



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

CERTIFICATION TEST REPORT

For

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

MODEL NUMBER: SKI.WB638BU.2_668BU

FCC ID: 2AR82-SKIWB668BU2

IC: 24728-SKIWB668BU2

REPORT NUMBER: 4789861913-3

ISSUE DATE: March 23, 2021

Prepared for

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	03/23/2021	Initial Issue	

Note: This report is based on 4789476783-3 which is issued by UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch at June 2, 2020. The EUT had already applied for the FCC ID, the customer changed two kinds of antenna, one is called KTC antenna and the other one called INNO-LINK antenna. So we only added the Radiated Unwanted Emissions and conducted output power tests in this report. For other data, please refer to the original report.

Summary of Test Results			
Clause	Test Items	FCC/ISED Rules	Test Results
1	AVG Conducted Output Power	FCC Part 15.247 (b) (3) RSS-247 Clause 5.4 (d)	Pass
2	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass
3	Antenna Requirement	FCC Part 15.203 RSS-GEN Clause 6.8	Pass

Note:

1. This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C >< ISED RSS-247 > when <Accuracy Method> decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

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

Manufacturer Information

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

EUT Description

EUT Name IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module
Integrated BT 2.1+EDR/4.2/5.0
Model SKI.WB638BU.2_668BU
Sample Status Normal
Sample ID 3722611
Sample Received date March 2, 2021
Date Tested March 2 ~ 23, 2021

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

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2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT UNCERTAINTY

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

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module Integrated BT 2.1+EDR/4.2/5.0
Model	SKI.WB638BU.2_668BU
Radio Technology	IEEE802.11b/g/n HT20/n HT40
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
Rated Input	DC 3.3V
Permissive Change	C2PC

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]	16.85
g	2412 ~ 2462	1-11[11]	14.34
n HT20	2412 ~ 2462	1-11[11]	13.90
n HT40	2422 ~ 2452	3-9[7]	11.39

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		QA tool					
Modulation Mode	Transmit Antenna Number	Test Software setting value					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	2	1C	1C	1C	/		
802.11g	2	1C	1C	1C			
802.11n HT20	2	18	18	18			
802.11n HT40	2	/			13	13	13

5.6. THE WORSE CASE CONFIGURATIONS

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

For 2TX MIMO modes, ANTENNA 1 and ANTENNA 2, used at the same time.

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

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20 mode: MCS0

802.11n HT40 mode: MCS0

Note: Only 802.11n HT20 and 802.11n HT40 support MIMO mode, for 802.11b and 802.11g, all antennas had been tested, but only the worst data for Antenna 1 was recorded.

For 802.11n HT20 and 802.11n HT40, all antennas had the same power in MIMO mode and SISO mode, so only the worst data for MIMO mode was recorded.

5.7. DESCRIPTION OF AVAILABLE ANTENNAS

KTC ANTENNA:

Antenna model	SN.	Frequency (MHz)	Antenna Type	MAX. Antenna Gain (dBi)
1(WIFI0)	A100-0062	2412-2462	Dipole Antenna	3.5
2(WIFI1)	A100-0062	2412-2462	Dipole Antenna	3.5

Note:

Directional gain= $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.51 \text{ dB}$

G_{ANT} : Average of the Antenna Gain

N_{ANT} : Antenna numbers

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

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11g	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.

Note:

1. Only 802.11n HT20/HT40 support MIMO mode

INNO-LINK ANTENNA:

Antenna model	SN.	Frequency (MHz)	Antenna Type	MAX. Antenna Gain (dBi)
1(WIFI0)	INNO-EWFDT-237	2412-2462	Dipole Antenna	2.44
2(WIFI1)	INNO-EWFDT-237	2412-2462	Dipole Antenna	2.44

Note:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{\text{ANT}}] = 5.45 \text{ dBi}$$

G_{ANT} : Average of the Antenna Gain

N_{ANT} : Antenna numbers

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

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11g	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	<input checked="" type="checkbox"/> 2TX, 2RX	ANT 1,2 can be used as transmitting/receiving antenna.

Note:

1. Only 802.11n HT20/HT40 support MIMO mode

Note:

1. The value of the antenna gain was declared by customer.
2. BT&WLAN 2.4G ,BT& WLAN 5G can transmit simultaneously. (declared by client)
3. The EUT have two kinds of antennas, one is called KTC antenna and the other one called INNO-LINK antenna.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

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

I/O CABLES

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

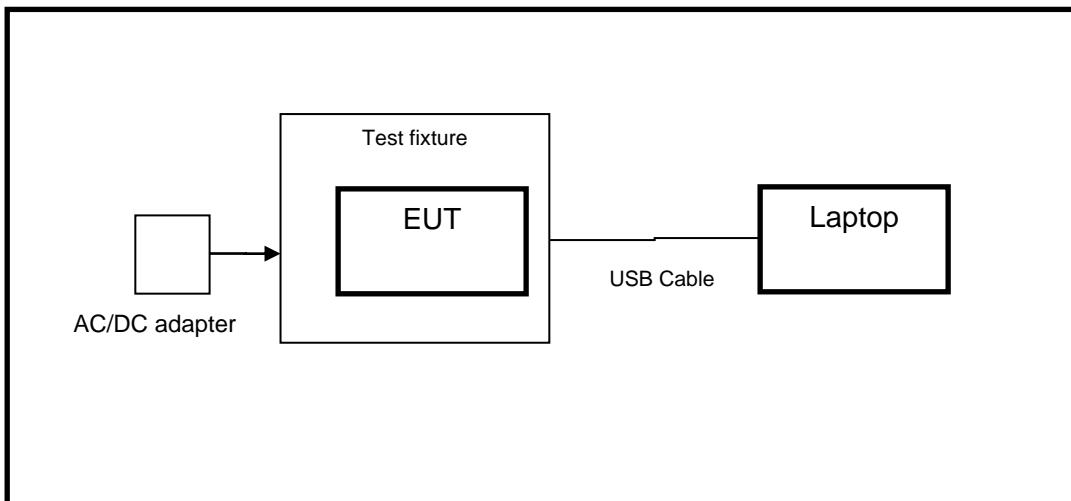
ACCESSORIES

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

TEST SETUP

The EUT can work in engineering mode with a software.

SETUP DIAGRAM FOR TESTS



6. MEASURING INSTRUMENT AND SOFTWARE USED

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
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
Preamplifier	TDK	PA-02-3	TRS-308-00002	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
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Nov. 12, 2020	Nov. 11, 2021
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Nov. 12, 2020	Nov. 11, 2021
Software					
Description			Manufacturer	Name	Version
Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1

Tonsend RF Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Wideband Radio Communication Tester	R&S	CMW500	155523	Nov.20,2020	Nov.19,2021
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Nov.20,2020	Nov.19,2021
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Nov.20,2020	Nov.19,2021
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Nov.20,2020	Nov.19,2021
DC power supply	Keysight	E3642A	MY55159130	Nov.24,2020	Nov.23,2021
Software					
Description	Manufacturer	Name		Version	
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System		2.6.77.0518	

Other Instruments					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Dual Channel Power Meter	Keysight	N1912A	MY55416024	Nov. 20, 2020	Nov. 19, 2021
Power Sensor	Keysight	USB Wideband Power Sensor	MY5100022	Nov. 20, 2020	Nov. 19, 2021

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

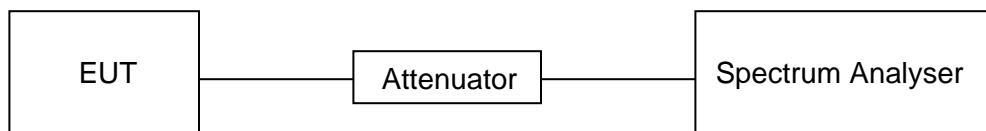
LIMITS

None; for reporting purposes only

PROCEDURE

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

TEST SETUP



TEST ENVIRONMENT

Temperature	23.1 °C	Relative Humidity	49.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.3 V

RESULTS

Please refer to appendix A.

7.2. CONDUCTED OUTPUT POWER

LIMITS

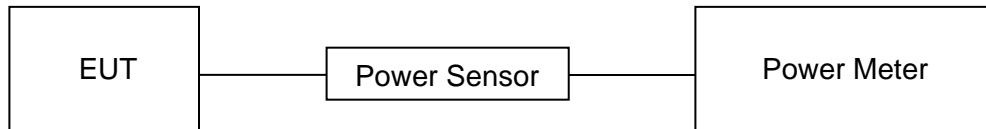
CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3) ISED RSS-247 5.4 (d)	AVG Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

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	23.1 °C	Relative Humidity	49.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.3 V

RESULTS

Please refer to appendix B.

8. RADIATED TEST RESULTS

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

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

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

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

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

ISED General field strength limits at frequencies below 30 MHz

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

Frequency	Magnetic field strength (H-Field) (μ A/m)	Measurement distance (m)
9 - 490 kHz ^{Note 1}	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

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

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

Table 7 – Restricted frequency bands ^{Note 1}		
MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.028	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3287	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138		

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

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

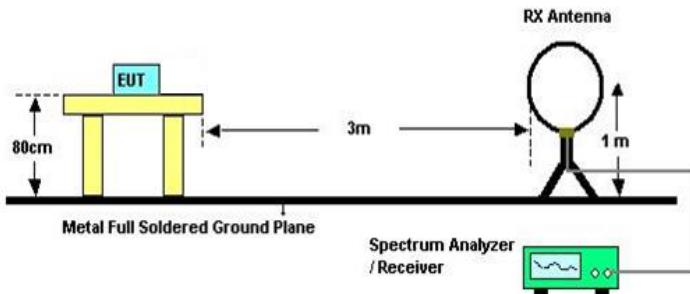
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218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

 Note: ¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6c

TEST SETUP AND PROCEDURE

Below 30 MHz

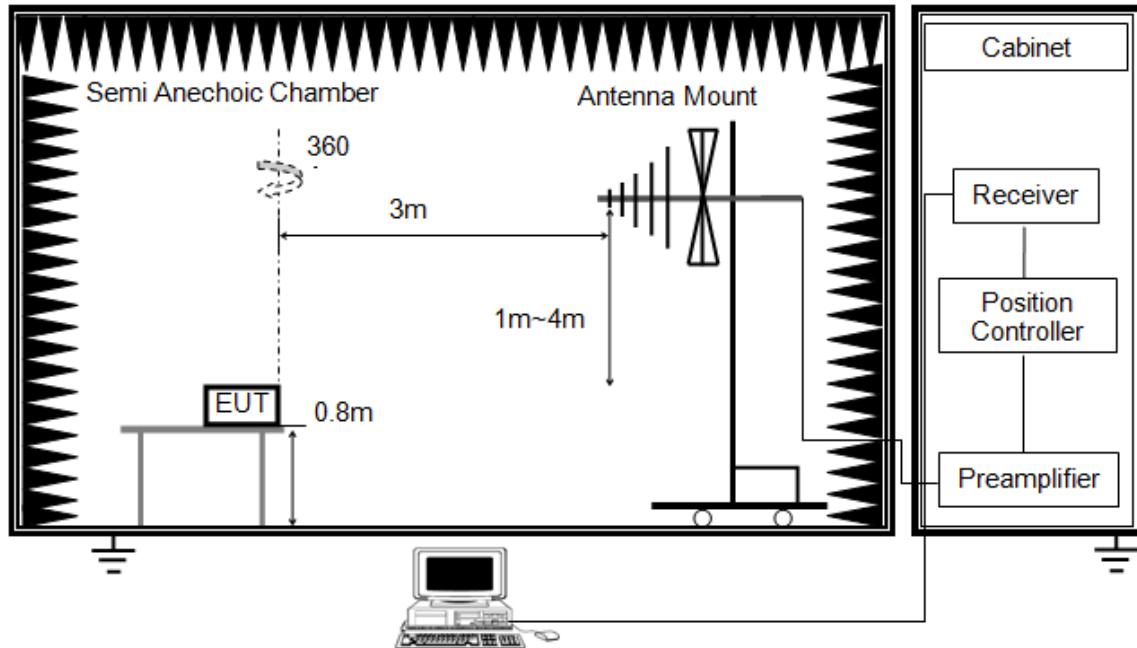


The setting of the spectrum analyser

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 80 cm 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 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.
8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω . For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to $Y-51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1 GHz and above 30 MHz

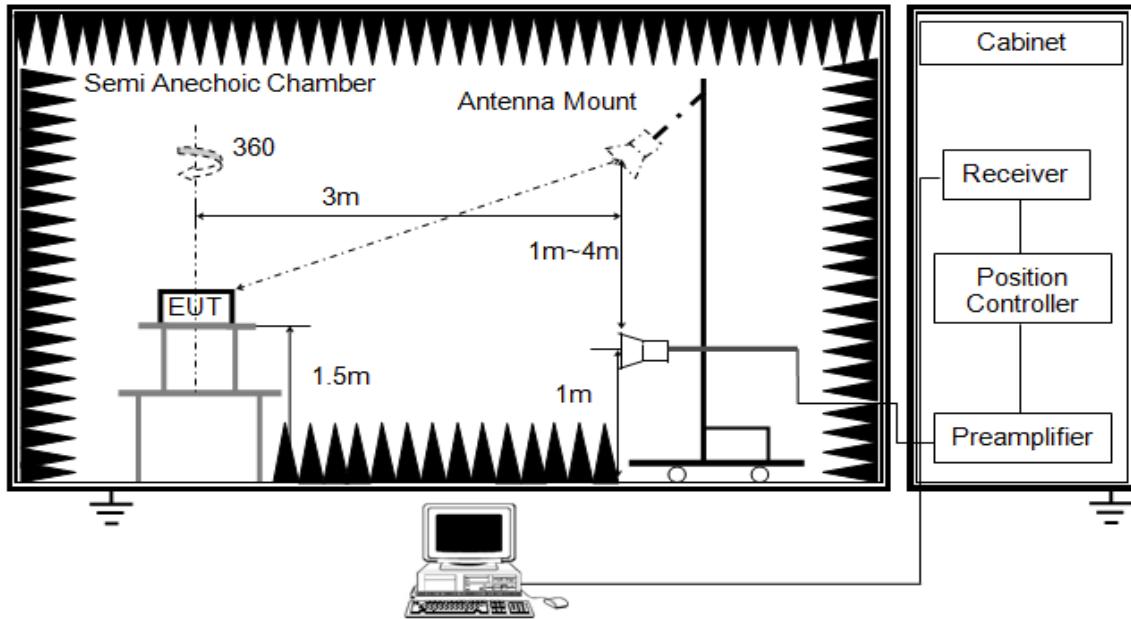


The setting of the spectrum analyser

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

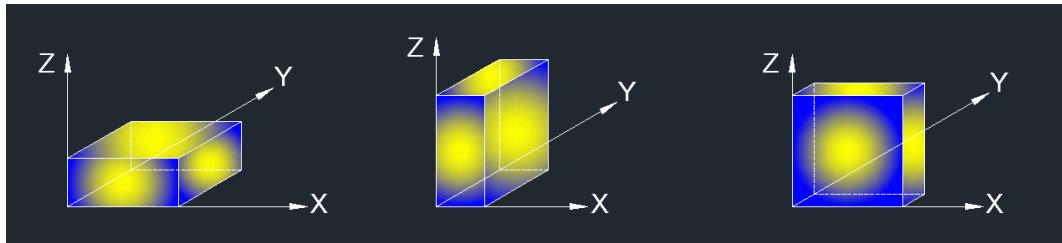


The setting of the spectrum analyser

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

Note 2: All the EUT's emissions had been evaluated for simultaneous transmission with the other WIFI 2.4GHz, WIFI 5GHz and BT transmitter and there were not any additional or worse emissions found. The worst case data has been recorded in the WIFI test report. (4789861913-3/4).

TEST ENVIRONMENT

Temperature	22.6 °C	Relative Humidity	64.4 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.3 V

RESULTS

8.1. RESTRICTED BANDEDGE

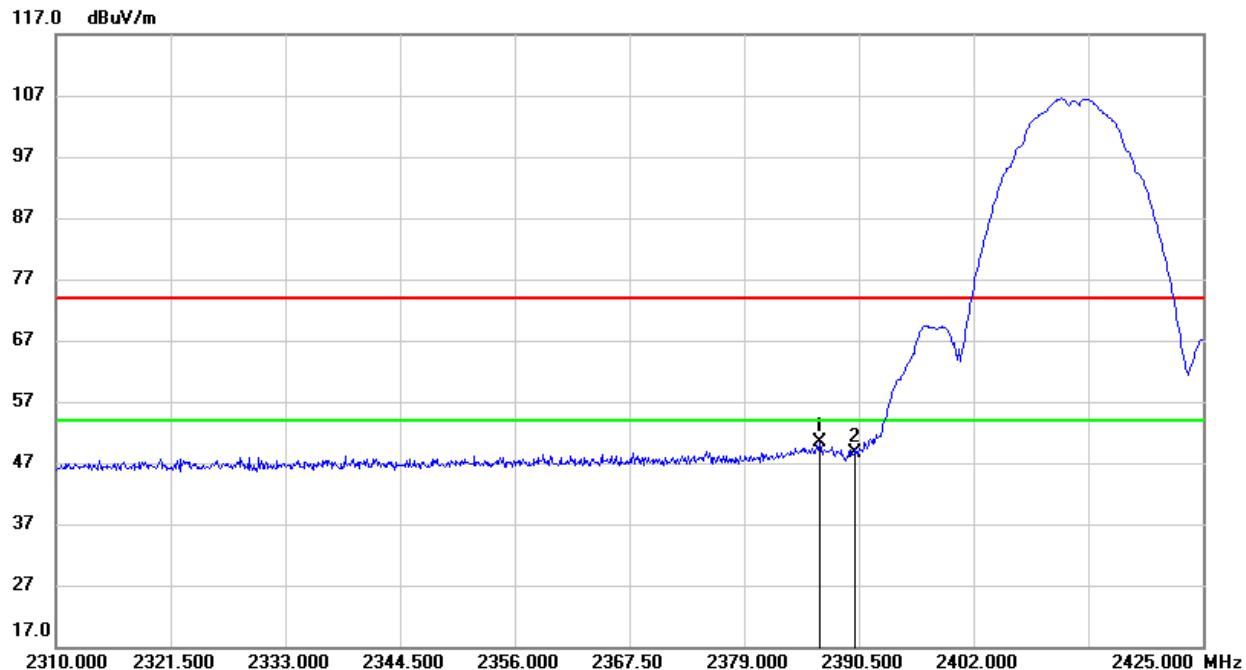
KTC ANTENNA:

8.1.1. 802.11b SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

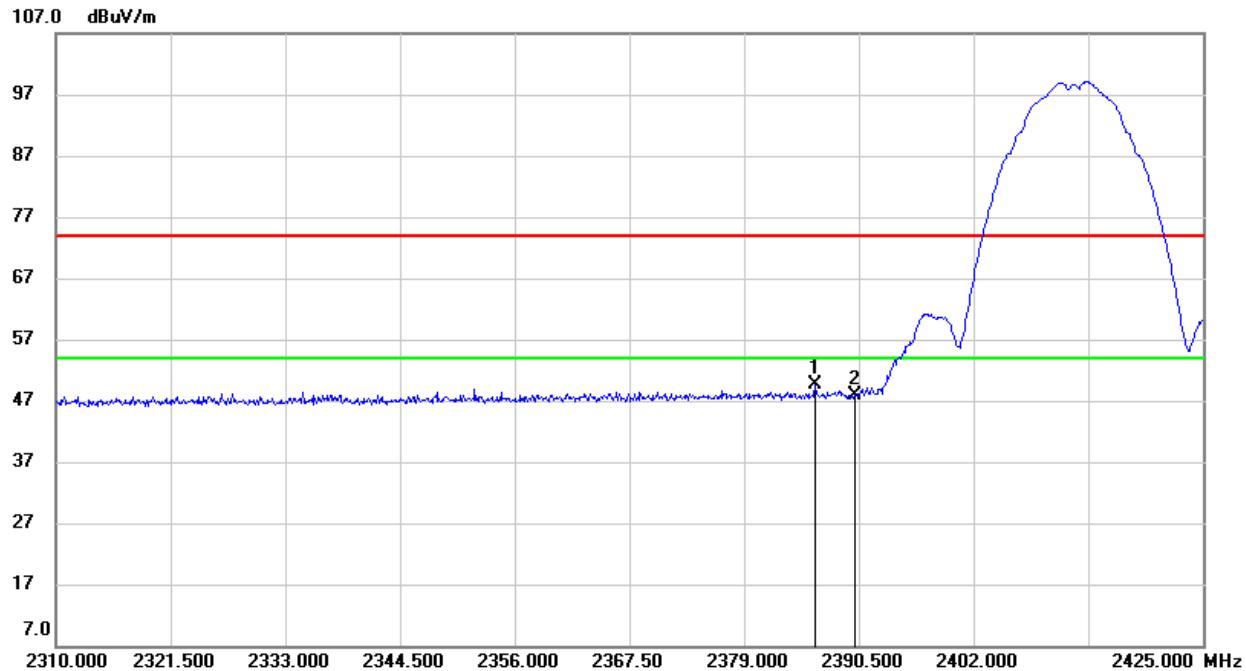
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

PEAK



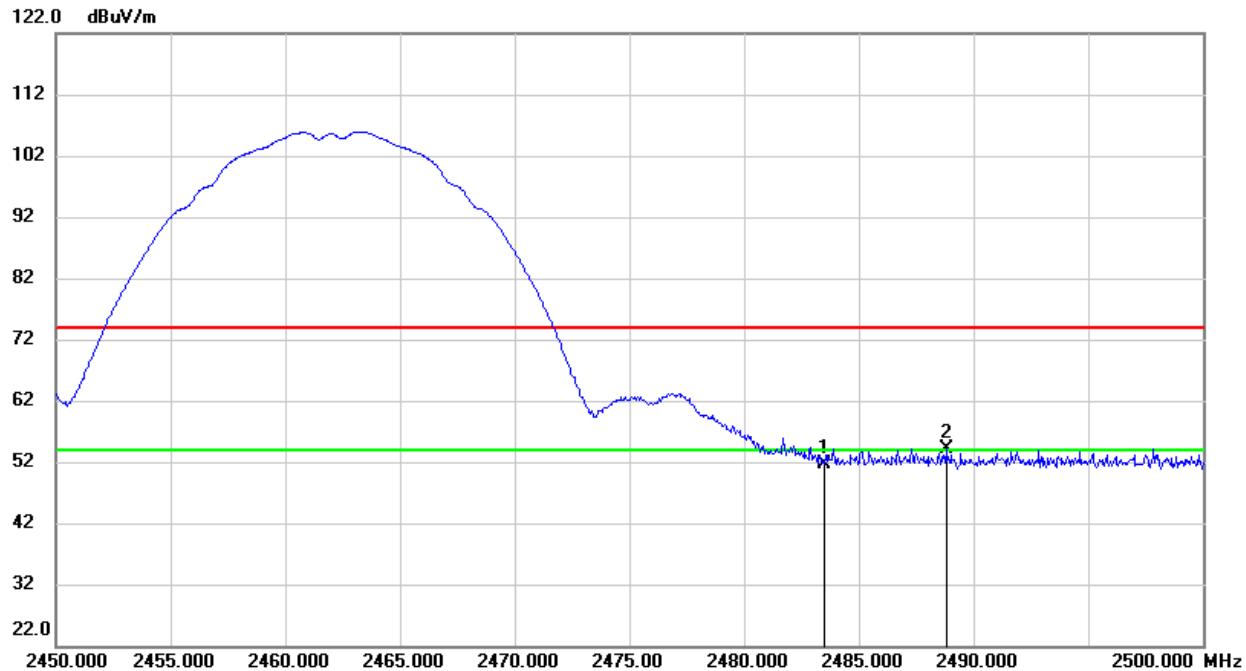
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.590	17.08	33.33	50.41	74.00	-23.59	peak
2	2390.000	15.37	33.35	48.72	74.00	-25.28	peak

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

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**PEAK**

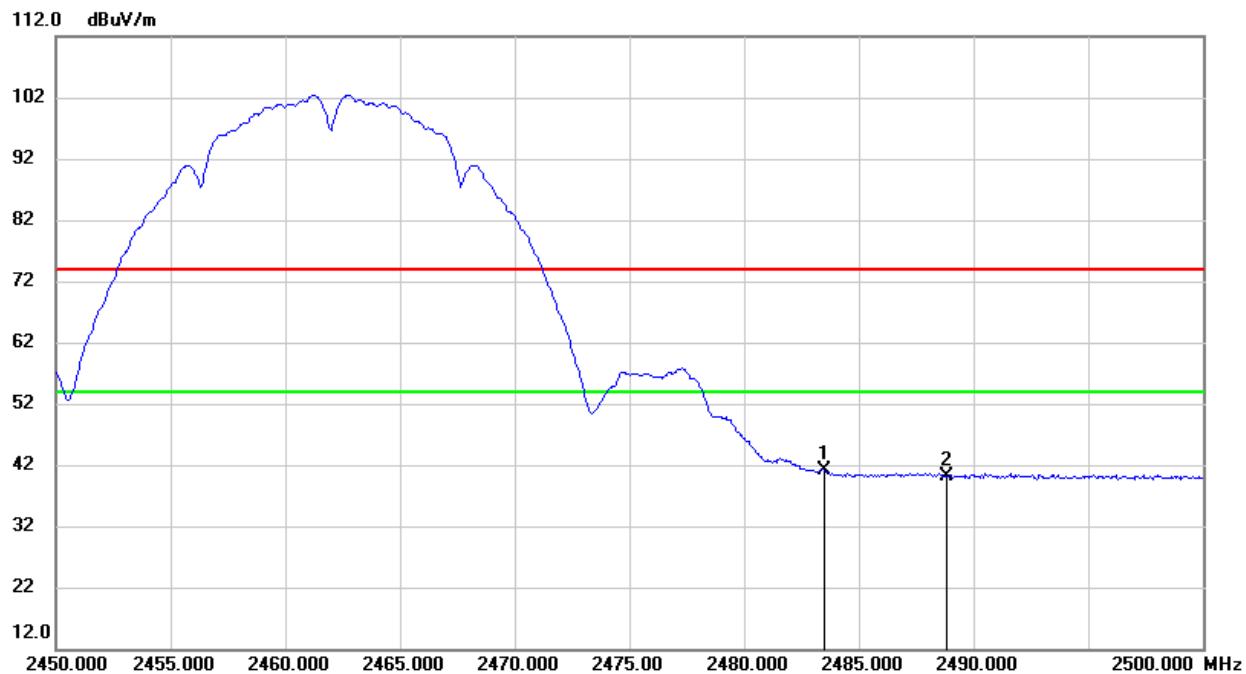
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.130	16.31	33.32	49.63	74.00	-24.37	peak
2	2390.000	14.50	33.35	47.85	74.00	-26.15	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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	17.88	33.71	51.59	74.00	-22.41	peak
2	2488.800	20.50	33.72	54.22	74.00	-19.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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	7.41	33.71	41.12	54.00	-12.88	AVG
2	2488.800	6.51	33.72	40.23	54.00	-13.77	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: Both the two antennas had been tested, but only the worst data was recorded in the report.

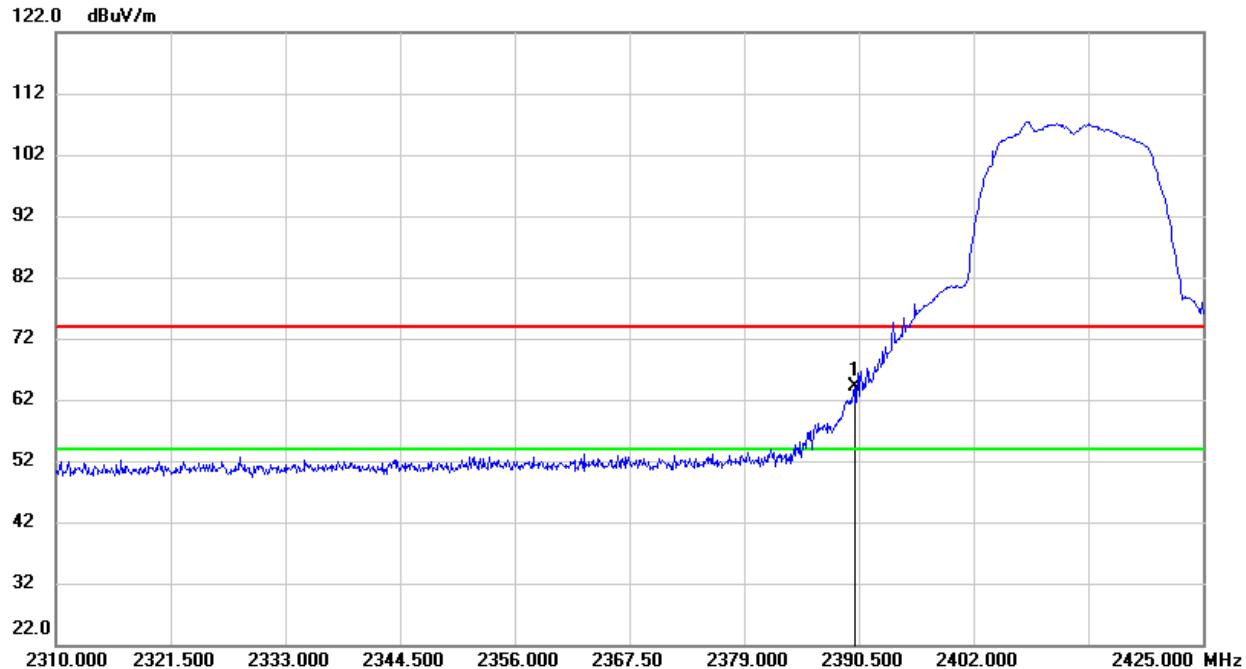
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

8.1.2. 802.11g SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

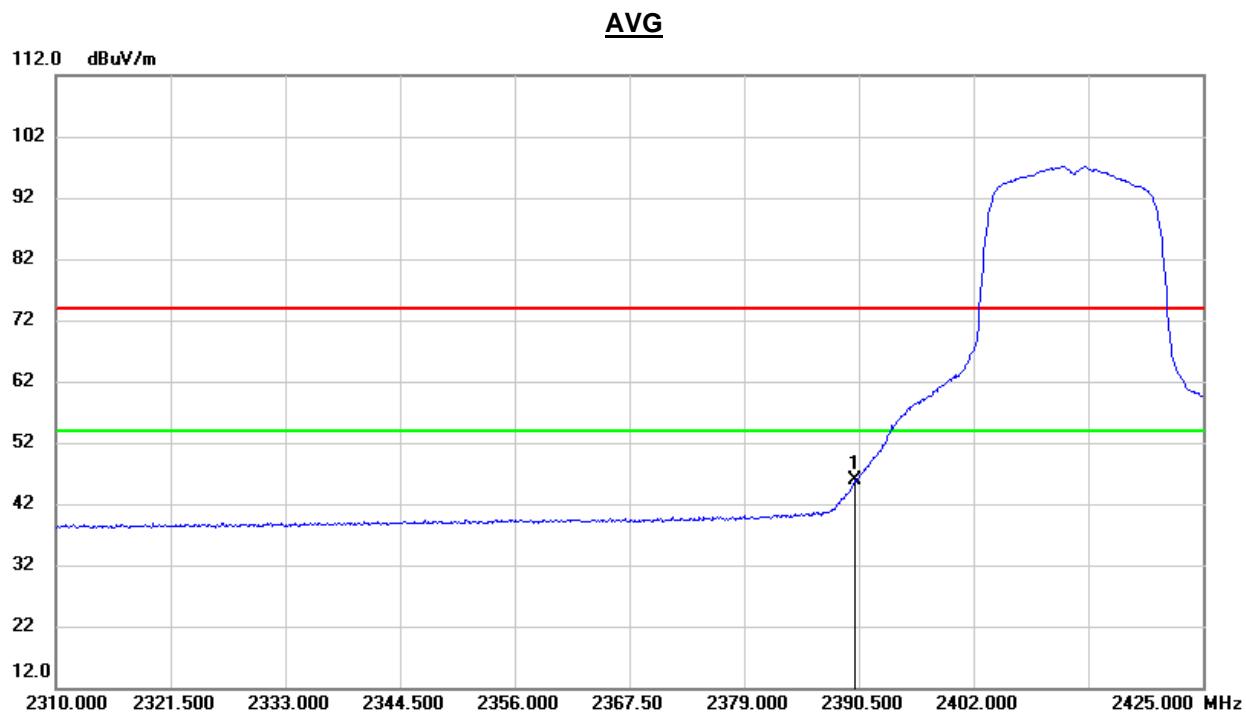
PEAK



No.	Frequency (MHz)	Reading (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	2390.000	30.67	33.35	64.02	74.00	-9.98	peak

Note:

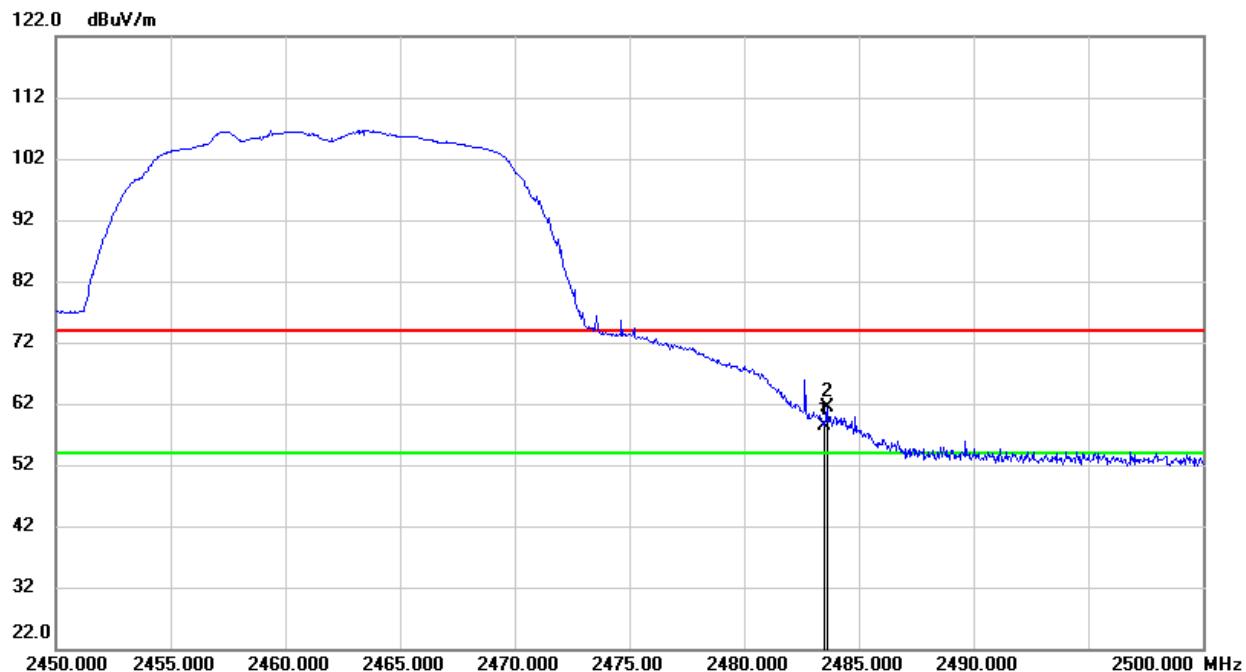
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	12.41	33.35	45.76	54.00	-8.24	AVG

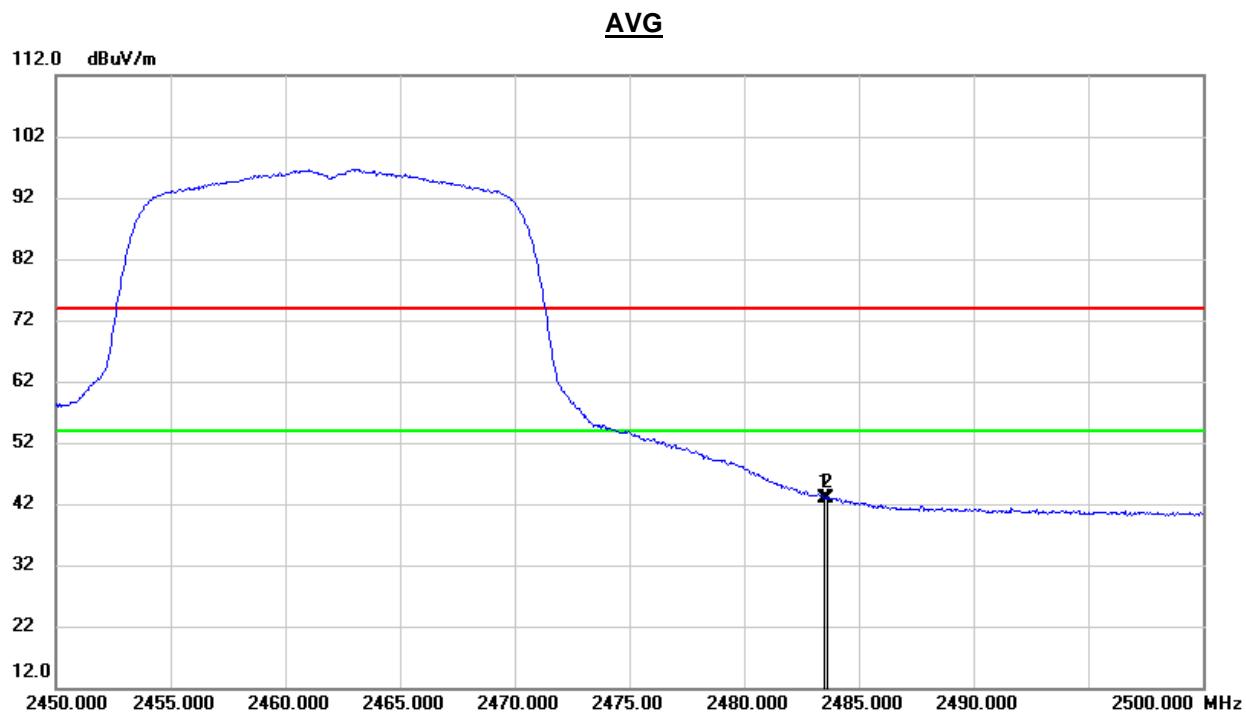
Note:

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 (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	2483.500	24.69	33.71	58.40	74.00	-15.60	peak
2	2483.600	27.70	33.71	61.41	74.00	-12.59	peak

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	9.23	33.71	42.94	54.00	-11.06	AVG
2	2483.600	9.19	33.71	42.90	54.00	-11.10	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is 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: Both the two antennas had been tested, but only the worst data was recorded in the report.

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

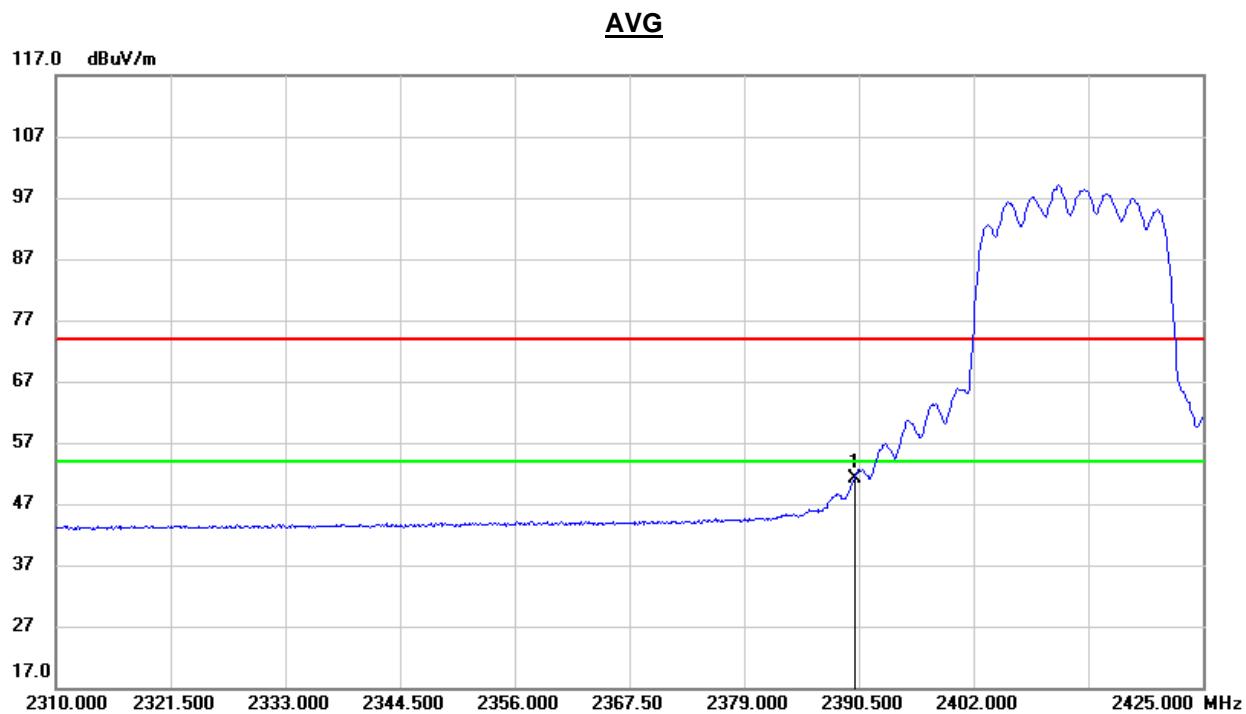
8.1.3. 802.11n HT20 MIMO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	35.77	33.35	69.12	74.00	-4.88	peak

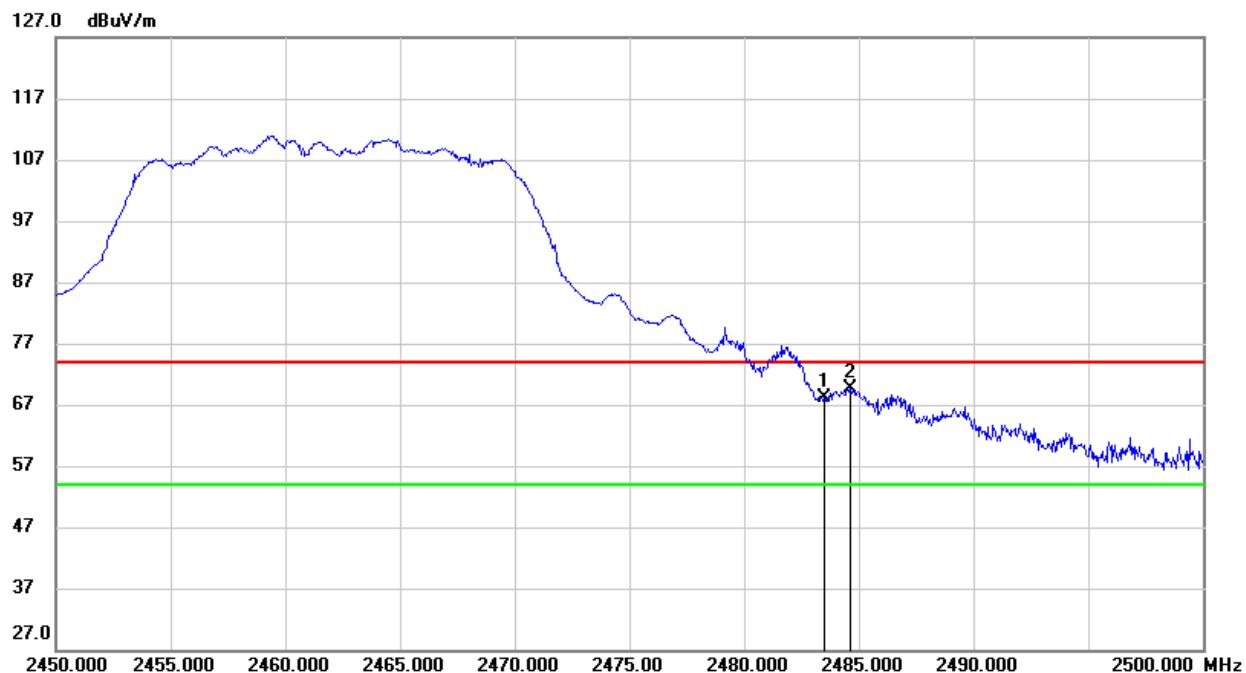
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	17.88	33.35	51.23	54.00	-2.77	AVG

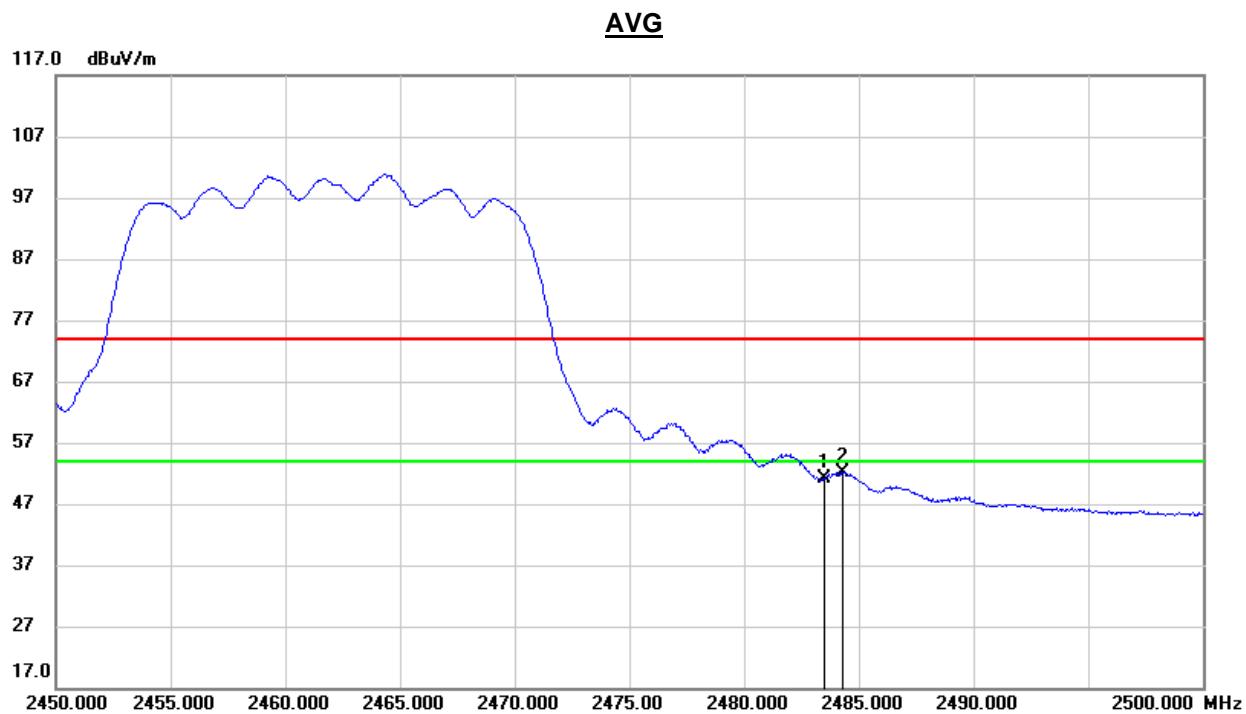
Note:

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	34.52	33.71	68.23	74.00	-5.77	peak
2	2484.650	36.04	33.71	69.75	74.00	-4.25	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.



