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

TEST REPORT

For

IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module
Integrated BT 2.1+EDR/4.2/5.0

MODEL NUMBER: SKI.WB638BU.2_668BU

FCC ID: 2AR82-SKIWB668BU2

IC: 24728-SKIWB668BU2

REPORT NUMBER: 4789476783-3

ISSUE DATE: June 2, 2020

Prepared for

Guangzhou Shikun Electronics Co., Ltd
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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	06/02/2020	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

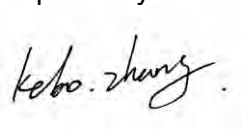
Company Name:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road,Huangpu District,Guangzhou,China

EUT Description

EUT Name	IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module Integrated BT 2.1+EDR/4.2/5.0
Model	SKI.WB638BU.2_668BU
Sample Status	Normal
Sample ID	3047339
Sample Received date	May 7, 2020
Date Tested	May 8 ~ 15, 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

Prepared By:



Kebo Zhang
Project Engineer

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager

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 Delcaration 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 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz 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	3.62dB
Radiation Emission test(include Fundamental emission) (9kHz-30MHz)	2.2dB
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.00dB
Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	5.78dB (1GHz-18GHz)
	5.23dB (18GHz-26GHz)
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/a/ac 2T2R USB WiFi Module Integrated BT 2.1+EDR/4.2/5.0
Model	SKI.WB638BU.2_668BU
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)
Rated Input	DC 3.3V

5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains (NTX)	IEE Std. 802.11	Frequency (MHz)	Channel Number	Max AV Conducted Power (dBm)
2	IEEE 802.11b	2412-2462	1-11[11]	17.94
2	IEEE 802.11g	2412-2462	1-11[11]	16.34
2	IEEE 802.11nHT20	2412-2462	1-11[11]	18.00
2	IEEE 802.11nHT40	2422-2452	3-9[7]	13.90

5.3. CHANNEL LIST

Channel List for 802.11b/g/n							
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	/	/

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
WiFi TX(802.11b)	CH1,CH6,CH11/ Low, Middle, High	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11g)	CH1,CH6,CH11/ Low, Middle, High	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11n HT20)	CH1,CH6,CH11/ Low, Middle, High	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11n HT40)	CH3,CH6,CH9/ Low, Middle, High	2422MHz, 2437MHz, 2452MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		QA tool					
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	2	default	default	default	/		
802.11g	2	default	default	default			
802.11n HT20	2	default	default	default			
802.11n HT40	2	/			default	default	default

5.6. THE WORSE CASE CONFIGURATIONS

For SISO modes, there are two transmission antennas. The antenna used in any given time can be either ANTENNA 1 or ANTENNA 2. The output power measurement for SISO modes on both antennas are reported.
For 2TX MIMO modes, ANTENNA 1 and ANTENNA 2, used at the same time.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps
802.11g 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 tested, but only the worst data for Antenna 1 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 model	Frequency (MHz)	Antenna Type	MAX. Antenna Gain (dBi)
1(WIFI0)	2412-2462	PCB Antenna	3.70
2(WIFI1)	2412-2462	PCB Antenna	4.94

Note:
Directional gain= 10 log[$(10^{G1/20} + 10^{G2/20})^2/N_{ANT}$]=7.35dBi
G_{ANT} : Average of the Antenna Gain
N_{ANT} : Antenna numbers
Note: The value of the antenna gain was declared by customer.

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. Only 802.11n HT20/HT40 support MIMO mode 2. BT&WLAN 2.4G ,BT& WLAN 5G can transmit simultaneously. (declared by client)		

5.8. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	45 ~ 70%	
Atmospheric Pressure:	101kPa	
Temperature	TN	22 ~ 28 °C
Voltage:	VL	N/A
	VN	DC 3.3V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage.
VH= Upper Extreme Test Voltage
TN= Normal Temperature

5.9. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	ThinkPad	X230i	/
2	Test fixture	/	/	/
3	AC/DC adapter	HUAWEI	HW-120150E2W	INPUT:100-240V~50/60Hz, 0.5A OUTPUT:12.0V, 1.5A

I/O CABLES

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

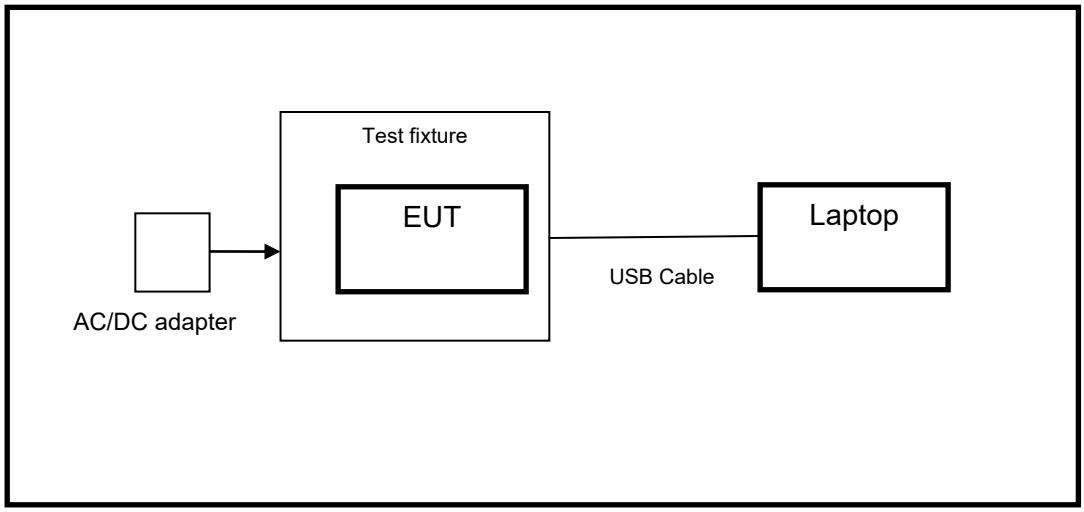
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	/	/	/	/

TEST SETUP

The EUT can work in engineering mode with a software.

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
☑	Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	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
☑	Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Dec.05,2019	Dec.05,2020
☑	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

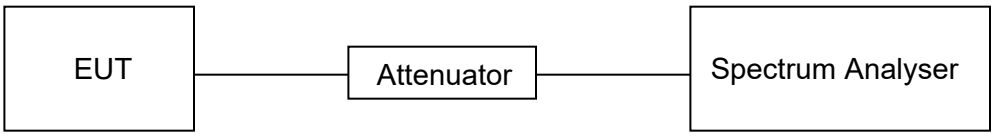
LIMITS

None; for reporting purposes only

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4°C	Relative Humidity	67.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

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	≥ 500KHz	2400-2483.5
ISED RSS-Gen Clause 6.7	99% Occupied Bandwidth	For reporting purposes only.	2400-2483.5

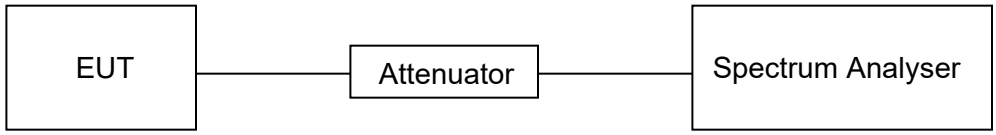
TEST PROCEDURE

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

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

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 and 99% relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4°C	Relative Humidity	67.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

Please refer to Appendix A & B.

7.3. CONDUCTED OUTPUT POWER

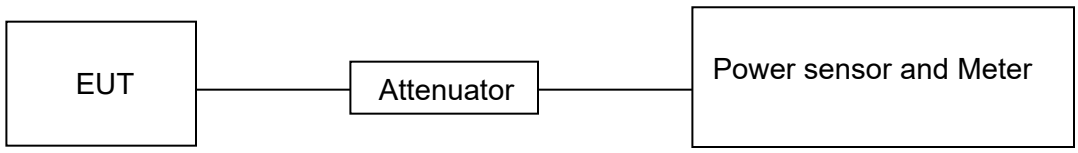
LIMITS

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)	Peak Output Power	1 watt or 30dBm	2400-2483.5

TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.
Measure the power of each channel.
AVG Detector use for AVG result.

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4°C	Relative Humidity	67.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

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

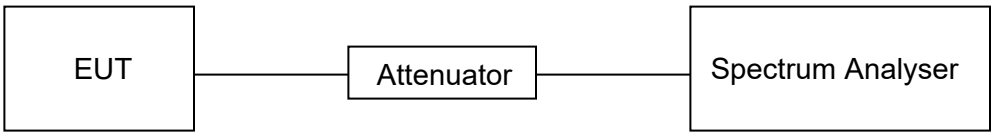
TEST PROCEDURE

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

Center Frequency	The centre frequency of the channel under test
Detector	Peak
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	25.4°C	Relative Humidity	67.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

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

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

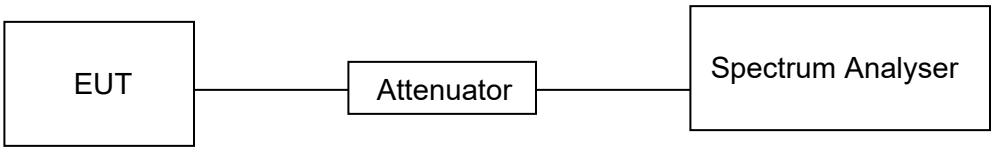
Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum PSD level.

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

Use the peak marker function to determine the maximum amplitude level.

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4°C	Relative Humidity	67.8%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

RESULTS

Please refer to Appendix E & F.

7.6. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209

Please refer to ISED RSS-GEN Clause 8.9 (Transmitter)

Radiation Disturbance Test Limit for FCC (Class B)(9KHz-1GHz)

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
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
	Peak	Average
Above 1000	74	54

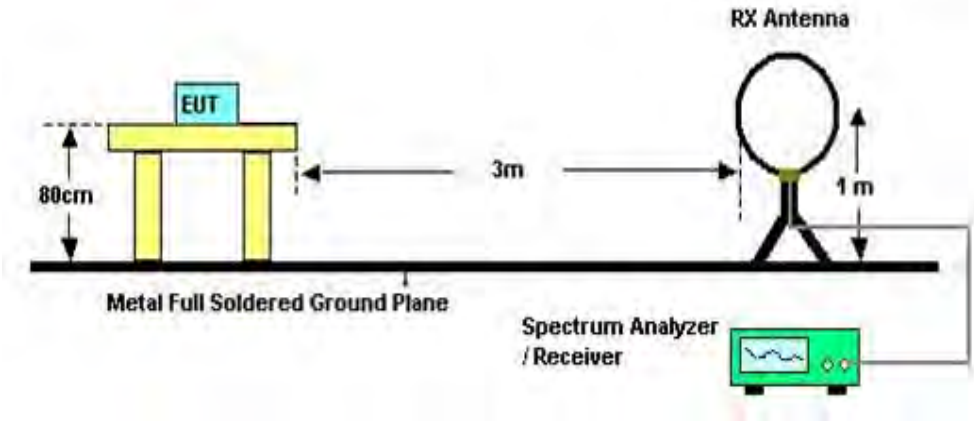
IC Restricted bands please refer to ISED RSS-GEN Clause 8.10
FCC Restricted bands of operation:

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 30MHz



The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

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

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. 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

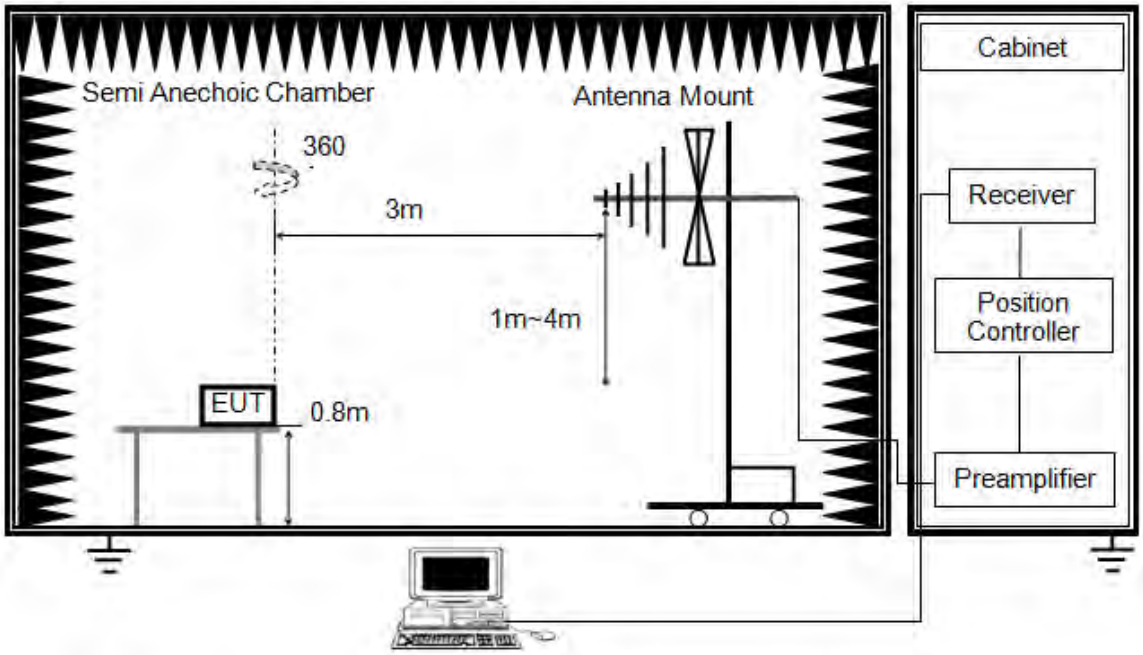
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, 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.

6. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m 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 1G



The setting of the spectrum analyser

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

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

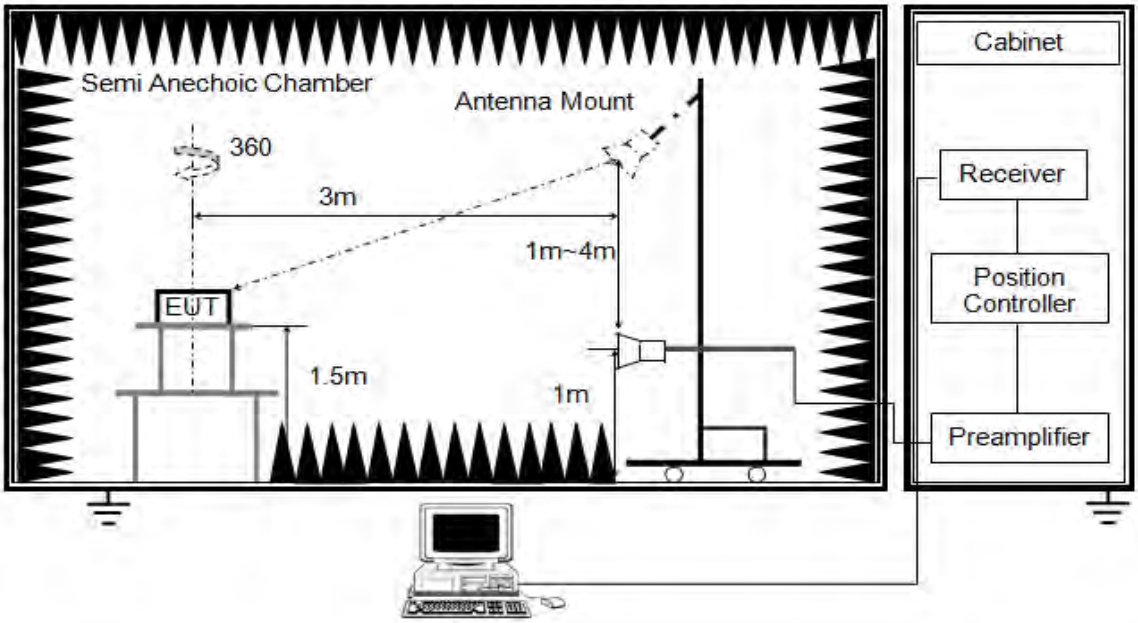
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations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

3. The EUT was placed on a turntable with 0.8 meter 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 1GHz, 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 1G



The setting of the spectrum analyser

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

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

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.

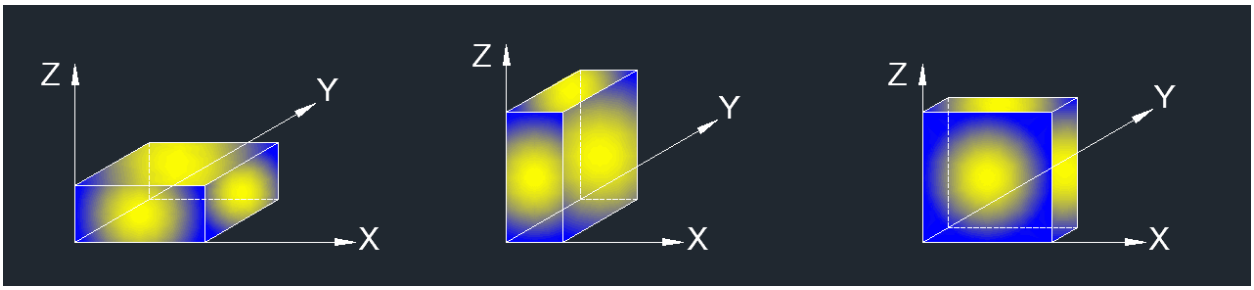
3. The EUT was placed on a turntable with 1.5m above ground.

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 1GHz, 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: All the EUT's emissions had been evaluated for simultaneous transmission with the other WIFI 2.4GHz, WIFI 5GHz and BT transmitter and there were no any additional or worse emissions found. The worst case data has been recorded in the WIFI test report. (4789476783-3/-4).

TEST ENVIRONMENT

Temperature	23.2°C	Relative Humidity	55%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

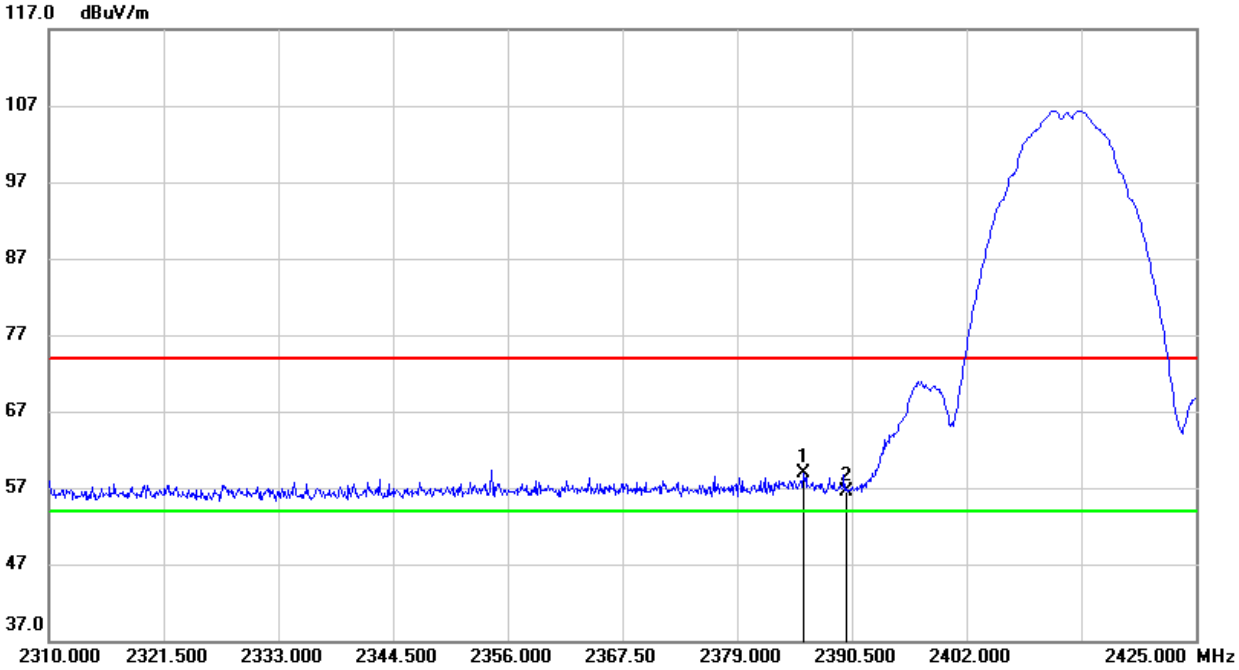
7.7. RESTRICTED BANDEDGE

7.7.1. 802.11b SISO MODE

ANTENNA1

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

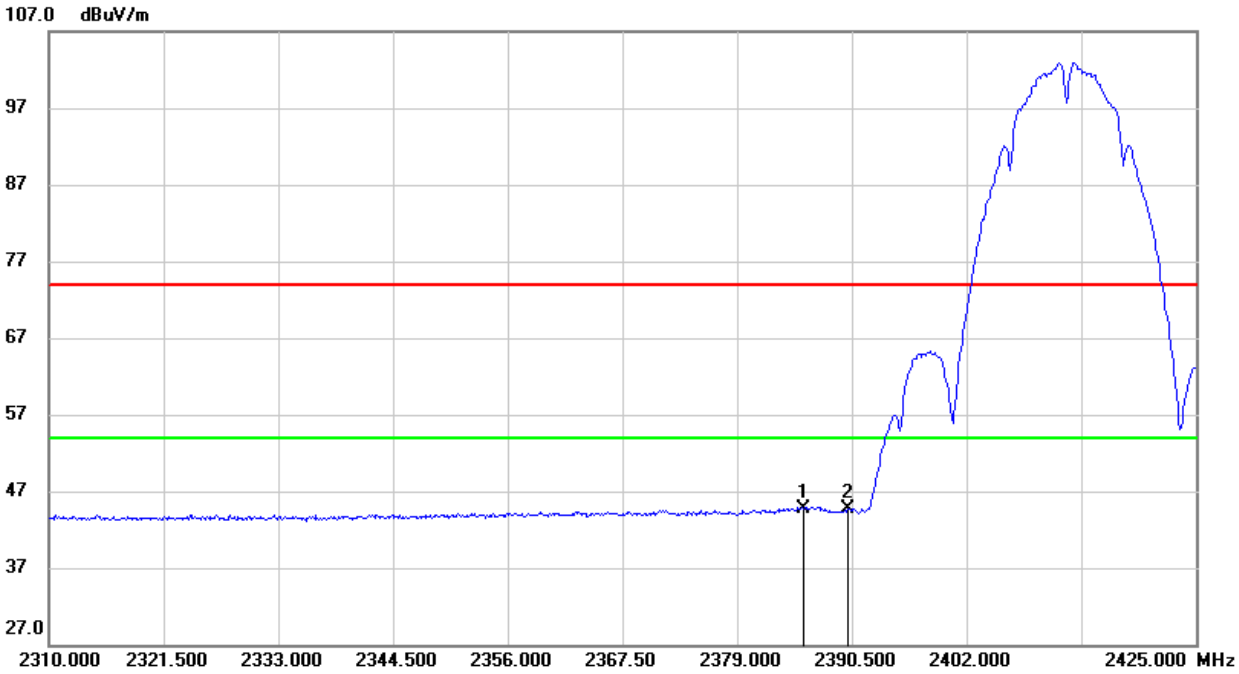
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2385.670	25.92	32.93	58.85	74.00	-15.15	peak
2	2390.000	23.59	32.94	56.53	74.00	-17.47	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Avg

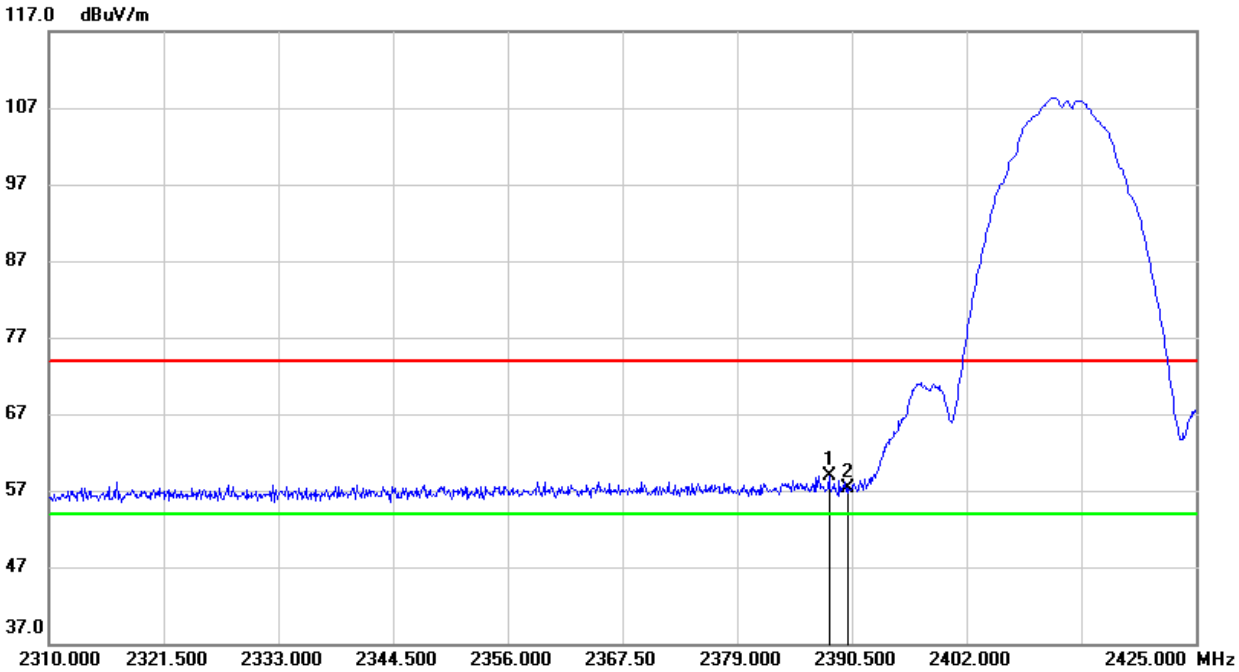


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2385.670	11.80	32.93	44.73	54.00	-9.27	AVG
2	2390.000	11.75	32.94	44.69	54.00	-9.31	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

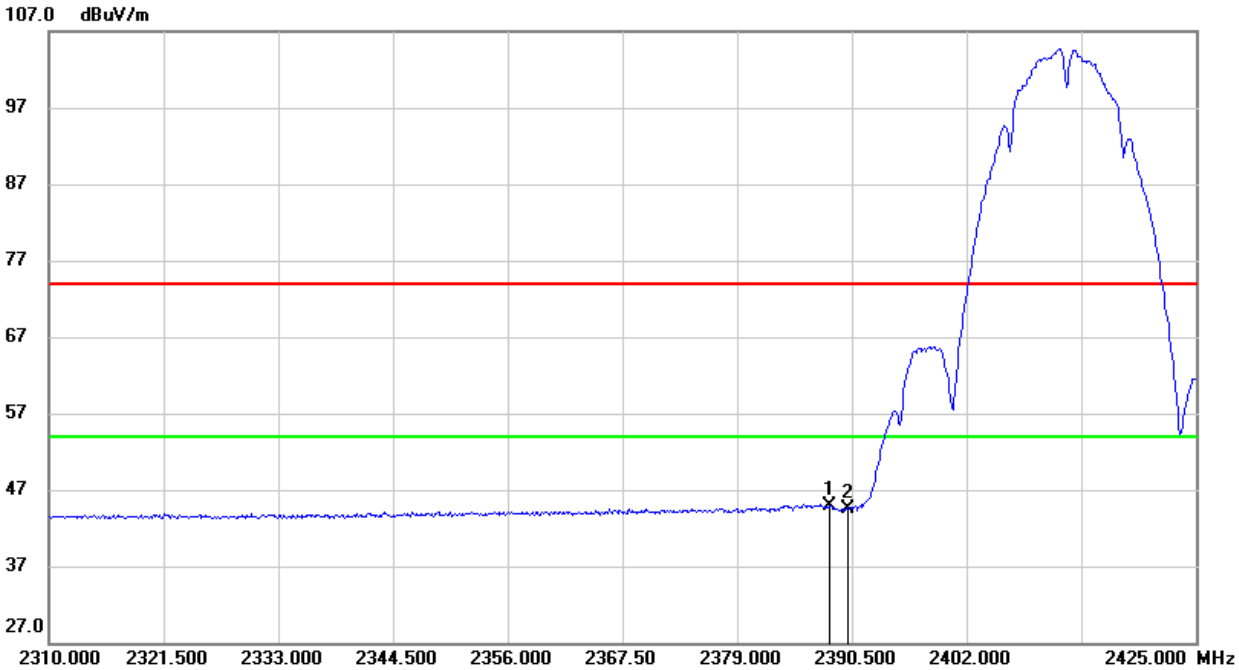
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.200	25.92	32.94	58.86	74.00	-15.14	peak
2	2390.000	24.44	32.94	57.38	74.00	-16.62	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Avg

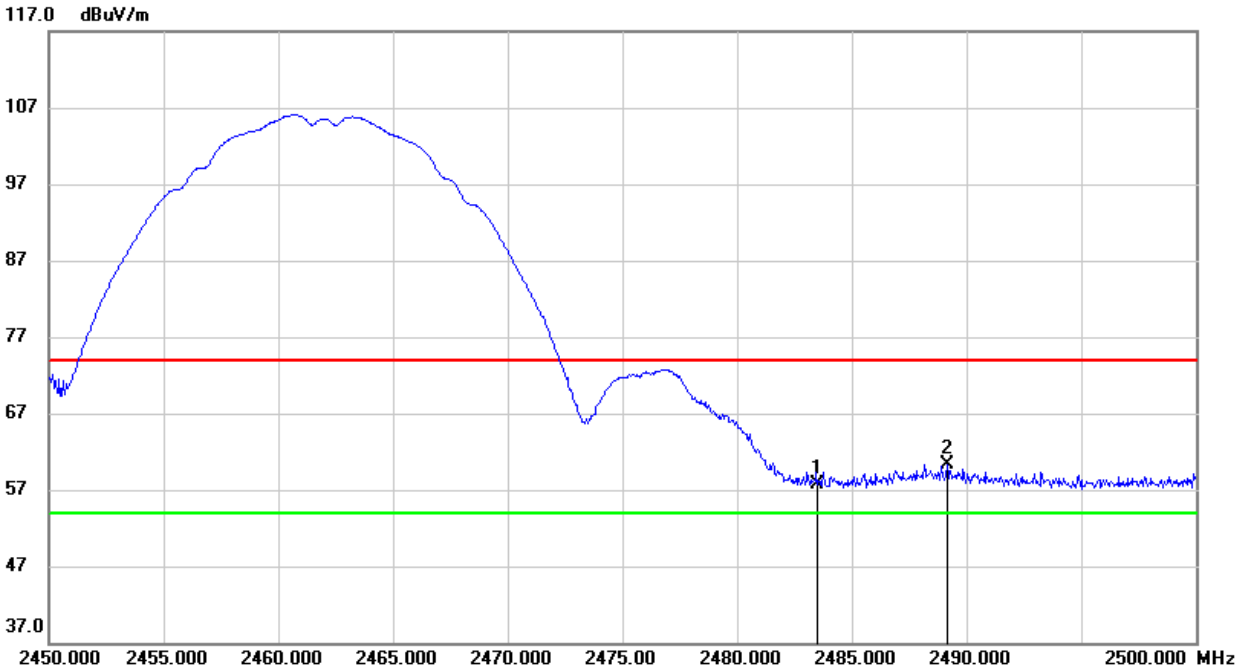


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.200	12.03	32.94	44.97	54.00	-9.03	AVG
2	2390.000	11.55	32.94	44.49	54.00	-9.51	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

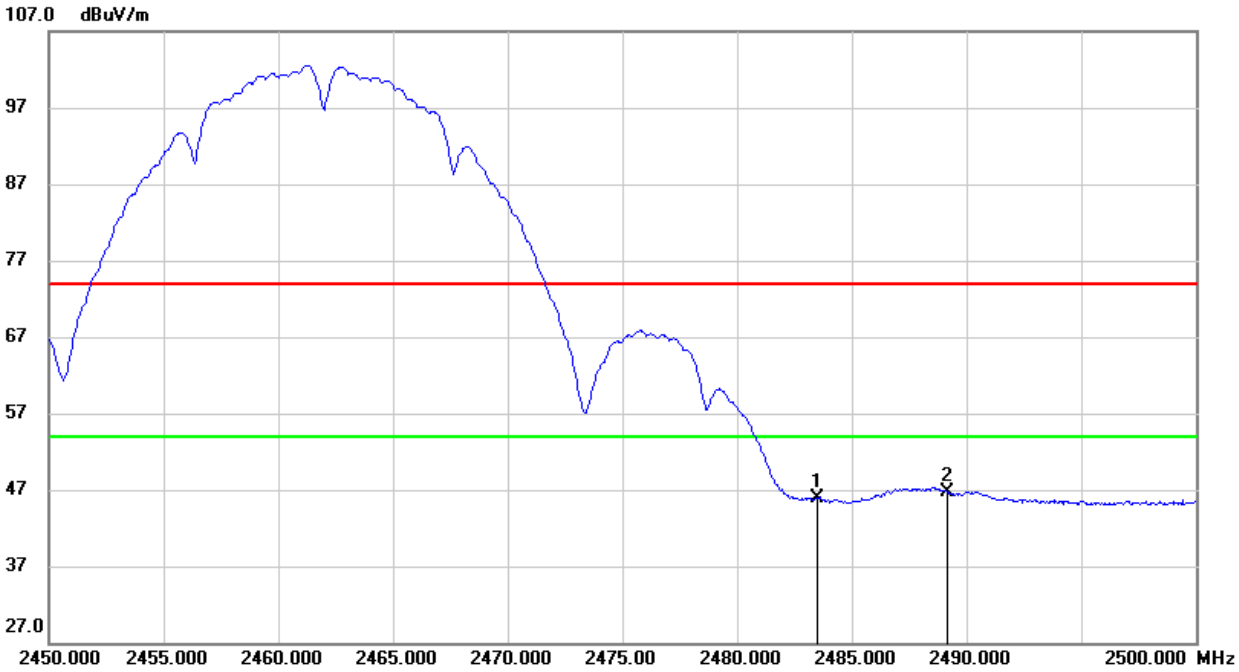
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	24.03	33.58	57.61	74.00	-16.39	peak
2	2489.150	26.62	33.62	60.24	74.00	-13.76	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Avg

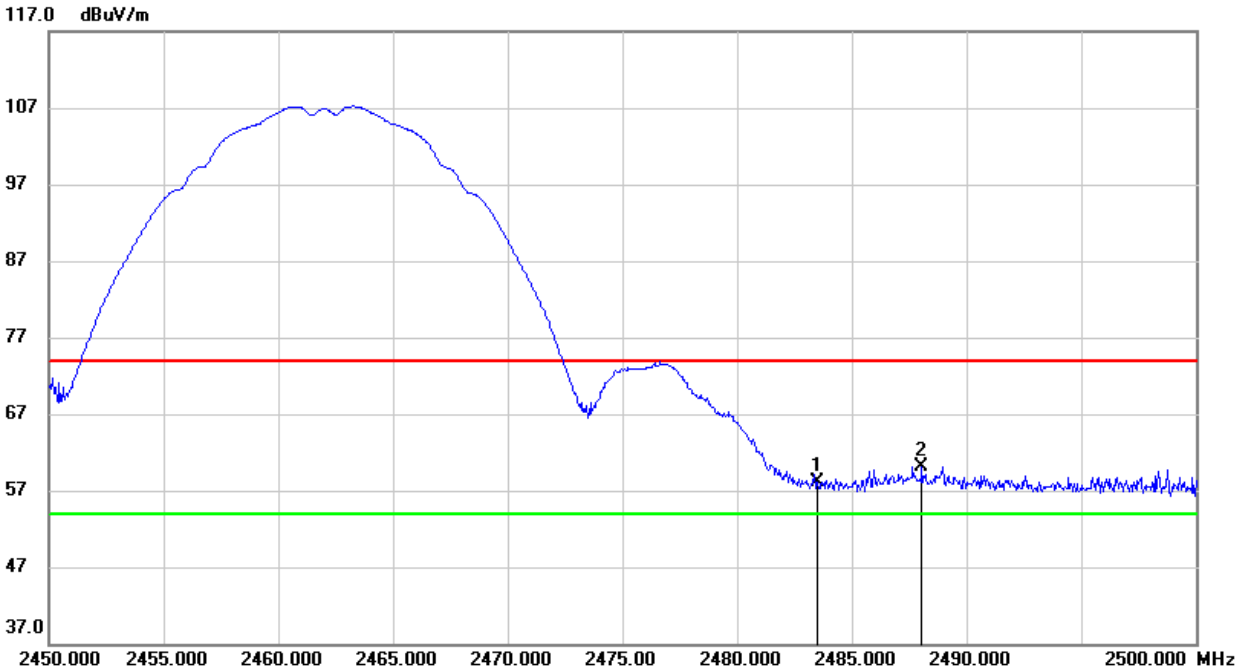


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	12.39	33.58	45.97	54.00	-8.03	AVG
2	2489.150	13.05	33.62	46.67	54.00	-7.33	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

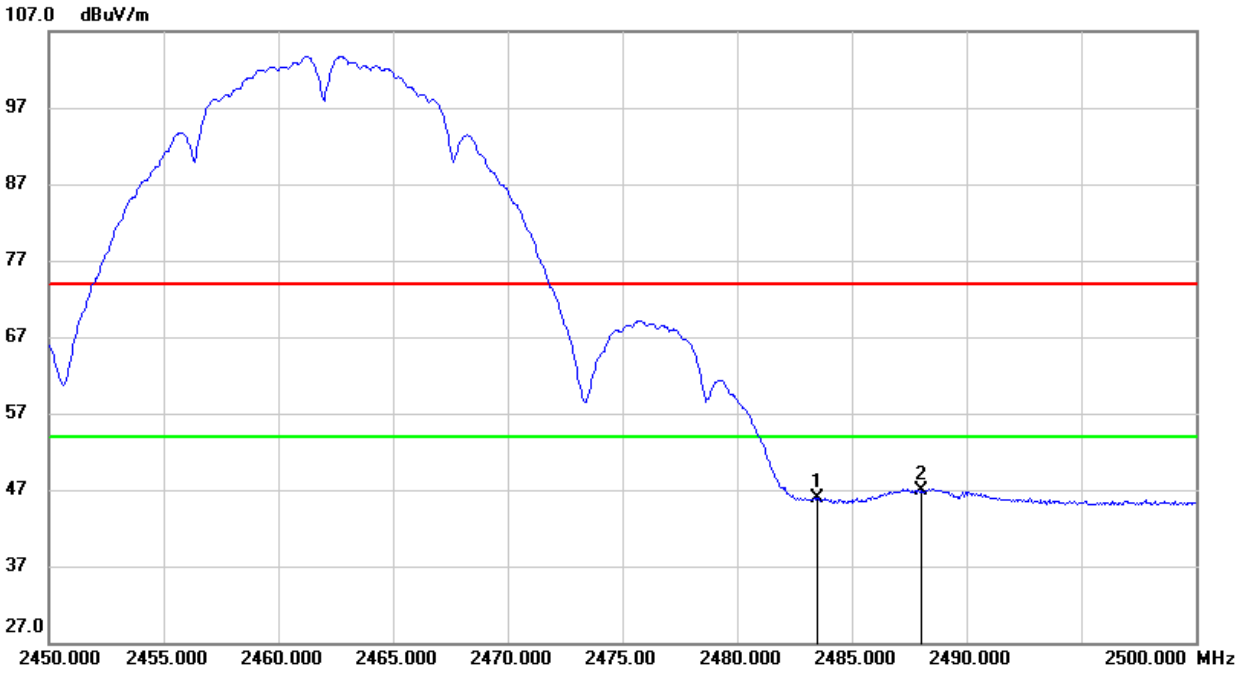
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	24.53	33.58	58.11	74.00	-15.89	peak
2	2488.050	26.50	33.62	60.12	74.00	-13.88	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 case emission 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	12.29	33.58	45.87	54.00	-8.13	AVG
2	2488.050	13.29	33.62	46.91	54.00	-7.09	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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

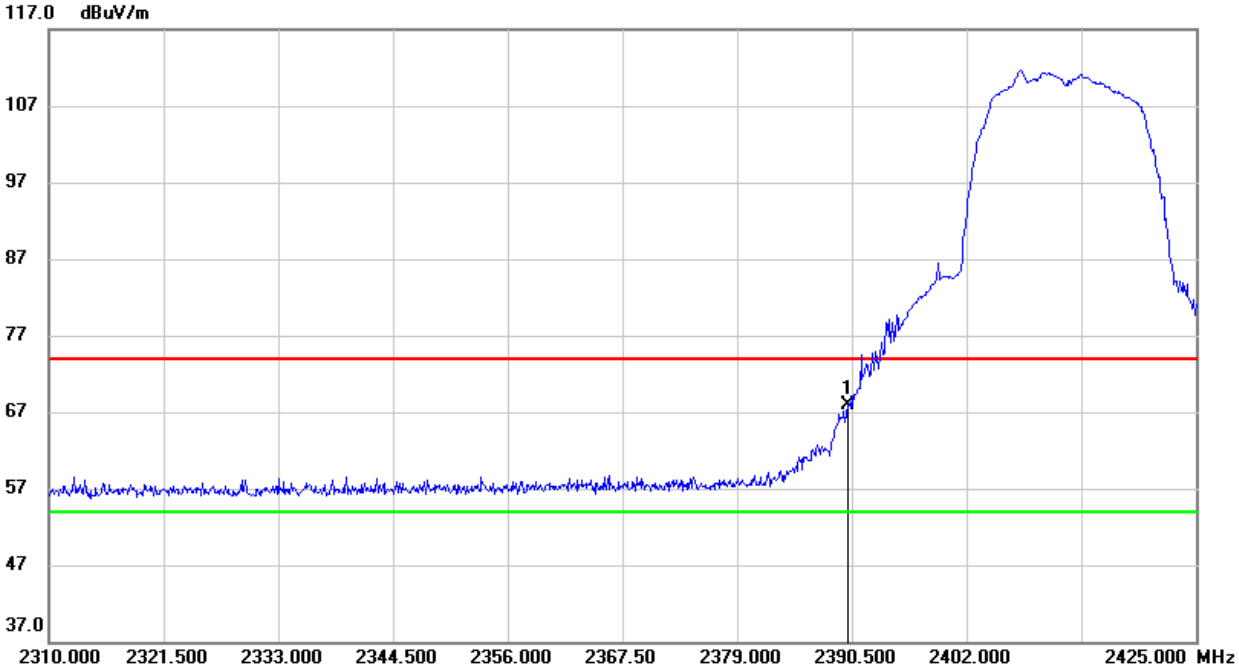
Note: All antennas have been tested, only the worst data record in the report.

