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

CERTIFICATION TEST REPORT

For

Kasa Smart Wi-Fi Light Switch, Motion-Activated

MODEL NUMBER: KS200M

FCC ID: 2AXJ4KS200M

IC: 26583-KS200M

HIVN: KS200M

REPORT NUMBER: 4789841897-2

ISSUE DATE: March 24, 2021

Prepared for

TP-Link Corporation Limited
Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	03/24/2021	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.

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	TP-Link Corporation Limited
Address:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

Manufacturer Information

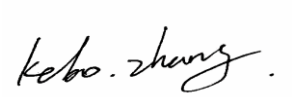
Company Name:	TP-Link Corporation Limited
Address:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

EUT Information

EUT Name:	Kasa Smart Wi-Fi Light Switch, Motion-Activated
Model:	KS200M
HVIN:	KS200M
Brand Name:	tp-link
Sample Received Date:	March 01, 2021
Sample Status:	Normal
Sample ID:	3698111
Date of Tested:	March 01, 2021~ March 23, 2021

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

Check 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 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Duty Cycle	±0.028%
DTS and 99% Occupied Bandwidth	±0.0196%
Maximum Conducted Output Power	±0.686 dB
Maximum Power Spectral Density Level	±0.743 dB
Conducted Band-edge Compliance	±1.328 dB
Conducted Unwanted Emissions In Non-restricted Frequency Bands	±0.746 dB (9 kHz ~ 1 GHz)
	±1.328dB (1 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Kasa Smart Wi-Fi Light Switch, Motion-Activated			
Model	KS200M			
Radio Technology	IEEE802.11b/g/n HT20			
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz			
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)			
Supply Voltage	☒AC mains State	AC 120V, 60Hz		
	☒DC State	☐Internal Power Supply		
		☒External Power Supply or AC/DC adapter	Rate Input:	DC 5V
			Rate Output:	
		☐Battery		

5.2. CHANNEL LIST

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

5.3. MAXIMUM OUTPUT POWER

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)
b	2412 ~ 2462	1-11[11]	22.15
g	2412 ~ 2462	1-11[11]	19.87
n HT20	2412 ~ 2462	1-11[11]	19.84

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
WiFi TX(802.11b)	CH 1, CH 2, CH 6, CH 10, CH 11	2412MHz, 2417MHz, 2437MHz, 2457MHz, 2462MHz
WiFi TX(802.11g)	CH 1, CH 2, CH 6, CH 10, CH 11	2412MHz, 2417MHz, 2437MHz, 2457MHz, 2462MHz
WiFi TX(802.11n HT20)	CH 1, CH 2, CH 6, CH 10, CH 11	2412MHz, 2417MHz, 2437MHz, 2457MHz, 2462MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band						
Test Software		UI_MP tool				
Modulation Mode	Transmit Antenna Number	Test Software Setting Value				
		NCB: 20MHz				
		CH 1	CH 2	CH 6	CH 10	CH 11
802.11b	1	118	122	127	119	116
802.11g	1	113	127	127	120	108
802.11n HT20	1	111	124	127	117	106

5.6. THE WORSE CASE CONFIGURATIONS

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

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst case Data Rates declared by the customer:

IEEE 802.11b / SISO – DBPSK / 1 Mbps
IEEE 802.11g / SISO – BPSK / 6 Mbps
IEEE 802.11n HT20 / SISO – BPSK / MCS0

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2400-2483.5	PIFA Antenna	3

Note: The value of the antenna gain was declared by customer.

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

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	Laptop	lenovo	Lenovo 5000	PF0WRQQN
2	USB TO UART	/	/	/

I/O CABLES

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

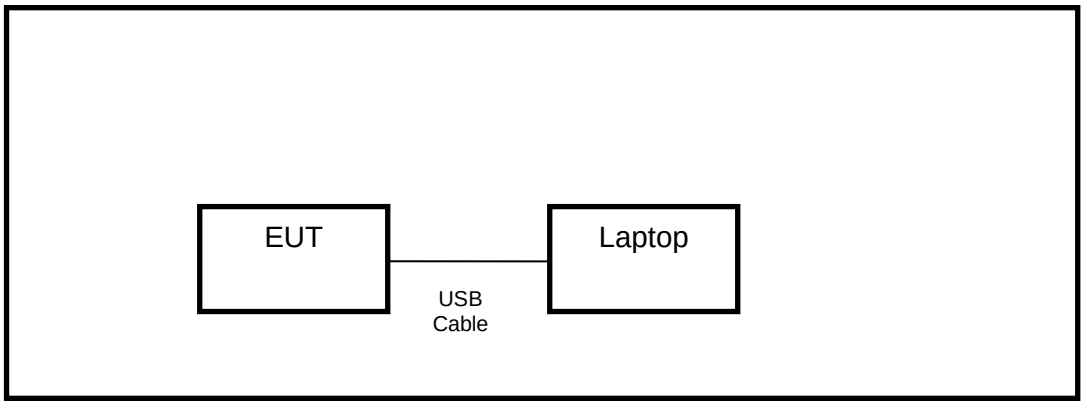
ACCESSORIES

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

TEST SETUP

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

SETUP DIAGRAM FOR TESTS



6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	101961	Nov. 12, 2020	Nov. 11, 2021
☑	Two-Line V-Network	R&S	ENV216	101983	Nov. 12, 2020	Nov. 11, 2021
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	Nov. 12, 2020	Nov. 11, 2021
☑	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Aug. 11, 2018	Aug. 10, 2021
☑	Preamplifier	HP	8447D	2944A09099	Nov. 12, 2020	Nov. 11, 2021
☑	EMI Measurement Receiver	R&S	ESR26	101377	Nov. 12, 2020	Nov. 11, 2021
☑	Horn Antenna	TDK	HRN-0118	130939	Sept. 17, 2018	Sept. 17, 2021
☑	Preamplifier	TDK	PA-02-0118	TRS-305-00067	Nov. 20, 2020	Nov. 19, 2021
☑	Horn Antenna	Schwarzbeck	BBHA9170	#691	Aug. 11, 2018	Aug. 11, 2021
☑	Preamplifier	TDK	PA-02-2	TRS-307-00003	Nov. 12, 2020	Nov. 11, 2021
☑	Loop antenna	Schwarzbeck	1519B	00008	Jan.17, 2019	Jan.17,2022
☑	Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Nov. 12, 2020	Nov. 11, 2021
☑	Preamplifier	Mini-Circuits	ZX60-83LN-S+	SUP01201941	Nov. 20, 2020	Nov. 19, 2021
☑	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	Nov. 12, 2020	Nov. 11, 2021
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	Nov. 20, 2020	Nov. 19, 2021
☑	Dual Channel Power Meter	Keysight	N1912A	MY55416024	Nov. 20, 2020	Nov. 19, 2021
☑	Power Sensor	Keysight	USB Wideband Power Sensor	MY5100022	Nov. 20, 2020	Nov. 19, 2021

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

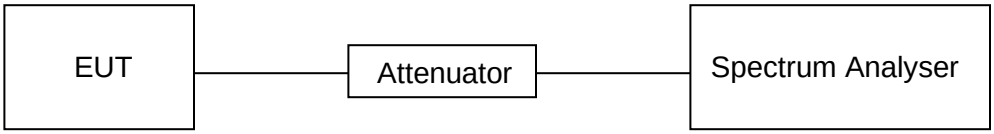
LIMITS

None; for reporting purposes only

PROCEDURE

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

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4 °C	Relative Humidity	48.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

Please refer to appendix G.

7.2. 6 dB DTS BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

LIMITS

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

TEST PROCEDURE

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

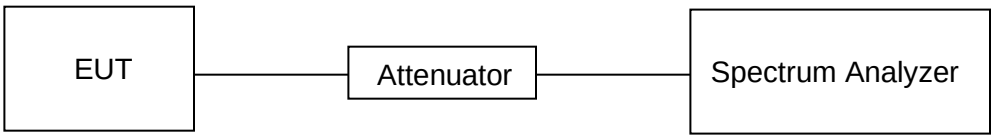
Connect the EUT to the spectrum analyser and use the following settings:

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

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

b) Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4 °C	Relative Humidity	48.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

Please refer to appendix A & B.

7.3. CONDUCTED OUTPUT POWER

LIMITS

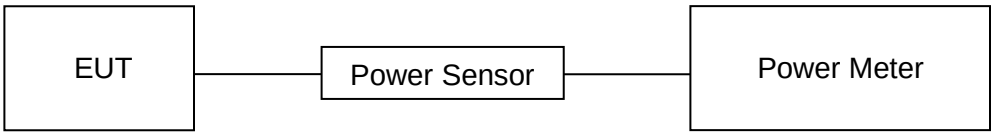
CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3) ISED RSS-247 5.4 (d)	Peak Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.9.

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

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4 °C	Relative Humidity	48.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

Please refer to appendix C.

7.4. POWER SPECTRAL DENSITY

LIMITS

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

TEST PROCEDURE

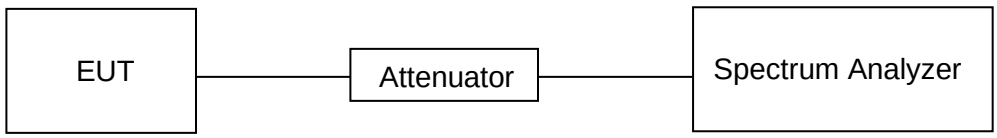
Refer to ANSI C63.10-2013 clause 11.10.

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

Center Frequency	The center frequency of the channel under test
Detector	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	48.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

Please refer to appendix D.

7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

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

TEST PROCEDURE

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

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

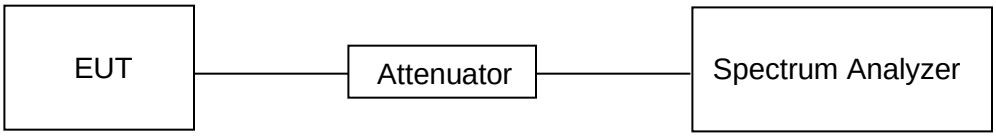
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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

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

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

TEST SETUP



TEST ENVIRONMENT

Temperature	25.4 °C	Relative Humidity	48.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

Please refer to appendix E & F.

8. RADIATED TEST RESULTS

LIMITS

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

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

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

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

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

ISED General field strength limits at frequencies below 30 MHz

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

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

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

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

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

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

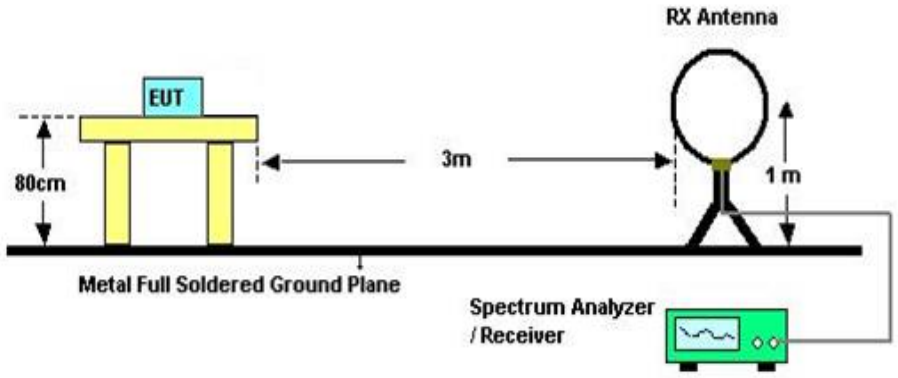
FCC Restricted bands of operation refer to FCC §15.205 (a):

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

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

TEST SETUP AND PROCEDURE

Below 30 MHz



The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.

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

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

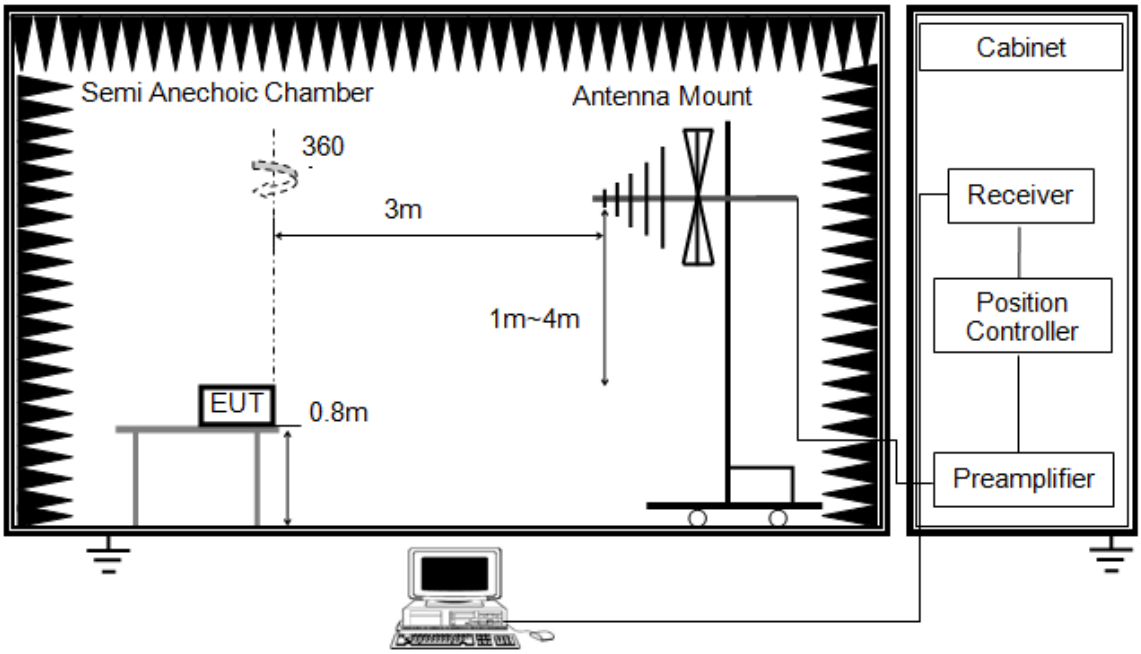
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

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

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

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

Below 1 GHz and above 30 MHz



The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.

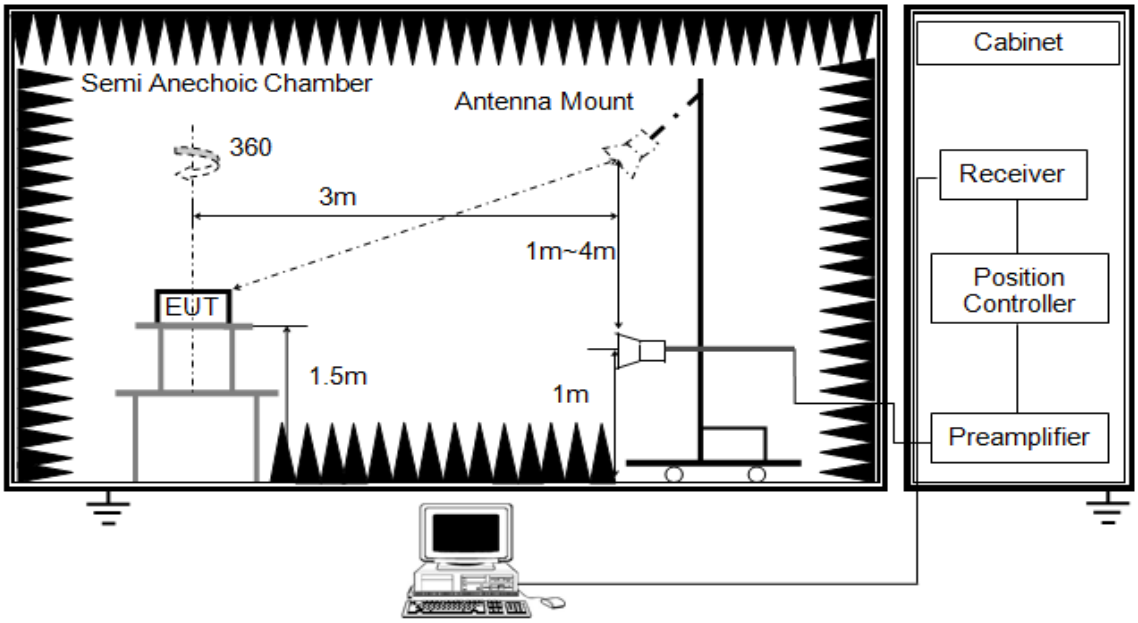
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations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

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

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

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

Above 1 GHz



The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.

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.

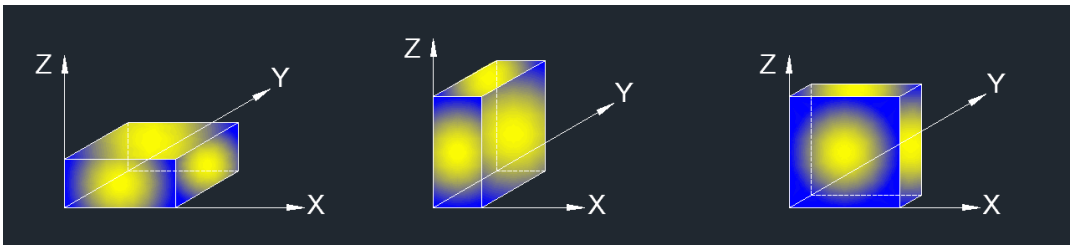
3. The EUT was placed on a turntable with 1.5 m above ground.

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

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

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

X axis, Y axis, Z axis positions:



Note: 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.

TEST ENVIRONMENT

Temperature	22.7 °C	Relative Humidity	66.7 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

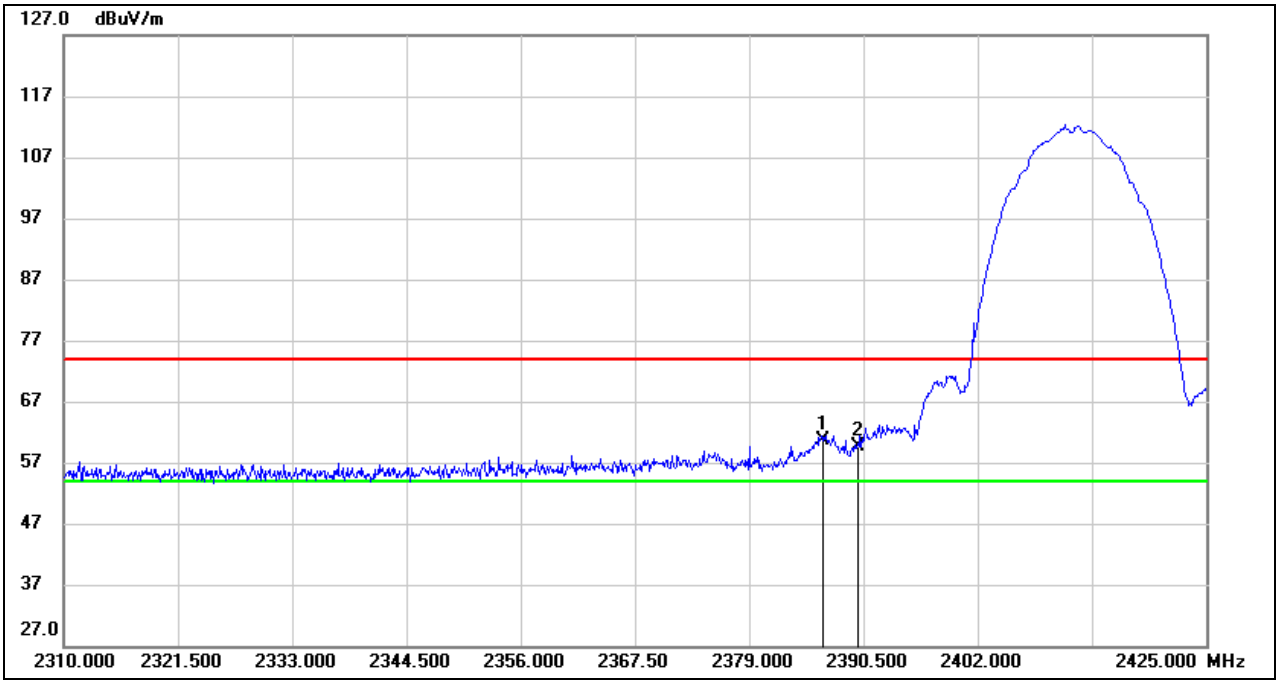
RESULTS

8.1. RESTRICTED BANDEDGE

8.1.1. 802.11b MODE

RESTRICTED BANDEDGE (CHANNEL 1, HORIZONTAL)

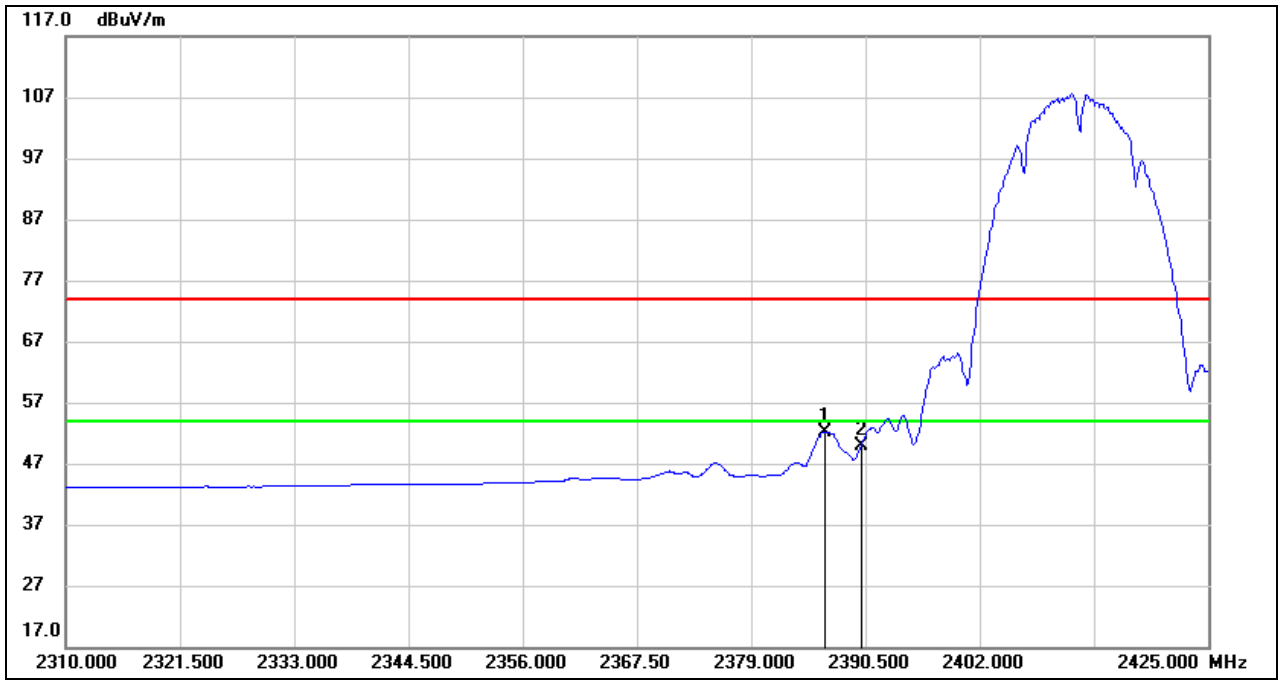
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.360	27.32	33.33	60.65	74.00	-13.35	peak
2	2390.000	26.39	33.35	59.74	74.00	-14.26	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. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



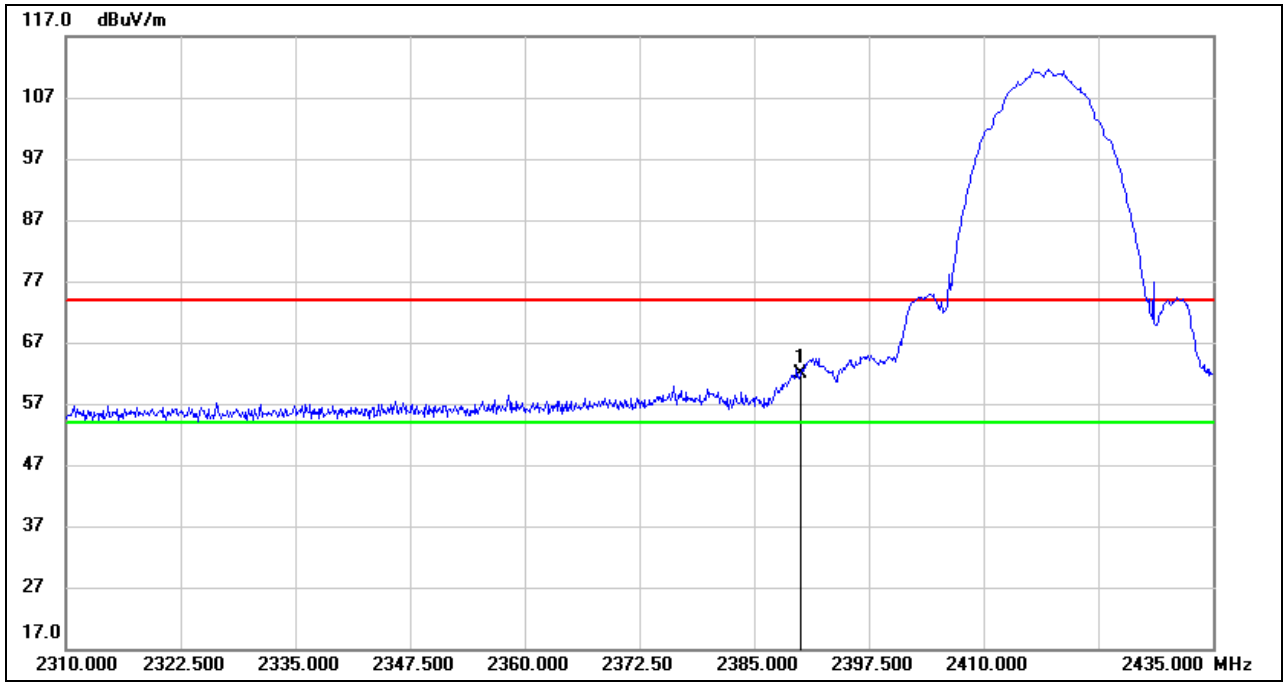
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.360	18.89	33.33	52.22	54.00	-1.78	AVG
2	2390.000	16.42	33.35	49.77	54.00	-4.23	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 2, HORIZONTAL)

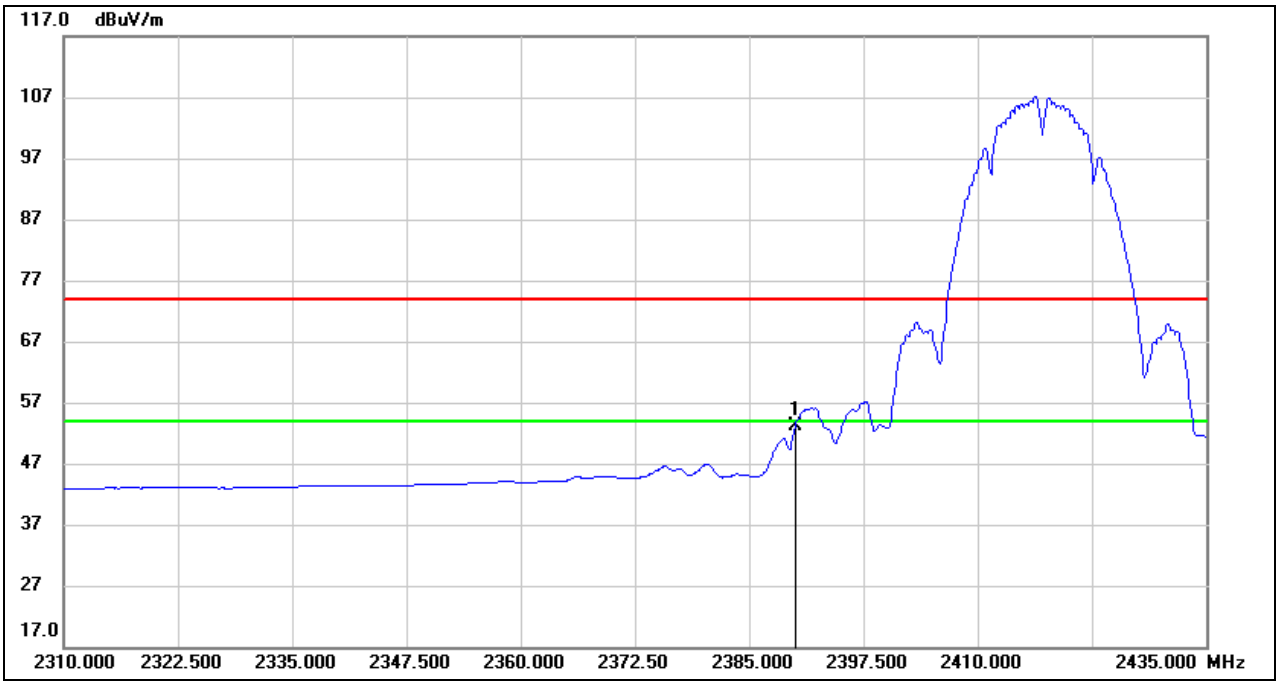
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.60	33.35	61.95	74.00	-12.05	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



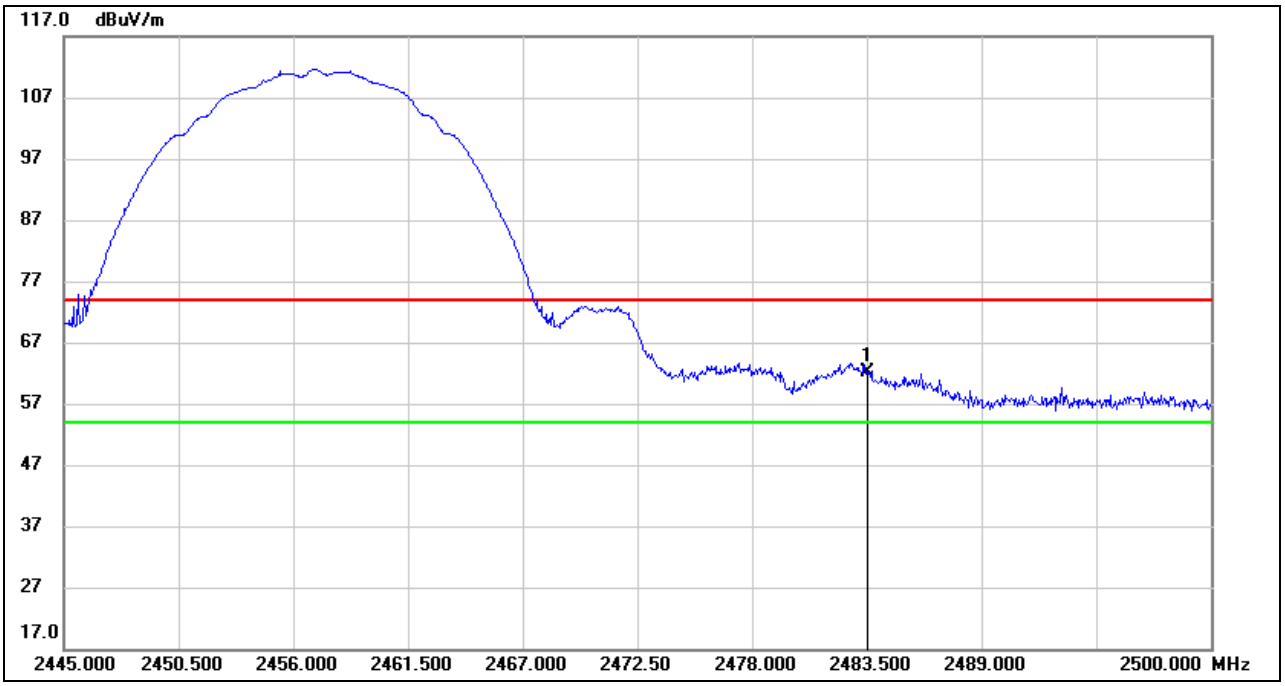
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	19.73	33.35	53.08	54.00	-0.92	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 10, HORIZONTAL)

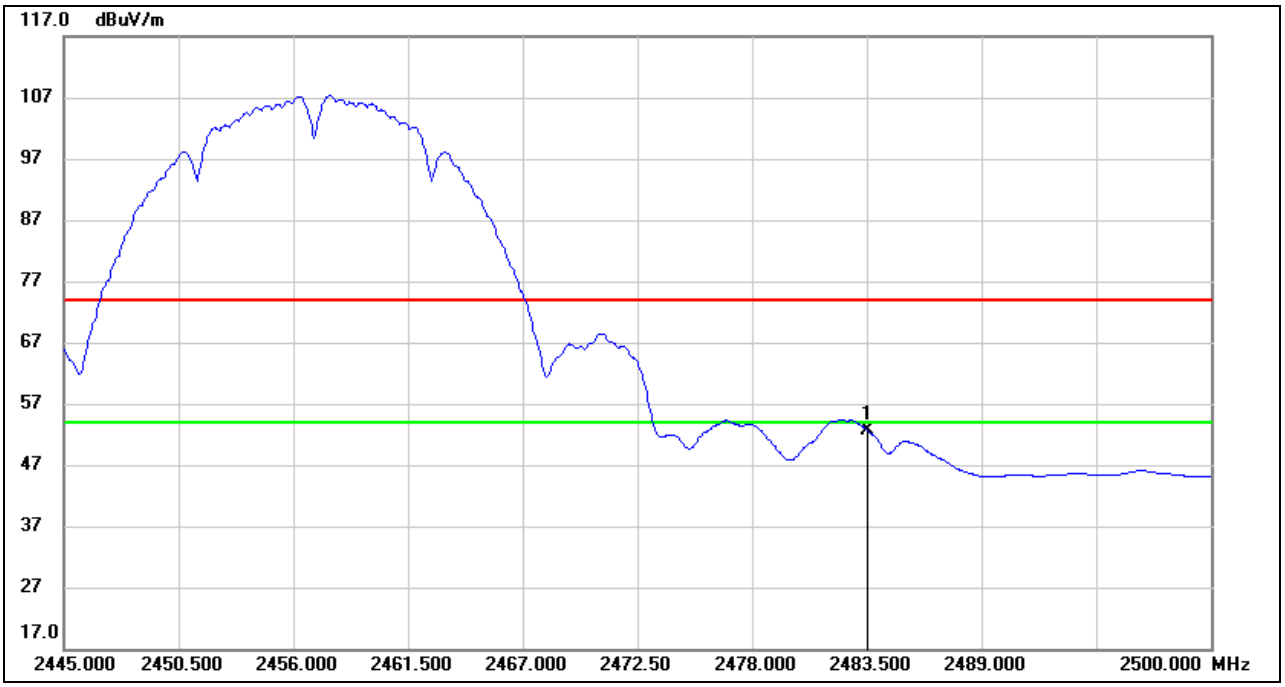
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.33	33.71	62.04	74.00	-11.96	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



