FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

NAVIGATOR X1100

MODEL NUMBER: DHI-UAV-Aircraft-X1100-1133

FCC ID: SVNX1100-M

REPORT NUMBER: 4788796572-3

ISSUE DATE: March 21, 2019

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	3/21/2019	Initial Issue	

Note: This is a report base on 4788510935-9 which is issued by UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch at August 3, 2018.The customer replace the 2.4G module (New Module FCC ID: NS918PMDDL2450) when others circuit remain unchanged, the new sample change a new module name and doesn't support simultaneous transmission.

The customer declared that the 902MHz ~ 928MHz module remain unchanged (the original FCC ID is SVNX1100) and Lab had performed a spot check for this module and showed the data at page 16, 35 ~ 38 and 41 ~ 42, according to the test data, we can consider that all the RF parameters remain unchanged then we use the original data to apply a new FCC ID (SVNX1100-M) which the grantee code are the same. For more information, Please refer to the original report.

Summary of spot check item			
Clause	**Test Items**	**FCC Rules**	**Test Results**
1	Peak Conducted Output Power	FCC 15.247 (b) (2)	Pass
2	Radiated Bandedge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass

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1. ATTESTATION OF TESCT RESULTS

Applicant Information

Company Name:	Zhejiang Dahua Vision Technology Co., Ltd.
Address:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

Manufacturer Information

Company Name:	Zhejiang Dahua Vision Technology Co., Ltd.
Address:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

Factory Information

Company Name:	Zhejiang Dahua Vision Technology Co., Ltd.
Address:	No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

EUT Name:	NAVIGATOR X1100
Brand:	alhua
Model:	DHI-UAV-Aircraft-X1100-1133
Serial Model:	See chapter 5.1
Date of Tested:	March 10, 2019 ~ March 20, 2019

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

Tested By:

Denny Huang
Project 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 KDB 558074 D01 15.247 Meas Guidance v05r01, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013, KDB 484596 D01 Referencing Test Data v01.

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 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
Uncertainty for Conduction emission test	2.90dB
Uncertainty for Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	2.2dB
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	NAVIGATOR X1100	
Model Name	DHI-UAV-Aircraft-X1100-1133	
Series Model	DHI-UAV-Aircraft-X1100-1123,UAV-Aircraft-X1100-1123, UAV-Aircraft-X1100-1133	
Model Difference	All the same except for the model name.	
Product Description	Operation Frequency	907.15 MHz ~ 923.35 MHz
	Modulation Type	
	2GFSK	
Rated Input Voltage	DC 22.2V	
Battery	DC 22.2V, 27000mAh	

5.2. MAXIMUM OUTPUT POWER

Mode	Frequency (MHz)	Channel Number	Max Output Power (dBm)
2GFSK	907.15 ~ 923.35	1-163[163]	20.72

5.3. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	907.15	42	911.25	83	915.35	124	919.45
2	907.25	43	911.35	84	915.45	125	919.55
3	907.35	44	911.45	85	915.55	126	919.65
4	907.45	45	911.55	86	915.65	127	919.75
5	907.55	46	911.65	87	915.75	128	919.85
6	907.65	47	911.75	88	915.85	129	919.95
7	907.75	48	911.85	89	915.95	130	920.05
8	907.85	49	911.95	90	916.05	131	920.15
9	907.95	50	912.05	91	916.15	132	920.25
10	908.05	51	912.15	92	916.25	133	920.35
11	908.15	52	912.25	93	916.35	134	920.45
12	908.25	53	912.35	94	916.45	135	920.55
13	908.35	54	912.45	95	916.55	136	920.65
14	908.45	55	912.55	96	916.65	137	920.75
15	908.55	56	912.65	97	916.75	138	920.85
16	908.65	57	912.75	98	916.85	139	920.95
17	908.75	58	912.85	99	916.95	140	921.05
18	908.85	59	912.95	100	917.05	141	921.15
19	908.95	60	913.05	101	917.15	142	921.25
20	909.05	61	913.15	102	917.25	143	921.35
21	909.15	62	913.25	103	917.35	144	921.45
22	909.25	63	913.35	104	917.45	145	921.55
23	909.35	64	913.45	105	917.55	146	921.65
24	909.45	65	913.55	106	917.65	147	921.75
25	909.55	66	913.65	107	917.75	148	921.85
26	909.65	67	913.75	108	917.85	149	921.95
27	909.75	68	913.85	109	917.95	150	922.05
28	909.85	69	913.95	110	918.05	151	922.15
29	909.95	70	914.05	111	918.15	152	922.25
30	910.05	71	914.15	112	918.25	153	922.35
31	910.15	72	914.25	113	918.35	154	922.45
32	910.25	73	914.35	114	918.45	155	922.55
33	910.35	74	914.45	115	918.55	156	922.65
34	910.45	75	914.55	116	918.65	157	922.75
35	910.55	76	914.65	117	918.75	158	922.85
36	910.65	77	914.75	118	918.85	159	922.95
37	910.75	78	914.85	119	918.95	160	923.05
38	910.85	79	914.95	120	919.05	161	923.15
39	910.95	80	915.05	121	919.15	162	923.25
40	911.05	81	915.15	122	919.25	163	923.35
41	911.15	82	915.25	123	919.35		

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel Number	Test Channel
2GFSK	CH 1, CH 82, CH 163	Low, Middle, High

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 907.15~923.35MHzMHz Band				
Test Software		/		
Modulation Type	Transmit Antenna Number	Test Channel		
		CH 1	CH 82	CH 163
2GFSK	1	10	10	10

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

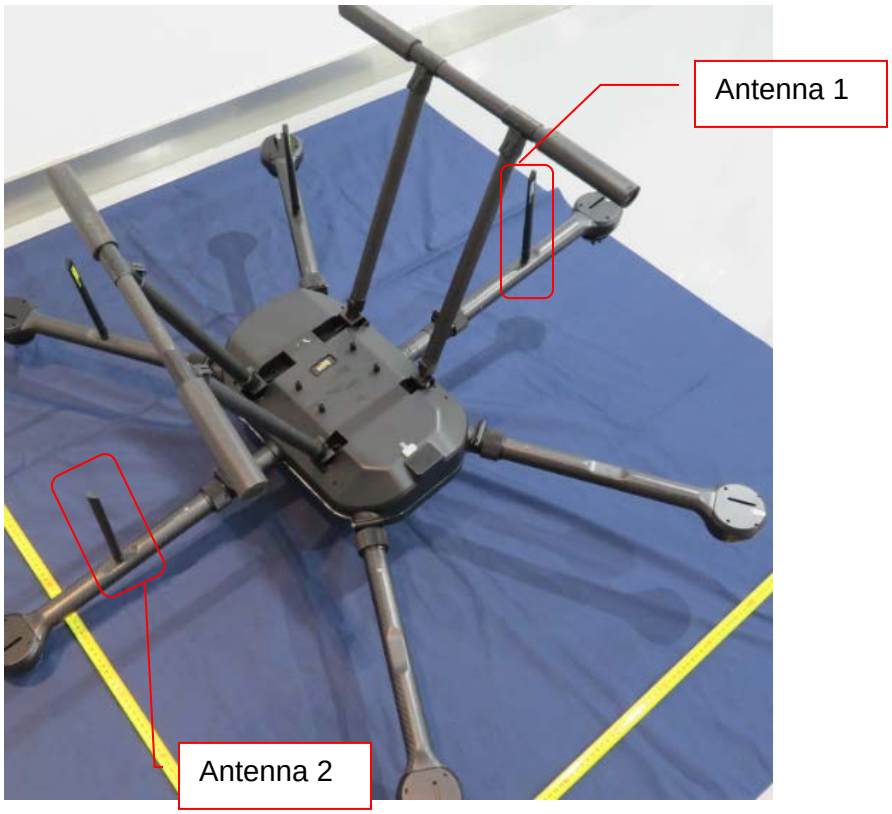
Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	907.15MHz~923.35MHz	External Antenna	-0.18

Test Mode	Transmit and Receive Mode	Description
2GFSK	☒ 1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
2	907.15MHz~923.35MHz	External Antenna	-0.18

Test Mode	Transmit and Receive Mode	Description
2GFSK	☒ 1TX, 1RX	Chain 2 can be used as transmitting/receiving antenna.

Note 1: The EUT have 2 antennas, but only 1 antenna active at any moment in time.
Note 2: The EUT only support SISO mode.
Note 3: The circuit before the two difference antenna are the same, so for all test we only perform one output port and one antenna.



5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	Laptop	ThinkPad	T460S	SL10K24796 JS
2	USB to Serial board	N/A	N/A	N/A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB	Unshielded	0.7	N/A

Note: The USB port only use for charging.

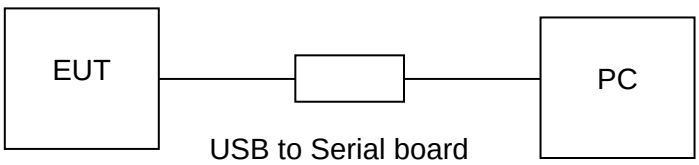
ACCESSORY

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

TEST SETUP

The EUT can work in an engineer mode with a software through a PC.

