CFR 47 FCC PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Integrated video conference terminal

MODEL NUMBER: UC S10, MS10B, MS**, UC******

FCC ID: 2AFG6-MS10B

REPORT NUMBER: 4789822671.2-8

ISSUE DATE: April 07, 2021

Prepared for

Guangzhou Shirui Electronics Co Ltd
192 Kezhu Road, Scientech Park, guangzhou Economic Technology Development District Guangzhou China

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881
Fax: +86 769 33244054
Website: www.ul.com

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	04/07/2021	Initial Issue	

Summary of Test Results			
Clause	**Test Items**	**FCC Rules**	**Test Results**
1	6dB Bandwidth and 99% Occupied Bandwidth	FCC Part 15.247 (a) (2)	Pass
2	Conducted Output Power	FCC Part 15.247 (b) (3)	Pass
3	Power Spectral Density	FCC Part 15.247 (e)	Pass
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d)	Pass
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205	Pass
6	Conducted Emission Test for AC Power Port	FCC Part 15.207	Pass
7	Antenna Requirement	FCC Part 15.203	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 > when <Accuracy Method> decision rule is applied.

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Guangzhou Shirui Electronics Co Ltd
Address:	192 Kezhu Road, Scientech Park, guangzhou Economic Technology Development District Guangzhou China

Manufacturer Information

Company Name:	Guangzhou Shirui Electronics Co Ltd
Address:	192 Kezhu Road, Scientech Park, guangzhou Economic Technology Development District Guangzhou China

EUT Information

EUT Name:	Integrated video conference terminal
Model:	UC S10
Series Model:	MS10B, MS****, UC****
Model difference:	See section 5.1 of this report for detail
Sample Received Date:	February 7, 2021
Sample Status:	Normal
Sample ID:	3689328
Date of Tested:	February 7, 2021~ April 7, 2021

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	PASS

Prepared By:

Mick Zhang
Project Engineer

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager

2. TEST METHODOLOGY

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

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)
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	Integrated video conference terminal			
Model	UC S10			
Series Model	MS10B, MS****, UC****			
Model difference	There are no difference except the model name. (*=A-Z, a-z, 0-9 "-" or blank, no other difference but model number and color just for marketing purpose)			
Radio Technology	IEEE802.11b/g/n HT20/HT40			
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz			
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)			
Wireless Module	RTL8821CU-CG			
Supply Voltage	☐AC mains State			
	☒DC State	☐Internal Power Supply		
		☒External Power Supply or AC/DC adapter	Rate Input:	AC 100-240V~, 50/60Hz, 50/60, 1.0A Max
			Rate Output:	DC 12V3A, 36.0W
		☐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	/	/

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

5.3. MAXIMUM OUTPUT POWER

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)
b	2412 ~ 2462	1-11[11]	14.6
g	2412 ~ 2462	1-11[11]	12.13
n HT20	2412 ~ 2462	1-11[11]	11.19
n HT40	2422 ~ 2452	3-9[7]	11.34

5.4. TEST CHANNEL CONFIGURATION

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

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		WLAN Test Tool					
Modulation Mode	Transmit Antenna Number	Test Software setting value					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	1	default	default	default	/		
802.11g	1	default	default	default			
802.11n HT20	1	default	default	default			
802.11n HT40	1	/			default	default	default

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 / 1 Mbps
IEEE 802.11g / 6 Mbps
IEEE 802.11n HT20 / MCS0
IEEE 802.11n HT40 / MCS0

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.

The EUT support rotating antennas, we have done pre-tests under different angle combinations. so only the worst measurement position (X axis) was recorded in the report only the worst as shown in the setup photo.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2412-2462	FPC antenna	5.95

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.
IEEE 802.11n HT40	☒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	ThinkPad	X230i	/
2	USB TO UART	/	/	/
3	Monitor	DELL	P2715Qt	CN-040FHF-WS200-79C-390L
4	Earphone	GIONEE	N/A	N/A
5	Mouse	Lenovo	MO28UOB	8SSM50G45918F CCC1545

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	/	/	1.0	/
2	HDMI Cable	YES	YES	1.5	/
3	Network Cable	/	/	2.0	/

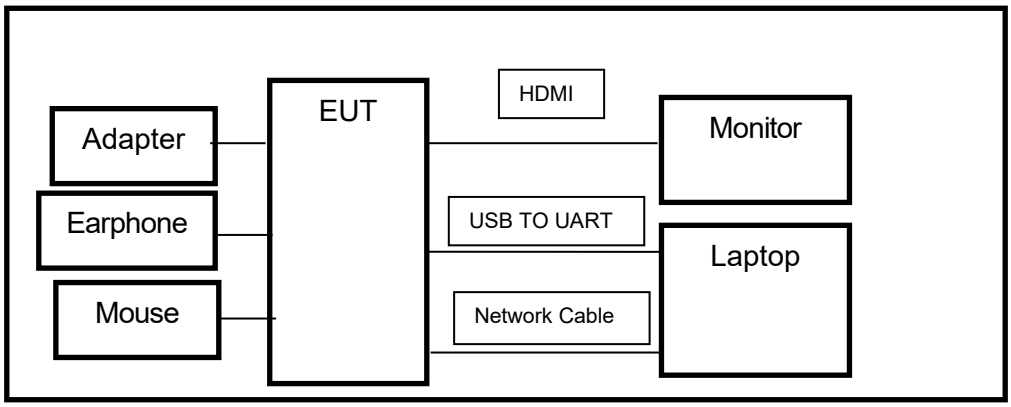
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
1	Adapter	GangQi	GQ36-120300-AX	Input: AC 100-240V~, 50/60Hz, 50/60, 1.0A Max Output: DC 12V3A, 36.0W

TEST SETUP

The EUT can work in engineering mode with a software.

SETUP DIAGRAM FOR TESTS



6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	101961	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	Nov. 12, 2020	Nov. 11, 2021
☑	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
☑	Power sensor, Power Meter	Tonsend	JS0806-2	178060074	Dec.30,2020	Dec.30,2021

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

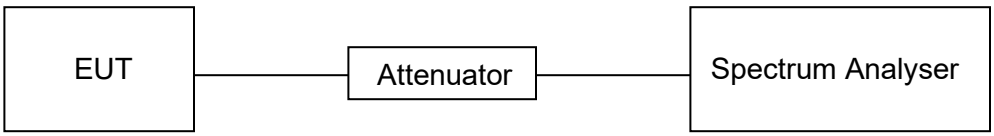
LIMITS

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	25.2 °C	Relative Humidity	68.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

Please refer to appendix G.

7.2. 6 dB DTS BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2)	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

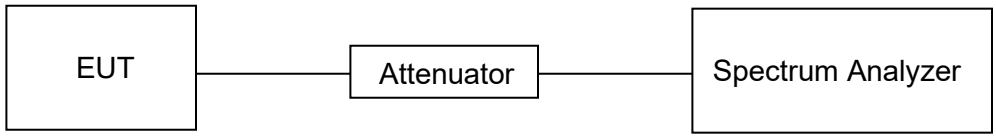
Connect the EUT to the spectrum analyser and use the following settings:

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	25.2 °C	Relative Humidity	68.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

Please refer to appendix A & B.

7.3. CONDUCTED OUTPUT POWER

LIMITS

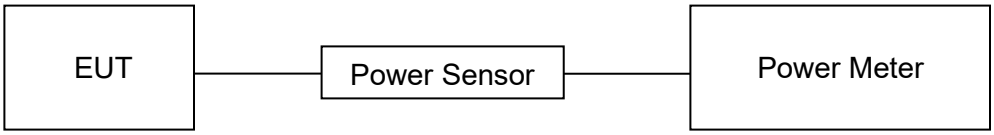
CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3)	AVG Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause in 11.9.2.

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	25.2 °C	Relative Humidity	68.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

Please refer to appendix C.

7.4. POWER SPECTRAL DENSITY

LIMITS

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

TEST PROCEDURE

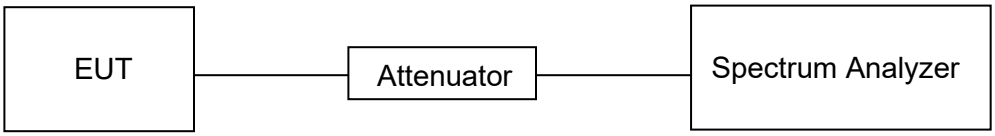
Refer to ANSI C63.10-2013 clause 11.10.

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	25.2 °C	Relative Humidity	68.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

Please refer to appendix D.

7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d)	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:

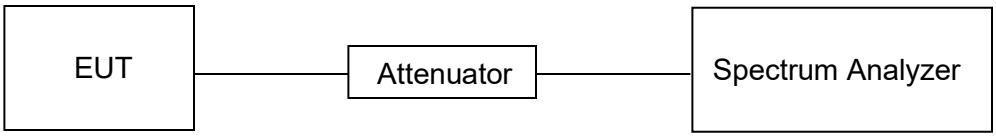
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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	25.2 °C	Relative Humidity	68.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

Please refer to appendix E & F.

8. RADIATED TEST RESULTS

LIMITS

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

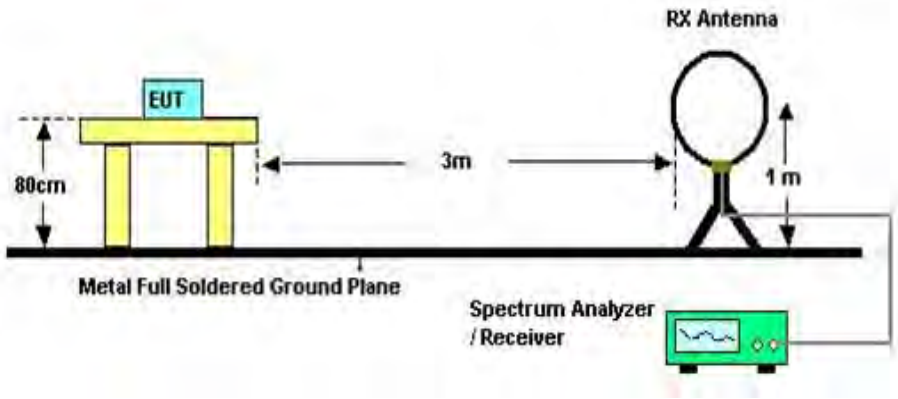
FCC Restricted bands of operation refer to FCC §15.205 (a):

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.

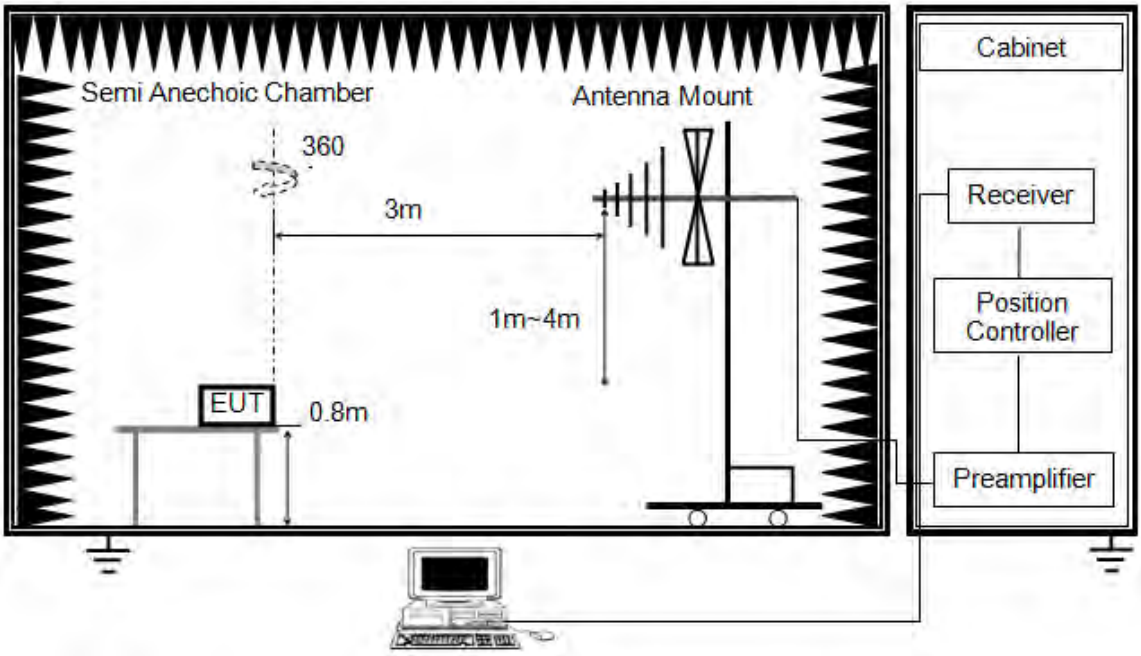
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

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.

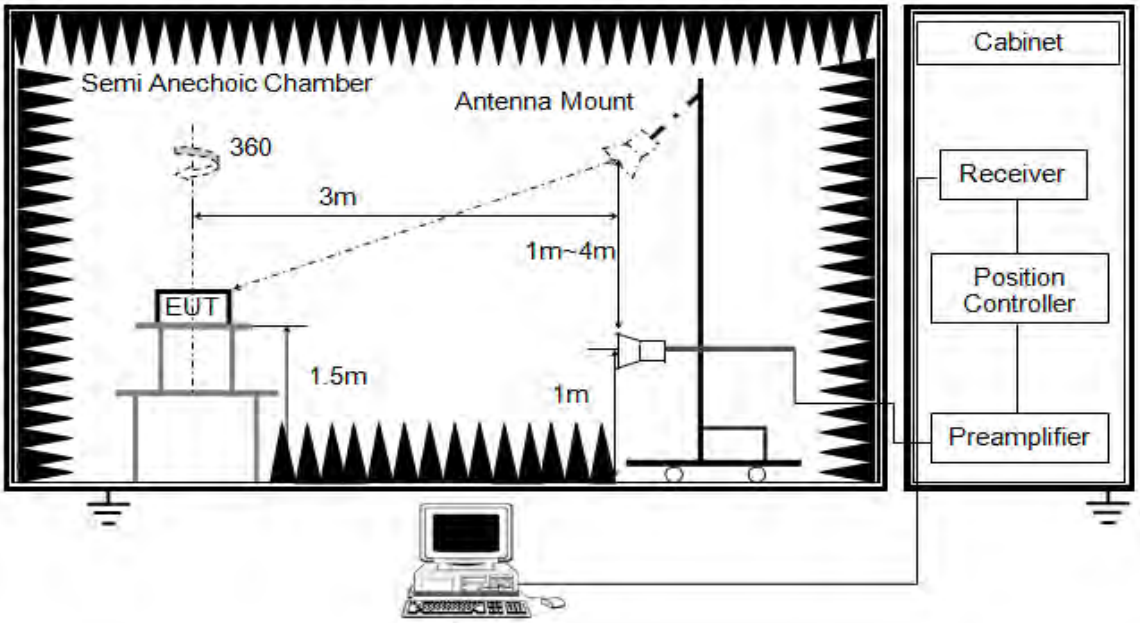
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations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

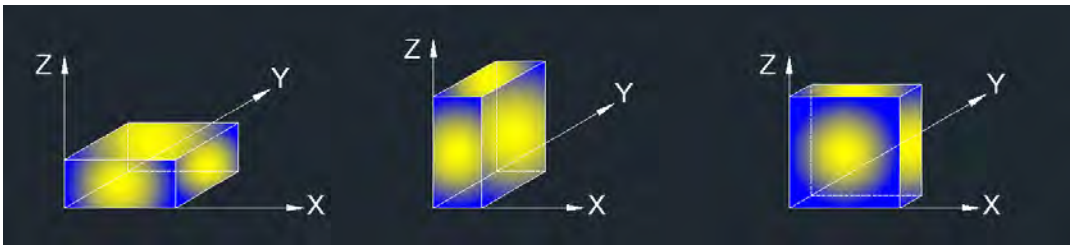
3. The EUT was placed on a turntable with 1.5 m above ground.

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	AC 120 V/60 Hz

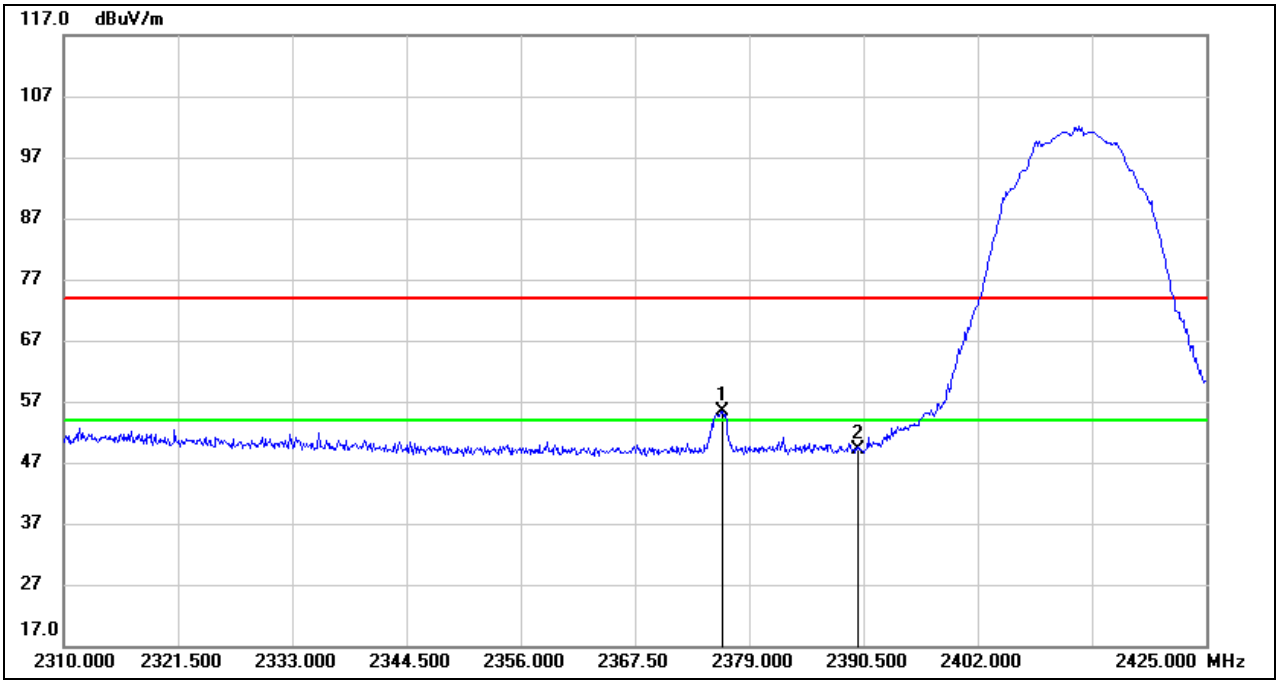
RESULTS

8.1. RESTRICTED BANDEDGE

8.1.1. 802.11b SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

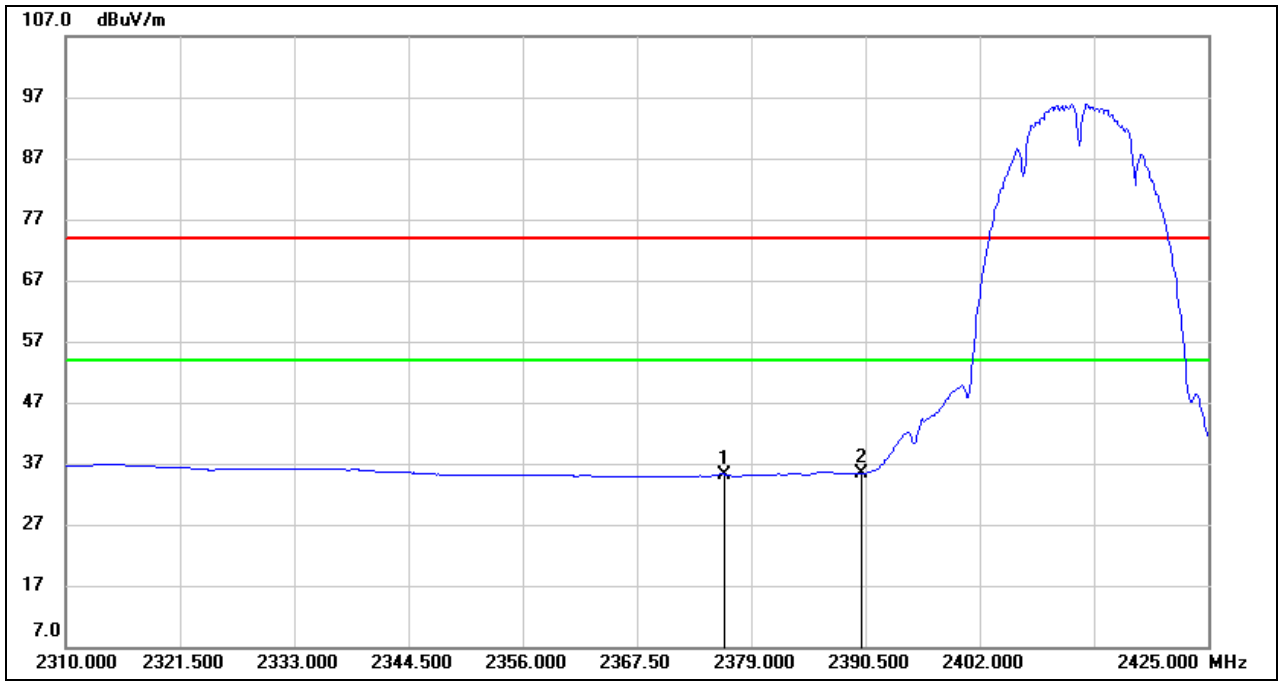
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2376.355	22.25	33.25	55.50	74.00	-18.50	peak
2	2390.000	15.90	33.35	49.25	74.00	-24.75	peak

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

AVG

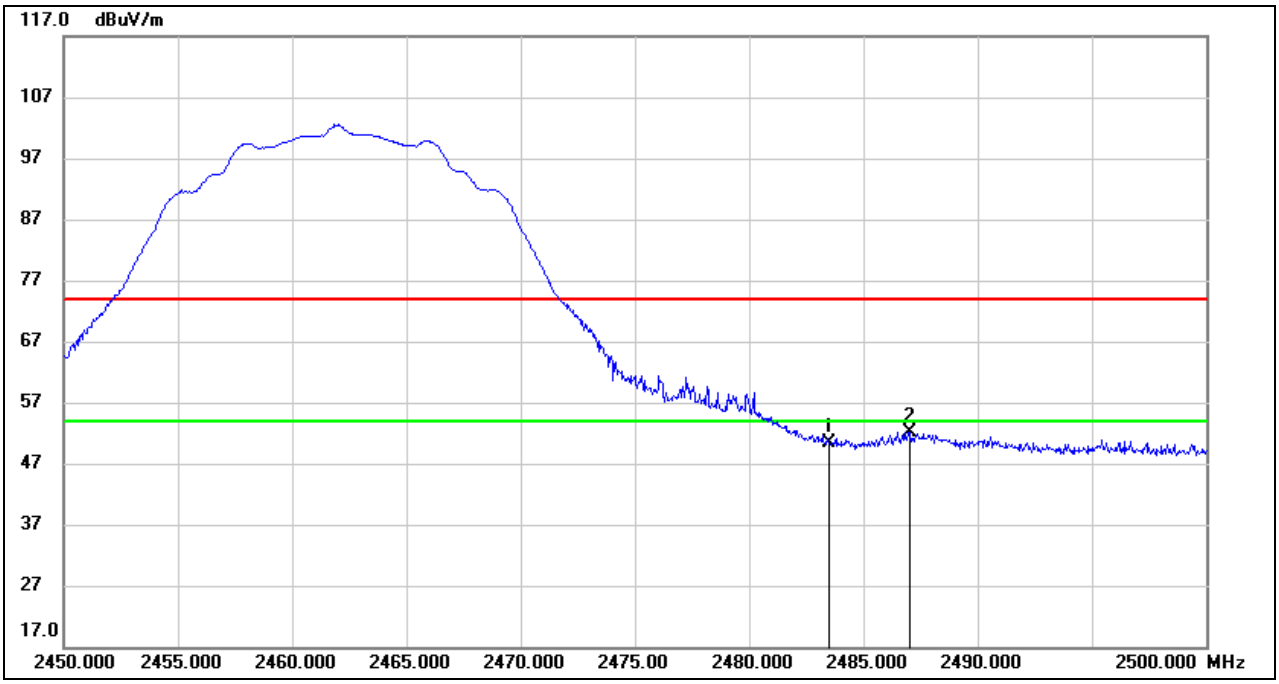


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2376.355	1.98	33.25	35.23	54.00	-18.77	AVG
2	2390.000	2.00	33.35	35.35	54.00	-18.65	AVG

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

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	16.59	33.71	50.30	74.00	-23.70	peak
2	2487.050	18.43	33.72	52.15	74.00	-21.85	peak

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

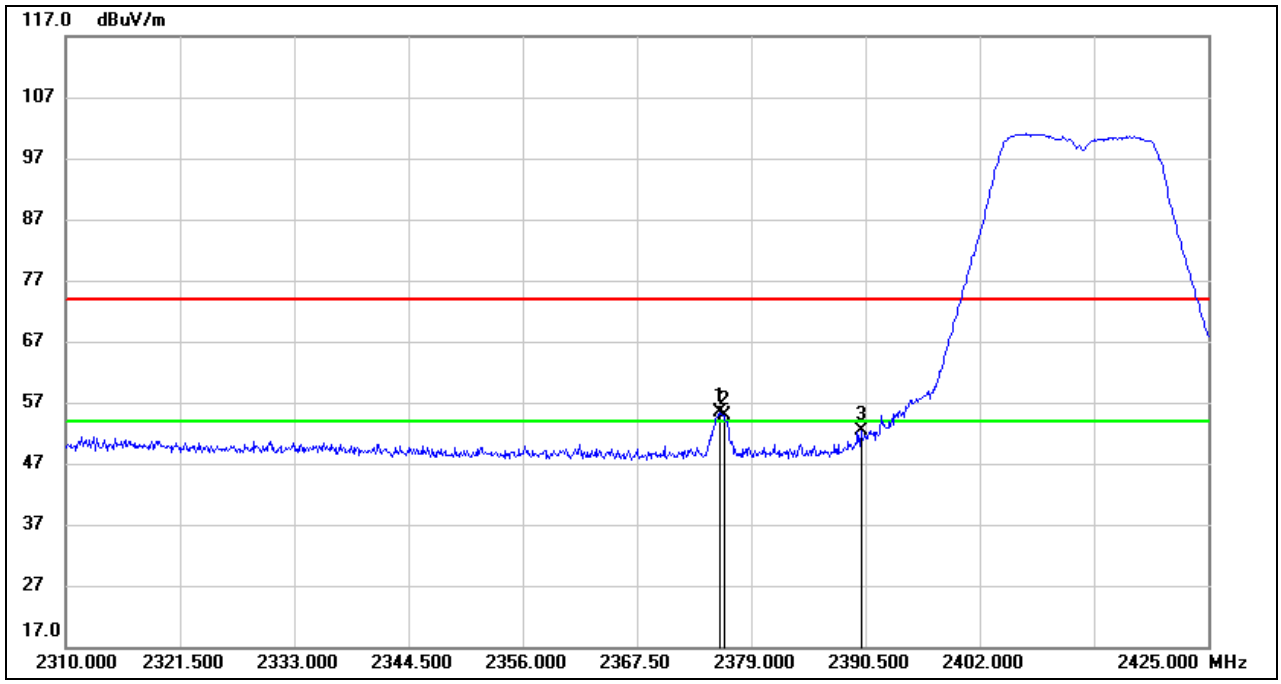
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

8.1.2. 802.11g SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

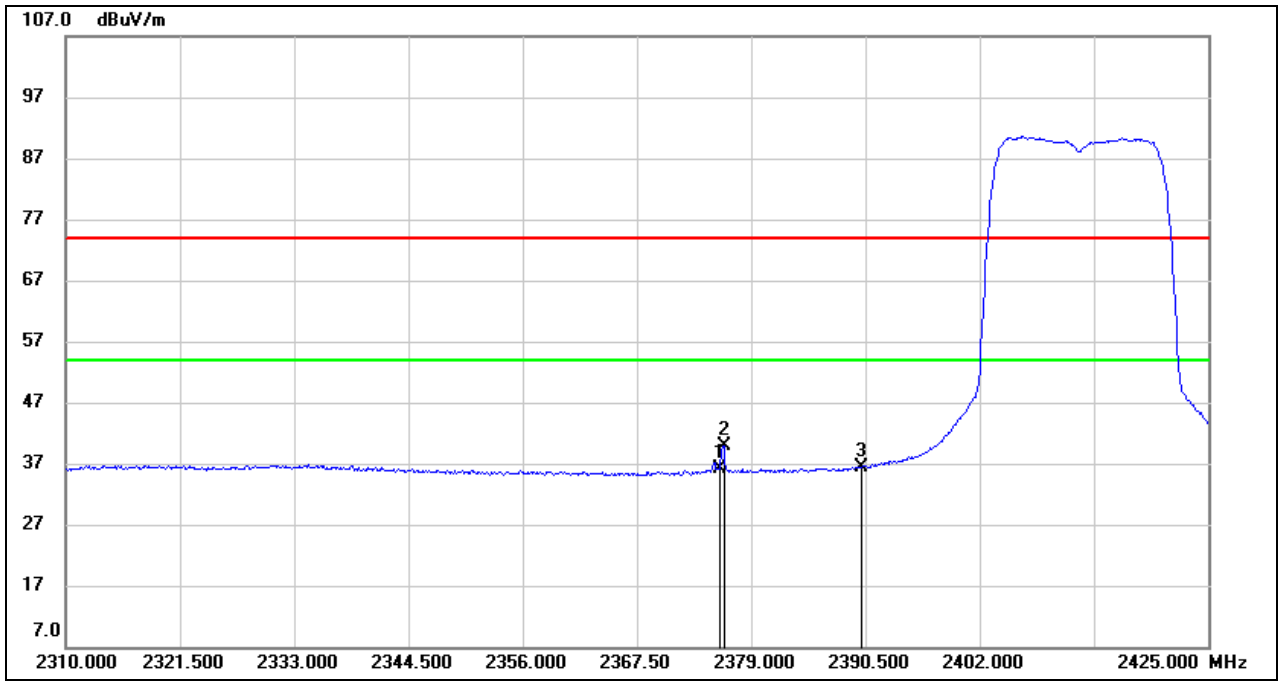
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.780	22.20	33.25	55.45	74.00	-18.55	peak
2	2376.240	21.74	33.25	54.99	74.00	-19.01	peak
3	2390.000	18.99	33.35	52.34	74.00	-21.66	peak

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

AVG

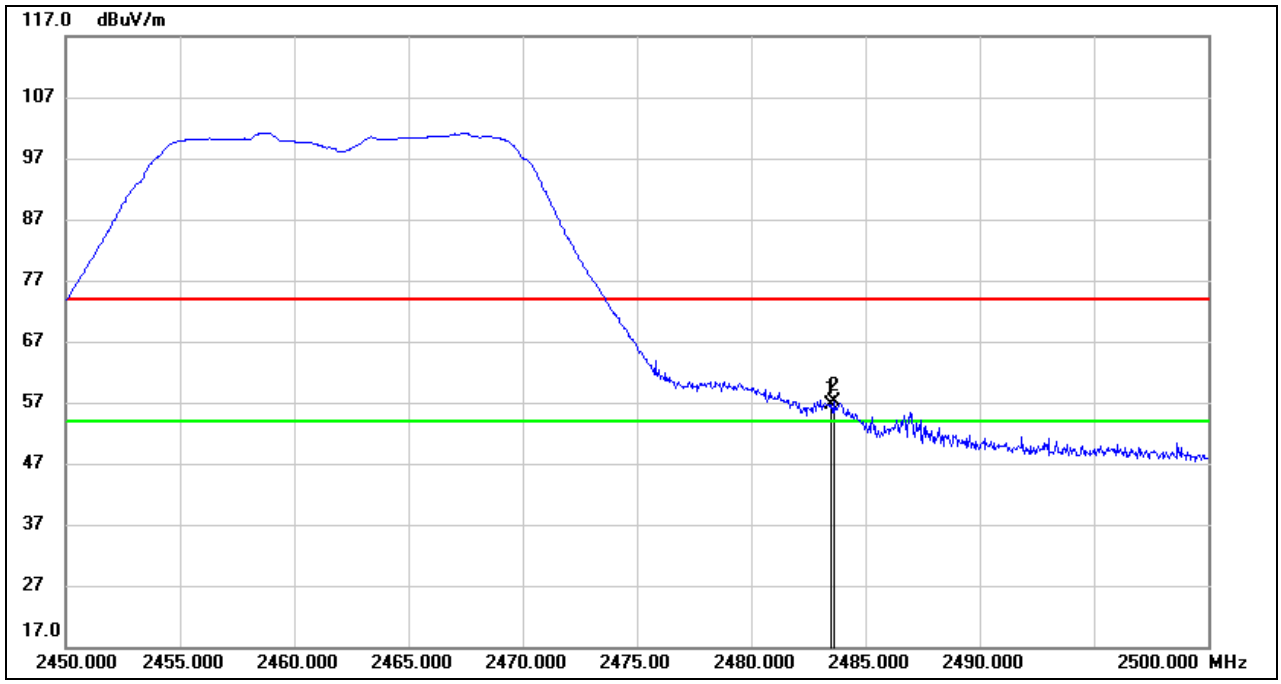


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.780	2.96	33.25	36.21	54.00	-17.79	AVG
2	2376.240	6.73	33.25	39.98	54.00	-14.02	AVG
3	2390.000	3.09	33.35	36.44	54.00	-17.56	AVG

