CFR 47 FCC PART 15 SUBPART C
ISED RSS-247 ISSUE 2

CERTIFICATION TEST REPORT

For

IEEE 802.11b/g/n 2T2R USB WiFi Module

MODEL NUMBER: SKI.W7603.1

FCC ID: 2AR82-SKIW7603101

IC: 24728-SKIW7603101

REPORT NUMBER: 4789631992-1

ISSUE DATE: November 05, 2020

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	11/05/2020	Initial Issue	

Summary of Test Results			
Clause	**Test Items**	**FCC/ISED Rules**	**Test Results**
1	6dB Bandwidth and 99% Occupied Bandwidth	FCC Part 15.247 (a) (2) RSS-247 Clause 5.2 (a) ISED RSS-Gen Clause 6.7	Pass
2	Conducted Output Power	FCC Part 15.247 (b) (3) RSS-247 Clause 5.4 (d)	Pass
3	Power Spectral Density	FCC Part 15.247 (e) RSS-247 Clause 5.2 (b)	Pass
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d) RSS-247 Clause 5.5	Pass
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass
6	Conducted Emission Test for AC Power Port	FCC Part 15.207 RSS-GEN Clause 8.8	Pass
7	Antenna Requirement	FCC Part 15.203 RSS-GEN Clause 6.8	Pass

Note:
1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C >< ISED RSS-247 > when <Accuracy Method> decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road,Huangpu District,Guangzhou,China

Manufacturer Information

Company Name:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road,Huangpu District,Guangzhou,China

EUT Information

EUT Name:	IEEE 802.11b/g/n 2T2R USB WiFi Module
Model:	SKI.W7603.1
Sample Received Date:	September 18, 2020
Sample Status:	Normal
Sample ID:	3331747
Date of Tested:	September 18, 2020~ October 30, 2020

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

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Approved By:

Stephen Guo
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	IEEE 802.11b/g/n 2T2R USB WiFi Module
Model	SKI.W7603.1
Radio Technology	IEEE802.11b/g/n HT20/n HT40
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz
Modulation	IEEE 802.11b: DSSS (CCK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
Supply Voltage	AC 120V, 60Hz

5.2. CHANNEL LIST

Channel List for 802.11b/g/n (20 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	4	2427	7	2442	10	2457
2	2417	5	2432	8	2447	11	2462
3	2422	6	2437	9	2452	/	/

Channel List for 802.11n (40 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	5	2432	7	2442	9	2452
4	2427	6	2437	8	2447	/	/

5.3. MAXIMUM OUTPUT POWER

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)	Maximum AVG EIRP (dBm)
b	2412 ~ 2462	1-11[11]	15.04	17.66
g	2412 ~ 2462	1-11[11]	14.38	17.00
n HT20	2412 ~ 2462	1-11[11]	16.31	18.93
n HT40	2422 ~ 2452	3-9[7]	15.66	18.28

5.4. TEST CHANNEL CONFIGURATION

IEEE Std. 802.11	Test Channel Number	Frequency
b	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
g	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT20	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT40	CH 3(Low Channel), CH 6(MID Channel), CH 9(High Channel)	2422 MHz, 2437 MHz, 2452 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		QATool_Dbg					
Modulation Mode	Transmit Antenna Number	Test Software Setting Value					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	1	16	18	1B	/		
	2	16	18	1B			
802.11g	1	1E	1E	1E			
	2	1E	1E	1E			
802.11n HT20	1	1D	1E	1E			
	2	1D	1E	1E			
802.11n HT40	1	/			18	1C	1C
	2	/			18	1C	1C

5.6. THE WORSE CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.
Test channels referring to section 5.4.
Maximum power setting referring to section 5.5.
Worst case Data Rates declared by the customer:

802.11b mode: 1 Mbps
802.11b mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0

Note: Only 802.11n HT20 and 802.11n HT40 support MIMO mode, for 802.11b and 802.11g, all antennas had been test, but only the worst data for Antenna 2 was recorded.
For 802.11n HT20 and 802.11n HT40, all antennas had the same power in MIMO mode and SISO mode, so only the worst data for MIMO mode was recorded.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2412-2462	PIFA antenna	2.62
2	2412-2462	PIFA antenna	2.62

Note: 1. ANT 0,1 use the same antenna. So Directional gain= GANT + 10 log(NANT) dBi=5.63dBi, GANT : Antenna Gain(2.62 dBi), NANT : Antenna numbers(2).

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☒2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11g	☒2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	☒2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	☒2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.

Note: 1. The value of the antenna gain was declared by customer.
2. IEEE 802.11b and IEEE 802.11g mode are only support SISO mode, IEEE 802.11n HT20 and IEEE 802.11n HT40 support SISO and MIMO mode.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	PC	Dell	Vostro 3902	8KNDDB2
2	USB TO UART	/	/	/

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	/	/	1.0	/

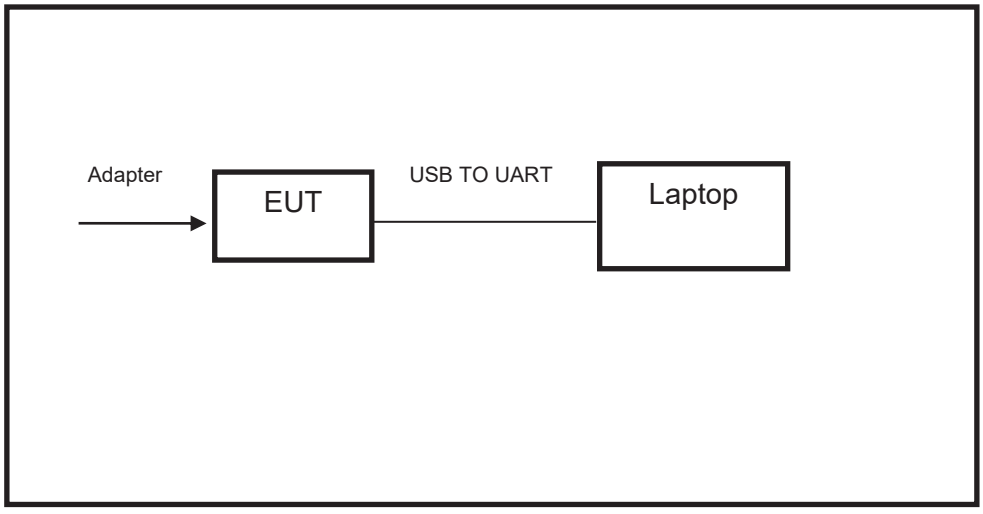
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	AC Adapter	/	HKA02412020-3K	Input: AC 100~240V, 50/60Hz, 0.8A Output: DC 12V, 2A

TEST SETUP

The EUT can work in engineering mode with a software through a Laptop.

SETUP DIAGRAM FOR TESTS



6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	101961	Dec.05,2019	Dec.05,2020
☑	Two-Line V-Network	R&S	ENV216	101983	Dec.05,2019	Dec.05,2020
Software						
Used	Description			Manufacturer	Name	Version
☑	Test Software for Conducted disturbance			Farad	EZ-EMC	Ver. UL-3A1
Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Dec.06,2019	Dec.05,2020
☑	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Sep.17,2018	Sep.17,2021
☑	Preamplifier	HP	8447D	2944A09099	Dec.05,2019	Dec.05,2020
☑	EMI Measurement Receiver	R&S	ESR26	101377	Dec.05,2019	Dec.05,2020
☑	Horn Antenna	TDK	HRN-0118	130939	Sep.17,2018	Sep.17,2021
☑	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Aug.11,2018	Aug.11,2021
☑	Preamplifier	TDK	PA-02-0118	TRS-305-00067	Dec.05,2019	Dec.05,2020
☑	Preamplifier	TDK	PA-02-2	TRS-307-00003	Dec.05,2019	Dec.05,2020
☑	Loop antenna	Schwarzbeck	1519B	00008	Jan.07,2019	Jan.07,2022
☑	High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Dec.05,2019	Dec.05,2020
Software						
Used	Description			Manufacturer	Name	Version
☑	Test Software for Radiated disturbance			Farad	EZ-EMC	Ver. UL-3A1
Other instruments						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.06,2019	Dec.05,2020

☑	Power sensor, Power Meter	R&S	OSP120	100921	Dec.06,2019	Dec.06,2020

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

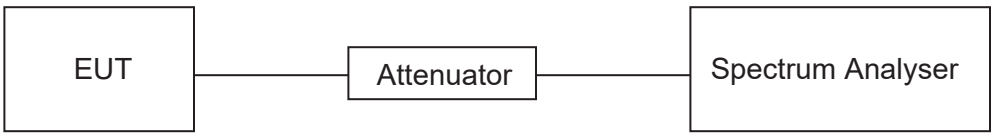
LIMITS

None; for reporting purposes only

PROCEDURE

Refer to ANSI C63.10-2013 clause 11.6 Zero – Span Spectrum Analyzer method.

TEST SETUP



TEST ENVIRONMENT

Temperature	27.1 °C	Relative Humidity	60.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Please refer to appendix G.

7.2. 6 dB DTS BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	For reporting purposes only.	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

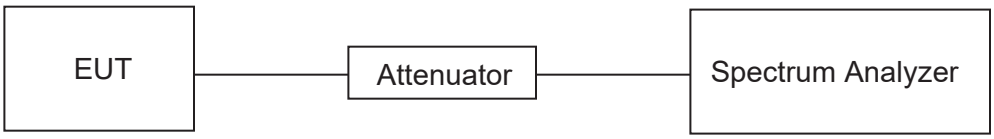
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Frequency Span	Between 1.5 times and 5.0 times the OBW
Detector	Peak
RBW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and 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.

TEST SETUP



TEST ENVIRONMENT

Temperature	27.1 °C	Relative Humidity	60.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Please refer to appendix A & B.

7.3. CONDUCTED OUTPUT POWER

LIMITS

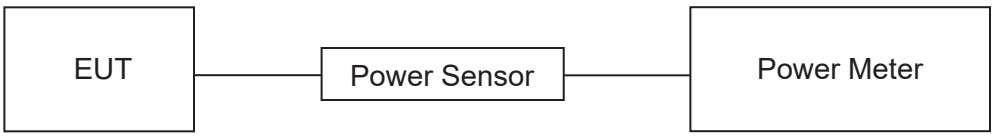
CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3) ISED RSS-247 5.4 (d)	Conducted Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.9.

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).
Measure peak emission level, the indicated level is the average output power, after any corrections for external attenuators and cables.

TEST SETUP



TEST ENVIRONMENT

Temperature	27.1 °C	Relative Humidity	60.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Please refer to appendix C.

7.4. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e) ISED RSS-247 5.2 (b)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

TEST PROCEDURE

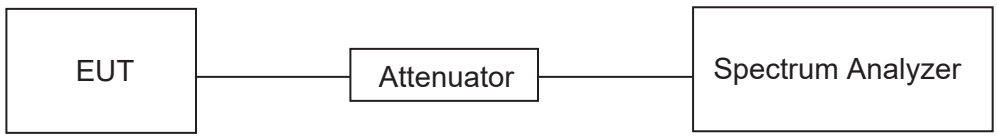
Refer to ANSI C63.10-2013 clause 11.10.

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



TEST ENVIRONMENT

Temperature	27.1 °C	Relative Humidity	60.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Please refer to appendix D.

7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	Conducted Bandedge and Spurious Emissions	at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.11 and 11.13.

Connect the EUT to the spectrum analyser and use the following settings for reference level measurement:

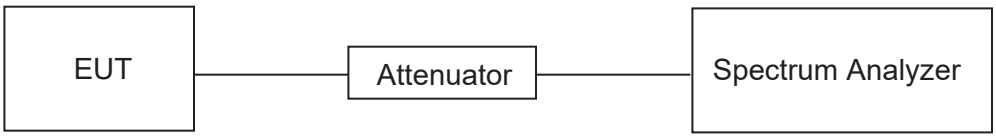
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level.
Change the settings for emission level measurement:

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in ANSI C63.10-2013 clause 11.11.

TEST SETUP



TEST ENVIRONMENT

Temperature	27.1 °C	Relative Humidity	60.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

Please refer to appendix E & F.

8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

Please refer to ISED RSS-GEN Clause 8.9 and Clause 8.10.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

ISED General field strength limits at frequencies below 30 MHz

Table 6 – General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) (µA/m)	Measurement distance (m)
9 - 490 kHz[Note 1]	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

ISED Restricted bands please refer to ISED RSS-GEN Clause 8.10

Table 7 – Restricted frequency bands[Note 1]		
MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 – 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 – 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 – 8500	
108 – 138		

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

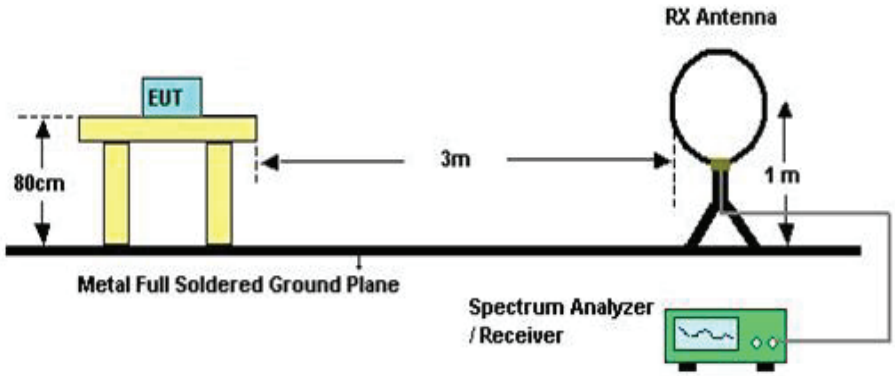
FCC Restricted bands of operation refer to FCC §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST SETUP AND PROCEDURE

Below 30 MHz



The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz) / 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz) / 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 11.11.

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80cm above ground.

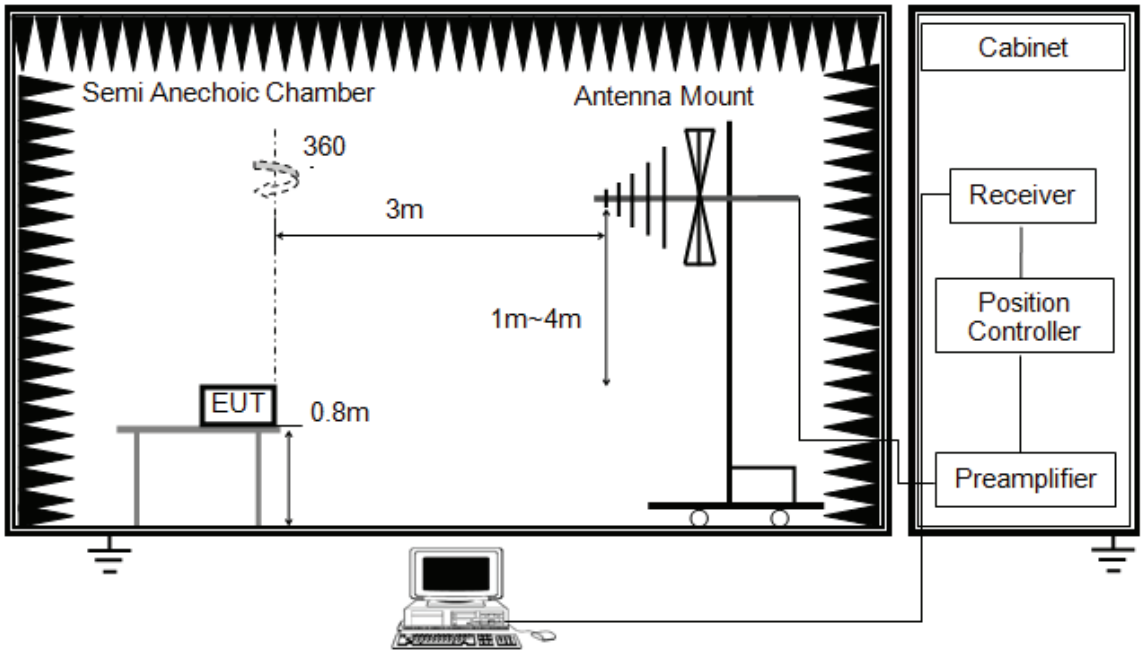
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

Below 1 GHz and above 30 MHz



The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 11.11.

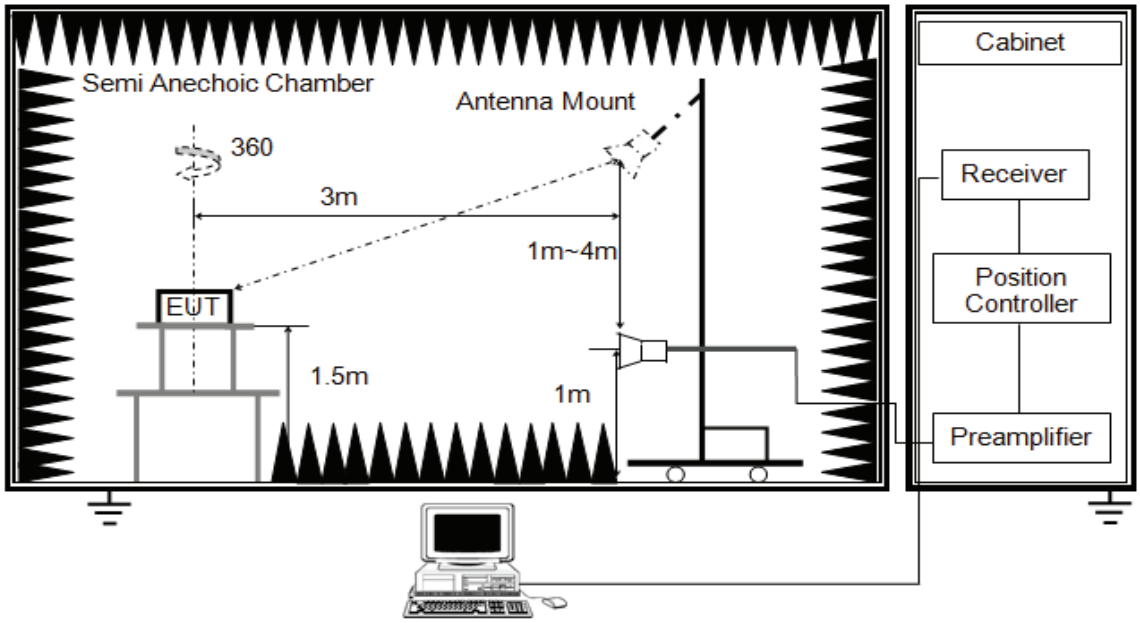
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1 GHz



The setting of the spectrum analyser

RBW	1 MHz
VBW	PEAK: 3 MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 11.11 and 11.12.

2. The EUT was arranged to its worst case and then tune the antenna tower (1.5 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

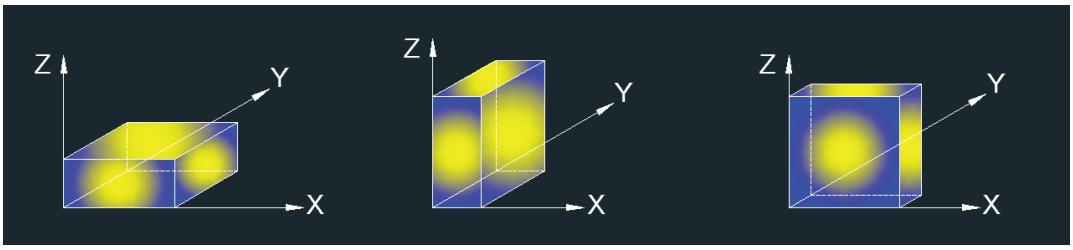
3. The EUT was placed on a turntable with 1.5 m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

TEST ENVIRONMENT

Temperature	27.3 °C	Relative Humidity	53.2 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

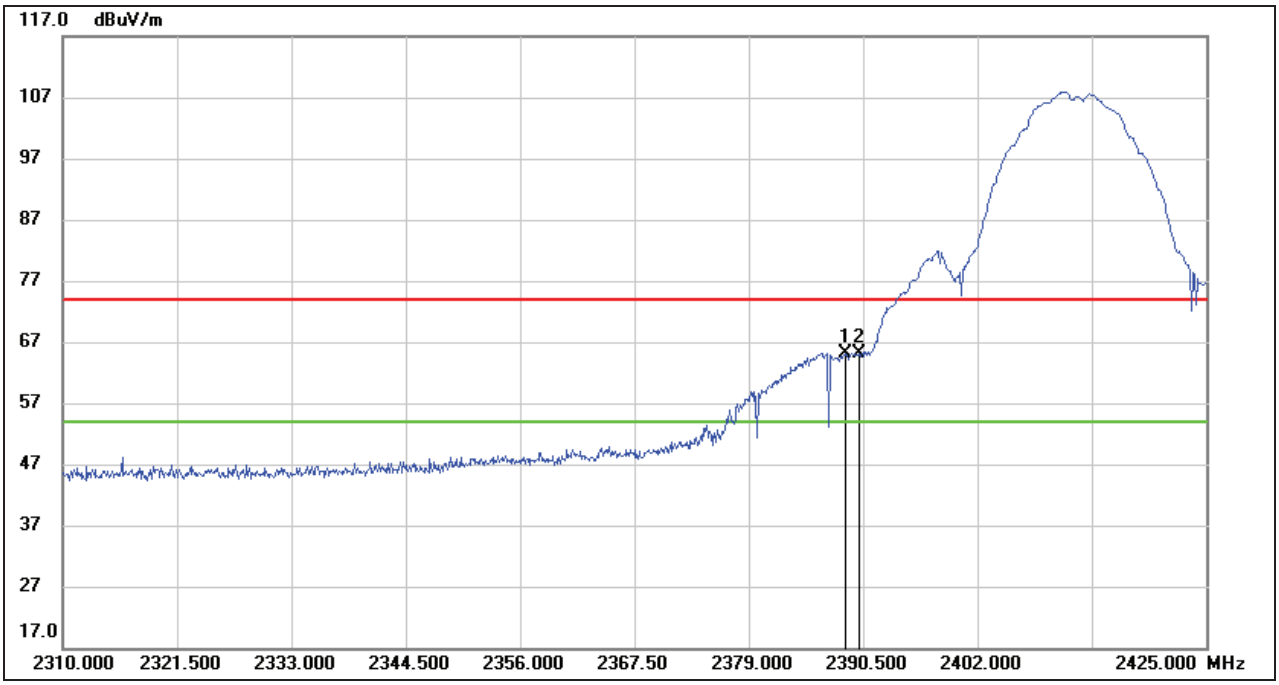
RESULTS

8.1. RESTRICTED BANDEDGE

8.1.1. 802.11b SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

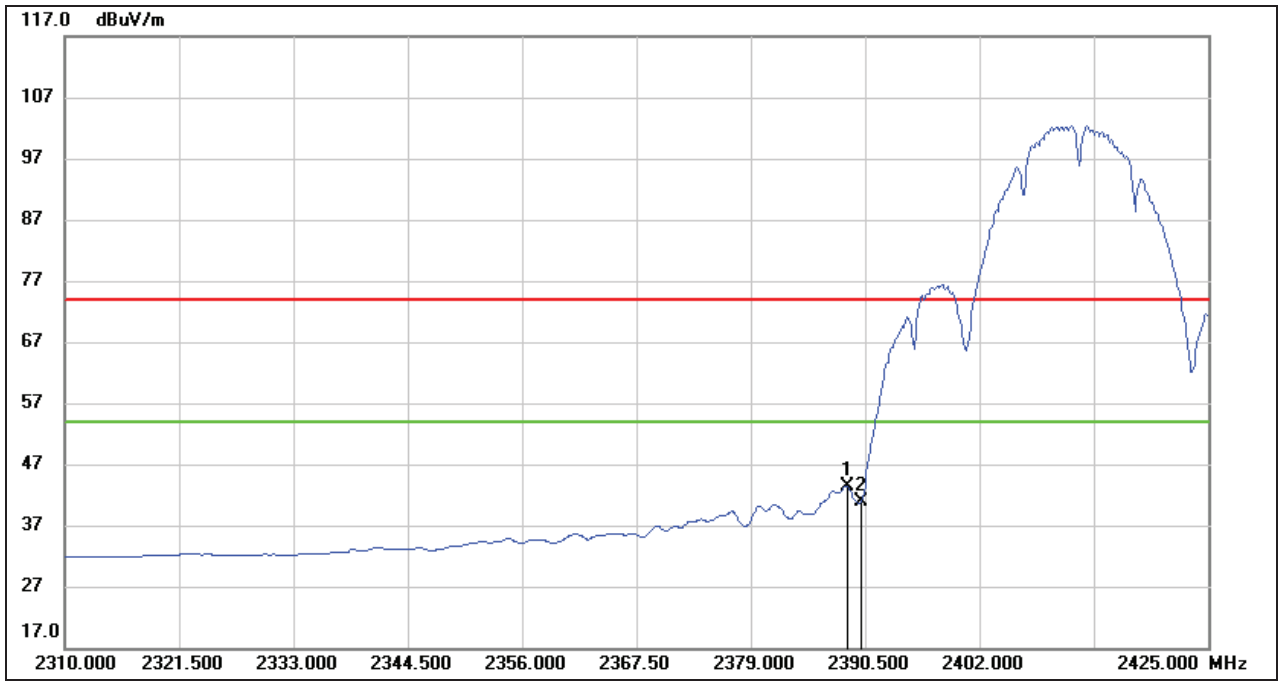
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.660	53.13	11.95	65.08	74.00	-8.92	peak
2	2390.000	53.27	11.96	65.23	74.00	-8.77	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

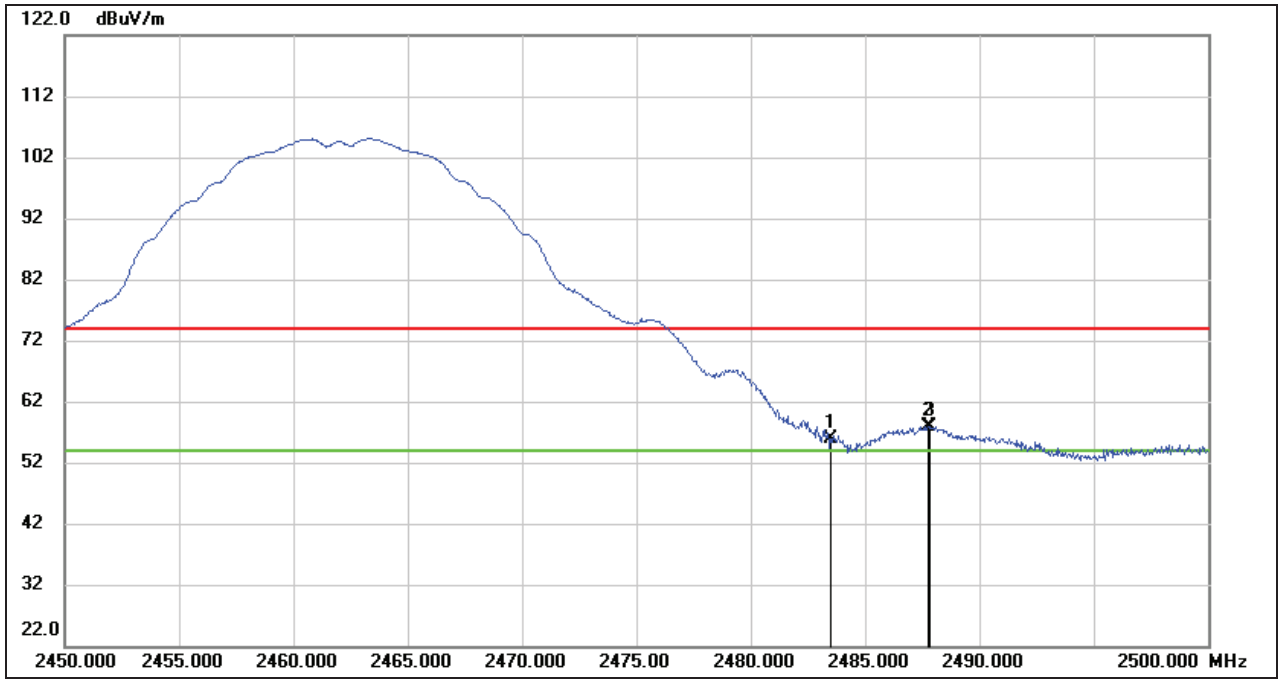


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.660	31.52	11.95	43.47	54.00	-10.53	AVG
2	2390.000	28.82	11.96	40.78	54.00	-13.22	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

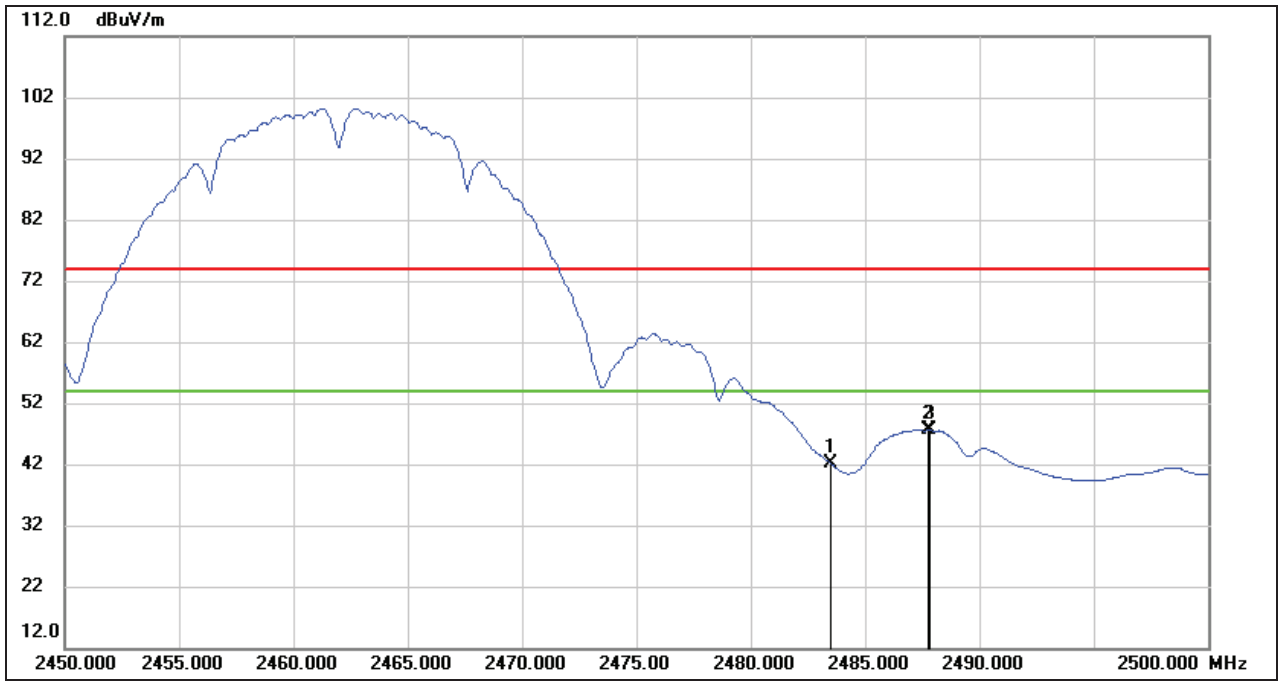
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	43.39	12.38	55.77	74.00	-18.23	peak
2	2487.750	45.53	12.39	57.92	74.00	-16.08	peak
3	2487.800	45.44	12.39	57.83	74.00	-16.17	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	29.78	12.38	42.16	54.00	-11.84	AVG
2	2487.750	35.17	12.39	47.56	54.00	-6.44	AVG
3	2487.800	35.17	12.39	47.56	54.00	-6.44	AVG

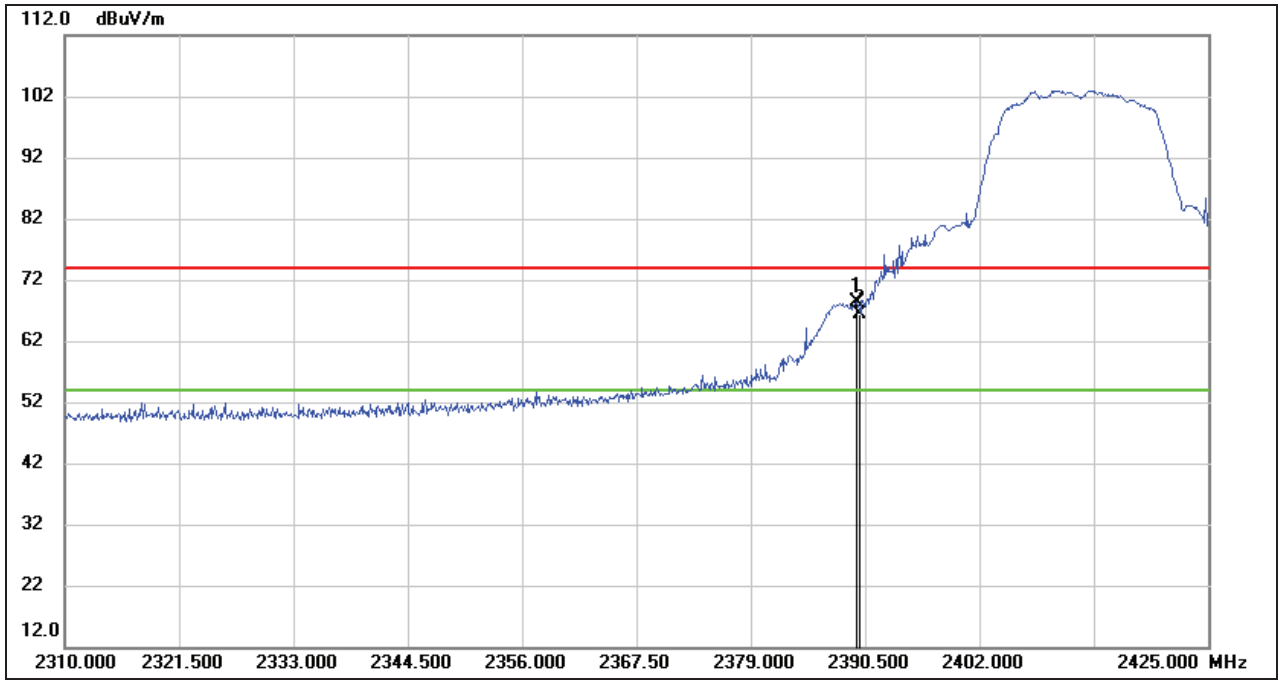
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: The Horizontal and vertical position have been tested, only the worst data for Horizontal was recorded in the report.

8.1.2. 802.11g SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

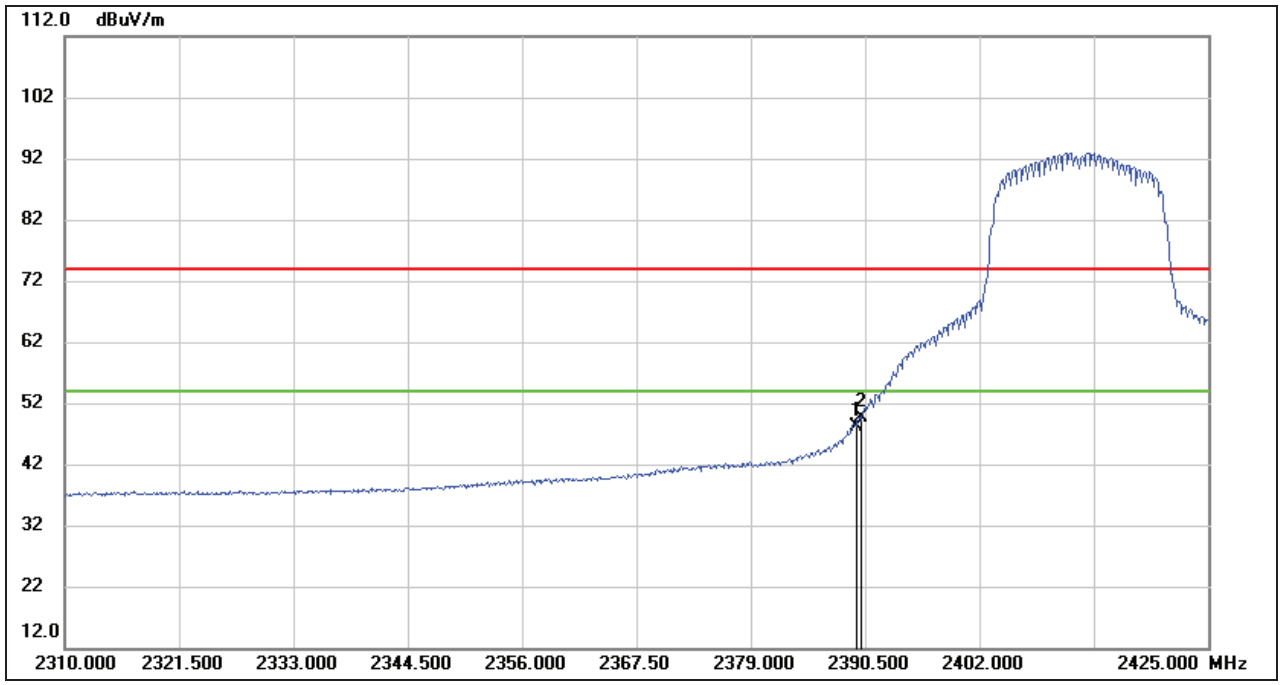
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.580	56.54	11.96	68.50	74.00	-5.50	peak
2	2390.000	54.36	11.96	66.32	74.00	-7.68	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

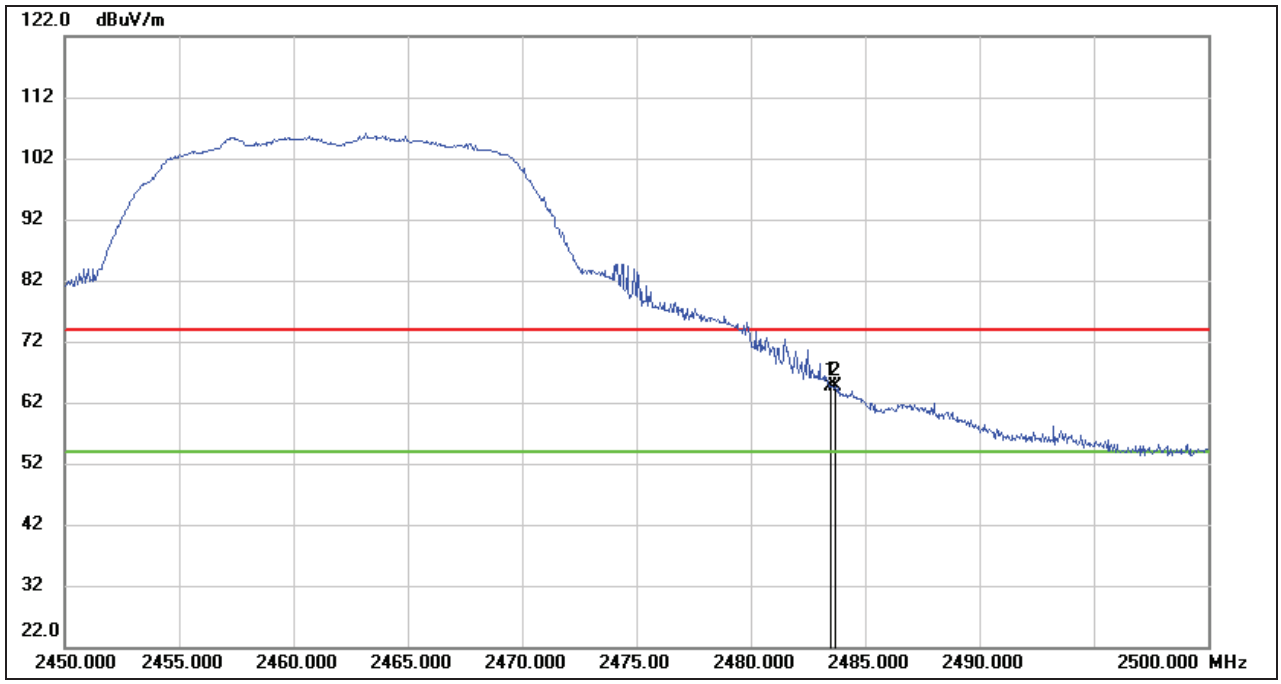


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.580	36.08	11.96	48.04	54.00	-5.96	AVG
2	2390.000	37.74	11.96	49.70	54.00	-4.30	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

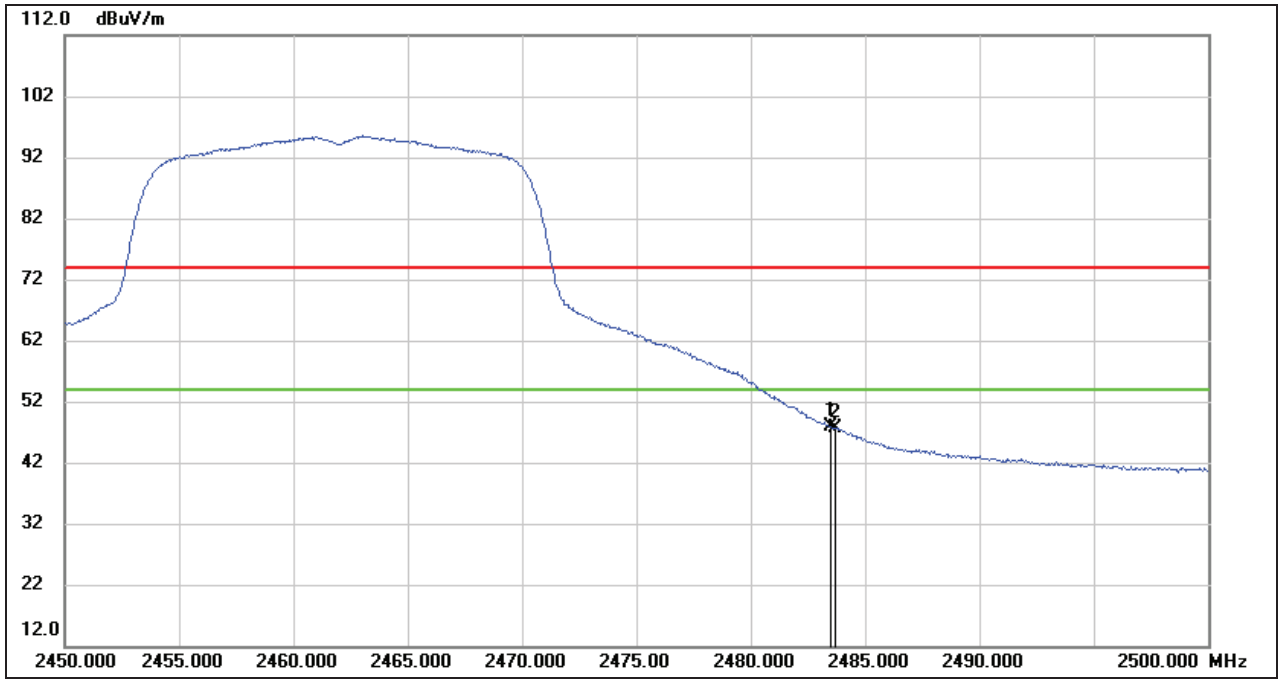
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	52.29	12.38	64.67	74.00	-9.33	peak
2	2483.700	52.34	12.38	64.72	74.00	-9.28	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.50	12.38	47.88	54.00	-6.12	AVG
2	2483.700	35.24	12.38	47.62	54.00	-6.38	AVG

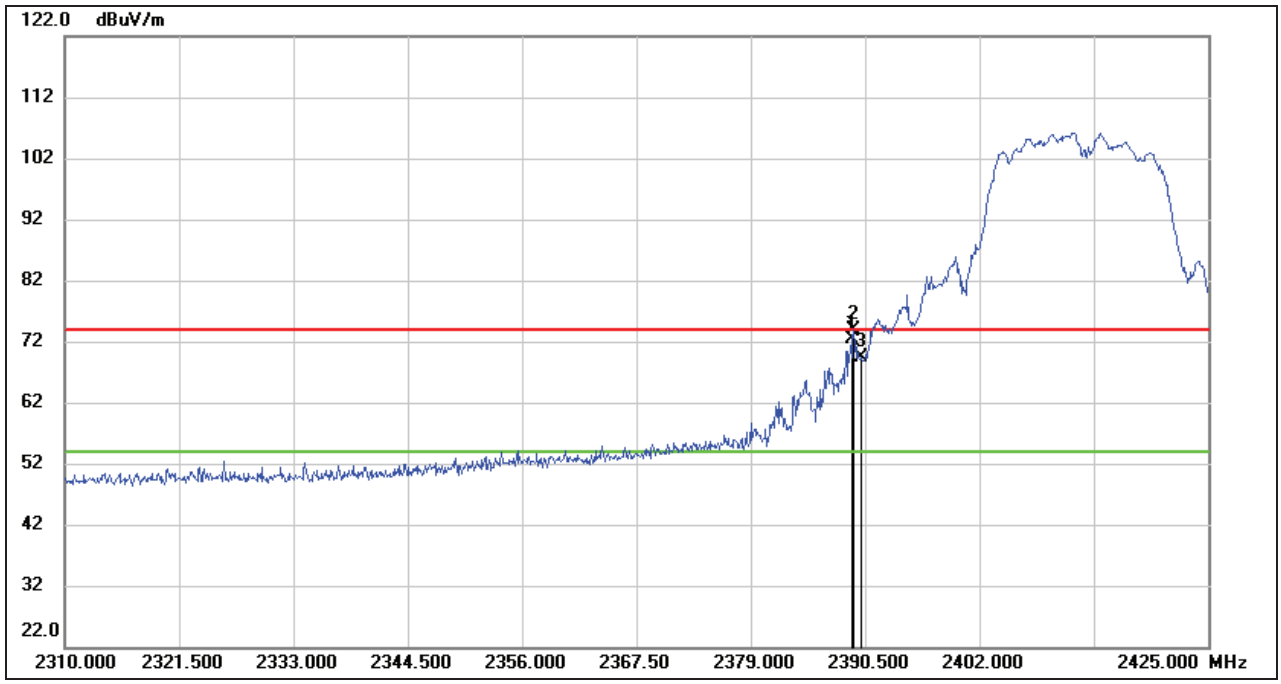
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: The Horizontal and vertical position have been tested, only the worst data for Horizontal was recorded in the report.

