



CFR 47 FCC PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Mobile

PRODUCT MARKETING NAME: APX6500

MODEL NUMBER: M25URS9PW1BN

REPORT NUMBER: 4789278436.1-1

ISSUE DATE: January 07, 2020

Prepared for

**Motorola Solutions (Malaysia) Sdn Bhd
Unit 1807-12 Two Harbourfront 22 Tak Fung St, Hung Hom Kowloon Hong Kong**

Prepared by

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V0	01/07/2020	Initial Issue	



Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205	Pass
Note: 1. only above test item were performed according to manufacturer's requirement. 2. This test report is only published to and used by the applicant, and it is not for evidence purpose in China.			



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Motorola Solutions (Malaysia) Sdn Bhd
Address: Unit 1807-12 Two Harbourfront 22 Tak Fung St, Hunghom
Kowloon Hong Kong

Manufacturer Information

Company Name: Motorola Solutions (Malaysia) Sdn Bhd
Address: Unit 1807-12 Two Harbourfront 22 Tak Fung St, Hunghom
Kowloon Hong Kong

EUT Information

Product Type: Mobile
Product Marketing Name: APX6500
Model Number: M25URS9PW1BN
Sample Status: Normal
Sample ID: 2738299
Sample Received Date: December 06, 2019
Date of Tested: December 09 ~ December 27, 2019

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.247 (d)	PASS

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2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>ISED(Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p>
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

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

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



4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty
Conduction emission	3.62dB
Radiation Emission test(include Fundamental emission) (9kHz-30MHz)	2.2dB
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.00dB
Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	5.78dB (1GHz-18Gz)
	5.23dB (18GHz-26Gz)
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	Mobile	
Model	APX6500	
Product Description	Operation Frequency	2402 MHz ~ 2480 MHz
	Modulation Type	Data Rate
	GFSK	1Mbps
Rated Input	DC 13.6V	

5.2. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel Number	Test Channel
GFSK	CH 0, CH 19, CH 39	Low, Middle, High

5.3. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	45 ~ 70%	
Atmospheric Pressure:	1025Pa	
Temperature	TN	22 ~ 28°C
Voltage :	VL	N/A
	VN	DC 13.6V
	VH	N/A

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

5.4. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	PC	HP	HP ZBook 15G4c	/
2	USB TO UART	/	/	/

I/O CABLES

Cable No	Port	Part Number	Serial No / Tag	Country Of Origin	Remarks
1	Radio Power Cable	HKN4191B	HKN4191B-3	Malaysia	/
2	Cable	HKN6163C	HKN6163C-2	Malaysia	/
3	131ft remote cable	HKN6164B	HKN6164B-CF1	Malaysia	/
4	Control Head Power Cable	HKN6188B	HKN6188B	Malaysia	/

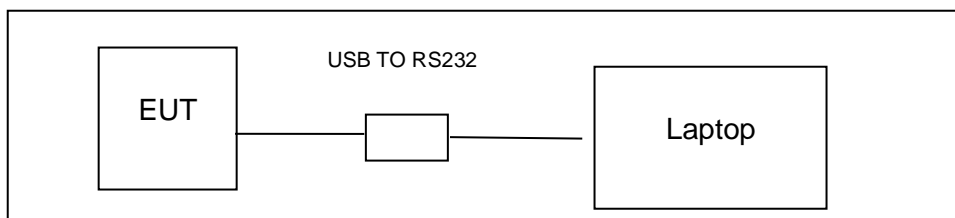
ACCESSORY

Item	Accessory	Part Number	Serial No / Tag	Country Of Origin
1	Control head	PMHN4194C	PMHN4194C-CF2	Malaysia
2	CHIB	PMUN1057B	PMUN1057B-CF1	Malaysia
3	TIB	PMUN1083A	PMUN1083A-C3	Malaysia
4	Antenna	AN000197A10	AN000197A10-CF1	Malaysia
5	Antenna	AN000163A02	AN000163A02-C2	Mexico
6	RSM	HMN4079G	HMN4079G-4	Malaysia
7	Audio Accy	HSN4040A	HSN4040A-C4	Taiwan
8	Mate plate	/	2pcs	Malaysia
9	Antenna holder	/	1pcs	Malaysia

TEST SETUP

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

SETUP DIAGRAM FOR TEST





6. MEASURING INSTRUMENT AND SOFTWARE USED

Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	MXE EMI Receiver	KESIGHT	N9038A	MY56400 036	Dec.06,2019	Dec.06,2020
<input checked="" type="checkbox"/>	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Sep.17, 2018	Sep.17, 2021
<input checked="" type="checkbox"/>	Preamplifier	HP	8447D	2944A090 99	Dec.05,2019	Dec.05,2020
<input checked="" type="checkbox"/>	EMI Measurement Receiver	R&S	ESR26	101377	Dec.05,2019	Dec.05,2020
<input checked="" type="checkbox"/>	Horn Antenna	TDK	HRN-0118	130939	Sep.17, 2018	Sep.17, 2021
<input checked="" type="checkbox"/>	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Aug.11, 2018	Aug.11, 2021
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-0118	TRS-305- 00066	Dec.05,2019	Dec.05,2020
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-2	TRS-307- 00003	Dec.05,2019	Dec.05,2020
<input checked="" type="checkbox"/>	Loop antenna	Schwarzbeck	1519B	00008	Jan.07, 2019	Jan.07, 2022
<input checked="" type="checkbox"/>	Band Reject Filter	Wainwright	WRCJV8- 2350-2400- 2483.5- 2533.5-40SS	4	Dec.05,2019	Dec.05,2020
<input checked="" type="checkbox"/>	High Pass Filter	Wi	WHKX10- 2700-3000- 18000-40SS	23	Dec.05,2019	Dec.05,2020
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	Dec.06,2019	Dec.06,2020
<input checked="" type="checkbox"/>	Power Meter	Keysight	N1911A	MY55416024	Dec.06,2019	Dec.06,2020
<input checked="" type="checkbox"/>	Power Sensor	Keysight	U2021XA	MY5100022	Dec.06,2019	Dec.06,2020

7. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209

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

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

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

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

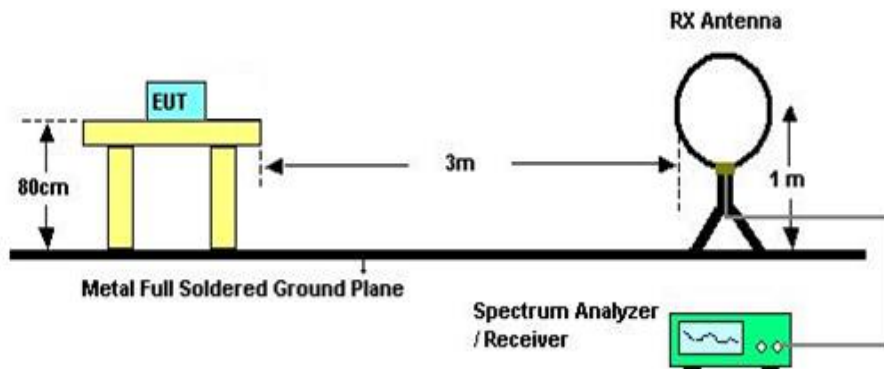
Radiation Disturbance Test Limit for FCC (Above 1GHz)

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

About Restricted bands of operation please refer to RSS-Gen section 8.10 and FCC §15.205 (a)

TEST SETUP AND PROCEDURE

Below 30MHz

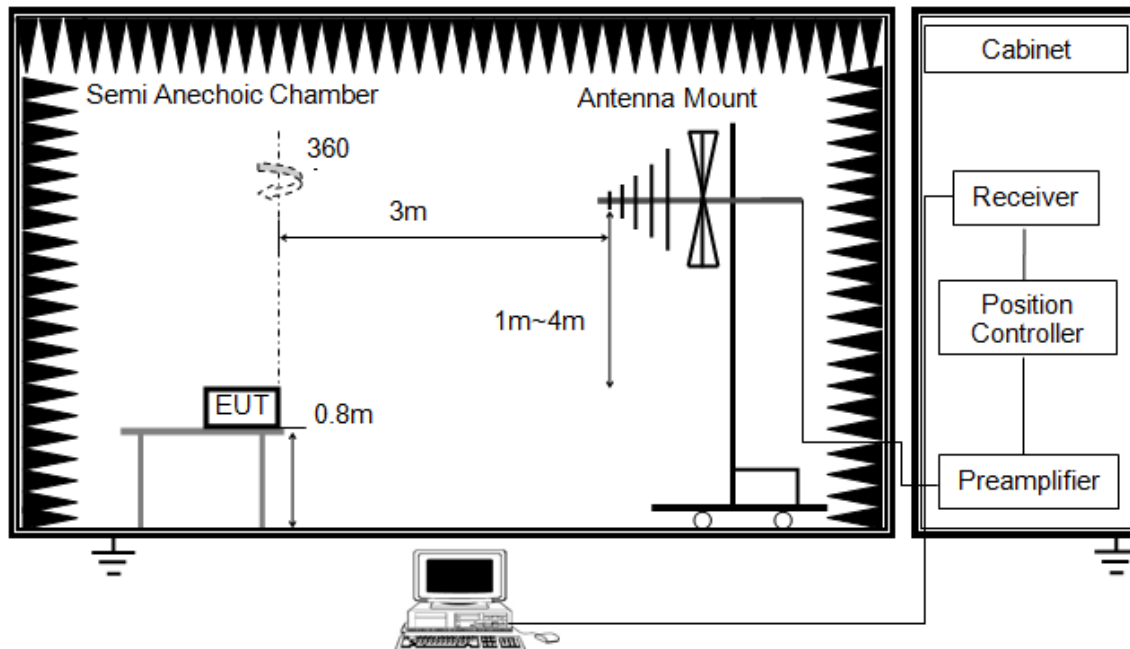


The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of 1 meter 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 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

Below 1G and above 30MHz

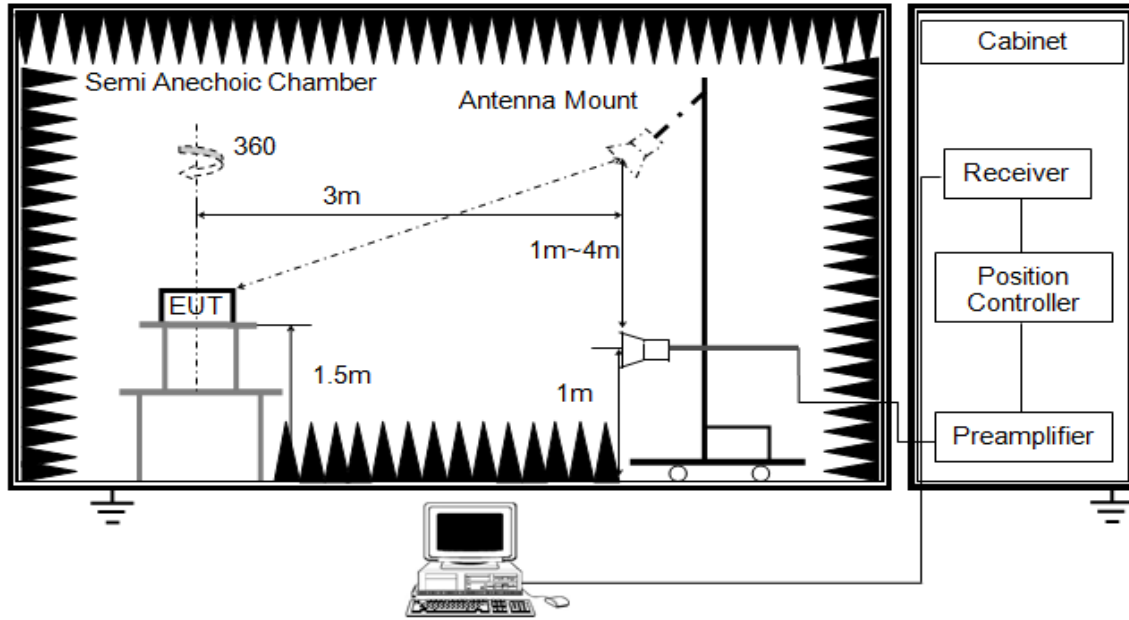


The setting of the spectrum analyser

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

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

Above 1G

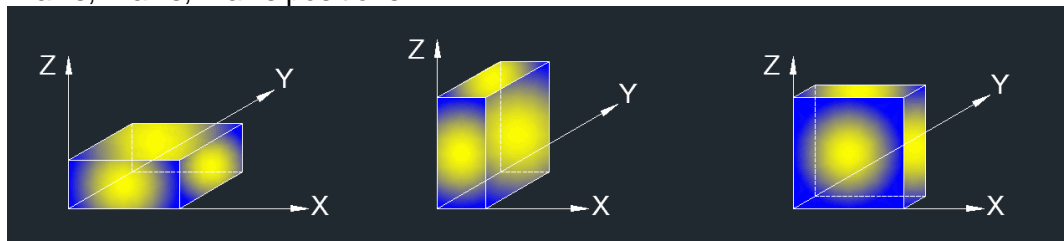


The setting of the spectrum analyser

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

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

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 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	24.2°C	Relative Humidity	61%
Atmosphere Pressure	101kPa	Test Voltage	DC 13.6V

