



**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number – 25111-1 WLAN- 5.2G

Report Date – 2012-8-21

The test results contained herein relate only to the model(s) identified. It is the manufacturer’s responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

Signature:

Name: Hongpeng Yin

Title: EMC Project Manager

Test: 2012-07-27 to 2012-08-22

As the responsible test lab manager, I hereby declare that the model tested as specified in this report conforms to the requirements indicated.

Signature:

Name: Danny Palaniswami

Title: Test Lab Manager

Date: 2012-8-27

This report must not be reproduced, except in full, without written approval from this laboratory.

FCC Registration Number: 402854
IC Registration Number: 109AW-1

ADR Testing Service location ADR BJ
ISO/IEC-17025:2005 accredited by UKAS



UKAS Certificate Number: 2404

Table of Contents

Test Report Details 3

Applicable Standards 3

Summary of Testing..... 4

General and Special Conditions..... 4

Equipment and Cable Configurations 5

Measuring Equipment and Calibration Information 5

Description of WLAN Transmitter 5

Measurement Procedures and Data..... 6

 26 dB Bandwidth 6

 Measurement Procedure..... 6

 Measurement Results 6

 PEAK OUTPUT POWER 21

 Measurement Procedure..... 21

 Measurement Results 21

 Peak Power Spectral Density 26

 Measurement Procedure..... 26

 Measurement Results 26

 Peak Excursion Ratio 28

 Measurement Procedure..... 28

 Measurement Results 28

 FREQUENCY STABILITY 44

 FIELD STRENGTH OF SPURIOUS EMISSIONS 46

 Measurement Procedure..... 46

 Measurement Results 46

 BAND-EDGE COMPLIANCE OF RF RADIATED EMISSIONS..... 52

 Measurement Procedure..... 52

 Measurement Results 52

 AC LINE CONDUCTED EMISSIONS 62

 Measurement Procedure..... 62

 Measurement Results 62

Test Report Details

Tests Performed By: Motorola (Beijing) Mobility Technologies Co.,
Ltd.
Asia Global Compliance Labs
No.1 Wang Jing East Road
Chao Yang District
Beijing, 100102, P. R. China
Phone: +86 10 8499 5891
FCC Registration Number: 402854
IC Registration Number: 109AW-1

Tests Requested By: Motorola Mobility LLC
600 North US Hwy 45
Libertyville, IL 60048
United States

Product Type: Cellular phone

Signaling Capability: EDGE 800/1900, GSM 850/1900, Bluetooth+EDR,
802.11a/802.11b/802.11g/802.11n

FCC ID: IHDT56NS6

MEID: 352524050008534
352524050007676

Project number: 25111-1

Testing Complete Date: 2012-08-22

Applicable Standards

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

 X Part 15 Subpart E – Unlicensed National Information Infrastructure
Devices

Applicable Standards: ANSI 63.4 2003, RSS-210 Issue 8,
In addition, testing was performed per FCC KDB publication number KDB
789033 D01

Summary of Testing

Test	Test Name	Pass/Fail
1	26 dB Bandwidth	Pass
2	Peak Power	Pass
3	Peak Power Spectral Density	Pass
4	Peak Excursion ration	Pass
5	Frequency Stability	Pass
6	AC Line Conducted Emissions	Pass

Test	Test Name	Results
1	26 dB Bandwidth	Pass
2	Peak Power	Pass
3	Peak Power Spectral Density	Pass
4	Peak Excursion ration	Pass
5	Frequency Stability	Pass
6	AC Line Conducted Emissions	Pass

General and Special Conditions

The Cellular Phone hereinafter referred to as the Equipment under Test or EUT was tested using a fully charged internal battery when applicable. Where a battery could not be used due to the need for a controlled variation of input voltage, an external power supply was utilized.

All testing was done in an indoor controlled environment. The temperature and the relative humidity were maintained within the ANSI C63.4 2003 Standard requirements during the entire duration of testing.

Equipment and Cable Configurations

The EUT was tested in a stand-alone configuration that is representative of typical use.

Measuring Equipment and Calibration Information

Manufacturer	Equipment Type	Model No.	Serial Number	Date of Calibration
Rohde Schwarz	Receiver	FSU26	200353	03/13/2012
Rohde Schwarz	Receiver	ESCI	100650	03/13/2012
Agilent	Attenuator	8491A	MY39263202	NCR
Rohde Schwarz	LISN	ENV216	100055	12/19/2010

All test equipment was within their calibration date during the time of testing. When equipment went out of calibration during testing it was replaced using a similar piece of calibrated equipment. All these equipments are listed in the equipment list. All equipment is on a one-year calibration cycle except LISN is on a two-year calibration cycle. .

Description of WLAN Transmitter

The EUT offers WLAN, operating in the 2.4 GHz and 5 GHz bands, as a feature. This report covers operation in the 5 GHz Sub band 1 only. The WLAN antenna is mounted inside of the EUT. The antenna installation is permanent. For a more thorough description of the functionality please refer to Exhibit 12 of this package.

As a WLAN transmitter, it is designed operate with other WLAN devices as defined by the industrial standard. In this application, the device is battery operated.

De Facto EIRP Limit – Pursuant 47 CFR 15.407(a) (1); RSS-210 Section A8.4.

Criterion: The conducted output power limit of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The antenna employed by this transmitter is intended to be omni-directional, and thus will not exhibit directional gain in excess of 6 dBi. The conducted power is less than the limits set forth (see elsewhere in this report for details).

Measurement Procedures and Data

26 dB Bandwidth

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 20dB passive attenuator. A fully charged battery was used for the supply voltage.

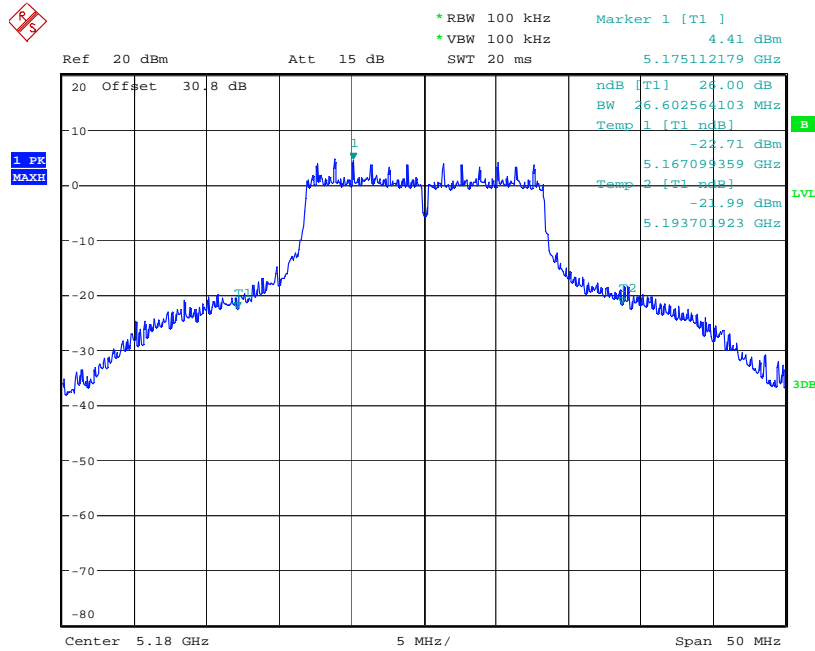
1. RBW \geq 100 kHz
2. VBW \geq RBW
3. Sweep = auto
4. Detector function = peak
5. Trace = max hold

The trace was allowed to stabilize. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 26 dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 26 dB bandwidth of the emission.

Measurement Results

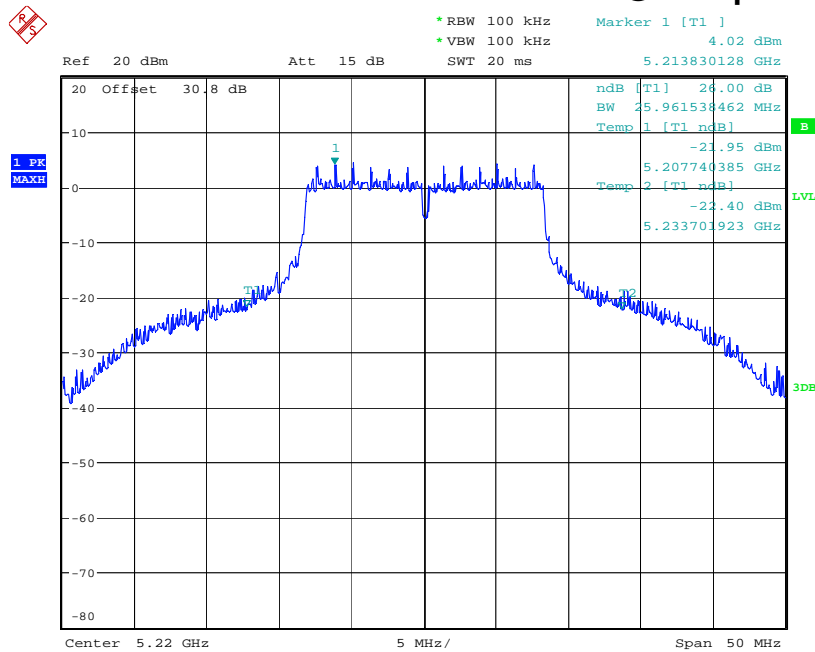
See attached

802.11 a Mode @ 6 Mbps



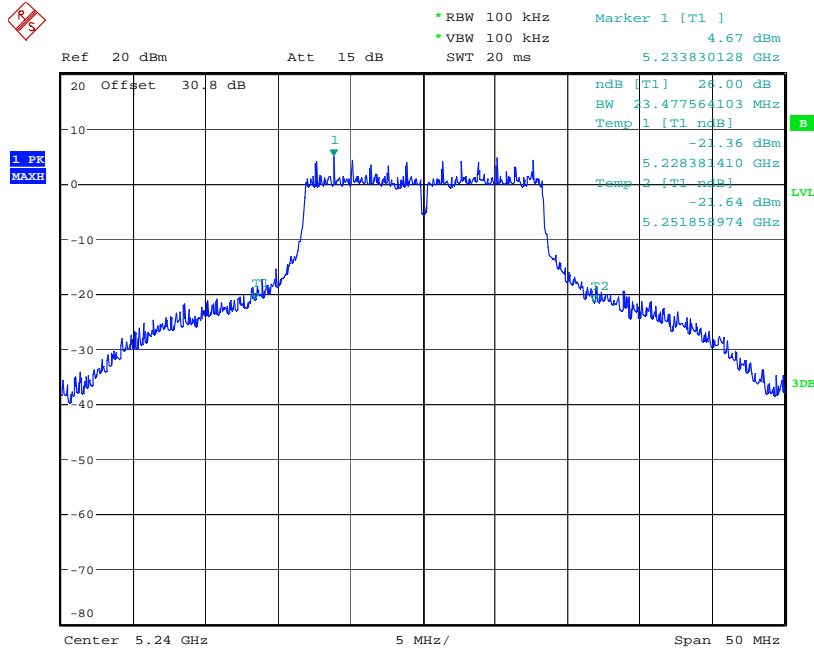
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26 dB Bandwidth Channel 36 @ 6 Mbps



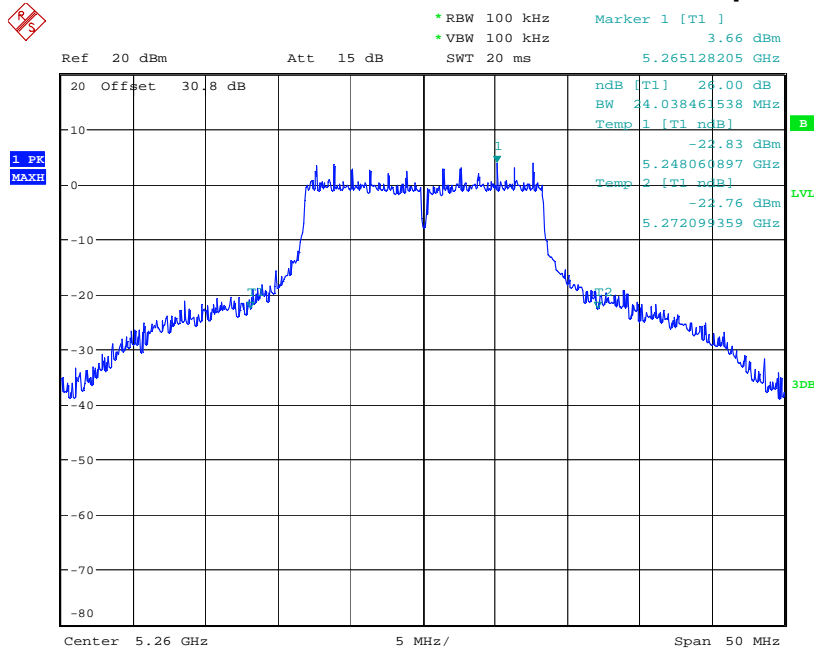
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26 dB Bandwidth Channel 44 @ 6 Mbps



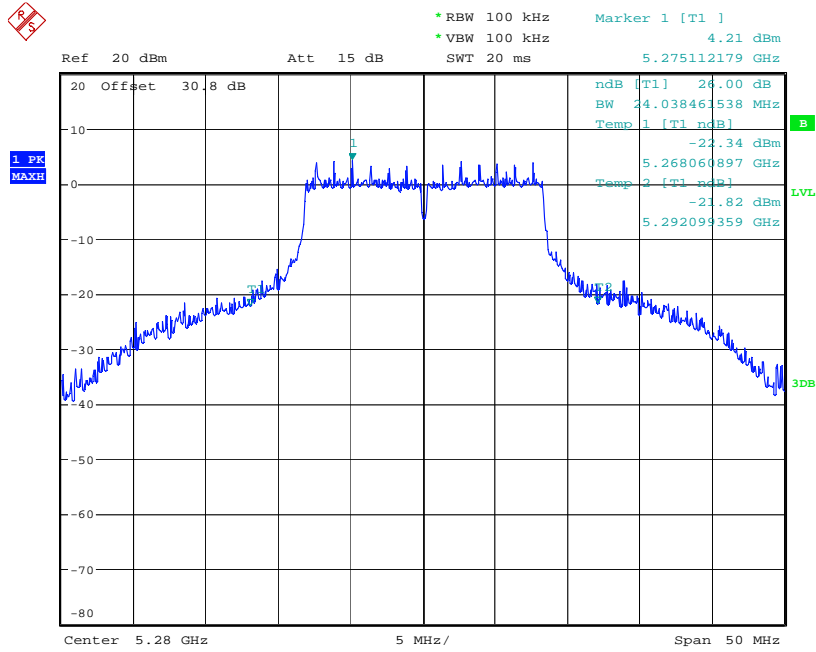
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26 dB Bandwidth Channel 48 @ 6 Mbps



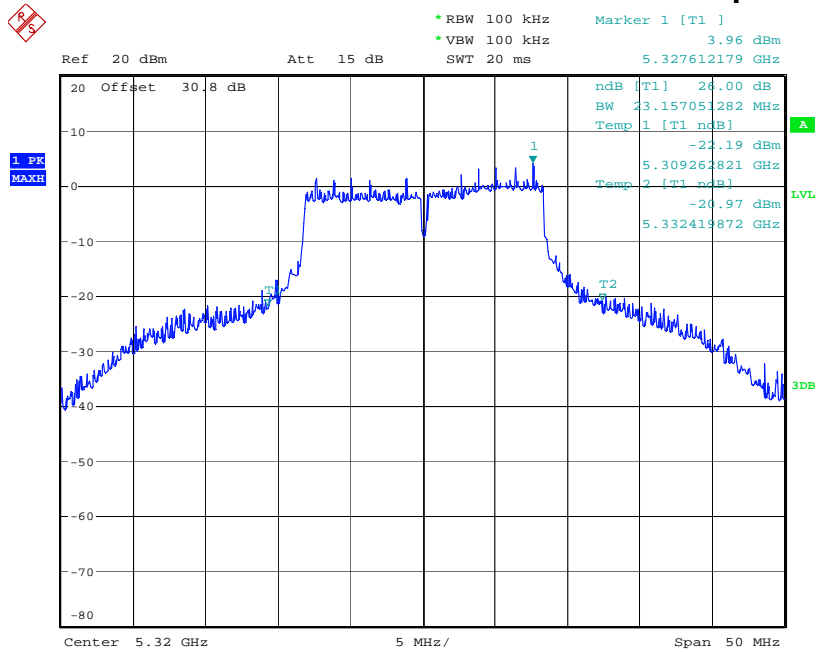
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26 dB Bandwidth Channel 52 @ 6 Mbps



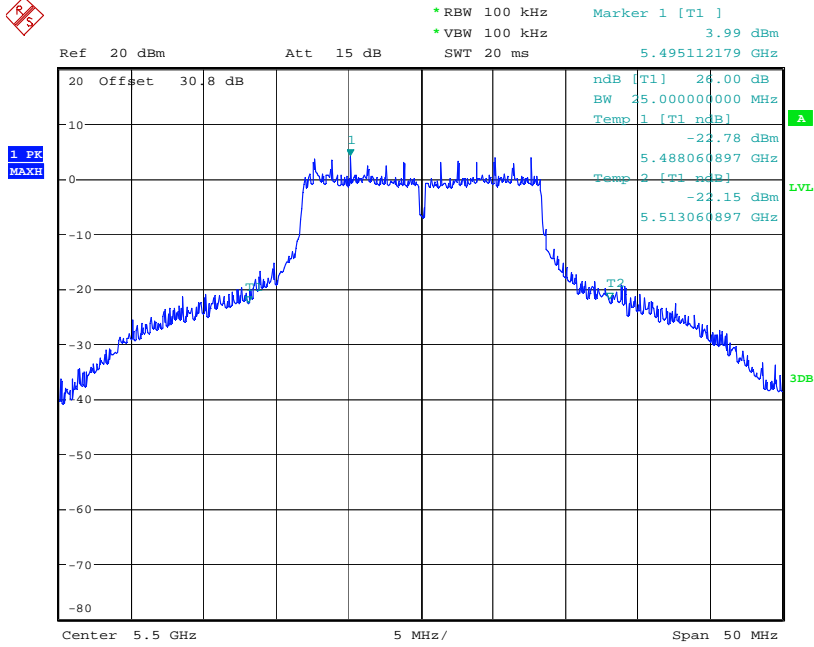
Date: 16.AUG.2012 15:19:12

26 dB Bandwidth Channel 56 @ 6 Mbps



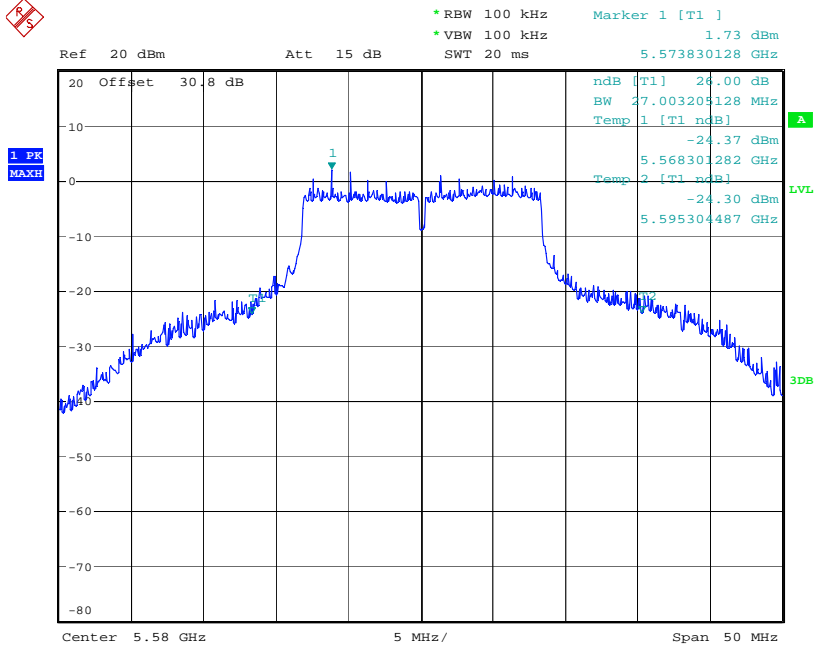
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26 dB Bandwidth Channel 64 @ 6 Mbps