8.1.3. 802.11n HT20 MODE

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

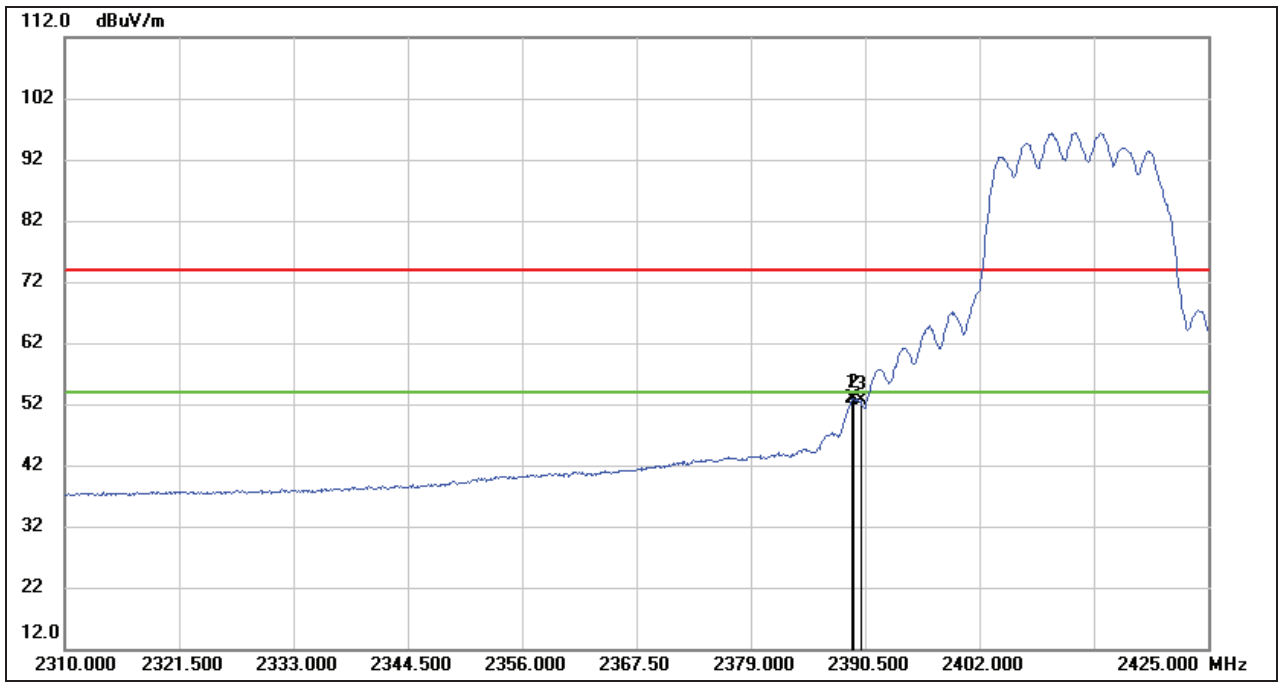
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.235	60.40	11.95	72.35	74.00	-1.65	peak
2	2389.350	62.01	11.96	73.97	74.00	-0.03	peak
3	2390.000	57.32	11.96	69.28	74.00	-4.72	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

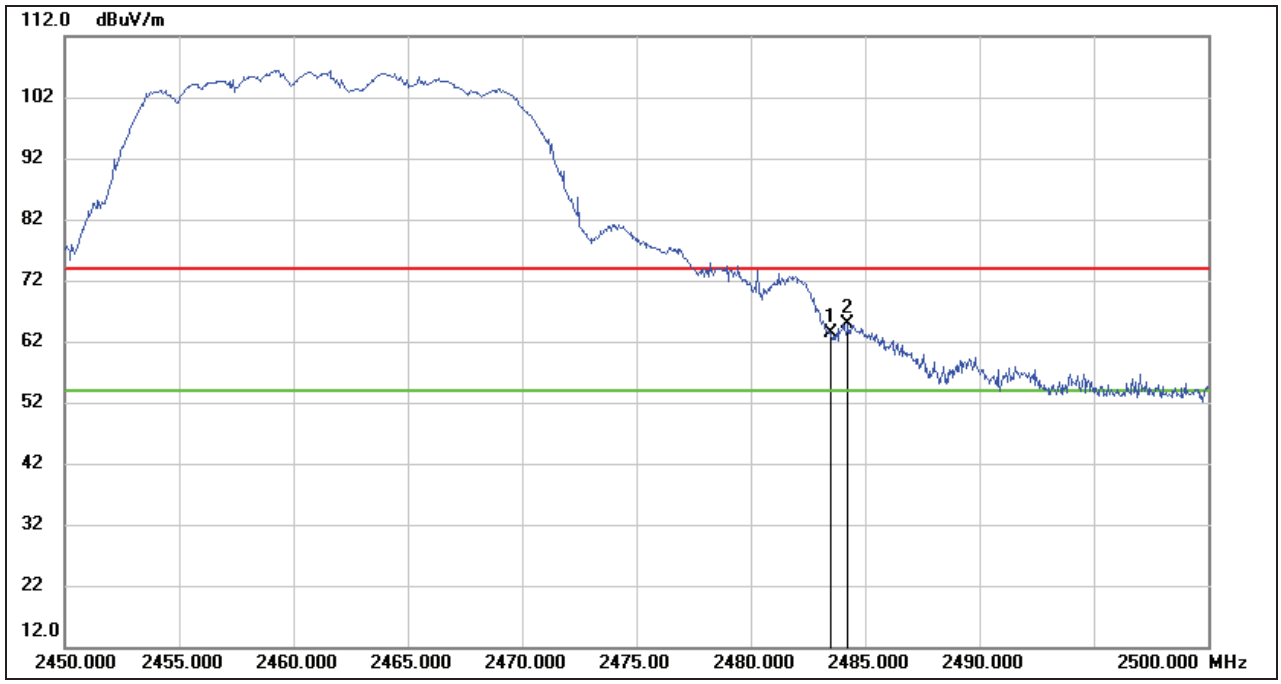


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.235	40.94	11.95	52.89	54.00	-1.11	AVG
2	2389.350	40.85	11.96	52.81	54.00	-1.19	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

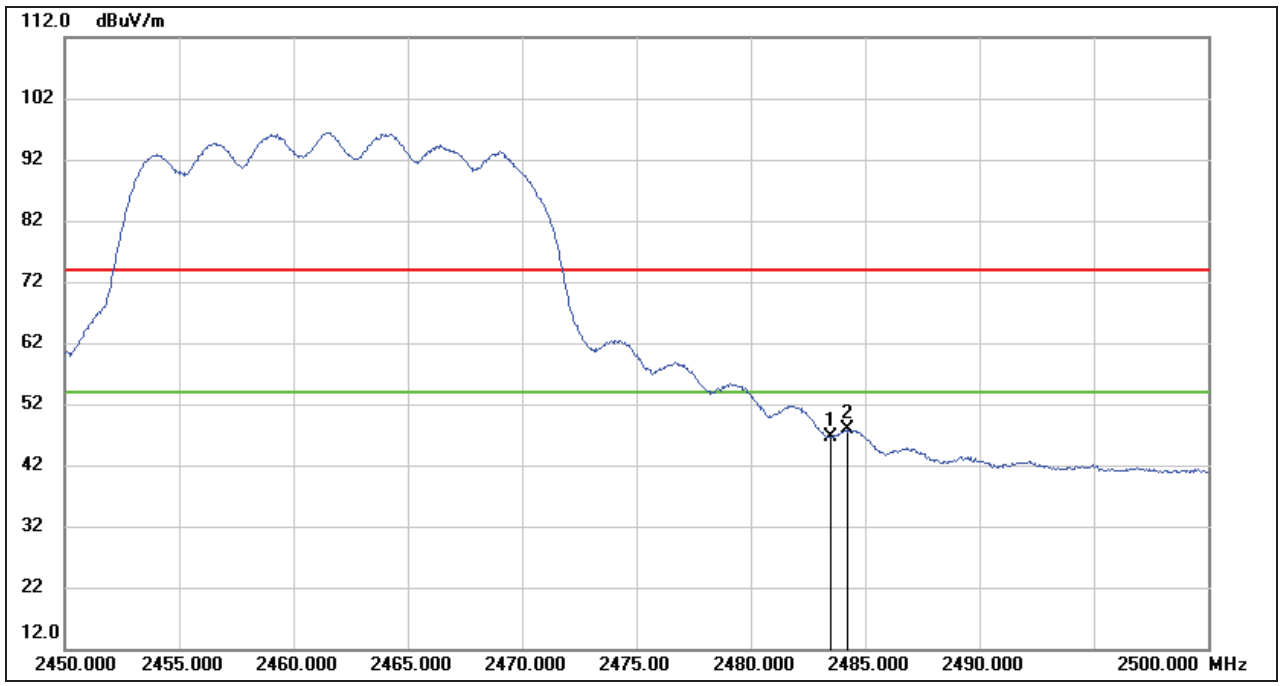
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	50.94	12.38	63.32	74.00	-10.68	peak
2	2484.250	52.49	12.38	64.87	74.00	-9.13	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	34.19	12.38	46.57	54.00	-7.43	AVG
2	2484.250	35.57	12.38	47.95	54.00	-6.05	AVG

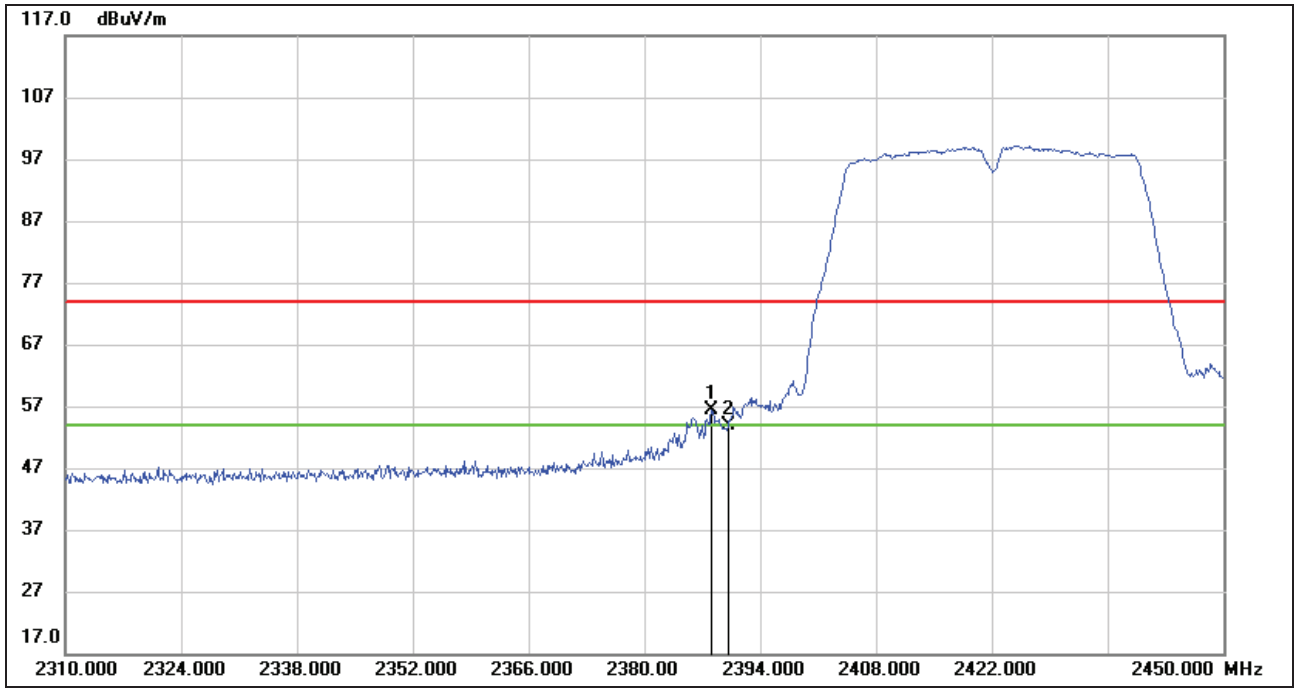
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: The Horizontal and vertical position have been tested, only the worst data for Horizontal was recorded in the report.

8.1.4. 802.11n HT40 MODE

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

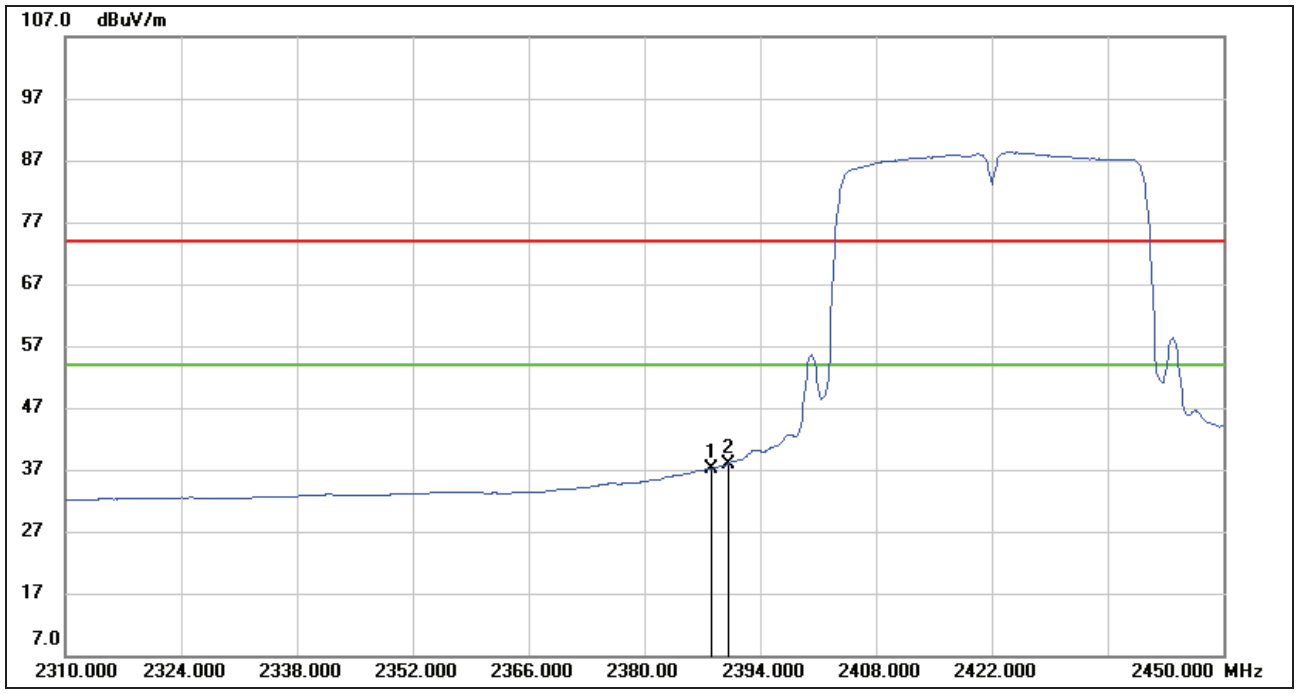
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.120	44.39	11.95	56.34	74.00	-17.66	peak
2	2390.000	41.84	11.96	53.80	74.00	-20.20	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

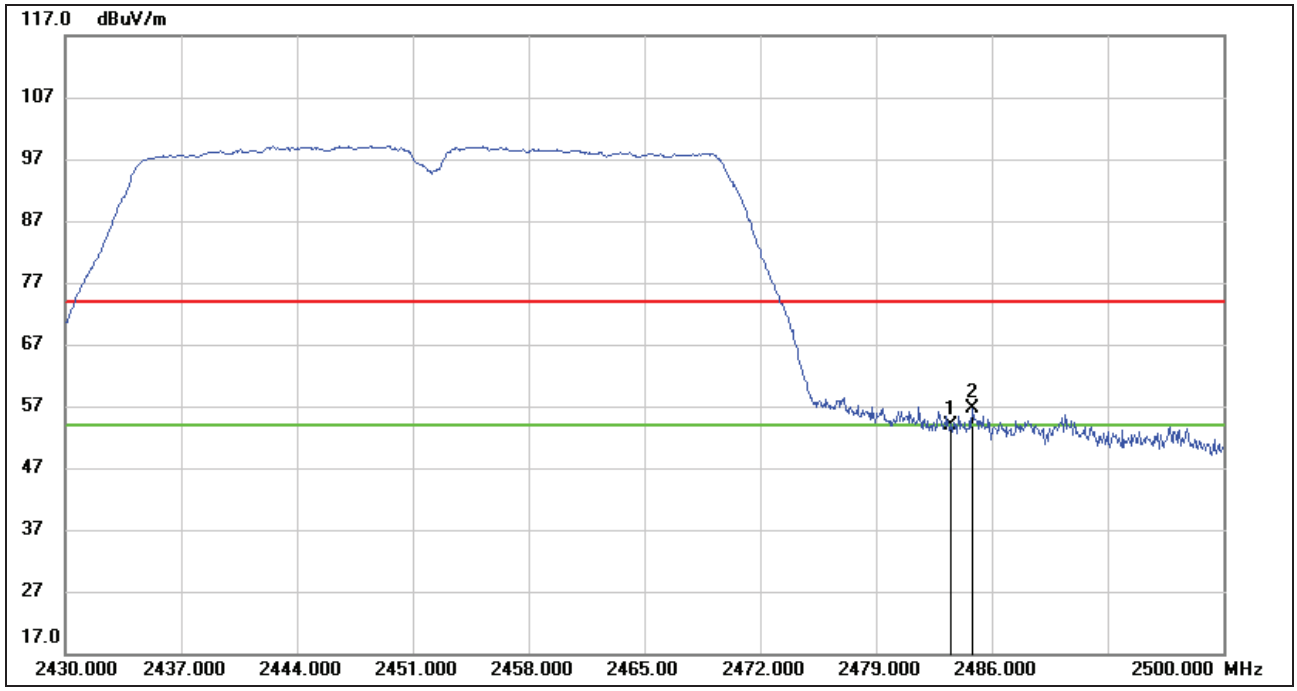


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.120	25.24	11.95	37.19	54.00	-16.81	AVG
2	2390.000	25.99	11.96	37.95	54.00	-16.05	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

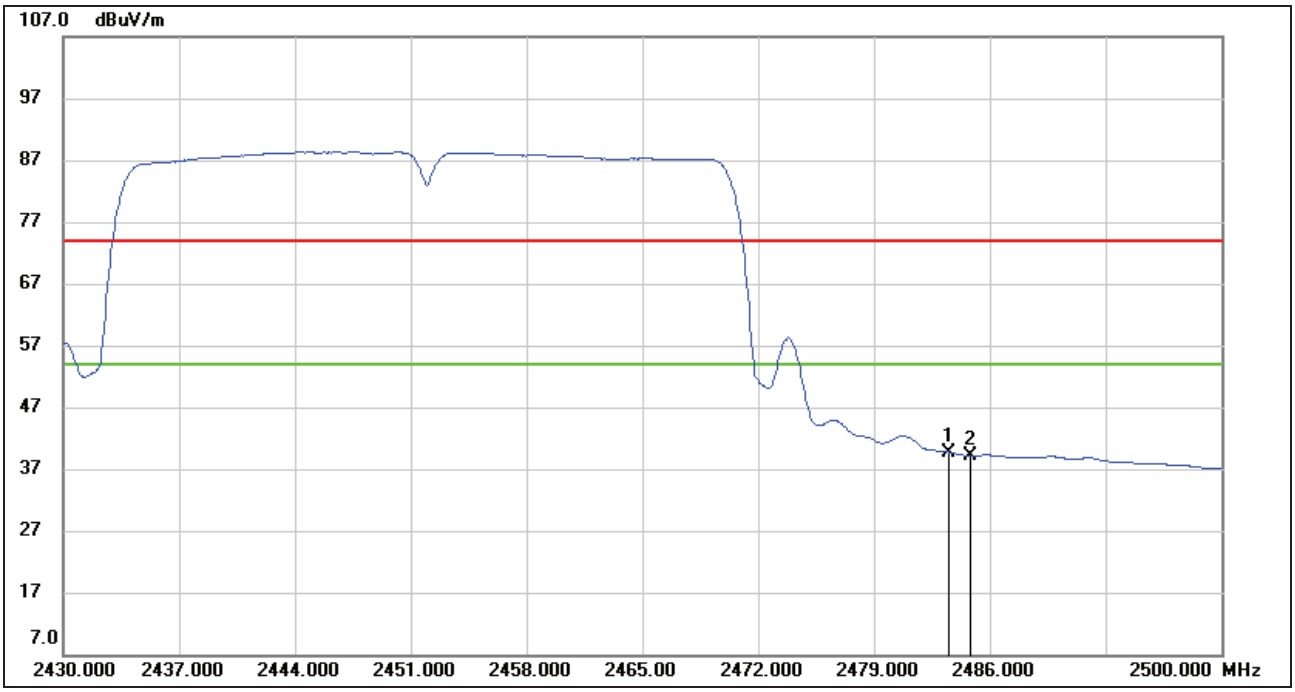
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	41.54	12.38	53.92	74.00	-20.08	peak
2	2484.810	44.35	12.38	56.73	74.00	-17.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	27.32	12.38	39.70	54.00	-14.30	AVG
2	2484.810	26.79	12.38	39.17	54.00	-14.83	AVG

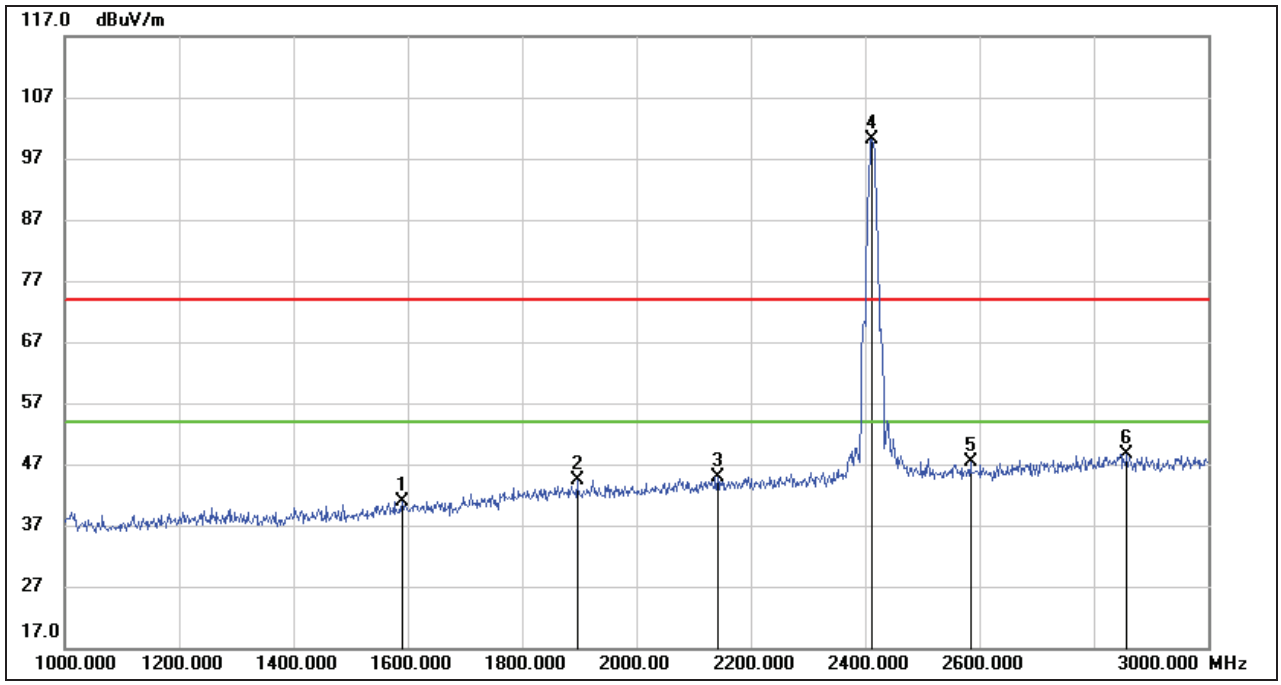
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: The Horizontal and vertical position have been tested, only the worst data for Horizontal was recorded in the report.

8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

8.2.1. 802.11b SISO MODE

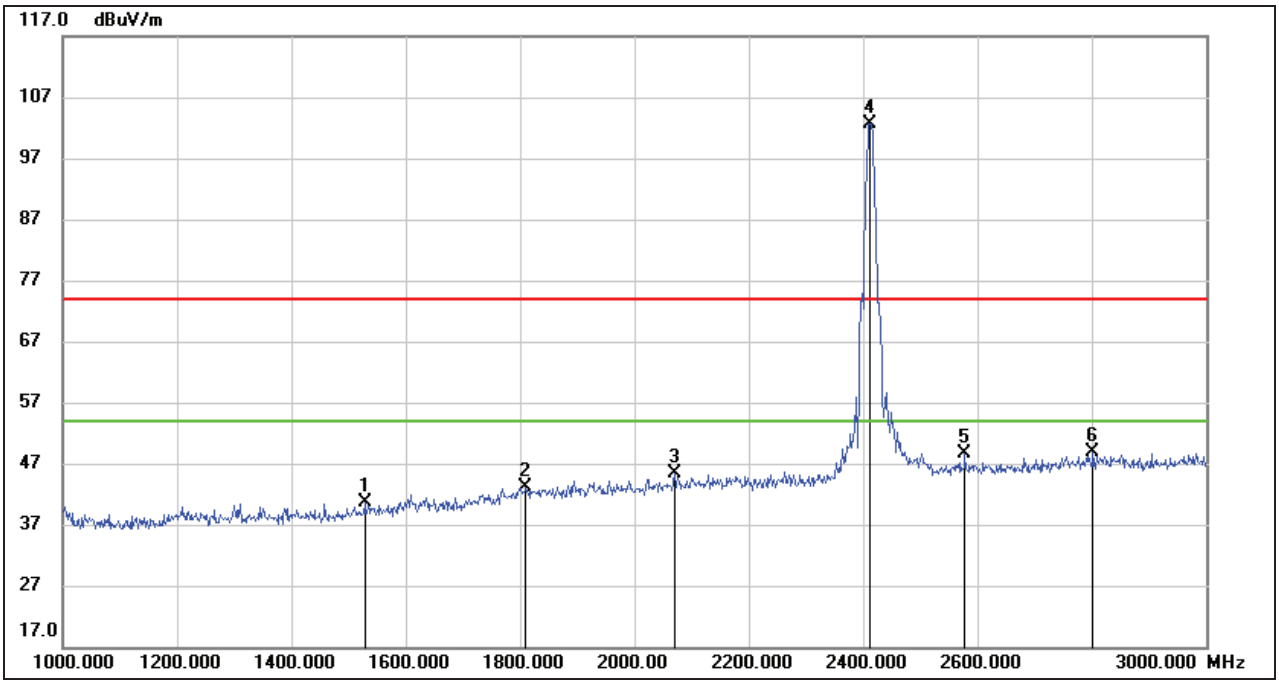
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1590.000	33.13	7.87	41.00	74.00	-33.00	peak
2	1896.000	34.36	9.96	44.32	74.00	-29.68	peak
3	2142.000	33.73	11.16	44.89	74.00	-29.11	peak
4	2412.000	88.00	12.08	100.08	/	/	fundamental
5	2584.000	34.91	12.41	47.32	74.00	-26.68	peak
6	2858.000	34.73	13.92	48.65	74.00	-25.35	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1528.000	33.44	7.25	40.69	74.00	-33.31	peak
2	1810.000	33.31	9.81	43.12	74.00	-30.88	peak
3	2070.000	34.69	10.80	45.49	74.00	-28.51	peak
4	2412.000	90.60	12.08	102.68	/	/	fundamental
5	2578.000	36.20	12.42	48.62	74.00	-25.38	peak
6	2802.000	35.10	13.77	48.87	74.00	-25.13	peak

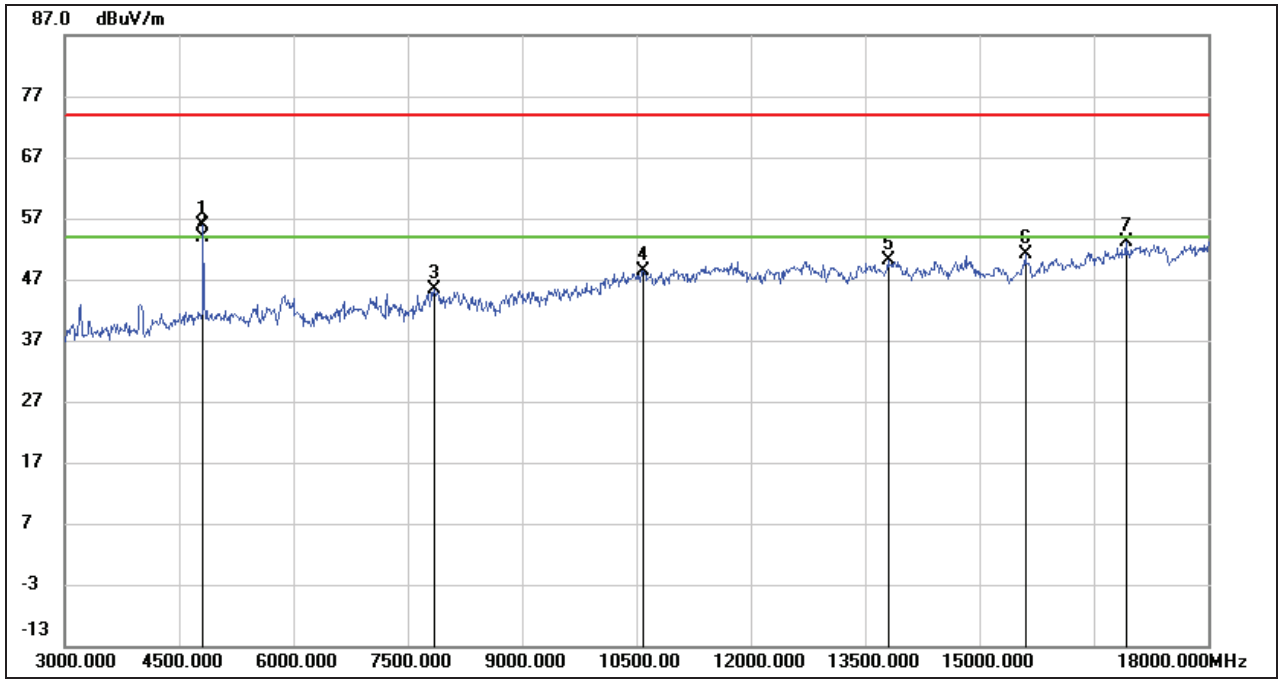
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

Note: All the modes and channels have been tested, only the worst data was recorded in the report.

8.3. SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)

8.3.1. 802.11b SISO MODE

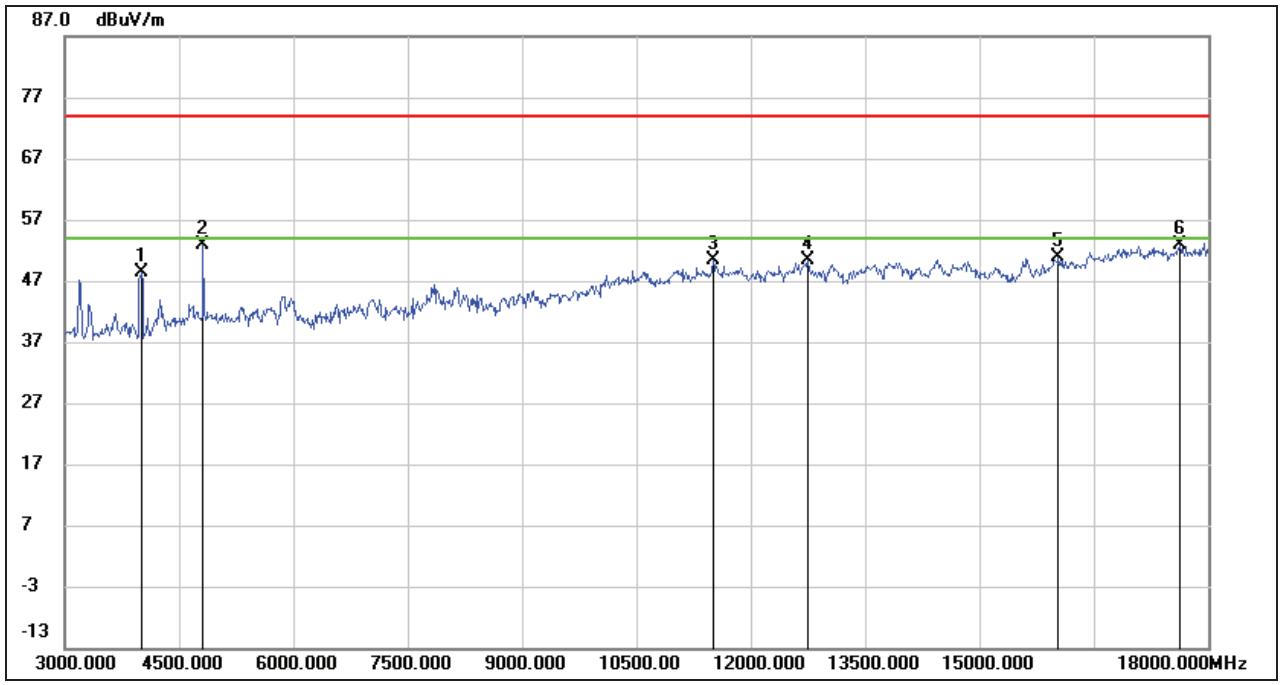
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	55.34	0.51	55.85	74.00	-18.15	peak
2	4815.000	53.34	0.51	53.85	54.00	-0.15	AVG
3	7845.000	37.76	7.62	45.38	74.00	-28.62	peak
4	10590.000	36.48	11.88	48.36	74.00	-25.64	peak
5	13800.000	32.97	17.10	50.07	74.00	-23.93	peak
6	15600.000	34.16	16.98	51.14	74.00	-22.86	peak
7	16920.000	33.08	20.06	53.14	74.00	-20.86	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

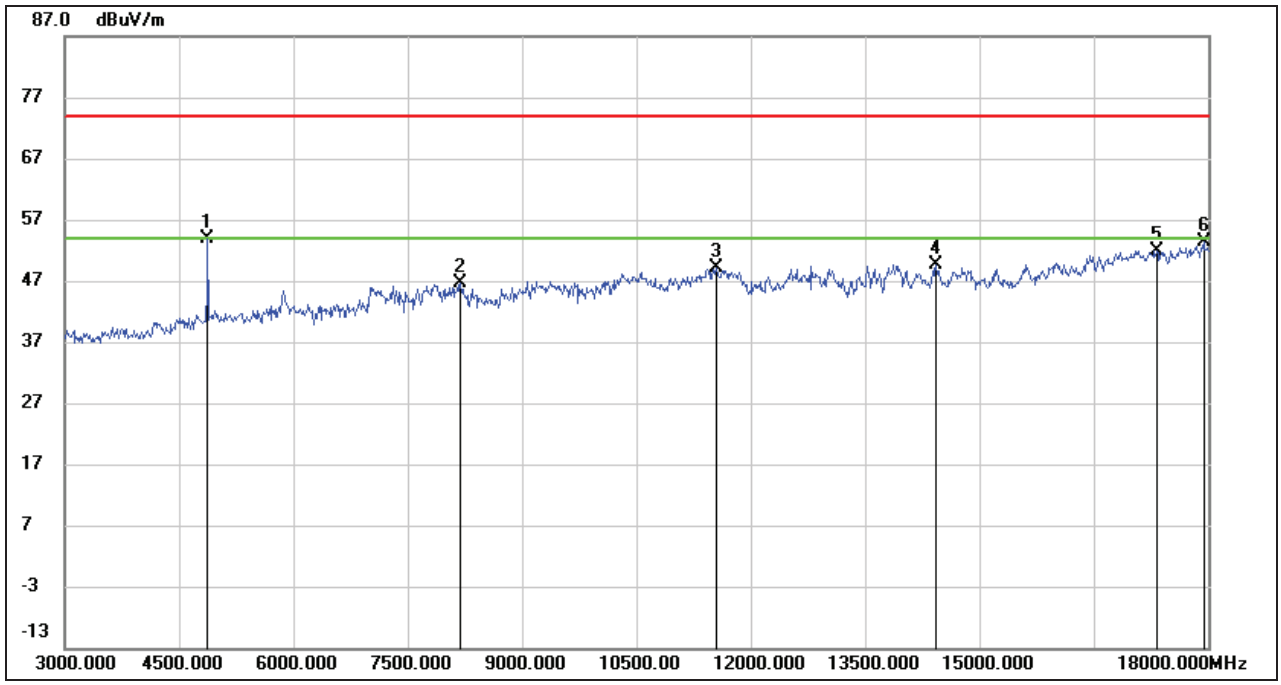
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	51.36	-2.89	48.47	74.00	-25.53	peak
2	4815.000	52.39	0.51	52.90	74.00	-21.10	peak
3	11505.000	36.84	13.42	50.26	74.00	-23.74	peak
4	12750.000	35.35	14.98	50.33	74.00	-23.67	peak
5	16035.000	33.09	17.85	50.94	74.00	-23.06	peak
6	17625.000	31.02	21.95	52.97	74.00	-21.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

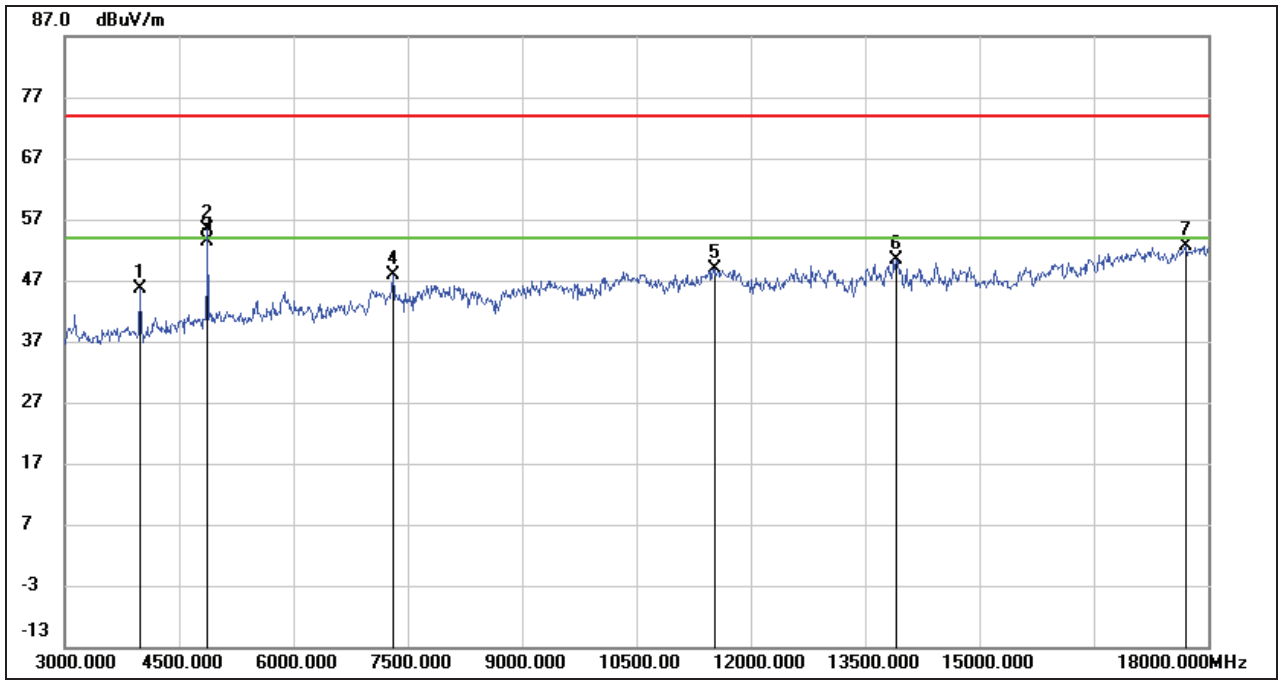
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	53.08	0.76	53.84	74.00	-20.16	peak
2	8190.000	38.22	8.36	46.58	74.00	-27.42	peak
3	11550.000	35.82	13.30	49.12	74.00	-24.88	peak
4	14430.000	33.39	16.35	49.74	74.00	-24.26	peak
5	17325.000	30.21	21.67	51.88	74.00	-22.12	peak
6	17940.000	29.95	23.39	53.34	74.00	-20.66	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

