



FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Wireless doorbell for socket

MODEL NUMBER: SFS 52 B2

FCC ID: 2AJ90-SFS52B2

REPORT NUMBER: 4788096206.2-1

ISSUE DATE: October 25, 2017

Prepared for

Lidl US, LLC

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Prepared by

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	10/25/2017	Initial Issue	

Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	Dell Time	FCC 15.231 (a) (1)	PASS
2	20dB Bandwidth	FCC 15.231 (c)	PASS
3	Radiated emission	FCC 15.231 (b)/15.209	PASS

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Lidl US, LLC
Address: 3500 S. Clark Street, Arlington, Virginia, United States 22202

Manufacturer Information

Company Name: WINKA ELECTRONIC CO.,LTD
Address: The west of Lihan Avenue (Within Putian City Jiali Electronic Industry Co.,Ltd), Hanjiang District, Putian, Fujian, China.

EUT Name: Wireless doorbell for socket

Model: SFS 52 B2

Sample Status: Normal

Sample ID: 1090375

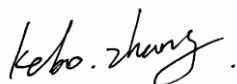
Brand: N/A

Sample Received: October 12, 2017

Date of Tested: October 12, 2017 ~ October 23, 2017

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

Tested By:



Kebo Zhang
Engineer

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, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

Test Location	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Address	Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
Accreditation Certificate	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. The Certificate Registration Number is 4102.01. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The Designation Number is CN1187. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.

Note: 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.

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
Uncertainty for Conduction emission test	2.90dB
Uncertainty for Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.52dB
Uncertainty for Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	5.04dB(1-6GHz)
	5.30dB (6GHz-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

Equipment	Wireless doorbell for socket
Model Name	SFS 52 B2
Operation Frequency	433.92MHz
Modulation Type	FSK
Power supply	DC 3V via Battery

5.2. TEST CHANNEL CONFIGURATION

Test Mode	Frequency
FSK	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	DC3V
	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 TEST SETUP

SUPPORT EQUIPMENT

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

I/O CABLES

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

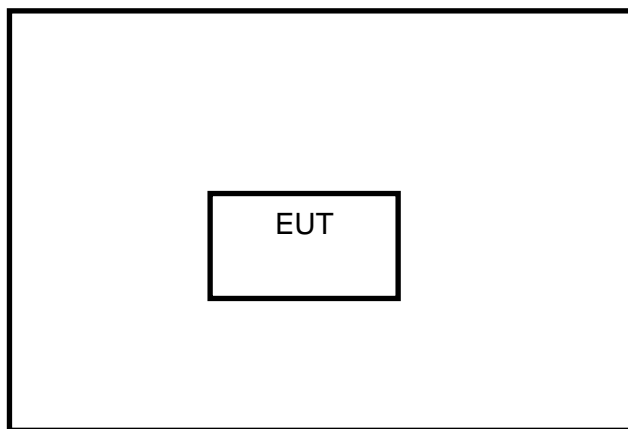
ACCESSORY

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

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



5.5. MEASURING INSTRUMENT AND SOFTWARE USED

Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
<input checked="" type="checkbox"/>	MXE EMI Receiver	KESIGHT	N9038A	MY56400 036	Feb. 24, 2017	Feb. 24, 2018
<input checked="" type="checkbox"/>	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	Jan.09, 2016	Jan.09, 2019
<input checked="" type="checkbox"/>	Preamplifier	HP	8447D	2944A090 99	Feb. 13, 2017	Feb. 13, 2018
<input checked="" type="checkbox"/>	EMI Measurement Receiver	R&S	ESR26	101377	Dec. 20, 2016	Dec. 20, 2017
<input checked="" type="checkbox"/>	Horn Antenna	TDK	HRN-0118	130939	Jan. 09, 2016	Jan. 09, 2019
<input checked="" type="checkbox"/>	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	Jan.06, 2016	Jan.06, 2019
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-0118	TRS-305- 00066	Jan. 14, 2017	Jan. 14, 2018
<input checked="" type="checkbox"/>	Preamplifier	TDK	PA-02-2	TRS-307- 00003	Dec. 20, 2016	Dec. 20, 2017
<input checked="" type="checkbox"/>	Loop antenna	Schwarzbeck	1519B	00008	Mar. 26, 2016	Mar. 26, 2019
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	MY55410 512	Dec. 20, 2016	Dec. 20, 2017
<input checked="" type="checkbox"/>	Power Meter	Keysight	N9031A	MY55416 024	Feb. 13, 2017	Feb. 13, 2018
<input checked="" type="checkbox"/>	Power Sensor	Keysight	N9323A	MY55440 013	Feb. 13, 2017	Feb. 13, 2018

