

TEST REPORT

Reference No...... : WTX26X04113218W003
FCC ID..... : 2BVI9-MLWK1
Applicant..... : Mallow
Address..... : 229 rue Saint Honore, Paris 75001, France
Manufacturer..... : The same as Applicant
Address..... : The same as Applicant
Product Name..... : Mallow Kids Speaker
Model No...... : MLWK1
Standards..... : FCC Part 15.247
Date of Receipt sample..... : 2026-04-24
Date of Test..... : 2026-05-06 to 2026-08-24
Date of Issue..... : 2026-09-02
Test Report Form No...... : WTX_Part 15_247W
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 approver.

Prepared By:

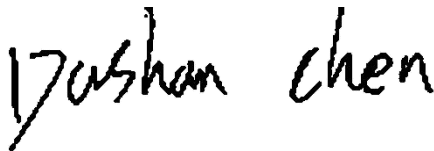
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TABLE OF CONTENTS

1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
1.2 TEST STANDARDS	5
1.3 TEST METHODOLOGY	5
1.4 TEST FACILITY	5
1.5 EUT SETUP AND TEST MODE	6
1.6 MEASUREMENT UNCERTAINTY	7
1.7 TEST EQUIPMENT LIST AND DETAILS	8
2. SUMMARY OF TEST RESULTS	12
3. ANTENNA REQUIREMENT	13
3.1 STANDARD APPLICABLE	13
3.2 EVALUATION INFORMATION	13
4. POWER SPECTRAL DENSITY	14
4.1 STANDARD APPLICABLE	14
4.2 TEST SETUP BLOCK DIAGRAM	14
4.3 TEST PROCEDURE	14
4.4 SUMMARY OF TEST RESULTS/PLOTS	14
5. DTS BANDWIDTH	15
5.1 STANDARD APPLICABLE	15
5.2 TEST SETUP BLOCK DIAGRAM	15
5.3 TEST PROCEDURE	15
5.4 SUMMARY OF TEST RESULTS/PLOTS	15
6. RF OUTPUT POWER	16
6.1 STANDARD APPLICABLE	16
6.2 TEST SETUP BLOCK DIAGRAM	16
6.3 TEST PROCEDURE	16
6.4 SUMMARY OF TEST RESULTS/PLOTS	16
7. FIELD STRENGTH OF SPURIOUS EMISSIONS	17
7.1 STANDARD APPLICABLE	17
7.2 TEST PROCEDURE	17
7.3 CORRECTED AMPLITUDE & MARGIN CALCULATION	19
7.4 SUMMARY OF TEST RESULTS/PLOTS	19
8. OUT OF BAND EMISSIONS	42
8.1 STANDARD APPLICABLE	42
8.2 TEST PROCEDURE	42
8.3 SUMMARY OF TEST RESULTS/PLOTS	43
9. CONDUCTED EMISSIONS	60
9.1 TEST PROCEDURE	60
9.2 BASIC TEST SETUP BLOCK DIAGRAM	60
9.3 TEST RECEIVER SETUP	60
9.4 SUMMARY OF TEST RESULTS/PLOTS	60
APPENDIX SUMMARY	63
APPENDIX A: DTS BANDWIDTH	64
APPENDIX B: OCCUPIED CHANNEL BANDWIDTH	73
APPENDIX C: MAXIMUM CONDUCTED OUTPUT POWER	82
APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY	83
APPENDIX E: REFERENCE LEVEL MEASUREMENT	92
APPENDIX F: BAND EDGE MEASUREMENTS	101
APPENDIX G: CONDUCTED SPURIOUS EMISSION	108
APPENDIX H: DUTY CYCLE	126
APPENDIX PHOTOGRAPHS	135

Report version

Version No.	Date of issue	Description
Rev.00	2026-09-02	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Mallow Kids Speaker
Trade Name:	Mallow
Model No.:	MLWK1
Adding Model(s):	/
Rated Voltage:	Battery:DC3.7V Type-C:DC5V
Battery Capacity:	2500mAh
Power Adapter:	/
<i>Note: The sample information is provided by the customer.</i>	

Technical Characteristics of EUT	
Support Standards:	802.11b, 802.11g, 802.11n, 802.11ax
Frequency Range:	2412-2462MHz for 802.11b/g/n/ax(HT/HE20)
RF Output Power:	Metal Antenna: 16.92dBm (Conducted) PCB Antenna: 14.18dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM, 1024QAM
Quantity of Channels:	11 for 802.11b/g/n/ax(HT/HE20)
Channel Separation:	5MHz
Type of Antenna:	Metal Antenna & PCB Antenna
Antenna Gain:	Metal Antenna: -3.19dBi PCB Antenna: -0.24dBi
<i>Note: 1: The Antenna Gain is provided by the customer and can affect the validity of results.</i>	
<i>2: The data provided by the customer and can affect the validity of results.</i>	

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 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

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 C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results 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 C63.10-2020, 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 and the CAB identifier is CN0057.

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, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	802.11b	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM2	802.11g	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM3	802.11n-HT20	Low:2412MHz, Middle:2437MHz,High:2462MHz
TM4	802.11ax-HE20	Low:2412MHz, Middle:2437MHz,High:2462MHz
Note: The prototype does not support MIMO modes, During work, only one antenna can be used for transmission		

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
Type-C Cable	0.5	Unshielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
Network cable	1.0	Unshielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Adapter	Xiaomi	MDY-11-EX	/
Router	TP-LINK	MR550	/
Phone	iphone	iphone 15	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.57\text{dB}$
Occupied Bandwidth	Conducted	$\pm 0.015\text{MHz}$
Power Spectral Density	Conducted	$\pm 1.8\text{dB}$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emission 1#	Conducted	@9kHz to 150kHz: $\pm 3.74\text{dB}$
		@150kHz to 30MHz: $\pm 3.34\text{dB}$
Conducted Emission 2#	Conducted	@9kHz to 150kHz: $\pm 3.74\text{dB}$
		@150kHz to 30MHz: $\pm 3.34\text{dB}$
Transmitter Spurious Emissions chamber A	Radiated	@9kHz to 30MHz: $\pm 3.0\text{dB}$
		@30MHz to 1GHz: $\pm 5.70\text{dB}$
		@1GHz to 6GHz: $\pm 5.88\text{dB}$
		@6GHz to 18GHz: $\pm 5.96\text{dB}$
		@18GHz to 40GHz: $\pm 6.12\text{dB}$
Transmitter Spurious Emissions chamber B	Radiated	@30MHz to 1GHz: $\pm 5.36\text{dB}$
Transmitter Spurious Emissions chamber C	Radiated	@9kHz to 30MHz: $\pm 3.0\text{dB}$
		@30MHz to 1GHz: $\pm 5.28\text{dB}$
		@1GHz to 6GHz: $\pm 5.56\text{dB}$
		@6GHz to 18GHz: $\pm 5.72\text{dB}$
		@18GHz to 40GHz: $\pm 6.12\text{dB}$

1.7 Test Equipment List and Details

Internal No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041A 1002	Communication Tester	Rohde & Schwarz	CMW500	1201.0002 k50-14865 0-FB	2026-03-25	2027-03-24
WTXE1005A 1005	MXA Signal Analyzer	Agilent	N9020A	US471401 02	2026-03-25	2027-03-24
WTXE1084A 1001	MXA Signal Analyzer	KEYSIGHT	N9020A	MY543205 48	2026-02-06	2027-02-05
WTXE1005A 1006	Spectrum Analyzer	Rohde & Schwarz	FSP40	1164.4391 K38Ser. 100368	2026-04-29	2027-04-28
WTXE1051A 1002	Power Sensor	Keysight Technologies	U2021XA	MY551600 07	2026-02-06	2027-02-05
WTXE1051A 1002	Power Sensor	Agilent	U2021XA	MY542400 01	2026-02-06	2027-02-05
WTXW1105A 1010	MXA signal Analyzer	KEYSIGHT	N9020A	MY512856 78	2026-02-06	2027-02-05
WTXE1105A 1008	RF Control Unit	Tonscend	JS0806-2	/	2026-02-06	2027-02-05
WTXW1105A 1136	RF ATTENUATOR	FEIYANG	N-JK	/	2026-02-06	2027-02-05
WTXE1003A 1-005	Coaxial Cable	/	0M4RFC	/	2026-02-23	2027-02-22
☐ Chamber A: Below 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/03 5	2026-02-05	2027-02-04
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2026-02-05	2027-02-04
WTXE1007A 1002	Amplifier	HP	8447F	2805A034 75	2026-02-05	2027-02-04
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2026-02-05	2027-02-04
WTXE1010A 1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2026-03-11	2029-03-10
WTXE1104A 1032-1	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1032-2	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1032-3	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22

☐ Chamber A: Above 1GHz						
WTXE1005A 1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/03 5	2026-02-05	2027-02-04
WTXE1001A 1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2026-02-05	2027-02-04
WTXE1065A 1001	Amplifier	C&D	PAP-1.0G18	14918	2026-02-05	2027-02-04
WTXE1010A 1005	Horn Antenna	ETS	3117	00086197	2026-02-05	2027-02-04
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2026-02-10	2027-02-09
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2026-02-05	2027-02-04
WTXE1104A 1033-1	Coaxial Cable	/	C16-07-07	/	2026-02-23	2027-02-22
WTXE1104A 1033-2	Coaxial Cable	/	C16-07-07	/	2026-02-23	2027-02-22
WTXE1104A 1033-3	Coaxial Cable	/	C16-07-07	/	2026-02-23	2027-02-22
☐ Chamber B:Below 1GHz						
WTXE1010A 1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038A 1001	Amplifier	Agilent	8447D	2944A104 57	2026-02-05	2027-02-04
WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2026-02-05	2027-02-04
WTXE1104A 1031-1	Coaxial Cable	/	1.5MRFC-LWB3	/	2026-02-23	2027-02-22
WTXE1104A 1031-2	Coaxial Cable	/	RG 316	/	2026-02-23	2027-02-22
WTXE1104A 1031-3	Coaxial Cable	/	RG 316	/	2026-02-23	2027-02-22
☒ Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2026-02-05	2027-02-04
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2026-02-05	2027-02-04
WTXE1007A	Amplifier	HP	8447F	2944A038	2026-02-05	2027-02-04

1003				69		
WTXE1104A 1034-1	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1034-2	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1034-3	Coaxial Cable	/	RC_6G-N-M	/	2026-02-23	2027-02-22
☒ Chamber C: Above 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2026-02-05	2027-02-04
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2025-06-13	2027-06-12
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2026-02-05	2027-02-04
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2026-02-10	2027-02-09
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2026-02-05	2027-02-04
WTXE1104A 1035-1	Coaxial Cable	/	RC-18G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1035-2	Coaxial Cable	/	RC-18G-N-M	/	2026-02-23	2027-02-22
WTXE1104A 1035-3	Coaxial Cable	/	RC-18G-N-M	/	2026-02-23	2027-02-22
☐ Conducted Room 1#						
WTXE1104A 1029	EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2025-11-25	2026-11-24
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2026-02-05	2027-02-04
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2026-02-05	2027-02-04
WTXE1104A 1036	Coaxial Cable	/	RG 316	/	2026-02-23	2027-02-22
WTXE1104A 1038	Coaxial Cable	/	6MRFC-DP	/	2026-02-23	2027-02-22
☒ Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2026-02-05	2027-02-04
WTXE1003A 1003	LISN	Rohde & Schwarz	ENV 216	100097	2026-02-05	2027-02-04
WTXE1104A 1037	Coaxial Cable	/	RG 316	/	2026-02-23	2027-02-22

Software List			
Description	Manufacturer	Model	Version
EMI Test Software/EZ-EMC (Radiated Emission A)	Farad	RA-03A1	1.1.4.2
EMI Test Software/EZ-EMC (Radiated Emission B)	Farad	RA-03A1	1.1.4.2
EMI Test Software/EZ-EMC (Radiated Emission C)	Farad	RA-03A1-2	1.1.4.2
EMI Test Software/EZ-EMC (Conducted Emission Room 1#)	Farad	3A1*CE-RE	1.1.4.3
EMI Test Software/EZ-EMC (Conducted Emission Room 2#)	Farad	3A1*CE-RE	1.1.4.3
RF Test System	Tonscend	JS1120-3	V3.6.21

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

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§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. Antenna Requirement

3.1 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.

3.2 Evaluation Information

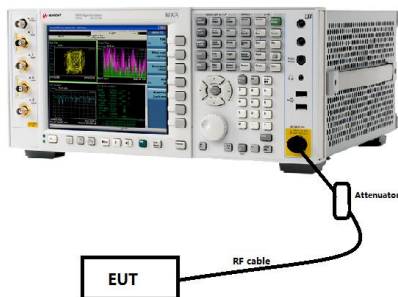
This product has a Metal antenna and PCB antenna, fulfill the requirement of this section.

4. Power Spectral Density

4.1 Standard Applicable

According to 15.247(e), for digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

4.2 Test Setup Block Diagram



4.3 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.4 and ANSI C63.10-2020 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).

4.4 Summary of Test Results/Plots

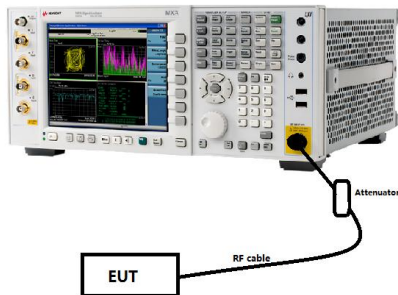
Please refer to Appendix D

5. DTS Bandwidth

5.1 Standard Applicable

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

5.2 Test Setup Block Diagram



5.3 Test Procedure

According to the KDB 558074 D01 v05r02 Subclause 8.2 and ANSI C63.10-2020 Subclause 11.8.1, the test method of DTS Bandwidth as below:

Option 1:

The steps for the first option are as follows:

- Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Trace mode = max-hold.
- Sweep = No faster than coupled (auto) time.
- Allow the trace to stabilize.
- Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB downamplitude” value, then it shall be as close as possible to this value.

Option 2:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in ANSI C63.10-2020 Subclause 11.8.1 (i.e., RBW = 100 kHz, VBW $\geq 3 \times \text{RBW}$, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB

5.4 Summary of Test Results/Plots

Please refer to Appendix A

6. RF Output Power

6.1 Standard Applicable

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

6.2 Test Setup Block Diagram



6.3 Test Procedure

The EUT was directly connected to the Power meter.

6.4 Summary of Test Results/Plots

Please refer to Appendix C

7. Field Strength of Spurious Emissions

7.1 Standard Applicable

According to §15.247(d), in any 100kHz 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 20dB below that in the 100kHz 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 30dB instead of 20dB. 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).

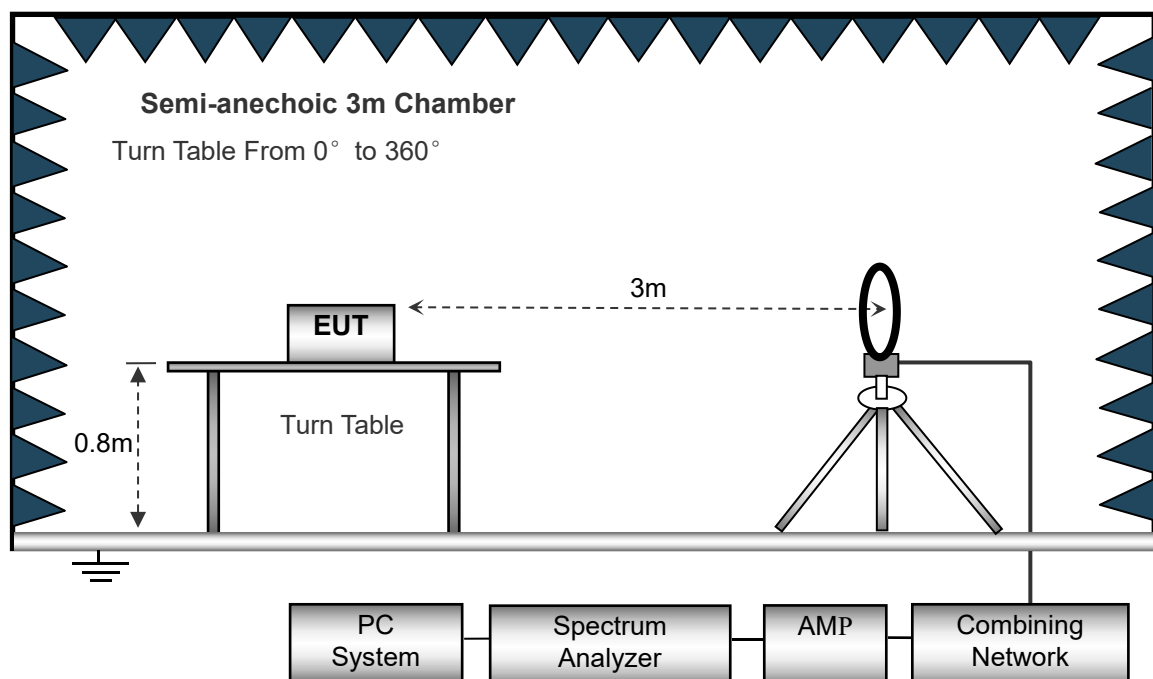
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

