



## **CFR 47 FCC PART 15 SUBPART C**

### **CERTIFICATION TEST REPORT**

*For*

**DJI Ronin 4D Video Transmitter**

**MODEL NUMBER: TX2**

**FCC ID: 2ANDR-TX2202109**

**REPORT NUMBER: 4789980498.1-3-6**

**ISSUE DATE: October 18,2021**

*Prepared for*

**SZ DJI Osmo Technology Co.,Ltd.**

**4F, Jingkou Community Comprehensive Service Building, No. 83 Bishui Road North,  
Guangming Street, Guangming District, Shenzhen**

*Prepared by*

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

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

**Tel: +86 769 22038881**

**Fax: +86 769 33244054**

**Website: [www.ul.com](http://www.ul.com)**

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	07/15/2021	Initial Issue	Mick Zhang
V1	08/20/2021	Updated modulation to OFDM (QPSK, 16QAM, 64QAM)	Mick Zhang
V2	10/18/2021	Divide the report into FCC and ISED	Mick Zhang



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

**Note:**

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

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

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS .....</b>	<b>6</b>
<b>2. TEST METHODOLOGY .....</b>	<b>7</b>
<b>3. FACILITIES AND ACCREDITATION .....</b>	<b>7</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>8</b>
4.1. MEASURING INSTRUMENT CALIBRATION .....	8
4.2. MEASUREMENT UNCERTAINTY .....	8
<b>5. EQUIPMENT UNDER TEST .....</b>	<b>9</b>
5.1. DESCRIPTION OF EUT .....	9
5.2. CHANNEL LIST .....	9
5.3. MAXIMUM OUTPUT POWER .....	11
5.4. TEST CHANNEL CONFIGURATION .....	12
5.5. THE WORSE CASE POWER SETTING PARAMETER .....	12
5.6. THE WORSE CASE CONFIGURATIONS .....	13
5.7. DESCRIPTION OF AVAILABLE ANTENNAS .....	14
5.8. DESCRIPTION OF TEST SETUP .....	15
<b>6. MEASURING INSTRUMENT AND SOFTWARE USED .....</b>	<b>16</b>
<b>7. ANTENNA PORT TEST RESULTS .....</b>	<b>18</b>
7.1. ON TIME AND DUTY CYCLE .....	18
7.2. 6 dB DTS BANDWIDTH AND 99 % OCCUPIED BANDWIDTH .....	19
7.3. CONDUCTED OUTPUT POWER .....	21
7.4. POWER SPECTRAL DENSITY .....	22
7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS .....	24
<b>8. RADIATED TEST RESULTS .....</b>	<b>26</b>
8.1. RESTRICTED BANDEDGE .....	31
8.1.1. 2.4G SRD 1.4MHz MODE .....	31
8.1.2. 2.4G SRD 1.4MHz CA MODE .....	34
8.1.3. 2.4G SRD 3MHz MODE .....	36
8.1.4. 2.4G SRD 3MHz CA MODE .....	38
8.1.5. 2.4G SRD 10MHz MODE .....	40
8.1.6. 2.4G SRD 20MHz MODE .....	44
8.1.7. 2.4G SRD 40MHz MODE .....	48
8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz) .....	52

8.2.1.	2.4G SRD 10MHz MODE.....	52
8.3.	<i>SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)</i> .....	58
8.3.1.	2.4G SRD 1.4MHz MODE.....	58
8.3.2.	2.4G SRD 1.4MHz CA MODE .....	64
8.3.3.	2.4G SRD 3MHz MODE.....	70
8.3.4.	2.4G SRD 3MHz CA MODE .....	76
8.3.5.	2.4G SRD 10MHz MODE.....	82
8.3.6.	2.4G SRD 20MHz MODE.....	88
8.3.7.	2.4G SRD 40MHz MODE.....	94
8.5.	<i>SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)</i> .....	100
8.5.1.	2.4G SRD 10MHz MODE.....	100
8.6.	<i>SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)</i> .....	102
8.6.1.	2.4G SRD 10MHz MODE.....	102
8.7.	<i>SPURIOUS EMISSIONS BELOW 30 MHz</i> .....	104
8.7.1.	2.4G SRD 10MHz MODE.....	104
9.	<b>AC POWER LINE CONDUCTED EMISSIONS .....</b>	<b>107</b>
9.1.	<i>2.4G SRD 10MHz MODE</i> .....	108
10.	<b>ANTENNA REQUIREMENTS.....</b>	<b>110</b>
11.	<b>Appendix.....</b>	<b>111</b>
11.1.	<i>Appendix A: DTS Bandwidth</i> .....	111
11.1.1.	Test Result.....	111
11.1.2.	Test Graphs .....	112
11.2.	<i>Appendix B: Occupied Channel Bandwidth</i> .....	119
11.2.1.	Test Result.....	119
11.2.2.	Test Graphs .....	120
11.3.	<i>Appendix C: Maximum conducted AVG output power</i> .....	127
11.3.1.	Test Result.....	127
11.4.	<i>Appendix D: Maximum power spectral density</i> .....	130
11.4.1.	Test Result.....	130
11.4.2.	Test Graphs .....	132
11.5.	<i>Appendix E: Band edge measurements</i> .....	146
11.5.1.	Test Result.....	146
11.5.2.	Test Graphs .....	147
11.6.	<i>Appendix F: Conducted Spurious Emission</i> .....	152
11.6.1.	Test Result.....	152
11.6.2.	Test Graphs .....	153
11.7.	<i>Appendix G: Duty Cycle</i> .....	170
11.7.1.	Test Result.....	170
11.7.2.	Test Graphs .....	171



## 1. ATTESTATION OF TEST RESULTS

### Applicant Information

Company Name: SZ DJI Osmo Technology Co.,Ltd.  
Address: 4F, Jinkou Community Comprehensive Service Building, No. 83  
Bishui Road North, Guangming Street, Guangming District,  
Shenzhen

### Manufacturer Information

Company Name: SZ DJI Osmo Technology Co.,Ltd.  
Address: 4F, Jinkou Community Comprehensive Service Building, No. 83  
Bishui Road North, Guangming Street, Guangming District,  
Shenzhen

### EUT Information

EUT Name: DJI Ronin 4D Video Transmitter  
Model: TX2  
Brand: DJI  
Sample Received Date: June 03, 2021  
Sample Status: Normal  
Sample ID: 3991066  
Date of Tested: June 03, 2021 ~ July 15, 2021

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

Prepared By:

Check By:

Mick Zhang  
Project Engineer

Shawn Wen  
Laboratory Leader

Approved By:

Stephen Guo  
Laboratory Manager



## 2. TEST METHODOLOGY

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

## 3. FACILITIES AND ACCREDITATION

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

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

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

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

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

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

### 4.2. MEASUREMENT UNCERTAINTY

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

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



## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

EUT Name	DJI Ronin 4D Video Transmitter
Model	TX2
Radio Technology	SRD 2.4G
Operation frequency	2.4G 1.4MHz Bandwidth (2403.5MHz-2469.5MHz) 2.4G 1.4MHz Bandwidth (CA Mode) (2405.12MHz-2471.12MHz) 2.4G 3MHz Bandwidth(2404.5MHz-2467.5MHz) 2.4G 3MHz Bandwidth (CA Mode) (2407.2MHz-2470.2MHz) 2.4G 10MHz Bandwidth: (2407.5MHz-2467.5MHz) 2.4G 20MHz Bandwidth: (2412.5MHz-2462.5MHz) 2.4G 40MHz Bandwidth: (2422.5MHz-2452.5MHz)
Modulation	OFDM (QPSK, 64QAM, 16QAM)
Supply Voltage	DC 12V

### 5.2. CHANNEL LIST

2.4G 1.4MHz Bandwidth (2403.5MHz-2469.5MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2403.5	10	2421.5	19	2439.5	28	2457.5
2	2405.5	11	2423.5	20	2441.5	29	2459.5
3	2407.5	12	2425.5	21	2443.5	30	2461.5
4	2409.5	13	2427.5	22	2445.5	31	2463.5
5	2411.5	14	2429.5	23	2447.5	32	2465.5
6	2413.5	15	2431.5	24	2449.5	33	2467.5
7	2415.5	16	2433.5	25	2451.5	34	2469.5
8	2417.5	17	2435.5	26	2453.5	/	/
9	2419.5	18	2437.5	27	2455.5	/	/

2.4G 1.4MHz Bandwidth-CA Mode(2405.12MHz-2471.12MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405.12	10	2423.12	19	2441.12	28	2459.12
2	2407.12	11	2425.12	20	2443.12	29	2461.12
3	2409.12	12	2427.12	21	2445.12	30	2463.12
4	2411.12	13	2429.12	22	2447.12	31	2465.12
5	2413.12	14	2431.12	23	2449.12	32	2467.12
6	2415.12	15	2433.12	24	2451.12	33	2469.12
7	2417.12	16	2435.12	25	2453.12	34	2471.12
8	2419.12	17	2437.12	26	2455.12	/	/
9	2421.12	18	2439.12	27	2457.12	/	/



2.4G 3MHz Bandwidth Mode(2404.5MHz-2467.5MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2404.5	7	2422.5	13	2440.5	19	2458.5
2	2407.5	8	2425.5	14	2443.5	20	2461.5
3	2410.5	9	2428.5	15	2446.5	21	2464.5
4	2413.5	10	2431.5	16	2449.5	22	2467.5
5	2416.5	11	2434.5	17	2452.5	/	/
6	2419.5	12	2437.5	18	2455.5	/	/

2.4G 3MHz Bandwidth-CA Mode(2407.2MHz-2470.2MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2407.2	7	2425.2	13	2443.2	19	2461.2
2	2410.2	8	2428.2	14	2446.2	20	2464.2
3	2413.2	9	2431.2	15	2449.2	21	2467.2
4	2416.2	10	2434.2	16	2452.2	22	2470.2
5	2419.2	11	2437.2	17	2455.2	/	/
6	2422.2	12	2440.2	18	2458.2	/	/

2.4G 10MHz Bandwidth (2407.5MHz-2467.5MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2407.5	17	2423.5	33	2439.5	49	2455.5
2	2408.5	18	2424.5	34	2440.5	50	2456.5
3	2409.5	19	2425.5	35	2441.5	51	2457.5
4	2410.5	20	2426.5	36	2442.5	52	2458.5
5	2411.5	21	2427.5	37	2443.5	53	2459.5
6	2412.5	22	2428.5	38	2444.5	54	2460.5
7	2413.5	23	2429.5	39	2445.5	55	2461.5
8	2414.5	24	2430.5	40	2446.5	56	2462.5
9	2415.5	25	2431.5	41	2447.5	57	2463.5
10	2416.5	26	2432.5	42	2448.5	58	2464.5
11	2417.5	27	2433.5	43	2449.5	59	2465.5
12	2418.5	28	2434.5	44	2450.5	60	2466.5
13	2419.5	29	2435.5	45	2451.5	61	2467.5
14	2420.5	30	2436.5	46	2452.5	/	/
15	2421.5	31	2437.5	47	2453.5	/	/
16	2422.5	32	2438.5	48	2454.5	/	/



2.4G 20MHz Bandwidth (2412.5MHz-2462.5MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412.5	14	2425.5	27	2438.5	40	2451.5
2	2413.5	15	2426.5	28	2439.5	41	2452.5
3	2414.5	16	2427.5	29	2440.5	42	2453.5
4	2415.5	17	2428.5	30	2441.5	43	2454.5
5	2416.5	18	2429.5	31	2442.5	44	2455.5
6	2417.5	19	2430.5	32	2443.5	45	2456.5
7	2418.5	20	2431.5	33	2444.5	46	2457.5
8	2419.5	21	2432.5	34	2445.5	47	2458.5
9	2420.5	22	2433.5	35	2446.5	48	2459.5
10	2421.5	23	2434.5	36	2447.5	49	2460.5
11	2422.5	24	2435.5	37	2448.5	50	2461.5
12	2423.5	25	2436.5	38	2449.5	51	2462.5
13	2424.5	26	2437.5	39	2450.5	/	/

2.4G 40MHz Bandwidth (2412.5MHz-2462.5MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2422.5	9	2430.5	17	2438.5	25	2446.5
2	2423.5	10	2431.5	18	2439.5	26	2447.5
3	2424.5	11	2432.5	19	2440.5	27	2448.5
4	2425.5	12	2433.5	20	2441.5	28	2449.5
5	2426.5	13	2434.5	21	2442.5	29	2450.5
6	2427.5	14	2435.5	22	2443.5	30	2451.5
7	2428.5	15	2436.5	23	2444.5	31	2452.5
8	2429.5	16	2437.5	24	2445.5	/	/

### 5.3. MAXIMUM OUTPUT POWER

SRD 2.4G	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)
1.4M Mode	2403.5MHz-2469.5MHz	1-34[34]	15.87
1.4M-CA Mode	2405.12MHz-2471.12MHz	1-34[34]	16.34
3M Mode	2404.5MHz-2467.5MHz	1-22[22]	15.89
3M-CA Mode	2407.2MHz-2470.2MHz	1-22[22]	16.07
10M Mode	2407.5MHz-2467.5MHz	1-61[61]	26.10
20M Mode	2412.5MHz-2462.5MHz	1-51[51]	25.99
40M Mode	2422.5MHz-2452.5MHz	1-31[31]	23.77

## 5.4. TEST CHANNEL CONFIGURATION

SRD 2.4G	Test Channel Number	Frequency
1.4M Mode	CH 1(Low Channel), CH 17(MID Channel), CH 34(High Channel)	2403.5 MHz, 2435.5 MHz, 2469.5 MHz
1.4M-CA Mode	CH 1(Low Channel), CH 17(MID Channel), CH 34(High Channel)	2405.12 MHz, 2437.12 MHz, 2471.12 MHz
3M Mode	CH 1(Low Channel), CH 11(MID Channel), CH 22(High Channel)	2404.5 MHz, 2434.5 MHz, 2467.5 MHz
3M-CA Mode	CH 1(Low Channel), CH 11(MID Channel), CH 22(High Channel)	2407.2 MHz, 2437.2 MHz, 2470.2 MHz
10M Mode	CH 1(Low Channel), CH 31(MID Channel), CH 61(High Channel)	2407.5 MHz, 2437.5 MHz, 2467.5 MHz
20M Mode	CH 1(Low Channel), CH 26(MID Channel), CH 51(High Channel)	2412.5 MHz, 2437.5 MHz, 2462.5 MHz
40M Mode	CH 1(Low Channel), CH 16(MID Channel), CH 31(High Channel)	2422.5 MHz, 2437.5 MHz, 2452.5 MHz

## 5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band				
Test Software		DjiSdrConsole		
Modulation Mode	Transmit Antenna Number	Test Software setting value		
		NCB: 1.4MHz/3MHz/10MHz/20MHz/40MHz		
		Low Channel	MID Channel	High Channel
All	All	Default	Default	Default

## 5.6. THE WORSE CASE CONFIGURATIONS

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

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

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst case Data Rates declared by the customer:

- SRD 2.4G-1.4M Mode/QPSK
- SRD 2.4G-1.4M-CA Mode/QPSK
- SRD 2.4G-3M Mode/QPSK
- SRD 2.4G-3M-CA Mode/QPSK
- SRD 2.4G-10M Mode/QPSK
- SRD 2.4G-20M Mode/QPSK
- SRD 2.4G-40M Mode/QPSK

The EUT has 4 separate antennas which correspond to 4 separate antenna ports. The EUT only support 2TX4RX mode, and Only 4 TX models as ANT 0&1/ANT 0&3/ANT 2&1/ANT 2&3 were used.

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

Duty cycle and occupied channel bandwidth tests, only one chain were tested since the duty cycle and bandwidth does not change depending on chains used.

The EUT support Cyclic Shift Diversity (CDD), They use the same conducted power per chain in any given mode, so we only chose the worst-case mode CDD 2TX at ANT 0&1 for final testing.

## 5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
0	2400-2483.5	Dipole antenna	2.5
1	2400-2483.5	Dipole antenna	2.5
2	2400-2483.5	Dipole antenna	2.5
3	2400-2483.5	Dipole antenna	2.5

The EUT support Cyclic Shift Diversity(CDD) mode.

MIMO output power port and MIMO PSD port summing was performed in accordance with KDB 662911 D01. For the CDD results the Directional Gain was calculated in accordance with the following method.

For output power measurements:

Directional gain=  $G_{ANT} + \text{Array Gain} = 2.5 \text{ dBi}$

$G_{ANT}$ : equal to the gain of the antenna having the highest gain

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$

For power spectral density (PSD) measurements:

Directional gain=  $G_{ANT} + \text{Array Gain} = 5.51 \text{ dBi}$

Array Gain =  $10 \log(N_{ANT}/N_{SS}) \text{ dB}$ .

$N_{ANT}$ : number of transmit antennas

$N_{SS}$ : number of spatial streams, the worst case directional gain will occur when  $N_{SS} = 1$

Note: The value of the antenna gain was declared by customer. The customer declared that SRD 2.4G and SRD 5G can't transmit simultaneously.

Test Mode	Transmit and Receive Mode	Description
1.4MHz Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
1.4MHz-CAMode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
3MHz Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
3MHz-CA Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
10MHz Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
20MHz Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.
40MHz Mode	<input checked="" type="checkbox"/> 2TX, 4RX	ANT 0,1, 2,3 can be used as transmitting and receiving antenna.

Note: The device supports 2x4 MIMO (2Tx, 4Rx), with four different combinations of transmit antenna - ANT 0&1, ANT 0&3, ANT 2&1 or ANT 2&3.

## 5.8. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Lenovo	ThinkPad E480	/
2	DJI RONIN 4D	DJI	R4D	/

### I/O CABLES

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

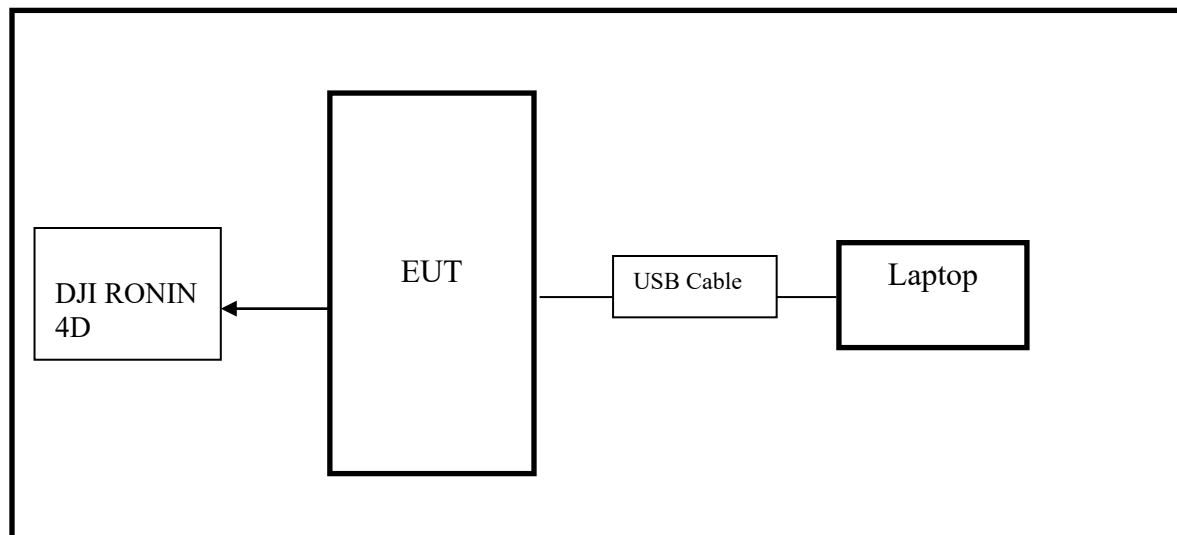
### ACCESSORIES

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

### TEST SETUP

The EUT can work in engineering mode with a software.

### SETUP DIAGRAM FOR TESTS



## 6. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	EMI Test Receiver	R&S	ESR3	101961	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	Two-Line V- Network	R&S	ENV216	101983	Nov. 12, 2020	Nov. 11, 2021
Software						
Used	Description		Manufacturer	Name		Version
<input checked="" type="checkbox"/>	Test Software for Conducted disturbance		Farad	EZ-EMC		Ver. UL-3A1
Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Aug. 11, 2018	Aug. 10, 2021
<input checked="" type="checkbox"/>	Preamplifier	HP	8447D	2944A09099	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	EMI Measurement Receiver	R&S	ESR26	101377	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	Horn Antenna	TDK	HRN-0118	130939	Sept. 17, 2018	Sept. 17, 2021
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-0118	TRS-305-00067	Nov. 20, 2020	Nov. 19, 2021
<input checked="" type="checkbox"/>	Horn Antenna	Schwarzbeck	BBHA9170	#691	Aug. 11, 2018	Aug. 11, 2021
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-2	TRS-307-00003	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	Loop antenna	Schwarzbeck	1519B	00008	Jan.17, 2019	Jan.17,2022
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Nov. 12, 2020	Nov. 11, 2021
<input checked="" type="checkbox"/>	Preamplifier	Mini-Circuits	ZX60-83LN-S+	SUP01201941	Nov. 20, 2020	Nov. 19, 2021
<input checked="" type="checkbox"/>	High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Nov. 12, 2020	Nov. 11, 2021
Software						
Used	Description		Manufacturer	Name		Version
<input checked="" type="checkbox"/>	Test Software for Radiated disturbance		Farad	EZ-EMC		Ver. UL-3A1





Other instruments						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	Spectrum Analyzer	Keysight	N9030A	MY55410512	Nov. 20, 2020	Nov. 19, 2021
<input checked="" type="checkbox"/>	Power sensor, Power Meter	R&S	OSP120	100921	Mar.23,2021	Mar.22,2022

## 7. ANTENNA PORT TEST RESULTS

### 7.1. ON TIME AND DUTY CYCLE

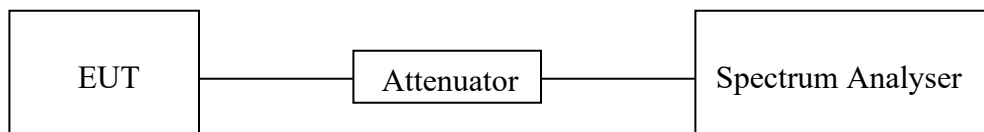
#### LIMITS

None; for reporting purposes only

#### PROCEDURE

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

#### TEST SETUP



#### TEST ENVIRONMENT

Temperature	25.2 °C	Relative Humidity	54.6 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12V

#### RESULTS

Please refer to appendix G.

## 7.2. 6 dB DTS BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

### LIMITS

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

### TEST PROCEDURE

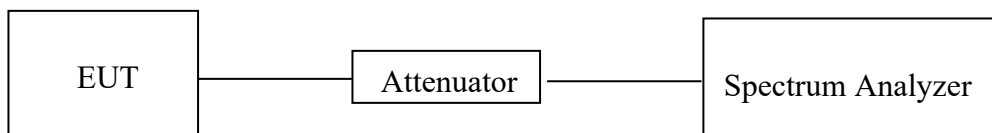
Connect the EUT to the spectrum analyser and use the following settings:

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

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

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

### TEST SETUP



**TEST ENVIRONMENT**

Temperature	25.2 ℃	Relative Humidity	54.6 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12V

**RESULTS**

Please refer to appendix A & B.



### 7.3. CONDUCTED OUTPUT POWER

#### LIMITS

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

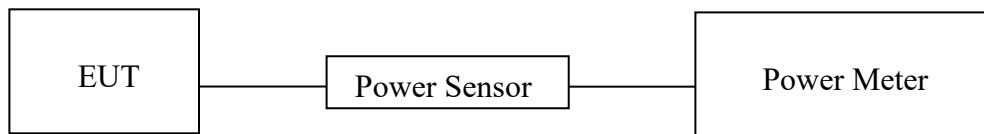
#### TEST PROCEDURE

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

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).

Measure peak emission level, the indicated level is the average output power, after any corrections for external attenuators and cables.

#### TEST SETUP



#### TEST ENVIRONMENT

Temperature	25.2 ℃	Relative Humidity	54.6 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12V

#### RESULTS

Please refer to appendix C.

## 7.4. POWER SPECTRAL DENSITY

### LIMITS

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

### TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.10.

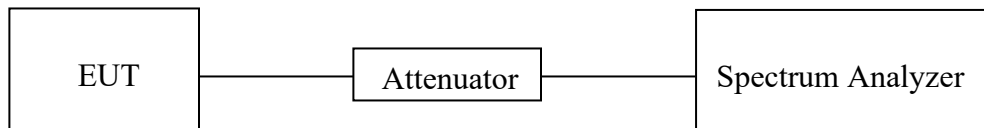
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	PEAK
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### TEST SETUP



### TEST ENVIRONMENT

Temperature	25.2 °C	Relative Humidity	54.6 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V / 60 Hz



**RESULTS**

Please refer to appendix D.



## 7.5. CONDUCTED BANDEGE AND SPURIOUS EMISSIONS

### LIMITS

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

### TEST PROCEDURE

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

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

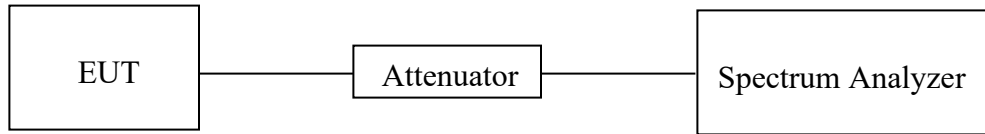
Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level.

Change the settings for emission level measurement:

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
measurement points	$\geq \text{span}/\text{RBW}$
Trace	Max hold
Sweep time	Auto couple.

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



**TEST SETUP****TEST ENVIRONMENT**

Temperature	25.2 ℃	Relative Humidity	54.6 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12V

**RESULTS**

Please refer to appendix E & F.



## 8. RADIATED TEST RESULTS

### LIMITS

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

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

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

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

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

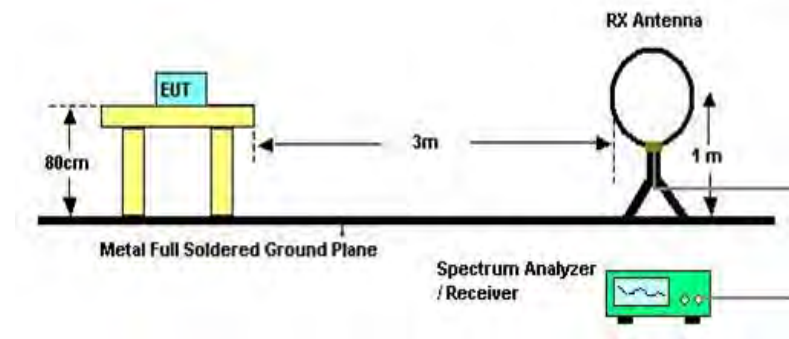
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
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	( <sup>2</sup> )
13.36-13.41			

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

<sup>2</sup>Above 38.6c

## TEST SETUP AND PROCEDURE

Below 30 MHz

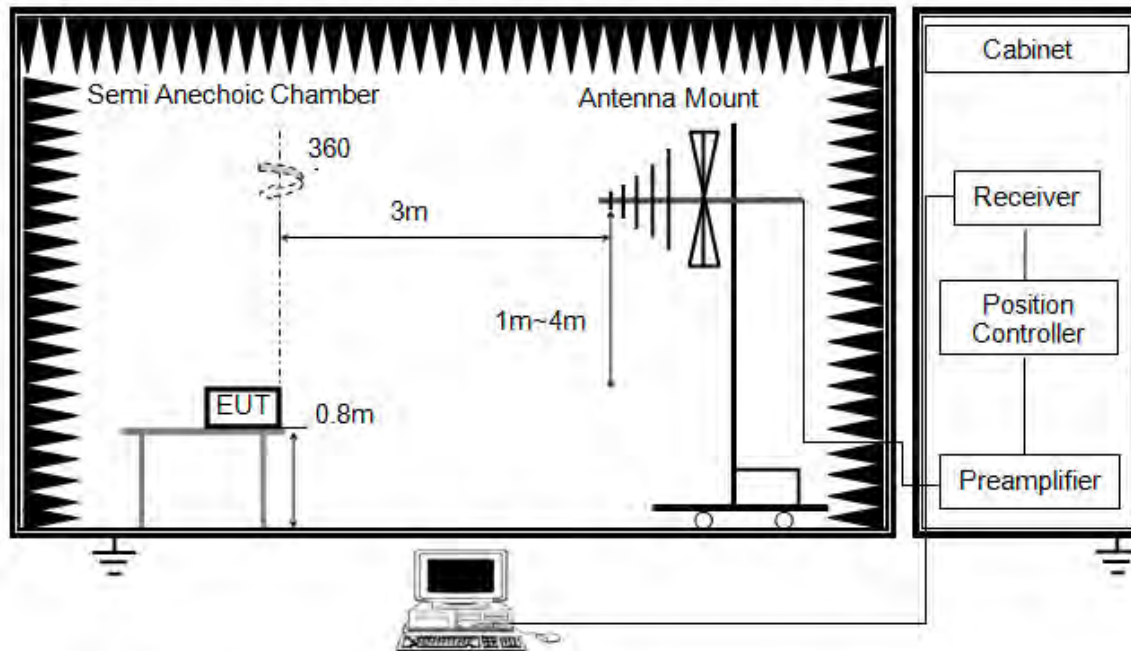


The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 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 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

Below 1 GHz and above 30 MHz

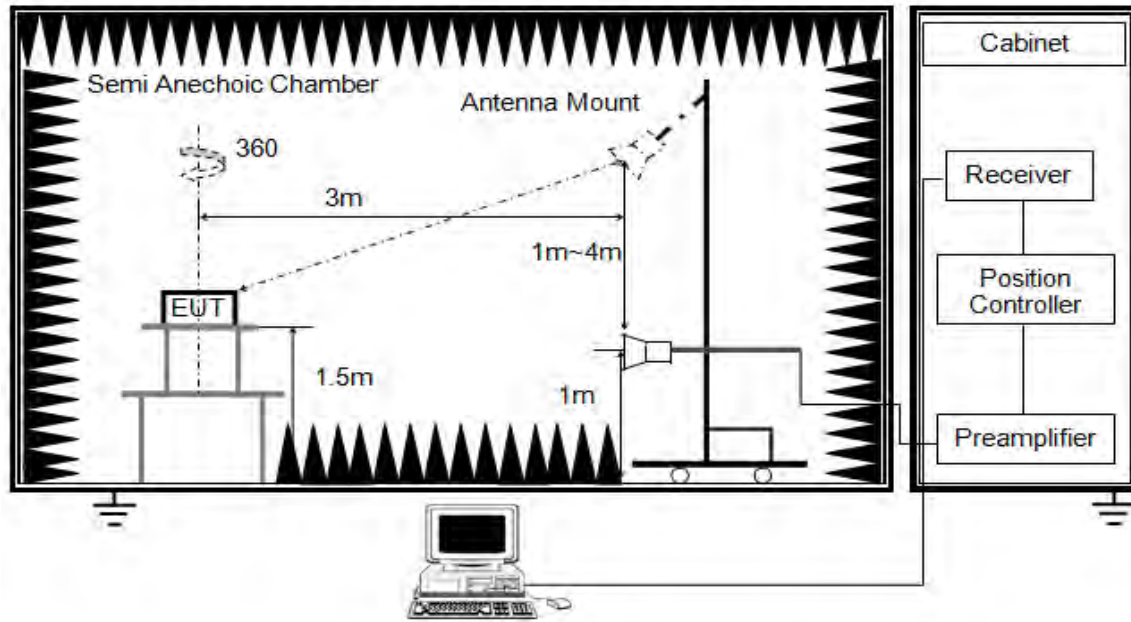


The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1 GHz

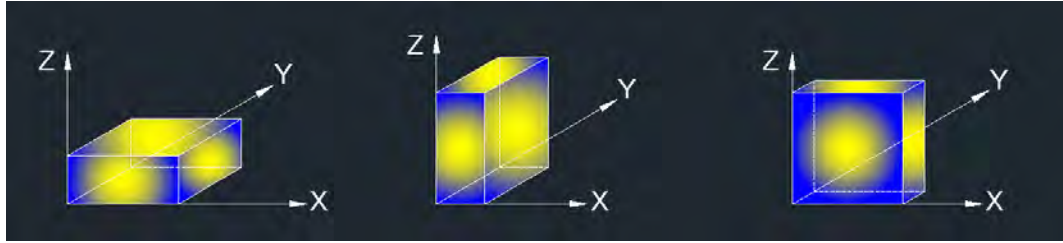


The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 1.5 m above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



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

Note 2: The EUT do not support transmit simultaneously for SRD 2.4G and SRD 5G.

Note 3: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

#### **TEST ENVIRONMENT**

Temperature	22.1℃	Relative Humidity	62.7 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12V

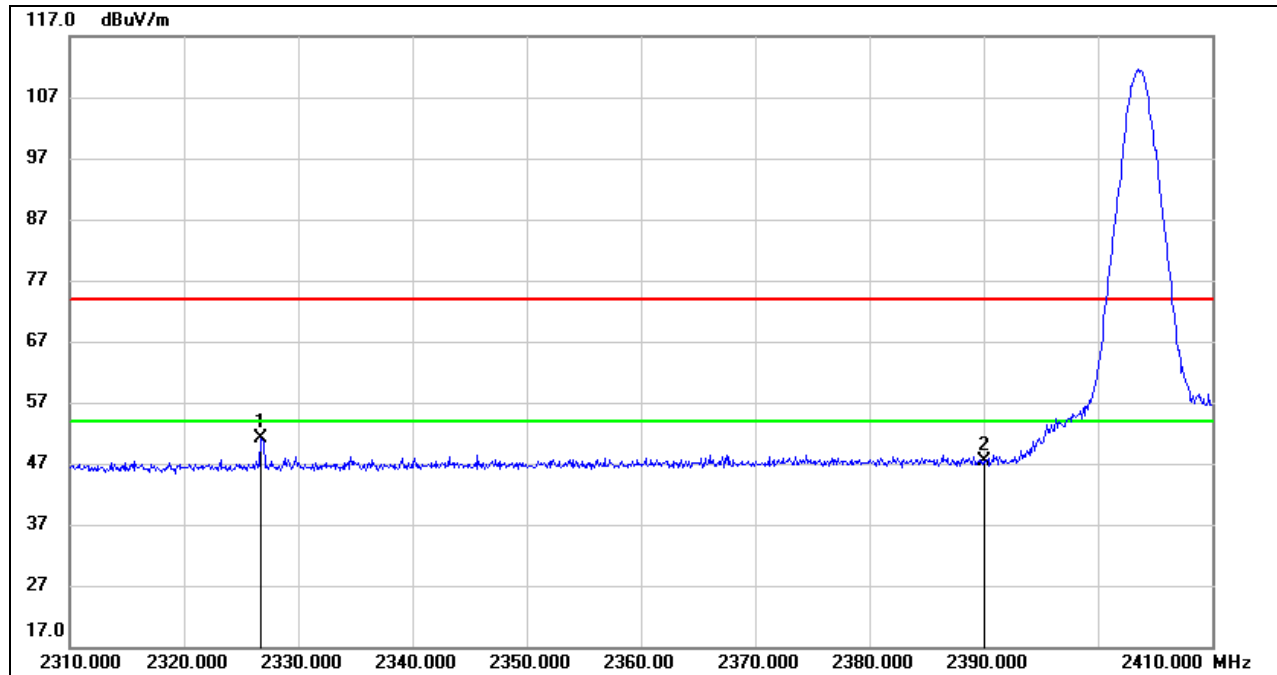
#### **RESULTS**

## 8.1. RESTRICTED BANDEGE

### 8.1.1. 2.4G SRD 1.4MHz MODE

#### RESTRICTED BANDEGE (LOW CHANNEL, HORIZONTAL)

#### PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2326.700	18.34	32.87	51.21	74.00	-22.79	peak
2	2390.000	14.13	33.35	47.48	74.00	-26.52	peak

Note: 1. Measurement = Reading Level + Correct Factor.

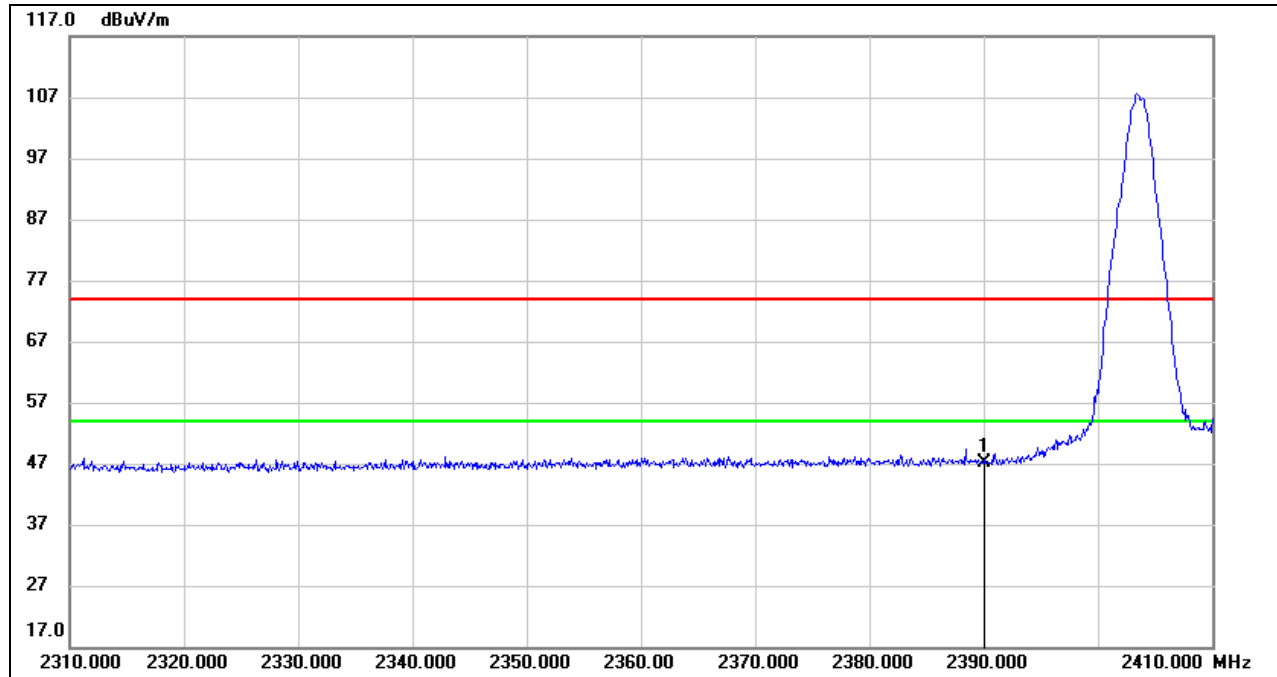
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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.

