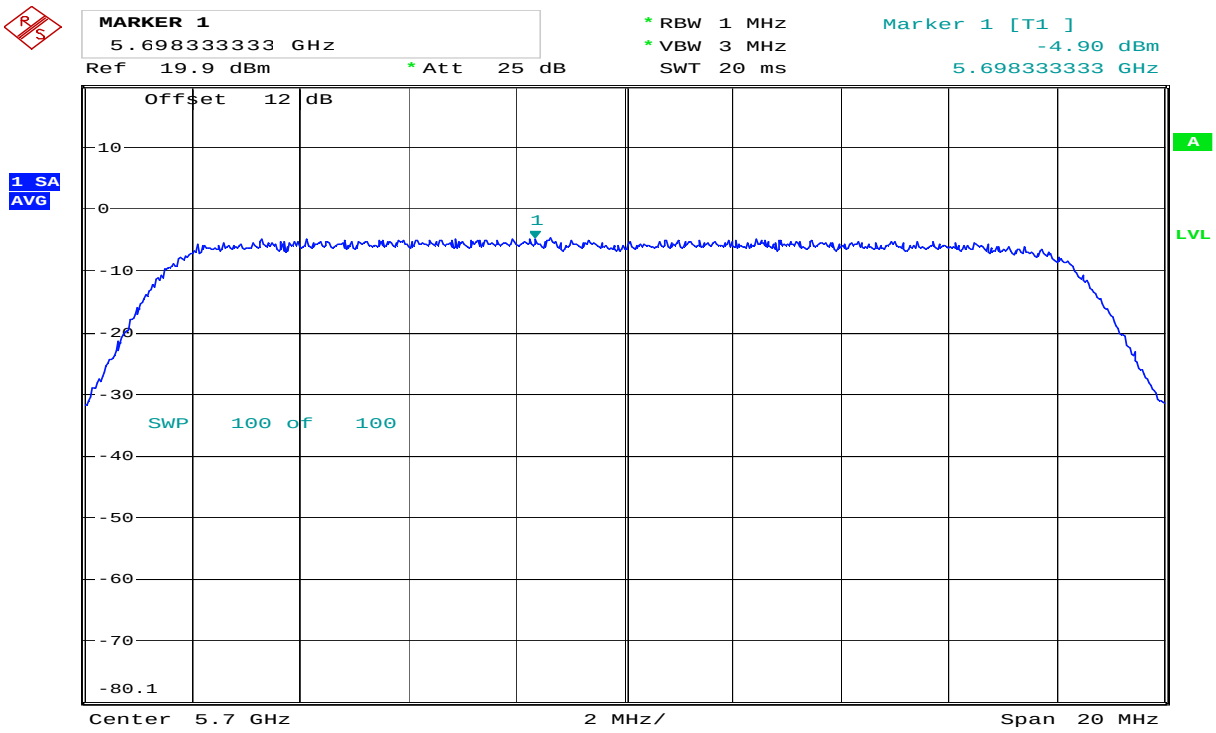
Date: 26.JUL.2010 15:21:51

Power Spectral Density, 5520 MHz, 802.11a - 6Mbps, Method 2



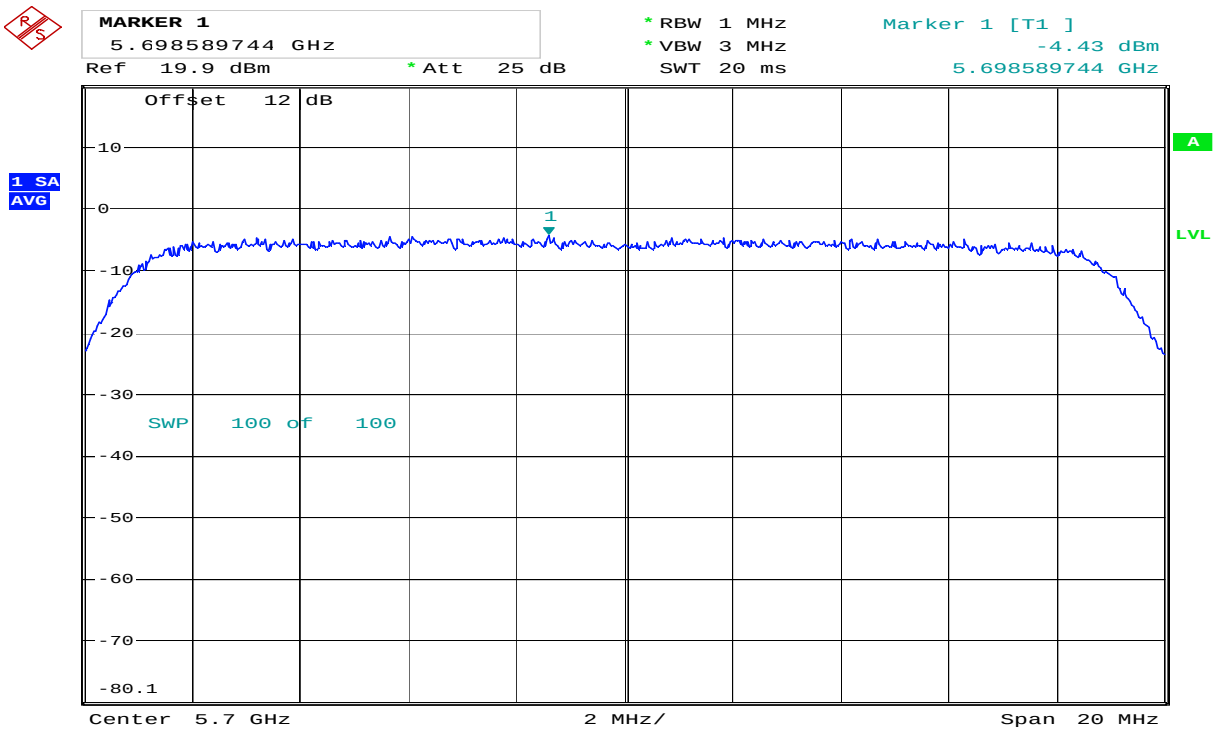
Date: 26.JUL.2010 15:24:01

Power Spectral Density, 5520 MHz, 802.11n – MCS0, Method 2



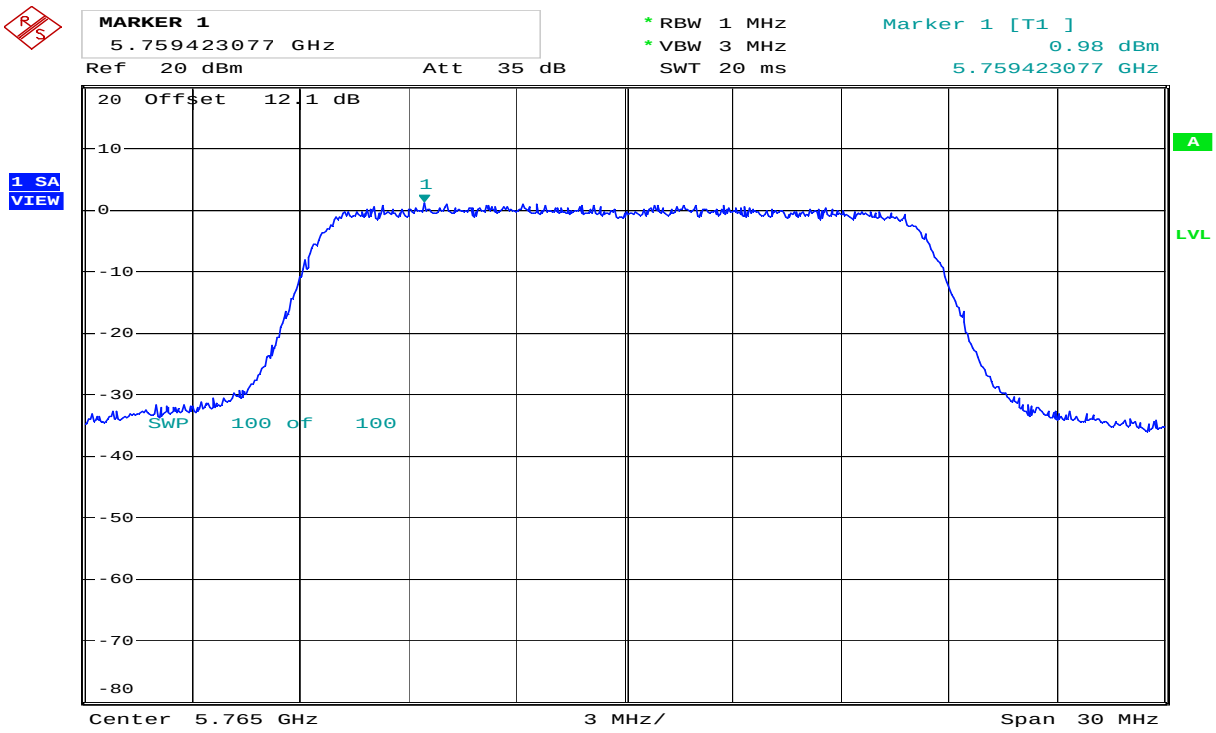
Date: 14.JUL.2010 11:37:04

Power Spectral Density, 5700 MHz, 802.11a - 6Mbps, Method 2



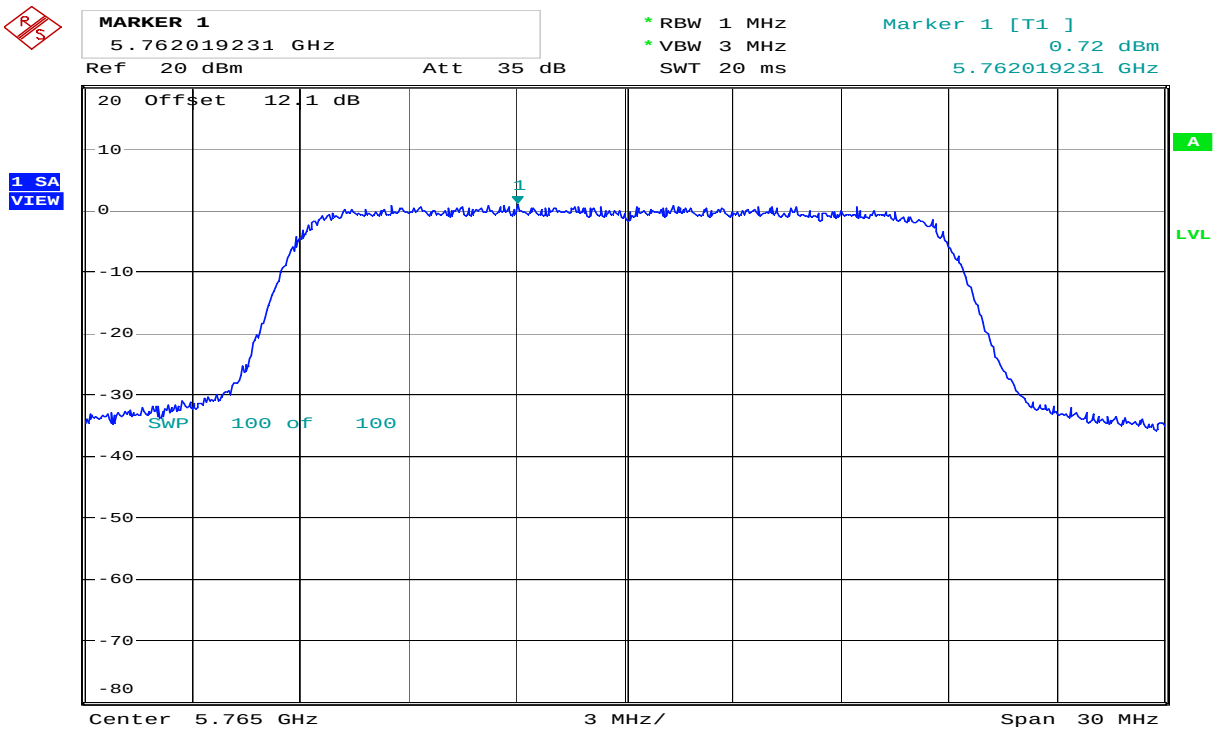
Date: 14.JUL.2010 11:38:32

Power Spectral Density, 5700 MHz, 802.11n – MCS0, Method 2



Date: 26.JUL.2010 15:33:28

Power Spectral Density, 5760 MHz, 802.11a - 6Mbps, Method 2



Date: 26.JUL.2010 15:34:28

Power Spectral Density, 5760 MHz, 802.11n – MCS0, Method 2

4.6 Peak Spectral Density

Industry Canada RSS-210 A9.5(2)

Test Results: Complies

Measurement Data:

Carrier Frequency	Peak Spectral Limit dBm		Measured Peak Spectral Density dBm		Necessary Reduction in PPSD dB	
	802.11a	802.11n	802.11a	802.11n	802.11a	802.11n
5180 MHz	20.7	20.1	12.0	11.4	0	0
5260 MHz	22.5	22.5	16.1	15.5	0	0
5320 MHz	21.9	22.3	14.5	15.4	0	0
5520 MHz	20.7	21.2	12.2	12.7	0	0

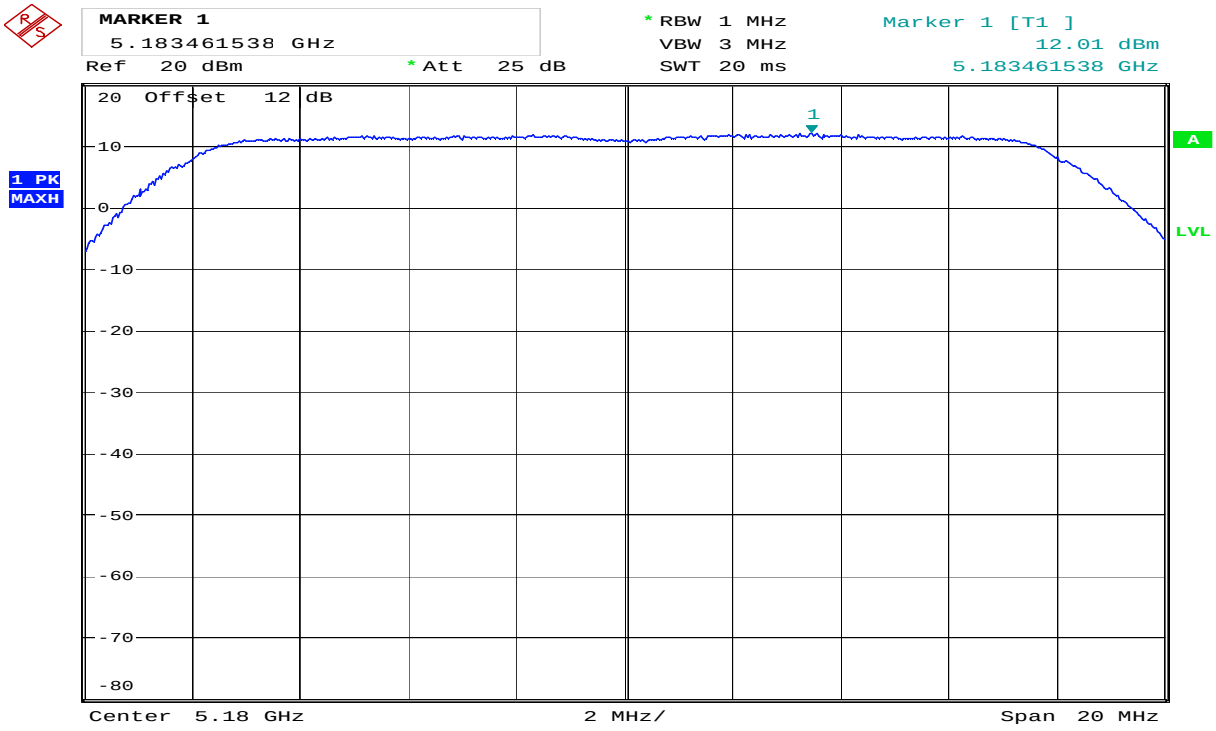
This test is to show whether PPSD should be reduced due to Peak Spectral Density being above the 10 $\log^{10}$B +3dB value. The Average Output Power values from clause 4.3 are used.

No reduction is necessary.

See plots.

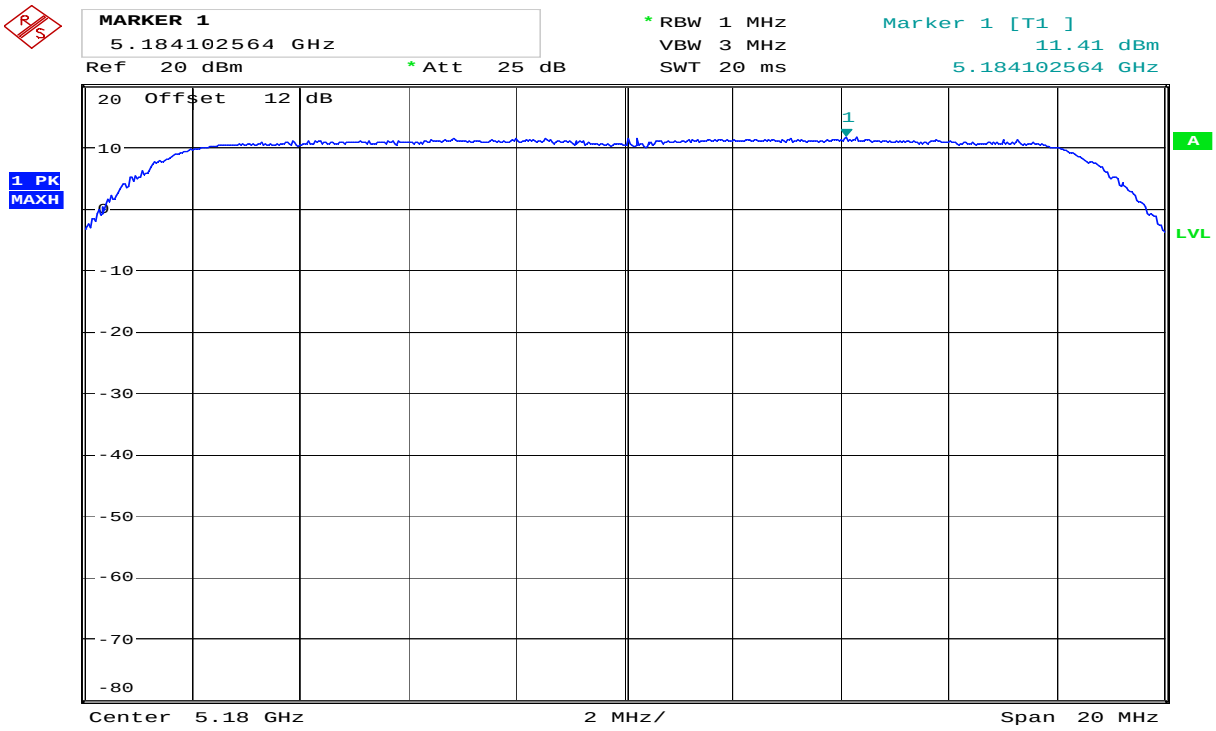
Requirement:

Within the emission bandwidth, when the peak spectral density per MHz over any continuous transmission exceeds the average (10 $\log_{10}$B) value by more than 3 dB, the permissible power spectral density shall be reduced by the excess amount. B is the 99% Bandwidth.