6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

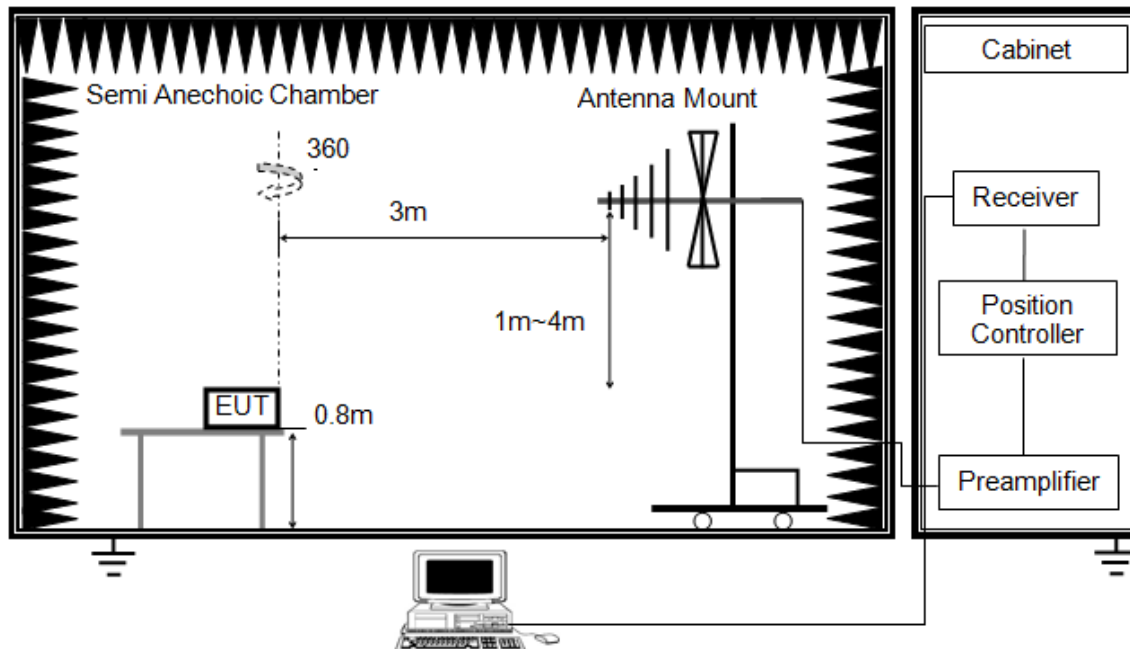
LIMITS

None; for reporting purposes only

PROCEDURE

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

TEST SETUP



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

RESULTS

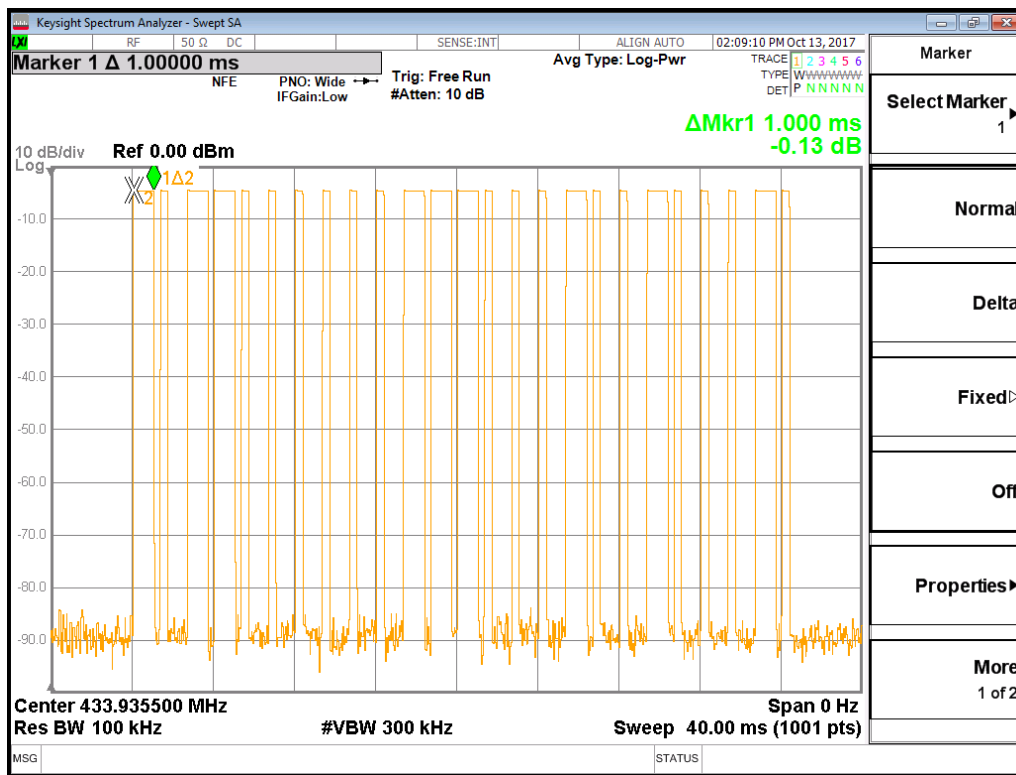
	On Time (ms)	Times	Ton (ms)	Total Ton times (ms)
Ton1	1	9	9	11.88
Ton2	0.32	16	2.88	

Note: Total Ton times= Ton1*9+Ton2*16

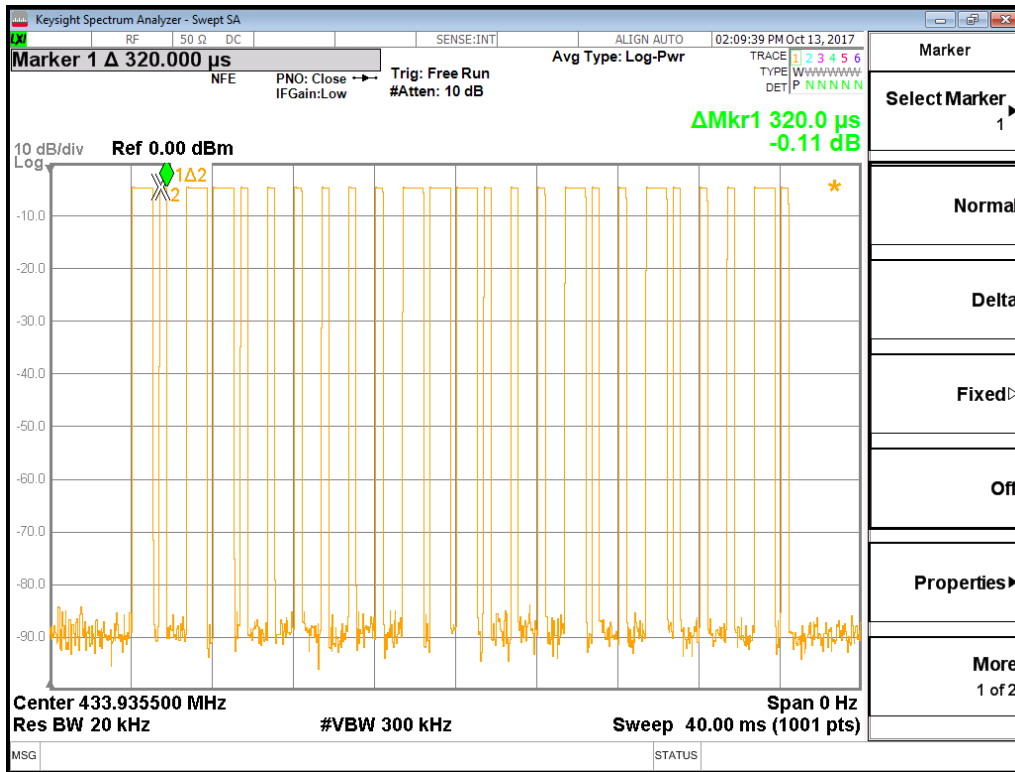
Total Ton times (ms)	Period (ms)	Duty Cycle (Linear)	Duty Cycle Correction Factor
11.8	42.6	0.277	-11.15

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

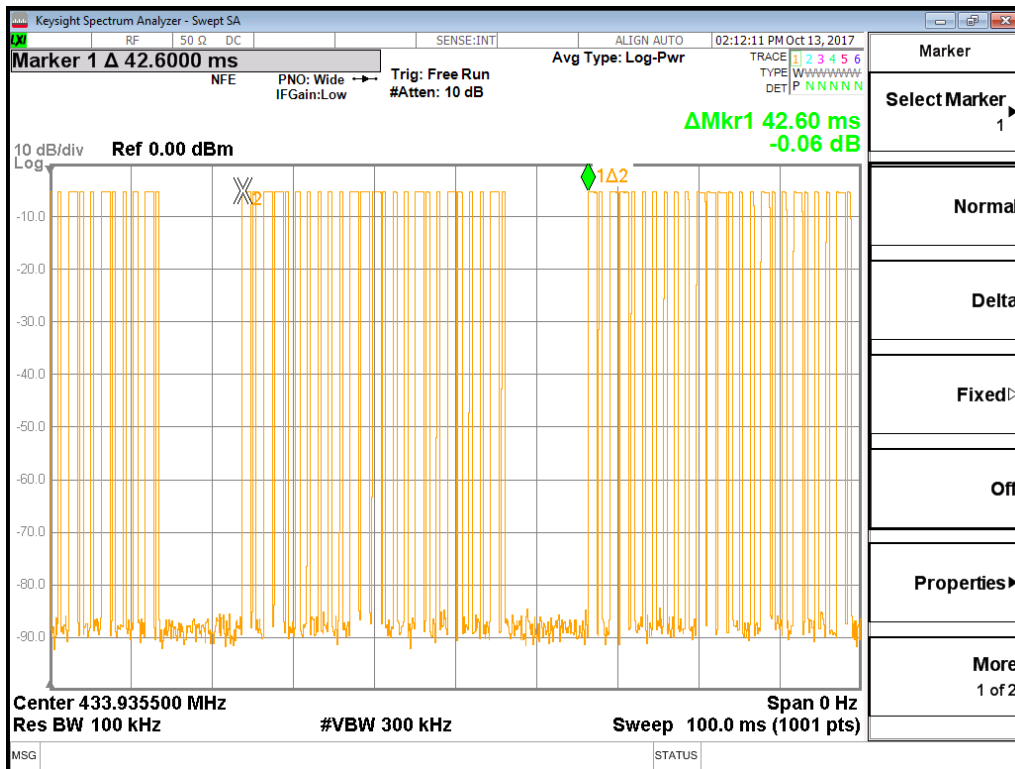
Ton 1



Ton 2



Period
(ms)



