CFR 47 FCC PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Blow Max remote control

MODEL NUMBER: C88HM11-2

FCC ID: 2AILYC88HM11

REPORT NUMBER: 4788817979.1-1

ISSUE DATE: January 18, 2019

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	01/18/2019	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	Transmitter Timeout	CFR 47 FCC 15.231 (a) (1)	PASS
2	20dB Bandwidth	CFR 47 FCC 15.231 (c)	PASS
3	Radiated emission	CFR 47 FCC 15.231 (b), 15.209 and Part 15.205	PASS
4	Antenna Requirement	FCC Part 15.203	Pass

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS 5

2. TEST METHODOLOGY 6

3. FACILITIES AND ACCREDITATION 6

4. CALIBRATION AND UNCERTAINTY 7

4.1. MEASURING INSTRUMENT CALIBRATION 7

4.2. MEASUREMENT UNCERTAINTY 7

5. EQUIPMENT UNDER TEST 8

5.1. DESCRIPTION OF EUT 8

5.2. TEST CHANNEL CONFIGURATION 8

5.3. TEST ENVIRONMENT 8

5.4. DESCRIPTION OF AVAILABLE ANTENNAS 9

5.5. WORST-CASE CONFIGURATIONS 9

5.6. DESCRIPTION OF TEST SETUP 10

5.7. MEASURING INSTRUMENT AND SOFTWARE USED 11

6. ANTENNA PORT TEST RESULTS 12

6.1. ON TIME AND DUTY CYCLE 12

6.2. TRANSMITTER TIMEOUT 15

6.3. 20dB BANDWIDTH 17

6.4. RADIATED EMISSION 19

6.4.1. FUNDAMENTAL FIELD STRENGTH 24
6.4.2. SPURIOUS EMISSIONS BELOW 1G 26
6.4.3. SPURIOUS EMISSIONS ABOVE 1G 28
6.4.4. SPURIOUS EMISSIONS BELOW 30M 30

7. ANTENNA REQUIREMENTS 36

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	JM Sunflower Ltd.
Address:	7/F, Goldsland Building, 22-26 Miden Avenue, Tsim Sha Tsui, Hong Kong

Manufacturer Information

Company Name:	JM Sunflower Ltd.
Address:	7/F, Goldsland Building, 22-26 Miden Avenue, Tsim Sha Tsui, Hong Kong

EUT Name:	Blow Max remote control
Brand:	/
Model:	C88HM11-2
Sample ID:	2004978
Sample Status:	Normal
Sample Received Date:	January 03, 2019
Date of Tested:	January 04, 2019 ~ January 10, 2019

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	PASS

Tested By:

Denny Huang
Engineer Project Associate

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo

Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, CFR 47 FCC Part 2, CFR 47 FCC Part 15 and KDB414788 D01 Radiated Test Site v01r01.

3. FACILITIES AND ACCREDITATION

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

Note:

1. All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
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.
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	Blow Max remote control
EUT Description	The EUT is controller.
Model	C88HM11-2
Operation Frequency	433.92MHz
Modulation Type	ASK
Battery	DC 3.0V

5.2. TEST CHANNEL CONFIGURATION

Test Mode	Frequency
ASK	433.92MHz

5.3. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	55 ~ 65%	
Atmospheric Pressure:	1025Pa	
Temperature	TN	23 ~ 28°C
Voltage :	VL	N/A
	VN	DC 3.0V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage, DC 3V via Battery
VH= Upper Extreme Test Voltage
TN= Normal Temperature

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
433.92	PCB antenna	0

5.5. WORST-CASE CONFIGURATIONS

Mode
ASK

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	/	/	/	/

I/O CABLES

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

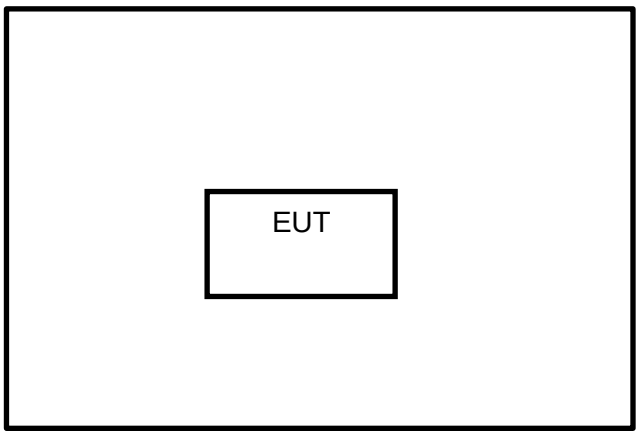
ACCESSORY

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

TEST SETUP

1. A fully charged battery was used for all tests.
2. The test sample can be into a transmission mode through the power on.

SETUP DIAGRAM FOR TEST



5.7. MEASURING INSTRUMENT AND SOFTWARE USED

Radiated Emissions						
Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Dec.10,2018	Dec.10,2019
☑	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Sep.17,2018	Sep.17,2021
☑	Preamplifier	HP	8447D	2944A09099	Dec.10,2018	Dec.10,2019
☑	EMI Measurement Receiver	R&S	ESR26	101377	Dec.10,2018	Dec.10,2019
☑	Horn Antenna	TDK	HRN-0118	130939	Sep.17,2018	Sep.17,2021
☑	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Aug.11,2018	Aug.11,2021
☑	Preamplifier	TDK	PA-02-0118	TRS-305-00066	Dec.10,2018	Dec.10,2019
☑	Preamplifier	TDK	PA-02-2	TRS-307-00003	Dec.10,2018	Dec.10,2019
☑	Loop antenna	Schwarzbeck	1519B	00008	Mar.26,2016	Mar. 25,2019
Software						
Used	Description		Manufacturer	Name		Version
☑	Test Software for Radiated disturbance		Farad	EZ-EMC		Ver. UL-3A1
Other instruments						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.10,2018	Dec.10,2019

6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

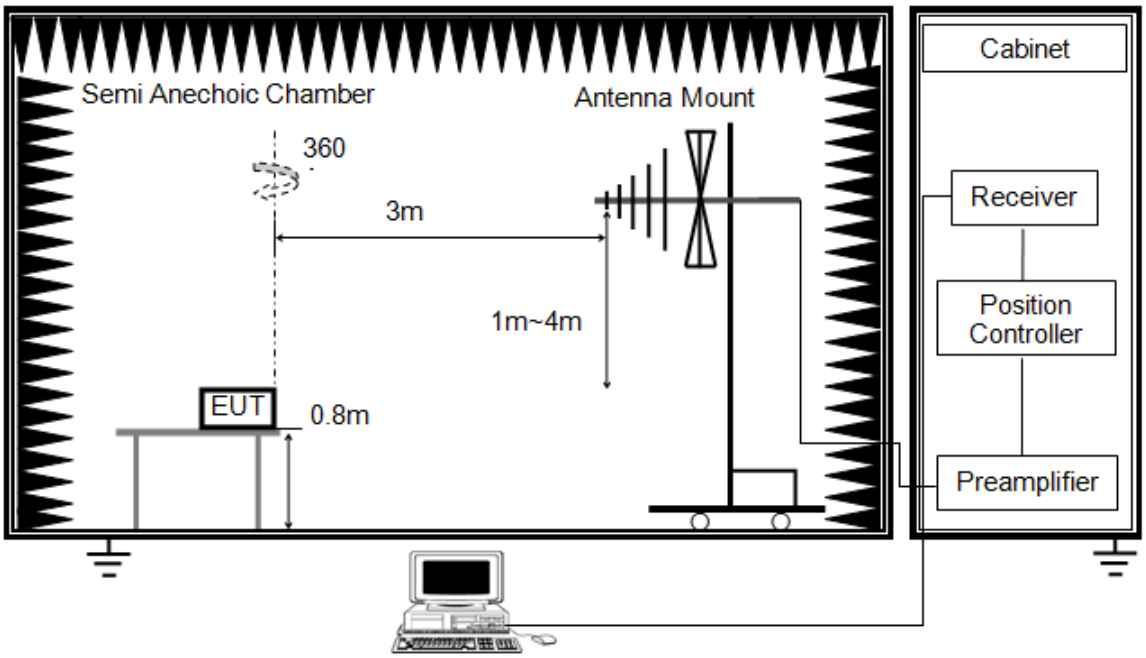
LIMITS

None; for reporting purposes only

PROCEDURE

FCC Reference:	CFR 47 Part 15.35(c)
Test Method Used:	ANSI C63.10 Section 7.5

TEST SETUP



a. Set RBW of spectrum analyzer to 100KHz and VBW to 100KHz.
b. Use a video trigger with the trigger level set to enable triggering only on full pulses.
c. Sweep Time is at least a 100 ms.
d. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
e. Measure the maximum time duration of one single pulse.