7.2 Test Procedure

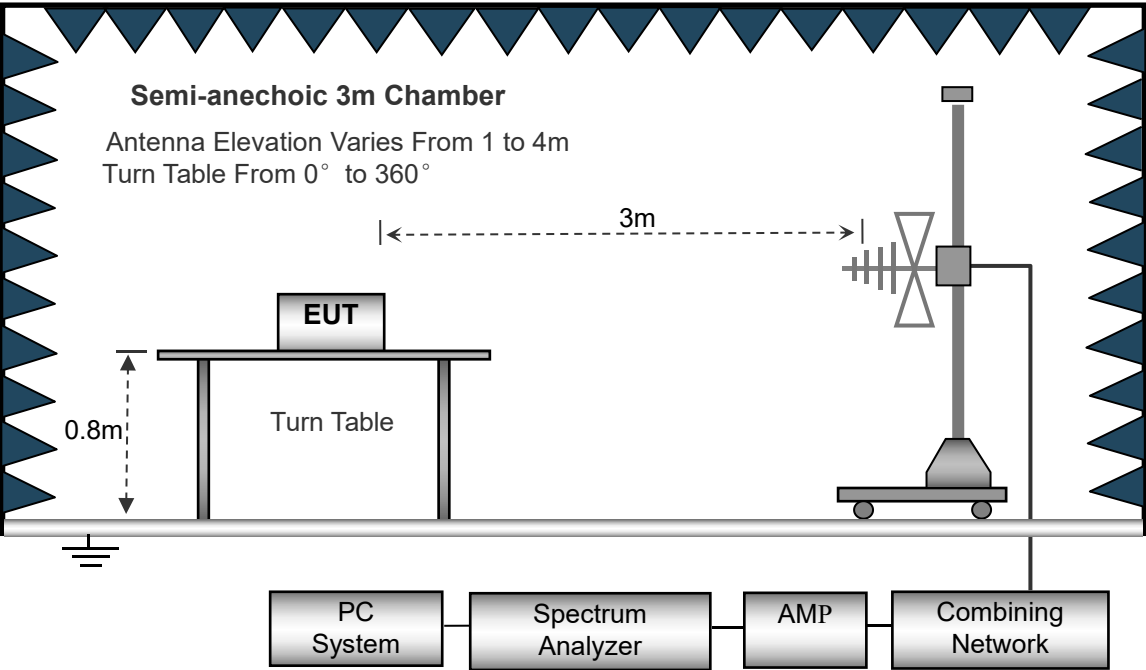
The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

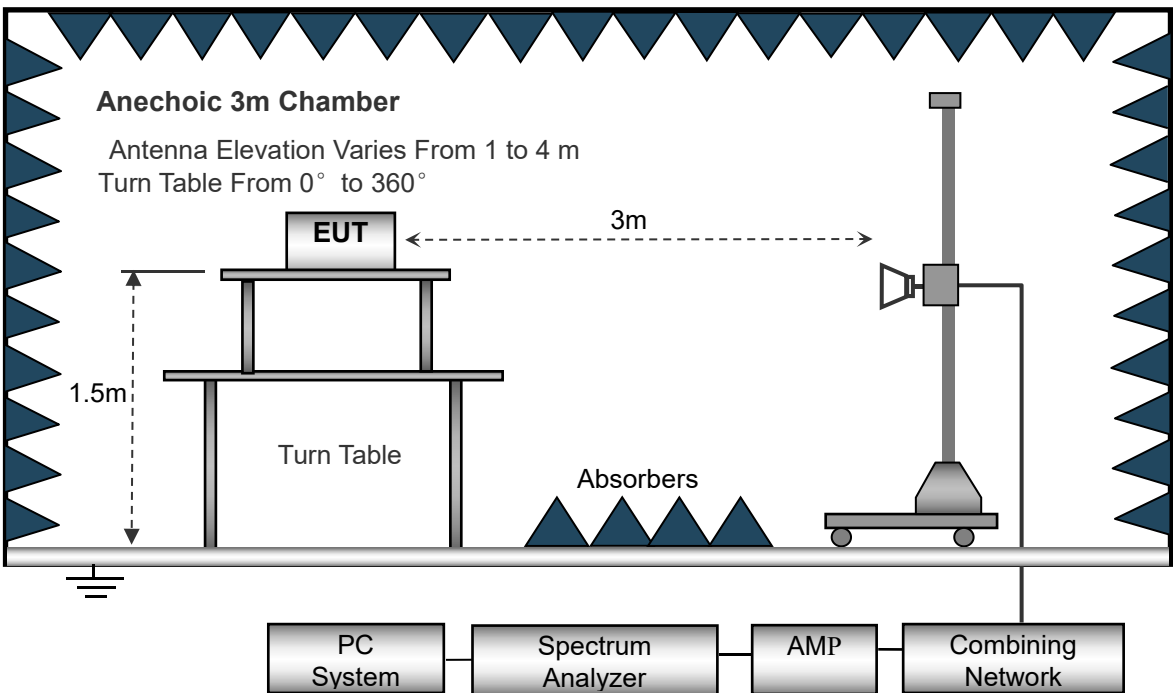
The test setup for emission measurement below 30MHz.



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



The test setup for emission measurement above 1GHz.



Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10kHz,	RBW=120kHz,	RBW=1MHz,
VBW =30kHz	VBW=300kHz	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

7.3 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:

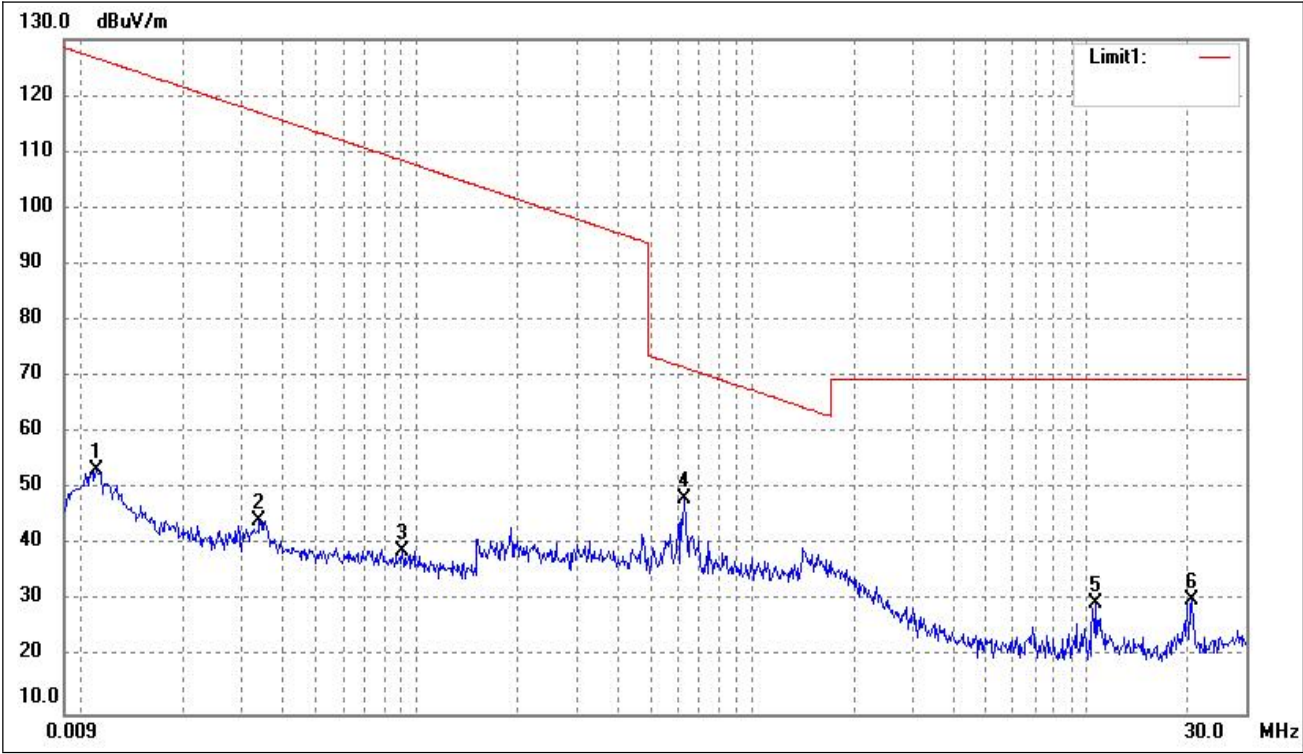
$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15 Limit}$$

7.4 Summary of Test Results/Plots

*Note: 1.This EUT was tested in 3 orthogonal positions and the worst case position data was reported.
All test modes (different data rate and different modulation) are performed, but only the worst case(802.11b_11Mbps) is recorded in this report.*

➤ Spurious Emissions 9kHz to 30MHz
Metal Antenna

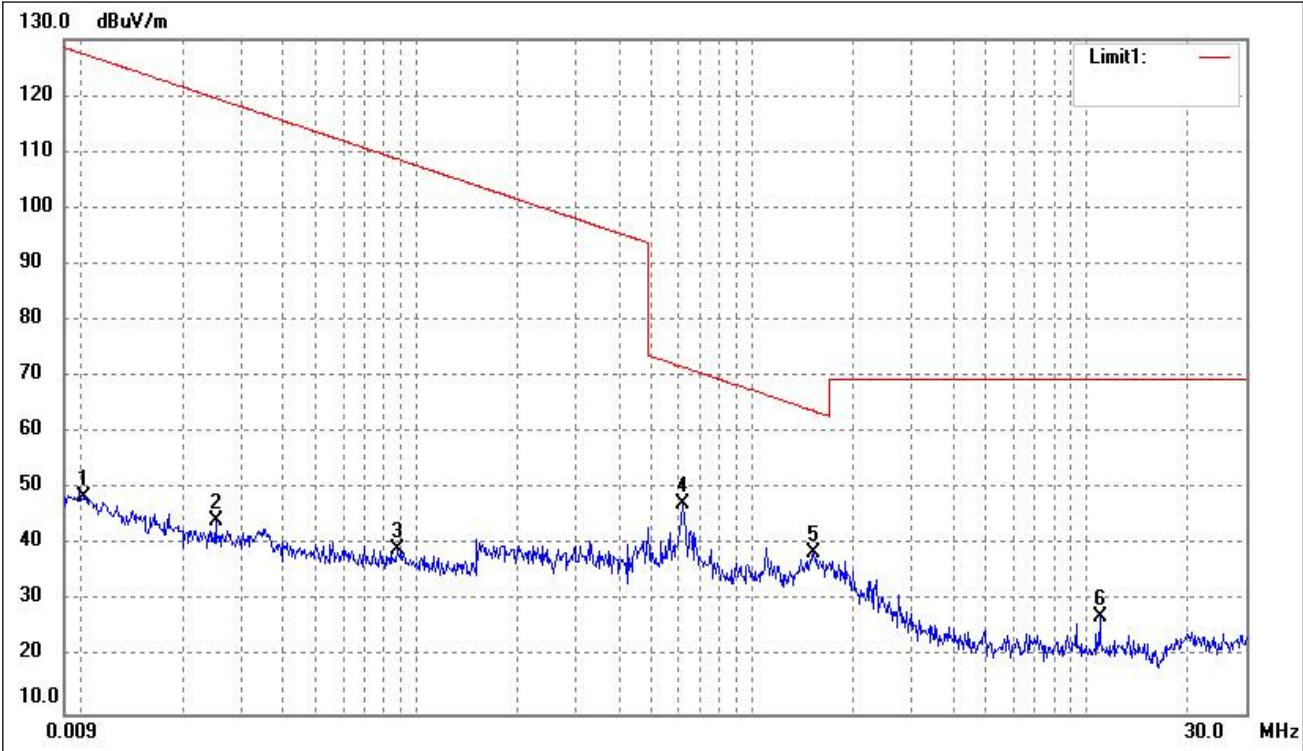
802.11b_11Mbps(worst case)			
Test Channel	Low(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	0.0111	60.58	-7.23	53.35	126.68	-73.33	-	-	peak
2	0.0340	51.86	-7.44	44.42	116.96	-72.54	-	-	peak
3	0.0904	46.88	-7.80	39.08	108.47	-69.39	-	-	peak
4	0.6271	56.28	-8.03	48.25	71.66	-23.41	-	-	peak
5	10.6763	37.32	-7.81	29.51	69.50	-39.99	-	-	peak
6	20.5944	37.90	-7.53	30.37	69.50	-39.13	-	-	peak

PCB Antenna

802.11b_11Mbps(worst case)			
Test Channel	Low(worst case)	Polarity:	Vertical



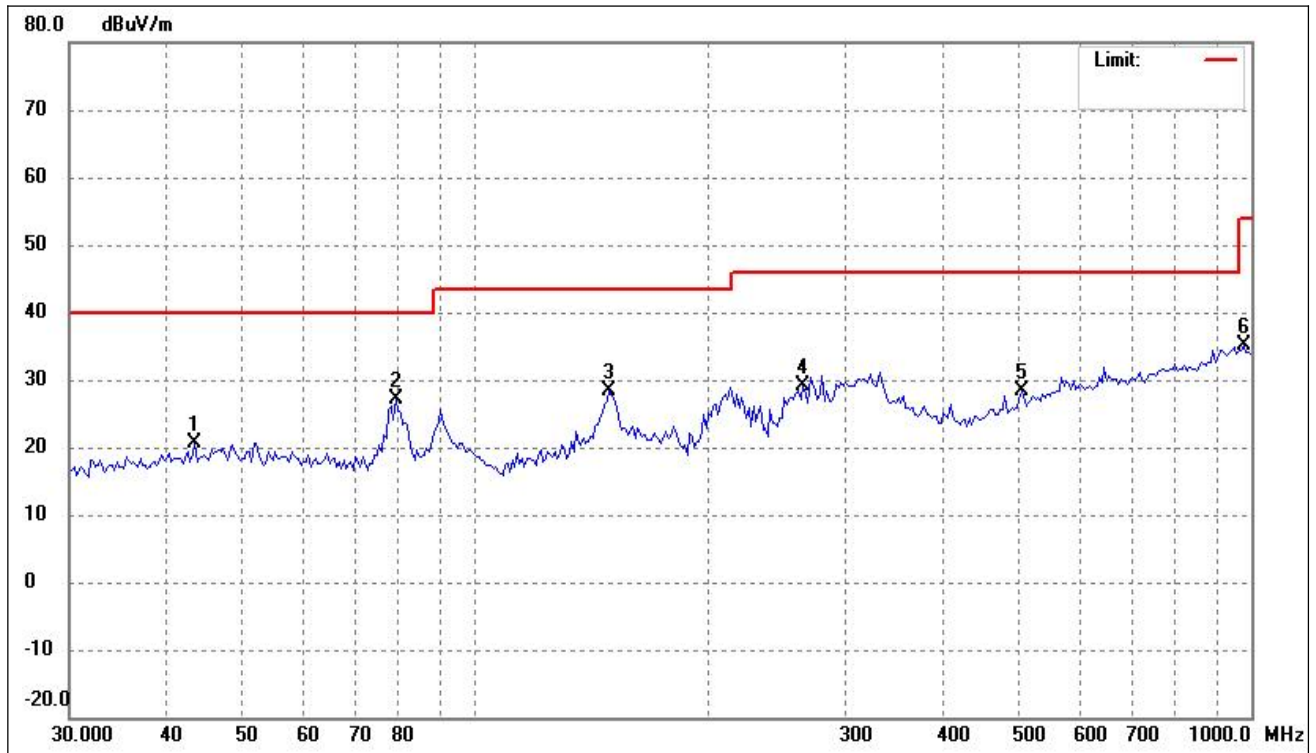
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	0.0102	55.89	-7.22	48.67	127.41	-78.74	-	-	peak
2	0.0253	51.75	-7.35	44.40	119.53	-75.13	-	-	peak
3	0.0875	47.13	-7.80	39.33	108.76	-69.43	-	-	peak
4	0.6205	55.48	-8.03	47.45	71.75	-24.30	-	-	peak
5	1.5274	46.26	-7.68	38.58	63.95	-25.37	-	-	peak
6	10.9050	35.10	-7.83	27.27	69.50	-42.23	-	-	peak

➤ Spurious Emissions Below 1GHz

Metal Antenna

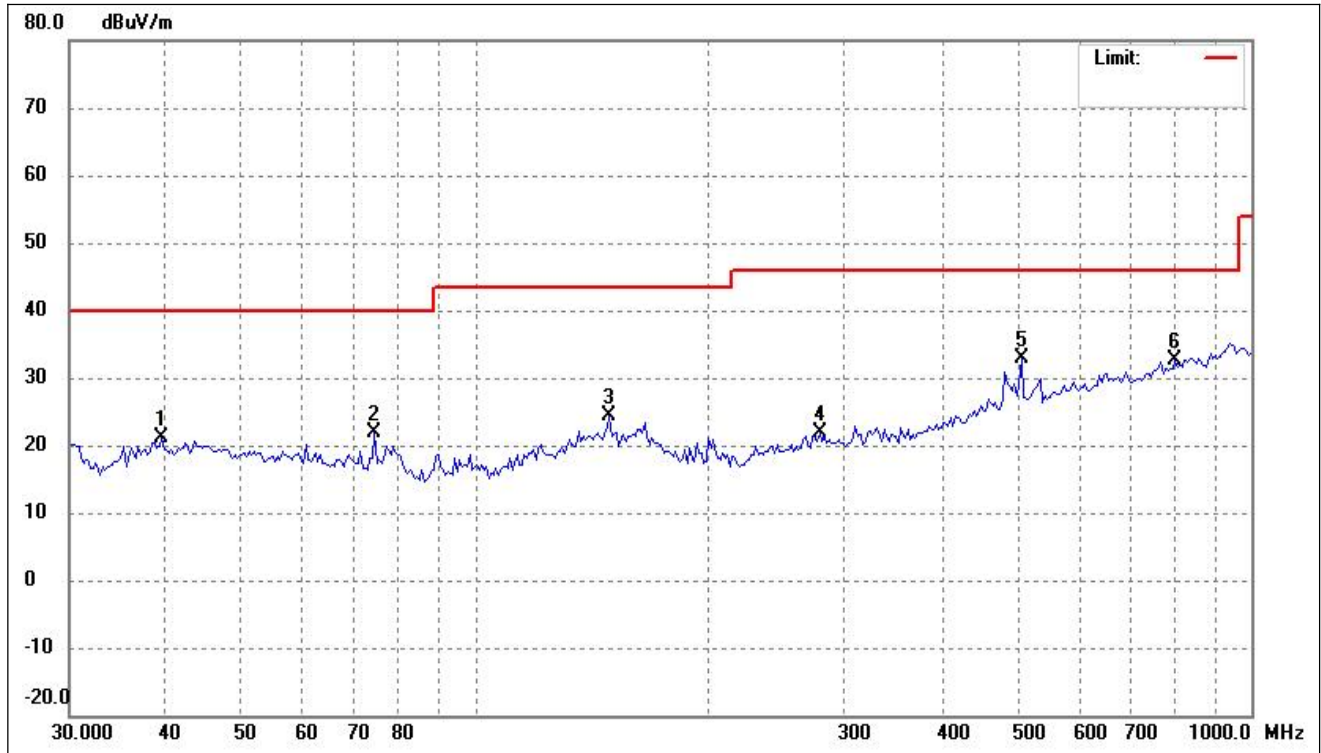
802.11b_11Mbps

Test Channel	Low(worst case)	Polarity:	Horizontal
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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	43.5380	29.04	-8.48	20.56	40.00	-19.44	-	-	peak
2	79.1185	39.29	-12.14	27.15	40.00	-12.85	-	-	peak
3	148.9173	36.86	-8.54	28.32	43.50	-15.18	-	-	peak
4	264.9709	38.53	-9.49	29.04	46.00	-16.96	-	-	peak
5	505.7890	31.71	-3.38	28.33	46.00	-17.67	-	-	peak
6	979.1391	31.41	3.68	35.09	54.00	-18.91	-	-	peak