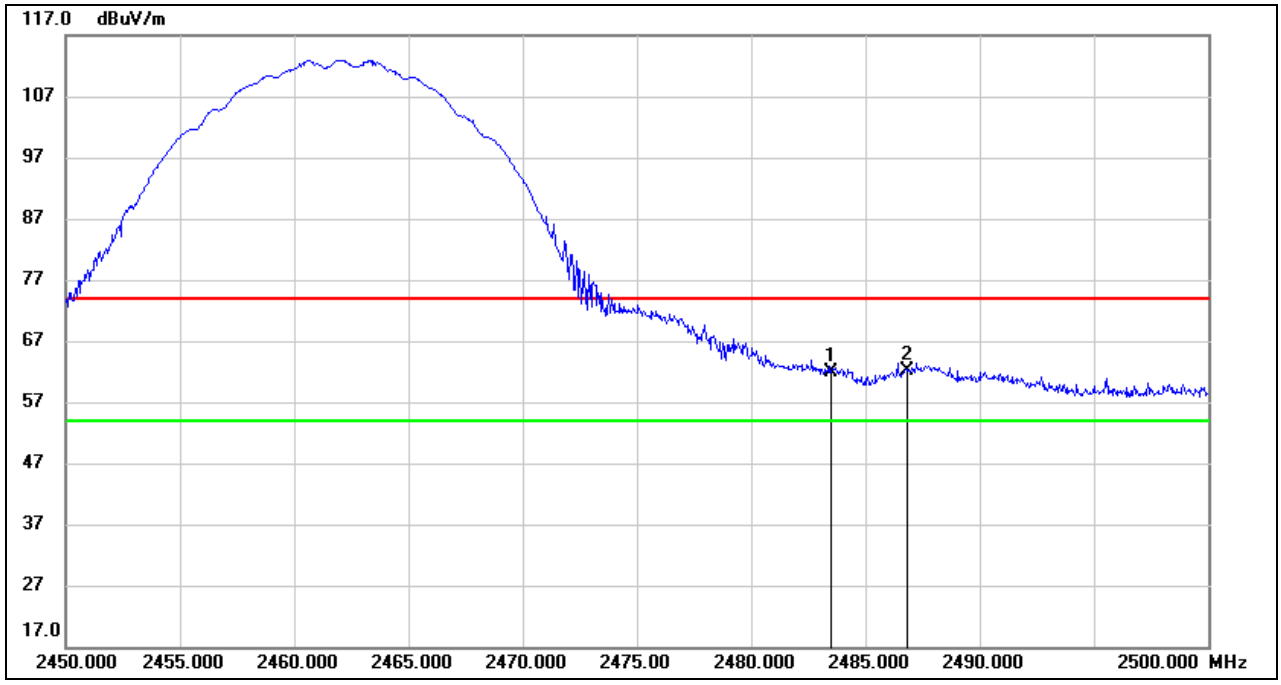
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.02	33.71	52.73	54.00	-1.27	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 11, HORIZONTAL)

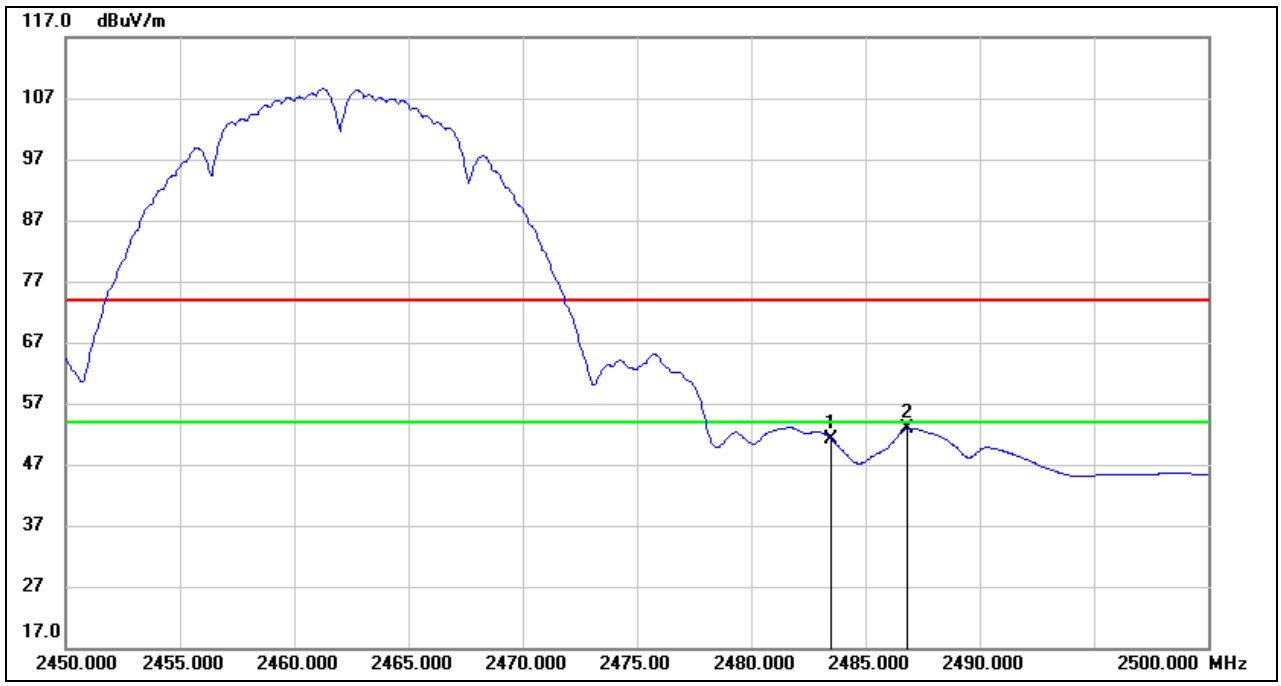
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.18	33.71	61.89	74.00	-12.11	peak
2	2486.850	28.35	33.72	62.07	74.00	-11.93	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	17.49	33.71	51.20	54.00	-2.80	AVG
2	2486.850	19.08	33.72	52.80	54.00	-1.20	AVG

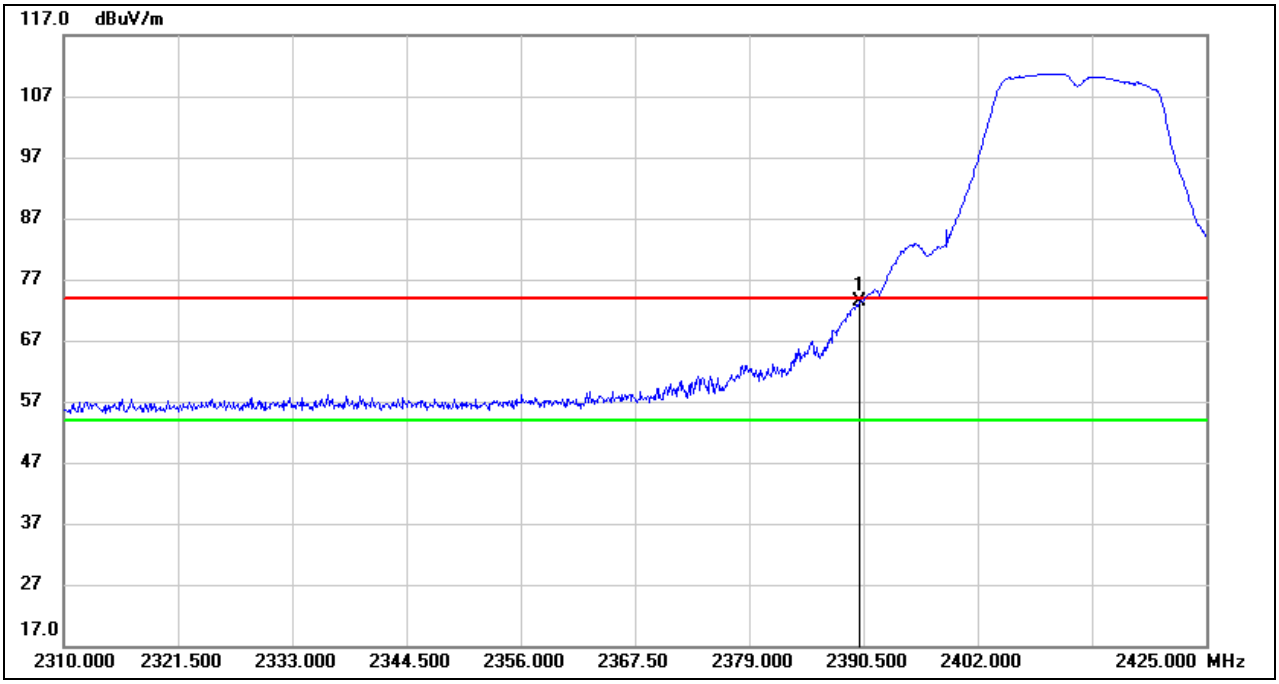
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst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

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

8.1.1. 802.11g MODE

RESTRICTED BANDEDGE (CHANNEL 1, HORIZONTAL)

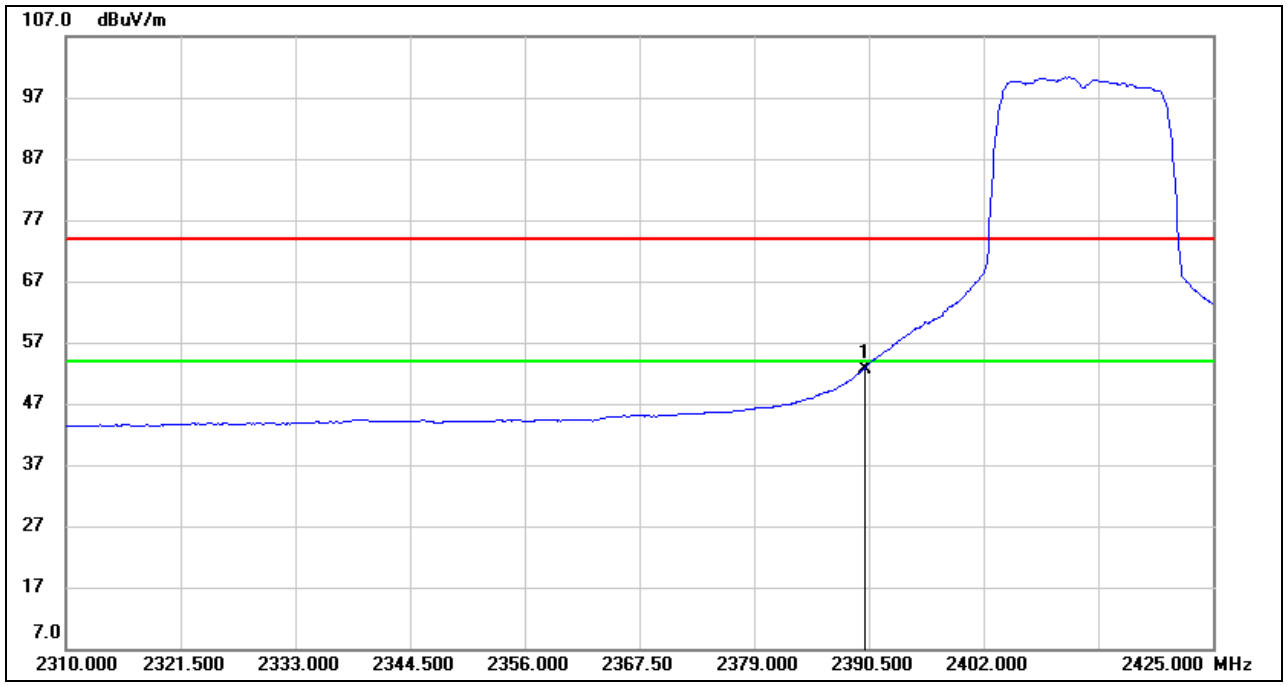
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	40.05	33.35	73.40	74.00	-0.60	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



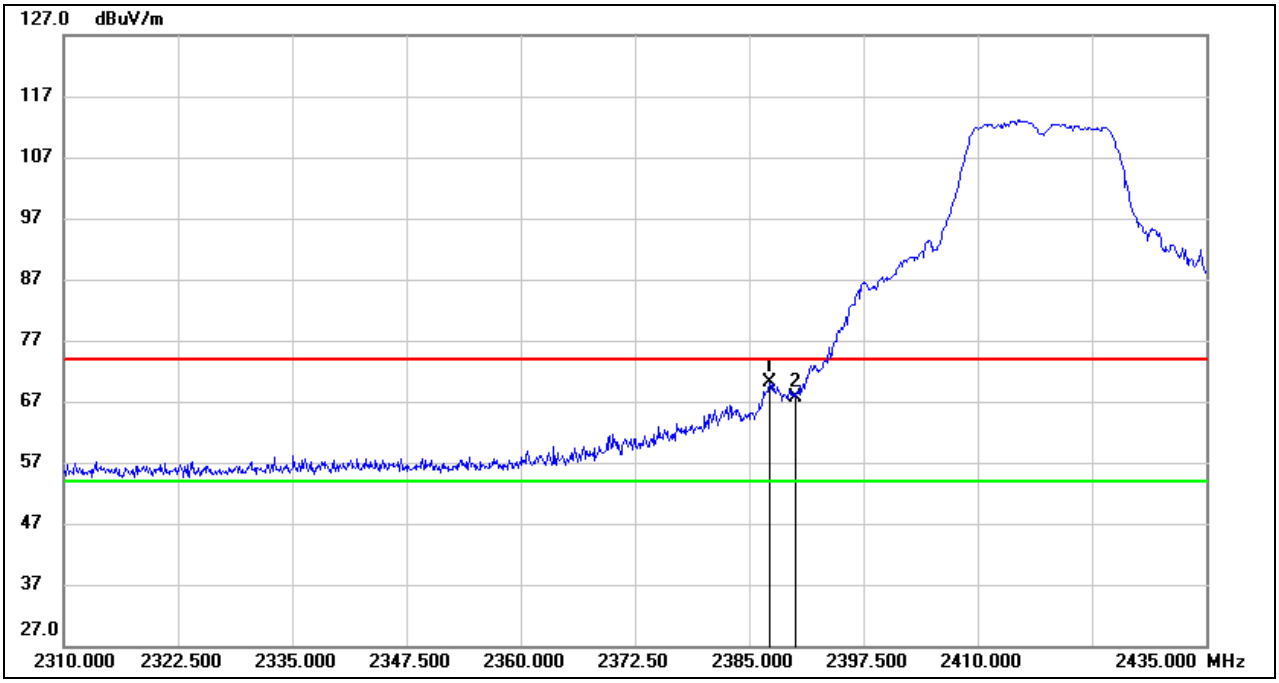
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	19.30	33.35	52.65	54.00	-1.35	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 2, HORIZONTAL)

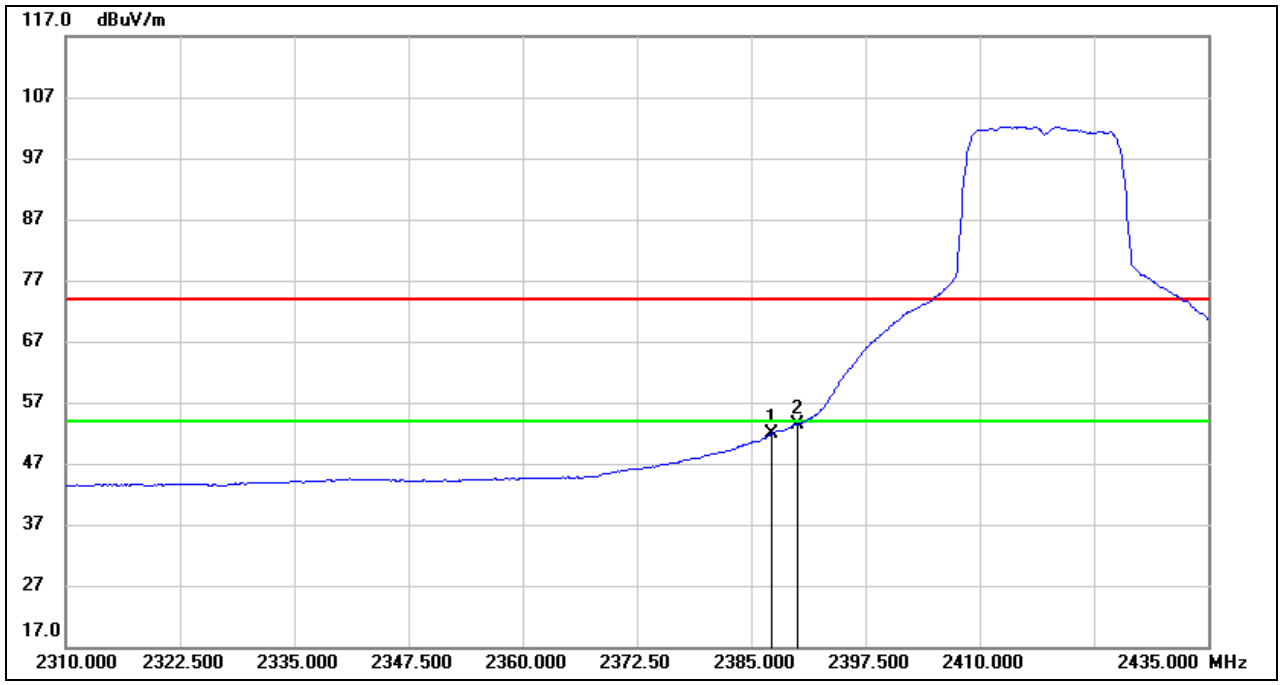
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.250	36.83	33.33	70.16	74.00	-3.84	peak
2	2390.000	34.17	33.35	67.52	74.00	-6.48	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



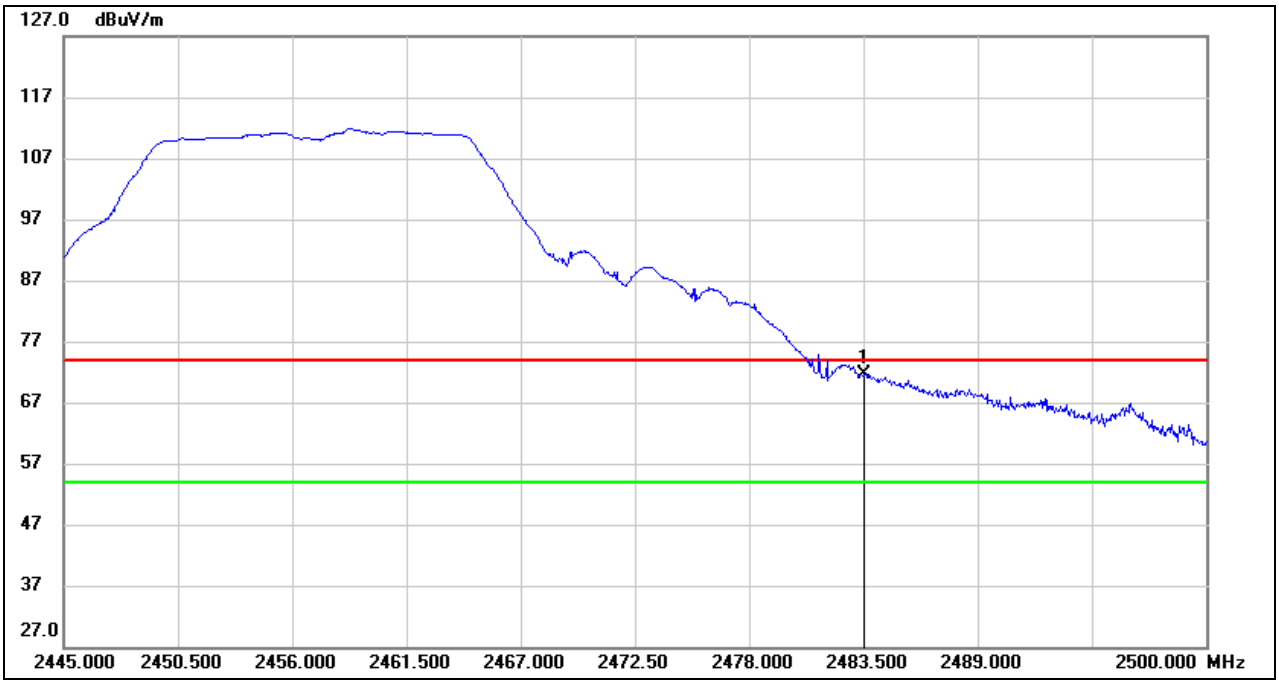
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.250	18.61	33.33	51.94	54.00	-2.06	AVG
2	2390.000	20.14	33.35	53.49	54.00	-0.51	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 10, HORIZONTAL)

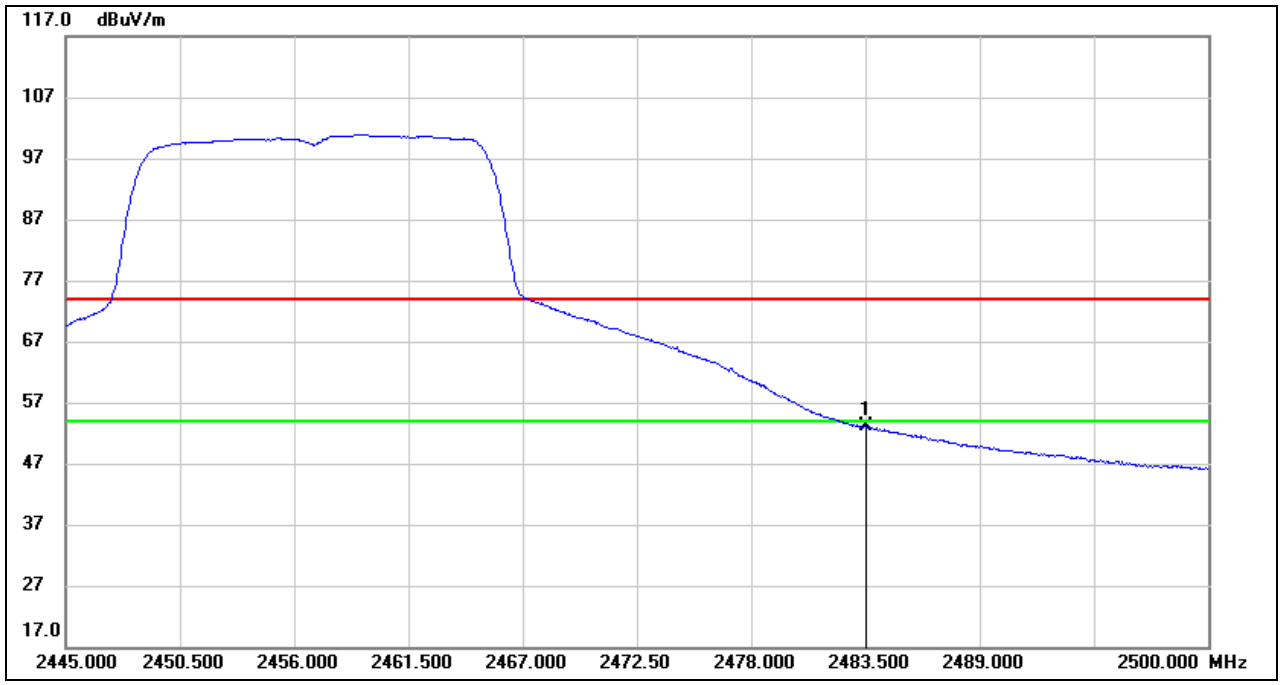
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	37.82	33.71	71.53	74.00	-2.47	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



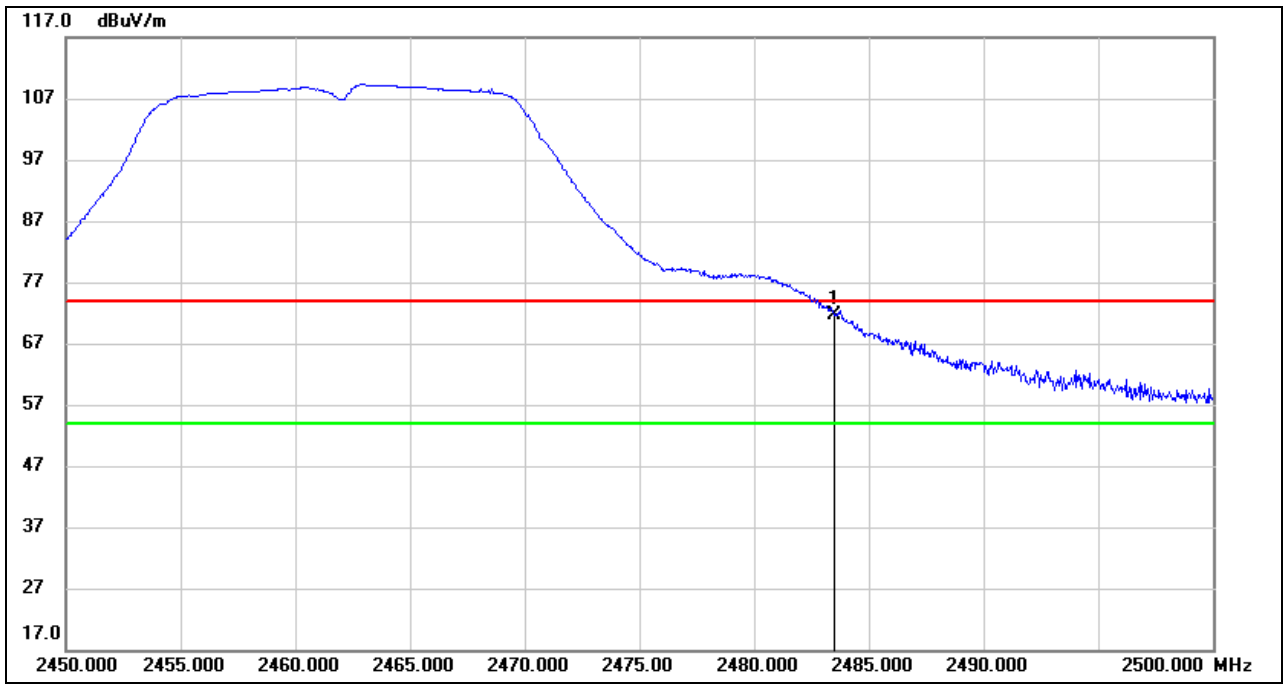
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.32	33.71	53.03	54.00	-0.97	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 11, HORIZONTAL)

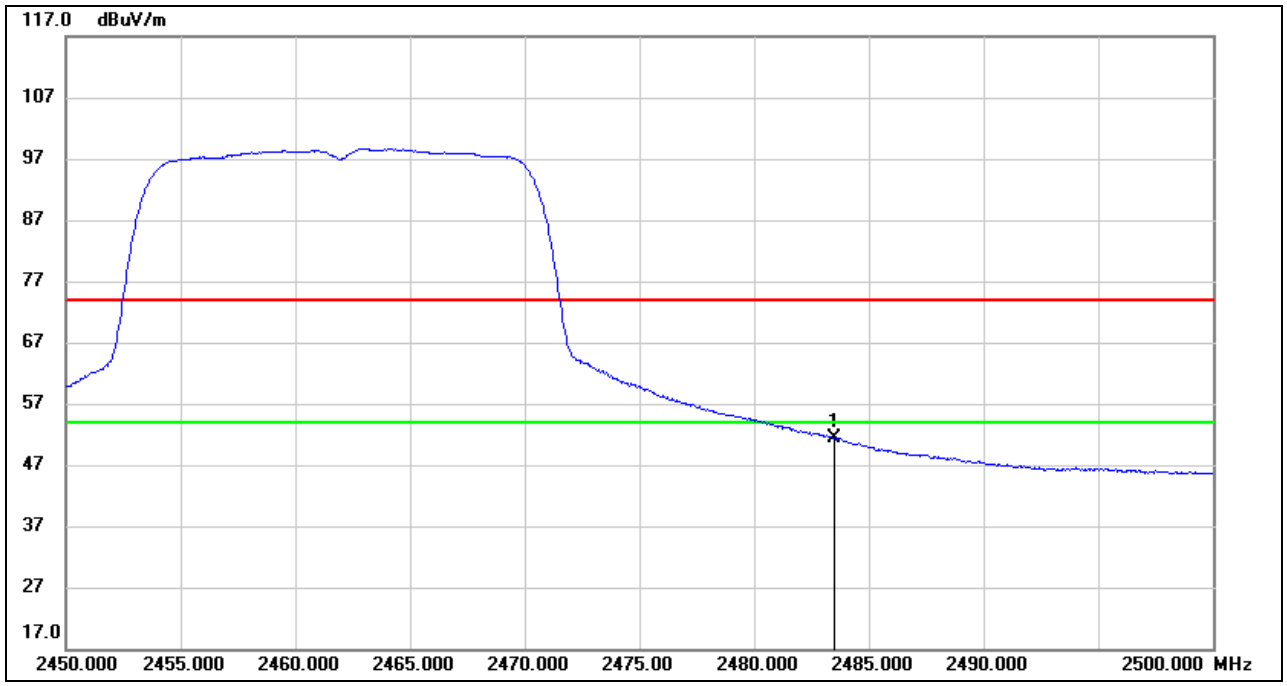
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	37.96	33.71	71.67	54.00	17.67	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. 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	17.68	33.71	51.39	54.00	-2.61	AVG

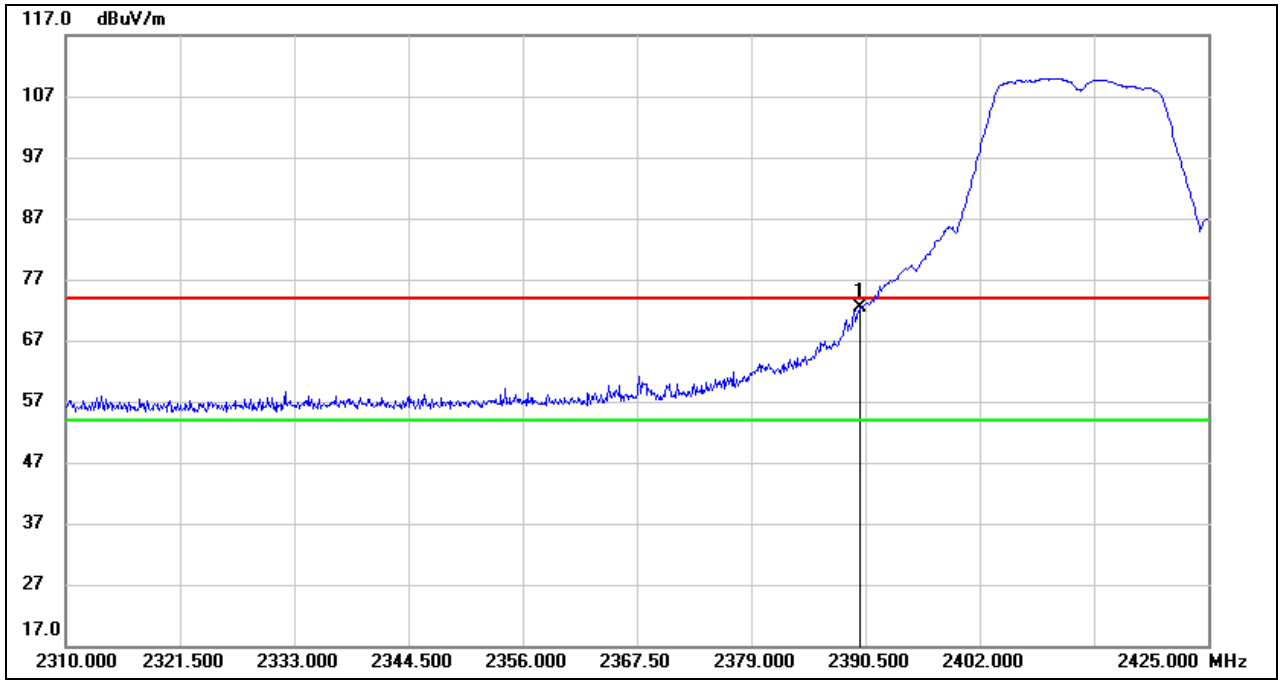
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst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

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

8.1.2. 802.11n HT20 MODE

RESTRICTED BANDEDGE (CHANNEL 1, HORIZONTAL)