SETUP DIAGRAM FOR TESTS



5.8. 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.18,2018	Aug.18,2021
☑	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	Jan.17, 2019	Jan.17,2022
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
☑	Power Meter	Keysight	N9031A	MY55416024	Dec.10,2018	Dec.10,2019
☑	Power Sensor	Keysight	N9323A	MY55440013	Dec.10,2018	Dec.10,2019

5.9. PEAK CONDUCTED OUTPUT POWER

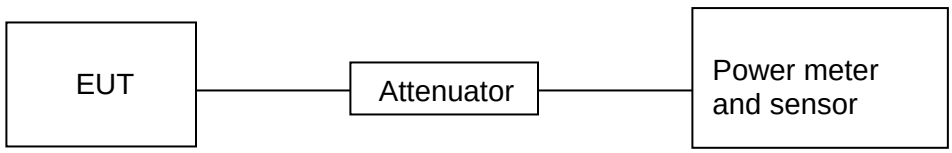
LIMITS

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247 (b) (2)	Peak Conducted Output Power	1 watt for systems employing at least 50 hopping channels	902~928

TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.
Measure peak power each channel.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.5°C	Relative Humidity	67%
Atmosphere Pressure	101kPa	Test Voltage	DC 22.2V

RESULTS

Original result from the original FCC ID: SVNX1100

Channel	Frequency	Maximum Conducted Output Power(PK)	Maximum Conducted Output Power(AVG)	Result
	(MHz)	(dBm)		
Low	907.15	20.72	16.515	Pass
Middle	915.25	20.18	16.370	Pass
High	923.35	19.42	15.451	Pass

Spot check for the new sample:

Channel	Frequency	Maximum Conducted Output Power(PK)	Maximum Conducted Output Power(AVG)	Result
	(MHz)	(dBm)		
Low	907.15	20.29	16.322	Pass
Middle	915.25	19.77	16.146	Pass
High	923.35	19.03	15.233	Pass

6. RADIATED TEST RESULTS

6.1. LIMITS AND PROCEDURE

LIMITS

Please refer to FCC §15.205 and §15.209

Please refer to RSS-GEN Clause 8.9 and Clause 8.10

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

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

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

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

Radiation Disturbance Test Limit for FCC (Above 1G)

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

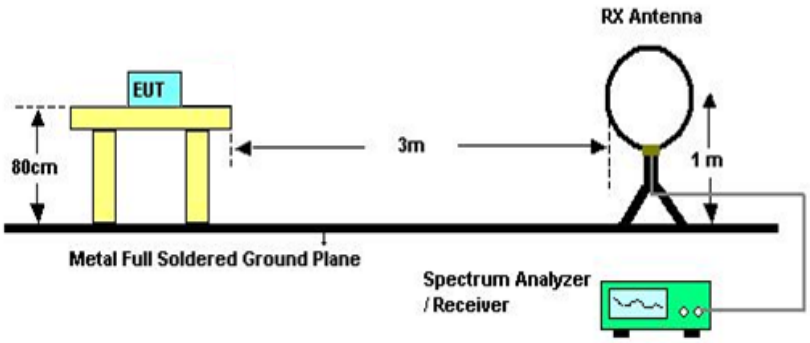
Restricted bands of operation

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 SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

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

1. The testing follows the guidelines in ANSI C63.10-2013 and 414788 D01 Radiated Test Site v01.

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 80cm meter above ground.

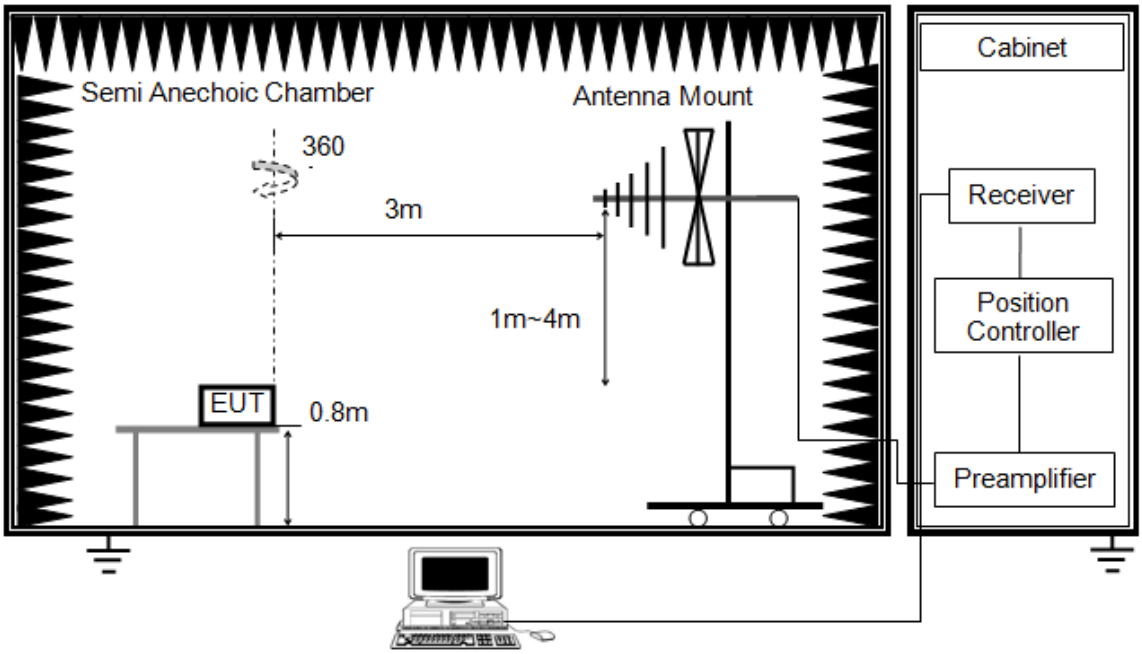
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

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 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.

7. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m OFS. 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 based on KDB 414788. Anechoic chamber is shown to be equivalent to or worst case from the open field site.

Below 1G and above 30MHz



The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Trace	Max hold

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

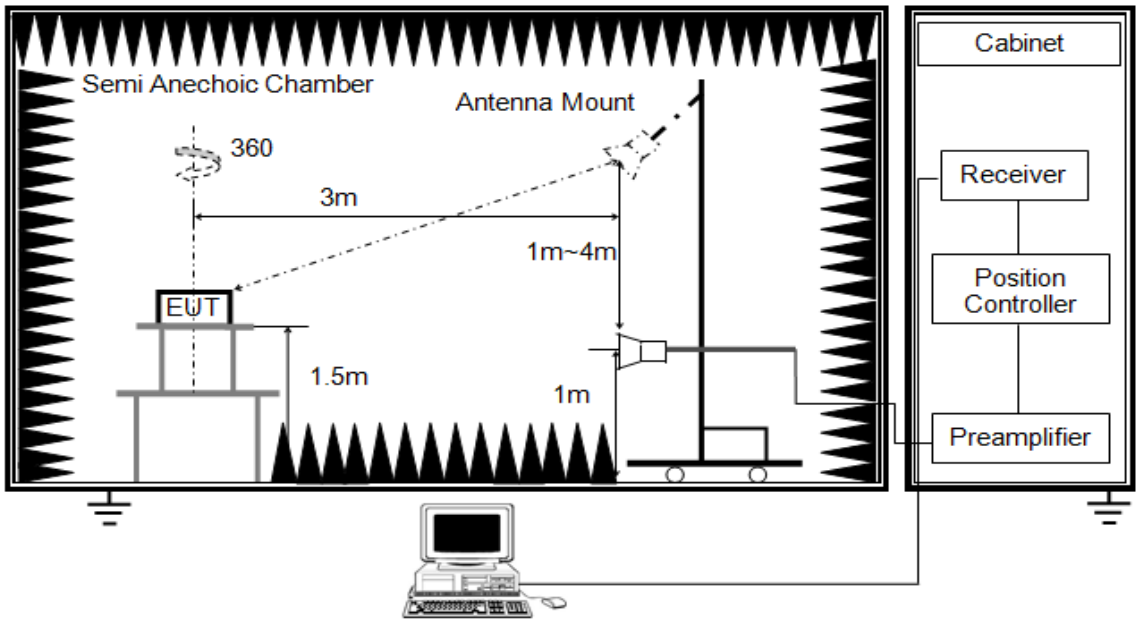
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

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

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

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

Above 1G



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

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

2. The EUT was arranged to its worst case and then tune the antenna tower (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.

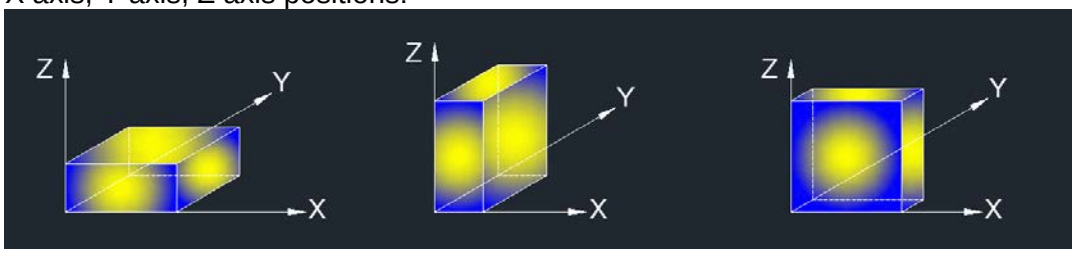
3. The EUT was placed on a turntable with 1.5m above ground.