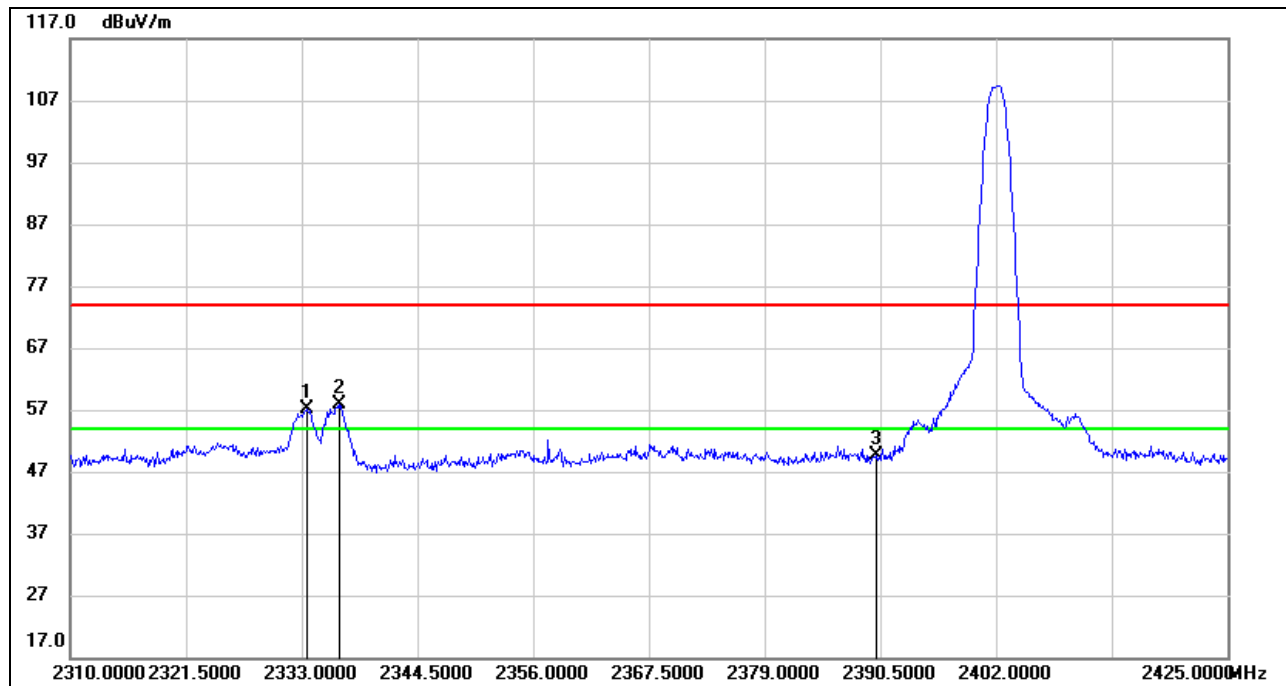
RESULTS



7.1. RESTRICTED BANDEDGE

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

PEAK

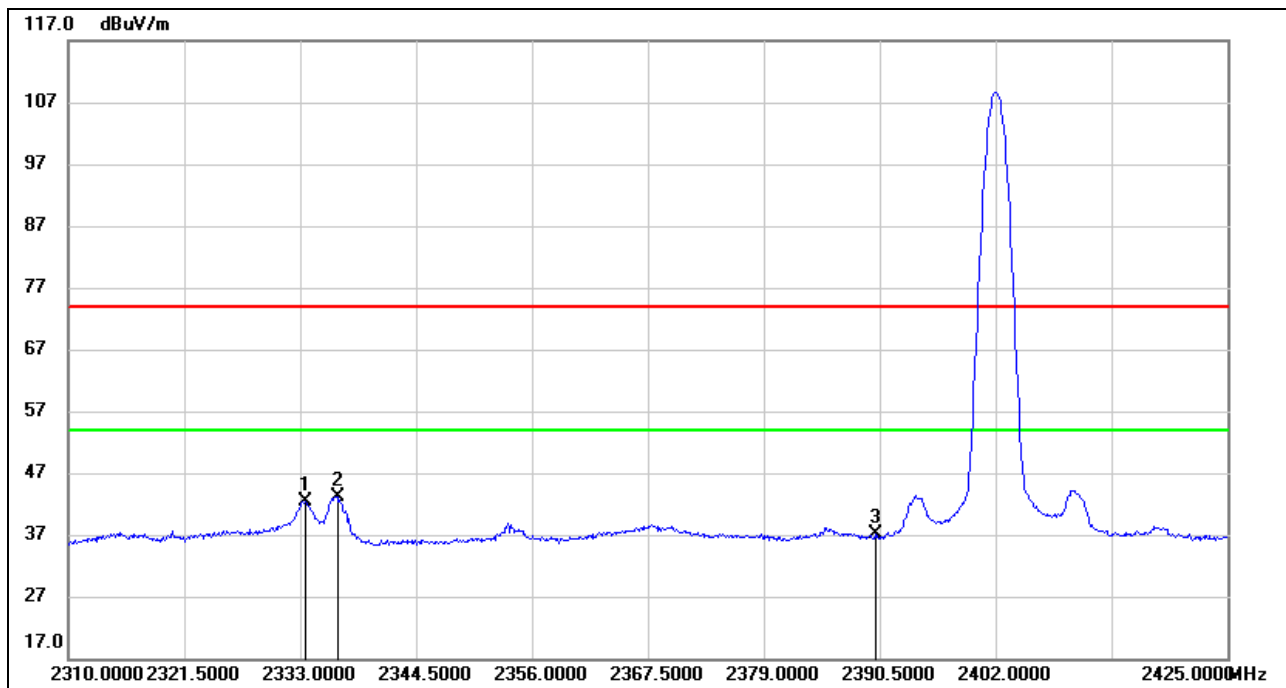


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2333.460	24.32	32.75	57.07	74.00	-16.93	peak
2	2336.680	25.06	32.77	57.83	74.00	-16.17	peak
3	2390.000	16.61	32.94	49.55	74.00	-24.45	peak

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



AVG



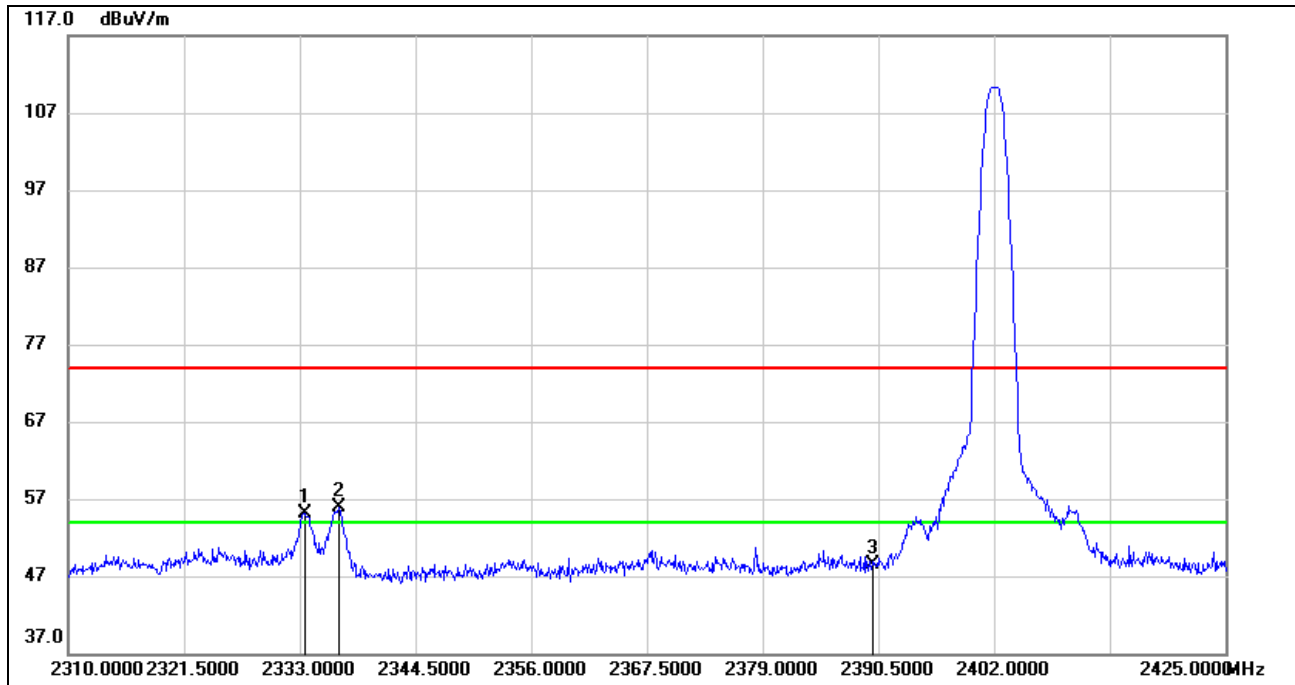
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2333.460	9.69	32.75	42.44	54.00	-11.56	AVG
2	2336.680	10.28	32.77	43.05	54.00	-10.95	AVG
3	2390.000	4.14	32.94	37.08	54.00	-16.92	AVG

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



RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

PEAK

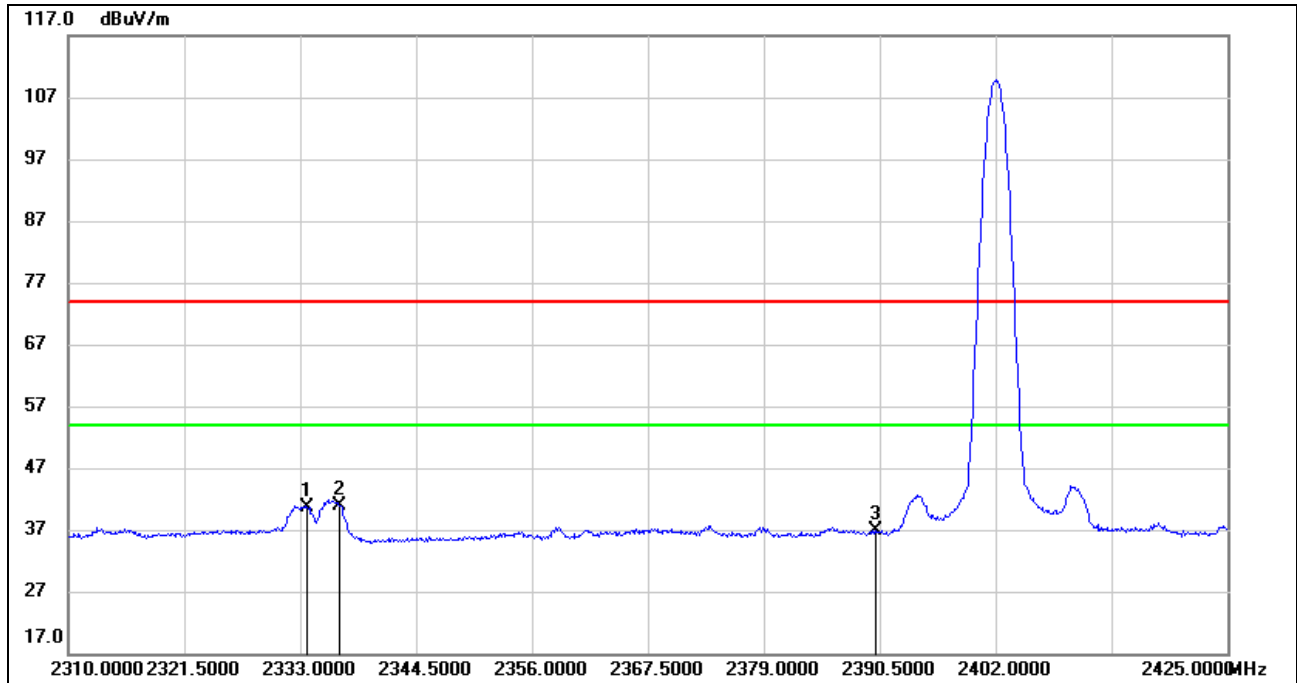


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2333.575	22.36	32.75	55.11	74.00	-18.89	peak
2	2336.910	23.11	32.77	55.88	74.00	-18.12	peak
3	2390.000	15.52	32.94	48.46	74.00	-25.54	peak