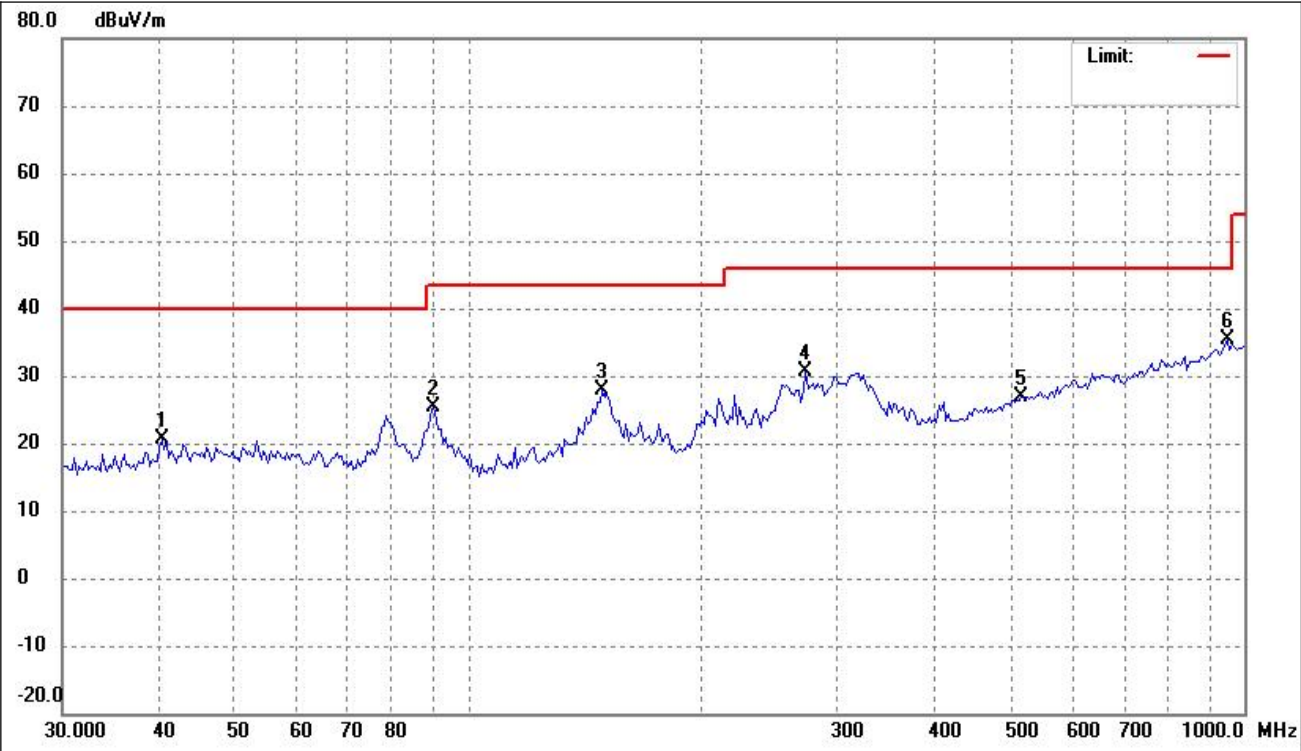
802.11b_11Mbps			
Test Channel	Low(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.4587	29.96	-8.91	21.05	40.00	-18.95	-	-	peak
2	74.2696	33.04	-11.20	21.84	40.00	-18.16	-	-	peak
3	148.9173	32.97	-8.54	24.43	43.50	-19.07	-	-	peak
4	278.3307	30.76	-8.85	21.91	46.00	-24.09	-	-	peak
5	505.7890	36.30	-3.38	32.92	46.00	-13.08	-	-	peak
6	798.6204	30.99	1.71	32.70	46.00	-13.30	-	-	peak

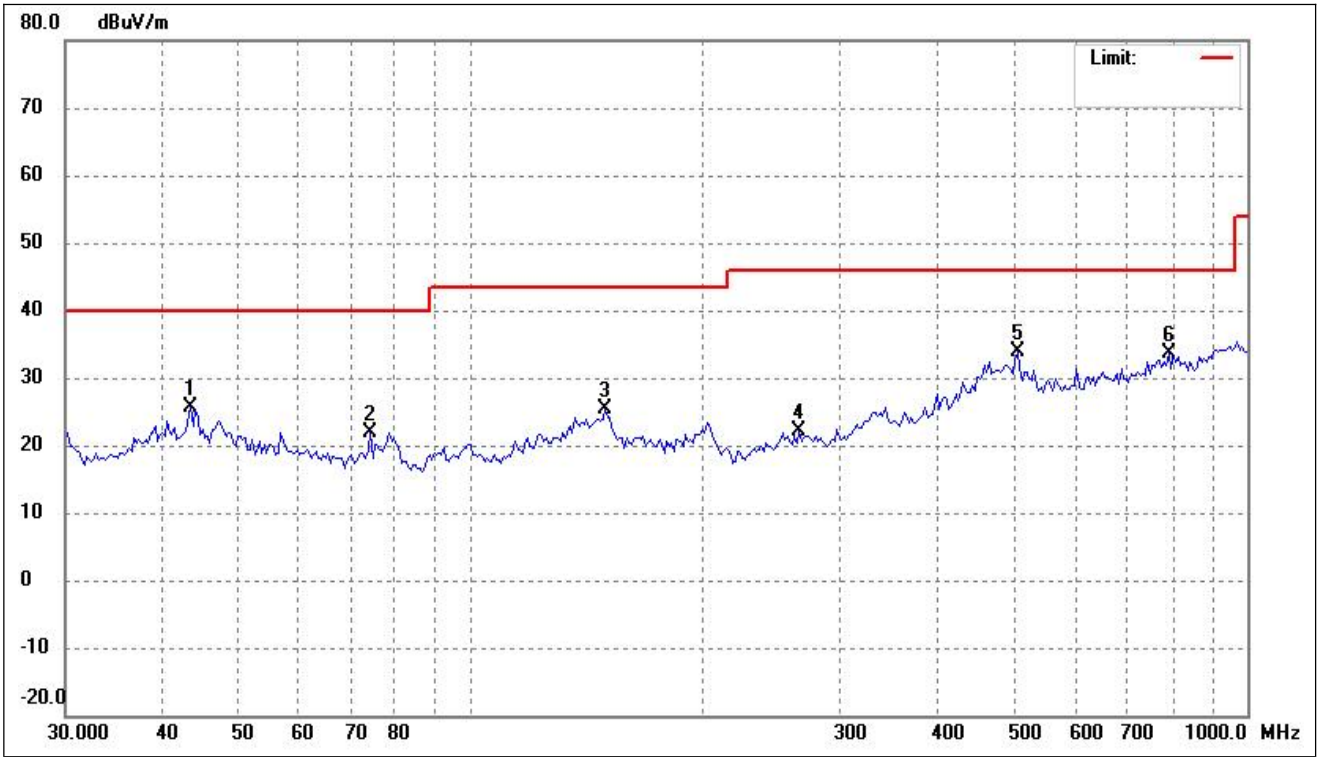
PCB Antenna

802.11b_11Mbps			
Test Channel	Low(worst case)	Polarity:	Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	40.2994	29.51	-8.82	20.69	40.00	-19.31	-	-	peak
2	90.4196	39.08	-13.68	25.40	43.50	-18.10	-	-	peak
3	148.9173	36.31	-8.54	27.77	43.50	-15.73	-	-	peak
4	272.5245	39.79	-9.11	30.68	46.00	-15.32	-	-	peak
5	516.5650	29.87	-3.11	26.76	46.00	-19.24	-	-	peak
6	952.0000	31.68	3.63	35.31	46.00	-10.69	-	-	peak

802.11b_11Mbps			
Test Channel	Low(worst case)	Polarity:	Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	43.5380	33.99	-8.48	25.51	40.00	-14.49	-	-	peak
2	74.2696	33.17	-11.20	21.97	40.00	-18.03	-	-	peak
3	148.9173	33.92	-8.54	25.38	43.50	-18.12	-	-	peak
4	264.9709	31.70	-9.49	22.21	46.00	-23.79	-	-	peak
5	505.7890	37.23	-3.38	33.85	46.00	-12.15	-	-	peak
6	793.0281	32.07	1.65	33.72	46.00	-12.28	-	-	peak

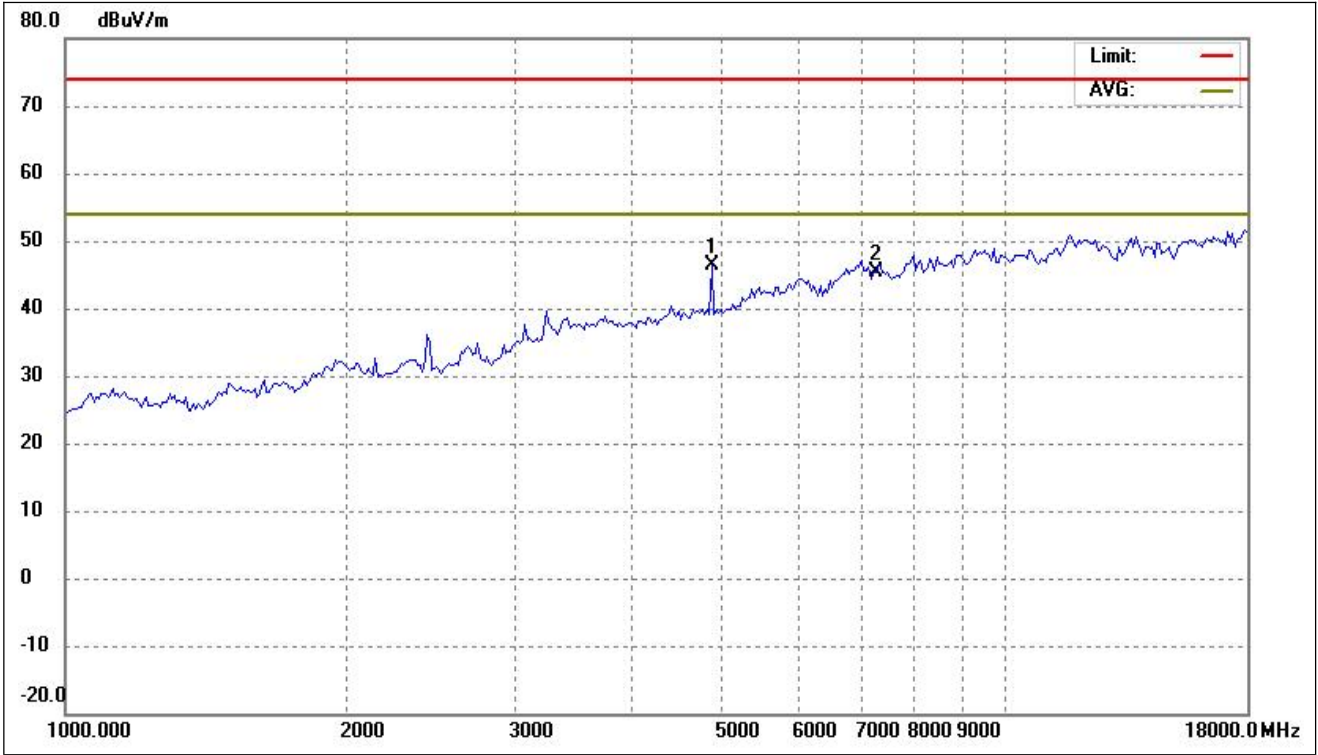
➤ Spurious Emissions Above 1GHz
Metal Antenna

802.11b_11Mbps			
Test Channel	Low	Polarity:	Horizontal



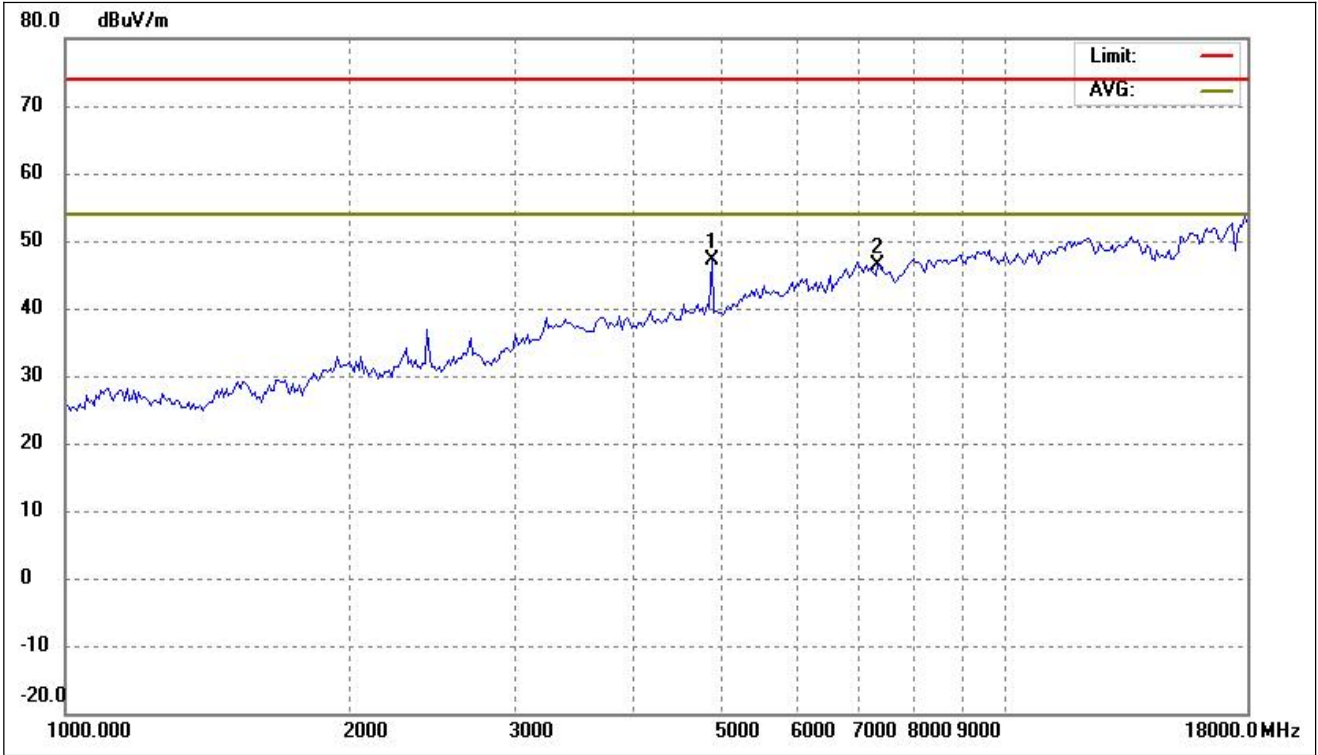
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	57.98	-11.81	46.17	74.00	-27.83	-	-	peak
2	7236.000	51.18	-6.48	44.70	74.00	-29.30	-	-	peak