6.2. TRANSMITTER TIMEOUT

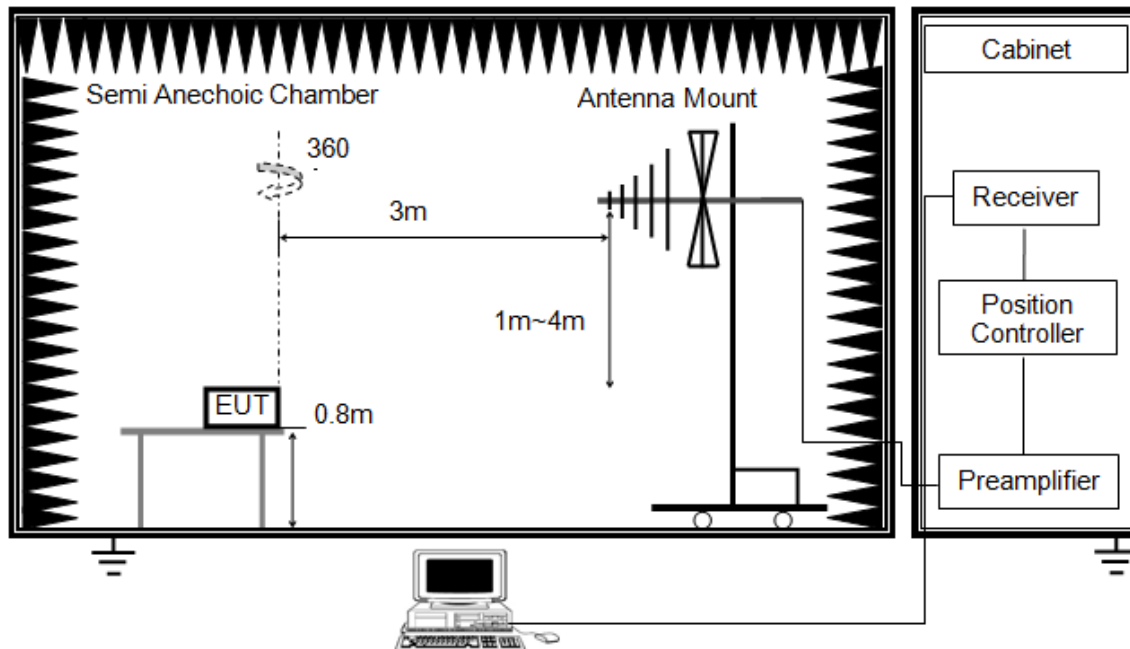
LIMITS

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

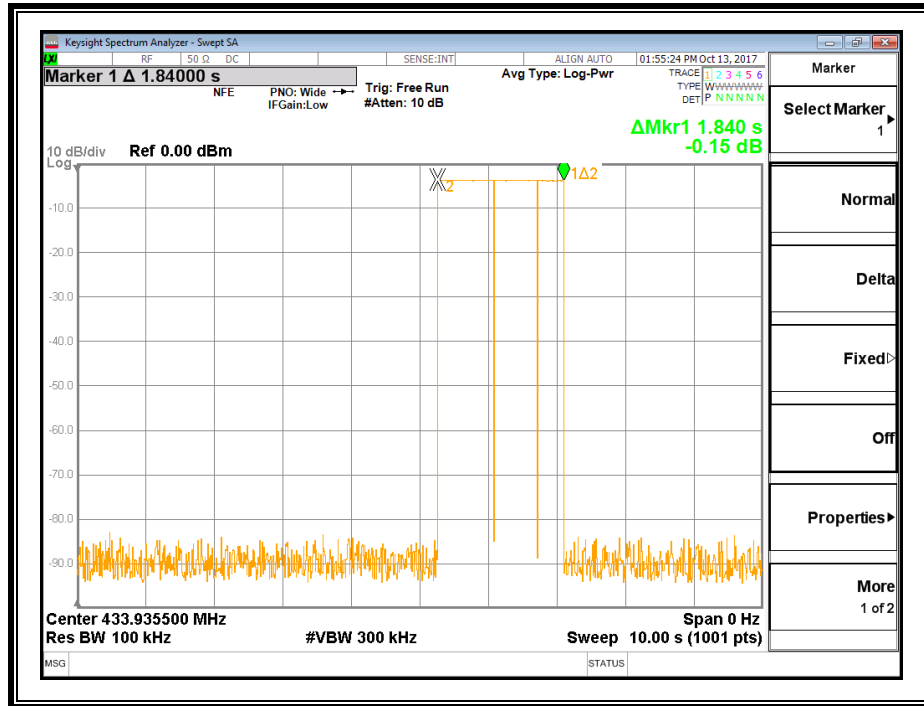
TEST SETUP



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

RESULTS

Deactivation Time (seconds)	Limit (seconds)	Margin (seconds)	Result
1.84	5.000	3.16	Complied



6.3. 20dB BANDWIDTH

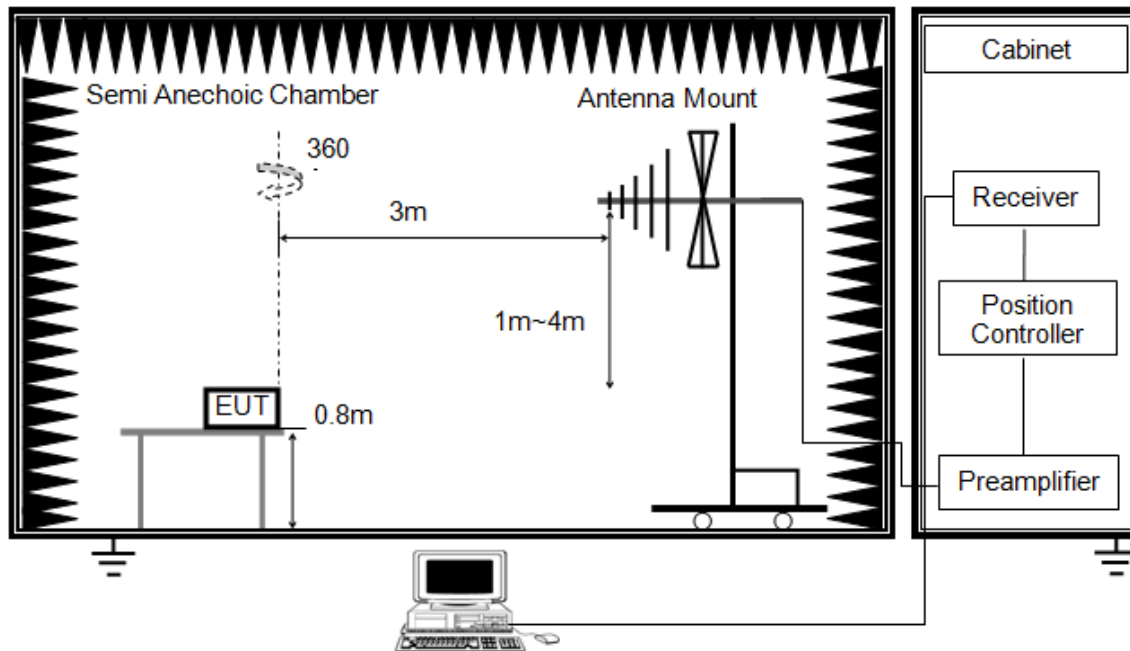
LIMITS

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: $0.0025 * 433.92 \text{ MHz} = 1.0848 \text{ MHz}$

TEST PROCEDURE

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

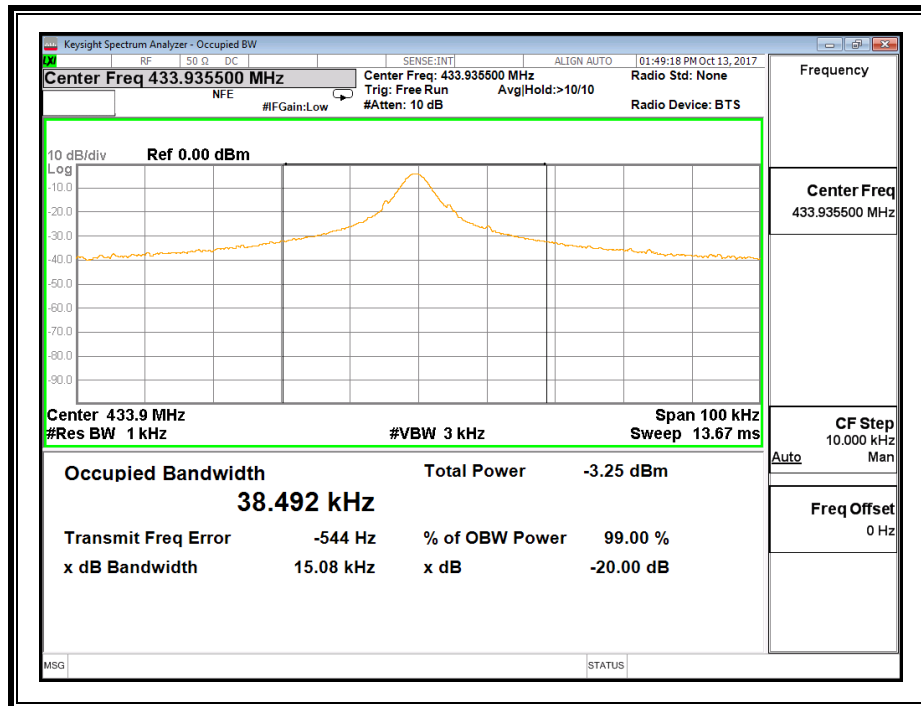
TEST SETUP



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.