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 power measurement, set the Detector to RMS, the detector and averaging type may be set for linear voltage averaging, while maintaining all of the other instrument settings, if the duty cycle of the EUT is less than 98%, the Duty Cycle Correction Factor shall be added to the measured emission levels. For the Duty Cycle and Correction Factor please refer to clause 6.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



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

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

TEST ENVIRONMENT

Temperature	22.7°C	Relative Humidity	62%
Atmosphere Pressure	101kPa	Test Voltage	DC 22.2V

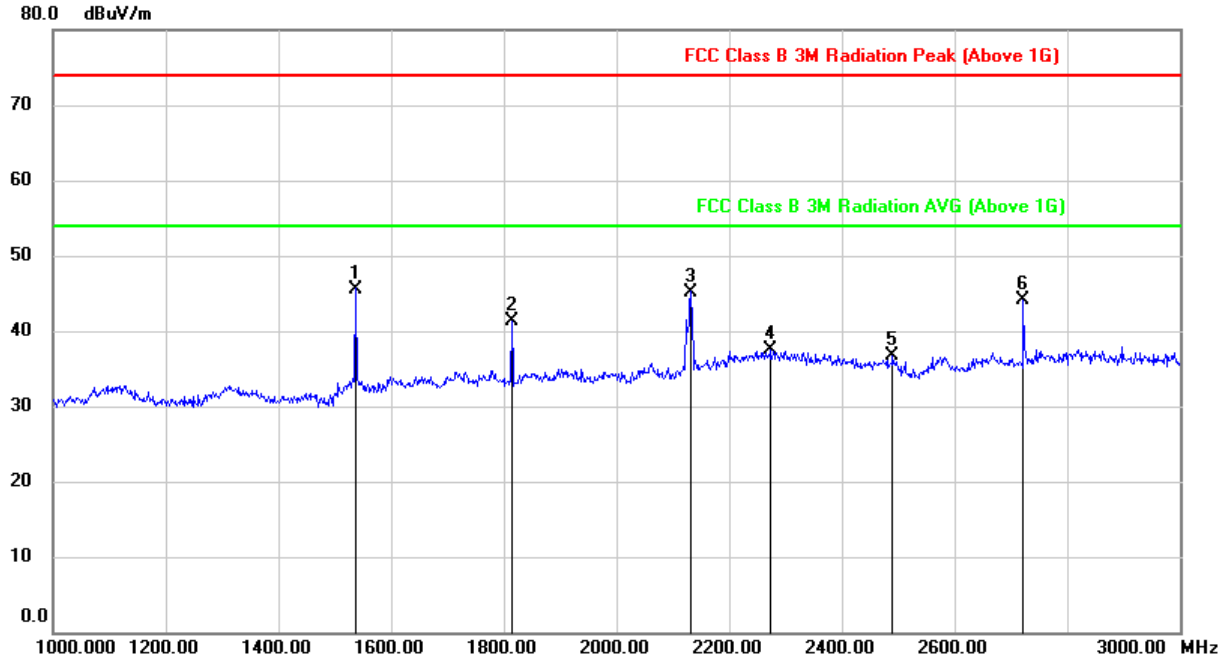
RESULTS

6.2. SPURIOUS EMISSIONS (1~10GHz)

Original result from the original FCC ID: SVNX1100

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

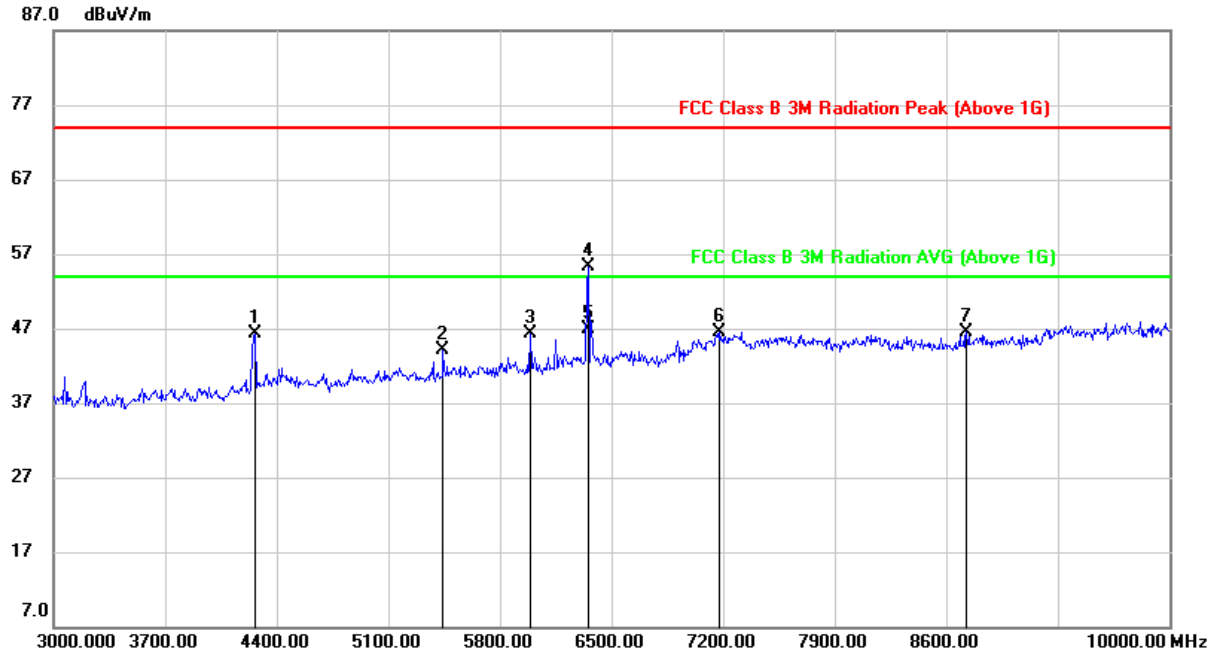
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	57.92	-12.32	45.60	74.00	-28.40	peak
2	1814.000	52.44	-11.06	41.38	74.00	-32.62	peak
3	2132.000	54.36	-9.16	45.20	74.00	-28.80	peak
4	2274.000	44.94	-7.50	37.44	74.00	-36.56	peak
5	2490.000	45.02	-8.39	36.63	74.00	-37.37	peak
6	2722.000	51.54	-7.44	44.10	74.00	-29.90	peak

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

3GHz ~ 10GHz

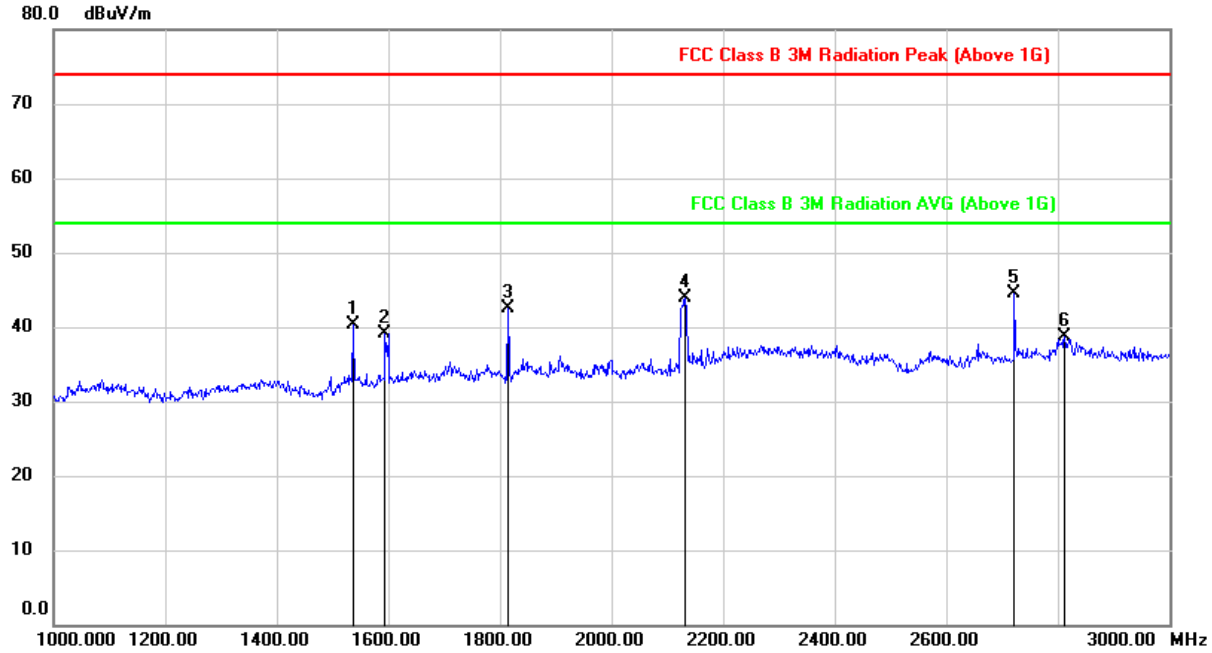


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4260.000	48.28	-1.90	46.38	74.00	-27.62	peak
2	5443.000	42.08	1.95	44.03	74.00	-29.97	peak
3	5989.000	43.02	3.20	46.22	74.00	-27.78	peak
4	6350.083	50.75	4.63	55.38	74.00	-18.62	peak
5	6350.083	42.34	9.12	51.46	54.00	-2.54	AVG
6	7179.000	38.73	7.72	46.45	74.00	-27.55	peak
7	8726.000	37.20	9.32	46.52	74.00	-27.48	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