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

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

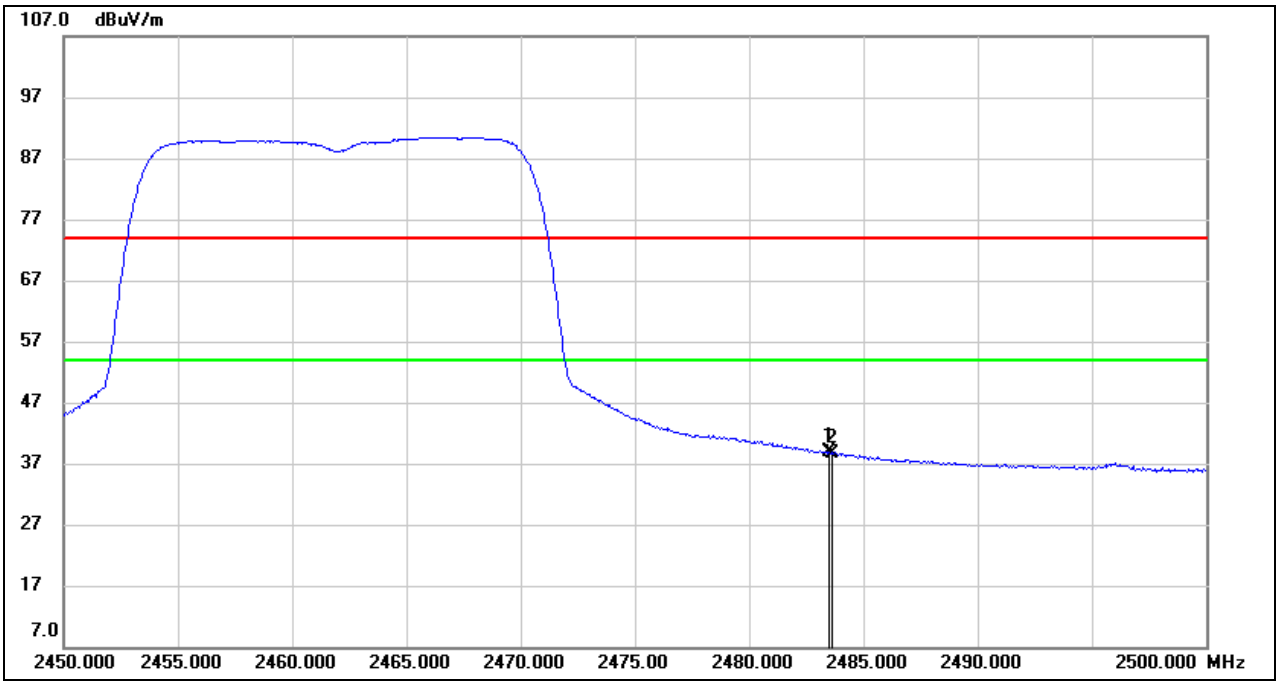
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.03	33.71	56.74	74.00	-17.26	peak
2	2483.600	23.40	33.71	57.11	74.00	-16.89	peak

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

AVG



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	5.05	33.71	38.76	54.00	-15.24	AVG
2	2483.600	4.98	33.71	38.69	54.00	-15.31	AVG

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

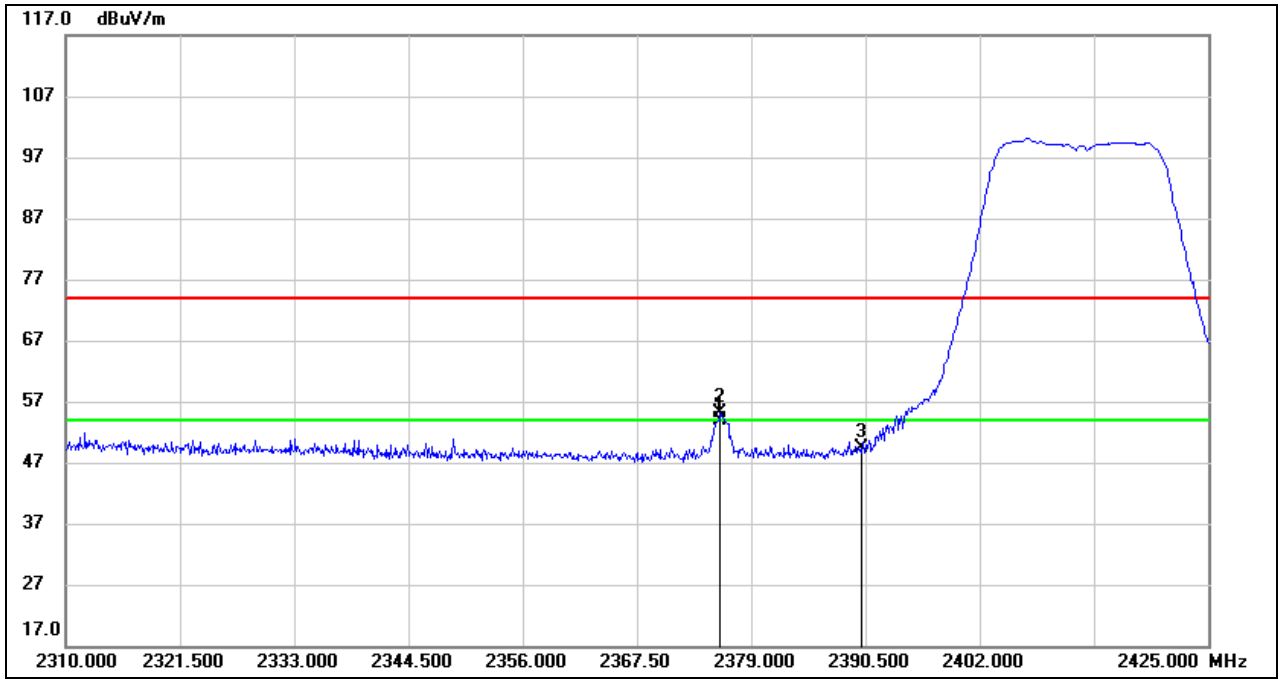
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

8.1.3. 802.11n HT20 SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

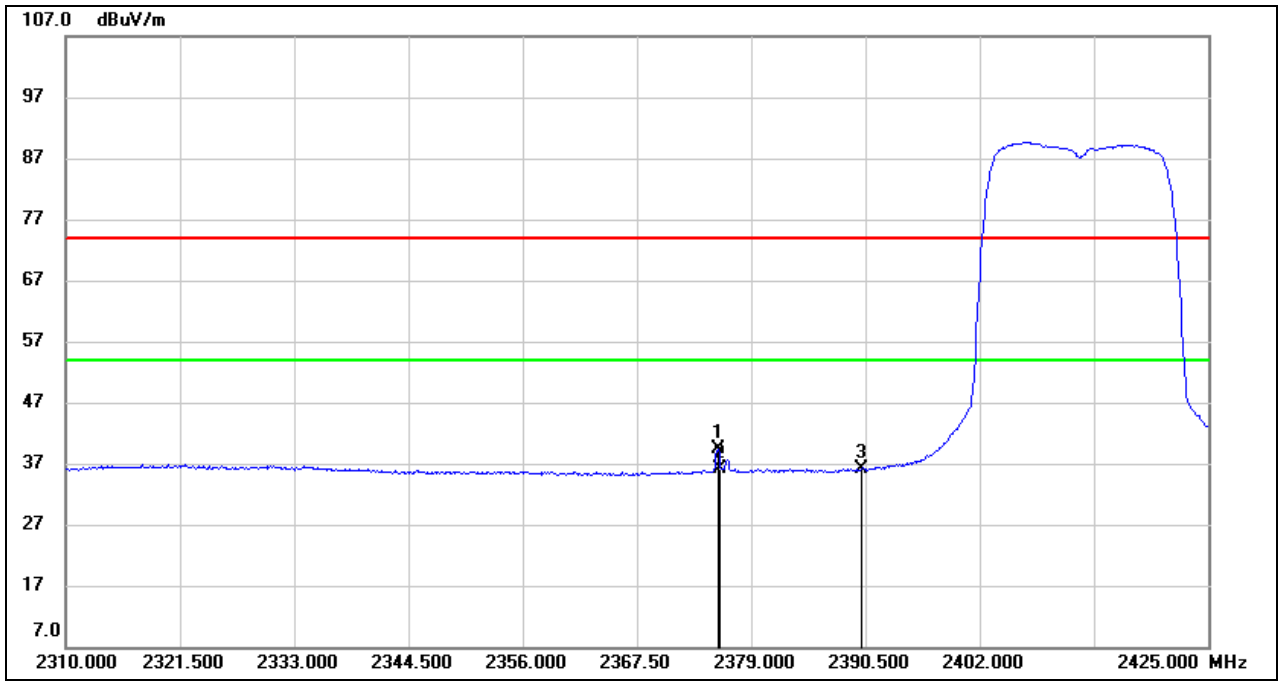
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.665	20.73	33.25	53.98	74.00	-20.02	peak
2	2375.895	21.76	33.25	55.01	74.00	-18.99	peak
3	2390.000	16.07	33.35	49.42	74.00	-24.58	peak

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

AVG

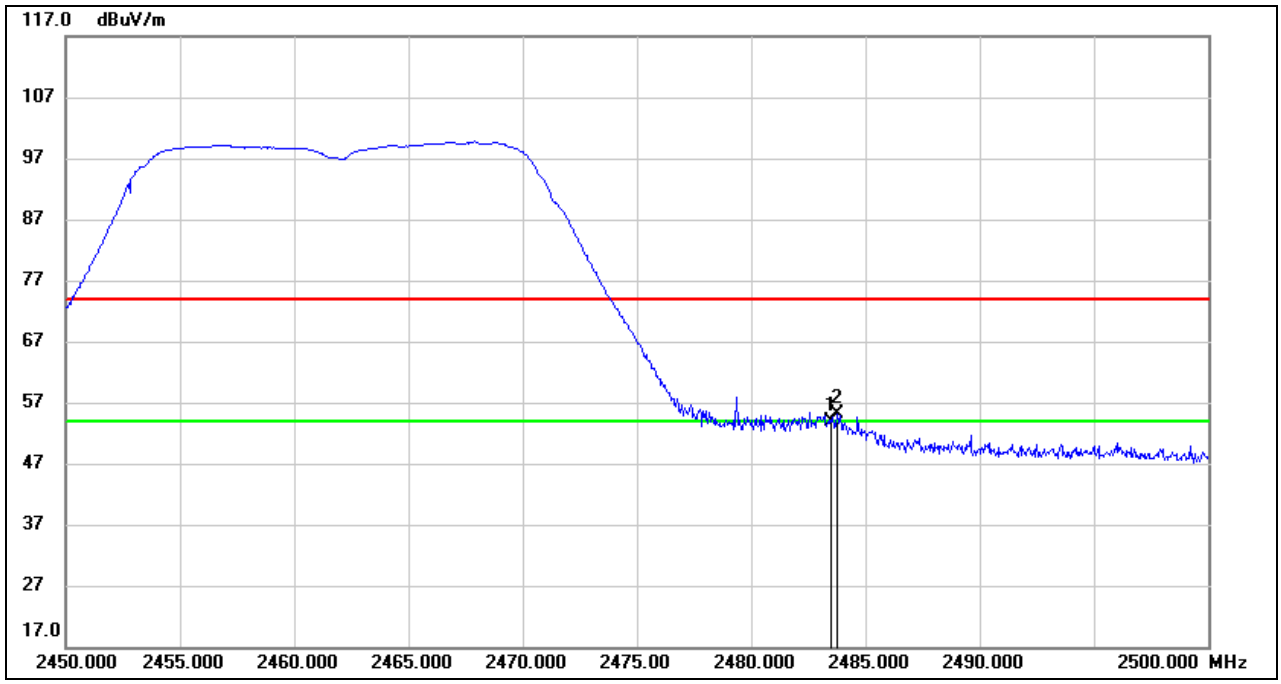


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.665	6.24	33.25	39.49	54.00	-14.51	AVG
2	2375.895	2.91	33.25	36.16	54.00	-17.84	AVG
3	2390.000	2.67	33.35	36.02	54.00	-17.98	AVG

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

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

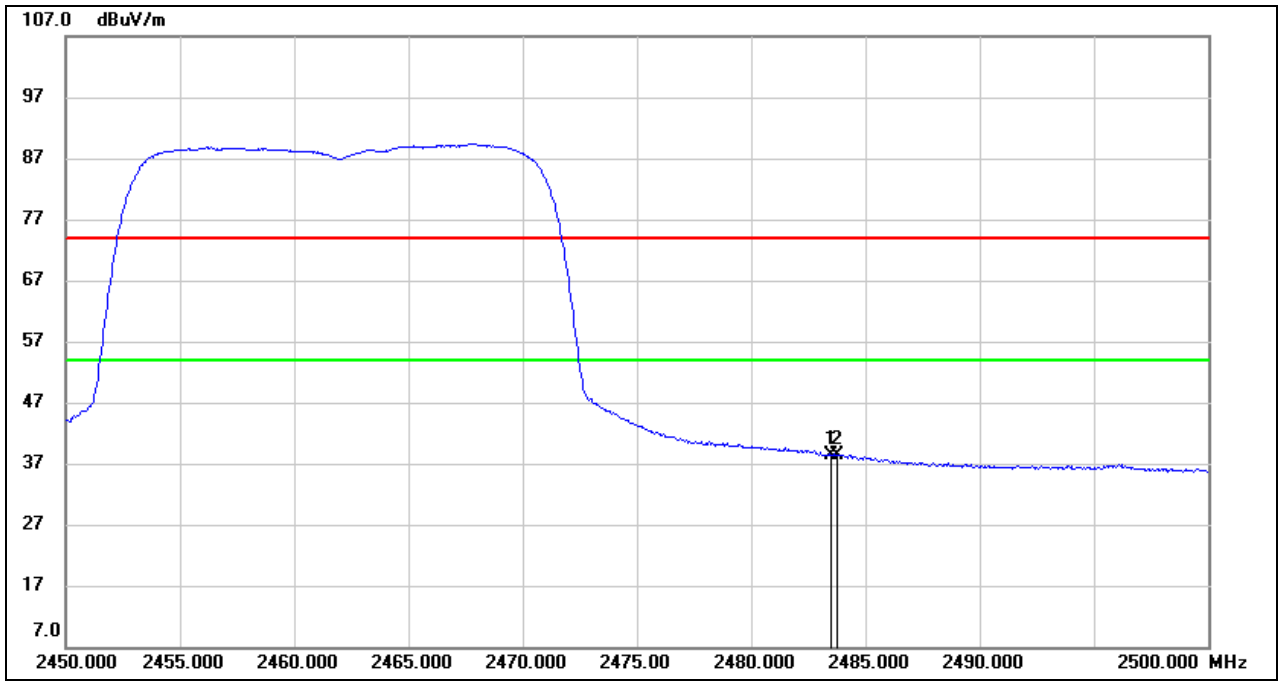
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	20.14	33.71	53.85	74.00	-20.15	peak
2	2483.750	21.44	33.71	55.15	74.00	-18.85	peak

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

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	4.76	33.71	38.47	54.00	-15.53	AVG
2	2483.750	4.62	33.71	38.33	54.00	-15.67	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

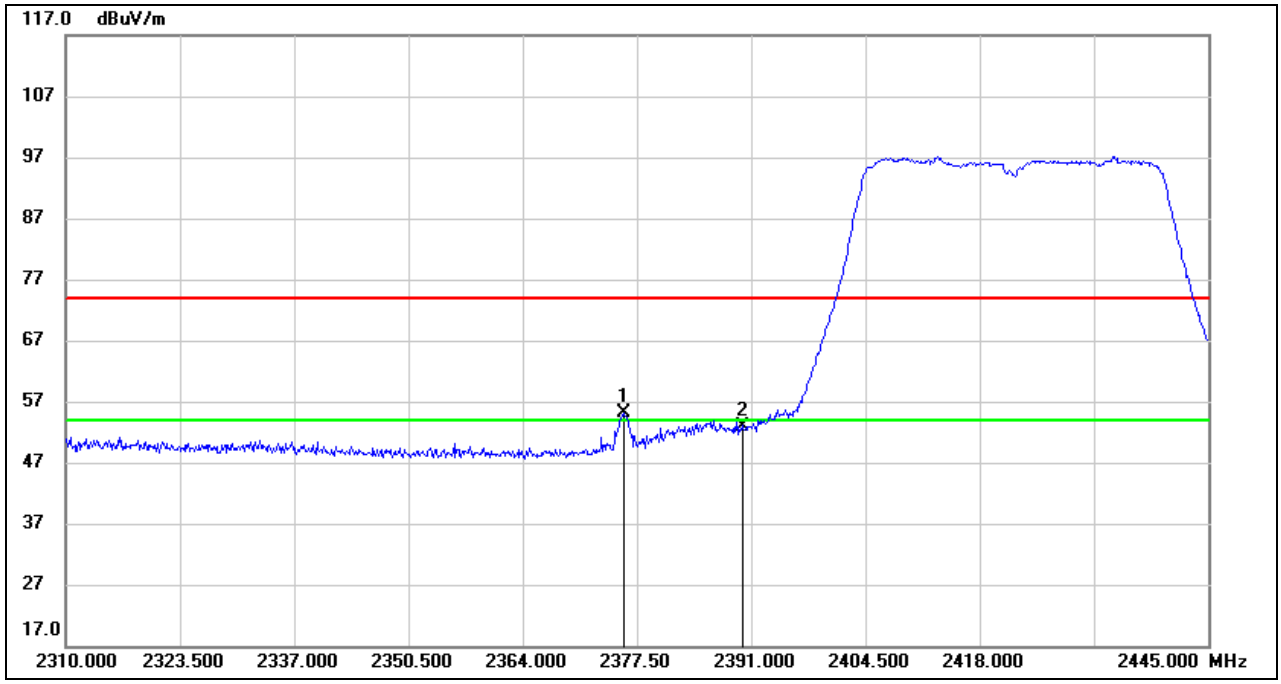
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

8.1.4. 802.11n HT40 SISO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

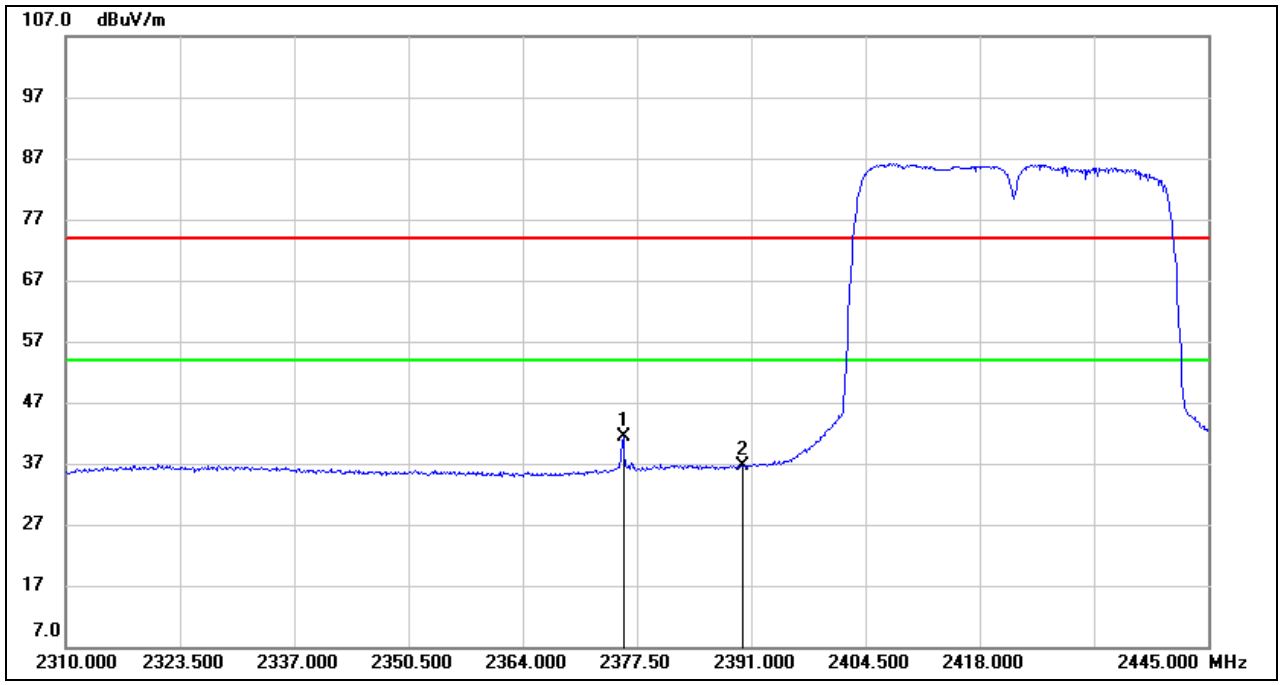
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.880	21.86	33.25	55.11	74.00	-18.89	peak
2	2390.000	19.65	33.35	53.00	74.00	-21.00	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

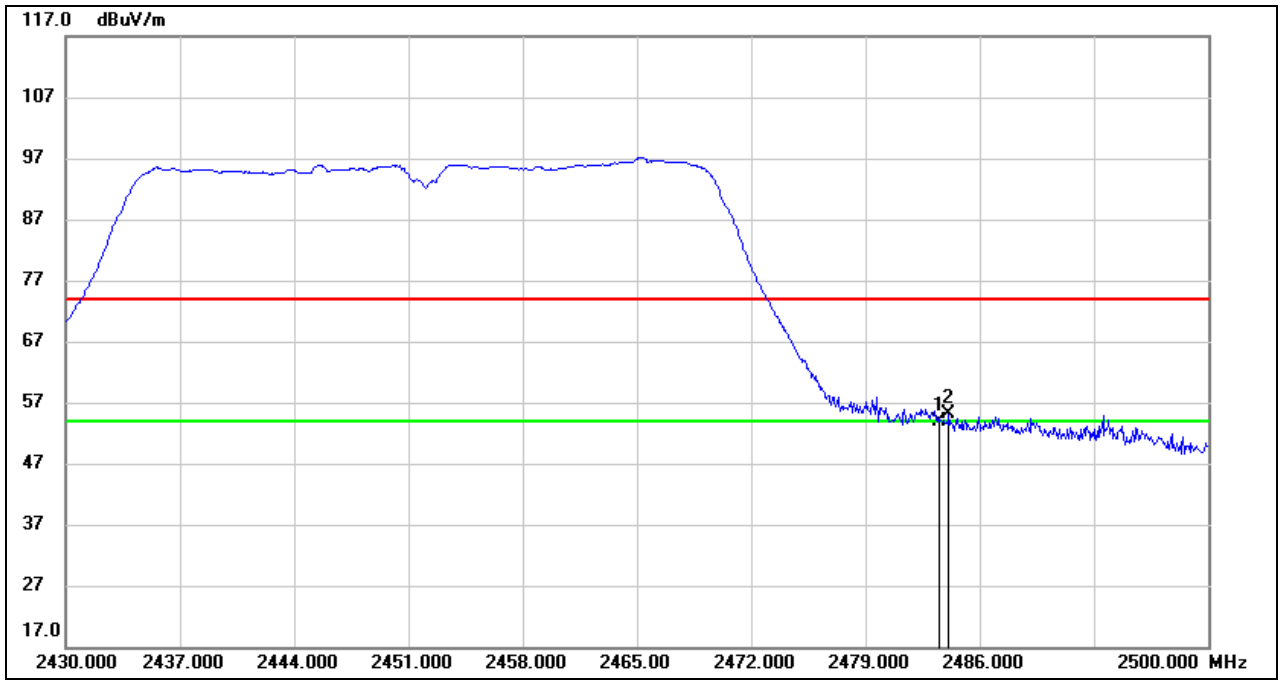


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.880	8.11	33.25	41.36	54.00	-12.64	AVG
2	2390.000	3.20	33.35	36.55	54.00	-17.45	AVG

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

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

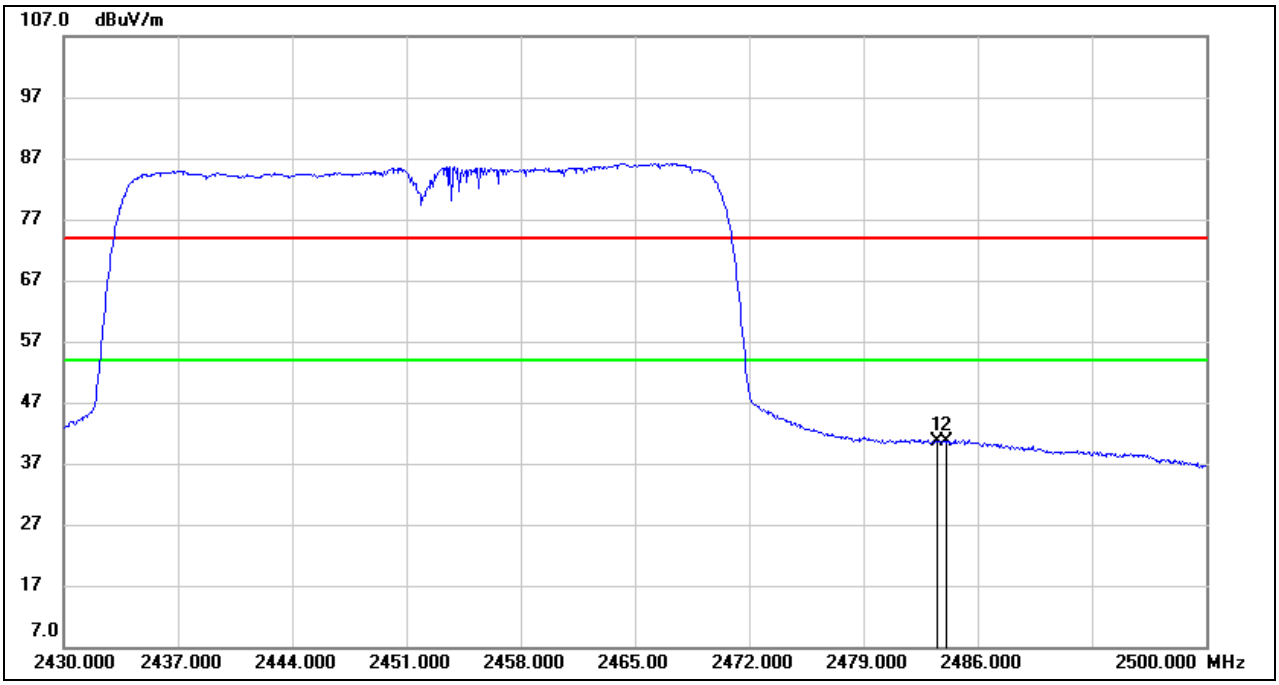
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	20.16	33.71	53.87	74.00	-20.13	peak
2	2484.110	21.45	33.71	55.16	74.00	-18.84	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 data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	6.83	33.71	40.54	54.00	-13.46	AVG
2	2484.110	6.99	33.71	40.70	54.00	-13.30	AVG

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

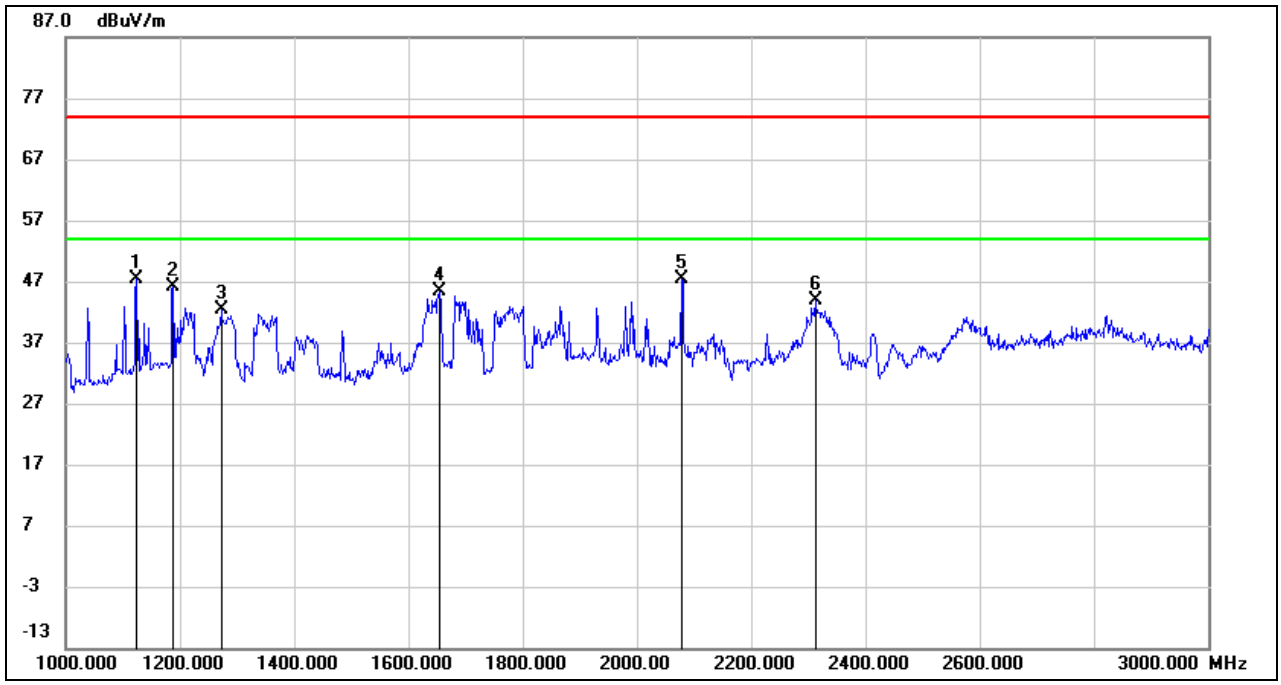
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

8.2.1. 802.11b SISO MODE

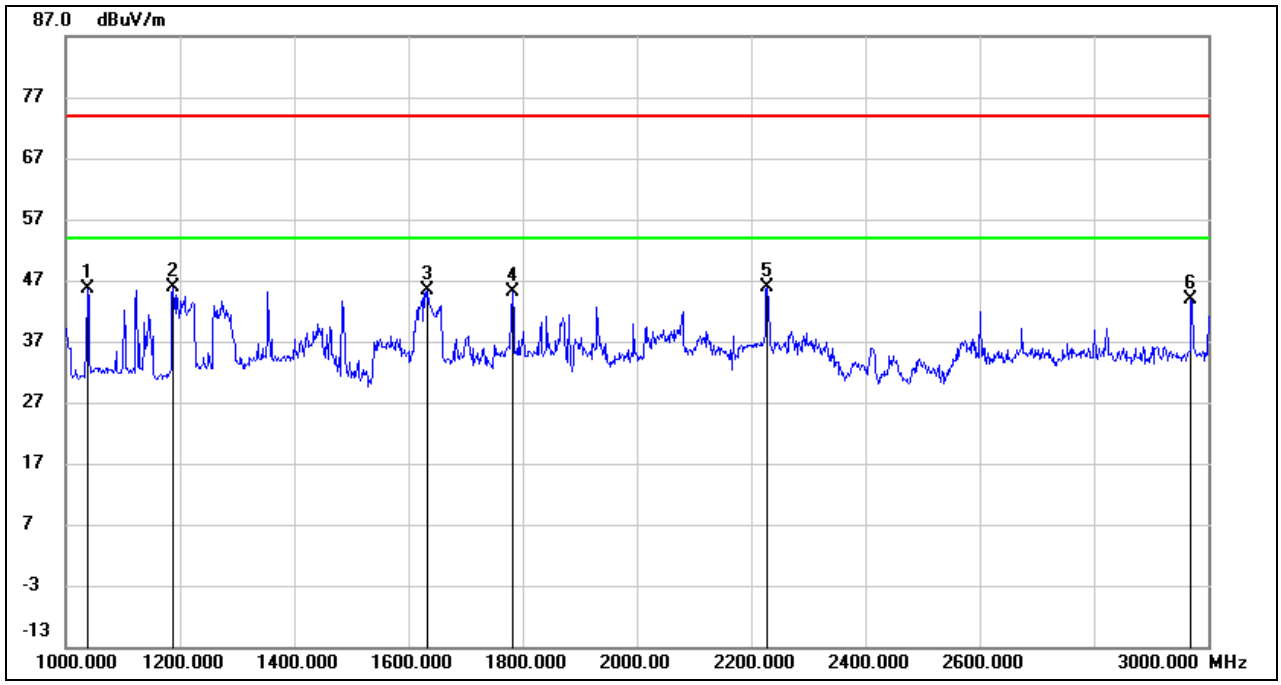
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1124.000	60.64	-13.37	47.27	74.00	-26.73	peak
2	1188.000	59.19	-13.05	46.14	74.00	-27.86	peak
3	1272.000	55.30	-12.89	42.41	74.00	-31.59	peak
4	1654.000	56.58	-11.15	45.43	74.00	-28.57	peak
5	2078.000	57.12	-9.75	47.37	74.00	-26.63	peak
6	2312.000	52.48	-8.68	43.80	74.00	-30.20	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.