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



AVG



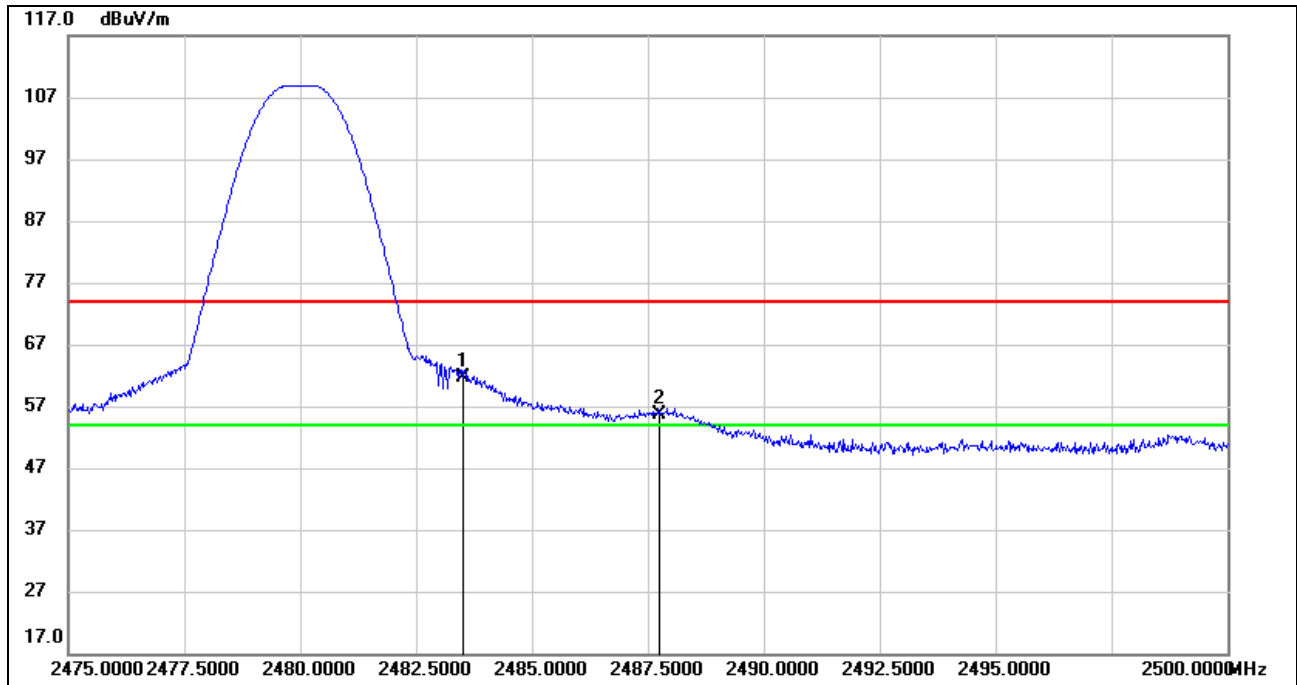
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2333.575	7.94	32.75	40.69	54.00	-13.31	AVG
2	2336.910	8.19	32.77	40.96	54.00	-13.04	AVG
3	2390.000	3.93	32.94	36.87	54.00	-17.13	AVG

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



RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

PEAK

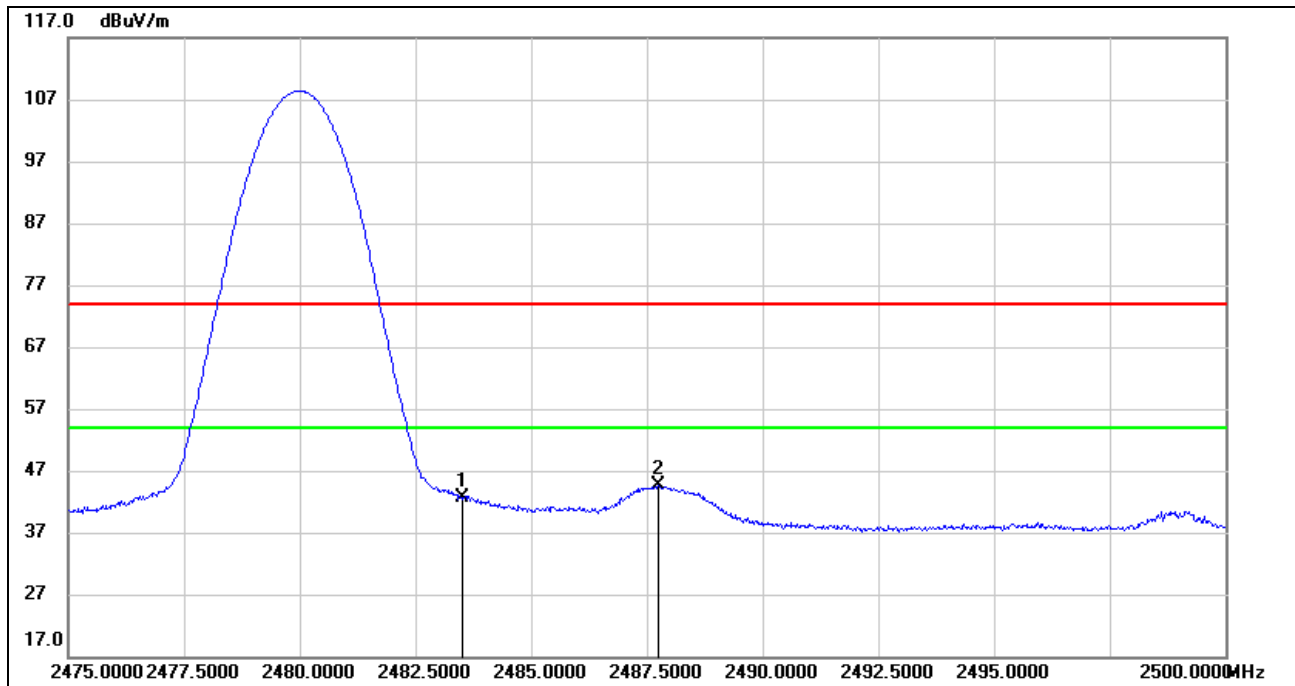


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.10	33.58	61.68	74.00	-12.32	peak
2	2487.750	22.03	33.61	55.64	74.00	-18.36	peak

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



AVG



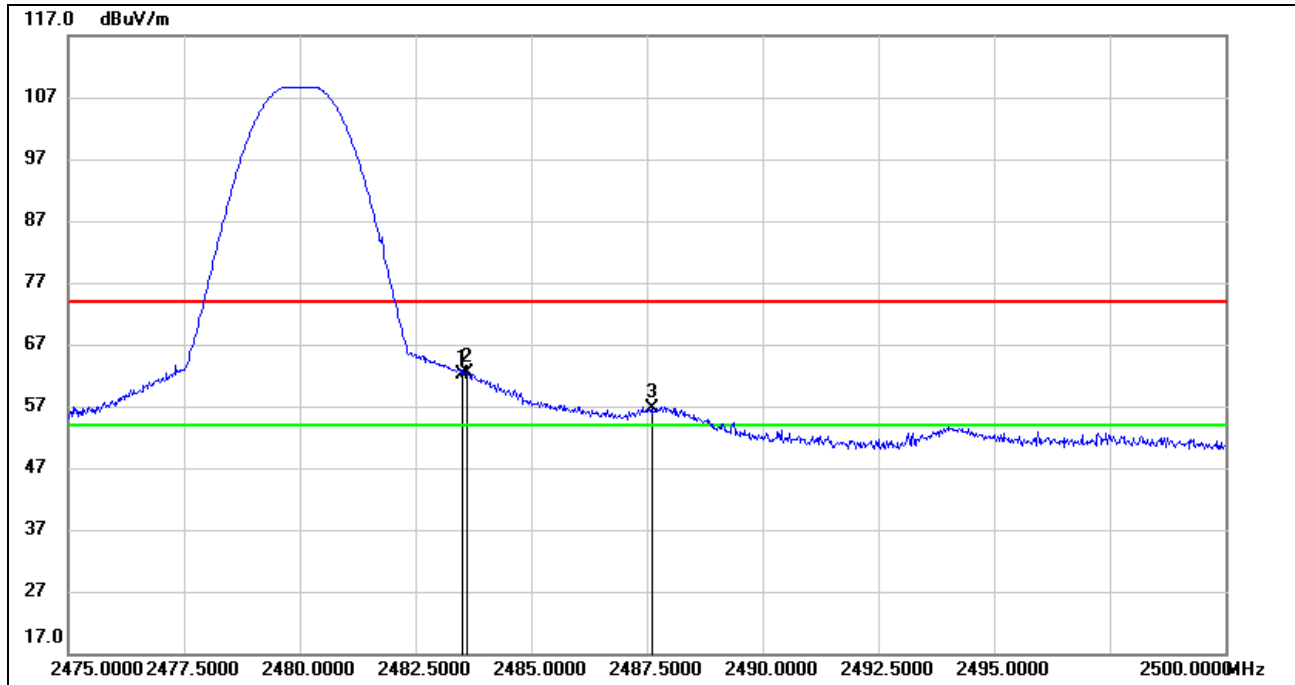
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	8.94	33.58	42.52	54.00	-11.48	AVG
2	2487.750	10.90	33.61	44.51	54.00	-9.49	AVG

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



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

PEAK

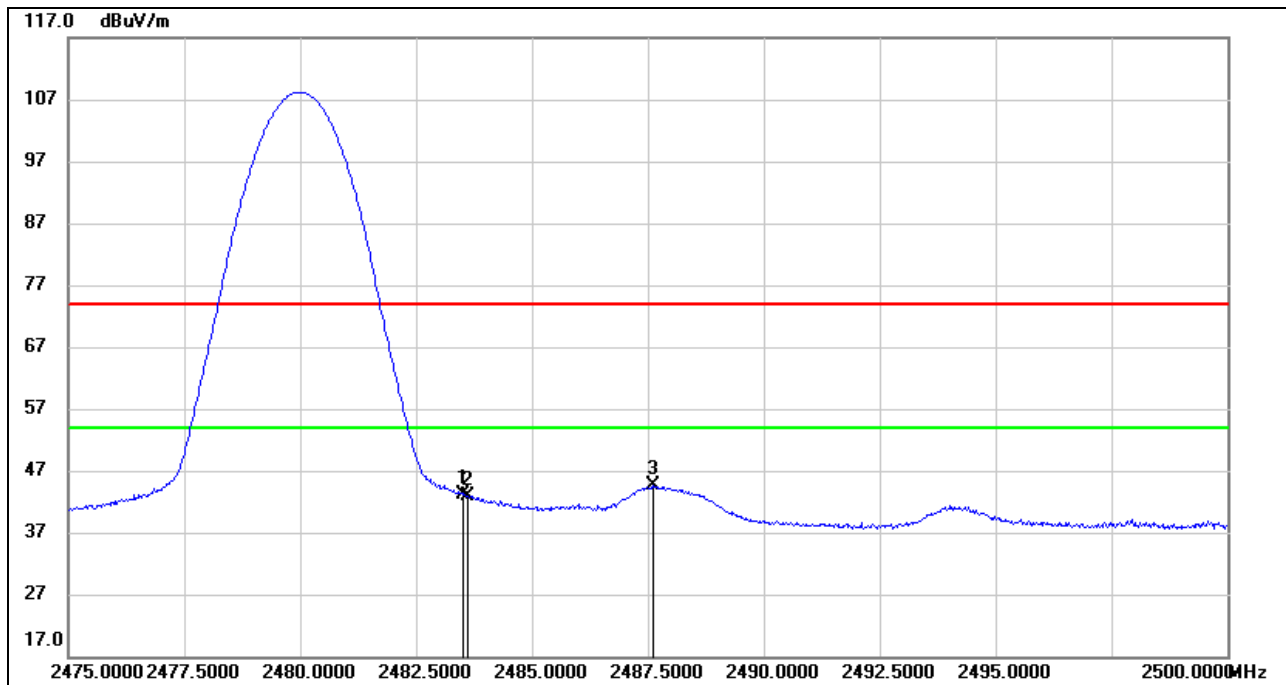


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	28.64	33.58	62.22	74.00	-11.78	peak
2	2483.625	28.83	33.58	62.41	74.00	-11.59	peak
3	2487.600	22.92	33.61	56.53	74.00	-17.47	peak