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	17.42	33.71	51.13	54.00	-2.87	AVG
2	2484.650	18.50	33.71	52.21	54.00	-1.79	AVG

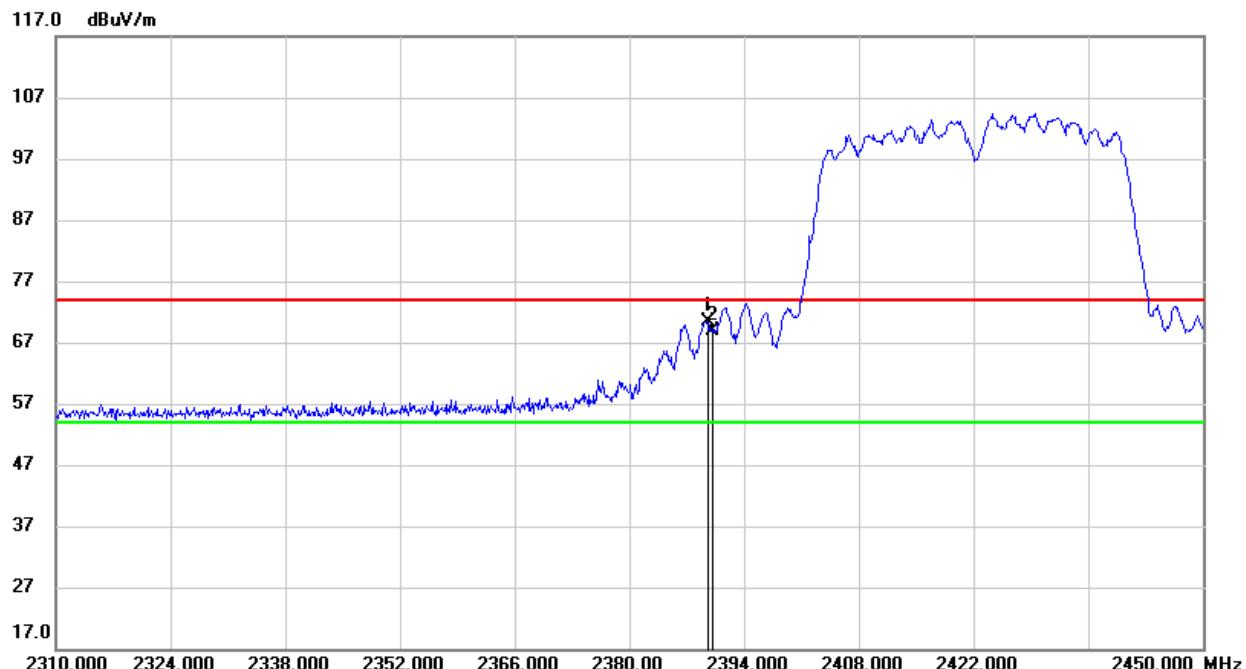
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded,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

8.1.4. 802.11n HT40 MIMO MODE

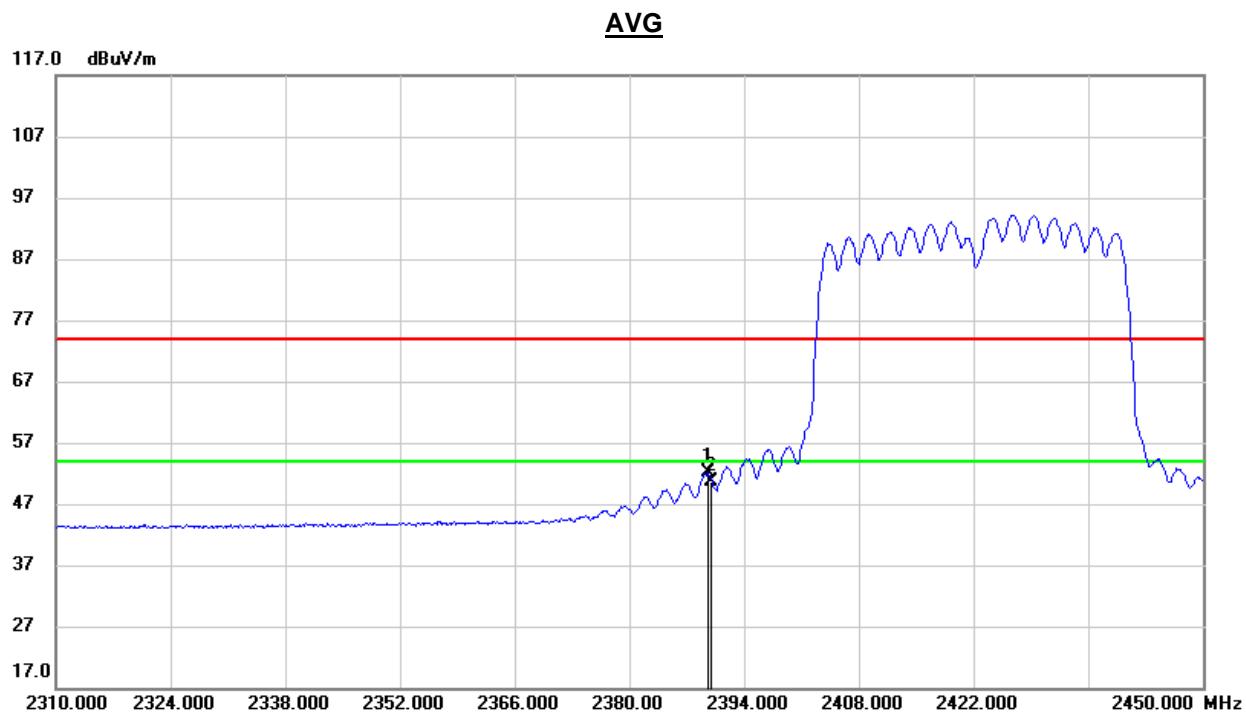
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.520	36.95	33.35	70.30	74.00	-3.70	peak
2	2390.000	35.63	33.35	68.98	74.00	-5.02	peak

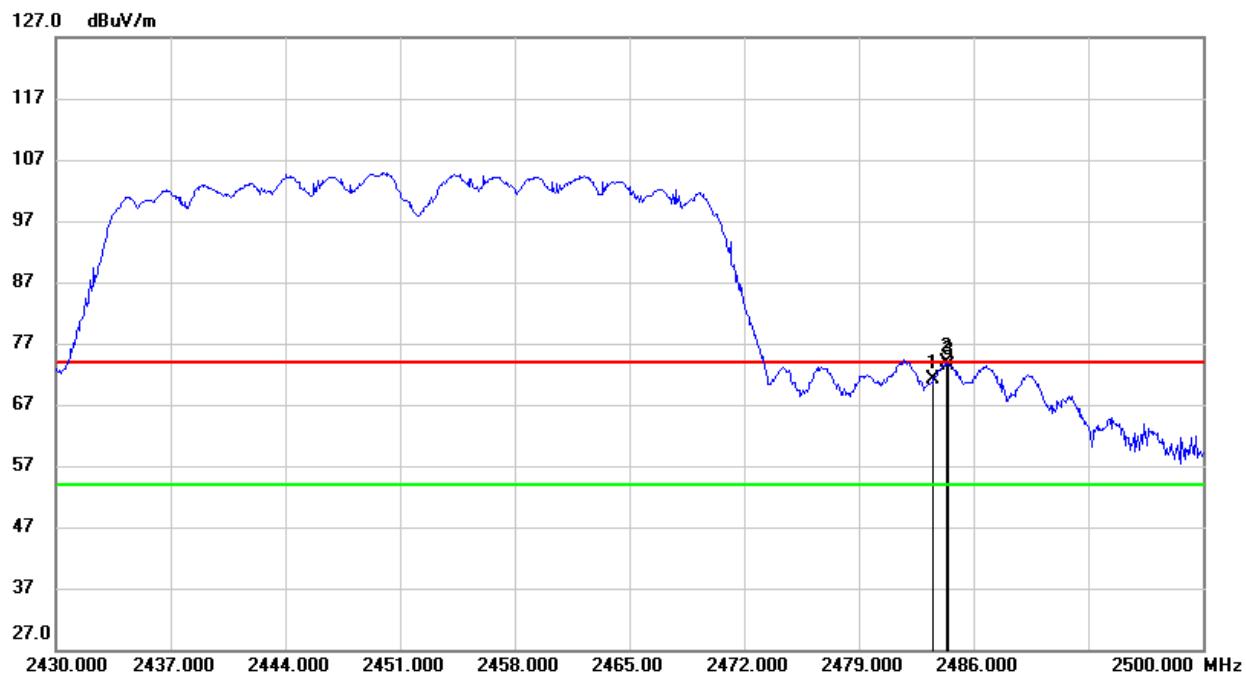
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded,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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.520	18.66	33.35	52.01	54.00	-1.99	AVG
2	2390.000	17.40	33.35	50.75	54.00	-3.25	AVG

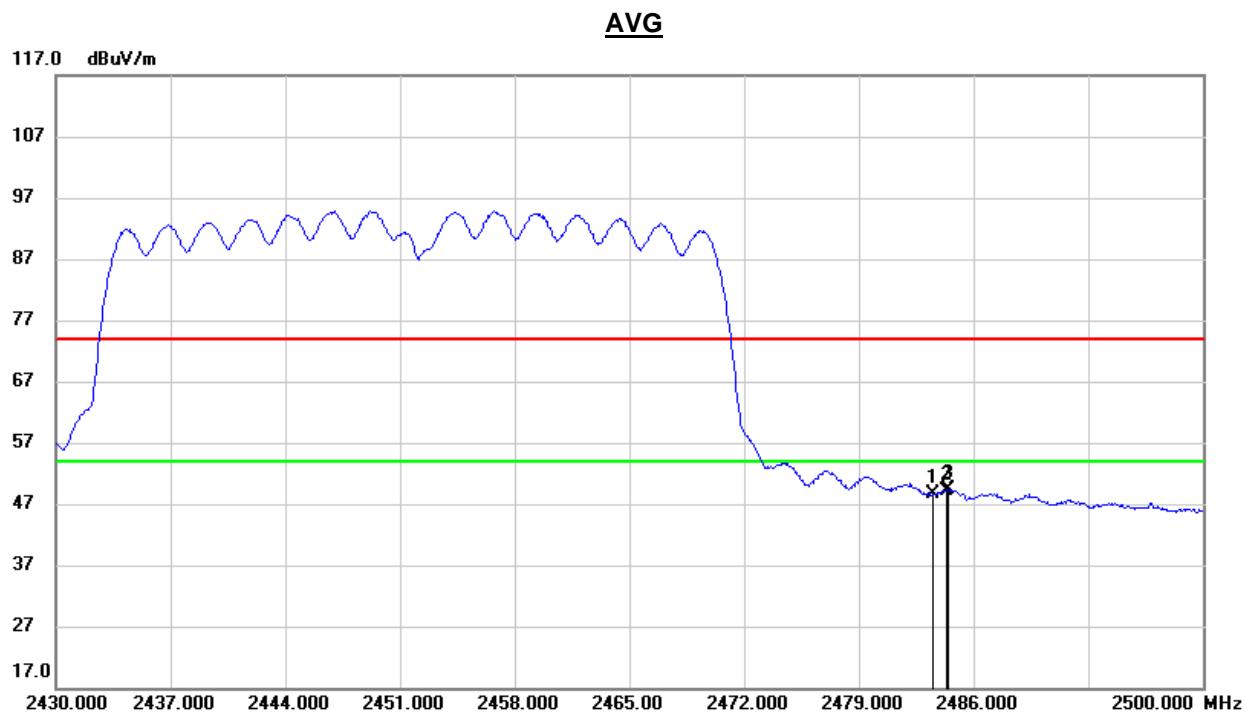
Note:

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	37.36	33.71	71.07	74.00	-2.93	peak
2	2484.320	40.19	33.71	73.90	74.00	-0.10	peak
3	2484.460	39.79	33.71	73.50	74.00	-0.50	peak

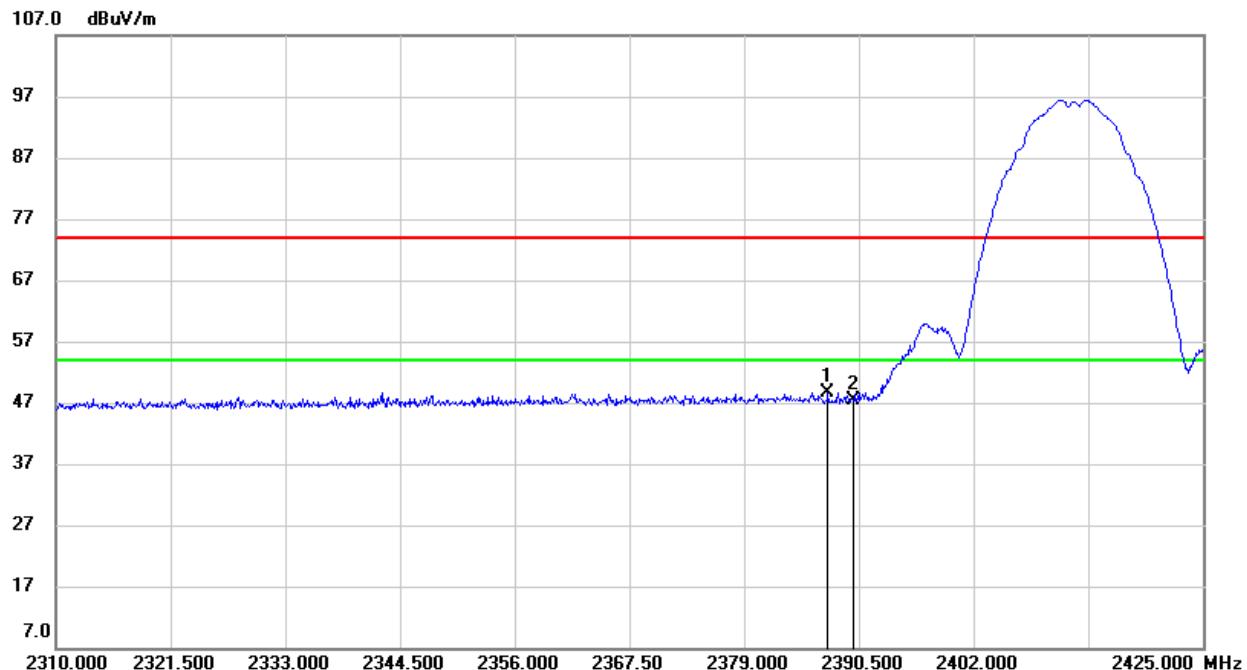
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	15.00	33.71	48.71	54.00	-5.29	AVG
2	2484.320	15.42	33.71	49.13	54.00	-4.87	AVG
3	2484.460	15.68	33.71	49.39	54.00	-4.61	AVG

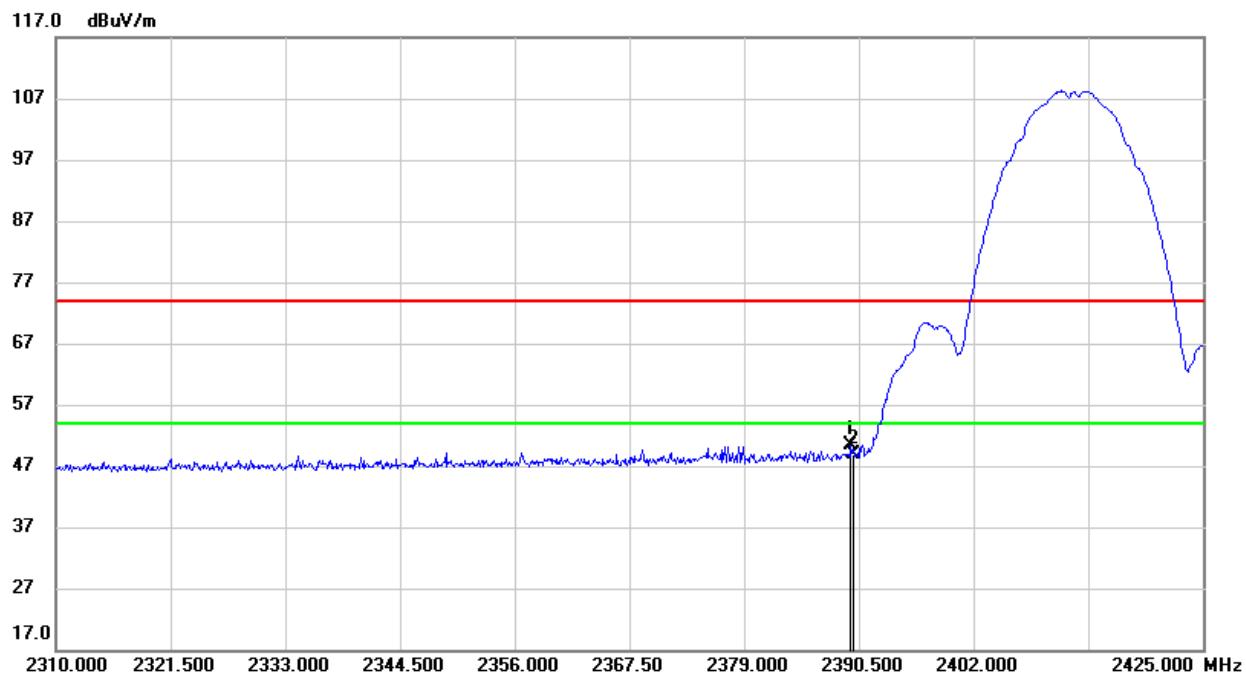
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded,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

INNO-LINK ANTENNA:**8.1.5. 802.11b SISO MODE****ANTENNA 1 TEST RESULTS (WORST CASE)****RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)****PEAK**

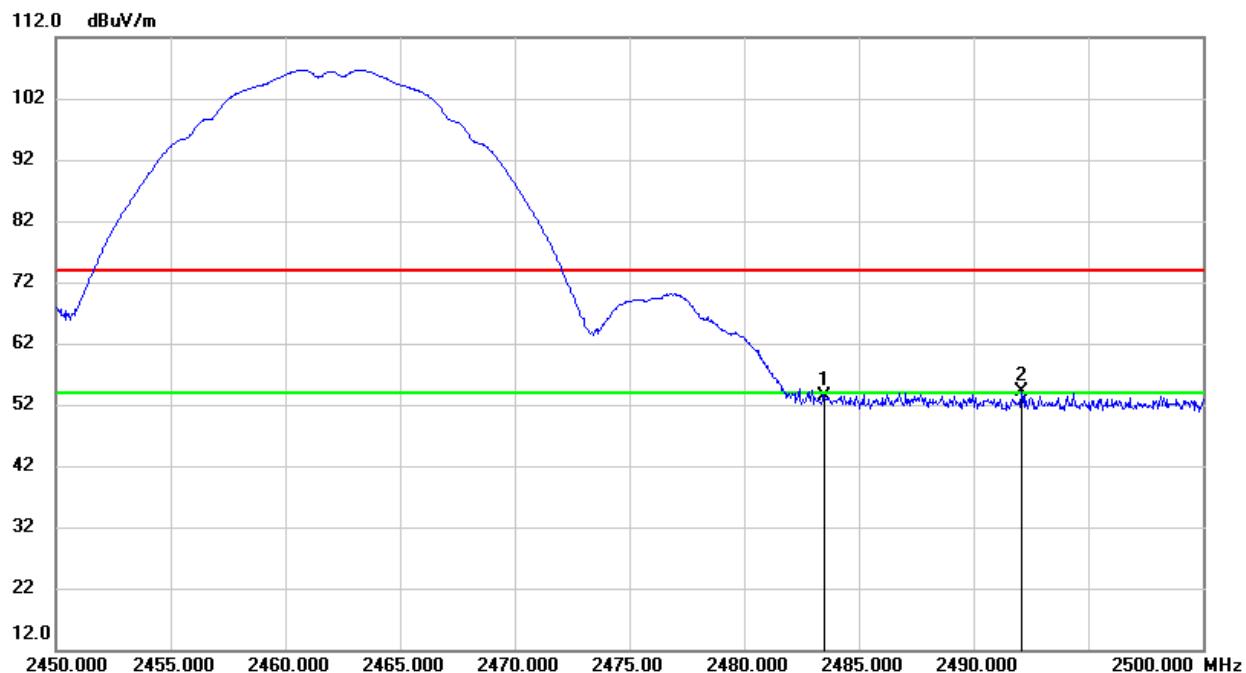
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2387.395	15.25	33.34	48.59	74.00	-25.41	peak
2	2390.000	13.94	33.35	47.29	74.00	-26.71	peak

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

RESTRICTED BANDEdge (LOW CHANNEL, VERTICAL)PEAK

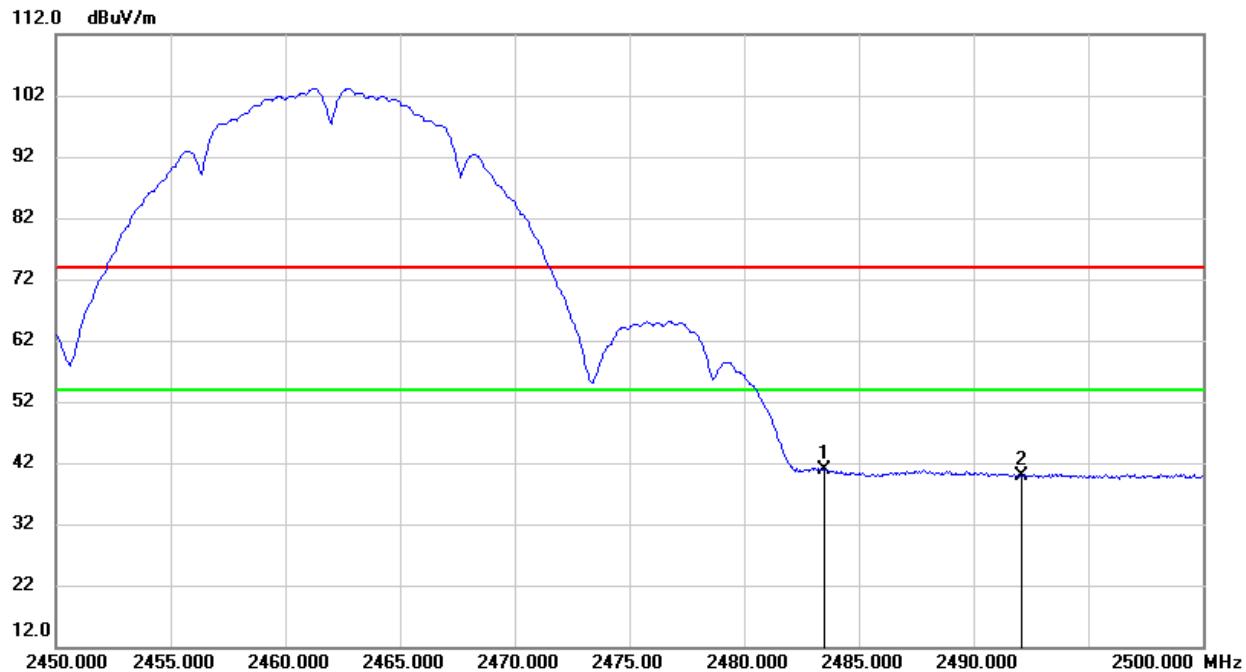
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.695	17.03	33.35	50.38	74.00	-23.62	peak
2	2390.000	15.46	33.35	48.81	74.00	-25.19	peak

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.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)PEAK

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	19.57	33.71	53.28	74.00	-20.72	peak
2	2492.100	20.50	33.74	54.24	74.00	-19.76	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst 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	7.06	33.71	40.77	54.00	-13.23	AVG
2	2492.100	6.20	33.74	39.94	54.00	-14.06	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.

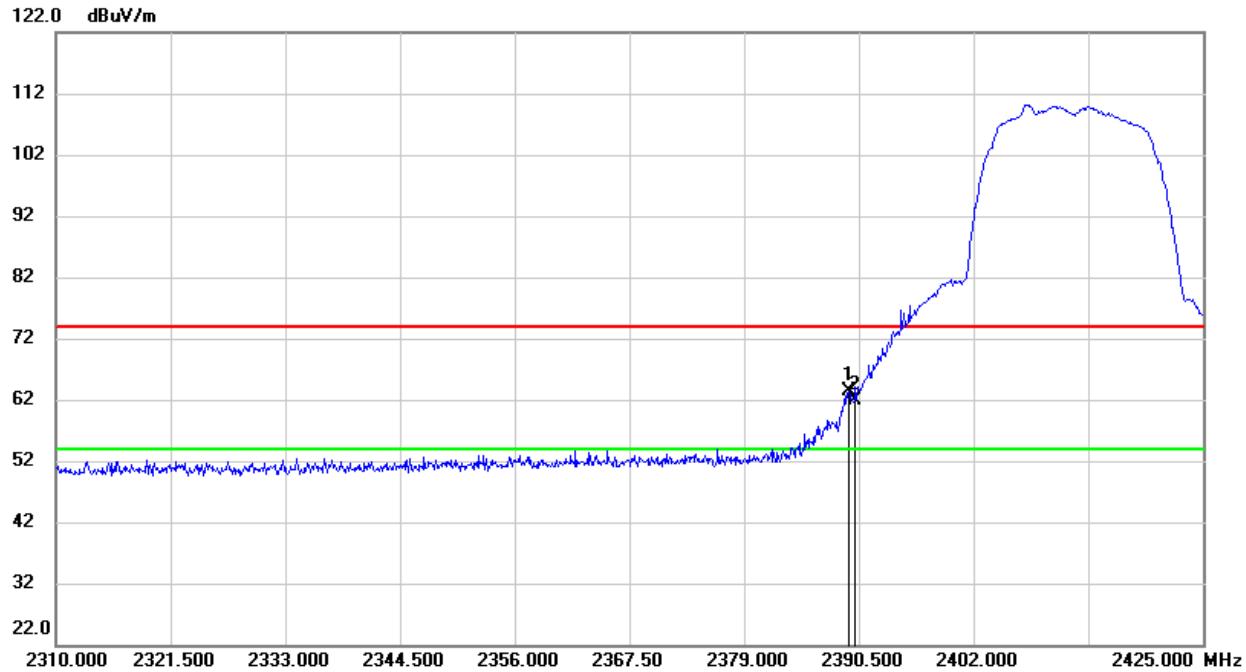
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

8.1.6. 802.11g SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

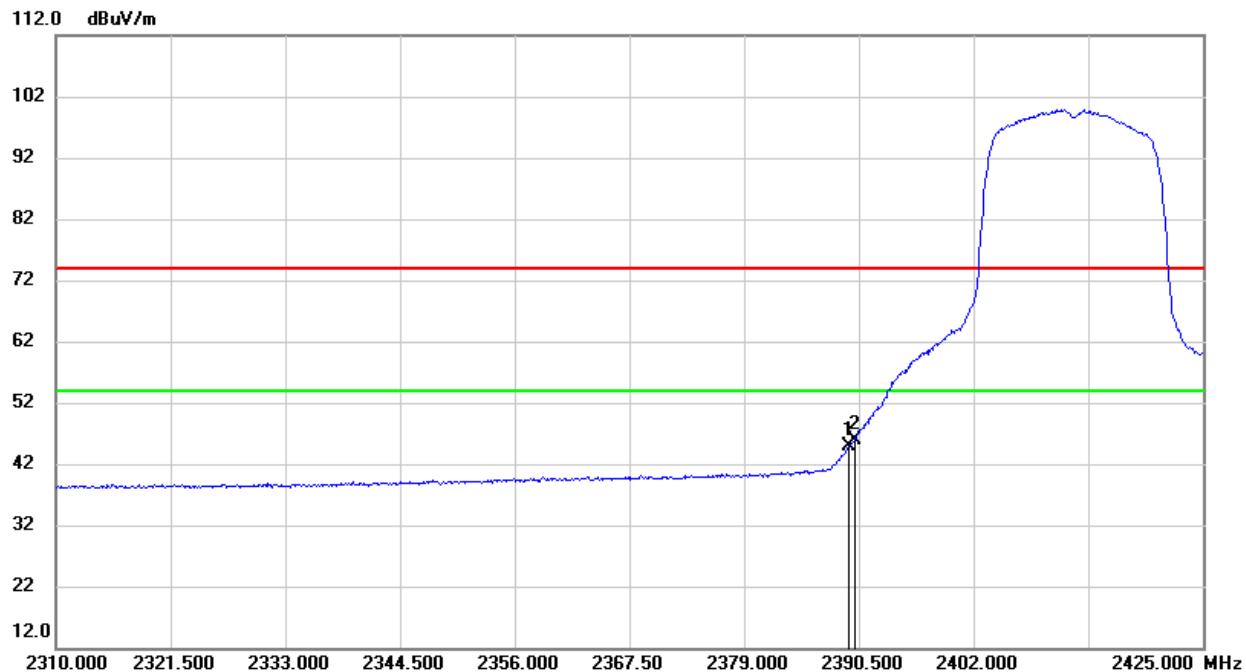
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.465	29.94	33.35	63.29	74.00	-10.71	peak
2	2390.000	28.43	33.35	61.78	74.00	-12.22	peak

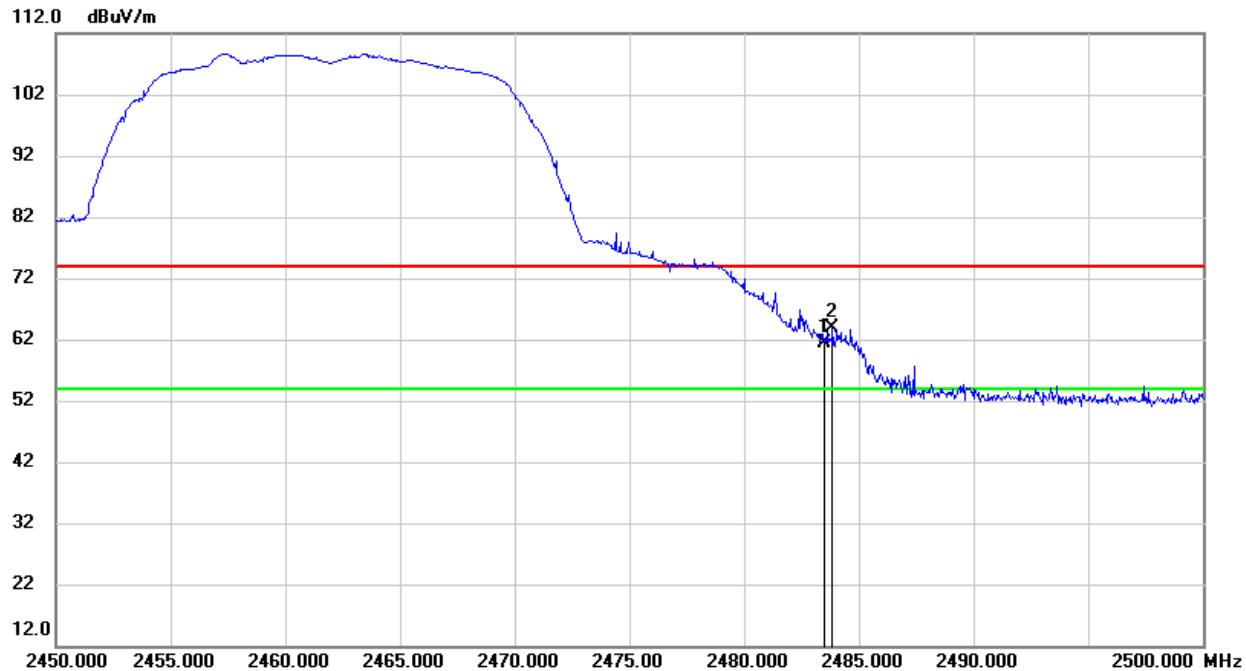
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.465	11.48	33.35	44.83	54.00	-9.17	AVG
2	2390.000	12.50	33.35	45.85	54.00	-8.15	AVG

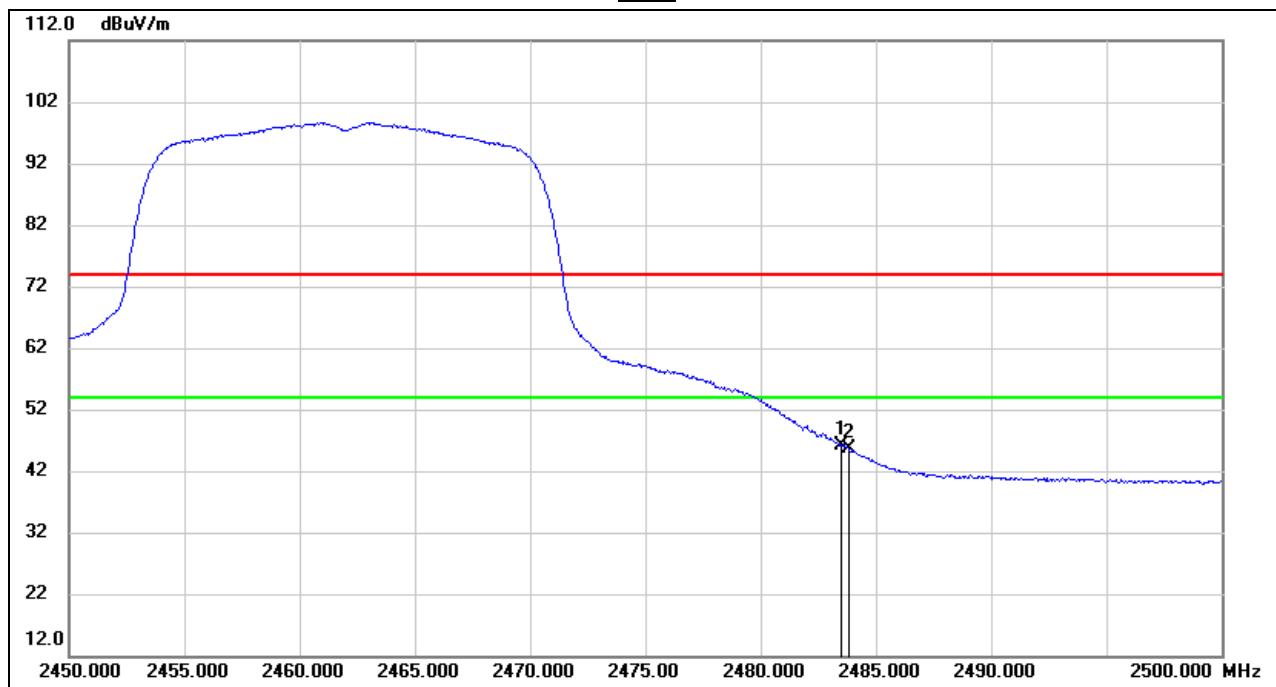
Note:

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

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)PEAK

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	27.62	33.71	61.33	74.00	-12.67	peak
2	2483.850	30.25	33.71	63.96	74.00	-10.04	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	12.31	33.71	46.02	54.00	-7.98	AVG
2	2483.850	11.94	33.71	45.65	54.00	-8.35	AVG

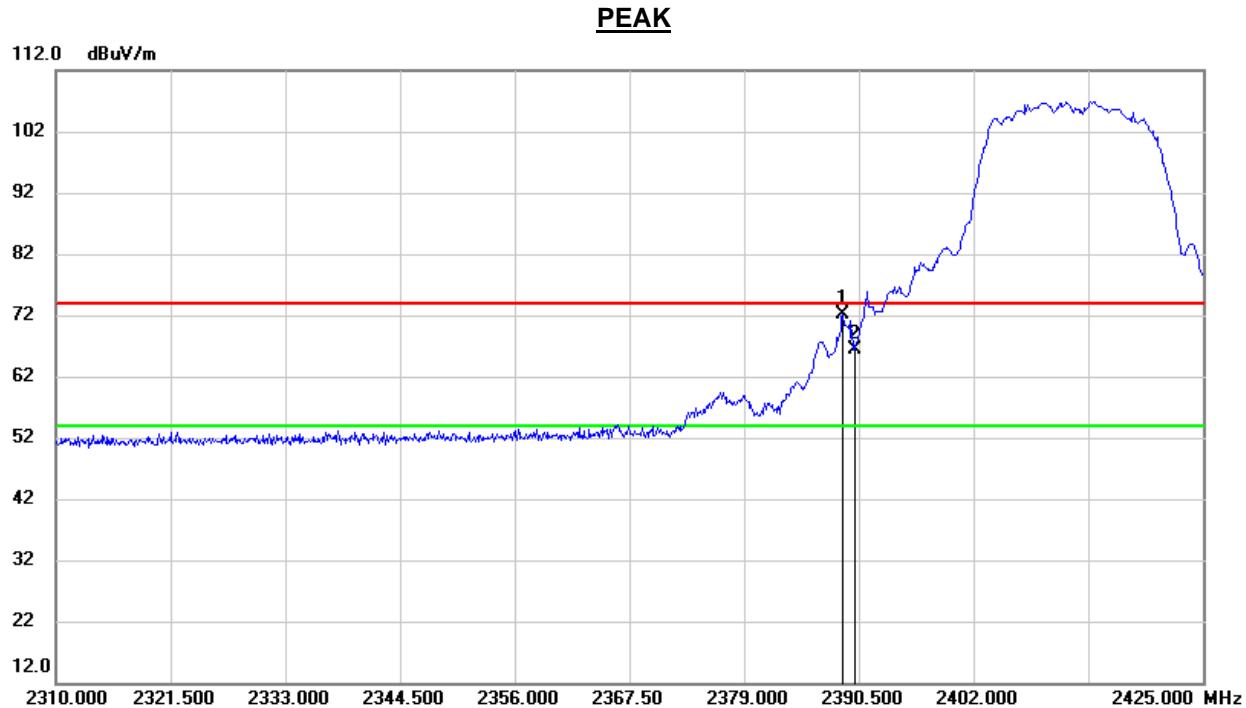
Note:

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

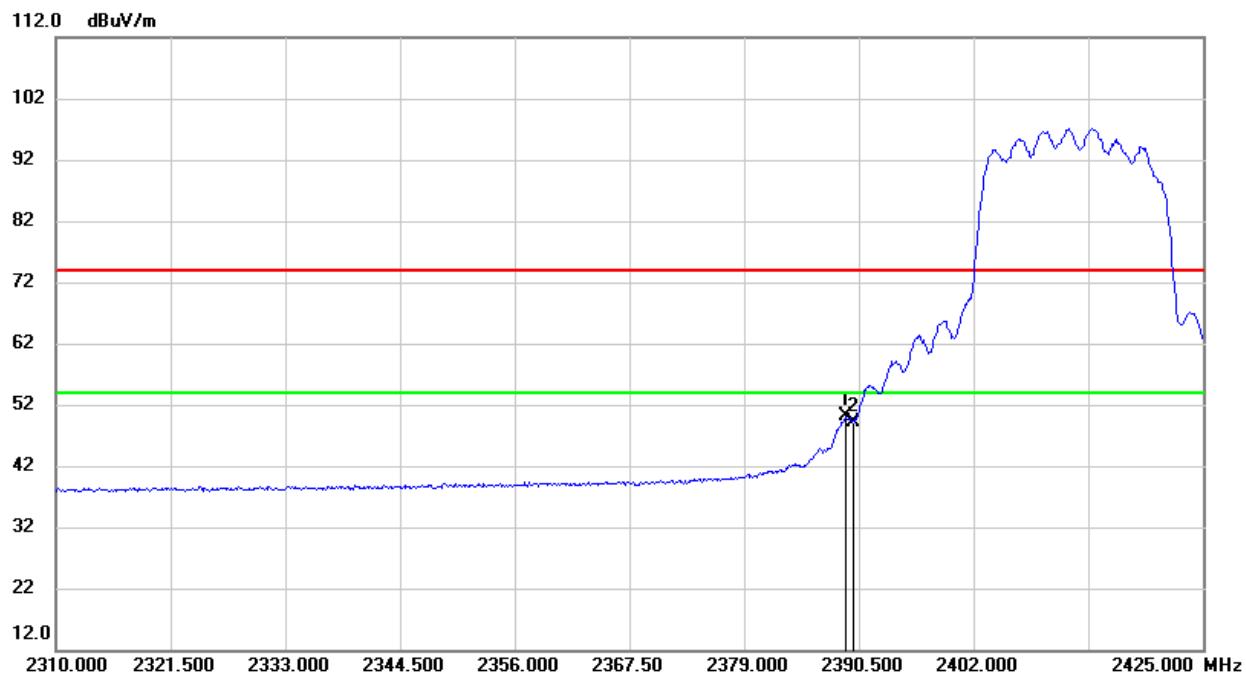
8.1.7. 802.11n HT20 MIMO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.890	38.80	33.34	72.14	74.00	-1.86	peak
2	2390.000	33.13	33.35	66.48	74.00	-7.52	peak