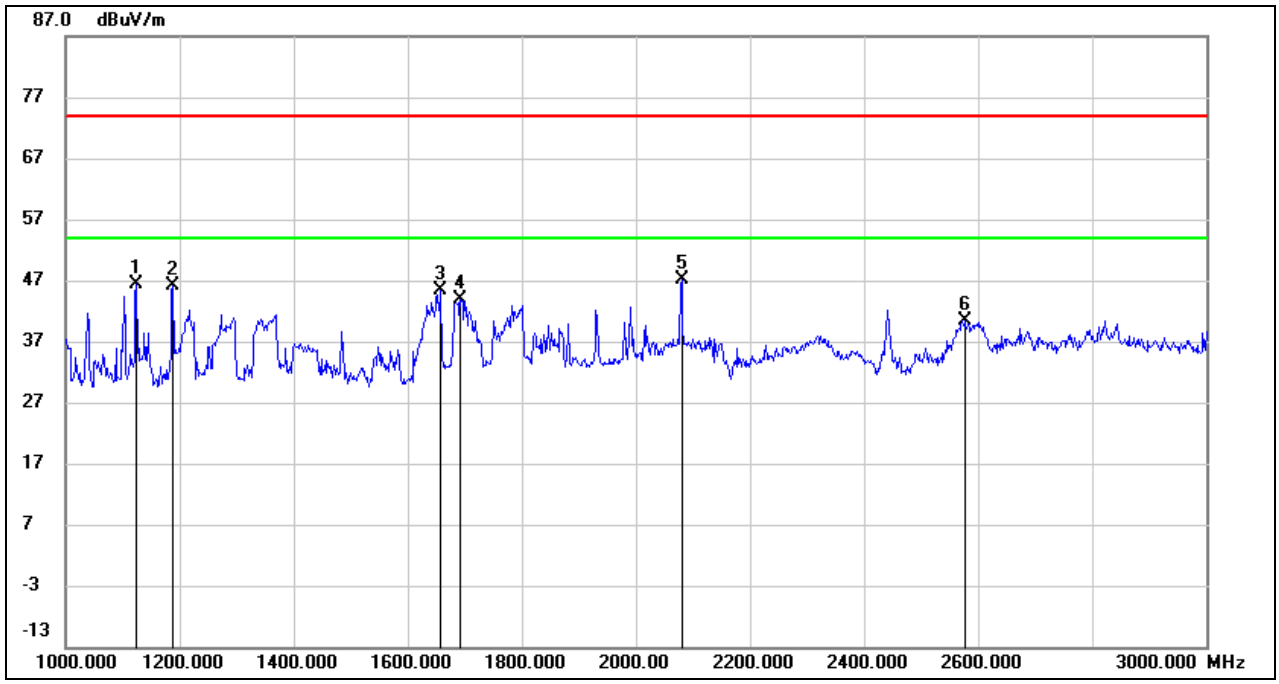
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1038.000	59.45	-13.79	45.66	74.00	-28.34	peak
2	1188.000	59.02	-13.05	45.97	74.00	-28.03	peak
3	1634.000	56.58	-11.30	45.28	74.00	-28.72	peak
4	1782.000	55.32	-10.18	45.14	74.00	-28.86	peak
5	2228.000	54.73	-8.96	45.77	74.00	-28.23	peak
6	2970.000	49.54	-5.74	43.80	74.00	-30.20	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.

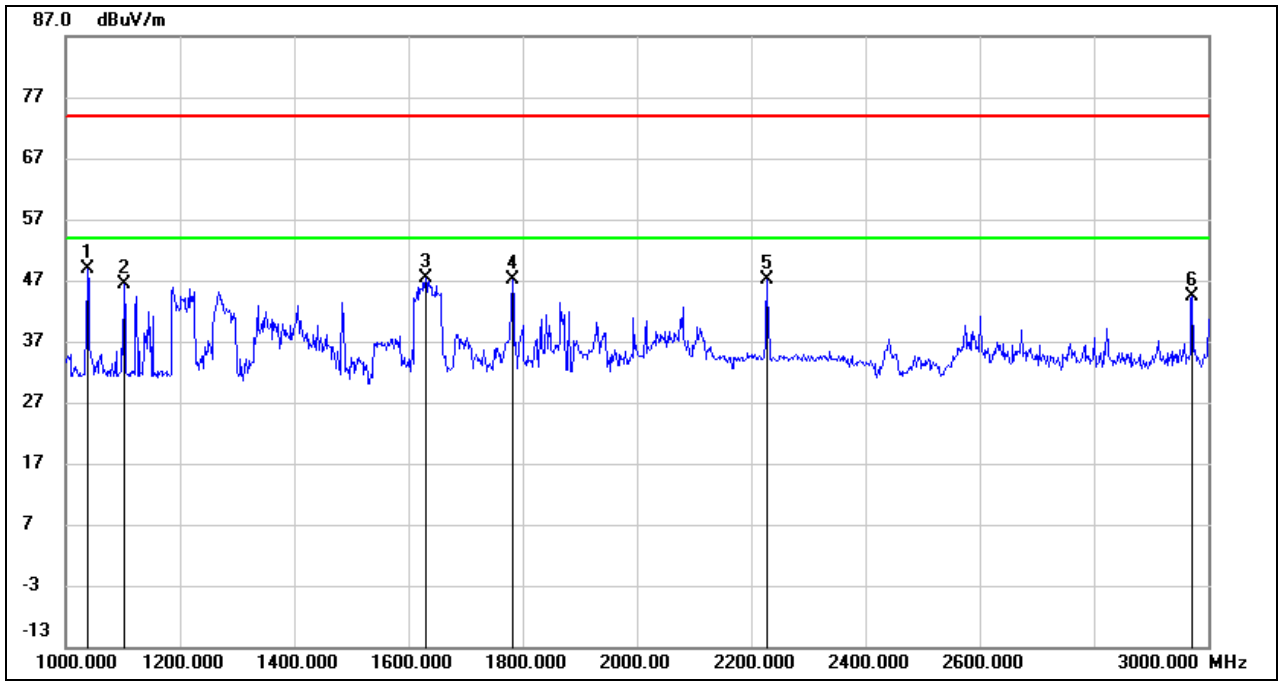
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1124.000	59.86	-13.37	46.49	74.00	-27.51	peak
2	1188.000	59.20	-13.05	46.15	74.00	-27.85	peak
3	1658.000	56.47	-11.12	45.35	74.00	-28.65	peak
4	1692.000	54.83	-10.87	43.96	74.00	-30.04	peak
5	2080.000	56.78	-9.73	47.05	74.00	-26.95	peak
6	2576.000	48.42	-7.96	40.46	74.00	-33.54	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.

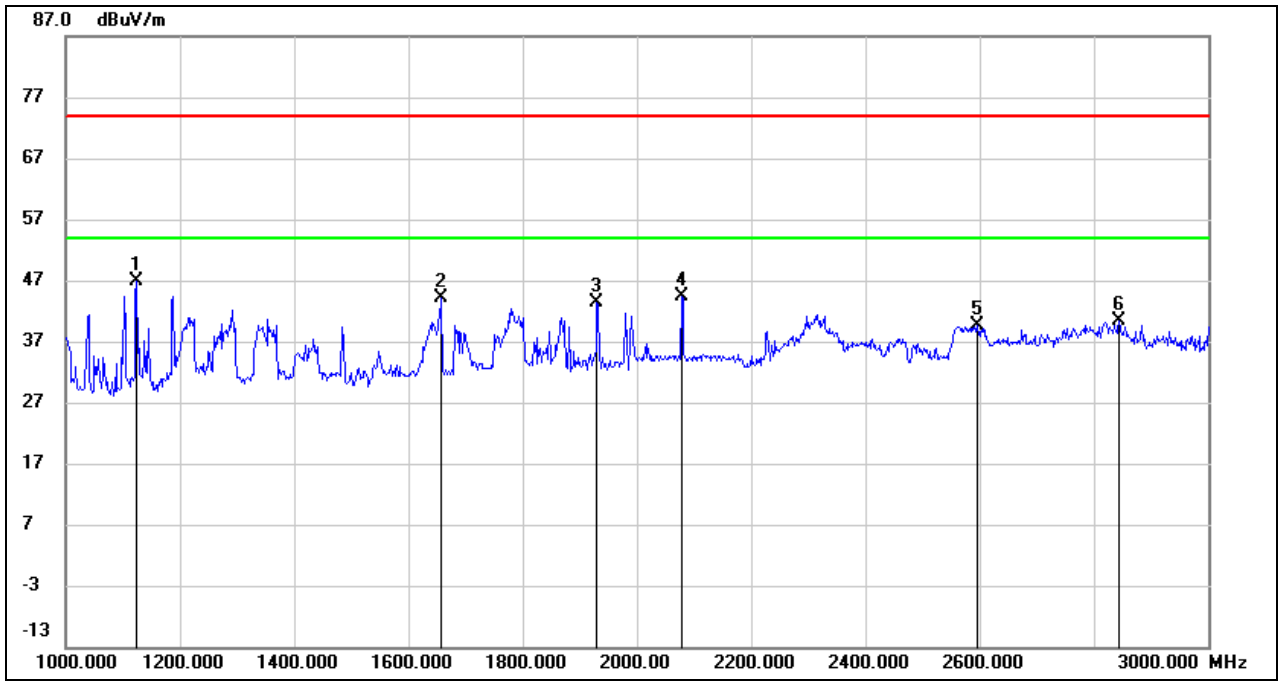
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1038.000	62.59	-13.79	48.80	74.00	-25.20	peak
2	1102.000	59.84	-13.48	46.36	74.00	-27.64	peak
3	1630.000	58.73	-11.33	47.40	74.00	-26.60	peak
4	1782.000	57.40	-10.18	47.22	74.00	-26.78	peak
5	2228.000	56.09	-8.96	47.13	74.00	-26.87	peak
6	2972.000	50.23	-5.73	44.50	74.00	-29.50	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.

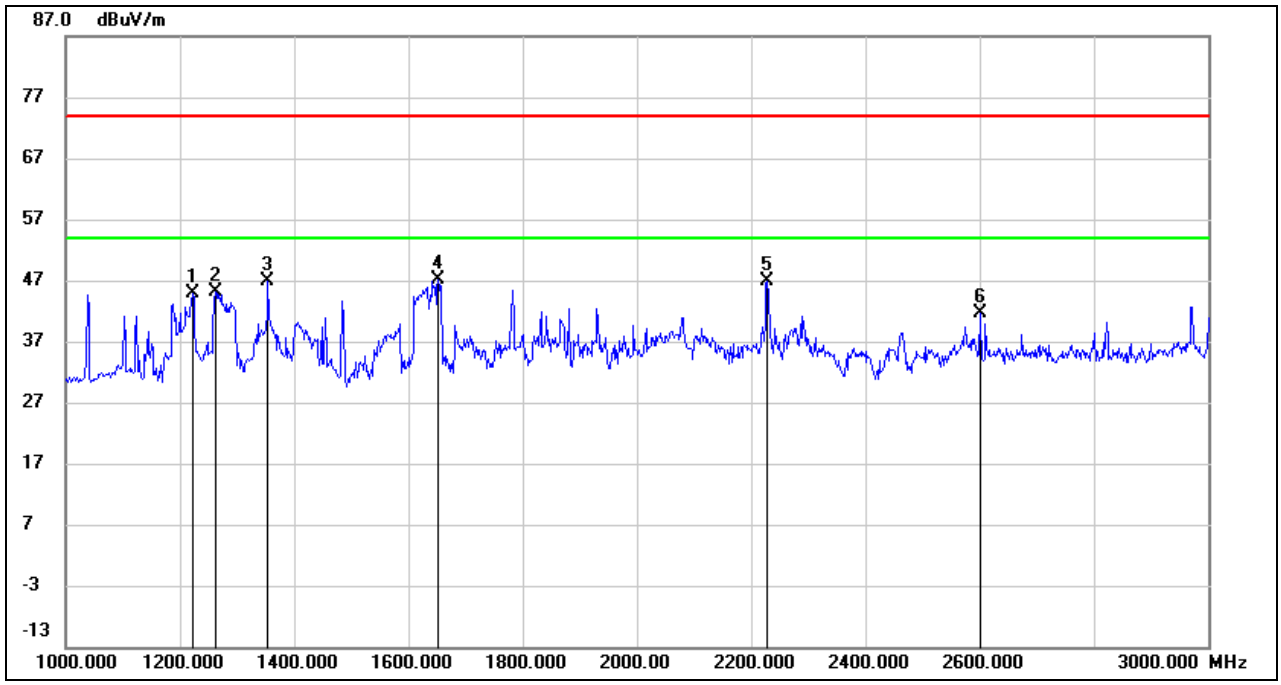
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1124.000	60.22	-13.37	46.85	74.00	-27.15	peak
2	1658.000	55.24	-11.12	44.12	74.00	-29.88	peak
3	1930.000	53.62	-10.15	43.47	74.00	-30.53	peak
4	2078.000	54.16	-9.75	44.41	74.00	-29.59	peak
5	2596.000	47.50	-7.88	39.62	74.00	-34.38	peak
6	2844.000	46.77	-6.34	40.43	74.00	-33.57	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 (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1222.000	57.72	-12.96	44.76	74.00	-29.24	peak
2	1262.000	58.05	-12.90	45.15	74.00	-28.85	peak
3	1354.000	59.74	-12.76	46.98	74.00	-27.02	peak
4	1652.000	58.20	-11.16	47.04	74.00	-26.96	peak
5	2228.000	55.86	-8.96	46.90	74.00	-27.10	peak
6	2600.000	49.50	-7.86	41.64	74.00	-32.36	peak

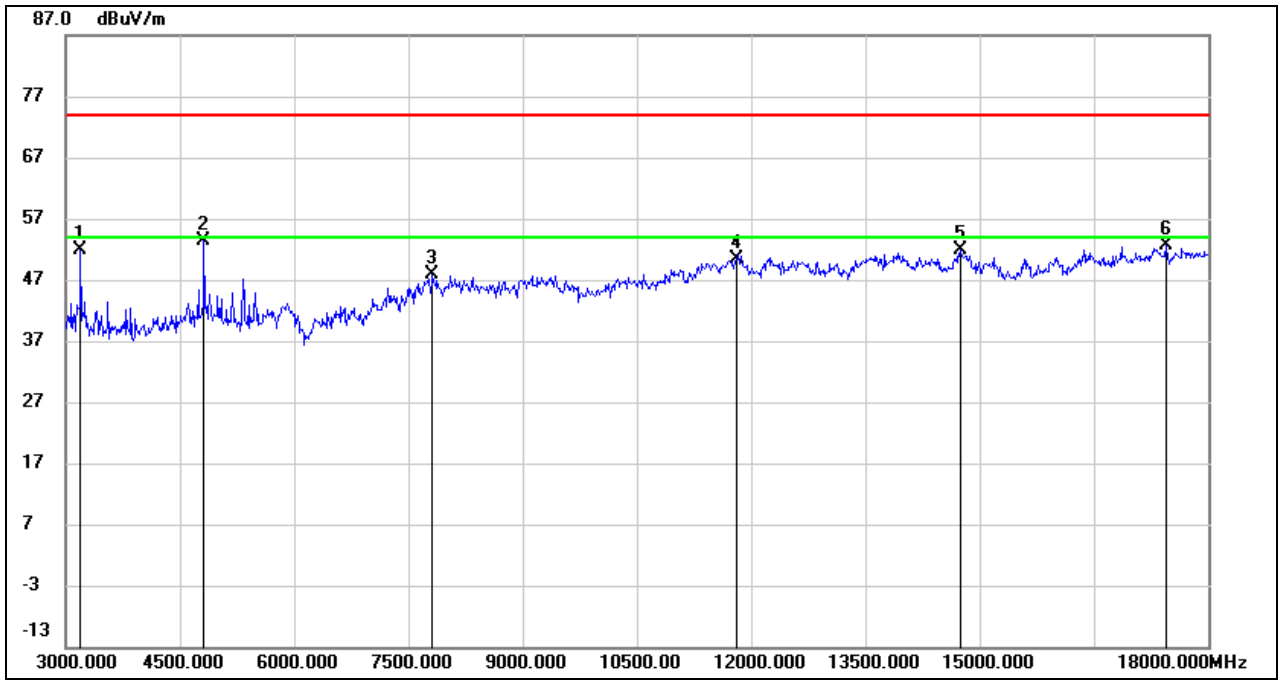
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

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 SISO MODE

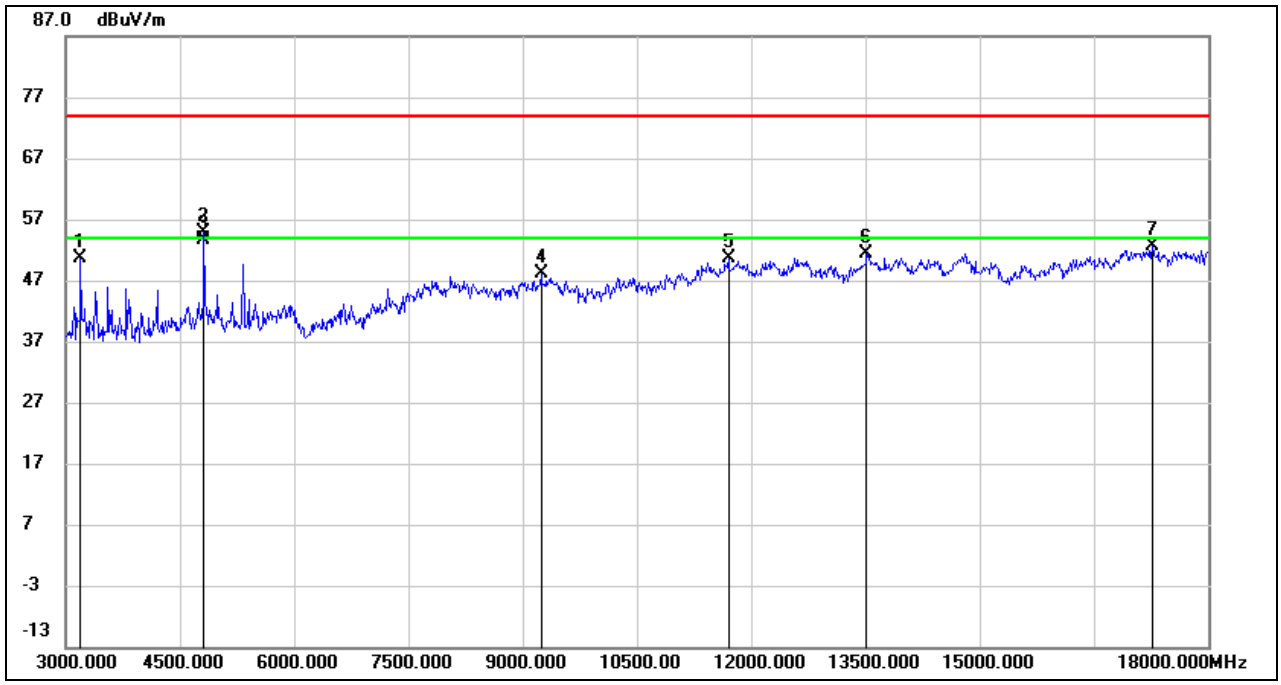
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.80	-3.91	51.89	74.00	-22.11	peak
2	4815.000	51.97	1.38	53.35	74.00	-20.65	peak
3	7815.000	38.48	9.28	47.76	74.00	-26.24	peak
4	11805.000	35.15	15.26	50.41	74.00	-23.59	peak
5	14745.000	33.99	17.84	51.83	74.00	-22.17	peak
6	17445.000	30.73	21.95	52.68	74.00	-21.32	peak

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

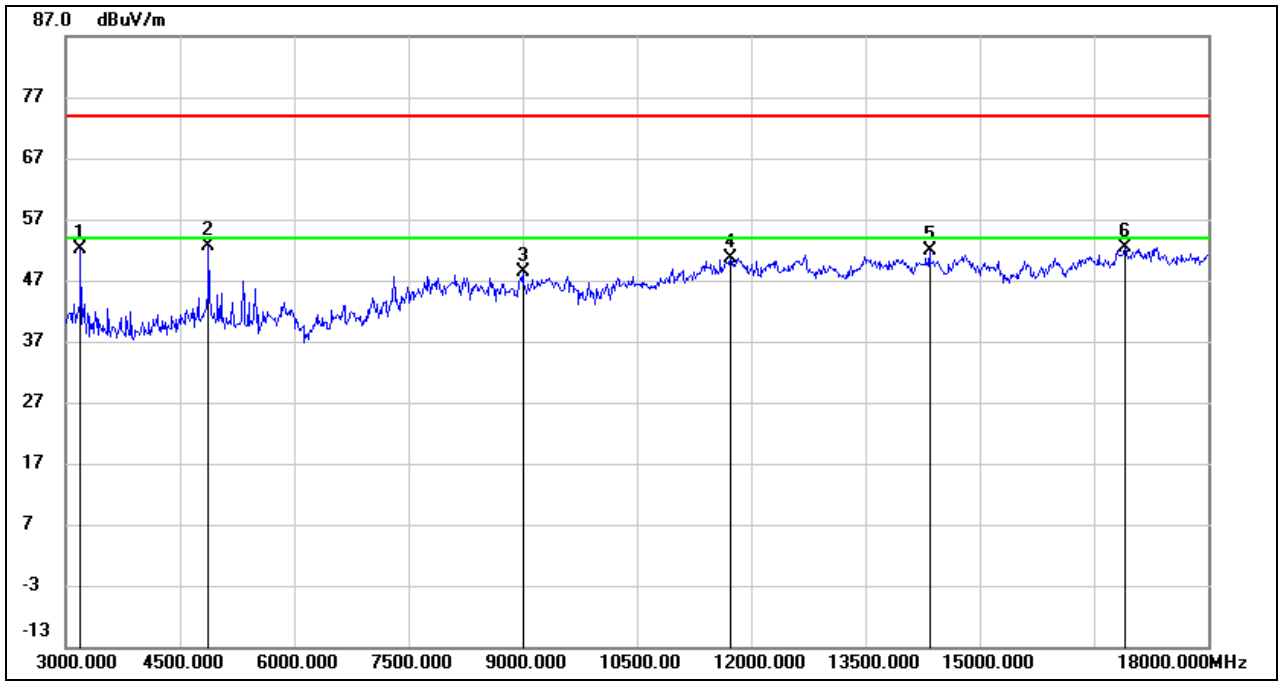
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	54.50	-3.91	50.59	74.00	-23.41	peak
2	4815.000	53.46	1.38	54.84	74.00	-19.16	peak
3	4815.000	52.14	1.38	53.52	54.00	-0.48	AVG
4	9240.000	37.94	10.10	48.04	74.00	-25.96	peak
5	11700.000	35.33	15.35	50.68	74.00	-23.32	peak
6	13515.000	34.21	17.19	51.40	74.00	-22.60	peak
7	17265.000	30.27	22.39	52.66	74.00	-21.34	peak

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

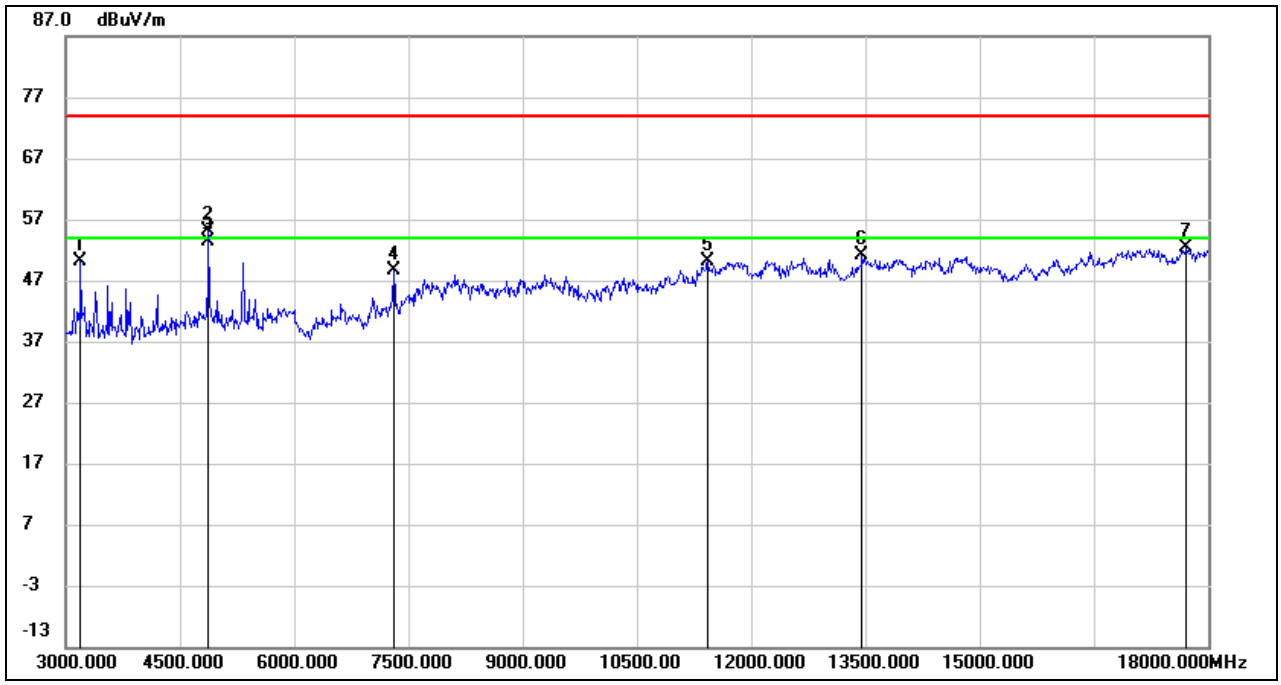
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	56.10	-3.91	52.19	74.00	-21.81	peak
2	4875.000	51.21	1.32	52.53	74.00	-21.47	peak
3	9000.000	37.16	11.27	48.43	74.00	-25.57	peak
4	11730.000	35.33	15.32	50.65	74.00	-23.35	peak
5	14340.000	34.09	17.84	51.93	74.00	-22.07	peak
6	16905.000	30.84	21.55	52.39	74.00	-21.61	peak

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

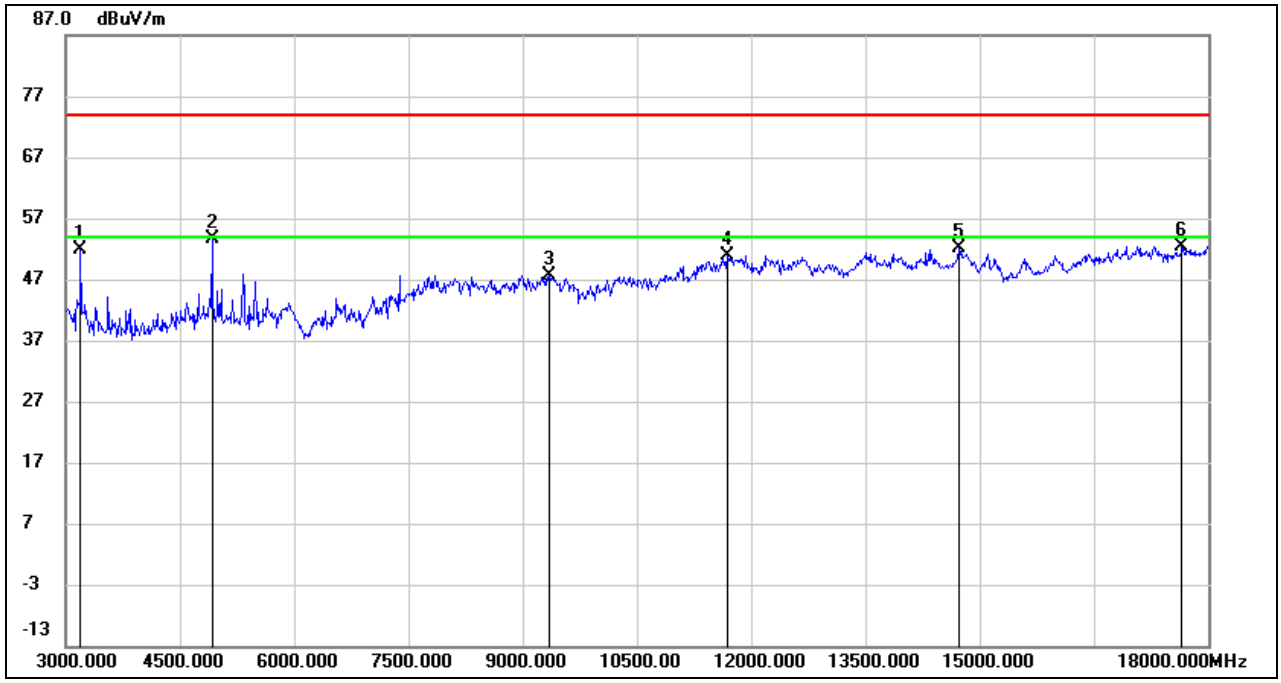
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.98	-3.91	50.07	74.00	-23.93	peak
2	4875.000	53.69	1.32	55.01	74.00	-18.99	peak
3	4875.000	52.14	1.32	53.46	54.00	-0.54	AVG
4	7305.000	41.46	7.14	48.60	74.00	-25.40	peak
5	11430.000	35.45	14.72	50.17	74.00	-23.83	peak
6	13455.000	33.98	17.14	51.12	74.00	-22.88	peak
7	17715.000	28.73	23.56	52.29	74.00	-21.71	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

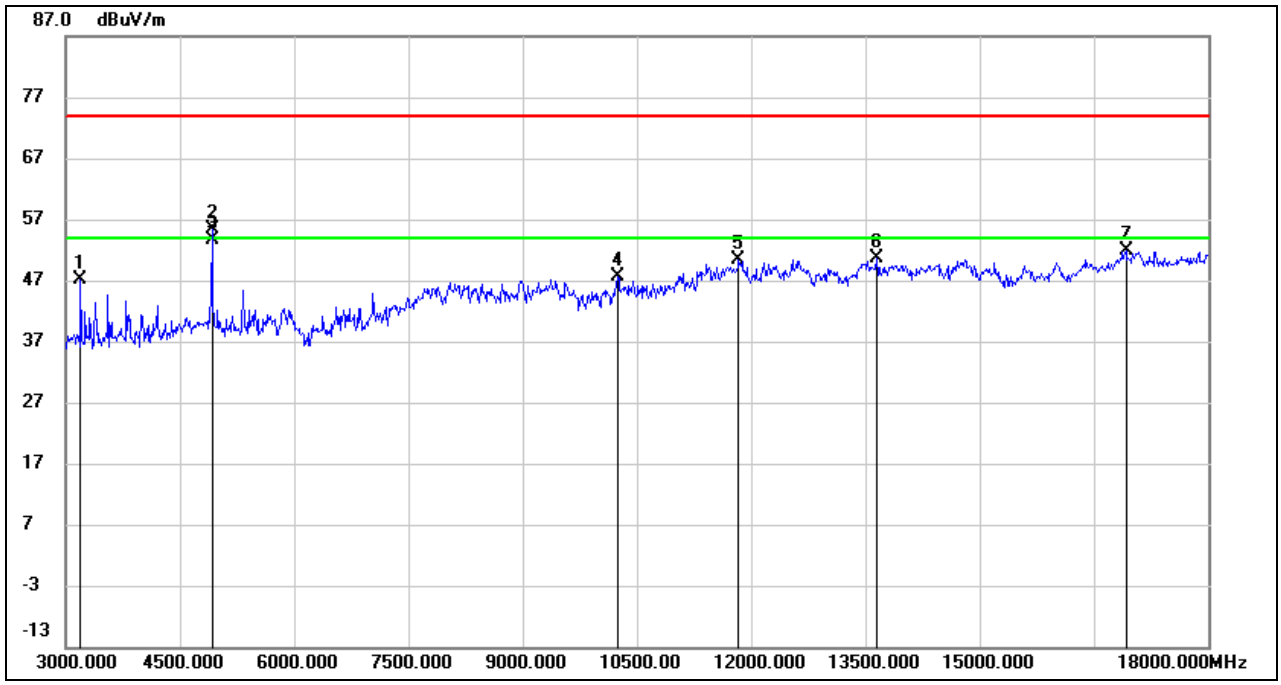
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.74	-3.91	51.83	74.00	-22.17	peak
2	4920.000	52.21	1.45	53.66	74.00	-20.34	peak
3	9345.000	37.09	10.66	47.75	74.00	-26.25	peak
4	11685.000	35.63	15.26	50.89	74.00	-23.11	peak
5	14730.000	34.29	17.79	52.08	74.00	-21.92	peak
6	17655.000	29.30	23.14	52.44	74.00	-21.56	peak

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

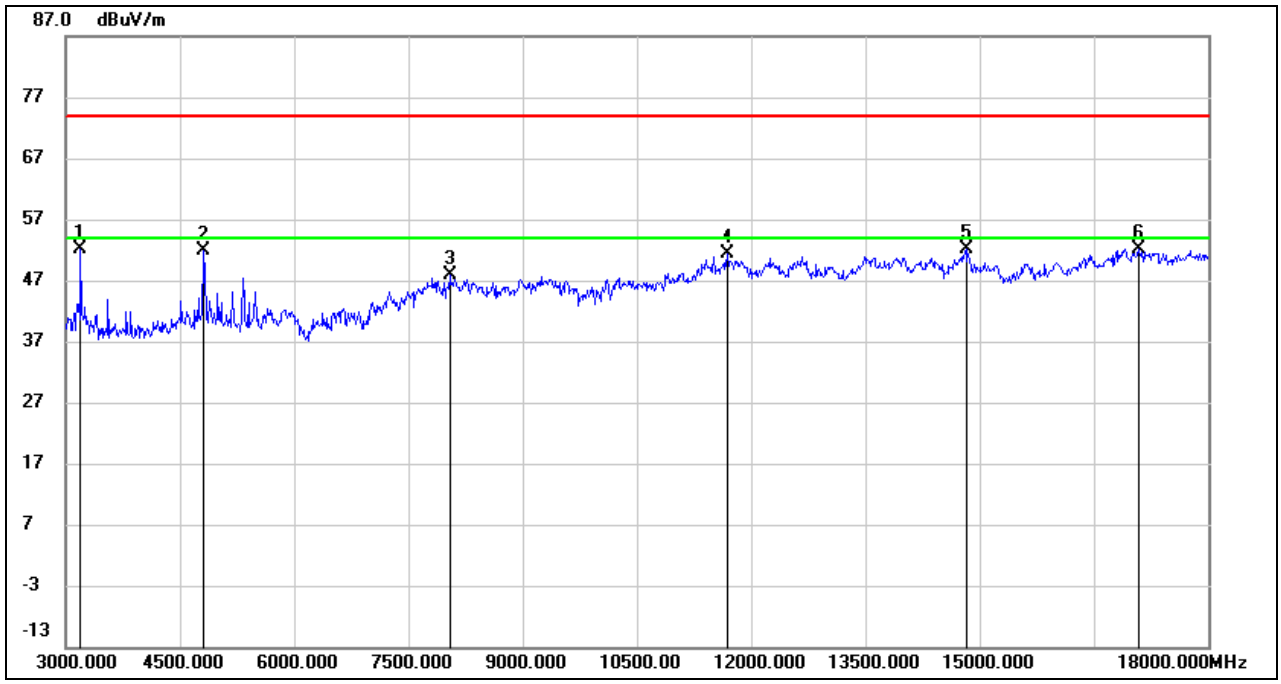


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	50.97	-3.91	47.06	74.00	-26.94	peak
2	4920.000	54.04	1.45	55.49	74.00	-18.51	peak
3	4920.000	52.29	1.45	53.74	54.00	-0.26	AVG
4	10245.000	36.09	11.63	47.72	74.00	-26.28	peak
5	11835.000	35.08	15.34	50.42	74.00	-23.58	peak
6	13650.000	33.20	17.35	50.55	74.00	-23.45	peak
7	16920.000	30.39	21.51	51.90	74.00	-22.10	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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.