TEST ENVIRONMENT

Temperature	22.5°C	Relative Humidity	66%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V

RESULTS

	On Time (ms)	Times	Ton (ms)	Total Ton times (ms)
Ton 1	0.30	15	4.50	12.60
Ton 2	0.81	10	8.10	

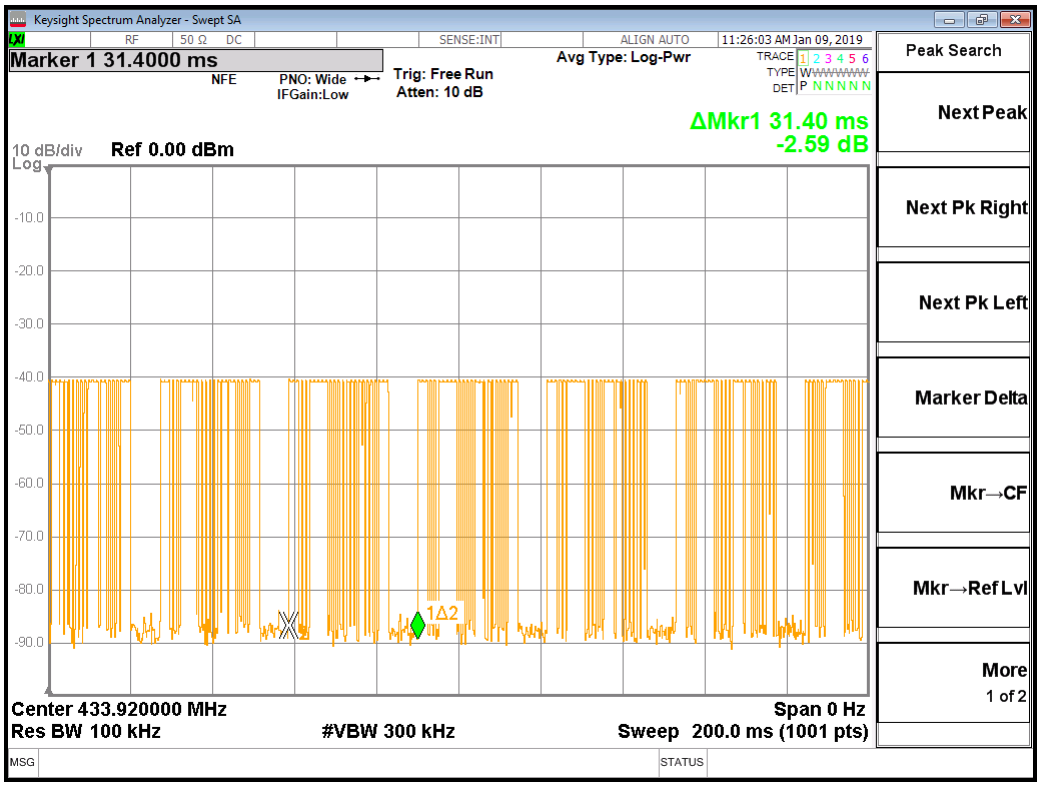
Note: Total Ton times= Ton1*15+Ton2*10

Total Ton times (ms)	Period (ms)	Duty Cycle (Linear)	Duty Cycle Correction Factor
12.60	31.40	0.401	-7.94

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

Ton

Period



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

6.2. TRANSMITTER TIMEOUT

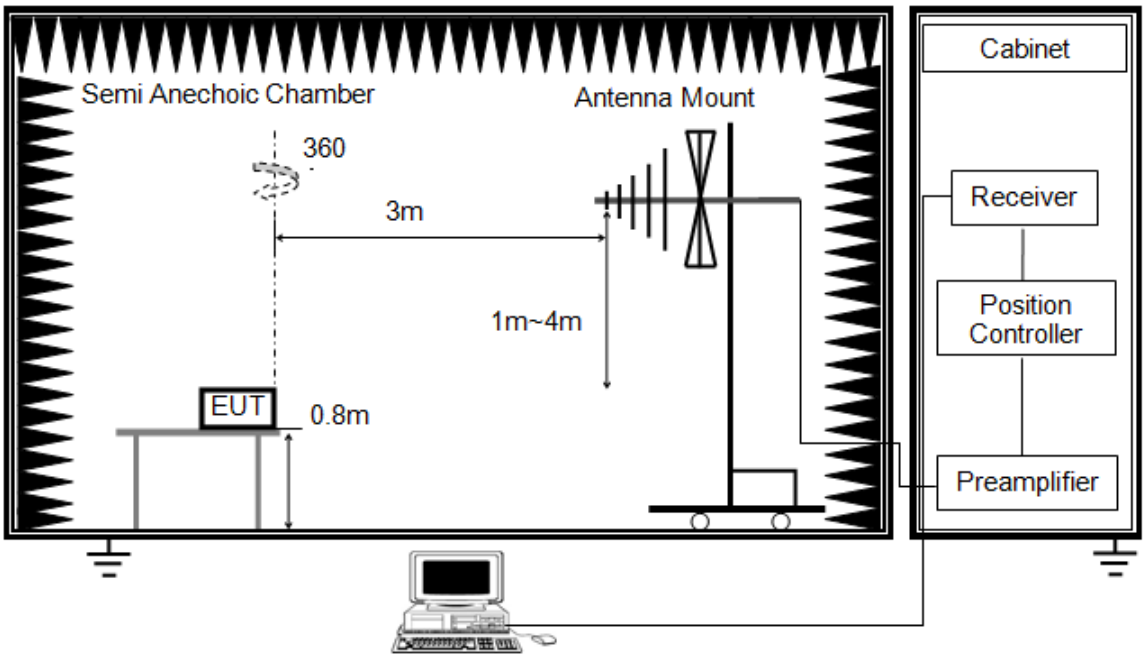
LIMITS

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

TEST PROCEDURE

FCC Reference:	CFR 47 Part 15.231(a)
Test Method Used:	The EUT transmitter was activated and monitored using a spectrum analyser for a period of 10 seconds.

TEST SETUP



a. Set RBW of spectrum analyzer to 100KHz and VBW to 100KHz.
b. Use a video trigger with the trigger level set to enable triggering only on full pulses.
c. Sew Sweep Time to 10 s.
d. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
e. Measure the maximum time duration of one single pulse.

TEST ENVIRONMENT

Temperature	22.5°C	Relative Humidity	66%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V

RESULTS

Deactivation Time (seconds)	Limit (seconds)	Margin (seconds)	Result
0.48	5.000	4.52	PASS

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

6.3. 20dB BANDWIDTH

LIMITS

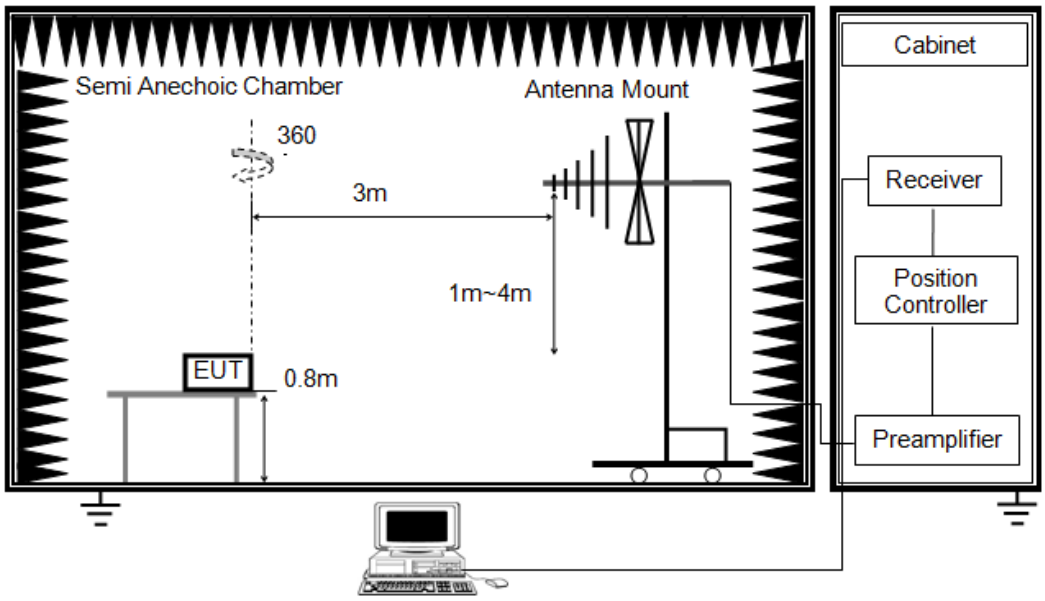
1. The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz.

