

TEST REPORT

Reference No..... : WTS20X09065420W-3
FCC ID : ZLZ-WLINK
Applicant : Shenzhen Mindray Bio-Medical Electronics Co., Ltd.
Address : Mindray Building, Keji 12th Road South, High-tech Industrial Park, Nanshan,
Shenzhen 518057, PEOPLE'S REPUBLIC OF CHINA
Product Name : wireless module
Test Model. : Wlink
Standards : FCC Part 15.247
Date of Receipt sample : Oct. 10, 2020
Date of Test..... : Oct. 10, 2020 to Nov.24, 2020
Date of Issue : Nov.24, 2020
Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

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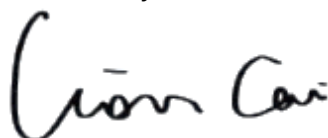
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Report version

Version No.	Date of issue	Description
Rev.00	Nov.24, 2020	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Shenzhen Mindray Bio-Medical Electronics Co., Ltd
Address of applicant: Mindray Building, Keji 12th Road South, High-tech Industrial Park, Nanshan, Shenzhen 518057, PEOPLE'S REPUBLIC OF CHINA

Manufacturer: Shenzhen Mindray Bio-Medical Electronics Co., Ltd.
Address of manufacturer: 1203 Nanhuan Avenue, Guangming District, Shenzhen, PEOPLE'S REPUBLIC OF CHINA

General Description of EUT	
Product Name:	wireless module
Trade Name:	/
Model No.:	Wlink
Adding Model(s):	/
Rated Voltage:	DC3.3V
Software Version:	V1.0
Hardware Version:	V1.0
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n-HT20
Frequency Range:	2412-2462MHz for 802.11b/g/n-HT20
RF Output Power:	16.91dBm (Conducted)
Type of Modulation:	DBPSK,BPSK,DQPSK,QPSK,16QAM,64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to72.2Mbps
Quantity of Channels:	11 for 802.11b/g/n-HT20
Channel Separation:	5MHz
Type of Antenna:	ANT 1: FPC dipole ANT 2: FPC dipole ANT 3: FPC dipole ANT 4: Copper pipe dipole ANT 5: Copper pipe dipole ANT 6: FPC PIFA ANT 7: FPC PIFA

Antenna Gain:	ANT 1: 2.79dBi, ANT 2: 2.79dBi ANT 3: 2.6dBi , ANT 4 :1.32dBi ANT 5 :1.87dBi, ANT 6 :1dBi ANT 7 :1.56dBi
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1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

558074 D01 15.247 Meas Guidance v05r02: Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under section 15.247 of the Fcc rules.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02.

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

Address of the test laboratory

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd., has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, with a duty cycle equal to 100%, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b-11Mbps	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM2	802.11g-54Mbps	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM3	802.11n-HT20-MCS7	Low:2412MHz, Middle:2437MHz,High:2462MHz

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	50~55 %.
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Accessories Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	TianYi310-14ISK	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.42\text{dB}$
Occupied Bandwidth	Conducted	$\pm 1.5\%$
Power Spectral Density	Conducted	$\pm 1.8\text{dB}$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emissions	Conducted	9-150kHz $\pm 3.74\text{dB}$
		0.15-30MHz $\pm 3.34\text{dB}$
Transmitter Spurious Emissions	Radiated	30-200MHz $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-26GHz $\pm 3.92\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2020-04-28	2021-04-27
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2020-04-28	2021-04-27
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2020-04-28	2021-04-27
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2020-04-28	2021-04-27
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2020-04-28	2021-04-27
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2019-05-05	2021-05-04
SEMT-1042	Horn Antenna	ETS	3117	00086197	2019-05-05	2021-05-04
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2019-05-05	2021-05-04
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2019-05-05	2021-05-04
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2020-04-28	2021-04-27
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2020-04-28	2021-04-27
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2020-04-28	2021-04-27
SEMT-1168	Pre-amplifier	Direction Systems Inc.	PAP-0126	14141-12838	2020-04-28	2021-04-27
SEMT-1169	Pre-amplifier	Direction Systems Inc.	PAP-2640	14145-14153	2020-04-28	2021-04-27
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2020-04-28	2021-04-27
SEMT-1170	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2019-05-05	2021-05-04
SEMT-1166	Power Limiter	Agilent	N9356B	MY45450376	2020-04-28	2021-04-27
SEMT-1048	RF Limiter	ATTEN	AT-BSF-2400~2500	/	2020-04-28	2021-04-27
SEMT-1076	RF Switcher	Top Precision	RCS03-A2	/	2020-04-28	2021-04-27
SEMT-C001	Cable	Zheng DI	LL142-07-07-10M(A)	/	2020-03-17	2021-03-16
SEMT-C002	Cable	Zheng DI	ZT40-2.92J-2.92J-6M	/	2020-03-17	2021-03-16
SEMT-C003	Cable	Zheng DI	ZT40-2.92J-2.92J-2.5M	/	2020-03-17	2021-03-16
SEMT-C004	Cable	Zheng DI	2M0RFC	/	2020-03-17	2021-03-16
SEMT-C005	Cable	Zheng DI	1M0RFC	/	2020-03-17	2021-03-16
SEMT-C006	Cable	Zheng DI	1M0RFC	/	2020-03-17	2021-03-16

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§2.1093	RF Exposure	Compliant
§15.203;15.247(b)(4)(i)	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	Compliant
§15.207(a)	Conducted Emission	Compliant
§15.247(e)	Power Spectral Density	Compliant
§15.247(a)(2)	DTS Bandwidth	Compliant
§15.247(b)(3)	RF Output Power	Compliant
§15.209(a)	Radiated Emission	Compliant
§15.247(d)	Band Edge (Out of Band Emissions)	Compliant

N/A: Not applicable

3. RF Exposure

3.1 Standard Applicable

According to §1.1307 and §2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the RF Exposure Report.

4. Antenna Requirement

4.1 Standard Applicable

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

4.2 Evaluation Information

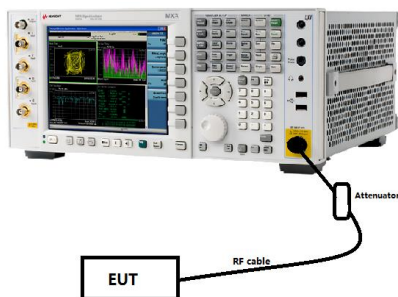
This product has an external antenna, fulfill the requirement of this section.

5. Power Spectral Density

5.1 Standard Applicable

According to 15.247(a)(1)(iii), 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.

5.2 Test Setup Block Diagram



5.3 Test Procedure

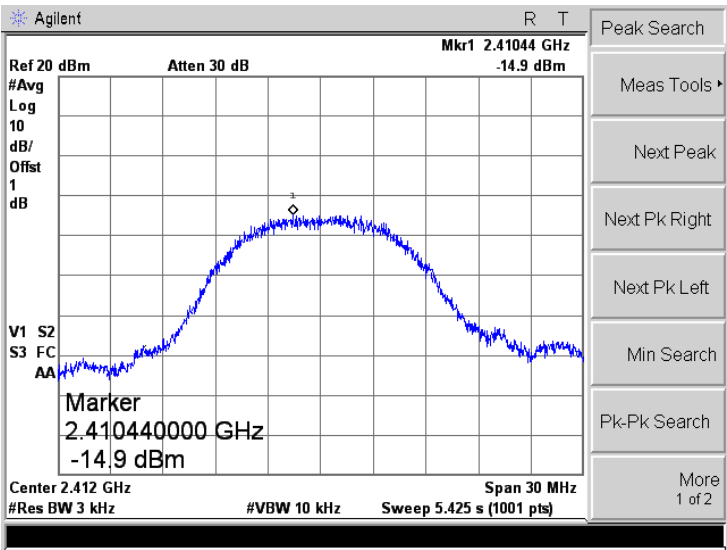
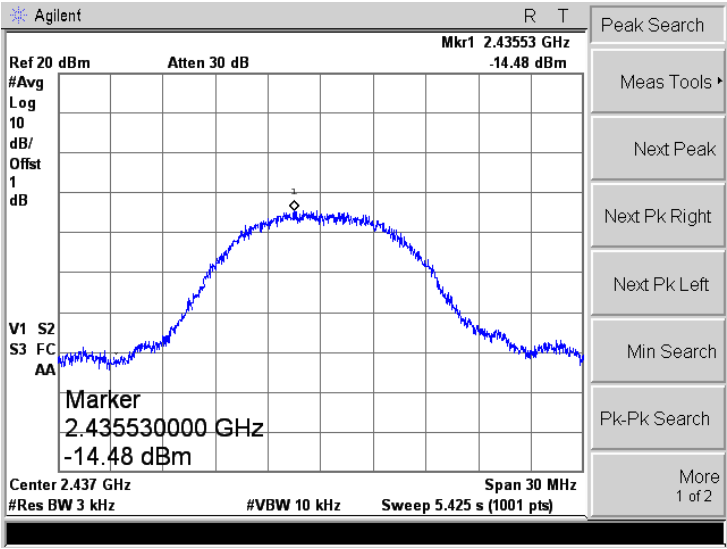
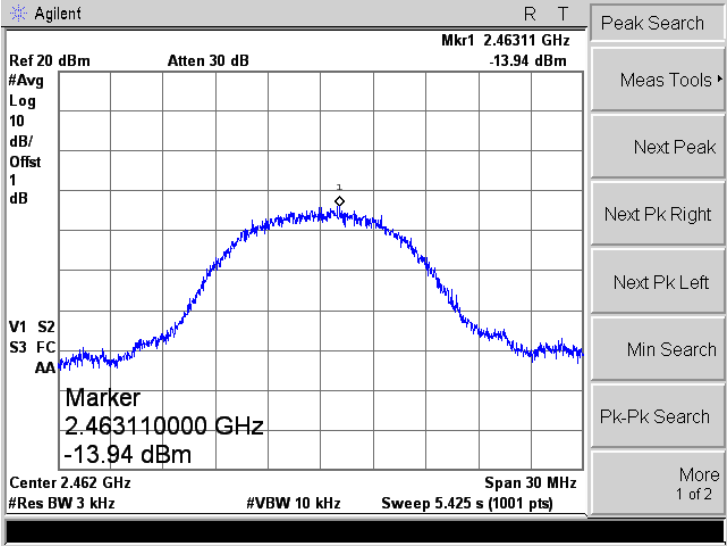
According to the KDB 558074 D01 v05r02 Subclause 8.4 and ANSI C63.10-2013 Subclause 11.10.3, such specifications require that the same method as used to determine the conducted output power shall also be used to determine the power spectral density. The test method of power spectral density as below:

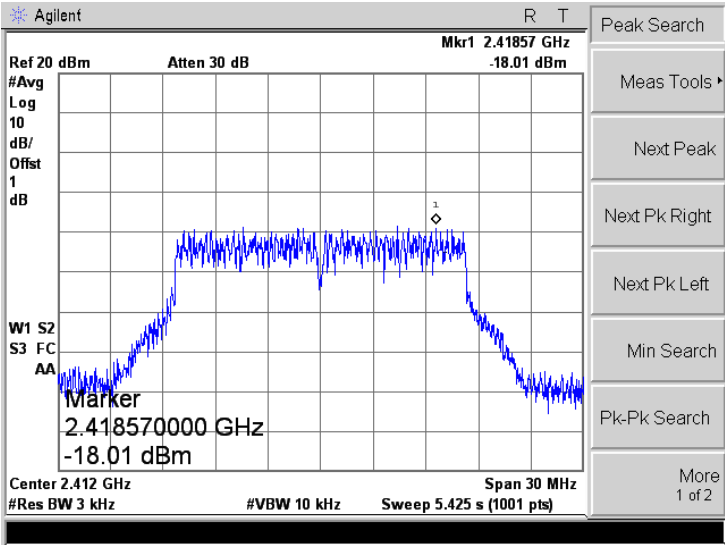
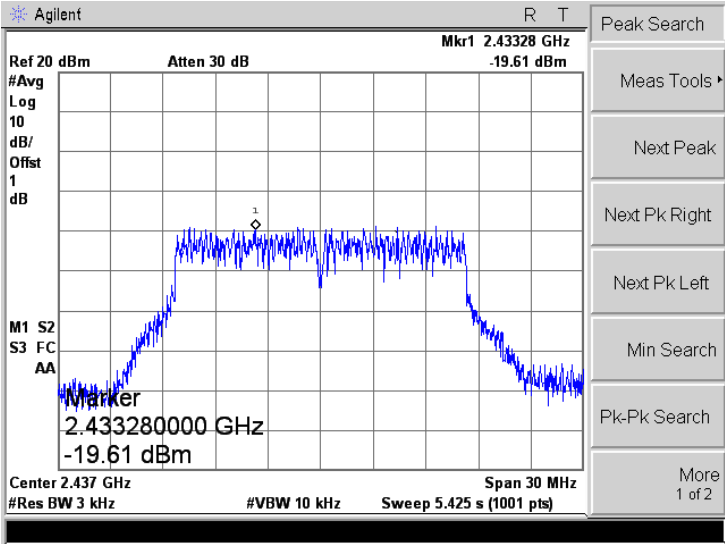
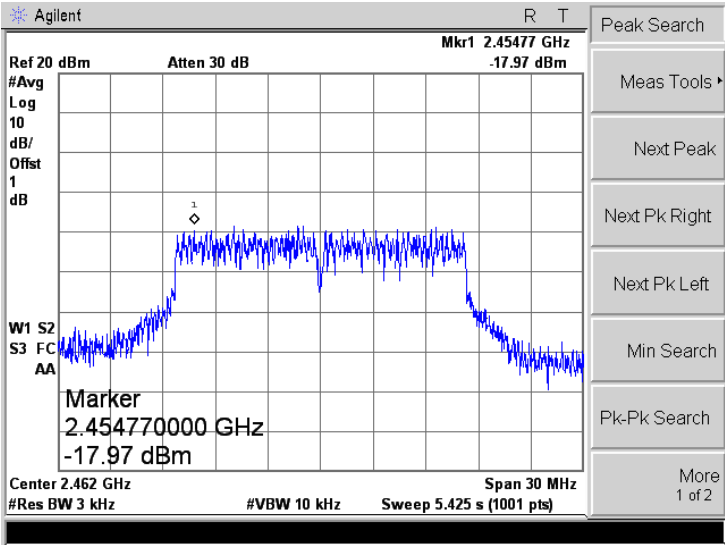
- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
- Sweep time = auto couple.
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- 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 (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

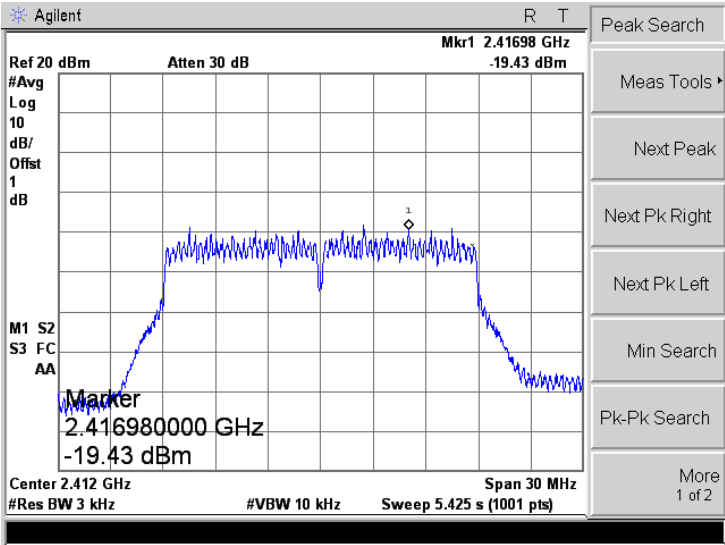
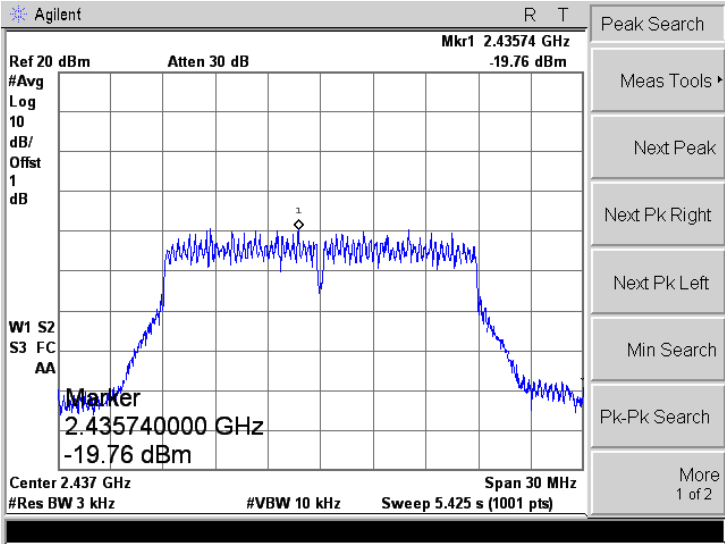
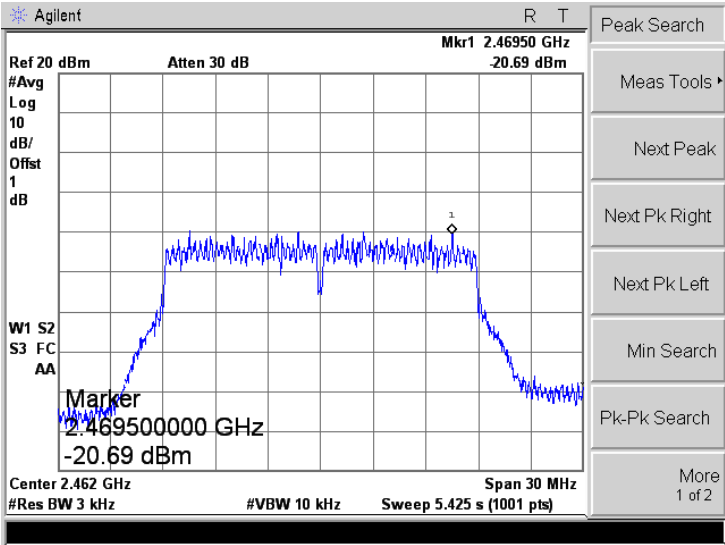
5.4 Summary of Test Results/Plots

Test Mode	Test Channel MHz	Power Spectral Density dBm/3kHz	Limit dBm/3kHz
802.11b_11Mbps	2412	-14.90	8
	2437	-14.48	8
	2462	-13.94	8
802.11g_54Mbps	2412	-18.01	8
	2437	-19.61	8
	2462	-17.97	8
802.11n-HT20_MCS7	2412	-19.43	8
	2437	-19.76	8
	2462	-20.69	8

Please refer to the following test plots:

802.11b-Low	
802.11b-Middle	
802.11b-High	

802.11g-Low	
802.11g-Middle	
802.11g-High	

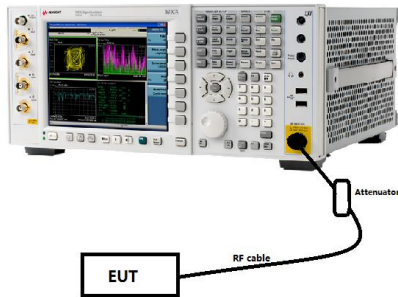
802.11n-HT20-Low	
802.11n-HT20-Middle	
802.11n-HT20-High	

6. DTS Bandwidth

6.1 Standard Applicable

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 6 dB bandwidth shall be at least 500 kHz.

6.2 Test Setup Block Diagram



6.3 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.2 and ANSI C63.10-2013 Subclause 11.8.1, the test method of DTS Bandwidth as below:

- Set RBW = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times \text{RBW}$.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

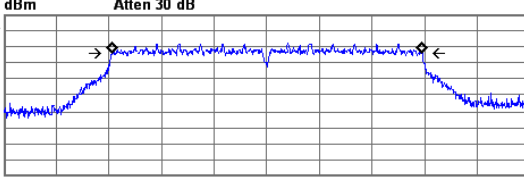
6.4 Summary of Test Results/Plots

Test Mode	Test Channel MHz	6 dB Bandwidth MHz	Limit kHz
802.11b_11Mbps	2412	8.353	≥ 500
	2437	9.049	≥ 500
	2462	9.030	≥ 500
802.11g_54Mbps	2412	16.408	≥ 500
	2437	16.423	≥ 500
	2462	16.412	≥ 500
802.11n-HT20_MCS7	2412	17.713	≥ 500
	2437	17.623	≥ 500
	2462	17.715	≥ 500

Please refer to the following test plots:

802.11b-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.412 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Occupied Bandwidth 12.4962 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 165.178 kHz x dB Bandwidth 8.353 MHz Trace/View Trace 1 2 3 Clear Write Max Hold Min Hold View Blank More 1 of 2
802.11b-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.437 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Occupied Bandwidth 12.4761 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 86.582 kHz x dB Bandwidth 9.049 MHz Freq/Channel Center Freq 2.437000000 GHz Start Freq 2.422000000 GHz Stop Freq 2.452000000 GHz CF Step 3.000000000 MHz Auto Man Freq Offset 0.000000000 Hz Signal Track On Off Scale Type Log Lin
802.11b-High	Agilent R T Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.462000000 GHz Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.462 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Occupied Bandwidth 12.4585 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error 111.200 kHz x dB Bandwidth 9.030 MHz Freq/Channel Center Freq 2.462000000 GHz Start Freq 2.447000000 GHz Stop Freq 2.477000000 GHz CF Step 3.000000000 MHz Auto Man Freq Offset 0.000000000 Hz Signal Track On Off Scale Type Log Lin

802.11g-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 30 MHz Occupied Bandwidth 16.4212 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -936.098 Hz x dB Bandwidth 16.408 MHz Freq/Channel Center Freq 2.41200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.42700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin
802.11g-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 30 MHz Occupied Bandwidth 16.4168 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -15.254 kHz x dB Bandwidth 16.423 MHz Freq/Channel Center Freq 2.43700000 GHz Start Freq 2.42200000 GHz Stop Freq 2.45200000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin
802.11g-High	Agilent R T Ch Freq 2.462 GHz Trig Free Occupied Bandwidth Center 2.462000000 GHz Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 30 MHz Occupied Bandwidth 16.4245 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -10.466 kHz x dB Bandwidth 16.412 MHz Freq/Channel Center Freq 2.46200000 GHz Start Freq 2.44700000 GHz Stop Freq 2.47700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin

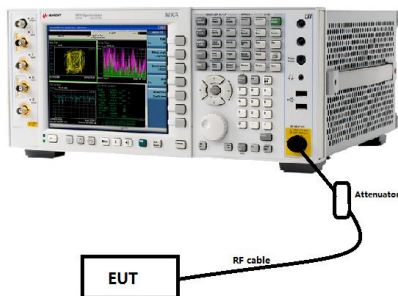
802.11n-HT20-Low	Agilent R T Ch Freq 2.412 GHz Trig Free Occupied Bandwidth Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Offset 1 dB  Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 30 MHz Occupied Bandwidth 17.6560 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -463.438 Hz x dB Bandwidth 17.713 MHz Freq/Channel Center Freq 2.41200000 GHz Start Freq 2.39700000 GHz Stop Freq 2.42700000 GHz CF Step 3.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Scale Type Log Lin
802.11n-HT20-Middle	Agilent R T Ch Freq 2.437 GHz Trig Free Occupied Bandwidth Center 2.437000000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 10 ms (1001 pts) Span 30 MHz Occupied Bandwidth 17.6520 MHz Occ BW % Pwr 99.00 % x dB -6.00 dB Transmit Freq Error -12.801 kHz x dB Bandwidth 17.623 MHz Trace/View 1 2 3 Trace Clear Write Max Hold Min Hold View Blank More 1 of 2

7. RF Output Power

7.1 Standard Applicable

According to 15.247(b)(3), for systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

7.2 Test Setup Block Diagram



7.3 Test Procedure

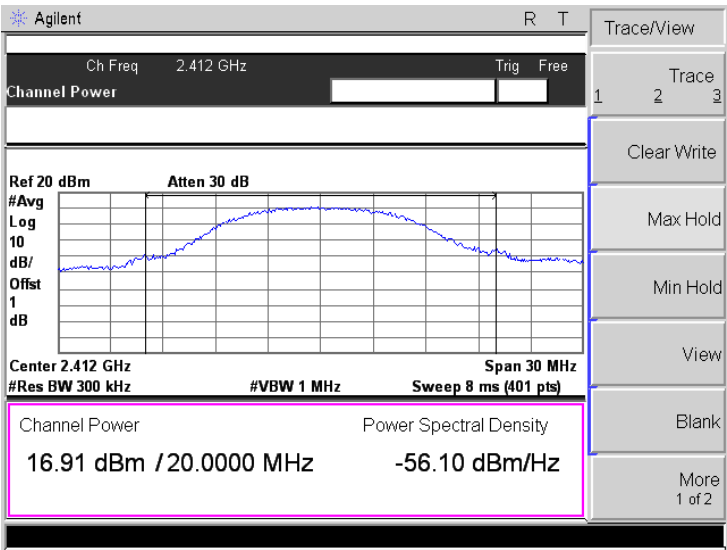
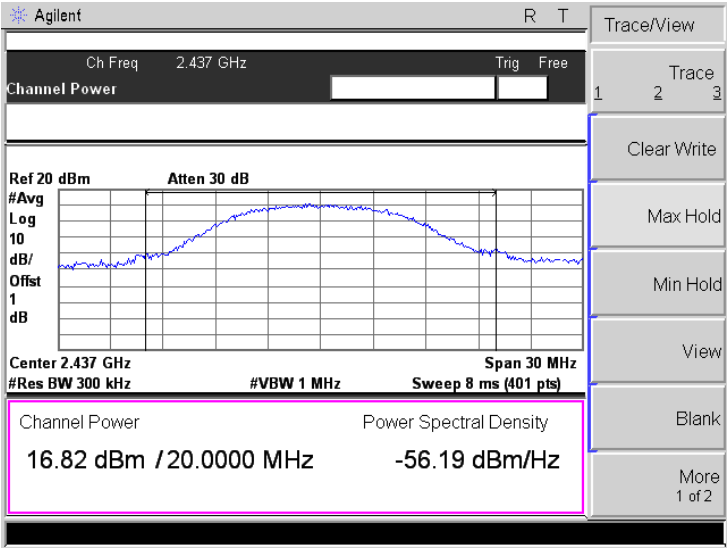
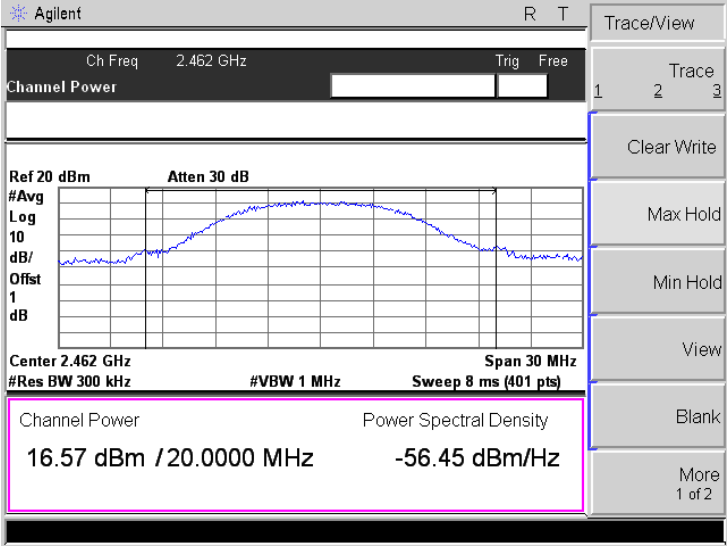
According to the KDB-558074 D01 v05r02 Subclause 8.3.2.2 and ANSI C63.10-2013 Subclause 11.9.2.2, when this option is exercised, the measured power is to be referenced to the OBW rather than the DTS bandwidth

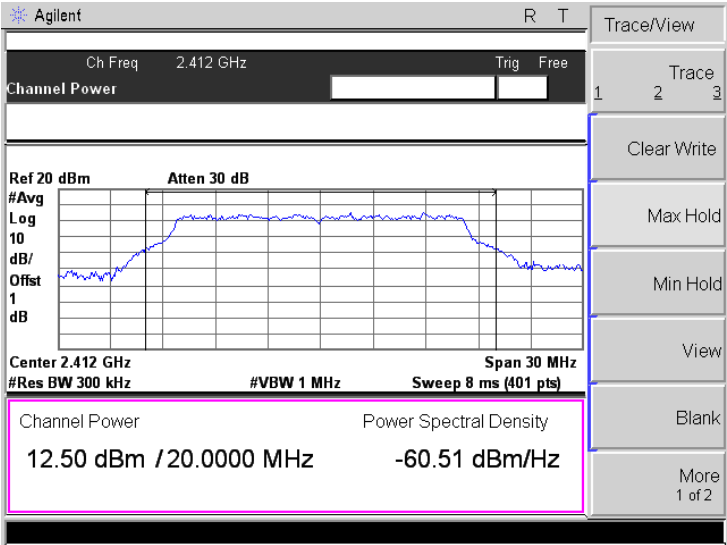
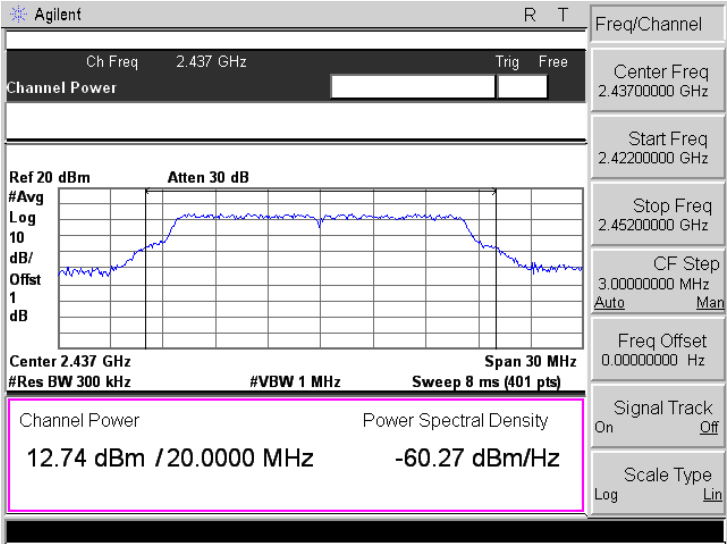
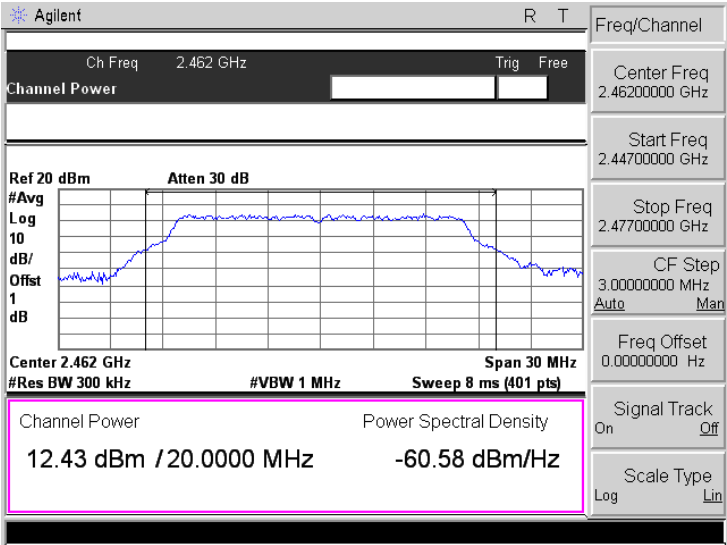
- Set span to at least 1.5 times the OBW.
- Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
- Set $VBW \geq 3 \times RBW$.
- Number of points in sweep $\geq 2 \times \text{span} / RBW$. (This gives bin-to-bin spacing $\leq RBW/2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- If transmit duty cycle < 98 %, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq 98 \%$, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run” .
- Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

7.4 Summary of Test Results/Plots

Test Mode	Frequency MHz	Reading dBm	Output Power mW	Limit mW
802.11b _ 11Mbps	2412	16.91	49.09	1000
	2437	16.82	48.08	1000
	2462	16.57	45.39	1000
802.11g_54Mbps	2412	12.50	17.78	1000
	2437	12.74	18.79	1000
	2462	12.43	17.50	1000
802.11n HT20_MCS7	2412	12.09	16.18	1000
	2437	11.61	14.49	1000
	2462	11.51	14.16	1000

Please refer to the following test plots:

802.11b-Low 11Mbps	
802.11b-Middle 11Mbps	
802.11b-High 11Mbps	

802.11g-Low 54Mbps	
802.11g-Middle 54Mbps	
802.11g-High 54Mbps	

802.11n-HT20-Low MCS7	
802.11n-HT20-Middle MCS7	
802.11n-HT20-High MCS7	

8. Field Strength of Spurious Emissions

8.1 Standard Applicable

According to §15.247(d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

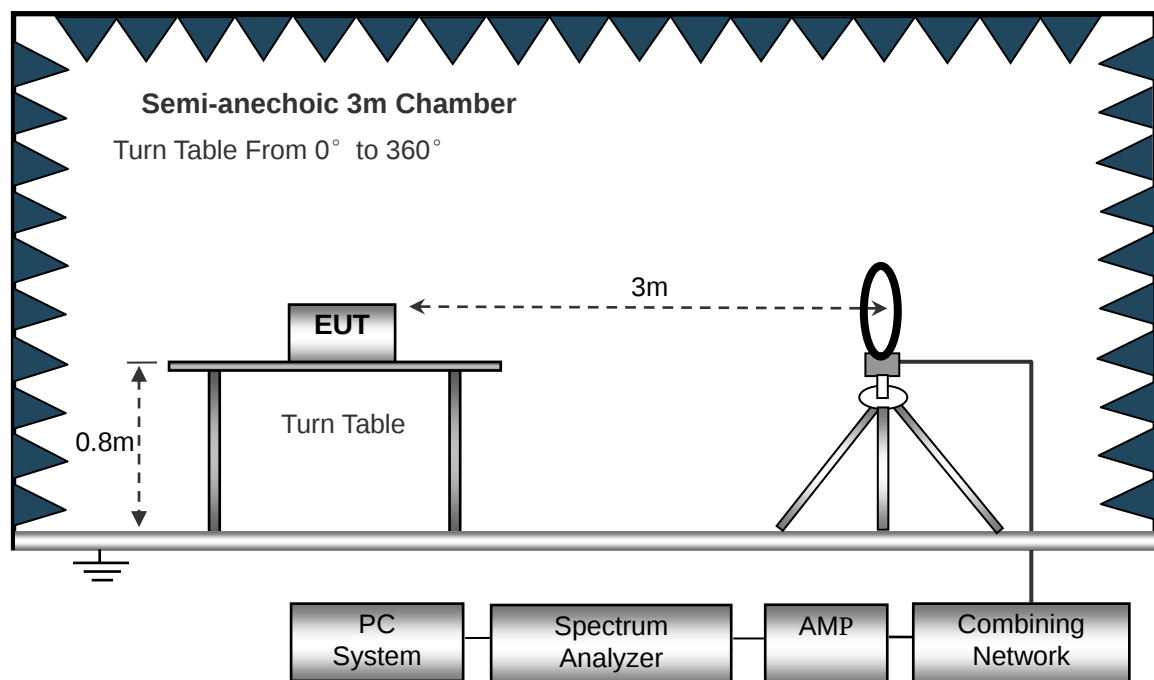
8.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

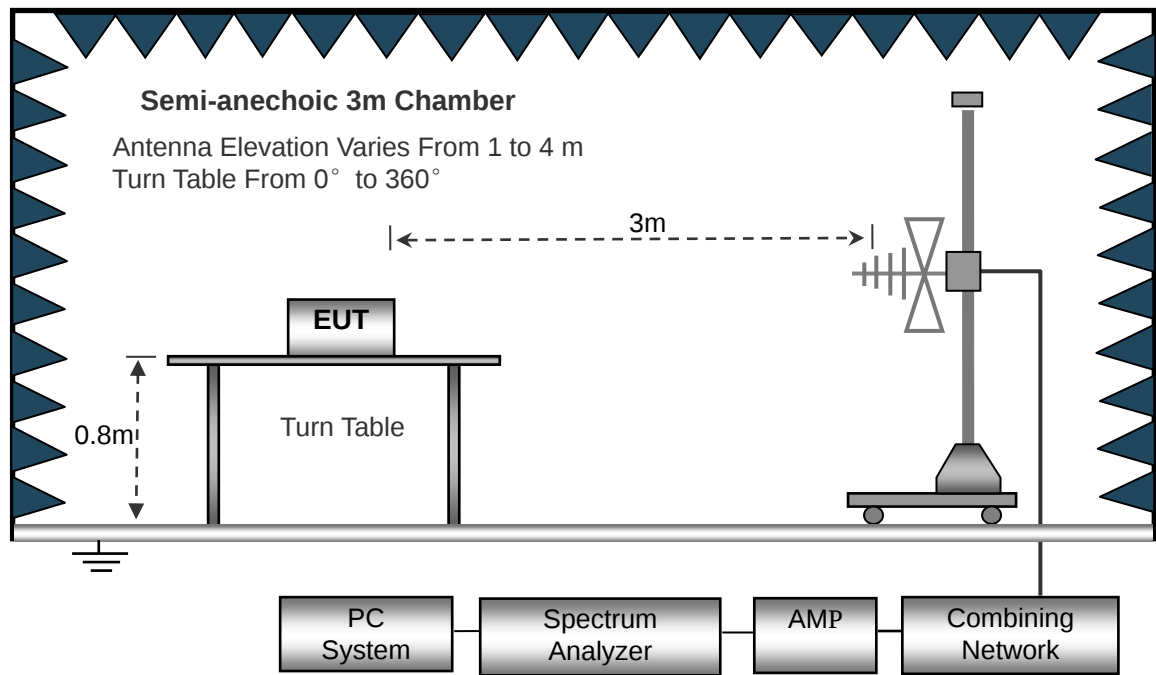
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

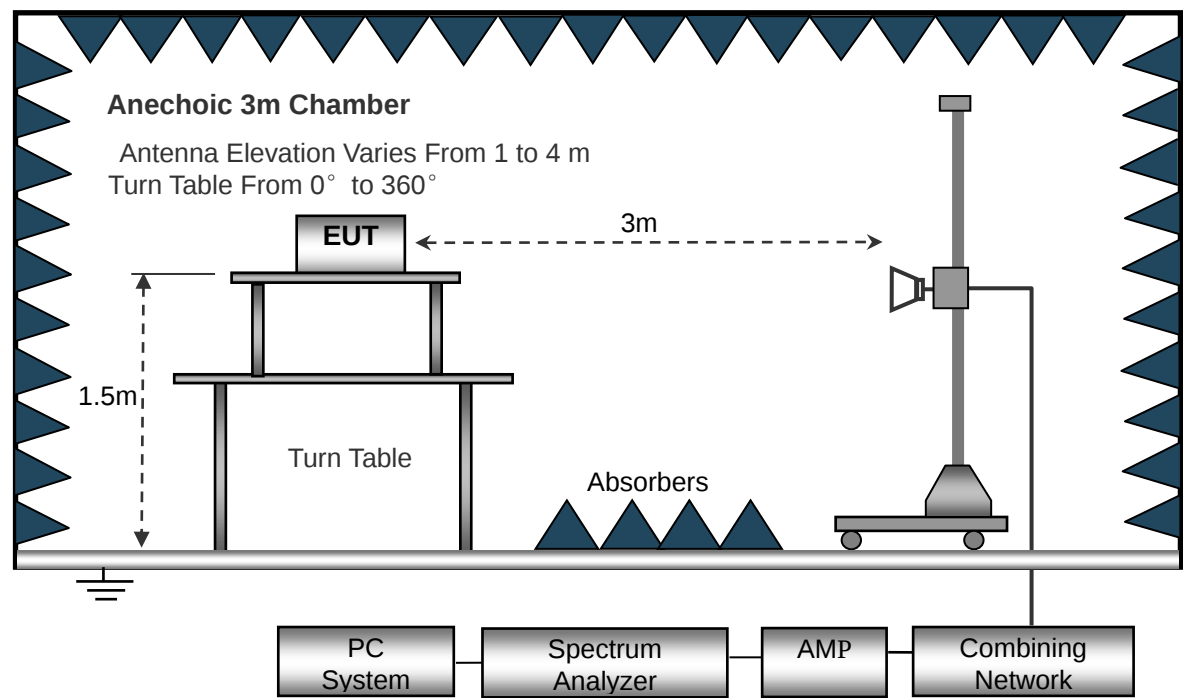
The test setup for emission measurement below 30MHz..



The test setup for emission measurement from 30 MHz to 1 GHz..



The test setup for emission measurement above 1 GHz..



Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=360KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

8.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

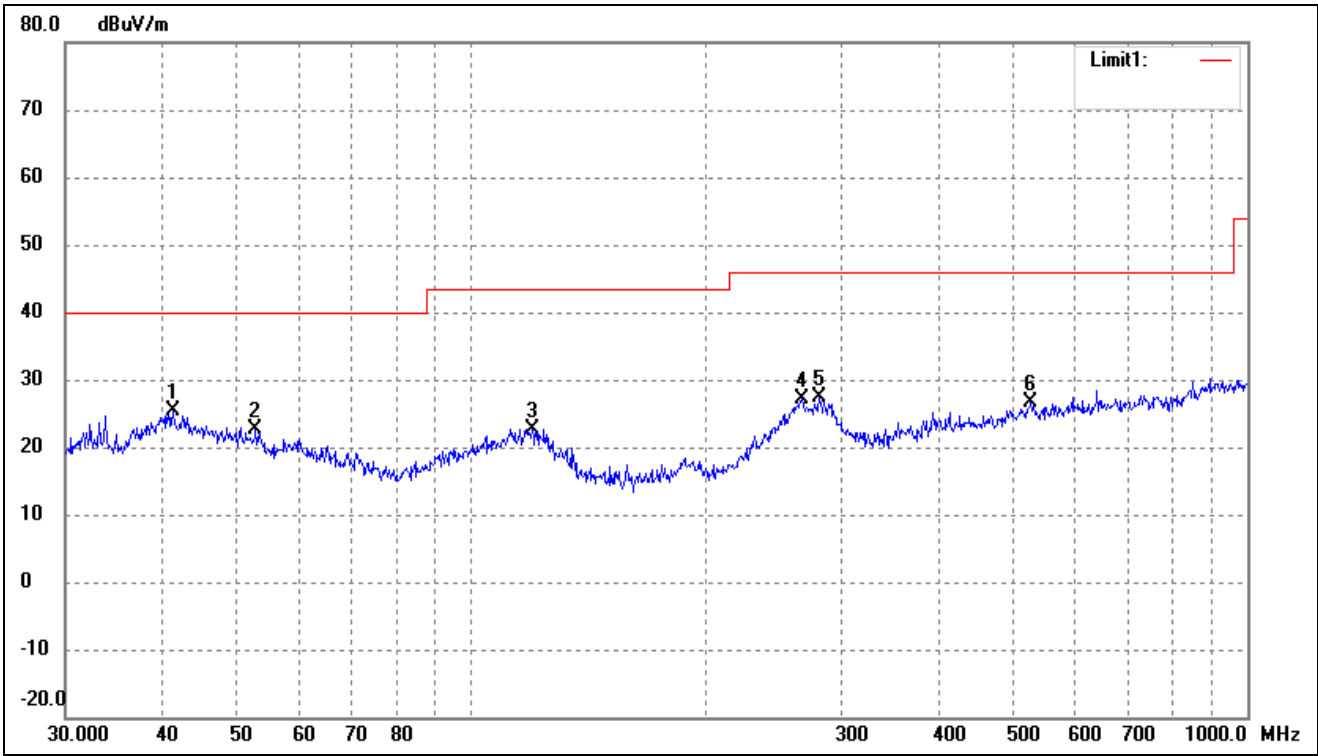
The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

8.4 Summary of Test Results/Plots

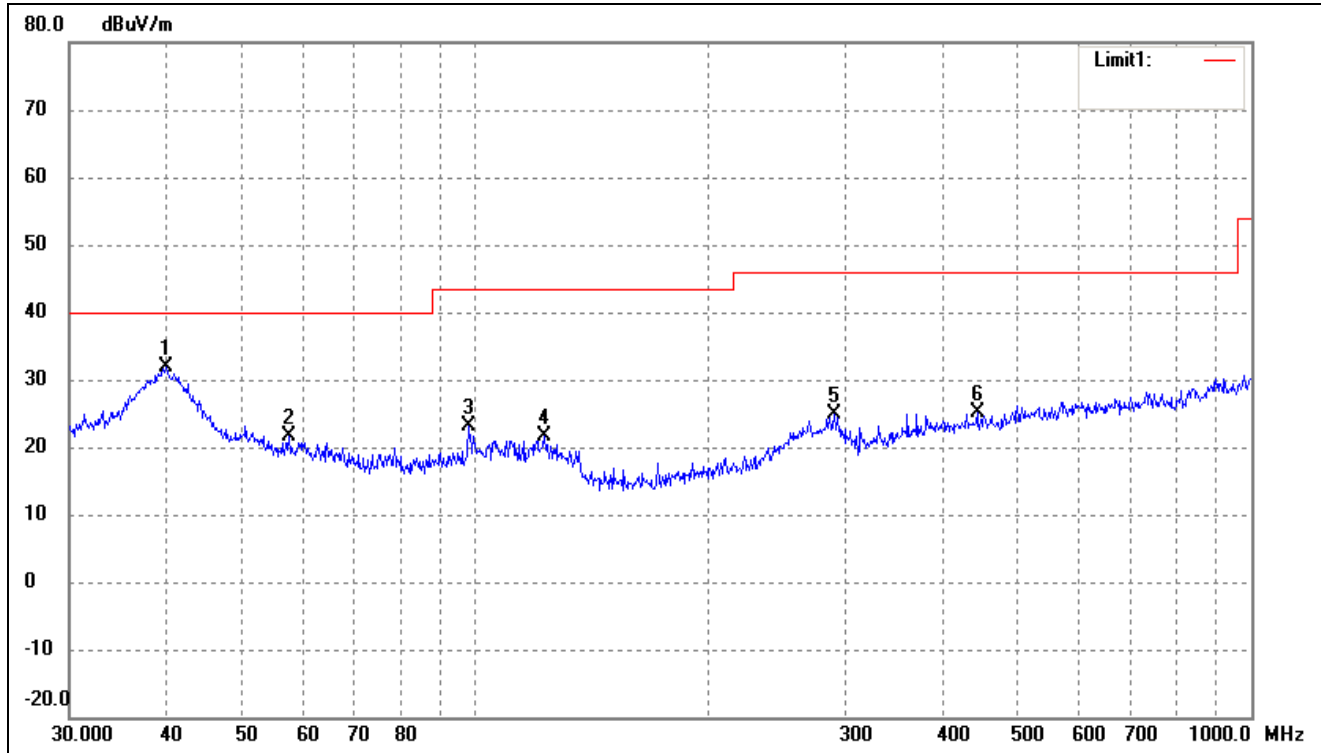
➤ Spurious Emissions Below 1GHz

ANT 1_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



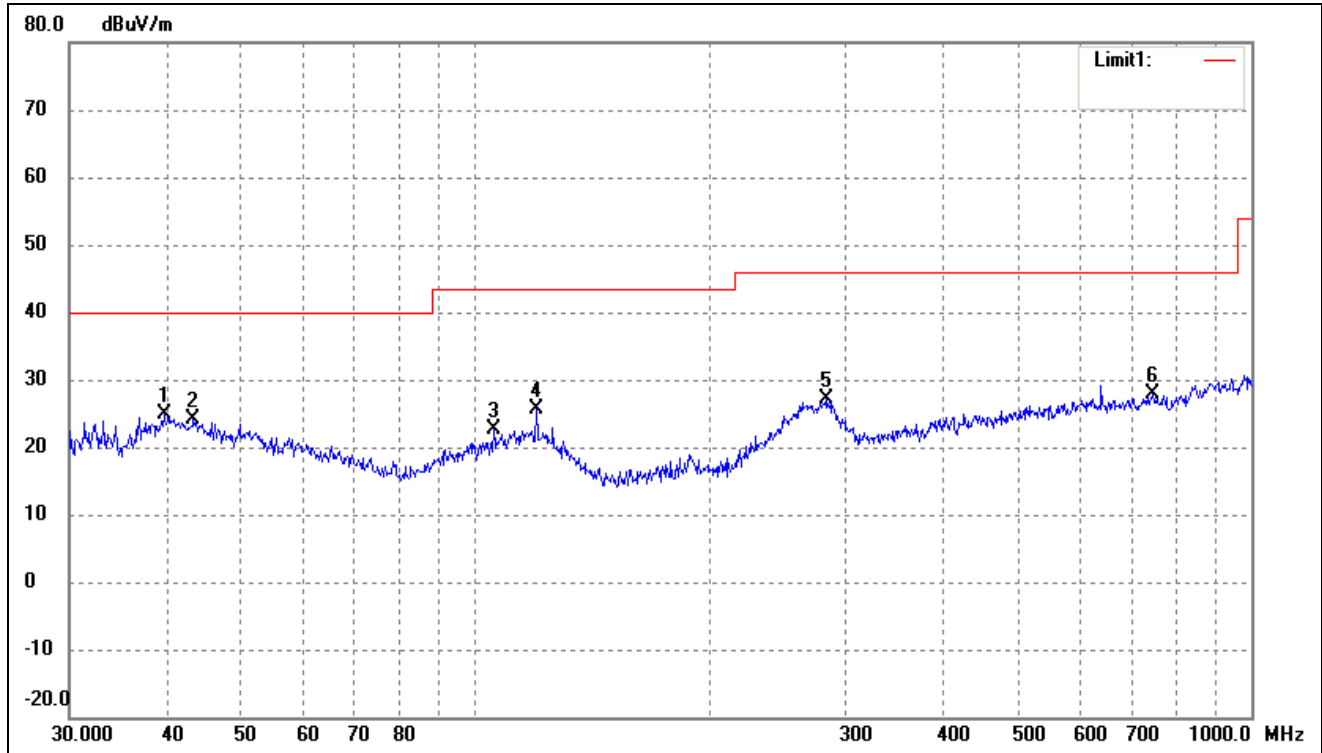
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	41.2765	37.24	-11.94	25.30	40.00	-14.70	-	-	peak
2	52.7600	34.82	-12.31	22.51	40.00	-17.49	-	-	peak
3	119.8556	36.98	-14.28	22.70	43.50	-20.80	-	-	peak
4	266.6089	37.93	-10.81	27.12	46.00	-18.88	-	-	peak
5	281.0075	37.58	-10.32	27.26	46.00	-18.74	-	-	peak
6	526.3967	30.76	-4.15	26.61	46.00	-19.39	-	-	peak