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

## PEAK



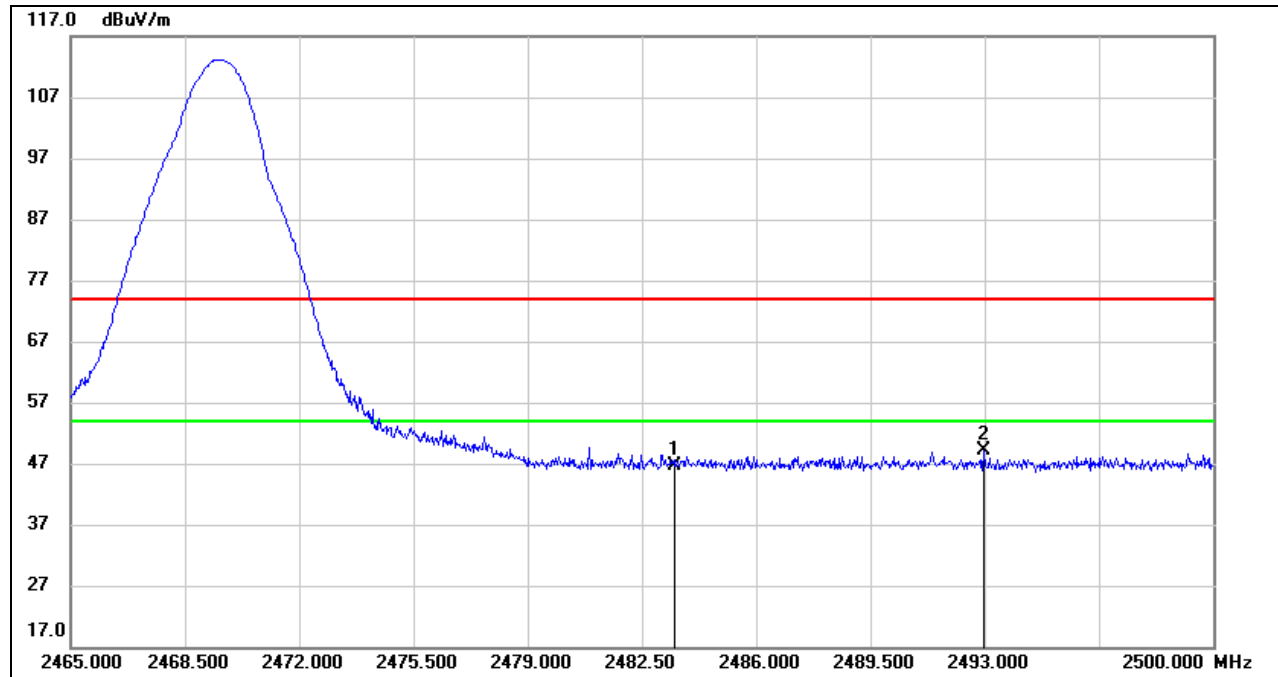
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	13.84	33.35	47.19	74.00	-26.81	peak

- 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.



# 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	12.99	33.71	46.70	74.00	-27.30	peak
2	2492.965	15.27	33.74	49.01	74.00	-24.99	peak

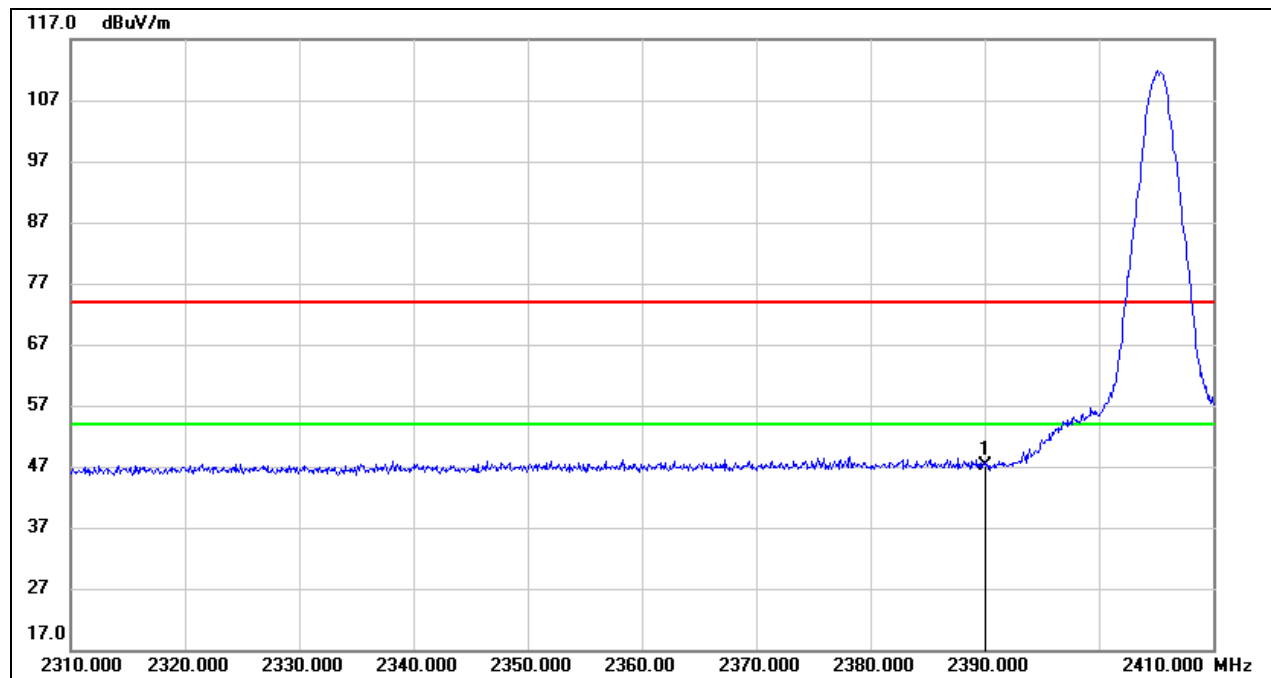
- Note: 1. Measurement = Reading Level + Correct Factor.  
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
3. Peak: Peak detector.  
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

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

## 8.1.2. 2.4G SRD 1.4MHz CA MODE

### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

#### PEAK

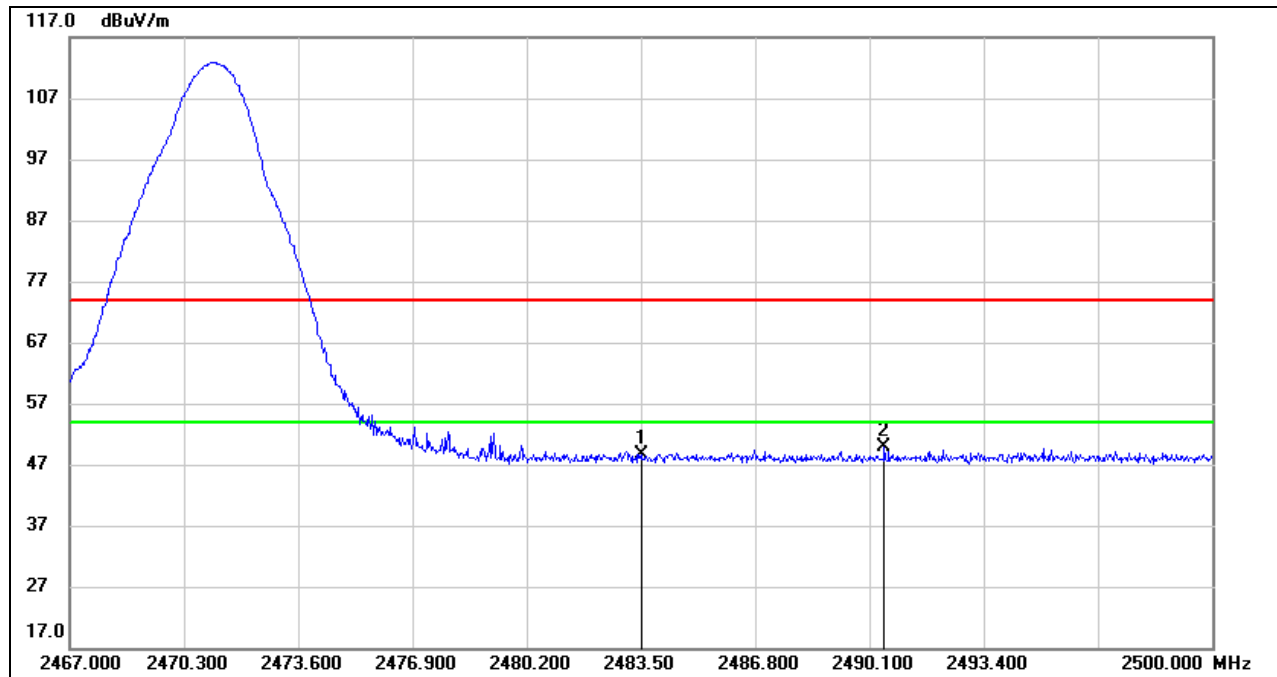


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	13.90	33.35	47.25	74.00	-26.75	peak

- Note: 1. Measurement = Reading Level + Correct Factor.  
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
3. Peak: Peak detector.  
4. 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	14.83	33.71	48.54	74.00	-25.46	peak
2	2490.529	16.15	33.73	49.88	74.00	-24.12	peak

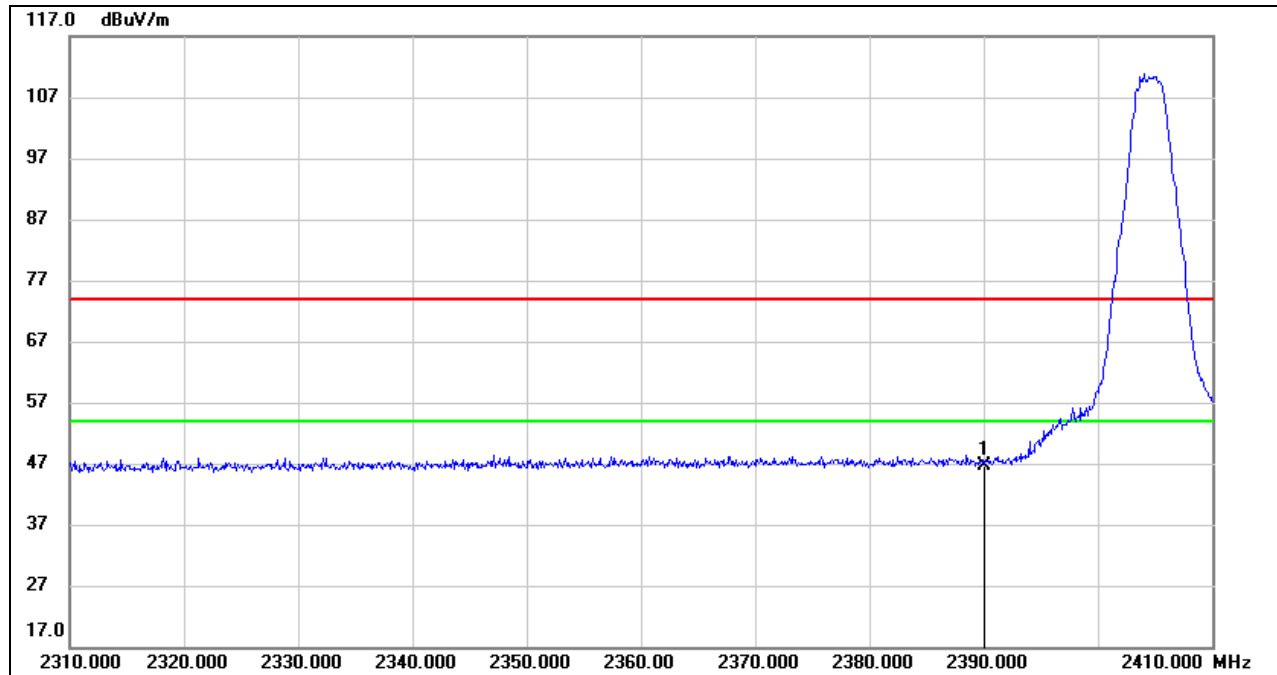
- Note: 1. Measurement = Reading Level + Correct Factor.  
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
3. Peak: Peak detector.  
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

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

### 8.1.3. 2.4G SRD 3MHz MODE

#### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

#### PEAK

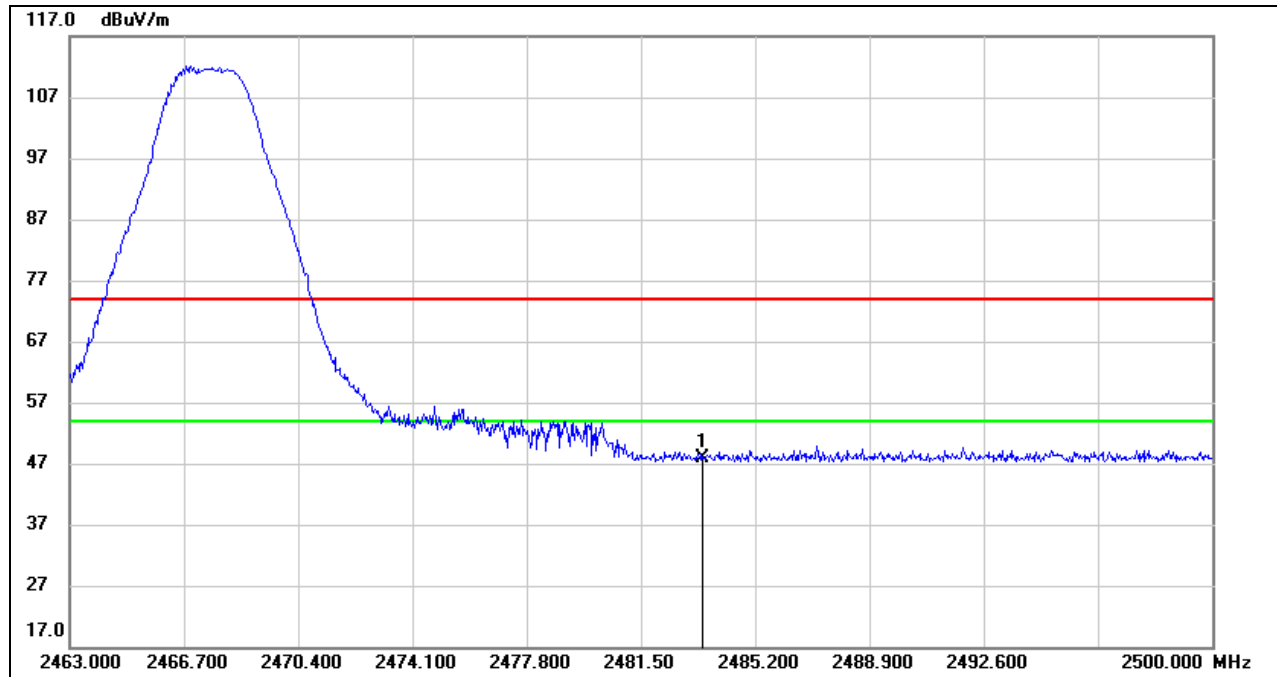


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	13.40	33.35	46.75	74.00	-27.25	peak

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.

# 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	14.06	33.71	47.77	74.00	-26.23	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit

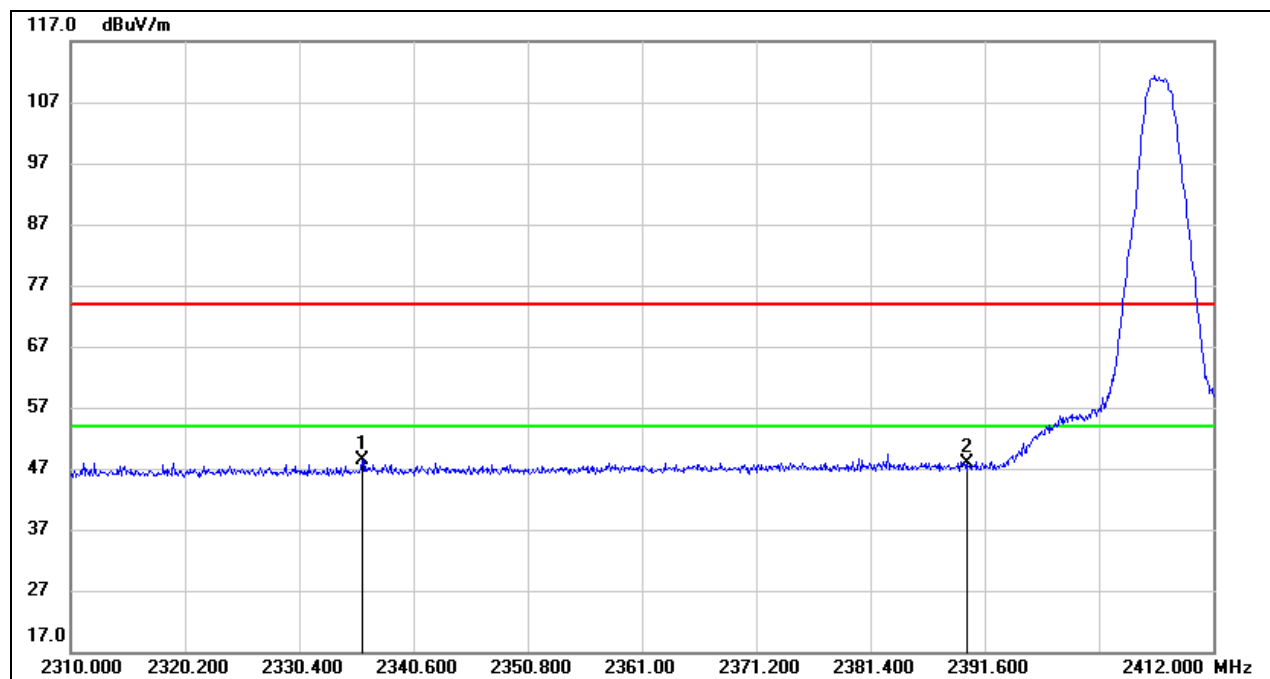
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

### 8.1.4. 2.4G SRD 3MHz CA MODE

#### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

#### PEAK

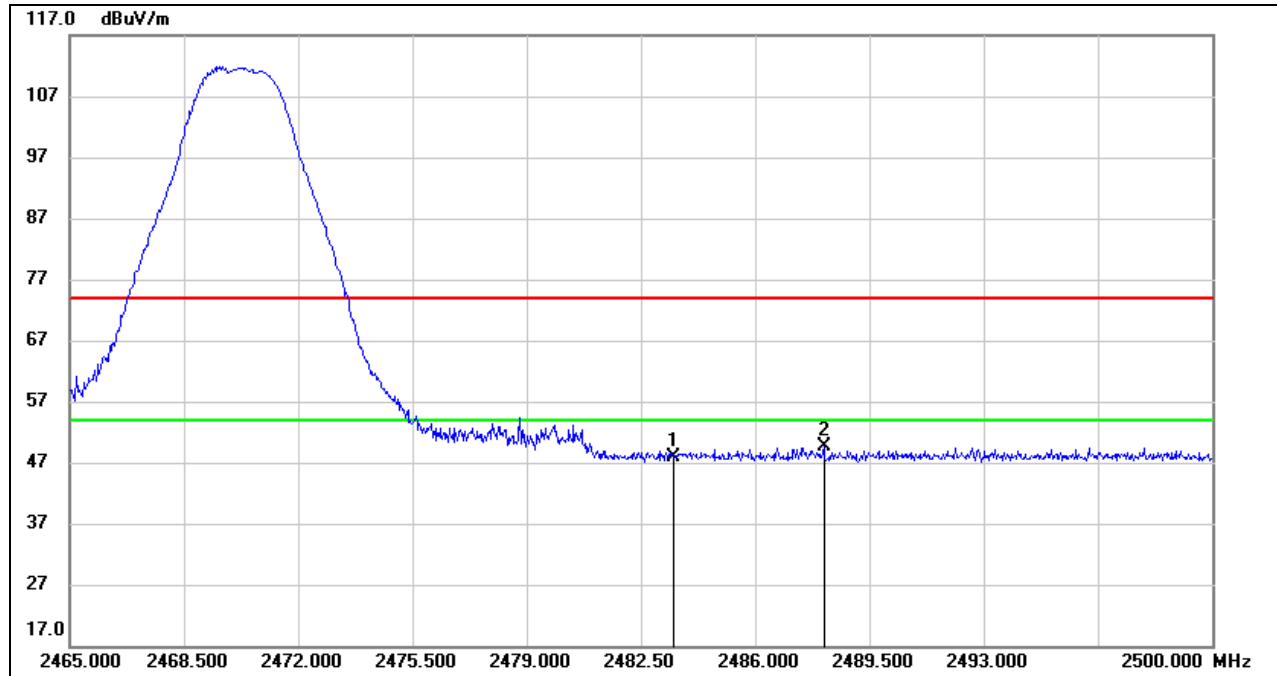


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2336.010	15.52	32.93	48.45	74.00	-25.55	peak
2	2390.000	14.55	33.35	47.90	74.00	-26.10	peak

- Note: 1. Measurement = Reading Level + Correct Factor.  
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
3. 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	14.17	33.71	47.88	74.00	-26.12	peak
2	2488.100	15.88	33.72	49.60	74.00	-24.40	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.

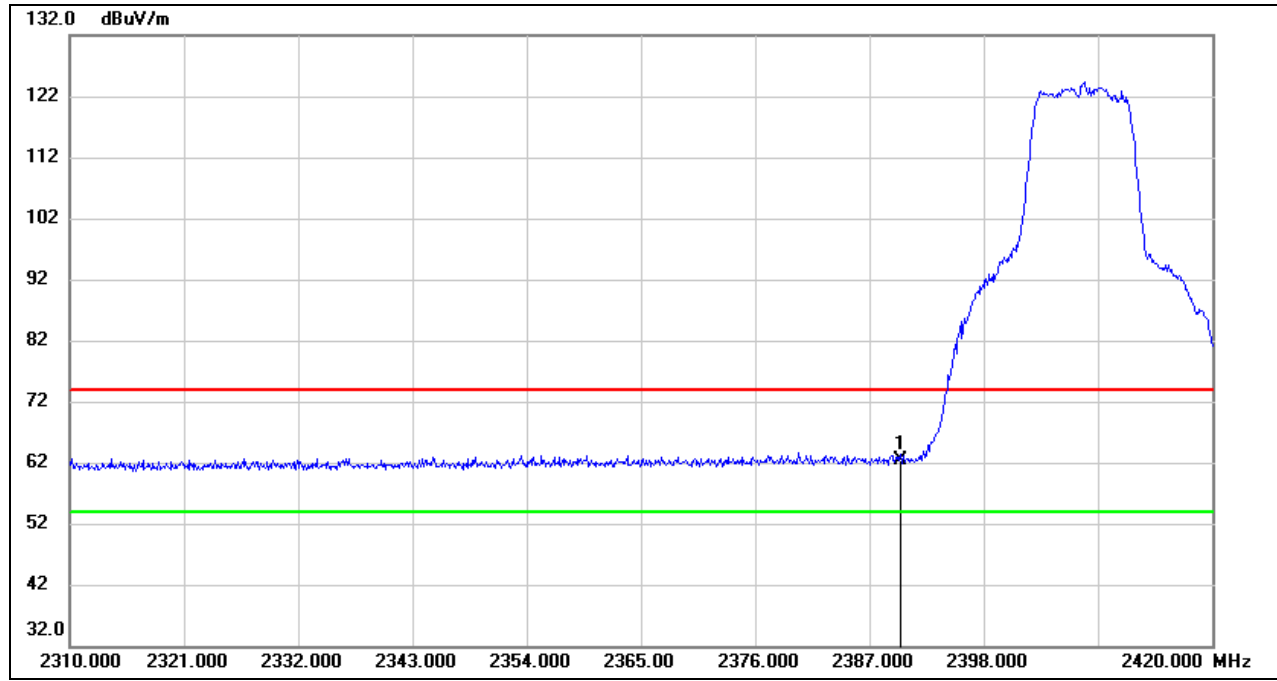
4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

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

### 8.1.5. 2.4G SRD 10MHz MODE

#### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

#### PEAK

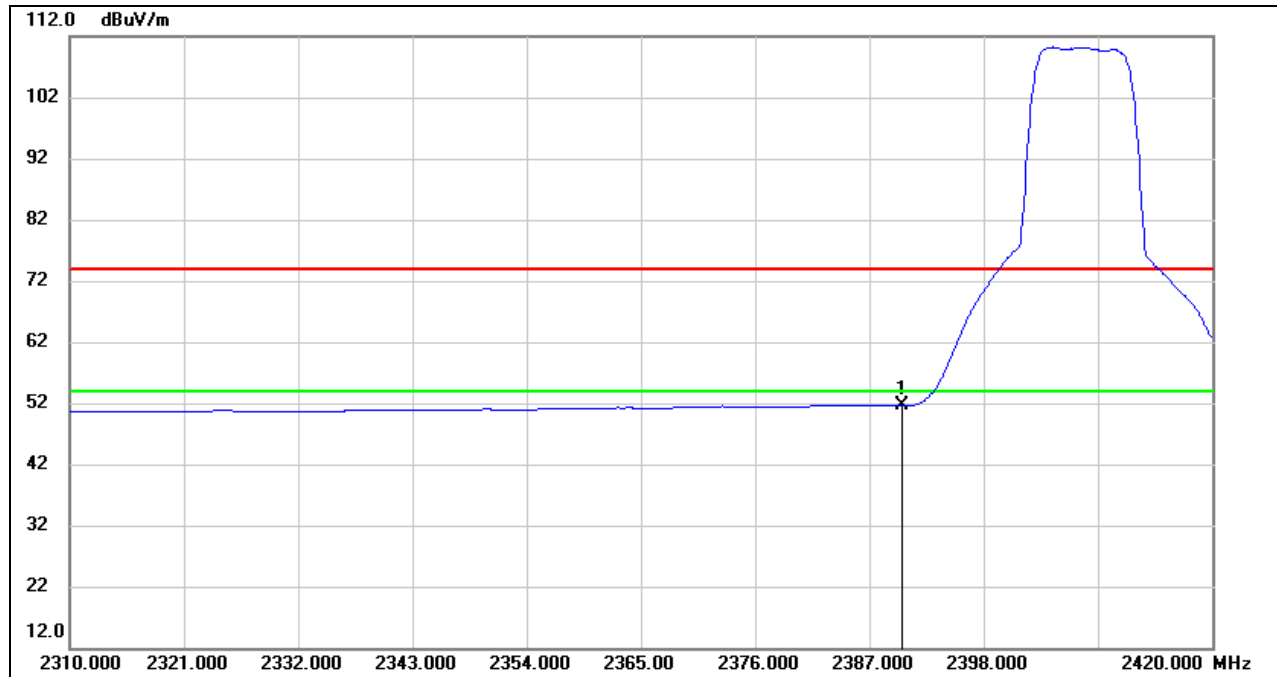


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.99	33.35	62.34	74.00	-11.66	peak

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



### AVG

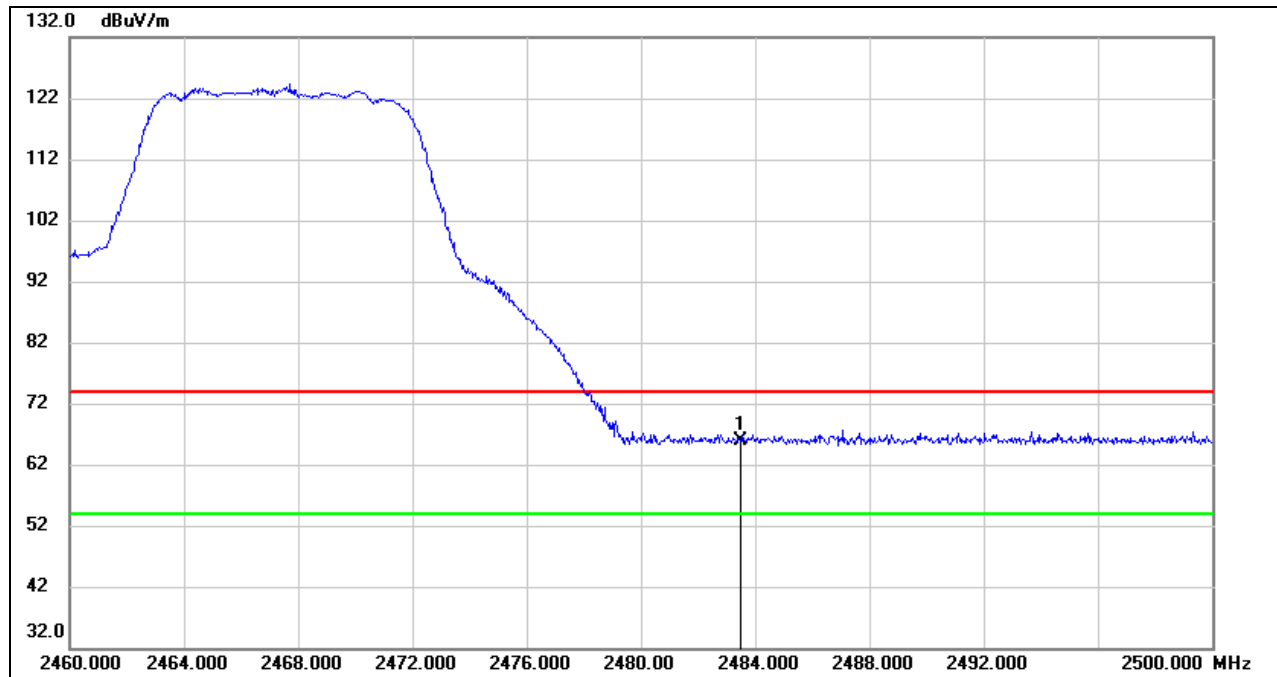


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.23	33.35	51.58	54.00	-2.42	AVG

- 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)

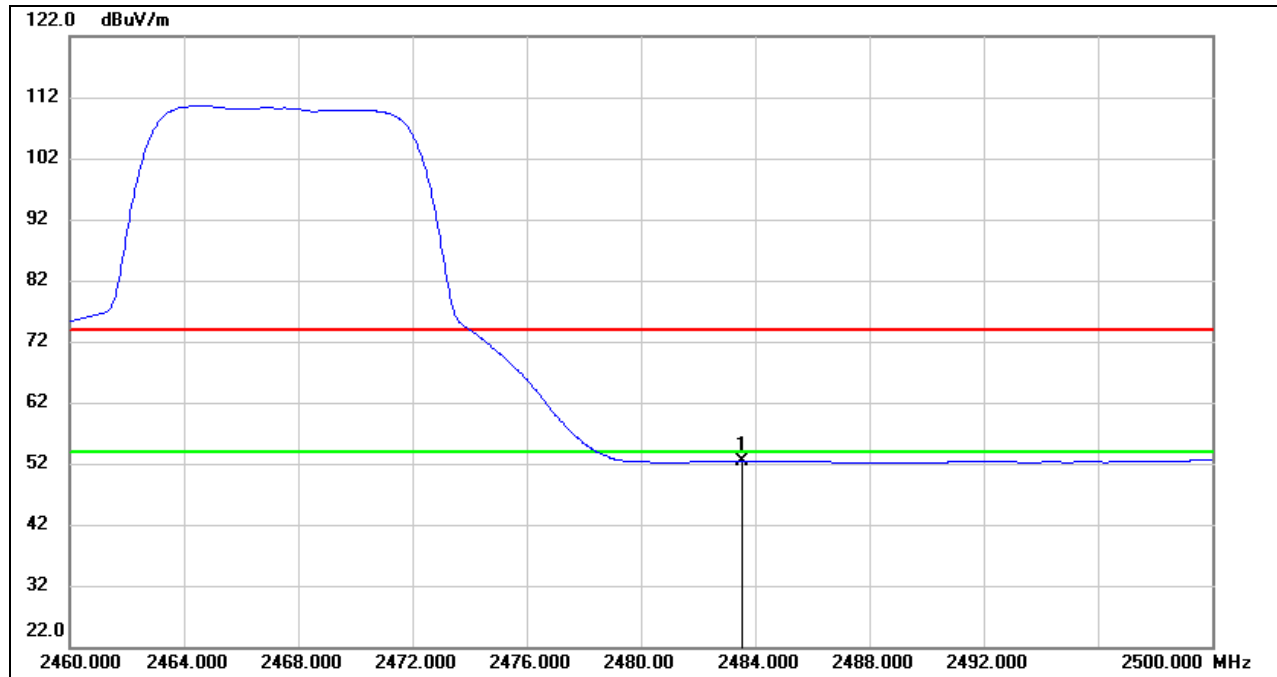
## PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	32.21	33.71	65.92	74.00	-8.08	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	18.61	33.71	52.32	54.00	-1.68	AVG

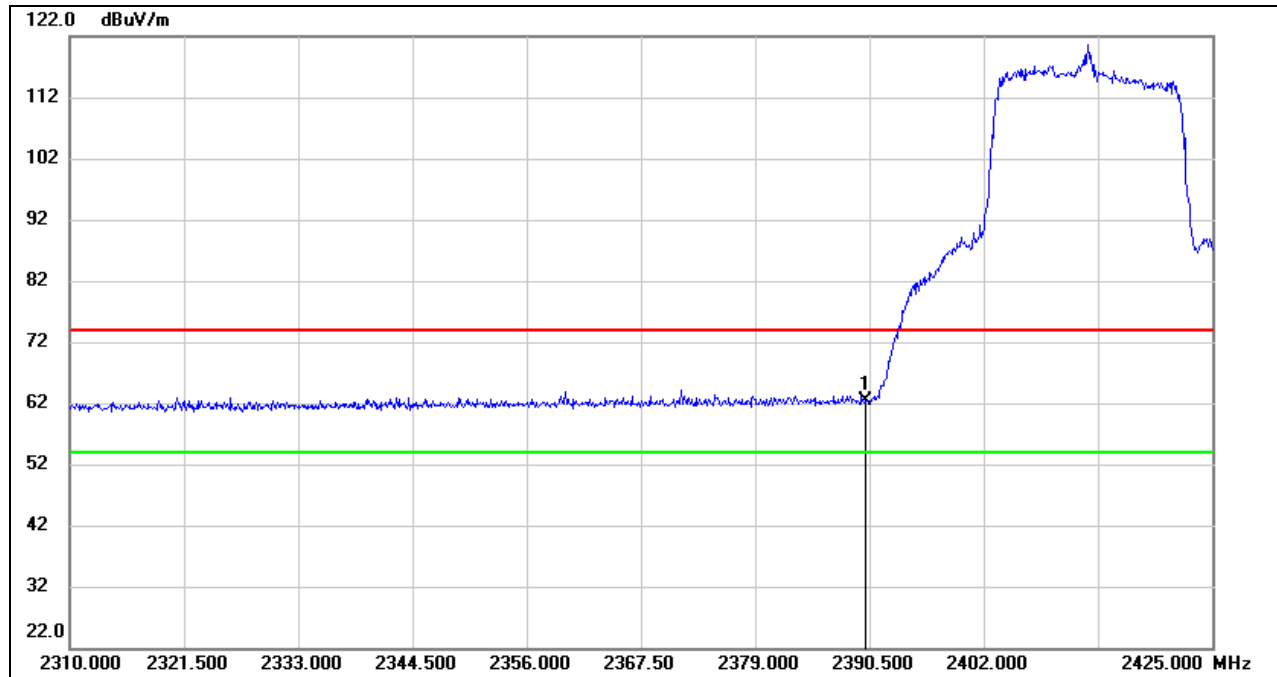
- Note:
1. Measurement = Reading Level + Correct Factor.
  2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  3. AVG:  $VBW=1/T_{on}$ , where:  $T_{on}$  is the transmitting duration.
  4. For the transmitting duration, please refer to clause 7.1.
  5. Only the worst 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. 2.4G SRD 20MHz 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	2390.000	28.91	33.35	62.26	74.00	-11.74	peak

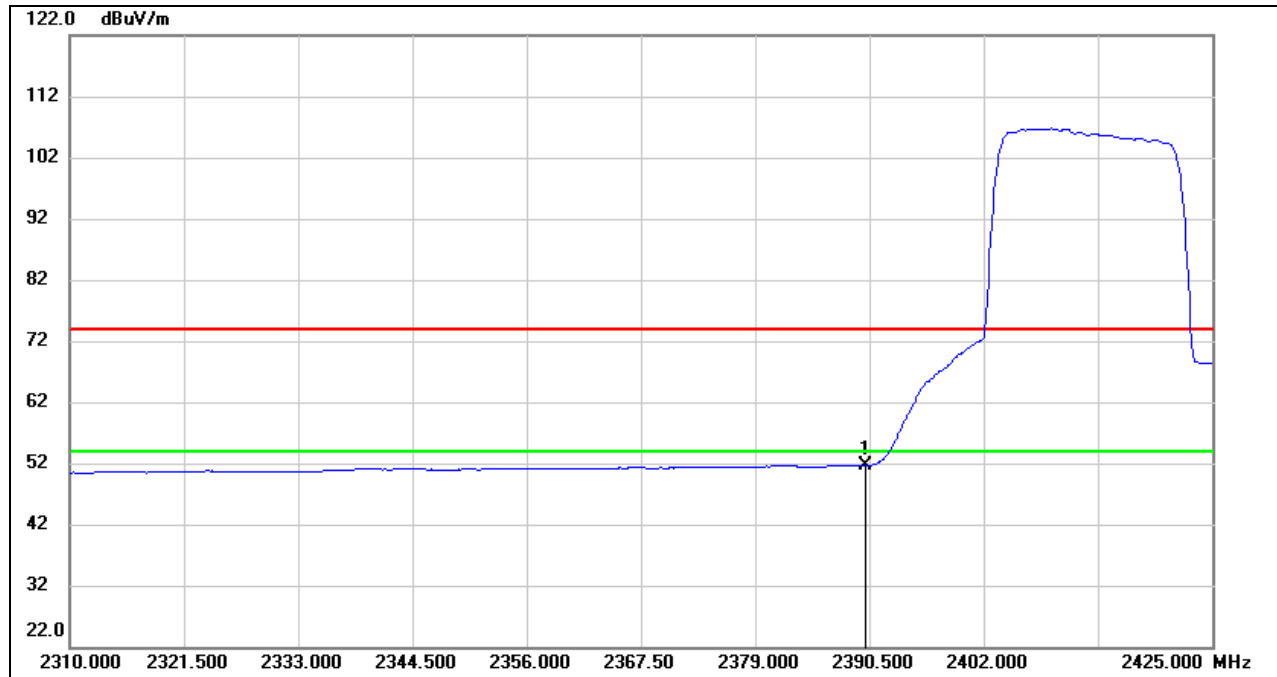
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

### AVG

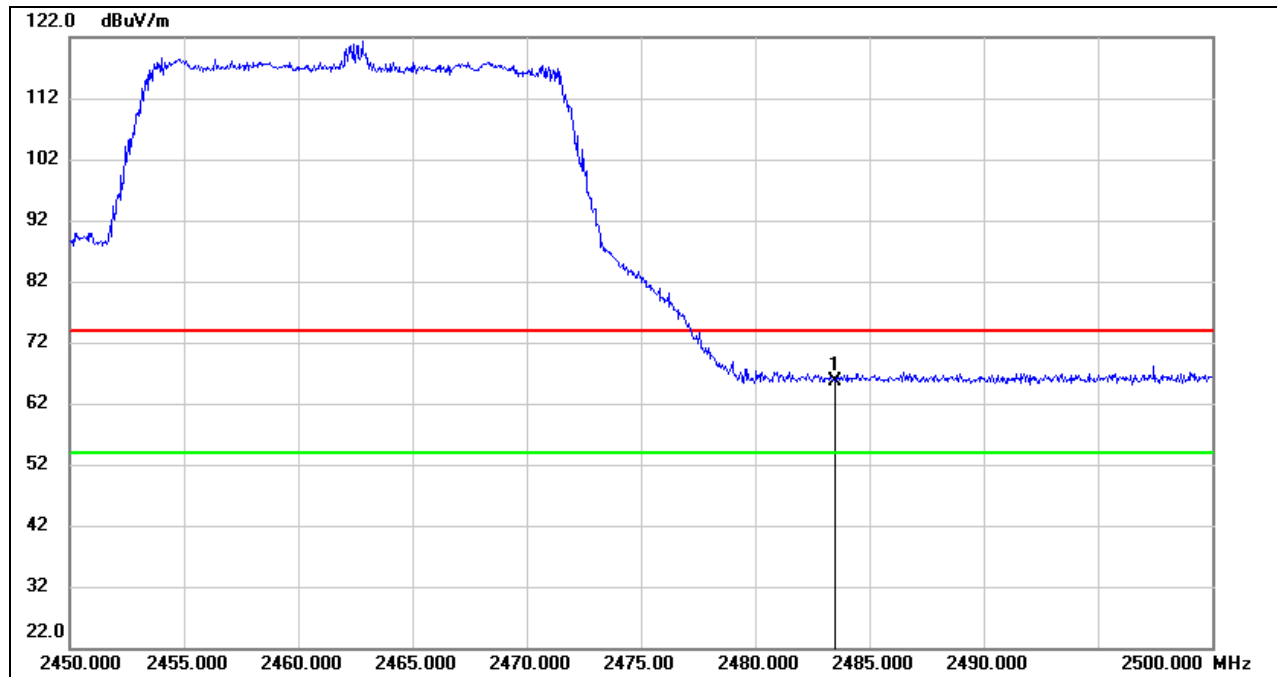


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.26	33.35	51.61	54.00	-2.39	AVG

- Note:
1. Measurement = Reading Level + Correct Factor.
  2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  3. AVG:  $VBW=1/T_{on}$ , where:  $T_{on}$  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)

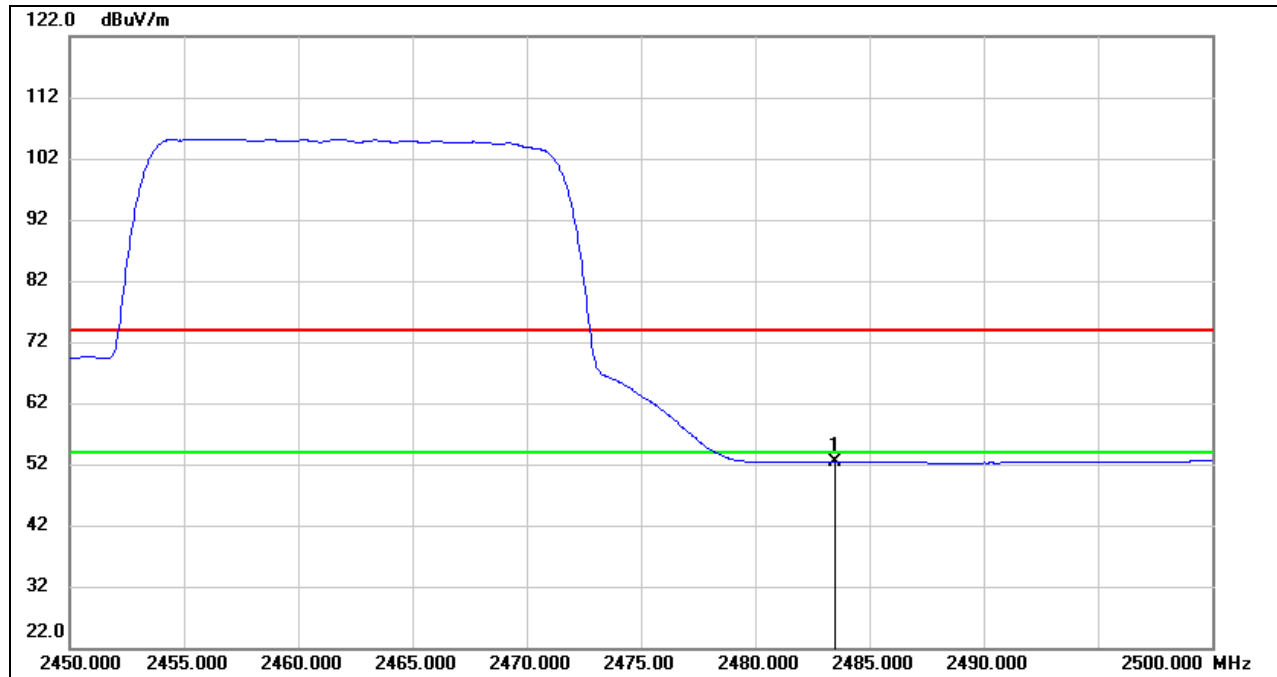
## PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	32.00	33.71	65.71	74.00	-8.29	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. 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	18.72	33.71	52.43	54.00	-1.57	AVG

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

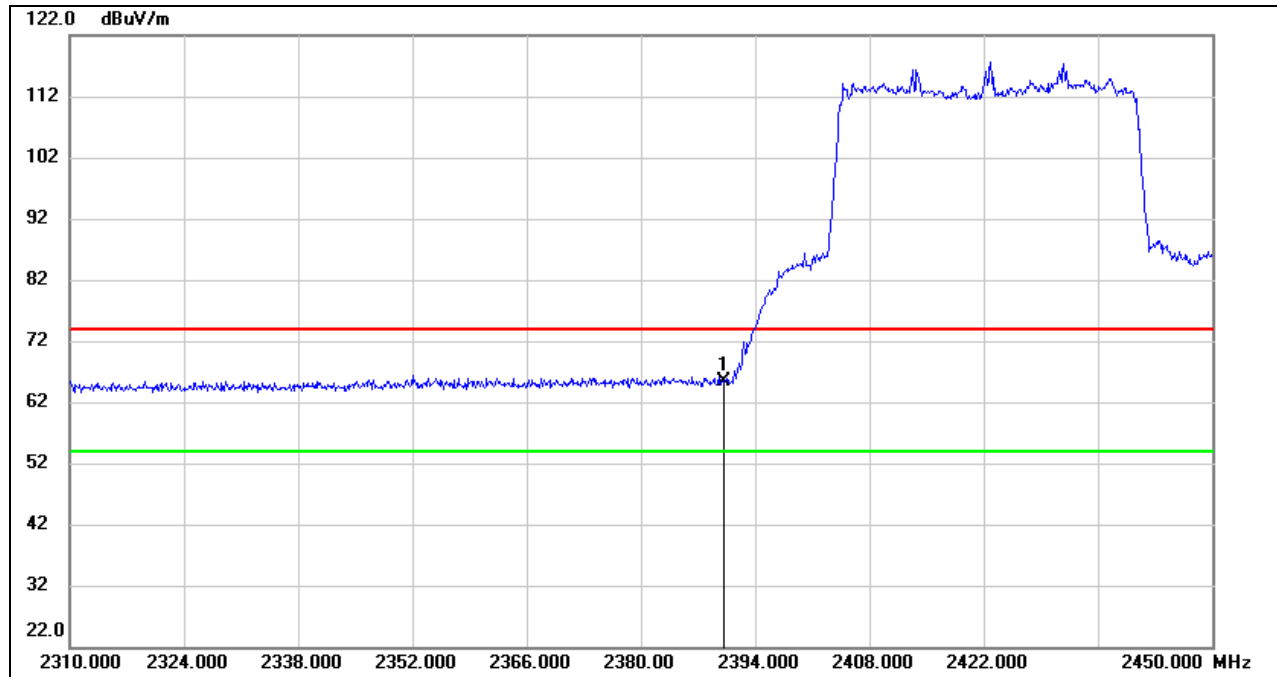
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

### 8.1.7. 2.4G SRD 40MHz 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	2390.000	32.14	33.35	65.49	74.00	-8.51	peak

Note: 1. Measurement = Reading Level + Correct Factor.