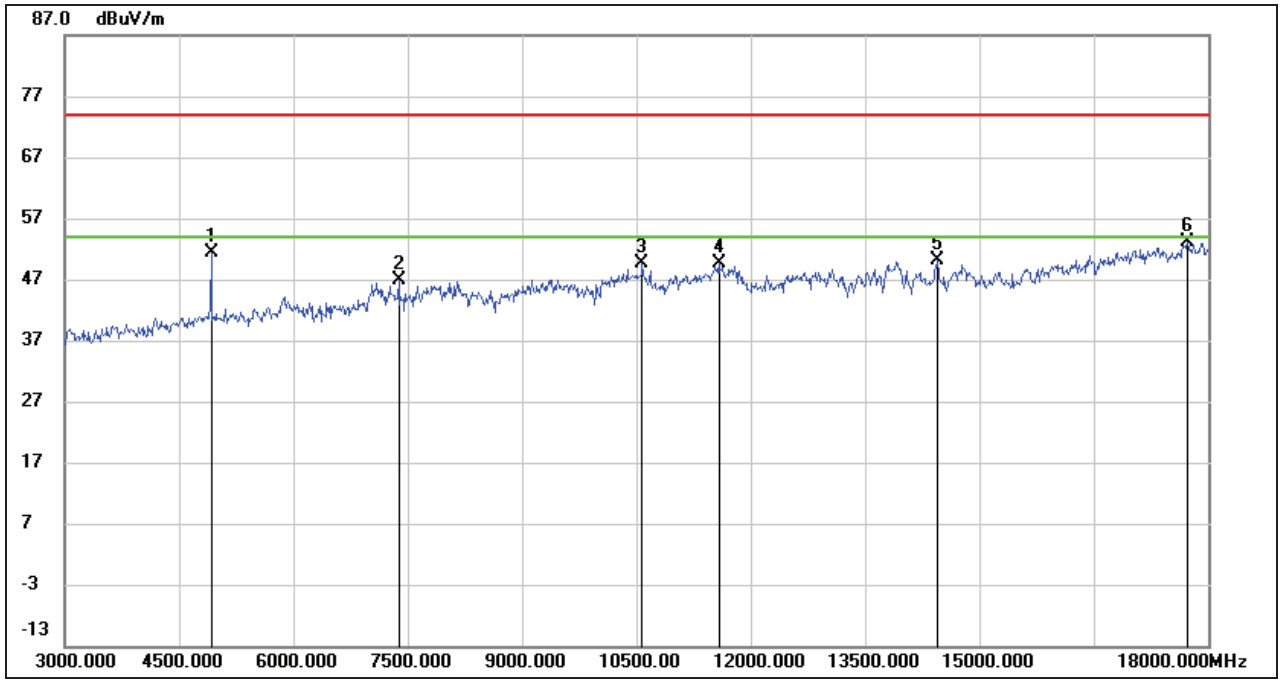
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	48.48	-2.89	45.59	74.00	-28.41	peak
2	4875.000	54.60	0.76	55.36	74.00	-18.64	peak
3	4875.000	52.69	0.76	53.45	54.00	-0.55	AVG
4	7305.000	41.87	6.08	47.95	74.00	-26.05	peak
5	11520.000	35.55	13.38	48.93	74.00	-25.07	peak
6	13905.000	34.25	16.20	50.45	74.00	-23.55	peak
7	17700.000	30.13	22.43	52.56	74.00	-21.44	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

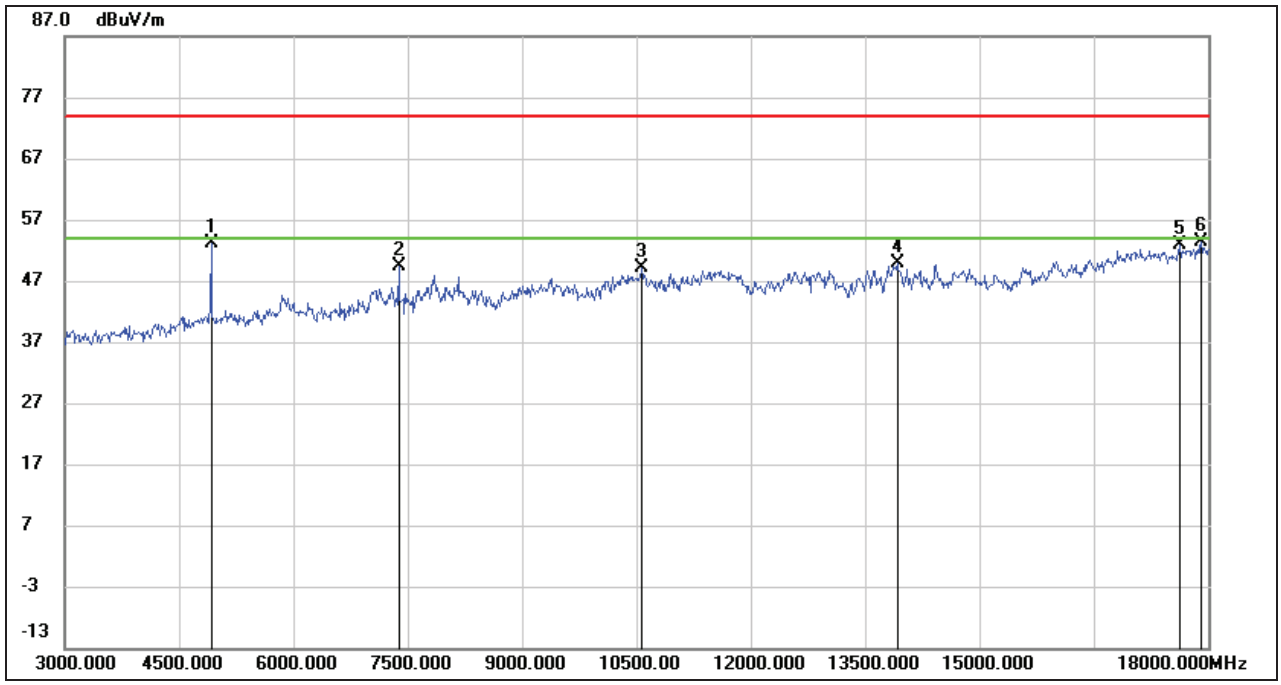
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	50.52	0.96	51.48	74.00	-22.52	peak
2	7380.000	40.37	6.41	46.78	74.00	-27.22	peak
3	10575.000	37.75	11.81	49.56	74.00	-24.44	peak
4	11580.000	36.34	13.23	49.57	74.00	-24.43	peak
5	14445.000	33.70	16.36	50.06	74.00	-23.94	peak
6	17730.000	30.31	22.70	53.01	74.00	-20.99	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

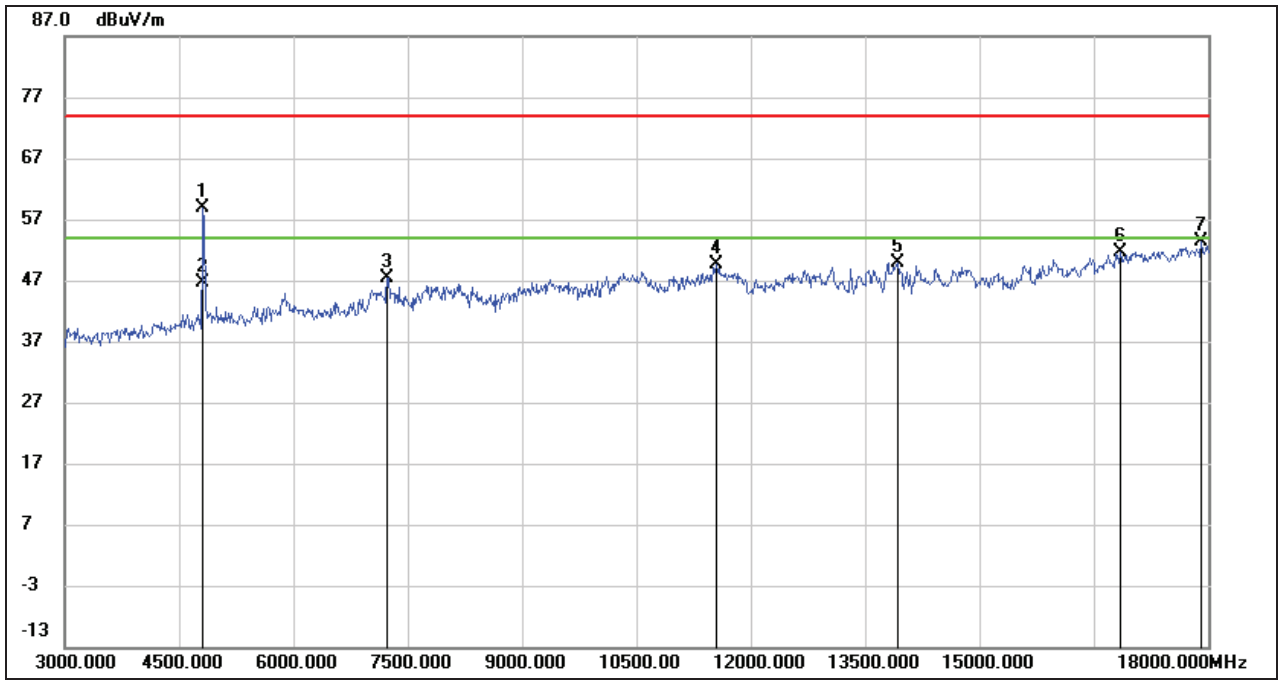


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	52.25	0.96	53.21	74.00	-20.79	peak
2	7380.000	43.00	6.41	49.41	74.00	-24.59	peak
3	10575.000	37.39	11.81	49.20	74.00	-24.80	peak
4	13920.000	33.77	16.17	49.94	74.00	-24.06	peak
5	17625.000	30.88	21.95	52.83	74.00	-21.17	peak
6	17910.000	30.02	23.35	53.37	74.00	-20.63	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.2. 802.11g SISO MODE

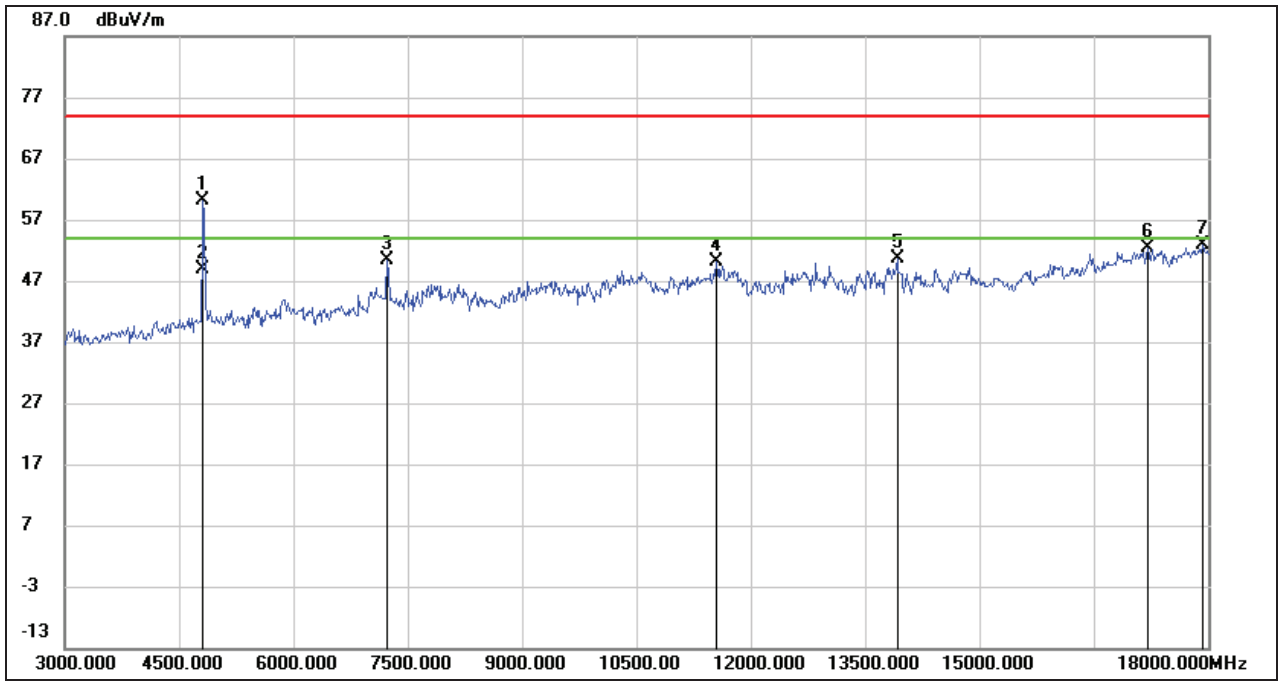
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	58.33	0.51	58.84	74.00	-15.16	peak
2	4815.000	46.22	0.51	46.73	54.00	-7.27	AVG
3	7230.000	41.49	5.89	47.38	74.00	-26.62	peak
4	11550.000	36.21	13.30	49.51	74.00	-24.49	peak
5	13935.000	33.81	16.15	49.96	74.00	-24.04	peak
6	16845.000	31.62	19.96	51.58	74.00	-22.42	peak
7	17910.000	30.14	23.35	53.49	74.00	-20.51	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

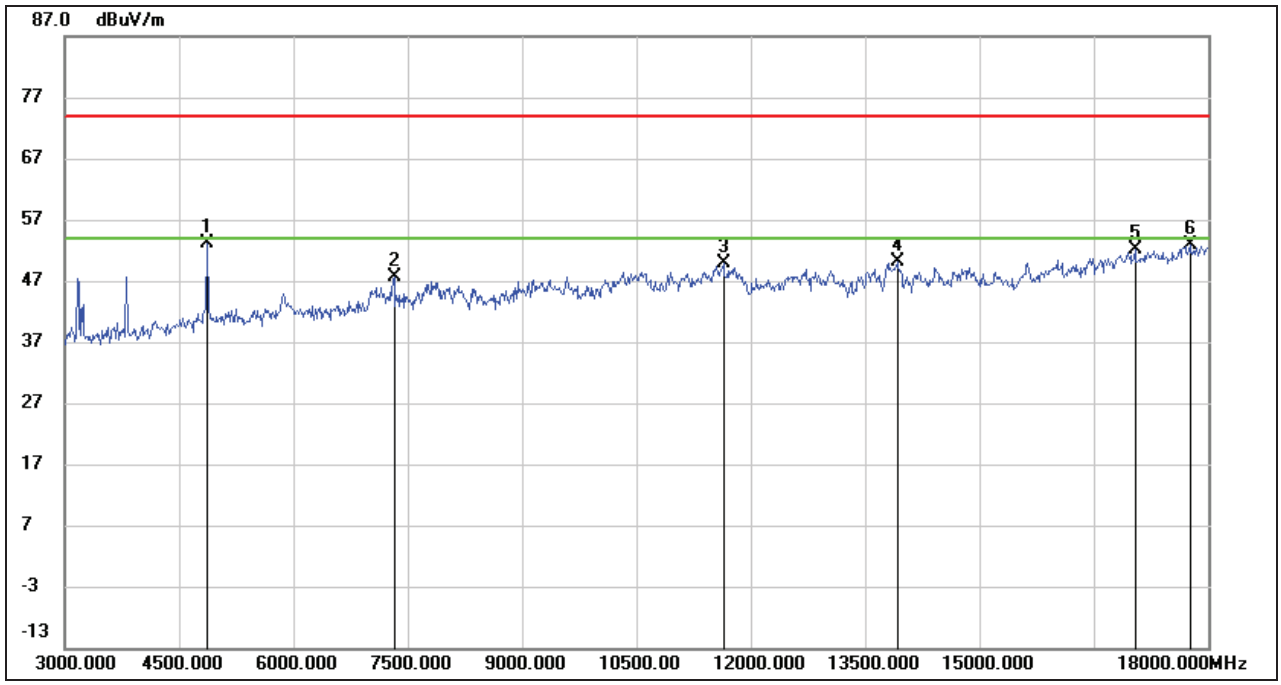
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	59.60	0.51	60.11	74.00	-13.89	peak
2	4815.000	48.29	0.51	48.80	54.00	-5.20	AVG
3	7230.000	44.48	5.89	50.37	74.00	-23.63	peak
4	11550.000	36.85	13.30	50.15	74.00	-23.85	peak
5	13920.000	34.53	16.17	50.70	74.00	-23.30	peak
6	17205.000	31.31	20.95	52.26	74.00	-21.74	peak
7	17925.000	29.60	23.37	52.97	74.00	-21.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

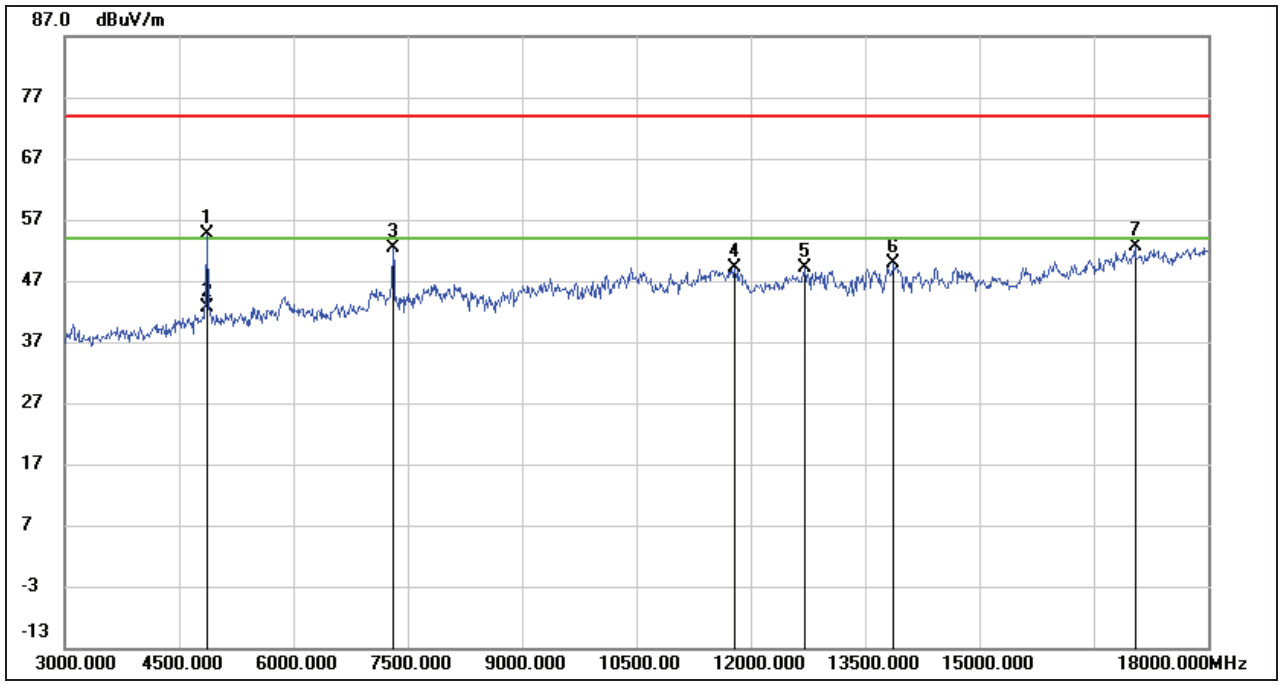
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	52.32	0.70	53.02	74.00	-20.98	peak
2	7320.000	41.37	6.14	47.51	74.00	-26.49	peak
3	11640.000	36.83	13.09	49.92	74.00	-24.08	peak
4	13920.000	34.04	16.17	50.21	74.00	-23.79	peak
5	17040.000	31.60	20.49	52.09	74.00	-21.91	peak
6	17760.000	29.91	22.95	52.86	74.00	-21.14	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

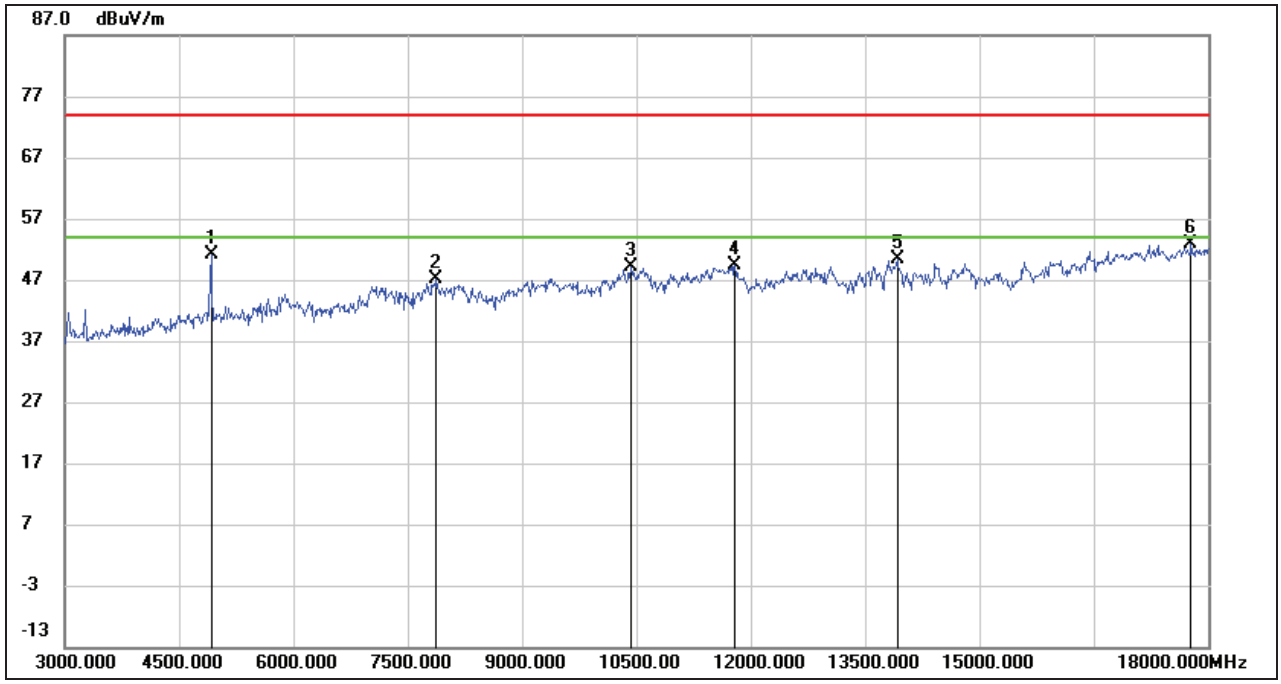
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	53.84	0.76	54.60	74.00	-19.40	peak
2	4875.000	41.83	0.76	42.59	54.00	-11.41	AVG
3	7305.000	46.21	6.08	52.29	74.00	-21.71	peak
4	11790.000	35.94	13.17	49.11	74.00	-24.89	peak
5	12705.000	34.82	14.35	49.17	74.00	-24.83	peak
6	13875.000	33.50	16.44	49.94	74.00	-24.06	peak
7	17040.000	32.06	20.49	52.55	74.00	-21.45	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

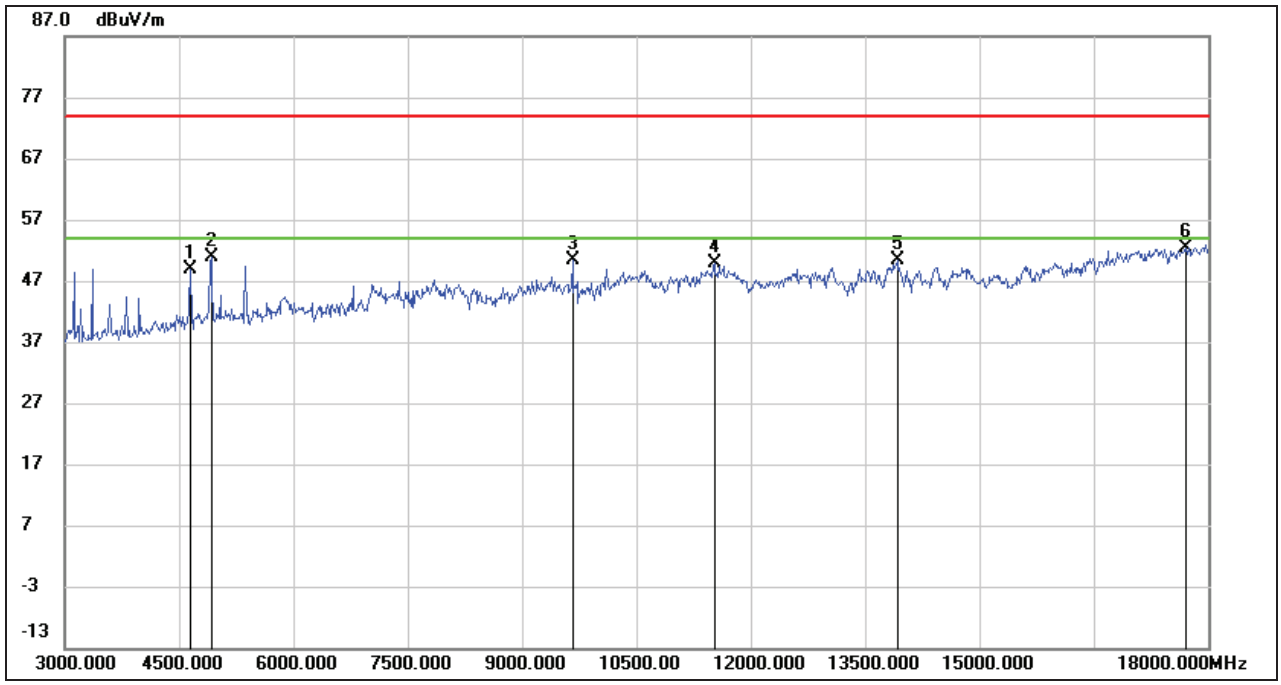
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	50.15	0.96	51.11	74.00	-22.89	peak
2	7875.000	39.74	7.40	47.14	74.00	-26.86	peak
3	10425.000	38.17	11.08	49.25	74.00	-24.75	peak
4	11790.000	36.09	13.17	49.26	74.00	-24.74	peak
5	13920.000	34.09	16.17	50.26	74.00	-23.74	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

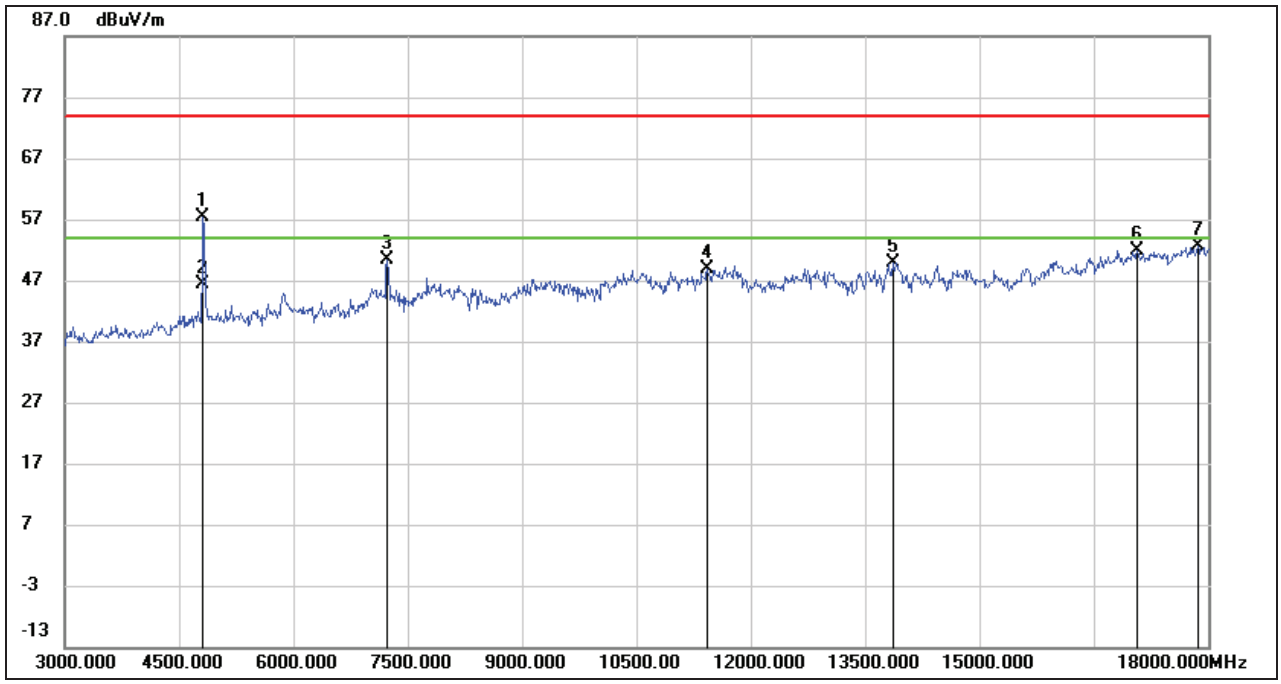


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4650.000	49.09	-0.12	48.97	74.00	-25.03	peak
2	4920.000	49.87	0.96	50.83	74.00	-23.17	peak
3	9660.000	40.78	9.65	50.43	74.00	-23.57	peak
4	11520.000	36.52	13.38	49.90	74.00	-24.10	peak
5	13920.000	34.10	16.17	50.27	74.00	-23.73	peak
6	17715.000	29.86	22.56	52.42	74.00	-21.58	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.3. 802.11n HT20 MODE

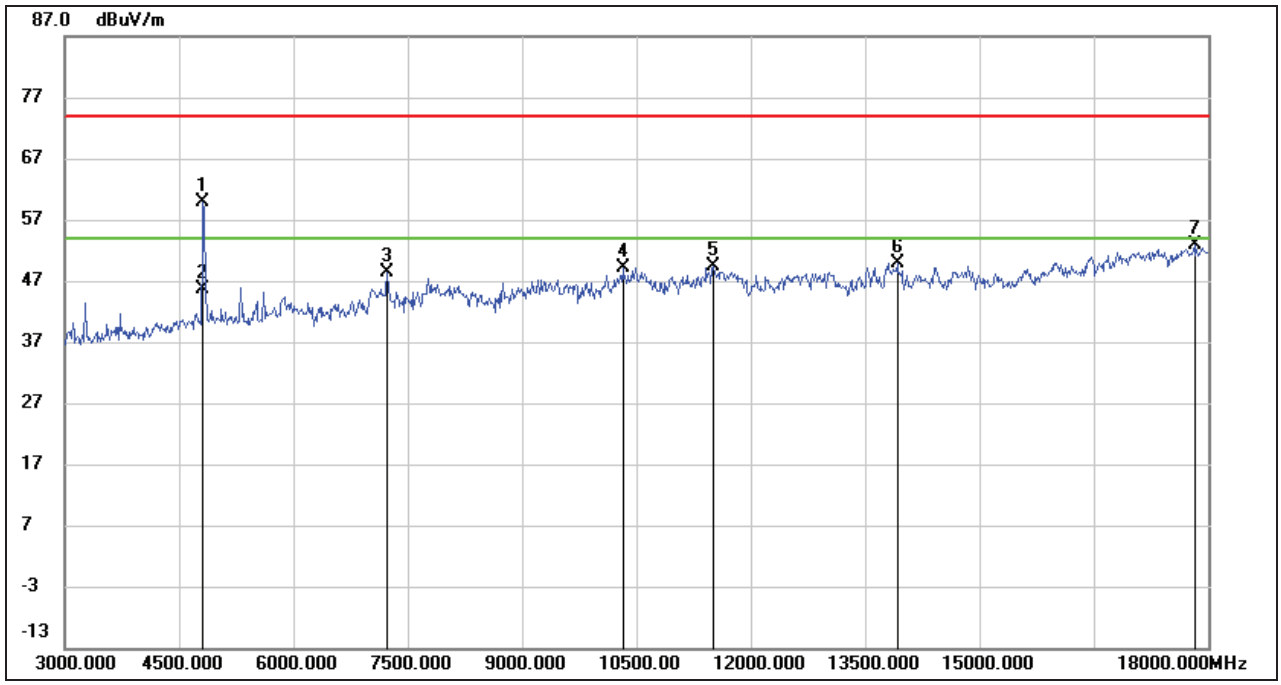
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	56.93	0.51	57.44	74.00	-16.56	peak
2	4815.000	45.83	0.51	46.34	54.00	-7.66	AVG
3	7230.000	44.46	5.89	50.35	74.00	-23.65	peak
4	11430.000	36.01	12.85	48.86	74.00	-25.14	peak
5	13860.000	33.42	16.56	49.98	74.00	-24.02	peak
6	17070.000	31.36	20.57	51.93	74.00	-22.07	peak
7	17865.000	29.39	23.33	52.72	74.00	-21.28	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

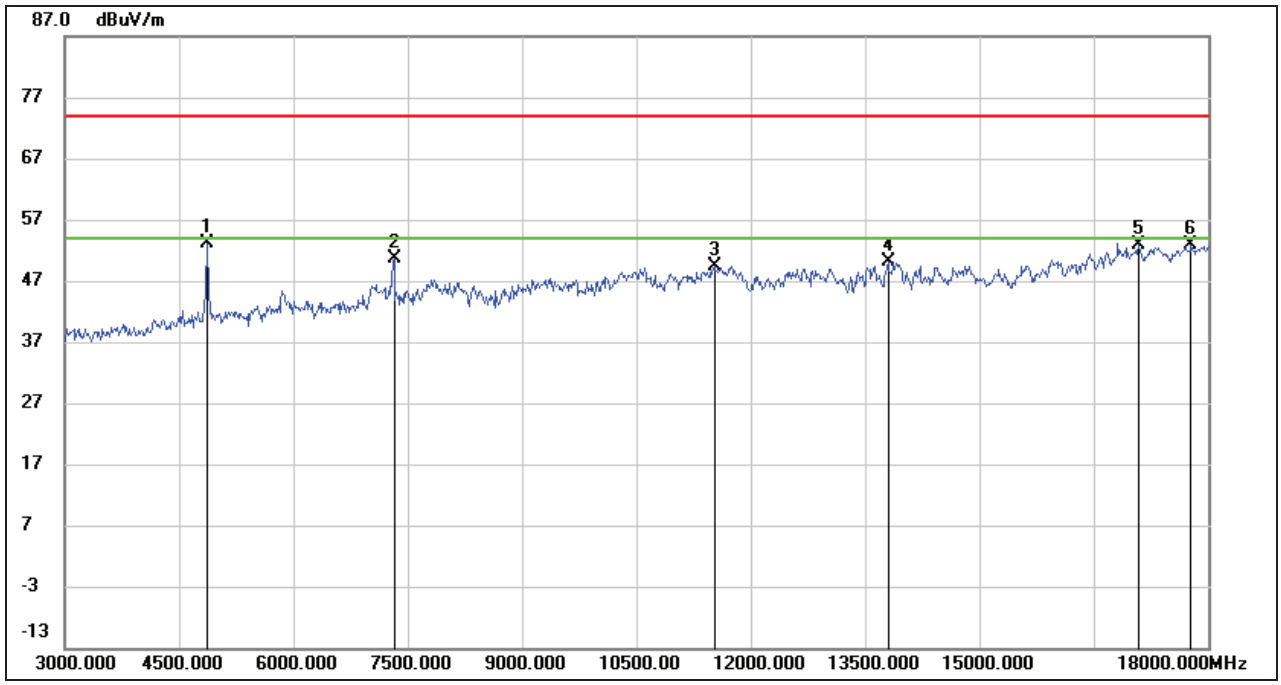
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	59.28	0.51	59.79	74.00	-14.21	peak
2	4815.000	45.09	0.51	45.60	54.00	-8.40	AVG
3	7230.000	42.50	5.89	48.39	74.00	-25.61	peak
4	10320.000	38.11	11.05	49.16	74.00	-24.84	peak
5	11505.000	35.89	13.42	49.31	74.00	-24.69	peak
6	13920.000	33.72	16.17	49.89	74.00	-24.11	peak
7	17820.000	29.49	23.30	52.79	74.00	-21.21	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

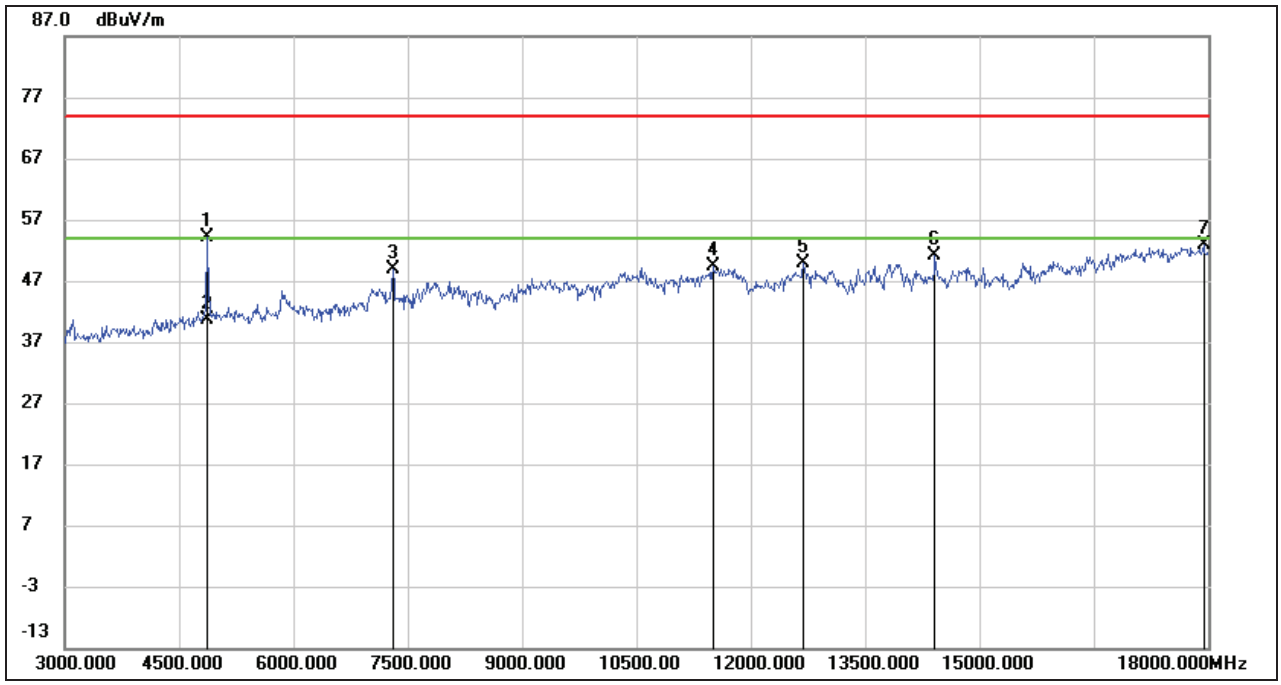
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	52.50	0.70	53.20	74.00	-20.80	peak
2	7320.000	44.44	6.14	50.58	74.00	-23.42	peak
3	11520.000	35.97	13.38	49.35	74.00	-24.65	peak
4	13800.000	33.04	17.10	50.14	74.00	-23.86	peak
5	17085.000	32.22	20.60	52.82	74.00	-21.18	peak
6	17775.000	29.67	23.09	52.76	74.00	-21.24	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

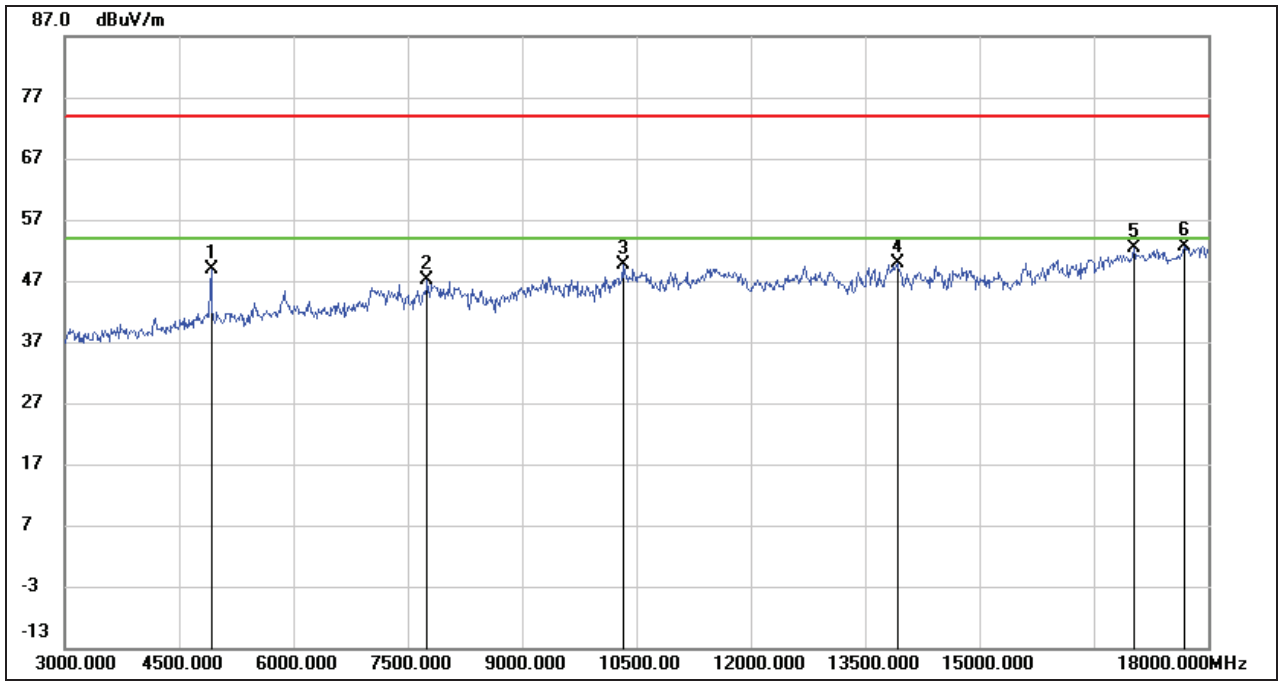
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	53.39	0.70	54.09	74.00	-19.91	peak
2	4860.000	39.99	0.70	40.69	54.00	-13.31	AVG
3	7305.000	42.69	6.08	48.77	74.00	-25.23	peak
4	11505.000	35.89	13.42	49.31	74.00	-24.69	peak
5	12690.000	35.55	14.25	49.80	74.00	-24.20	peak
6	14415.000	34.80	16.35	51.15	74.00	-22.85	peak
7	17940.000	29.37	23.39	52.76	74.00	-21.24	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

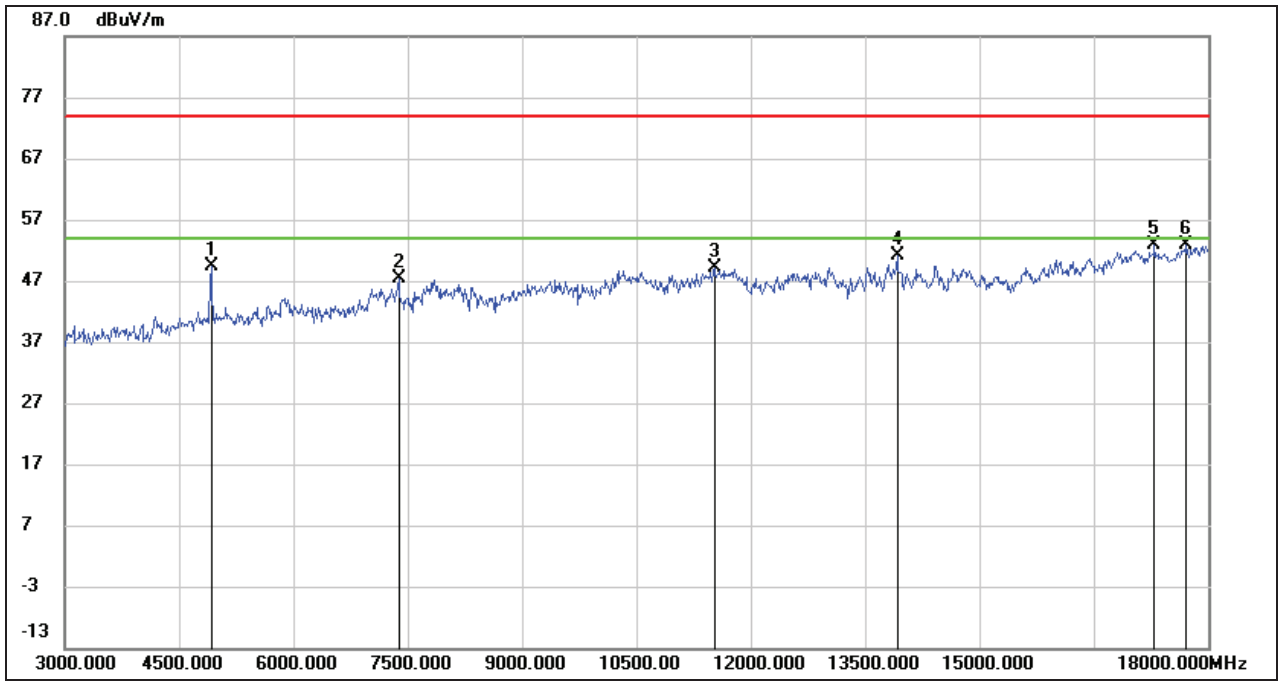
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	47.89	0.96	48.85	74.00	-25.15	peak
2	7755.000	39.76	7.29	47.05	74.00	-26.95	peak
3	10320.000	38.57	11.05	49.62	74.00	-24.38	peak
4	13920.000	33.73	16.17	49.90	74.00	-24.10	peak
5	17025.000	32.03	20.46	52.49	74.00	-21.51	peak
6	17685.000	30.40	22.33	52.73	74.00	-21.27	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