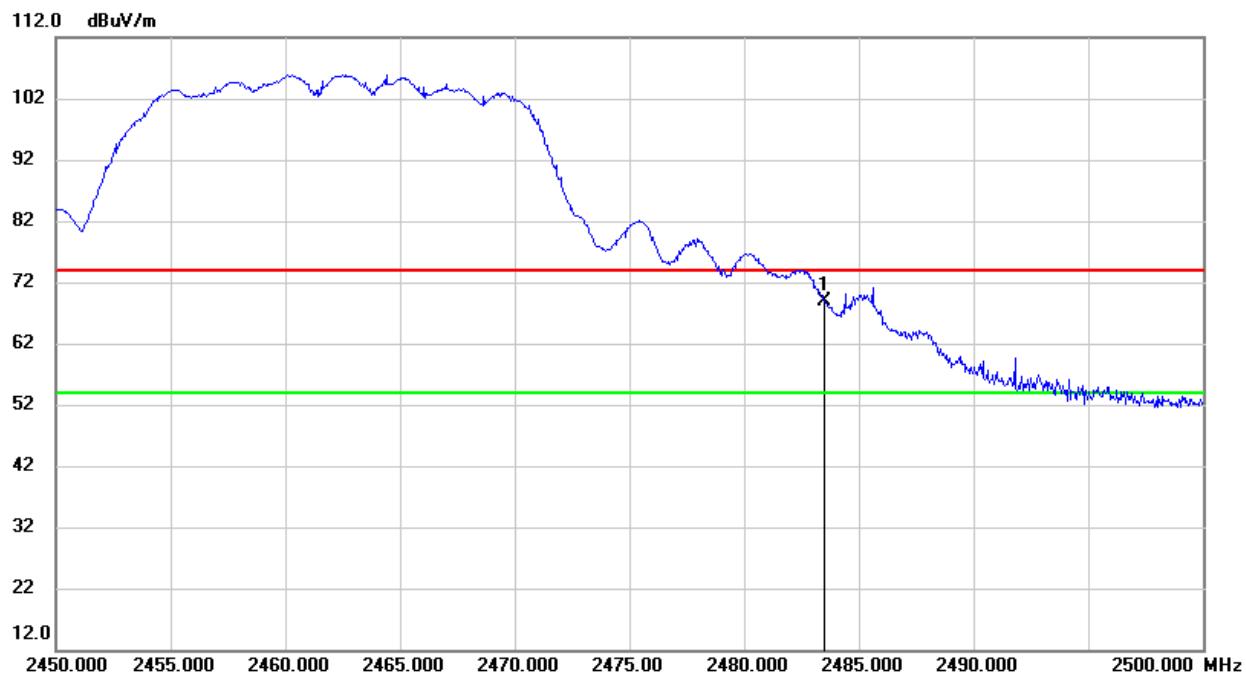
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.890	16.72	33.35	50.07	54.00	-3.93	AVG
2	2390.000	15.70	33.35	49.05	54.00	-4.95	AVG

Note:

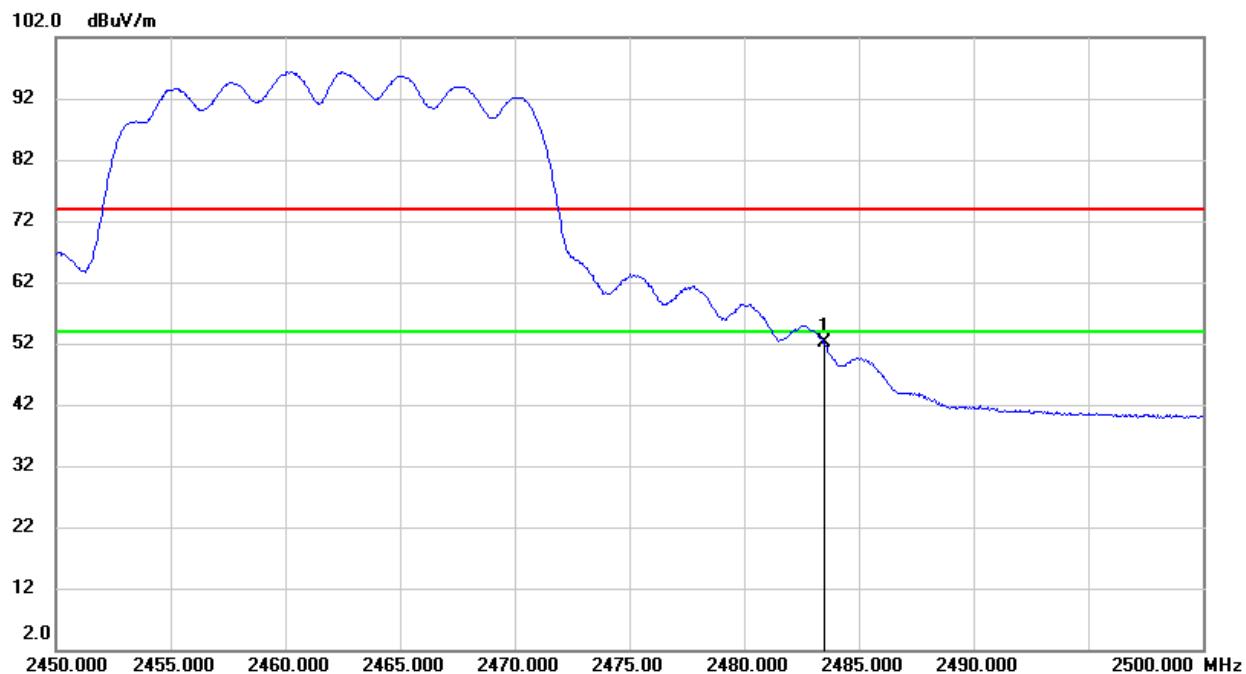
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
4. For the transmitting duration, please refer to clause 7.1.
5. Only the worst data was recorded, if it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

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)PEAK

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.26	33.71	68.97	74.00	-5.03	peak

Note:

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

AVG

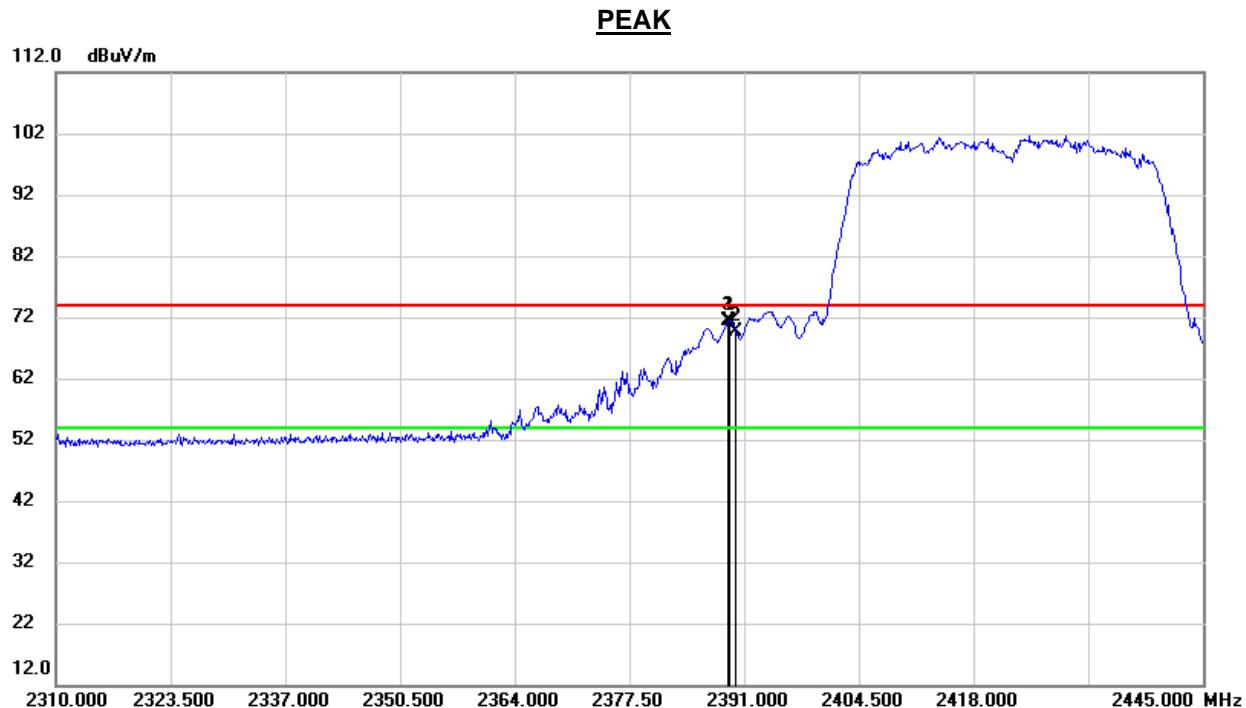
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.39	33.71	52.10	54.00	-1.90	AVG

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.

8.1.8. 802.11n HT40 MIMO MODE

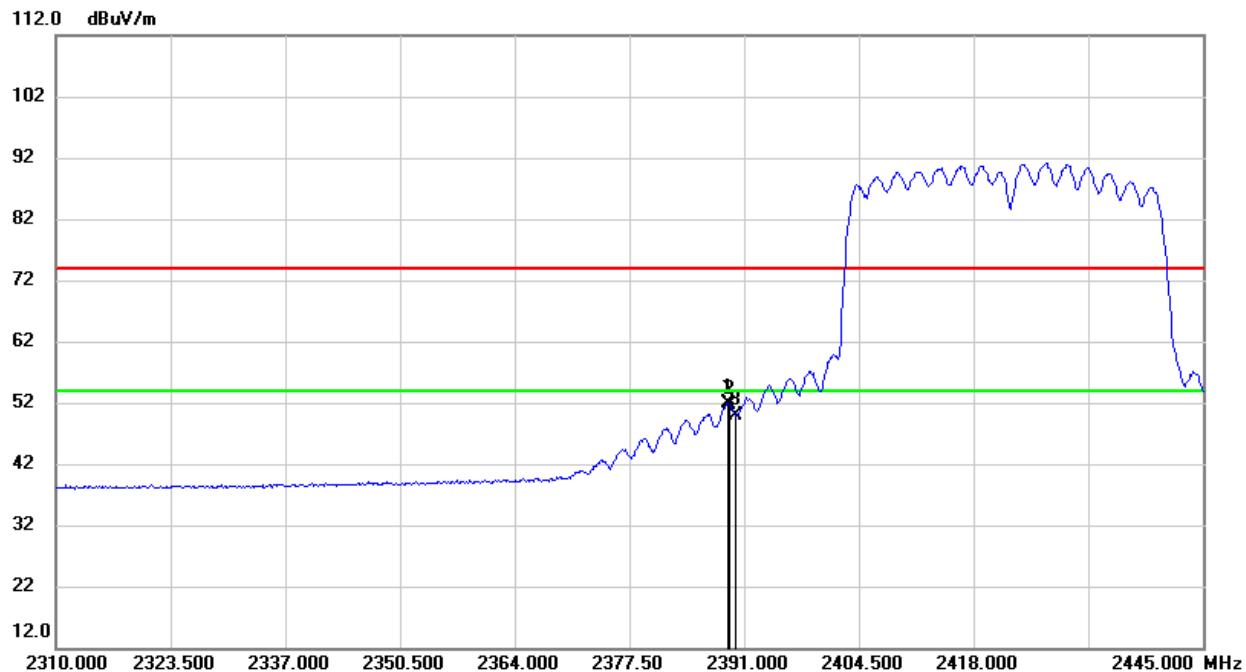
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.245	38.07	33.35	71.42	74.00	-2.58	peak
2	2390.000	36.21	33.35	69.56	74.00	-4.44	peak
3	2389.110	37.95	33.35	71.30	74.00	-2.70	peak

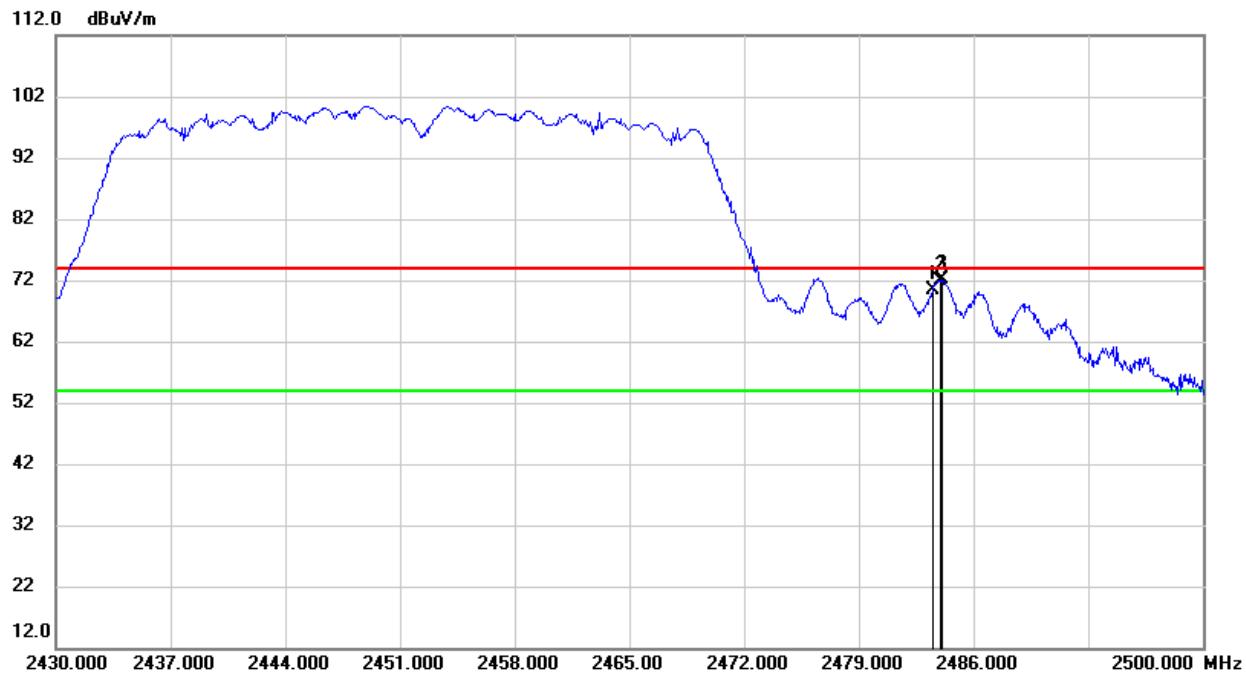
Note:

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

AVG

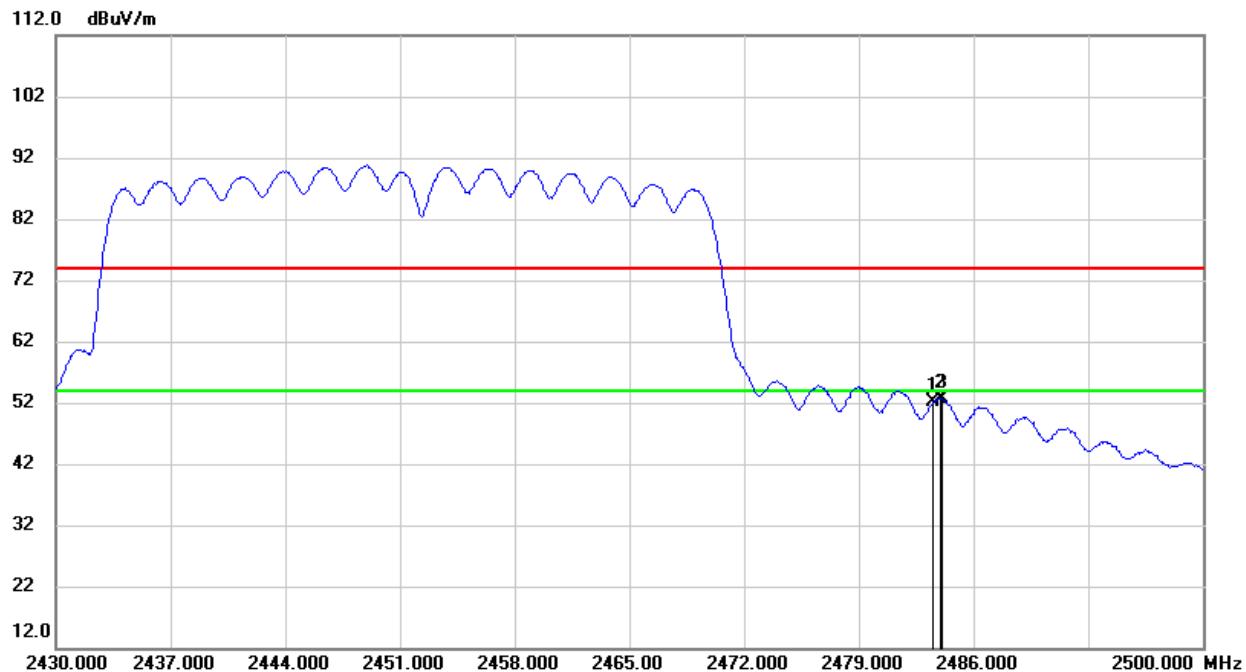
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.110	18.52	33.35	51.87	54.00	-2.13	AVG
2	2389.245	18.25	33.35	51.60	54.00	-2.40	AVG
3	2390.000	16.49	33.35	49.84	54.00	-4.16	AVG

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

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)PEAK

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.60	33.71	70.31	74.00	-3.69	peak
2	2483.970	38.20	33.71	71.91	74.00	-2.09	peak
3	2484.110	38.36	33.71	72.07	74.00	-1.93	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst 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	18.30	33.71	52.01	54.00	-1.99	AVG
2	2483.970	19.02	33.71	52.73	54.00	-1.27	AVG
3	2484.110	18.80	33.71	52.51	54.00	-1.49	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.

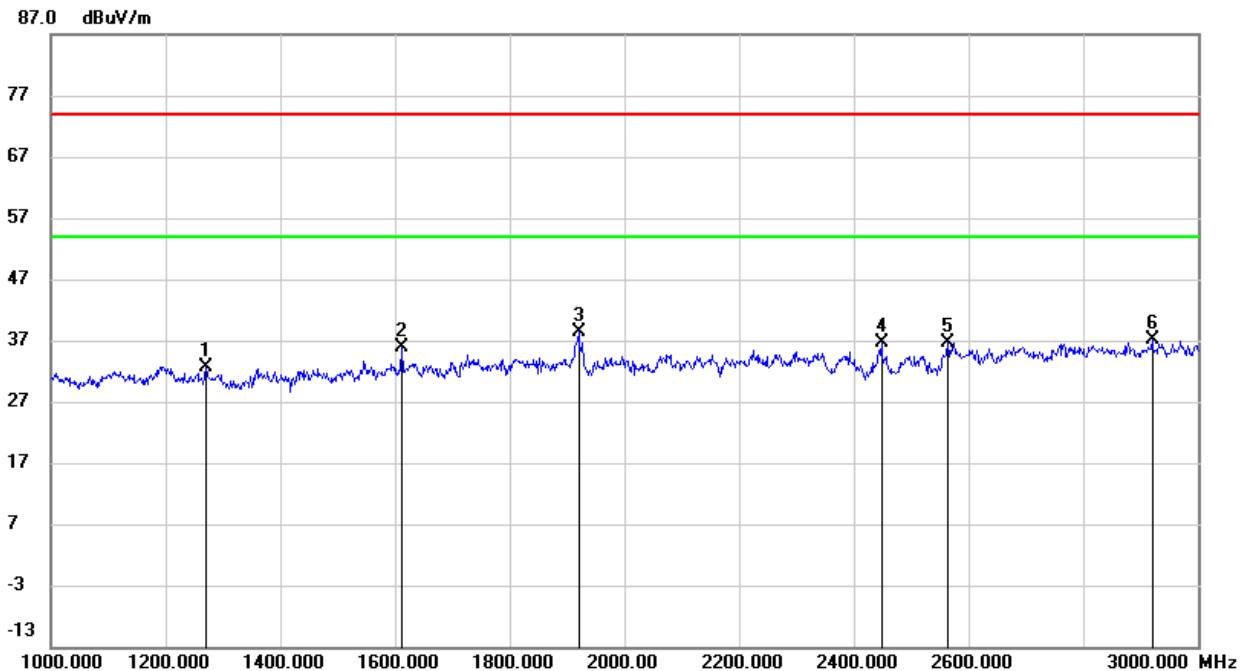
8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

KTC ANTENNA:

8.2.1. 802.11b SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

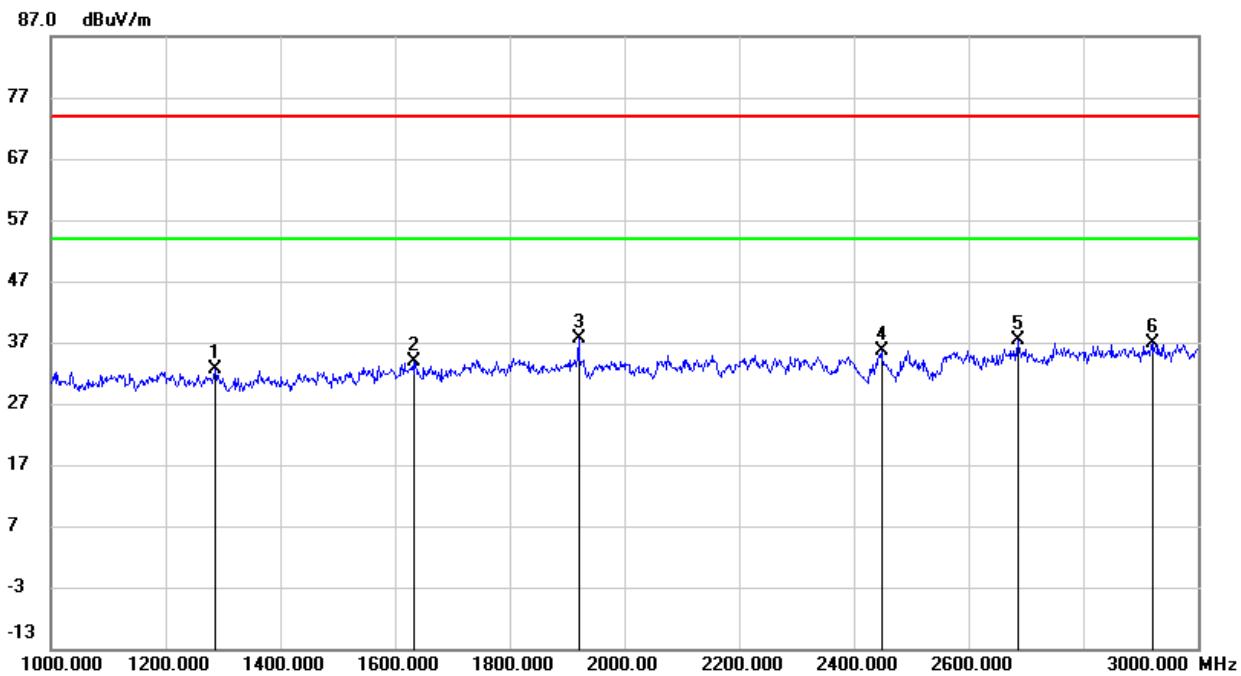
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1270.000	45.52	-12.89	32.63	74.00	-41.37	peak
2	1612.000	47.40	-11.46	35.94	74.00	-38.06	peak
3	1920.000	48.53	-10.13	38.40	74.00	-35.60	peak
4	2448.000	45.04	-8.31	36.73	74.00	-37.27	peak
5	2564.000	44.62	-7.99	36.63	74.00	-37.37	peak
6	2920.000	43.13	-5.98	37.15	74.00	-36.85	peak

Note:

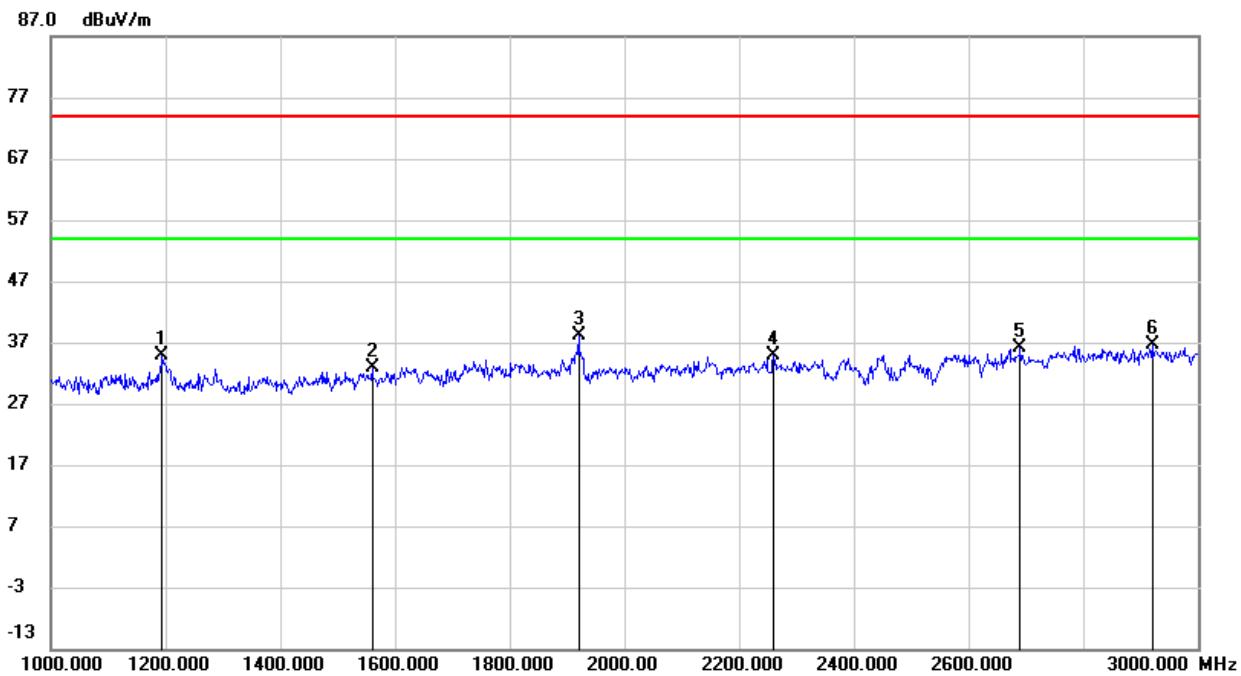
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1286.000	45.52	-12.87	32.65	74.00	-41.35	peak
2	1634.000	45.27	-11.30	33.97	74.00	-40.03	peak
3	1920.000	47.86	-10.13	37.73	74.00	-36.27	peak
4	2448.000	44.01	-8.31	35.70	74.00	-38.30	peak
5	2686.000	44.65	-7.30	37.35	74.00	-36.65	peak
6	2922.000	42.87	-5.96	36.91	74.00	-37.09	peak

Note:

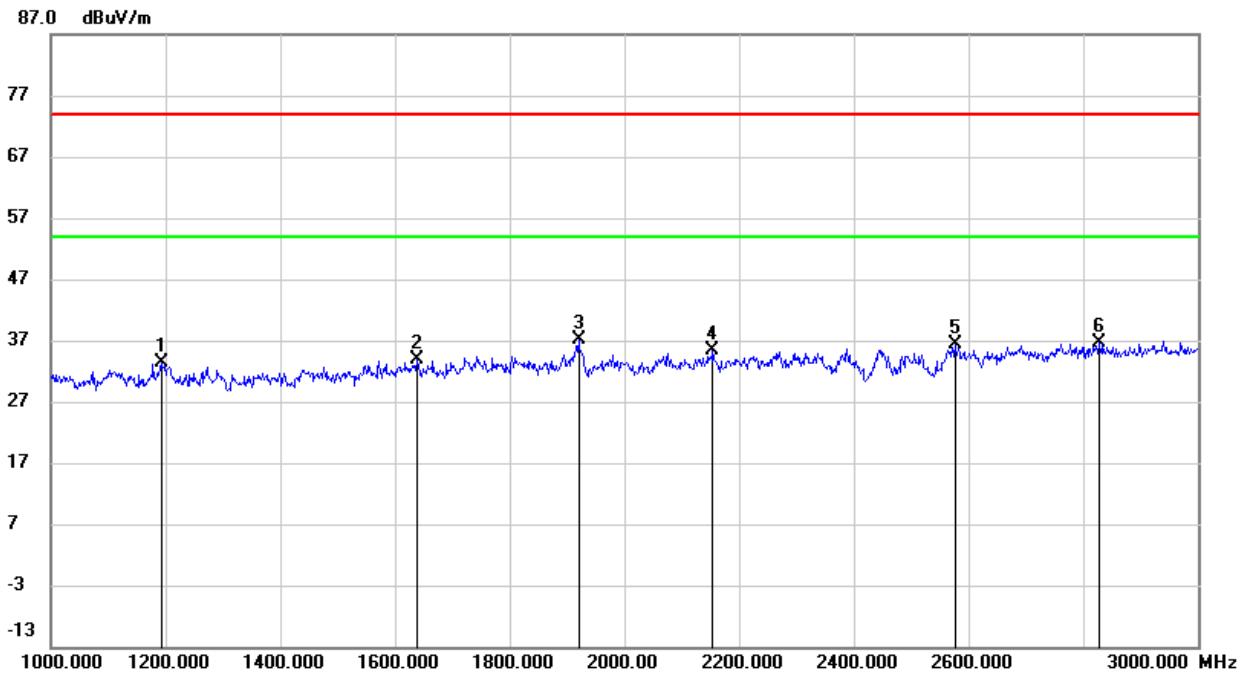
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	47.83	-13.02	34.81	74.00	-39.19	peak
2	1560.000	44.76	-11.83	32.93	74.00	-41.07	peak
3	1920.000	48.25	-10.13	38.12	74.00	-35.88	peak
4	2260.000	43.69	-8.85	34.84	74.00	-39.16	peak
5	2690.000	43.36	-7.28	36.08	74.00	-37.92	peak
6	2920.000	42.61	-5.98	36.63	74.00	-37.37	peak

Note:

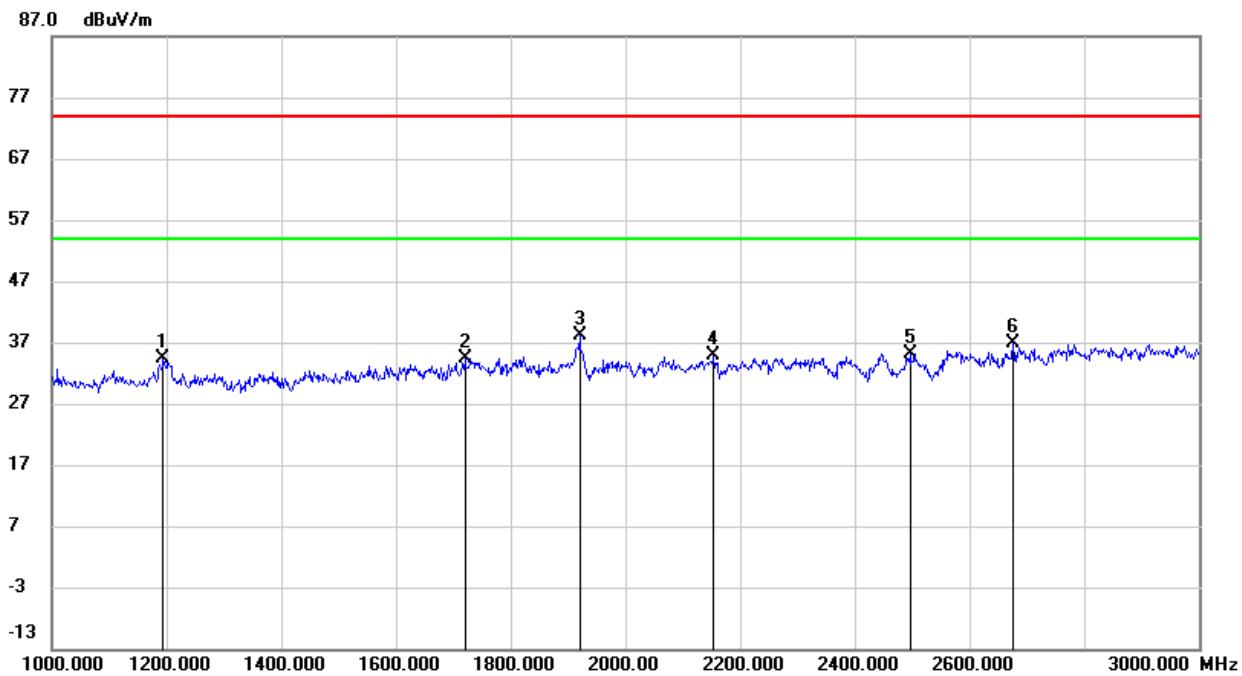
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1192.000	46.31	-13.03	33.28	74.00	-40.72	peak
2	1638.000	45.22	-11.27	33.95	74.00	-40.05	peak
3	1920.000	47.21	-10.13	37.08	74.00	-36.92	peak
4	2154.000	44.66	-9.31	35.35	74.00	-38.65	peak
5	2576.000	44.36	-7.96	36.40	74.00	-37.60	peak
6	2828.000	43.13	-6.42	36.71	74.00	-37.29	peak

Note:

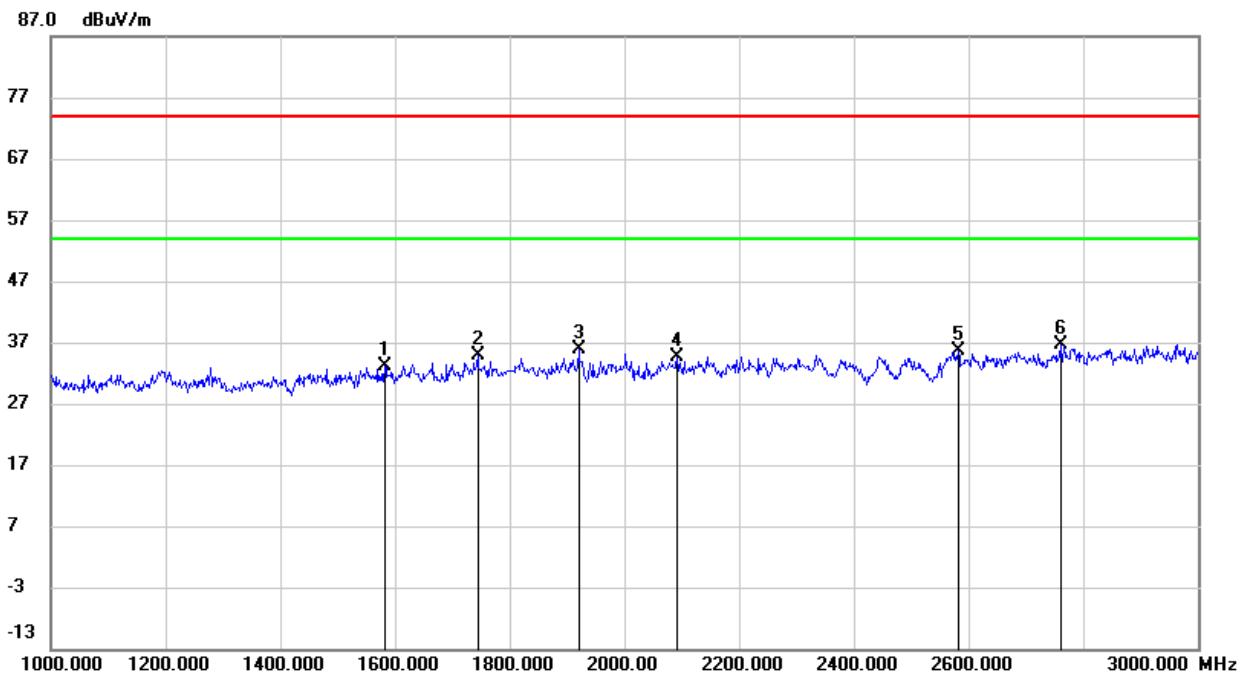
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	47.51	-13.02	34.49	74.00	-39.51	peak
2	1720.000	45.10	-10.65	34.45	74.00	-39.55	peak
3	1920.000	48.16	-10.13	38.03	74.00	-35.97	peak
4	2154.000	44.22	-9.31	34.91	74.00	-39.09	peak
5	2496.000	43.43	-8.23	35.20	74.00	-38.80	peak
6	2676.000	44.22	-7.37	36.85	74.00	-37.15	peak

Note:

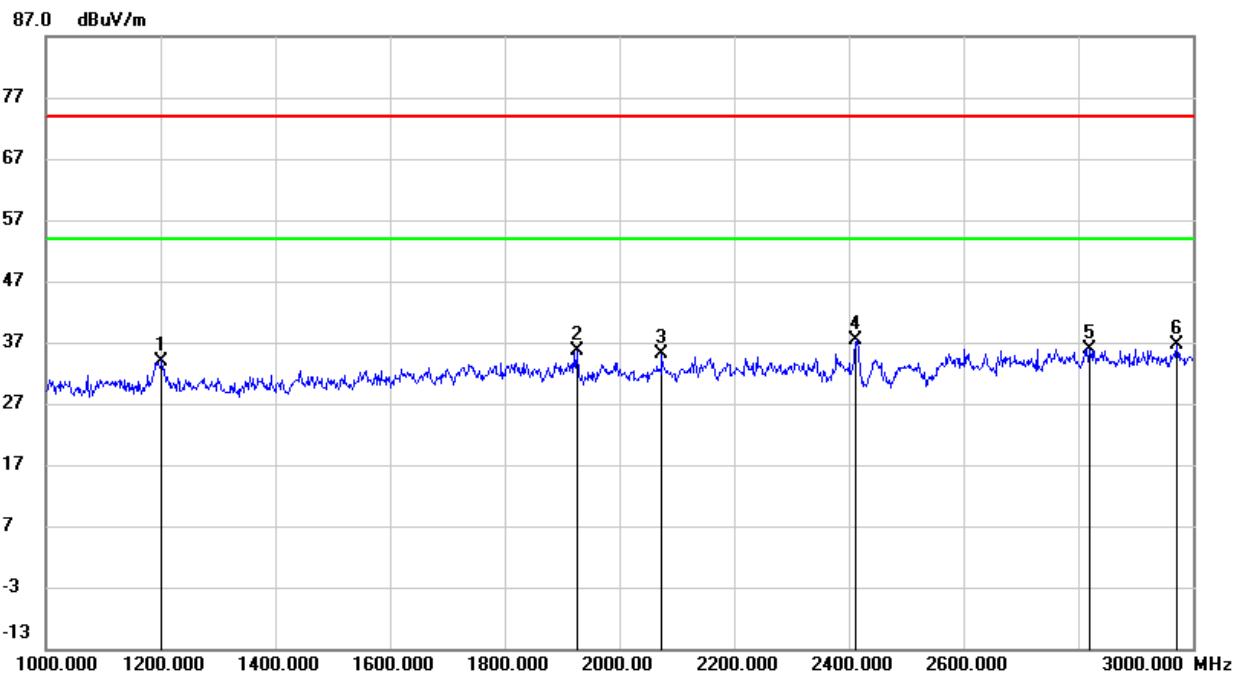
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1582.000	44.81	-11.68	33.13	74.00	-40.87	peak
2	1744.000	45.26	-10.47	34.79	74.00	-39.21	peak
3	1920.000	45.94	-10.13	35.81	74.00	-38.19	peak
4	2092.000	44.40	-9.66	34.74	74.00	-39.26	peak
5	2582.000	43.54	-7.92	35.62	74.00	-38.38	peak
6	2760.000	43.36	-6.81	36.55	74.00	-37.45	peak

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

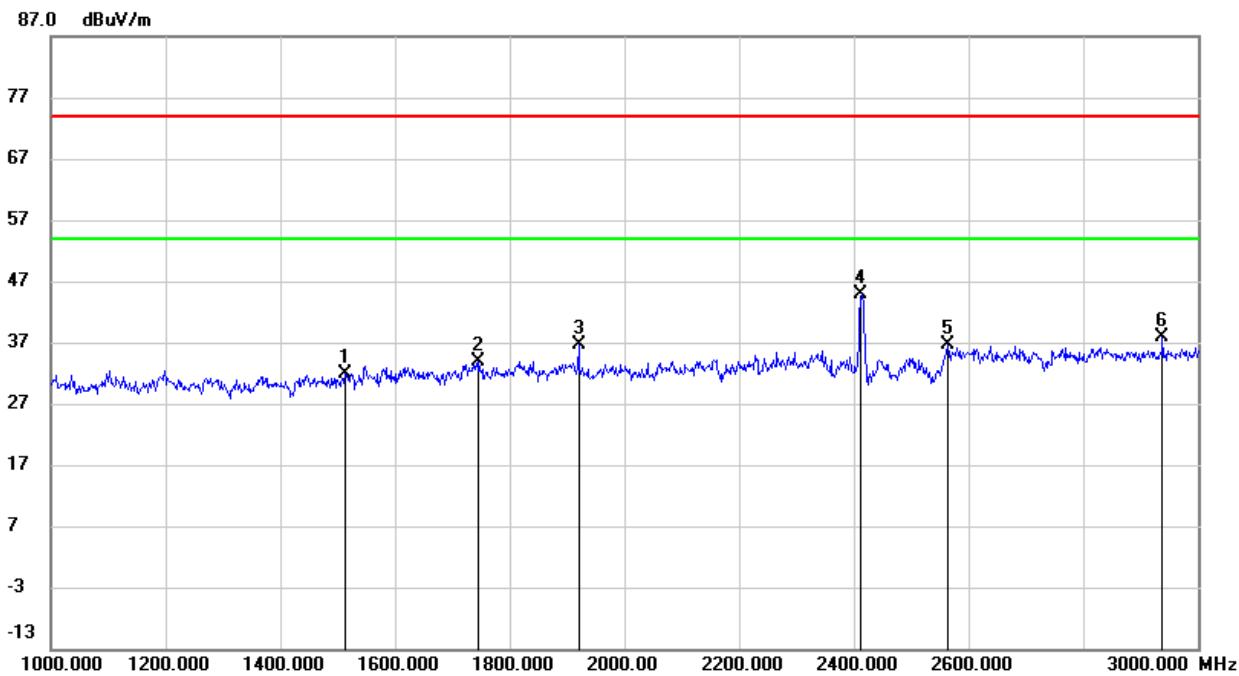
Note: All the test modes, channels and antennas have been tested, only the worst data record in the report.