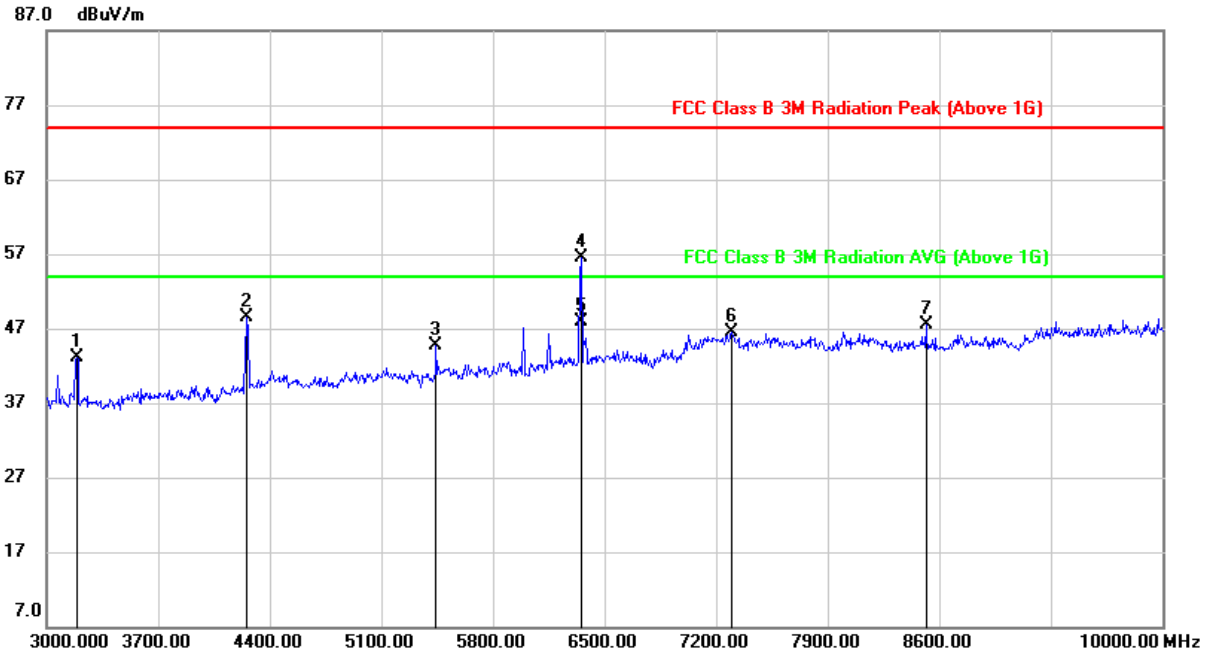
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	52.63	-12.27	40.36	74.00	-33.64	peak
2	1594.000	51.18	-12.08	39.10	74.00	-34.90	peak
3	1814.000	53.63	-11.06	42.57	74.00	-31.43	peak
4	2132.000	53.09	-9.26	43.83	74.00	-30.17	peak
5	2722.000	51.91	-7.48	44.43	74.00	-29.57	peak
6	2812.000	45.69	-6.90	38.79	74.00	-35.21	peak

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

3GHz ~ 10GHz

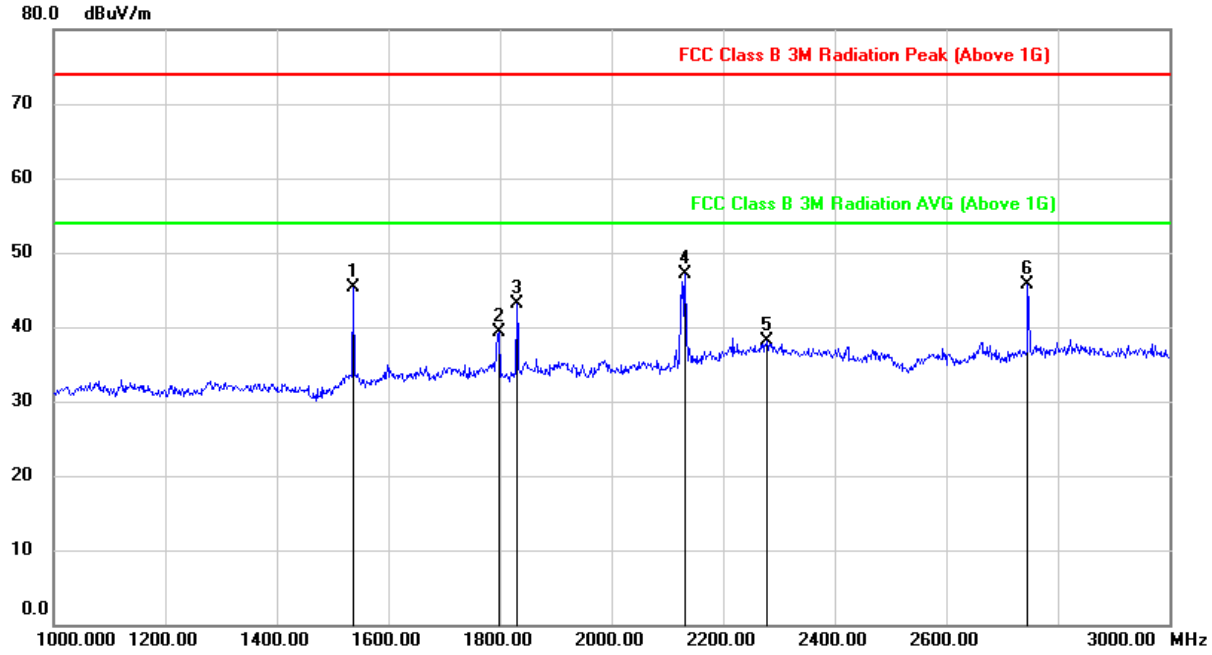


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3189.000	47.95	-4.76	43.19	74.00	-30.81	peak
2	4253.000	50.39	-1.87	48.52	74.00	-25.48	peak
3	5443.000	42.70	1.95	44.65	74.00	-29.35	peak
4	6350.000	51.82	4.63	56.45	74.00	-17.55	peak
5	6350.000	43.35	9.12	52.47	54.00	-1.53	AVG
6	7298.000	38.58	7.86	46.44	74.00	-27.56	peak
7	8516.000	38.90	8.51	47.41	74.00	-26.59	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

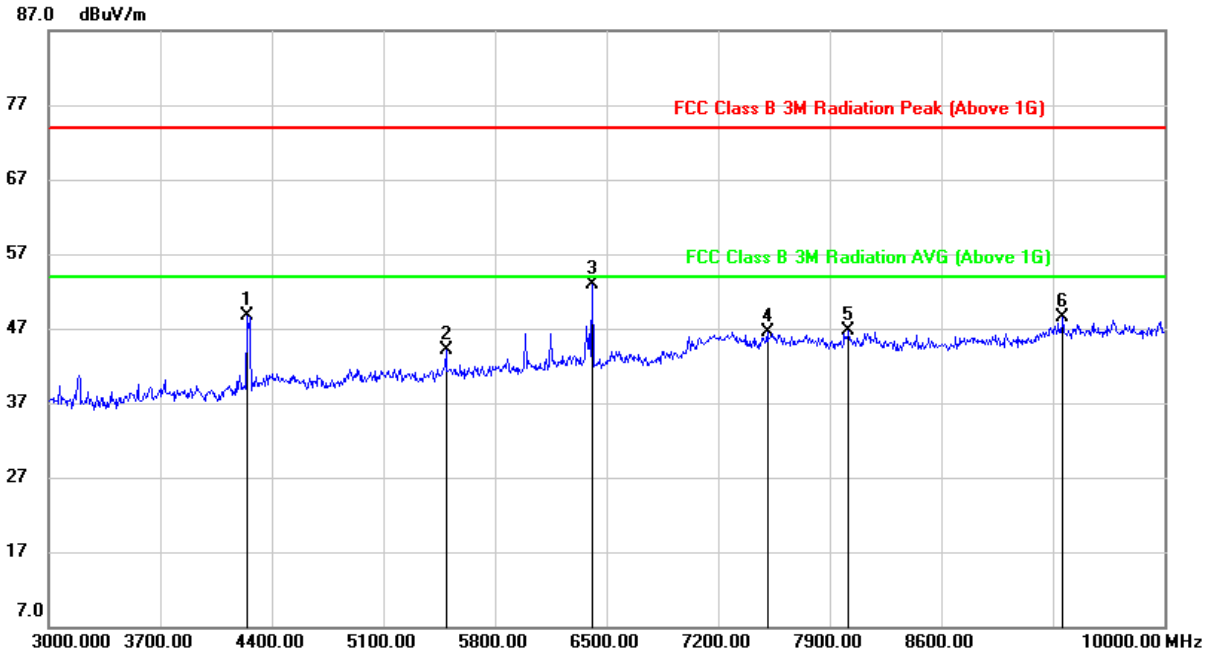
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	57.66	-12.32	45.34	74.00	-28.66	peak
2	1798.000	50.51	-11.13	39.38	74.00	-34.62	peak
3	1830.000	54.02	-10.98	43.04	74.00	-30.96	peak
4	2132.000	56.29	-9.16	47.13	74.00	-26.87	peak
5	2278.000	45.65	-7.49	38.16	74.00	-35.84	peak
6	2746.000	52.91	-7.26	45.65	74.00	-28.35	peak

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

3GHz ~ 10GHz

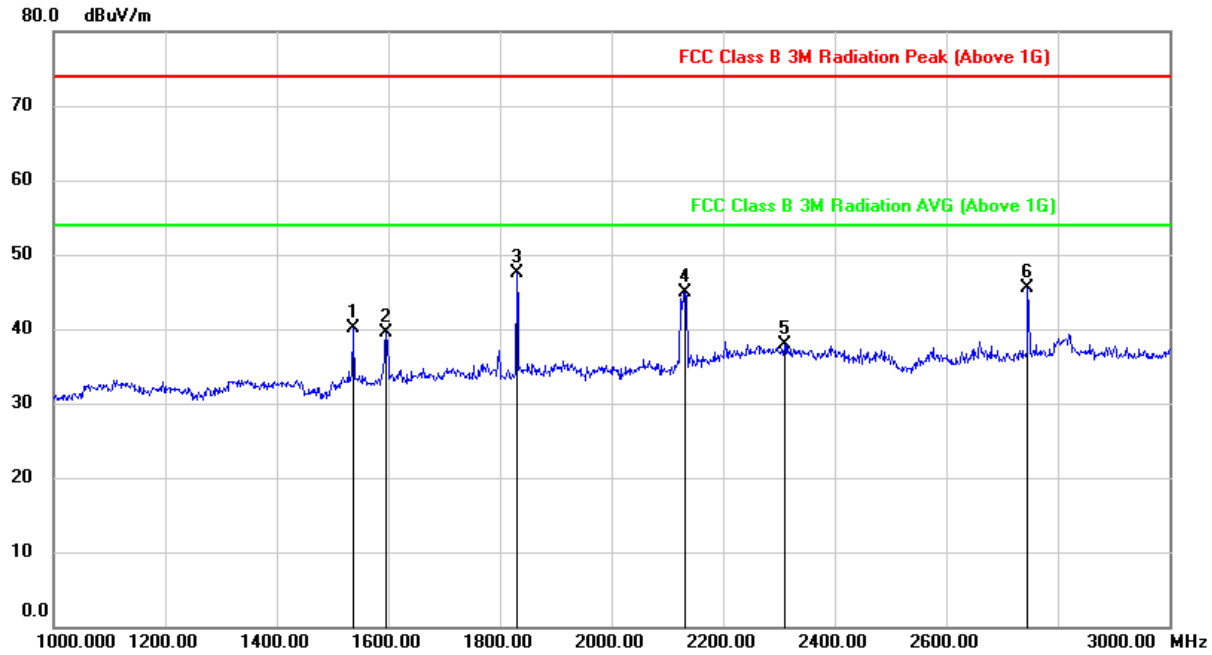


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4246.000	50.80	-2.01	48.79	74.00	-25.21	peak
2	5492.000	41.78	2.30	44.08	74.00	-29.92	peak
3	6409.000	48.30	4.67	52.97	74.00	-21.03	peak
4	7508.000	38.34	8.22	46.56	74.00	-27.44	peak
5	8019.000	38.28	8.51	46.79	74.00	-27.21	peak
6	9363.000	37.66	10.84	48.50	74.00	-25.50	peak