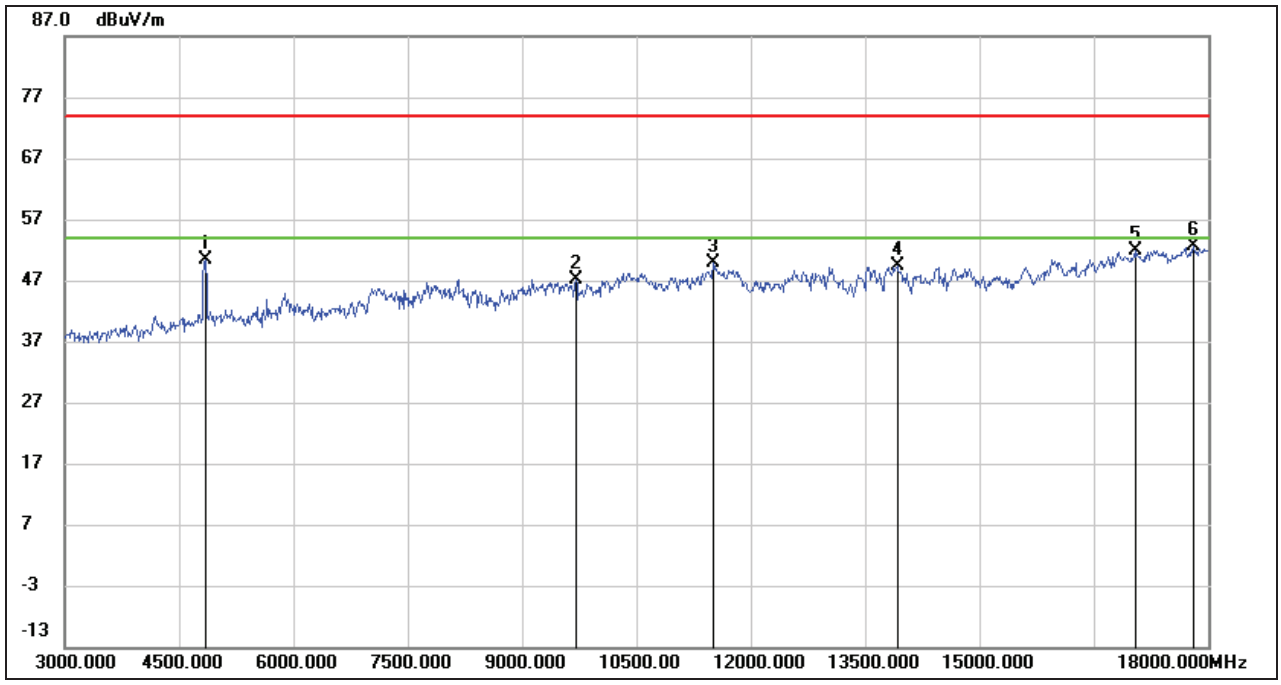


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.48	0.96	49.44	74.00	-24.56	peak
2	7380.000	40.92	6.41	47.33	74.00	-26.67	peak
3	11520.000	35.68	13.38	49.06	74.00	-24.94	peak
4	13920.000	34.85	16.17	51.02	74.00	-22.98	peak
5	17295.000	31.10	21.71	52.81	74.00	-21.19	peak
6	17715.000	30.34	22.56	52.90	74.00	-21.10	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.4. 802.11n HT40 MODE

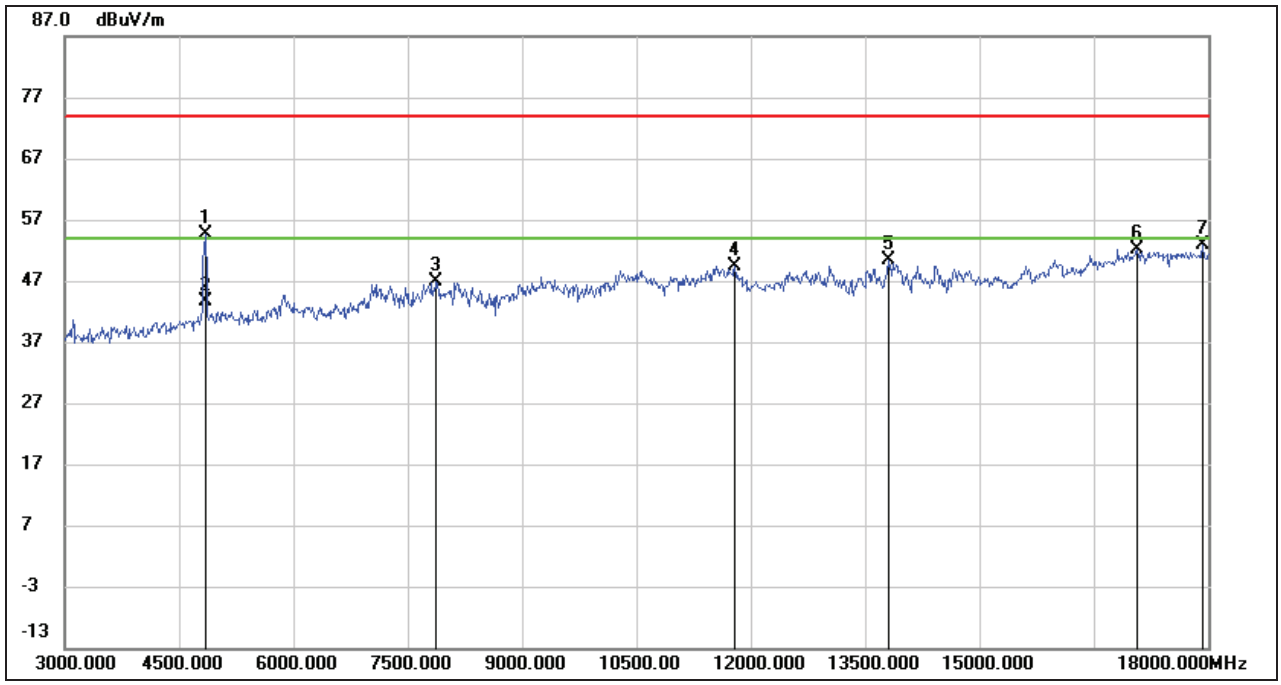
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	49.81	0.64	50.45	74.00	-23.55	peak
2	9705.000	37.54	9.63	47.17	74.00	-26.83	peak
3	11505.000	36.34	13.42	49.76	74.00	-24.24	peak
4	13920.000	33.18	16.17	49.35	74.00	-24.65	peak
5	17040.000	31.49	20.49	51.98	74.00	-22.02	peak
6	17805.000	29.41	23.31	52.72	74.00	-21.28	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

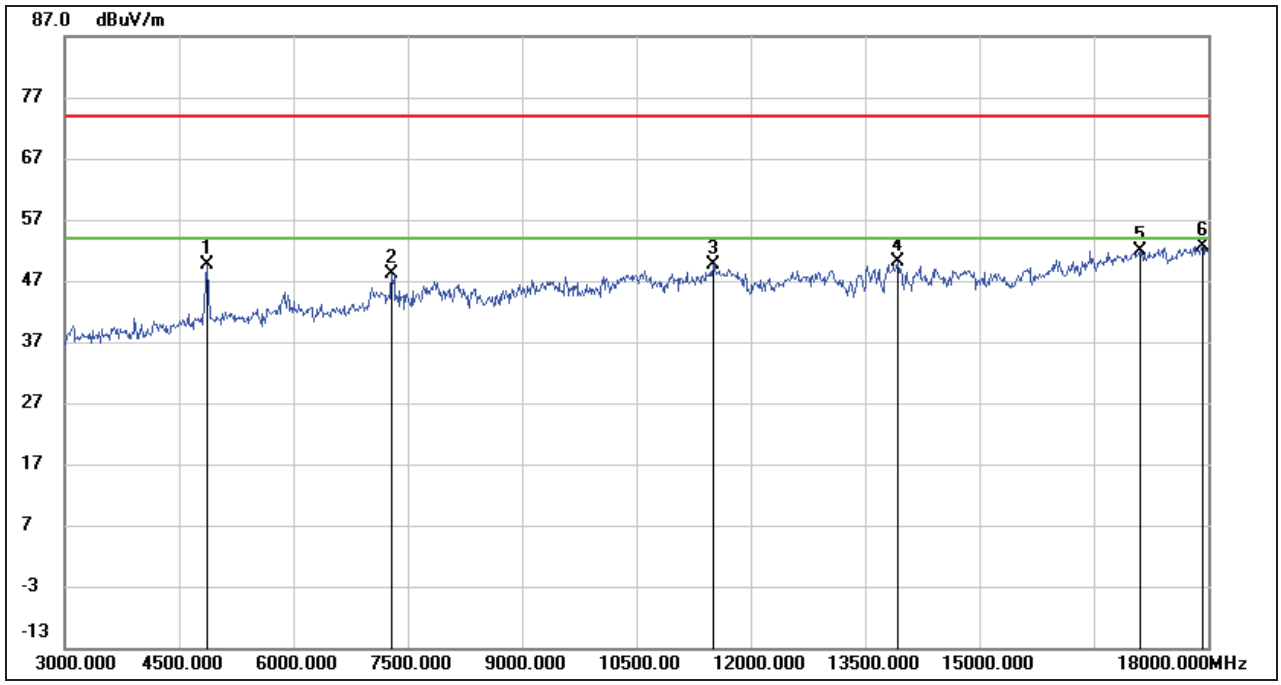
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	54.10	0.64	54.74	74.00	-19.26	peak
2	4845.000	43.08	0.64	43.72	54.00	-10.28	AVG
3	7875.000	39.54	7.40	46.94	74.00	-27.06	peak
4	11790.000	36.13	13.17	49.30	74.00	-24.70	peak
5	13800.000	33.16	17.10	50.26	74.00	-23.74	peak
6	17070.000	31.44	20.57	52.01	74.00	-21.99	peak
7	17925.000	29.52	23.37	52.89	74.00	-21.11	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

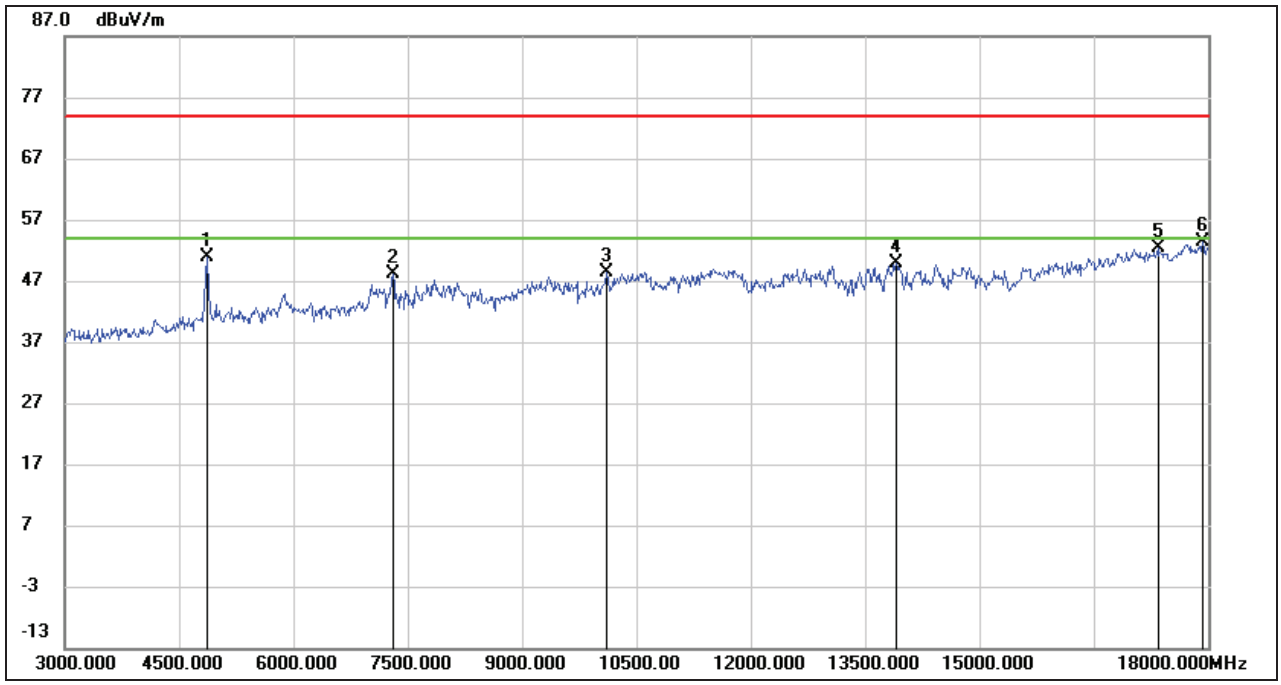
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.98	0.76	49.74	74.00	-24.26	peak
2	7290.000	42.12	6.03	48.15	74.00	-25.85	peak
3	11505.000	36.19	13.42	49.61	74.00	-24.39	peak
4	13935.000	33.87	16.15	50.02	74.00	-23.98	peak
5	17100.000	31.24	20.64	51.88	74.00	-22.12	peak
6	17925.000	29.36	23.37	52.73	74.00	-21.27	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

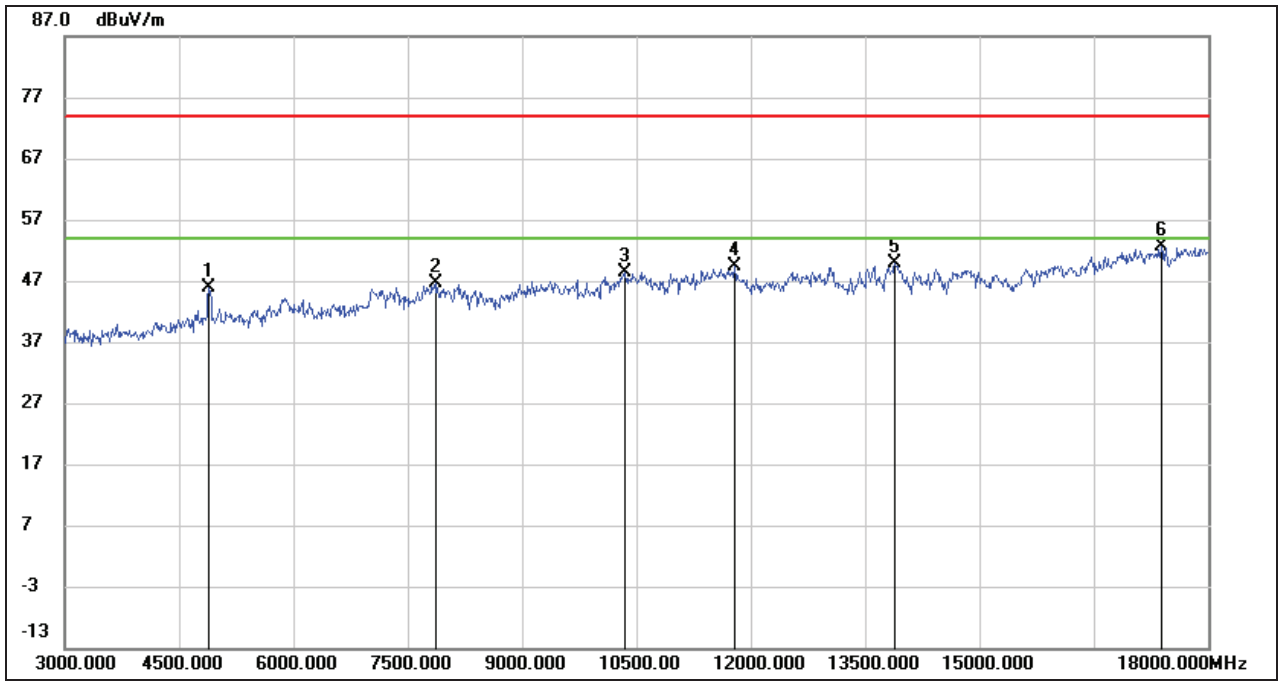
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	50.13	0.70	50.83	74.00	-23.17	peak
2	7305.000	42.01	6.08	48.09	74.00	-25.91	peak
3	10110.000	37.86	10.53	48.39	74.00	-25.61	peak
4	13905.000	33.68	16.20	49.88	74.00	-24.12	peak
5	17340.000	30.73	21.61	52.34	74.00	-21.66	peak
6	17925.000	29.90	23.37	53.27	74.00	-20.73	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

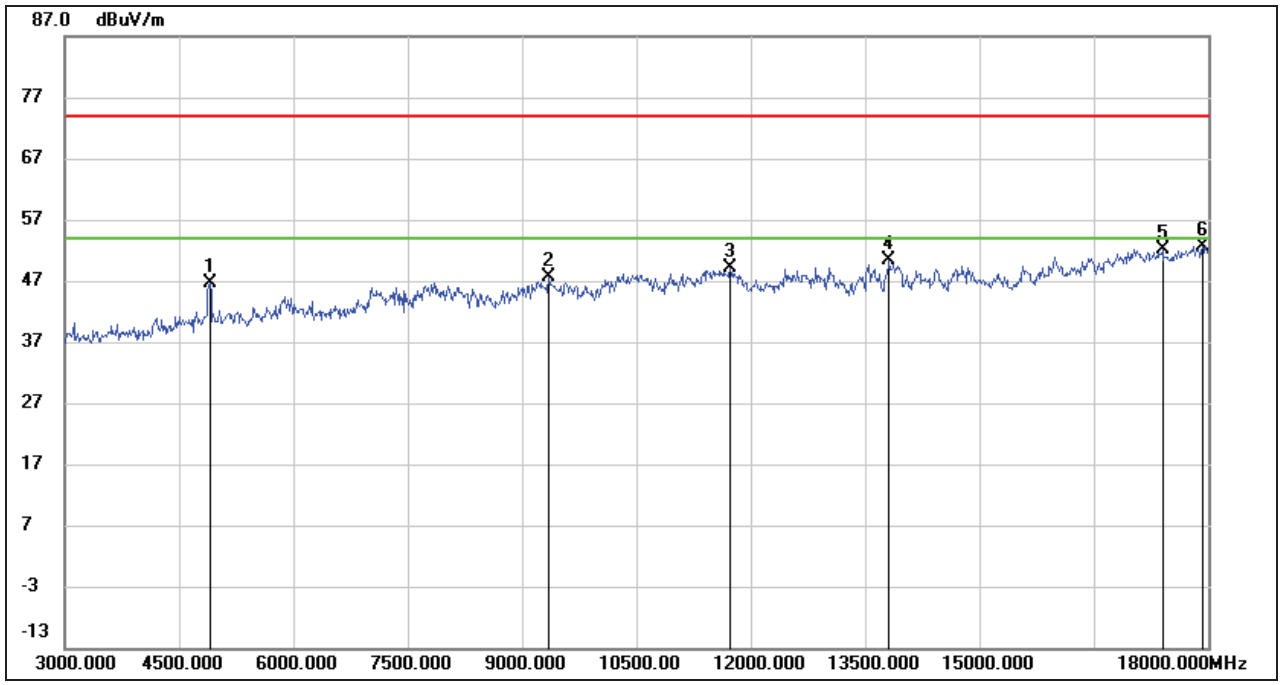
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4890.000	45.15	0.82	45.97	74.00	-28.03	peak
2	7875.000	39.23	7.40	46.63	74.00	-27.37	peak
3	10350.000	37.39	11.02	48.41	74.00	-25.59	peak
4	11790.000	36.23	13.17	49.40	74.00	-24.60	peak
5	13890.000	33.53	16.31	49.84	74.00	-24.16	peak
6	17385.000	31.13	21.46	52.59	74.00	-21.41	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	45.64	0.88	46.52	74.00	-27.48	peak
2	9345.000	38.39	9.26	47.65	74.00	-26.35	peak
3	11730.000	36.02	13.02	49.04	74.00	-24.96	peak
4	13815.000	33.51	16.97	50.48	74.00	-23.52	peak
5	17400.000	30.79	21.41	52.20	74.00	-21.80	peak
6	17925.000	29.29	23.37	52.66	74.00	-21.34	peak

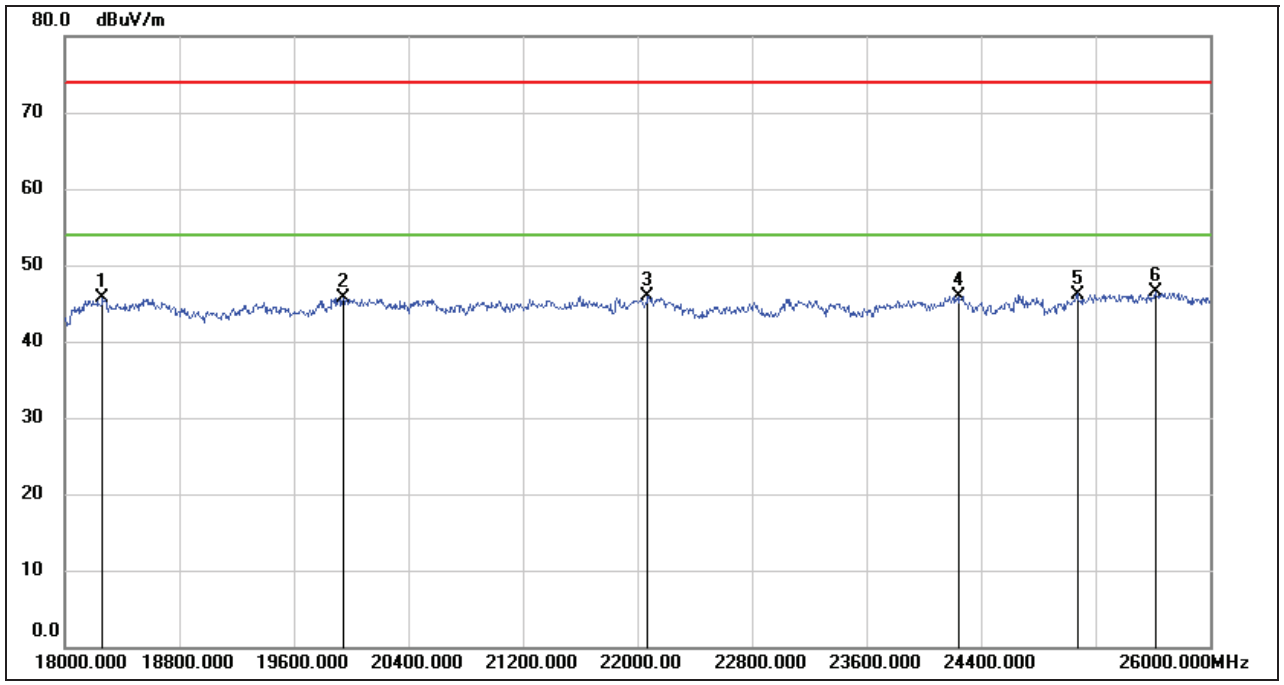
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

Note: All the modes had been tested, but only the worst data was recorded in the report.

8.5. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.5.1. 802.11b MODE

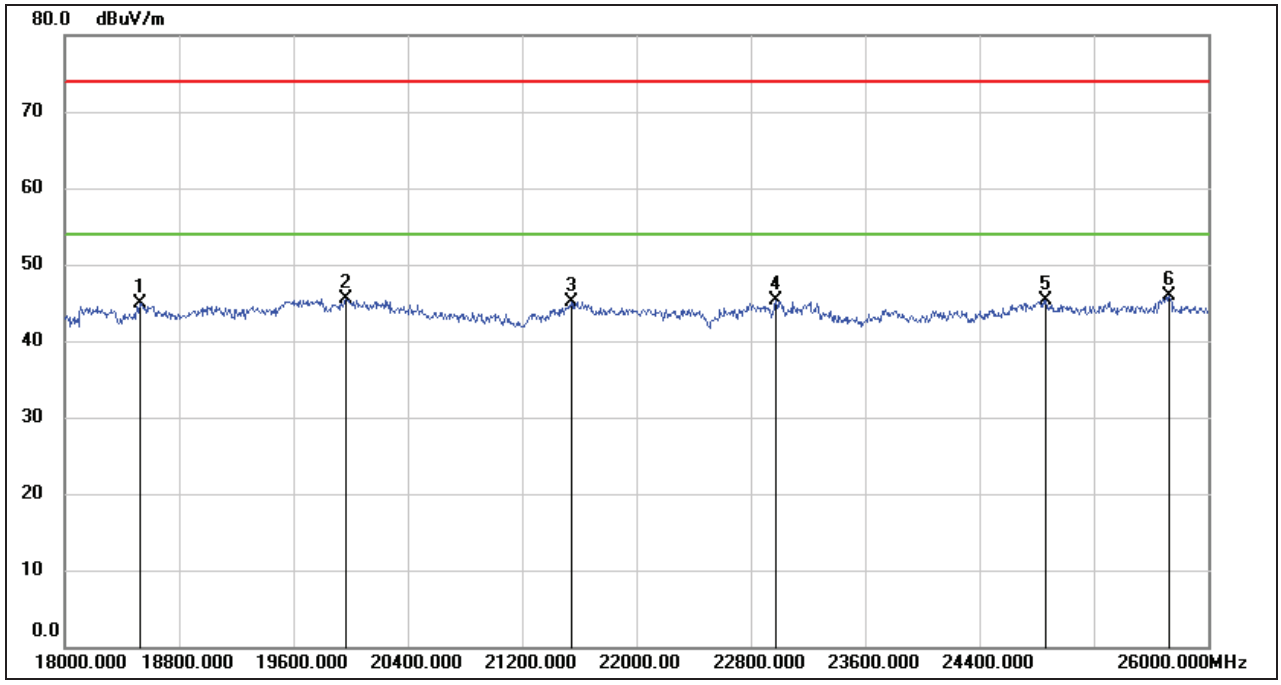
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18264.000	51.15	-5.53	45.62	74.00	-28.38	peak
2	19944.000	51.09	-5.41	45.68	74.00	-28.32	peak
3	22072.000	50.27	-4.41	45.86	74.00	-28.14	peak
4	24248.000	48.82	-2.83	45.99	74.00	-28.01	peak
5	25072.000	48.17	-1.97	46.20	74.00	-27.80	peak
6	25616.000	47.68	-1.24	46.44	74.00	-27.56	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18528.000	50.11	-5.26	44.85	74.00	-29.15	peak
2	19968.000	50.86	-5.42	45.44	74.00	-28.56	peak
3	21544.000	49.76	-4.63	45.13	74.00	-28.87	peak
4	22976.000	48.76	-3.46	45.30	74.00	-28.70	peak
5	24864.000	47.53	-2.23	45.30	74.00	-28.70	peak
6	25728.000	46.61	-0.72	45.89	74.00	-28.11	peak

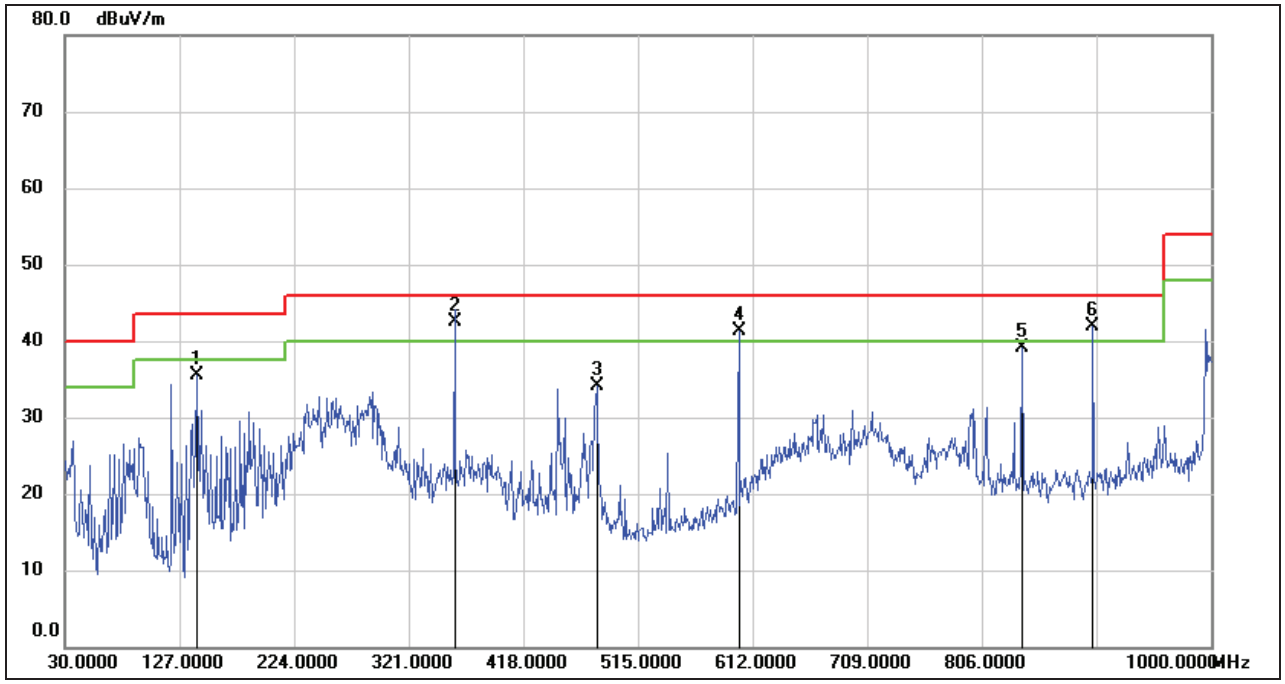
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

Note: All the modes had been tested, but only the worst data was recorded in the report.

8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.6.1. 802.11b MODE

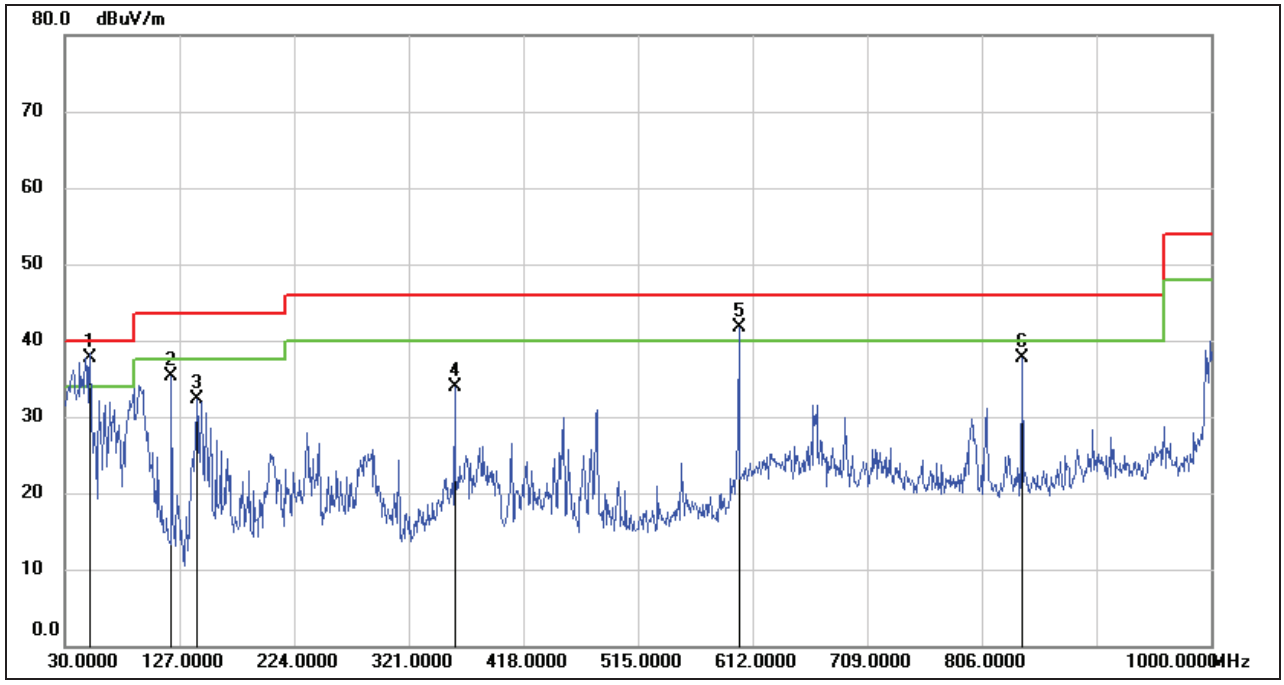
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	141.5500	54.33	-18.87	35.46	43.50	-8.04	QP
2	359.8000	55.95	-13.40	42.55	46.00	-3.45	QP
3	480.0800	45.45	-11.26	34.19	46.00	-11.81	QP
4	600.3600	50.10	-8.80	41.30	46.00	-4.70	QP
5	839.9500	43.90	-4.86	39.04	46.00	-6.96	QP
6	900.0900	46.12	-4.25	41.87	46.00	-4.13	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	51.3400	56.20	-18.46	37.74	40.00	-2.26	QP
2	120.2100	56.02	-20.74	35.28	43.50	-8.22	QP
3	141.5500	51.16	-18.87	32.29	43.50	-11.21	QP
4	359.8000	47.22	-13.40	33.82	46.00	-12.18	QP
5	600.3600	50.52	-8.80	41.72	46.00	-4.28	QP
6	839.9500	42.60	-4.86	37.74	46.00	-8.26	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

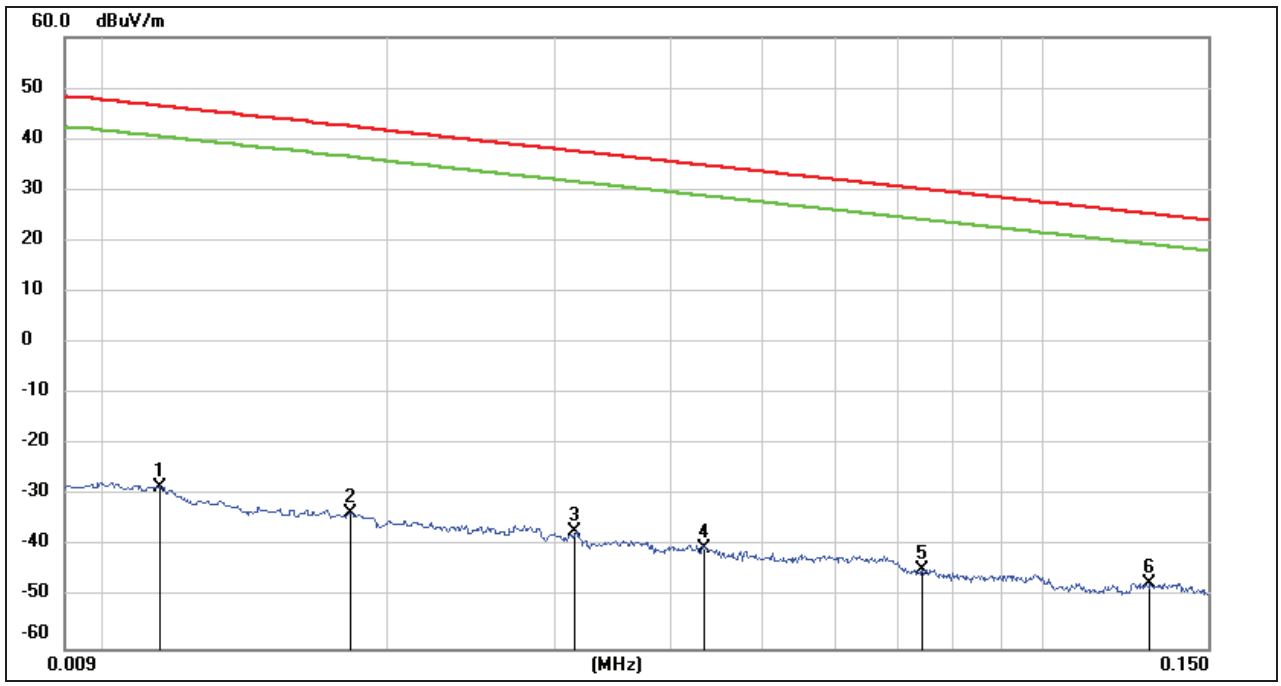
Note: All the modes had been tested, but only the worst data was recorded in the report.

8.7. SPURIOUS EMISSIONS BELOW 30 MHz

8.7.1. 802.11b MODE

SPURIOUS EMISSIONS (LOW CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)

9 kHz~ 150 kHz



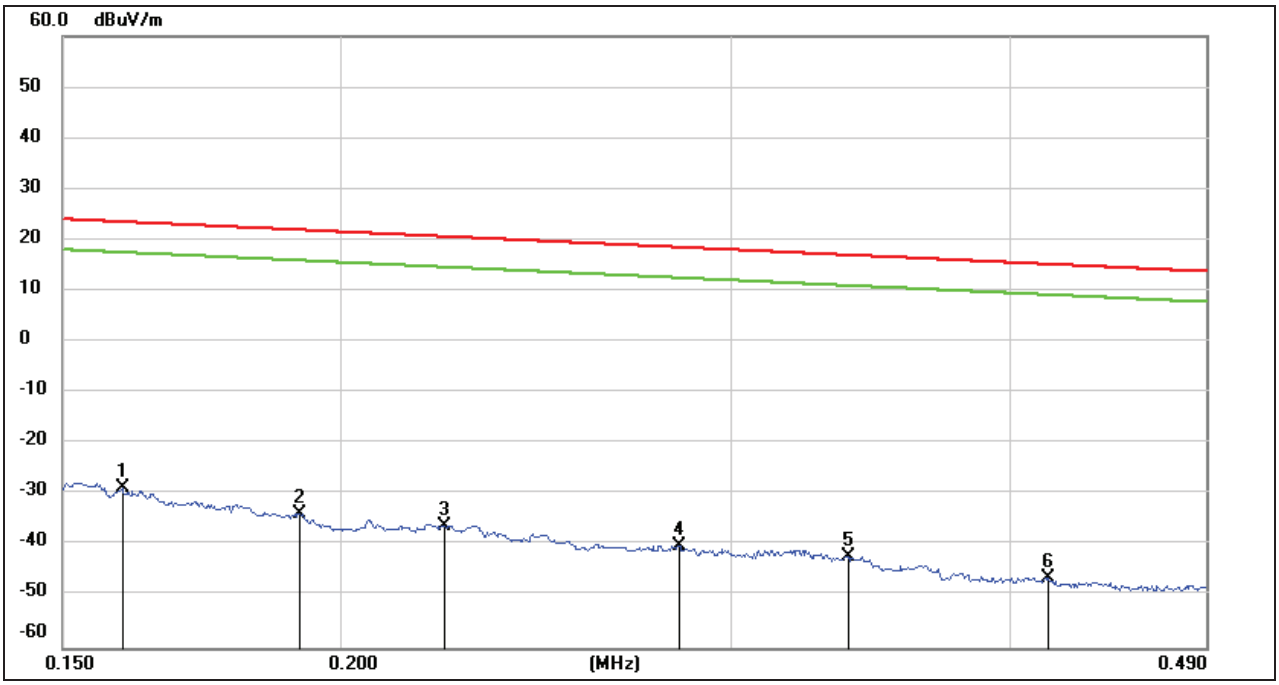
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0114	73.00	-101.40	-28.4	46.46	-79.90	-5.04	-74.86	peak
2	0.0182	67.85	-101.36	-33.51	42.4	-85.01	-9.10	-75.91	peak
3	0.0316	64.24	-101.40	-37.16	37.61	-88.66	-13.89	-74.77	peak
4	0.0434	61.11	-101.45	-40.34	34.85	-91.84	-16.65	-75.19	peak
5	0.0743	57.08	-101.59	-44.51	30.18	-96.01	-21.32	-74.69	peak
6	0.1300	54.43	-101.70	-47.27	25.33	-98.77	-26.17	-72.60	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

150 kHz ~ 490 kHz



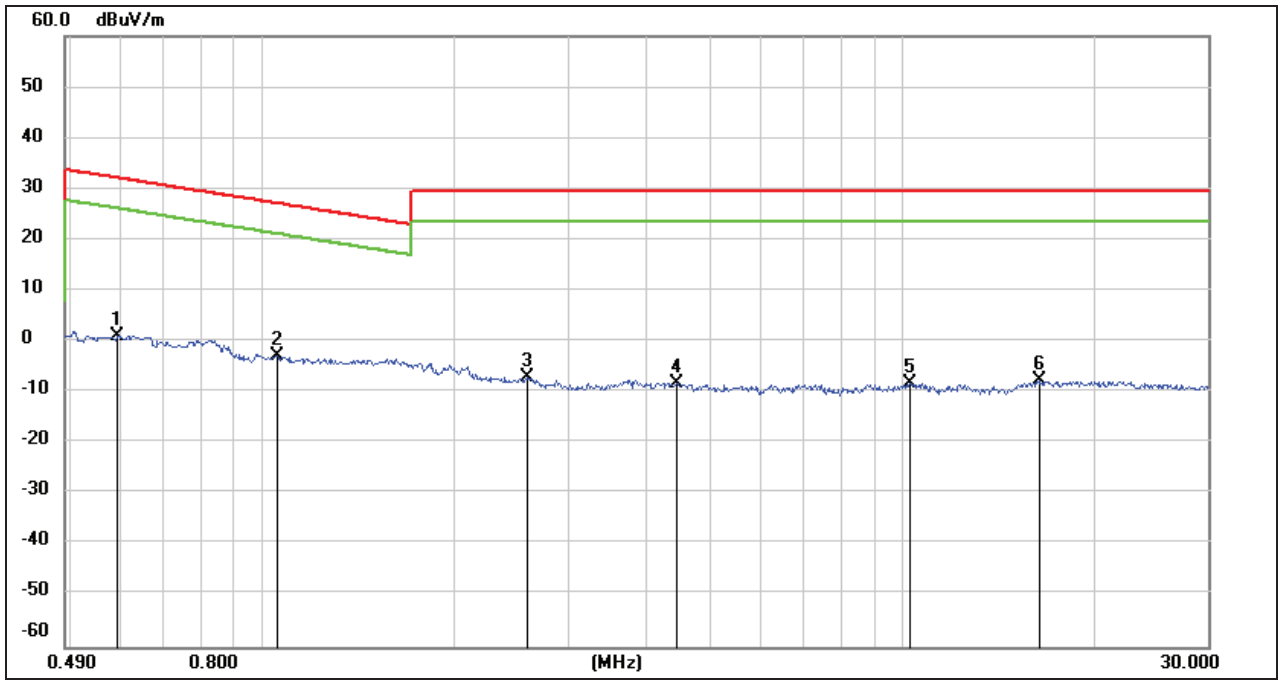
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1595	72.86	-101.65	-28.79	23.55	-80.29	-27.95	-52.34	peak
2	0.1917	68.04	-101.70	-33.66	21.95	-85.16	-29.55	-55.61	peak
3	0.2227	65.65	-101.75	-36.1	20.65	-87.60	-30.85	-56.75	peak
4	0.2837	61.72	-101.83	-40.11	18.54	-91.61	-32.96	-58.65	peak
5	0.3382	59.73	-101.90	-42.17	17.02	-93.67	-34.48	-59.19	peak
6	0.4162	55.68	-101.98	-46.3	15.22	-97.80	-36.28	-61.52	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

490 kHz ~ 30 MHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.5917	63.24	-62.08	1.16	32.16	-50.34	-19.34	-31.00	peak
2	1.0524	59.44	-62.24	-2.8	27.16	-54.30	-24.34	-29.96	peak
3	2.5935	54.61	-61.68	-7.07	29.54	-58.57	-21.96	-36.61	peak
4	4.4443	53.29	-61.40	-8.11	29.54	-59.61	-21.96	-37.65	peak
5	10.2576	52.63	-60.81	-8.18	29.54	-59.68	-21.96	-37.72	peak
6	16.3959	53.17	-60.96	-7.79	29.54	-59.29	-21.96	-37.33	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Note: All the modes had been tested, but only the worst data was recorded in the report.