2. The limit has been calculated as: 0.0025 * 433.92 MHz = 1.0848 MHz

TEST PROCEDURE

FCC Reference:	CFR 47 Part 15.231(c)
Test Method Used:	ANSI C63.10 Section 6.9.2

TEST SETUP



1. 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.

2. The EUT was placed on a turntable with 0.8 meter above ground.

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

4. Set the spectrum analyzer in the following setting as:
RBW is set to 1 kHz and VBW is set 3 kHz.

TEST ENVIRONMENT

Temperature	22.5°C	Relative Humidity	66%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V

RESULTS

Transmitter 20 dB Bandwidth (MHz)	Limit (MHz)	Result
0.01285	1.0848	Pass

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

6.4. RADIATED EMISSION

LIMITS

1. In addition to the provisions of §15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	[1]1,250 to 3,750	[1]125 to 375
174-260	3,750	375
260-470	[1]3,750 to 12,500	[1]375 to 1,250
Above 470	12,500	1,250

Note:
1. To obtain the average limit at the test frequency the values given in the table of FCC part 15.231(b) have to be linear interpolated and then converted to dBµV/m. The limit at 260 MHz is 3750 µV/m and at 470 MHz it is 12500 µV/m. Limit at 433.92 MHz is calculated as shown in ANSI C63.10 Section 7.6.2:

Limit [µV/m] = Limlower + ΔF [(Limupper – Limlower) / ($f$upper – $f$lower)]
where ΔF = fc – $f$lower = 433.92 – 260 = 173.92

Limit = 3750 + 173.92 * [(12500 – 3750) / (470 -260)]
= 3750 + 173.92 * [8750 / 210]
= 10996.7 µV/m

dBµV/m = 20 * log (µV/m)
= 20 * log (10996.7)

Average Limit at 433.92 MHz = 80.8 dBµV/m

2. If the average limit is specified for the EUT, the peak limit is 20 dB above the average limit as specified in FCC 15.35 (b)

2. Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permItted under other sections of this part, e.g., §§15.231 and 15.241.

3. 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.

Restricted bands of operation

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			

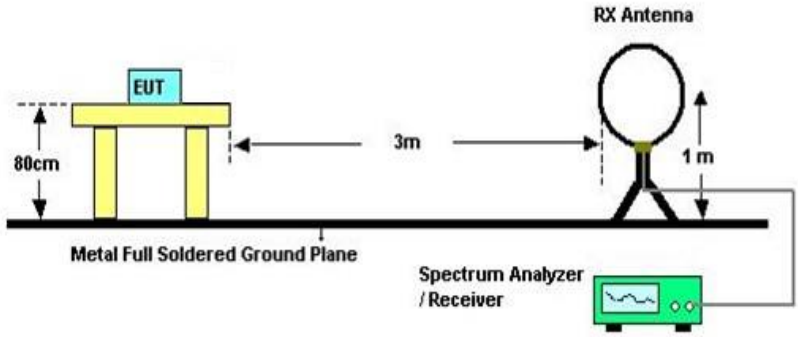
Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST PROCEDURE

FCC Reference:	CFR 47 Parts 15.231(b) / 15.209
Test Method Used:	ANSI C63.10 Sections 6.3 and 6.5

TEST SETUP

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
Detector	Peak/QP/ Average
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 and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

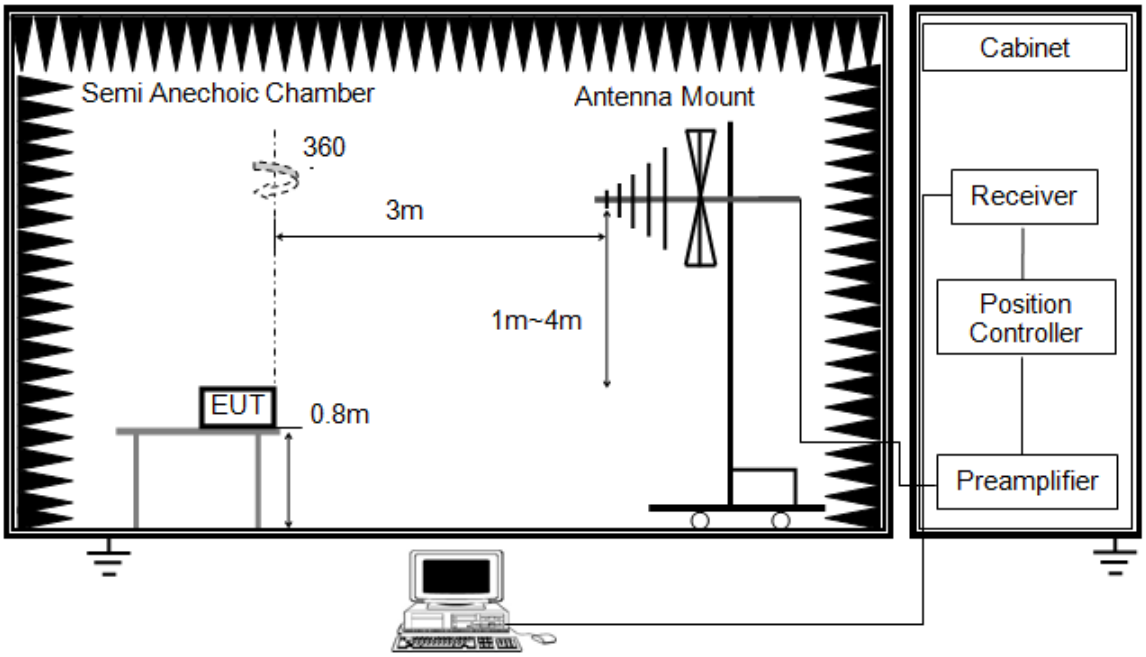
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. 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



The setting of the spectrum analyser

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

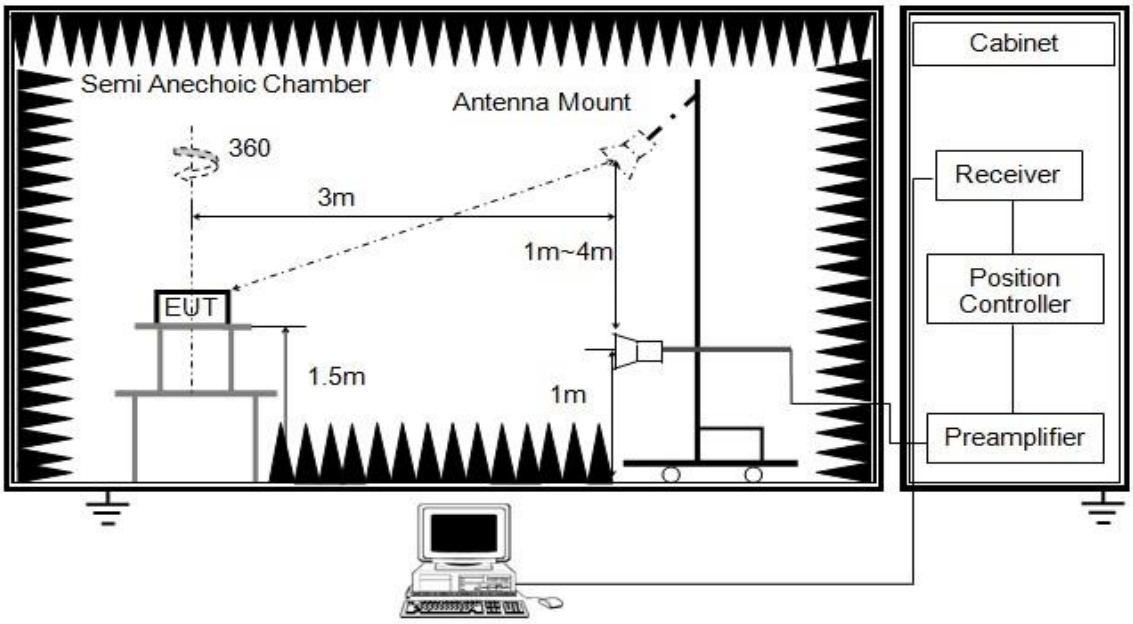
1. The testing follows the guidelines in ANSI C63.10-2013.