RESULTS

Transmitter 20 dB Bandwidth (MHz)	Limit (MHz)	Result
0.01508	1.0848	Complied



6.4. RADIATED EMISSION

LIMITS

- 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 dB μ V/m. The limit at 260 MHz is 3750 μ V/m and at 470 MHz it is 12500 μ V/m. Limit at 433.92 MHz is calculated as shown in ANSI C63.10 Section 7.6.2:

$$\text{Limit } [\mu\text{V/m}] = \text{Lim}_{\text{lower}} + \Delta F [(\text{Lim}_{\text{upper}} - \text{Lim}_{\text{lower}}) / (f_{\text{upper}} - f_{\text{lower}})] \text{ where } \Delta F = f_c - f_{\text{lower}}$$

$$= 433.92 - 260 = 173.92$$

$$\text{Limit} = 3750 + 173.92 * [(12500 - 3750) / (470 - 260)]$$

$$= 3750 + 173.92 * [8750 / 210]$$

$$= 10996.7 \mu\text{V/m}$$

$$\text{dB}\mu\text{V/m} = 20 * \log (\mu\text{V/m})$$

$$= 20 * \log (10996.7)$$

Average Limit at 433.92 MHz = 80.8 dB μ V/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)

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

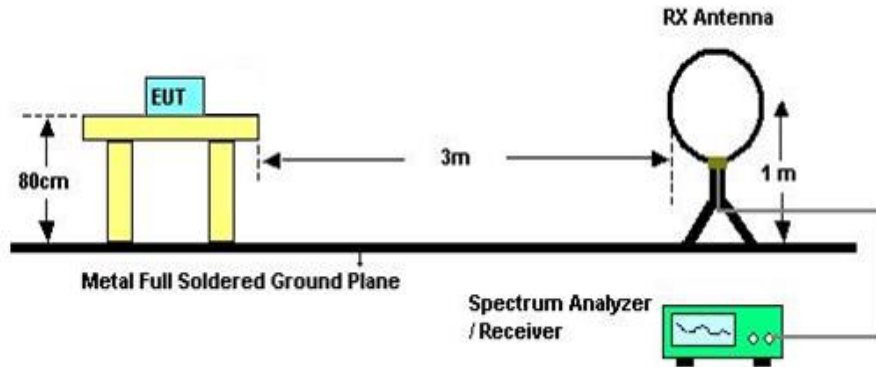
²Above 38.6c

TEST PROCEDURE

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

TEST SETUP

Below 30MHz

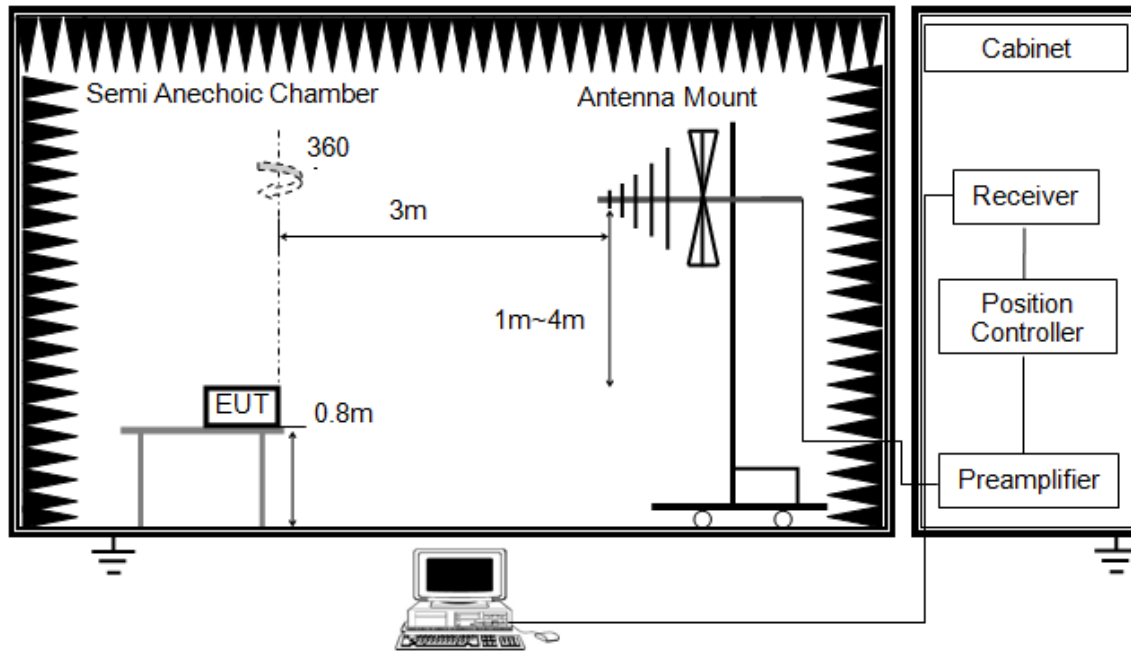


The setting of the spectrum analyser

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.

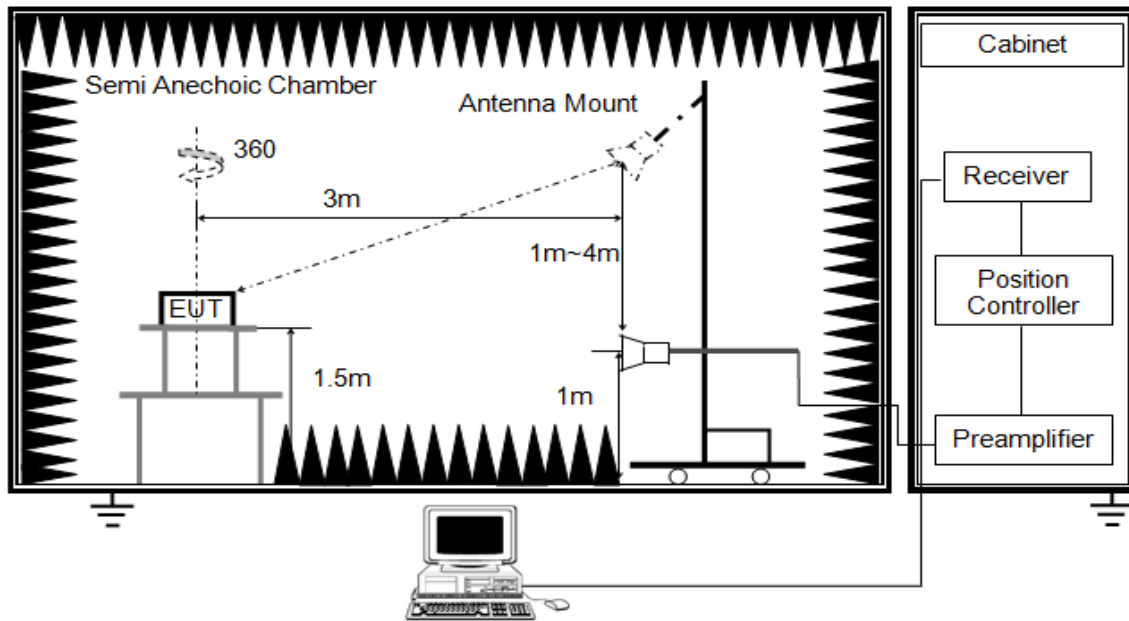
Below 1G



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

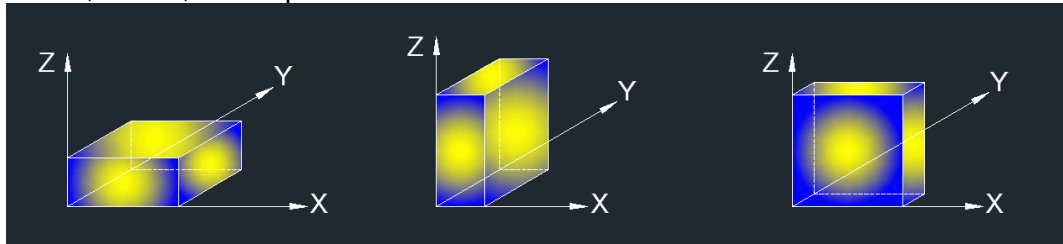


RBW	1M
VBW	3M
Sweep	Auto
Detector	Peak For Average see note 6
Trace	Max hold

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. For average value=peak average+Duty Correction Factor
 For the Duty Cycle and Correction Factor please refer to clause 7.1.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