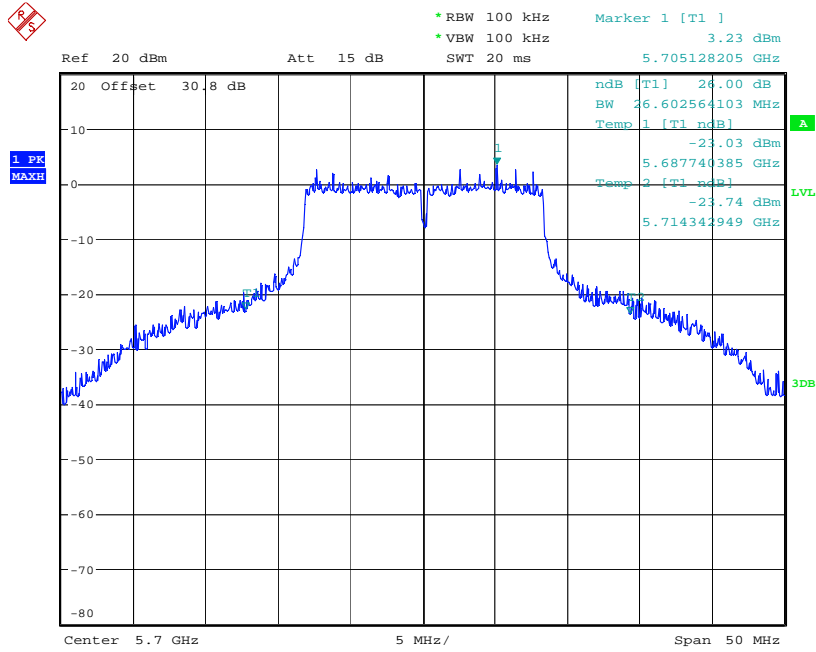
Date: 16.AUG.2012 15:26:05

26 dB Bandwidth Channel 100 @ 6 Mbps



Date: 16.AUG.2012 15:25:30

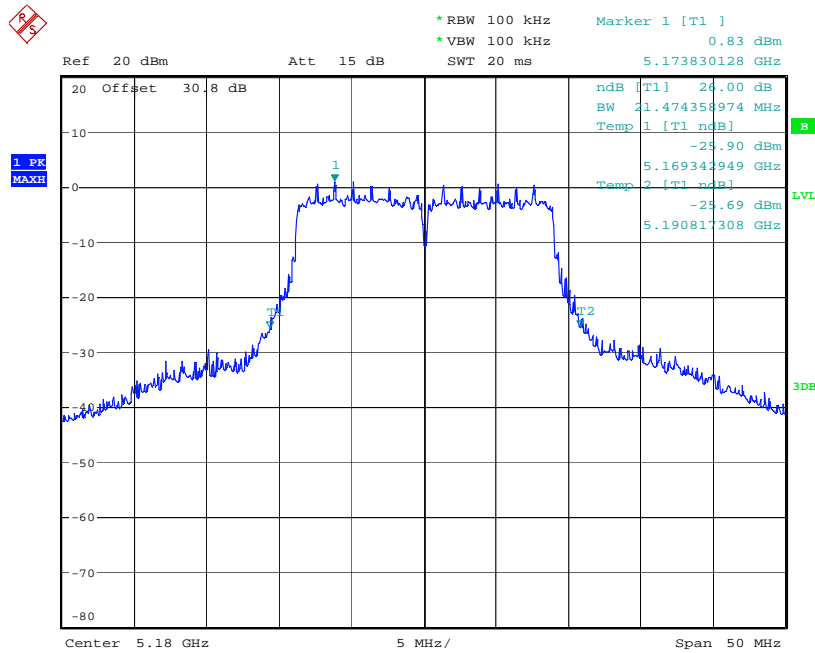
26 dB Bandwidth Channel 116 @ 6 Mbps



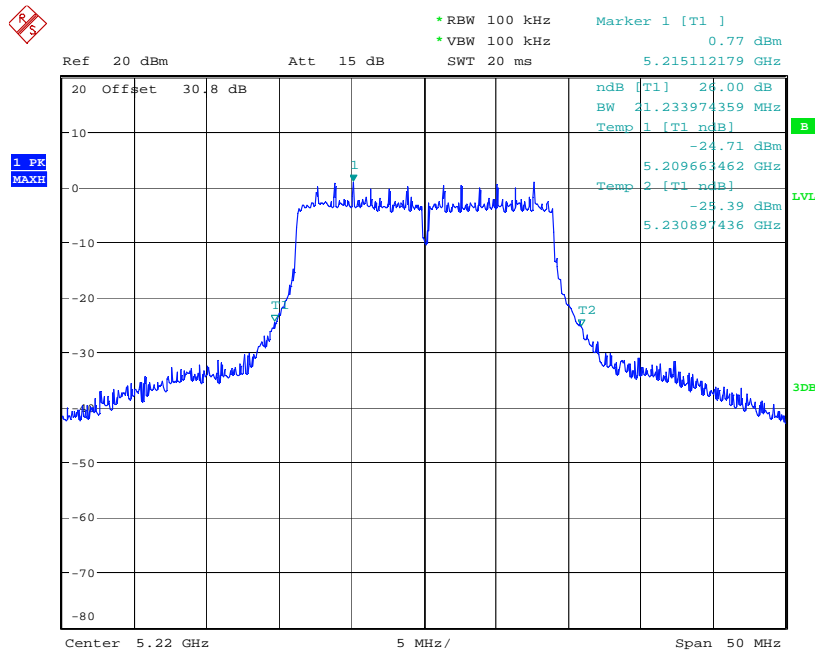
Date: 16.AUG.2012 15:26:48

26 dB Bandwidth Channel 140 @ 6 Mbps

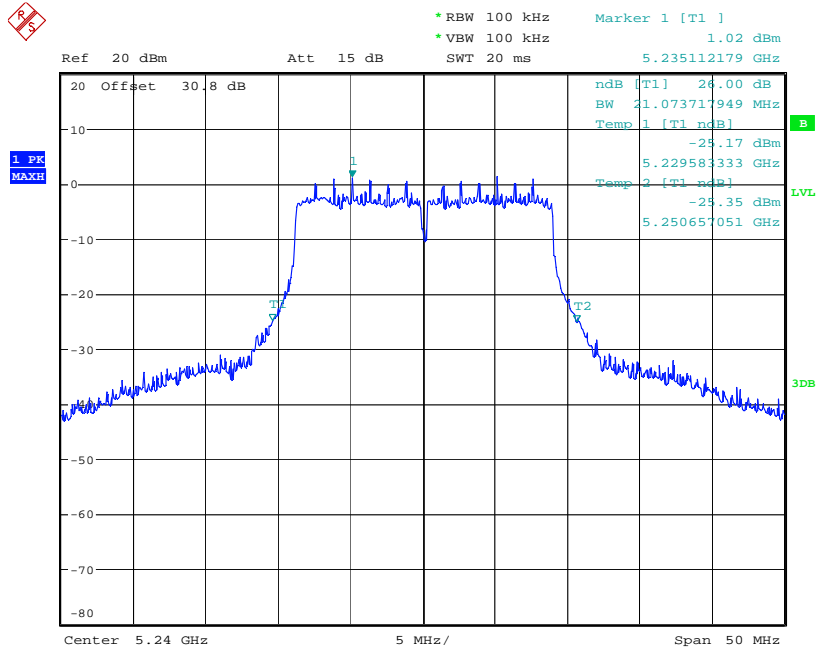
802.11 n Mode 20MHz BW @ 13 Mbps



26 dB Bandwidth Channel 36 @ 13 Mbps

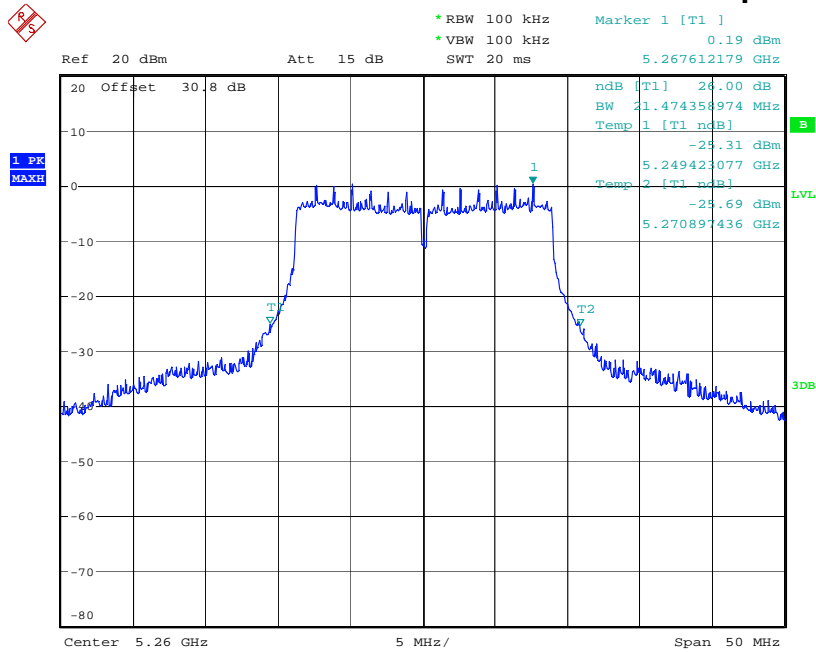


26 dB Bandwidth Channel 44 @ 13 Mbps



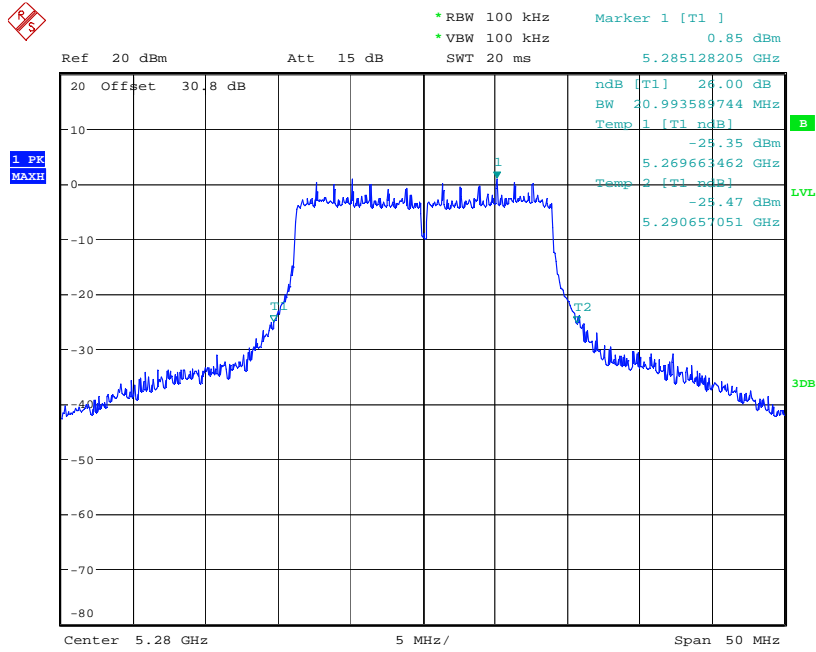
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26 dB Bandwidth Channel 48 @ 13 Mbps



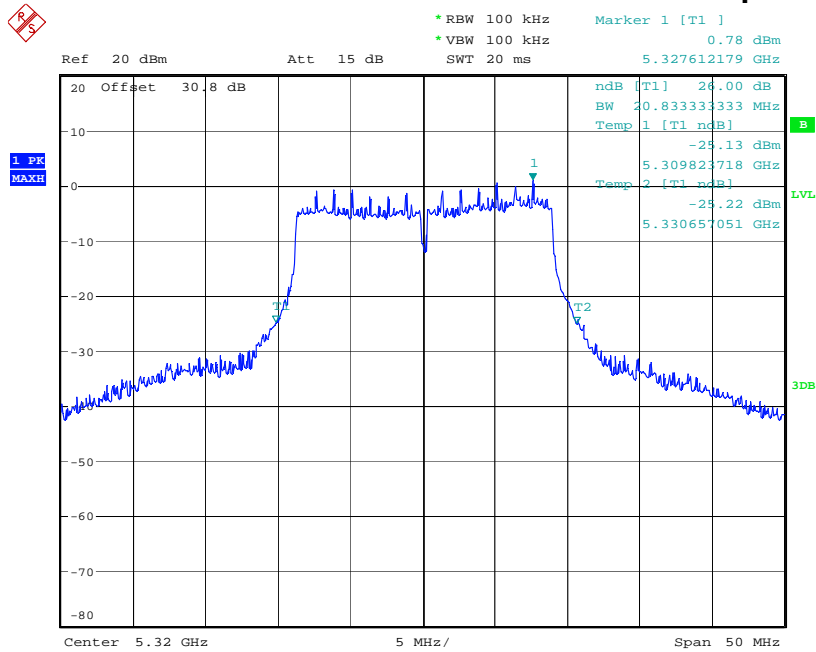
Date: 16.AUG.2012 15:07:09

26 dB Bandwidth Channel 52 @ 13 Mbps



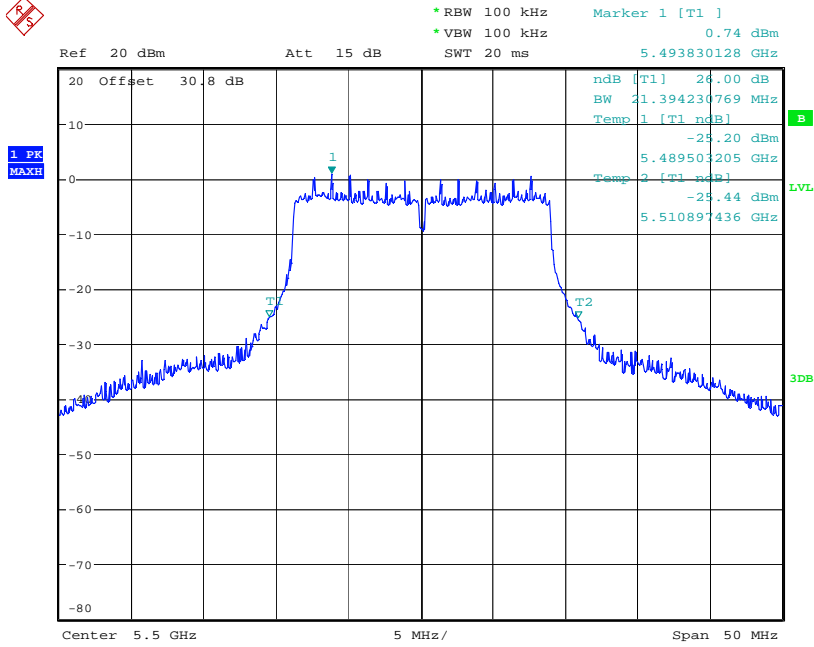
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26 dB Bandwidth Channel 56 @ 13 Mbps



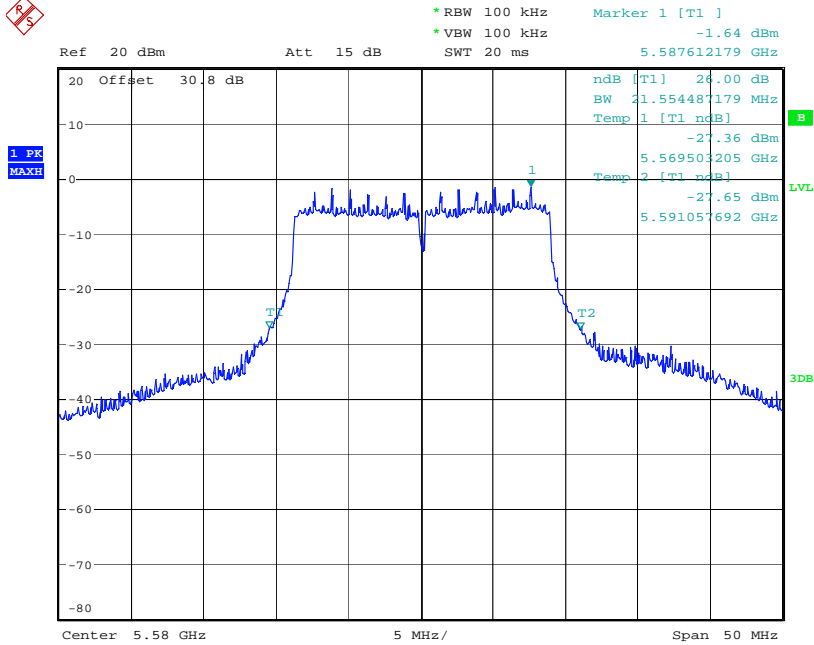
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26 dB Bandwidth Channel 64 @ 13 Mbps



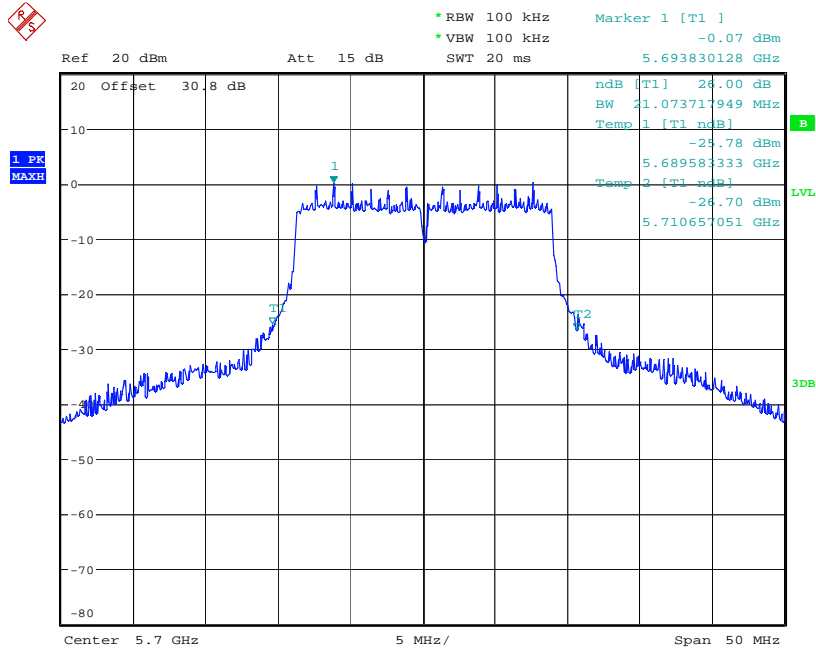
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26 dB Bandwidth Channel 100 @ 13 Mbps



Date: 16.AUG.2012 15:09:28

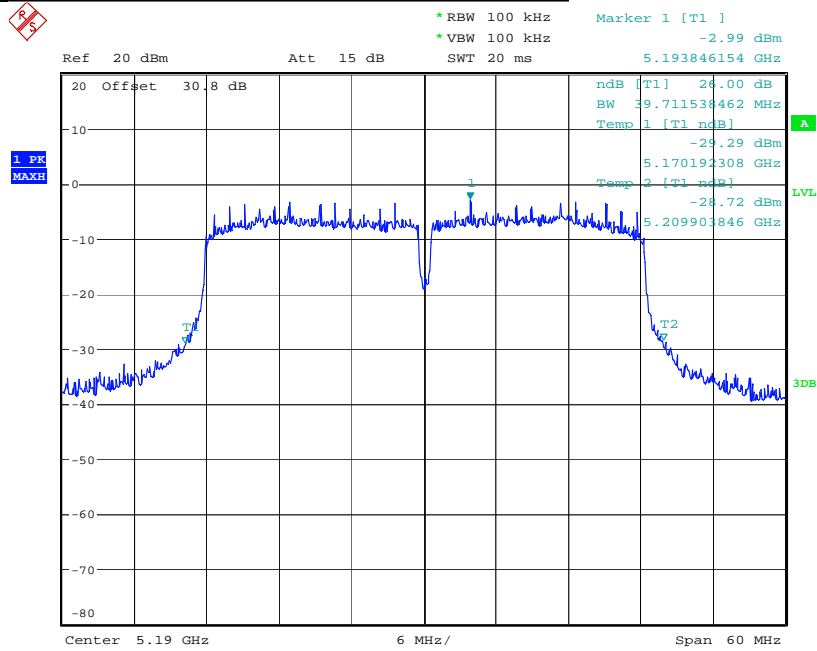
26 dB Bandwidth Channel 116 @ 13 Mbps



Date: 16.AUG.2012 15:10:02

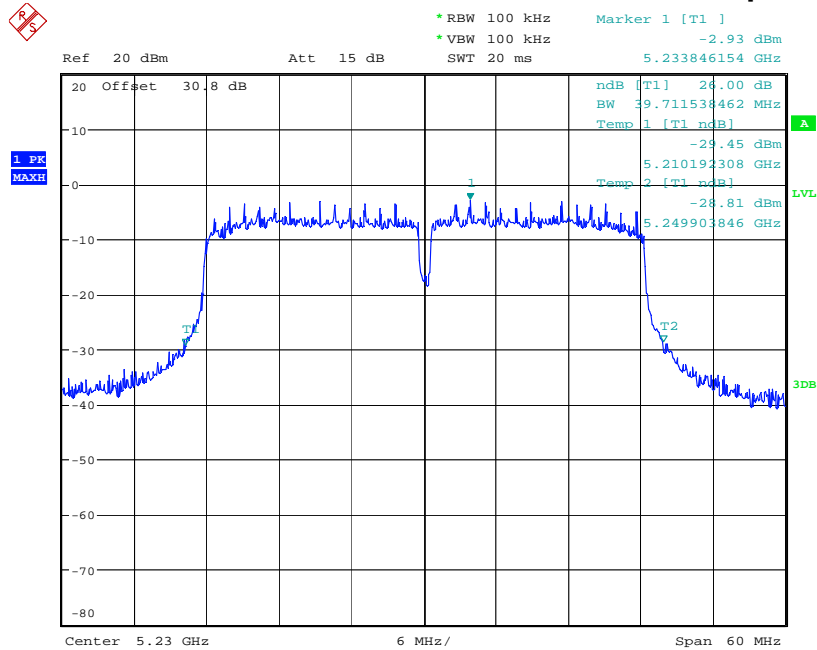
26 dB Bandwidth Channel 140 @ 13 Mbps

802.11 n Mode 40MHz BW @ 6.5 Mbps



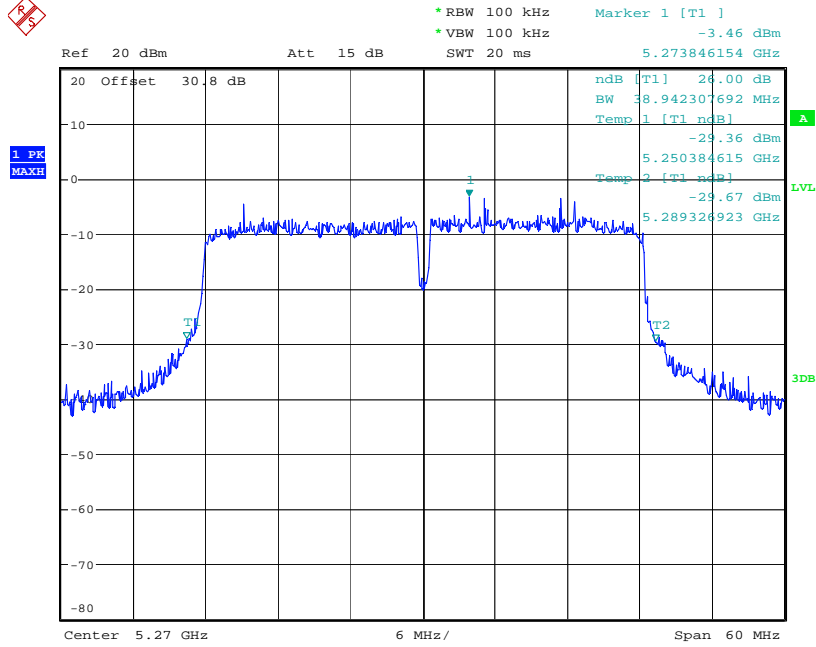
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26 dB Bandwidth Channel 38 @ 6.5 Mbps