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



AVG

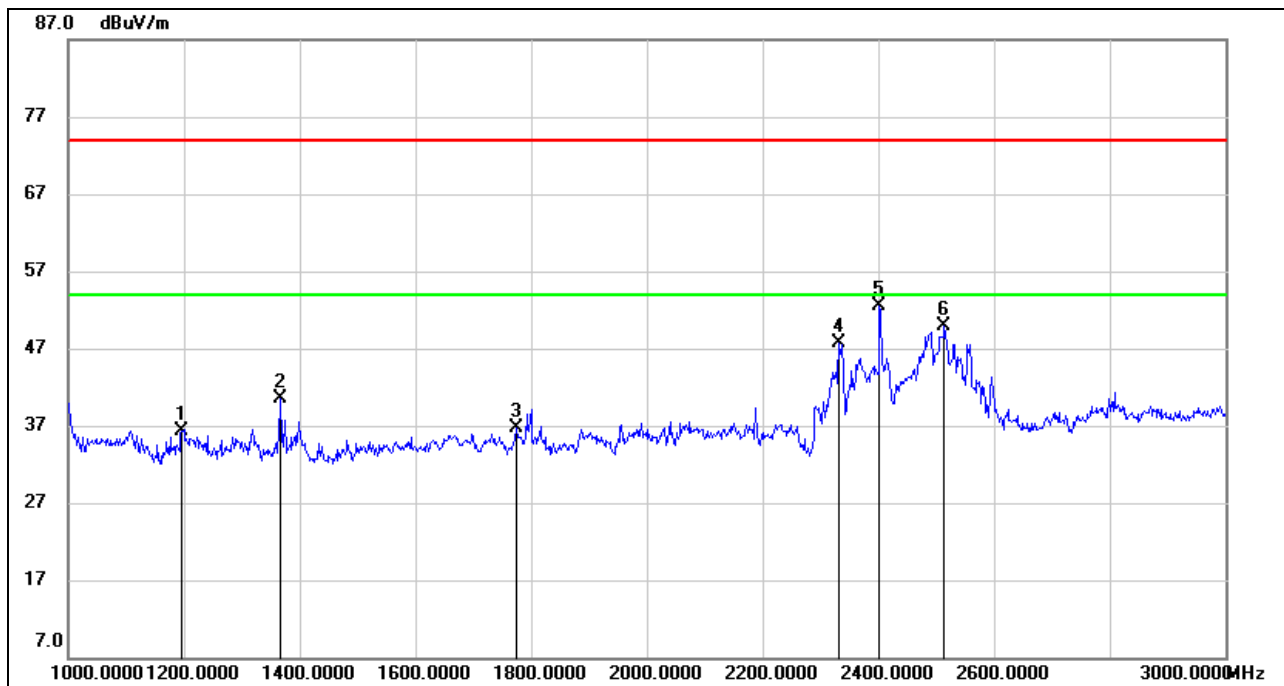


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	9.65	33.58	43.23	54.00	-10.77	AVG
2	2483.625	9.32	33.58	42.90	54.00	-11.10	AVG
3	2487.600	10.90	33.61	44.51	54.00	-9.49	AVG

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

7.2. SPURIOUS EMISSIONS (1~3GHz)

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	1196.000	49.31	-12.96	36.35	74.00	-37.65	peak
2	1366.000	53.19	-12.60	40.59	74.00	-33.41	peak
3	1774.000	46.98	-10.37	36.61	74.00	-37.39	peak
4	2332.000	55.91	-8.20	47.71	74.00	-26.29	peak
5	2402.000	60.37	-7.95	52.42	74.00	-21.58	peak
6	2514.000	57.13	-7.31	49.82	74.00	-24.18	peak

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

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

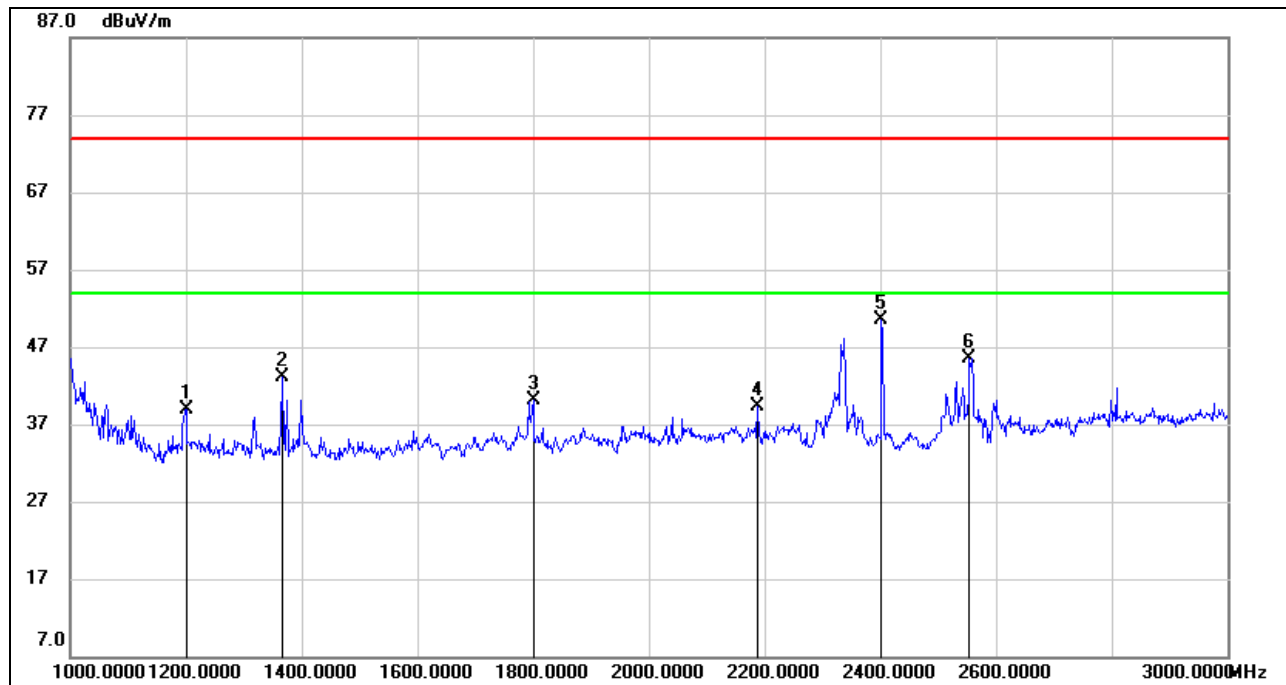
3. Peak: Peak detector.

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

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



HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

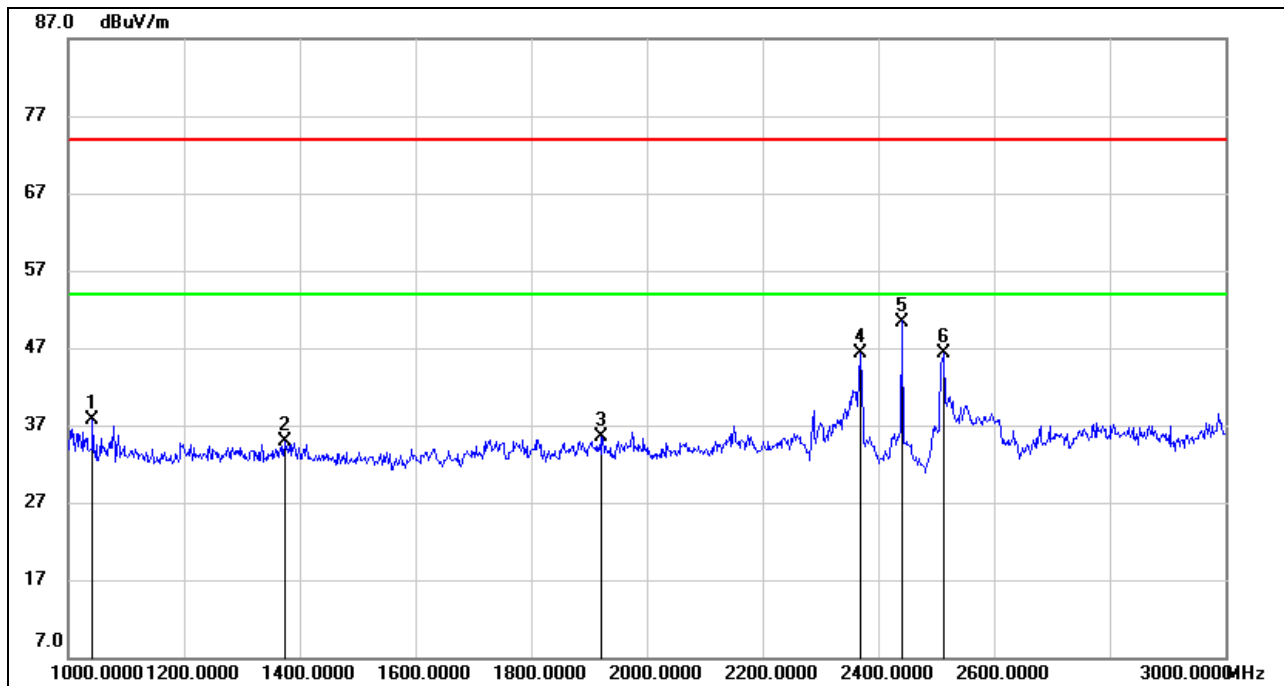


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1200.000	51.84	-12.92	38.92	74.00	-35.08	peak
2	1366.000	55.69	-12.60	43.09	74.00	-30.91	peak
3	1800.000	50.17	-10.11	40.06	74.00	-33.94	peak
4	2188.000	48.24	-8.86	39.38	74.00	-34.62	peak
5	2402.000	58.37	-7.95	50.42	74.00	-23.58	peak
6	2554.000	53.02	-7.53	45.49	74.00	-28.51	peak

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



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

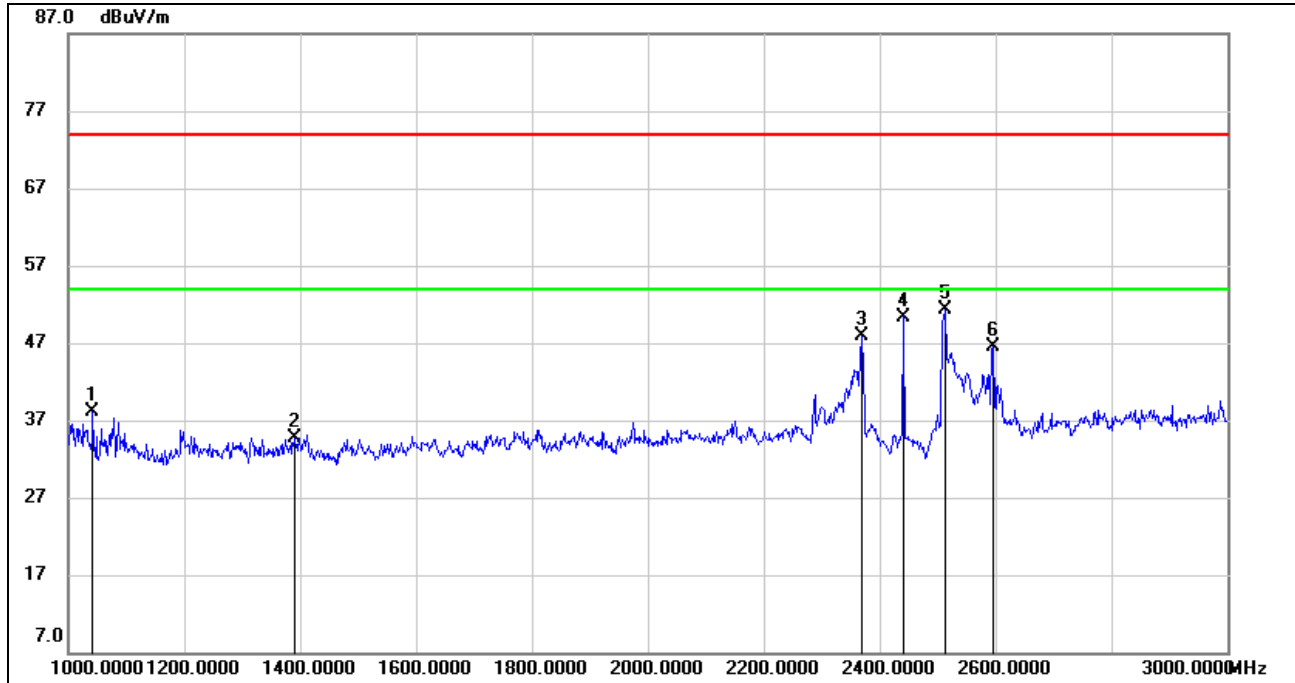


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1042.000	51.42	-13.81	37.61	74.00	-36.39	peak
2	1374.000	47.60	-12.61	34.99	74.00	-39.01	peak
3	1922.000	45.60	-10.11	35.49	74.00	-38.51	peak
4	2368.000	54.46	-8.07	46.39	74.00	-27.61	peak
5	2440.000	58.08	-7.68	50.40	74.00	-23.60	peak
6	2514.000	53.61	-7.31	46.30	74.00	-27.70	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 Band Reject Filter losses.
 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