INNO-LINK ANTENNA:**8.2.1. 802.11b SISO MODE****ANTENNA 1 TEST RESULTS (WORST CASE)****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	1202.000	46.99	-12.99	34.00	74.00	-40.00	peak
2	1926.000	45.76	-10.13	35.63	74.00	-38.37	peak
3	2074.000	44.92	-9.77	35.15	74.00	-38.85	peak
4	2412.000	45.66	-8.37	37.29	/	/	fundamental
5	2820.000	42.41	-6.46	35.95	74.00	-38.05	peak
6	2972.000	42.33	-5.73	36.60	74.00	-37.40	peak

Note:

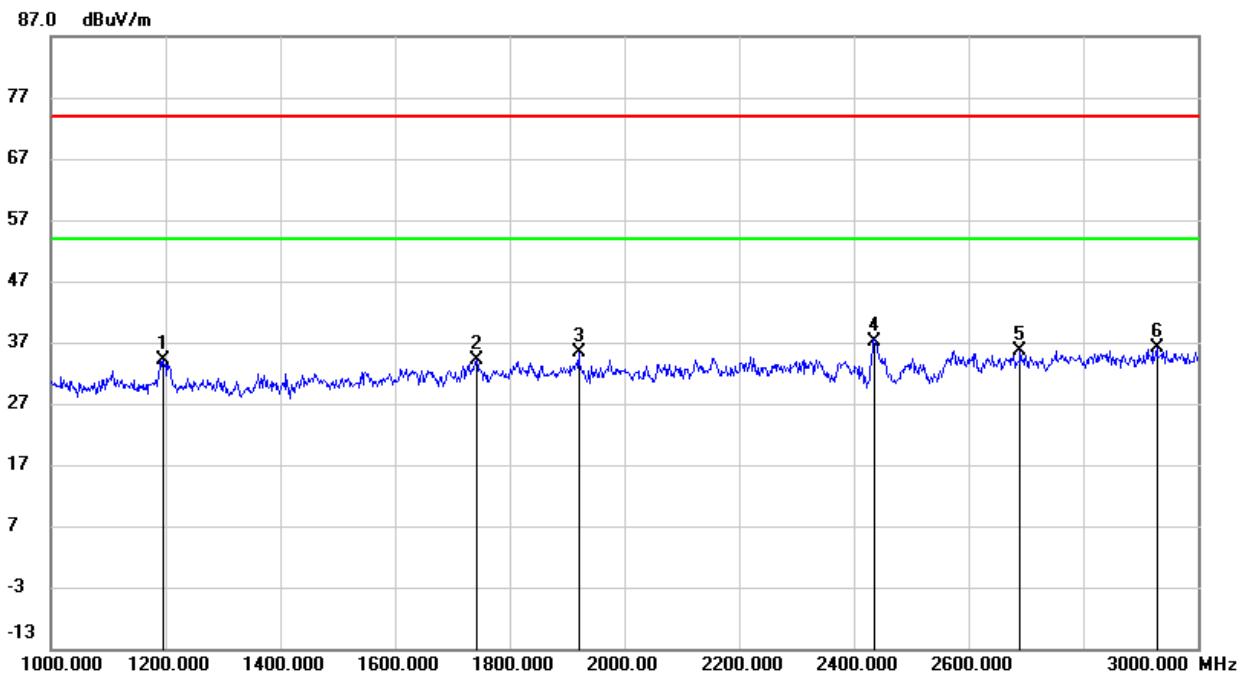
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1514.000	43.92	-12.14	31.78	74.00	-42.22	peak
2	1746.000	44.23	-10.46	33.77	74.00	-40.23	peak
3	1920.000	46.71	-10.13	36.58	74.00	-37.42	peak
4	2412.000	53.16	-8.37	44.79	/	/	fundamental
5	2564.000	44.54	-7.99	36.55	74.00	-37.45	peak
6	2938.000	43.72	-5.89	37.83	74.00	-36.17	peak

Note:

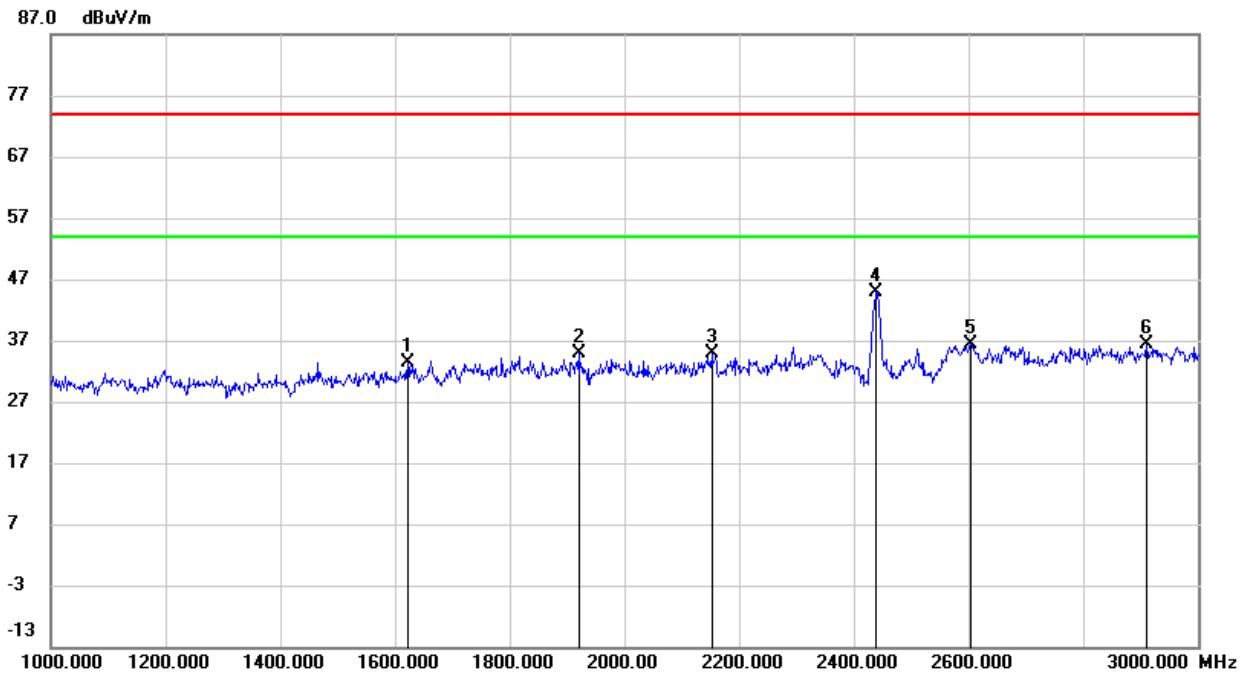
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1196.000	47.15	-13.01	34.14	74.00	-39.86	peak
2	1742.000	44.67	-10.49	34.18	74.00	-39.82	peak
3	1920.000	45.55	-10.13	35.42	74.00	-38.58	peak
4	2437.000	45.46	-8.33	37.13	/	/	fundamental
5	2690.000	42.90	-7.28	35.62	74.00	-38.38	peak
6	2928.000	42.07	-5.94	36.13	74.00	-37.87	peak

Note:

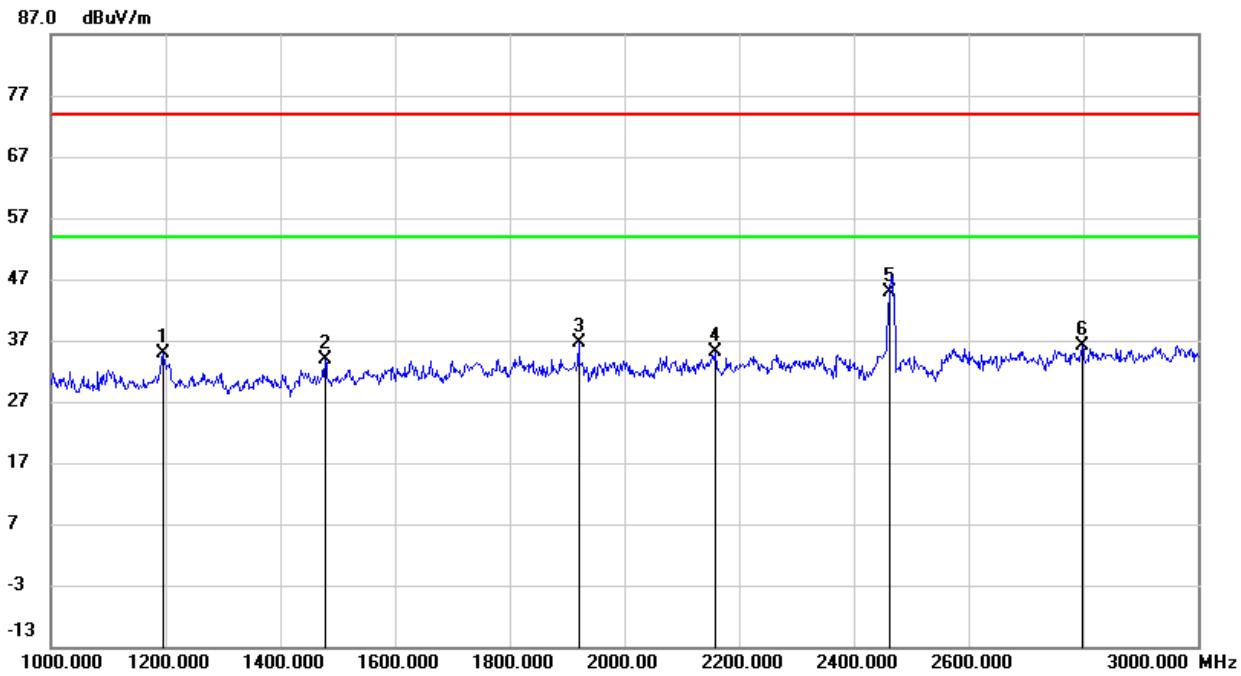
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1622.000	44.87	-11.39	33.48	74.00	-40.52	peak
2	1920.000	44.90	-10.13	34.77	74.00	-39.23	peak
3	2152.000	44.15	-9.32	34.83	74.00	-39.17	peak
4	2437.000	53.10	-8.33	44.77	/	/	fundamental
5	2604.000	44.22	-7.84	36.38	74.00	-37.62	peak
6	2910.000	42.46	-6.02	36.44	74.00	-37.56	peak

Note:

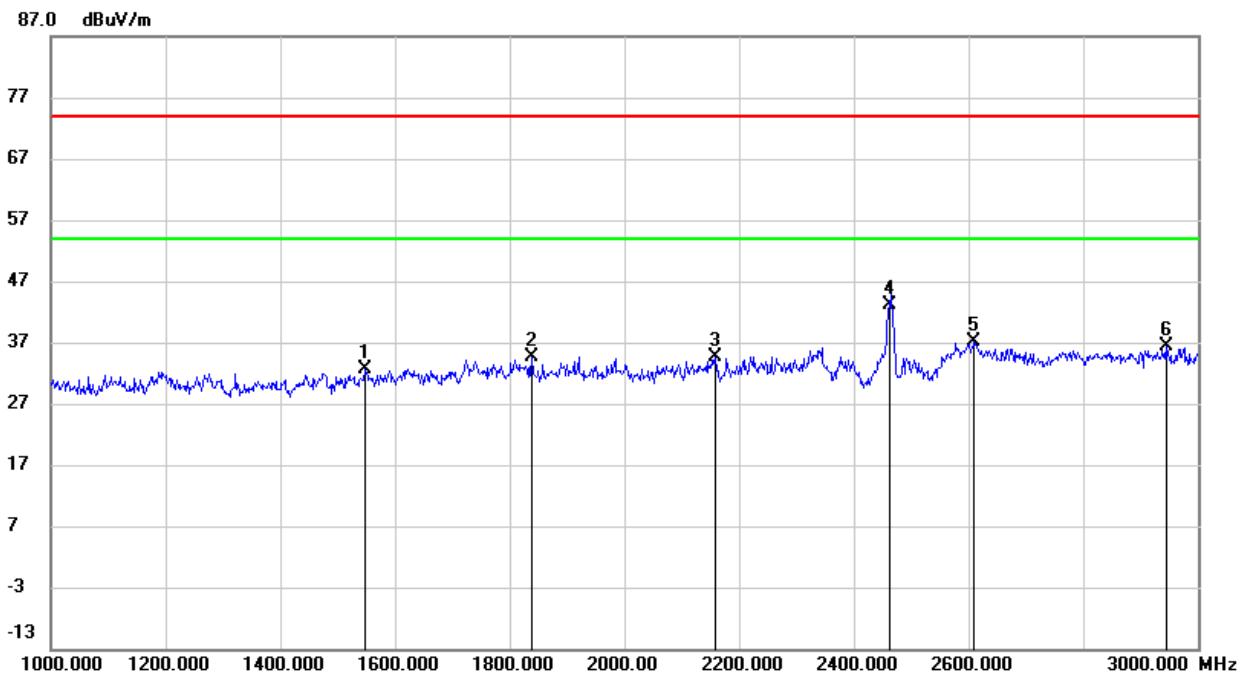
1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1196.000	47.90	-13.01	34.89	74.00	-39.11	peak
2	1478.000	46.27	-12.33	33.94	74.00	-40.06	peak
3	1920.000	46.78	-10.13	36.65	74.00	-37.35	peak
4	2158.000	44.48	-9.29	35.19	74.00	-38.81	peak
5	2462.000	53.25	-8.29	44.96	/	/	fundamental
6	2798.000	42.60	-6.56	36.04	74.00	-37.96	peak

Note:

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1548.000	44.62	-11.91	32.71	74.00	-41.29	peak
2	1838.000	44.67	-10.08	34.59	74.00	-39.41	peak
3	2158.000	43.98	-9.29	34.69	74.00	-39.31	peak
4	2462.000	51.49	-8.29	43.20	/	/	fundamental
5	2610.000	45.00	-7.79	37.21	74.00	-36.79	peak
6	2944.000	42.21	-5.85	36.36	74.00	-37.64	peak

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

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

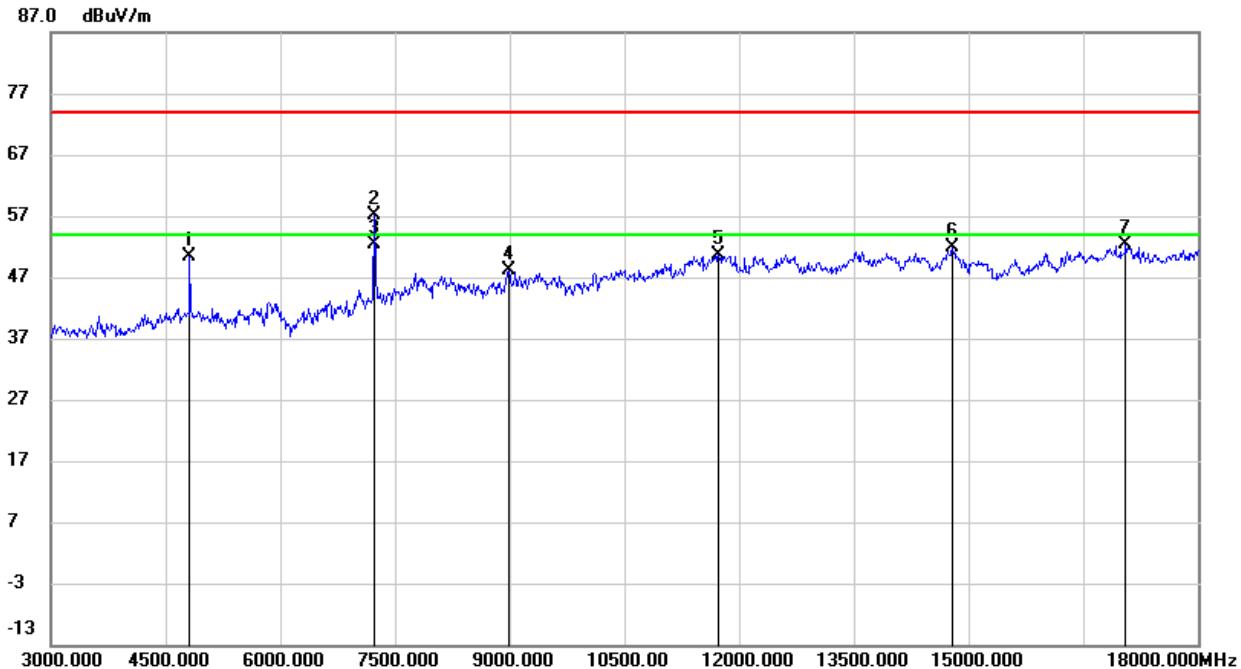
8.3. SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)

KTC ANTENNA:

8.3.1. 802.11b SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

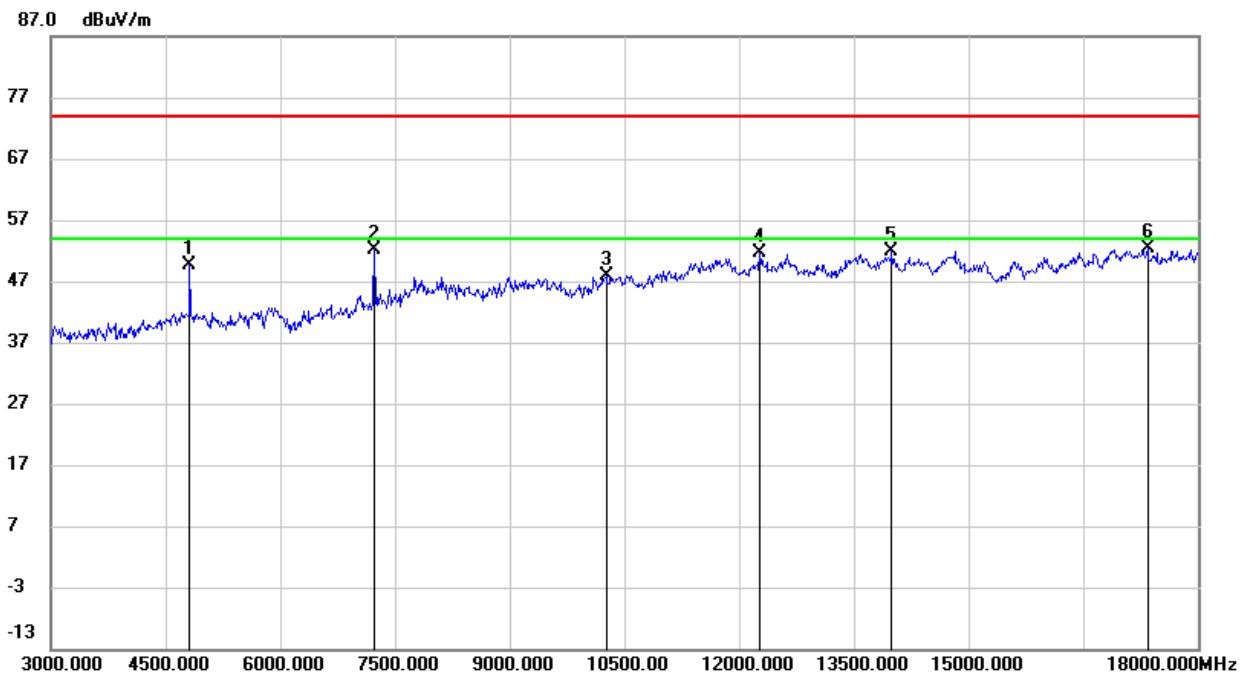
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	48.96	1.38	50.34	74.00	-23.66	peak
2	7230.000	49.77	7.28	57.05	74.00	-16.95	peak
3	7230.000	44.99	7.28	52.27	54.00	-1.73	AVG
4	8985.000	37.18	10.99	48.17	74.00	-25.83	peak
5	11730.000	35.23	15.32	50.55	74.00	-23.45	peak
6	14790.000	33.98	18.01	51.99	74.00	-22.01	peak
7	17055.000	30.68	21.60	52.28	74.00	-21.72	peak

Note:

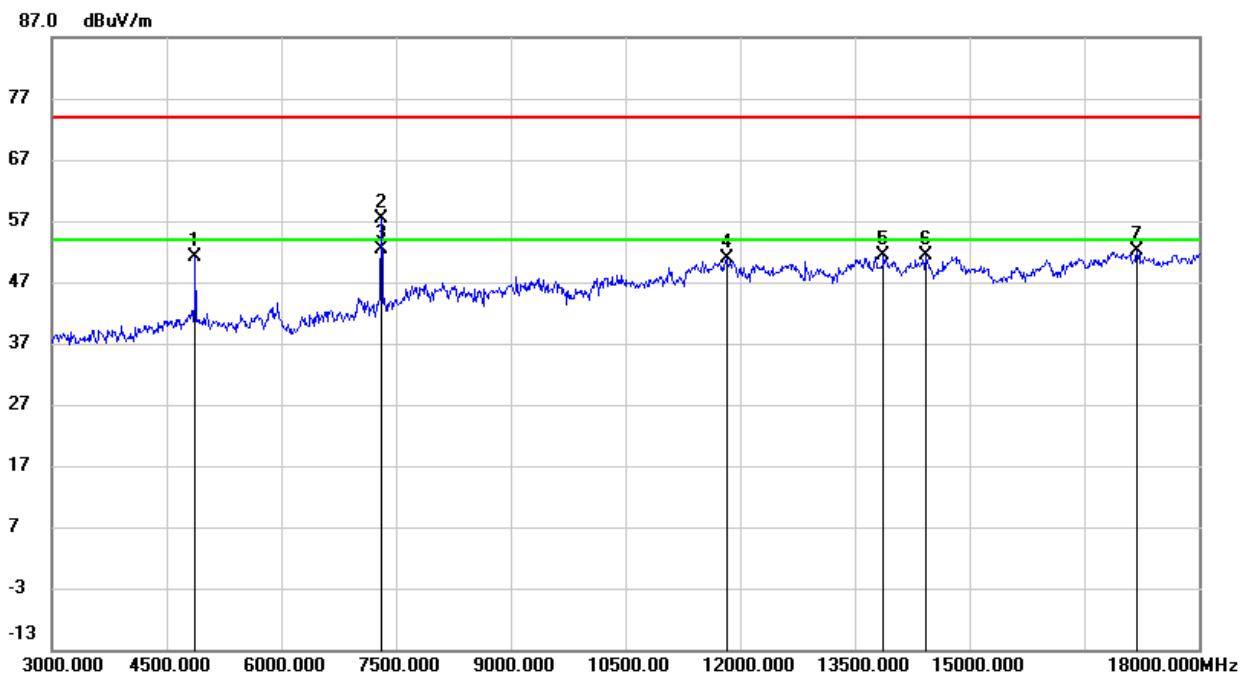
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	48.26	1.38	49.64	74.00	-24.36	peak
2	7230.000	44.73	7.28	52.01	74.00	-21.99	peak
3	10260.000	36.31	11.68	47.99	74.00	-26.01	peak
4	12270.000	35.69	16.04	51.73	74.00	-22.27	peak
5	13995.000	34.11	17.66	51.77	74.00	-22.23	peak
6	17340.000	30.14	22.31	52.45	74.00	-21.55	peak

Note:

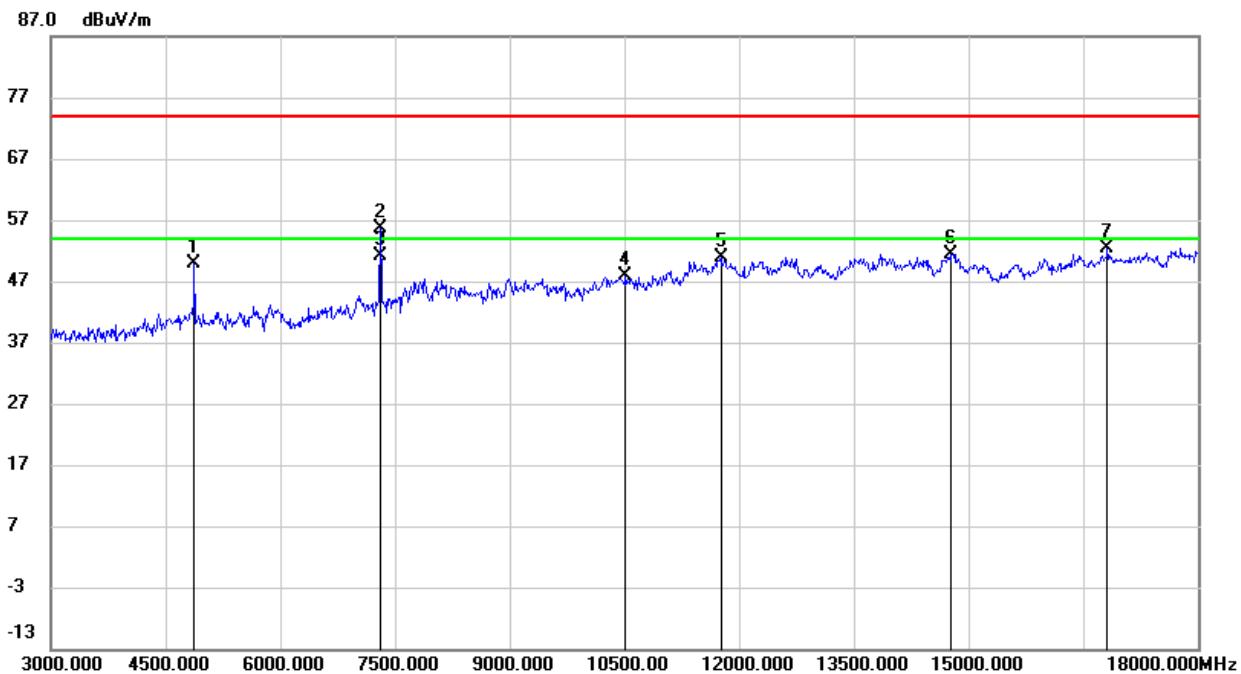
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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 (dB _{uV})	Correct (dB/m)	Result (dB _{uV/m})	Limit (dB _{uV/m})	Margin (dB)	Remark
1	4875.000	49.88	1.32	51.20	74.00	-22.80	peak
2	7305.000	50.31	7.14	57.45	74.00	-16.55	peak
3	7305.000	45.22	7.14	52.36	54.00	-1.64	AVG
4	11820.000	35.59	15.29	50.88	74.00	-23.12	peak
5	13875.000	33.71	17.55	51.26	74.00	-22.74	peak
6	14430.000	33.95	17.34	51.29	74.00	-22.71	peak
7	17190.000	30.22	21.98	52.20	74.00	-21.80	peak

Note:

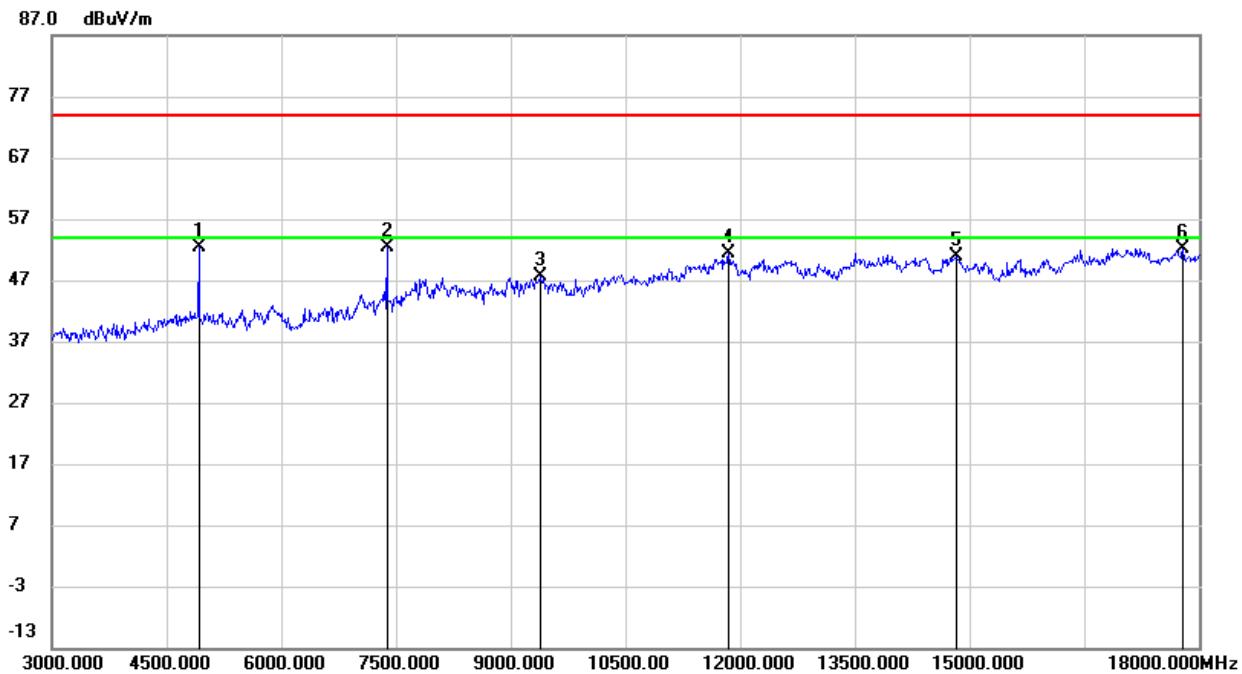
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.65	1.32	49.97	74.00	-24.03	peak
2	7305.000	48.39	7.14	55.53	74.00	-18.47	peak
3	7305.000	43.90	7.14	51.04	54.00	-2.96	AVG
4	10515.000	35.36	12.41	47.77	74.00	-26.23	peak
5	11760.000	35.68	15.29	50.97	74.00	-23.03	peak
6	14775.000	33.52	17.95	51.47	74.00	-22.53	peak
7	16815.000	31.59	20.84	52.43	74.00	-21.57	peak

Note:

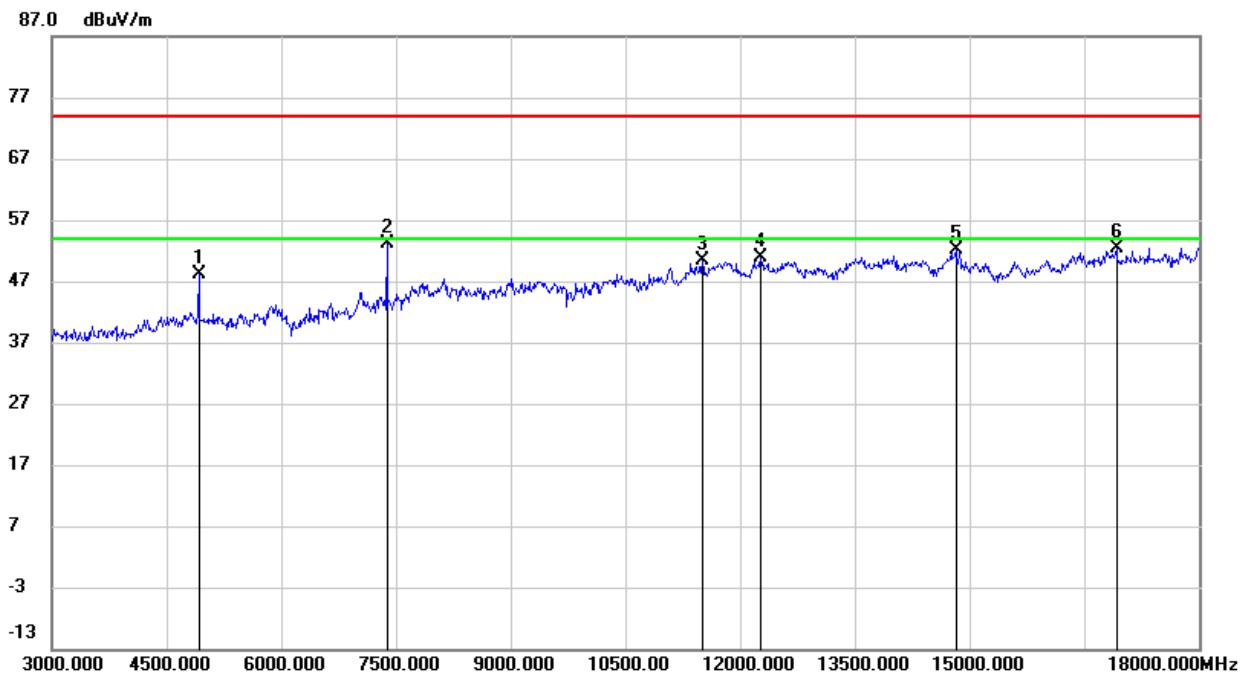
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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 (dB _{uV})	Correct (dB/m)	Result (dB _{uV/m})	Limit (dB _{uV/m})	Margin (dB)	Remark
1	4920.000	50.96	1.45	52.41	74.00	-21.59	peak
2	7380.000	44.61	7.79	52.40	74.00	-21.60	peak
3	9390.000	36.74	10.92	47.66	74.00	-26.34	peak
4	11850.000	35.92	15.38	51.30	74.00	-22.70	peak
5	14820.000	32.88	17.91	50.79	74.00	-23.21	peak
6	17790.000	28.25	23.99	52.24	74.00	-21.76	peak

Note:

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	46.64	1.45	48.09	74.00	-25.91	peak
2	7380.000	45.22	7.79	53.01	74.00	-20.99	peak
3	11505.000	35.82	14.66	50.48	74.00	-23.52	peak
4	12270.000	34.82	16.04	50.86	74.00	-23.14	peak
5	14820.000	34.18	17.91	52.09	74.00	-21.91	peak
6	16920.000	30.91	21.51	52.42	74.00	-21.58	peak

Note:

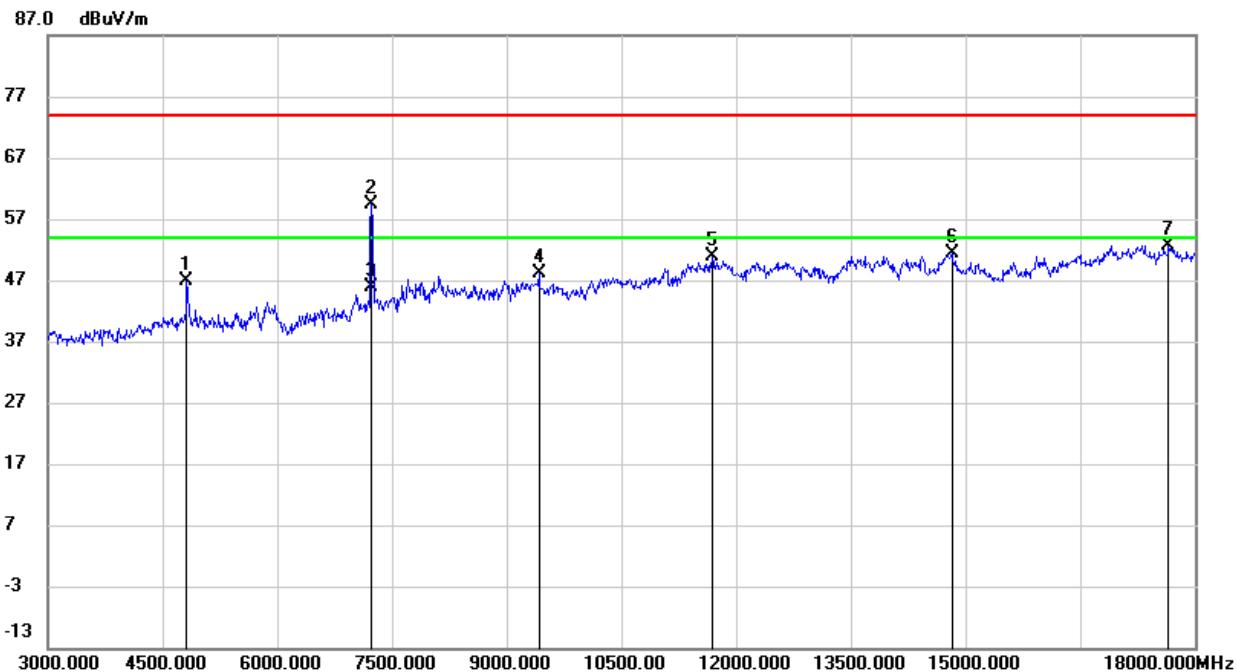
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

8.3.2. 802.11g SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

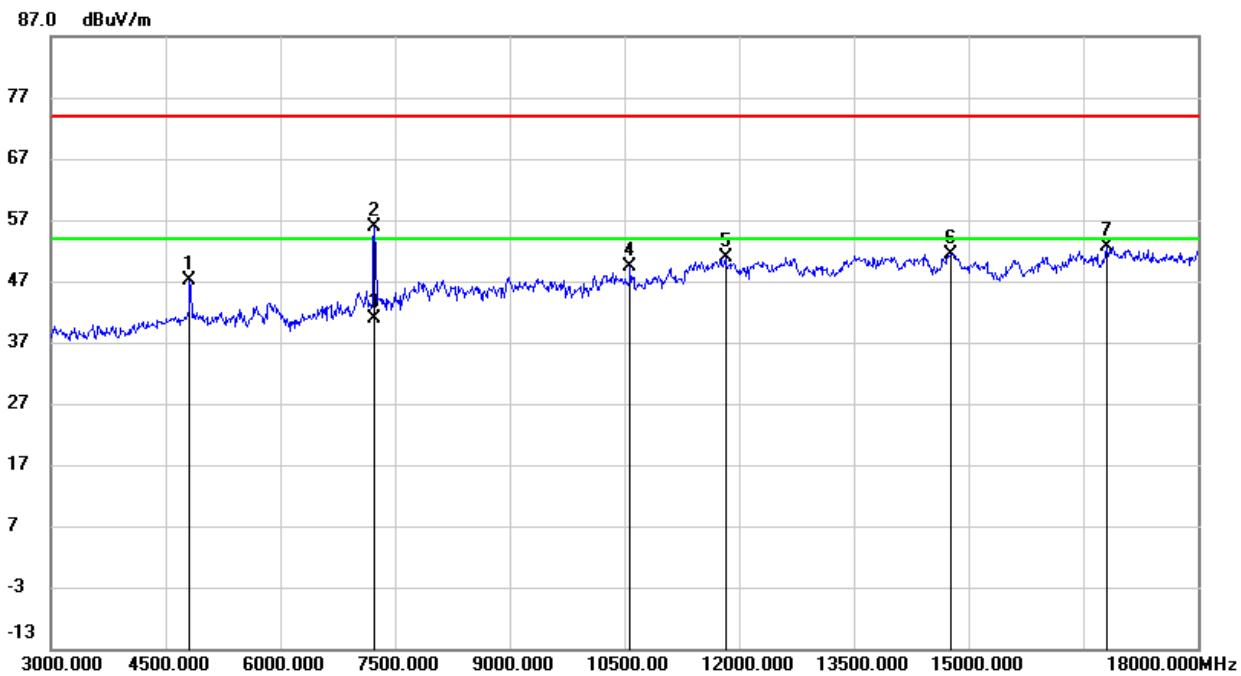
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	45.41	1.38	46.79	74.00	-27.21	peak
2	7230.000	51.98	7.28	59.26	74.00	-14.74	peak
3	7230.000	38.53	7.28	45.81	54.00	-8.19	AVG
4	9420.000	37.21	10.88	48.09	74.00	-25.91	peak
5	11685.000	35.51	15.26	50.77	74.00	-23.23	peak
6	14820.000	33.56	17.91	51.47	74.00	-22.53	peak
7	17655.000	29.44	23.14	52.58	74.00	-21.42	peak

Note:

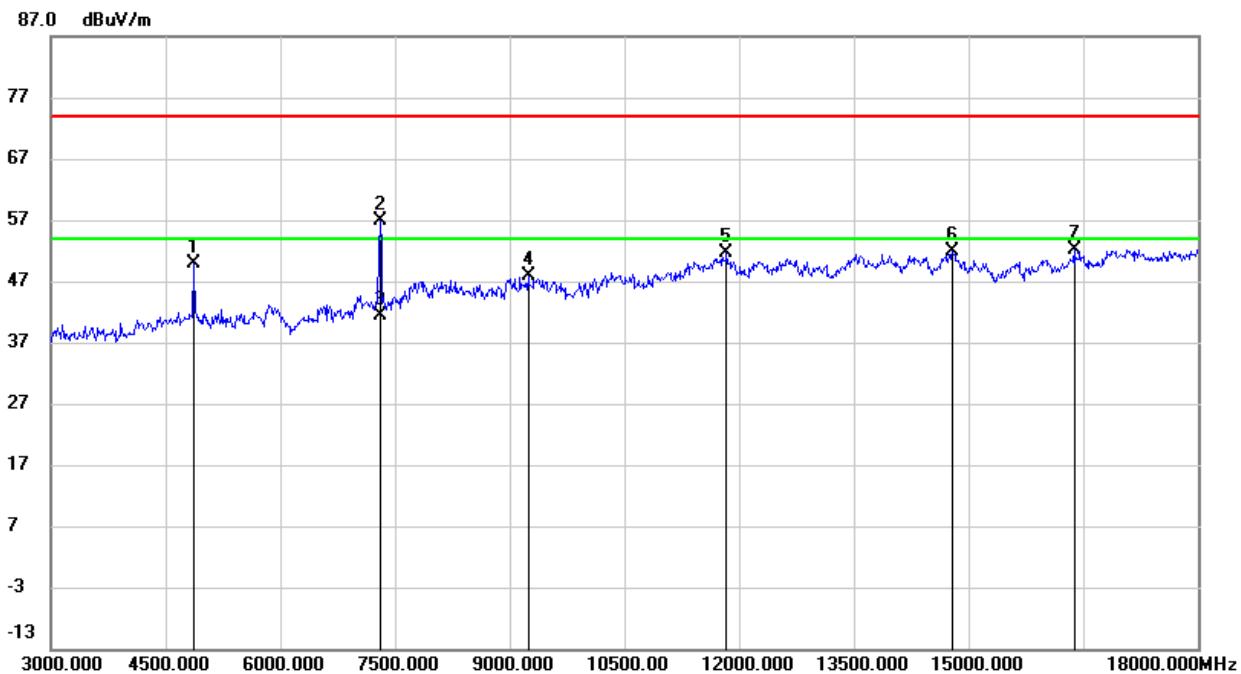
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/T_{on}$, where: T_{on} is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	45.71	1.38	47.09	74.00	-26.91	peak
2	7230.000	48.48	7.28	55.76	74.00	-18.24	peak
3	7230.000	33.60	7.28	40.88	54.00	-13.12	AVG
4	10575.000	36.68	12.59	49.27	74.00	-24.73	peak
5	11820.000	35.69	15.29	50.98	74.00	-23.02	peak
6	14760.000	33.57	17.90	51.47	74.00	-22.53	peak
7	16800.000	31.86	20.71	52.57	74.00	-21.43	peak

Note:

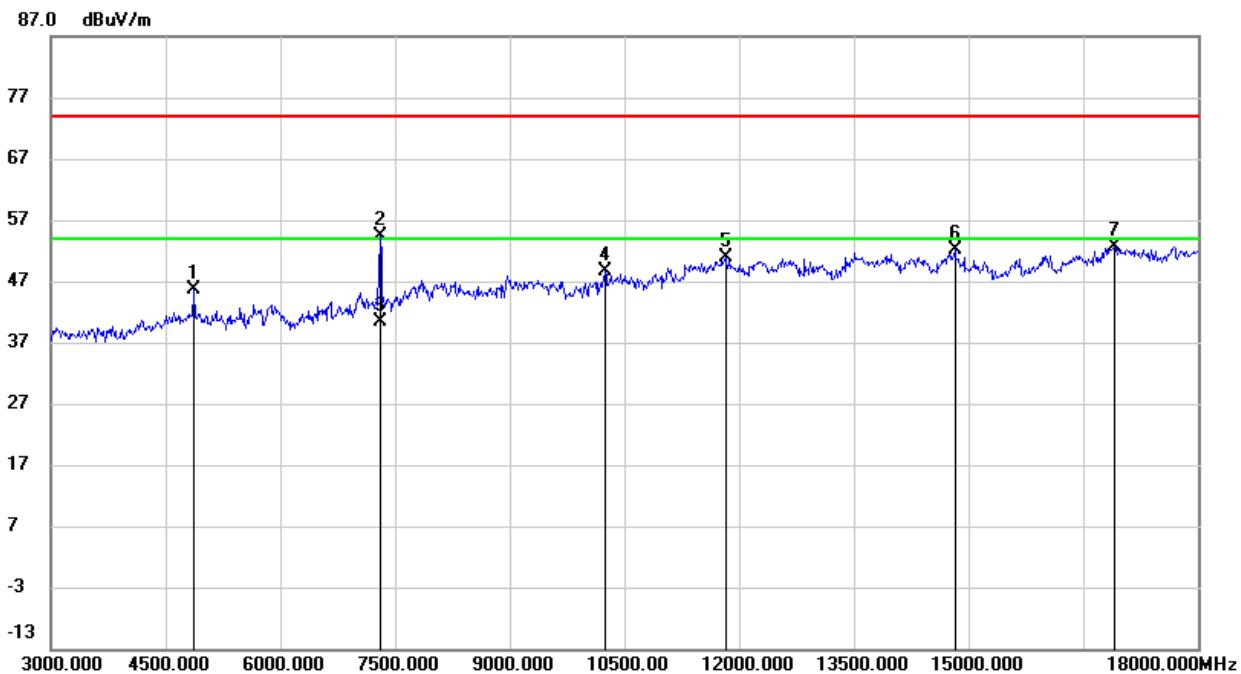
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	48.66	1.33	49.99	74.00	-24.01	peak
2	7305.000	49.75	7.14	56.89	74.00	-17.11	peak
3	7305.000	34.19	7.14	41.33	54.00	-12.67	AVG
4	9240.000	37.69	10.10	47.79	74.00	-26.21	peak
5	11835.000	36.37	15.34	51.71	74.00	-22.29	peak
6	14790.000	33.88	18.01	51.89	74.00	-22.11	peak
7	16380.000	32.45	19.67	52.12	74.00	-21.88	peak