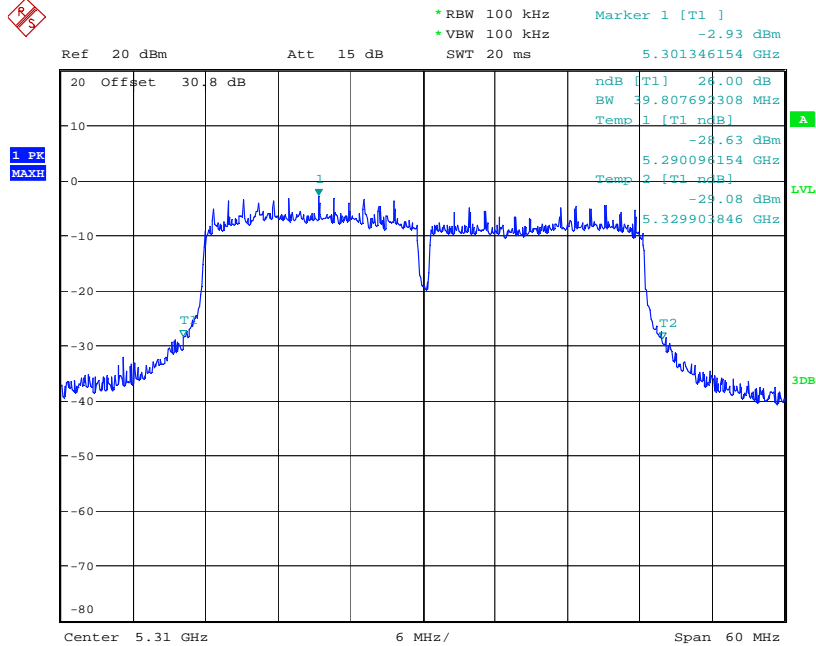
Date: 16.AUG.2012 15:29:48

26 dB Bandwidth Channel 46 @ 6.5 Mbps



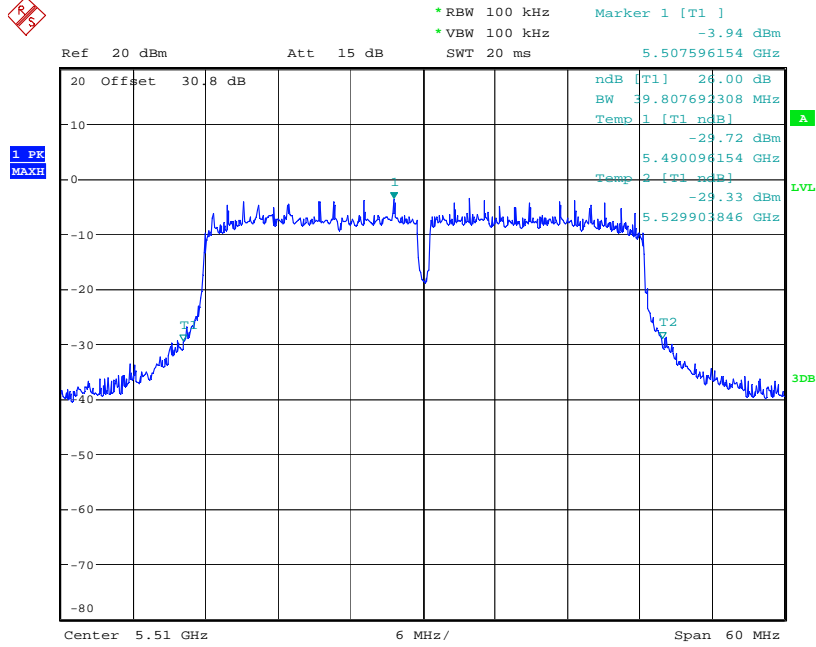
Date: 16.AUG.2012 15:31:52

26 dB Bandwidth Channel 54 @ 6.5 Mbps



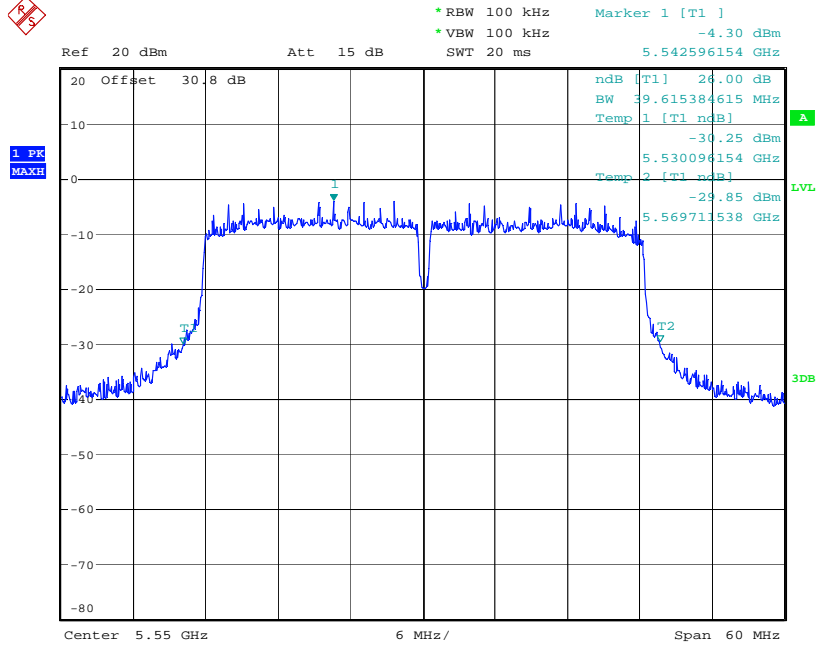
Date: 16.AUG.2012 15:32:31

26 dB Bandwidth Channel 62 @ 6.5 Mbps



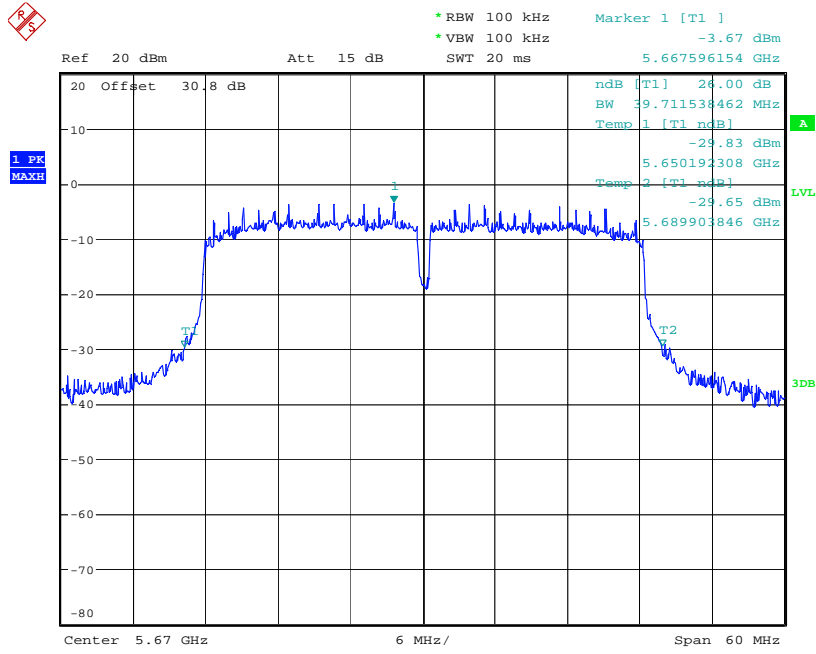
Date: 16.AUG.2012 15:33:13

26 dB Bandwidth Channel 102 @ 6.5 Mbps



Date: 16.AUG.2012 15:33:50

26 dB Bandwidth Channel 110 @ 6.5 Mbps



Date: 16.AUG.2012 15:34:26

26 dB Bandwidth Channel 134 @ 6.5 Mbps

PEAK OUTPUT POWER**Measurement Procedure**

The RF output port of the Equipment-Under-Test is directly coupled to the input of the Spectrum analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage. Initially, an average detector is used to measure power in the low, middle and high channels for all data rates. The average measurements are used to determine which data rate is to be fully tested for each supported mode. Then using the Method #1 of Public Notice KDB 789033 D01 for the testing

Measurement Results

See Attached

Initial average power measurements in the 5 GHz band

Average power (dBm) for 802.11n in 5 GHz																	
Freq	CH	20 MHz BW, 400 ns GI								20 MHz BW, 800 ns GI							
		7.2 Mbps	43.3 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
5180	36	11.53	11.61	10.26	10.86	9.98	10.03	8.98	10.62	11.62	11.71	10.46	10.88	9.88	10.05	8.88	10.52
5200	40	11.64	12.02	10.79	11.23	10.33	10.26	9.01	10.66	11.94	12.01	10.89	11.33	10.33	10.36	9.11	10.77
5220	44	11.65	11.76	10.58	11.19	9.99	10.13	8.78	10.67	11.75	11.86	10.59	11.09	9.99	10.23	8.99	10.66
5240	48	11.96	12.11	10.88	11.27	10.11	10.18	9.18	10.81	11.98	12.16	10.99	11.28	10.21	10.28	9.23	10.86
5260	52	11.11	10.77	9.75	10.21	9.18	9.11	9.65	9.85	11.01	10.88	9.85	10.31	9.18	9.28	9.95	9.91
5280	56	11.65	11.67	10.54	11.05	9.92	9.88	10.49	10.43	11.55	11.68	10.53	11.01	9.92	9.98	10.62	10.33
5300	60	11.66	11.77	10.78	11.33	10.17	10.22	10.75	10.53	11.77	11.88	10.91	11.28	10.18	10.32	10.65	10.66
5320	64	10.61	10.67	9.57	9.89	9.08	9.01	9.58	9.68	10.56	10.68	9.58	9.99	9.08	9.11	9.53	9.58
5500	100	11.32	11.27	10.27	10.61	9.68	9.62	10.53	10.21	11.32	11.28	10.28	10.71	9.68	9.72	10.43	10.3
5520	104	10.82	10.63	9.94	10.16	9.19	9.11	9.61	9.66	10.8	10.93	9.93	10.17	9.19	9.21	9.71	9.67
5540	108	10.53	10.45	9.62	10	8.86	9.08	9.58	9.3	10.53	10.62	9.64	10.16	8.86	9.02	9.48	9.43
5560	112	10.62	10.63	9.62	10.01	9.06	9.12	9.69	9.68	10.72	10.73	9.72	10.15	9.07	9.18	9.79	9.78
5580	116	9.15	9.12	8.01	8.5	6.41	7.23	7.89	7.86	9.13	9.09	8.05	8.58	7.41	7.43	7.88	7.85
5660	132	11.25	11.38	10.24	10.61	9.52	9.55	10.24	10.23	11.15	11.32	10.23	10.69	9.52	9.61	10.14	10.13
5680	136	11.17	11.27	10.26	10.68	9.65	9.71	10.16	10.11	11.19	11.28	10.25	10.78	9.65	9.69	10.26	10.1
5700	140	10.81	10.76	9.66	10.22	9.12	9.16	9.78	9.75	10.91	10.96	9.77	10.32	9.12	9.17	9.91	9.6

Average power (dBm) for 802.11n in 5 GHz																	
Freq	CH	40 MHz BW, 400 ns GI								40 MHz BW, 800 ns GI							
		7.2 Mbps	43.3 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
5190	38	11.39	11.02	11.35	10.27	10.47	9.7	8.32	9.41	12.51	12.29	11.25	11.28	11.25	10.55	8.85	8.77
5210	42	11.51	11.27	11.29	10.6	10.52	9.77	8.42	9.34	12.6	12.38	11.33	11.32	11.32	10.36	8.95	8.56
5230	46	11.58	11.36	11.34	10.43	10.33	9.49	8.46	9.66	12.66	12.5	11.18	11.34	11.22	10.5	9.05	8.88
5250	50	11.14	10.98	11.04	10.02	9.98	9.2	8.12	9.21	12.3	12.07	11.01	10.99	10.87	10.06	8.62	8.33
5270	54	10.65	10.26	10.78	9.91	9.89	8.98	7.71	8.38	11.88	11.88	10.65	10.65	10.4	9.92	8.23	8.03
5290	58	11.42	11.3	11.13	10.38	10.39	9.61	8.23	8.85	12.51	12.5	11.22	11.21	11.25	10.49	8.8	8.68
5310	62	10.86	10.69	10.52	9.83	9.71	9.67	7.78	8.14	11.9	11.78	10.64	10.7	10.6	9.81	8.35	8.05
5270	54	10.51	10.15	10.43	9.8	9.74	9.12	7.58	8.26	11.81	11.78	10.51	10.48	10.37	9.77	8.12	7.99
5510	102	11.39	11.02	11.35	10.27	10.47	9.7	8.32	9.41	12.51	12.29	11.25	11.28	11.25	10.55	8.85	8.77
5550	110	10.34	10.04	10.1	9.68	9.13	8.75	7.02	8.93	11.24	11.34	10.3	10.25	10.05	9.27	7.84	7.43
5670	134	10.97	10.68	10.75	9.41	9.72	9.32	7.93	8.48	11.92	11.96	10.81	10.77	10.53	9.87	8.54	8.15

Average power (dBm) for <u>802.11a</u> in 5 GHz									
Freq	CH	20 MHz BW							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
5180	36	14.69	13.74	13.78	10.71	12.02	12.03	12.05	9.04
5200	40	14.98	14.05	14.14	11.04	12.43	12.32	12.64	9.64
5220	44	14.82	13.86	13.88	11.03	12.17	12.26	12.25	9.3
5240	48	15.04	13.89	13.91	10.86	12.42	12.45	12.46	9.48
5260	52	14.01	12.81	12.91	9.86	11.13	11.12	11.21	8.39
5280	56	14.52	13.52	13.62	10.62	11.88	11.97	12.01	9.22
5300	60	14.73	13.81	13.93	10.95	12.28	12.25	12.26	9.49
5320	64	13.53	12.58	12.71	9.72	10.86	10.99	10.96	8.35
5500	100	14.35	13.19	13.27	10.31	11.61	11.76	11.88	8.94
5520	104	13.79	12.64	12.69	9.95	11.21	11.2	11.24	8.52
5540	108	13.57	12.59	12.65	9.66	10.98	10.94	10.99	8.18
5560	112	13.84	12.86	12.97	9.79	11.06	11.07	11.26	8.34
5580	116	11.94	10.93	11.05	8.14	9.39	9.41	9.4	6.44
5660	132	14.39	13.29	13.33	10.36	11.62	11.63	11.71	8.7
5680	136	14.26	13.22	13.28	10.34	11.59	11.69	11.68	8.65
5700	140	13.88	12.71	13.02	9.89	11.31	11.28	11.38	8.34

Peak power (dBm) for 802.11n in 5 GHz

Freq	CH	20 MHz BW, 400 ns GI								20 MHz BW, 800 ns GI							
		7.2 Mbps	43.3 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
5180	36	17.73	18.41	16.74	17.24	16.06	16.33	15.01	17.64	17.88	18.21	16.94	17.34	16.08	16.41	15.05	17.62
5200	40	18.14	18.45	17.35	17.72	16.56	16.58	15.46	17.58	18.16	18.25	17.31	17.73	16.58	16.68	15.26	17.87
5220	44	18.04	18.25	17.01	17.55	16.43	16.51	15.11	17.91	18.02	18.35	16.98	17.45	16.23	16.59	15.18	17.8
5240	48	18.53	18.47	17.51	17.62	16.35	16.29	15.44	17.91	18.27	18.61	17.43	17.63	16.44	16.59	15.42	17.98
5260	52	17.46	17.27	16.21	16.58	15.39	15.53	14.38	17.04	17.26	17.33	16.3	16.66	15.44	15.57	14.41	17.02
5280	56	17.76	18.01	16.9	17.28	16.16	16.38	14.46	17.57	17.84	18.19	16.95	17.38	16.18	16.36	14.56	17.47
5300	60	18.04	18.28	17.28	17.63	16.42	16.64	17.56	17.55	18.02	18.41	17.35	17.65	16.45	16.62	17.54	17.75
5320	64	16.72	17.36	15.92	16.13	15.25	15.54	16.37	16.64	16.81	17.16	16.01	16.19	15.31	15.44	16.41	16.62
5500	100	17.35	17.62	16.56	17.21	15.82	15.98	17.2	17.51	17.55	17.71	16.71	17.11	15.91	16.03	17.31	17.41
5520	104	17.04	17.28	16.24	16.25	15.46	15.45	16.52	16.74	17.02	17.36	16.34	16.48	15.48	15.55	16.61	16.74
5540	108	16.69	17.11	16.11	16.47	15.14	15.25	16.24	16.41	16.79	17.13	16.07	16.55	15.12	15.31	16.36	16.51
5560	112	16.83	17.41	16.15	16.52	15.34	15.44	16.74	16.98	16.93	17.21	16.16	16.53	15.32	15.42	16.72	16.9
5580	116	15.47	15.39	14.52	15.01	13.66	13.69	14.7	14.89	15.37	15.59	14.41	14.96	13.68	13.77	14.78	14.95
5660	132	17.53	17.74	16.64	17.18	15.61	15.85	17.05	17.1	17.41	17.72	16.62	17.08	15.81	15.93	17.03	17.19
5680	136	17.23	17.71	16.55	17.11	15.69	15.91	16.99	17.14	17.46	17.77	16.68	17.17	15.89	16.01	17.07	17.12
5700	140	17.25	17.48	16.43	16.55	15.46	15.38	16.73	16.55	17.15	17.49	16.23	16.65	15.36	15.47	16.83	16.69

Peak power (dBm) for 802.11n in 5 GHz

Freq	CH	40 MHz BW, 400 ns GI								40 MHz BW, 800 ns GI							
		7.2 Mbps	43.3 Mbps	21.7 Mbps	28.9 Mbps	43.3 Mbps	57.8 Mbps	65 Mbps	72.2 Mbps	6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
5190	38	19.18	18.78	18.53	17.62	17.55	16.8	15.34	16.34	19.96	19.46	18.38	18.32	18.28	17.65	15.79	15.67
5210	42	19.36	19.03	18.49	17.74	17.6	16.89	15.44	16.35	20.07	19.57	18.46	18.37	18.38	17.41	15.87	15.47
5230	46	19.38	19.02	18.55	17.59	17.38	16.56	15.49	16.65	20.15	19.65	18.31	18.45	18.24	17.51	15.99	15.76
5250	50	18.98	18.58	18.27	17.2	17.04	16.26	15.13	16.28	19.77	19.23	18.15	18.07	17.95	17.1	15.54	15.27
5270	54	18.5	18.29	17.73	17.11	16.94	16.1	14.68	15.58	19.32	19.01	17.74	17.74	17.41	16.96	15.08	14.95
5290	58	19.12	18.98	18.07	17.56	17.43	16.71	15.19	15.73	19.92	19.64	18.36	18.26	18.27	17.55	15.67	15.55
5310	62	18.67	18.45	17.6	16.96	16.78	16.74	14.86	15.03	19.31	18.9	17.73	17.79	17.61	16.85	15.29	14.83
5270	54	18.28	18.05	17.3	16.98	16.8	16.08	14.57	15.09	19.24	18.88	17.62	17.52	17.47	16.84	14.97	14.82
5510	102	19.18	18.78	18.53	17.62	17.55	16.8	15.34	16.34	19.96	19.46	18.38	18.32	18.28	17.65	15.79	15.67
5550	110	18.14	18.01	16.94	16.78	16.17	15.73	14.09	15.82	18.69	18.38	17.4	17.29	17.05	16.32	14.75	14.24
5670	134	18.78	18.55	17.71	17.65	16.79	16.28	14.92	15.31	19.37	19.07	17.99	17.69	17.6	16.92	15.44	15

Peak power (dBm) for <u>802.11a</u> in 5 GHz									
Freq	CH	20 MHz BW							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
5180	36	20.99	19.94	20.25	18.06	18.33	18.28	18.39	16.11
5200	40	21.28	20.29	20.64	18.39	18.71	18.58	19.07	16.66
5220	44	21.14	20.06	20.35	18.31	18.53	18.5	18.59	16.29
5240	48	21.43	20.11	20.42	18.25	18.8	18.7	18.83	16.5
5260	52	20.36	19.01	19.44	17.16	17.45	17.41	17.69	15.49
5280	56	20.85	19.72	20.07	17.94	18.25	18.23	18.39	16.26
5300	60	21.12	20.04	20.41	18.25	18.61	18.51	18.65	16.54
5320	64	19.86	18.77	19.04	17.05	17.23	17.23	17.33	15.36
5500	100	20.68	19.41	19.67	17.59	17.89	17.98	18.26	15.98
5520	104	20.11	18.87	19.21	17.25	17.53	17.49	17.67	15.48
5540	108	19.93	18.79	19.06	16.98	17.25	17.21	17.35	15.03
5560	112	20.21	19.09	19.46	17.17	17.41	17.33	17.67	15.42
5580	116	18.28	17.16	17.52	15.53	15.69	15.61	15.76	13.49
5660	132	20.72	19.54	19.81	17.66	17.95	17.86	18.03	15.82
5680	136	20.59	19.45	19.69	17.55	17.88	17.93	18.01	15.69
5700	140	20.26	18.95	19.67	17.32	17.62	17.57	17.74	15.5

Based on these initial measurements, it was determined that testing were performed in the 13 Mbps data rate for the 802.11n 20M BW mode and 6.5 Mbps data rate for 802.11n 40M BW mode and 6Mbps for the 802.11 a mode.

Peak Power Spectral Density

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 20db passive attenuator. A fully charged battery was used for the supply voltage. Testing was done according to Public Notice KDB 789033 D01.

The spectrum analyzer used the following settings:

1. Span = 25 MHz
2. VBW = 3 MHz
3. RBW= 1 MHz
4. Sweep = auto
5. Detector function = RMS Detector
6. Trace = AVG
7. Sweep count = 100

The trace was allowed to stabilize.