9. AC POWER LINE CONDUCTED EMISSIONS

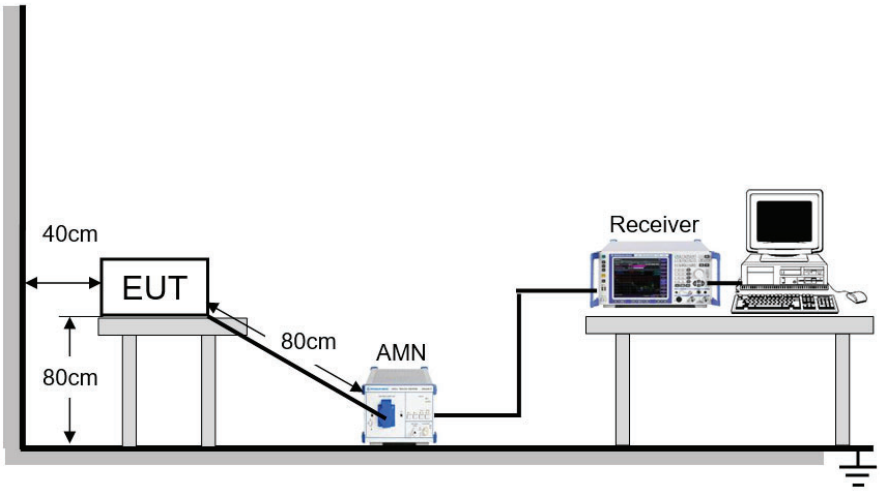
LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISED RSS-Gen Clause 8.8

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST SETUP AND PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.



The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

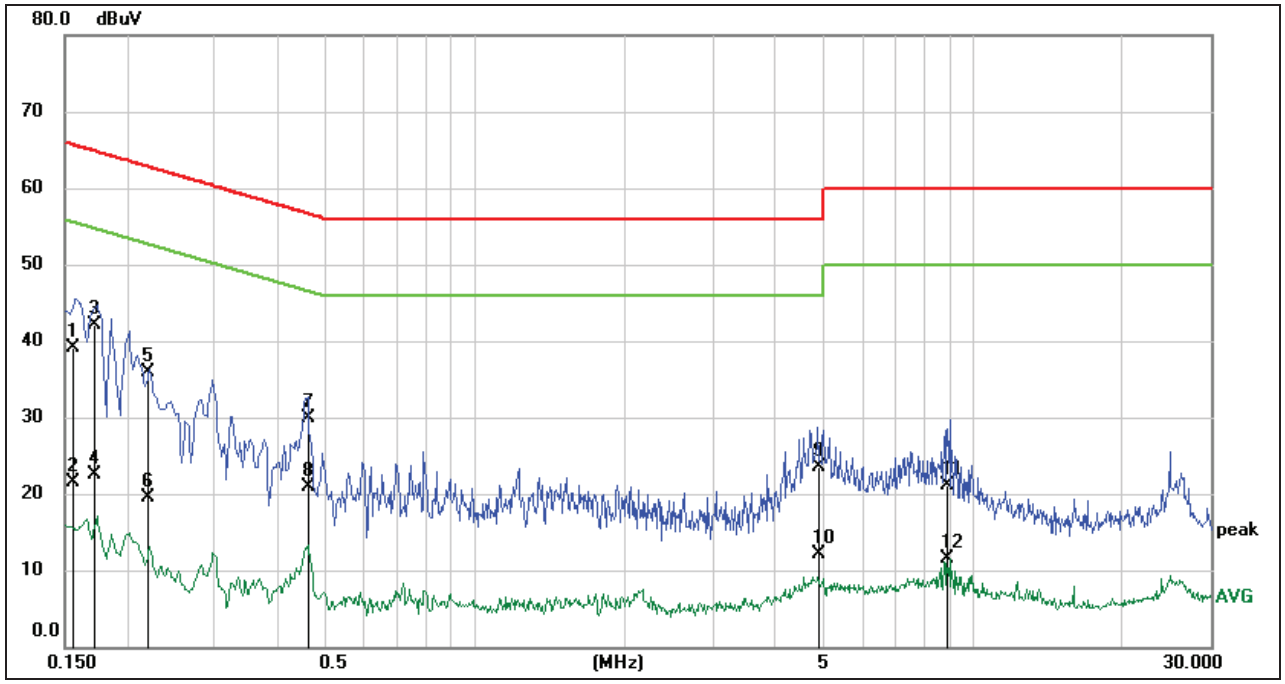
TEST ENVIRONMENT

Temperature	25.2 °C	Relative Humidity	65.7 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

9.1. 802.11b MODE

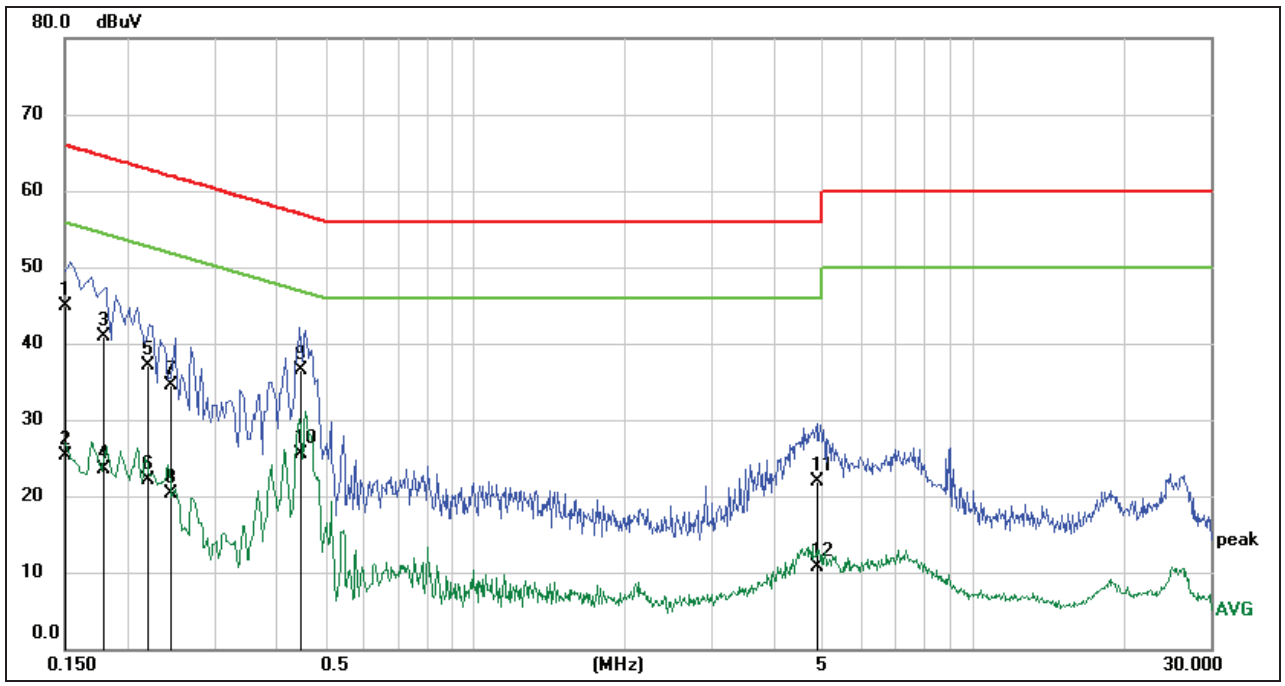
LINE N RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1554	29.41	9.61	39.02	65.71	-26.69	QP
2	0.1554	11.80	9.61	21.41	55.71	-34.30	AVG
3	0.1718	32.40	9.61	42.01	64.87	-22.86	QP
4	0.1718	12.94	9.61	22.55	54.87	-32.32	AVG
5	0.2194	26.21	9.60	35.81	62.84	-27.03	QP
6	0.2194	9.82	9.60	19.42	52.84	-33.42	AVG
7	0.4601	20.32	9.60	29.92	56.69	-26.77	QP
8	0.4601	11.30	9.60	20.90	46.69	-25.79	AVG
9	4.9351	13.79	9.67	23.46	56.00	-32.54	QP
10	4.9351	2.36	9.67	12.03	46.00	-33.97	AVG
11	8.9527	11.45	9.73	21.18	60.00	-38.82	QP
12	8.9527	1.74	9.73	11.47	50.00	-38.53	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

LINE L RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1507	35.28	9.61	44.89	65.96	-21.07	QP
2	0.1507	15.69	9.61	25.30	55.96	-30.66	AVG
3	0.1796	31.33	9.61	40.94	64.50	-23.56	QP
4	0.1796	13.80	9.61	23.41	54.50	-31.09	AVG
5	0.2195	27.45	9.60	37.05	62.84	-25.79	QP
6	0.2195	12.60	9.60	22.20	52.84	-30.64	AVG
7	0.2452	24.83	9.60	34.43	61.92	-27.49	QP
8	0.2452	10.70	9.60	20.30	51.92	-31.62	AVG
9	0.4487	26.84	9.60	36.44	56.90	-20.46	QP
10	0.4487	15.81	9.60	25.41	46.90	-21.49	AVG
11	4.9165	12.24	9.67	21.91	56.00	-34.09	QP
12	4.9165	0.99	9.67	10.66	46.00	-35.34	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes had been tested, but only the worst data was recorded in the report.

10. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

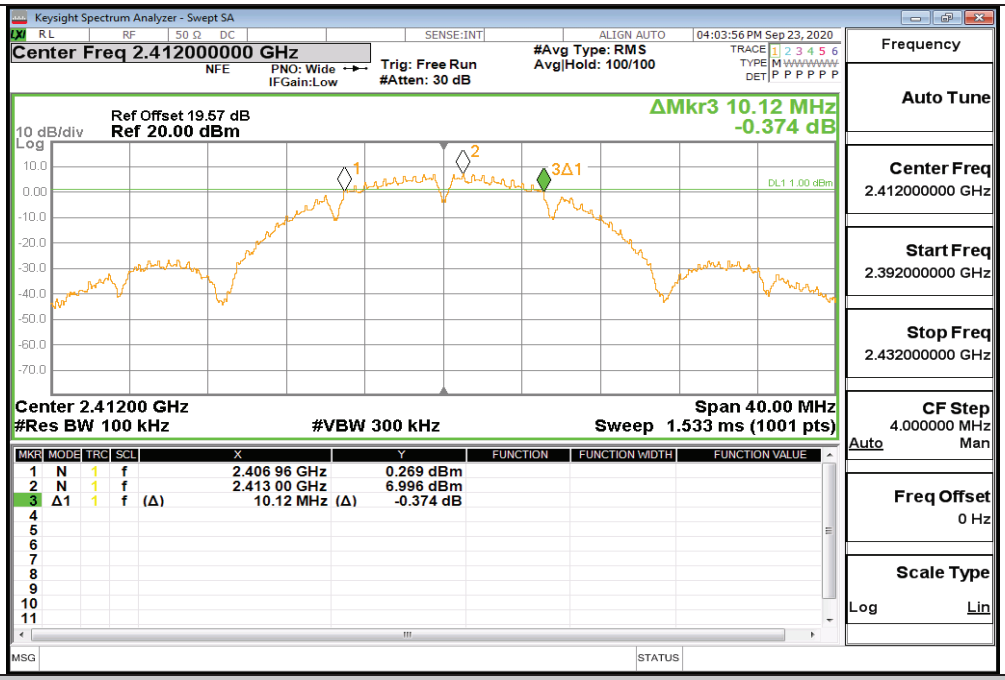
11. 11.Appendix

11.1. Appendix A: DTS Bandwidth

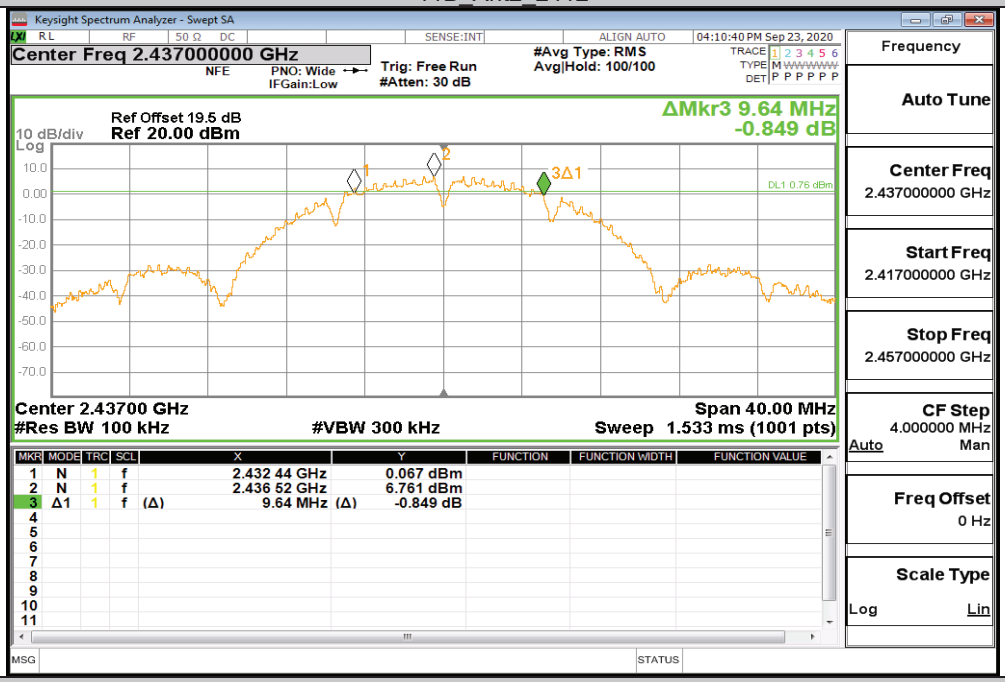
11.1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant2	2412	10.120	2406.960	2417.080	0.5	PASS
		2437	9.640	2432.440	2442.080	0.5	PASS
		2462	10.080	2457.000	2467.080	0.5	PASS
11G	Ant2	2412	15.160	2404.440	2419.600	0.5	PASS
		2437	15.200	2429.440	2444.640	0.5	PASS
		2462	15.120	2454.480	2469.600	0.5	PASS
11N20MIMO	Ant1	2412	16.160	2404.360	2420.520	0.5	PASS
	Ant2	2412	17.600	2403.200	2420.800	0.5	PASS
	Ant1	2437	17.240	2428.560	2445.800	0.5	PASS
	Ant2	2437	16.360	2428.800	2445.160	0.5	PASS
	Ant1	2462	16.600	2453.480	2470.080	0.5	PASS
	Ant2	2462	17.240	2453.200	2470.440	0.5	PASS
11N40MIMO	Ant1	2422	35.200	2404.400	2439.600	0.5	PASS
	Ant2	2422	35.280	2404.400	2439.680	0.5	PASS
	Ant1	2437	35.280	2419.400	2454.680	0.5	PASS
	Ant2	2437	35.200	2419.400	2454.600	0.5	PASS
	Ant1	2452	35.200	2434.400	2469.600	0.5	PASS
	Ant2	2452	35.120	2434.480	2469.600	0.5	PASS

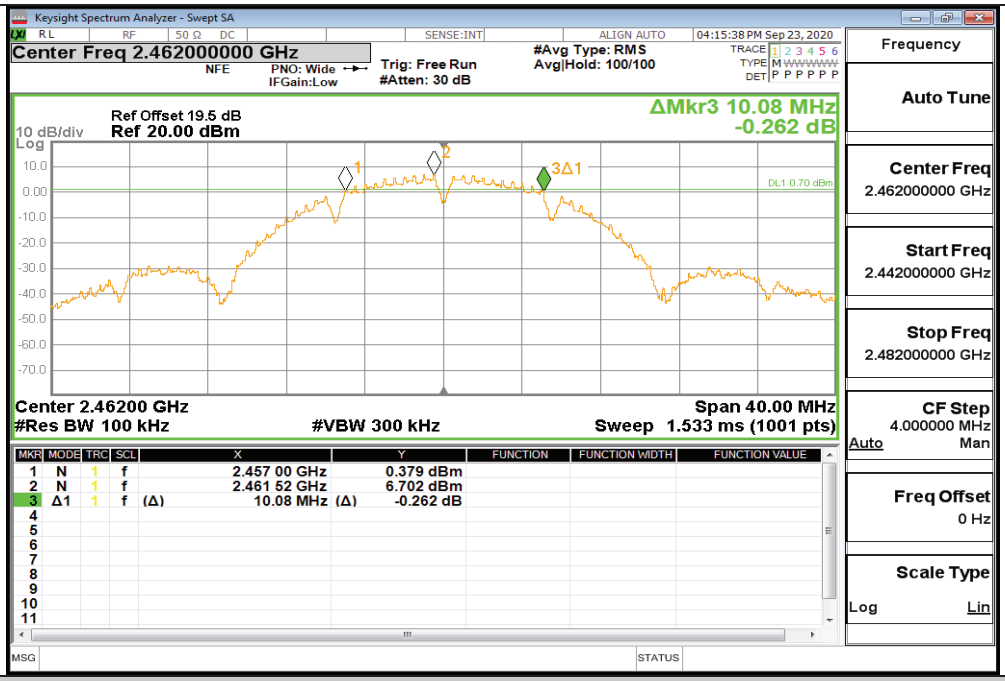
11.1.2. Test Graphs



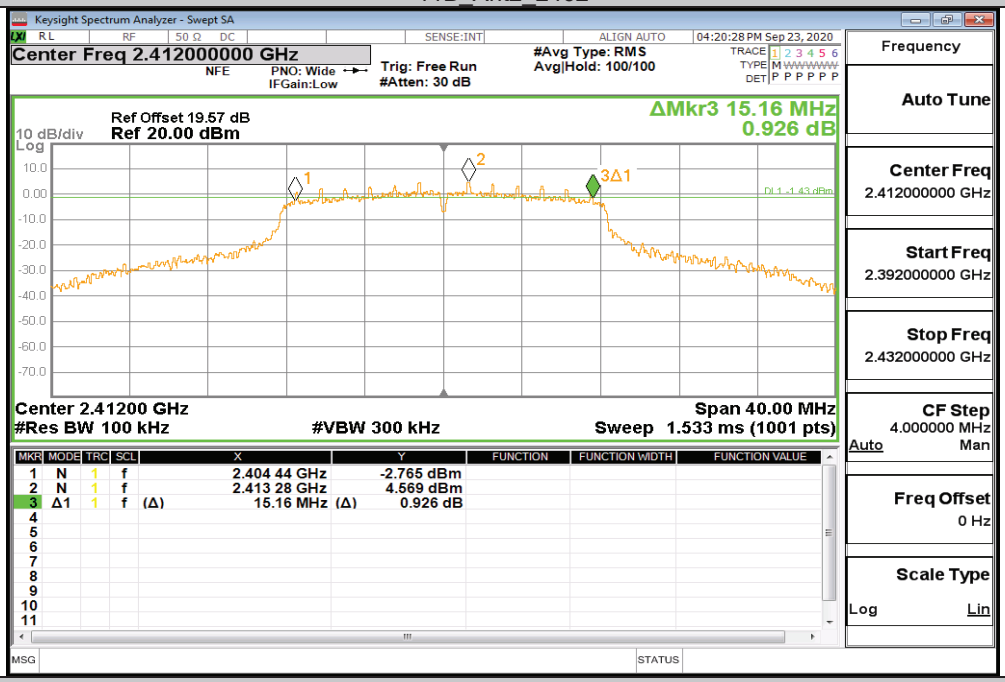
11B_Ant2_2412



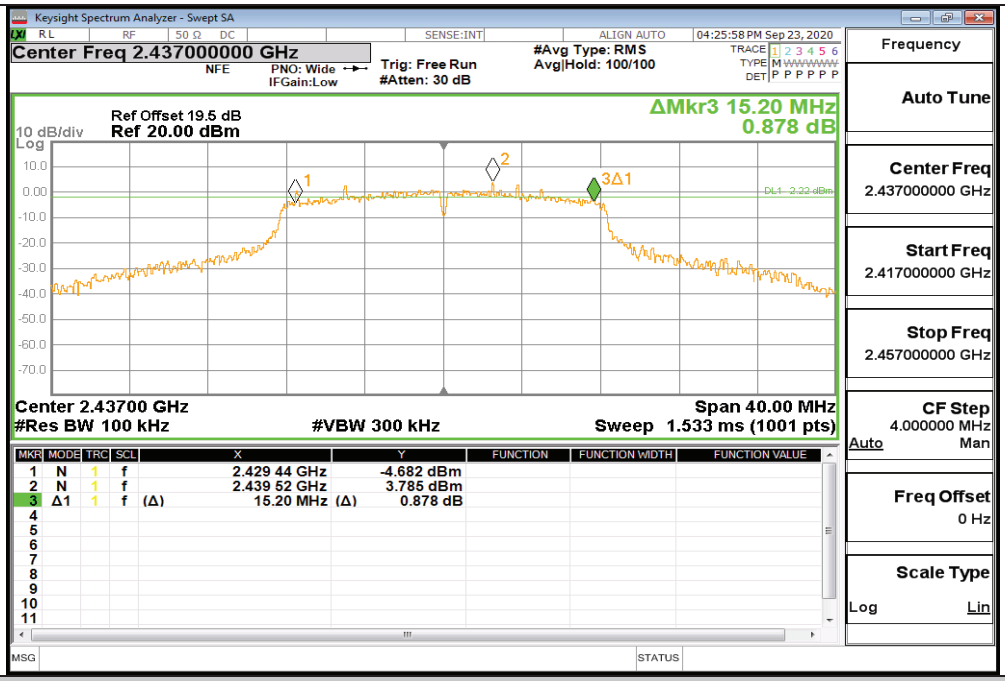
11B_Ant2_2437



11B_Ant2_2462



11G_Ant2_2412



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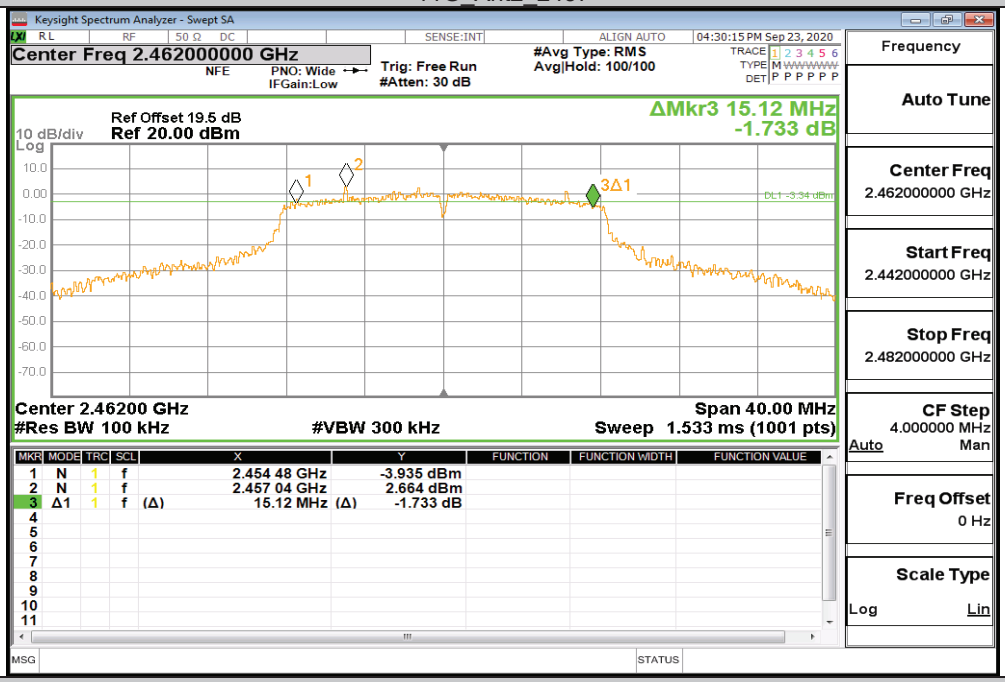

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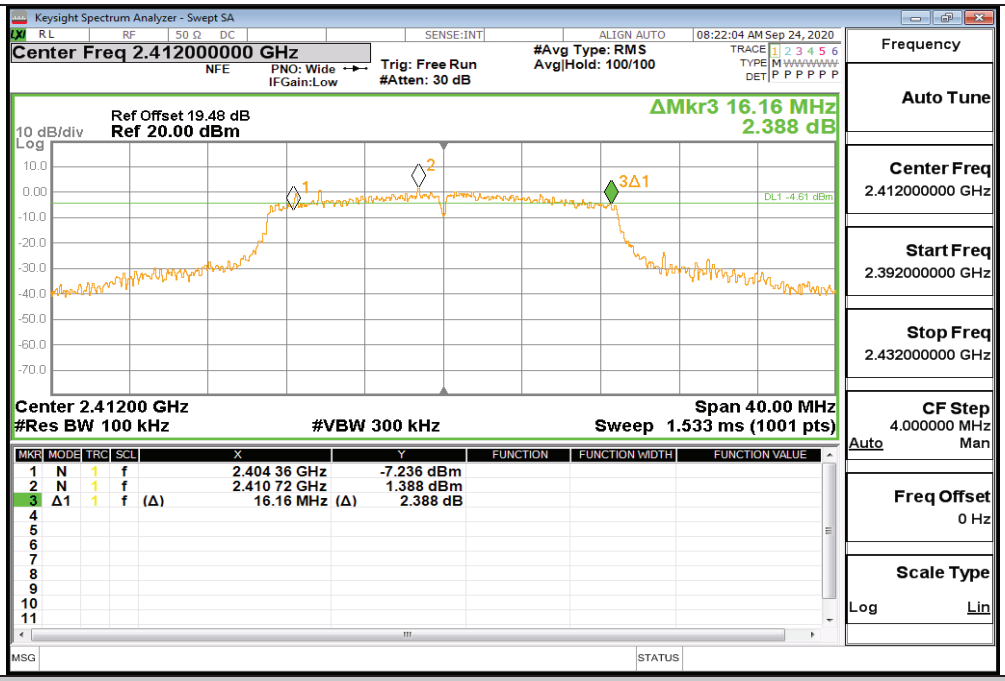
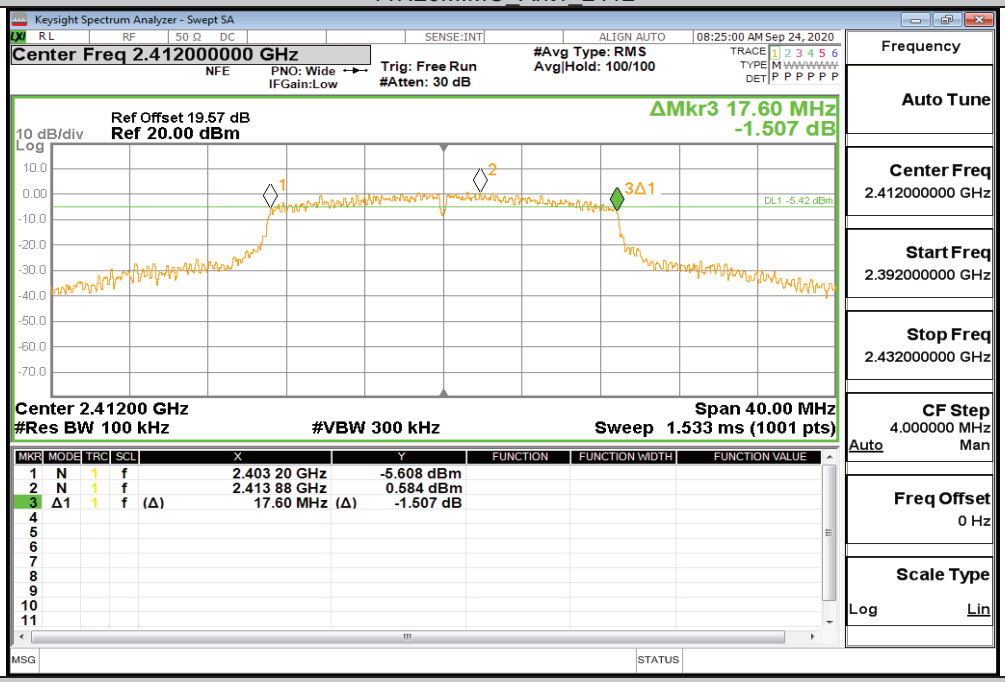
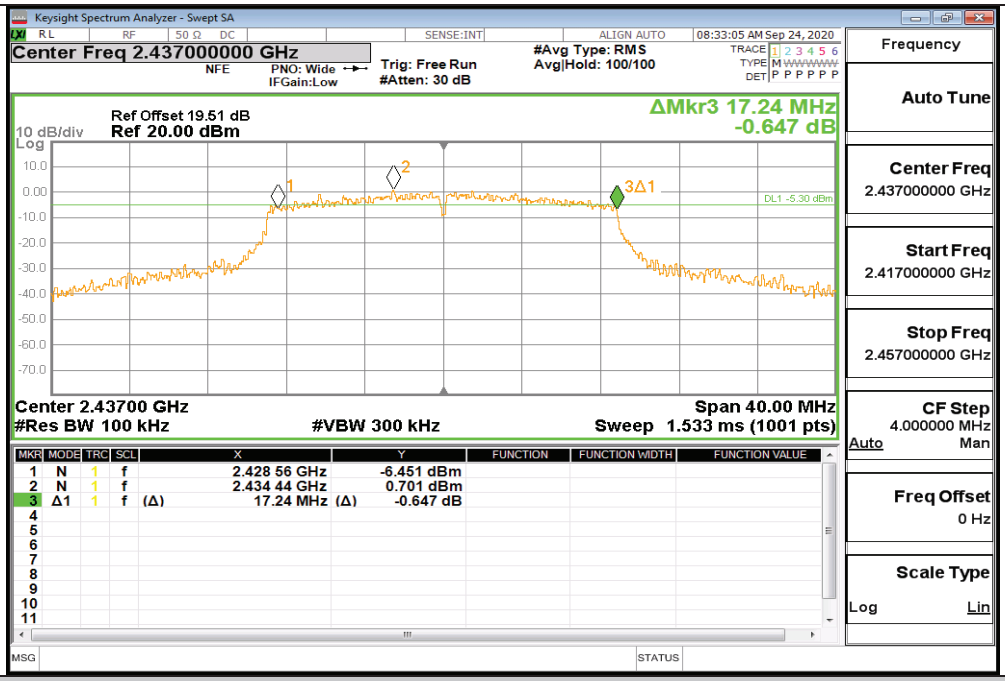


11N20MIMO_Ant1_2412



11N20MIMO_Ant2_2412



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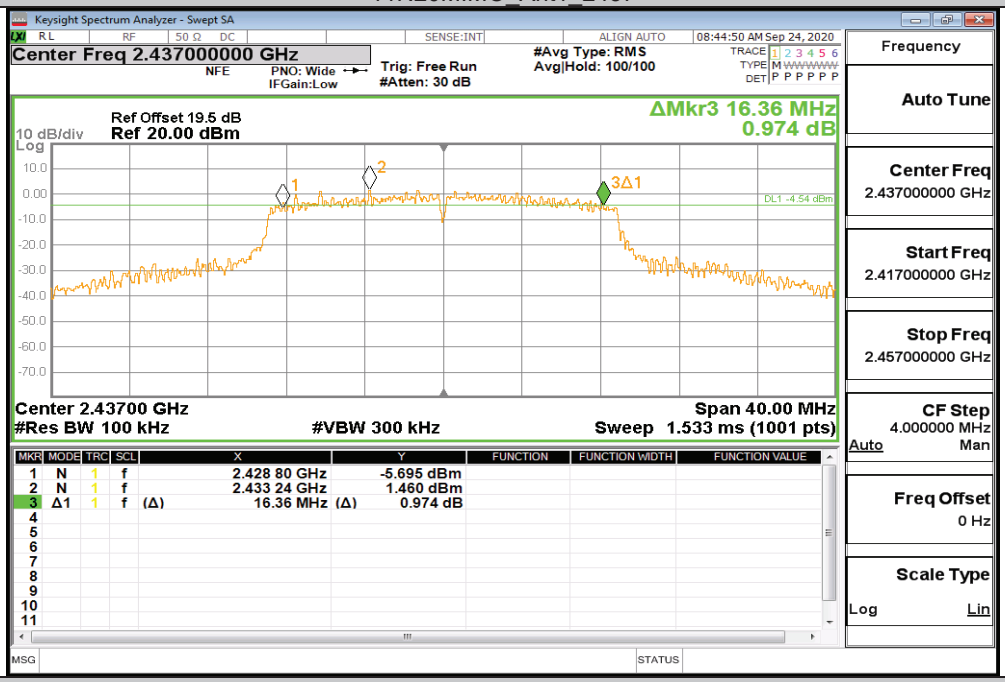

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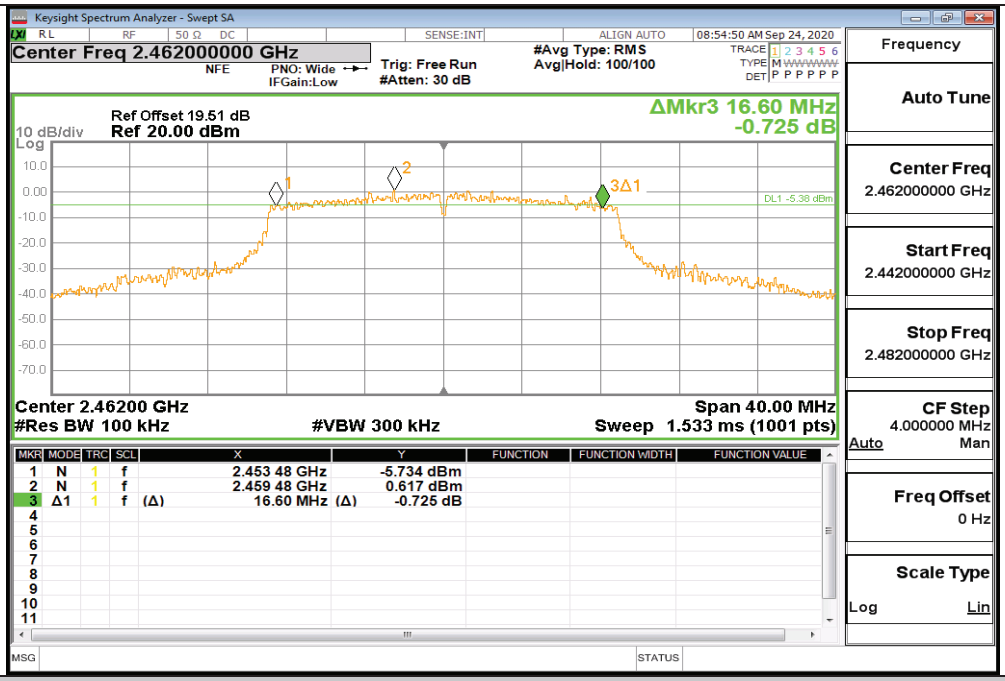
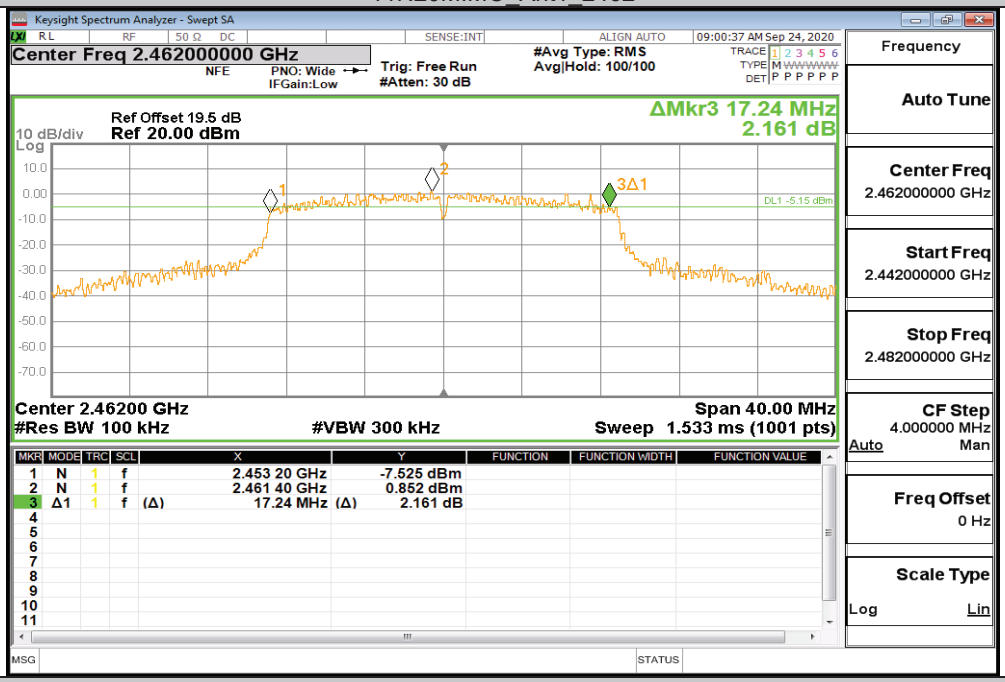


11N20MIMO_Ant1_2462



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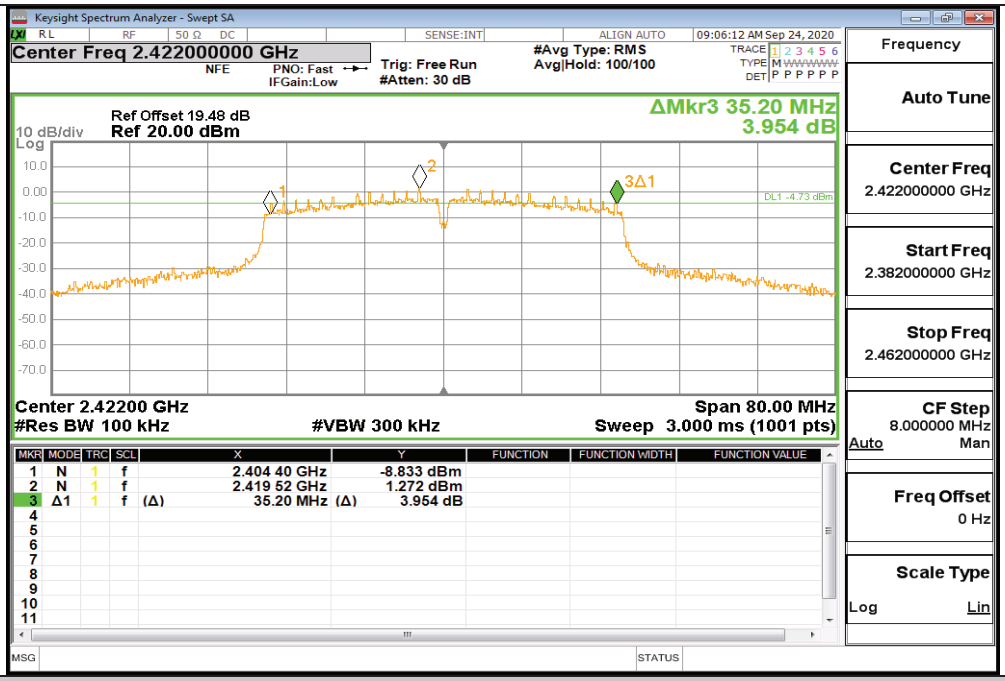
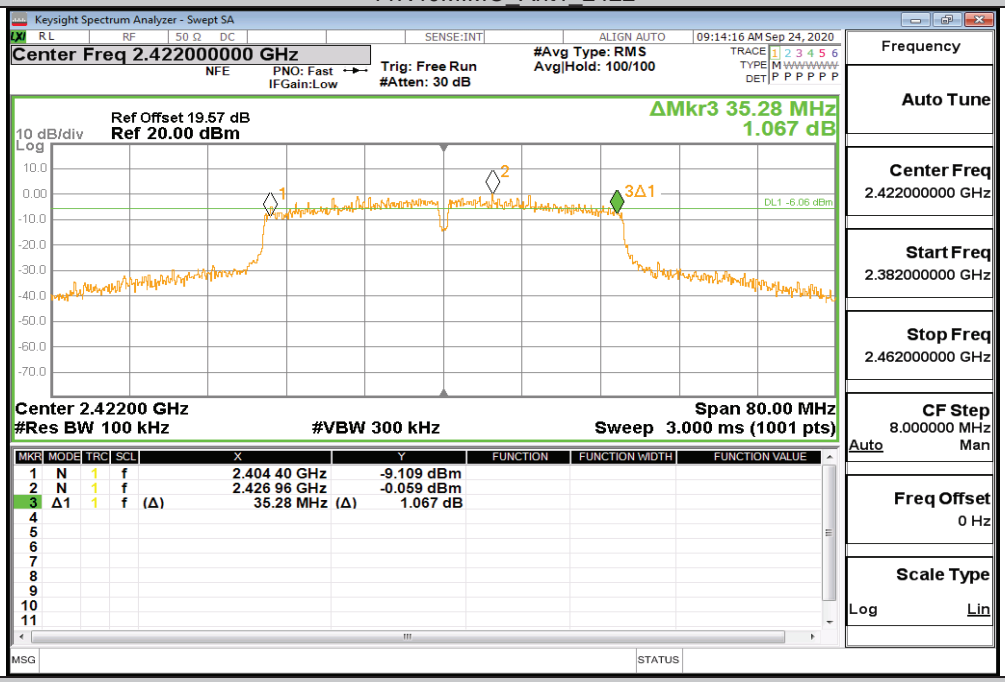