ANT 1_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



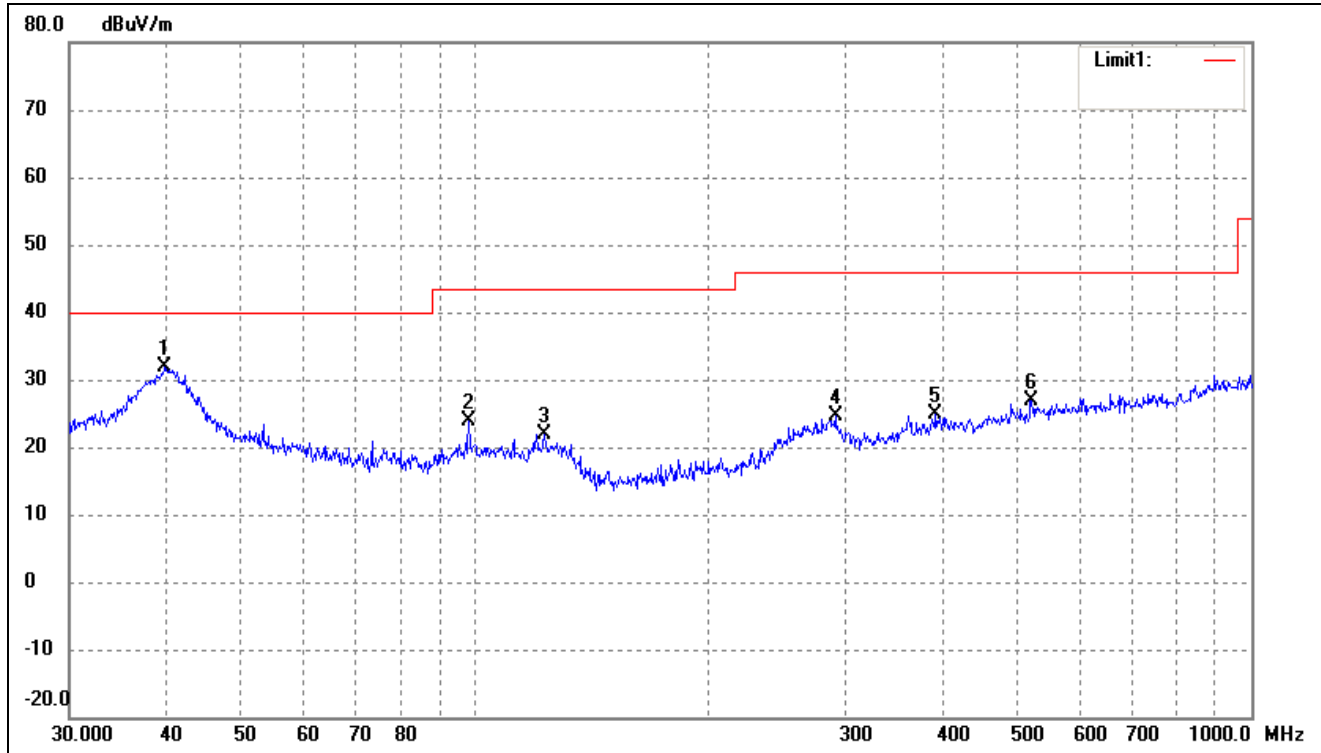
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	43.84	-11.98	31.86	40.00	-8.14	-	-	peak
2	57.5939	34.61	-12.97	21.64	40.00	-18.36	-	-	peak
3	98.1419	36.68	-13.62	23.06	43.50	-20.44	-	-	peak
4	122.8340	36.78	-15.05	21.73	43.50	-21.77	-	-	peak
5	290.0172	34.46	-9.65	24.81	46.00	-21.19	-	-	peak
6	443.2943	30.88	-5.67	25.21	46.00	-20.79	-	-	peak

ANT 1_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	36.88	-12.09	24.79	40.00	-15.21	-	-	peak
2	43.3534	35.88	-11.86	24.02	40.00	-15.98	-	-	peak
3	105.6415	35.93	-13.31	22.62	43.50	-20.88	-	-	peak
4	119.8556	39.85	-14.28	25.57	43.50	-17.93	-	-	peak
5	282.9852	37.27	-10.17	27.10	46.00	-18.90	-	-	peak
6	747.4826	29.24	-1.27	27.97	46.00	-18.03	-	-	peak

ANT 1_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	44.00	-12.03	31.97	40.00	-8.03	-	-	peak
2	98.1419	37.52	-13.62	23.90	43.50	-19.60	-	-	peak
3	122.8340	36.89	-15.05	21.84	43.50	-21.66	-	-	peak
4	291.0360	34.17	-9.58	24.59	46.00	-21.41	-	-	peak
5	392.0951	31.65	-6.69	24.96	46.00	-21.04	-	-	peak
6	520.8882	31.11	-4.15	26.96	46.00	-19.04	-	-	peak

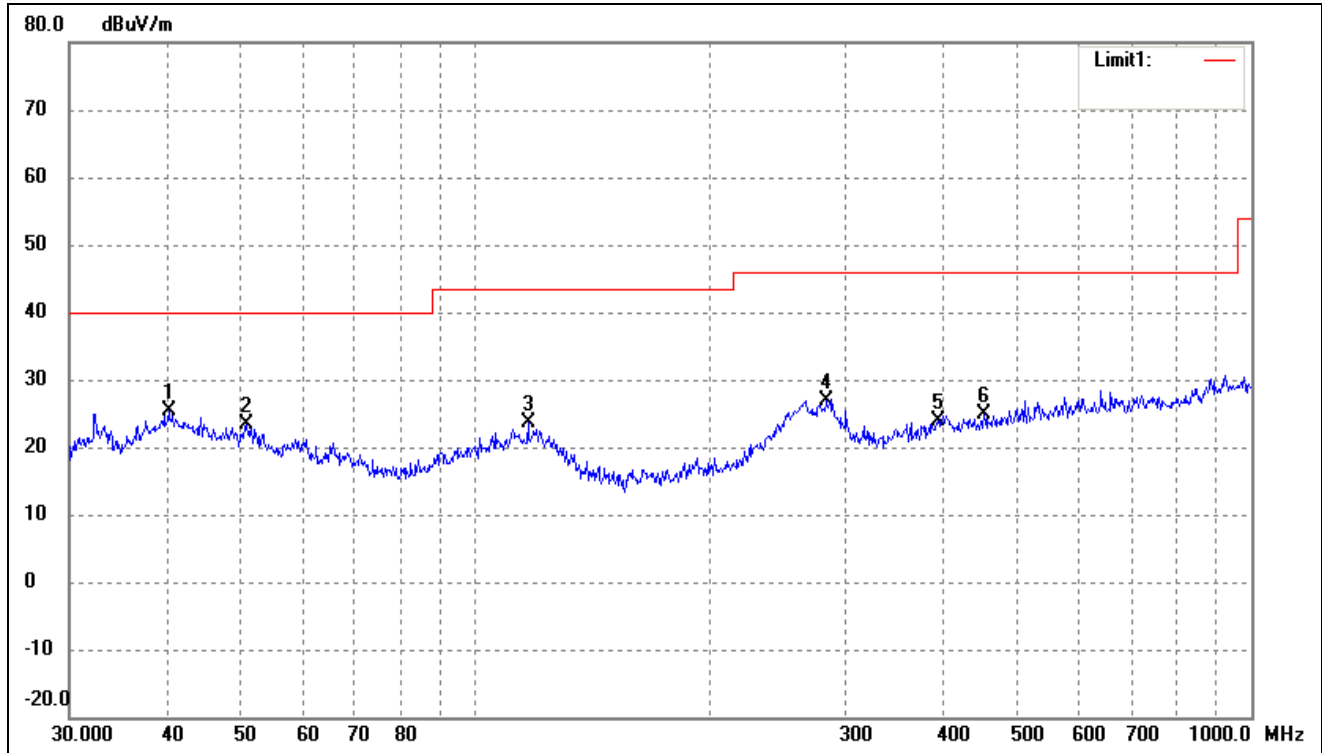
ANT 1_802.11b_11Mbps

Test Channel

High

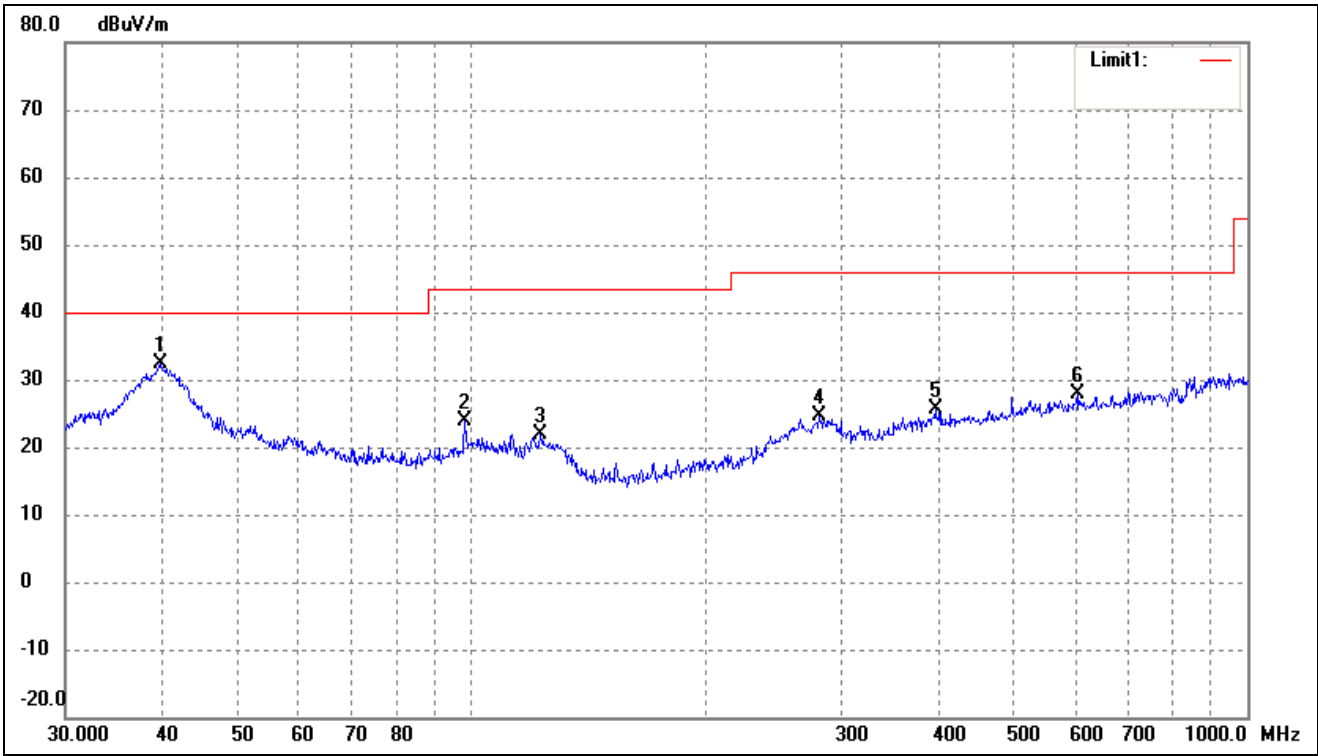
Polarity:

Horizontal



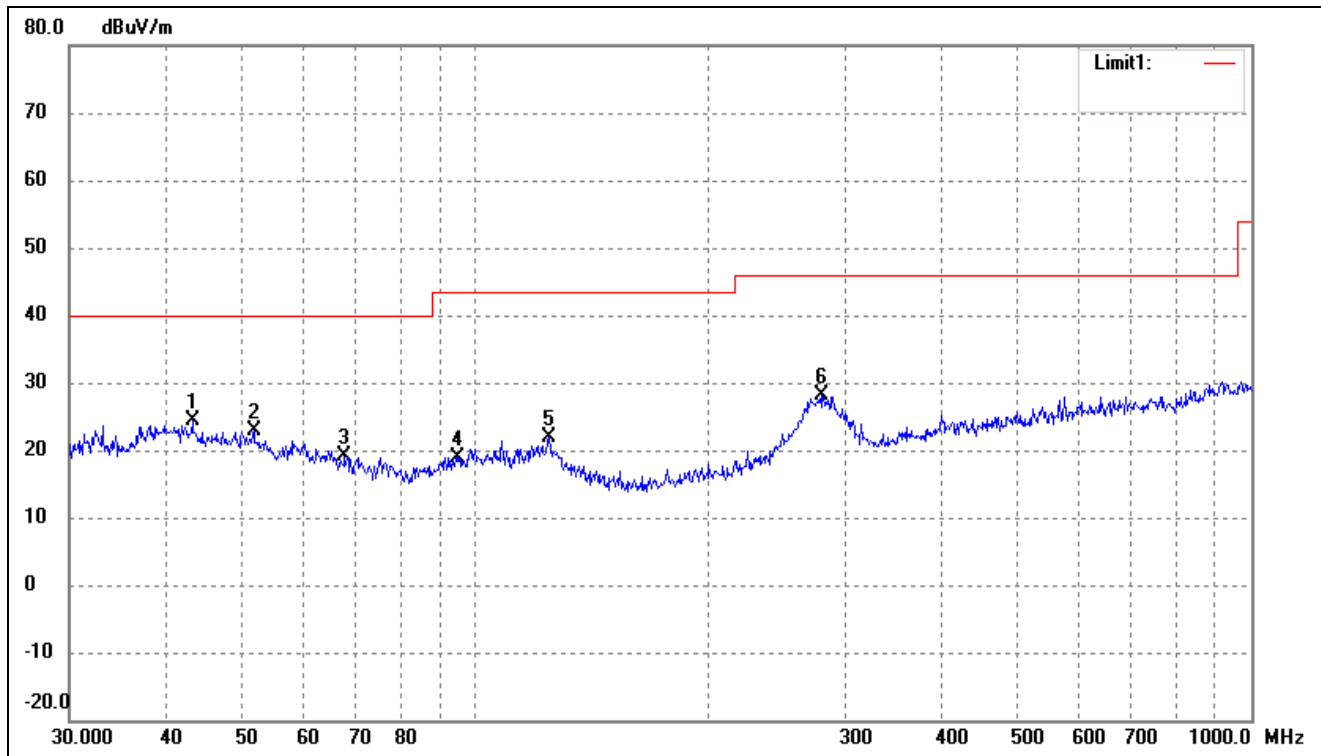
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.2757	37.28	-11.98	25.30	40.00	-14.70	-	-	peak
2	50.7637	35.12	-11.75	23.37	40.00	-16.63	-	-	peak
3	116.9495	37.56	-13.99	23.57	43.50	-19.93	-	-	peak
4	283.9792	37.06	-10.10	26.96	46.00	-19.04	-	-	peak
5	394.8545	30.49	-6.61	23.88	46.00	-22.12	-	-	peak
6	452.7197	30.45	-5.50	24.95	46.00	-21.05	-	-	peak

ANT 1_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



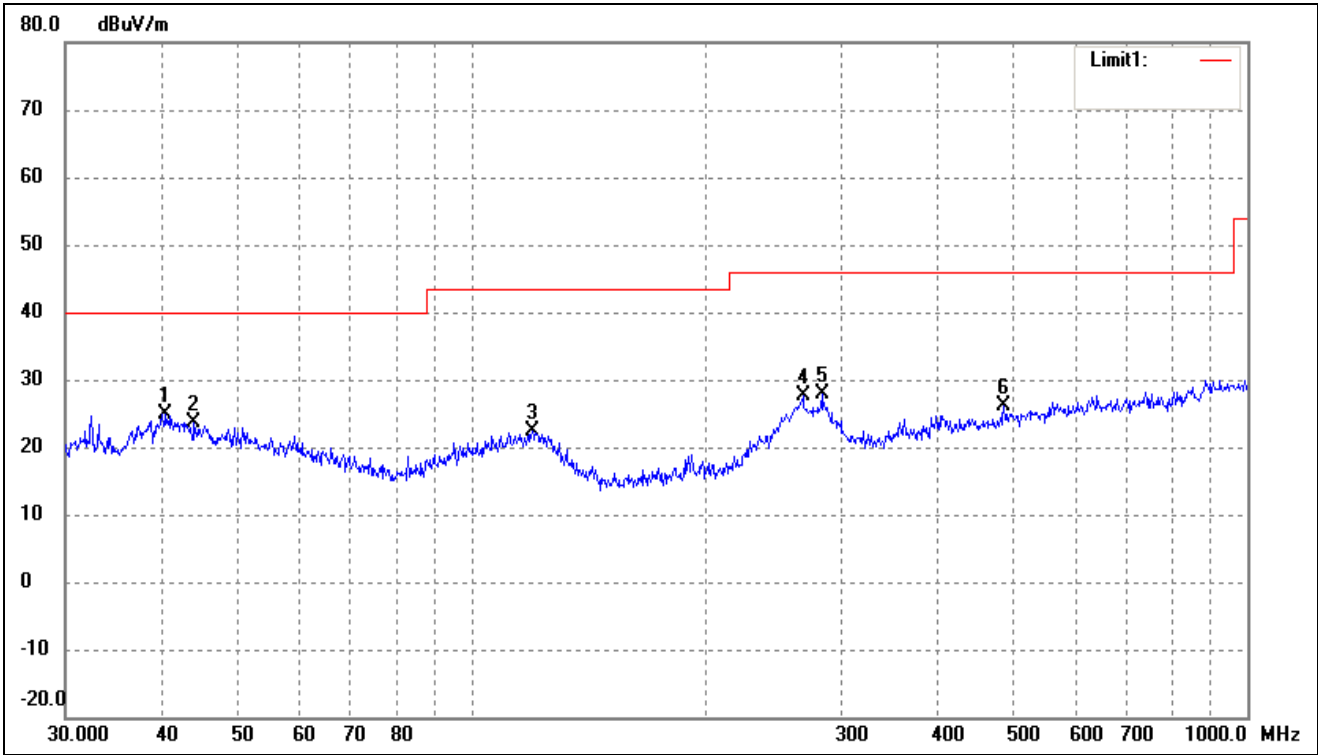
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)	
1	39.7147	44.40	-12.09	32.31	40.00	-7.69	-	-	peak
2	98.1419	37.51	-13.62	23.89	43.50	-19.61	-	-	peak
3	122.8340	36.90	-15.05	21.85	43.50	-21.65	-	-	peak
4	281.0075	34.93	-10.32	24.61	46.00	-21.39	-	-	peak
5	396.2415	32.16	-6.57	25.59	46.00	-20.41	-	-	peak
6	603.5392	29.77	-1.97	27.80	46.00	-18.20	-	-	peak

ANT 2_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



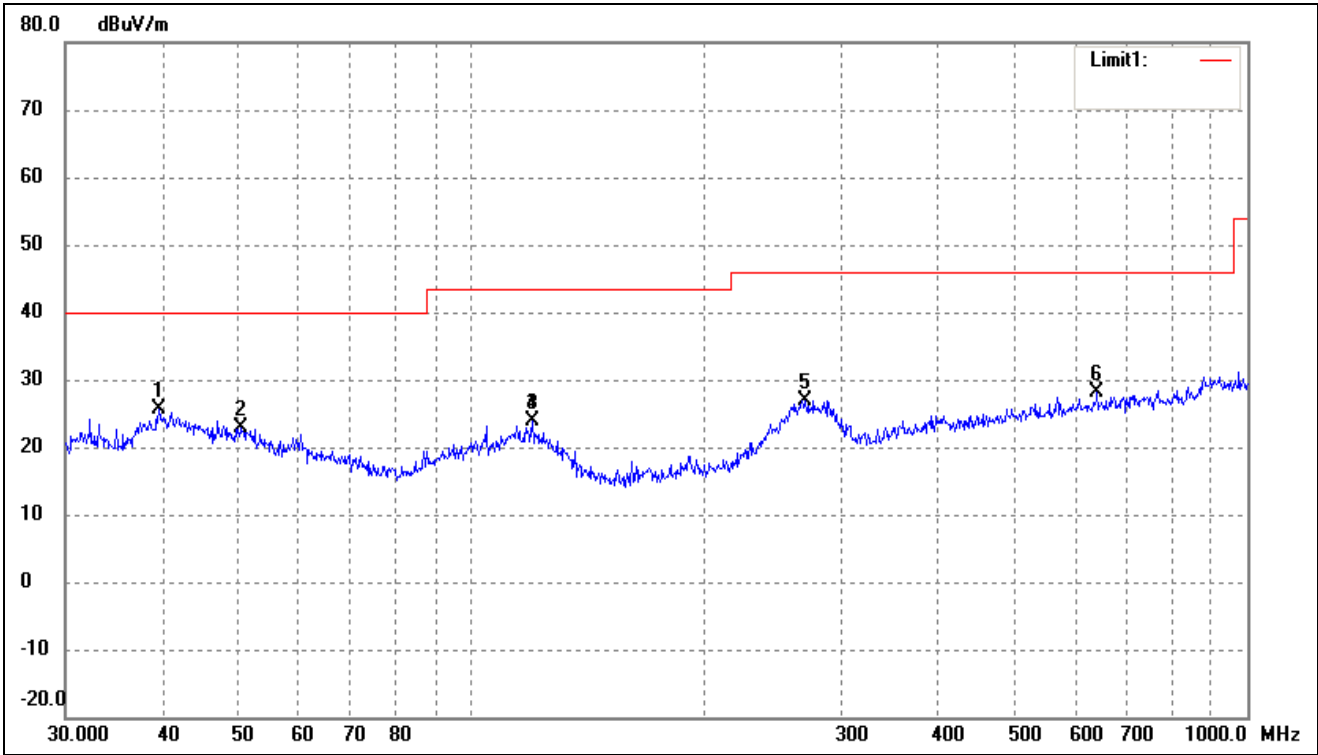
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	43.2017	36.12	-11.86	24.26	40.00	-15.74	-	-	peak
2	51.8430	34.95	-12.04	22.91	40.00	-17.09	-	-	peak
3	67.9129	33.52	-14.34	19.18	40.00	-20.82	-	-	peak
4	94.7601	33.19	-14.19	19.00	43.50	-24.50	-	-	peak
5	124.5690	37.35	-15.52	21.83	43.50	-21.67	-	-	peak
6	280.0238	38.43	-10.39	28.04	46.00	-17.96	-	-	peak

ANT 2_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



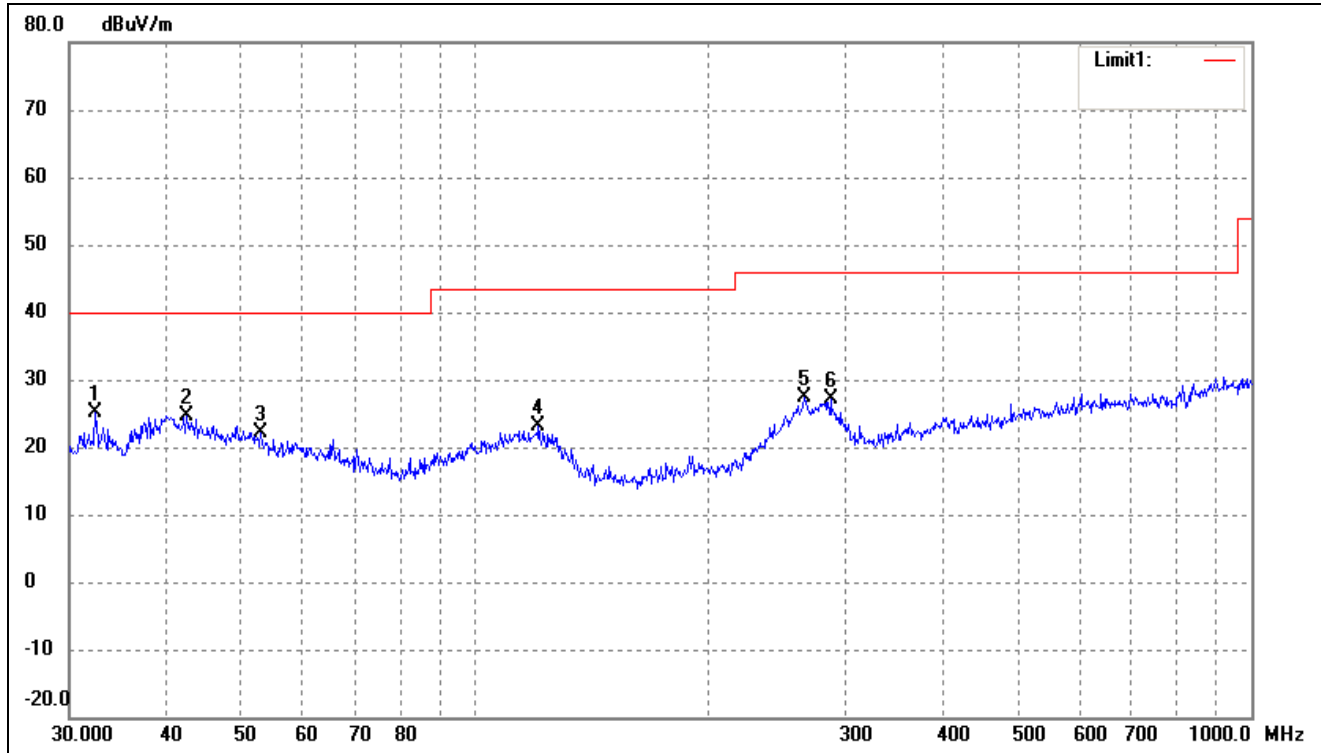
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.4172	36.76	-11.97	24.79	40.00	-15.21	-	-	peak
2	43.9658	35.46	-11.83	23.63	40.00	-16.37	-	-	peak
3	119.8556	36.76	-14.28	22.48	43.50	-21.02	-	-	peak
4	267.5455	38.54	-10.80	27.74	46.00	-18.26	-	-	peak
5	282.9852	37.99	-10.17	27.82	46.00	-18.18	-	-	peak
6	485.6093	30.61	-4.49	26.12	46.00	-19.88	-	-	peak

ANT 2_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	37.79	-12.14	25.65	40.00	-14.35	-	-	peak
2	50.4089	34.45	-11.65	22.80	40.00	-17.20	-	-	peak
3	119.8556	38.25	-14.28	23.97	43.50	-19.53	-	-	peak
4	119.8556	38.25	-14.28	23.97	43.50	-19.53	-	-	peak
5	269.4284	37.77	-10.79	26.98	46.00	-19.02	-	-	peak
6	640.6110	30.46	-2.29	28.17	46.00	-17.83	-	-	peak

ANT 2_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.4059	39.20	-14.02	25.18	40.00	-14.82	-	-	peak
2	42.4508	36.42	-11.89	24.53	40.00	-15.47	-	-	peak
3	52.9453	34.50	-12.36	22.14	40.00	-17.86	-	-	peak
4	120.6991	37.71	-14.50	23.21	43.50	-20.29	-	-	peak
5	265.6757	38.17	-10.80	27.37	46.00	-18.63	-	-	peak
6	286.9823	36.93	-9.87	27.06	46.00	-18.94	-	-	peak

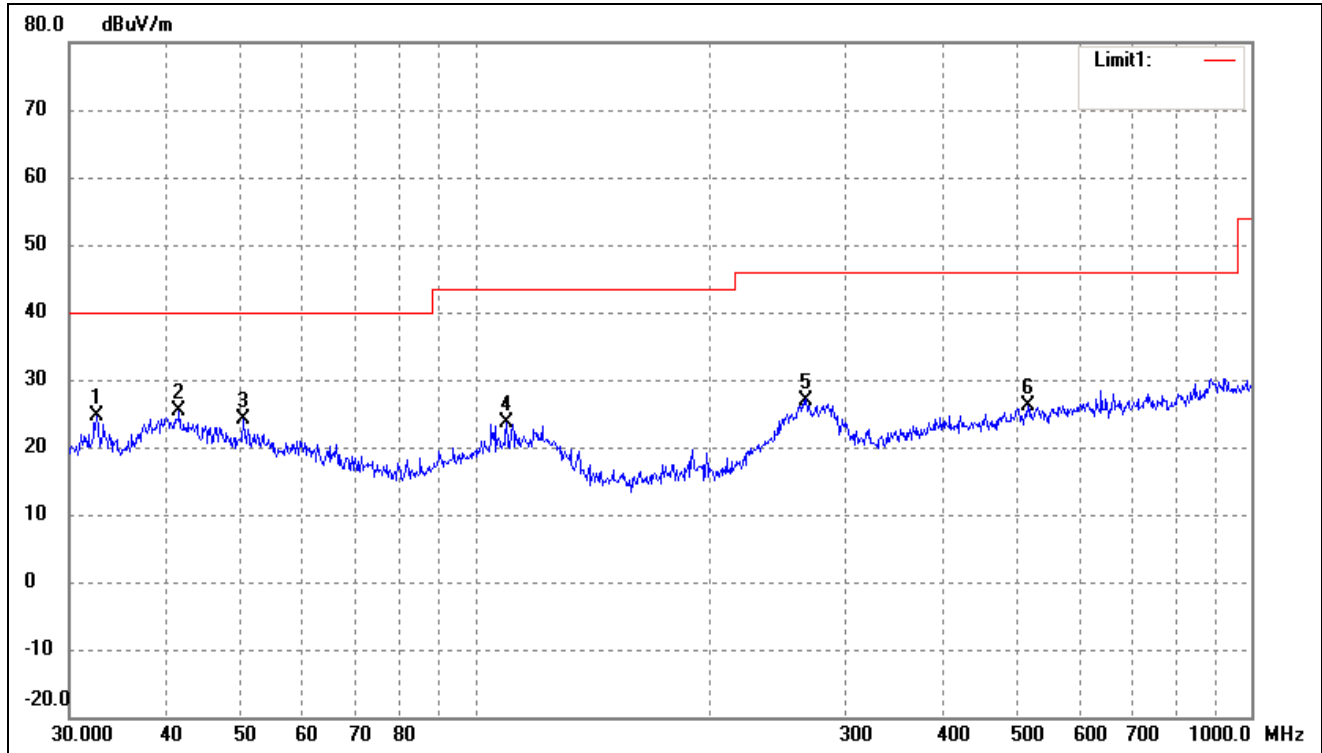
ANT 2_802.11b_11Mbps

Test Channel

High

Polarity:

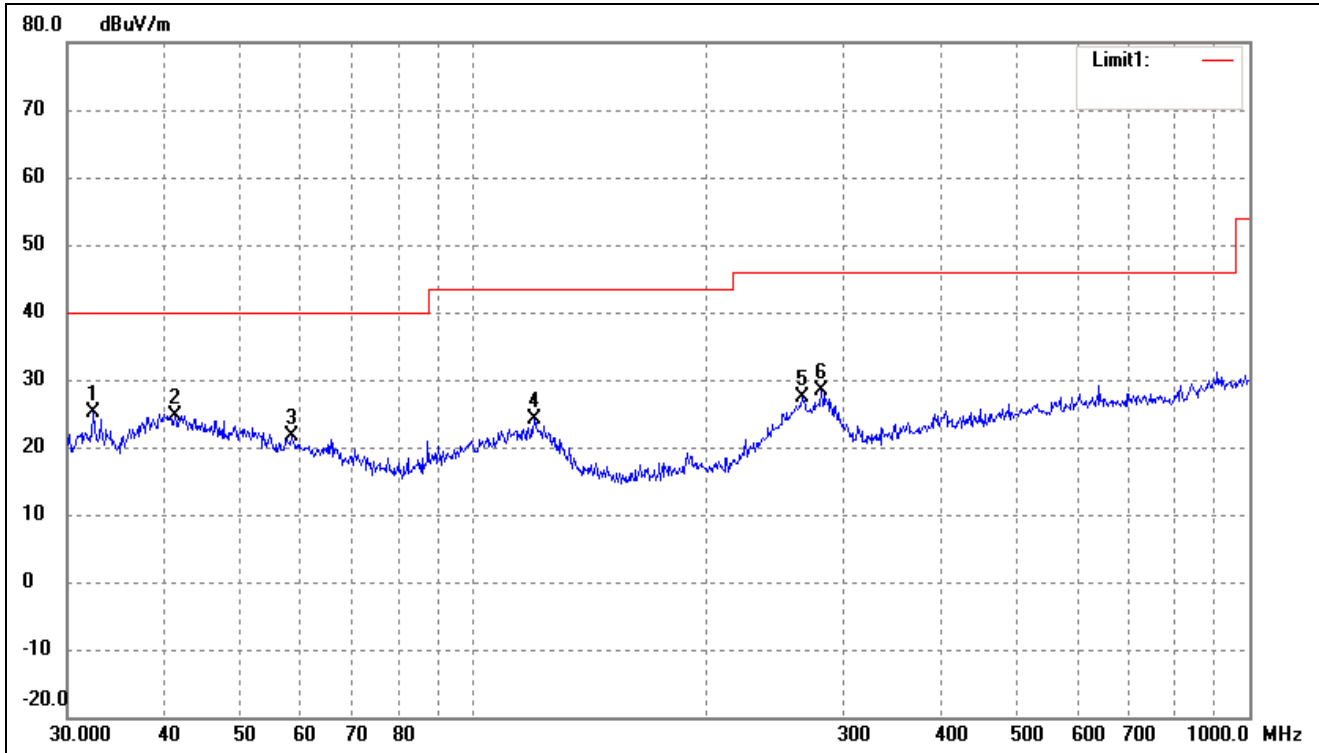
Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.5198	38.54	-14.01	24.53	40.00	-15.47	-	-	peak
2	41.5670	37.42	-11.93	25.49	40.00	-14.51	-	-	peak
3	50.2325	35.71	-11.60	24.11	40.00	-15.89	-	-	peak
4	109.7960	36.85	-13.32	23.53	43.50	-19.97	-	-	peak
5	266.6089	37.81	-10.81	27.00	46.00	-19.00	-	-	peak
6	515.4374	30.21	-4.12	26.09	46.00	-19.91	-	-	peak

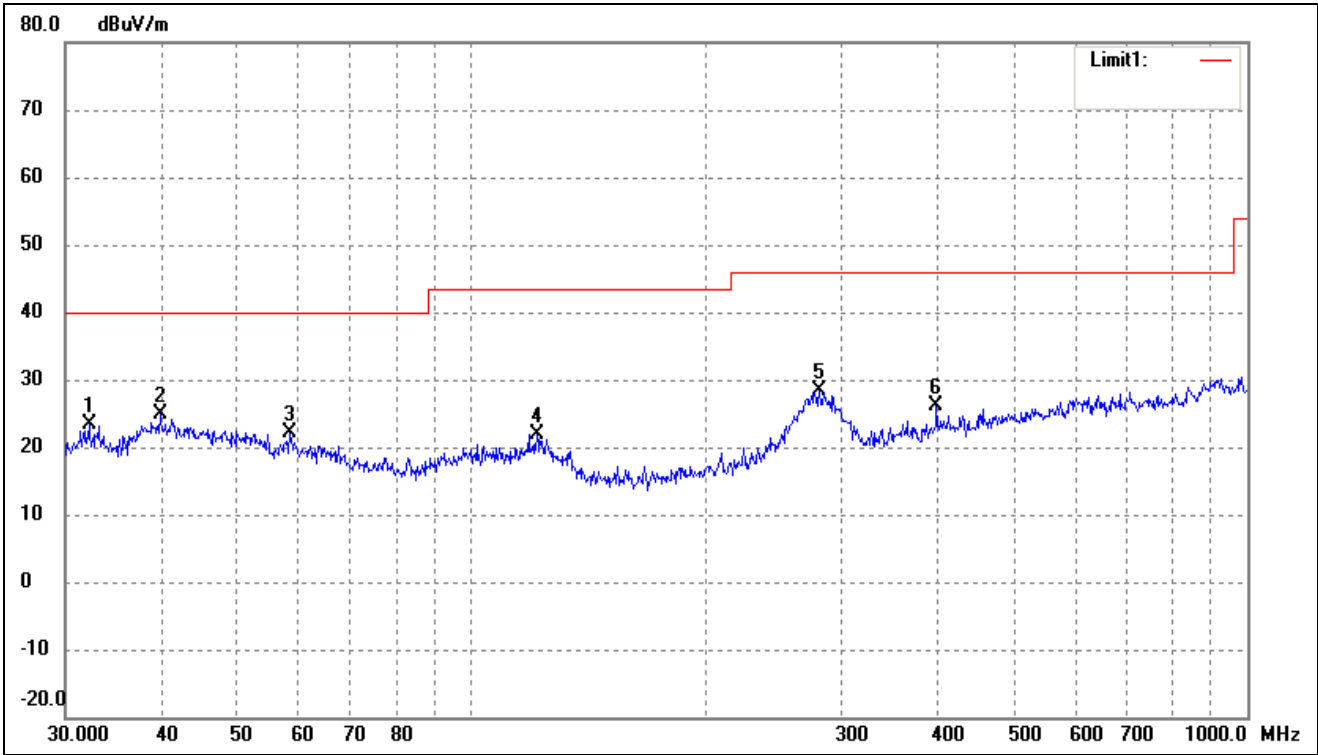
ANT 2_802.11b_11Mbps

Test Channel	High	Polarity:	Vertical
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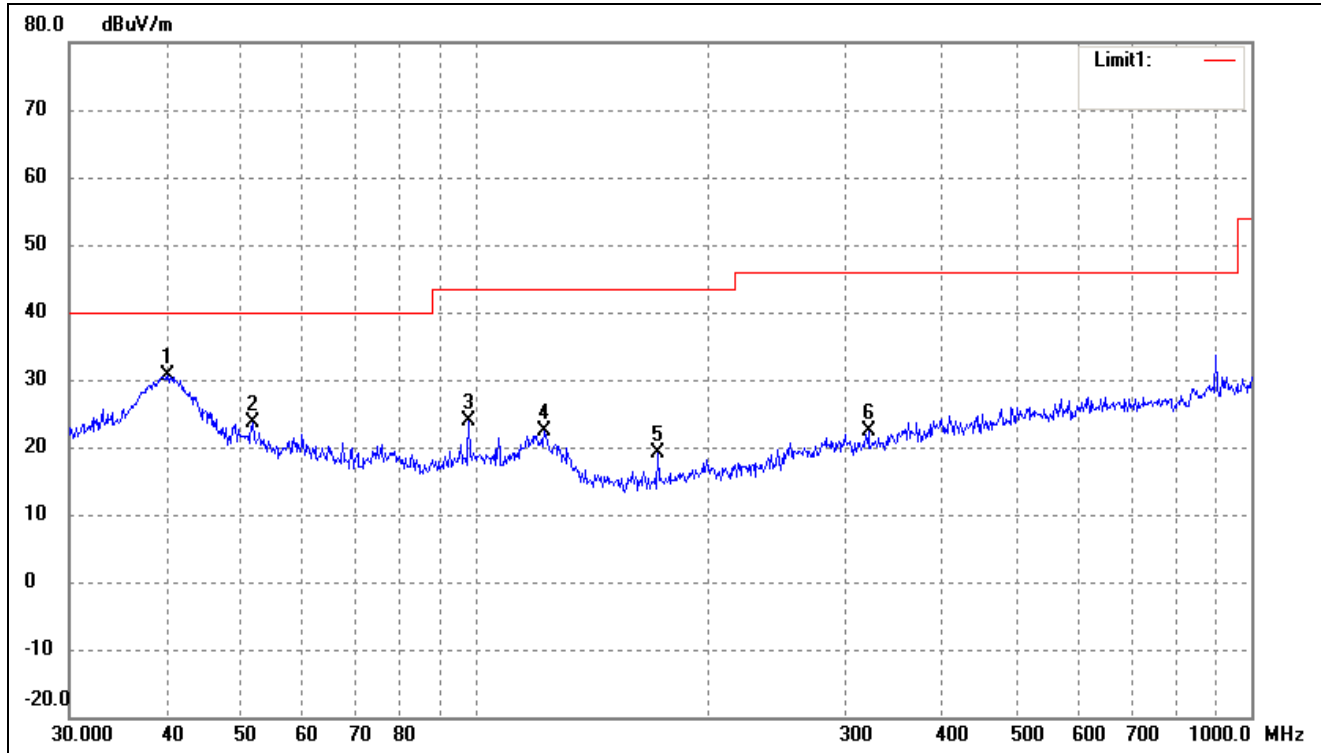
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.4059	39.20	-14.02	25.18	40.00	-14.82	-	-	peak
2	41.2765	36.56	-11.94	24.62	40.00	-15.38	-	-	peak
3	58.4074	34.68	-12.98	21.70	40.00	-18.30	-	-	peak
4	119.8556	38.49	-14.28	24.21	43.50	-19.29	-	-	peak
5	265.6757	38.17	-10.80	27.37	46.00	-18.63	-	-	peak
6	281.0075	38.58	-10.32	28.26	46.00	-17.74	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



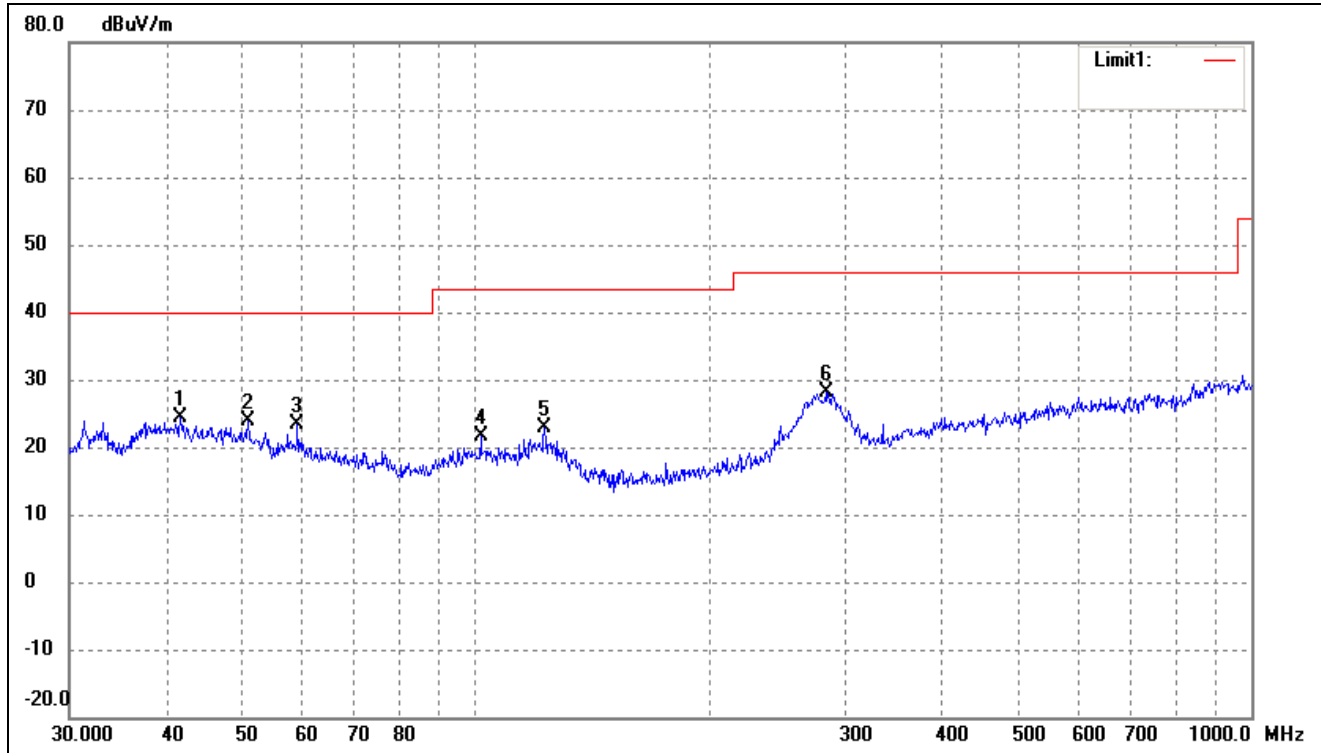
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	32.1795	37.32	-14.03	23.29	40.00	-16.71	-	-	peak
2	39.7147	36.91	-12.09	24.82	40.00	-15.18	-	-	peak
3	58.4074	34.99	-12.98	22.01	40.00	-17.99	-	-	peak
4	121.5486	36.56	-14.71	21.85	43.50	-21.65	-	-	peak
5	281.0075	38.75	-10.32	28.43	46.00	-17.57	-	-	peak
6	397.6334	32.62	-6.53	26.09	46.00	-19.91	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



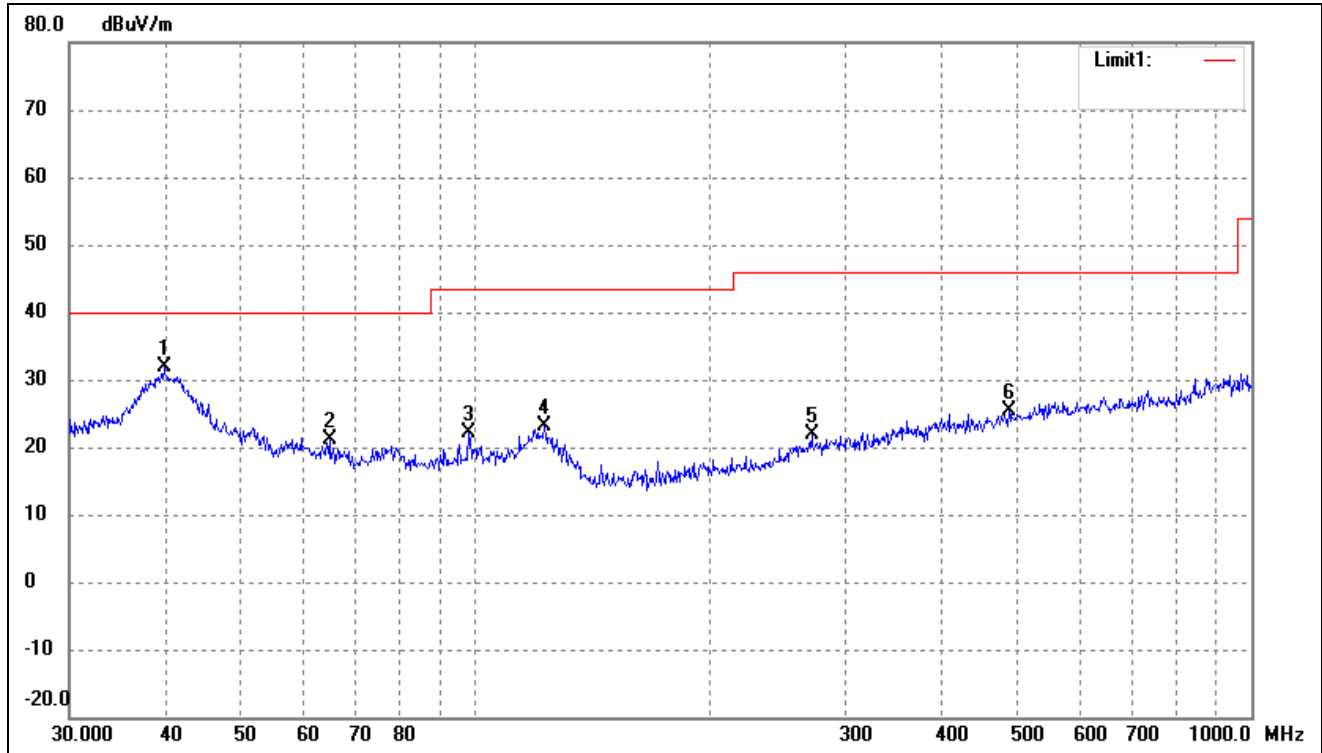
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	42.55	-11.98	30.57	40.00	-9.43	-	-	peak
2	51.6616	35.51	-12.00	23.51	40.00	-16.49	-	-	peak
3	98.1419	37.55	-13.62	23.93	43.50	-19.57	-	-	peak
4	122.8340	37.51	-15.05	22.46	43.50	-21.04	-	-	peak
5	171.9946	33.97	-14.88	19.09	43.50	-24.41	-	-	peak
6	321.0608	31.41	-8.95	22.46	46.00	-23.54	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



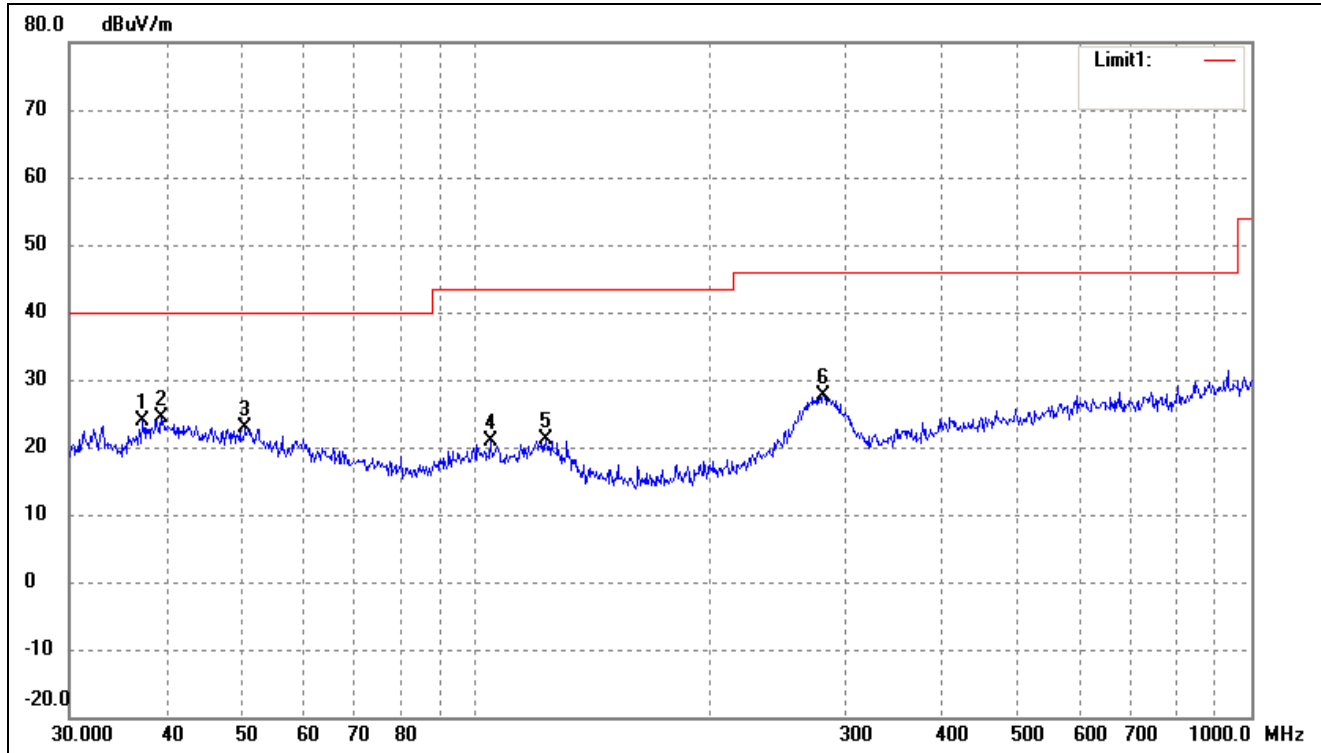
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	41.7130	36.34	-11.92	24.42	40.00	-15.58	-	-	peak
2	50.9420	35.72	-11.80	23.92	40.00	-16.08	-	-	peak
3	59.0251	36.33	-12.97	23.36	40.00	-16.64	-	-	peak
4	101.6443	34.83	-13.32	21.51	43.50	-21.99	-	-	peak
5	122.8340	37.82	-15.05	22.77	43.50	-20.73	-	-	peak
6	282.9852	38.24	-10.17	28.07	46.00	-17.93	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