802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



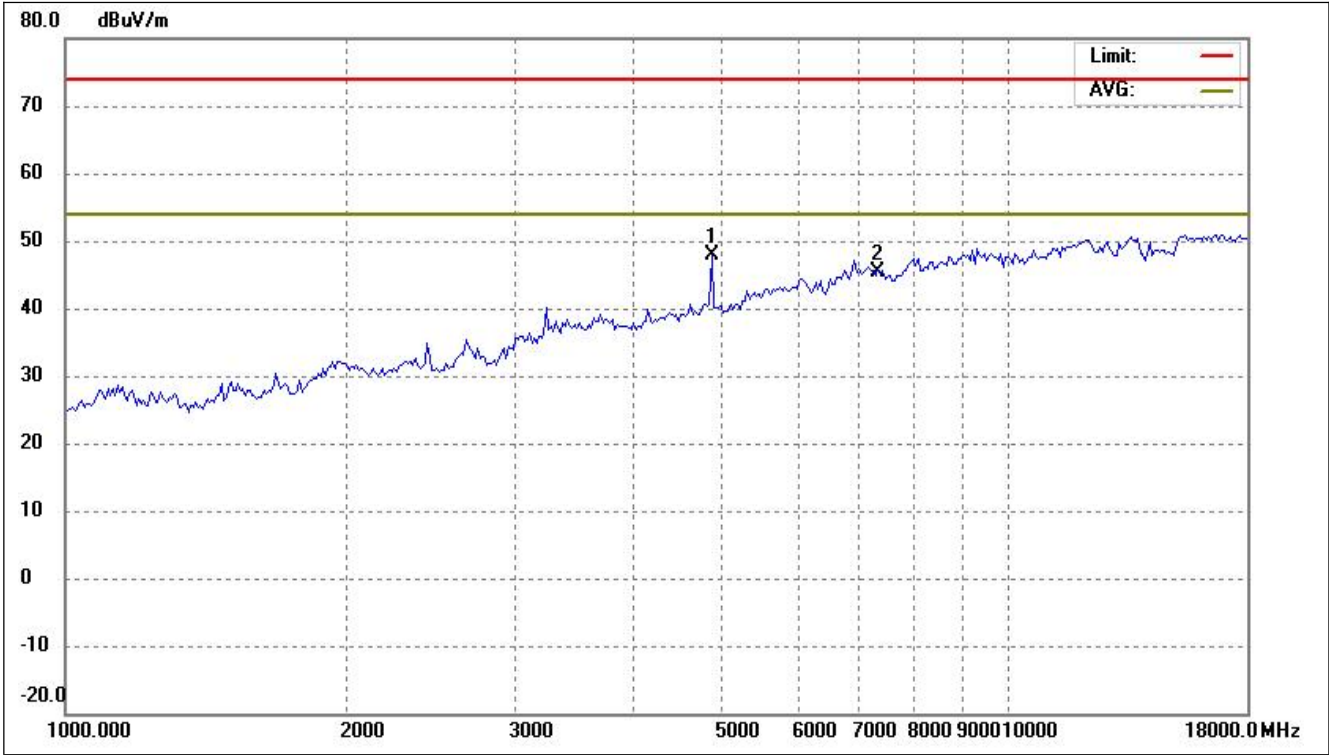
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	58.24	-11.81	46.43	74.00	-27.57	-	-	peak
2	7236.000	51.94	-6.48	45.46	74.00	-28.54	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Horizontal



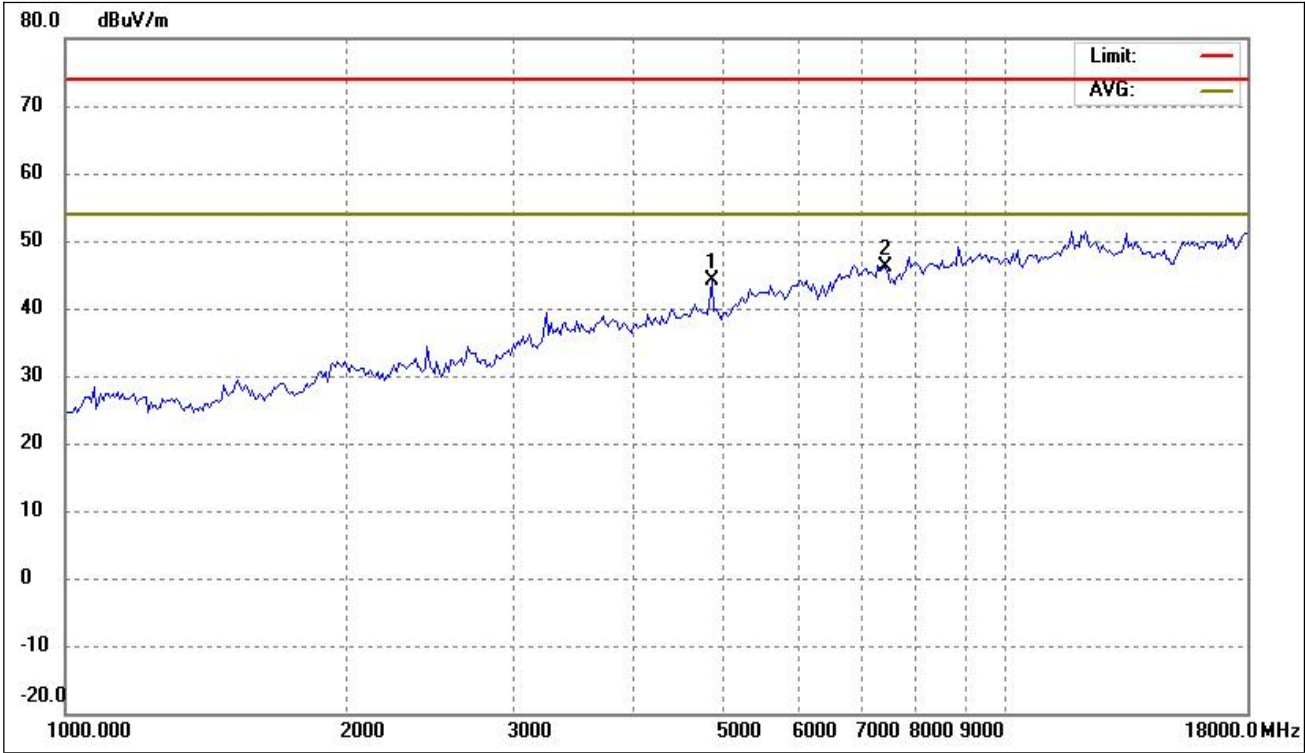
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	58.86	-11.81	47.05	74.00	-26.95	-	-	peak
2	7311.000	51.33	-5.04	46.29	74.00	-27.71	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



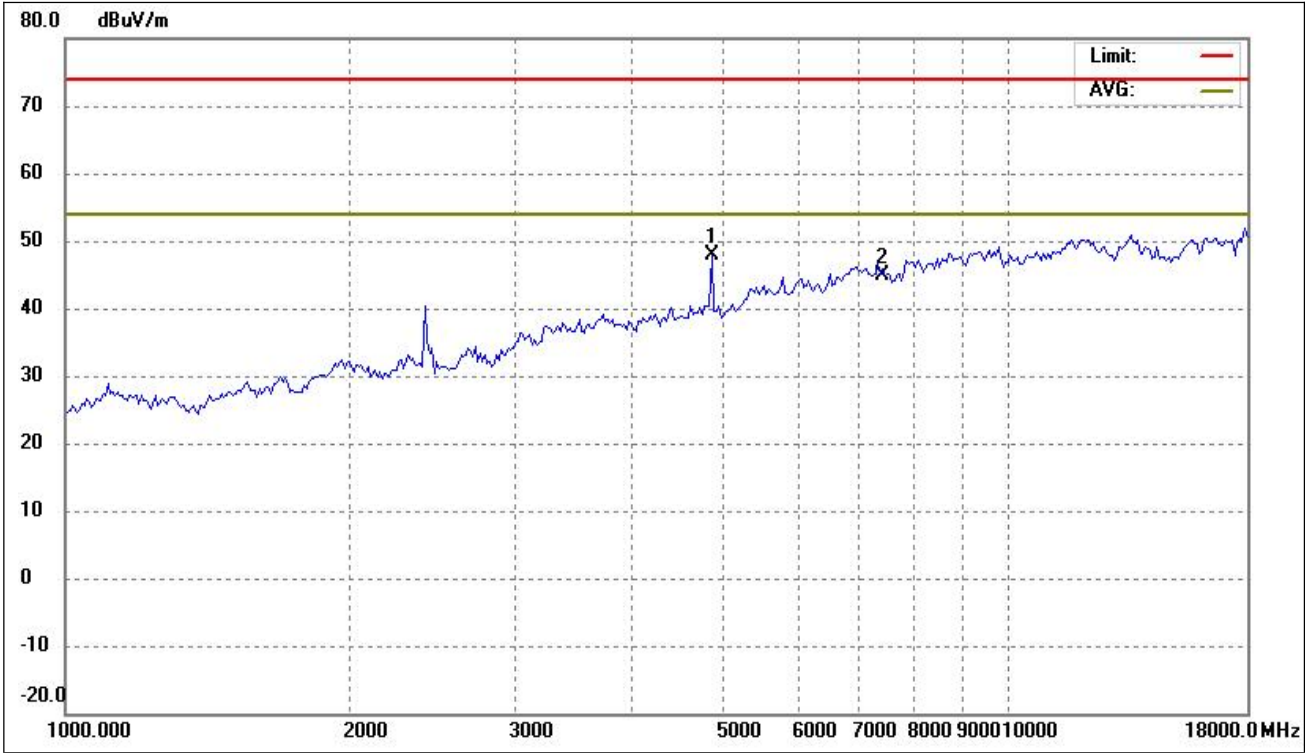
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	59.68	-11.81	47.87	74.00	-26.13	-	-	peak
2	7311.000	50.47	-5.04	45.43	74.00	-28.57	-	-	peak

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	4861.299	55.89	-11.81	44.08	74.00	-29.92	-	-	peak
2	7386.000	52.11	-6.09	46.02	74.00	-27.98	-	-	peak

802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical

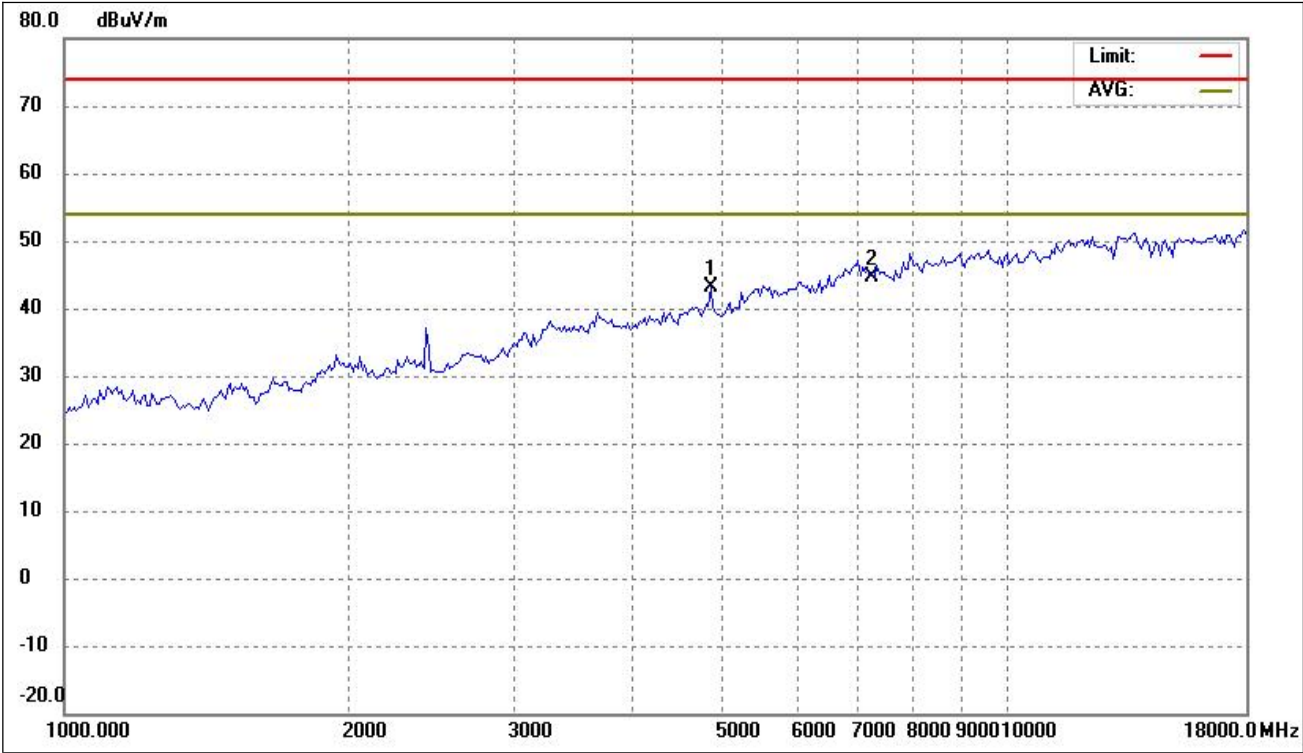


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	59.57	-11.81	47.76	74.00	-26.24	-	-	peak
2	7386.000	50.96	-6.09	44.87	74.00	-29.13	-	-	peak

PCB Antenna

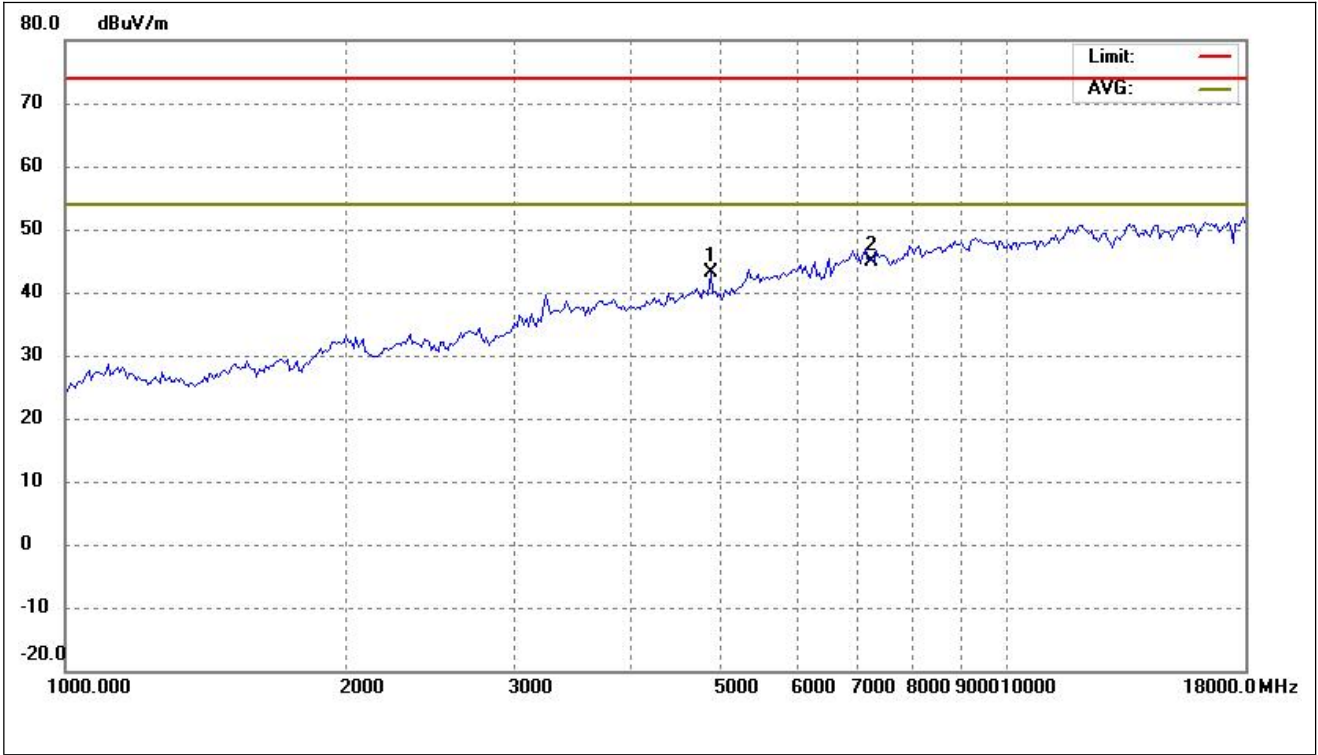
802.11b_11Mbps

Test Channel	Low	Polarity:	Horizontal
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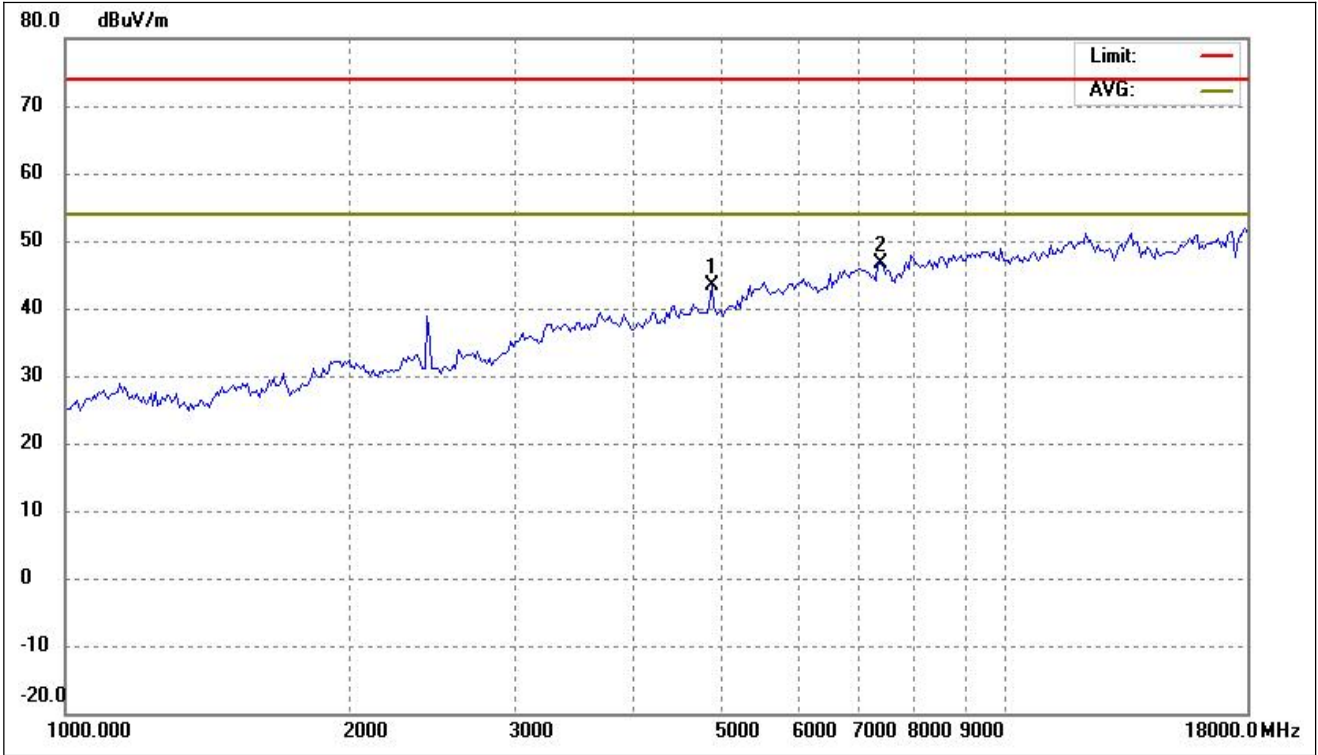
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	54.95	-11.81	43.14	74.00	-30.86	-	-	peak
2	7236.000	50.99	-6.48	44.51	74.00	-29.49	-	-	peak