8.3.2. 802.11g SISO MODE

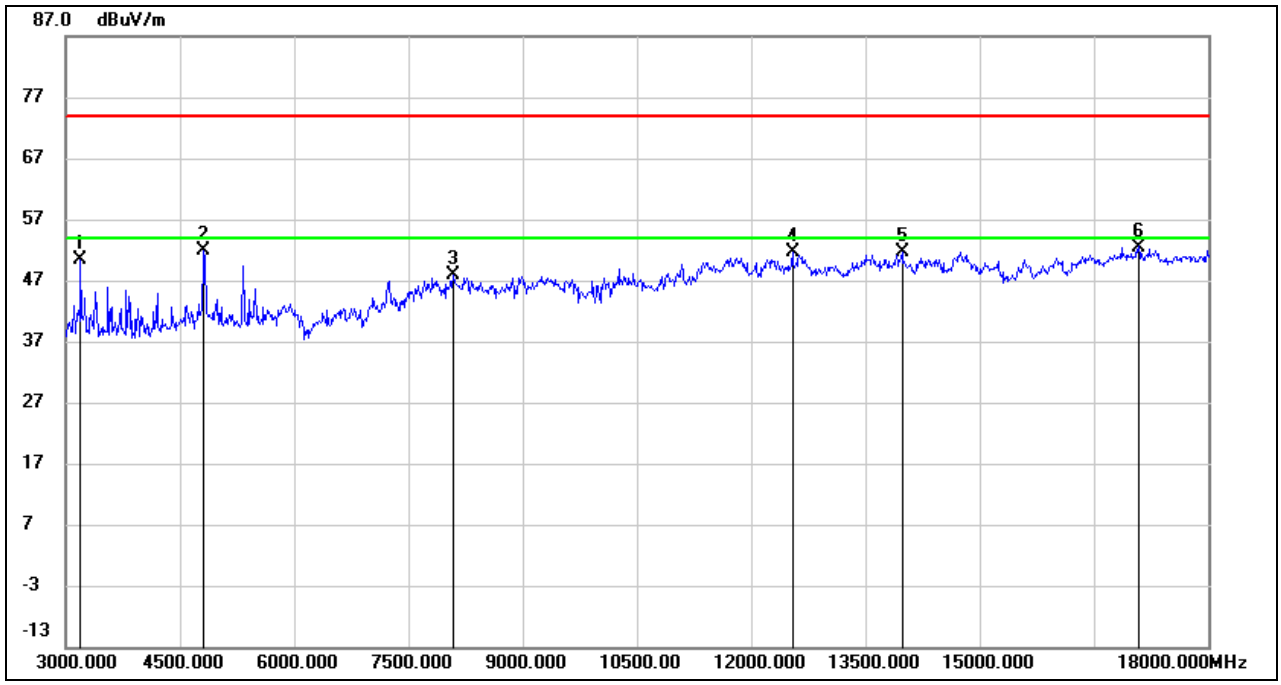
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	56.04	-3.91	52.13	74.00	-21.87	peak
2	4815.000	50.53	1.38	51.91	74.00	-22.09	peak
3	8040.000	38.55	9.25	47.80	74.00	-26.20	peak
4	11685.000	36.04	15.26	51.30	74.00	-22.70	peak
5	14820.000	34.13	17.91	52.04	74.00	-21.96	peak
6	17085.000	30.27	21.80	52.07	74.00	-21.93	peak

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

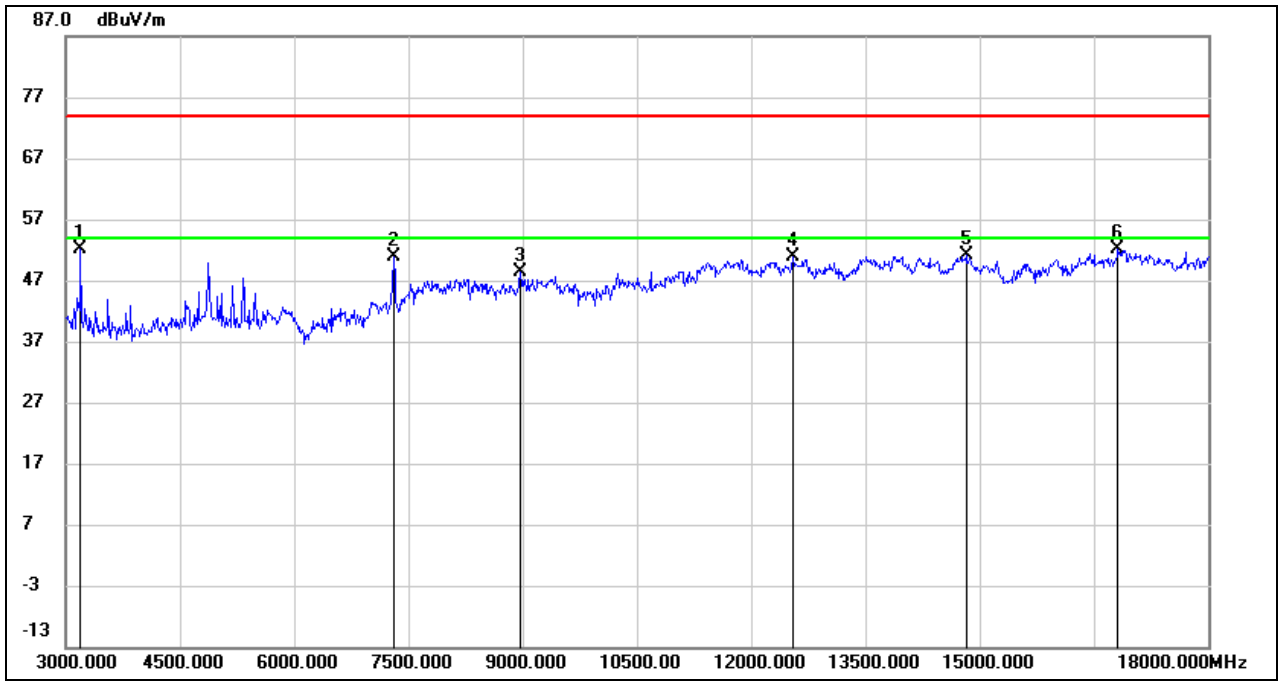
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	54.29	-3.91	50.38	74.00	-23.62	peak
2	4815.000	50.62	1.38	52.00	74.00	-22.00	peak
3	8085.000	37.91	9.94	47.85	74.00	-26.15	peak
4	12540.000	35.79	15.72	51.51	74.00	-22.49	peak
5	13980.000	33.93	17.64	51.57	74.00	-22.43	peak
6	17085.000	30.70	21.80	52.50	74.00	-21.50	peak

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

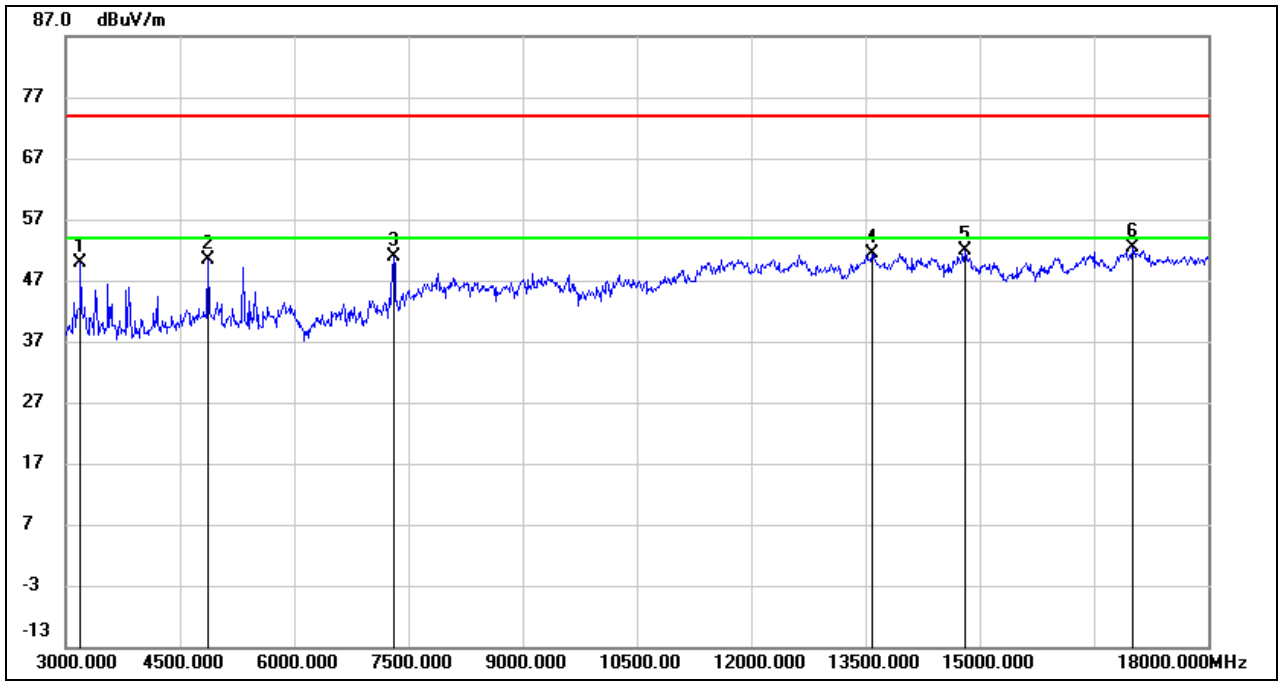
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.99	-3.91	52.08	74.00	-21.92	peak
2	7305.000	43.77	7.14	50.91	74.00	-23.09	peak
3	8970.000	37.62	10.70	48.32	74.00	-25.68	peak
4	12540.000	35.09	15.72	50.81	74.00	-23.19	peak
5	14820.000	33.31	17.91	51.22	74.00	-22.78	peak
6	16815.000	31.20	20.84	52.04	74.00	-21.96	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.

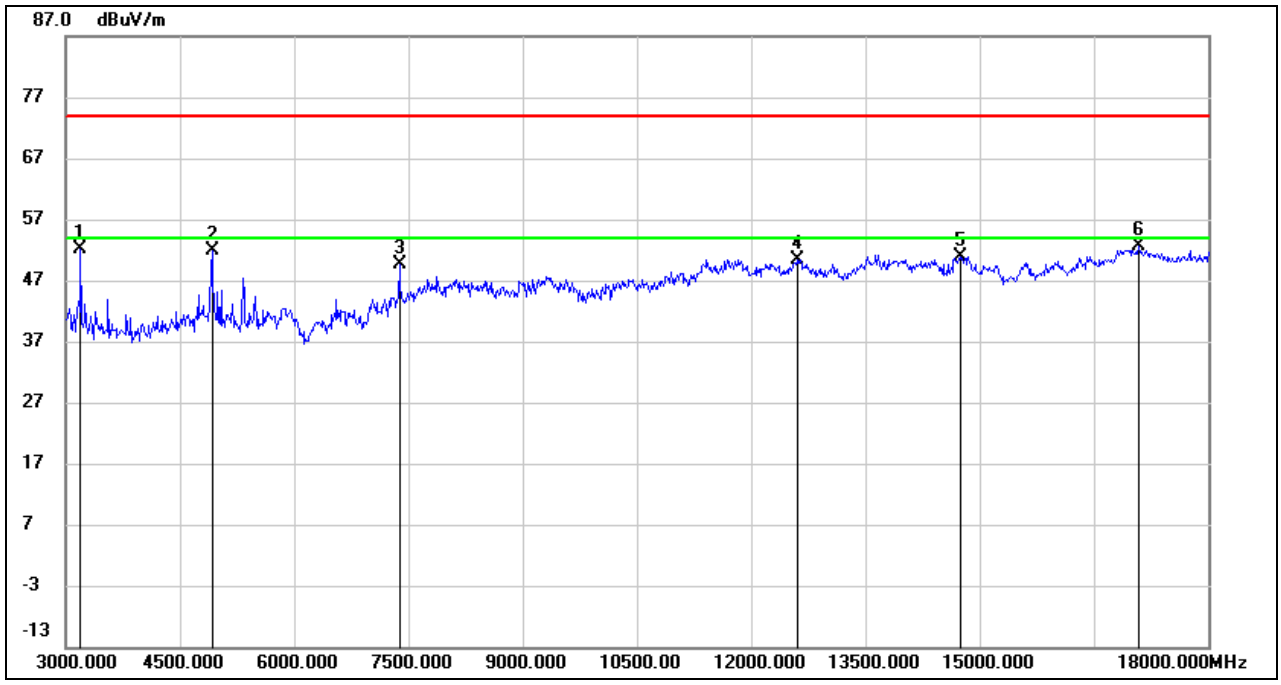
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.74	-3.91	49.83	74.00	-24.17	peak
2	4860.000	49.10	1.33	50.43	74.00	-23.57	peak
3	7305.000	43.66	7.14	50.80	74.00	-23.20	peak
4	13590.000	34.23	17.11	51.34	74.00	-22.66	peak
5	14805.000	33.86	18.00	51.86	74.00	-22.14	peak
6	17010.000	31.11	21.31	52.42	74.00	-21.58	peak

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

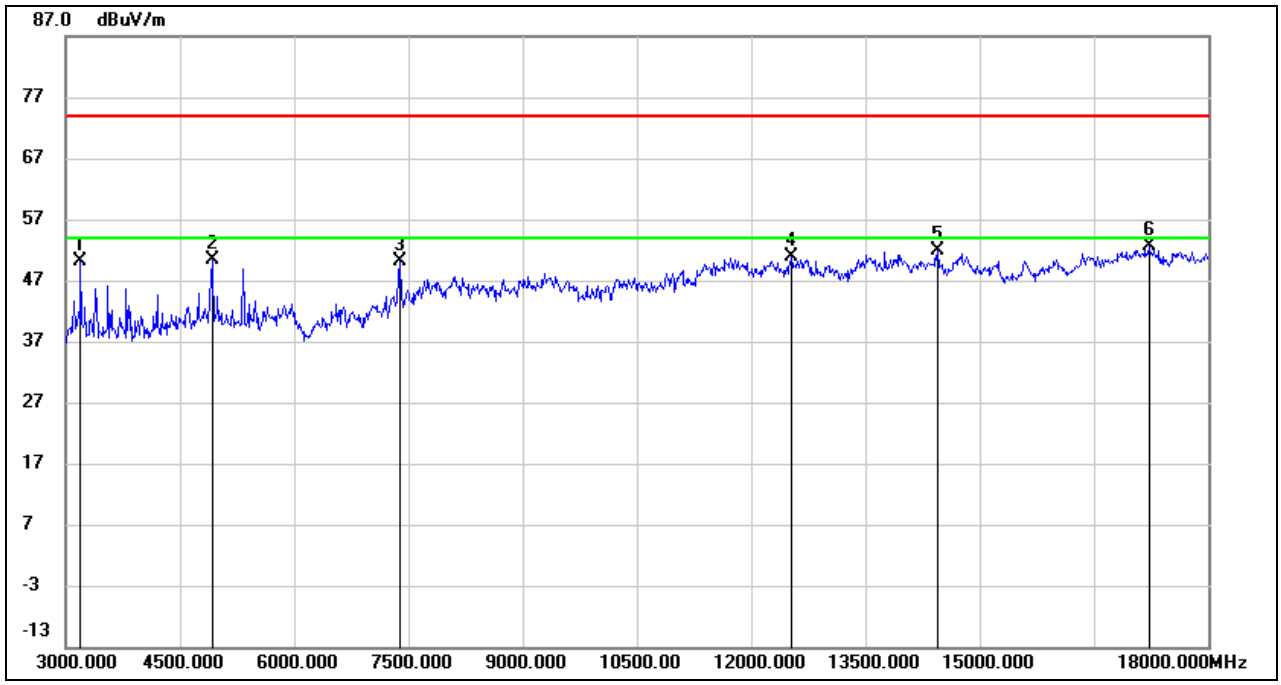
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.96	-3.91	52.05	74.00	-21.95	peak
2	4920.000	50.39	1.45	51.84	74.00	-22.16	peak
3	7380.000	41.77	7.79	49.56	74.00	-24.44	peak
4	12600.000	34.65	15.78	50.43	74.00	-23.57	peak
5	14745.000	33.07	17.84	50.91	74.00	-23.09	peak
6	17085.000	30.80	21.80	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 (HIGH CHANNEL, VERTICAL)

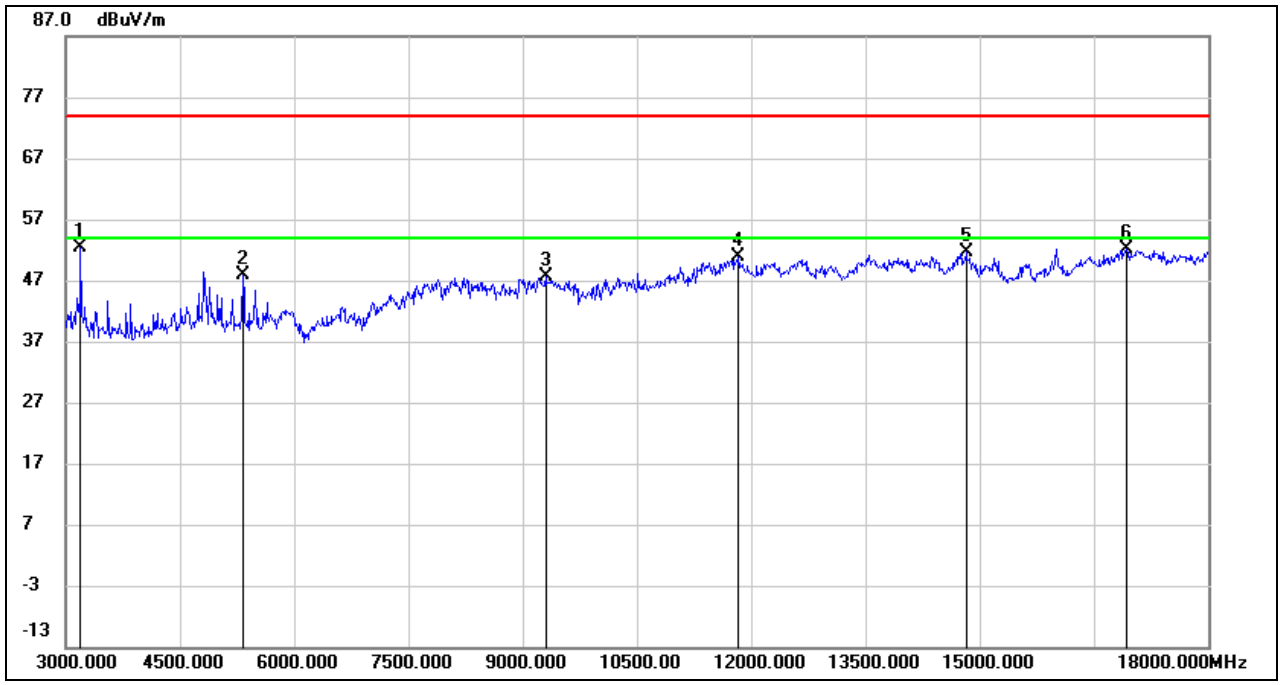


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.98	-3.91	50.07	74.00	-23.93	peak
2	4920.000	48.97	1.45	50.42	74.00	-23.58	peak
3	7380.000	42.29	7.79	50.08	74.00	-23.92	peak
4	12525.000	35.29	15.70	50.99	74.00	-23.01	peak
5	14445.000	34.57	17.31	51.88	74.00	-22.12	peak
6	17220.000	30.46	22.12	52.58	74.00	-21.42	peak

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

8.3.3. 802.11n HT20 SISO MODE

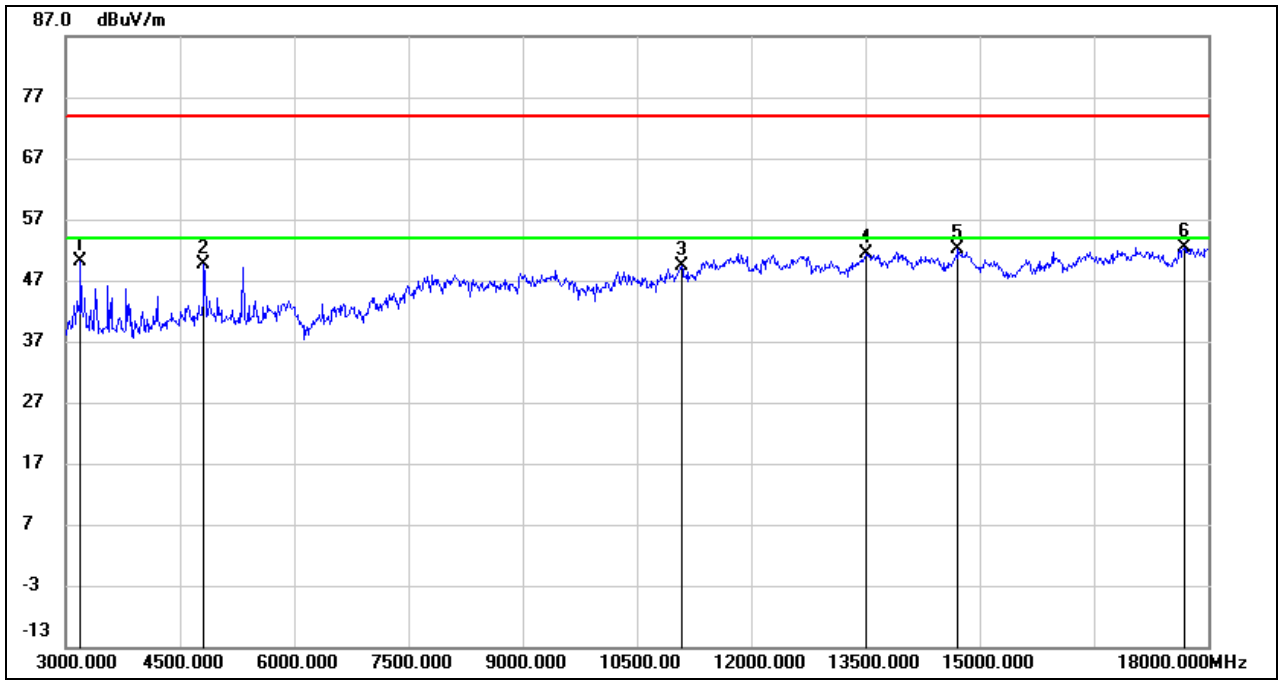
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	56.21	-3.91	52.30	74.00	-21.70	peak
2	5325.000	45.39	2.38	47.77	74.00	-26.23	peak
3	9300.000	37.33	10.40	47.73	74.00	-26.27	peak
4	11835.000	35.63	15.34	50.97	74.00	-23.03	peak
5	14820.000	33.67	17.91	51.58	74.00	-22.42	peak
6	16935.000	30.77	21.45	52.22	74.00	-21.78	peak

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

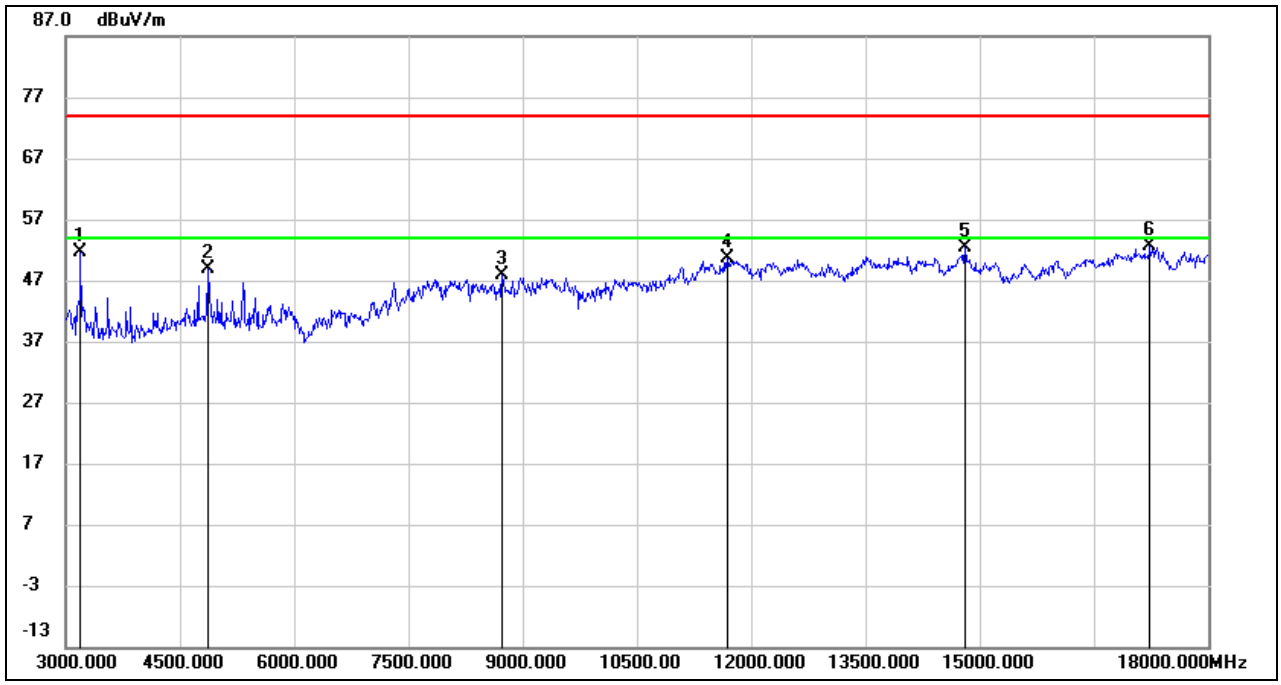
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	54.03	-3.91	50.12	74.00	-23.88	peak
2	4815.000	48.15	1.38	49.53	74.00	-24.47	peak
3	11085.000	35.60	13.72	49.32	74.00	-24.68	peak
4	13500.000	34.17	17.22	51.39	74.00	-22.61	peak
5	14715.000	34.36	17.74	52.10	74.00	-21.90	peak
6	17685.000	29.14	23.36	52.50	74.00	-21.50	peak

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

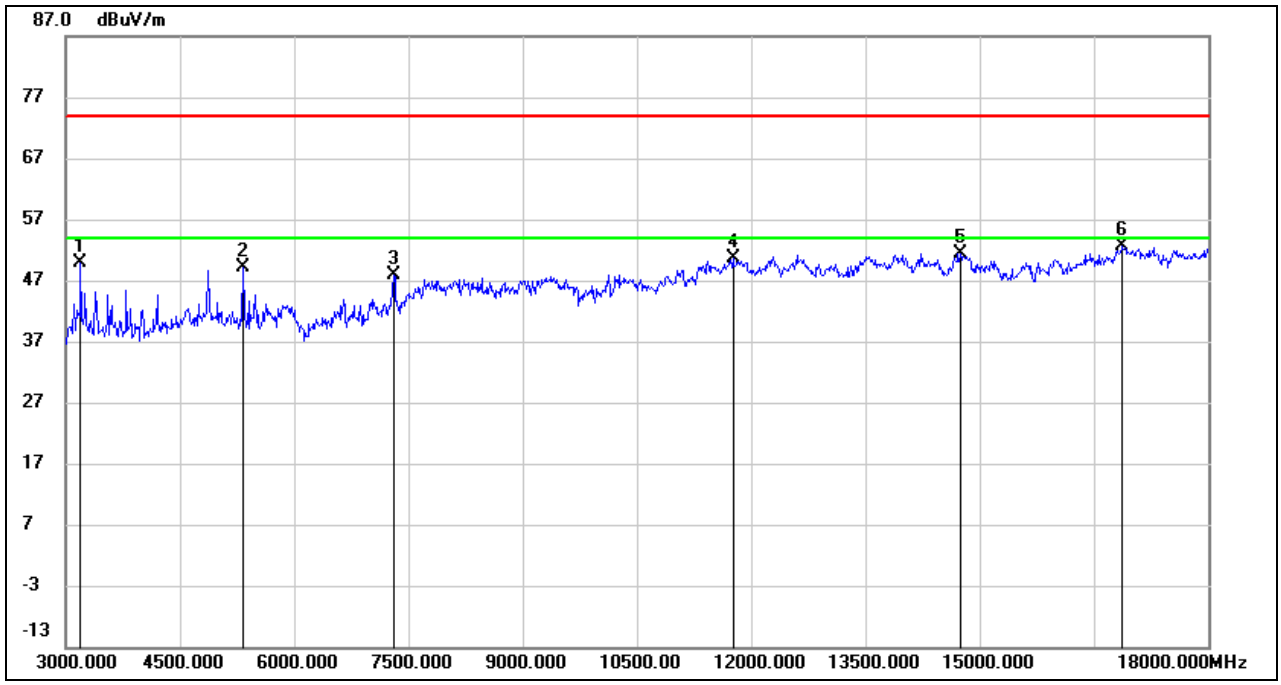
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.60	-3.91	51.69	74.00	-22.31	peak
2	4875.000	47.48	1.32	48.80	74.00	-25.20	peak
3	8730.000	38.67	9.09	47.76	74.00	-26.24	peak
4	11685.000	35.45	15.26	50.71	74.00	-23.29	peak
5	14805.000	34.32	18.00	52.32	74.00	-21.68	peak
6	17235.000	30.34	22.21	52.55	74.00	-21.45	peak