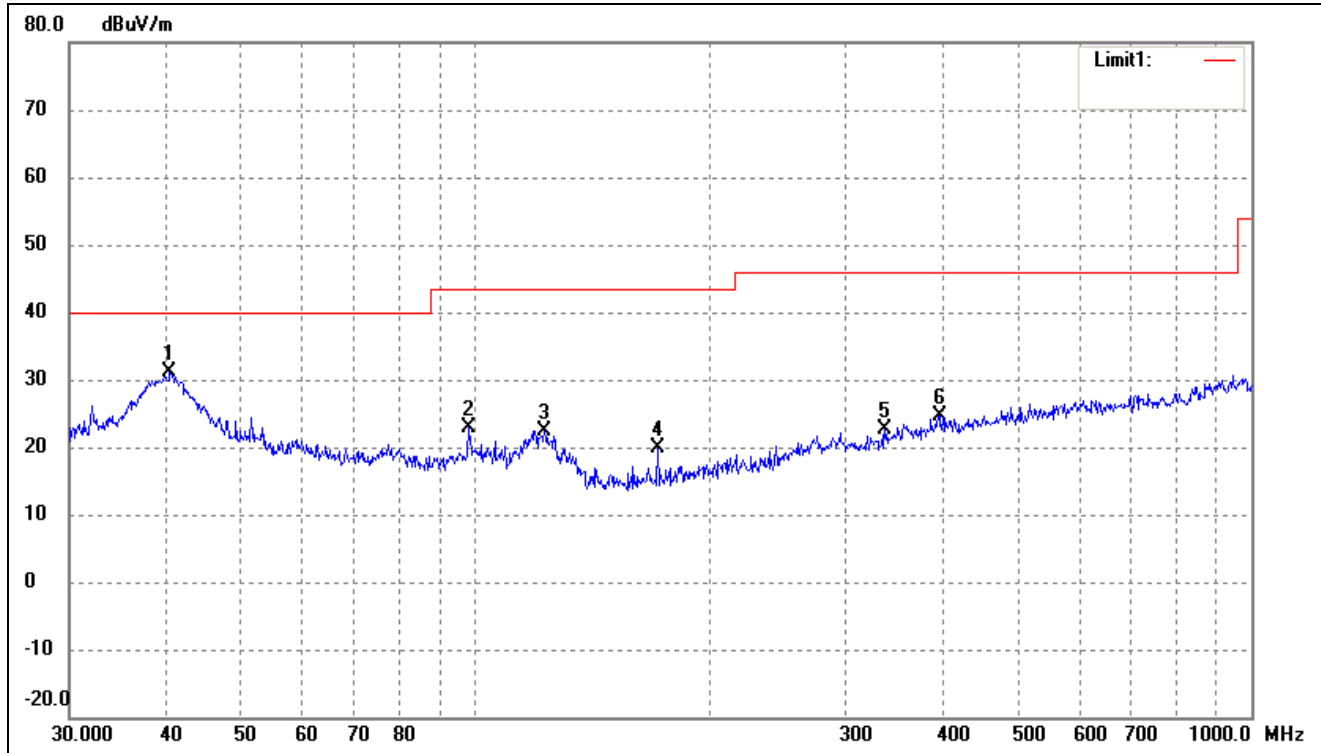
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	43.88	-12.09	31.79	40.00	-8.21	-	-	peak
2	64.8865	35.05	-13.91	21.14	40.00	-18.86	-	-	peak
3	98.1419	35.74	-13.62	22.12	43.50	-21.38	-	-	peak
4	122.8340	38.11	-15.05	23.06	43.50	-20.44	-	-	peak
5	271.3246	32.56	-10.79	21.77	46.00	-24.23	-	-	peak
6	487.3151	29.71	-4.44	25.27	46.00	-20.73	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



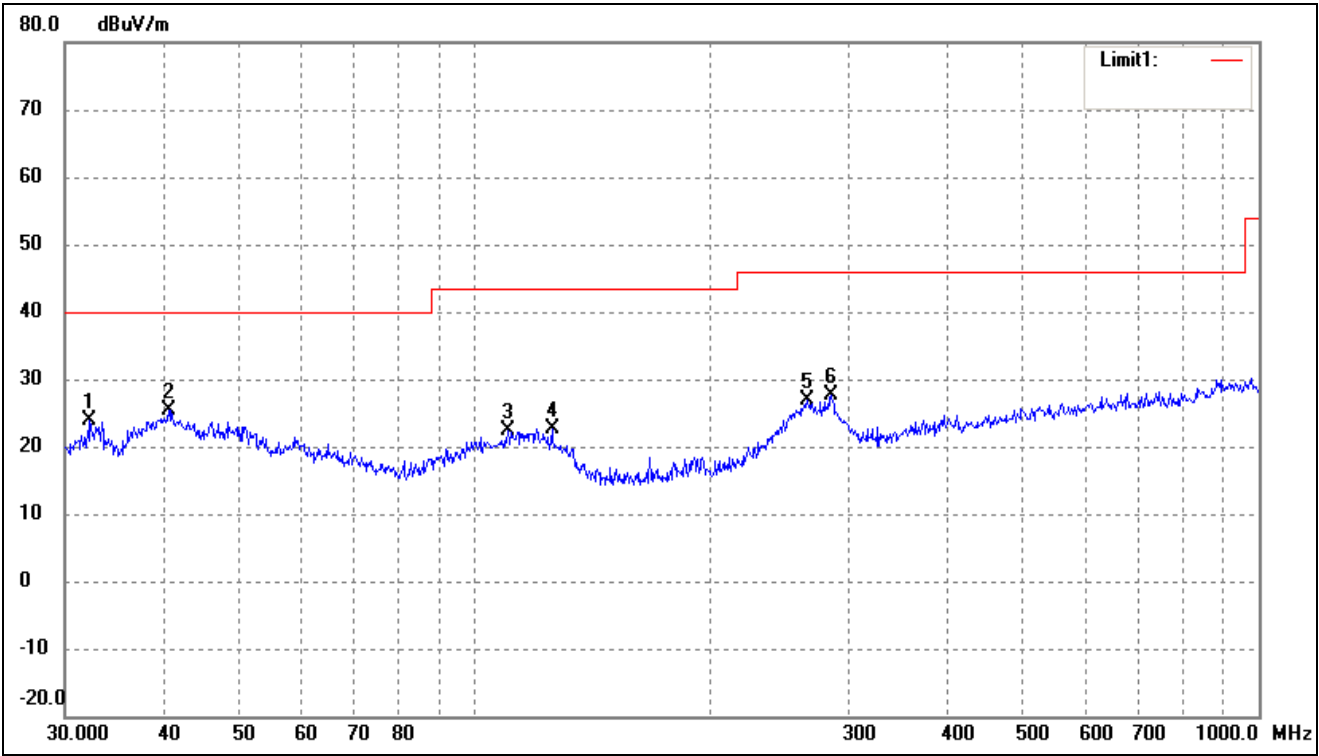
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	37.2855	36.94	-13.01	23.93	40.00	-16.07	-	-	peak
2	39.4372	36.51	-12.19	24.32	40.00	-15.68	-	-	peak
3	50.5860	34.50	-11.69	22.81	40.00	-17.19	-	-	peak
4	104.5361	34.17	-13.32	20.85	43.50	-22.65	-	-	peak
5	123.2655	36.35	-15.17	21.18	43.50	-22.32	-	-	peak
6	281.0075	37.92	-10.32	27.60	46.00	-18.40	-	-	peak

ANT 3_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



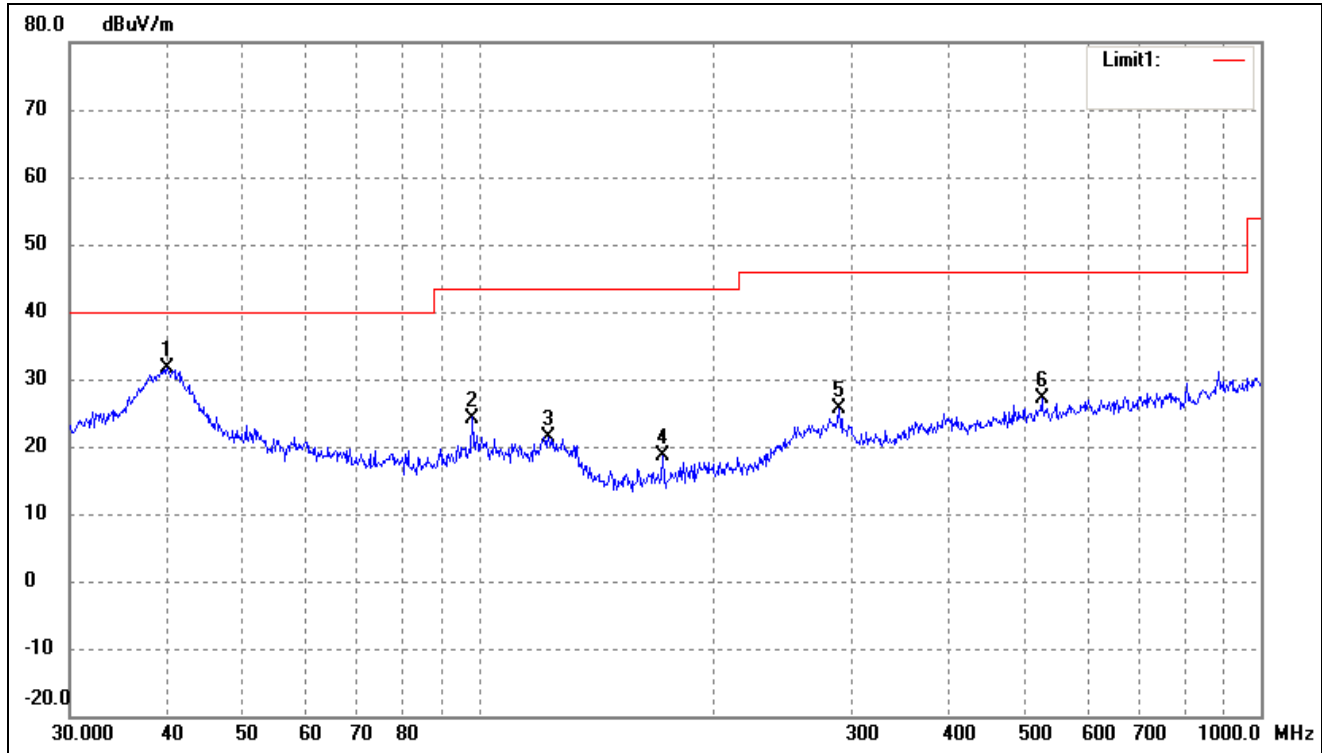
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.4172	43.05	-11.97	31.08	40.00	-8.92	-	-	peak
2	98.1419	36.62	-13.62	23.00	43.50	-20.50	-	-	peak
3	122.8340	37.39	-15.05	22.34	43.50	-21.16	-	-	peak
4	171.9946	34.84	-14.88	19.96	43.50	-23.54	-	-	peak
5	337.2155	30.92	-8.21	22.71	46.00	-23.29	-	-	peak
6	396.2415	31.29	-6.57	24.72	46.00	-21.28	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



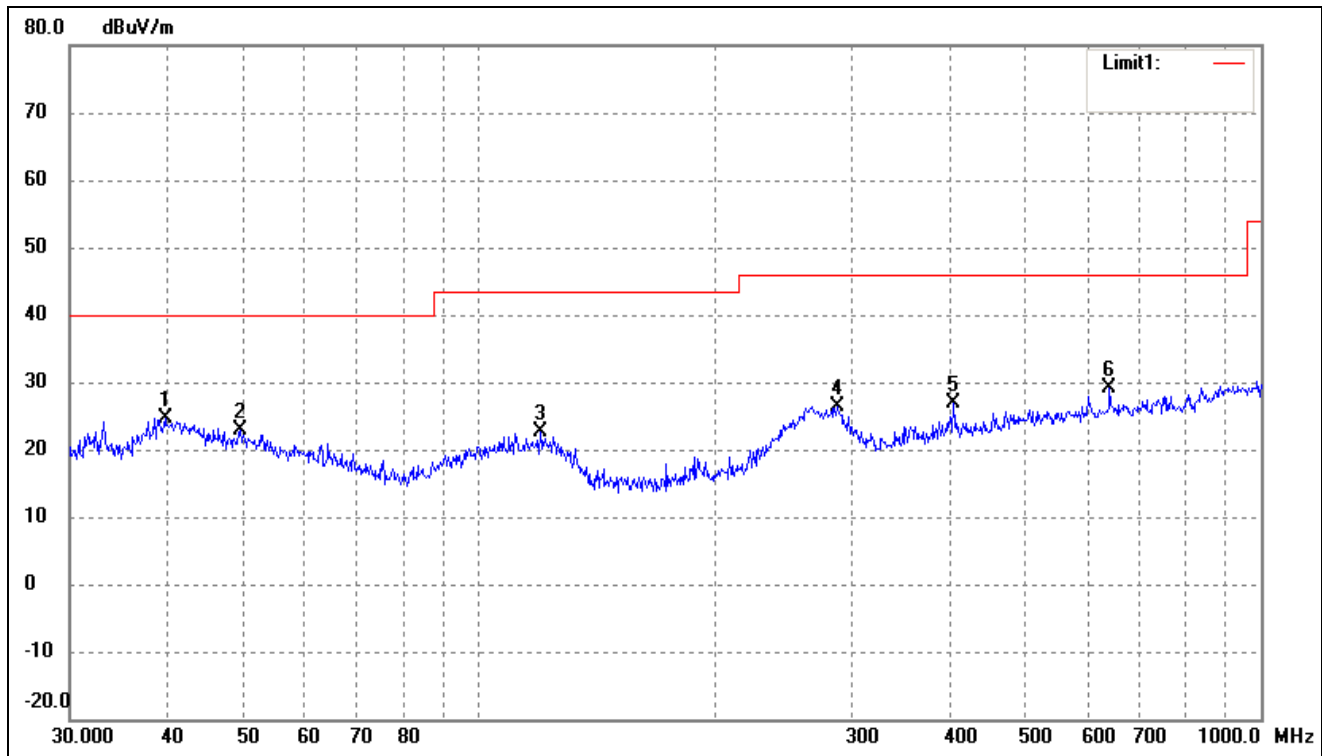
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)	
1	32.2925	38.01	-14.03	23.98	40.00	-16.02	-	-	peak
2	40.7016	37.25	-11.96	25.29	40.00	-14.71	-	-	peak
3	110.1816	35.70	-13.32	22.38	43.50	-21.12	-	-	peak
4	125.4457	38.47	-15.74	22.73	43.50	-20.77	-	-	peak
5	265.6757	37.62	-10.80	26.82	46.00	-19.18	-	-	peak
6	284.9767	37.67	-10.03	27.64	46.00	-18.36	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



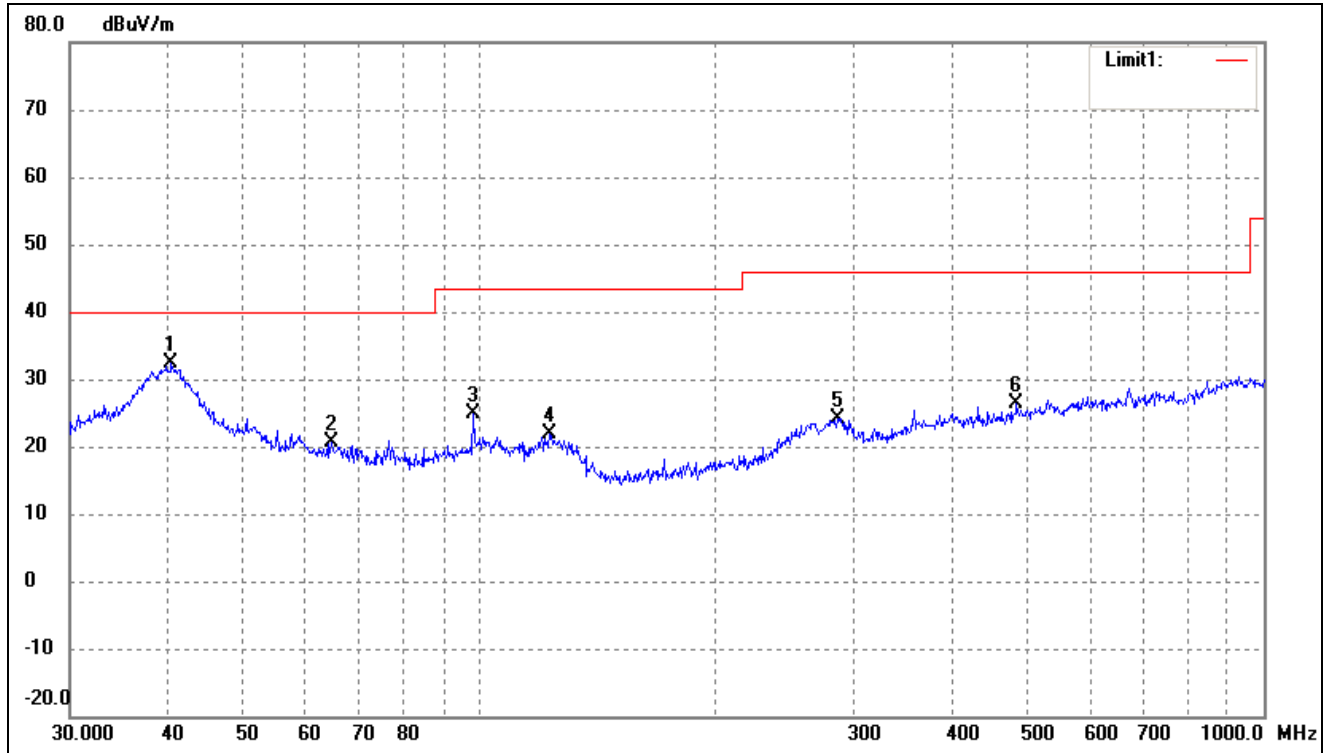
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	43.57	-11.98	31.59	40.00	-8.41	-	-	peak
2	98.1419	37.87	-13.62	24.25	43.50	-19.25	-	-	peak
3	122.8340	36.35	-15.05	21.30	43.50	-22.20	-	-	peak
4	171.9946	33.54	-14.88	18.66	43.50	-24.84	-	-	peak
5	289.0021	35.34	-9.72	25.62	46.00	-20.38	-	-	peak
6	524.5541	31.28	-4.18	27.10	46.00	-18.90	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



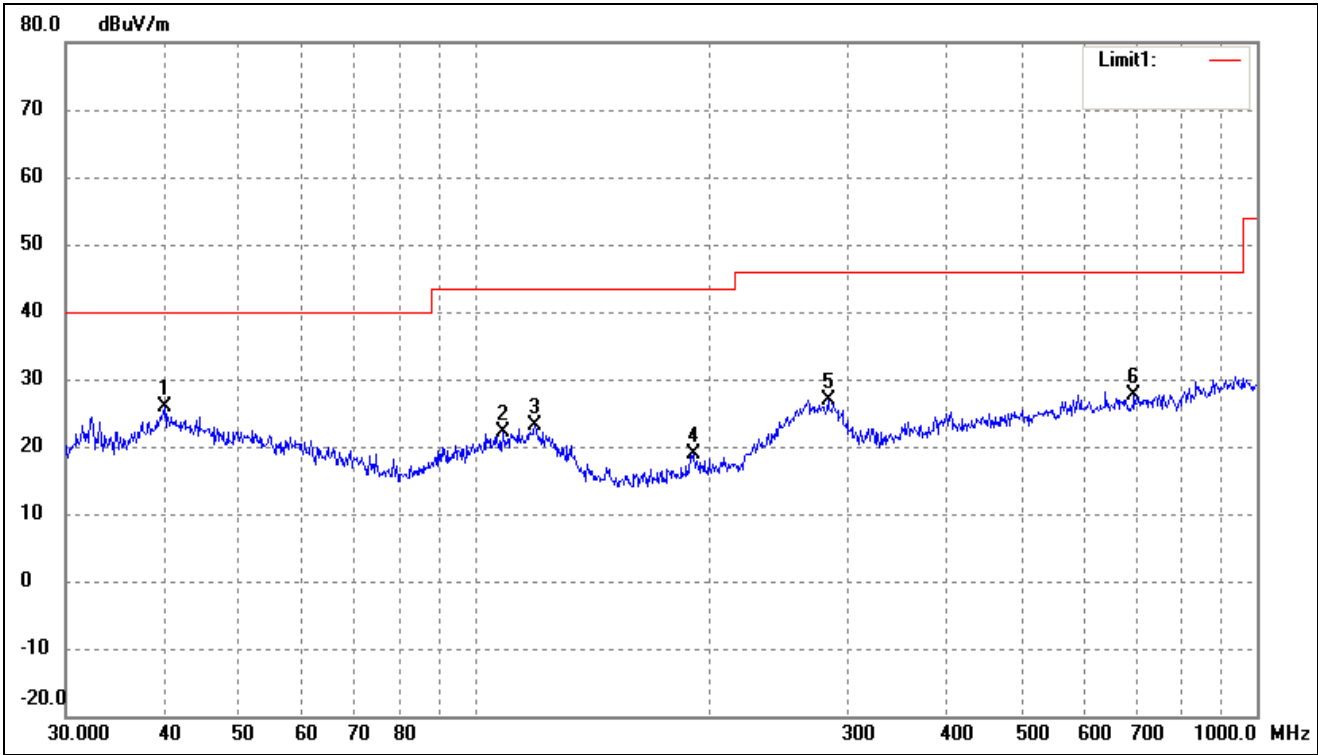
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	36.83	-12.09	24.74	40.00	-15.26	-	-	peak
2	49.5328	34.37	-11.56	22.81	40.00	-17.19	-	-	peak
3	119.8556	36.80	-14.28	22.52	43.50	-20.98	-	-	peak
4	286.9823	36.15	-9.87	26.28	46.00	-19.72	-	-	peak
5	404.6665	33.28	-6.36	26.92	46.00	-19.08	-	-	peak
6	640.6110	31.30	-2.29	29.01	46.00	-16.99	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



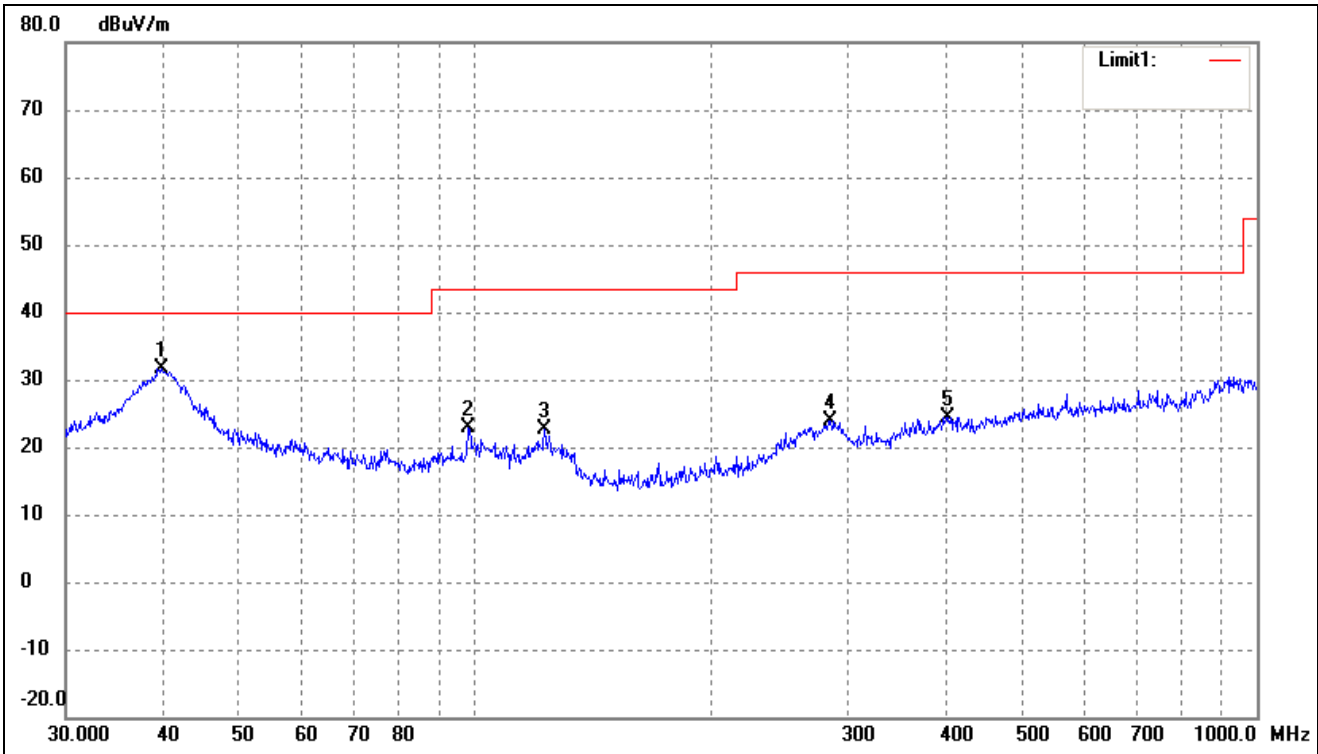
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.4172	44.28	-11.97	32.31	40.00	-7.69	-	-	peak
2	64.6594	34.45	-13.87	20.58	40.00	-19.42	-	-	peak
3	98.1419	38.47	-13.62	24.85	43.50	-18.65	-	-	peak
4	122.8340	37.05	-15.05	22.00	43.50	-21.50	-	-	peak
5	285.9778	34.11	-9.95	24.16	46.00	-21.84	-	-	peak
6	483.9094	30.83	-4.53	26.30	46.00	-19.70	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



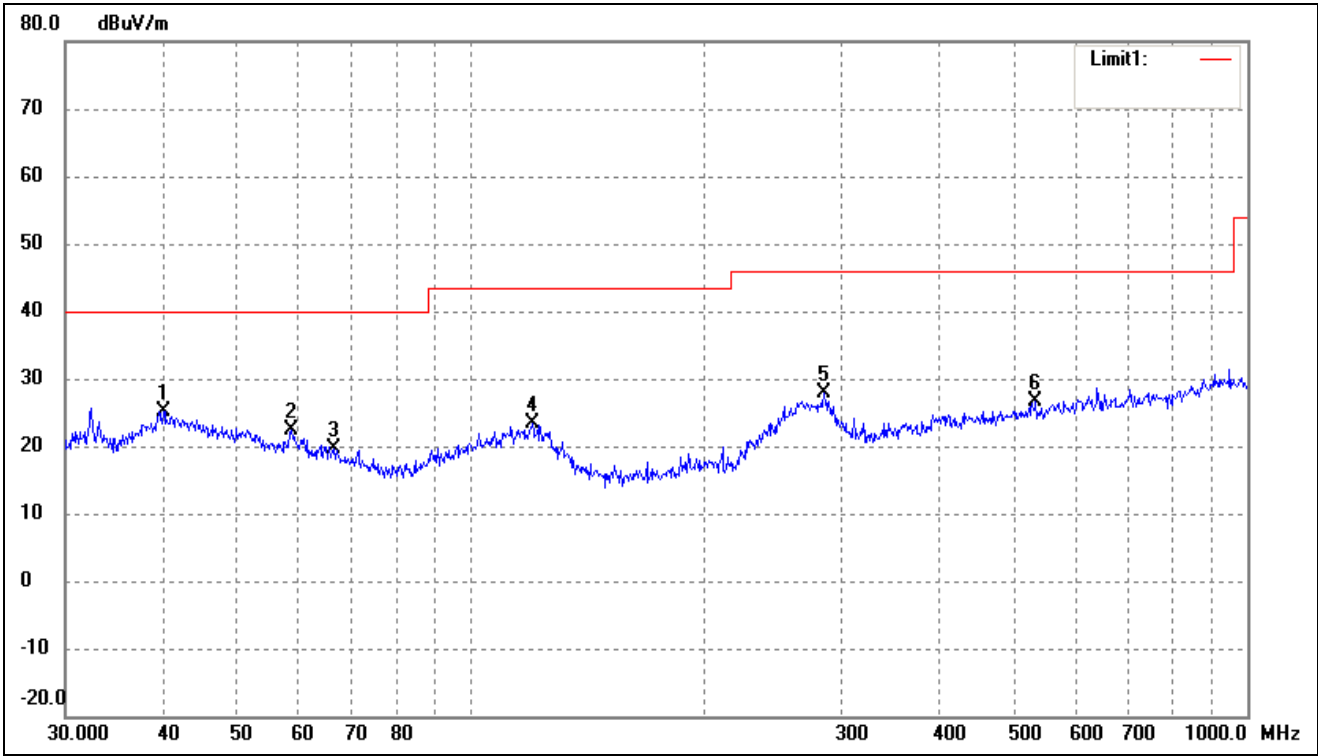
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.1347	37.93	-11.98	25.95	40.00	-14.05	-	-	peak
2	108.6470	35.47	-13.31	22.16	43.50	-21.34	-	-	peak
3	119.4361	37.48	-14.24	23.24	43.50	-20.26	-	-	peak
4	190.4050	32.07	-13.09	18.98	43.50	-24.52	-	-	peak
5	282.9852	37.16	-10.17	26.99	46.00	-19.01	-	-	peak
6	696.8567	29.51	-1.86	27.65	46.00	-18.35	-	-	peak

ANT 4_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



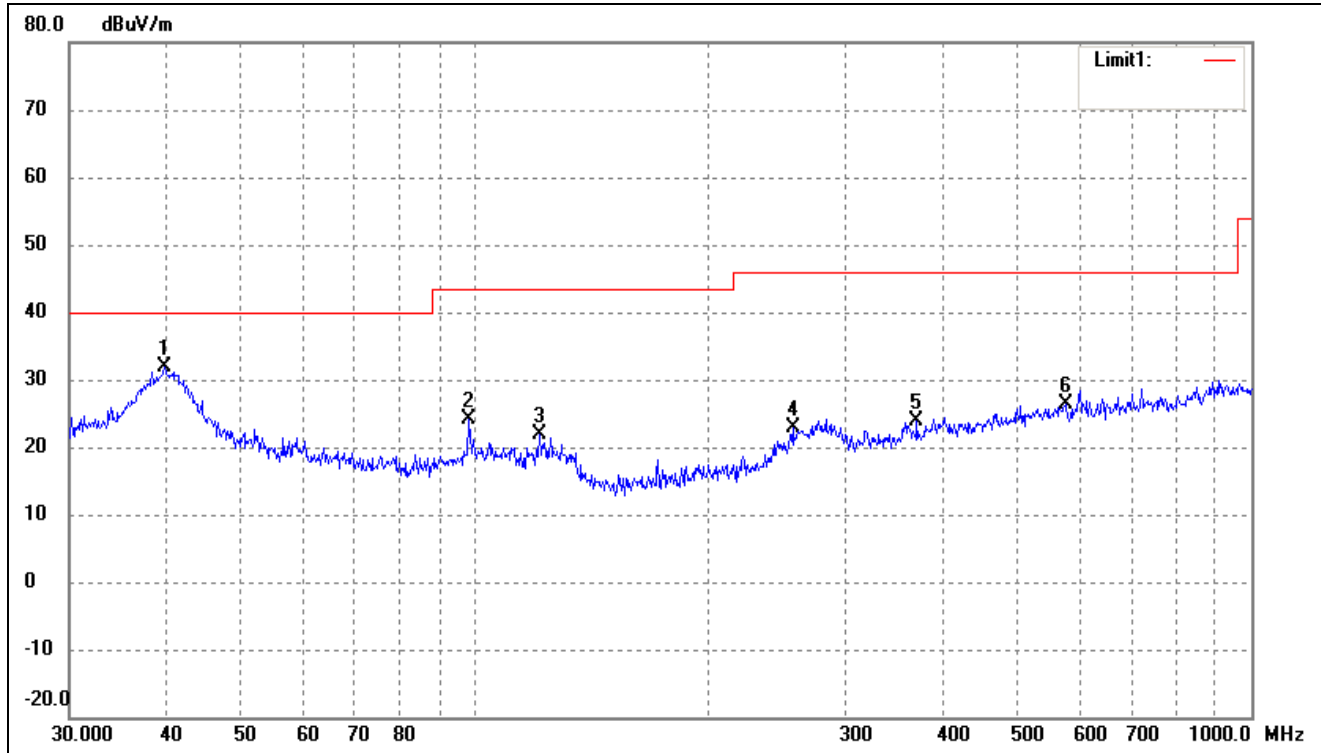
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.7147	43.82	-12.09	31.73	40.00	-8.27	-	-	peak
2	98.1419	36.62	-13.62	23.00	43.50	-20.50	-	-	peak
3	122.8340	37.64	-15.05	22.59	43.50	-20.91	-	-	peak
4	284.9767	33.86	-10.03	23.83	46.00	-22.17	-	-	peak
5	403.2500	30.83	-6.39	24.44	46.00	-21.56	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



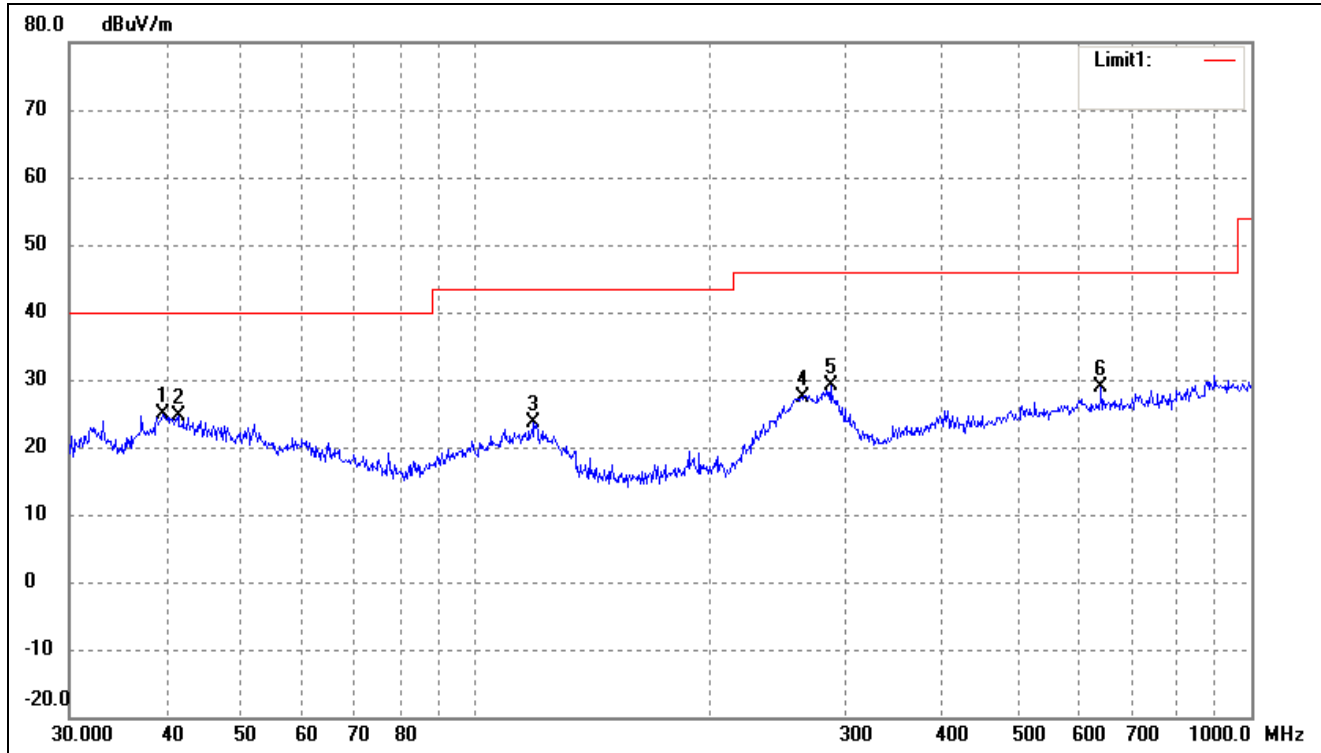
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)	
1	40.1347	37.14	-11.98	25.16	40.00	-14.84	-	-	peak
2	58.6126	35.40	-12.98	22.42	40.00	-17.58	-	-	peak
3	66.4989	33.68	-14.14	19.54	40.00	-20.46	-	-	peak
4	119.8556	37.62	-14.28	23.34	43.50	-20.16	-	-	peak
5	284.9767	37.90	-10.03	27.87	46.00	-18.13	-	-	peak
6	533.8321	30.71	-4.04	26.67	46.00	-19.33	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



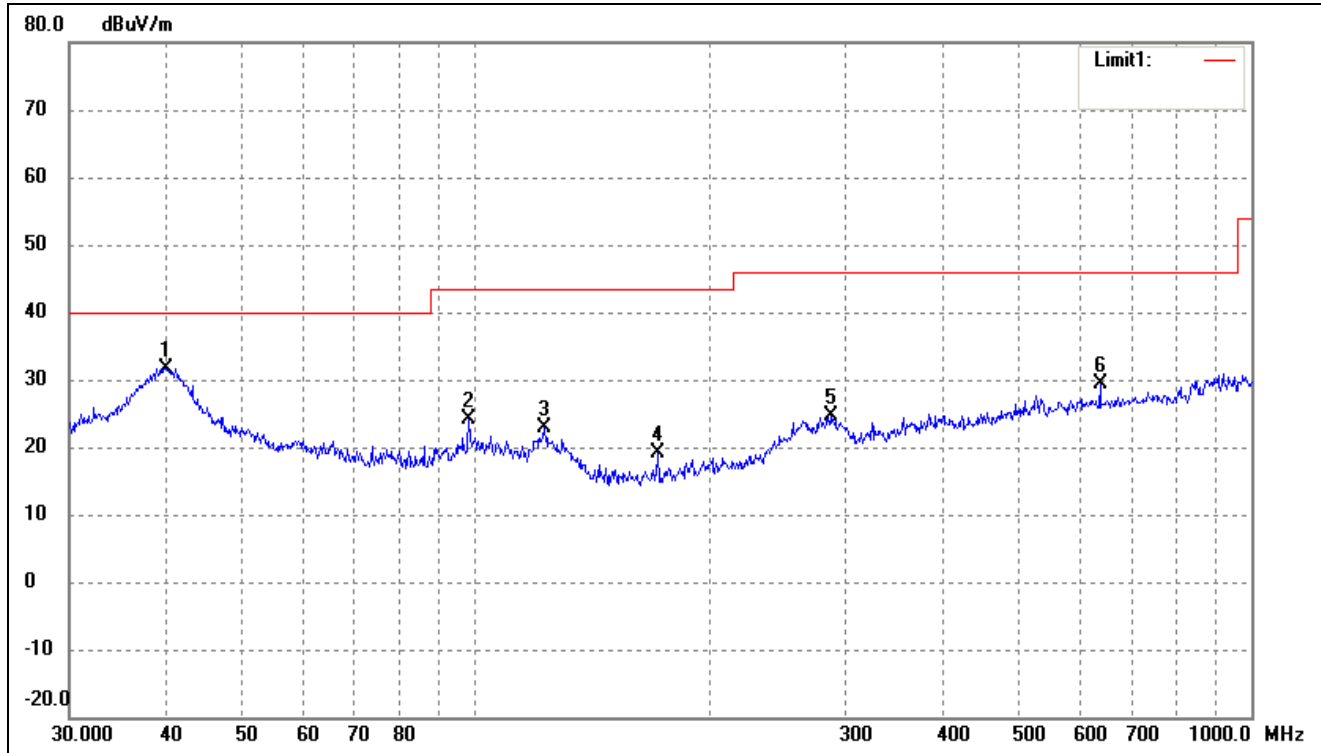
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	43.89	-12.03	31.86	40.00	-8.14	-	-	peak
2	98.1419	37.66	-13.62	24.04	43.50	-19.46	-	-	peak
3	121.1231	36.35	-14.59	21.76	43.50	-21.74	-	-	peak
4	256.5211	33.79	-10.87	22.92	46.00	-23.08	-	-	peak
5	370.7023	31.03	-7.24	23.79	46.00	-22.21	-	-	peak
6	576.6443	28.89	-2.52	26.37	46.00	-19.63	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



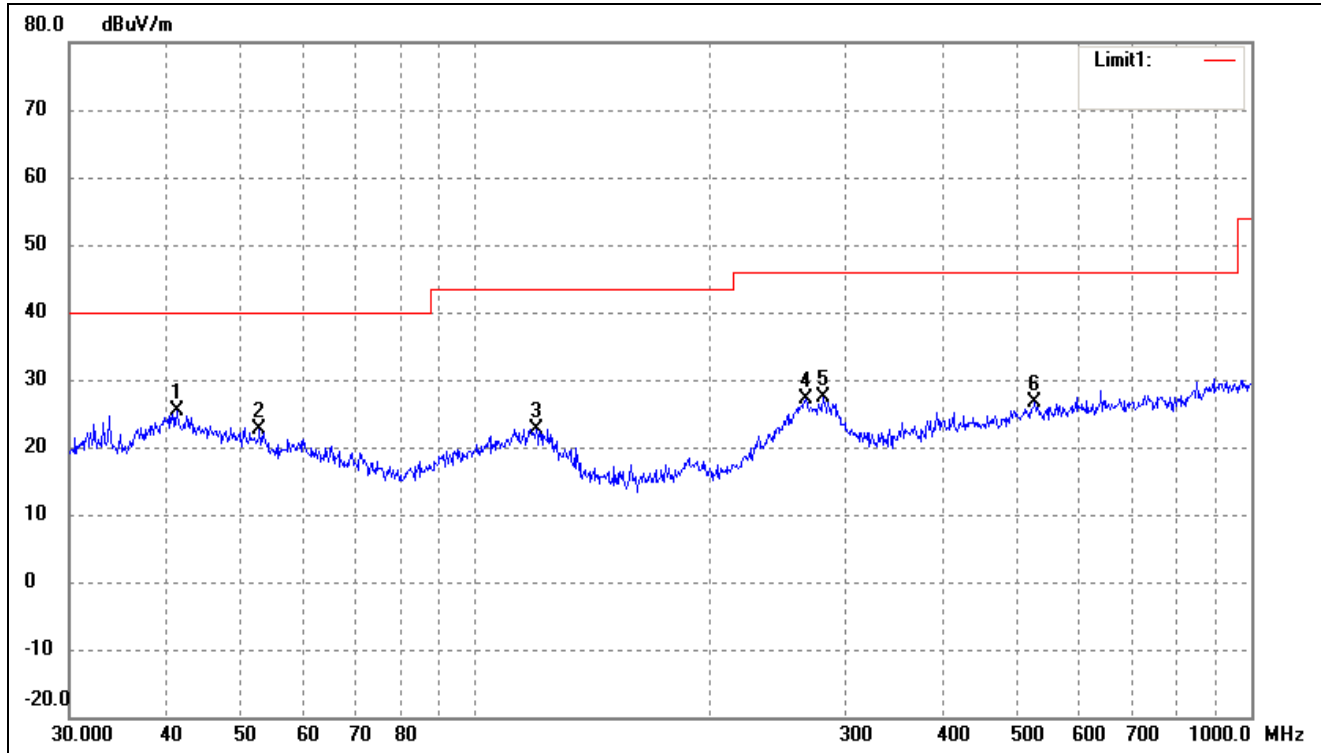
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	37.04	-12.14	24.90	40.00	-15.10	-	-	peak
2	41.4215	36.57	-11.93	24.64	40.00	-15.36	-	-	peak
3	119.0180	37.82	-14.20	23.62	43.50	-19.88	-	-	peak
4	263.8190	38.27	-10.83	27.44	46.00	-18.56	-	-	peak
5	286.9823	39.02	-9.87	29.15	46.00	-16.85	-	-	peak
6	640.6110	31.22	-2.29	28.93	46.00	-17.07	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



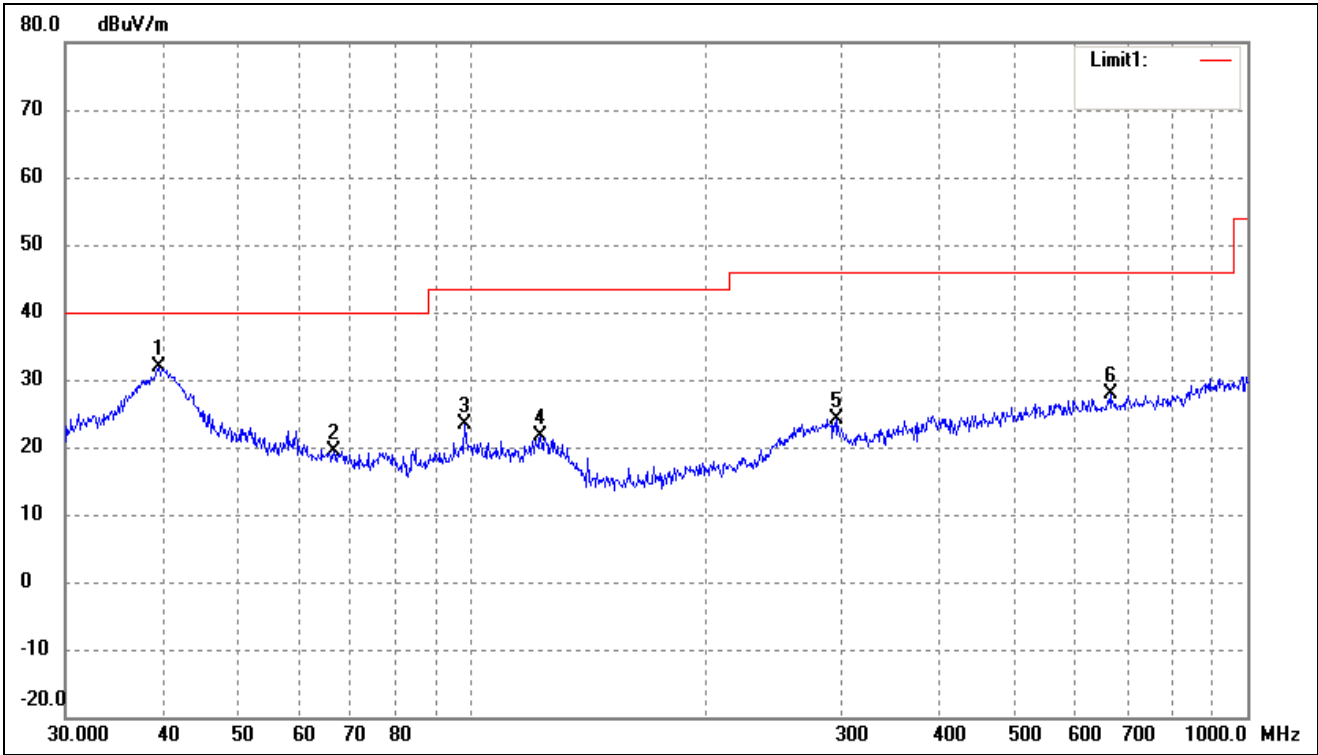
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	43.71	-11.98	31.73	40.00	-8.27	-	-	peak
2	98.1419	37.84	-13.62	24.22	43.50	-19.28	-	-	peak
3	122.8340	38.01	-15.05	22.96	43.50	-20.54	-	-	peak
4	171.9946	34.04	-14.88	19.16	43.50	-24.34	-	-	peak
5	286.9823	34.44	-9.87	24.57	46.00	-21.43	-	-	peak
6	638.3686	31.57	-2.27	29.30	46.00	-16.70	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



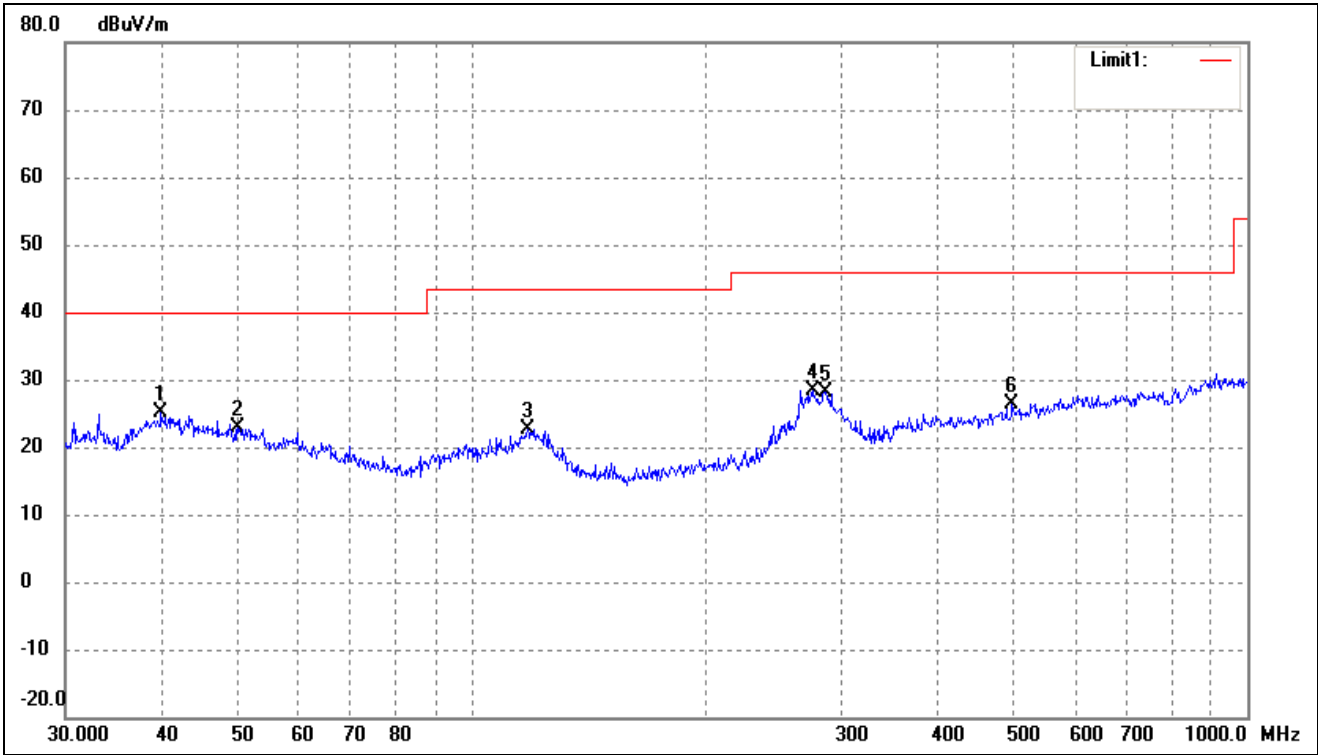
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	41.2765	37.24	-11.94	25.30	40.00	-14.70	-	-	peak
2	52.7600	34.82	-12.31	22.51	40.00	-17.49	-	-	peak
3	119.8556	36.98	-14.28	22.70	43.50	-20.80	-	-	peak
4	266.6089	37.93	-10.81	27.12	46.00	-18.88	-	-	peak
5	281.0075	37.58	-10.32	27.26	46.00	-18.74	-	-	peak
6	526.3967	30.76	-4.15	26.61	46.00	-19.39	-	-	peak