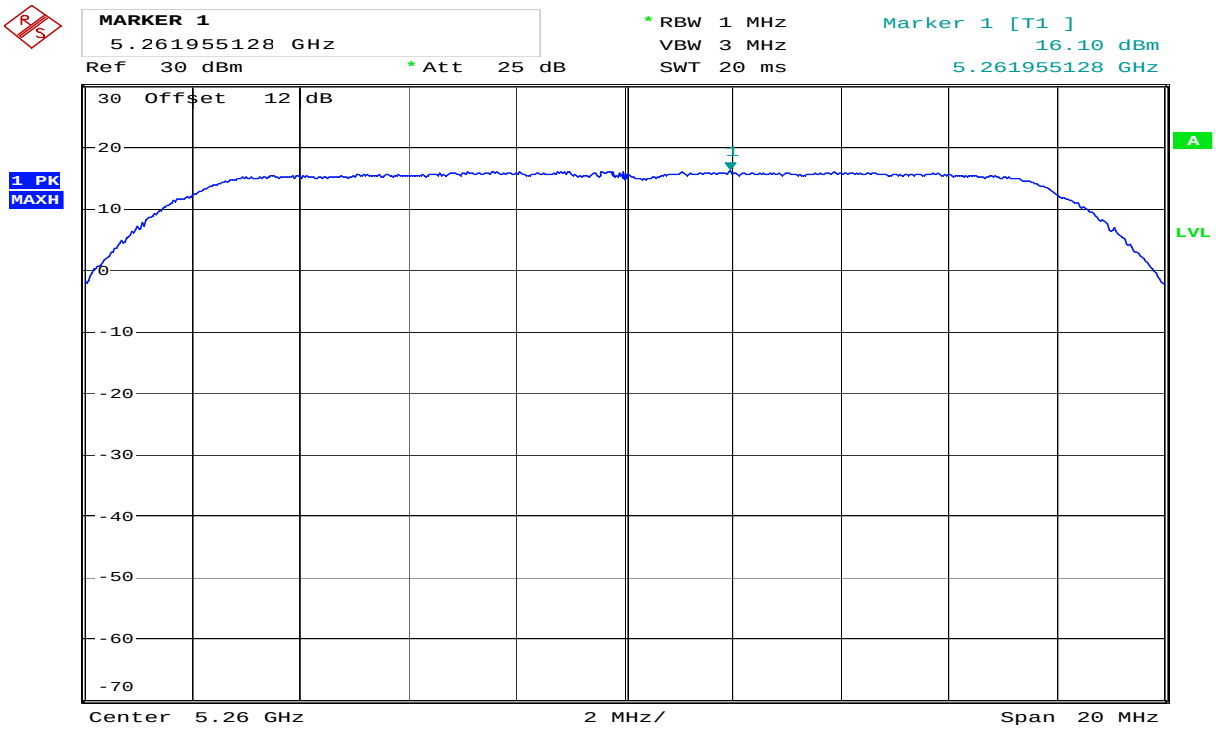
Date: 20.OCT.2010 14:22:59

Peak Spectral Density, 5180 MHz, 802.11a – 6Mbps



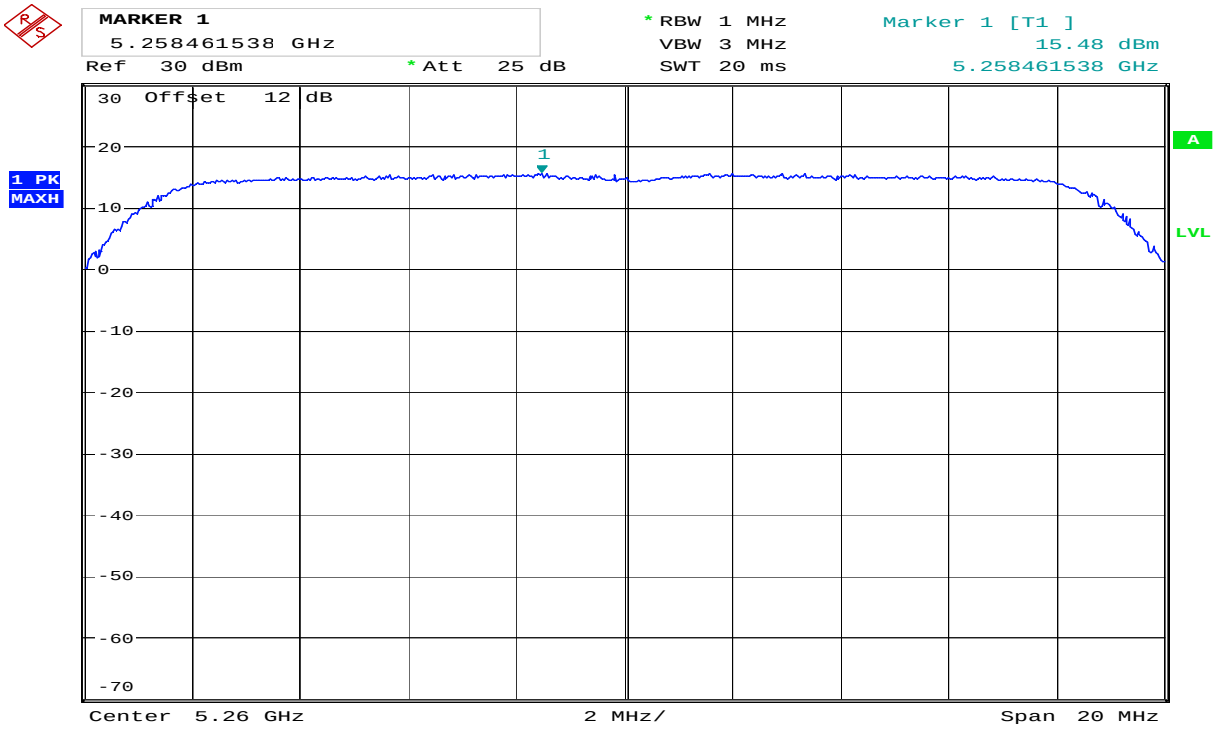
Date: 20.OCT.2010 14:24:03

Peak Spectral Density, 5180 MHz, 802.11n – MCS0



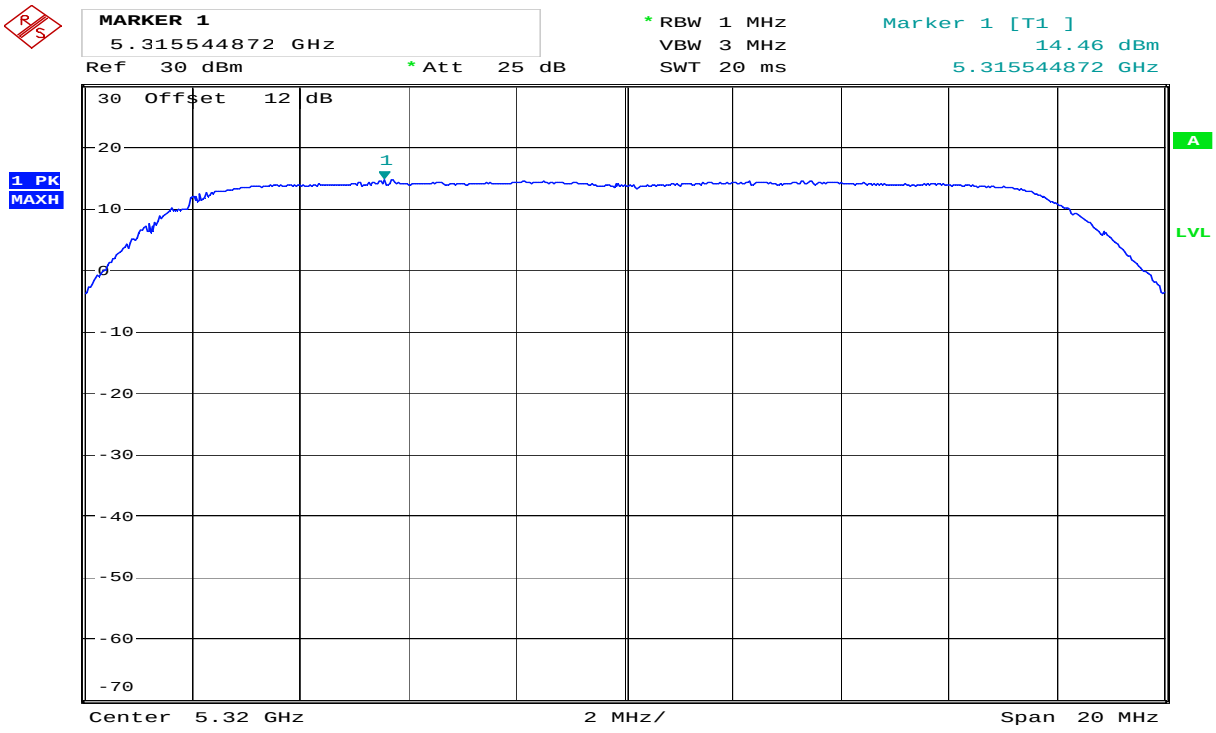
Date: 20.OCT.2010 14:40:40

Peak Spectral Density, 5260 MHz, 802.11a – 6Mbps



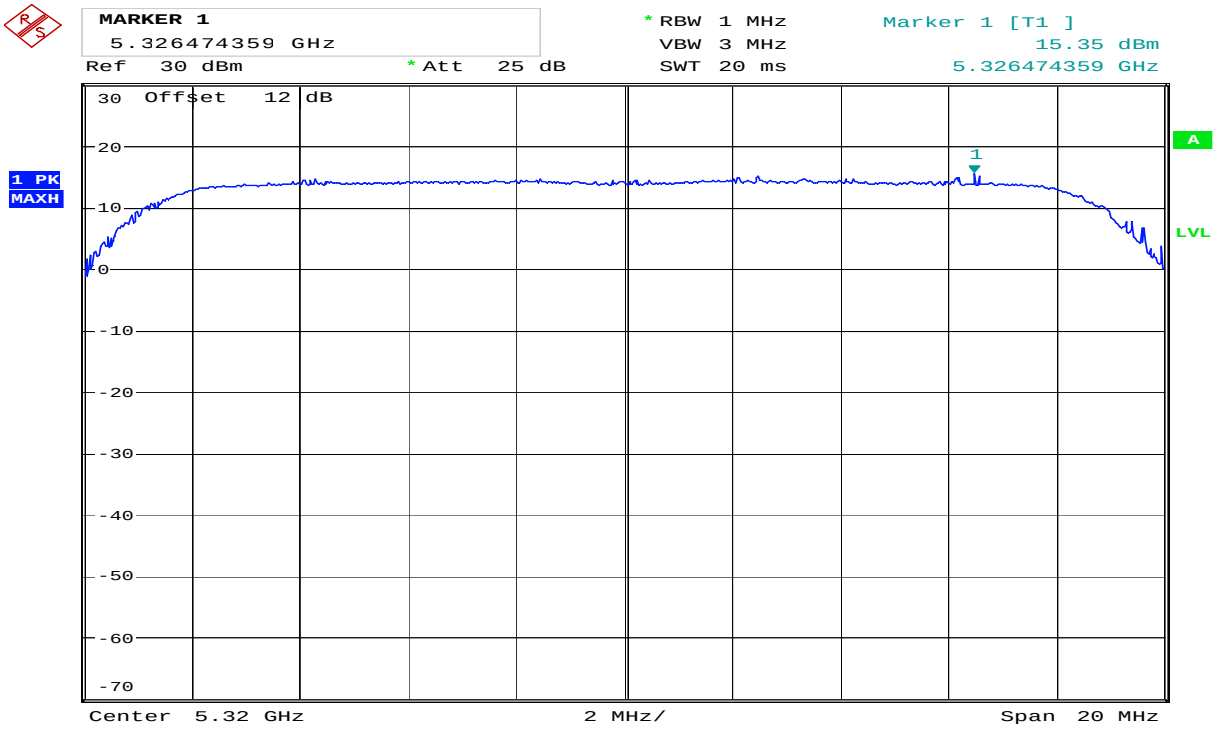
Date: 20.OCT.2010 14:42:07

Peak Spectral Density, 5260 MHz, 802.11n – MCS0



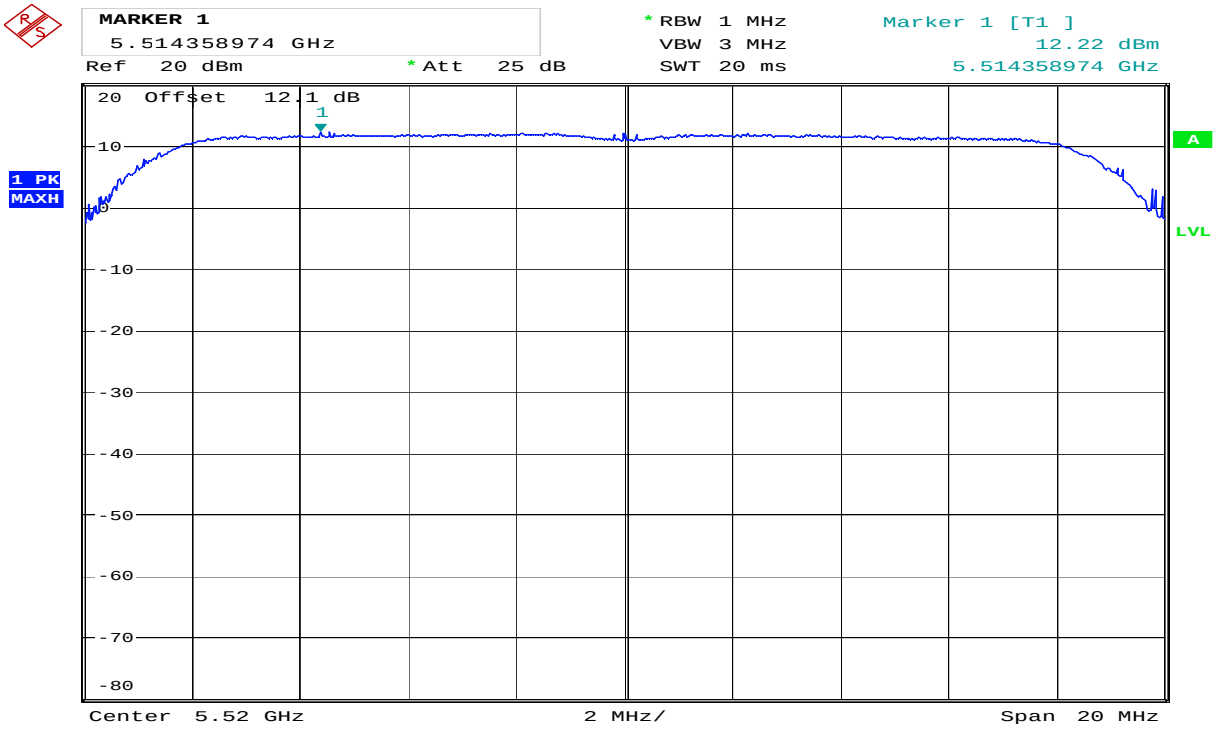
Date: 20.OCT.2010 14:43:55

Peak Spectral Density, 5320 MHz, 802.11a – 6Mbps



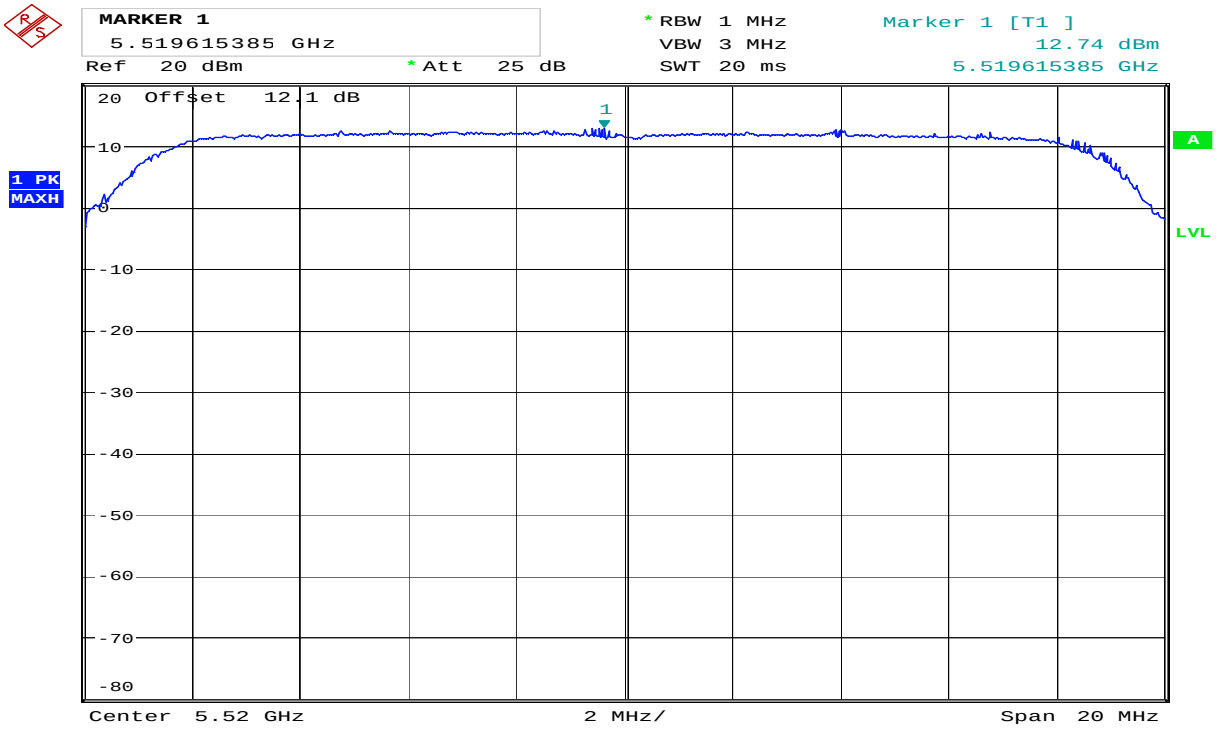
Date: 20.OCT.2010 14:45:07

Peak Spectral Density, 5320 MHz, 802.11n – MCS0



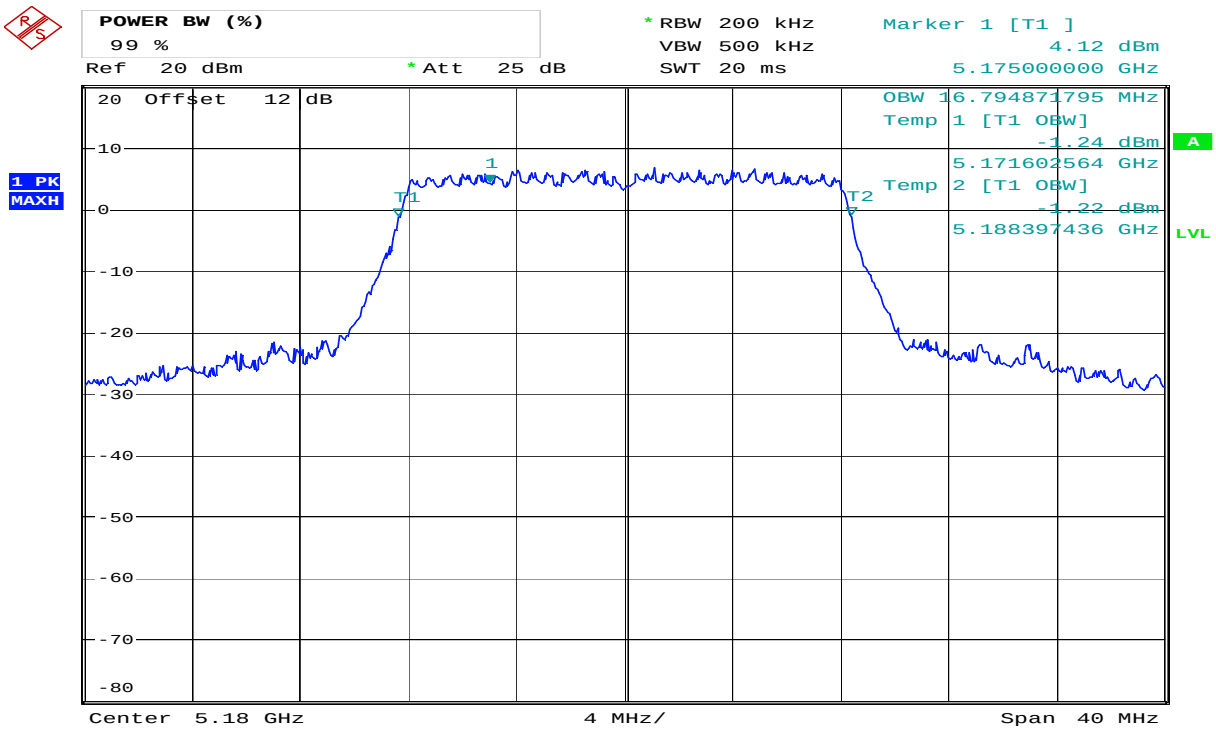
Date: 20.OCT.2010 14:47:27

Peak Spectral Density, 5520 MHz, 802.11a – 6Mbps



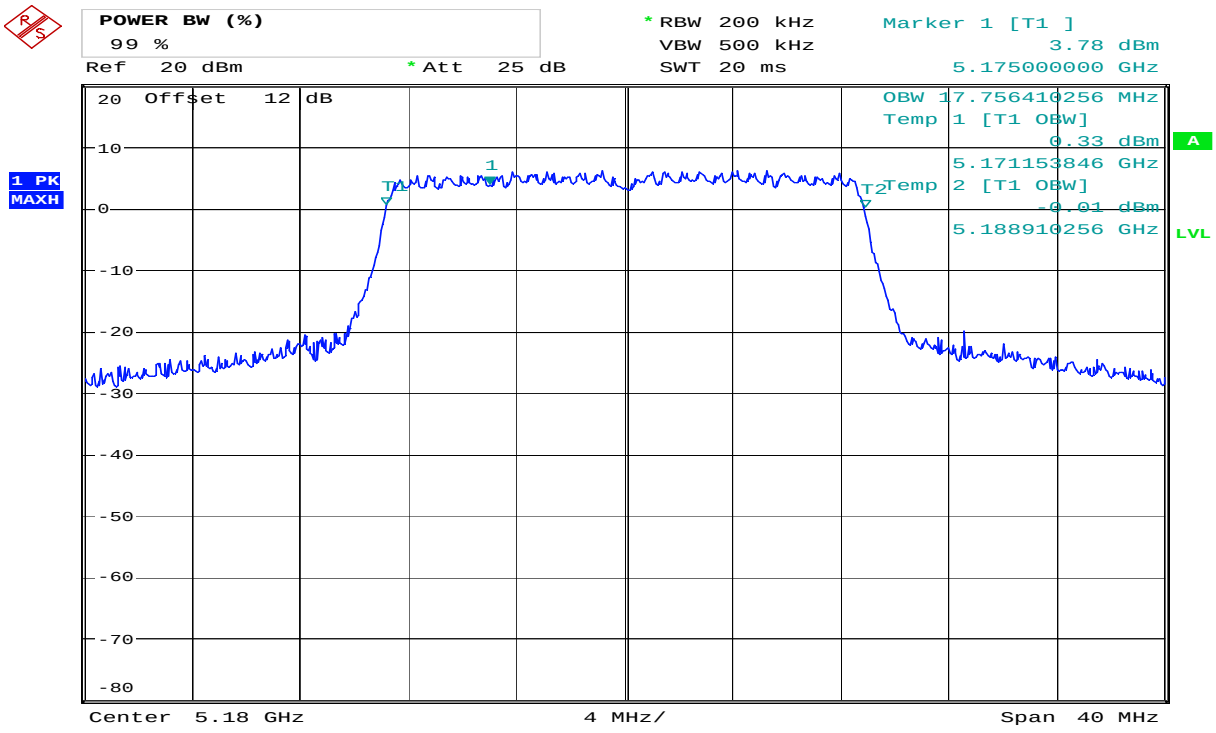
Date: 20.OCT.2010 14:48:39

Peak Spectral Density, 5520 MHz, 802.11n – MCS0



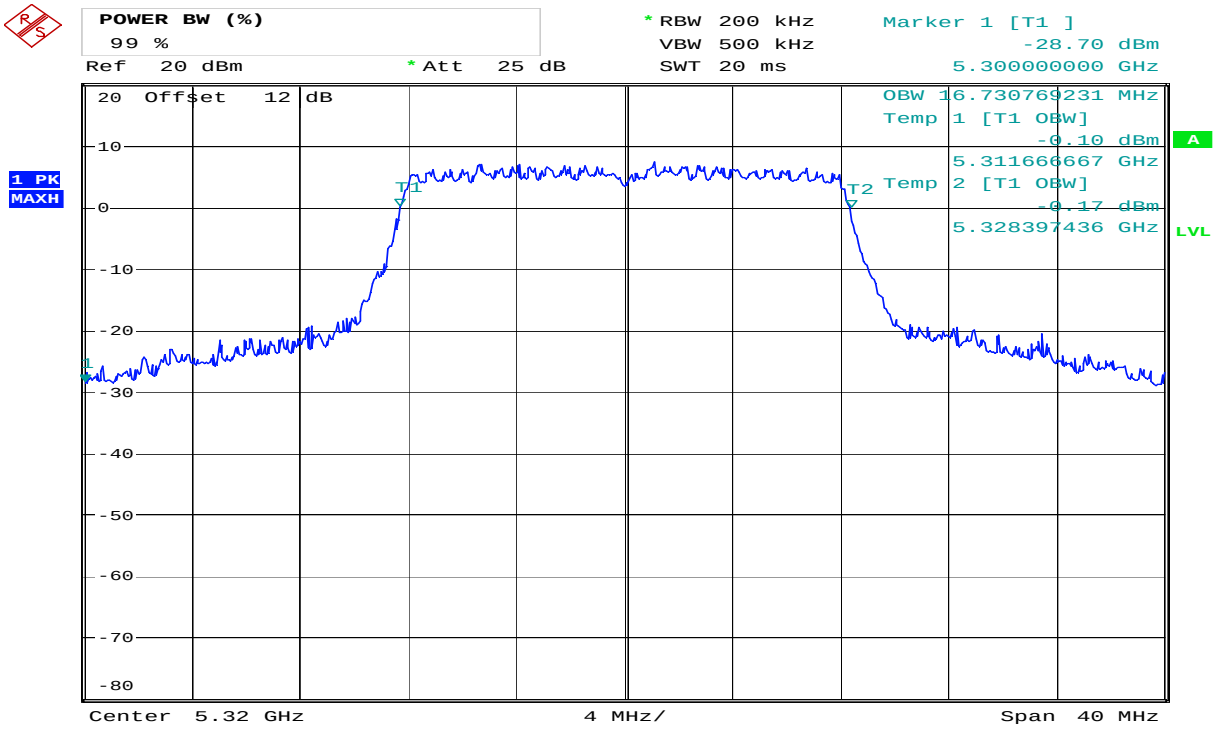
Date: 20.OCT.2010 13:01:02

Emission Bandwidth, 20dB, 5180 MHz, 802.11a – 6Mbps



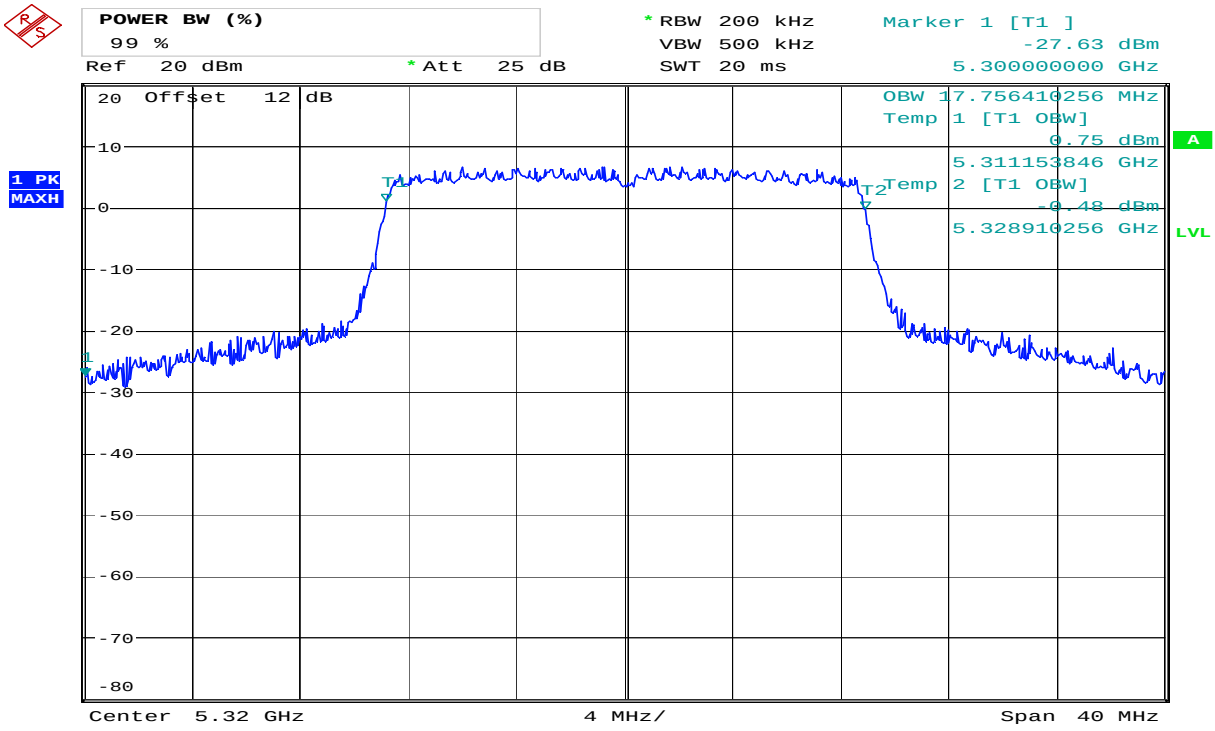
Date: 20.OCT.2010 13:02:16

Emission Bandwidth, 20dB, 5180 MHz, 802.11n – MCS0



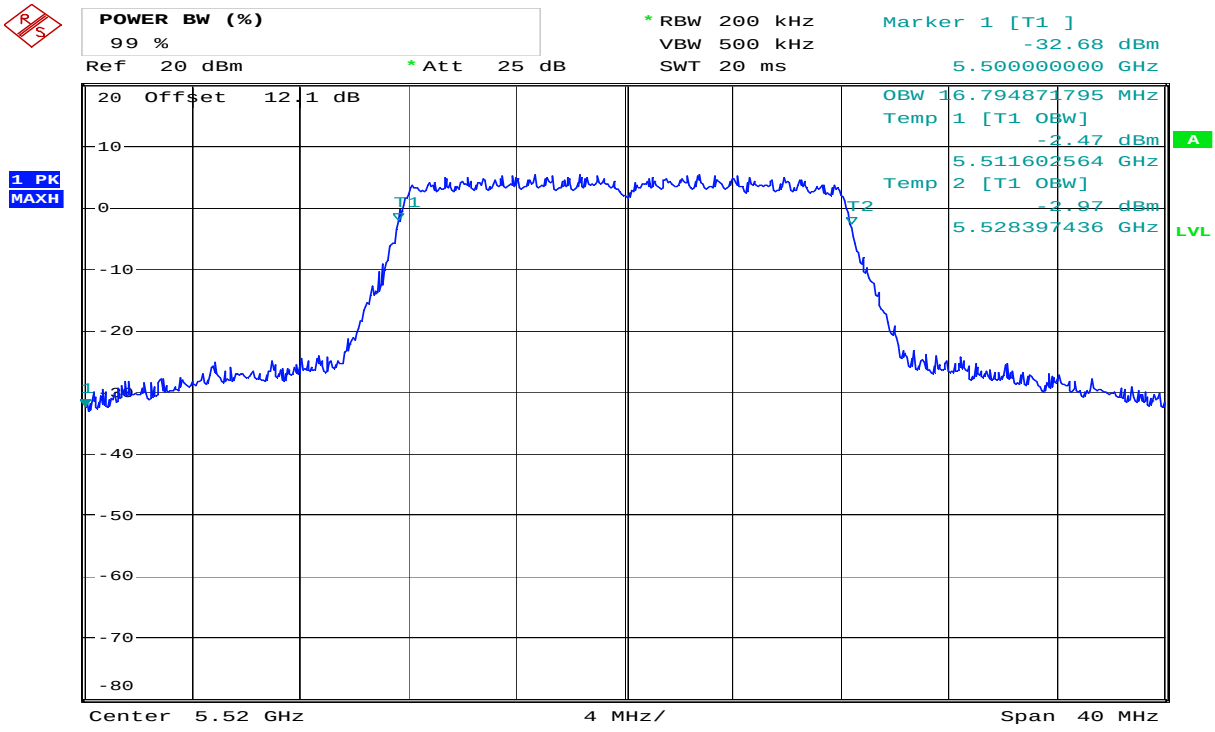
Date: 20.OCT.2010 13:03:19

Emission Bandwidth, 20dB, 5320 MHz, 802.11a – 6Mbps



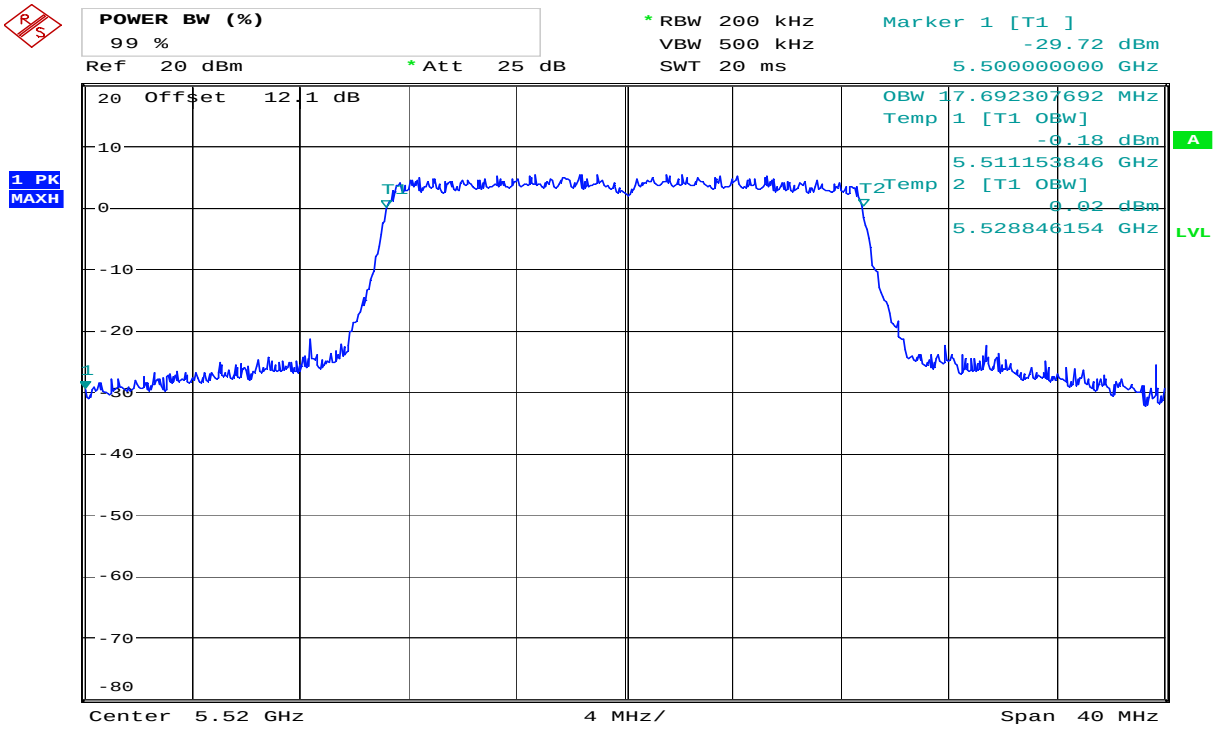
Date: 20.OCT.2010 13:04:05

Emission Bandwidth, 20dB, 5320 MHz, 802.11n – MCS0



Date: 20.OCT.2010 13:05:09

Emission Bandwidth, 20dB, 5520 MHz, 802.11a – 6Mbps



Date: 20.OCT.2010 13:06:18

Emission Bandwidth, 20dB, 5520 MHz, 802.11n – MCS0

4.7 Peak Excursion of Modulation Envelope

Para. No.: 15.407(a)

Test Performed By: Frode Sveinsen	Date of Test: July 2010

Test Results: Complies

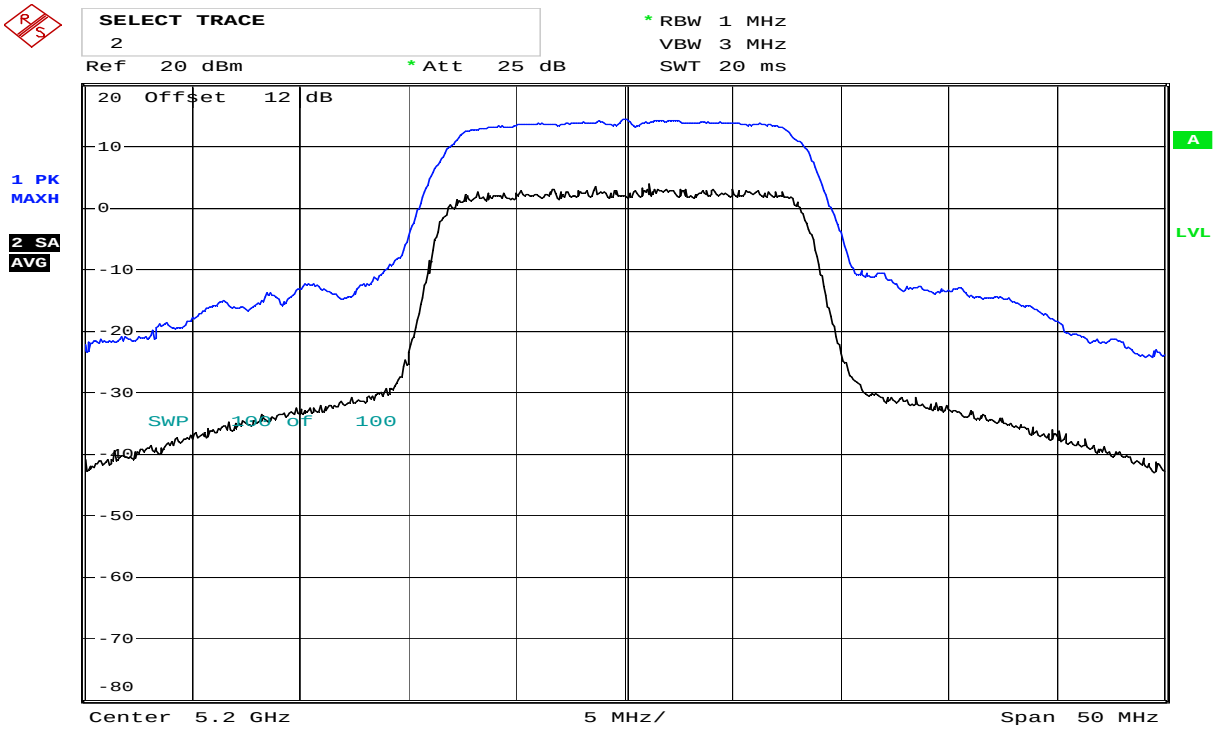
Measurement Data:

Test method in ANSI C63.10-2009 clause 6.10.4 was used.

See plots.

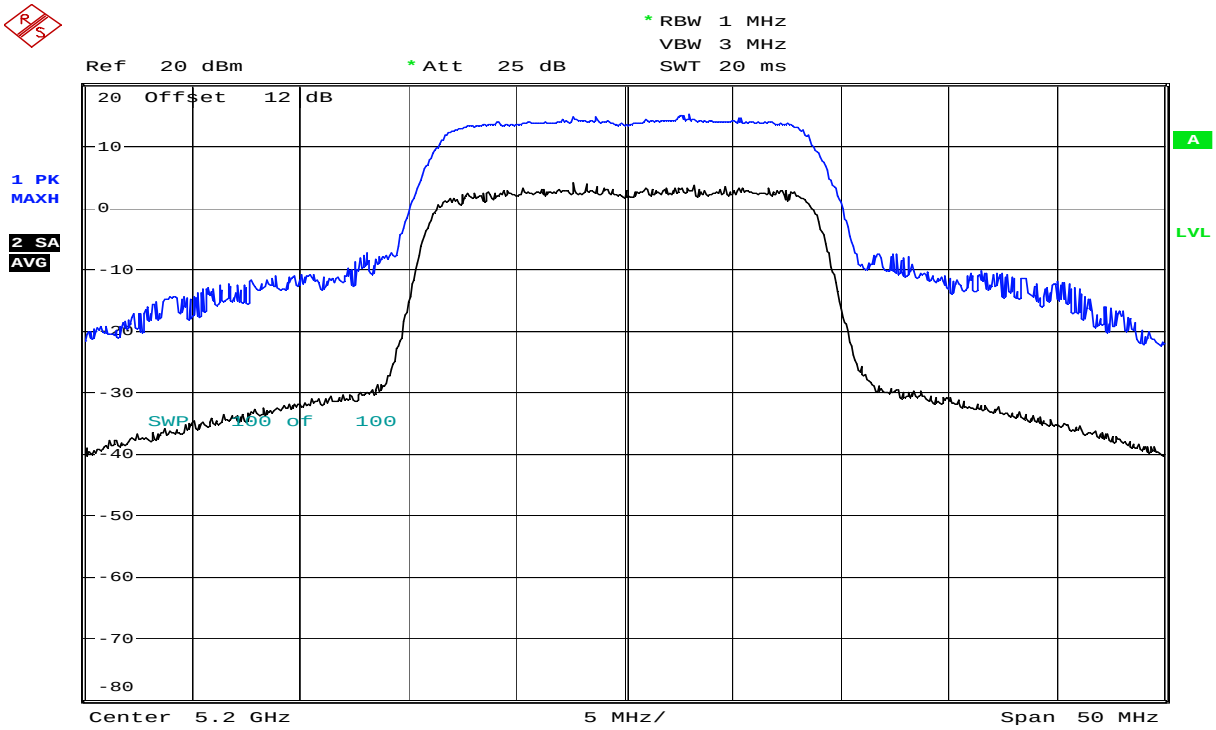
Peak Excursion limit:

Peak excursion shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth, whichever is less.