Measurement Results

5180 MHz	5220 MHz	5240 MHz
0.92	0.88	1.01
5260 MHz	5280 MHz	5320 MHz
0.27	0.65	0.69
5500 MHz	5580 MHz	5700 MHz
0.42	-1.66	-0.06

802.11 n 20MHz BW @ 13 Mbps

5190 MHz	5230 MHz	5270 MHz
-2.67	-3.01	-3.20
5310 MHz	5510 MHz	5550 MHz
-2.74	-3.68	-4.13
5670 MHz		
-3.35		

802.11 n 40MHz BW @ 6.5 Mbps

5180 MHz	5220 MHz	5240 MHz
3.94	3.98	3.94
5260 MHz	5280 MHz	5320 MHz
3.45	3.86	3.85
5500 MHz	5580 MHz	5700 MHz
3.69	1.44	3.15

802.11 a @ 6 Mbps

Peak Excursion Ratio

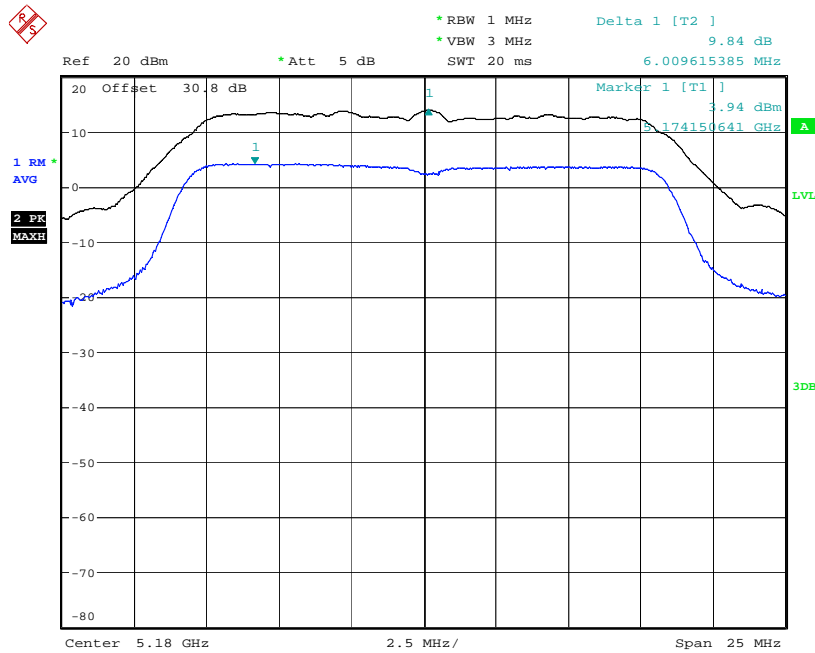
Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 20db passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