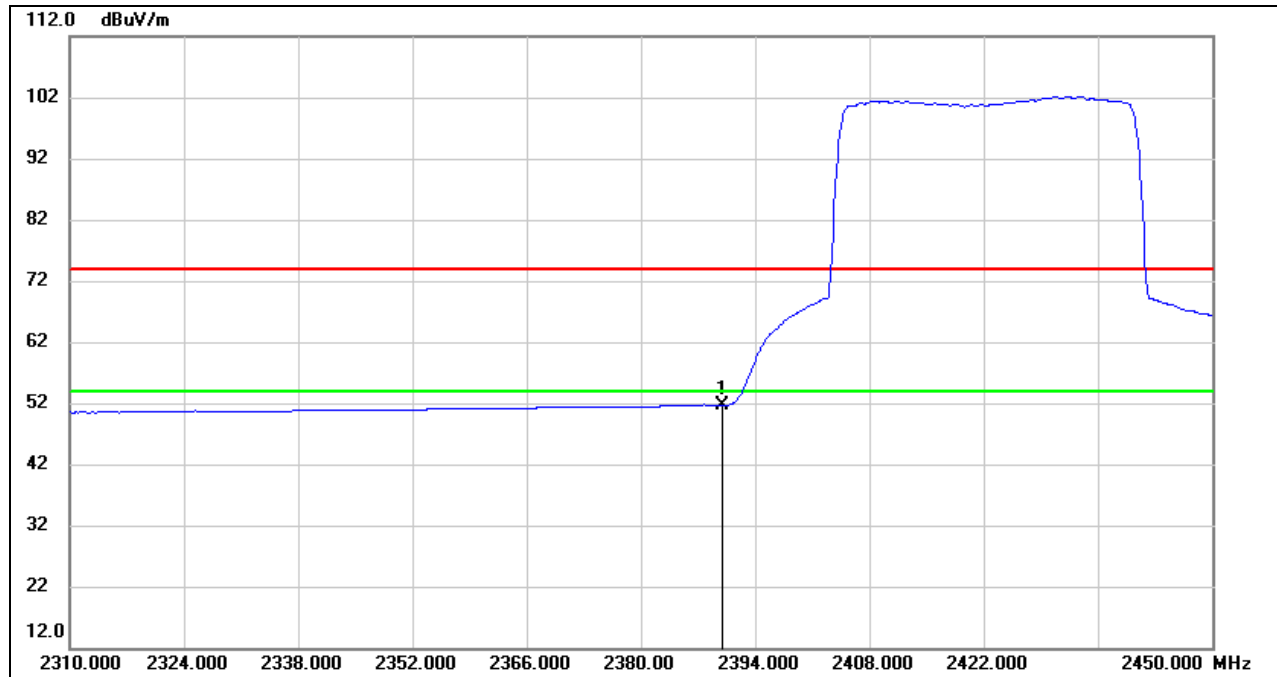
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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

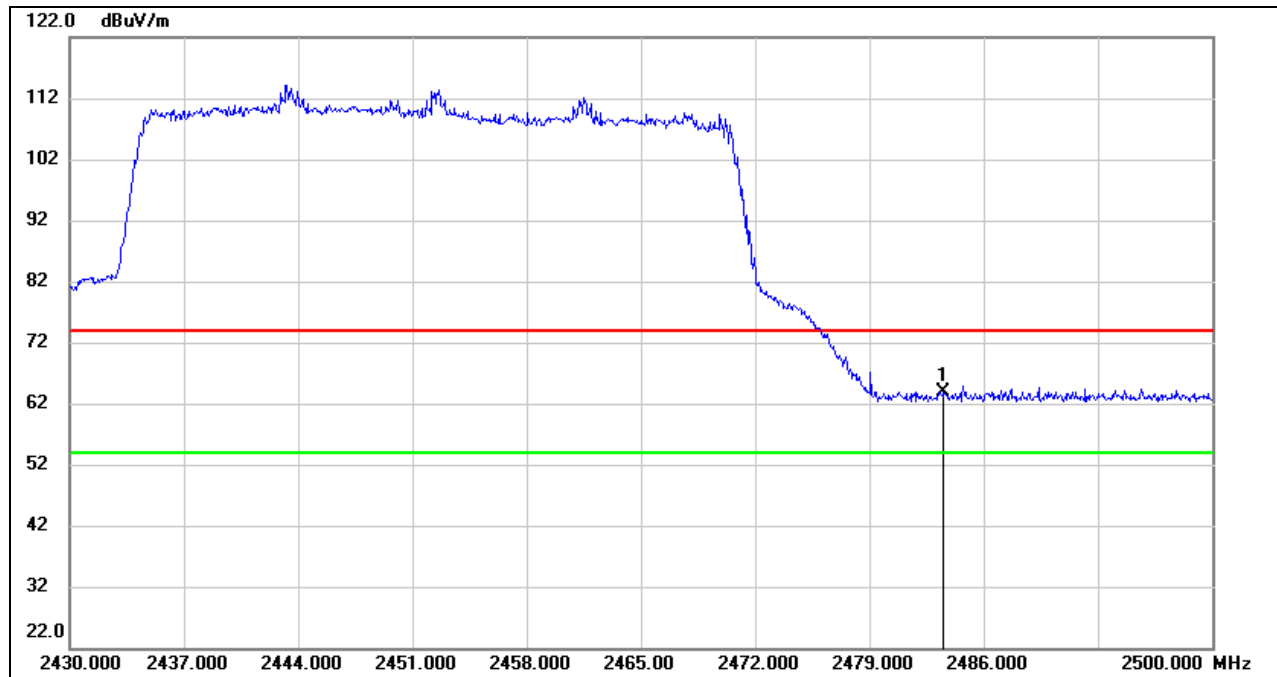


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	18.19	33.35	51.54	54.00	-2.46	AVG

- 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:  $VBW=1/T_{on}$ , where:  $T_{on}$  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)

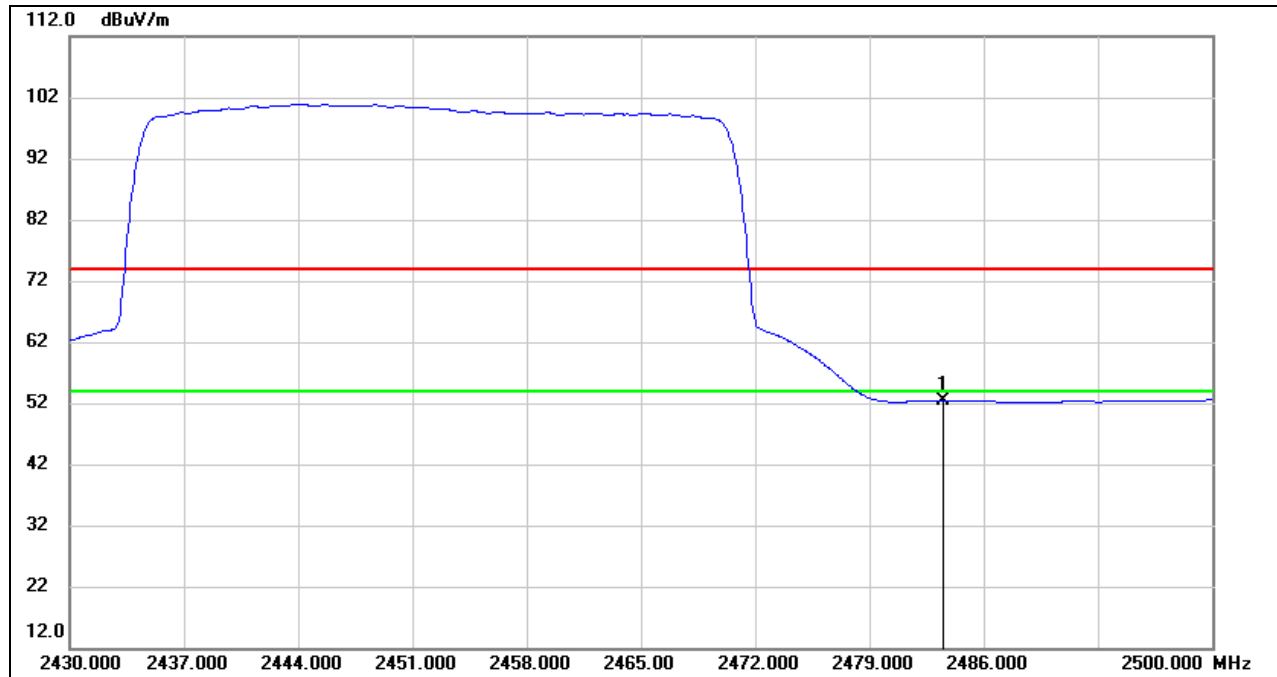
## PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	30.09	33.71	63.80	74.00	-10.20	peak

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

### AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.75	33.71	52.46	54.00	-1.54	AVG

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

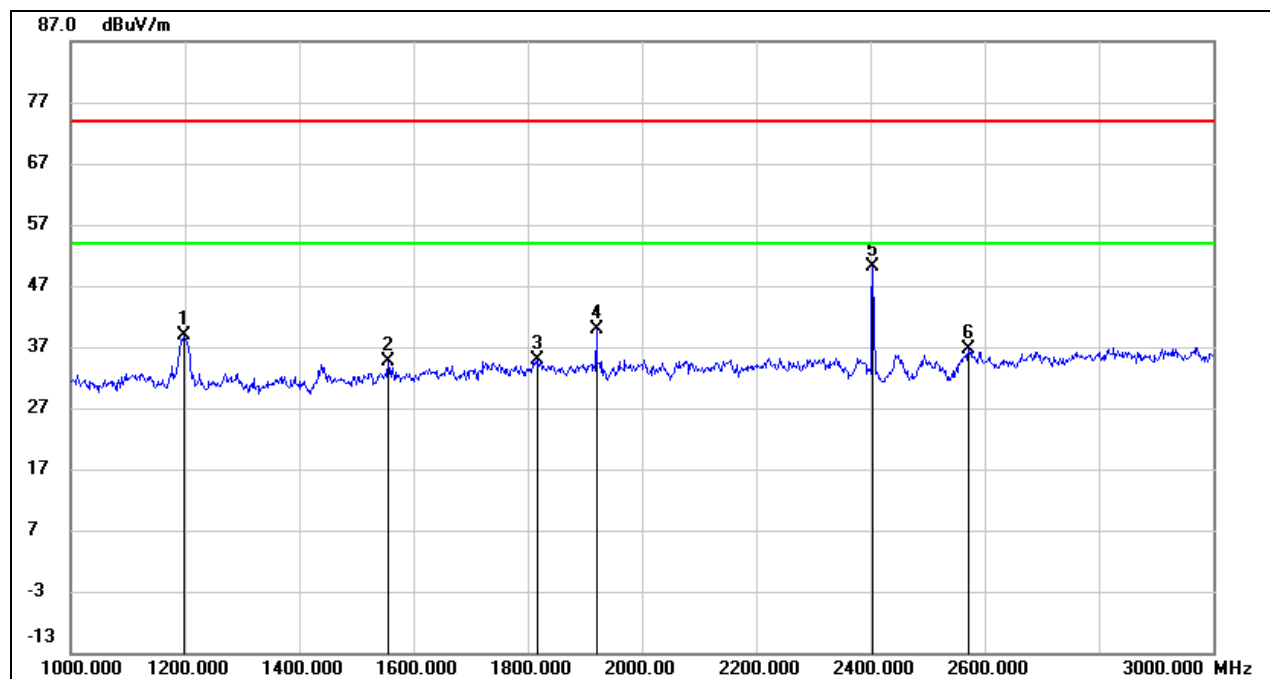
Note: Horizontal and Vertical have been tested, only the worst data was recorded in the report.

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

## 8.2. SPURIOUS EMISSIONS (1 GHz ~ 3 GHz)

### 8.2.1. 2.4G SRD 10MHz MODE

#### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

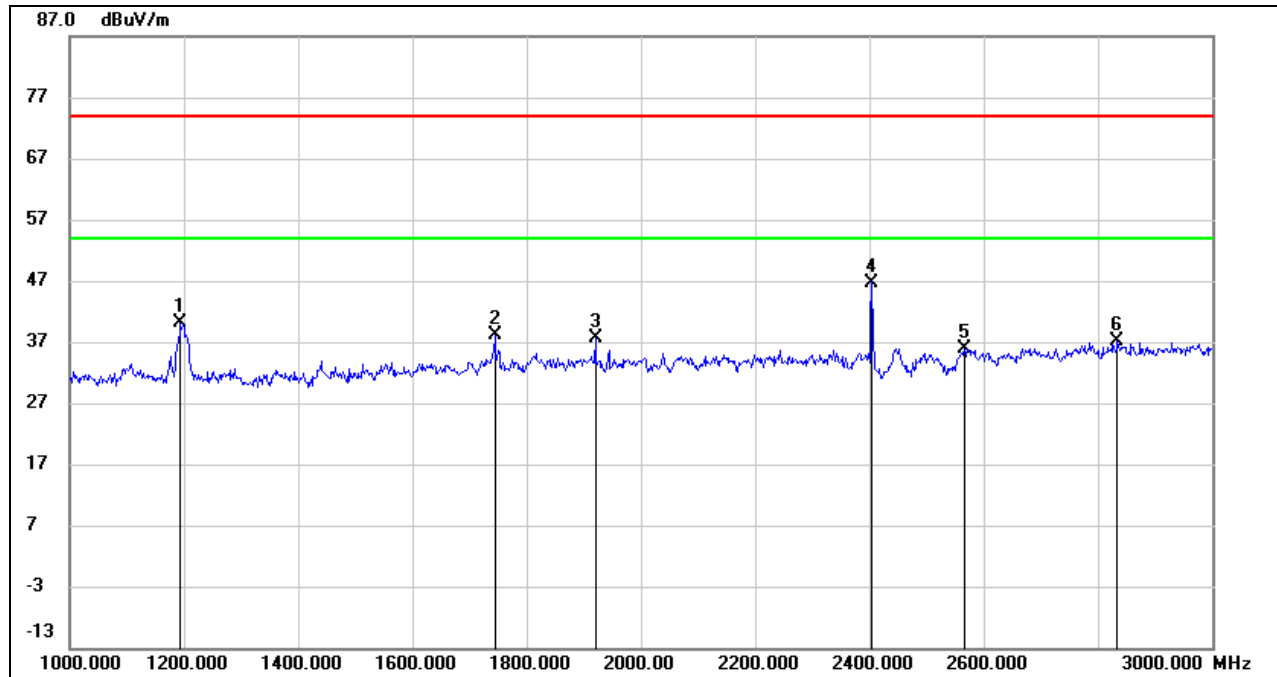


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1198.000	51.86	-13.00	38.86	74.00	-35.14	peak
2	1556.000	46.60	-11.86	34.74	74.00	-39.26	peak
3	1818.000	45.00	-10.06	34.94	74.00	-39.06	peak
4	1920.000	49.91	-10.13	39.78	74.00	-34.22	peak
5	2407.500	58.55	-8.38	50.17	/	/	fundamental
6	2572.000	44.59	-7.96	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.

**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

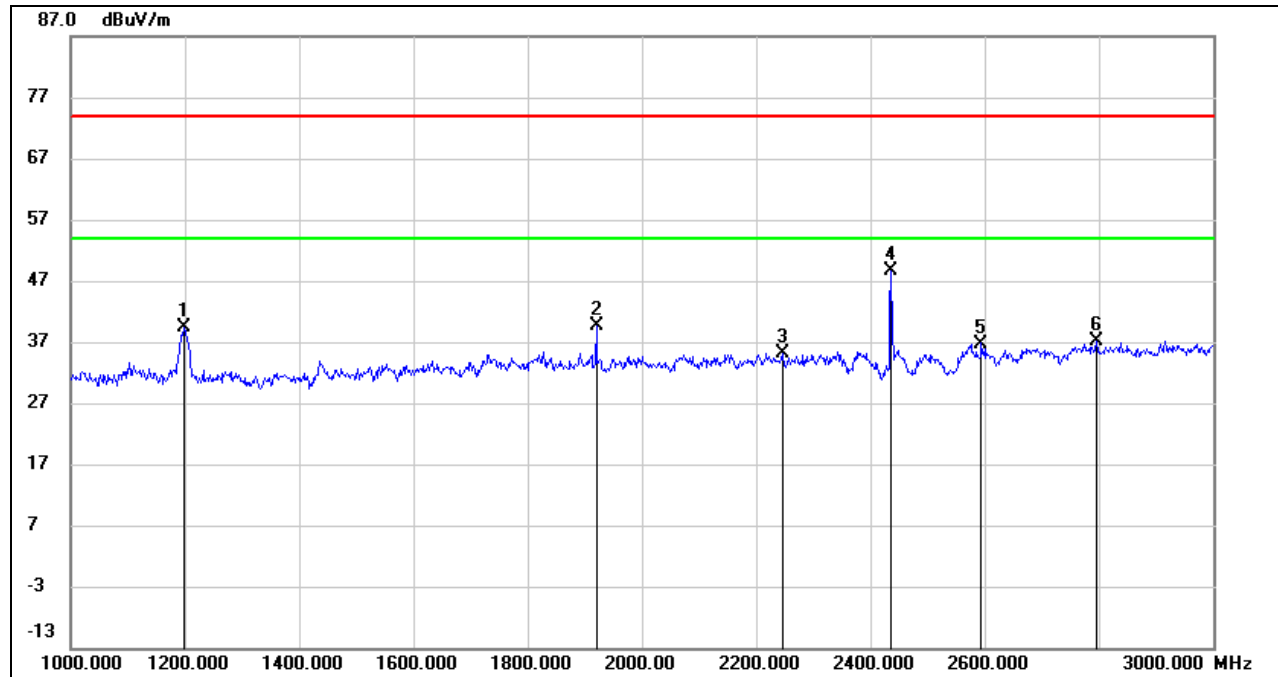
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	53.08	-13.02	40.06	74.00	-33.94	peak
2	1744.000	48.57	-10.47	38.10	74.00	-35.90	peak
3	1920.000	47.77	-10.13	37.64	74.00	-36.36	peak
4	2407.500	55.13	-8.38	46.75	/	/	fundamental
5	2566.000	43.97	-7.99	35.98	74.00	-38.02	peak
6	2834.000	43.61	-6.39	37.22	74.00	-36.78	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.

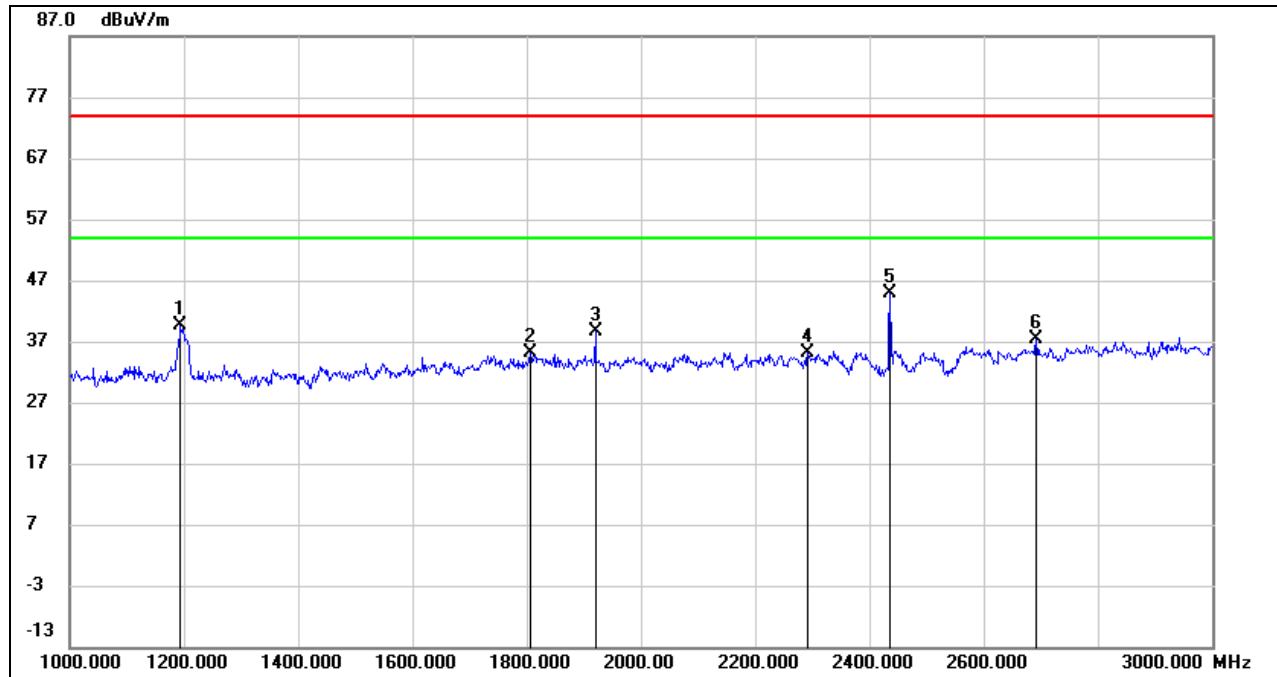
3. Peak: Peak detector.

### 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	1198.000	52.34	-13.00	39.34	74.00	-34.66	peak
2	1920.000	49.64	-10.13	39.51	74.00	-34.49	peak
3	2246.000	44.05	-8.90	35.15	74.00	-38.85	peak
4	2437.500	56.88	-8.34	48.54	/	/	fundamental
5	2594.000	44.63	-7.88	36.75	74.00	-37.25	peak
6	2796.000	43.63	-6.58	37.05	74.00	-36.95	peak

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

**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

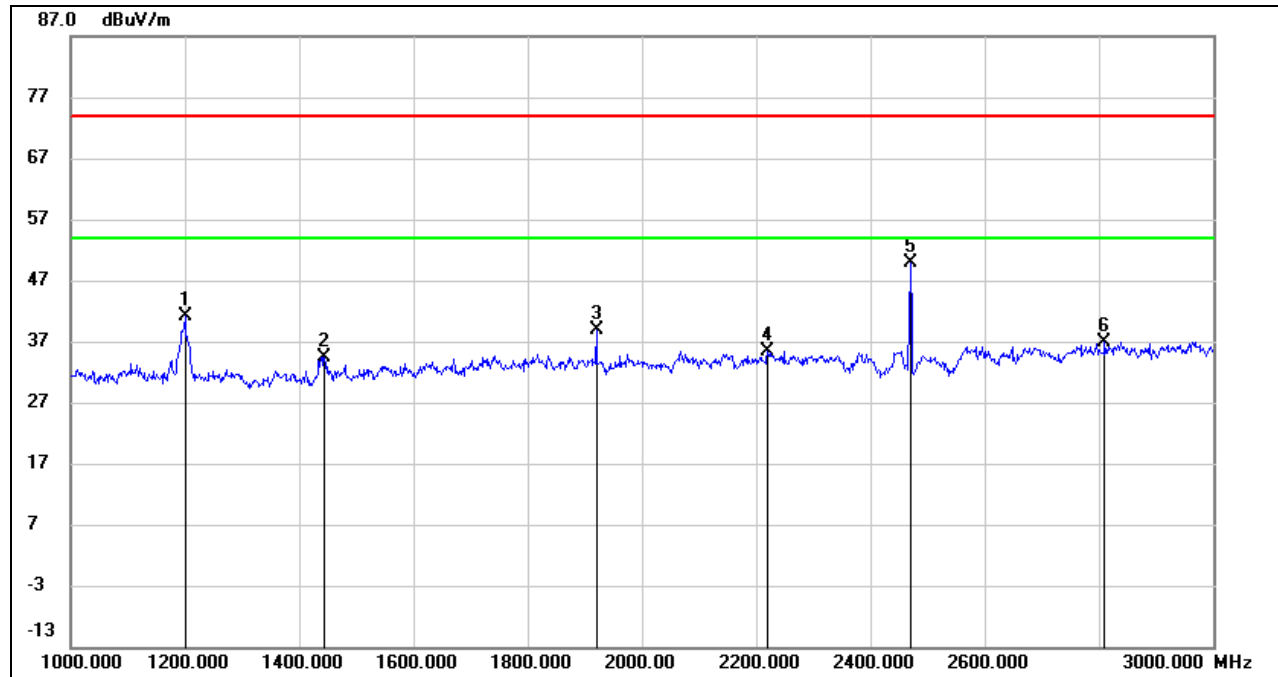
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1194.000	52.65	-13.02	39.63	74.00	-34.37	peak
2	1806.000	45.17	-10.06	35.11	74.00	-38.89	peak
3	1920.000	48.76	-10.13	38.63	74.00	-35.37	peak
4	2292.000	43.86	-8.74	35.12	74.00	-38.88	peak
5	2437.500	53.15	-8.34	44.81	/	/	fundamental
6	2692.000	44.68	-7.27	37.41	74.00	-36.59	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1200.000	54.22	-12.99	41.23	74.00	-32.77	peak
2	1444.000	46.93	-12.49	34.44	74.00	-39.56	peak
3	1920.000	49.04	-10.13	38.91	74.00	-35.09	peak
4	2220.000	44.42	-8.98	35.44	74.00	-38.56	peak
5	2467.500	58.14	-8.27	49.87	/	/	fundamental
6	2810.000	43.26	-6.50	36.76	74.00	-37.24	peak

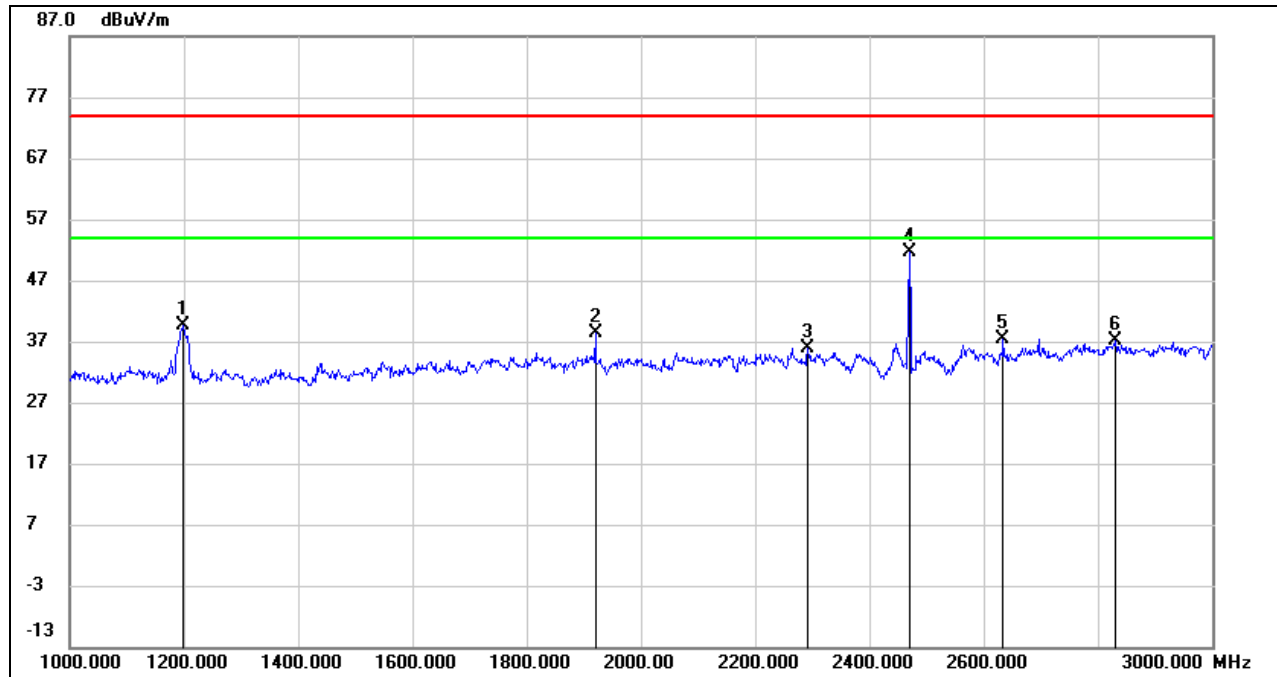
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1198.000	52.58	-13.00	39.58	74.00	-34.42	peak
2	1920.000	48.54	-10.13	38.41	74.00	-35.59	peak
3	2292.000	44.55	-8.74	35.81	74.00	-38.19	peak
4	2467.500	59.90	-8.27	51.63	/	/	fundamental
5	2634.000	45.03	-7.64	37.39	74.00	-36.61	peak
6	2830.000	43.41	-6.40	37.01	74.00	-36.99	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

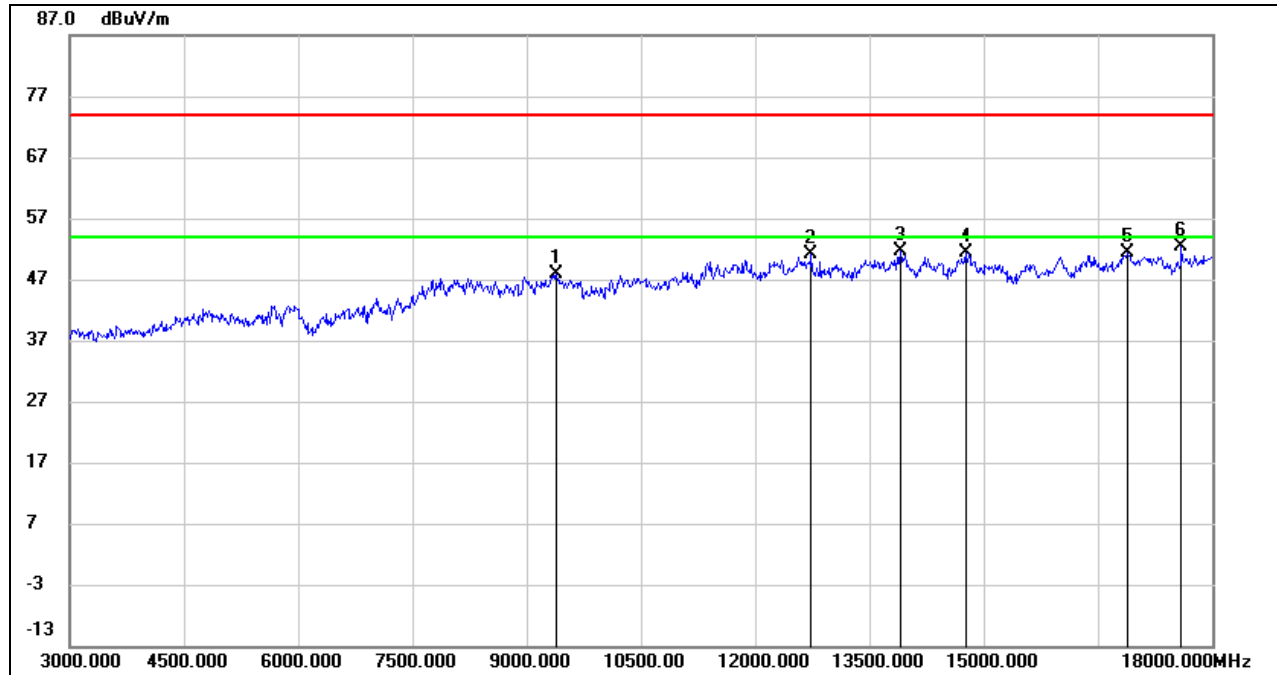
3. Peak: Peak detector.