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

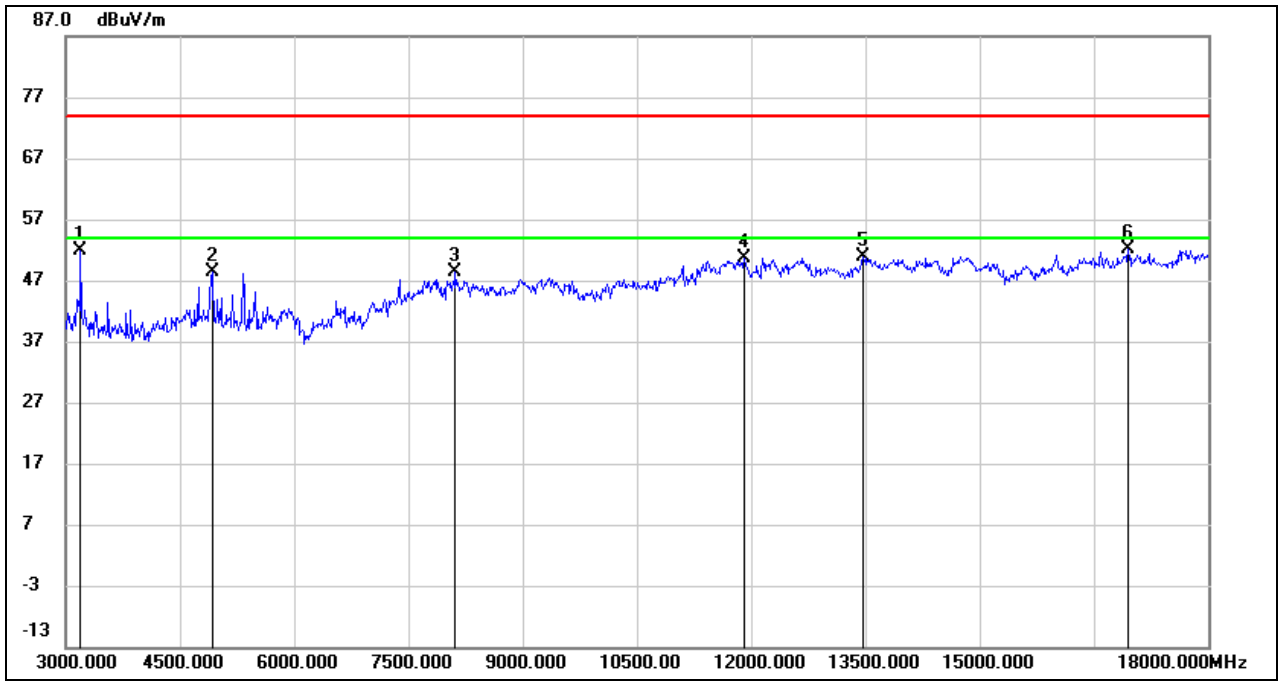
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.85	-3.91	49.94	74.00	-24.06	peak
2	5325.000	46.85	2.38	49.23	74.00	-24.77	peak
3	7305.000	40.85	7.14	47.99	74.00	-26.01	peak
4	11760.000	35.24	15.29	50.53	74.00	-23.47	peak
5	14745.000	33.54	17.84	51.38	74.00	-22.62	peak
6	16875.000	31.21	21.35	52.56	74.00	-21.44	peak

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

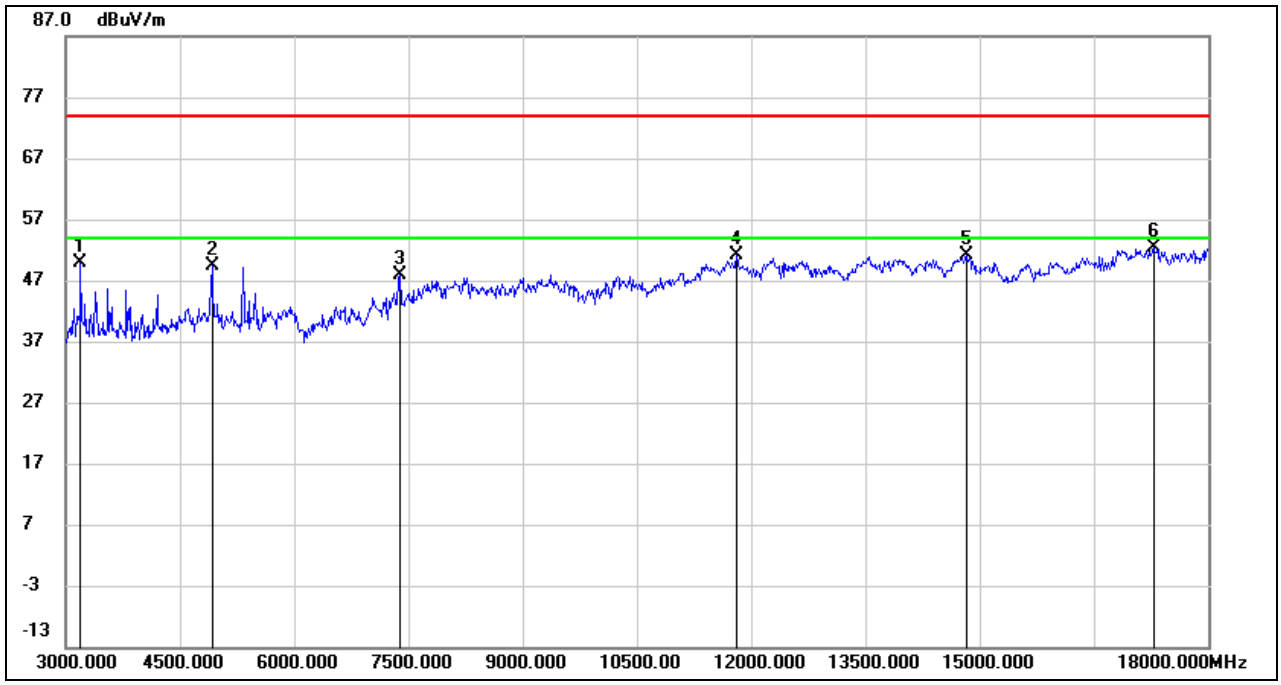
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.89	-3.91	51.98	74.00	-22.02	peak
2	4920.000	46.92	1.45	48.37	74.00	-25.63	peak
3	8115.000	38.18	10.13	48.31	74.00	-25.69	peak
4	11910.000	35.12	15.52	50.64	74.00	-23.36	peak
5	13470.000	33.83	17.15	50.98	74.00	-23.02	peak
6	16950.000	30.60	21.41	52.01	74.00	-21.99	peak

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



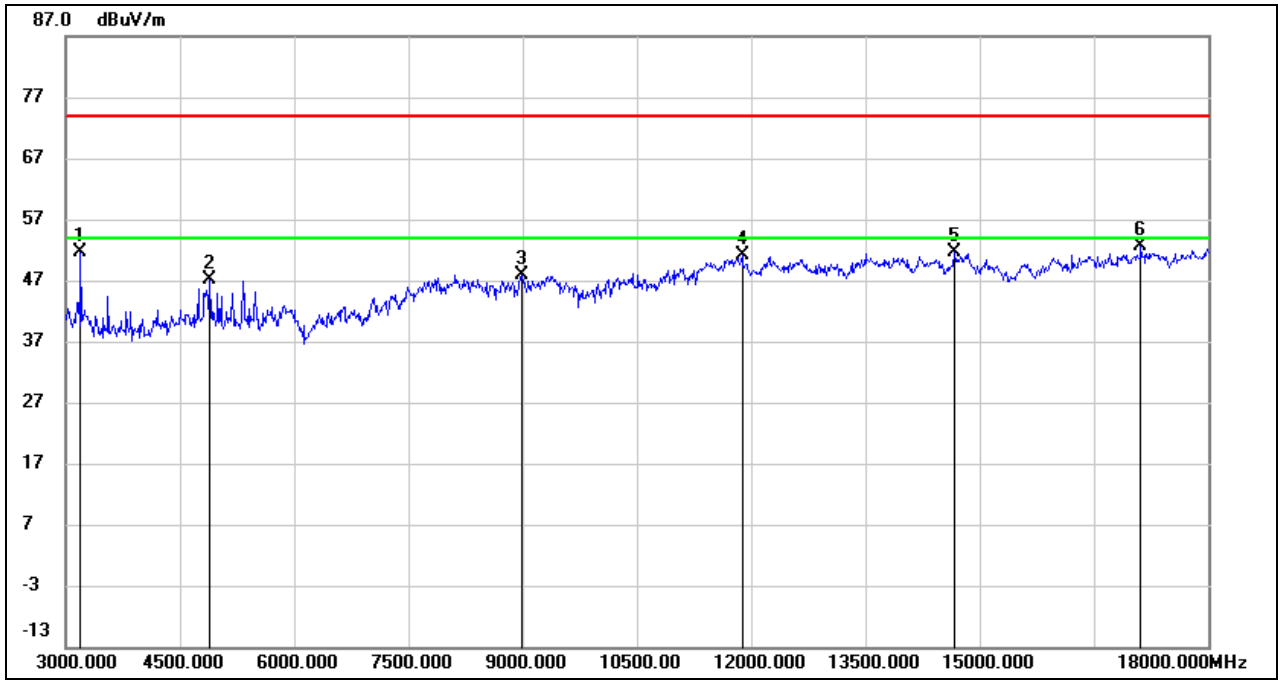
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.76	-3.91	49.85	74.00	-24.15	peak
2	4920.000	47.90	1.45	49.35	74.00	-24.65	peak
3	7395.000	40.05	7.93	47.98	74.00	-26.02	peak
4	11805.000	35.76	15.26	51.02	74.00	-22.98	peak
5	14820.000	33.16	17.91	51.07	74.00	-22.93	peak
6	17280.000	29.79	22.48	52.27	74.00	-21.73	peak

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

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

8.3.4. 802.11n HT40 SISO MODE

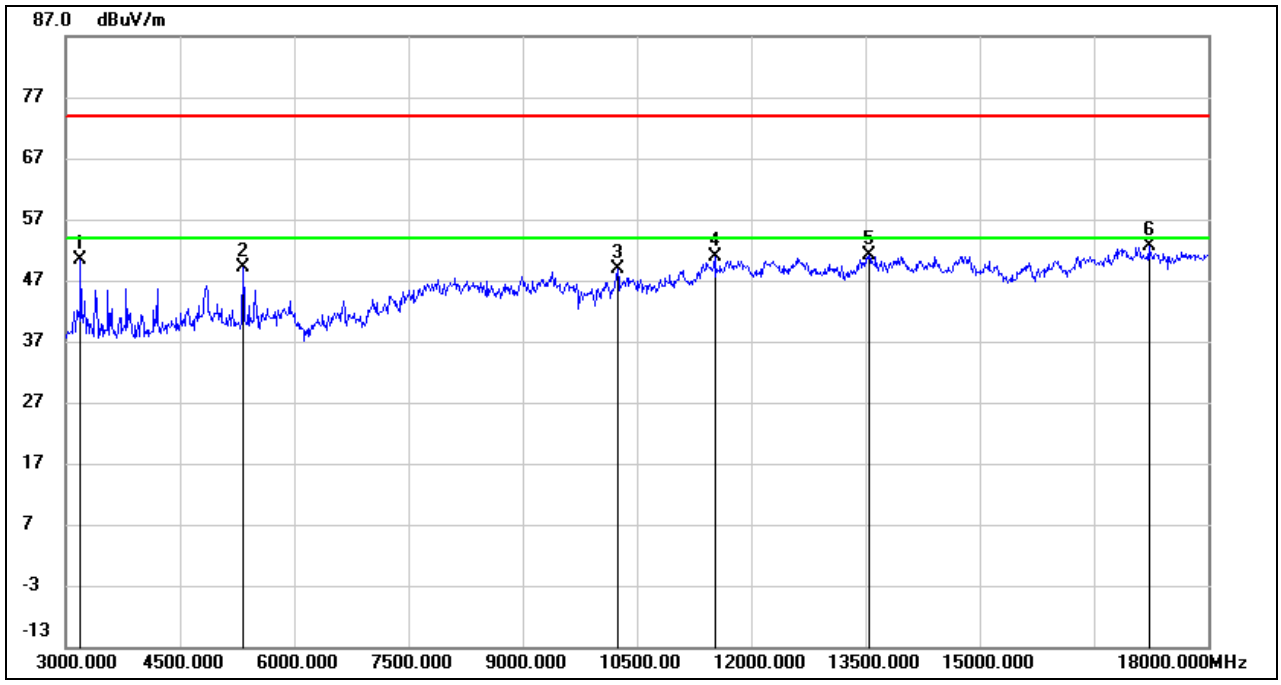
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.53	-3.91	51.62	74.00	-22.38	peak
2	4890.000	45.72	1.30	47.02	74.00	-26.98	peak
3	8985.000	36.91	10.99	47.90	74.00	-26.10	peak
4	11880.000	35.72	15.46	51.18	74.00	-22.82	peak
5	14670.000	33.93	17.59	51.52	74.00	-22.48	peak
6	17115.000	30.64	21.91	52.55	74.00	-21.45	peak

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

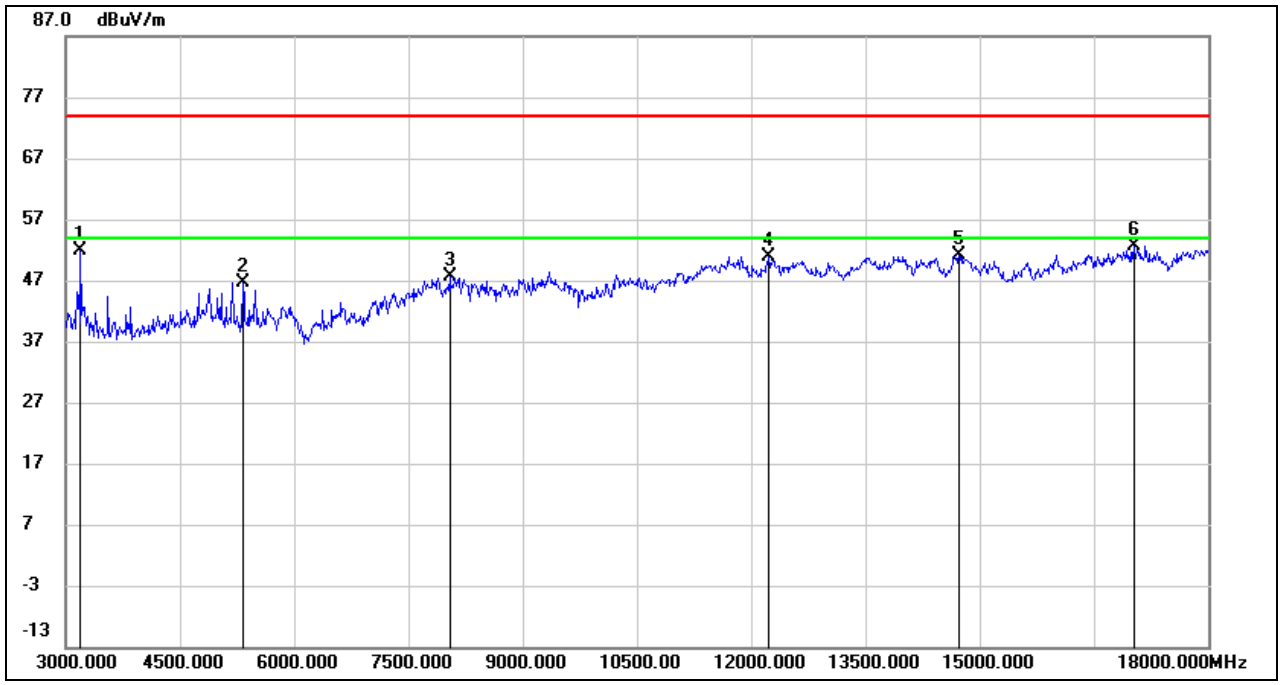
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	54.20	-3.91	50.29	74.00	-23.71	peak
2	5325.000	46.86	2.38	49.24	74.00	-24.76	peak
3	10245.000	37.27	11.63	48.90	74.00	-25.10	peak
4	11520.000	36.17	14.66	50.83	74.00	-23.17	peak
5	13545.000	33.94	17.16	51.10	74.00	-22.90	peak
6	17220.000	30.42	22.12	52.54	74.00	-21.46	peak

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

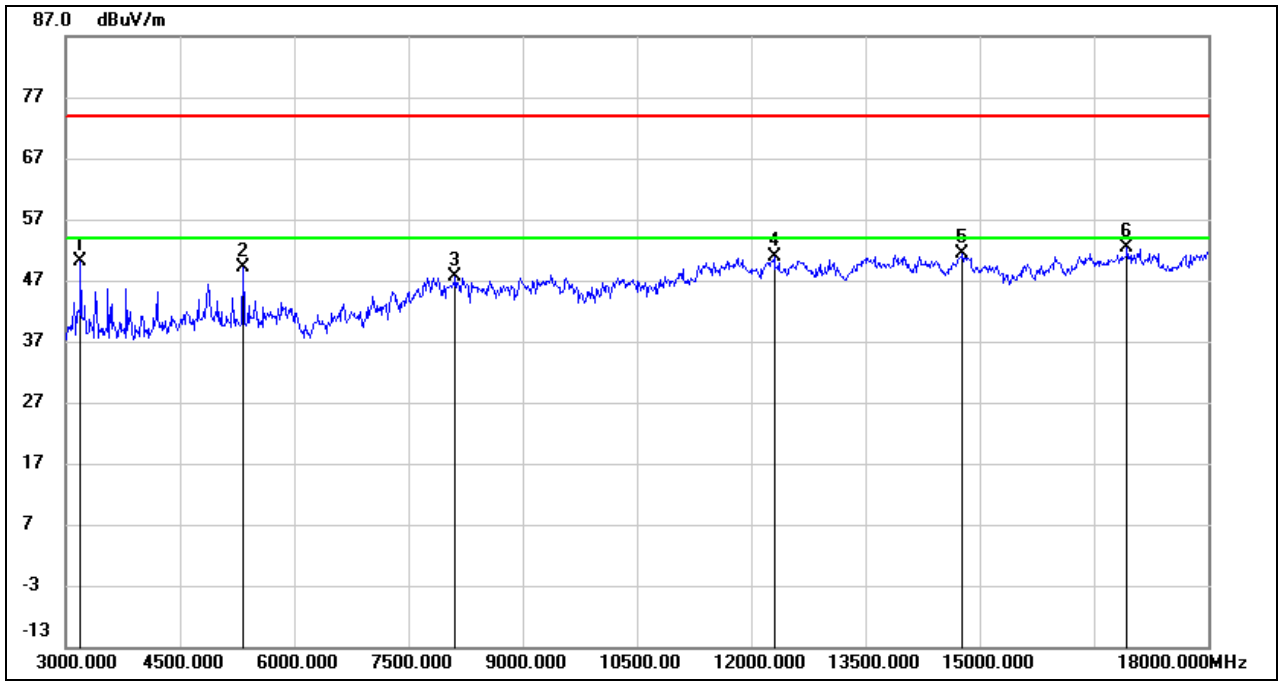
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.81	-3.91	51.90	74.00	-22.10	peak
2	5325.000	44.37	2.38	46.75	74.00	-27.25	peak
3	8040.000	38.49	9.25	47.74	74.00	-26.26	peak
4	12225.000	34.94	15.99	50.93	74.00	-23.07	peak
5	14730.000	33.33	17.79	51.12	74.00	-22.88	peak
6	17025.000	31.30	21.40	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.

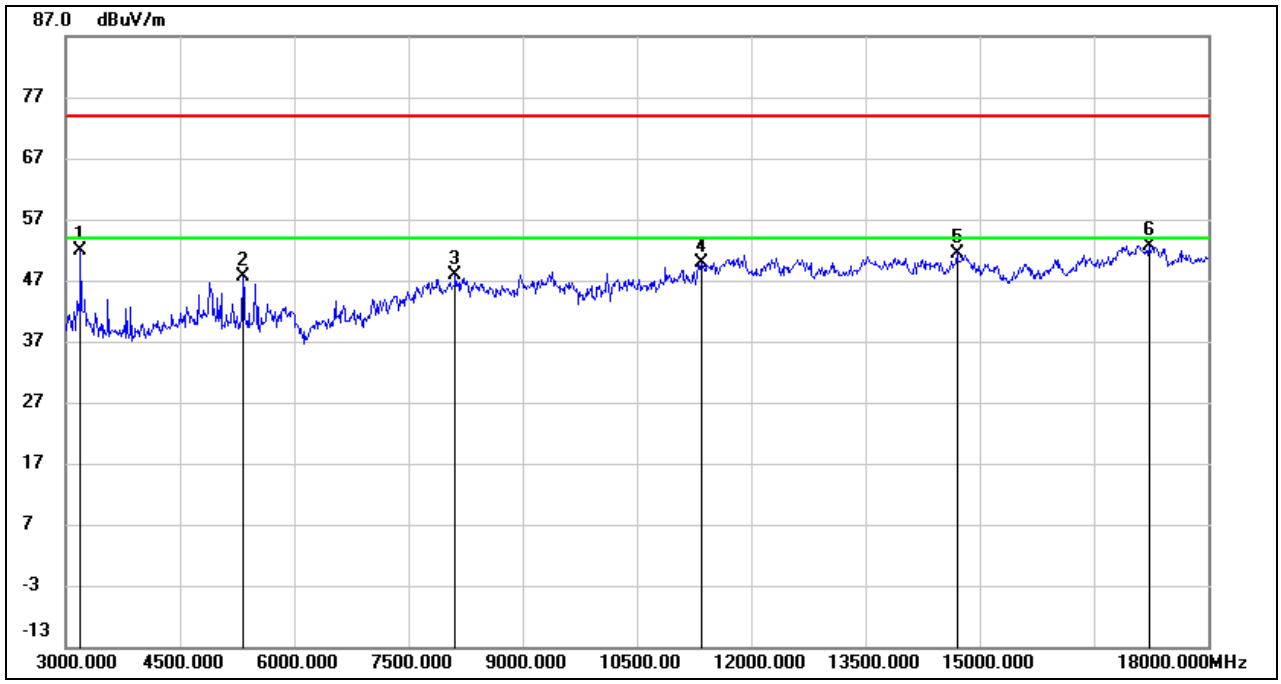
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	54.15	-3.91	50.24	74.00	-23.76	peak
2	5325.000	46.82	2.38	49.20	74.00	-24.80	peak
3	8115.000	37.47	10.13	47.60	74.00	-26.40	peak
4	12300.000	34.80	16.09	50.89	74.00	-23.11	peak
5	14775.000	33.31	17.95	51.26	74.00	-22.74	peak
6	16935.000	30.81	21.45	52.26	74.00	-21.74	peak

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

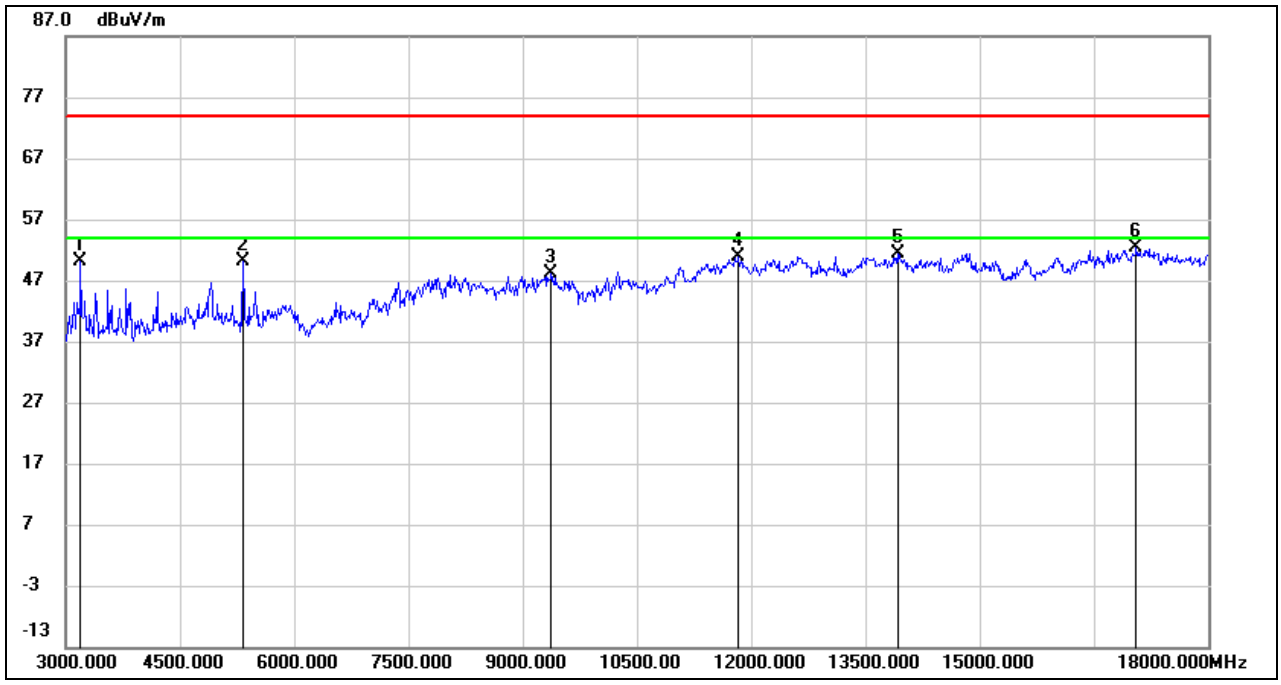
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	55.78	-3.91	51.87	74.00	-22.13	peak
2	5325.000	45.16	2.38	47.54	74.00	-26.46	peak
3	8115.000	37.68	10.13	47.81	74.00	-26.19	peak
4	11340.000	35.75	14.21	49.96	74.00	-24.04	peak
5	14700.000	33.81	17.69	51.50	74.00	-22.50	peak
6	17220.000	30.60	22.12	52.72	74.00	-21.28	peak

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3195.000	53.98	-3.91	50.07	74.00	-23.93	peak
2	5325.000	47.78	2.38	50.16	74.00	-23.84	peak
3	9375.000	37.22	10.83	48.05	74.00	-25.95	peak
4	11835.000	35.59	15.34	50.93	74.00	-23.07	peak
5	13920.000	33.88	17.55	51.43	74.00	-22.57	peak
6	17055.000	30.68	21.60	52.28	74.00	-21.72	peak

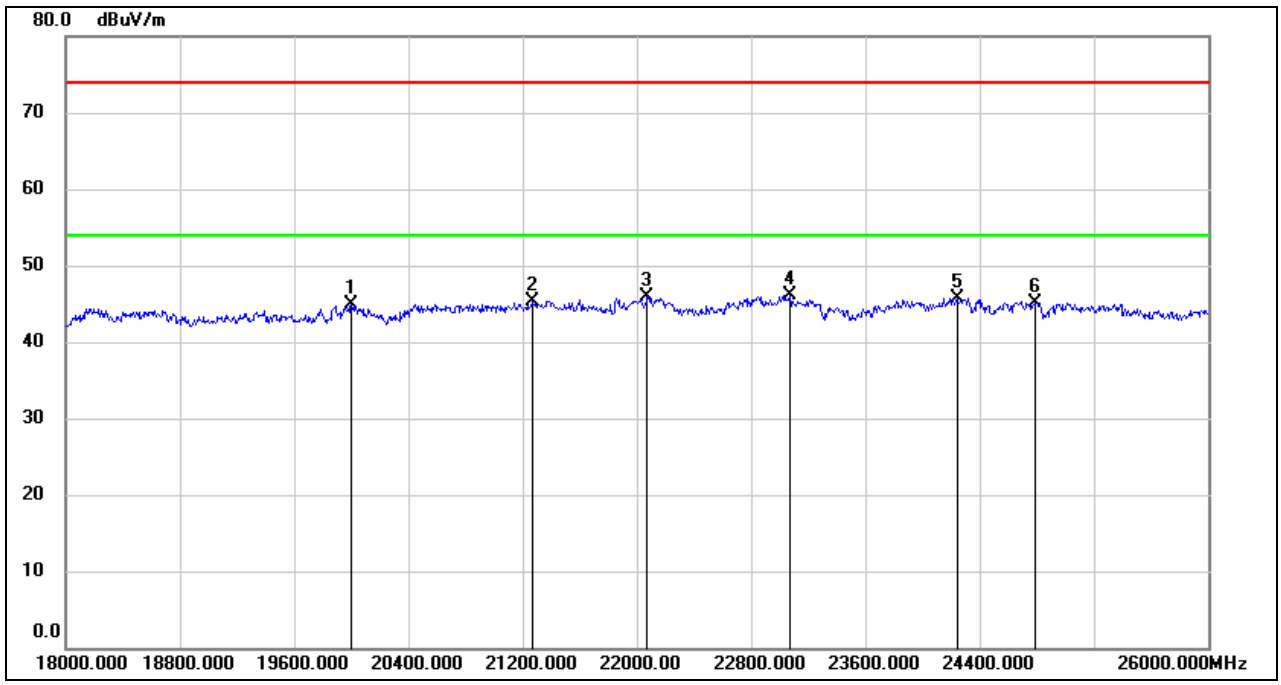
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

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

8.5. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.5.1. 802.11b SISO MODE

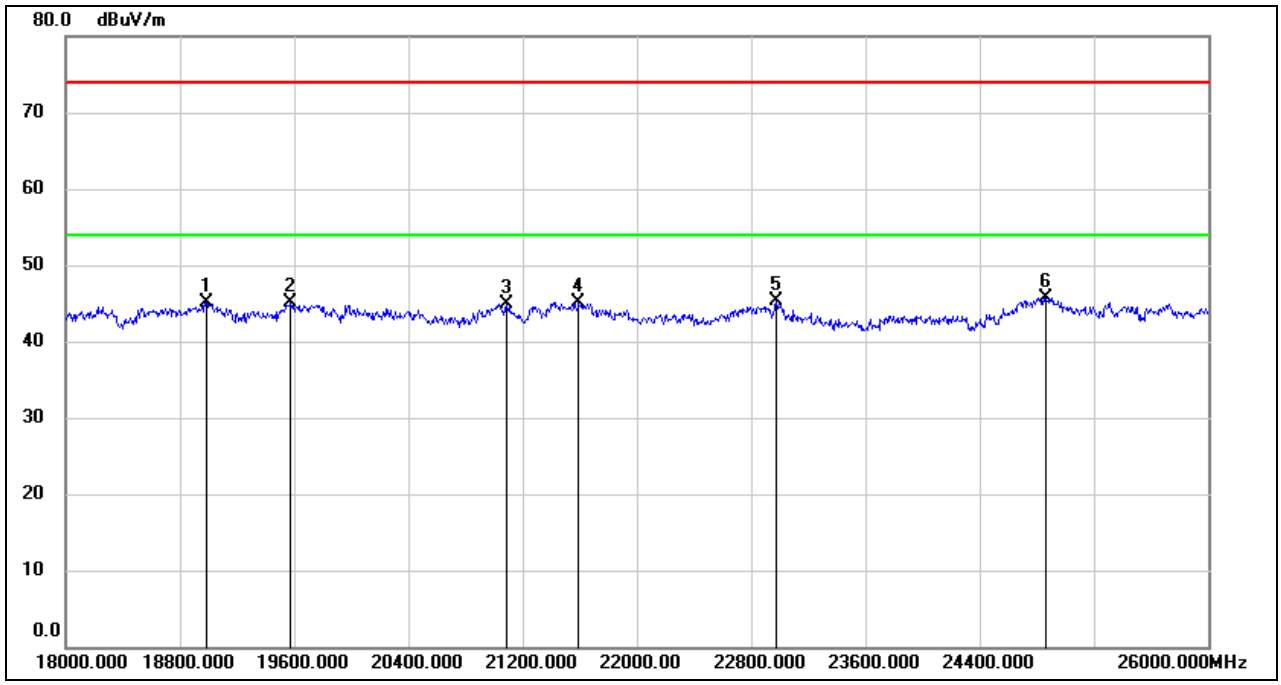
SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20000.000	50.31	-5.45	44.86	74.00	-29.14	peak
2	21264.000	50.04	-4.76	45.28	74.00	-28.72	peak
3	22072.000	50.27	-4.41	45.86	74.00	-28.14	peak
4	23072.000	49.52	-3.42	46.10	74.00	-27.90	peak
5	24240.000	48.52	-2.83	45.69	74.00	-28.31	peak
6	24784.000	47.48	-2.28	45.20	74.00	-28.80	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.