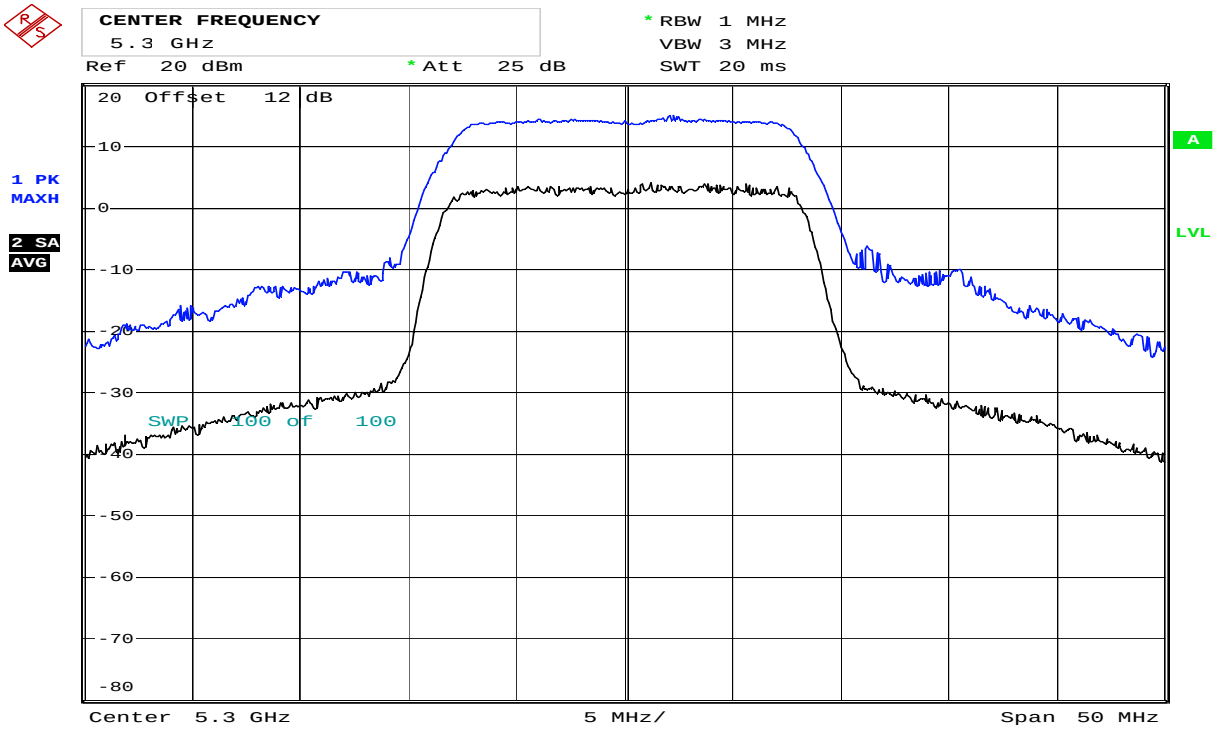
Date: 19.OCT.2010 11:08:27

Peak Excursion of Modulation Envelope, 5200 MHz, 802.11a 6Mbps, Method 1



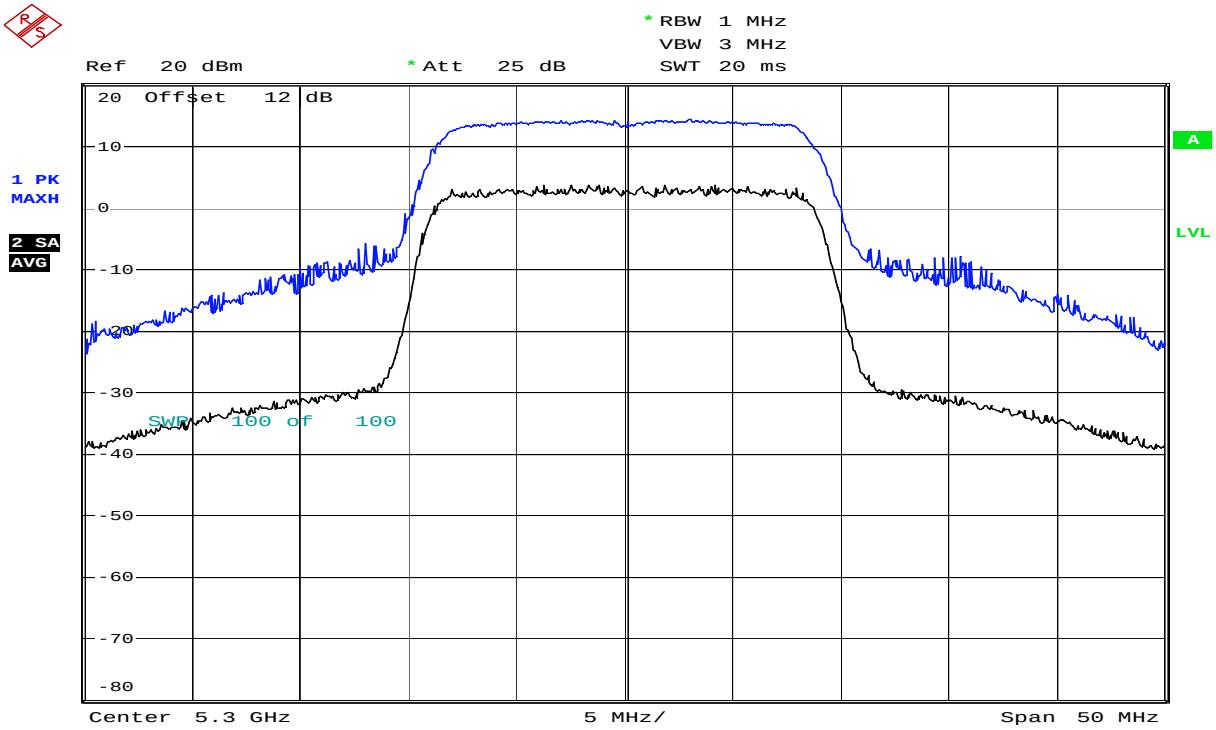
Date: 19.OCT.2010 11:11:05

Peak Excursion of Modulation Envelope, 5200 MHz, 802.11n MCS0, Method 1



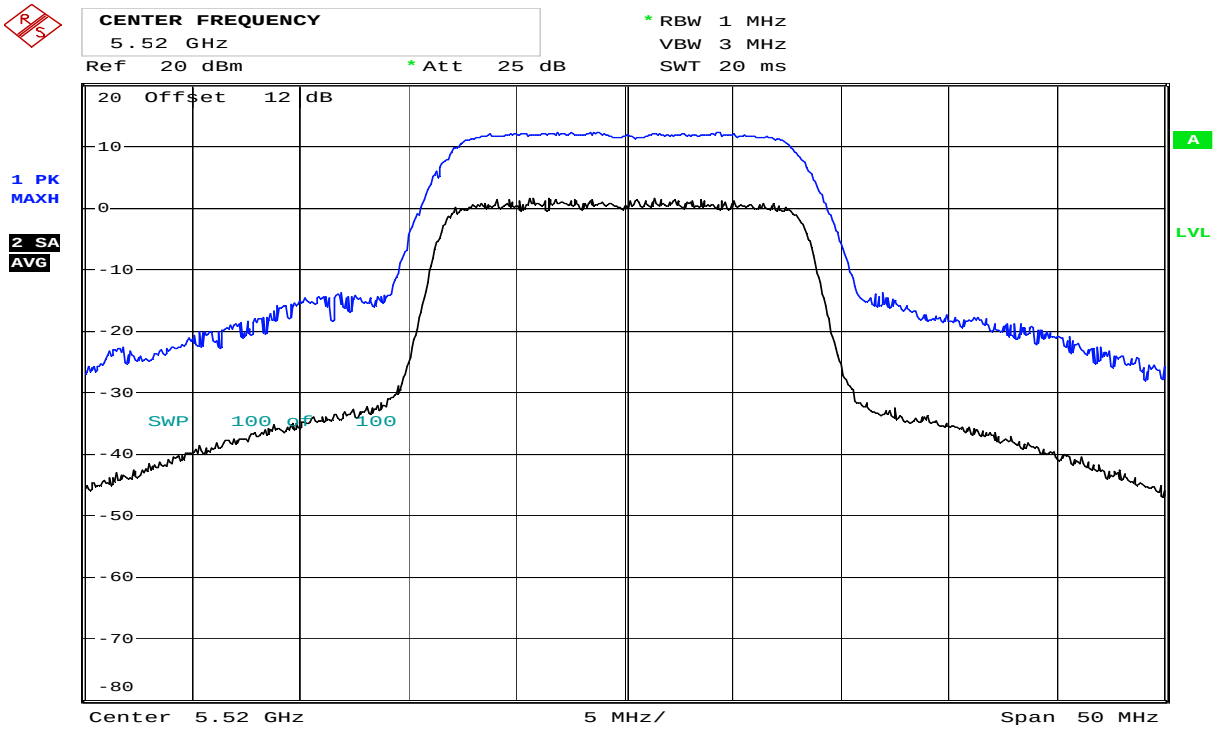
Date: 19.OCT.2010 11:12:54

Peak Excursion of Modulation Envelope, 5300 MHz, 802.11a 6Mbps, Method 1



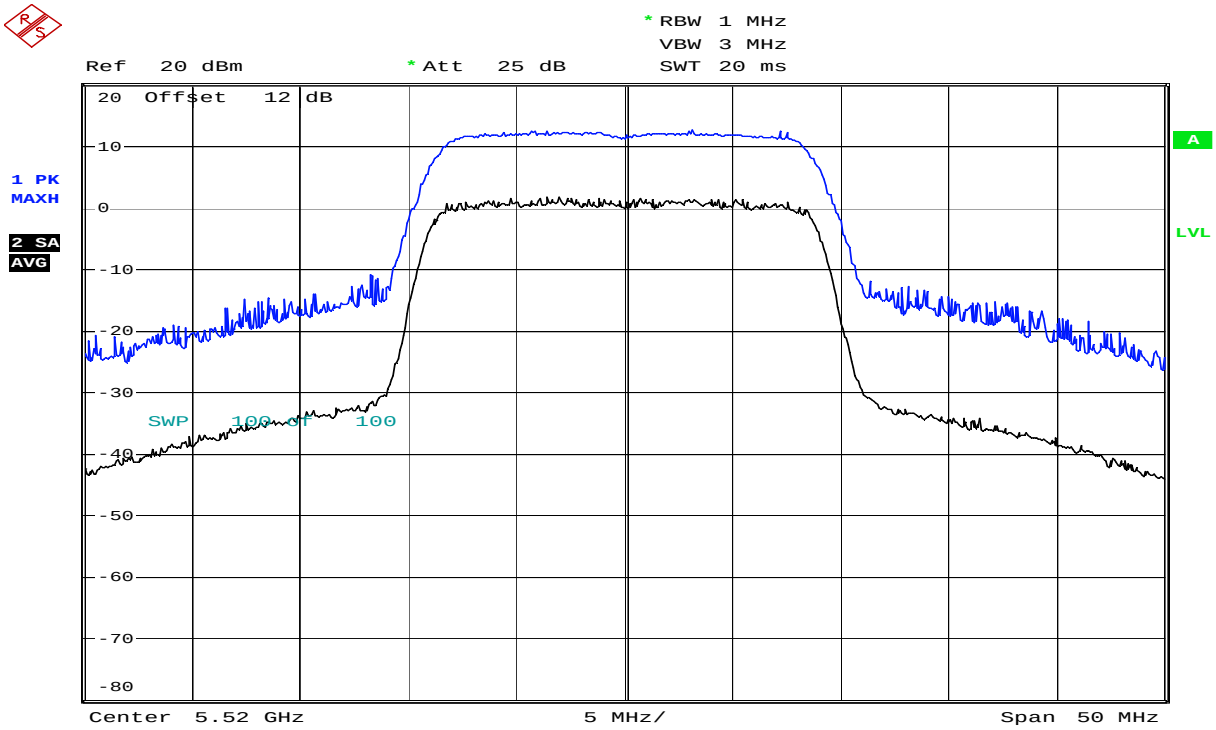
Date: 19.OCT.2010 11:14:02

Peak Excursion of Modulation Envelope, 5300 MHz, 802.11n MCS0, Method 1



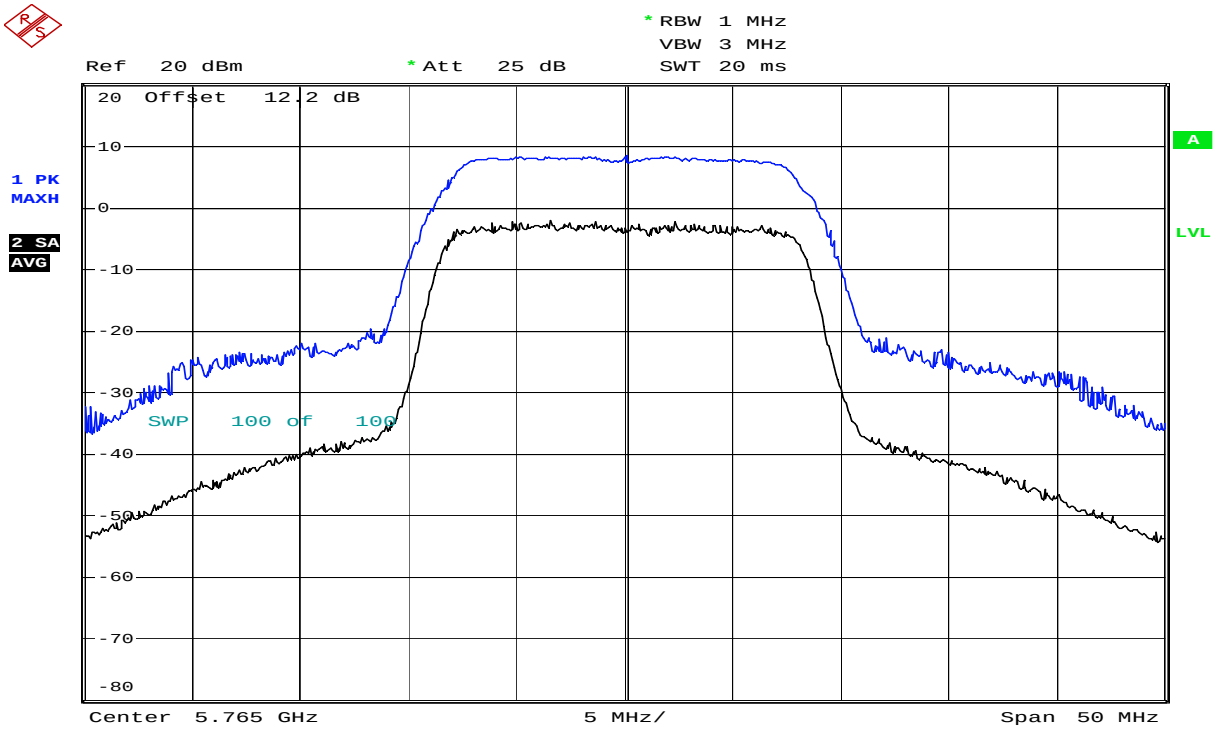
Date: 19.OCT.2010 11:15:39

Peak Excursion of Modulation Envelope, 5520 MHz, 802.11a 6Mbps, Method 1



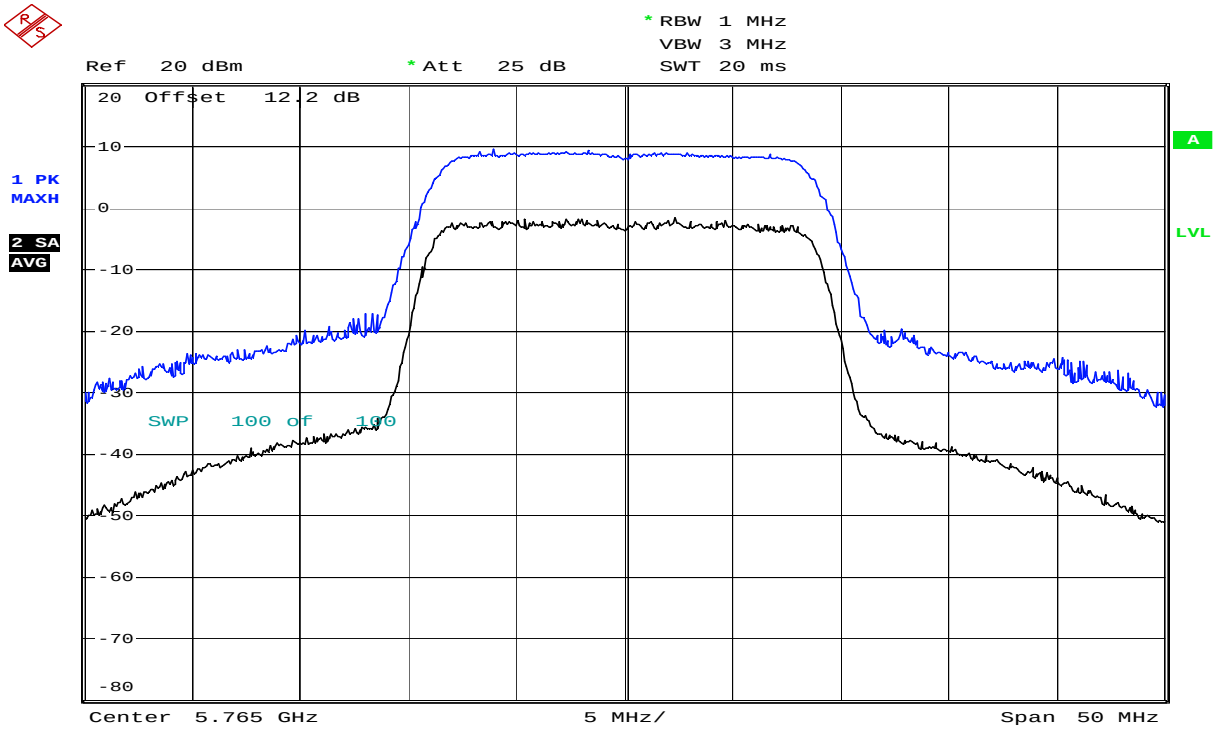
Date: 19.OCT.2010 11:16:56

Peak Excursion of Modulation Envelope, 5520 MHz, 802.11n MCS0, Method 1



Date: 19.OCT.2010 11:19:11

Peak Excursion of Modulation Envelope, 5765 MHz, 802.11a 6Mbps, Method 1



Date: 19.OCT.2010 11:20:29

Peak Excursion of Modulation Envelope, 5765 MHz, 802.11n MCS0, Method 1

4.8 Unwanted Emissions

Para. No.: 15.407(b)

Test Performed By: Frode Sveinsen	**Date of Test: June/July 2010**

Test Results: Complies

Measurement Data:

Band Edge Emissions:

Ch. No.	**Carrier Frequency (MHz)**	**Band Edge Frequency (MHz)**	**Measured value (dBm/MHz)**		**Limit (dBm/MHz)**
			802.11a 6Mbps	802.11n MCS0	
36	5180	5150	-28.2	-27.1	-27
64	5320	5350	-31.0	-29.8	-27
100	5500	5470	-27.9	-27.0	-27
140	5700	5725	-28.6	-27.8	-27
149	5745	5715	<-35	<-34	-27
149	5745	5725	-26.5	-24.8	-17
161	5805	5825	-26.8	-24.6	-17
161	5805	5835	<-33	<-32	-27

Harmonics:

Ch. No.	**Carrier Frequency (MHz)**	**Frequency (GHz)**	**Measured value (dBm/MHz)**	**Limit (dBm/MHz)**
36	5180	10.36	-36.0	-27
64	5320	10.64	-34.1	-27
100	5500	11.0	-30.8	-27
140	5700	11.4	-31.9	-27
36	5180	15.54	-42.7	-27
64	5320	15.96	-35.2	-27
100	5500	16.5	-43.4	-27
140	5700	17.1	-44.4	-27

See plots.

The measurement was performed in a 3m fully anechoic chamber. The EUT was first rotated in 3 planes to find the maximum position.

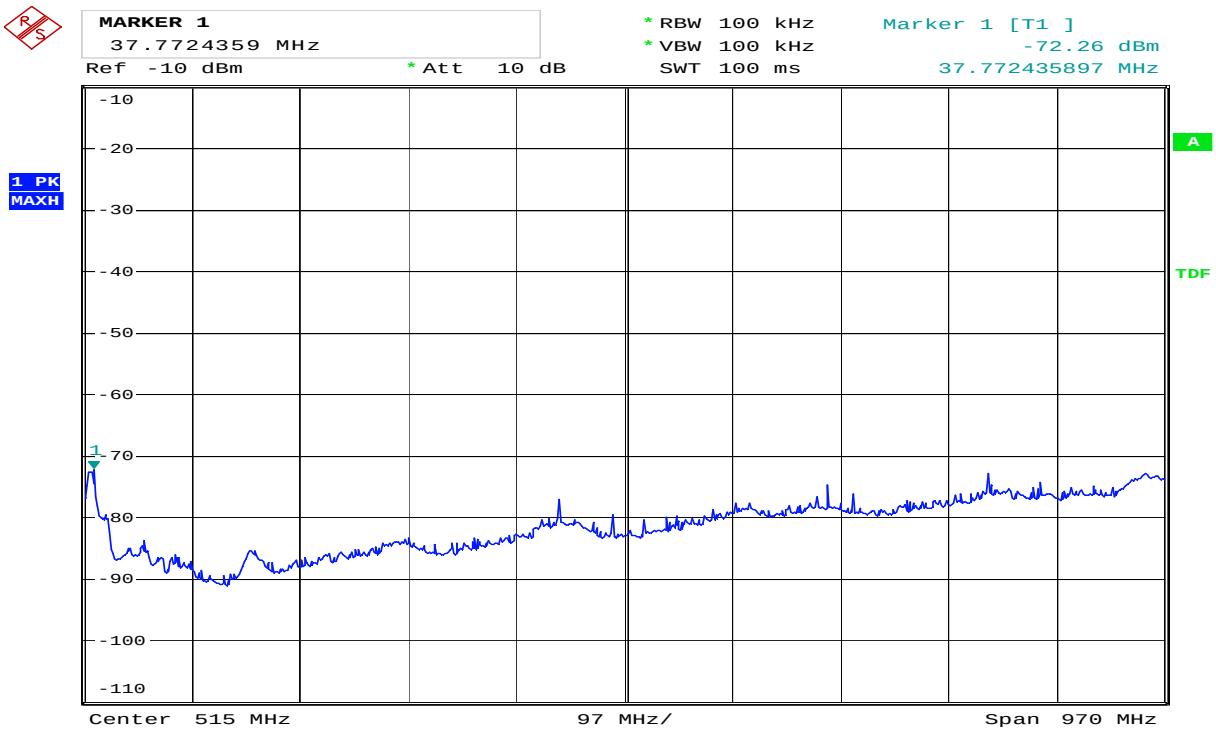
The tested equipment is for indoor use only, no band-edge requirements apply at 5250 MHz.

No spurious emissions except the above listed harmonics and band-edge emissions were found.

Unwanted Emissions limit:

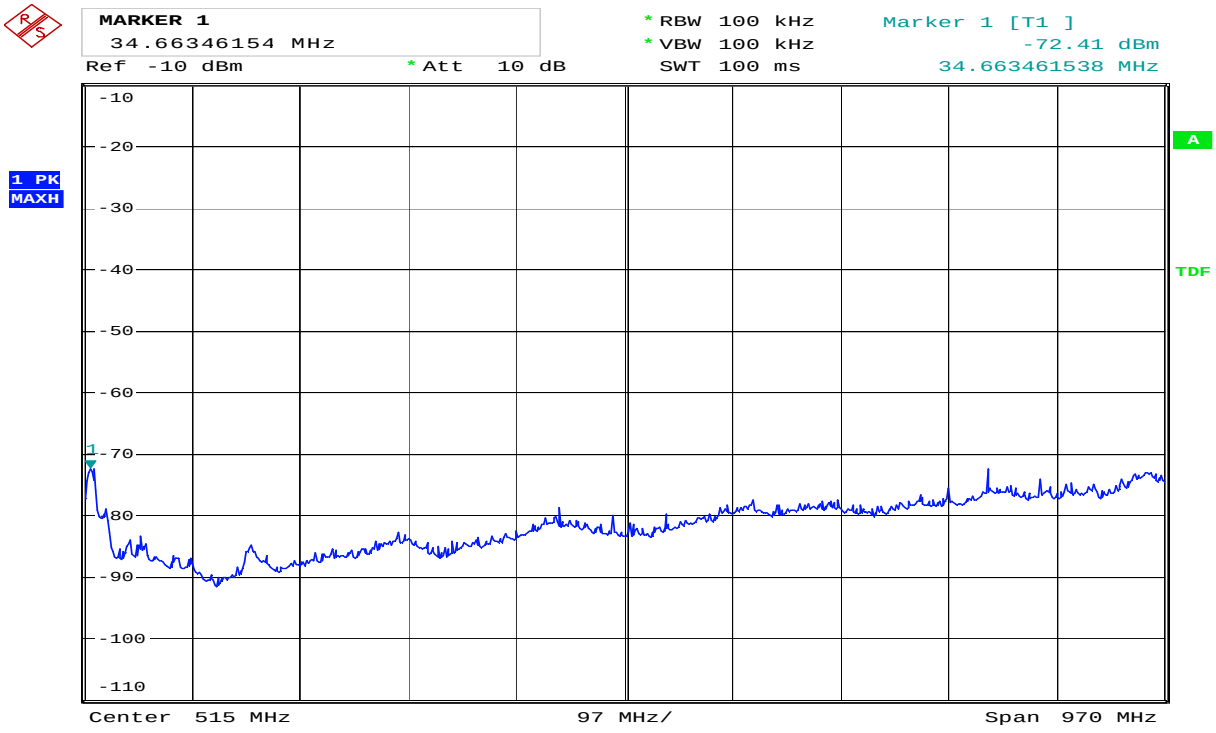
Operating Frequency band	Limit for Emissions Outside Operating Frequency Band
5150 – 5250 MHz	-27 dBm/MHz
5250 – 5350 MHz	-27 dBm/MHz
5470 – 5725 MHz	-27 dBm/MHz
5725 – 5825 MHz	From Band Edge to 10 MHz above or below band: -17 dBm/MHz From 10 MHz or more above and below Band Edge: -27 dBm/MHz

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.