ANT 5_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



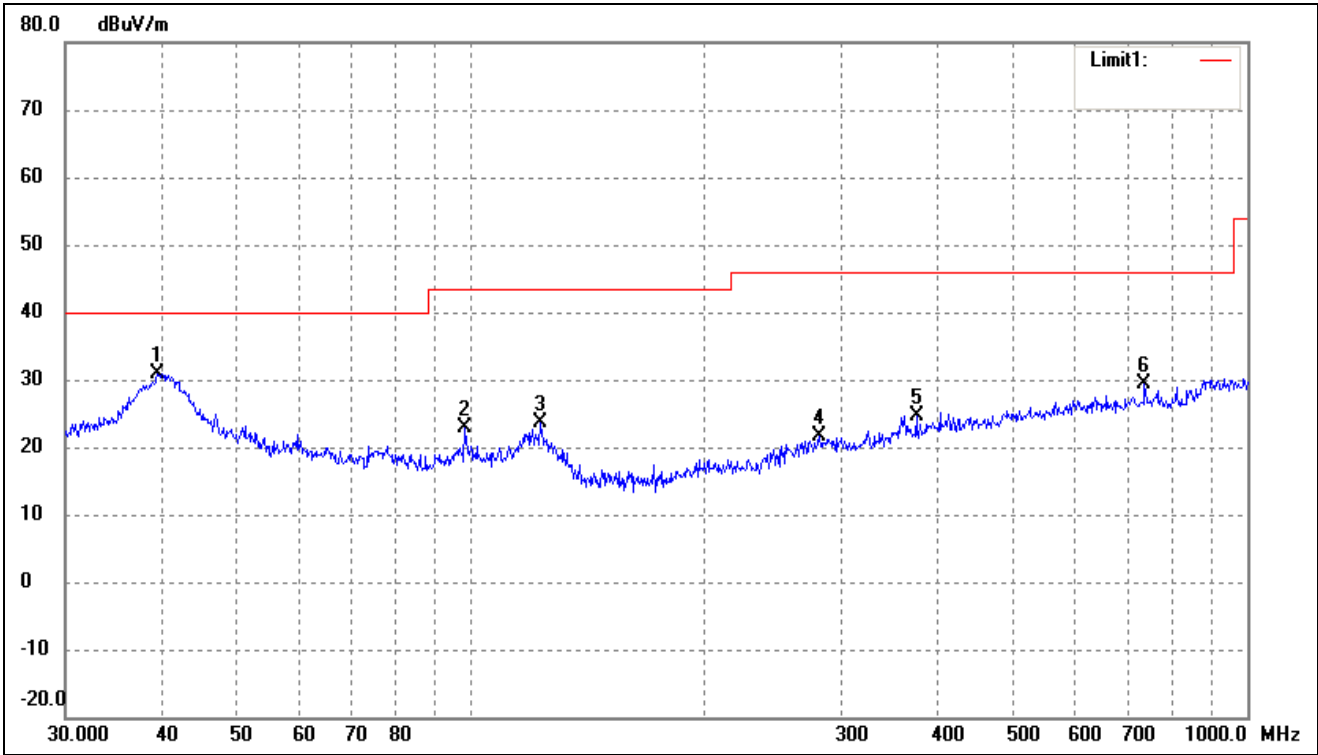
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.5757	43.95	-12.14	31.81	40.00	-8.19	-	-	peak
2	66.4989	33.54	-14.14	19.40	40.00	-20.60	-	-	peak
3	98.1419	37.04	-13.62	23.42	43.50	-20.08	-	-	peak
4	122.8340	36.63	-15.05	21.58	43.50	-21.92	-	-	peak
5	295.1469	33.38	-9.27	24.11	46.00	-21.89	-	-	peak
6	665.8035	29.91	-2.05	27.86	46.00	-18.14	-	-	peak

ANT 6_802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



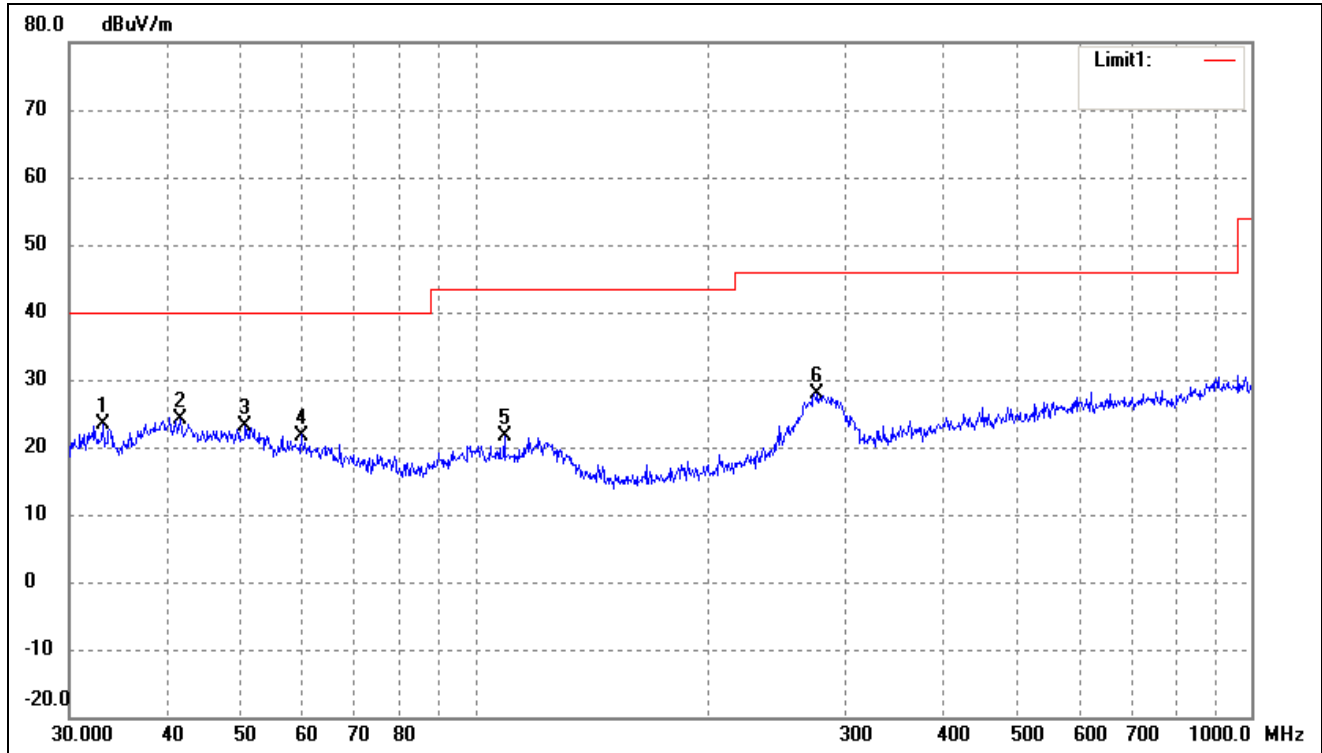
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	37.09	-12.03	25.06	40.00	-14.94	-	-	peak
2	50.0566	34.46	-11.55	22.91	40.00	-17.09	-	-	peak
3	118.1862	36.69	-14.12	22.57	43.50	-20.93	-	-	peak
4	276.1236	39.00	-10.68	28.32	46.00	-17.68	-	-	peak
5	285.9778	38.18	-9.95	28.23	46.00	-17.77	-	-	peak
6	497.6765	30.60	-4.12	26.48	46.00	-19.52	-	-	peak

ANT 6_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



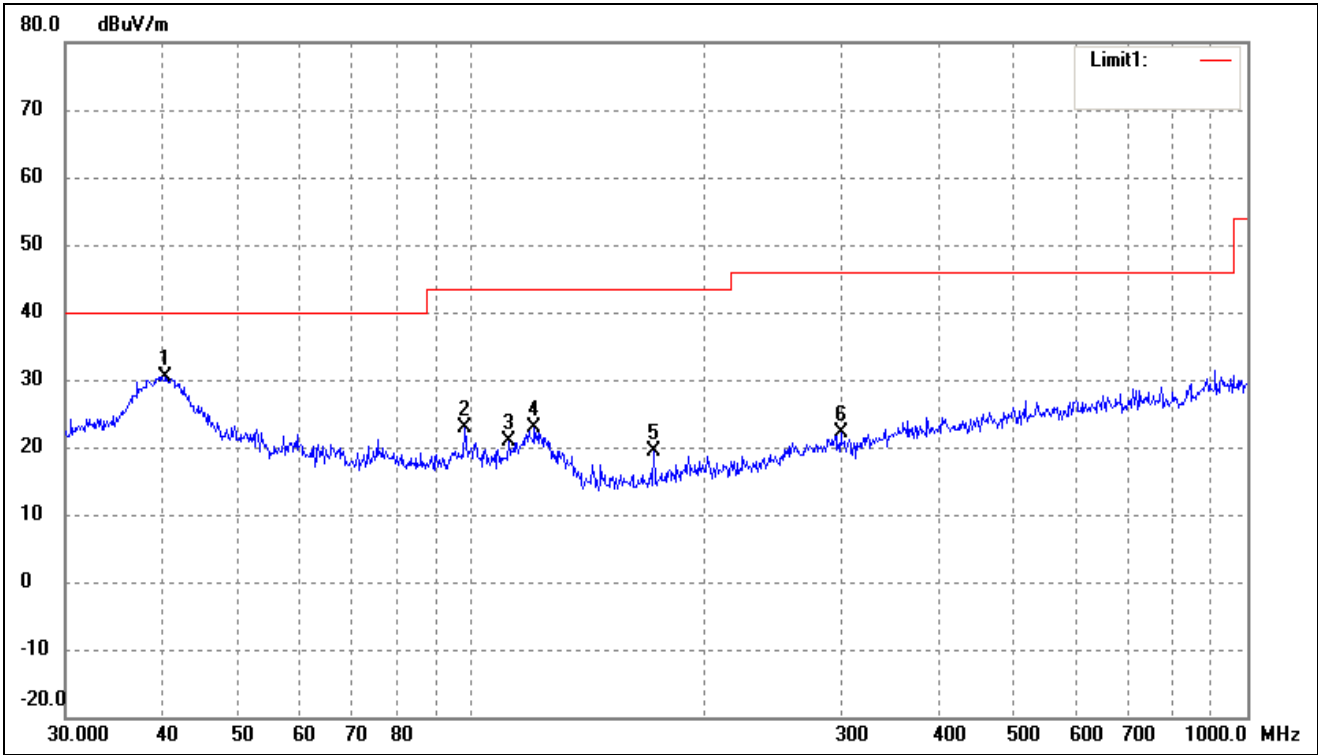
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.4372	43.04	-12.19	30.85	40.00	-9.15	-	-	peak
2	98.1419	36.58	-13.62	22.96	43.50	-20.54	-	-	peak
3	122.8340	38.60	-15.05	23.55	43.50	-19.95	-	-	peak
4	281.0075	31.96	-10.32	21.64	46.00	-24.36	-	-	peak
5	374.6226	31.89	-7.19	24.70	46.00	-21.30	-	-	peak
6	737.0714	30.59	-1.13	29.46	46.00	-16.54	-	-	peak

ANT 6_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



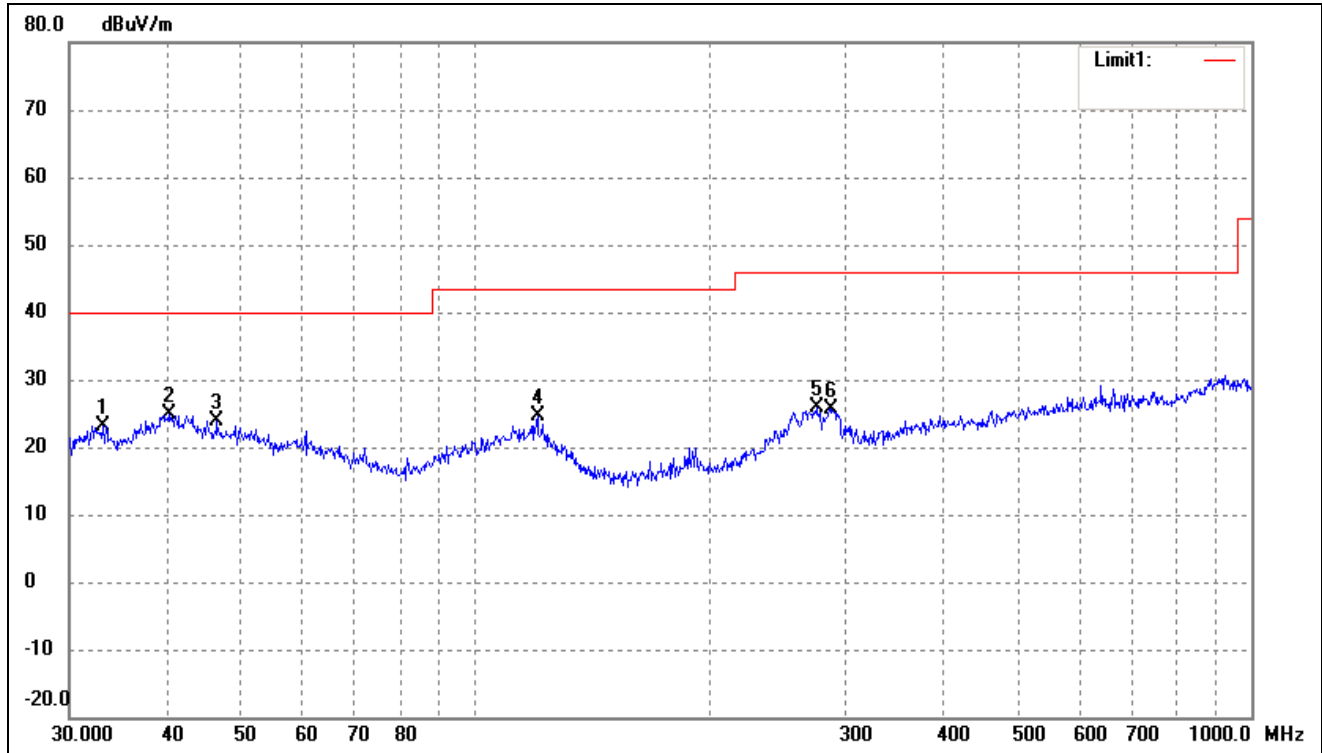
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	33.0950	37.33	-13.98	23.35	40.00	-16.65	-	-	peak
2	41.7130	35.96	-11.92	24.04	40.00	-15.96	-	-	peak
3	50.5860	34.85	-11.69	23.16	40.00	-16.84	-	-	peak
4	59.6493	34.73	-12.98	21.75	40.00	-18.25	-	-	peak
5	109.0286	34.95	-13.31	21.64	43.50	-21.86	-	-	peak
6	276.1236	38.68	-10.68	28.00	46.00	-18.00	-	-	peak

ANT 6_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.4172	42.43	-11.97	30.46	40.00	-9.54	-	-	peak
2	98.1419	36.54	-13.62	22.92	43.50	-20.58	-	-	peak
3	111.7380	34.35	-13.48	20.87	43.50	-22.63	-	-	peak
4	120.6991	37.31	-14.50	22.81	43.50	-20.69	-	-	peak
5	171.9946	34.23	-14.88	19.35	43.50	-24.15	-	-	peak
6	299.3158	31.05	-8.96	22.09	46.00	-23.91	-	-	peak

ANT 6_802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	33.2112	37.22	-13.97	23.25	40.00	-16.75	-	-	peak
2	40.4172	36.86	-11.97	24.89	40.00	-15.11	-	-	peak
3	46.5030	35.70	-11.72	23.98	40.00	-16.02	-	-	peak
4	120.2766	39.07	-14.38	24.69	43.50	-18.81	-	-	peak
5	275.1570	36.58	-10.74	25.84	46.00	-20.16	-	-	peak
6	286.9823	35.57	-9.87	25.70	46.00	-20.30	-	-	peak

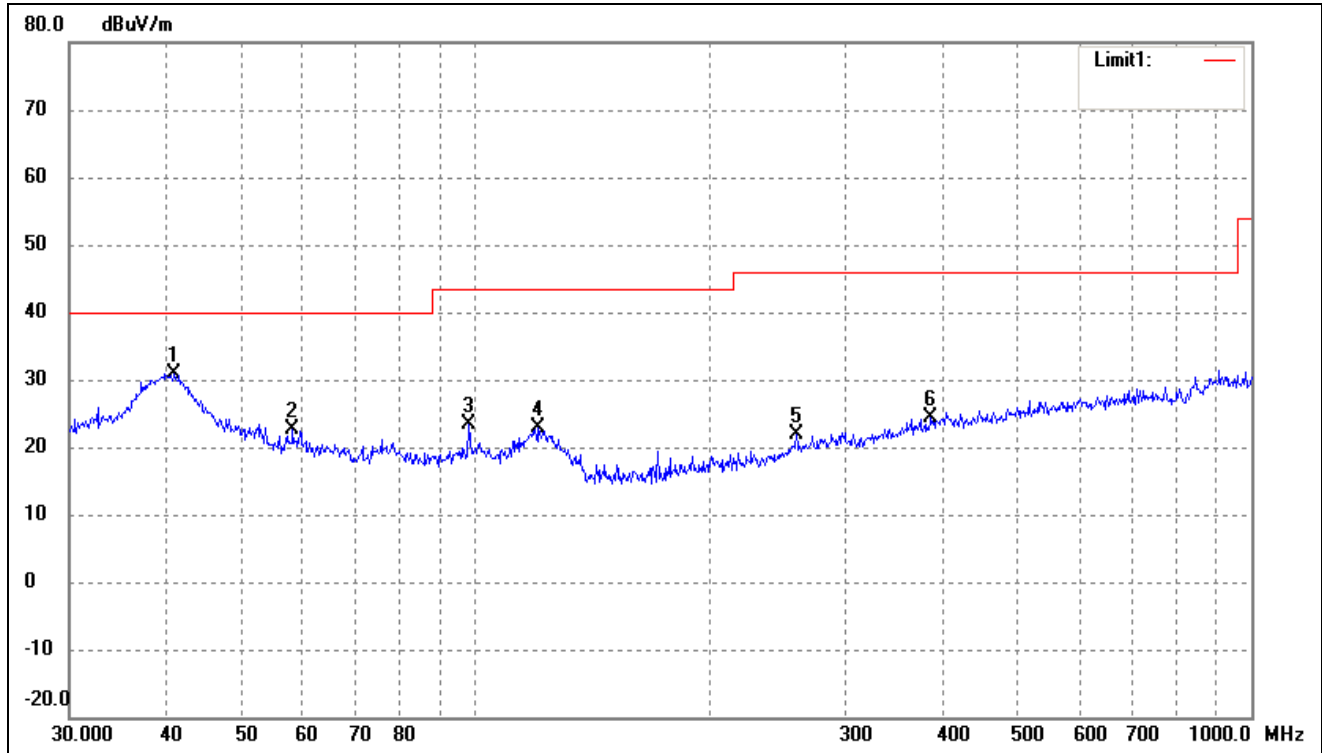
ANT 6_802.11b_11Mbps

Test Channel

High

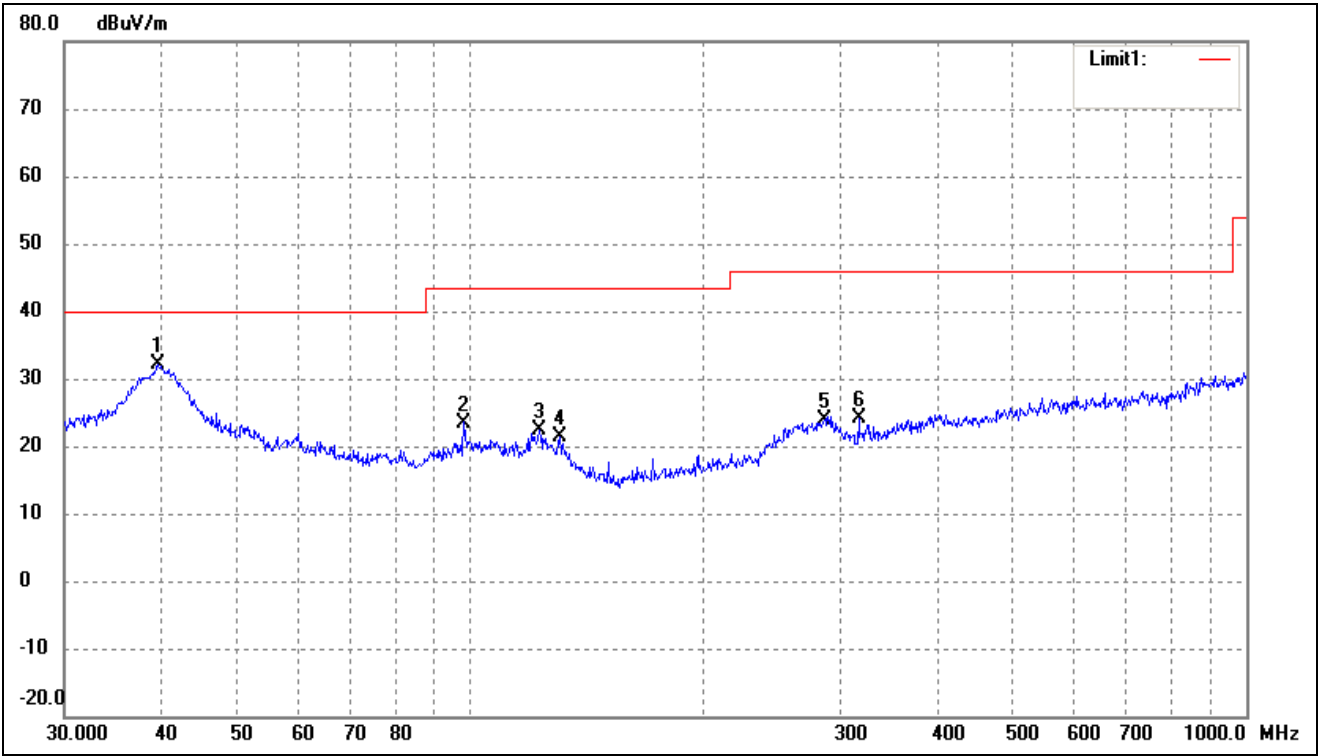
Polarity:

Vertical



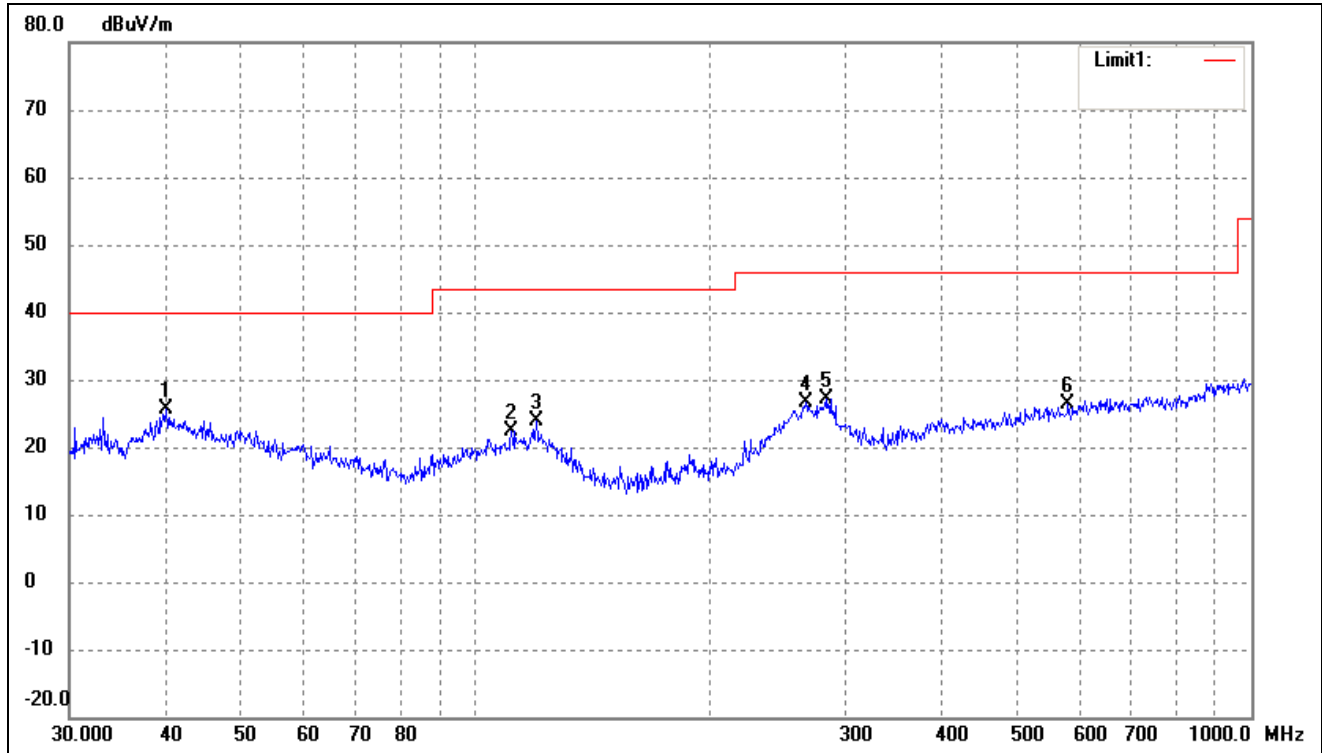
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	40.9881	42.93	-11.95	30.98	40.00	-9.02	-	-	peak
2	58.2030	35.52	-12.97	22.55	40.00	-17.45	-	-	peak
3	98.1419	36.94	-13.62	23.32	43.50	-20.18	-	-	peak
4	120.6991	37.31	-14.50	22.81	43.50	-20.69	-	-	peak
5	259.2338	32.60	-10.84	21.76	46.00	-24.24	-	-	peak
6	386.6338	31.11	-6.85	24.26	46.00	-21.74	-	-	peak

ANT 7_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



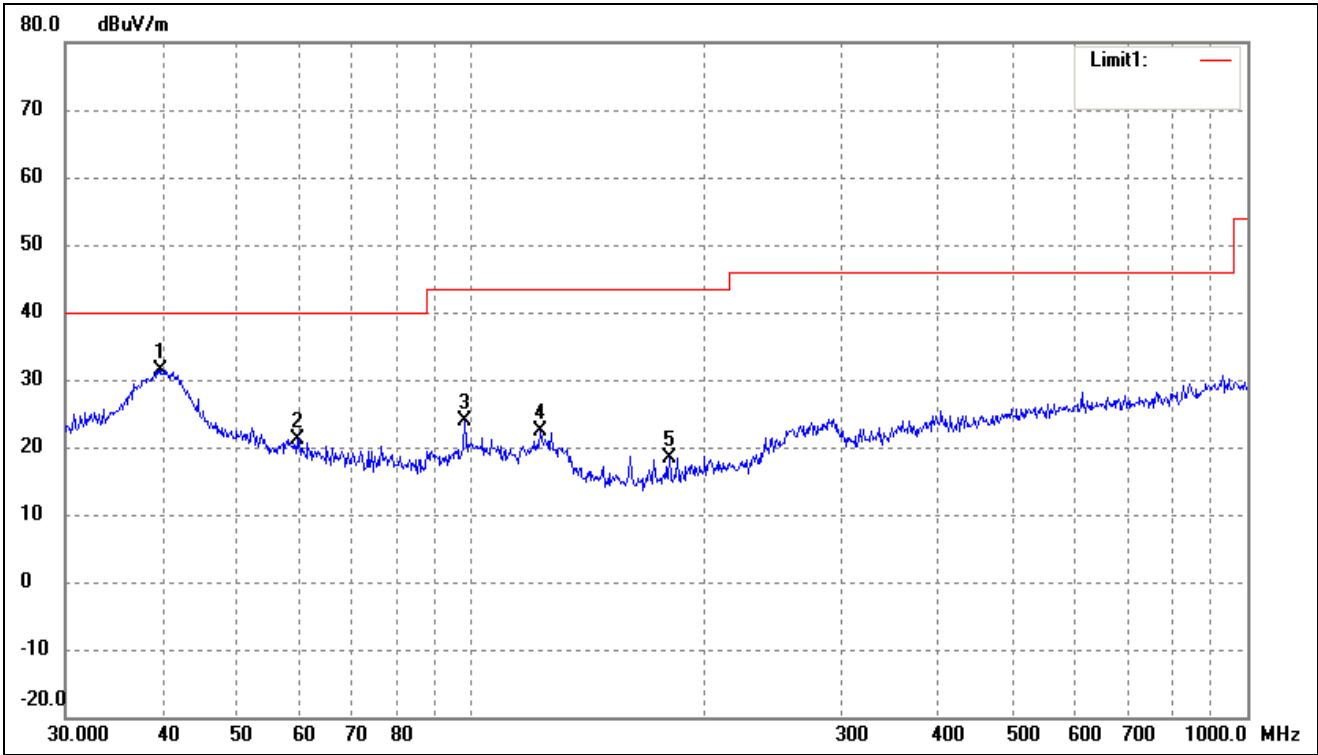
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)	
1	39.5757	44.39	-12.14	32.25	40.00	-7.75	-	-	peak
2	98.1419	37.12	-13.62	23.50	43.50	-20.00	-	-	peak
3	122.8340	37.33	-15.05	22.28	43.50	-21.22	-	-	peak
4	130.3789	38.35	-16.94	21.41	43.50	-22.09	-	-	peak
5	285.9778	33.95	-9.95	24.00	46.00	-22.00	-	-	peak
6	316.5890	33.04	-8.95	24.09	46.00	-21.91	-	-	peak

ANT 7_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



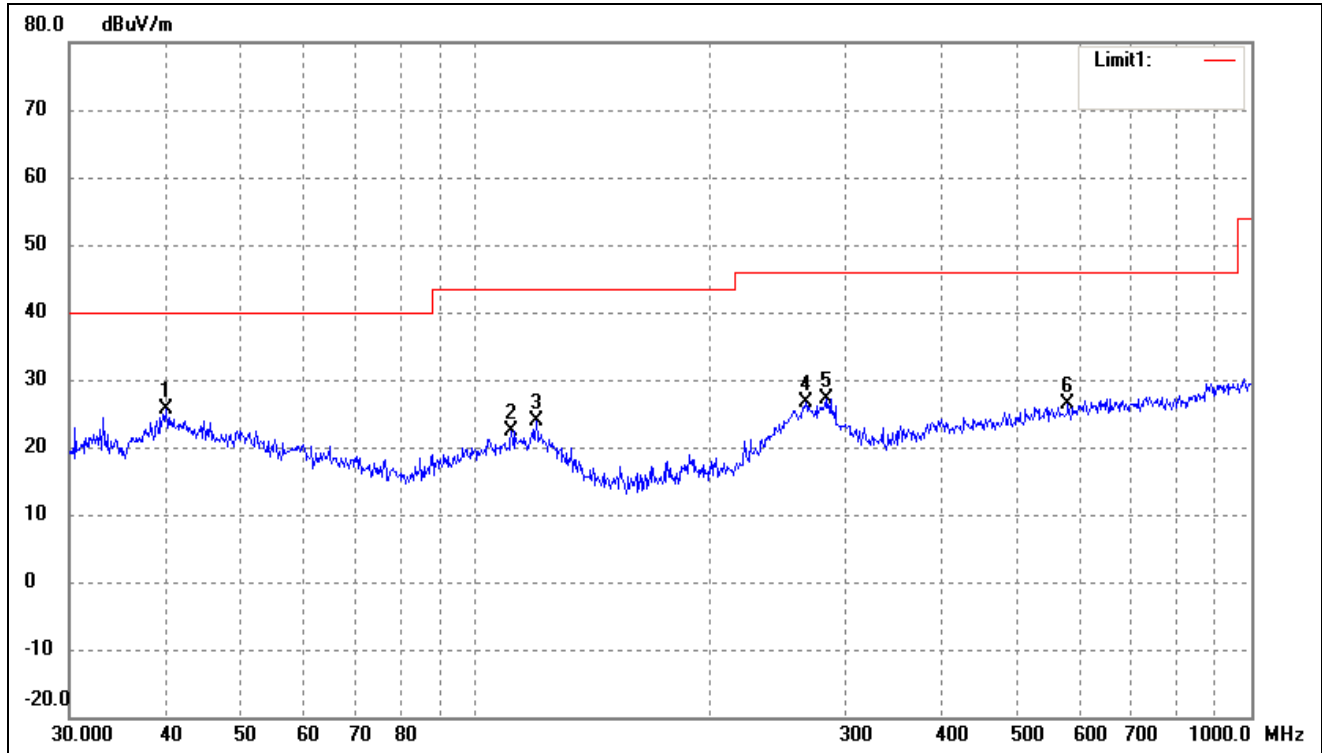
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	37.67	-11.98	25.69	40.00	-14.31	-	-	peak
2	111.3468	35.85	-13.45	22.40	43.50	-21.10	-	-	peak
3	119.8556	38.15	-14.28	23.87	43.50	-19.63	-	-	peak
4	266.6089	37.54	-10.81	26.73	46.00	-19.27	-	-	peak
5	282.9852	37.25	-10.17	27.08	46.00	-18.92	-	-	peak
6	580.7026	28.74	-2.42	26.32	46.00	-19.68	-	-	peak

ANT 7_802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



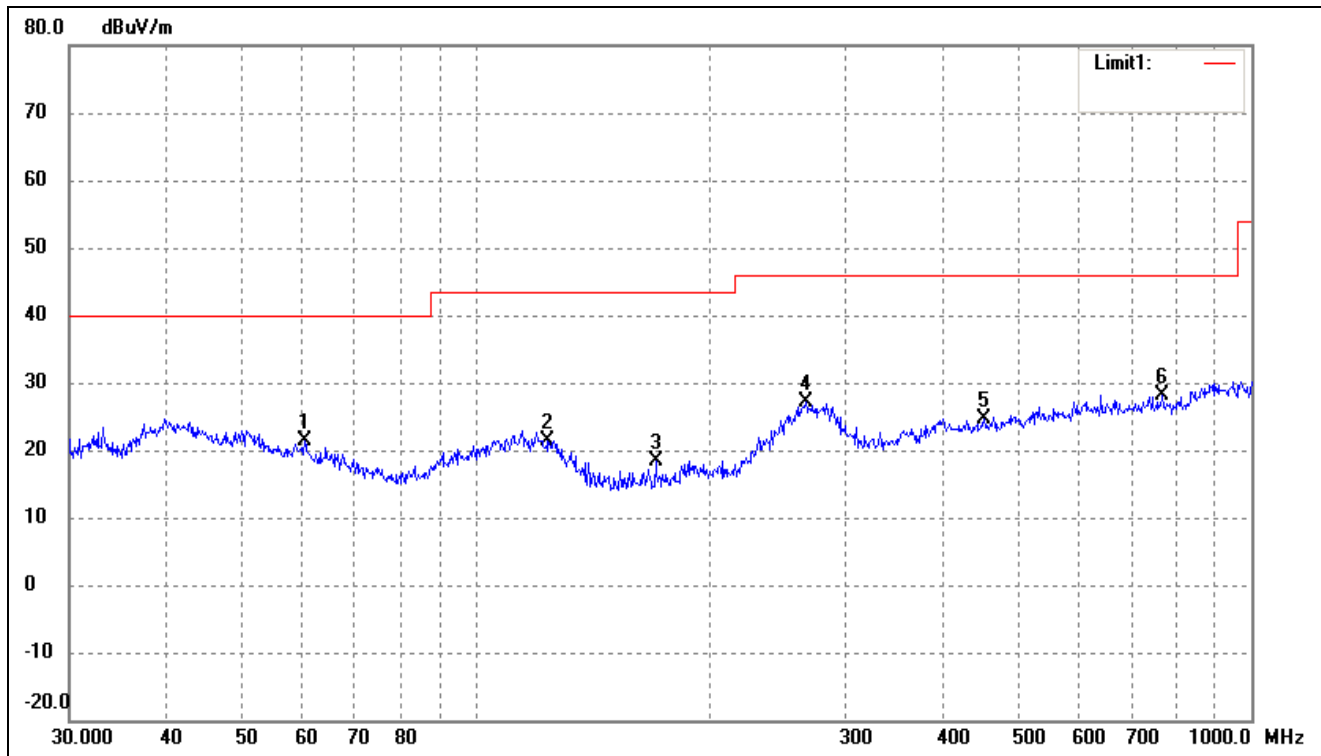
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.8542	43.33	-12.03	31.30	40.00	-8.70	-	-	peak
2	59.6493	34.17	-12.98	21.19	40.00	-18.81	-	-	peak
3	98.1419	37.59	-13.62	23.97	43.50	-19.53	-	-	peak
4	122.8340	37.47	-15.05	22.42	43.50	-21.08	-	-	peak
5	180.0165	32.70	-14.31	18.39	43.50	-25.11	-	-	peak

ANT 7_802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	39.9942	37.67	-11.98	25.69	40.00	-14.31	-	-	peak
2	111.3468	35.85	-13.45	22.40	43.50	-21.10	-	-	peak
3	119.8556	38.15	-14.28	23.87	43.50	-19.63	-	-	peak
4	266.6089	37.54	-10.81	26.73	46.00	-19.27	-	-	peak
5	282.9852	37.25	-10.17	27.08	46.00	-18.92	-	-	peak
6	580.7026	28.74	-2.42	26.32	46.00	-19.68	-	-	peak

ANT 7_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	60.2801	34.30	-13.04	21.26	40.00	-18.74	-	-	peak
2	124.1330	36.88	-15.40	21.48	43.50	-22.02	-	-	peak
3	170.7926	33.44	-14.97	18.47	43.50	-25.03	-	-	peak
4	266.6089	37.88	-10.81	27.07	46.00	-18.93	-	-	peak
5	452.7197	30.18	-5.50	24.68	46.00	-21.32	-	-	peak
6	768.7482	29.29	-1.14	28.15	46.00	-17.85	-	-	peak

Remark: '-' Means the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

- Spurious Emissions Above 1GHz
- Test Mode: 802.11b_11Mbps (worst case)
- ANT 1

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	50.53	-4.50	46.03	74.00	-27.97	H	PK
4824.000	39.84	-4.50	35.34	54.00	-18.66	H	AV
7236.000	49.79	-2.20	47.59	74.00	-26.41	H	PK
7236.000	37.85	-2.20	35.65	54.00	-18.35	H	AV
4824.000	50.50	-4.50	46.00	74.00	-28.00	V	PK
4824.000	39.84	-4.50	35.34	54.00	-18.66	V	AV
7236.000	49.35	-2.20	47.15	74.00	-26.85	V	PK
7236.000	38.07	-2.20	35.87	54.00	-18.13	V	AV
Middle Channel-2437MHz							
4874.000	50.42	-4.47	45.95	74.00	-28.05	H	PK
4874.000	39.56	-4.47	35.09	54.00	-18.91	H	AV
7311.000	48.92	-2.17	46.75	74.00	-27.25	H	PK
7311.000	37.55	-2.17	35.38	54.00	-18.62	H	AV
4874.000	50.36	-4.47	45.89	74.00	-28.11	V	PK
4874.000	39.62	-4.47	35.15	54.00	-18.85	V	AV
7311.000	49.09	-2.17	46.92	74.00	-27.08	V	PK
7311.000	37.36	-2.17	35.19	54.00	-18.81	V	AV
High Channel-2462MHz							
4924.000	51.82	-4.44	47.38	74.00	-26.62	H	PK
4924.000	39.82	-4.44	35.38	54.00	-18.62	H	AV
7386.000	48.75	-2.15	46.60	74.00	-27.40	H	PK
7386.000	37.24	-2.15	35.09	54.00	-18.91	H	AV
4924.000	51.15	-4.44	46.71	74.00	-27.29	V	PK
4924.000	40.17	-4.44	35.73	54.00	-18.27	V	AV
7386.000	48.34	-2.15	46.19	74.00	-27.81	V	PK
7386.000	37.13	-2.15	34.98	54.00	-19.02	V	AV

➤ ANT 2

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	52.52	-4.50	48.02	74.00	-25.98	H	PK
4824.000	41.24	-4.50	36.74	54.00	-17.26	H	AV
7236.000	49.40	-2.20	47.20	74.00	-26.80	H	PK
7236.000	38.37	-2.20	36.17	54.00	-17.83	H	AV
4824.000	53.25	-4.50	48.75	74.00	-25.25	V	PK
4824.000	42.74	-4.50	38.24	54.00	-15.76	V	AV
7236.000	49.44	-2.20	47.24	74.00	-26.76	V	PK
7236.000	38.37	-2.20	36.17	54.00	-17.83	V	AV
Middle Channel-2437MHz							
4874.000	55.75	-4.47	51.28	74.00	-22.72	H	PK
4874.000	41.1	-4.47	36.63	54.00	-17.37	H	AV
7311.000	58.02	-2.17	55.85	74.00	-18.15	H	PK
7311.000	39.7	-2.17	37.53	54.00	-16.47	H	AV
4874.000	56.5	-4.47	52.03	74.00	-21.97	V	PK
4874.000	38.29	-4.47	33.82	54.00	-20.18	V	AV
7311.000	58.33	-2.17	56.16	74.00	-17.84	V	PK
7311.000	41.52	-2.17	39.35	54.00	-14.65	V	AV
High Channel-2462MHz							
4924.000	57.98	-4.44	53.54	74.00	-20.46	H	PK
4924.000	46.70	-4.44	42.26	54.00	-11.74	H	AV
7386.000	48.76	-2.15	46.61	74.00	-27.39	H	PK
7386.000	37.03	-2.15	34.88	54.00	-19.12	H	AV
4924.000	55.84	-4.44	51.40	74.00	-22.60	V	PK
4924.000	43.91	-4.44	39.47	54.00	-14.53	V	AV
7386.000	47.67	-2.15	45.52	74.00	-28.48	V	PK
7386.000	36.89	-2.15	34.74	54.00	-19.26	V	AV

➤

➤ ANT 3

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	51.00	-4.50	46.50	74.00	-27.50	H	PK
4824.000	39.61	-4.50	35.11	54.00	-18.89	H	AV
7236.000	50.47	-2.20	48.27	74.00	-25.73	H	PK
7236.000	37.91	-2.20	35.71	54.00	-18.29	H	AV
4824.000	51.48	-4.50	46.98	74.00	-27.02	V	PK
4824.000	40.06	-4.50	35.56	54.00	-18.44	V	AV
7236.000	48.65	-2.20	46.45	74.00	-27.55	V	PK
7236.000	37.91	-2.20	35.71	54.00	-18.29	V	AV
Middle Channel-2437MHz							
4874.000	55.22	-4.47	50.75	74.00	-23.25	H	PK
4874.000	38.71	-4.47	34.24	54.00	-19.76	H	AV
7311.000	56.58	-2.17	54.41	74.00	-19.59	H	PK
7311.000	41.95	-2.17	39.78	54.00	-14.22	H	AV
4874.000	55.12	-4.47	50.65	74.00	-23.35	V	PK
4874.000	41.64	-4.47	37.17	54.00	-16.83	V	AV
7311.000	58.47	-2.17	56.30	74.00	-17.70	V	PK
7311.000	38.32	-2.17	36.15	54.00	-17.85	V	AV
High Channel-2462MHz							
4924.000	51.00	-4.44	46.56	74.00	-27.44	H	PK
4924.000	39.95	-4.44	35.51	54.00	-18.49	H	AV
7386.000	48.66	-2.15	46.51	74.00	-27.49	H	PK
7386.000	37.11	-2.15	34.96	54.00	-19.04	H	AV
4924.000	50.84	-4.44	46.40	74.00	-27.60	V	PK
4924.000	39.89	-4.44	35.45	54.00	-18.55	V	AV
7386.000	48.16	-2.15	46.01	74.00	-27.99	V	PK
7386.000	37.08	-2.15	34.93	54.00	-19.07	V	AV

➤ ANT 4

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	51.37	-4.50	46.87	74.00	-27.13	H	PK
4824.000	39.54	-4.50	35.04	54.00	-18.96	H	AV
7236.000	50.01	-2.20	47.81	74.00	-26.19	H	PK
7236.000	38.34	-2.20	36.14	54.00	-17.86	H	AV
4824.000	51.00	-4.50	46.50	74.00	-27.50	V	PK
4824.000	39.72	-4.50	35.22	54.00	-18.78	V	AV
7236.000	49.84	-2.20	47.64	74.00	-26.36	V	PK
7236.000	38.41	-2.20	36.21	54.00	-17.79	V	AV
Middle Channel-2437MHz							
4874.000	57.83	-4.47	53.36	74.00	-20.64	H	PK
4874.000	38.98	-4.47	34.51	54.00	-19.49	H	AV
7311.000	57.48	-2.17	55.31	74.00	-18.69	H	PK
7311.000	41.28	-2.17	39.11	54.00	-14.89	H	AV
4874.000	57.8	-4.47	53.33	74.00	-20.67	V	PK
4874.000	39.46	-4.47	34.99	54.00	-19.01	V	AV
7311.000	55.33	-2.17	53.16	54.00	-20.84	V	PK
7311.000	40.49	-2.17	38.32	74.00	-15.68	V	AV
High Channel-2462MHz							
4924.000	50.63	-4.44	46.19	74.00	-27.81	H	PK
4924.000	39.65	-4.44	35.21	54.00	-18.79	H	AV
7386.000	48.63	-2.15	46.48	74.00	-27.52	H	PK
7386.000	37.34	-2.15	35.19	54.00	-18.81	H	AV
4924.000	50.78	-4.44	46.34	74.00	-27.66	V	PK
4924.000	40.07	-4.44	35.63	54.00	-18.37	V	AV
7386.000	37.20	-2.15	35.05	54.00	-18.95	V	PK
7386.000	47.79	-2.15	45.64	74.00	-28.36	V	AV

➤ ANT 5

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	50.77	-4.50	46.27	74.00	-27.73	H	PK
4824.000	40.27	-4.50	35.77	54.00	-18.23	H	AV
7236.000	50.89	-2.20	48.69	74.00	-25.31	H	PK
7236.000	38.25	-2.20	36.05	54.00	-17.95	H	AV
4824.000	50.91	-4.50	46.41	74.00	-27.59	V	PK
4824.000	39.76	-4.50	35.26	54.00	-18.74	V	AV
7236.000	49.09	-2.20	46.89	74.00	-27.11	V	PK
7236.000	38.35	-2.20	36.15	54.00	-17.85	V	AV
Middle Channel-2437MHz							
4874.000	55.48	-4.47	51.01	74.00	-22.99	H	PK
4874.000	39.06	-4.47	34.59	54.00	-19.41	H	AV
7311.000	57.08	-2.17	54.91	74.00	-19.09	H	PK
7311.000	39.63	-2.17	37.46	54.00	-16.54	H	AV
4874.000	57.71	-4.47	53.24	74.00	-20.76	V	PK
4874.000	39.36	-4.47	34.89	54.00	-19.11	V	AV
7311.000	55.84	-2.17	53.67	74.00	-20.33	V	PK
7311.000	40.9	-2.17	38.73	54.00	-15.27	V	AV
High Channel-2462MHz							
4924.000	50.83	-4.44	46.39	74.00	-27.61	H	PK
4924.000	39.84	-4.44	35.40	54.00	-18.60	H	AV
7386.000	48.37	-2.15	46.22	74.00	-27.78	H	PK
7386.000	37.19	-2.15	35.04	54.00	-18.96	H	AV
4924.000	51.54	-4.44	47.10	74.00	-26.90	V	PK
4924.000	39.79	-4.44	35.35	54.00	-18.65	V	AV
7386.000	49.89	-2.15	47.74	74.00	-26.26	V	PK
7386.000	37.02	-2.15	34.87	54.00	-19.13	V	AV

➤ ANT 6

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	50.49	-4.50	45.99	74.00	-28.01	H	PK
4824.000	39.81	-4.50	35.31	54.00	-18.69	H	AV
7236.000	49.22	-2.20	47.02	74.00	-26.98	H	PK
7236.000	38.07	-2.20	35.87	54.00	-18.13	H	AV
4824.000	51.13	-4.50	46.63	74.00	-27.37	V	PK
4824.000	39.75	-4.50	35.25	54.00	-18.75	V	AV
7236.000	49.15	-2.20	46.95	74.00	-27.05	V	PK
7236.000	38.04	-2.20	35.84	54.00	-18.16	V	AV
Middle Channel-2437MHz							
4874.000	55.12	-4.47	50.65	74.00	-23.35	H	PK
4874.000	38.43	-4.47	33.96	54.00	-20.04	H	AV
7311.000	55.08	-2.17	52.91	74.00	-21.09	H	PK
7311.000	40.52	-2.17	38.35	54.00	-15.65	H	AV
4874.000	58.39	-4.47	53.92	74.00	-20.08	V	PK
4874.000	39.38	-4.47	34.91	54.00	-19.09	V	AV
7311.000	58.54	-2.17	56.37	74.00	-17.63	V	PK
7311.000	40.07	-2.17	37.9	54.00	-16.10	V	AV
High Channel-2462MHz							
4924.000	51.14	-4.44	46.70	74.00	-27.30	H	PK
4924.000	39.91	-4.44	35.47	54.00	-18.53	H	AV
7386.000	48.35	-2.15	46.20	74.00	-27.80	H	PK
7386.000	37.20	-2.15	35.05	54.00	-18.95	H	AV
4924.000	51.34	-4.44	46.90	74.00	-27.10	V	PK
4924.000	39.81	-4.44	35.37	54.00	-18.63	V	AV
7386.000	48.15	-2.15	46.00	74.00	-28.00	V	PK
7386.000	37.18	-2.15	35.03	54.00	-18.97	V	AV

➤ ANT 7

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2412MHz							
4824.000	51.03	-4.50	46.53	74.00	-27.47	H	PK
4824.000	40.58	-4.50	36.08	54.00	-17.92	H	AV
7236.000	48.84	-2.20	46.64	74.00	-27.36	H	PK
7236.000	38.03	-2.20	35.83	54.00	-18.17	H	AV
4824.000	52.00	-4.50	47.50	74.00	-26.50	V	PK
4824.000	40.00	-4.50	35.50	54.00	-18.50	V	AV
7236.000	48.98	-2.20	46.78	74.00	-27.22	V	PK
7236.000	38.44	-2.20	36.24	54.00	-17.76	V	AV
Middle Channel-2437MHz							
4874.000	57.04	-4.47	52.57	74.00	-21.43	H	PK
4874.000	39.59	-4.47	35.12	54.00	-18.88	H	AV
7311.000	56.54	-2.17	54.37	74.00	-19.63	H	PK
7311.000	39.67	-2.17	37.5	54.00	-16.50	H	AV
4874.000	56.26	-4.47	51.79	74.00	-22.21	V	PK
4874.000	41.05	-4.47	36.58	54.00	-17.42	V	AV
7311.000	58.85	-2.17	56.68	54.00	-17.32	V	PK
7311.000	41.88	-2.17	39.71	74.00	-14.29	V	AV
High Channel-2462MHz							
4924.000	50.16	-4.44	45.72	74.00	-28.28	H	PK
4924.000	39.90	-4.44	35.46	54.00	-18.54	H	AV
7386.000	48.19	-2.15	46.04	74.00	-27.96	H	PK
7386.000	37.09	-2.15	34.94	54.00	-19.06	H	AV
4924.000	51.32	-4.44	46.88	74.00	-27.12	V	PK
4924.000	39.92	-4.44	35.48	54.00	-18.52	V	AV
7386.000	48.99	-2.15	46.84	74.00	-27.16	V	PK
7386.000	37.30	-2.15	35.15	54.00	-18.85	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

9. Out of Band Emissions

9.1 Standard Applicable

According to §15.247 (d), in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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).