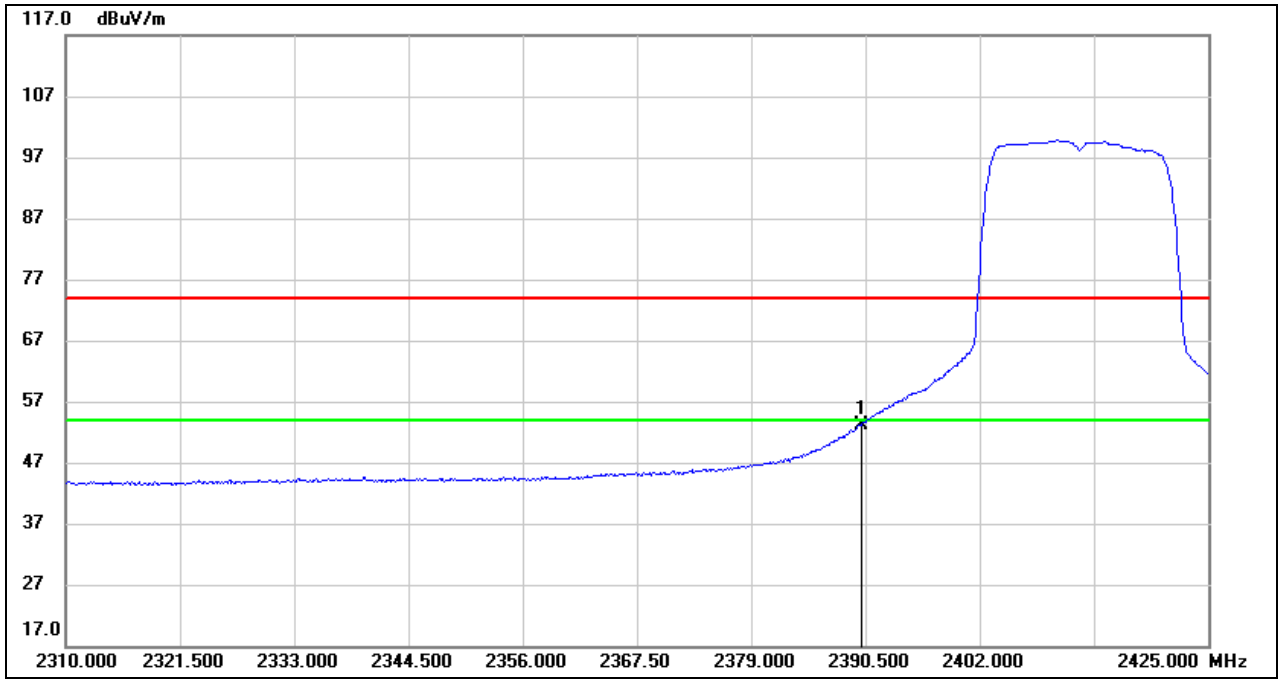
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	38.94	33.35	72.29	74.00	-1.71	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



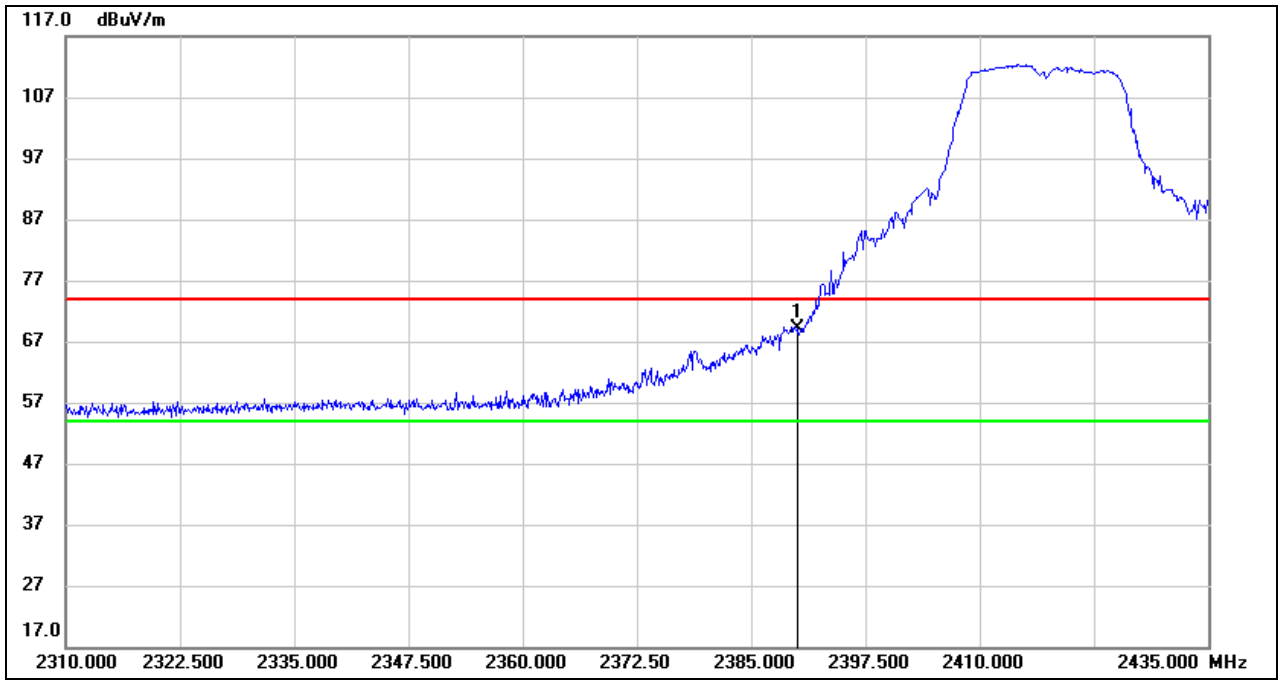
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	19.84	33.35	53.19	54.00	-0.81	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 2, HORIZONTAL)

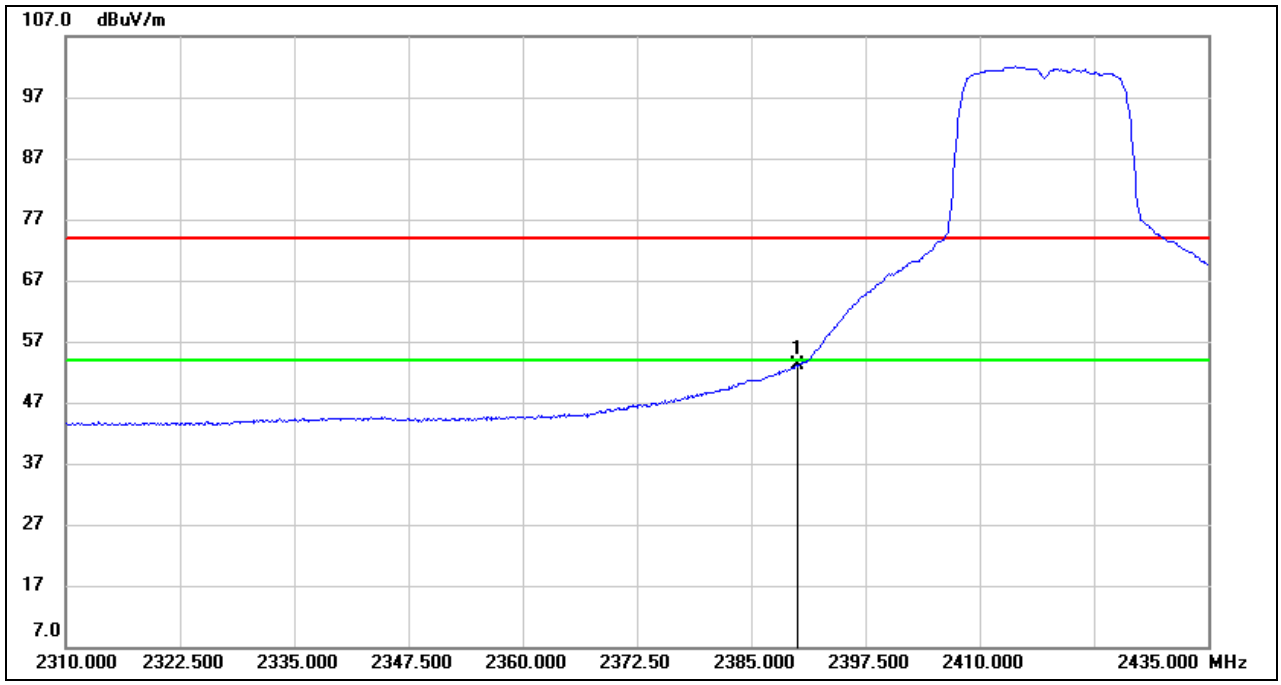
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	35.81	33.35	69.16	74.00	-4.84	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



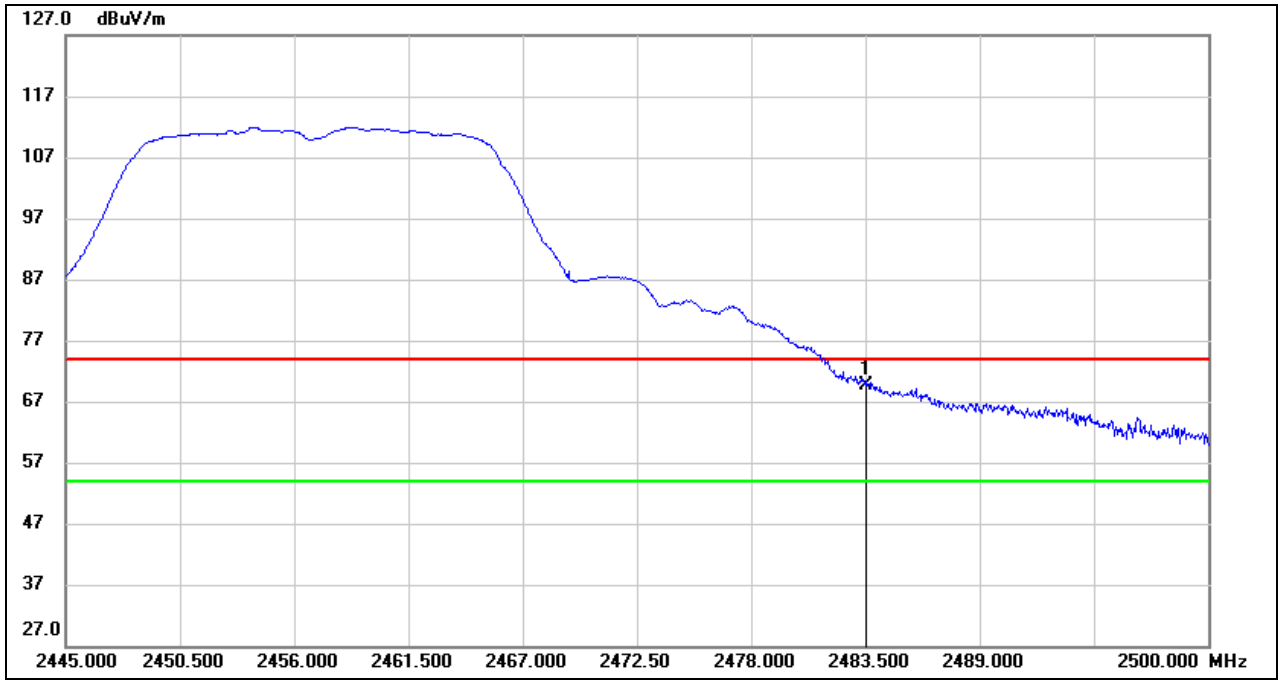
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	19.83	33.35	53.18	54.00	-0.82	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 10, HORIZONTAL)

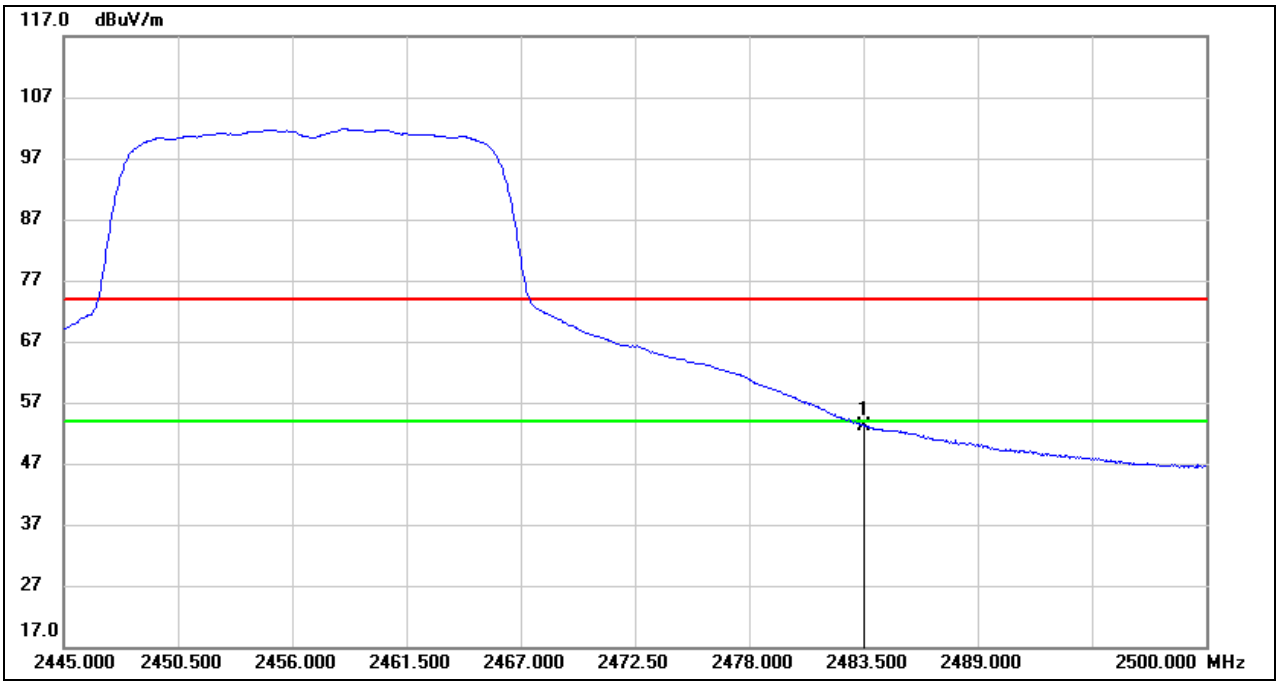
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.03	33.71	69.74	74.00	-4.26	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. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



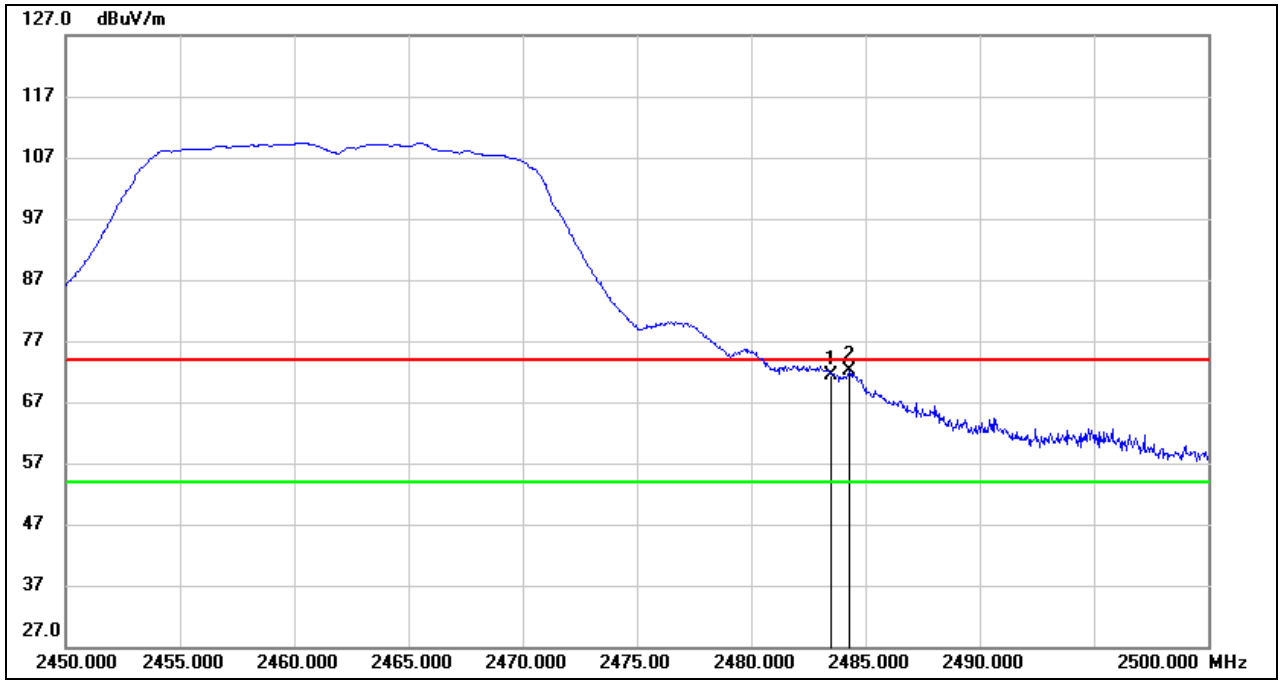
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.54	33.71	53.25	54.00	-0.75	AVG

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

RESTRICTED BANDEDGE (CHANNEL 11, HORIZONTAL)

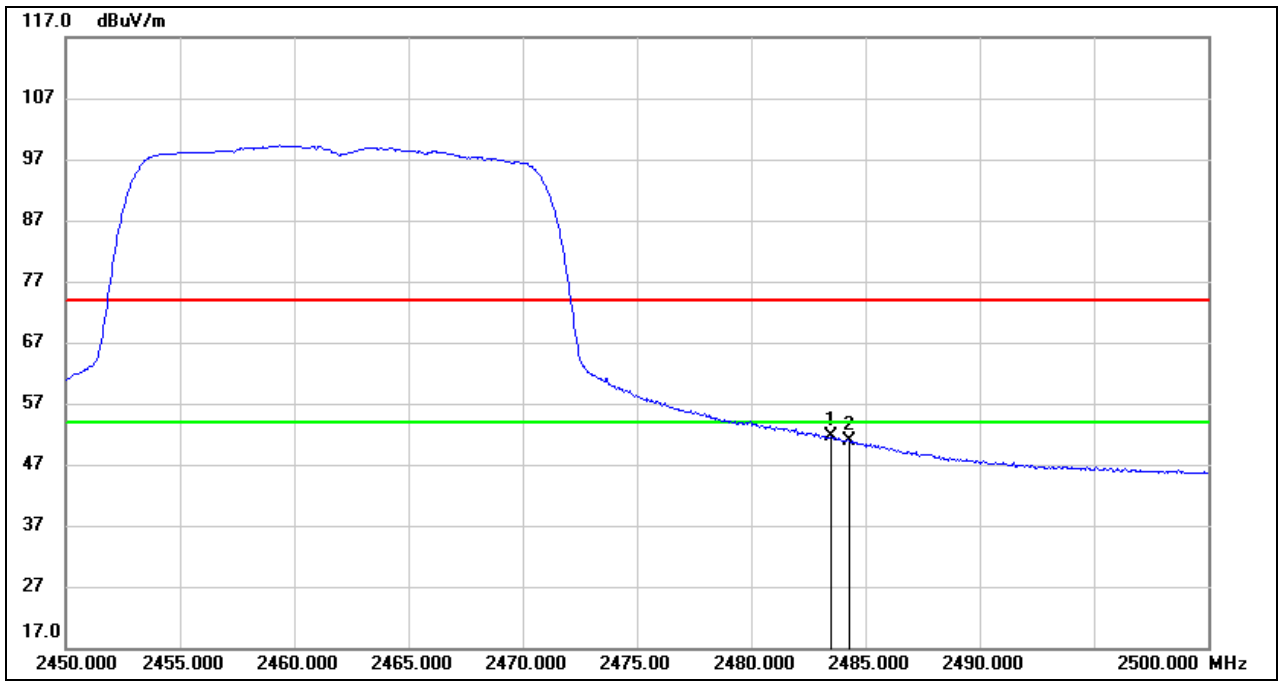
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	37.79	33.71	71.50	74.00	-2.50	peak
2	2484.300	38.49	33.71	72.20	74.00	-1.80	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	17.87	33.71	51.58	54.00	-2.42	AVG
2	2484.300	17.17	33.71	50.88	54.00	-3.12	AVG

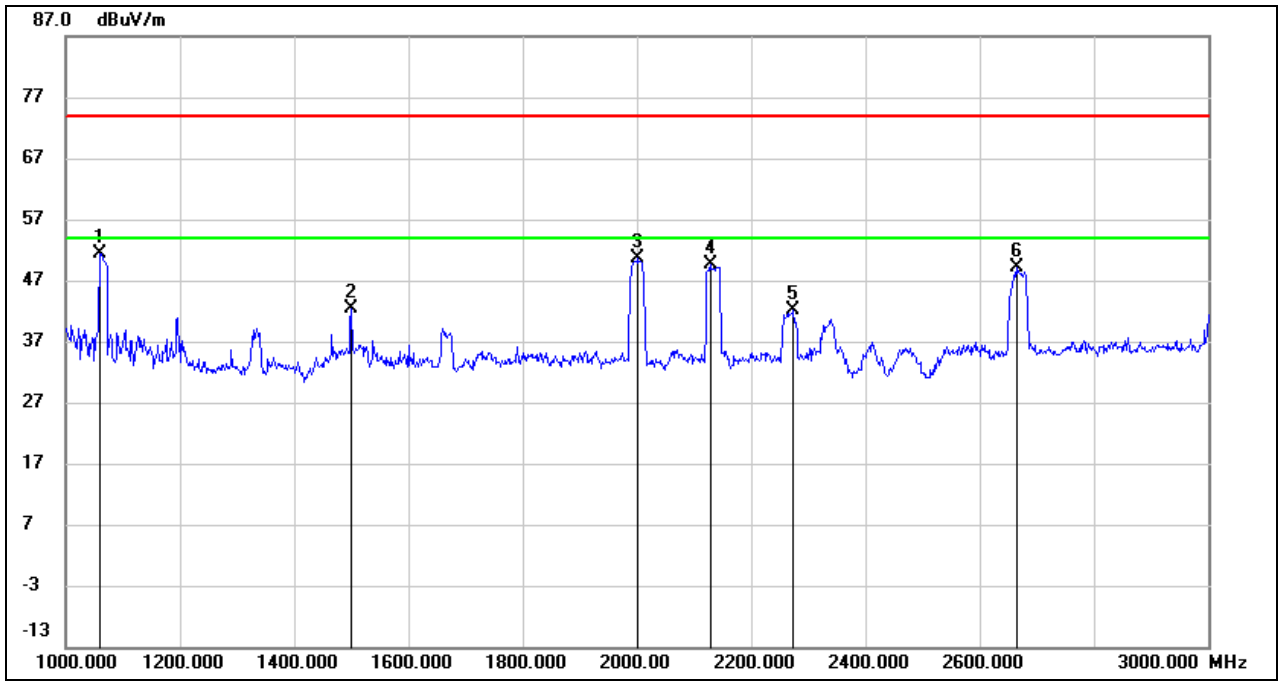
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst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

Note: Both vertical and horizontal had been tested, only the worst data was recorded in the report.

8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

8.2.1. 802.11b MODE

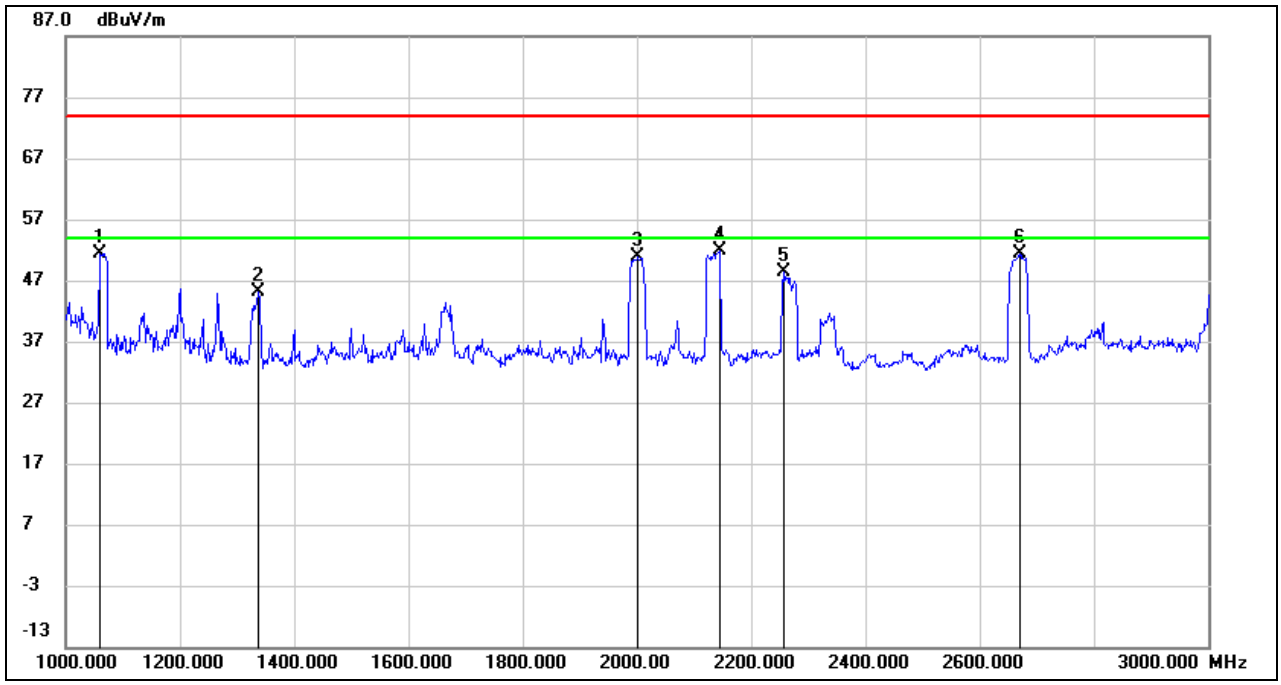
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	65.09	-13.68	51.41	74.00	-22.59	peak
2	1500.000	54.50	-12.23	42.27	74.00	-31.73	peak
3	2002.000	60.76	-10.18	50.58	74.00	-23.42	peak
4	2128.000	59.09	-9.46	49.63	74.00	-24.37	peak
5	2274.000	50.89	-8.81	42.08	74.00	-31.92	peak
6	2664.000	56.58	-7.44	49.14	74.00	-24.86	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.

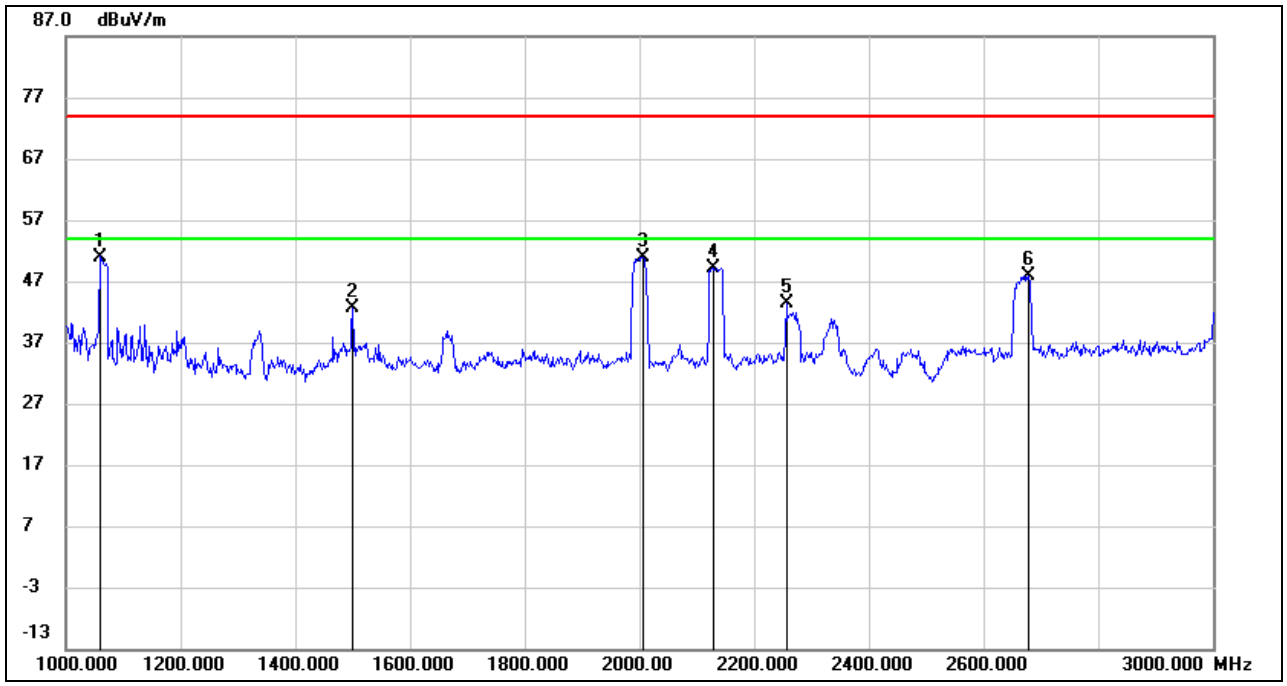
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	65.16	-13.68	51.48	74.00	-22.52	peak
2	1336.000	57.88	-12.80	45.08	74.00	-28.92	peak
3	2002.000	61.02	-10.18	50.84	74.00	-23.16	peak
4	2144.000	61.34	-9.37	51.97	74.00	-22.03	peak
5	2258.000	57.19	-8.86	48.33	74.00	-25.67	peak
6	2670.000	58.67	-7.41	51.26	74.00	-22.74	peak

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

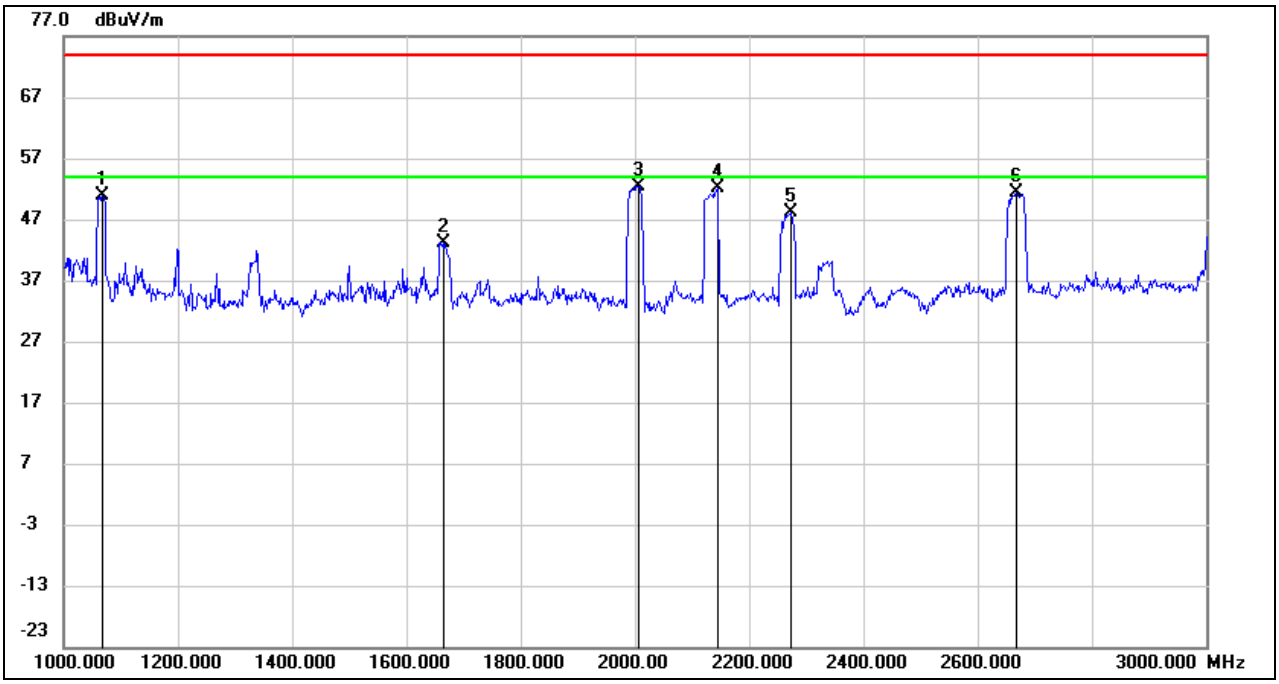
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	64.68	-13.68	51.00	74.00	-23.00	peak
2	1500.000	54.74	-12.23	42.51	74.00	-31.49	peak
3	2006.000	61.09	-10.15	50.94	74.00	-23.06	peak
4	2128.000	58.63	-9.46	49.17	74.00	-24.83	peak
5	2256.000	52.26	-8.86	43.40	74.00	-30.60	peak
6	2678.000	55.15	-7.35	47.80	74.00	-26.20	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.