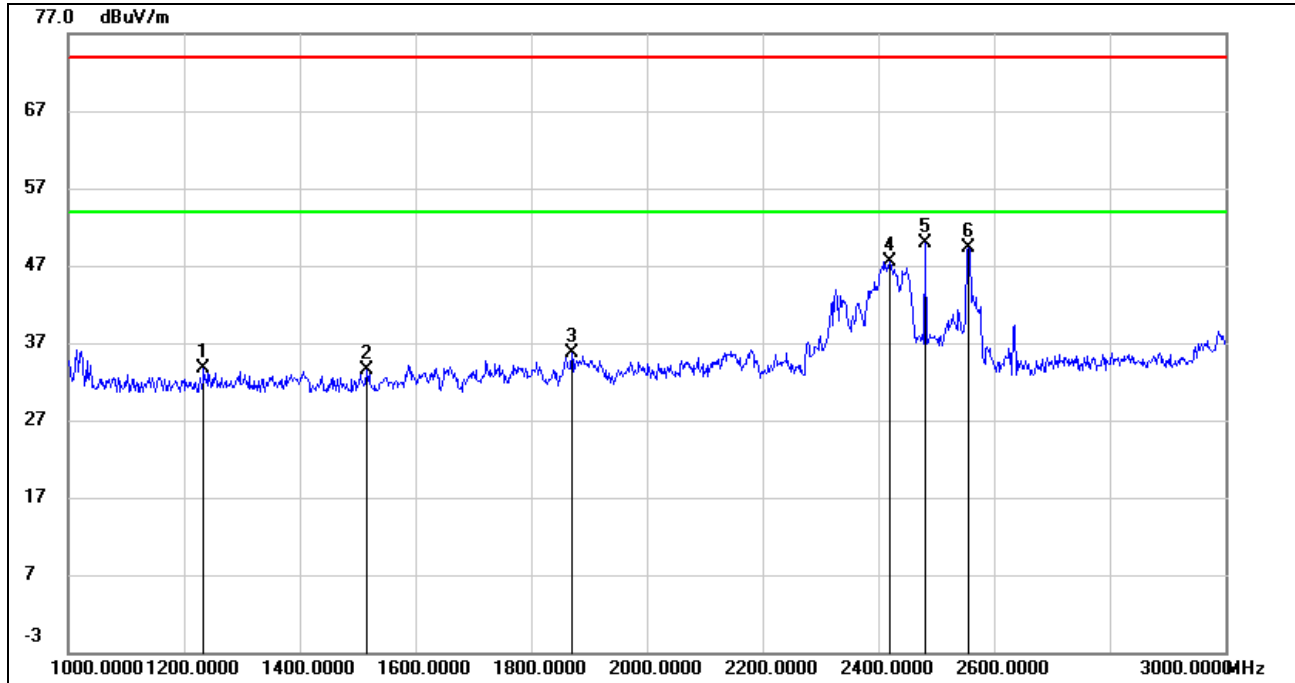


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1042.000	51.92	-13.81	38.11	74.00	-35.89	peak
2	1390.000	47.39	-12.61	34.78	74.00	-39.22	peak
3	2368.000	55.96	-8.07	47.89	74.00	-26.11	peak
4	2440.000	58.08	-7.68	50.40	74.00	-23.60	peak
5	2514.000	58.61	-7.31	51.30	74.00	-22.70	peak
6	2596.000	54.33	-7.73	46.60	74.00	-27.40	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 Band Reject Filter losses.
 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

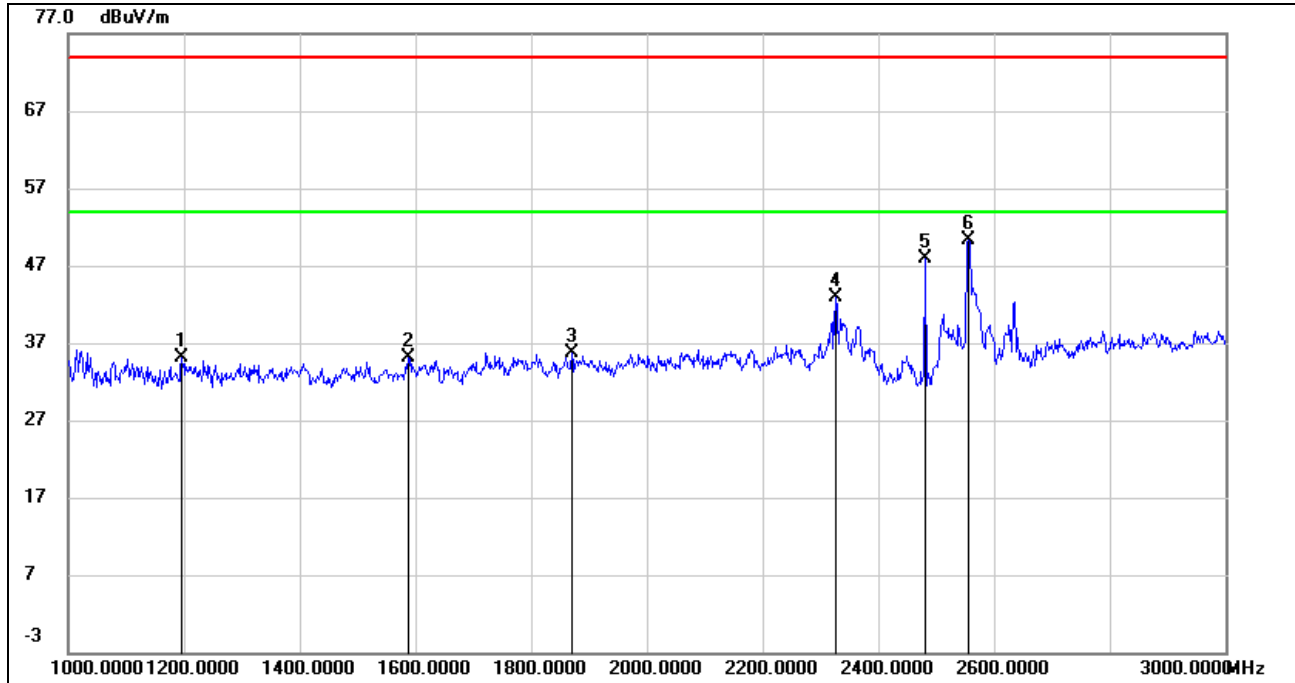


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1234.000	46.44	-12.80	33.64	74.00	-40.36	peak
2	1516.000	45.73	-12.30	33.43	74.00	-40.57	peak
3	1870.000	45.80	-10.13	35.67	74.00	-38.33	peak
4	2420.000	55.34	-7.81	47.53	74.00	-26.47	peak
5	2480.000	57.36	-7.39	49.97	74.00	-24.03	peak
6	2556.000	56.86	-7.53	49.33	74.00	-24.67	peak

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



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

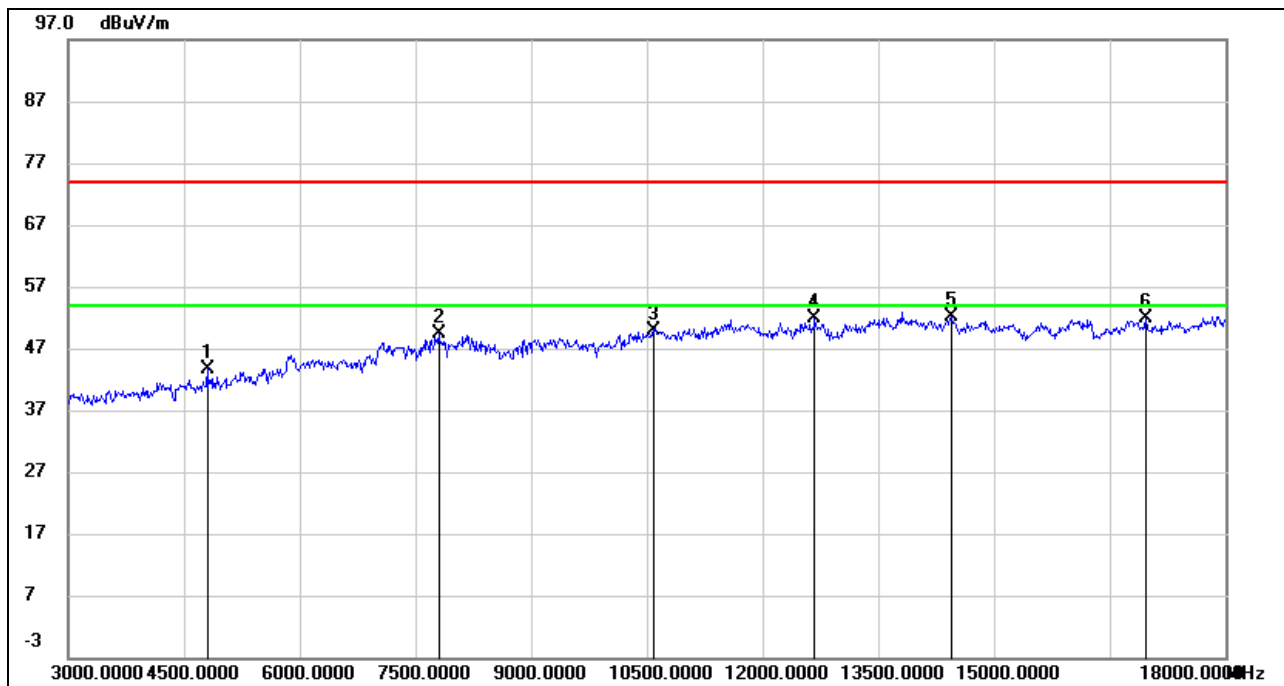


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1196.000	48.11	-12.96	35.15	74.00	-38.85	peak
2	1588.000	46.89	-11.71	35.18	74.00	-38.82	peak
3	1870.000	45.80	-10.13	35.67	74.00	-38.33	peak
4	2326.000	51.11	-8.21	42.90	74.00	-31.10	peak
5	2480.000	55.36	-7.39	47.97	74.00	-26.03	peak
6	2556.000	57.86	-7.53	50.33	74.00	-23.67	peak

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

8.3.SPURIOUS EMISSIONS (3~18GHz)

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

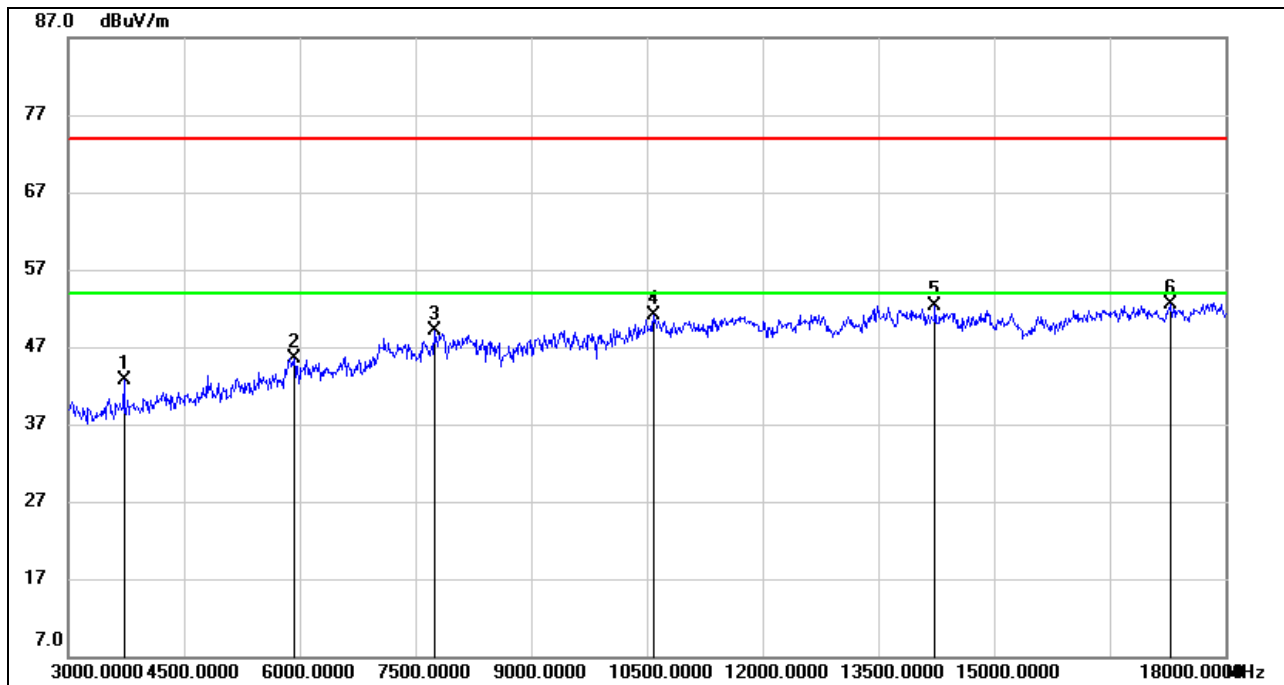


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	43.89	-0.14	43.75	74.00	-30.25	peak
2	7800.000	39.98	9.41	49.39	74.00	-24.61	peak
3	10590.000	36.95	12.83	49.78	74.00	-24.22	peak
4	12675.000	37.19	14.61	51.80	74.00	-22.20	peak
5	14445.000	35.35	16.66	52.01	74.00	-21.99	peak
6	16965.000	31.08	20.68	51.76	74.00	-22.24	peak

