FCC 47 CFR PART 15 SUBPART C

TEST REPORT

For

150Mbps Wireless N ADSL2+ Modem Router

Model: DL4312; DL4312D

Trade Name: netis

Issued to

NETIS SYSTEMS CO., LTD
4F & 5F, R&D Building, Oriental Cyberport, High-Tech Industrial Park,
Nanshan, Shenzhen, China

Issued by

Compliance Certification Services Inc.
No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township,
Taoyuan County 33841, Taiwan, R.O.C.
TEL: 886-3-324-0332
FAX: 886-3-324-5235
http://www.ccsrf.com
service@ccsrf.com

Testing Laboratory
1309

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		April 23, 2014		Initial Issue	All	Iren Wang

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1 TEST RESULT CERTIFICATION

Applicant:	**NETIS SYSTEMS CO., LTD** 4F & 5F, R&D Building, Oriental Cyberport, High-Tech Industrial Park, Nanshan, Shenzhen, China
Manufacturer:	**Shenzhen Netcore Industrial Ltd.** 4F & 5F, R&D Building, Oriental Cyberport, High-Tech Industrial Park, Nanshan, Shenzhen, China
Equipment Under Test:	150Mbps Wireless N ADSL2+ Modem Router
Trade Name:	netis
Model:	DL4312; DL4312D
Date of Test:	April 1 ~ 2, 2014

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 15 Subpart C	No non-compliance noted

We hereby certify that:

Compliance Certification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The test results of this report relate only to the tested sample identified in this report.

Approved by:

Stan Lin
Section Manager

Reviewed by:

Angel Hu
Section Manager

2 EUT DESCRIPTION

<table>
<tr><td>Product</td><td colspan="3">150Mbps Wireless N ADSL2+ Modem Router</td></tr>
<tr><td>Trade Name</td><td colspan="3">netis</td></tr>
<tr><td>Model Number</td><td colspan="3">DL4312; DL4312D</td></tr>
<tr><td>Model Discrepancy</td><td colspan="3">All the model numbers (list on this report) are identical, just for marketing purpose only except Antenna.
<table>
<tr><th>Model Number</th><th>Antenna</th></tr>
<tr><td>DL4312</td><td>Fixed</td></tr>
<tr><td>DL4312D</td><td>Detachable</td></tr>
</table></td></tr>
<tr><td>EUT Power Rating</td><td colspan="3">12VDC, 0.5A</td></tr>
<tr><td>Power Adapter</td><td>Tenpao</td><td>Model</td><td>NT120050UL</td></tr>
<tr><td>Power Adapter Power Rating</td><td colspan="3">I/P: 100-240VAC, 50/60HZ, 0.2A
O/P: 12VDC, 0.5A</td></tr>
<tr><td>RF Module Manufacturer</td><td>Realtek</td><td>Model</td><td>RTL8188ER-CG</td></tr>
<tr><td>Frequency Range</td><td colspan="3">IEEE 802.11b/g/ IEEE 802.11n HT20 mode: 2412~2462MHz
IEEE 802.11n HT40 mode: 2422~2452MHz</td></tr>
<tr><td>Transmit Power</td><td colspan="3">IEEE 802.11b mode: 15.39 dBm (0.0346W)
IEEE 802.11g mode: 21.36 dBm (0.1368W)
IEEE 802.11n HT20 mode: 21.36 dBm (0.1368W)
IEEE 802.11n HT40 mode: 22.76 dBm (0.1888W)</td></tr>
<tr><td>Modulation Technique & Transmit Data Rate</td><td colspan="3">IEEE 802.11b mode: DSSS (11, 5.5, 2, 1 Mbps)
IEEE 802.11g mode: OFDM (54, 48, 36, 24, 18, 12, 11 , 9, 6 Mbps)
IEEE 802.11n HT20 mode: OFDM (65, 58.5, 52, 39, 26, 19.5, 13, 6.5 Mbps)
IEEE 802.11n HT40 mode: OFDM (135, 121.5, 108, 81, 54, 40.5, 27, 13.5 Mbps)</td></tr>
<tr><td>Antenna Specification</td><td colspan="3">Dipole Antenna / Gain: 5 dBi</td></tr>
</table>

Remark:

1. The sample selected for test was production product and was provided by manufacturer.

2. This submittal(s) (test report) is intended for FCC ID: T58DL4312R filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.

3. This report is compliance with the 558074 D01 DTS Meas Guidance v03r01 Requirement.

3 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2009 and FCC CFR 47 Part 15.207, 15.209, 15.247.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4.

3.4 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	([2])
13.36 - 13.41	322 - 335.4		

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

3.5 DESCRIPTION OF TEST MODES

The EUT is a 1Tx1R SISO transmitter.

The EUT (model: DL4312D) had been tested under operating condition and had been reported as worst case on this test report.

Software used to control the EUT for staying in continuous transmitting and receiving mode was programmed.

The worst case data rate is determined as the data rate with highest output power.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode and receiving radiated spurious emission above 1GHz, which worst case was in CH Mid mode only.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Y axis), lie-down position (X, Z axis). The worst emission was found in lie-down position (Z axis) and the worst case was recorded.

IEEE 802.11b mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate was chosen for full testing.

IEEE 802.11g mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate was chosen for full testing.

IEEE 802.11n HT20 mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6.5Mbps data rate were chosen for full testing.

IEEE 802.11n HT40 mode:

Channel Low (2422MHz), Channel Mid (2437MHz) and Channel High (2452MHz) with 13.5Mbps data rate were chosen for full testing.

4 INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Conducted Emissions Test Site				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY48250064	01/01/2015
Spectrum Analyzer	Agilent	N9010A	MY52220817	03/20/2015
Spectrum Analyzer	R&S	FSL	100837	11/11/2014
Power meter	Anritsu	ML2495A	1033009	09/29/2014
Power Sensor	Anritsu	MA2411B	0917221	09/29/2014

3M Semi Anechoic Chamber				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY48250064	01/01/2015
Spectrum Analyzer	R&S	FSL	100837	11/11/2014
Pre-Amplifier	HP	8447D	2944A06530	08/10/2014
Pre-Amplifier	EMEC	EM01M26G	060570	07/25/2014
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	08/08/2014
Pre-Amplifier	Agilent	8449B	3008A01738	08/10/2014
EMI Test Receiver	SCHAFFNER	SCR 3501	430	03/30/2015
Loop Antenna	EMCO	6502	2356	06/12/2014
Bilog Antenna	TESEQ	CBL 6112D	35378	09/11/2014
Horn Antenna	EMCO	3115	00022250	08/04/2014
Horn Antenna	EMCO	3116	00026370	12/29/2014
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Test S/W	EZ-EMC			

NOTE: *1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*
2. N.C.R = No Calibration Request.

Powerline Conducted Emissions Test Site #4				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI	100782	06/14/2014
LISN	R&S	ENV216	100066	02/06/2015
LISN	R&S	ENV 4200	830326/016	05/30/2014
ISN	FCC	FCC-TLISN-T2-02	20587	08/01/2014
ISN	TESEQ	ISN-T8	30843	08/16/2014
Current Probe	FCC	F-35	506	07/19/2014
ISN	TESEQ	ISN ST08	27907	09/30/2014
Test S/W	EZ-EMC			

NOTE: *1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.*
2. N.C.R = No Calibration Request.

4.3 MEASUREMENT UNCERTAINTY

Parameter	Uncertainty
Powerline Conducted Emission	±2.0543
3M Semi Anechoic Chamber / 30MHz ~ 200MHz	±3.5921
3M Semi Anechoic Chamber / 200MHz ~ 1GHz	±3.5657
3M Semi Anechoic Chamber / 1 ~ 8GHz	±2.5873
3M Semi Anechoic Chamber / 8 ~ 18GHz	±2.6646
3M Semi Anechoic Chamber / 18 ~ 26GHz	±2.9617
3M Semi Anechoic Chamber / 26 ~ 40GHz	±3.4250

Remark*: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.*

5 FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No. 163-1, Jhongsheng Rd., Sindien District, Taipei City 23151, Taiwan
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☐ No 11, Wugong 6th Rd, Wugu District, New Taipei City 24891, Taiwan (R.O.C)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☒ No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, Taiwan
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5.2 LABORATORY ACCREDITATIONS AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 0824-01 to perform Electromagnetic Interference tests according to FCC Part 15 and CISPR 22 requirements. In addition, the test facilities are listed with Industry Canada, Certification and Engineering Bureau, IC 2324G-1 for 3M Semi Anechoic Chamber A, IC 2324G-2 for 3M Semi Anechoic Chamber B.

5.3 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	A2LA	CFR 47, FCC Part15/18, CISPR 22, EN 55022, ICES-003, AS/NZS CISPR 22, VCCI V-3, EN 55011, CISPR 11, IEC/EN 61000-4-2/3/4/5/6/8/11, EN 61000-6-1/2/3/4, EN 55024, CISPR 24, AS/NZS CISPR 24, AS/NZS 61000.6.2, EN 55014-1/-2, ETSI EN 300 386 v1.3.2/v1.3.3, IEC/EN 61000-3-2, AS/NZS 61000.3.2, IEC/EN 61000-3-3, AS/NZS 61000.3.3	ACCREDITED TESTING CERT #0824.01
USA	FCC MRA	3 meter Open Area Test Sites to perform FCC Part 15/18 measurements	TW1026
Japan	VCCI	3/10 meter Open Area Test Sites and conducted test sites to perform radiated/conducted measurements	VCCI R-2882/2541/2798/725/1868 C-402/747/912 T-1930/1646
Taiwan	TAF	EN 55014-1, CISPR 14, CNS 13781-1, EN 55013, CISPR 13, CNS 13439, EN 55011, CISPR 11, CNS 13803, PLMN09, IS2045-0, LP0002 FCC Part 27/90, Part 15B/C/D/E, RSS-192/193/210/310 ETSI EN 300 328/ 300 220-1/ 300 220-2/ 301 893/ 301 489-01/ 301 489-03/ 301 489-07 / 301 489-17/ 300 440-1/ 300 440-2 AS/NZS 4268, AS/NZS 4771 CISPR 22, EN 55022, CNS 13438, AS/NZS CISPR 22, VCCI, IEC/EN 61000-4-2/3/4/5/6/8/11, CNS 14676-2/3/4/5/6/8, CNS 14934-2/3, CNS 13783-1, CNS 13439, CNS 13803	ilac-MRA TAF Testing Laboratory 0363
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439, CNS 14115	SL2-IS-E-0014 / IN-E-0014 /A1-E-0014 /R1-E-0014 /R2-E-0014 /L1-E-0014
Canada	Industry Canada	RSS-Gen Issue 3	Canada IC 2324C-5

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*

6 SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix II for the actual connections between EUT and support equipment.

6.2 SUPPORT EQUIPMENT

For Radiated Emissions(Below 1GHz) and Powerline Conducted Emission							
No.	**Device Type**	**Model**	**Series No.**	**FCC ID**	**Brand**	**Data Cable**	**Power Cord**
1	Notebook PC (Remote)	1706-A78	LV-L1870 06/09	FCC DOC	IBM	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
2	Notebook PC (Remote)	D400	0932RY	E2K24GBRL	DELL	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
3	Notebook PC (Remote)	ThinkPad T430u	PB-VZLGG 12/09	FCC DoC	LENOVO	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
4	Notebook PC (Remote)	ThinkPad T430u	PB-VZHMR 12/09	FCC DoC	LENOVO	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
5	Notebook PC (Remote)	TP00013A	LR-9XH2K	FCC DoC	LENOVO	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
6	Multi Services Access Node	IES-1000	N/A	N/A	Zyxel	RJ-11 Cable: Unshielded, 10m	Unshielded, 1.8m

For Radiated Emissions(Above 1GHz) and Conducted Emission							
No.	**Device Type**	**Model**	**Series No.**	**FCC ID**	**Brand**	**Data Cable**	**Power Cord**
1	Notebook PC (Remote)	D400	0932RY	E2K24GBRL	DELL	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core

Remark: *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

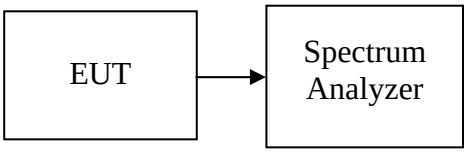
7 FCC PART 15 REQUIREMENTS

7.1 6DB BANDWIDTH

LIMIT

According to §15.247(a)(2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6dB bandwidth shall be at least 500 kHz.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 100kHz, VBW = 300kHz, Sweep = auto, Span = 30MHz (IEEE 802.11b, IEEE 802.11g, IEEE 802.11n HT20) or Span = 50MHz (IEEE 802.11n HT40).
4. Mark the peak frequency and –6dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	10.10	>500	PASS
Mid	2437	10.10		PASS
High	2462	10.10		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.45	>500	PASS
Mid	2437	16.45		PASS
High	2462	16.45		PASS

Test mode: IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2412	17.75	>500	PASS
Mid	2437	17.75		PASS
High	2462	17.75		PASS

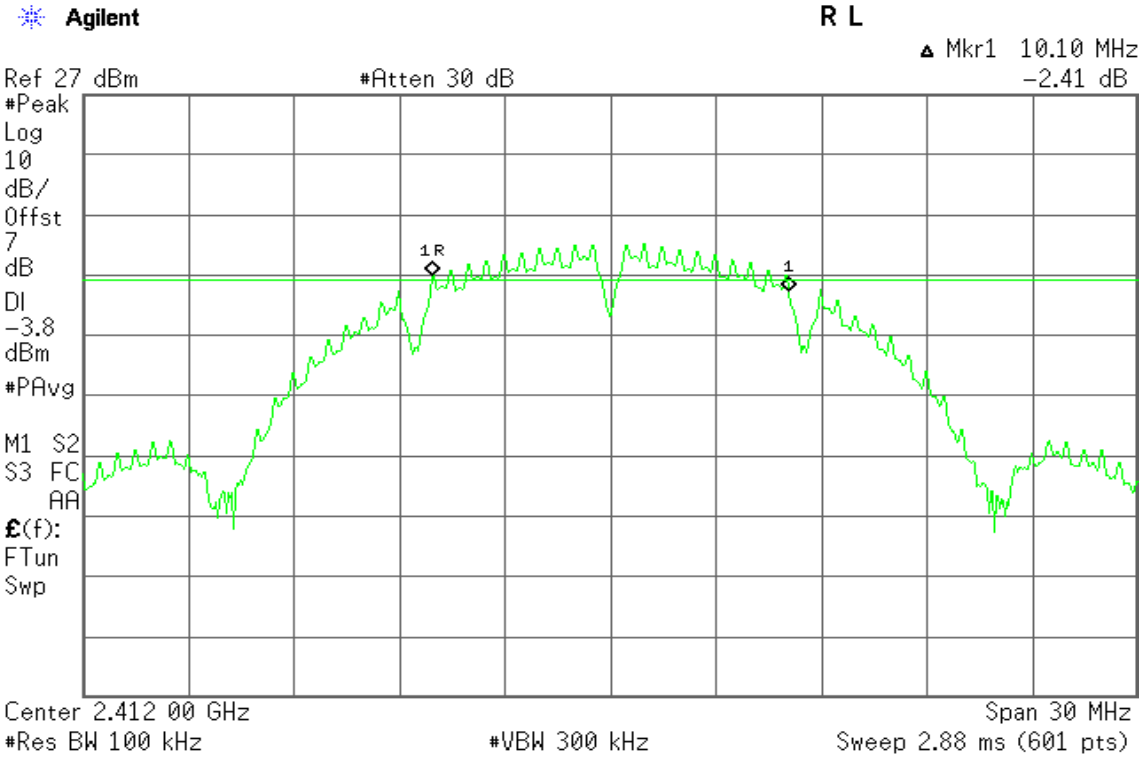
Test mode: IEEE 802.11n HT40 mode

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Result
Low	2422	36.17	>500	PASS
Mid	2437	36.25		PASS
High	2452	36.17		PASS

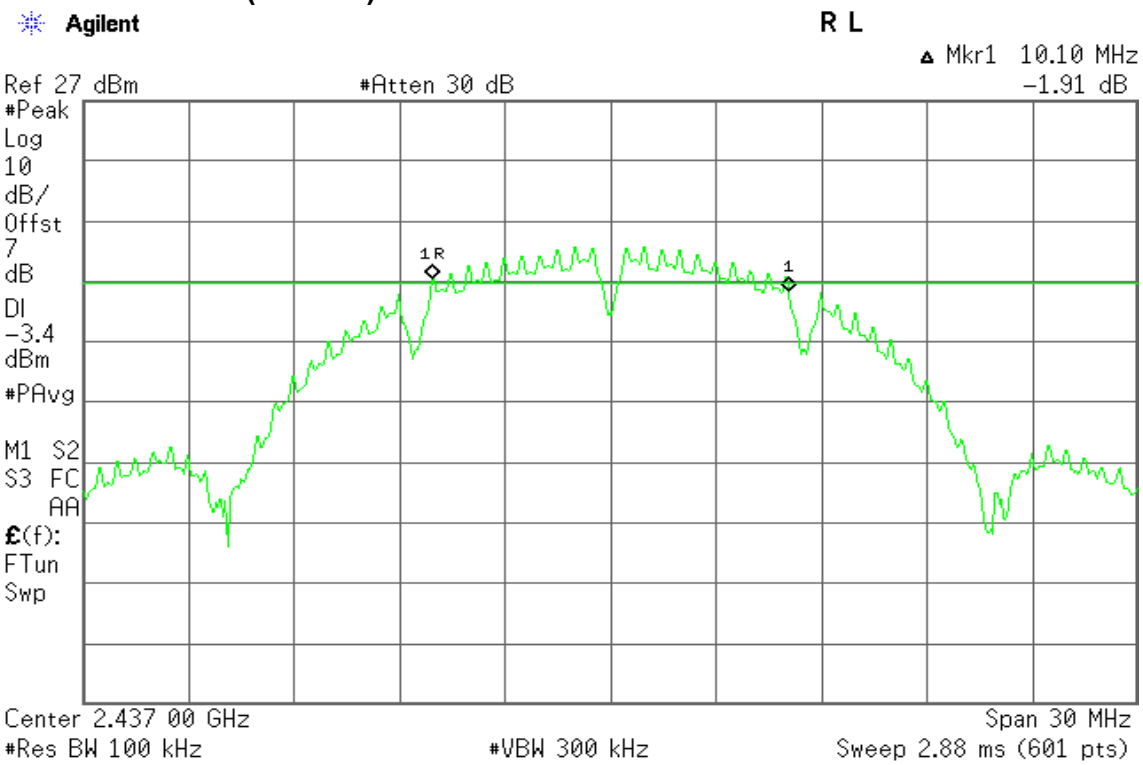
Test Plot

IEEE 802.11b mode

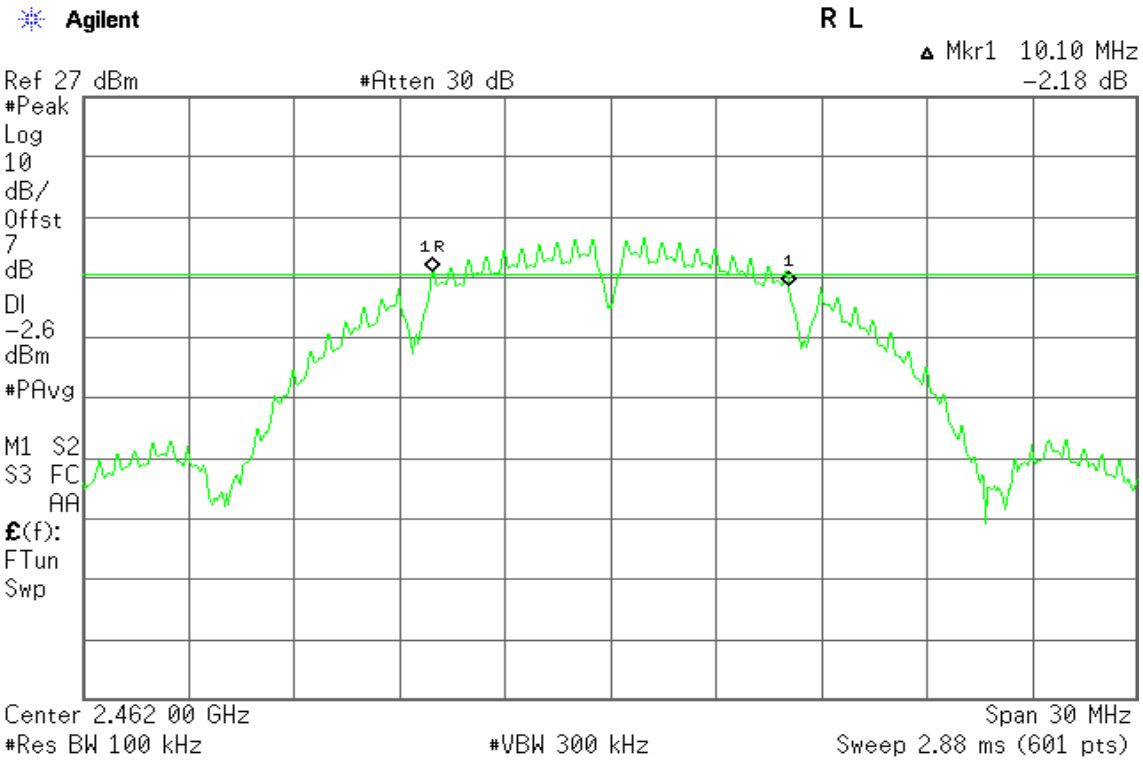
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

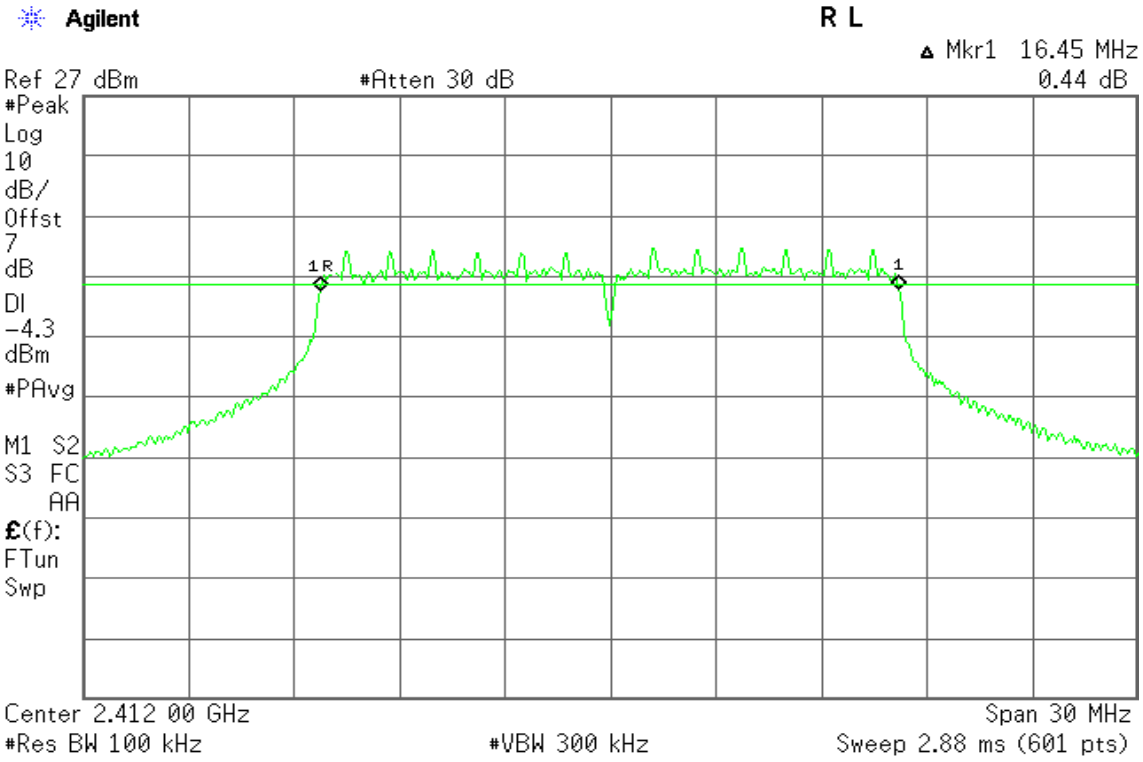


6dB Bandwidth (CH High)

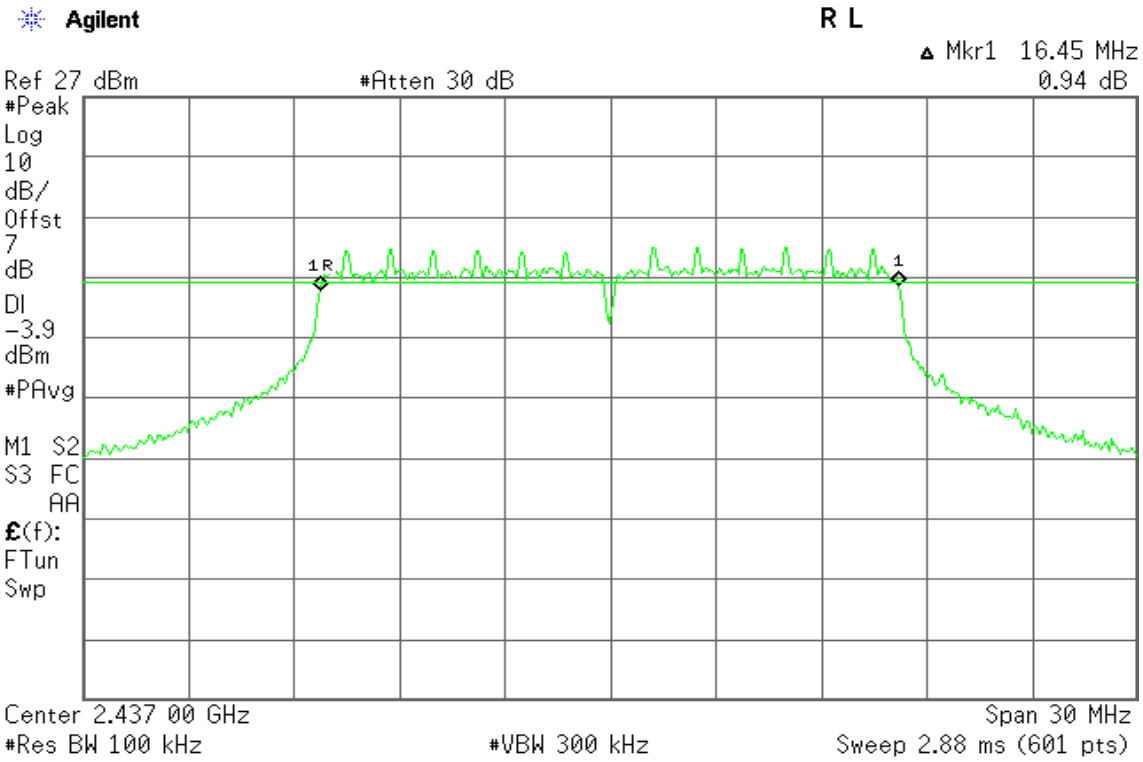


IEEE 802.11g mode

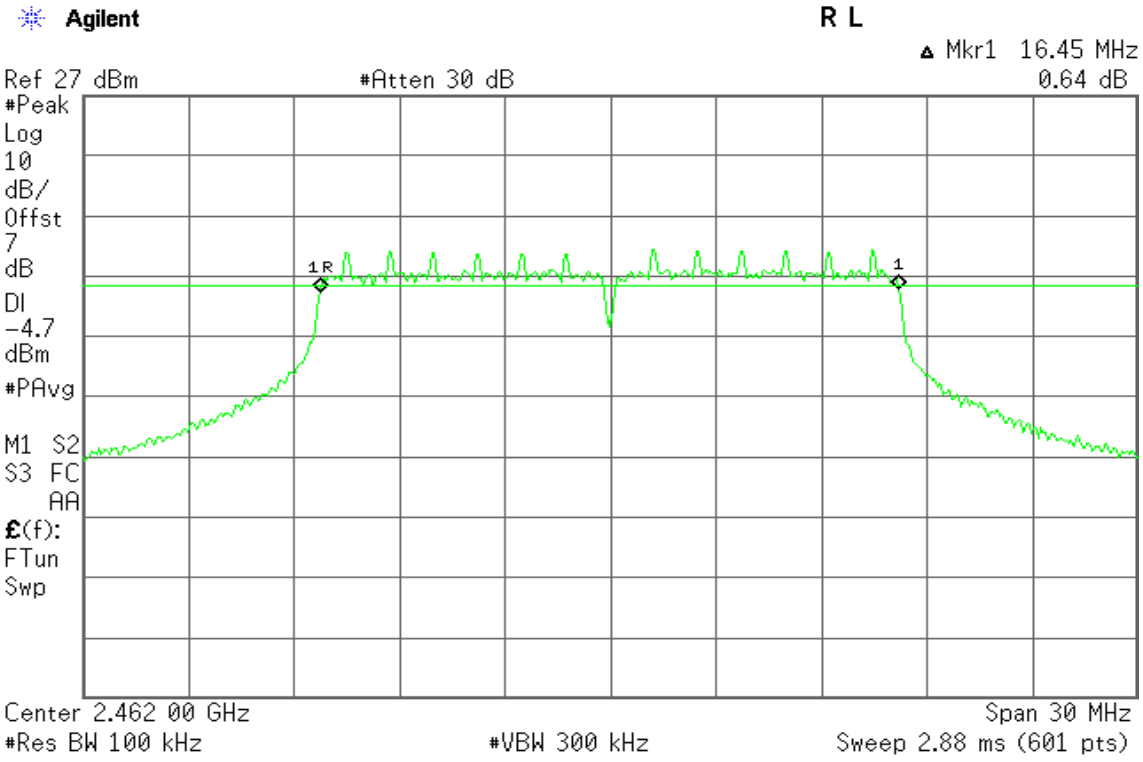
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