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 0.8 meter 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

ABOVE 1G



RBW	1M
VBW	3M
Sweep	Auto
Detector	Peak For Average see note 6
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 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.

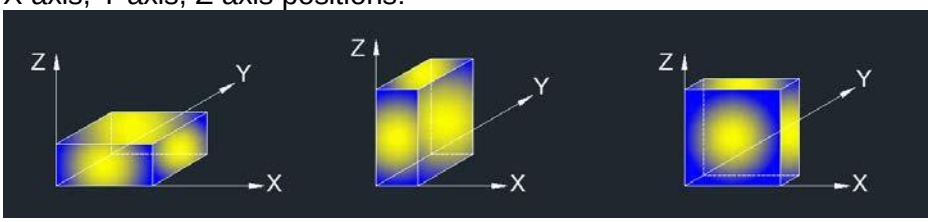
6. Average Value=Peak Value + Duty Correction Factor

For the Duty Cycle and Correction Factor please refer to clause 6.1.ON TIME AND DUTY CYCLE.

8. For the actual test configuration, please refer to the related item in this test report. (Photographs of the Test Configuration)

RESULTS

X axis, Y axis, Z axis positions:



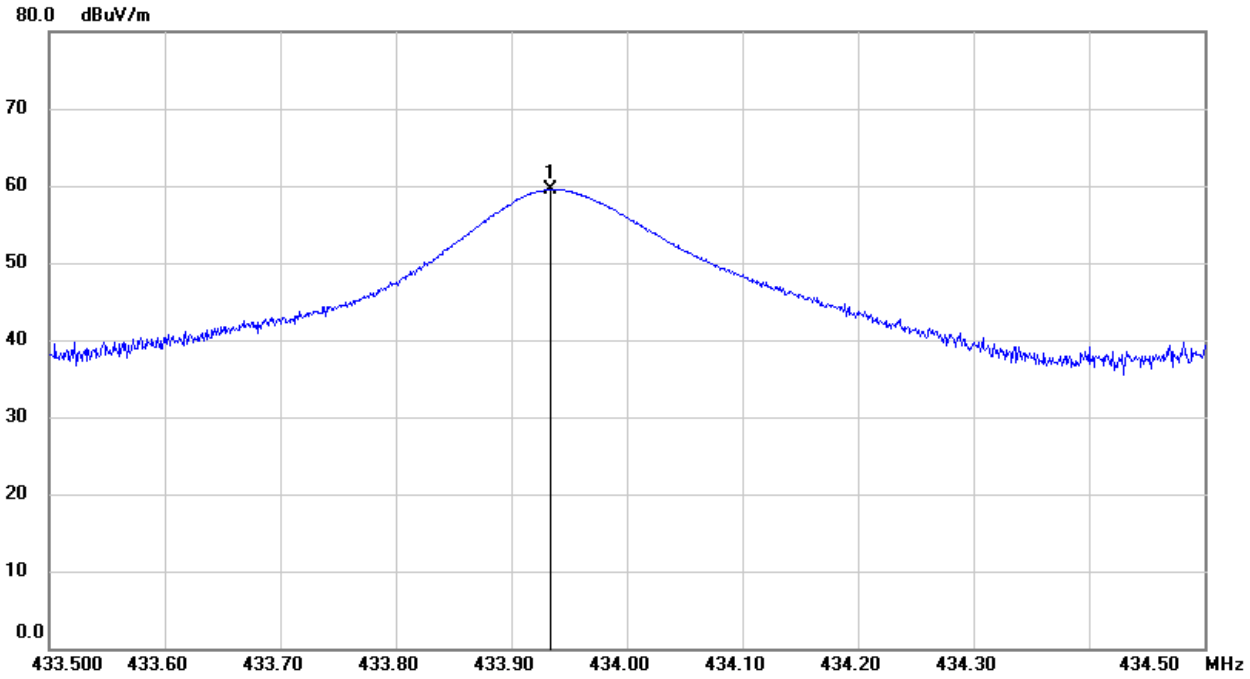
Note: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

TEST ENVIRONMENT

Temperature	22.1°C	Relative Humidity	64%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V

6.4.1. FUNDAMENTAL FIELD STRENGTH

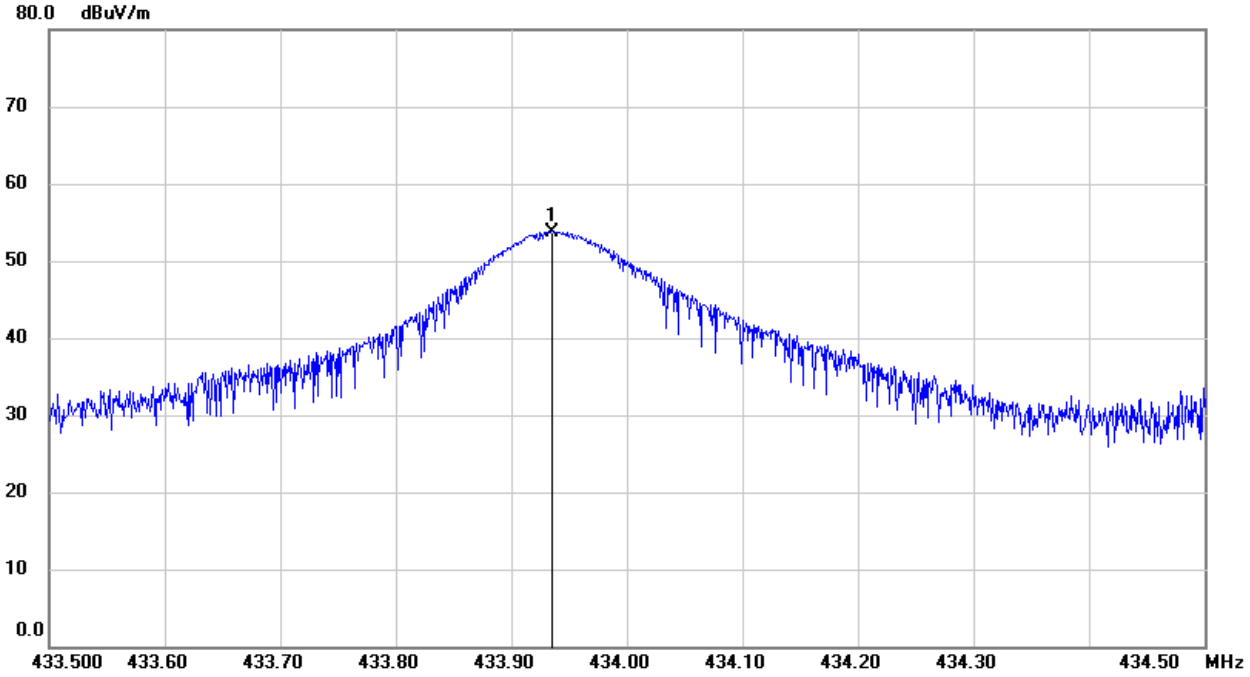
HORIZONTAL



Frequency	Reading	Correct	Peak Result	Average Result	Limit	Margin	Remark
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
433.9340	71.22	-11.69	59.53	/	100.8	-41.27	peak
			/	51.59	80.8	-29.21	Average

Note: 1. Peak Result = Reading+ Duty Correction Factor
2. Average Result= Peak Result+ Correct Factor

