CFR 47 FCC PART 15 SUBPART C

TEST REPORT

For

Drifter Master

MODEL NUMBER: SC-6632, SC-6692, SC-6693, SP-6653

REPORT NUMBER: 4791731318-1-RF-2

ISSUE DATE: April 16, 2025

FCC ID: 2ASK3SC-6692R

Prepared for

AMAX INDUSTRIAL GROUP CHINA CO.,LTD
OFFICE NO.3 10/F WITTY COMMERCIAL BUILDING 1A-1L TUNG CHOI STREET MONGKOK KOWLOON HONG KONG

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	April 11, 2025	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC/ISED Rules	Test Results
1	20dB Bandwidth and 99% Occupied Bandwidth	CFR 47 FCC §15.215 (c)	Pass
2	Radiated Emission	CFR 47 FCC §15.249 (a)(d)(e) CFR 47 FCC §15.205 and §15.209	Pass
3	Conducted Emission Test for AC Power Port	CFR 47 FCC §15.207	Pass
4	Antenna Requirement	CFR 47 FCC §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. Note 2: The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C, ISED RSS-210 ISSUE 11 > when < Simple Acceptance > decision rule is applied.			

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	AMAX INDUSTRIAL GROUP CHINA CO.,LTD
Address:	OFFICE NO.3 10/F WITTY COMMERCIAL BUILDING 1A-1L TUNG CHOI STREET MONGKOK KOWLOON HONG KONG

Manufacturer Information

Company Name:	AMAX INDUSTRIAL GROUP CHINA CO.,LTD
Address:	OFFICE NO.3 10/F WITTY COMMERCIAL BUILDING 1A-1L TUNG CHOI STREET MONGKOK KOWLOON HONG KONG

EUT Information

EUT Name:	Drifter Master
Model Number:	SC-6632, SC-6692, SC-6693, SP-6653
Model Difference:	Please see Clause 5.1
Sample Received Date:	March 26, 2025
Sample Status:	Normal
Sample ID:	8337354
Date of Tested:	March 28, 2025 to April 16, 2025

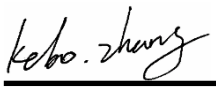
APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	**Pass**

Prepared By:

Daniel Zhang

Project Engineer

Checked By:



Kebo Zhang

Senior Project Engineer

Approved By:

Stephen Guo

Operations Manager

2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules. **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.

Note 1:
All tests measurement facilities use to collect the measurement data are located at Room 101, Building 2, Zhihui City Phase I, No.4, Information Road, Songshan Lake, Dongguan, Guangdong, 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 recognized 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
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Duty Cycle	±0.028%
DTS and 99% Occupied Bandwidth	±0.0196%
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:	Drifter Master
Model Number:	SC-6632, SC-6692,SC-6693, SP-6653
Model Difference:	Only the appearance color and model number are different

Frequency Range:	2407 MHz to 2479 MHz
Type of Modulation:	GFSK
Normal Test Voltage:	DC 3.7V

5.2. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2407	2	2425	3	2443	4	2451
5	2467	6	2471	7	2479		

5.3. MAXIMUM FIELD STRENGTH

Test Mode	Frequency (MHz)	Channel Number	Maximum Peak field strength (dBµV/m)	Maximum Average field strength (dBµV/m)
GFSK	2407 ~ 2479	1-7[7]	79.86	61.59

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
GFSK	CH 1(Low Channel), CH 3(MID Channel), CH 7(High Channel)	2407 MHz, 2443 MHz, 2479 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2407 MHz ~ 2479 MHz Band				
Test Software Version		/		
Modulation Type	Transmit Antenna Number	Test Channel		
		CH 1	CH 3	CH 7
GFSK	1	Default	Default	Default

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	Maximum Antenna Gain (dBi)
1	2407-2479	Wire Antenna	0.17

Test Mode	Transmit and Receive Mode	Description
GFSK	☒1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
Note: The value of the antenna gain was declared by customer		

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Specification
1	Adapter	UGREEN	CD143	Input: 100-240V~ 50/60Hz Output: 5Vdc, 2.1A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
/	/	/	/	/	/

ACCESSORY

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
1	USB Line	/	/	0.5m	/

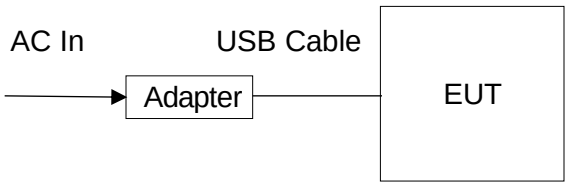
TEST SETUP

The EUT have the engineer mode inside.

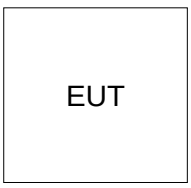
Note: All tests are operated using a new battery.

SETUP DIAGRAM FOR TEST

For AC Power Port Conducted Emission Test:



For the others test:



6. MEASURING EQUIPMENT AND SOFTWARE USED

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Sep.28, 2024	Sep.27, 2025
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	May.08, 2023	May.07, 2026
Preamplifier	HP	8447D	2944A09099	Sep.28, 2024	Sep.27, 2025
EMI Measurement Receiver	R&S	ESR26	101377	Sep.28, 2024	Sep.27, 2025
Horn Antenna	TDK	HRN-0118	130940	April 29, 2022	April 28, 2025
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Sep.28, 2024	Sep.27, 2025
Horn Antenna	Schwarzbeck	BBHA9170	697	June 30, 2024	June 29, 2027
Preamplifier	TDK	PA-02-2	TRS-307-00003	Sep.28, 2024	Sep.27, 2025
Preamplifier	TDK	PA-02-3	TRS-308-00002	Sep.28, 2024	Sep.27, 2025
Loop antenna	Schwarzbeck	1519B	00008	April 29, 2022	April 28, 2025
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Sep.28, 2024	Sep.27, 2025
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	Sep.28, 2024	Sep.27, 2025
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	Sep.28, 2024	Sep.27, 2025

Software			
Description	Manufacturer	Name	Version
Test Software for Radiated Emissions	Farad	EZ-EMC	Ver. UL-3A1

7. ANTENNA PORT TEST RESULTS

7.1. 20DB BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.249) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.215 (c)	20dB Bandwidth	for reporting purposes only	2400-2483.5

TEST PROCEDURE

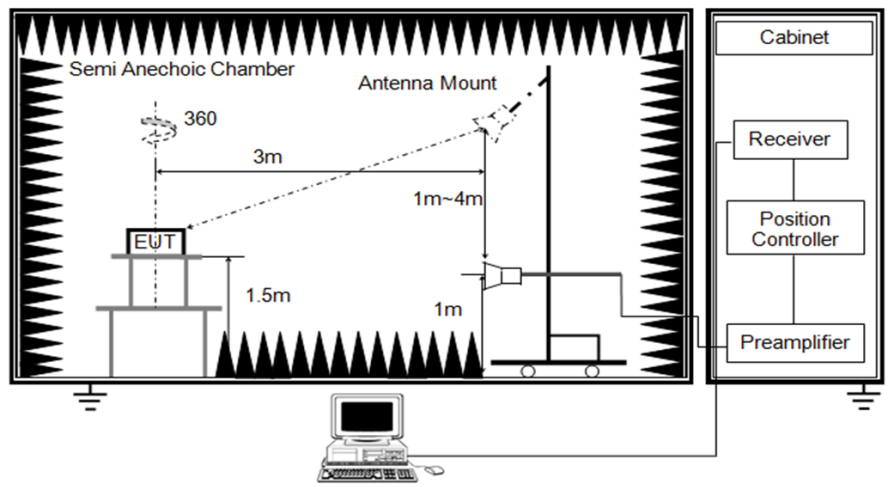
Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the occupied bandwidth
VBW	approximately 3×RBW
Trace	Max hold
Sweep	Auto couple

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 20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

Above 1 GHz



TEST ENVIRONMENT

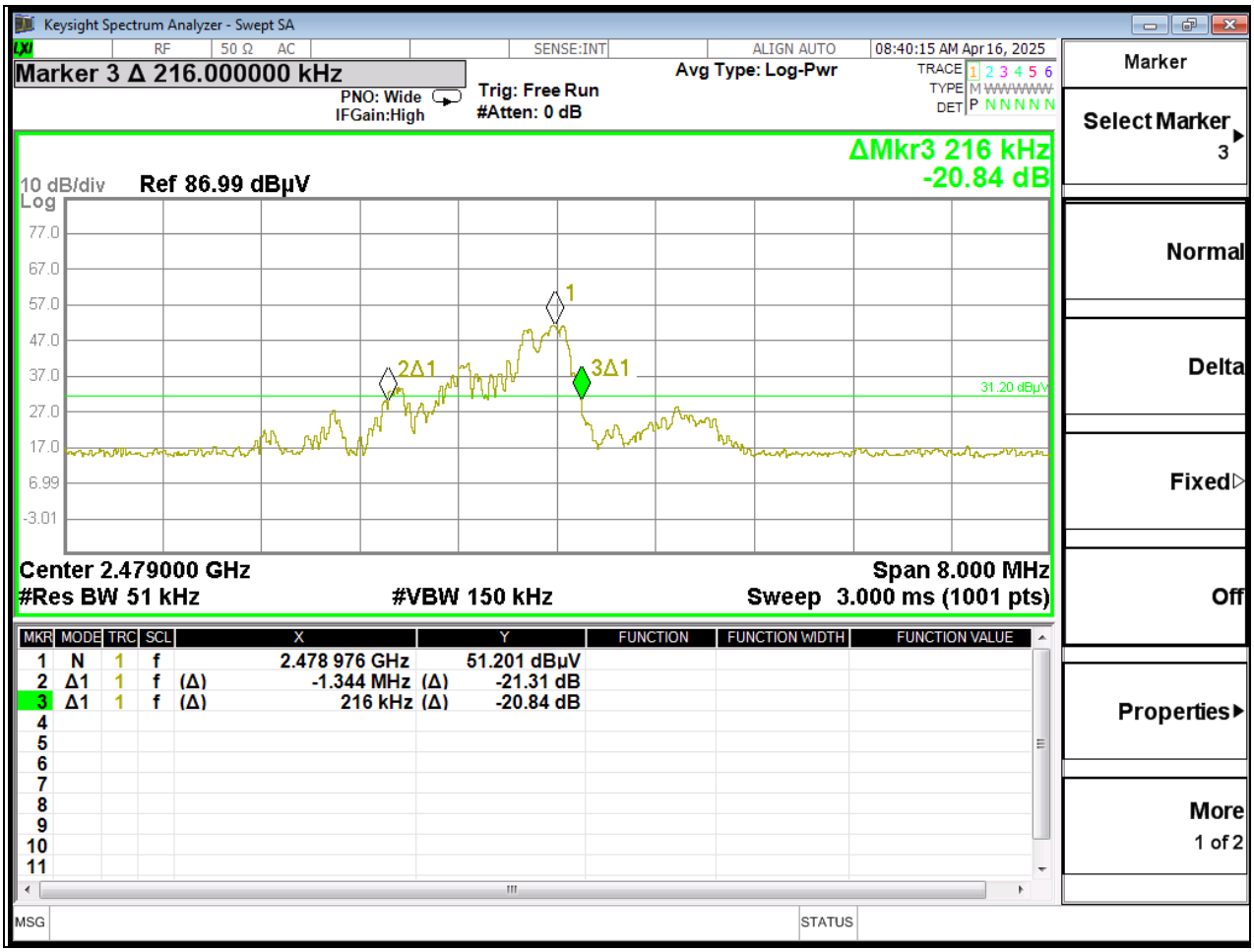
Temperature	21.2 ℃	Relative Humidity	58.4%
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.7 V

TEST RESULTS

Frequency (MHz)	20dB Bandwidth (MHz)	Result
2407	2.144	PASS

Frequency (MHz)	20dB Bandwidth (MHz)	Result
2443	2.080	PASS

Frequency (MHz)	20dB Bandwidth (MHz)	Result
2479	1.560	PASS



7.2. DUTY CYCLE

LIMITS

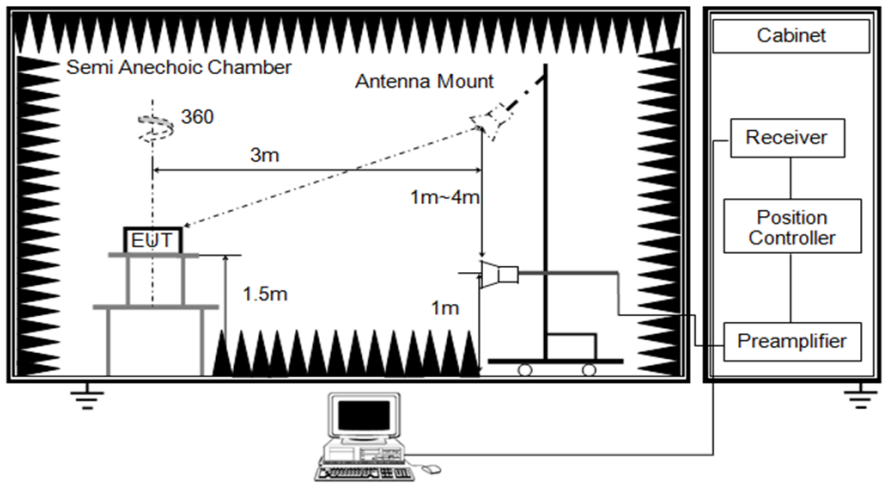
None; for reporting purposes only.