7.7.2. 802.11g SISO MODE

ANTENNA1

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

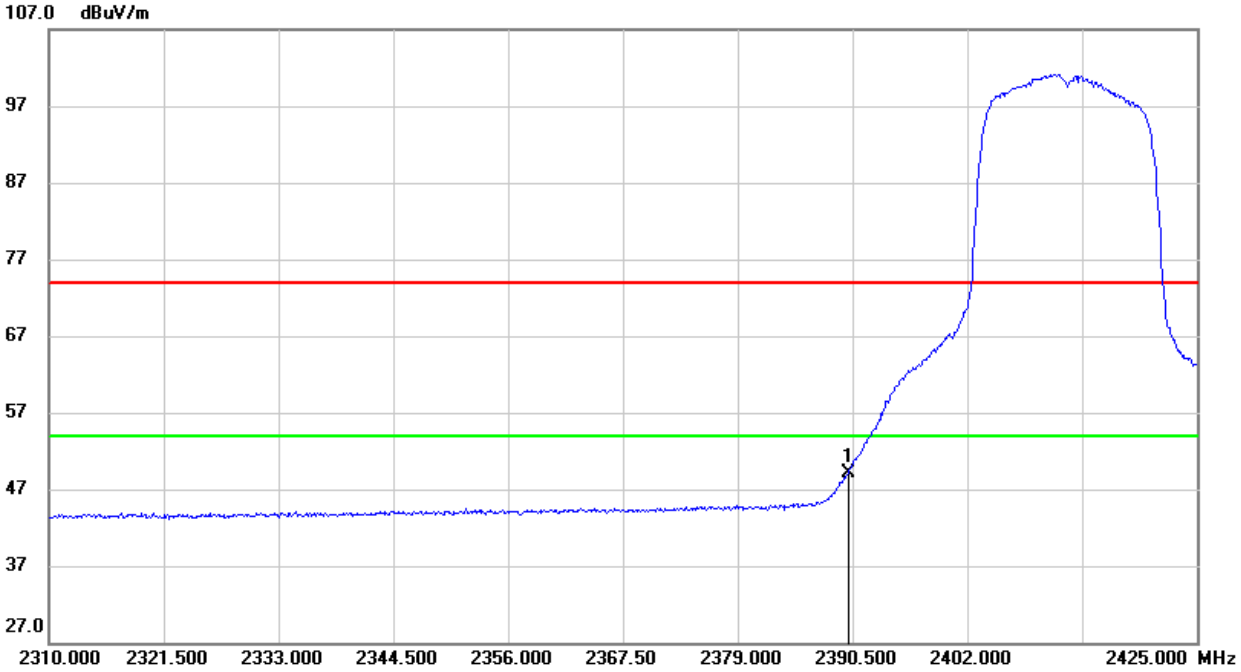
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	34.97	32.94	67.91	74.00	-6.09	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

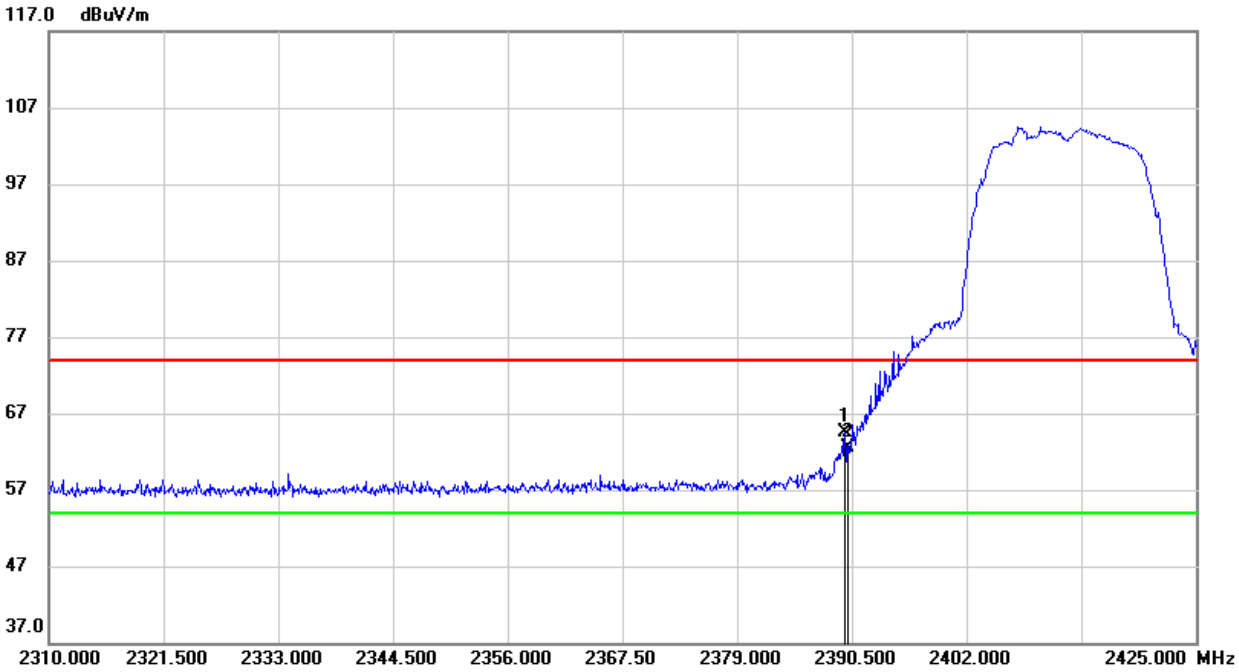


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	16.22	32.94	49.16	54.00	-4.84	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

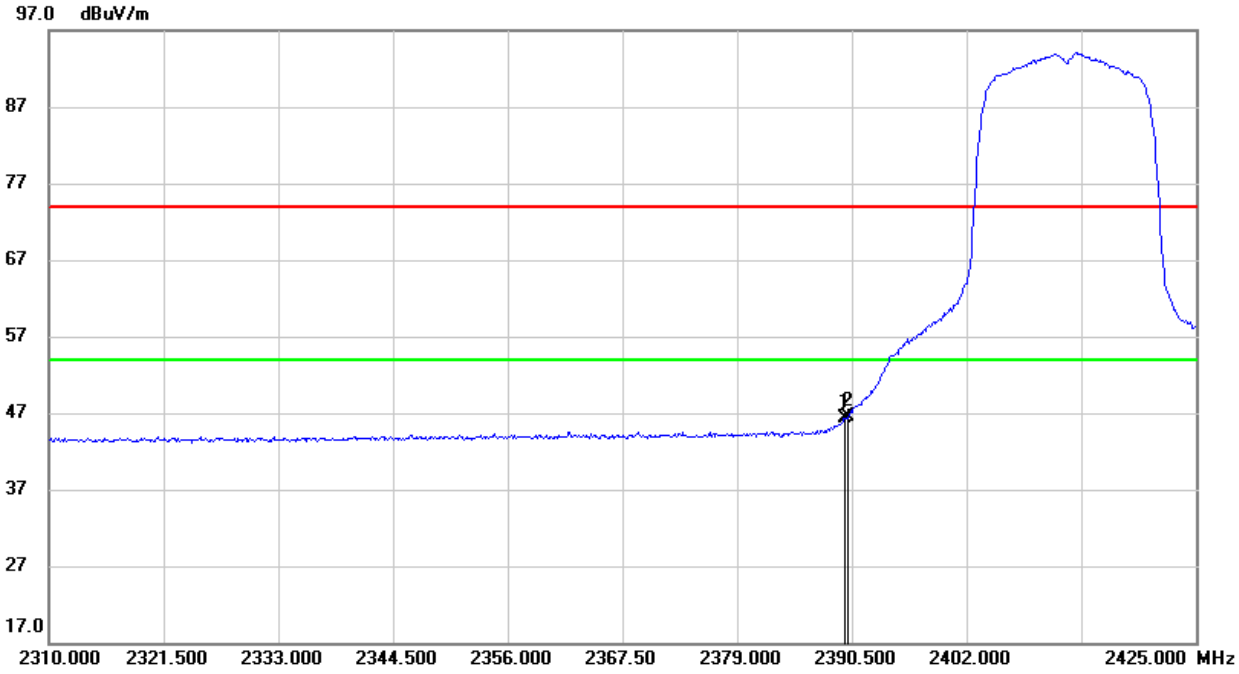
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.810	31.47	32.94	64.41	74.00	-9.59	peak
2	2390.000	29.65	32.94	62.59	74.00	-11.41	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

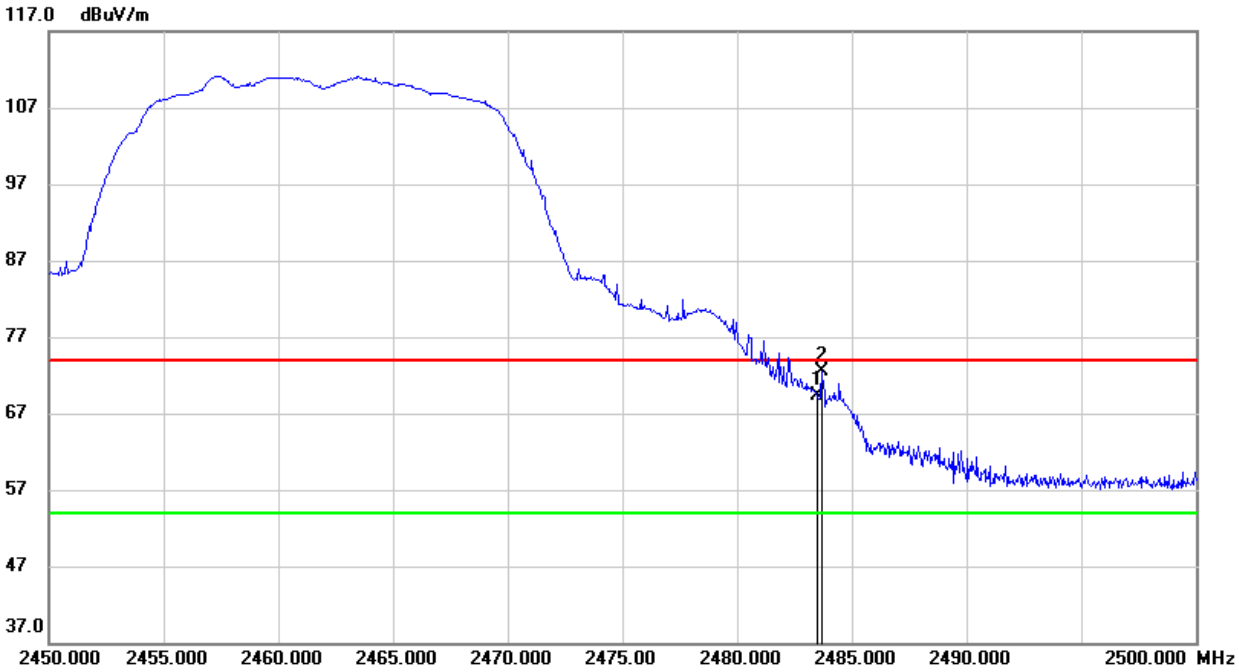


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.810	13.40	32.94	46.34	54.00	-7.66	AVG
2	2390.000	13.50	32.94	46.44	54.00	-7.56	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

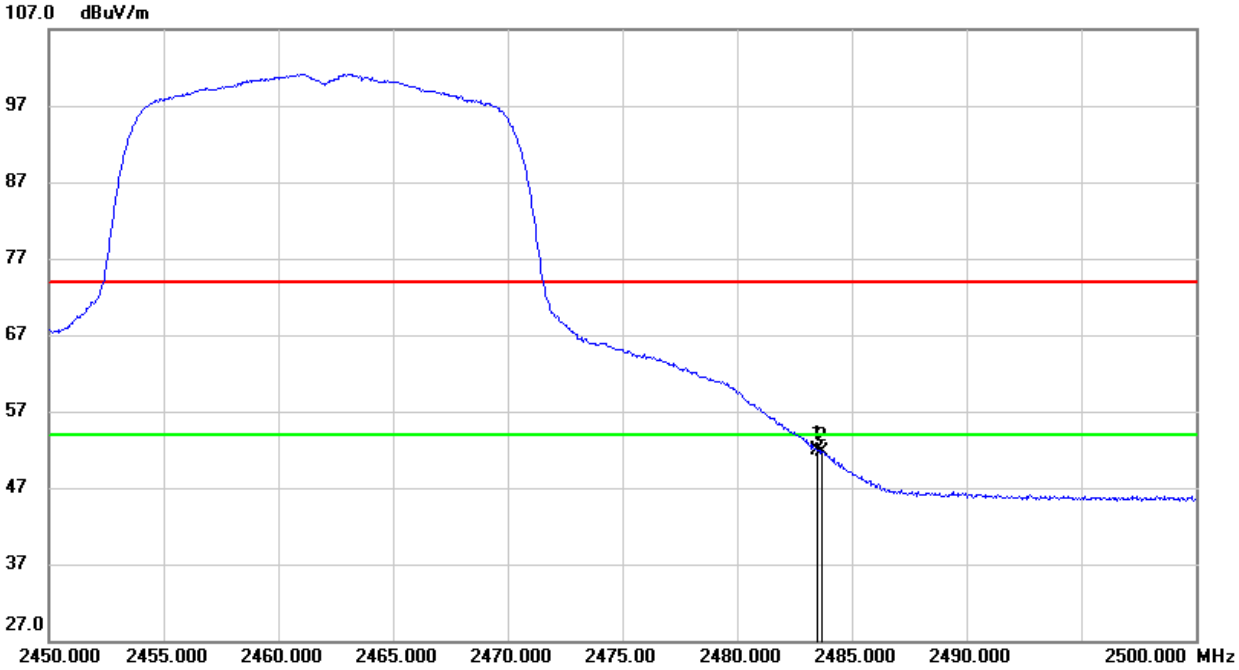
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	35.70	33.58	69.28	74.00	-4.72	peak
2	2483.700	38.94	33.58	72.52	74.00	-1.48	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

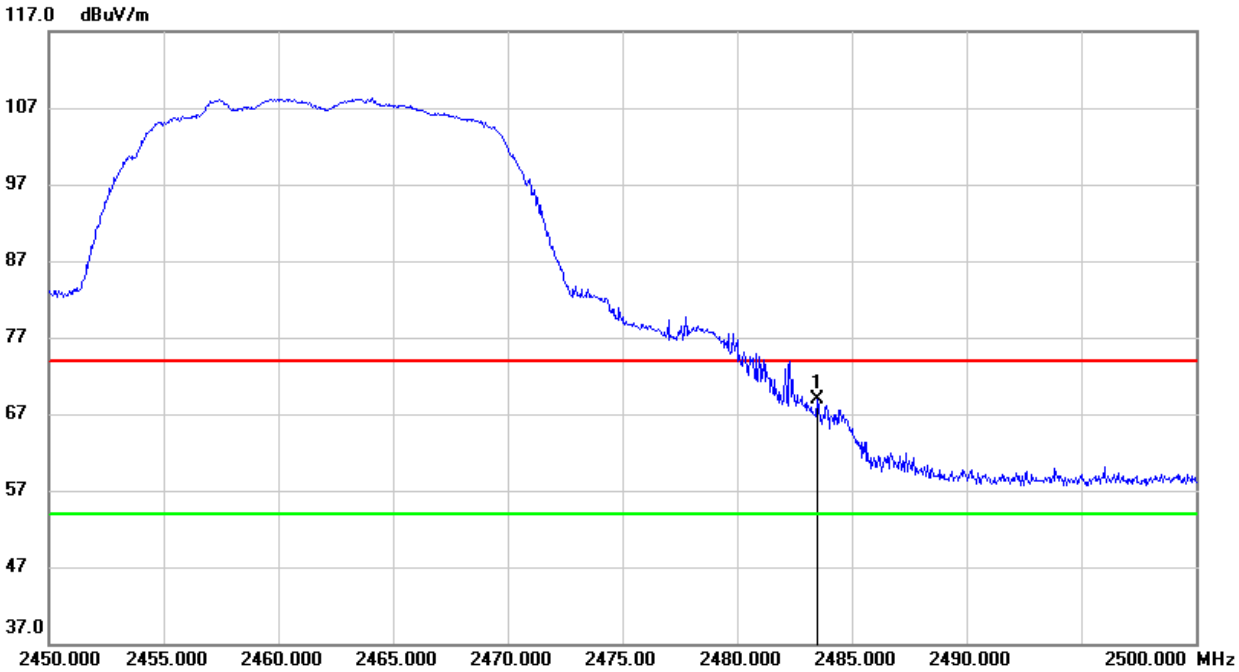


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.29	33.58	51.87	54.00	-2.13	AVG
2	2483.700	18.10	33.58	51.68	54.00	-2.32	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

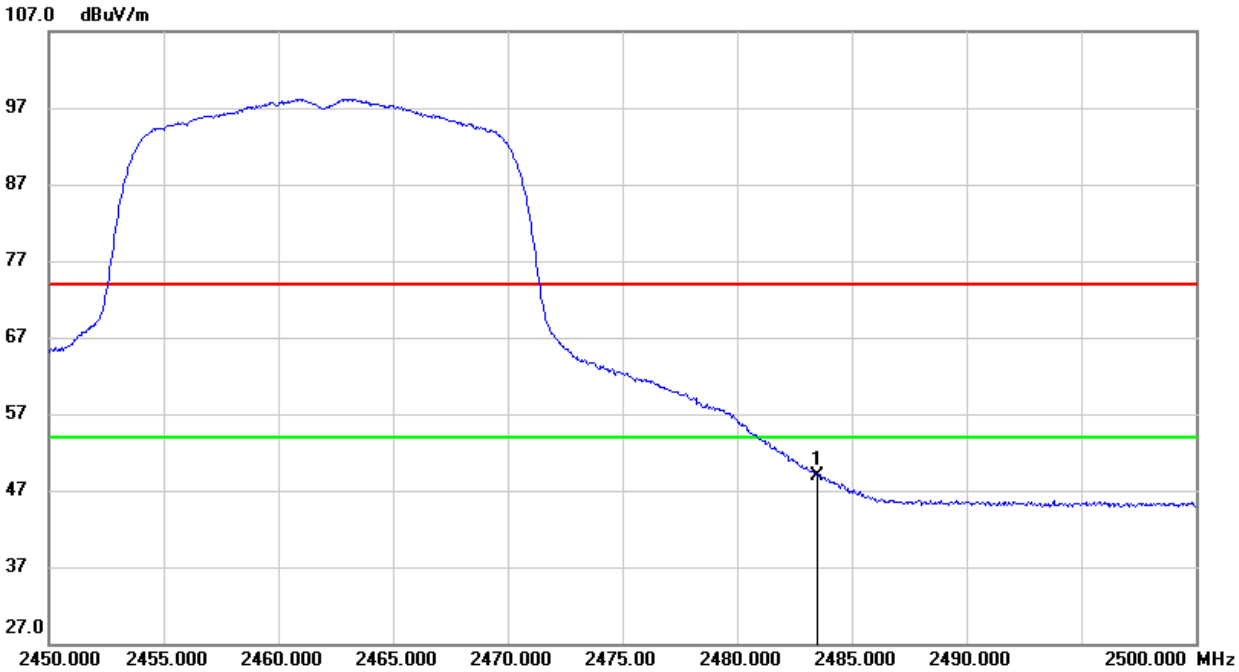
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.29	33.58	68.87	74.00	-5.13	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 case emission 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	15.39	33.58	48.97	54.00	-5.03	AVG

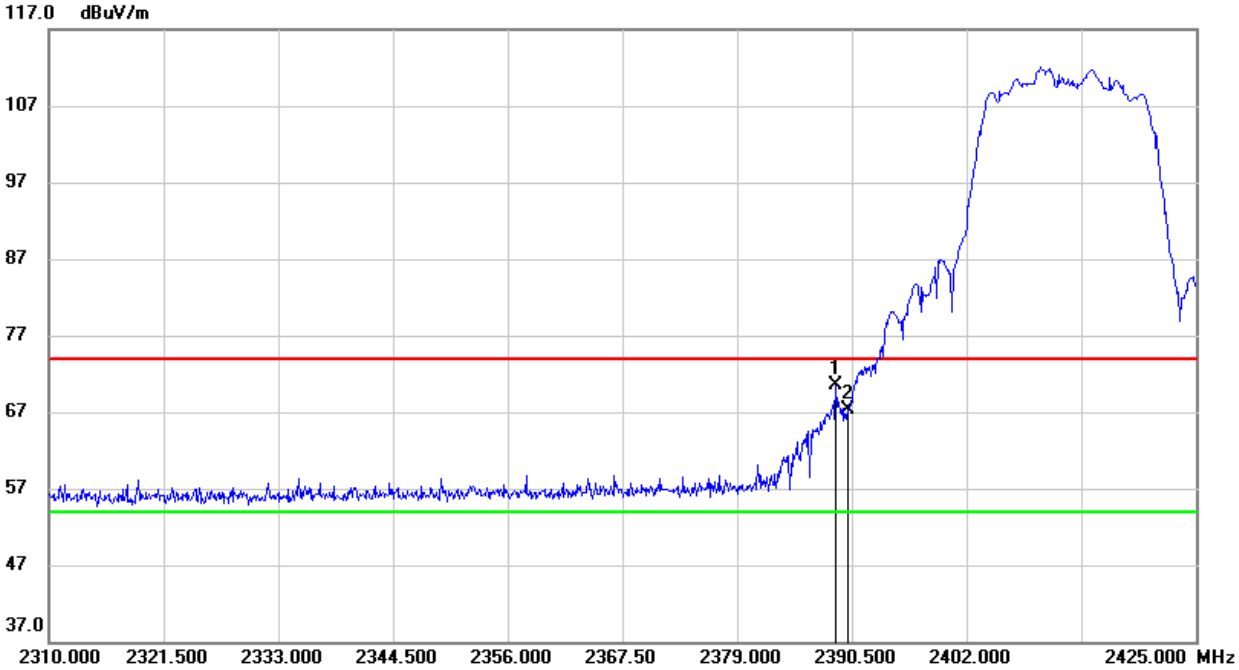
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies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

Note: All antennas have been tested, only the worst data record in the report.

7.7.3. 802.11n HT20 MIMO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

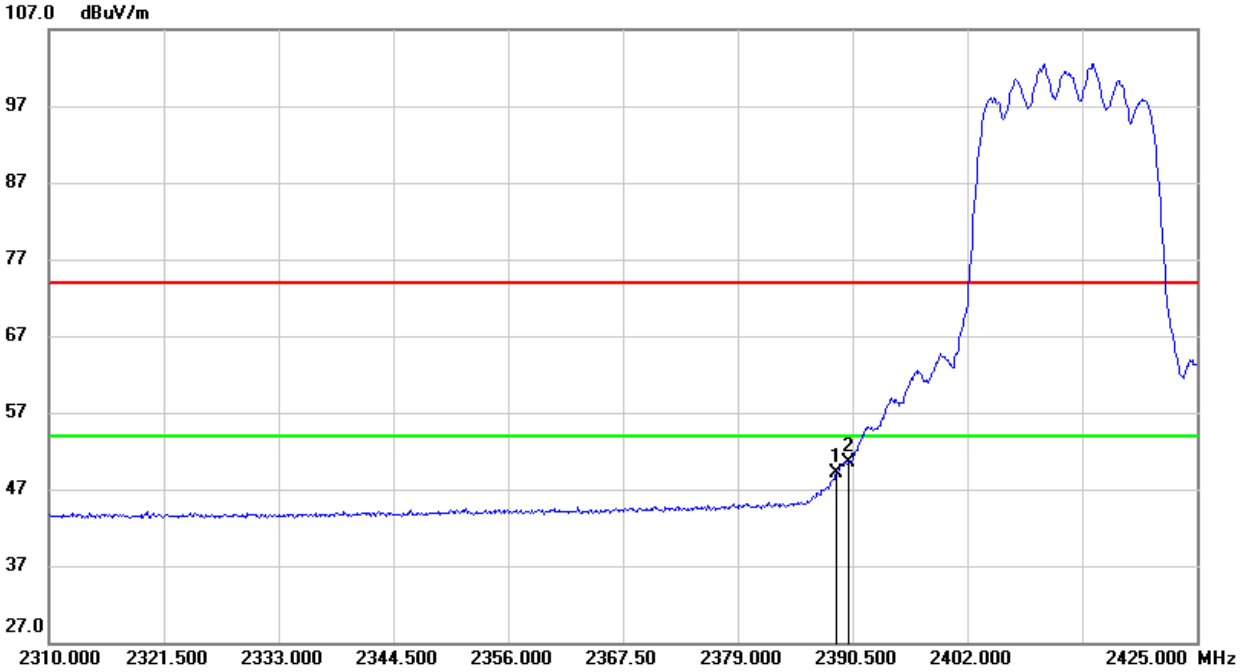
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.890	37.47	32.94	70.41	74.00	-3.59	peak
2	2390.000	34.27	32.94	67.21	74.00	-6.79	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

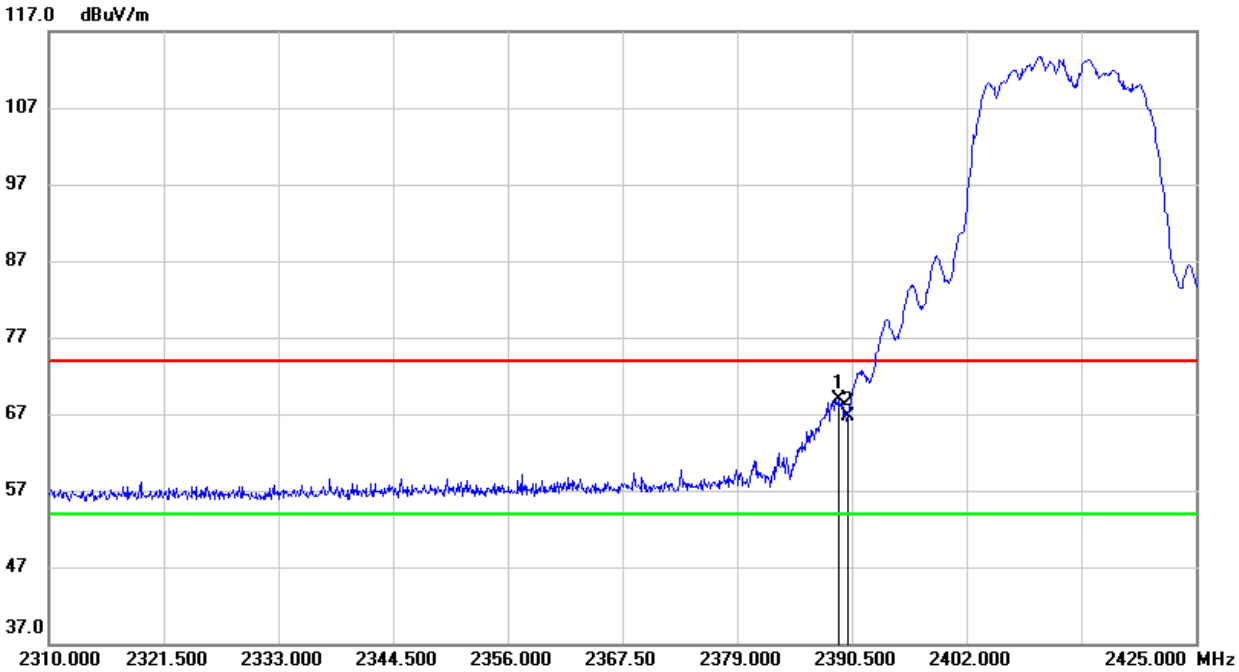


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.890	16.08	32.94	49.02	54.00	-4.98	AVG
2	2390.000	17.52	32.94	50.46	54.00	-3.54	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

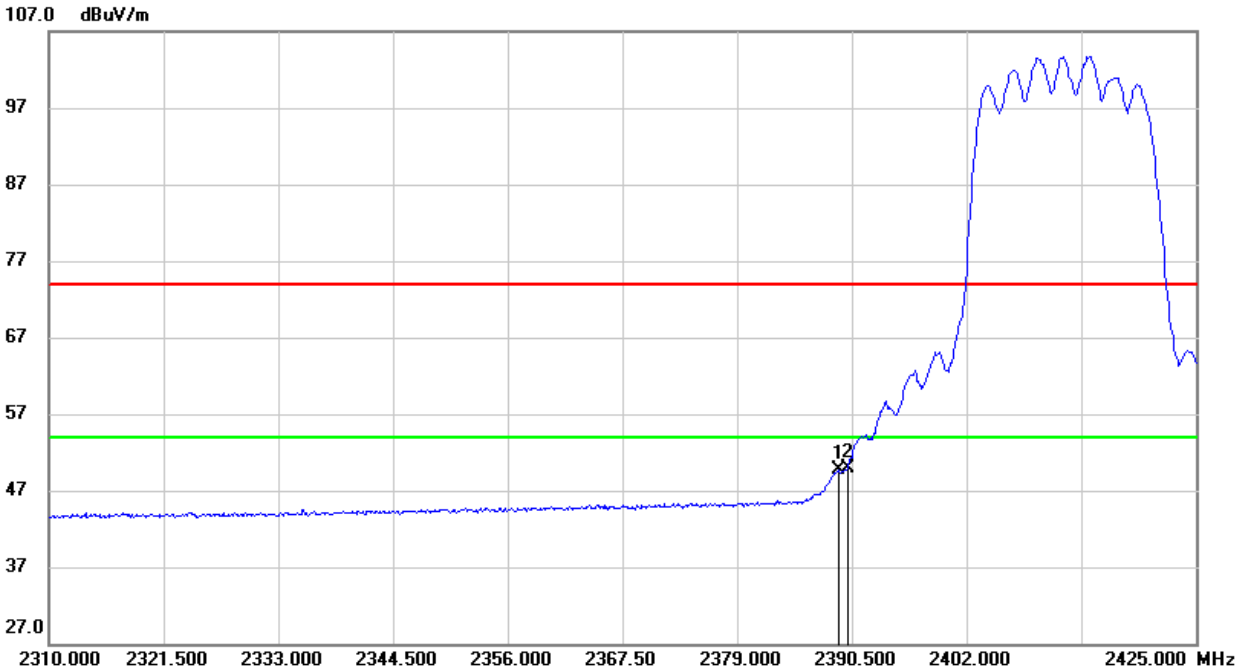
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.120	35.97	32.94	68.91	74.00	-5.09	peak
2	2390.000	33.75	32.94	66.69	74.00	-7.31	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

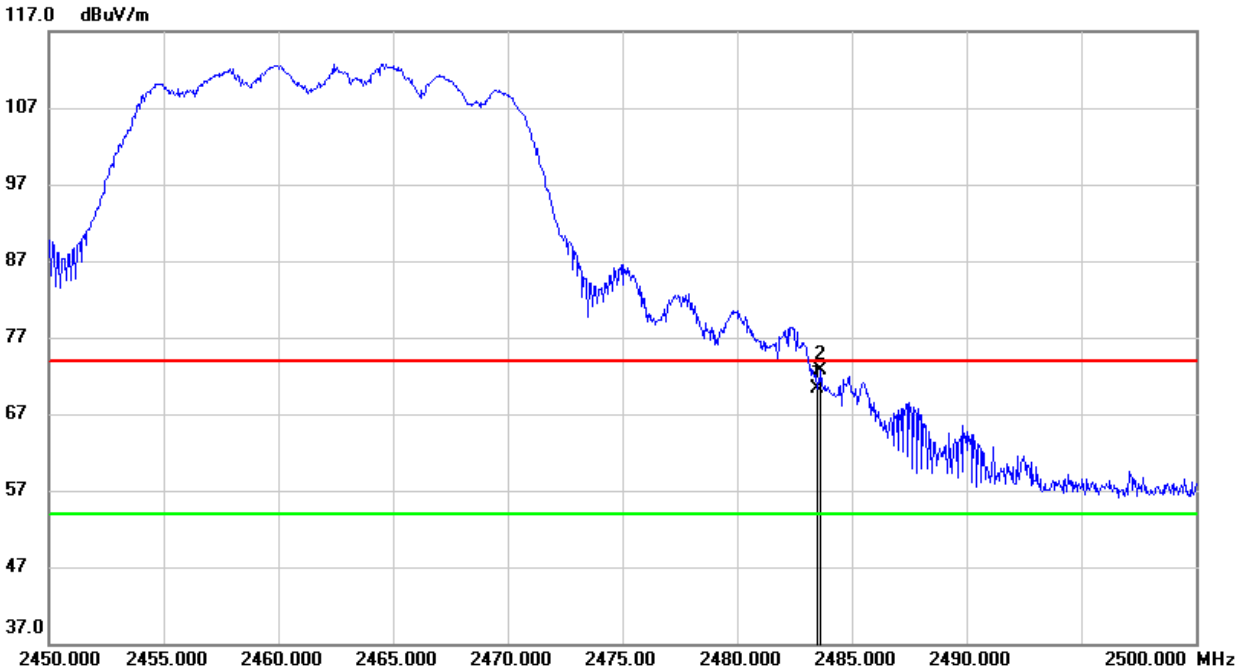


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.120	16.74	32.94	49.68	54.00	-4.32	AVG
2	2390.000	16.96	32.94	49.90	54.00	-4.10	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

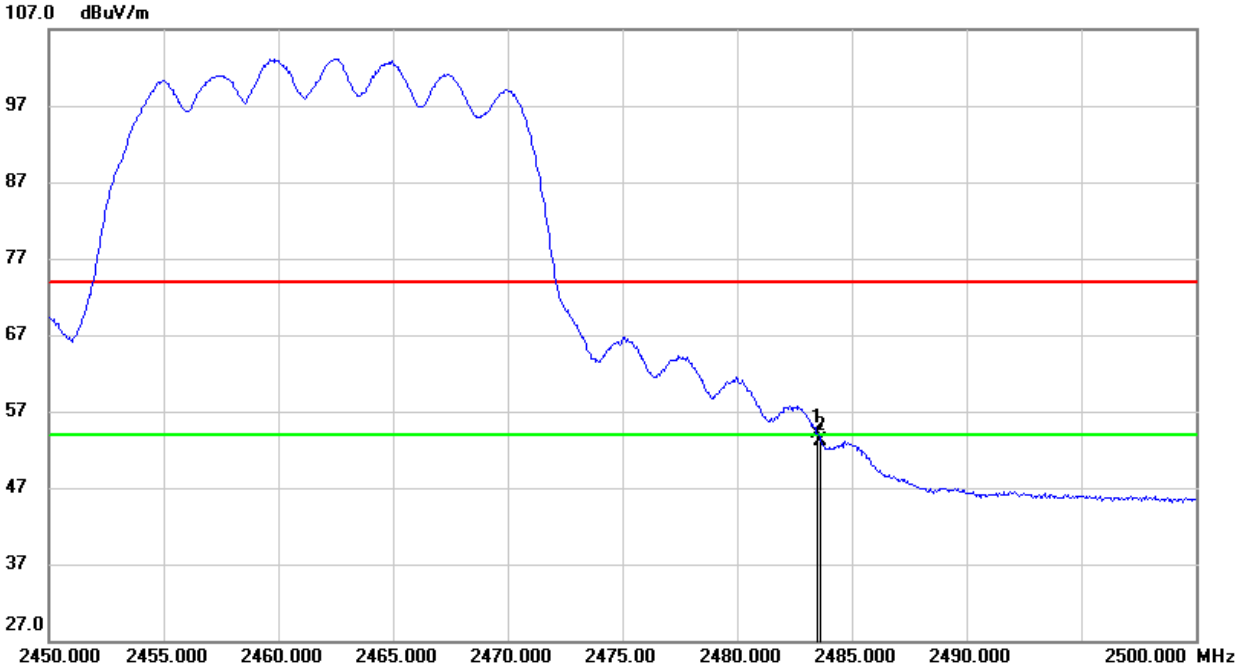
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.69	33.58	70.27	74.00	-3.73	peak
2	2483.650	39.14	33.58	72.72	74.00	-1.28	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

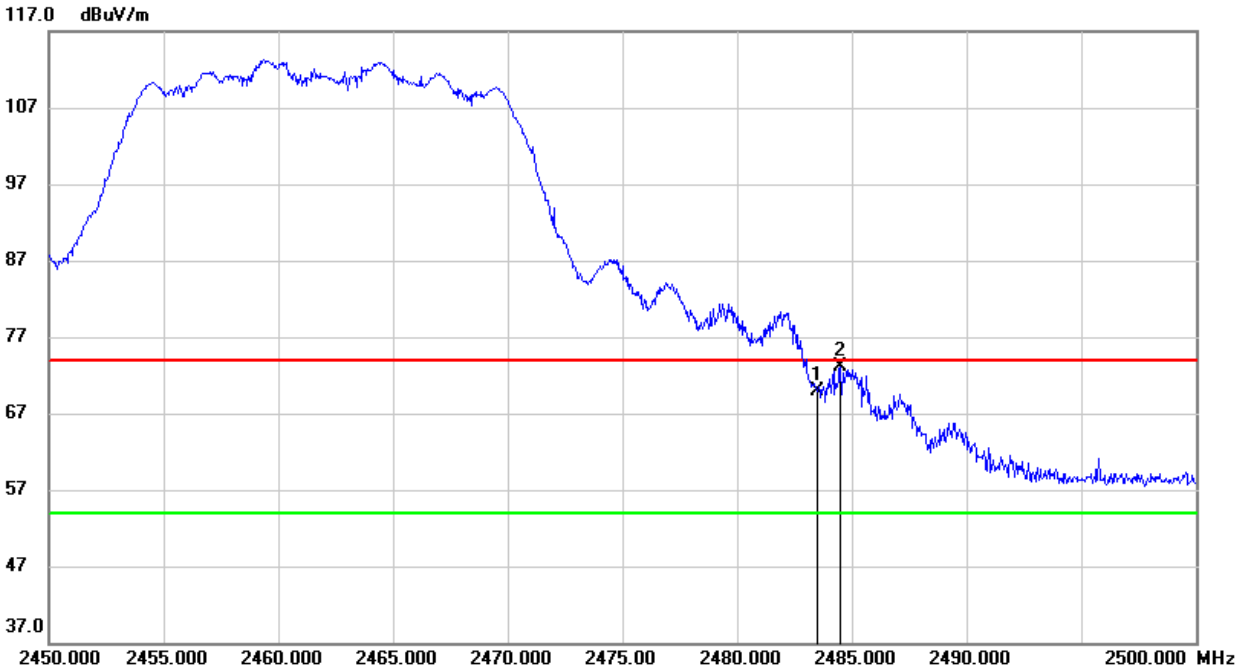


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	20.49	33.58	53.09	54.00	-0.91	AVG
2	2483.650	19.53	33.58	53.11	54.00	-0.89	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

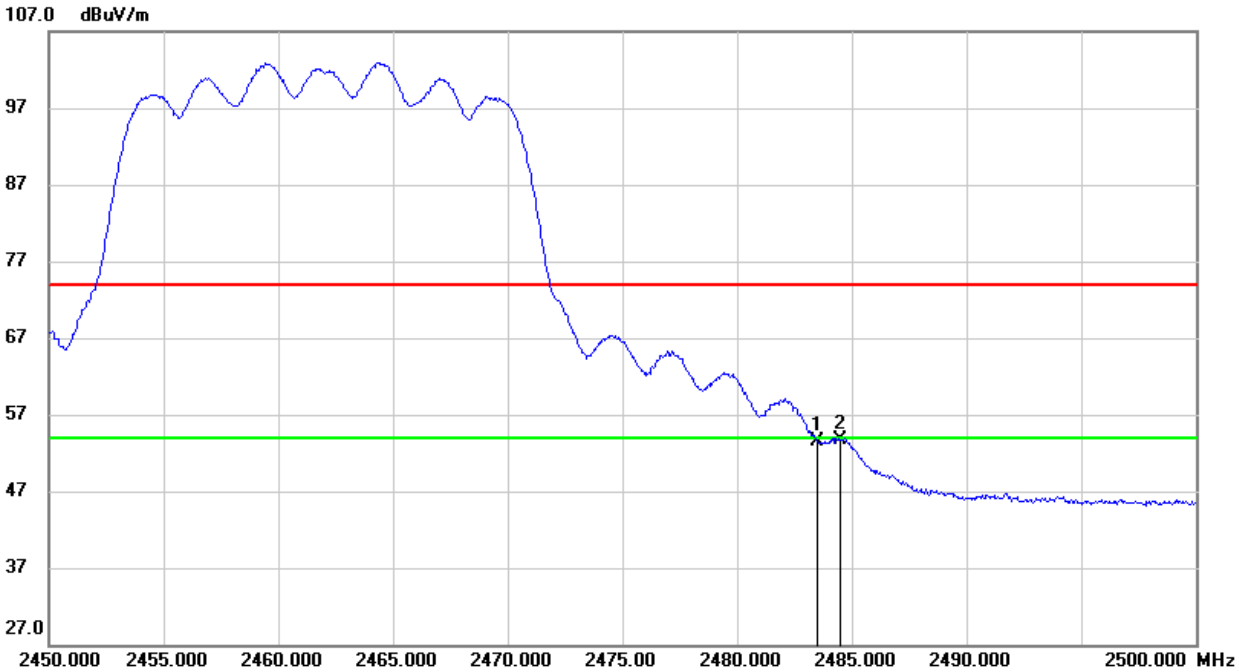
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.24	33.58	69.82	74.00	-4.18	peak
2	2484.500	39.48	33.59	73.07	74.00	-0.93	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 case emission 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	19.86	33.58	53.44	54.00	-0.56	AVG
2	2484.500	20.10	33.59	53.69	54.00	-0.31	AVG

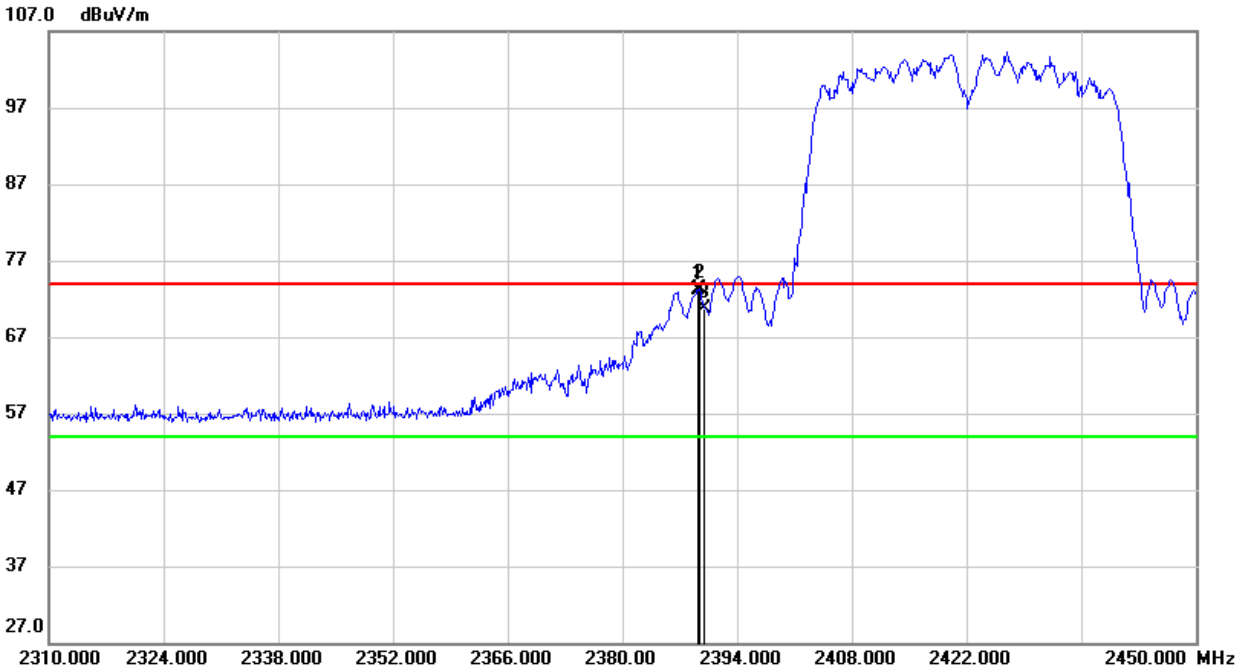
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies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

Note: All antennas have been tested, only the worst data record in the report.