9.2 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.4 and ANSI C63.10-2013 Subclause 11.11, the emissions in nonrestricted frequency bands test method as follows:

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW $\geq [3 \times \text{RBW}]$.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

According to the KDB 558074 D01 v05r02 Subclause 8.5 and ANSI C63.10-2013 Subclause 11.12, the emissions in restricted frequency bands test method as follows:

A. Radiated emission measurements:

Set span = wide enough to capture the peak level of the emission operating on the channel closest to the bandedge, as well as any modulation products which fall outside of the authorized band of operation (2310MHz to 2420MHz for low bandedge, 2460MHz to 2500MHz for the high bandedge)

RBW = 1MHz, VBW = 1MHz for peak value measured

RBW = 1MHz, VBW = 10Hz for average value measured

Sweep = auto; Detector function = peak/average; Trace = max hold

All the trace to stabilize, set the marker on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. Those emission must comply with the 15.209 limit for fall in the restricted bands listed in section 15.205. Note that the method of measurement

KDB publication number: 913591 may be used for the radiated bandedge measurements.

B. Antenna-port conducted measurements

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 9.
- b) $VBW \geq [3 \times RBW]$.
- c) Detector = peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be lengthened for low-duty-cycle applications.)

Table 9—RBW as a function of frequency

Frequency	RBW
9 kHz to 150 kHz	200 Hz to 300 Hz
0.15 MHz to 30 MHz	9 kHz to 10 kHz
30 MHz to 1000 MHz	100 kHz to 120 kHz
>1000 MHz	1 MHz

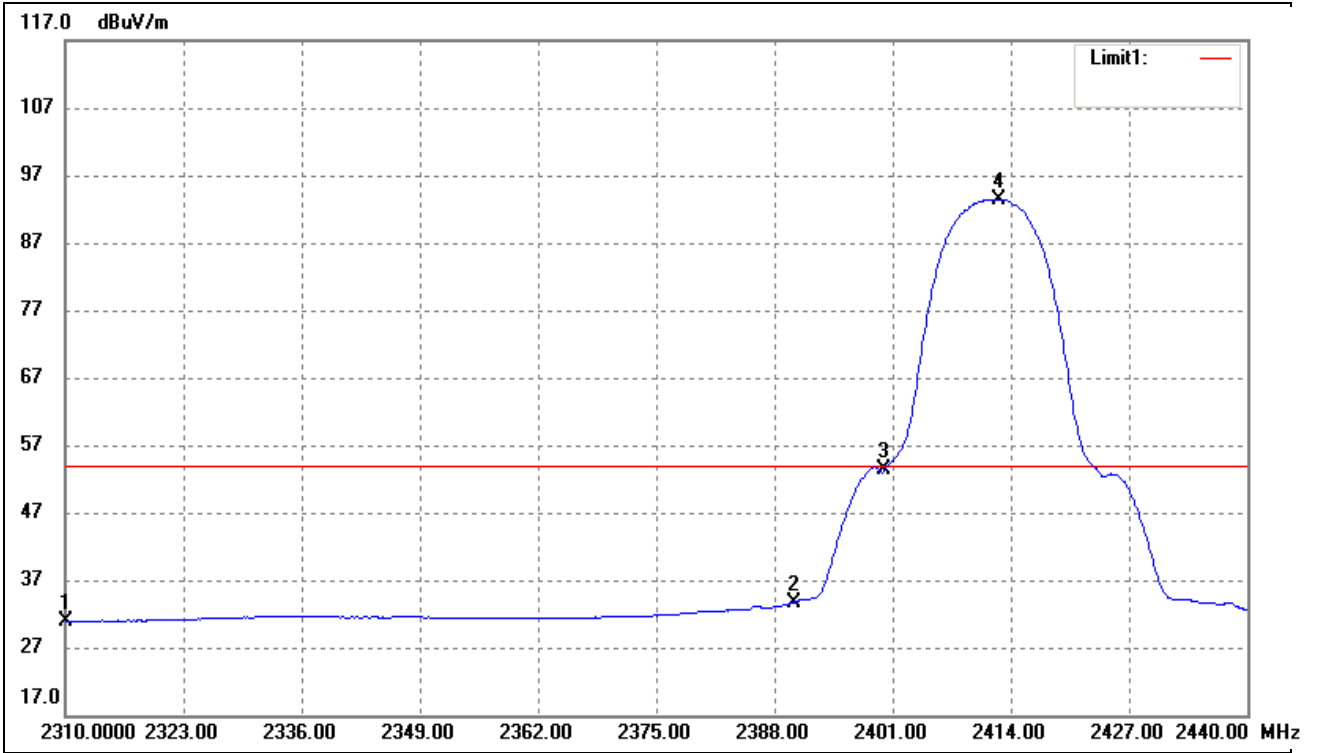
If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in section 8.1. Report the three highest emissions relative to the limit.

9.3 Summary of Test Results/Plots

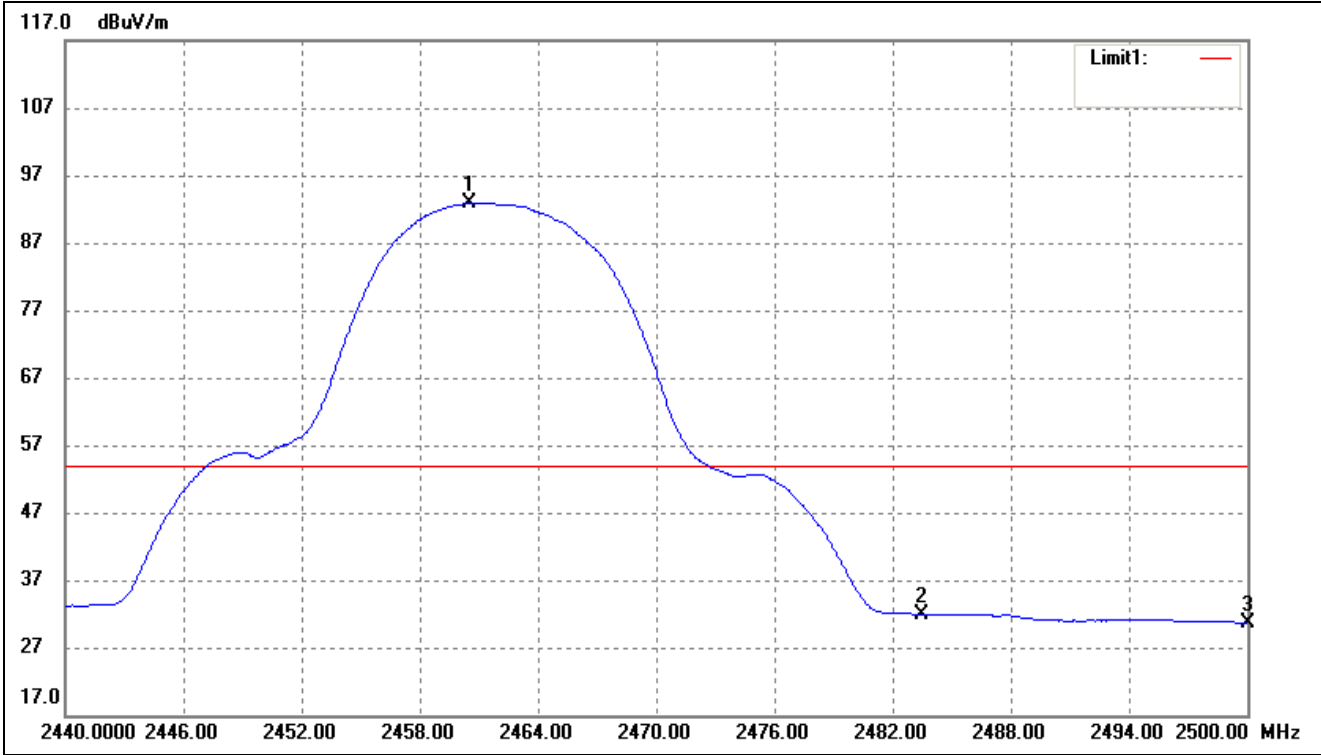
- Radiated test
-

ANT 1_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



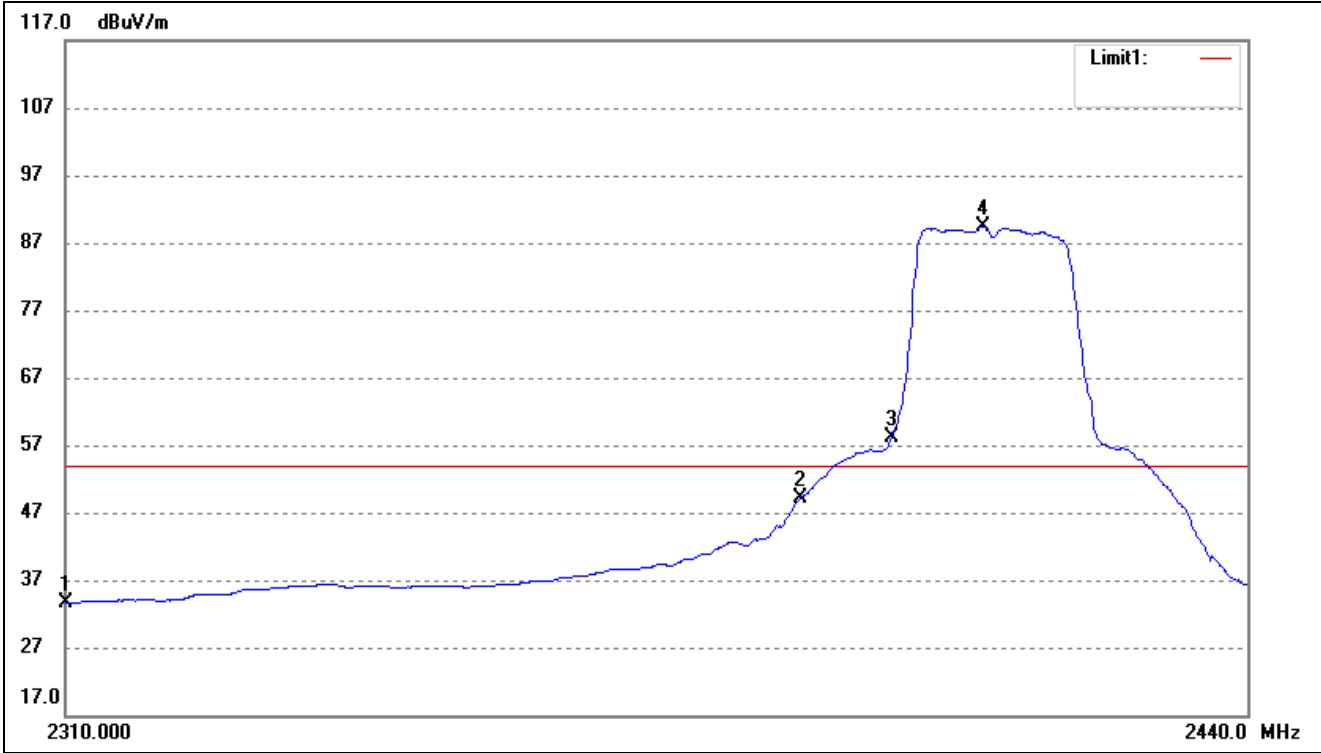
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.46	-9.66	30.80	54.00	-23.20	Average Detector
	2310.000	49.86	-9.66	40.20	74.00	-33.80	Peak Detector
2	2390.000	43.22	-9.50	33.72	54.00	-20.28	Average Detector
	2390.000	52.56	-9.50	43.06	74.00	-30.94	Peak Detector
3	2400.000	62.81	-9.48	53.33	54.00	-0.67	Average Detector
4	2412.700	102.95	-9.46	93.49	/	/	Average Detector
	2413.350	111.53	-9.46	102.07	/	/	Peak Detector

ANT 1_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



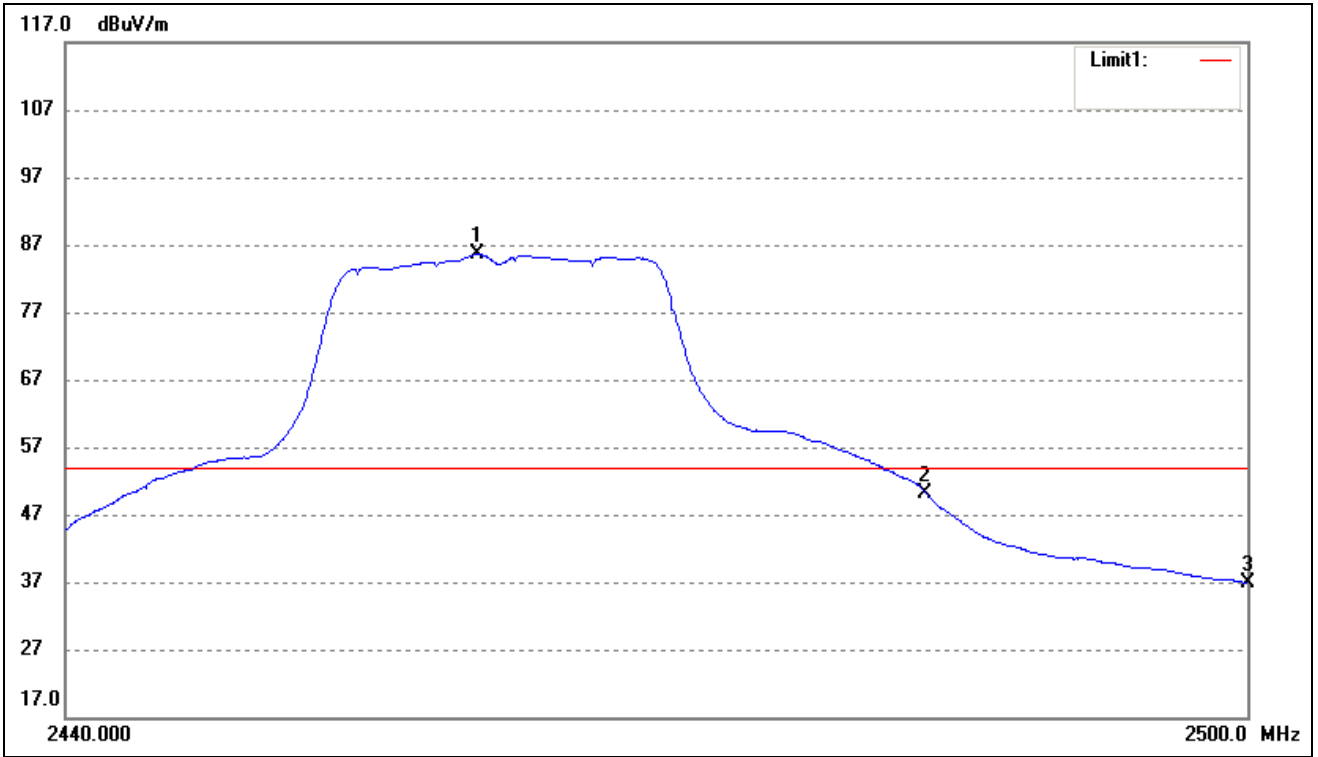
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.520	102.34	-9.36	92.98	/	/	Average Detector
	2461.180	113.05	-9.36	103.69	/	/	Peak Detector
2	2483.500	41.25	-9.31	31.94	54.00	-22.06	Average Detector
	2483.500	53.52	-9.31	44.21	74.00	-29.79	Peak Detector
3	2500.000	39.95	-9.28	30.67	54.00	-23.33	Average Detector
	2500.000	52.74	-9.28	43.46	74.00	-30.54	Peak Detector

ANT 1_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



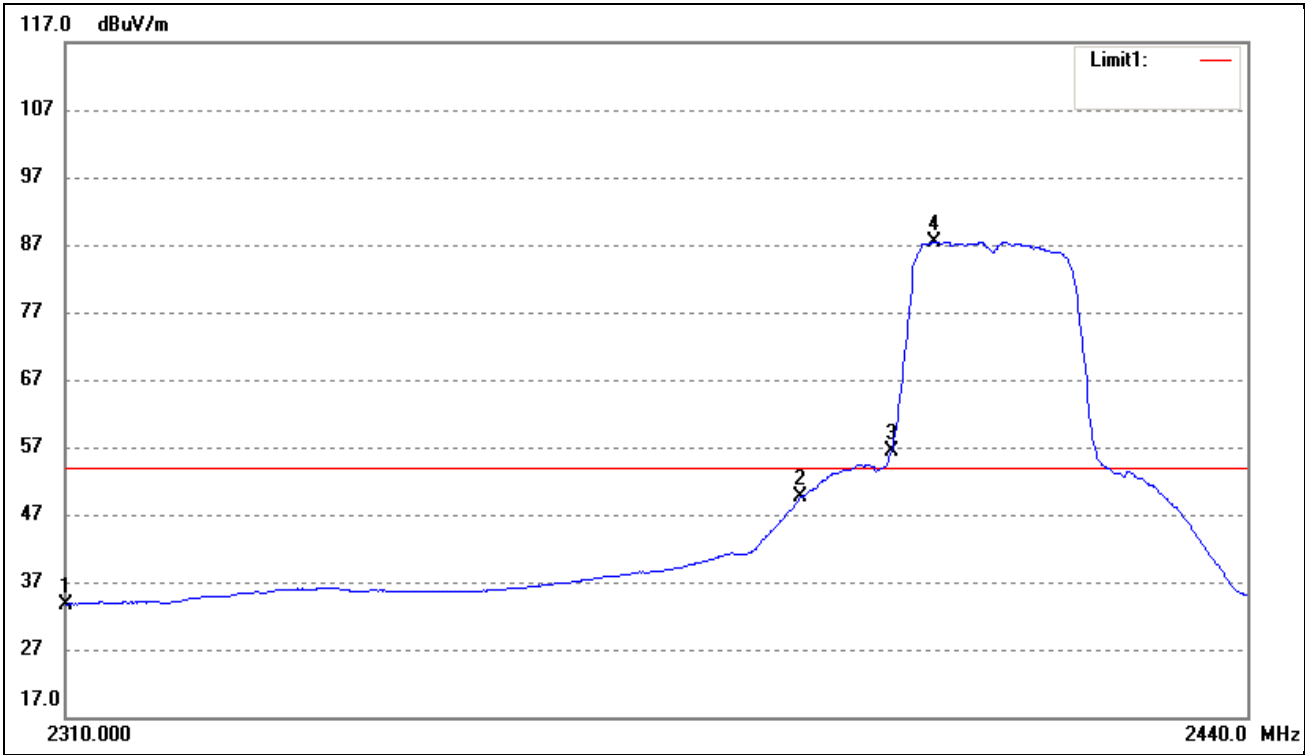
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	43.26	-9.66	33.60	54.00	-20.40	Average Detector
	2310.000	56.76	-9.66	47.10	74.00	-26.90	Peak Detector
2	2390.000	58.54	-9.50	49.04	54.00	-4.96	Average Detector
	2390.000	78.89	-9.50	69.39	74.00	-4.61	Peak Detector
3	2400.000	67.54	-9.48	58.06	Delta=31.37dBc		Average Detector
4	2410.258	98.89	-9.46	89.43			Average Detector

ANT 1_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



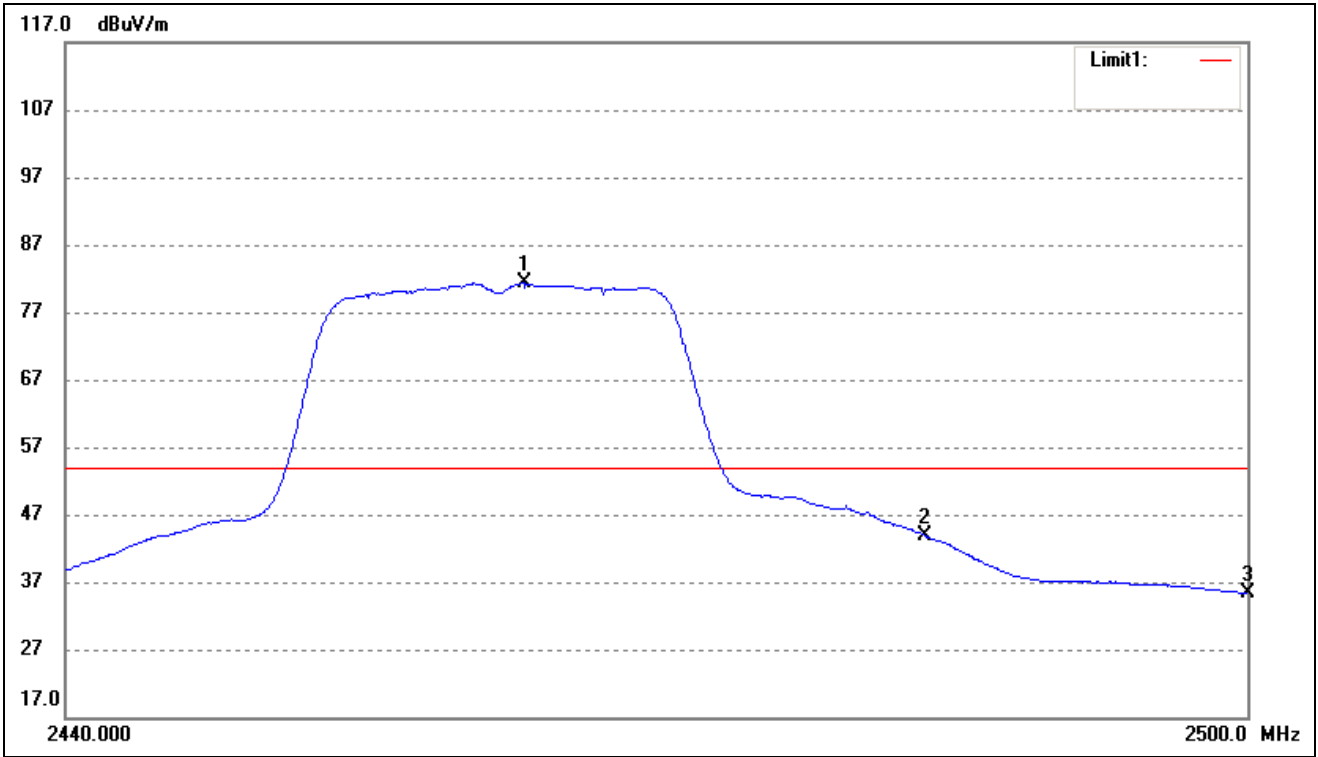
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.775	94.97	-9.36	85.61	/	/	Average Detector
	2461.073	112.18	-9.36	102.82	/	/	Peak Detector
2	2483.500	59.54	-9.31	50.23	54.00	-3.77	Average Detector
	2483.500	79.04	-9.31	69.73	74.00	-4.27	Peak Detector
3	2500.000	46.12	-9.28	36.84	54.00	-17.16	Average Detector
	2500.000	60.62	-9.28	51.34	74.00	-22.66	Peak Detector

ANT 1_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	43.36	-9.66	33.70	54.00	-20.30	Average Detector
	2310.000	57.40	-9.66	47.74	74.00	-26.26	Peak Detector
2	2390.000	59.03	-9.50	49.53	54.00	-4.47	Average Detector
	2390.000	80.13	-9.50	70.63	74.00	-3.37	Peak Detector
3	2400.000	65.90	-9.48	56.42	Delta=31.03dBc		Average Detector
4	2404.854	96.93	-9.48	87.45			Average Detector

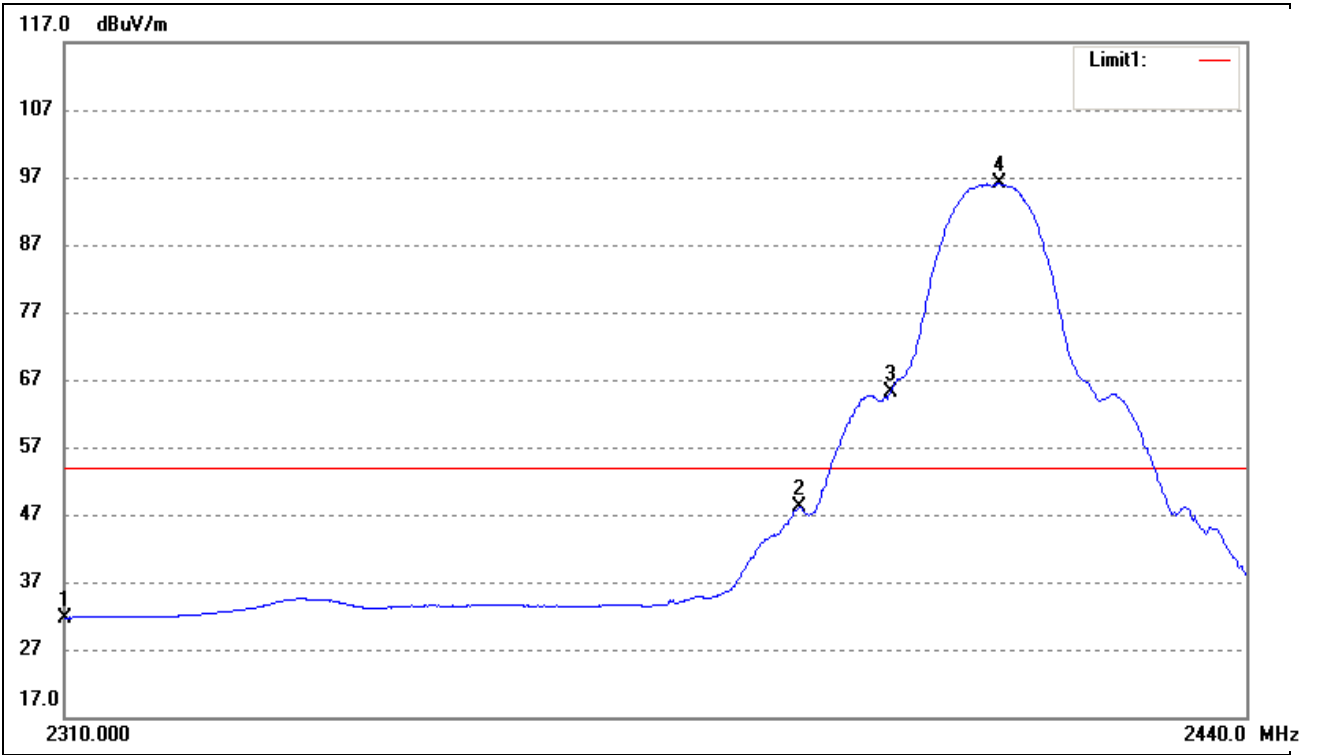
ANT 1_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.107	90.70	-9.36	81.34	/	/	Average Detector
	2468.618	108.29	-9.34	98.95	/	/	Peak Detector
2	2483.500	53.09	-9.31	43.78	54.00	-10.22	Average Detector
	2483.500	76.62	-9.31	67.31	74.00	-6.69	Peak Detector
3	2500.000	44.62	-9.28	35.34	54.00	-18.66	Average Detector
	2500.000	59.10	-9.28	49.82	74.00	-24.18	Peak Detector

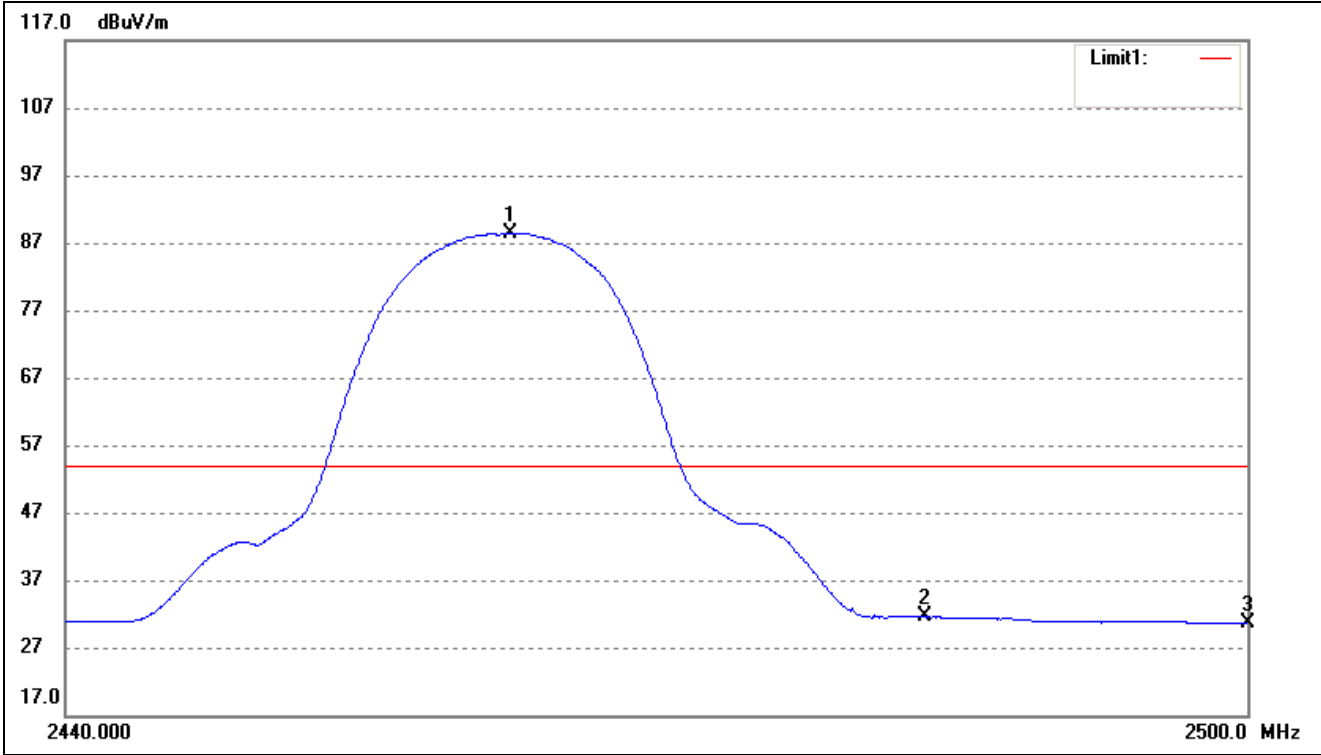


ANT 2_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



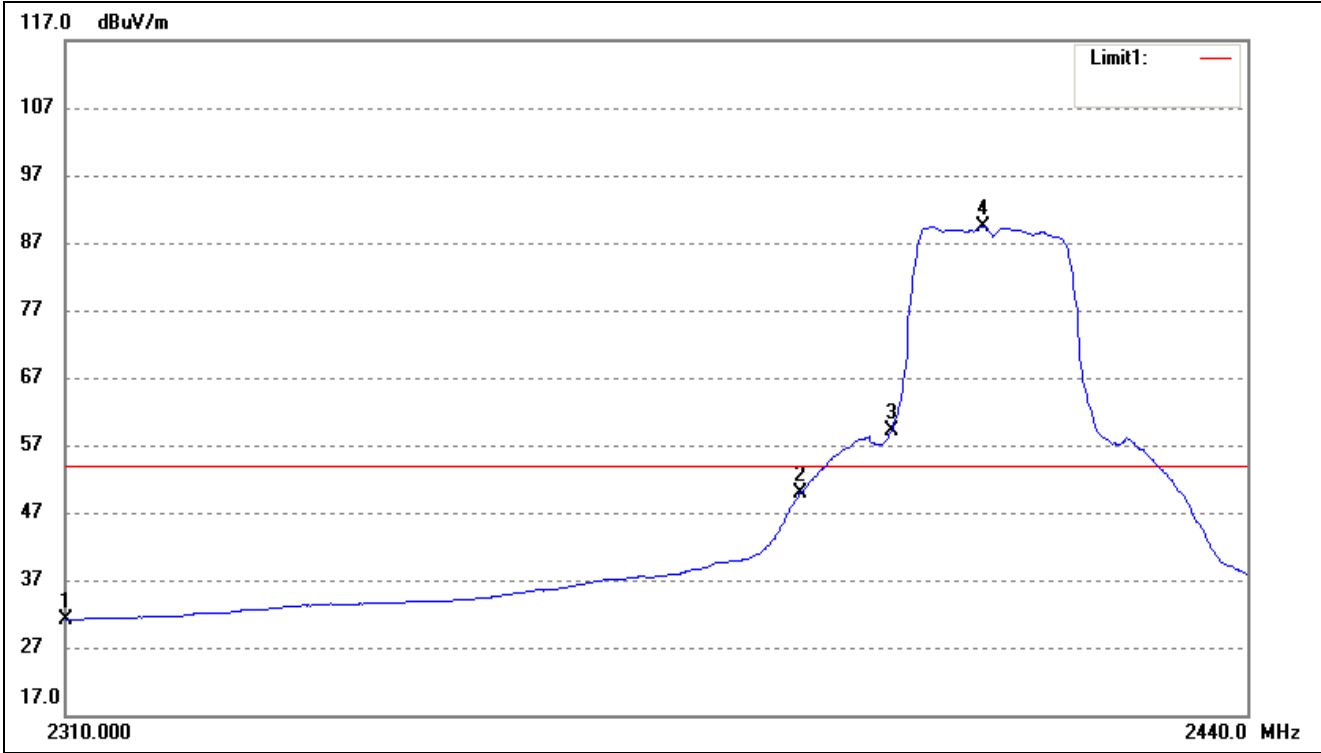
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	41.35	-9.66	31.69	54.00	-22.31	Average Detector
	2310.000	54.26	-9.66	44.60	74.00	-29.40	Peak Detector
2	2390.000	57.52	-9.50	48.02	54.00	-5.98	Average Detector
	2390.000	67.14	-9.50	57.64	74.00	-16.36	Peak Detector
3	2400.000	74.71	-9.48	65.23	Delta=30.9dBc		Average Detector
4	2412.239	105.59	-9.46	96.13			Average Detector

ANT 2_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



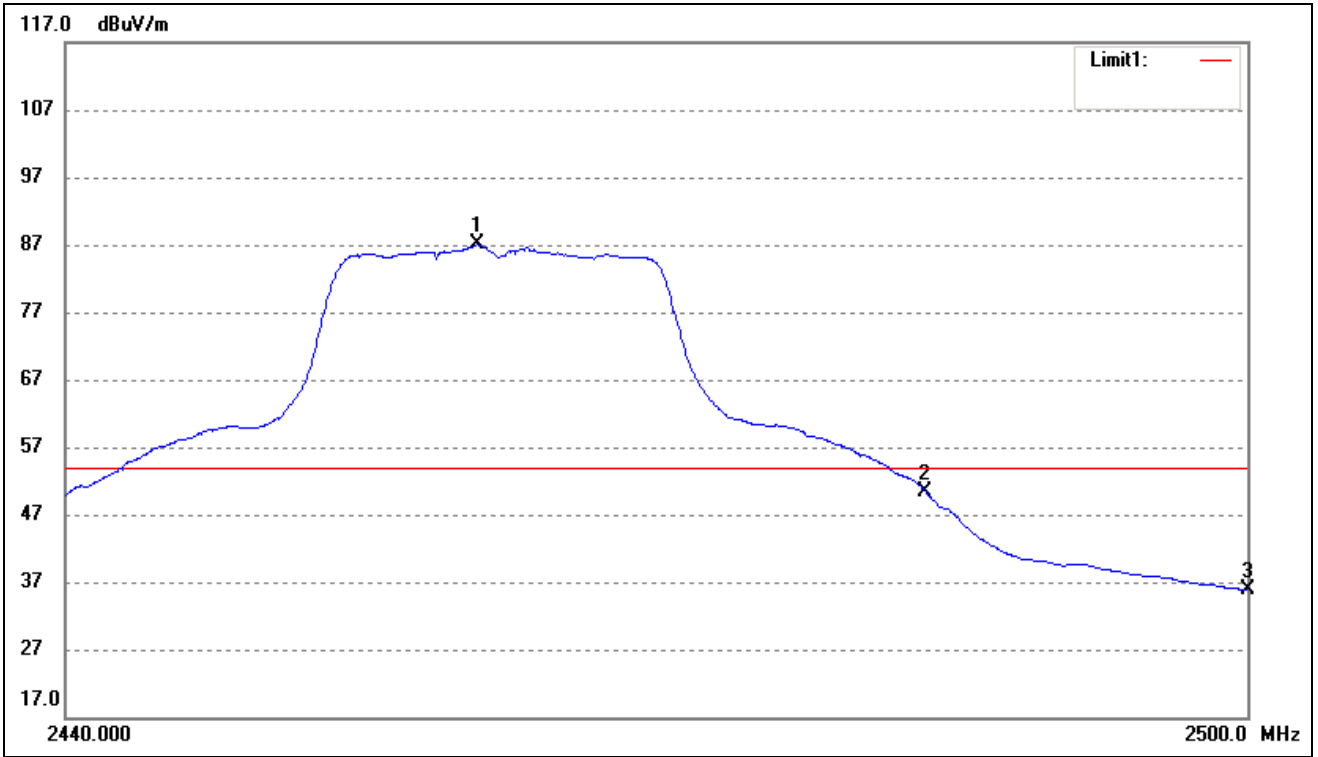
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.449	97.86	-9.36	88.50	/	/	Average Detector
	2463.107	106.39	-9.36	97.03	/	/	Peak Detector
2	2483.500	40.83	-9.31	31.52	54.00	-22.48	Average Detector
	2483.500	50.11	-9.31	40.80	74.00	-33.20	Peak Detector
3	2500.000	39.83	-9.28	30.55	54.00	-23.45	Average Detector
	2500.000	51.54	-9.28	42.26	74.00	-31.74	Peak Detector

ANT 2_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



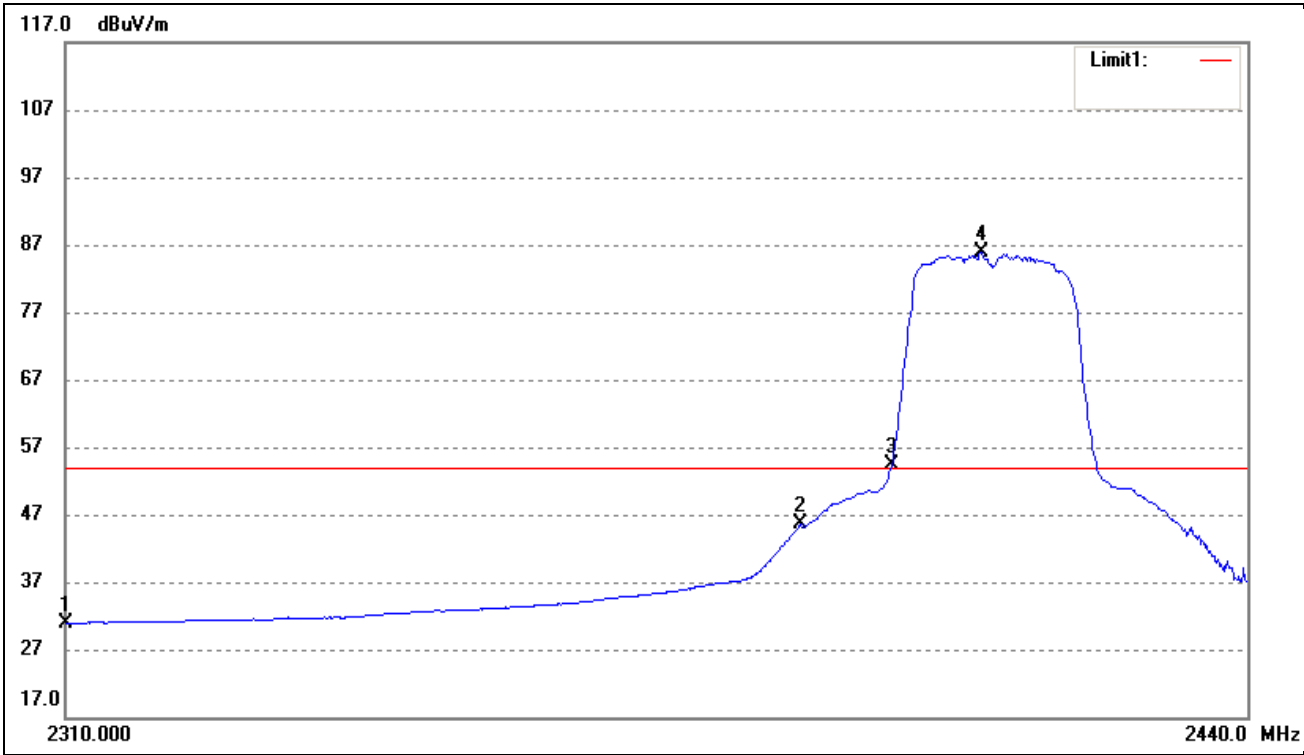
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.75	-9.66	31.09	54.00	-22.91	Average Detector
	2310.000	52.74	-9.66	43.08	74.00	-30.92	Peak Detector
2	2390.000	59.37	-9.50	49.87	54.00	-4.13	Average Detector
	2390.000	77.84	-9.50	68.34	74.00	-5.66	Peak Detector
3	2400.000	68.59	-9.48	59.11	Delta=30.38dBc		Average Detector
4	2410.390	98.95	-9.46	89.49			Average Detector

ANT 2_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



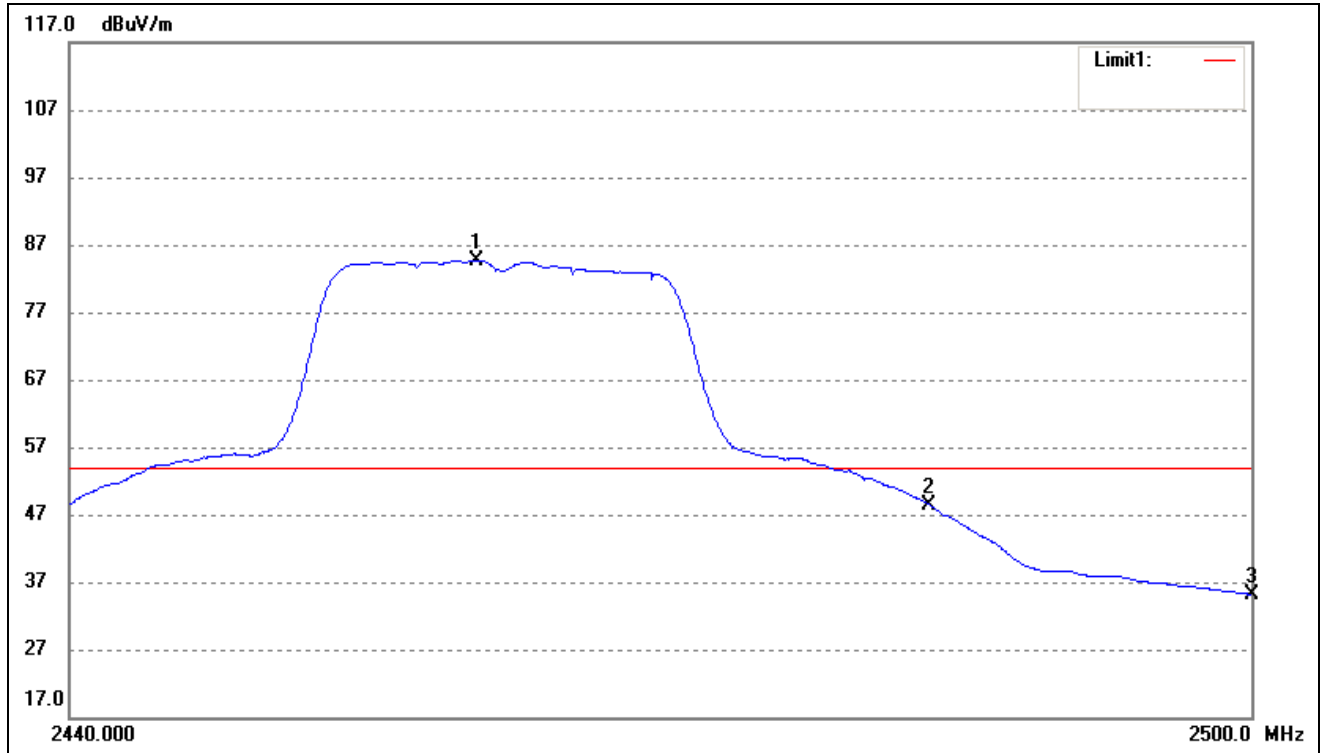
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.715	96.44	-9.36	87.08	/	/	Average Detector
	2461.133	113.30	-9.36	103.94	/	/	Peak Detector
2	2483.500	59.76	-9.31	50.45	54.00	-3.55	Average Detector
	2483.500	76.97	-9.31	67.66	74.00	-6.34	Peak Detector
3	2500.000	45.17	-9.28	35.89	54.00	-18.11	Average Detector
	2500.000	59.51	-9.28	50.23	74.00	-23.77	Peak Detector

ANT 2_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.57	-9.66	30.91	54.00	-23.09	Average Detector
	2310.000	53.50	-9.66	43.84	74.00	-30.16	Peak Detector
2	2390.000	55.05	-9.50	45.55	54.00	-8.45	Average Detector
	2390.000	76.69	-9.50	67.19	74.00	-6.81	Peak Detector
3	2400.000	63.92	-9.48	54.44	Delta=31.42dBc		Average Detector
4	2410.126	95.32	-9.46	85.86			Average Detector

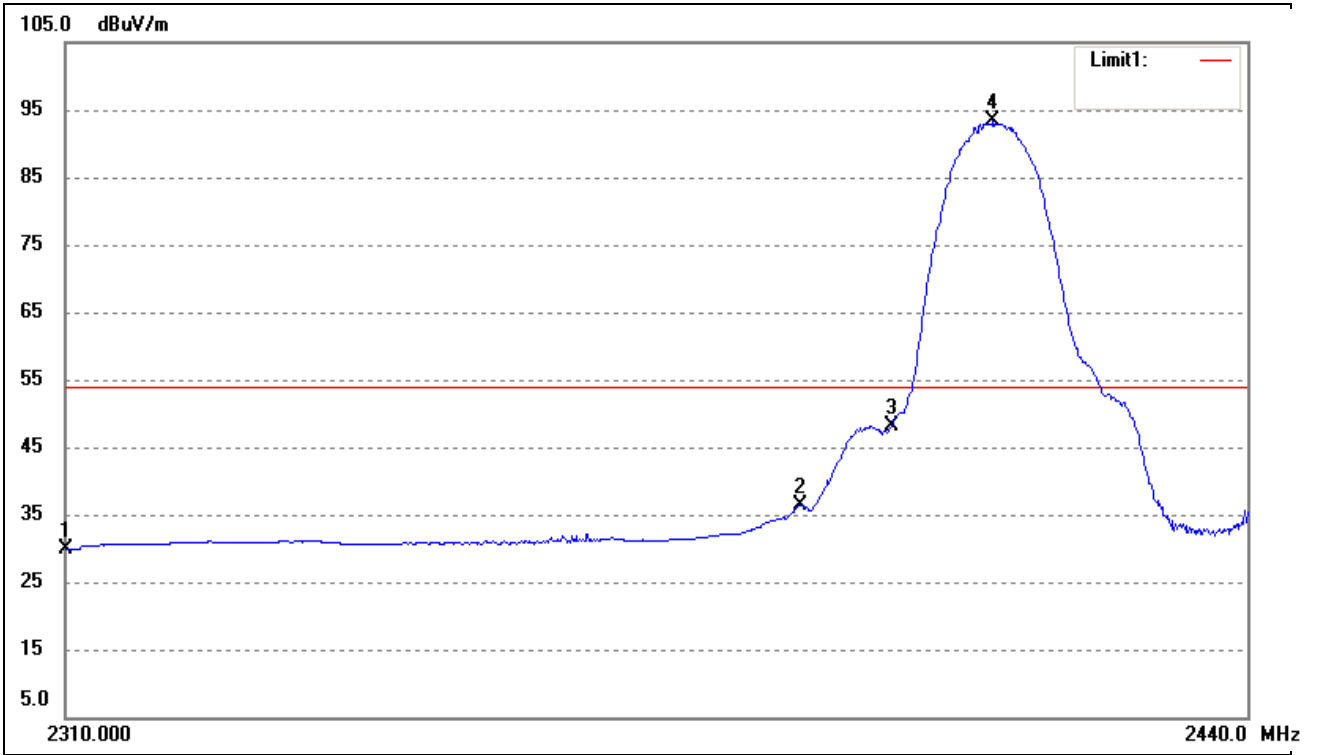
ANT 2_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.476	94.11	-9.36	84.75	/	/	Average Detector
	2459.938	112.12	-9.35	102.77	/	/	Peak Detector
2	2483.500	57.75	-9.31	48.44	54.00	-5.56	Average Detector
	2483.500	79.45	-9.31	70.14	74.00	-3.86	Peak Detector
3	2500.000	44.43	-9.28	35.15	54.00	-18.85	Average Detector
	2500.000	58.75	-9.28	49.47	74.00	-24.53	Peak Detector