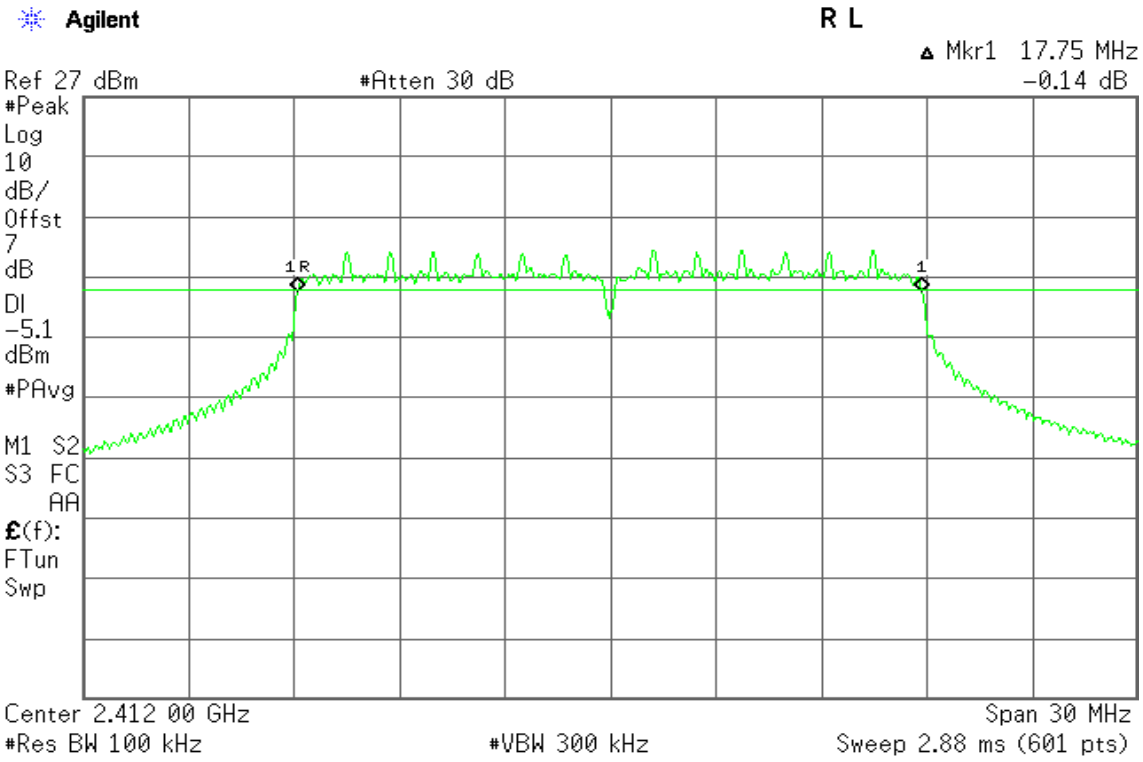


6dB 6dB Bandwidth (CH High)

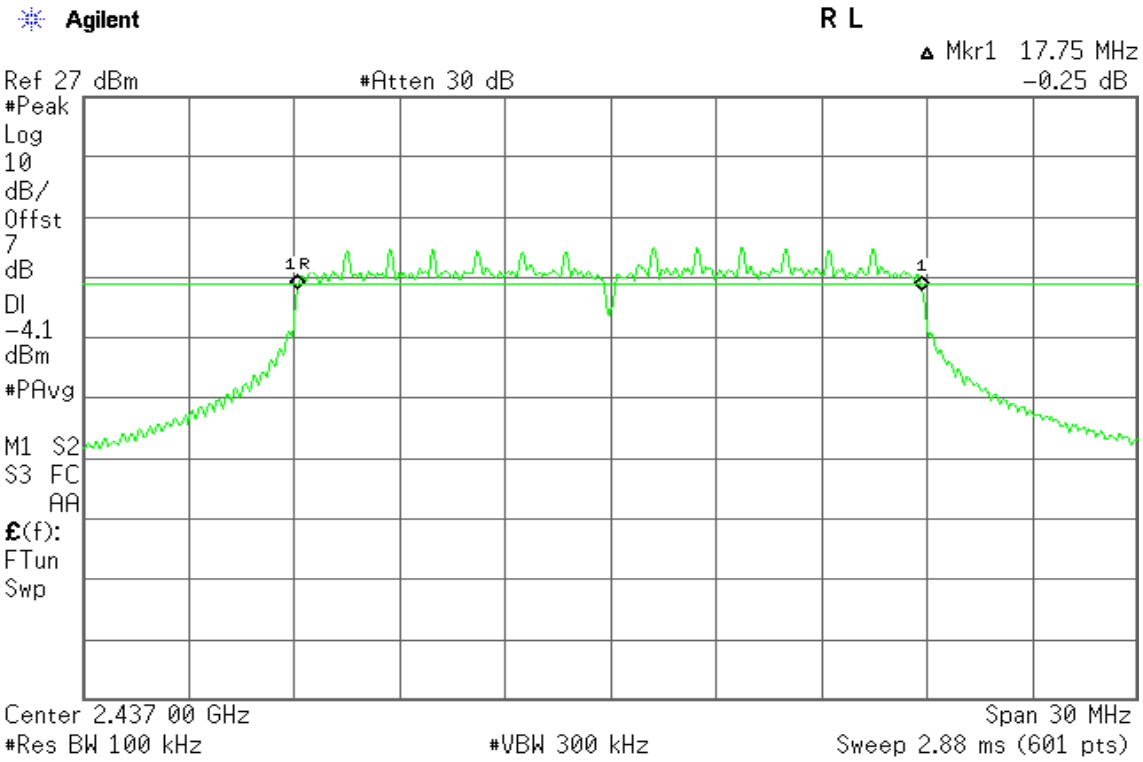


IEEE 802.11n HT20 mode

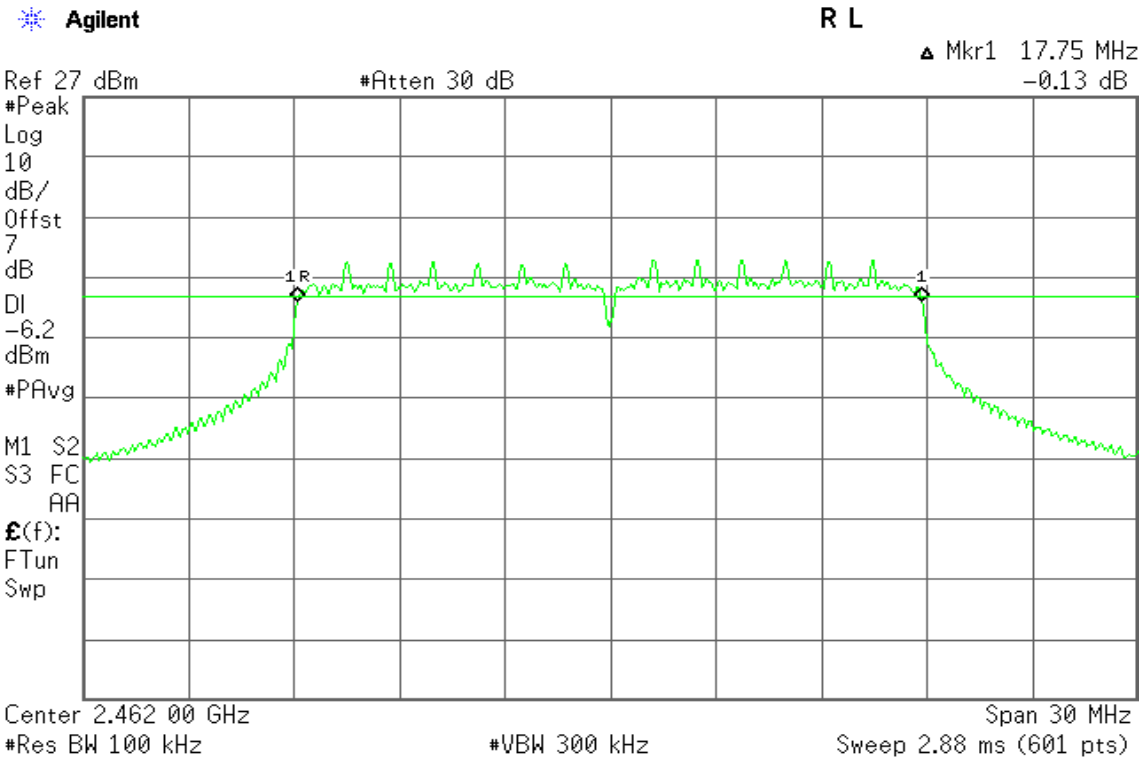
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

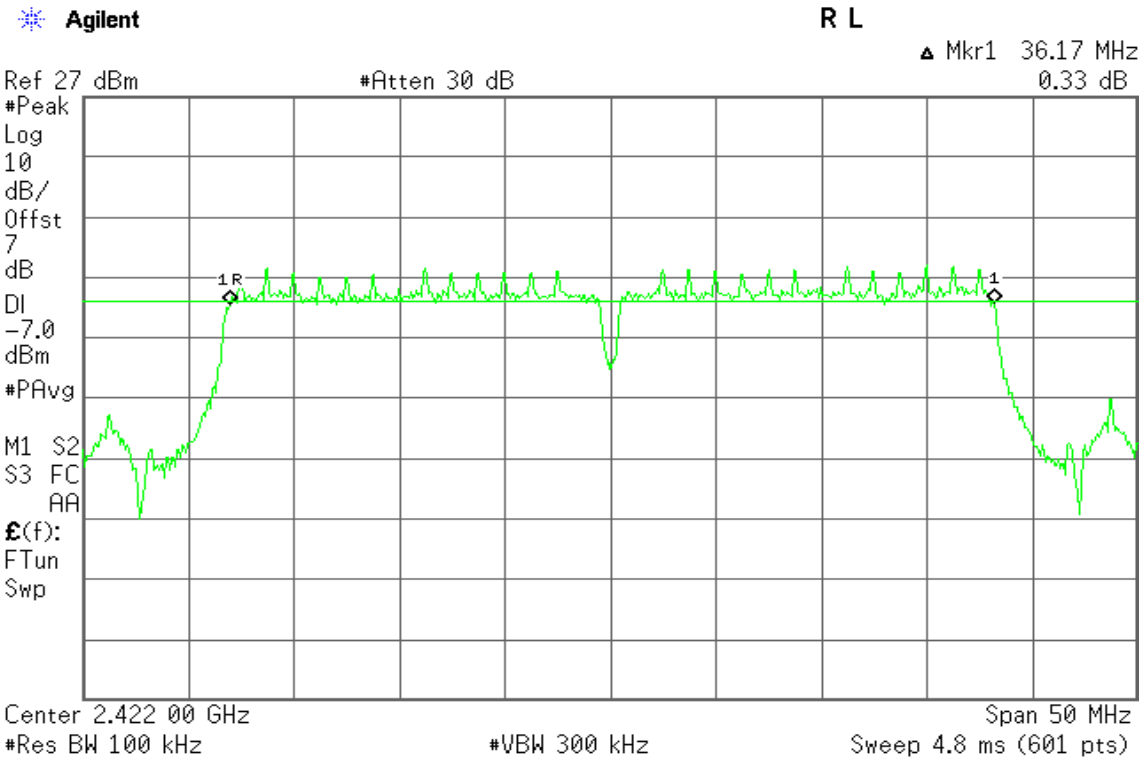


6dB Bandwidth (CH High)

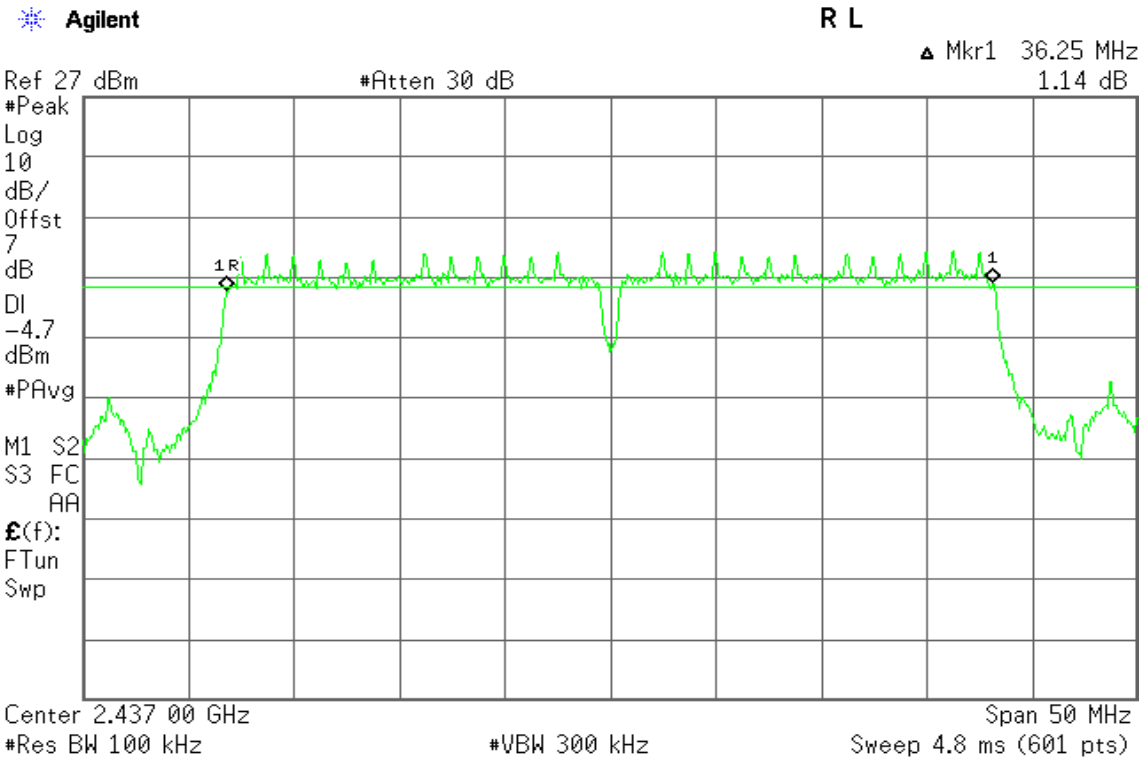


IEEE 802.11n HT40 mode

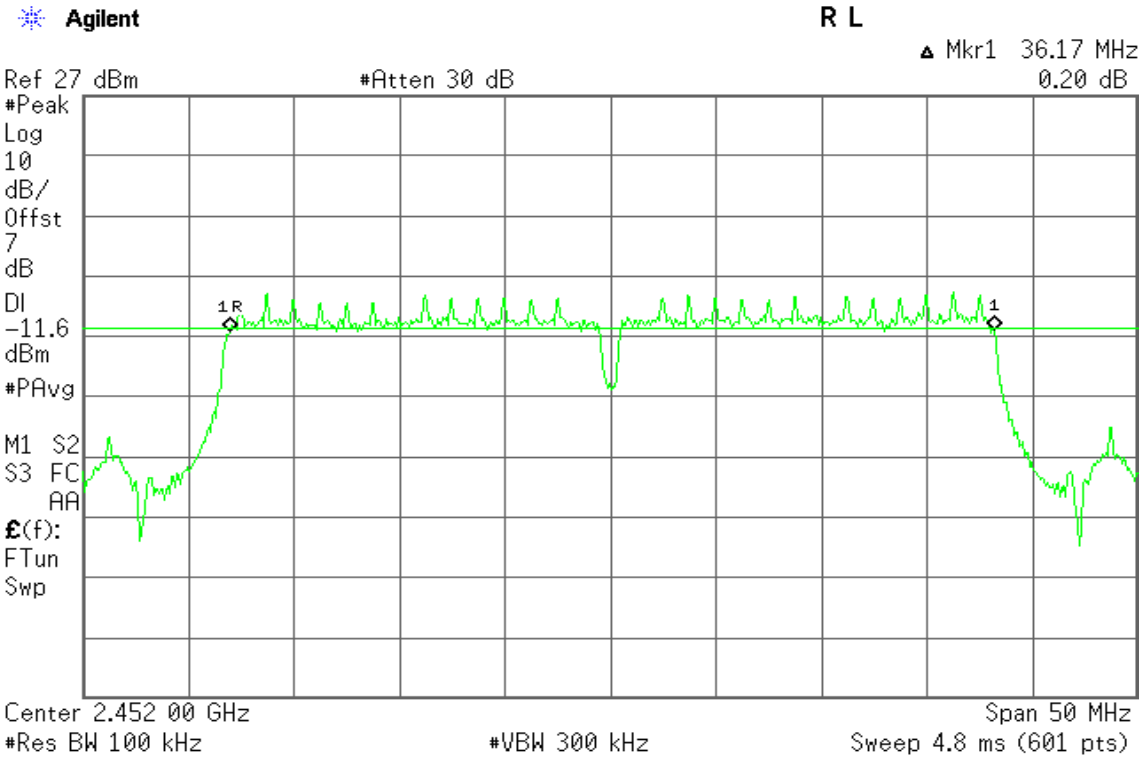
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)



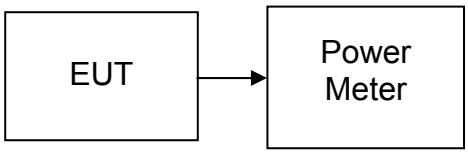
7.2 PEAK POWER

LIMIT

The maximum peak output power of the intentional radiator shall not exceed the following:

1. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.
2. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Configuration



TEST PROCEDURE

Per KDB 558074 v03r01

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Test Result
Low	2412	14.69	0.0294	1	PASS
Mid	2437	15.03	0.0318		PASS
High	2462	15.39	0.0346		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Test Result
Low	2412	21.16	0.1306	1	PASS
Mid	2437	21.36	0.1368		PASS
High	2462	20.74	0.1186		PASS

Test mode: IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Test Result
Low	2412	20.91	0.1233	1	PASS
Mid	2437	21.36	0.1368		PASS
High	2462	19.29	0.0849		PASS

Test mode: IEEE 802.11n HT40 mode

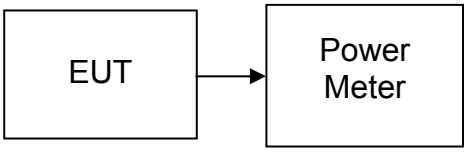
Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)	Test Result
Low	2422	19.70	0.0933	1	PASS
Mid	2437	22.76	0.1888		PASS
High	2452	16.04	0.0402		PASS

7.3 AVERAGE POWER

LIMIT

None; for reporting purposes only.

Test Configuration



TEST PROCEDURE

Per KDB 558074 v03r01

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	11.61	0.0145
Mid	2437	11.91	0.0155
High	2462	12.43	0.0175

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	13.62	0.0230
Mid	2437	13.86	0.0243
High	2462	13.18	0.0208

Test mode: IEEE 802.11n HT20 mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2412	13.67	0.0233
Mid	2437	13.77	0.0238
High	2462	11.70	0.0148

Test mode: IEEE 802.11n HT40 mode

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)
Low	2422	11.75	0.0150
Mid	2437	13.66	0.0232
High	2452	7.76	0.0060

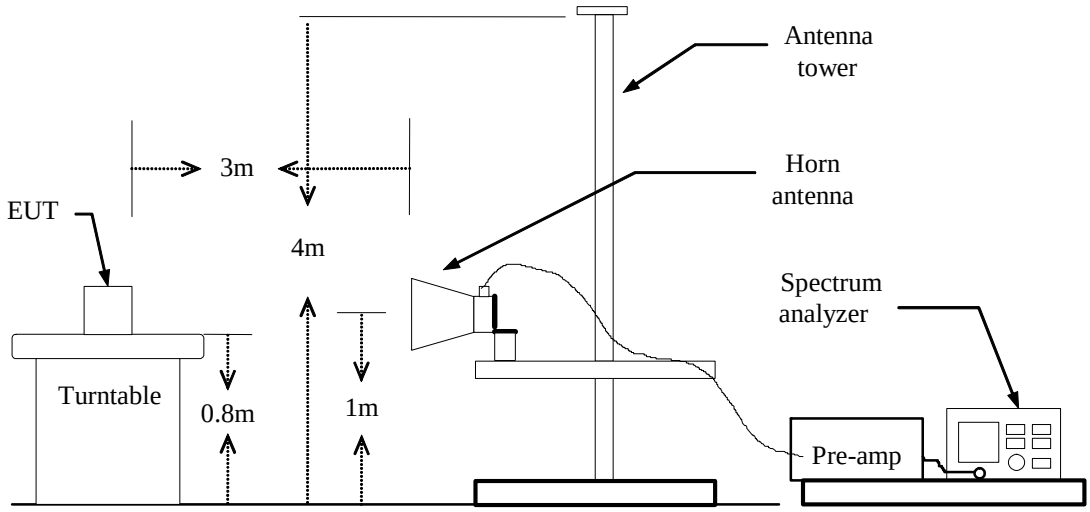
7.4 BAND EDGES MEASUREMENT

LIMIT

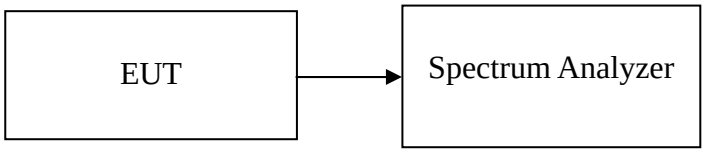
According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

Test Configuration

For Radiated



For Conducted



TEST PROCEDURE

For Radiated

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
   (a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=300Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

For Conducted

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 100 kHz.

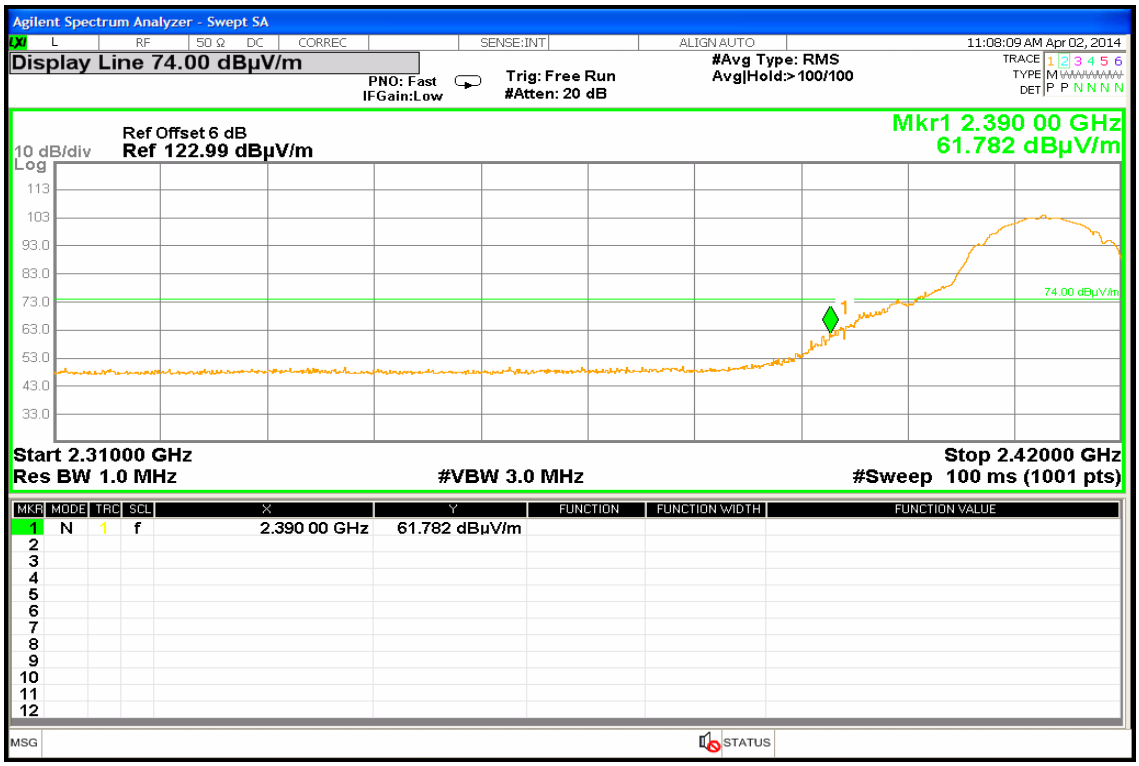
TEST RESULTS

Refer to attach spectrum analyzer data chart.

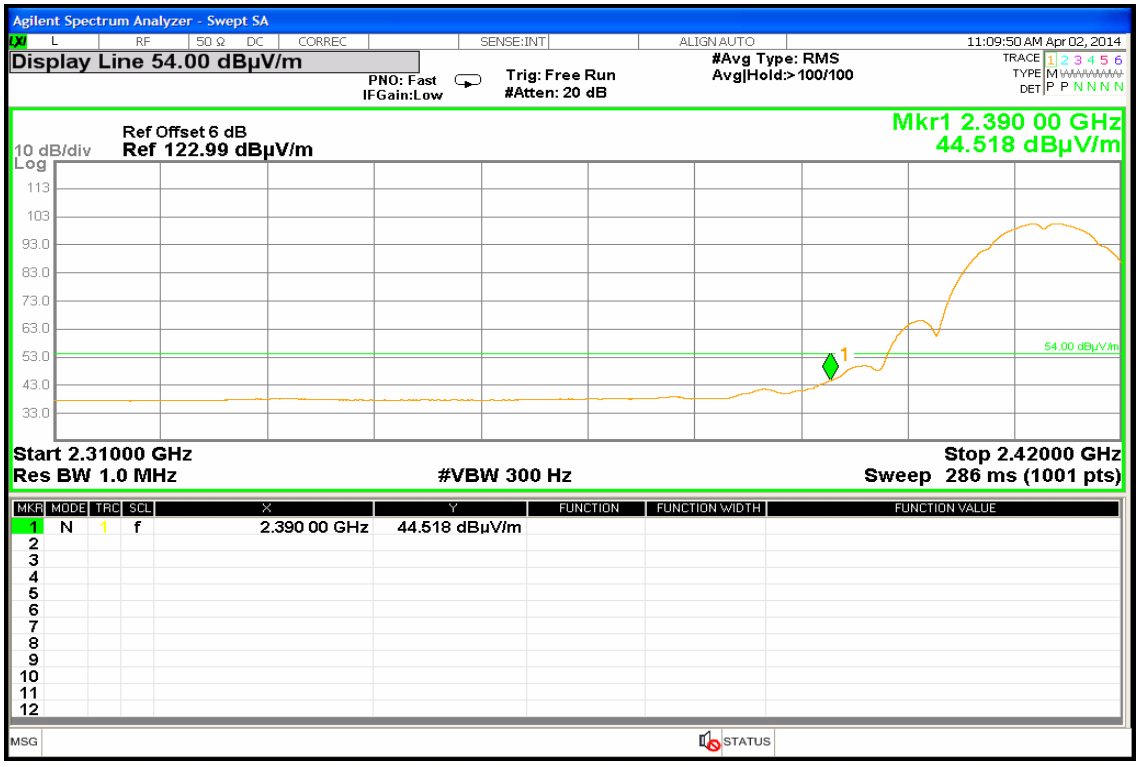
TEST DATA

Band Edges (IEEE 802.11b mode / CH Low)

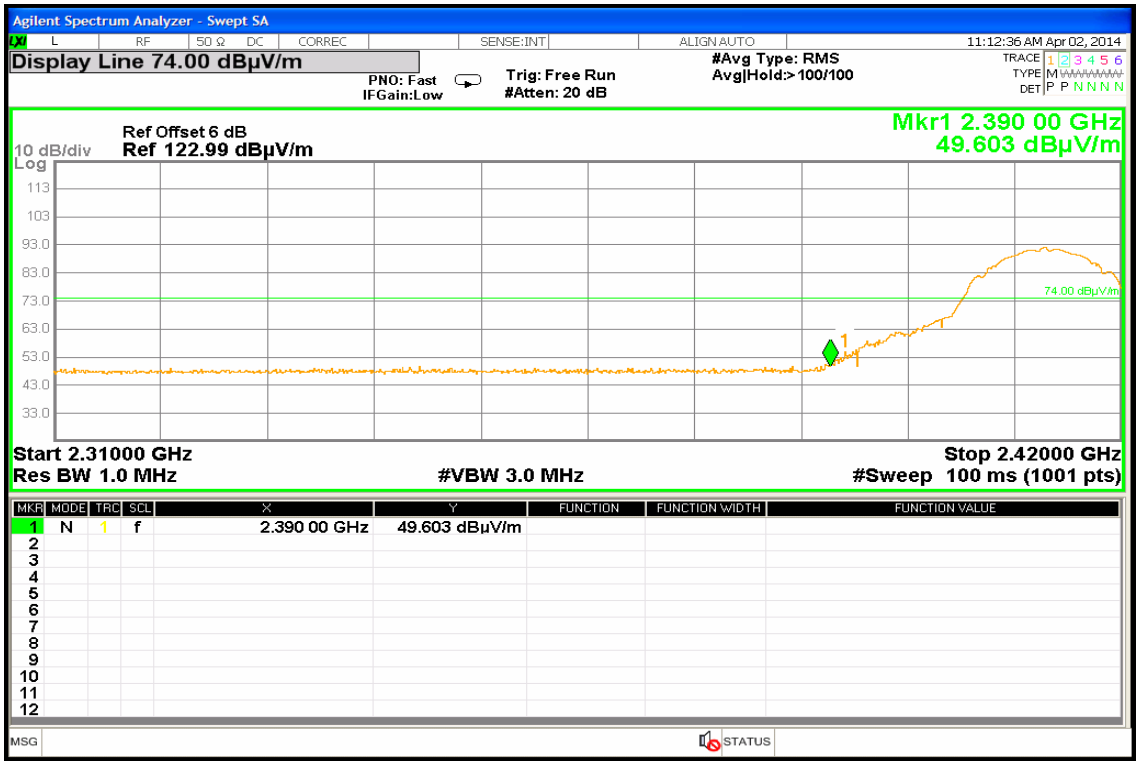
Detector mode: Peak Polarity: Vertical



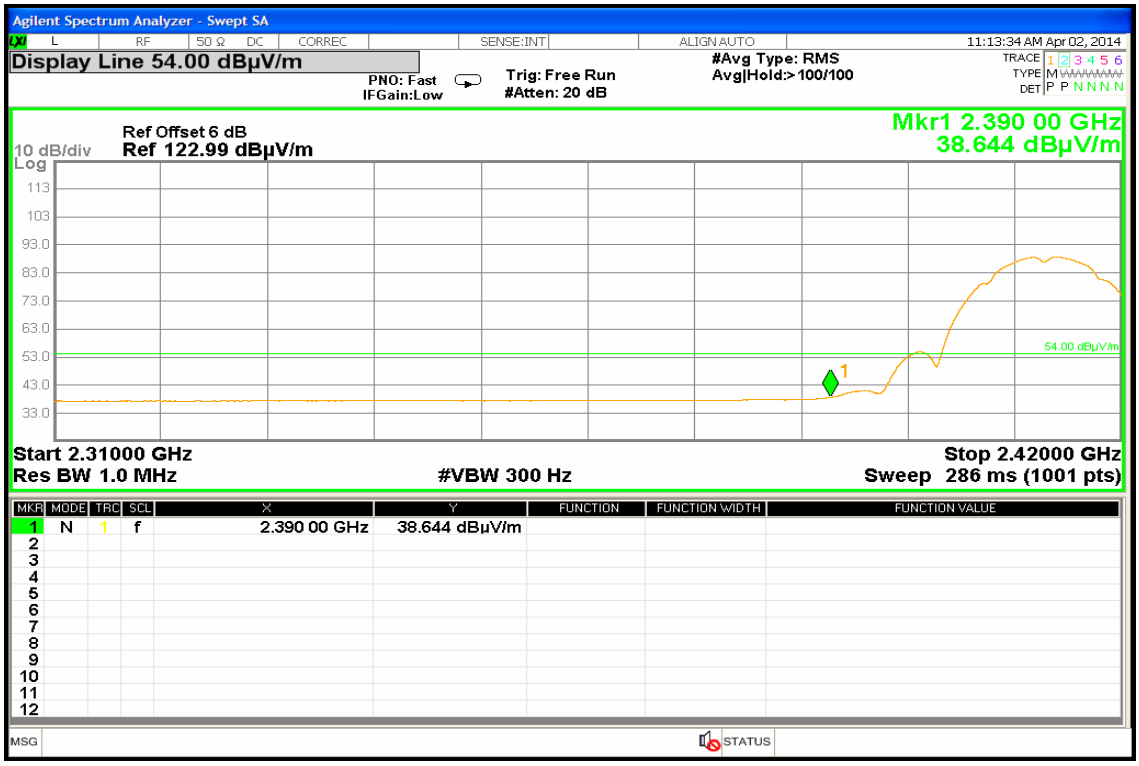
Detector mode: Average Polarity: Vertical