VERTICAL



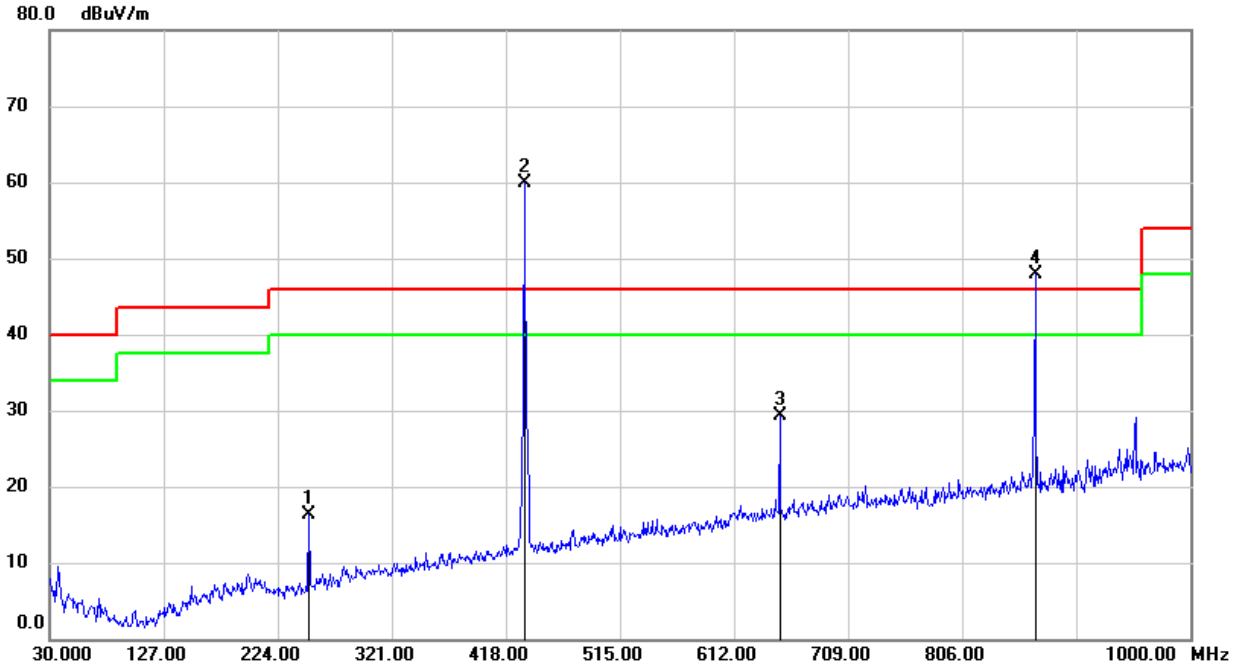
Frequency	Reading	Correct	Peak Result	Average Result	Limit	Margin	Remark
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
433.9350	65.49	-11.69	53.80	/	100.8	-47.00	peak
			/	45.86	80.8	-34.94	Average

Note: 1. Peak Result = Reading+ Duty Correction Factor
2. Average Result= Peak Result+ Correct Factor

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

6.4.2. SPURIOUS EMISSIONS BELOW 1G

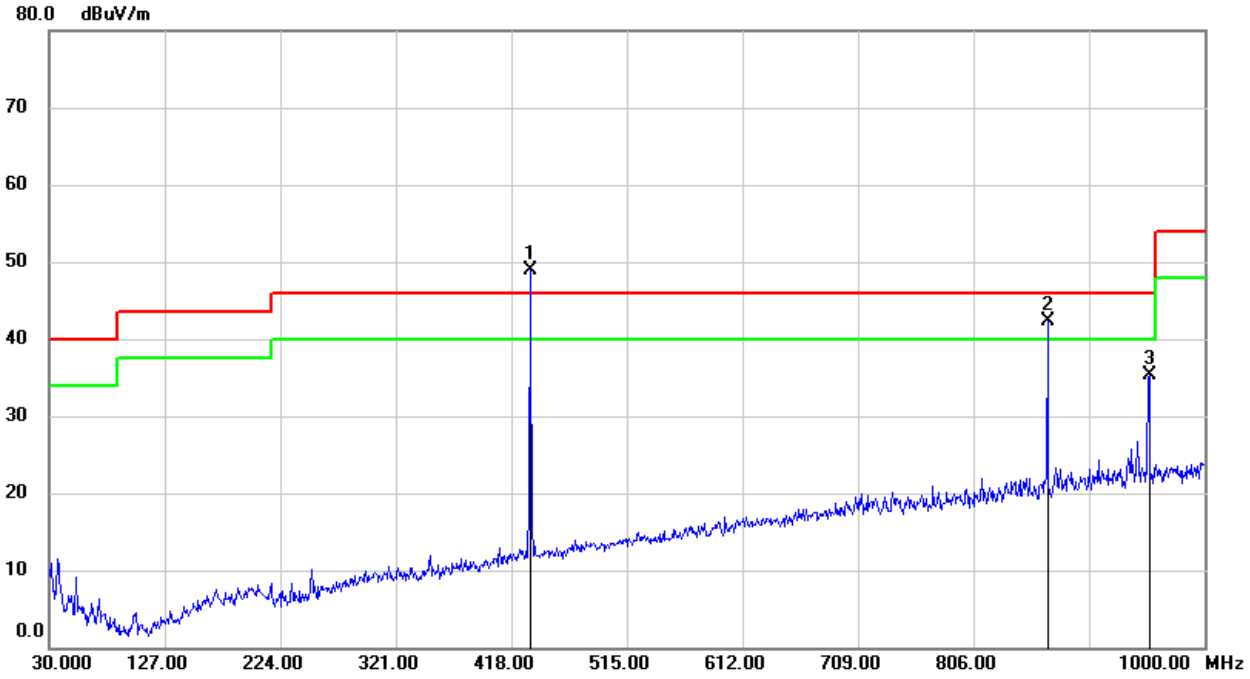
SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency	Reading	Correct	Peak Result	Average Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	250.1900	32.48	-16.12	16.36	/	46.00	-29.64	peak
2	433.5200	71.61	-11.69	59.92	/	100.8	-40.88	peak
3	650.8000	36.86	-7.58	29.28	/	46.00	-16.72	peak
2th harmonic	868.0800	52.34	-4.48	47.86	/	80.8	-32.94	peak
				/	39.92	60.8	-20.88	Average

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.
4. Mark 2 is the fundamental frequency, Mark 4 is 2th harmonic.
5. For the average value of the fundamental frequency(Mark 2), please refer to clause 6.4.1.

SPURIOUS EMISSIONS (VERTICAL)



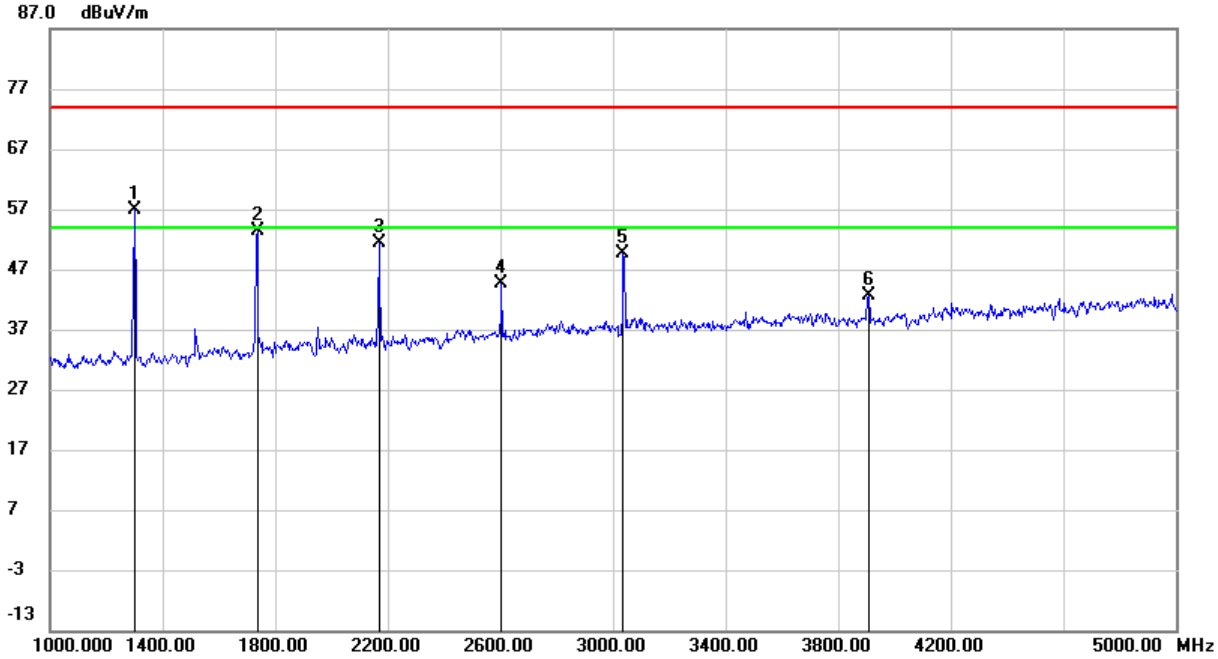
No.	Frequency	Reading	Correct	Peak Result	Average Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	433.5200	60.63	-11.69	48.94	/	100.8	-51.86	peak
2th harmonic	868.0800	46.77	-4.48	42.29	/	80.8	-38.51	peak
				/	34.35	60.8	-26.45	Average
3	953.4400	38.63	-3.37	35.26	/	46.00	-10.74	peak

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.
4. Mark 1 is the fundamental frequency, Mark 2 is 2th harmonic.
5. For the average value of the fundamental frequency(Mark 1), please refer to clause 6.4.1.