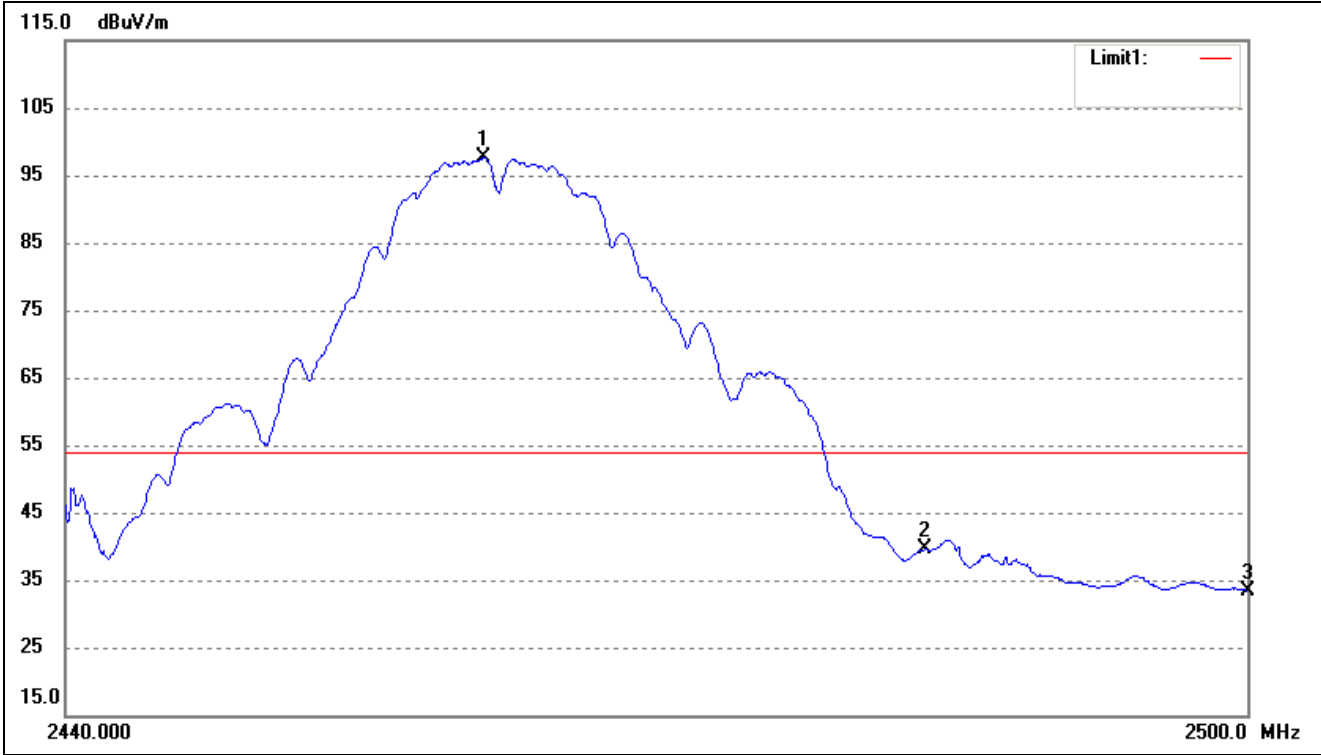


ANT 3_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



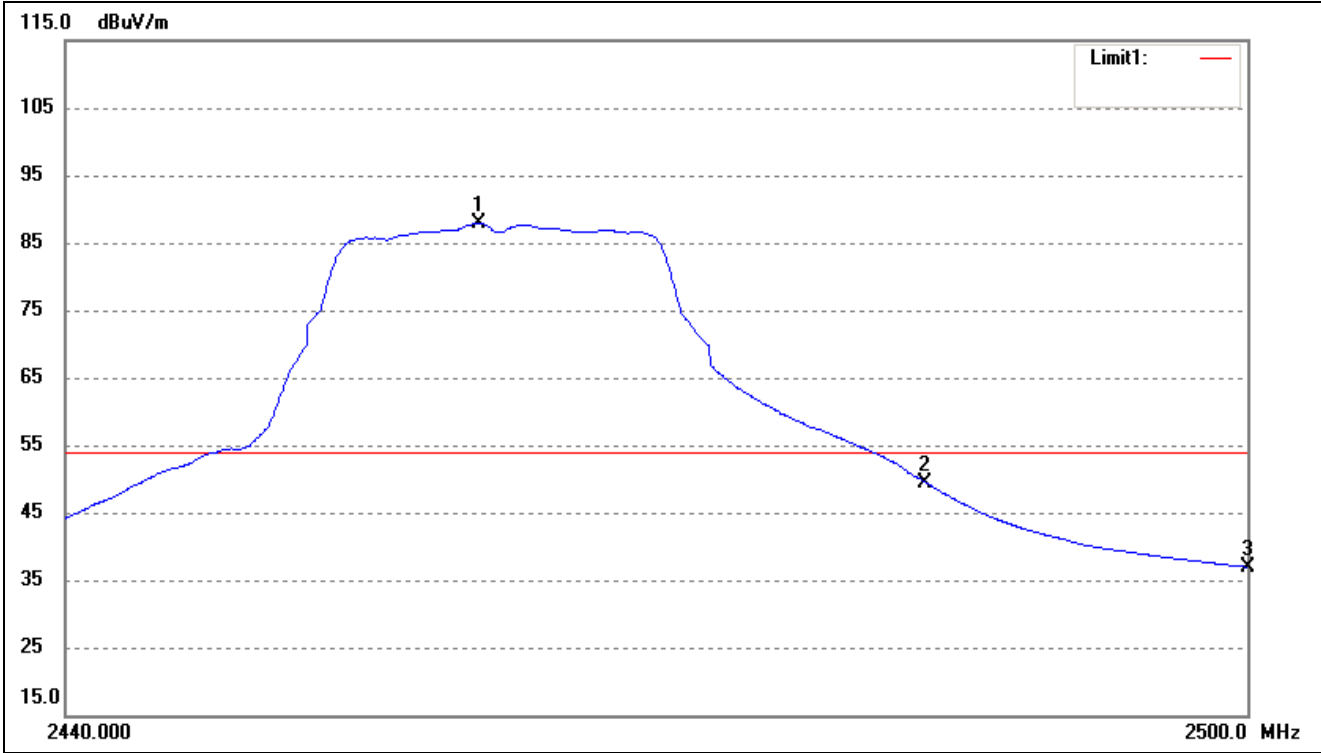
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	39.44	-9.66	29.78	54.00	-24.22	Average Detector
	2310.000	50.60	-9.66	40.94	74.00	-33.06	Peak Detector
2	2390.000	45.90	-9.50	36.40	54.00	-17.60	Average Detector
	2390.000	58.43	-9.50	48.93	74.00	-25.07	Peak Detector
3	2400.000	57.59	-9.48	48.11	54.00	-5.89	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2411.446	102.83	-9.46	93.37	/	/	Average Detector
	2410.522	109.93	-9.46	100.47	/	/	Peak Detector

ANT 3_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



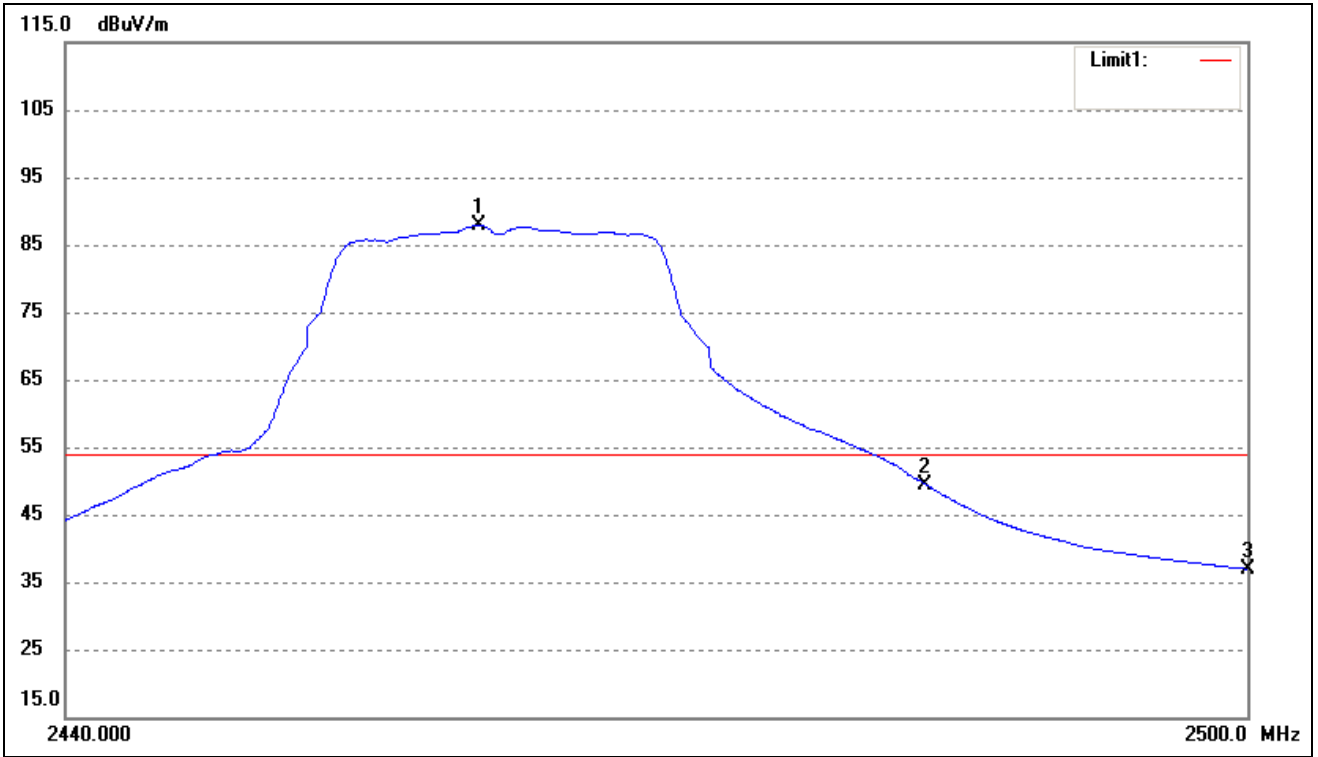
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.073	106.93	-9.36	97.57	/	/	Average Detector
	2460.416	112.09	-9.36	102.73	/	/	Peak Detector
2	2483.500	48.83	-9.31	39.52	54.00	-14.48	Average Detector
	2483.500	57.87	-9.31	48.56	74.00	-25.44	Peak Detector
3	2500.000	42.69	-9.28	33.41	54.00	-20.59	Average Detector
	2500.000	55.38	-9.28	46.10	74.00	-27.90	Peak Detector

ANT 3_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



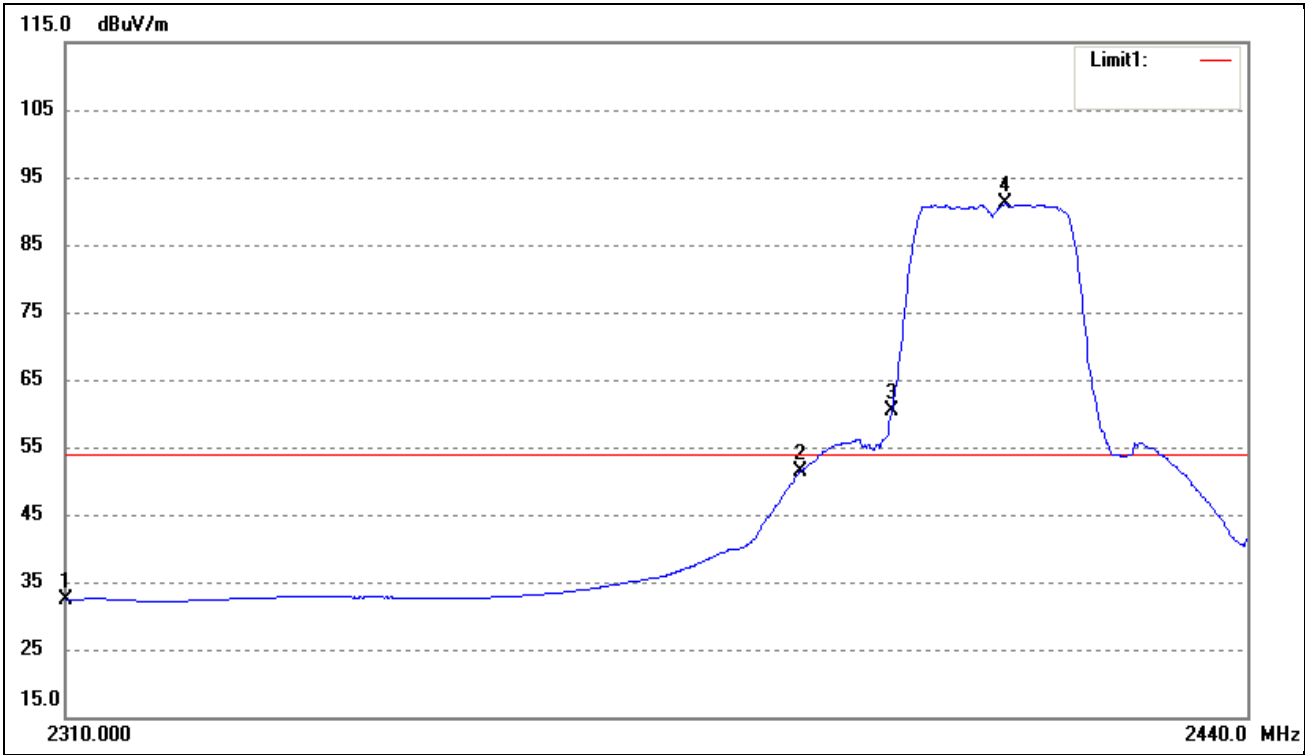
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	42.98	-9.66	33.32	54.00	-20.68	Average Detector
	2310.000	54.02	-9.66	44.36	74.00	-29.64	Peak Detector
2	2390.000	60.59	-9.50	51.09	54.00	-2.91	Average Detector
	2390.000	80.14	-9.50	70.64	74.00	-3.36	Peak Detector
3	2400.000	68.78	-9.48	59.30	Delta=31.52dBc		Average Detector
4	2410.258	100.28	-9.46	90.82			Average Detector

ANT 3_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



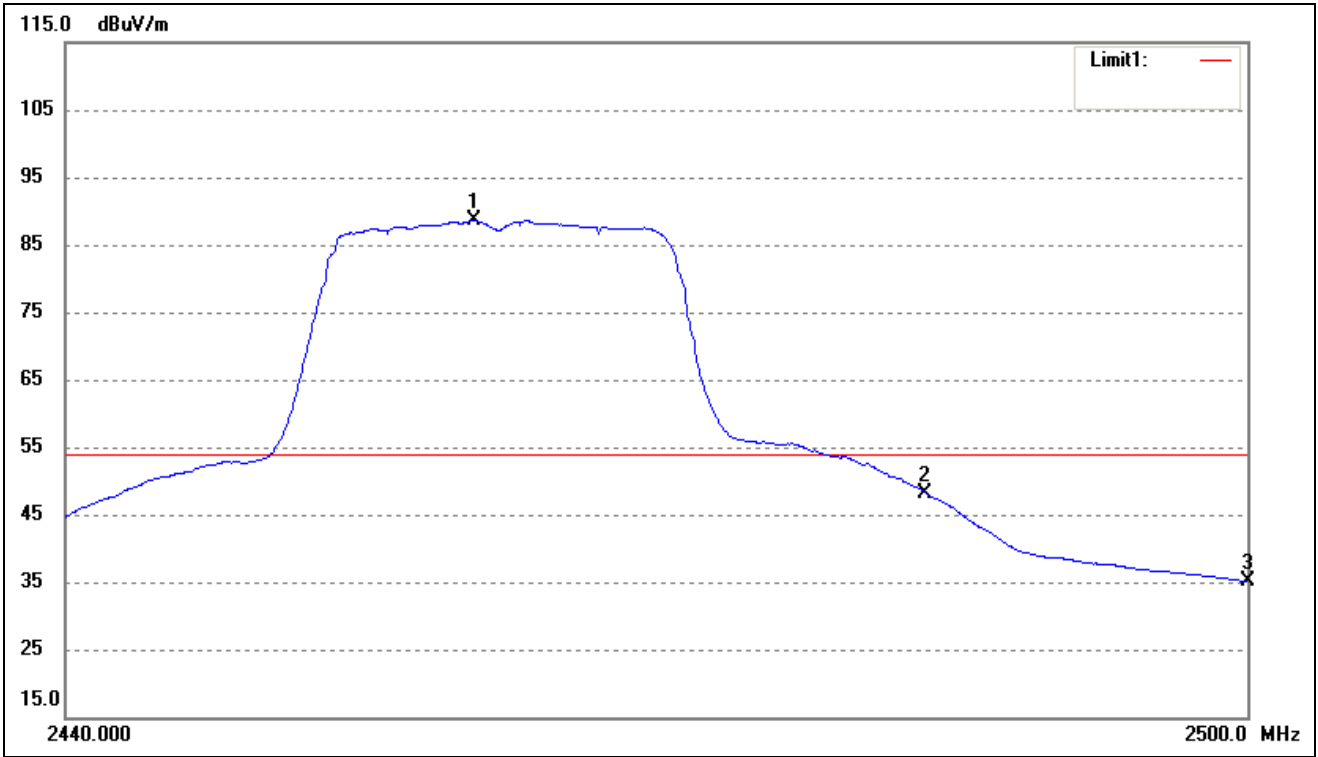
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.834	97.33	-9.36	87.97	/	/	Average Detector
	2461.014	111.42	-9.36	102.06	/	/	Peak Detector
2	2483.500	58.79	-9.31	49.48	54.00	-4.52	Average Detector
	2483.500	75.12	-9.31	65.81	74.00	-8.19	Peak Detector
3	2500.000	46.23	-9.28	36.95	54.00	-17.05	Average Detector
	2500.000	61.69	-9.28	52.41	74.00	-21.59	Peak Detector

ANT 3_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



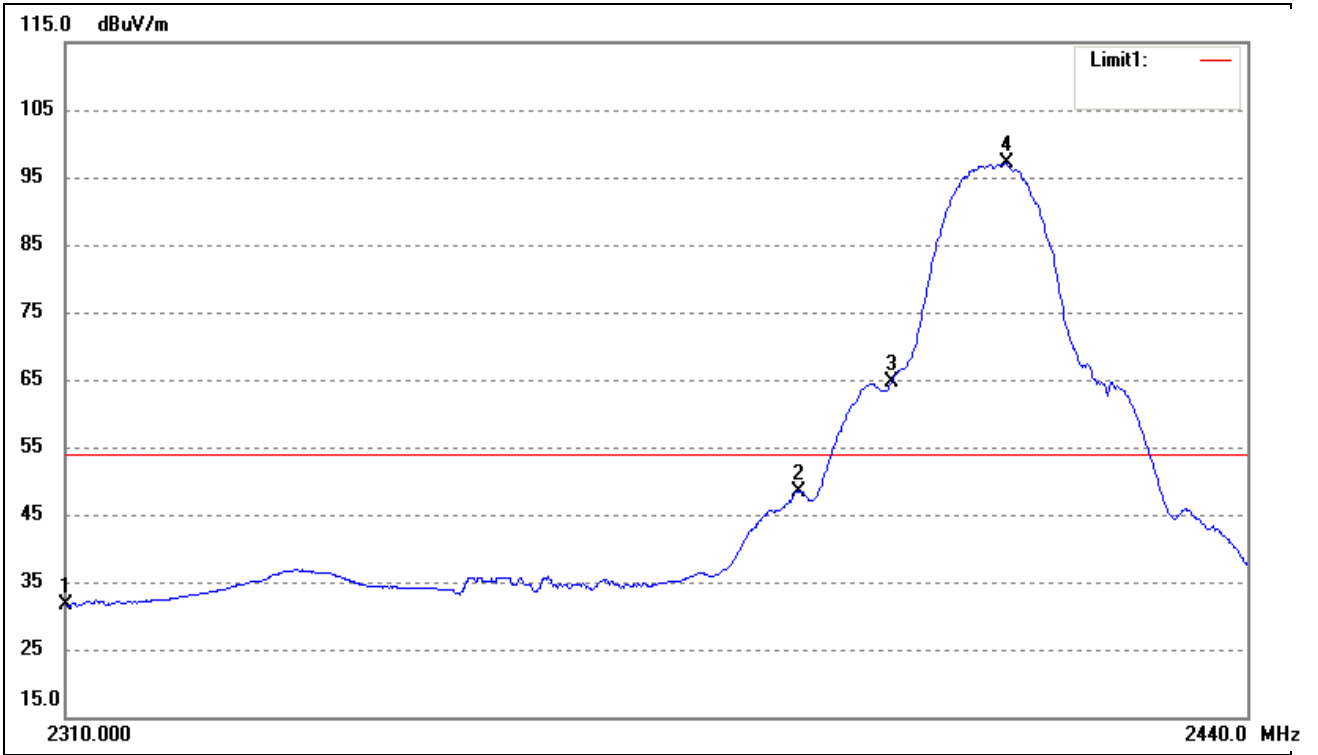
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	42.08	-9.66	32.42	54.00	-21.58	Average Detector
	2310.000	55.84	-9.66	46.18	74.00	-27.82	Peak Detector
2	2390.000	60.89	-9.50	51.39	54.00	-2.61	Average Detector
	2390.000	79.87	-9.50	70.37	74.00	-3.63	Peak Detector
3	2400.000	69.76	-9.48	60.28	Delta=30.75dBc		Average Detector
4	2412.767	100.49	-9.46	91.03			Average Detector

ANT 3_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



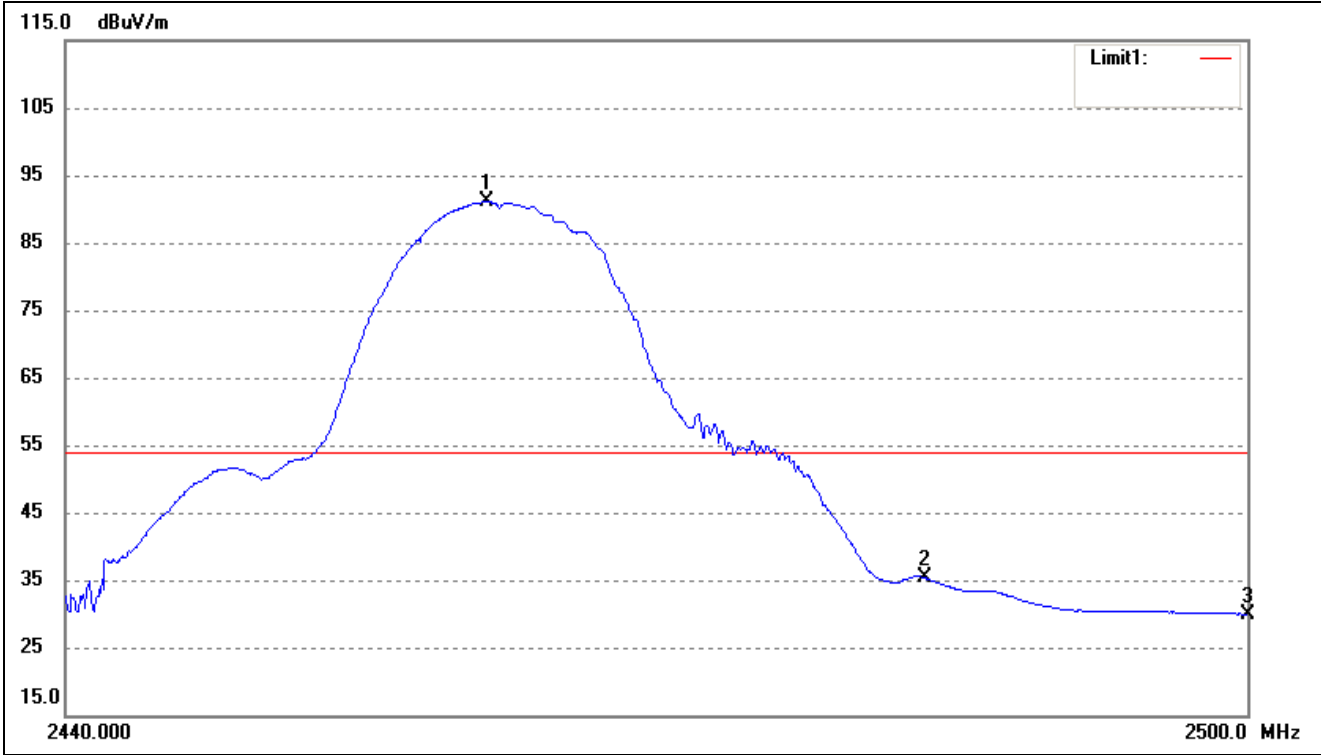
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.595	97.99	-9.36	88.63	/	/	Average Detector
	2459.699	111.10	-9.35	101.75	/	/	Peak Detector
2	2483.500	57.53	-9.31	48.22	54.00	-5.78	Average Detector
	2483.500	81.10	-9.31	71.79	74.00	-2.21	Peak Detector
3	2500.000	44.33	-9.28	35.05	54.00	-18.95	Average Detector
	2500.000	64.24	-9.28	54.96	74.00	-19.04	Peak Detector

ANT 4_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



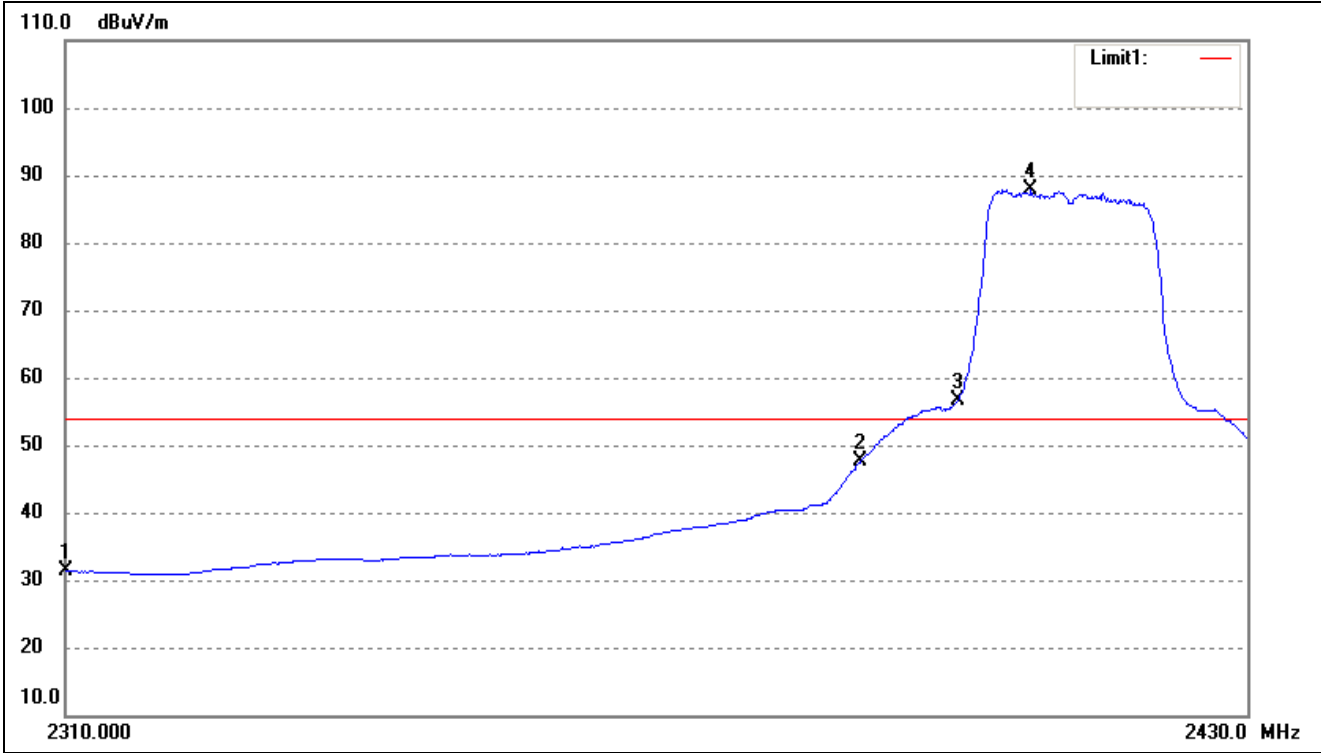
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	41.34	-9.66	31.68	54.00	-22.32	Average Detector
	2310.000	53.22	-9.66	43.56	74.00	-30.44	Peak Detector
2	2390.000	57.90	-9.50	48.40	54.00	-5.60	Average Detector
	2390.000	70.99	-9.50	61.49	74.00	-12.51	Peak Detector
3	2400.000	74.18	-9.48	64.70	Delta=32.39dBc		Average Detector
4	2412.899	106.55	-9.46	97.09			Average Detector

ANT 4_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



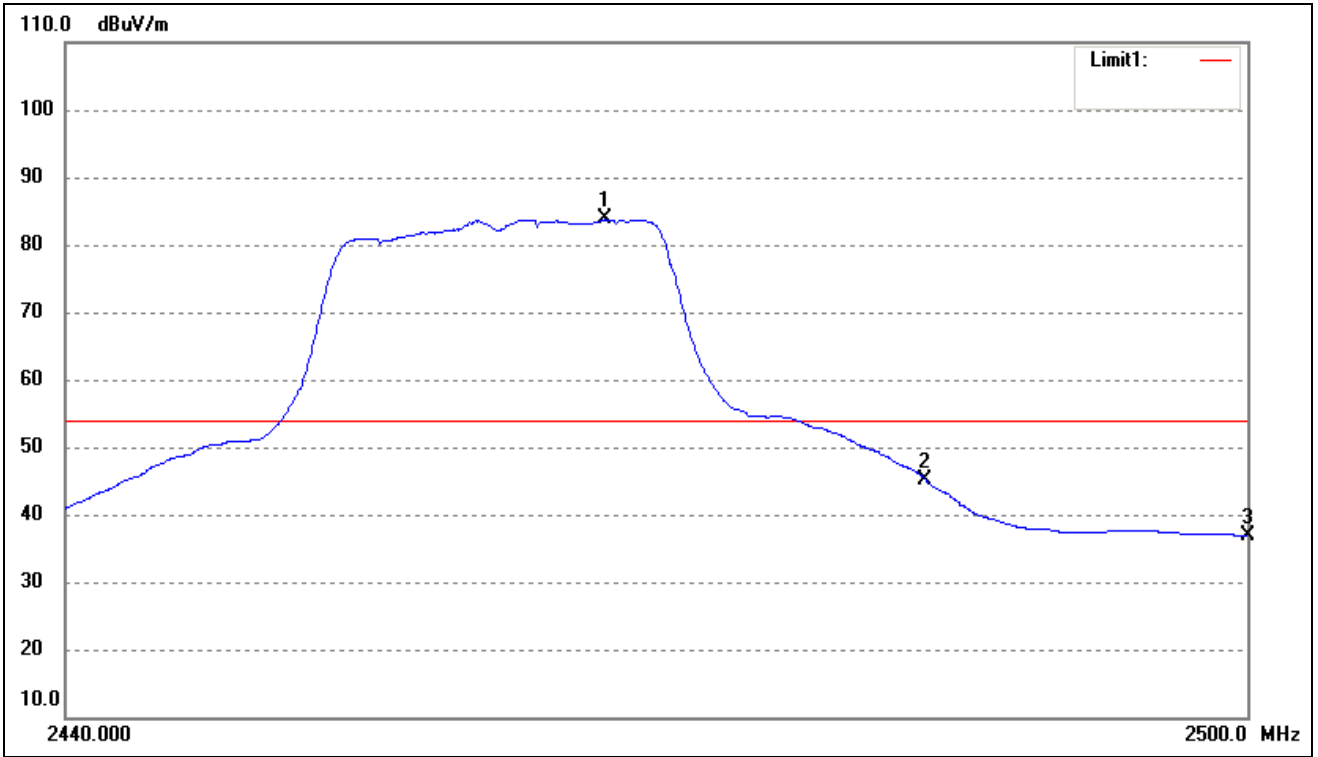
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.193	100.48	-9.36	91.12	/	/	Average Detector
	2461.604	110.45	-9.36	101.09	/	/	Peak Detector
2	2483.500	44.58	-9.31	35.27	54.00	-18.73	Average Detector
	2483.500	58.97	-9.31	49.66	74.00	-24.34	Peak Detector
3	2500.000	39.27	-9.28	29.99	54.00	-24.01	Average Detector
	2500.000	50.77	-9.28	41.49	74.00	-32.51	Peak Detector

ANT 4_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



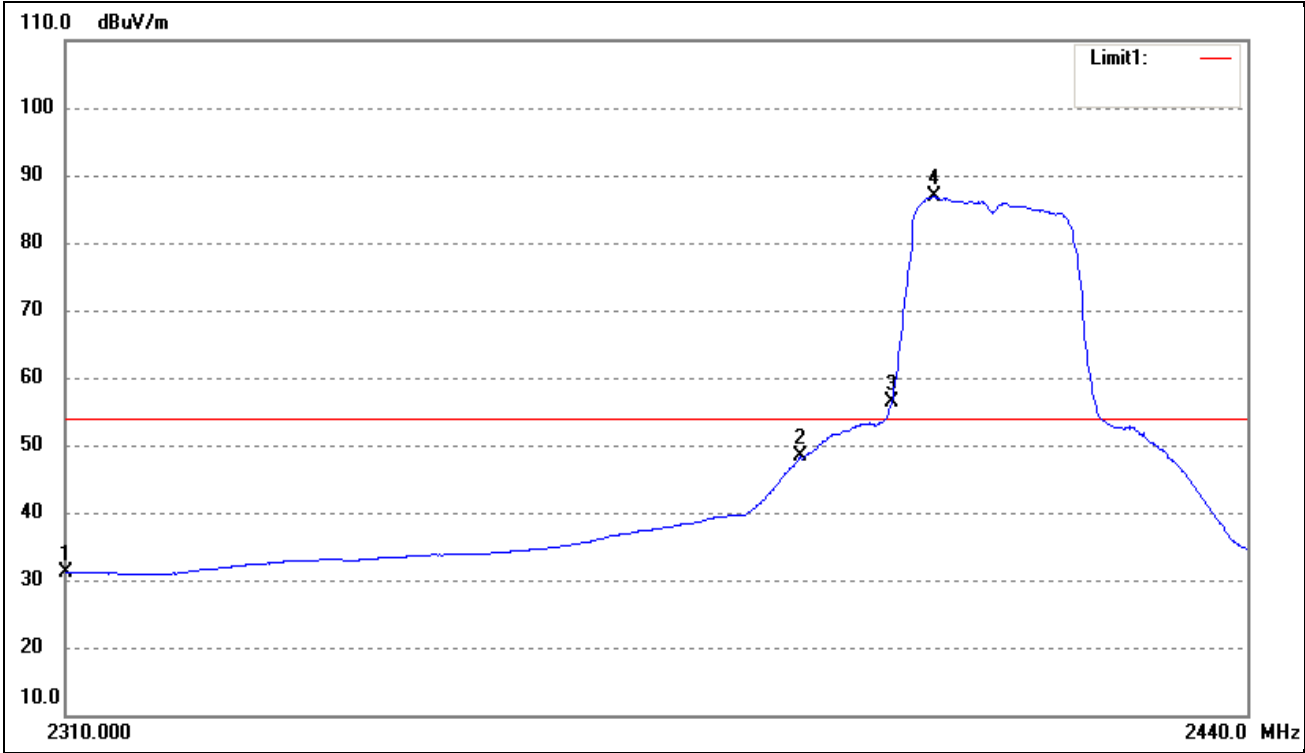
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.95	-9.66	31.29	54.00	-22.71	Average Detector
	2310.000	53.94	-9.66	44.28	74.00	-29.72	Peak Detector
2	2390.000	57.25	-9.50	47.75	54.00	-6.25	Average Detector
	2390.000	76.81	-9.50	67.31	74.00	-6.69	Peak Detector
3	2400.000	66.08	-9.48	56.60	Delta=31.33dBc		Average Detector
4	2407.583	97.40	-9.47	87.93			Average Detector

ANT 4_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



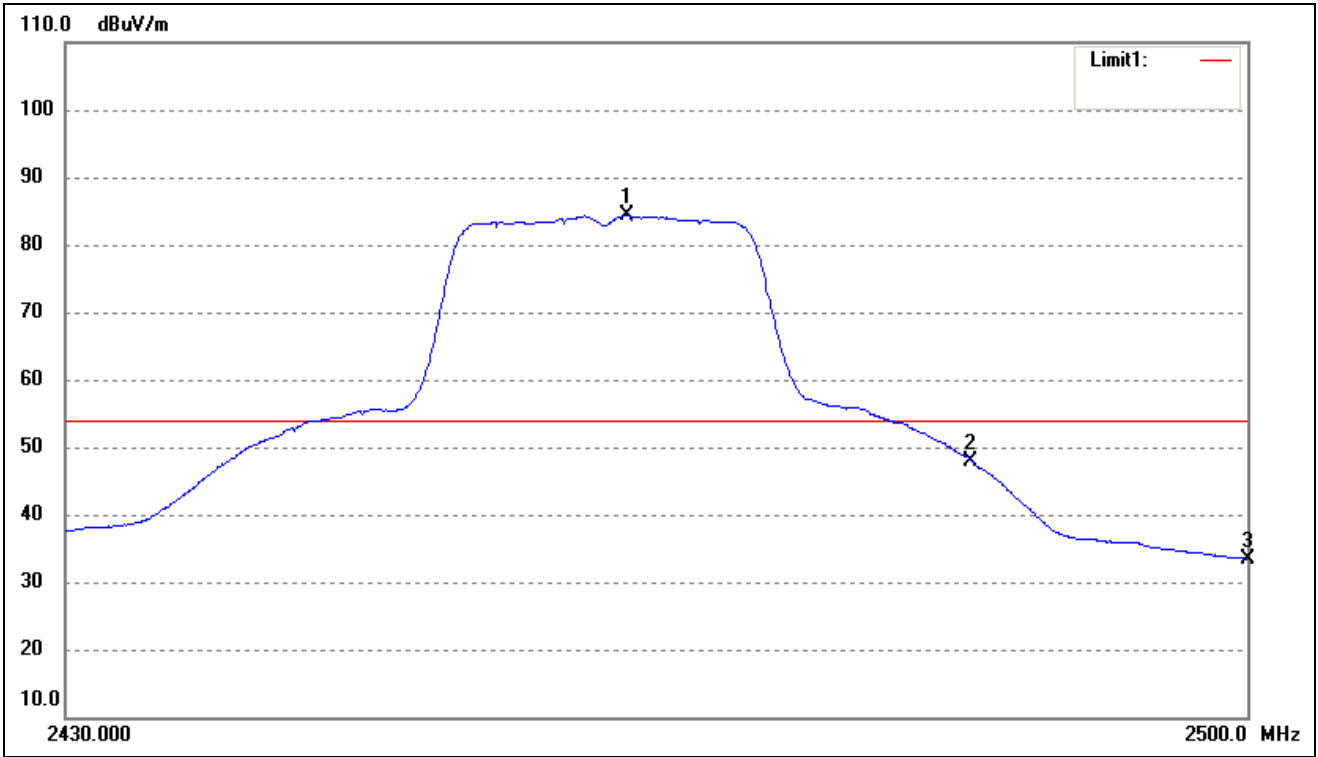
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2467.239	93.11	-9.35	83.76	/	/	Average Detector
	2468.678	110.26	-9.34	100.92	/	/	Peak Detector
2	2483.500	54.50	-9.31	45.19	54.00	-8.81	Average Detector
	2483.500	71.08	-9.31	61.77	74.00	-12.23	Peak Detector
3	2500.000	46.13	-9.28	36.85	54.00	-17.15	Average Detector
	2500.000	59.42	-9.28	50.14	74.00	-23.86	Peak Detector

ANT 4_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



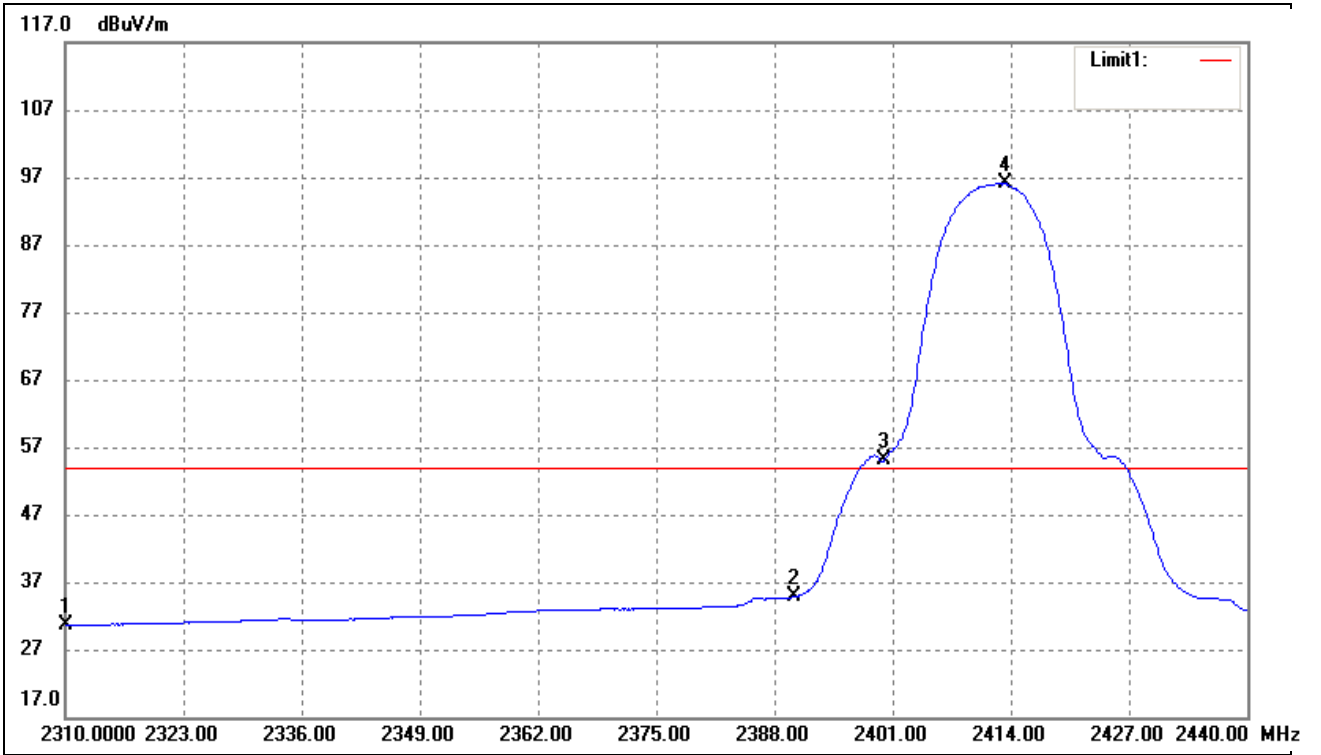
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.71	-9.66	31.05	54.00	-22.95	Average Detector
	2310.000	52.99	-9.66	43.33	74.00	-30.67	Peak Detector
2	2390.000	57.78	-9.50	48.28	54.00	-5.72	Average Detector
	2390.000	78.78	-9.50	69.28	74.00	-4.72	Peak Detector
3	2400.000	65.86	-9.48	56.38	Delta=30.39dBc		Average Detector
4	2404.854	96.25	-9.48	86.77			Average Detector

ANT 4_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



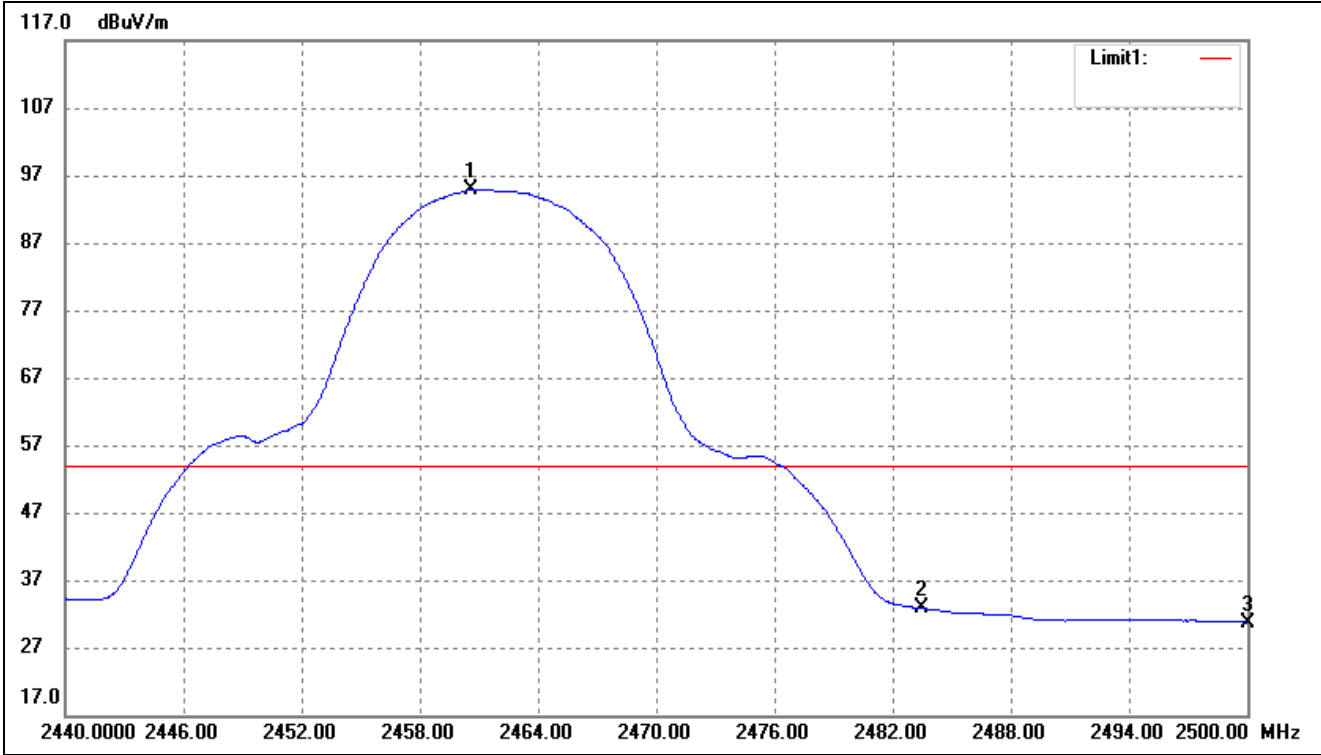
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.002	93.84	-9.36	84.48	/	/	Average Detector
	2459.158	111.27	-9.36	101.91	/	/	Peak Detector
2	2483.500	57.29	-9.31	47.98	54.00	-6.02	Average Detector
	2483.500	80.01	-9.31	70.70	74.00	-3.30	Peak Detector
3	2500.000	42.66	-9.28	33.38	54.00	-20.62	Average Detector
	2500.000	56.03	-9.28	46.75	74.00	-27.25	Peak Detector

ANT 5_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



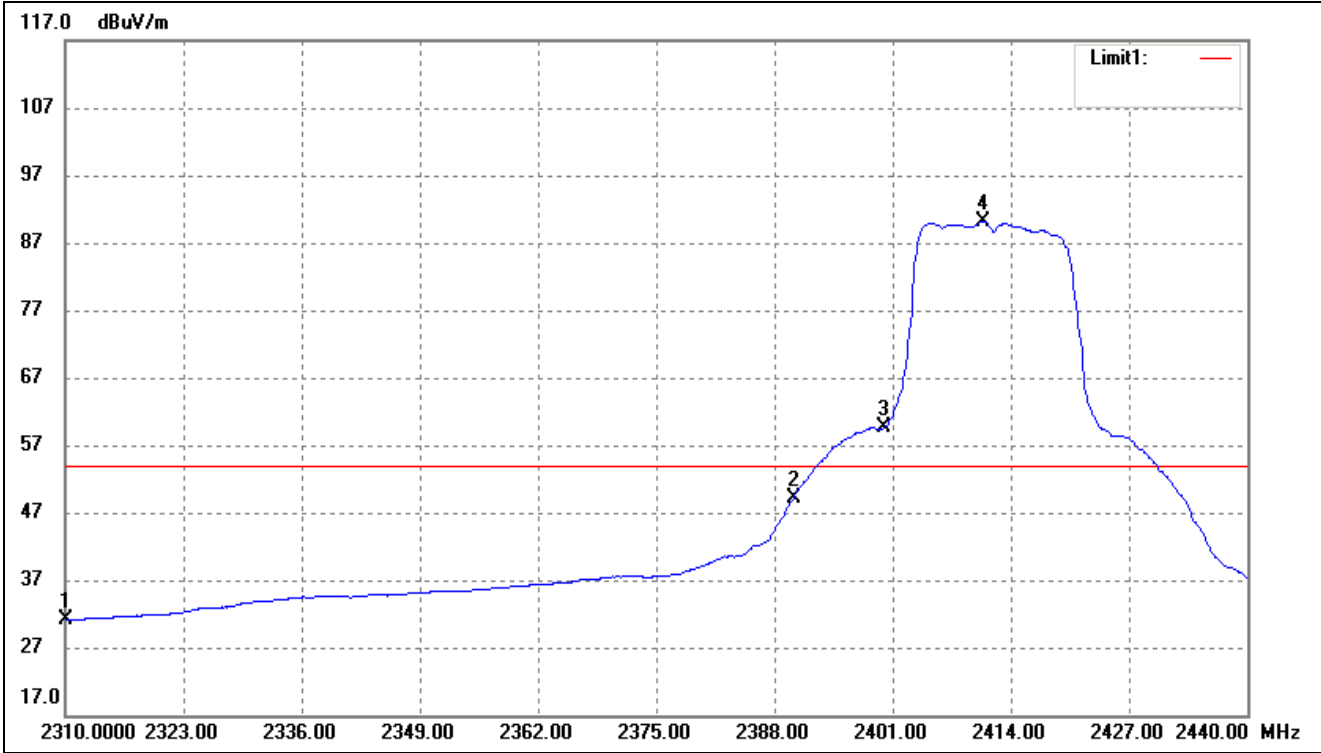
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.21	-9.66	30.55	54.00	-23.45	Average Detector
	2310.000	53.11	-9.66	43.45	74.00	-30.55	Peak Detector
2	2390.000	44.33	-9.50	34.83	54.00	-19.17	Average Detector
	2390.000	56.84	-9.50	47.34	74.00	-26.66	Peak Detector
3	2400.000	64.71	-9.48	55.23	Delta=40.85dBc		Average Detector
4	2413.350	105.54	-9.46	96.08			Average Detector