Note:

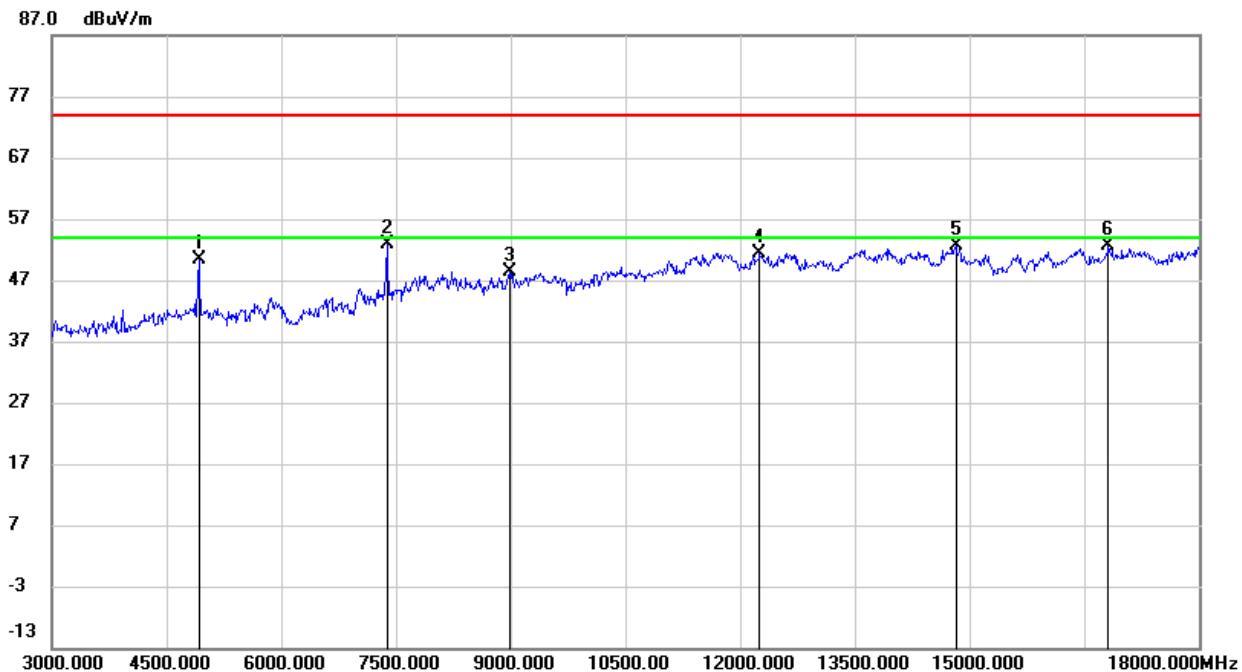
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	44.27	1.32	45.59	74.00	-28.41	peak
2	7305.000	47.28	7.14	54.42	74.00	-19.58	peak
3	7305.000	33.33	7.14	40.47	54.00	-13.53	AVG
4	10245.000	37.12	11.63	48.75	74.00	-25.25	peak
5	11820.000	35.63	15.29	50.92	74.00	-23.08	peak
6	14820.000	34.16	17.91	52.07	74.00	-21.93	peak
7	16905.000	31.15	21.55	52.70	74.00	-21.30	peak

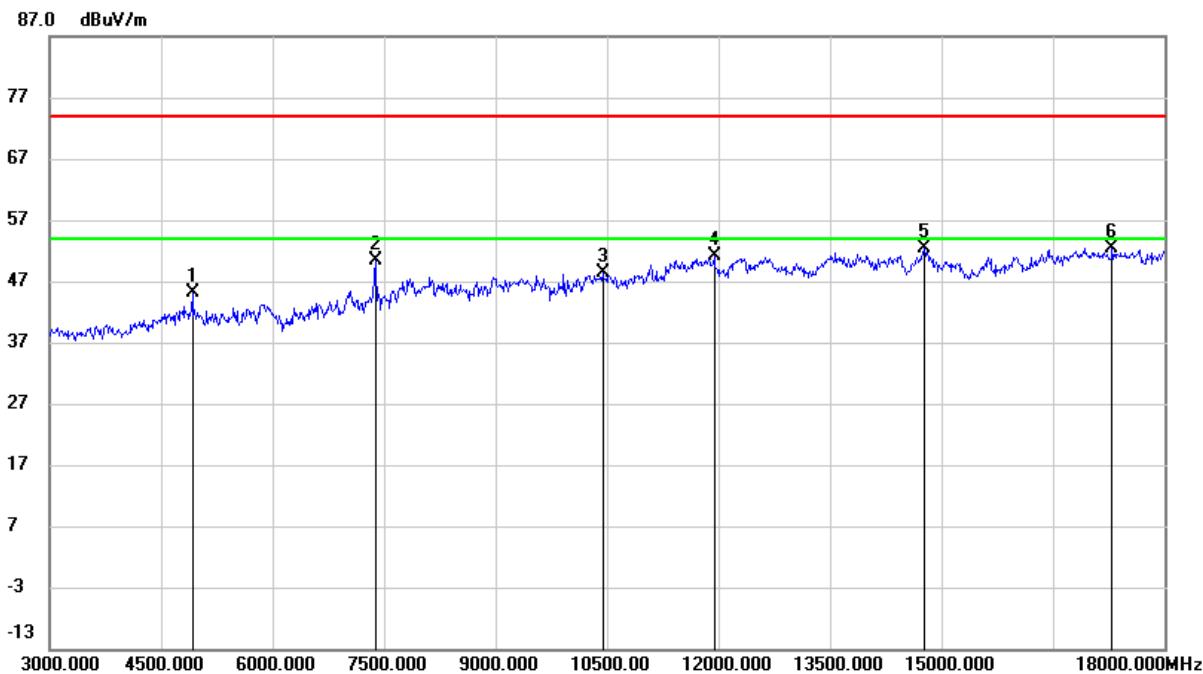
Note:

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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.82	1.45	50.27	74.00	-23.73	peak
2	7380.000	44.97	7.79	52.76	74.00	-21.24	peak
3	8985.000	37.43	10.99	48.42	74.00	-25.58	peak
4	12255.000	35.36	16.03	51.39	74.00	-22.61	peak
5	14820.000	34.78	17.91	52.69	74.00	-21.31	peak
6	16815.000	31.69	20.84	52.53	74.00	-21.47	peak

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

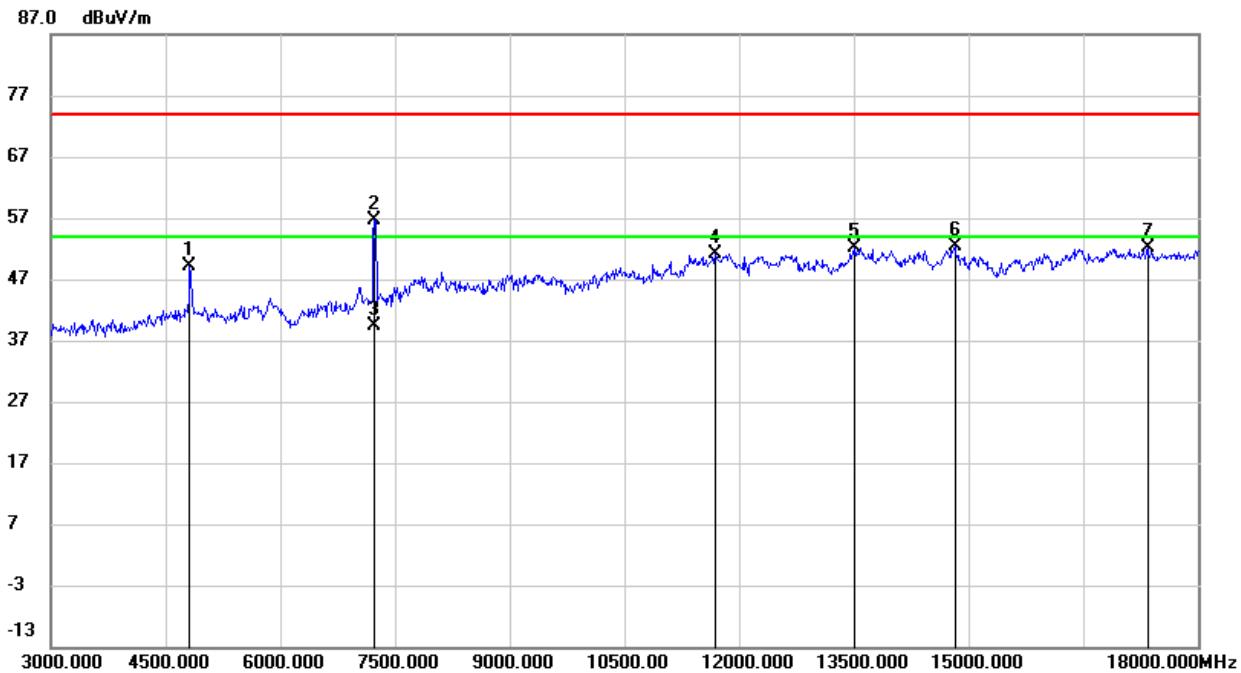
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	43.69	1.45	45.14	74.00	-28.86	peak
2	7380.000	42.66	7.79	50.45	74.00	-23.55	peak
3	10440.000	36.12	12.28	48.40	74.00	-25.60	peak
4	11940.000	35.50	15.54	51.04	74.00	-22.96	peak
5	14775.000	34.39	17.95	52.34	74.00	-21.66	peak
6	17295.000	29.79	22.58	52.37	74.00	-21.63	peak

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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

8.3.3. 802.11n HT20 MIMO MODE

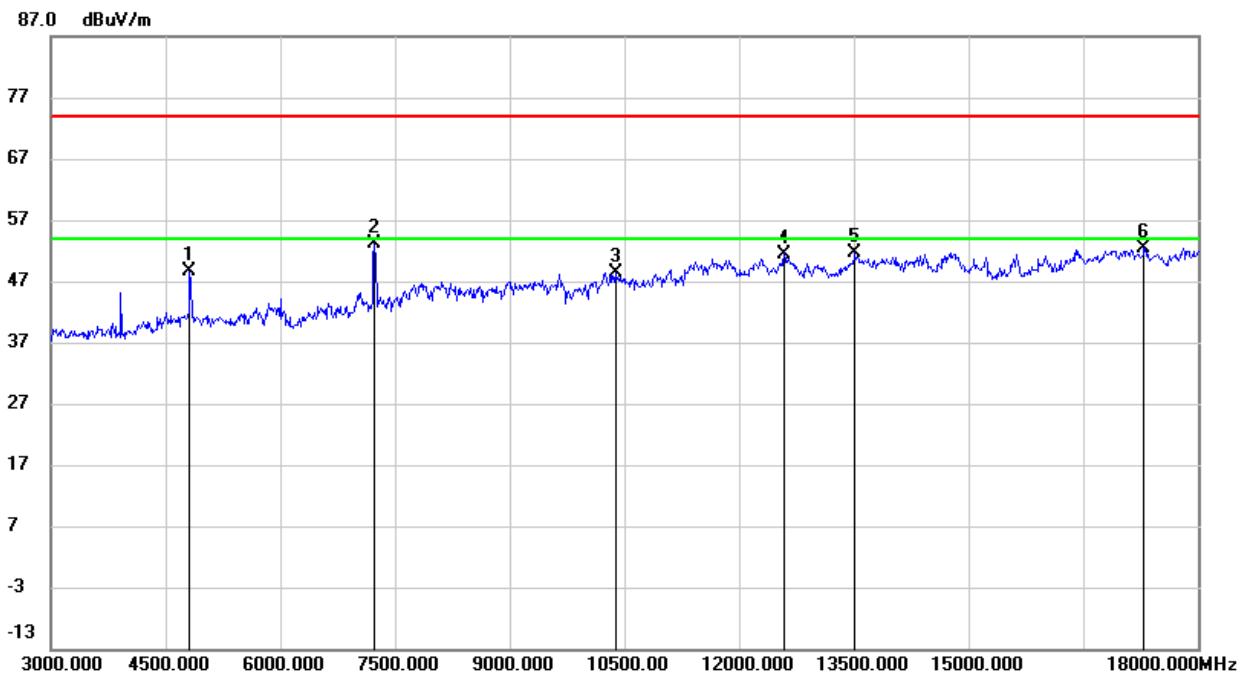
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	47.83	1.38	49.21	74.00	-24.79	peak
2	7230.000	49.46	7.28	56.74	74.00	-17.26	peak
3	7230.000	32.16	7.28	39.44	54.00	-14.56	AVG
4	11685.000	35.87	15.26	51.13	74.00	-22.87	peak
5	13515.000	35.02	17.19	52.21	74.00	-21.79	peak
6	14820.000	34.38	17.91	52.29	74.00	-21.71	peak
7	17340.000	29.83	22.31	52.14	74.00	-21.86	peak

Note:

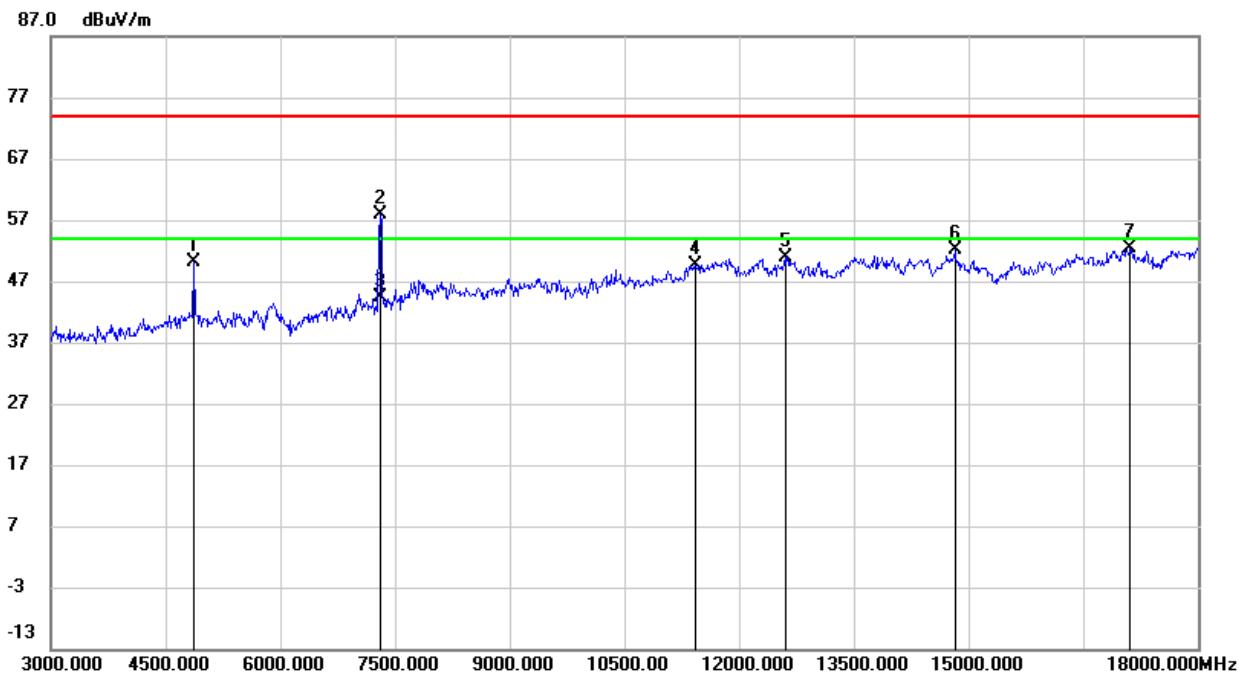
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	47.36	1.38	48.74	74.00	-25.26	peak
2	7230.000	45.84	7.28	53.12	74.00	-20.88	peak
3	10380.000	36.29	12.15	48.44	74.00	-25.56	peak
4	12585.000	35.73	15.77	51.50	74.00	-22.50	peak
5	13515.000	34.45	17.19	51.64	74.00	-22.36	peak
6	17295.000	29.86	22.58	52.44	74.00	-21.56	peak

Note:

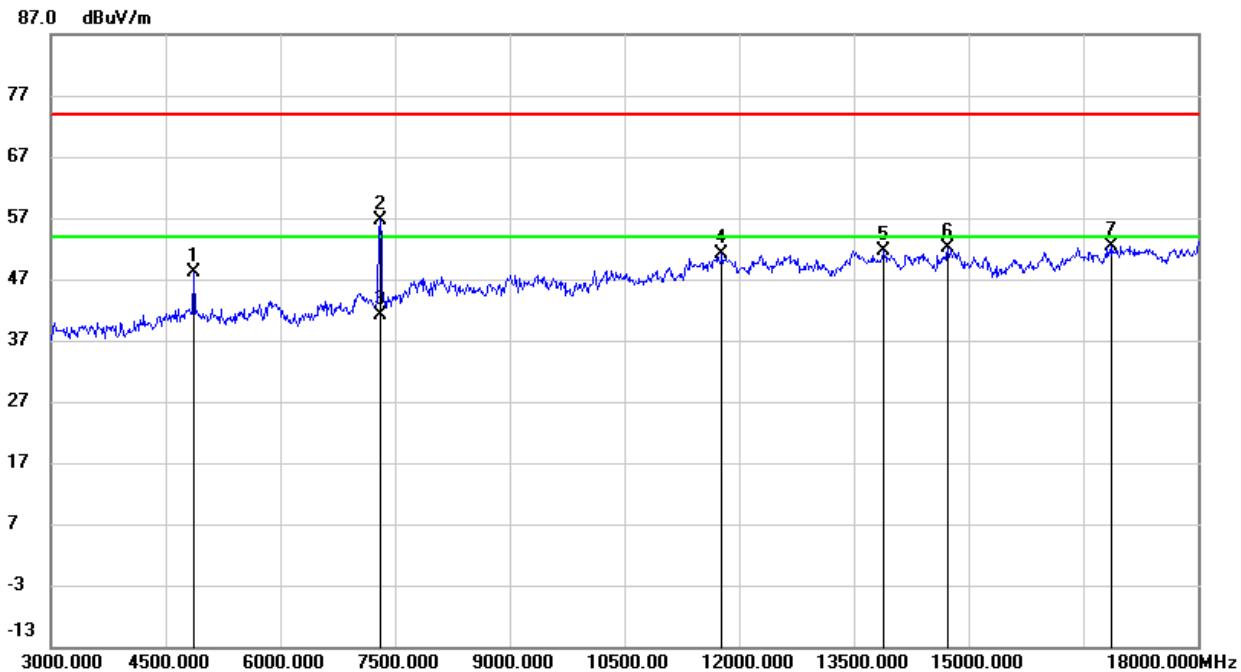
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.71	1.32	50.03	74.00	-23.97	peak
2	7305.000	50.62	7.14	57.76	74.00	-16.24	peak
3	7305.000	37.18	7.14	44.32	54.00	-9.68	AVG
4	11430.000	34.91	14.72	49.63	74.00	-24.37	peak
5	12600.000	35.20	15.78	50.98	74.00	-23.02	peak
6	14820.000	34.31	17.91	52.22	74.00	-21.78	peak
7	17115.000	30.50	21.91	52.41	74.00	-21.59	peak

Note:

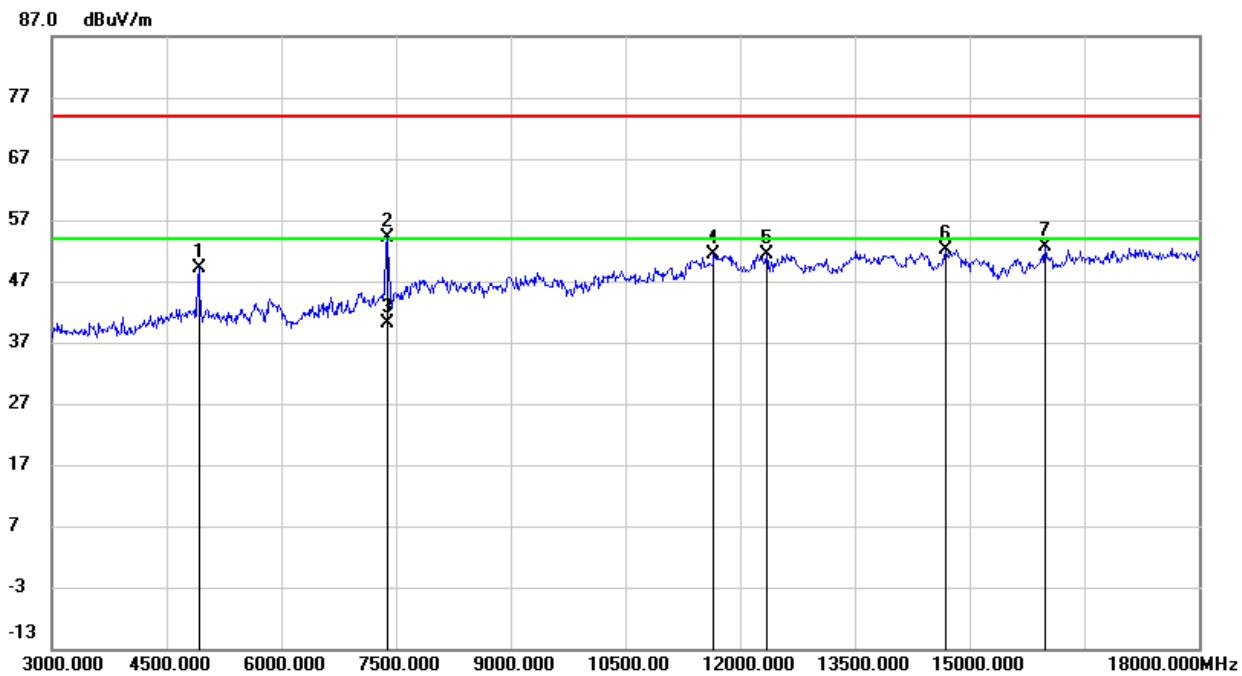
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	46.92	1.32	48.24	74.00	-25.76	peak
2	7305.000	49.52	7.14	56.66	74.00	-17.34	peak
3	7305.000	34.07	7.14	41.21	54.00	-12.79	AVG
4	11775.000	35.91	15.27	51.18	74.00	-22.82	peak
5	13890.000	34.09	17.53	51.62	74.00	-22.38	peak
6	14730.000	34.28	17.79	52.07	74.00	-21.93	peak
7	16860.000	31.20	21.22	52.42	74.00	-21.58	peak

Note:

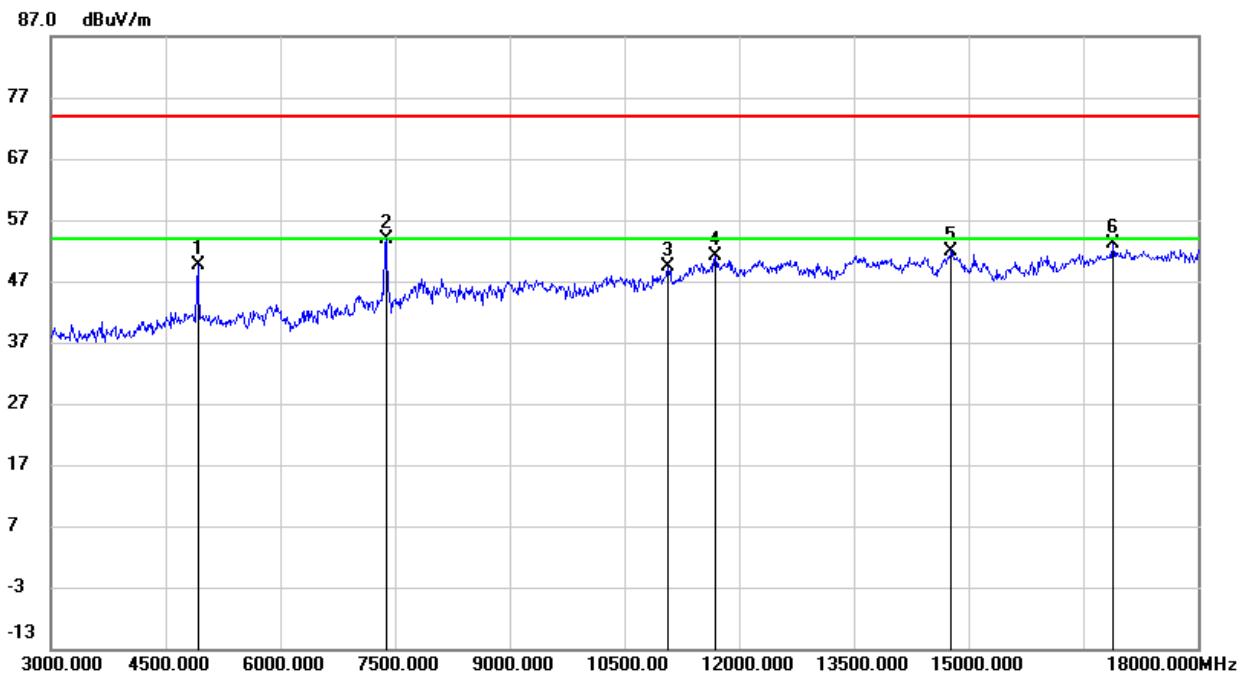
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	47.78	1.45	49.23	74.00	-24.77	peak
2	7380.000	46.43	7.79	54.22	74.00	-19.78	peak
3	7380.000	32.22	7.79	40.01	54.00	-13.99	AVG
4	11655.000	36.25	15.07	51.32	74.00	-22.68	peak
5	12345.000	35.46	16.03	51.49	74.00	-22.51	peak
6	14685.000	34.51	17.64	52.15	74.00	-21.85	peak
7	15990.000	34.17	18.39	52.56	74.00	-21.44	peak

Note:

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.26	1.45	49.71	74.00	-24.29	peak
2	7380.000	45.98	7.79	53.77	74.00	-20.23	peak
3	11070.000	35.73	13.65	49.38	74.00	-24.62	peak
4	11685.000	35.78	15.26	51.04	74.00	-22.96	peak
5	14775.000	34.05	17.95	52.00	74.00	-22.00	peak
6	16890.000	31.57	21.49	53.06	74.00	-20.94	peak

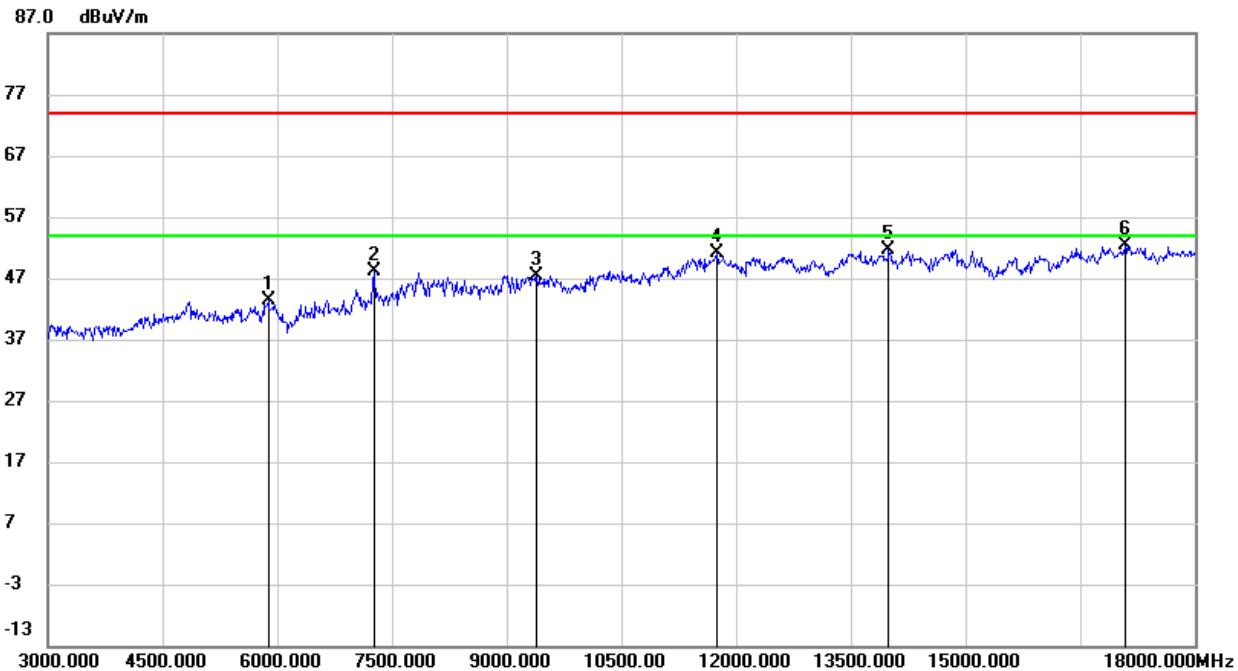
Note:

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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

8.3.4. 802.11n HT40 MIMO MODE

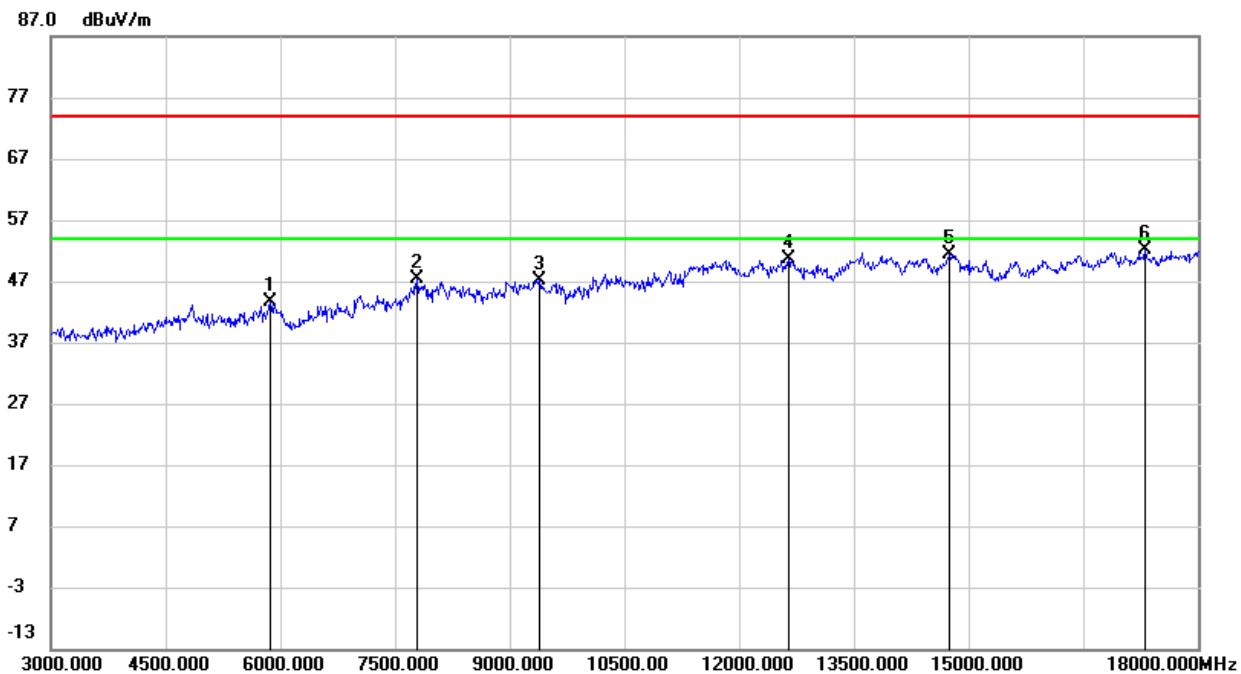
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5880.000	38.97	4.31	43.28	74.00	-30.72	peak
2	7260.000	40.87	7.21	48.08	74.00	-25.92	peak
3	9390.000	36.51	10.92	47.43	74.00	-26.57	peak
4	11745.000	35.89	15.30	51.19	74.00	-22.81	peak
5	13995.000	34.01	17.66	51.67	74.00	-22.33	peak
6	17085.000	30.63	21.80	52.43	74.00	-21.57	peak

Note:

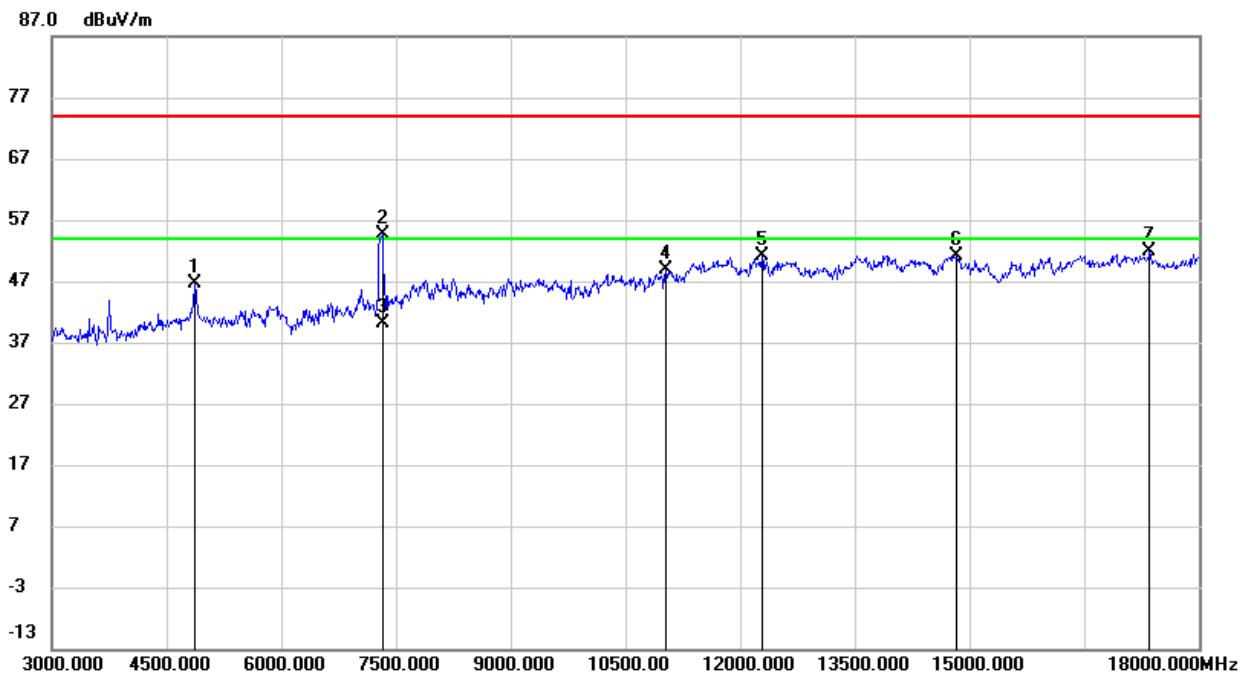
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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	5865.000	39.43	4.16	43.59	74.00	-30.41	peak
2	7785.000	38.21	9.21	47.42	74.00	-26.58	peak
3	9390.000	36.30	10.92	47.22	74.00	-26.78	peak
4	12645.000	34.95	15.71	50.66	74.00	-23.34	peak
5	14745.000	33.66	17.84	51.50	74.00	-22.50	peak
6	17310.000	29.50	22.54	52.04	74.00	-21.96	peak

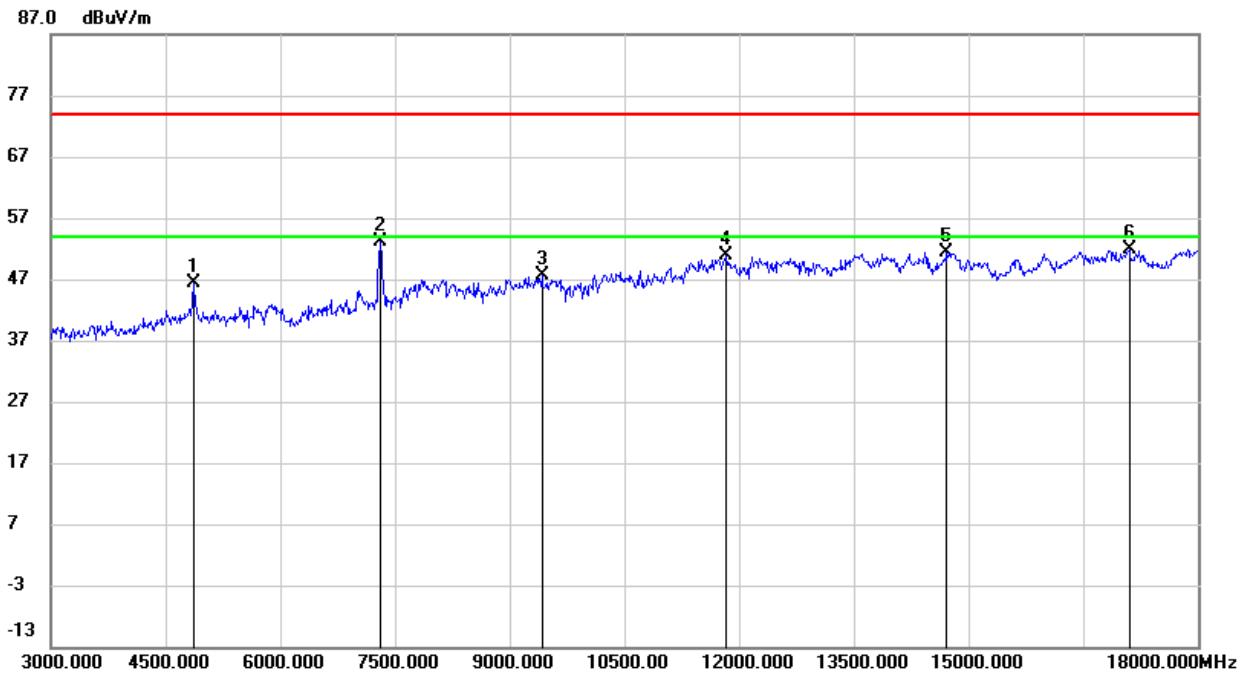
Note:

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, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	45.30	1.32	46.62	74.00	-27.38	peak
2	7320.000	47.25	7.28	54.53	74.00	-19.47	peak
3	7320.000	32.95	7.28	40.23	54.00	-13.77	AVG
4	11025.000	35.52	13.43	48.95	74.00	-25.05	peak
5	12285.000	34.93	16.08	51.01	74.00	-22.99	peak
6	14835.000	33.34	17.80	51.14	74.00	-22.86	peak
7	17355.000	29.61	22.20	51.81	74.00	-22.19	peak

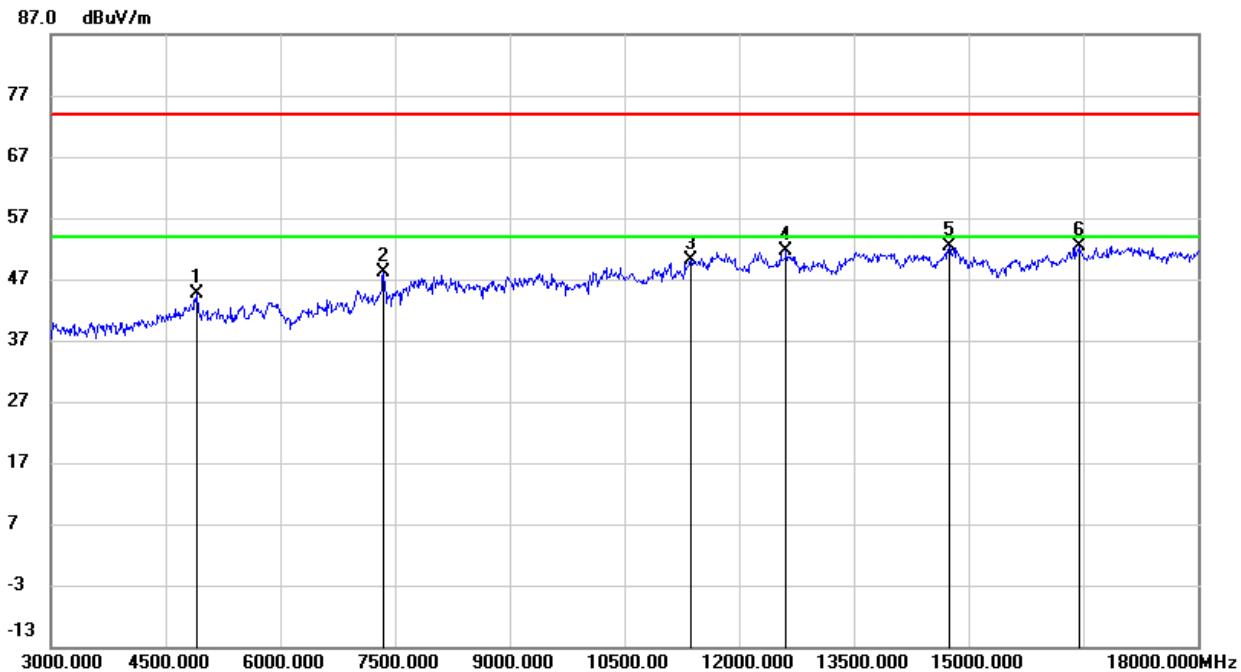
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses 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, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	45.09	1.33	46.42	74.00	-27.58	peak
2	7305.000	46.11	7.14	53.25	74.00	-20.75	peak
3	9420.000	36.79	10.88	47.67	74.00	-26.33	peak
4	11835.000	35.57	15.34	50.91	74.00	-23.09	peak
5	14715.000	33.59	17.74	51.33	74.00	-22.67	peak
6	17100.000	29.90	21.90	51.80	74.00	-22.20	peak

Note:

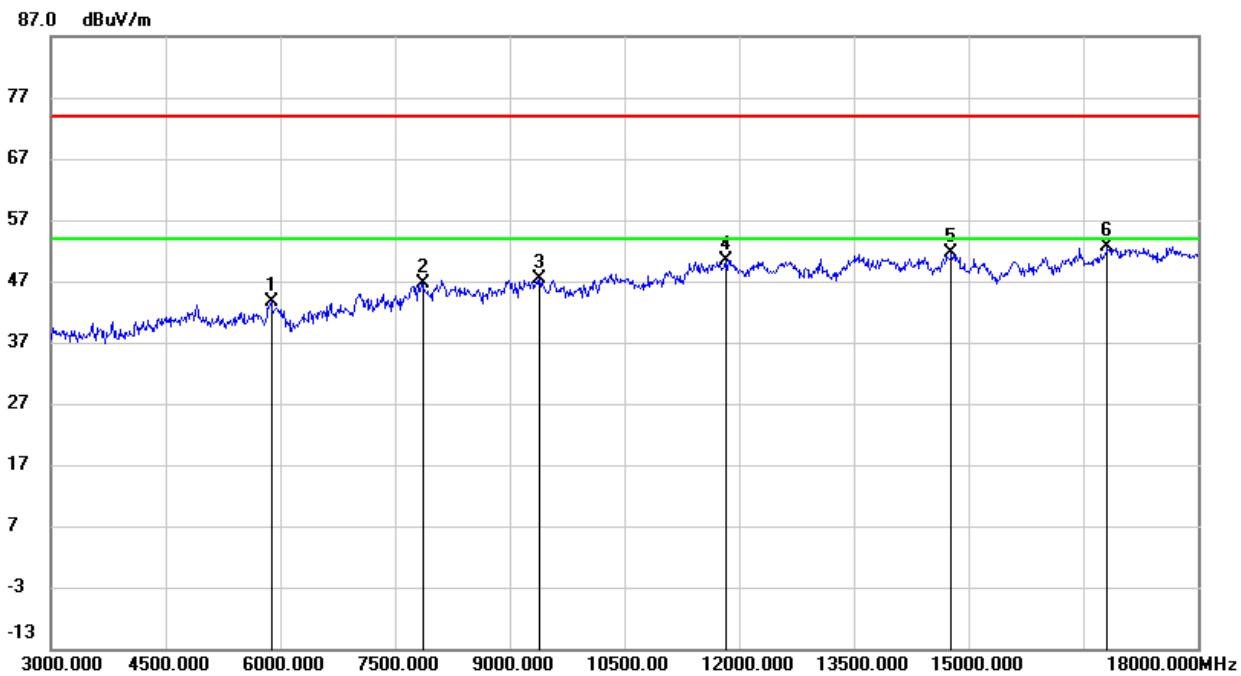
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	43.20	1.33	44.53	74.00	-29.47	peak
2	7350.000	40.56	7.53	48.09	74.00	-25.91	peak
3	11370.000	35.61	14.49	50.10	74.00	-23.90	peak
4	12615.000	35.85	15.75	51.60	74.00	-22.40	peak
5	14745.000	34.60	17.84	52.44	74.00	-21.56	peak
6	16440.000	32.69	19.68	52.37	74.00	-21.63	peak