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

6.4.3. SPURIOUS EMISSIONS ABOVE 1G

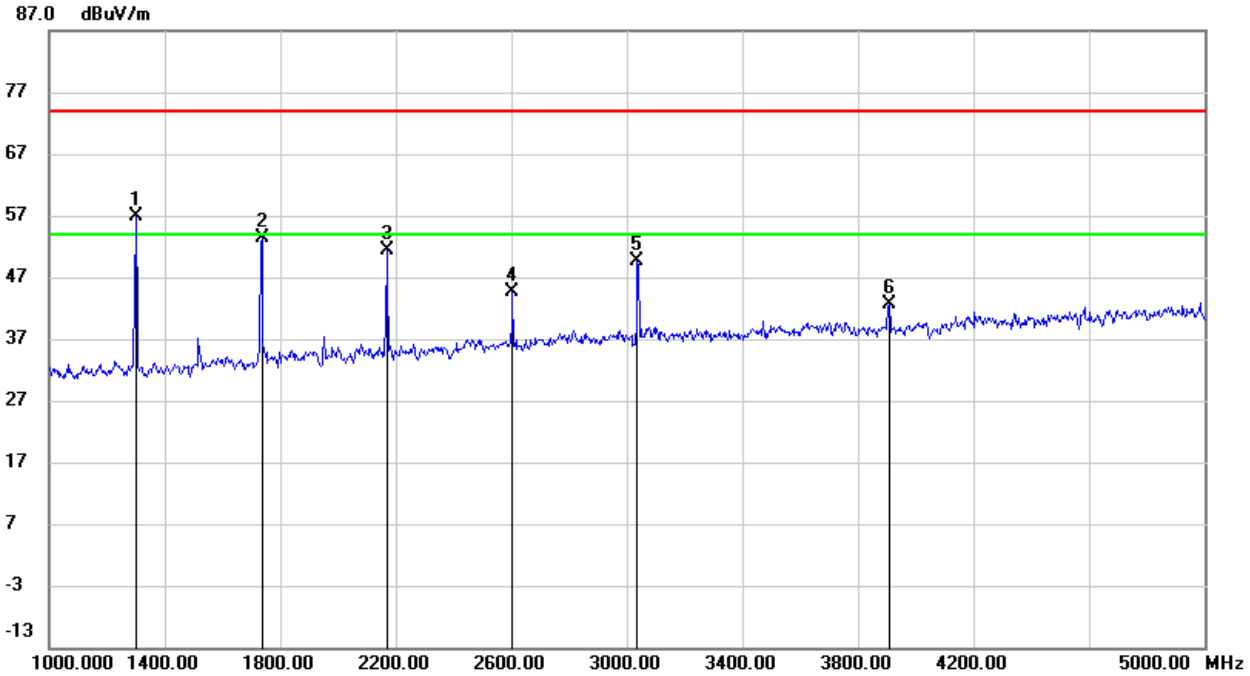
HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency	Reading	Correct	P-Result	A-Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	dBuV/m)	(dBuV/m)	(dB)	
1(3th harmonic)	1300.000	74.23	-13.13	61.10	/	80.8	-19.7	peak
				/	53.16	60.8	-7.64	average
2(4th harmonic)	1736.000	69.31	-11.61	57.70	/	80.8	-23.1	peak
				/	49.76	60.8	-11.04	average
3(5th harmonic)	2168.000	66.60	-9.94	56.66	/	80.8	-24.14	peak
				/	48.72	60.8	-12.08	average
4(6th harmonic)	2604.000	55.65	-8.59	47.06	/	80.8	-33.74	peak
				/	39.12	60.8	-21.68	average
5(7th harmonic)	3036.000	56.23	-6.04	50.19	/	80.8	-30.61	peak
				/	42.25	60.8	-18.55	average
6	3908.000	48.64	-4.16	44.48	/	74.0	-29.52	peak

Note: 1.Peak Result = Reading Level + Correct Factor.
2. Average Result = Peak Result + Duty Correction Factor.
3. No burst found in Restricted bands.

HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	P-Result (dBuV/m)	A-Result dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1(3th harmonic)	1300.000	69.96	-13.13	56.83	/	80.8	-23.97	peak
				/	48.89	60.8	-11.91	average
2(4th harmonic)	1736.000	65.08	-11.61	53.47	/	80.8	-27.33	peak
				/	45.53	60.8	-15.27	average
3(5th harmonic)	2168.000	61.41	-9.94	51.47	/	80.8	-29.33	peak
				/	43.53	60.8	-17.27	average
4(6th harmonic)	2604.000	53.25	-8.59	44.66	/	80.8	-36.14	peak
				/	36.72	60.8	-24.08	average
5(7th harmonic)	3036.000	55.56	-6.04	49.52	/	80.8	-31.28	peak
				/	41.58	60.8	-19.22	average
6	3908.000	46.75	-4.16	42.59	/	74.0	-31.41	peak

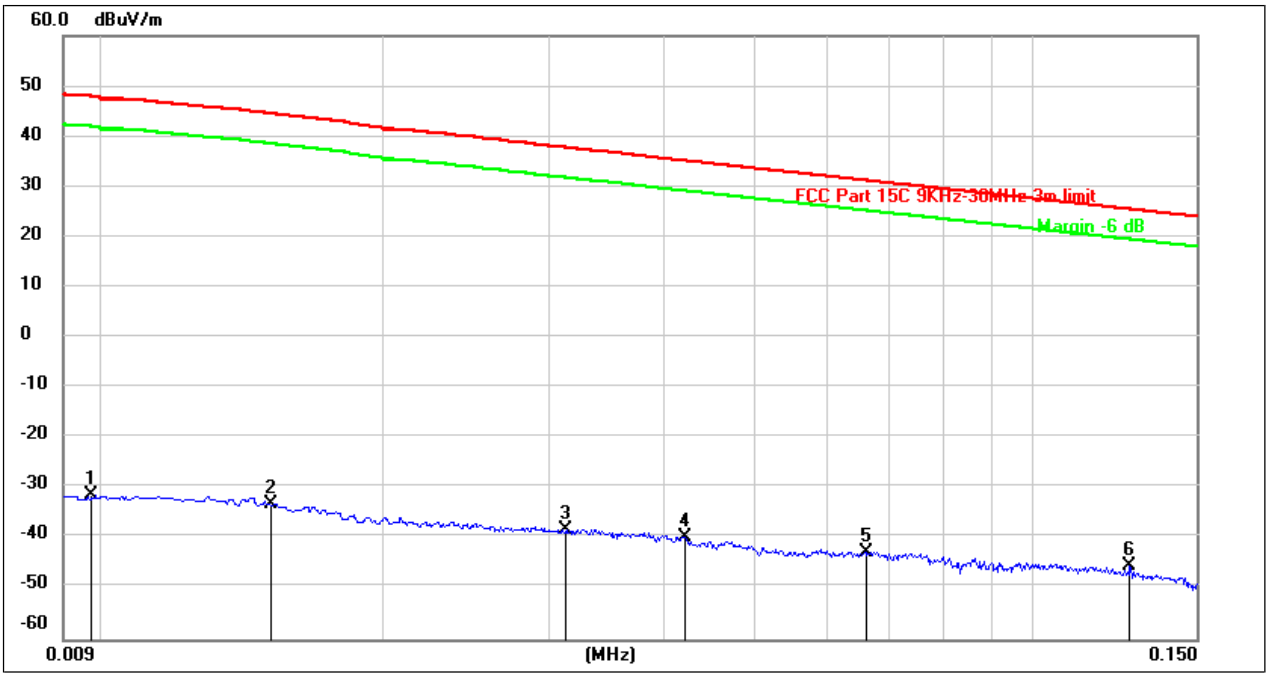
Note: 1.Peak Result = Reading Level + Correct Factor.
2. Average Result = Peak Result + Duty Correction Factor.
3. No burst found in Restricted bands.