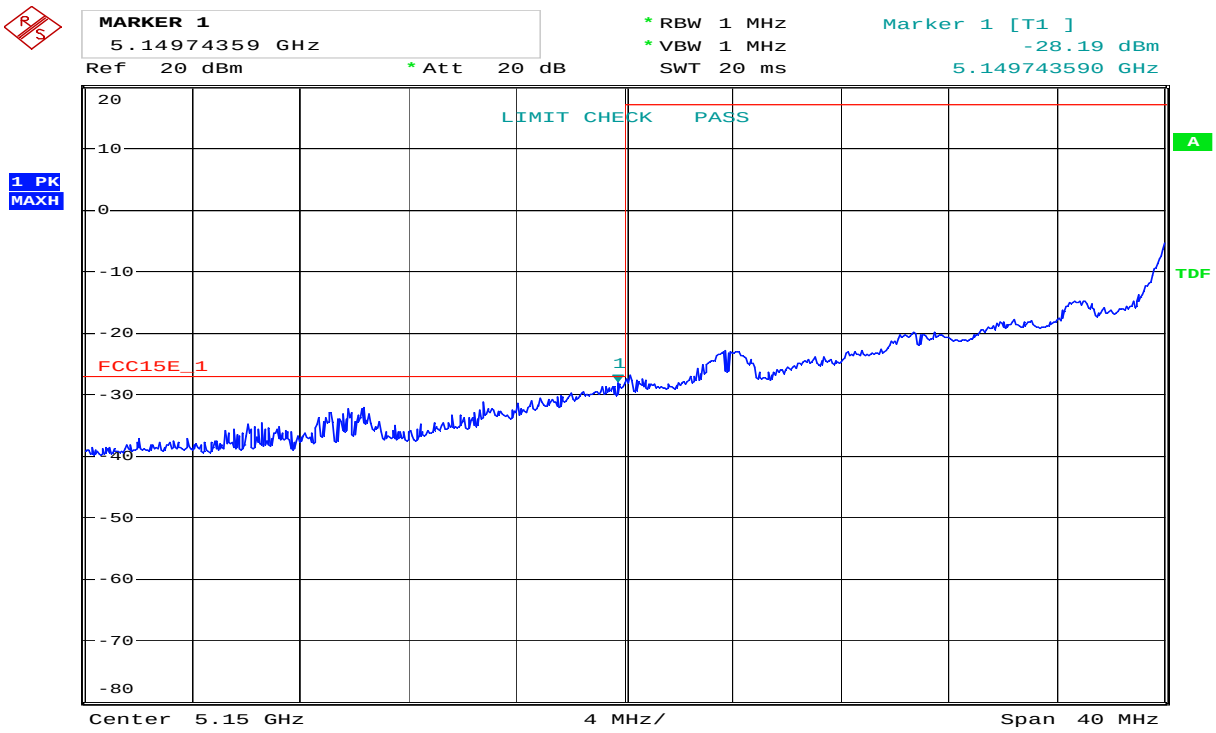
Date: 31.MAY.2010 16:20:11

Unwanted Emissions, 30 – 1000 MHz, 802.11a 6Mbps, VP



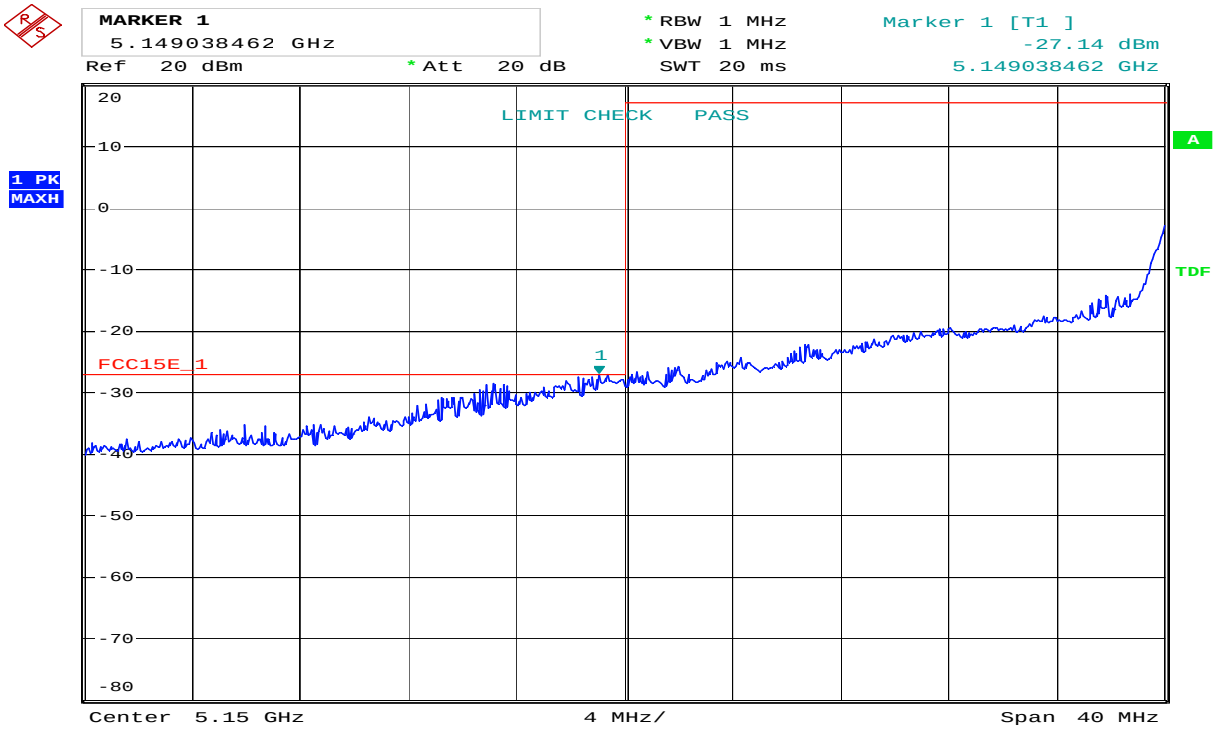
Date: 31.MAY.2010 16:26:22

Unwanted Emissions, 30 – 1000 MHz, 802.11n MCS0, VP



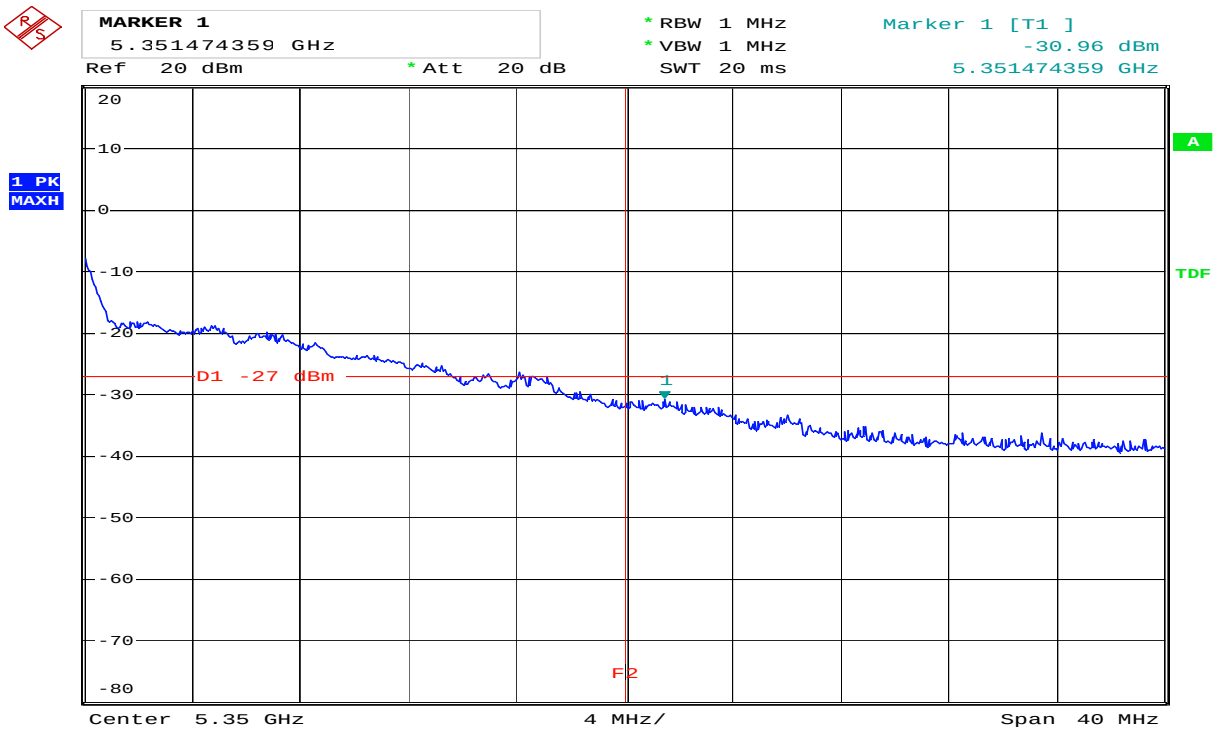
Date: 26.JUL.2010 16:31:43

Unwanted Emissions, Band Edge, 5150 MHz, 802.11a 6Mbps



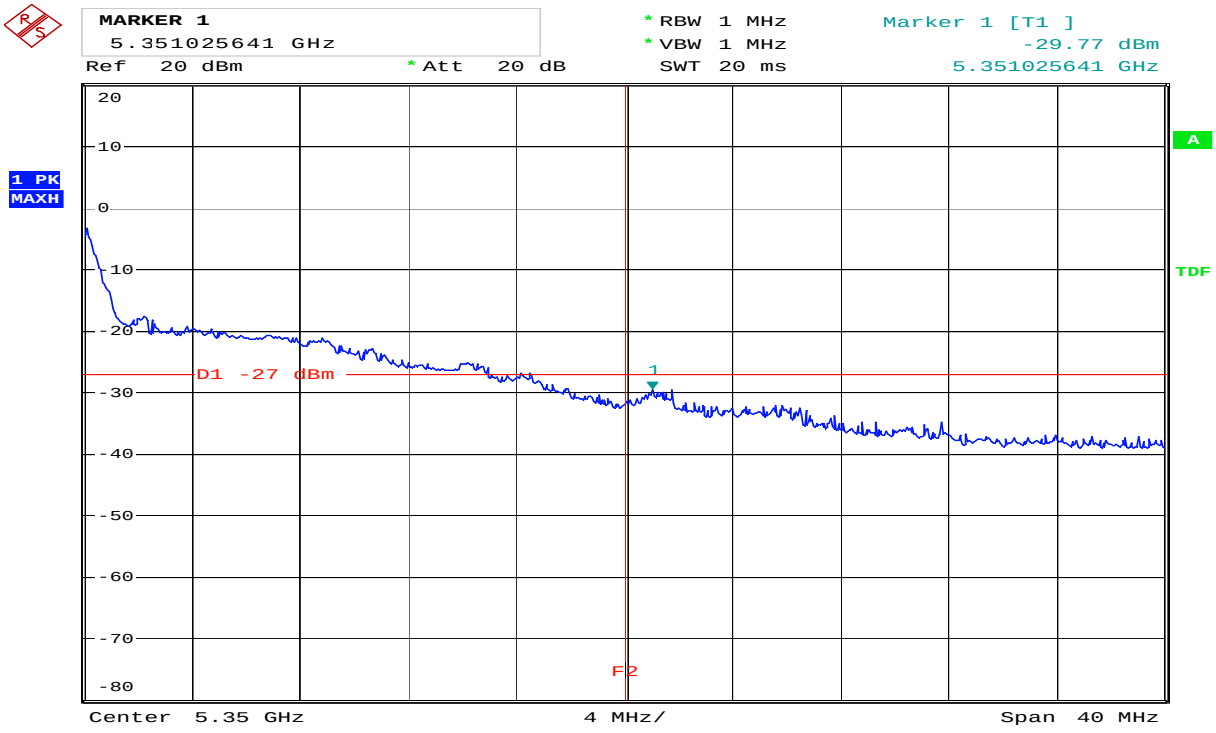
Date: 26.JUL.2010 16:34:23

Unwanted Emissions, Band Edge, 5150 MHz, 802.11n MCS0



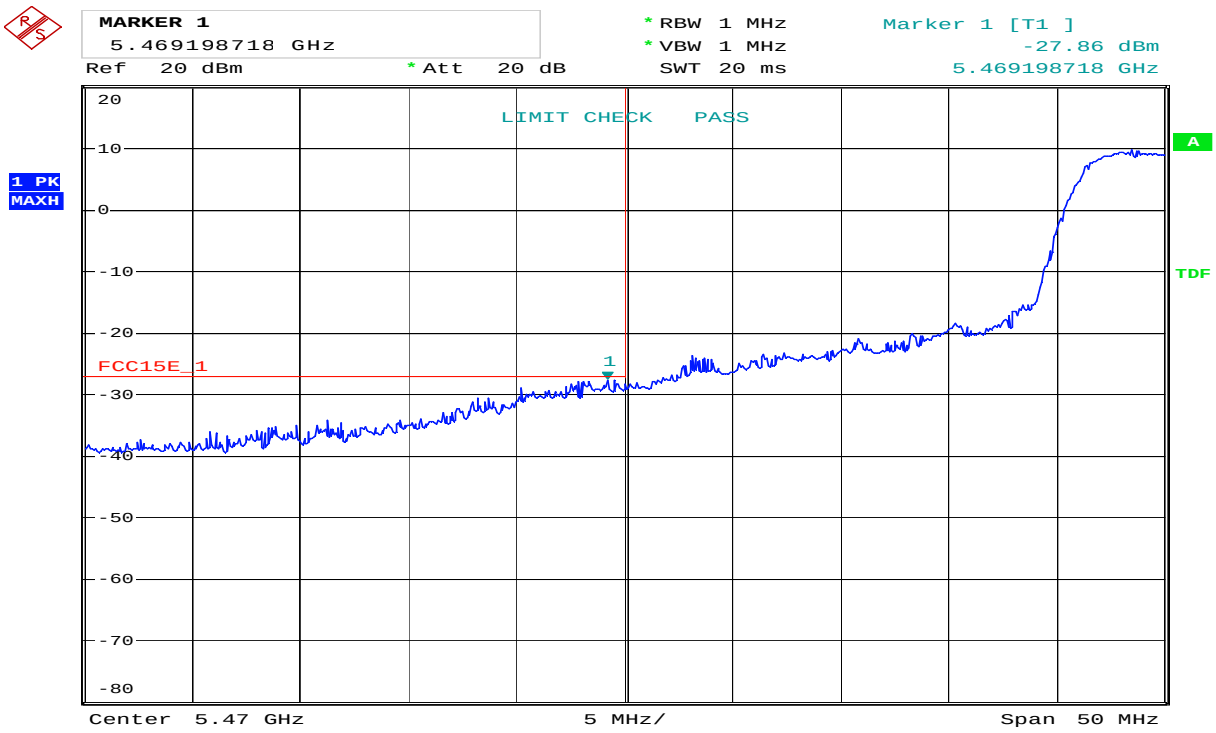
Date: 29.JUN.2010 12:46:24

Unwanted Emissions, Band Edge, 5350 MHz, 802.11a 6Mbps



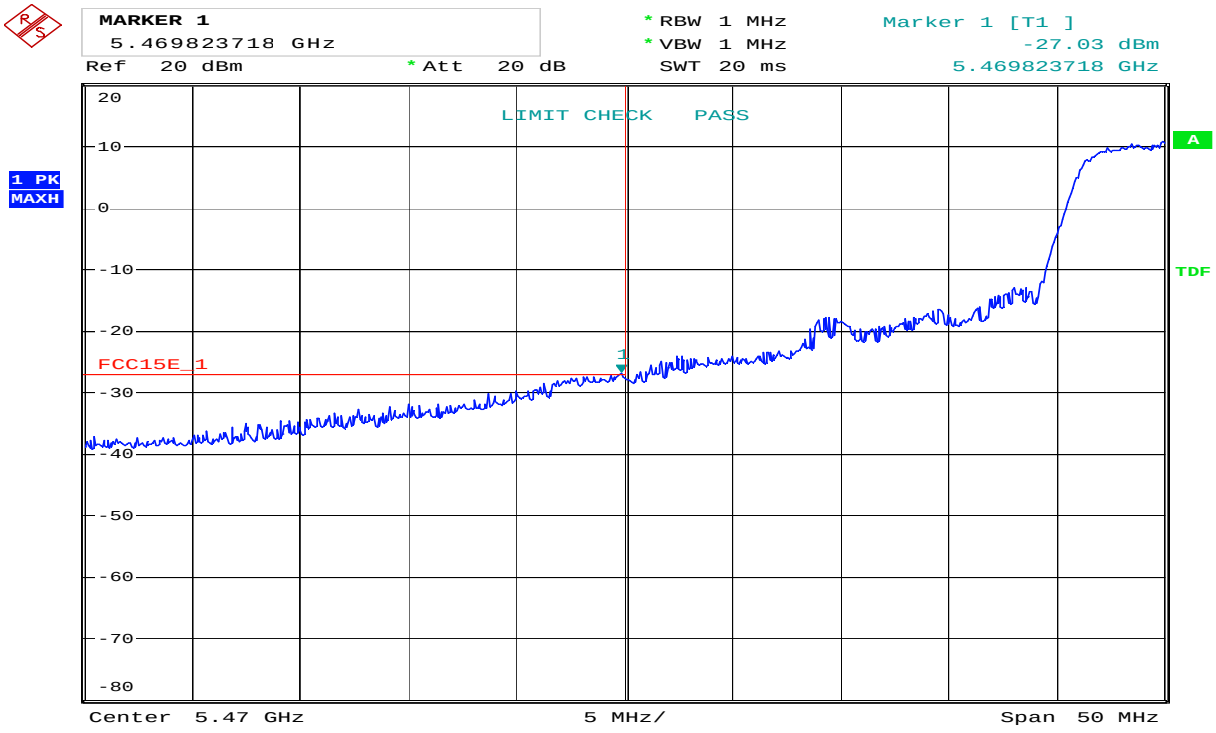
Date: 29.JUN.2010 12:40:41

Unwanted Emissions, Band Edge, 5350 MHz, 802.11n MCS0



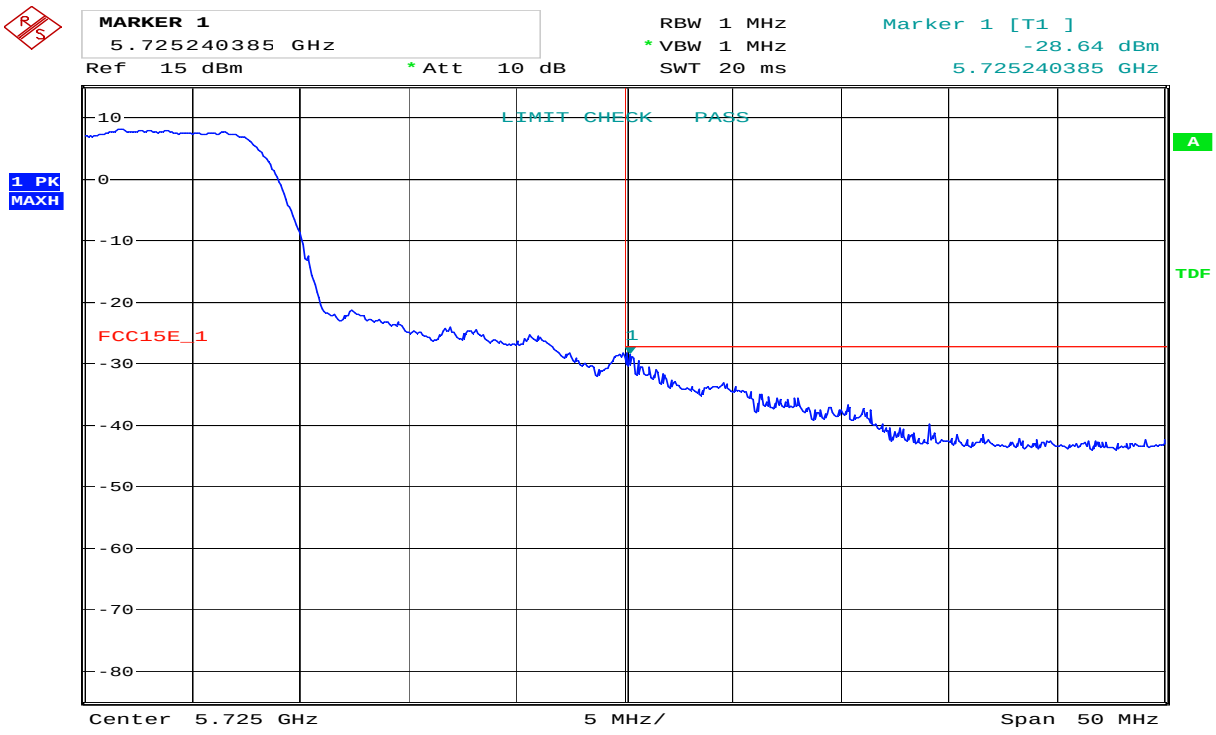
Date: 2.JUL.2010 10:38:36

Unwanted Emissions, Band Edge, 5470 MHz, 802.11a 6Mbps



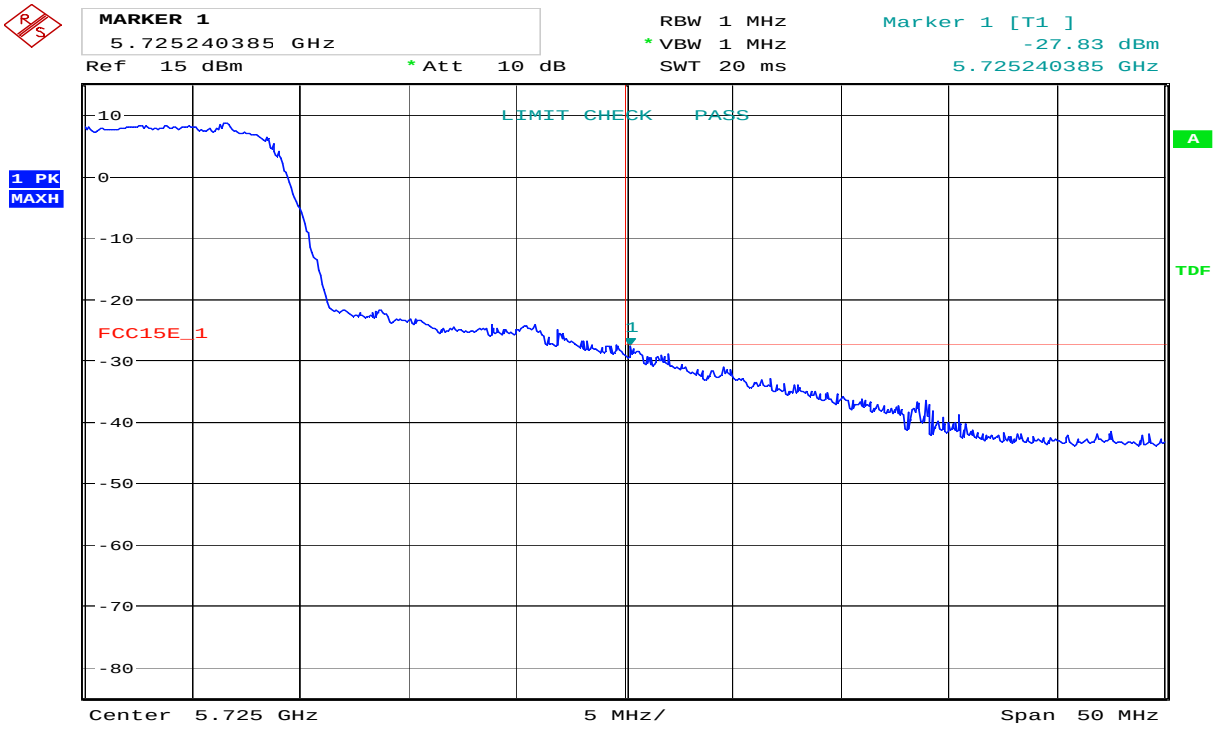
Date: 29.JUN.2010 16:24:17

Unwanted Emissions, Band Edge, 5470 MHz, 802.11n MCS0



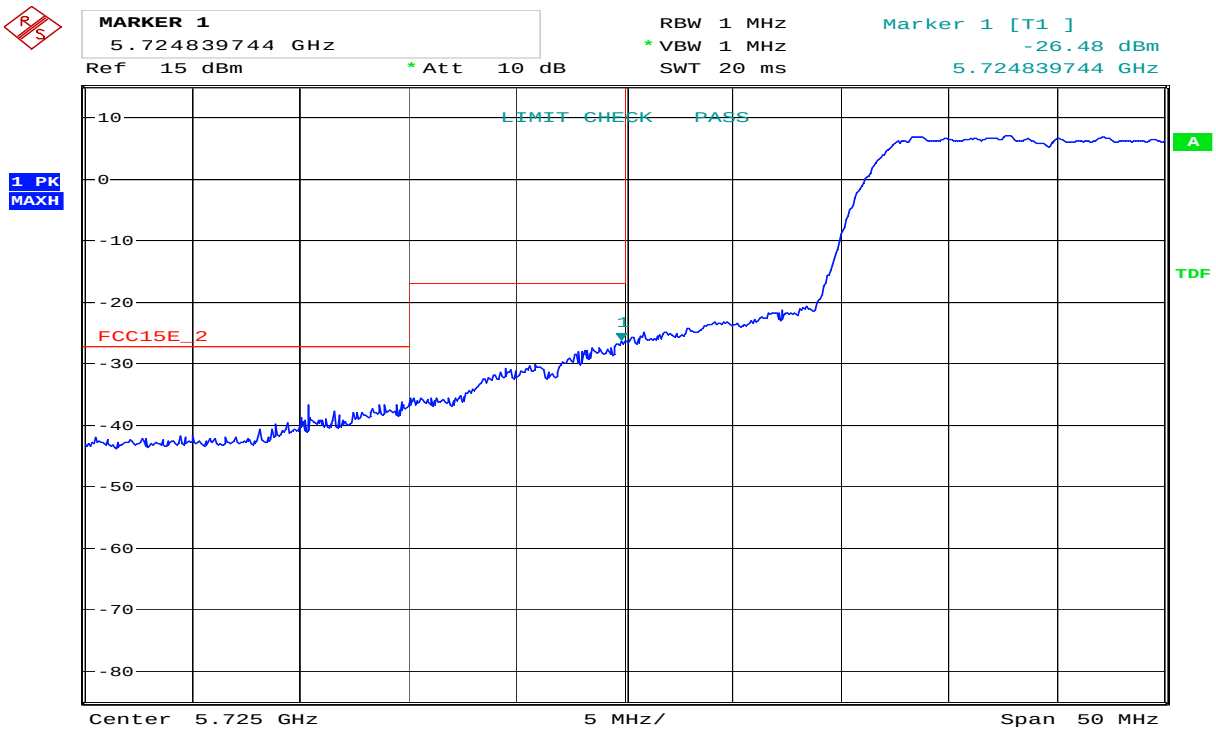
Date: 1.JUL.2010 09:21:27

Unwanted Emissions, Band Edge, 5725 MHz, 802.11a 6Mbps



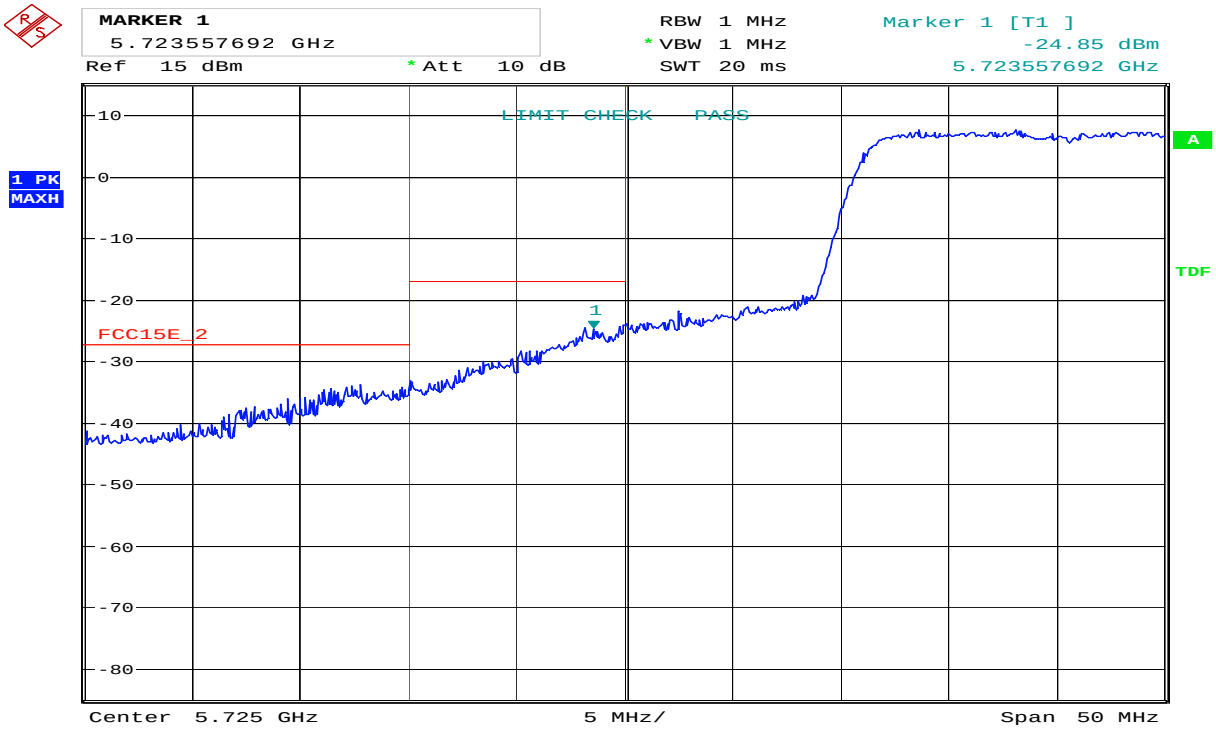
Date: 1.JUL.2010 09:24:14

Unwanted Emissions, Band Edge, 5725 MHz, 802.11n MCS0



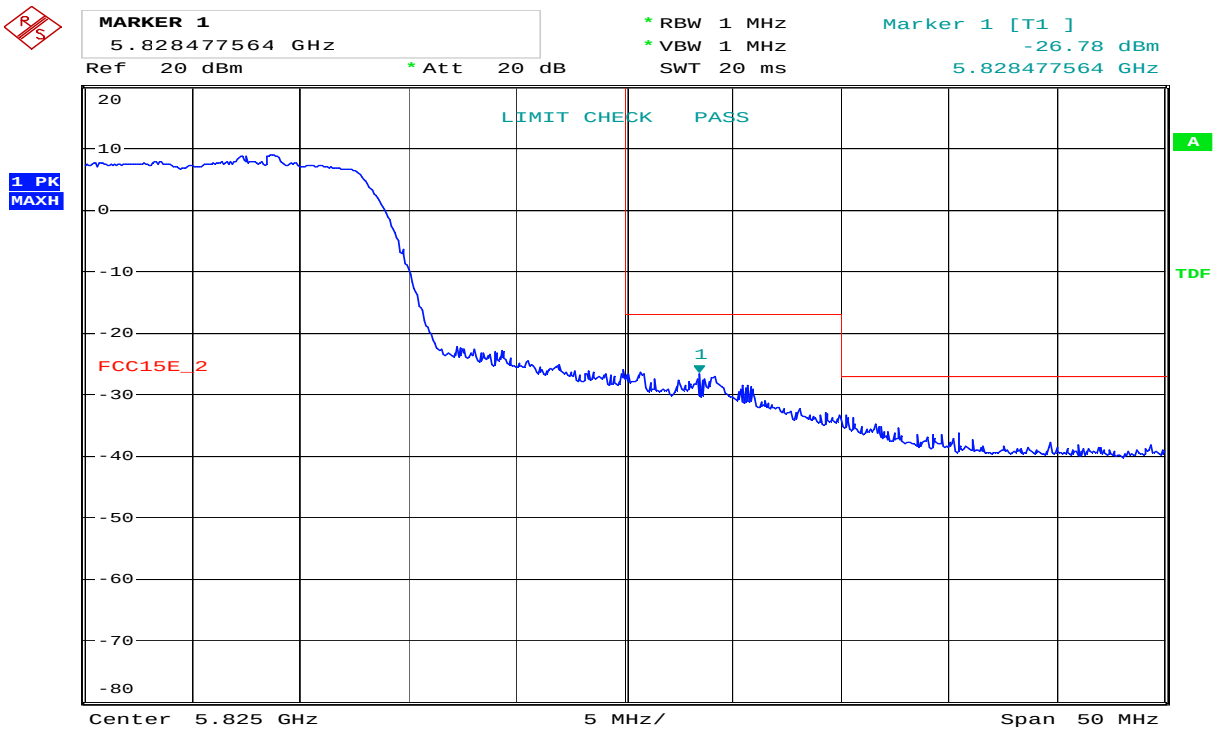
Date: 1.JUL.2010 09:29:47

Unwanted Emissions, Band Edge, 5745 MHz, 802.11a 6Mbps



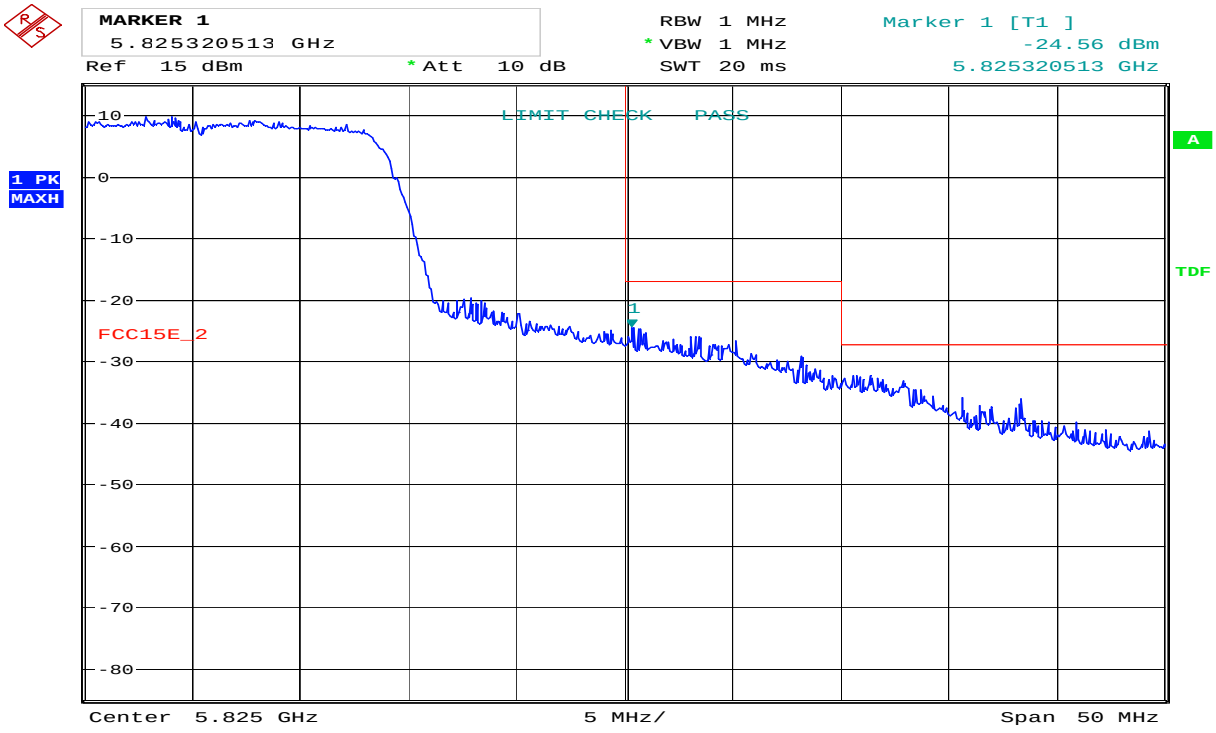
Date: 1.JUL.2010 09:27:47

Unwanted Emissions, Band Edge, 5745 MHz, 802.11n MCS0



Date: 29.JUN.2010 16:36:36

Unwanted Emissions, Band Edge, 5825 MHz, 802.11a 6Mbps



Date: 1.JUL.2010 09:32:10

Unwanted Emissions, Band Edge, 5825 MHz, 802.11n MCS0

4.9 Frequency Stability

Para. No.: 15.407(g)

Test Performed By: Frode Sveinsen	Date of Test: 2 August 2010

Test Results: Complies

Measurement Data:

Temperature	Measured Frequency (MHz)	Frequency Drift (ppm)
+45℃	5500.00007	-0.020
+40 ℃	5500.00005	-0.024
+30 ℃	5500.00037	0.035
+20 ℃	5500.00018	0
+10 ℃	5499.99995	-0.042
0 ℃	5499.99979	-0.071
-5 ℃	5500.00048	0.055

The test was performed with the counter function of a spectrum analyzer.

The upper and lower temperatures used are the outer limits specified by the manufacturer.

The EUT was powered from a fully charged battery during this test.

Frequency Stability requirement:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

4.10 Transmit Power Control

Para. No.: 15.407(h)

Test Performed By: Frode Sveinsen	**Date of Test: June/July 2010**

Test Results: Complies

Measurement Data:

Ch #	**Frequency (MHz)**	**Max. Power (dBm)**		**Low Power (dBm)**	
		802.11a 6Mbps	802.11n MCS0	802.11a 6Mbps	802.11n MCS0
36	5180	17.7	17.1	-3.3	-3.2
64	5320	18.9	19.3	-2.2	-1.6
100	5500	15.7	14.6	-1.4	-1.3
140	5700	10.2	10.6	-3.2	-3.0

The above values are measured with an RMS Power Meter with duty-cycle 100%.