802.11b_11Mbps			
Test Channel	Low	Polarity:	Vertical



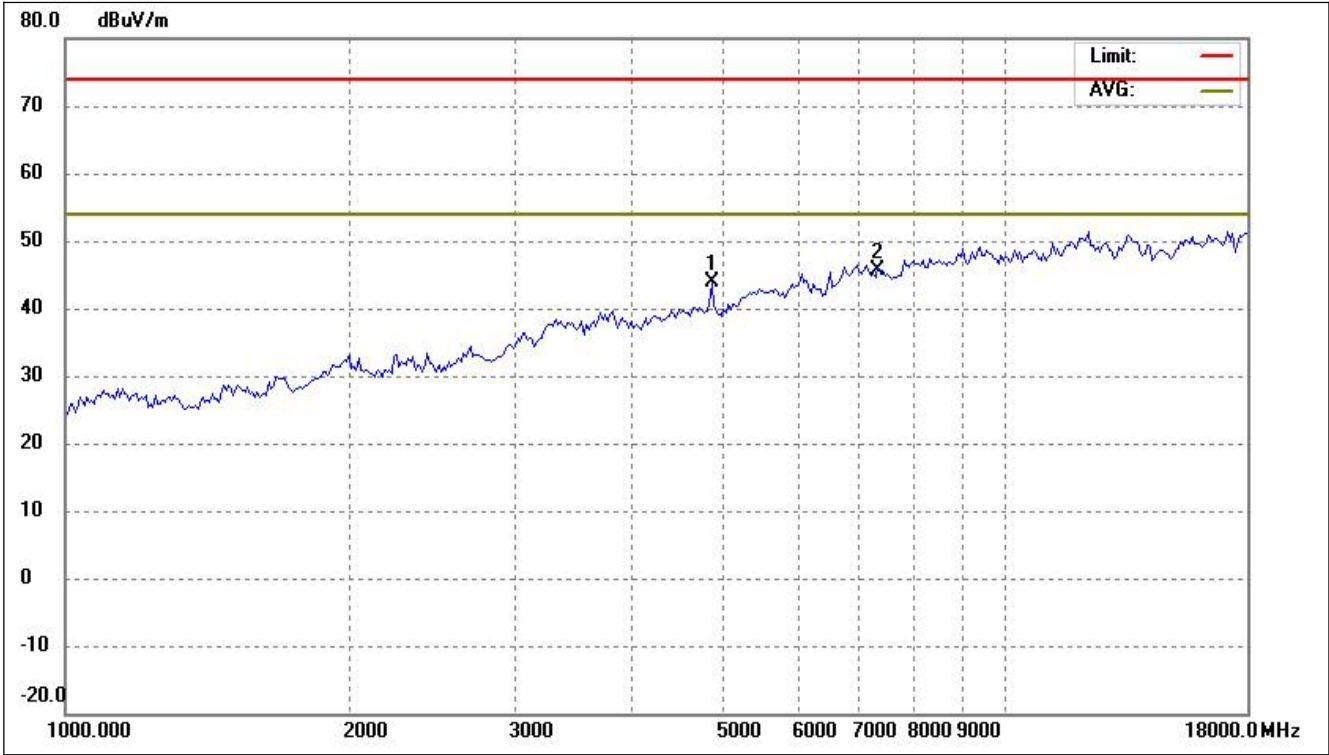
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	54.90	-11.81	43.09	74.00	-30.91	-	-	peak
2	7236.000	51.30	-6.48	44.82	74.00	-29.18	-	-	peak

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	4861.299	55.24	-11.81	43.43	74.00	-30.57	-	-	peak
2	7311.000	51.75	-5.04	46.71	74.00	-27.29	-	-	peak

802.11b_11Mbps			
Test Channel	Middle	Polarity:	Vertical



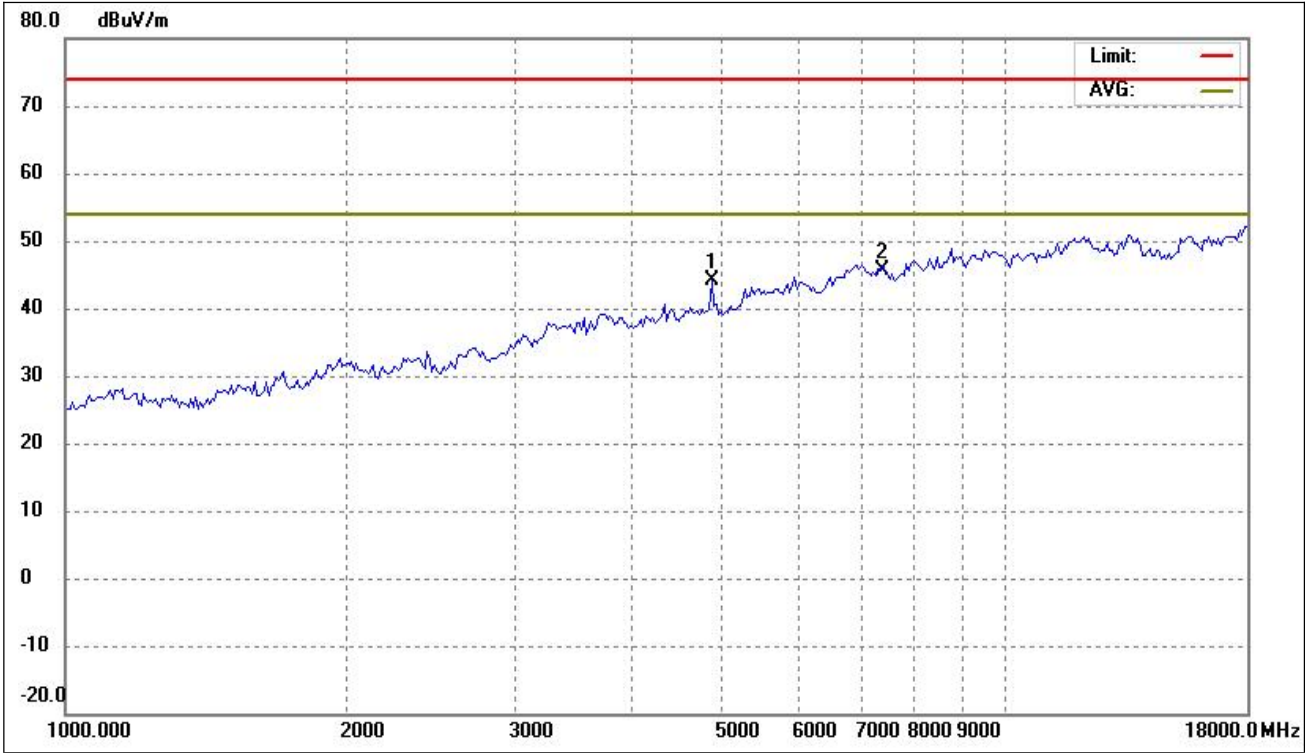
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	55.65	-11.81	43.84	74.00	-30.16	-	-	peak
2	7311.000	50.76	-5.04	45.72	74.00	-28.28	-	-	peak

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	4861.299	57.66	-11.81	45.85	74.00	-28.15	-	-	peak
2	7386.000	51.32	-6.09	45.23	74.00	-28.77	-	-	peak

802.11b_11Mbps			
Test Channel	High	Polarity:	Vertical

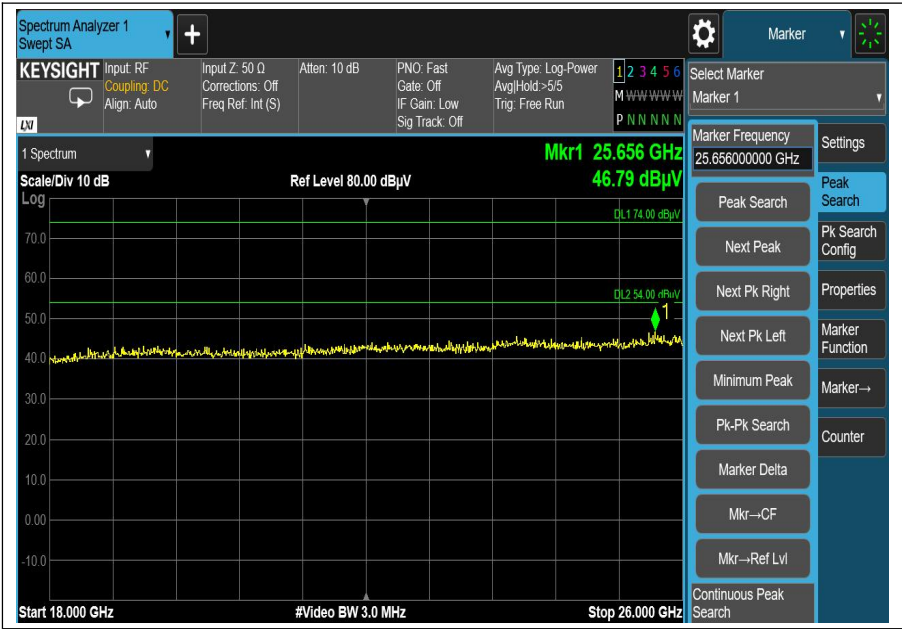


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	4861.299	55.83	-11.81	44.02	74.00	-29.98	-	-	peak
2	7386.000	51.60	-6.09	45.51	74.00	-28.49	-	-	peak

Reference No.: WTX26X04113218W003

- Spurious Emission From Above 18GHz
- Metal Antenna:

Test Channel	Low(worst case)	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	25656	46.79	74.00	-27.21	peak

Test Channel	Low(worst case)	Polarity:	Vertical
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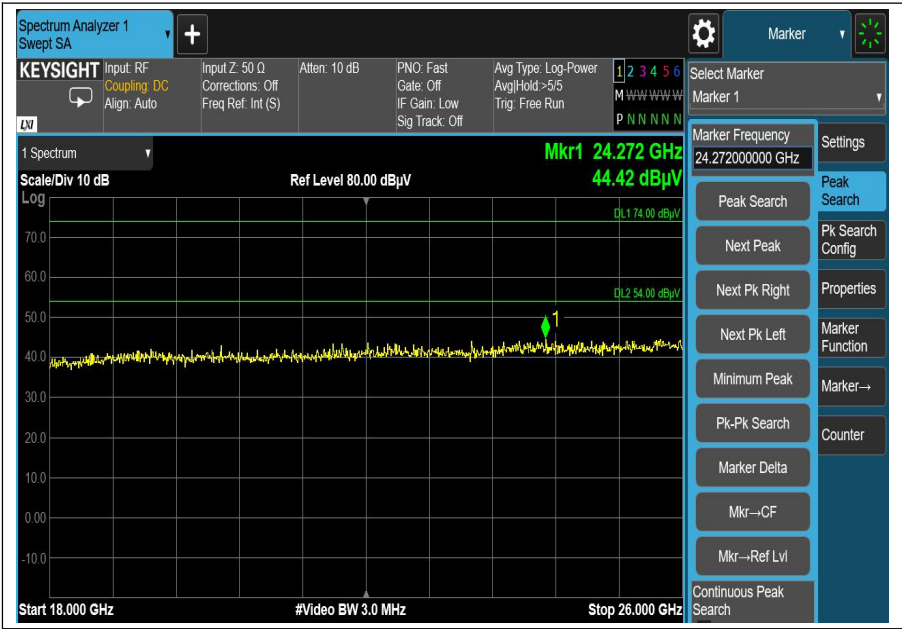


No.	Frequency (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	25336	45.44	74.00	-28.56	peak

Reference No.: WTX26X04113218W003

- Spurious Emission From Above 18GHz
PCB Antenna:

Test Channel	Low(worst case)	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	24272	44.42	74.00	-29.58	peak

Test Channel	Low(worst case)	Polarity:	Vertical
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No.	Frequency	Reading	Limit	Margin	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	
1	23912	45.03	74.00	-28.97	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.

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.

Conducted Spurious Emission Please refer to Appendix G

8. Out of Band Emissions

8.1 Standard Applicable

According to §15.247(d), in any 100kHz 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 20dB below that in the 100kHz 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 30dB instead of 20dB. 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).

8.2 Test Procedure

According to the KDB 558074D01 v05r02 Subclause 8.4 and ANSI C63.10-2020 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 = 100kHz.
- 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 C63.10-2020 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 $\geq [3 \times \text{RBW}]$.
- 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.

8.3 Summary of Test Results/Plots

➤ Radiated test

Metal Antenna

802.11b_11Mbps

Test Channel	Low	Polarity:	Horizontal(worst case)
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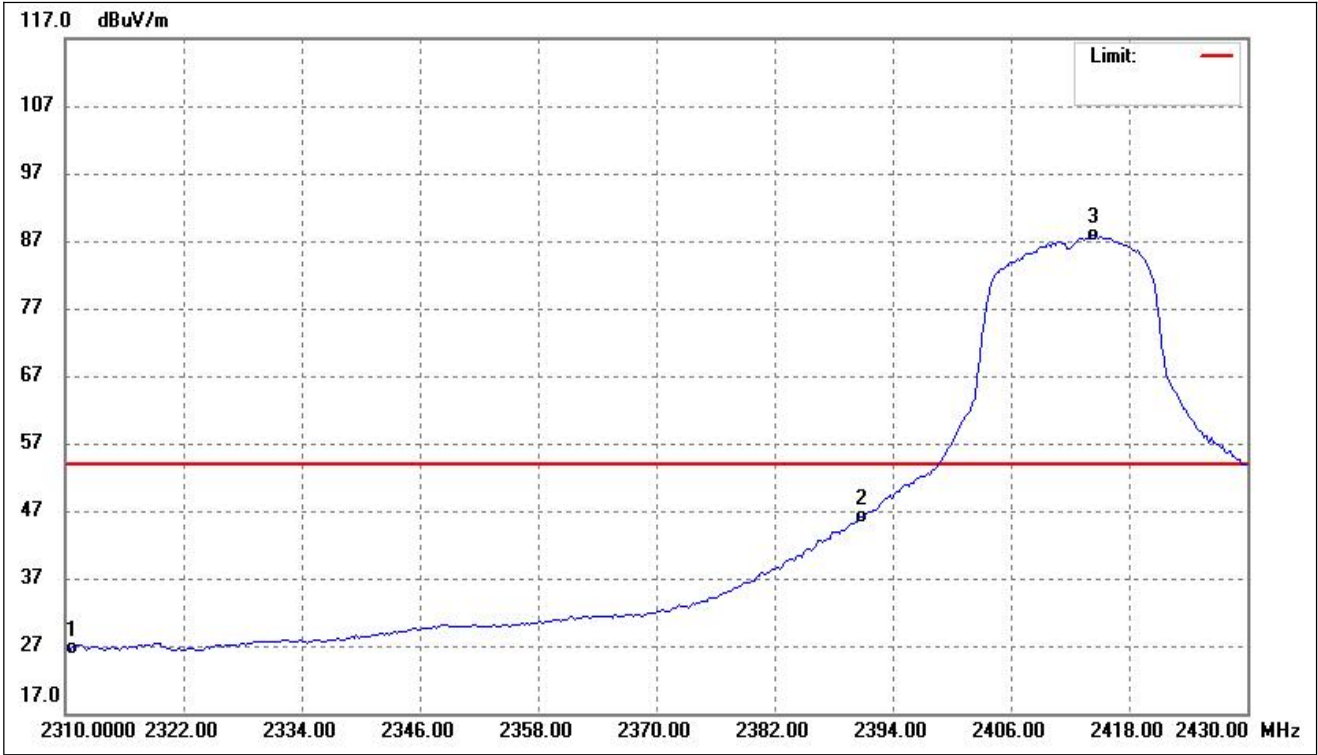
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	44.50	-18.90	25.60	54.00	-28.40	Average Detector
	2310.000	58.38	-18.90	39.48	74.00	-34.52	Peak Detector
2	2390.000	48.47	-18.82	29.65	54.00	-24.35	Average Detector
	2390.000	71.22	-18.82	52.40	74.00	-21.60	Peak Detector
3	2412.798	105.62	-18.76	86.86	/	/	Average Detector
	2412.798	113.41	-18.76	94.65	/	/	Peak Detector

802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal(worst case)