TEST PROCEDURE

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

TEST SETUP

Above 1 GHz



TEST ENVIRONMENT

Temperature	21.2℃	Relative Humidity	58.4%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7 V

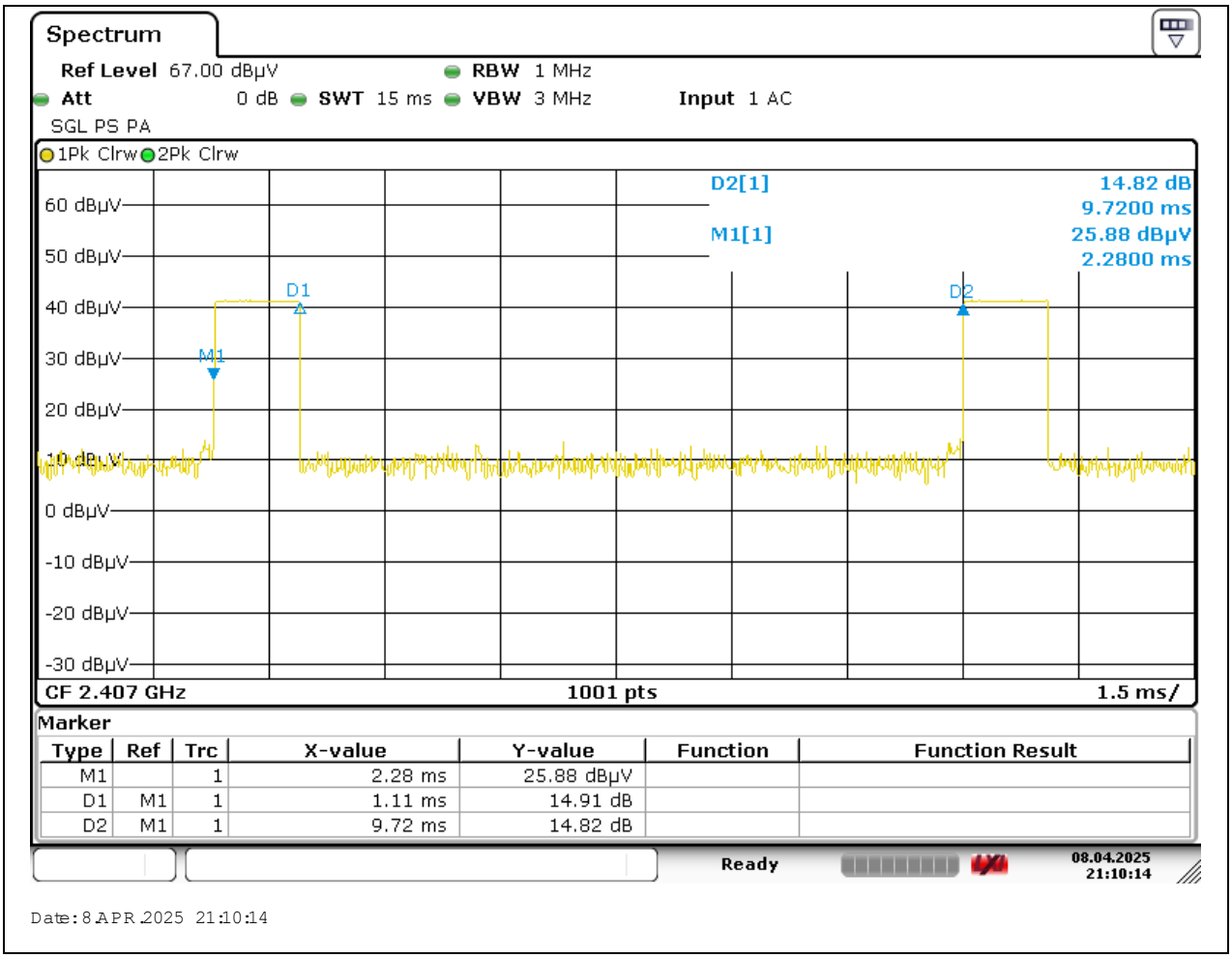
TEST RESULTS

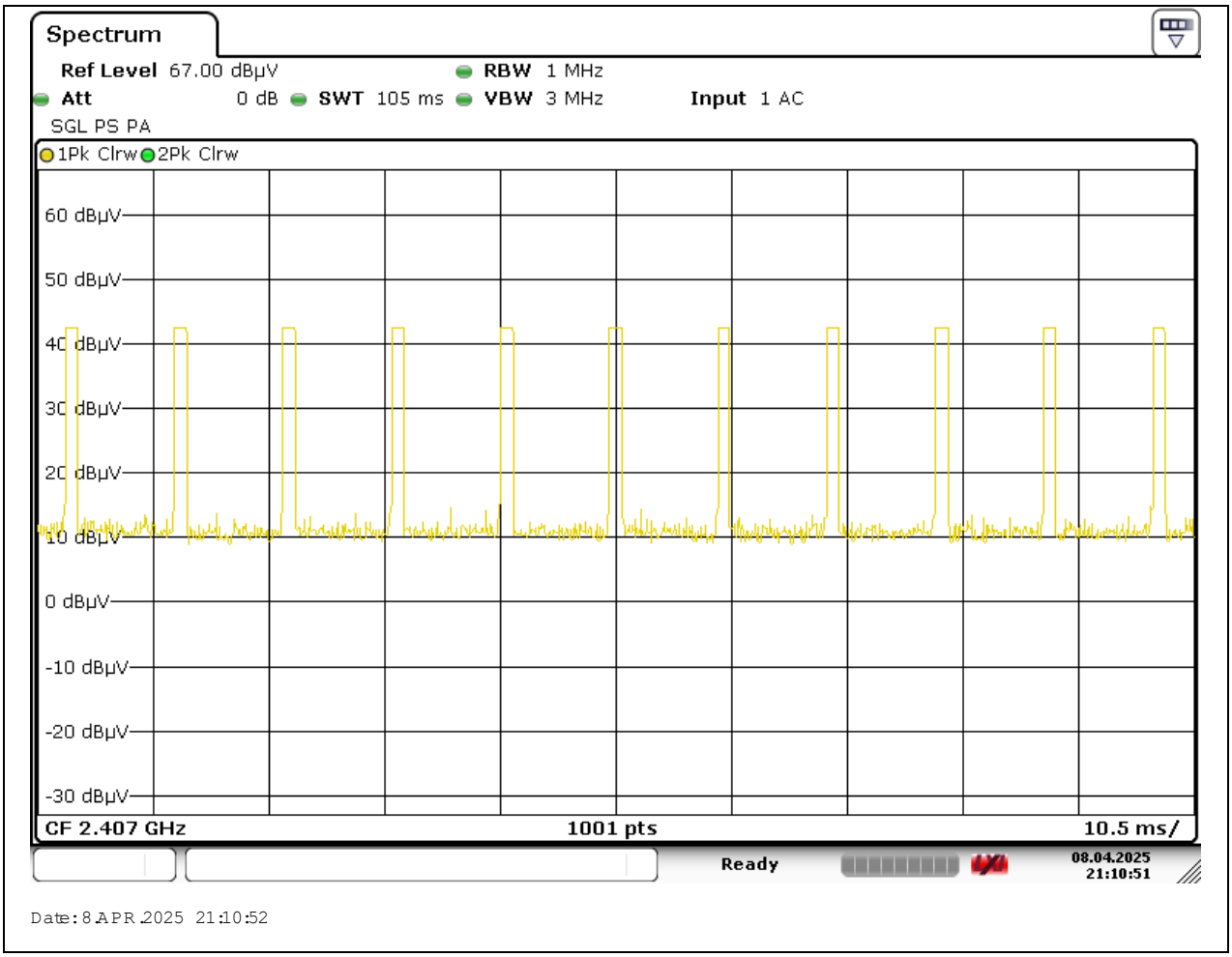
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)
GFSK	12.21	100	0.1221	12.21	-18.27

Note: Duty Cycle Correction Factor=20log(x).
Where: x is Duty Cycle

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

Note: On Time=Pulse width×Pulses per Period
Pulse is the single transmitting time between M1 and D1 showed in the first graph below.
Pulses per Period is showed in the second graph below.
As a result, On Time=1.11ms×11=12.21ms





8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205, §15.209 and §15.249 (a).

Radiation Disturbance Test Limit for FCC

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 field strength of emissions from intentional radiators operated within these frequency bands			
Frequency (MHz)	Field strength of Fundamental	Field strength of Harmonics	Distance (m)
902 - 928	50 mV/m (94 dBuV/m)	500 uV/m (54 dBuV/m)	3
2400 – 2483.5	50 mV/m (94 dBuV/m)	500 uV/m (54 dBuV/m)	3
5725 – 5875	50 mV/m (94 dBuV/m)	500 uV/m (54 dBuV/m)	3

Note: The EUT has the same power when push the control direction of different strength.

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

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

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

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

TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyzer

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

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

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

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

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

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

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

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

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

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 analyzer

For Restricted Bandedge and Spurious Emissions

RBW	1 MHz
VBW	3 MHz
Sweep	Auto
Detector	Peak
Trace	Max hold

For field strength of fundamental emission

RBW	⩾ 20dB Bandwidth
VBW	3 × RBW
Sweep	Auto
Detector	Peak
Trace	Max hold

Note: According to test result of Clause 7.1, RBW is set as 3MHz.

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.

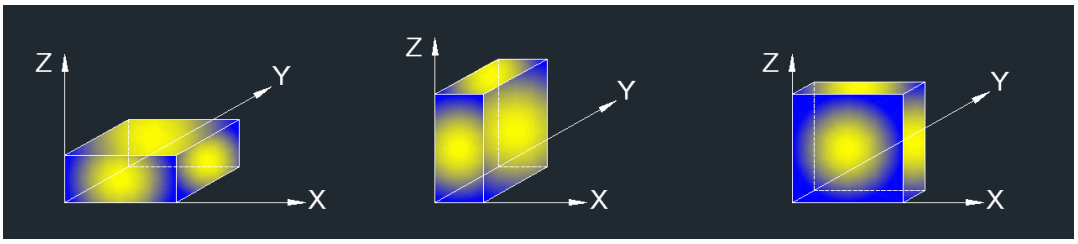
3. The EUT was placed on a turntable with 1.5 m above ground.

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. AVG Result=Peak Result + Duty Cycle Correction Factor. For the + Duty Cycle Correction Factor please refer to clause 7.2. ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



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

For Restricted Bandedge and field strength of fundamental emission:
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG Result=Peak Result + Duty Cycle Correction Factor.
5. For the transmitting duration, please refer to clause 7.2.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission (9 kHz ~ 30 MHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP 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.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious Emission (30 MHz ~ 1 GHz):
Note:
1. Result Level = Read Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
3. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

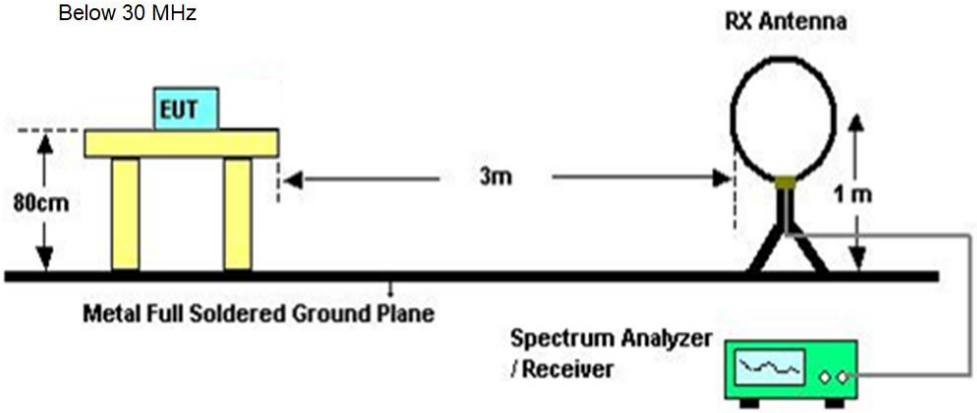
For Radiate Spurious Emission (1 GHz ~ 3 GHz):
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG Result=Peak Result + Duty Cycle Correction Factor.
5. For the transmitting duration, please refer to clause 7.2.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious Emission (3 GHz ~ 18 GHz):
Note:
1. Peak Result = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG Result=Peak Result + Duty Cycle Correction Factor.
5. For the transmitting duration, please refer to clause 7.2.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

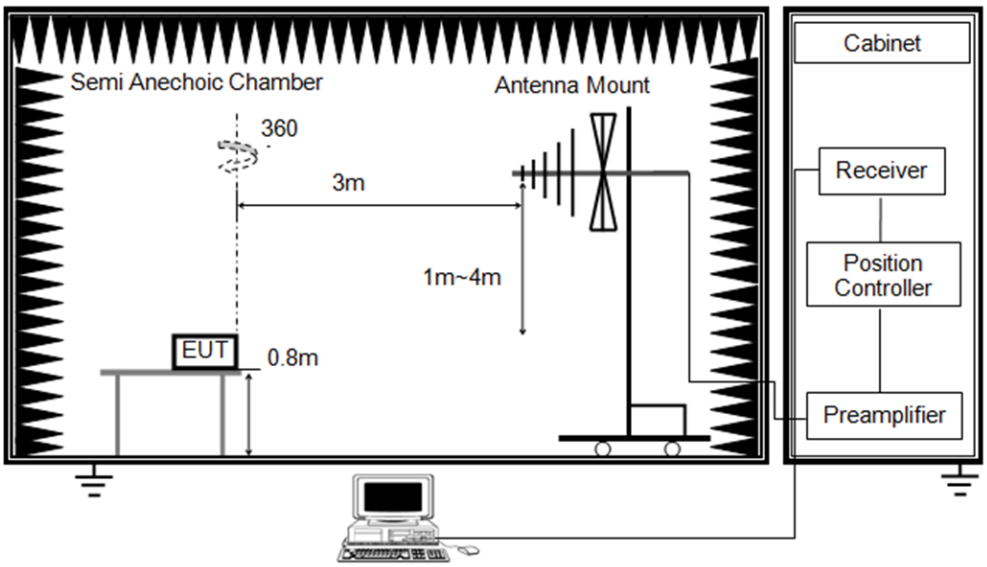
For Radiate Spurious emission (18 GHz ~ 26 GHz):
Note:
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