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



HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

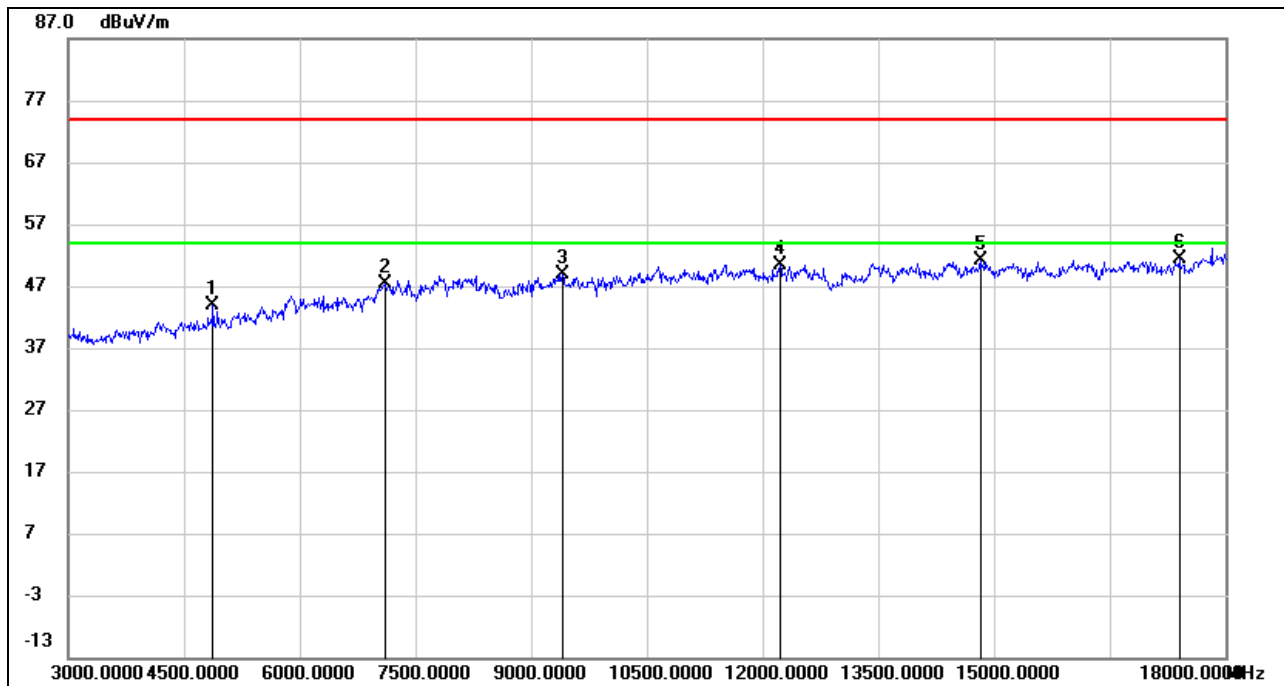


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3720.000	45.28	-2.67	42.61	74.00	-31.39	peak
2	5925.000	40.33	5.13	45.46	74.00	-28.54	peak
3	7740.000	40.56	8.53	49.09	74.00	-24.91	peak
4	10590.000	38.31	12.83	51.14	74.00	-22.86	peak
5	14235.000	35.58	16.76	52.34	74.00	-21.66	peak
6	17295.000	30.55	22.01	52.56	74.00	-21.44	peak

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



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

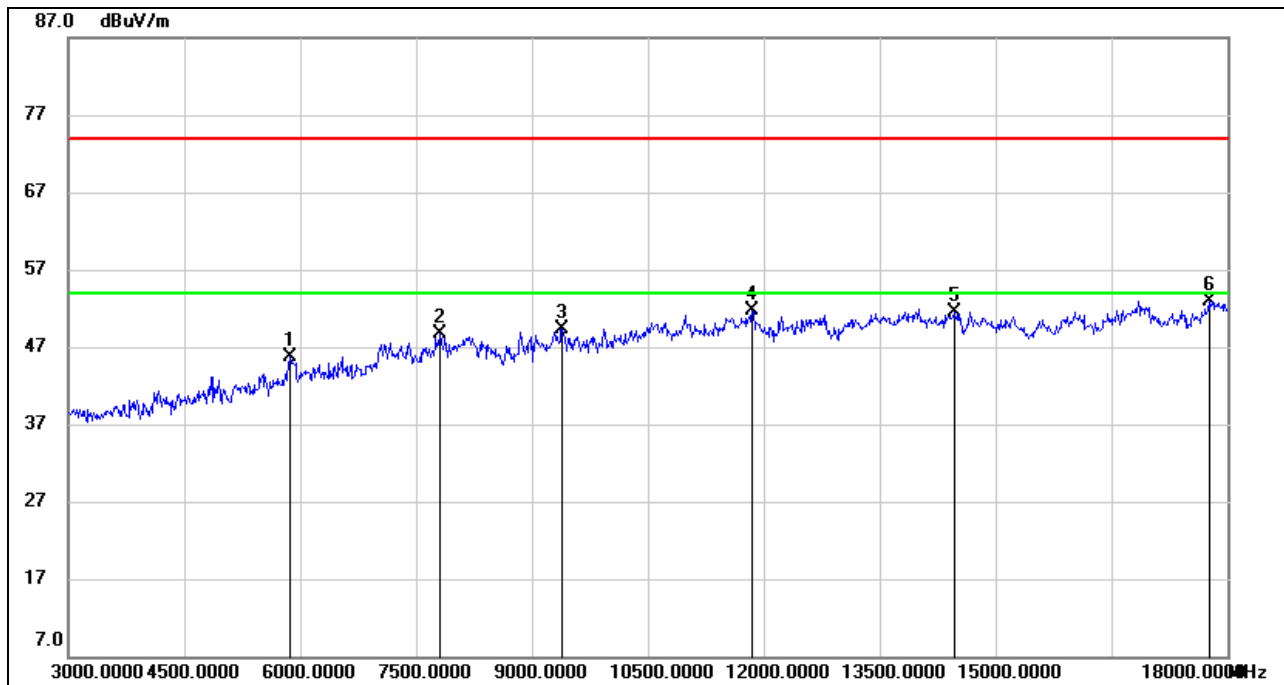


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	43.68	0.10	43.78	74.00	-30.22	peak
2	7110.000	40.30	7.12	47.42	74.00	-26.58	peak
3	9405.000	38.16	10.62	48.78	74.00	-25.22	peak
4	12225.000	35.79	14.70	50.49	74.00	-23.51	peak
5	14820.000	35.15	15.98	51.13	74.00	-22.87	peak
6	17400.000	29.73	21.65	51.38	74.00	-22.62	peak

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

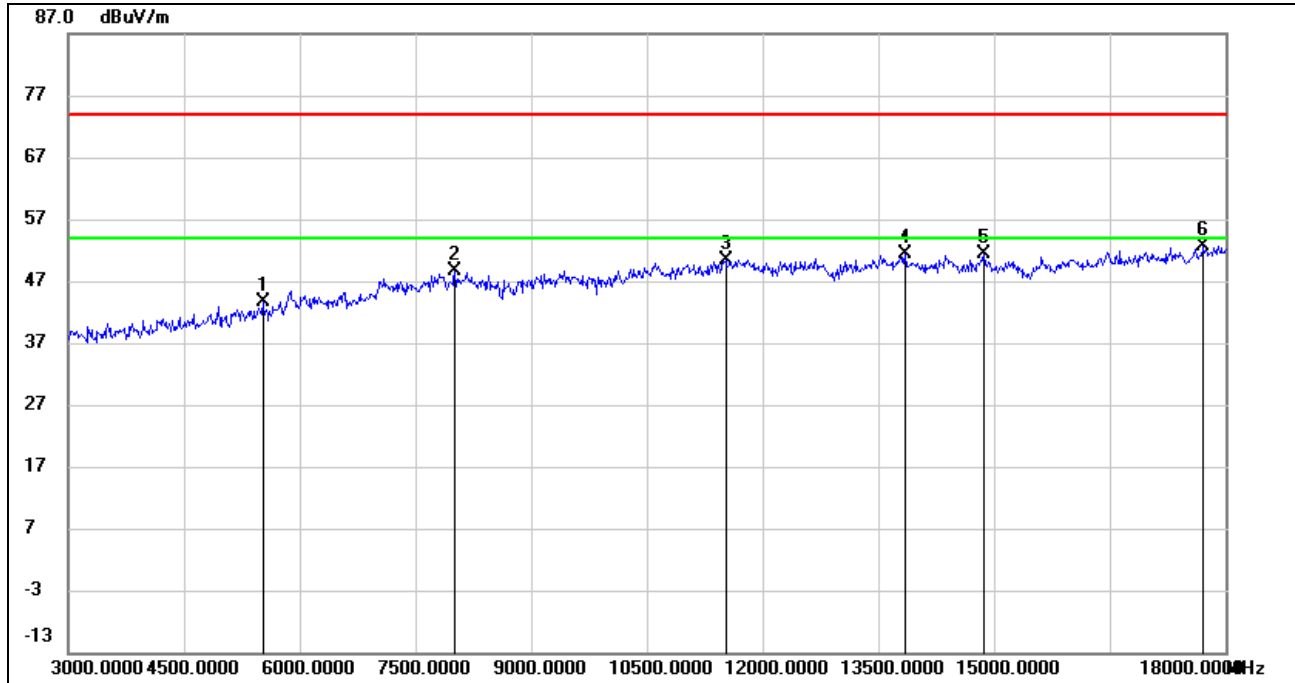


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5865.000	40.90	4.80	45.70	74.00	-28.30	peak
2	7815.000	39.36	9.31	48.67	74.00	-25.33	peak
3	9390.000	38.82	10.57	49.39	74.00	-24.61	peak
4	11850.000	37.36	14.32	51.68	74.00	-22.32	peak
5	14460.000	34.86	16.65	51.51	74.00	-22.49	peak
6	17760.000	29.94	23.01	52.95	74.00	-21.05	peak

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



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

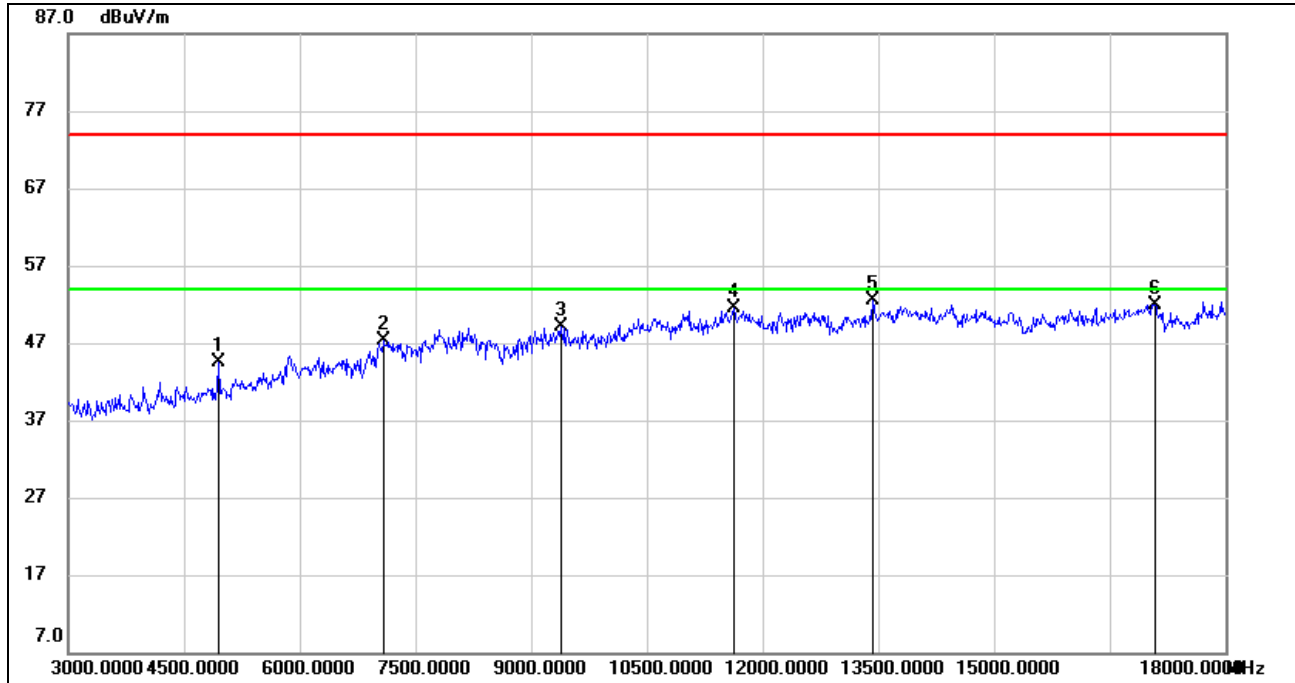


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5520.000	40.55	2.97	43.52	74.00	-30.48	peak
2	8010.000	40.07	8.52	48.59	74.00	-25.41	peak
3	11520.000	35.90	14.46	50.36	74.00	-23.64	peak
4	13845.000	34.05	17.22	51.27	74.00	-22.73	peak
5	14865.000	35.48	15.99	51.47	74.00	-22.53	peak
6	17715.000	30.01	22.65	52.66	74.00	-21.34	peak