7.7.4. 802.11n HT40 MIMO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

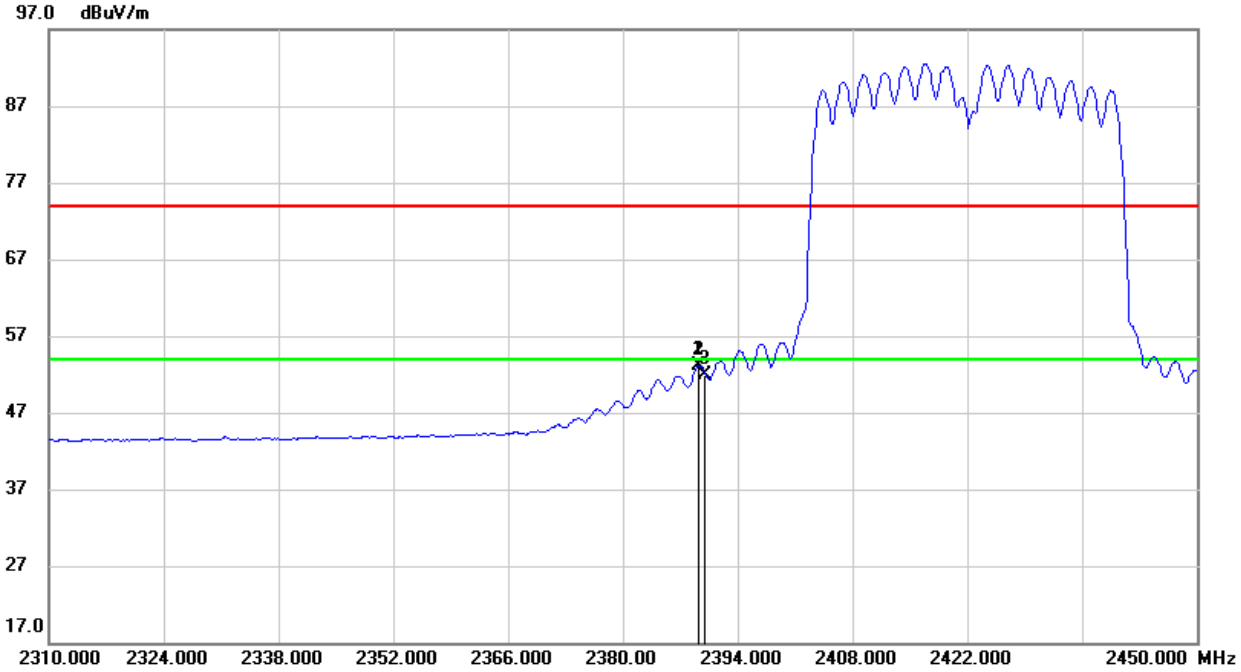
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.240	40.13	32.94	73.07	74.00	-0.93	peak
2	2389.380	40.40	32.94	73.34	74.00	-0.66	peak
3	2390.000	37.71	32.94	70.65	74.00	-3.35	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.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

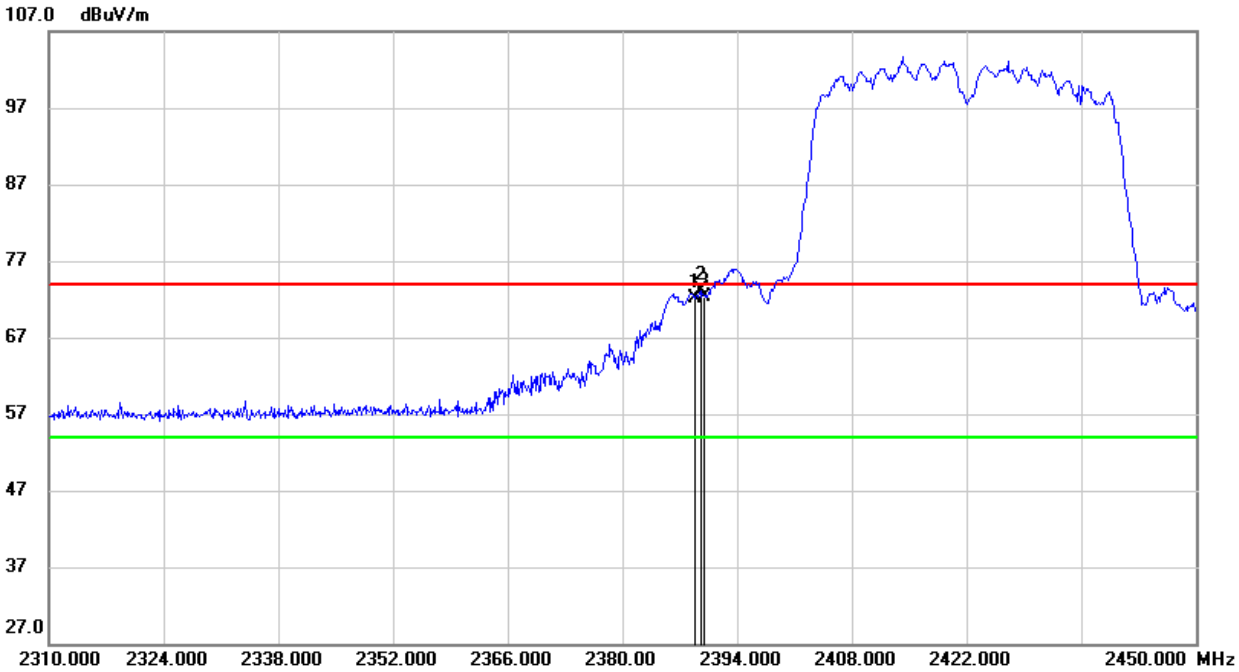


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.240	20.22	32.94	53.16	54.00	-0.84	AVG
2	2389.380	20.19	32.94	53.13	54.00	-0.87	AVG
3	2390.000	19.05	32.94	51.99	54.00	-2.01	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

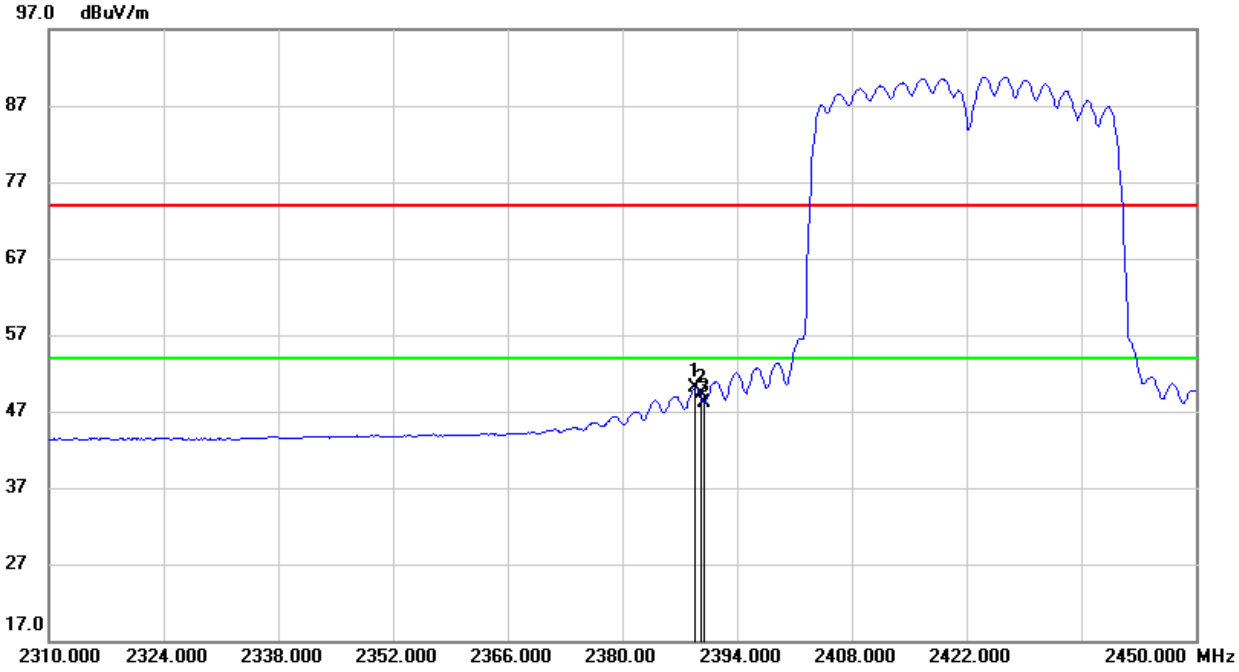
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.820	39.20	32.94	72.14	74.00	-1.86	peak
2	2389.520	40.11	32.94	73.05	74.00	-0.95	peak
3	2390.000	39.43	32.94	72.37	74.00	-1.63	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

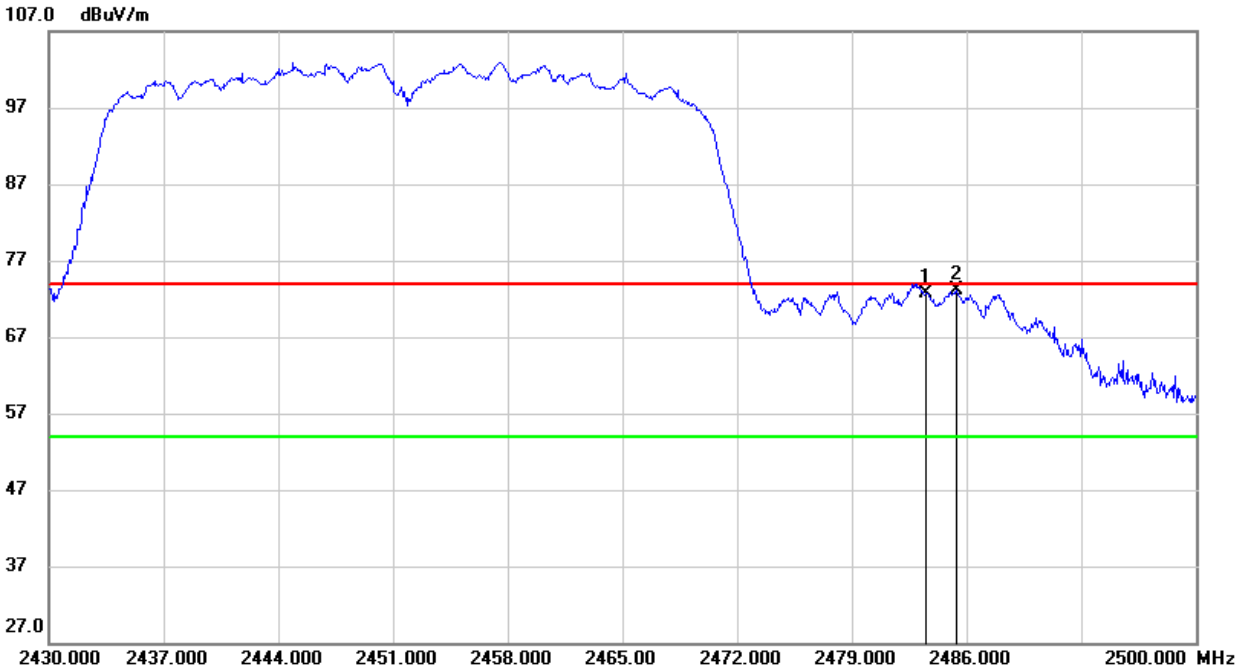


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.820	17.16	32.94	50.10	54.00	-3.90	AVG
2	2389.520	16.37	32.94	49.31	54.00	-4.69	AVG
3	2390.000	15.08	32.94	48.02	54.00	-5.98	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

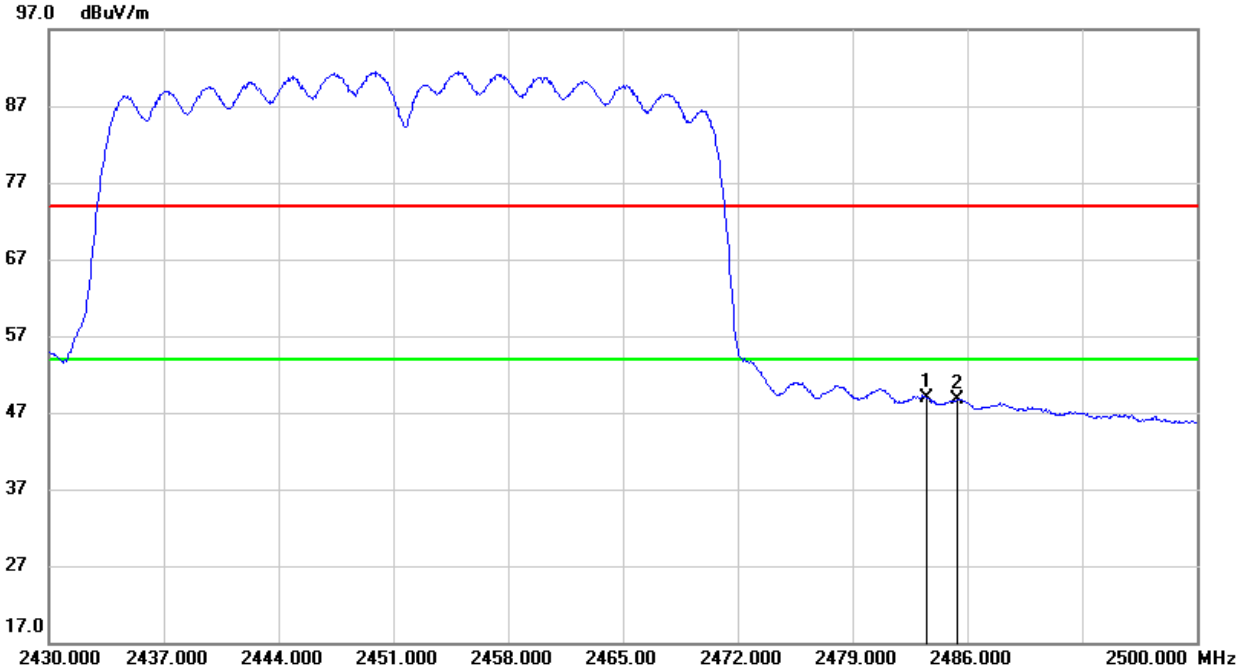
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	39.07	33.58	72.65	74.00	-1.35	peak
2	2485.370	39.50	33.59	73.09	74.00	-0.91	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

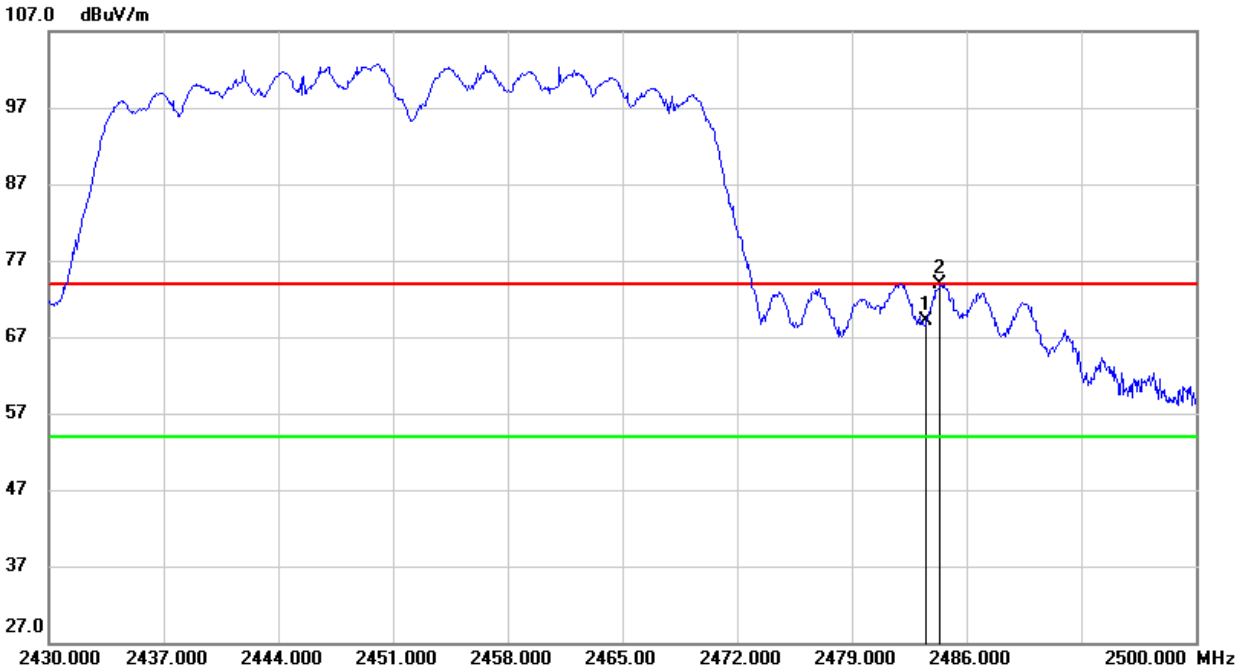


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	15.37	33.58	48.95	54.00	-5.05	AVG
2	2485.370	15.02	33.59	48.61	54.00	-5.39	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

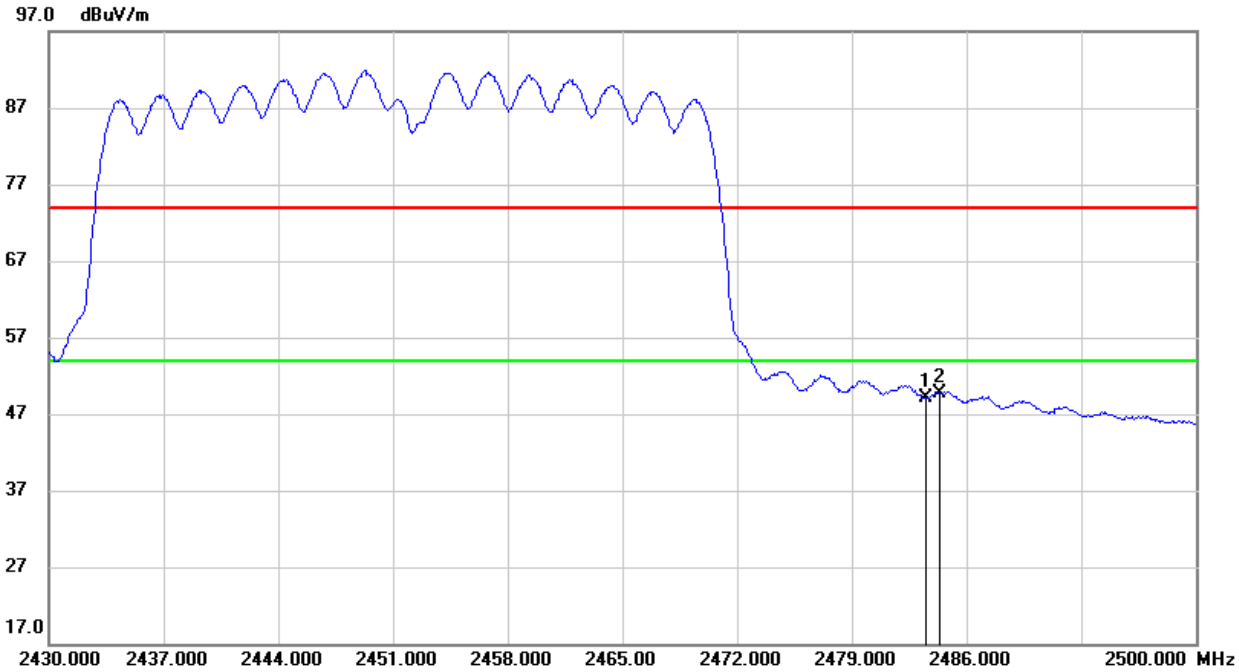
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.60	33.58	69.18	74.00	-4.82	peak
2	2484.390	40.39	33.59	73.98	74.00	-0.02	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 case emission 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	15.47	33.58	49.05	54.00	-4.95	AVG
2	2484.390	16.13	33.59	49.72	54.00	-4.28	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 transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

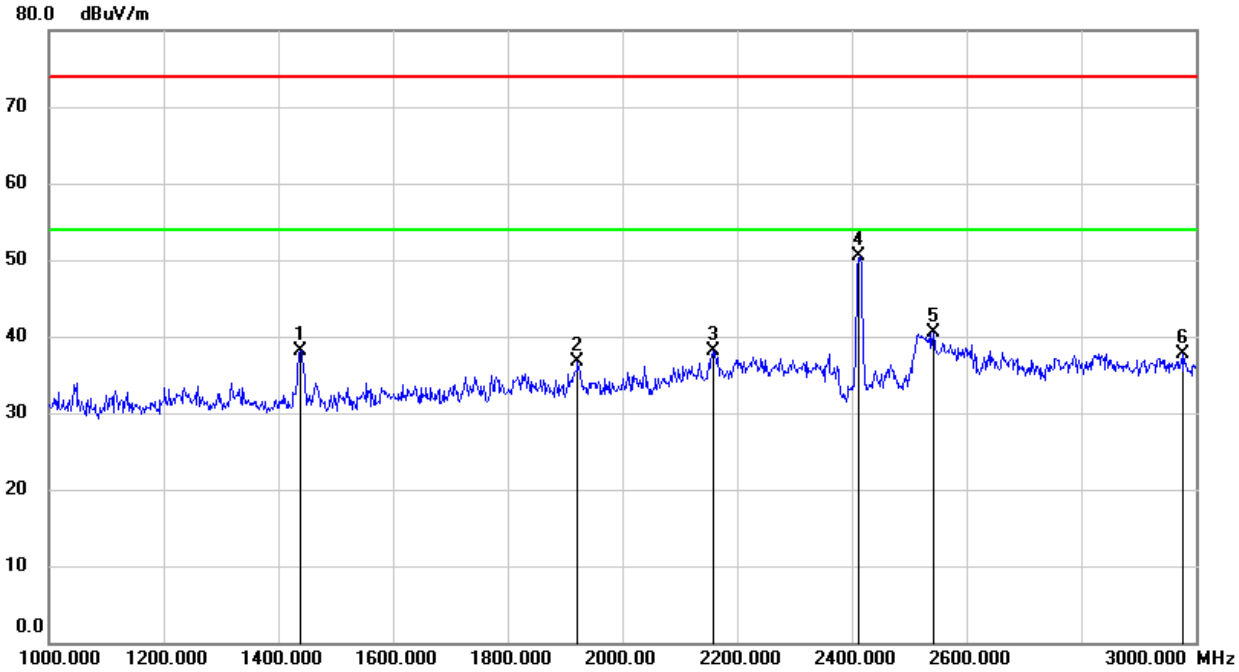
Note: All antennas have been tested, only the worst data record in the report.

7.8. SPURIOUS EMISSIONS (1~3GHz)

7.8.1. 802.11b SISO MODE

ANTENNA1

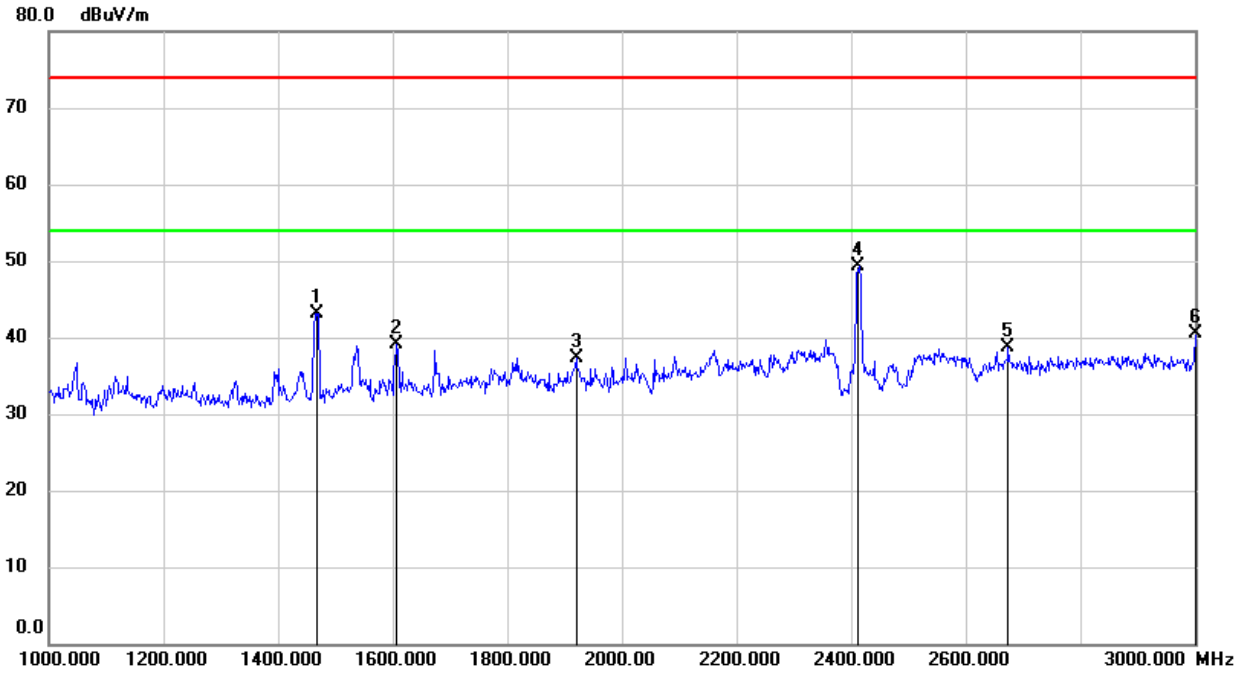
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1438.000	50.48	-12.32	38.16	74.00	-35.84	peak
2	1922.000	46.68	-9.93	36.75	74.00	-37.25	peak
3	2158.000	46.97	-8.88	38.09	74.00	-35.91	peak
4	2412.000	58.19	-7.77	50.42	/	/	fundamental
5	2542.000	47.84	-7.39	40.45	74.00	-33.55	peak
6	2976.000	43.15	-5.35	37.80	74.00	-36.20	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

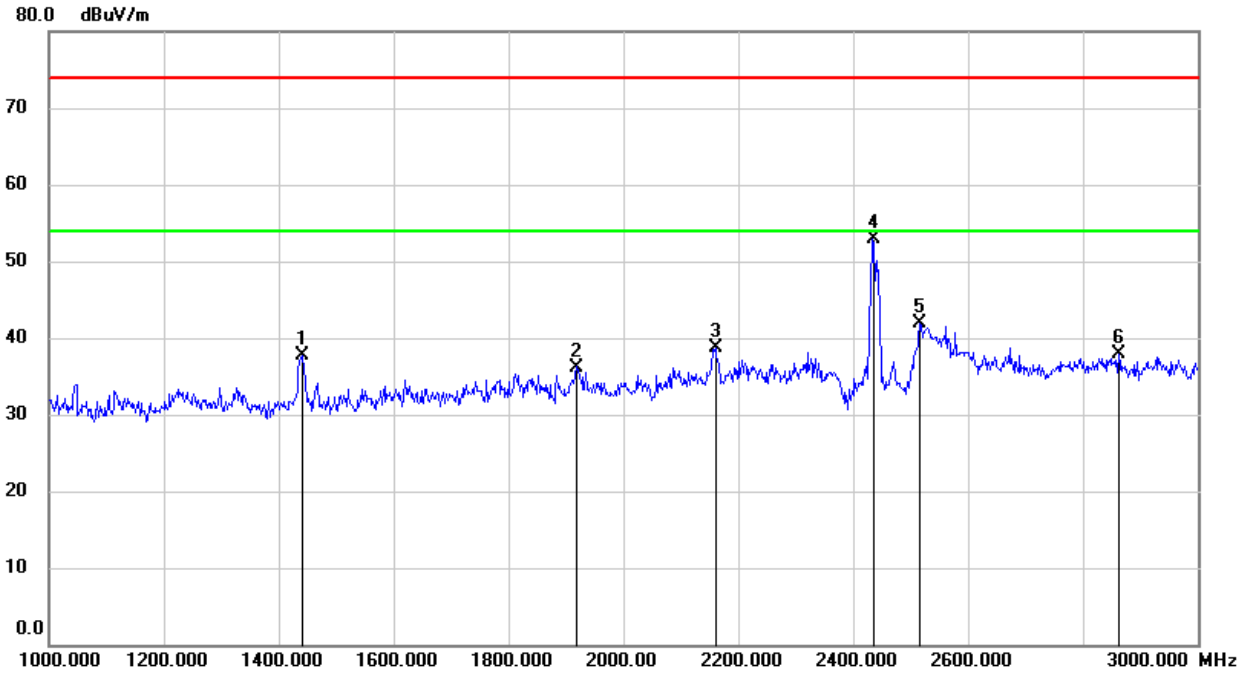
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1468.000	55.46	-12.26	43.20	74.00	-30.80	peak
2	1606.000	50.51	-11.37	39.14	74.00	-34.86	peak
3	1920.000	47.31	-9.93	37.38	74.00	-36.62	peak
4	2412.000	57.12	-7.77	49.35	/	/	fundamental
5	2674.000	45.93	-7.27	38.66	74.00	-35.34	peak
6	3000.000	45.90	-5.30	40.60	74.00	-33.40	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

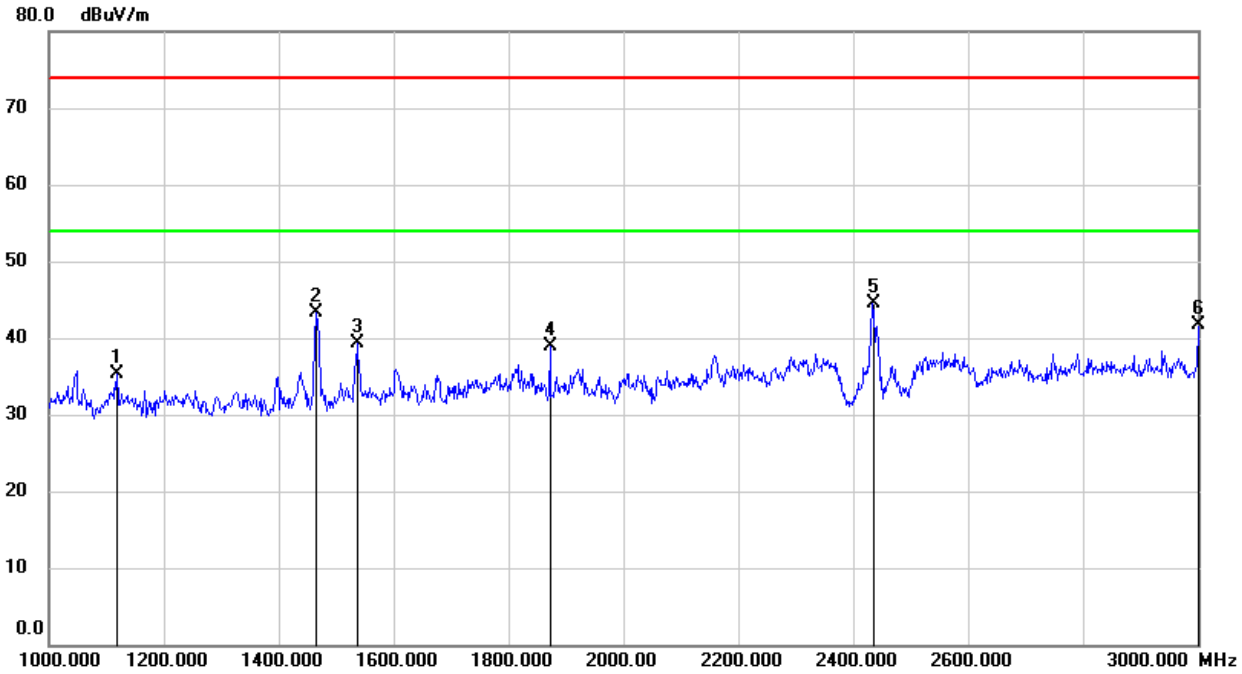
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1440.000	50.02	-12.32	37.70	74.00	-36.30	peak
2	1918.000	46.13	-9.93	36.20	74.00	-37.80	peak
3	2160.000	47.52	-8.86	38.66	74.00	-35.34	peak
4	2437.000	60.43	-7.60	52.83	/	/	fundamental
5	2516.000	49.10	-7.25	41.85	74.00	-32.15	peak
6	2862.000	43.62	-5.73	37.89	74.00	-36.11	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

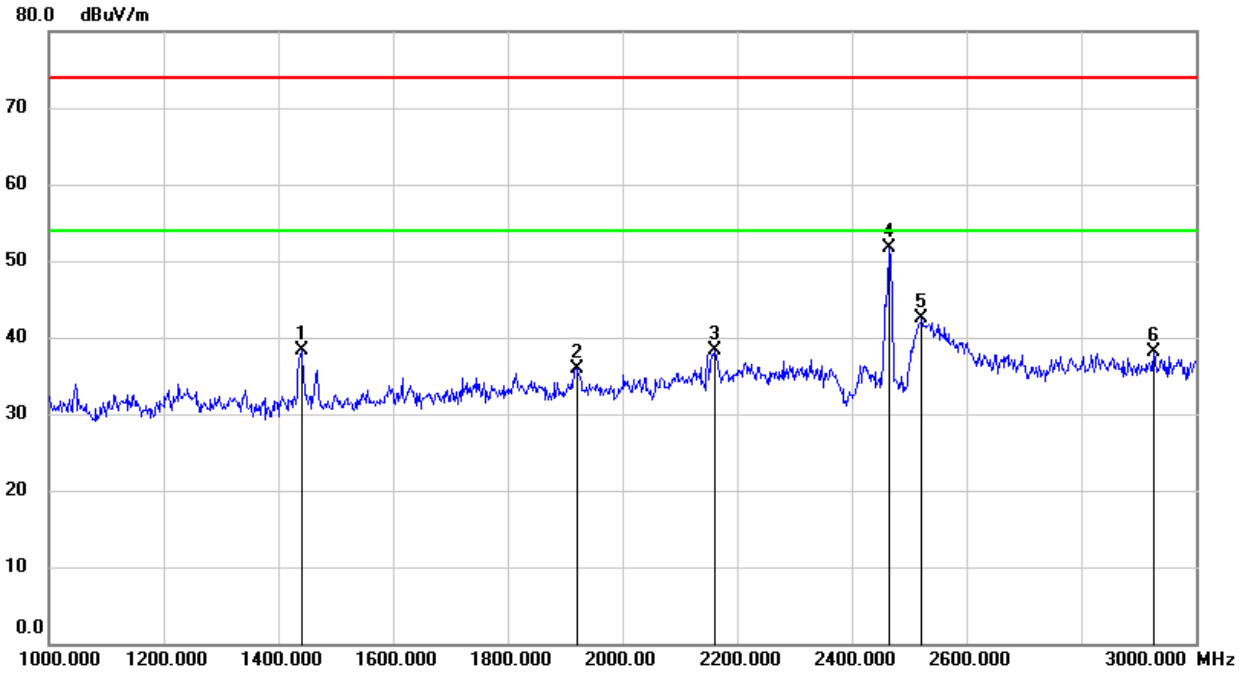
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1118.000	48.65	-13.37	35.28	74.00	-38.72	peak
2	1466.000	55.54	-12.26	43.28	74.00	-30.72	peak
3	1536.000	51.27	-11.92	39.35	74.00	-34.65	peak
4	1872.000	48.89	-9.95	38.94	74.00	-35.06	peak
5	2437.000	52.10	-7.60	44.50	/	/	fundamental
6	3000.000	46.92	-5.30	41.62	74.00	-32.38	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

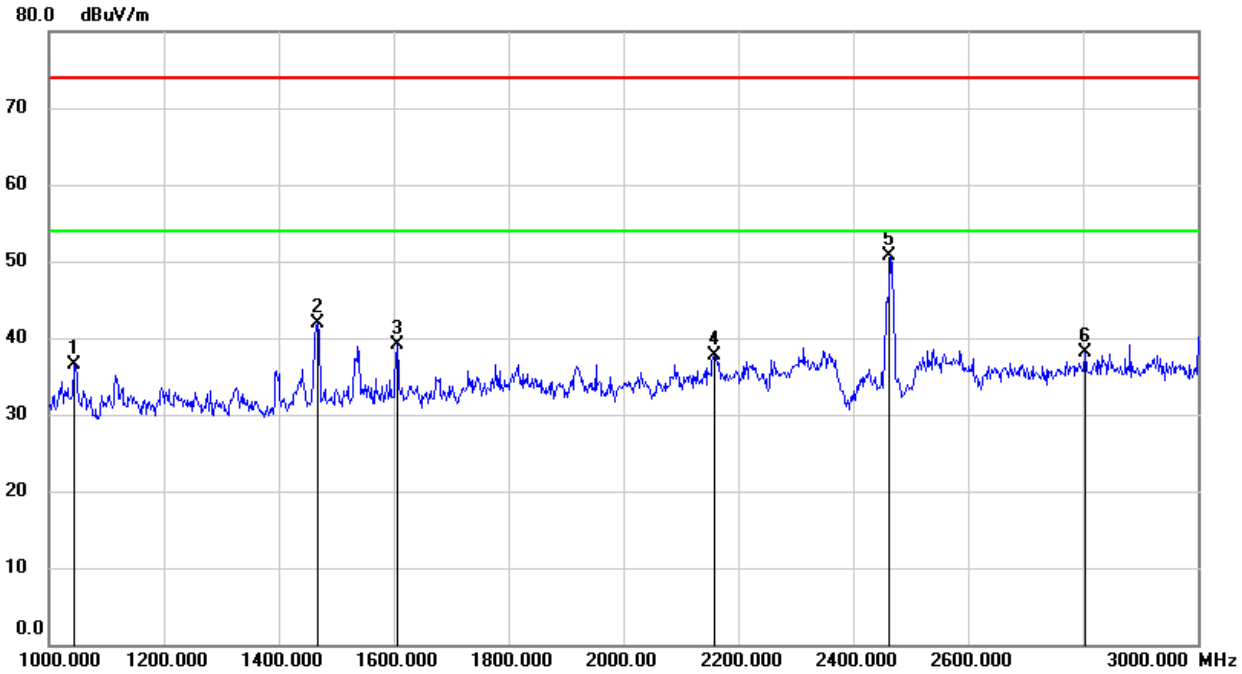
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.62	-12.32	38.30	74.00	-35.70	peak
2	1920.000	45.87	-9.93	35.94	74.00	-38.06	peak
3	2160.000	47.20	-8.86	38.34	74.00	-35.66	peak
4	2462.000	59.03	-7.40	51.63	/	/	fundamental
5	2522.000	49.74	-7.28	42.46	74.00	-31.54	peak
6	2926.000	43.58	-5.47	38.11	74.00	-35.89	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject 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	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1044.000	49.97	-13.56	36.41	74.00	-37.59	peak
2	1468.000	54.24	-12.26	41.98	74.00	-32.02	peak
3	1606.000	50.50	-11.37	39.13	74.00	-34.87	peak
4	2158.000	46.58	-8.88	37.70	74.00	-36.30	peak
5	2462.000	58.16	-7.43	50.73	/	/	fundamental
6	2804.000	44.22	-6.04	38.18	74.00	-35.82	peak

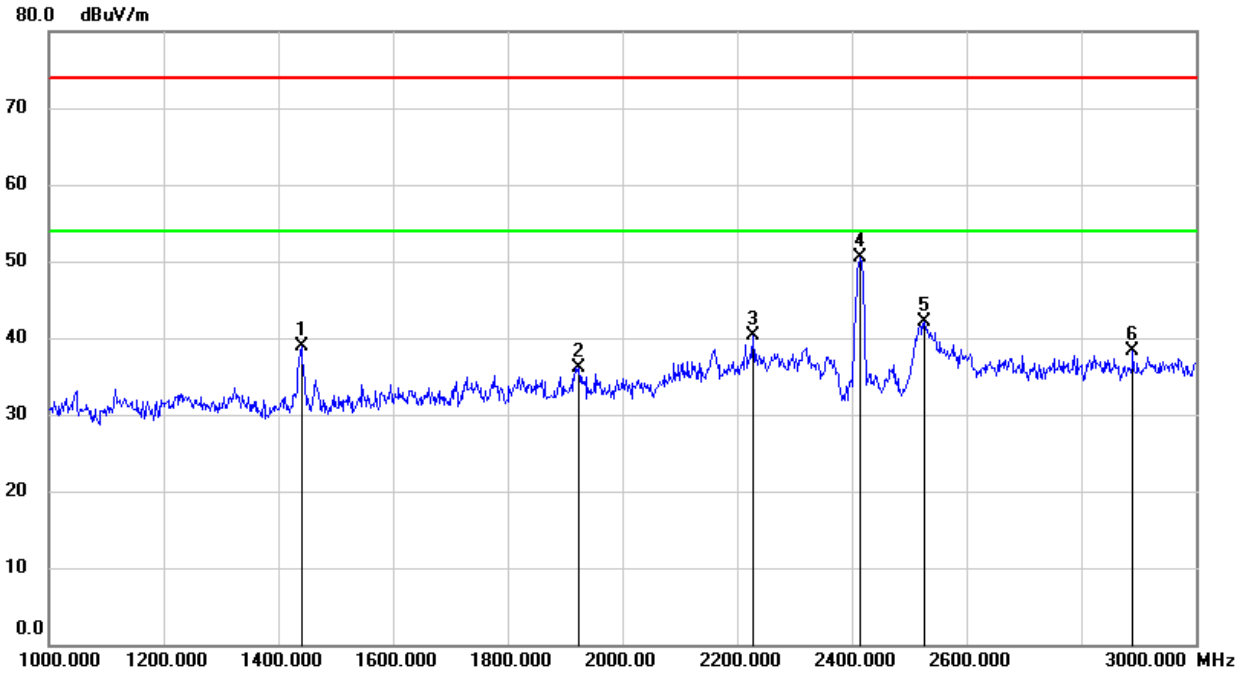
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter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

Note: All antennas have been tested, only the worst data record in the report.