Transmit Power Control requirement:

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

4.11 Conducted Emissions

Para. No.: 15.205, 15.209

Test Performed By: Frode Sveinsen	Date of Test: 12 August 2010

Test Results: Complies

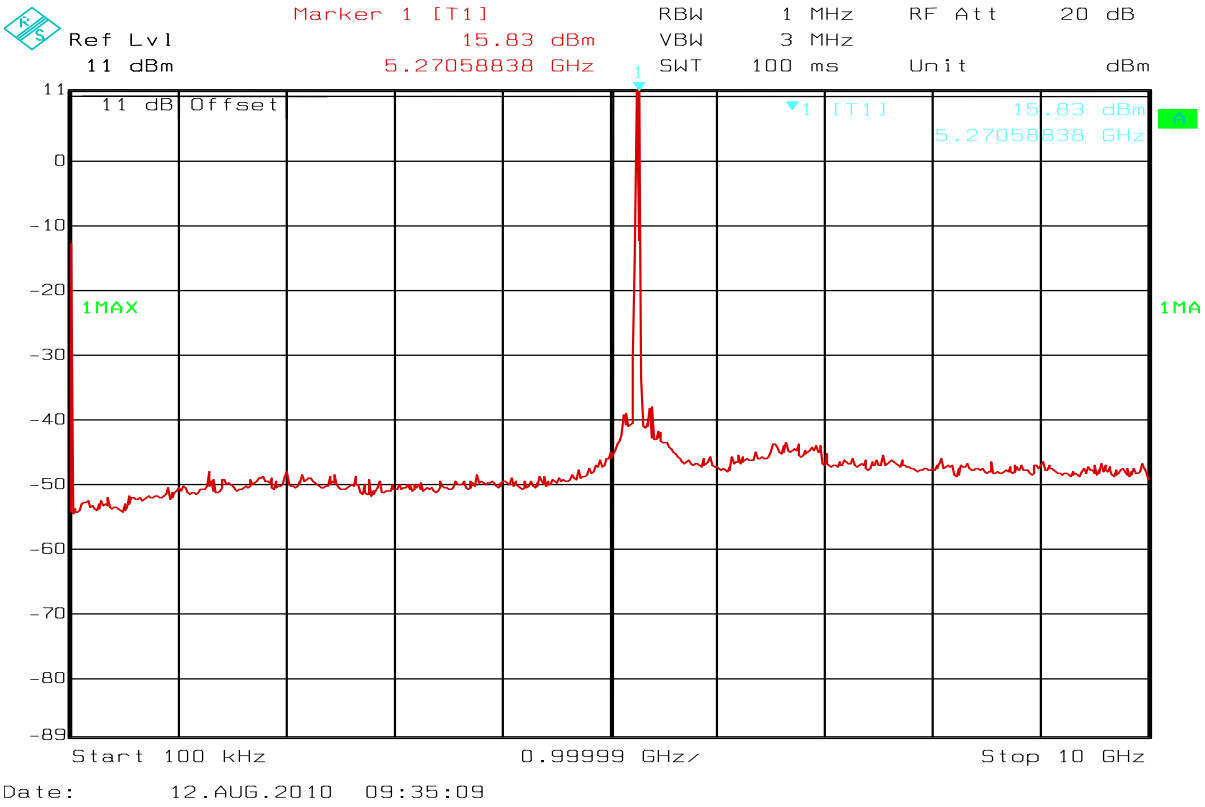
Measurement Data:

Conducted Emissions, 100kHz - 40 GHz

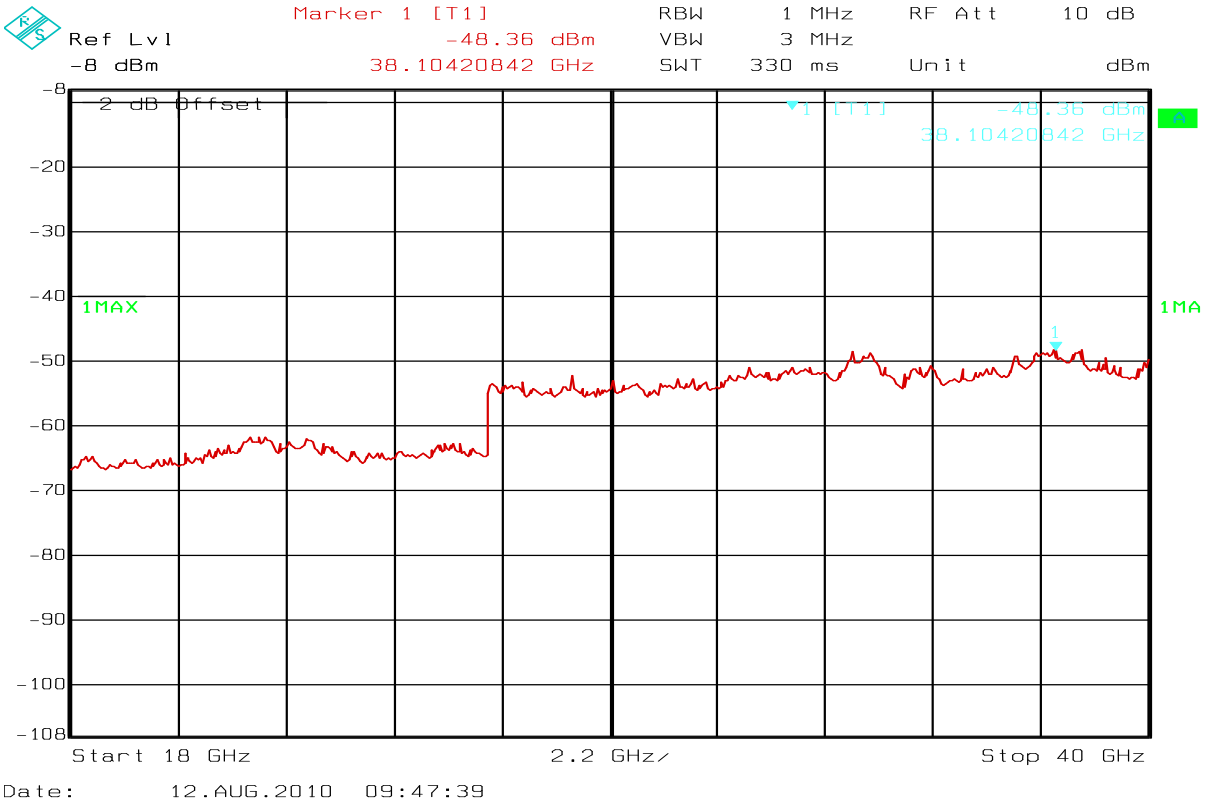
Peak Detector, RBW=1 MHz

Ch. No.	Emission Frequency (MHz)	Measured value (dBm)		Limit (dBm)
		802.11a 6Mbps	802.11n MCS0	
52	5260	-30.6	-30.6	-27

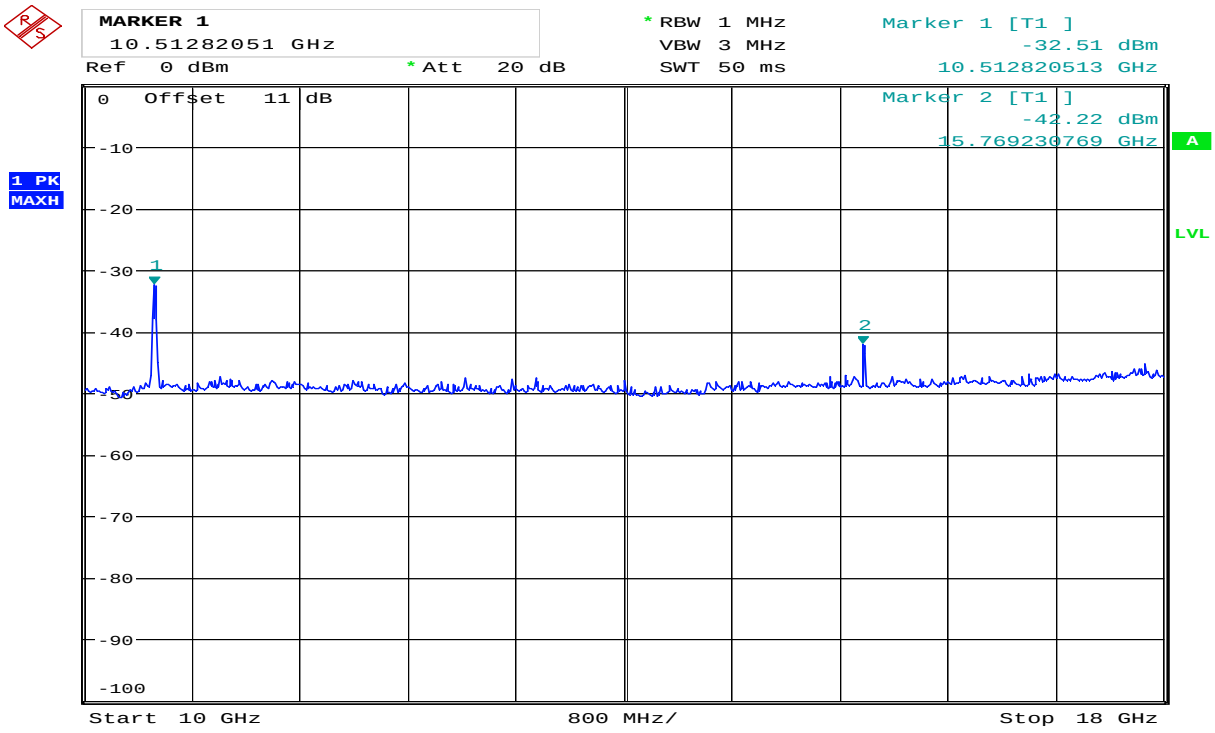
See attached plots.



Conducted Emissions, 100 kHz – 10 GHz, 802.11a 6Mbps

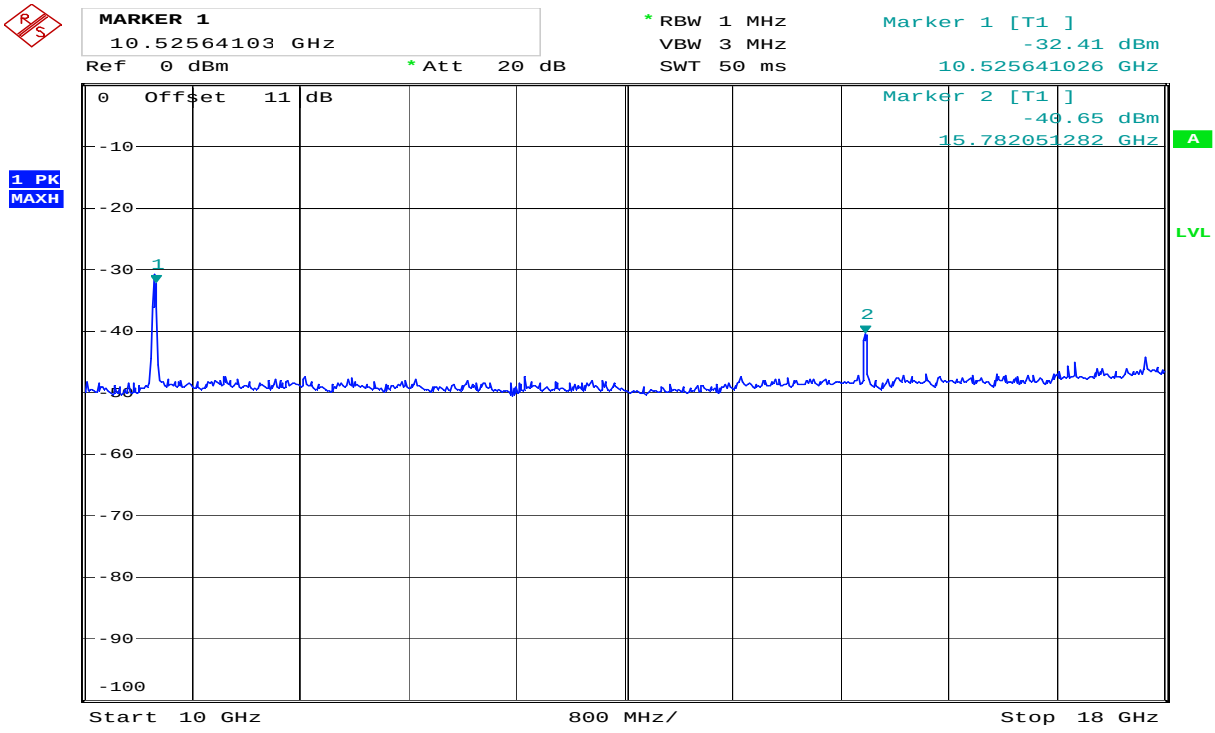


Conducted Emissions, 18 – 40 GHz, 802.11a 6Mbps



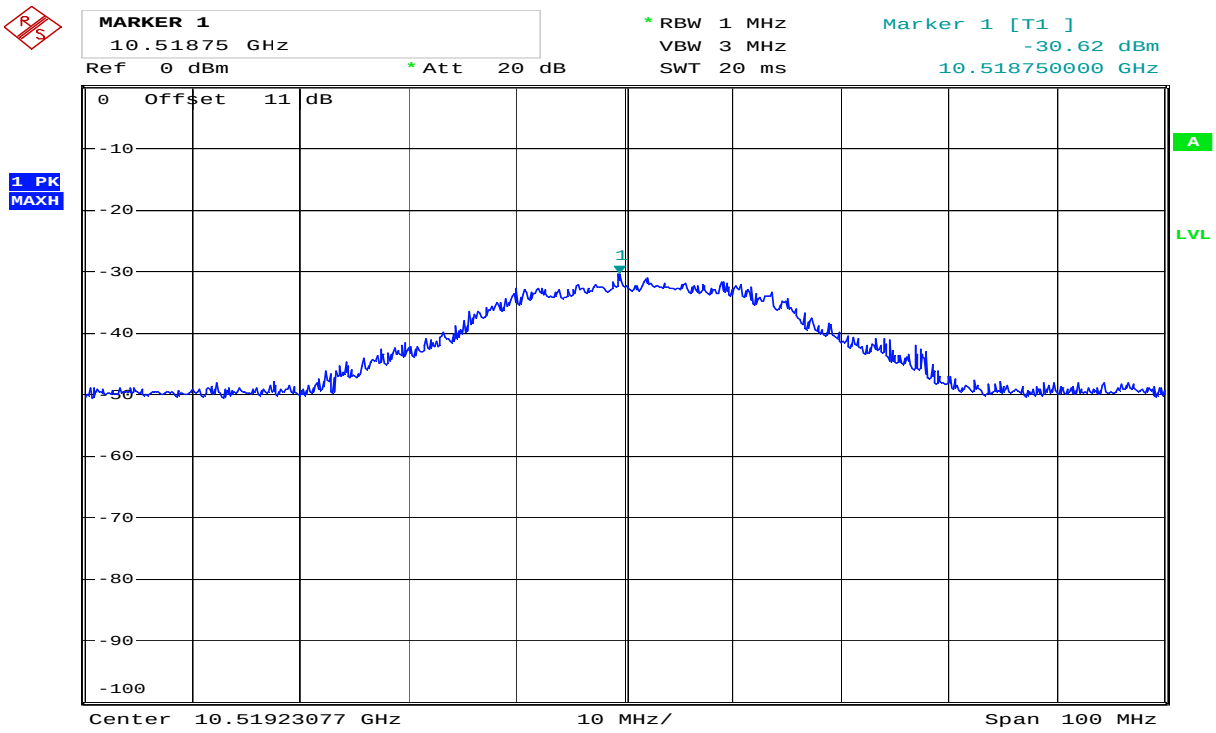
Date: 12.AUG.2010 13:37:08

Conducted Emissions, 10 – 18 GHz, 802.11a 6Mbps



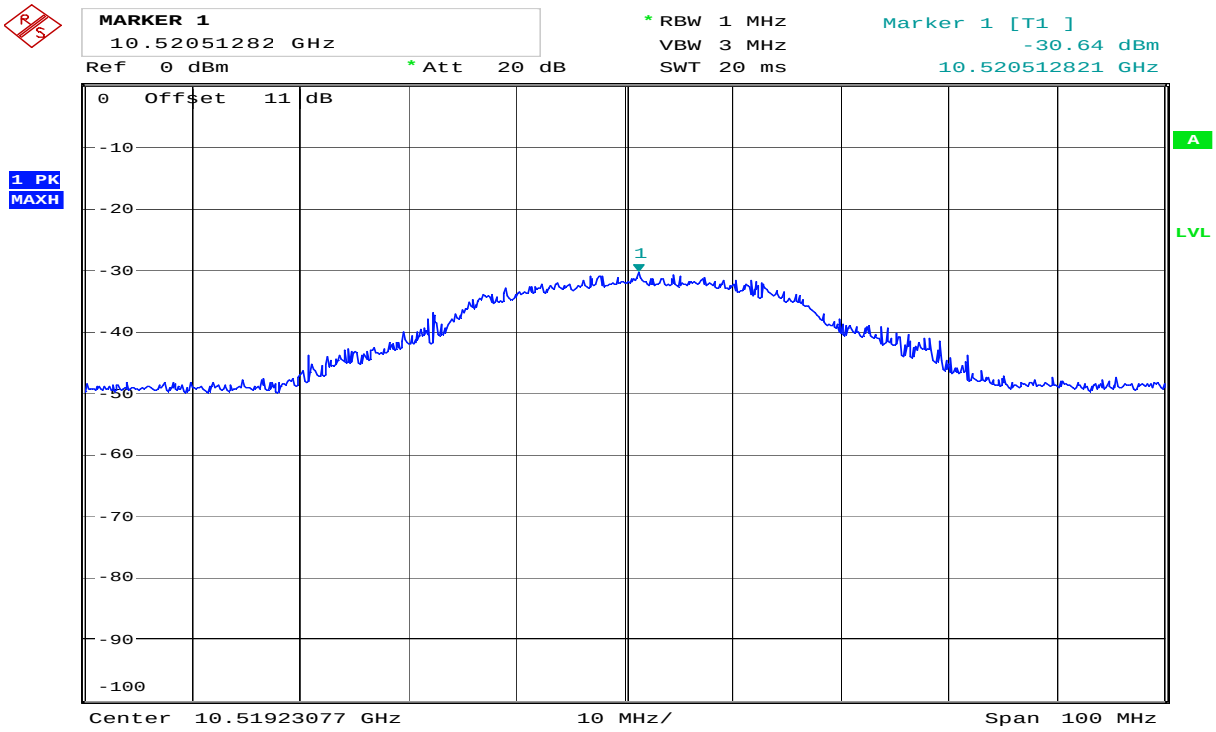
Date: 12.AUG.2010 13:33:11

Conducted Emissions, 10 – 18 GHz, 802.11n MCS0



Date: 12.AUG.2010 13:35:55

Conducted Emissions, 10.52 GHz, 802.11a 6Mbps



Date: 12.AUG.2010 13:35:03

Conducted Emissions, 10.52 GHz, 802.11n MCS0

4.12 Radiated Emissions

Para. No.: 15.205, 15.209

Test Performed By: Frode Sveinsen	Date of Test: June 2010

Test Results: Complies

Measurement Data:

Radiated emissions 10 kHz-30 MHz.

Measuring distance 10m, measured with Peak detector.

No component detected, see attached plots.

Limit is converted to 10m using 40 dB/decade according to 15.31 (f) (2).

Radiated emission 30 – 1000 MHz.

Measuring distance 10m, measured with Peak detector.

No component detected, see attached plots.

Radiated Emissions, 1-40 GHz

Measuring distance 3m up to 8.5 GHz, 1m above 8.5 GHz.

Peak Detector, RBW=1 MHz

Carrier freq. (MHz)	Measured Frequency (GHz)	Measured Emission (dBµV/m)	Transducer Factor dB	Limit (dBµV/m)	Margin (dB)
5180	10.36	67.6	17.9	74	6.4
	15.54	62.6	22.5	74	11.4
5320	10.64	68.7	18.5	74	5.3
	15.96	68.8	23.3	74	5.2
5500	11.0	72.0	19.5	74	2.0
5700	11.4	68.4	19.9	74	5.6
5805	11.61	70.8	20.2	74	3.2

Average Detector, RBW=1 MHz

Carrier freq. (MHz)	Measured Frequency (GHz)	Measured Emission (dBµV/m)	Transducer Factor dB	Limit (dBµV/m)	Margin (dB)
5180	10.36	47.6	17.9	54	6.4
	15.54	42.6	22.5	54	11.4
5320	10.64	48.7	18.5	54	5.3
	15.96	48.8	23.3	54	5.2
5500	11.0	52.0	19.5	54	2.0
5700	11.4	48.4	19.9	54	5.6
5805	11.61	50.8	20.2	54	3.2

Measured results are for 802.11n, 6 Mbps. It was checked that other modulations and/or bitrates did not produce higher emissions.

Only harmonics that fall in the restricted bands (ref. §15.205) have been measured.

Antenna factor, amplifier gain and cable loss are included in Spectrum Analyzer “Transducer factor”.

Duty Cycle correction factor is 20 dB for all modulations according to calculations supplied by the applicant. Average Detector values are calculated from Peak Detector values using Duty Cycle correction factor 20 dB.

See attached plots.

Nemko AS
Peak

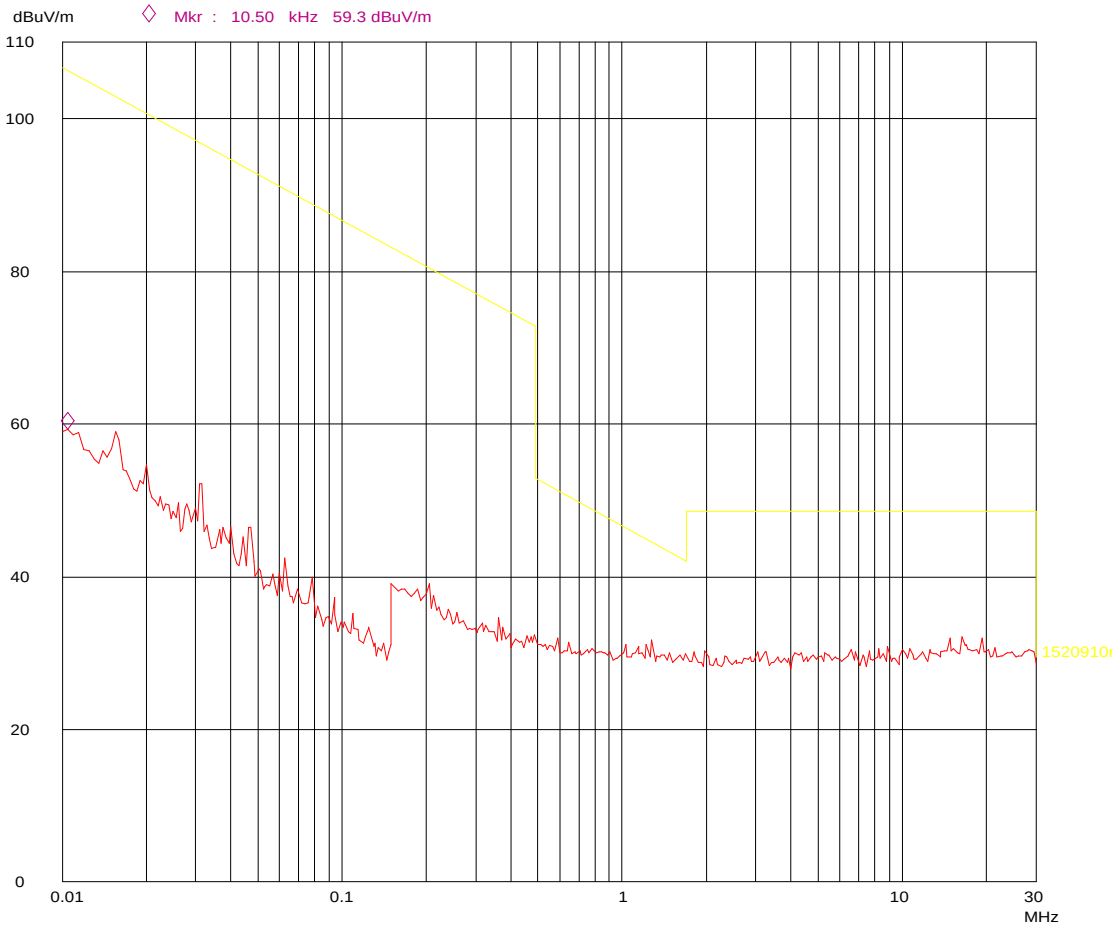
03. Jun 10 14:00

Operator: FS
Comment: ASCOM WH1 Cordless WLAN Phone
FCC 15.209
Dist 10m
802.11n, MCS0, 5GHz Operation
Nemko Ref: 151006
R&S HFH2-Z2

Scan Settings (2 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
10k	150k	500Hz	1k	PK	50ms	AUTO	LN ON	60dB
150k	30M	4.5k	9k	PK	50ms	AUTO	LN OFF	60dB

Transducer No.	Start	Stop	Name
3	9k	30M	HFH2Z2uV



Radiated Emissions, 10 kHz – 30 MHz, 802.11n MCS0

Nemko AS
Peak

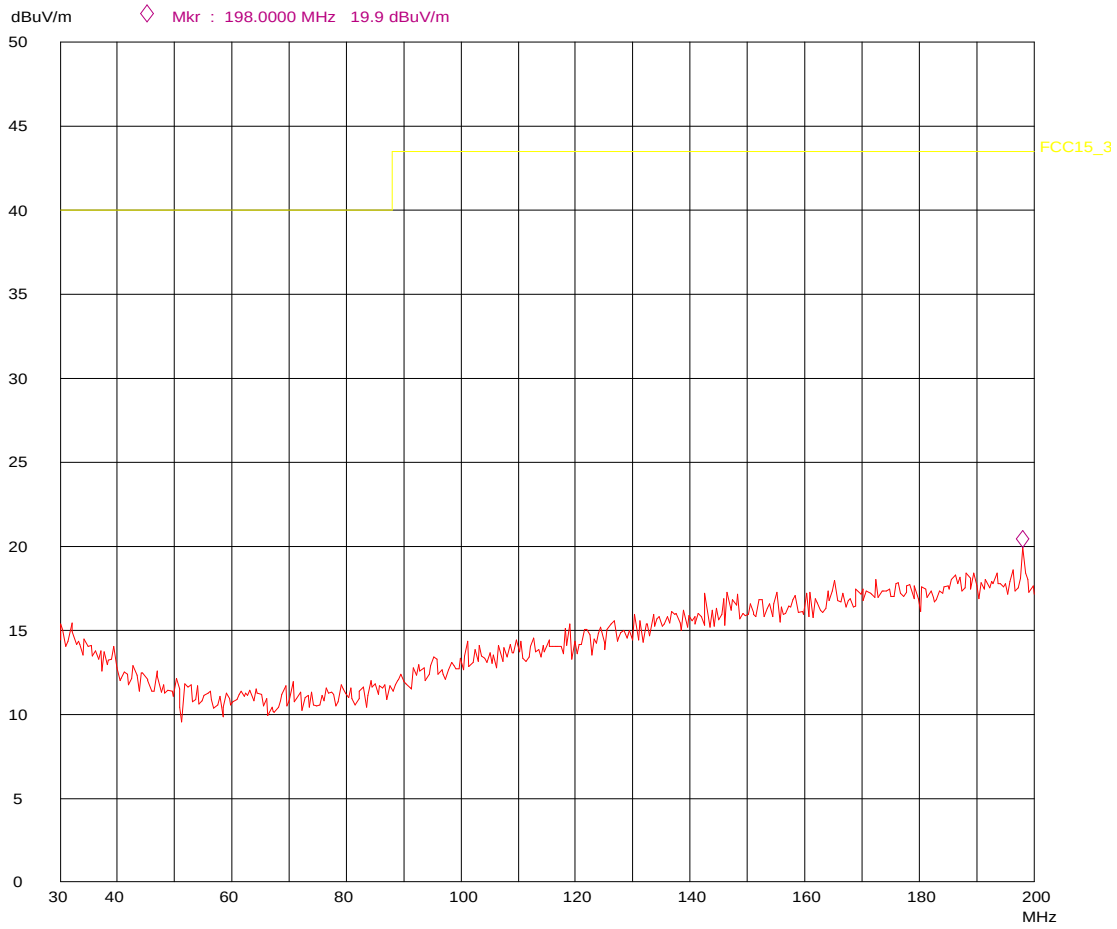
03. Jun 10 09:50

Operator: FS
Comment: ASCOM WH1 Cordless WLAN Phone
FCC 15.209
Dist 3m, H=1m, VP
802.11a, 6Mbps, Ch100=5500MHz
Nemko Ref: 151006

Scan Settings (1 Range)
|--------- Frequencies ----------||---------- Receiver Settings ----------|

Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
30M	200M	50k	120k	PK	50ms	AUTO	LN ON	60dB

Transducer No.	Start	Stop	Name
11	30M	200M	HK116



Radiated Emissions, 30– 200 MHz, 802.11a 6Mbps, EUT V, VP

Nemko AS

03. Jun 10 09:58

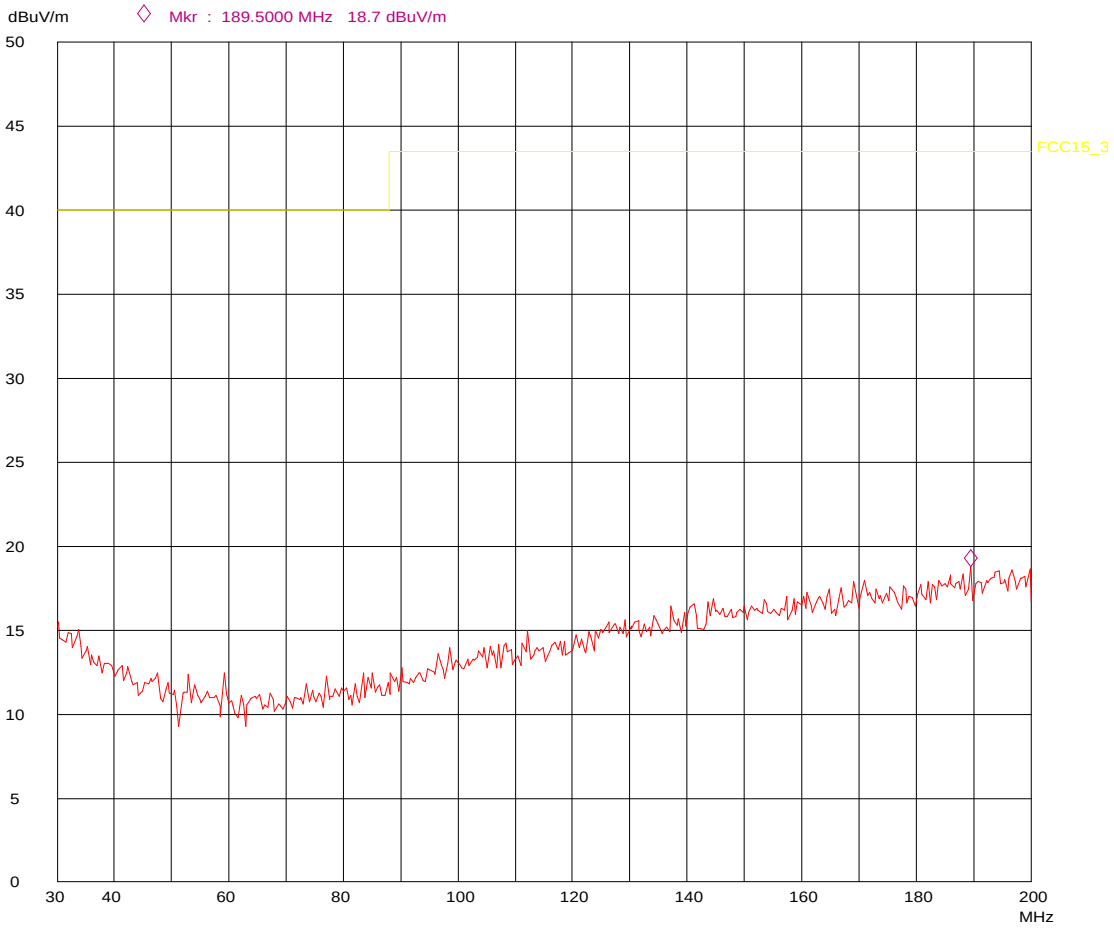
Peak

Operator: FS
Comment: ASCOM WH1 Cordless WLAN Phone
FCC 15.209
Dist 3m, H=2m, HP
802.11a, 6Mbps, Ch100=5500MHz
Nemko Ref: 151006

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
30M	200M	50k	120k	PK	50ms	AUTO	LN ON	60dB