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



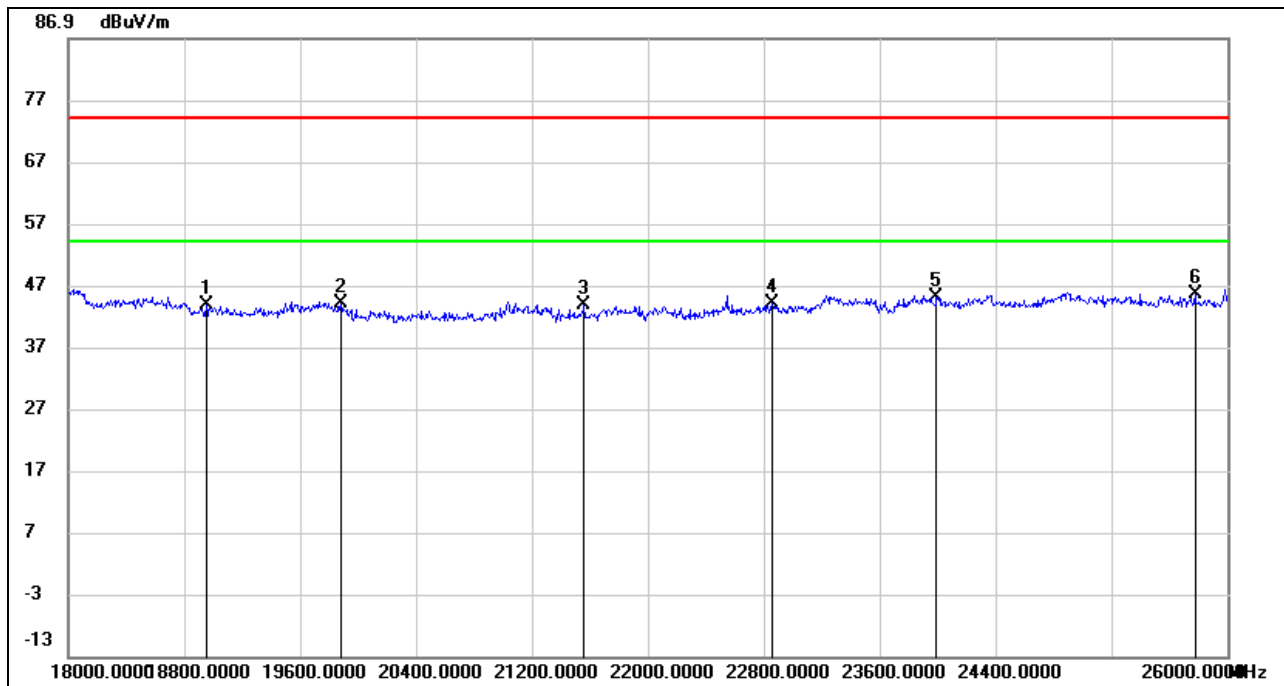
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	44.13	0.40	44.53	74.00	-29.47	peak
2	7080.000	40.16	7.07	47.23	74.00	-26.77	peak
3	9390.000	38.52	10.57	49.09	74.00	-24.91	peak
4	11625.000	37.31	14.22	51.53	74.00	-22.47	peak
5	13425.000	36.26	16.31	52.57	74.00	-21.43	peak
6	17085.000	30.87	21.01	51.88	74.00	-22.12	peak

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



7.4. SPURIOUS EMISSIONS 18G ~ 26GHz

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

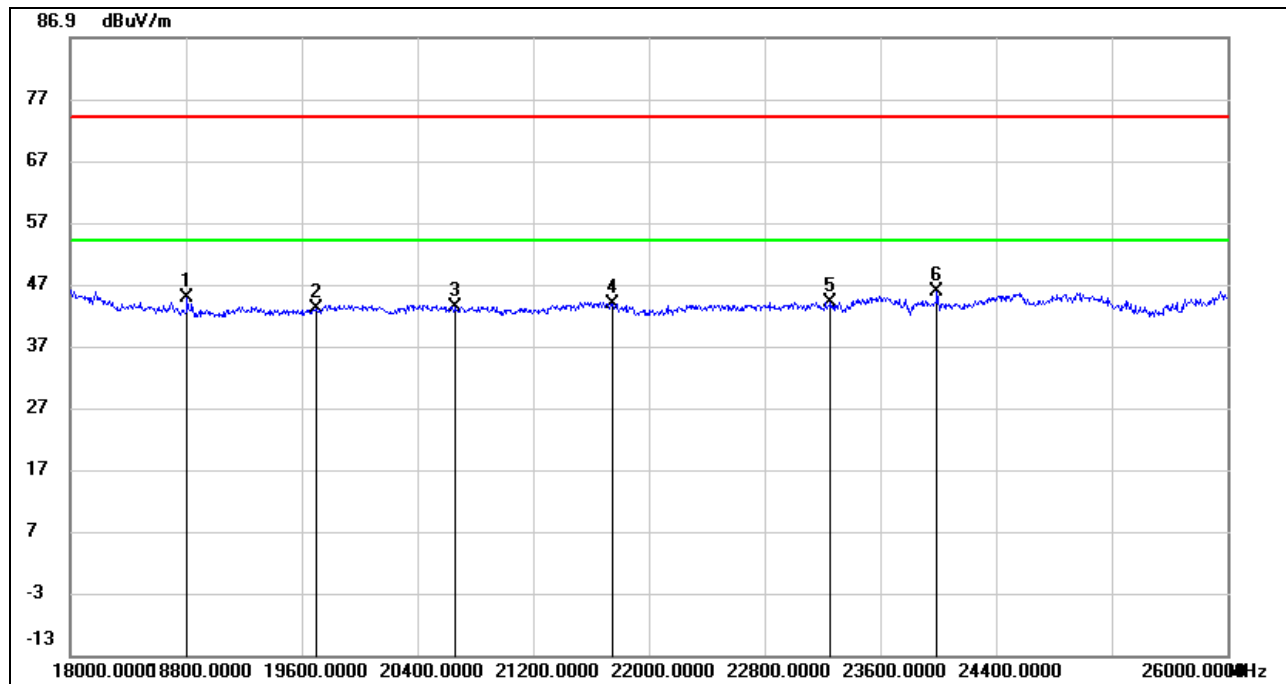


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18952.000	48.68	-4.89	43.79	74.00	-30.21	peak
2	19880.000	48.35	-4.36	43.99	74.00	-30.01	peak
3	21560.000	49.56	-5.77	43.79	74.00	-30.21	peak
4	22856.000	49.83	-5.68	44.15	74.00	-29.85	peak
5	23992.000	49.16	-4.03	45.13	74.00	-28.87	peak
6	25776.000	46.92	-1.45	45.47	74.00	-28.53	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.



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



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18808.000	49.55	-4.85	44.70	74.00	-29.30	peak
2	19696.000	47.57	-4.44	43.13	74.00	-30.87	peak
3	20664.000	48.43	-5.06	43.37	74.00	-30.63	peak
4	21744.000	49.65	-5.76	43.89	74.00	-30.11	peak
5	23256.000	49.38	-5.24	44.14	74.00	-29.86	peak
6	23992.000	49.72	-4.03	45.69	74.00	-28.31	peak

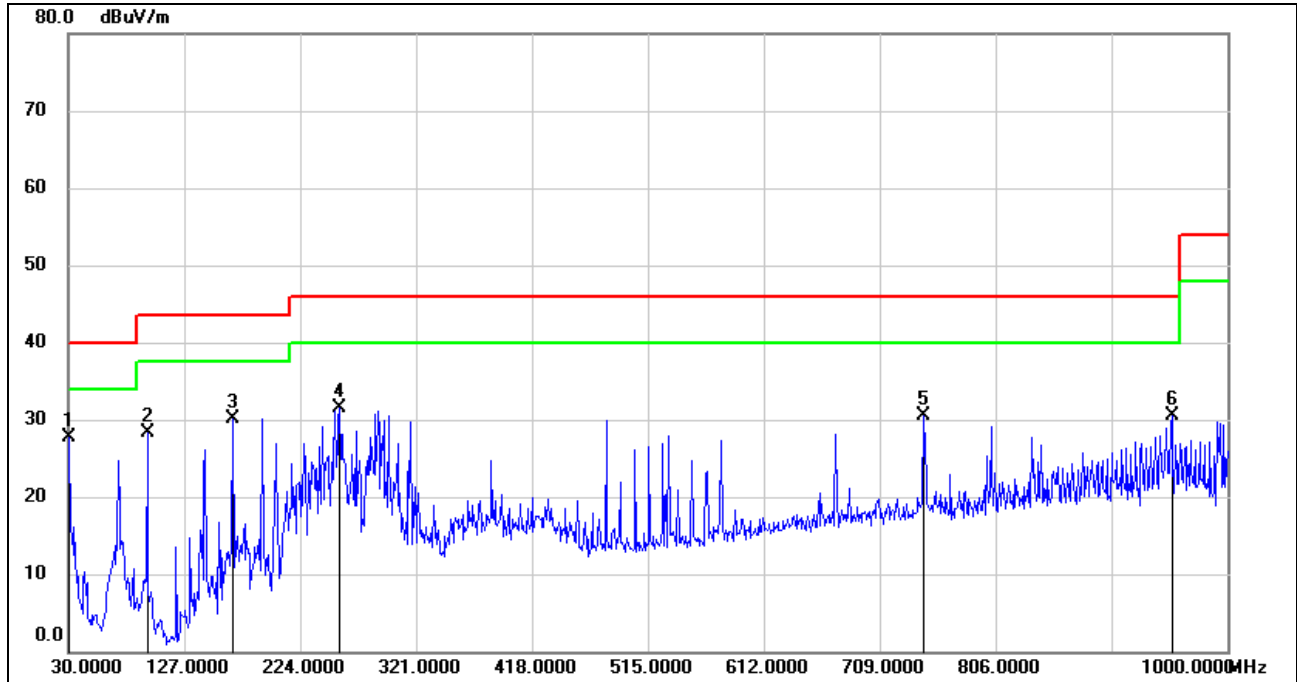
- Note: 1. Peak Result = Reading Level + Correct Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Peak: Peak detector.