ANT 5_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



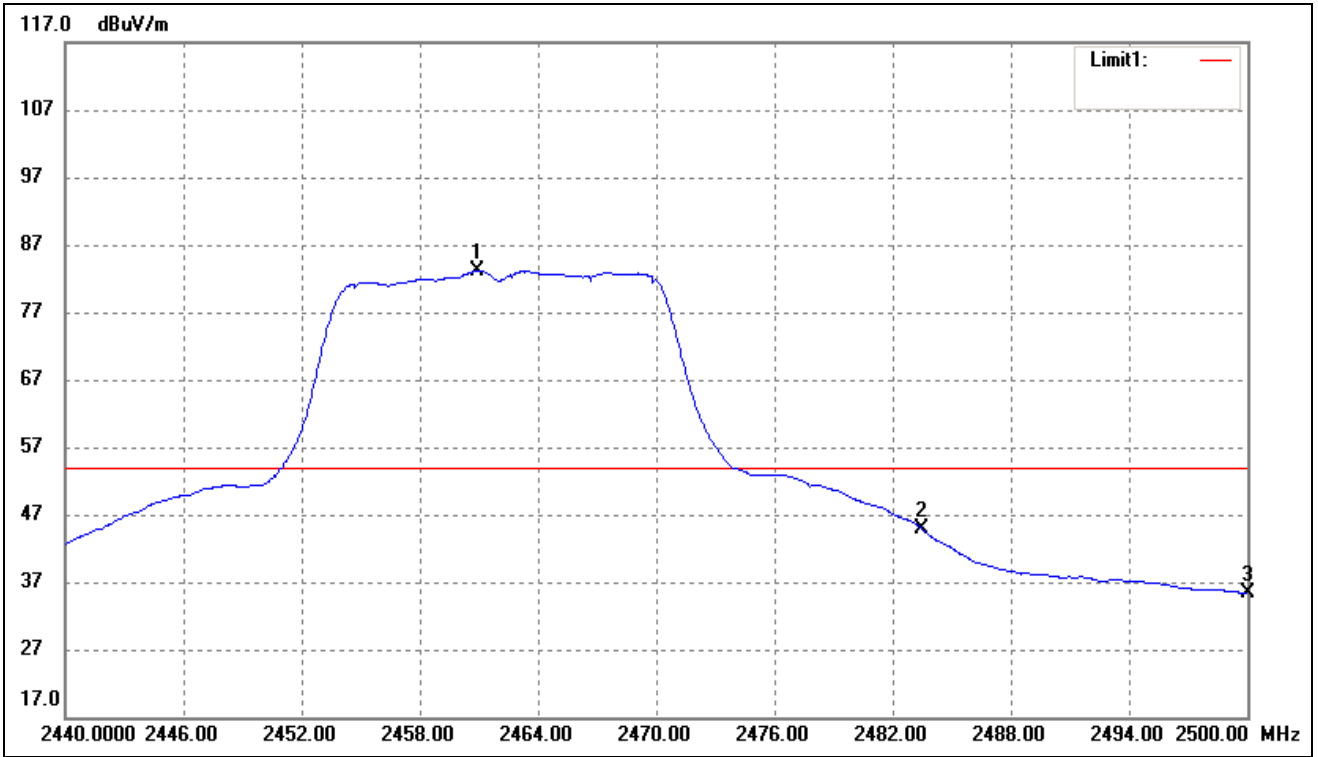
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.580	104.18	-9.36	94.82	/	/	Average Detector
	2463.280	113.02	-9.36	103.66	/	/	Peak Detector
2	2483.500	42.13	-9.31	32.82	54.00	-21.18	Average Detector
	2483.500	55.37	-9.31	46.06	74.00	-27.94	Peak Detector
3	2500.000	39.99	-9.28	30.71	54.00	-23.29	Average Detector
	2500.000	52.76	-9.28	43.48	74.00	-30.52	Peak Detector

ANT 5_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



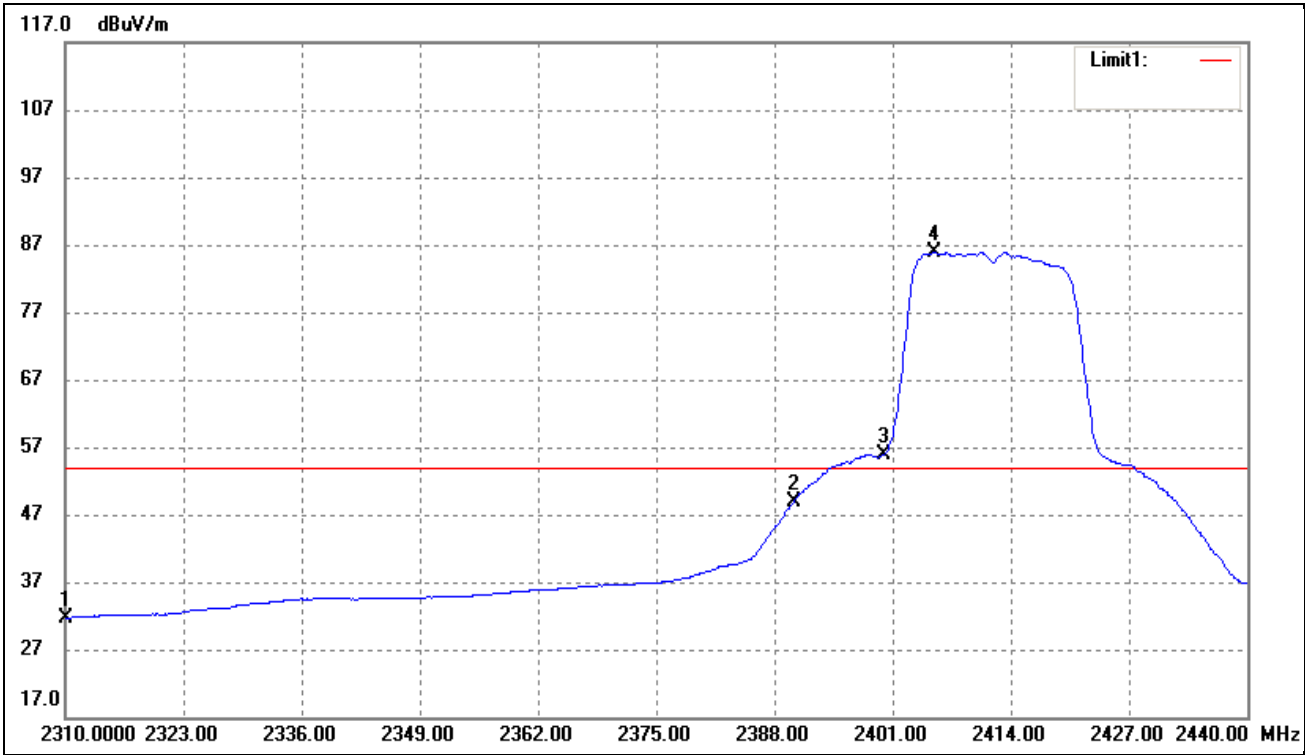
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.72	-9.66	31.06	54.00	-22.94	Average Detector
	2310.000	53.64	-9.66	43.98	74.00	-30.02	Peak Detector
2	2390.000	58.73	-9.50	49.23	54.00	-4.77	Average Detector
	2390.000	80.88	-9.50	71.38	74.00	-2.62	Peak Detector
3	2400.000	69.11	-9.48	59.63	Delta=30.62dBc		Average Detector
4	2411.010	99.71	-9.46	90.25			Average Detector

ANT 5_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



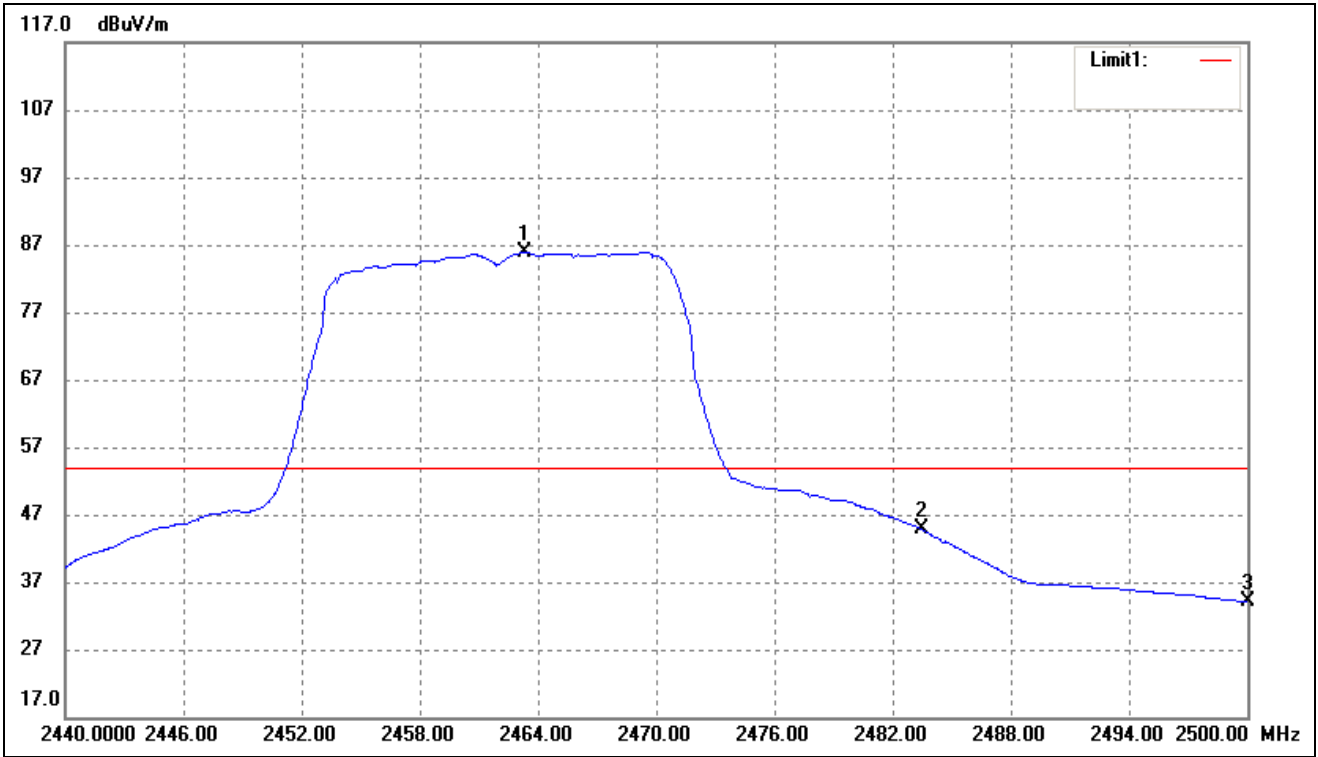
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.940	92.56	-9.36	83.20	/	/	Average Detector
	2468.800	109.51	-9.34	100.17	/	/	Peak Detector
2	2483.500	54.22	-9.31	44.91	54.00	-9.09	Average Detector
	2483.500	70.83	-9.31	61.52	74.00	-12.48	Peak Detector
3	2500.000	44.62	-9.28	35.34	54.00	-18.66	Average Detector
	2500.000	58.05	-9.28	48.77	74.00	-25.23	Peak Detector

ANT 5_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



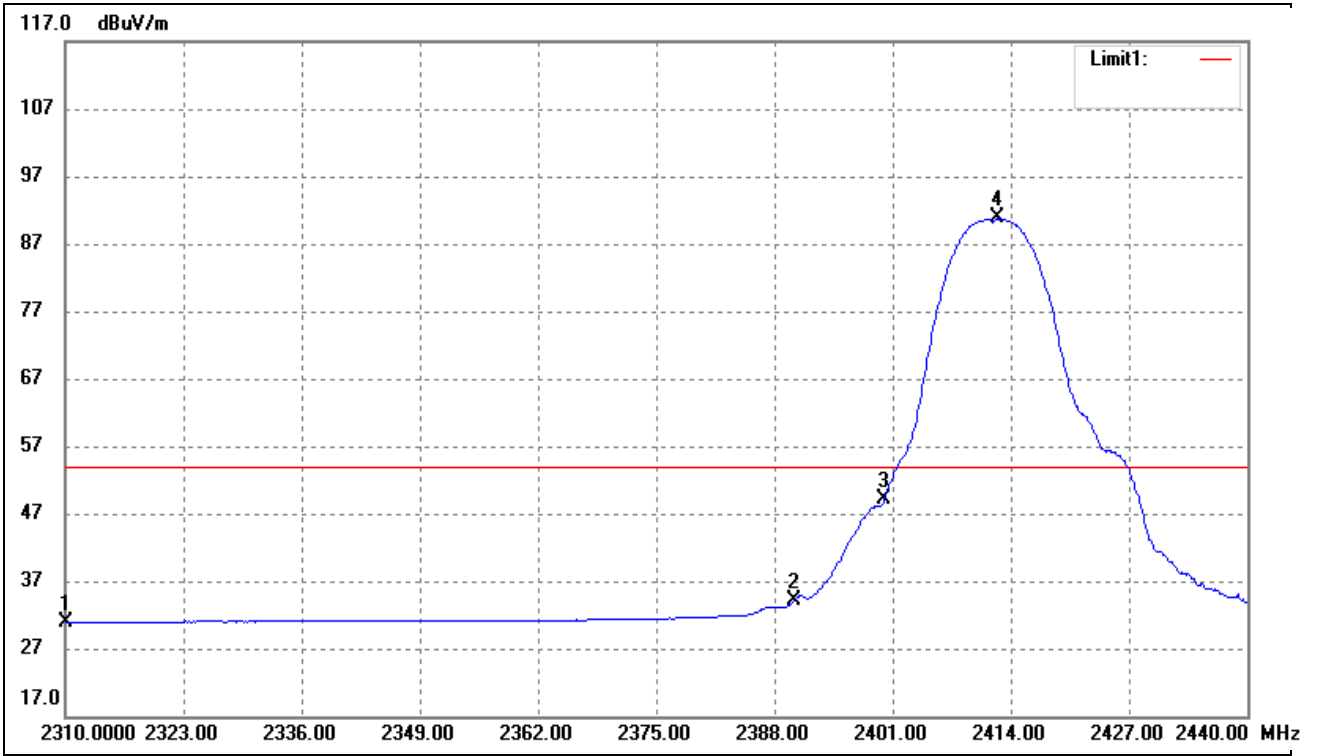
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	41.33	-9.66	31.67	54.00	-22.33	Average Detector
	2310.000	53.75	-9.66	44.09	74.00	-29.91	Peak Detector
2	2390.000	58.26	-9.50	48.76	54.00	-5.24	Average Detector
	2390.000	79.49	-9.50	69.99	74.00	-4.01	Peak Detector
3	2400.000	65.47	-9.48	55.99	Delta=29.85dBc		Average Detector
4	2405.550	95.32	-9.48	85.84			Average Detector

ANT 5_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



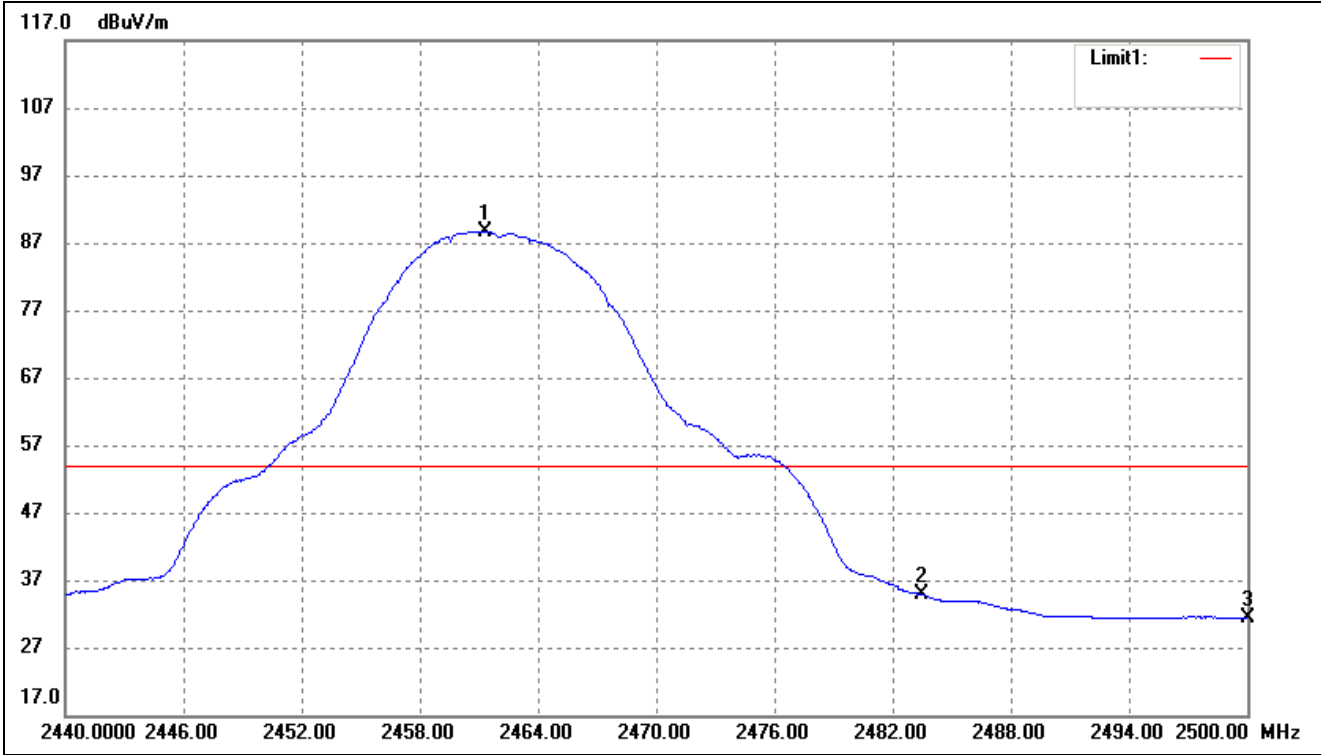
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.280	95.27	-9.36	85.91	/	/	Average Detector
	2469.100	109.61	-9.34	100.27	/	/	Peak Detector
2	2483.500	54.09	-9.31	44.78	54.00	-9.22	Average Detector
	2483.500	74.22	-9.31	64.91	74.00	-9.09	Peak Detector
3	2500.000	43.38	-9.28	34.10	54.00	-19.90	Average Detector
	2500.000	56.68	-9.28	47.40	74.00	-26.60	Peak Detector

ANT 6_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



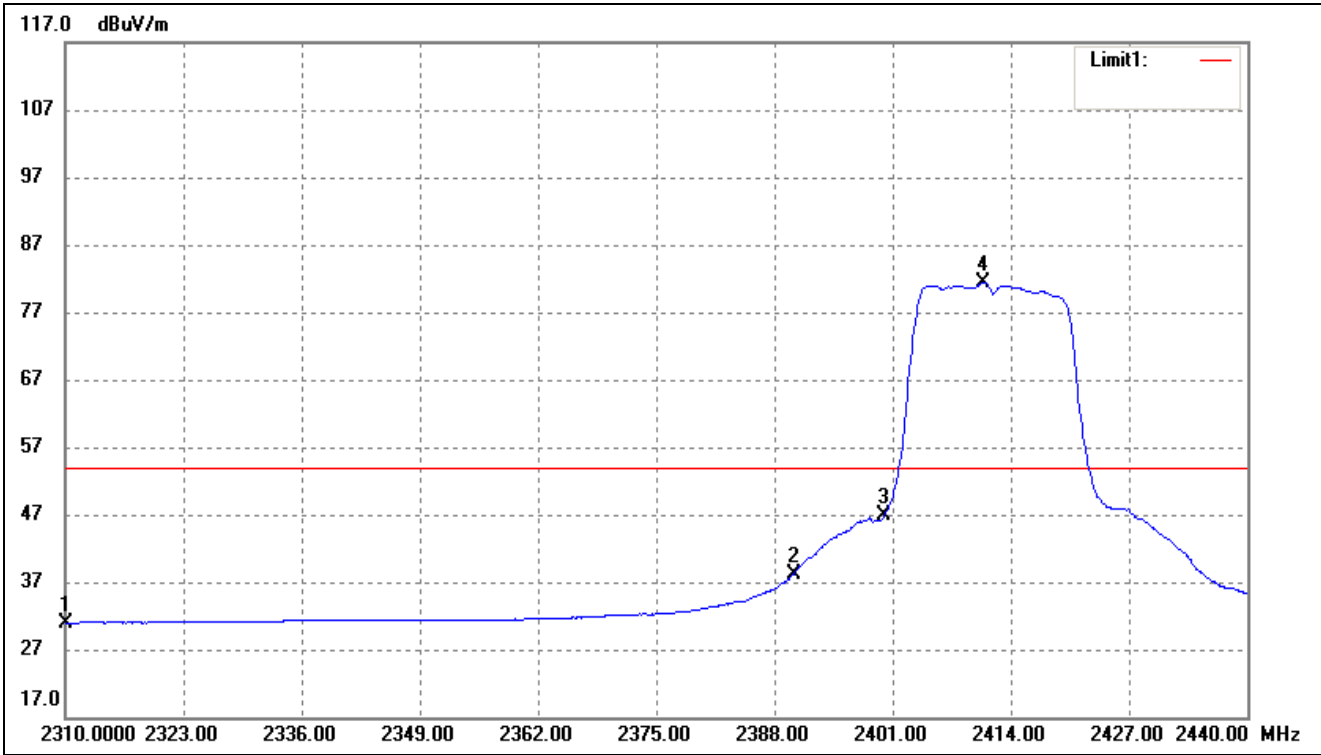
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.46	-9.66	30.80	54.00	-23.20	Average Detector
	2310.000	54.42	-9.66	44.76	74.00	-29.24	Peak Detector
2	2390.000	43.60	-9.50	34.10	54.00	-19.90	Average Detector
	2390.000	57.37	-9.50	47.87	74.00	-26.13	Peak Detector
3	2400.000	58.61	-9.48	49.13	54.00	-4.87	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2412.440	100.22	-9.46	90.76	/	/	Average Detector
	2411.140	109.90	-9.46	100.44	/	/	Peak Detector

ANT 6_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



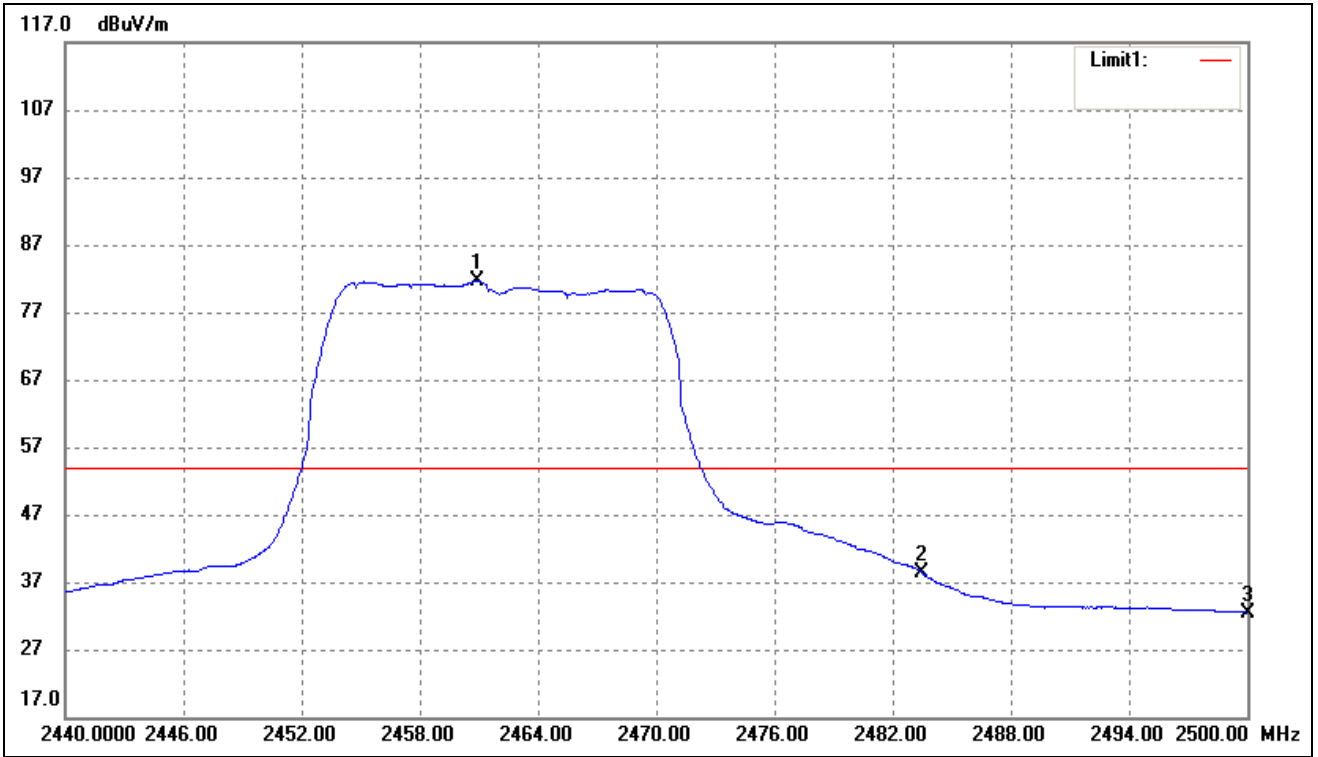
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.300	98.02	-9.36	88.66	/	/	Average Detector
	2460.700	107.50	-9.36	98.14	/	/	Peak Detector
2	2483.500	44.13	-9.31	34.82	54.00	-19.18	Average Detector
	2483.500	57.36	-9.31	48.05	74.00	-25.95	Peak Detector
3	2500.000	40.55	-9.28	31.27	54.00	-22.73	Average Detector
	2500.000	52.65	-9.28	43.37	74.00	-30.63	Peak Detector

ANT 6_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



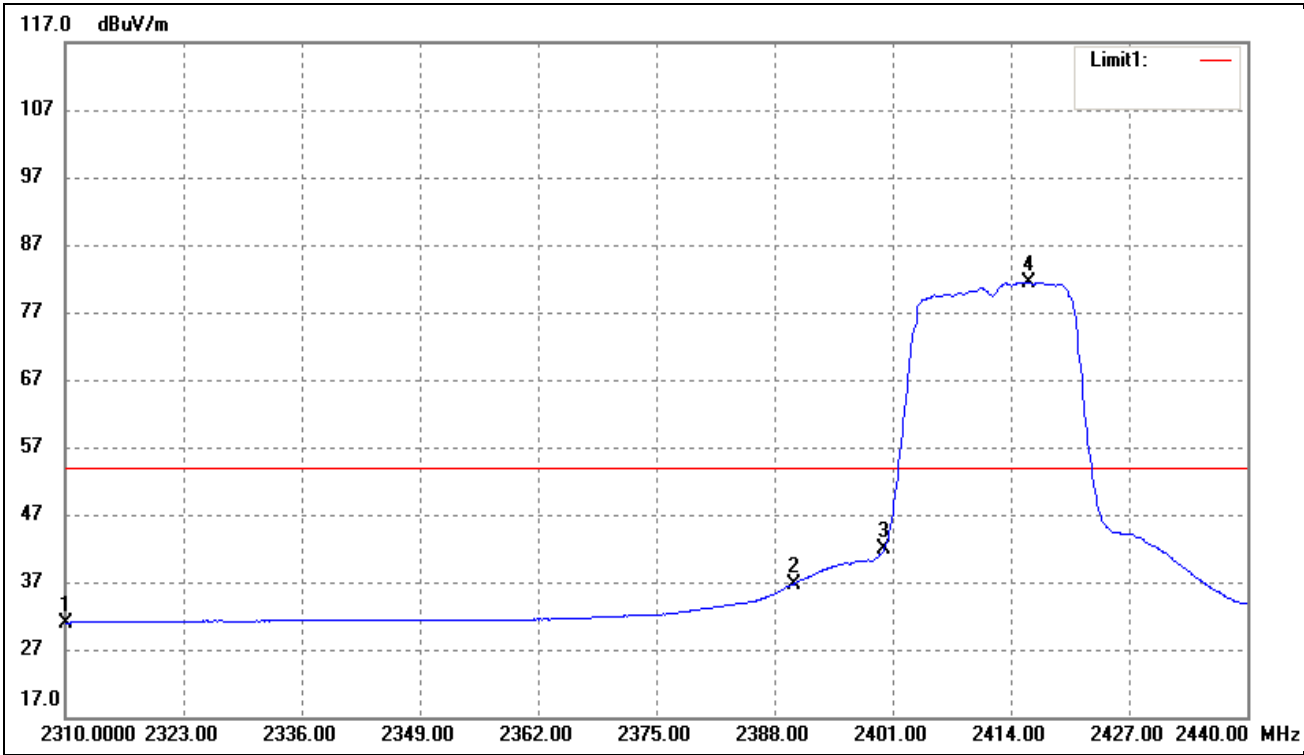
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.58	-9.66	30.92	54.00	-23.08	Average Detector
	2310.000	54.02	-9.66	44.36	74.00	-29.64	Peak Detector
2	2390.000	47.67	-9.50	38.17	54.00	-15.83	Average Detector
	2390.000	67.04	-9.50	57.54	74.00	-16.46	Peak Detector
3	2400.000	56.36	-9.48	46.88	54.00	-7.12	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2410.880	90.93	-9.46	81.47	/	/	Average Detector
	2409.710	105.36	-9.46	95.90	/	/	Peak Detector

ANT 6_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



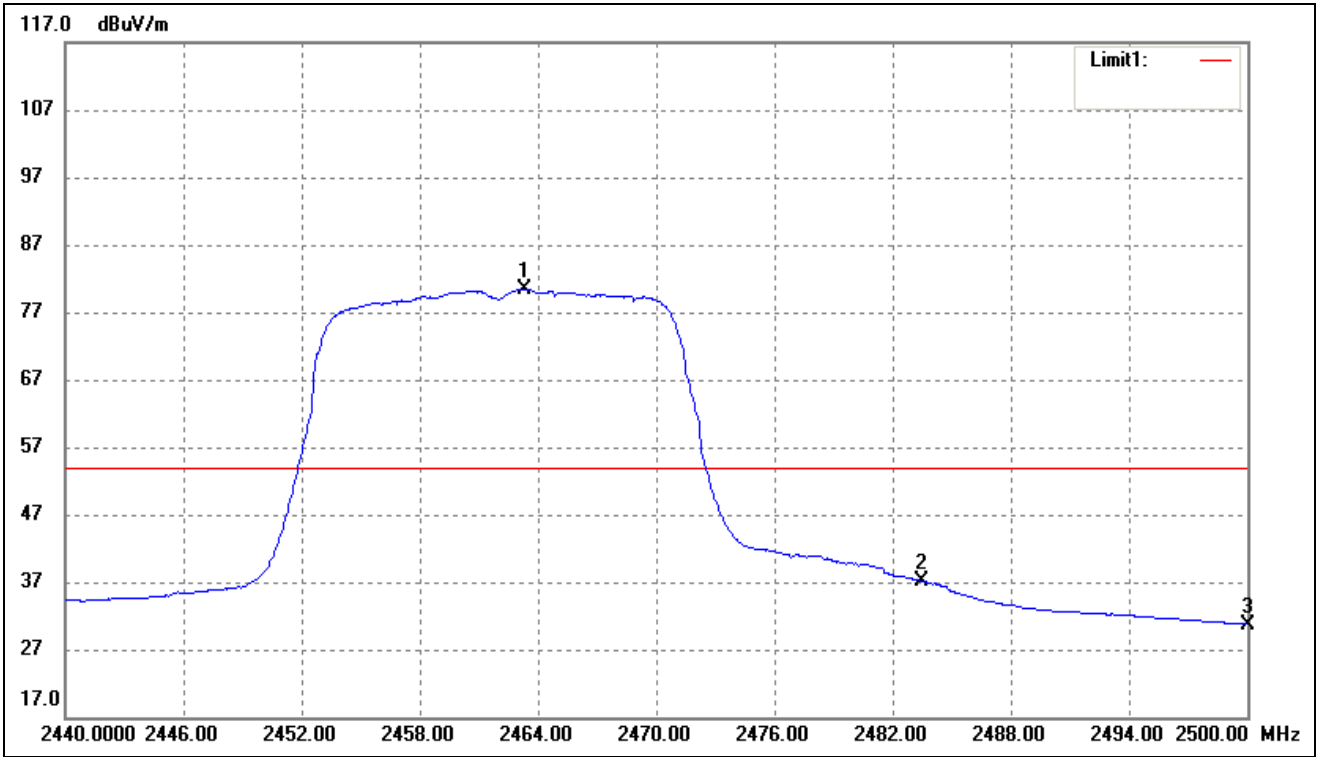
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.880	90.94	-9.36	81.58	/	/	Average Detector
	2459.620	104.14	-9.35	94.79	/	/	Peak Detector
2	2483.500	47.70	-9.31	38.39	54.00	-15.61	Average Detector
	2483.500	64.53	-9.31	55.22	74.00	-18.78	Peak Detector
3	2500.000	41.74	-9.28	32.46	54.00	-21.54	Average Detector
	2500.000	54.34	-9.28	45.06	74.00	-28.94	Peak Detector

ANT 6_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



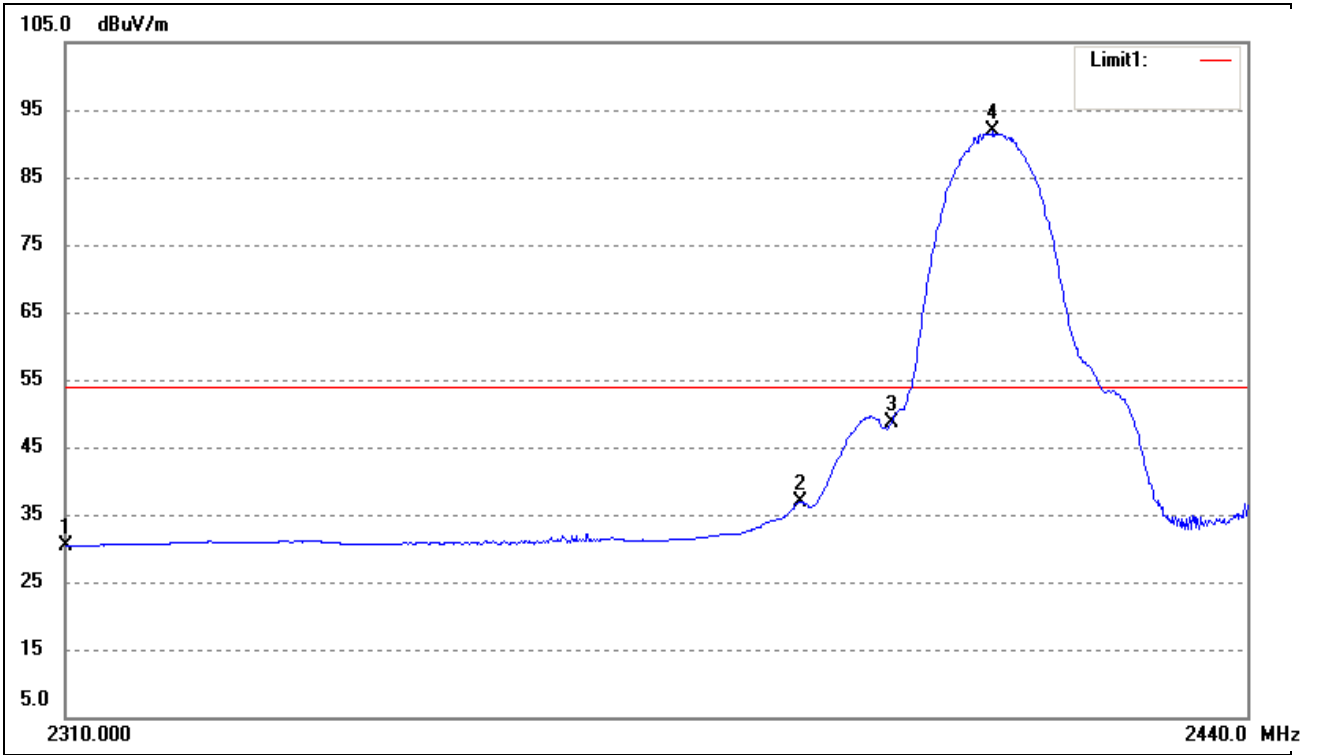
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	40.66	-9.66	31.00	54.00	-23.00	Average Detector
	2310.000	54.25	-9.66	44.59	74.00	-29.41	Peak Detector
2	2390.000	46.23	-9.50	36.73	54.00	-17.27	Average Detector
	2390.000	71.78	-9.50	62.28	74.00	-11.72	Peak Detector
3	2400.000	51.46	-9.48	41.98	54.00	-12.02	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2415.950	90.85	-9.46	81.39	/	/	Average Detector
	2418.940	104.49	-9.44	95.05	/	/	Peak Detector

ANT 6_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



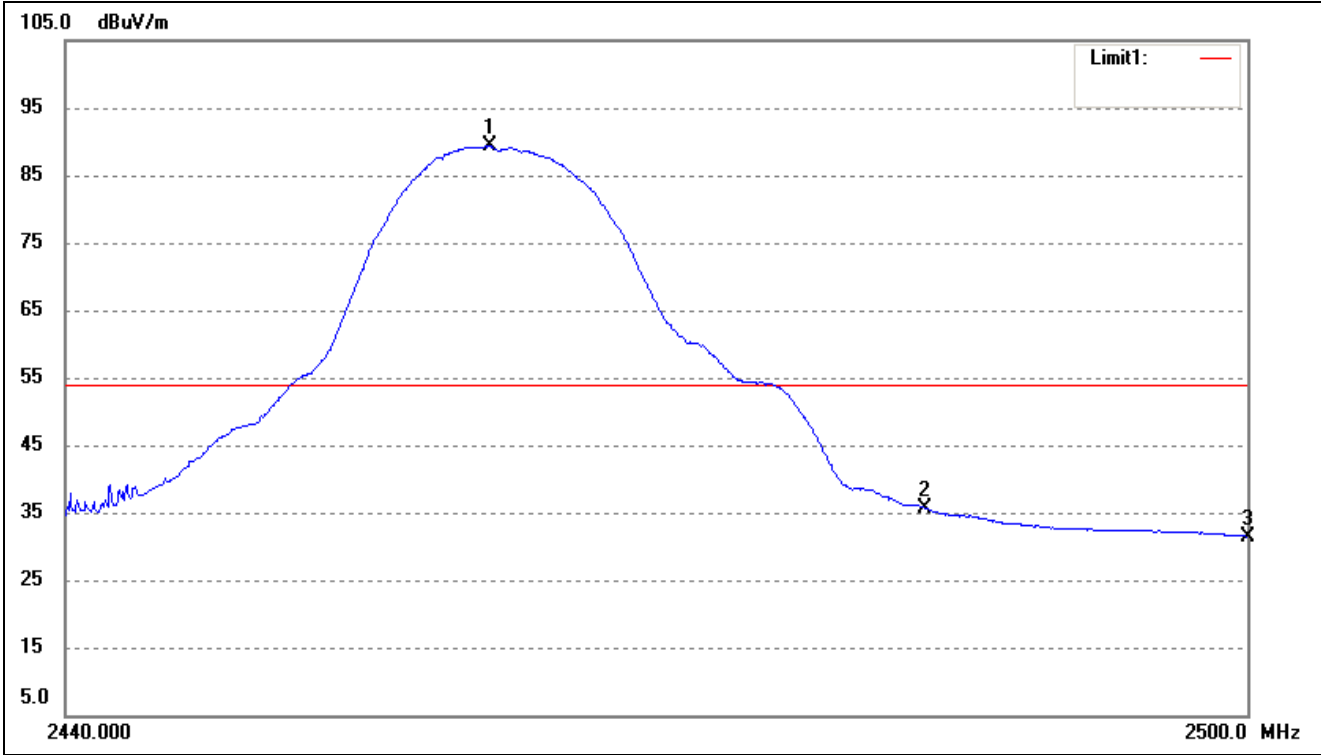
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.280	89.82	-9.36	80.46	/	/	Average Detector
	2468.920	101.49	-9.34	92.15	/	/	Peak Detector
2	2483.500	46.43	-9.31	37.12	54.00	-16.88	Average Detector
	2483.500	68.07	-9.31	58.76	74.00	-15.24	Peak Detector
3	2500.000	40.03	-9.28	30.75	54.00	-23.25	Average Detector
	2500.000	54.77	-9.28	45.49	74.00	-28.51	Peak Detector

ANT 7_802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



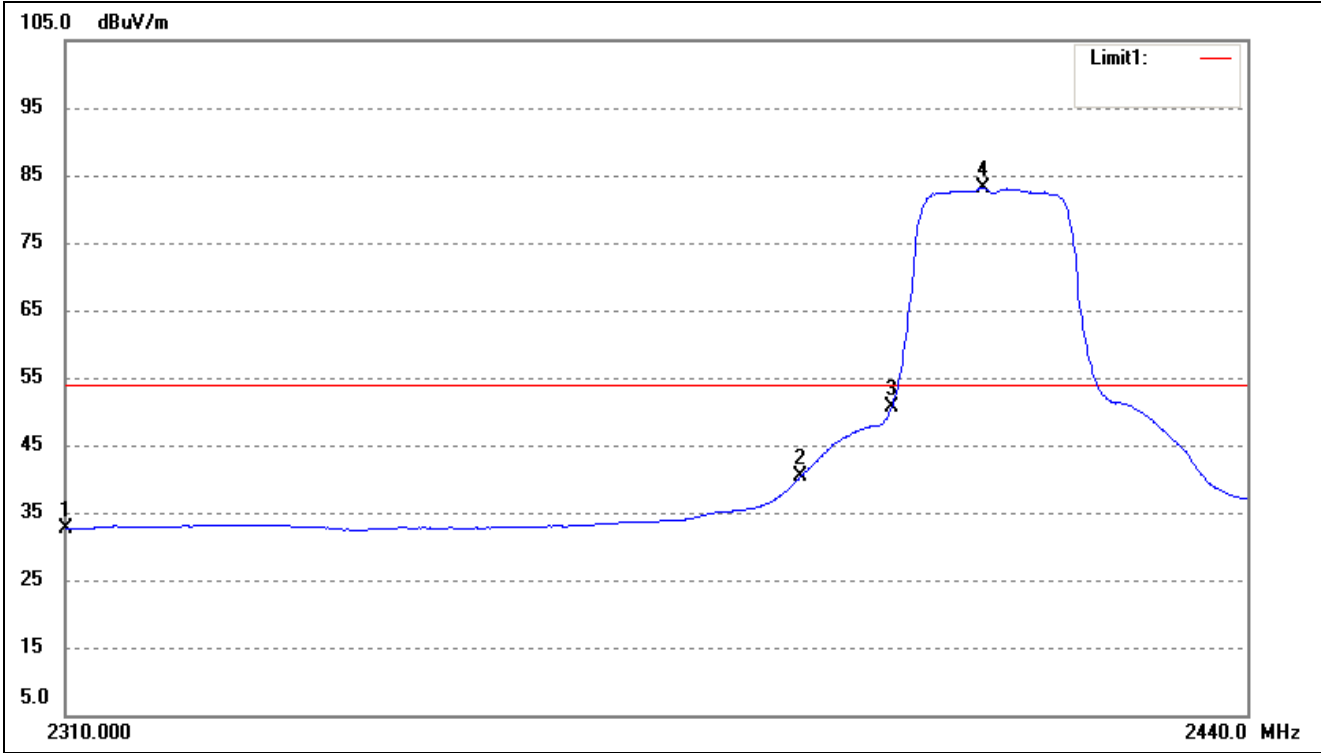
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	39.94	-9.66	30.28	54.00	-23.72	Average Detector
	2310.000	51.10	-9.66	41.44	74.00	-32.56	Peak Detector
2	2390.000	46.40	-9.50	36.90	54.00	-17.10	Average Detector
	2390.000	58.93	-9.50	49.43	74.00	-24.57	Peak Detector
3	2400.000	58.09	-9.48	48.61	54.00	-5.39	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2411.446	101.33	-9.46	91.87	/	/	Average Detector
	2412.106	108.85	-9.46	99.39	/	/	Peak Detector

ANT 7_802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



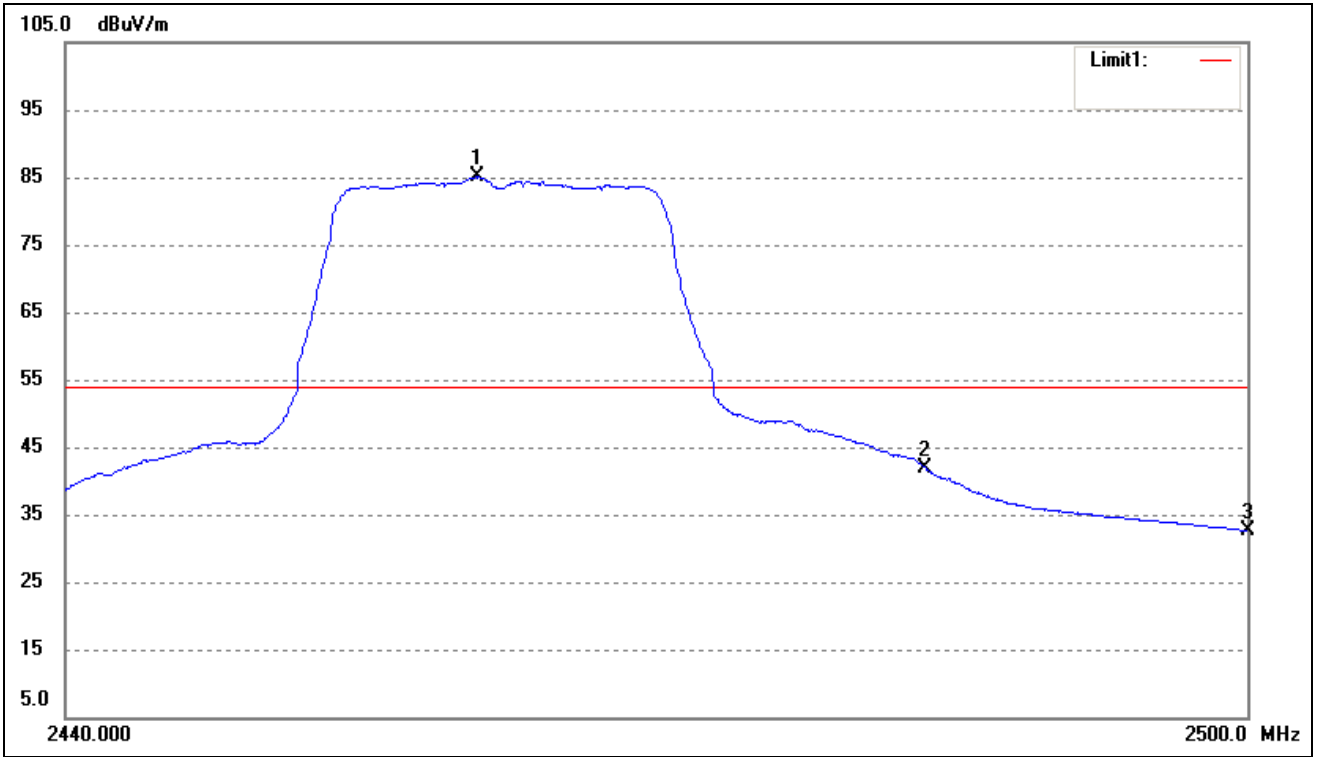
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2461.372	98.69	-9.36	89.33	/	/	Average Detector
	2460.954	108.07	-9.36	98.71	/	/	Peak Detector
2	2483.500	44.97	-9.31	35.66	54.00	-18.34	Average Detector
	2483.500	57.58	-9.31	48.27	74.00	-25.73	Peak Detector
3	2500.000	40.78	-9.28	31.50	54.00	-22.50	Average Detector
	2500.000	53.37	-9.28	44.09	74.00	-29.91	Peak Detector

ANT 7_802.11g_54Mbps			
Test Channel	Low	Polarity:	Vertical(worst case)



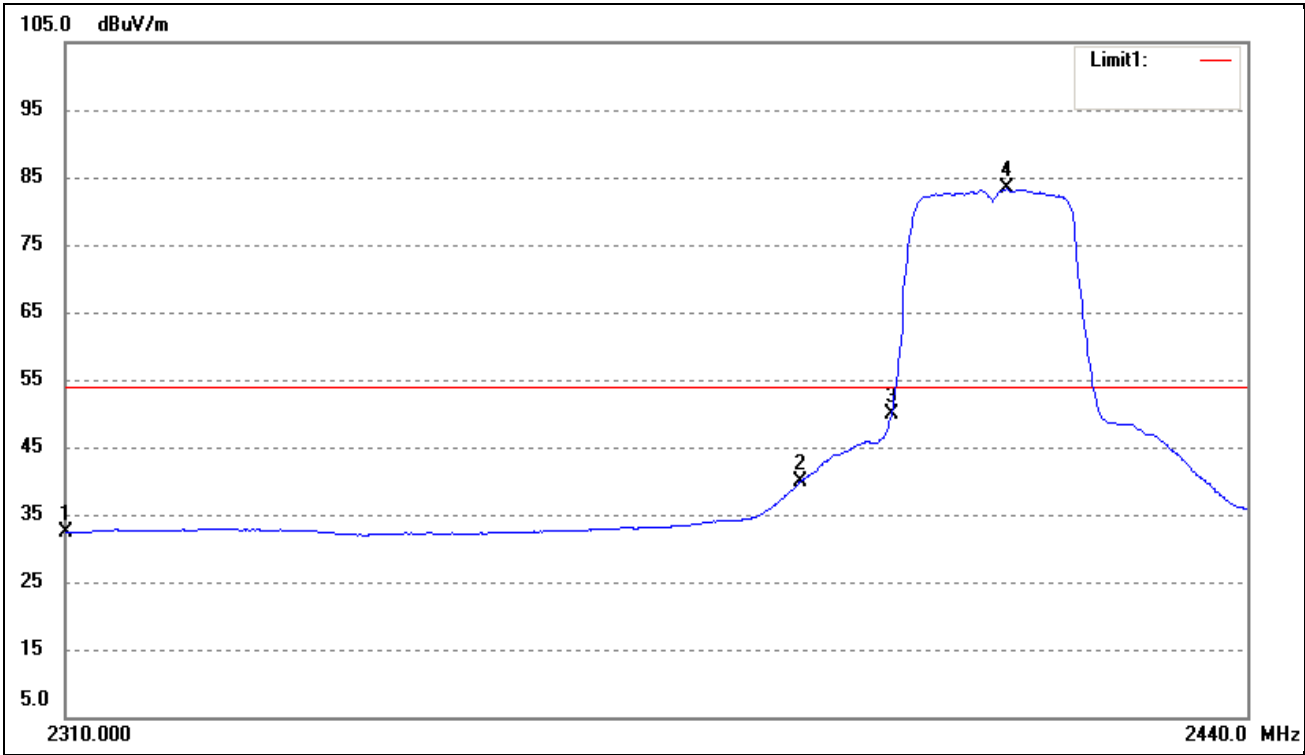
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	42.22	-9.66	32.56	54.00	-21.44	Average Detector
	2310.000	55.52	-9.66	45.86	74.00	-28.14	Peak Detector
2	2390.000	49.84	-9.50	40.34	54.00	-13.66	Average Detector
	2390.000	67.56	-9.50	58.06	74.00	-15.94	Peak Detector
3	2400.000	59.99	-9.48	50.51	54.00	-3.49	Average Detector
	/	/	/	/	/	/	Peak Detector
4	2410.258	92.66	-9.46	83.20	/	/	Average Detector
	2409.203	106.22	-9.47	96.75	/	/	Peak Detector