Detector mode: Peak Polarity: Horizontal

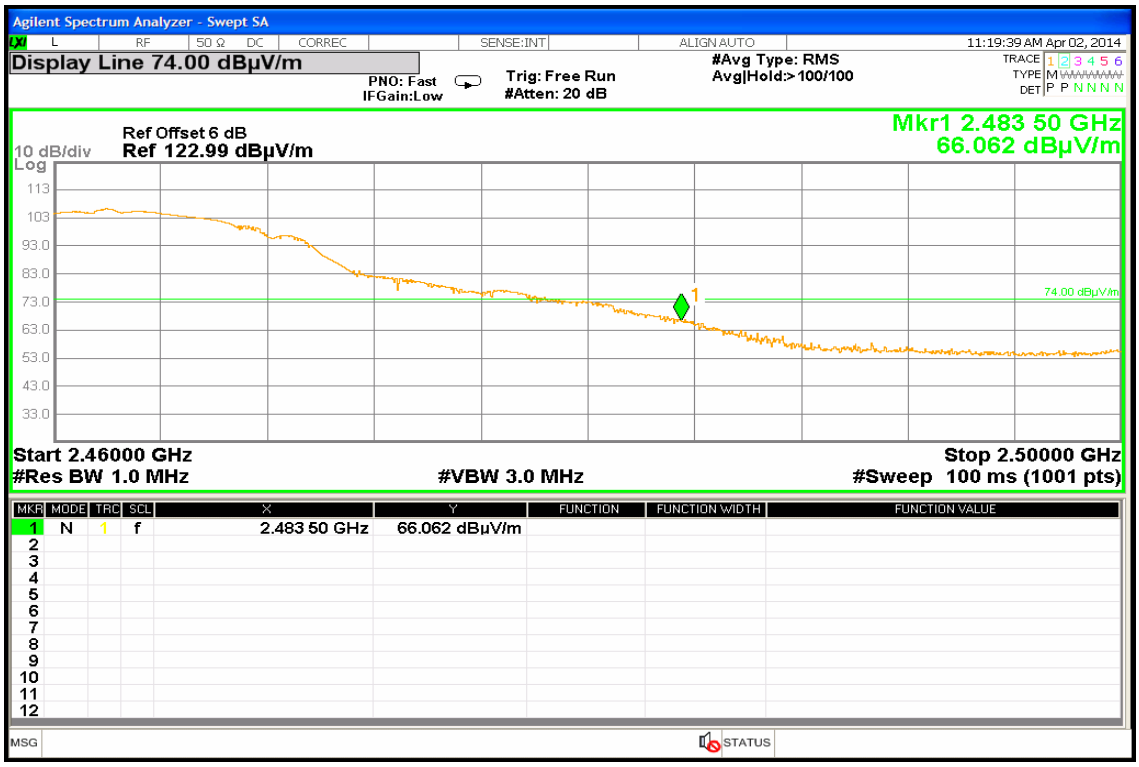


Detector mode: Average Polarity: Horizontal

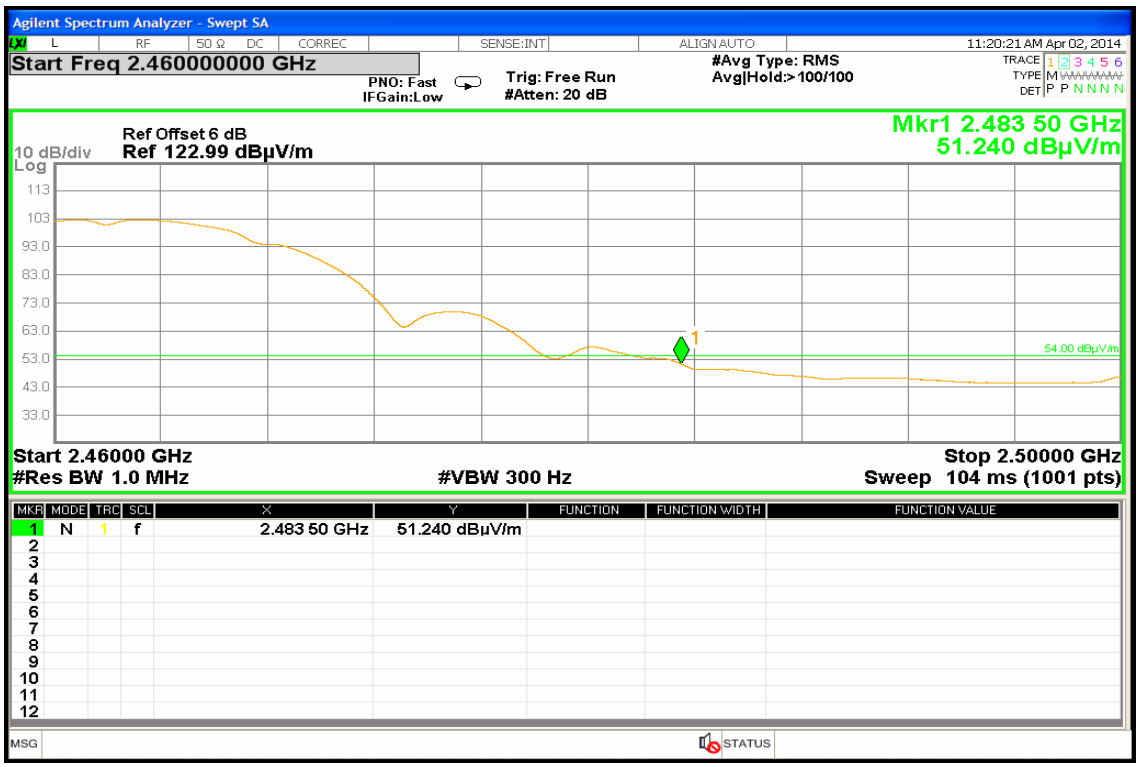


Band Edges (IEEE 802.11b mode / CH High)

Detector mode: Peak Polarity: Vertical



Detector mode: Average Polarity: Vertical

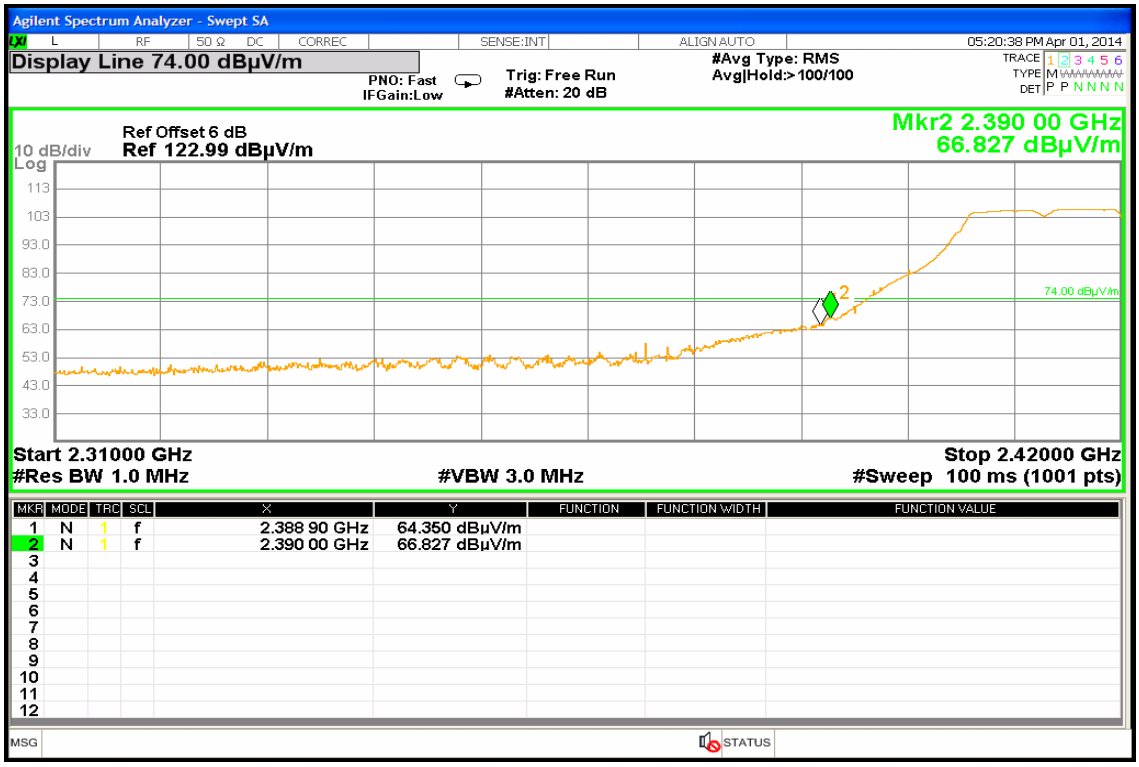


Detector mode: Peak Polarity: Horizontal

Detector mode: Average Polarity: Horizontal

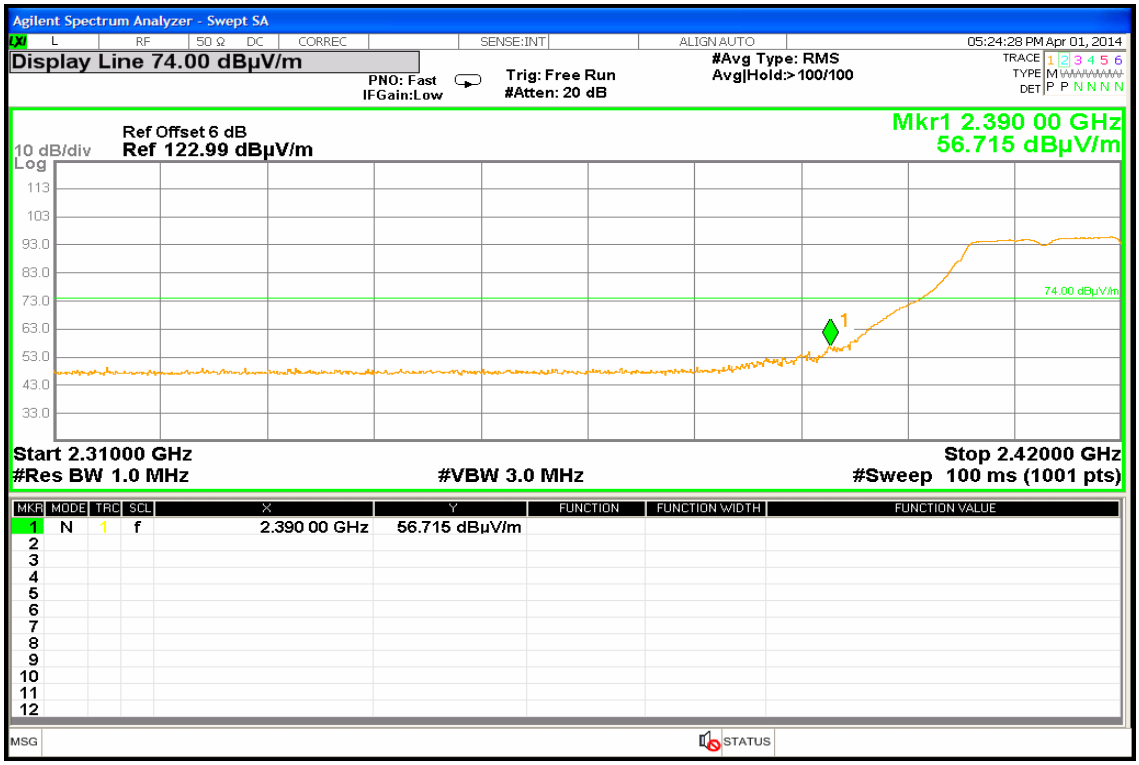
Band Edges (IEEE 802.11g mode / CH Low)

Detector mode: Peak Polarity: Vertical

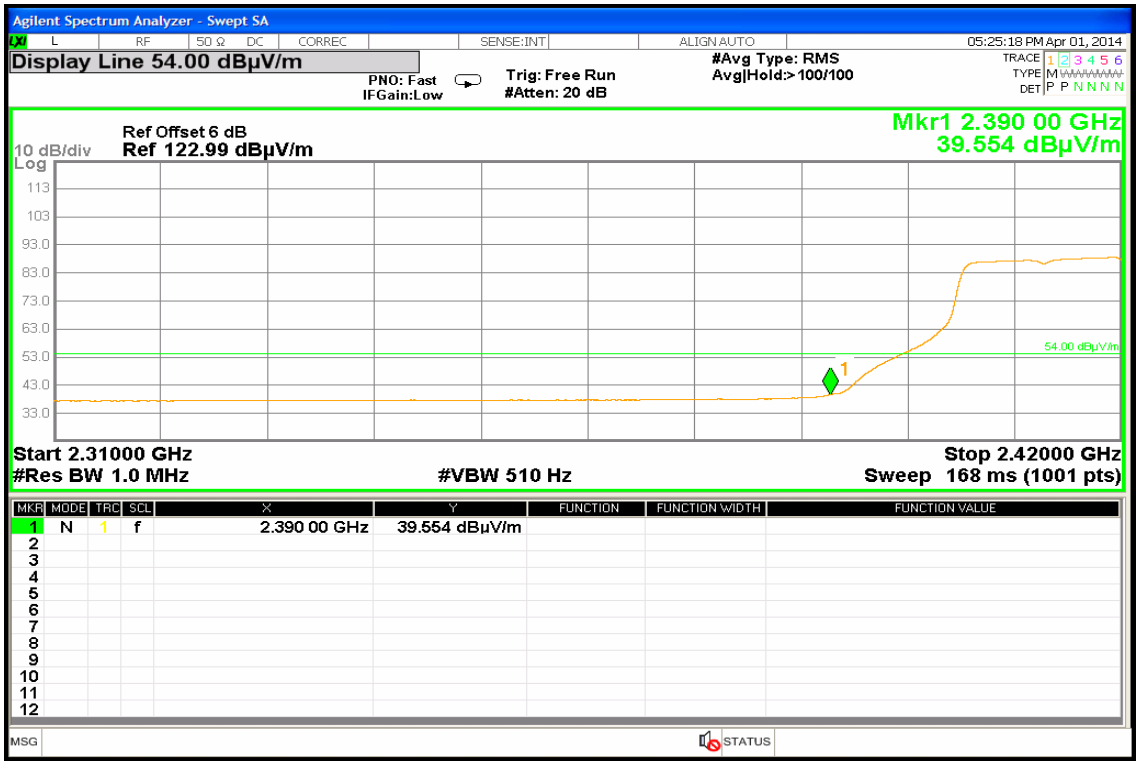


Detector mode: Average Polarity: Vertical

Detector mode: Peak Polarity: Horizontal

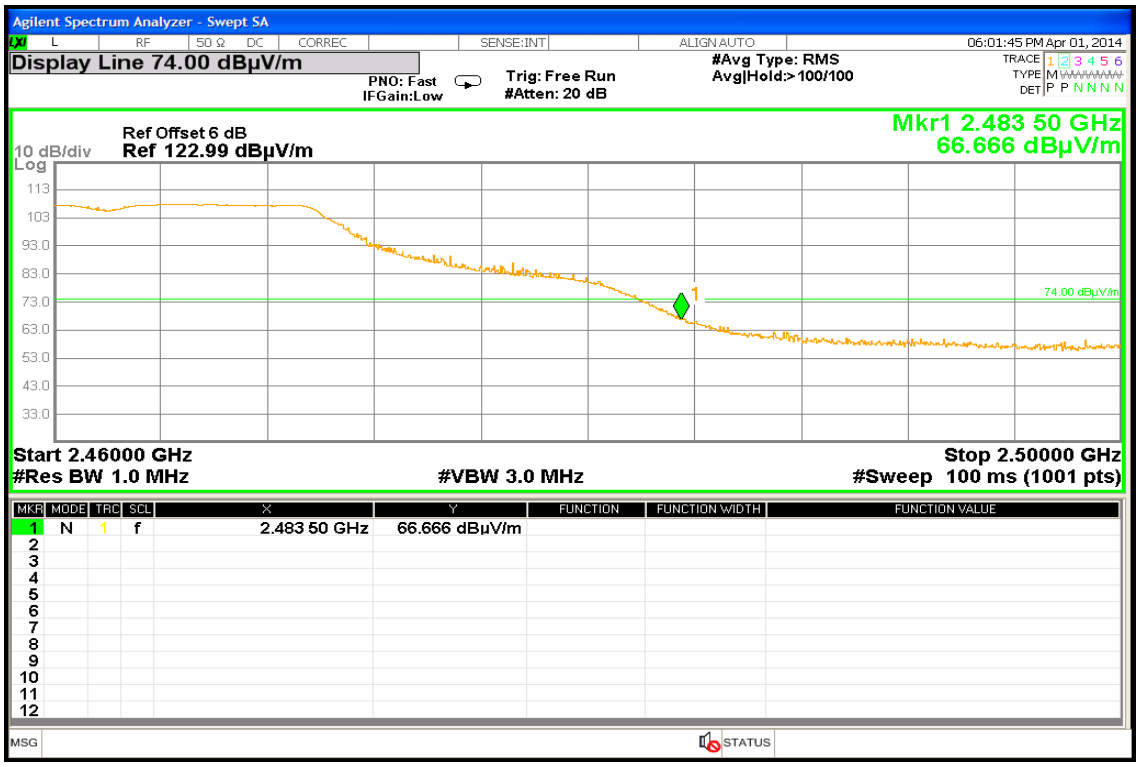


Detector mode: Average Polarity: Horizontal

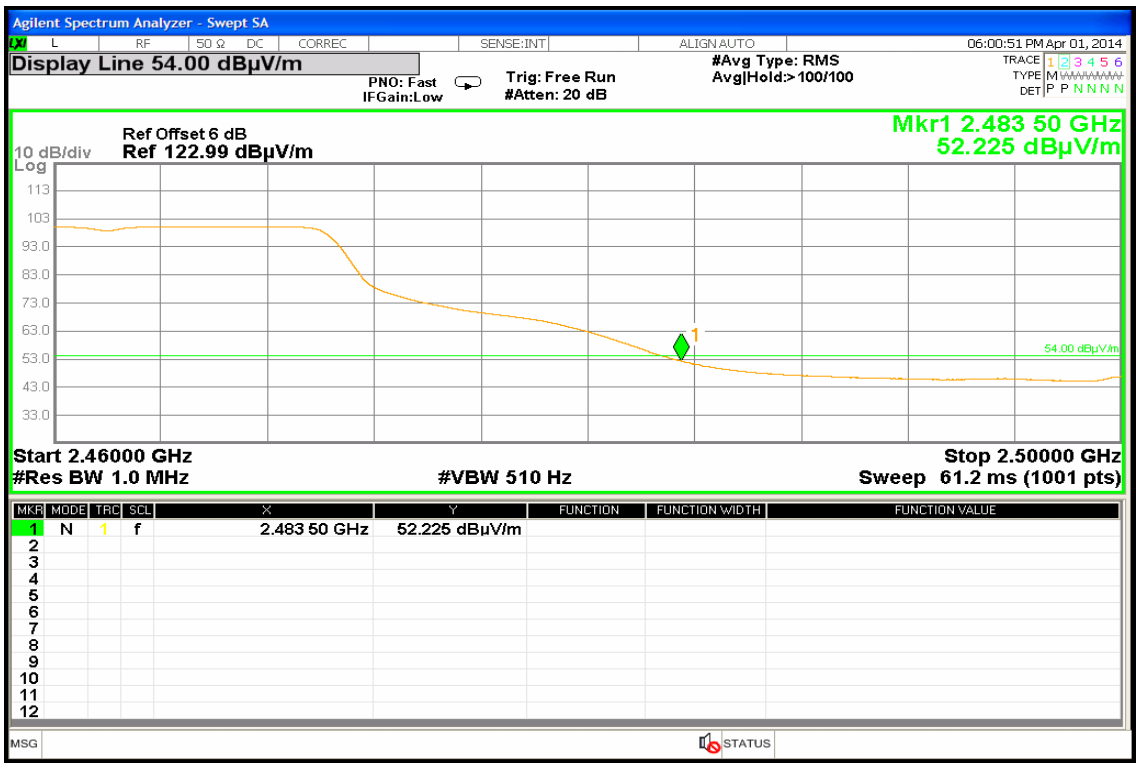


Band Edges (IEEE 802.11g mode / CH High)

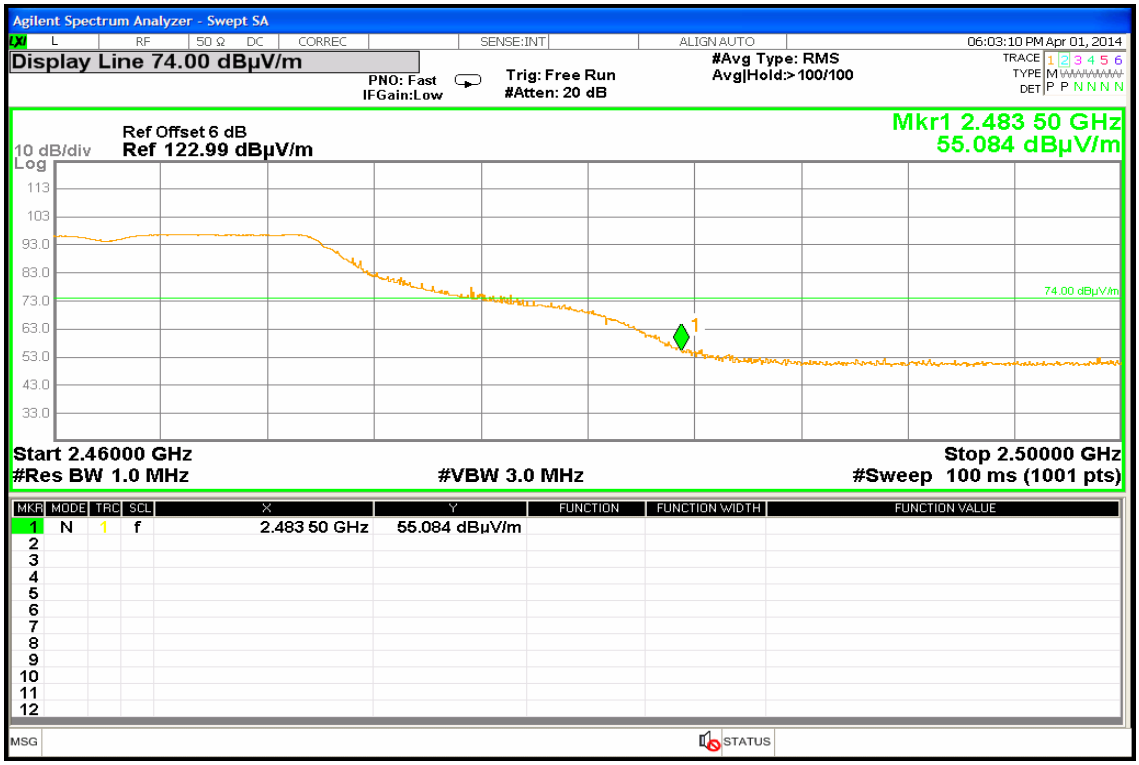
Detector mode: Peak Polarity: Vertical



Detector mode: Average Polarity: Vertical



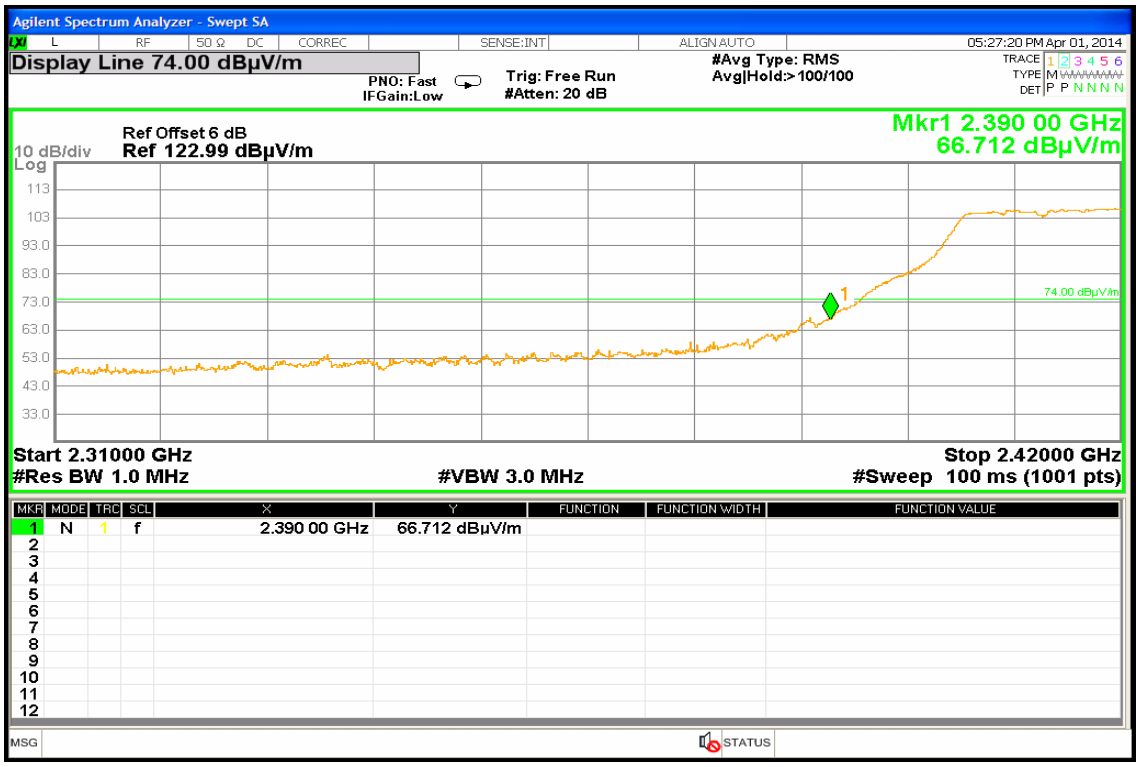
Detector mode: Peak Polarity: Horizontal



Detector mode: Average Polarity: Horizontal

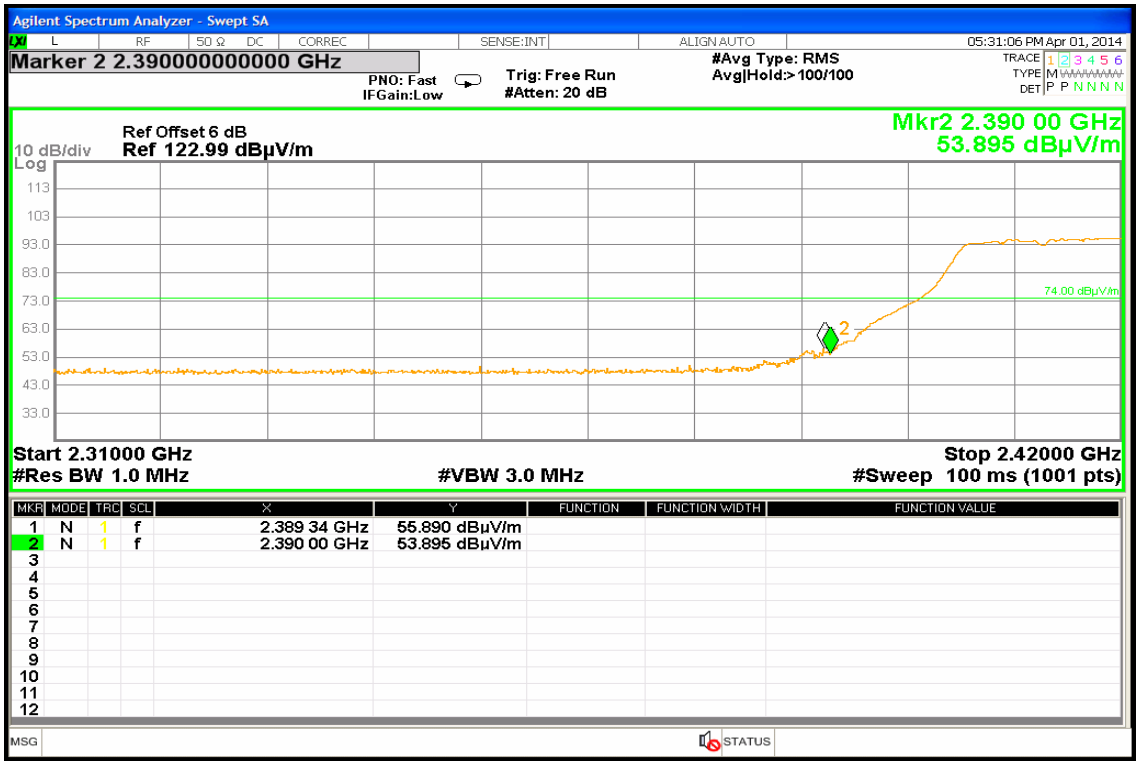
Band Edges (IEEE 802.11n HT20 mode / CH Low)