11N40MIMO_Ant1_2422



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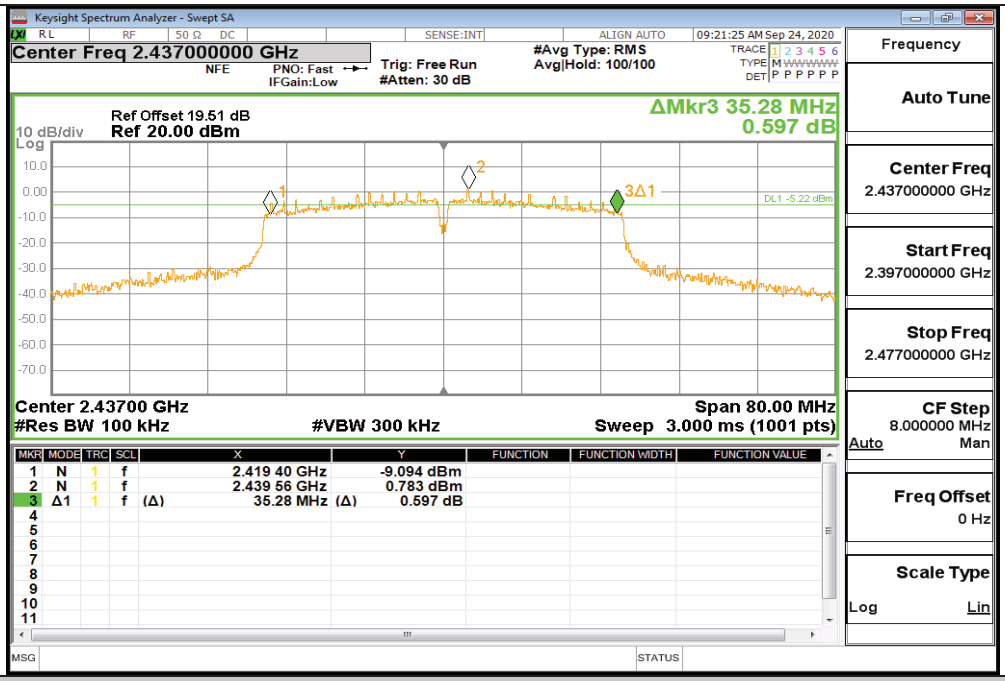
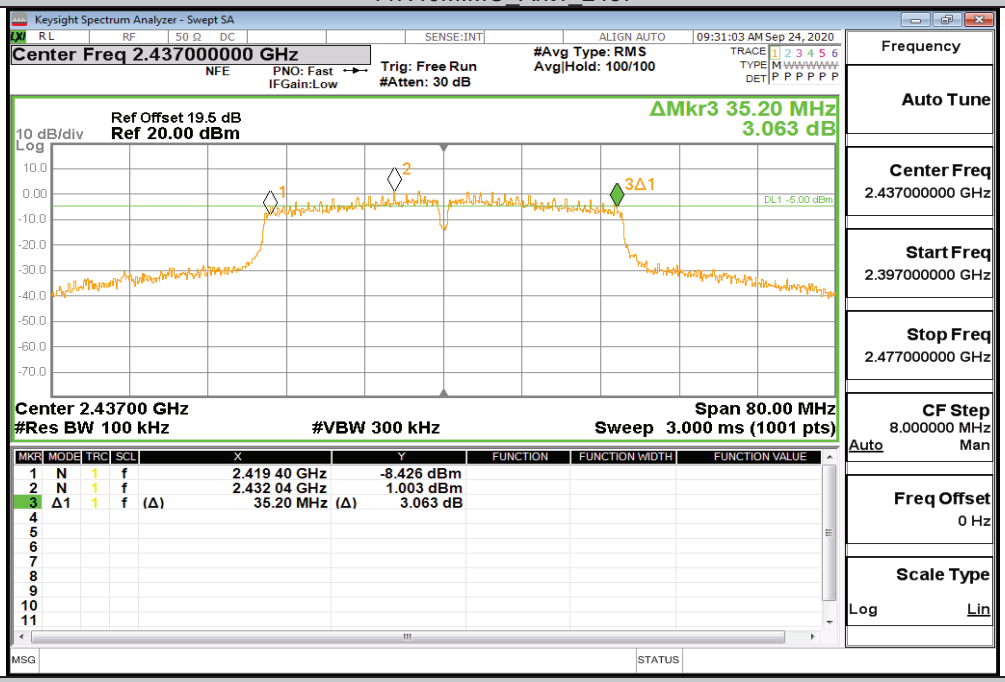


11N40MIMO_Ant1_2437



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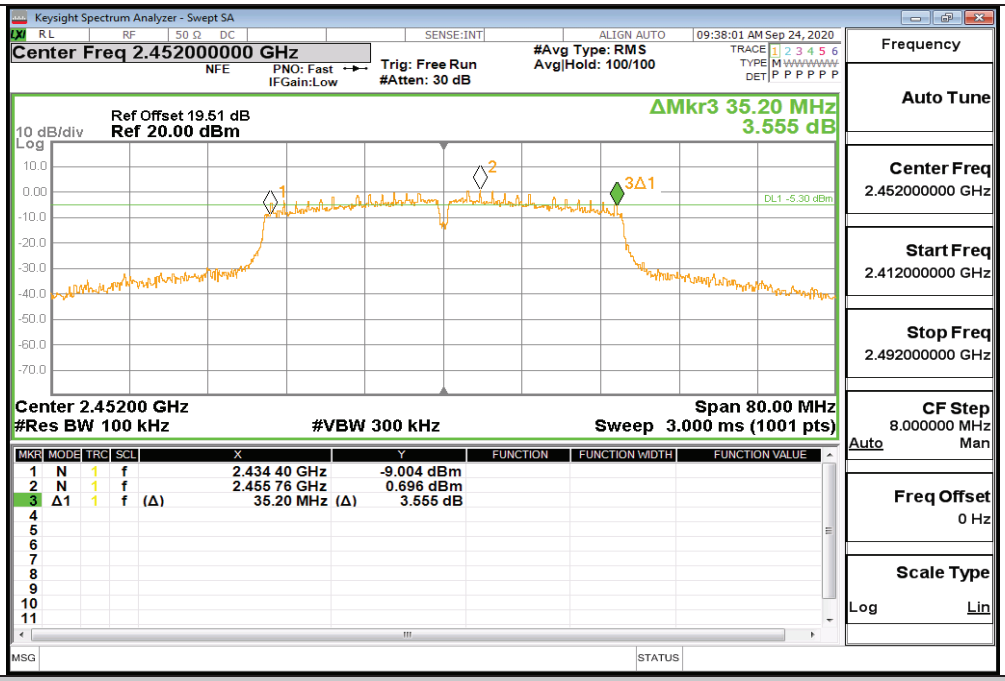

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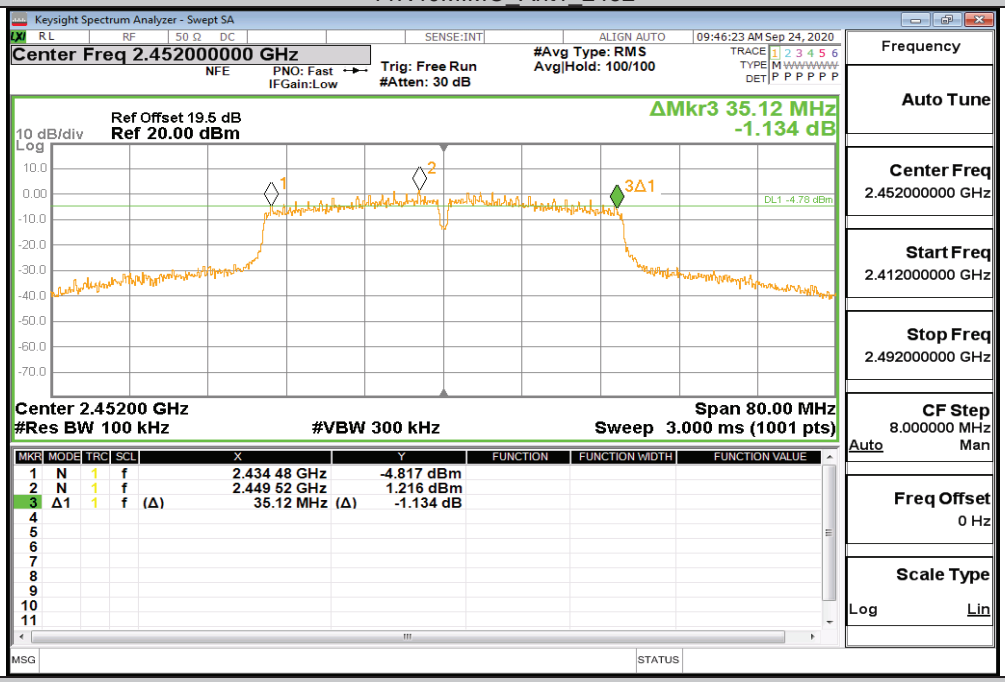


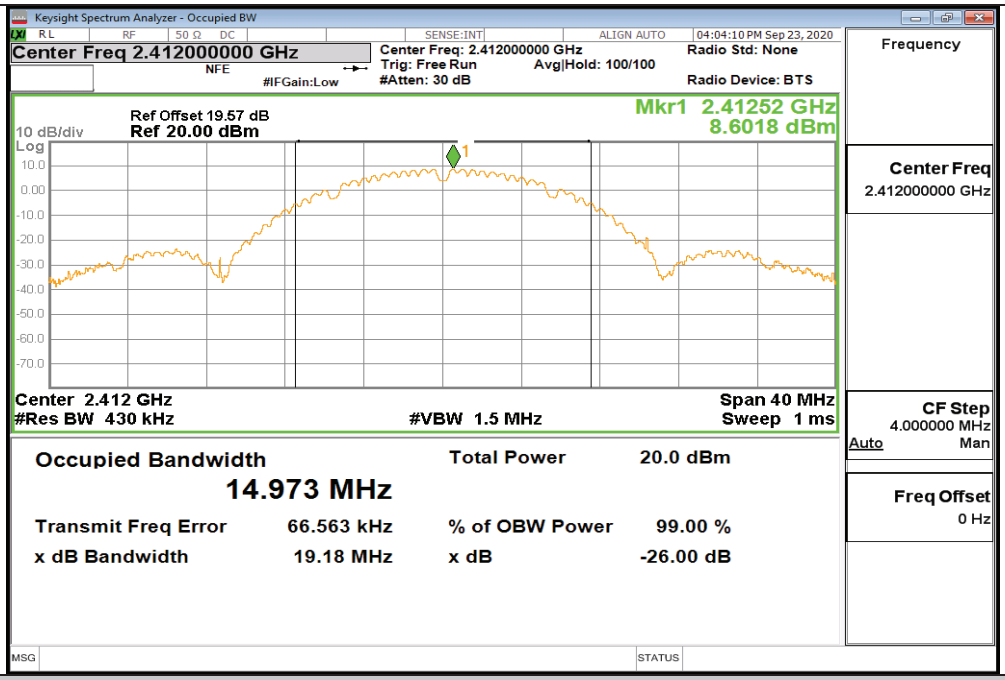
11N40MIMO_Ant2_2452

11.2. Appendix B: Occupied Channel Bandwidth

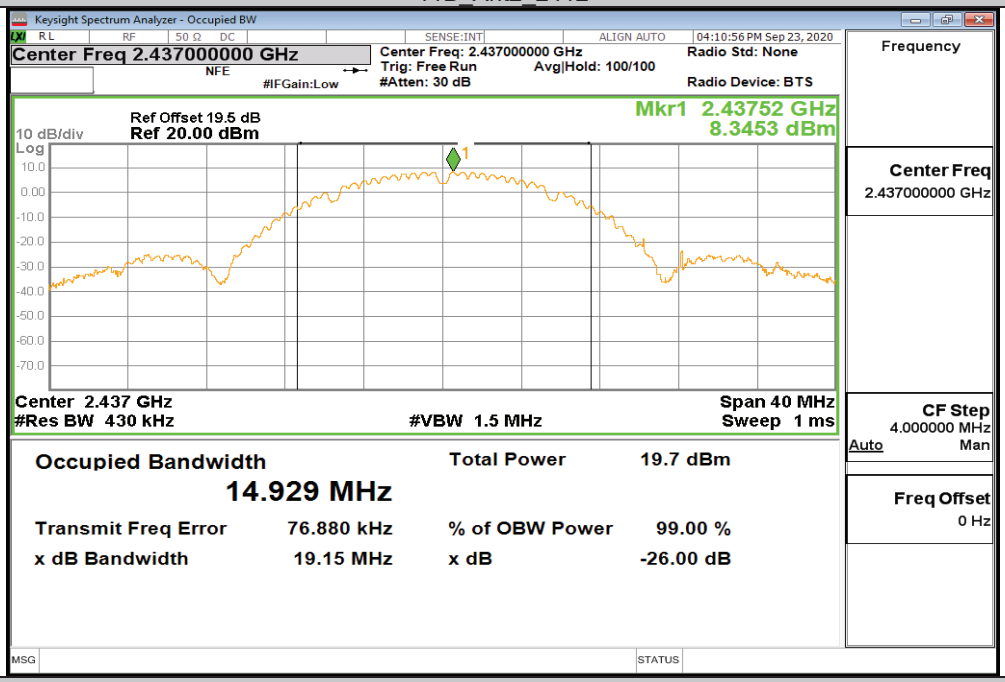
11.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11B	Ant2	2412	14.973	2404.580	2419.553	PASS
		2437	14.929	2429.612	2444.541	PASS
		2462	14.815	2454.598	2469.413	PASS
11G	Ant2	2412	16.974	2403.581	2420.555	PASS
		2437	16.998	2428.513	2445.511	PASS
		2462	16.986	2453.497	2470.483	PASS
11N20MIMO	Ant1	2412	17.825	2403.110	2420.935	PASS
	Ant2	2412	17.689	2403.147	2420.836	PASS
	Ant1	2437	17.874	2428.052	2445.926	PASS
	Ant2	2437	17.675	2428.162	2445.837	PASS
	Ant1	2462	17.869	2453.071	2470.940	PASS
	Ant2	2462	17.658	2453.185	2470.843	PASS
11N40MIMO	Ant1	2422	36.012	2404.109	2440.121	PASS
	Ant2	2422	36.243	2404.023	2440.266	PASS
	Ant1	2437	36.038	2419.076	2455.114	PASS
	Ant2	2437	36.257	2418.939	2455.196	PASS
	Ant1	2452	35.987	2434.095	2470.082	PASS
	Ant2	2452	36.031	2434.061	2470.092	PASS

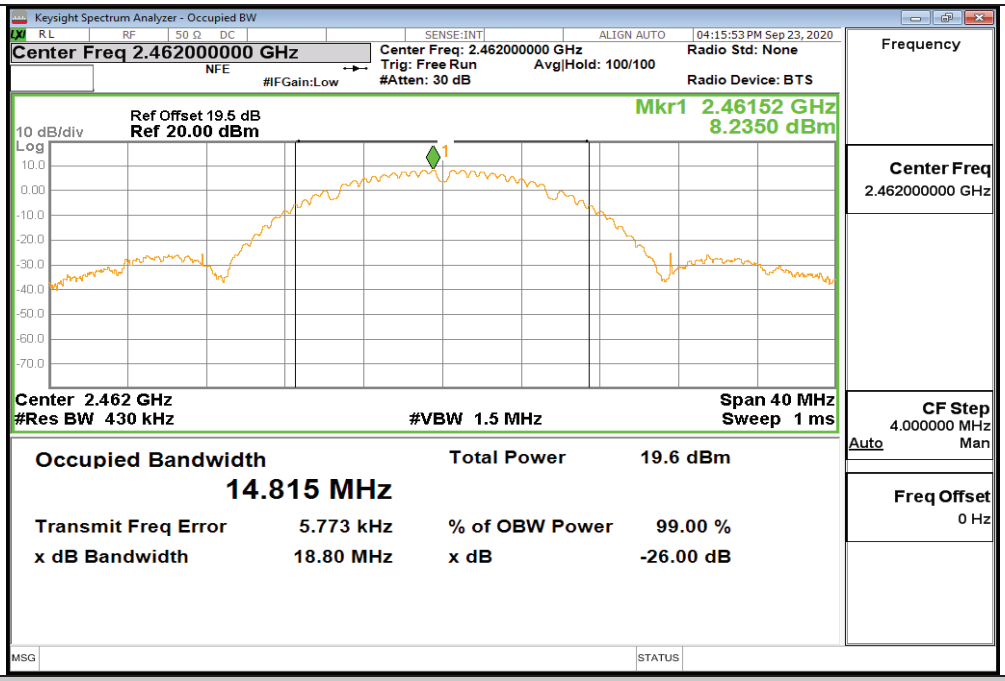
11.2.2. Test Graphs



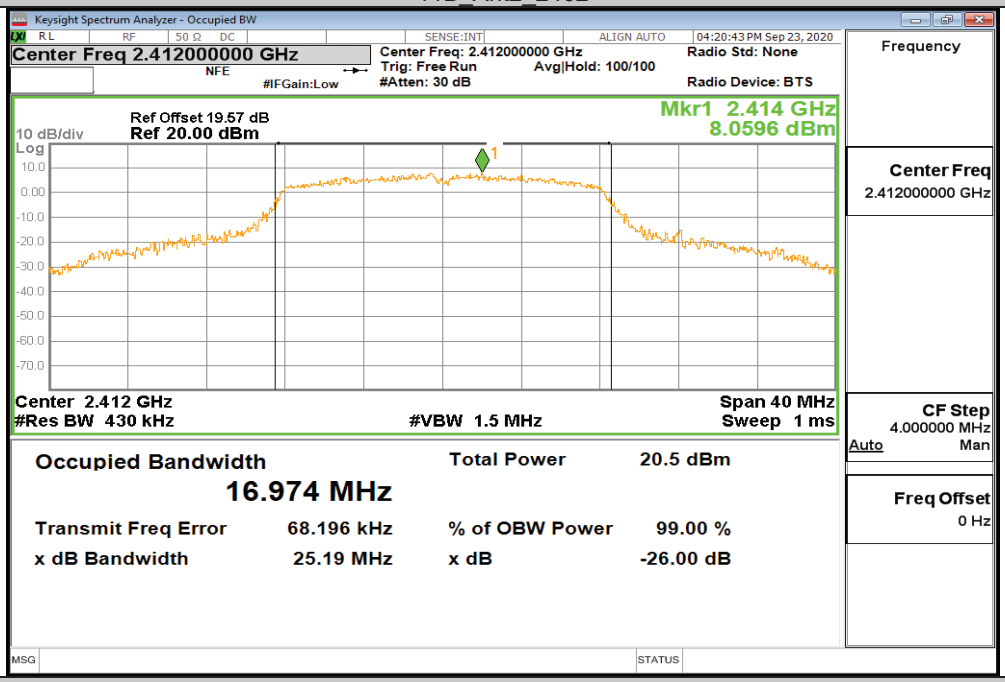
11B_Ant2_2412



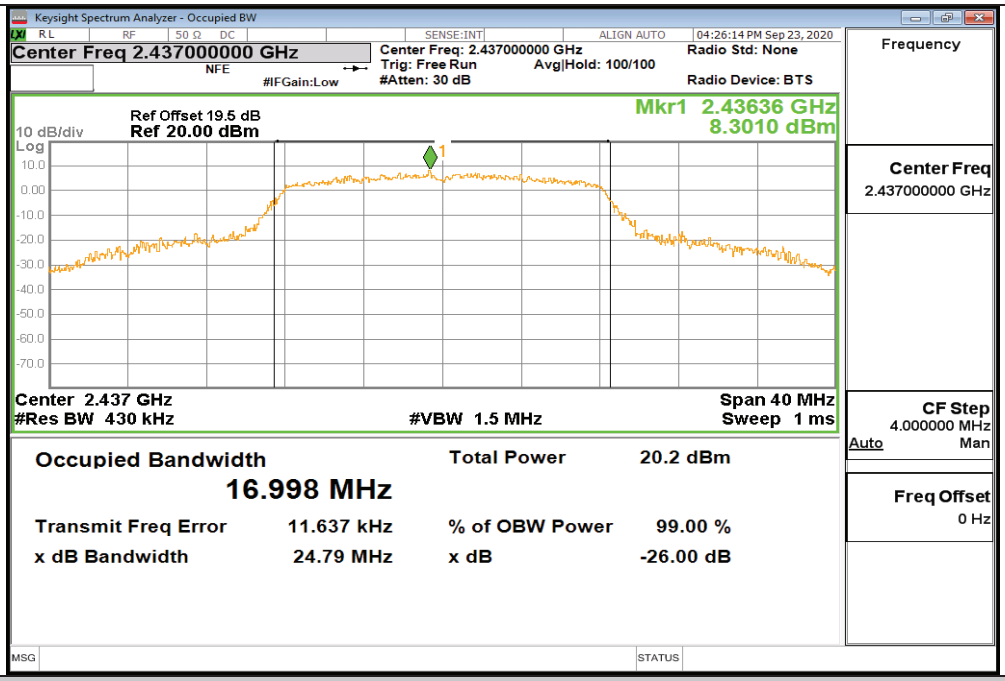
11B_Ant2_2437



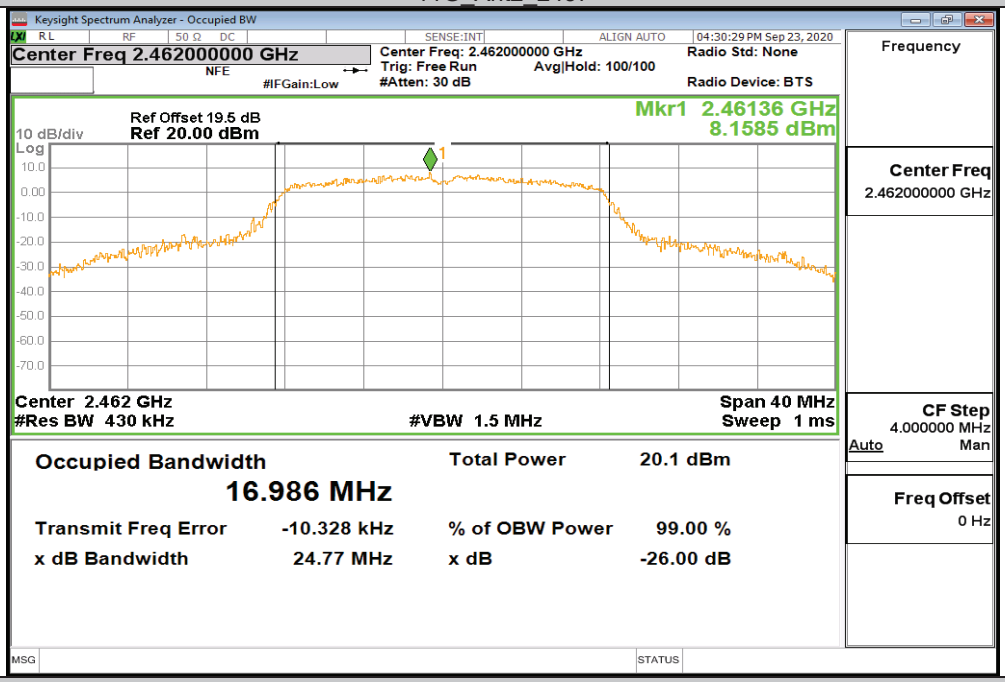
11B_Ant2_2462



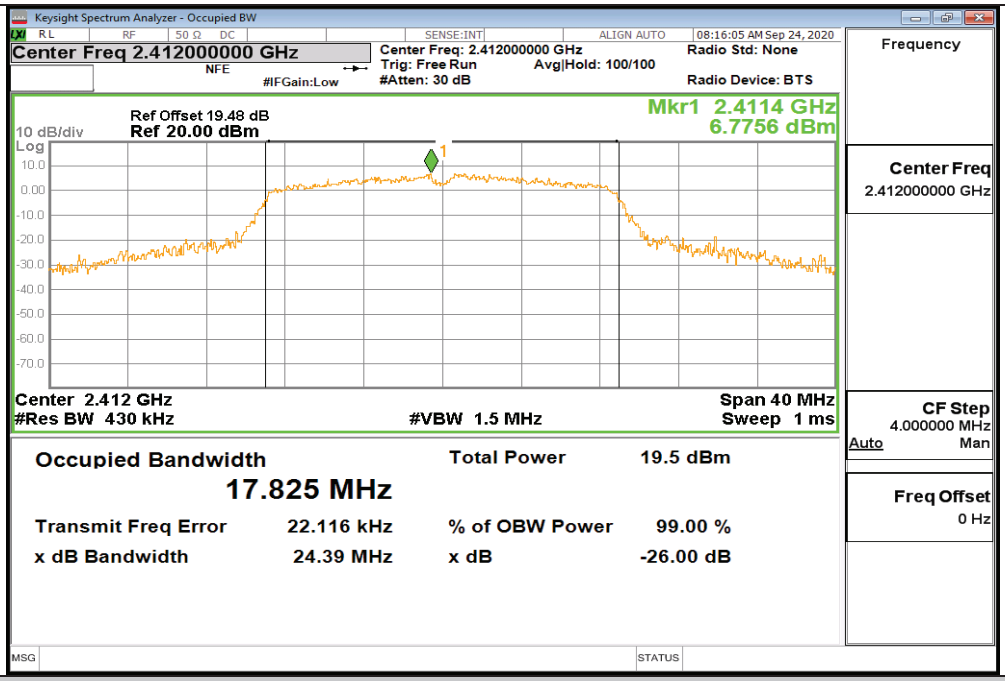
11G_Ant2_2412



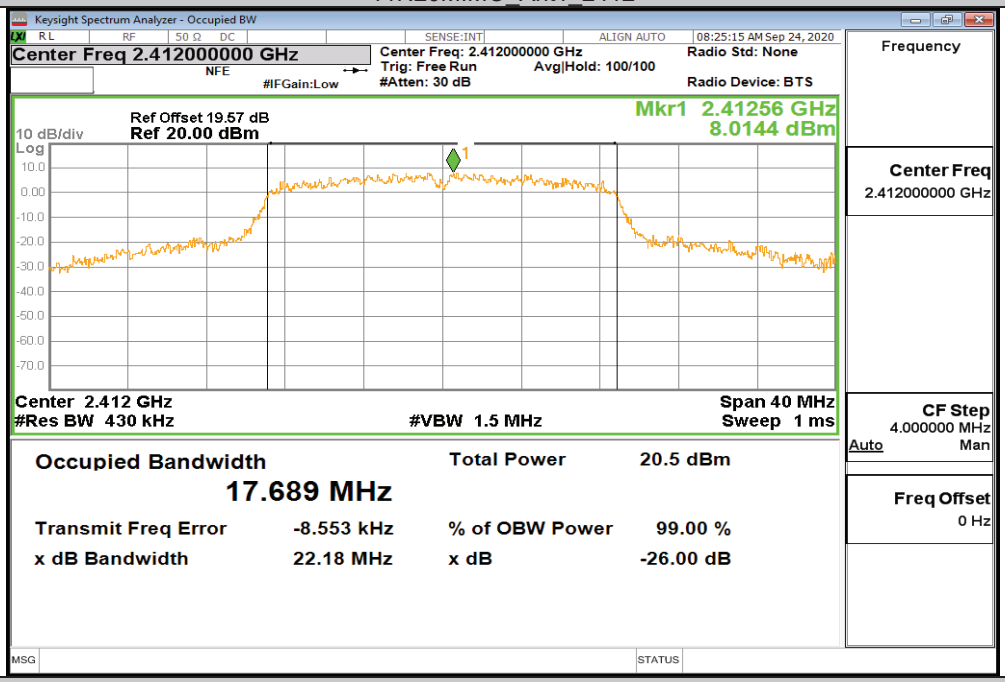
11G_Ant2_2437



11G_Ant2_2462



11N20MIMO_Ant1_2412



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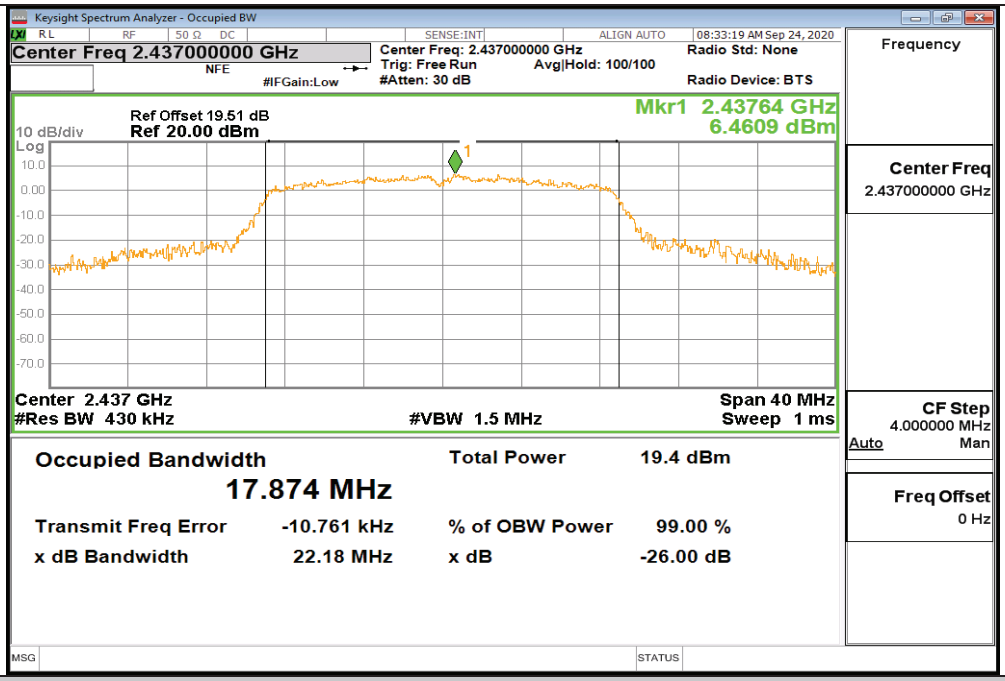
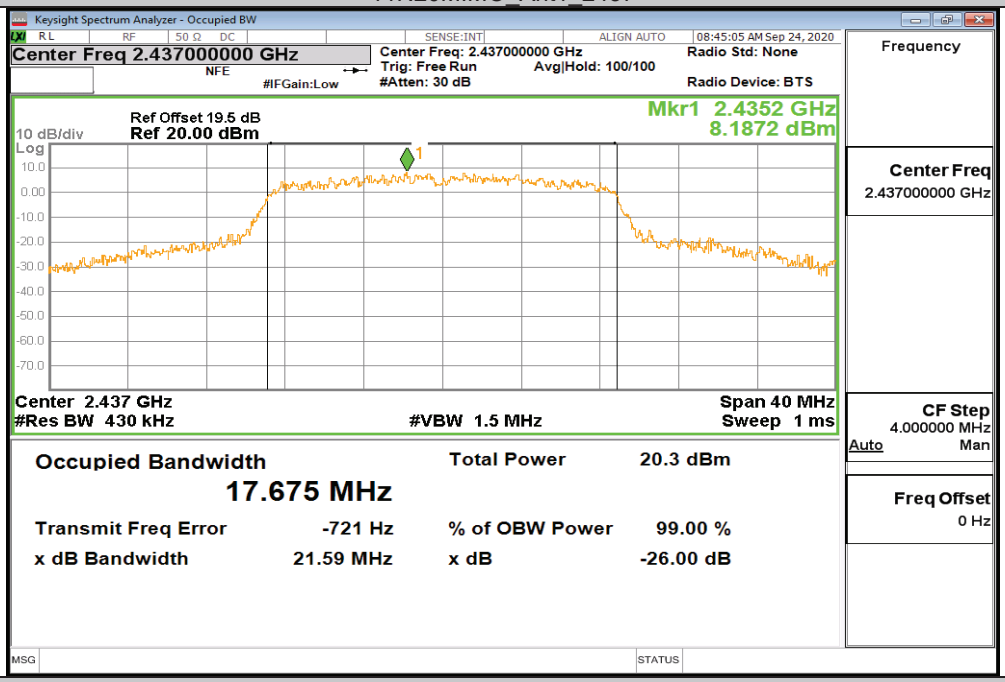
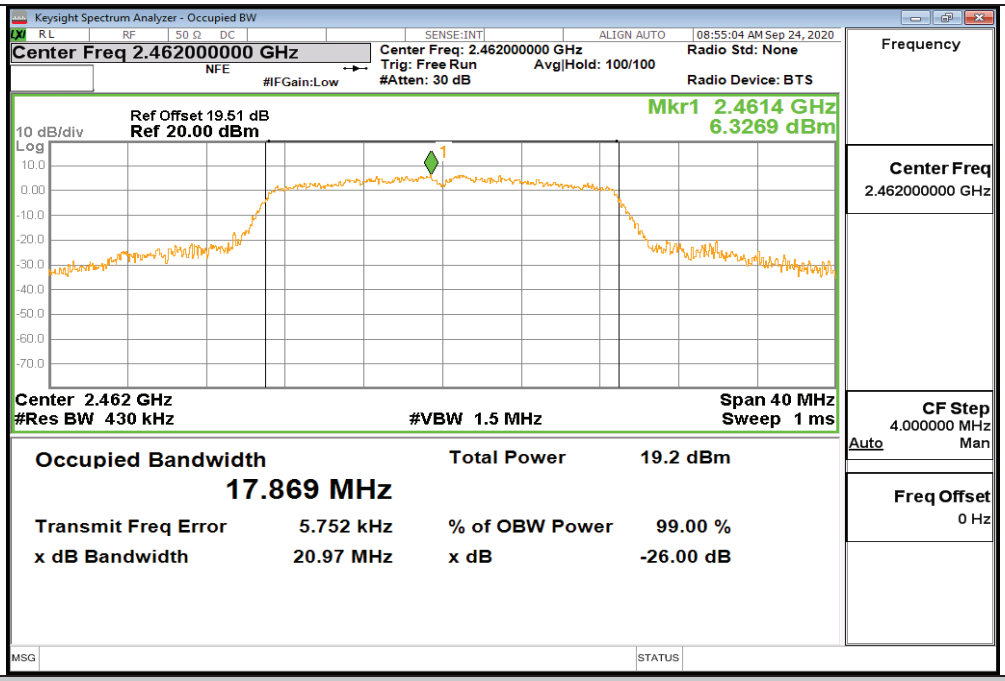


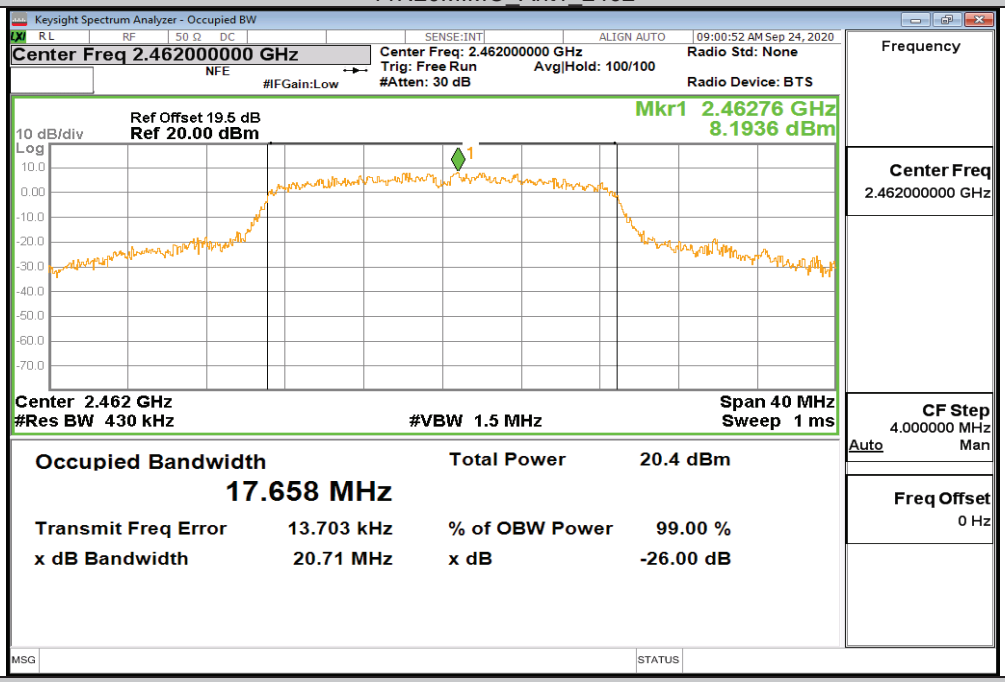
11N20MIMO_Ant1_2437



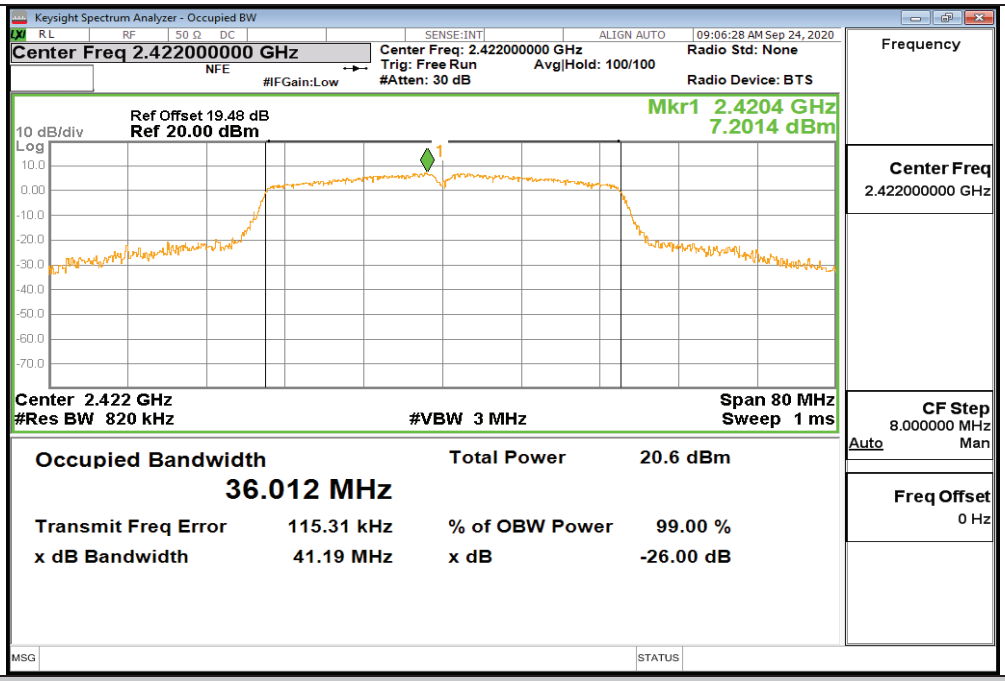
11N20MIMO_Ant2_2437



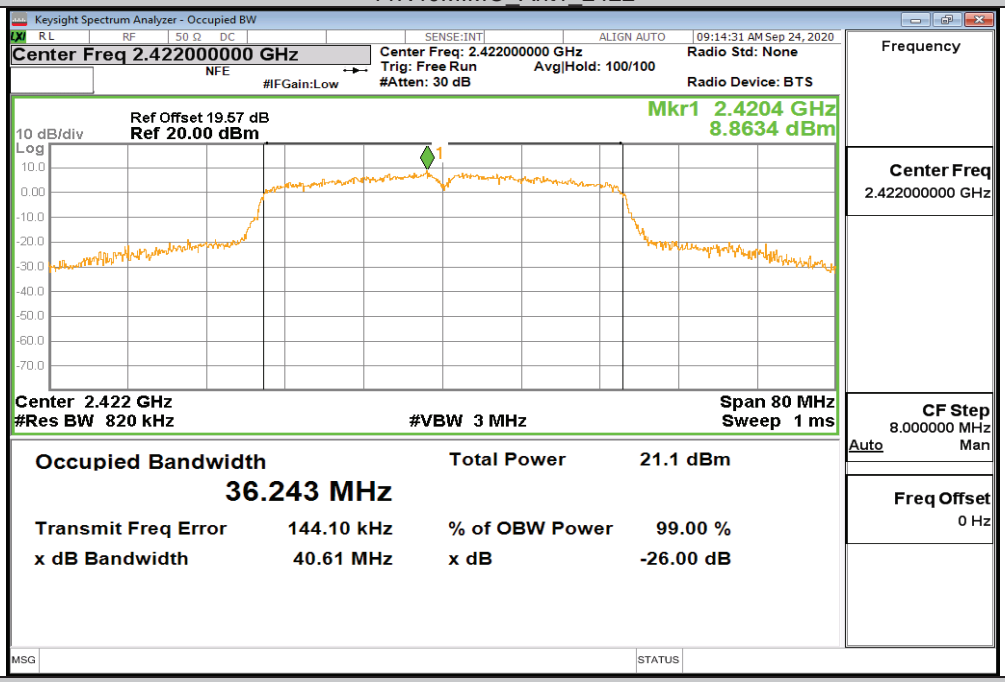
11N20MIMO_Ant1_2462



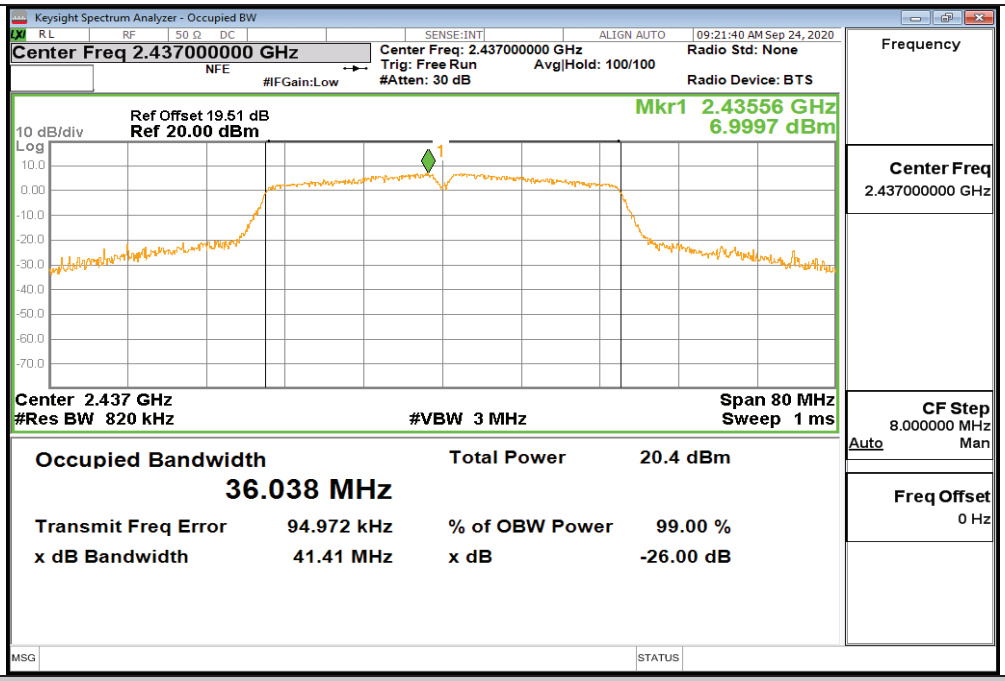
11N20MIMO_Ant2_2462



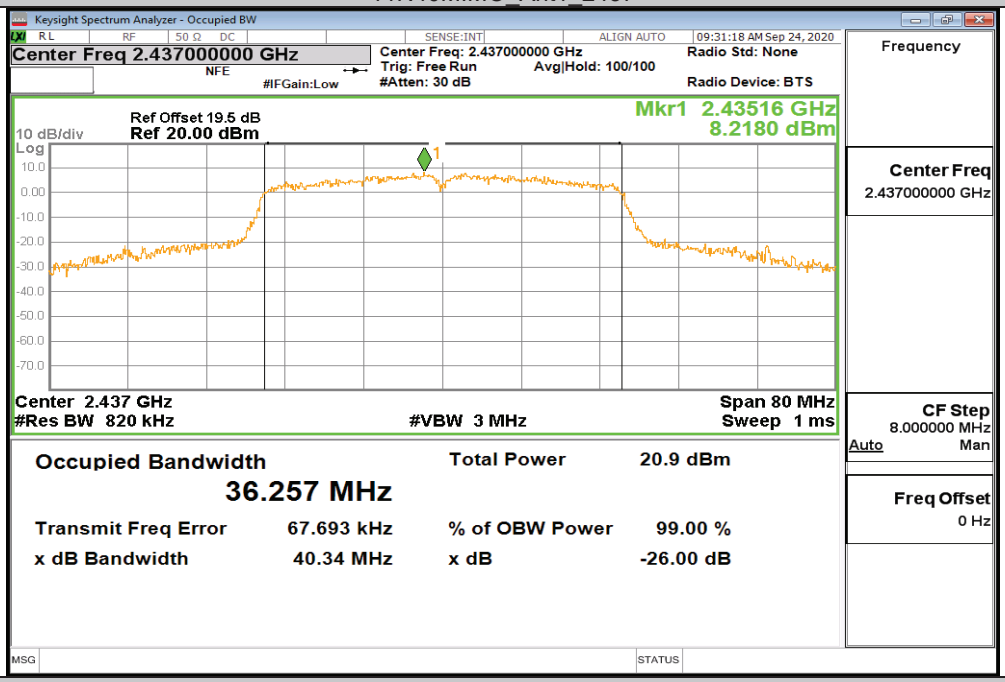
11N40MIMO_Ant1_2422



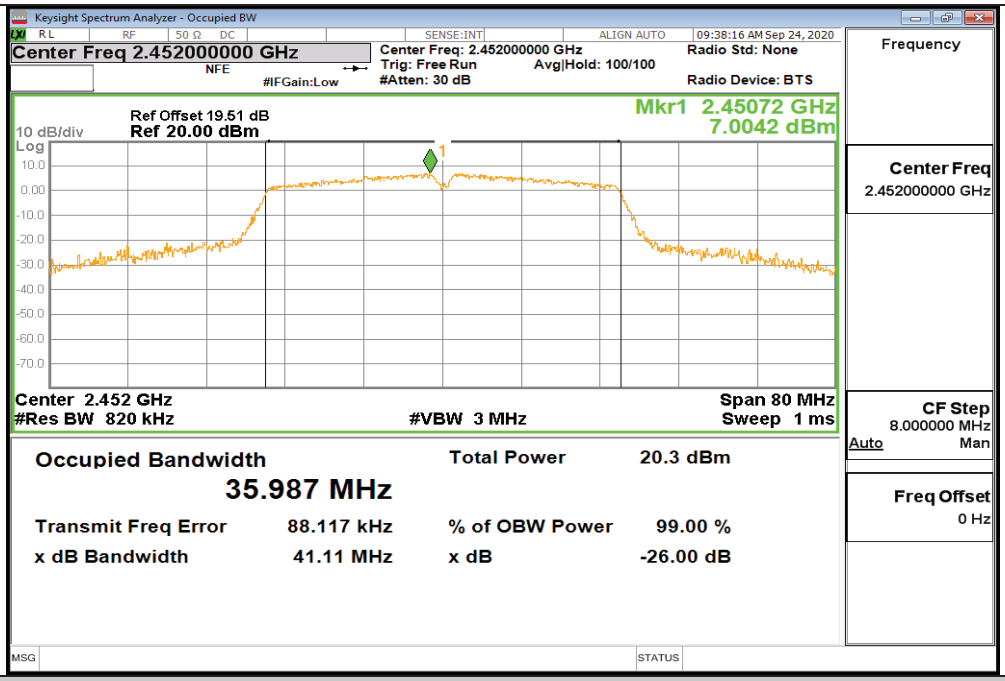
11N40MIMO_Ant2_2422



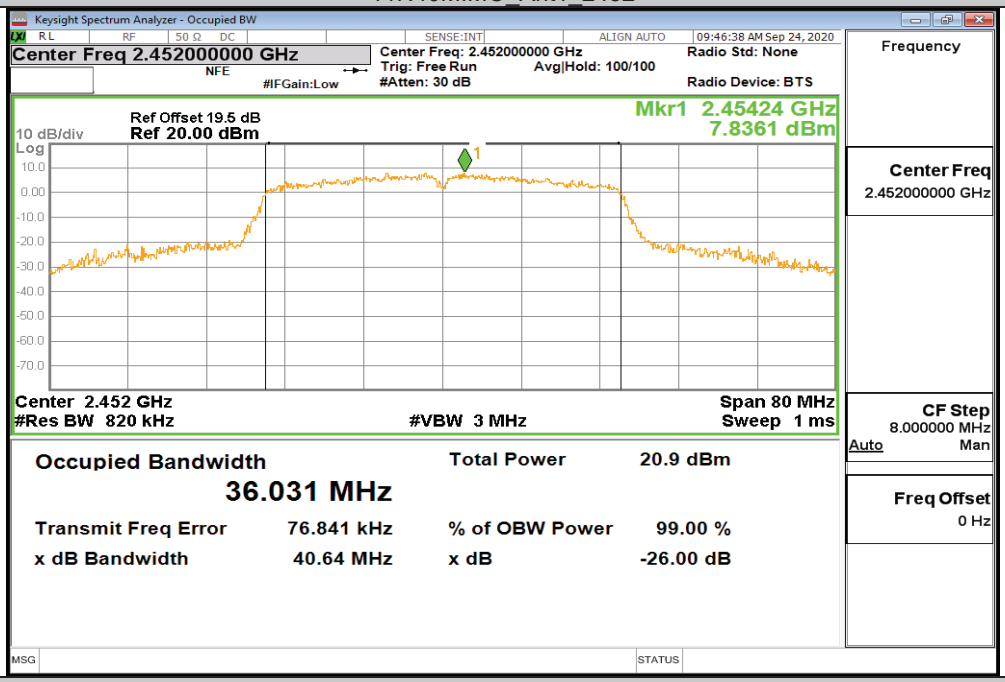
11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452