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



7.5. SPURIOUS EMISSIONS 30M ~ 1 GHz

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

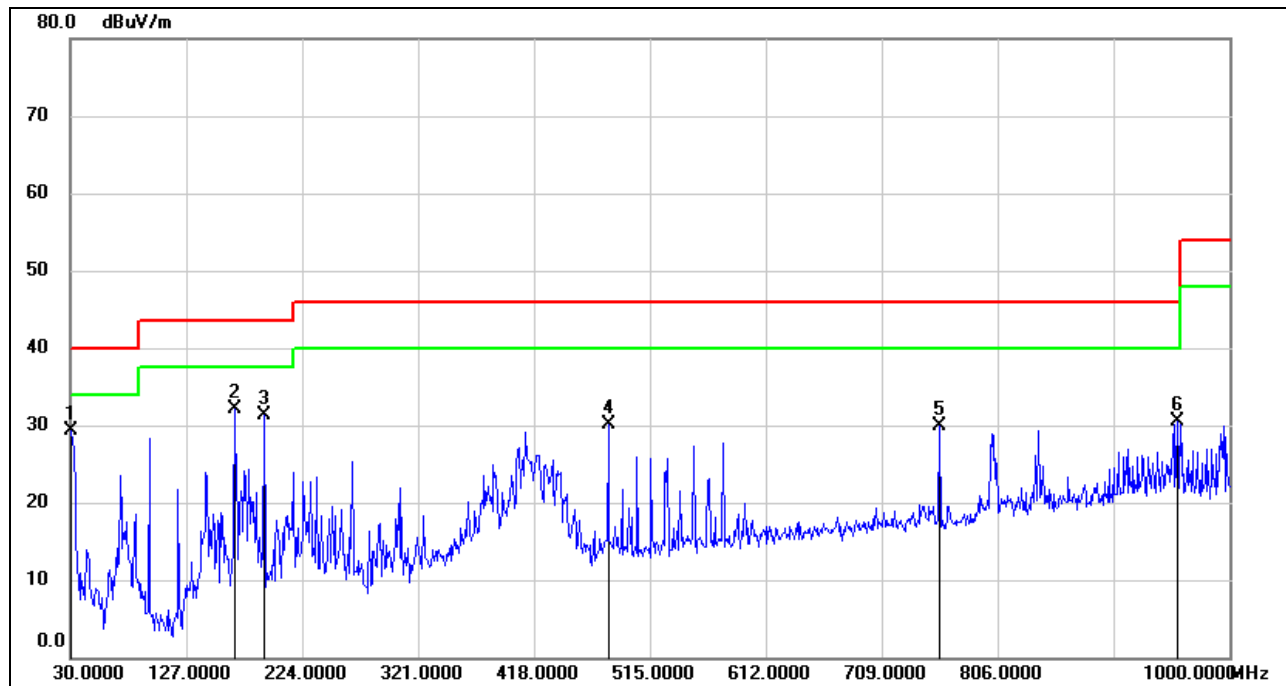


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	44.82	-17.19	27.63	40.00	-12.37	QP
2	95.9600	49.64	-21.43	28.21	43.50	-15.29	QP
3	167.7400	47.06	-17.04	30.02	43.50	-13.48	QP
4	256.9800	47.32	-15.90	31.42	46.00	-14.58	QP
5	745.8600	36.58	-6.09	30.49	46.00	-15.51	QP
6	953.4400	33.91	-3.37	30.54	46.00	-15.46	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 (WORST-CASE CONFIGURATION, LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9700	46.50	-17.19	29.31	40.00	-10.69	QP
2	167.7400	49.17	-17.04	32.13	43.50	-11.37	QP
3	191.9900	47.30	-15.99	31.31	43.50	-12.19	QP
4	480.0800	40.86	-10.84	30.02	46.00	-15.98	QP
5	757.5000	35.76	-5.81	29.95	46.00	-16.05	QP
6	956.3500	34.01	-3.42	30.59	46.00	-15.41	QP

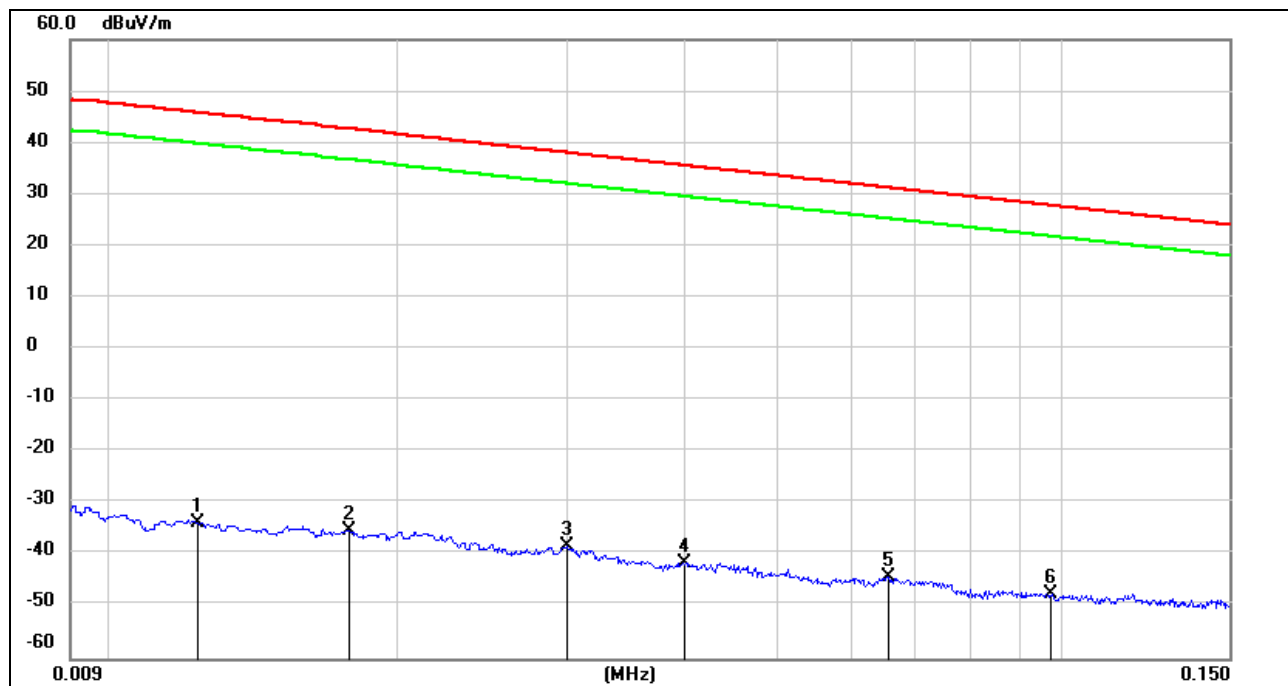
- Note: 1. Result Level = Read Level + Correct Factor.
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

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

7.6. SPURIOUS EMISSIONS BELOW 30M

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

9kHz~ 150kHz



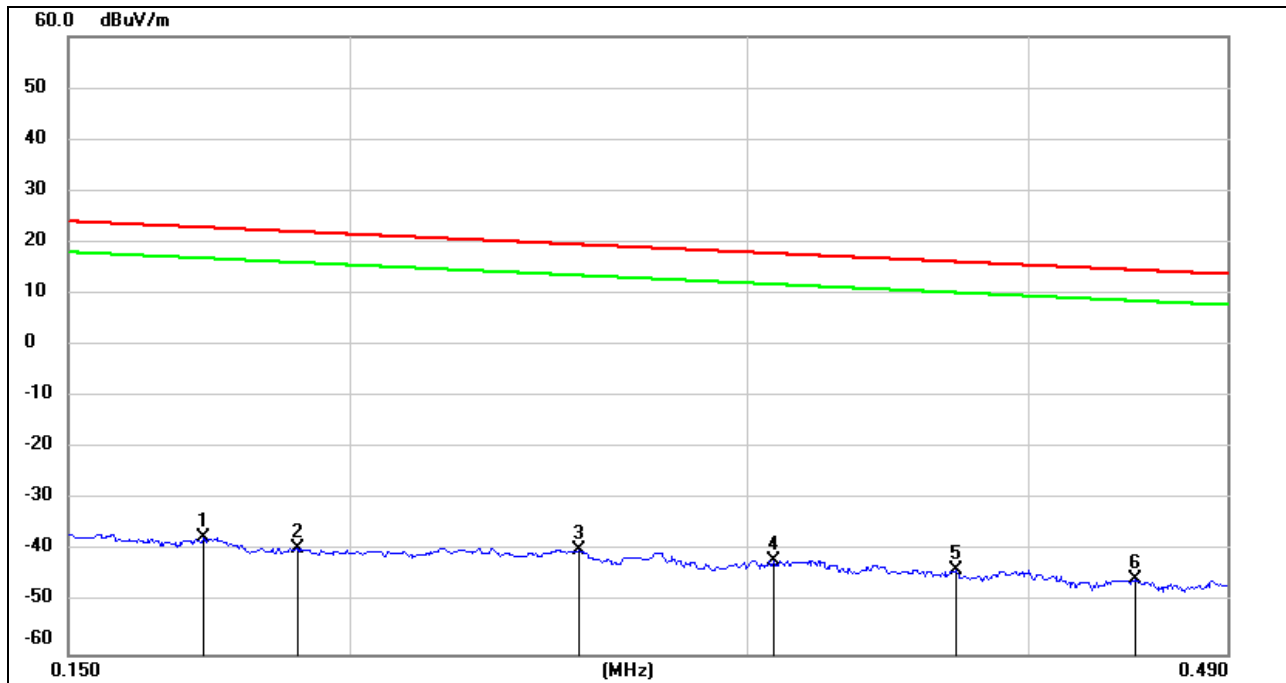
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0123	67.69	-101.39	-33.70	45.80	-79.50	peak
2	0.0177	66.07	-101.35	-35.28	42.64	-77.92	peak
3	0.0300	63.18	-101.39	-38.21	38.06	-76.27	peak
4	0.0400	59.98	-101.43	-41.45	35.56	-77.01	peak
5	0.0656	57.36	-101.55	-44.19	31.26	-75.45	peak
6	0.0974	54.27	-101.78	-47.51	27.83	-75.34	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.

150kHz ~ 490kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1720	64.19	-101.67	-37.48	22.90	-60.38	peak
2	0.1895	62.15	-101.70	-39.55	22.05	-61.60	peak
3	0.2530	62.09	-101.80	-39.71	19.54	-59.25	peak
4	0.3084	59.95	-101.86	-41.91	17.82	-59.73	peak
5	0.3714	58.28	-101.93	-43.65	16.20	-59.85	peak
6	0.4460	56.58	-102.01	-45.43	14.62	-60.05	peak

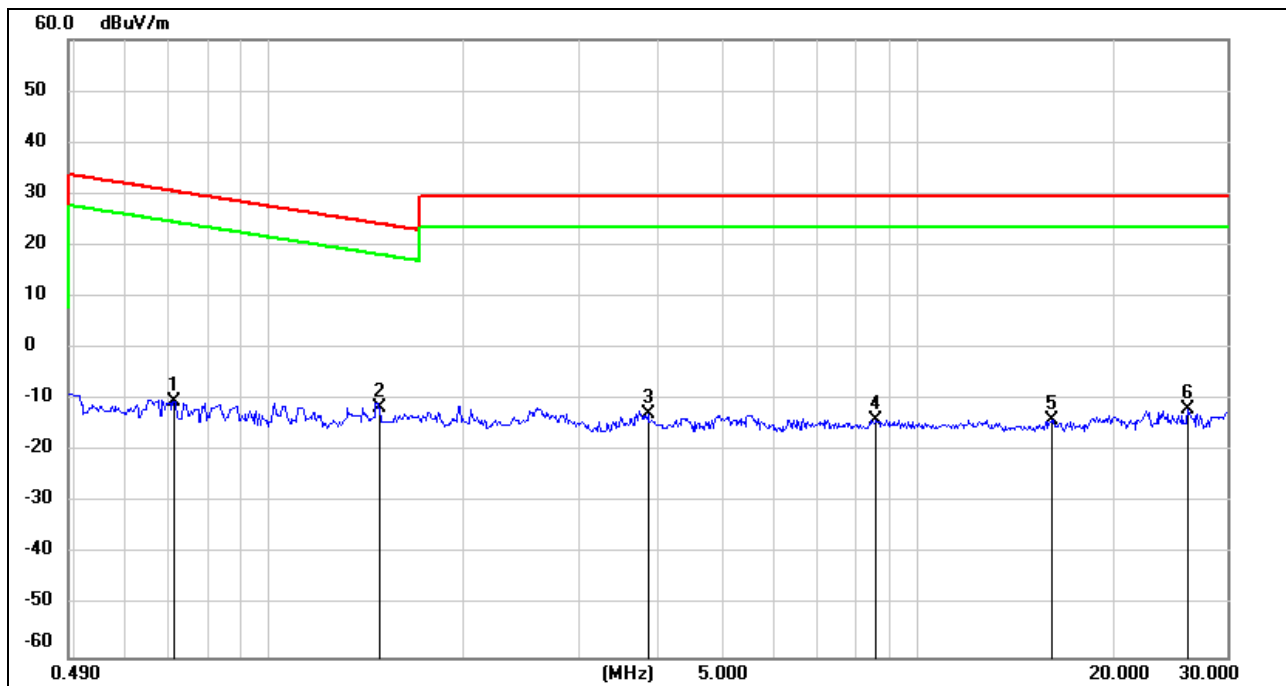
Note: 1. Measurement = Reading Level + Correct Factor.

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.



490kHz ~ 30MHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.7125	51.82	-62.12	-10.30	30.55	-40.85	peak
2	1.4818	50.61	-62.05	-11.44	24.19	-35.63	peak
3	3.8340	48.51	-61.38	-12.87	29.54	-42.41	peak
4	8.6348	47.10	-60.99	-13.89	29.54	-43.43	peak
5	16.1598	47.11	-60.97	-13.86	29.54	-43.40	peak
6	26.1047	48.48	-60.34	-11.86	29.54	-41.40	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 test modes have been tested, only the worst data record in the report.

END OF REPORT