Detector mode: Peak Polarity: Vertical

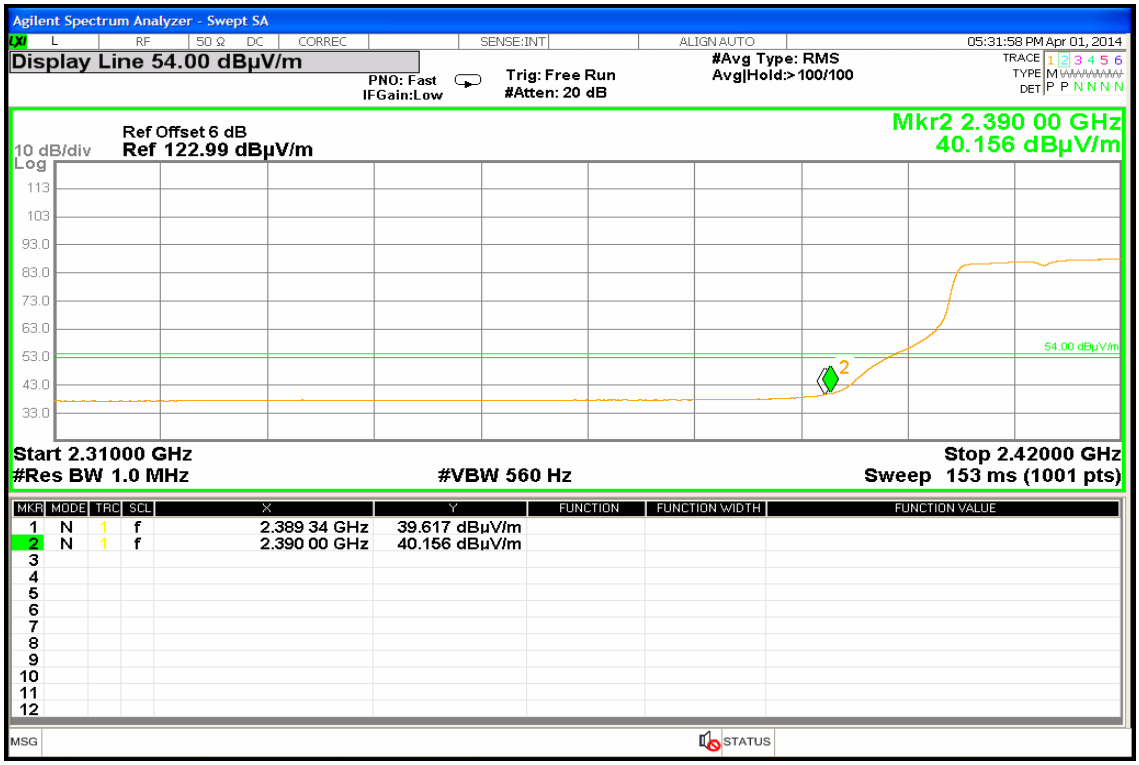


Detector mode: Average Polarity: Vertical

Detector mode: Peak Polarity: Horizontal

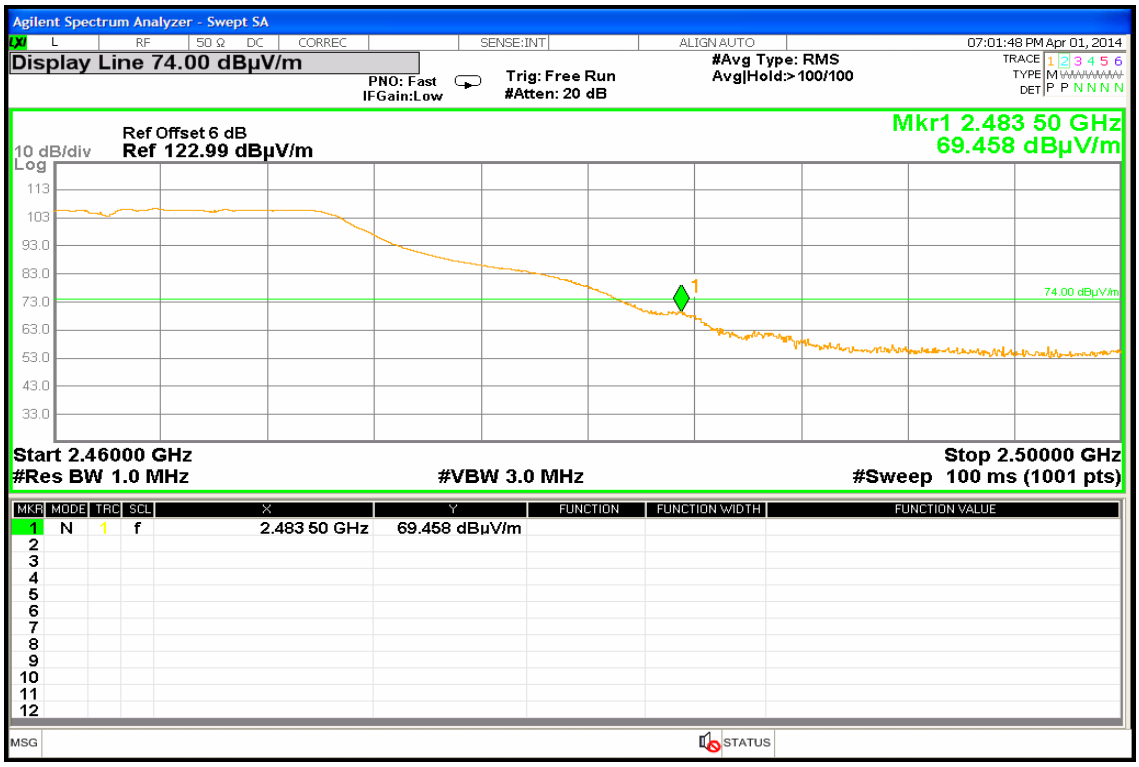


Detector mode: Average Polarity: Horizontal

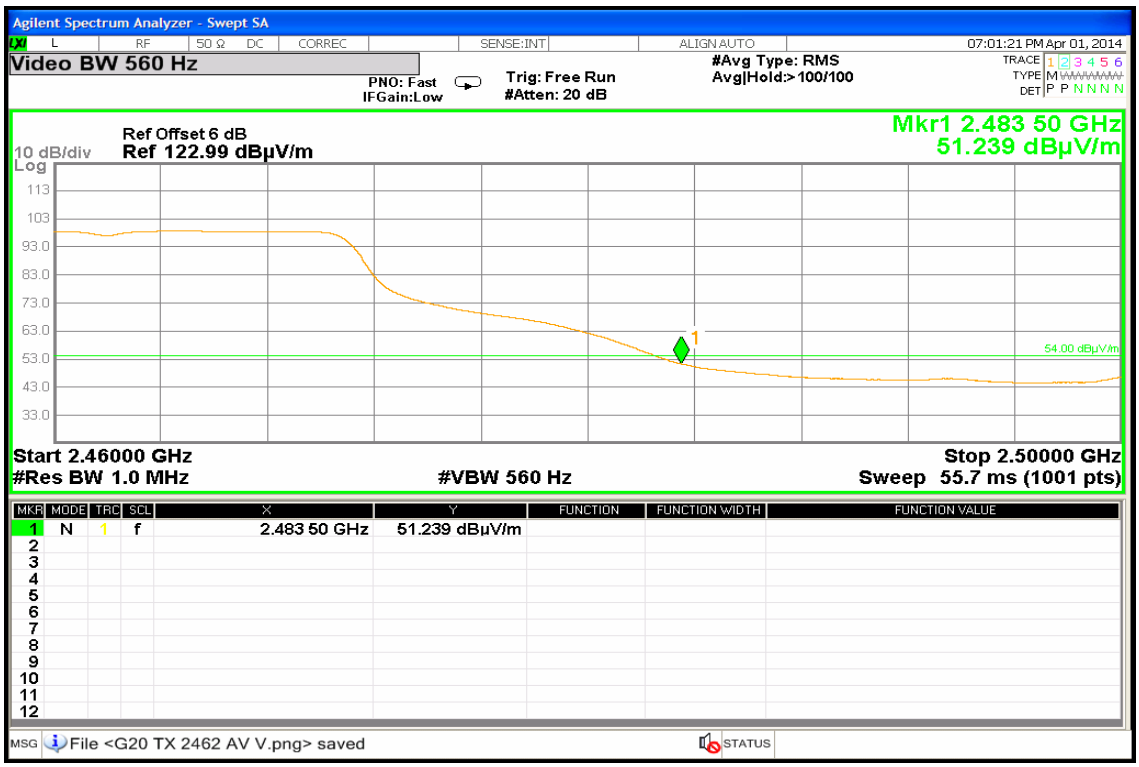


Band Edges (IEEE 802.11n HT20 mode / CH High)

Detector mode: Peak Polarity: Vertical



Detector mode: Average Polarity: Vertical

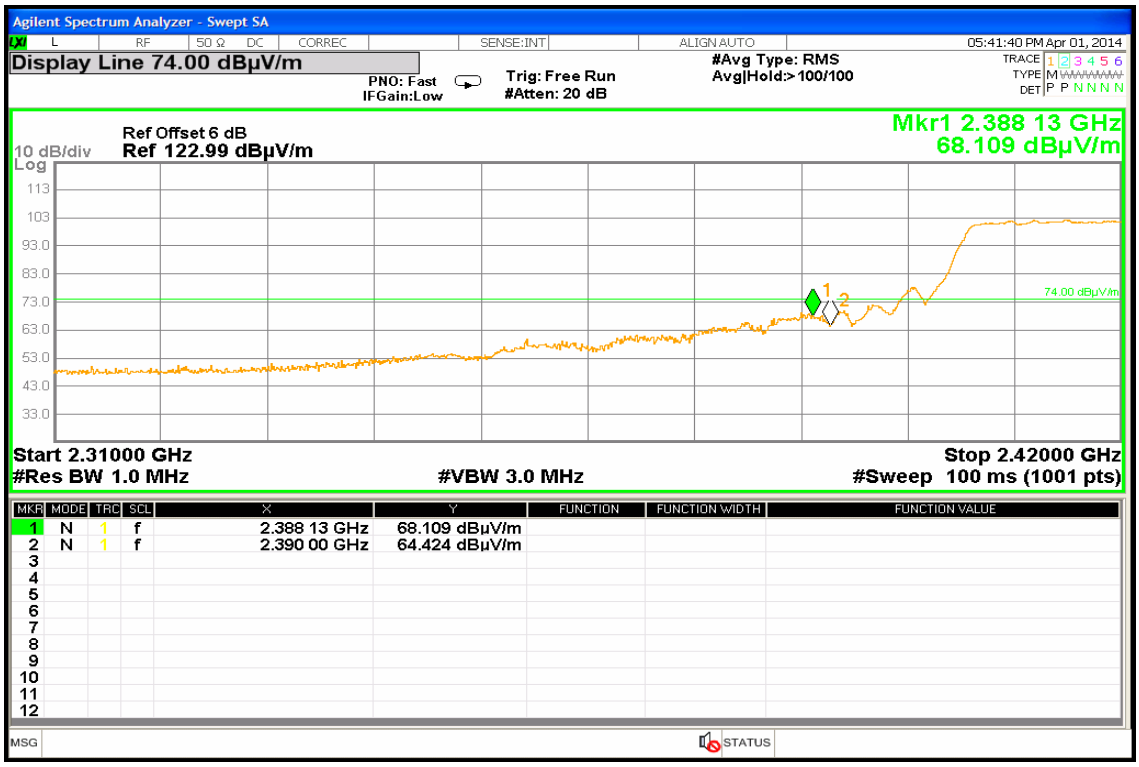


Detector mode: Peak Polarity: Horizontal

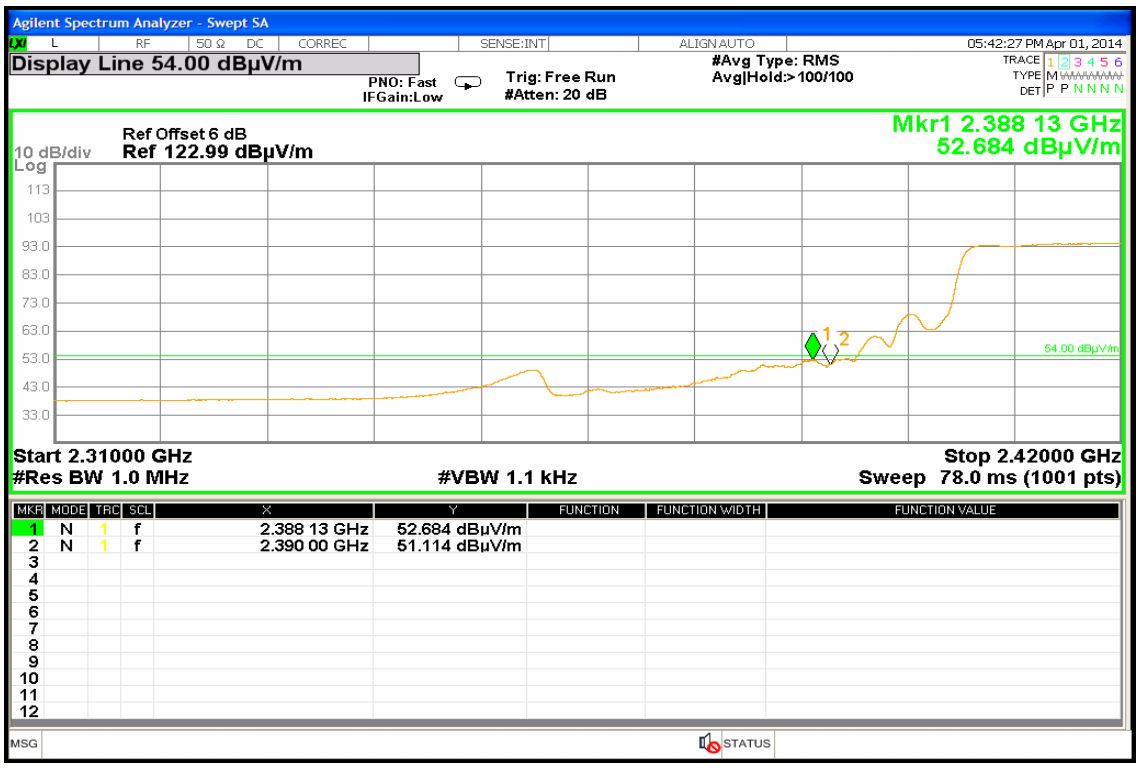
Detector mode: Average Polarity: Horizontal

Band Edges (IEEE 802.11n HT40 mode / CH Low)

Detector mode: Peak Polarity: Vertical



Detector mode: Average Polarity: Vertical

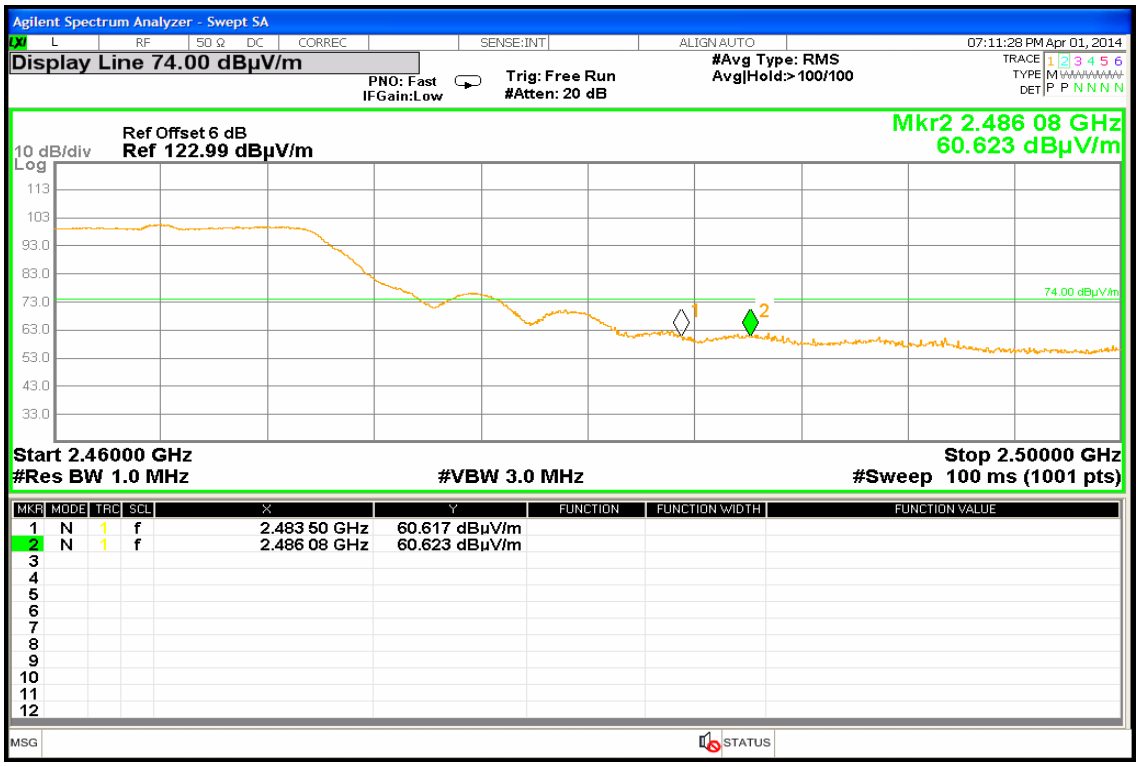


Detector mode: Peak Polarity: Horizontal

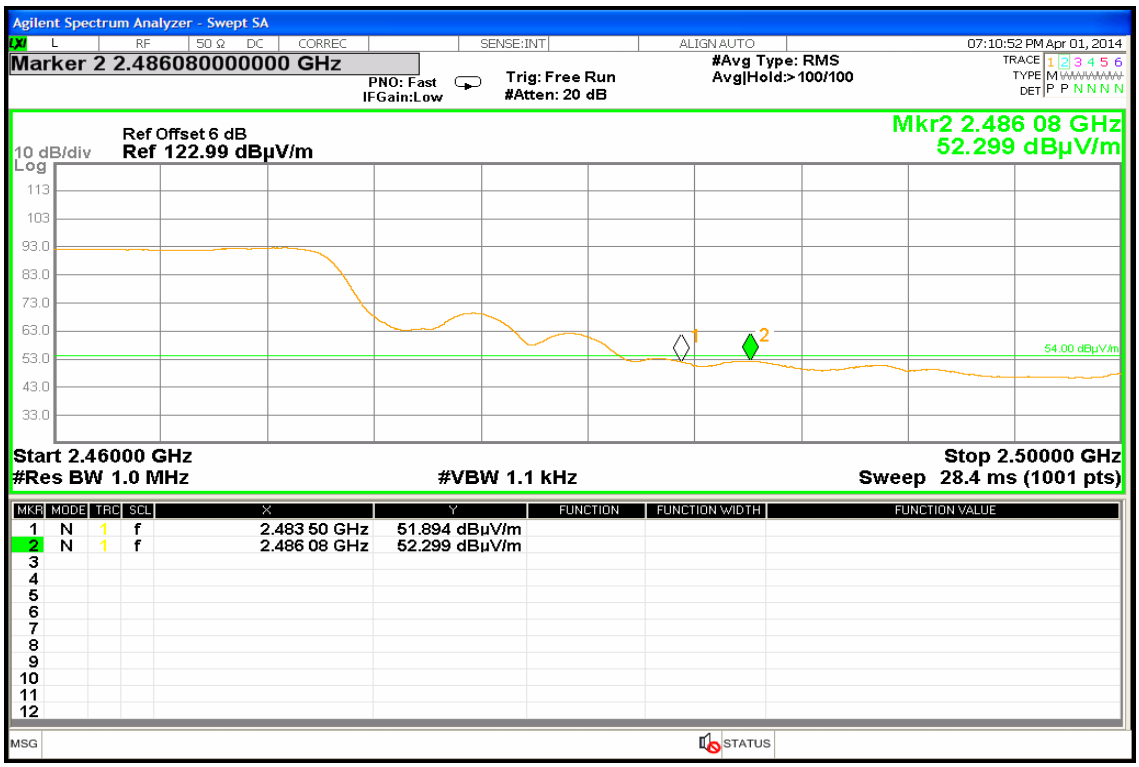
Detector mode: Average Polarity: Horizontal

Band Edges (IEEE 802.11n HT40 mode / CH High)

Detector mode: Peak Polarity: Vertical



Detector mode: Average Polarity: Vertical

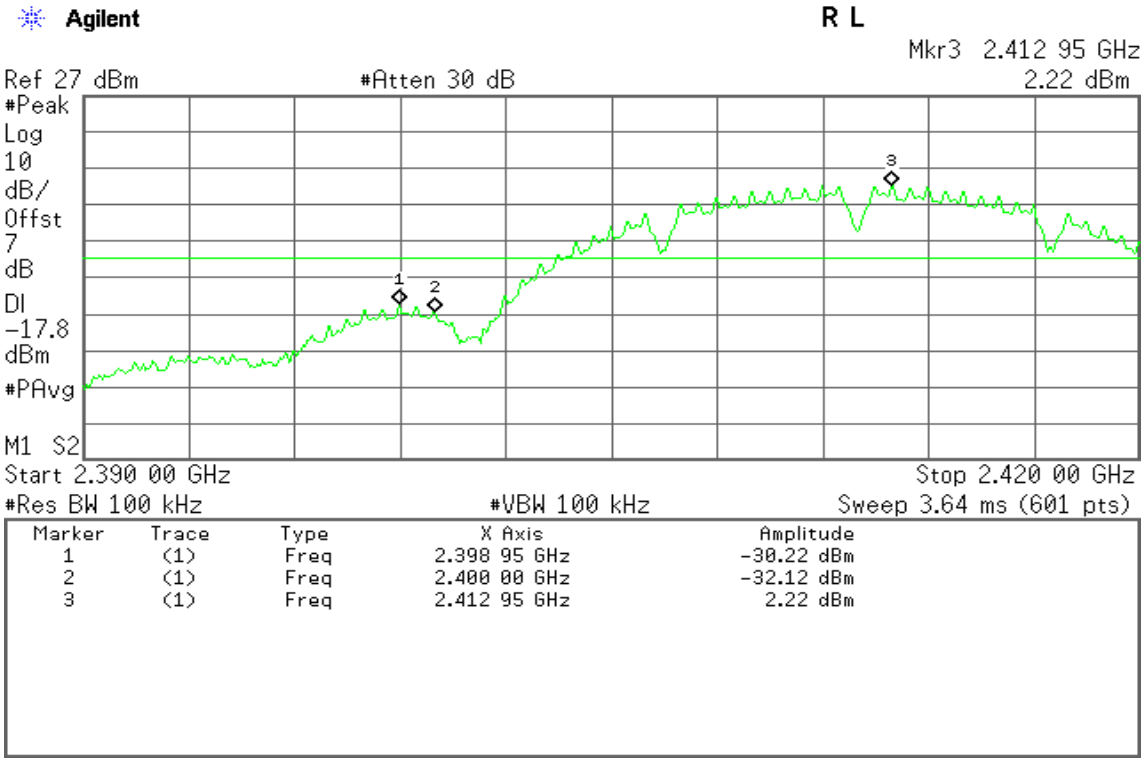


Detector mode: Peak Polarity: Horizontal

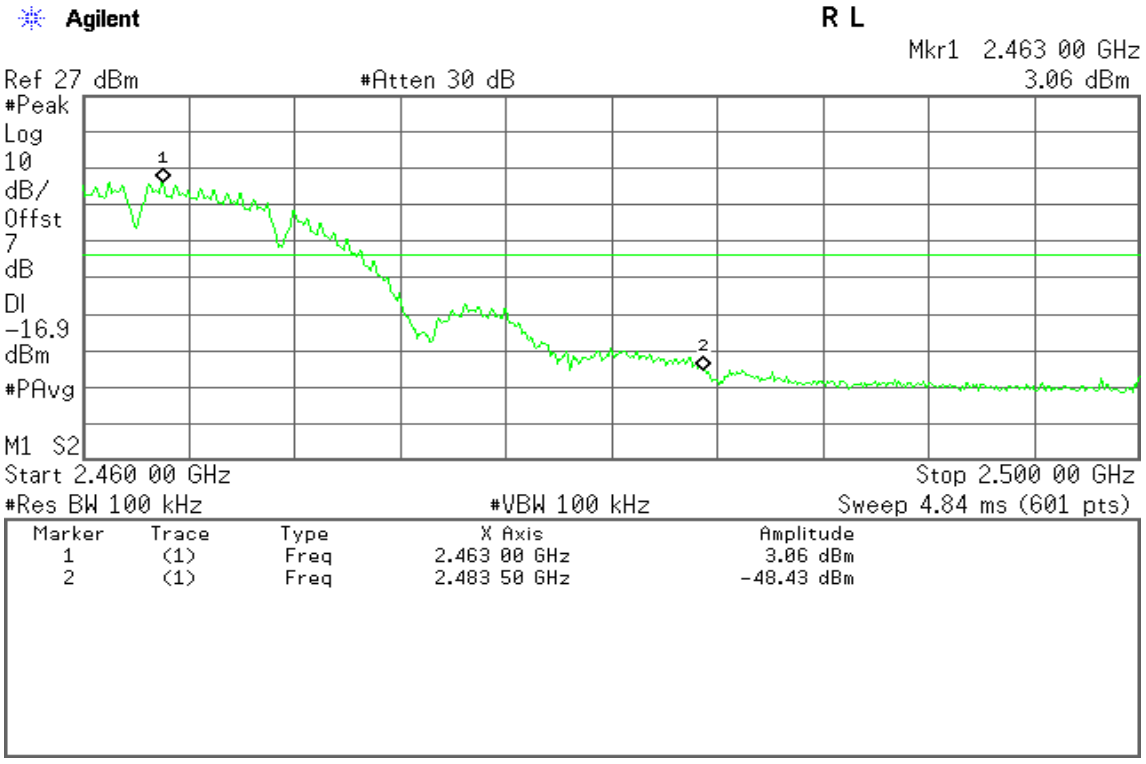
Detector mode: Average Polarity: Horizontal

Test Plot

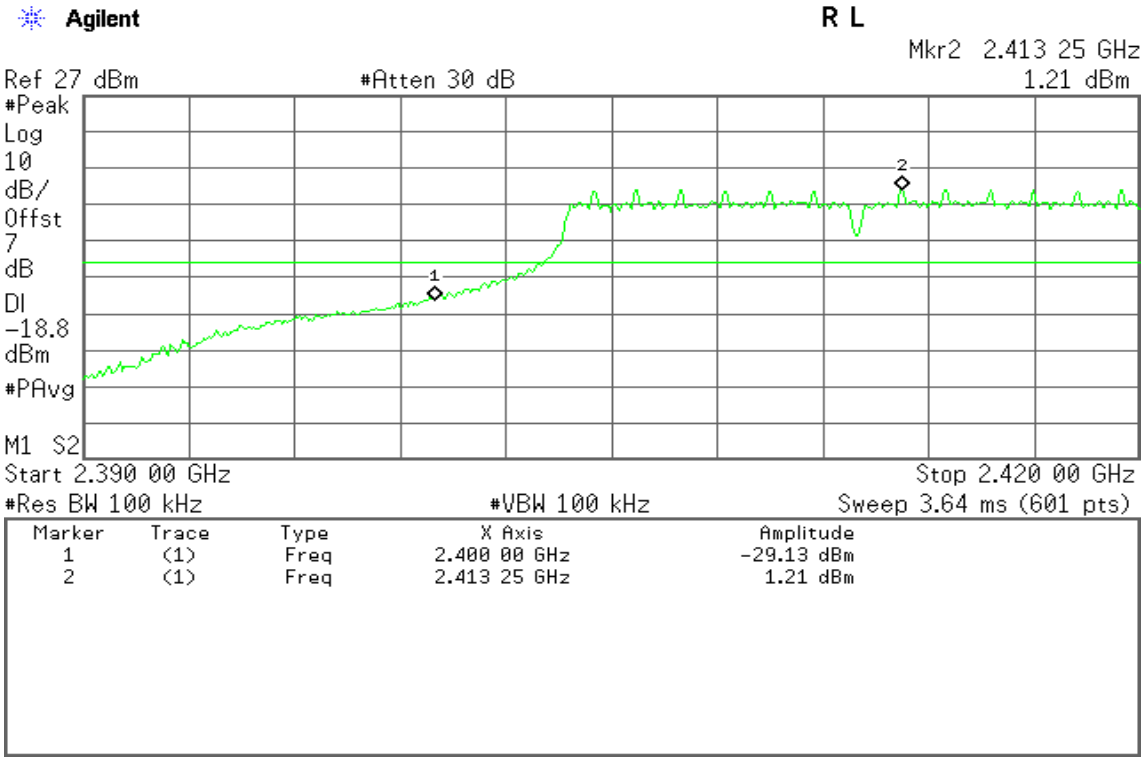
Conducted Band Edges (IEEE 802.11b mode / CH Low)



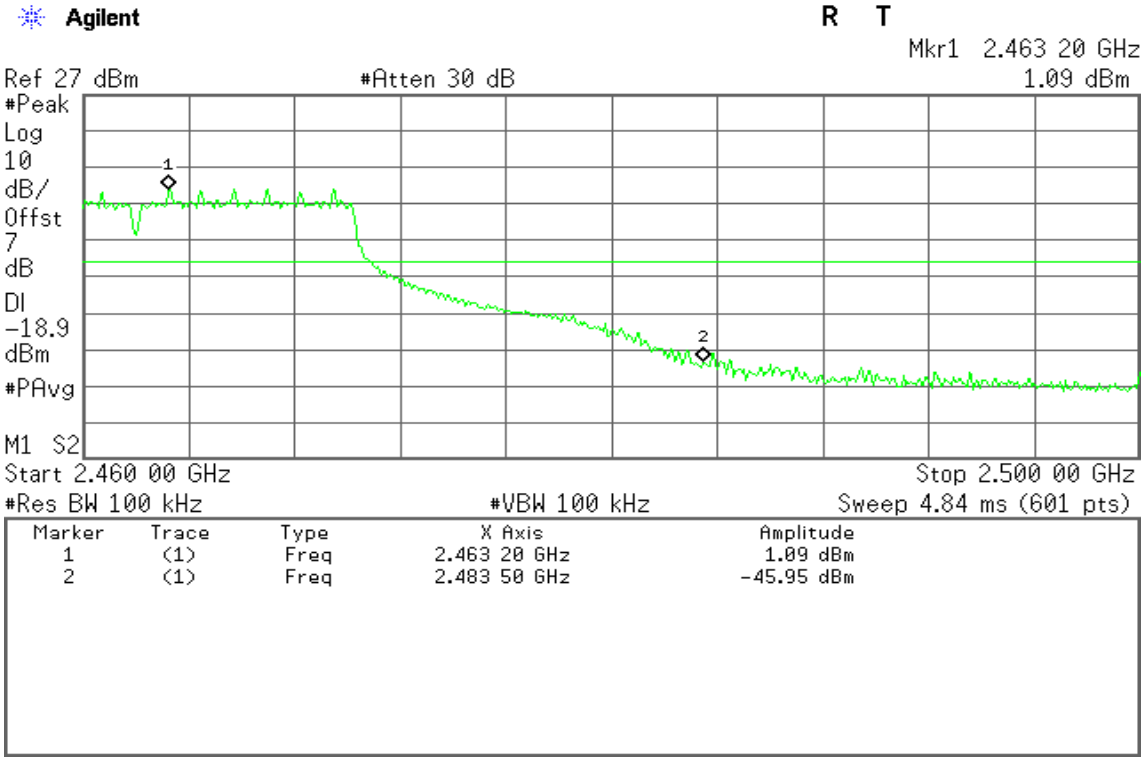
Conducted Band Edges (IEEE 802.11b mode / CH High)