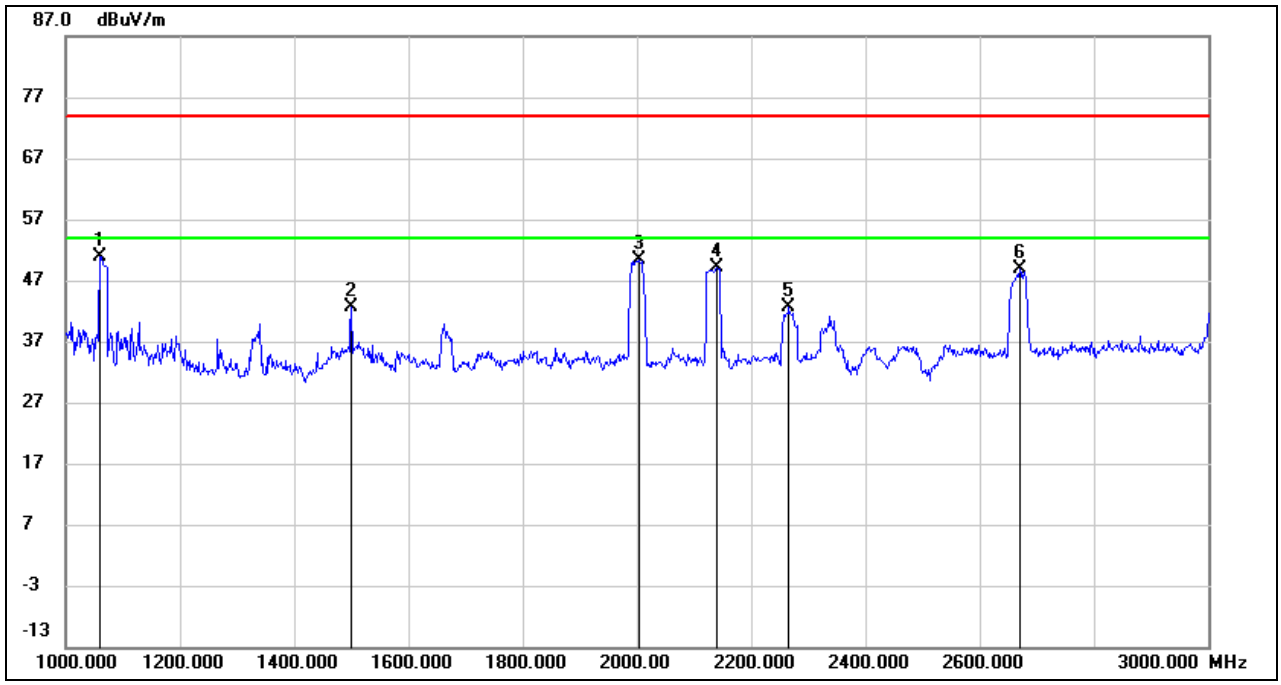
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1068.000	64.40	-13.64	50.76	74.00	-23.24	peak
2	1664.000	54.14	-11.08	43.06	74.00	-30.94	peak
3	2006.000	62.55	-10.15	52.40	74.00	-21.60	peak
4	2146.000	61.48	-9.36	52.12	74.00	-21.88	peak
5	2274.000	56.95	-8.81	48.14	74.00	-25.86	peak
6	2668.000	58.78	-7.42	51.36	74.00	-22.64	peak

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

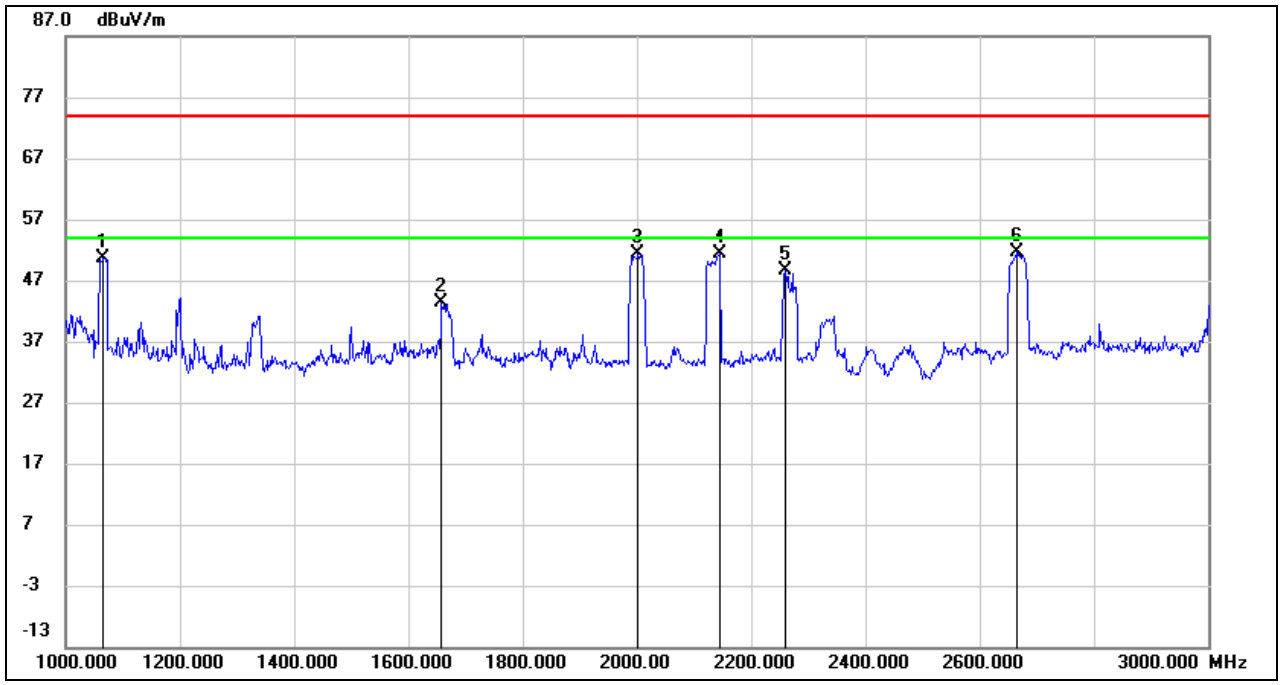
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	64.58	-13.68	50.90	74.00	-23.10	peak
2	1500.000	54.91	-12.23	42.68	74.00	-31.32	peak
3	2004.000	60.48	-10.17	50.31	74.00	-23.69	peak
4	2140.000	58.49	-9.40	49.09	74.00	-24.91	peak
5	2266.000	51.37	-8.83	42.54	74.00	-31.46	peak
6	2670.000	56.41	-7.41	49.00	74.00	-25.00	peak

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

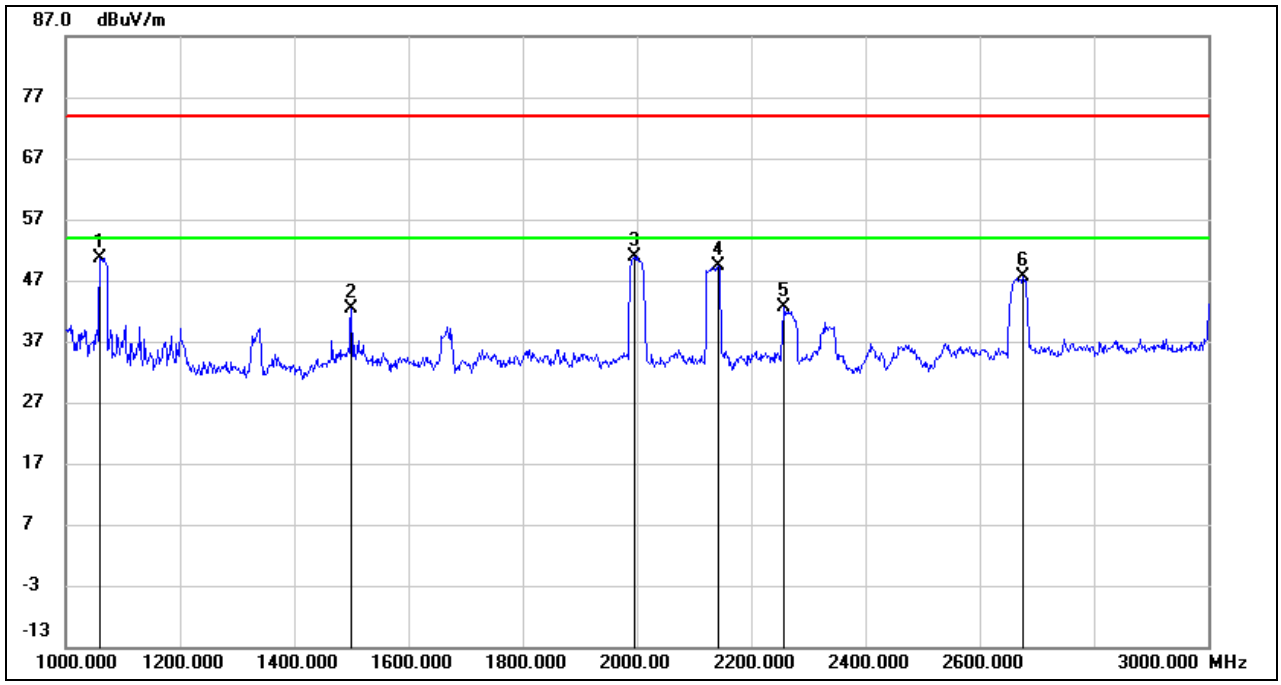
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1066.000	64.21	-13.65	50.56	74.00	-23.44	peak
2	1658.000	54.55	-11.12	43.43	74.00	-30.57	peak
3	2002.000	61.46	-10.18	51.28	74.00	-22.72	peak
4	2144.000	60.87	-9.37	51.50	74.00	-22.50	peak
5	2260.000	57.44	-8.85	48.59	74.00	-25.41	peak
6	2666.000	59.11	-7.43	51.68	74.00	-22.32	peak

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

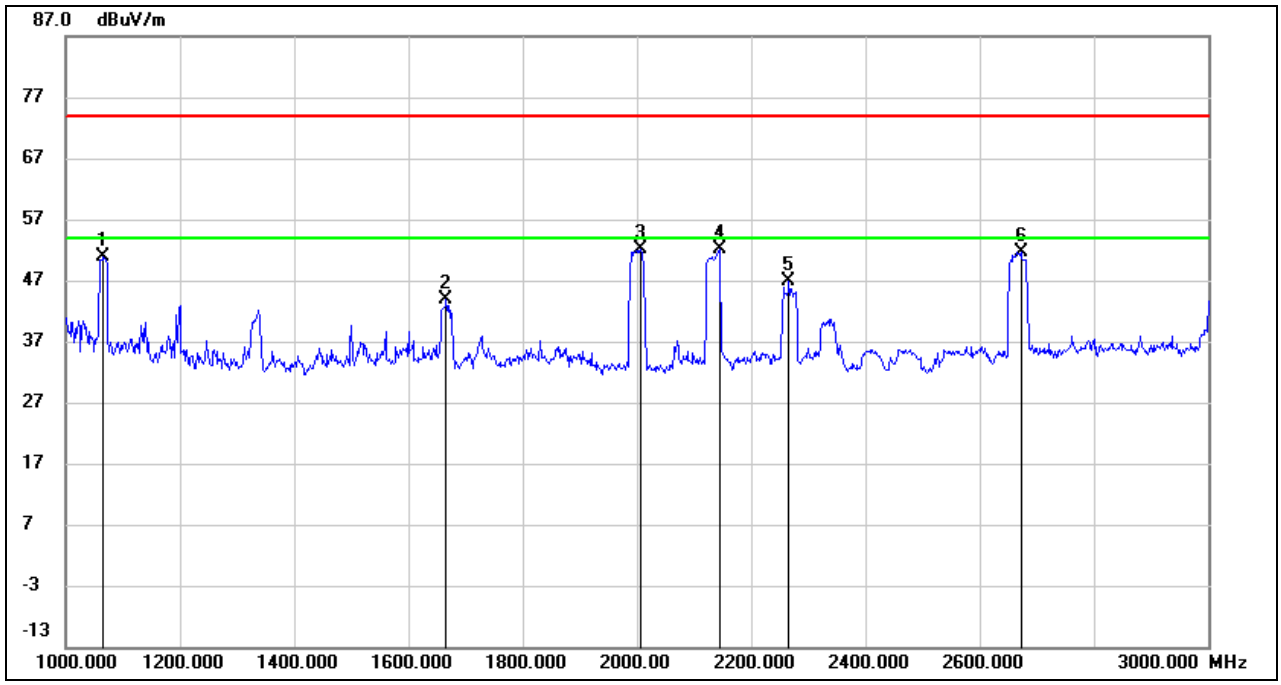
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	64.42	-13.68	50.74	74.00	-23.26	peak
2	1500.000	54.65	-12.23	42.42	74.00	-31.58	peak
3	1996.000	60.98	-10.19	50.79	74.00	-23.21	peak
4	2142.000	58.85	-9.37	49.48	74.00	-24.52	peak
5	2258.000	51.52	-8.86	42.66	74.00	-31.34	peak
6	2676.000	54.91	-7.37	47.54	74.00	-26.46	peak

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

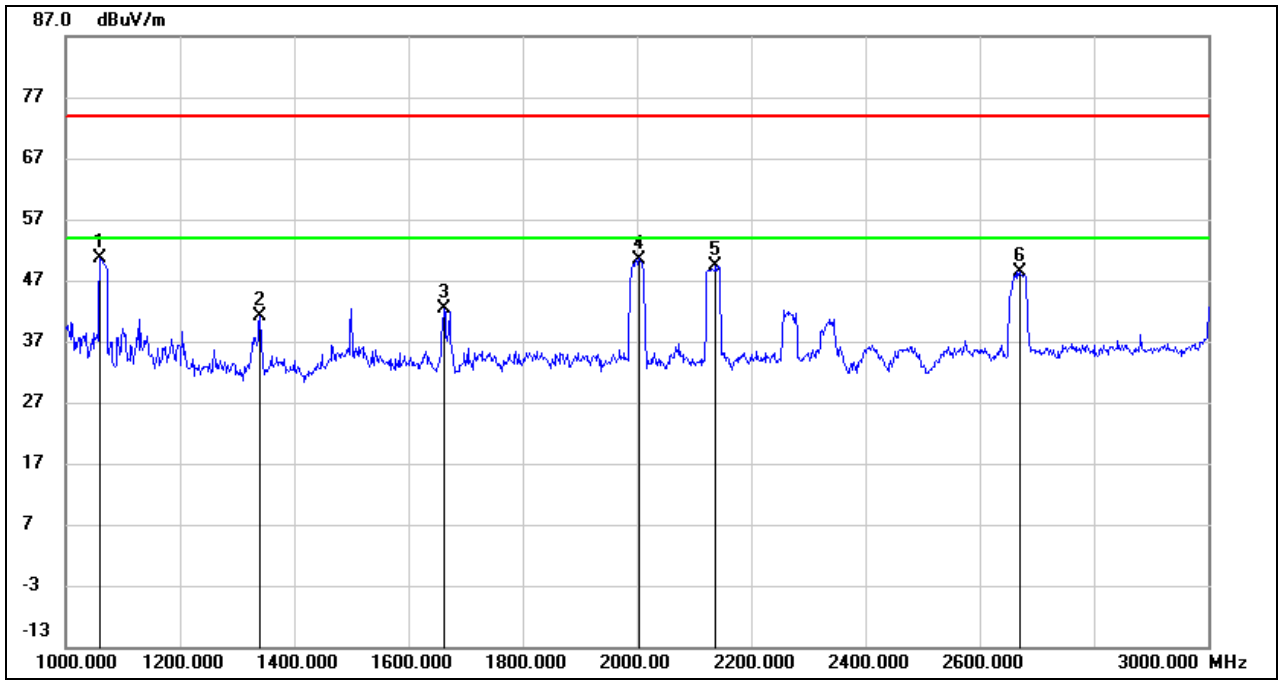
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1066.000	64.41	-13.65	50.76	74.00	-23.24	peak
2	1666.000	54.98	-11.06	43.92	74.00	-30.08	peak
3	2006.000	62.23	-10.15	52.08	74.00	-21.92	peak
4	2144.000	61.47	-9.37	52.10	74.00	-21.90	peak
5	2266.000	55.60	-8.83	46.77	74.00	-27.23	peak
6	2672.000	59.05	-7.39	51.66	74.00	-22.34	peak

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

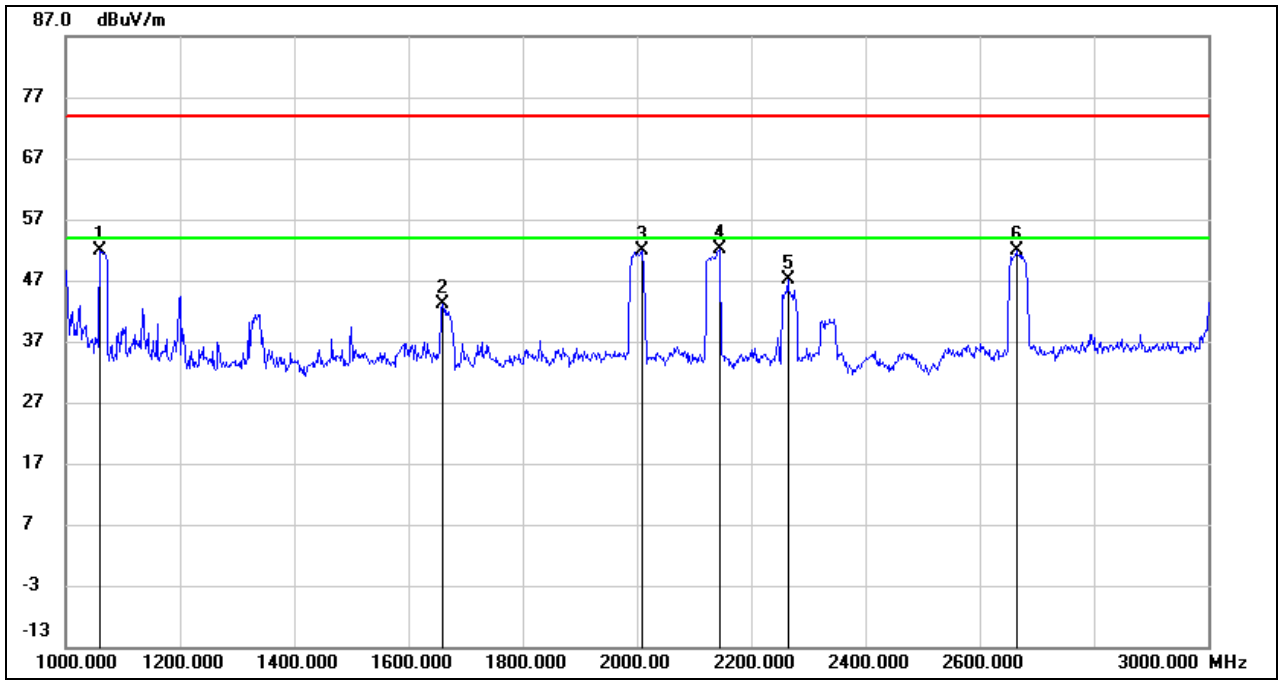
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	64.21	-13.68	50.53	74.00	-23.47	peak
2	1340.000	53.96	-12.79	41.17	74.00	-32.83	peak
3	1662.000	53.47	-11.09	42.38	74.00	-31.62	peak
4	2004.000	60.67	-10.17	50.50	74.00	-23.50	peak
5	2138.000	58.74	-9.40	49.34	74.00	-24.66	peak
6	2670.000	55.82	-7.41	48.41	74.00	-25.59	peak

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

HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1060.000	65.51	-13.68	51.83	74.00	-22.17	peak
2	1660.000	54.15	-11.10	43.05	74.00	-30.95	peak
3	2008.000	61.94	-10.15	51.79	74.00	-22.21	peak
4	2144.000	61.53	-9.37	52.16	74.00	-21.84	peak
5	2264.000	55.96	-8.84	47.12	74.00	-26.88	peak
6	2664.000	59.23	-7.44	51.79	74.00	-22.21	peak

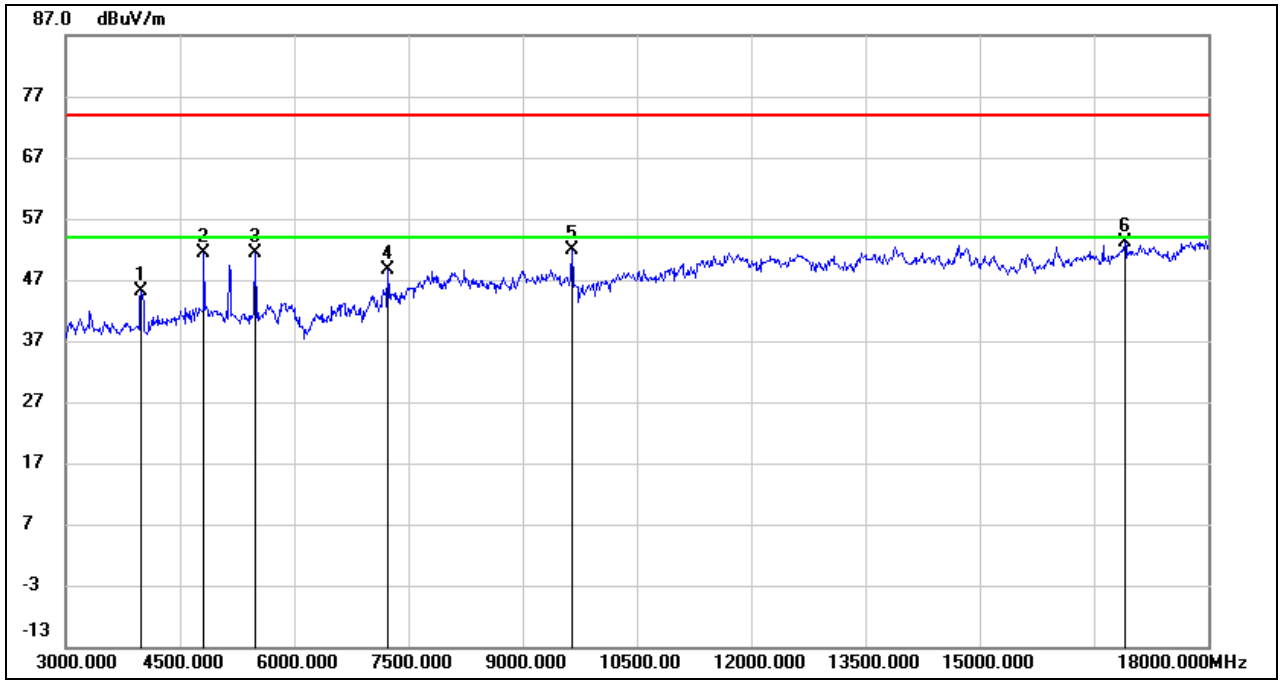
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

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

8.3. SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)

8.3.1. 802.11b MODE

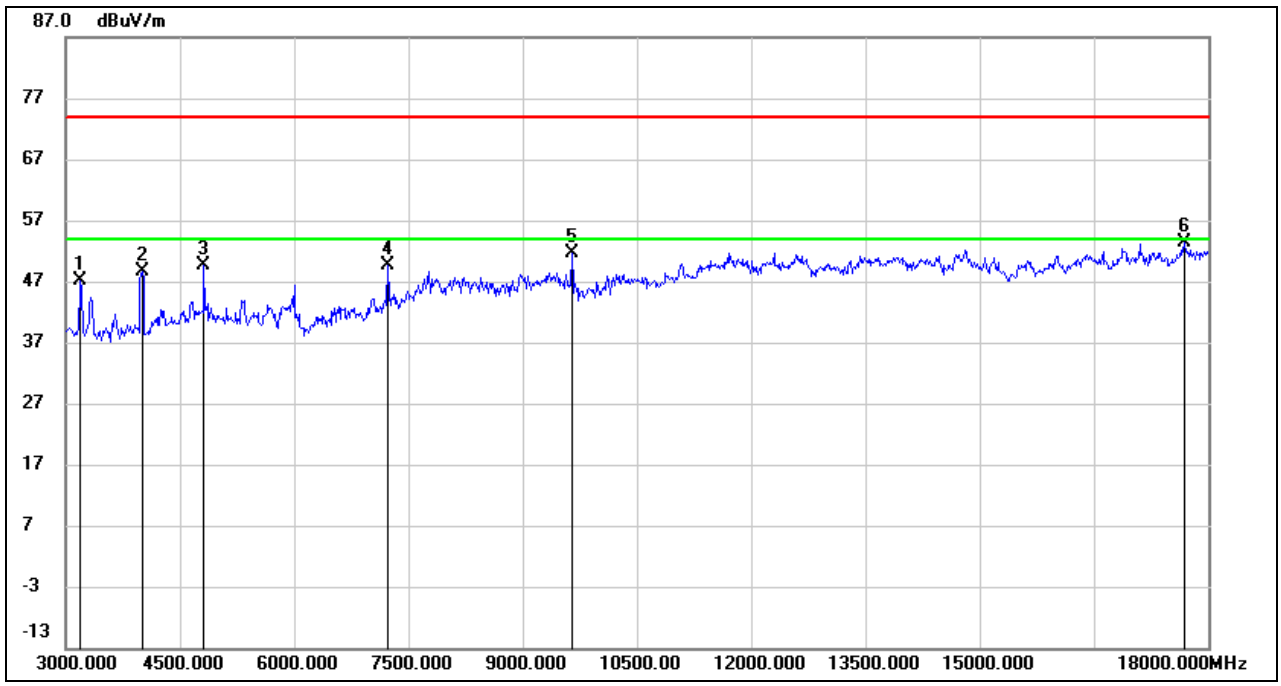
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	47.74	-2.51	45.23	74.00	-28.77	peak
2	4815.000	49.90	1.38	51.28	74.00	-22.72	peak
3	5490.000	48.00	3.32	51.32	74.00	-22.68	peak
4	7230.000	41.32	7.28	48.60	74.00	-25.40	peak
5	9645.000	41.05	10.81	51.86	74.00	-22.14	peak
6	16905.000	31.68	21.55	53.23	74.00	-20.77	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.

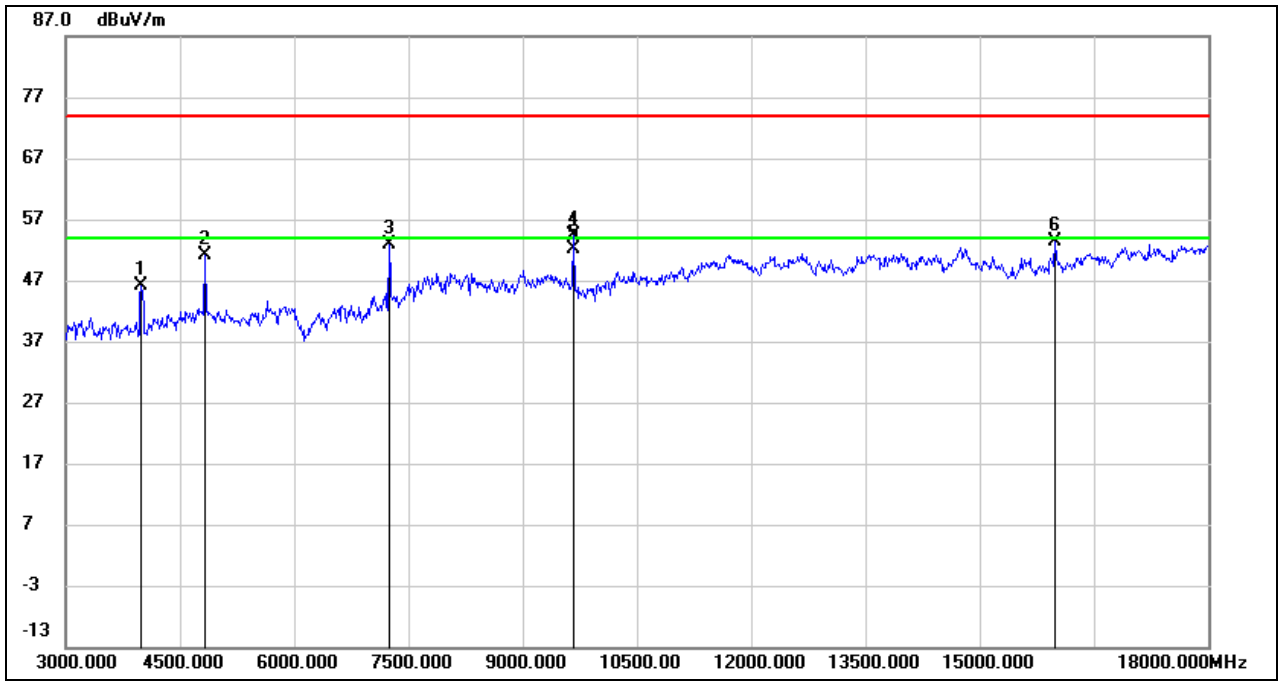
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	50.94	-3.91	47.03	74.00	-26.97	peak
2	4005.000	51.10	-2.46	48.64	74.00	-25.36	peak
3	4815.000	48.21	1.38	49.59	74.00	-24.41	peak
4	7230.000	42.42	7.28	49.70	74.00	-24.30	peak
5	9645.000	40.83	10.81	51.64	74.00	-22.36	peak
6	17685.000	30.05	23.36	53.41	74.00	-20.59	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.

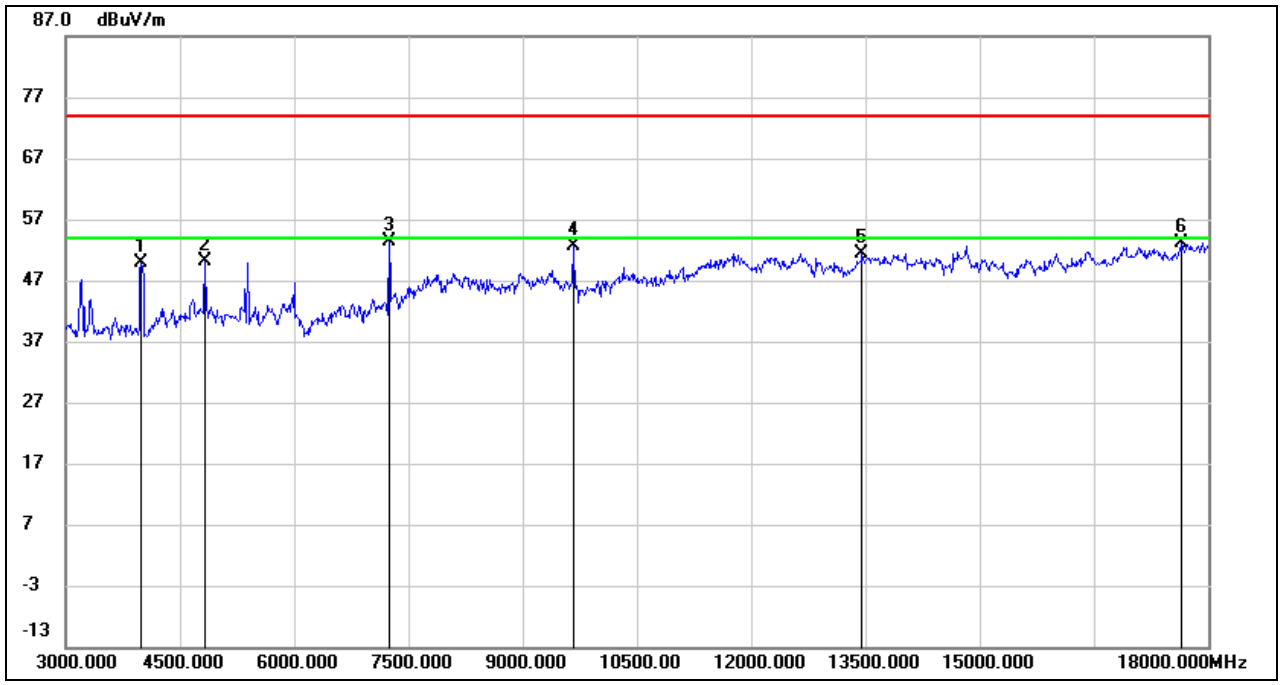
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	48.60	-2.51	46.09	74.00	-27.91	peak
2	4830.000	49.65	1.37	51.02	74.00	-22.98	peak
3	7245.000	45.61	7.25	52.86	74.00	-21.14	peak
4	9660.000	43.54	10.74	54.28	74.00	-19.72	peak
5	9660.000	41.42	10.74	52.16	54.00	-1.84	AVG
6	15990.000	34.90	18.39	53.29	74.00	-20.71	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.

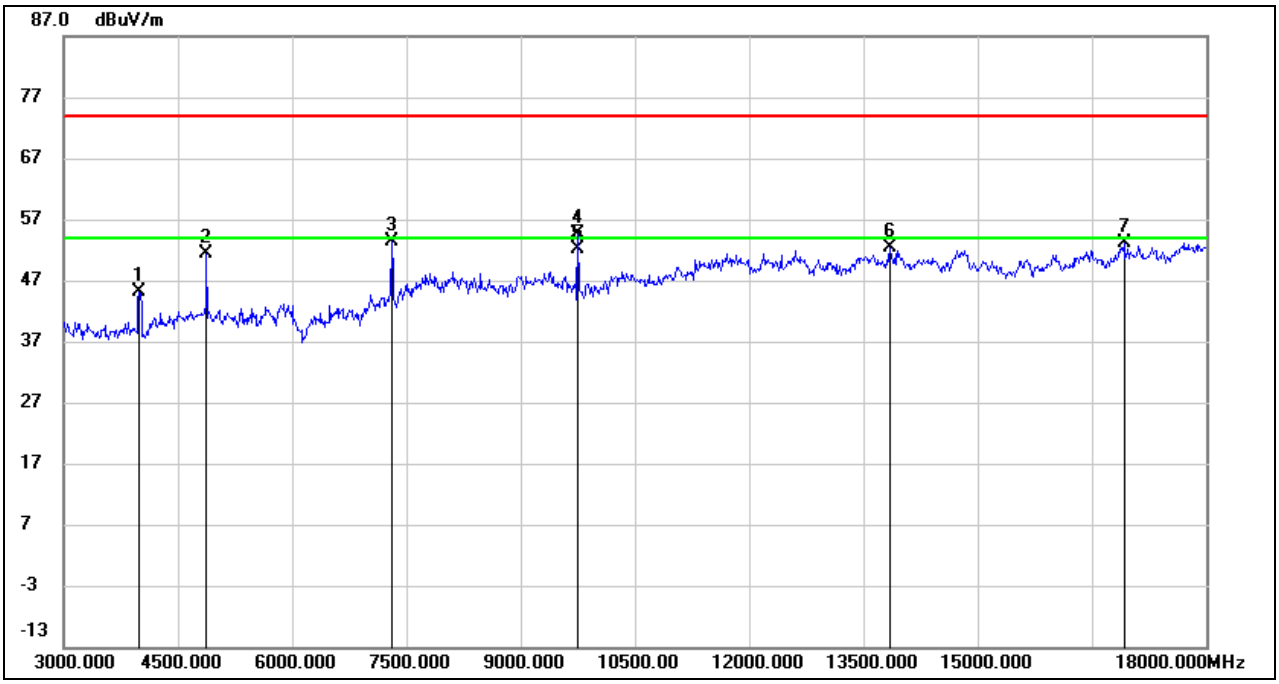
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	52.49	-2.51	49.98	74.00	-24.02	peak
2	4830.000	48.65	1.37	50.02	74.00	-23.98	peak
3	7245.000	46.16	7.25	53.41	74.00	-20.59	peak
4	9660.000	41.77	10.74	52.51	74.00	-21.49	peak
5	13455.000	34.21	17.14	51.35	74.00	-22.65	peak
6	17655.000	29.98	23.14	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.