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

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

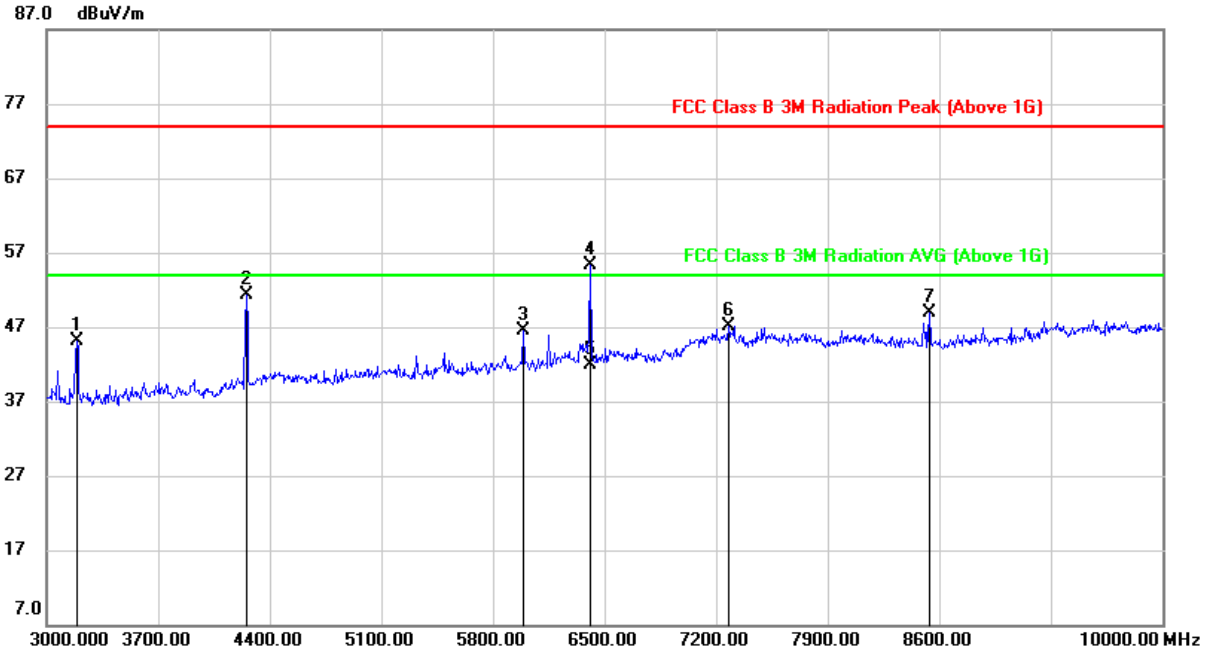
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	52.46	-12.27	40.19	74.00	-33.81	peak
2	1596.000	51.59	-12.08	39.51	74.00	-34.49	peak
3	1830.000	58.54	-10.98	47.56	74.00	-26.44	peak
4	2132.000	54.17	-9.26	44.91	74.00	-29.09	peak
5	2310.000	45.25	-7.29	37.96	74.00	-36.04	peak
6	2746.000	52.82	-7.36	45.46	74.00	-28.54	peak

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

3GHz ~ 10GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3189.000	49.96	-4.76	45.20	74.00	-28.80	peak
2	4253.000	53.25	-1.87	51.38	74.00	-22.62	peak
3	5989.000	43.28	3.30	46.58	74.00	-27.42	peak
4	6406.750	50.46	4.76	55.22	74.00	-18.78	peak
5	6406.750	37.22	9.25	46.47	54.00	-7.53	AVG
6	7277.000	39.23	7.81	47.04	74.00	-26.96	peak
7	8537.000	40.42	8.55	48.97	74.00	-25.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

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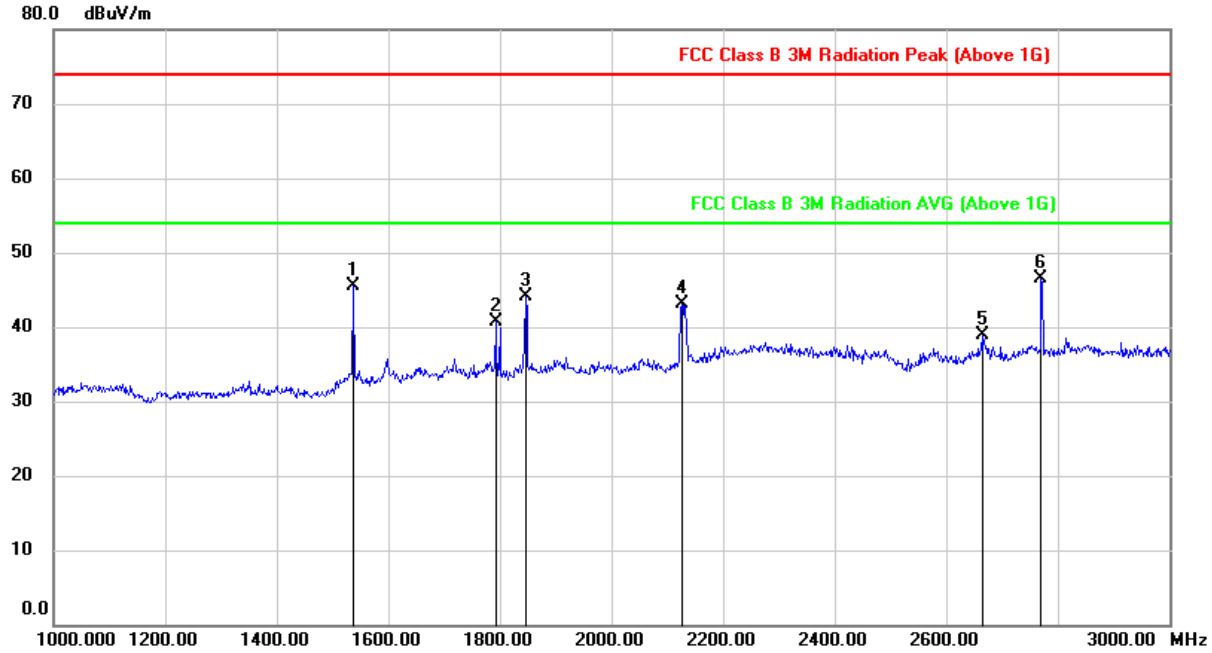
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

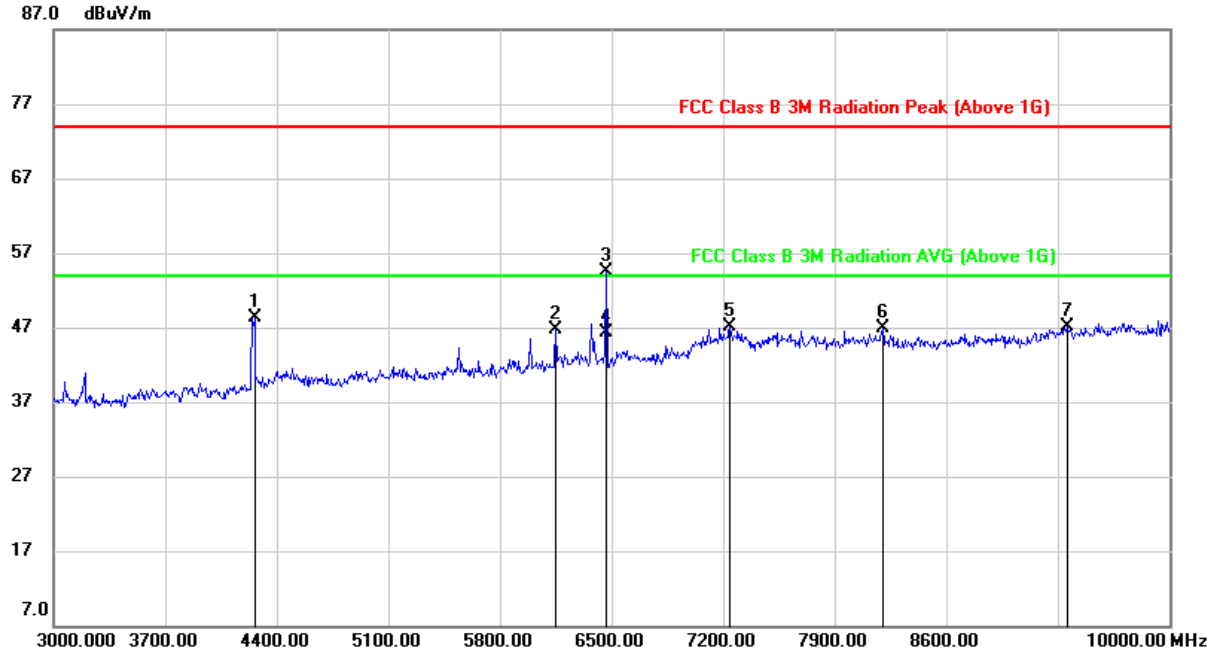
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	57.89	-12.32	45.57	74.00	-28.43	peak
2	1792.000	51.86	-11.16	40.70	74.00	-33.30	peak
3	1846.000	55.01	-10.90	44.11	74.00	-29.89	peak
4	2126.000	52.40	-9.24	43.16	74.00	-30.84	peak
5	2664.000	46.59	-7.78	38.81	74.00	-35.19	peak
6	2770.000	53.69	-7.12	46.57	74.00	-27.43	peak