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

### 8.3. SPURIOUS EMISSIONS (3 GHz ~ 18 GHz)

#### 8.3.1. 2.4G SRD 1.4MHz MODE

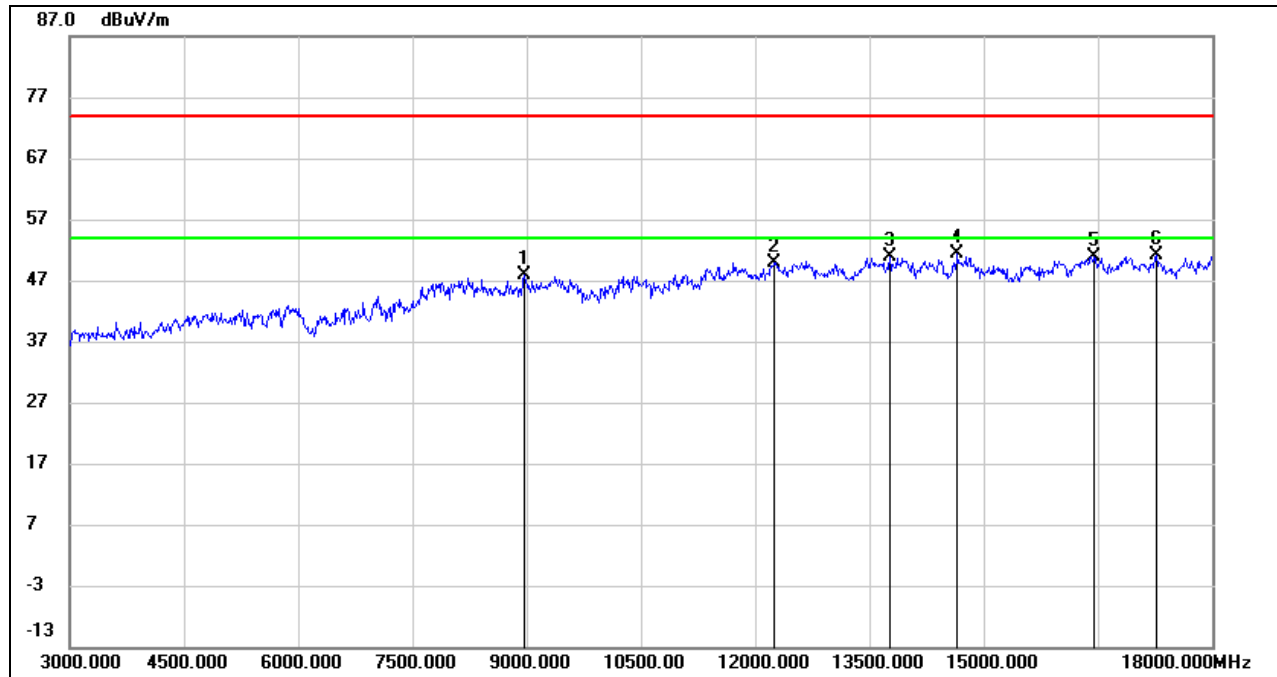
##### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9390.000	37.02	10.92	47.94	74.00	-26.06	peak
2	12735.000	35.35	15.75	51.10	74.00	-22.90	peak
3	13905.000	34.02	17.54	51.56	74.00	-22.44	peak
4	14760.000	33.52	17.90	51.42	74.00	-22.58	peak
5	16890.000	29.83	21.49	51.32	74.00	-22.68	peak
6	17595.000	29.66	22.69	52.35	74.00	-21.65	peak

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

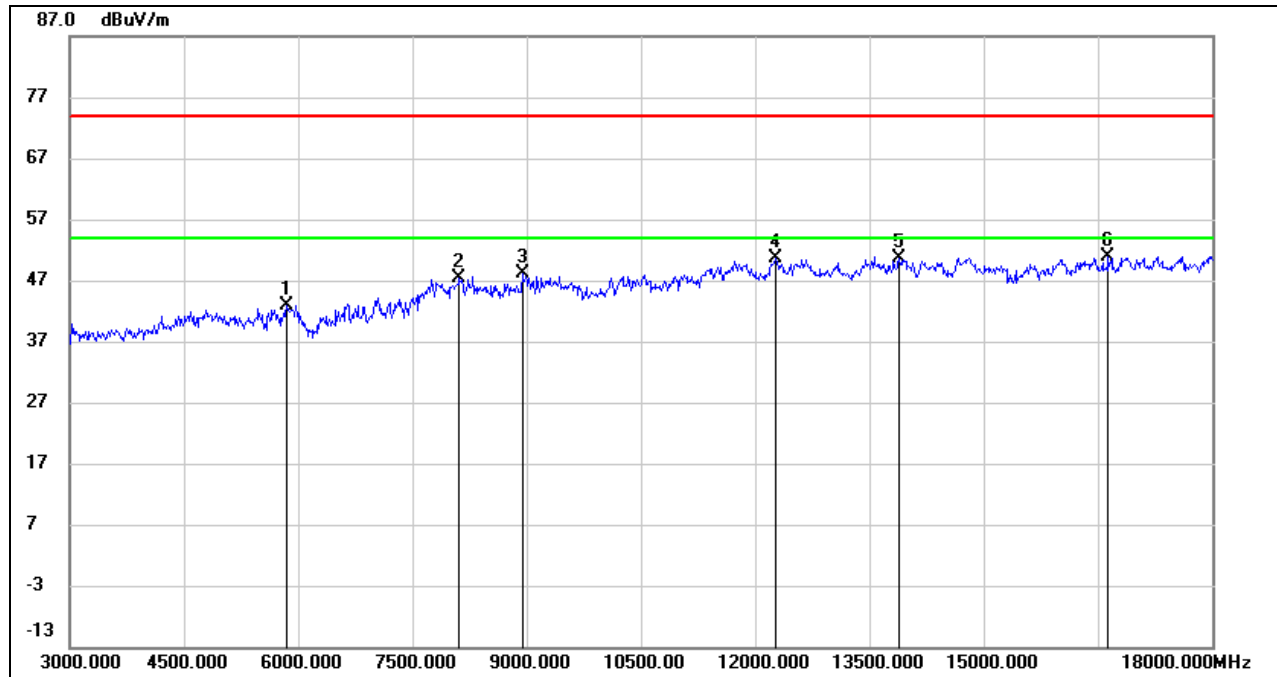
### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8970.000	37.30	10.70	48.00	74.00	-26.00	peak
2	12255.000	33.87	16.03	49.90	74.00	-24.10	peak
3	13770.000	33.37	17.60	50.97	74.00	-23.03	peak
4	14655.000	33.77	17.54	51.31	74.00	-22.69	peak
5	16455.000	31.20	19.68	50.88	74.00	-23.12	peak
6	17265.000	28.65	22.39	51.04	74.00	-22.96	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. 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	5850.000	38.94	4.00	42.94	74.00	-31.06	peak
2	8115.000	37.24	10.13	47.37	74.00	-26.63	peak
3	8940.000	37.99	10.13	48.12	74.00	-25.88	peak
4	12270.000	34.60	16.04	50.64	74.00	-23.36	peak
5	13890.000	33.14	17.53	50.67	74.00	-23.33	peak
6	16635.000	30.86	19.98	50.84	74.00	-23.16	peak

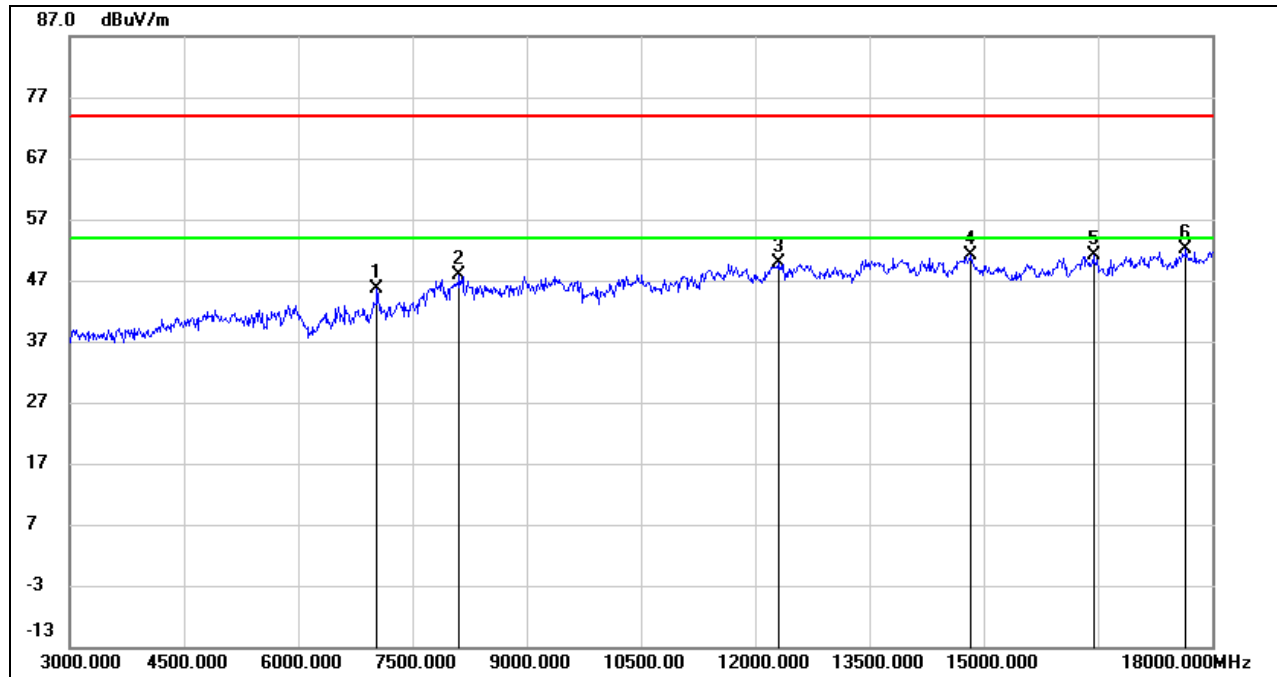
Note: 1. Peak Result = Reading Level + Correct Factor.

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	7035.000	37.98	7.62	45.60	74.00	-28.40	peak
2	8115.000	37.76	10.13	47.89	74.00	-26.11	peak
3	12300.000	33.82	16.09	49.91	74.00	-24.09	peak
4	14835.000	33.30	17.80	51.10	74.00	-22.90	peak
5	16440.000	31.38	19.68	51.06	74.00	-22.94	peak
6	17655.000	28.91	23.14	52.05	74.00	-21.95	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

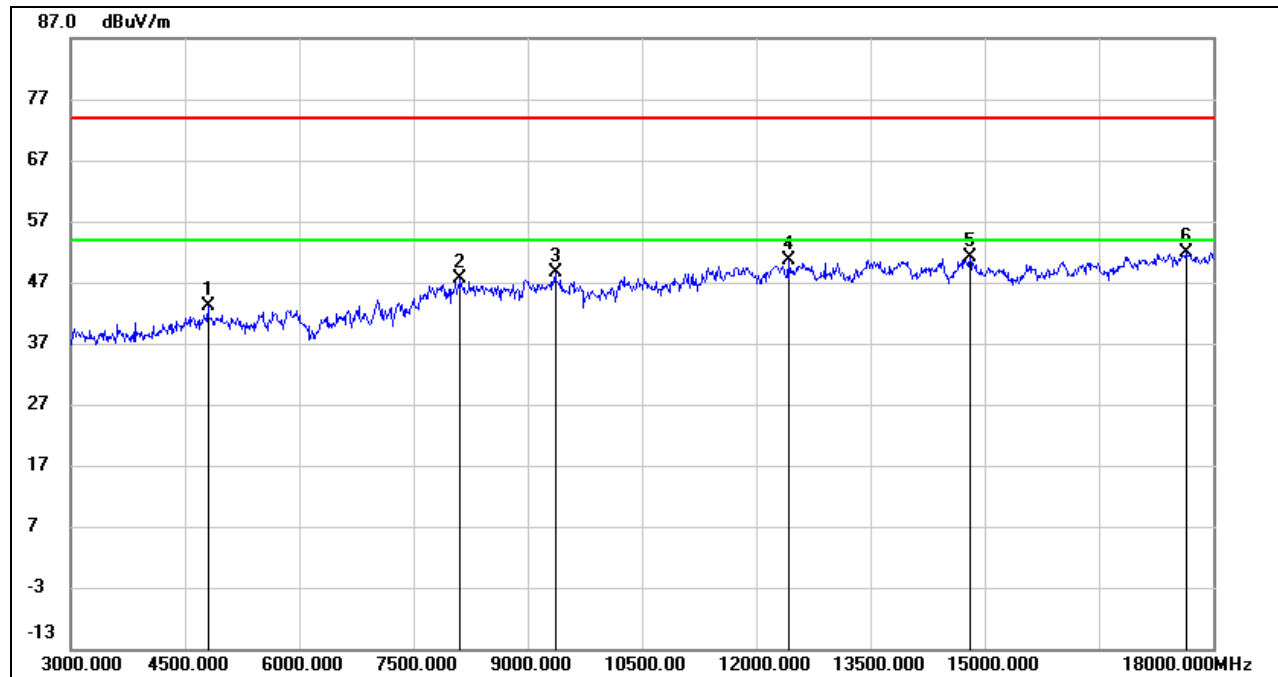
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	4800.000	41.61	1.40	43.01	74.00	-30.99	peak
2	8115.000	37.40	10.13	47.53	74.00	-26.47	peak
3	9360.000	37.88	10.75	48.63	74.00	-25.37	peak
4	12420.000	34.68	15.89	50.57	74.00	-23.43	peak
5	14805.000	33.13	18.00	51.13	74.00	-22.87	peak
6	17640.000	28.74	23.03	51.77	74.00	-22.23	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

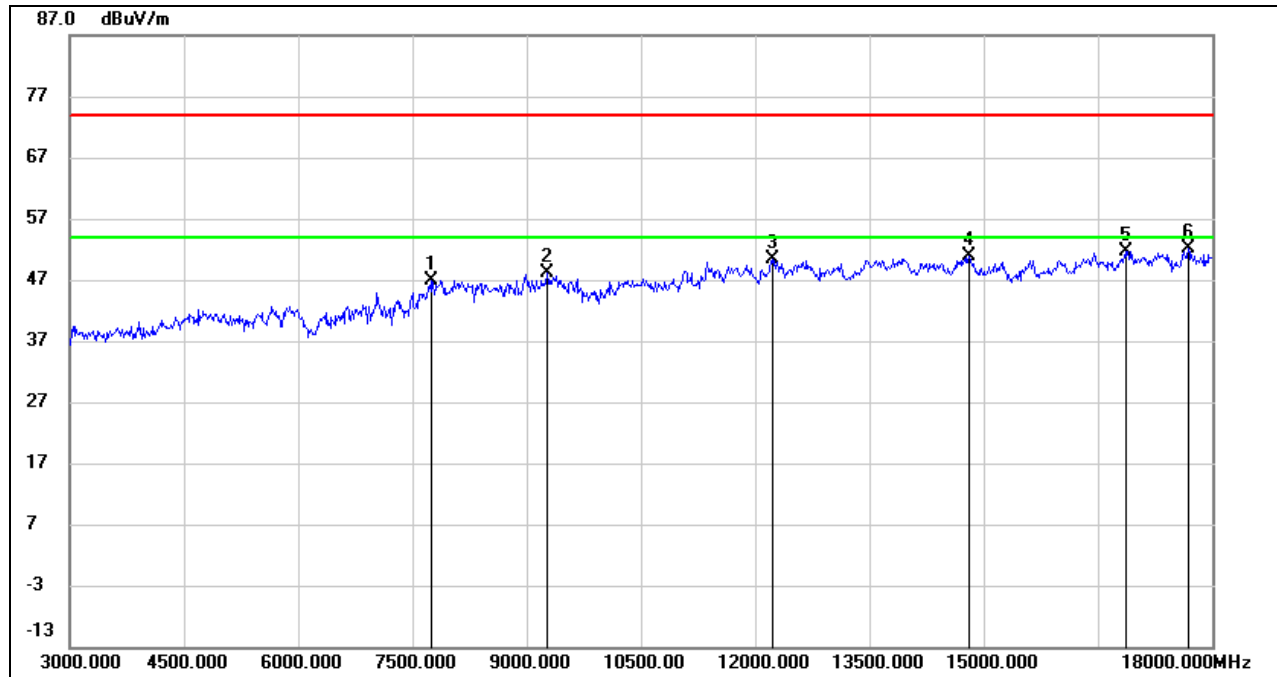
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

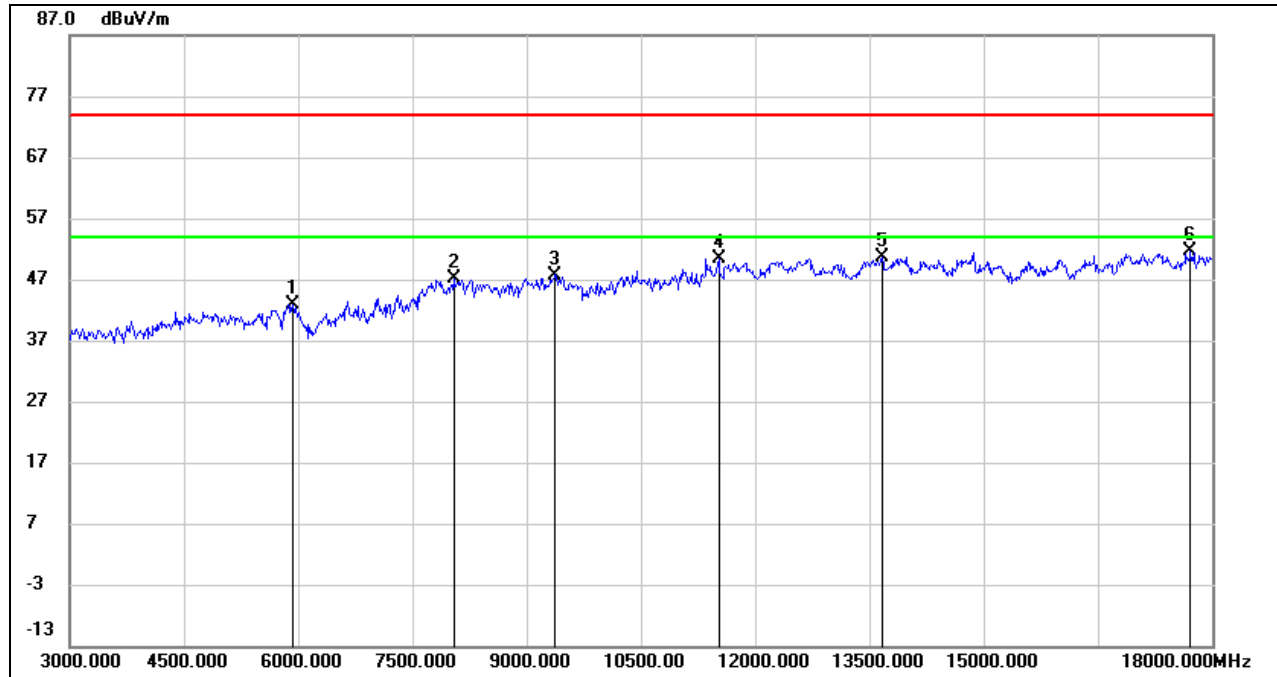


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7755.000	38.02	8.94	46.96	74.00	-27.04	peak
2	9270.000	37.97	10.25	48.22	74.00	-25.78	peak
3	12225.000	34.35	15.99	50.34	74.00	-23.66	peak
4	14805.000	32.78	18.00	50.78	74.00	-23.22	peak
5	16860.000	30.42	21.22	51.64	74.00	-22.36	peak
6	17685.000	28.76	23.36	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.  
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

### 8.3.2. 2.4G SRD 1.4MHz CA 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	5925.000	38.44	4.38	42.82	74.00	-31.18	peak
2	8040.000	37.85	9.25	47.10	74.00	-26.90	peak
3	9375.000	36.92	10.83	47.75	74.00	-26.25	peak
4	11520.000	35.77	14.66	50.43	74.00	-23.57	peak
5	13665.000	33.26	17.43	50.69	74.00	-23.31	peak
6	17715.000	27.97	23.56	51.53	74.00	-22.47	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.

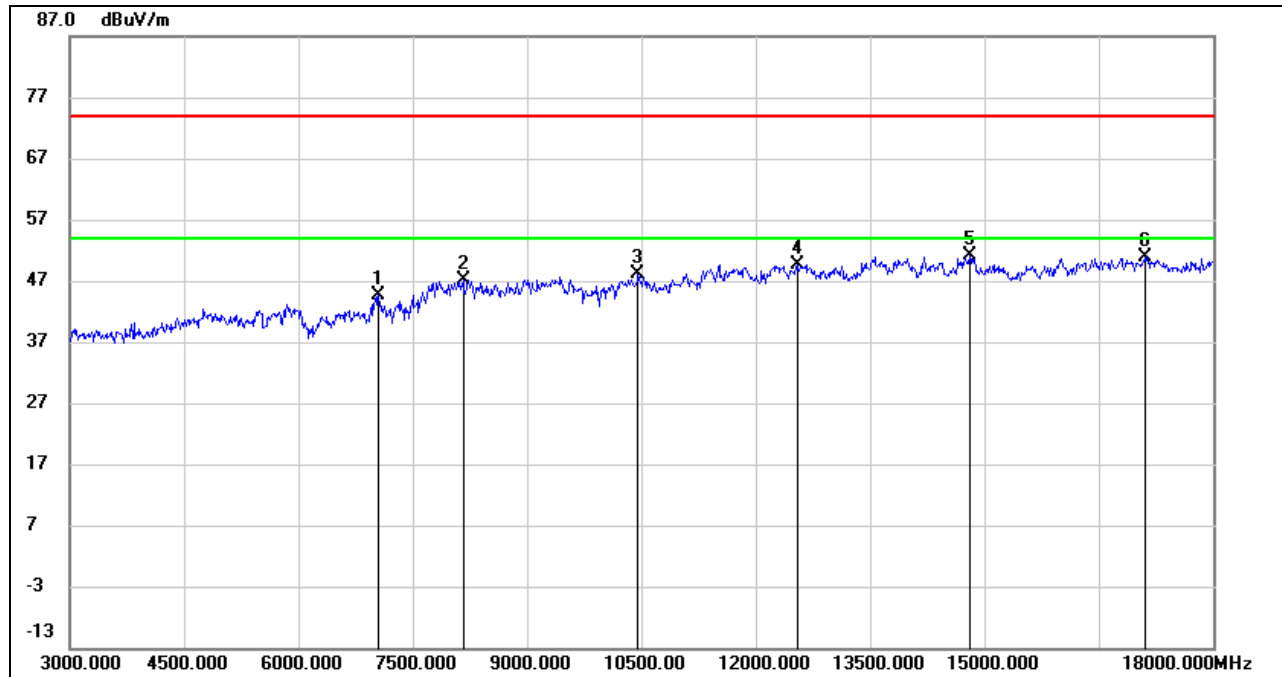
3. Peak: Peak detector.

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.



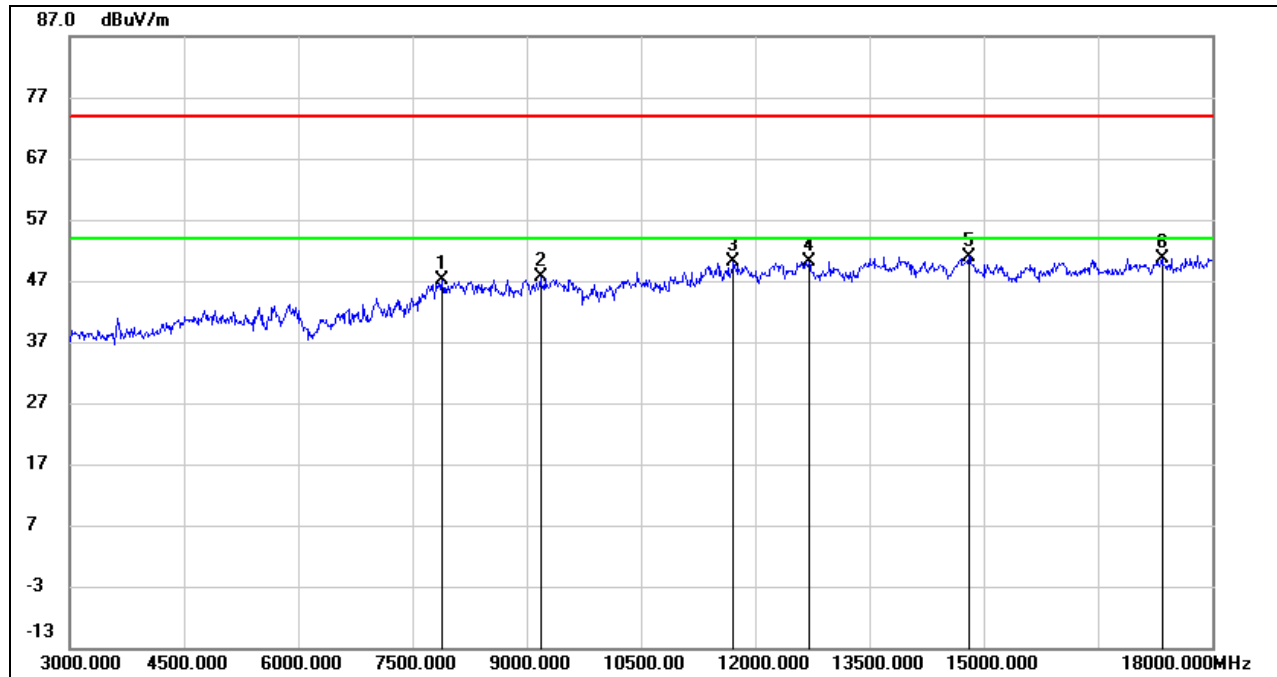
### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7050.000	37.05	7.63	44.68	74.00	-29.32	peak
2	8160.000	37.28	9.96	47.24	74.00	-26.76	peak
3	10455.000	35.88	12.31	48.19	74.00	-25.81	peak
4	12540.000	33.99	15.72	49.71	74.00	-24.29	peak
5	14805.000	33.16	18.00	51.16	74.00	-22.84	peak
6	17100.000	29.03	21.90	50.93	74.00	-23.07	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.

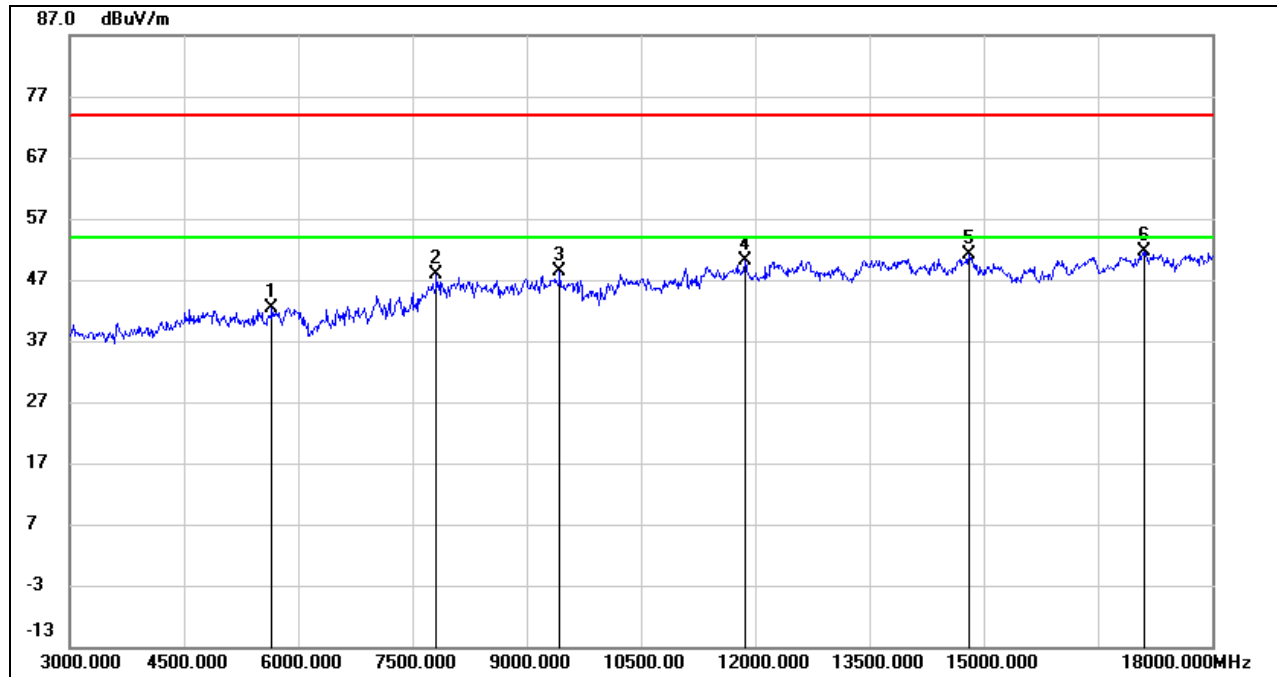
### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7890.000	38.22	8.91	47.13	74.00	-26.87	peak
2	9180.000	37.62	9.95	47.57	74.00	-26.43	peak
3	11715.000	34.82	15.34	50.16	74.00	-23.84	peak
4	12705.000	34.59	15.64	50.23	74.00	-23.77	peak
5	14805.000	33.00	18.00	51.00	74.00	-23.00	peak
6	17340.000	28.41	22.31	50.72	74.00	-23.28	peak

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

### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5655.000	39.41	3.04	42.45	74.00	-31.55	peak
2	7815.000	38.49	9.28	47.77	74.00	-26.23	peak
3	9435.000	37.66	10.81	48.47	74.00	-25.53	peak
4	11865.000	34.66	15.42	50.08	74.00	-23.92	peak
5	14805.000	33.19	18.00	51.19	74.00	-22.81	peak
6	17115.000	29.77	21.91	51.68	74.00	-22.32	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

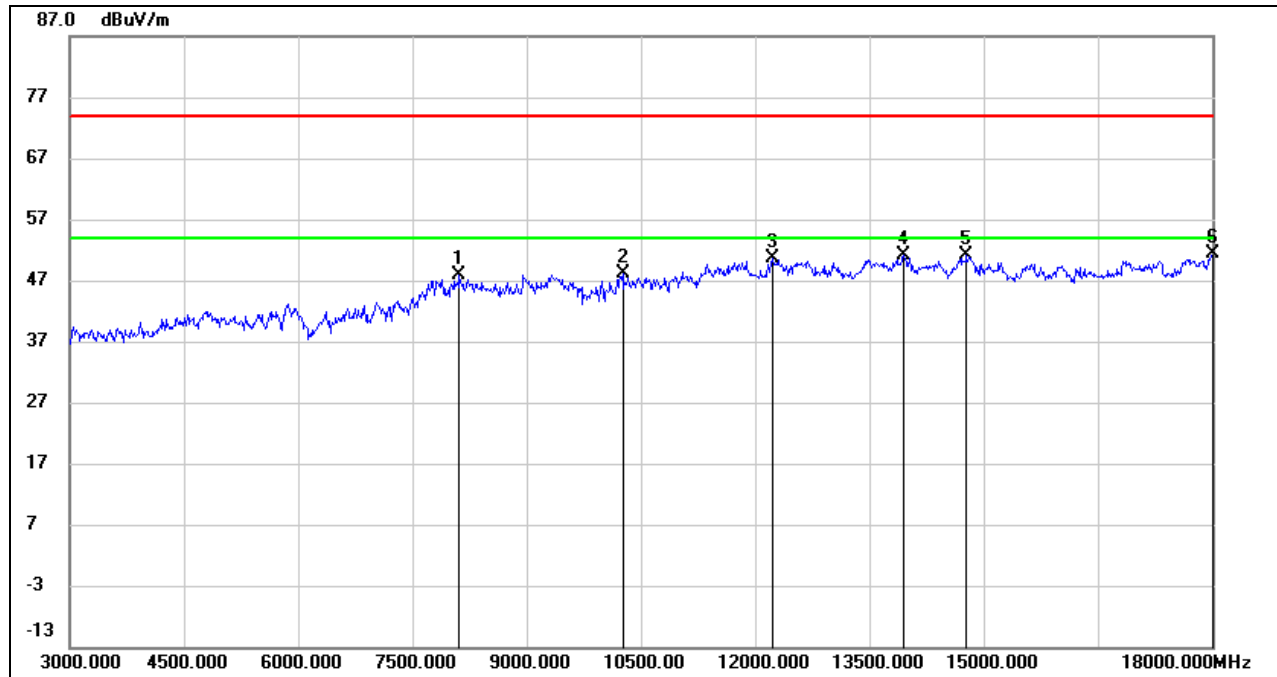
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8115.000	37.65	10.13	47.78	74.00	-26.22	peak
2	10260.000	36.34	11.68	48.02	74.00	-25.98	peak
3	12225.000	34.67	15.99	50.66	74.00	-23.34	peak
4	13950.000	33.43	17.60	51.03	74.00	-22.97	peak
5	14775.000	33.21	17.95	51.16	74.00	-22.84	peak
6	18000.000	27.00	24.27	51.27	74.00	-22.73	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

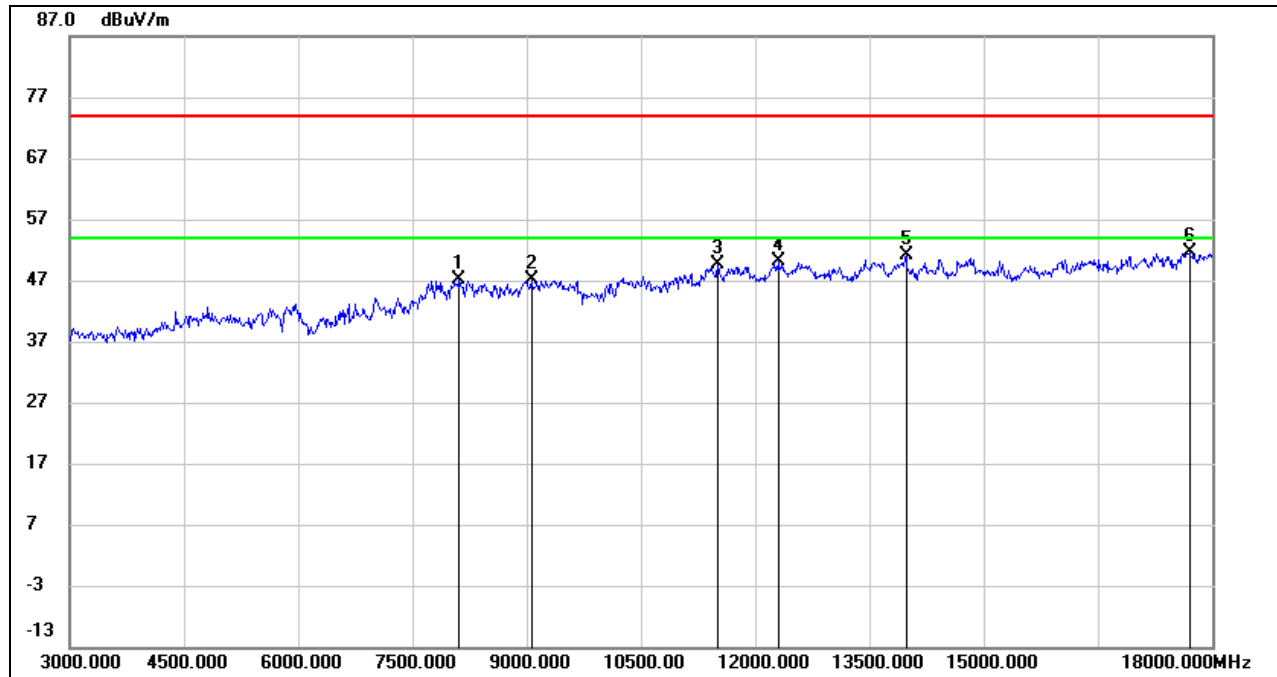
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8115.000	37.04	10.13	47.17	74.00	-26.83	peak
2	9060.000	36.45	10.60	47.05	74.00	-26.95	peak
3	11505.000	35.08	14.66	49.74	74.00	-24.26	peak
4	12300.000	33.93	16.09	50.02	74.00	-23.98	peak
5	13980.000	33.45	17.64	51.09	74.00	-22.91	peak
6	17700.000	28.04	23.47	51.51	74.00	-22.49	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.

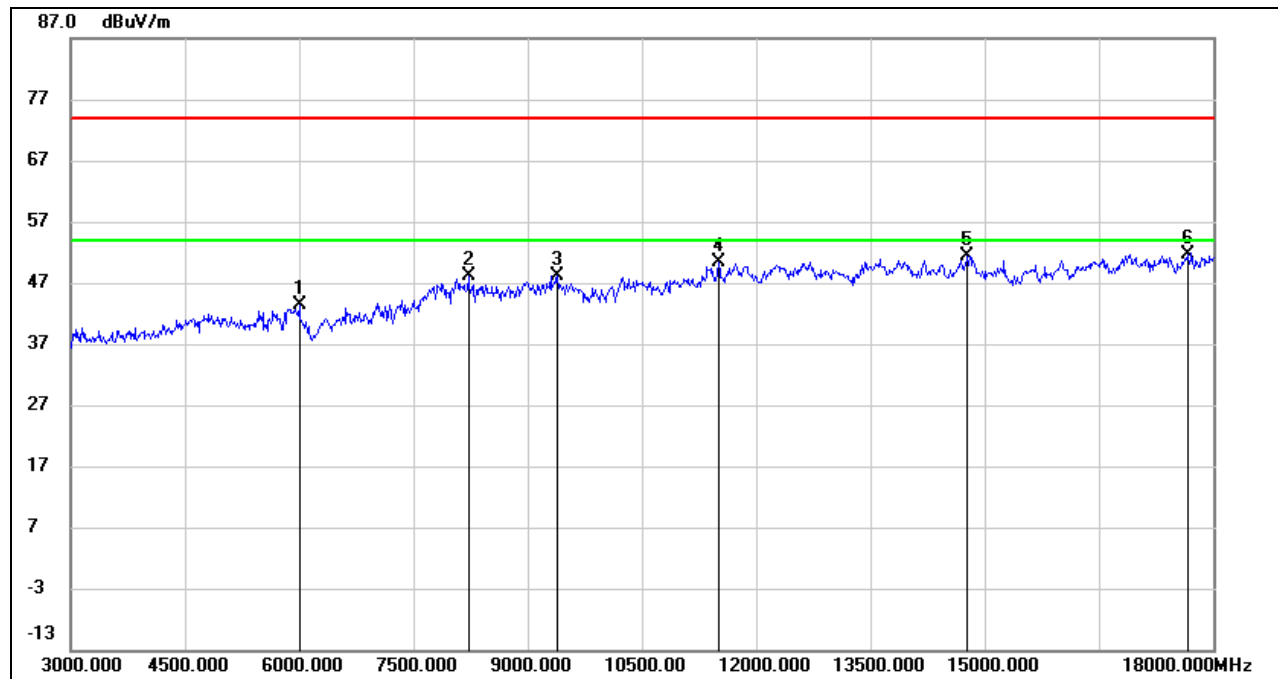
3. Peak: Peak detector.