TEST SETUP

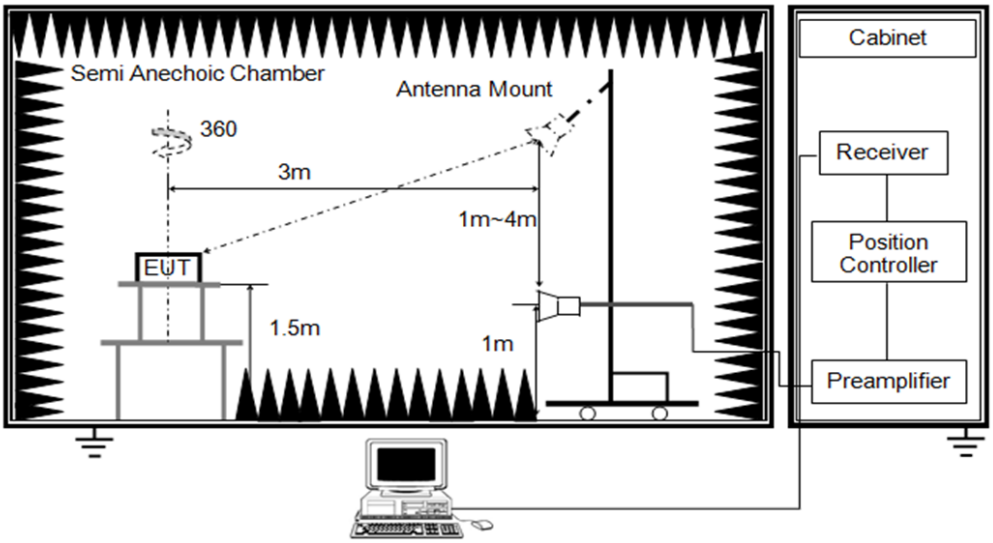
Below 30 MHz



Below 1 GHz and above 30 MHz



Above 1 GHz



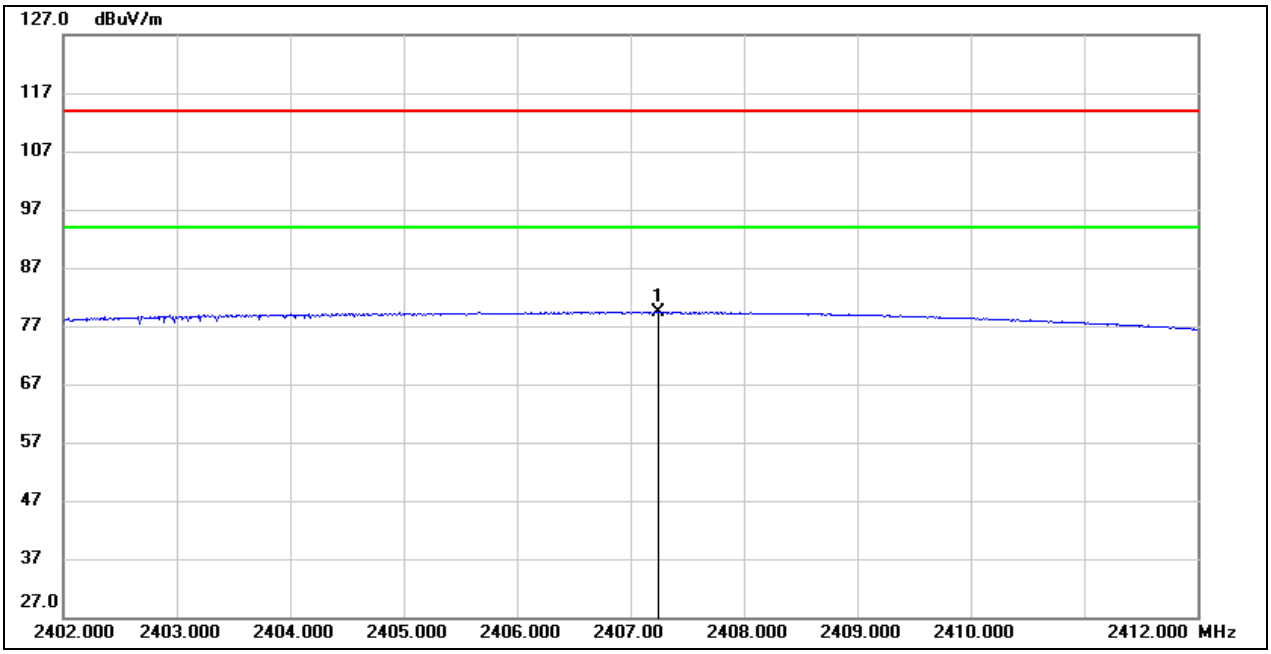
TEST ENVIRONMENT

Temperature	21.2 ℃	Relative Humidity	58.4%
Atmosphere Pressure	101 kPa	Test Voltage	DC 3.7 V

TEST RESULTS

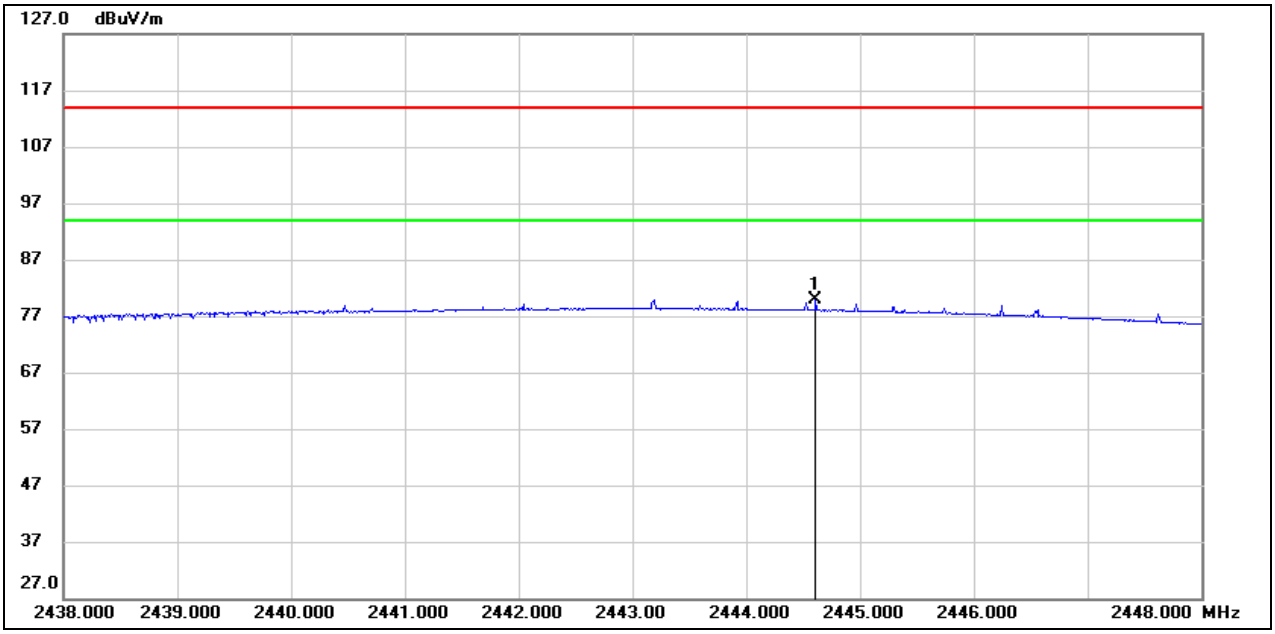
8.1. FUNDAMENTAL EMISSION

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



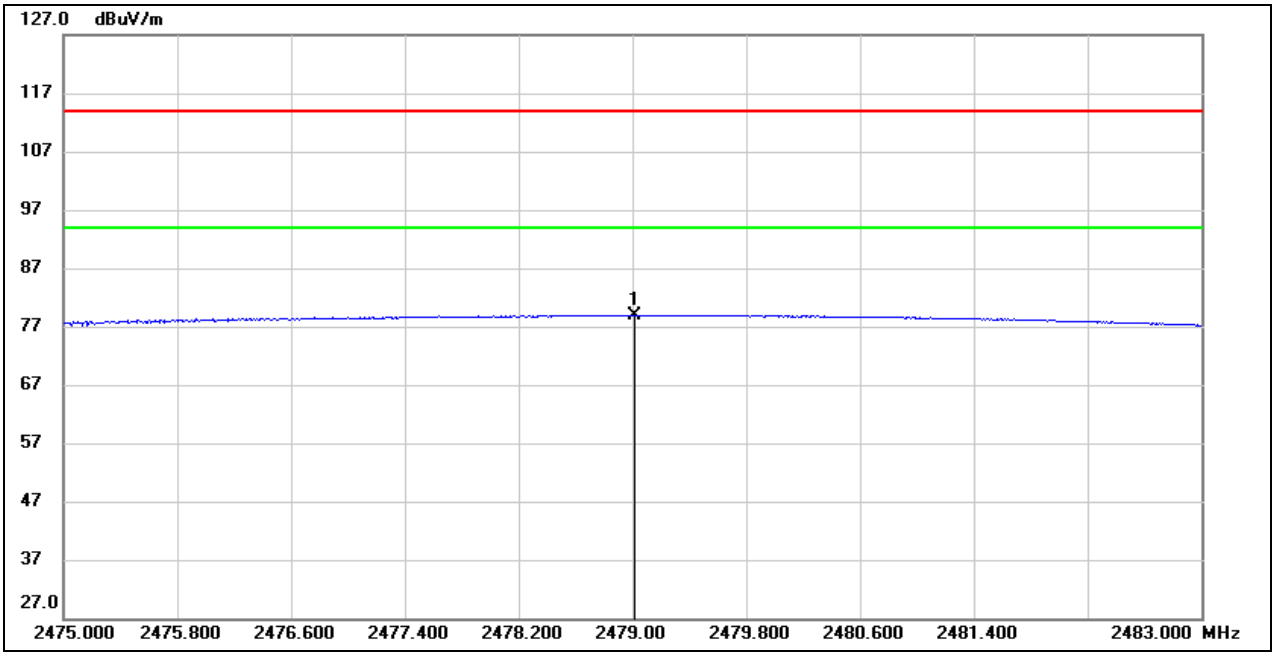
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2407.250	47.60	31.79	79.39	114.00	-34.61	Fundamental
	2407.250	/	/	61.12	94.00	-32.88	

Test Mode:	2.4GHz	Frequency(MHz):	2443
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2444.610	47.97	31.89	79.86	114.00	-34.14	Fundamental
	2444.610	/	/	61.59	94.00	-32.41	

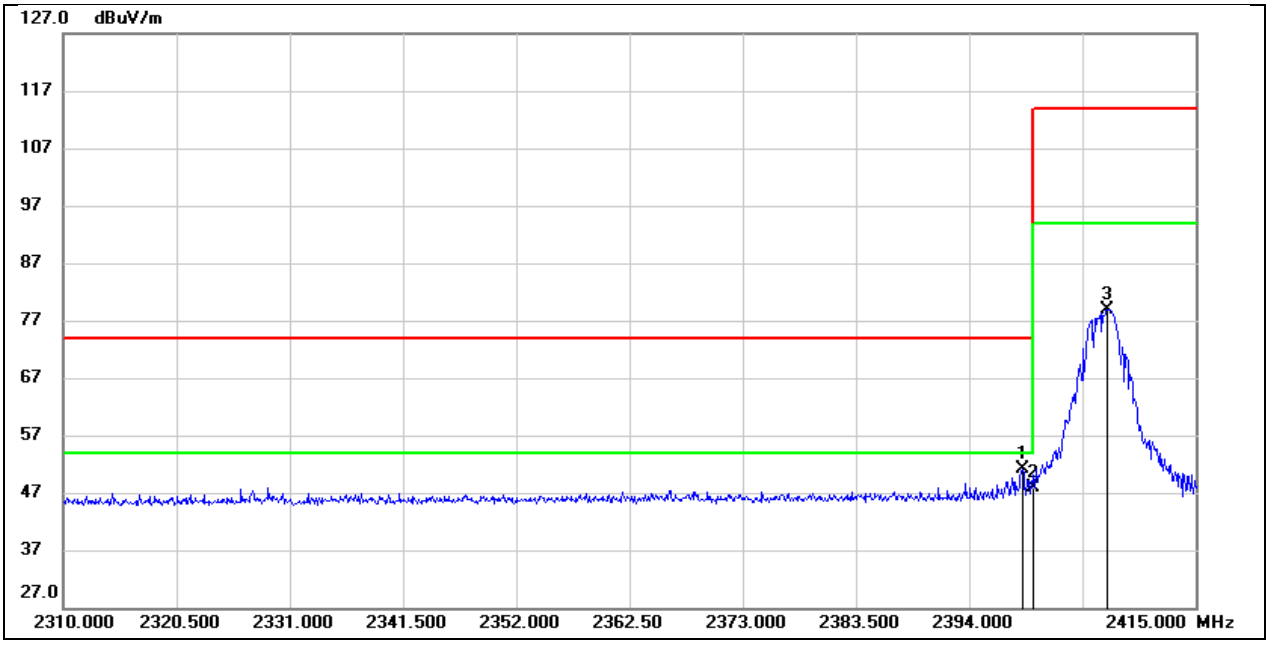
Test Mode:	2.4GHz	Frequency(MHz):	2479
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2479.016	46.96	31.99	78.95	114.00	-35.05	Fundamental
	2479.016	/	/	60.68	94.00	-33.32	