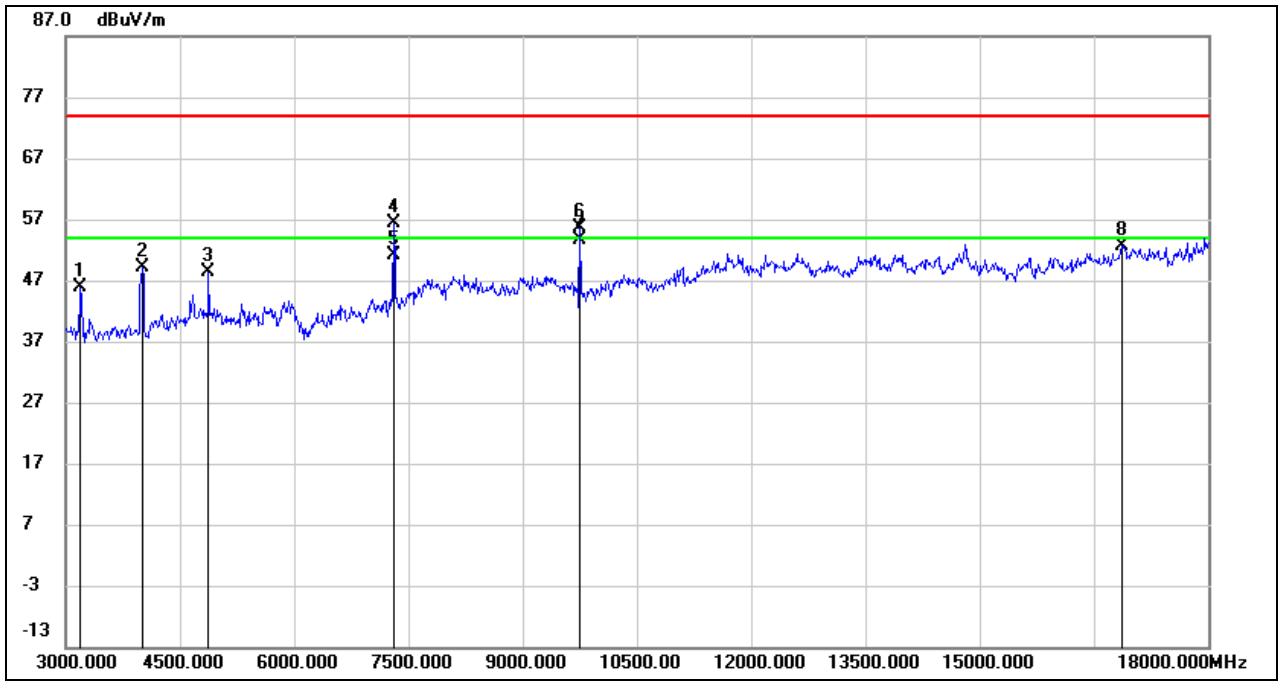
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	47.59	-2.51	45.08	74.00	-28.92	peak
2	4875.000	50.11	1.32	51.43	74.00	-22.57	peak
3	7305.000	46.18	7.14	53.32	74.00	-20.68	peak
4	9750.000	44.25	10.29	54.54	74.00	-19.46	peak
5	9750.000	41.78	10.29	52.07	54.00	-1.93	AVG
6	13845.000	34.86	17.57	52.43	74.00	-21.57	peak
7	16920.000	31.55	21.51	53.06	74.00	-20.94	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.

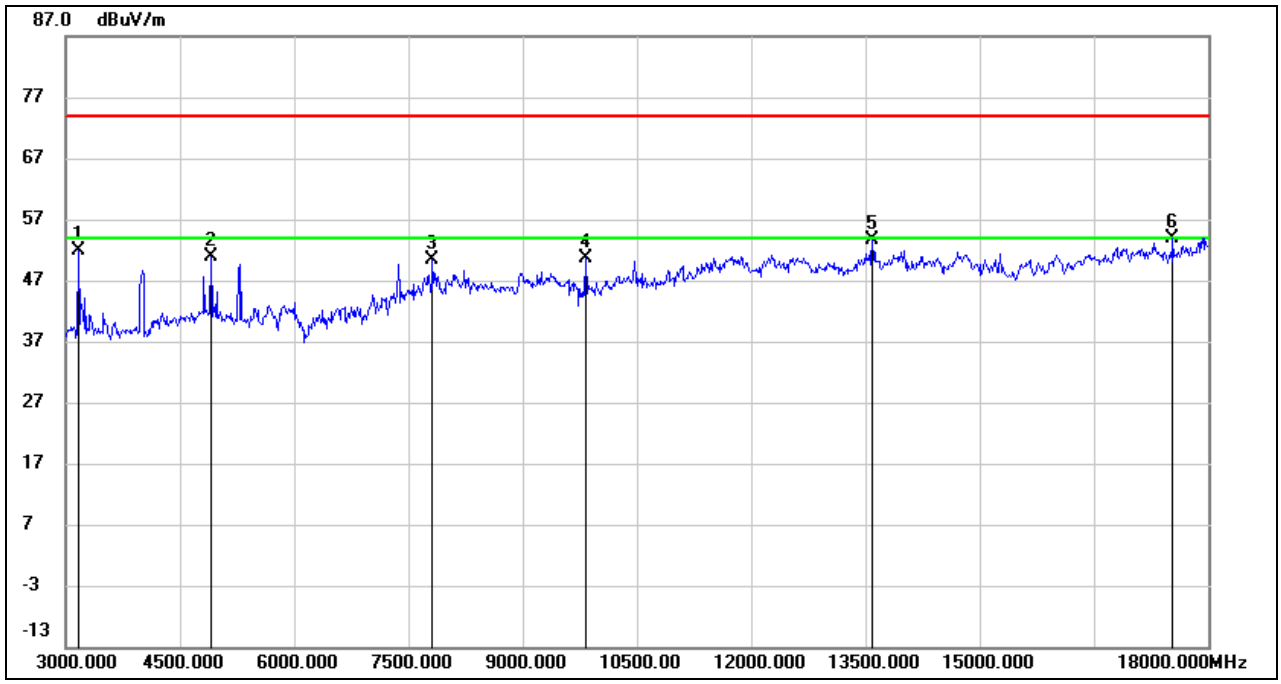
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	49.78	-3.91	45.87	74.00	-28.13	peak
2	4005.000	51.61	-2.46	49.15	74.00	-24.85	peak
3	4875.000	46.96	1.32	48.28	74.00	-25.72	peak
4	7305.000	49.30	7.14	56.44	74.00	-17.56	peak
5	7305.000	43.92	7.14	51.06	54.00	-2.94	AVG
6	9750.000	45.32	10.29	55.61	74.00	-18.39	peak
7	9750.000	43.46	10.29	53.75	54.00	-0.25	AVG
8	16860.000	31.52	21.22	52.74	74.00	-21.26	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.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

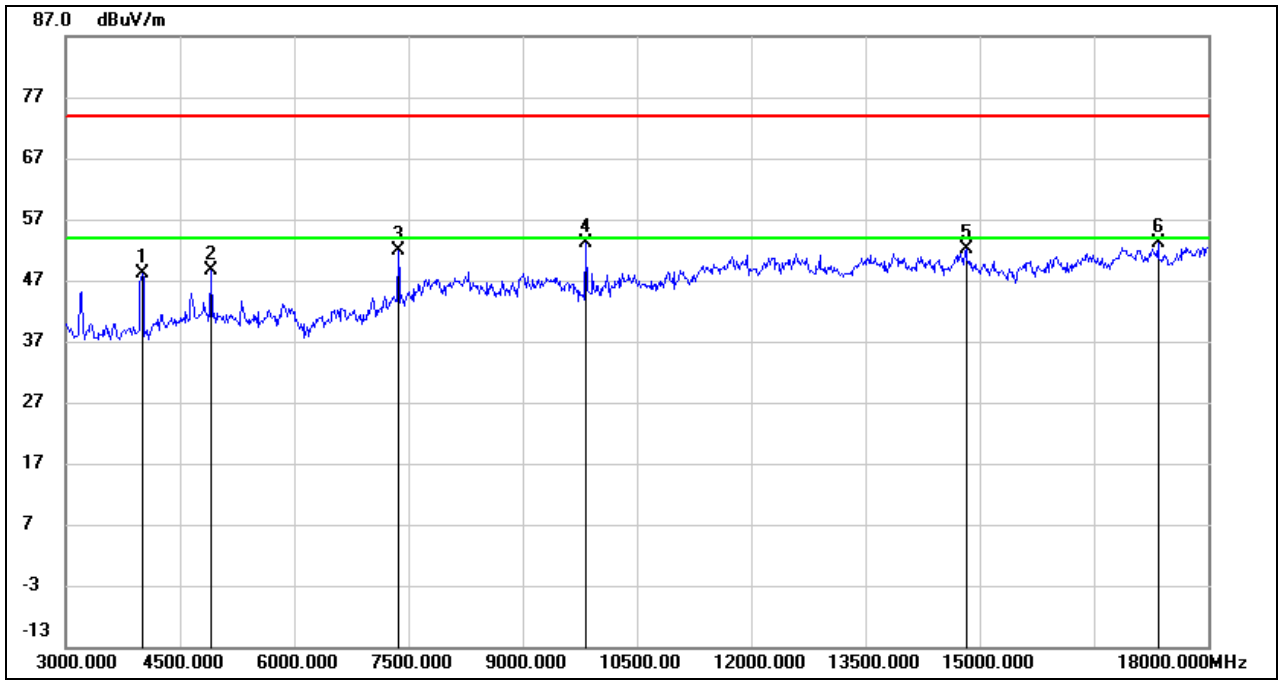
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3165.000	55.66	-3.70	51.96	74.00	-22.04	peak
2	4905.000	49.53	1.33	50.86	74.00	-23.14	peak
3	7815.000	41.03	9.28	50.31	74.00	-23.69	peak
4	9825.000	40.41	10.32	50.73	74.00	-23.27	peak
5	13590.000	36.50	17.11	53.61	74.00	-20.39	peak
6	17535.000	31.68	22.28	53.96	74.00	-20.04	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.

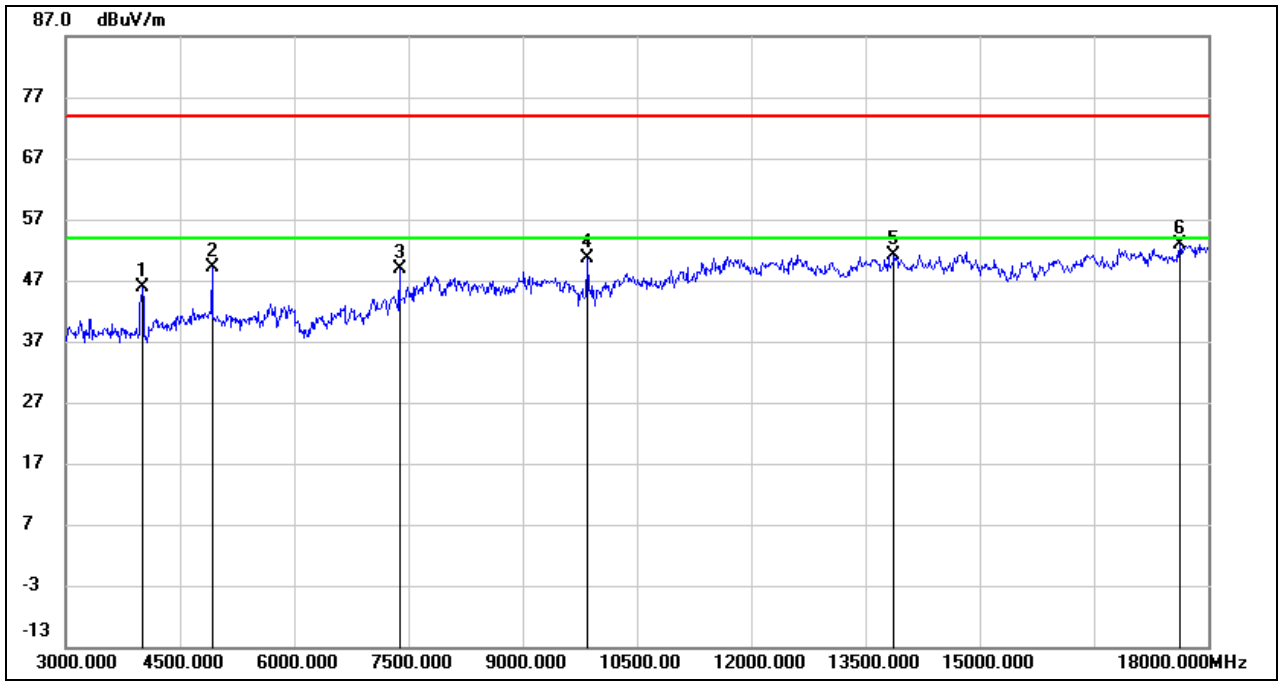
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	50.55	-2.46	48.09	74.00	-25.91	peak
2	4905.000	47.18	1.33	48.51	74.00	-25.49	peak
3	7365.000	44.24	7.66	51.90	74.00	-22.10	peak
4	9825.000	42.78	10.32	53.10	74.00	-20.90	peak
5	14820.000	34.28	17.91	52.19	74.00	-21.81	peak
6	17340.000	30.73	22.31	53.04	74.00	-20.96	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.

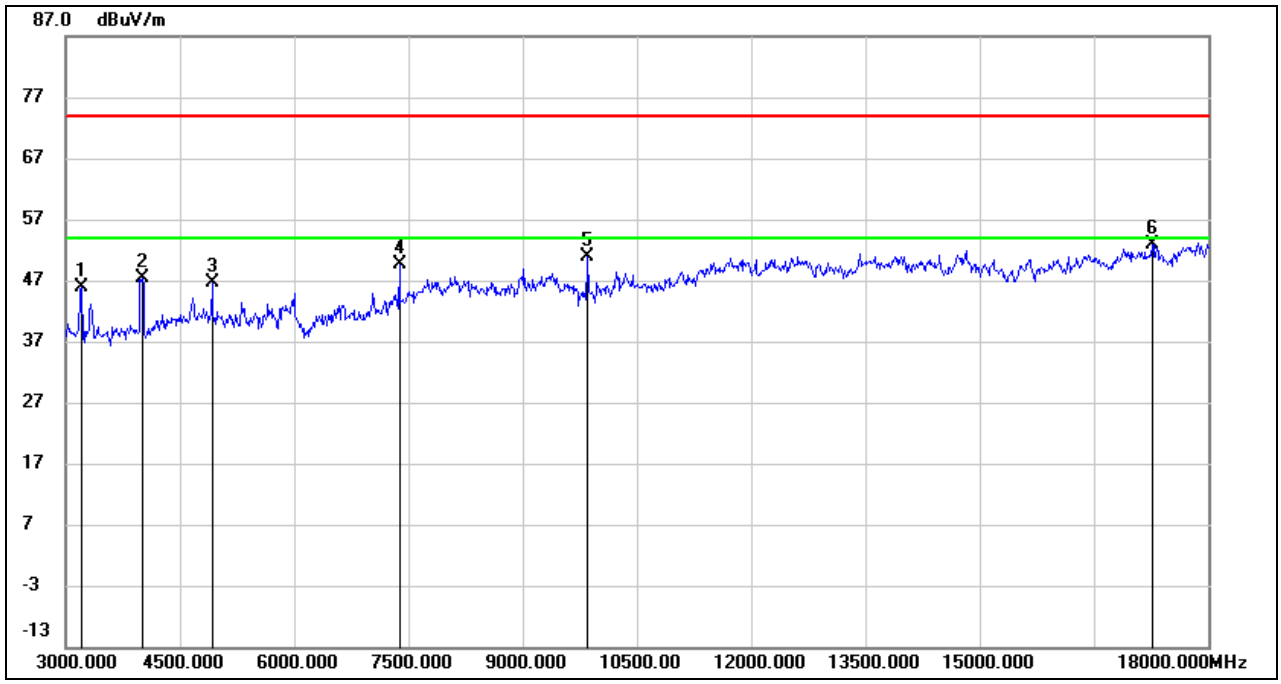
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	48.29	-2.46	45.83	74.00	-28.17	peak
2	4920.000	47.66	1.45	49.11	74.00	-24.89	peak
3	7380.000	41.07	7.79	48.86	74.00	-25.14	peak
4	9855.000	39.90	10.64	50.54	74.00	-23.46	peak
5	13875.000	33.46	17.55	51.01	74.00	-22.99	peak
6	17625.000	29.85	22.92	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 (CHANNEL 11, VERTICAL)

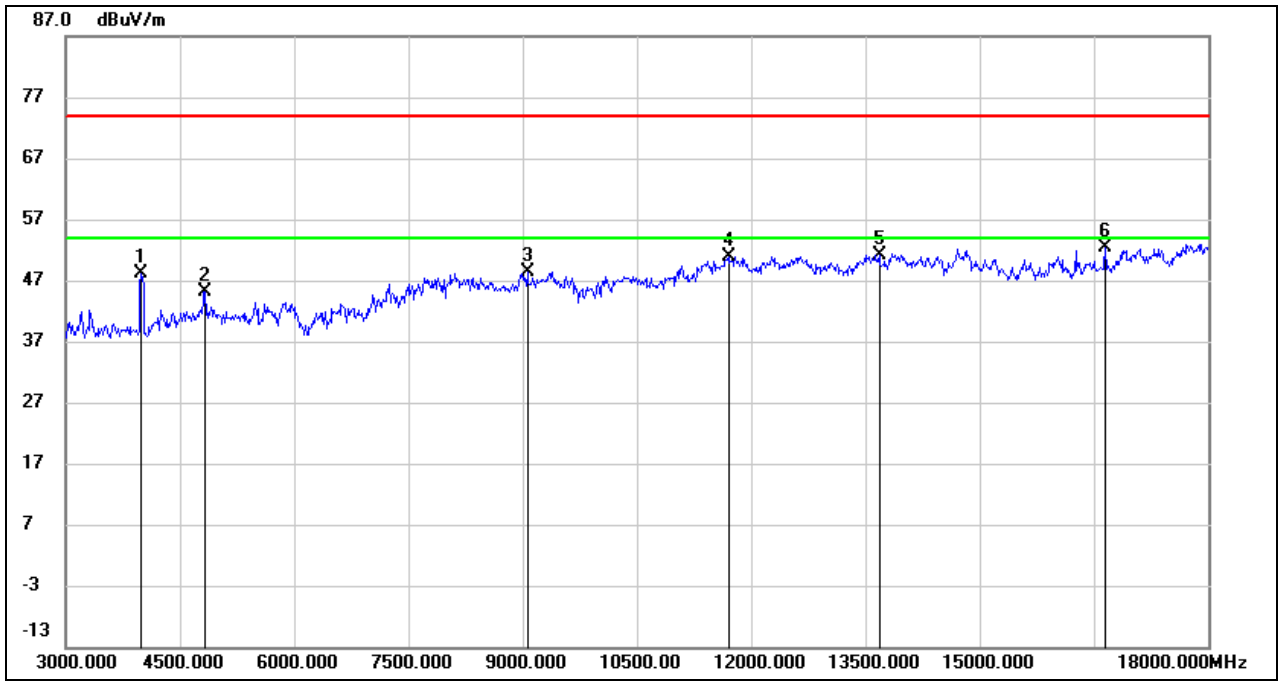


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3210.000	49.90	-3.91	45.99	74.00	-28.01	peak
2	4005.000	49.76	-2.46	47.30	74.00	-26.70	peak
3	4920.000	45.28	1.45	46.73	74.00	-27.27	peak
4	7380.000	41.84	7.79	49.63	74.00	-24.37	peak
5	9855.000	40.12	10.64	50.76	74.00	-23.24	peak
6	17265.000	30.51	22.39	52.90	74.00	-21.10	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.1. 802.11g MODE

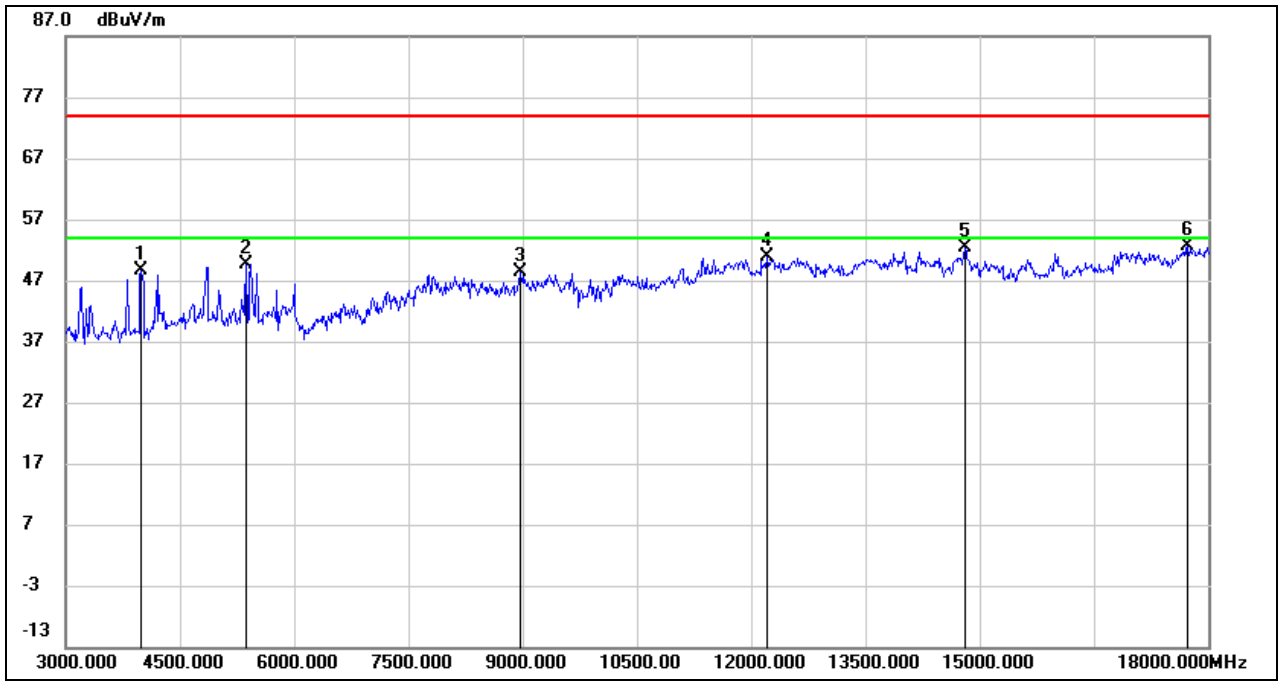
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	50.73	-2.51	48.22	74.00	-25.78	peak
2	4830.000	43.86	1.37	45.23	74.00	-28.77	peak
3	9060.000	37.86	10.60	48.46	74.00	-25.54	peak
4	11700.000	35.61	15.35	50.96	74.00	-23.04	peak
5	13680.000	33.60	17.52	51.12	74.00	-22.88	peak
6	16650.000	32.42	19.98	52.40	74.00	-21.60	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

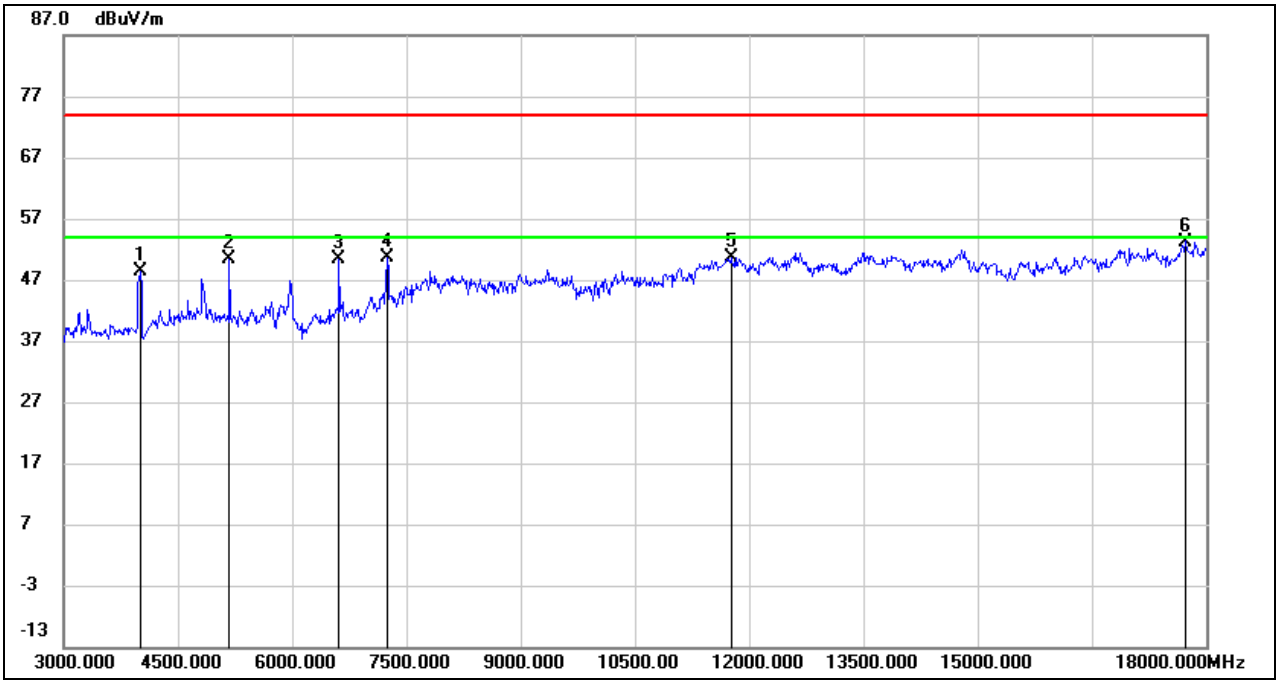
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	51.23	-2.51	48.72	74.00	-25.28	peak
2	5370.000	47.00	2.68	49.68	74.00	-24.32	peak
3	8970.000	37.74	10.70	48.44	74.00	-25.56	peak
4	12210.000	34.92	15.97	50.89	74.00	-23.11	peak
5	14805.000	34.36	18.00	52.36	74.00	-21.64	peak
6	17730.000	28.94	23.64	52.58	74.00	-21.42	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

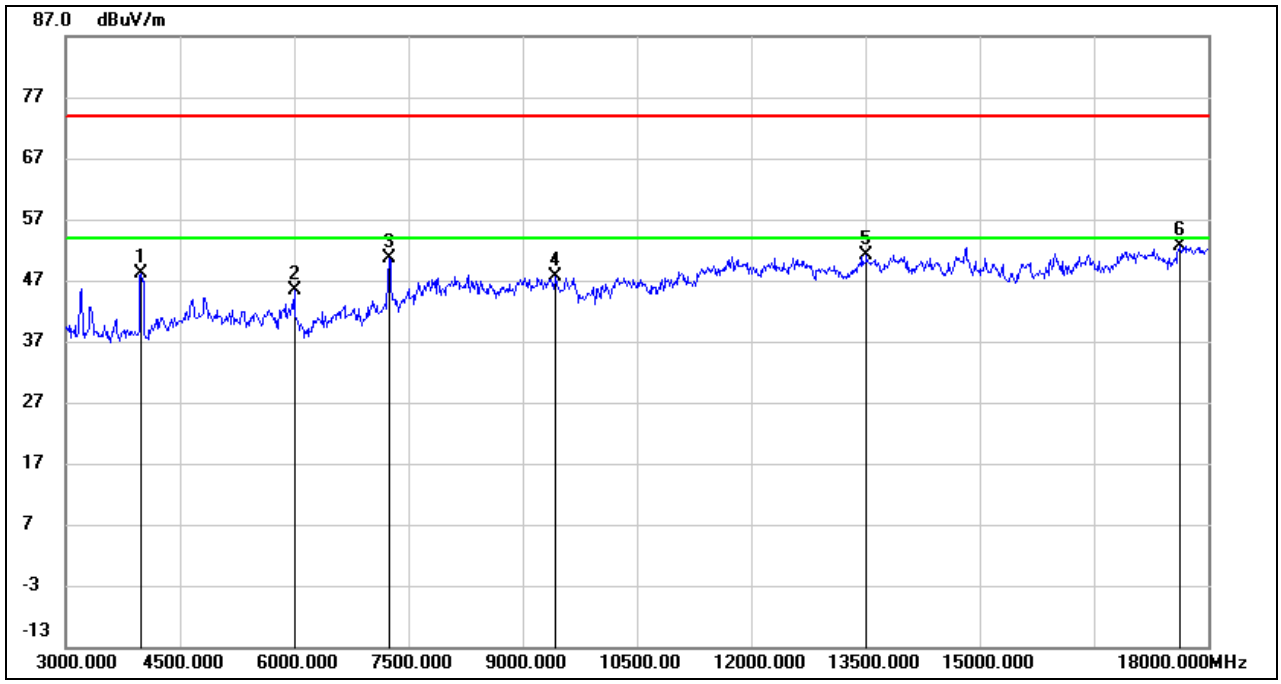
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	50.91	-2.46	48.45	74.00	-25.55	peak
2	5175.000	47.88	2.58	50.46	74.00	-23.54	peak
3	6615.000	44.45	5.95	50.40	74.00	-23.60	peak
4	7245.000	43.33	7.25	50.58	74.00	-23.42	peak
5	11760.000	35.34	15.29	50.63	74.00	-23.37	peak
6	17730.000	29.61	23.64	53.25	74.00	-20.75	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.