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. 2.4G SRD 3MHz 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	6000.000	39.37	4.00	43.37	74.00	-30.63	peak
2	8220.000	38.30	9.79	48.09	74.00	-25.91	peak
3	9390.000	37.23	10.92	48.15	74.00	-25.85	peak
4	11505.000	35.70	14.66	50.36	74.00	-23.64	peak
5	14775.000	33.51	17.95	51.46	74.00	-22.54	peak
6	17670.000	28.31	23.24	51.55	74.00	-22.45	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

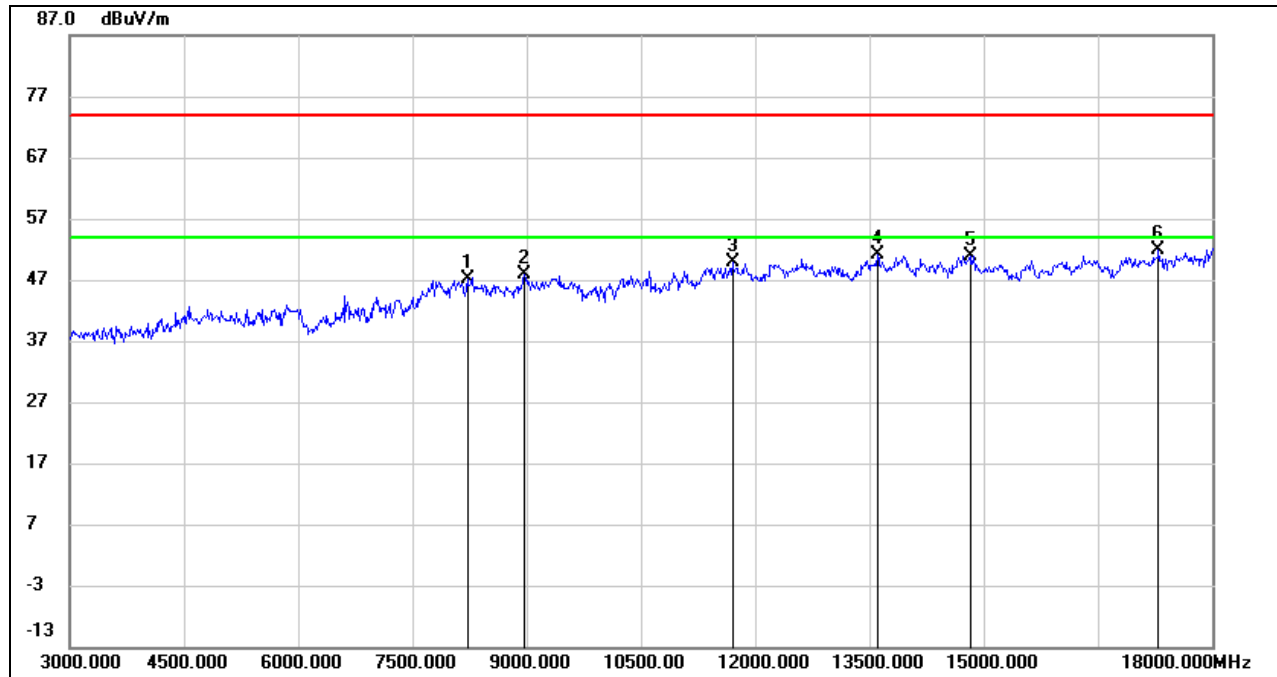
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8220.000	37.23	9.79	47.02	74.00	-26.98	peak
2	8970.000	37.13	10.70	47.83	74.00	-26.17	peak
3	11700.000	34.63	15.35	49.98	74.00	-24.02	peak
4	13605.000	34.09	17.12	51.21	74.00	-22.79	peak
5	14820.000	33.05	17.91	50.96	74.00	-23.04	peak
6	17295.000	29.33	22.58	51.91	74.00	-22.09	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

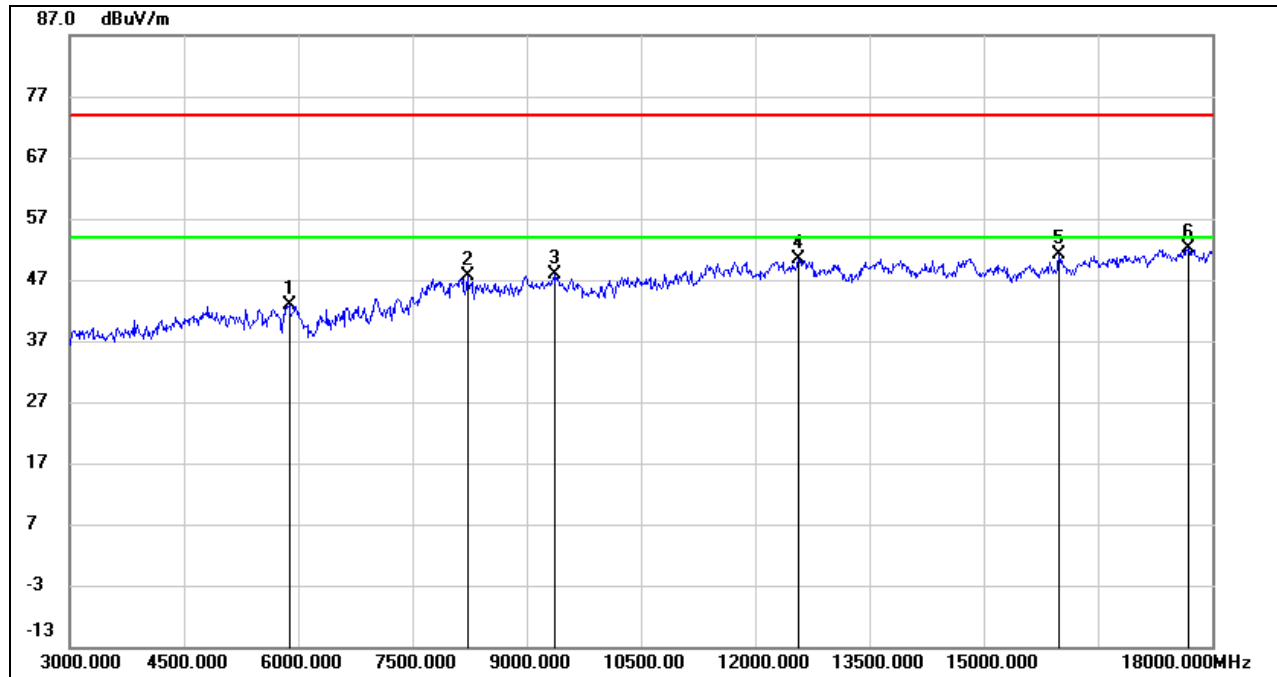
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	5880.000	38.63	4.31	42.94	74.00	-31.06	peak
2	8220.000	37.83	9.79	47.62	74.00	-26.38	peak
3	9375.000	36.97	10.83	47.80	74.00	-26.20	peak
4	12570.000	34.74	15.75	50.49	74.00	-23.51	peak
5	15990.000	32.75	18.39	51.14	74.00	-22.86	peak
6	17685.000	28.70	23.36	52.06	74.00	-21.94	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

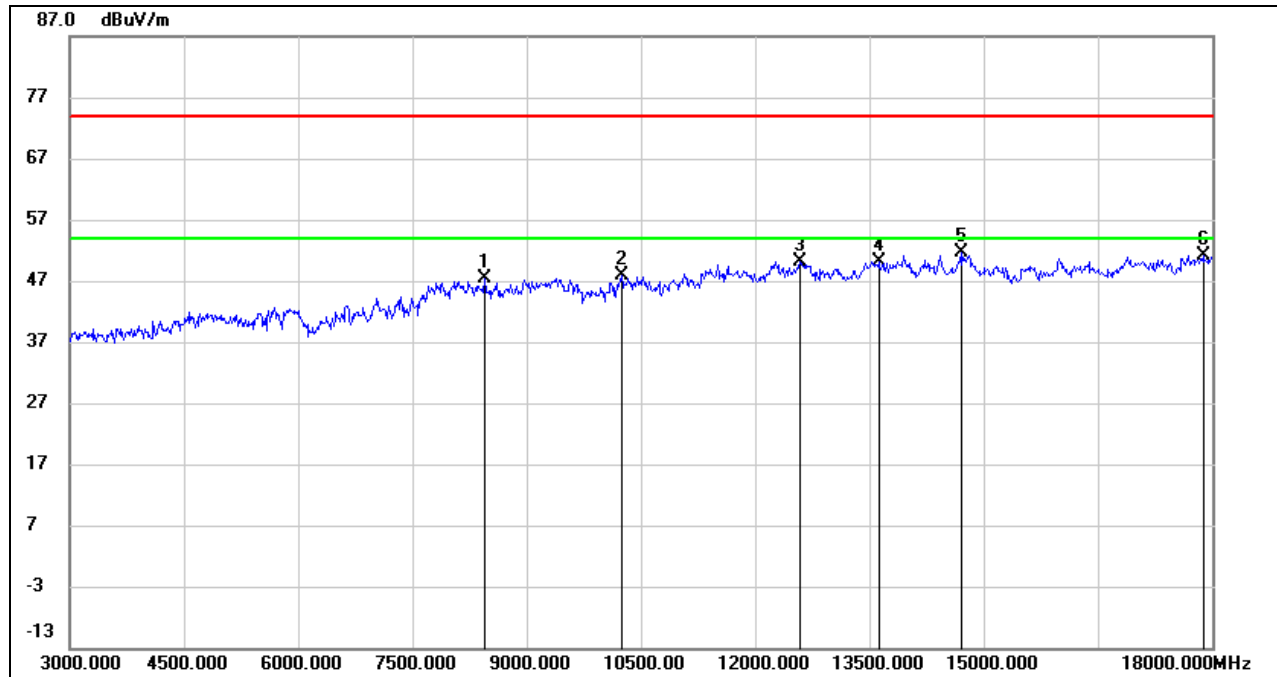
3. Peak: Peak detector.

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

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



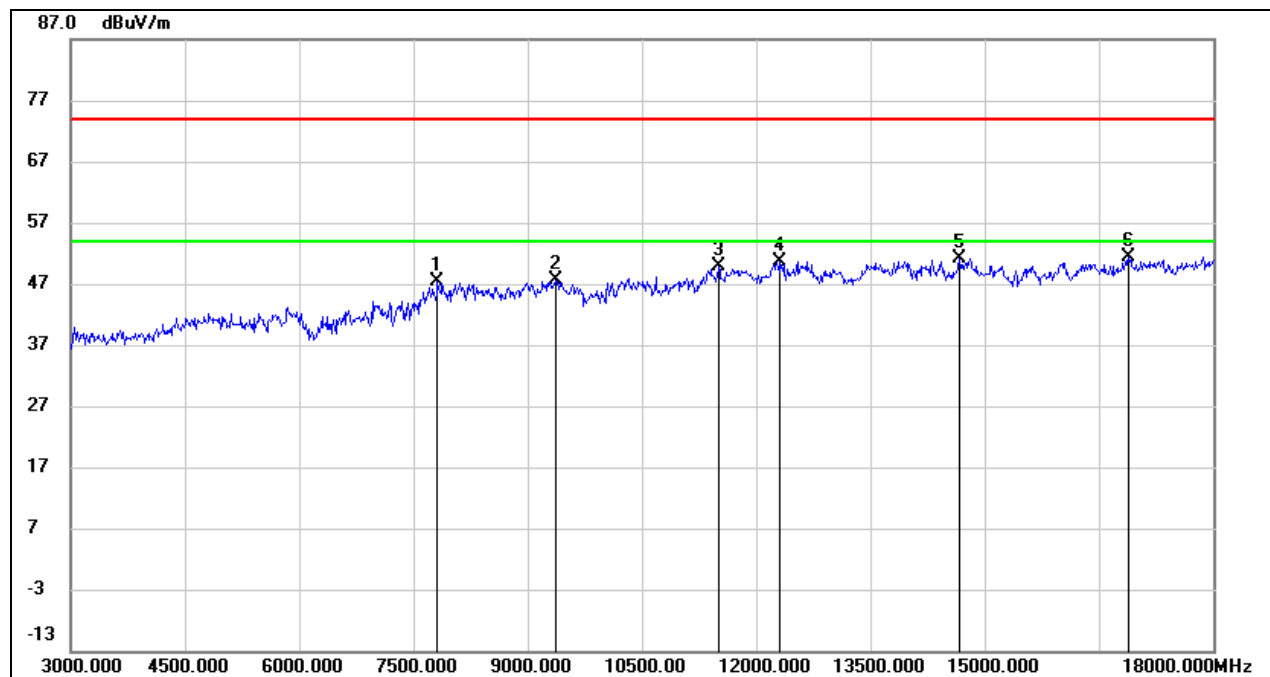
### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8445.000	38.10	9.24	47.34	74.00	-26.66	peak
2	10245.000	36.17	11.63	47.80	74.00	-26.20	peak
3	12585.000	34.31	15.77	50.08	74.00	-23.92	peak
4	13620.000	32.99	17.19	50.18	74.00	-23.82	peak
5	14700.000	33.96	17.69	51.65	74.00	-22.35	peak
6	17880.000	27.22	23.93	51.15	74.00	-22.85	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	7815.000	37.98	9.28	47.26	74.00	-26.74	peak
2	9375.000	36.72	10.83	47.55	74.00	-26.45	peak
3	11505.000	35.10	14.66	49.76	74.00	-24.24	peak
4	12315.000	34.65	16.06	50.71	74.00	-23.29	peak
5	14670.000	33.58	17.59	51.17	74.00	-22.83	peak
6	16890.000	29.98	21.49	51.47	74.00	-22.53	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

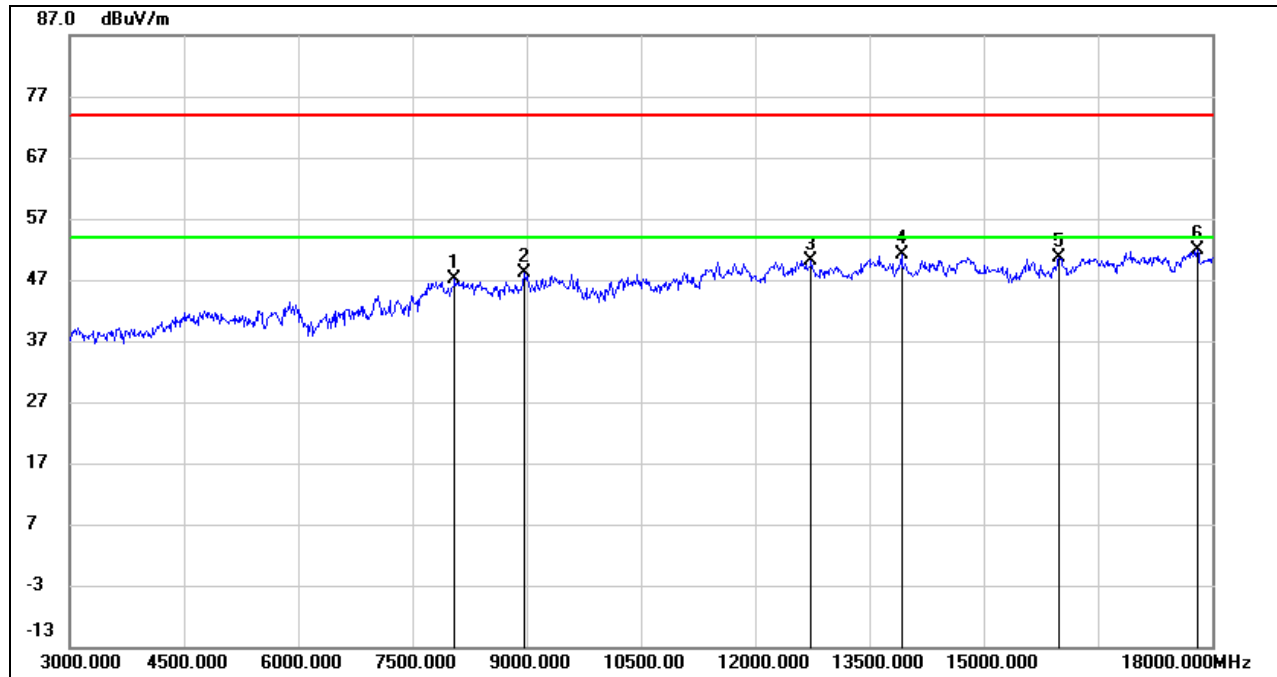
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	8055.000	37.54	9.48	47.02	74.00	-26.98	peak
2	8970.000	37.37	10.70	48.07	74.00	-25.93	peak
3	12735.000	34.32	15.75	50.07	74.00	-23.93	peak
4	13920.000	33.56	17.55	51.11	74.00	-22.89	peak
5	15990.000	32.29	18.39	50.68	74.00	-23.32	peak
6	17805.000	27.72	24.05	51.77	74.00	-22.23	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

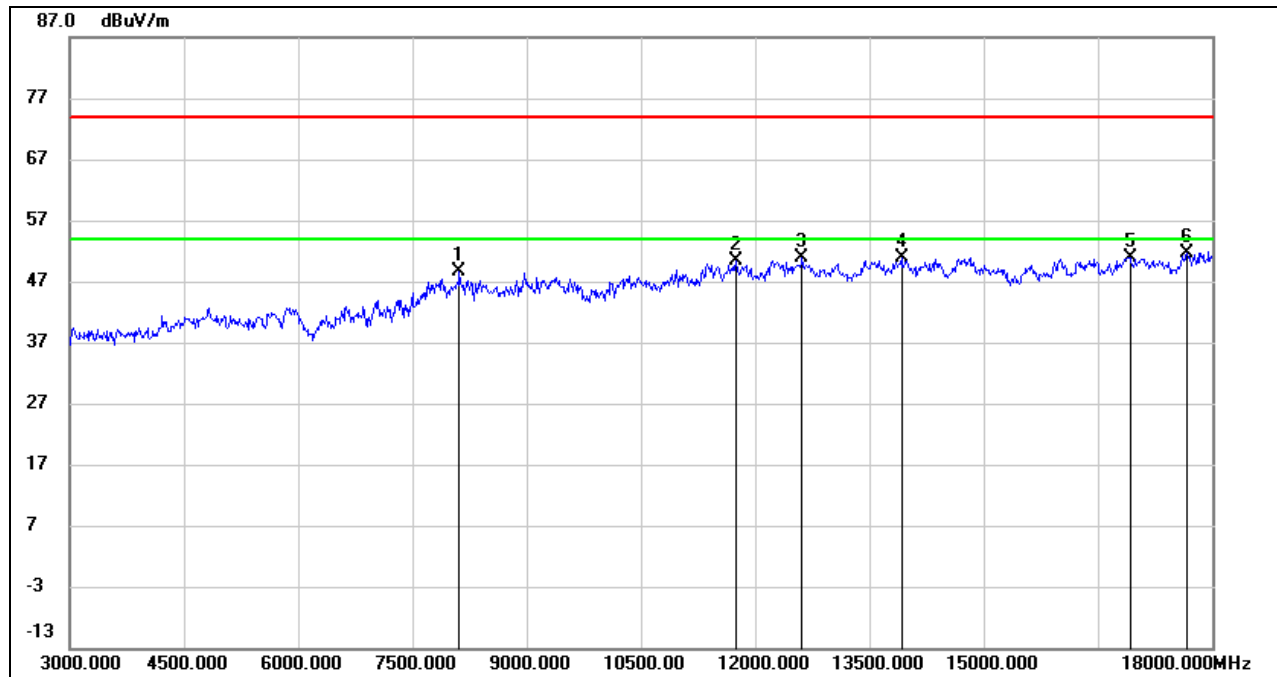
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

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

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

### 8.3.4. 2.4G SRD 3MHz CA 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	8115.000	38.52	10.13	48.65	74.00	-25.35	peak
2	11745.000	35.06	15.30	50.36	74.00	-23.64	peak
3	12615.000	35.10	15.75	50.85	74.00	-23.15	peak
4	13920.000	33.45	17.55	51.00	74.00	-23.00	peak
5	16920.000	29.48	21.51	50.99	74.00	-23.01	peak
6	17670.000	28.46	23.24	51.70	74.00	-22.30	peak

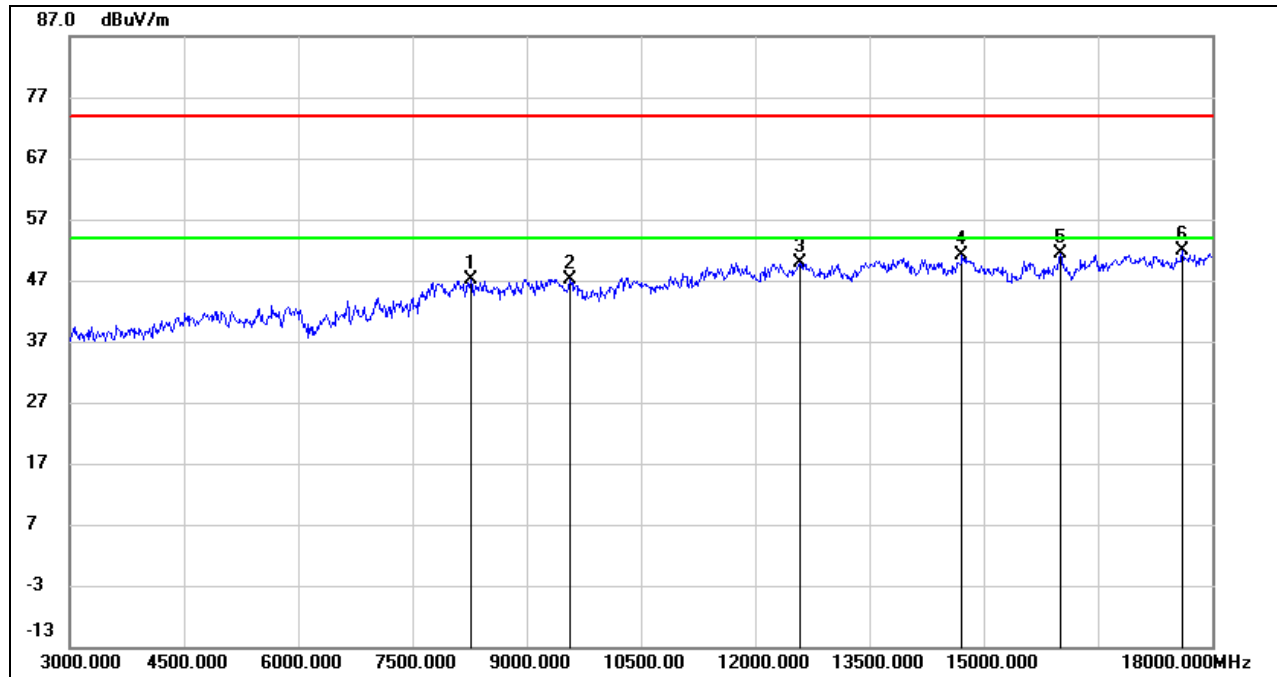
Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

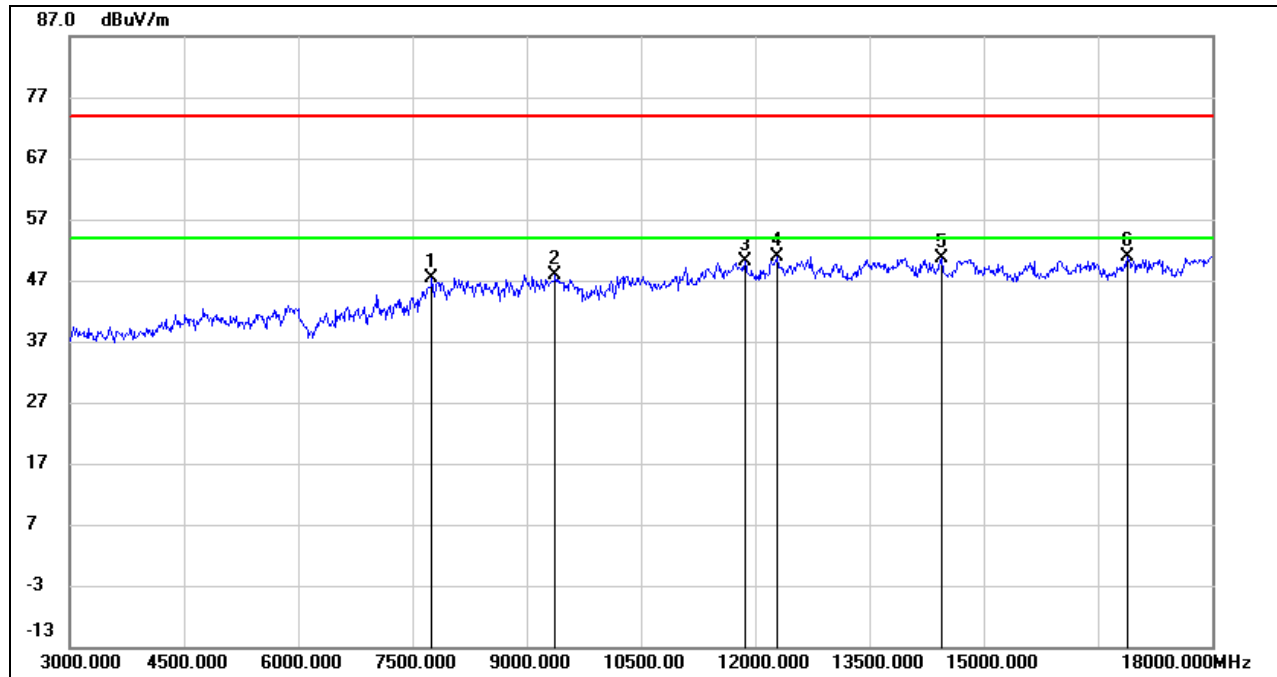
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8265.000	37.48	9.73	47.21	74.00	-26.79	peak
2	9570.000	36.34	10.88	47.22	74.00	-26.78	peak
3	12585.000	34.10	15.77	49.87	74.00	-24.13	peak
4	14715.000	33.38	17.74	51.12	74.00	-22.88	peak
5	16005.000	33.06	18.42	51.48	74.00	-22.52	peak
6	17610.000	29.13	22.80	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 (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7755.000	38.47	8.94	47.41	74.00	-26.59	peak
2	9375.000	36.94	10.83	47.77	74.00	-26.23	peak
3	11865.000	34.60	15.42	50.02	74.00	-23.98	peak
4	12285.000	34.90	16.08	50.98	74.00	-23.02	peak
5	14445.000	33.43	17.31	50.74	74.00	-23.26	peak
6	16890.000	29.51	21.49	51.00	74.00	-23.00	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

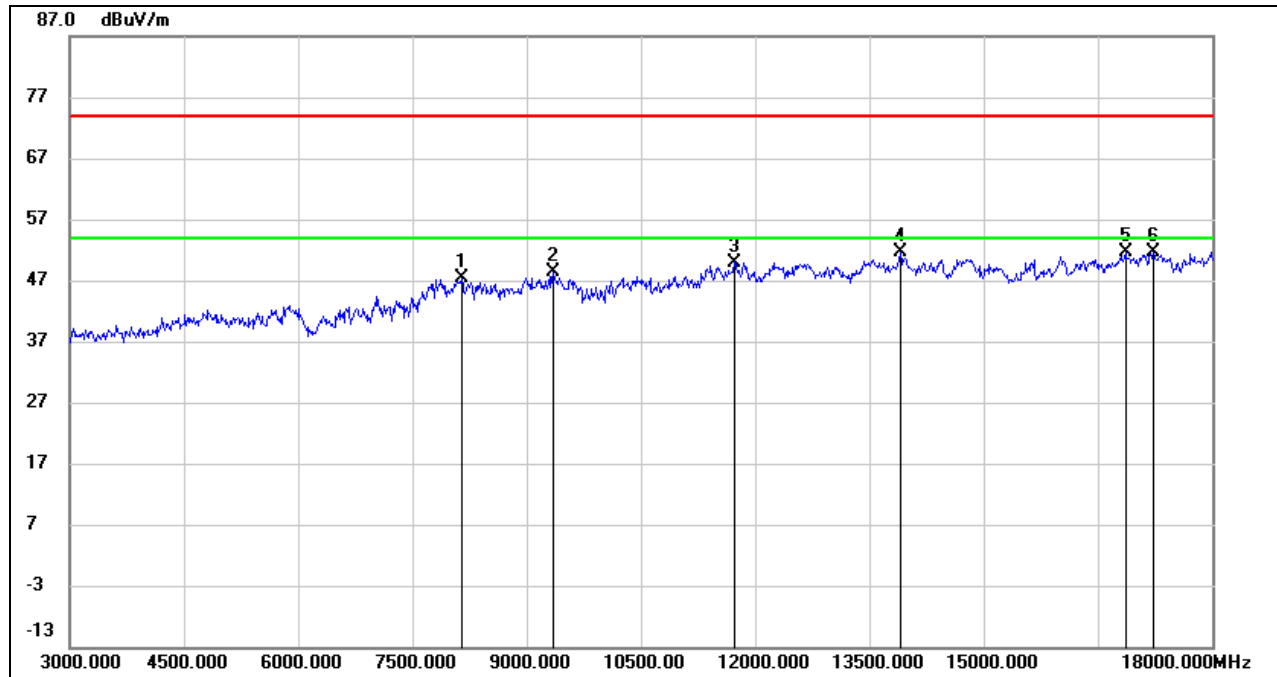
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8145.000	37.28	10.01	47.29	74.00	-26.71	peak
2	9345.000	37.70	10.66	48.36	74.00	-25.64	peak
3	11730.000	34.68	15.32	50.00	74.00	-24.00	peak
4	13905.000	34.13	17.54	51.67	74.00	-22.33	peak
5	16860.000	30.52	21.22	51.74	74.00	-22.26	peak
6	17220.000	29.48	22.12	51.60	74.00	-22.40	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

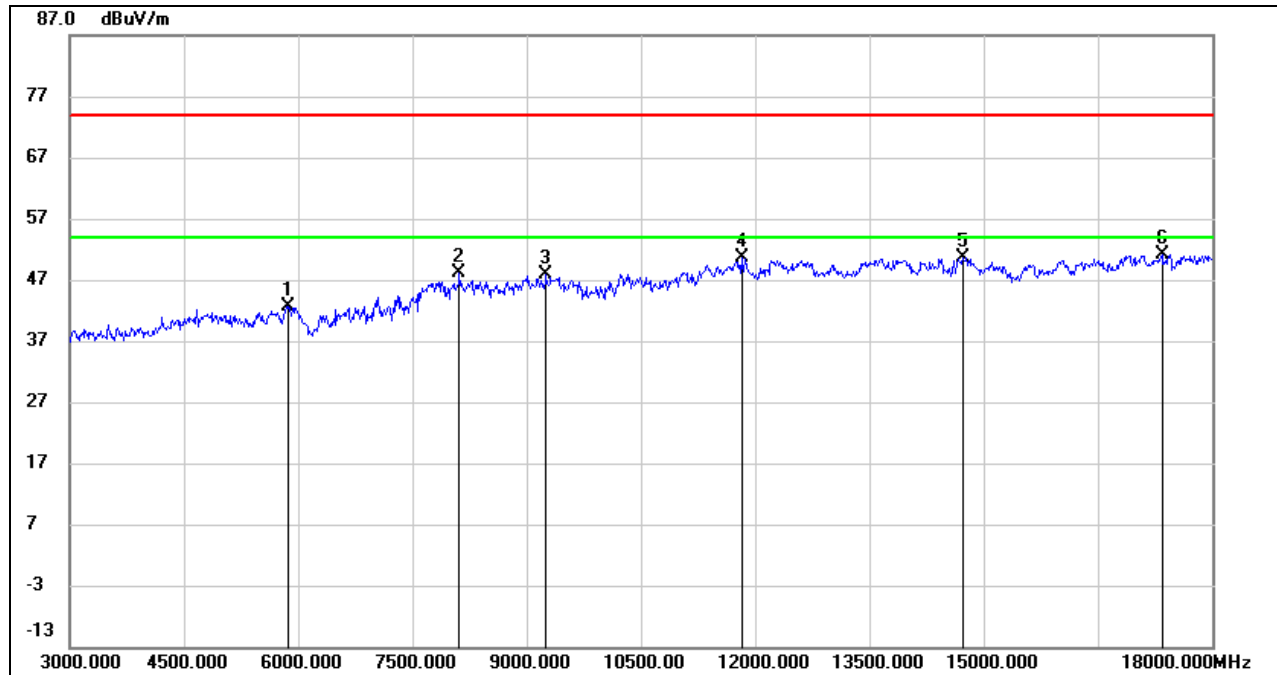
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5865.000	38.42	4.16	42.58	74.00	-31.42	peak
2	8115.000	38.10	10.13	48.23	74.00	-25.77	peak
3	9255.000	37.78	10.17	47.95	74.00	-26.05	peak
4	11820.000	35.32	15.29	50.61	74.00	-23.39	peak
5	14730.000	32.94	17.79	50.73	74.00	-23.27	peak
6	17340.000	28.86	22.31	51.17	74.00	-22.83	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.

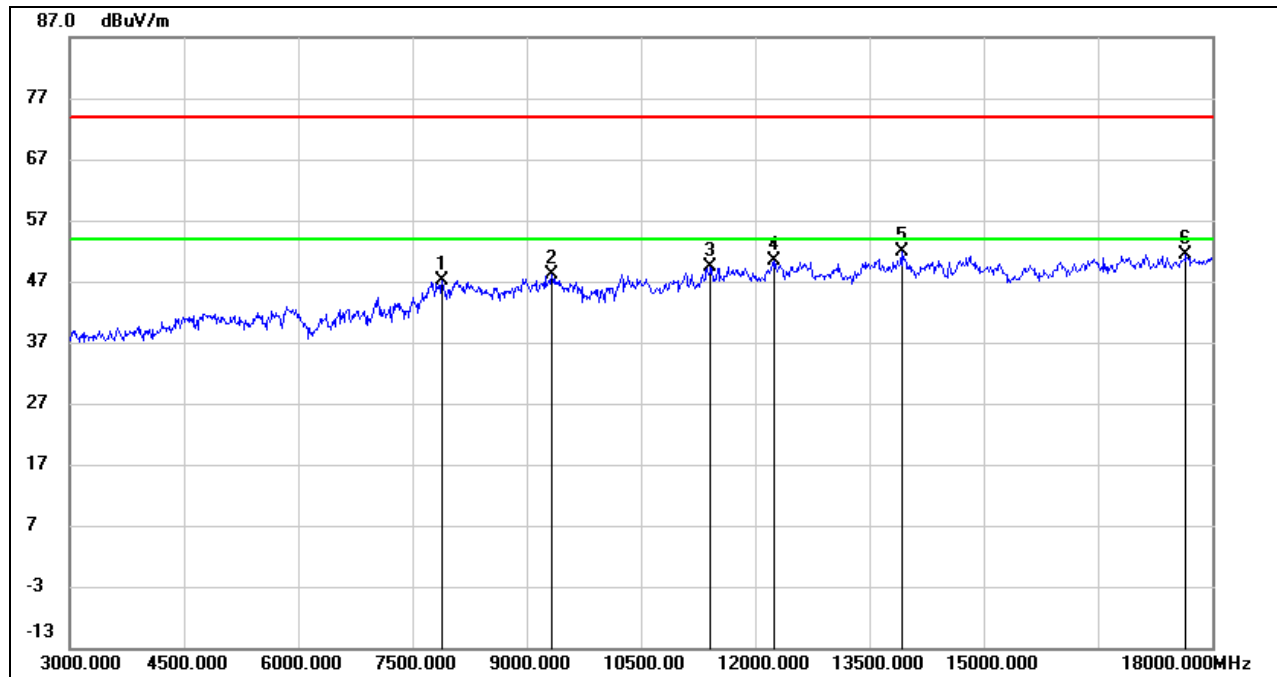
3. Peak: Peak detector.

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	7890.000	38.23	8.91	47.14	74.00	-26.86	peak
2	9330.000	37.62	10.57	48.19	74.00	-25.81	peak
3	11415.000	34.70	14.74	49.44	74.00	-24.56	peak
4	12255.000	34.44	16.03	50.47	74.00	-23.53	peak
5	13920.000	34.22	17.55	51.77	74.00	-22.23	peak
6	17655.000	28.31	23.14	51.45	74.00	-22.55	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.

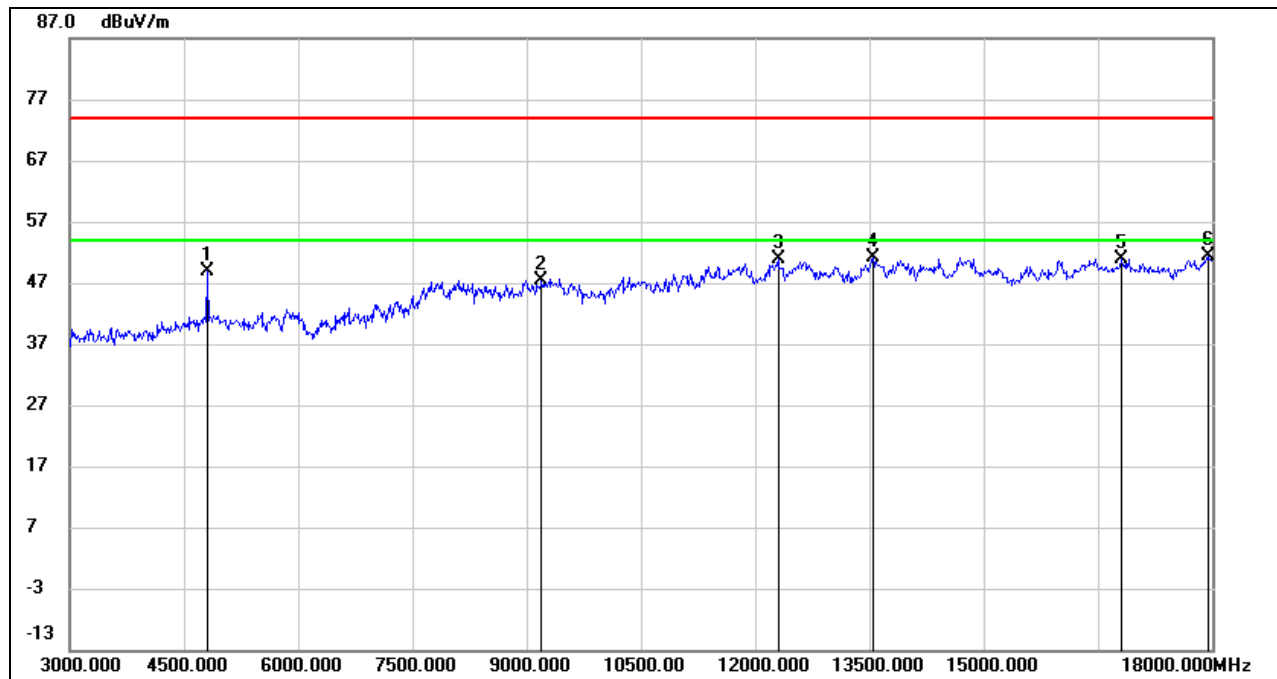
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

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

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

### 8.3.5. 2.4G SRD 10MHz 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	4800.000	47.45	1.40	48.85	74.00	-25.15	peak
2	9195.000	37.57	9.92	47.49	74.00	-26.51	peak
3	12300.000	34.81	16.09	50.90	74.00	-23.10	peak
4	13545.000	33.86	17.16	51.02	74.00	-22.98	peak
5	16815.000	29.96	20.84	50.80	74.00	-23.20	peak
6	17940.000	27.26	24.04	51.30	74.00	-22.70	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

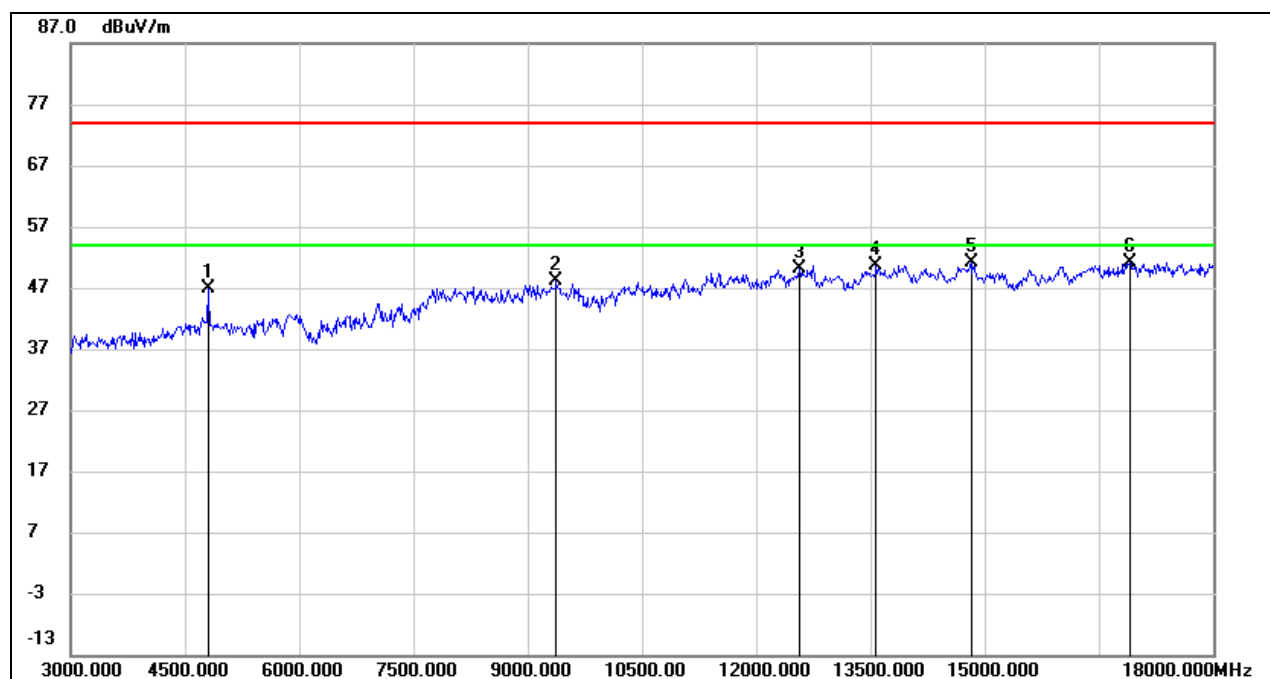
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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.