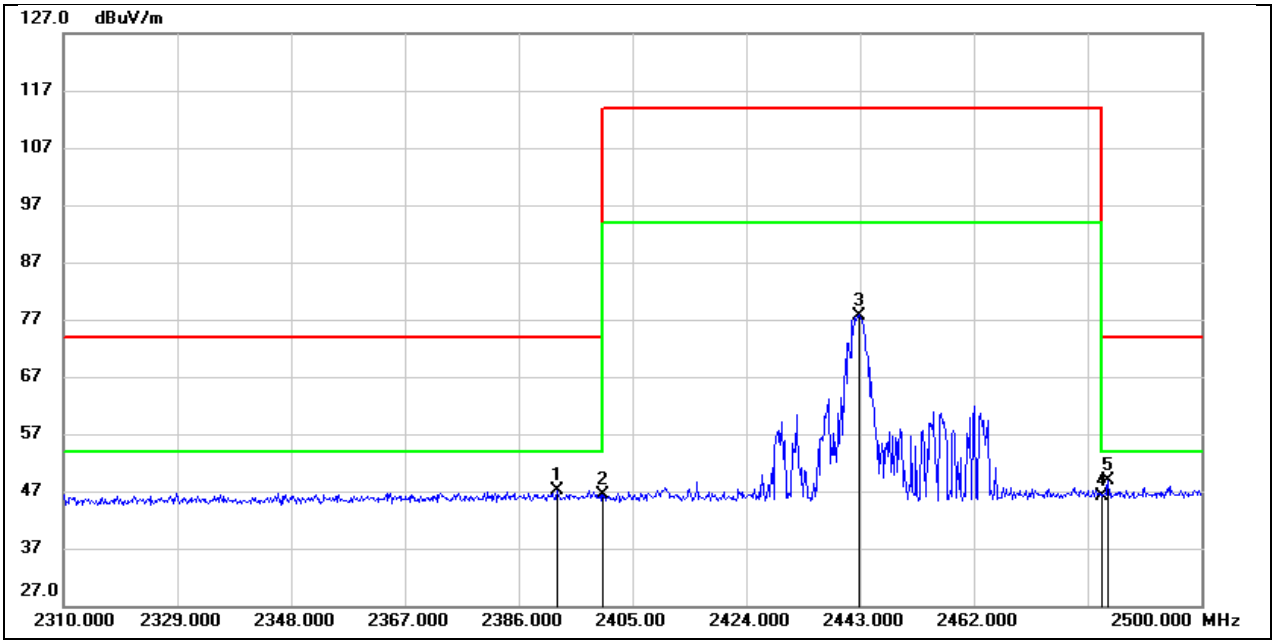
8.2. RESTRICTED BANDEDGE

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



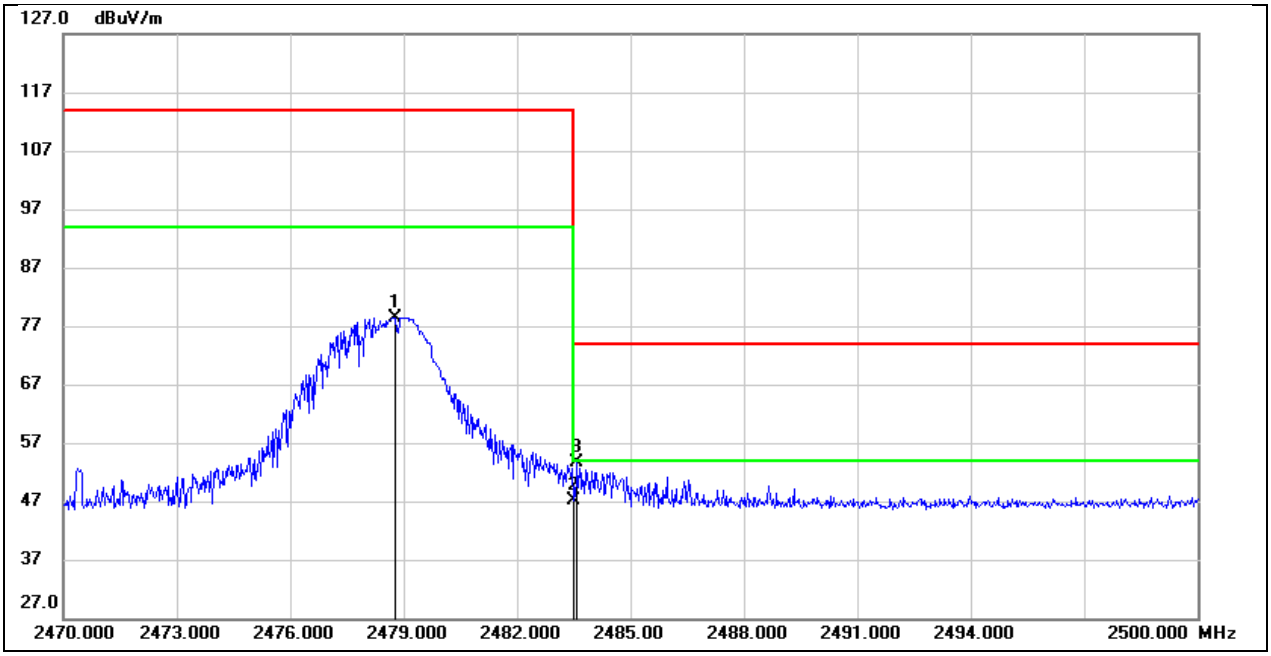
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2398.935	19.37	31.77	51.14	74.00	-22.86	peak
2	2400.000	16.15	31.77	47.92	74.00	-26.08	peak
3	2406.810	47.13	31.78	78.91	114.00	-35.09	Max Emission Position

Test Mode:	2.4GHz	Frequency(MHz):	2443
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2392.460	15.43	31.74	47.17	74.00	-26.83	peak
2	2400.000	14.49	31.77	46.26	74.00	-27.74	peak
3	2442.810	45.86	31.89	77.75	114.00	-36.25	Max Emission Position
4	2483.500	14.25	32.00	46.25	74.00	-27.75	peak
5	2484.420	16.79	32.00	48.79	74.00	-25.21	peak

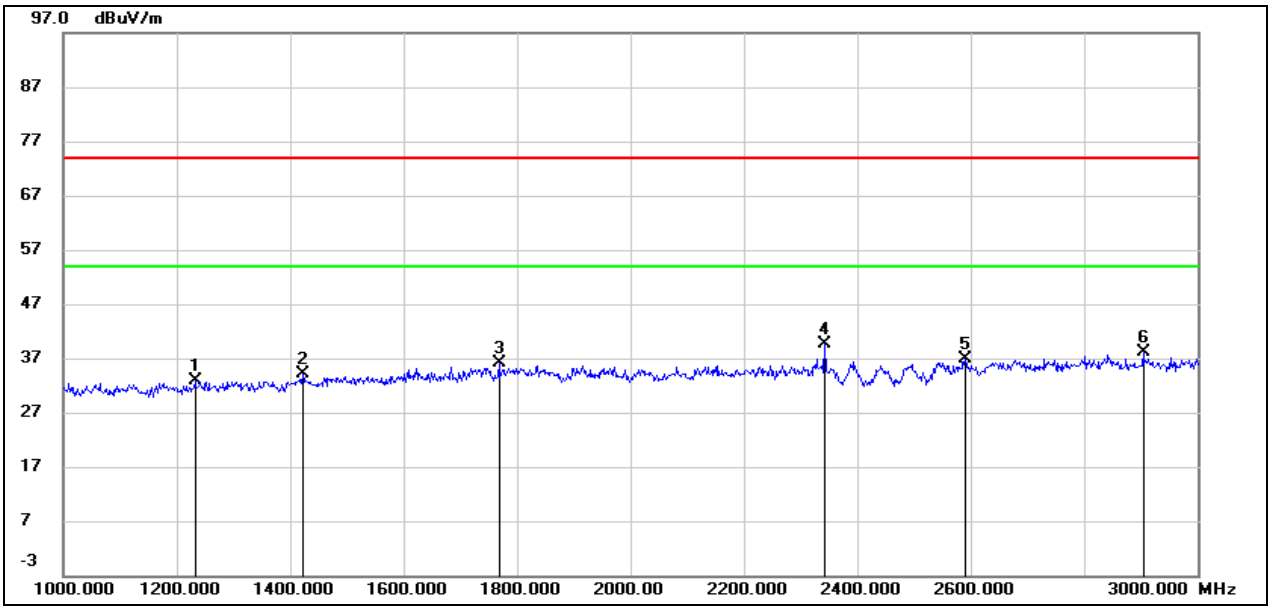
Test Mode:	2.4GHz	Frequency(MHz):	2479
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2478.790	46.48	31.99	78.47	114.00	-35.53	Max Emission Position
2	2483.500	15.03	32.00	47.03	74.00	-26.97	peak
3	2483.590	21.52	32.00	53.52	74.00	-20.48	peak

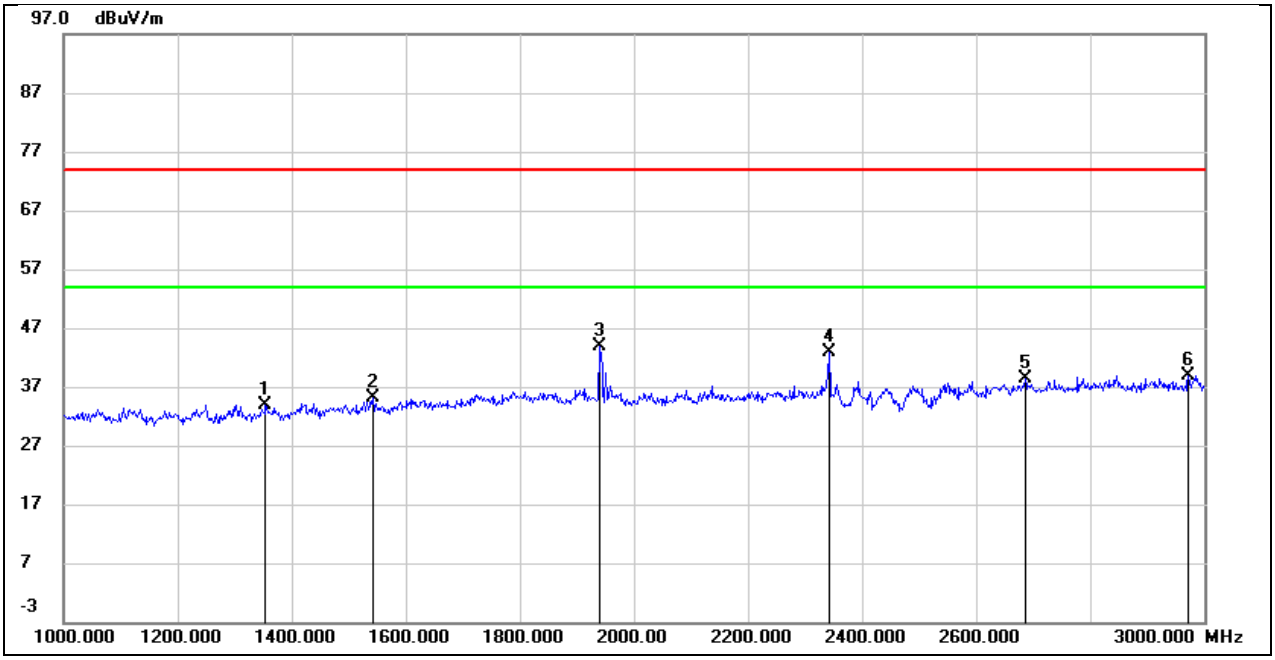
8.3. SPURIOUS EMISSIONS (1 GHZ ~ 3 GHZ)

Test Mode:	2.4GHZ	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



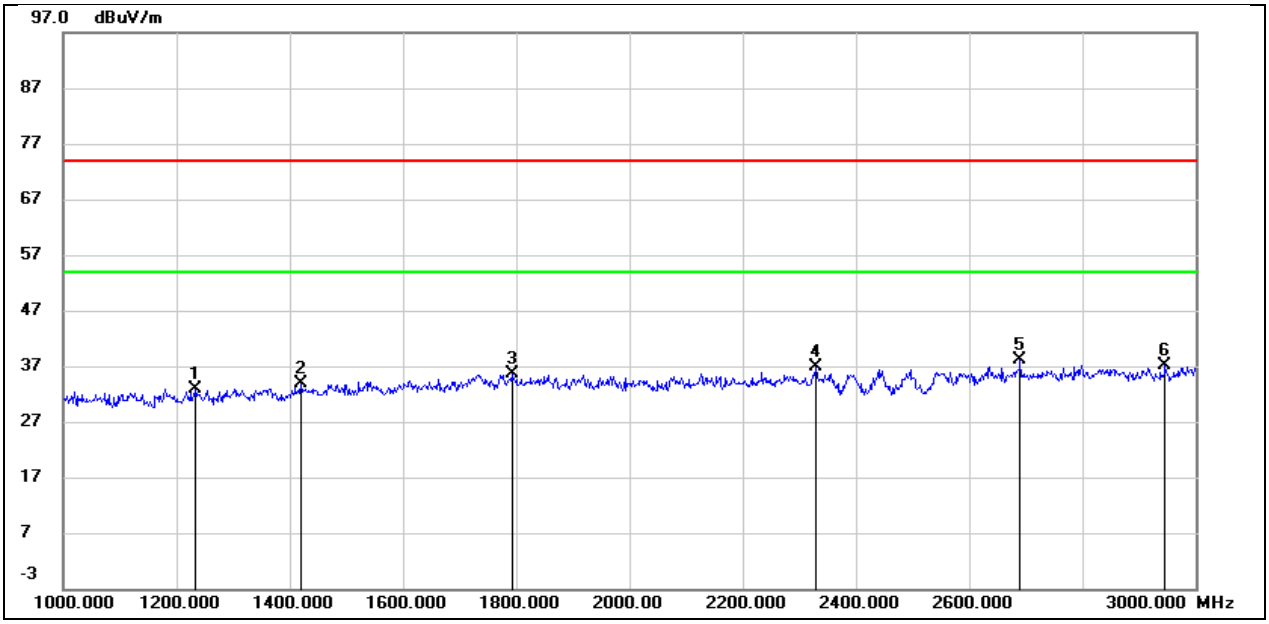
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1232.000	46.06	-13.30	32.76	74.00	-41.24	peak
2	1422.000	46.45	-12.33	34.12	74.00	-39.88	peak
3	1768.000	46.22	-10.19	36.03	74.00	-37.97	peak
4	2342.000	48.49	-8.81	39.68	74.00	-34.32	peak
5	2590.000	44.68	-7.81	36.87	74.00	-37.13	peak
6	2904.000	44.55	-6.45	38.10	74.00	-35.90	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2407
Polarity:	Vertical	Test Voltage:	DC 3.7 V



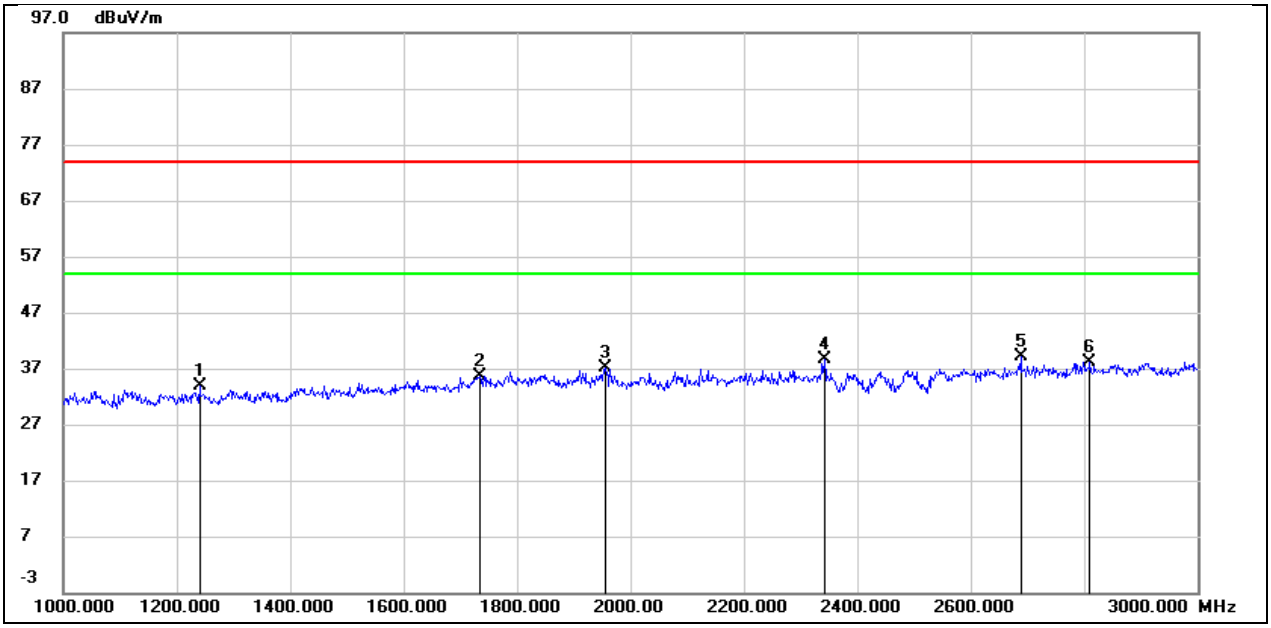
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1354.000	46.23	-12.42	33.81	74.00	-40.19	peak
2	1542.000	46.53	-11.50	35.03	74.00	-38.97	peak
3	1940.000	53.17	-9.25	43.92	74.00	-30.08	peak
4	2342.000	50.82	-7.97	42.85	74.00	-31.15	peak
5	2686.000	44.88	-6.41	38.47	74.00	-35.53	peak
6	2972.000	43.74	-4.87	38.87	74.00	-35.13	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2443
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