Note:

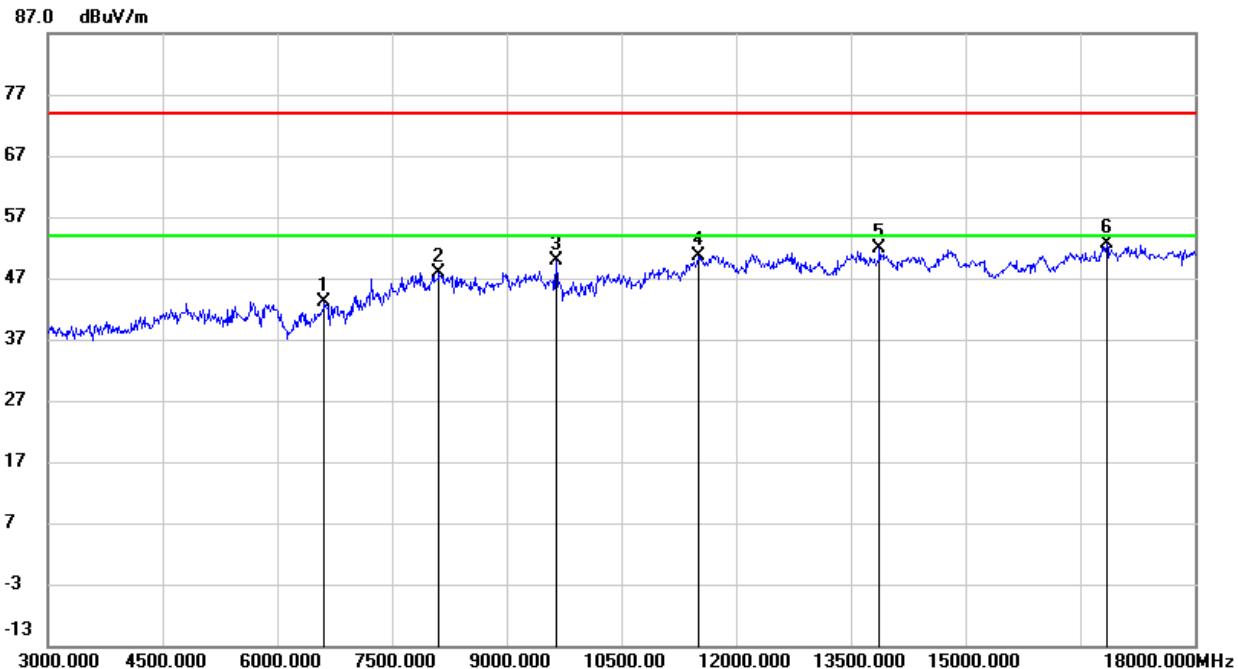
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5880.000	39.39	4.31	43.70	74.00	-30.30	peak
2	7860.000	37.60	9.05	46.65	74.00	-27.35	peak
3	9390.000	36.40	10.92	47.32	74.00	-26.68	peak
4	11820.000	35.20	15.29	50.49	74.00	-23.51	peak
5	14775.000	33.68	17.95	51.63	74.00	-22.37	peak
6	16815.000	31.87	20.84	52.71	74.00	-21.29	peak

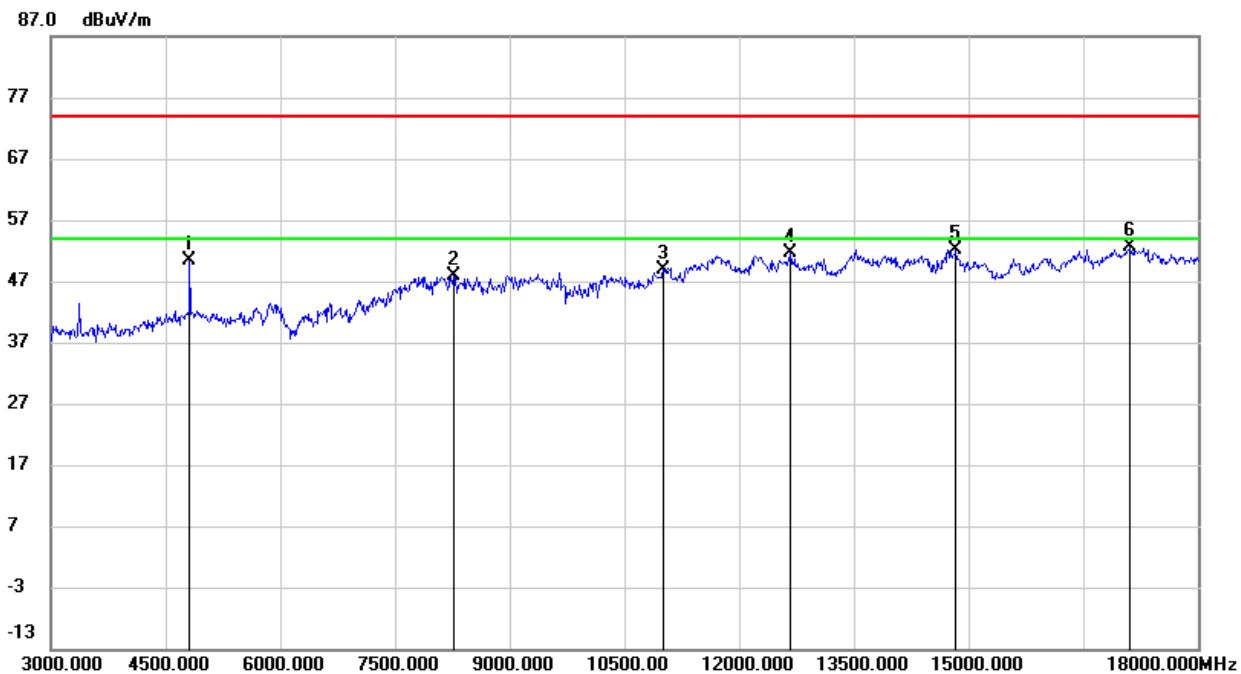
Note: 1. Peak Result = Reading Level + Correct Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Peak: Peak detector.
 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

INNO-LINK ANTENNA:**8.3.1. 802.11b SISO MODE****ANTENNA 1 TEST RESULTS (WORST CASE)****HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)**

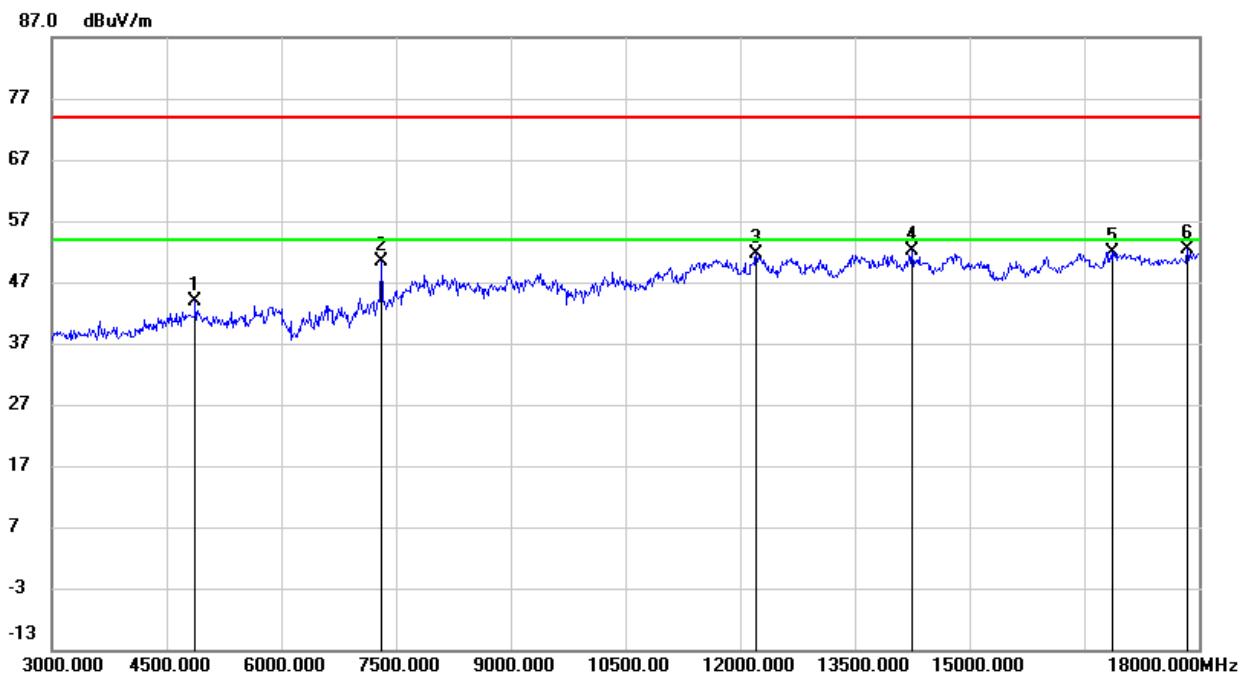
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6615.000	37.12	5.95	43.07	74.00	-30.93	peak
2	8115.000	37.82	10.13	47.95	74.00	-26.05	peak
3	9645.000	38.96	10.81	49.77	74.00	-24.23	peak
4	11505.000	36.01	14.66	50.67	74.00	-23.33	peak
5	13875.000	34.28	17.55	51.83	74.00	-22.17	peak
6	16845.000	31.51	21.10	52.61	74.00	-21.39	peak

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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.09	1.38	50.47	74.00	-23.53	peak
2	8265.000	38.10	9.73	47.83	74.00	-26.17	peak
3	11010.000	35.49	13.36	48.85	74.00	-25.15	peak
4	12675.000	35.95	15.66	51.61	74.00	-22.39	peak
5	14835.000	34.44	17.80	52.24	74.00	-21.76	peak
6	17115.000	30.68	21.91	52.59	74.00	-21.41	peak

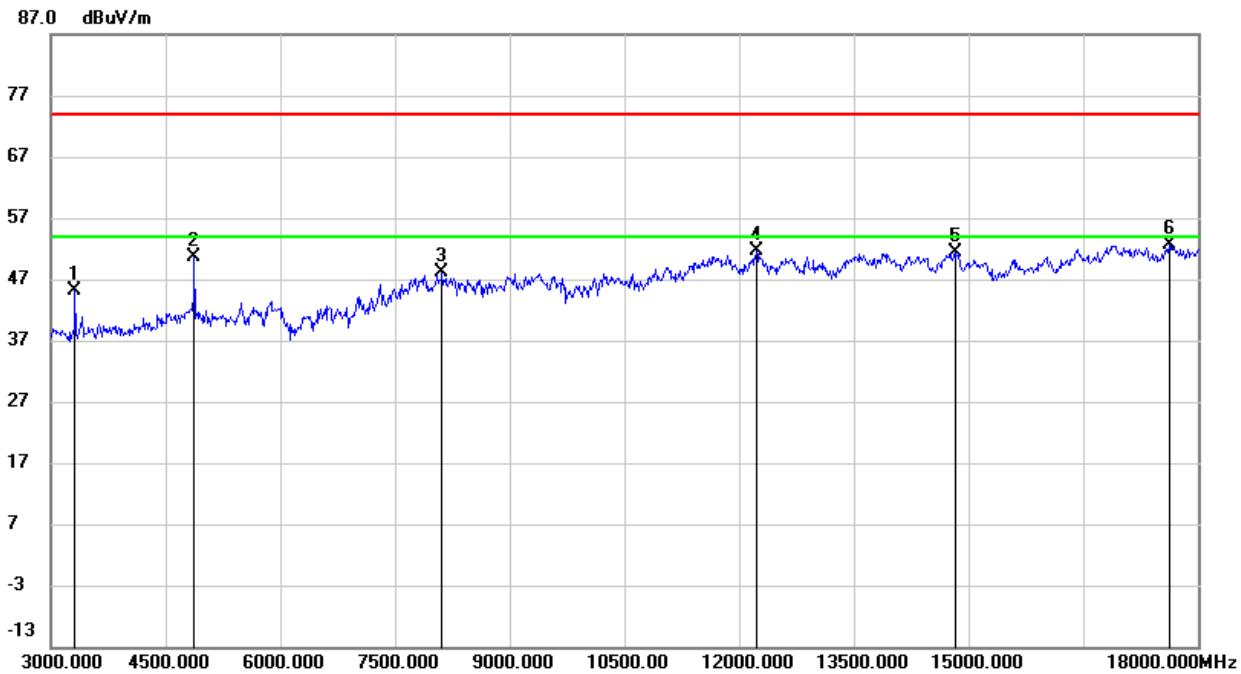
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	42.44	1.32	43.76	74.00	-30.24	peak
2	7305.000	43.31	7.14	50.45	74.00	-23.55	peak
3	12210.000	35.60	15.97	51.57	74.00	-22.43	peak
4	14250.000	34.26	17.96	52.22	74.00	-21.78	peak
5	16860.000	30.71	21.22	51.93	74.00	-22.07	peak
6	17850.000	28.33	23.97	52.30	74.00	-21.70	peak

Note:

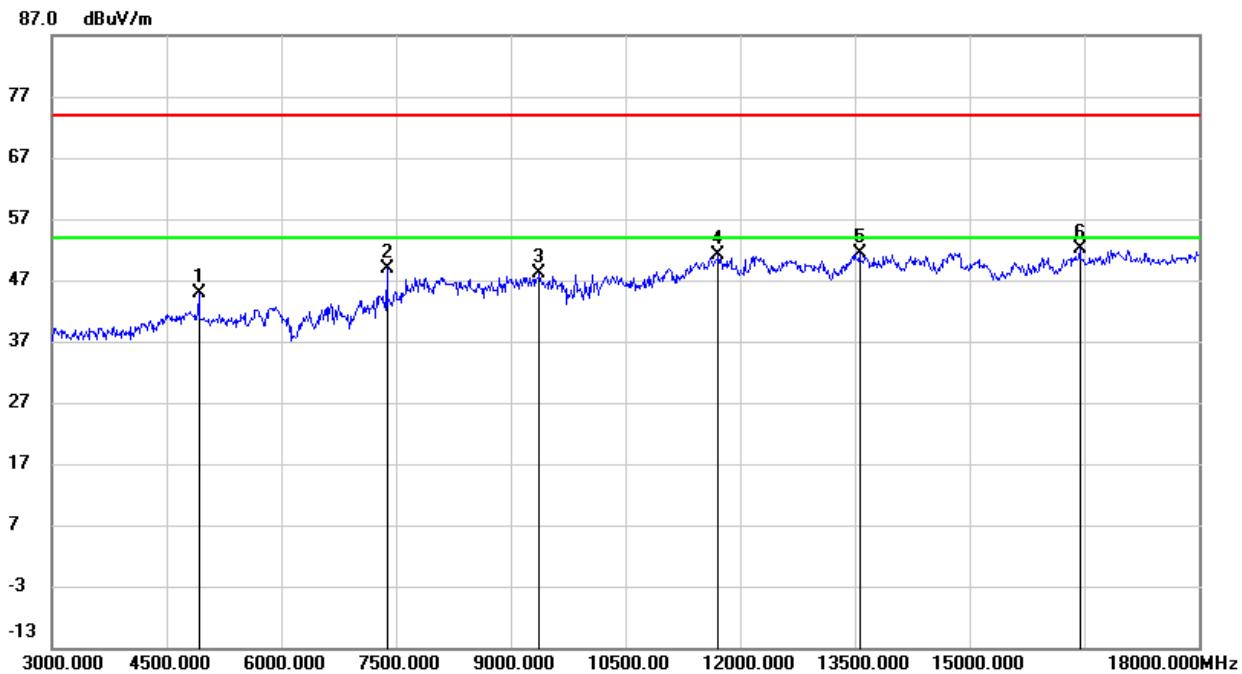
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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	3315.000	48.87	-3.65	45.22	74.00	-28.78	peak
2	4875.000	49.38	1.32	50.70	74.00	-23.30	peak
3	8115.000	38.09	10.13	48.22	74.00	-25.78	peak
4	12225.000	35.56	15.99	51.55	74.00	-22.45	peak
5	14820.000	33.59	17.91	51.50	74.00	-22.50	peak
6	17625.000	29.63	22.92	52.55	74.00	-21.45	peak

Note:

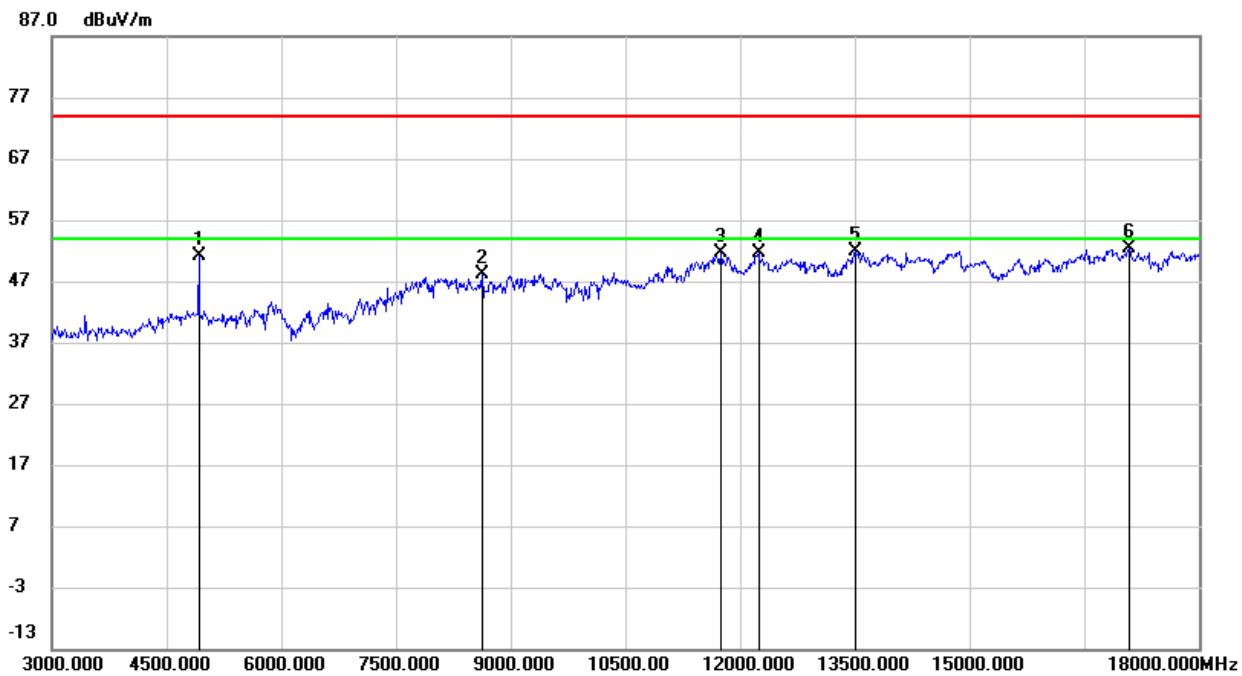
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	4920.000	43.52	1.45	44.97	74.00	-29.03	peak
2	7380.000	41.21	7.79	49.00	74.00	-25.00	peak
3	9375.000	37.38	10.83	48.21	74.00	-25.79	peak
4	11715.000	35.77	15.34	51.11	74.00	-22.89	peak
5	13560.000	34.17	17.15	51.32	74.00	-22.68	peak
6	16440.000	32.54	19.68	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 (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	49.75	1.45	51.20	74.00	-22.80	peak
2	8625.000	38.89	9.13	48.02	74.00	-25.98	peak
3	11745.000	36.22	15.30	51.52	74.00	-22.48	peak
4	12240.000	35.58	16.01	51.59	74.00	-22.41	peak
5	13515.000	34.66	17.19	51.85	74.00	-22.15	peak
6	17085.000	30.46	21.80	52.26	74.00	-21.74	peak

Note:

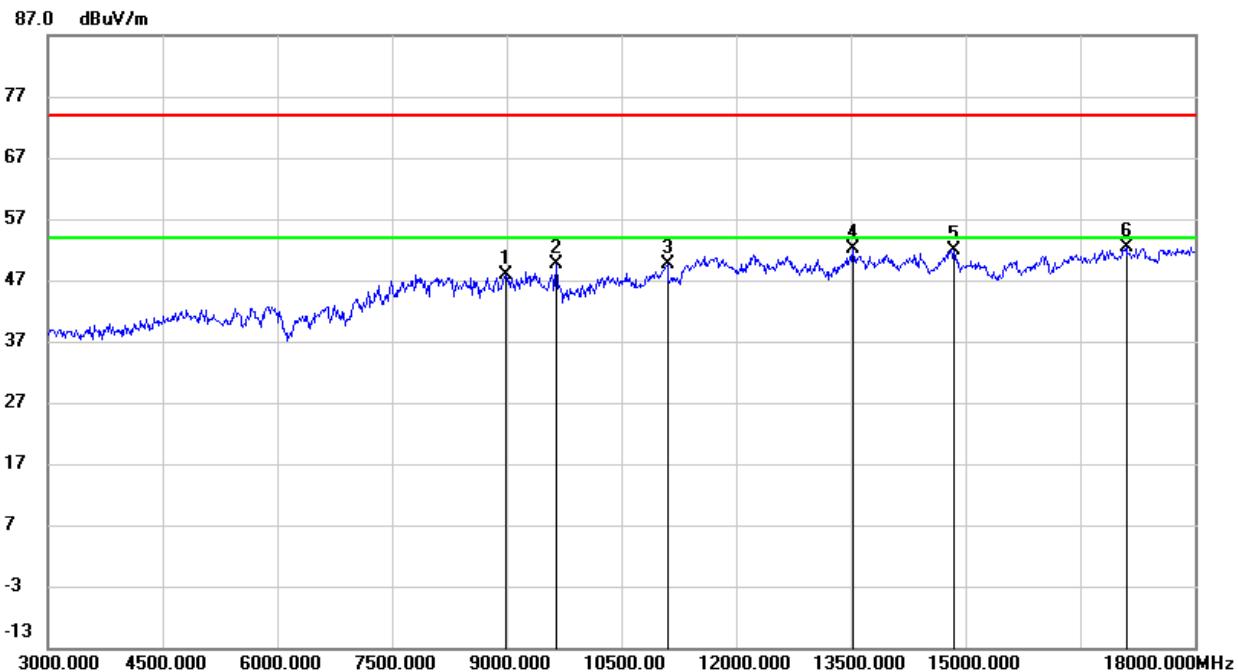
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

8.3.2. 802.11g SISO MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

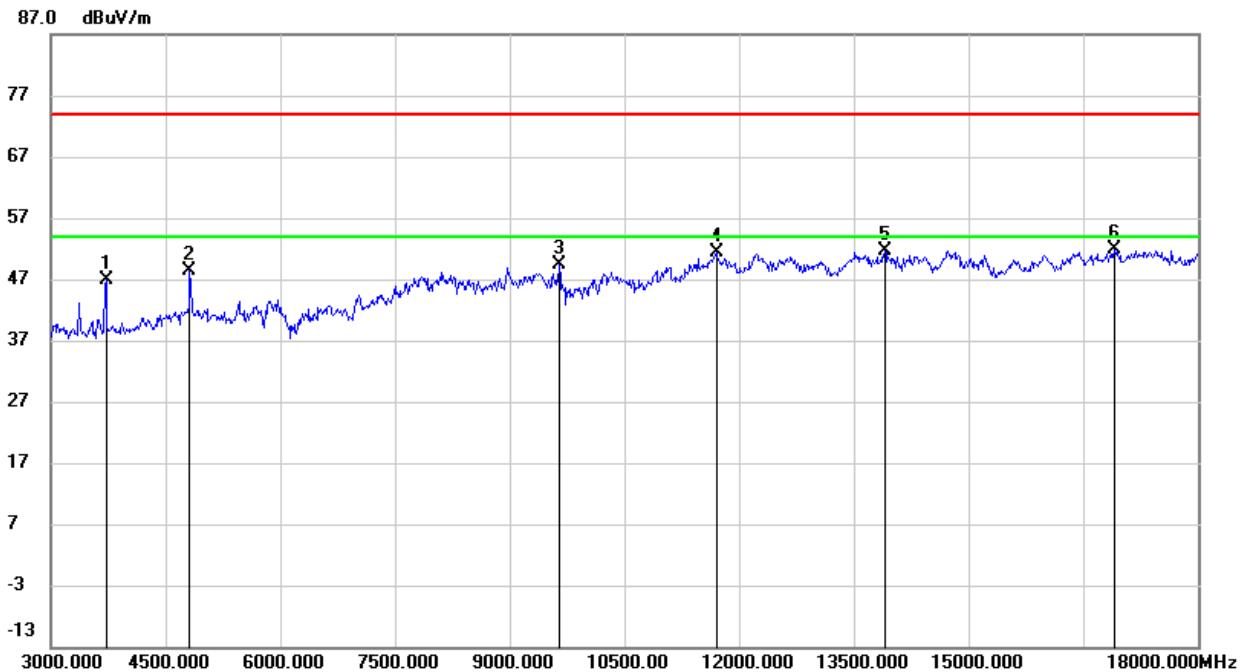
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8985.000	36.97	10.99	47.96	74.00	-26.04	peak
2	9645.000	38.73	10.81	49.54	74.00	-24.46	peak
3	11100.000	35.75	13.79	49.54	74.00	-24.46	peak
4	13530.000	34.84	17.19	52.03	74.00	-21.97	peak
5	14850.000	34.21	17.71	51.92	74.00	-22.08	peak
6	17100.000	30.58	21.90	52.48	74.00	-21.52	peak

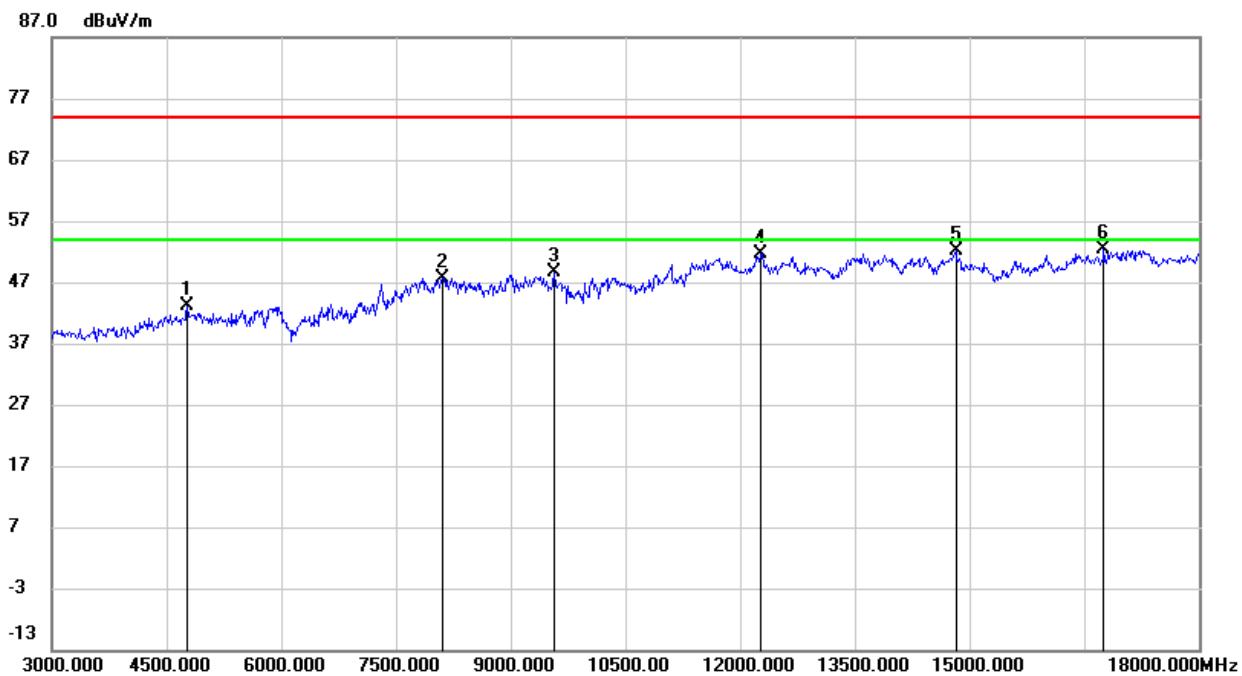
Note:

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	3720.000	49.73	-2.84	46.89	74.00	-27.11	peak
2	4815.000	47.02	1.38	48.40	74.00	-25.60	peak
3	9645.000	38.46	10.81	49.27	74.00	-24.73	peak
4	11700.000	36.06	15.35	51.41	74.00	-22.59	peak
5	13905.000	34.13	17.54	51.67	74.00	-22.33	peak
6	16905.000	30.45	21.55	52.00	74.00	-22.00	peak

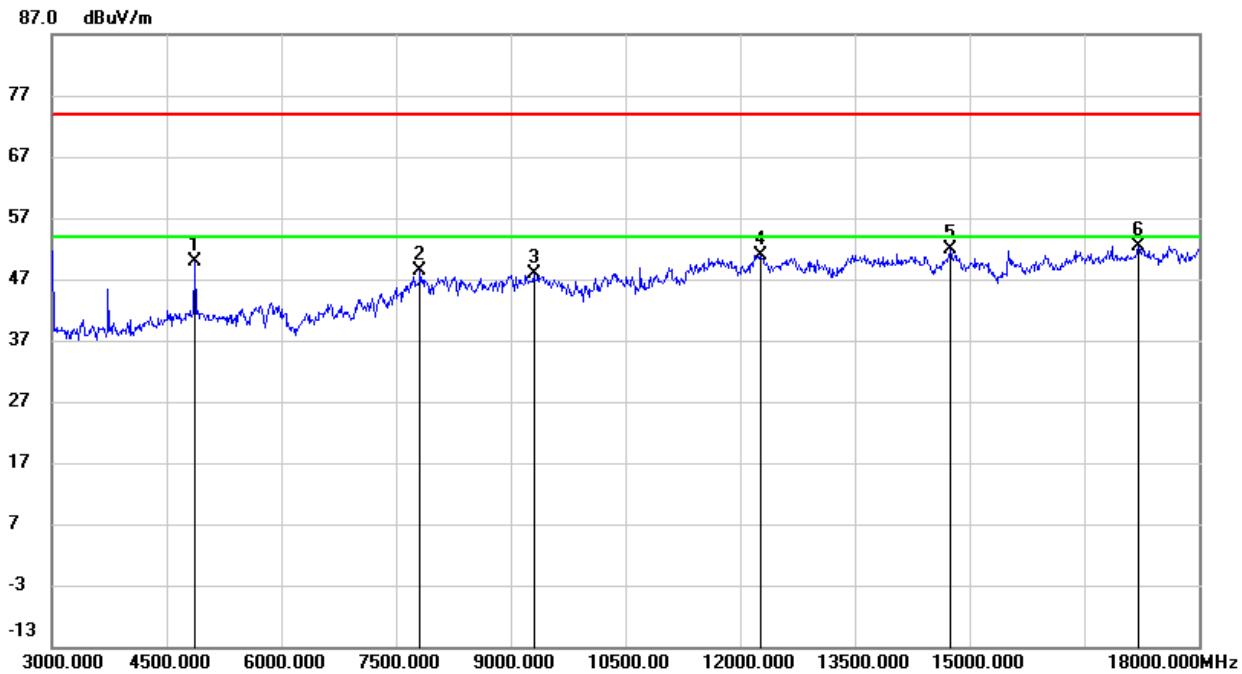
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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 (dB _{uV})	Correct (dB/m)	Result (dB _{uV/m})	Limit (dB _{uV/m})	Margin (dB)	Remark
1	4770.000	42.13	1.06	43.19	74.00	-30.81	peak
2	8115.000	37.60	10.13	47.73	74.00	-26.27	peak
3	9570.000	37.68	10.88	48.56	74.00	-25.44	peak
4	12270.000	35.67	16.04	51.71	74.00	-22.29	peak
5	14820.000	34.16	17.91	52.07	74.00	-21.93	peak
6	16755.000	31.91	20.37	52.28	74.00	-21.72	peak

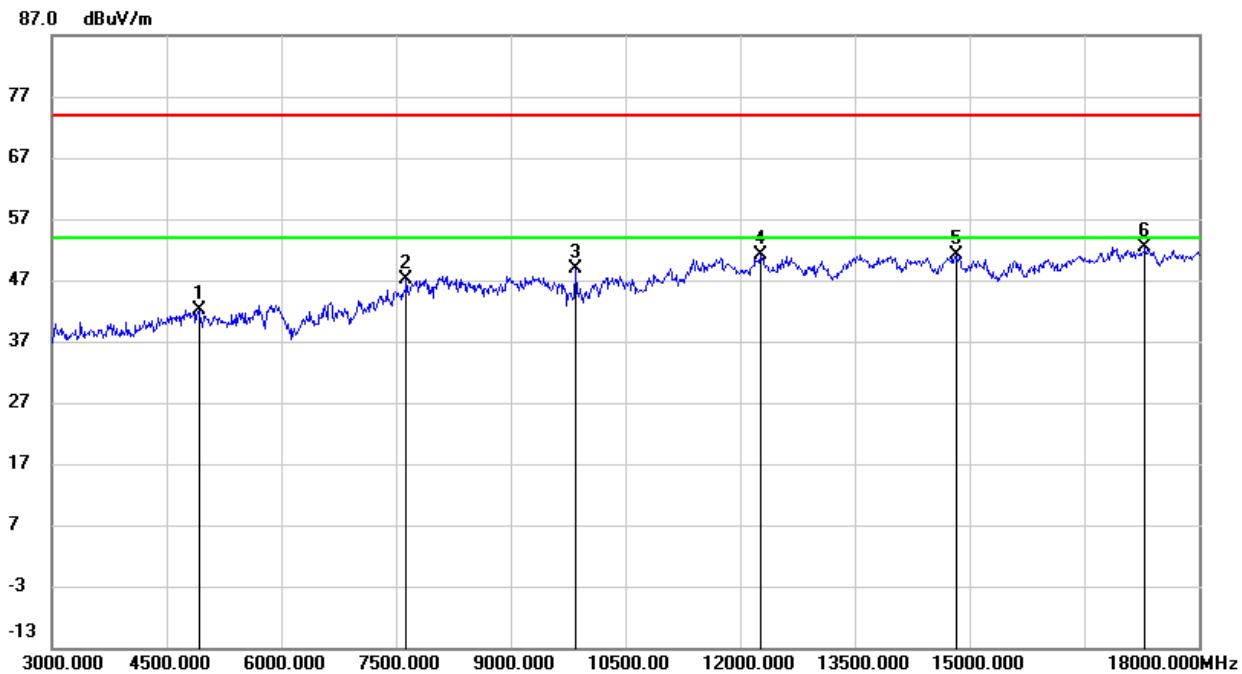
Note:

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.

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.46	1.32	49.78	74.00	-24.22	peak
2	7815.000	39.00	9.28	48.28	74.00	-25.72	peak
3	9300.000	37.58	10.40	47.98	74.00	-26.02	peak
4	12270.000	34.79	16.04	50.83	74.00	-23.17	peak
5	14745.000	33.95	17.84	51.79	74.00	-22.21	peak
6	17205.000	30.41	22.02	52.43	74.00	-21.57	peak

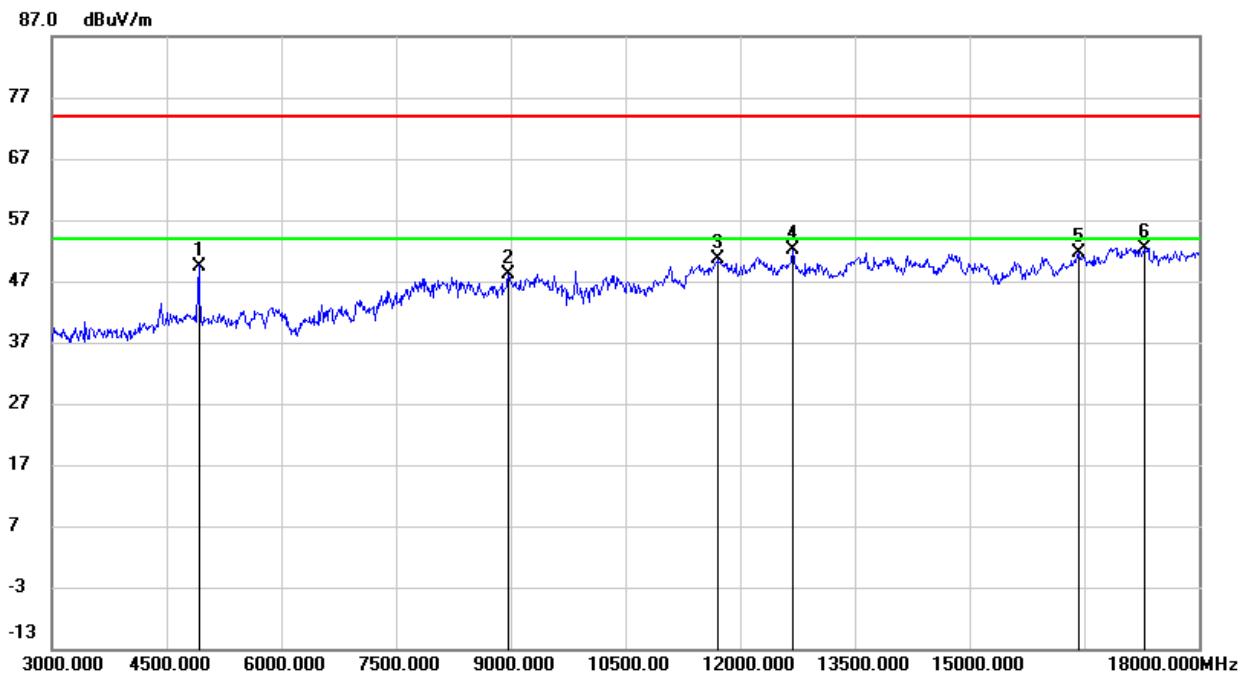
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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 (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	4920.000	40.67	1.45	42.12	74.00	-31.88	peak
2	7635.000	38.96	8.12	47.08	74.00	-26.92	peak
3	9840.000	38.43	10.48	48.91	74.00	-25.09	peak
4	12270.000	35.10	16.04	51.14	74.00	-22.86	peak
5	14820.000	33.34	17.91	51.25	74.00	-22.75	peak
6	17295.000	29.72	22.58	52.30	74.00	-21.70	peak

Note:

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

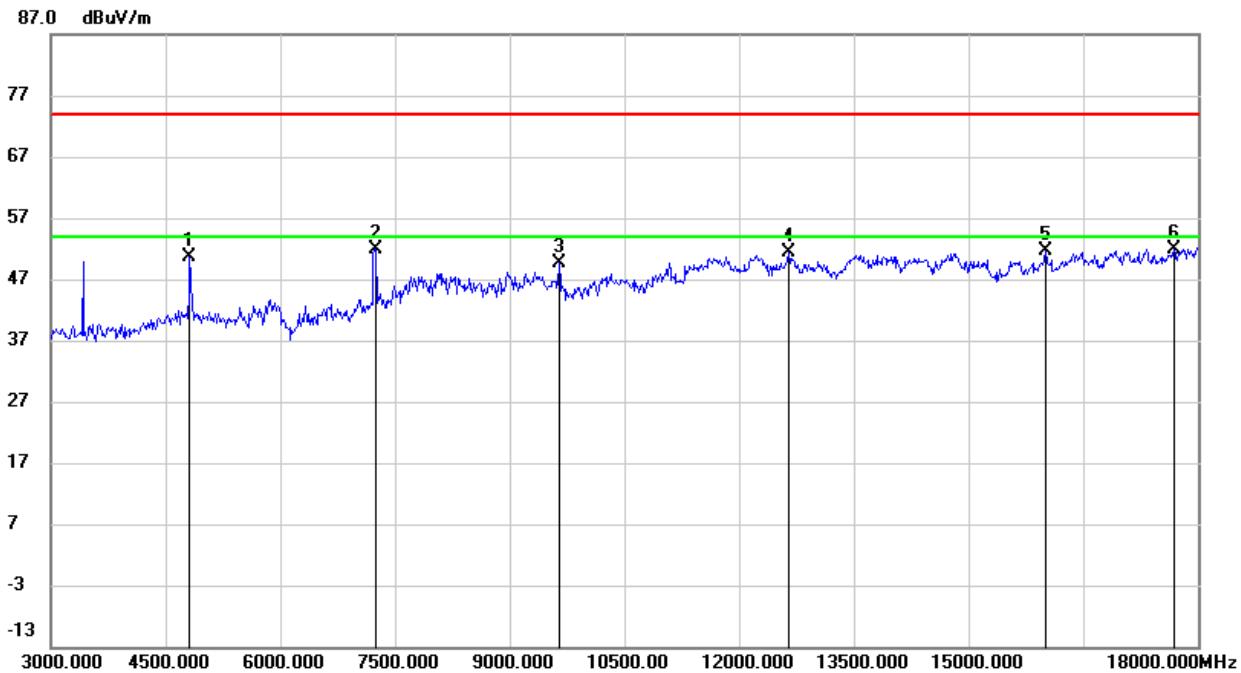
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	48.05	1.45	49.50	74.00	-24.50	peak
2	8970.000	37.38	10.70	48.08	74.00	-25.92	peak
3	11715.000	35.31	15.34	50.65	74.00	-23.35	peak
4	12690.000	36.41	15.64	52.05	74.00	-21.95	peak
5	16425.000	32.05	19.68	51.73	74.00	-22.27	peak
6	17280.000	29.96	22.48	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.