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18984.000	50.29	-5.23	45.06	74.00	-28.94	peak
2	19576.000	50.49	-5.46	45.03	74.00	-28.97	peak
3	21088.000	49.78	-4.84	44.94	74.00	-29.06	peak
4	21592.000	49.64	-4.55	45.09	74.00	-28.91	peak
5	22976.000	48.76	-3.46	45.30	74.00	-28.70	peak
6	24864.000	48.03	-2.23	45.80	74.00	-28.20	peak

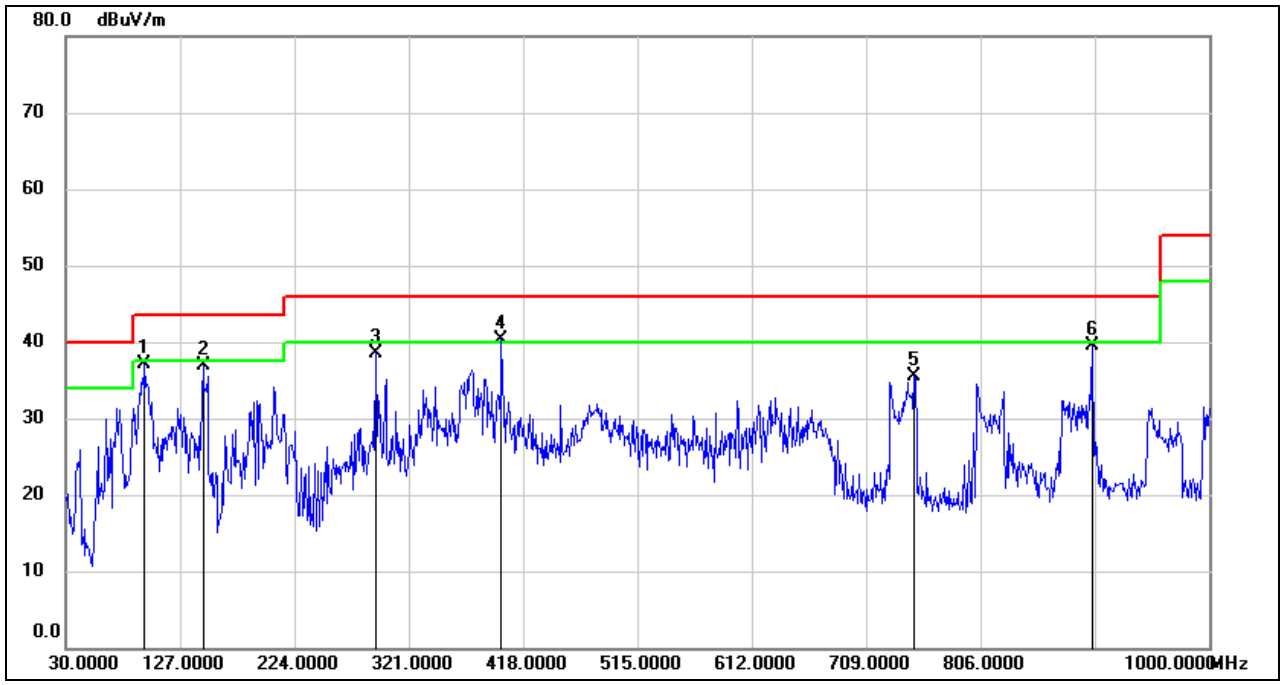
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

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

8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.6.1. 802.11b SISO MODE

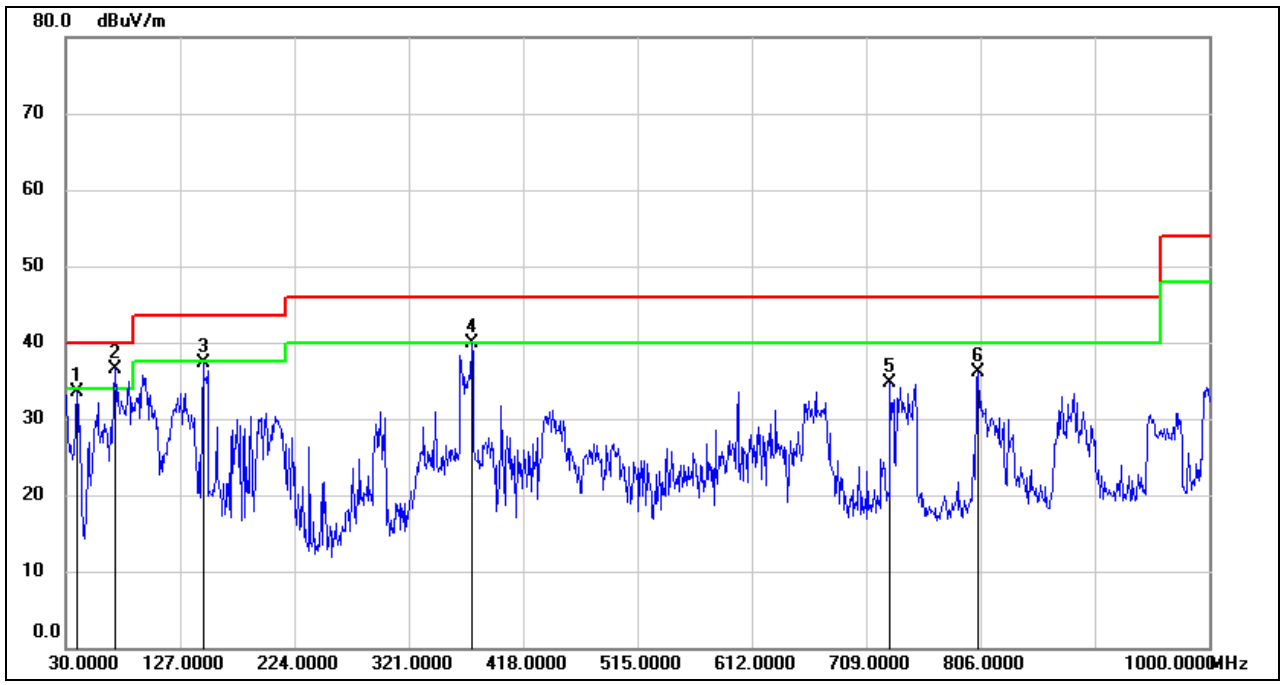
SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	96.9300	58.43	-21.38	37.05	43.50	-6.45	QP
2	146.4000	55.33	-18.49	36.84	43.50	-6.66	QP
3	292.8700	54.33	-15.73	38.60	46.00	-7.40	QP
4	399.5700	53.72	-13.37	40.35	46.00	-5.65	QP
5	749.7400	43.41	-7.94	35.47	46.00	-10.53	QP
6	901.0600	44.75	-5.18	39.57	46.00	-6.43	QP

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

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	39.7000	53.50	-19.96	33.54	40.00	-6.46	QP
2	71.7100	57.30	-20.70	36.60	40.00	-3.40	QP
3	146.4000	55.78	-18.49	37.29	43.50	-6.21	QP
4	374.3500	53.68	-13.82	39.86	46.00	-6.14	QP
5	729.3700	42.83	-8.11	34.72	46.00	-11.28	QP
6	804.0600	43.43	-7.25	36.18	46.00	-9.82	QP

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

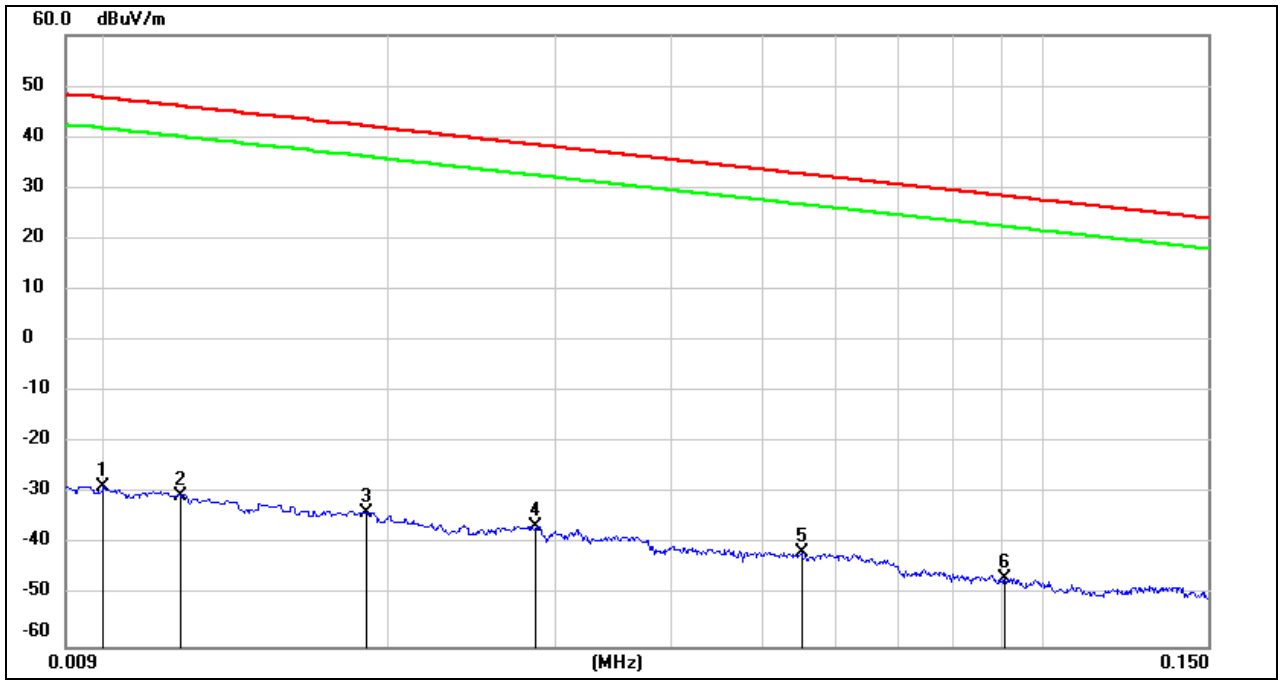
Note: All the modes and channels had been tested, but only the worst data was recorded in the report.

8.7. SPURIOUS EMISSIONS BELOW 30 MHz

8.7.1. 802.11b SISO MODE

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

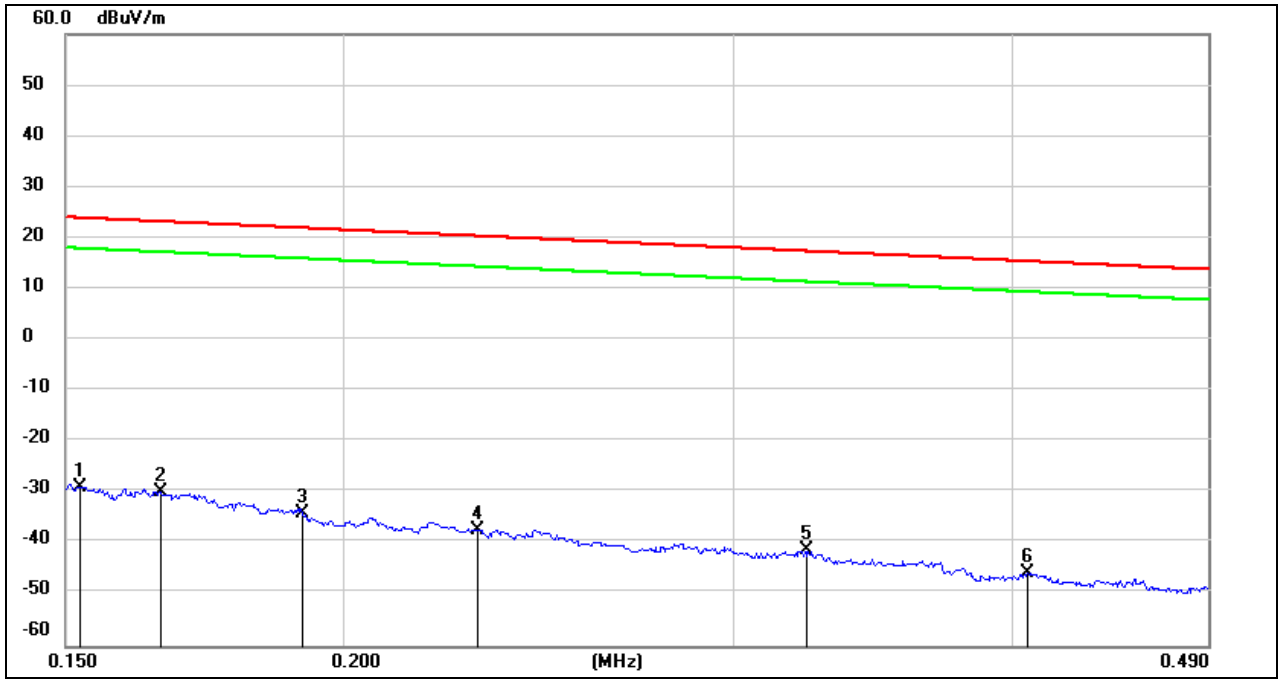
9 kHz~ 150 kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	72.72	-101.40	-28.68	47.6	-76.28	peak
2	0.0120	70.86	-101.39	-30.53	46.02	-76.55	peak
3	0.0189	67.49	-101.35	-33.86	42.07	-75.93	peak
4	0.0286	64.96	-101.38	-36.42	38.47	-74.89	peak
5	0.0551	59.95	-101.50	-41.55	32.78	-74.33	peak
6	0.0911	55.11	-101.72	-46.61	28.41	-75.02	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

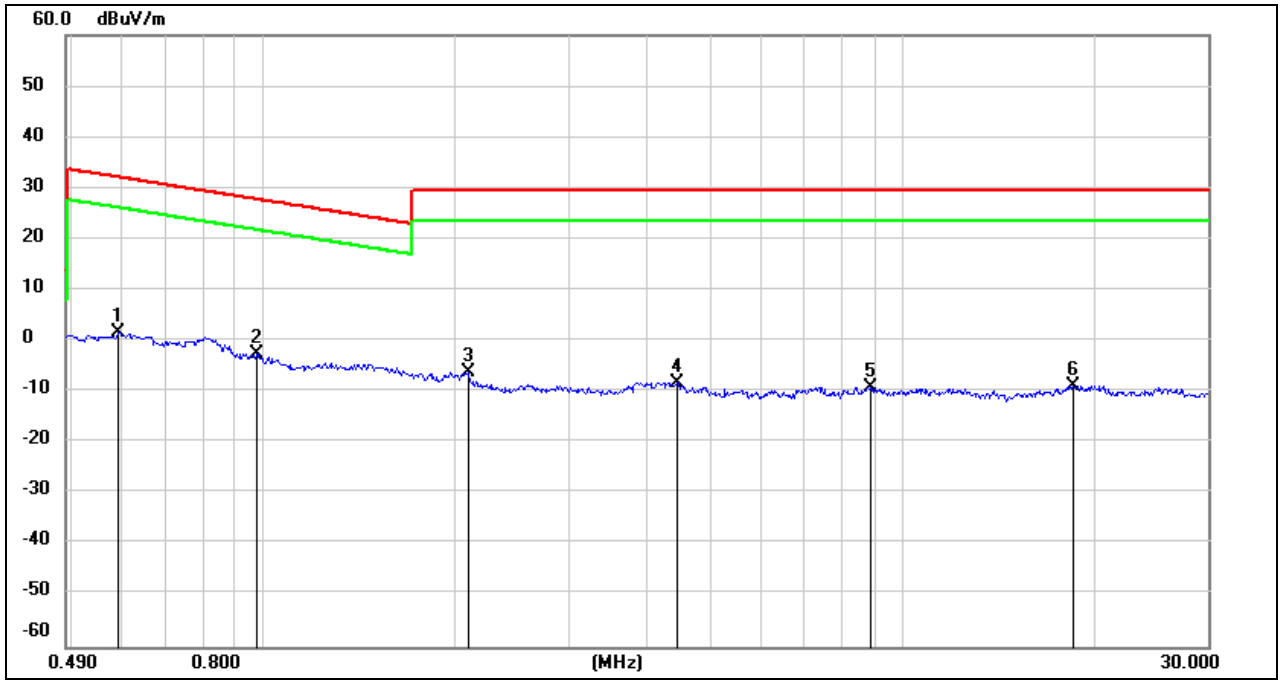
150 kHz ~ 490 kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.1524	72.80	-101.63	-28.83	23.94	-52.77	peak
2	0.1655	71.83	-101.66	-29.83	23.23	-53.06	peak
3	0.1917	67.54	-101.70	-34.16	21.95	-56.11	peak
4	0.2298	64.55	-101.77	-37.22	20.37	-57.59	peak
5	0.3234	60.48	-101.88	-41.4	17.41	-58.81	peak
6	0.4062	56.14	-101.96	-45.82	15.43	-61.25	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

490 kHz ~ 30 MHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.5917	63.74	-62.08	1.66	32.16	-30.50	peak
2	0.9737	59.71	-62.25	-2.54	27.83	-30.37	peak
3	2.0853	55.57	-61.80	-6.23	29.54	-35.77	peak
4	4.4443	53.29	-61.40	-8.11	29.54	-37.65	peak
5	8.9001	51.91	-60.95	-9.04	29.54	-38.58	peak
6	18.4908	52.05	-60.89	-8.84	29.54	-38.38	peak

Note: 1. Measurement = Reading Level + Correct Factor.
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 and channels had been tested, but only the worst data was recorded in the report.

9. AC POWER LINE CONDUCTED EMISSIONS

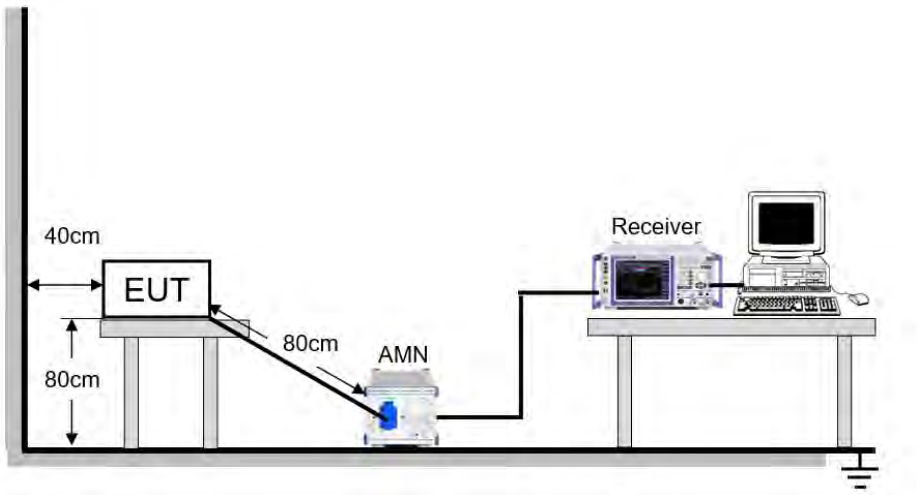
LIMITS

Please refer to CFR 47 FCC §15.207 (a)

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.

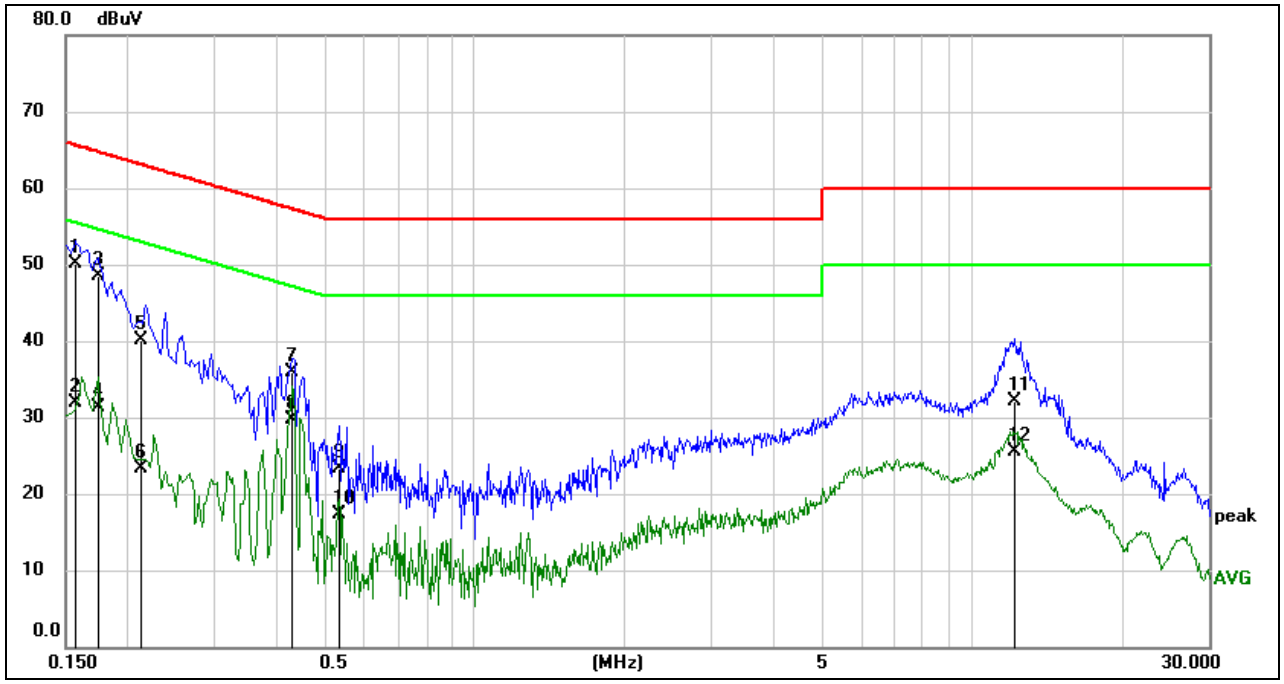
TEST ENVIRONMENT

Temperature	23.6 °C	Relative Humidity	59.1 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

RESULTS

9.1. 802.11b SISO MODE

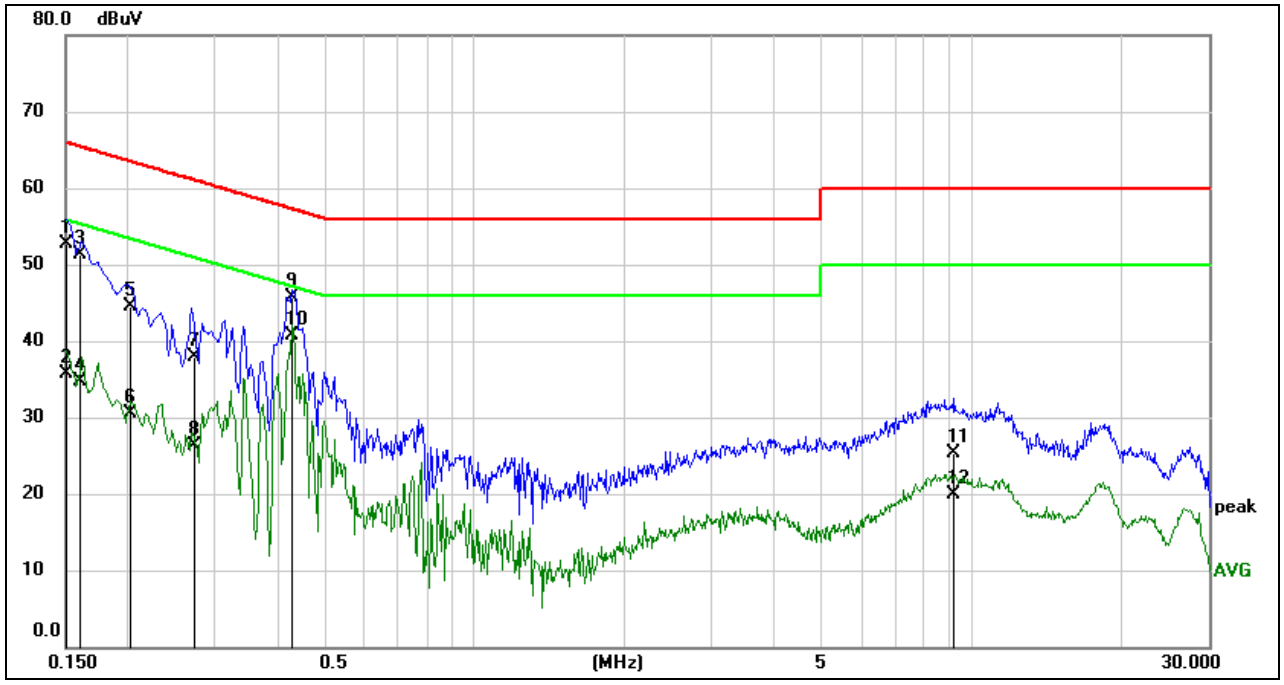
LINE N RESULTS (MID CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1573	40.46	9.59	50.05	65.61	-15.56	QP
2	0.1573	22.30	9.59	31.89	55.61	-23.72	AVG
3	0.1732	38.96	9.59	48.55	64.81	-16.26	QP
4	0.1732	21.69	9.59	31.28	54.81	-23.53	AVG
5	0.2138	30.56	9.59	40.15	63.06	-22.91	QP
6	0.2138	13.77	9.59	23.36	53.06	-29.70	AVG
7	0.4300	26.25	9.60	35.85	57.25	-21.40	QP
8	0.4300	20.13	9.60	29.73	47.25	-17.52	AVG
9	0.5341	13.78	9.60	23.38	56.00	-32.62	QP
10	0.5341	7.68	9.60	17.28	46.00	-28.72	AVG
11	12.2539	22.49	9.66	32.15	60.00	-27.85	QP
12	12.2539	15.76	9.66	25.42	50.00	-24.58	AVG

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

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1505	43.16	9.59	52.75	65.97	-13.22	QP
2	0.1505	26.11	9.59	35.70	55.97	-20.27	AVG
3	0.1607	41.72	9.59	51.31	65.43	-14.12	QP
4	0.1607	25.09	9.59	34.68	55.43	-20.75	AVG
5	0.2028	34.89	9.59	44.48	63.50	-19.02	QP
6	0.2028	20.83	9.59	30.42	53.50	-23.08	AVG
7	0.2717	28.32	9.59	37.91	61.07	-23.16	QP
8	0.2717	16.67	9.59	26.26	51.07	-24.81	AVG
9	0.4287	36.05	9.60	45.65	57.28	-11.63	QP
10	0.4287	31.15	9.60	40.75	47.28	-6.53	AVG
11	9.2137	15.75	9.62	25.37	60.00	-34.63	QP
12	9.2137	10.38	9.62	20.00	50.00	-30.00	AVG

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

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

10. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

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

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

RESULTS

Complies

11. 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	10.120	2406.960	2417.080	0.5	PASS
		2437	10.200	2431.920	2442.120	0.5	PASS
		2462	10.120	2456.960	2467.080	0.5	PASS
11G	Ant1	2412	16.360	2403.840	2420.200	0.5	PASS
		2437	16.360	2428.840	2445.200	0.5	PASS
		2462	16.360	2453.840	2470.200	0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.200	2420.840	0.5	PASS
		2437	17.360	2428.480	2445.840	0.5	PASS
		2462	16.720	2453.720	2470.440	0.5	PASS
11N40SISO	Ant1	2422	35.200	2404.400	2439.600	0.5	PASS
		2437	35.440	2419.400	2454.840	0.5	PASS
		2452	35.200	2434.400	2469.600	0.5	PASS

11.1.2. Test Graphs

11B_Ant1_2412

11B_Ant1_2437

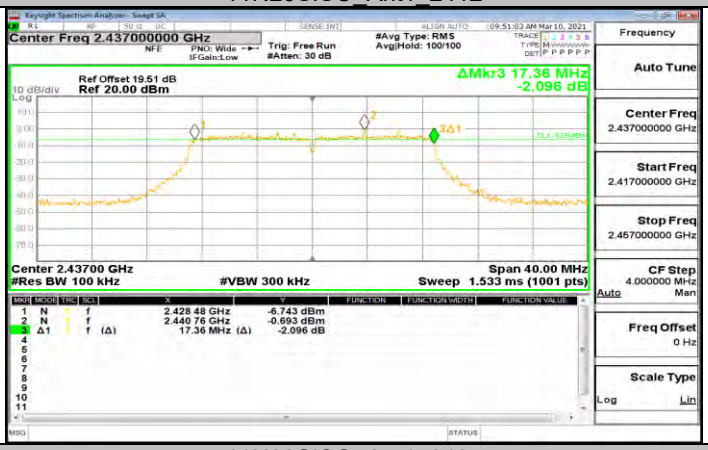
11B_Ant1_2462

11G_Ant1_2412

11G_Ant1_2437

11G_Ant1_2462

11N20SISO_Ant1_2412



11N20SISO_Ant1_2437

11N20SISO_Ant1_2462

11N40SISO_Ant1_2422

11N40SISO_Ant1_2437

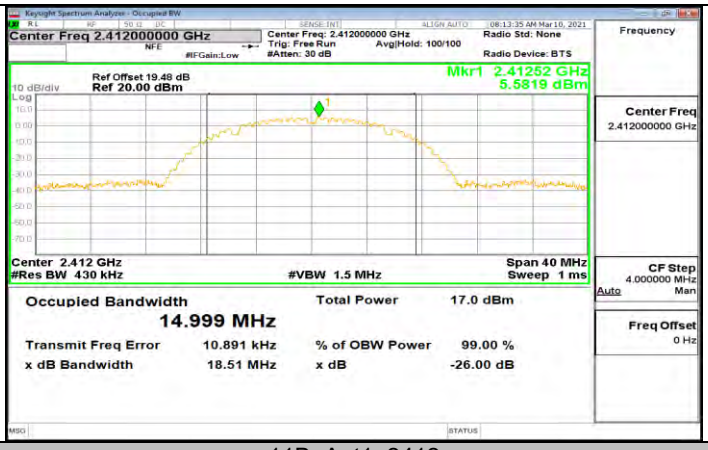
11N40SISO_Ant1_2452

11.2. Appendix B: Occupied Channel Bandwidth

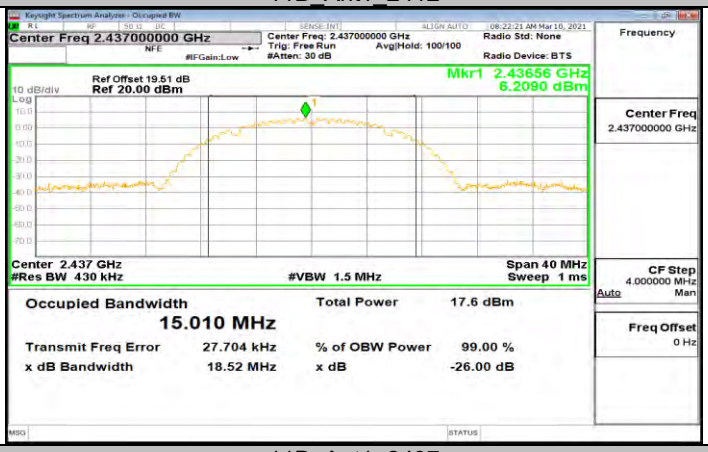
11.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11B	Ant1	2412	14.999	2404.511	2419.510	PASS
		2437	15.010	2429.523	2444.533	PASS
		2462	15.014	2454.484	2469.498	PASS
11G	Ant1	2412	17.005	2403.512	2420.517	PASS
		2437	16.988	2428.580	2445.568	PASS
		2462	17.064	2453.442	2470.506	PASS
11N20SISO	Ant1	2412	17.978	2403.022	2421.000	PASS
		2437	18.019	2428.045	2446.064	PASS
		2462	18.018	2452.961	2470.979	PASS
11N40SISO	Ant1	2422	36.349	2403.925	2440.274	PASS
		2437	36.413	2418.895	2455.308	PASS
		2452	36.366	2433.893	2470.259	PASS