7.8.2. 802.11g SISO MODE

ANTENNA1

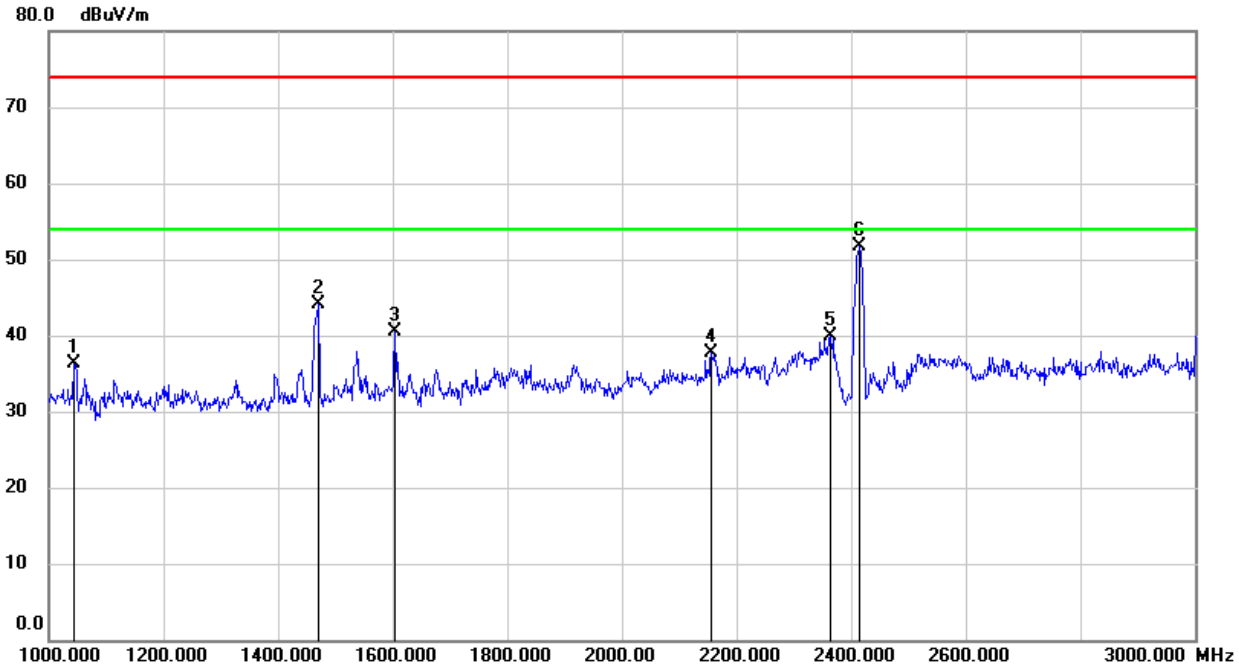
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	51.17	-12.32	38.85	74.00	-35.15	peak
2	1924.000	46.06	-9.93	36.13	74.00	-37.87	peak
3	2228.000	48.85	-8.53	40.32	74.00	-33.68	peak
4	2412.000	58.24	-7.76	50.48	/	/	fundamental
5	2526.000	49.42	-7.31	42.11	74.00	-31.89	peak
6	2890.000	43.79	-5.58	38.21	74.00	-35.79	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

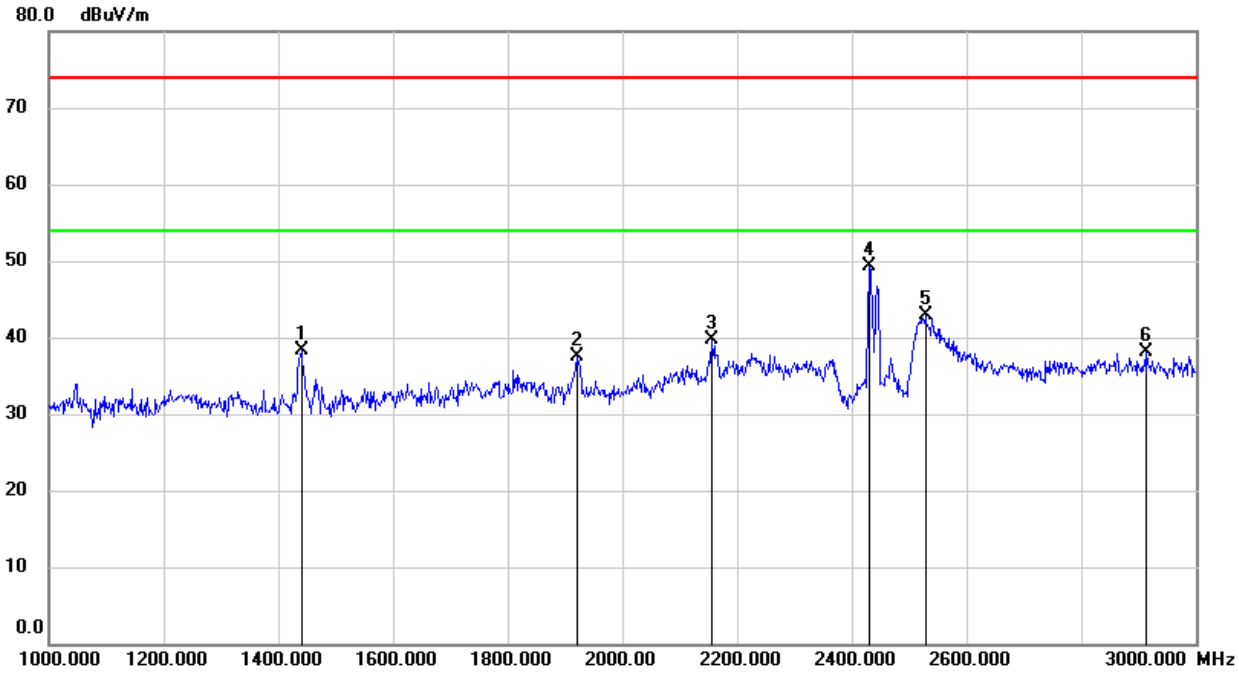
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1044.000	49.92	-13.56	36.36	74.00	-37.64	peak
2	1470.000	56.37	-12.25	44.12	74.00	-29.88	peak
3	1604.000	51.95	-11.37	40.58	74.00	-33.42	peak
4	2156.000	46.66	-8.88	37.78	74.00	-36.22	peak
5	2364.000	47.85	-7.98	39.87	74.00	-34.13	peak
6	2412.000	59.54	-7.76	51.78	/	/	fundamental

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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

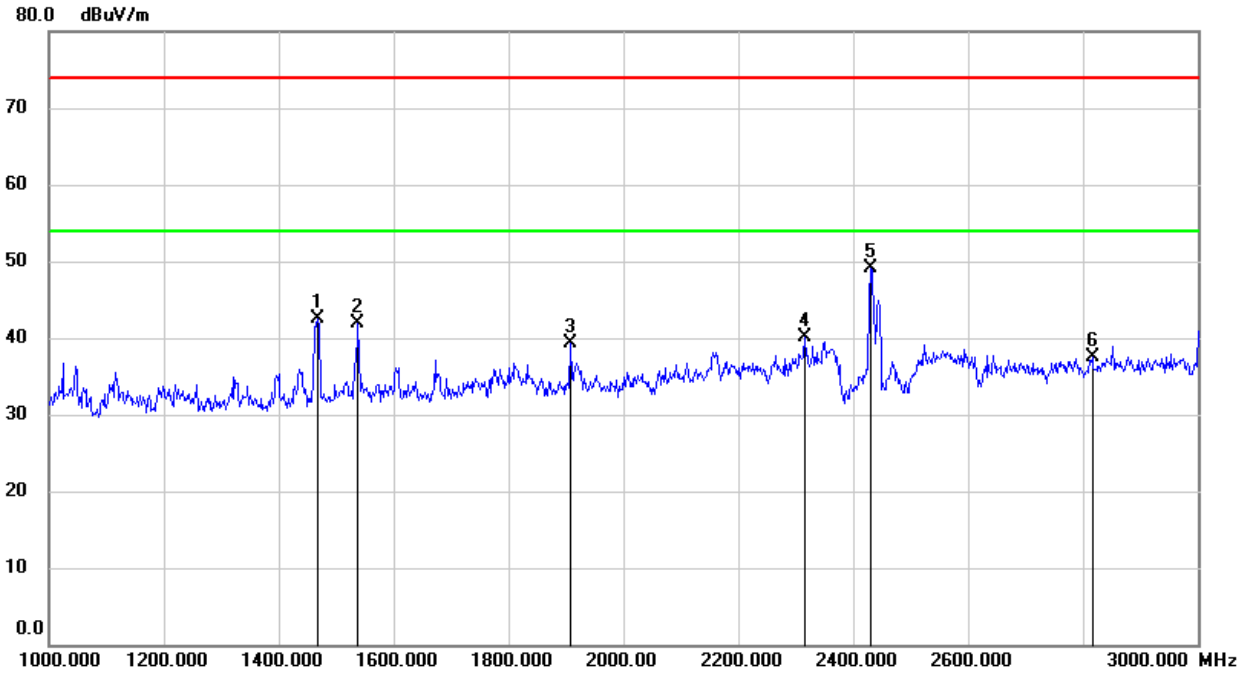
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.72	-12.32	38.40	74.00	-35.60	peak
2	1920.000	47.35	-9.93	37.42	74.00	-36.58	peak
3	2156.000	48.65	-8.88	39.77	74.00	-34.23	peak
4	2437.000	56.92	-7.65	49.27	/	/	fundamental
5	2528.000	50.25	-7.32	42.93	74.00	-31.07	peak
6	2914.000	43.58	-5.50	38.08	74.00	-35.92	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

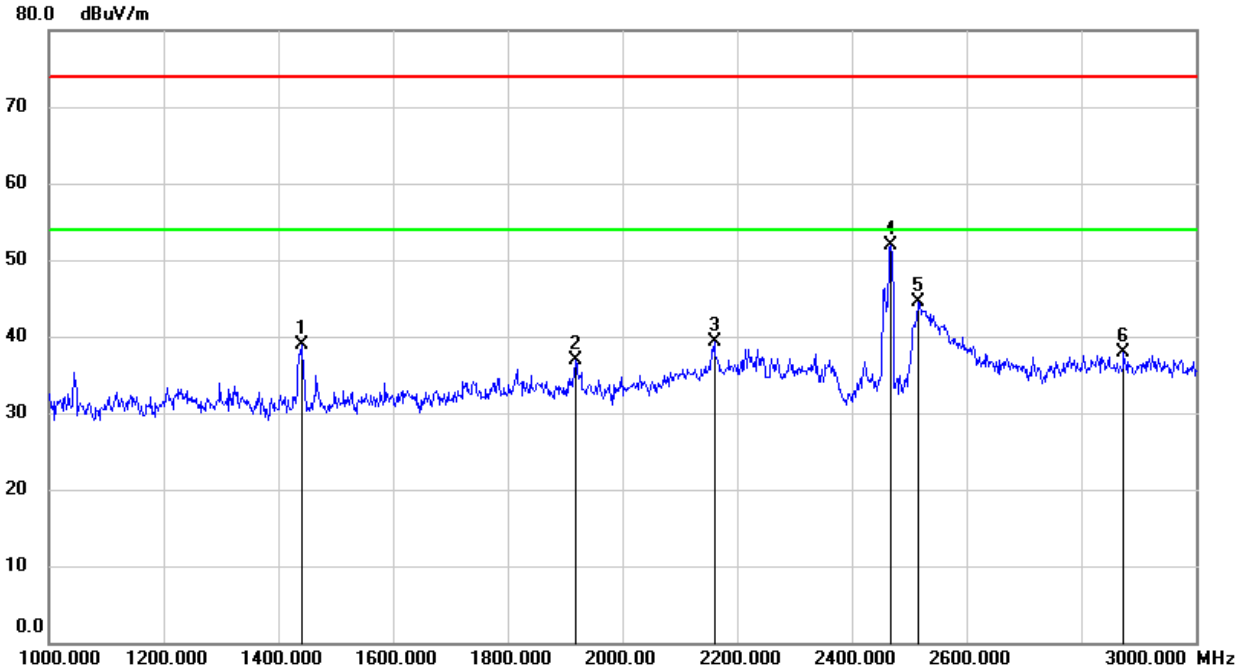
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1468.000	54.68	-12.26	42.42	74.00	-31.58	peak
2	1538.000	53.80	-11.91	41.89	74.00	-32.11	peak
3	1908.000	49.24	-9.94	39.30	74.00	-34.70	peak
4	2316.000	48.14	-8.13	40.01	74.00	-33.99	peak
5	2437.000	56.74	-7.65	49.09	/	/	fundamental
6	2816.000	43.41	-5.97	37.44	74.00	-36.56	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

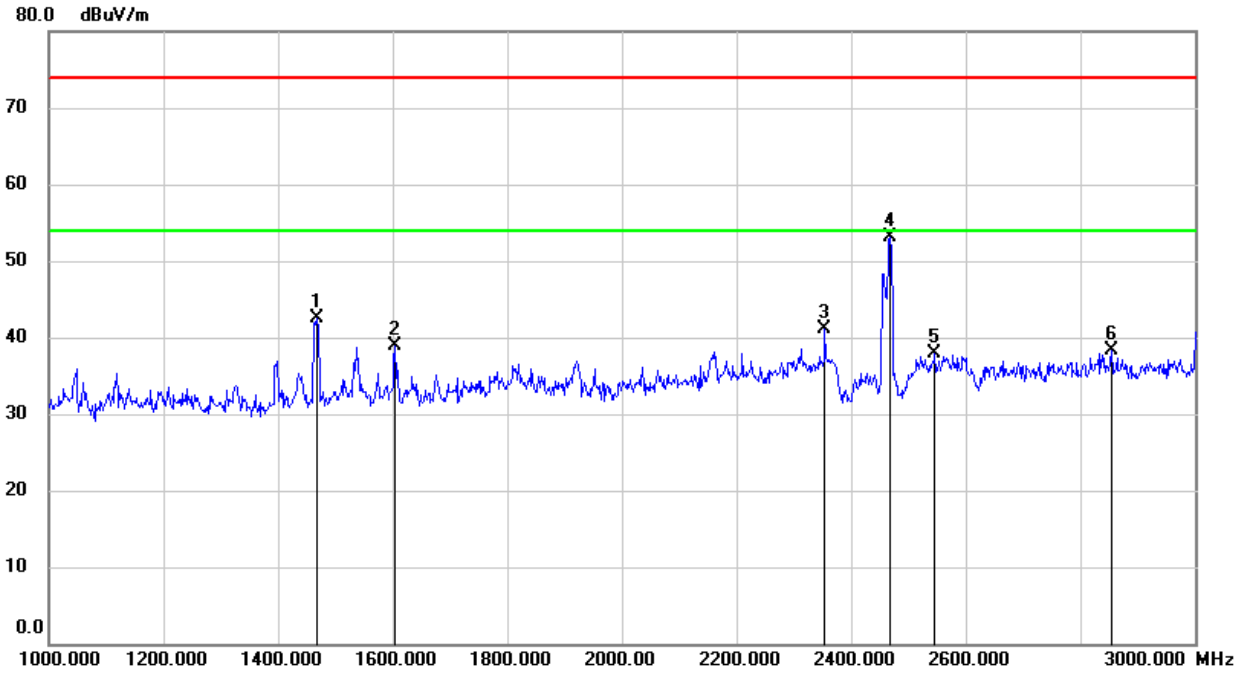
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	51.28	-12.32	38.96	74.00	-35.04	peak
2	1918.000	46.88	-9.93	36.95	74.00	-37.05	peak
3	2160.000	48.10	-8.86	39.24	74.00	-34.76	peak
4	2462.000	59.26	-7.39	51.87	/	/	fundamental
5	2516.000	51.73	-7.25	44.48	74.00	-29.52	peak
6	2874.000	43.63	-5.66	37.97	74.00	-36.03	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



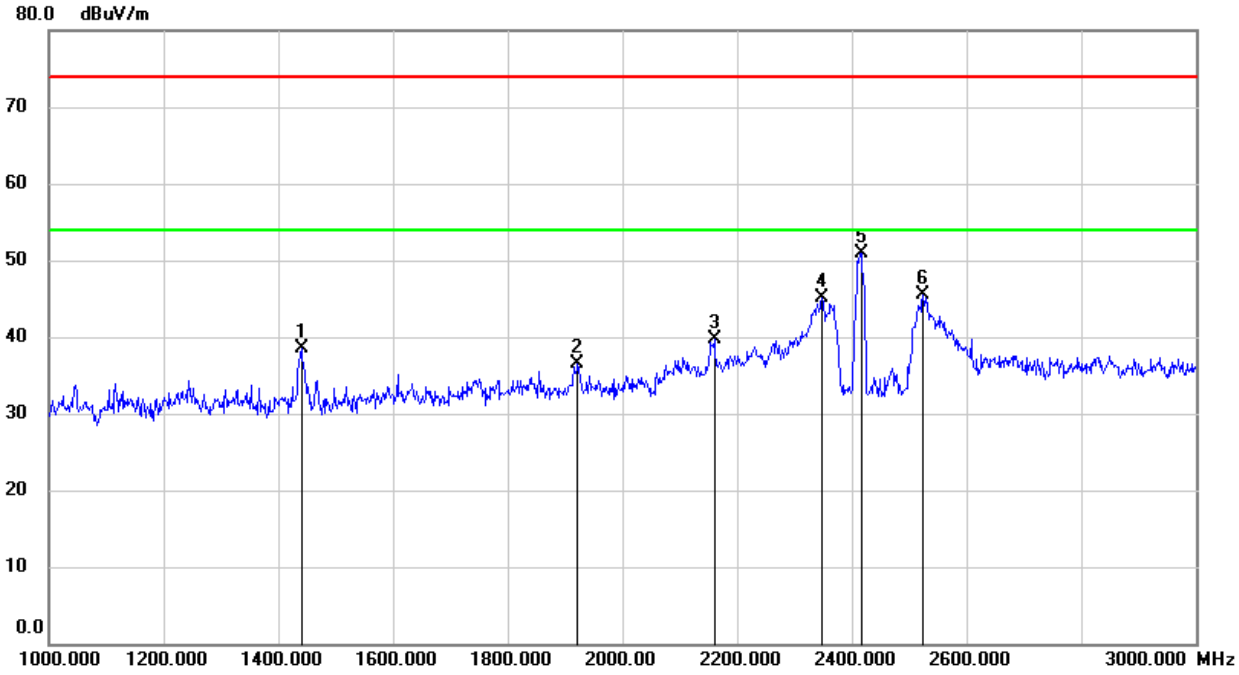
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1468.000	54.75	-12.26	42.49	74.00	-31.51	peak
2	1604.000	50.31	-11.37	38.94	74.00	-35.06	peak
3	2354.000	49.12	-8.01	41.11	74.00	-32.89	peak
4	2462.000	60.56	-7.39	53.17	/	/	fundamental
5	2546.000	45.29	-7.41	37.88	74.00	-36.12	peak
6	2854.000	44.00	-5.78	38.22	74.00	-35.78	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

Note: All antennas have been tested, only the worst data record in the report.

7.8.3. 802.11n HT20 MIMO MODE

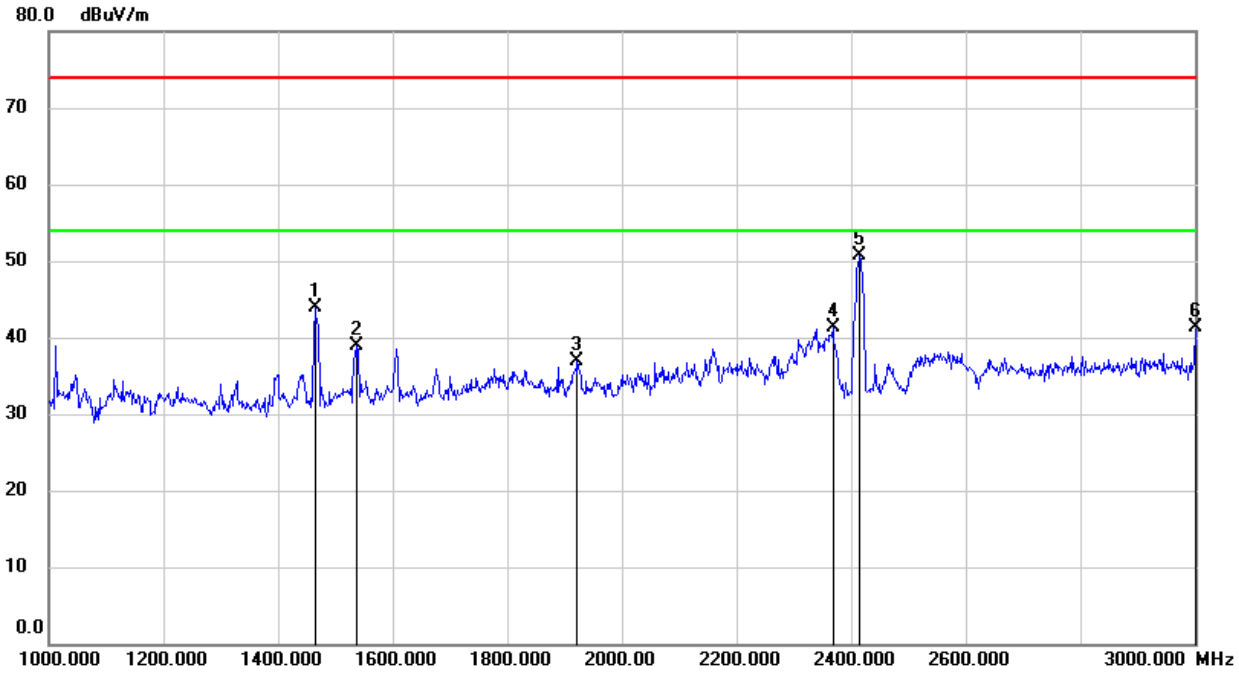
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.77	-12.32	38.45	74.00	-35.55	peak
2	1922.000	46.34	-9.93	36.41	74.00	-37.59	peak
3	2160.000	48.57	-8.86	39.71	74.00	-34.29	peak
4	2348.000	53.20	-8.03	45.17	74.00	-28.83	peak
5	2412.000	58.69	-7.75	50.94	/	/	fundamental
6	2524.000	52.87	-7.29	45.58	74.00	-28.42	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

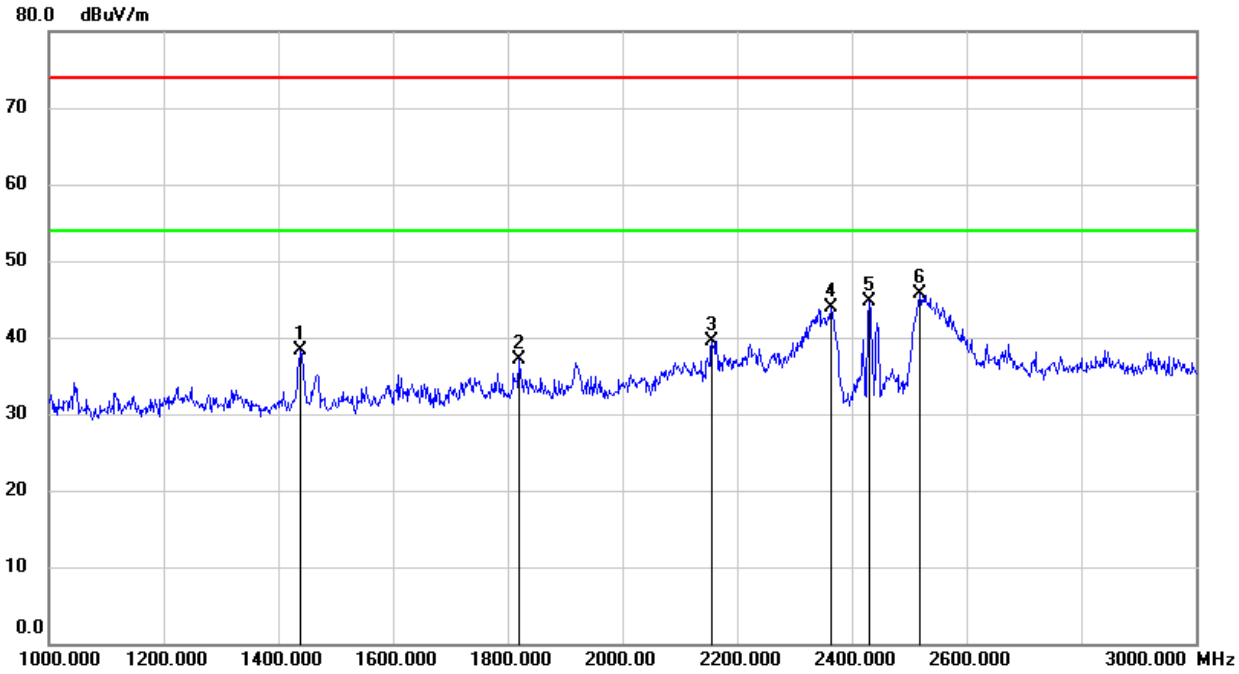
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1464.000	56.19	-12.26	43.93	74.00	-30.07	peak
2	1538.000	50.77	-11.91	38.86	74.00	-35.14	peak
3	1922.000	46.90	-9.93	36.97	74.00	-37.03	peak
4	2368.000	49.25	-7.96	41.29	74.00	-32.71	peak
5	2412.000	58.39	-7.76	50.63	/	/	fundamental
6	3000.000	46.61	-5.30	41.31	74.00	-32.69	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

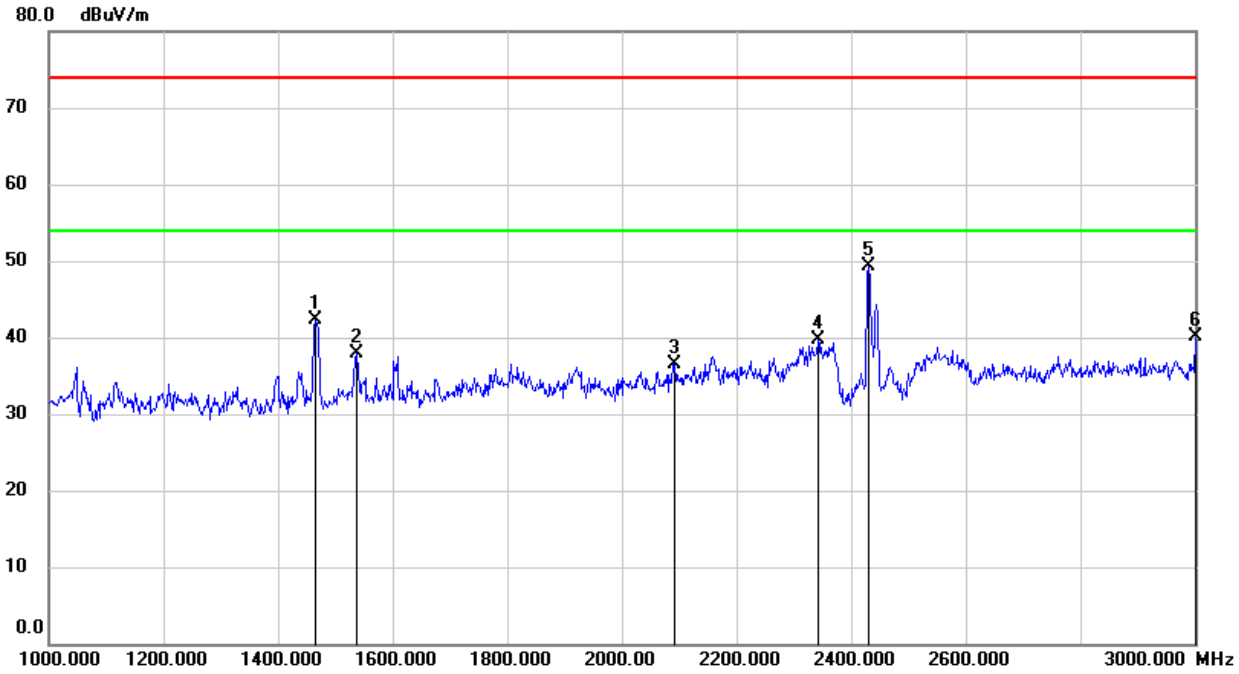
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1438.000	50.67	-12.32	38.35	74.00	-35.65	peak
2	1820.000	46.98	-9.92	37.06	74.00	-36.94	peak
3	2156.000	48.47	-8.88	39.59	74.00	-34.41	peak
4	2364.000	51.92	-7.98	43.94	74.00	-30.06	peak
5	2437.000	52.38	-7.65	44.73	/	/	fundamental
6	2518.000	52.99	-7.27	45.72	74.00	-28.28	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

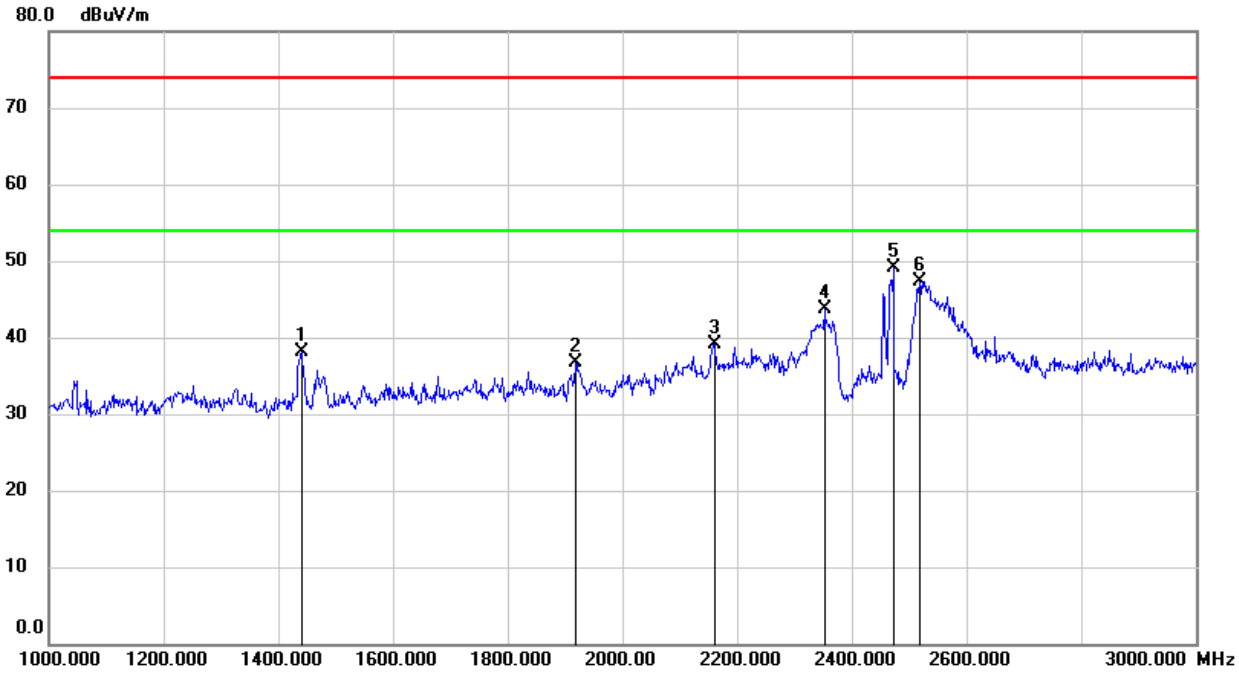
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1466.000	54.66	-12.26	42.40	74.00	-31.60	peak
2	1538.000	49.78	-11.91	37.87	74.00	-36.13	peak
3	2092.000	45.74	-9.20	36.54	74.00	-37.46	peak
4	2342.000	47.70	-8.05	39.65	74.00	-34.35	peak
5	2437.000	56.92	-7.65	49.27	/	/	fundamental
6	3000.000	45.37	-5.30	40.07	74.00	-33.93	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

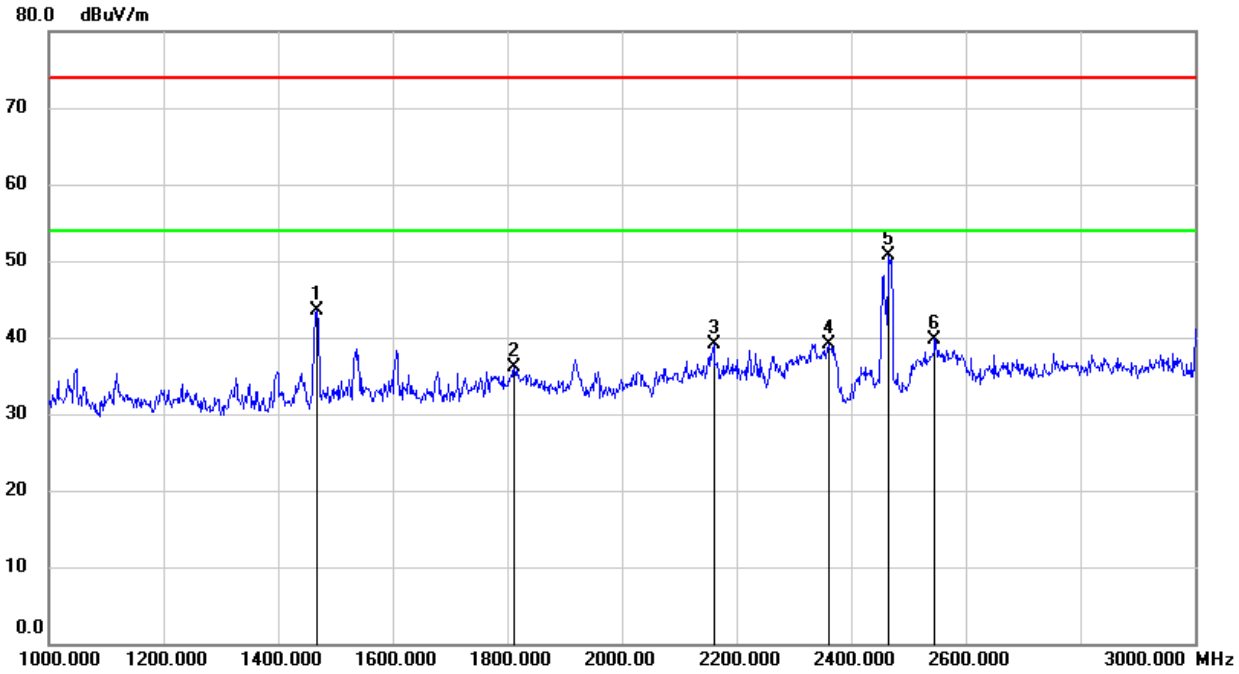
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.47	-12.32	38.15	74.00	-35.85	peak
2	1918.000	46.59	-9.93	36.66	74.00	-37.34	peak
3	2160.000	47.89	-8.86	39.03	74.00	-34.97	peak
4	2352.000	51.79	-8.02	43.77	74.00	-30.23	peak
5	2462.000	56.49	-7.36	49.13	/	/	fundamental
6	2518.000	54.52	-7.27	47.25	74.00	-26.75	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



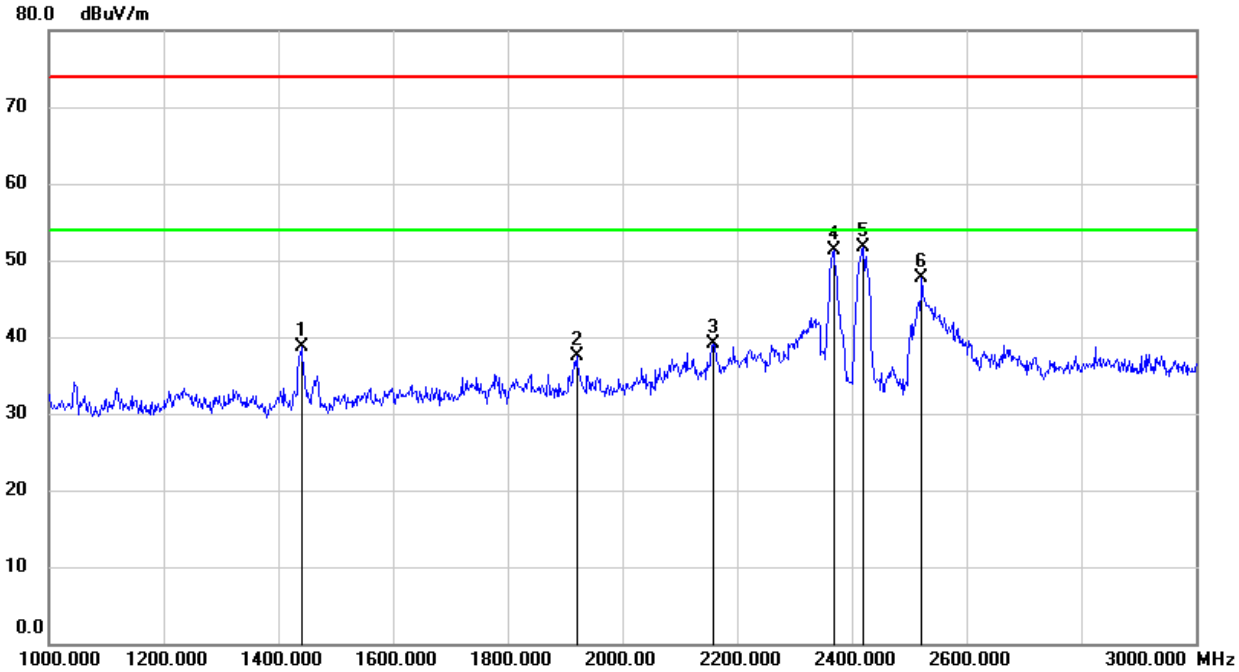
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1468.000	55.71	-12.26	43.45	74.00	-30.55	peak
2	1812.000	46.12	-9.92	36.20	74.00	-37.80	peak
3	2160.000	47.93	-8.86	39.07	74.00	-34.93	peak
4	2360.000	47.11	-7.99	39.12	74.00	-34.88	peak
5	2462.000	58.02	-7.40	50.62	/	/	fundamental
6	2546.000	47.21	-7.41	39.80	74.00	-34.20	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

Note: All antennas have been tested, only the worst data record in the report.