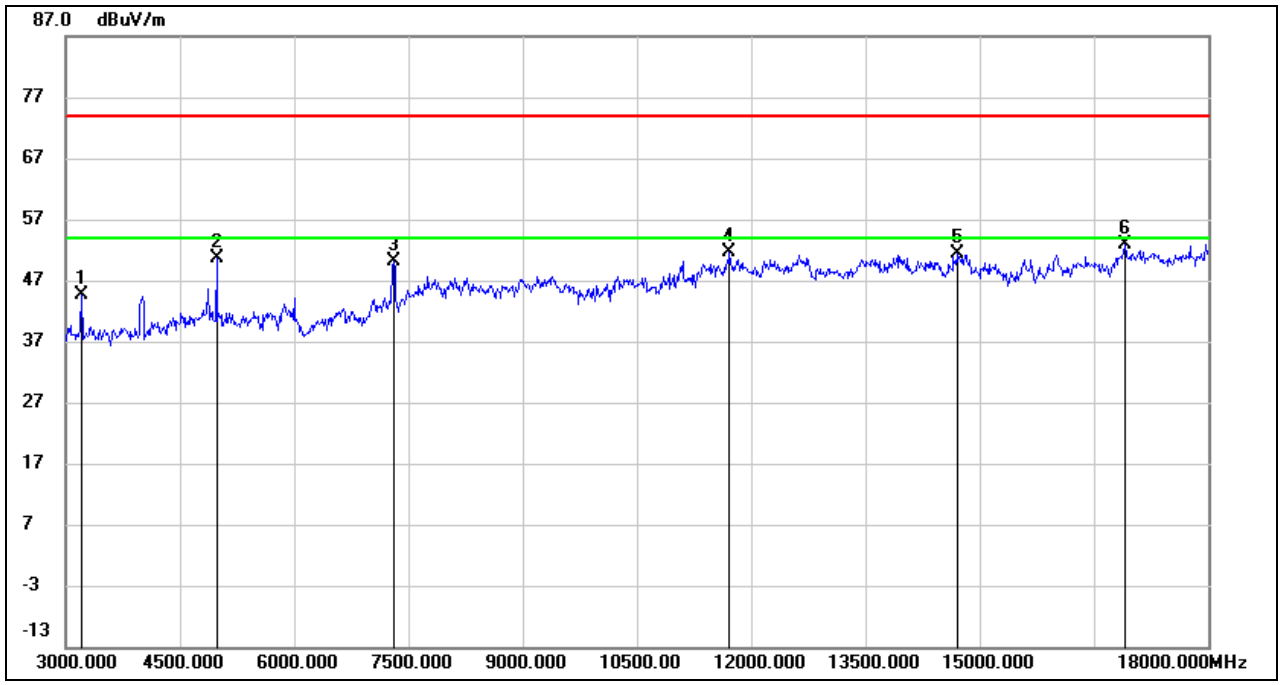
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	50.75	-2.51	48.24	74.00	-25.76	peak
2	6000.000	41.36	4.00	45.36	74.00	-28.64	peak
3	7245.000	43.32	7.25	50.57	74.00	-23.43	peak
4	9435.000	36.82	10.81	47.63	74.00	-26.37	peak
5	13515.000	33.86	17.19	51.05	74.00	-22.95	peak
6	17625.000	29.76	22.92	52.68	74.00	-21.32	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

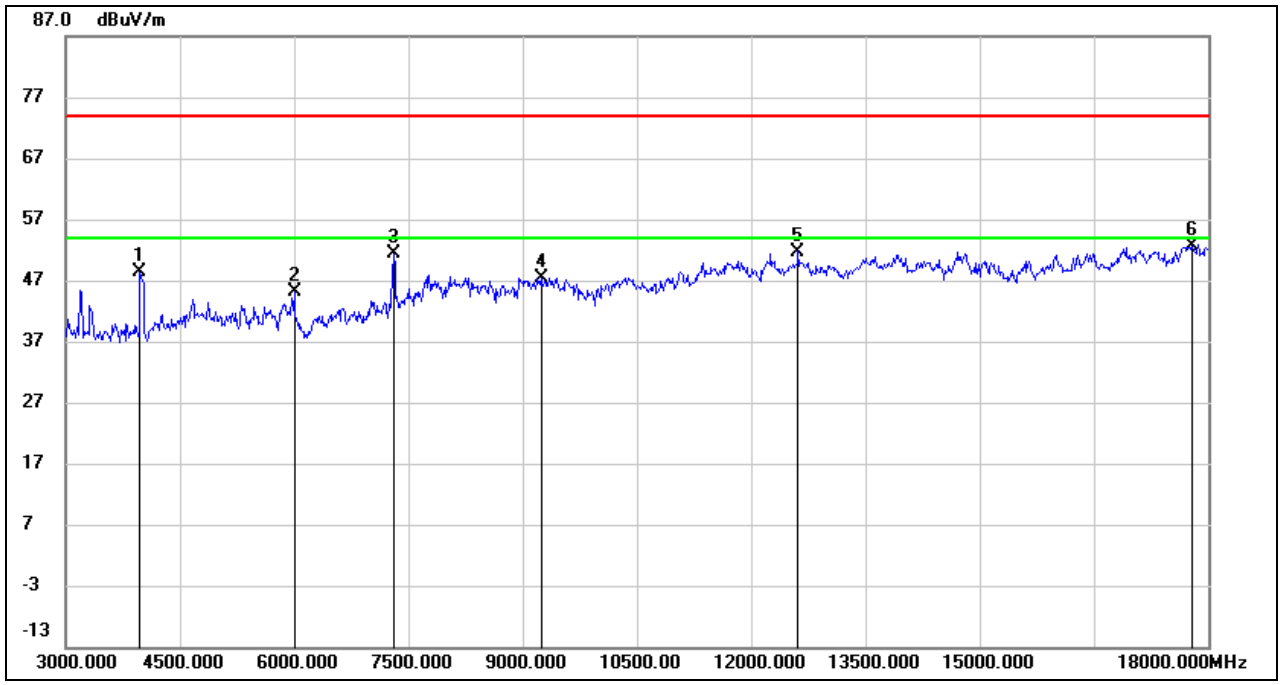
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3210.000	48.59	-3.91	44.68	74.00	-29.32	peak
2	4980.000	48.53	1.98	50.51	74.00	-23.49	peak
3	7305.000	43.09	7.14	50.23	74.00	-23.77	peak
4	11715.000	36.18	15.34	51.52	74.00	-22.48	peak
5	14700.000	33.66	17.69	51.35	74.00	-22.65	peak
6	16905.000	31.25	21.55	52.80	74.00	-21.20	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

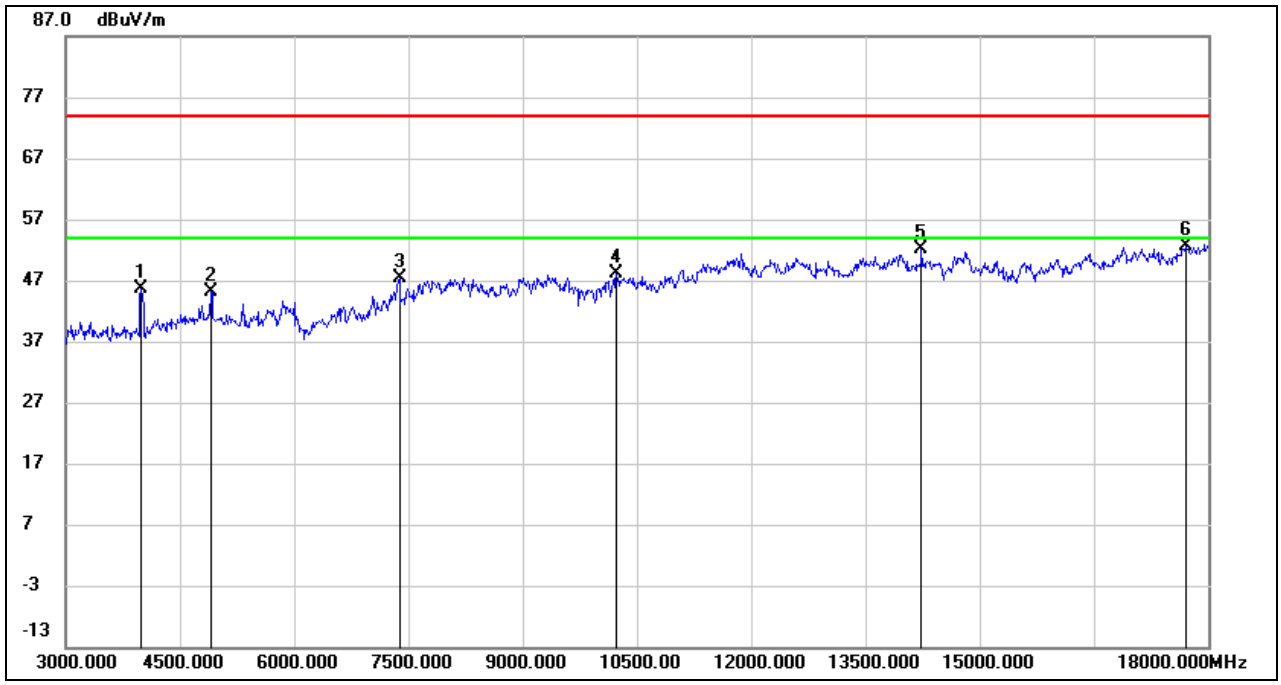
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	50.93	-2.57	48.36	74.00	-25.64	peak
2	6000.000	41.23	4.00	45.23	74.00	-28.77	peak
3	7305.000	44.26	7.14	51.40	74.00	-22.60	peak
4	9240.000	37.29	10.10	47.39	74.00	-26.61	peak
5	12615.000	36.00	15.75	51.75	74.00	-22.25	peak
6	17790.000	28.71	23.99	52.70	74.00	-21.30	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.

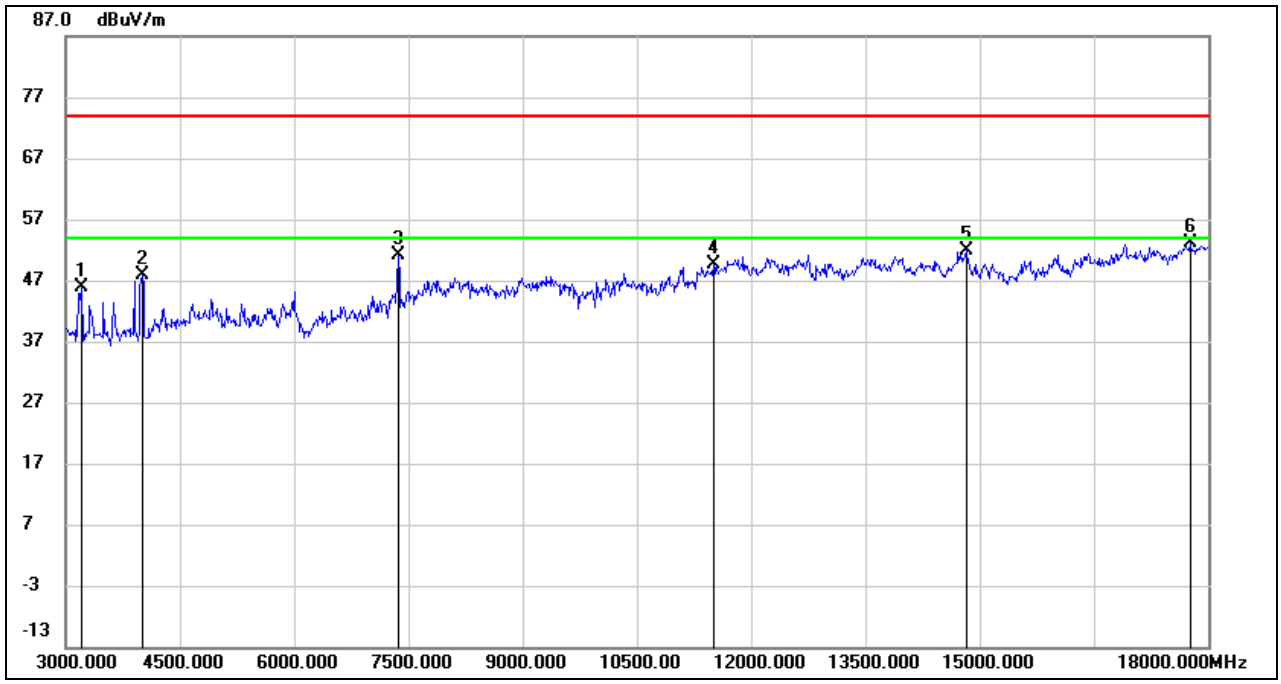
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	48.21	-2.51	45.70	74.00	-28.30	peak
2	4905.000	43.80	1.33	45.13	74.00	-28.87	peak
3	7380.000	39.48	7.79	47.27	74.00	-26.73	peak
4	10230.000	36.43	11.58	48.01	74.00	-25.99	peak
5	14235.000	34.25	17.91	52.16	74.00	-21.84	peak
6	17700.000	29.13	23.47	52.60	74.00	-21.40	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.

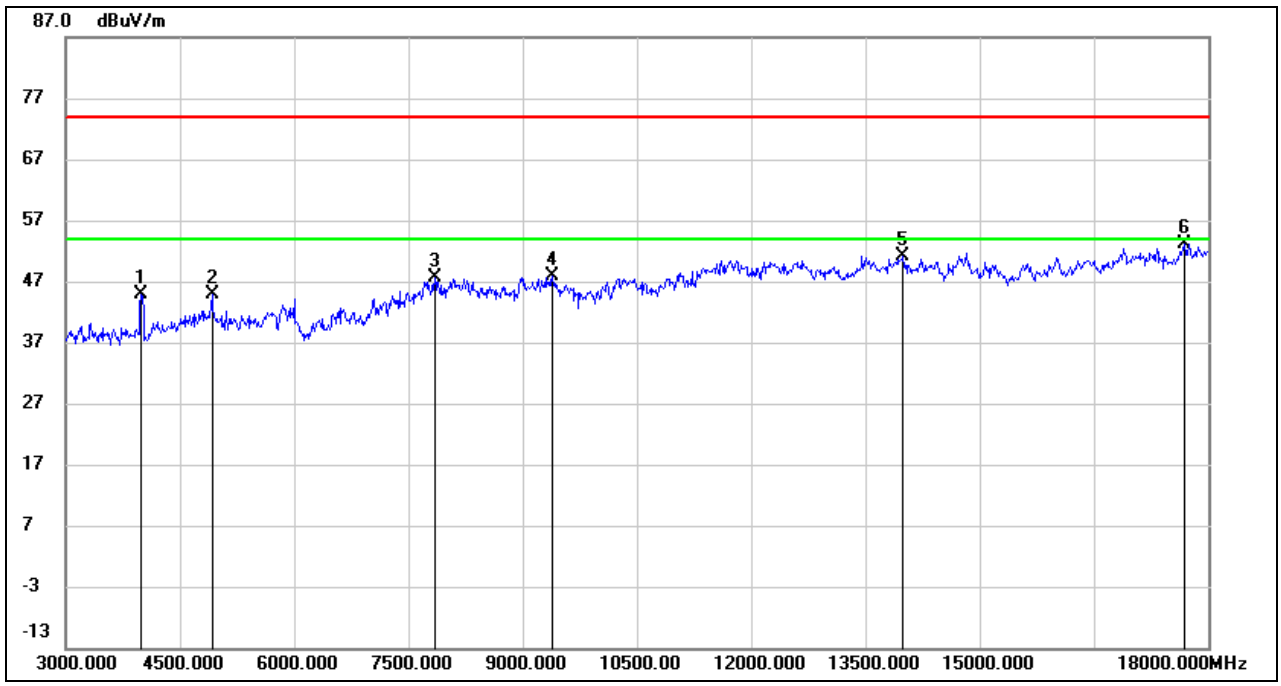
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3210.000	49.68	-3.91	45.77	74.00	-28.23	peak
2	4005.000	50.24	-2.46	47.78	74.00	-26.22	peak
3	7365.000	43.56	7.66	51.22	74.00	-22.78	peak
4	11505.000	35.01	14.66	49.67	74.00	-24.33	peak
5	14820.000	33.94	17.91	51.85	74.00	-22.15	peak
6	17760.000	29.21	23.82	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.

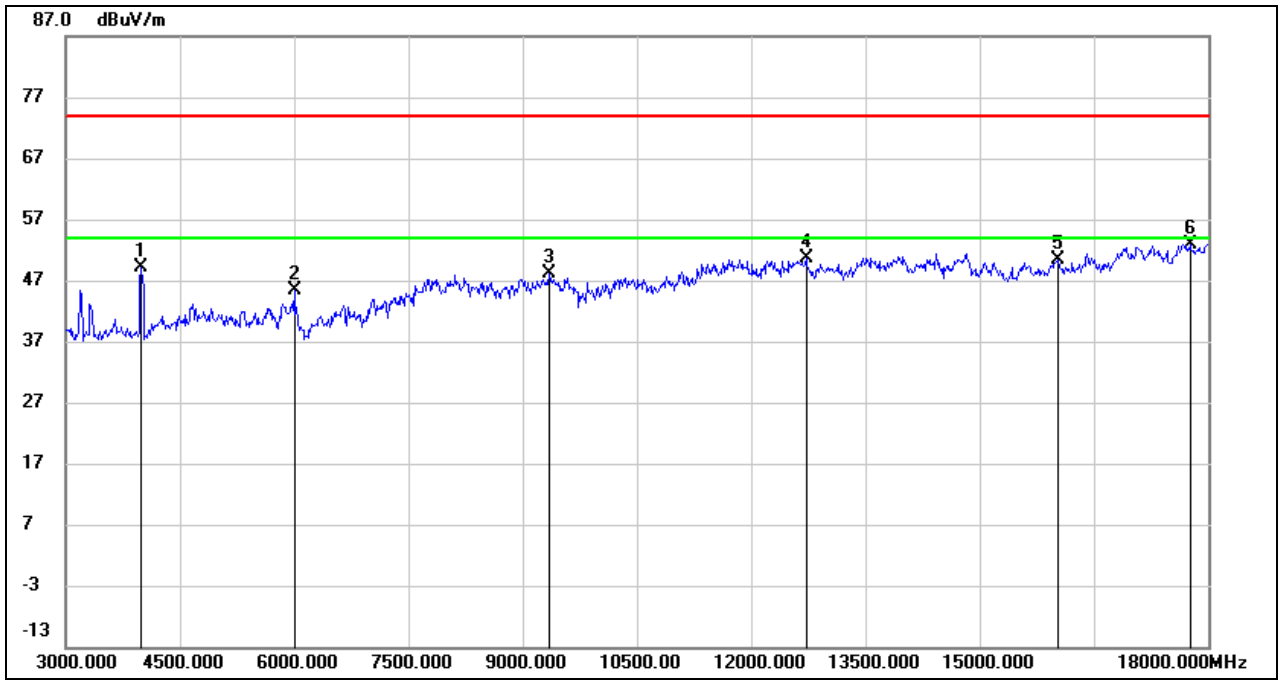
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	47.27	-2.51	44.76	74.00	-29.24	peak
2	4920.000	43.36	1.45	44.81	74.00	-29.19	peak
3	7845.000	38.41	9.14	47.55	74.00	-26.45	peak
4	9390.000	36.95	10.92	47.87	74.00	-26.13	peak
5	13995.000	33.59	17.66	51.25	74.00	-22.75	peak
6	17685.000	29.85	23.36	53.21	74.00	-20.79	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, VERTICAL)

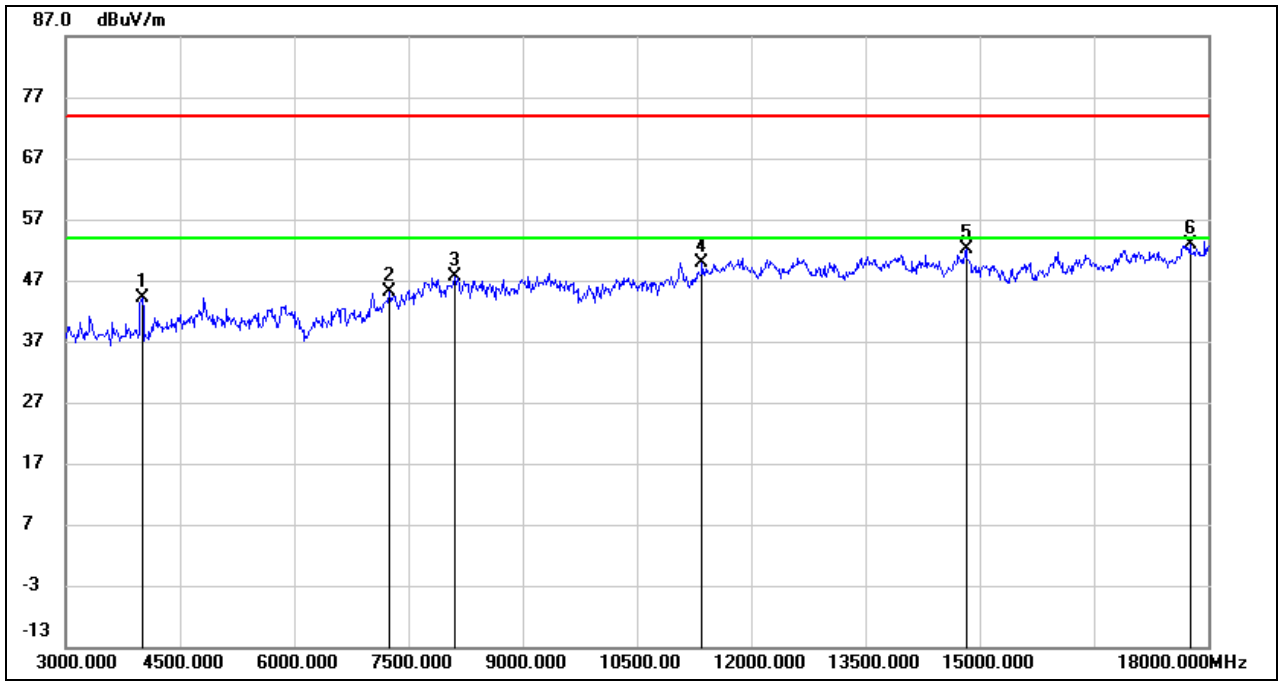


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	51.52	-2.51	49.01	74.00	-24.99	peak
2	6000.000	41.45	4.00	45.45	74.00	-28.55	peak
3	9345.000	37.59	10.66	48.25	74.00	-25.75	peak
4	12720.000	34.87	15.70	50.57	74.00	-23.43	peak
5	16035.000	32.07	18.41	50.48	74.00	-23.52	peak
6	17760.000	28.96	23.82	52.78	74.00	-21.22	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.3.2. 802.11n HT20 MODE

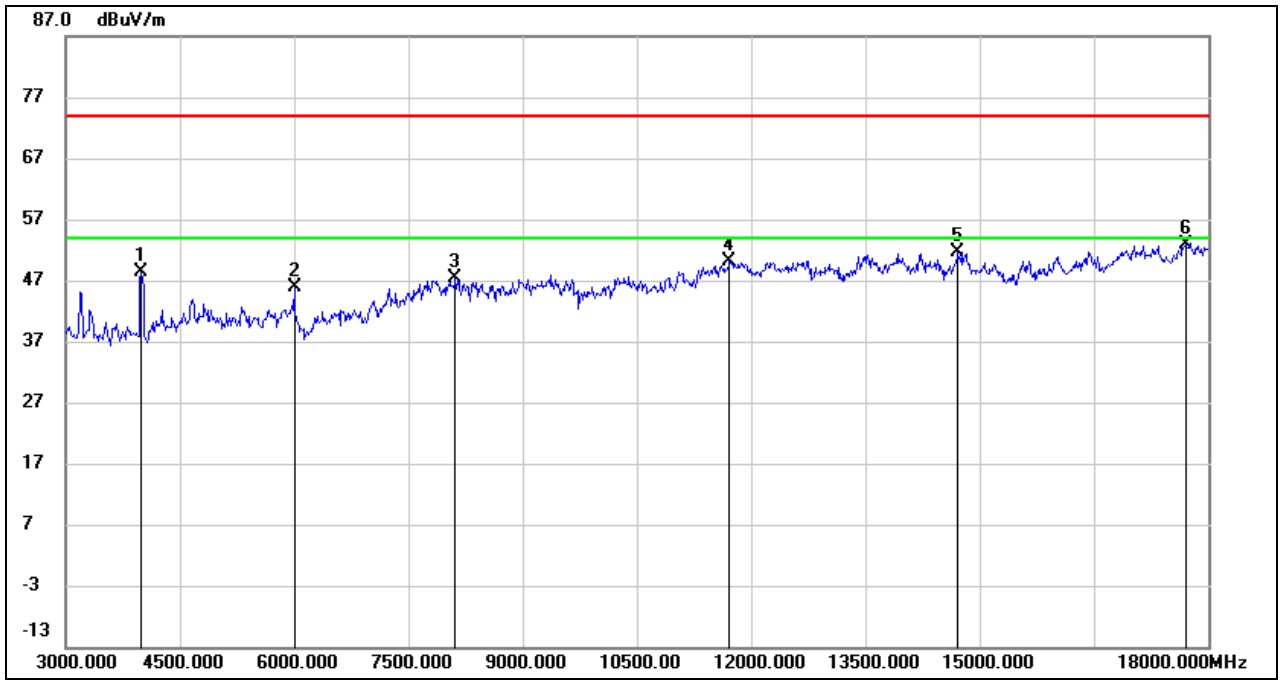
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	46.55	-2.46	44.09	74.00	-29.91	peak
2	7245.000	37.98	7.25	45.23	74.00	-28.77	peak
3	8115.000	37.58	10.13	47.71	74.00	-26.29	peak
4	11355.000	35.52	14.34	49.86	74.00	-24.14	peak
5	14820.000	34.28	17.91	52.19	74.00	-21.81	peak
6	17760.000	28.95	23.82	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.

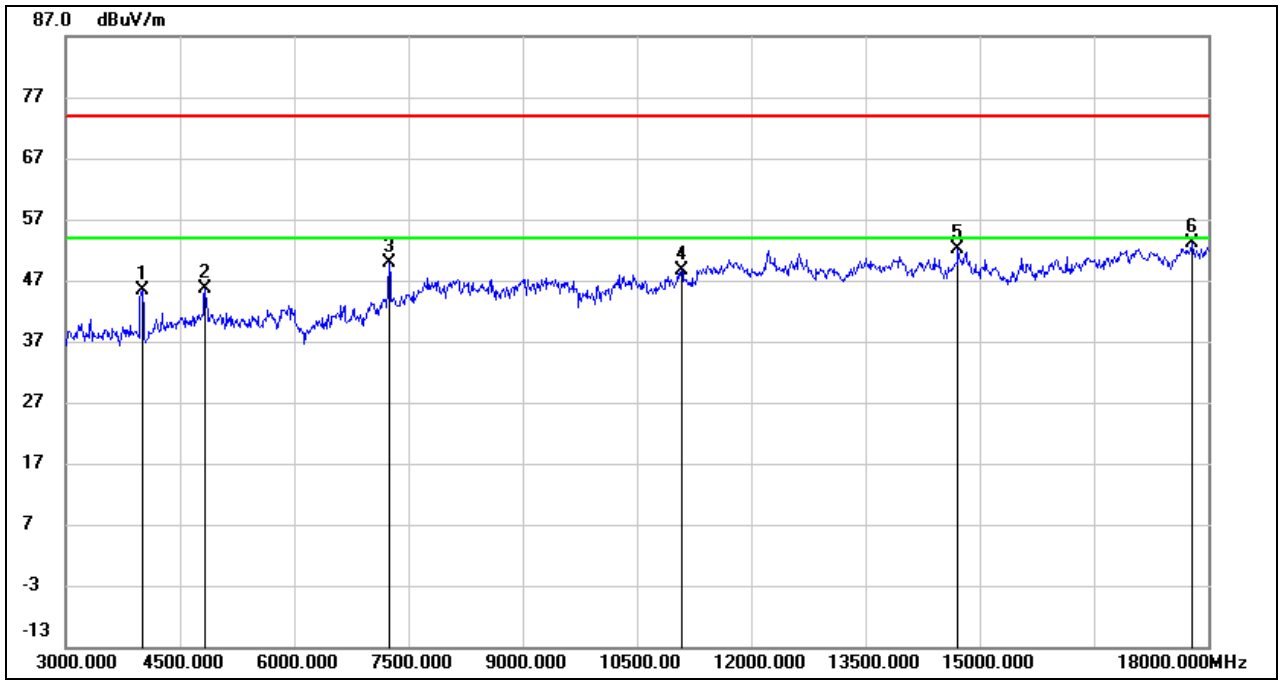
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 1, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	50.92	-2.51	48.41	74.00	-25.59	peak
2	6000.000	41.97	4.00	45.97	74.00	-28.03	peak
3	8115.000	37.27	10.13	47.40	74.00	-26.60	peak
4	11715.000	34.86	15.34	50.20	74.00	-23.80	peak
5	14715.000	33.99	17.74	51.73	74.00	-22.27	peak
6	17715.000	29.29	23.56	52.85	74.00	-21.15	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

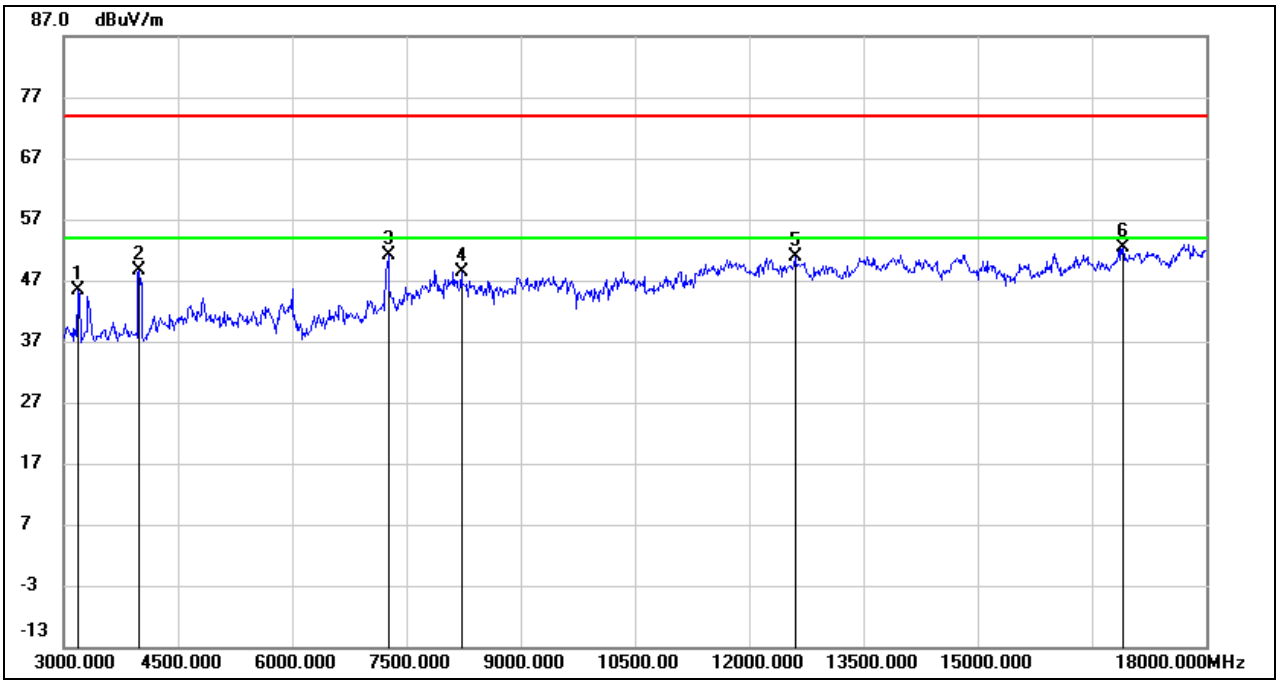
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	47.73	-2.46	45.27	74.00	-28.73	peak
2	4830.000	44.21	1.37	45.58	74.00	-28.42	peak
3	7245.000	42.51	7.25	49.76	74.00	-24.24	peak
4	11085.000	34.96	13.72	48.68	74.00	-25.32	peak
5	14715.000	34.44	17.74	52.18	74.00	-21.82	peak
6	17790.000	29.04	23.99	53.03	74.00	-20.97	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

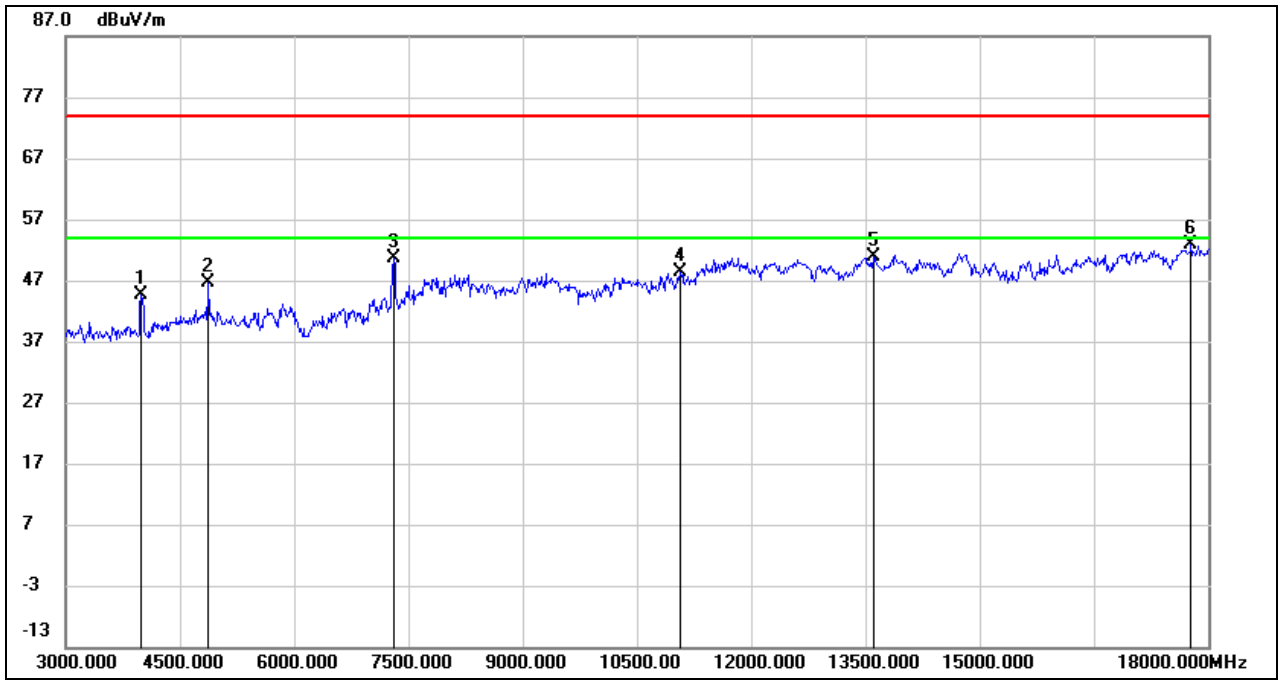
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 2, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	49.22	-3.91	45.31	74.00	-28.69	peak
2	3990.000	51.15	-2.51	48.64	74.00	-25.36	peak
3	7260.000	43.97	7.21	51.18	74.00	-22.82	peak
4	8220.000	38.67	9.79	48.46	74.00	-25.54	peak
5	12600.000	35.13	15.78	50.91	74.00	-23.09	peak
6	16905.000	30.82	21.55	52.37	74.00	-21.63	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. 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.

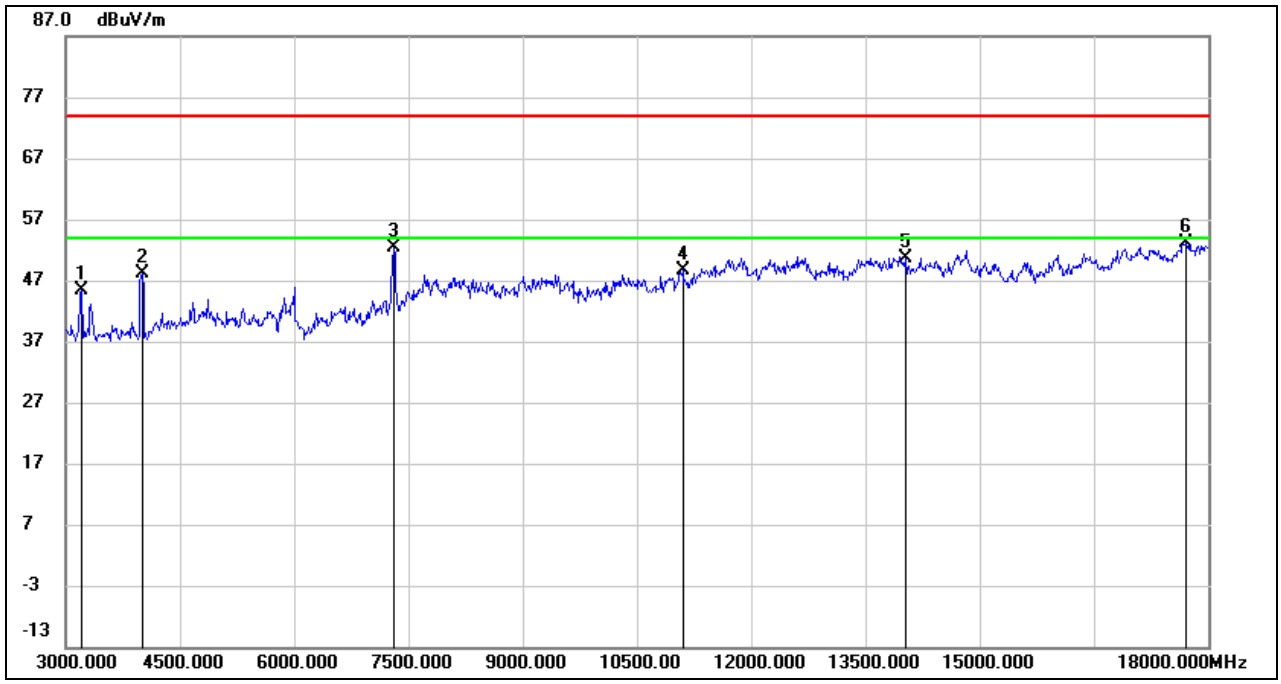
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	47.18	-2.51	44.67	74.00	-29.33	peak
2	4875.000	45.24	1.32	46.56	74.00	-27.44	peak
3	7305.000	43.44	7.14	50.58	74.00	-23.42	peak
4	11070.000	34.72	13.65	48.37	74.00	-25.63	peak
5	13605.000	33.82	17.12	50.94	74.00	-23.06	peak
6	17775.000	28.94	23.91	52.85	74.00	-21.15	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.