Transducer No.	Start	Stop	Name
11	30M	200M	HK116



Radiated Emissions, 30– 200 MHz, 802.11a 6Mbps, EUT V, HP

Nemko AS

03. Jun 10 11:39

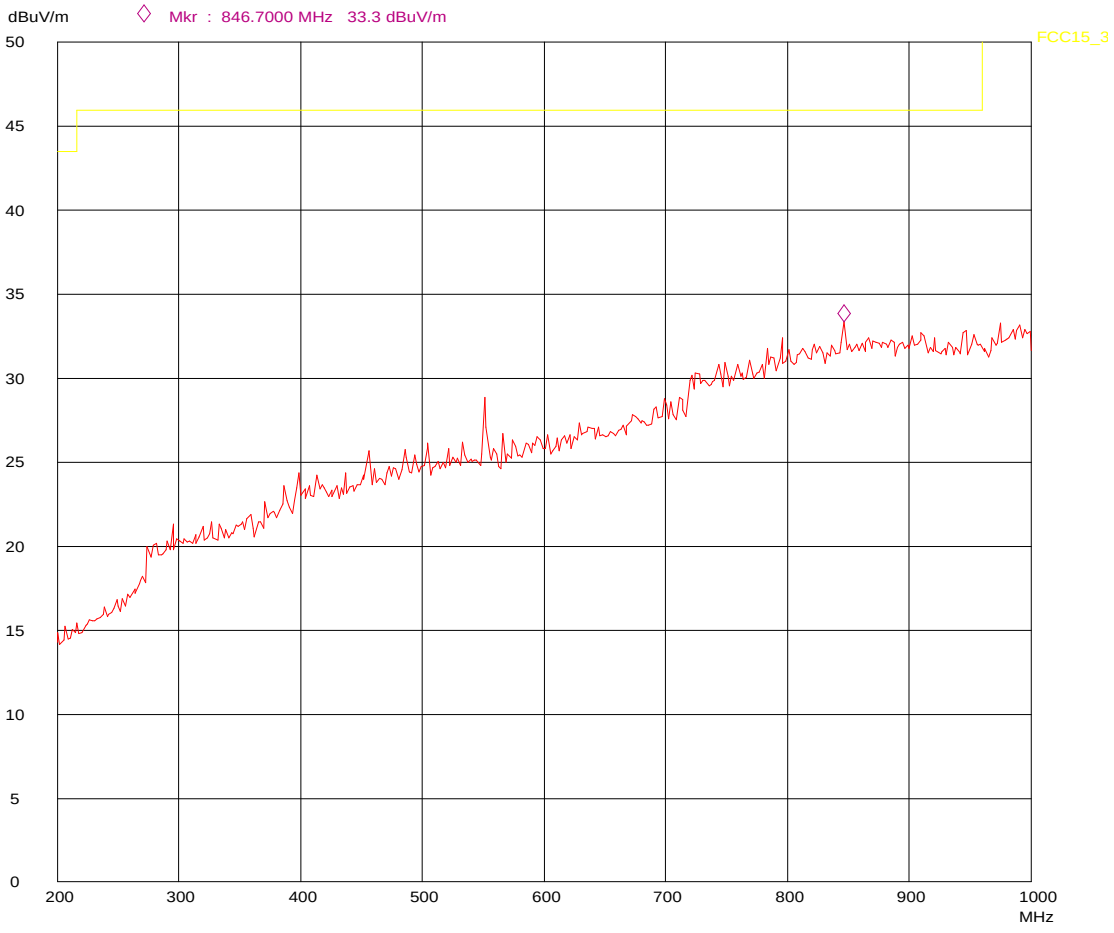
Peak

Operator: FS
Comment: ASCOM WH1 Cordless WLAN Phone
FCC 15.209
Dist 3m, H=1m, VP
802.11a, 6Mbps, 5GHz Operation
Nemko Ref: 151006
R&S HL223

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
200M	1000M	50k	120k	PK	20ms	AUTO	LN ON	60dB

Transducer No.	Start	Stop	Name
20	200M	1000M	HL223



Radiated Emissions, 200 - 1000 MHz, 802.11a 6Mbps, EUT V, VP

Nemko AS

03. Jun 10 11:23

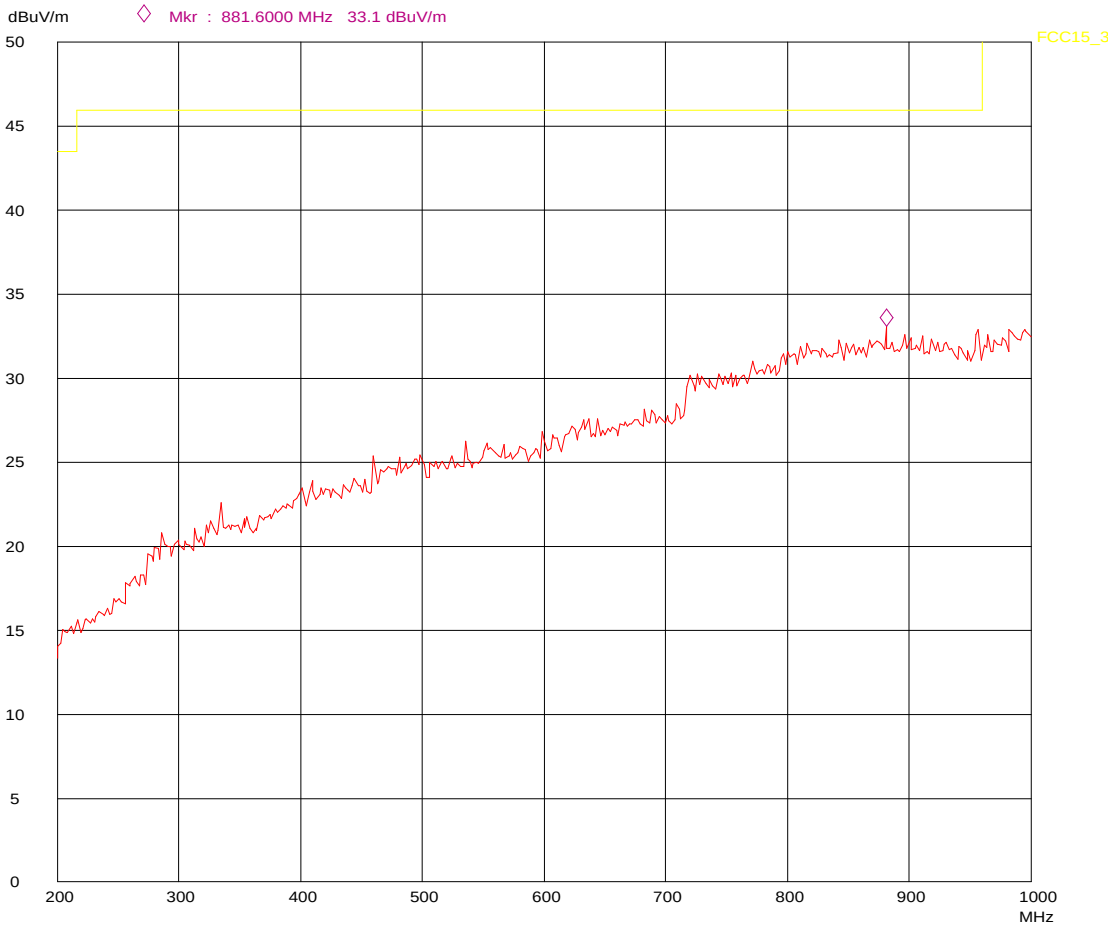
Peak

Operator: FS
Comment: ASCOM WH1 Cordless WLAN Phone
FCC 15.209
Dist 3m, H=2m, HP
802.11a, 6Mbps, 5GHz Operation
Nemko Ref: 151006
R&S HL223

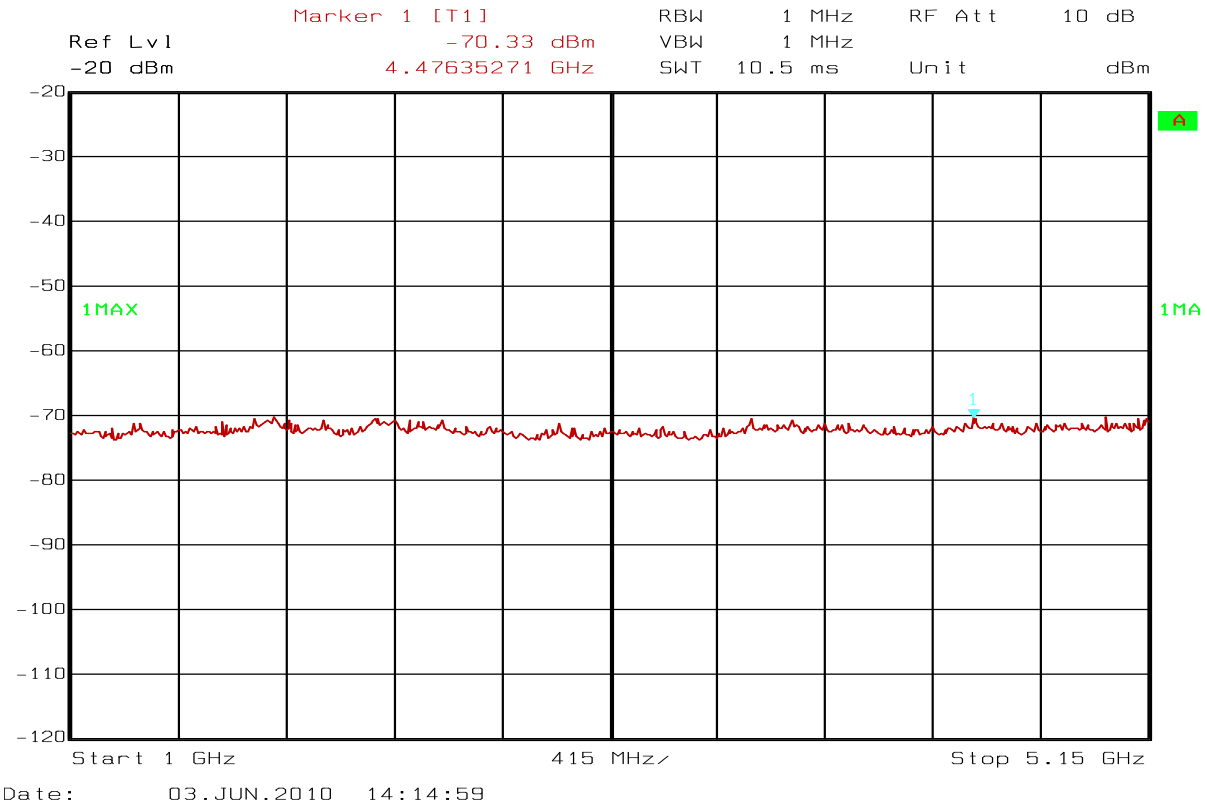
Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
200M	1000M	50k	120k	PK	20ms	AUTO	LN ON	60dB

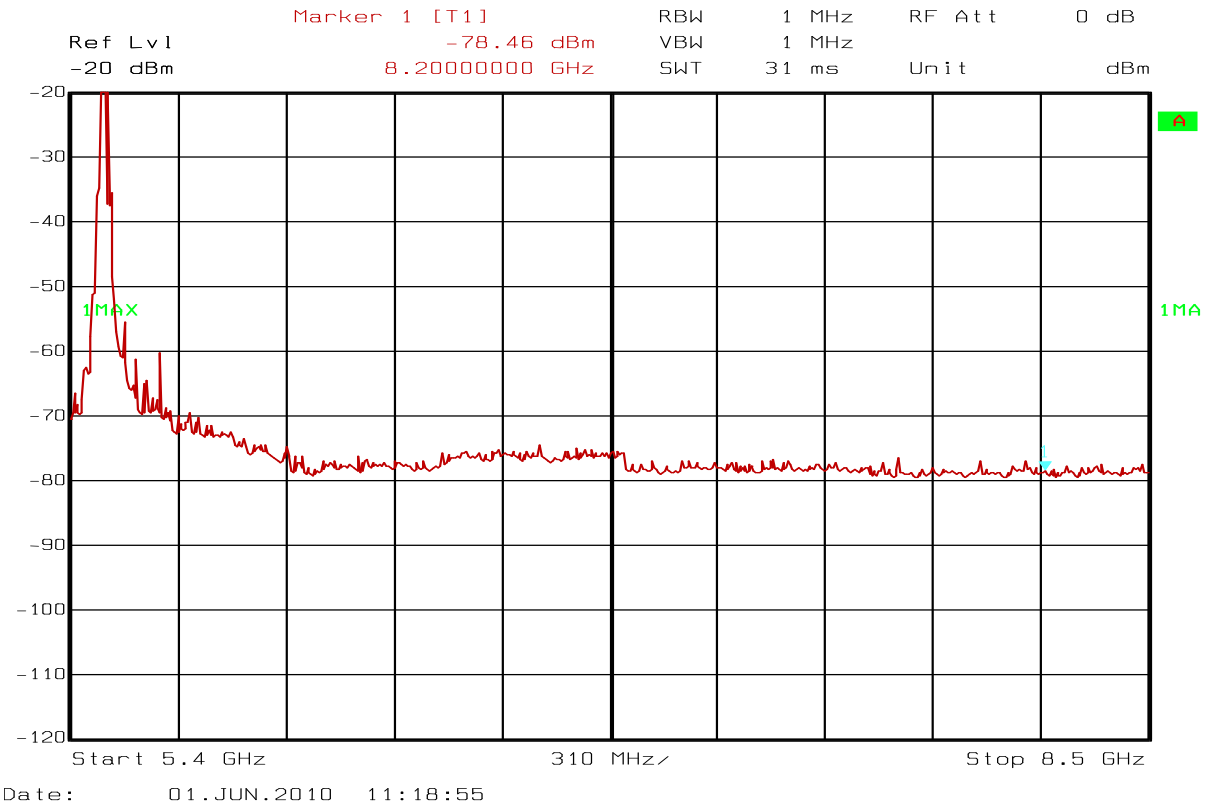
Transducer No.	Start	Stop	Name
20	200M	1000M	HL223



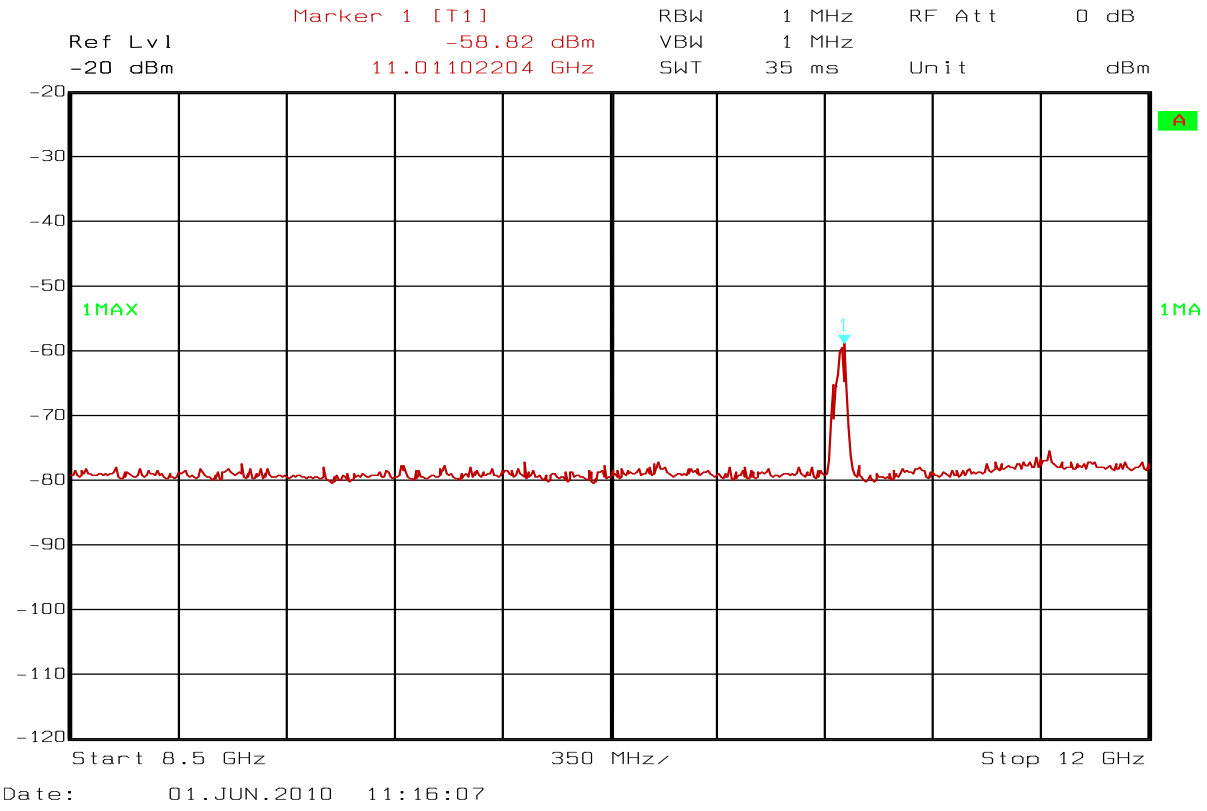
Radiated Emissions, 200 - 1000 MHz, 802.11a 6Mbps, EUT V, HP



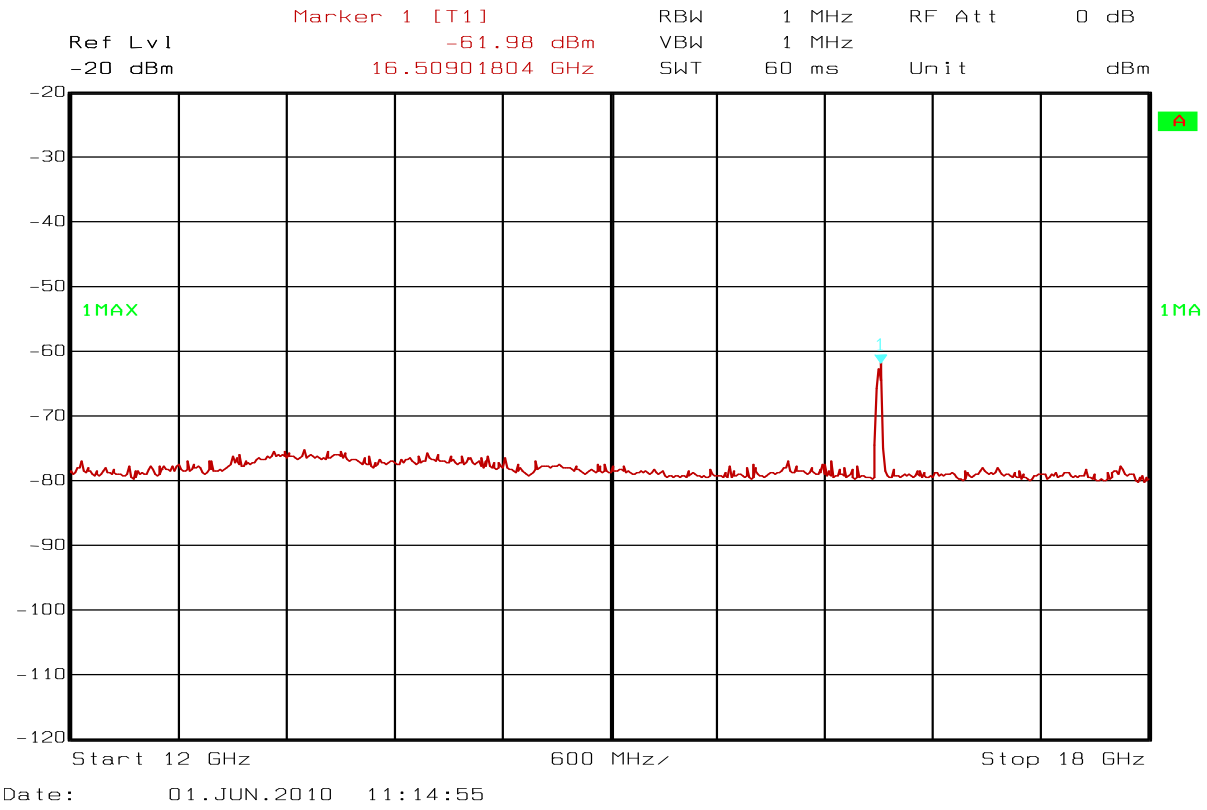
Prescan, 1.0 – 5.15 GHz, 5500 MHz, 802.11n MCS0



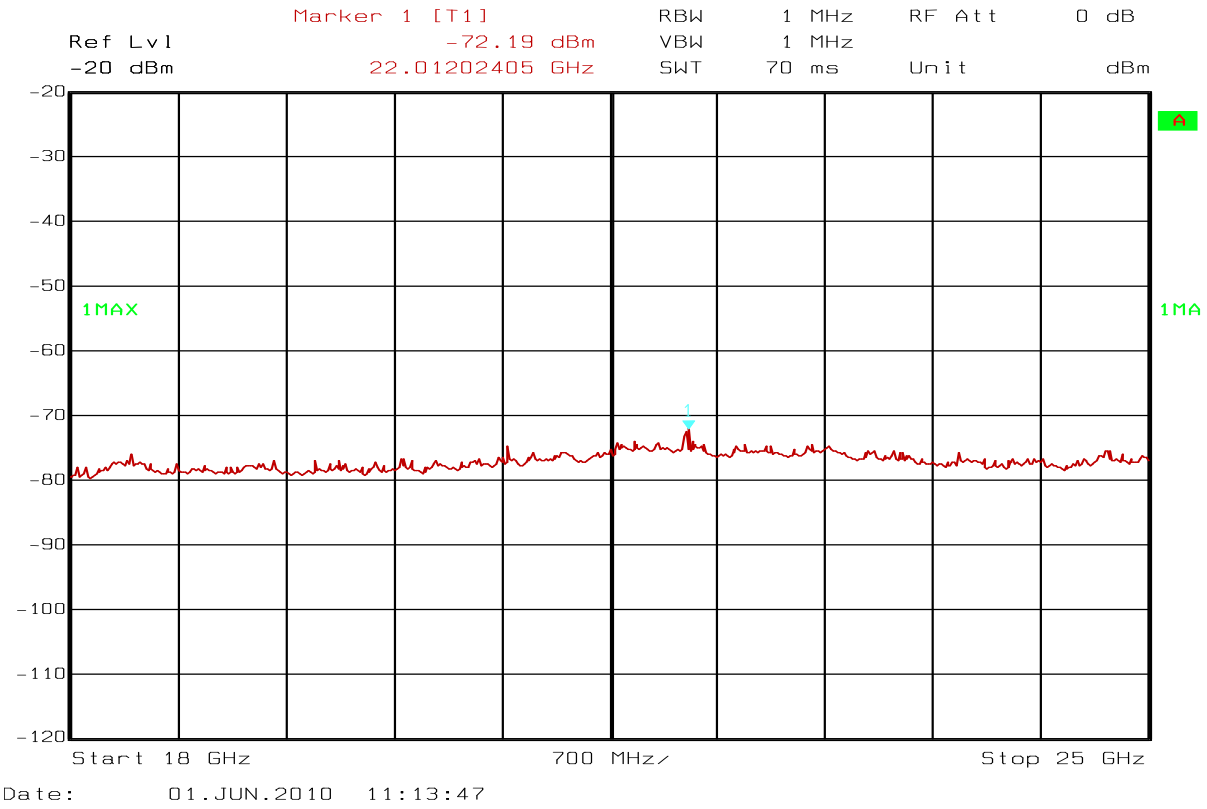
Prescan, 5.4 – 8.5 GHz, 5500 MHz, 802.11n MCS0



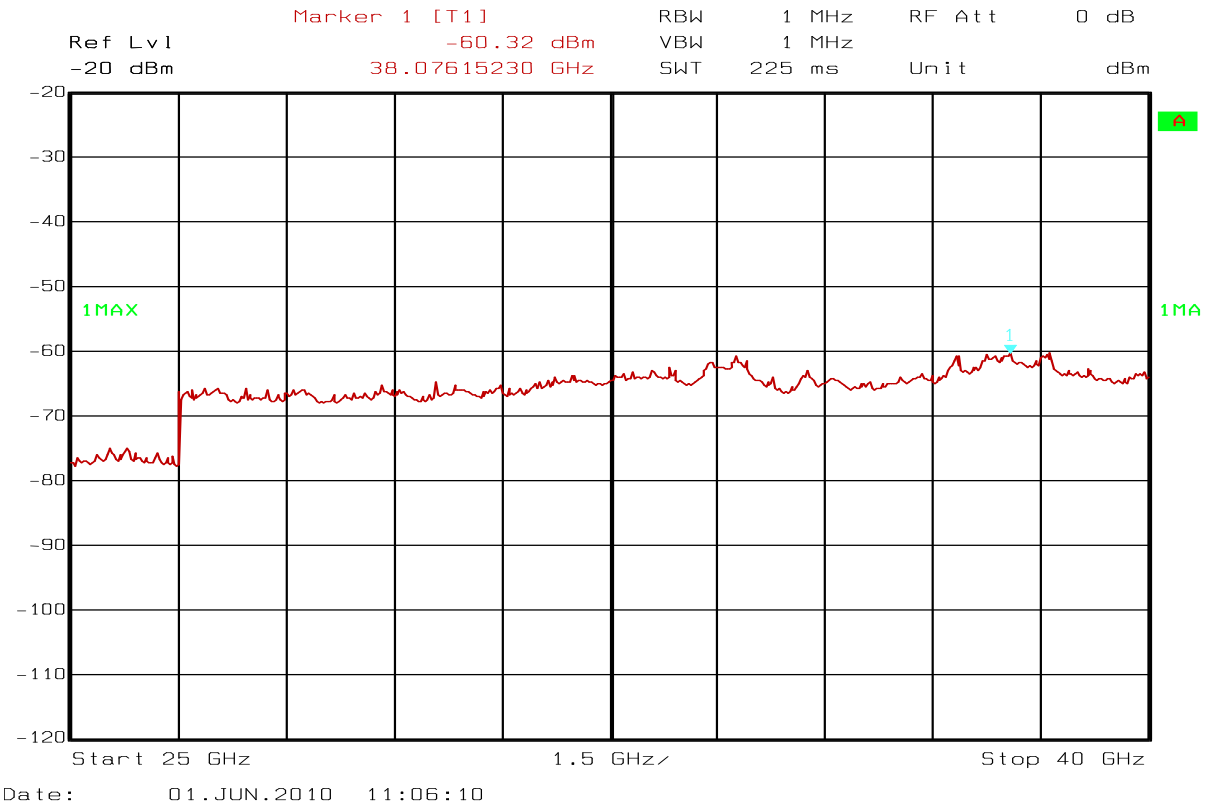
Prescan, 8.5 – 12.0 GHz, 5500 MHz, 802.11n MCS0



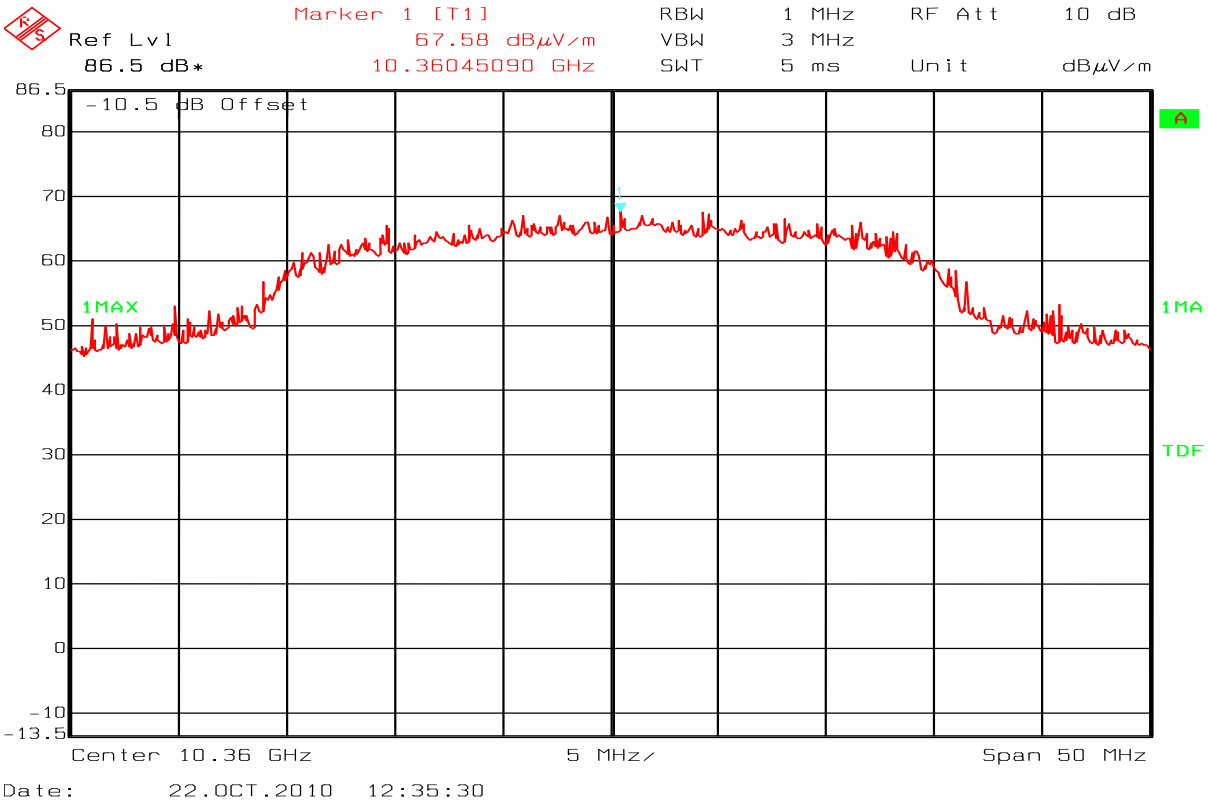
Prescan, 12.0 – 18.0 GHz, 5500 MHz, 802.11n MCS0



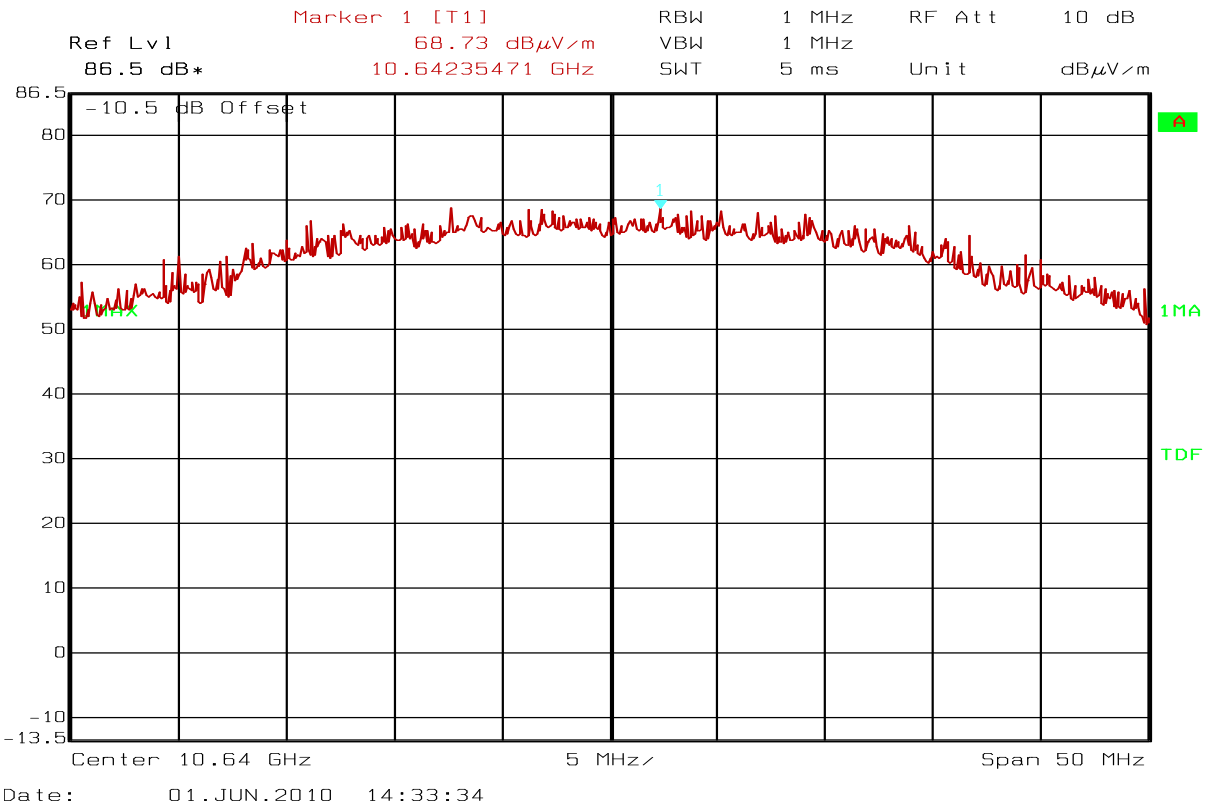
Prescan, 18.0 – 25.0 GHz, 5500 MHz, 802.11n MCS0