8.3.3. 802.11n HT20 MIMO MODE

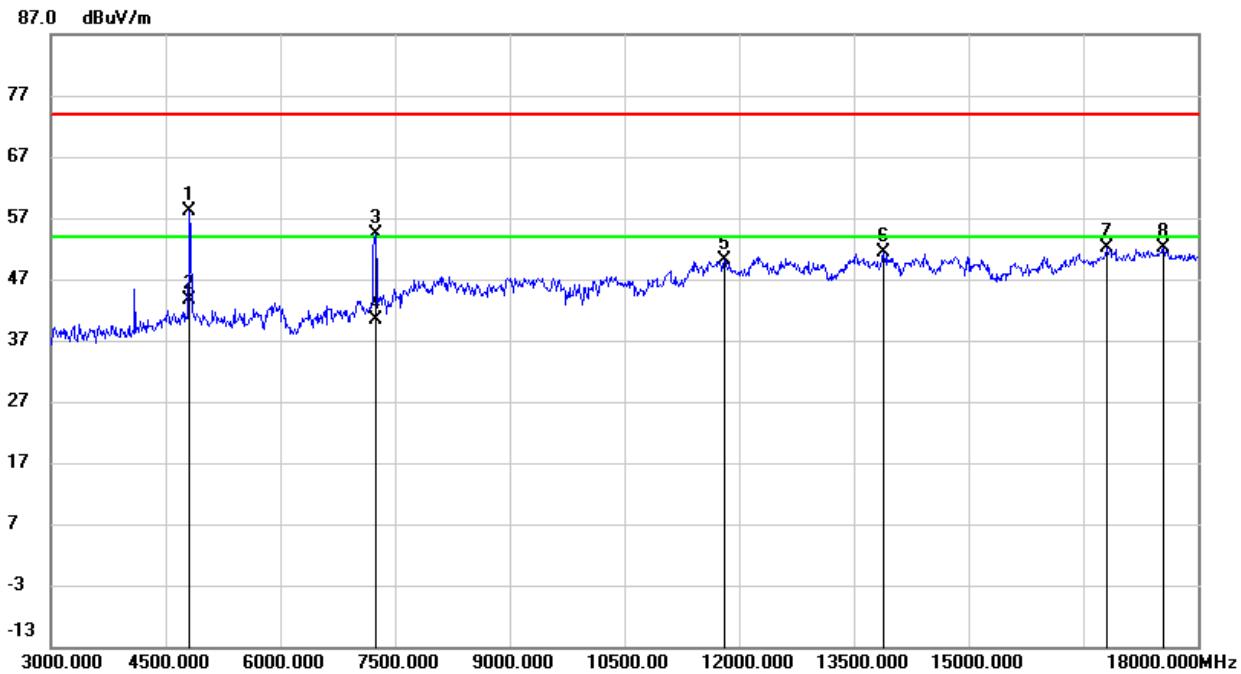
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.13	1.38	50.51	74.00	-23.49	peak
2	7245.000	44.60	7.25	51.85	74.00	-22.15	peak
3	9645.000	38.87	10.81	49.68	74.00	-24.32	peak
4	12645.000	35.70	15.71	51.41	74.00	-22.59	peak
5	16005.000	33.27	18.42	51.69	74.00	-22.31	peak
6	17685.000	28.60	23.36	51.96	74.00	-22.04	peak

Note:

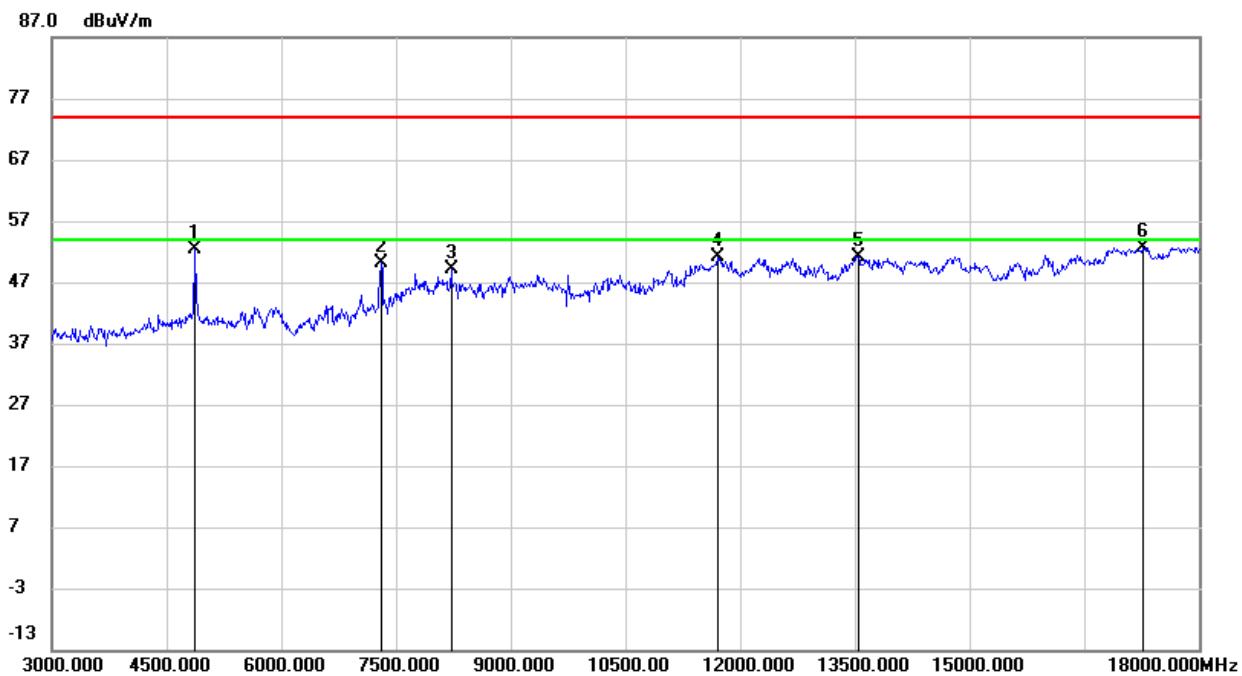
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	56.68	1.38	58.06	74.00	-15.94	peak
2	4815.000	42.25	1.38	43.63	54.00	-10.37	AVG
3	7245.000	47.23	7.25	54.48	74.00	-19.52	peak
4	7245.000	33.25	7.25	40.50	54.00	-13.50	AVG
5	11805.000	34.83	15.26	50.09	74.00	-23.91	peak
6	13890.000	33.90	17.53	51.43	74.00	-22.57	peak
7	16815.000	31.19	20.84	52.03	74.00	-21.97	peak
8	17550.000	29.82	22.38	52.20	74.00	-21.80	peak

Note:

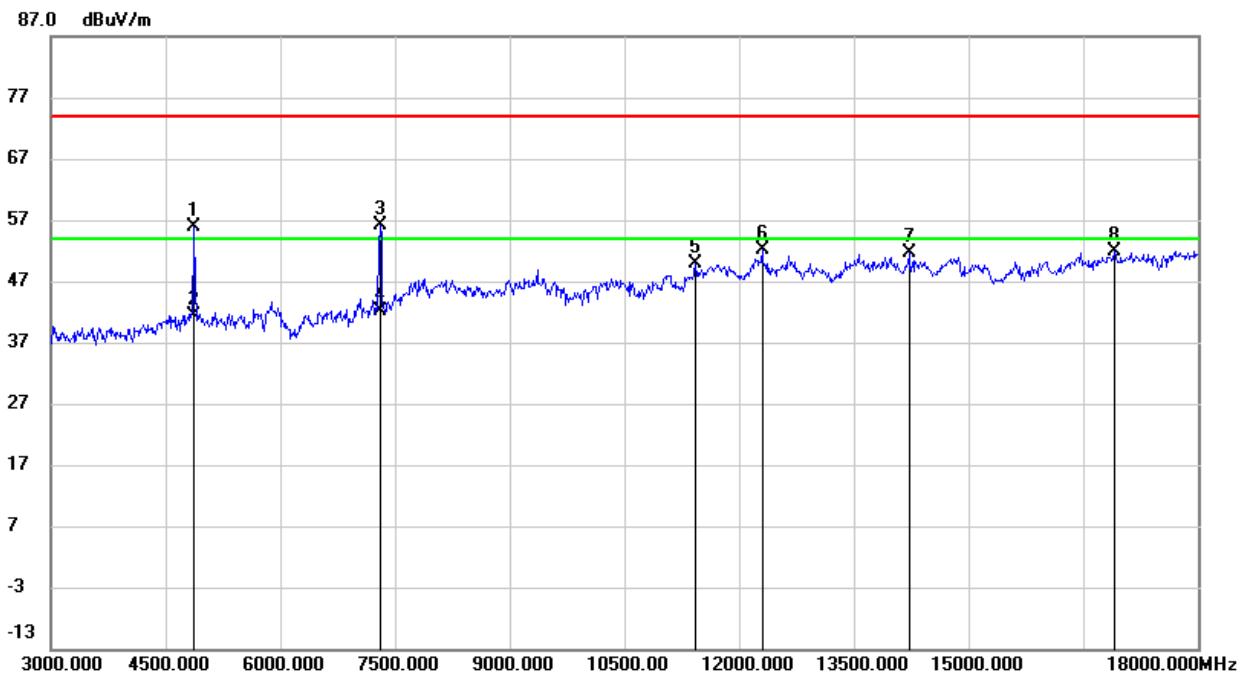
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.17	1.32	52.49	74.00	-21.51	peak
2	7305.000	43.07	7.14	50.21	74.00	-23.79	peak
3	8220.000	39.35	9.79	49.14	74.00	-24.86	peak
4	11700.000	35.66	15.35	51.01	74.00	-22.99	peak
5	13545.000	34.07	17.16	51.23	74.00	-22.77	peak
6	17265.000	30.36	22.39	52.75	74.00	-21.25	peak

Note:

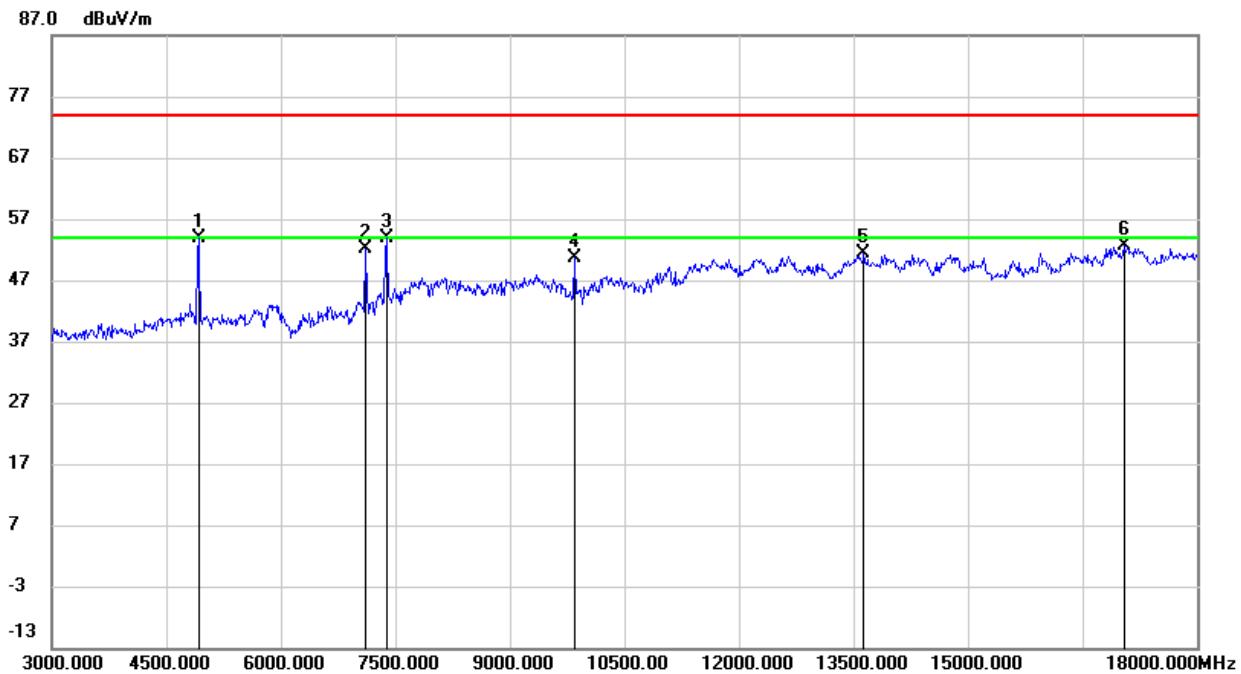
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	54.47	1.32	55.79	74.00	-18.21	peak
2	4875.000	39.99	1.32	41.31	54.00	-12.69	AVG
3	7305.000	49.11	7.14	56.25	74.00	-17.75	peak
4	7305.000	35.11	7.14	42.25	54.00	-11.75	AVG
5	11430.000	35.14	14.72	49.86	74.00	-24.14	peak
6	12300.000	35.97	16.09	52.06	74.00	-21.94	peak
7	14220.000	33.68	17.86	51.54	74.00	-22.46	peak
8	16905.000	30.33	21.55	51.88	74.00	-22.12	peak

Note:

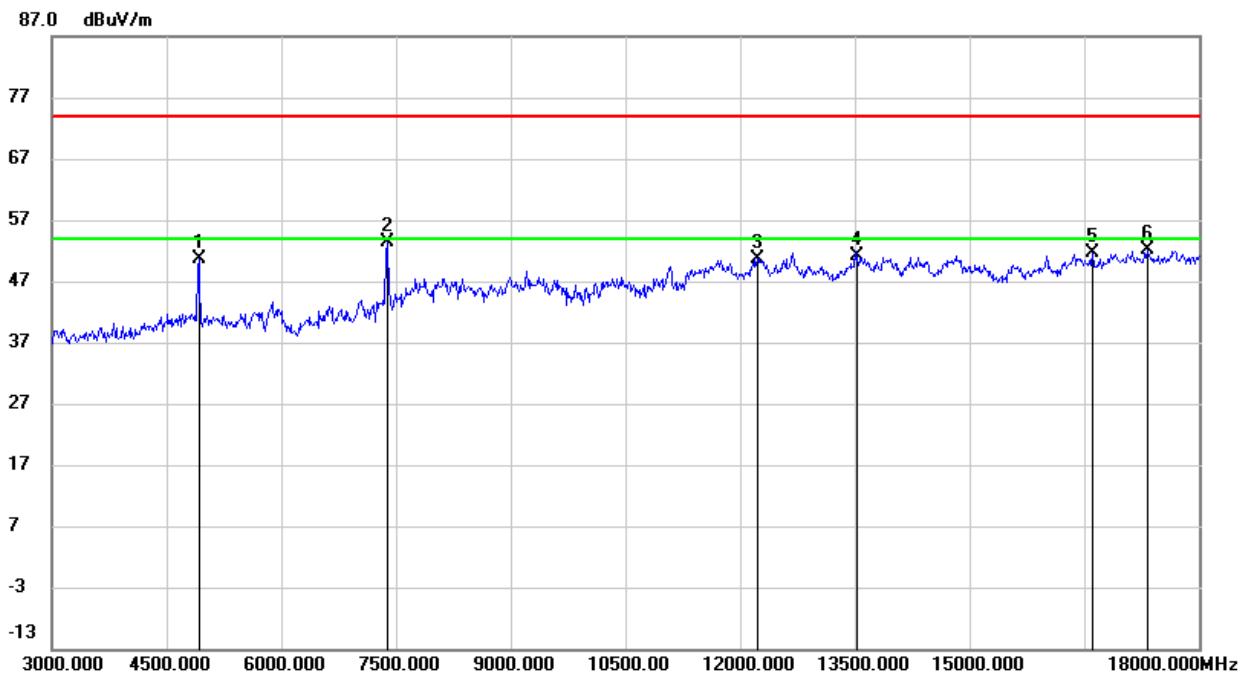
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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 (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	4920.000	52.46	1.45	53.91	74.00	-20.09	peak
2	7110.000	44.43	7.64	52.07	74.00	-21.93	peak
3	7380.000	46.03	7.79	53.82	74.00	-20.18	peak
4	9840.000	40.25	10.48	50.73	74.00	-23.27	peak
5	13635.000	34.21	17.28	51.49	74.00	-22.51	peak
6	17040.000	31.18	21.50	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 (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	49.28	1.45	50.73	74.00	-23.27	peak
2	7380.000	45.48	7.79	53.27	74.00	-20.73	peak
3	12225.000	34.67	15.99	50.66	74.00	-23.34	peak
4	13530.000	33.93	17.19	51.12	74.00	-22.88	peak
5	16605.000	31.62	20.00	51.62	74.00	-22.38	peak
6	17325.000	29.67	22.42	52.09	74.00	-21.91	peak

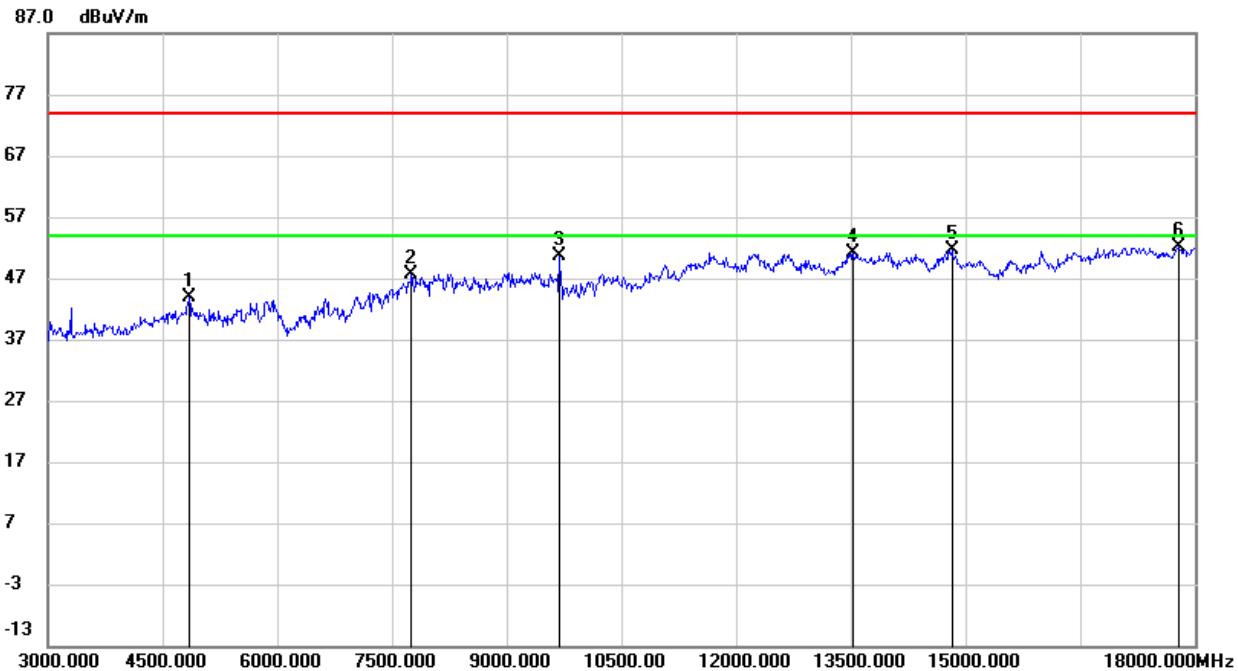
Note:

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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

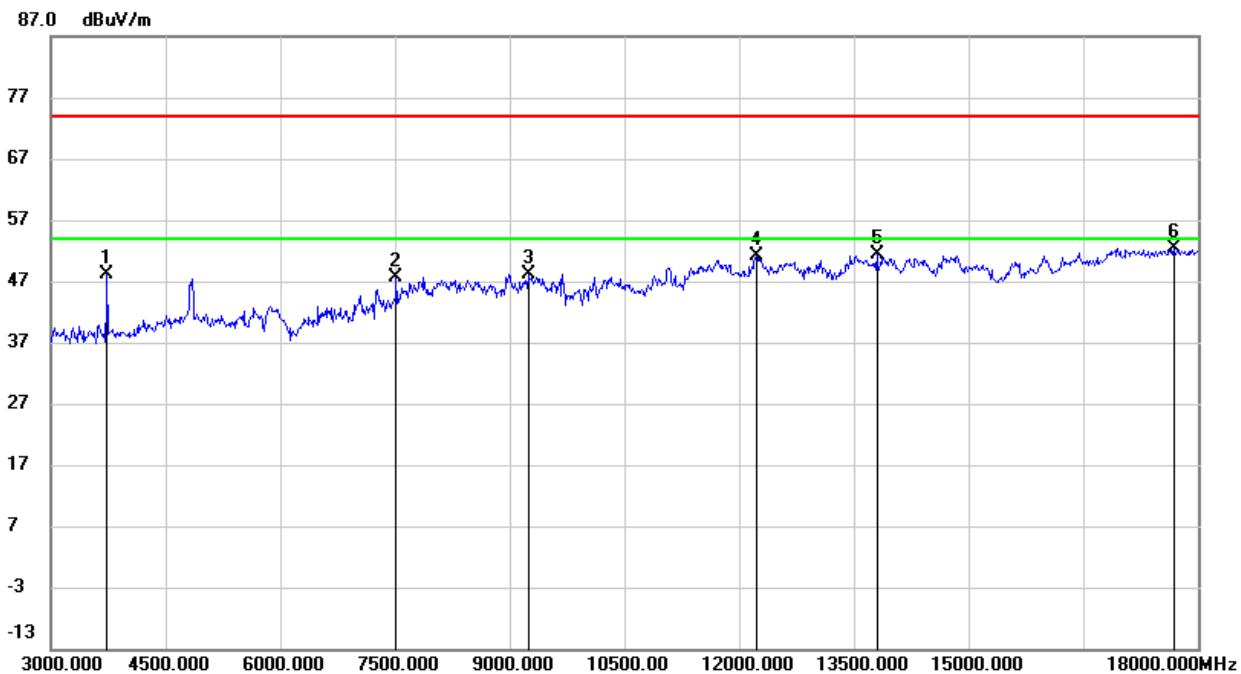
8.3.4. 802.11n HT40 MIMO MODE

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



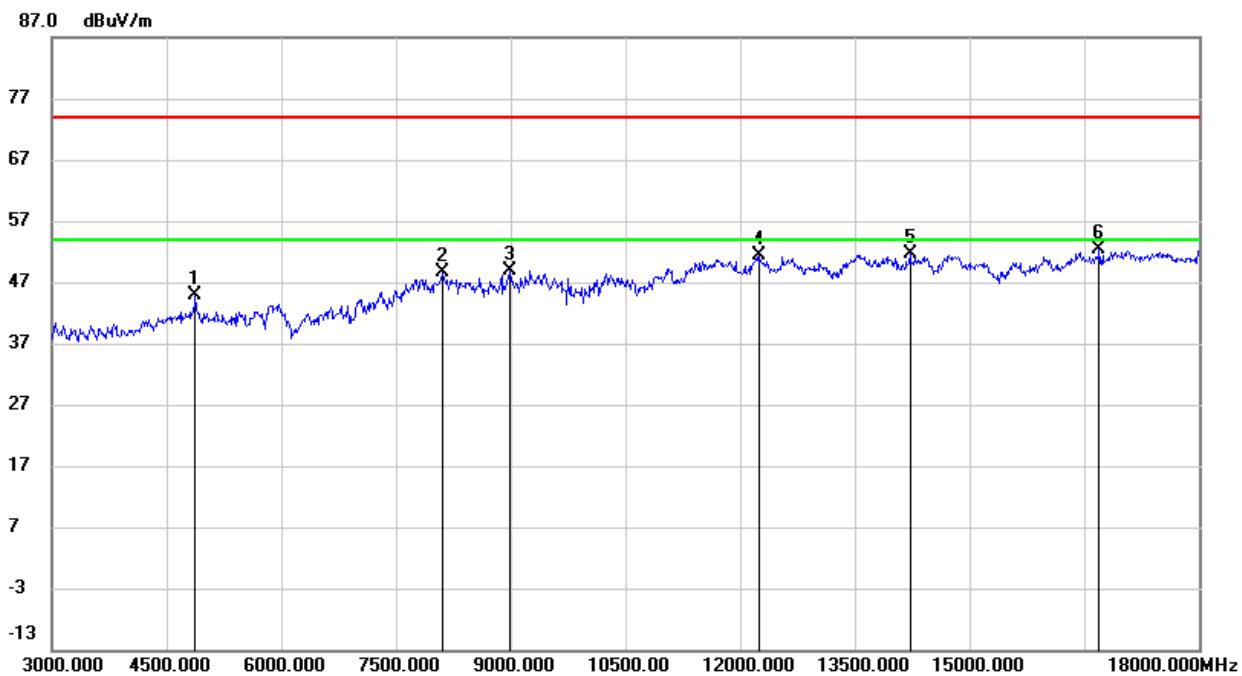
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	42.52	1.35	43.87	74.00	-30.13	peak
2	7755.000	38.64	8.94	47.58	74.00	-26.42	peak
3	9690.000	40.13	10.57	50.70	74.00	-23.30	peak
4	13530.000	34.01	17.19	51.20	74.00	-22.80	peak
5	14820.000	33.70	17.91	51.61	74.00	-22.39	peak
6	17790.000	28.04	23.99	52.03	74.00	-21.97	peak

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

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3735.000	50.96	-2.77	48.19	74.00	-25.81	peak
2	7515.000	39.31	8.32	47.63	74.00	-26.37	peak
3	9240.000	38.06	10.10	48.16	74.00	-25.84	peak
4	12225.000	35.20	15.99	51.19	74.00	-22.81	peak
5	13800.000	33.69	17.61	51.30	74.00	-22.70	peak
6	17685.000	29.08	23.36	52.44	74.00	-21.56	peak

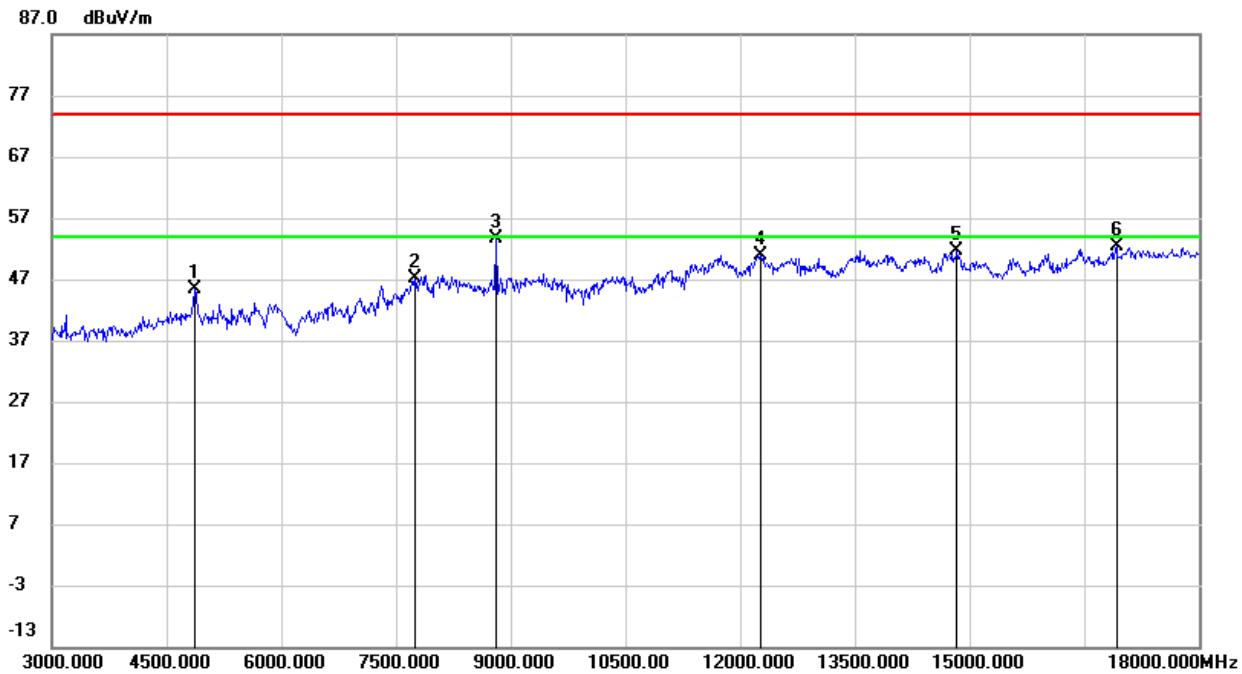
Note: 1. Peak Result = Reading Level + Correct Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Peak: Peak detector.
 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

No.	Frequency (MHz)	Reading (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	4875.000	43.50	1.32	44.82	74.00	-29.18	peak
2	8115.000	38.39	10.13	48.52	74.00	-25.48	peak
3	8985.000	37.89	10.99	48.88	74.00	-25.12	peak
4	12255.000	35.26	16.03	51.29	74.00	-22.71	peak
5	14220.000	33.84	17.86	51.70	74.00	-22.30	peak
6	16695.000	32.47	19.95	52.42	74.00	-21.58	peak

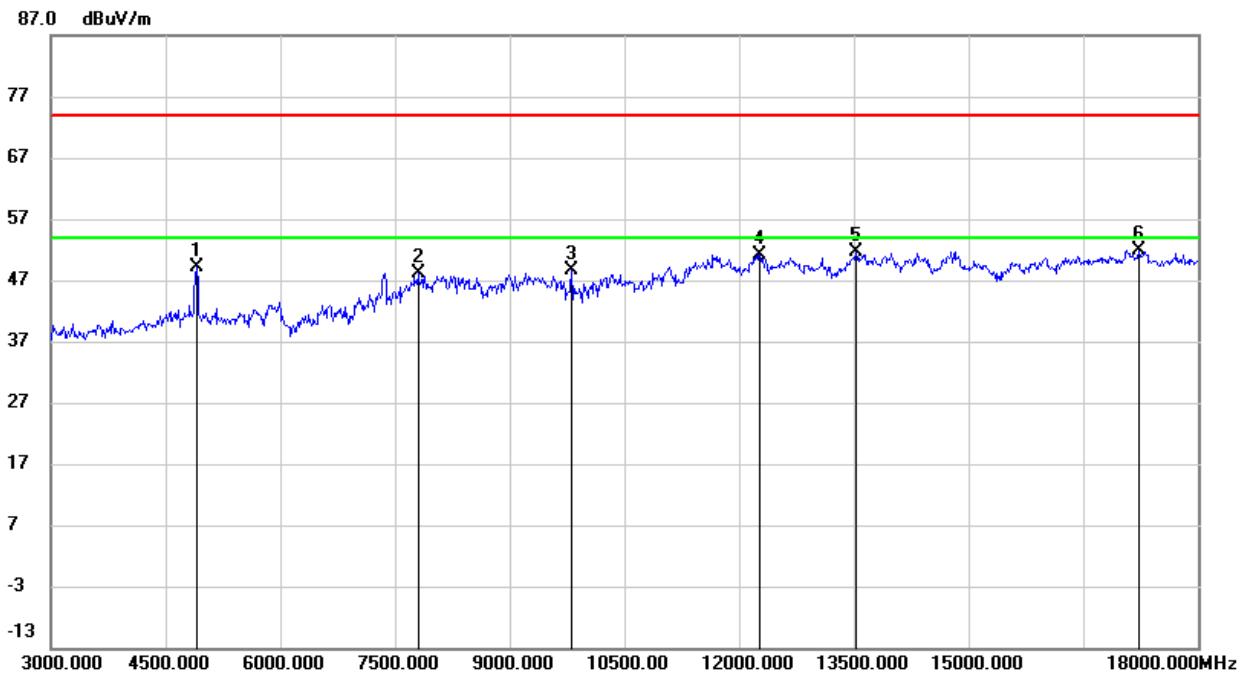
Note:

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 (MID CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	44.11	1.33	45.44	74.00	-28.56	peak
2	7755.000	38.29	8.94	47.23	74.00	-26.77	peak
3	8805.000	44.29	9.25	53.54	74.00	-20.46	peak
4	12270.000	34.90	16.04	50.94	74.00	-23.06	peak
5	14835.000	33.84	17.80	51.64	74.00	-22.36	peak
6	16920.000	30.81	21.51	52.32	74.00	-21.68	peak

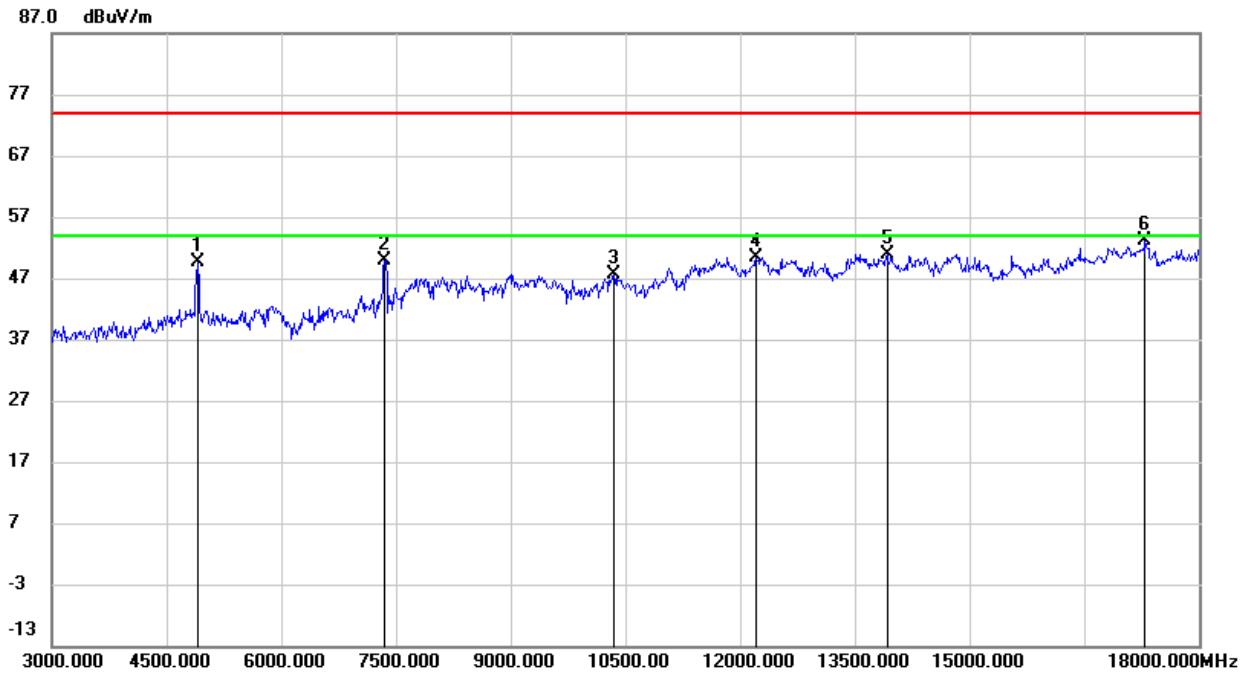
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
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 (dB _{UV})	Correct (dB/m)	Result (dB _{UV} /m)	Limit (dB _{UV} /m)	Margin (dB)	Remark
1	4905.000	47.75	1.33	49.08	74.00	-24.92	peak
2	7800.000	38.78	9.35	48.13	74.00	-25.87	peak
3	9810.000	38.54	10.17	48.71	74.00	-25.29	peak
4	12270.000	35.18	16.04	51.22	74.00	-22.78	peak
5	13530.000	34.47	17.19	51.66	74.00	-22.34	peak
6	17235.000	29.72	22.21	51.93	74.00	-22.07	peak

Note:

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

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	48.26	1.33	49.59	74.00	-24.41	peak
2	7350.000	42.40	7.53	49.93	74.00	-24.07	peak
3	10350.000	35.71	12.02	47.73	74.00	-26.27	peak
4	12210.000	34.51	15.97	50.48	74.00	-23.52	peak
5	13920.000	33.42	17.55	50.97	74.00	-23.03	peak
6	17295.000	30.43	22.58	53.01	74.00	-20.99	peak

Note:

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

Note: Both the two antennas had been tested, but only the worst data was recorded in the report.

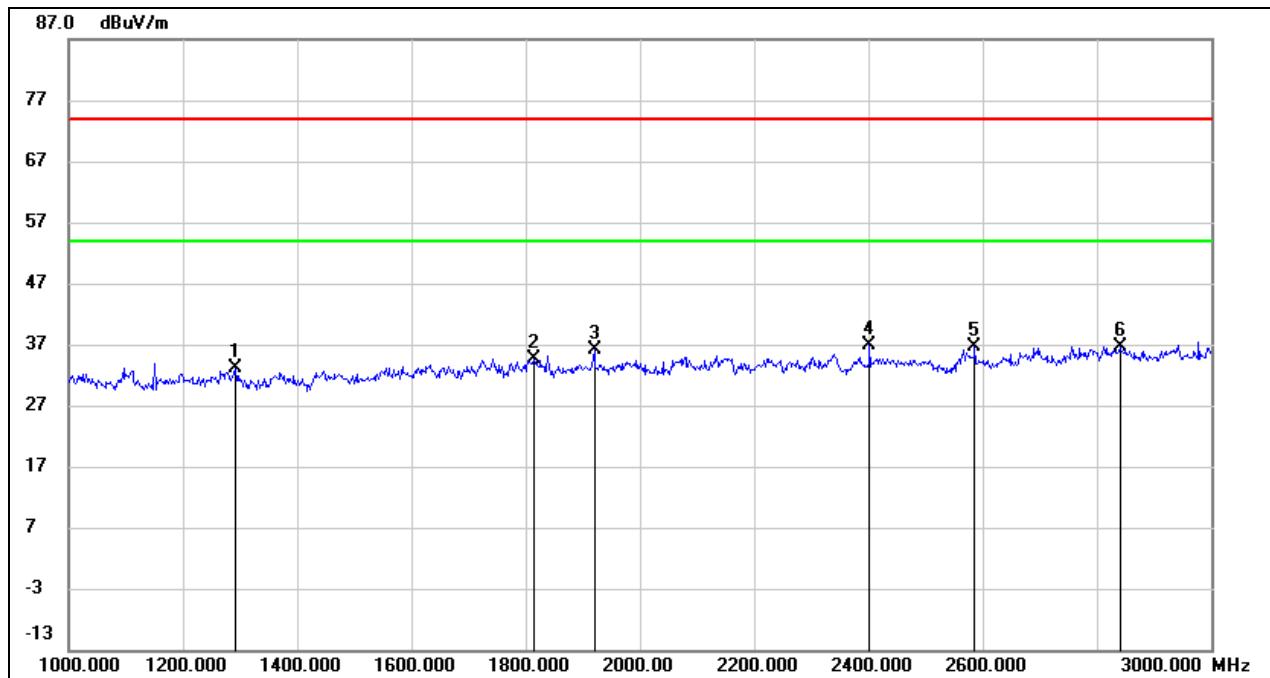
8.5. SPURIOUS EMISSIONS FOR SIMULTANEOUS TRANSMISSION

KTC ANTENNA:

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

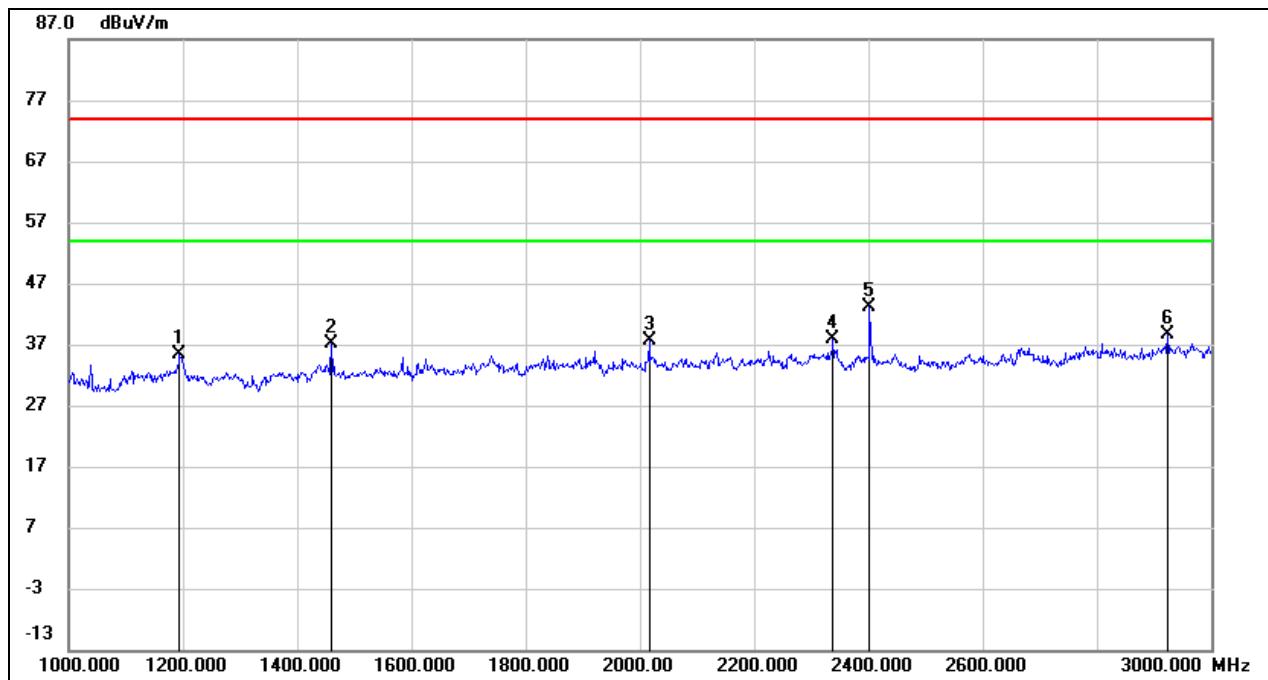
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

1-3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1292.000	45.87	-12.85	33.02	74.00	-40.98	peak
2	1814.000	44.80	-10.06	34.74	74.00	-39.26	peak
3	1920.000	46.15	-10.13	36.02	74.00	-37.98	peak
4	2402.000	45.26	-8.39	36.87	74.00	-37.13	peak
5	2586.000	44.50	-7.92	36.58	74.00	-37.42	peak
6	2840.000	42.91	-6.36	36.55	74.00	-37.45	peak

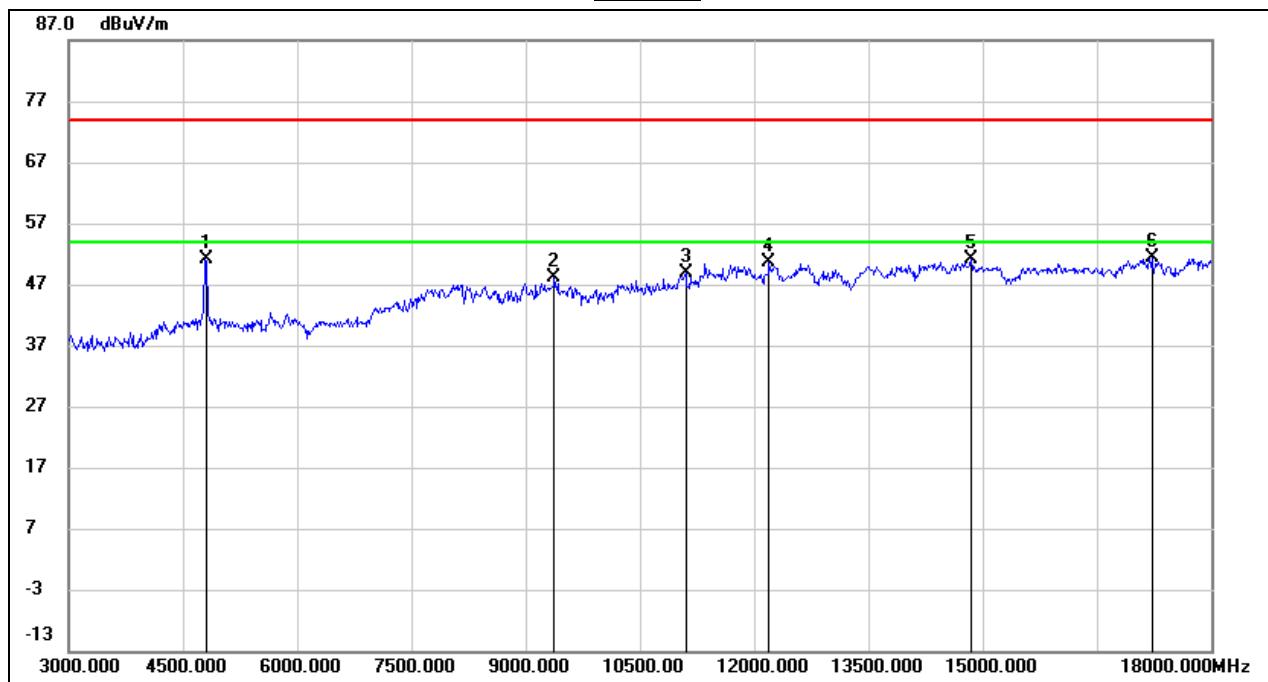
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter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

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)**1-3GHz**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	48.31	-13.02	35.29	74.00	-38.71	peak
2	1460.000	49.58	-12.42	37.16	74.00	-36.84	peak
3	2016.000	47.60	-10.09	37.51	74.00	-36.49	peak
4	2338.000	46.50	-8.60	37.90	74.00	-36.10	peak
5	2402.000	51.54	-8.39	43.15	74.00	-30.85	peak
6	2924.000	44.55	-5.95	38.60	74.00	-35.40	peak

Note:

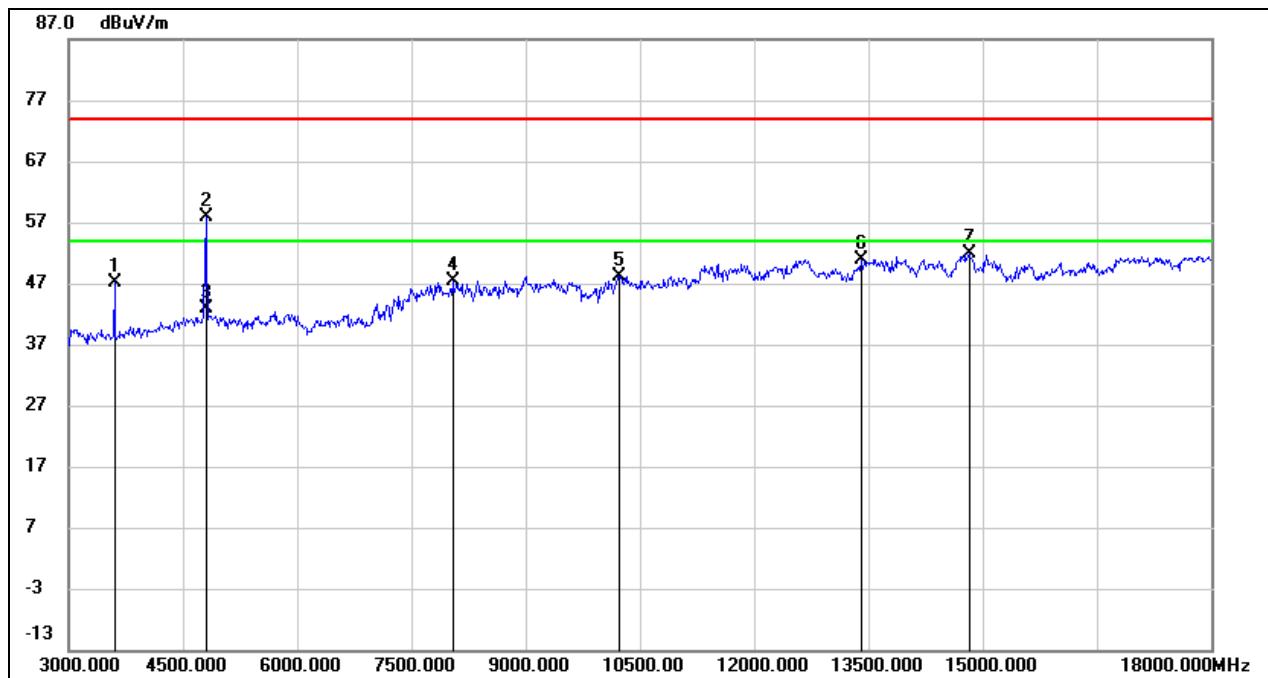
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)**3-18GHz**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.85	1.38	51.23	74.00	-22.77	peak
2	9375.000	37.35	10.83	48.18	74.00	-25.82	peak
3	11100.000	34.98	13.79	48.77	74.00	-25.23	peak
4	12195.000	34.79	15.93	50.72	74.00	-23.28	peak
5	14850.000	33.34	17.71	51.05	74.00	-22.95	peak
6	17220.000	29.26	22.12	51.38	74.00	-22.62	peak

Note:

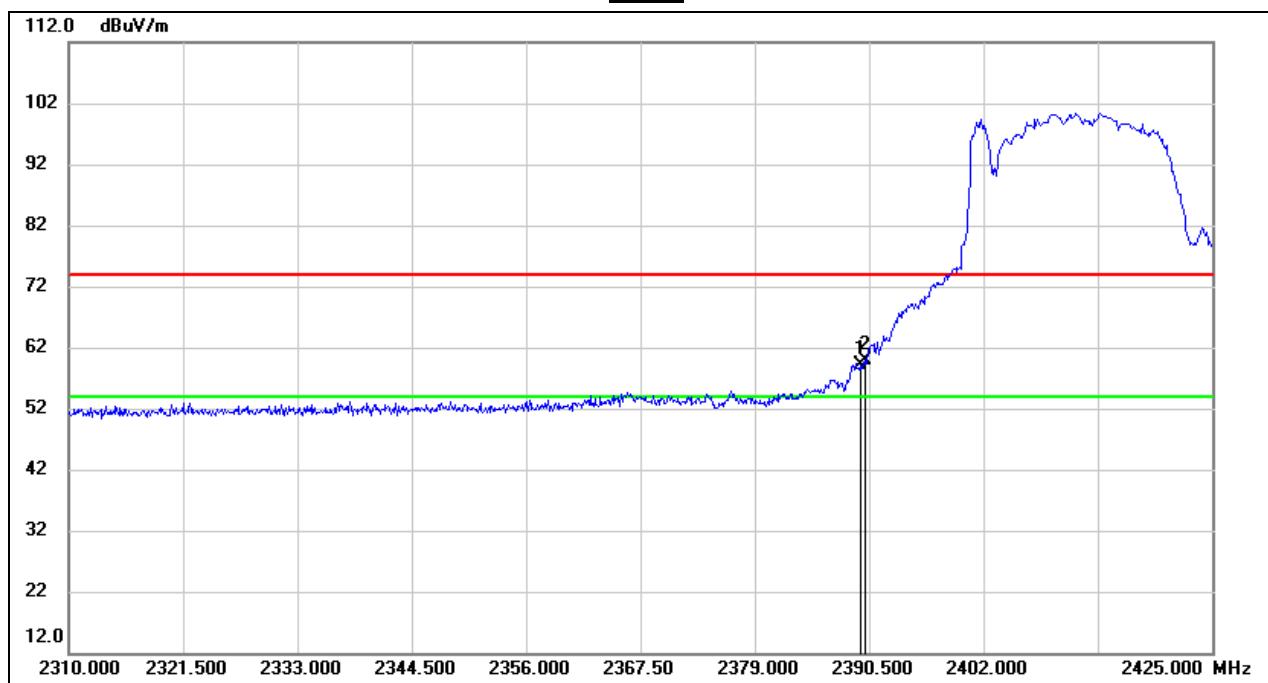
1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were 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.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)**3-18GHz**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3600.000	50.36	-3.17	47.19	74.00	-26.81	peak
2	4815.000	56.58	1.38	57.96	74.00	-16.04	peak
3	4815.000	41.39	1.38	42.77	54.00	-11.23	AVG
4	8040.000	38.10	9.25	47.35	74.00	-26.65	peak
5	10230.000	36.60	11.58	48.18	74.00	-25.82	peak
6	13410.000	33.91	17.04	50.95	74.00	-23.05	peak
7	14820.000	33.87	17.91	51.78	74.00	-22.22	peak

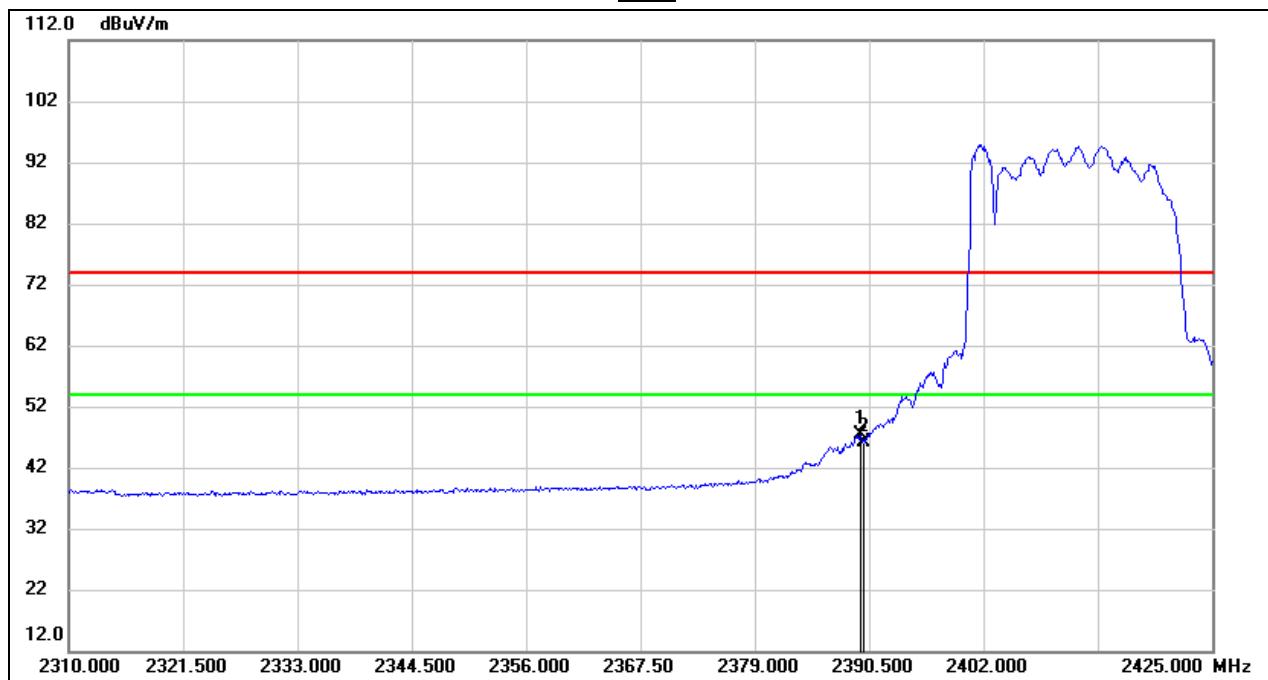
Note:

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

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

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.580	25.71	33.35	59.06	74.00	-14.94	peak
2	2390.000	26.63	33.35	59.98	74.00	-14.02	peak

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

AVG

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.580	13.98	33.35	47.33	54.00	-6.67	AVG
2	2390.000	12.70	33.35	46.05	54.00	-7.95	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.

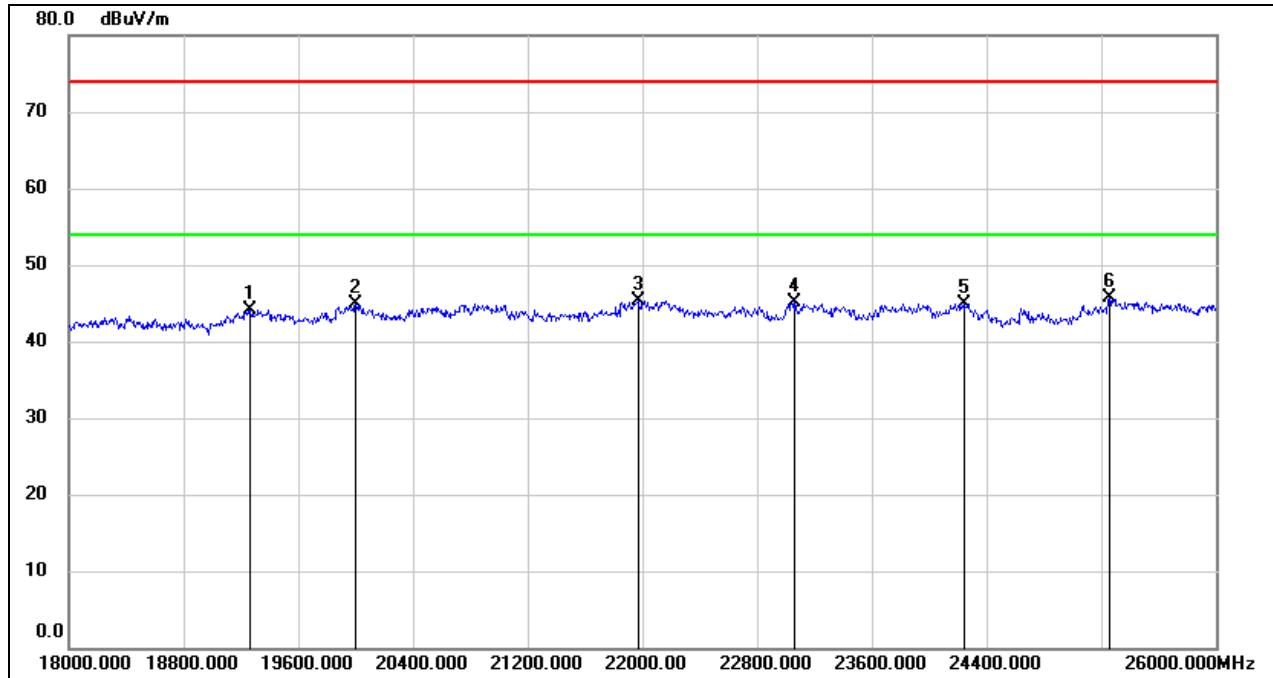
Note: All the test modes, channels and antenna have been tested, only the worst data record in the report.

8.6. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

KTC ANTENNA:

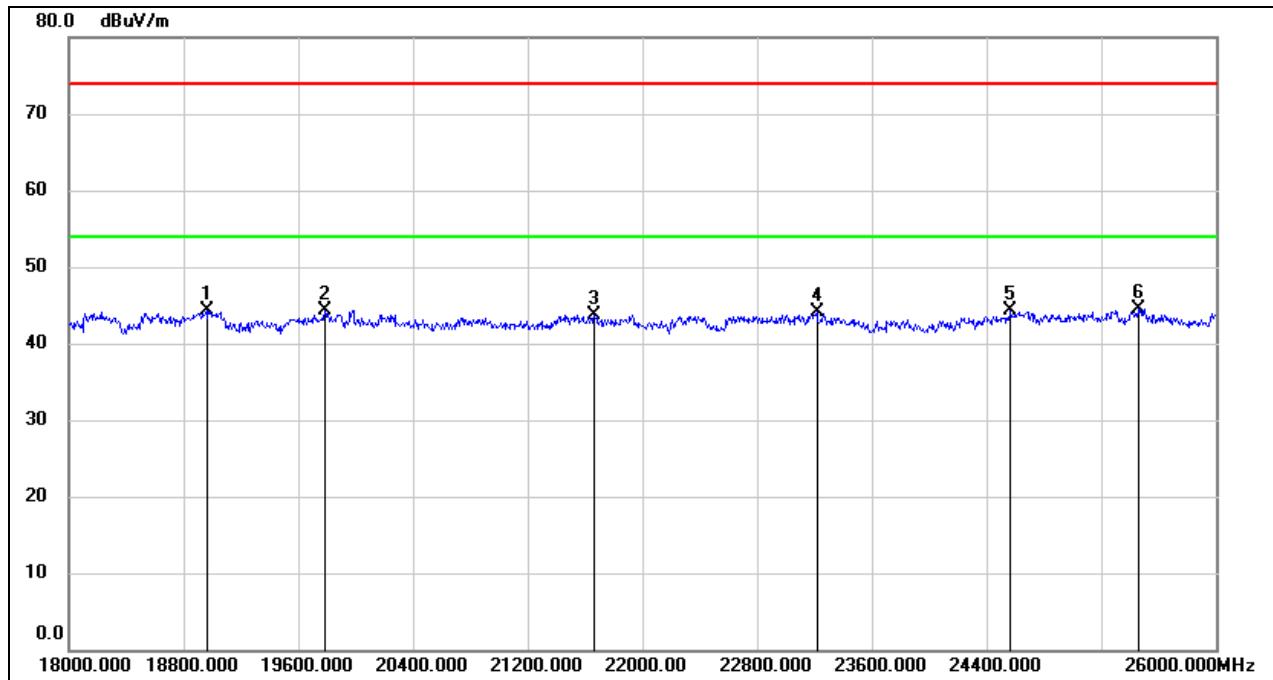
8.6.1. 802.11n HT20 MIMO MODE

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19264.000	49.77	-5.57	44.20	74.00	-29.80	peak
2	20000.000	50.31	-5.45	44.86	74.00	-29.14	peak
3	21968.000	49.75	-4.46	45.29	74.00	-28.71	peak
4	23064.000	48.49	-3.42	45.07	74.00	-28.93	peak
5	24248.000	47.82	-2.83	44.99	74.00	-29.01	peak
6	25256.000	47.29	-1.67	45.62	74.00	-28.38	peak

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

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

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18960.000	49.51	-5.25	44.26	74.00	-29.74	peak
2	19784.000	49.57	-5.28	44.29	74.00	-29.71	peak
3	21664.000	48.23	-4.45	43.78	74.00	-30.22	peak
4	23216.000	47.51	-3.38	44.13	74.00	-29.87	peak
5	24568.000	46.60	-2.33	44.27	74.00	-29.73	peak
6	25456.000	46.22	-1.75	44.47	74.00	-29.53	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.

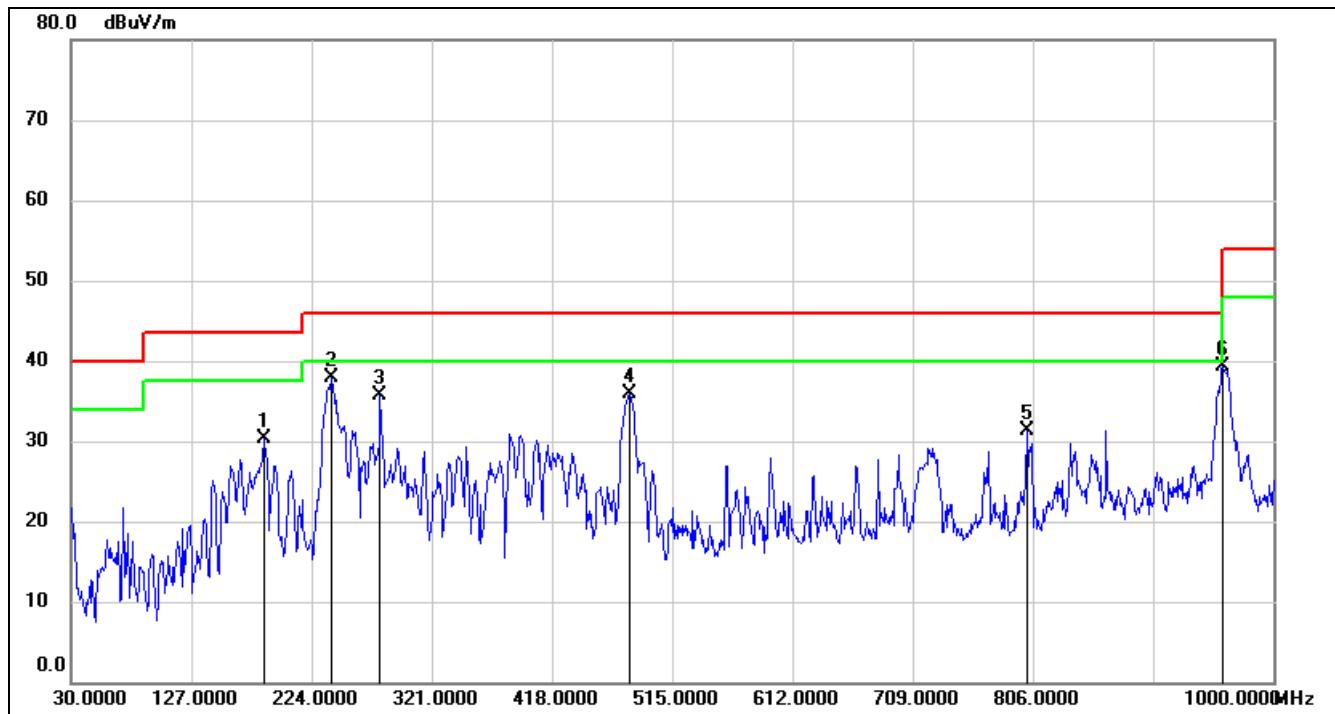
Note: All the test modes, channels and antenna have been tested, only the worst data record in the report.

8.7. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

KTC ANTENNA:

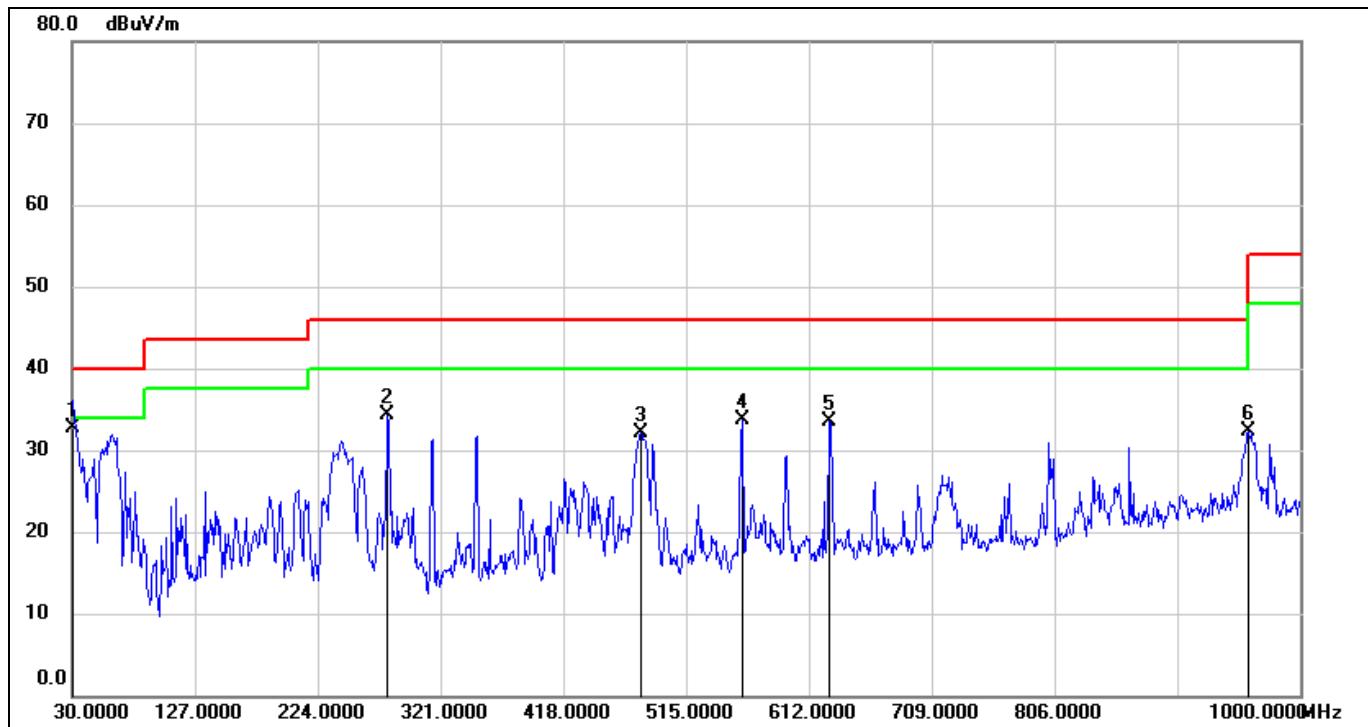
8.7.1. 802.11n HT20 MIMO MODE

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	185.2000	46.61	-16.26	30.35	43.50	-13.15	QP
2	240.4900	54.95	-16.99	37.96	46.00	-8.04	QP
3	279.2900	50.81	-15.18	35.63	46.00	-10.37	QP
4	480.0800	47.12	-11.26	35.86	46.00	-10.14	QP
5	801.1500	36.89	-5.52	31.37	46.00	-14.63	QP
6	959.2600	42.88	-3.51	39.37	46.00	-6.63	QP

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

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

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	49.85	-17.13	32.72	40.00	-7.28	QP
2	279.2900	49.44	-15.18	34.26	46.00	-11.74	QP
3	479.1100	43.31	-11.28	32.03	46.00	-13.97	QP
4	559.6200	43.44	-9.78	33.66	46.00	-12.34	QP
5	627.5200	41.88	-8.43	33.45	46.00	-12.55	QP
6	959.2600	35.72	-3.51	32.21	46.00	-13.79	QP

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

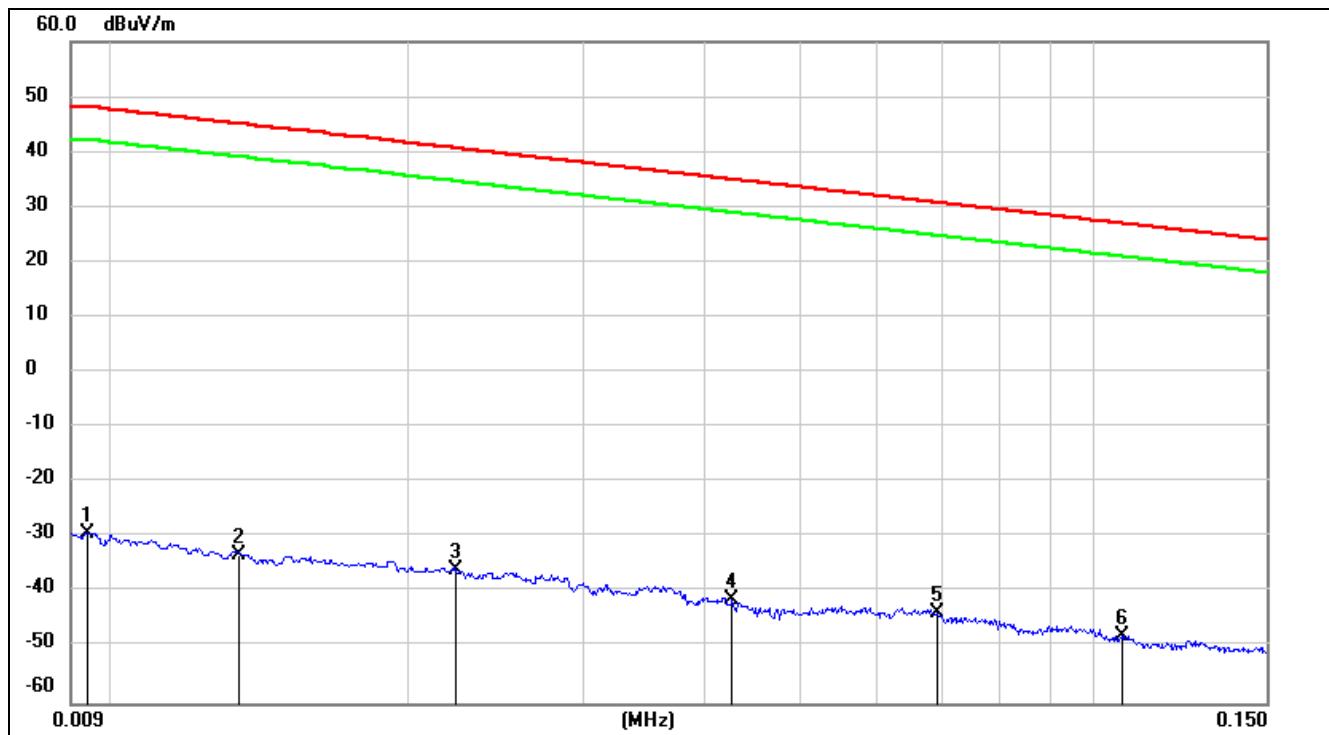
Note: All the test modes, channels and antenna have been tested, only the worst data record in the report.

8.8. SPURIOUS EMISSIONS BELOW 30 MHz

KTC ANTENNA:

8.8.1. 802.11n HT20 MIMO MODE

9kHz~ 150kHz

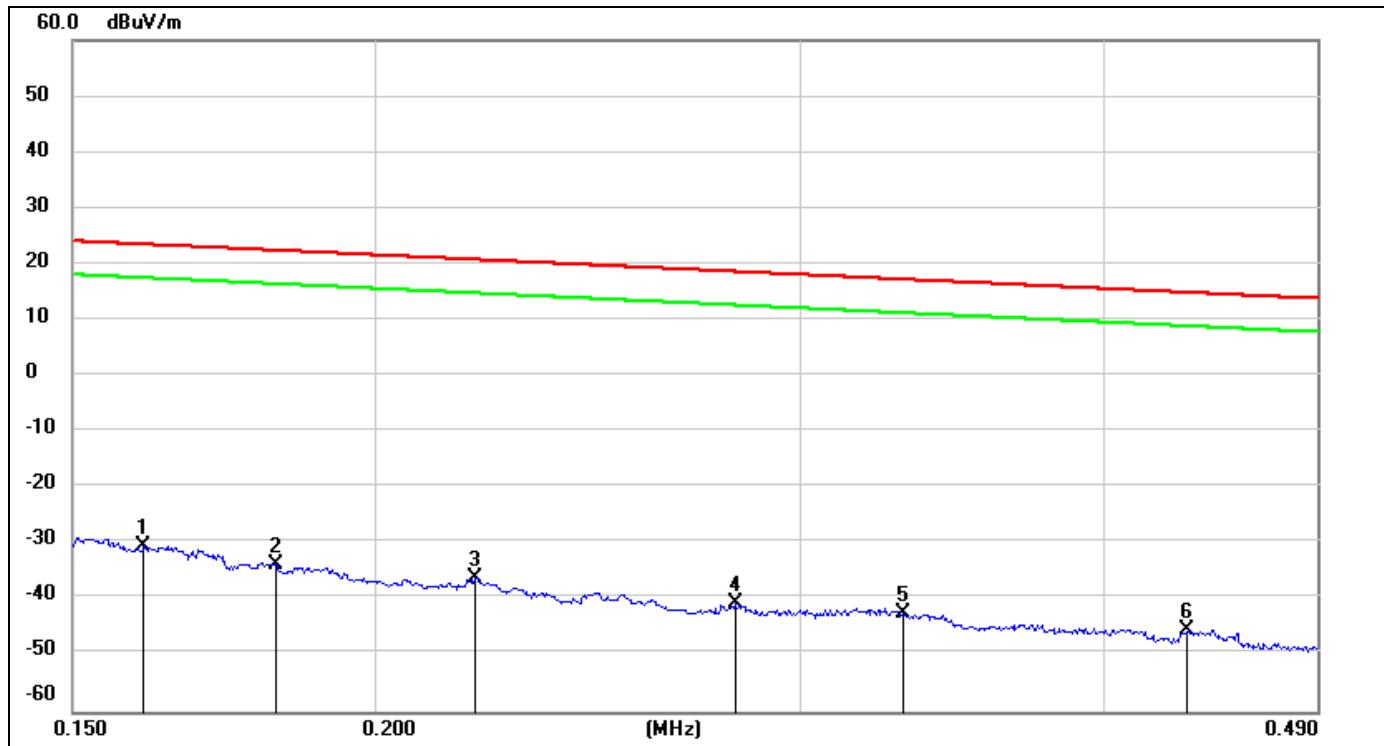


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.0094	72.16	-101.35	-29.19	48.05	-80.69	-3.45	-77.24	peak
2	0.0134	68.34	-101.39	-33.05	45.06	-84.55	-6.44	-78.11	peak
3	0.0223	65.36	-101.35	-35.99	40.63	-87.49	-10.87	-76.62	peak
4	0.0427	60.14	-101.45	-41.31	34.99	-92.81	-16.51	-76.30	peak
5	0.0693	57.77	-101.56	-43.79	30.79	-95.29	-20.71	-74.58	peak
6	0.1067	53.88	-101.77	-47.89	27.04	-99.39	-24.46	-74.93	peak

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

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

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

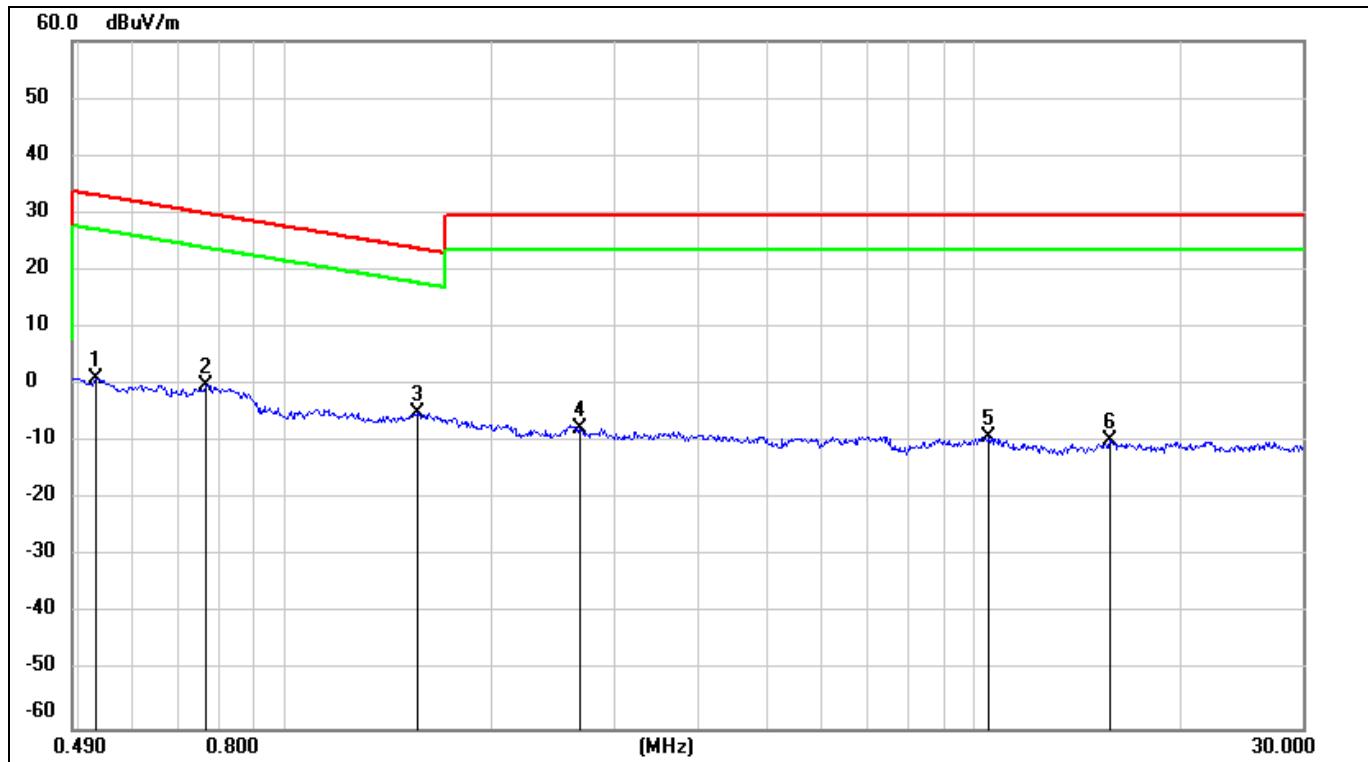
150kHz ~ 490kHz

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.1604	71.18	-101.65	-30.47	23.5	-81.97	-28.00	-53.97	peak
2	0.1819	67.99	-101.68	-33.69	22.41	-85.19	-29.09	-56.10	peak
3	0.2200	65.74	-101.75	-36.01	20.75	-87.51	-30.75	-56.76	peak
4	0.2816	61.16	-101.83	-40.67	18.61	-92.17	-32.89	-59.28	peak
5	0.3305	59.53	-101.88	-42.35	17.22	-93.85	-34.28	-59.57	peak
6	0.4329	56.57	-101.99	-45.42	14.87	-96.92	-36.63	-60.29	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- $20\log_{10}[120\pi]$ = dBuV/m- 51.5).

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

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

490kHz ~ 30MHz

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.5298	63.03	-62.08	0.95	33.12	-50.55	-18.38	-32.17	peak
2	0.7641	61.92	-62.12	-0.2	29.94	-51.70	-21.56	-30.14	peak
3	1.5564	57.18	-62.02	-4.84	23.76	-56.34	-27.74	-28.60	peak
4	2.6737	54.14	-61.65	-7.51	29.54	-59.01	-21.96	-37.05	peak
5	10.5234	51.80	-60.82	-9.02	29.54	-60.52	-21.96	-38.56	peak
6	15.7759	51.25	-60.99	-9.74	29.54	-61.24	-21.96	-39.28	peak

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- $20\log_{10}[120\pi]$ = dBuV/m- 51.5).

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

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

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

9. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203

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

Please refer to FCC §15.247(b)(4)

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

RESULTS

Complies

APPENDIX A: DUTY CYCLE

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	100	100	1	100	0	0.01	0.01
11g	1.38	1.43	0.97	97	0.13	0.72	1
11n HT20	1.29	1.34	0.96	96	0.18	0.78	1
11n HT40	0.62	0.68	0.91	91	0.41	1.61	2

Note:

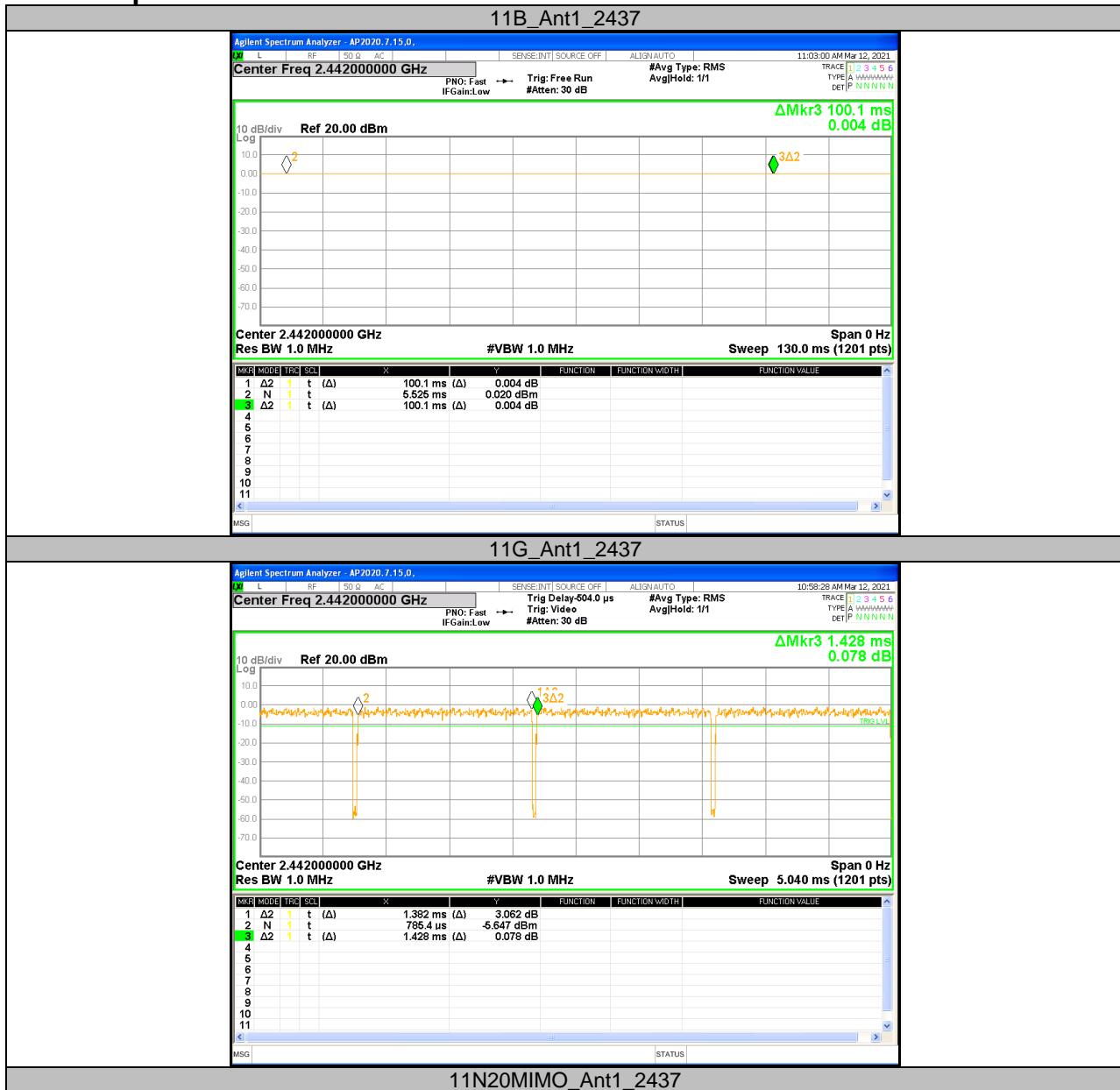
Duty Cycle Correction Factor=10log (1/x).

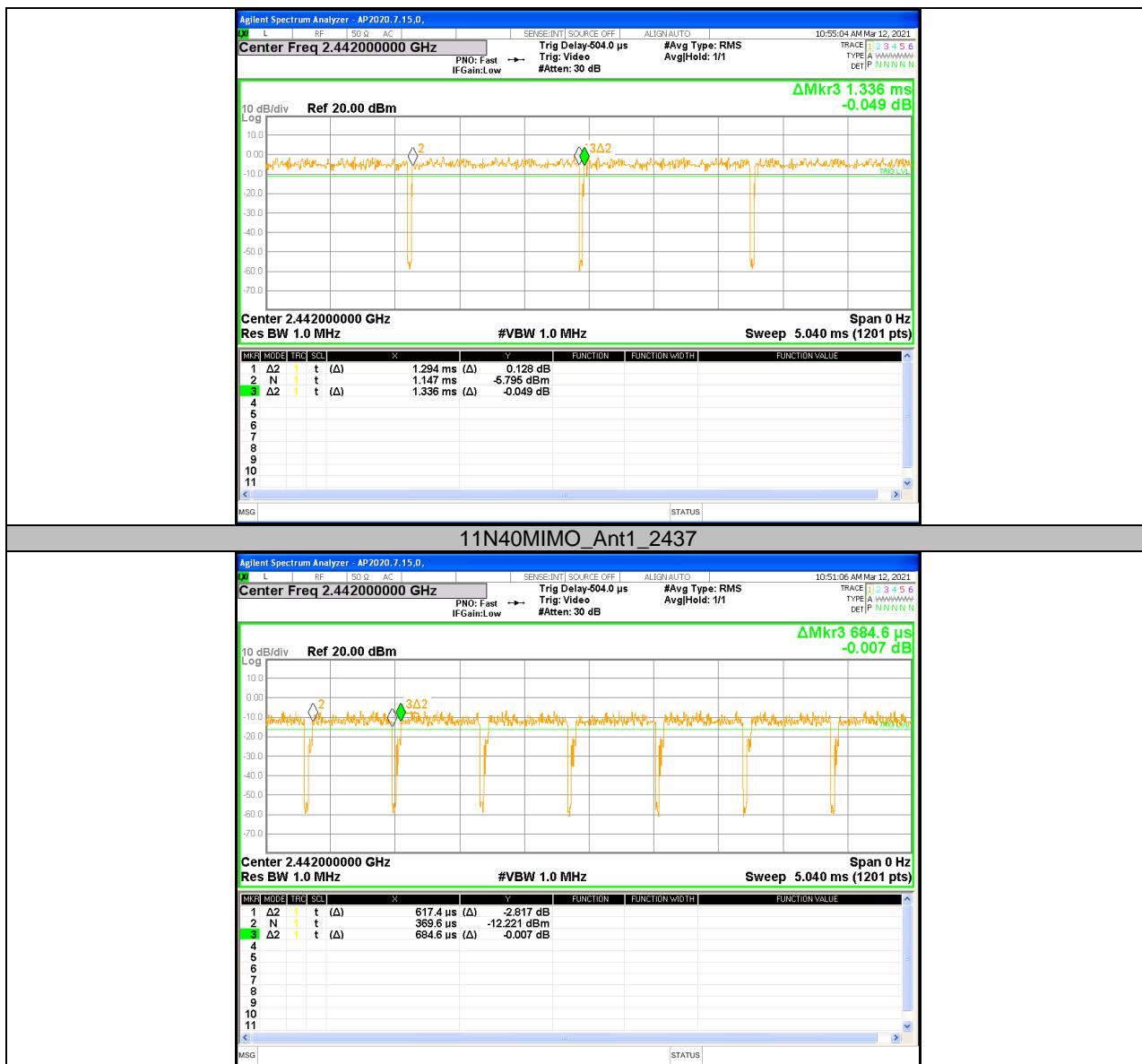
Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.

Test Graphs





APPENDIX B: CONDUCTED AVERAEG OUTPUT POWER

Test Result

Test Mode	Channel	Conducted AVG Output Power (dBm)			Limit (dBm)	Verdict
		ANT1	ANT2	Total		
802.11b	2412	15.37	16.28	/	30	PASS
	2437	15.41	16.77	/	30	PASS
	2462	15.13	16.85	/	30	PASS
802.11g	2412	13.60	14.03	/	30	PASS
	2437	13.77	14.34	/	30	PASS
	2462	13.84	14.34	/	30	PASS
802.11n HT20	2412	10.26	10.61	13.45	30	PASS
	2437	10.54	10.89	13.73	30	PASS
	2462	10.49	11.25	13.90	30	PASS
802.11n HT40	2422	8.00	8.72	11.39	30	PASS
	2437	8.07	8.45	11.27	30	PASS
	2452	7.49	8.72	11.16	30	PASS

END OF REPORT