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

6.4.4. SPURIOUS EMISSIONS BELOW 30M

SPURIOUS EMISSIONS (HORIZONTAL)

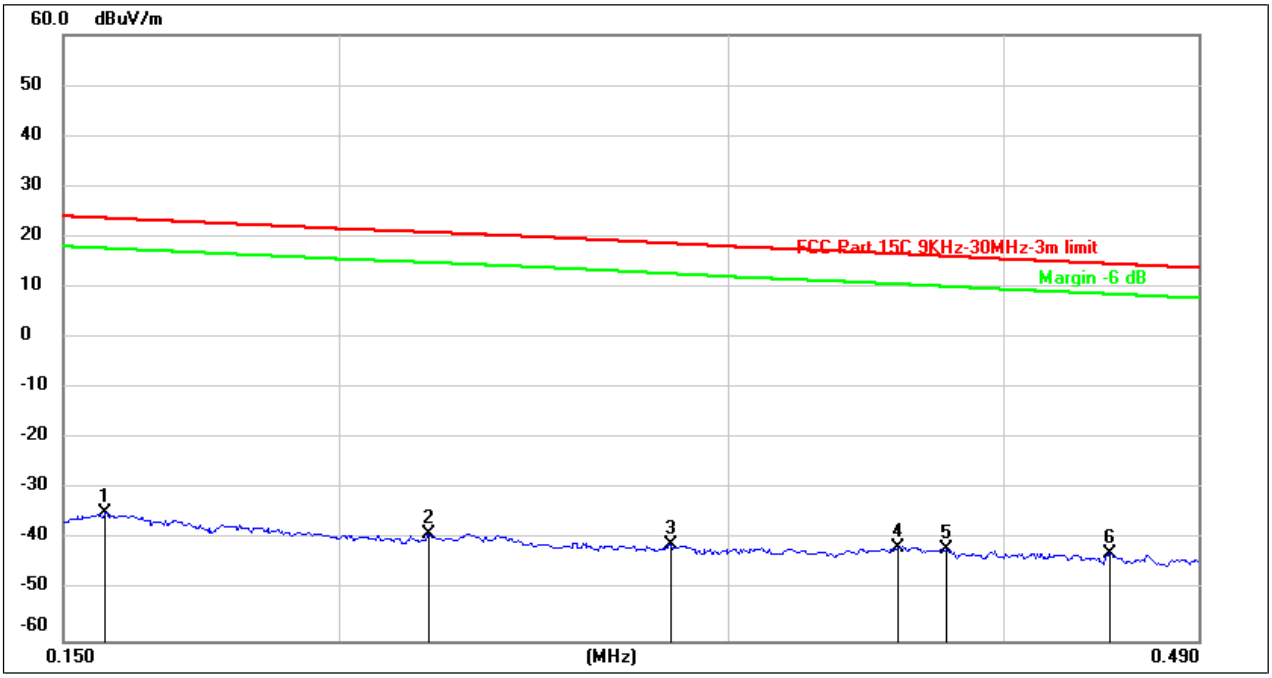
9kHz~ 150kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0097	69.93	-101.38	-31.45	47.83	-79.28	peak
2	0.0151	68.21	-101.37	-33.16	44.53	-77.69	peak
3	0.0313	63.20	-101.39	-38.19	37.73	-75.92	peak
4	0.0420	61.84	-101.44	-39.60	35.17	-74.77	peak
5	0.0660	58.85	-101.55	-42.70	31.24	-73.94	peak
6	0.1272	56.35	-101.71	-45.36	25.52	-70.88	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.

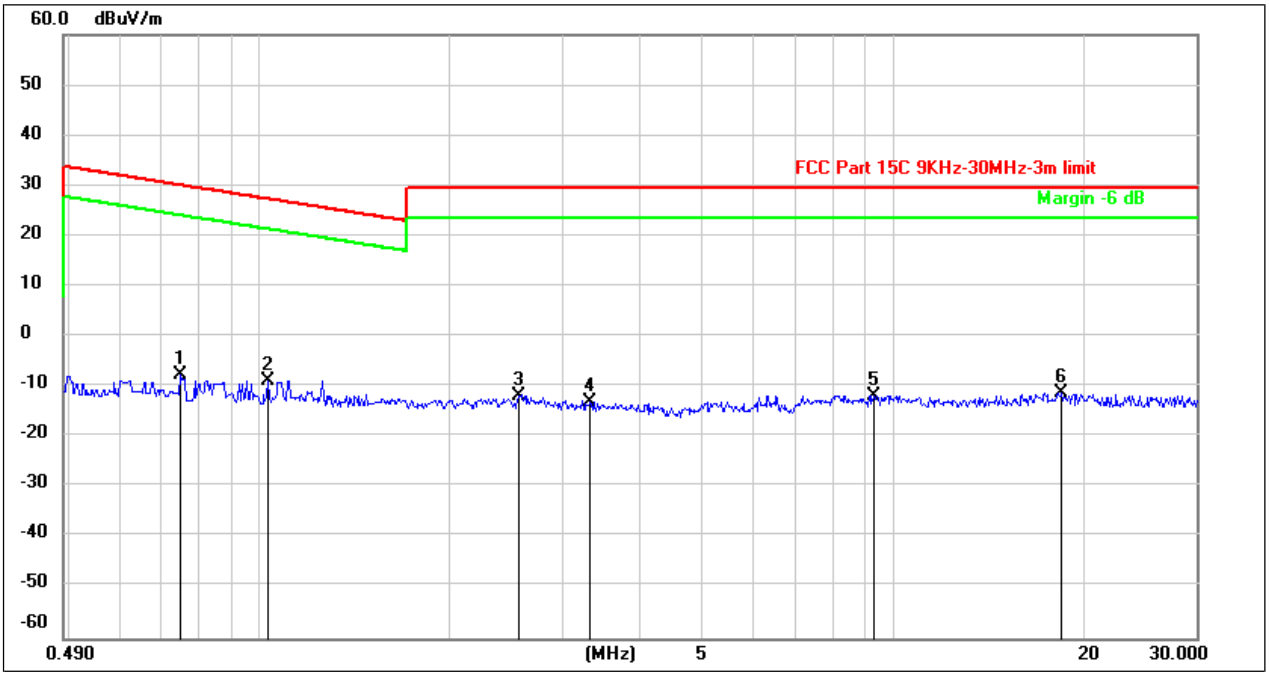
0.15MHz ~ 0.49MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1565	67.03	-101.65	-34.62	23.72	-58.34	peak
2	0.2197	62.77	-101.75	-38.98	20.89	-59.87	peak
3	0.2826	60.99	-101.83	-40.84	18.67	-59.51	peak
4	0.3583	60.30	-101.91	-41.61	16.60	-58.21	peak
5	0.3768	60.07	-101.93	-41.86	16.14	-58.00	peak
6	0.4470	59.21	-102.01	-42.80	14.64	-57.44	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.

0.49MHz ~ 30MHz

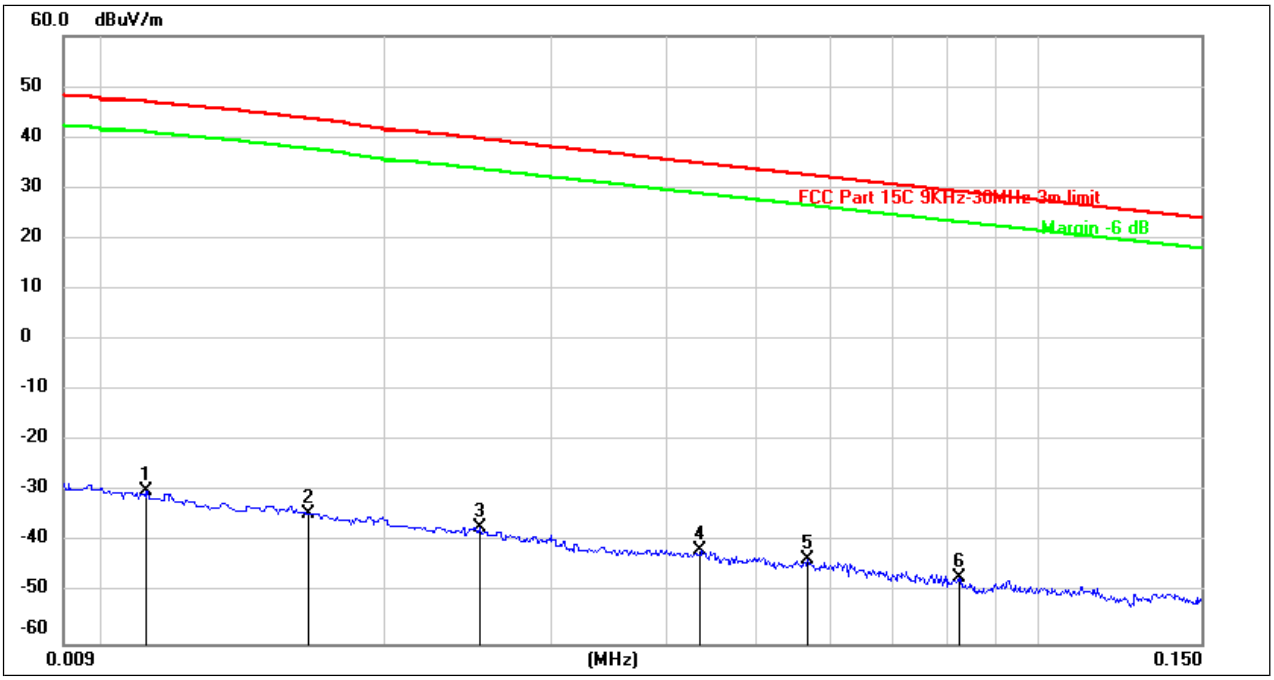


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.7486	54.58	-62.11	-7.53	30.14	-37.67	peak
2	1.0276	53.36	-62.25	-8.89	27.37	-36.26	peak
3	2.5617	49.77	-61.68	-11.91	29.54	-41.45	peak
4	3.3229	48.39	-61.50	-13.11	29.54	-42.65	peak
5	9.3132	49.16	-60.89	-11.73	29.54	-41.27	peak
6	18.4318	49.79	-60.89	-11.10	29.54	-40.64	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.