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

3GHz ~ 10GHz

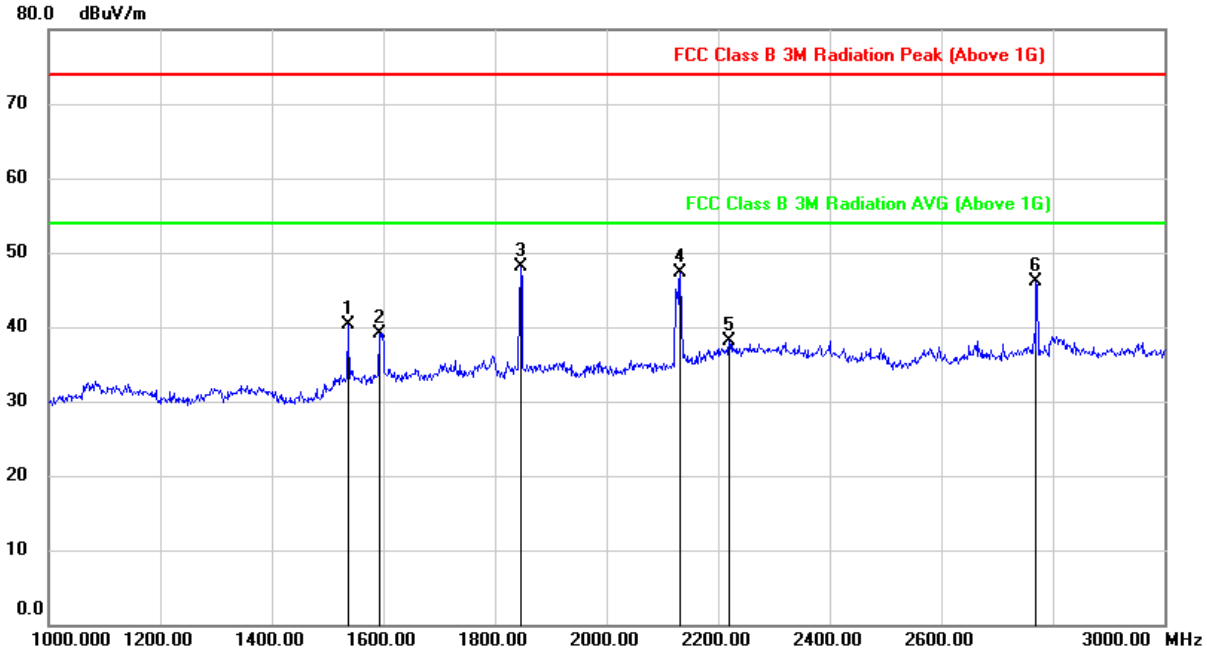


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4260.000	50.29	-1.90	48.39	74.00	-25.61	peak
2	6150.000	42.86	3.79	46.65	74.00	-27.35	peak
3	6463.541	49.87	4.70	54.57	74.00	-19.43	peak
4	6463.541	41.58	9.19	50.77	54.00	-3.23	AVG
5	7242.000	39.23	7.84	47.07	74.00	-26.93	peak
6	8201.000	38.11	8.83	46.94	74.00	-27.06	peak
7	9356.000	36.17	10.84	47.01	74.00	-26.99	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

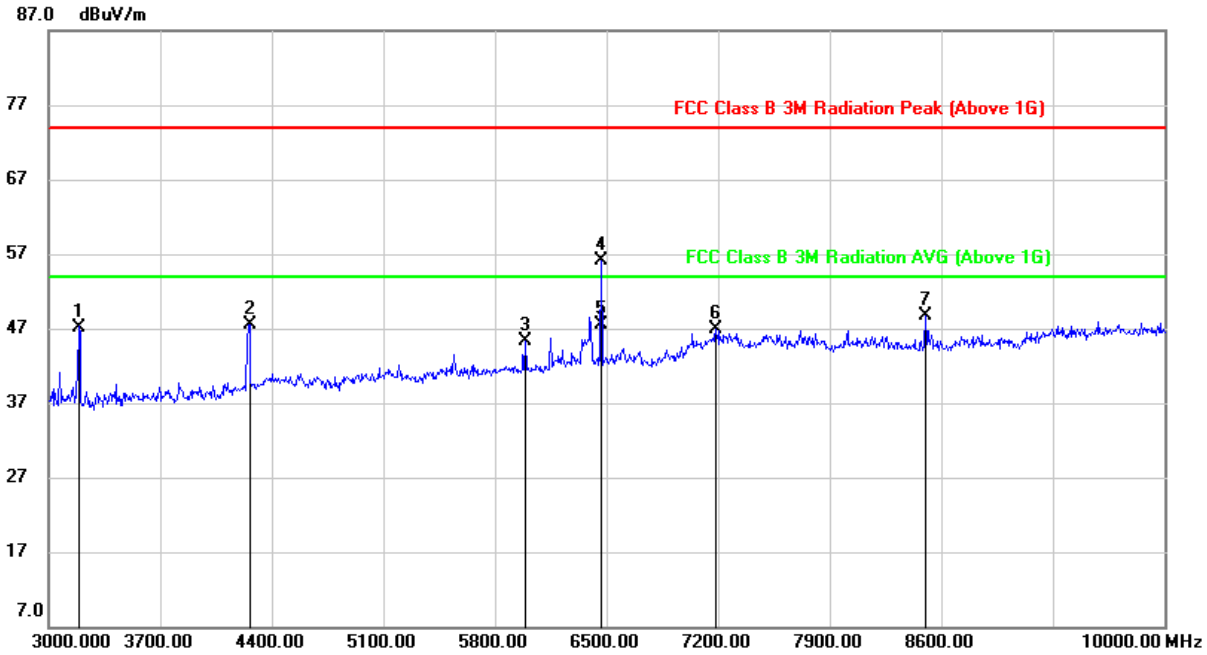
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	52.56	-12.27	40.29	74.00	-33.71	peak
2	1592.000	51.29	-12.10	39.19	74.00	-34.81	peak
3	1846.000	59.00	-10.90	48.10	74.00	-25.90	peak
4	2132.000	56.56	-9.26	47.30	74.00	-26.70	peak
5	2220.000	46.10	-8.01	38.09	74.00	-35.91	peak
6	2770.000	53.30	-7.18	46.12	74.00	-27.88	peak

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

3GHz ~ 10GHz



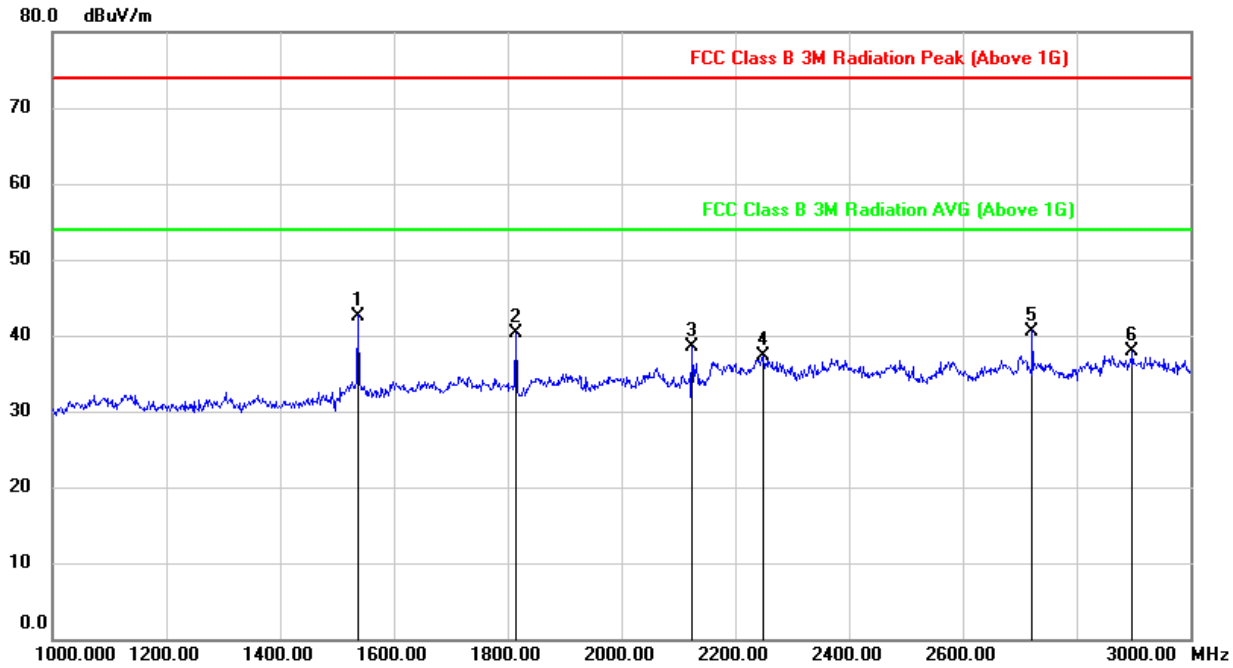
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3189.000	51.96	-4.76	47.20	74.00	-26.80	peak
2	4260.000	49.38	-1.80	47.58	74.00	-26.42	peak
3	5989.000	41.98	3.30	45.28	74.00	-28.72	peak
4	6463.450	51.31	4.80	56.11	74.00	-17.89	peak
5	6463.450	42.66	9.29	51.95	54.00	-2.05	AVG
6	7186.000	39.00	7.83	46.83	74.00	-27.17	peak
7	8502.000	40.20	8.49	48.69	74.00	-25.31	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