ANT 7_802.11g_54Mbps			
Test Channel	High	Polarity:	Vertical(worst case)



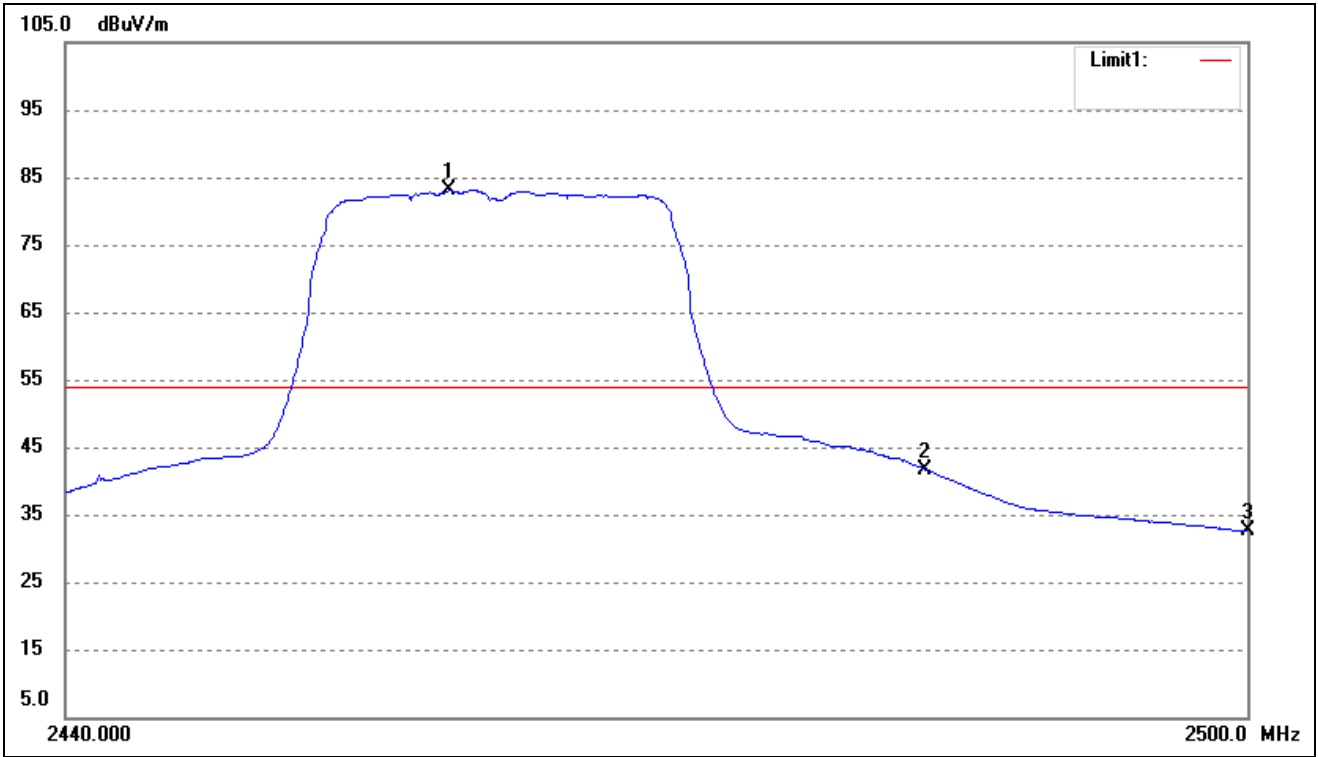
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.715	94.38	-9.36	85.02	/	/	Average Detector
	2459.579	104.90	-9.36	95.54	/	/	Peak Detector
2	2483.500	51.28	-9.31	41.97	54.00	-12.03	Average Detector
	2483.500	70.38	-9.31	61.07	74.00	-12.93	Peak Detector
3	2500.000	41.90	-9.28	32.62	54.00	-21.38	Average Detector
	2500.000	58.65	-9.28	49.37	74.00	-24.63	Peak Detector

ANT 7_802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Vertical(worst case)



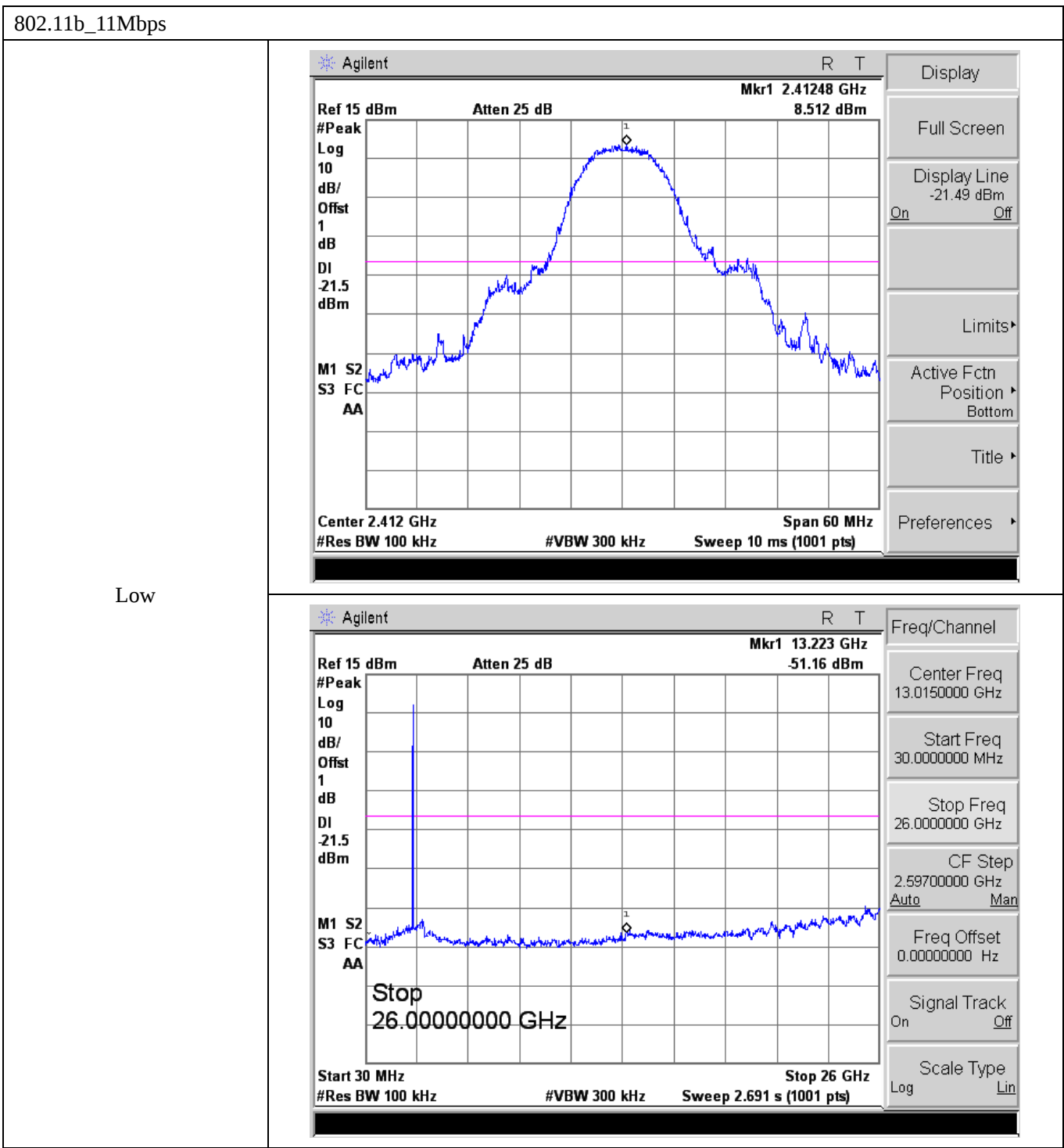
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	42.03	-9.66	32.37	54.00	-21.63	Average Detector
	2310.000	55.06	-9.66	45.40	74.00	-28.60	Peak Detector
2	2390.000	49.35	-9.50	39.85	54.00	-14.15	Average Detector
	2390.000	71.95	-9.50	62.45	74.00	-11.55	Peak Detector
3	2400.000	59.47	-9.48	49.99	54.00	-4.01	Average Detector
4	2412.899	92.74	-9.46	83.28	/	/	Average Detector
	2414.353	105.90	-9.45	96.45	/	/	Peak Detector

ANT 7_802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Vertical(worst case)



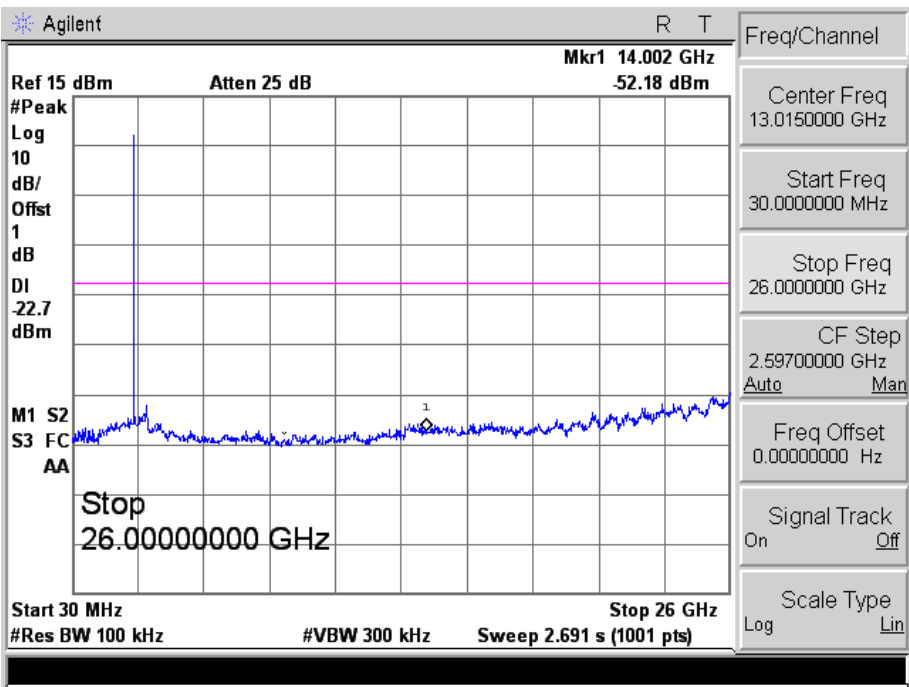
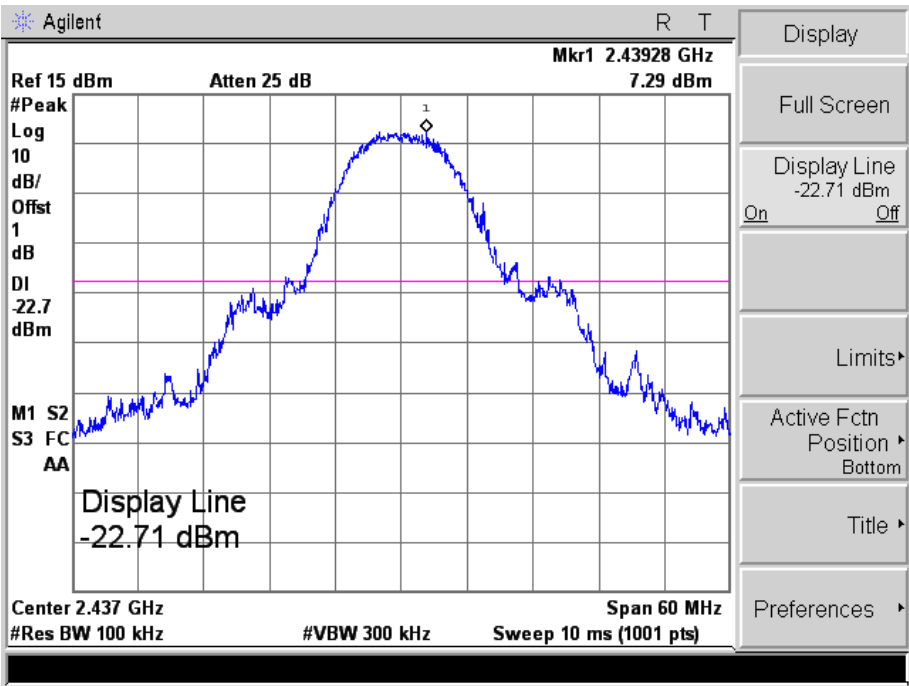
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2459.340	92.56	-9.36	83.20	/	/	Average Detector
	2459.998	104.42	-9.35	95.07	/	/	Peak Detector
2	2483.500	51.00	-9.31	41.69	54.00	-12.31	Average Detector
	2483.500	74.89	-9.31	65.58	74.00	-8.42	Peak Detector
3	2500.000	41.80	-9.28	32.52	54.00	-21.48	Average Detector
	2500.000	59.65	-9.28	50.37	74.00	-23.63	Peak Detector

➤ Conducted test



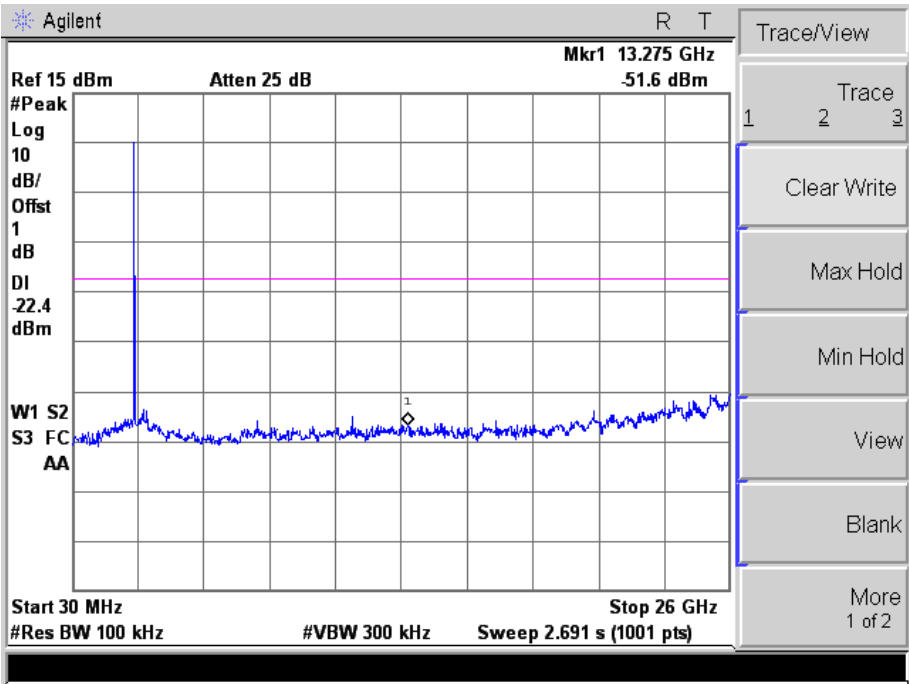
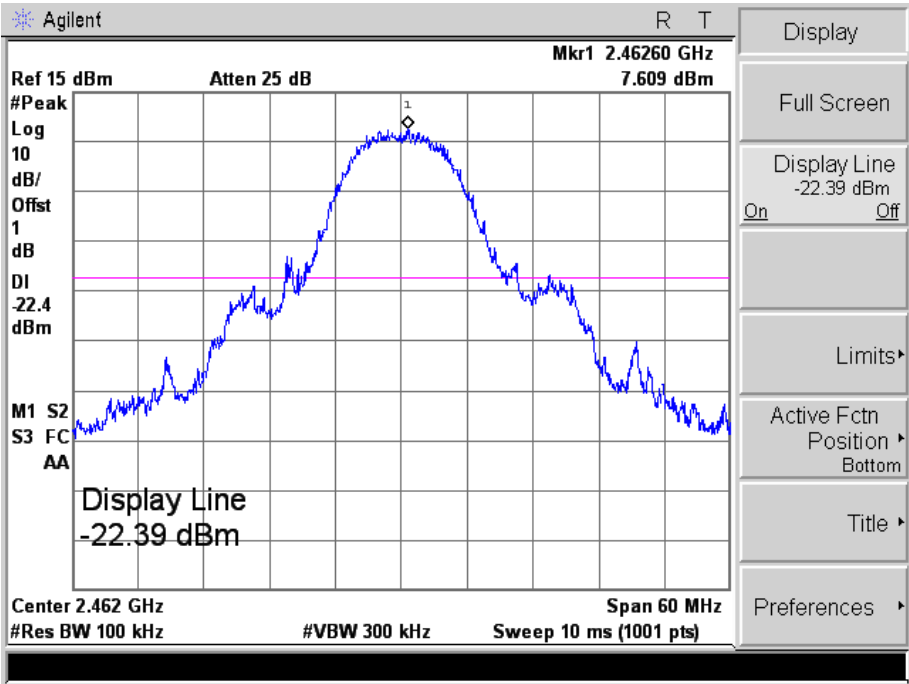
802.11b_11Mbps

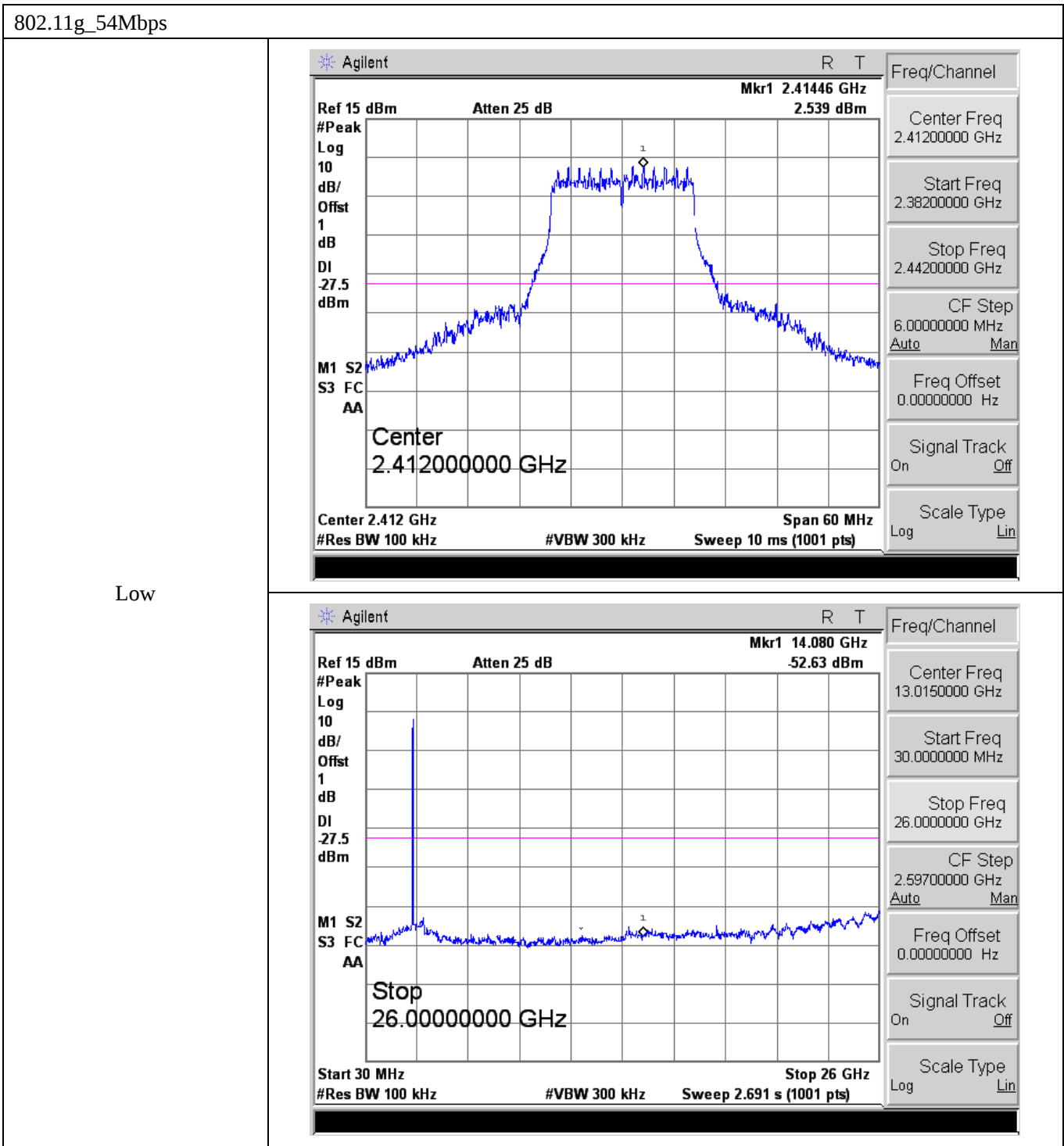
Middle



802.11b_11Mbps

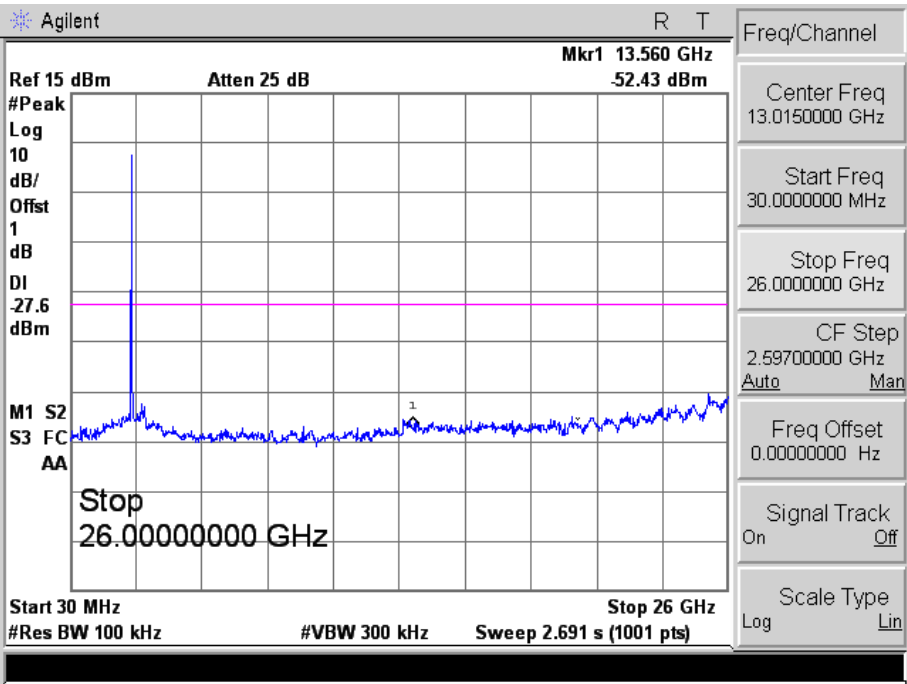
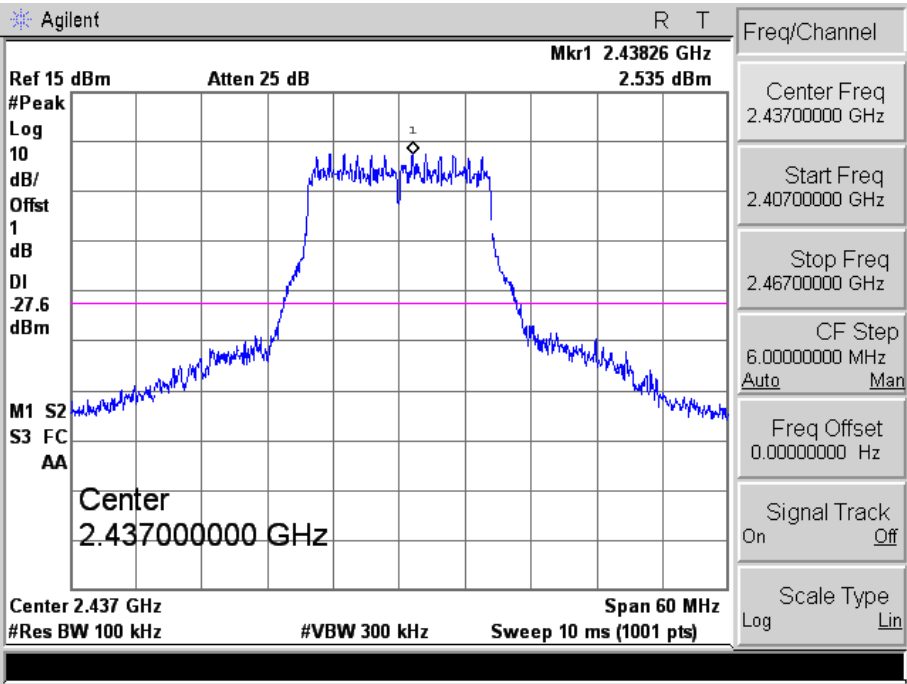
High





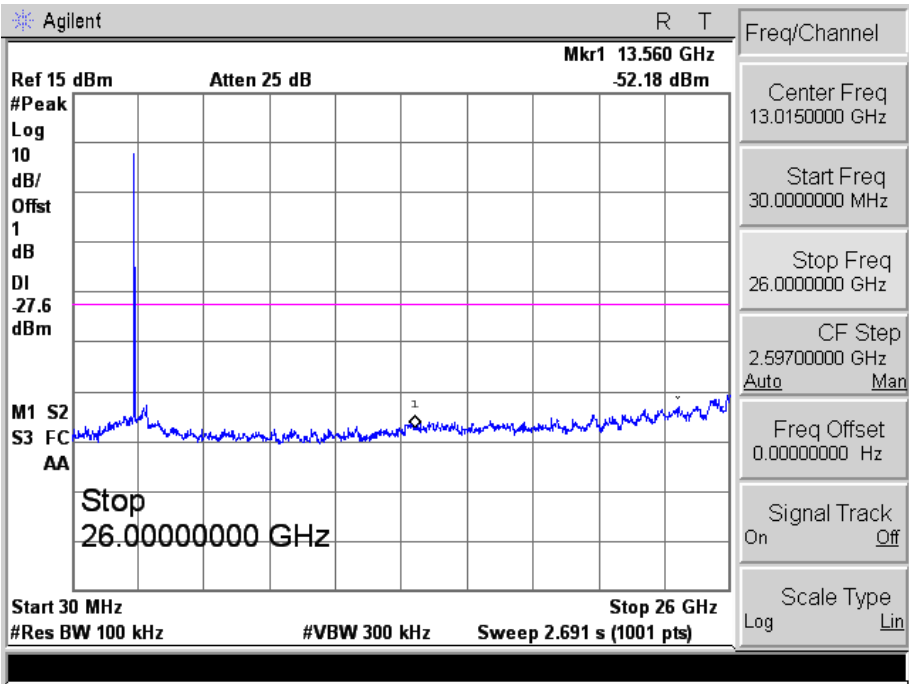
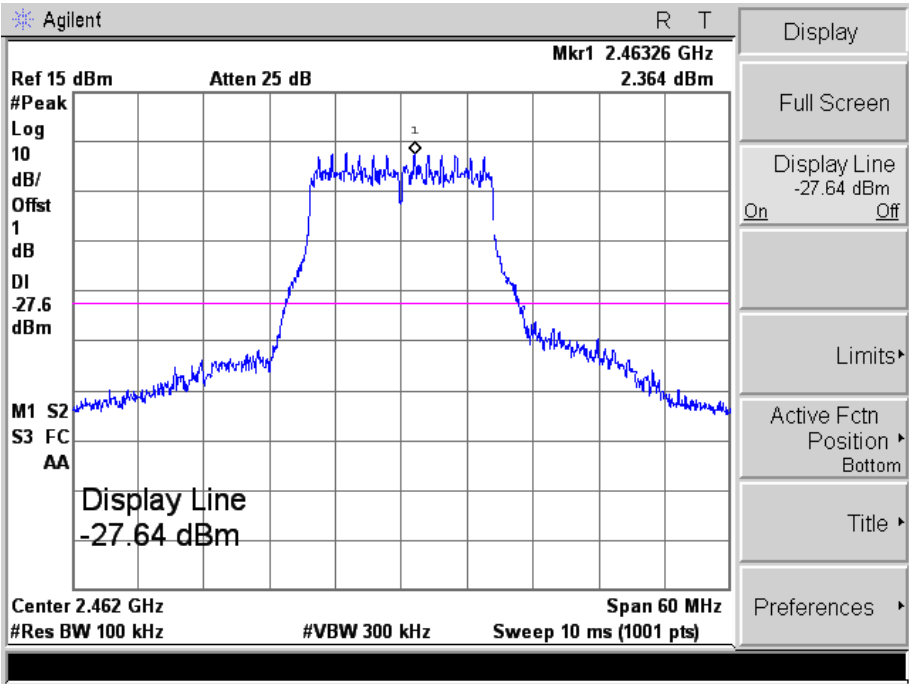
802.11g_54Mbps

Middle



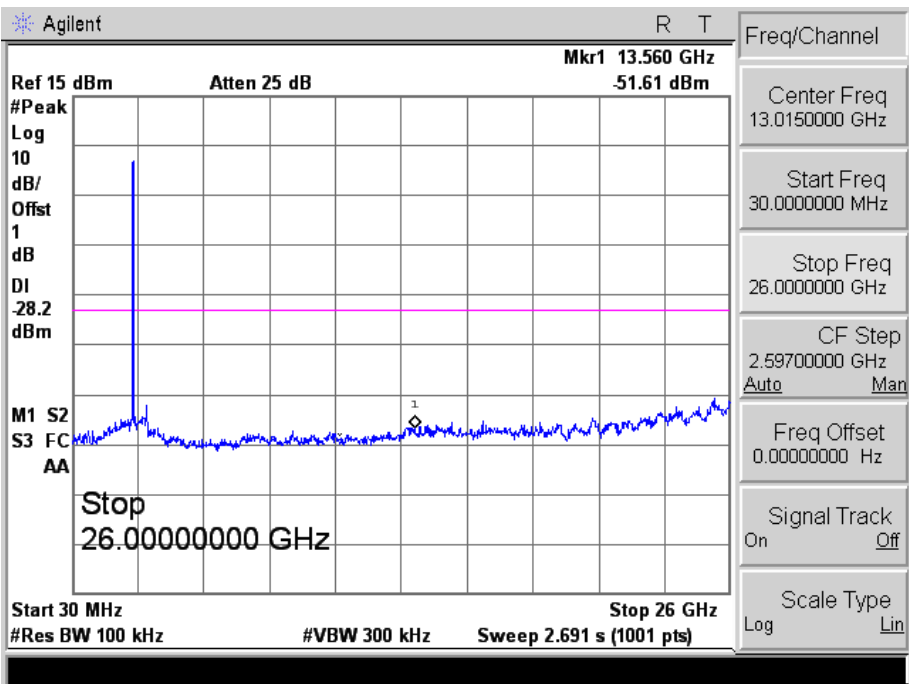
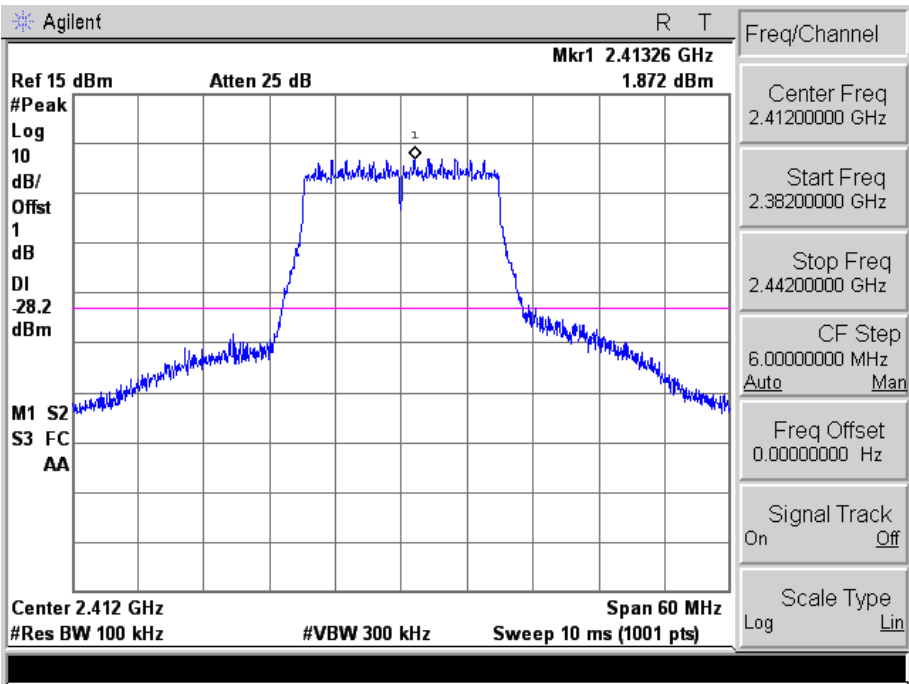
802.11g_54Mbps

High



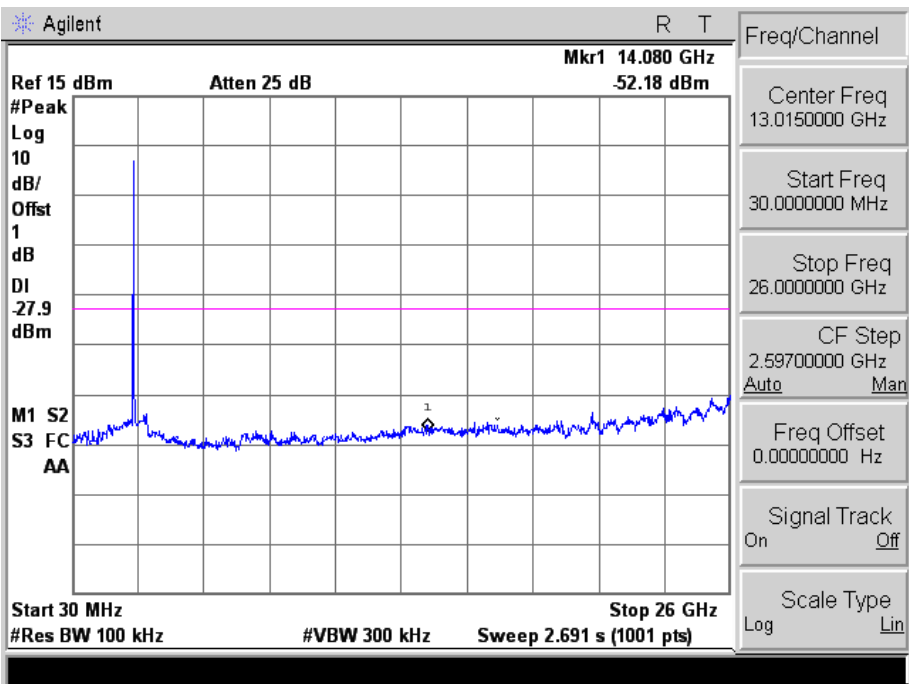
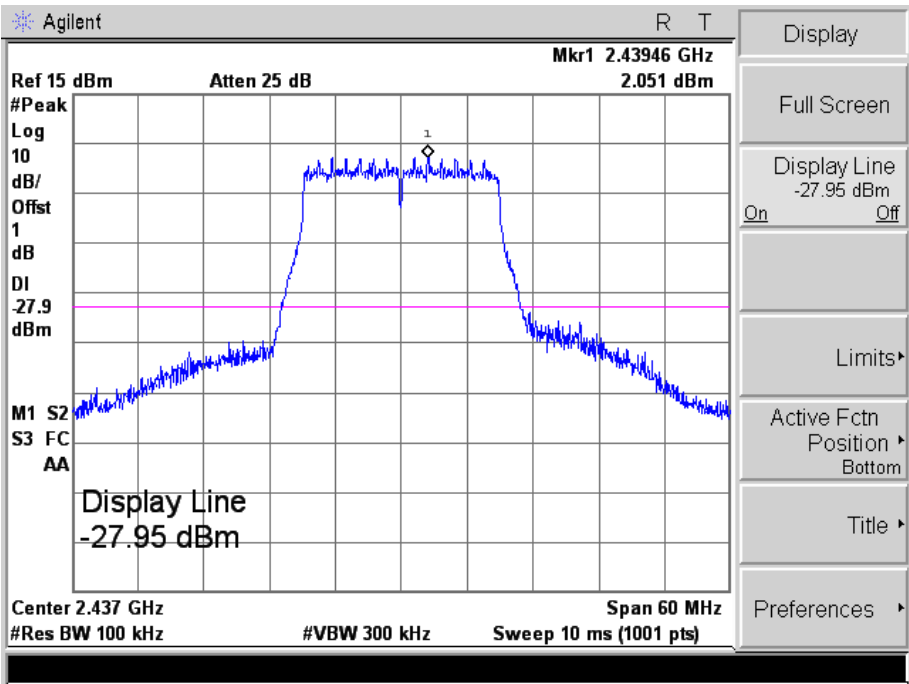
802.11n-HT20_MCS7

Low



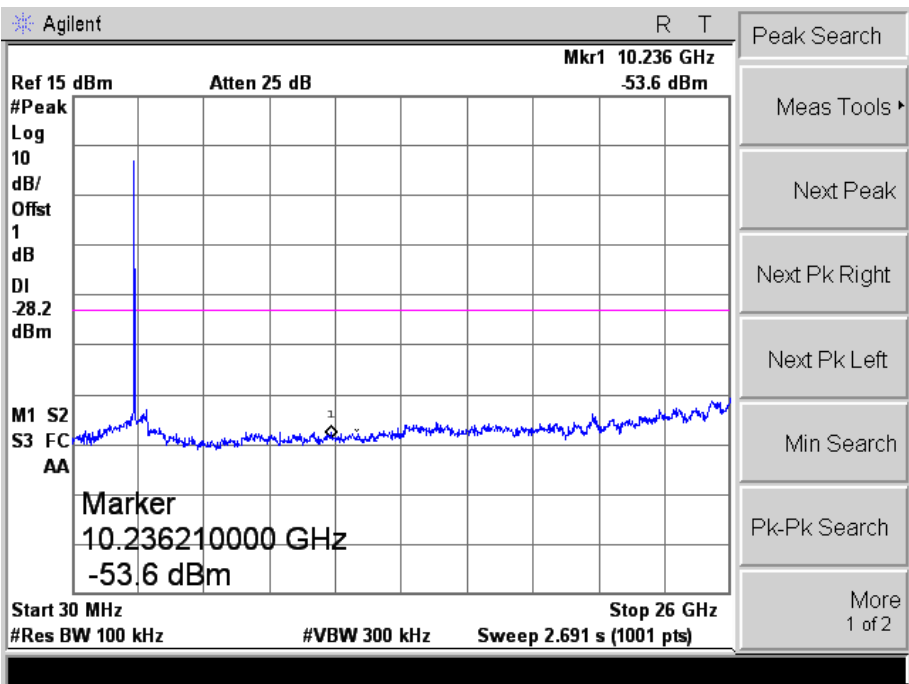
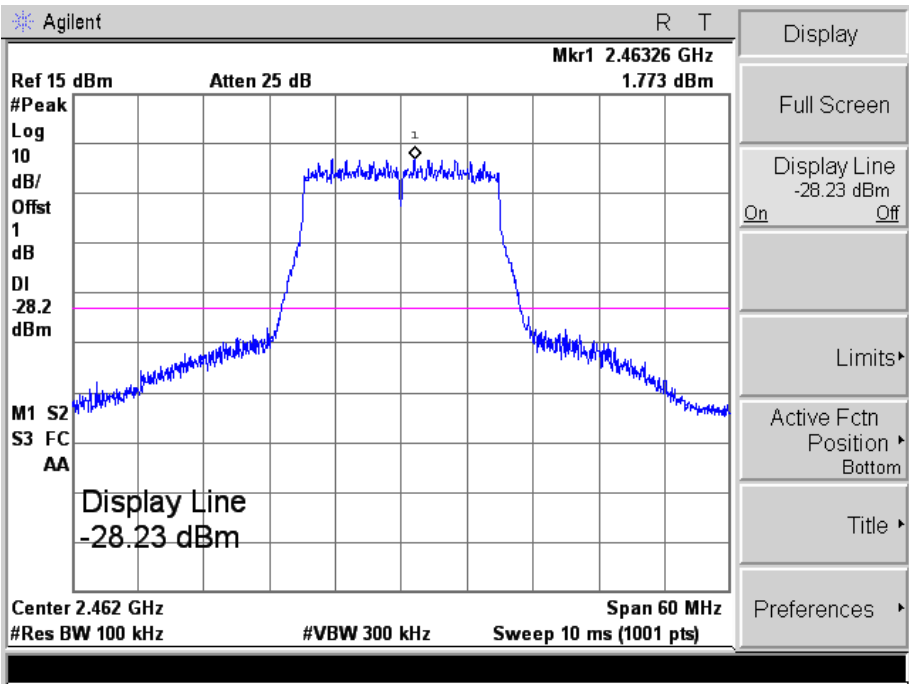
802.11n-HT20_MCS7

Middle



802.11n-HT20_MCS7

High



10. Conducted Emissions

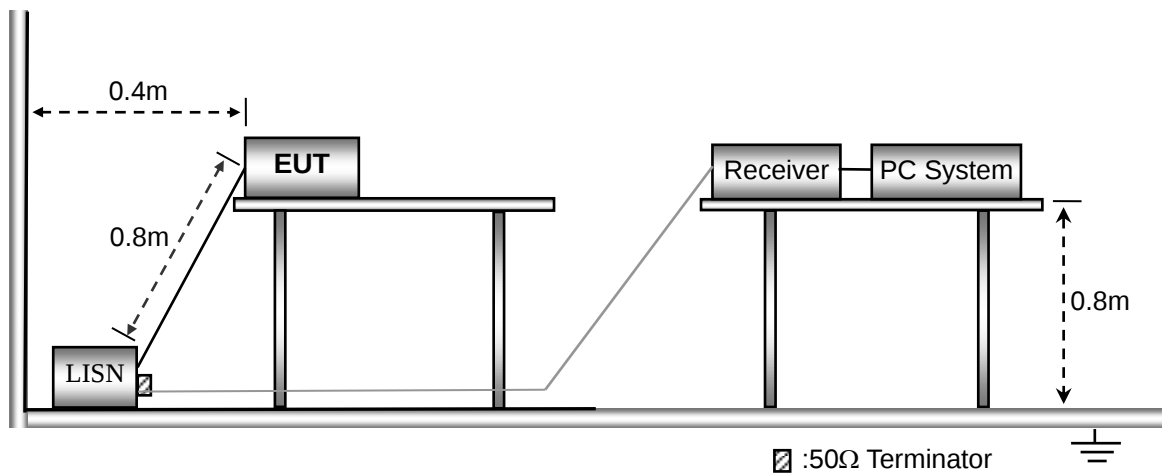
10.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

10.2 Basic Test Setup Block Diagram



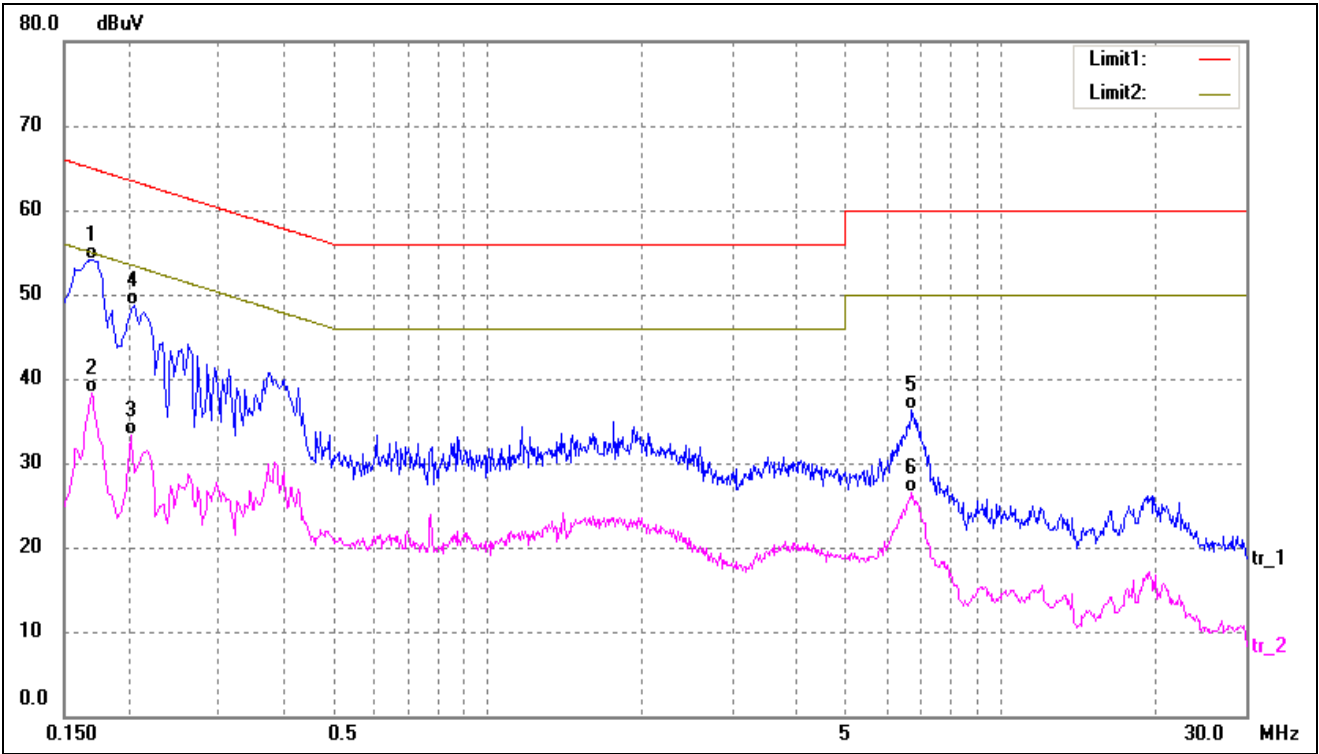
10.3 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	Auto
IF Bandwidth.....	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

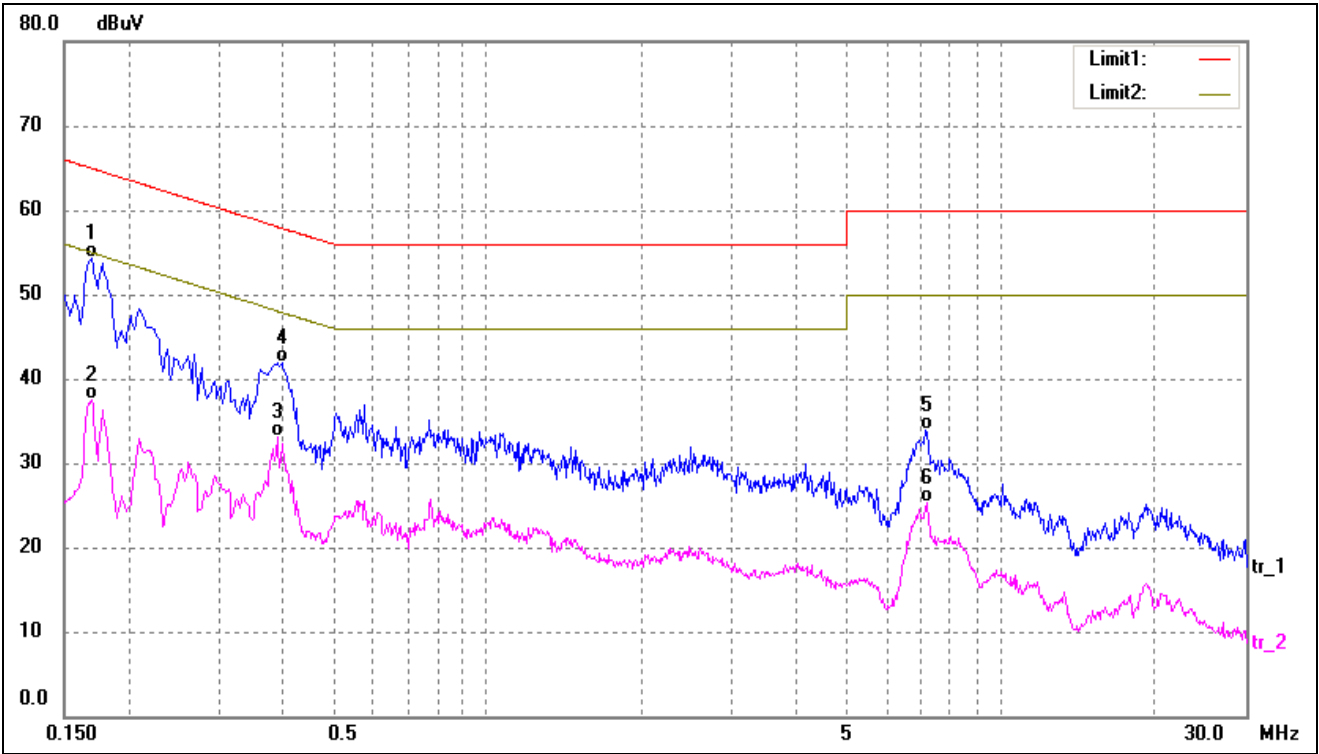
10.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1700	43.93	10.25	54.18	64.96	-10.78	QP
2	0.1700	28.03	10.25	38.28	54.96	-16.68	AVG
3	0.2020	23.09	10.27	33.36	53.53	-20.17	AVG
4	0.2060	38.43	10.27	48.70	63.37	-14.67	QP
5	6.6980	26.01	10.25	36.26	60.00	-23.74	QP
6	6.6980	16.32	10.25	26.57	50.00	-23.43	AVG

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1700	43.99	10.25	54.24	64.96	-10.72	QP
2	0.1700	27.25	10.25	37.50	54.96	-17.46	AVG
3	0.3900	22.88	10.24	33.12	48.06	-14.94	AVG
4	0.3980	31.69	10.23	41.92	57.90	-15.98	QP
5	7.1220	23.65	10.25	33.90	60.00	-26.10	QP
6	7.1980	15.11	10.25	25.36	50.00	-24.64	AVG

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******