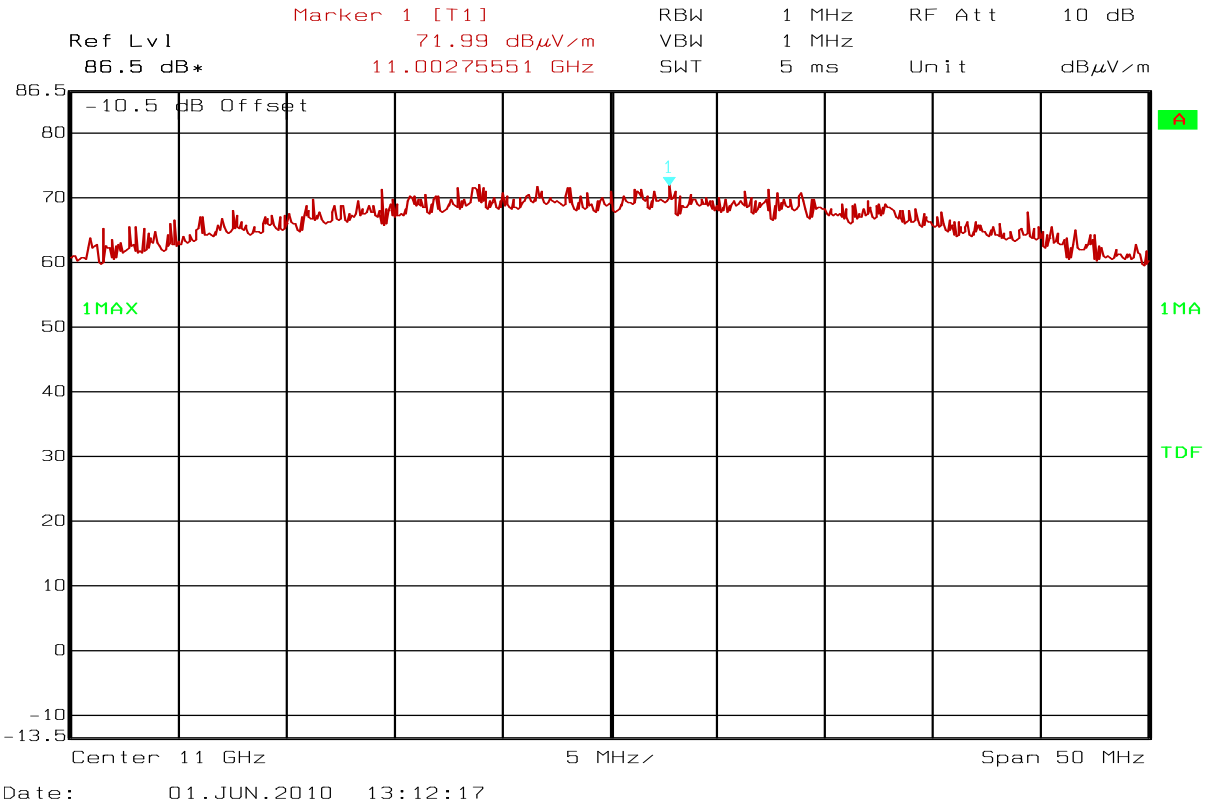
Prescan, 25.0 – 40.0 GHz, 5500 MHz, 802.11n MCS0



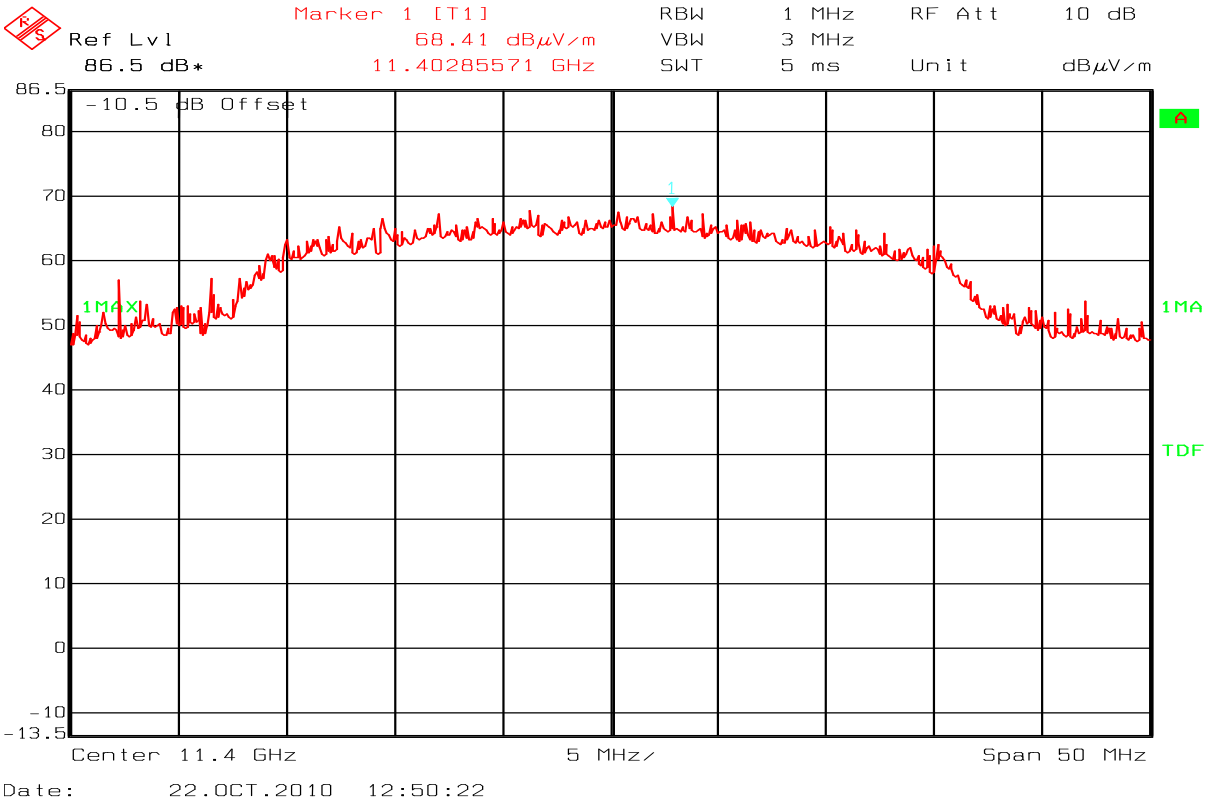
Radiated Emissions, 10.36 GHz, 5180 MHz (Max: 802.11a 6Mbps, EUT V, HP, 1m)



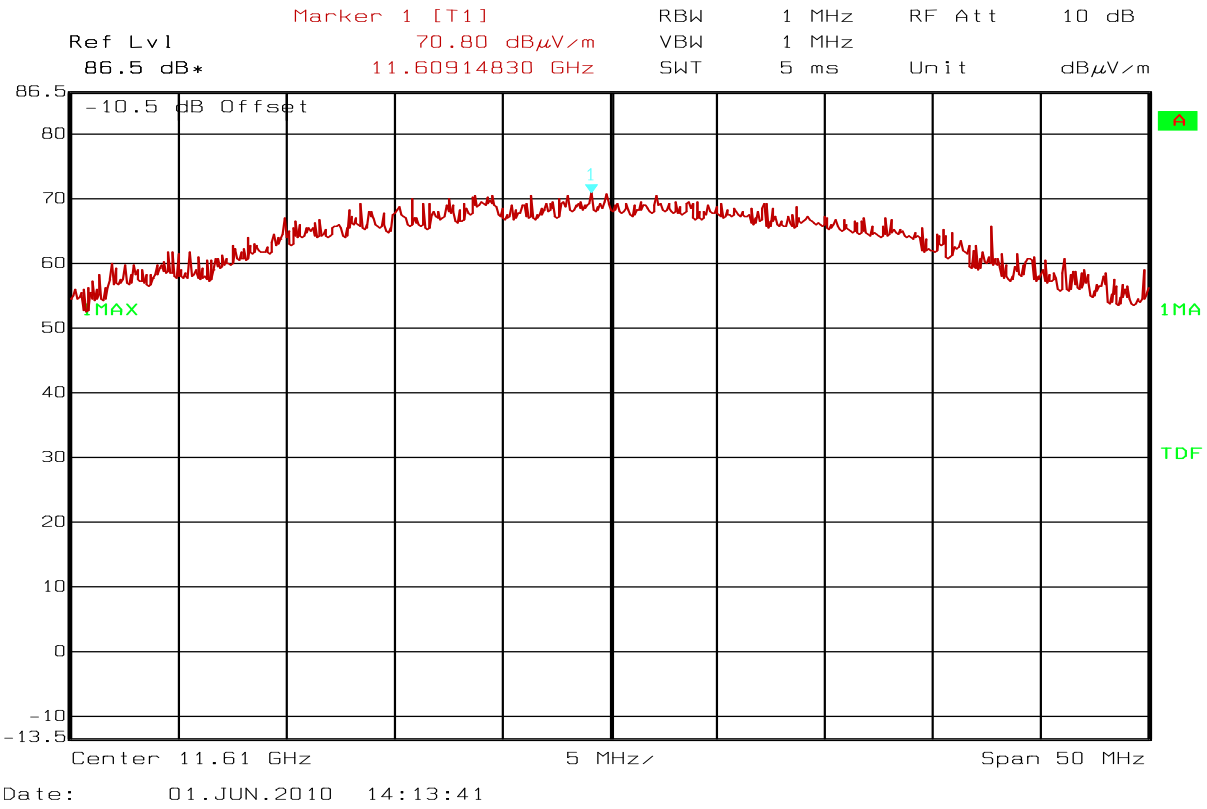
Radiated Emissions, 10.64 GHz, 5320 MHz (Max: 802.11n MCS0, EUT V, HP, 1m)



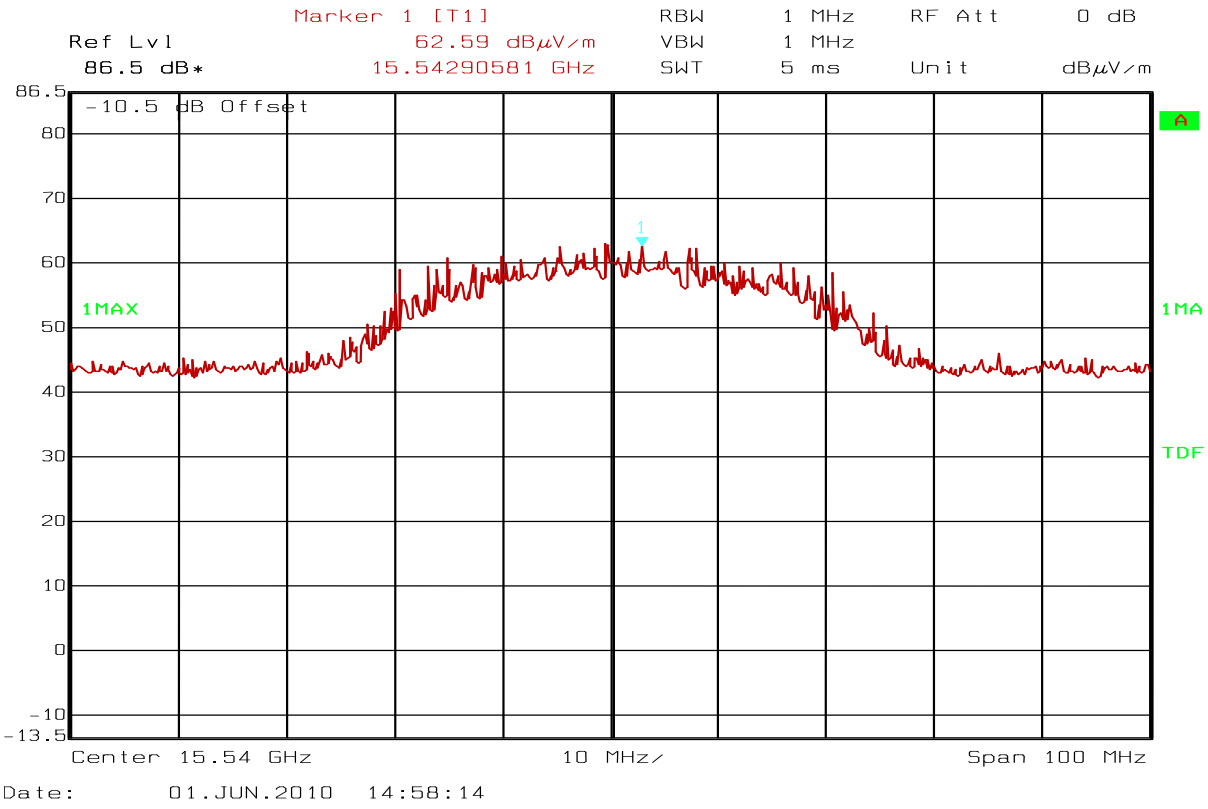
Radiated Emissions, 11.0 GHz, 5500 MHz (Max: 802.11n MCS0, EUT V, HP, 1m)



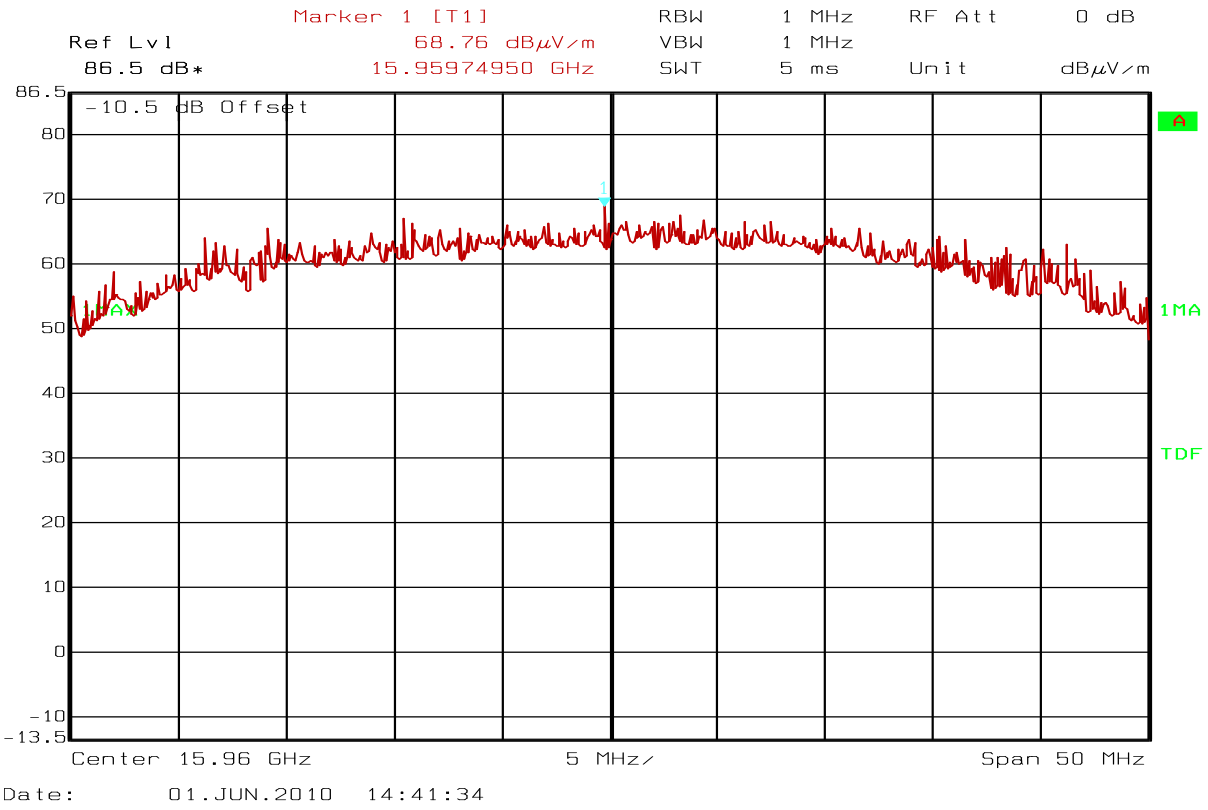
Radiated Emissions, 11.4 GHz, 5700 MHz (Max: 802.11n MCS0, EUT V, VP, 1m)



Radiated Emissions, 11.61 GHz, 5805 MHz (Max: 802.11n MCS0, EUT V, VP, 1m)



Radiated Emissions, 15.54 GHz, 5180 MHz (Max: 802.11n MCS0, EUT V, HP, 1m)



Radiated Emissions, 15.96 GHz, 5320 MHz (Max: 802.11n MCS0, EUT V, HP, 1m)

4.13 Dynamic Frequency Selection

Measurement Procedure:

FCC 15.407(h)(2)

Industry Canada RSS-210 A9.4.

Test results:

	Measured values	
	Frequency Band 2	**Frequency Band 3**
Channel Move Time	**2.7 s**	**2.7**
Non-occupancy Period	**>30 min**	**>30 min**

The tested EUT is a slave or client device without radar detection capabilities. The handset does not have ad-hoc or direct mode.

The test was performed by setting up a speech link between two WH1 handsets on the test channel and then applying a radar signal at a RF level of -50dBm to the Master device while the channel was monitored on the Spectrum Analyzer.

The EUT moves channel with the Master Device. See plots that illustrate Channel Move Time and Non-Occupancy Time in the frequency bands 5250 - 5350 MHz and 5470 – 5725 MHz.

The test was performed conducted according to KDB 848637.

FCC Radar Type 3 with Pulse Width 10µs, PRI 200µs and 18 pulses per burst was used (FCC 06-96 A1). Only one burst was used for each test since the Access point with DFS detected the radar every time.

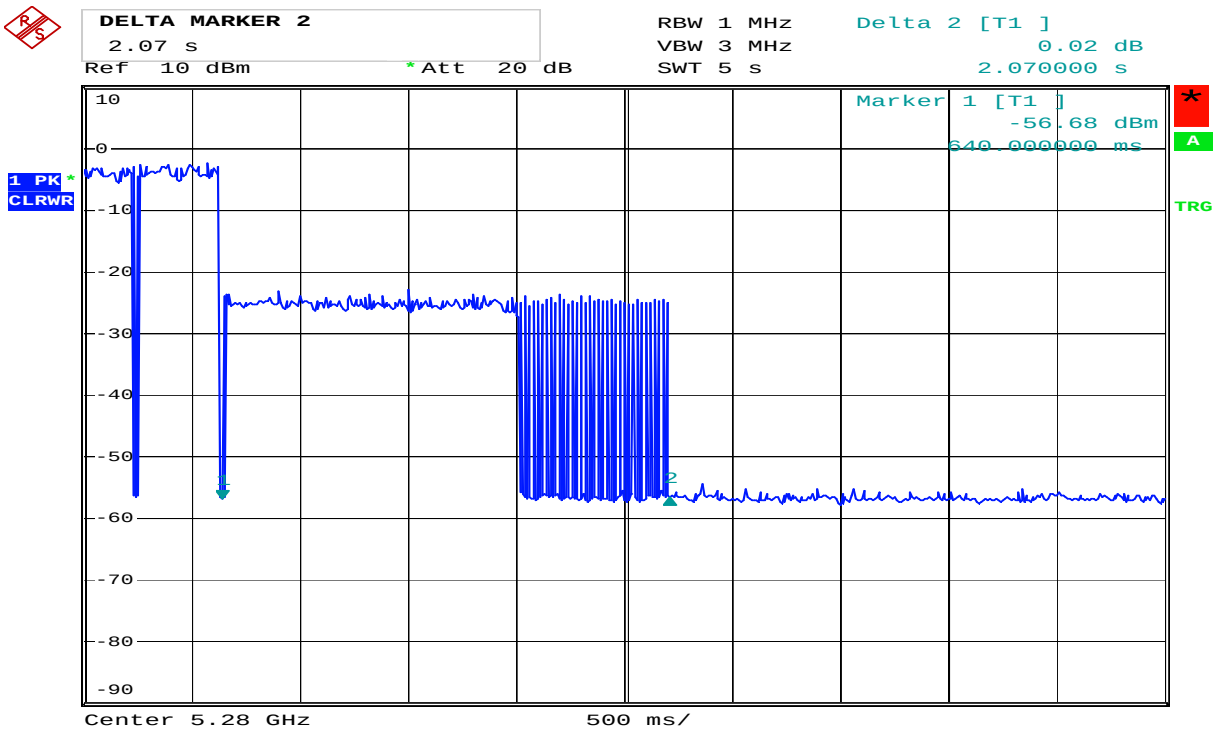
The Access Point with DFS used for this test was a Cisco Air AP1242AG-E-K9. Additionally a Linksys WRT54GC v.2.0 Router, Netgear FS 108P Switch an ACER PC with PBX software and a second WH1 handset was used for this test.

Requirements

FCC 15.407(h)(2), IC RSS-210 A9.4(b):

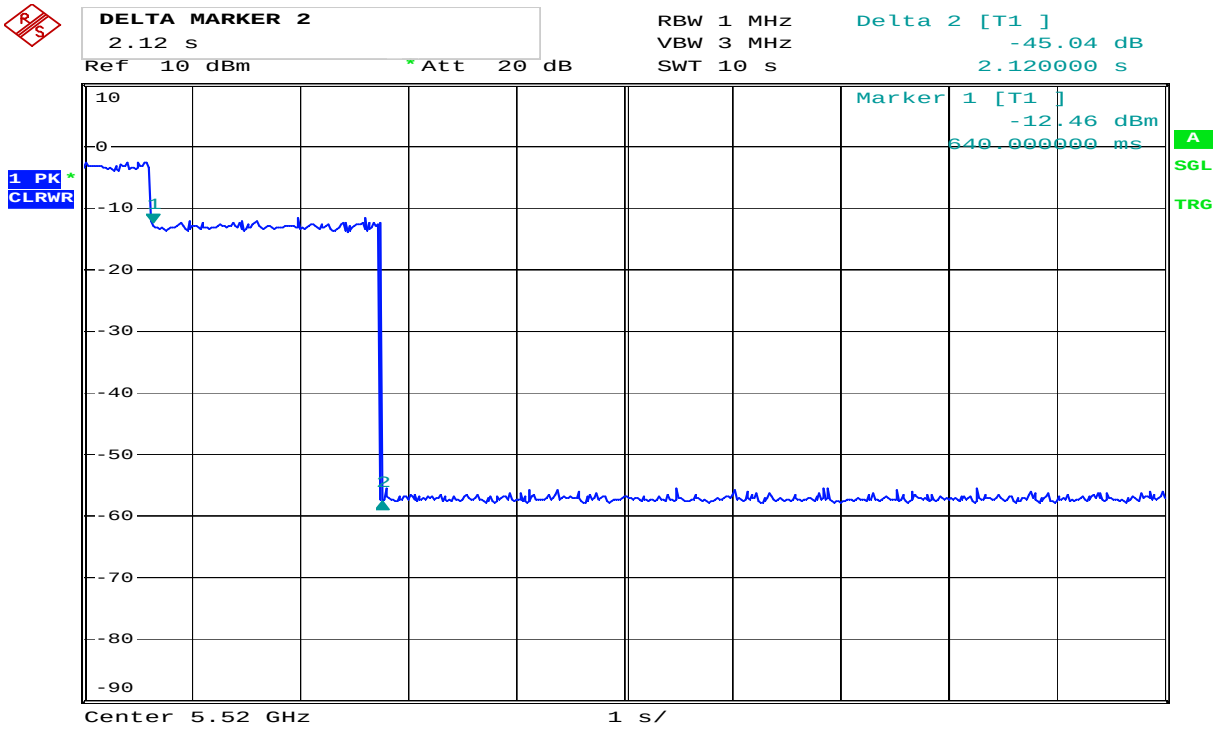
Channel Move Time: After a radar's presence is detected, all transmissions shall cease on the operating channel within 10 seconds. Transmissions during this period shall consist of normal traffic for a maximum of 200 ms after detection of the radar signal. In addition, intermittent management and control signals can be sent during the remaining time to facilitate vacating the operating channel.

Non-occupancy Period: A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.



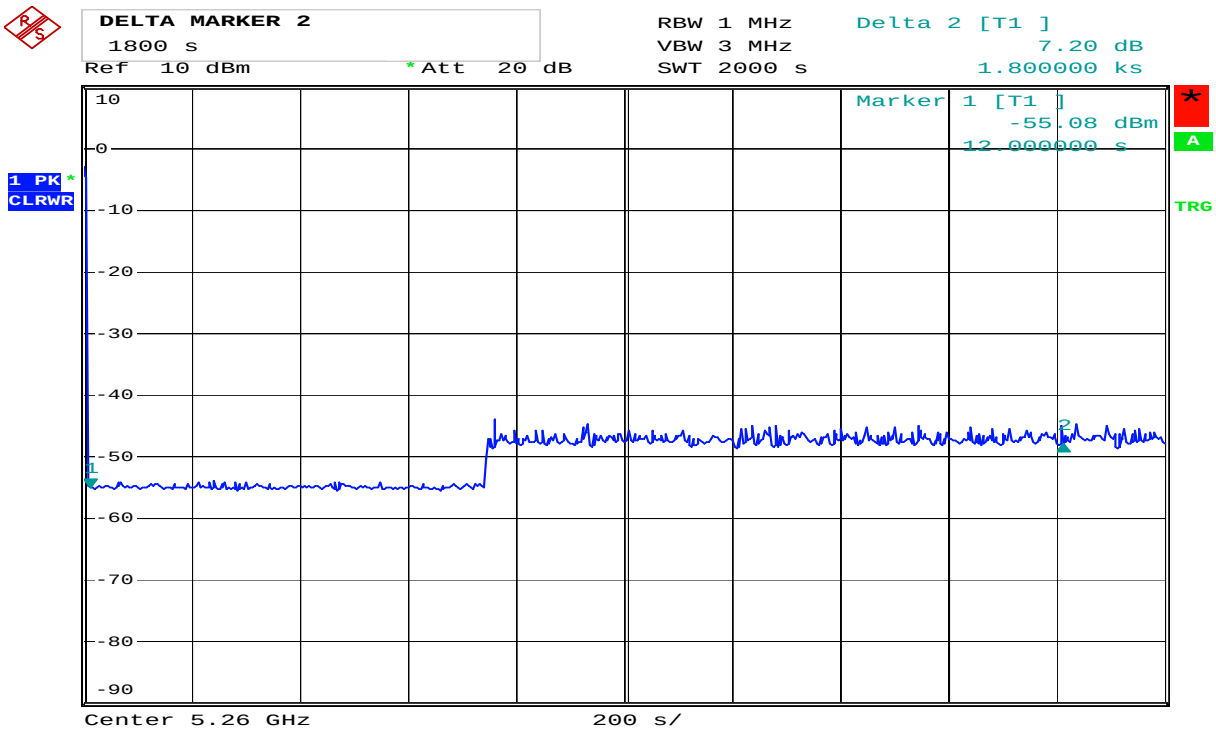
Date: 26.OCT.2010 10:15:59

Channel Closing Time, Band 2



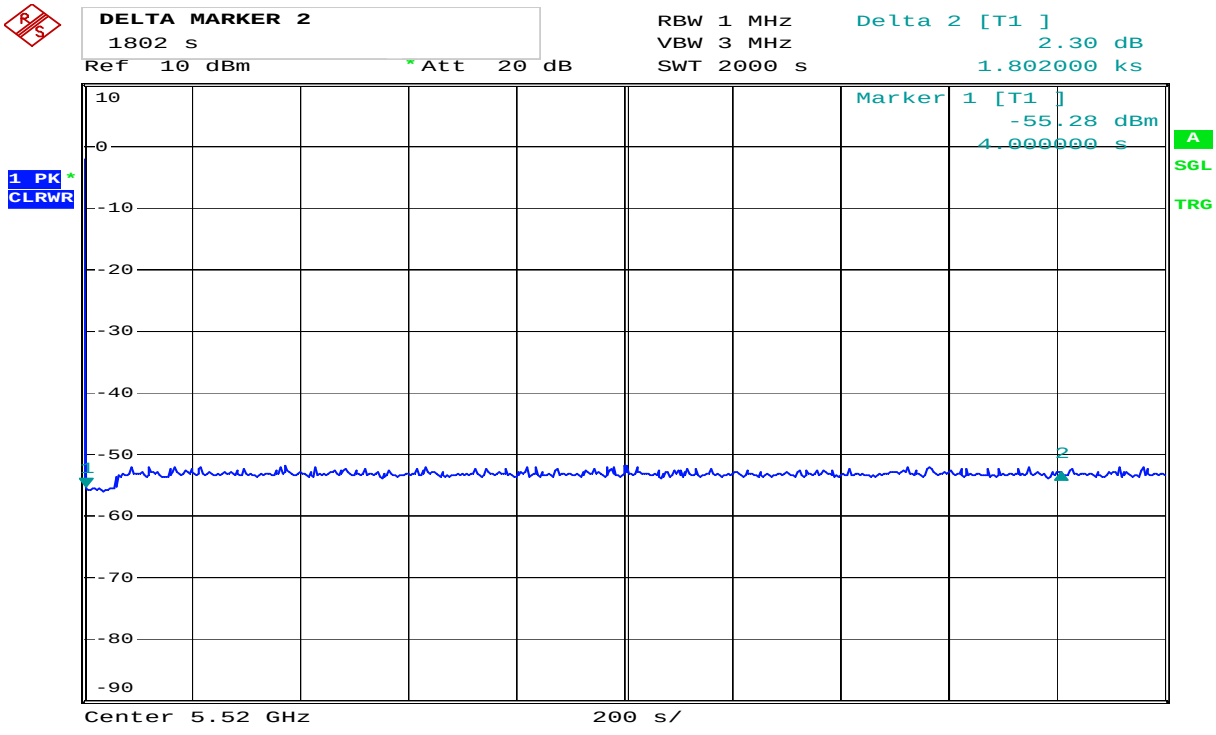
Date: 26.OCT.2010 12:09:17

Channel Closing Time, Band 3



Date: 26.OCT.2010 10:59:51

Non-Occupancy Period, Band 2



Date: 26.OCT.2010 11:58:44

Non-Occupancy Period, Band 3

4.14 Receiver Spurious Emissions

Measurement Procedure:

Industry Canada RSS-GEN paragraphs 4.10 and 6.

Test results:

Frequency MHz	Carrier No.	Measured Value Conducted dBm	Conducted Limit dBm	Margin dB
30 – 1000	all	< -77	-57	>20
> 1000	all	< -68	-53	>15

The measurement was performed conducted.