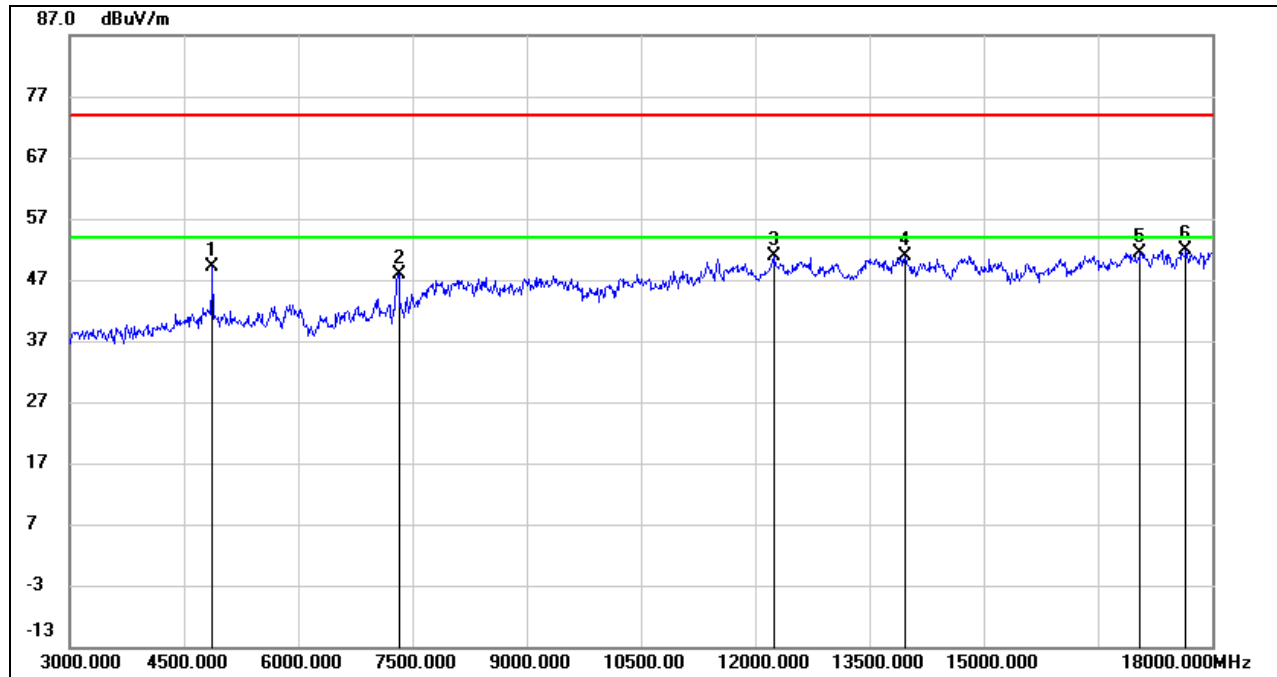
### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	45.46	1.40	46.86	74.00	-27.14	peak
2	9375.000	37.18	10.83	48.01	74.00	-25.99	peak
3	12570.000	34.30	15.75	50.05	74.00	-23.95	peak
4	13575.000	33.47	17.13	50.60	74.00	-23.40	peak
5	14820.000	33.31	17.91	51.22	74.00	-22.78	peak
6	16905.000	29.61	21.55	51.16	74.00	-22.84	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	47.92	1.32	49.24	74.00	-24.76	peak
2	7320.000	40.72	7.28	48.00	74.00	-26.00	peak
3	12255.000	34.76	16.03	50.79	74.00	-23.21	peak
4	13965.000	33.31	17.62	50.93	74.00	-23.07	peak
5	17055.000	29.90	21.60	51.50	74.00	-22.50	peak
6	17655.000	28.83	23.14	51.97	74.00	-22.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

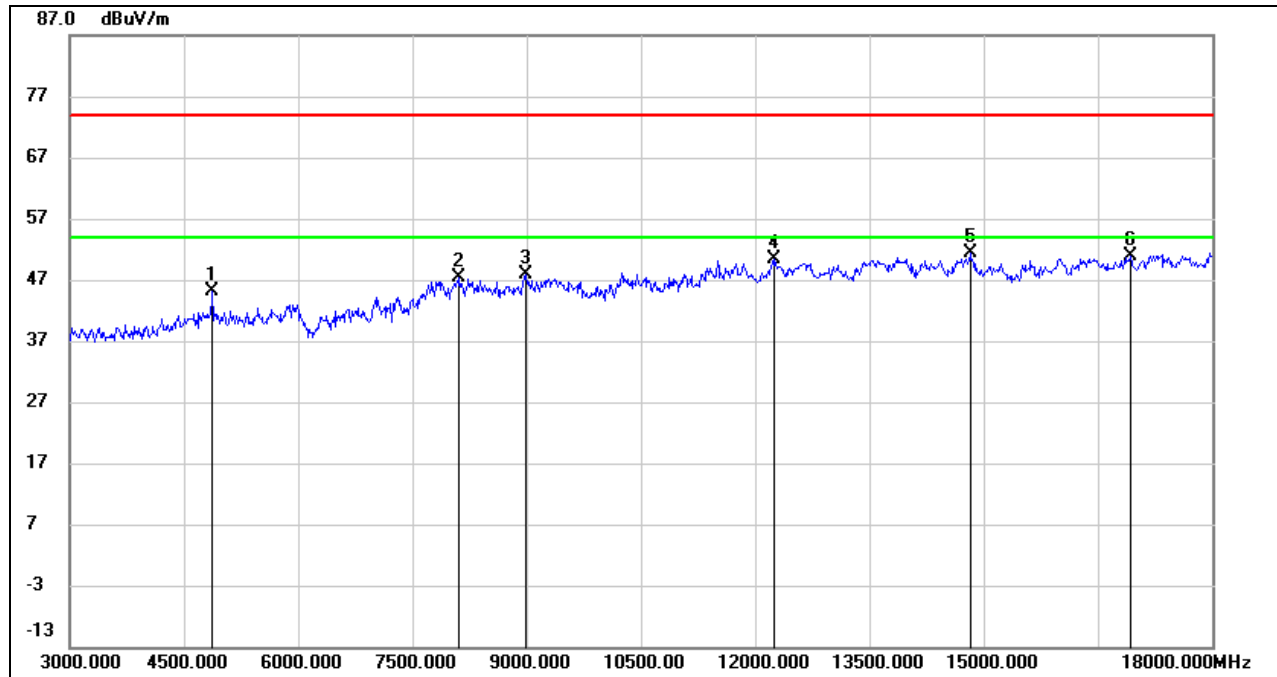
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	43.77	1.32	45.09	74.00	-28.91	peak
2	8115.000	37.28	10.13	47.41	74.00	-26.59	peak
3	8985.000	36.85	10.99	47.84	74.00	-26.16	peak
4	12240.000	34.44	16.01	50.45	74.00	-23.55	peak
5	14820.000	33.35	17.91	51.26	74.00	-22.74	peak
6	16935.000	29.45	21.45	50.90	74.00	-23.10	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

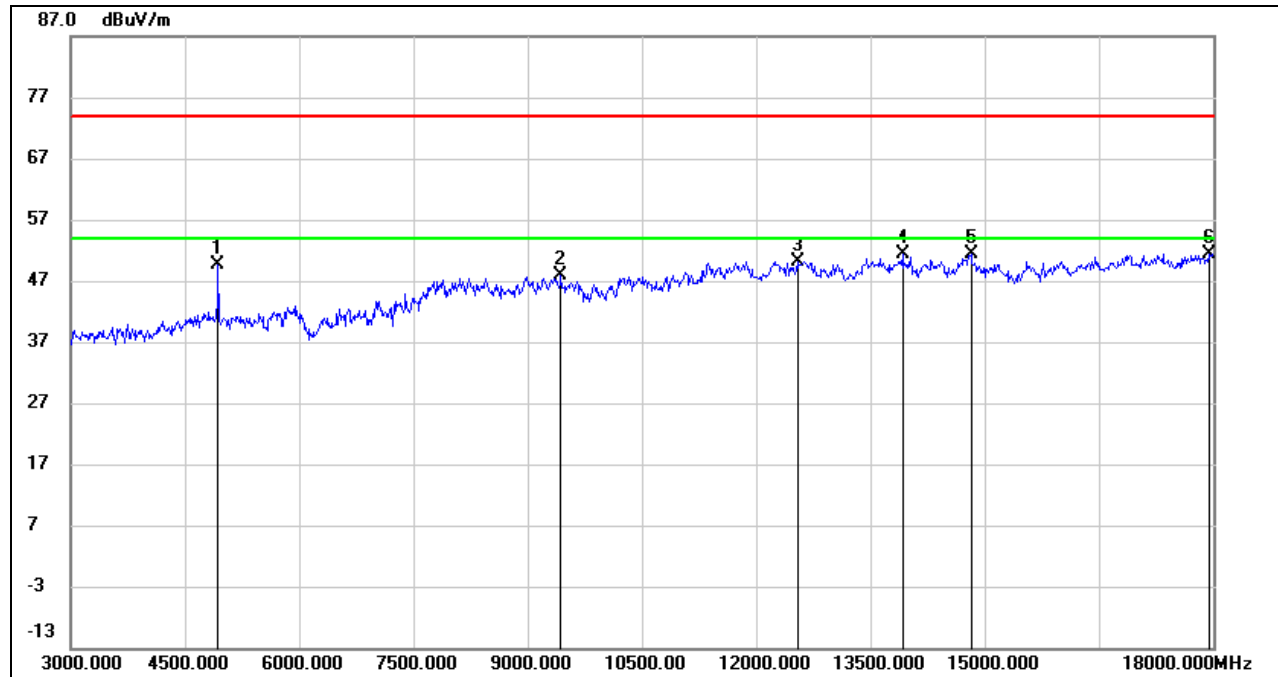
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### 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	4935.000	48.02	1.59	49.61	74.00	-24.39	peak
2	9435.000	37.14	10.81	47.95	74.00	-26.05	peak
3	12540.000	34.48	15.72	50.20	74.00	-23.80	peak
4	13920.000	33.78	17.55	51.33	74.00	-22.67	peak
5	14820.000	33.52	17.91	51.43	74.00	-22.57	peak
6	17940.000	27.37	24.04	51.41	74.00	-22.59	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

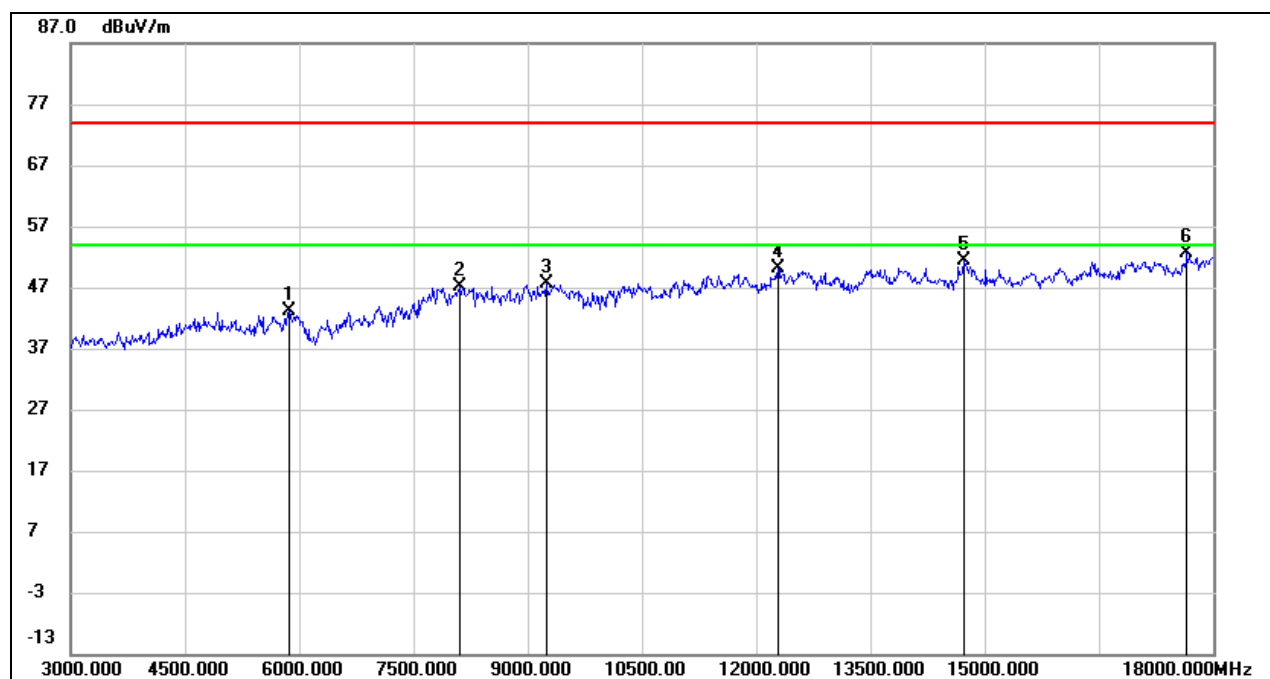
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5865.000	38.94	4.16	43.10	74.00	-30.90	peak
2	8115.000	36.92	10.13	47.05	74.00	-26.95	peak
3	9240.000	37.42	10.10	47.52	74.00	-26.48	peak
4	12285.000	34.01	16.08	50.09	74.00	-23.91	peak
5	14730.000	33.47	17.79	51.26	74.00	-22.74	peak
6	17655.000	29.47	23.14	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.

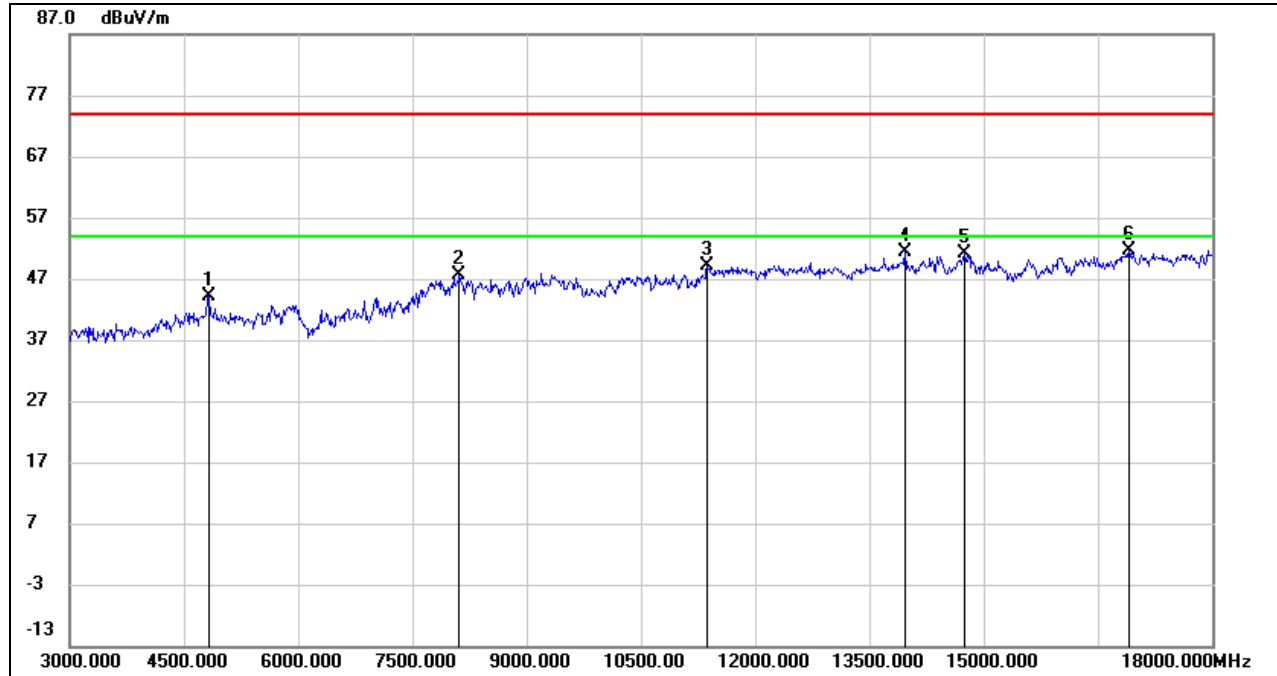
3. Peak: Peak detector.

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.

### 8.3.6. 2.4G SRD 20MHz MODE

#### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

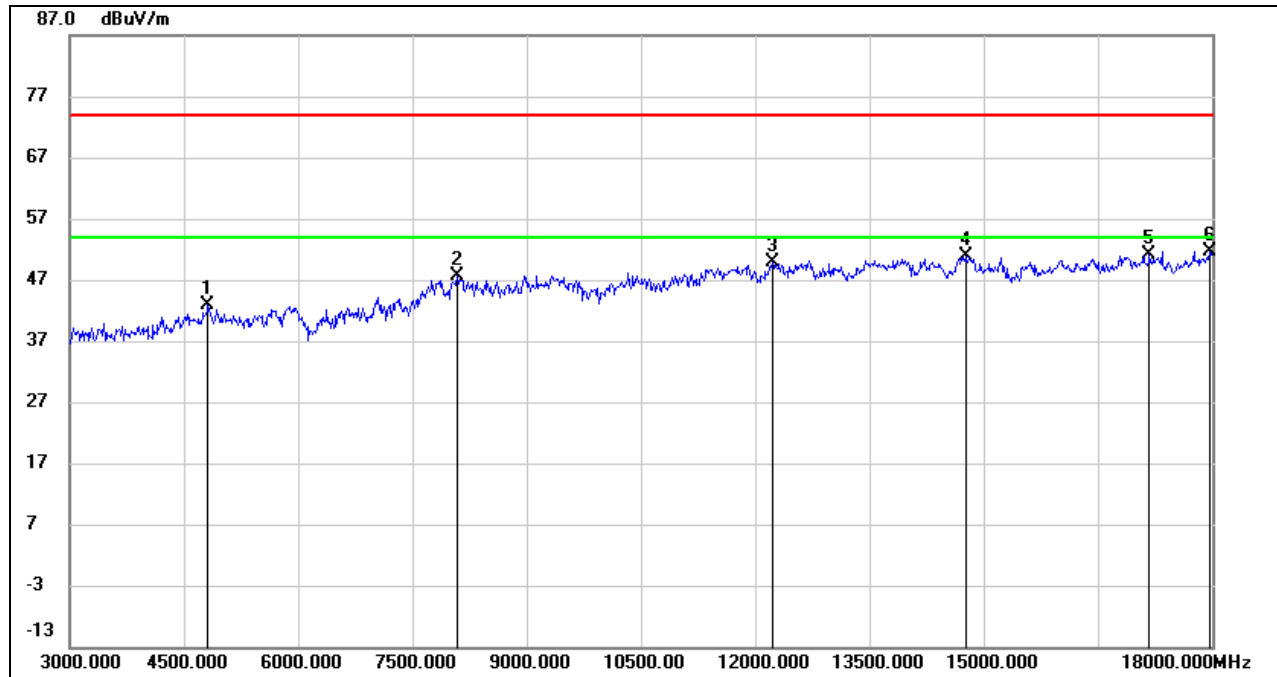


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4830.000	42.86	1.37	44.23	74.00	-29.77	peak
2	8115.000	37.58	10.13	47.71	74.00	-26.29	peak
3	11370.000	34.70	14.49	49.19	74.00	-24.81	peak
4	13965.000	33.76	17.62	51.38	74.00	-22.62	peak
5	14745.000	33.25	17.84	51.09	74.00	-22.91	peak
6	16905.000	29.97	21.55	51.52	74.00	-22.48	peak

- Note: 1. Peak Result = Reading Level + Correct Factor.  
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
3. Peak: Peak detector.  
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for 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	41.55	1.38	42.93	74.00	-31.07	peak
2	8085.000	37.75	9.94	47.69	74.00	-26.31	peak
3	12225.000	33.80	15.99	49.79	74.00	-24.21	peak
4	14760.000	32.88	17.90	50.78	74.00	-23.22	peak
5	17175.000	29.07	21.97	51.04	74.00	-22.96	peak
6	17970.000	27.56	24.15	51.71	74.00	-22.29	peak

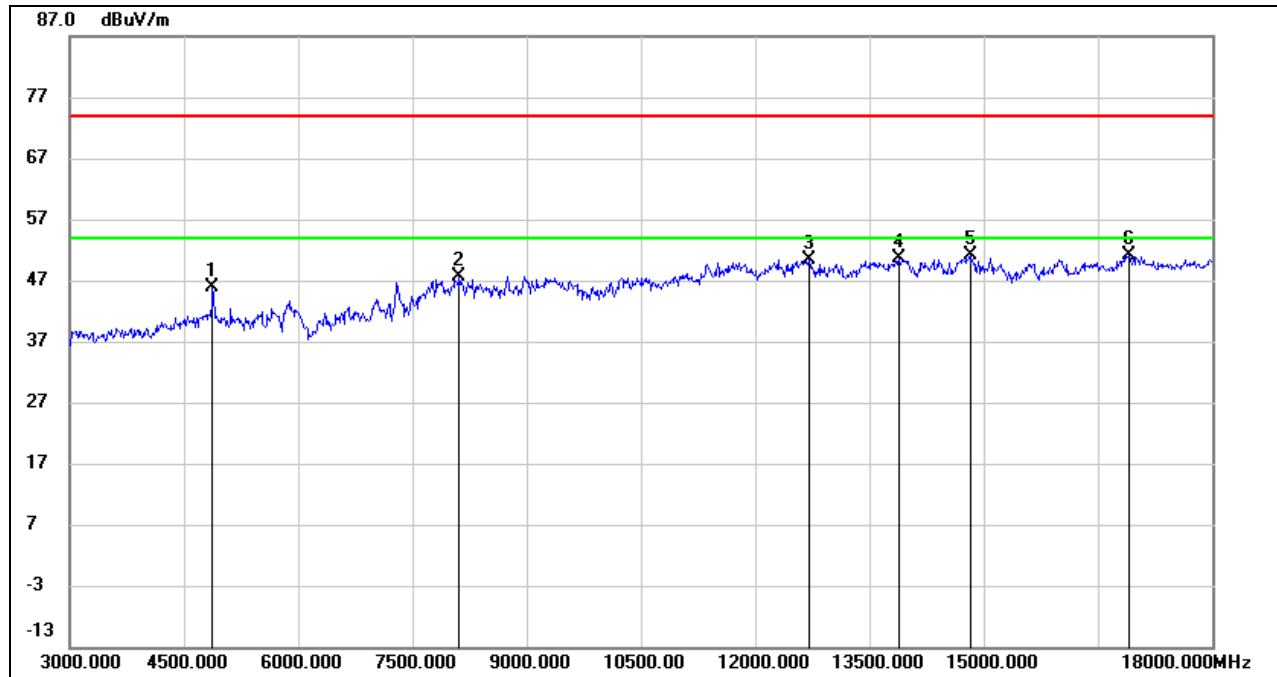
Note: 1. Peak Result = Reading Level + Correct Factor.

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.

**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	44.67	1.32	45.99	74.00	-28.01	peak
2	8115.000	37.54	10.13	47.67	74.00	-26.33	peak
3	12705.000	34.69	15.64	50.33	74.00	-23.67	peak
4	13890.000	32.98	17.53	50.51	74.00	-23.49	peak
5	14820.000	33.26	17.91	51.17	74.00	-22.83	peak
6	16905.000	29.53	21.55	51.08	74.00	-22.92	peak

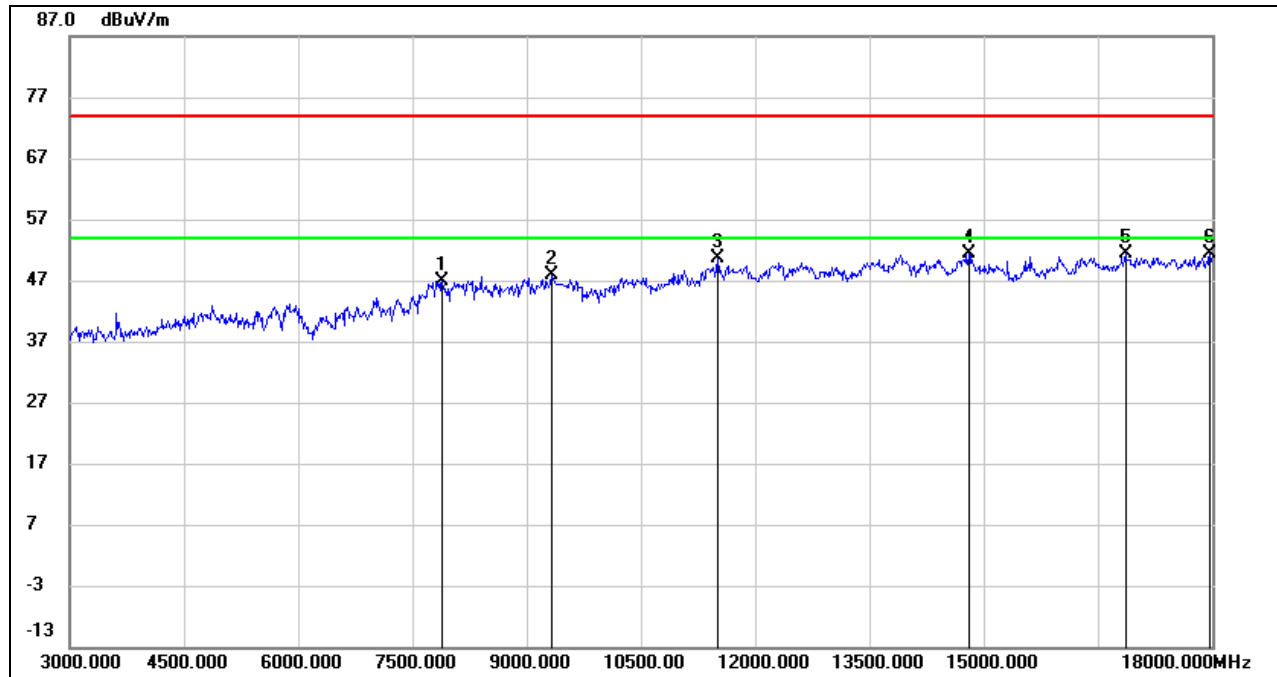
Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

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

**HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7890.000	38.03	8.91	46.94	74.00	-27.06	peak
2	9330.000	37.40	10.57	47.97	74.00	-26.03	peak
3	11505.000	35.87	14.66	50.53	74.00	-23.47	peak
4	14805.000	33.42	18.00	51.42	74.00	-22.58	peak
5	16860.000	30.11	21.22	51.33	74.00	-22.67	peak
6	17970.000	27.21	24.15	51.36	74.00	-22.64	peak

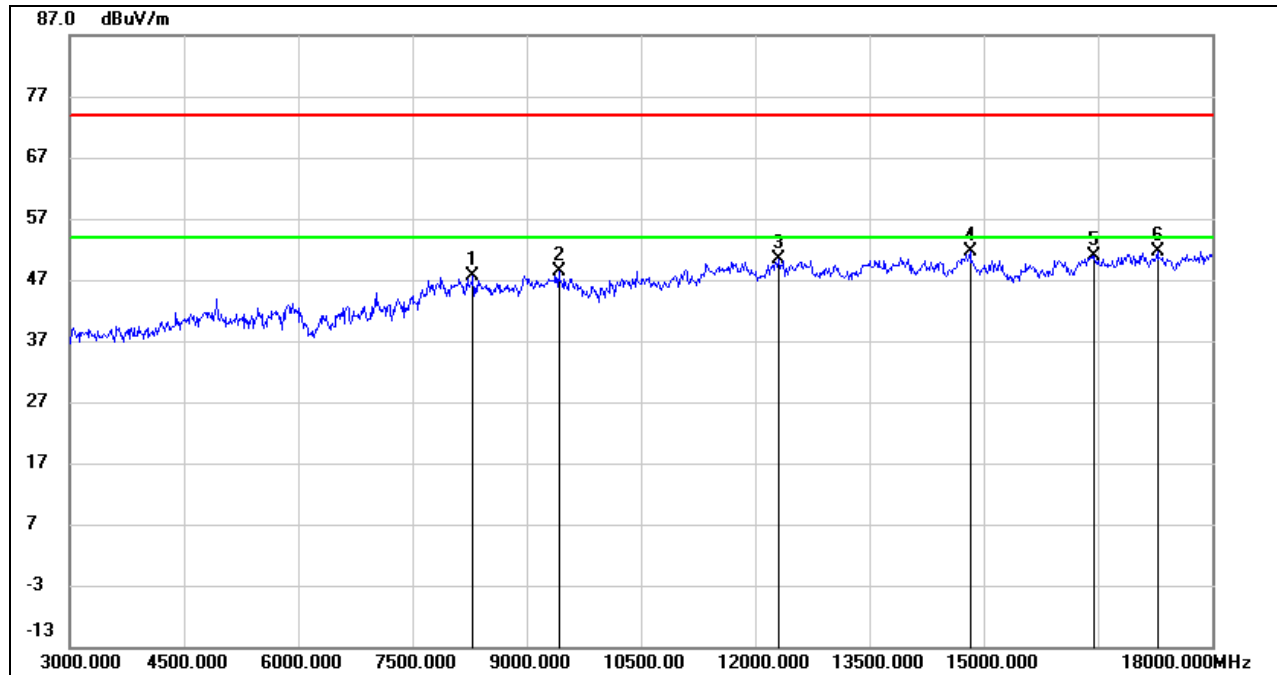
Note: 1. Peak Result = Reading Level + Correct Factor.

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	8295.000	37.87	9.69	47.56	74.00	-26.44	peak
2	9420.000	37.56	10.88	48.44	74.00	-25.56	peak
3	12315.000	34.22	16.06	50.28	74.00	-23.72	peak
4	14820.000	33.63	17.91	51.54	74.00	-22.46	peak
5	16455.000	31.27	19.68	50.95	74.00	-23.05	peak
6	17280.000	29.14	22.48	51.62	74.00	-22.38	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

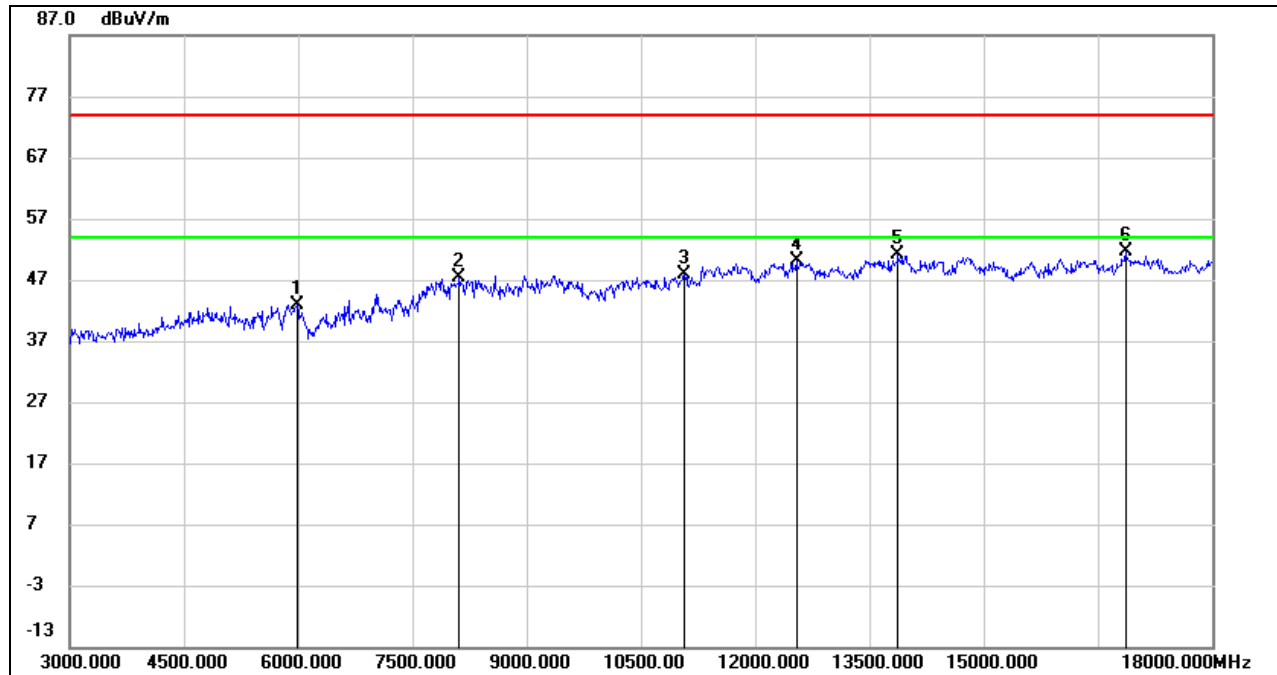
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	5985.000	38.88	4.08	42.96	74.00	-31.04	peak
2	8115.000	37.24	10.13	47.37	74.00	-26.63	peak
3	11070.000	34.13	13.65	47.78	74.00	-26.22	peak
4	12540.000	34.37	15.72	50.09	74.00	-23.91	peak
5	13875.000	33.52	17.55	51.07	74.00	-22.93	peak
6	16860.000	30.36	21.22	51.58	74.00	-22.42	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

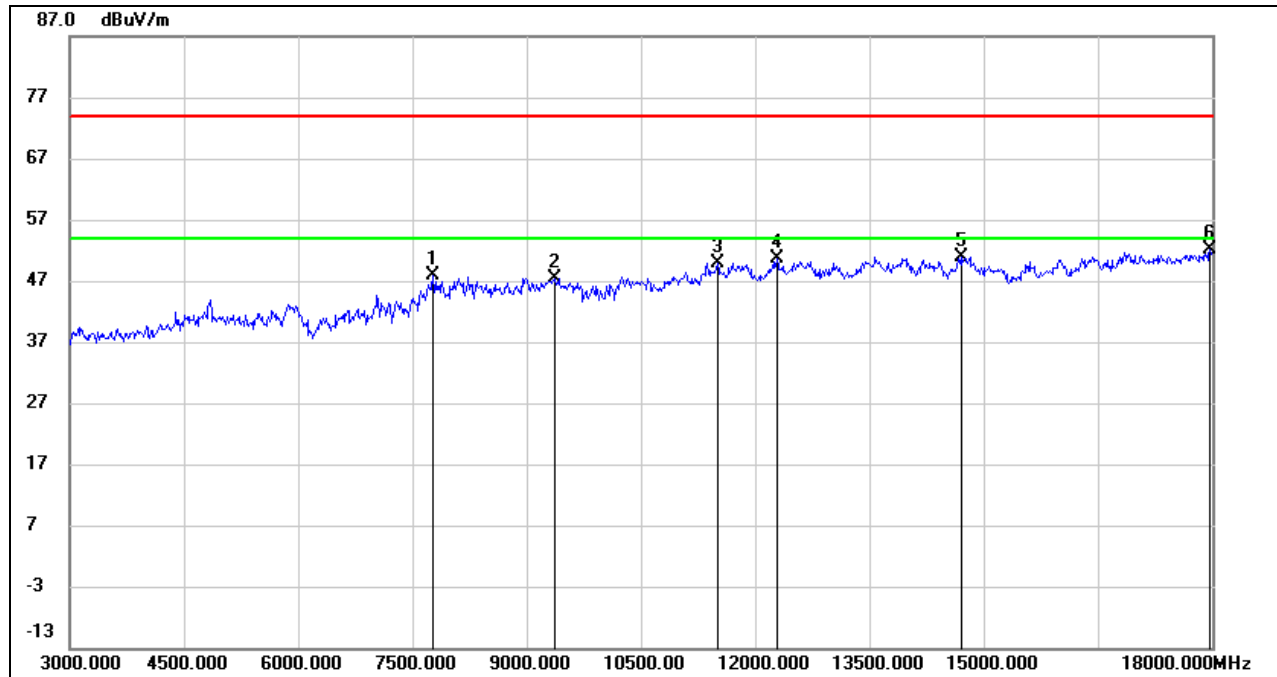
4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

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

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

### 8.3.7. 2.4G SRD 40MHz 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	7770.000	38.67	9.09	47.76	74.00	-26.24	peak
2	9360.000	36.67	10.75	47.42	74.00	-26.58	peak
3	11505.000	35.26	14.66	49.92	74.00	-24.08	peak
4	12285.000	34.52	16.08	50.60	74.00	-23.40	peak
5	14700.000	33.25	17.69	50.94	74.00	-23.06	peak
6	17970.000	28.05	24.15	52.20	74.00	-21.80	peak

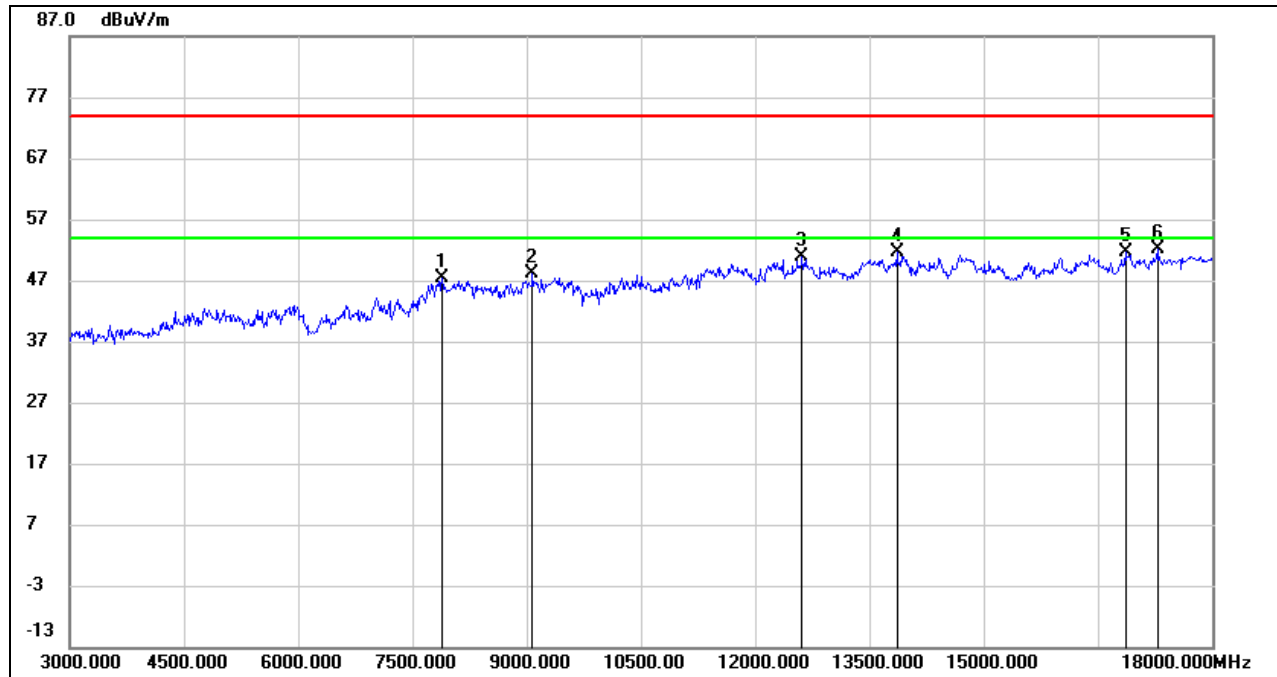
Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

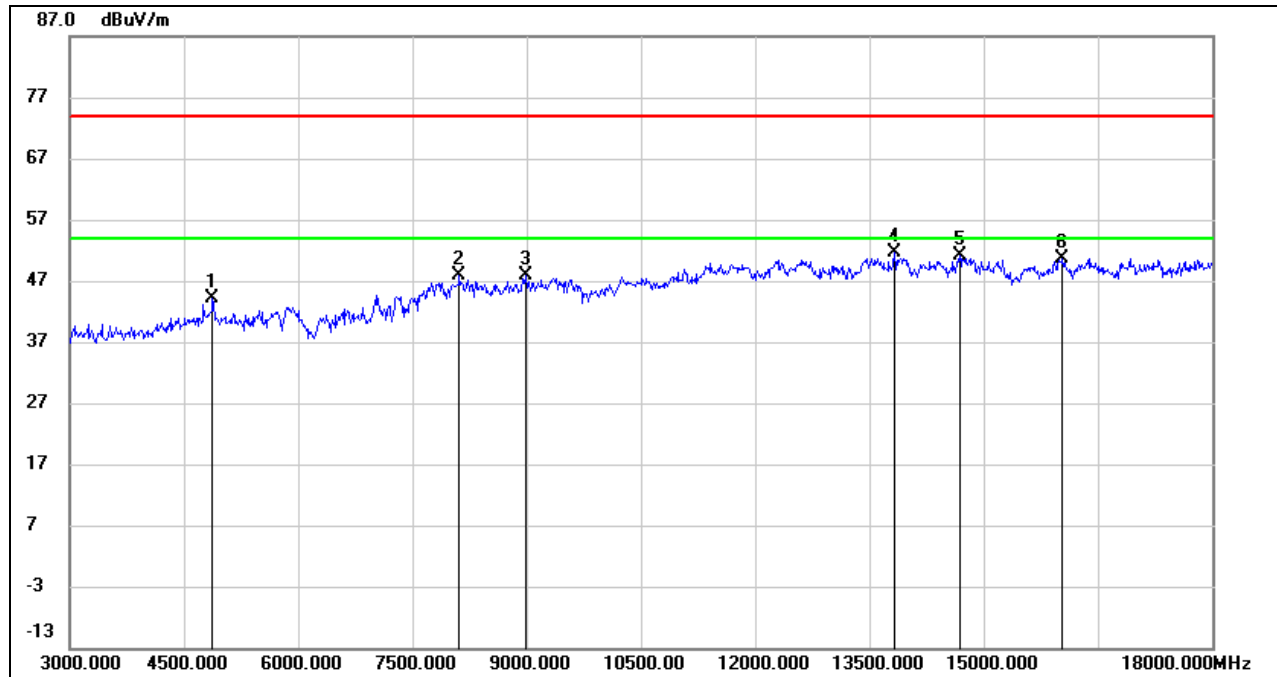
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