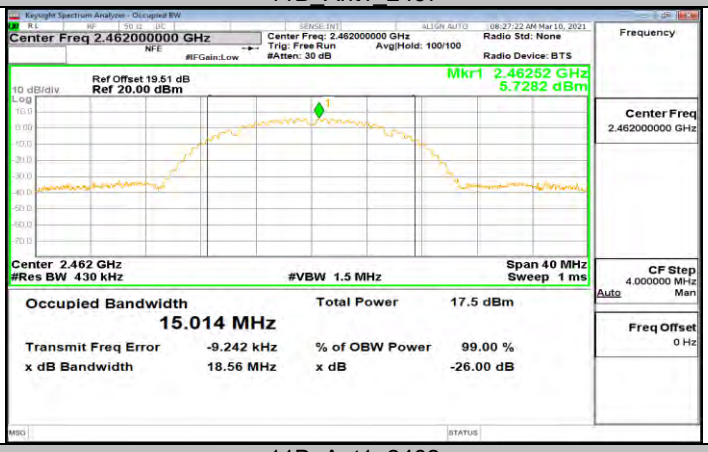
11.2.2. Test Graphs



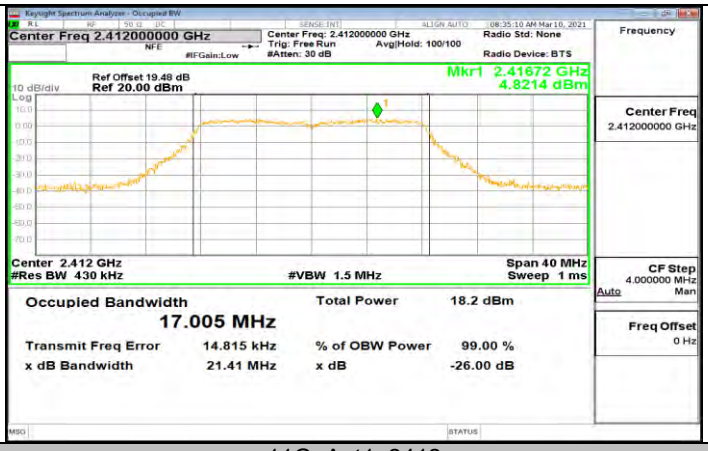
11B_Ant1_2412



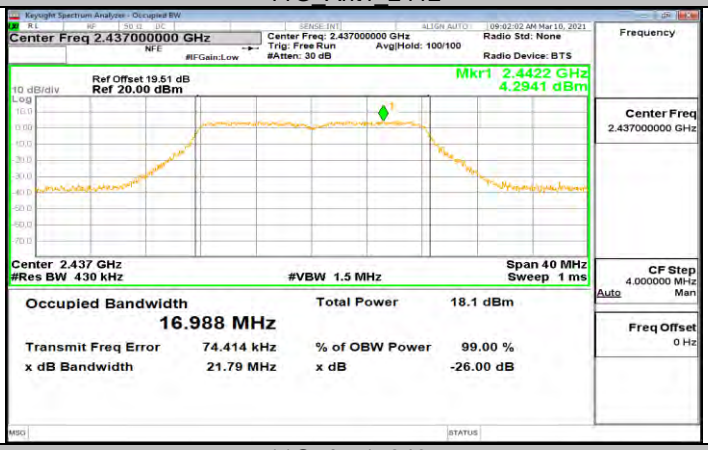
11B_Ant1_2437



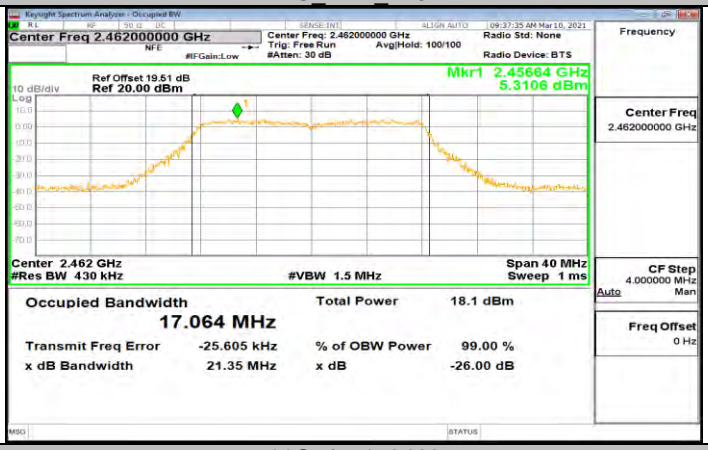
11B_Ant1_2462



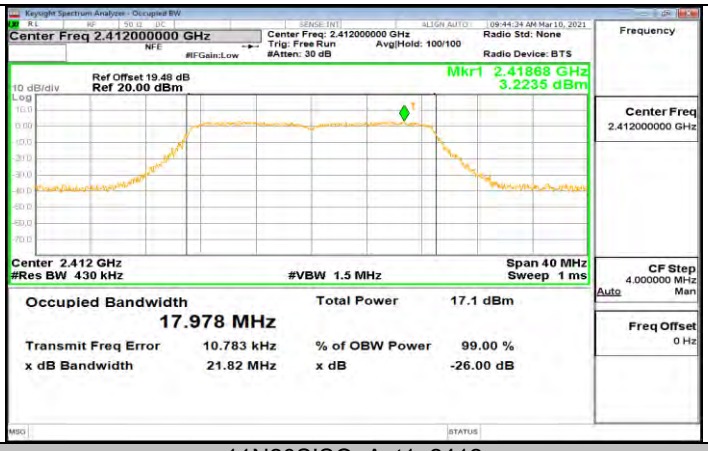
11G_Ant1_2412



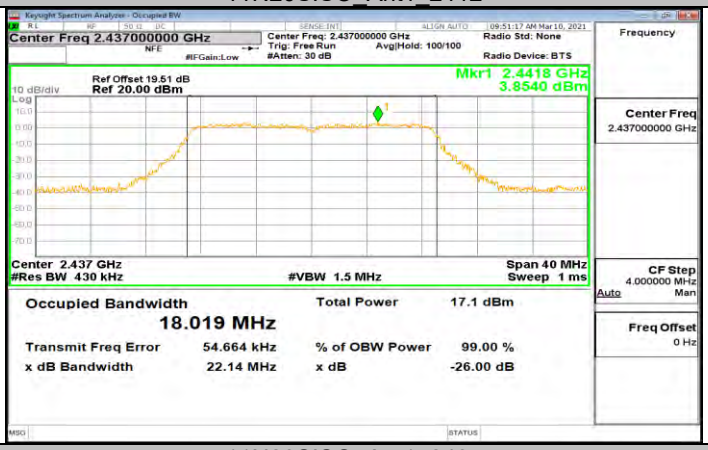
11G_Ant1_2437



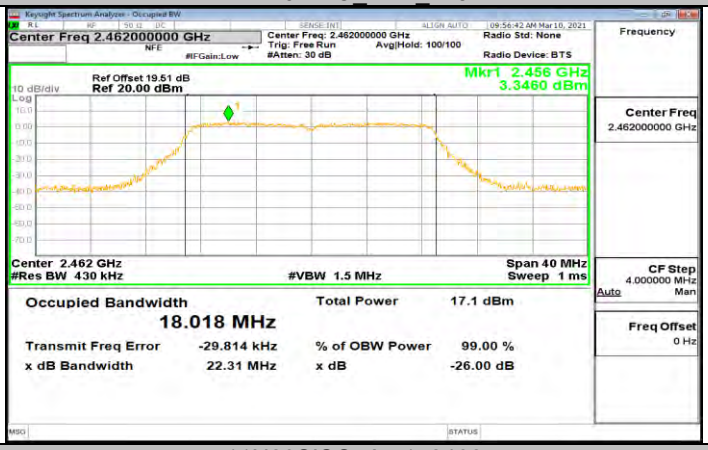
11G_Ant1_2462



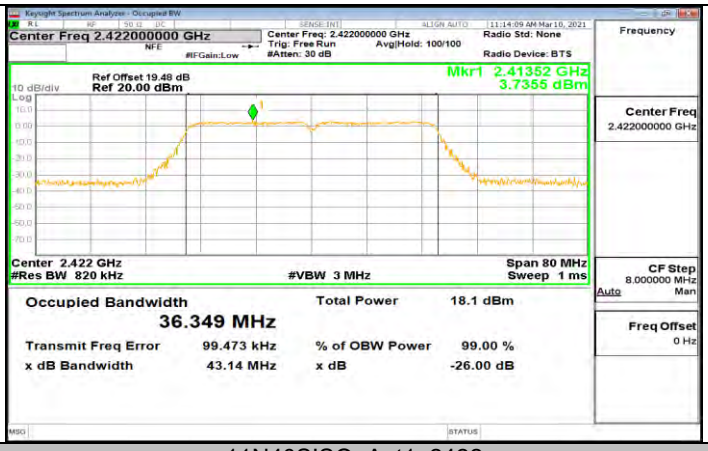
11N20SISO_Ant1_2412



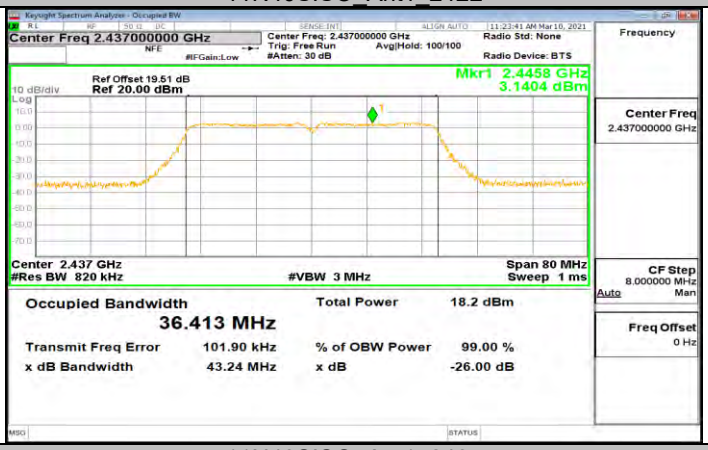
11N20SISO_Ant1_2437



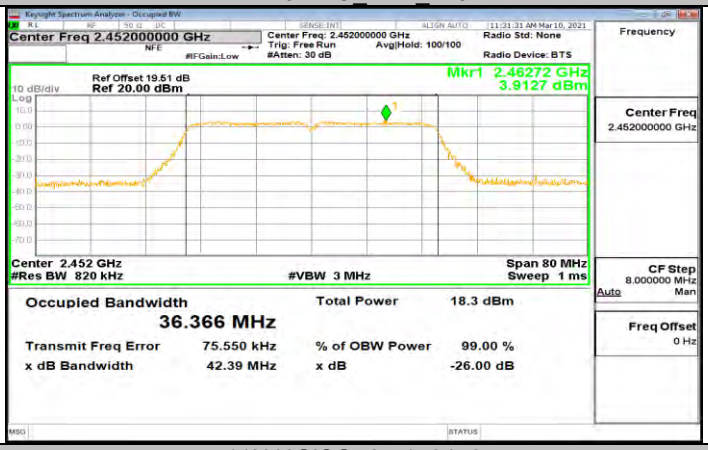
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

11.3. Appendix C: Maximum AVG conducted output power

11.3.1. Test Result

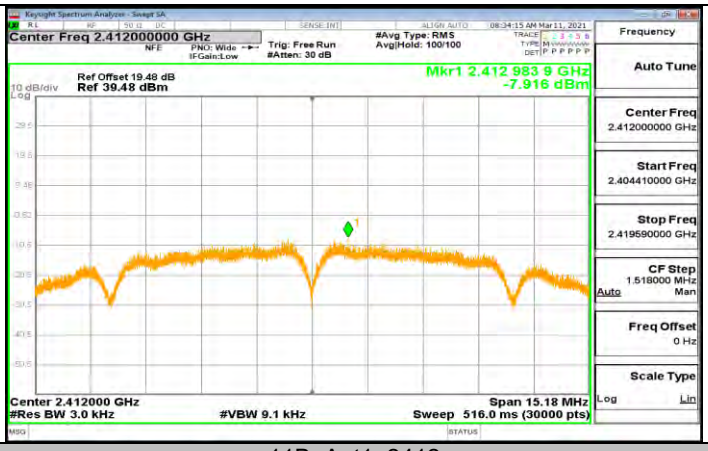
Test Mode	Antenna	Channel	Power [dBm]	Limit [dBm]	Limit [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.92	<=30	<=30	19.87	<=36	PASS
		2437	14.60	<=30	<=30	20.55	<=36	PASS
		2462	13.81	<=30	<=30	19.76	<=36	PASS
11G	Ant1	2412	12.01	<=30	<=30	17.96	<=36	PASS
		2437	12.02	<=30	<=30	17.97	<=36	PASS
		2462	12.13	<=30	<=30	18.08	<=36	PASS
11N20SISO	Ant1	2412	11.05	<=30	<=30	17.00	<=36	PASS
		2437	11.19	<=30	<=30	17.14	<=36	PASS
		2462	11.11	<=30	<=30	17.06	<=36	PASS
11N40SISO	Ant1	2422	11.02	<=30	<=30	16.97	<=36	PASS
		2437	11.34	<=30	<=30	17.29	<=36	PASS
		2452	10.96	<=30	<=30	16.91	<=36	PASS

11.4. Appendix D: Maximum power spectral density

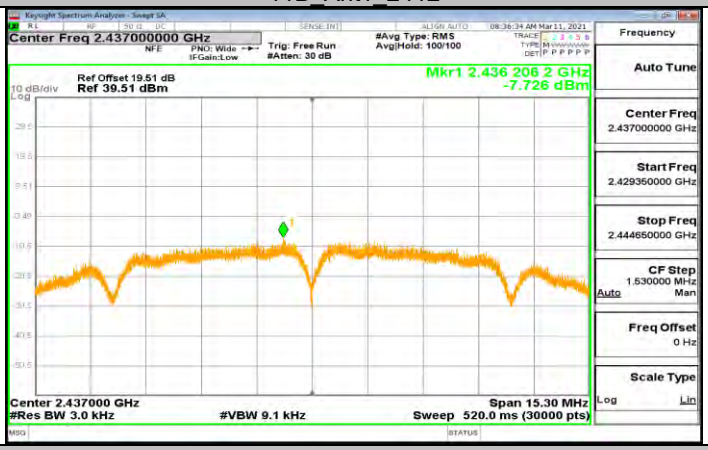
11.4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-7.92	<=8	PASS
		2437	-7.73	<=8	PASS
		2462	-8.97	<=8	PASS
11G	Ant1	2412	-11.81	<=8	PASS
		2437	-13.52	<=8	PASS
		2462	-12.30	<=8	PASS
11N20SISO	Ant1	2412	-14.56	<=8	PASS
		2437	-13.89	<=8	PASS
		2462	-13.93	<=8	PASS
11N40SISO	Ant1	2422	-16.57	<=8	PASS
		2437	-16.34	<=8	PASS
		2452	-16.86	<=8	PASS

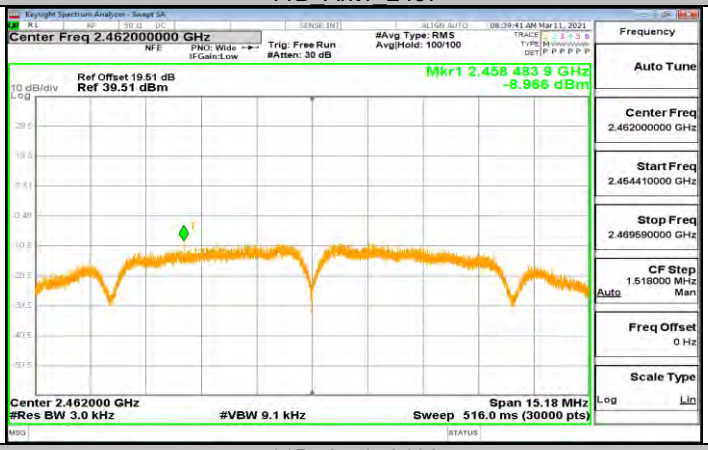
11.4.2. Test Graphs



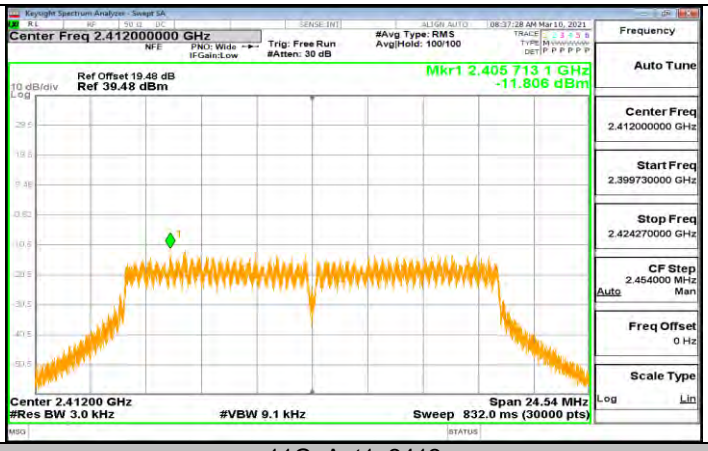
11B_Ant1_2412



11B_Ant1_2437

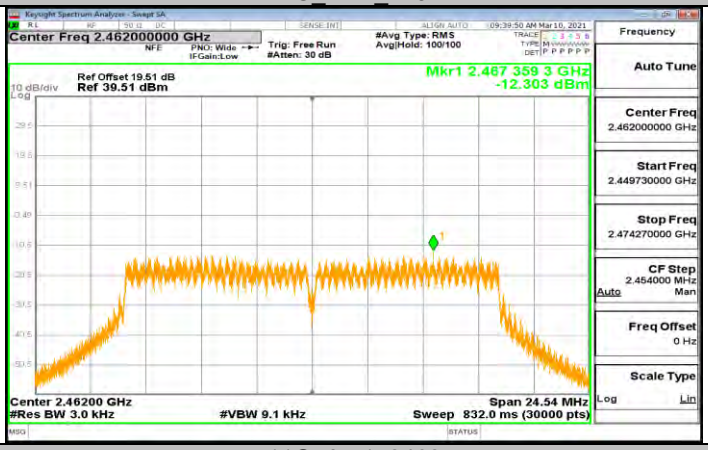


11B_Ant1_2462

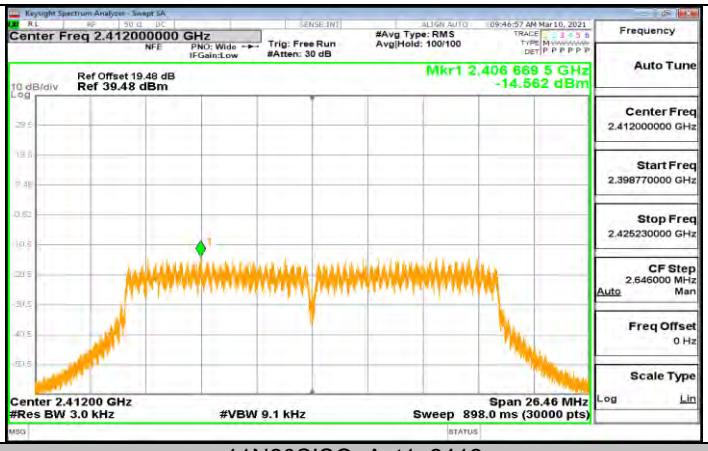


11G_Ant1_2412

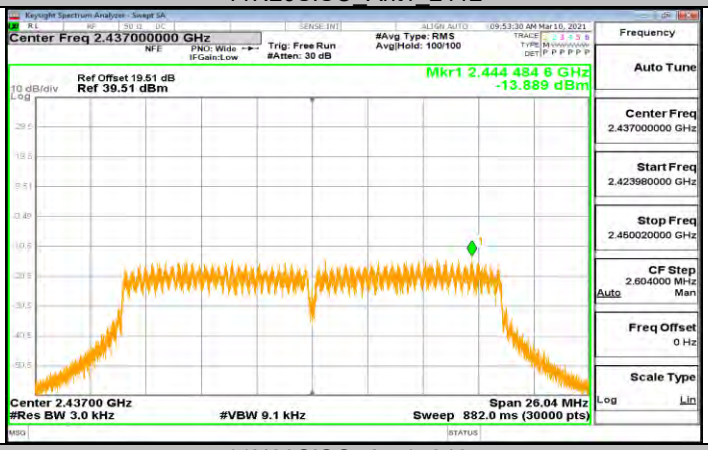
11G_Ant1_2437



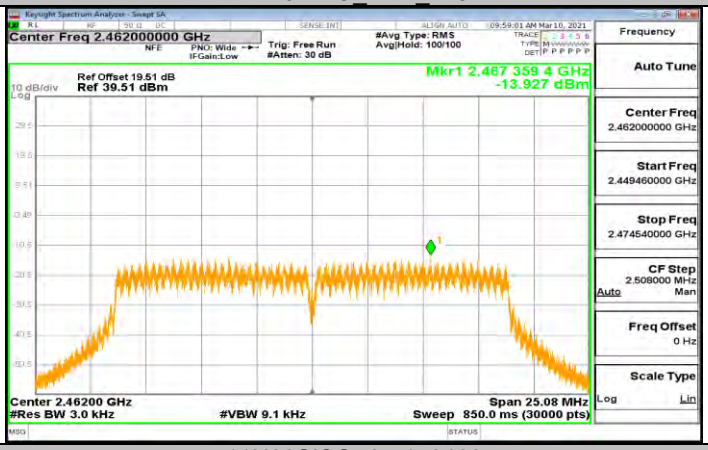
11G_Ant1_2462



11N20SISO_Ant1_2412

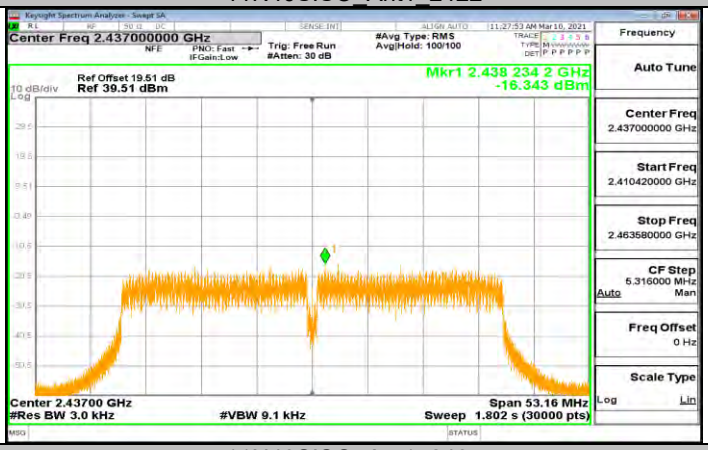


11N20SISO_Ant1_2437

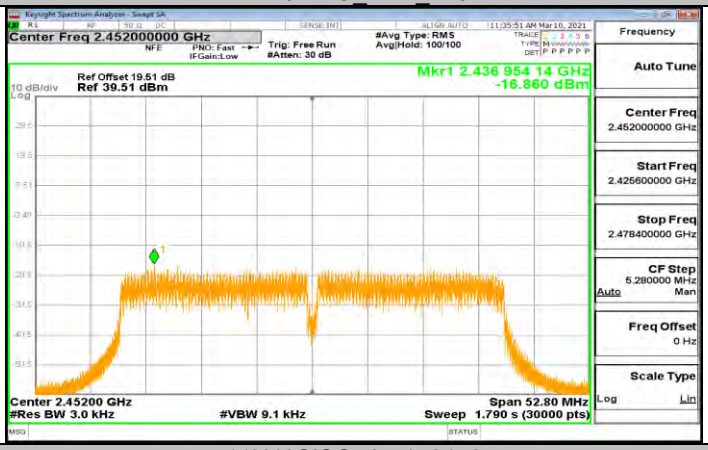


11N20SISO_Ant1_2462

11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

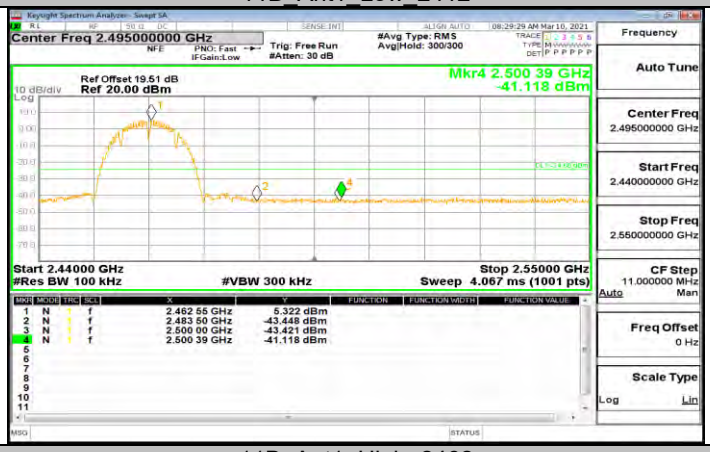
11.5. Appendix E: Band edge measurements

11.5.1. Test Result

Test Mode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.67	-38.95	<=-25.33	PASS
		High	2462	5.32	-41.12	<=-24.68	PASS
11G	Ant1	Low	2412	1.06	-37.89	<=-28.94	PASS
		High	2462	0.87	-40.09	<=-29.13	PASS
11N20SISO	Ant1	Low	2412	-0.04	-38.27	<=-30.04	PASS
		High	2462	-0.59	-41.18	<=-30.59	PASS
11N40SISO	Ant1	Low	2422	-2.83	-37.73	<=-32.83	PASS
		High	2452	-2.82	-40.01	<=-32.82	PASS

11.5.2. Test Graphs

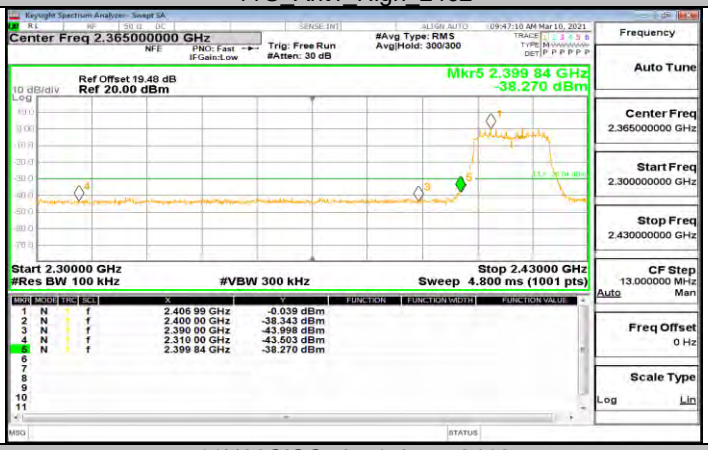
11B_Ant1_Low_2412



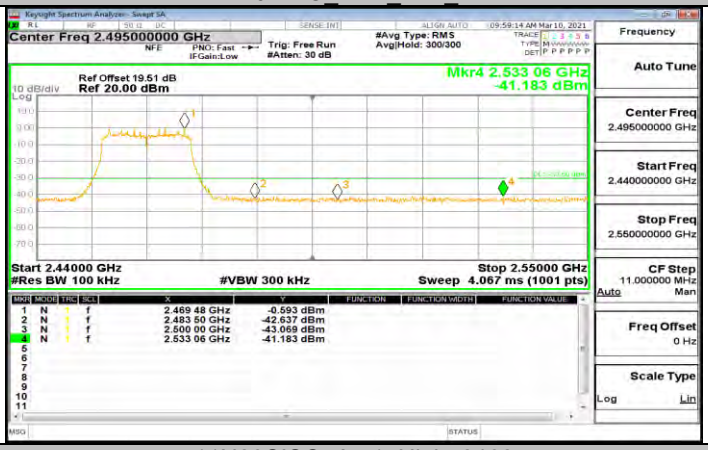
11B_Ant1_High_2462

11G_Ant1_Low_2412

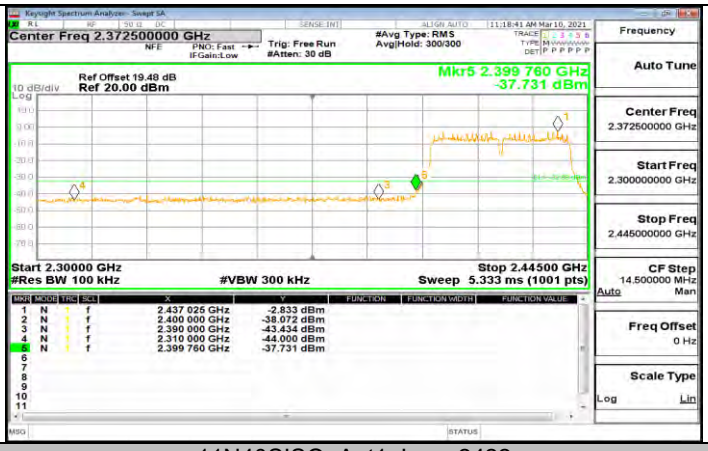
11G_Ant1_High_2462



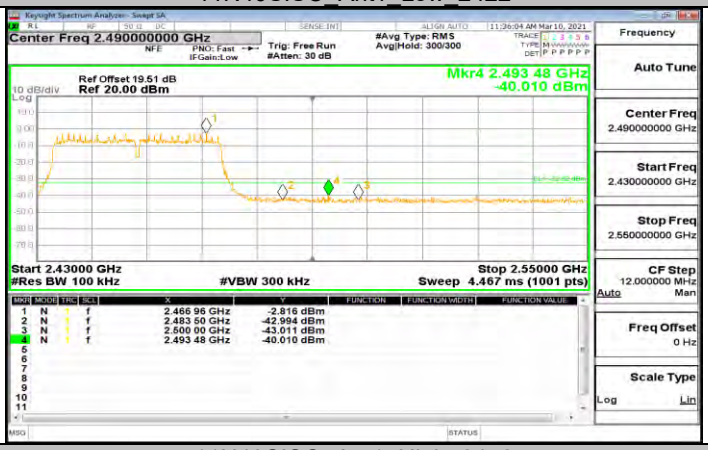
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

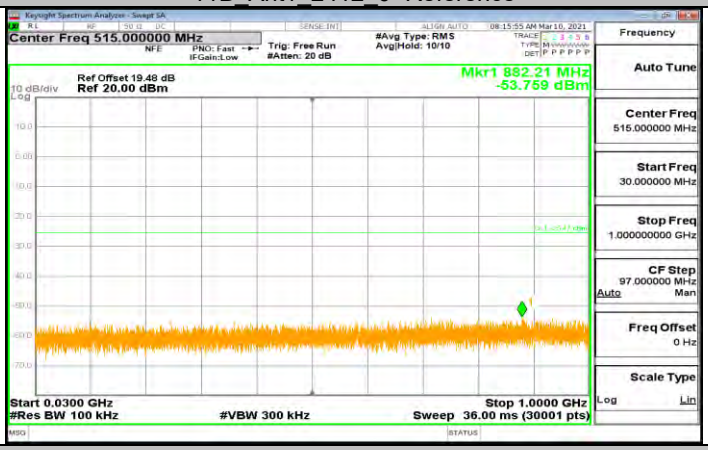
11.6. Appendix F: Conducted Spurious Emission

11.6.1. Test Result

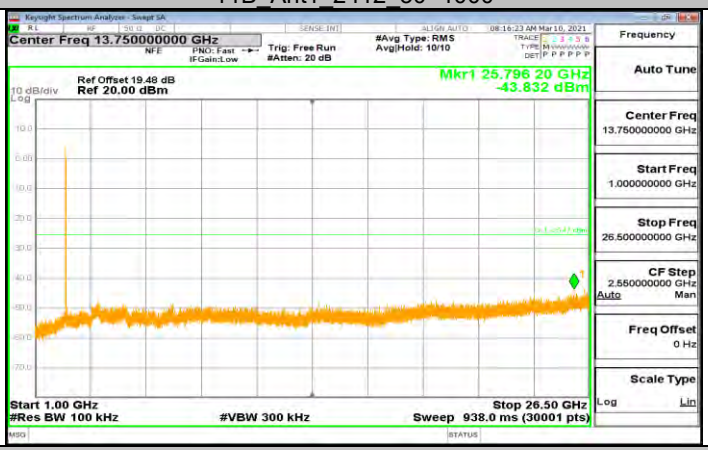
Test Mode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	4.53	4.53	---	PASS
			30~1000	4.53	-53.76	<=-25.47	PASS
			1000~26500	4.53	-43.83	<=-25.47	PASS
		2437	Reference	5.20	5.20	---	PASS
			30~1000	5.20	-53.88	<=-24.8	PASS
			1000~26500	5.20	-44.28	<=-24.8	PASS
		2462	Reference	4.61	4.61	---	PASS
			30~1000	4.61	-53.74	<=-25.4	PASS
			1000~26500	4.61	-44.05	<=-25.4	PASS
11G	Ant1	2412	Reference	-0.80	-0.80	---	PASS
			30~1000	-0.80	-52.9	<=-30.8	PASS
			1000~26500	-0.80	-44.67	<=-30.8	PASS
		2437	Reference	0.61	0.61	---	PASS
			30~1000	0.61	-52.92	<=-29.39	PASS
			1000~26500	0.61	-43.93	<=-29.39	PASS
		2462	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-53.47	<=-29.75	PASS
			1000~26500	0.25	-44.4	<=-29.75	PASS
11N20SISO	Ant1	2412	Reference	-0.01	-0.01	---	PASS
			30~1000	-0.01	-53.55	<=-30.01	PASS
			1000~26500	-0.01	-44.65	<=-30.01	PASS
		2437	Reference	-0.23	-0.23	---	PASS
			30~1000	-0.23	-53.26	<=-30.23	PASS
			1000~26500	-0.23	-44.02	<=-30.23	PASS
		2462	Reference	-0.45	-0.45	---	PASS
			30~1000	-0.45	-52.18	<=-30.45	PASS
			1000~26500	-0.45	-44.04	<=-30.45	PASS
11N40SISO	Ant1	2422	Reference	-2.76	-2.76	---	PASS
			30~1000	-2.76	-52.93	<=-32.76	PASS
			1000~26500	-2.76	-44.64	<=-32.76	PASS
		2437	Reference	-3.13	-3.13	---	PASS
			30~1000	-3.13	-53.08	<=-33.13	PASS
			1000~26500	-3.13	-44.47	<=-33.13	PASS
		2452	Reference	-3.07	-3.07	---	PASS
			30~1000	-3.07	-52.6	<=-33.07	PASS
			1000~26500	-3.07	-45	<=-33.07	PASS