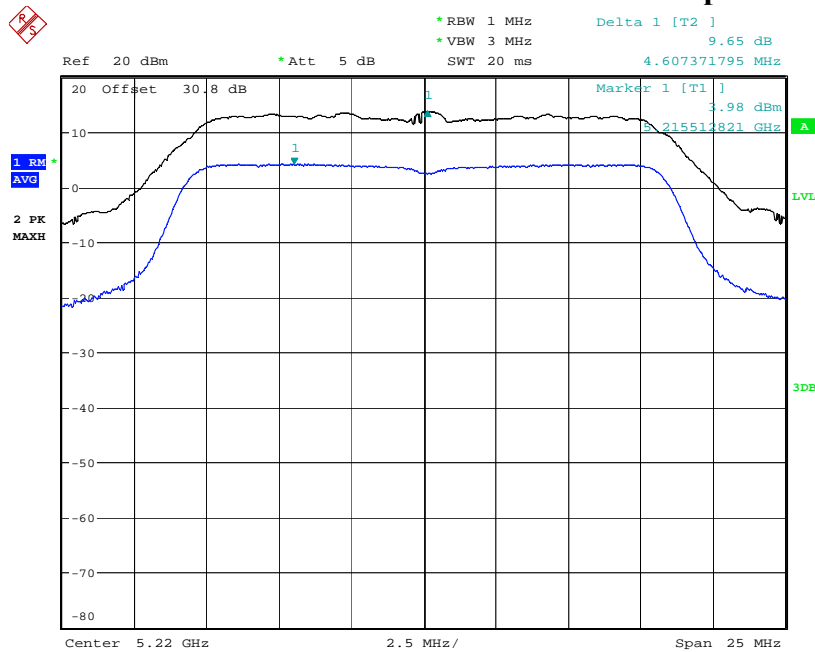
See attached

802.11 a Mode @ 6 Mbps



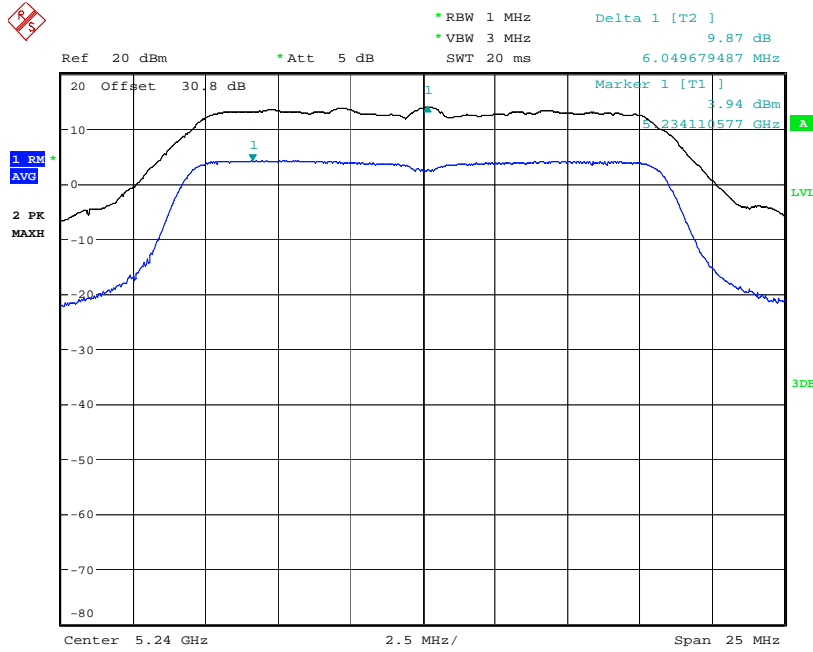
Date: 27.AUG.2012 12:35:56

Peak Excursion Channel 36 @ 6 Mbps



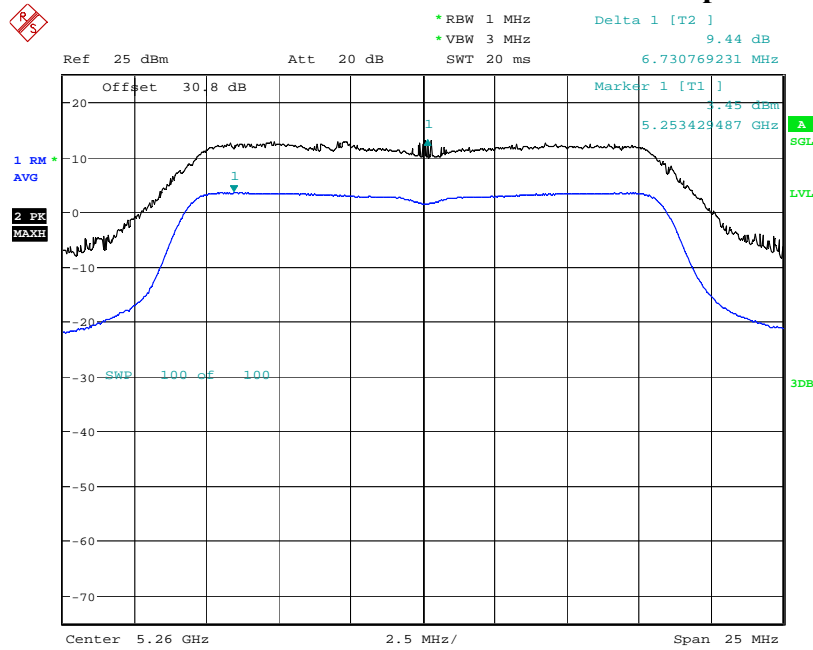
Date: 27.AUG.2012 12:38:18

Peak Excursion Channel 44 @ 6 Mbps



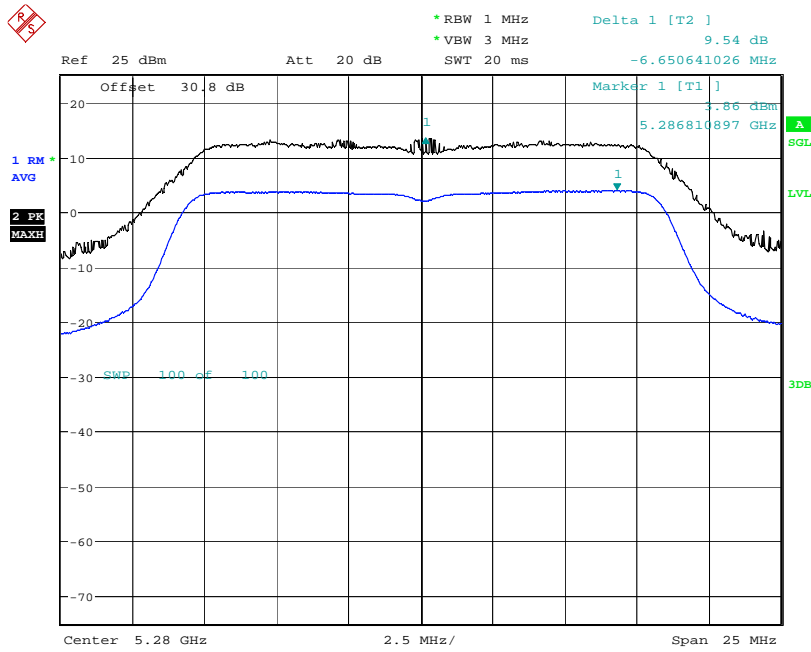
Date: 27.AUG.2012 12:41:05

Peak Excursion Channel 48 @ 6 Mbps



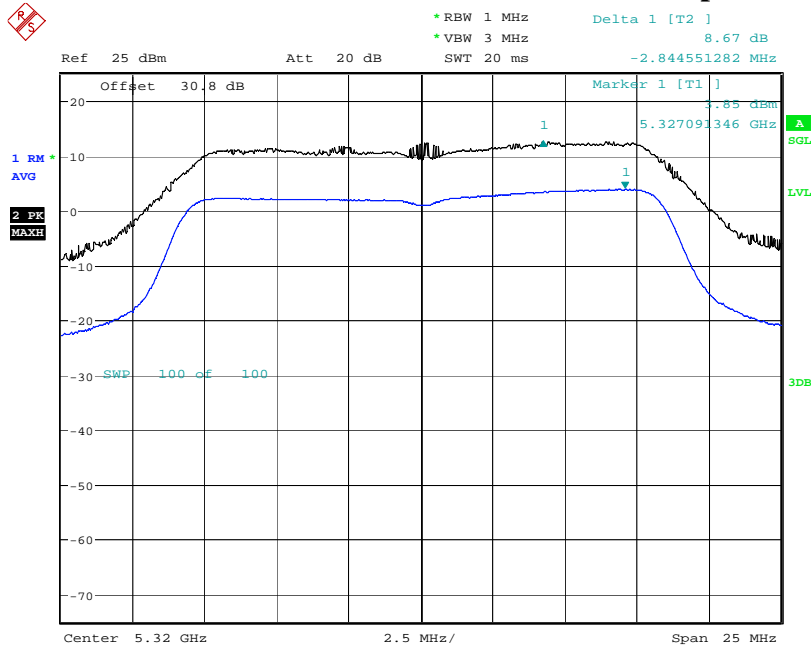
Date: 16.AUG.2012 16:18:44

Peak Excursion Channel 52 @ 6 Mbps



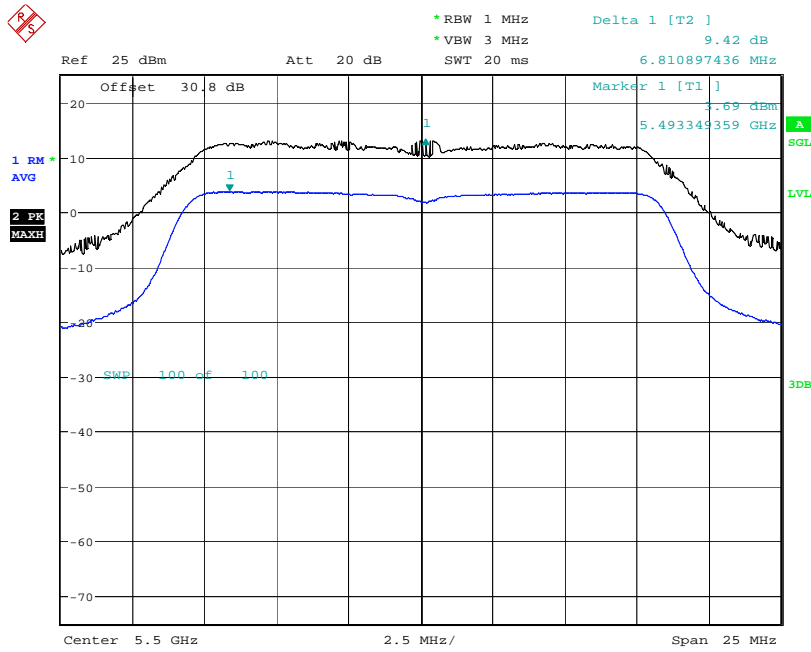
Date: 16.AUG.2012 16:19:18

Peak Excursion Channel 56 @ 6 Mbps



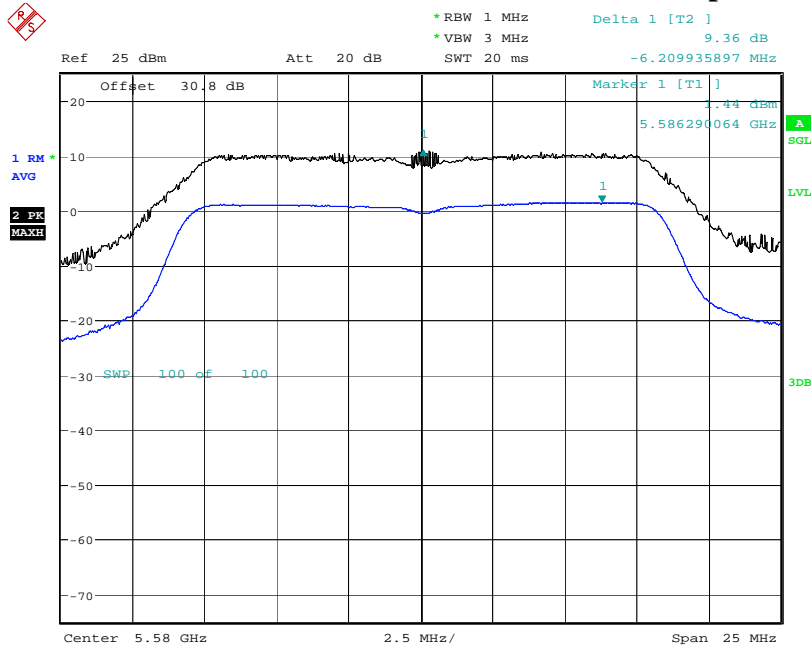
Date: 16.AUG.2012 16:19:55

Peak Excursion Channel 64 @ 6 Mbps



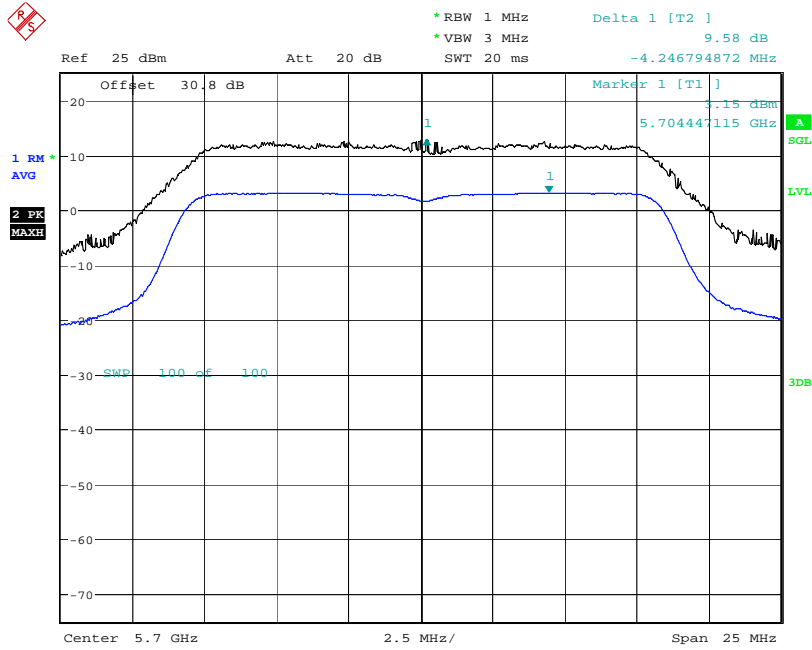
Date: 16.AUG.2012 16:20:38

Peak Excursion Channel 100 @ 6 Mbps



Date: 16.AUG.2012 16:21:08

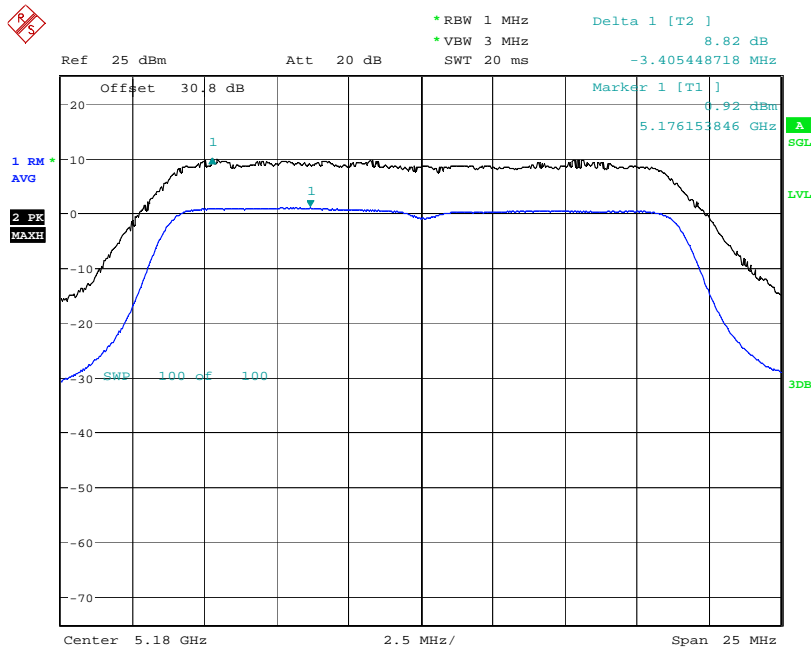
Peak Excursion Channel 116 @ 6 Mbps



Date: 16.AUG.2012 16:21:41

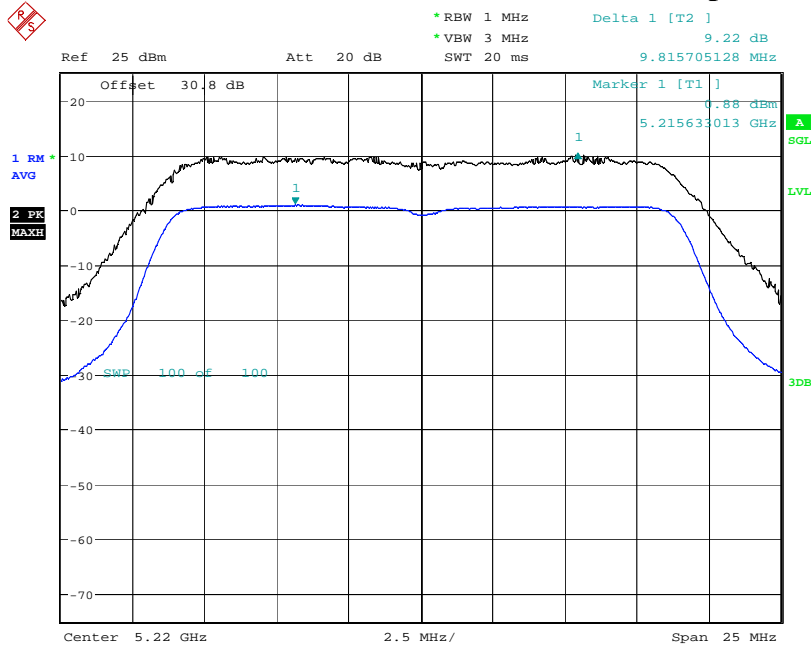
Peak Excursion Channel 140 @ 6 Mbps

802.11 n Mode 20MHz BW @ 13 Mbps



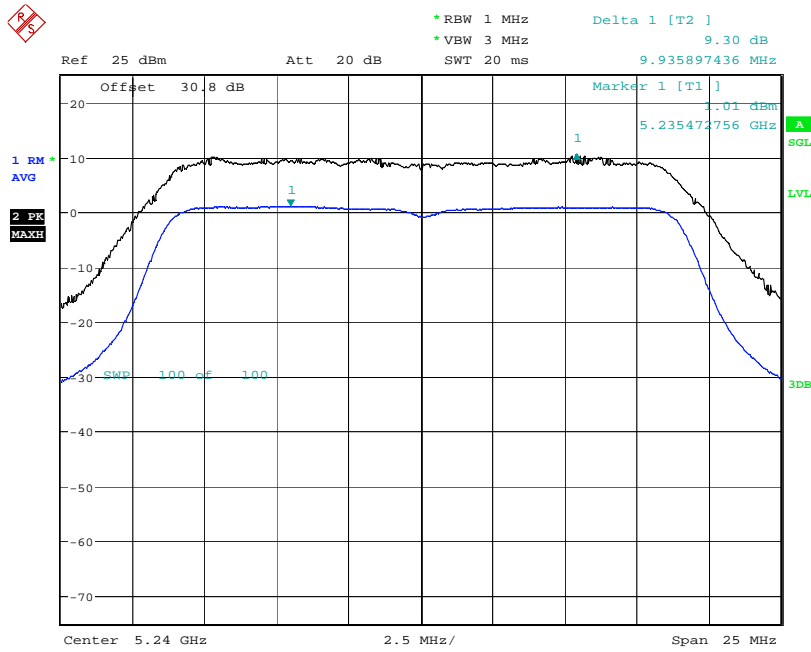
Date: 16.AUG.2012 16:22:28

Peak Excursion Channel 36 @ 13 Mbps



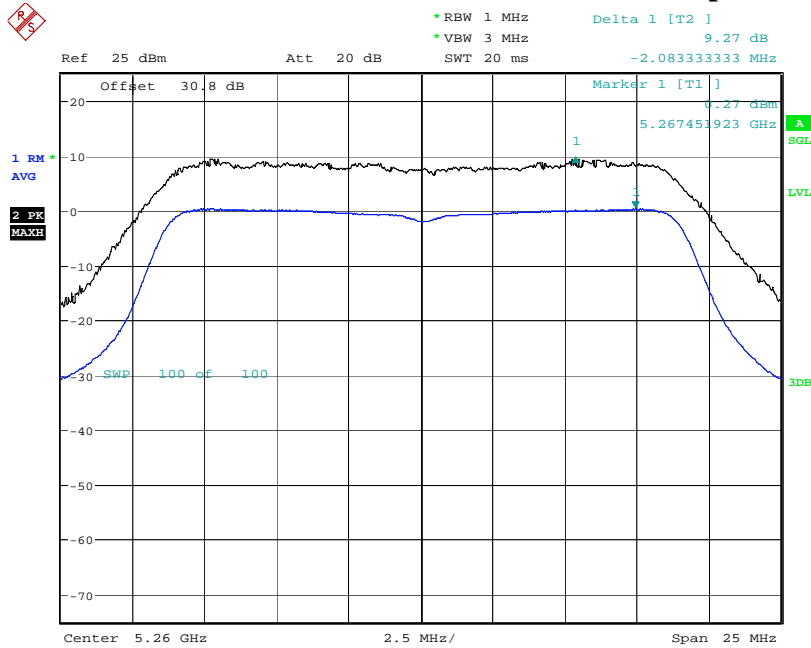
Date: 16.AUG.2012 16:23:14

Peak Excursion Channel 44 @ 13 Mbps



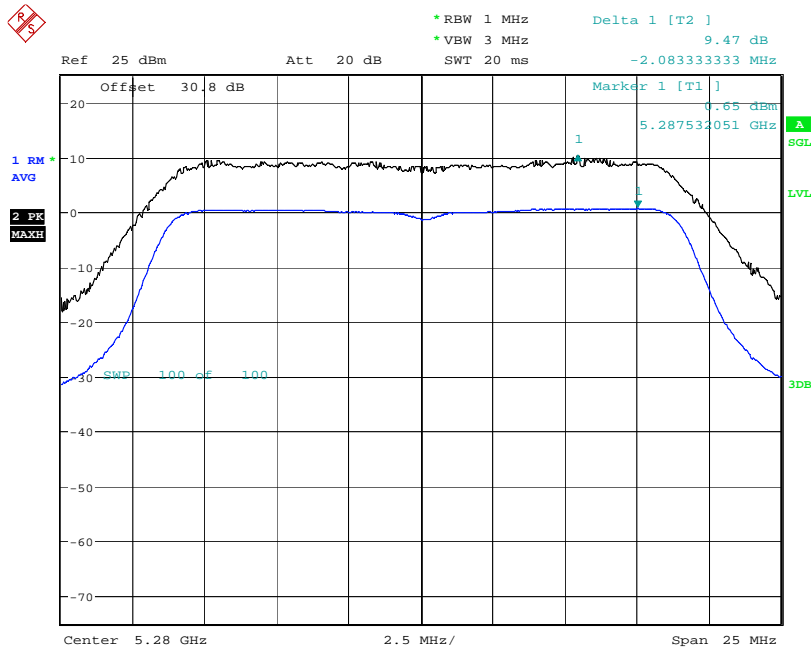
Date: 16.AUG.2012 16:23:47

Peak Excursion Channel 48 @ 13 Mbps



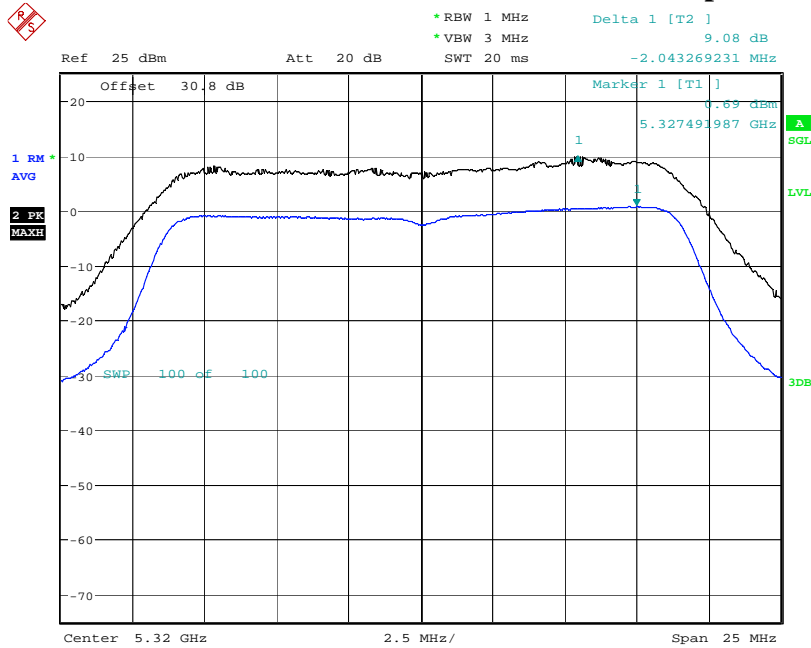
Date: 16.AUG.2012 16:25:56

Peak Excursion Channel 52 @ 13 Mbps



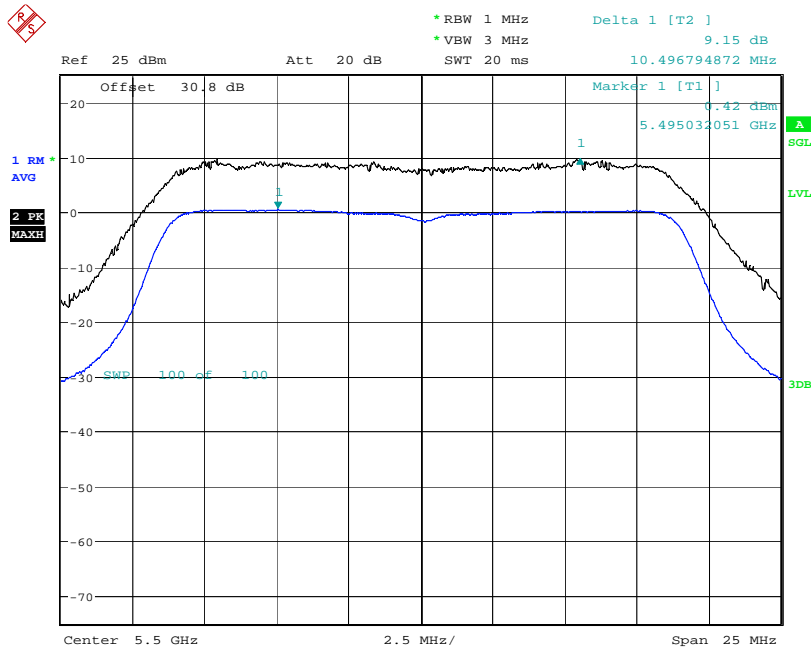
Date: 16.AUG.2012 16:26:27

Peak Excursion Channel 56 @ 13Mbps



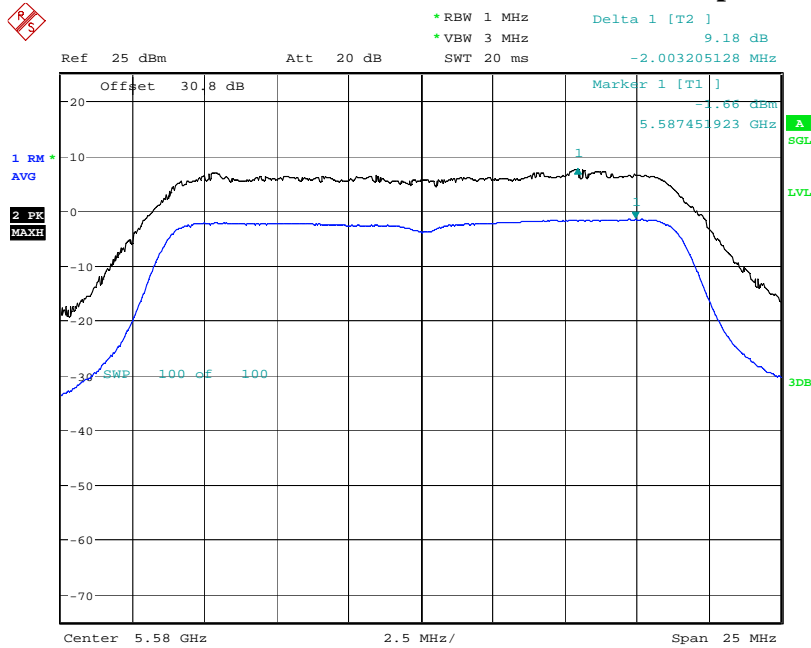
Date: 16.AUG.2012 16:26:58

Peak Excursion Channel 64 @ 13 Mbps



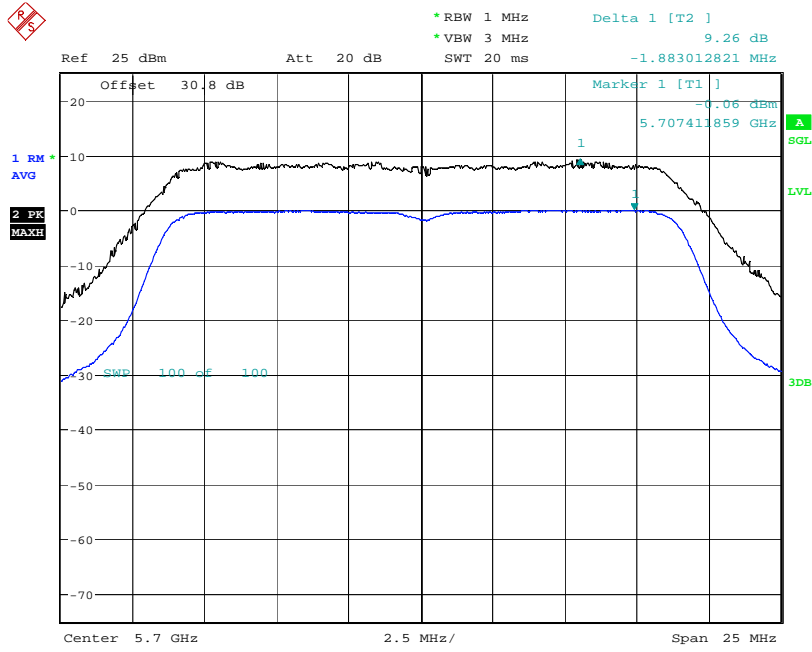
Date: 16.AUG.2012 16:27:26

Peak Excursion Channel 100 @ 13 Mbps



Date: 16.AUG.2012 16:28:01

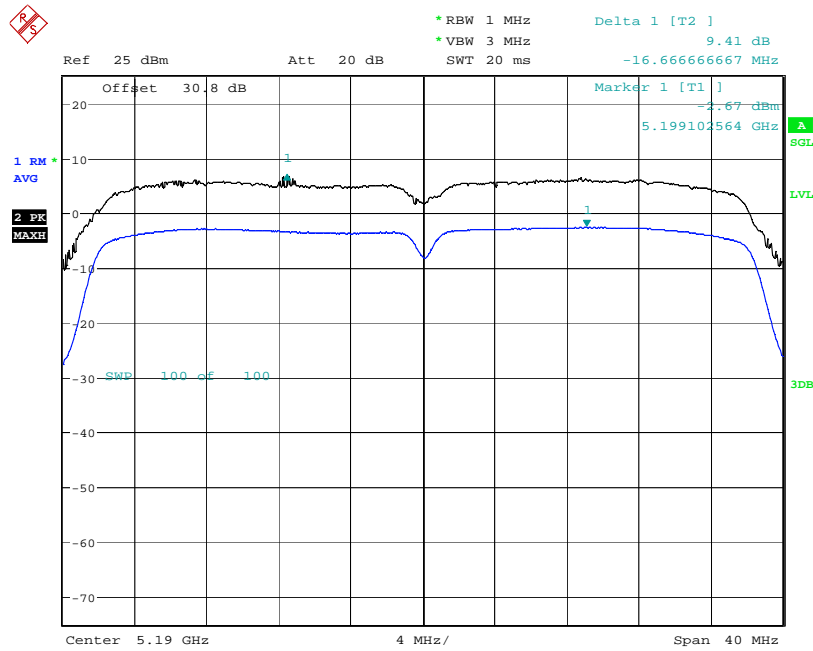
Peak Excursion Channel 116 @ 13 Mbps



Date: 16.AUG.2012 16:28:30

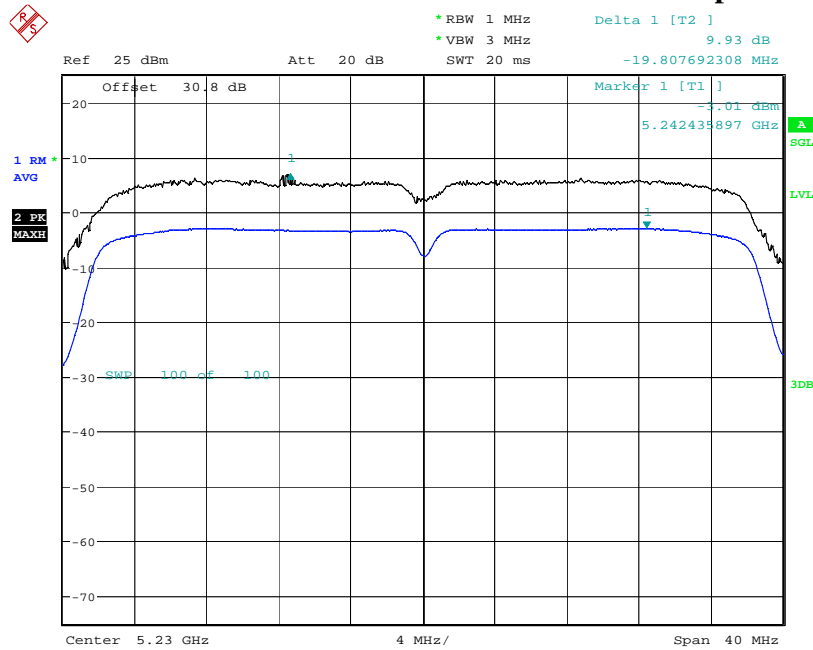
Peak Excursion Channel 140 @ 13 Mbps

802.11 n Mode 40MHz BW @ 6.5 Mbps



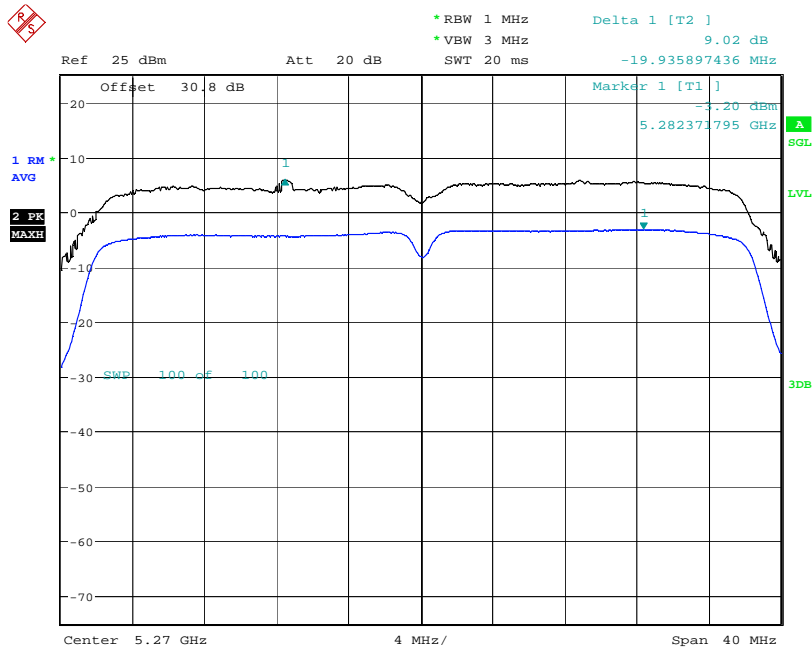
Date: 16.AUG.2012 16:29:52

Peak Excursion Channel 38 @ 6.5 Mbps



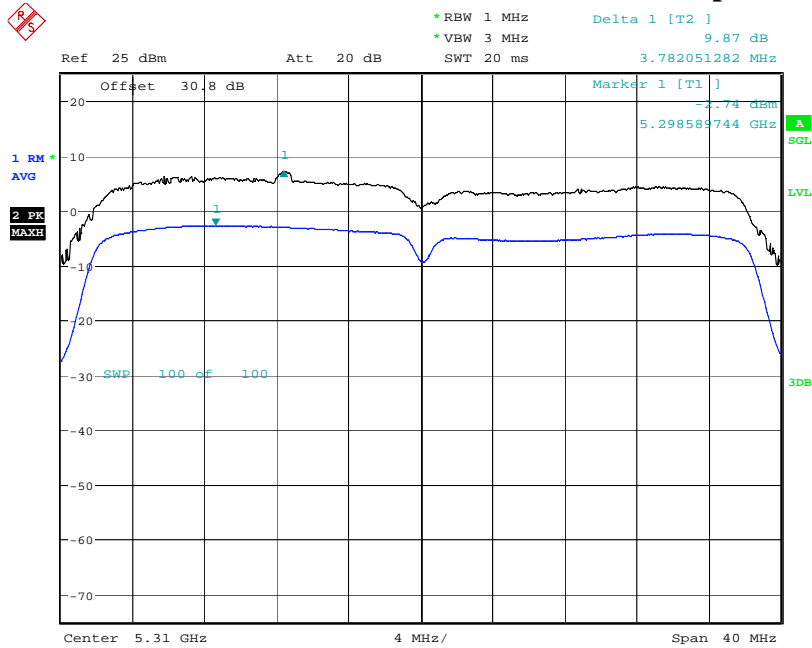
Date: 16.AUG.2012 16:30:34

Peak Excursion Channel 46 @ 6.5 Mbps



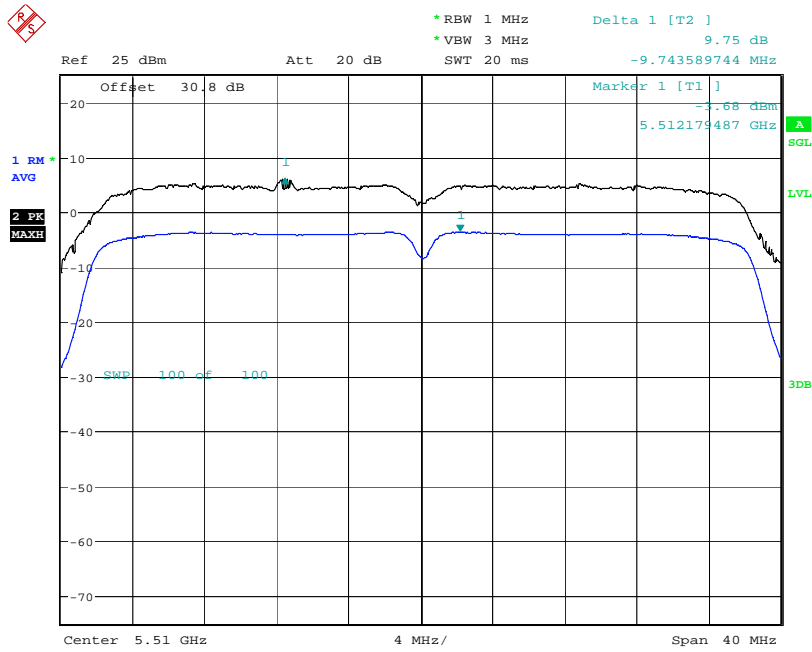
Date: 16.AUG.2012 16:30:59

Peak Excursion Channel 54 @ 6.5 Mbps



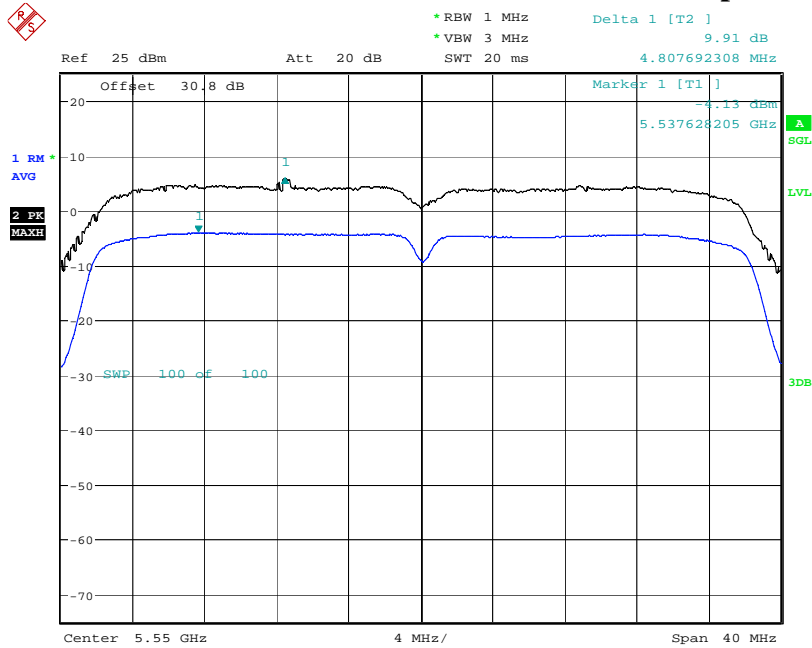
Date: 16.AUG.2012 16:31:29

Peak Excursion Channel 62 @ 6.5 Mbps



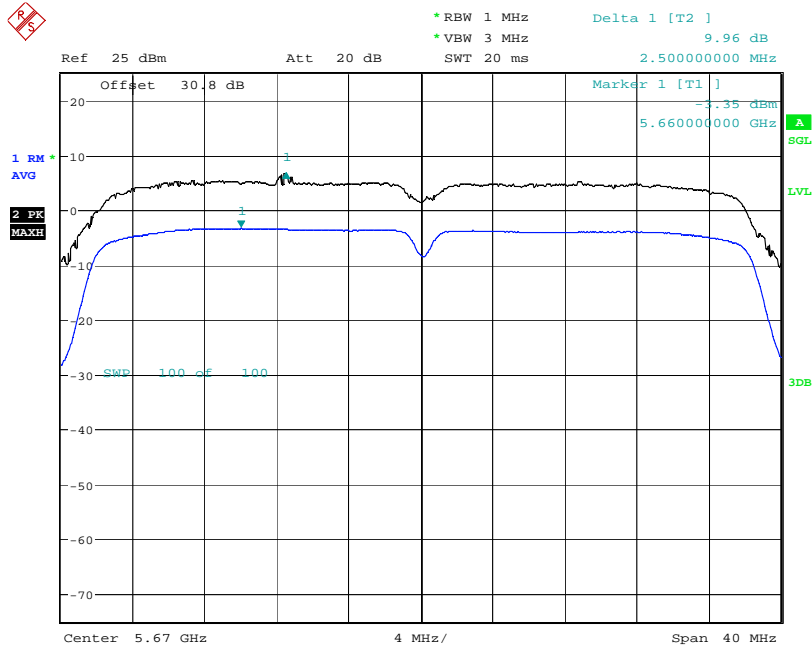
Date: 16.AUG.2012 16:31:59

Peak Excursion Channel 102 @ 6.5 Mbps



Date: 16.AUG.2012 16:32:29

Peak Excursion Channel 110 @ 6.5 Mbps



Date: 16.AUG.2012 16:32:57

Peak Excursion Channel 134 @ 6.5 Mbps

Frequency	Channel	Mode	Data Rate	Peak Excursion	Limit	Margin
5180	36	a	6	9.42	13	-3.58
5220	44	a	6	9.60	13	-3.40
5240	48	a	6	9.76	13	-3.24
5260	52	a	6	9.44	13	-3.56
5280	56	a	6	9.54	13	-3.46
5320	64	a	6	8.67	13	-4.33
5500	100	a	6	9.42	13	-3.58
5580	116	a	6	9.36	13	-3.64
5700	140	a	6	9.58	13	-3.42
5180	36	n(20MHz)	13	8.82	13	-4.18
5220	44	n(20MHz)	13	9.22	13	-3.78
5240	48	n(20MHz)	13	9.30	13	-3.70
5260	52	n(20MHz)	13	9.27	13	-3.73
5280	56	n(20MHz)	13	9.47	13	-3.53
5320	64	n(20MHz)	13	9.08	13	-3.92
5500	100	n(20MHz)	13	9.15	13	-3.85
5580	116	n(20MHz)	13	9.18	13	-3.82
5700	140	n(20MHz)	13	9.26	13	-3.74
5190	36	n(40MHz)	6.5	9.41	13	-3.59
5230	46	n(40MHz)	6.5	9.93	13	-3.07
5270	54	n(40MHz)	6.5	9.02	13	-3.98
5310	62	n(40MHz)	6.5	9.87	13	-3.13
5510	102	n(40MHz)	6.5	9.75	13	-3.25
5550	110	n(40MHz)	6.5	9.91	13	-3.09
5670	134	n(40MHz)	6.5	9.96	13	-3.04

FREQUENCY STABILITY

Measurement Procedure

The equipment under test is placed in an environmental chamber. The antenna port of the Equipment under Test is directly coupled to the input of the spectrum analyzer through a specialized RF connector. A power supply is attached as the primary voltage supply.

Frequency measurements are made at the extremes of the temperature range -30°C to $+50^{\circ}\text{C}$ and at intervals of 10°C with the primary supply voltage set to the nominal battery operating voltage. A period of time sufficient to stabilize all components of the equipment is allowed at each frequency measurement. The maximum variation of frequency is measured.