7.8.4. 802.11n HT40 MIMO MODE

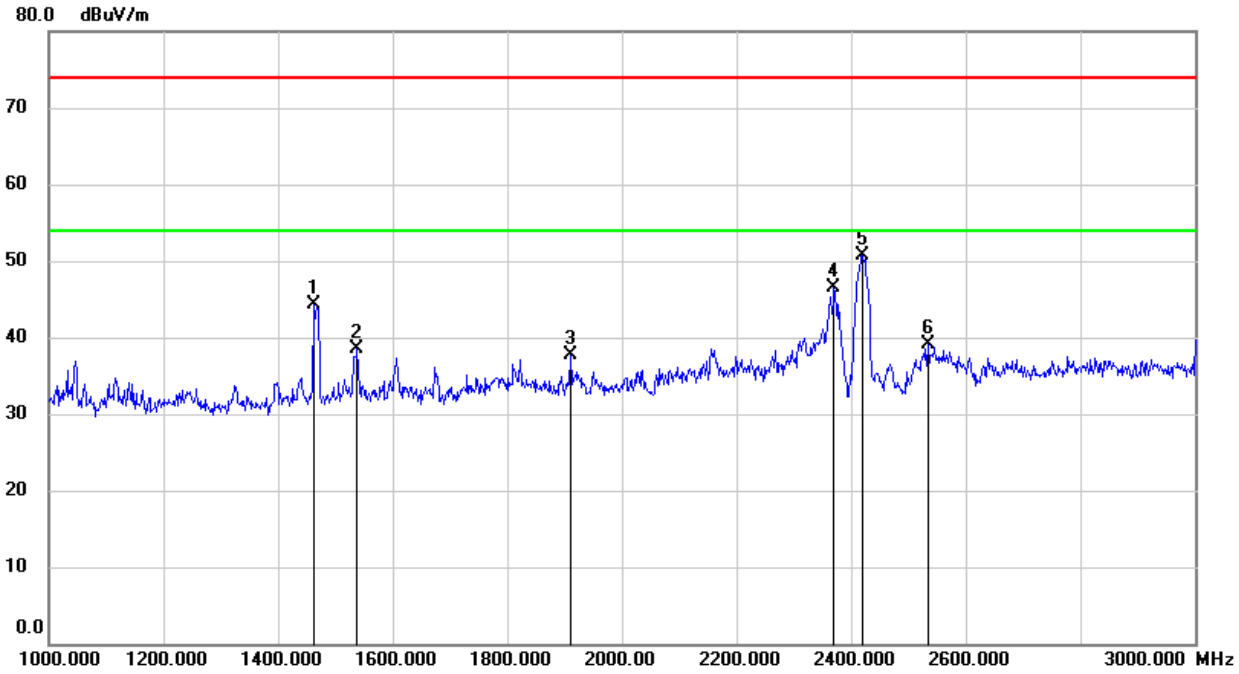
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	51.00	-12.32	38.68	74.00	-35.32	peak
2	1920.000	47.35	-9.93	37.42	74.00	-36.58	peak
3	2158.000	48.06	-8.88	39.18	74.00	-34.82	peak
4	2368.000	59.34	-7.96	51.38	74.00	-22.62	peak
5	2422.000	59.50	-7.72	51.78	/	/	fundamental
6	2522.000	55.06	-7.28	47.78	74.00	-26.22	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

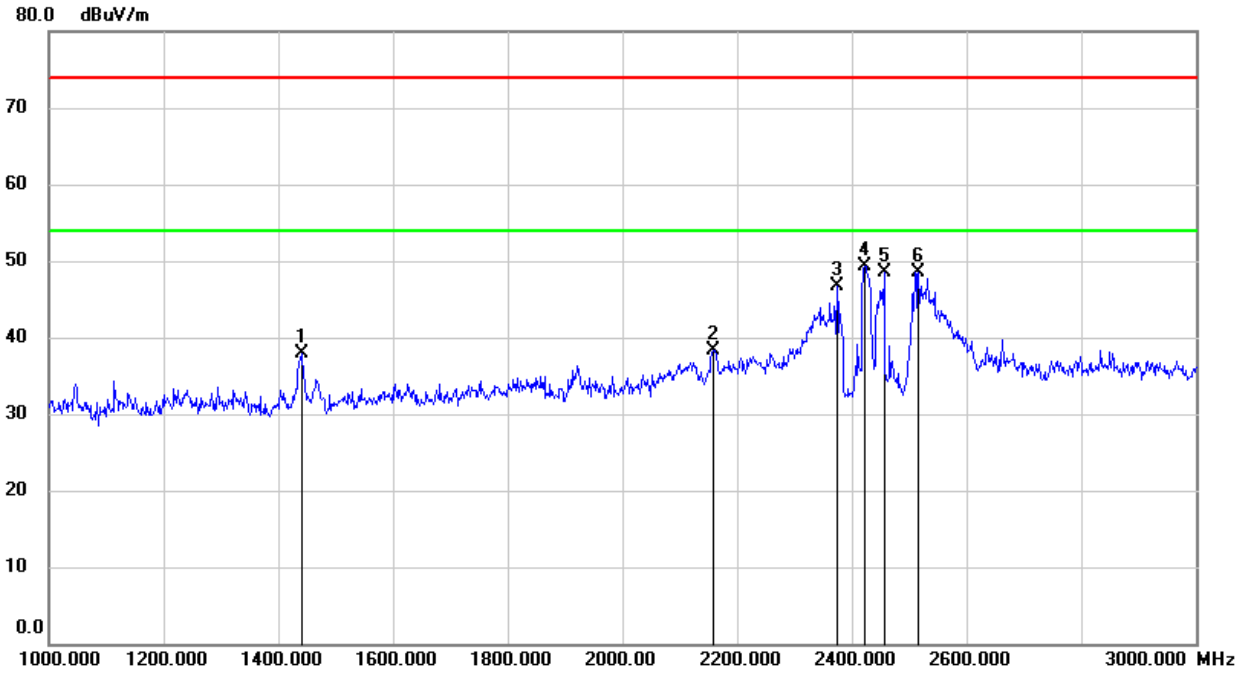
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1462.000	56.61	-12.27	44.34	74.00	-29.66	peak
2	1538.000	50.37	-11.91	38.46	74.00	-35.54	peak
3	1910.000	47.65	-9.93	37.72	74.00	-36.28	peak
4	2370.000	54.51	-7.95	46.56	74.00	-27.44	peak
5	2422.000	58.49	-7.72	50.77	/	/	fundamental
6	2534.000	46.48	-7.35	39.13	74.00	-34.87	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

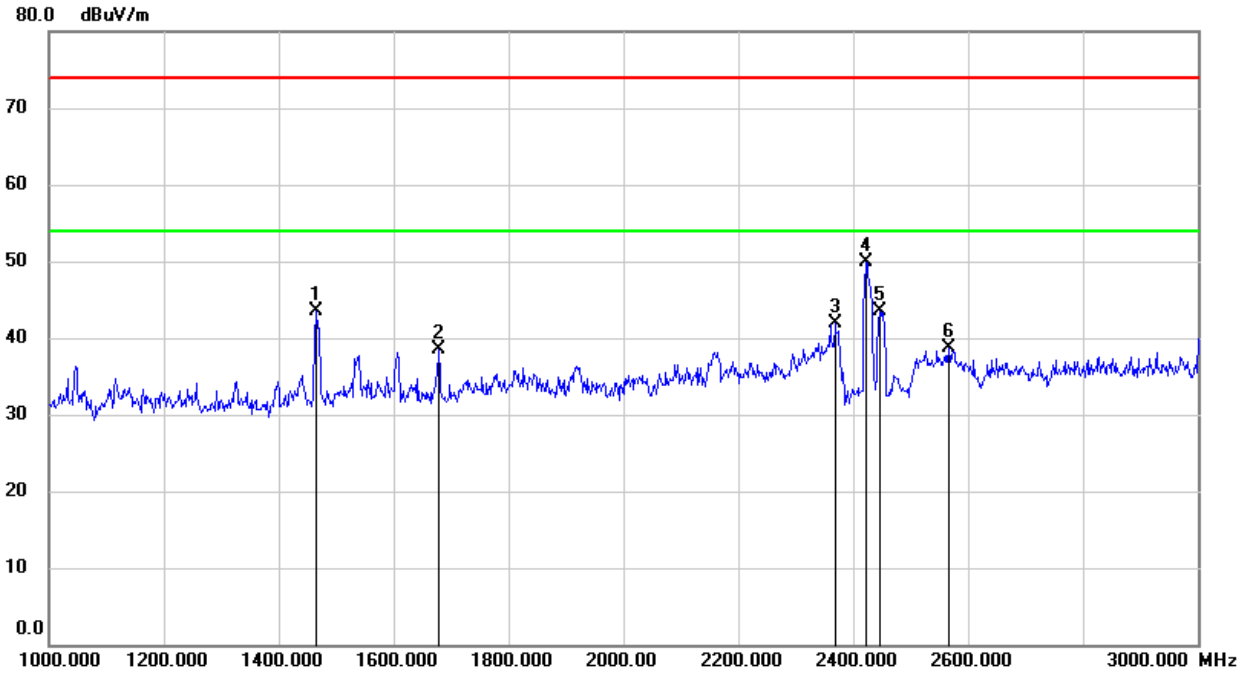
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.25	-12.32	37.93	74.00	-36.07	peak
2	2158.000	47.18	-8.88	38.30	74.00	-35.70	peak
3	2374.000	54.66	-7.95	46.71	74.00	-27.29	peak
4	2429.000	56.98	-7.71	49.27	74.00	-24.73	peak
5	2456.000	55.98	-7.47	48.51	74.00	-25.49	peak
6	2516.000	55.82	-7.25	48.57	74.00	-25.43	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

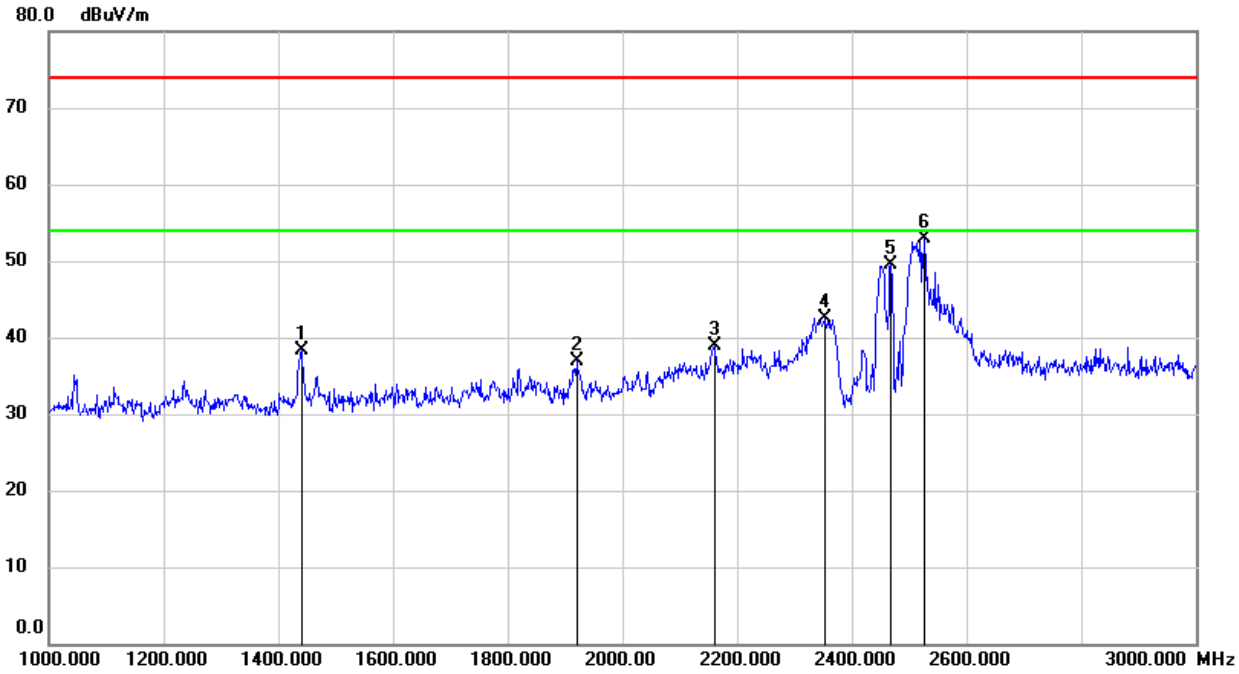
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1466.000	55.72	-12.26	43.46	74.00	-30.54	peak
2	1678.000	49.53	-11.01	38.52	74.00	-35.48	peak
3	2368.000	49.91	-7.96	41.95	74.00	-32.05	peak
4	2429.000	57.63	-7.71	49.92	74.00	-24.08	peak
5	2446.000	50.96	-7.54	43.42	74.00	-30.58	peak
6	2566.000	46.26	-7.52	38.74	74.00	-35.26	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

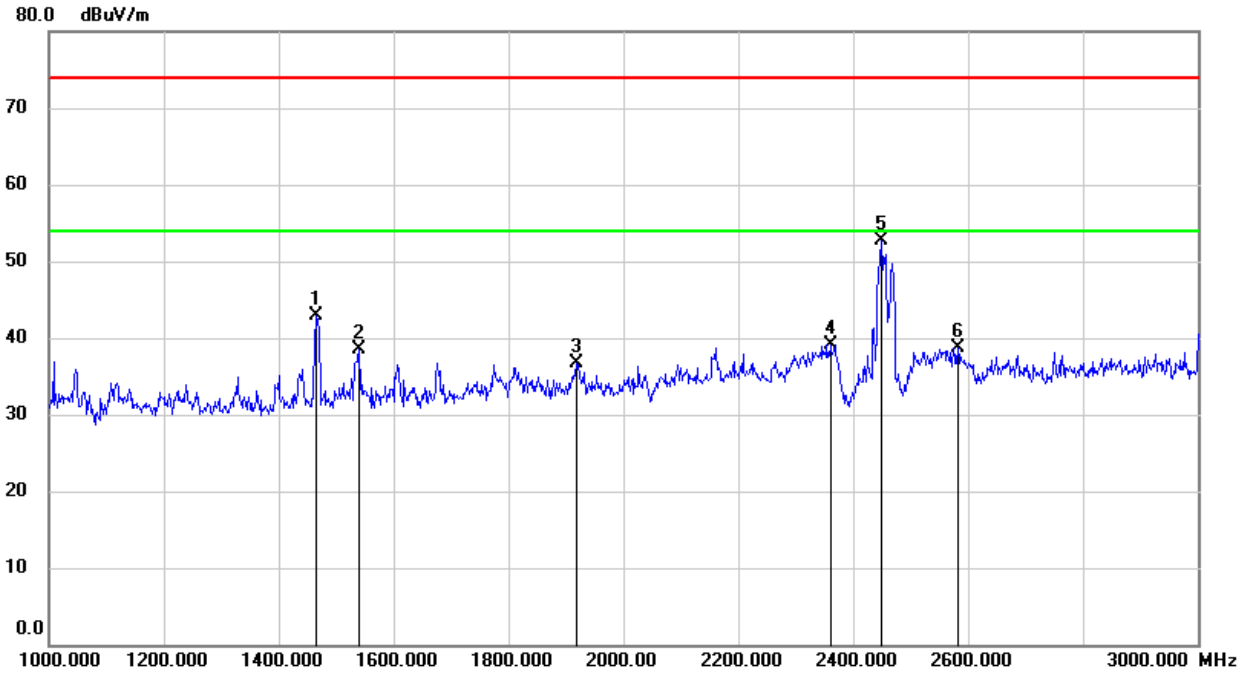
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	50.62	-12.32	38.30	74.00	-35.70	peak
2	1920.000	46.76	-9.93	36.83	74.00	-37.17	peak
3	2160.000	47.79	-8.86	38.93	74.00	-35.07	peak
4	2354.000	50.46	-8.01	42.45	74.00	-31.55	peak
5	2462.000	56.87	-7.39	49.48	/	/	fundamental
6	2526.000	60.14	-7.31	52.83	74.00	-21.17	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject 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	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1466.000	55.13	-12.26	42.87	74.00	-31.13	peak
2	1540.000	50.36	-11.89	38.47	74.00	-35.53	peak
3	1918.000	46.60	-9.93	36.67	74.00	-37.33	peak
4	2360.000	47.09	-7.99	39.10	74.00	-34.90	peak
5	2462.000	60.16	-7.51	52.65	/	/	fundamental
6	2582.000	46.30	-7.60	38.70	74.00	-35.30	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

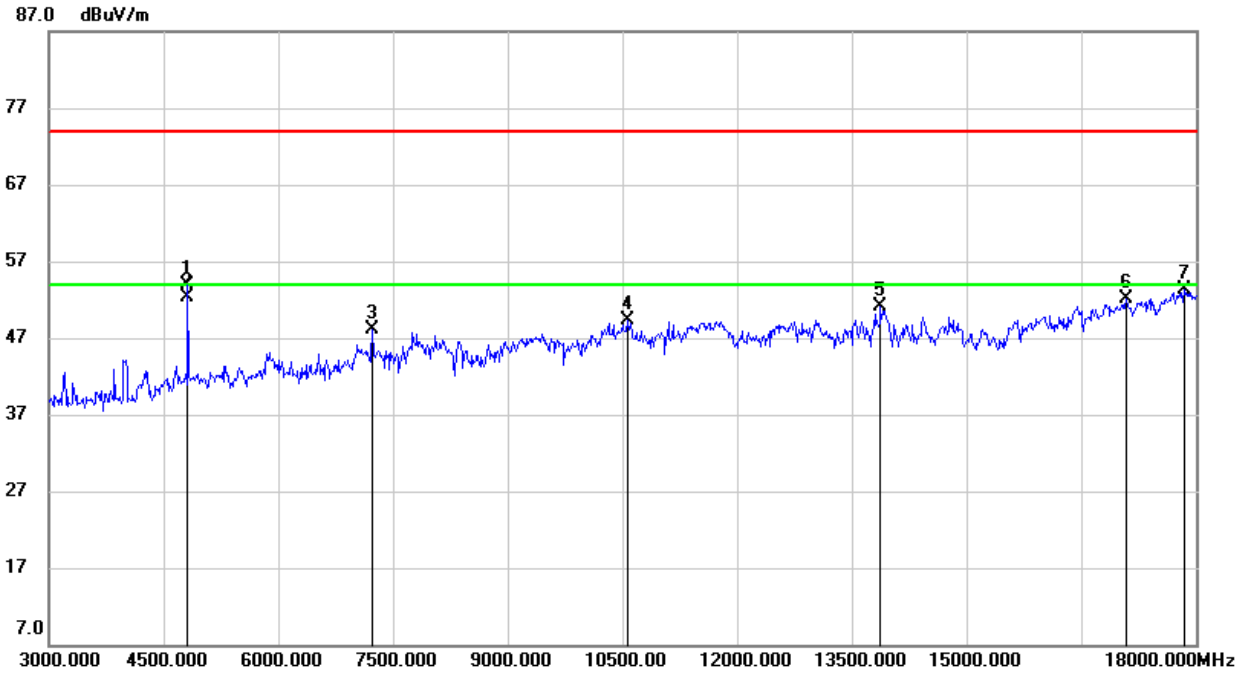
Note: All antennas have been tested, only the worst data record in the report.

7.9. SPURIOUS EMISSIONS (3~18GHz)

7.9.1. 802.11b SISO MODE

ANTENNA1

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	53.49	0.51	54.00	74.00	-20.00	peak
2	4815.000	51.84	0.51	52.35	54.00	-1.65	AVG
3	7230.000	42.17	5.89	48.06	74.00	-25.94	peak
4	10560.000	37.61	11.73	49.34	74.00	-24.66	peak
5	13875.000	34.61	16.44	51.05	74.00	-22.95	peak
6	17085.000	31.45	20.60	52.05	74.00	-21.95	peak
7	17850.000	29.91	23.32	53.23	74.00	-20.77	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.

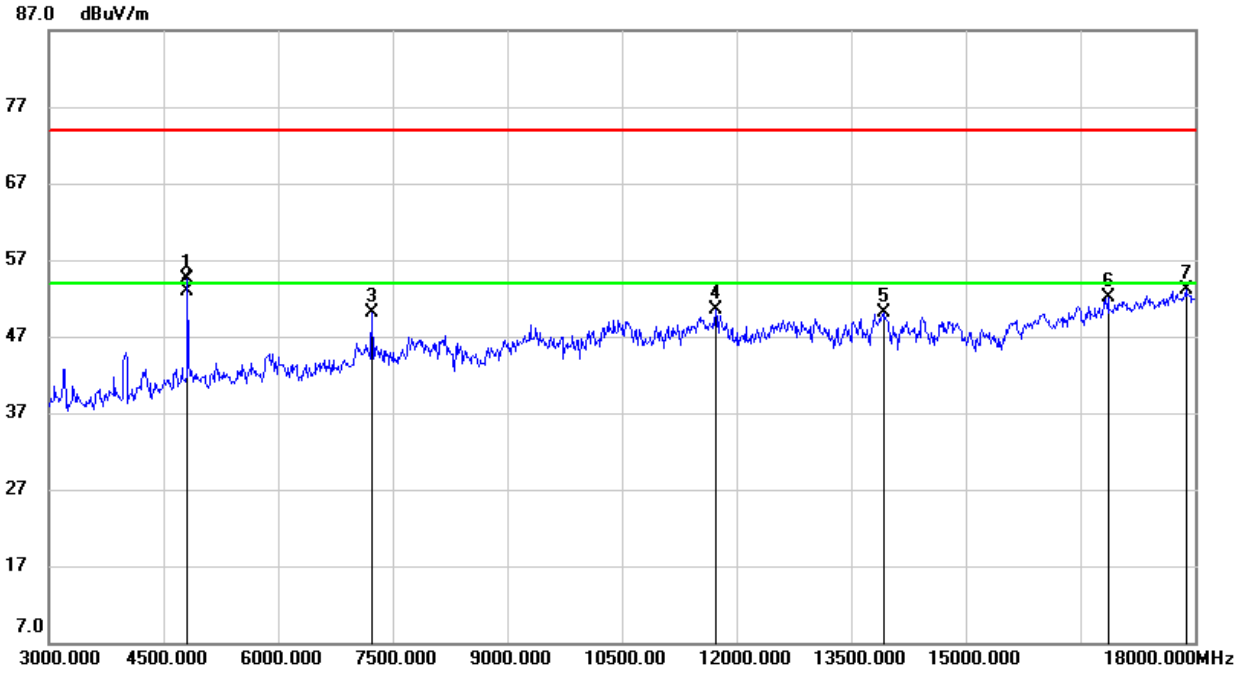
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

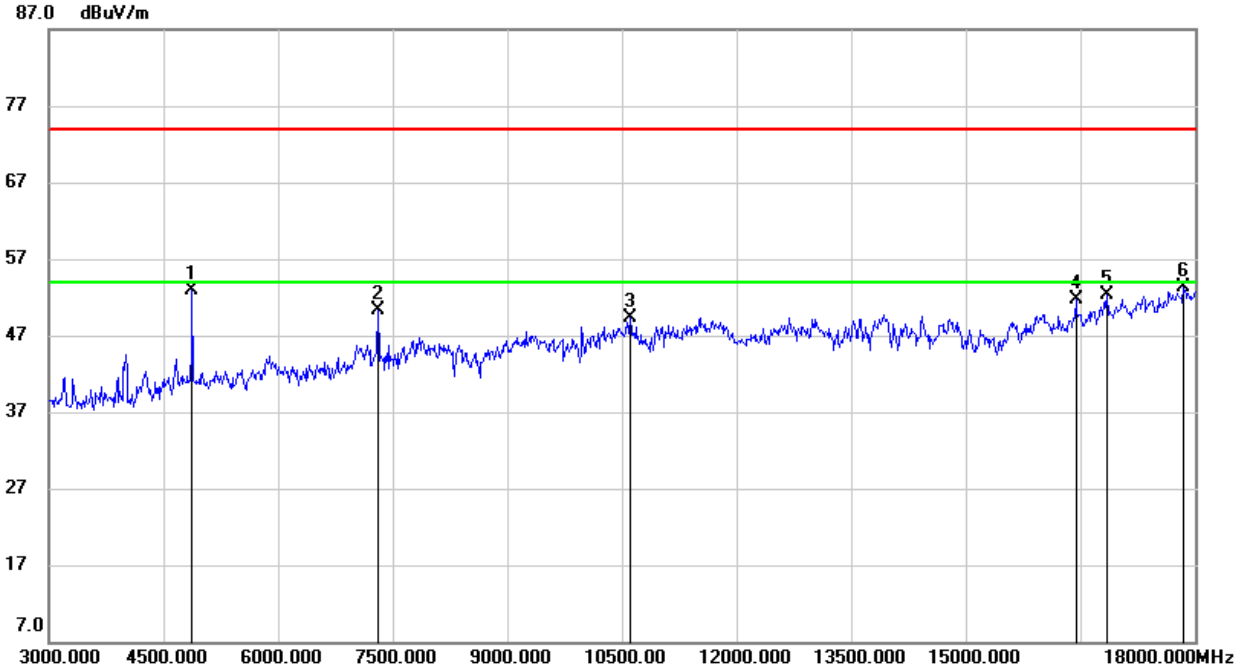
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	53.94	0.51	54.45	74.00	-19.55	peak
2	4815.000	52.39	0.51	52.90	54.00	-1.10	AVG
3	7230.000	44.27	5.89	50.16	74.00	-23.84	peak
4	11730.000	37.44	13.02	50.46	74.00	-23.54	peak
5	13920.000	34.00	16.17	50.17	74.00	-23.83	peak
6	16860.000	32.14	19.95	52.09	74.00	-21.91	peak
7	17880.000	29.78	23.34	53.12	74.00	-20.88	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	52.10	0.76	52.86	74.00	-21.14	peak
2	7305.000	44.23	6.08	50.31	74.00	-23.69	peak
3	10605.000	37.39	11.93	49.32	74.00	-24.68	peak
4	16440.000	32.76	18.94	51.70	74.00	-22.30	peak
5	16845.000	32.28	19.96	52.24	74.00	-21.76	peak
6	17850.000	29.90	23.32	53.22	74.00	-20.78	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.

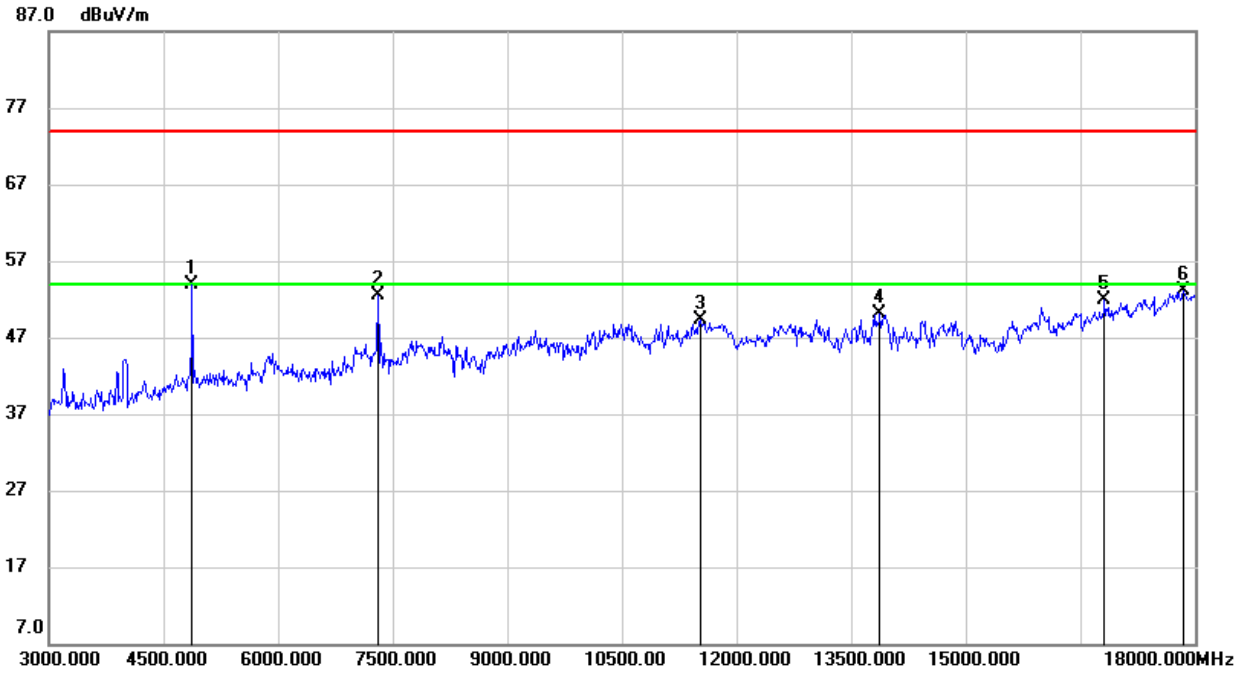
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

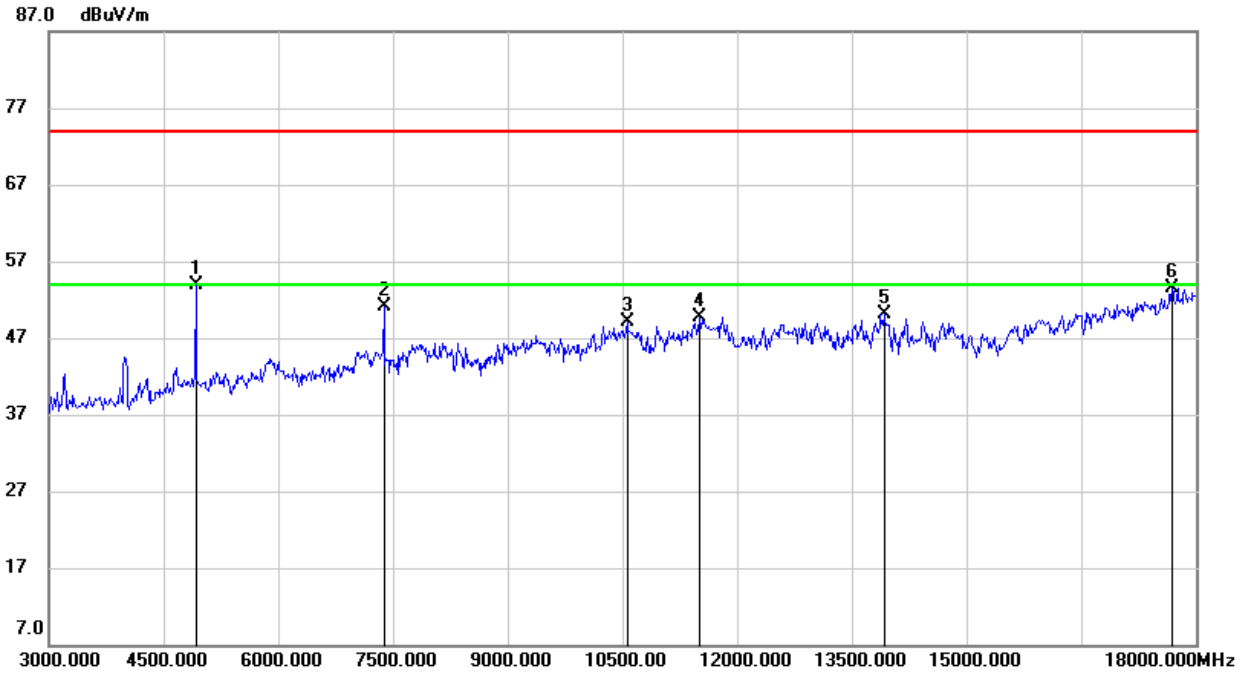
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	53.10	0.76	53.86	74.00	-20.14	peak
2	7305.000	46.46	6.08	52.54	74.00	-21.46	peak
3	11520.000	35.99	13.38	49.37	74.00	-24.63	peak
4	13875.000	33.65	16.44	50.09	74.00	-23.91	peak
5	16815.000	31.86	19.96	51.82	74.00	-22.18	peak
6	17850.000	29.69	23.32	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, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	52.91	0.96	53.87	74.00	-20.13	peak
2	7380.000	44.62	6.41	51.03	74.00	-22.97	peak
3	10560.000	37.34	11.73	49.07	74.00	-24.93	peak
4	11505.000	36.36	13.42	49.78	74.00	-24.22	peak
5	13920.000	33.95	16.17	50.12	74.00	-23.88	peak
6	17685.000	31.18	22.33	53.51	74.00	-20.49	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.

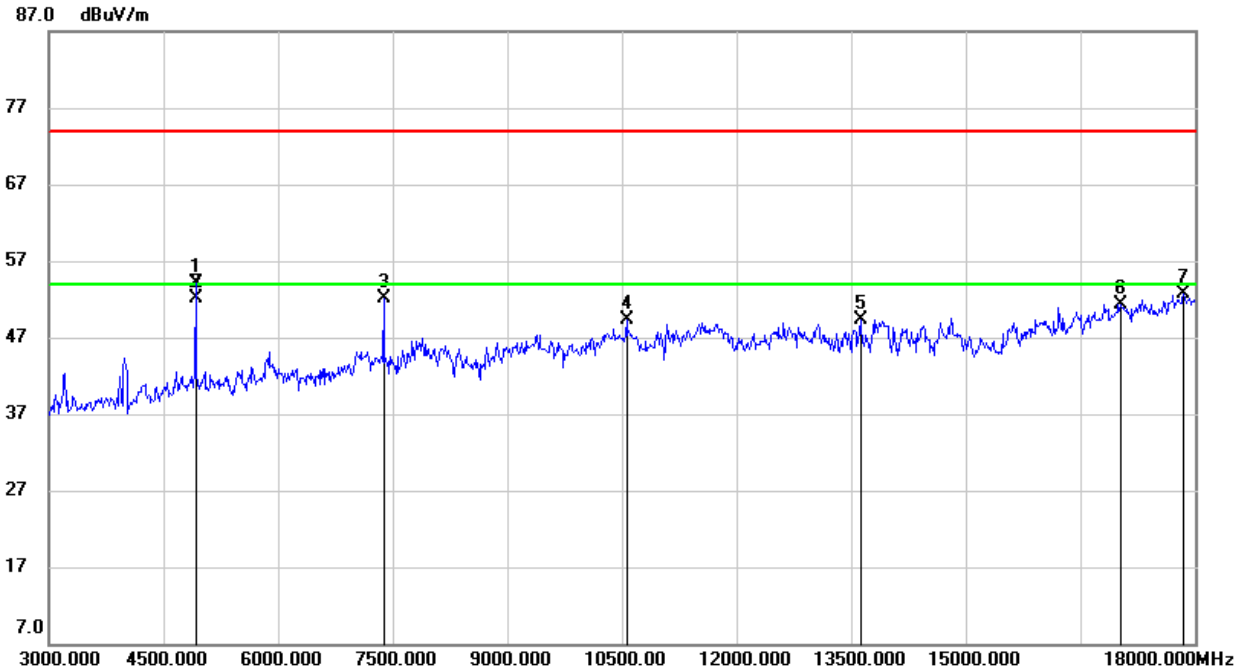
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 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, VERTICAL)



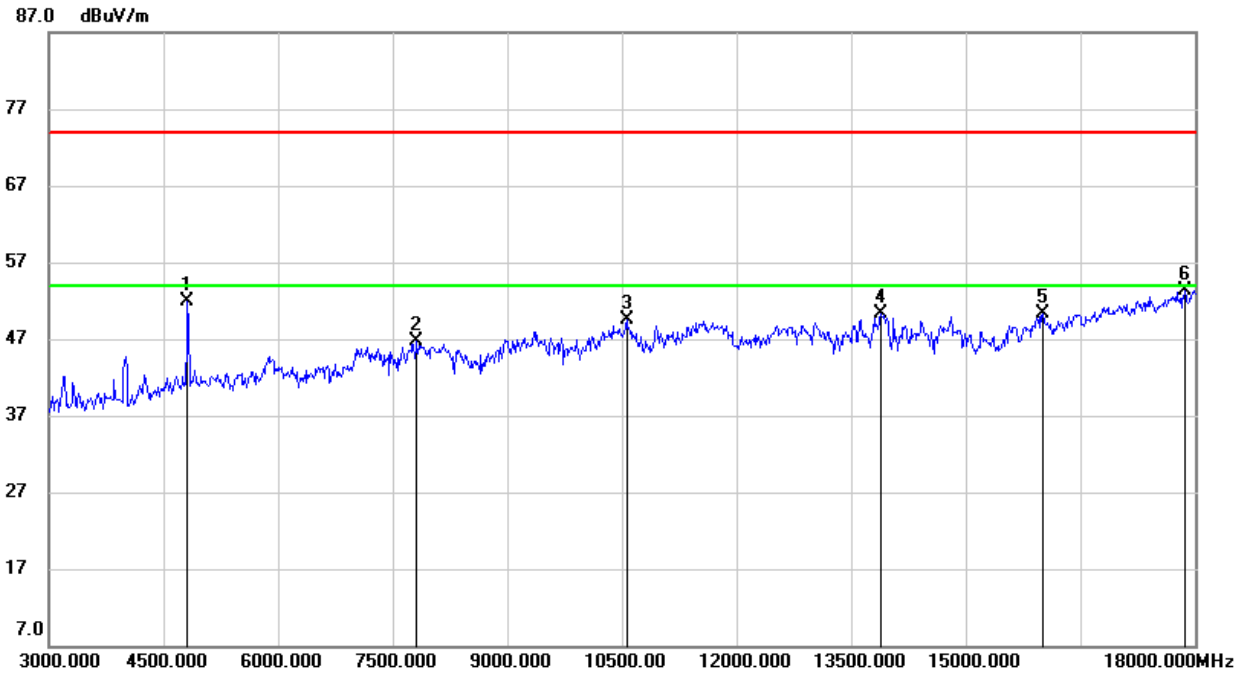
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	53.17	0.96	54.13	74.00	-19.87	peak
2	4920.000	51.05	0.96	52.01	54.00	-1.99	AVG
3	7380.000	45.68	6.41	52.09	74.00	-21.91	peak
4	10560.000	37.65	11.73	49.38	74.00	-24.62	peak
5	13620.000	33.25	15.99	49.24	74.00	-24.76	peak
6	17025.000	30.89	20.46	51.35	74.00	-22.65	peak
7	17850.000	29.32	23.32	52.64	74.00	-21.36	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 antennas have been tested, only the worst data record in the report.

7.9.2. 802.11g SISO MODE

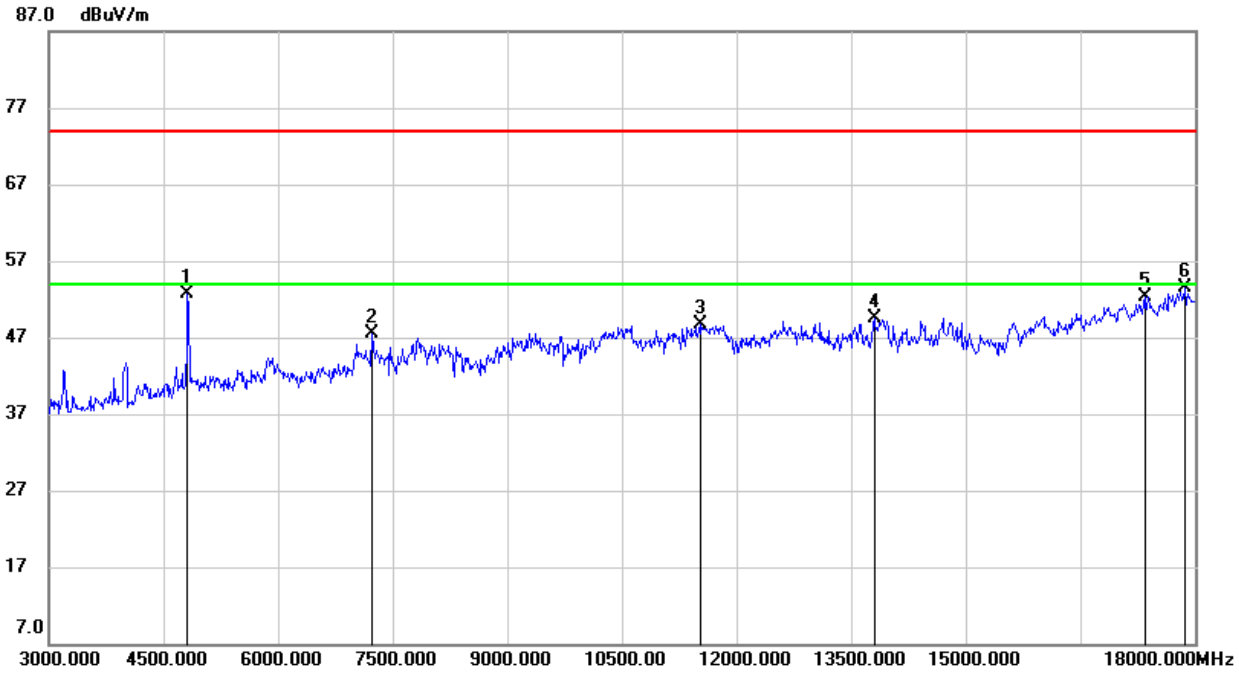
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	51.32	0.51	51.83	74.00	-22.17	peak
2	7815.000	38.80	7.83	46.63	74.00	-27.37	peak
3	10560.000	37.85	11.73	49.58	74.00	-24.42	peak
4	13890.000	33.93	16.31	50.24	74.00	-23.76	peak
5	16005.000	32.56	17.71	50.27	74.00	-23.73	peak
6	17865.000	30.06	23.33	53.39	74.00	-20.61	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.

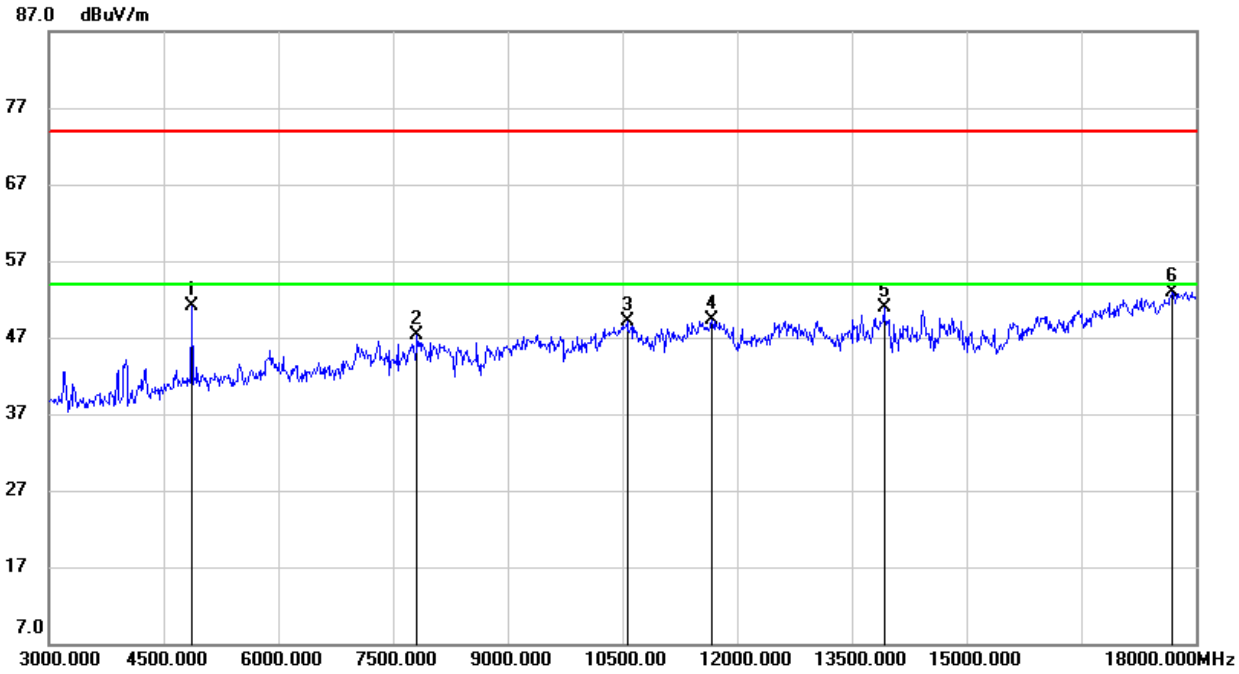
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	52.25	0.51	52.76	74.00	-21.24	peak
2	7230.000	41.62	5.89	47.51	74.00	-26.49	peak
3	11520.000	35.25	13.38	48.63	74.00	-25.37	peak
4	13800.000	32.33	17.10	49.43	74.00	-24.57	peak
5	17340.000	30.64	21.61	52.25	74.00	-21.75	peak
6	17865.000	30.09	23.33	53.42	74.00	-20.58	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.