11.6.2. Test Graphs

11B_Ant1_2412_0~Reference

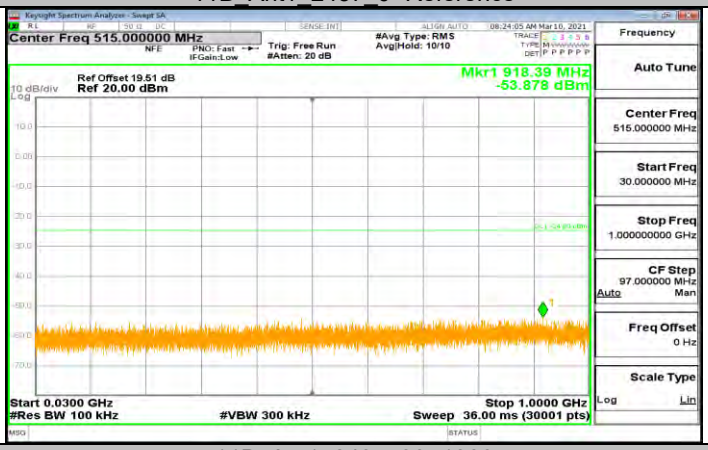


11B_Ant1_2412_30~1000

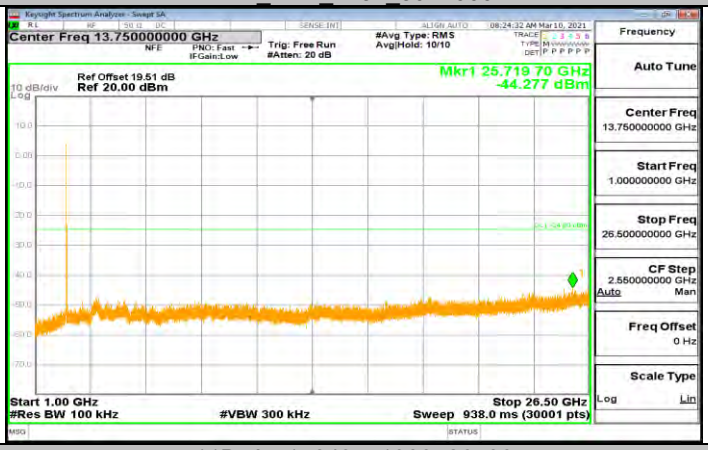


11B_Ant1_2412_1000~26500

11B_Ant1_2437_0~Reference

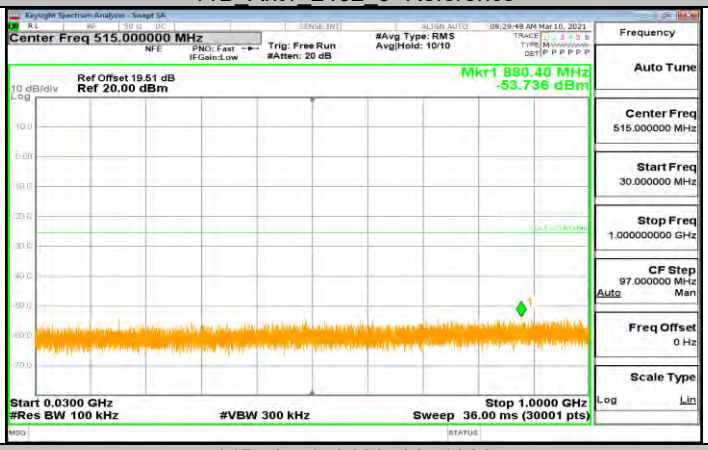


11B_Ant1_2437_30~1000



11B_Ant1_2437_1000~26500

11B_Ant1_2462_0~Reference



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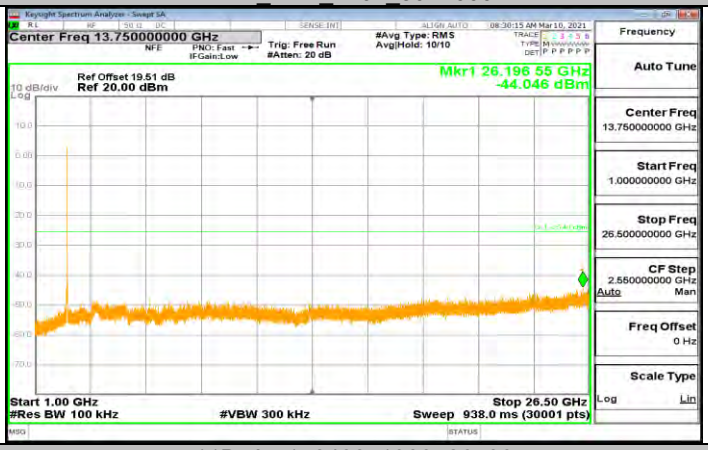

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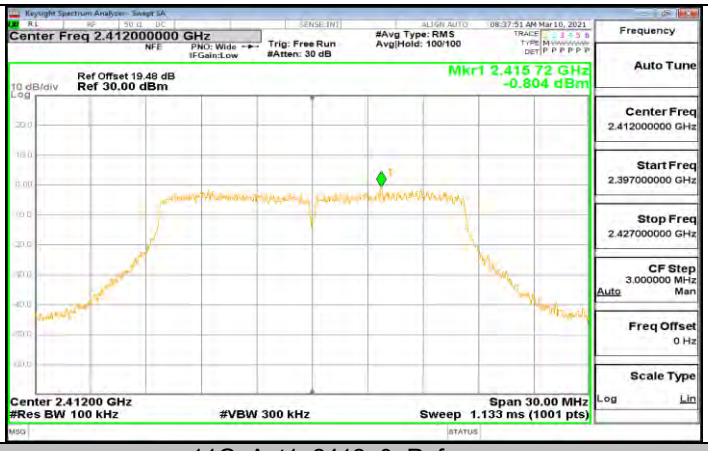
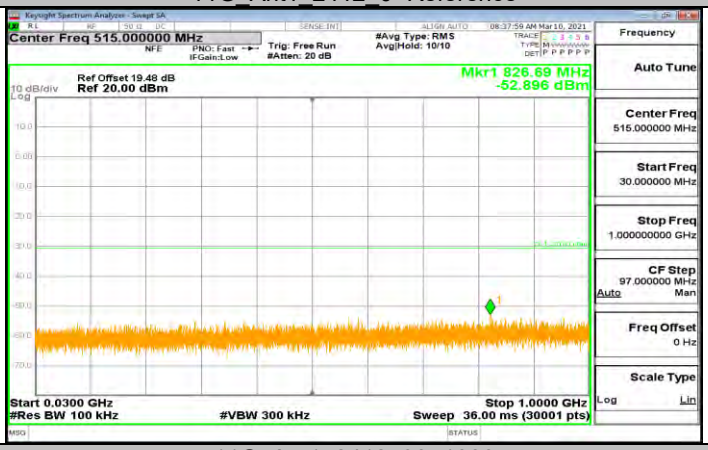


11G_Ant1_2412_0~Reference



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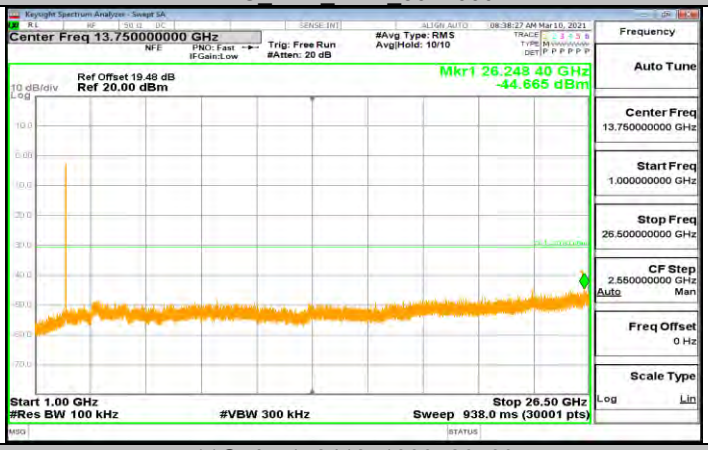

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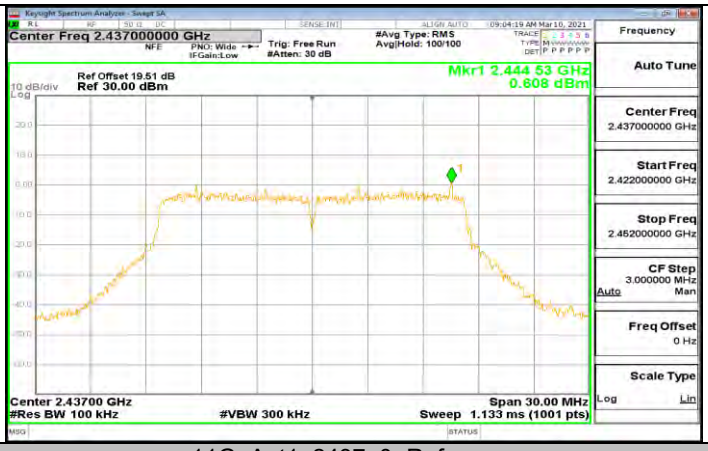

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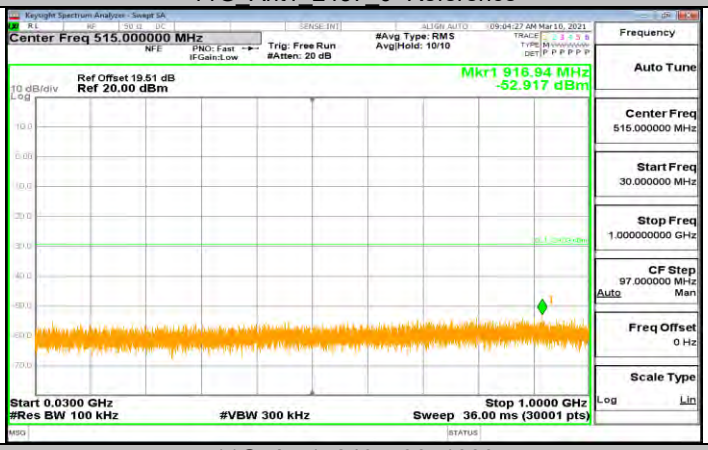

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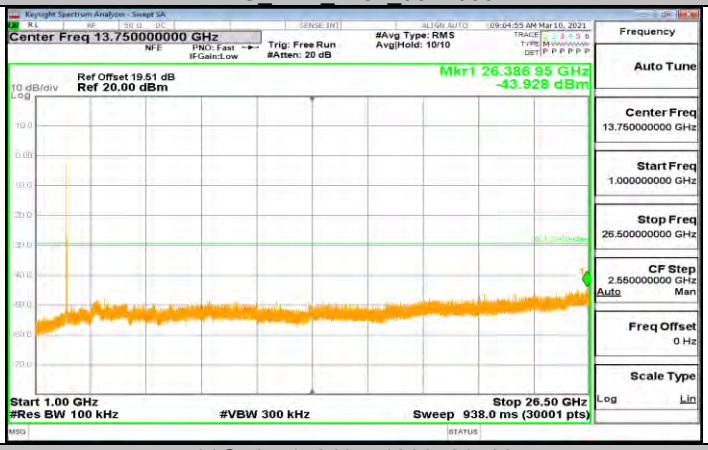

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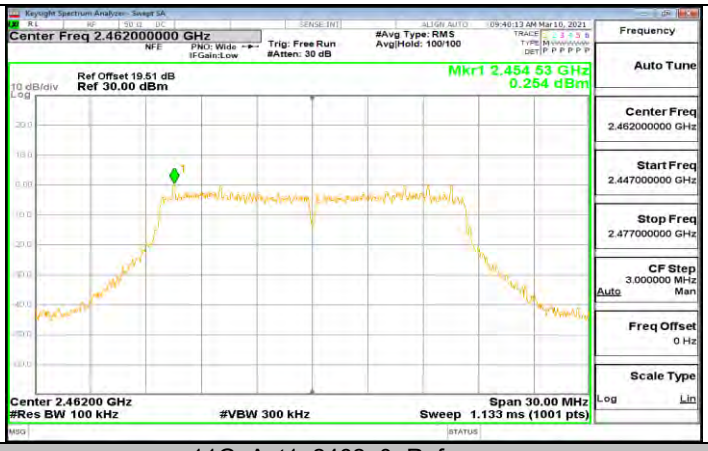

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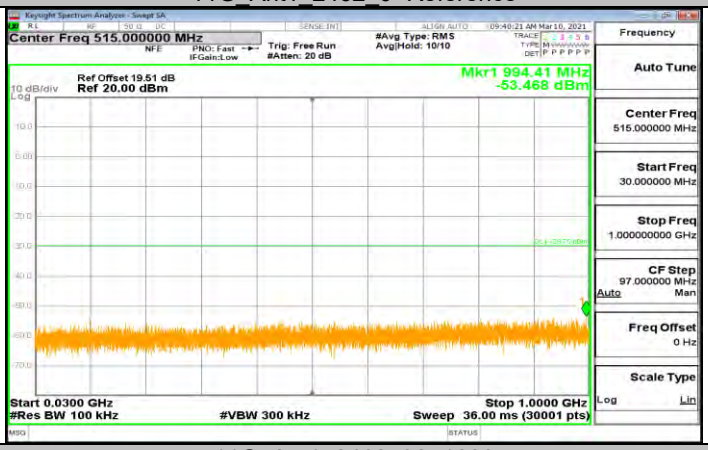

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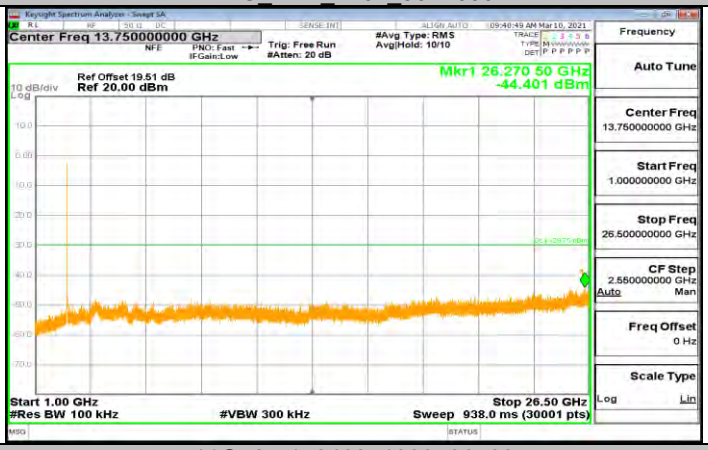

11G_Ant1_2462_1000~26500

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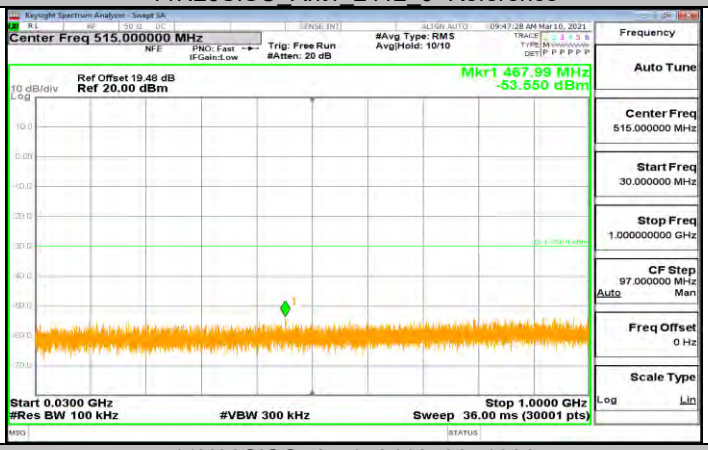

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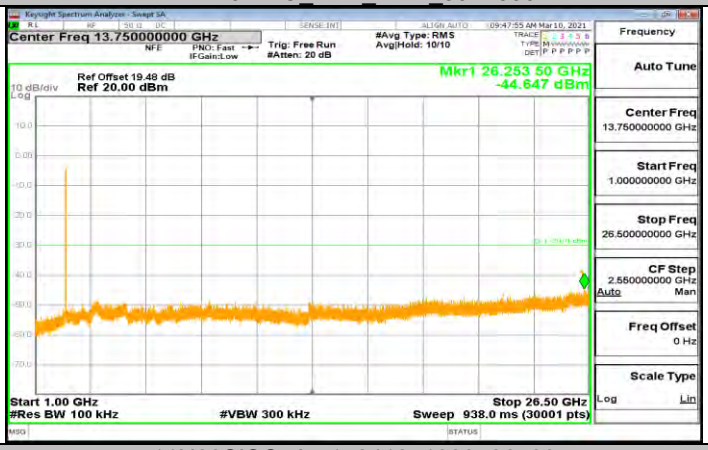

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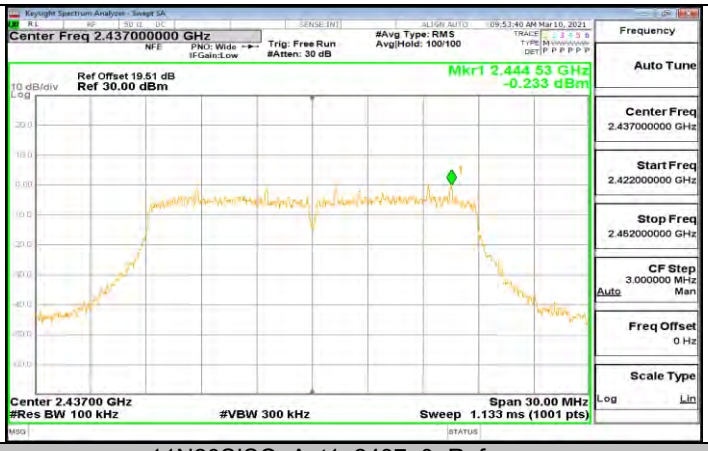

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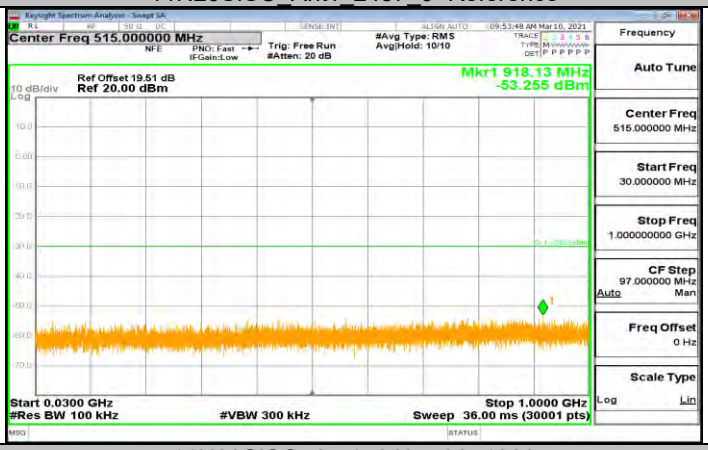

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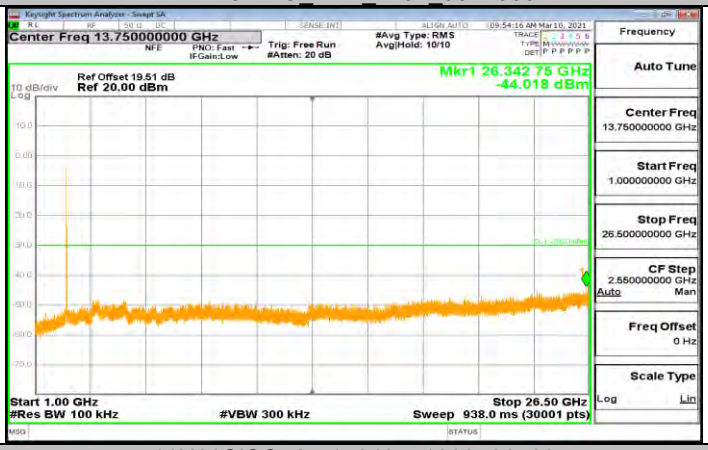

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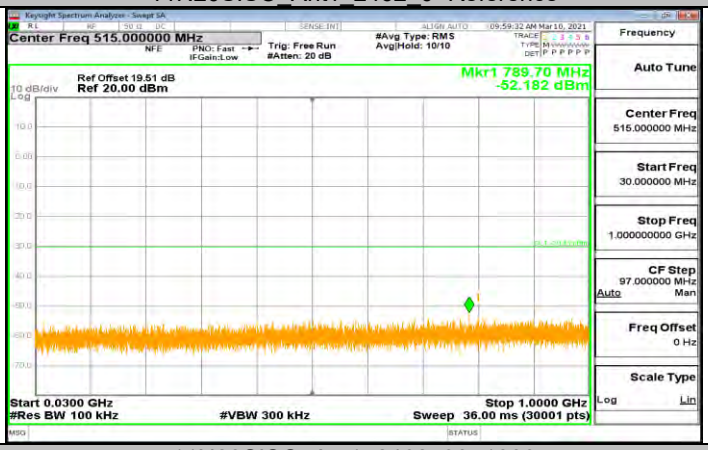

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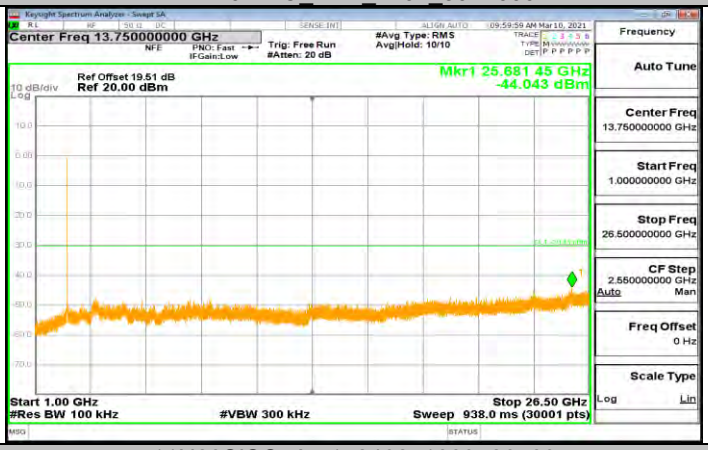
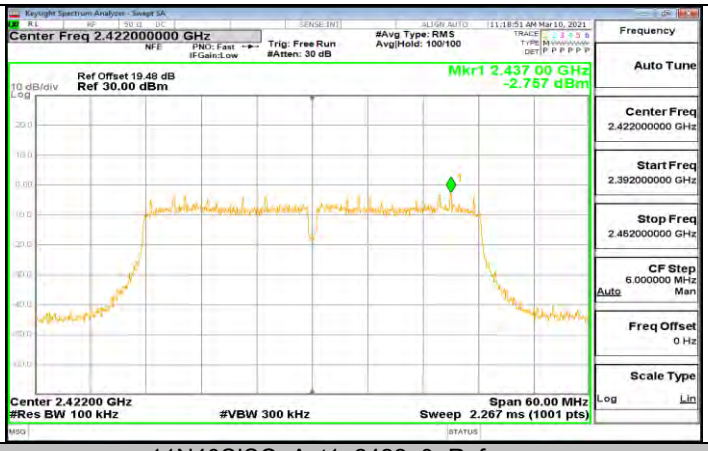
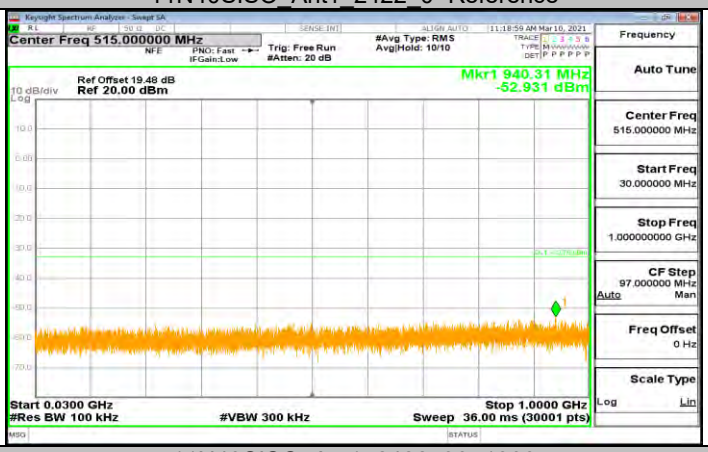


11N20SISO_Ant1_2462_1000~26500



11N40SISO_Ant1_2422_0~Reference



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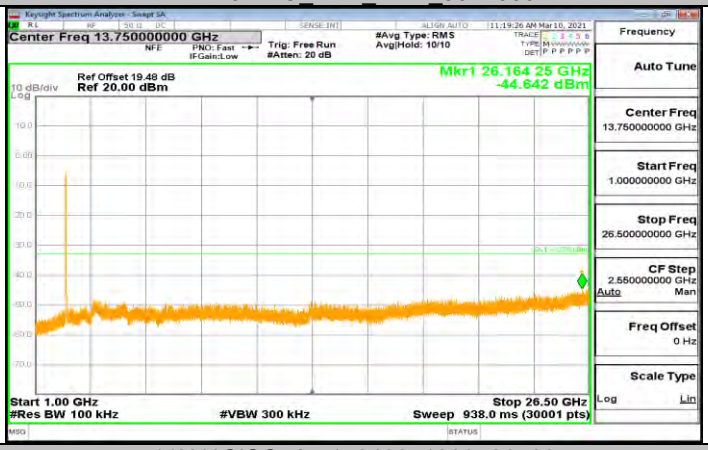

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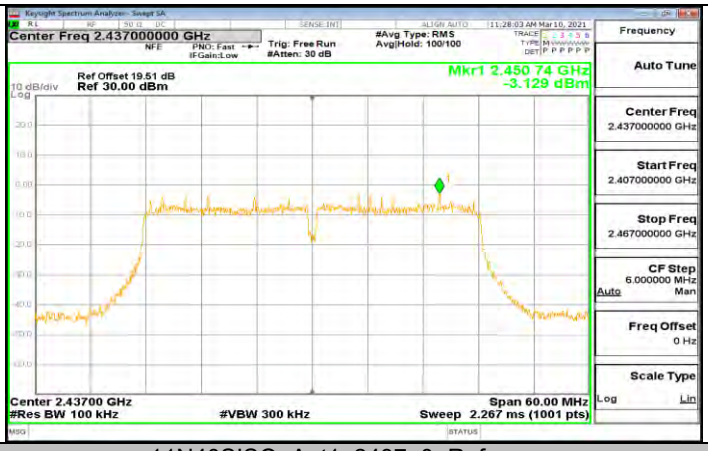

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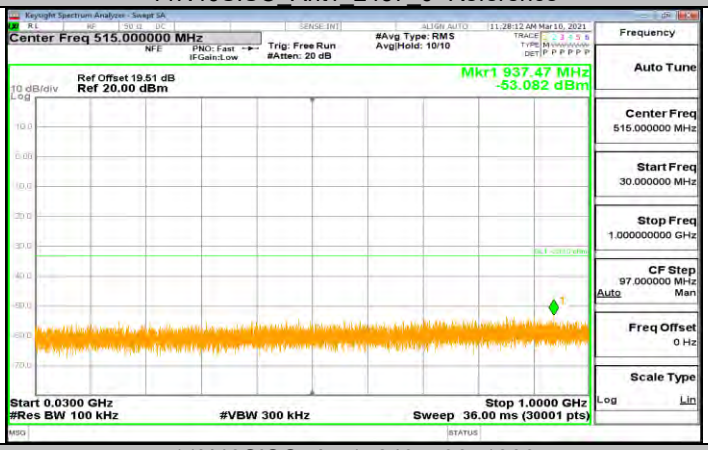
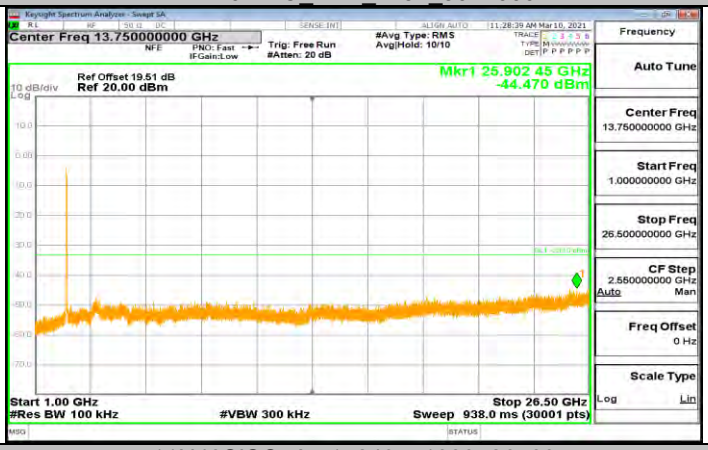
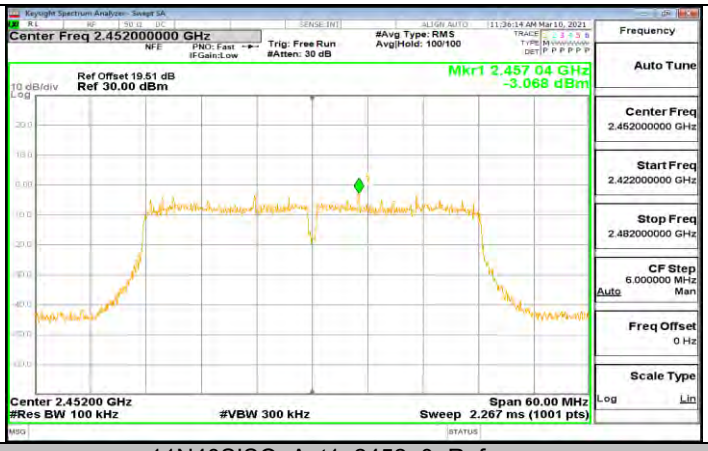


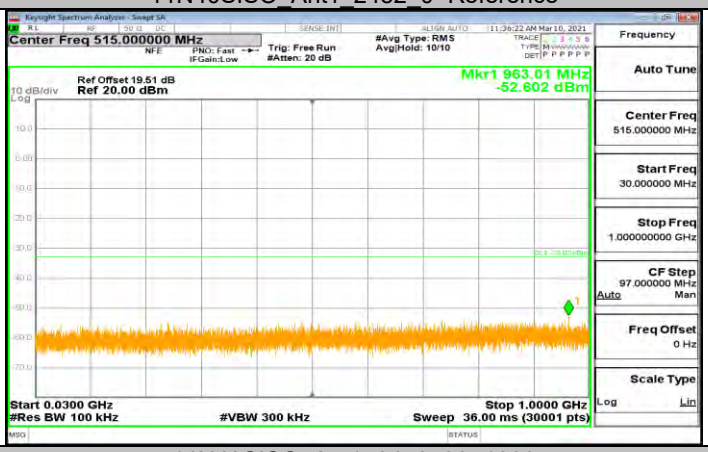
11N40SISO_Ant1_2437_30~1000



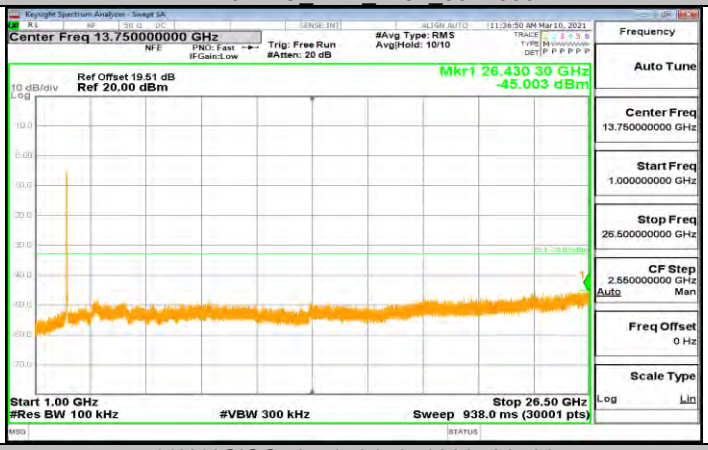
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500

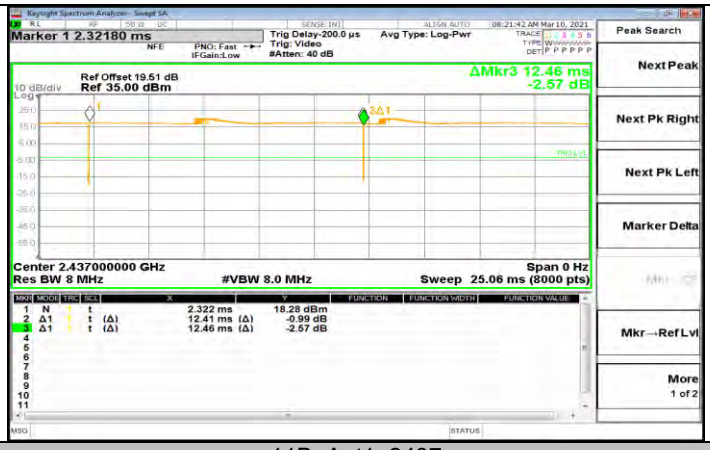
11.7. Appendix G: Duty Cycle

11.7.1. Test Result

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11b	12.41	12.46	0.9960	99.60	0.02	0.08	0.01
11g	2.07	2.24	0.9241	92.41	0.34	0.48	0.5
11n HT20	1.92	1.98	0.9697	96.97	0.13	0.52	1
11n HT40	0.95	1.09	0.8716	87.16	0.60	1.05	1.5

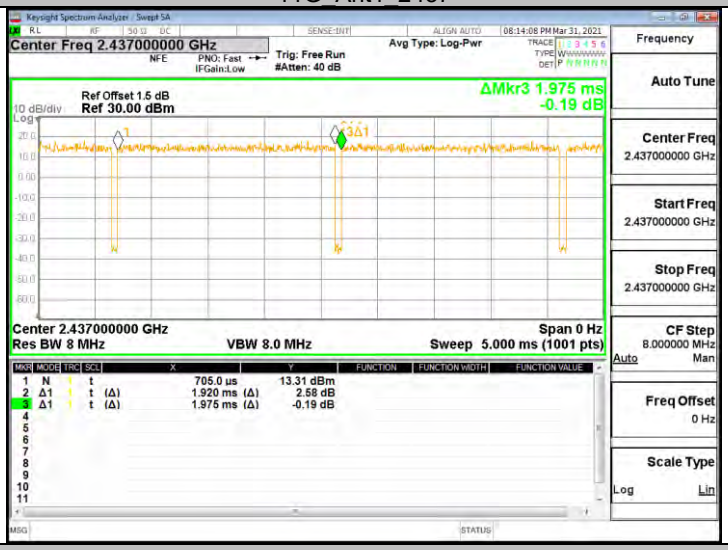
Note:
Duty Cycle Correction Factor=10log (1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time
If that calculated VBW is not available on the analyzer then the next higher value should be used.
The duty cycle correction is used to the per chain measured values since duty cycles are less than 98% for 11g, 11n HT20 and 11n HT40 modes.

11.7.2. Test Graphs



11B_Ant1_2437

11G_Ant1_2437



11N20SISO_Ant1_2437

11N40SISO_Ant1_2437

END OF REPORT