Measurement Results

Attached

Temp	Channel	Mode	Data Rate	Frequency (MHz)	Initial Frequency (MHz)	Deviation (MHz)
-30C	44	a	6	5220.38	5220.34	0.04
-20C	44	a	6	5220.41	5220.34	0.07
-10C	44	a	6	5220.14	5220.34	-0.2
0C	44	a	6	5220.29	5220.34	-0.05
10C	44	a	6	5220.38	5220.34	0.04
20C	44	a	6	5220.34	5220.34	0
30C	44	a	6	5220.39	5220.34	0.05
40C	44	a	6	5220.29	5220.34	-0.05
50C	44	a	6	5220.29	5220.34	-0.05
3.4V Batt end point	44	a	6	5220.09	5220.34	-0.25

Temp	Channel	Mode	Data Rate	Frequency (MHz)	Initial Frequency (MHz)	Deviation (MHz)
-30C	44	n(20MHz)	13	5225.38	5225.29	0.09
-20C	44	n(20MHz)	13	5225.48	5225.29	0.19
-10C	44	n(20MHz)	13	5225.39	5225.29	0.1
0C	44	n(20MHz)	13	5225.38	5225.29	0.09
10C	44	n(20MHz)	13	5225.48	5225.29	0.19
20C	44	n(20MHz)	13	5225.29	5225.29	0
30C	44	n(20MHz)	13	5225.39	5225.29	0.1
40C	44	n(20MHz)	13	5225.48	5225.29	0.19
50C	44	n(20MHz)	13	5225.48	5225.29	0.19
3.4V Batt end point	44	n(20MHz)	13	5225.38	5225.29	0.09

Temp	Channel	Mode	Data Rate	Frequency (MHz)	Initial Frequency (MHz)	Deviation (MHz)
-30C	42	n(40MHz)	6.5	5202.59	5202.50	0.09
-20C	42	n(40MHz)	6.5	5202.42	5202.50	-0.08
-10C	42	n(40MHz)	6.5	5202.41	5202.50	-0.09
0C	42	n(40MHz)	6.5	5202.40	5202.50	-0.1
10C	42	n(40MHz)	6.5	5202.48	5202.50	-0.02
20C	42	n(40MHz)	6.5	5202.50	5202.50	0
30C	42	n(40MHz)	6.5	5202.50	5202.50	0
40C	42	n(40MHz)	6.5	5202.41	5202.50	-0.09
50C	42	n(40MHz)	6.5	5202.40	5202.50	-0.1
3.4V Batt end point	42	n(40MHz)	6.5	5202.60	5202.50	0.1

FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR Part 15.407

Measurement Procedure

The Equipment-Under-Test is placed inside the semi-anechoic chamber on a polystyrene table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The field strength of each radiated emission is calculated by correcting the EMI receiver level for cable loss, amplifier gain, and antenna correction factors.

For 30 MHz – 18 GHz:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{EMI Receiver Level (dB}\mu\text{V)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)} + \text{Filter loss (dB)} + \text{Antenna Correction Factor (3/m)}$$

For 18 GHz – 40 GHz:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{EMI Receiver Level (dB}\mu\text{V)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)} + \text{Filter loss (dB)} + \text{Antenna Correction Factor (1/m)}$$

For frequencies below 1GHz, using the following spectrum analyzer setting:

1. Detector Mode = Peak/QP
2. For Peak detector, RBW=100 kHz (6dB), VBW=Auto; For QP detector, RBW=120 kHz (6dB), VBW=Auto.

For frequencies above 1GHz, using the following spectrum analyzer setting:

1. Detector Mode = Peak/AV
2. For Peak detector, RBW=1 MHz (6dB), VBW=Auto; For AV detector, RBW=1 MHz (6dB), VBW=Auto.

A fully charged battery was used for the supply voltage.

The test sample was operated during the measurements under the following conditions:

- Tests were performed at low, mid and high channels.
- Tests were performed in both horizontal and vertical polarity.
- Tests were performed in both operational WiFi bands (a) and (n)
- Tests were performed in X, Y and Z polarizations.

Measurement Results

Comments:

The band edge measurements crossing the corner for the low channel with respect to the average limit line is acceptable when applying the FCC rule specified in CFR 15.35(b) for the use of peak detector above 1 GHz. The peak detector limit line has been added to the graphical plots.

For peak emissions detected above 1 GHz, only those emissions that are higher than the AVG limit line plus 8 dB are selected for final emission analysis.

Radiated emissions was measured from 9 kHz to 30 MHz and all emissions were 20 dB below the limit.

802.11 a Mode @ 6 Mbps

Only the worst field strength of spurious emissions for each channel is displayed for WLAN (a) sub band 1

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10360.00	-49.41	-27.00	-22.41	199.90	100.00	H
10360.00	-49.59	-27.00	-22.59	73.80	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10440.00	-48.62	-27.00	-21.62	225.90	100.00	H
10440.00	-49.59	-27.00	-22.59	34.00	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10480.00	-49.41	-27.00	-22.41	312.30	100.00	H
10480.00	-49.59	-27.00	-22.59	117.00	100.00	V

High Channel Dual Polarization

WLAN (a) sub band 2

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10520.00	-49.27	-27.00	-22.27	1.60	100.00	H
10520.00	-48.41	-27.00	-21.41	204.60	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10600.00	-48.60	-27.00	-21.60	264.40	100.00	H
10600.00	-47.92	-27.00	-20.92	354.20	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10640.00	-48.29	-27.00	-21.29	218.40	100.00	H
10640.00	-48.43	-27.00	-21.43	276.00	100.00	V

High Channel Dual Polarization

WLAN (a) sub band 3

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11000.00	-46.93	-27.00	-19.93	24.60	100.00	H
11000.00	-46.28	-27.00	-19.28	75.00	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11160.00	-47.17	-27.00	-20.17	67.00	100.00	H
11160.00	-47.18	-27.00	-20.18	26.80	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11400.00	-46.35	-27.00	-19.35	67.50	100.00	H
11400.00	-45.53	-27.00	-18.53	271.80	100.00	V

High Channel Dual Polarization

802.11 n Mode 20MHz BW @ 13 Mbps

Only the worst field strength of spurious emissions for each channel is displayed for

WLAN (n) 5G sub band 1, 20M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10360.00	-49.44	-27.00	-22.44	270.30	100.00	H
10360.00	-49.05	-27.00	-22.05	141.30	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10440.00	-47.99	-27.00	-20.99	65.90	100.00	H
10440.00	-49.34	-27.00	-22.34	85.50	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10480.00	-48.75	-27.00	-21.75	18.00	100.00	H
10480.00	-48.96	-27.00	-21.96	117.90	100.00	V

High Channel Dual Polarization

WLAN (n) 5G sub band 2, 20M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10520.00	-49.08	-27.00	-22.08	224.30	100.00	H
10520.00	-48.48	-27.00	-21.48	278.90	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10600.00	-48.09	-27.00	-21.09	15.70	100.00	H
10600.00	-48.62	-27.00	-21.62	288.40	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10640.00	-48.64	-27.00	-21.64	338.40	100.00	H
10640.00	-48.33	-27.00	-21.33	39.60	100.00	V

High Channel Dual Polarization

WLAN (n) 5G sub band 3, 20M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11000.00	-46.33	-27.00	-19.33	25.50	100.00	H
11000.00	-46.54	-27.00	-19.54	166.40	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11160.00	-46.75	-27.00	-19.75	260.90	100.00	H
11160.00	-47.63	-27.00	-20.63	38.70	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11400.00	-46.54	-27.00	-19.54	351.20	100.00	H
11400.00	-45.59	-27.00	-18.59	214.30	100.00	V

High Channel Dual Polarization

802.11 n Mode 40MHz BW @ 6.5 Mbps

WLAN (n) 5G sub band 1, 40M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10380.00	-48.49	-27.00	-21.49	139.00	100.00	H
10380.00	-49.34	-27.00	-22.34	320.20	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10460.00	-49.30	-27.00	-22.30	206.40	100.00	H
10460.00	-48.39	-27.00	-21.39	92.80	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10500.00	-49.14	-27.00	-22.14	257.80	100.00	H
10500.00	-49.53	-27.00	-22.53	316.30	100.00	V

High Channel Dual Polarization

WLAN (n) 5G sub band 2, 40M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10540.00	-49.15	-27.00	-22.15	296.40	100.00	H
10540.00	-49.24	-27.00	-22.24	196.10	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10580.00	-48.49	-27.00	-21.49	348.30	100.00	H
10580.00	-49.12	-27.00	-22.12	246.20	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
10620.00	-48.09	-27.00	-21.09	195.30	100.00	H
10620.00	-48.53	-27.00	-21.53	3.00	100.00	V

High Channel Dual Polarization

WLAN (n) 5G sub band 3, 40M bandwidth

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11020.00	-45.81	-27.00	-18.81	0.00	100.00	H
11020.00	-46.30	-27.00	-19.30	316.30	100.00	V

Low Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11100.00	-46.72	-27.00	-19.72	312.10	100.00	H
11100.00	-46.19	-27.00	-19.19	329.80	100.00	V

Middle Channel Dual Polarization

Freq (MHz)	(PEAK) EMI (dBm)	Limit (dBm)	(PEAK) Margin (dB)	Ttbl Agl (deg)	Twr Ht (cm)	Pol
11340.00	-46.52	-27.00	-19.52	202.60	100.00	H
11340.00	-45.68	-27.00	-18.68	360.20	100.00	V

High Channel Dual Polarization

The spectrum is measured from 30MHz to 10th harmonic and the worst-case emissions are reported.

There are no discernible emissions are found beyond the 2nd harmonic for this device.

BAND-EDGE COMPLIANCE OF RF RADIATED EMISSIONS

CFR 47 Part 15.407

Measurement Procedure

The test sample is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

For 30 MHz – 18 GHz:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{EMI Receiver Level (dB}\mu\text{V)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)} + \text{Filter loss (dB)} + \text{Antenna Correction Factor (3/m)}$$

For 18 GHz – 26.5 GHz:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{EMI Receiver Level (dB}\mu\text{V)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)} + \text{Filter loss (dB)} + \text{Antenna Correction Factor (1/m)}$$

For Band-edge radiated Emission test, using the following spectrum analyzer setting:

1. Detector Mode = Peak/AV
2. For Peak detector, RBW=1 MHz (6dB), VBW=10 kHz; For AV detector, RBW=1 MHz (6dB), VBW=10 kHz.

The test sample WLAN transmitter was enabled using a test script.

A fully charged battery was used for the supply voltage.

Measurement Results

Comments:

The band edge measurements crossing the corner for the low/high channel with respect to the average limit line is acceptable when applying the FCC rule specified in CFR 47 part 15.35(b) for the use of peak detector above 1 GHz. The peak detector limit line has been added to the graphical plots.

All data rates were evaluated and worst results are reported. All three orthogonal planes were investigated and worst results are reported.

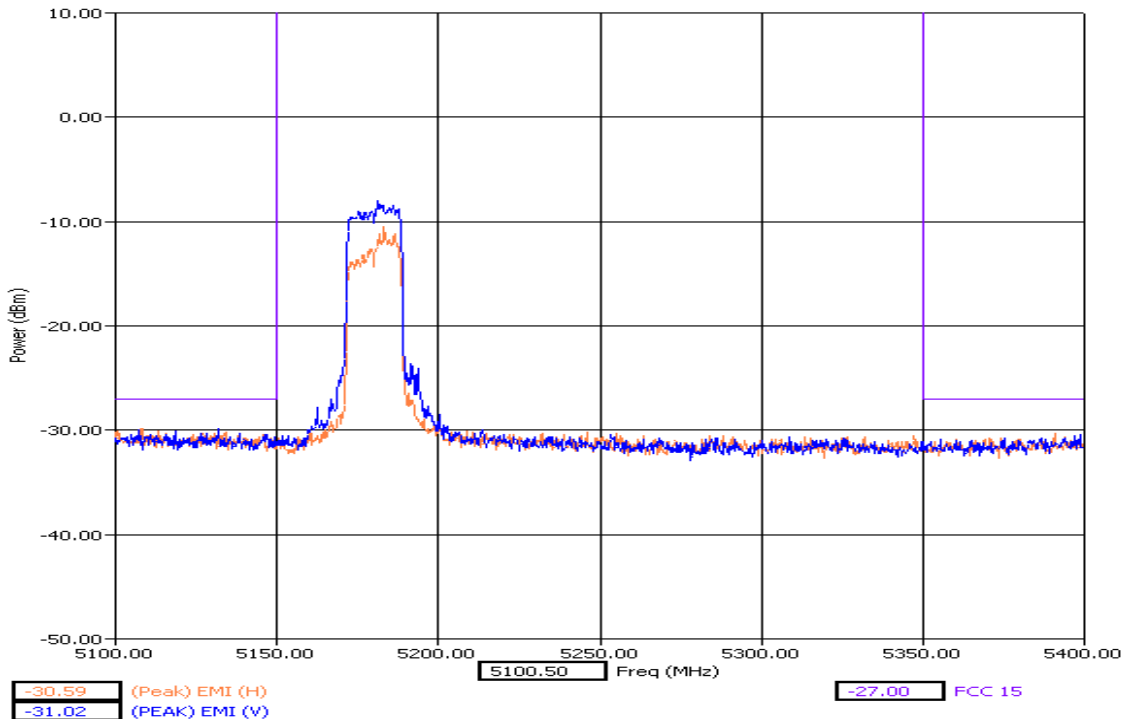
Note: No WLAN band notch filters were used.

See below attached plots for the measurement results with both peak detector and average detector:

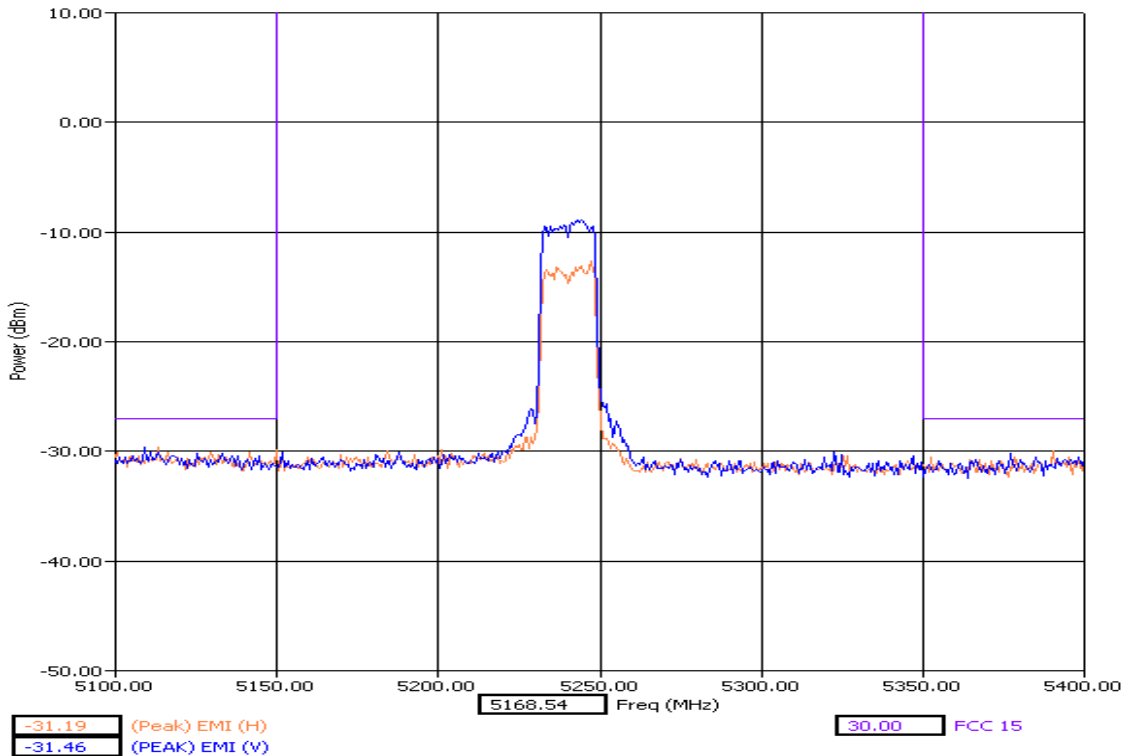
802.11 a Mode @ 6 Mbps

Only the worst band edge is displayed for WLAN band (a).