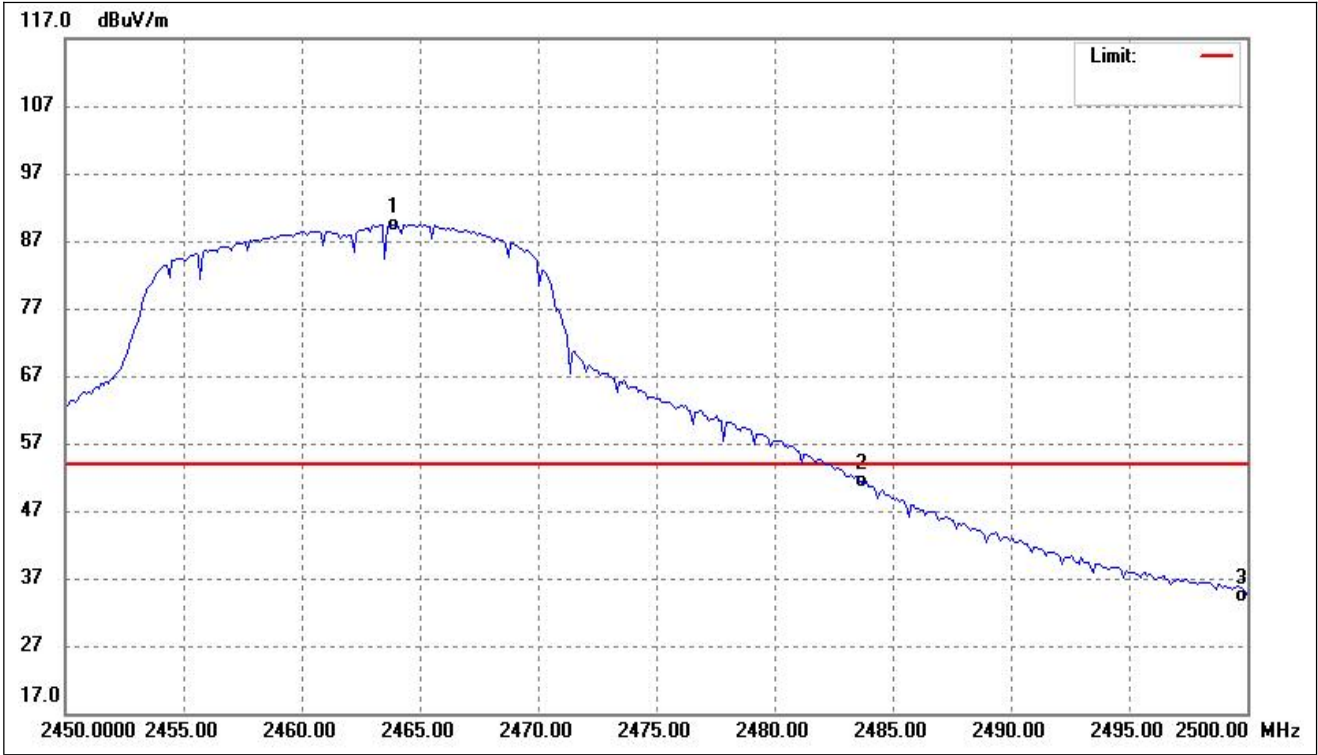
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.530	108.67	-18.53	90.14	/	/	Average Detector
	2462.929	113.72	-18.53	95.19	/	/	Peak Detector
2	2483.500	53.32	-18.65	34.67	54.00	-19.33	Average Detector
	2483.500	73.23	-18.65	54.58	74.00	-19.42	Peak Detector
3	2500.000	49.94	-18.75	31.19	54.00	-22.81	Average Detector
	2500.000	69.61	-18.75	50.86	74.00	-23.14	Peak Detector

802.11g_54Mbps			
Test Channel	Low	Polarity:	Horizontal(worst case)



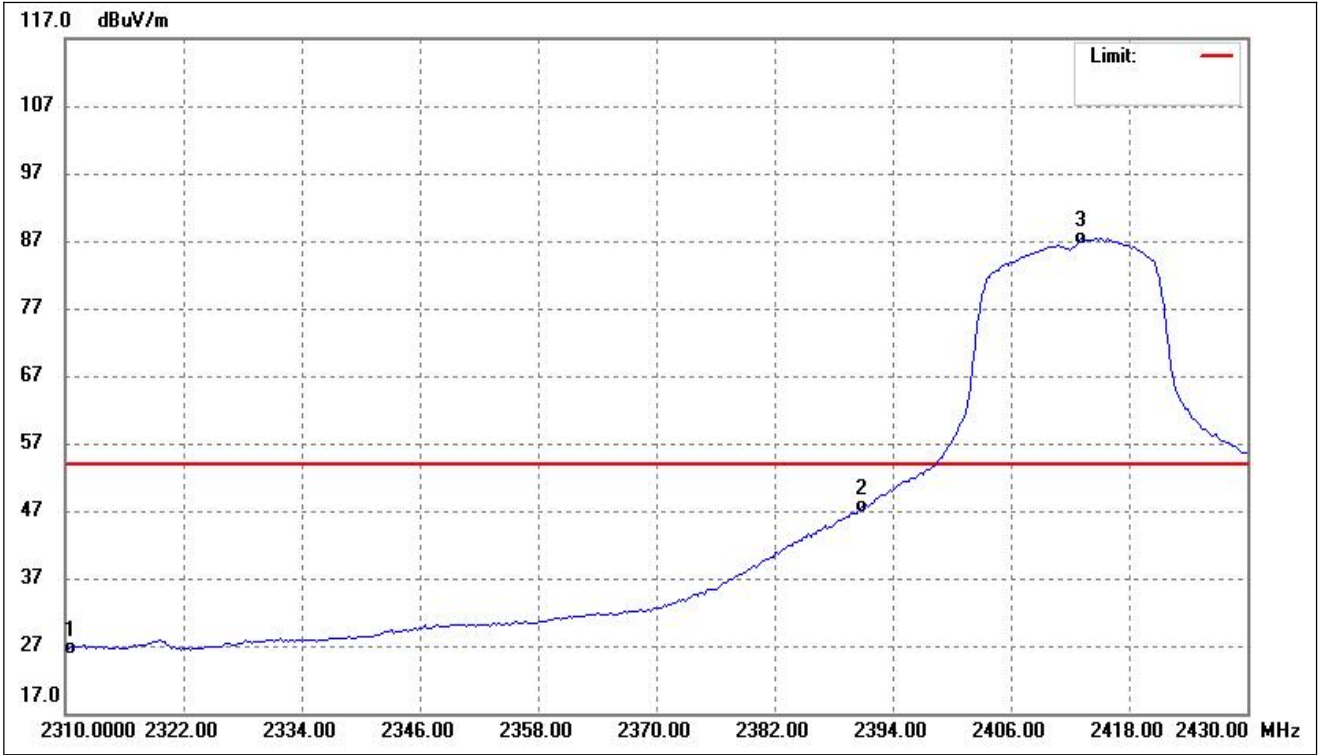
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	45.58	-18.90	26.68	54.00	-27.32	Average Detector
	2310.000	57.84	-18.90	38.94	74.00	-35.06	Peak Detector
2	2390.000	64.95	-18.82	46.13	54.00	-7.87	Average Detector
	2390.000	84.77	-18.82	65.95	74.00	-8.05	Peak Detector
3	2414.022	106.52	-18.75	87.77	/	/	Average Detector
	2415.003	117.31	-18.74	98.57	/	/	Peak Detector

802.11g_54Mbps			
Test Channel	High	Polarity:	Horizontal(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.827	108.02	-18.53	89.49	/	/	Average Detector
	2462.829	118.96	-18.53	100.43	/	/	Peak Detector
2	2483.500	70.13	-18.65	51.48	54.00	-2.52	Average Detector
	2483.500	84.48	-18.65	65.83	74.00	-8.17	Peak Detector
3	2500.000	53.13	-18.75	34.38	54.00	-19.62	Average Detector
	2500.000	74.70	-18.75	55.95	74.00	-18.05	Peak Detector

802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Horizontal(worst case)



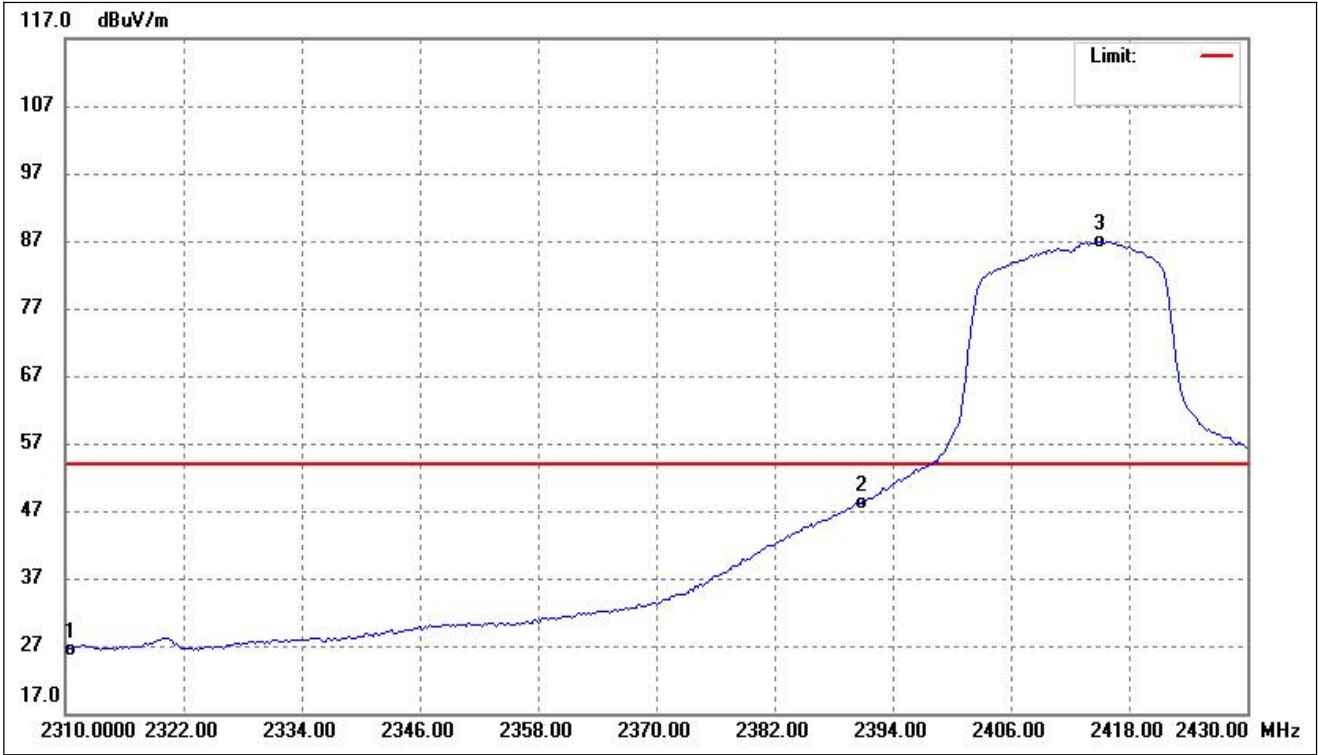
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	45.48	-18.90	26.58	54.00	-27.42	Average Detector
	2310.000	57.07	-18.90	38.17	74.00	-35.83	Peak Detector
2	2390.000	66.39	-18.82	47.57	54.00	-6.43	Average Detector
	2390.000	89.18	-18.82	70.36	74.00	-3.64	Peak Detector
3	2412.798	106.04	-18.76	87.28	/	/	Average Detector
	2414.022	117.32	-18.75	98.57	/	/	Peak Detector

802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Horizontal(worst case)



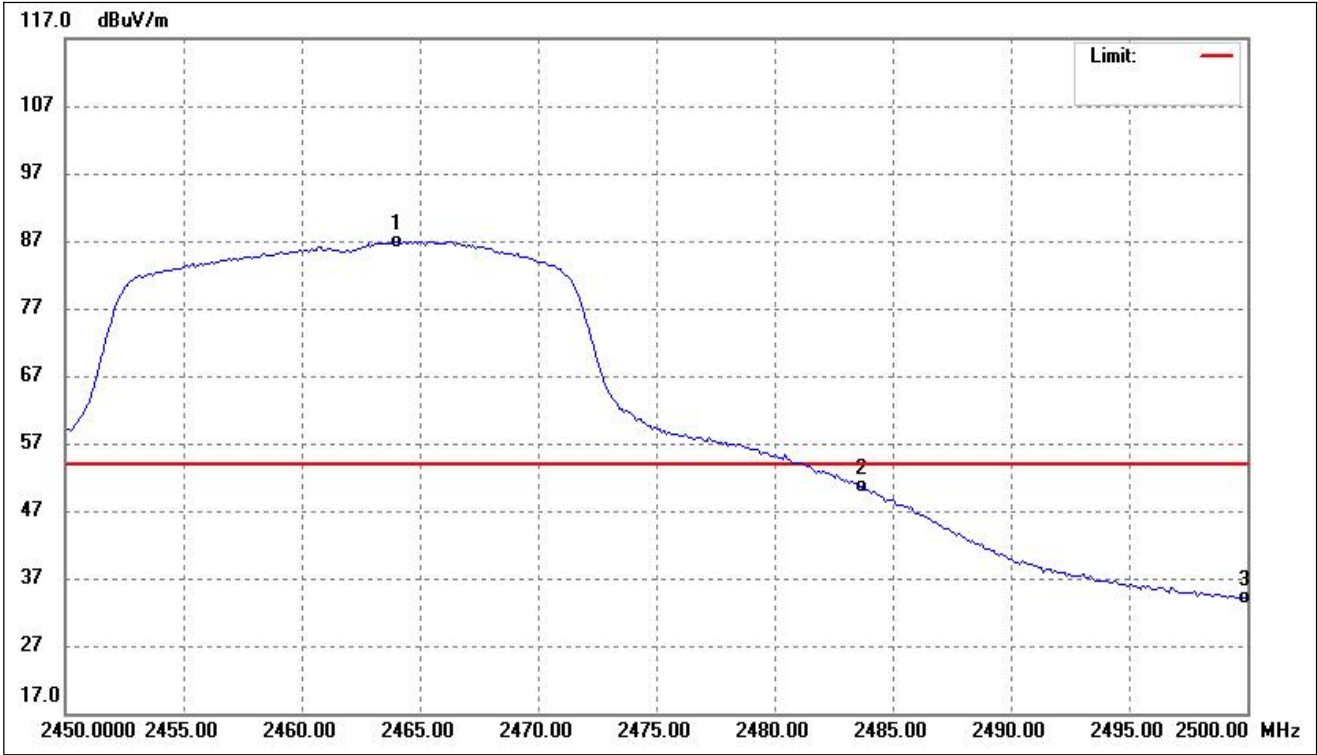
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.537	106.75	-18.51	88.24	/	/	Average Detector
	2464.325	119.11	-18.54	100.57	/	/	Peak Detector
2	2483.500	69.18	-18.65	50.53	54.00	-3.47	Average Detector
	2483.500	90.01	-18.65	71.36	74.00	-2.64	Peak Detector
3	2500.000	55.74	-18.75	36.99	54.00	-17.01	Average Detector
	2500.000	74.14	-18.75	55.39	74.00	-18.61	Peak Detector

802.11ax-HE20_MCS7			
Test Channel	Low	Polarity:	Horizontal(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	45.22	-18.90	26.32	54.00	-27.68	Average Detector
	2310.000	57.59	-18.90	38.69	74.00	-35.31	Peak Detector
2	2390.000	66.90	-18.82	48.08	54.00	-5.92	Average Detector
	2390.000	88.00	-18.82	69.18	74.00	-4.82	Peak Detector
3	2414.757	105.64	-18.74	86.90	/	/	Average Detector
	2415.493	119.95	-18.74	101.21	/	/	Peak Detector

802.11ax-HE20_MCS7			
Test Channel	High	Polarity:	Horizontal(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.926	105.43	-18.53	86.90	/	/	Average Detector
	2463.328	118.90	-18.53	100.37	/	/	Peak Detector
2	2483.500	69.19	-18.65	50.54	54.00	-3.46	Average Detector
	2483.500	86.38	-18.65	67.73	74.00	-6.27	Peak Detector
3	2500.000	52.80	-18.75	34.05	54.00	-19.95	Average Detector
	2500.000	73.64	-18.75	54.89	74.00	-19.11	Peak Detector

PCB Antenna

802.11b_11Mbps

Test Channel	Low	Polarity:	Horizontal(worst case)
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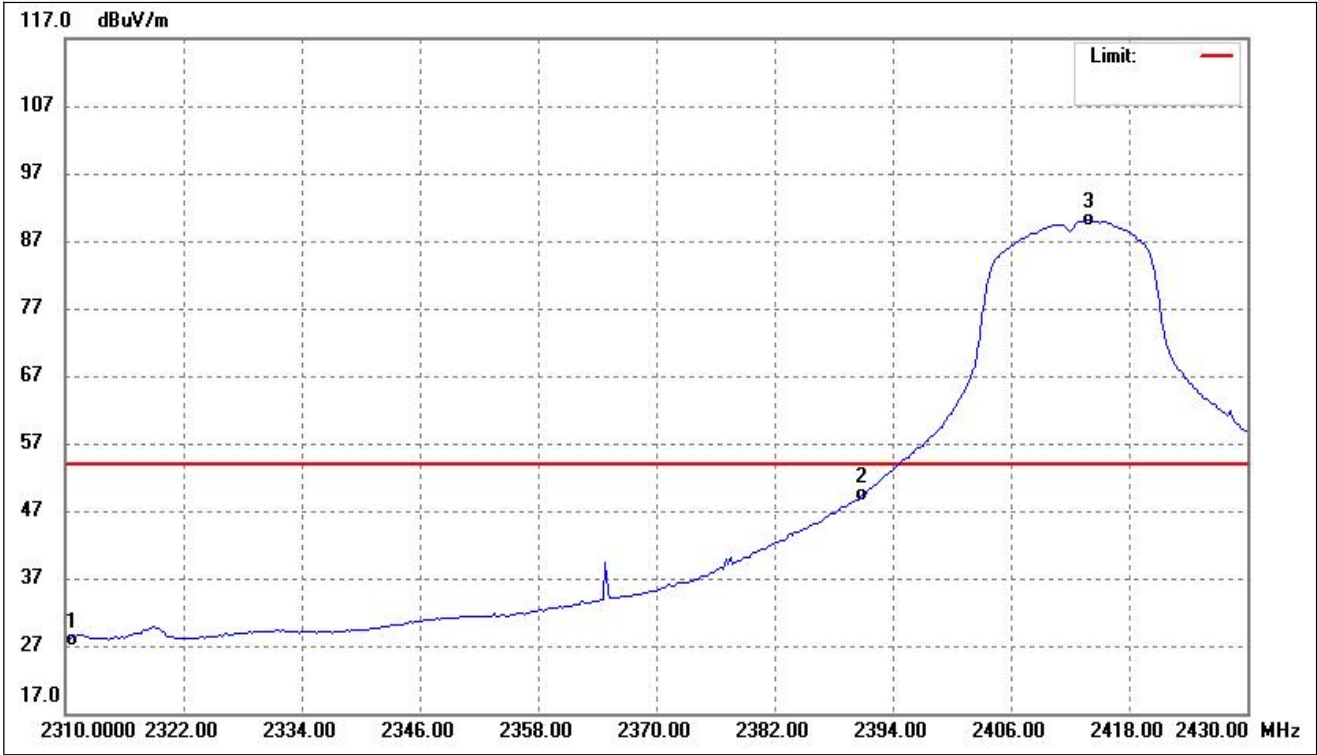
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	45.30	-18.90	26.40	54.00	-27.60	Average Detector
	2310.000	58.35	-18.90	39.45	74.00	-34.55	Peak Detector
2	2390.000	47.55	-18.82	28.73	54.00	-25.27	Average Detector
	2390.000	60.50	-18.82	41.68	74.00	-32.32	Peak Detector
3	2412.553	106.47	-18.76	87.71	/	/	Average Detector
	2412.798	111.15	-18.76	92.39	/	/	Peak Detector