11.3. Appendix C: Maximum AVG conducted output power

11.3.1. Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	13.63	30	PASS
	Ant2	2412	13.51	30	PASS
	Ant1	2437	14.31	30	PASS
	Ant2	2437	14.09	30	PASS
	Ant1	2462	15.04	30	PASS
	Ant2	2462	15.02	30	PASS
11G	Ant1	2412	14.36	30	PASS
	Ant2	2412	14.38	30	PASS
	Ant1	2437	14.25	30	PASS
	Ant2	2437	14.27	30	PASS
	Ant1	2462	14.02	30	PASS
	Ant2	2462	14.05	30	PASS
11N20MIMO	Ant1	2412	13.07	30	PASS
	Ant2	2412	13.15	30	PASS
	total	2412	16.12	30	PASS
	Ant1	2437	13.28	30	PASS
	Ant2	2437	13.32	30	PASS
	total	2437	16.31	30	PASS
	Ant1	2462	13.02	30	PASS
	Ant2	2462	13.08	30	PASS
	total	2462	16.06	30	PASS
11N40MIMO	Ant1	2422	11.02	30	PASS
	Ant2	2422	11.04	30	PASS
	total	2422	14.04	30	PASS
	Ant1	2437	12.64	30	PASS
	Ant2	2437	12.66	30	PASS
	total	2437	15.66	30	PASS
	Ant1	2452	12.53	30	PASS
	Ant2	2452	12.57	30	PASS
	total	2452	15.56	30	PASS

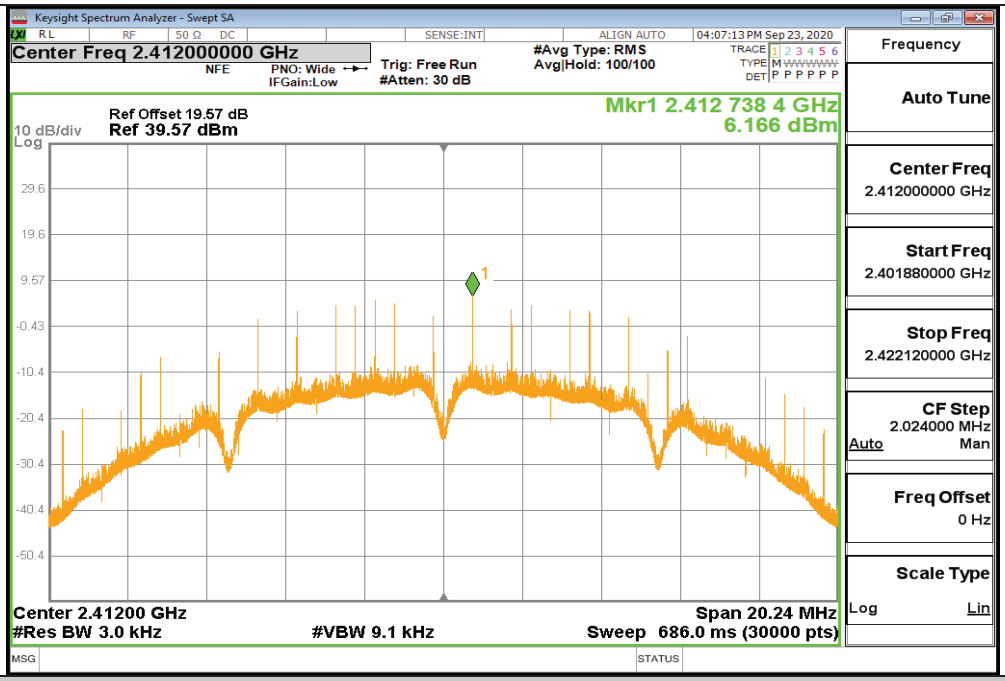
Note: 1. Conducted Power=Meas. Level+ Correction Factor
2. The Duty Cycle Factor (refer to section 7.1) had already compensated to the test data.

11.4. Appendix D: Maximum power spectral density

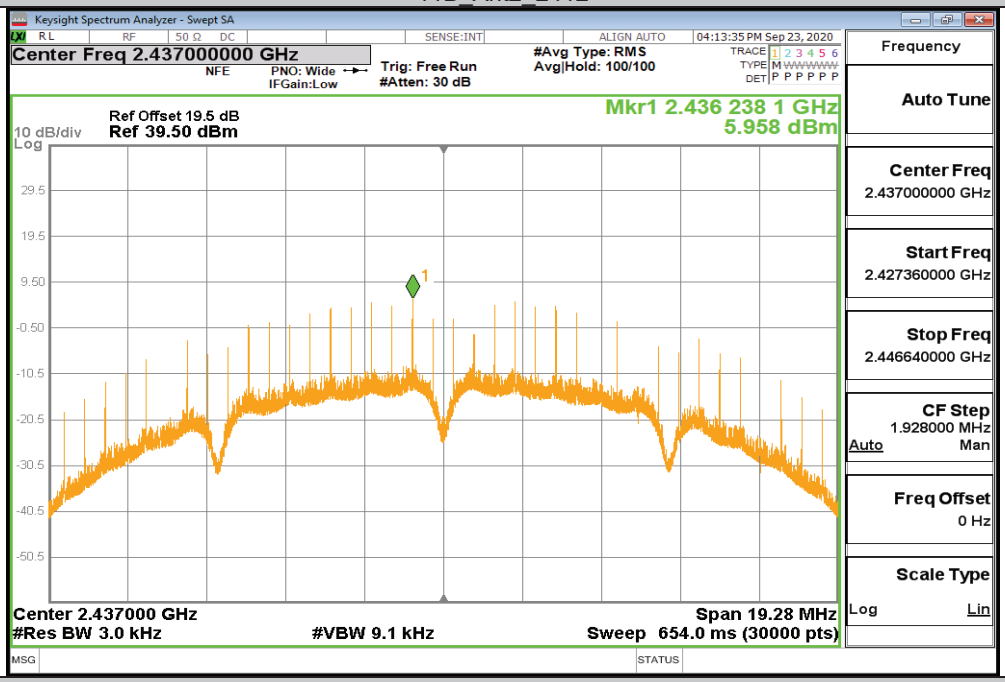
11.4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant2	2412	6.17	<=8	PASS
		2437	5.96	<=8	PASS
		2462	5.88	<=8	PASS
11G	Ant2	2412	-11.52	<=8	PASS
		2437	-10.94	<=8	PASS
		2462	-12.12	<=8	PASS
11N20MIMO	Ant1	2412	-11.75	<=8	PASS
	Ant2	2412	-12.09	<=8	PASS
	total	2412	-8.91	<=8	PASS
	Ant1	2437	-11.6	<=8	PASS
	Ant2	2437	-10.86	<=8	PASS
	total	2437	-8.20	<=8	PASS
	Ant1	2462	-11.98	<=8	PASS
	Ant2	2462	-9.82	<=8	PASS
	total	2462	-7.76	<=8	PASS
11N40MIMO	Ant1	2422	-14.83	<=8	PASS
	Ant2	2422	-14.25	<=8	PASS
	total	2422	-11.52	<=8	PASS
	Ant1	2437	-14.87	<=8	PASS
	Ant2	2437	-14.42	<=8	PASS
	total	2437	-11.63	<=8	PASS
	Ant1	2452	-13.87	<=8	PASS
	Ant2	2452	-14.18	<=8	PASS
	total	2452	-11.01	<=8	PASS