WLAN (a) sub band 1

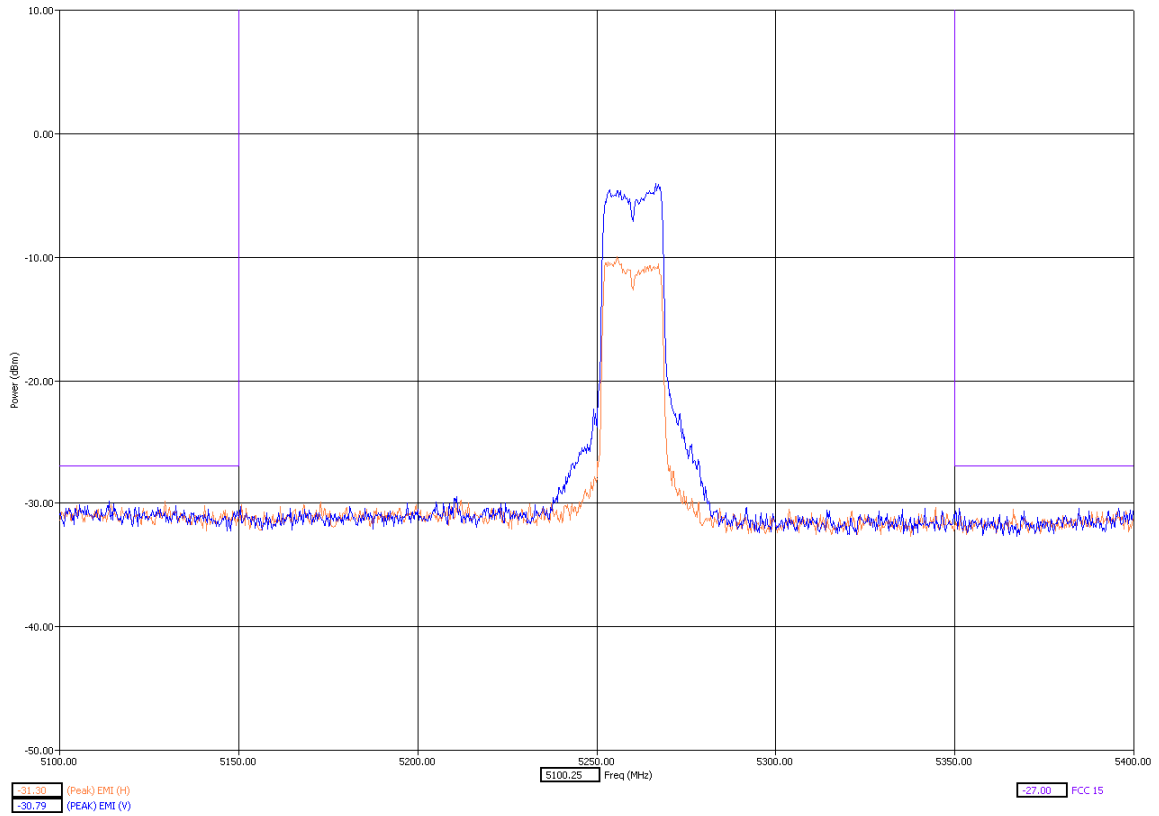


Low Band Edge - Peak Detector

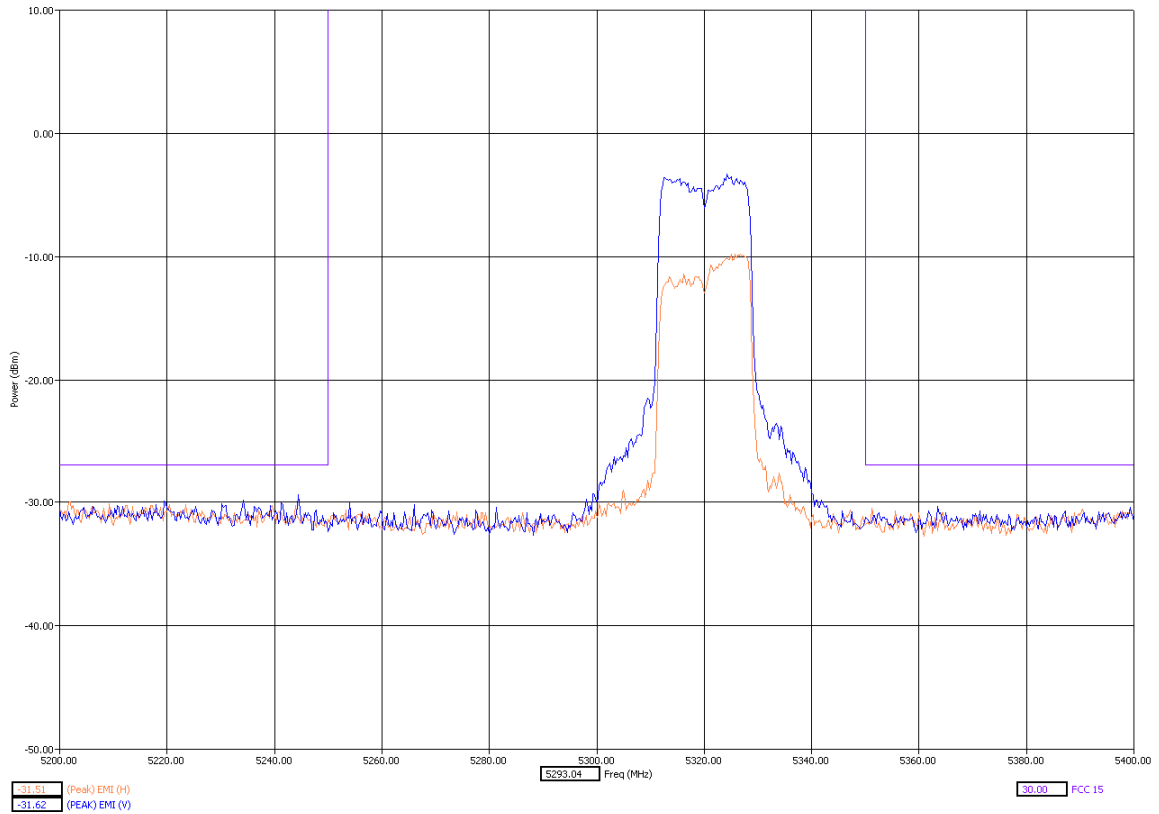


High Band Edge - Peak Detector

WLAN (a) sub band 2

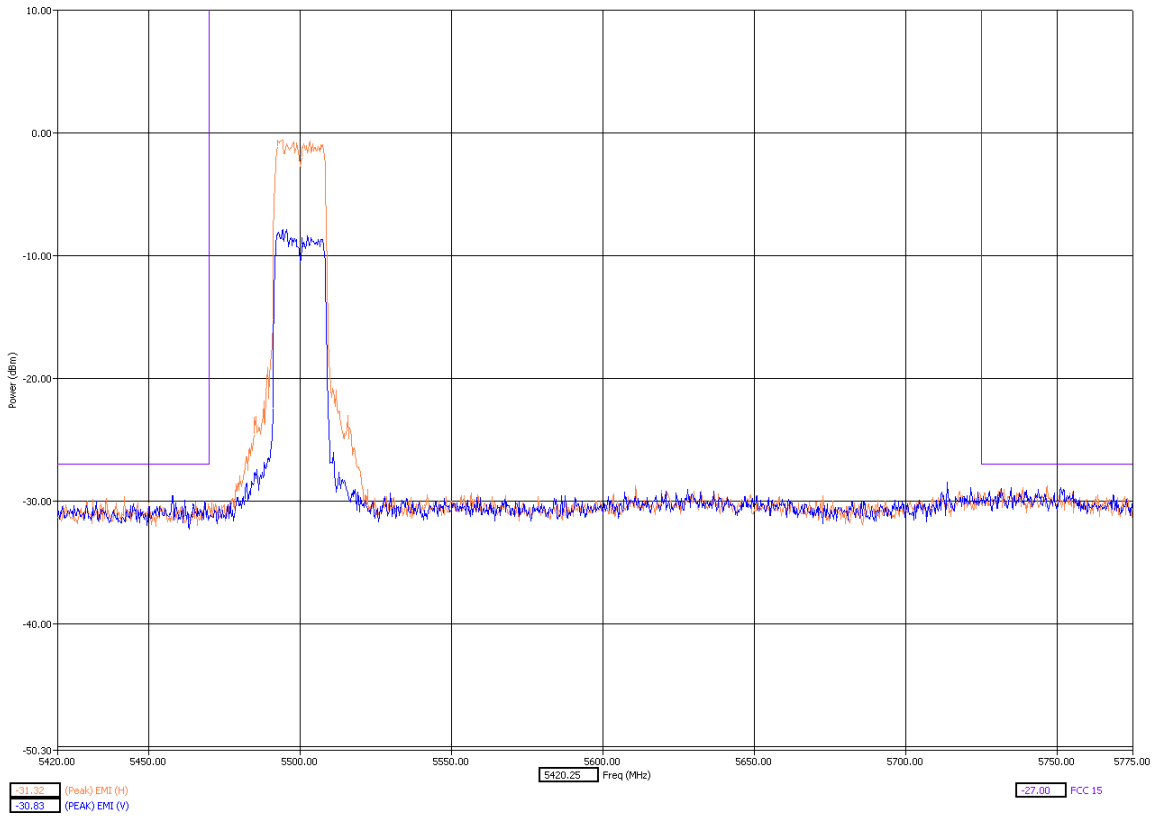


Low Band Edge - Peak Detector

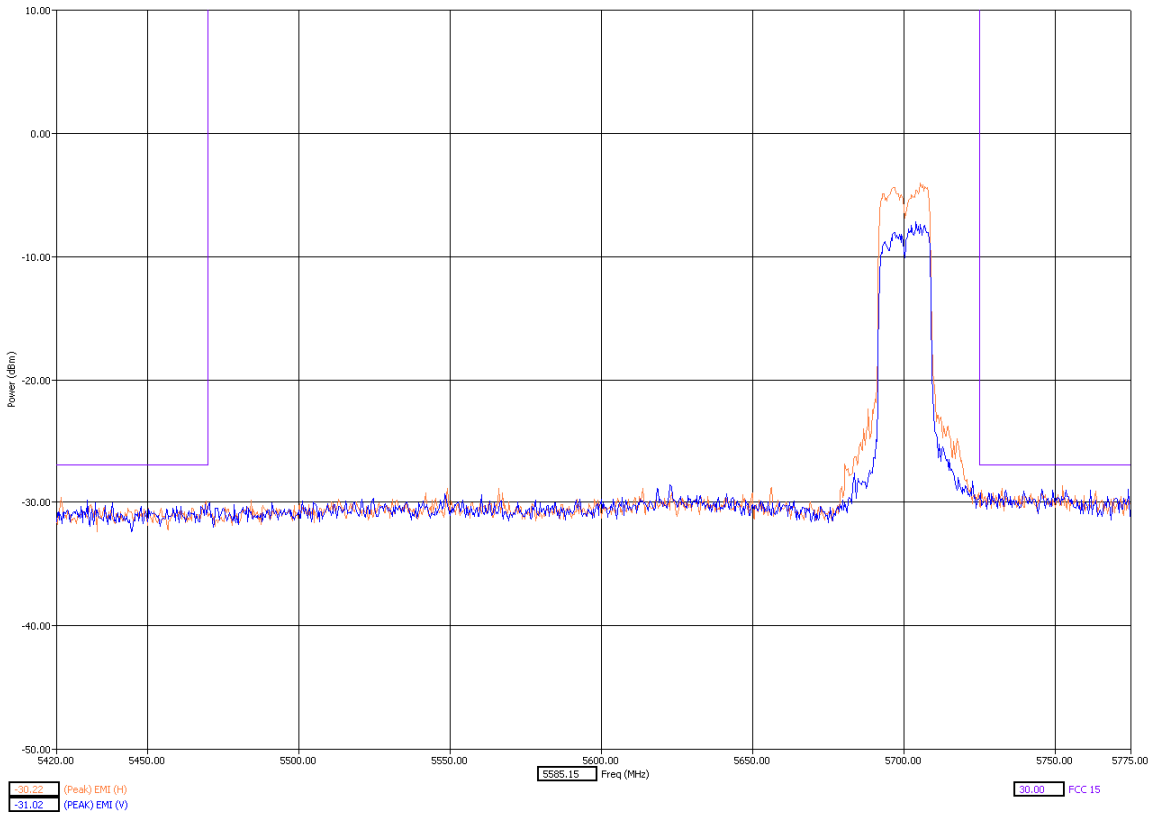


High Band Edge - Peak Detector

WLAN (a) sub band 3



Low Band Edge - Peak Detector

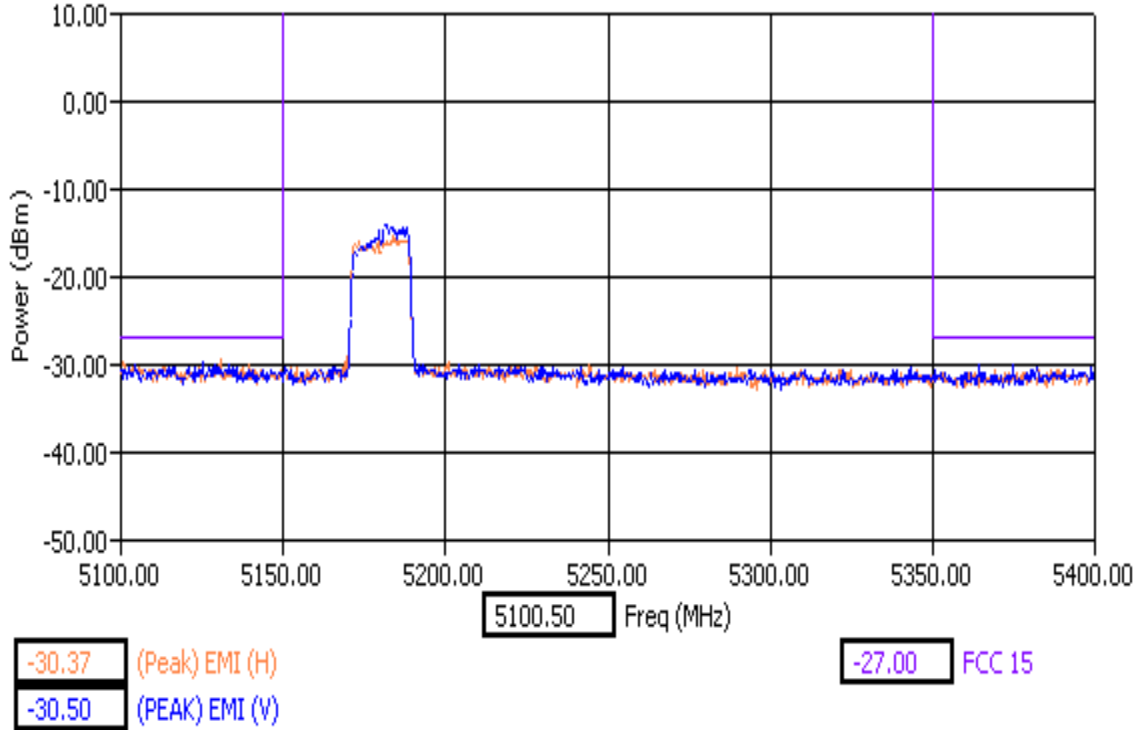


High Band Edge - Peak Detector

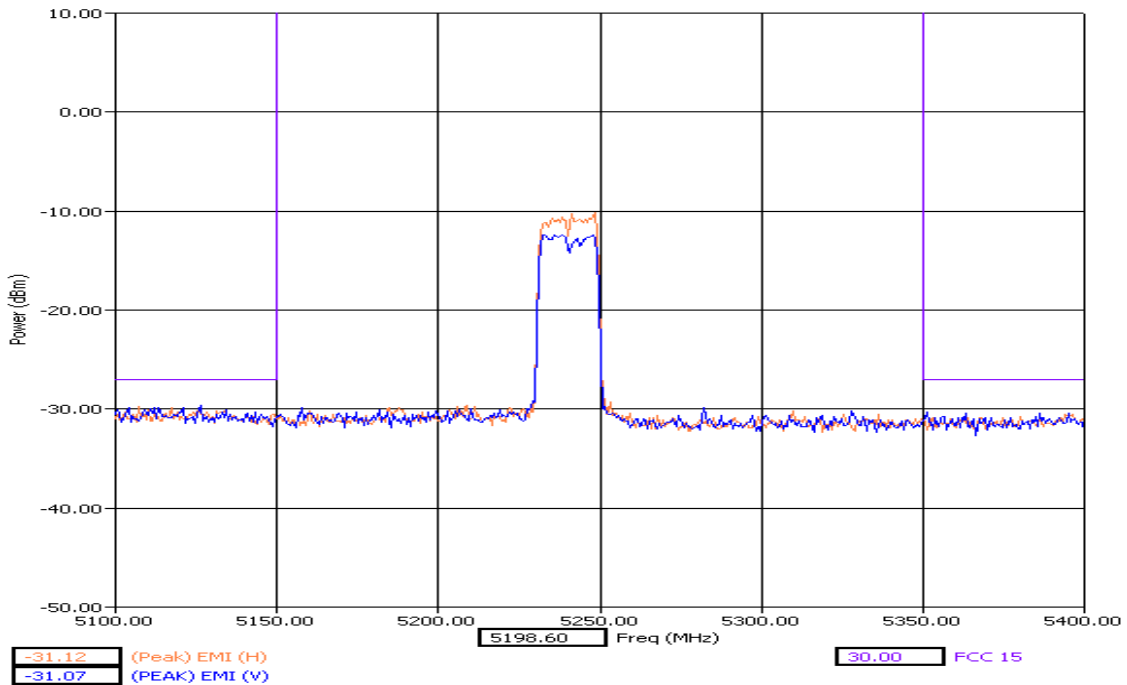
802.11 n Mode 20MHz BW @ 13 Mbps

Only the worst band edge is displayed

WLAN band (n) sub band 1, 20M Bandwidth

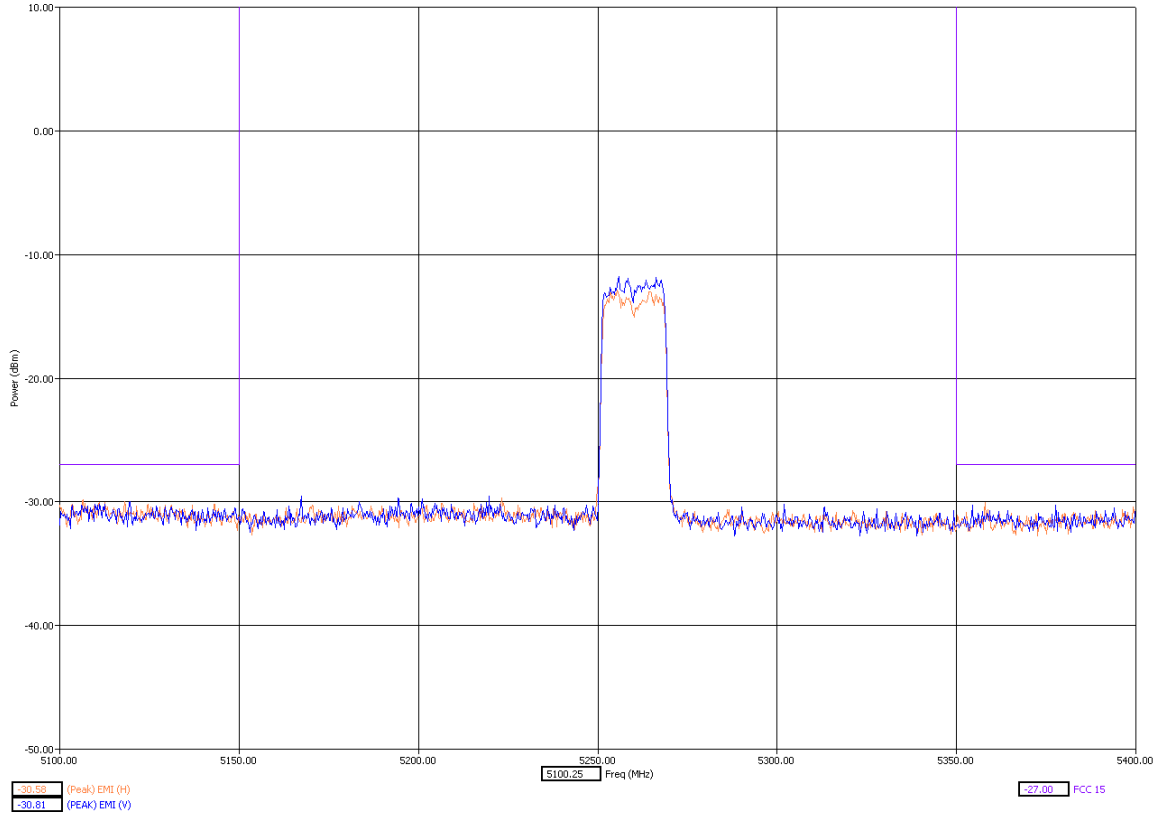


Low Band Edge - Peak Detector

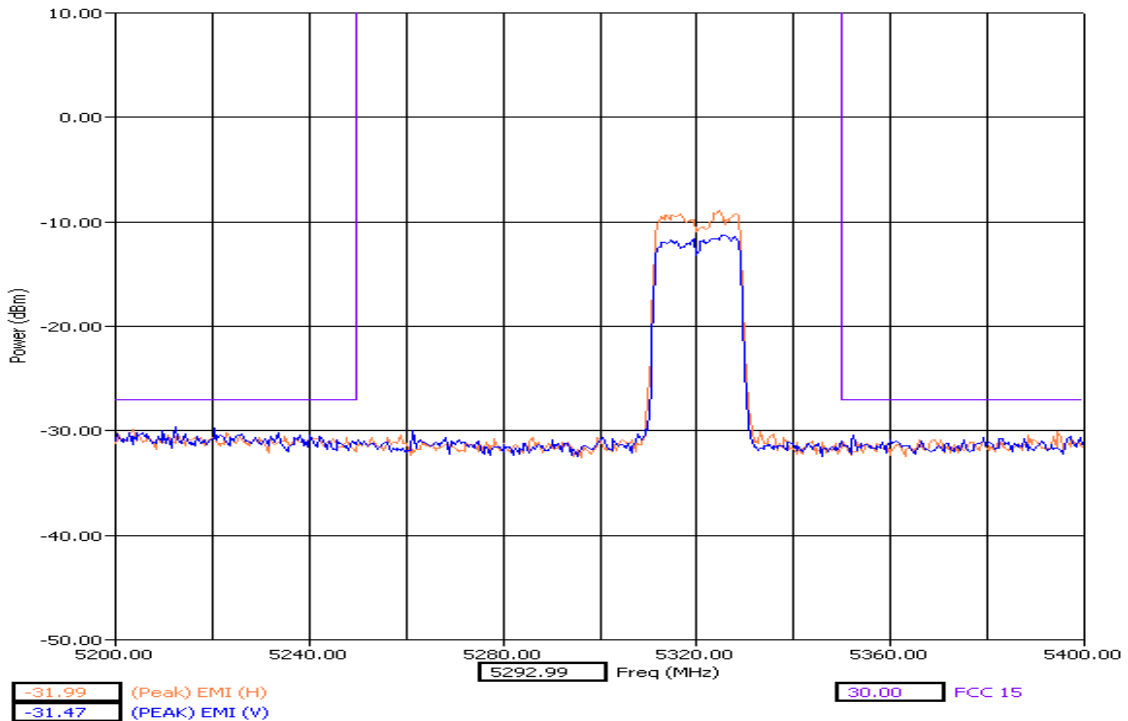


High Band Edge - Peak Detector

WLAN band (n) sub band 2, 20M Bandwidth

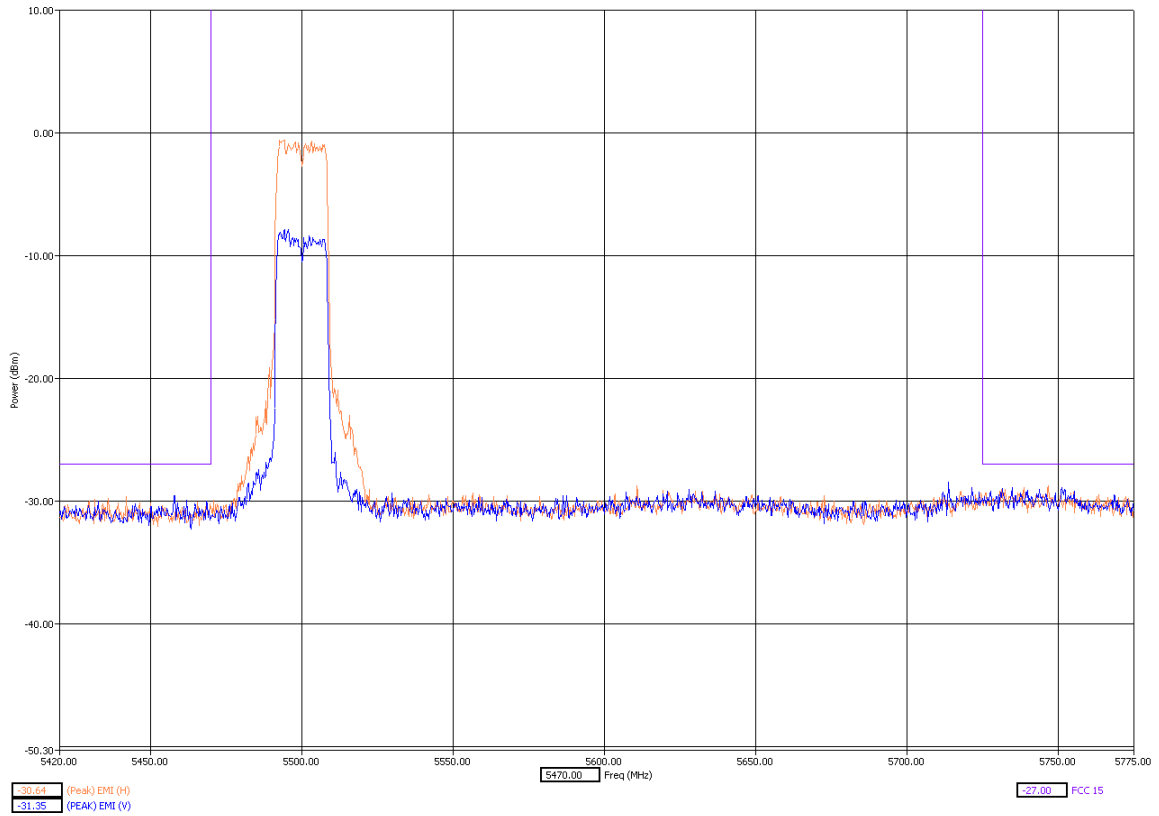


Low Band Edge - Peak Detector

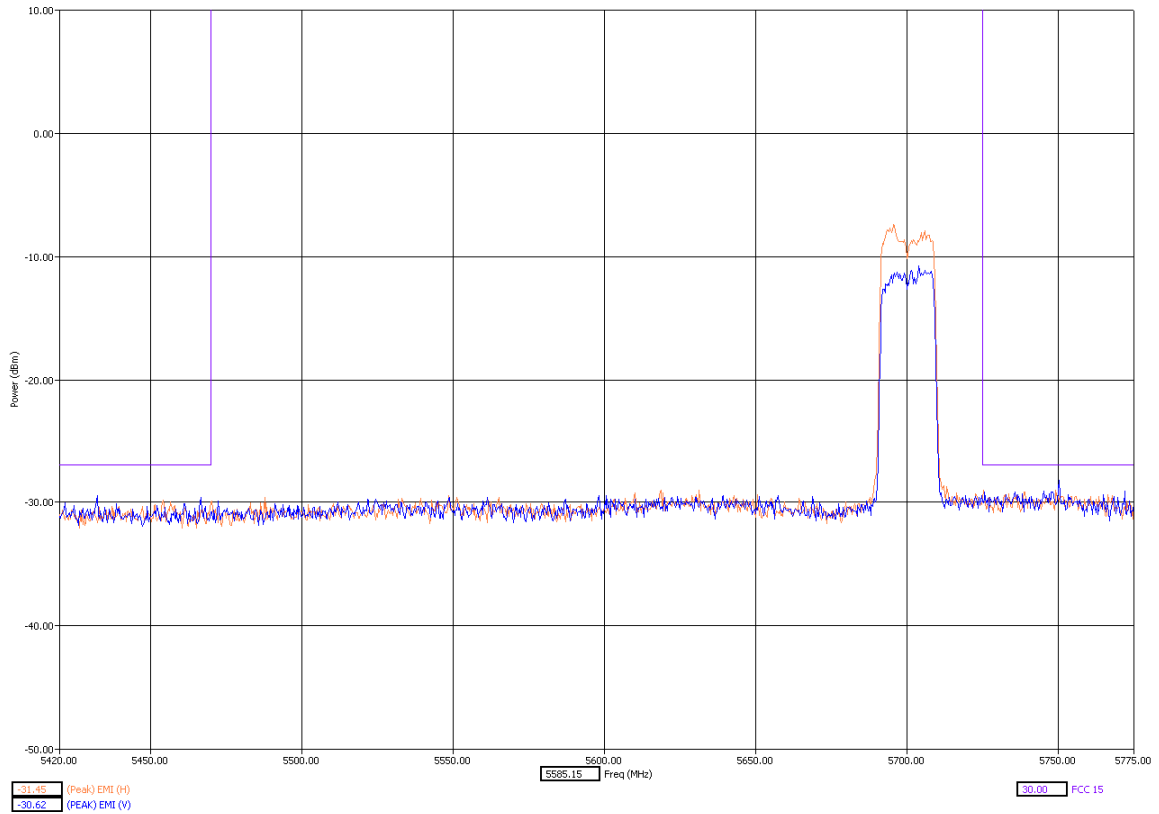


High Band Edge - Peak Detector

WLAN band (n) sub band 3, 20M Bandwidth



Low Band Edge - Peak Detector

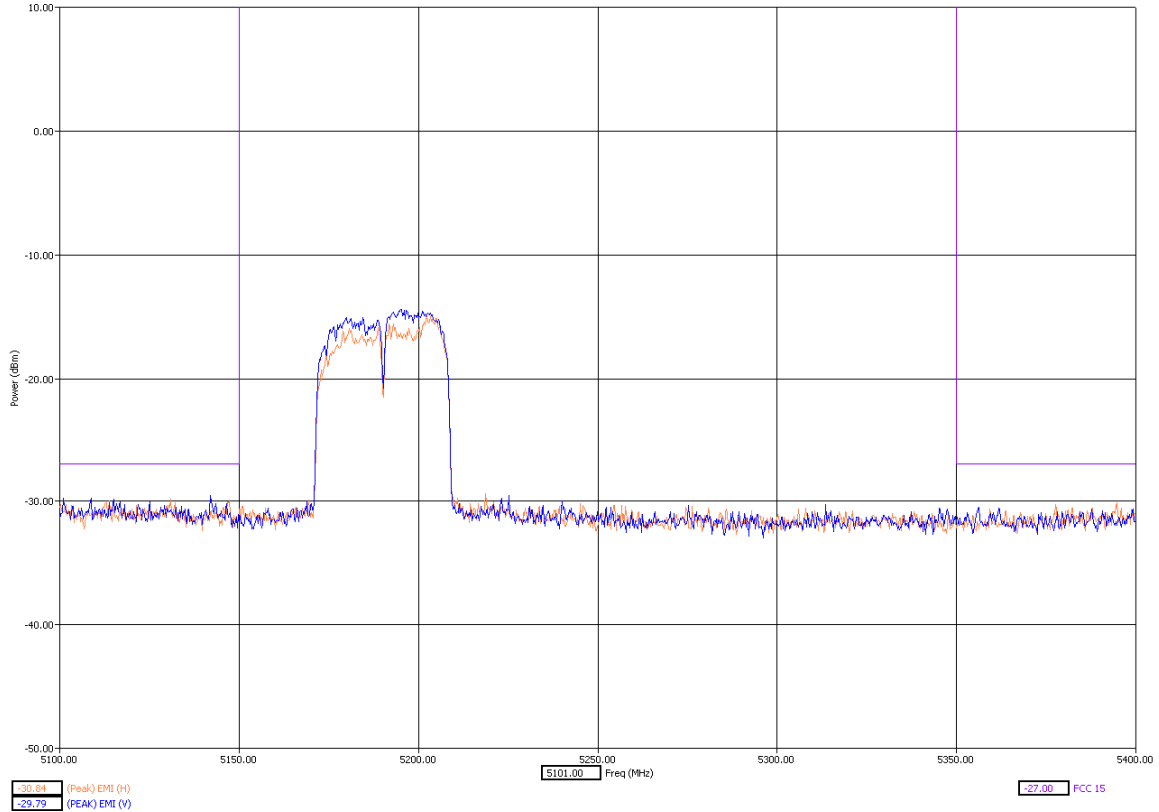


High Band Edge - Peak Detector

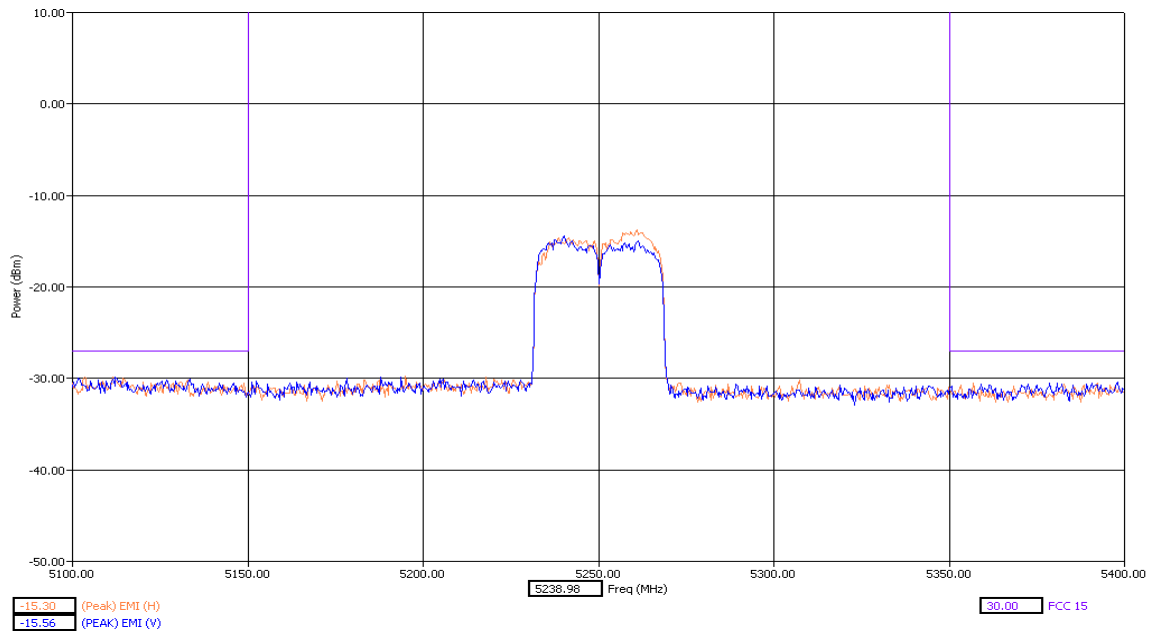
802.11 n Mode 40MHz BW @ 6.5 Mbps

Only the worst band edge is displayed

WLAN band (n) sub band 1, 40M Bandwidth

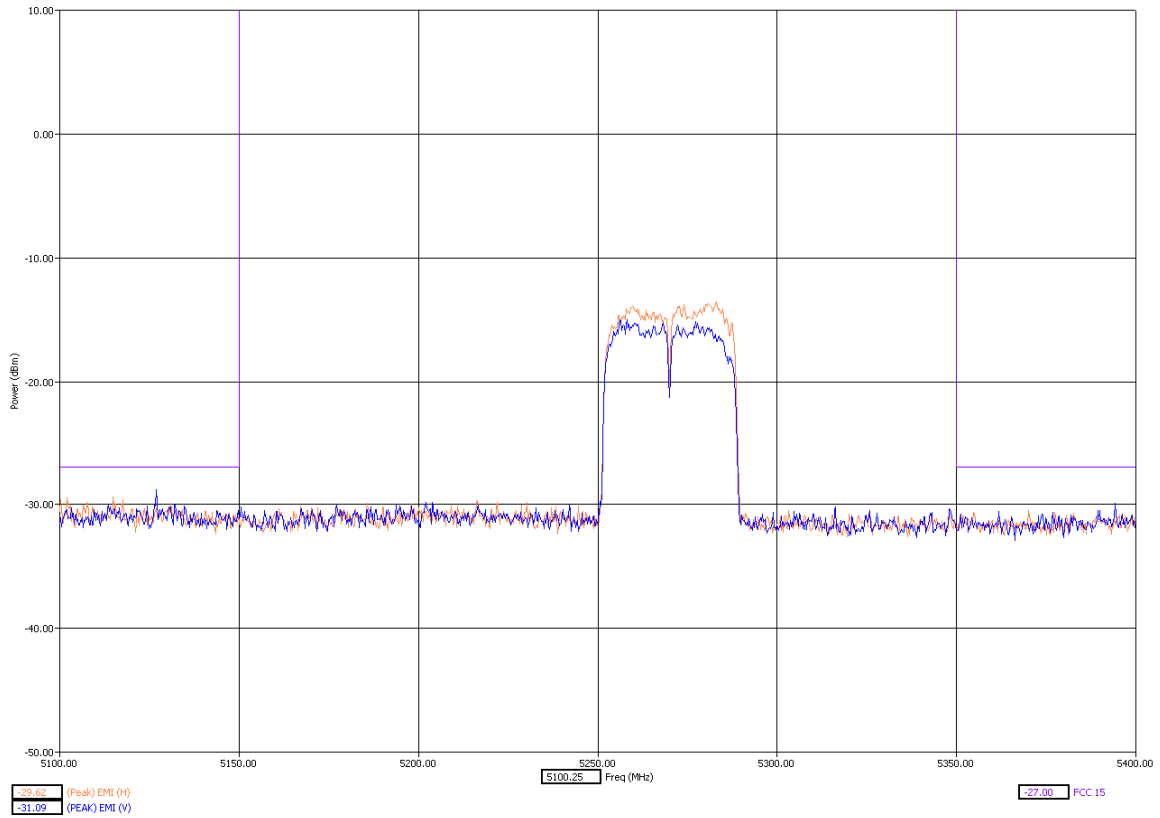


Low Band Edge - Peak Detector

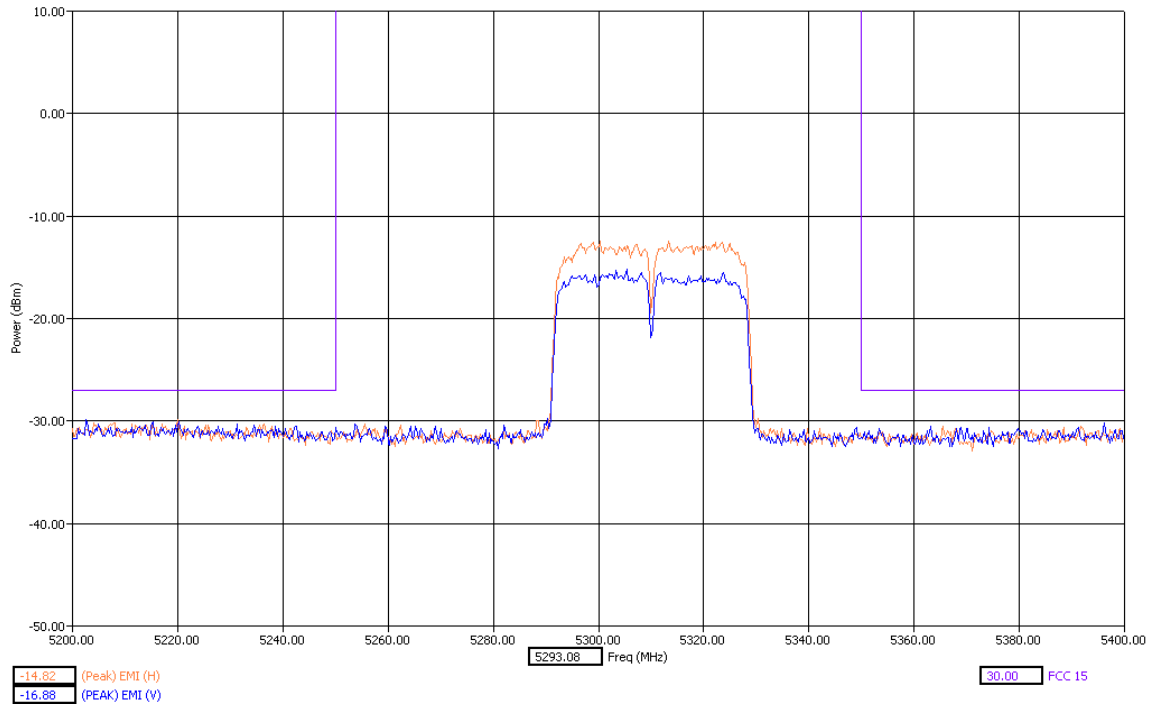


High Band Edge - Peak Detector

WLAN band (n) sub band 2, 40M Bandwidth

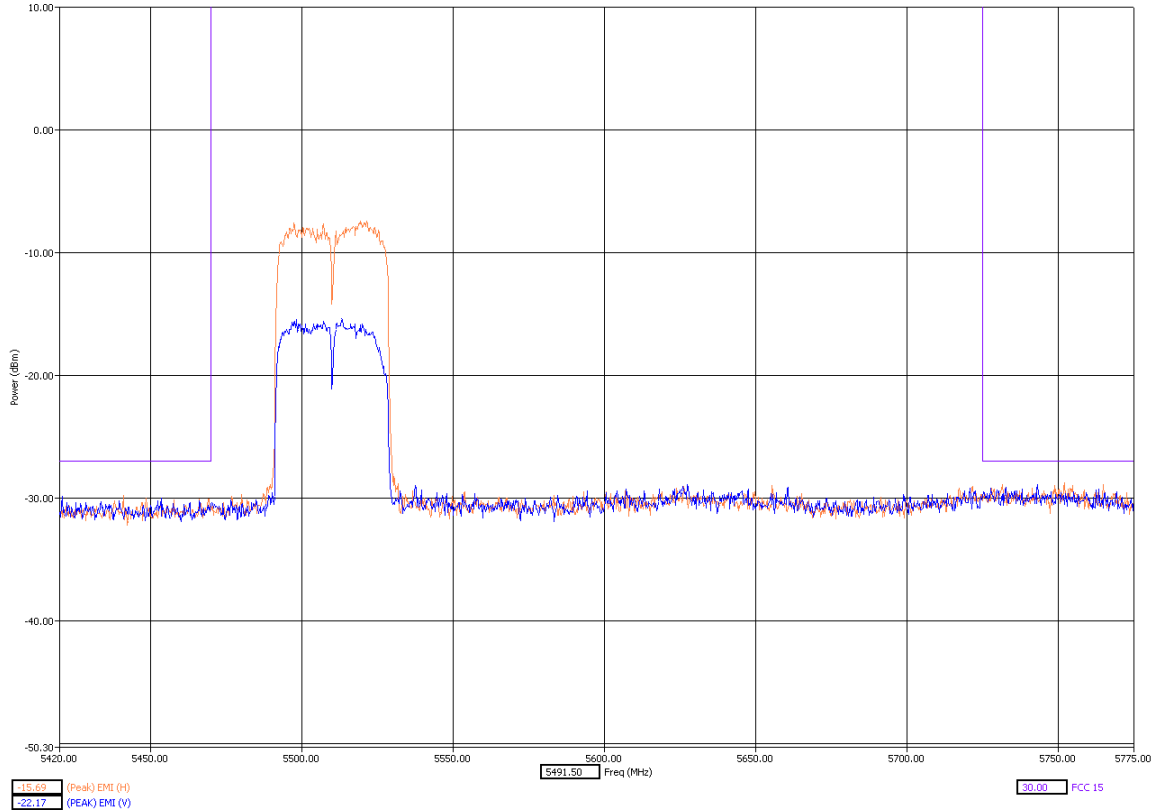