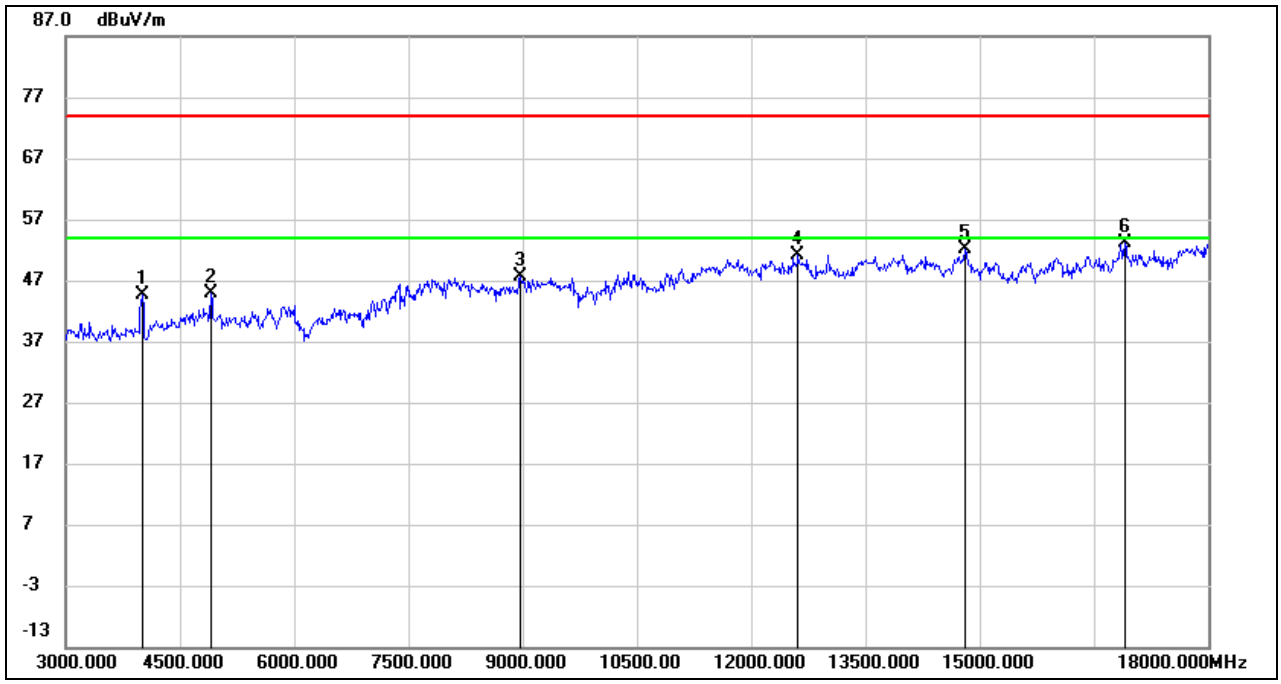
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 6, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3210.000	49.29	-3.91	45.38	74.00	-28.62	peak
2	4005.000	50.57	-2.46	48.11	74.00	-25.89	peak
3	7305.000	45.12	7.14	52.26	74.00	-21.74	peak
4	11100.000	34.80	13.79	48.59	74.00	-25.41	peak
5	14025.000	33.12	17.61	50.73	74.00	-23.27	peak
6	17715.000	29.68	23.56	53.24	74.00	-20.76	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.

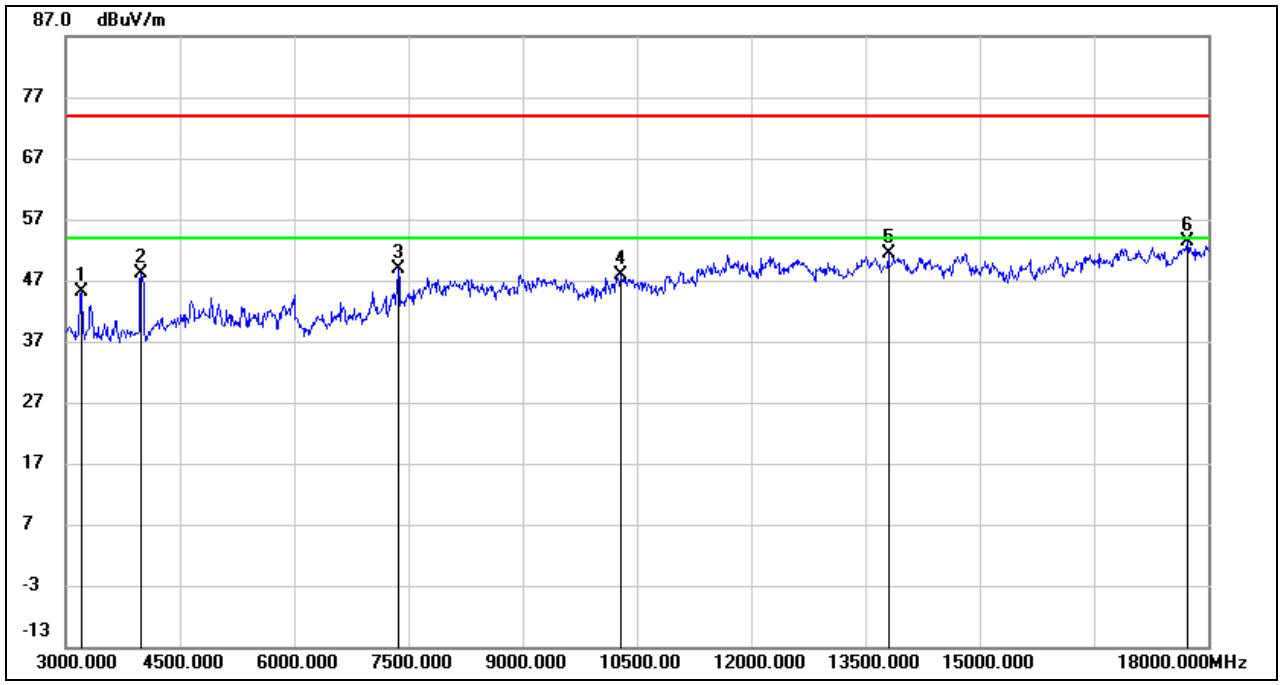
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	47.20	-2.46	44.74	74.00	-29.26	peak
2	4905.000	43.44	1.33	44.77	74.00	-29.23	peak
3	8970.000	36.91	10.70	47.61	74.00	-26.39	peak
4	12615.000	35.30	15.75	51.05	74.00	-22.95	peak
5	14805.000	34.21	18.00	52.21	74.00	-21.79	peak
6	16905.000	31.63	21.55	53.18	74.00	-20.82	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.

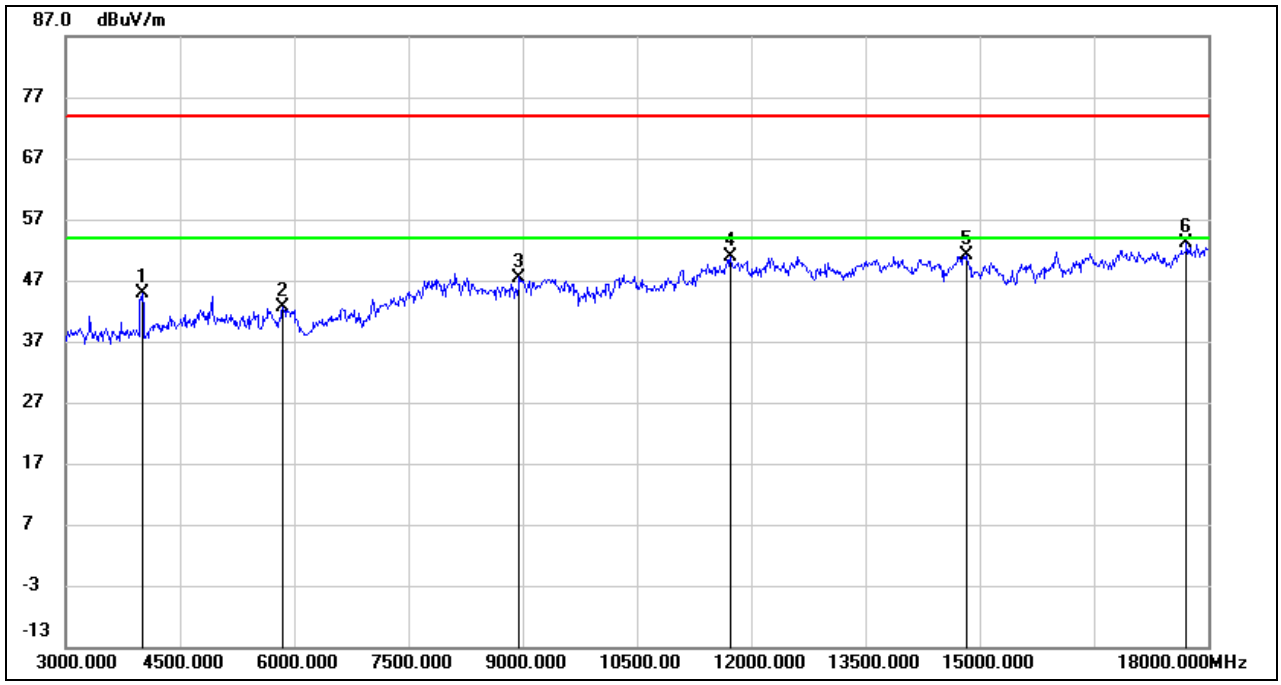
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 10, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3210.000	48.93	-3.91	45.02	74.00	-28.98	peak
2	3990.000	50.65	-2.51	48.14	74.00	-25.86	peak
3	7365.000	41.12	7.66	48.78	74.00	-25.22	peak
4	10290.000	36.04	11.76	47.80	74.00	-26.20	peak
5	13800.000	33.72	17.61	51.33	74.00	-22.67	peak
6	17730.000	29.66	23.64	53.30	74.00	-20.70	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

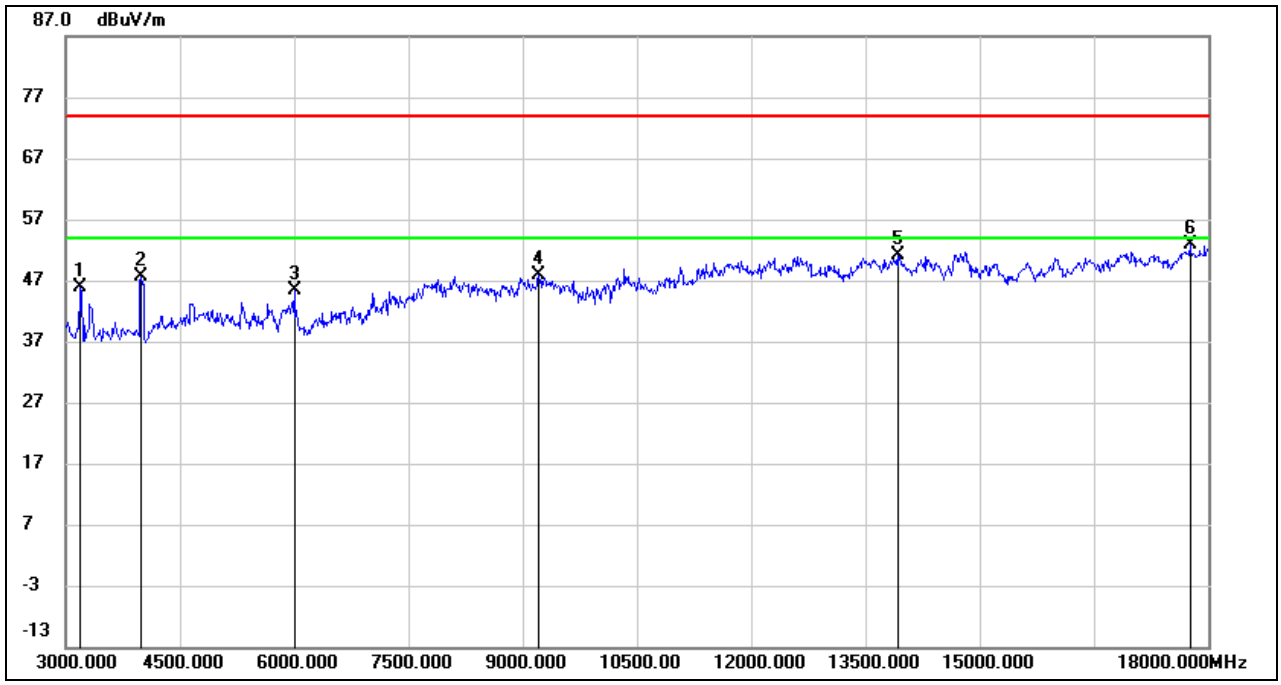
HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4005.000	47.29	-2.46	44.83	74.00	-29.17	peak
2	5850.000	38.68	4.00	42.68	74.00	-31.32	peak
3	8955.000	37.09	10.41	47.50	74.00	-26.50	peak
4	11730.000	35.65	15.32	50.97	74.00	-23.03	peak
5	14820.000	33.14	17.91	51.05	74.00	-22.95	peak
6	17715.000	29.49	23.56	53.05	74.00	-20.95	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (CHANNEL 11, VERTICAL)



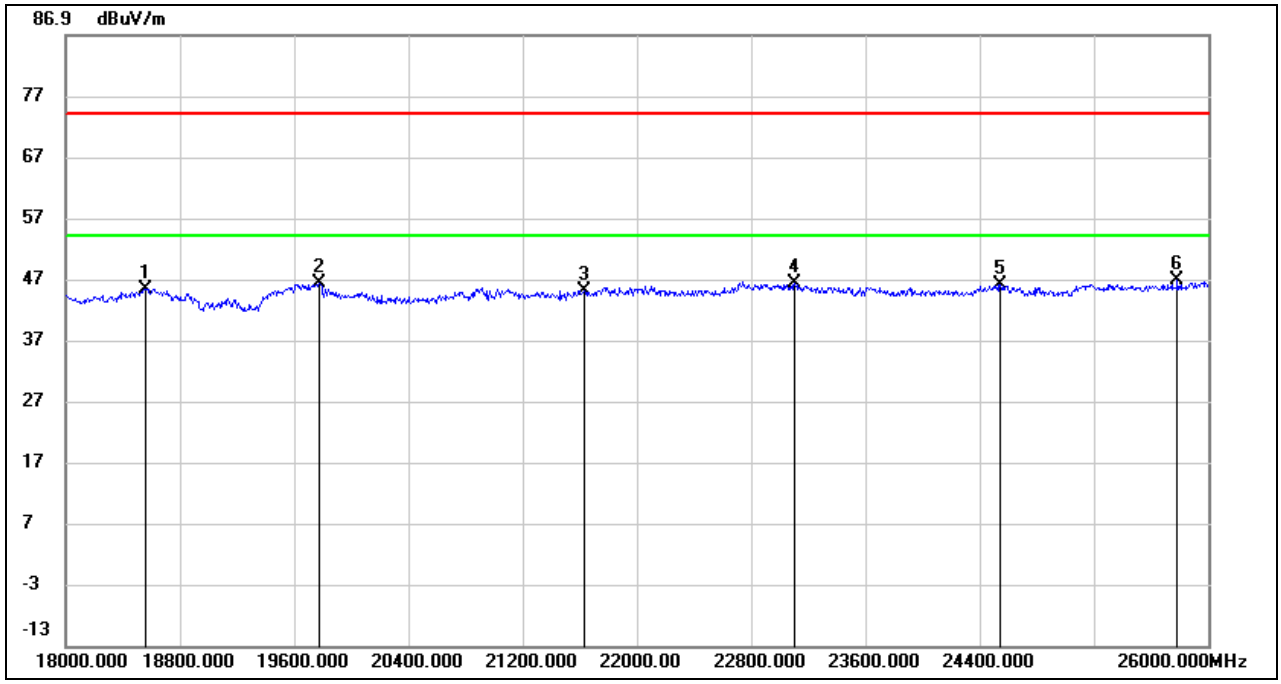
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	49.73	-3.91	45.82	74.00	-28.18	peak
2	3990.000	50.14	-2.51	47.63	74.00	-26.37	peak
3	6000.000	41.28	4.00	45.28	74.00	-28.72	peak
4	9210.000	37.83	9.95	47.78	74.00	-26.22	peak
5	13920.000	33.65	17.55	51.20	74.00	-22.80	peak
6	17760.000	29.12	23.82	52.94	74.00	-21.06	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 High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.4.1. 802.11b MODE

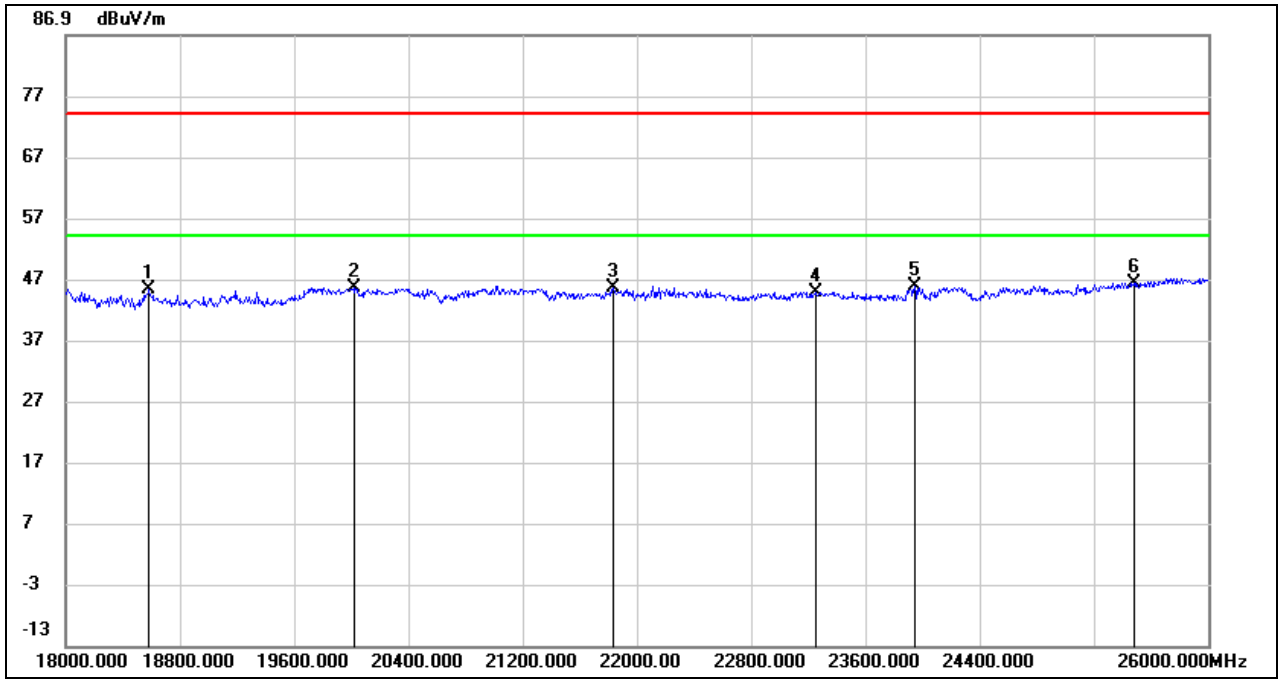
SPURIOUS EMISSIONS (CHANNEL6 , WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18560.000	49.87	-4.49	45.38	74.00	-28.62	peak
2	19776.000	50.63	-4.34	46.29	74.00	-27.71	peak
3	21632.000	50.84	-5.77	45.07	74.00	-28.93	peak
4	23104.000	51.85	-5.47	46.38	74.00	-27.62	peak
5	24544.000	48.57	-2.48	46.09	74.00	-27.91	peak
6	25784.000	48.23	-1.49	46.74	74.00	-27.26	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. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

SPURIOUS EMISSIONS (CHANNEL 6, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18584.000	49.69	-4.53	45.16	74.00	-28.84	peak
2	20016.000	49.85	-4.40	45.45	74.00	-28.55	peak
3	21832.000	51.53	-5.92	45.61	74.00	-28.39	peak
4	23248.000	50.16	-5.26	44.90	74.00	-29.10	peak
5	23944.000	49.95	-4.14	45.81	74.00	-28.19	peak
6	25480.000	48.08	-1.77	46.31	74.00	-27.69	peak

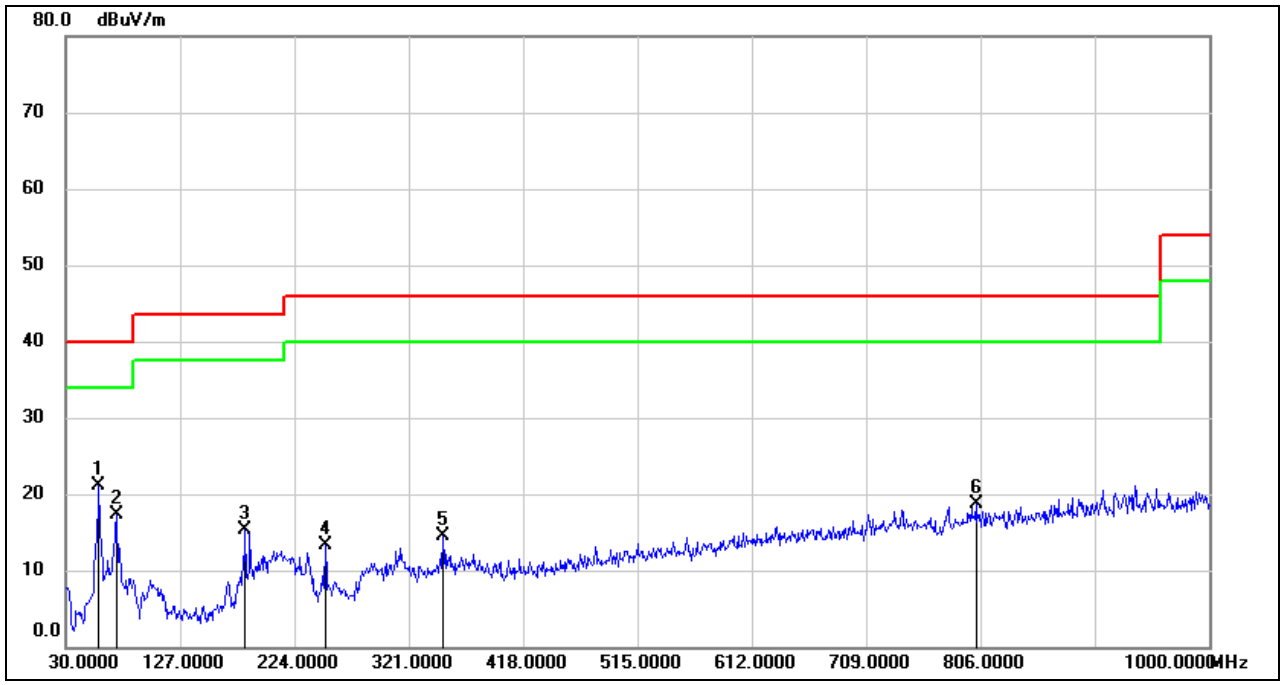
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

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

8.5. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.5.1. 802.11b MODE

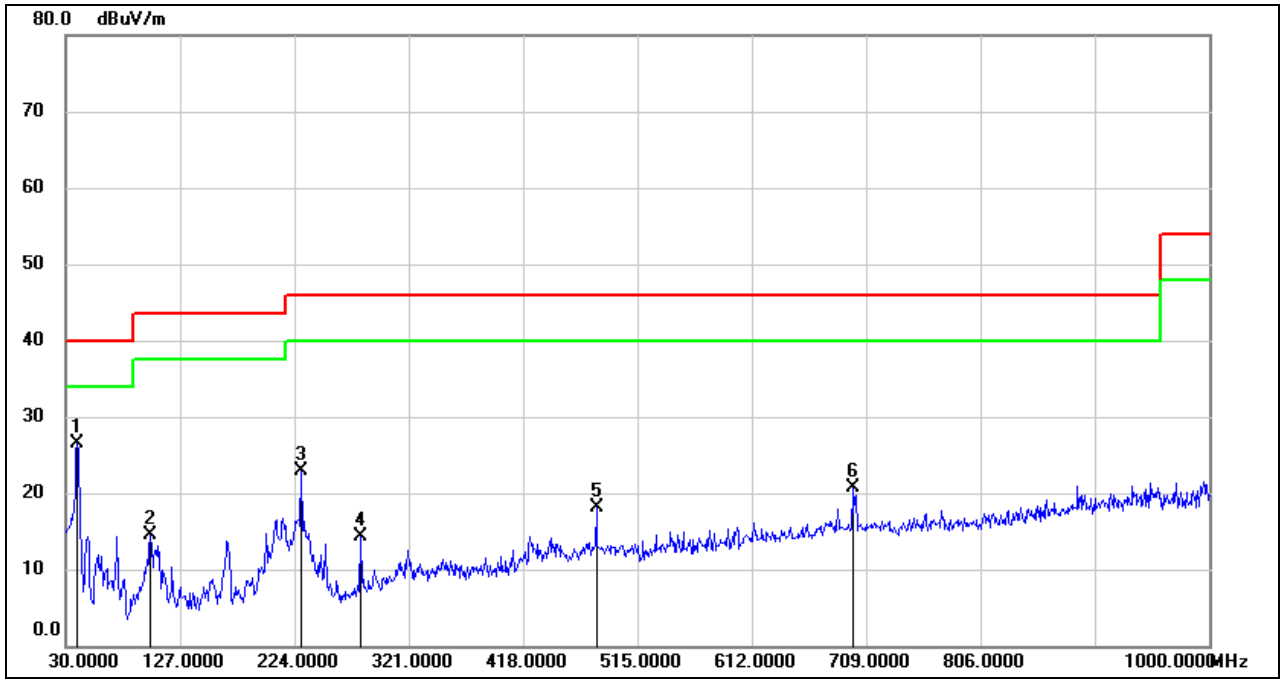
SPURIOUS EMISSIONS (CHANNEL 6, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	58.1300	41.60	-20.55	21.05	40.00	-18.95	QP
2	72.6800	38.12	-20.76	17.36	40.00	-22.64	QP
3	182.2899	32.16	-16.79	15.37	43.50	-28.13	QP
4	250.1900	32.15	-18.91	13.24	46.00	-32.76	QP
5	350.1000	28.80	-14.32	14.48	46.00	-31.52	QP
6	802.1200	26.07	-7.29	18.78	46.00	-27.22	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

SPURIOUS EMISSIONS (CHANNEL 6, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	39.7000	46.47	-19.96	26.51	40.00	-13.49	QP
2	101.7800	35.47	-21.00	14.47	43.50	-29.03	QP
3	229.8200	41.59	-18.65	22.94	46.00	-23.06	QP
4	280.2600	30.93	-16.66	14.27	46.00	-31.73	QP
5	480.0800	29.95	-11.79	18.16	46.00	-27.84	QP
6	697.3600	28.93	-8.32	20.61	46.00	-25.39	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

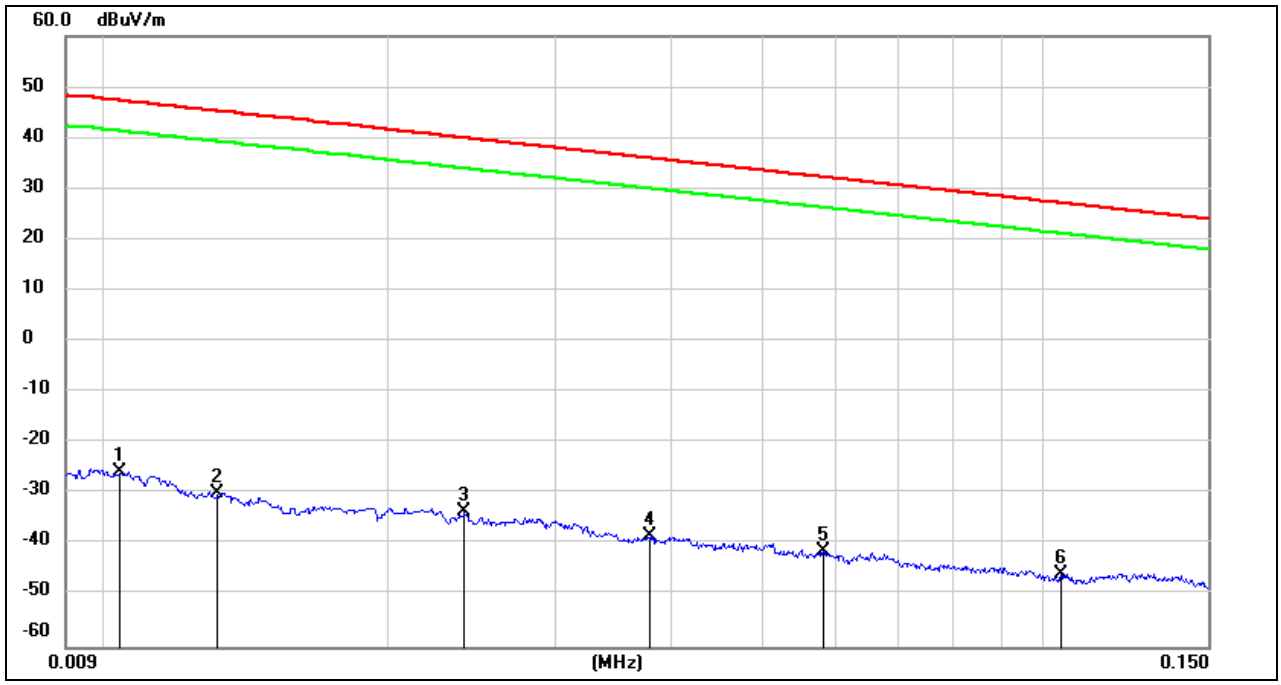
Note: All the modes and channels had been tested, but only the worst data was recorded in the report.