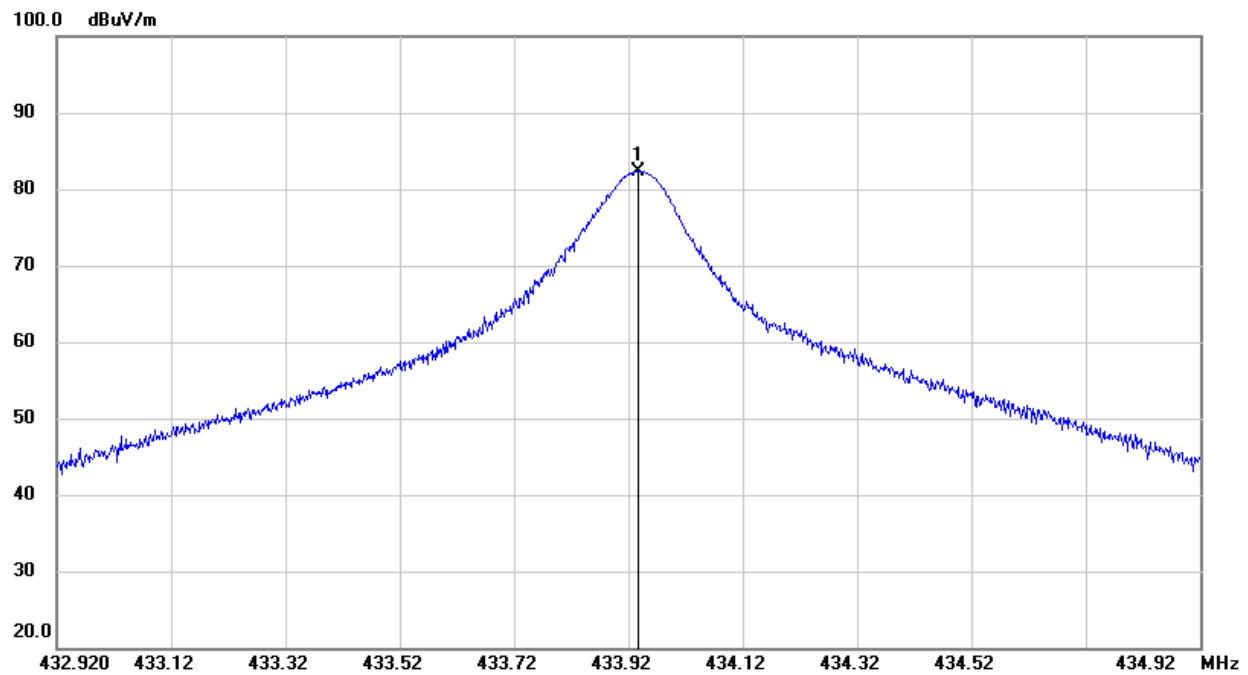
X axis, Y axis, Z axis positions:



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.

6.4.1. Fundamental Field Strength

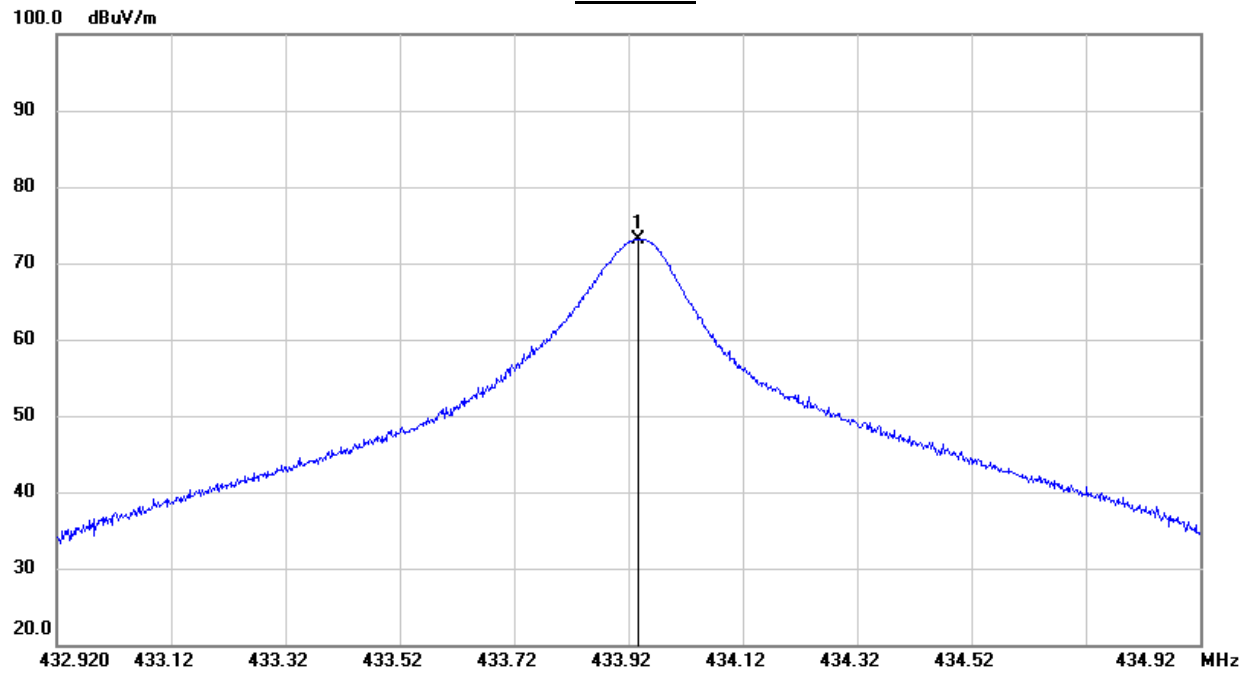
HORIZONTAL



Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Peak Result (dBuV/m)	Average Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
433.9380	91.94	-9.63	82.31		100.8	-18.49	peak
				71.16	80.8	-9.64	Average