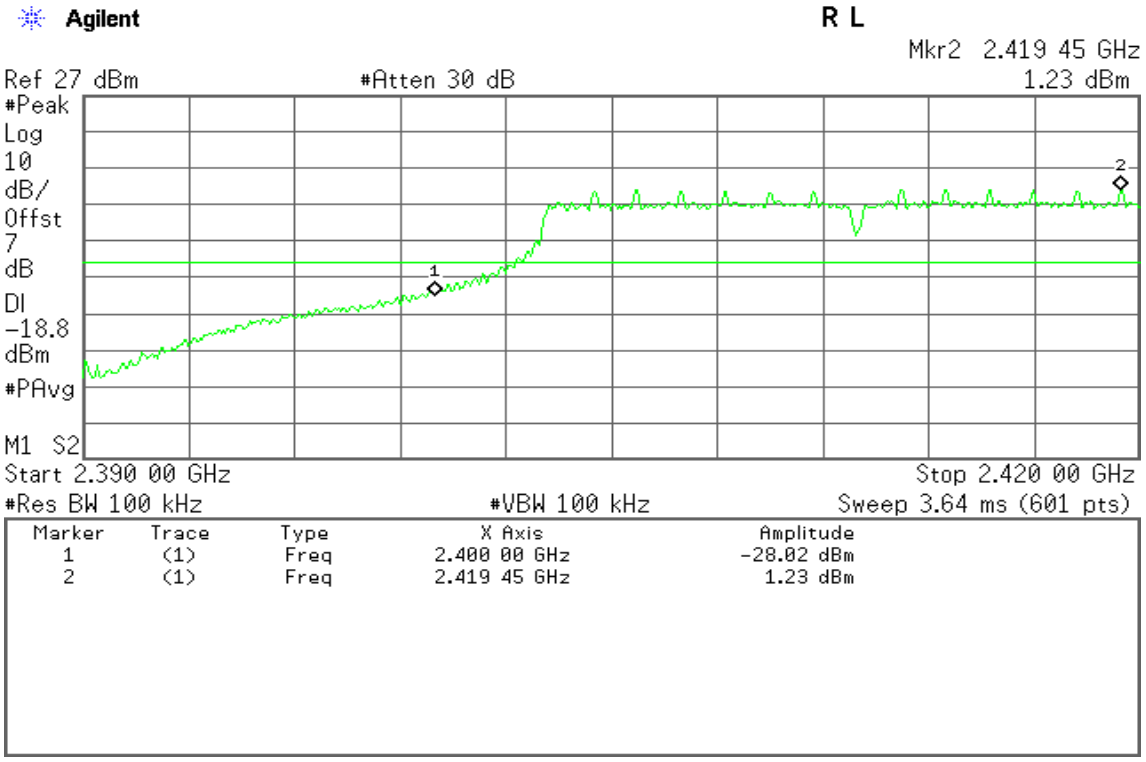
Conducted Band Edges (IEEE 802.11g mode / CH Low)



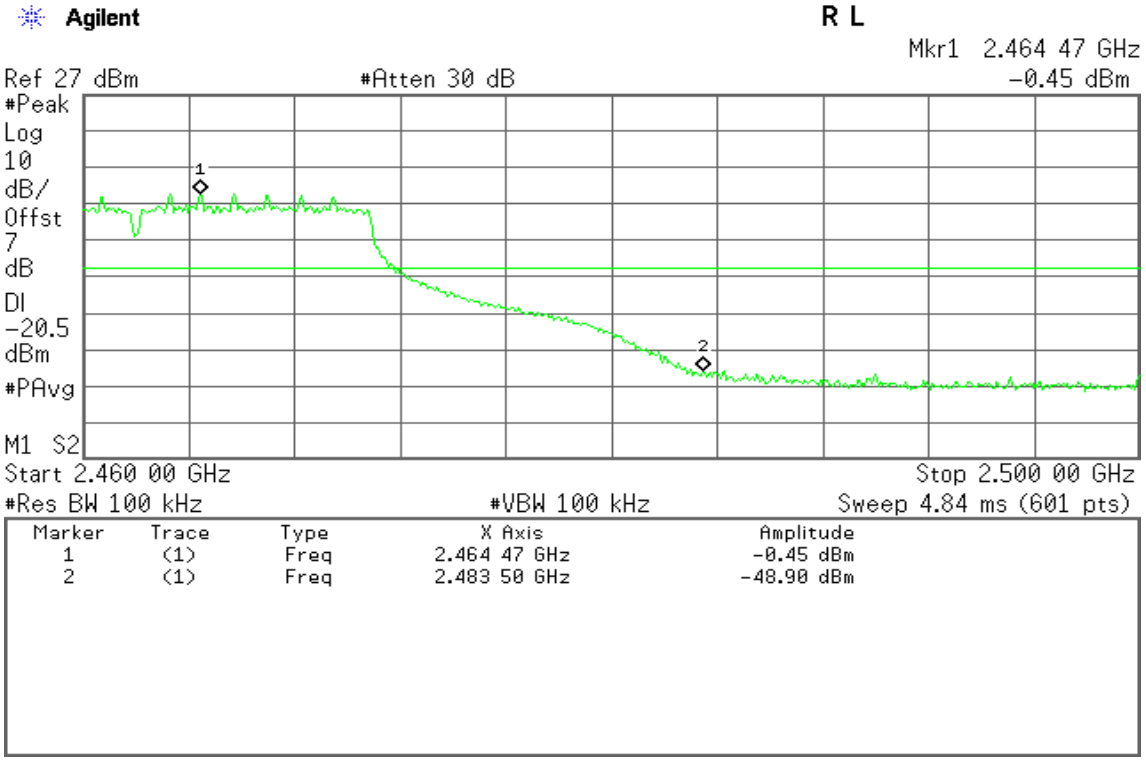
Conducted Band Edges (IEEE 802.11g mode / CH High)



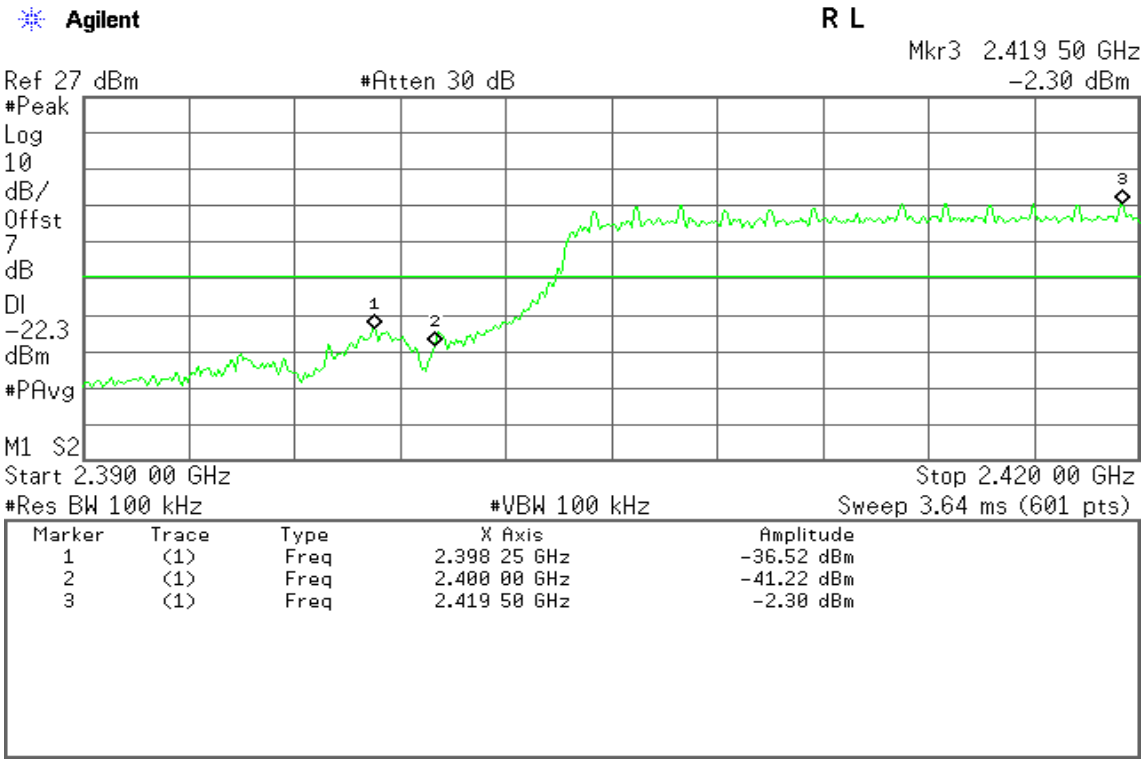
Conducted Band Edges (IEEE 802.11n HT20 mode / CH Low)



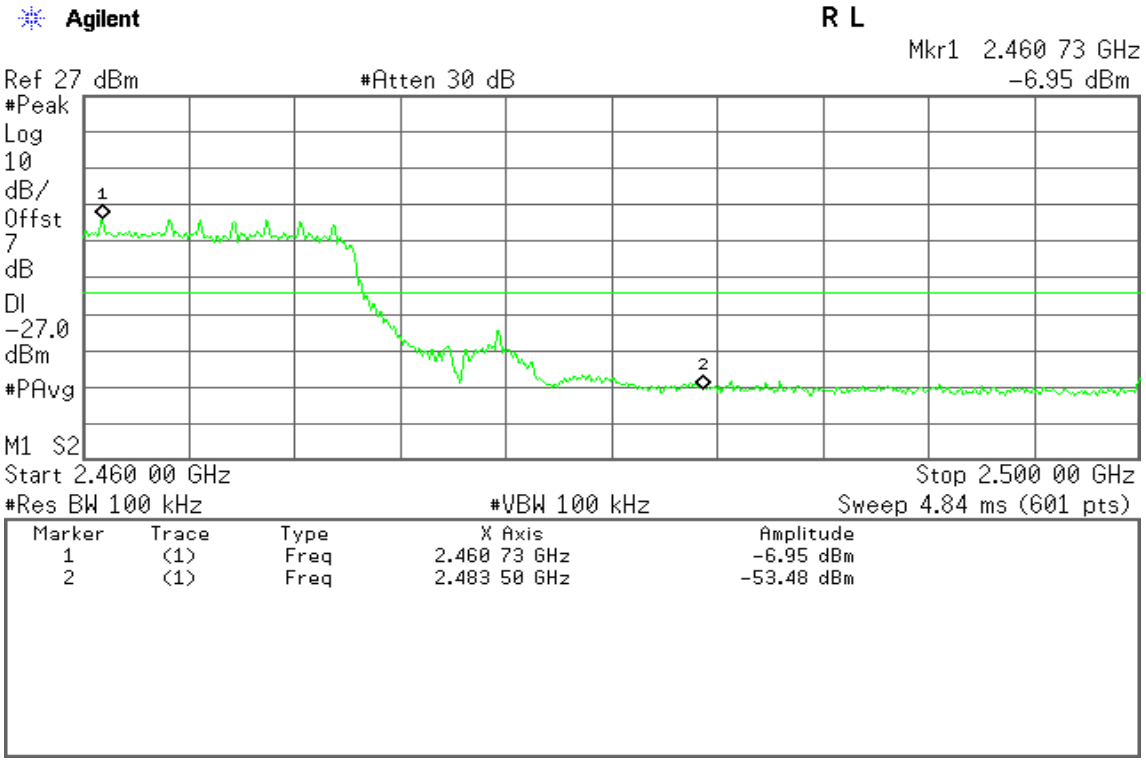
Conducted Band Edges (IEEE 802.11n HT20 mode / CH High)



Conducted Band Edges (IEEE 802.11n HT40 mode / CH Low)



Conducted Band Edges (IEEE 802.11n HT40 mode / CH High)

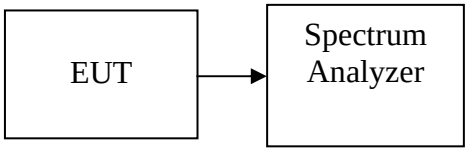


7.5 PEAK POWER SPECTRAL DENSITY

LIMIT

1. According to §15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
2. According to §15.247(f), the digital modulation operation of the hybrid system, with the frequency hopping turned off, shall comply with the power density requirements of paragraph (d) of this section.

Test Configuration



TEST PROCEDURE

Per KDB 558074 v03r01

This procedure must be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat

TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b mode

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-4.86	8.00	PASS
Mid	2437	-4.44		PASS
High	2462	-5.24		PASS

Test mode: IEEE 802.11g mode

Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-14.87	8.00	PASS
Mid	2437	-14.50		PASS
High	2462	-15.30		PASS

Test mode: IEEE 802.11n HT20 mode

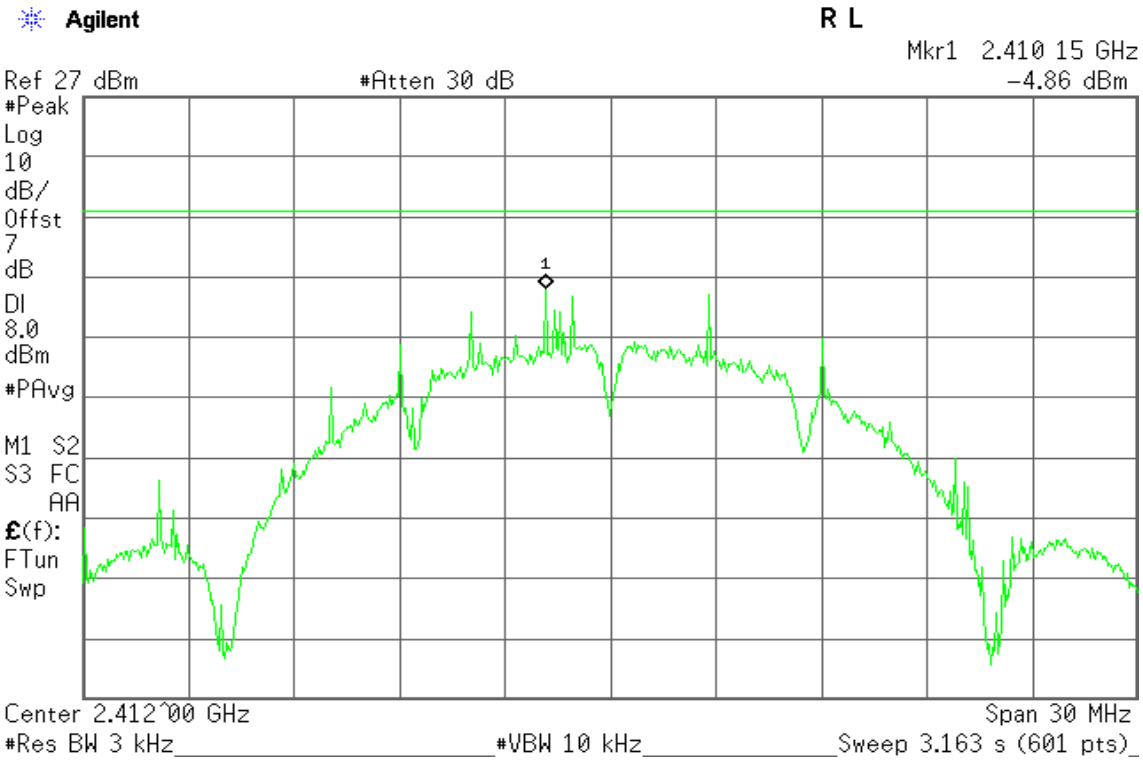
Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2412	-13.93	8.00	PASS
Mid	2437	-13.28		PASS
High	2462	-15.55		PASS

Test mode: IEEE 802.11n HT40 mode

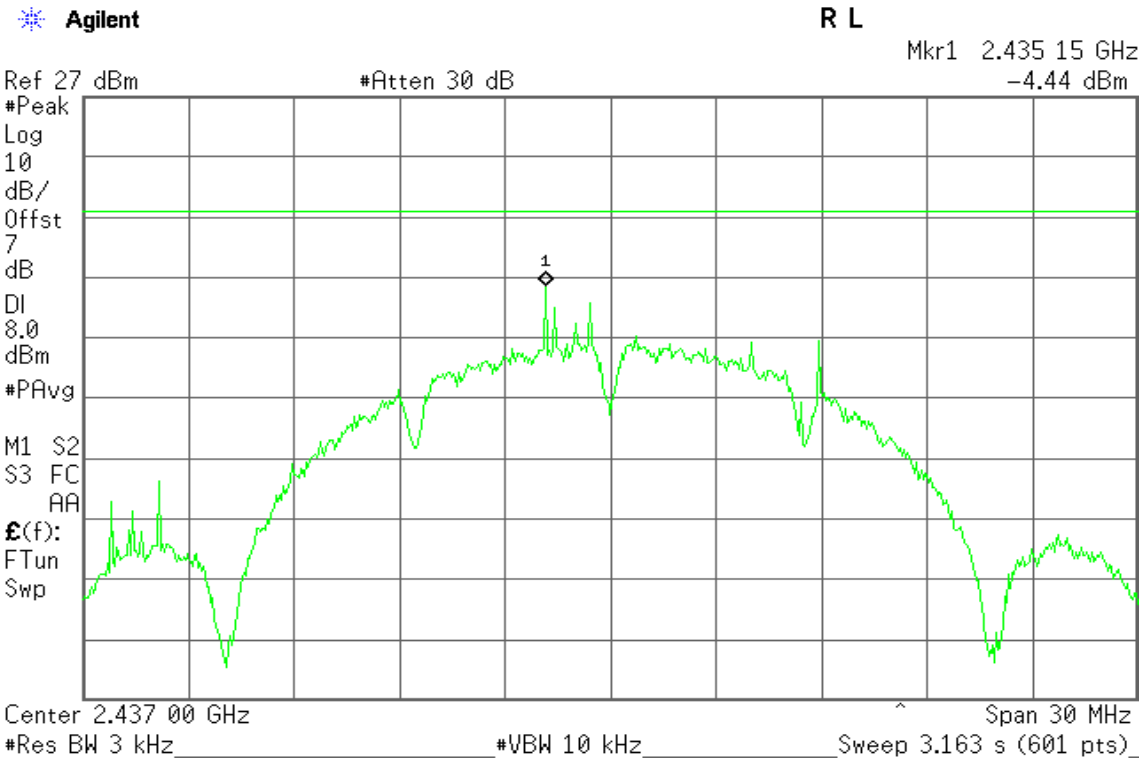
Channel	Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Result
Low	2422	-16.29	8.00	PASS
Mid	2437	-13.44		PASS
High	2452	-21.58		PASS

Test Plot

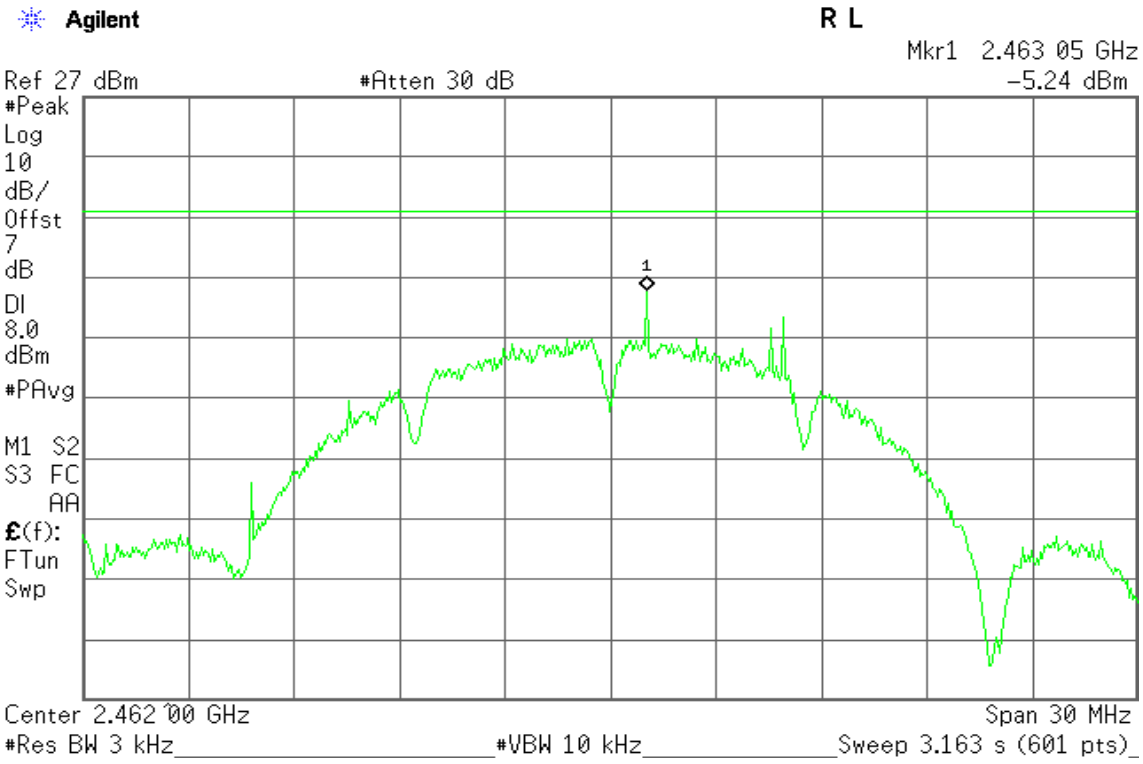
IEEE 802.11b mode
PPSD (CH Low)



PPSD (CH Mid)

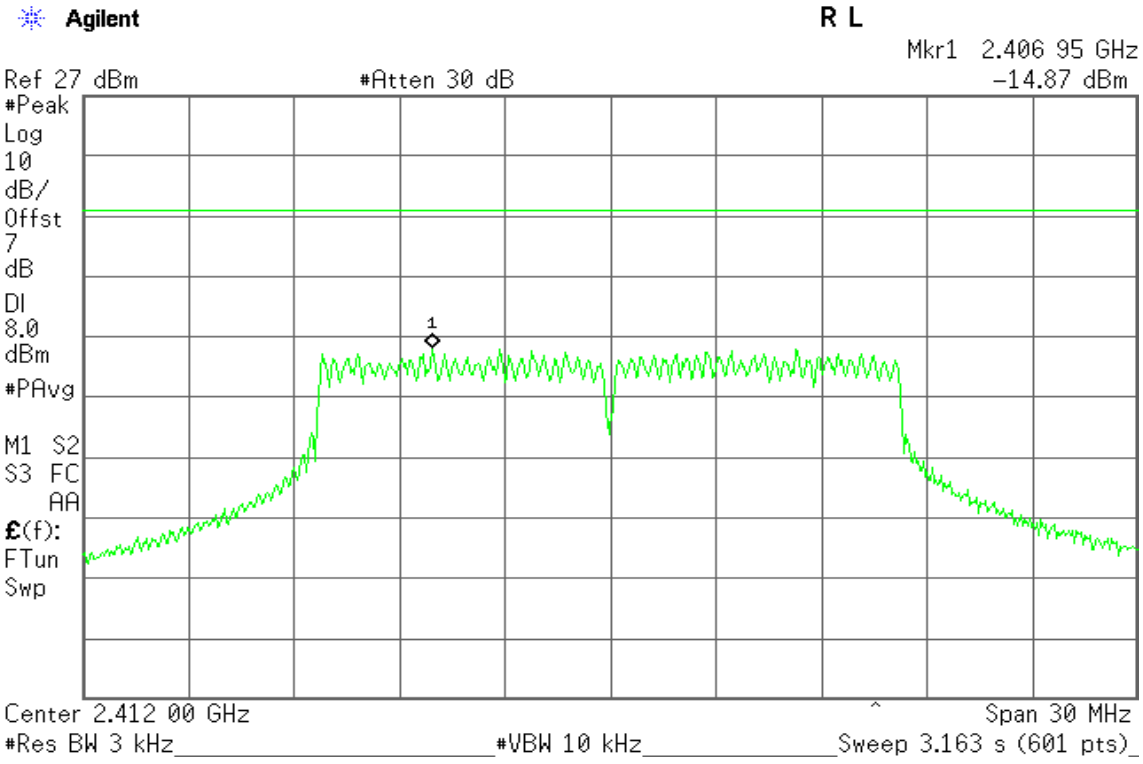


PPSD (CH High)

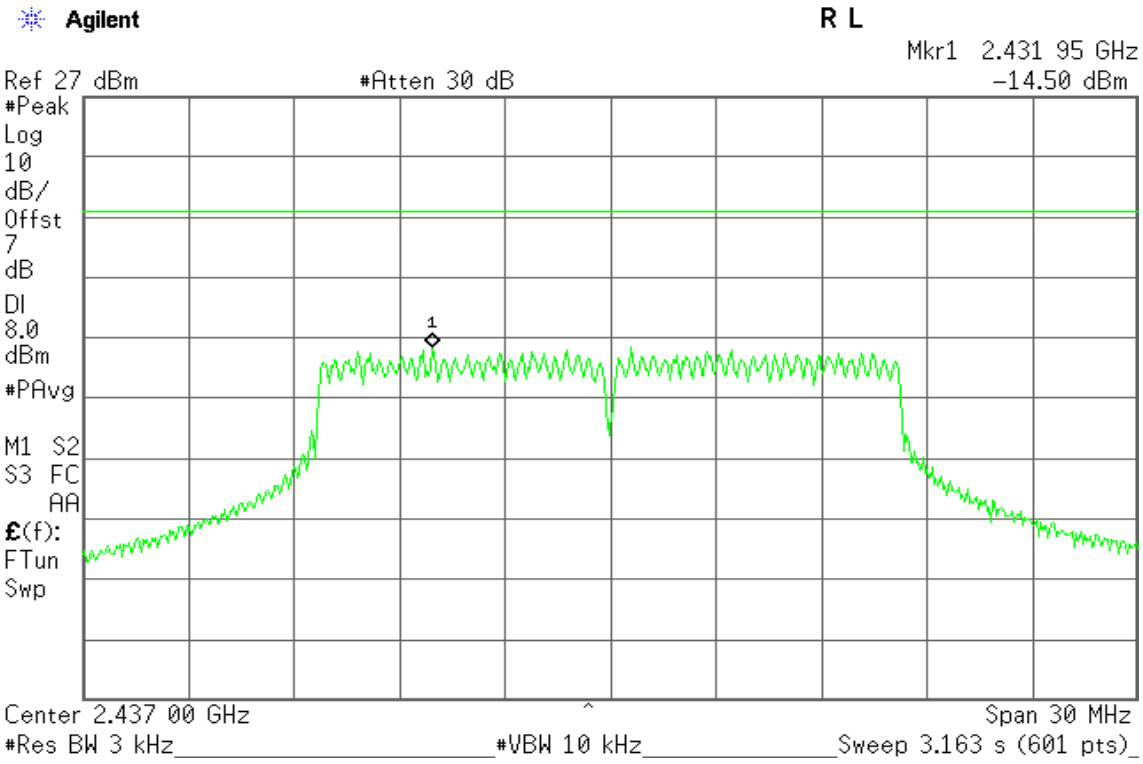


IEEE 802.11g mode

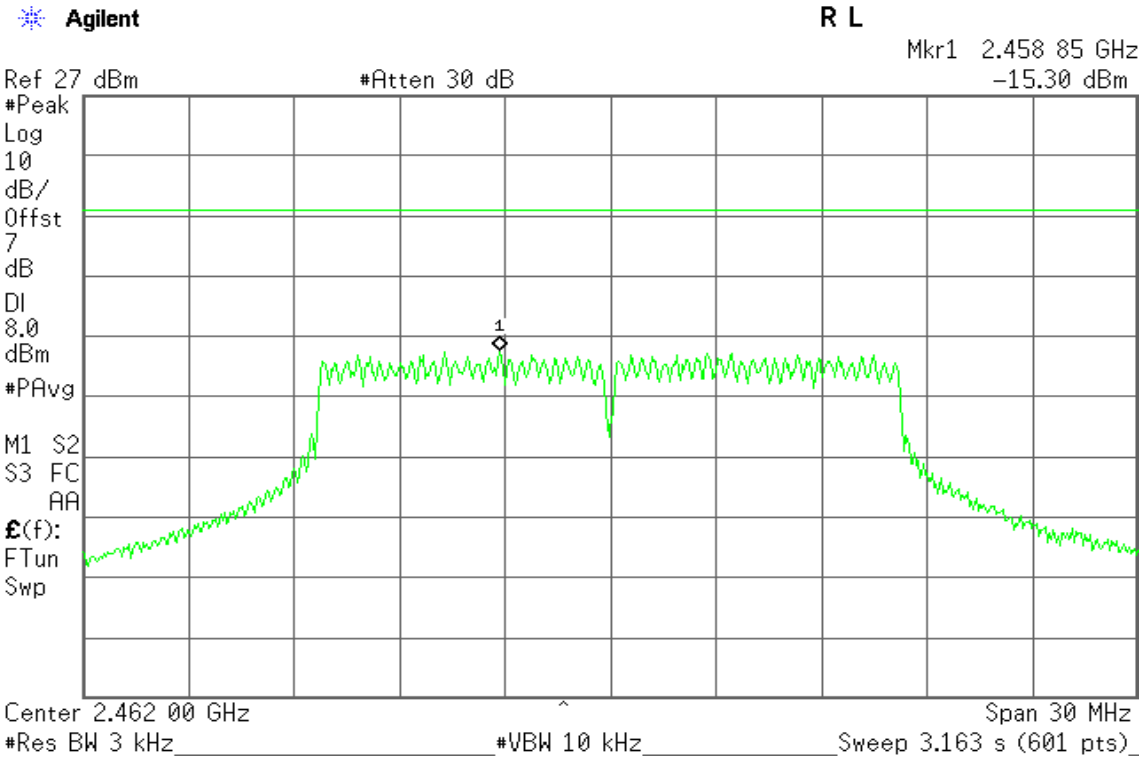
PPSD (CH Low)



PPSD (CH Mid)