802.11b_11Mbps			
Test Channel	High	Polarity:	Horizontal(worst case)



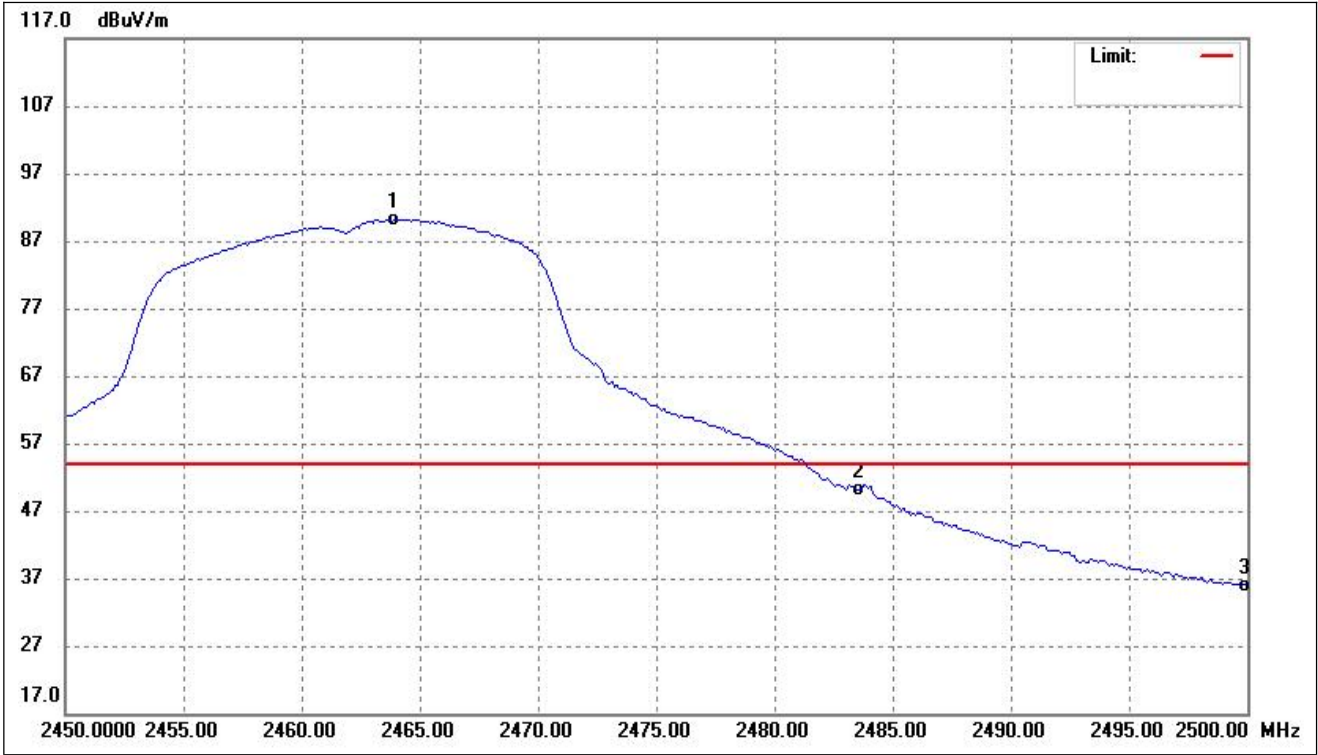
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2462.530	109.72	-18.53	91.19	/	/	Average Detector
	2462.829	114.39	-18.53	95.86	/	/	Peak Detector
2	2483.500	54.99	-18.65	36.34	54.00	-17.66	Average Detector
	2483.500	65.35	-18.65	46.70	74.00	-27.30	Peak Detector
3	2500.000	49.74	-18.75	30.99	54.00	-23.01	Average Detector
	2500.000	62.38	-18.75	43.63	74.00	-30.37	Peak Detector

802.11g_54Mbps			
Test Channel	Low	Polarity:	Horizontal(worst case)



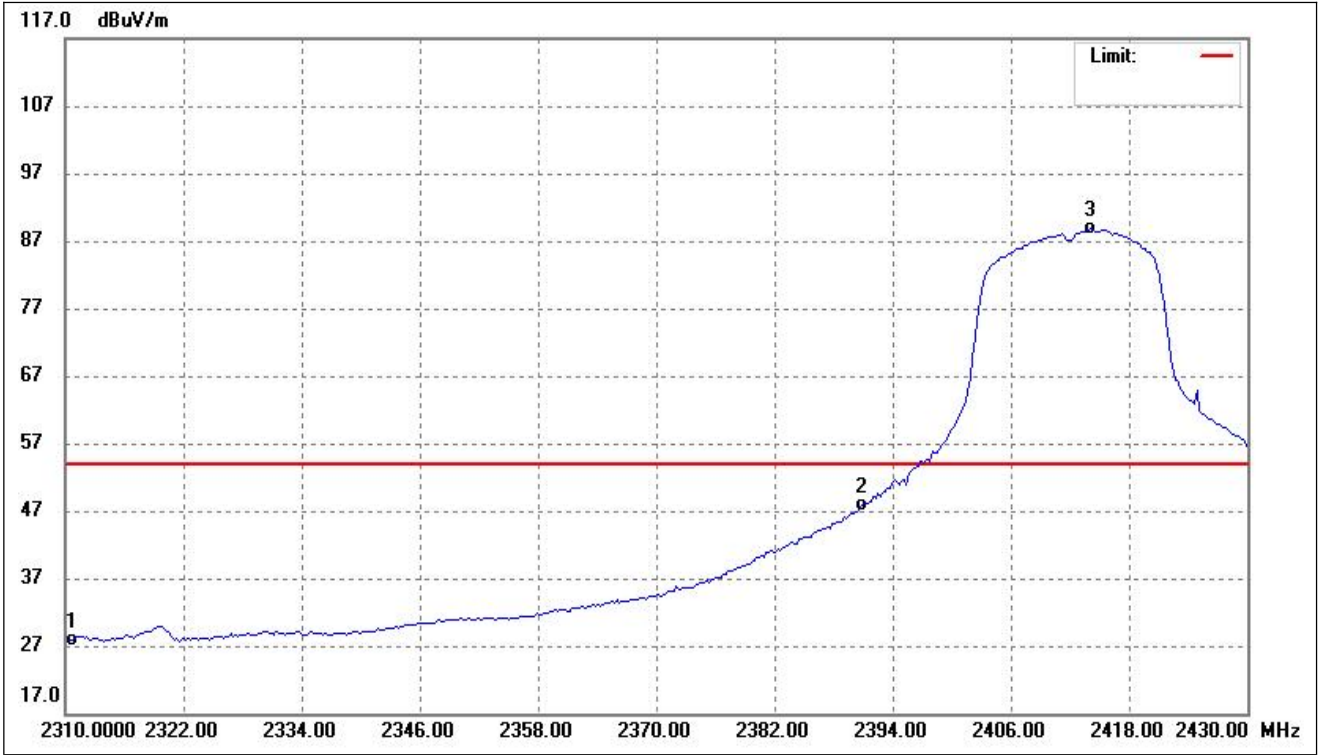
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	46.78	-18.90	27.88	54.00	-26.12	Average Detector
	2310.000	58.38	-18.90	39.48	74.00	-34.52	Peak Detector
2	2390.000	68.09	-18.82	49.27	54.00	-4.73	Average Detector
	2390.000	84.92	-18.82	66.10	74.00	-7.90	Peak Detector
3	2413.532	108.82	-18.75	90.07	/	/	Average Detector
	2414.022	119.12	-18.75	100.37	/	/	Peak Detector

802.11g_54Mbps			
Test Channel	High	Polarity:	Horizontal(worst case)



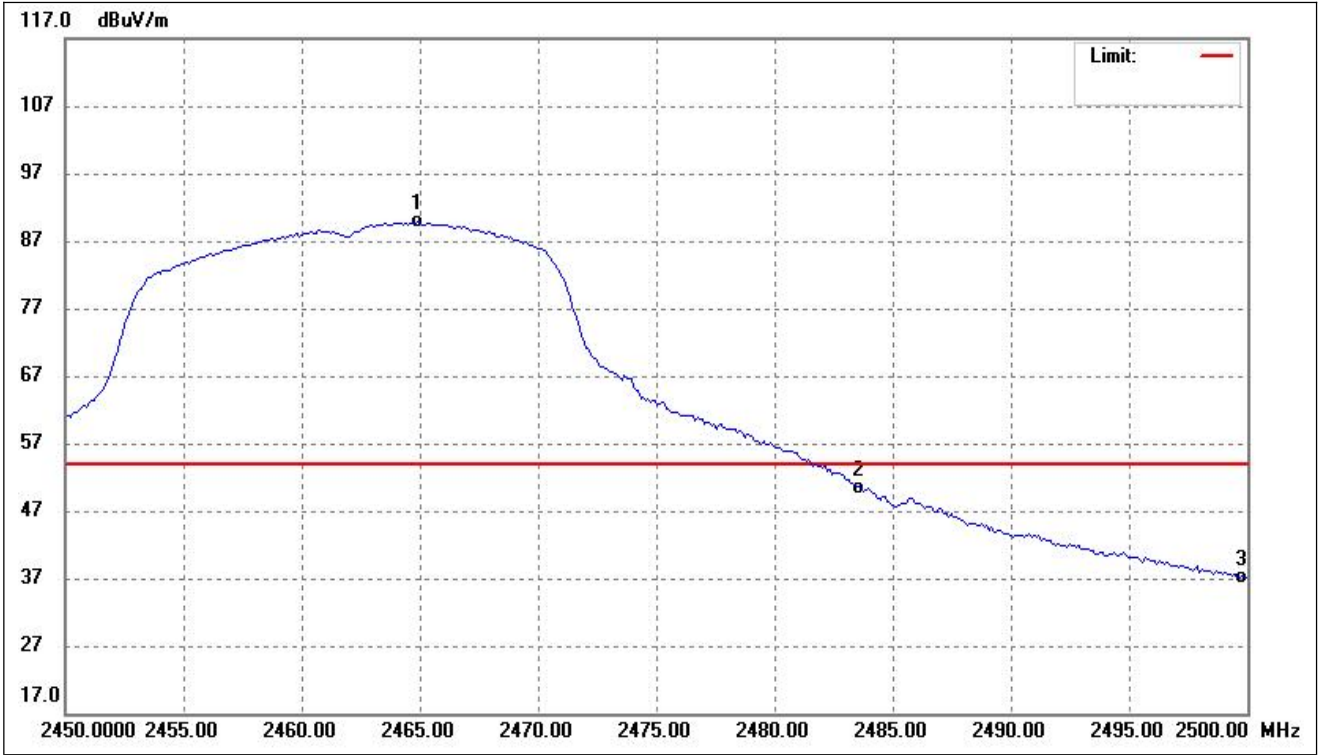
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.827	108.76	-18.53	90.23	/	/	Average Detector
	2463.727	119.24	-18.53	100.71	/	/	Peak Detector
2	2483.500	68.70	-18.65	50.05	54.00	-3.95	Average Detector
	2483.500	88.59	-18.65	69.94	74.00	-4.06	Peak Detector
3	2500.000	54.51	-18.75	35.76	54.00	-18.24	Average Detector
	2500.000	73.34	-18.75	54.59	74.00	-19.41	Peak Detector

802.11n-HT20_MCS7			
Test Channel	Low	Polarity:	Horizontal(worst case)



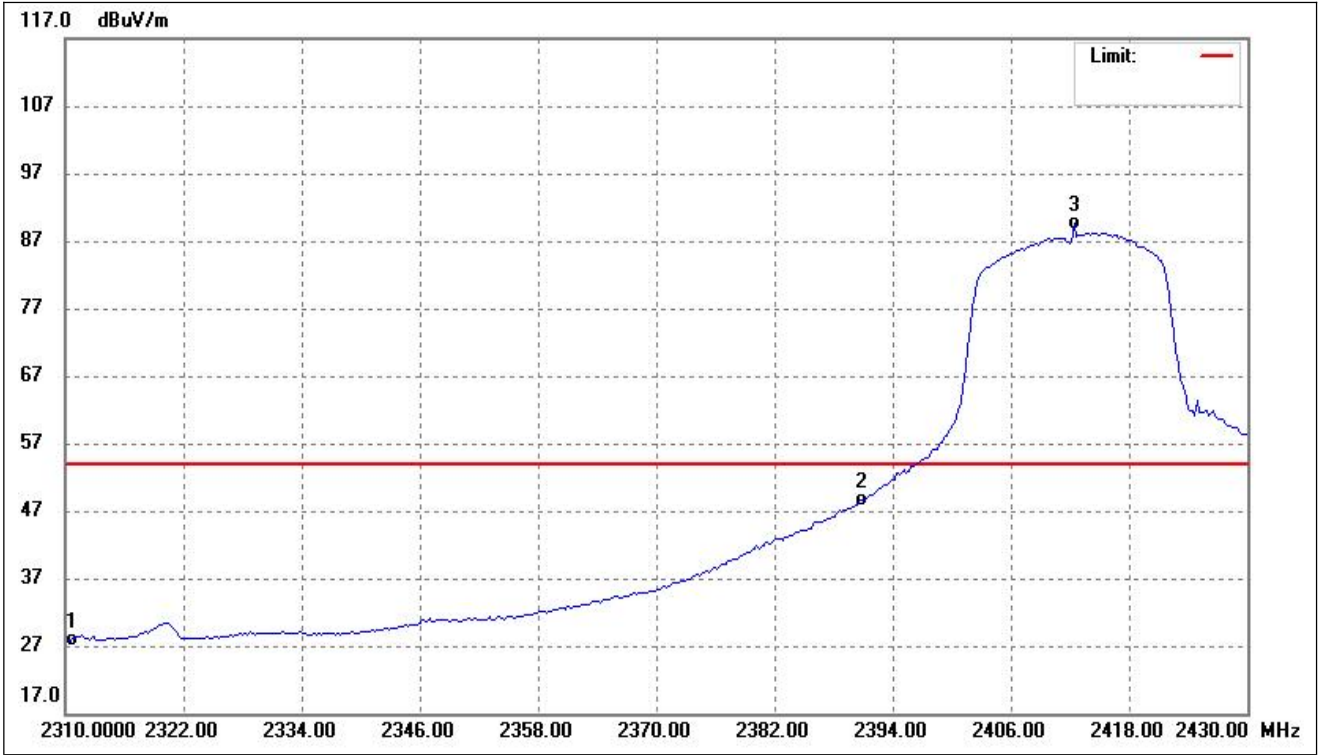
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	46.74	-18.90	27.84	54.00	-26.16	Average Detector
	2310.000	57.50	-18.90	38.60	74.00	-35.40	Peak Detector
2	2390.000	66.78	-18.82	47.96	54.00	-6.04	Average Detector
	2390.000	84.59	-18.82	65.77	74.00	-8.23	Peak Detector
3	2413.777	107.56	-18.75	88.81	/	/	Average Detector
	2412.798	119.06	-18.76	100.30	/	/	Peak Detector

802.11n-HT20_MCS7			
Test Channel	High	Polarity:	Horizontal(worst case)