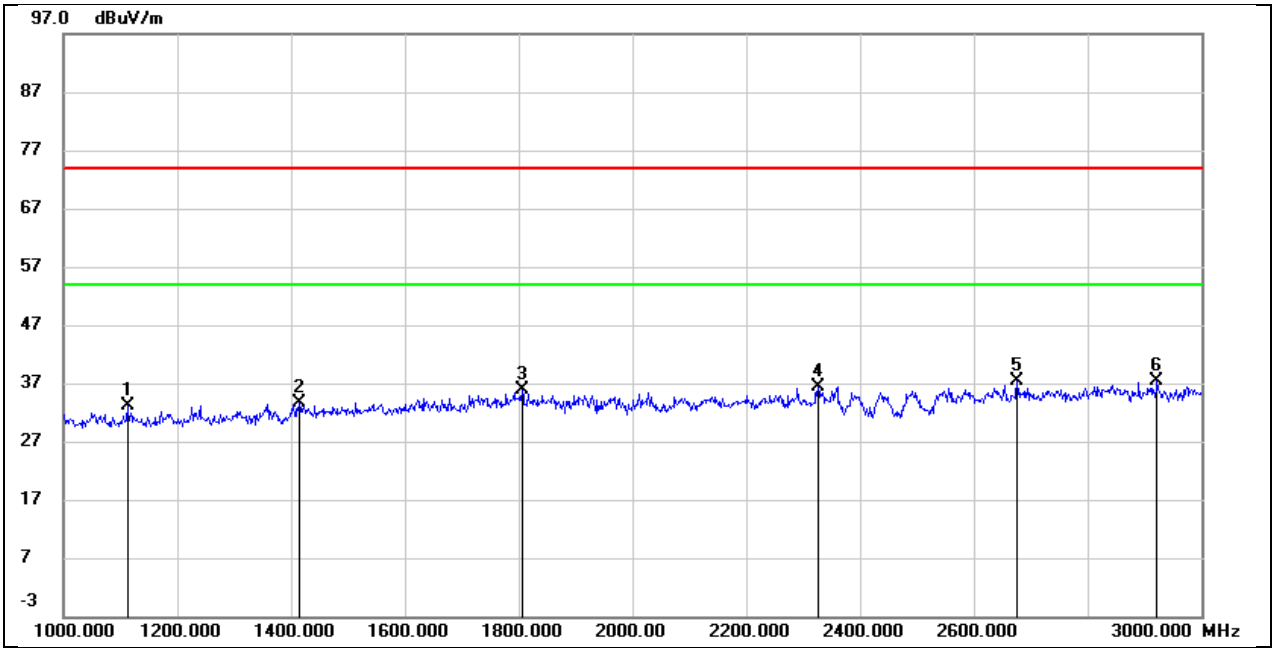
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1234.000	46.17	-13.30	32.87	74.00	-41.13	peak
2	1420.000	46.11	-12.35	33.76	74.00	-40.24	peak
3	1792.000	45.65	-10.02	35.63	74.00	-38.37	peak
4	2330.000	45.62	-8.85	36.77	74.00	-37.23	peak
5	2690.000	45.46	-7.39	38.07	74.00	-35.93	peak
6	2946.000	43.30	-6.25	37.05	74.00	-36.95	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2443
Polarity:	Vertical	Test Voltage:	DC 3.7 V



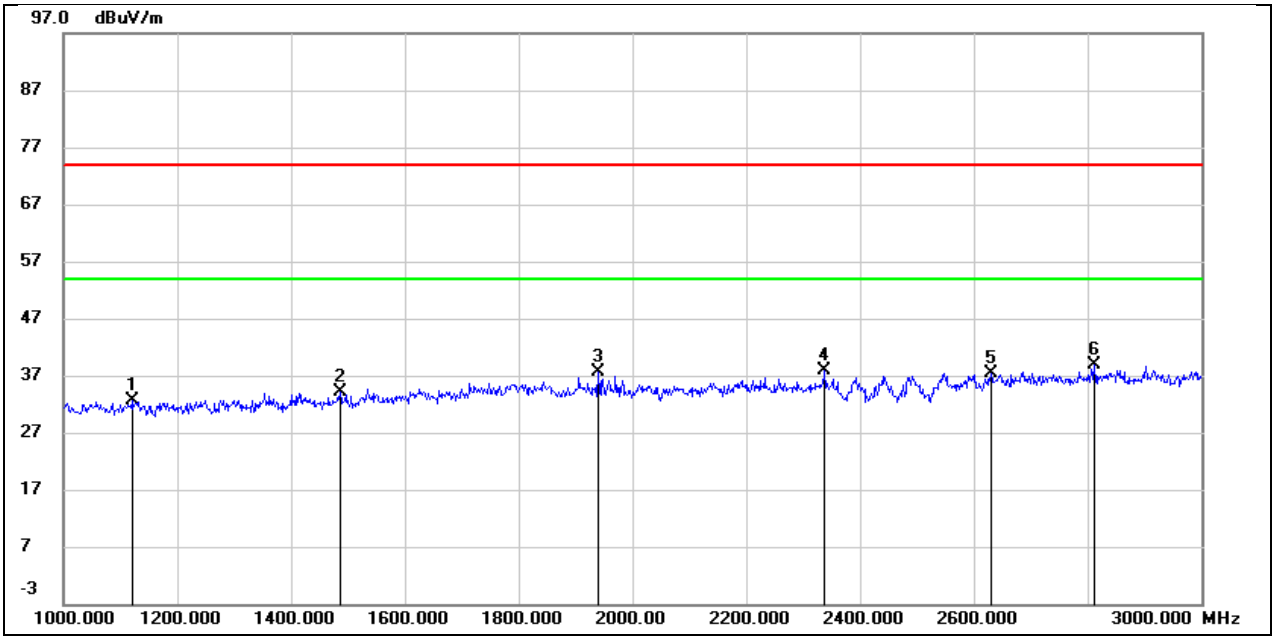
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1240.000	46.73	-12.86	33.87	74.00	-40.13	peak
2	1734.000	45.46	-9.95	35.51	74.00	-38.49	peak
3	1956.000	46.26	-9.24	37.02	74.00	-36.98	peak
4	2342.000	46.52	-7.97	38.55	74.00	-35.45	peak
5	2688.000	45.65	-6.40	39.25	74.00	-34.75	peak
6	2810.000	43.78	-5.76	38.02	74.00	-35.98	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2479
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1112.000	46.99	-13.90	33.09	74.00	-40.91	peak
2	1414.000	46.04	-12.38	33.66	74.00	-40.34	peak
3	1806.000	45.80	-9.97	35.83	74.00	-38.17	peak
4	2326.000	45.30	-8.87	36.43	74.00	-37.57	peak
5	2676.000	44.76	-7.43	37.33	74.00	-36.67	peak
6	2922.000	43.67	-6.37	37.30	74.00	-36.70	peak

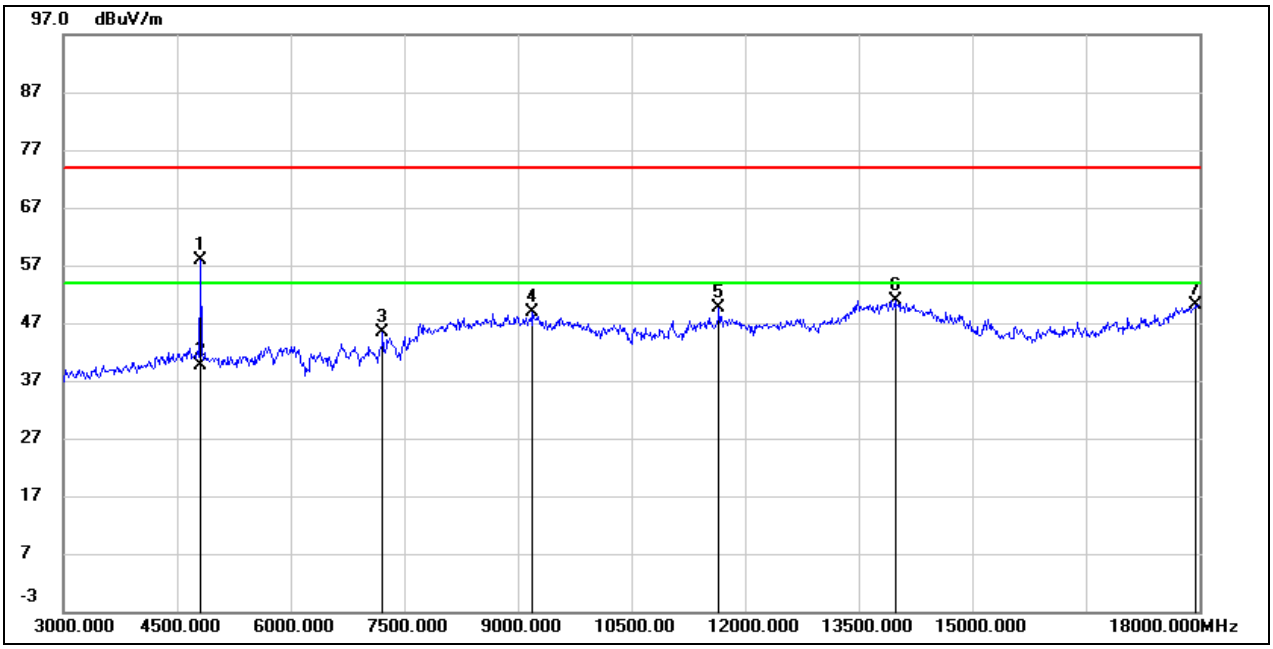
Test Mode:	2.4GHZ	Frequency(MHz):	2479
Polarity:	Vertical	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1120.000	46.02	-13.30	32.72	74.00	-41.28	peak
2	1486.000	46.02	-11.85	34.17	74.00	-39.83	peak
3	1940.000	46.76	-9.25	37.51	74.00	-36.49	peak
4	2338.000	45.94	-7.99	37.95	74.00	-36.05	peak
5	2630.000	44.20	-6.70	37.50	74.00	-36.50	peak
6	2812.000	44.52	-5.75	38.77	74.00	-35.23	peak

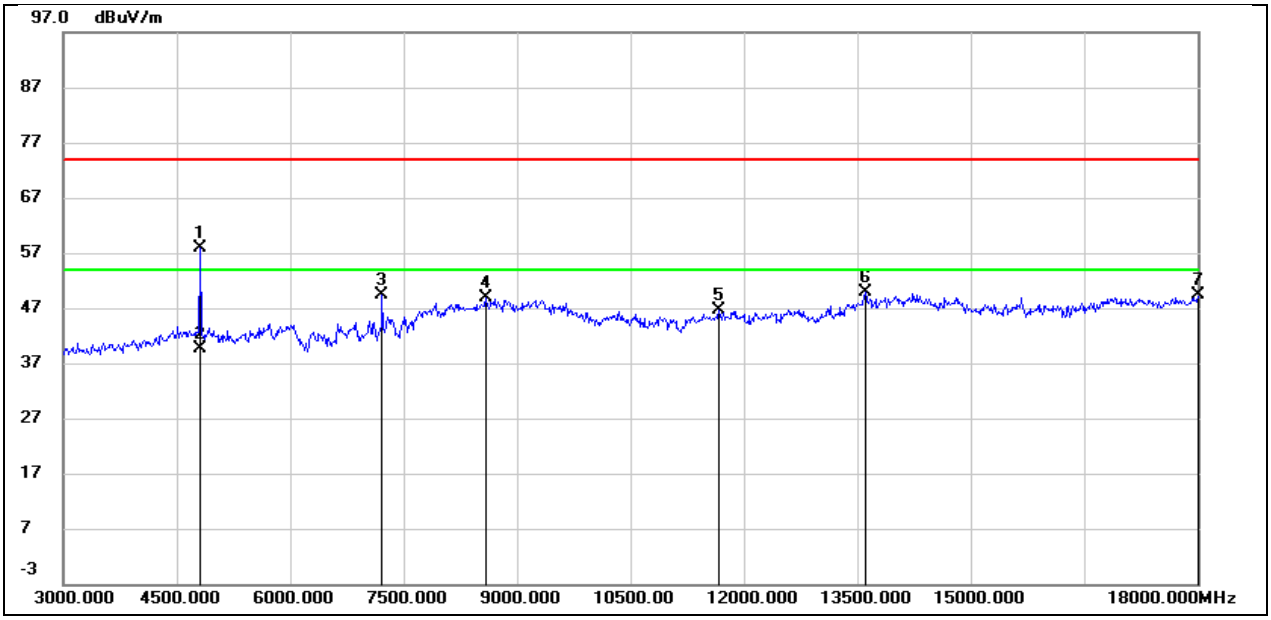
8.4. SPURIOUS EMISSIONS (3 GHZ ~ 18 GHZ)