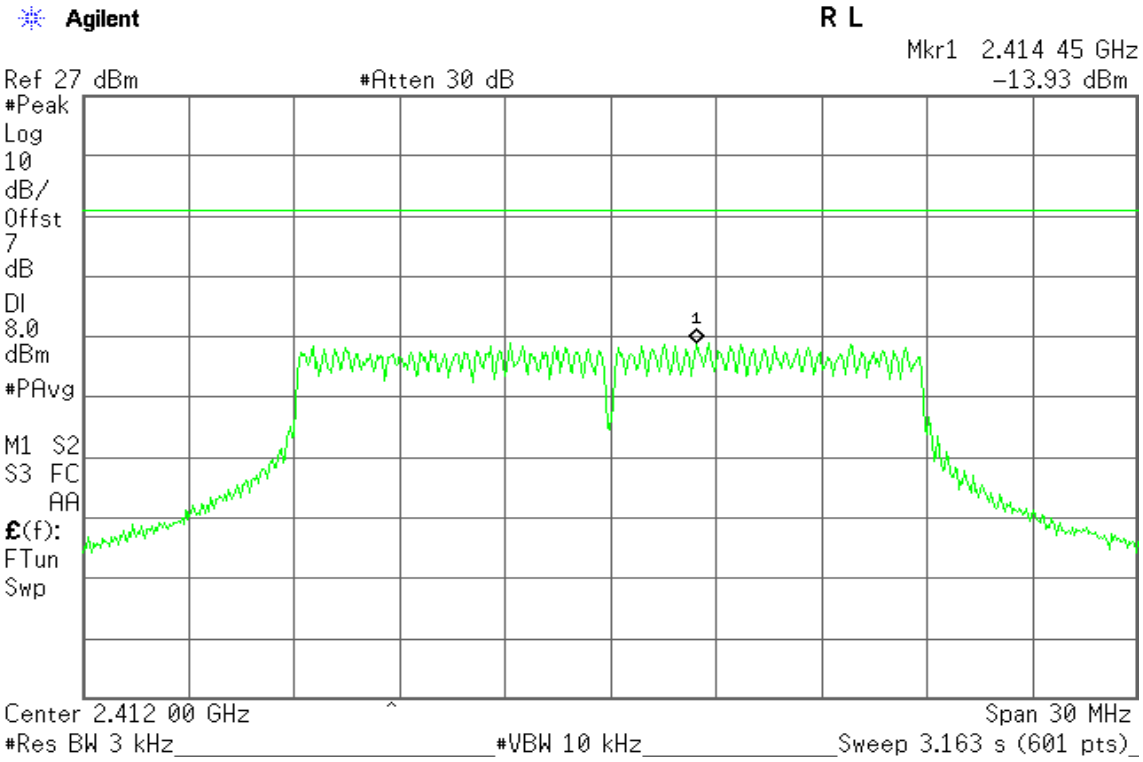


PPSD (CH High)

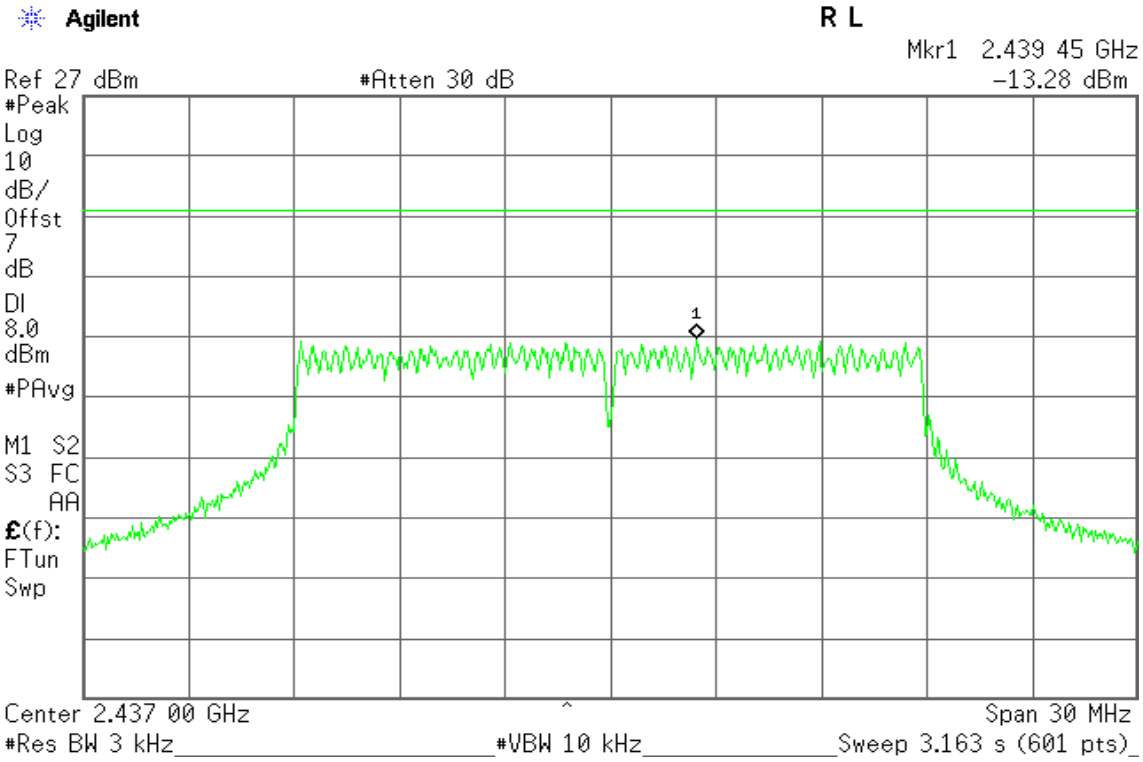


IEEE 802.11n HT20 mode

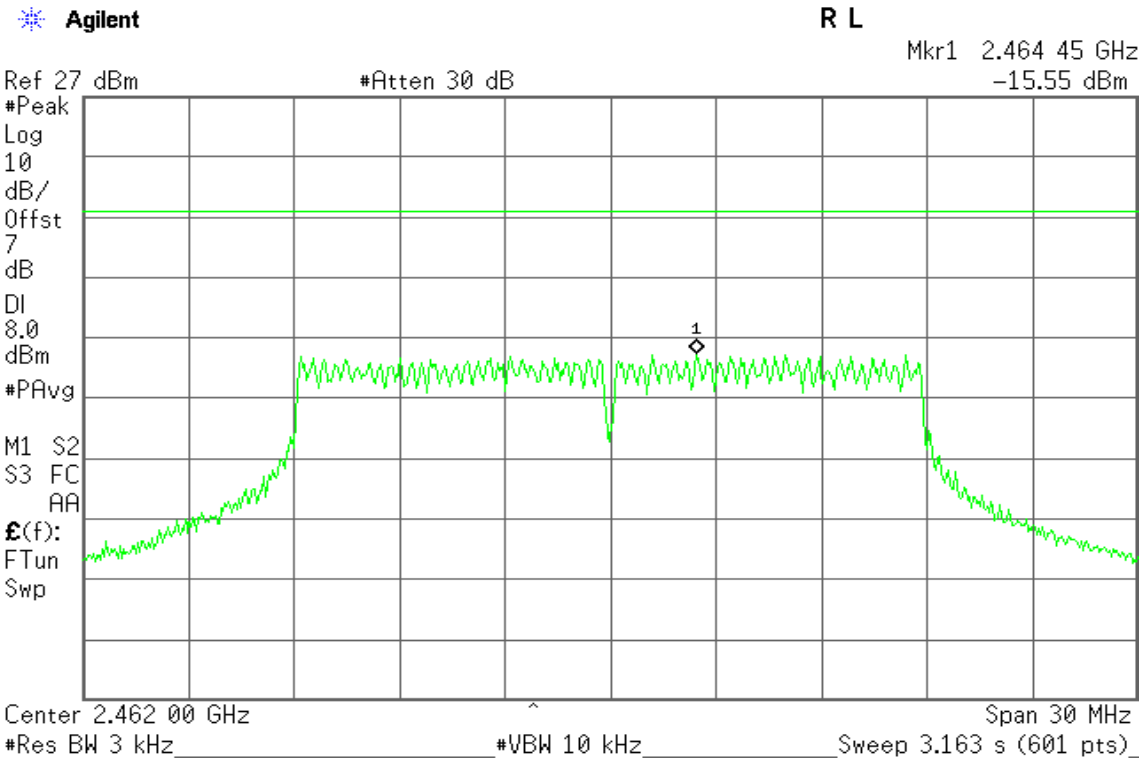
PPSD (CH Low)



PPSD (CH Mid)

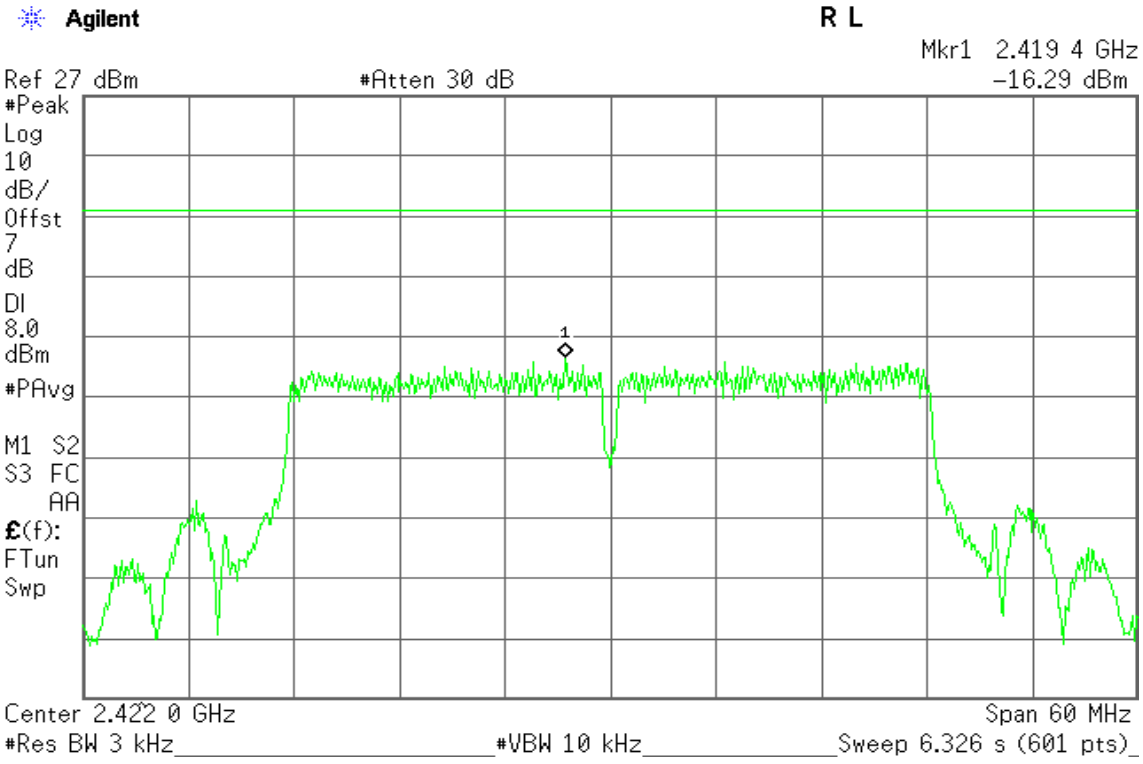


PPSD (CH High)

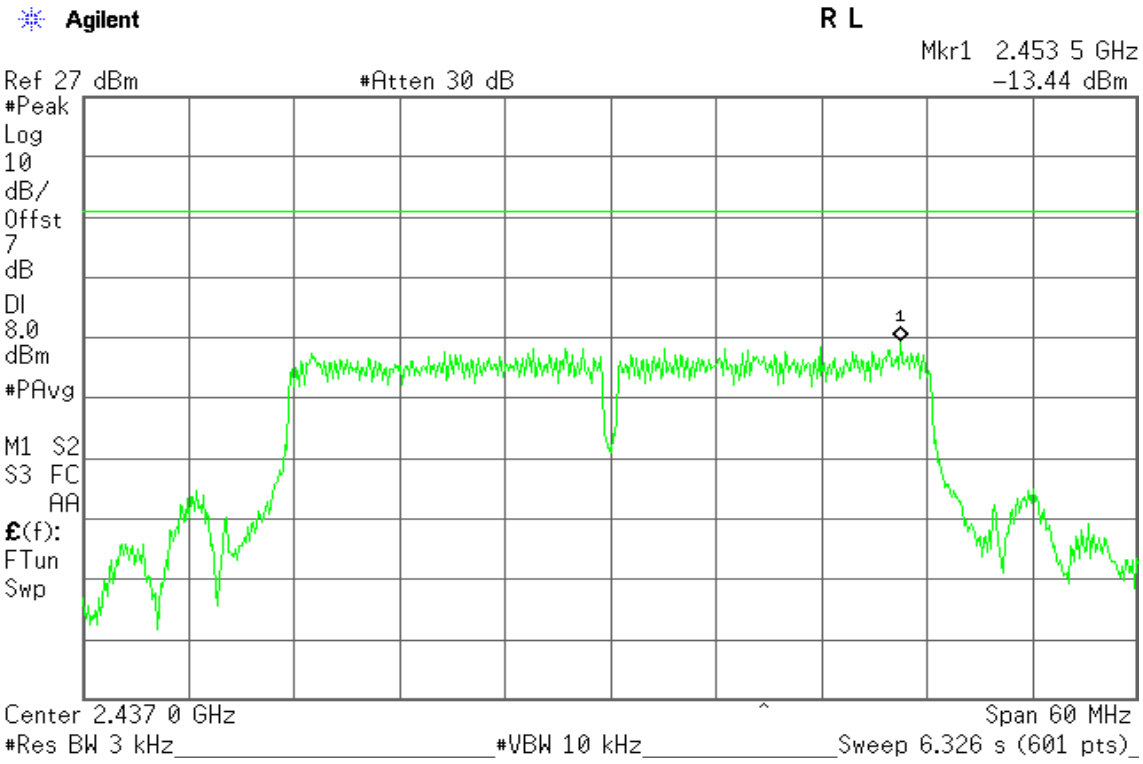


IEEE 802.11n HT40 mode

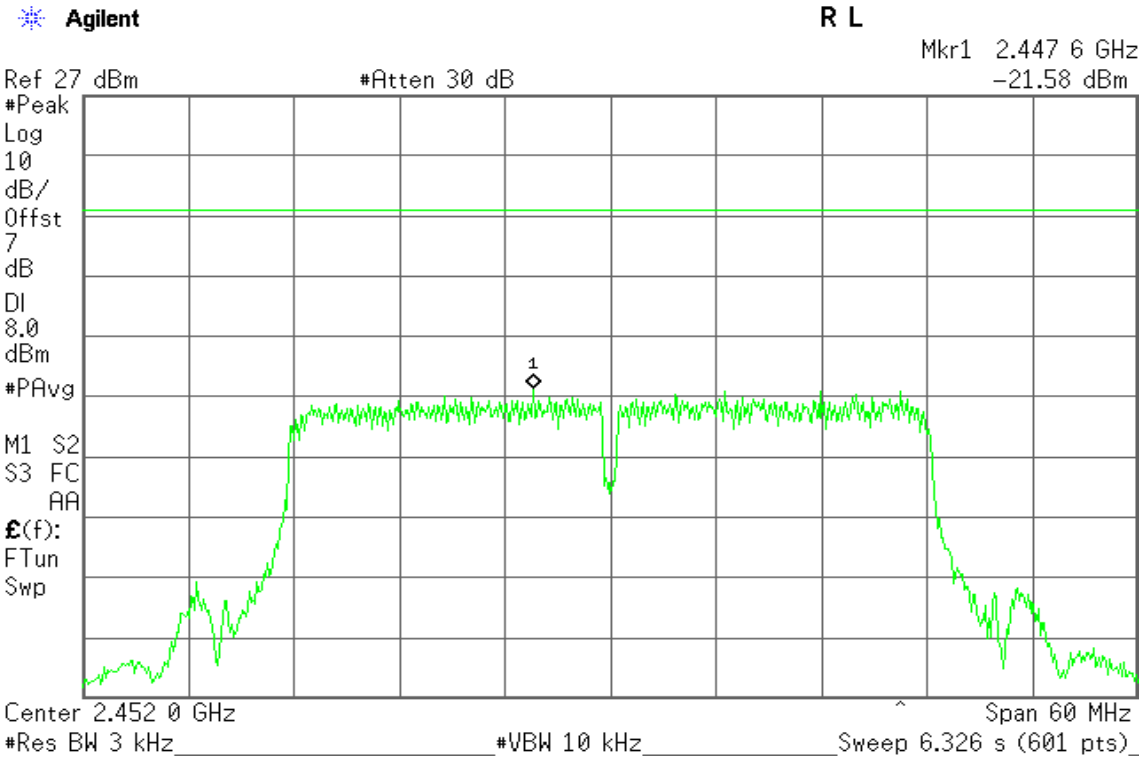
PPSD (CH Low)



PPSD (CH Mid)



PPSD (CH High)



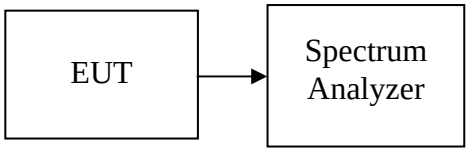
7.6 SPURIOUS EMISSIONS

7.6.1 Conducted Measurement

LIMIT

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

Test Configuration



TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 100 kHz.

Measurements are made over the 30MHz to 26GHz range for IEEE 802.11b/g, 30MHz to 40GHz range for IEEE 802.11a with the transmitter set to the lowest, middle, and highest channels.