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

VERTICAL

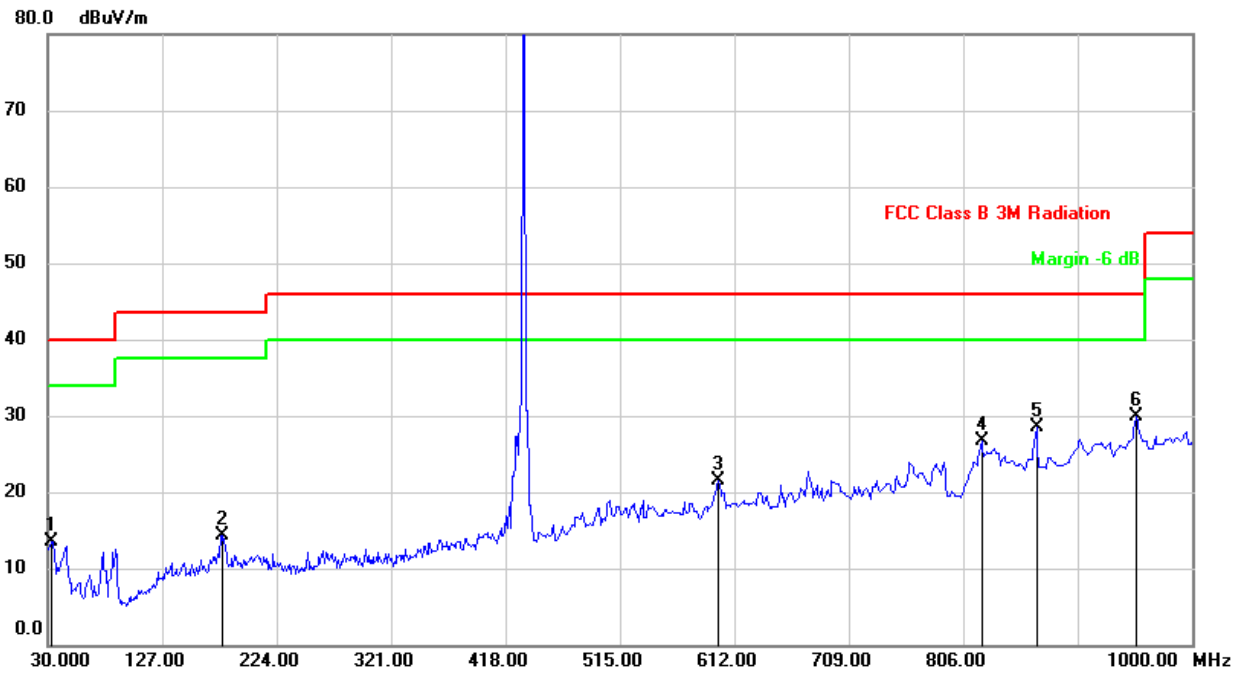


Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Peak Result (dBuV/m)	Average Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
433.92	82.79	-9.63	73.16		100.8	-26.92	peak
				62.01	80.8	-18.79	Average

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

6.4.2. SPURIOUS EMISSIONS BELOW 1G

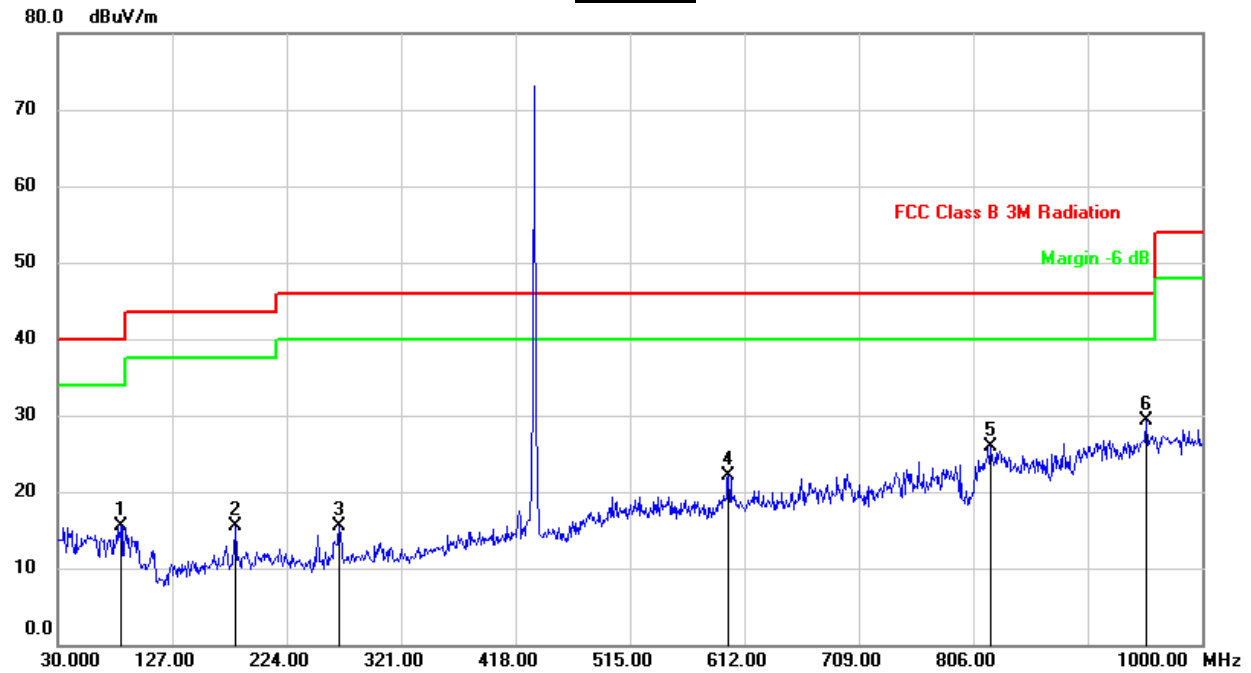
HORIZONTAL



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.9100	28.27	-14.68	13.59	40.00	-26.41	peak
2	177.4400	27.32	-12.94	14.38	43.50	-29.12	peak
3	598.4200	27.65	-6.09	21.56	46.00	-24.44	peak
4	821.5200	1.82	24.93	26.75	46.00	-19.25	peak
5	868.0800	4.17	24.34	28.51	46.00	-17.49	peak
6	952.4700	3.65	26.20	29.85	46.00	-16.15	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.

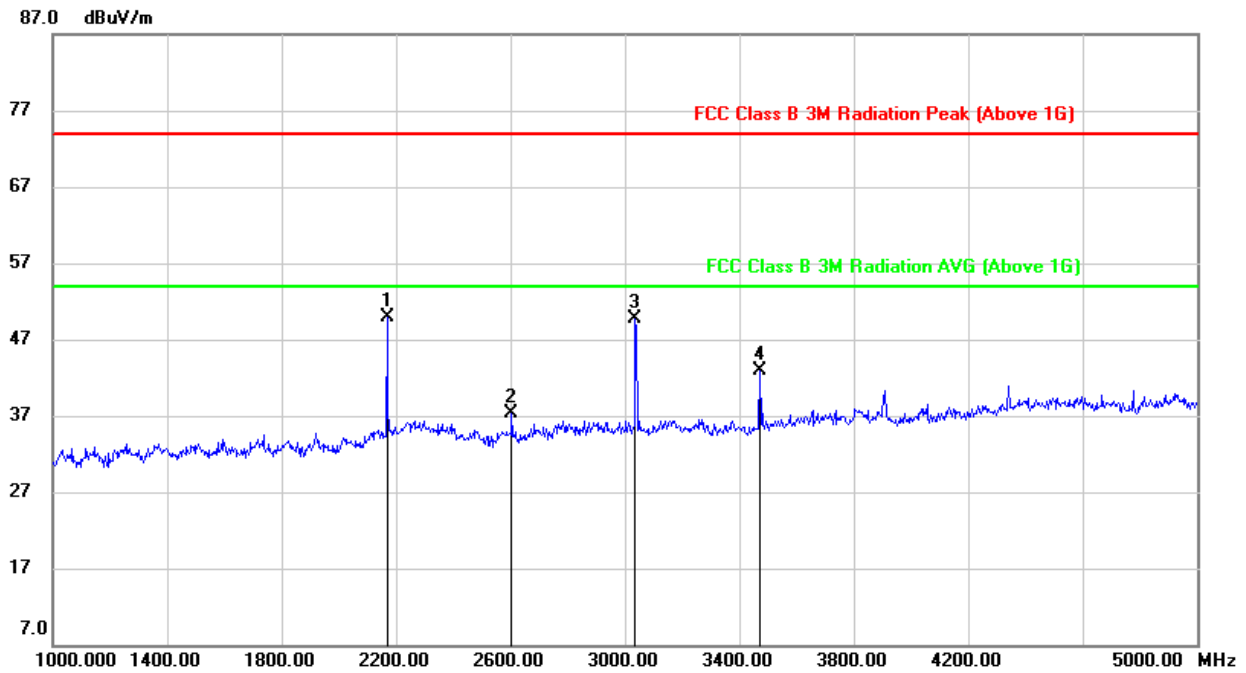
VERTICAL



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	83.3500	33.34	-17.88	15.46	40.00	-24.54	peak
2	180.3500	28.48	-12.93	15.55	43.50	-27.95	peak
3	268.6200	28.30	-12.74	15.56	46.00	-30.44	peak
4	598.4200	28.20	-6.08	22.12	46.00	-23.88	peak
5	820.5500	1.03	24.90	25.93	46.00	-20.07	peak
6	952.4700	3.13	26.20	29.33	46.00	-16.67	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.