Spot check for the new sample:

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

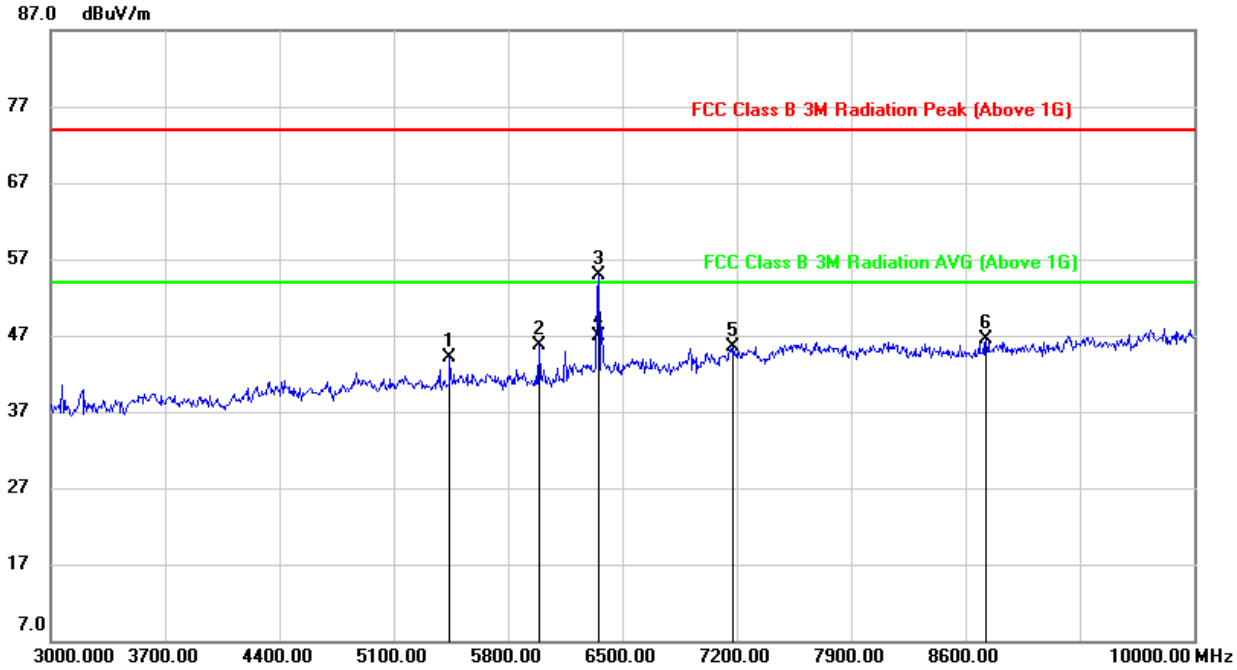
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1536.000	54.92	-12.32	42.60	74.00	-31.40	peak
2	1814.000	51.44	-11.06	40.38	74.00	-33.62	peak
3	2124.000	47.68	-9.26	38.42	74.00	-35.58	peak
4	2250.000	44.83	-7.59	37.24	74.00	-36.76	peak
5	2722.000	48.04	-7.44	40.60	74.00	-33.40	peak
6	2898.000	44.42	-6.54	37.88	74.00	-36.12	peak

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

3GHz ~ 10GHz

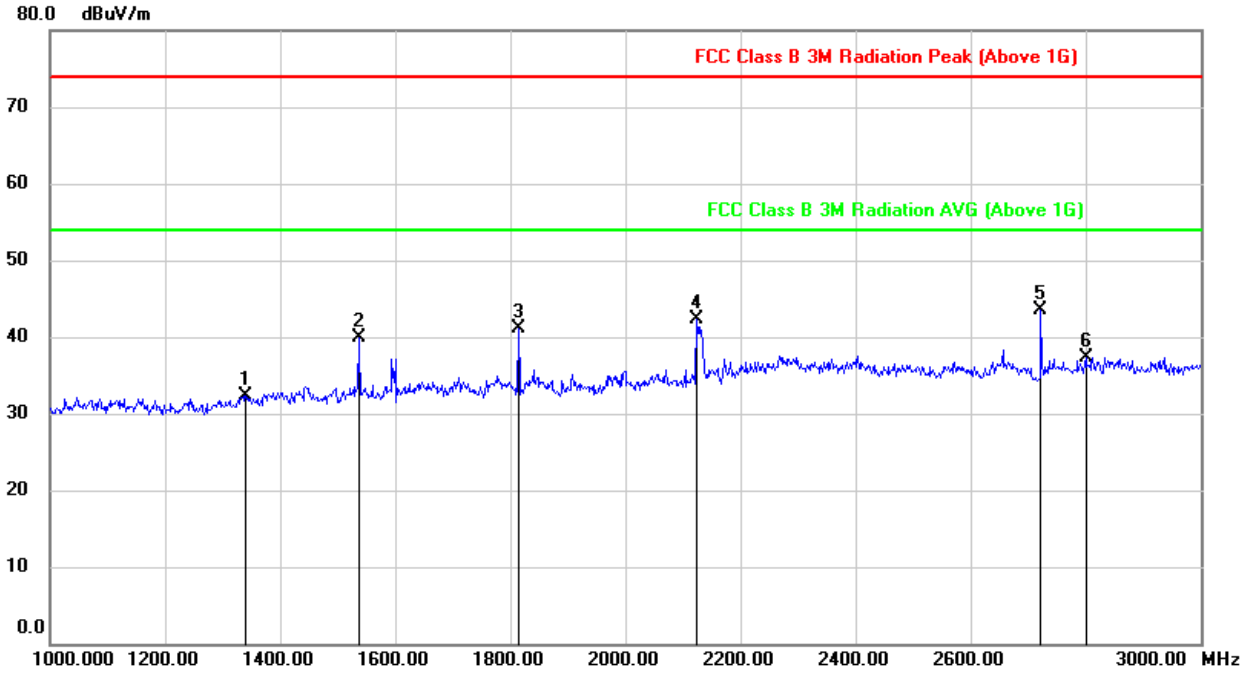


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5443.000	42.08	1.95	44.03	74.00	-29.97	peak
2	5989.000	42.52	3.20	45.72	74.00	-28.28	peak
3	6350.083	50.25	4.63	54.88	74.00	-19.12	peak
4	6350.083	42.26	4.63	46.89	54.00	-7.11	AVG
5	7179.000	37.73	7.72	45.45	74.00	-28.55	peak
6	8726.000	37.20	9.32	46.52	74.00	-27.48	peak
7	5443.000	42.08	1.95	44.03	74.00	-29.97	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

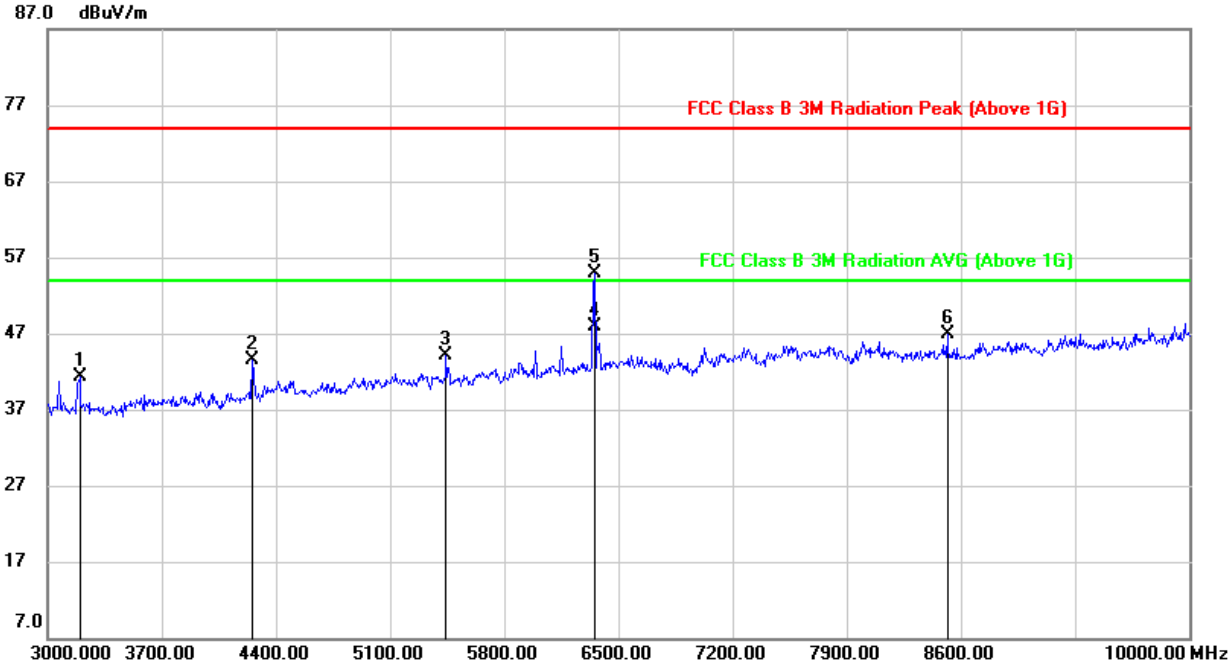
1GHz ~ 3GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1340.000	44.76	-12.43	32.33	74.00	-41.67	peak
2	1536.000	52.13	-12.27	39.86	74.00	-34.14	peak
3	1814.000	52.13	-11.06	41.07	74.00	-32.93	peak
4	2124.000	51.68	-9.36	42.32	74.00	-31.68	peak
5	2722.000	50.91	-7.48	43.43	74.00	-30.57	peak
6	2800.000	44.35	-6.96	37.39	74.00	-36.61	peak