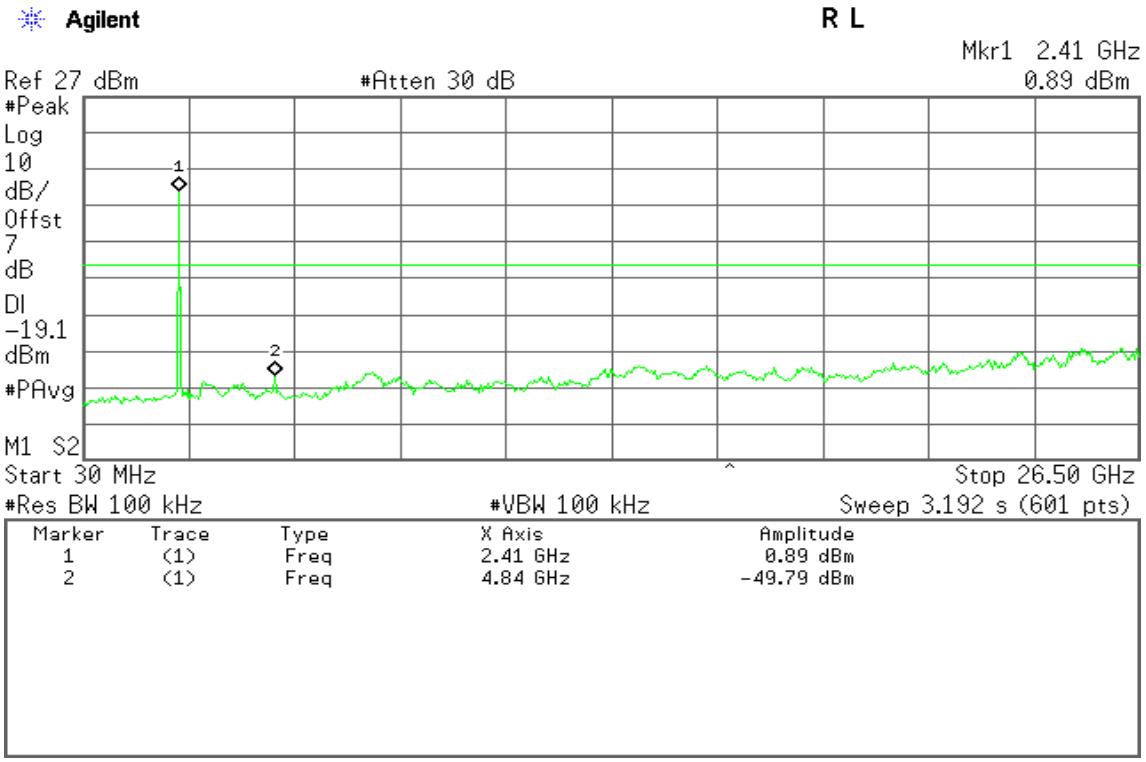
TEST RESULTS

No non-compliance noted

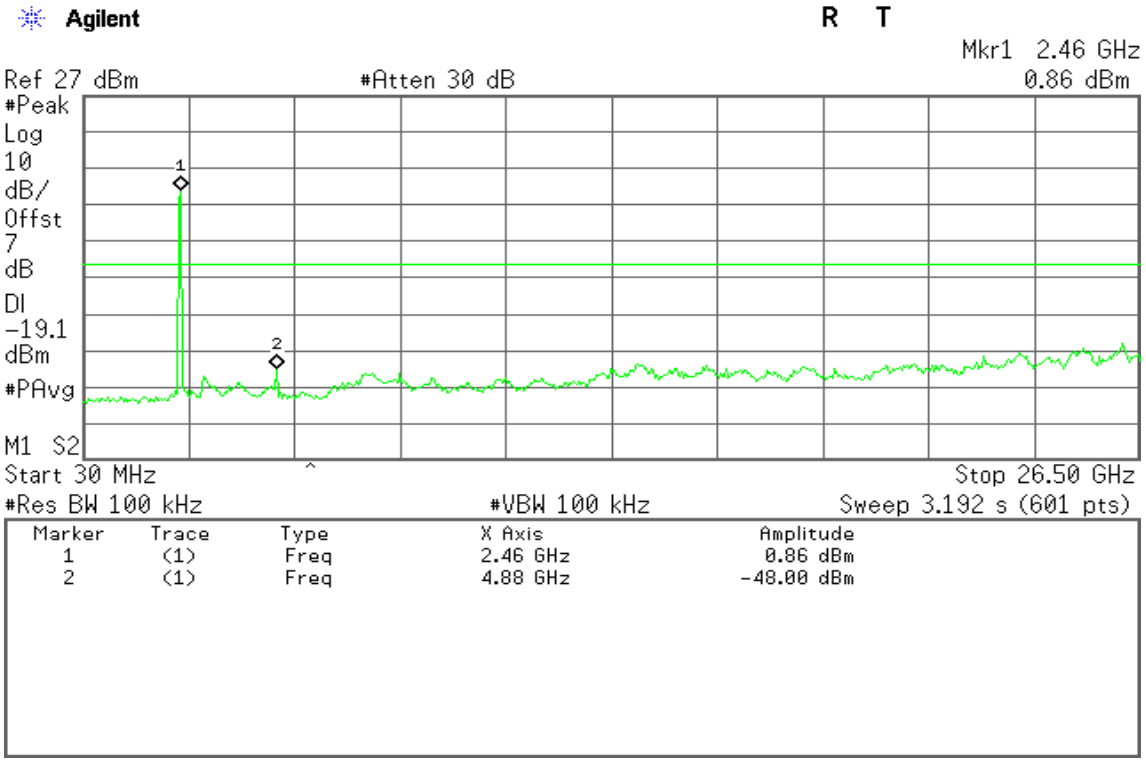
Test Plot

IEEE 802.11b mode

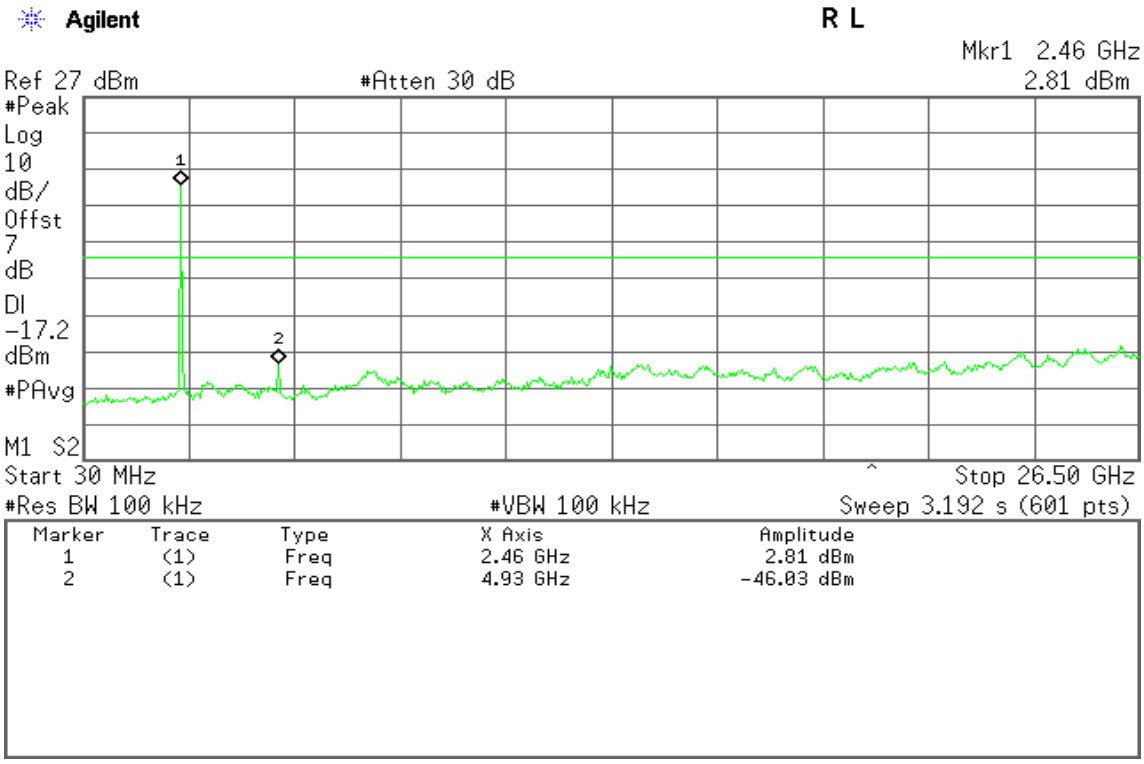
CH Low



CH Mid

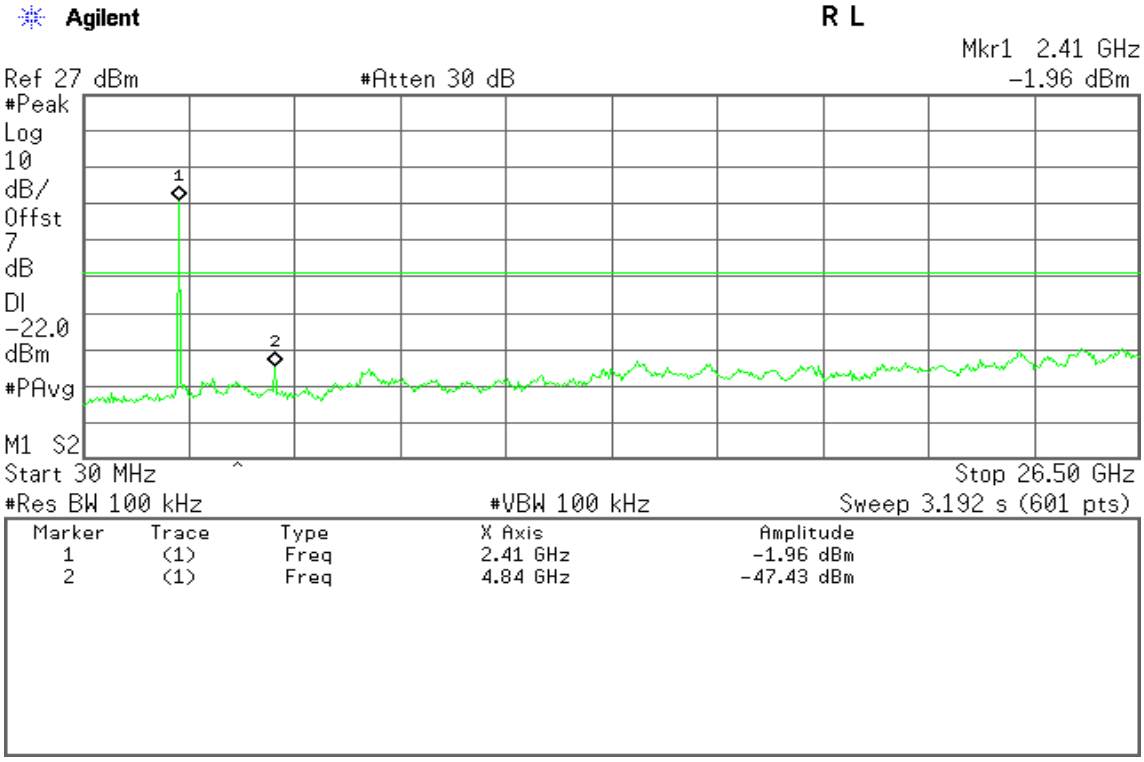


CH High

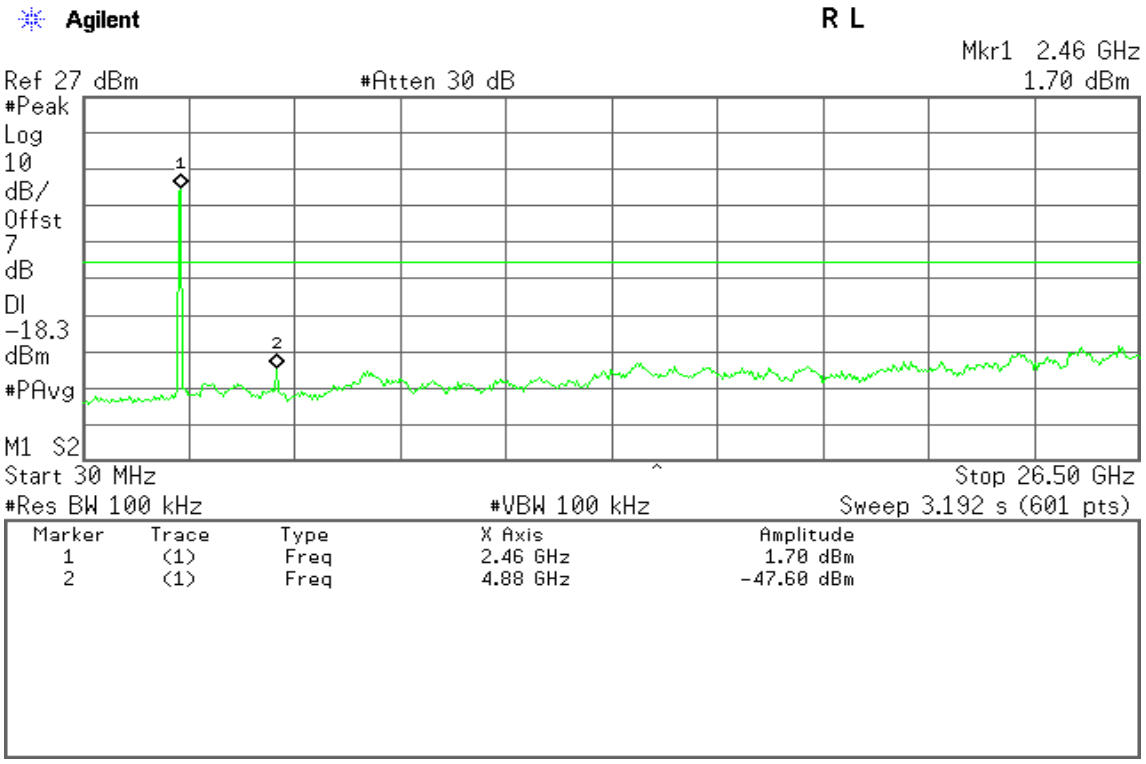


IEEE 802.11g mode

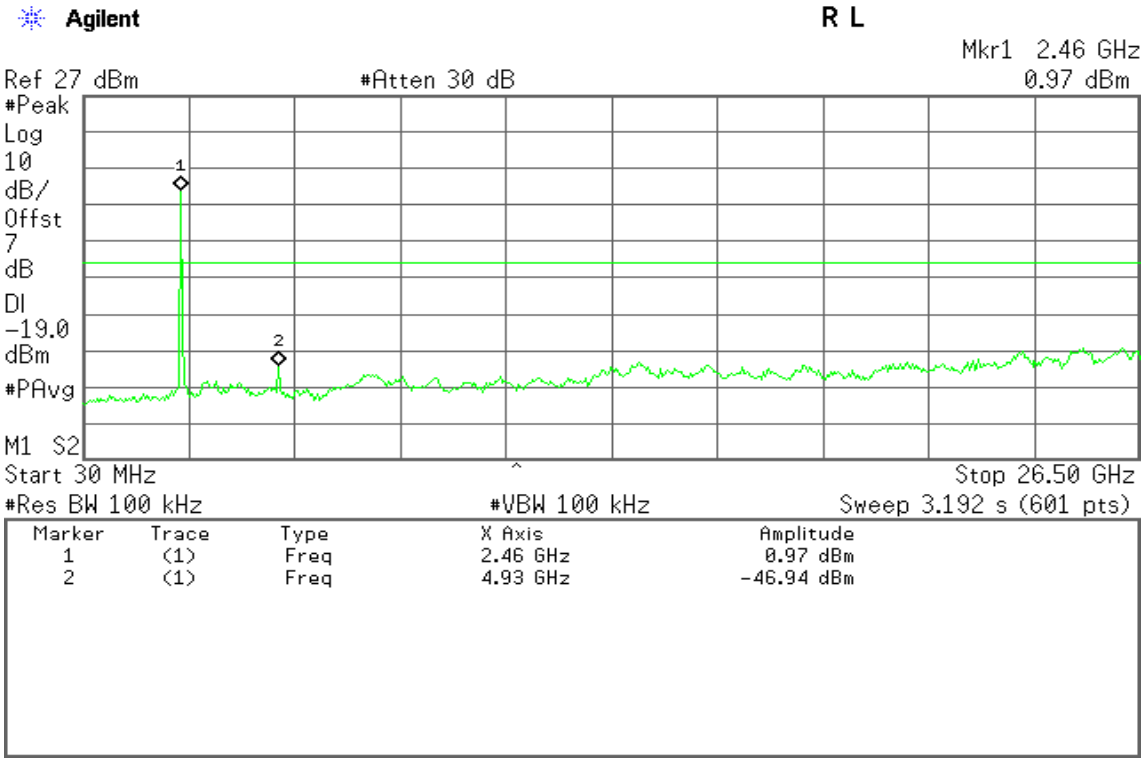
CH Low



CH Mid

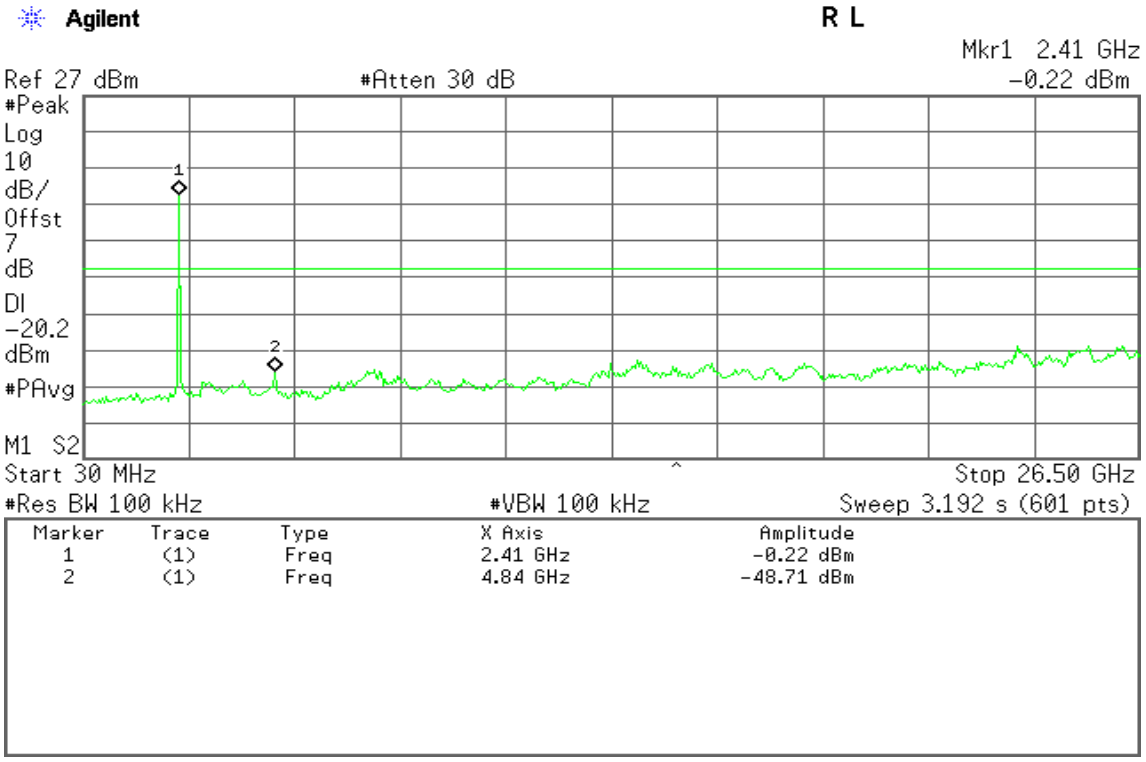


CH High

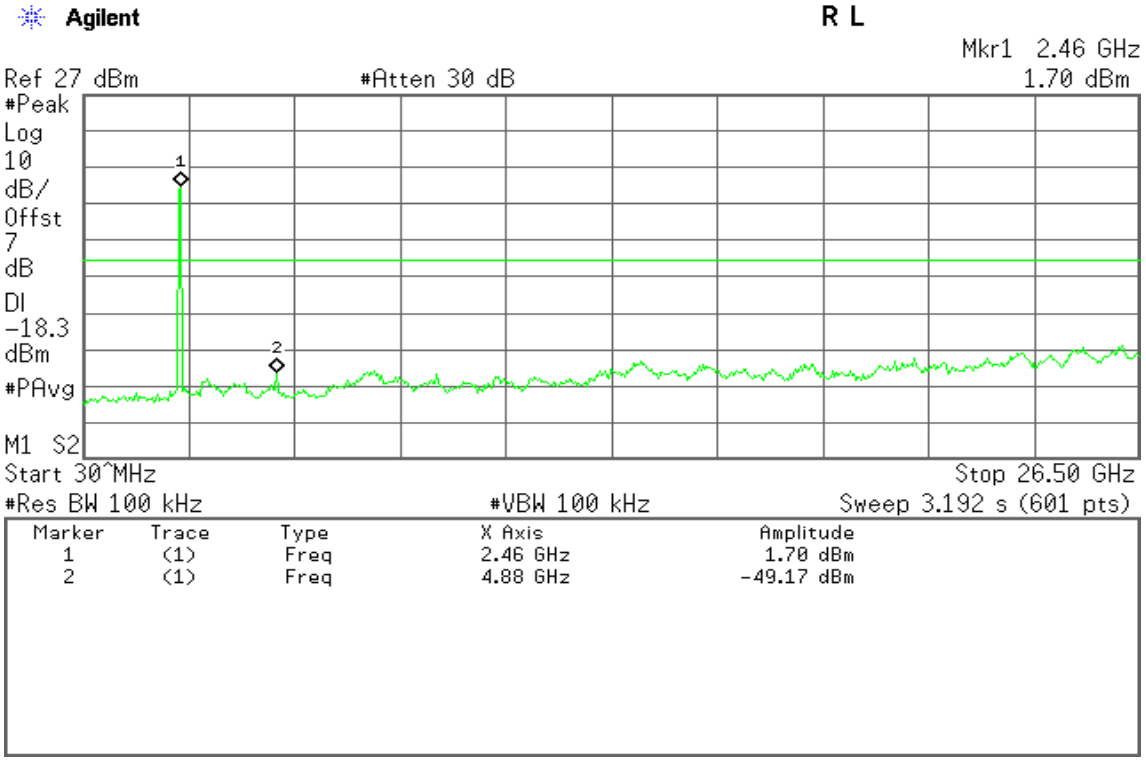


IEEE 802.11n HT20 mode

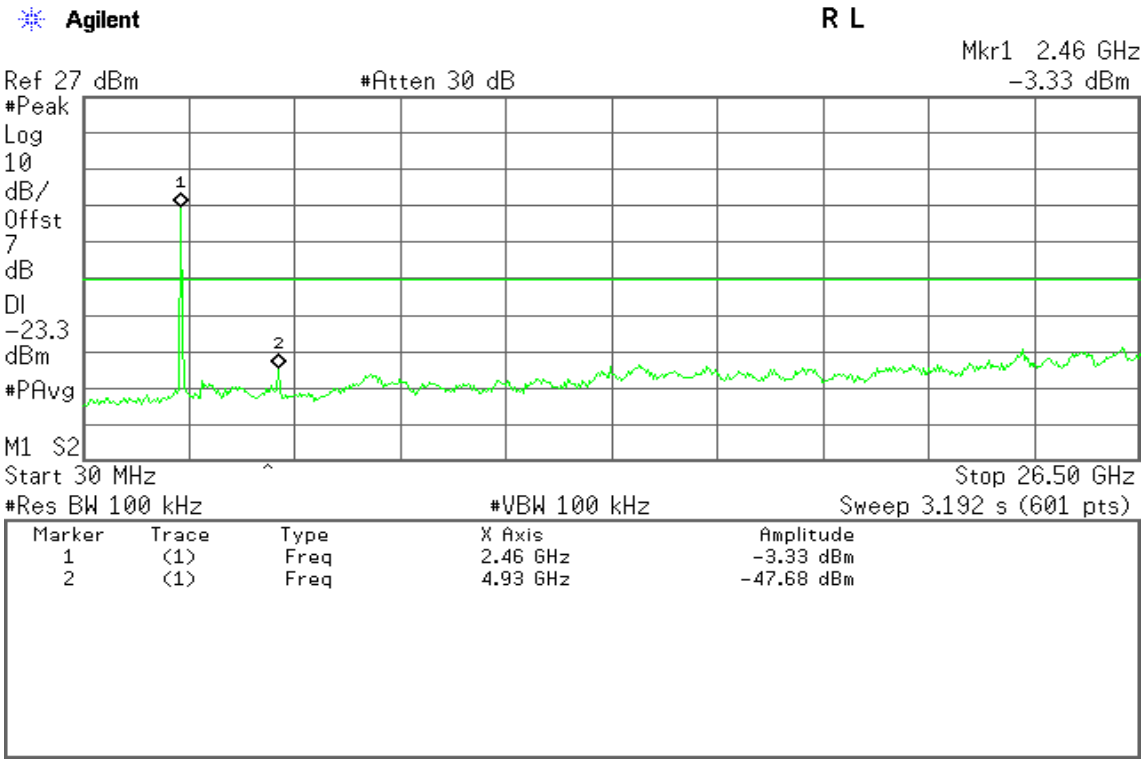
CH Low



CH Mid

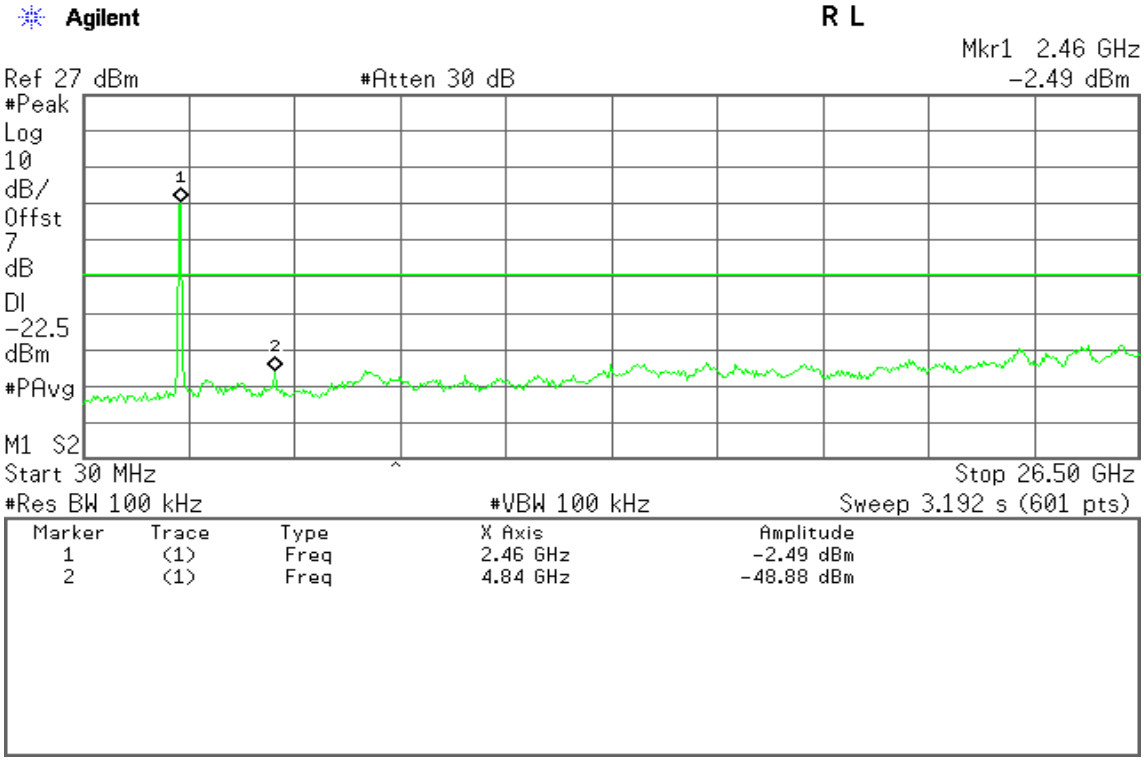


CH High

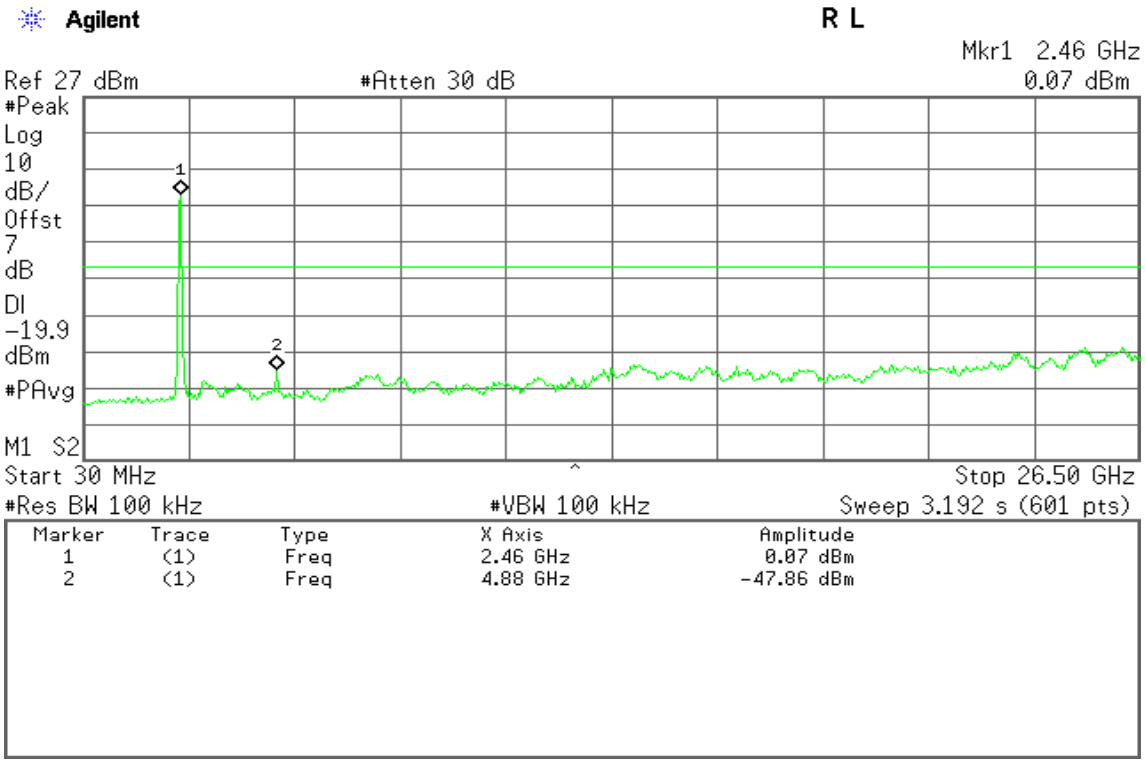


IEEE 802.11n HT40 mode

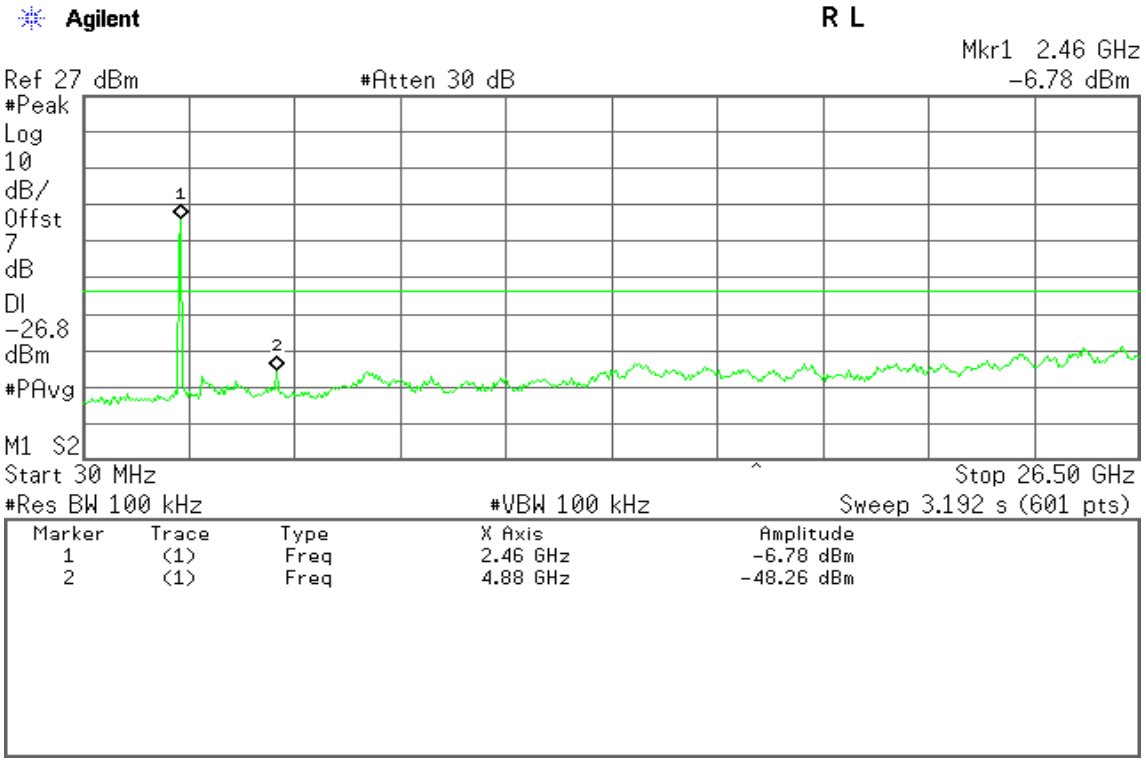
CH Low



CH Mid



CH High



7.6.2 Radiated Emissions

LIMIT

1. According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

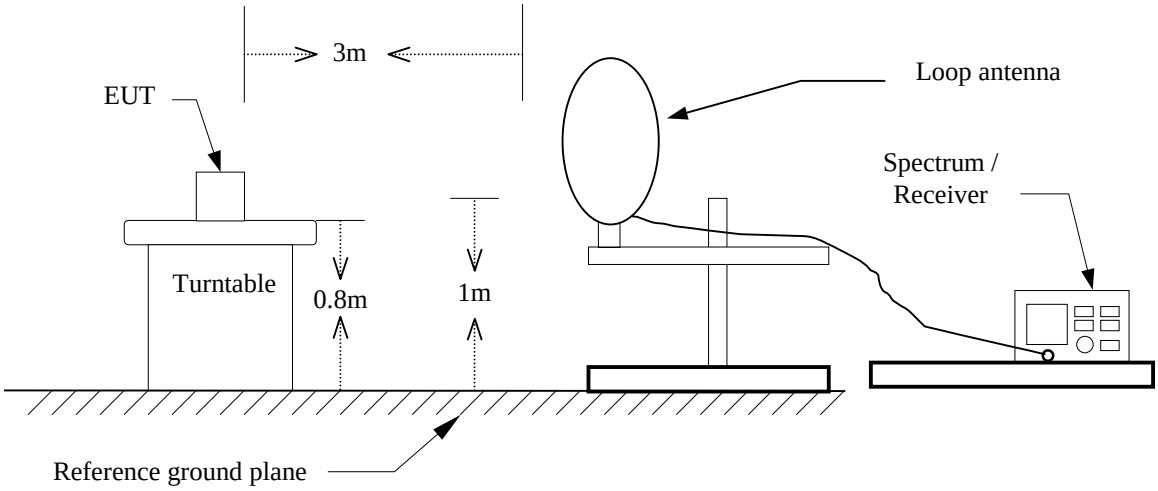
Remark: *Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.*

2. In the above emission table, the tighter limit applies at the band edges.

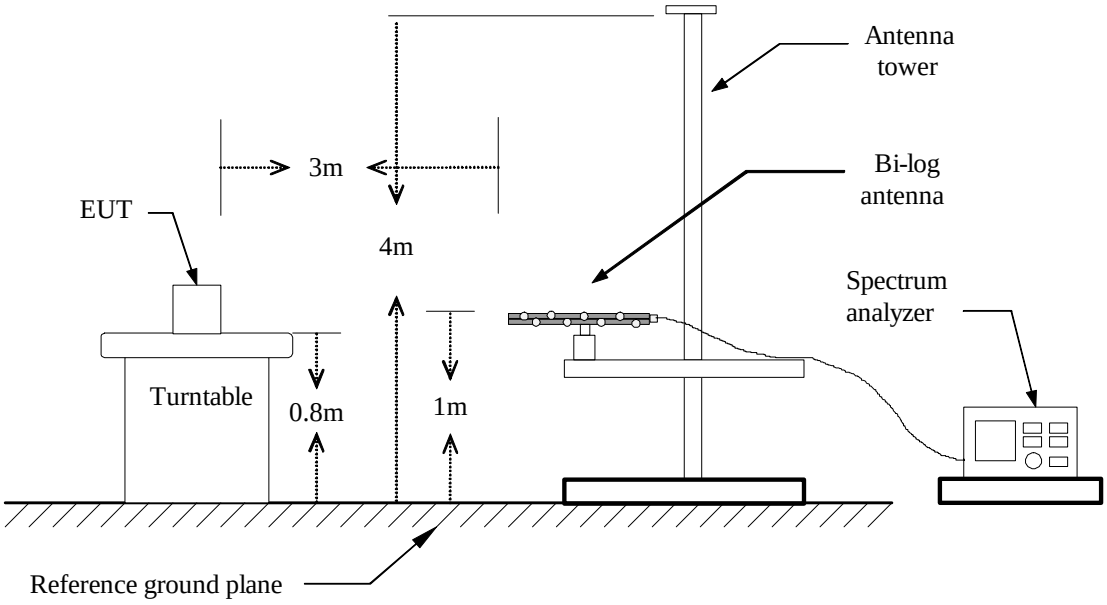
Frequency (MHz)	Field Strength (μV/m at 3-meter)	Field Strength (dBμV/m at 3-meter)
0.009 - 0.490	2400/F(kHz) +80	20LOG((2400/F(kHz))+80)
0.490 - 1.705	24000/F(kHz) +40	20LOG((24000/F(kHz))+40)
1.705 – 30.0	30	69.54
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Test Configuration

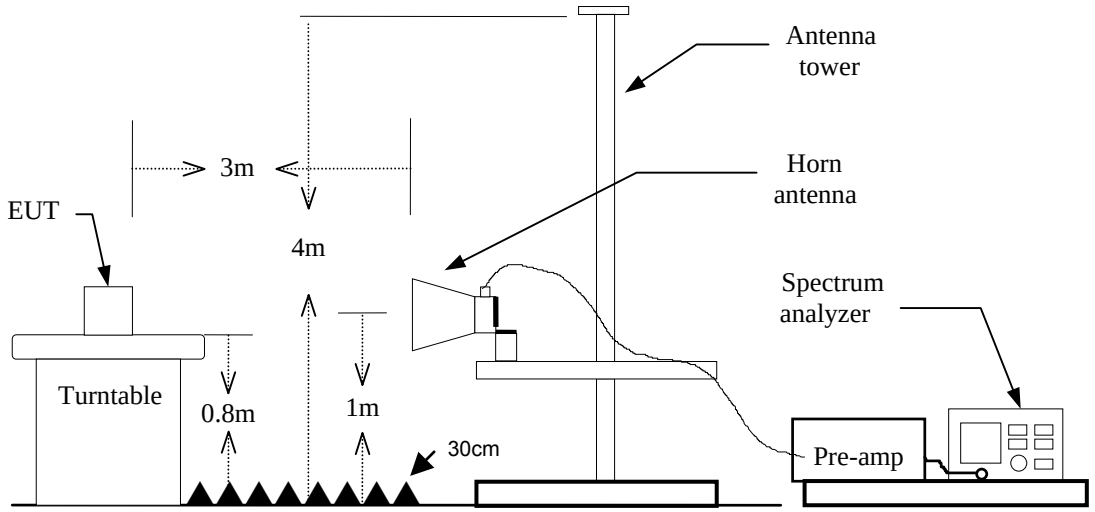
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

   Below 30MHz

   RBW=10kHz / VBW=30kHz / Sweep=AUTO

   30 ~ 1000MHz:

   RBW=100kHz / VBW=300KHz / Sweep=AUTO

   Above 1GHz:

   a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO

   b) AVERAGE: RBW=1MHz / VBW=300Hz / Sweep=AUTO

7. Repeat above procedures until the measurements for all frequencies are complete.

DATA SAMPLE

Below 1 GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol. (H/V)	Remark
x.xx	43.20	-20.71	22.49	40.00	-17.51	V	QP

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor – Amplifier gain + Cable loss
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Q.P. = Quasi-Peak

Above 1 GHz

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
x.xx	45.25	6.91	52.16	74.00	-21.84	H	peak
x.xx	32.33	6.91	39.24	54.00	-14.76	H	AVG

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

Below 1 GHz

Operation Mode:	Normal Link	**Test Date:**	2014/4/2
Temperature:	26°C	**Tested by:**	Louis Shen
Humidity:	56% RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol. (H/V)	Remark
30.6400	47.00	-9.37	37.63	40.00	-2.37	V	QP
74.5500	55.09	-20.55	34.54	40.00	-5.46	V	QP
106.6299	54.17	-16.02	38.15	43.50	-5.35	V	QP
250.1899	55.20	-13.48	41.72	46.00	-4.28	V	QP
500.4499	54.31	-9.24	45.07	46.00	-0.93	V	QP
750.0200	51.20	-6.13	45.07	46.00	-0.93	V	QP
90.1400	51.20	-18.27	32.93	43.50	-10.57	H	QP
139.6100	41.70	-15.41	26.29	43.50	-17.21	H	QP
250.1900	58.50	-13.48	45.02	46.00	-0.98	H	QP
299.6600	51.50	-12.49	39.01	46.00	-6.99	H	QP
500.4500	50.00	-9.24	40.76	46.00	-5.24	H	QP
750.0200	47.90	-6.13	41.77	46.00	-4.23	H	QP

Remark:

1. *No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).*
2. *Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.*
3. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit or as required by the applicant.*
4. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
5. *Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).*