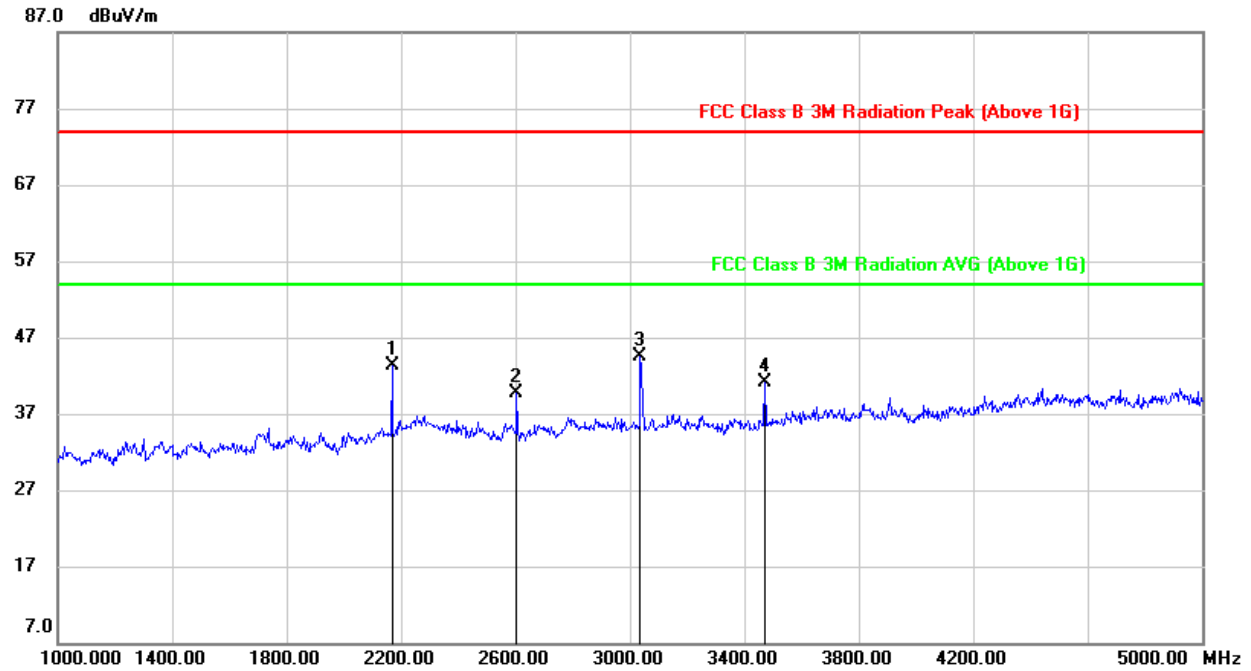
6.4.3. SPURIOUS EMISSIONS ABOVE 1G HORIZONTAL



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	P-Result (dBuV/m)	A-Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5 th harmonic	2168.000	59.28	-9.30	49.98		80.8	-24.02	peak
					38.83	60.8	-21.97	average
6 th harmonic	2604.000	46.03	-8.76	37.27		80.8	-36.73	peak
					26.12	60.8	-34.68	average
7 th harmonic	3036.000	56.79	-7.04	49.75		80.8	-24.25	peak
					38.60	60.8	-22.20	average
8 th harmonic	3472.000	49.05	-6.07	42.98		80.8	-31.02	peak
					31.83	60.8	-28.97	average

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

VERTICAL



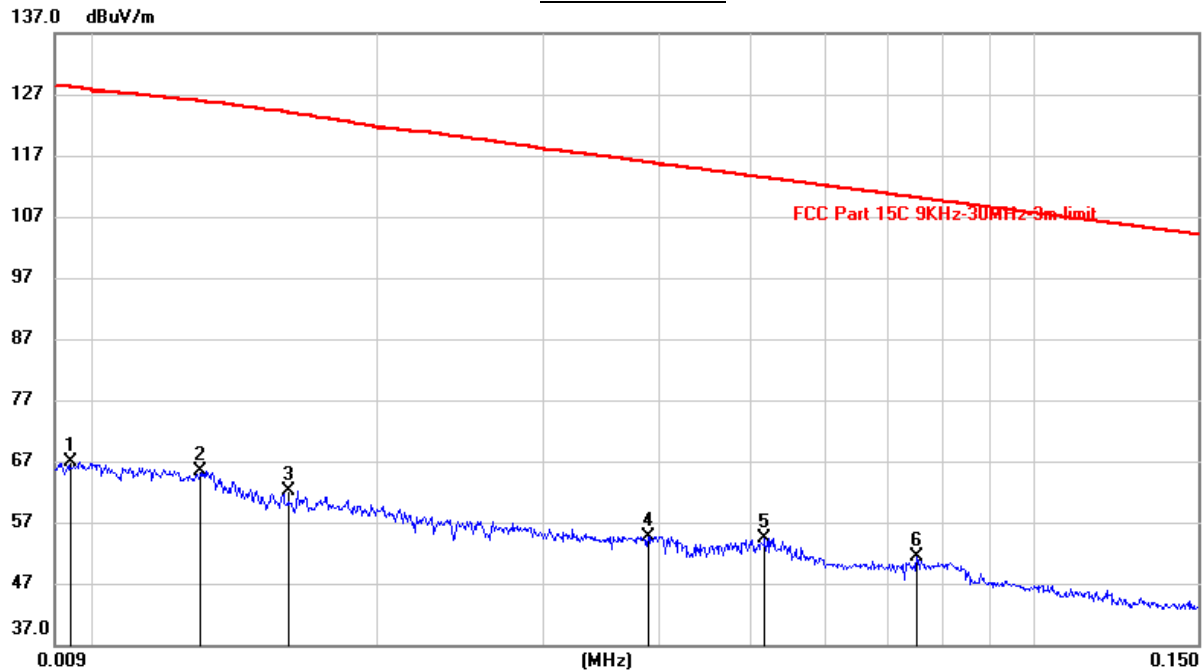
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	P-Result (dBuV/m)	A-Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
5 th harmonic	2168.000	52.72	-9.37	43.35		80.8	-30.65	peak
					32.20	60.8	-21.05	average
6 th harmonic	2604.000	48.46	-8.77	39.69		80.8	-34.31	peak
					28.54	60.8	-32.26	average
7 th harmonic	3036.000	51.62	-7.04	44.58		80.8	-29.42	peak
					33.43	60.8	-27.37	average
8 th harmonic	3472.000	47.22	-6.03	41.19		80.8	-32.81	peak
					30.04	60.8	-30.76	average