Requirements

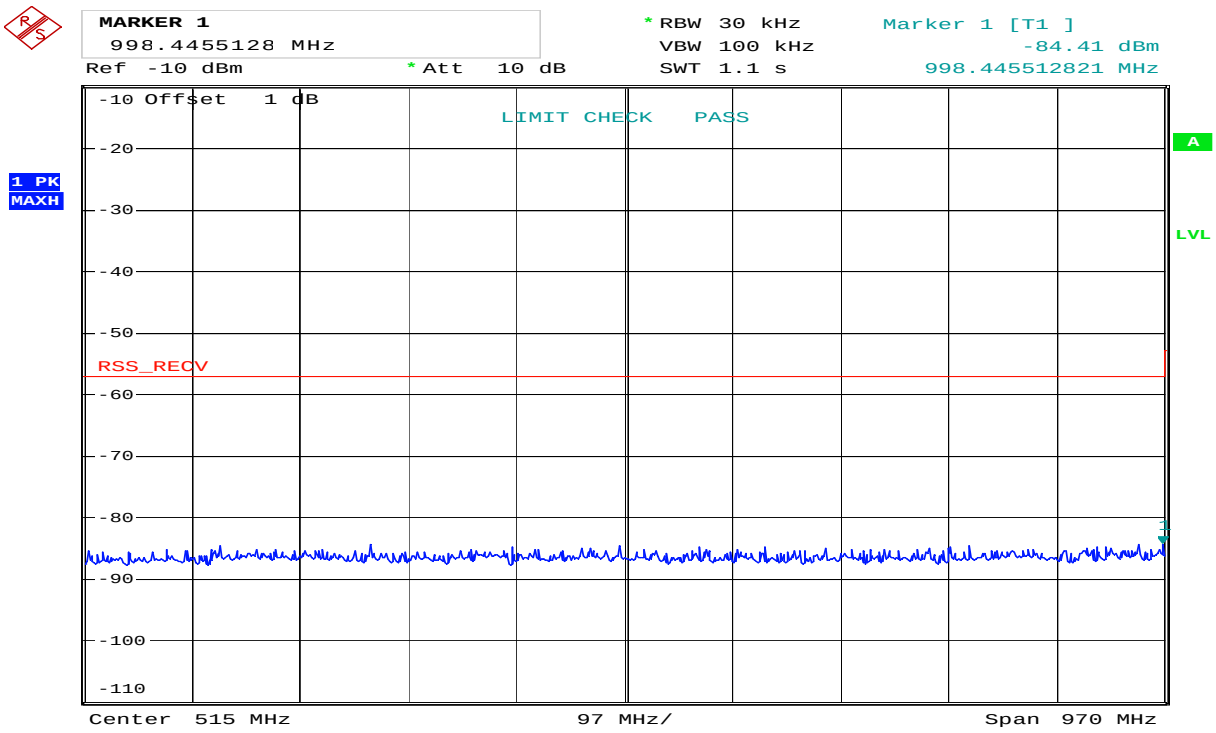
FCC: No requirements

Industry Canada: RSS-GEN Issue 2, clause 6

The measurement can be performed either radiated or conducted.

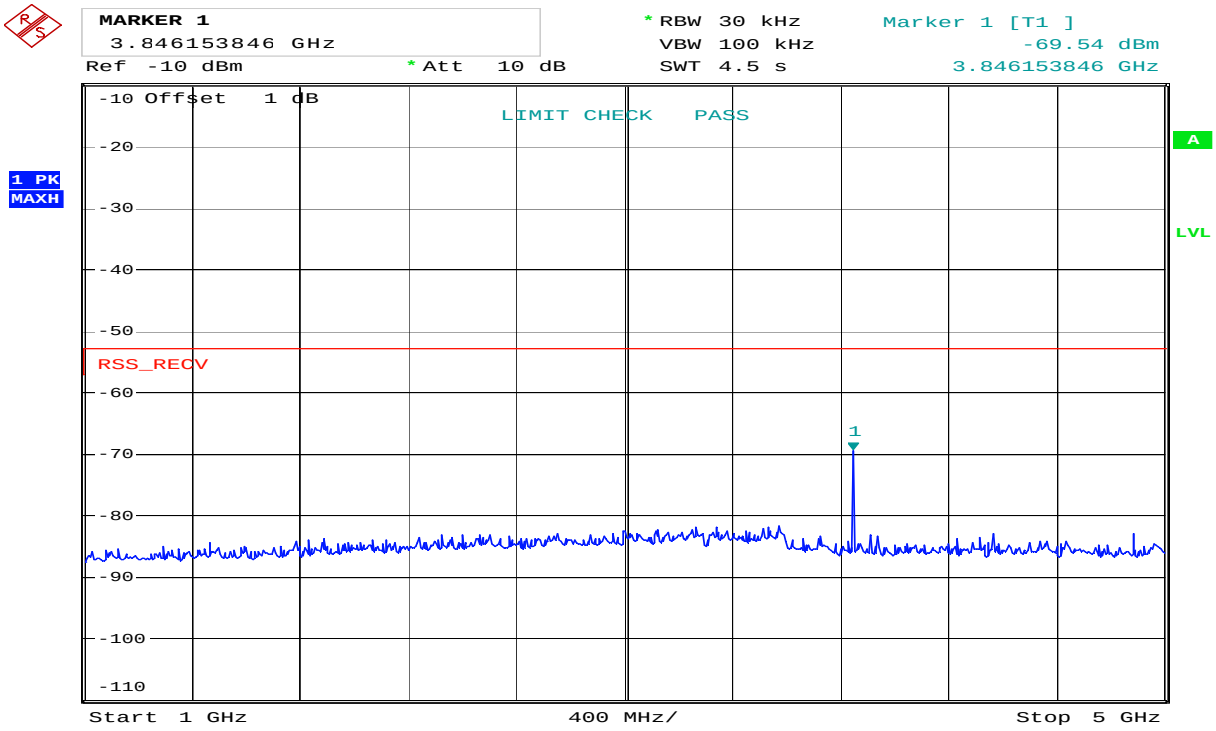
When measured Conducted*:* no spurious signals appearing at the antenna terminals shall exceed 2 nW per any 4 kHz spurious frequency in the band 30-1000 MHz, or 5 nW above 1 GHz.

When measured Radiated: See Table 1 in RSS-GEN Issue 2, clause 6.



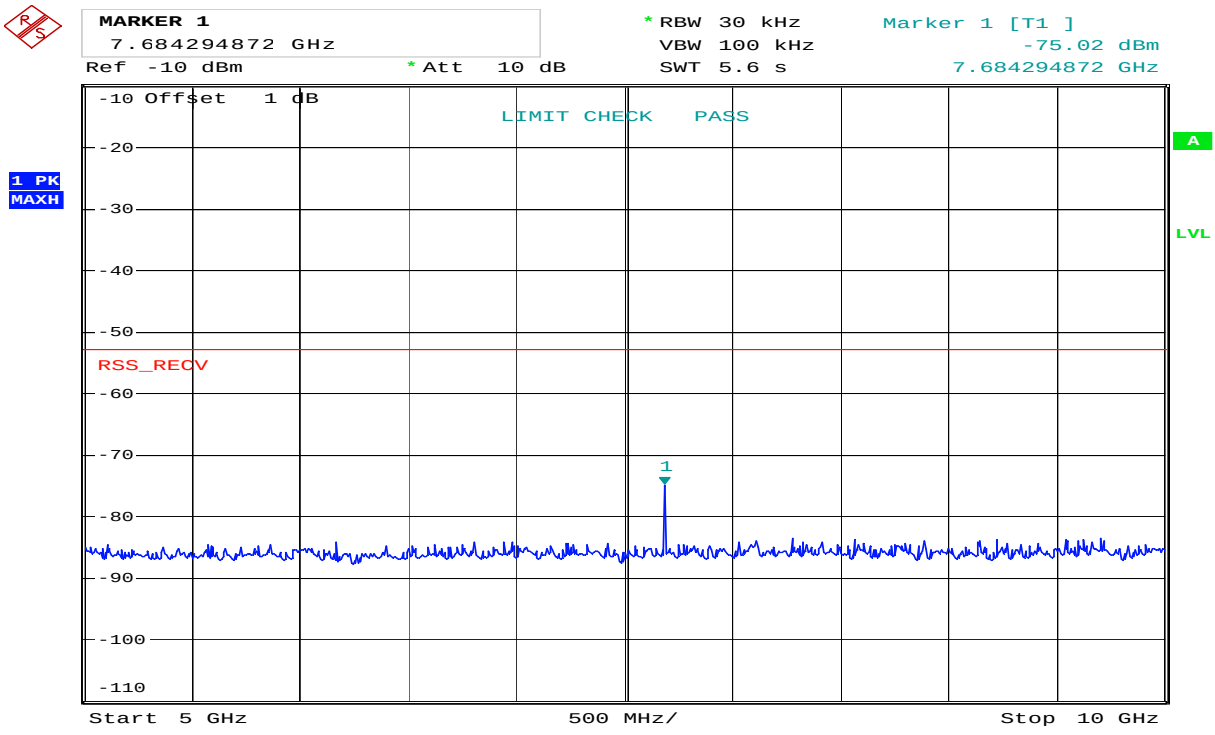
Date: 19.OCT.2010 11:31:33

Receiver Spurious Emissions, Conducted, 30 – 1000 MHz



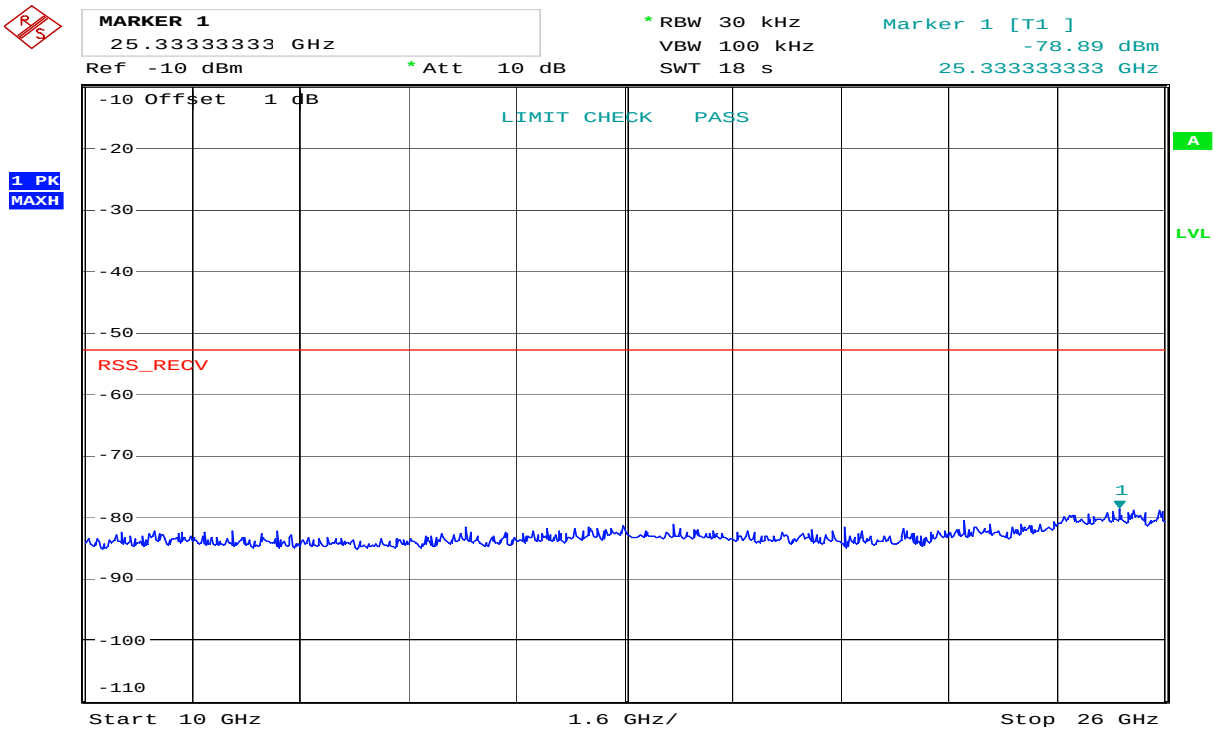
Date: 19.OCT.2010 11:32:59

Receiver Spurious Emissions, Conducted, 1 – 5 GHz



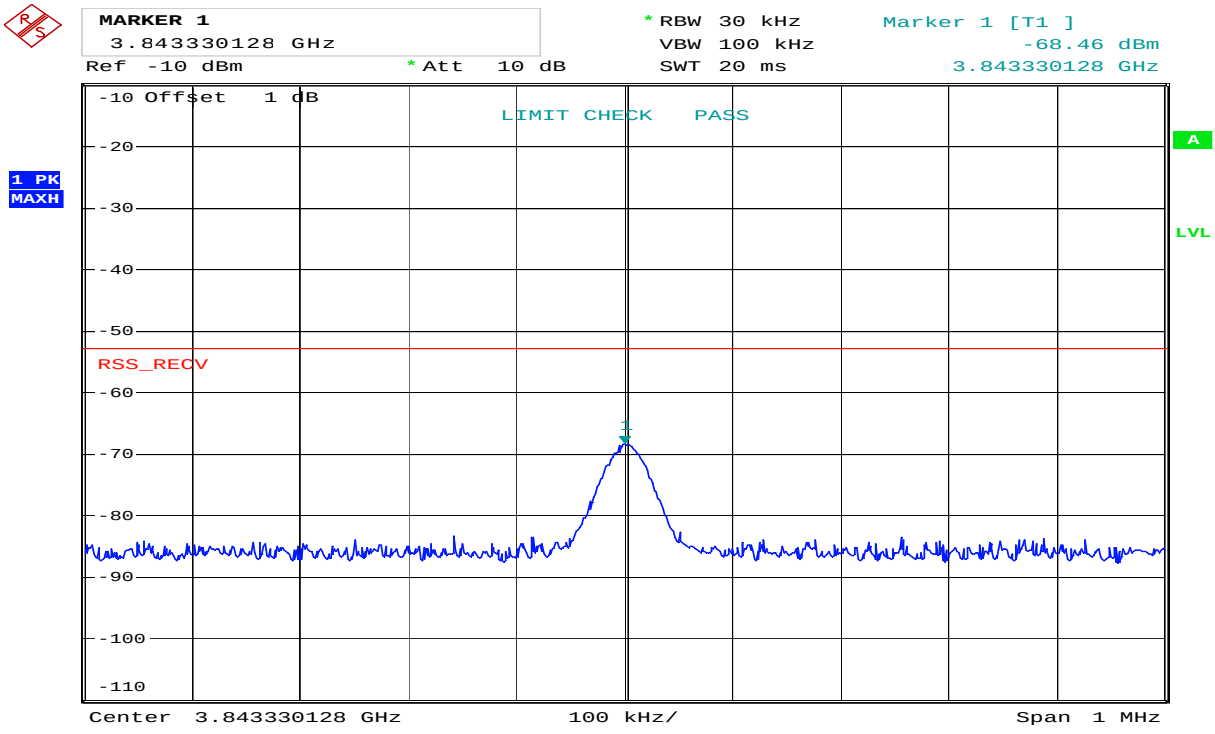
Date: 19.OCT.2010 11:33:47

Receiver Spurious Emissions, Conducted, 5 – 10 GHz



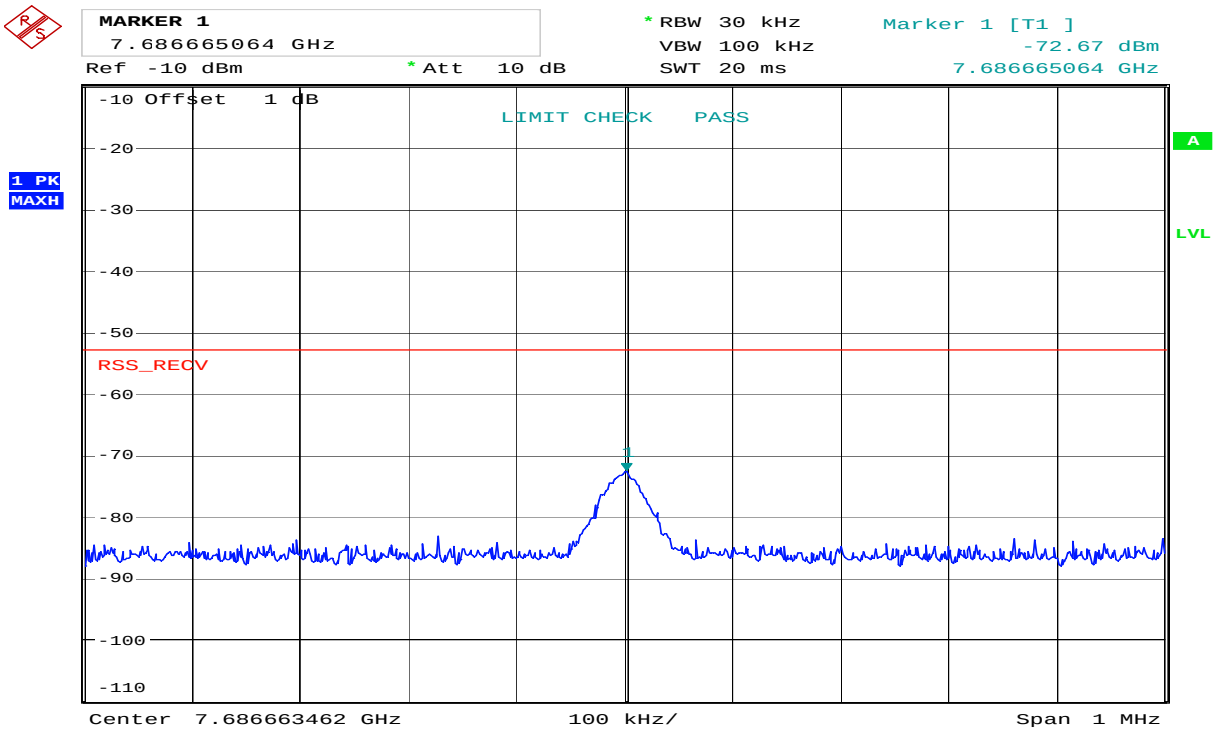
Date: 19.OCT.2010 11:34:58

Receiver Spurious Emissions, Conducted, 10 – 26 GHz



Date: 19.OCT.2010 13:17:06

Receiver Spurious Emissions, Conducted, 3.843 GHz



Date: 19.OCT.2010 13:17:54

Receiver Spurious Emissions, Conducted, 7.687 GHz

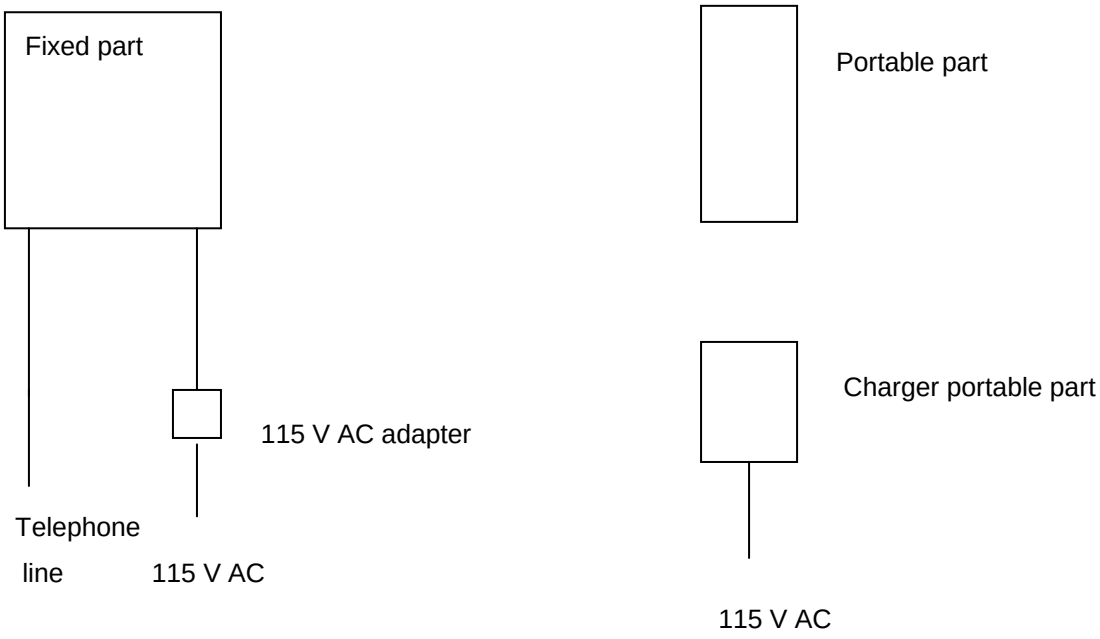
5 LIST OF TEST EQUIPMENT

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment and ancillaries are identified (numbered) by the Test Laboratory.

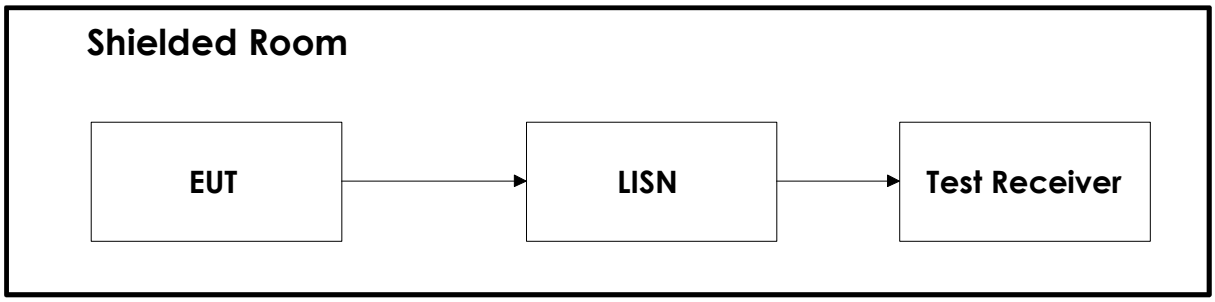
No.	Instrument/ ancillary	Type of instrument/ ancillary	Manufacturer	Ref. no.	Cal date	Cal due
1	FSEK	Spectrum Analyzer	Rohde & Schwarz	LR 1337	2009.12.23	2011.12.23
2	ESAI	Test Receiver	Rohde & Schwarz	LR 1090	2010.03.04	2011.03.04
3	3115	Antenna horn	EMCO	LR 1326	2008.11.06	2011.11.06
4	643	Antenna horn	Narda	LR 093	2009.01.26	2012.01.26
5	642	Antenna horn	Narda	LR 094	2009.01.26	2012.01.26
6	PM7320X	Antenna horn	Siverts lab	LR 103	2009.01.26	2012.01.26
7	DBF-520-20	Antenna horn	Systron Donner	LR 101	2009.01.26	2012.01.26
8	638	Antenna horn	Narda	LR 098	N/A	N/A
9	Model 7200	Signal Generator	Gigatronics	LR1188	2008.12.10	2010.12.10
10	ESH3-Z5	Two Line V-Network	Rohde & Schwarz	LR 1076	2008.11.06	2010.11.06
11	8449B	Pre-amplifier	Hewlett Packard	LR 1322	2009.08.04	2011.08.04
13	HFH2-Z2	Antenna loop	Rohde and Schwarz	LR 285	2007.07.31	2010.07.31
14	HL223	Antenna log.per	Rohde & Schwarz	LR 1261	2010.05.12	2013.05.12
15	HK116	Antenna biconical	Rohde & Schwarz	LR 1260	2010.05.12	2013.05.12
16	ESN	Test Receiver	Rohde & Schwarz	LR 1237	2009.10.22	2010.10.22
17	FSU26	Spectrum Analyzer	Rohde & Schwarz	LR 1504	2009.05.25	2011.05.25
18	U2000A	USB Power Meter	Agilent	LR 1523	2010.01.15	2011.01.15
19	6810.17B	Attenuator	Suhner	LR 1212	2008.09.25	2010.09.25
20	80S	Signal Generator	Powertron	LT502	Cal b4 use	
21	JS3	Pre-amplifier	Miteq	LR 1552	2009.03.18	2011.03.18
22	81104A	Pulse Generator	Agilent	LR 1502	2010.03.03	2011.03.03
23	SMR20	Signal Generator	Rohde & Schwarz	N-4015	2009.04.22	2011.04.22
24	Model 745-69	Step Attenuator	Narda	LR 1442	2009.10.19	2011.10.19
25	Model 1506	Power Splitter	Weinchel	LR 244	Cal b4 use	
26	Model 1506A	Power Splitter	Weinchel	LR 235	Cal b4 use	

6 BLOCK DIAGRAM

6.1 System set up



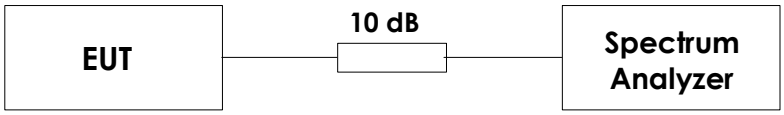
6.2 Power Line Conducted Emission



This test set-up is used for the Power-Line Conducted Emissions test.

Test equipment: 2, 10, 20

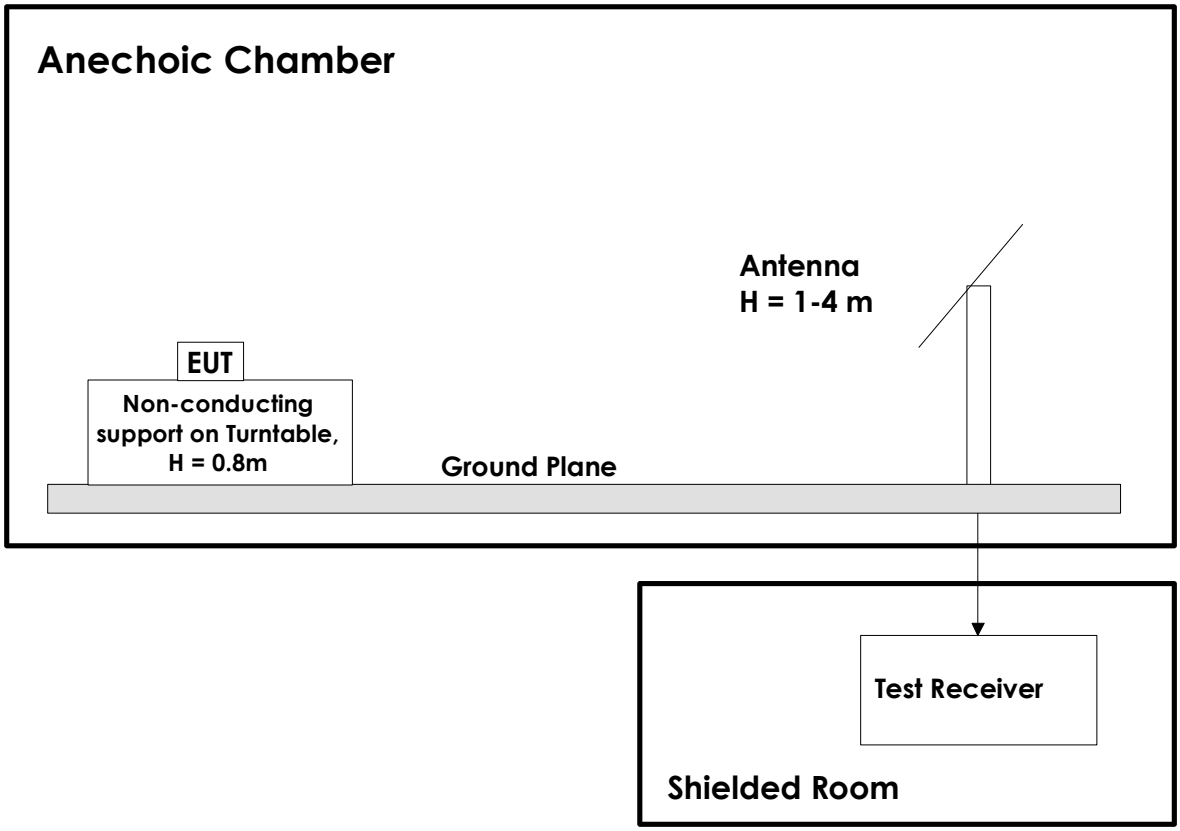
6.3 Conducted Tests



This test set-up is used for all Conducted tests. For the Frequency Stability test the EUT was placed in a climatic chamber.

Test equipment: 1, 17, 18, 19

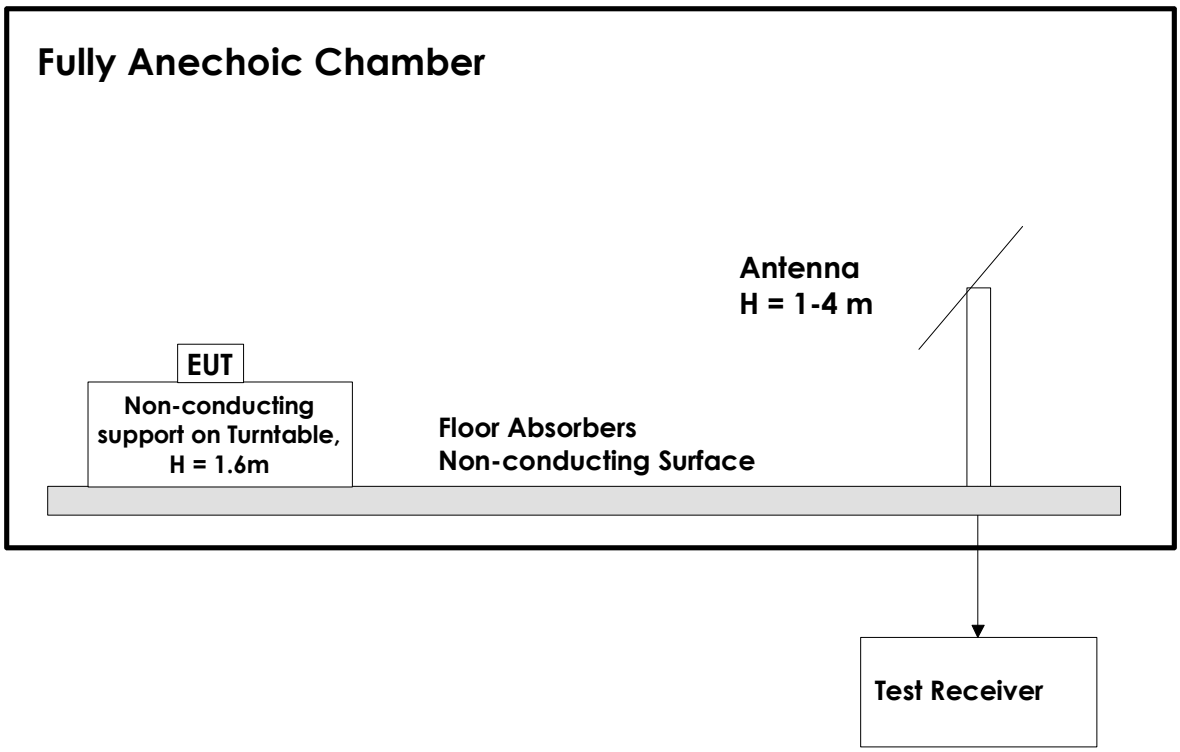
6.4 Test Site Radiated Emission, Semi-Anechoic Chamber



This test set-up was used for radiated emissions test measuring field-strength.

Test equipment: 1, 3, 4, 5, 6, 7, 8, 11, 13, 14, 15, 16

6.5 Radiated Emissions Test, Fully-Anechoic Chamber



This test set-up was used for the band-edge measurements. The turntable height was 1.8 m and the test antenna was kept fixed at the same height as the turntable.

Test equipment: 3, 9, 17, 21