Test Mode:	2.4GHZ	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



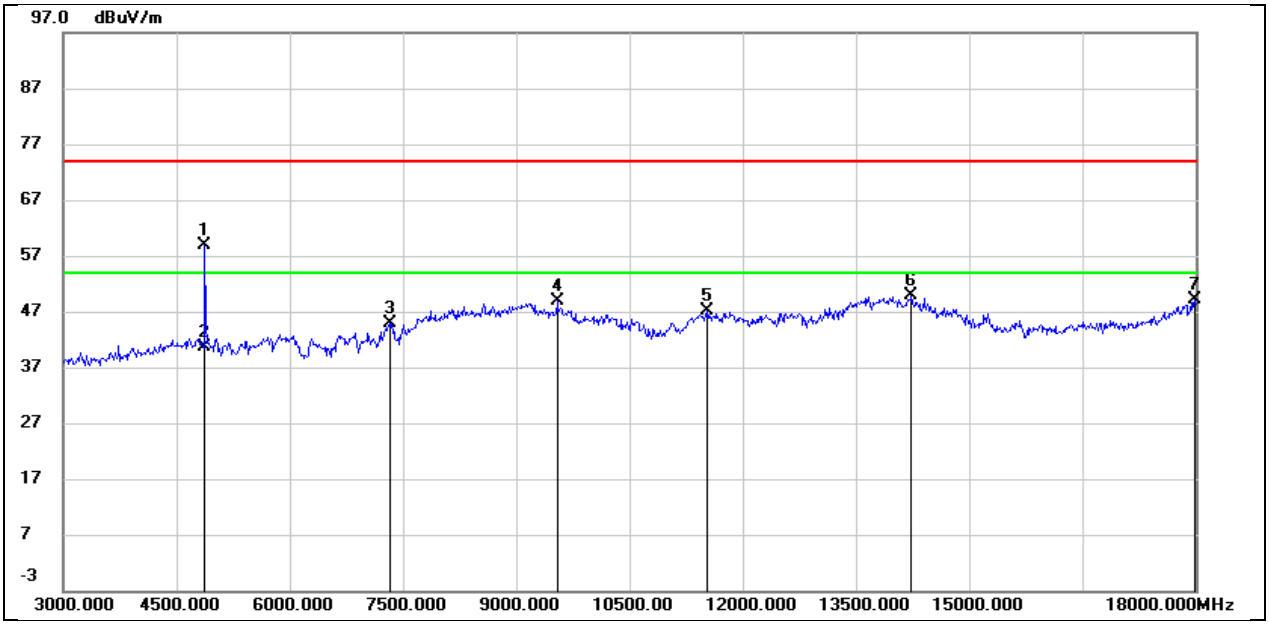
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	57.32	0.50	57.82	74.00	-16.18	peak
2	4815.000	/	/	39.55	54.00	-14.45	AVG
3	7215.000	38.49	6.91	45.40	74.00	-28.60	peak
4	9195.000	37.77	11.06	48.83	74.00	-25.17	peak
5	11655.000	31.36	18.25	49.61	74.00	-24.39	peak
6	13980.000	27.20	23.71	50.91	74.00	-23.09	peak
7	17955.000	21.05	29.18	50.23	74.00	-23.77	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2407
Polarity:	Vertical	Test Voltage:	DC 3.7 V



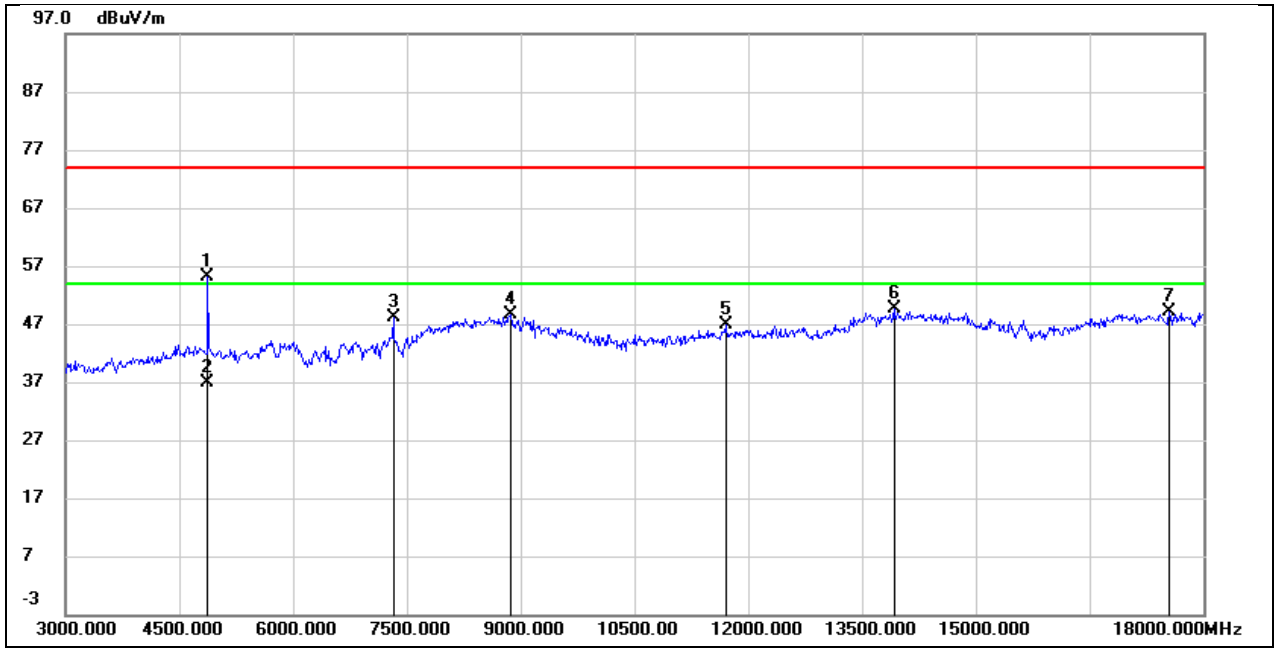
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	56.25	1.59	57.84	74.00	-16.16	peak
2	4815.000	/	/	39.57	54.00	-14.43	AVG
3	7215.000	41.73	7.64	49.37	74.00	-24.63	peak
4	8580.000	39.00	9.82	48.82	74.00	-25.18	peak
5	11670.000	29.77	16.91	46.68	74.00	-27.32	peak
6	13605.000	28.89	20.95	49.84	74.00	-24.16	peak
7	18000.000	21.83	27.44	49.27	74.00	-24.73	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2443
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



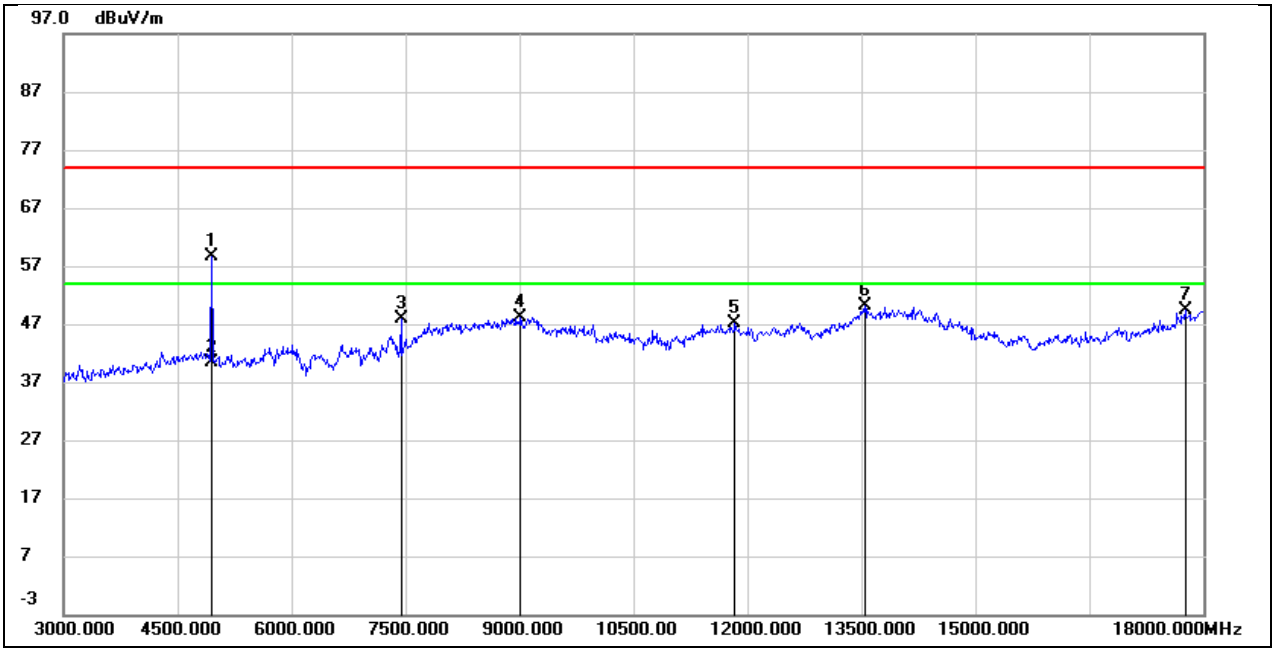
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	58.27	0.65	58.92	74.00	-15.08	peak
2	4875.000	/	/	40.65	54.00	-13.35	AVG
3	7320.000	37.82	7.05	44.87	74.00	-29.13	peak
4	9540.000	36.29	12.58	48.87	74.00	-25.13	peak
5	11535.000	29.18	18.05	47.23	74.00	-26.77	peak
6	14235.000	26.62	23.16	49.78	74.00	-24.22	peak
7	17985.000	19.75	29.49	49.24	74.00	-24.76	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2443
Polarity:	Vertical	Test Voltage:	DC 3.7 V



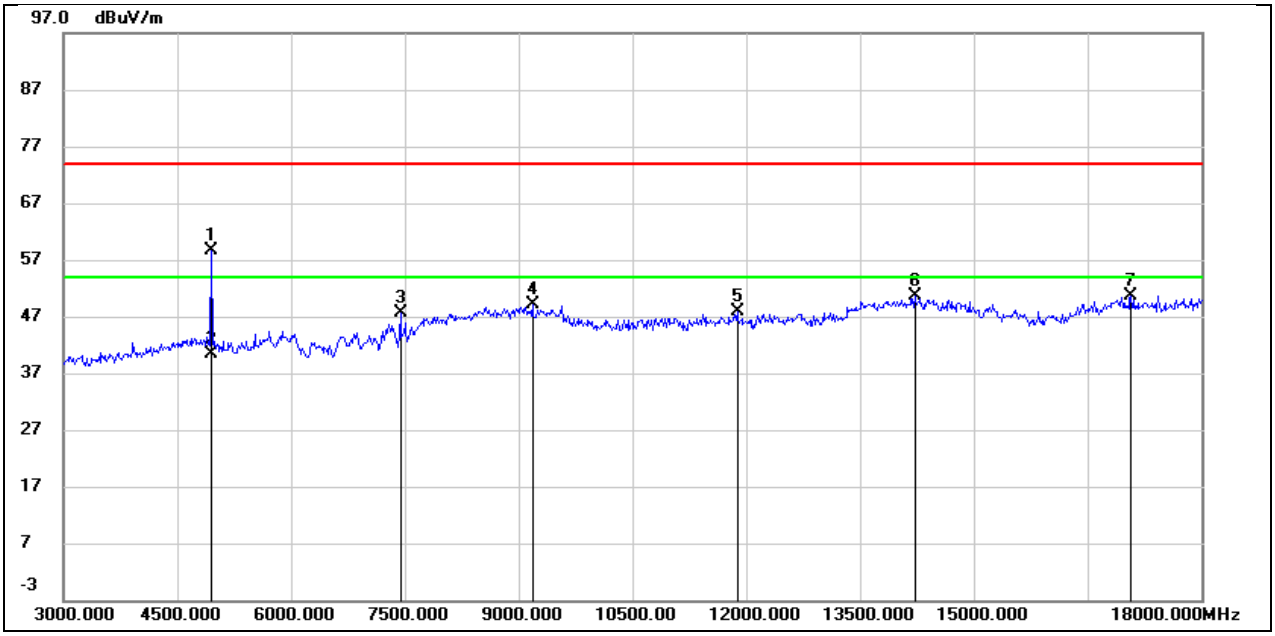
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	53.26	1.78	55.04	74.00	-18.96	peak
2	4875.000	/	/	36.77	54.00	-17.23	AVG
3	7320.000	40.39	7.69	48.08	74.00	-25.92	peak
4	8865.000	38.30	10.21	48.51	74.00	-25.49	peak
5	11700.000	29.83	16.98	46.81	74.00	-27.19	peak
6	13920.000	27.74	21.83	49.57	74.00	-24.43	peak
7	17550.000	23.45	25.58	49.03	74.00	-24.97	peak

Test Mode:	2.4GHZ	Frequency(MHz):	2479
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	57.74	0.83	58.57	74.00	-15.43	peak
2	4950.000	/	/	40.30	54.00	-13.70	AVG
3	7440.000	40.67	7.26	47.93	74.00	-26.07	peak
4	9015.000	37.98	10.24	48.22	74.00	-25.78	peak
5	11835.000	28.66	18.54	47.20	74.00	-26.80	peak
6	13545.000	27.59	22.52	50.11	74.00	-23.89	peak
7	17760.000	22.16	27.31	49.47	74.00	-24.53	peak

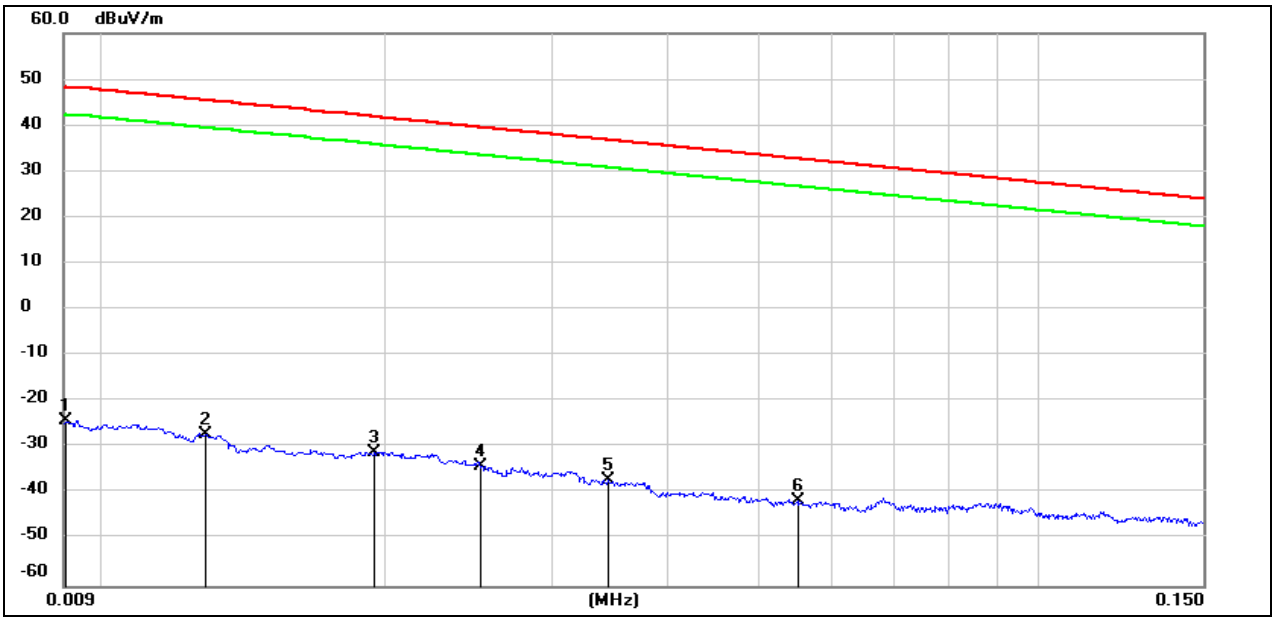
Test Mode:	2.4GHZ	Frequency(MHz):	2479
Polarity:	Vertical	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4950.000	56.60	2.00	58.60	74.00	-15.40	peak
2	4950.000	/	/	40.33	54.00	-13.67	AVG
3	7440.000	39.78	7.80	47.58	74.00	-26.42	peak
4	9180.000	37.92	11.25	49.17	74.00	-24.83	peak
5	11880.000	30.59	17.39	47.98	74.00	-26.02	peak
6	14220.000	28.52	22.22	50.74	74.00	-23.26	peak
7	17070.000	25.45	25.23	50.68	74.00	-23.32	peak