**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	7890.000	38.49	8.91	47.40	74.00	-26.60	peak
2	9075.000	37.73	10.43	48.16	74.00	-25.84	peak
3	12615.000	35.17	15.75	50.92	74.00	-23.08	peak
4	13860.000	34.04	17.55	51.59	74.00	-22.41	peak
5	16860.000	30.37	21.22	51.59	74.00	-22.41	peak
6	17280.000	29.69	22.48	52.17	74.00	-21.83	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)

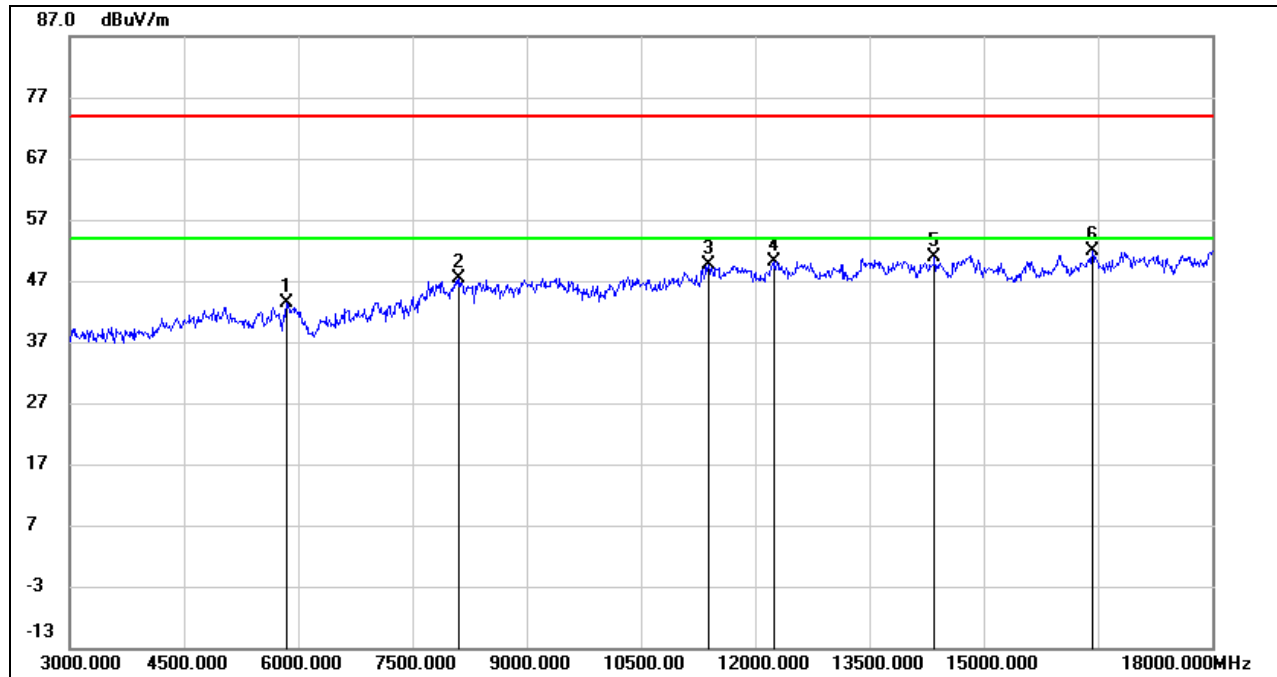


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	42.92	1.32	44.24	74.00	-29.76	peak
2	8115.000	37.65	10.13	47.78	74.00	-26.22	peak
3	8985.000	36.92	10.99	47.91	74.00	-26.09	peak
4	13830.000	33.97	17.59	51.56	74.00	-22.44	peak
5	14685.000	33.49	17.64	51.13	74.00	-22.87	peak
6	16035.000	32.24	18.41	50.65	74.00	-23.35	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	5850.000	39.28	4.00	43.28	74.00	-30.72	peak
2	8115.000	37.34	10.13	47.47	74.00	-26.53	peak
3	11385.000	35.08	14.62	49.70	74.00	-24.30	peak
4	12255.000	34.13	16.03	50.16	74.00	-23.84	peak
5	14355.000	33.12	17.73	50.85	74.00	-23.15	peak
6	16425.000	32.11	19.68	51.79	74.00	-22.21	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

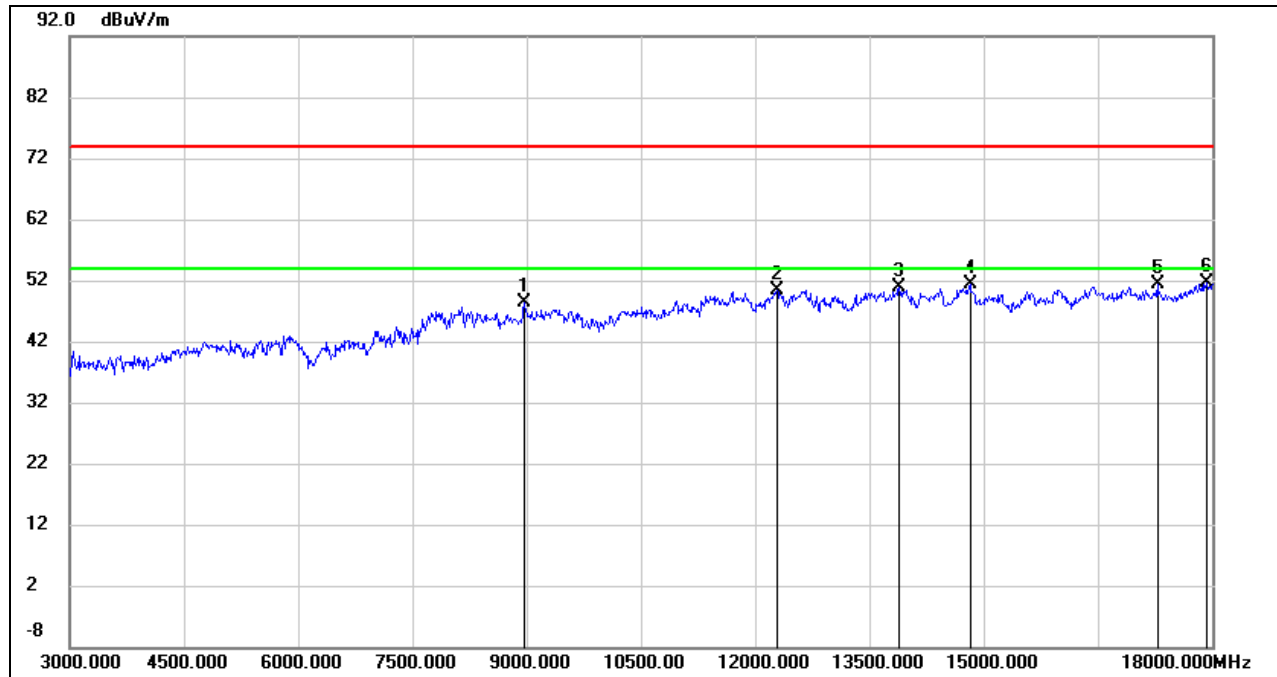
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. 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	8970.000	37.56	10.70	48.26	74.00	-25.74	peak
2	12285.000	34.21	16.08	50.29	74.00	-23.71	peak
3	13890.000	33.25	17.53	50.78	74.00	-23.22	peak
4	14820.000	33.44	17.91	51.35	74.00	-22.65	peak
5	17280.000	28.91	22.48	51.39	74.00	-22.61	peak
6	17925.000	27.55	23.98	51.53	74.00	-22.47	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

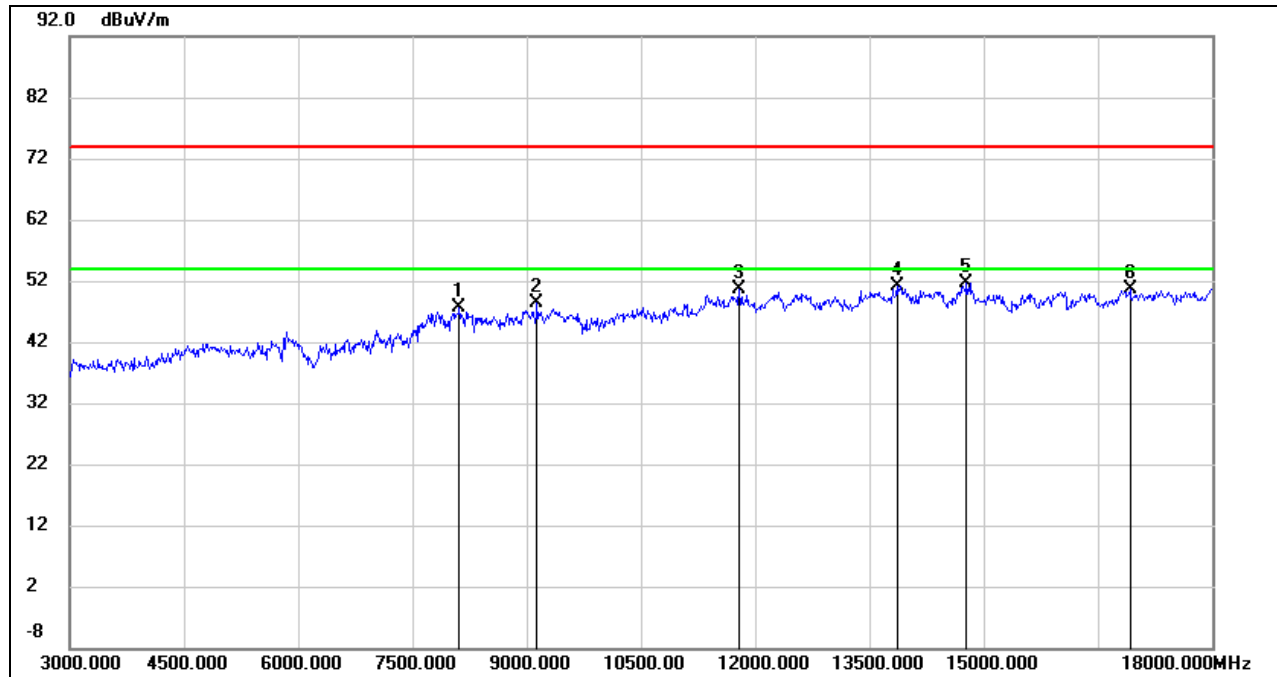
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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	8115.000	37.43	10.13	47.56	74.00	-26.44	peak
2	9135.000	38.30	10.07	48.37	74.00	-25.63	peak
3	11790.000	35.46	15.26	50.72	74.00	-23.28	peak
4	13860.000	33.66	17.55	51.21	74.00	-22.79	peak
5	14775.000	33.78	17.95	51.73	74.00	-22.27	peak
6	16920.000	29.12	21.51	50.63	74.00	-23.37	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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

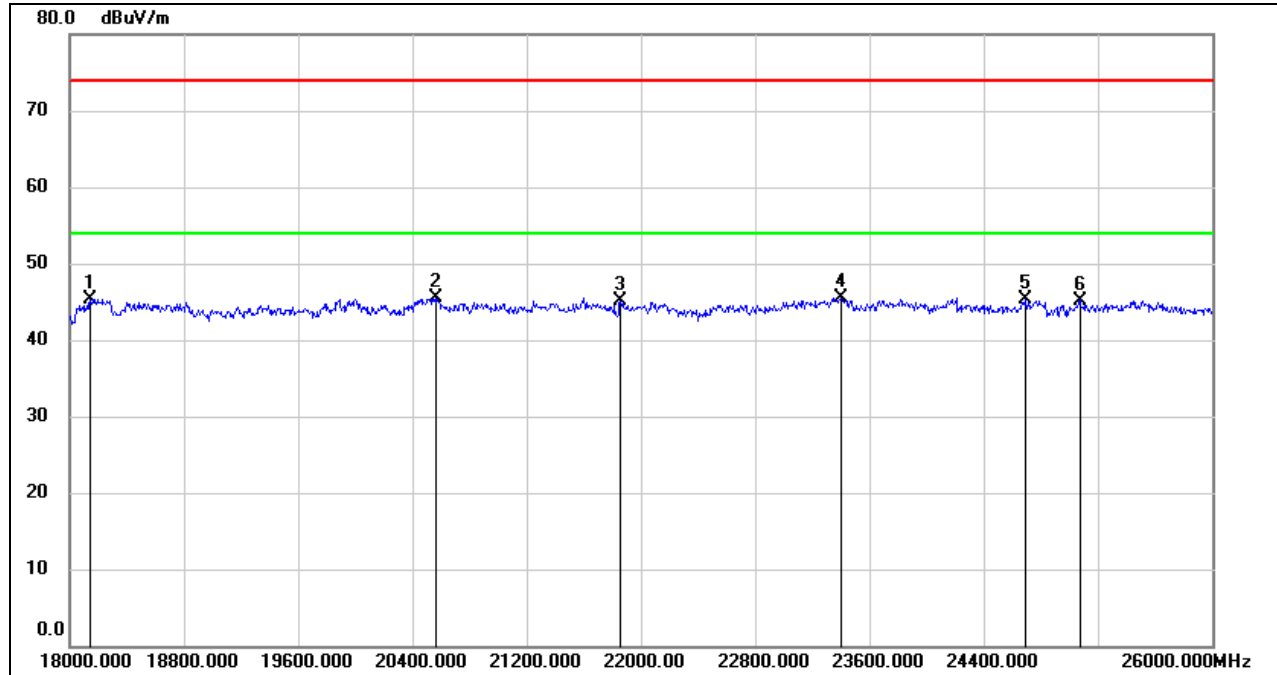
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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

## 8.5. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

### 8.5.1. 2.4G SRD 10MHz MODE

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



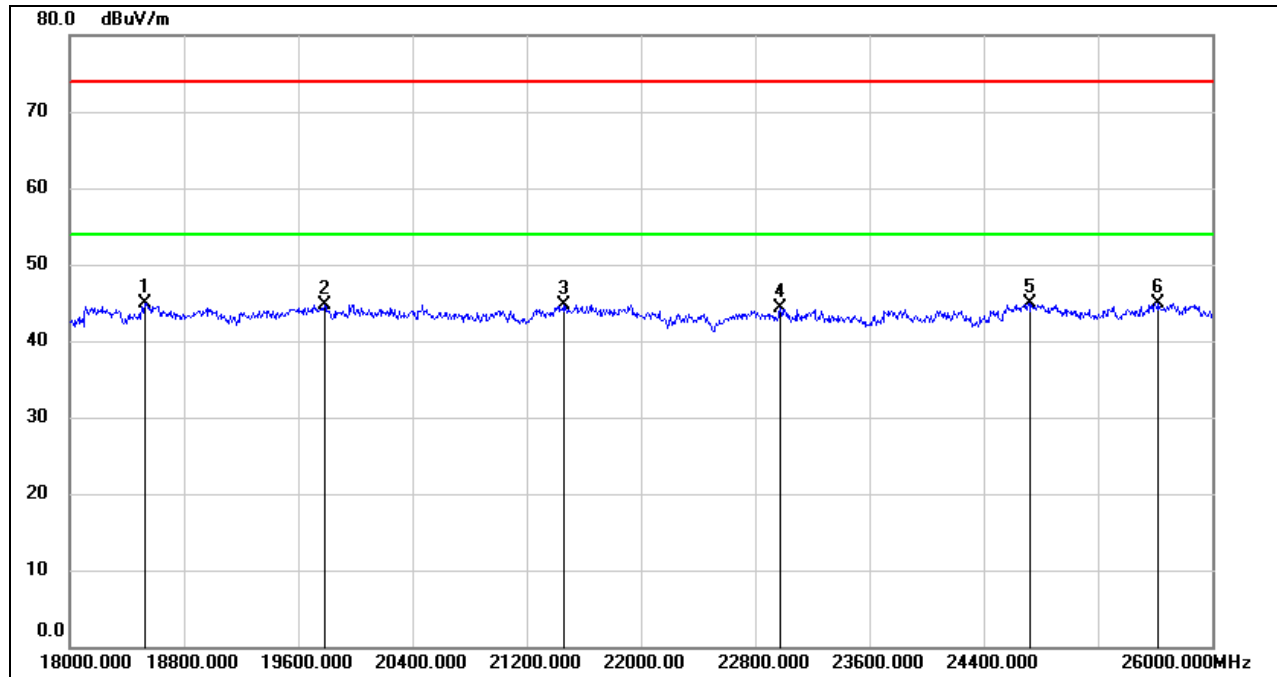
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18144.000	50.77	-5.48	45.29	74.00	-28.71	peak
2	20560.000	50.73	-5.30	45.43	74.00	-28.57	peak
3	21856.000	49.52	-4.39	45.13	74.00	-28.87	peak
4	23400.000	48.69	-3.23	45.46	74.00	-28.54	peak
5	24688.000	47.65	-2.32	45.33	74.00	-28.67	peak
6	25072.000	47.17	-1.97	45.20	74.00	-28.80	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18528.000	50.11	-5.26	44.85	74.00	-29.15	peak
2	19784.000	50.07	-5.28	44.79	74.00	-29.21	peak
3	21456.000	49.35	-4.70	44.65	74.00	-29.35	peak
4	22976.000	47.76	-3.46	44.30	74.00	-29.70	peak
5	24720.000	47.22	-2.33	44.89	74.00	-29.11	peak
6	25624.000	46.09	-1.20	44.89	74.00	-29.11	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

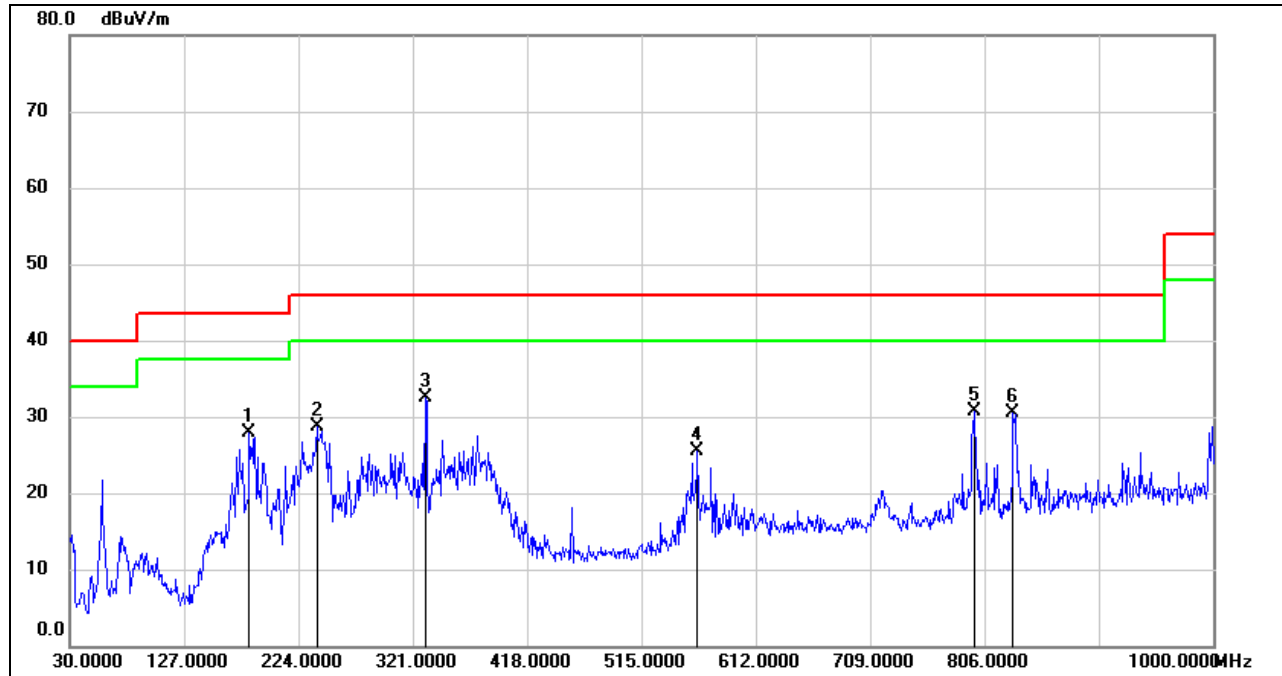
3. Peak: Peak detector.

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

## 8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

### 8.6.1. 2.4G SRD 10MHz MODE

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



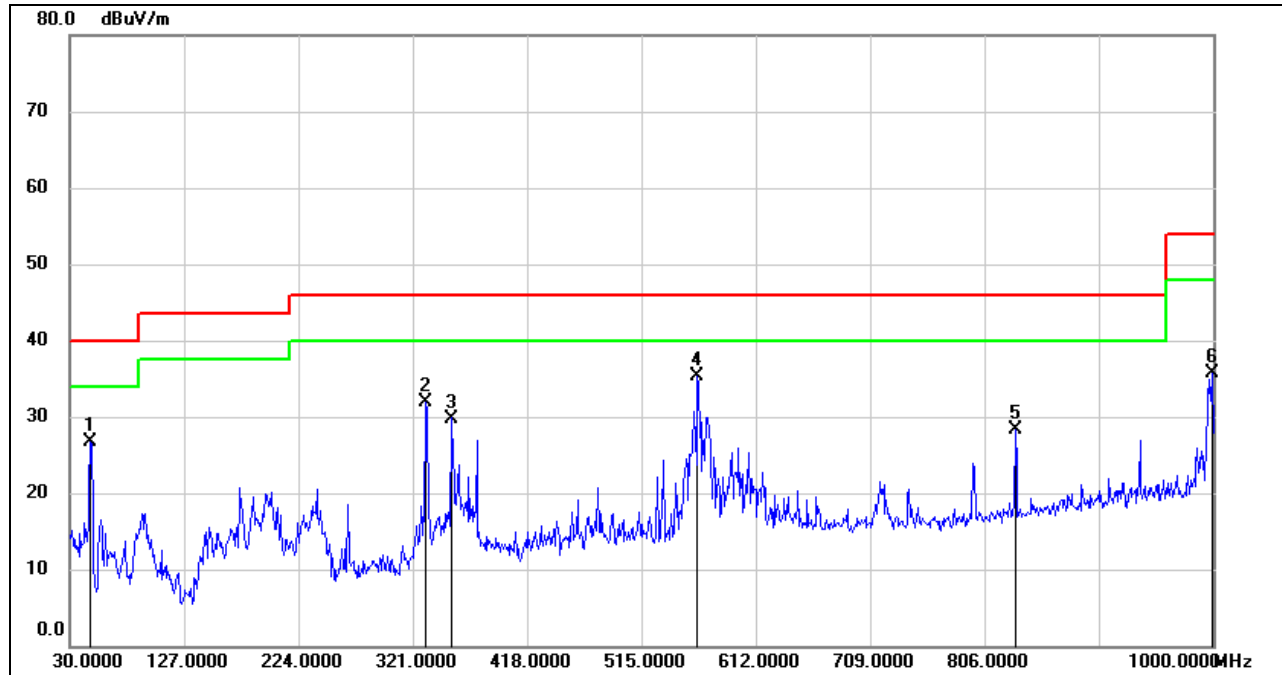
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	182.2899	44.61	-16.79	27.82	43.50	-15.68	QP
2	239.5200	47.93	-19.16	28.77	46.00	-17.23	QP
3	331.6700	47.17	-14.64	32.53	46.00	-13.47	QP
4	562.5300	35.76	-10.26	25.50	46.00	-20.50	QP
5	797.2700	38.02	-7.35	30.67	46.00	-15.33	QP
6	830.2500	37.20	-6.68	30.52	46.00	-15.48	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	47.4600	47.32	-20.55	26.77	40.00	-13.23	QP
2	331.6700	46.53	-14.64	31.89	46.00	-14.11	QP
3	353.9800	44.03	-14.23	29.80	46.00	-16.20	QP
4	562.5300	45.47	-10.26	35.21	46.00	-10.79	QP
5	832.1900	35.01	-6.63	28.38	46.00	-17.62	QP
6	999.0300	39.95	-4.15	35.80	54.00	-18.20	QP

Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

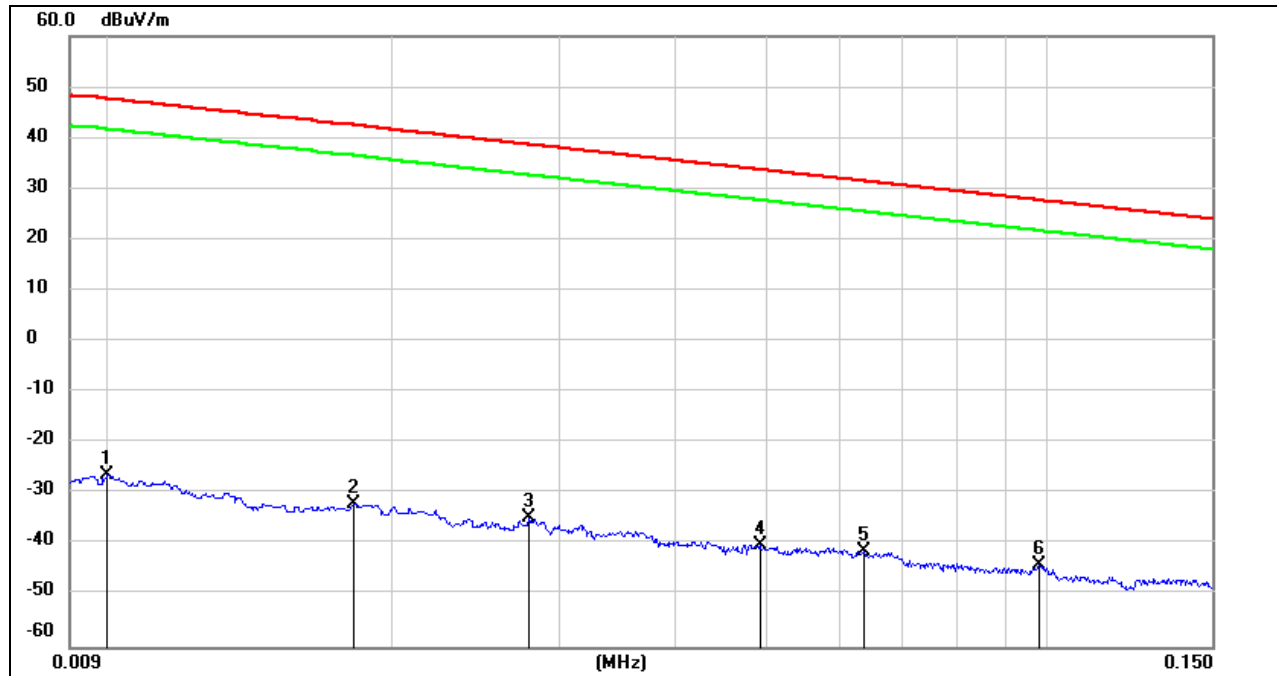
Note: All the modes and channels had been tested, but only the worst data was recorded in the report.

## 8.7. SPURIOUS EMISSIONS BELOW 30 MHz

### 8.7.1. 2.4G SRD 10MHz MODE

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

9 kHz~ 150 kHz



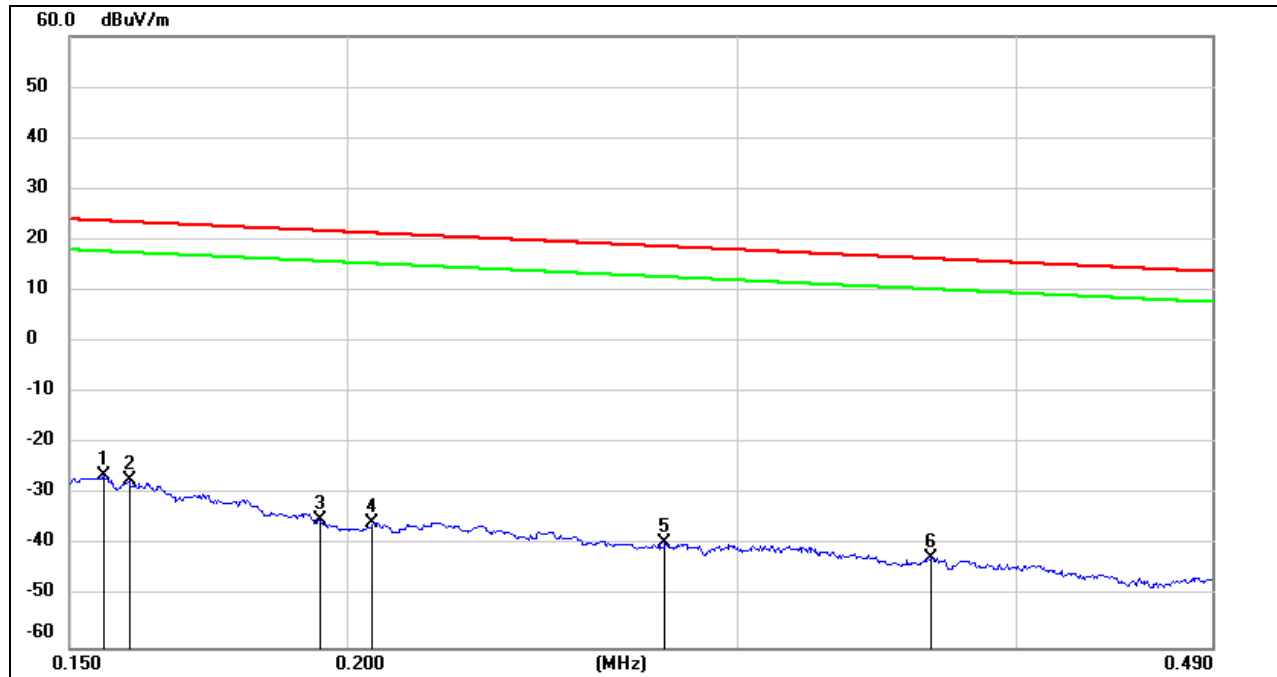
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	75.22	-101.40	-26.18	47.60	-73.78	peak
2	0.0181	69.35	-101.36	-32.01	42.45	-74.46	peak
3	0.0279	66.67	-101.38	-34.71	38.69	-73.40	peak
4	0.0492	61.55	-101.47	-39.92	33.76	-73.68	peak
5	0.0636	60.31	-101.54	-41.23	31.53	-72.76	peak
6	0.0981	57.77	-101.78	-44.01	27.77	-71.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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

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



150 kHz ~ 490 kHz

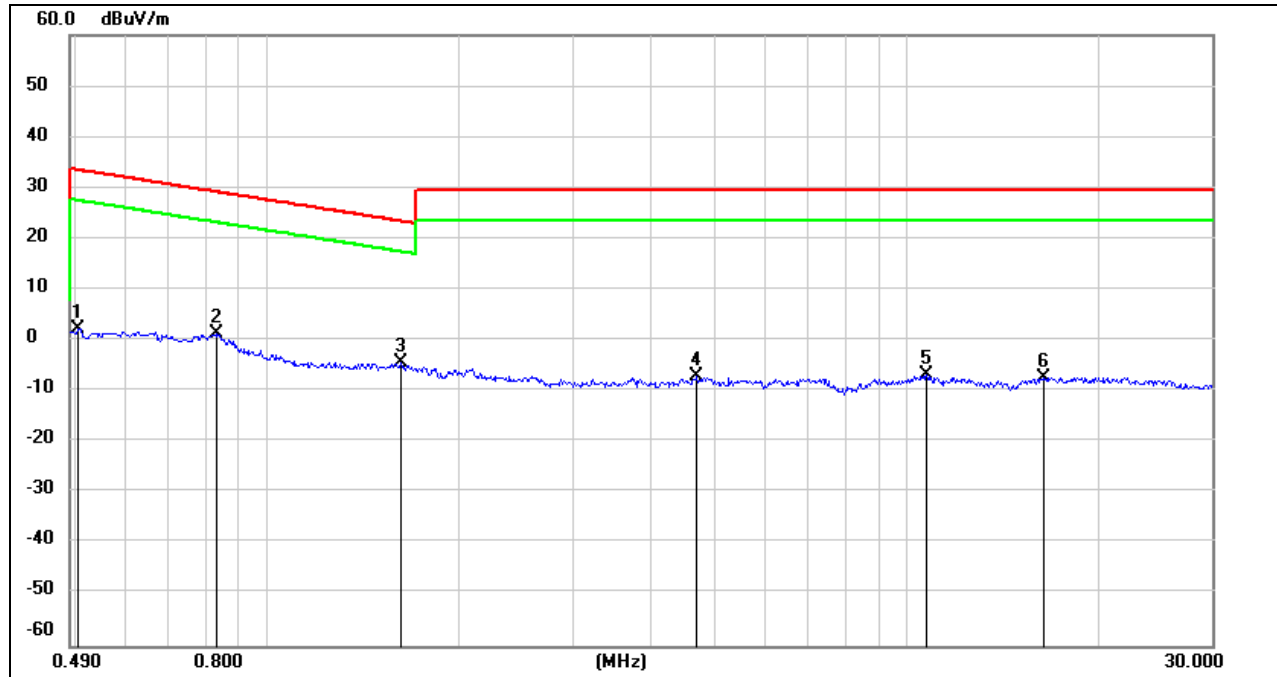
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.1554	75.27	-101.65	-26.38	23.77	-50.15	peak
2	0.1595	74.36	-101.65	-27.29	23.55	-50.84	peak
3	0.1945	66.69	-101.70	-35.01	21.82	-56.83	peak
4	0.2053	66.29	-101.73	-35.44	21.35	-56.79	peak
5	0.2782	62.29	-101.83	-39.54	18.71	-58.25	peak
6	0.3662	59.58	-101.93	-42.35	16.33	-58.68	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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

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

### 490 kHz ~ 30 MHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	Margin (dB)	Remark
1	0.5039	64.44	-62.07	2.37	33.56	-31.19	peak
2	0.8296	63.44	-62.17	1.27	29.23	-27.96	peak
3	1.6149	57.62	-62.00	-4.38	23.44	-27.82	peak
4	4.6905	54.32	-61.44	-7.12	29.54	-36.66	peak
5	10.7299	53.98	-60.83	-6.85	29.54	-36.39	peak
6	16.3959	53.67	-60.96	-7.29	29.54	-36.83	peak

Note: 1. Measurement = Reading Level + Correct Factor.

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

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

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

## 9. AC POWER LINE CONDUCTED EMISSIONS

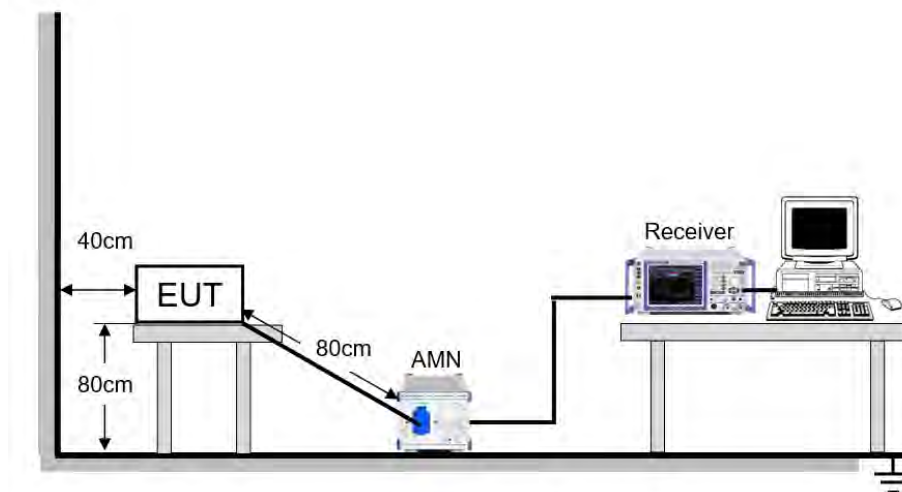
### LIMITS

Please refer to CFR 47 FCC §15.207 (a)

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

### TEST SETUP AND PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.

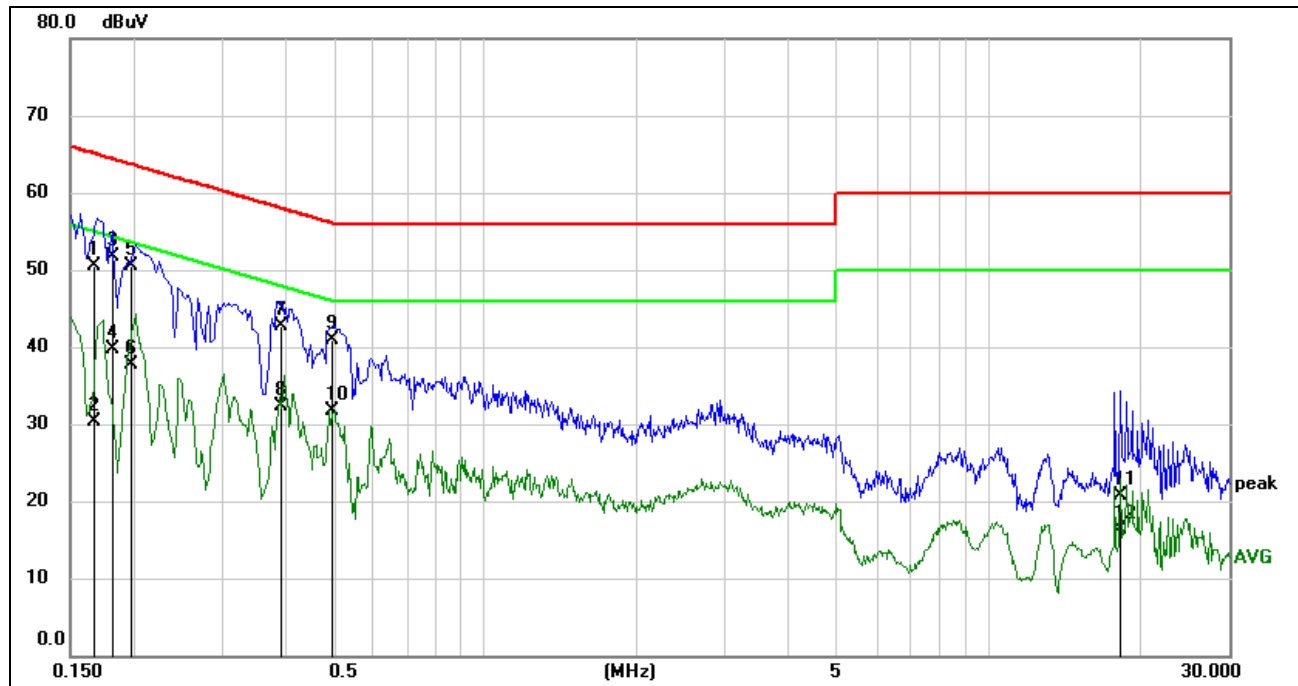


The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver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

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

### TEST ENVIRONMENT

Temperature	24.3 °C	Relative Humidity	64.4 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V / 60 Hz

**RESULTS****9.1.2.4G SRD 10MHz MODE****LINE N RESULTS (LOW CHANNEL, WORST-CASE CONFIGURATION)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1662	40.91	9.59	50.50	65.15	-14.65	QP
2	0.1662	20.70	9.59	30.29	55.15	-24.86	AVG
3	0.1826	42.13	9.59	51.72	64.37	-12.65	QP
4	0.1826	30.09	9.59	39.68	54.37	-14.69	AVG
5	0.1974	41.00	9.59	50.59	63.72	-13.13	QP
6	0.1974	28.09	9.59	37.68	53.72	-16.04	AVG
7	0.3930	33.12	9.59	42.71	58.00	-15.29	QP
8	0.3930	22.65	9.59	32.24	48.00	-15.76	AVG
9	0.4979	31.33	9.60	40.93	56.03	-15.10	QP
10	0.4979	22.18	9.60	31.78	46.03	-14.25	AVG
11	18.3557	11.09	9.71	20.80	60.00	-39.20	QP
12	18.3557	6.59	9.71	16.30	50.00	-33.70	AVG

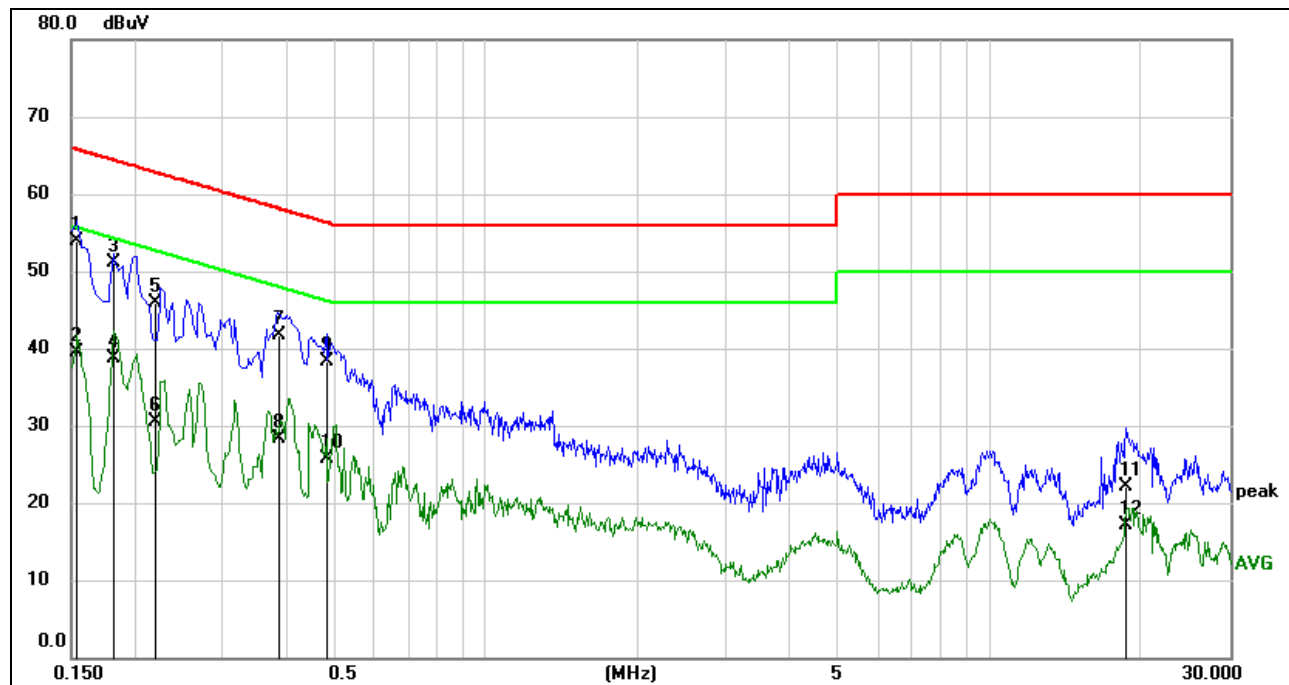
Note: 1. Result = Reading +Correct Factor.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).