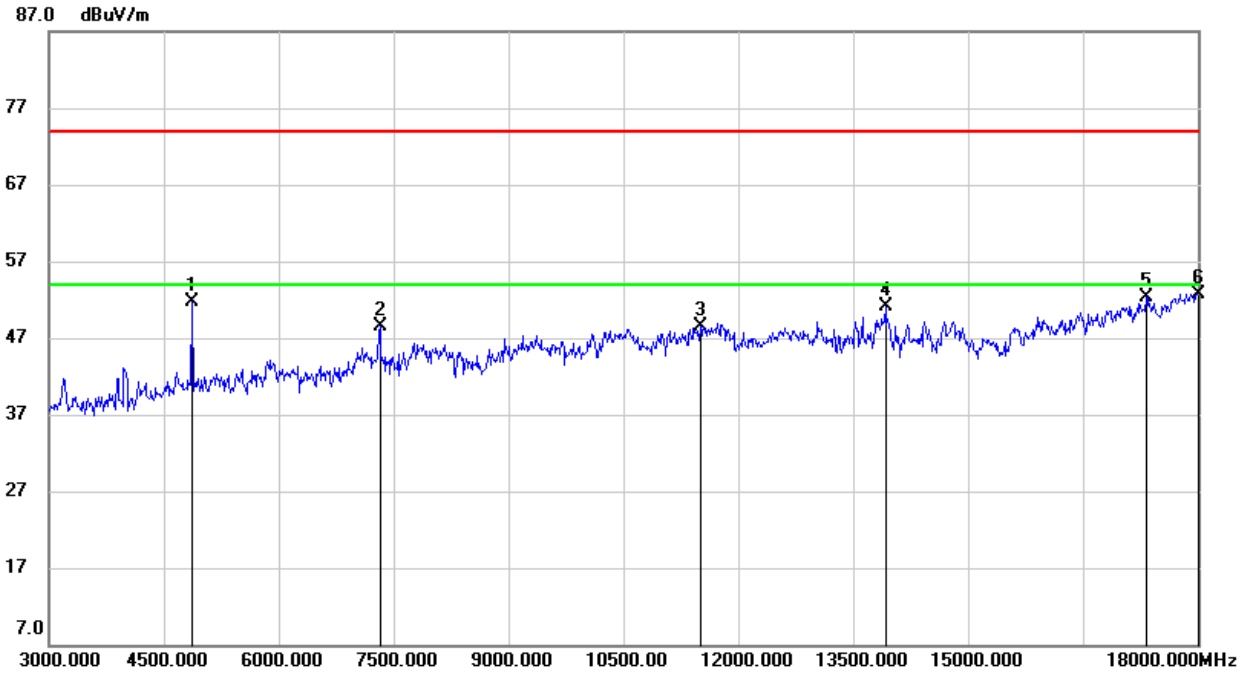
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	50.42	0.76	51.18	74.00	-22.82	peak
2	7815.000	39.47	7.83	47.30	74.00	-26.70	peak
3	10560.000	37.47	11.73	49.20	74.00	-24.80	peak
4	11670.000	36.33	13.01	49.34	74.00	-24.66	peak
5	13920.000	34.70	16.17	50.87	74.00	-23.13	peak
6	17685.000	30.50	22.33	52.83	74.00	-21.17	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.

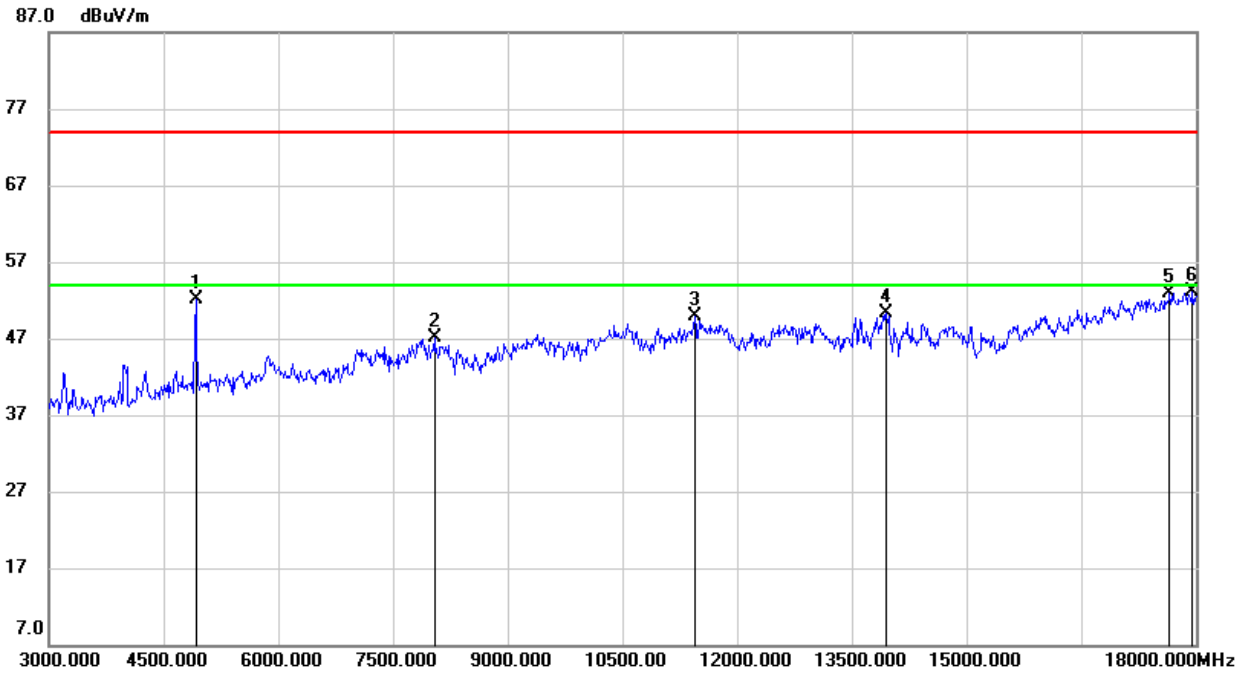
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	50.96	0.76	51.72	74.00	-22.28	peak
2	7320.000	42.30	6.14	48.44	74.00	-25.56	peak
3	11505.000	35.17	13.42	48.59	74.00	-25.41	peak
4	13920.000	34.96	16.17	51.13	74.00	-22.87	peak
5	17325.000	30.59	21.67	52.26	74.00	-21.74	peak
6	18000.000	29.31	23.46	52.77	74.00	-21.23	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.

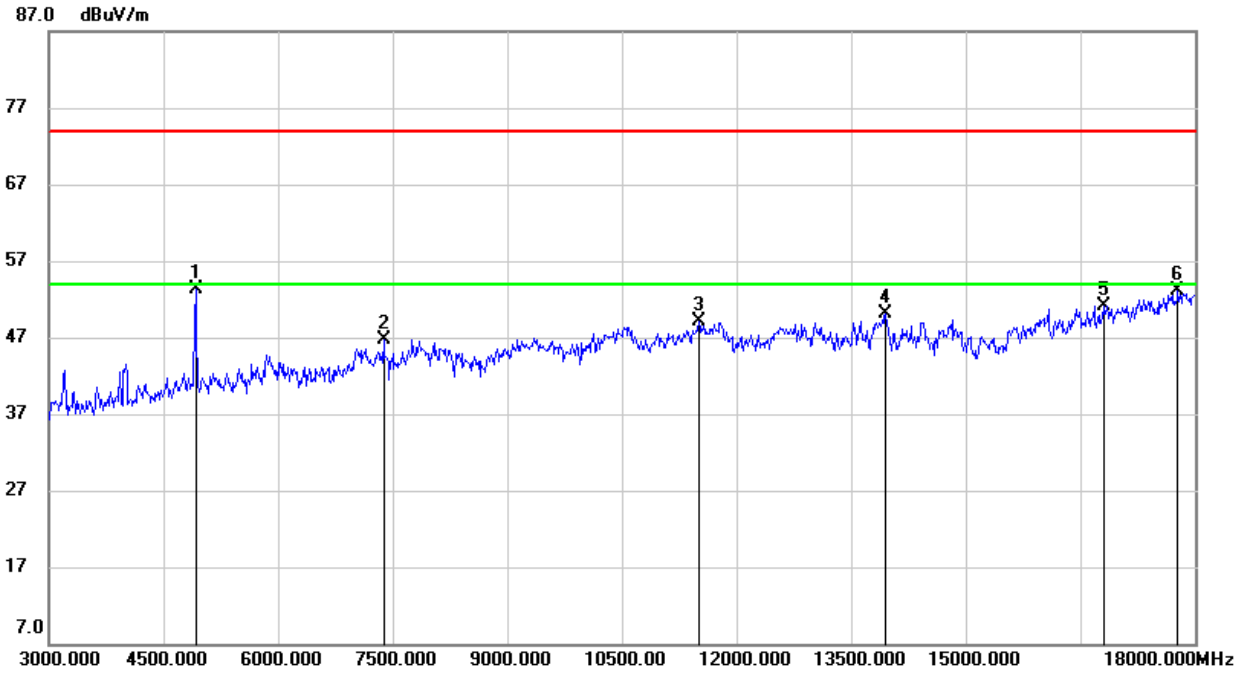
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	51.16	0.96	52.12	74.00	-21.88	peak
2	8040.000	39.93	7.24	47.17	74.00	-26.83	peak
3	11445.000	36.84	12.99	49.83	74.00	-24.17	peak
4	13950.000	34.13	16.11	50.24	74.00	-23.76	peak
5	17655.000	30.79	22.15	52.94	74.00	-21.06	peak
6	17955.000	29.67	23.41	53.08	74.00	-20.92	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)



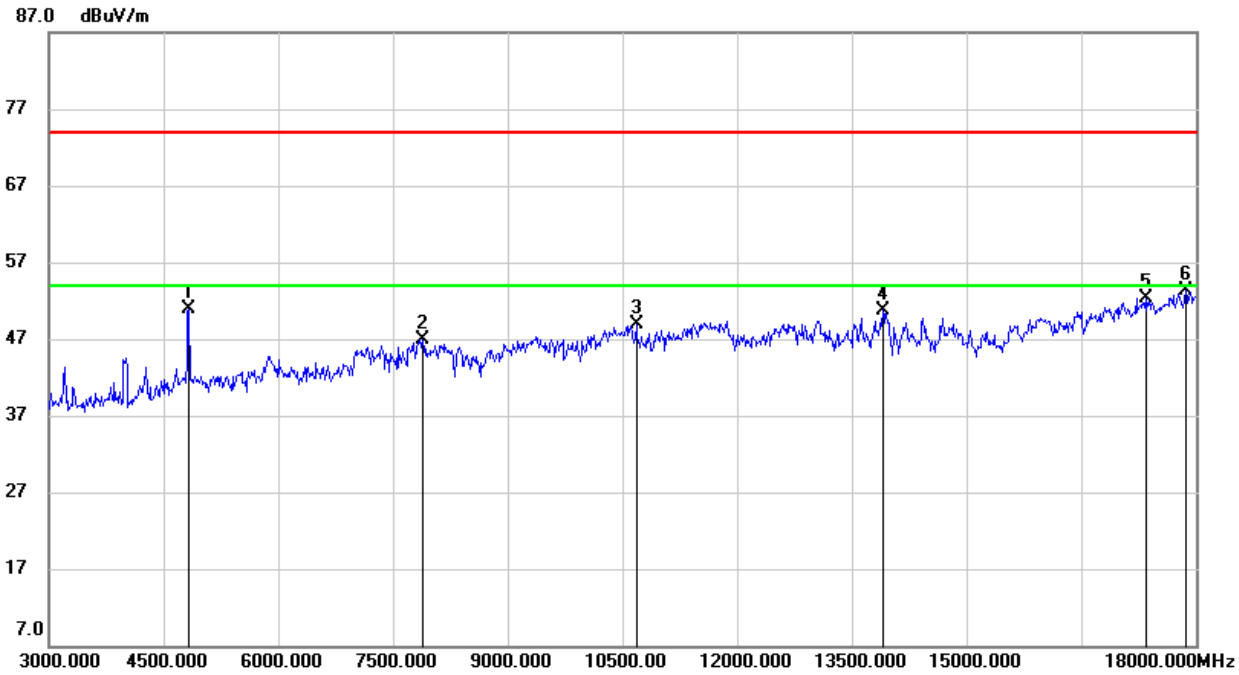
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	52.33	0.96	53.29	74.00	-20.71	peak
2	7380.000	40.32	6.41	46.73	74.00	-27.27	peak
3	11505.000	35.75	13.42	49.17	74.00	-24.83	peak
4	13950.000	33.96	16.11	50.07	74.00	-23.93	peak
5	16800.000	31.17	19.95	51.12	74.00	-22.88	peak
6	17775.000	30.03	23.09	53.12	74.00	-20.88	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 antennas have been tested, only the worst data record in the report.

7.9.3. 802.11n HT20 MIMO 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	4830.000	50.27	0.59	50.86	74.00	-23.14	peak
2	7890.000	39.60	7.30	46.90	74.00	-27.10	peak
3	10680.000	37.10	11.71	48.81	74.00	-25.19	peak
4	13905.000	34.53	16.20	50.73	74.00	-23.27	peak
5	17340.000	30.62	21.61	52.23	74.00	-21.77	peak
6	17865.000	29.92	23.33	53.25	74.00	-20.75	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.

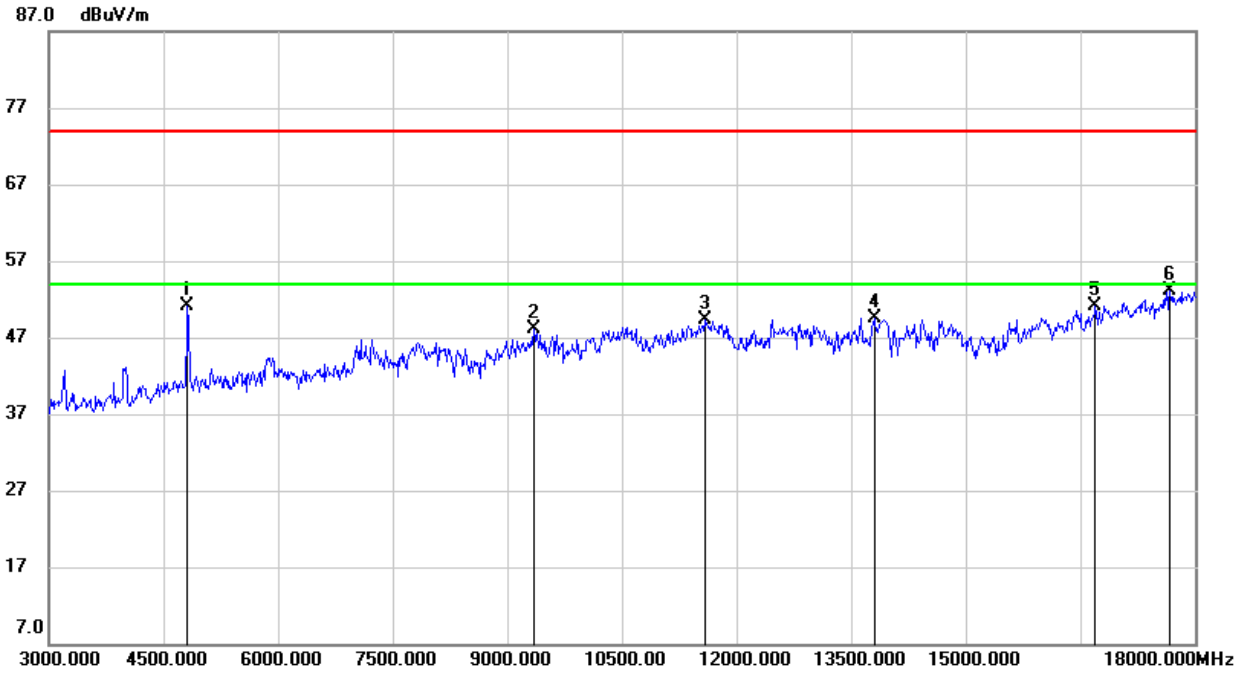
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

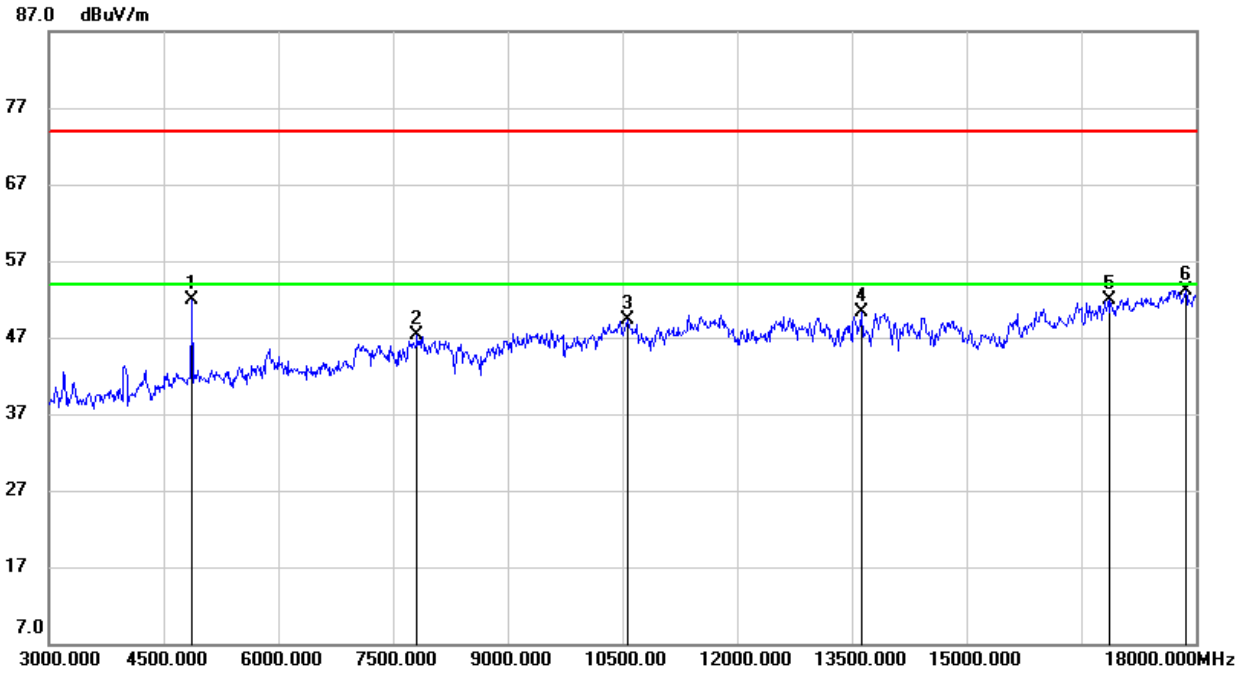
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	50.53	0.51	51.04	74.00	-22.96	peak
2	9345.000	38.86	9.26	48.12	74.00	-25.88	peak
3	11580.000	36.16	13.23	49.39	74.00	-24.61	peak
4	13800.000	32.49	17.10	49.59	74.00	-24.41	peak
5	16695.000	31.16	19.92	51.08	74.00	-22.92	peak
6	17670.000	30.79	22.24	53.03	74.00	-20.97	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	51.24	0.76	52.00	74.00	-22.00	peak
2	7815.000	39.42	7.83	47.25	74.00	-26.75	peak
3	10560.000	37.51	11.73	49.24	74.00	-24.76	peak
4	13635.000	34.26	15.97	50.23	74.00	-23.77	peak
5	16860.000	31.86	19.95	51.81	74.00	-22.19	peak
6	17865.000	29.81	23.33	53.14	74.00	-20.86	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.

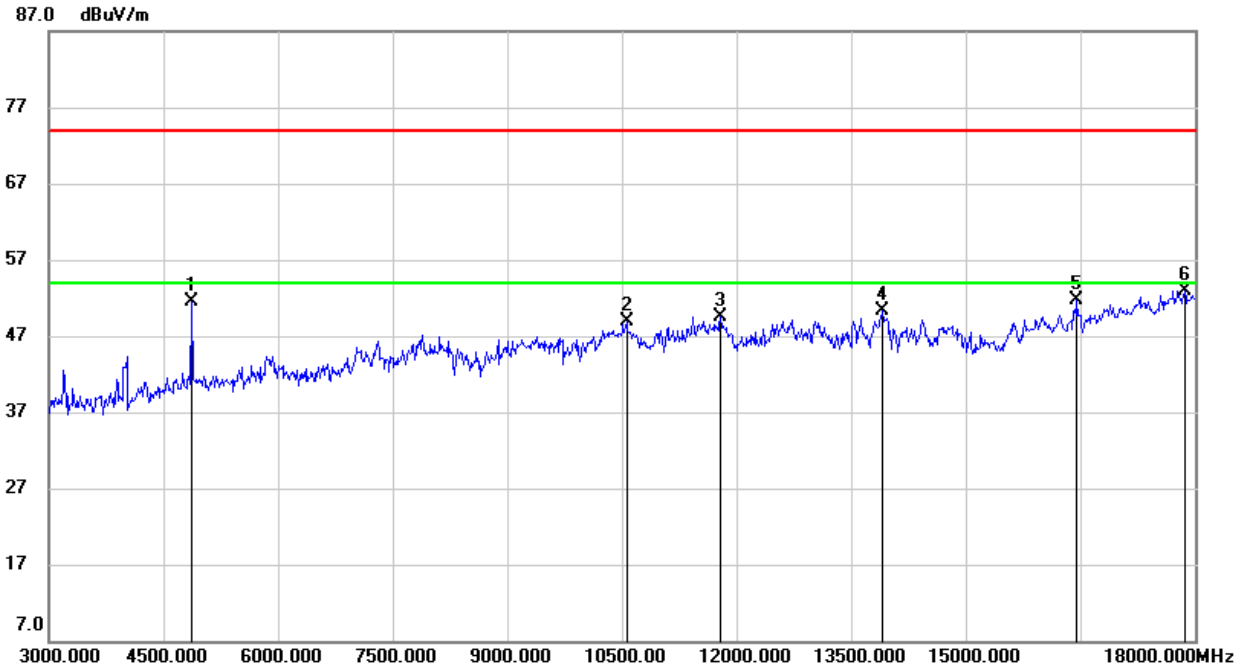
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

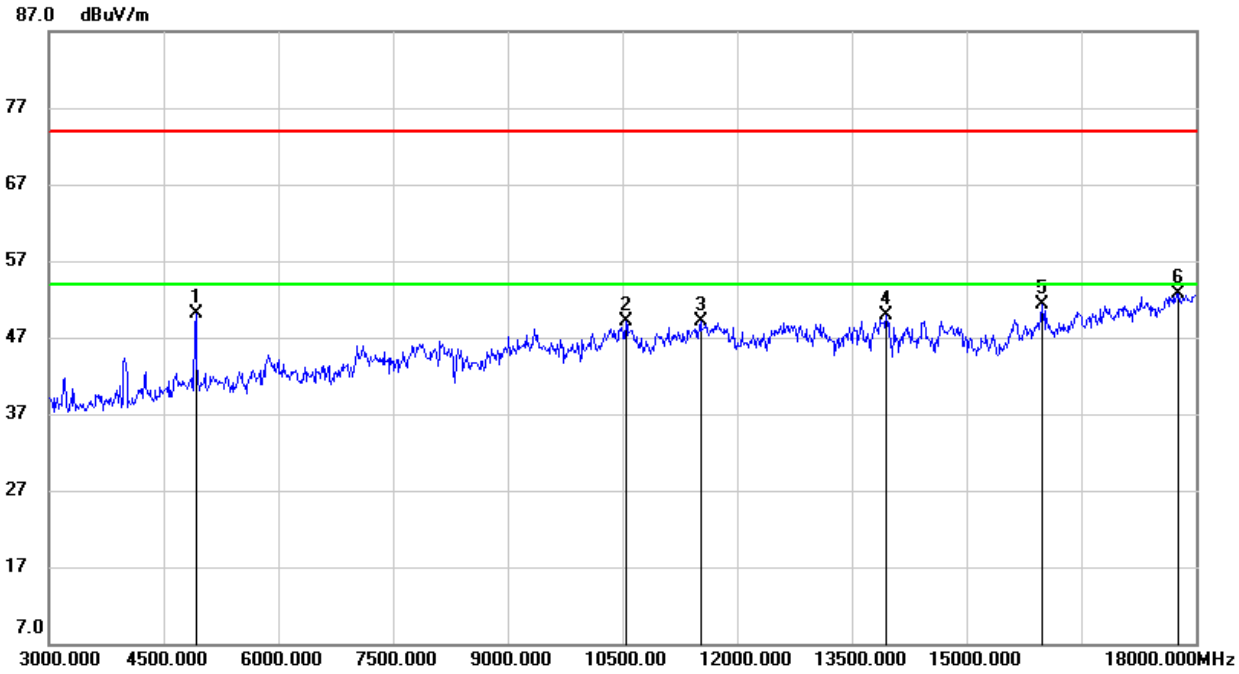
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	50.79	0.76	51.55	74.00	-22.45	peak
2	10560.000	37.19	11.73	48.92	74.00	-25.08	peak
3	11790.000	36.38	13.17	49.55	74.00	-24.45	peak
4	13905.000	34.08	16.20	50.28	74.00	-23.72	peak
5	16455.000	32.76	19.00	51.76	74.00	-22.24	peak
6	17865.000	29.62	23.33	52.95	74.00	-21.05	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	4920.000	49.06	0.96	50.02	74.00	-23.98	peak
2	10545.000	37.51	11.64	49.15	74.00	-24.85	peak
3	11520.000	35.68	13.38	49.06	74.00	-24.94	peak
4	13950.000	33.71	16.11	49.82	74.00	-24.18	peak
5	15990.000	33.58	17.68	51.26	74.00	-22.74	peak
6	17775.000	29.63	23.09	52.72	74.00	-21.28	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.

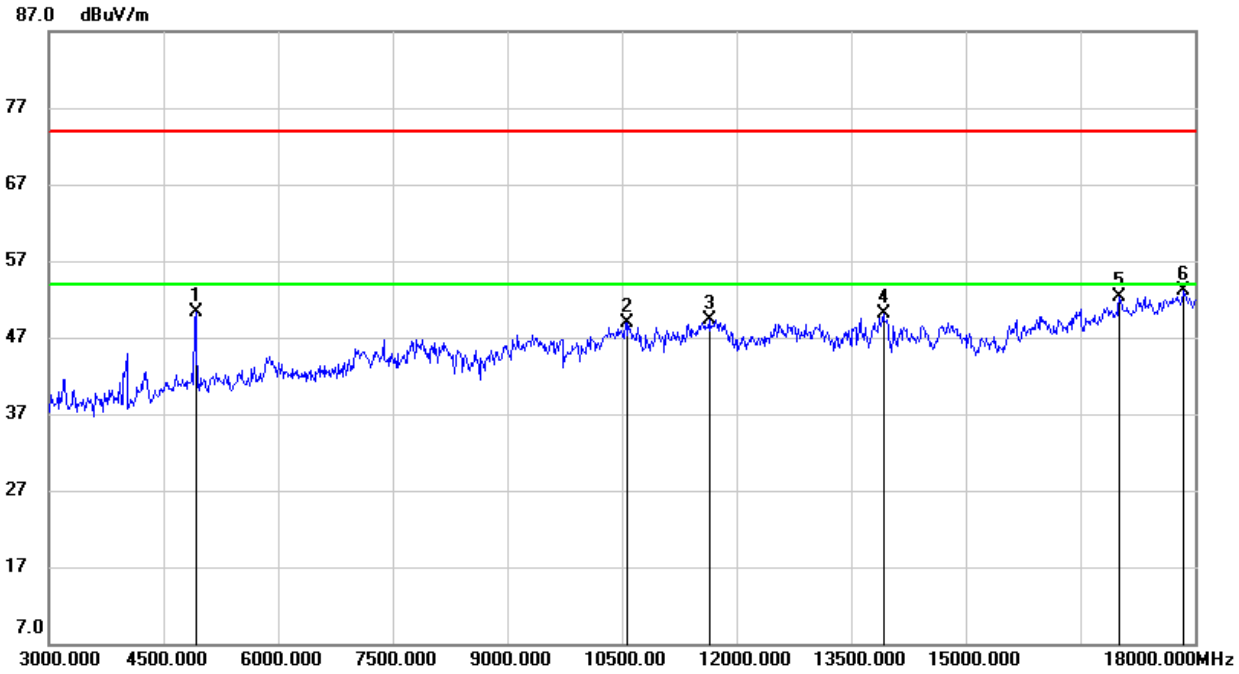
4. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit 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 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, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	49.36	0.96	50.32	74.00	-23.68	peak
2	10560.000	37.27	11.73	49.00	74.00	-25.00	peak
3	11640.000	36.18	13.09	49.27	74.00	-24.73	peak
4	13920.000	33.92	16.17	50.09	74.00	-23.91	peak
5	17010.000	31.85	20.43	52.28	74.00	-21.72	peak
6	17850.000	29.79	23.32	53.11	74.00	-20.89	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. AVG: VBW=1/Ton where: ton is transmit duration.

5. For transmit duration, please refer to clause 7.1.

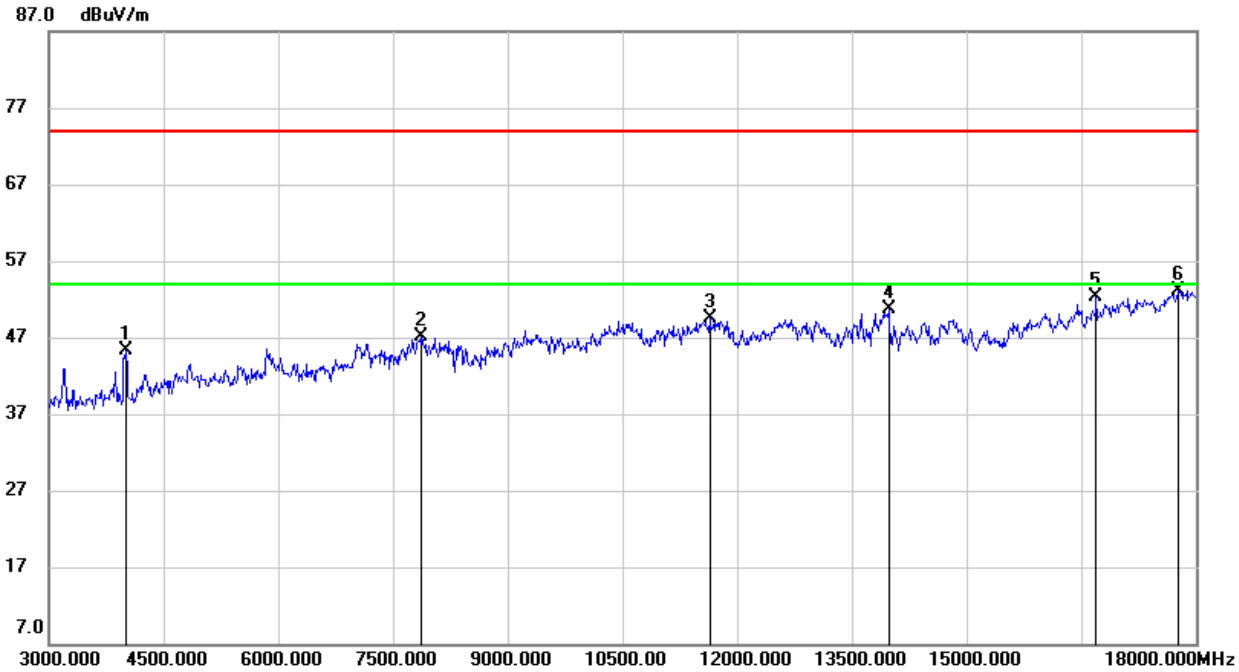
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected High Pass Filter losses.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

Note: All antennas have been tested, only the worst data record in the report.

7.9.4. 802.11n HT40 MIMO MODE

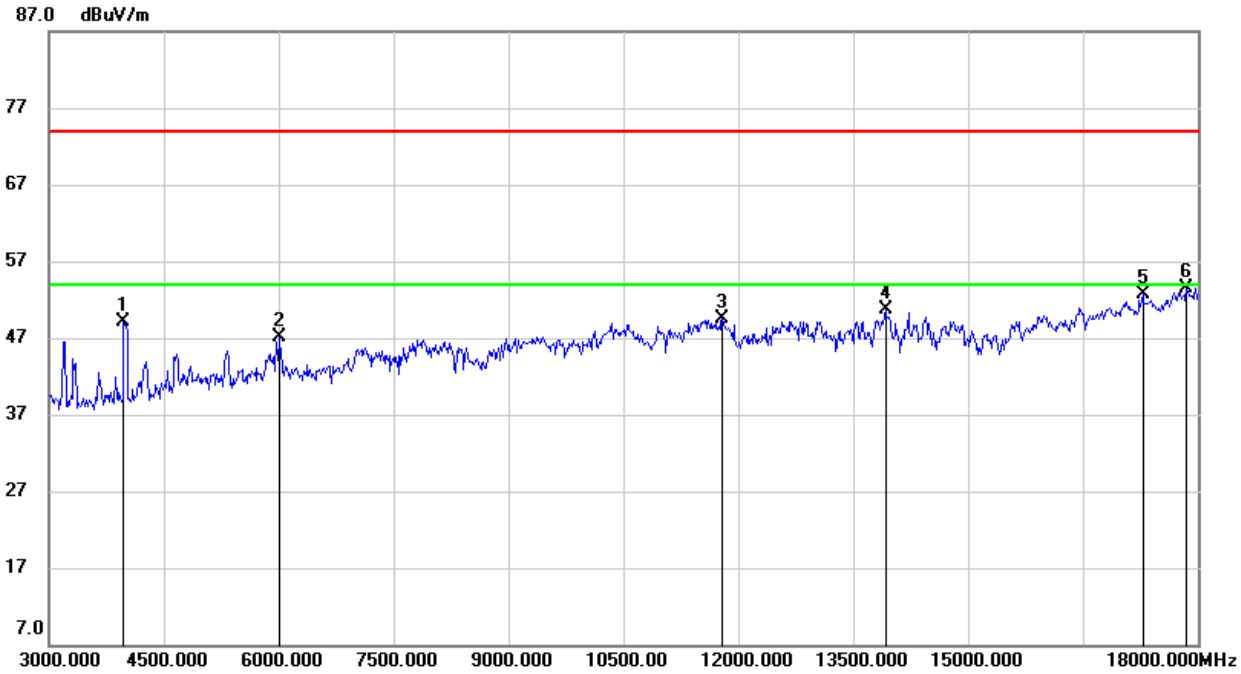
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4005.000	48.11	-2.89	45.22	74.00	-28.78	peak
2	7875.000	39.65	7.40	47.05	74.00	-26.95	peak
3	11640.000	36.41	13.09	49.50	74.00	-24.50	peak
4	13980.000	34.59	16.07	50.66	74.00	-23.34	peak
5	16695.000	32.33	19.92	52.25	74.00	-21.75	peak
6	17775.000	30.00	23.09	53.09	74.00	-20.91	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.

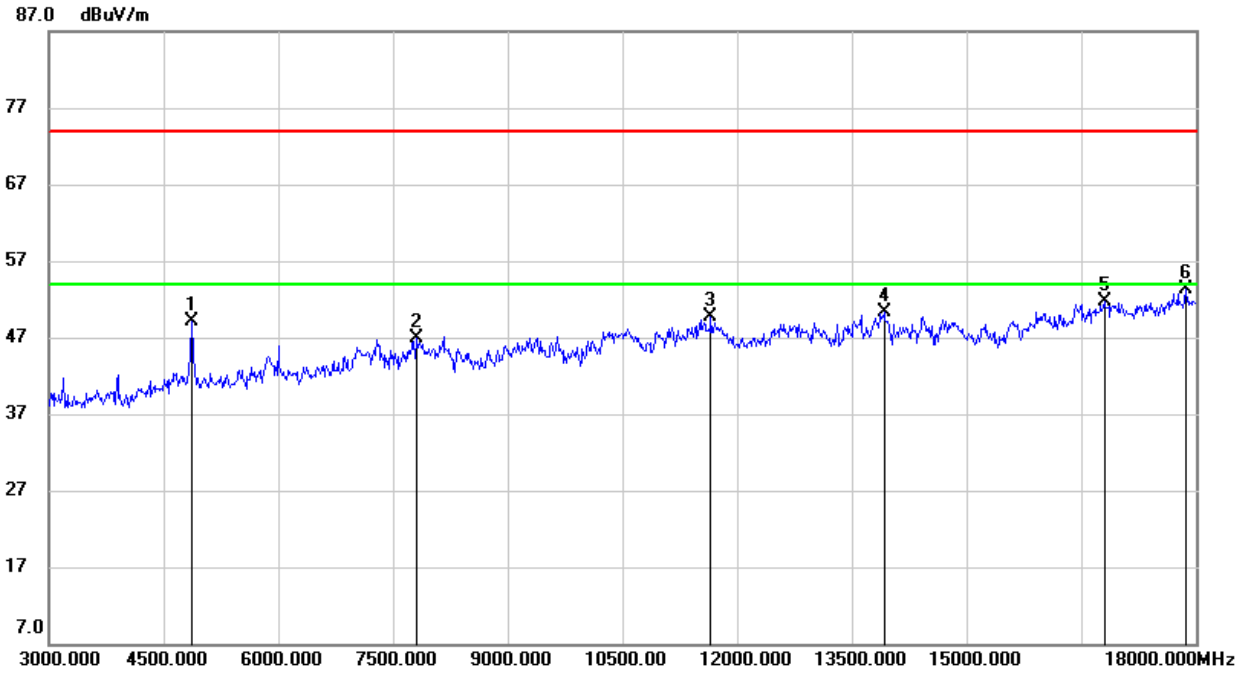
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	51.92	-2.90	49.02	74.00	-24.98	peak
2	6000.000	43.82	3.29	47.11	74.00	-26.89	peak
3	11790.000	36.31	13.17	49.48	74.00	-24.52	peak
4	13920.000	34.45	16.17	50.62	74.00	-23.38	peak
5	17280.000	31.08	21.59	52.67	74.00	-21.33	peak
6	17850.000	30.25	23.32	53.57	74.00	-20.43	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.

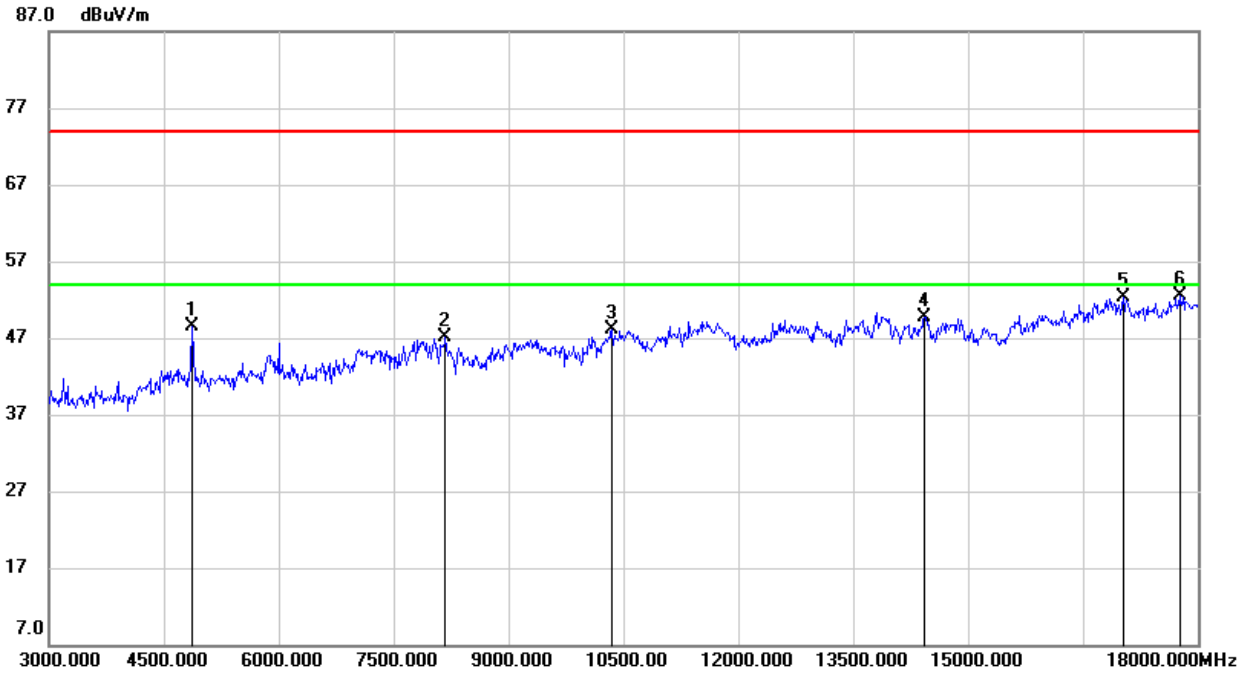
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.36	0.76	49.12	74.00	-24.88	peak
2	7800.000	38.96	7.93	46.89	74.00	-27.11	peak
3	11655.000	36.62	13.06	49.68	74.00	-24.32	peak
4	13920.000	34.22	16.17	50.39	74.00	-23.61	peak
5	16800.000	31.80	19.95	51.75	74.00	-22.25	peak
6	17865.000	30.05	23.33	53.38	74.00	-20.62	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.