Above 1 GHz

Operation Mode: TX / IEEE 802.11b mode / CH Low **Test Date:** 2014/4/1~2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1564.000	53.67	-4.96	48.71	74.00	-25.29	V	peak
2000.000	53.45	-1.30	52.15	74.00	-21.85	V	peak
2000.000	41.17	-1.30	39.87	54.00	-14.13	V	AVG
2700.000	54.53	-1.47	53.06	74.00	-20.94	V	peak
2700.000	41.70	-1.47	40.23	54.00	-13.77	V	AVG
3765.000	40.44	3.26	43.70	74.00	-30.30	V	peak
4825.000	46.86	2.68	49.54	74.00	-24.46	V	peak
7500.000	39.17	11.54	50.71	74.00	-23.29	V	peak
1398.000	53.31	-6.95	46.36	74.00	-27.64	H	peak
2172.000	54.75	-3.62	51.13	74.00	-22.87	H	peak
2592.000	54.37	-3.40	50.97	74.00	-23.03	H	peak
3905.000	40.91	5.20	46.11	74.00	-27.89	H	peak
4825.000	41.80	5.88	47.68	74.00	-26.32	H	peak
7320.000	38.83	11.72	50.55	74.00	-23.45	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11b mode / CH Mid **Test Date:** 2014/4/1~2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1596.000	53.78	-4.81	48.97	74.00	-25.03	V	peak
1994.000	53.46	-1.39	52.07	74.00	-21.93	V	peak
1994.000	41.31	-1.39	39.92	54.00	-14.08	V	AVG
2688.000	55.56	-1.55	54.01	74.00	-19.99	V	peak
2688.000	43.17	-1.55	41.62	54.00	-12.38	V	AVG
3835.000	41.77	2.91	44.68	74.00	-29.32	V	peak
4875.000	49.77	3.81	53.58	74.00	-20.42	V	peak
4875.000	48.71	3.81	52.52	54.00	-1.48	V	AVG
7500.000	39.96	11.54	51.50	74.00	-22.50	V	peak
1386.000	53.75	-7.26	46.49	74.00	-27.51	H	peak
2192.000	54.26	-3.58	50.68	74.00	-23.32	H	peak
2750.000	54.37	-2.92	51.45	74.00	-22.55	H	peak
4315.000	40.16	7.55	47.71	74.00	-26.29	H	peak
4875.000	41.43	6.73	48.16	74.00	-25.84	H	peak
7295.000	39.24	11.75	50.99	74.00	-23.01	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11b mode / CH High **Test Date:** 2014/4/1~2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1614.000	54.73	-4.91	49.82	74.00	-24.18	V	peak
1992.000	54.40	-1.43	52.97	74.00	-21.03	V	peak
1992.000	41.25	-1.43	39.82	54.00	-14.18	V	AVG
2254.000	53.98	-1.45	52.53	74.00	-21.47	V	peak
2254.000	41.65	-1.45	40.20	54.00	-13.80	V	AVG
2718.000	54.73	-1.58	53.15	74.00	-20.85	V	peak
2718.000	42.27	-1.58	40.69	54.00	-13.31	V	AVG
3785.000	41.02	3.51	44.53	74.00	-29.47	V	peak
4925.000	48.92	4.61	53.53	74.00	-20.47	V	peak
4925.000	46.00	4.61	50.61	54.00	-3.39	V	AVG
7540.000	39.08	11.69	50.77	74.00	-23.23	V	peak
1382.000	54.08	-7.36	46.72	74.00	-27.28	H	peak
2194.000	53.81	-3.57	50.24	74.00	-23.76	H	peak
2692.000	55.01	-3.37	51.64	74.00	-22.36	H	peak
4350.000	40.65	7.29	47.94	74.00	-26.06	H	peak
5910.000	39.76	9.18	48.94	74.00	-25.06	H	peak
7295.000	39.10	11.75	50.85	74.00	-23.15	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11g mode / CH Low **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1594.000	53.75	-4.82	48.93	74.00	-25.07	V	peak
1986.000	53.38	-1.52	51.86	74.00	-22.14	V	peak
2582.000	57.05	-1.95	55.10	74.00	-18.90	V	peak
2582.000	43.63	-1.95	41.68	54.00	-12.32	V	AVG
3630.000	41.10	2.79	43.89	74.00	-30.11	V	peak
4835.000	55.79	2.91	58.70	74.00	-15.30	V	peak
4835.000	48.96	2.91	51.87	54.00	-2.13	V	AVG
7565.000	40.31	11.78	52.09	74.00	-21.91	V	peak
7565.000	27.36	11.78	39.14	54.00	-14.86	V	AVG
1384.000	53.81	-7.31	46.50	74.00	-27.50	H	peak
2130.000	54.54	-3.71	50.83	74.00	-23.17	H	peak
2714.000	54.36	-3.25	51.11	74.00	-22.89	H	peak
4310.000	39.89	7.59	47.48	74.00	-26.52	H	peak
4825.000	45.78	5.88	51.66	74.00	-22.34	H	peak
7320.000	39.23	11.72	50.95	74.00	-23.05	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11g mode / CH Mid **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1552.000	54.09	-5.02	49.07	74.00	-24.93	V	peak
2200.000	53.87	-1.33	52.54	74.00	-21.46	V	peak
2200.000	41.76	-1.33	40.43	54.00	-13.57	V	AVG
2724.000	54.67	-1.62	53.05	74.00	-20.95	V	peak
2724.000	42.40	-1.62	40.78	54.00	-13.22	V	AVG
3735.000	41.19	2.90	44.09	74.00	-29.91	V	peak
4870.000	55.13	3.70	58.83	74.00	-15.17	V	peak
4870.000	47.36	3.70	51.06	54.00	-2.94	V	AVG
7475.000	39.18	11.48	50.66	74.00	-23.34	V	peak
1394.000	53.98	-7.05	46.93	74.00	-27.07	H	peak
2170.000	54.56	-3.63	50.93	74.00	-23.07	H	peak
2582.000	54.64	-3.44	51.20	74.00	-22.80	H	peak
4295.000	39.65	7.58	47.23	74.00	-26.77	H	peak
4870.000	47.41	6.64	54.05	74.00	-19.95	H	peak
4870.000	35.67	6.64	42.31	54.00	-11.69	H	AVG
7300.000	40.29	11.82	52.11	74.00	-21.89	H	peak
7300.000	27.08	11.82	38.90	54.00	-15.10	H	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11g mode / CH High **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1576.000	53.97	-4.90	49.07	74.00	-24.93	V	peak
2016.000	53.86	-1.66	52.20	74.00	-21.80	V	peak
2016.000	41.30	-1.66	39.64	54.00	-14.36	V	AVG
2236.000	54.82	-1.41	53.41	74.00	-20.59	V	peak
2236.000	41.78	-1.41	40.37	54.00	-13.63	V	AVG
2642.000	56.01	-1.88	54.13	74.00	-19.87	V	peak
2642.000	43.63	-1.88	41.75	54.00	-12.25	V	AVG
3510.000	41.40	2.30	43.70	74.00	-30.30	V	peak
4920.000	54.81	4.56	59.37	74.00	-14.63	V	peak
4920.000	47.65	4.56	52.21	54.00	-1.79	V	AVG
7360.000	39.36	10.97	50.33	74.00	-23.67	V	peak
1422.000	53.88	-7.36	46.52	74.00	-27.48	H	peak
2166.000	54.11	-3.63	50.48	74.00	-23.52	H	peak
2790.000	54.34	-2.57	51.77	74.00	-22.23	H	peak
3595.000	40.60	4.05	44.65	74.00	-29.35	H	peak
4925.000	43.52	7.26	50.78	74.00	-23.22	H	peak
7295.000	38.99	11.75	50.74	74.00	-23.26	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11n HT20 mode / CH Low **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1568.000	53.82	-4.94	48.88	74.00	-25.12	V	peak
1998.000	54.16	-1.33	52.83	74.00	-21.17	V	peak
1998.000	41.41	-1.33	40.08	54.00	-13.92	V	AVG
2186.000	53.88	-1.64	52.24	74.00	-21.76	V	peak
2186.000	41.93	-1.64	40.29	54.00	-13.71	V	AVG
2734.000	55.62	-1.68	53.94	74.00	-20.06	V	peak
2734.000	42.04	-1.68	40.36	54.00	-13.64	V	AVG
3760.000	40.94	3.20	44.14	74.00	-29.86	V	peak
4835.000	54.08	2.91	56.99	74.00	-17.01	V	peak
4835.000	49.52	2.91	52.43	54.00	-1.57	V	AVG
7390.000	39.59	11.22	50.81	74.00	-23.19	V	peak
1424.000	54.18	-7.40	46.78	74.00	-27.22	H	peak
2124.000	54.09	-3.73	50.36	74.00	-23.64	H	peak
2628.000	54.80	-3.36	51.44	74.00	-22.56	H	peak
4275.000	41.23	7.24	48.47	74.00	-25.53	H	peak
6145.000	40.91	8.46	49.37	74.00	-24.63	H	peak
7230.000	40.06	10.89	50.95	74.00	-23.05	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11n HT20 mode / CH Mid **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1640.000	54.72	-5.13	49.59	74.00	-24.41	V	peak
2024.000	53.44	-1.84	51.60	74.00	-22.40	V	peak
2234.000	54.39	-1.40	52.99	74.00	-21.01	V	peak
2234.000	42.04	-1.40	40.64	54.00	-13.36	V	AVG
2728.000	54.95	-1.65	53.30	74.00	-20.70	V	peak
2728.000	42.37	-1.65	40.72	54.00	-13.28	V	AVG
3805.000	40.43	3.58	44.01	74.00	-29.99	V	peak
4875.000	55.74	3.81	59.55	74.00	-14.45	V	peak
4875.000	47.05	3.81	50.86	54.00	-3.14	V	AVG
6865.000	39.73	7.55	47.28	74.00	-26.72	V	peak
1354.000	55.20	-8.08	47.12	74.00	-26.88	H	peak
2206.000	54.54	-3.73	50.81	74.00	-23.19	H	peak
2816.000	54.04	-2.36	51.68	74.00	-22.32	H	peak
3840.000	40.89	5.15	46.04	74.00	-27.96	H	peak
4875.000	45.43	6.73	52.16	74.00	-21.84	H	peak
4875.000	37.42	6.73	44.15	54.00	-9.85	H	AVG
7300.000	39.19	11.82	51.01	74.00	-22.99	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode:	TX / IEEE 802.11n HT20 mode / CH High	**Test Date:**	2014/4/2
Temperature:	26℃	**Tested by:**	Francis Lee
Humidity:	56%RH	**Polarity:**	Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1564.000	53.60	-4.96	48.64	74.00	-25.36	V	peak
1984.000	54.08	-1.55	52.53	74.00	-21.47	V	peak
1984.000	41.36	-1.55	39.81	54.00	-14.19	V	AVG
2174.000	54.72	-1.91	52.81	74.00	-21.19	V	peak
2174.000	41.67	-1.91	39.76	54.00	-14.24	V	AVG
2700.000	55.34	-1.47	53.87	74.00	-20.13	V	peak
2700.000	42.85	-1.47	41.38	54.00	-12.62	V	AVG
3805.000	41.37	3.58	44.95	74.00	-29.05	V	peak
4925.000	48.54	4.61	53.15	74.00	-20.85	V	peak
4925.000	46.39	4.61	51.00	54.00	-3.00	V	AVG
7515.000	39.34	11.60	50.94	74.00	-23.06	V	peak
1942.000	54.42	-6.06	48.36	74.00	-25.64	H	peak
2194.000	53.89	-3.57	50.32	74.00	-23.68	H	peak
2870.000	53.41	-1.95	51.46	74.00	-22.54	H	peak
3780.000	41.10	4.83	45.93	74.00	-28.07	H	peak
5220.000	41.71	7.04	48.75	74.00	-25.25	H	peak
7285.000	39.36	11.62	50.98	74.00	-23.02	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11n HT40 mode / CH Low **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1590.000	54.16	-4.84	49.32	74.00	-24.68	V	peak
2006.000	53.28	-1.44	51.84	74.00	-22.16	V	peak
2706.000	55.17	-1.51	53.66	74.00	-20.34	V	peak
2706.000	42.53	-1.51	41.02	54.00	-12.98	V	AVG
3795.000	41.40	3.63	45.03	74.00	-28.97	V	peak
4845.000	50.45	3.13	53.58	74.00	-20.42	V	peak
4845.000	48.36	3.13	51.49	54.00	-2.51	V	AVG
7295.000	40.71	10.46	51.17	74.00	-22.83	V	peak
1386.000	53.25	-7.26	45.99	74.00	-28.01	H	peak
2174.000	54.88	-3.62	51.26	74.00	-22.74	H	peak
2806.000	54.64	-2.43	52.21	74.00	-21.79	H	peak
2806.000	41.96	-2.43	39.53	54.00	-14.47	H	AVG
3625.000	41.95	4.06	46.01	74.00	-27.99	H	peak
4845.000	42.07	6.21	48.28	74.00	-25.72	H	peak
7325.000	39.09	11.69	50.78	74.00	-23.22	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11n HT40 mode / CH Mid **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1570.000	53.48	-4.93	48.55	74.00	-25.45	V	peak
2014.000	53.88	-1.62	52.26	74.00	-21.74	V	peak
2014.000	41.62	-1.62	40.00	54.00	-14.00	V	AVG
2700.000	55.42	-1.47	53.95	74.00	-20.05	V	peak
2700.000	43.67	-1.47	42.20	54.00	-11.80	V	AVG
3795.000	40.67	3.63	44.30	74.00	-29.70	V	peak
4870.000	55.92	3.70	59.62	74.00	-14.38	V	peak
4870.000	47.35	3.70	51.05	54.00	-2.95	V	AVG
7545.000	38.98	11.71	50.69	74.00	-23.31	V	peak
1398.000	53.55	-6.95	46.60	74.00	-27.40	H	peak
2094.000	54.24	-3.94	50.30	74.00	-23.70	H	peak
2866.000	53.86	-1.98	51.88	74.00	-22.12	H	peak
3835.000	41.28	5.14	46.42	74.00	-27.58	H	peak
4875.000	45.80	6.73	52.53	74.00	-21.47	H	peak
4875.000	38.60	6.73	45.33	54.00	-8.67	H	AVG
7300.000	39.15	11.82	50.97	74.00	-23.03	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

Operation Mode: TX / IEEE 802.11n HT40 mode / CH High **Test Date:** 2014/4/2

Temperature: 26℃ **Tested by:** Francis Lee

Humidity: 56%RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant. Pol H/V	Remark
1544.000	53.50	-5.05	48.45	74.00	-25.55	V	peak
2016.000	53.53	-1.66	51.87	74.00	-22.13	V	peak
2252.000	54.05	-1.44	52.61	74.00	-21.39	V	peak
2252.000	42.45	-1.44	41.01	54.00	-12.99	V	AVG
2692.000	55.38	-1.53	53.85	74.00	-20.15	V	peak
2692.000	43.89	-1.53	42.36	54.00	-11.64	V	AVG
3615.000	40.99	2.86	43.85	74.00	-30.15	V	peak
4905.000	47.25	4.42	51.67	74.00	-22.33	V	peak
7400.000	39.46	11.30	50.76	74.00	-23.24	V	peak
1402.000	53.57	-6.94	46.63	74.00	-27.37	H	peak
2186.000	53.89	-3.59	50.30	74.00	-23.70	H	peak
2818.000	54.27	-2.34	51.93	74.00	-22.07	H	peak
3870.000	40.80	5.18	45.98	74.00	-28.02	H	peak
4905.000	41.72	7.17	48.89	74.00	-25.11	H	peak
7345.000	39.25	11.59	50.84	74.00	-23.16	H	peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*

7.7 POWERLINE CONDUCTED EMISSIONS

LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

***** *Decreases with the logarithm of the frequency.*

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Test Data

Operation Mode:	Normal Link	**Test Date:**	2014/4/2
Temperature:	25℃	**Tested by:**	Louis Shen
Humidity:	57% RH		

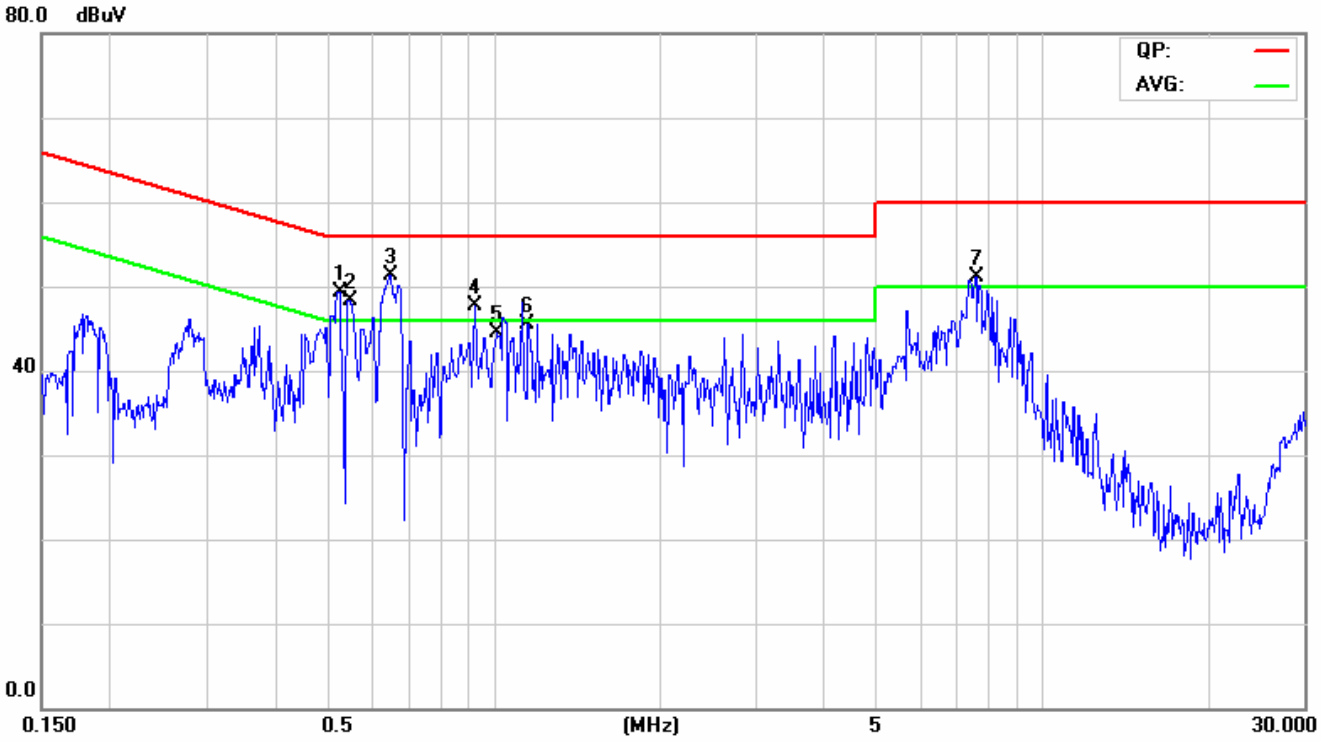
Freq. (MHz)	QP Reading	AV Reading	Corr. factor	QP Result	AV Result	QP Limit	AV Limit	QP Margin	AV Margin	Note
0.5242	35.29	19.38	9.85	45.14	29.23	56.00	46.00	-10.86	-16.77	L1
0.5470	35.13	21.35	9.85	44.98	31.20	56.00	46.00	-11.02	-14.80	L1
0.6491	37.25	23.15	9.86	47.11	33.01	56.00	46.00	-8.89	-12.99	L1
0.9272	31.49	16.17	9.88	41.37	26.05	56.00	46.00	-14.63	-19.95	L1
1.0140	31.00	18.30	9.89	40.89	28.19	56.00	46.00	-15.11	-17.81	L1
1.1454	26.92	15.25	9.90	36.82	25.15	56.00	46.00	-19.18	-20.85	L1
7.6364	32.58	23.10	10.16	42.74	33.26	60.00	50.00	-17.26	-16.74	L1
0.5248	35.48	19.50	9.77	45.25	29.27	56.00	46.00	-10.75	-16.73	L2
0.5473	35.11	21.27	9.77	44.88	31.04	56.00	46.00	-11.12	-14.96	L2
0.6463	36.86	23.05	9.79	46.65	32.84	56.00	46.00	-9.35	-13.16	L2
0.6723	35.01	19.12	9.79	44.80	28.91	56.00	46.00	-11.20	-17.09	L2
0.9119	30.28	15.95	9.82	40.10	25.77	56.00	46.00	-15.90	-20.23	L2
7.5967	31.57	22.17	10.19	41.76	32.36	60.00	50.00	-18.24	-17.64	L2

Remark:

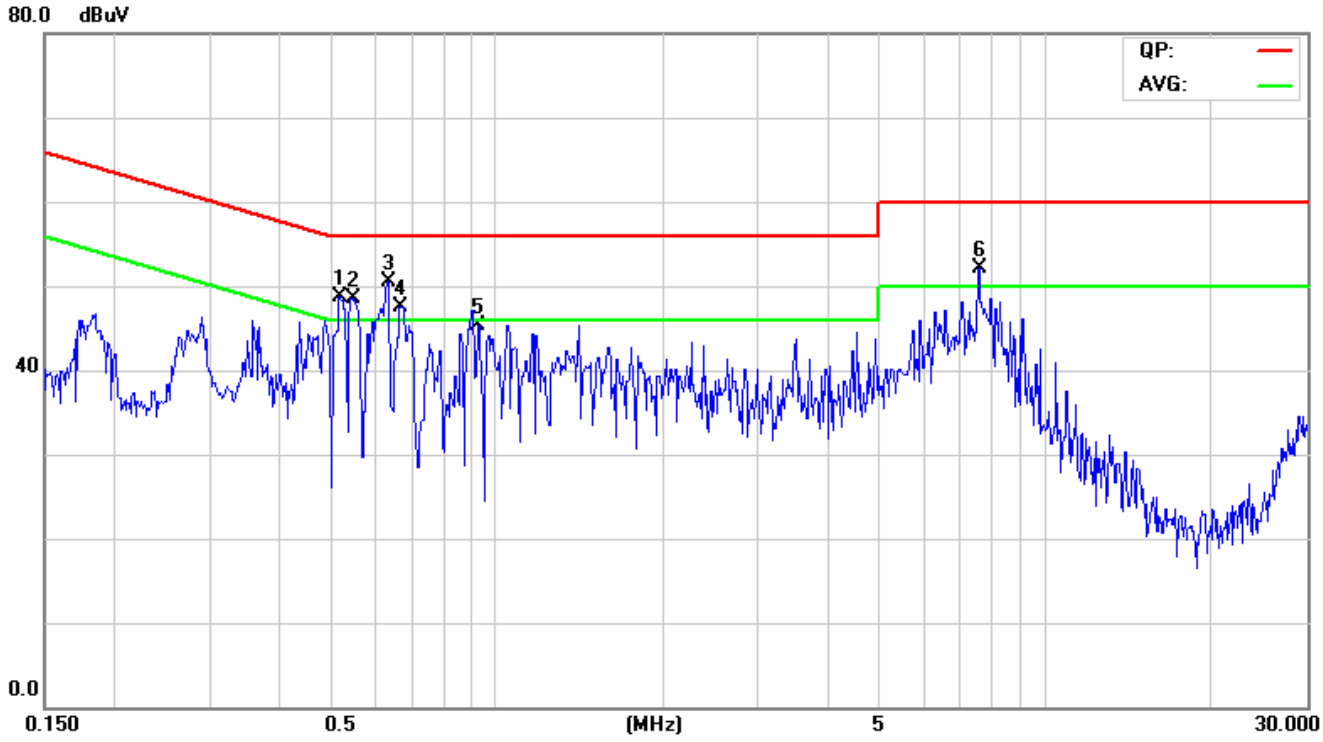
1. *Measuring frequencies from 0.15 MHz to 30MHz.*
2. *The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.*
3. *The IF bandwidth of SPA between 0.15MHz to 30MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15MHz to 30MHz was 9kHz;*
4. *L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)*

Test Plots

Conducted emissions (Line 1)

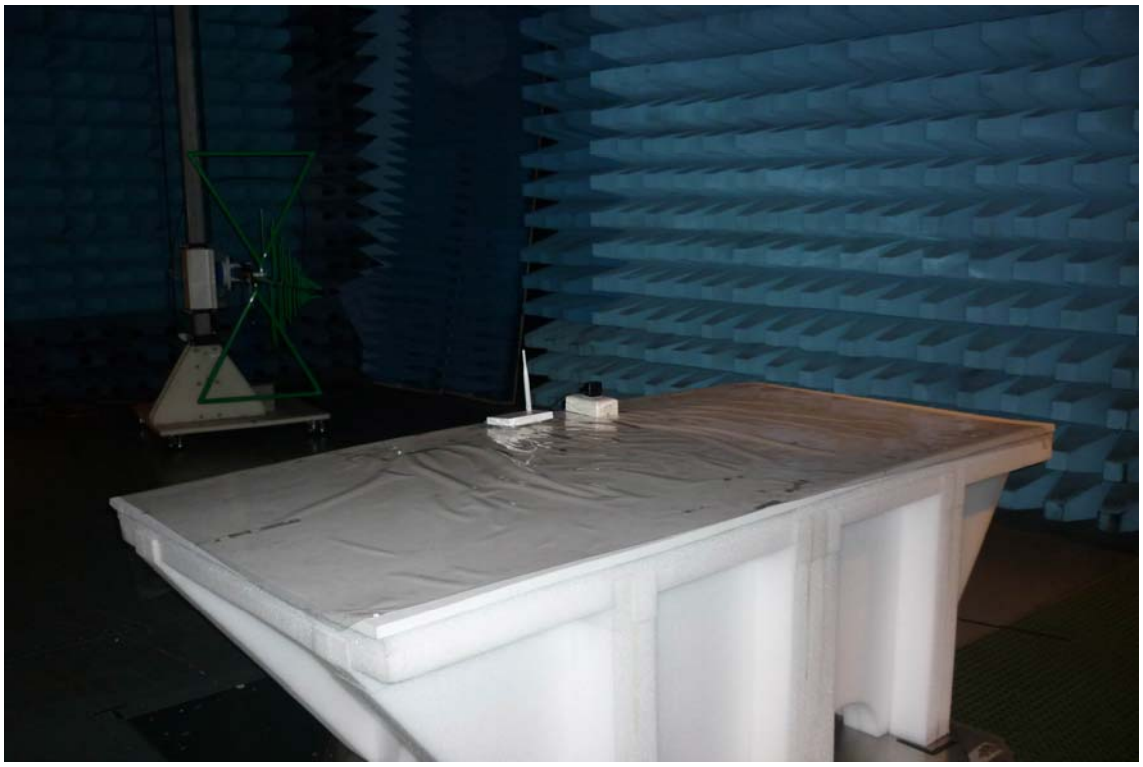


Conducted emissions (Line 2)

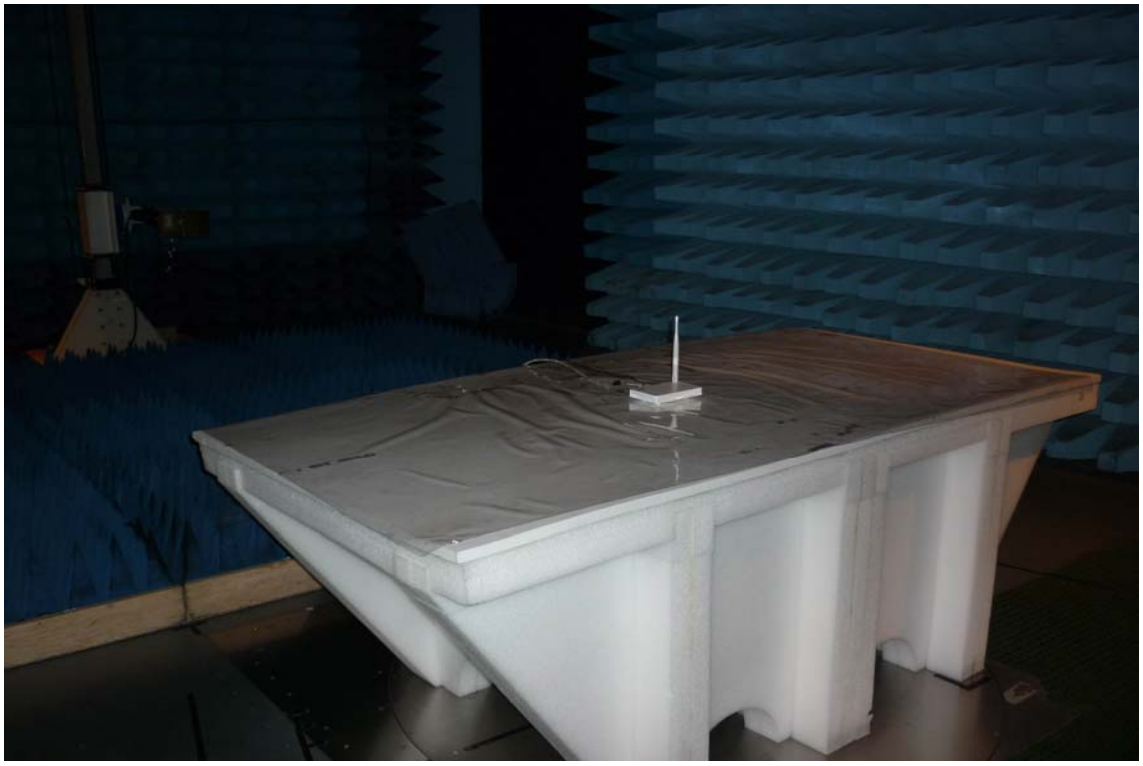


8 APPENDIX I
PHOTOGRAPHS OF TEST SETUP

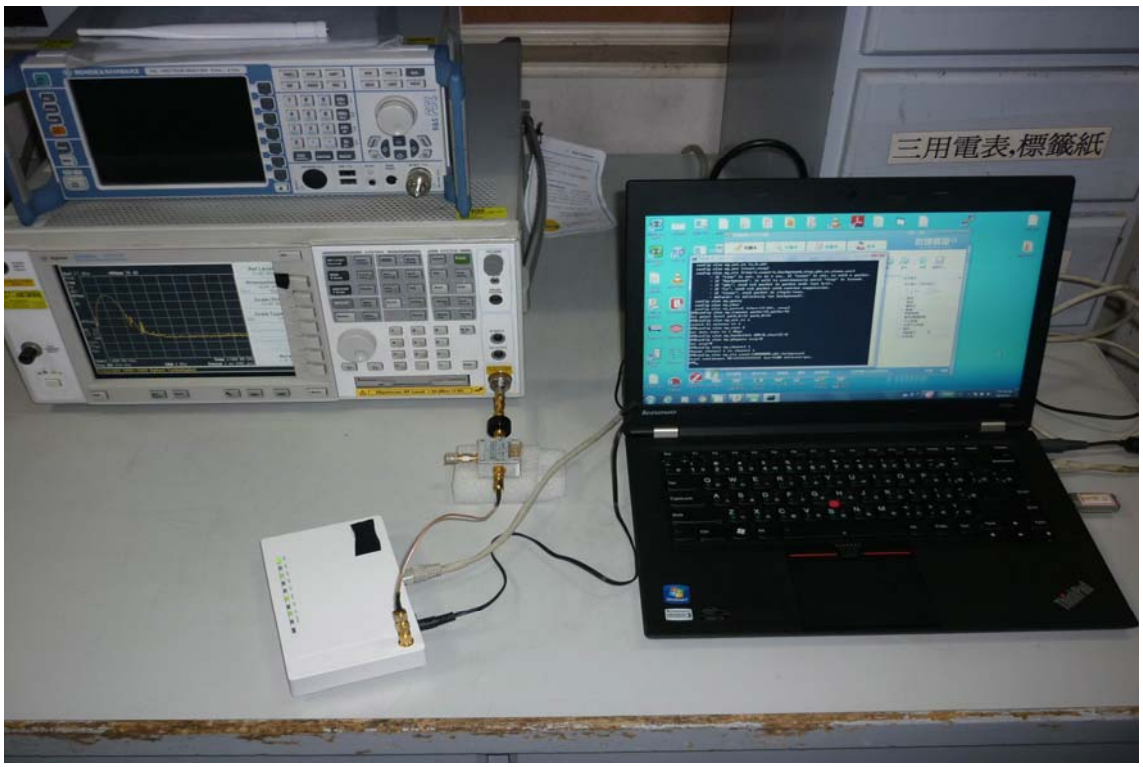
Radiated Emissions Setup Photos
Below 1GHz



Above 1GHz



Conducted Emissions Setup Photo



Powerline Conducted Emissions Setup Photos

9 APPENDIX II: PHOTOGRAPHS OF EUT

Refer to T140328D06 Photographs.