SPURIOUS EMISSIONS (VERTICAL)

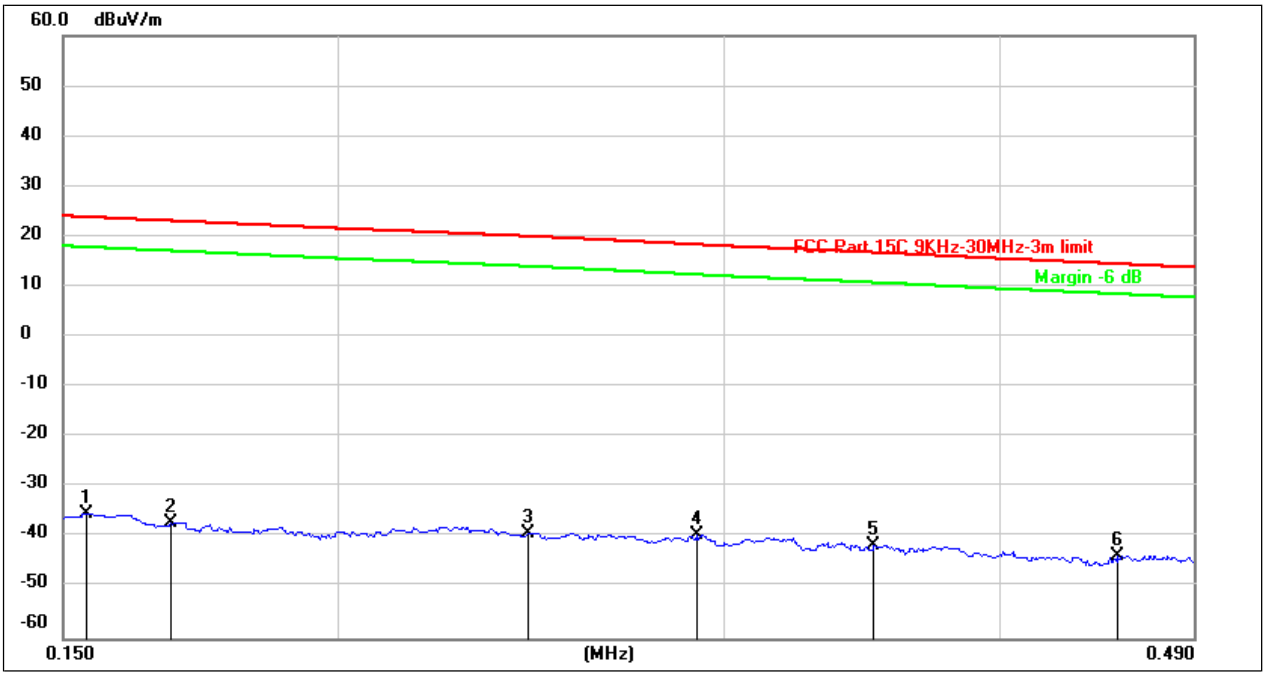
9kHz~ 150kHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0111	71.66	-101.39	-29.73	46.94	-76.67	peak
2	0.0165	67.15	-101.37	-34.22	43.69	-77.91	peak
3	0.0252	64.36	-101.37	-37.01	39.75	-76.76	peak
4	0.0434	59.93	-101.45	-41.52	34.90	-76.42	peak
5	0.0567	58.19	-101.51	-43.32	32.56	-75.88	peak
6	0.0825	54.59	-101.65	-47.06	29.28	-76.34	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.

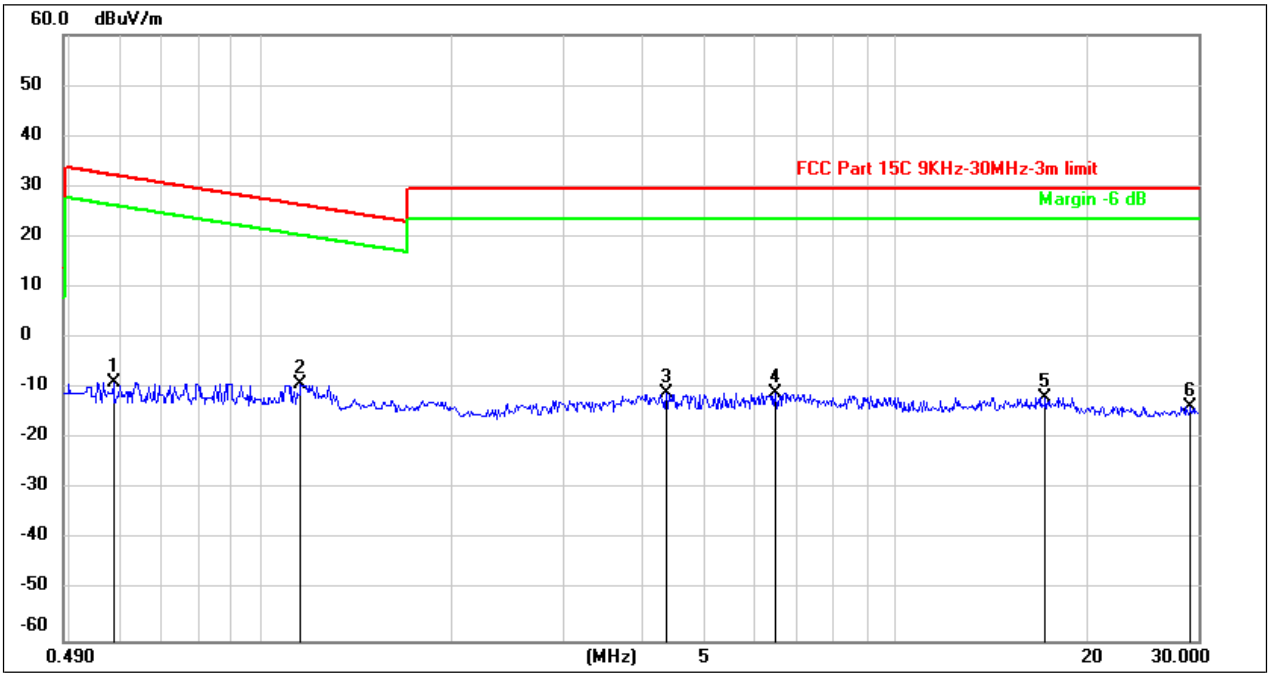
0.15MHz~ 0.49MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1537	66.40	-101.64	-35.24	23.87	-59.11	peak
2	0.1680	64.76	-101.67	-36.91	23.10	-60.01	peak
3	0.2442	62.77	-101.79	-39.02	20.02	-59.04	peak
4	0.2912	62.34	-101.85	-39.51	18.37	-57.88	peak
5	0.3506	60.36	-101.91	-41.55	16.79	-58.34	peak
6	0.4526	58.50	-102.02	-43.52	14.53	-58.05	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.

0.49MHz ~ 30MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.5872	53.24	-62.08	-8.84	32.24	-41.08	peak
2	1.1576	52.92	-62.20	-9.28	26.34	-35.62	peak
3	4.3558	50.34	-61.39	-11.05	29.54	-40.59	peak
4	6.4805	50.27	-61.28	-11.01	29.54	-40.55	peak
5	17.2515	49.17	-60.93	-11.76	29.54	-41.30	peak
6	29.2327	46.42	-60.04	-13.62	29.54	-43.16	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.

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

7. ANTENNA REQUIREMENTS

Applicable requirements

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

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

RESULTS

Complies

END OF REPORT