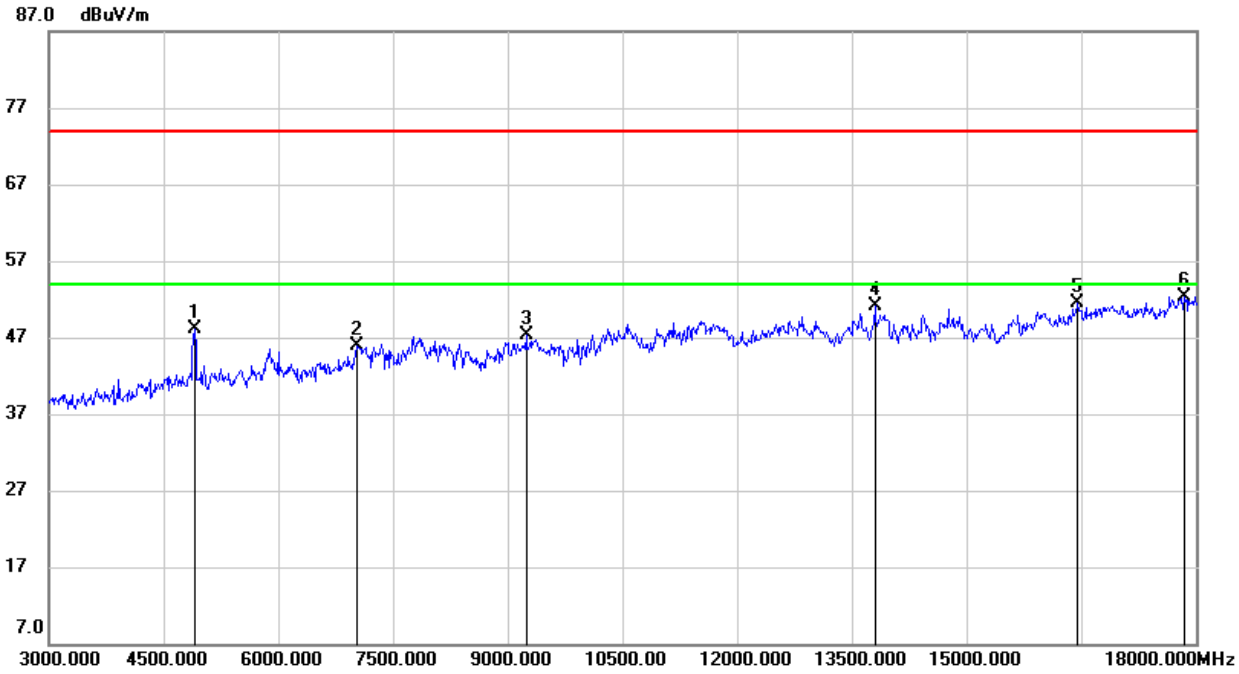
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	47.68	0.76	48.44	74.00	-25.56	peak
2	8175.000	38.80	8.27	47.07	74.00	-26.93	peak
3	10350.000	36.99	11.02	48.01	74.00	-25.99	peak
4	14430.000	33.43	16.35	49.78	74.00	-24.22	peak
5	17025.000	31.75	20.46	52.21	74.00	-21.79	peak
6	17760.000	29.49	22.95	52.44	74.00	-21.56	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.

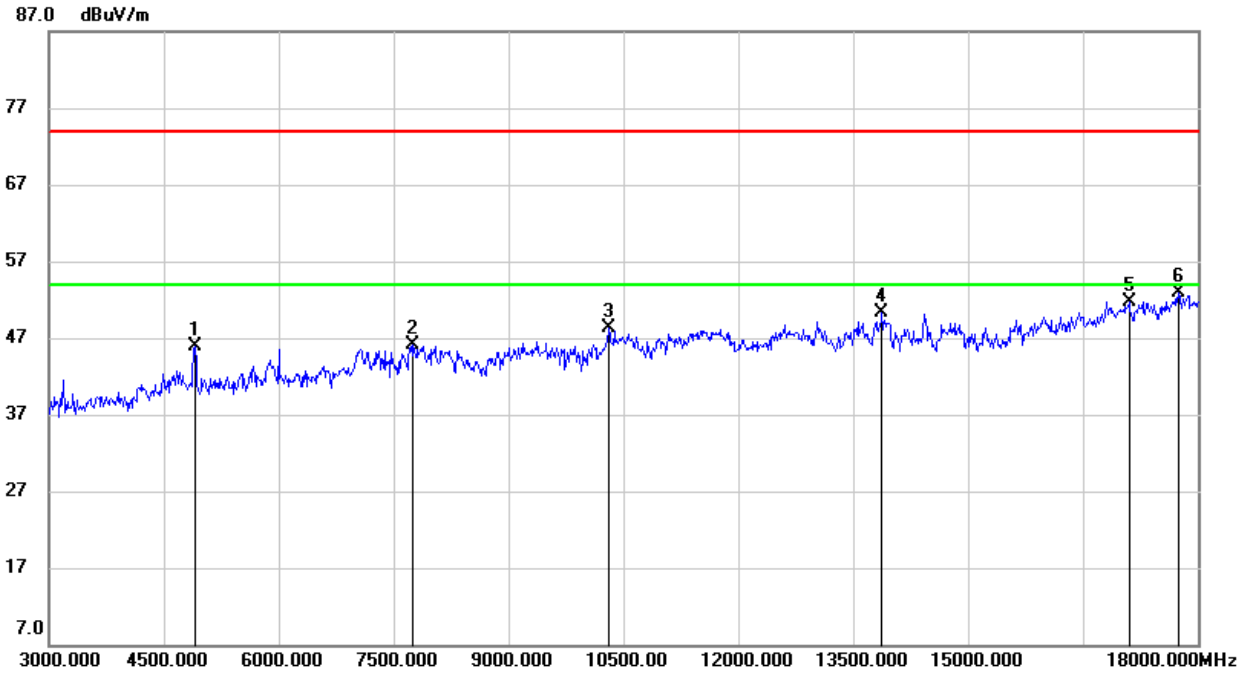
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	47.23	0.88	48.11	74.00	-25.89	peak
2	7035.000	40.11	5.81	45.92	74.00	-28.08	peak
3	9240.000	38.57	8.79	47.36	74.00	-26.64	peak
4	13800.000	34.00	17.10	51.10	74.00	-22.90	peak
5	16455.000	32.47	19.00	51.47	74.00	-22.53	peak
6	17850.000	29.05	23.32	52.37	74.00	-21.63	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.

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	44.99	0.88	45.87	74.00	-28.13	peak
2	7755.000	38.80	7.29	46.09	74.00	-27.91	peak
3	10305.000	37.20	11.07	48.27	74.00	-25.73	peak
4	13875.000	33.87	16.44	50.31	74.00	-23.69	peak
5	17100.000	31.08	20.64	51.72	74.00	-22.28	peak
6	17745.000	30.15	22.82	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.

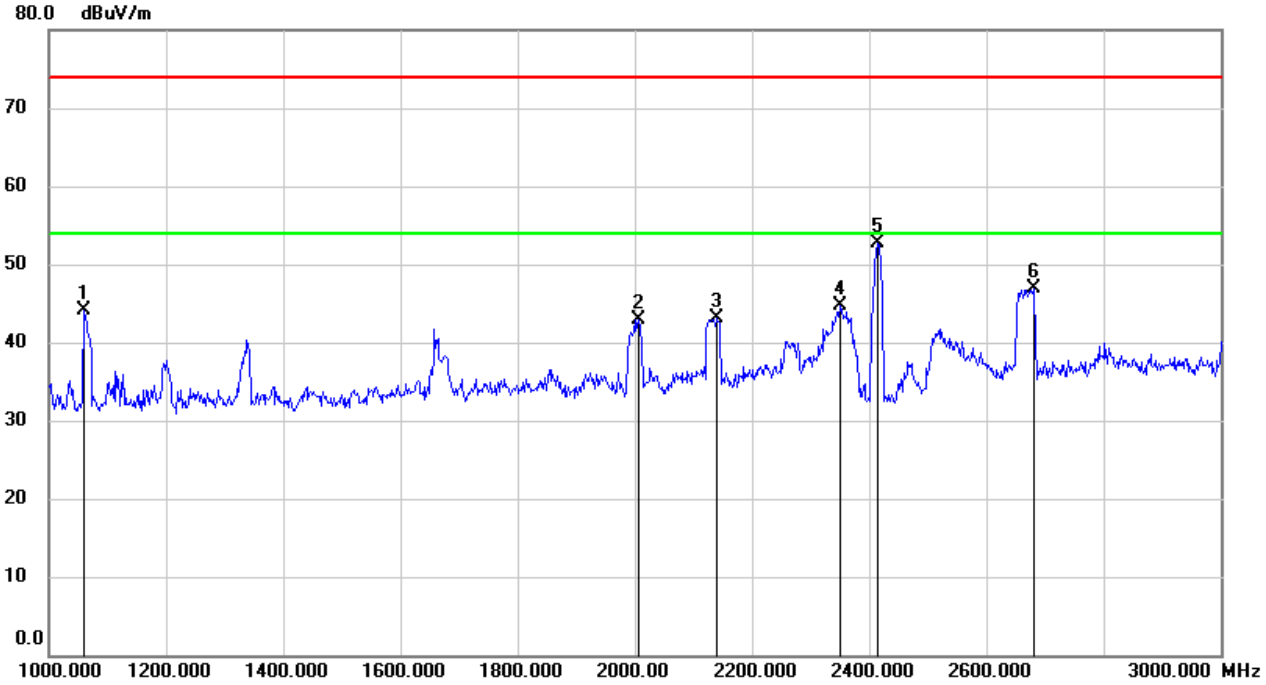
Note: All antennas have been tested, only the worst data record in the report.

7.11. WORST-CASE CO-LOCATION

7.11.1. BT 8DPSK MODE AND 802.11n HT20 MODE (TRANSMIT SIMULTANEOUSLY)

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

1-3GHz

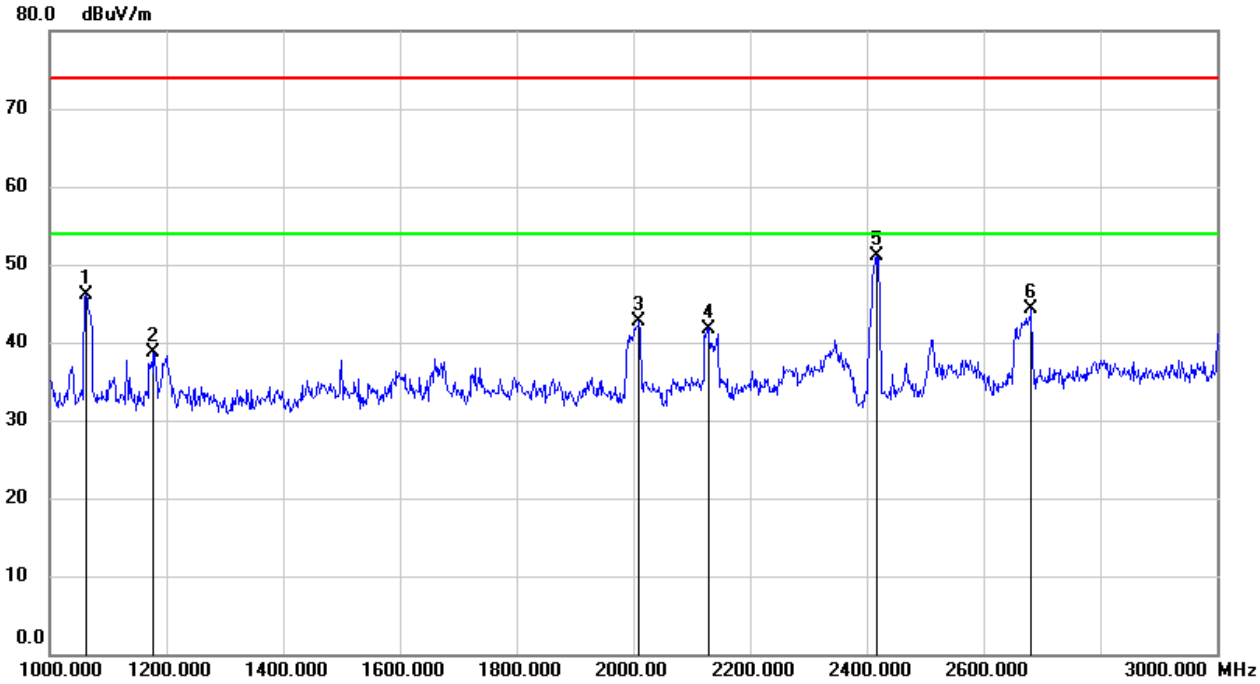


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	57.66	-13.54	44.12	74.00	-29.88	peak
2	2006.000	52.76	-9.78	42.98	74.00	-31.02	peak
3	2140.000	52.14	-8.97	43.17	74.00	-30.83	peak
4	2350.000	52.77	-8.02	44.75	74.00	-29.25	peak
5	2412.000	60.43	-7.76	52.67	/	/	fundamental
6	2680.000	54.14	-7.24	46.90	74.00	-27.10	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 Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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

1-3GHz

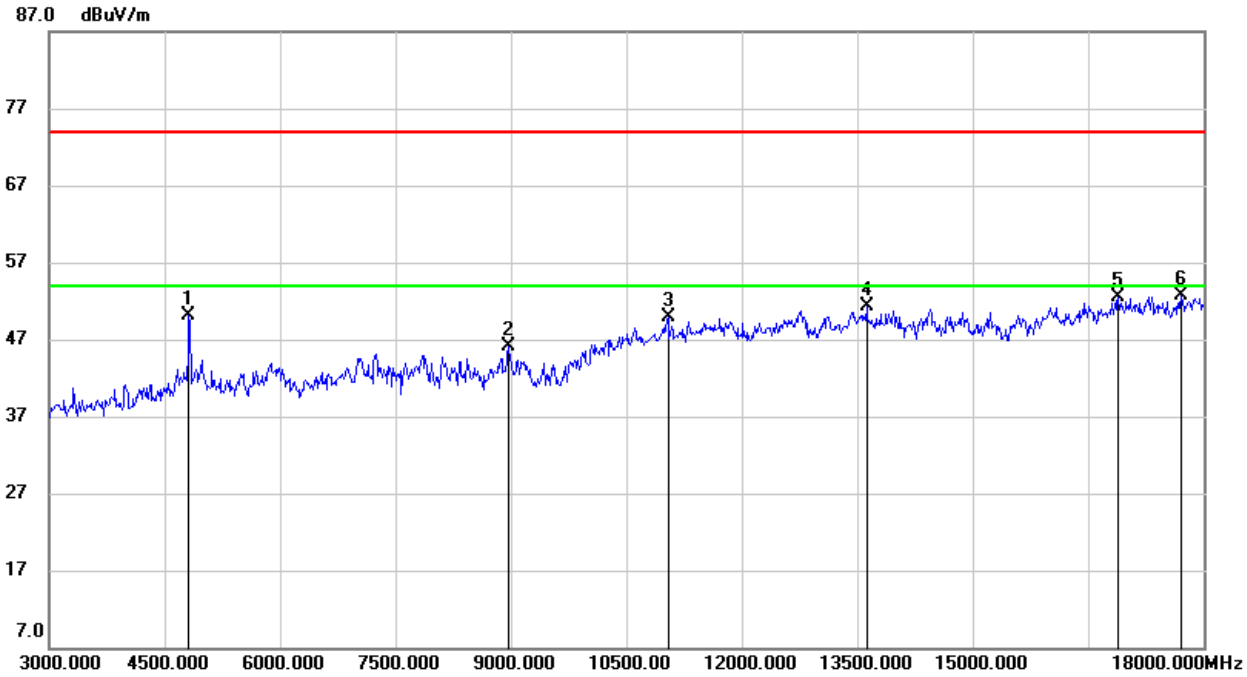


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1062.000	59.66	-13.55	46.11	74.00	-27.89	peak
2	1178.000	51.59	-12.86	38.73	74.00	-35.27	peak
3	2010.000	52.40	-9.75	42.65	74.00	-31.35	peak
4	2128.000	50.82	-9.02	41.80	74.00	-32.20	peak
5	2412.000	58.77	-7.75	51.02	/	/	fundamental
6	2682.000	51.58	-7.23	44.35	74.00	-29.65	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 Band reject filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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

3-18GHz

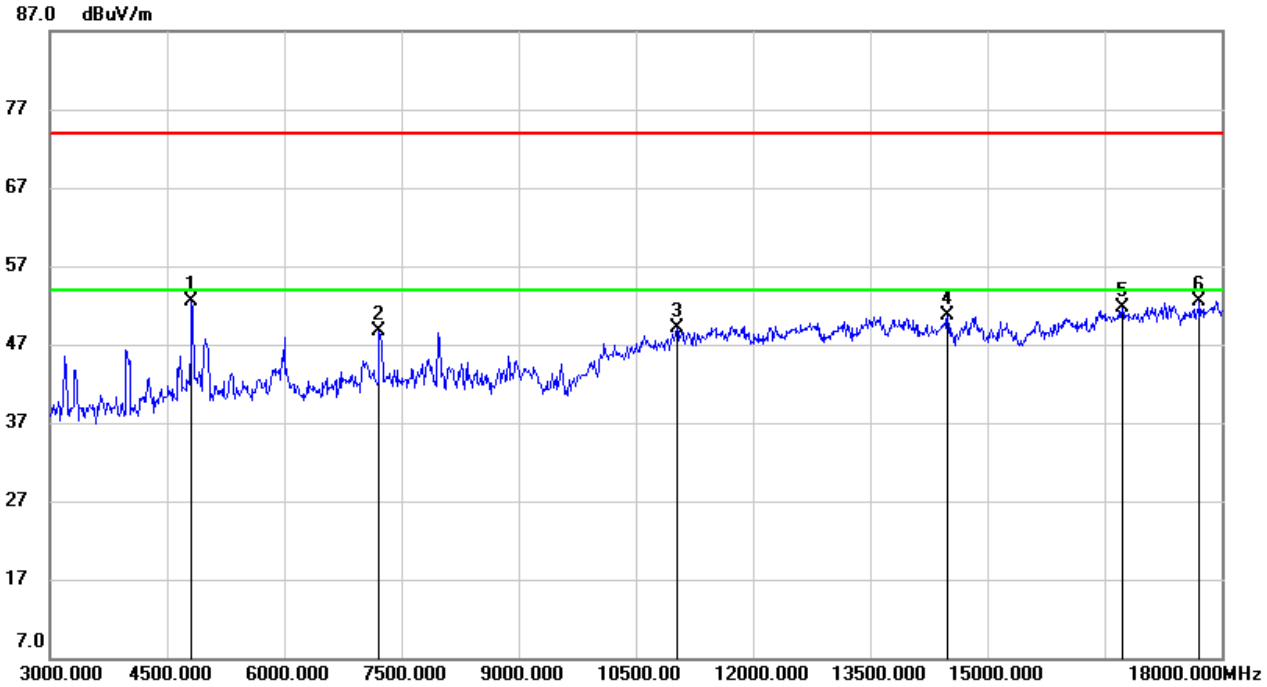


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.65	0.51	50.16	74.00	-23.84	peak
2	8970.000	37.01	9.00	46.01	74.00	-27.99	peak
3	11040.000	37.31	12.61	49.92	74.00	-24.08	peak
4	13620.000	35.24	15.99	51.23	74.00	-22.77	peak
5	16890.000	32.44	19.97	52.41	74.00	-21.59	peak
6	17700.000	30.30	22.43	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 HPF losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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

3-18GHz

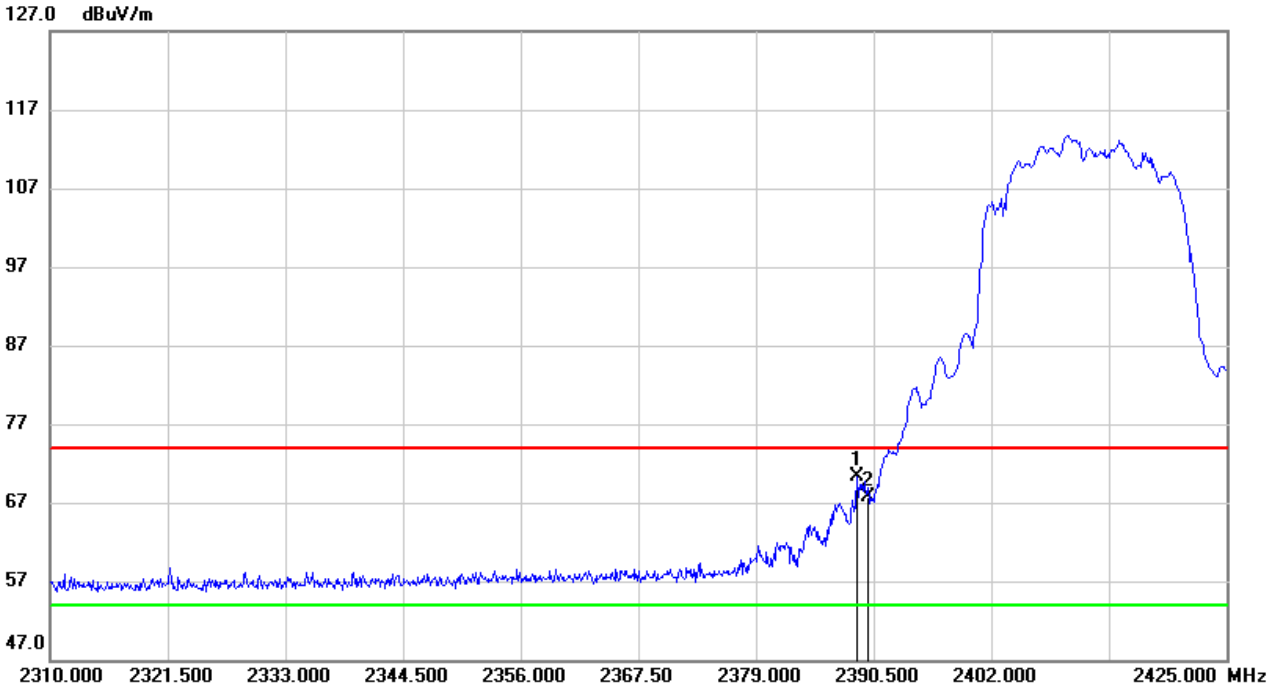


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	52.05	0.51	52.56	74.00	-21.44	peak
2	7215.000	42.77	5.85	48.62	74.00	-25.38	peak
3	11025.000	36.54	12.61	49.15	74.00	-24.85	peak
4	14490.000	34.39	16.37	50.76	74.00	-23.24	peak
5	16725.000	31.83	19.93	51.76	74.00	-22.24	peak
6	17715.000	29.96	22.56	52.52	74.00	-21.48	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 HPF losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

RESTRICTED BANDEDGE (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

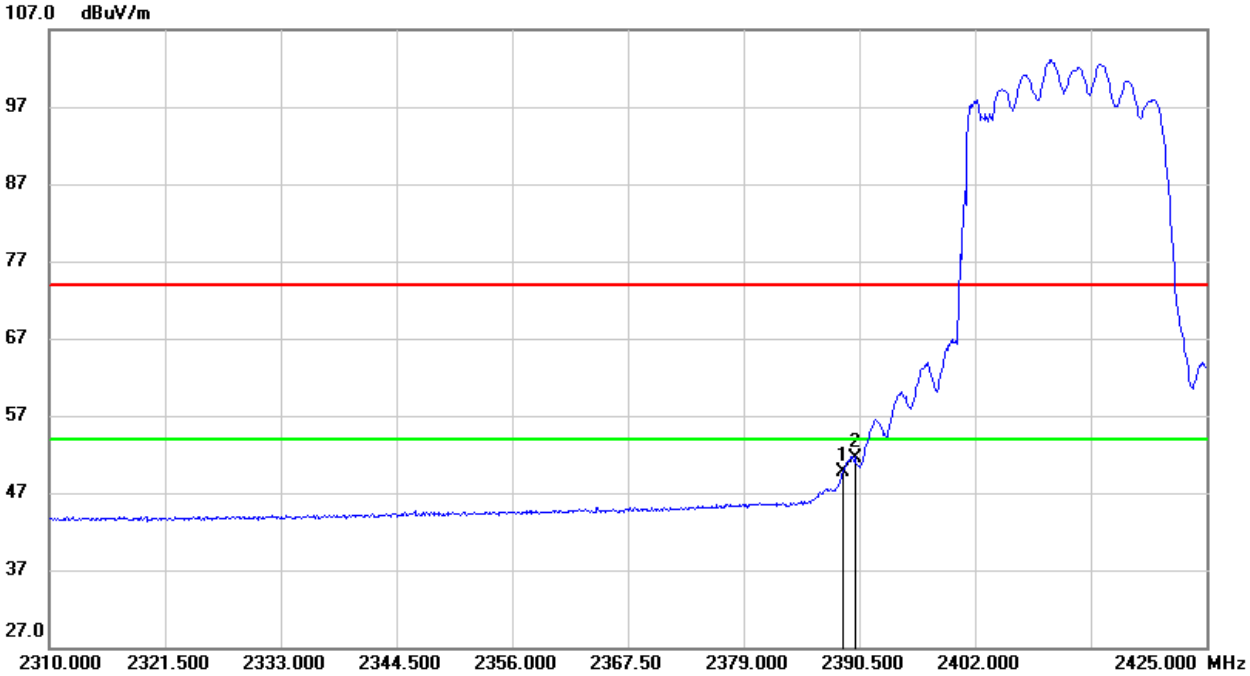
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.890	37.32	32.94	70.26	74.00	-3.74	peak
2	2390.000	34.68	32.94	67.62	74.00	-6.38	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

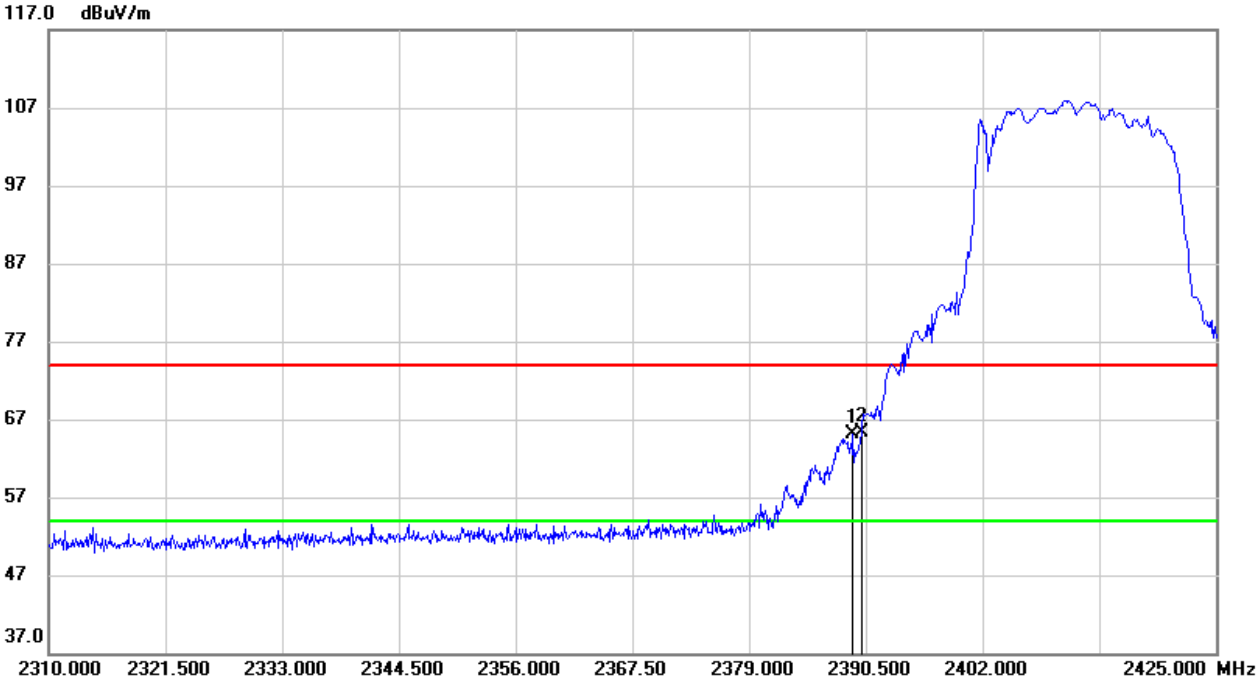


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.890	16.86	32.94	49.80	54.00	-4.20	AVG
2	2390.000	18.66	32.94	51.60	54.00	-2.40	AVG

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 transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

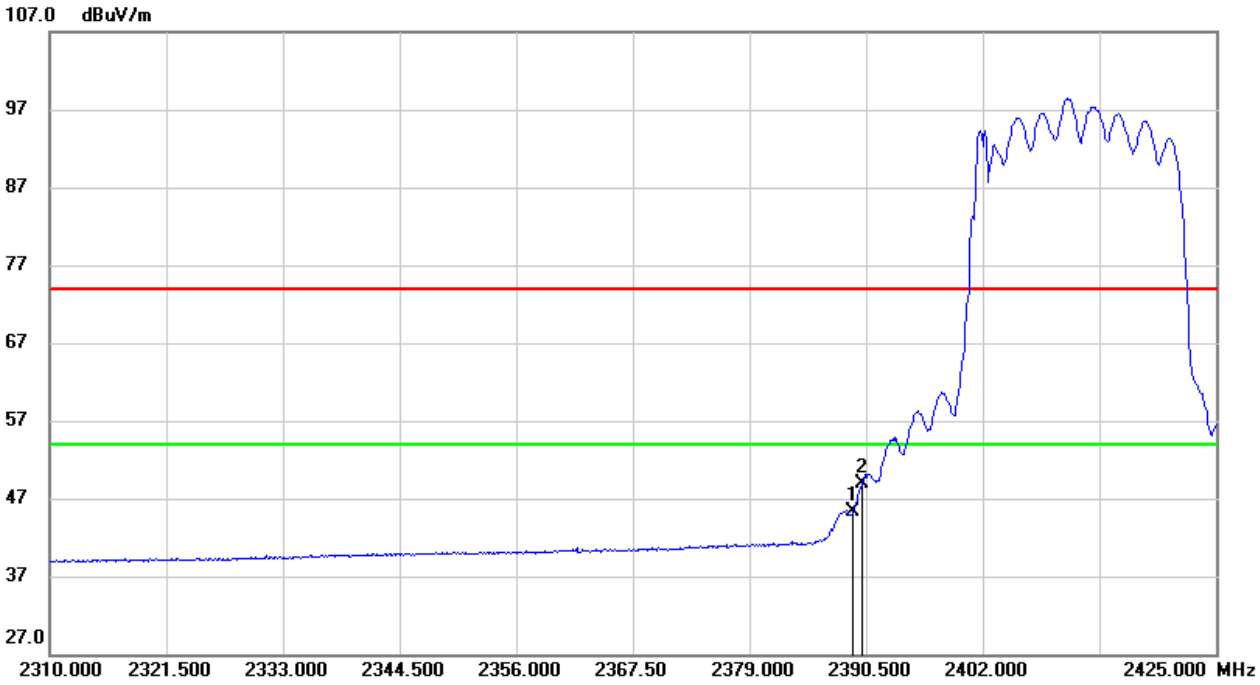
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.235	32.20	32.94	65.14	74.00	-8.86	peak
2	2390.000	32.41	32.94	65.35	74.00	-8.65	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 case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.235	12.31	32.94	45.25	54.00	-8.75	AVG
2	2390.000	15.89	32.94	48.83	54.00	-5.17	AVG

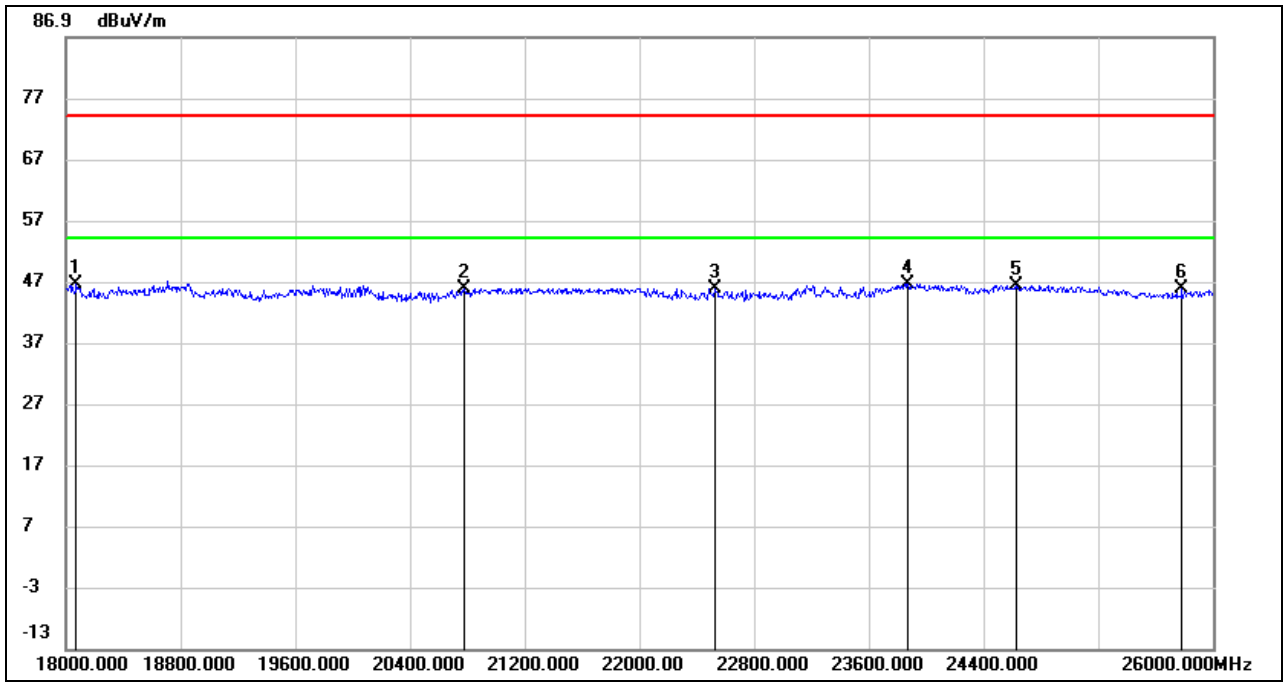
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 7.1.
5. Only the worst case emission was recorded, if it complies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

Note: All the test modes and combination have been considered. Only the worst data record in the report.

7.12. SPURIOUS EMISSIONS (18~26GHz)

7.12.1. 802.11n HT20 MIMO MODE

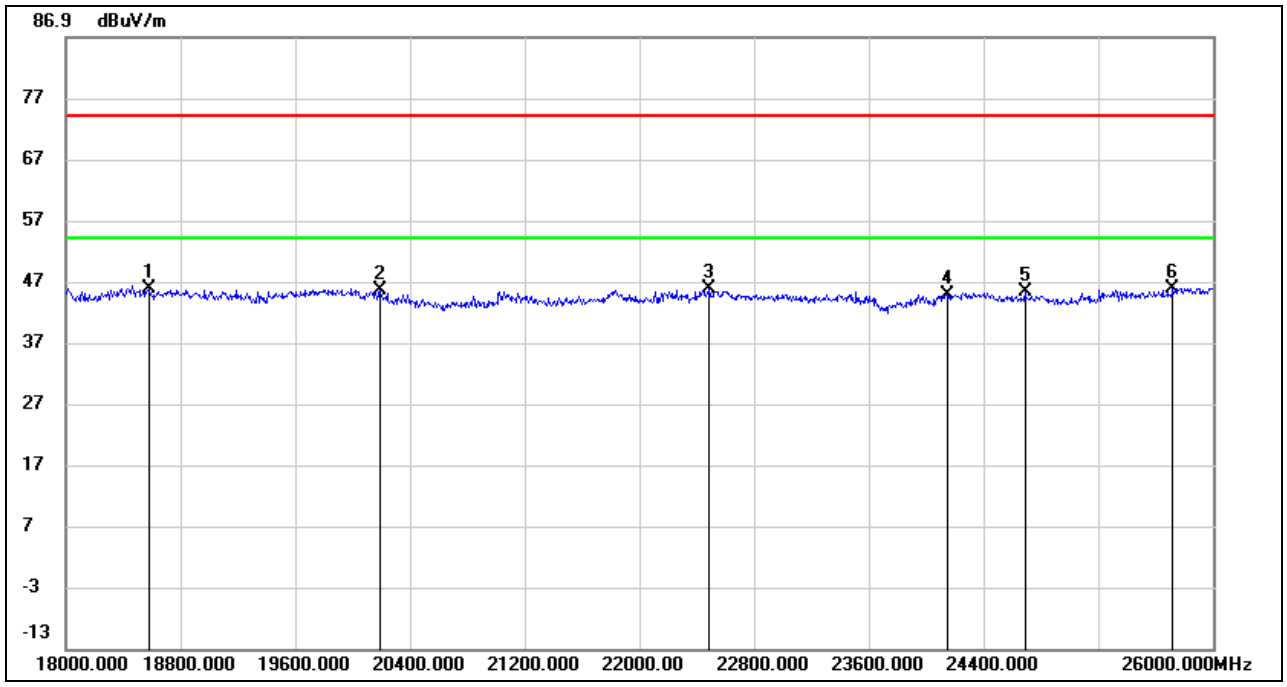
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18072.000	50.55	-4.02	46.53	74.00	-27.47	peak
2	20776.000	51.03	-5.14	45.89	74.00	-28.11	peak
3	22528.000	51.66	-5.79	45.87	74.00	-28.13	peak
4	23872.000	50.90	-4.33	46.57	74.00	-27.43	peak
5	24624.000	48.65	-2.27	46.38	74.00	-27.62	peak
6	25784.000	47.23	-1.49	45.74	74.00	-28.26	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.

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



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18584.000	50.19	-4.53	45.66	74.00	-28.34	peak
2	20192.000	50.37	-4.76	45.61	74.00	-28.39	peak
3	22488.000	51.60	-5.81	45.79	74.00	-28.21	peak
4	24144.000	48.67	-3.77	44.90	74.00	-29.10	peak
5	24688.000	47.39	-2.11	45.28	74.00	-28.72	peak
6	25720.000	47.28	-1.39	45.89	74.00	-28.11	peak

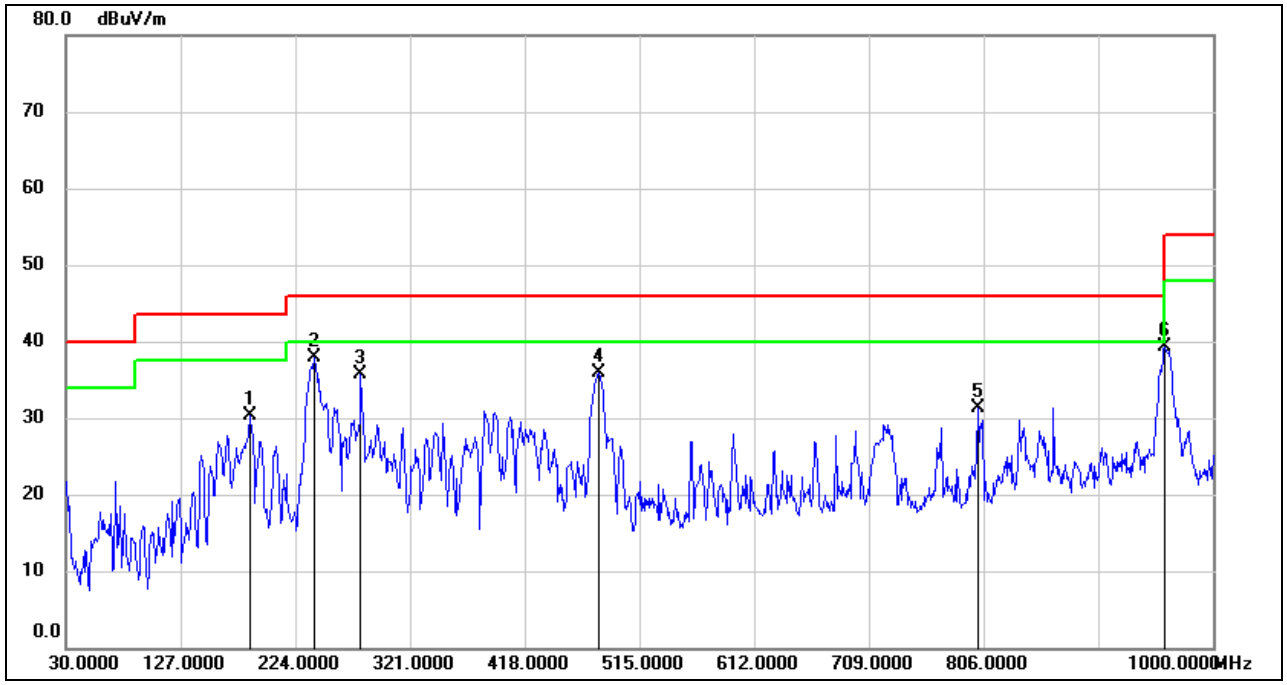
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

Note: All the test modes have been tested, only the worst data record in the report.