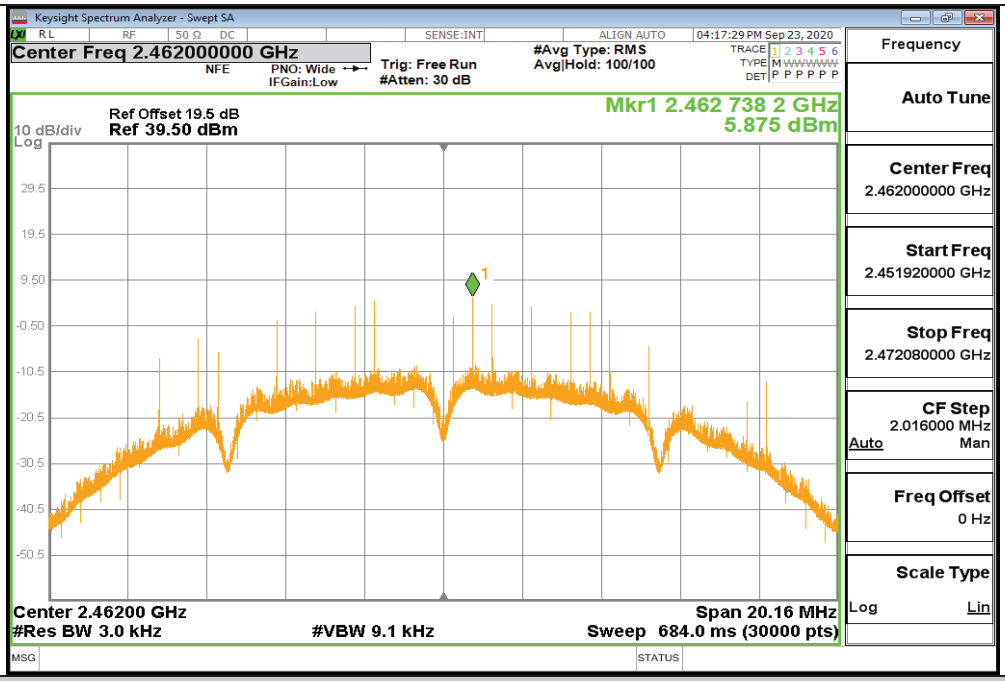
11.4.2. Test Graphs



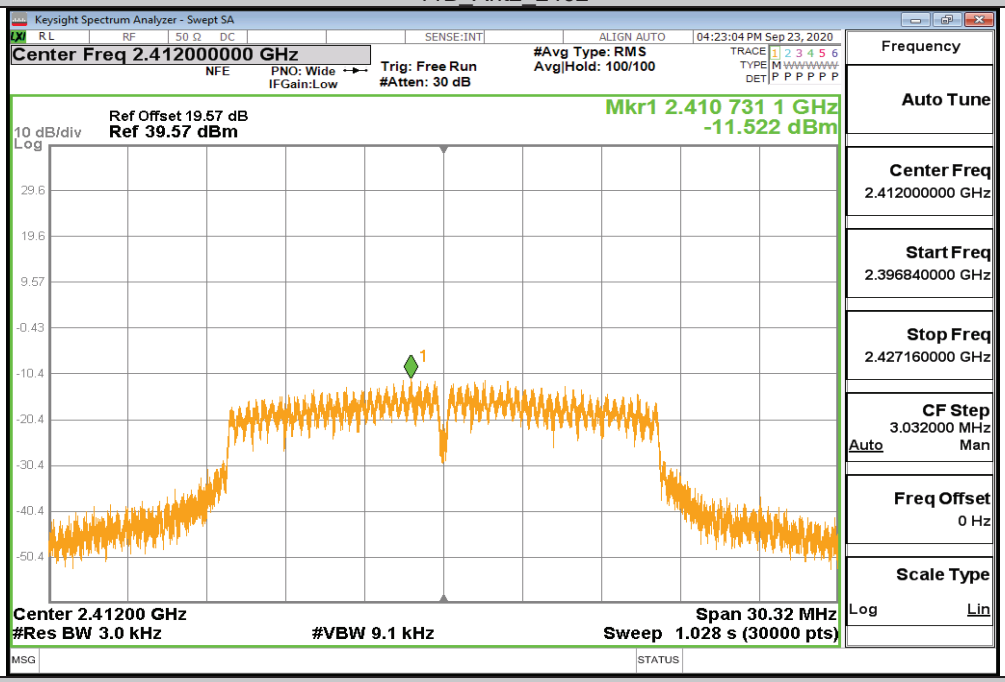
11B_Ant2_2412



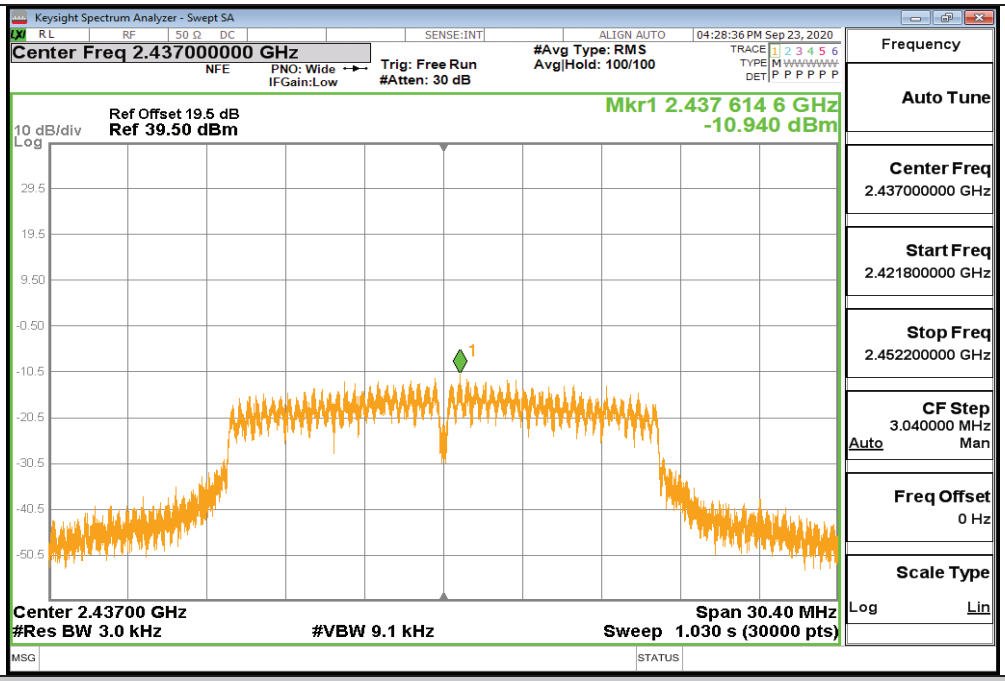
11B_Ant2_2437



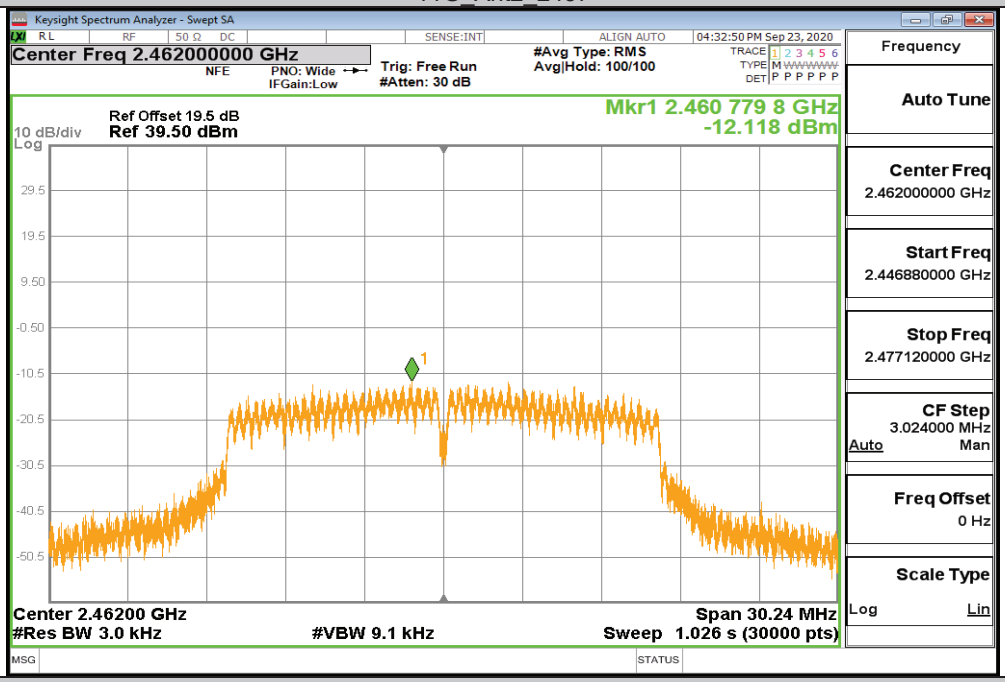
11B_Ant2_2462



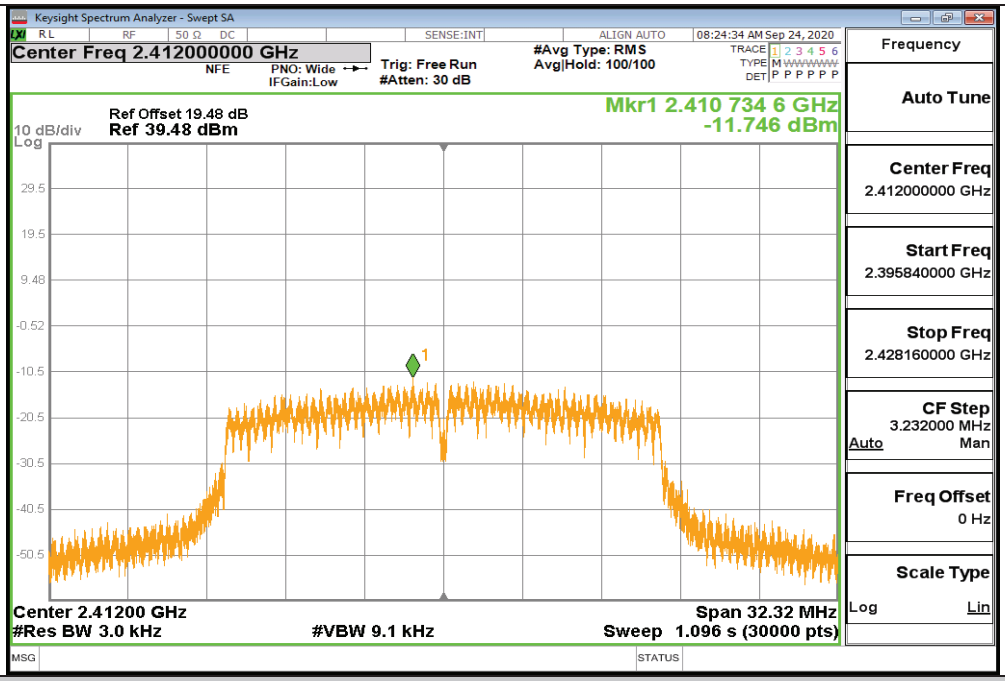
11G_Ant2_2412



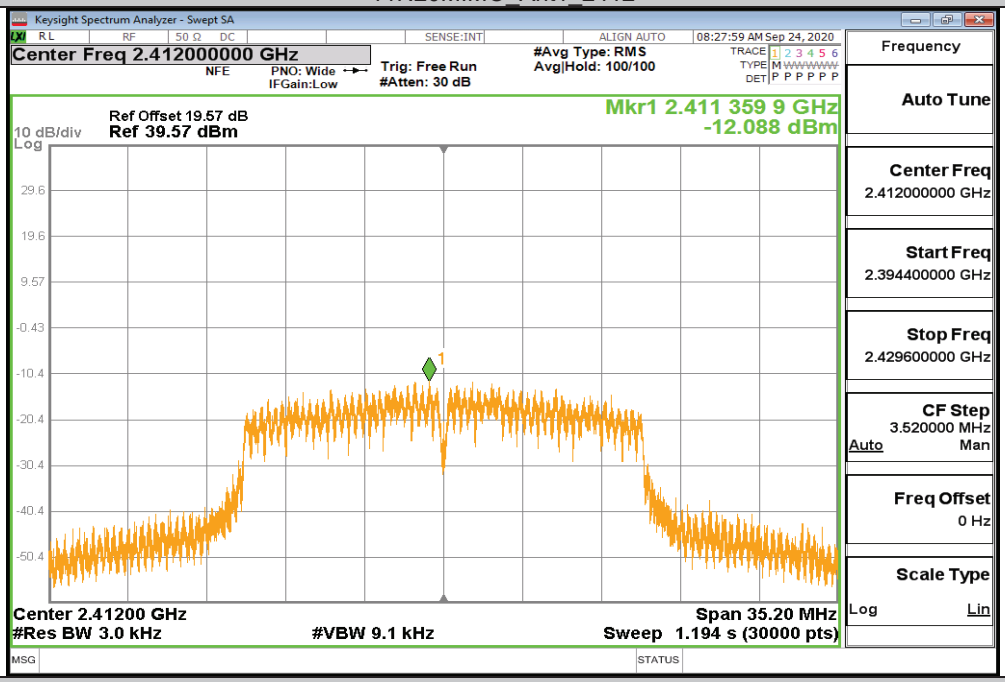
11G_Ant2_2437



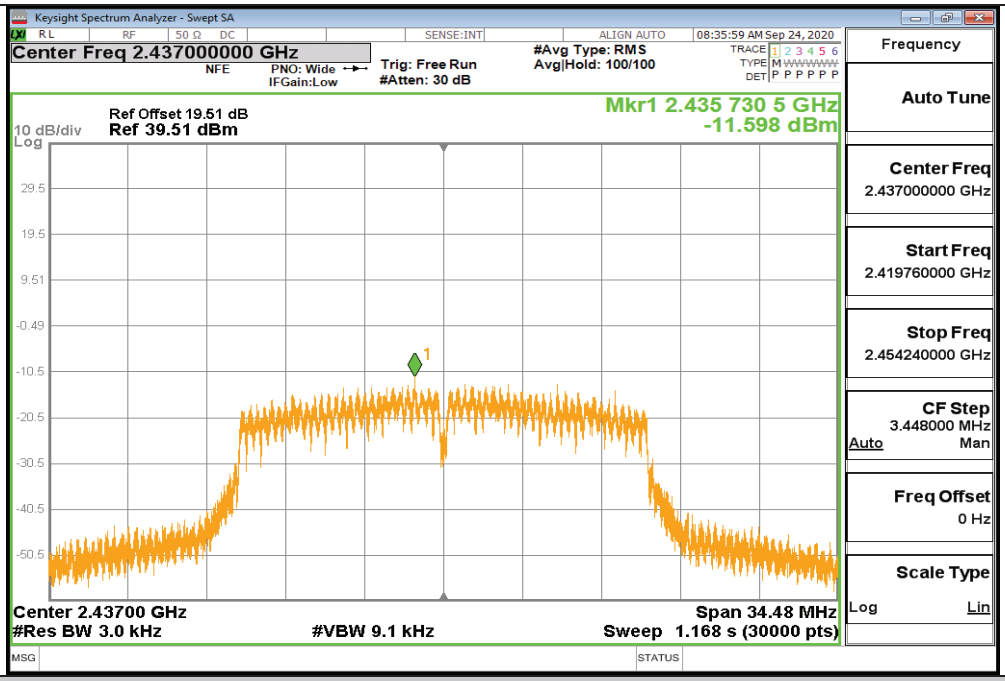
11G_Ant2_2462



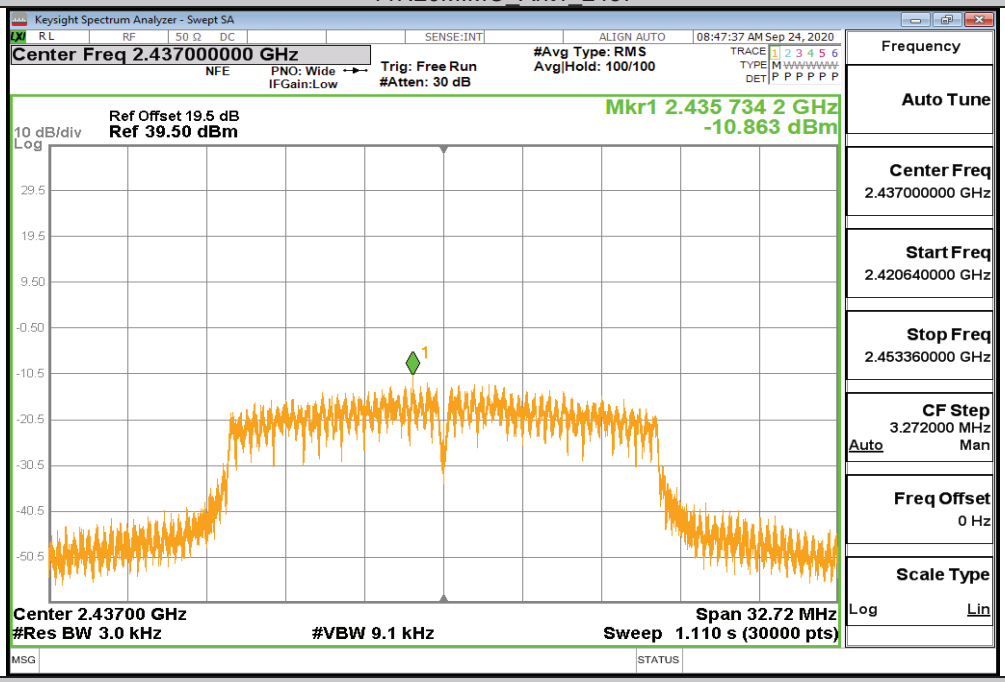
11N20MIMO_Ant1_2412



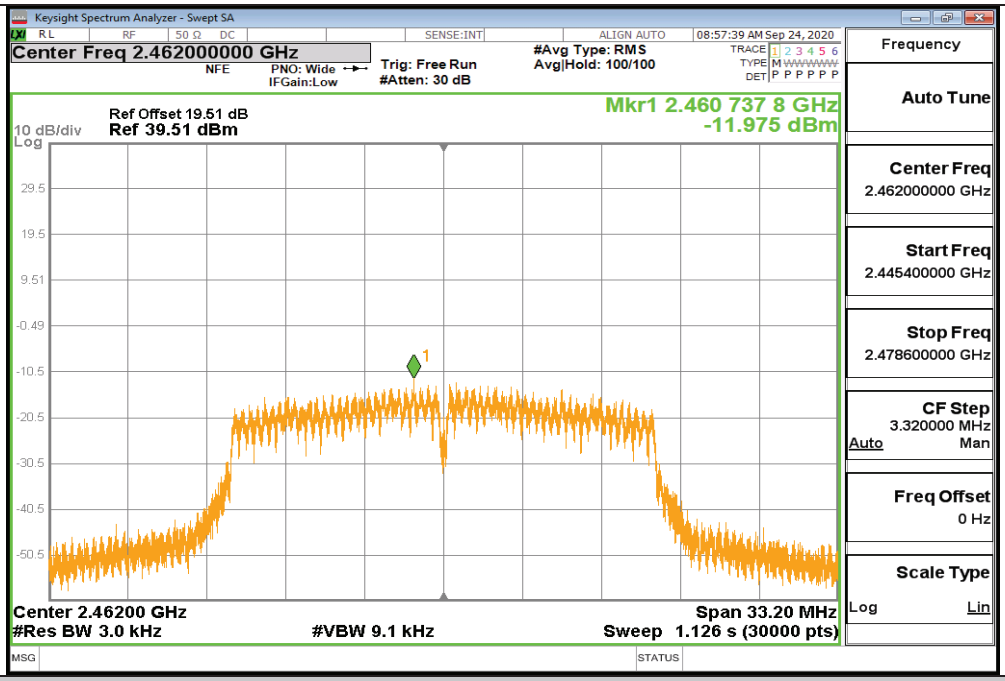
11N20MIMO_Ant2_2412



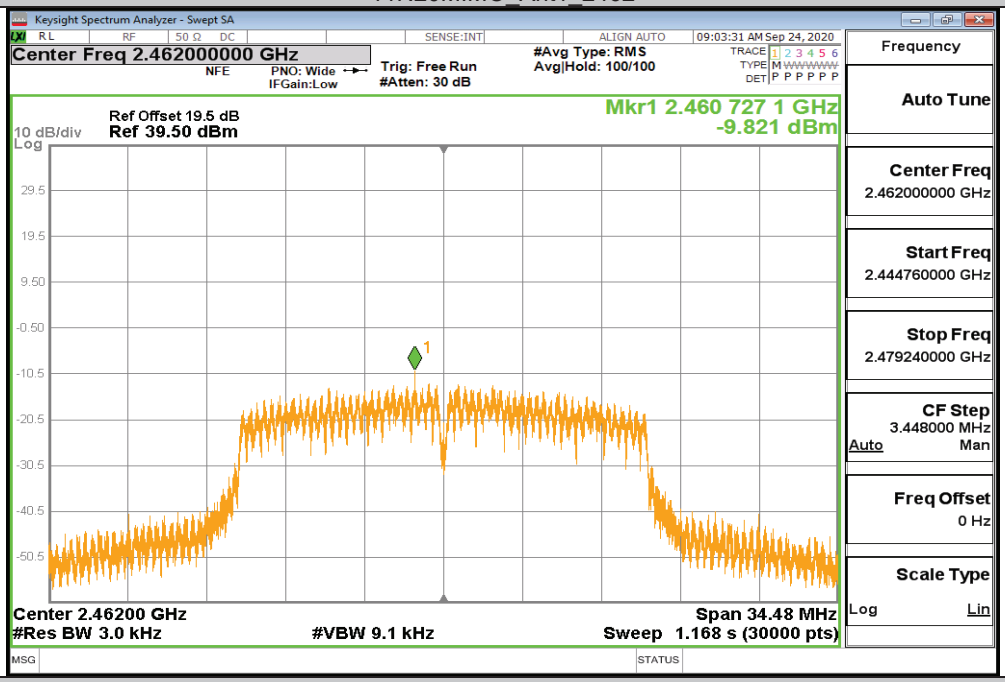
11N20MIMO_Ant1_2437



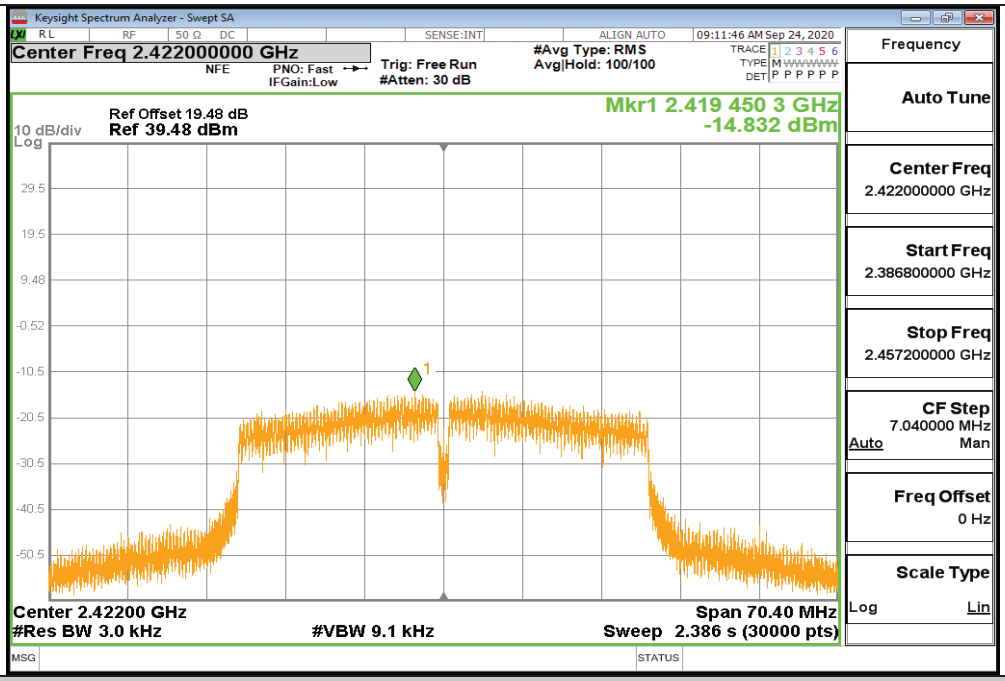
11N20MIMO_Ant2_2437



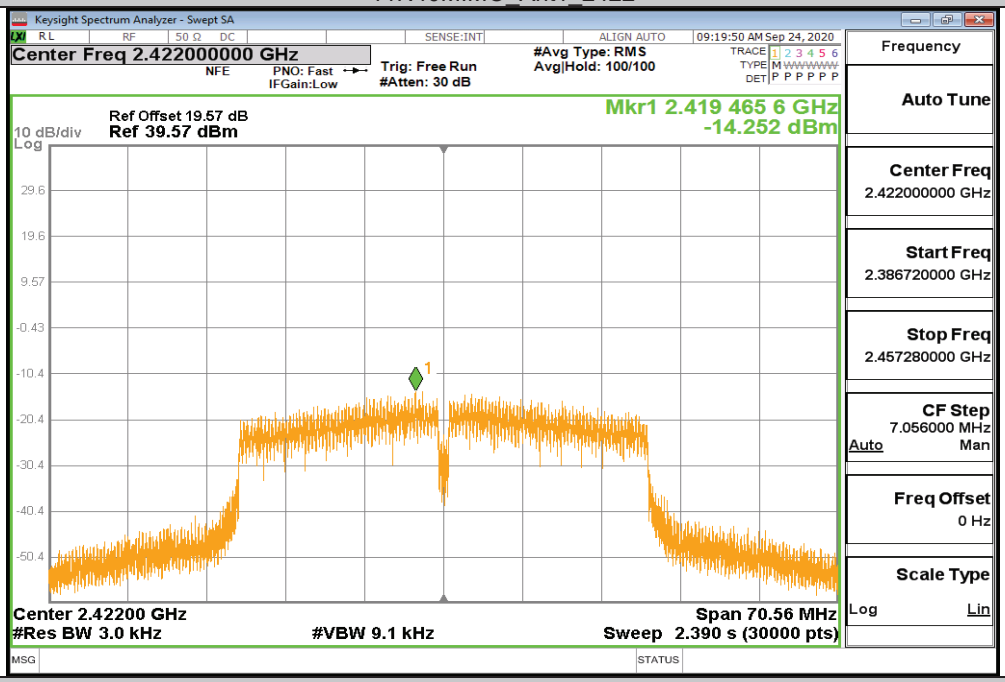
11N20MIMO_Ant1_2462



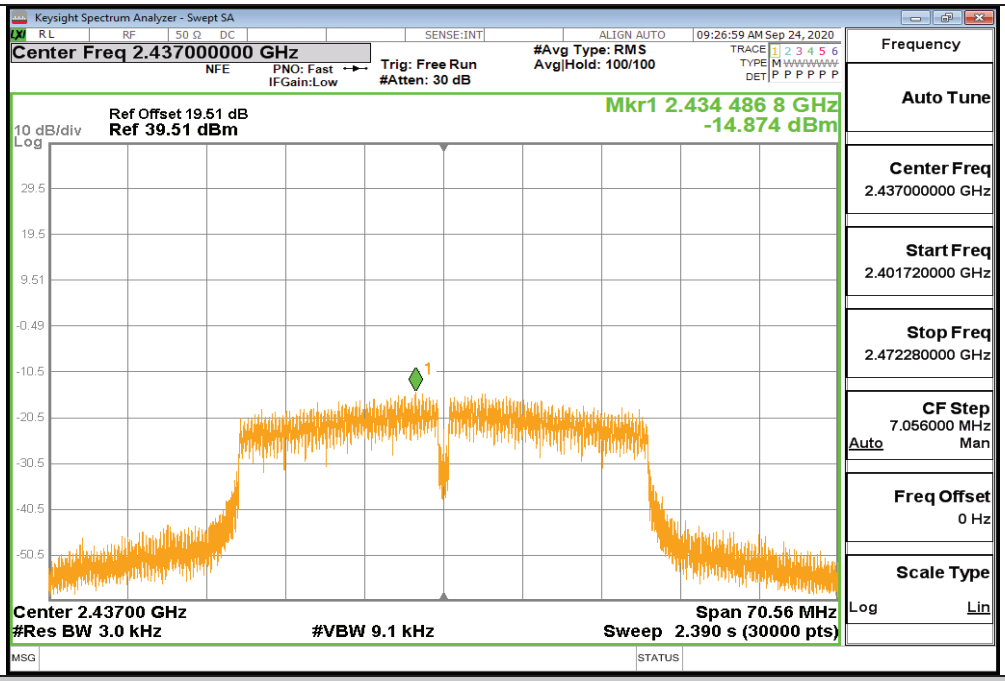
11N20MIMO_Ant2_2462



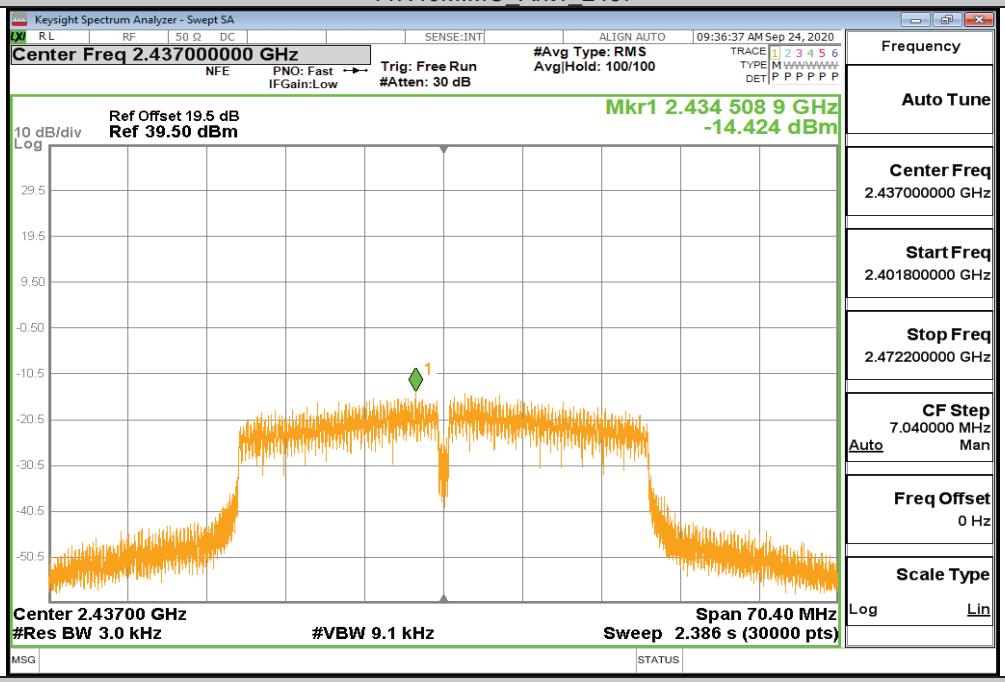
11N40MIMO_Ant1_2422



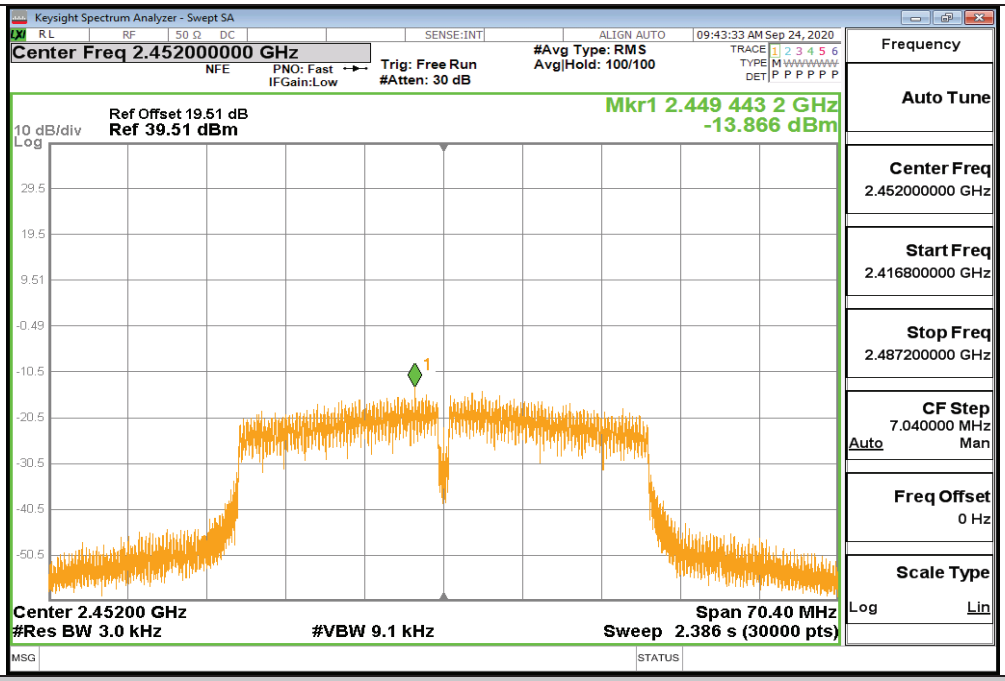
11N40MIMO_Ant2_2422



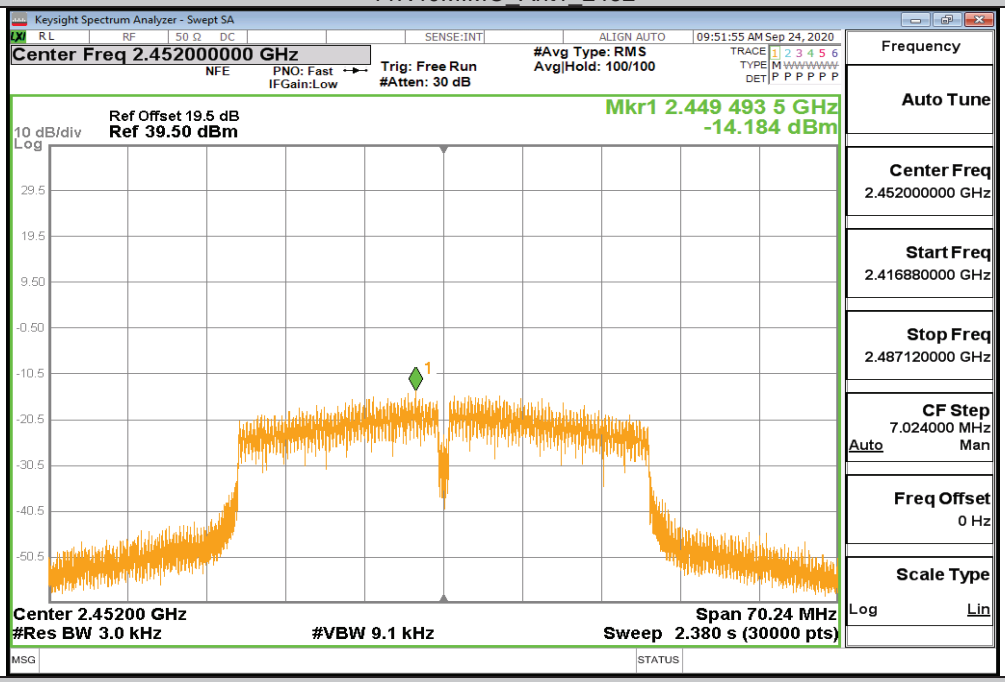
11N40MIMO_Ant1_2437



11N40MIMO_Ant2_2437



11N40MIMO_Ant1_2452



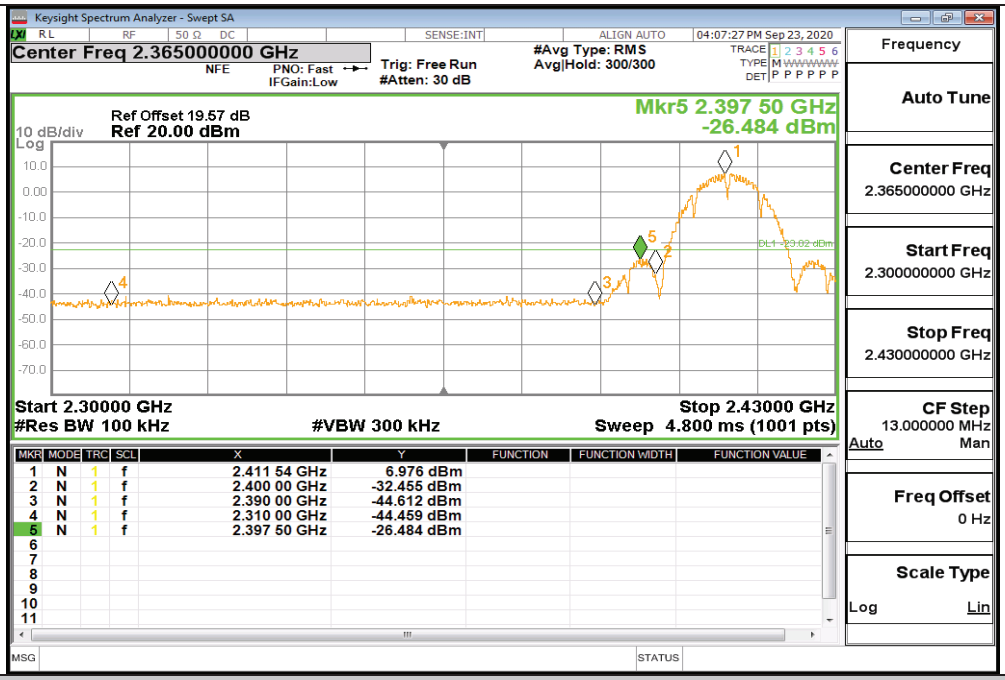
11N40MIMO_Ant2_2452

11.5. Appendix E: Band edge measurements

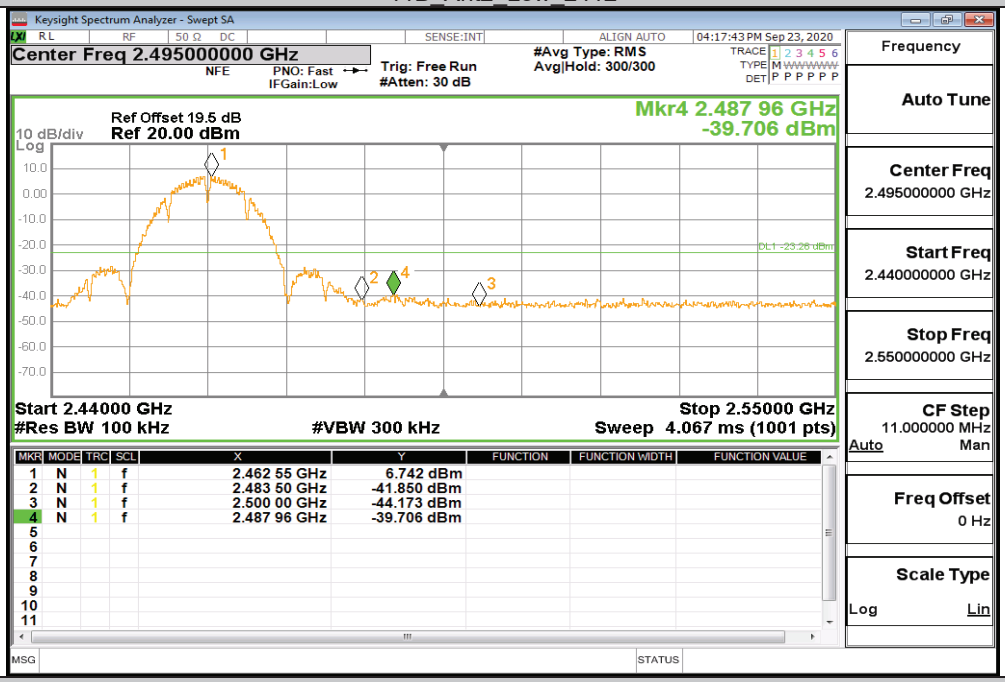
11.5.1. Test Result

Test Mode	Antenna	Ch Name	Channel	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant2	Low	2412	6.98	-26.48	<=-23.02	PASS
		High	2462	6.74	-39.71	<=-23.26	PASS
11G	Ant2	Low	2412	4.53	-26.37	<=-25.47	PASS
		High	2462	4.10	-39.75	<=-25.9	PASS
11N20MIMO	Ant1	Low	2412	2.38	-29.14	<=-27.62	PASS
	Ant2	Low	2412	3.67	-27.25	<=-26.33	PASS
	Ant1	High	2462	3.22	-40.06	<=-26.78	PASS
	Ant2	High	2462	3.43	-37.98	<=-26.57	PASS
11N40MIMO	Ant1	Low	2422	1.21	-30.03	<=-28.8	PASS
	Ant2	Low	2422	1.02	-29.09	<=-28.98	PASS
	Ant1	High	2452	0.42	-35.29	<=-29.58	PASS
	Ant2	High	2452	1.22	-33.9	<=-28.78	PASS

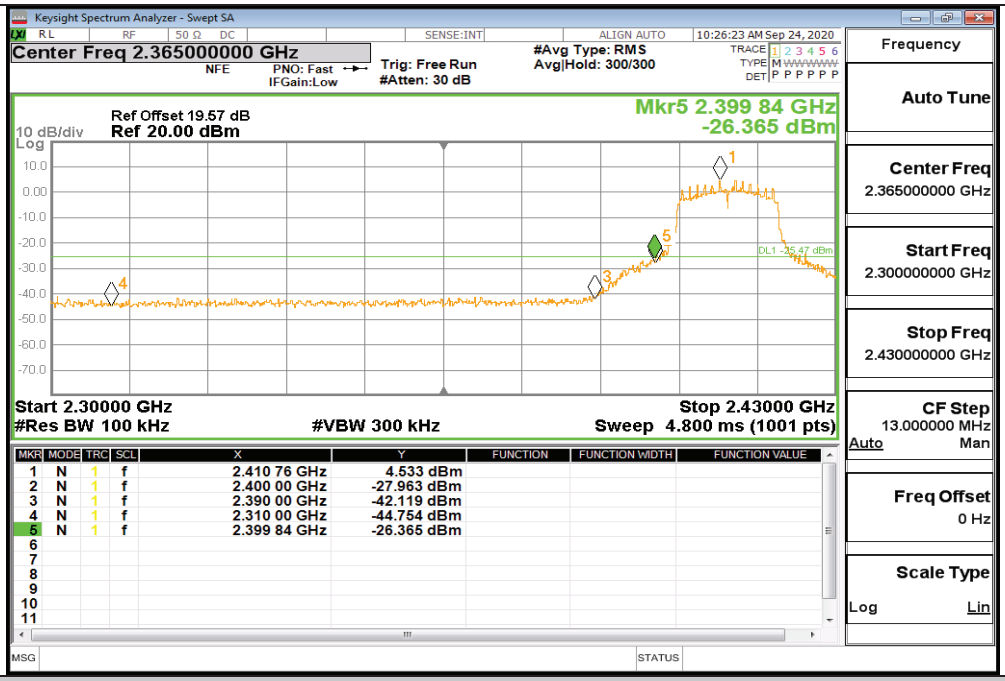
11.5.2. Test Graphs



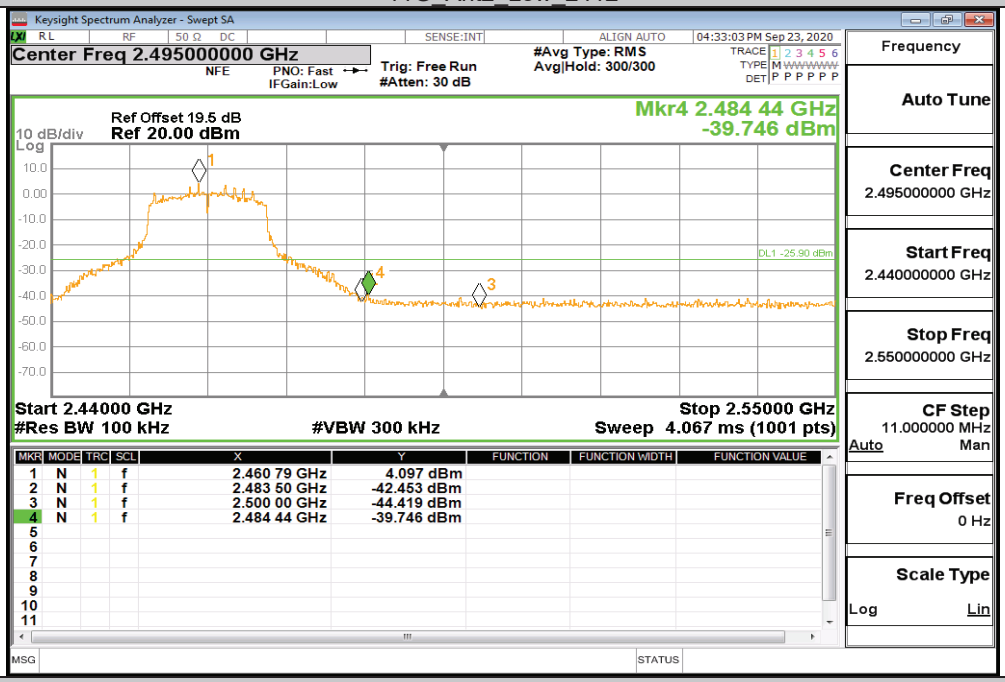
11B_Ant2_Low_2412



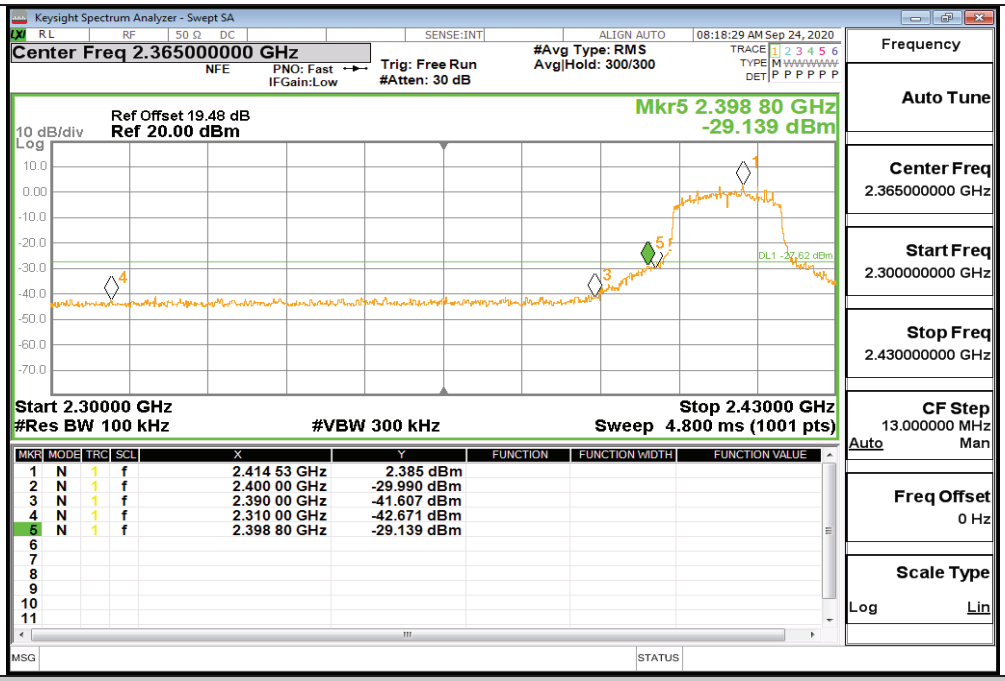
11B_Ant2_High_2462



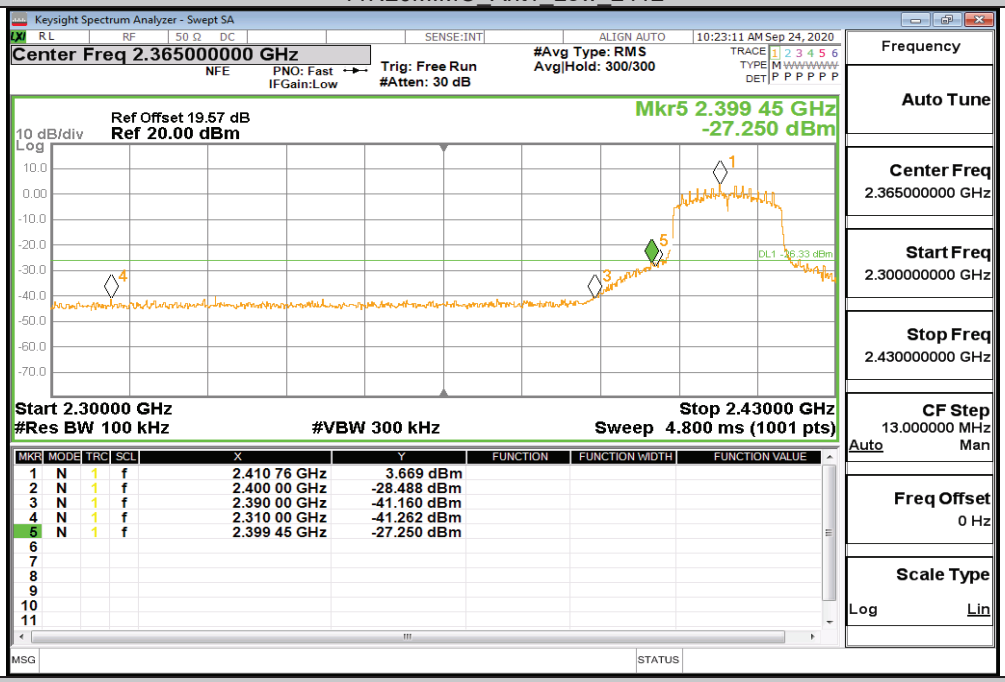
11G_Ant2_Low_2412



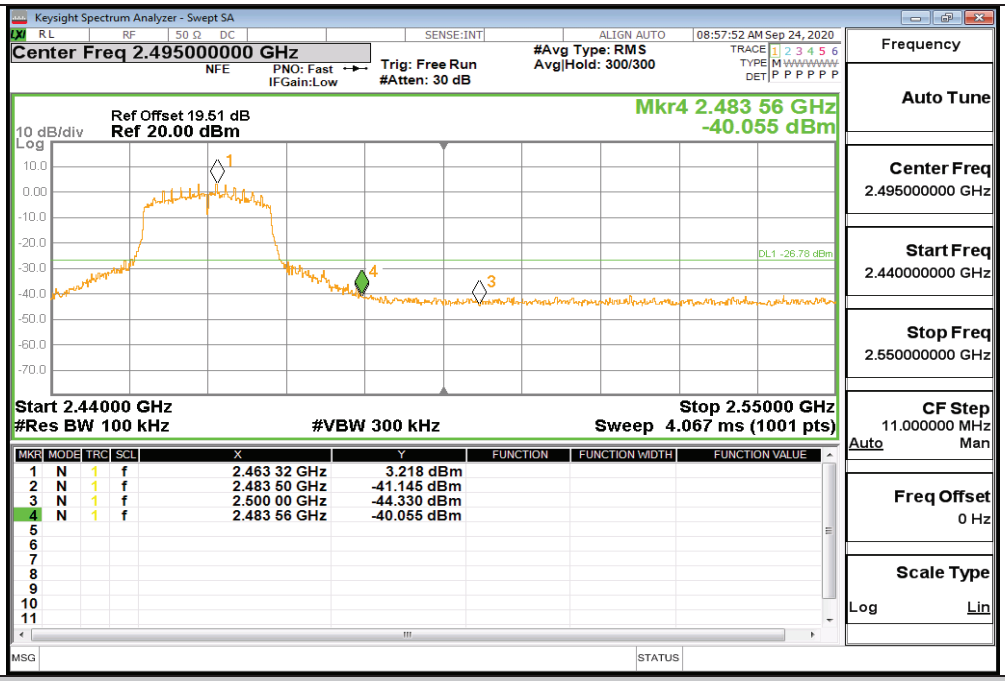
11G_Ant2_High_2462



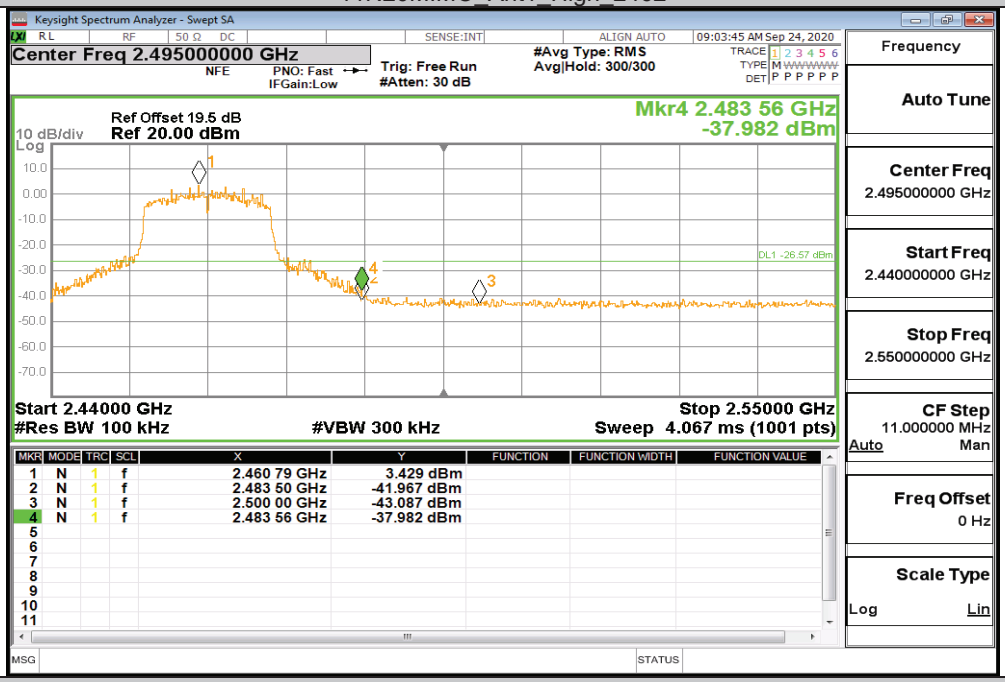
11N20MIMO_Ant1_Low_2412



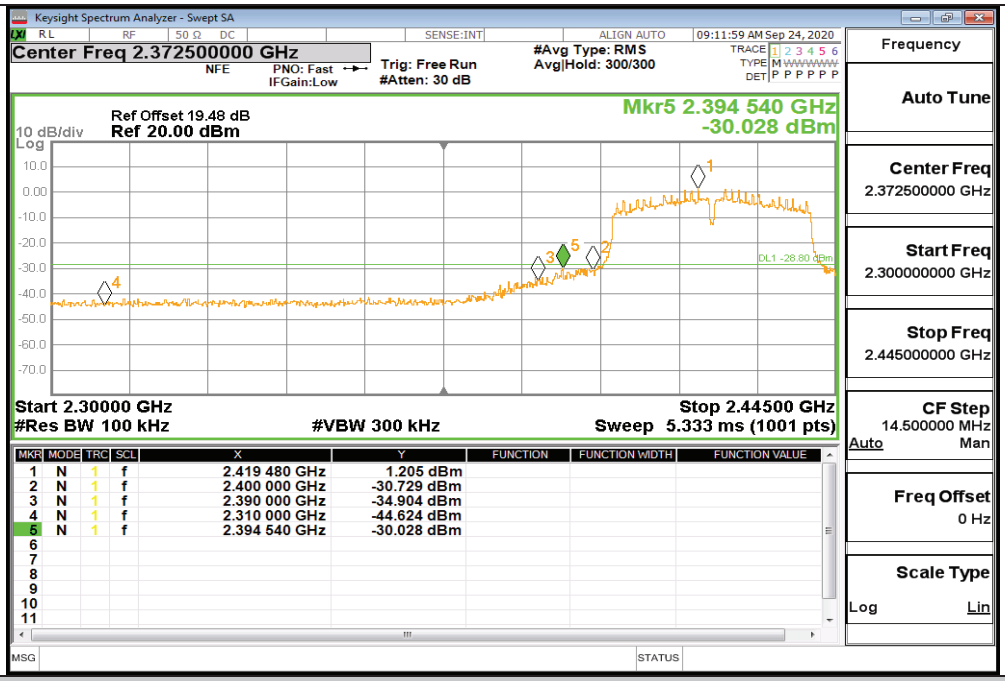
11N20MIMO_Ant2_Low_2412



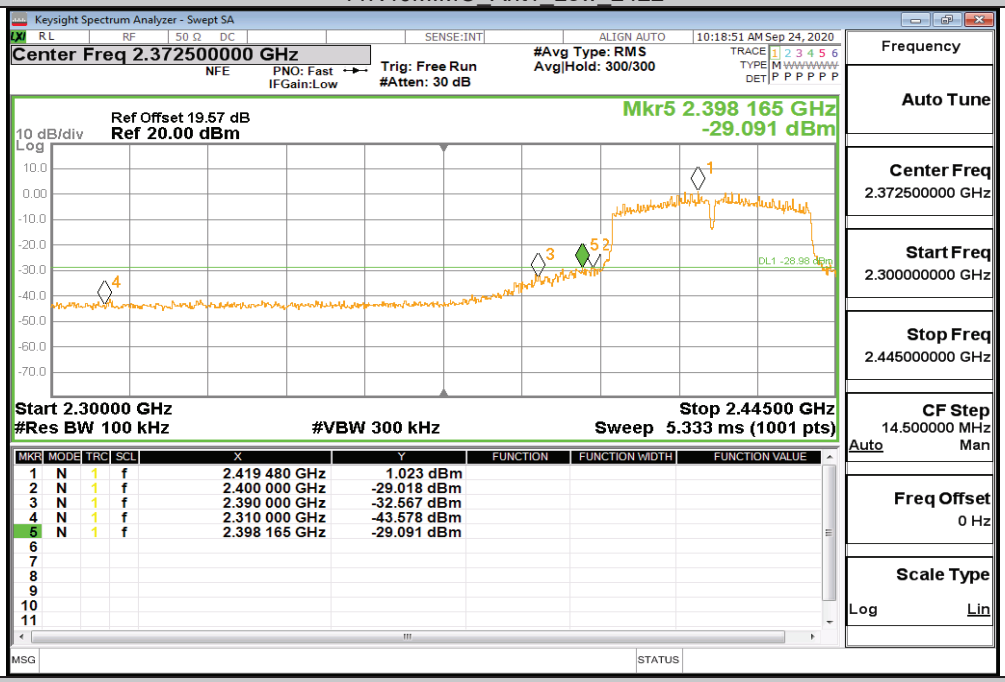
11N20MIMO_Ant1_High_2462



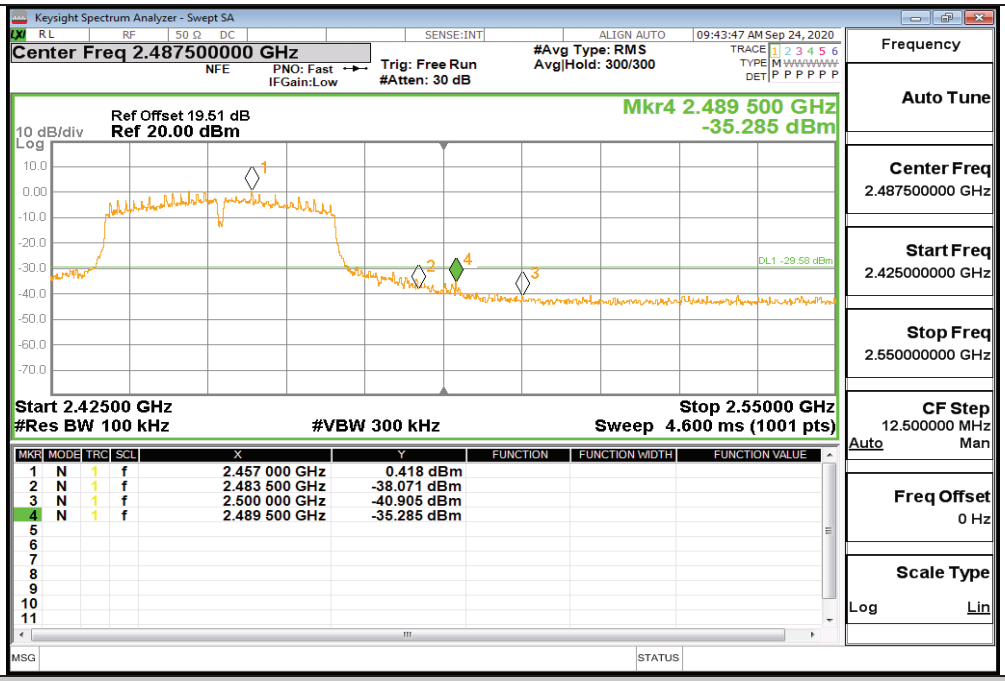
11N20MIMO_Ant2_High_2462



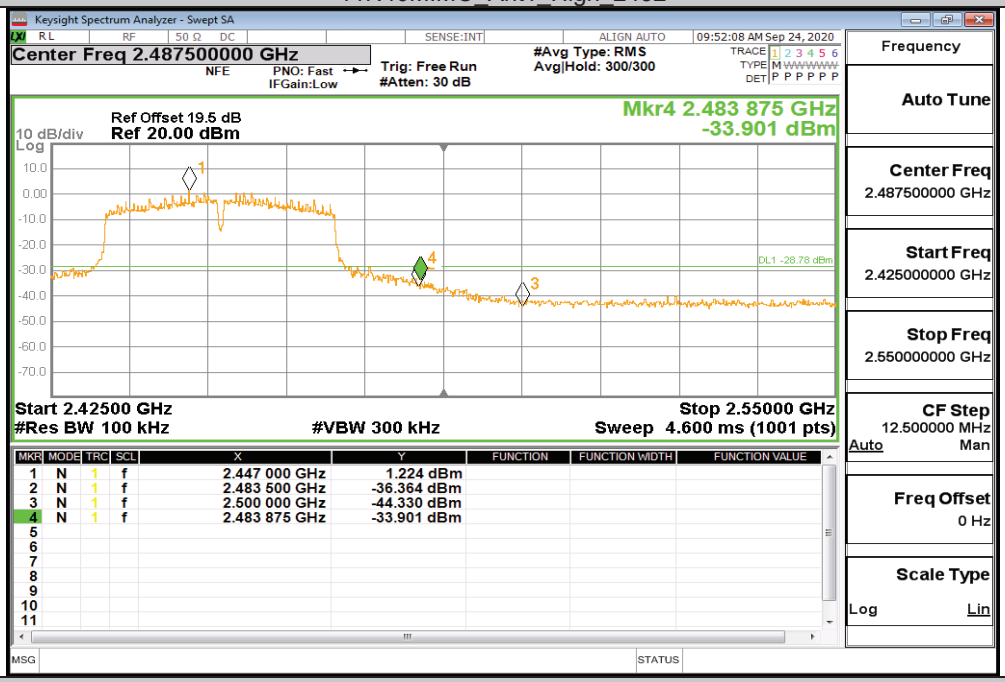
11N40MIMO_Ant1_Low_2422



11N40MIMO_Ant2_Low_2422



11N40MIMO_Ant1_High_2452



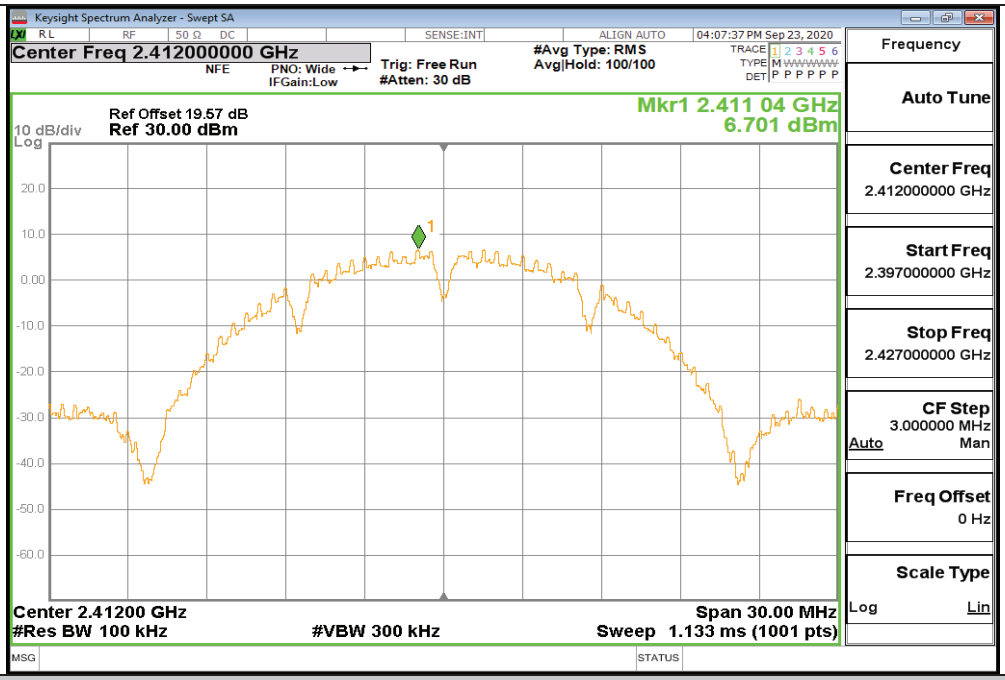
11N40MIMO_Ant2_High_2452

11.6. Appendix F: Conducted Spurious Emission

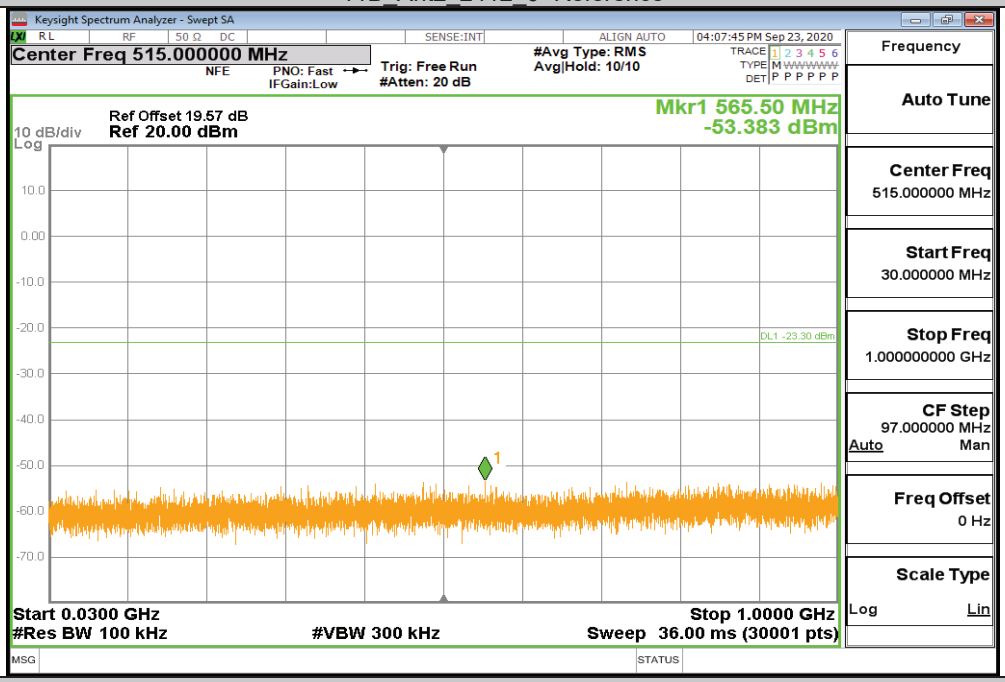
11.6.1. Test Result

Test Mode	Antenna	Channel	Freq Range [Mhz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant2	2412	Reference	6.70	6.70	---	PASS
			30~1000	30~1000	-53.383	<=-23.299	PASS
			1000~26500	1000~26500	-35.191	<=-23.299	PASS
		2437	Reference	6.83	6.83	---	PASS
			30~1000	30~1000	-53.491	<=-23.166	PASS
			1000~26500	1000~26500	-37.896	<=-23.166	PASS
		2462	Reference	6.72	6.72	---	PASS
			30~1000	30~1000	-53.227	<=-23.276	PASS
			1000~26500	1000~26500	-39.89	<=-23.276	PASS
11G	Ant2	2412	Reference	4.08	4.08	---	PASS
			30~1000	30~1000	-52.722	<=-25.919	PASS
			1000~26500	1000~26500	-44.073	<=-25.919	PASS
		2437	Reference	3.37	3.37	---	PASS
			30~1000	30~1000	-53.051	<=-26.626	PASS
			1000~26500	1000~26500	-43.194	<=-26.626	PASS
		2462	Reference	3.92	3.92	---	PASS
			30~1000	30~1000	-53.436	<=-26.076	PASS
			1000~26500	1000~26500	-44.477	<=-26.076	PASS
11N20MIMO	Ant1	2412	Reference	3.40	3.40	---	PASS
			30~1000	30~1000	-53.676	<=-26.6	PASS
			1000~26500	1000~26500	-44.164	<=-26.6	PASS
	Ant2	2412	Reference	2.40	2.40	---	PASS
			30~1000	30~1000	-52.714	<=-27.595	PASS
			1000~26500	1000~26500	-44.571	<=-27.595	PASS
	Ant1	2437	Reference	2.88	2.88	---	PASS
			30~1000	30~1000	-53.003	<=-27.121	PASS
			1000~26500	1000~26500	-44.457	<=-27.121	PASS
	Ant2	2437	Reference	3.21	3.21	---	PASS
			30~1000	30~1000	-52.98	<=-26.792	PASS
			1000~26500	1000~26500	-44.799	<=-26.792	PASS
	Ant1	2462	Reference	3.11	3.11	---	PASS
			30~1000	30~1000	-53.52	<=-26.888	PASS
			1000~26500	1000~26500	-44.451	<=-26.888	PASS
	Ant2	2462	Reference	2.59	2.59	---	PASS
			30~1000	30~1000	-53.211	<=-27.415	PASS
			1000~26500	1000~26500	-44.588	<=-27.415	PASS
11N40MIMO	Ant1	2422	Reference	-0.19	-0.19	---	PASS
			30~1000	30~1000	-46.961	<=-30.19	PASS
			1000~26500	1000~26500	-43.74	<=-30.19	PASS
	Ant2	2422	Reference	1.26	1.26	---	PASS
			30~1000	30~1000	-52.228	<=-28.735	PASS
			1000~26500	1000~26500	-44.618	<=-28.735	PASS
	Ant1	2437	Reference	0.25	0.25	---	PASS
			30~1000	30~1000	-47.673	<=-29.746	PASS
			1000~26500	1000~26500	-43.698	<=-29.746	PASS
	Ant2	2437	Reference	0.75	0.75	---	PASS
			30~1000	30~1000	-45.535	<=-29.248	PASS
			1000~26500	1000~26500	-44.689	<=-29.248	PASS
	Ant1	2452	Reference	0.88	0.88	---	PASS
			30~1000	30~1000	-48.401	<=-29.119	PASS
			1000~26500	1000~26500	-44.634	<=-29.119	PASS
	Ant2	2452	Reference	0.71	0.71	---	PASS
			30~1000	30~1000	-50.312	<=-29.294	PASS
			1000~26500	1000~26500	-44.762	<=-29.294	PASS

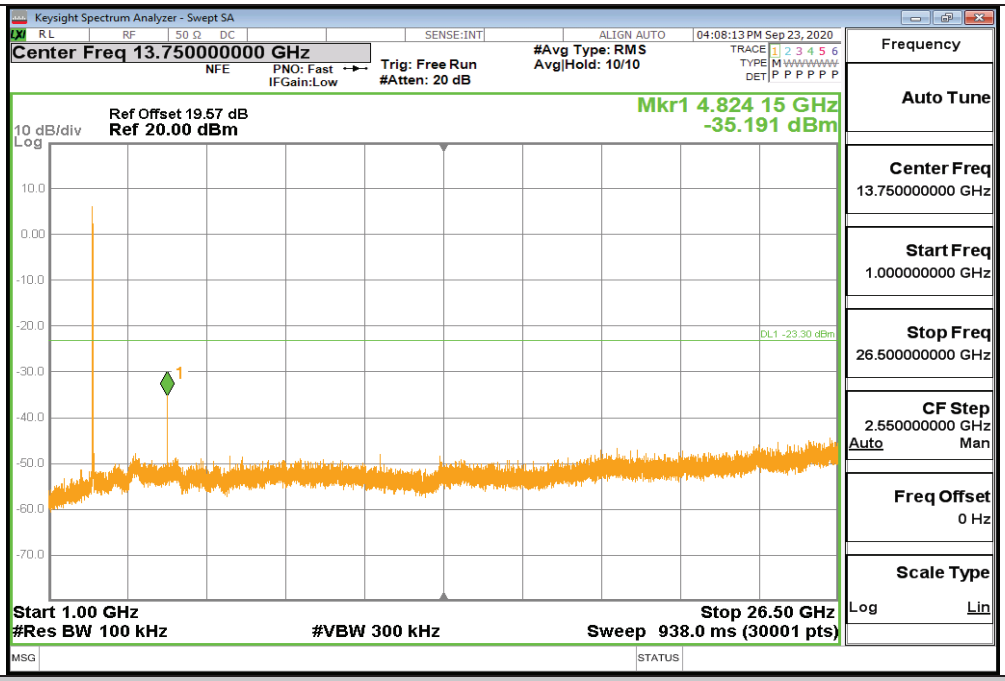
11.6.2. Test Graphs



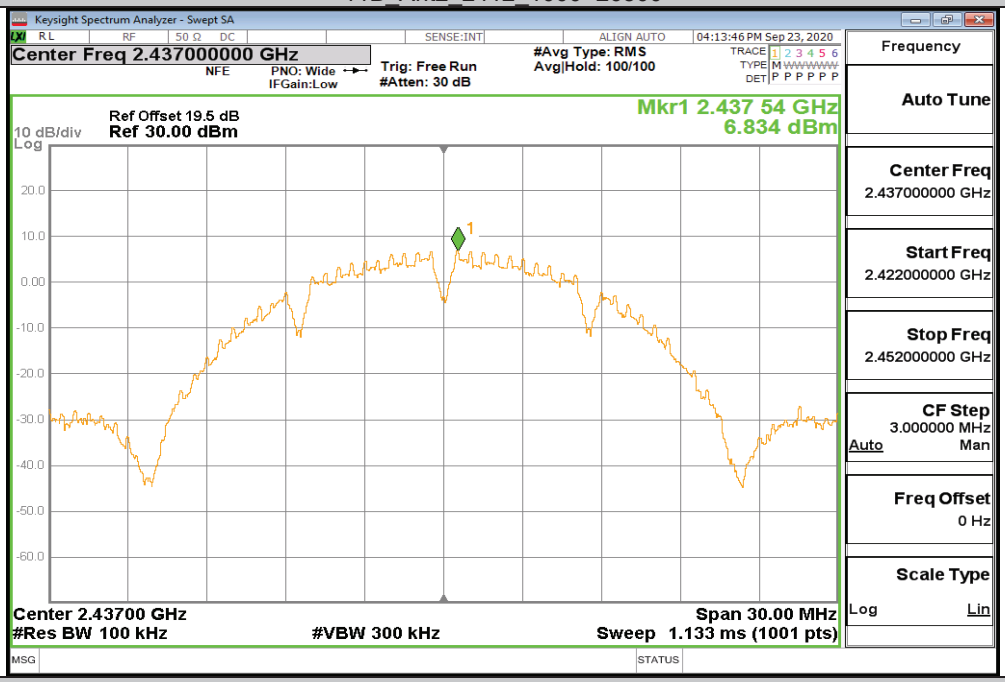
11B_Ant2_2412_0~Reference



11B_Ant2_2412_30~1000



11B_Ant2_2412_1000~26500



11B_Ant2_2437_0~Reference