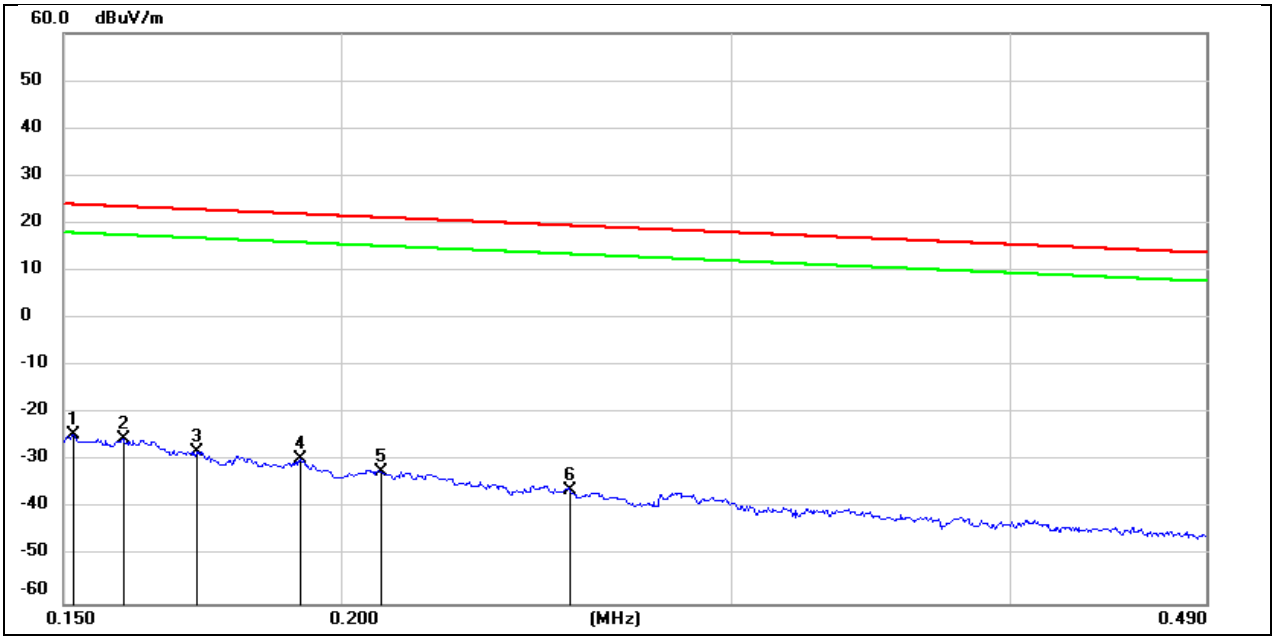
8.5. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 3.7 V



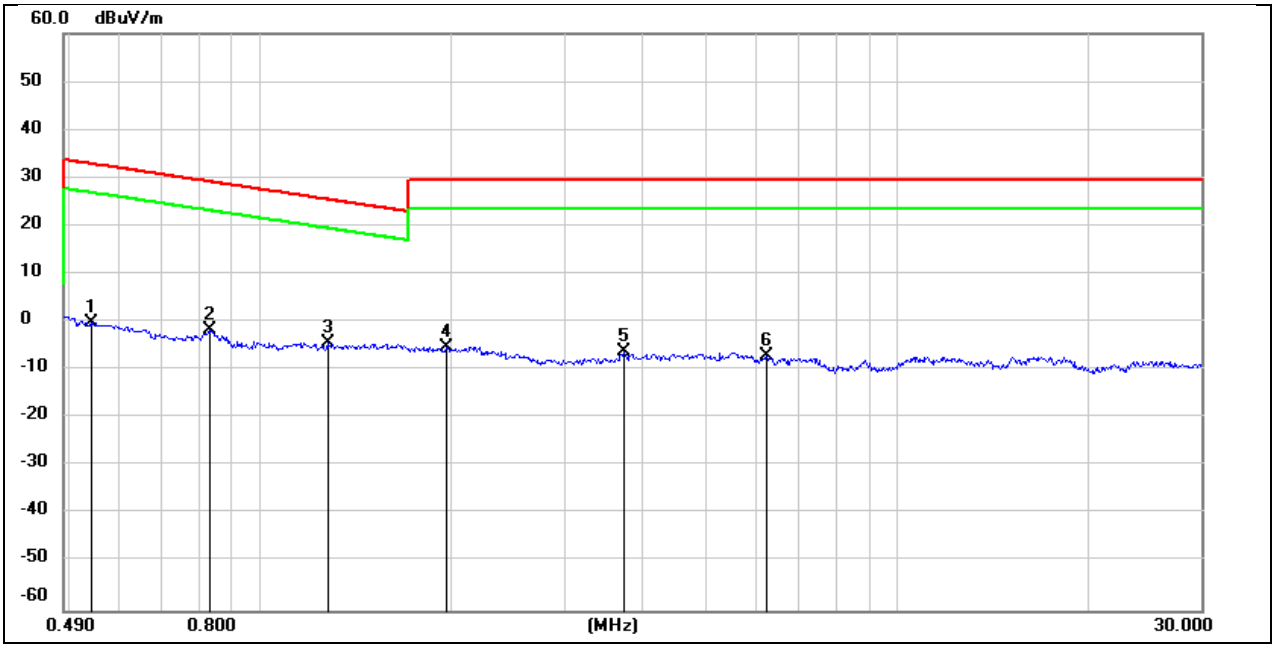
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0091	77.08	-101.33	-24.25	48.28	-72.53	peak
2	0.0128	74.37	-101.38	-27.01	45.46	-72.47	peak
3	0.0194	70.39	-101.35	-30.96	41.84	-72.80	peak
4	0.0252	67.38	-101.37	-33.99	39.57	-73.56	peak
5	0.0345	64.38	-101.41	-37.03	36.85	-73.88	peak
6	0.0551	59.95	-101.50	-41.55	32.78	-74.33	peak

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1517	77.23	-101.63	-24.40	23.98	-48.38	peak
2	0.1595	76.36	-101.65	-25.29	23.55	-48.84	peak
3	0.1720	73.69	-101.67	-27.98	22.90	-50.88	peak
4	0.1917	72.04	-101.70	-29.66	21.95	-51.61	peak
5	0.2084	69.47	-101.73	-32.26	21.22	-53.48	peak
6	0.2534	65.64	-101.80	-36.16	19.52	-55.68	peak

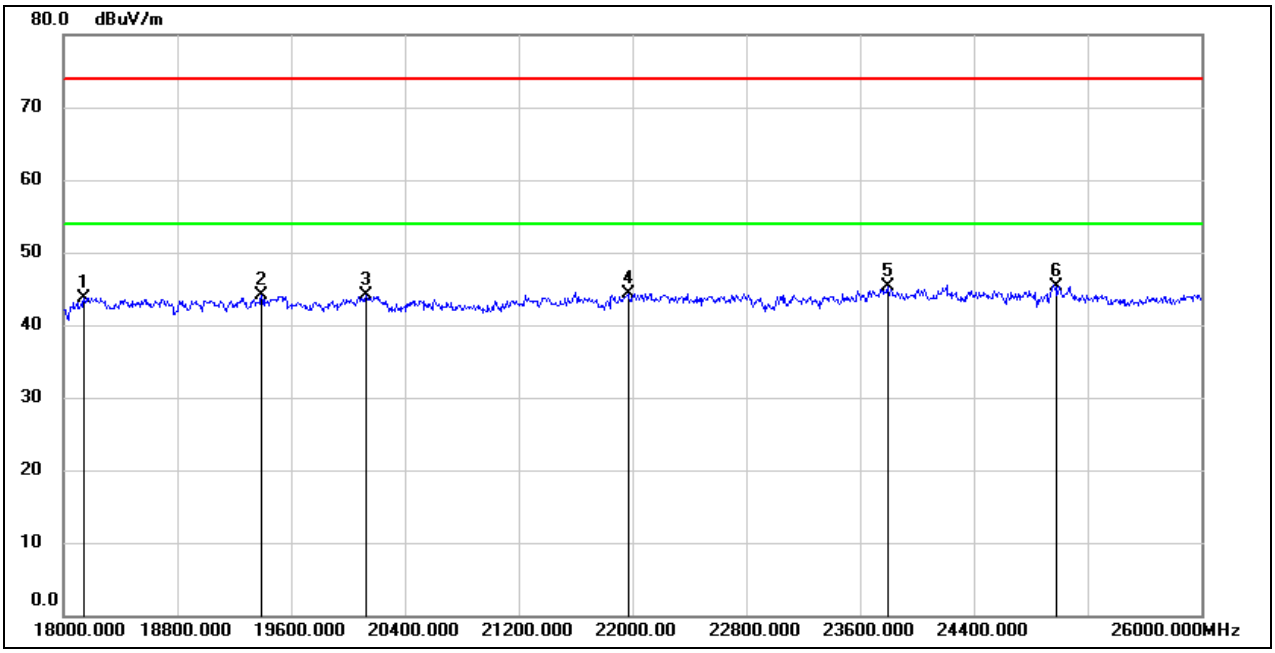
Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5409	61.91	-62.07	-0.16	32.94	-33.10	peak
2	0.8296	60.44	-62.17	-1.73	29.23	-30.96	peak
3	1.2721	57.74	-62.15	-4.41	25.52	-29.93	peak
4	1.9516	56.61	-61.84	-5.23	29.54	-34.77	peak
5	3.7100	55.20	-61.41	-6.21	29.54	-35.75	peak
6	6.2445	54.13	-61.32	-7.19	29.54	-36.73	peak

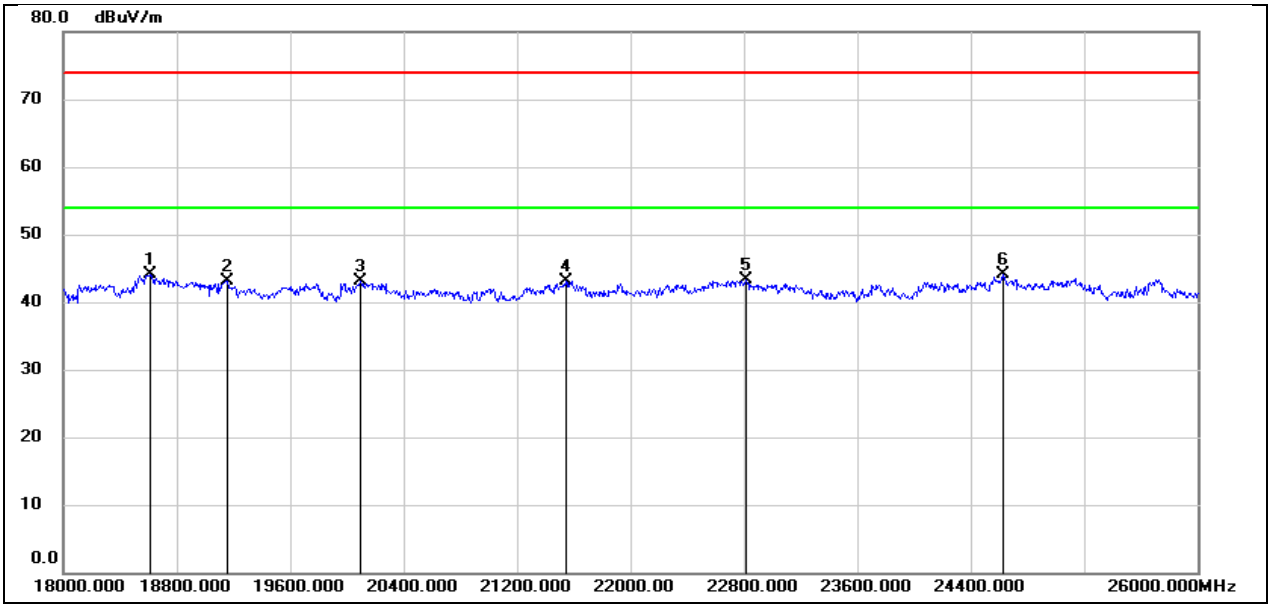
8.6. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18144.000	49.27	-5.48	43.79	74.00	-30.21	peak
2	19392.000	49.62	-5.57	44.05	74.00	-29.95	peak
3	20128.000	49.62	-5.53	44.09	74.00	-29.91	peak
4	21968.000	48.75	-4.46	44.29	74.00	-29.71	peak
5	23800.000	48.41	-3.11	45.30	74.00	-28.70	peak
6	24976.000	47.49	-2.11	45.38	74.00	-28.62	peak

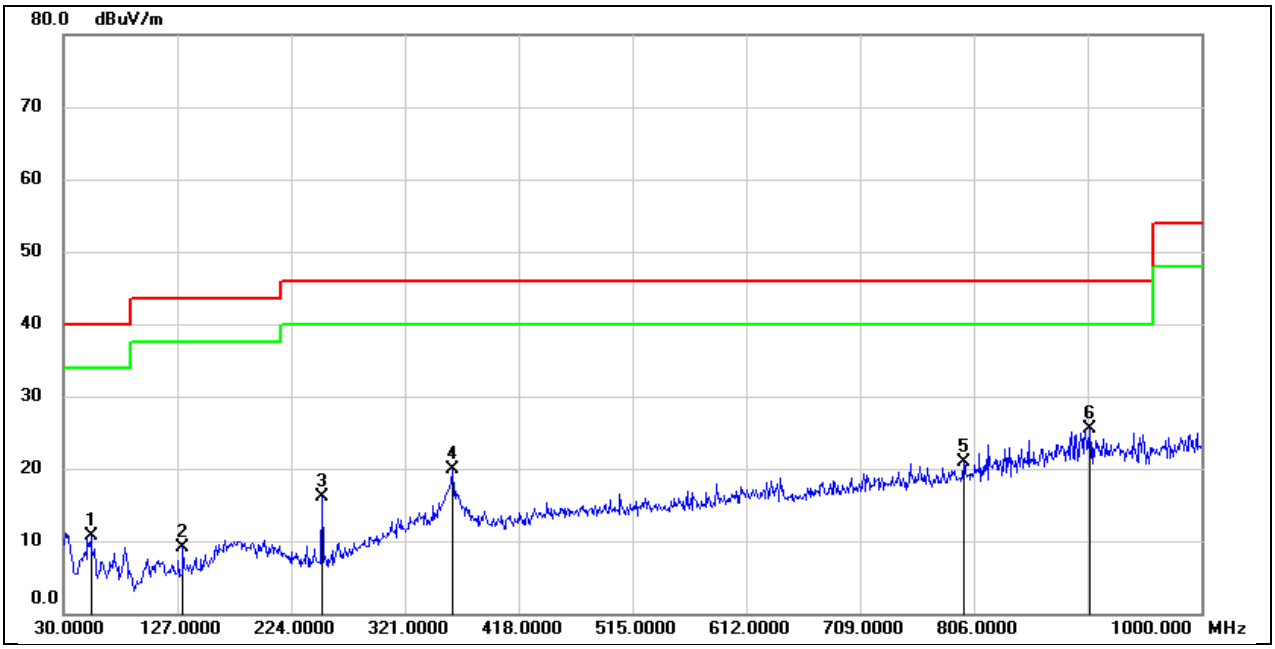
Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Vertical	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18616.000	49.39	-5.34	44.05	74.00	-29.95	peak
2	19160.000	48.50	-5.45	43.05	74.00	-30.95	peak
3	20096.000	48.60	-5.51	43.09	74.00	-30.91	peak
4	21544.000	47.76	-4.63	43.13	74.00	-30.87	peak
5	22816.000	46.93	-3.63	43.30	74.00	-30.70	peak
6	24624.000	46.49	-2.33	44.16	74.00	-29.84	peak