7.13. SPURIOUS EMISSIONS (0.03 ~ 1 GHz)

7.13.1. 802.11n HT20 MIMO MODE

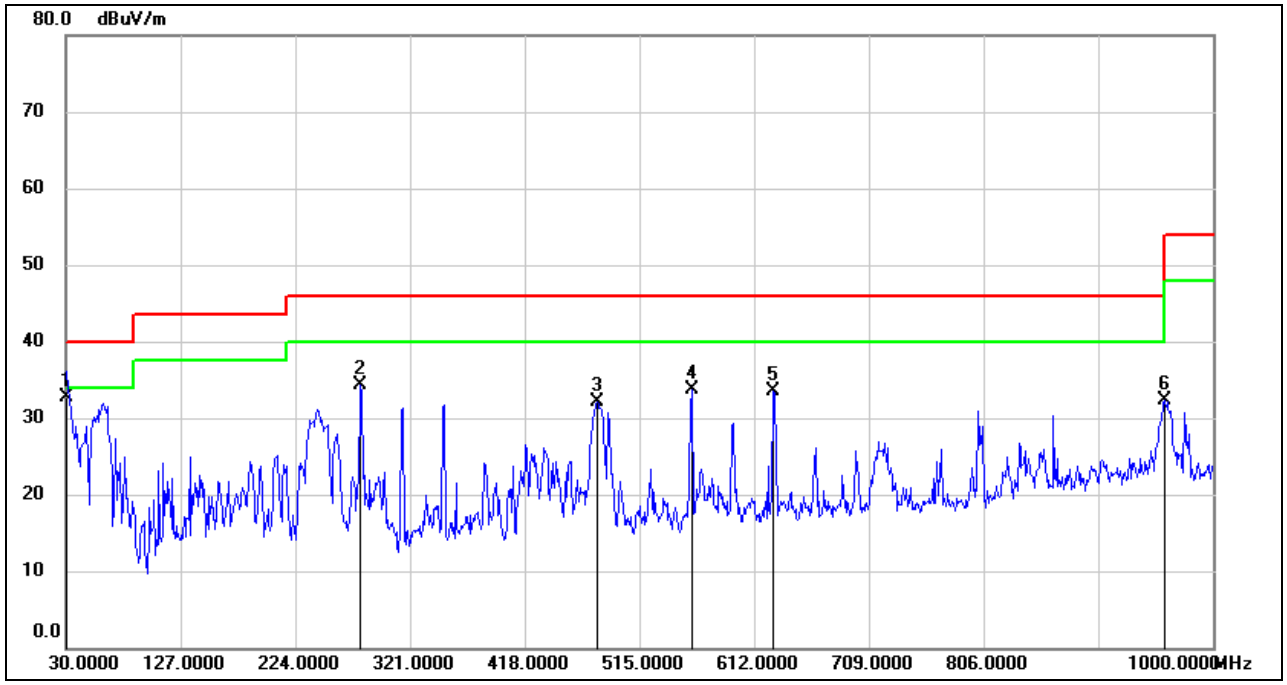
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	185.2000	46.61	-16.26	30.35	43.50	-13.15	QP
2	240.4900	54.95	-16.99	37.96	46.00	-8.04	QP
3	279.2900	50.81	-15.18	35.63	46.00	-10.37	QP
4	480.0800	47.12	-11.26	35.86	46.00	-10.14	QP
5	801.1500	36.89	-5.52	31.37	46.00	-14.63	QP
6	959.2600	42.88	-3.51	39.37	46.00	-6.63	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	30.9700	49.85	-17.13	32.72	40.00	-7.28	QP
2	279.2900	49.44	-15.18	34.26	46.00	-11.74	QP
3	479.1100	43.31	-11.28	32.03	46.00	-13.97	QP
4	559.6200	43.44	-9.78	33.66	46.00	-12.34	QP
5	627.5200	41.88	-8.43	33.45	46.00	-12.55	QP
6	959.2600	35.72	-3.51	32.21	46.00	-13.79	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

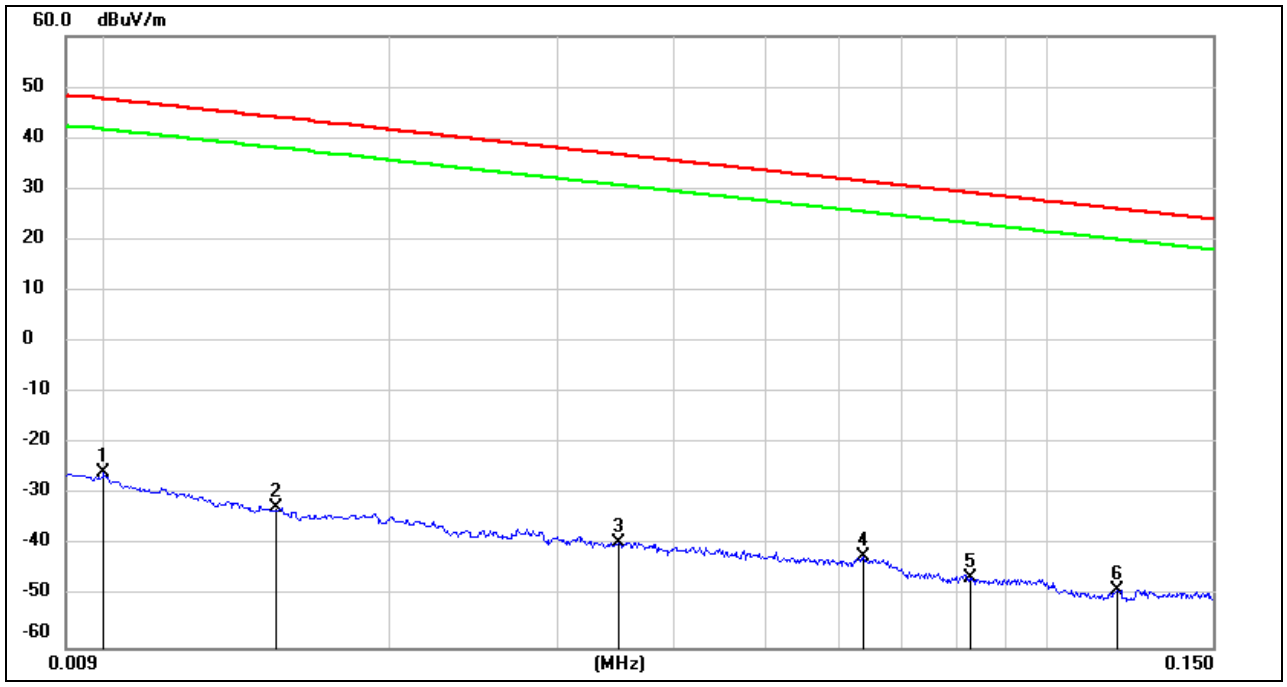
Note: All the test modes have been tested, only the worst data record in the report.

7.14. SPURIOUS EMISSIONS BELOW 30M

7.14.1. 802.11n HT20 MIMO MODE

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

9kHz~ 150kHz



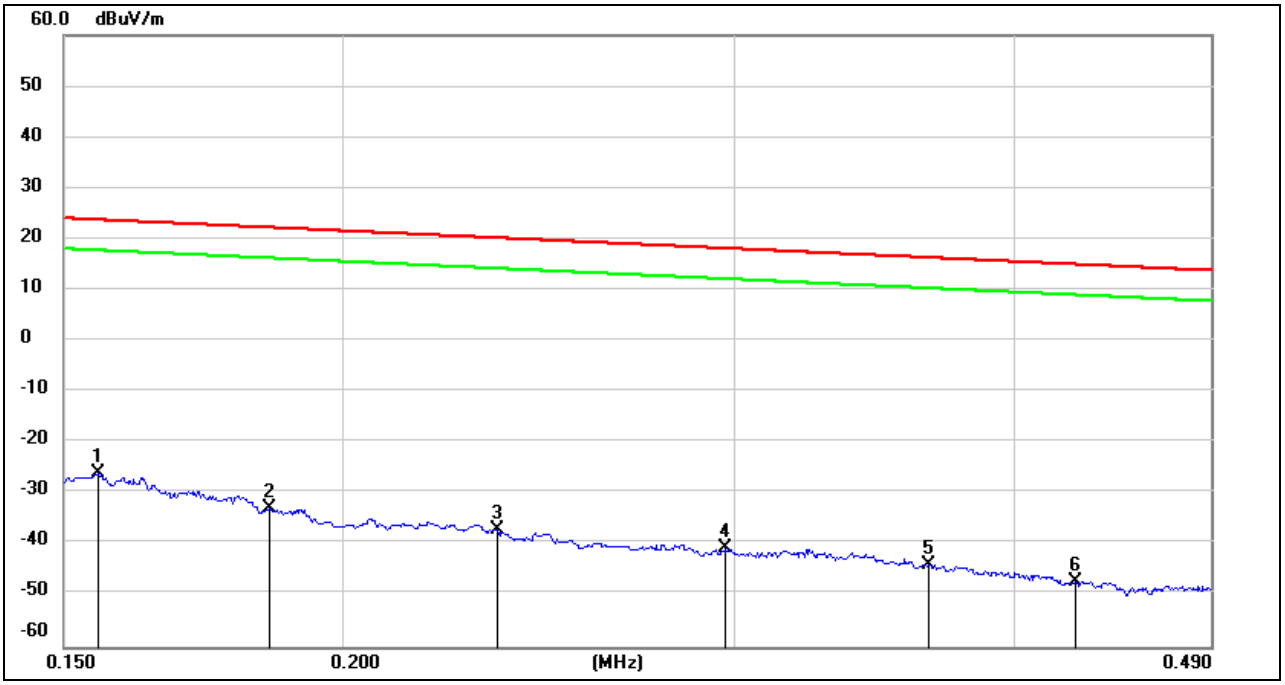
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0100	75.72	-101.40	-25.68	47.60	-77.18	-3.90	-73.28	peak
2	0.0151	68.71	-101.37	-32.66	44.02	-84.16	-7.48	-76.68	peak
3	0.0349	62.03	-101.41	-39.38	36.75	-90.88	-14.75	-76.13	peak
4	0.0636	59.31	-101.54	-42.23	31.53	-93.73	-19.97	-73.76	peak
5	0.0826	55.32	-101.65	-46.33	29.26	-97.83	-22.24	-75.59	peak
6	0.1188	53.06	-101.74	-48.68	26.11	-100.18	-25.39	-74.79	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.

150kHz ~ 490kHz



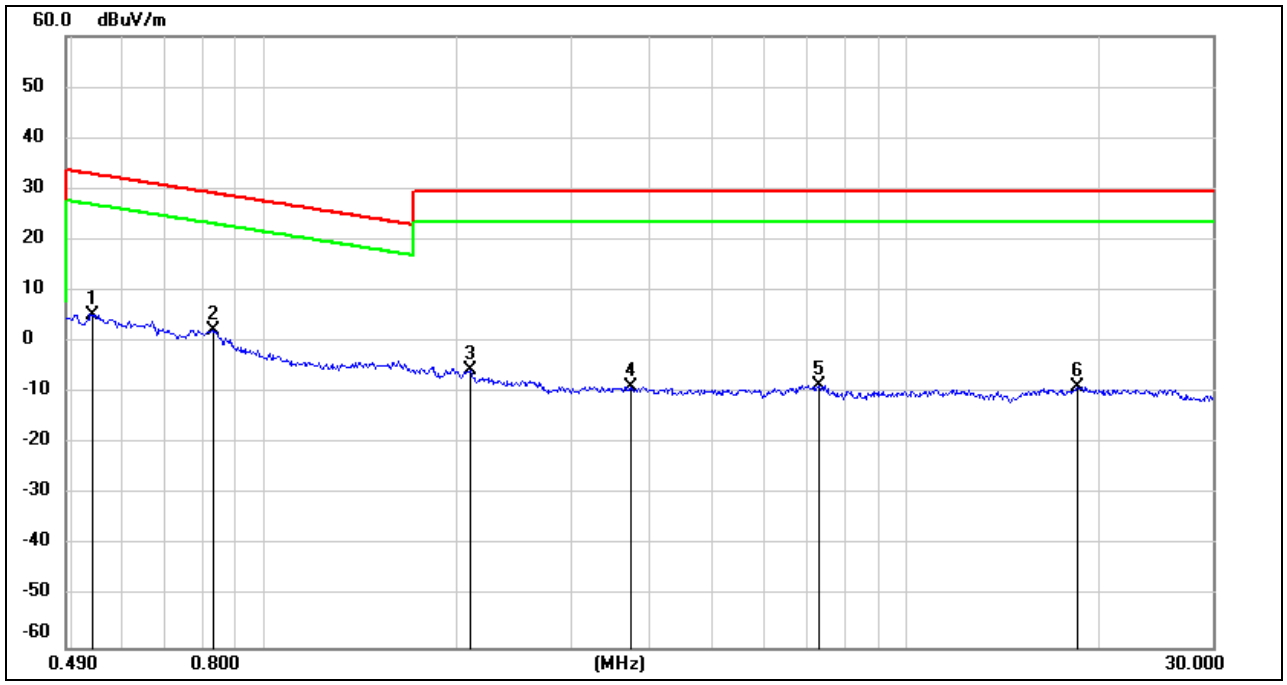
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1554	75.77	-101.65	-25.88	23.77	-77.38	-27.73	-49.65	peak
2	0.1853	68.90	-101.70	-32.80	22.25	-84.30	-29.25	-55.05	peak
3	0.2346	64.85	-101.77	-36.92	20.19	-88.42	-31.31	-57.11	peak
4	0.2972	61.16	-101.85	-40.69	18.14	-92.19	-33.36	-58.83	peak
5	0.3662	58.08	-101.93	-43.85	16.33	-95.35	-35.17	-60.18	peak
6	0.4259	54.88	-101.99	-47.11	15.02	-98.61	-36.48	-62.13	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.

490kHz ~ 30MHz



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	0.5383	67.44	-62.08	5.36	32.98	-46.14	-18.52	-27.62	peak
2	0.8296	64.44	-62.17	2.27	29.23	-49.23	-22.27	-26.96	peak
3	2.0939	56.39	-61.79	-5.40	29.54	-56.90	-21.96	-34.94	peak
4	3.7100	52.70	-61.41	-8.71	29.54	-60.21	-21.96	-38.25	peak
5	7.3361	52.58	-61.17	-8.59	29.54	-60.09	-21.96	-38.13	peak
6	18.4908	52.05	-60.89	-8.84	29.54	-60.34	-21.96	-38.38	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 test modes have been tested, only the worst data record in the report.

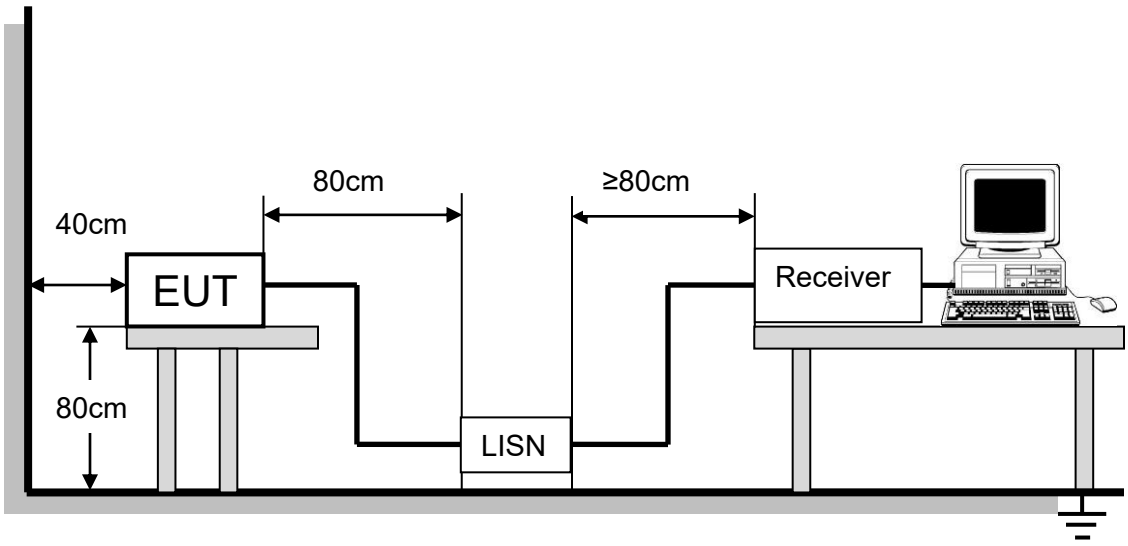
8. AC POWER LINE CONDUCTED EMISSIONS

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



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through an 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 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

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.

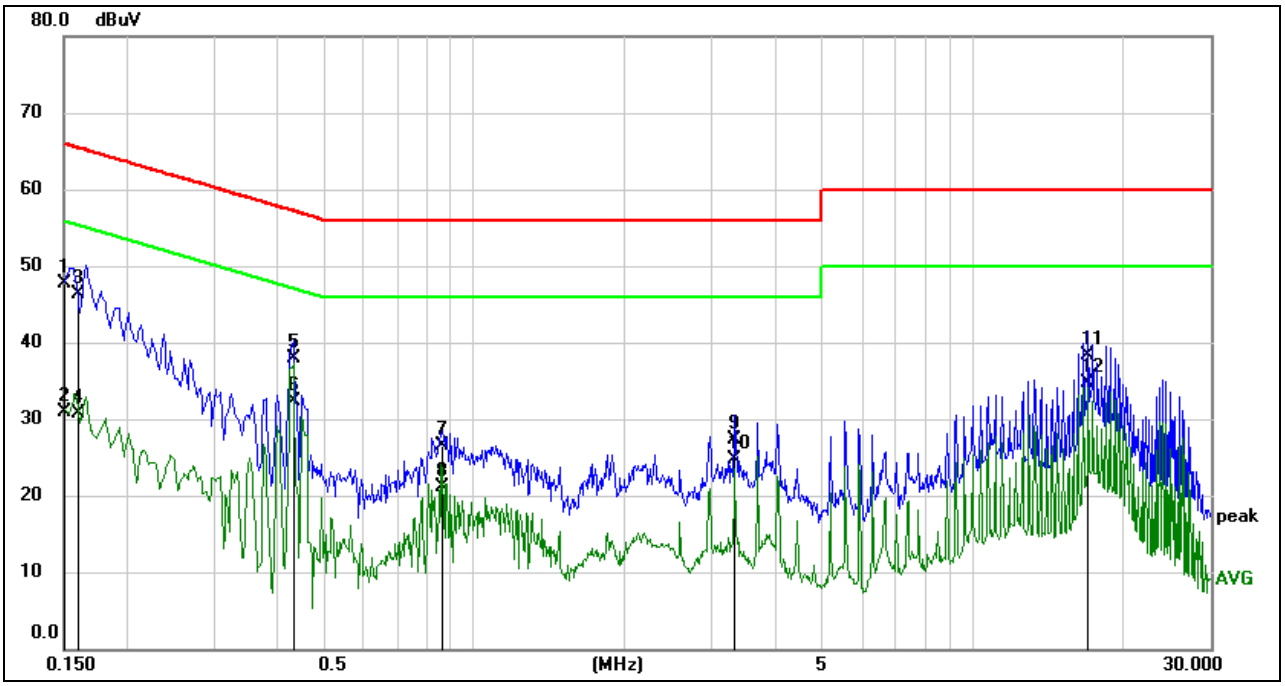
TEST ENVIRONMENT

Temperature	23°C	Relative Humidity	58%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST RESULTS

8.1. 802.11n HT20 MIMO MODE

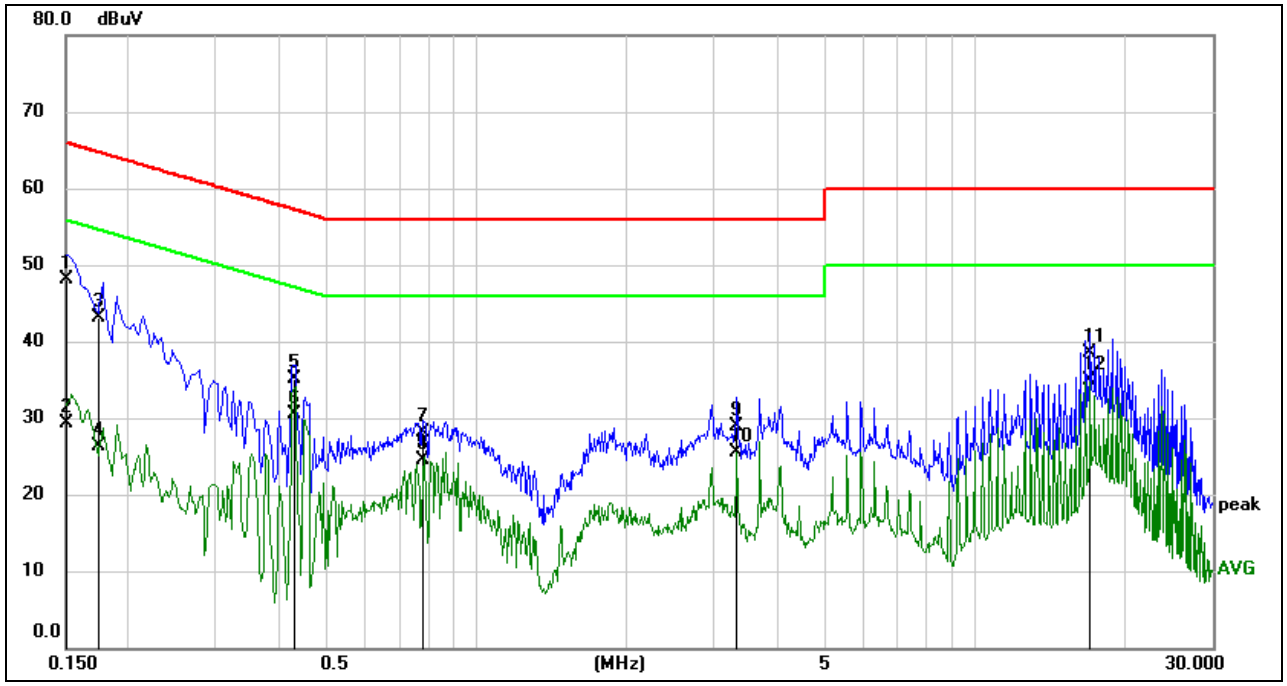
LINE N RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1505	38.18	9.60	47.78	65.97	-18.19	QP
2	0.1505	21.23	9.60	30.83	55.97	-25.14	AVG
3	0.1615	36.73	9.60	46.33	65.39	-19.06	QP
4	0.1615	21.20	9.60	30.80	55.39	-24.59	AVG
5	0.4341	28.27	9.60	37.87	57.17	-19.30	QP
6	0.4341	22.61	9.60	32.21	47.17	-14.96	AVG
7	0.8584	16.86	9.60	26.46	56.00	-29.54	QP
8	0.8584	11.45	9.60	21.05	46.00	-24.95	AVG
9	3.3359	17.73	9.65	27.38	56.00	-28.62	QP
10	3.3359	14.98	9.65	24.63	46.00	-21.37	AVG
11	17.0386	28.17	10.04	38.21	60.00	-21.79	QP
12	17.0386	24.63	10.04	34.67	50.00	-15.33	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: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), 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	0.1513	38.55	9.61	48.16	65.93	-17.77	QP
2	0.1513	19.77	9.61	29.38	55.93	-26.55	AVG
3	0.1741	33.43	9.61	43.04	64.76	-21.72	QP
4	0.1741	16.60	9.61	26.21	54.76	-28.55	AVG
5	0.4334	25.54	9.60	35.14	57.19	-22.05	QP
6	0.4334	20.87	9.60	30.47	47.19	-16.72	AVG
7	0.7835	18.46	9.61	28.07	56.00	-27.93	QP
8	0.7835	14.82	9.61	24.43	46.00	-21.57	AVG
9	3.3359	19.24	9.65	28.89	56.00	-27.11	QP
10	3.3359	15.95	9.65	25.60	46.00	-20.40	AVG
11	17.0387	28.46	9.97	38.43	60.00	-21.57	QP
12	17.0387	24.89	9.97	34.86	50.00	-15.14	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: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

Note: All test modes have been tested, only the worst data record in the report.

9. 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

Appendix A: DTS Bandwidth

Test Result

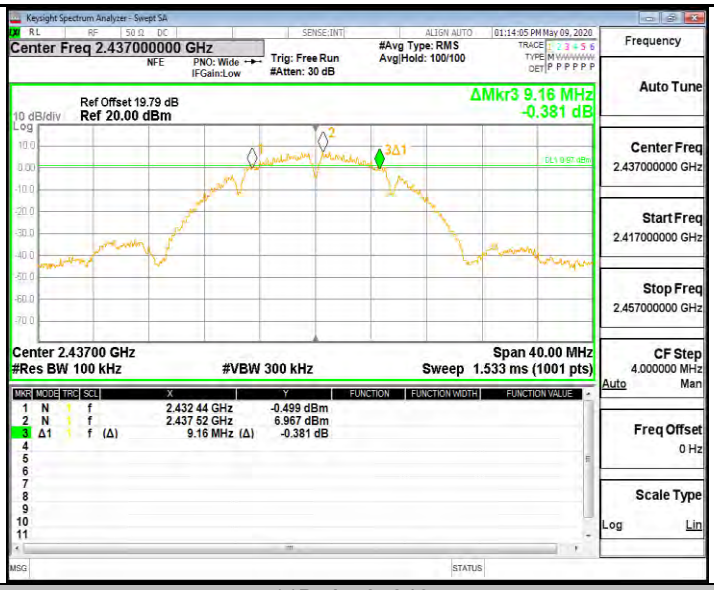
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.160	2407.440	2416.600	0.5	PASS
	Ant2	2412	9.160	2407.440	2416.600	0.5	PASS
	Ant1	2437	9.160	2432.440	2441.600	0.5	PASS
	Ant2	2437	9.120	2432.440	2441.560	0.5	PASS
	Ant1	2462	8.640	2457.960	2466.600	0.5	PASS
	Ant2	2462	9.600	2457.480	2467.080	0.5	PASS
11G	Ant1	2412	15.200	2404.440	2419.640	0.5	PASS
	Ant2	2412	15.200	2404.440	2419.640	0.5	PASS
	Ant1	2437	15.560	2429.080	2444.640	0.5	PASS
	Ant2	2437	16.080	2428.840	2444.920	0.5	PASS
	Ant1	2462	15.200	2454.440	2469.640	0.5	PASS
	Ant2	2462	15.160	2454.440	2469.600	0.5	PASS
11N20MIMO	Ant1	2412	15.560	2404.400	2419.960	0.5	PASS
	Ant2	2412	16.360	2403.600	2419.960	0.5	PASS
	Ant1	2437	15.200	2429.440	2444.640	0.5	PASS
	Ant2	2437	15.120	2429.480	2444.600	0.5	PASS
	Ant1	2462	15.520	2454.440	2469.960	0.5	PASS
	Ant2	2462	16.440	2454.400	2470.840	0.5	PASS
11N40MIMO	Ant1	2422	35.280	2404.400	2439.680	0.5	PASS
	Ant2	2422	35.280	2404.400	2439.680	0.5	PASS
	Ant1	2437	35.200	2419.480	2454.680	0.5	PASS
	Ant2	2437	35.200	2419.400	2454.600	0.5	PASS
	Ant1	2452	35.280	2434.400	2469.680	0.5	PASS
	Ant2	2452	36.400	2433.840	2470.240	0.5	PASS

Test Graphs

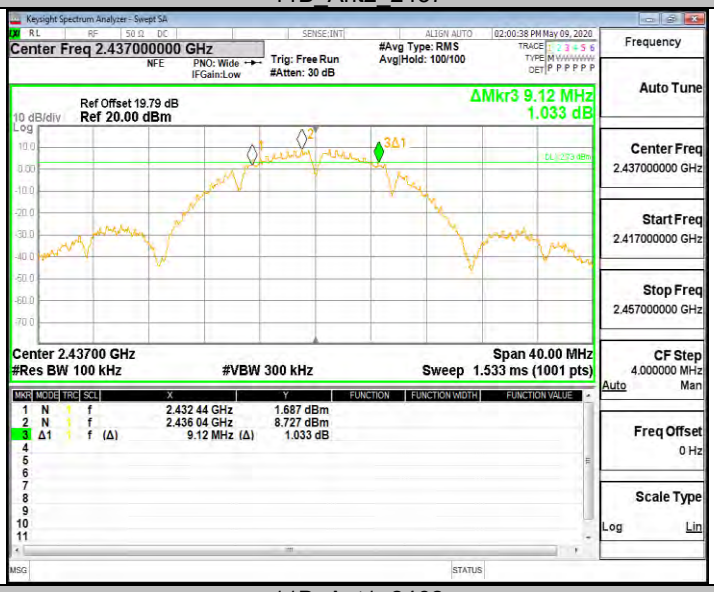
11B_Ant1_2412

11B_Ant2_2412

11B_Ant1_2437

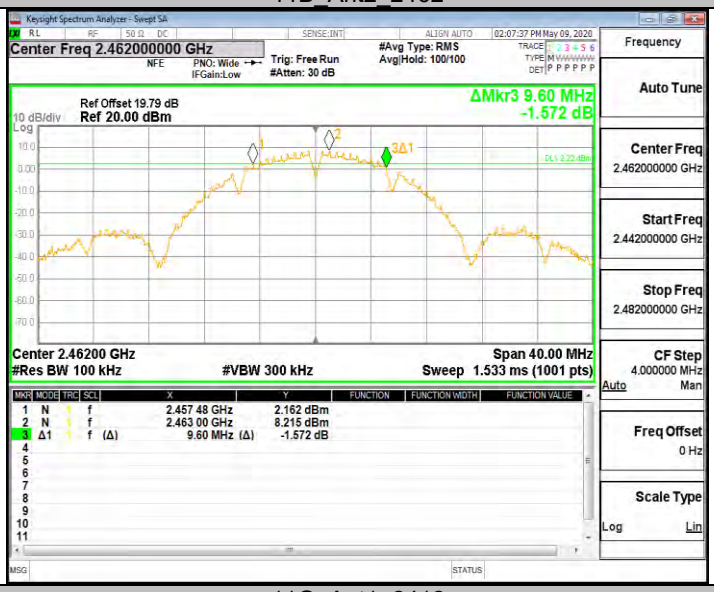


11B_Ant2_2437



11B_Ant1_2462

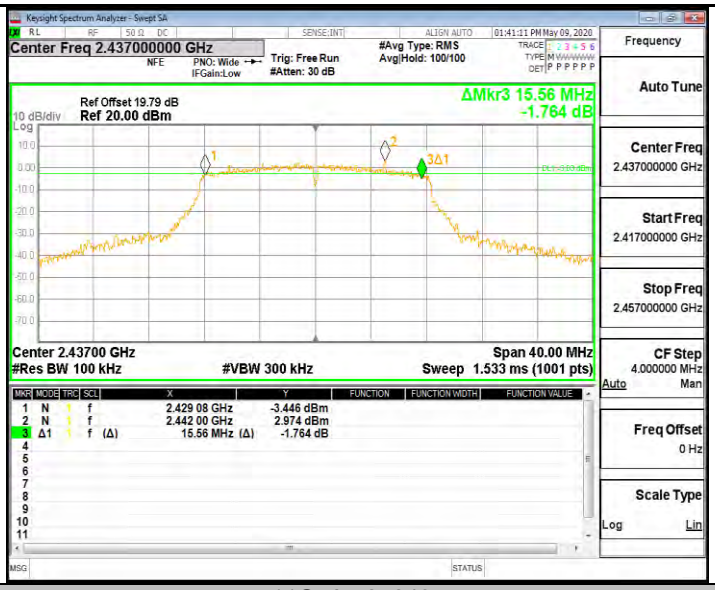
11B_Ant2_2462



11G_Ant1_2412

11G_Ant2_2412

11G_Ant1_2437

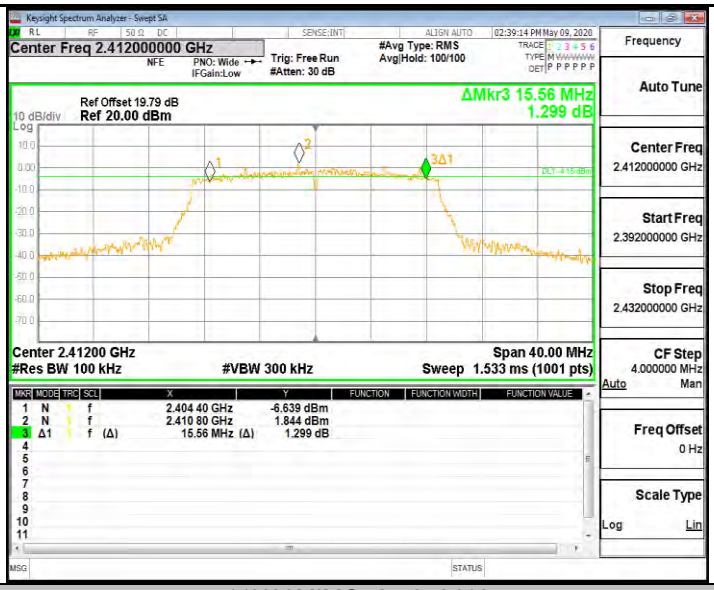


11G_Ant2_2437

11G_Ant1_2462

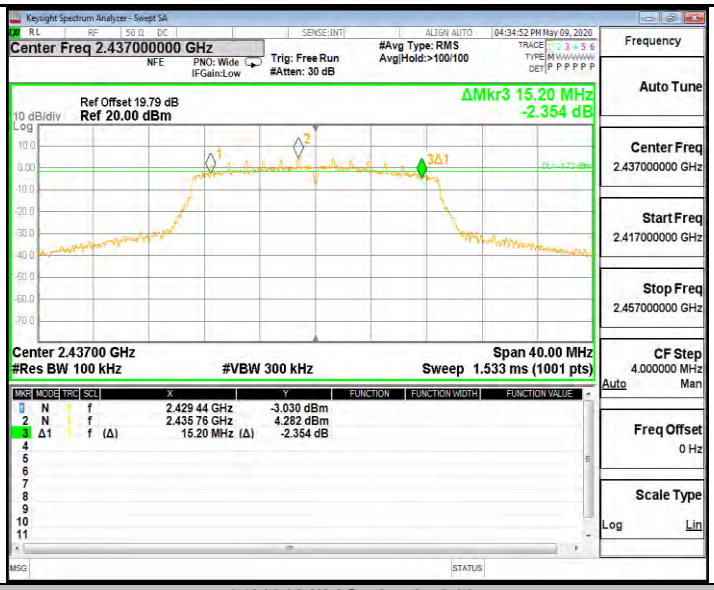
11G_Ant2_2462

11N20MIMO_Ant1_2412



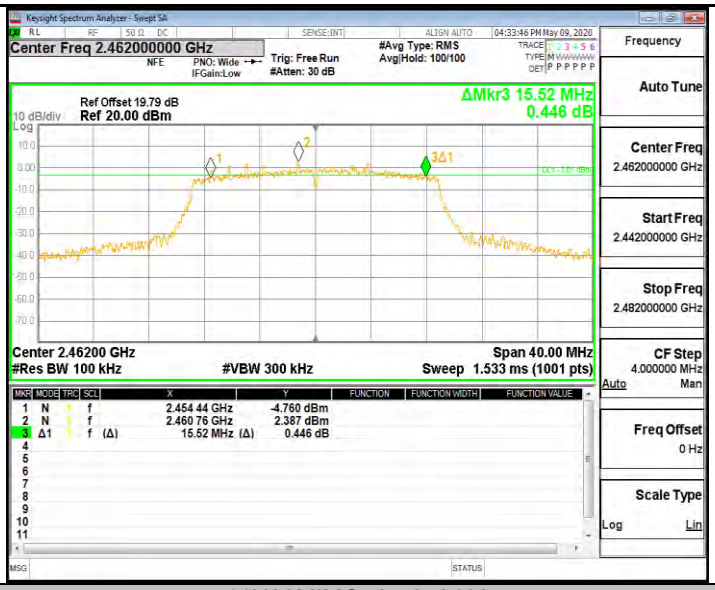
11N20MIMO_Ant2_2412

11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437

11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462

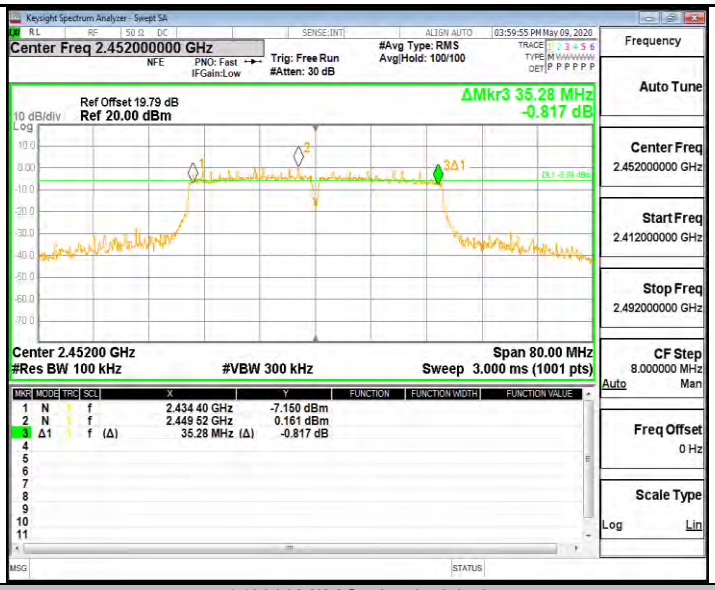
11N40MIMO_Ant1_2422

11N40MIMO_Ant2_2422

11N40MIMO_Ant1_2437

11N40MIMO_Ant2_2437

11N40MIMO_Ant1_2452



11N40MIMO_Ant2_2452

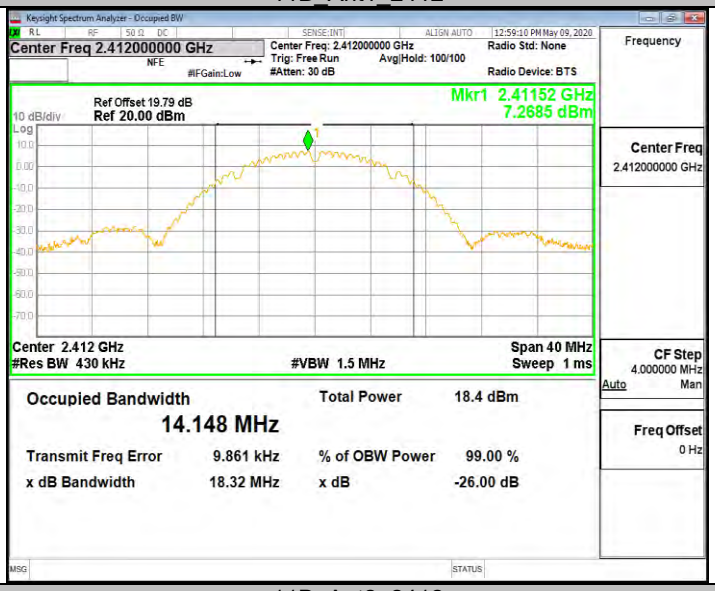
Appendix B: Occupied Channel Bandwidth

Test Result

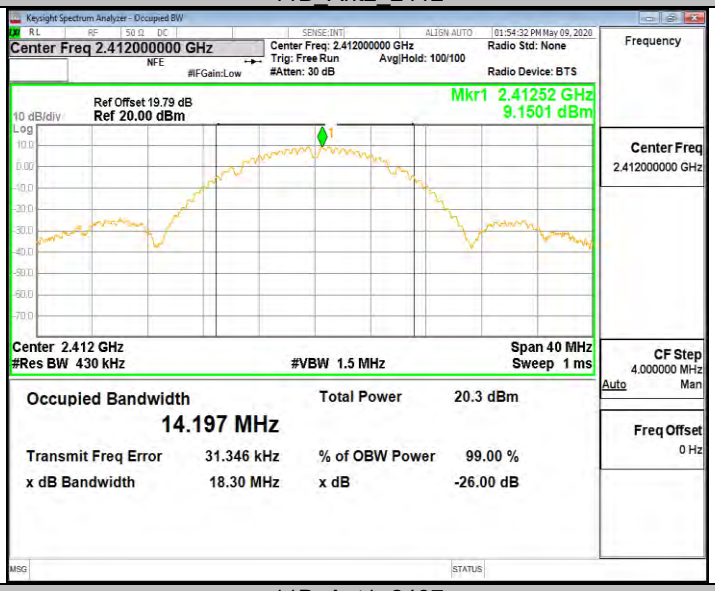
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.148	2404.936	2419.084	---	PASS
	Ant2	2412	14.197	2404.933	2419.130	---	PASS
	Ant1	2437	13.825	2430.038	2443.863	---	PASS
	Ant2	2437	14.127	2429.866	2443.993	---	PASS
	Ant1	2462	13.961	2455.115	2469.076	---	PASS
	Ant2	2462	14.189	2455.020	2469.209	---	PASS
11G	Ant1	2412	16.783	2403.624	2420.407	---	PASS
	Ant2	2412	16.946	2403.524	2420.470	---	PASS
	Ant1	2437	16.686	2428.629	2445.315	---	PASS
	Ant2	2437	16.736	2428.554	2445.290	---	PASS
	Ant1	2462	16.857	2453.599	2470.456	---	PASS
	Ant2	2462	16.844	2453.623	2470.467	---	PASS
11N20MIMO	Ant1	2412	17.875	2403.118	2420.993	---	PASS
	Ant2	2412	17.630	2403.239	2420.869	---	PASS
	Ant1	2437	17.775	2428.087	2445.862	---	PASS
	Ant2	2437	17.567	2428.211	2445.778	---	PASS
	Ant1	2462	17.796	2453.180	2470.976	---	PASS
	Ant2	2462	17.582	2453.292	2470.874	---	PASS
11N40MIMO	Ant1	2422	36.161	2404.022	2440.183	---	PASS
	Ant2	2422	36.300	2403.886	2440.186	---	PASS
	Ant1	2437	36.028	2419.018	2455.046	---	PASS
	Ant2	2437	36.231	2418.938	2455.169	---	PASS
	Ant1	2452	36.492	2433.812	2470.304	---	PASS
	Ant2	2452	36.574	2433.775	2470.349	---	PASS

Test Graphs

11B_Ant1_2412



11B_Ant2_2412



11B_Ant1_2437