4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1529	44.32	9.59	53.91	65.84	-11.93	QP
2	0.1529	29.86	9.59	39.45	55.84	-16.39	AVG
3	0.1812	41.58	9.59	51.17	64.43	-13.26	QP
4	0.1812	29.18	9.59	38.77	54.43	-15.66	AVG
5	0.2216	36.26	9.59	45.85	62.76	-16.91	QP
6	0.2216	21.00	9.59	30.59	52.76	-22.17	AVG
7	0.3876	32.14	9.59	41.73	58.11	-16.38	QP
8	0.3876	18.81	9.59	28.40	48.11	-19.71	AVG
9	0.4854	28.72	9.60	38.32	56.25	-17.93	QP
10	0.4854	16.16	9.60	25.76	46.25	-20.49	AVG
11	18.7202	12.33	9.79	22.12	60.00	-37.88	QP
12	18.7202	7.37	9.79	17.16	50.00	-32.84	AVG

Note: 1. Result = Reading +Correct Factor.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).

4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

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



## 10.ANTENNA REQUIREMENTS

### APPLICABLE REQUIREMENTS

Please refer to FCC § 5.203

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

Please refer to FCC §15.247(b)(4)

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

### RESULTS

Complies



## 11. Appendix

### 11.1. Appendix A: DTS Bandwidth

#### 11.1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
10M	Ant0	2407.5	9.080	2402.980	2412.060	0.5	PASS
	Ant0	2437.5	9.040	2433.020	2442.060	0.5	PASS
	Ant0	2467.5	9.080	2462.980	2472.060	0.5	PASS
20M	Ant0	2412.5	17.960	2403.500	2421.460	0.5	PASS
	Ant0	2437.5	18.040	2428.540	2446.580	0.5	PASS
	Ant0	2462.5	18.000	2453.500	2471.500	0.5	PASS
40M	Ant0	2422.5	36.080	2404.500	2440.580	0.5	PASS
	Ant0	2437.5	35.680	2419.820	2455.500	0.5	PASS
	Ant0	2452.5	36.080	2434.500	2470.580	0.5	PASS
1.4M	Ant0	2403.5	1.114	2402.941	2404.055	0.5	PASS
	Ant0	2435.5	1.103	2434.947	2436.050	0.5	PASS
	Ant0	2469.5	1.112	2468.944	2470.056	0.5	PASS
1.4M CA	Ant0	2405.12	1.094	2404.572	2405.666	0.5	PASS
	Ant0	2437.12	1.112	2436.564	2437.676	0.5	PASS
	Ant0	2471.12	1.123	2470.555	2471.678	0.5	PASS
3M	Ant0	2404.5	2.146	2403.425	2405.571	0.5	PASS
	Ant0	2434.5	2.133	2433.436	2435.569	0.5	PASS
	Ant0	2467.5	2.172	2466.414	2468.586	0.5	PASS
3M CA	Ant0	2407.2	2.153	2406.125	2408.278	0.5	PASS
	Ant0	2437.2	2.168	2436.113	2438.281	0.5	PASS
	Ant0	2470.2	2.154	2469.125	2471.279	0.5	PASS

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



## 11.1.2. Test Graphs



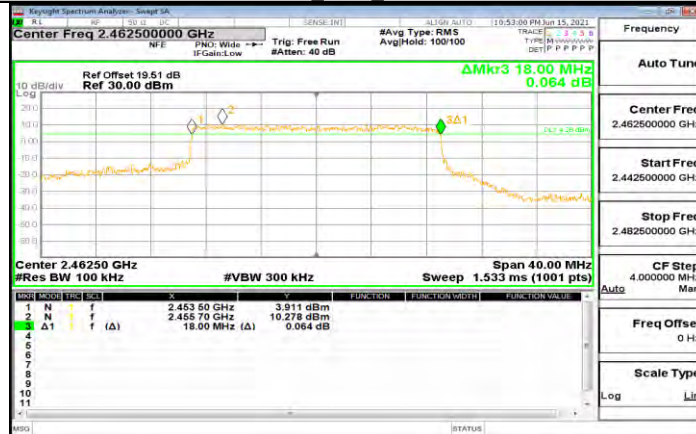




20M Ant0 2412.5



20M Ant0 2437.5



20M Ant0 2462.5



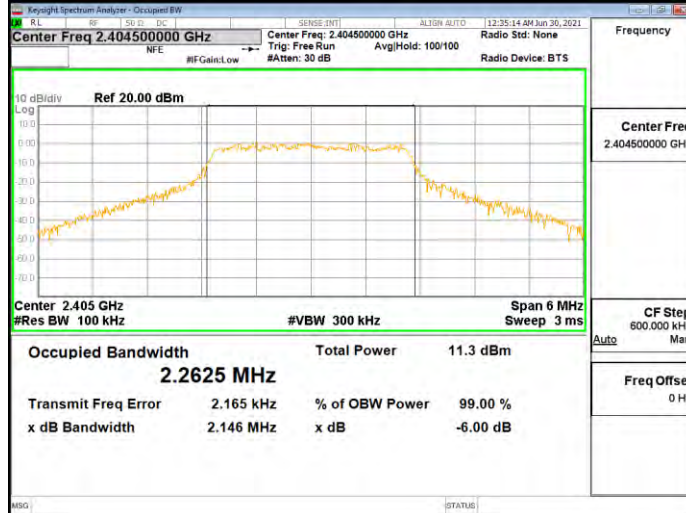




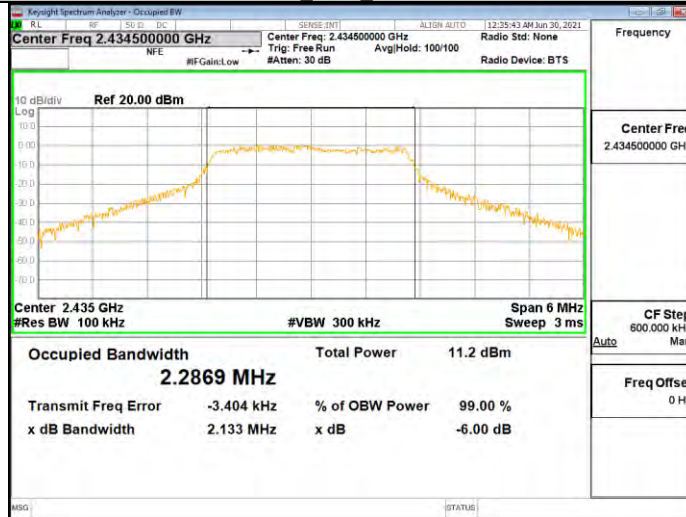




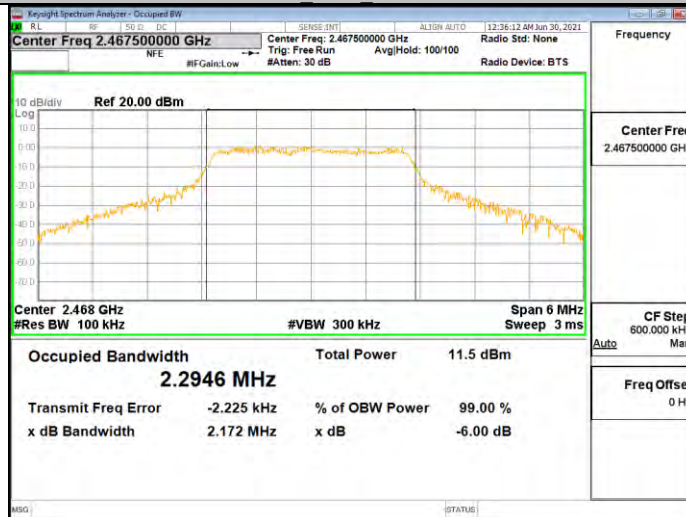
## 3M Ant0 2404.5



## 3M Ant0 2434.5

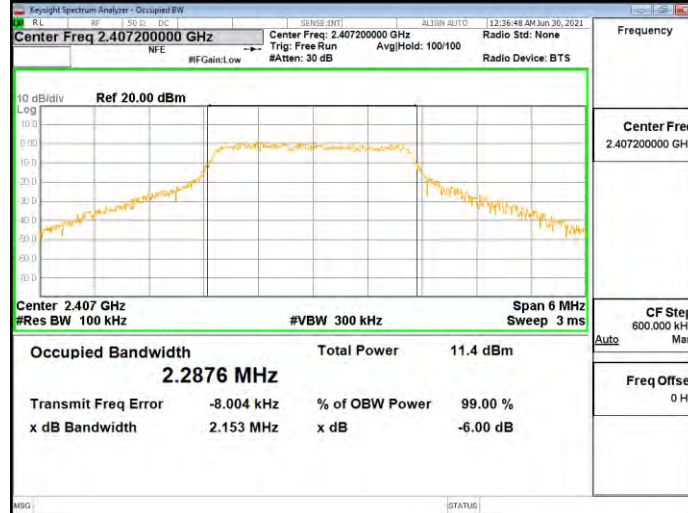


## 3M Ant0 2467.5

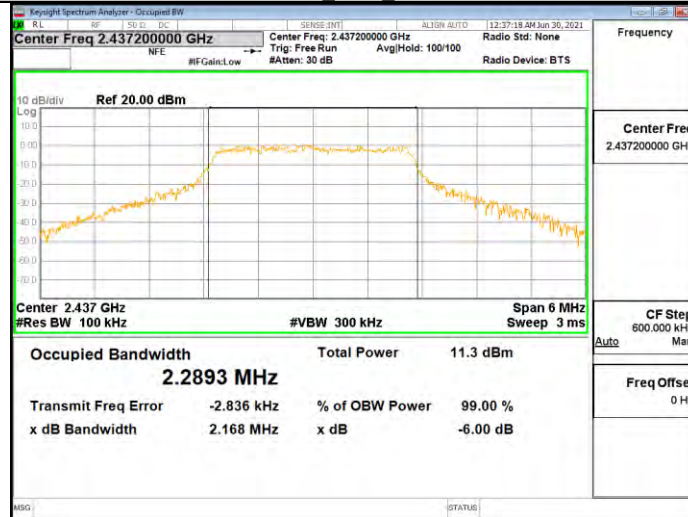




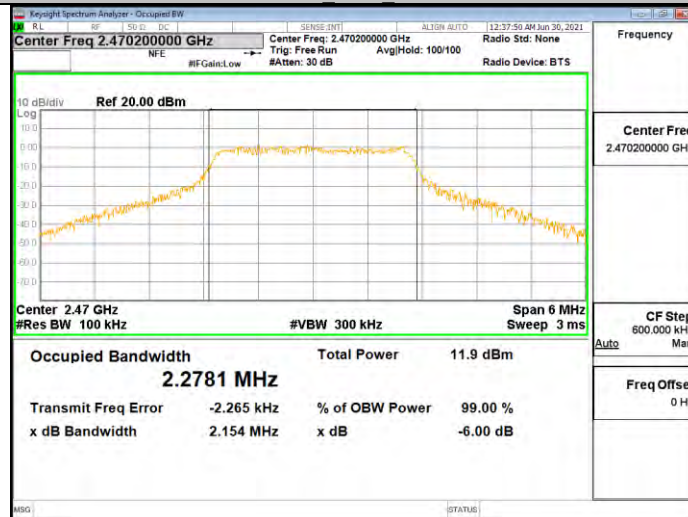
## 3M CA Ant0 2407.2



## 3M CA Ant0 2437.2



## 3M CA Ant0 2470.2



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

**11.2. Appendix B: Occupied Channel Bandwidth****11.2.1. Test Result**

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
10M	Ant0	2407.5	9.2414	2402.910	2412.152	PASS
	Ant0	2437.5	9.3287	2432.882	2442.210	PASS
	Ant0	2467.5	9.1803	2462.908	2472.088	PASS
20M	Ant0	2412.5	17.946	2403.533	2421.479	PASS
	Ant0	2437.5	17.912	2428.644	2446.556	PASS
	Ant0	2462.5	17.985	2453.492	2471.477	PASS
40M	Ant0	2422.5	35.848	2404.701	2440.549	PASS
	Ant0	2437.5	35.650	2419.752	2455.402	PASS
	Ant0	2452.5	35.804	2434.494	2470.298	PASS
1.4M	Ant0	2403.5	1.1726	2402.912	2404.084	PASS
	Ant0	2435.5	1.1729	2434.914	2436.086	PASS
	Ant0	2469.5	1.1698	2468.913	2470.083	PASS
1.4M CA	Ant0	2405.12	1.1642	2404.548	2405.712	PASS
	Ant0	2437.12	1.1821	2436.529	2437.711	PASS
	Ant0	2471.12	1.1669	2470.534	2471.701	PASS
3M	Ant0	2404.5	2.1908	2403.395	2405.585	PASS
	Ant0	2434.5	2.1913	2433.404	2435.596	PASS
	Ant0	2467.5	2.1939	2466.413	2468.607	PASS
3M CA	Ant0	2407.2	2.1950	2406.113	2408.308	PASS
	Ant0	2437.2	2.1984	2436.101	2438.299	PASS
	Ant0	2470.2	2.1916	2469.101	2471.293	PASS

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



## 11.2.2. Test Graphs



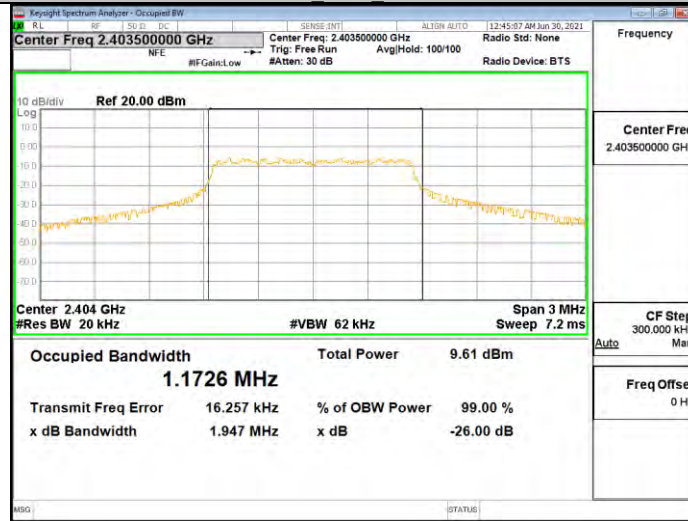




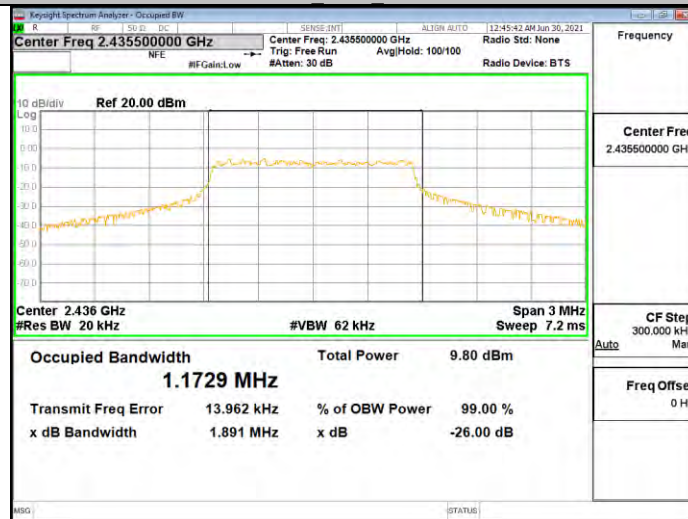




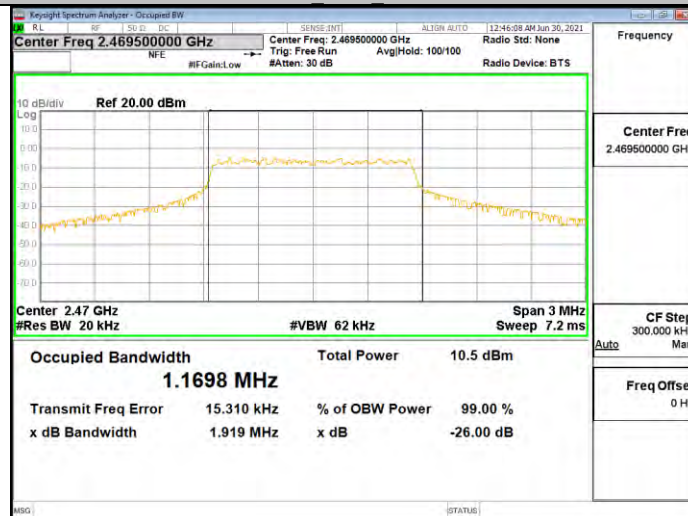
## 1.4M Ant0 2403.5



## 1.4M Ant0 2435.5



## 1.4M Ant0 2469.5

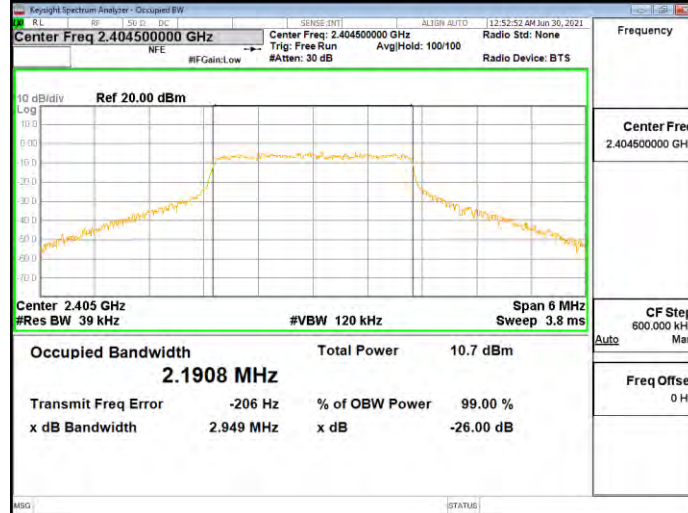




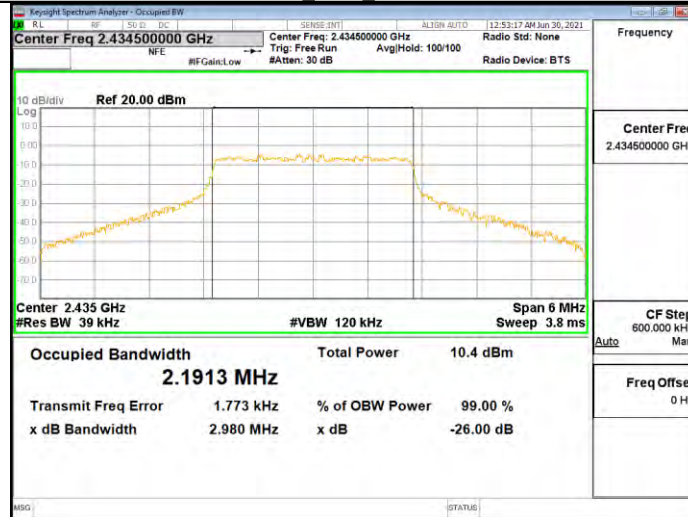




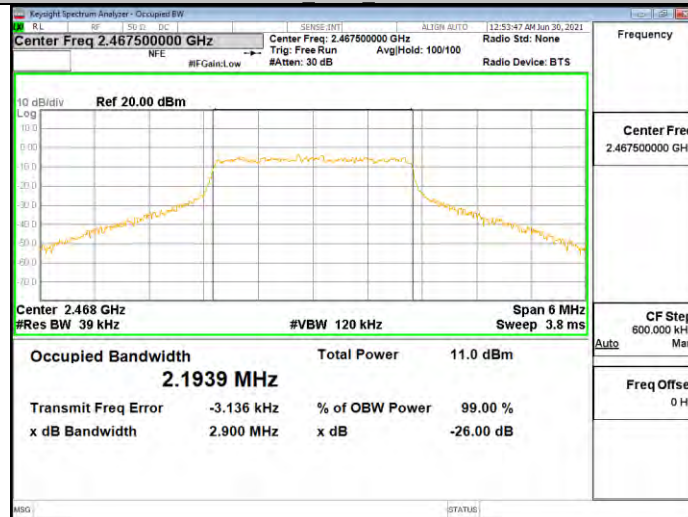
## 3M Ant0 2404.5



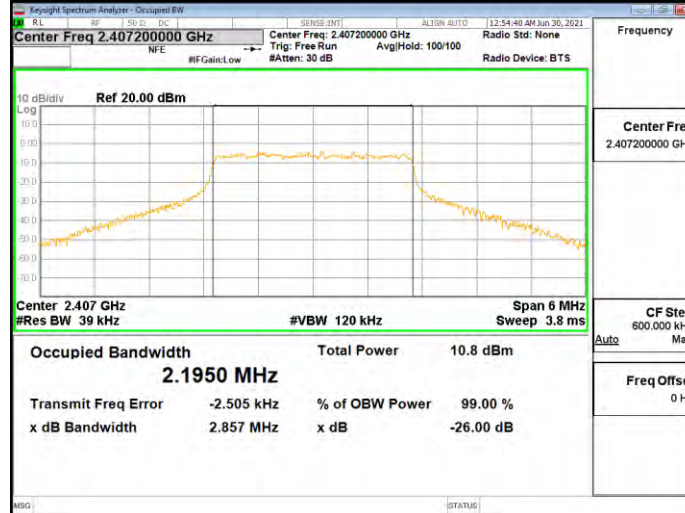
## 3M Ant0 2434.5



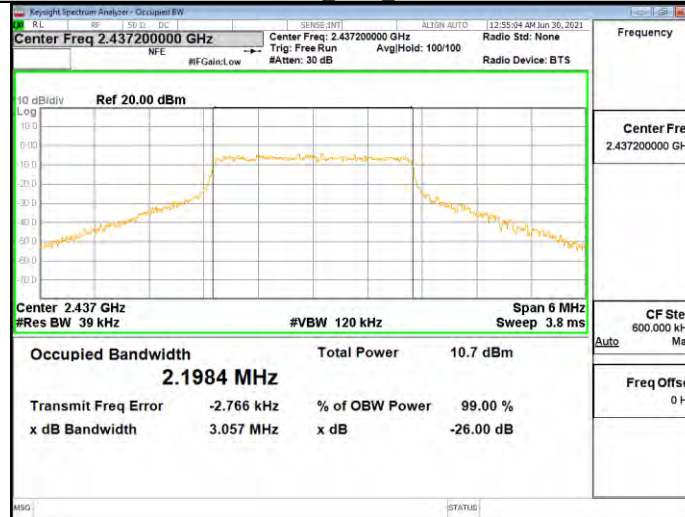
## 3M Ant0 2467.5



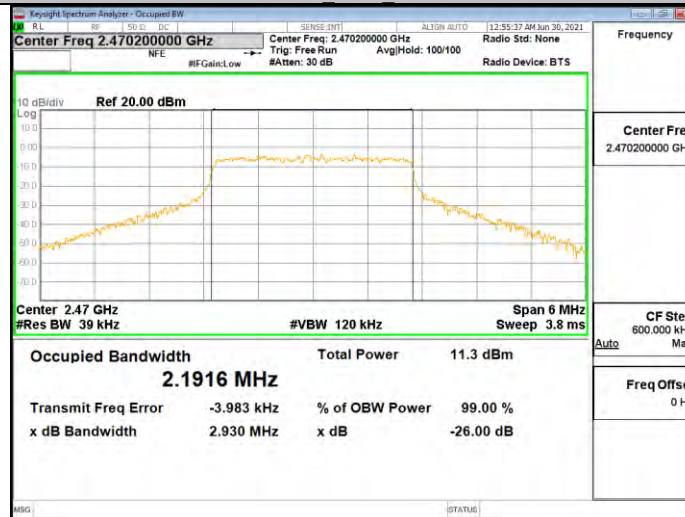
## 3M CA Ant0 2407.2



## 3M CA Ant0 2437.2



## 3M CA Ant0 2470.2



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

**11.3. Appendix C: Maximum conducted AVG output power****11.3.1. Test Result**

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
10M	Ant0	Low	23.14	<=30	PASS
	Ant1	Low	23.01	<=30	PASS
	Ant2	Low	22.93	<=30	PASS
	Ant3	Low	23.03	<=30	PASS
	total Ant0&1	Low	26.09	<=30	PASS
	total Ant0&3	Low	26.10	<=30	PASS
	total Ant2&1	Low	25.98	<=30	PASS
	total Ant2&3	Low	25.99	<=30	PASS
	Ant0	MID	22.85	<=30	PASS
	Ant1	MID	22.29	<=30	PASS
	Ant2	MID	22.86	<=30	PASS
	Ant3	MID	22.94	<=30	PASS
	total Ant0&1	MID	25.59	<=30	PASS
	total Ant0&3	MID	25.91	<=30	PASS
	total Ant2&1	MID	25.59	<=30	PASS
	total Ant2&3	MID	25.91	<=30	PASS
	Ant0	High	22.63	<=30	PASS
	Ant1	High	22.27	<=30	PASS
	Ant2	High	22.35	<=30	PASS
	Ant3	High	22.04	<=30	PASS
	total Ant0&1	High	25.46	<=30	PASS
	total Ant0&3	High	25.36	<=30	PASS
	total Ant2&1	High	25.32	<=30	PASS
	total Ant2&3	High	25.21	<=30	PASS
20M	Ant0	Low	22.80	<=30	PASS
	Ant1	Low	23.14	<=30	PASS
	Ant2	Low	22.46	<=30	PASS
	Ant3	Low	21.85	<=30	PASS
	total Ant0&1	Low	25.98	<=30	PASS
	total Ant0&3	Low	25.36	<=30	PASS
	total Ant2&1	Low	25.82	<=30	PASS
	total Ant2&3	Low	25.18	<=30	PASS
	Ant0	MID	23.23	<=30	PASS
	Ant1	MID	22.71	<=30	PASS
	Ant2	MID	22.43	<=30	PASS
	Ant3	MID	22.51	<=30	PASS
	total Ant0&1	MID	25.99	<=30	PASS
	total Ant0&3	MID	25.90	<=30	PASS
	total Ant2&1	MID	25.58	<=30	PASS
	total Ant2&3	MID	25.48	<=30	PASS
	Ant0	High	23.03	<=30	PASS
	Ant1	High	22.72	<=30	PASS
	Ant2	High	22.38	<=30	PASS
	Ant3	High	22.58	<=30	PASS
	total Ant0&1	High	25.89	<=30	PASS
	total Ant0&3	High	25.82	<=30	PASS
	total Ant2&1	High	25.56	<=30	PASS
	total Ant2&3	High	25.49	<=30	PASS
40M	Ant0	Low	20.21	<=30	PASS
	Ant1	Low	20.20	<=30	PASS
	Ant2	Low	19.76	<=30	PASS
	Ant3	Low	19.88	<=30	PASS
	total Ant0&1	Low	23.22	<=30	PASS
	total Ant0&3	Low	23.06	<=30	PASS
	total Ant2&1	Low	23.00	<=30	PASS





	total Ant2&3	Low	22.83	<=30	PASS
	Ant0	MID	21.10	<=30	PASS
	Ant1	MID	20.40	<=30	PASS
	Ant2	MID	20.22	<=30	PASS
	Ant3	MID	20.18	<=30	PASS
	total Ant0&1	MID	23.77	<=30	PASS
	total Ant0&3	MID	23.67	<=30	PASS
	total Ant2&1	MID	23.32	<=30	PASS
	total Ant2&3	MID	23.21	<=30	PASS
	Ant0	High	20.43	<=30	PASS
	Ant1	High	20.58	<=30	PASS
	Ant2	High	19.93	<=30	PASS
	Ant3	High	20.22	<=30	PASS
	total Ant0&1	High	23.52	<=30	PASS
	total Ant0&3	High	23.34	<=30	PASS
	total Ant2&1	High	23.28	<=30	PASS
1.4M	total Ant2&3	High	23.09	<=30	PASS
	Ant0	Low	12.43	<=30	PASS
	Ant1	Low	13.00	<=30	PASS
	Ant2	Low	12.56	<=30	PASS
	Ant3	Low	12.67	<=30	PASS
	total Ant0&1	Low	15.73	<=30	PASS
	total Ant0&3	Low	15.56	<=30	PASS
	total Ant2&1	Low	15.80	<=30	PASS
	total Ant2&3	Low	15.63	<=30	PASS
	Ant0	MID	12.64	<=30	PASS
	Ant1	MID	12.48	<=30	PASS
	Ant2	MID	13.02	<=30	PASS
	Ant3	MID	12.70	<=30	PASS
	total Ant0&1	MID	15.57	<=30	PASS
	total Ant0&3	MID	15.68	<=30	PASS
	total Ant2&1	MID	15.77	<=30	PASS
	total Ant2&3	MID	15.87	<=30	PASS
	Ant0	High	12.93	<=30	PASS
	Ant1	High	12.23	<=30	PASS
	Ant2	High	12.82	<=30	PASS
	Ant3	High	12.43	<=30	PASS
	total Ant0&1	High	15.60	<=30	PASS
	total Ant0&3	High	15.70	<=30	PASS
	total Ant2&1	High	15.55	<=30	PASS
	total Ant2&3	High	15.64	<=30	PASS
1.4M-CA	Ant0	Low	13.15	<=30	PASS
	Ant1	Low	13.51	<=30	PASS
	Ant2	Low	13.11	<=30	PASS
	Ant3	Low	12.82	<=30	PASS
	total Ant0&1	Low	16.34	<=30	PASS
	total Ant0&3	Low	16.00	<=30	PASS
	total Ant2&1	Low	16.32	<=30	PASS
	total Ant2&3	Low	15.98	<=30	PASS
	Ant0	MID	12.93	<=30	PASS
	Ant1	MID	12.82	<=30	PASS
	Ant2	MID	12.62	<=30	PASS
	Ant3	MID	12.76	<=30	PASS
	total Ant0&1	MID	15.89	<=30	PASS
	total Ant0&3	MID	15.86	<=30	PASS
	total Ant2&1	MID	15.73	<=30	PASS
	total Ant2&3	MID	15.70	<=30	PASS
	Ant0	High	13.23	<=30	PASS
	Ant1	High	12.47	<=30	PASS
	Ant2	High	12.02	<=30	PASS
	Ant3	High	12.39	<=30	PASS





	total Ant0&1	High	15.88	<=30	PASS
	total Ant0&3	High	15.84	<=30	PASS
	total Ant2&1	High	15.26	<=30	PASS
	total Ant2&3	High	15.22	<=30	PASS
3M	Ant0	Low	12.87	<=30	PASS
	Ant1	Low	12.88	<=30	PASS
	Ant2	Low	12.75	<=30	PASS
	Ant3	Low	12.39	<=30	PASS
	total Ant0&1	Low	15.89	<=30	PASS
	total Ant0&3	Low	15.65	<=30	PASS
	total Ant2&1	Low	15.83	<=30	PASS
	total Ant2&3	Low	15.58	<=30	PASS
	Ant0	MID	12.46	<=30	PASS
	Ant1	MID	12.54	<=30	PASS
	Ant2	MID	12.84	<=30	PASS
	Ant3	MID	12.62	<=30	PASS
	total Ant0&1	MID	15.51	<=30	PASS
	total Ant0&3	MID	15.55	<=30	PASS
	total Ant2&1	MID	15.70	<=30	PASS
	total Ant2&3	MID	15.74	<=30	PASS
	Ant0	High	12.56	<=30	PASS
	Ant1	High	12.08	<=30	PASS
	Ant2	High	12.57	<=30	PASS
	Ant3	High	12.26	<=30	PASS
	total Ant0&1	High	15.34	<=30	PASS
	total Ant0&3	High	15.42	<=30	PASS
	total Ant2&1	High	15.34	<=30	PASS
	total Ant2&3	High	15.43	<=30	PASS
3M-CA	Ant0	Low	12.99	<=30	PASS
	Ant1	Low	12.97	<=30	PASS
	Ant2	Low	13.14	<=30	PASS
	Ant3	Low	12.52	<=30	PASS
	total Ant0&1	Low	15.99	<=30	PASS
	total Ant0&3	Low	15.77	<=30	PASS
	total Ant2&1	Low	16.07	<=30	PASS
	total Ant2&3	Low	15.85	<=30	PASS
	Ant0	MID	12.85	<=30	PASS
	Ant1	MID	12.77	<=30	PASS
	Ant2	MID	13.13	<=30	PASS
	Ant3	MID	12.84	<=30	PASS
	total Ant0&1	MID	15.82	<=30	PASS
	total Ant0&3	MID	15.86	<=30	PASS
	total Ant2&1	MID	15.96	<=30	PASS
	total Ant2&3	MID	16.00	<=30	PASS
	Ant0	High	13.05	<=30	PASS
	Ant1	High	12.44	<=30	PASS
	Ant2	High	12.87	<=30	PASS
	Ant3	High	12.43	<=30	PASS
	total Ant0&1	High	15.77	<=30	PASS
	total Ant0&3	High	15.76	<=30	PASS
	total Ant2&1	High	15.67	<=30	PASS
	total Ant2&3	High	15.67	<=30	PASS

Note: 1. Conducted Power=Meas. Level+ Correction Factor

2. The Duty Cycle Factor (refer to section 7.1) had already compensated to the test data.

## 11.4. Appendix D: Maximum power spectral density

### 11.4.1. Test Result

Test Mode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
10M	Ant0	2407.5	-1.76	$\leq 8$	PASS
	Ant1	2407.5	-2.51	$\leq 8$	PASS
	total	2407.5	0.89	$\leq 8$	PASS
	Ant0	2437.5	-2.29	$\leq 8$	PASS
	Ant1	2437.5	-3.24	$\leq 8$	PASS
	total	2437.5	0.27	$\leq 8$	PASS
	Ant0	2467.5	-2.38	$\leq 8$	PASS
	Ant1	2467.5	-2.83	$\leq 8$	PASS
	total	2467.5	0.41	$\leq 8$	PASS
20M	Ant0	2412.5	-5.18	$\leq 8$	PASS
	Ant1	2412.5	-4.97	$\leq 8$	PASS
	total	2412.5	-2.06	$\leq 8$	PASS
	Ant0	2437.5	-4.78	$\leq 8$	PASS
	Ant1	2437.5	-5.24	$\leq 8$	PASS
	total	2437.5	-1.99	$\leq 8$	PASS
	Ant0	2462.5	-4.78	$\leq 8$	PASS
	Ant1	2462.5	-5.08	$\leq 8$	PASS
	total	2462.5	-1.92	$\leq 8$	PASS
40M	Ant0	2422.5	-10.6	$\leq 8$	PASS
	Ant1	2422.5	-10.31	$\leq 8$	PASS
	total	2422.5	-7.44	$\leq 8$	PASS
	Ant0	2437.5	-8.96	$\leq 8$	PASS
	Ant1	2437.5	-9.22	$\leq 8$	PASS
	total	2437.5	-6.08	$\leq 8$	PASS
	Ant0	2452.5	-9.49	$\leq 8$	PASS
	Ant1	2452.5	-9.55	$\leq 8$	PASS
	total	2452.5	-6.51	$\leq 8$	PASS
1.4M	Ant0	2403.5	-5.16	$\leq 8$	PASS
	Ant1	2403.5	-4.33	$\leq 8$	PASS
	total	2403.5	-1.71	$\leq 8$	PASS
	Ant0	2435.5	-4.90	$\leq 8$	PASS
	Ant1	2435.5	-4.98	$\leq 8$	PASS
	total	2435.5	-1.93	$\leq 8$	PASS
	Ant0	2469.5	-4.74	$\leq 8$	PASS
	Ant1	2469.5	-5.51	$\leq 8$	PASS
	total	2469.5	-2.10	$\leq 8$	PASS
1.4M CA	Ant0	2405.12	-4.74	$\leq 8$	PASS
	Ant1	2405.12	-4.24	$\leq 8$	PASS
	total	2405.12	-1.47	$\leq 8$	PASS
	Ant0	2437.12	-4.64	$\leq 8$	PASS
	Ant1	2437.12	-4.93	$\leq 8$	PASS
	total	2437.12	-1.77	$\leq 8$	PASS
	Ant0	2471.12	-5.22	$\leq 8$	PASS
	Ant1	2471.12	-5.32	$\leq 8$	PASS
	total	2471.12	-2.26	$\leq 8$	PASS
3M	Ant0	2404.5	-9.11	$\leq 8$	PASS
	Ant1	2404.5	-8.46	$\leq 8$	PASS
	total	2404.5	-5.76	$\leq 8$	PASS
	Ant0	2434.5	-9.09	$\leq 8$	PASS
	Ant1	2434.5	-8.81	$\leq 8$	PASS
	total	2434.5	-5.94	$\leq 8$	PASS
	Ant0	2467.5	-9.60	$\leq 8$	PASS
	Ant1	2467.5	-9.11	$\leq 8$	PASS
	total	2467.5	-6.33	$\leq 8$	PASS



3M CA	Ant0	2407.2	-8.12	$\leq 8$	PASS
	Ant1	2407.2	-8.49	$\leq 8$	PASS
	total	2407.2	-5.29	$\leq 8$	PASS
	Ant0	2437.2	-8.40	$\leq 8$	PASS
	Ant1	2437.2	-8.24	$\leq 8$	PASS
	total	2437.2	-5.31	$\leq 8$	PASS
	Ant0	2470.2	-8.69	$\leq 8$	PASS
	Ant1	2470.2	-9.64	$\leq 8$	PASS
	total	2470.2	-6.13	$\leq 8$	PASS

Note: All the modes and channels had been tested, but only the worst data as TX at Ant0&1 was recorded in the report.

## 11.4.2. Test Graphs