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

6.4.4. SPURIOUS EMISSIONS BELOW 30M

HORIZONTAL

9KHz~ 150KHz

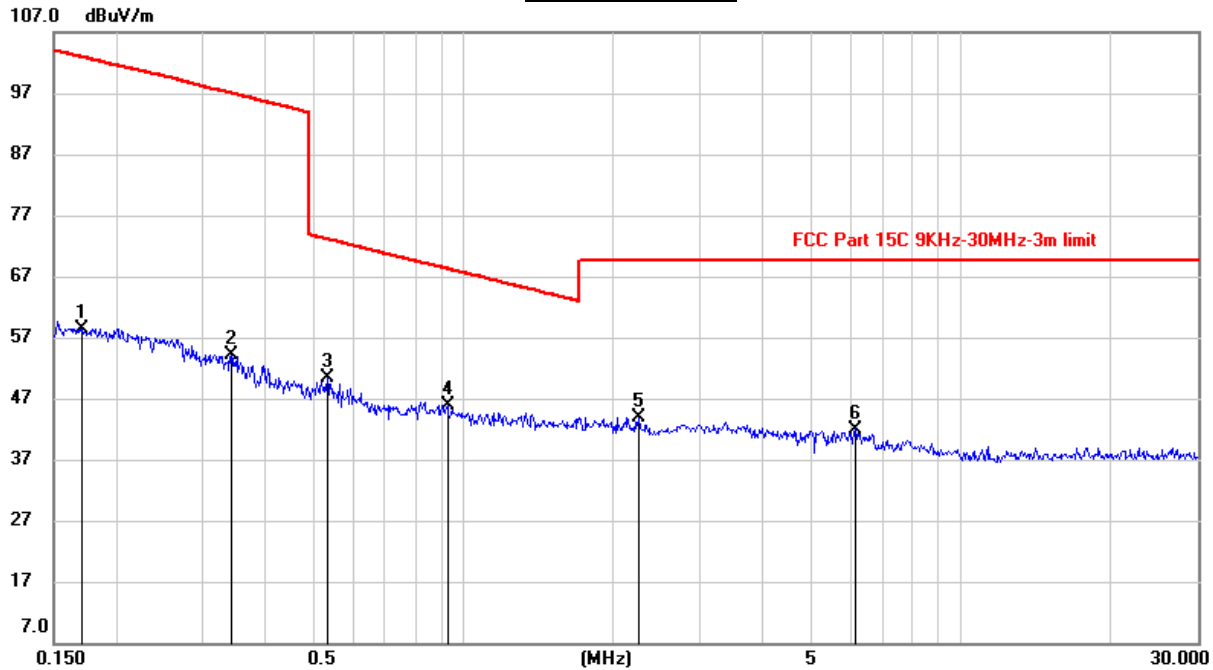


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0094	46.50	20.26	66.76	128.06	-61.30	peak
2	0.0129	45.20	20.24	65.44	125.85	-60.41	peak
3	0.0160	41.87	20.27	62.14	123.99	-61.85	peak
4	0.0388	34.44	20.31	54.75	115.86	-61.11	peak
5	0.0516	34.16	20.31	54.47	113.37	-58.90	peak
6	0.0752	30.98	20.31	51.29	110.10	-58.81	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.

150KHz ~ 30MHz



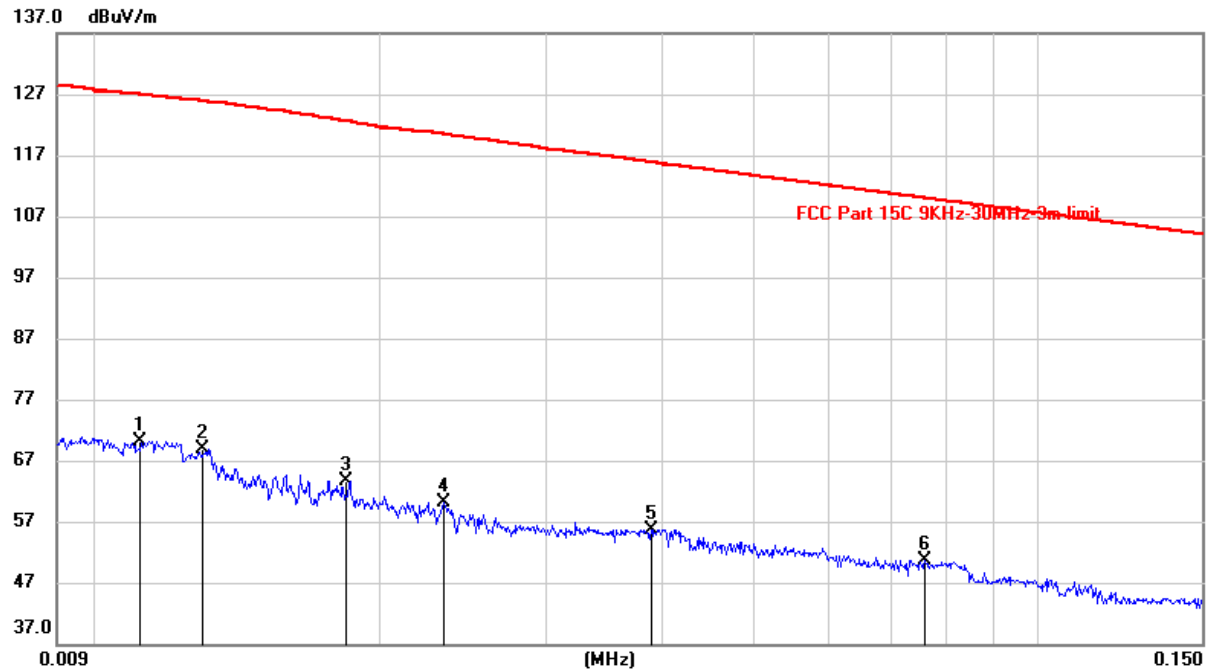
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1711	38.08	20.40	58.48	102.95	-44.47	peak
2	0.3410	33.95	20.29	54.24	97.03	-42.79	peak
3	0.5349	30.25	20.25	50.50	73.08	-22.58	peak
4	0.9282	25.50	20.37	45.87	68.26	-22.39	peak
5	2.2486	23.04	20.77	43.81	69.54	-25.73	peak
6	6.1859	21.13	20.87	42.00	69.54	-27.54	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.

VERTICAL

9KHz~ 150KHz

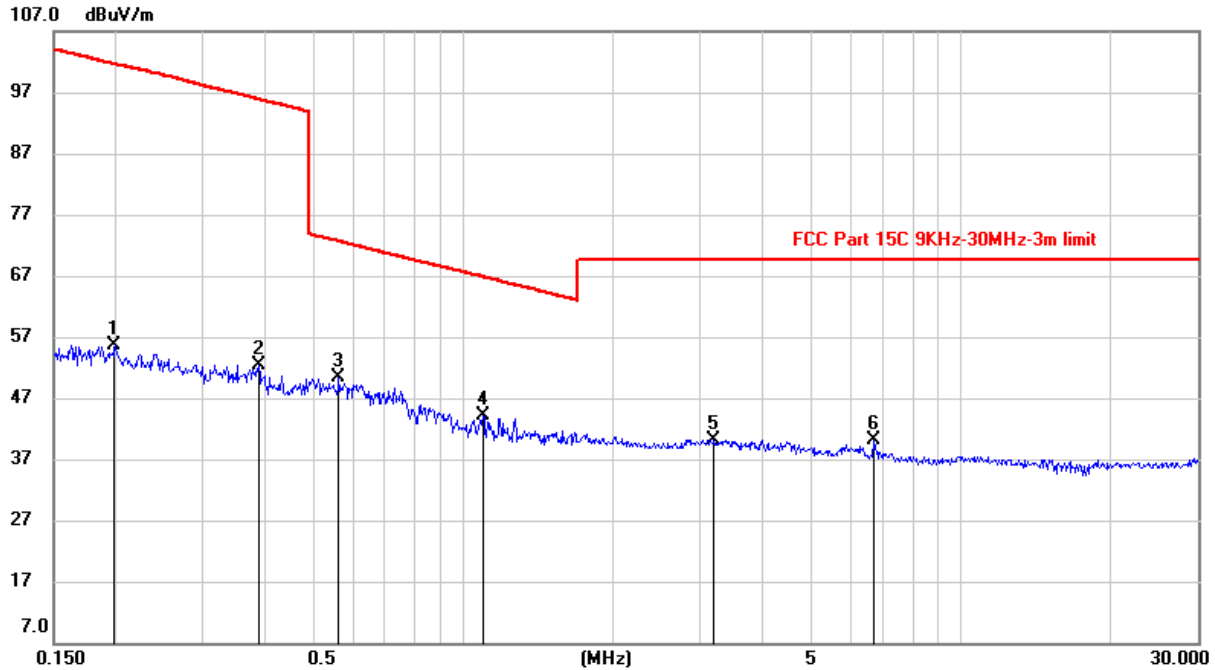


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0111	50.02	20.22	70.24	126.94	-56.70	peak
2	0.0129	48.70	20.24	68.94	125.85	-56.91	peak
3	0.0183	43.38	20.29	63.67	122.60	-58.93	peak
4	0.0233	39.85	20.31	60.16	120.42	-60.26	peak
5	0.0388	35.44	20.31	55.75	115.86	-60.11	peak
6	0.0758	30.25	20.31	50.56	110.03	-59.47	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.

150KHz ~ 30MHz



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1995	35.35	20.37	55.72	101.60	-45.88	peak
2	0.3870	32.15	20.27	52.42	95.89	-43.47	peak
3	0.5611	30.16	20.26	50.42	72.66	-22.24	peak
4	1.0939	23.73	20.41	44.14	66.83	-22.69	peak
5	3.1900	19.32	20.93	40.25	69.54	-29.29	peak
6	6.6977	19.21	20.90	40.11	69.54	-29.43	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.

END OF REPORT