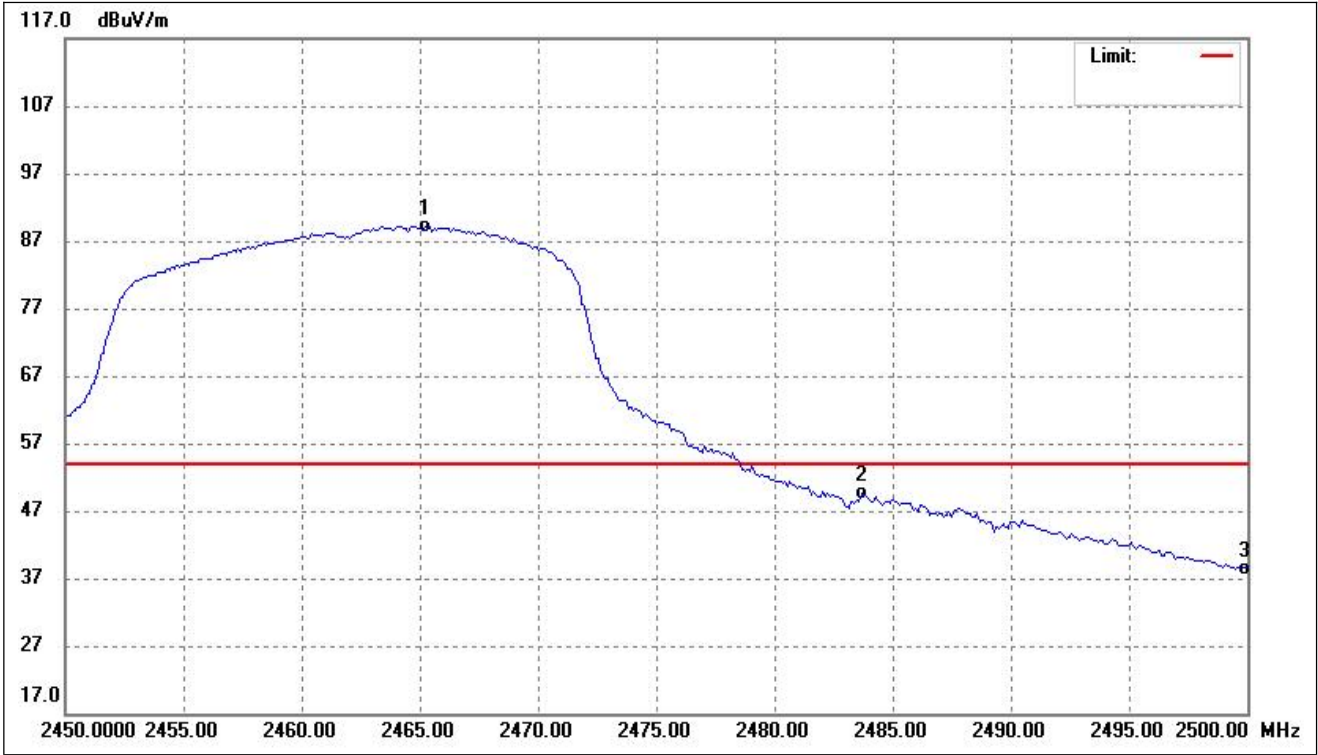
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2464.824	108.39	-18.54	89.85	/	/	Average Detector
	2464.226	119.95	-18.54	101.41	/	/	Peak Detector
2	2483.500	69.15	-18.65	50.50	54.00	-3.50	Average Detector
	2483.500	87.58	-18.65	68.93	74.00	-5.07	Peak Detector
3	2500.000	55.89	-18.75	37.14	54.00	-16.86	Average Detector
	2500.000	76.99	-18.75	58.24	74.00	-15.76	Peak Detector

802.11ax-HE20_MCS7			
Test Channel	Low	Polarity:	Horizontal(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	46.74	-18.90	27.84	54.00	-26.16	Average Detector
	2310.000	57.98	-18.90	39.08	74.00	-34.92	Peak Detector
2	2390.000	67.46	-18.82	48.64	54.00	-5.36	Average Detector
	2390.000	89.63	-18.82	70.81	74.00	-3.19	Peak Detector
3	2412.063	108.43	-18.76	89.67	/	/	Average Detector
	2414.757	119.57	-18.74	100.83	/	/	Peak Detector

802.11ax-HE20_MCS7			
Test Channel	High	Polarity:	Horizontal(worst case)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2465.124	107.74	-18.54	89.20	/	/	Average Detector
	2464.724	121.34	-18.54	102.80	/	/	Peak Detector
2	2483.500	68.18	-18.65	49.53	54.00	-4.47	Average Detector
	2483.500	85.36	-18.65	66.71	74.00	-7.29	Peak Detector
3	2500.000	57.01	-18.75	38.26	54.00	-15.74	Average Detector
	2500.000	75.93	-18.75	57.18	74.00	-16.82	Peak Detector

➤ Conducted test

Please refer to Appendix E&F

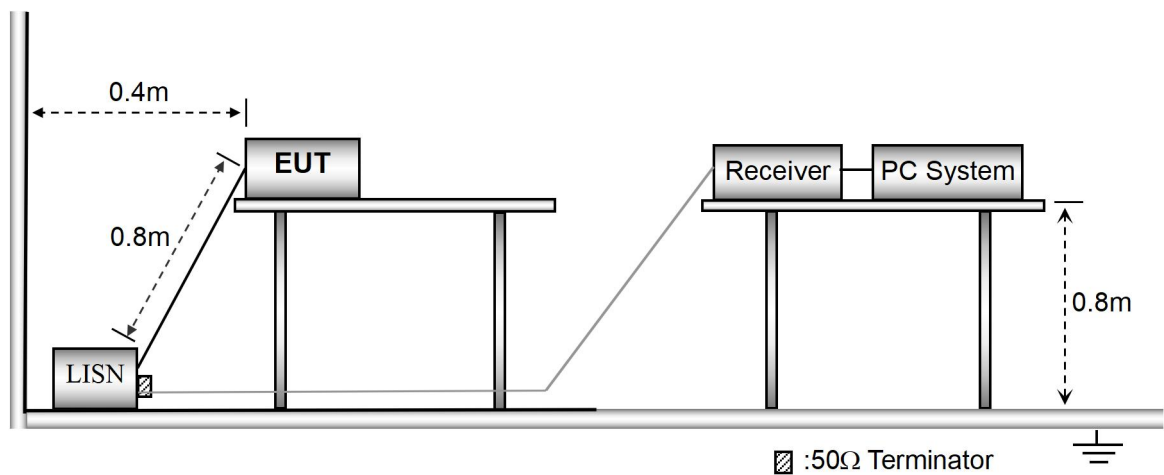
9. Conducted Emissions

9.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2020 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 40cm long in the middle. The spacing between the peripherals was 10cm.

9.2 Basic Test Setup Block Diagram



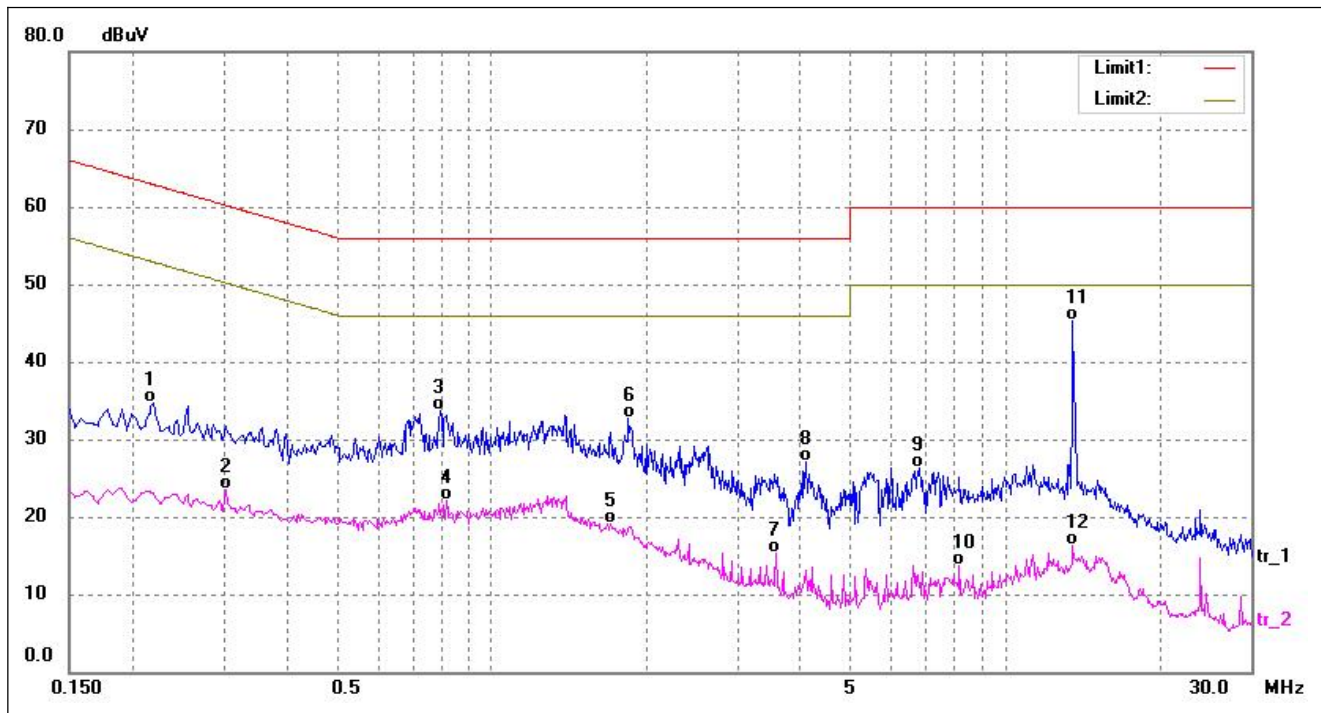
9.3 Test Receiver Setup

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

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

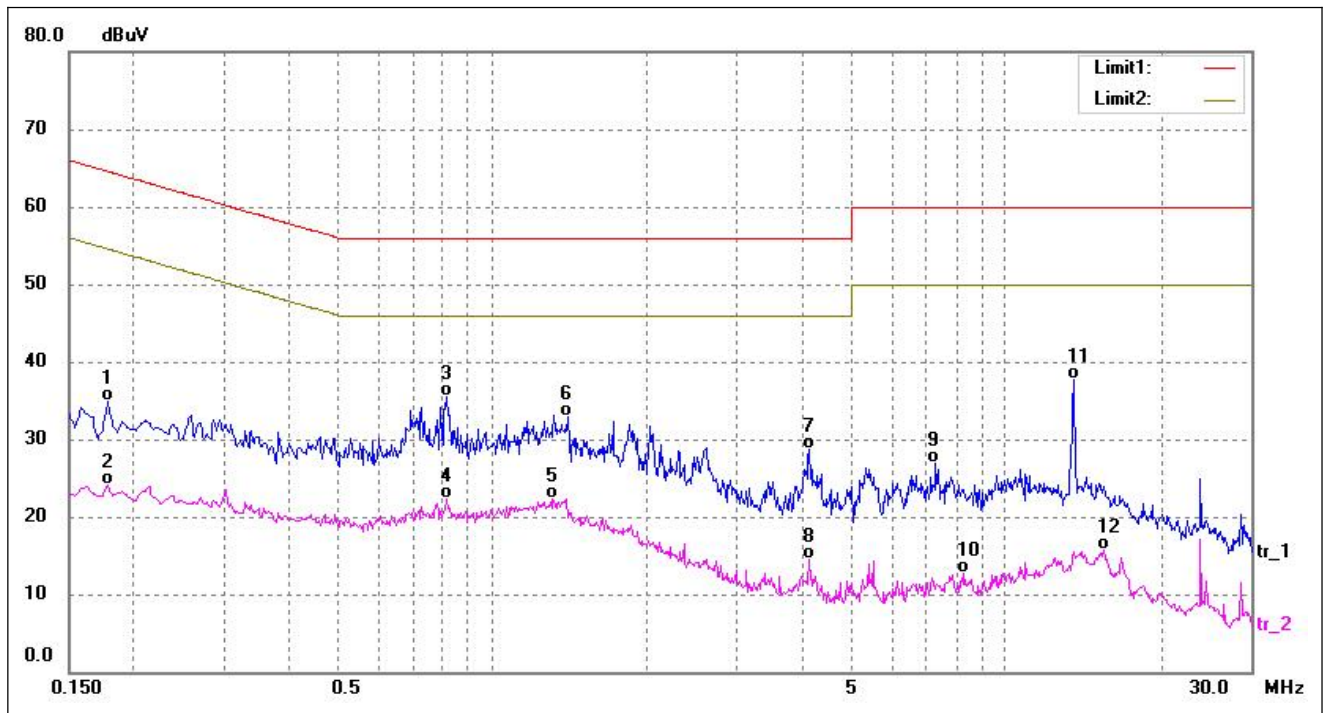
9.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2180	25.09	9.63	34.72	62.89	-28.17	QP
2	0.3020	13.89	9.63	23.52	50.19	-26.67	AVG
3	0.7940	23.93	9.75	33.68	56.00	-22.32	QP
4	0.8139	12.28	9.75	22.03	46.00	-23.97	AVG
5	1.7060	9.62	9.48	19.10	46.00	-26.90	AVG
6	1.8420	23.31	9.42	32.73	56.00	-23.27	QP
7	3.5740	5.77	9.44	15.21	46.00	-30.79	AVG
8	4.0820	17.67	9.47	27.14	56.00	-28.86	QP
9	6.7860	16.52	9.77	26.29	60.00	-33.71	QP
10	8.1420	3.96	9.80	13.76	50.00	-36.24	AVG
11*	13.5300	35.66	9.60	45.26	60.00	-14.74	QP
12	13.5300	6.64	9.60	16.24	50.00	-33.76	AVG

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1780	25.37	9.54	34.91	64.57	-29.66	QP
2	0.1780	14.61	9.54	24.15	54.57	-30.42	AVG
3*	0.8139	25.66	9.75	35.41	56.00	-20.59	QP
4	0.8139	12.55	9.75	22.30	46.00	-23.70	AVG
5	1.3099	12.71	9.64	22.35	46.00	-23.65	AVG
6	1.4100	23.22	9.60	32.82	56.00	-23.18	QP
7	4.1460	19.31	9.47	28.78	56.00	-27.22	QP
8	4.1460	4.98	9.47	14.45	46.00	-31.55	AVG
9	7.3060	17.12	9.79	26.91	60.00	-33.09	QP
10	8.3220	2.98	9.80	12.78	50.00	-37.22	AVG
11	13.6140	28.14	9.59	37.73	60.00	-22.27	QP
12	15.5220	6.10	9.51	15.61	50.00	-34.39	AVG

APPENDIX SUMMARY

Project No.	WTX26X04113218W003	Test Engineer	BAldi zhong
Start date	2026/6/20	Finish date	2026/8/24
Temperature	22.6℃	Humidity	57%
RF specifications	2.4G-WiFi		

APPENDIX	Description of Test Item	Result
A	DTS Bandwidth	Compliant
B	Occupied Channel Bandwidth	Compliant
C	Maximum conducted output power	Compliant
D	Maximum power spectral density	Compliant
E	Reference level measurement	Compliant
F	Band edge measurements	Compliant
G	Conducted Spurious Emission	Compliant
H	Duty Cycle	Compliant

Appendix A: DTS Bandwidth**Test Result****PCB Antenna:**

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.640	2408.400	2416.040	0.5	PASS
11B	Ant1	2437	7.640	2433.400	2441.040	0.5	PASS
11B	Ant1	2462	8.080	2457.960	2466.040	0.5	PASS
11G	Ant1	2412	14.240	2405.000	2419.240	0.5	PASS
11G	Ant1	2437	15.200	2429.640	2444.840	0.5	PASS
11G	Ant1	2462	15.400	2454.280	2469.680	0.5	PASS
11N20SISO	Ant1	2412	17.040	2403.480	2420.520	0.5	PASS
11N20SISO	Ant1	2437	17.160	2428.520	2445.680	0.5	PASS
11N20SISO	Ant1	2462	16.120	2454.160	2470.280	0.5	PASS
11AX20SISO	Ant1	2412	17.520	2402.520	2420.040	0.5	PASS
11AX20SISO	Ant1	2437	16.400	2429.040	2445.440	0.5	PASS
11AX20SISO	Ant1	2462	17.080	2453.880	2470.960	0.5	PASS

Metal Antenna:

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.600	2408.400	2416.000	0.5	PASS
11B	Ant1	2437	8.080	2432.960	2441.040	0.5	PASS
11B	Ant1	2462	7.640	2458.400	2466.040	0.5	PASS
11G	Ant1	2412	15.360	2404.640	2420.000	0.5	PASS
11G	Ant1	2437	15.800	2429.120	2444.920	0.5	PASS
11G	Ant1	2462	14.920	2454.960	2469.880	0.5	PASS
11N20SISO	Ant1	2412	15.760	2404.320	2420.080	0.5	PASS
11N20SISO	Ant1	2437	17.160	2428.480	2445.640	0.5	PASS
11N20SISO	Ant1	2462	16.840	2453.680	2470.520	0.5	PASS
11AX20SISO	Ant1	2412	17.320	2403.320	2420.640	0.5	PASS
11AX20SISO	Ant1	2437	18.120	2428.120	2446.240	0.5	PASS
11AX20SISO	Ant1	2462	17.360	2453.640	2471.000	0.5	PASS

Test Graphs

PCB Antenna:



11B-Ant1-2412-PASS



11B-Ant1-2437-PASS



11B-Ant1-2462-PASS



11G-Ant1-2412-PASS



11G-Ant1-2437-PASS



11G-Ant1-2462-PASS



11N20SISO-Ant1-2412-PASS



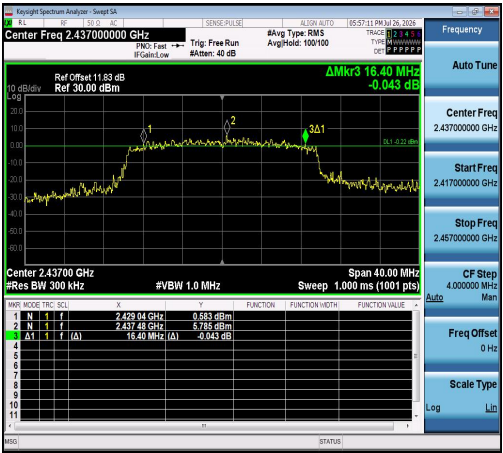
11N20SISO-Ant1-2437-PASS



11N20SISO-Ant1-2462-PASS



11AX20SISO-Ant1-2412-PASS



11AX20SISO-Ant1-2437-PASS



11AX20SISO-Ant1-2462-PASS

Metal Antenna:



11B-Ant1-2412-PASS



11B-Ant1-2437-PASS



11B-Ant1-2462-PASS