8.6. SPURIOUS EMISSIONS BELOW 30 MHz

8.6.1. 802.11b MODE

SPURIOUS EMISSIONS (CHANNEL 6, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)

9kHz~ 150kHz



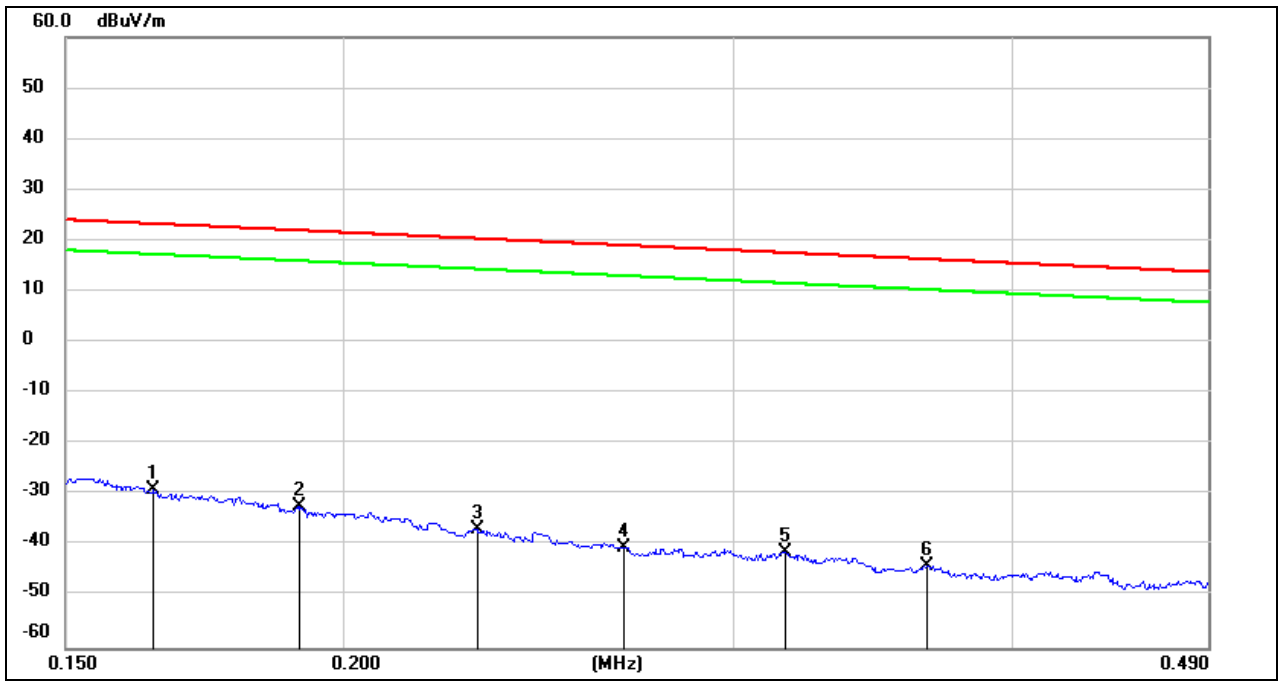
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0103	75.64	-101.40	-25.76	47.34	-77.26	-4.16	-73.10	peak
2	0.0131	71.47	-101.38	-29.91	45.25	-81.41	-6.25	-75.16	peak
3	0.0240	67.82	-101.36	-33.54	40	-85.04	-11.50	-73.54	peak
4	0.0379	63.07	-101.42	-38.35	36.03	-89.85	-15.47	-74.38	peak
5	0.0582	60.26	-101.51	-41.25	32.3	-92.75	-19.20	-73.55	peak
6	0.1044	56.06	-101.78	-45.72	27.23	-97.22	-24.27	-72.95	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



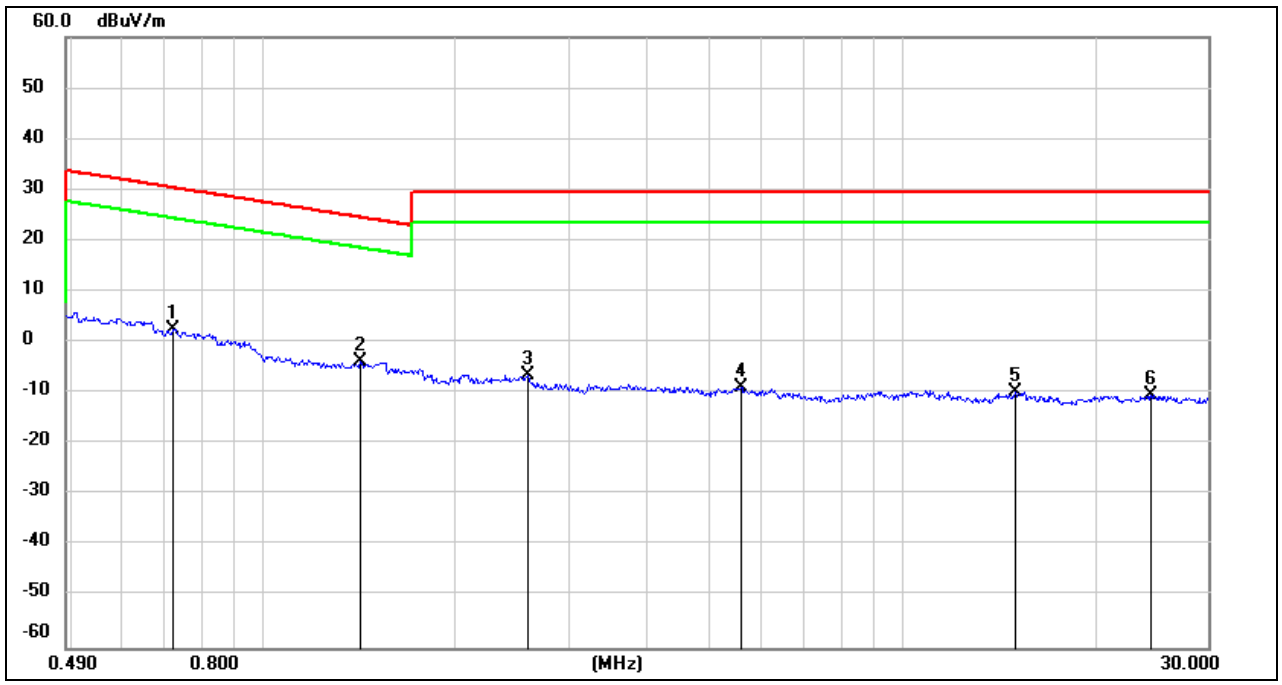
No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1643	72.67	-101.65	-28.98	23.29	-80.48	-28.21	-52.27	peak
2	0.1912	69.47	-101.70	-32.23	21.97	-83.73	-29.53	-54.20	peak
3	0.2298	65.05	-101.77	-36.72	20.37	-88.22	-31.13	-57.09	peak
4	0.2676	61.51	-101.82	-40.31	19.05	-91.81	-32.45	-59.36	peak
5	0.3163	60.70	-101.87	-41.17	17.6	-92.67	-33.90	-58.77	peak
6	0.3662	58.08	-101.93	-43.85	16.33	-95.35	-35.17	-60.18	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	0.7214	64.67	-62.10	2.57	30.44	-48.93	-21.06	-27.87	peak
2	1.4165	58.39	-62.09	-3.7	24.58	-55.20	-26.92	-28.28	peak
3	2.5935	55.11	-61.68	-6.57	29.54	-58.07	-21.96	-36.11	peak
4	5.5952	52.55	-61.41	-8.86	29.54	-60.36	-21.96	-38.40	peak
5	15.0089	51.42	-61.02	-9.6	29.54	-61.10	-21.96	-39.14	peak
6	24.5106	50.08	-60.49	-10.41	29.54	-61.91	-21.96	-39.95	peak

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

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

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

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

9. AC POWER LINE CONDUCTED EMISSIONS

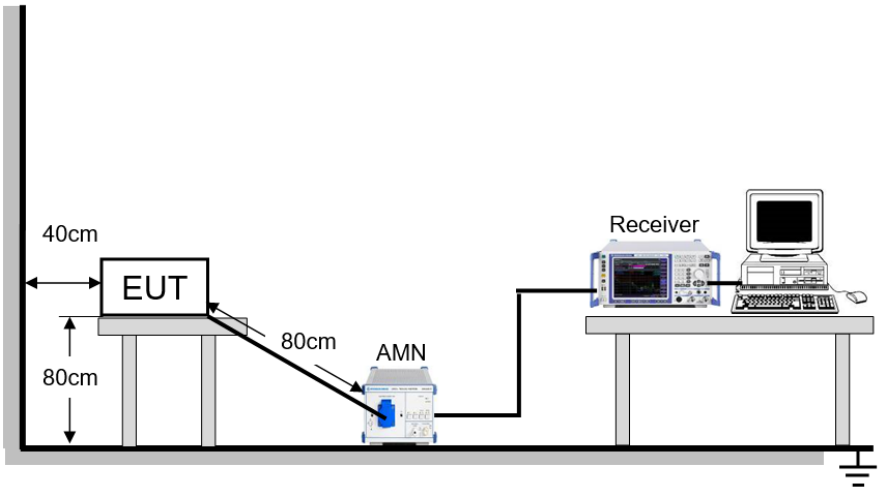
LIMITS

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

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

TEST SETUP AND PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.



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

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

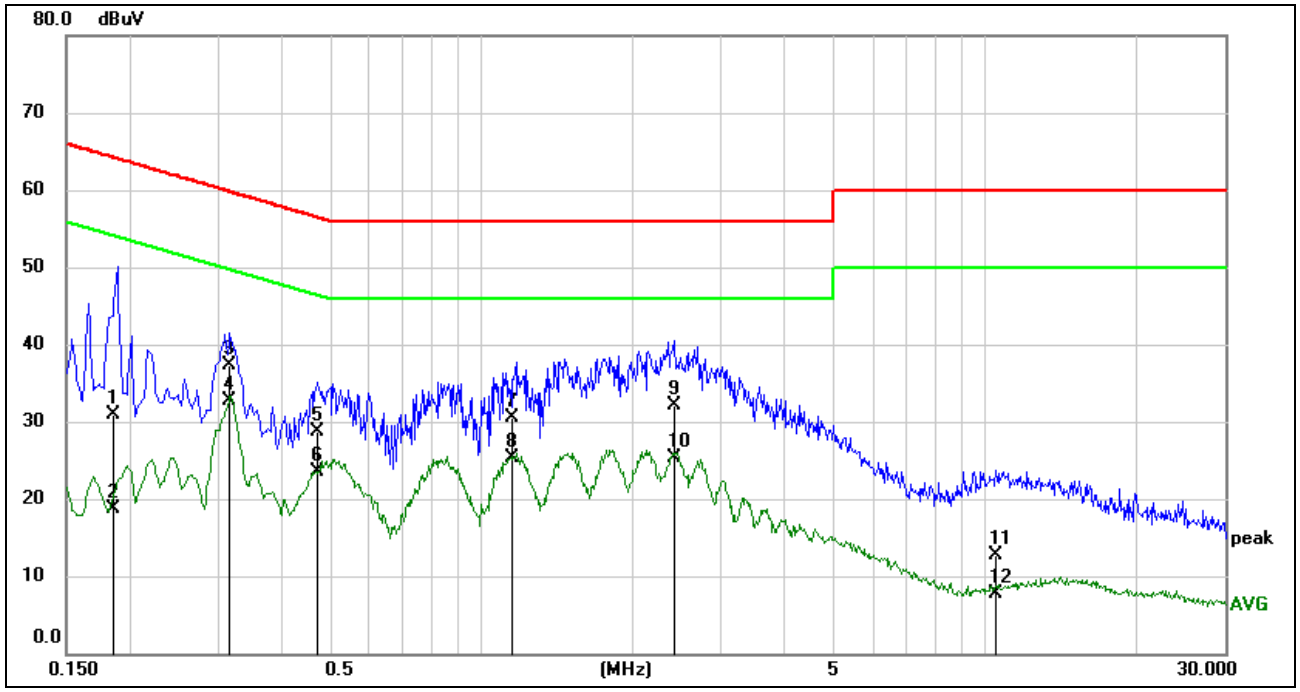
TEST ENVIRONMENT

Temperature	23.6 °C	Relative Humidity	68.4 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5V

RESULTS

9.1. 802.11b MODE

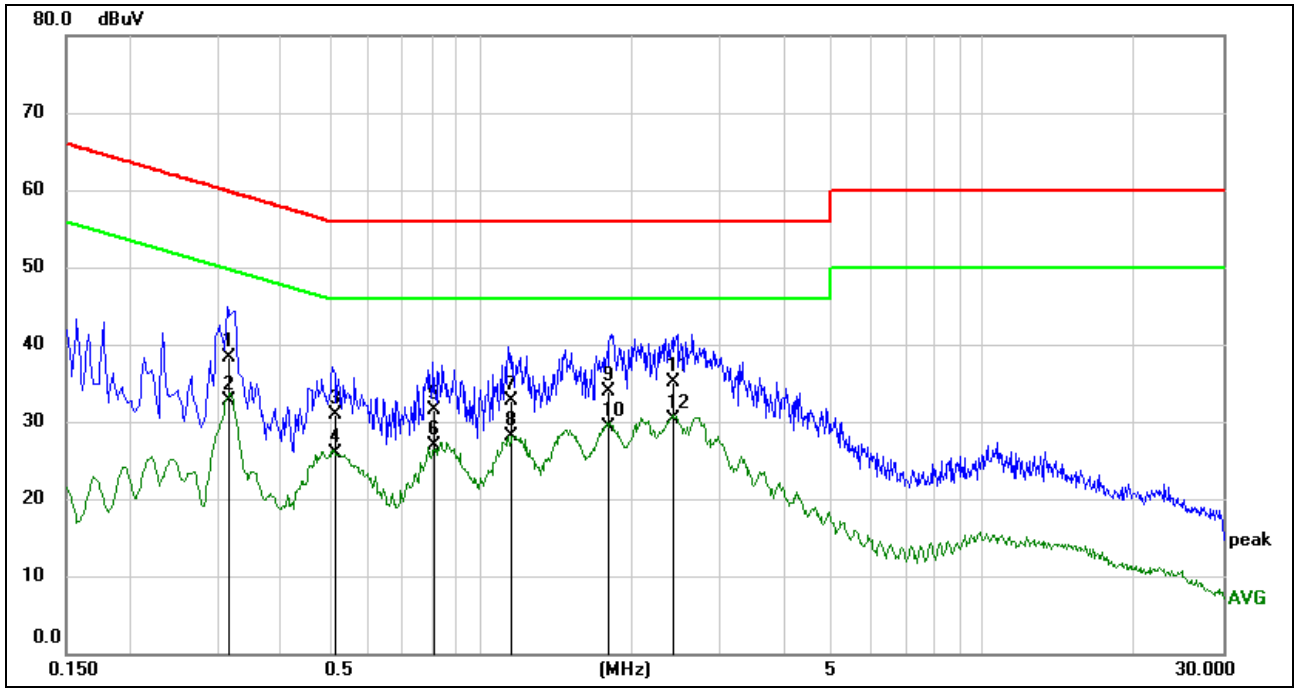
LINE N RESULTS (CHANNEL 6, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1853	21.33	9.59	30.92	64.24	-33.32	QP
2	0.1853	9.02	9.59	18.61	54.24	-35.63	AVG
3	0.3177	27.80	9.59	37.39	59.77	-22.38	QP
4	0.3177	23.13	9.59	32.72	49.77	-17.05	AVG
5	0.4758	19.09	9.60	28.69	56.41	-27.72	QP
6	0.4758	13.96	9.60	23.56	46.41	-22.85	AVG
7	1.1598	20.93	9.61	30.54	56.00	-25.46	QP
8	1.1598	15.71	9.61	25.32	46.00	-20.68	AVG
9	2.4248	22.49	9.63	32.12	56.00	-23.88	QP
10	2.4248	15.67	9.63	25.30	46.00	-20.70	AVG
11	10.5570	3.07	9.63	12.70	60.00	-47.30	QP
12	10.5570	-2.00	9.63	7.63	50.00	-42.37	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 (CHANNEL 6, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3150	28.81	9.59	38.40	59.84	-21.44	QP
2	0.3150	23.05	9.59	32.64	49.84	-17.20	AVG
3	0.5179	21.27	9.60	30.87	56.00	-25.13	QP
4	0.5179	16.22	9.60	25.82	46.00	-20.18	AVG
5	0.8105	21.86	9.60	31.46	56.00	-24.54	QP
6	0.8105	17.24	9.60	26.84	46.00	-19.16	AVG
7	1.1605	23.02	9.61	32.63	56.00	-23.37	QP
8	1.1605	18.44	9.61	28.05	46.00	-17.95	AVG
9	1.7981	24.37	9.62	33.99	56.00	-22.01	QP
10	1.7981	19.64	9.62	29.26	46.00	-16.74	AVG
11	2.4230	25.46	9.63	35.09	56.00	-20.91	QP
12	2.4230	20.71	9.63	30.34	46.00	-15.66	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 the test modes have been tested, only the worst data record in the report.

10. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

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

RESULTS

Complies

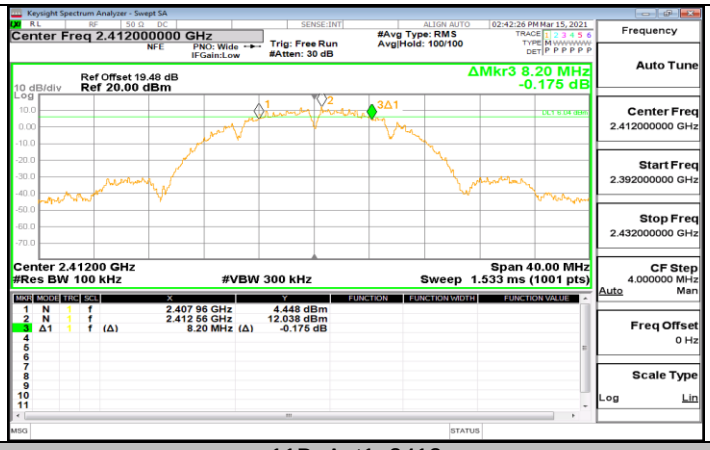
11. Appendix

11.1. Appendix A: DTS Bandwidth

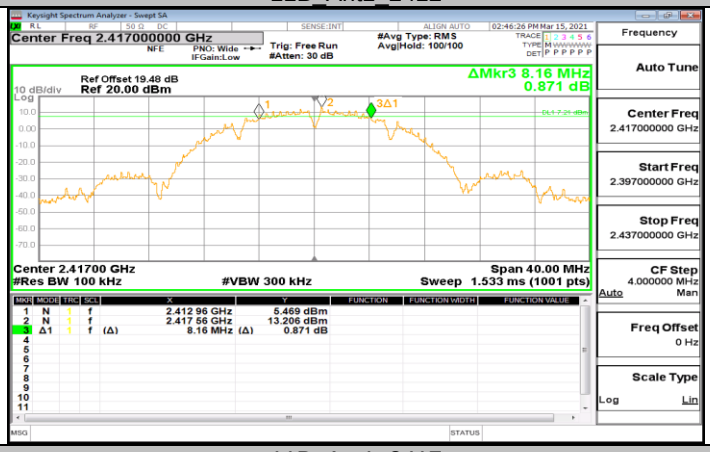
11.1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.200	2407.960	2416.160	0.5	PASS
		2417	8.160	2412.960	2421.120	0.5	PASS
		2437	9.640	2432.480	2442.120	0.5	PASS
		2457	10.120	2452.000	2462.120	0.5	PASS
		2462	9.120	2457.520	2466.640	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
		2417	16.400	2408.840	2425.240	0.5	PASS
		2437	16.400	2428.840	2445.240	0.5	PASS
		2457	16.400	2448.840	2465.240	0.5	PASS
		2462	16.400	2453.840	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.600	2403.240	2420.840	0.5	PASS
		2417	17.600	2408.240	2425.840	0.5	PASS
		2437	17.640	2428.240	2445.880	0.5	PASS
		2457	17.640	2448.200	2465.840	0.5	PASS
		2462	17.640	2453.240	2470.880	0.5	PASS

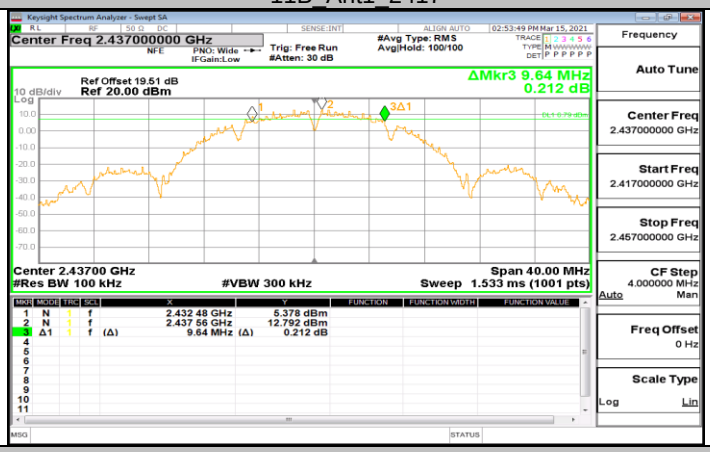
11.1.2. Test Graphs



11B_Ant1_2412



11B_Ant1_2417



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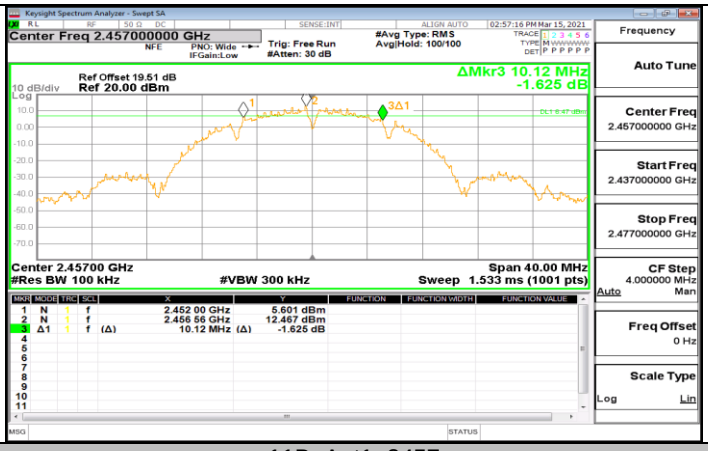
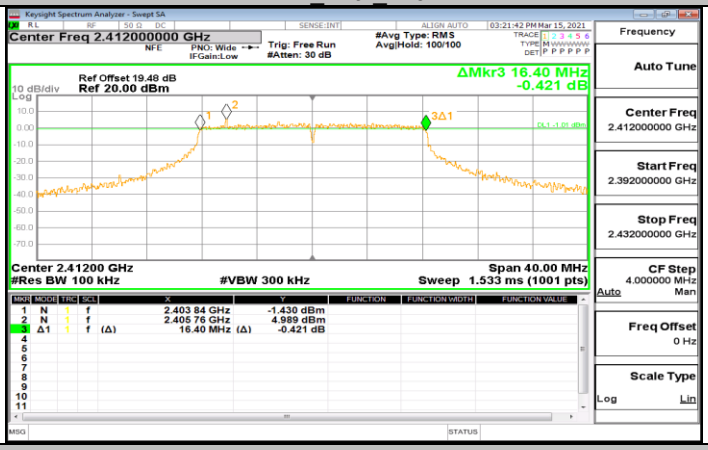
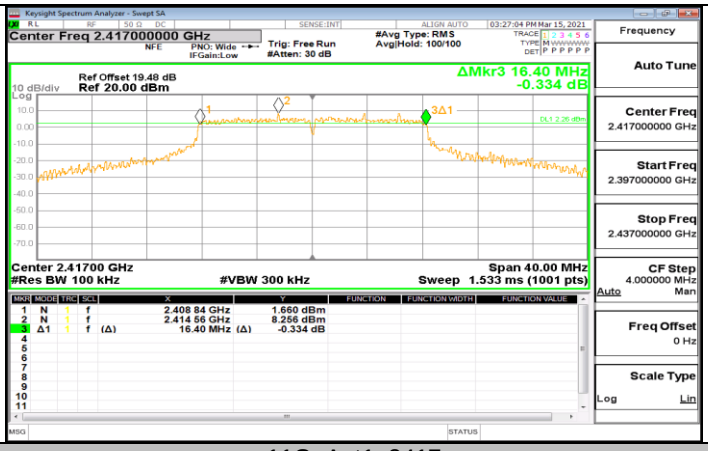


11B_Ant1_2457

11B_Ant1_2462



11G_Ant1_2412



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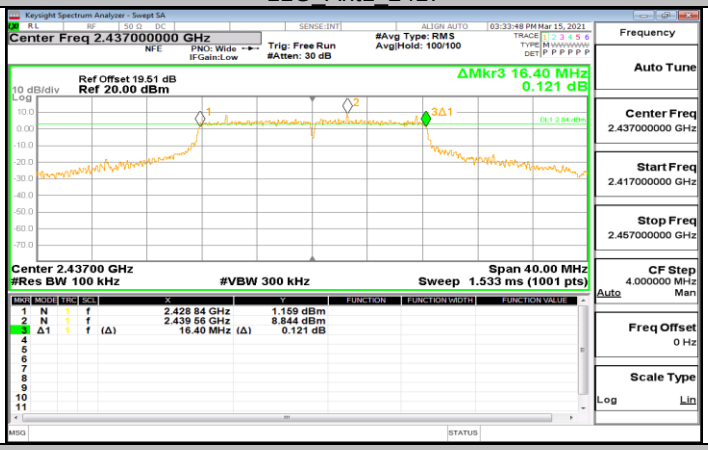
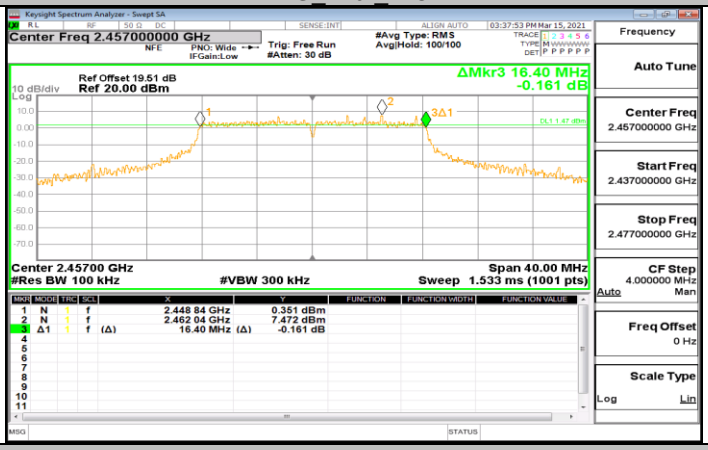
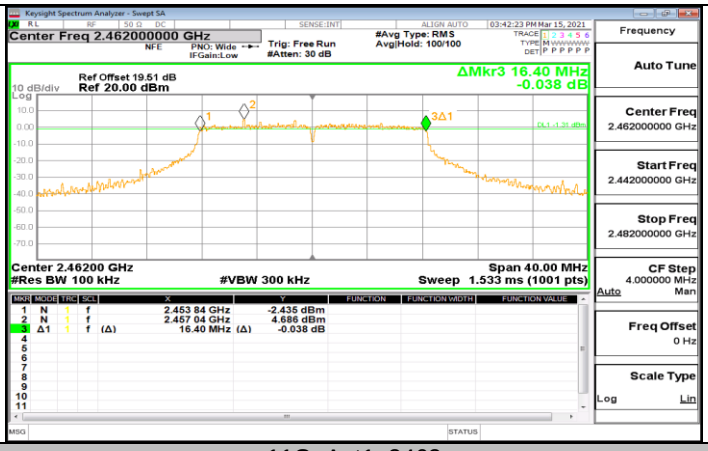


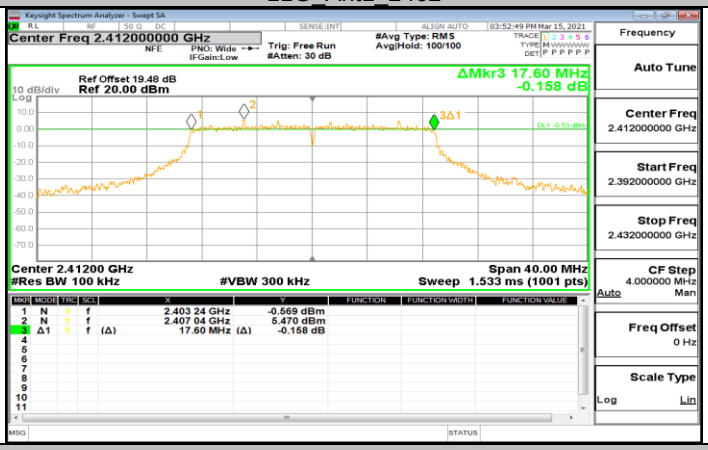
11G_Ant1_2437



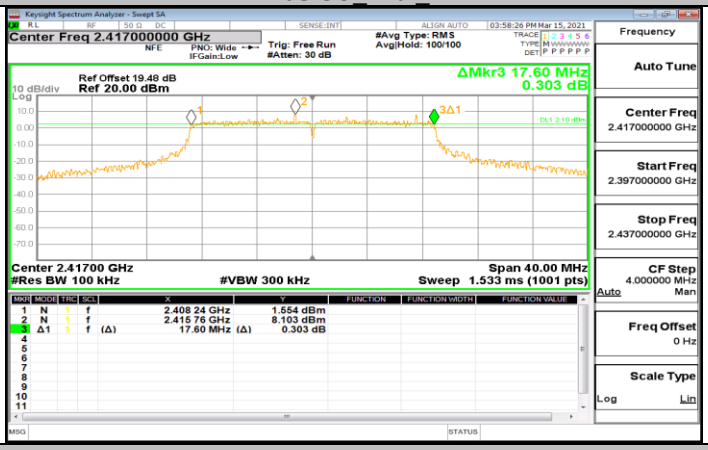
11G_Ant1_2457



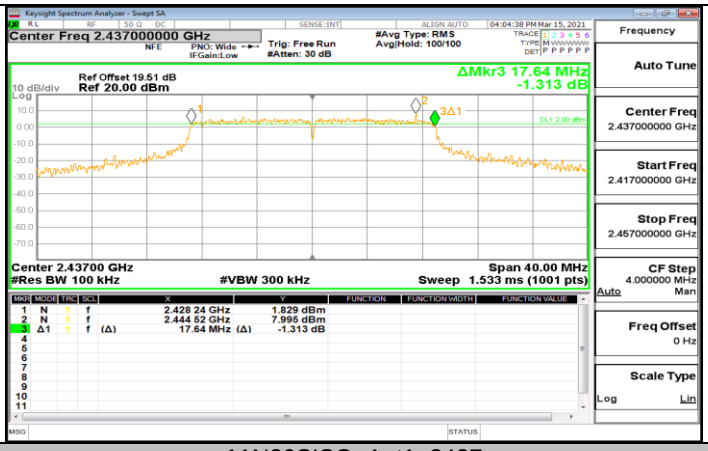
11G_Ant1_2462



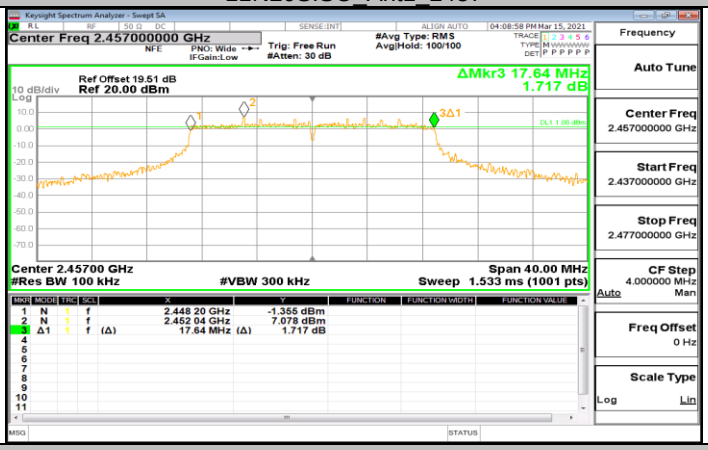
11N20SISO_Ant1_2412



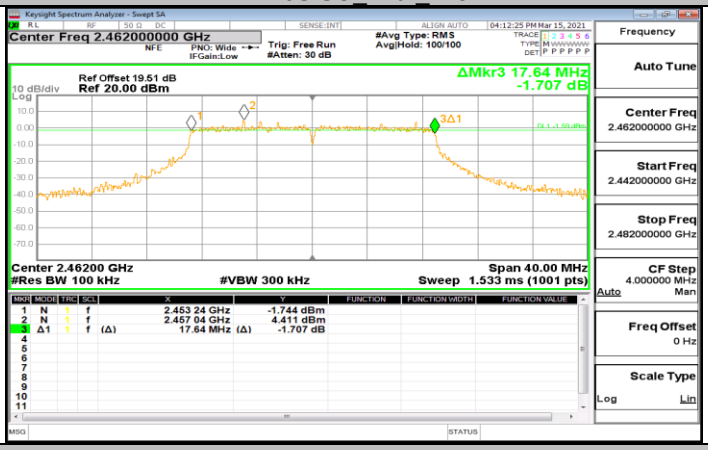
11N20SISO_Ant1_2417



11N20SISO_Ant1_2437



11N20SISO_Ant1_2457



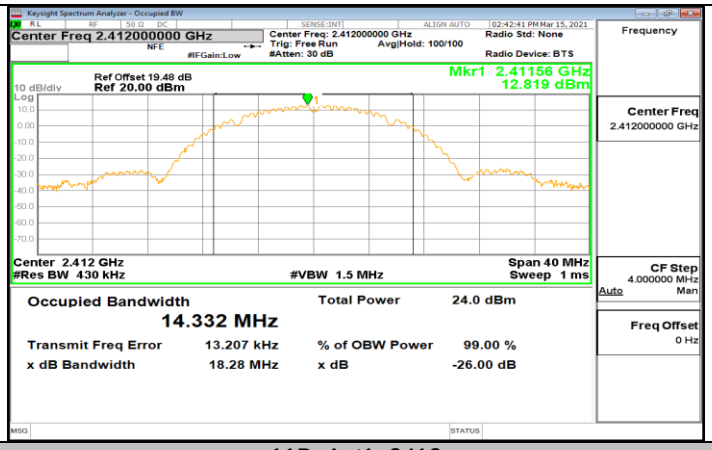
11N20SISO_Ant1_2462

11.2. Appendix B: Occupied Channel Bandwidth

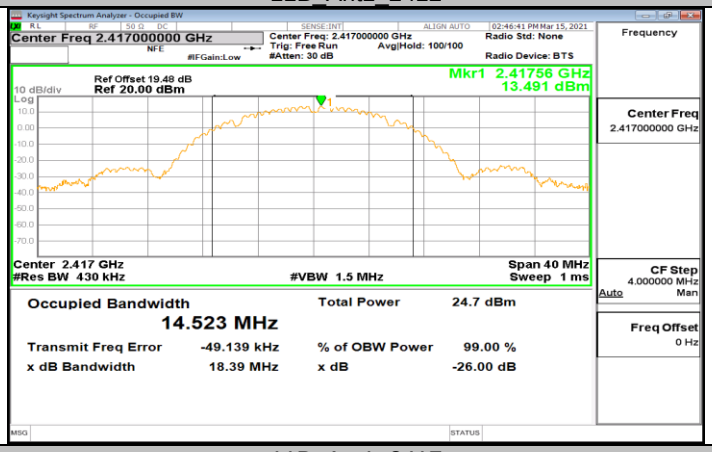
11.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11B	Ant1	2412	14.332	2404.847	2419.179	PASS
		2417	14.523	2409.689	2424.212	PASS
		2437	14.935	2429.525	2444.460	PASS
		2457	14.509	2449.723	2464.232	PASS
		2462	14.358	2454.830	2469.188	PASS
11G	Ant1	2412	17.225	2403.449	2420.674	PASS
		2417	17.666	2408.335	2426.001	PASS
		2437	17.924	2428.191	2446.115	PASS
		2457	17.534	2448.309	2465.843	PASS
		2462	17.280	2453.413	2470.693	PASS
11N20SISO	Ant1	2412	18.270	2402.943	2421.213	PASS
		2417	18.591	2407.825	2426.416	PASS
		2437	18.938	2427.669	2446.607	PASS
		2457	18.449	2447.877	2466.326	PASS
		2462	18.282	2452.935	2471.217	PASS

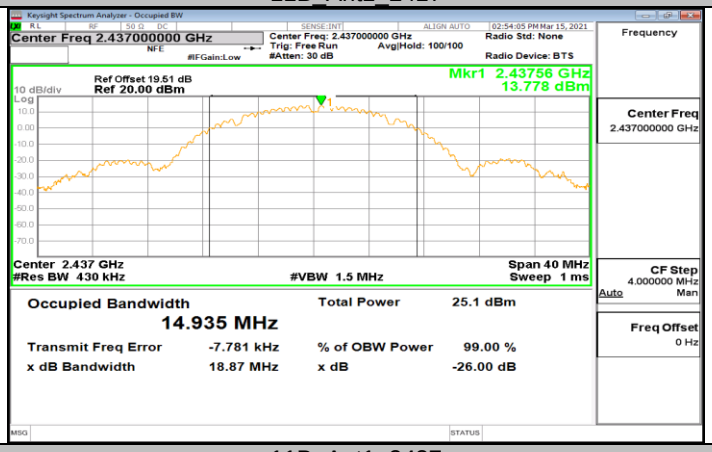
11.2.2. Test Graphs



11B_Ant1_2412



11B_Ant1_2417



11B_Ant1_2437