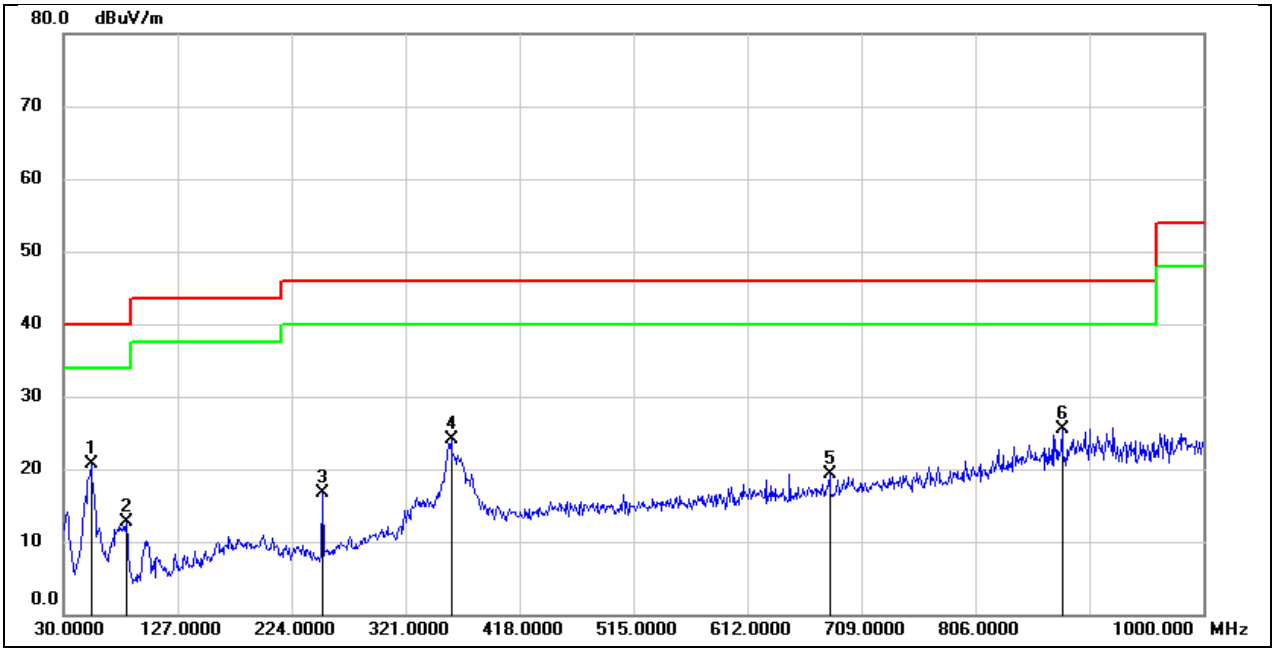
8.7. SPURIOUS EMISSIONS (30 MHZ ~ 1 GHZ)

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Horizontal	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	53.2800	26.23	-15.47	10.76	40.00	-29.24	QP
2	131.8500	24.05	-14.99	9.06	43.50	-34.44	QP
3	250.1900	31.64	-15.53	16.11	46.00	-29.89	QP
4	361.7400	30.60	-10.74	19.86	46.00	-26.14	QP
5	797.2700	25.34	-4.45	20.89	46.00	-25.11	QP
6	904.9400	27.75	-2.34	25.41	46.00	-20.59	QP

Test Mode:	2.4GHz	Frequency(MHz):	2407
Polarity:	Vertical	Test Voltage:	DC 3.7 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	53.2800	36.15	-15.47	20.68	40.00	-19.32	QP
2	83.3500	29.60	-16.82	12.78	40.00	-27.22	QP
3	250.1900	32.21	-15.53	16.68	46.00	-29.32	QP
4	359.8000	34.82	-10.74	24.08	46.00	-21.92	QP
5	681.8400	25.59	-6.38	19.21	46.00	-26.79	QP
6	879.7200	28.19	-2.64	25.55	46.00	-20.45	QP

9. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a)

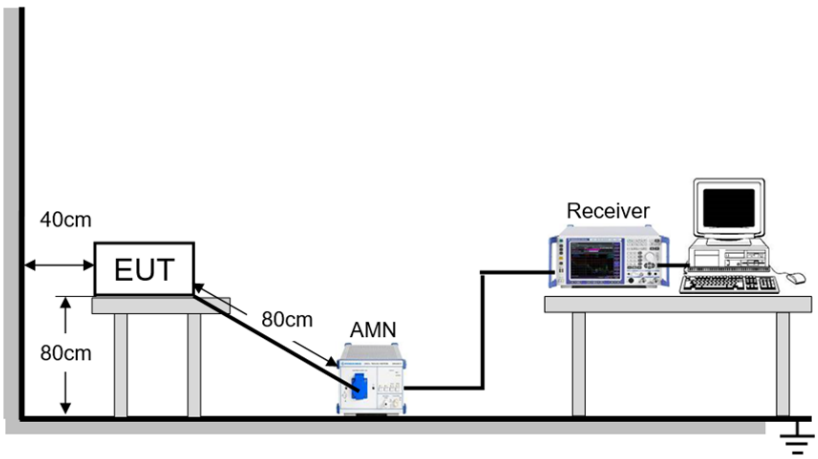
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST PROCEDURE

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 SETUP

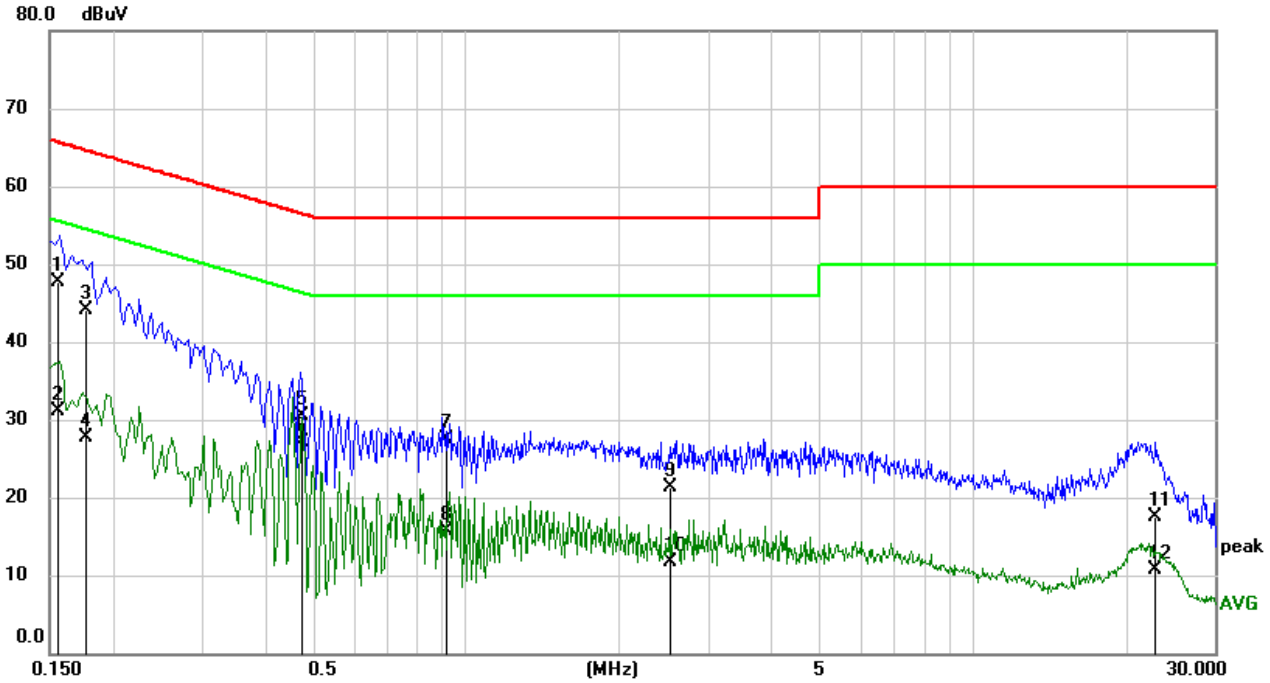


TEST ENVIRONMENT

Temperature	25 ℃	Relative Humidity	50%
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

TEST RESULTS

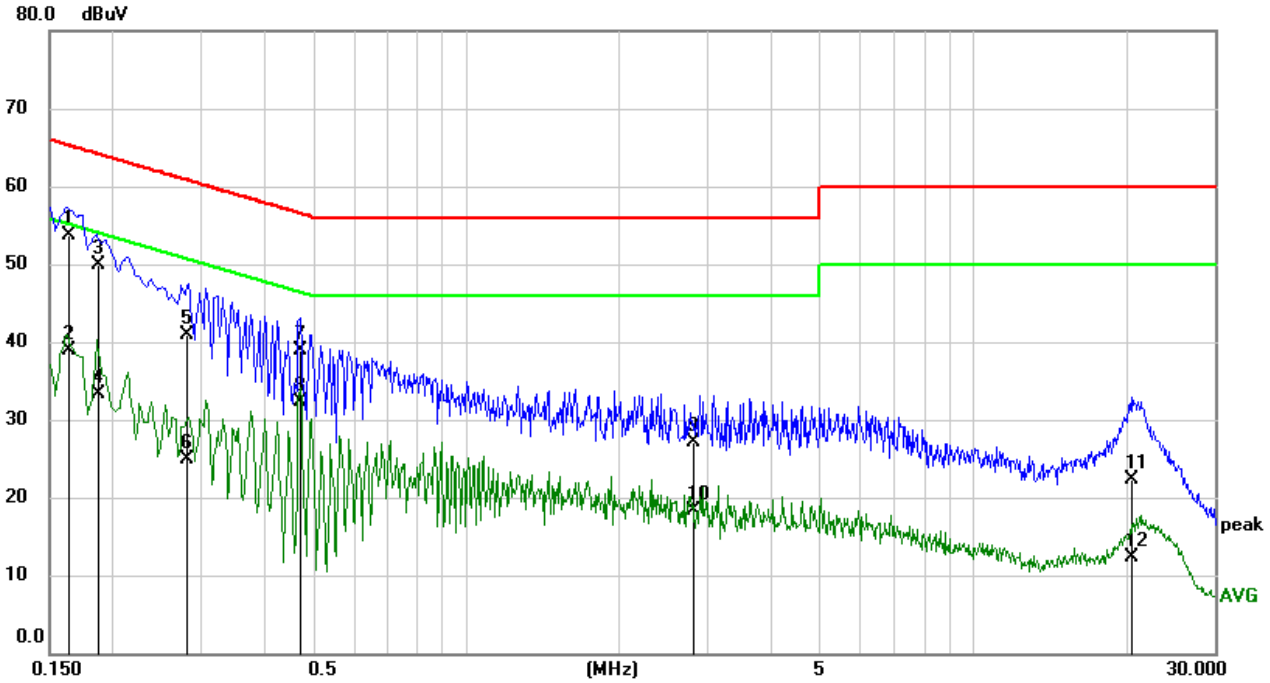
Test Mode:	2.4GHz	Frequency(MHz):	2407
Line	L		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1553	37.92	9.73	47.65	65.71	-18.06	QP
2	0.1553	21.33	9.73	31.06	55.71	-24.65	AVG
3	0.1778	34.48	9.68	44.16	64.59	-20.43	QP
4	0.1778	18.07	9.68	27.75	54.59	-26.84	AVG
5	0.4749	20.96	9.64	30.60	56.43	-25.83	QP
6	0.4749	17.52	9.64	27.16	46.43	-19.27	AVG
7	0.9081	17.79	9.63	27.42	56.00	-28.58	QP
8	0.9081	6.04	9.63	15.67	46.00	-30.33	AVG
9	2.5159	11.56	9.74	21.30	56.00	-34.70	QP
10	2.5159	1.87	9.74	11.61	46.00	-34.39	AVG
11	22.9264	7.83	9.72	17.55	60.00	-42.45	QP
12	22.9264	0.95	9.72	10.67	50.00	-39.33	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.

Test Mode:	2.4GHz	Frequency(MHz):	2407
Line	N		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1634	44.08	9.64	53.72	65.29	-11.57	QP
2	0.1634	29.32	9.64	38.96	55.29	-16.33	AVG
3	0.1880	40.24	9.64	49.88	64.12	-14.24	QP
4	0.1880	23.62	9.64	33.26	54.12	-20.86	AVG
5	0.2801	31.22	9.64	40.86	60.81	-19.95	QP
6	0.2801	15.21	9.64	24.85	50.81	-25.96	AVG
7	0.4694	29.21	9.64	38.85	56.52	-17.67	QP
8	0.4694	22.63	9.64	32.27	46.52	-14.25	AVG
9	2.8362	17.48	9.63	27.11	56.00	-28.89	QP
10	2.8362	8.75	9.63	18.38	46.00	-27.62	AVG
11	20.5967	12.54	9.73	22.27	60.00	-37.73	QP
12	20.5967	2.63	9.73	12.36	50.00	-37.64	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 have been tested, only the worst data was recorded in the report.

10. ANTENNA REQUIREMENT

REQUIREMENT

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

DESCRIPTION

Pass

END OF REPORT