Low Band Edge - Peak Detector

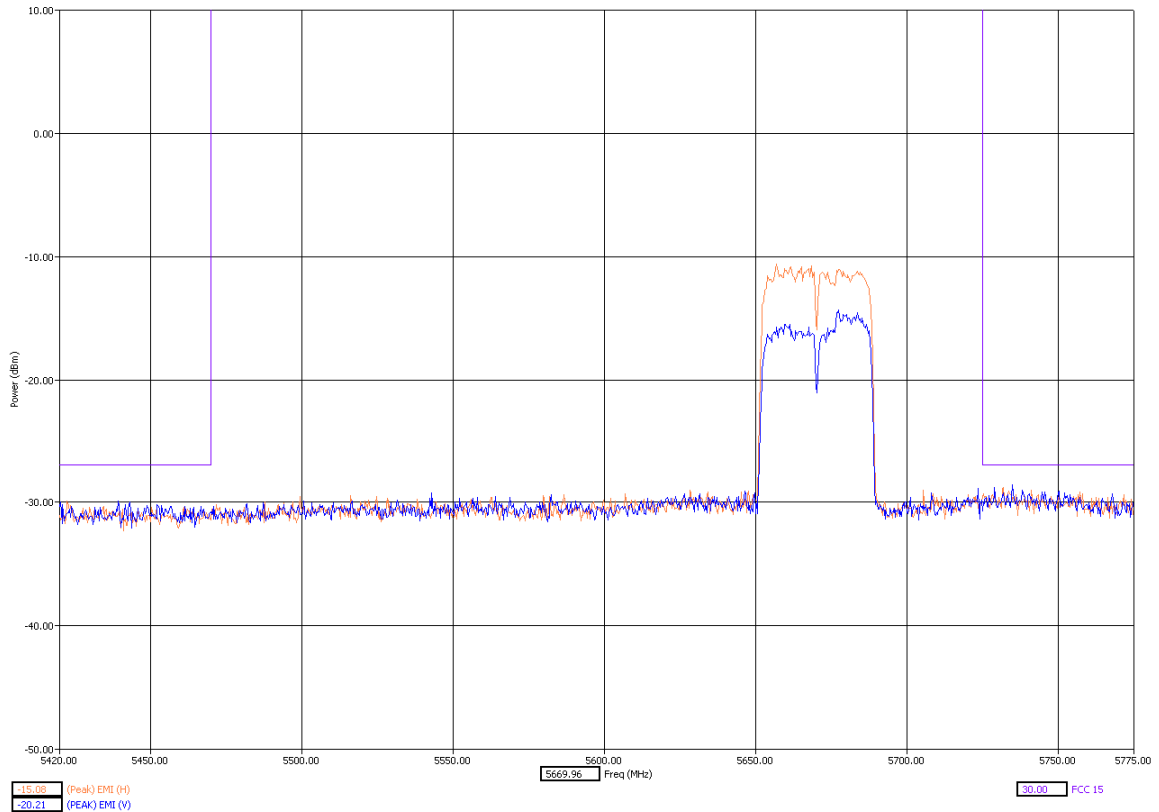


High Band Edge - Peak Detector

WLAN band (n) sub band 3, 40M Bandwidth



Low Band Edge - Peak Detector



High Band Edge - Peak Detector

AC LINE CONDUCTED EMISSIONS

Measurement Procedure

Measured levels of ac power line conducted emission shall be the radio-noise voltage from the line probe or across the 50 Ω LISN port, where permitted, terminated into a 50 Ω noise meter, or where permitted or required, the radio-noise current on the power line sensed by a current probe.

All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using an LISN, the 50 Ω measuring port is terminated by a 50 Ω radio-noise meter or a 50 Ω resistive load. All other ports are terminated in 50 Ω .

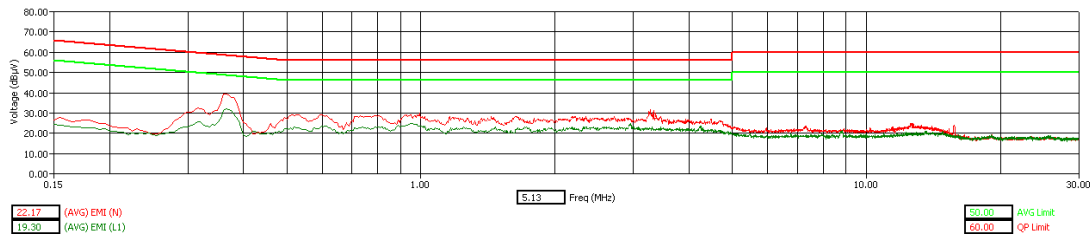
Detectors – Peak and Average Detector.

All modes of operation and data rates were investigated. The test results shown below represent the worst case condition.

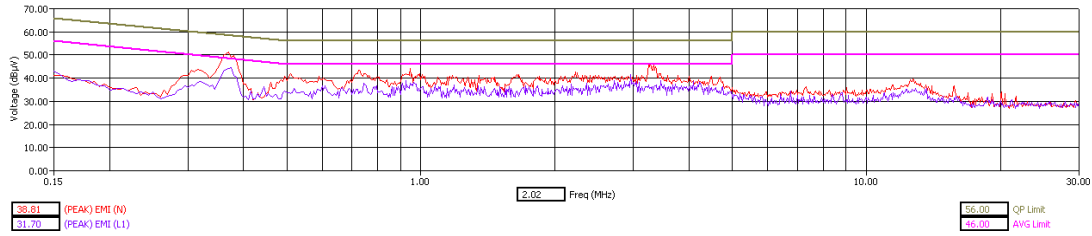
Measurement Results

See attached:

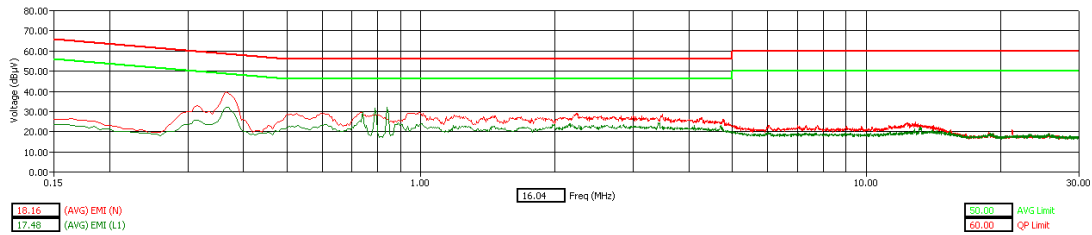
802.11 n mode 40M BW @ 6.5 Mbps



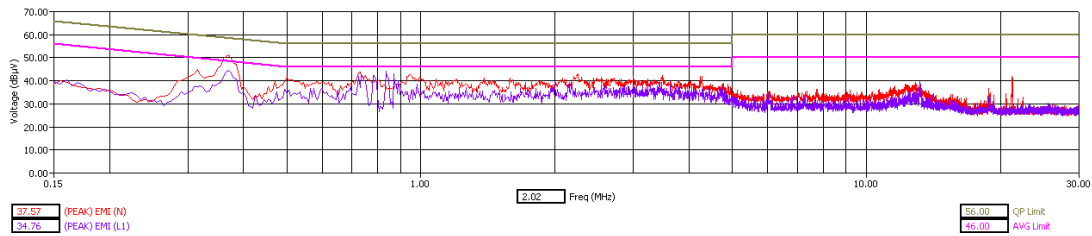
5G sub band 1 - Tx Mode - AVG Detector



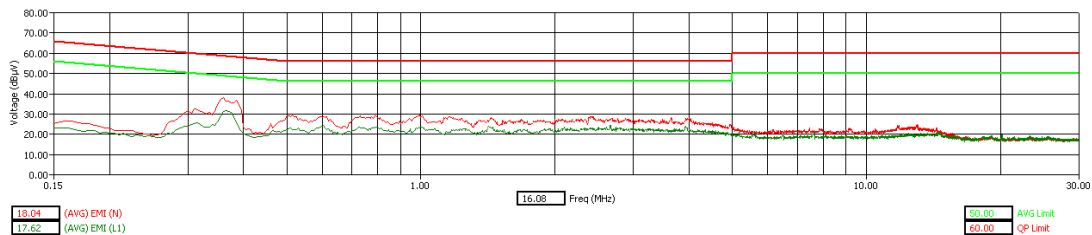
5G sub band 1 - Tx Mode - Peak Detector



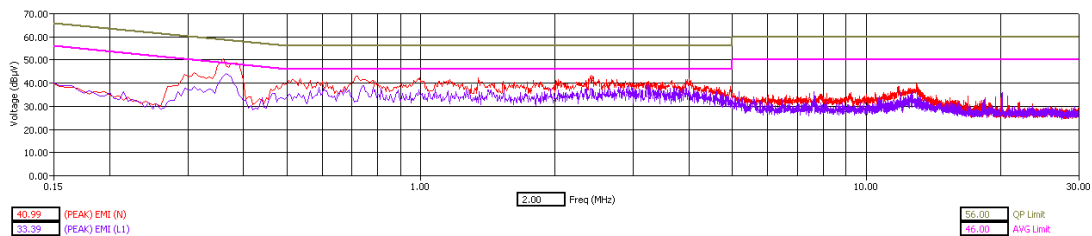
5G sub band 2 - Tx Mode - AVG Detector



5G sub band 2 - Tx Mode - Peak Detector



5G sub band 3 - Tx Mode - AVG Detector



5G sub band 3 - Tx Mode - Peak Detector

End of Test Report