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

3GHz ~ 10GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3196.000	46.09	-4.74	41.35	74.00	-32.65	peak
2	4253.000	45.39	-1.87	43.52	74.00	-30.48	peak
3	5443.000	42.20	1.95	44.15	74.00	-29.85	peak
4	6350.000	43.26	4.63	47.89	54.00	-6.11	AVG
5	6353.000	50.31	4.64	54.95	74.00	-19.05	peak
6	8516.000	38.40	8.51	46.91	74.00	-27.09	peak
7	3196.000	46.09	-4.74	41.35	74.00	-32.65	peak

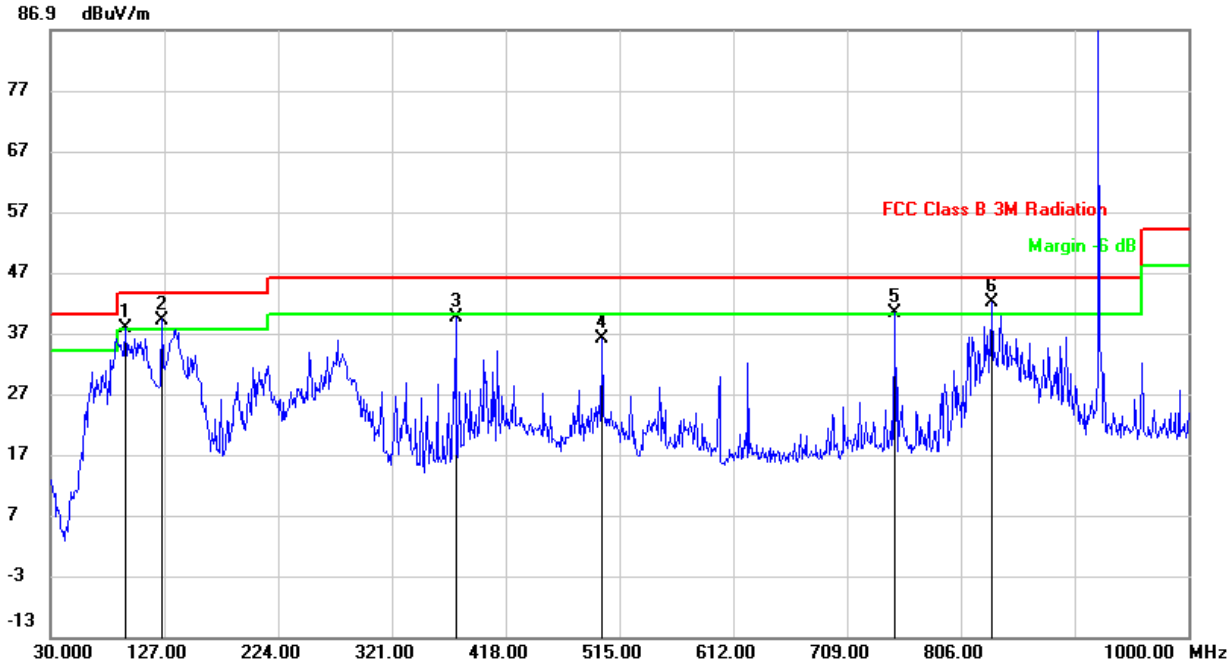
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: Average value = AVG (Detector) Reading + Correct (included DCCF).
5. For transmit duration, please refer to clause 6.1

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

6.3. SPURIOUS EMISSIONS 30M ~ 1 GHz

Original result from the original FCC ID: SVNX1100

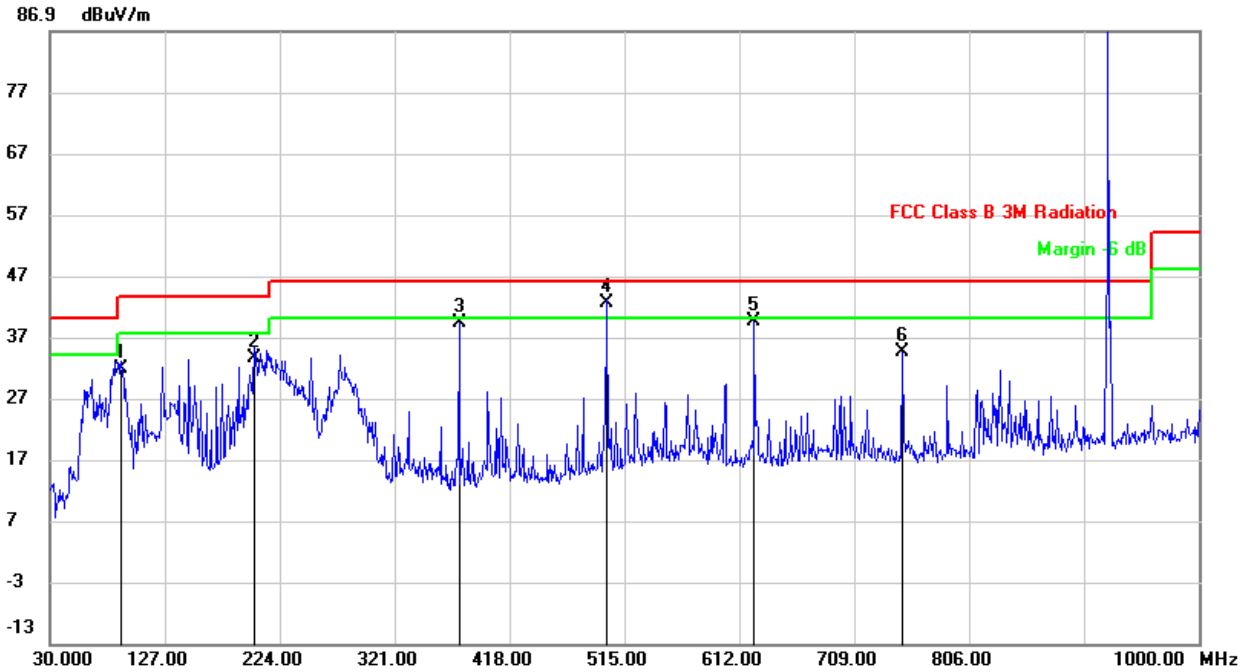
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	94.0199	59.77	-21.92	37.85	43.50	-5.65	QP
2	125.0600	57.90	-18.82	39.08	43.50	-4.42	QP
3	375.3200	52.48	-13.05	39.43	46.00	-6.57	QP
4	500.4500	47.23	-11.11	36.12	46.00	-9.88	QP
5	749.7400	47.77	-7.52	40.25	46.00	-5.75	QP
6	832.1900	48.43	-6.48	41.95	46.00	-4.05	QP

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

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



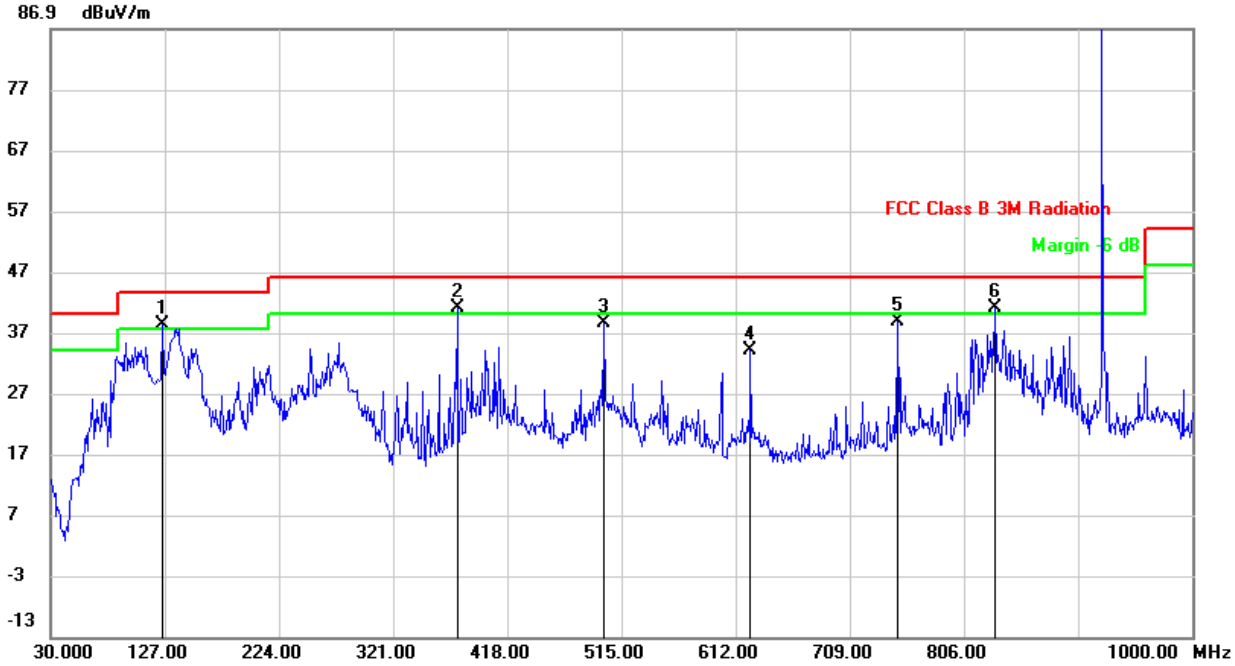
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	90.1400	53.70	-21.92	31.78	43.50	-11.72	QP
2	202.6600	48.76	-15.11	33.65	43.50	-9.85	QP
3	375.3200	52.35	-13.05	39.30	46.00	-6.70	QP
4	500.0012	53.72	-11.13	42.59	46.00	-3.41	QP
5	624.6100	48.27	-8.80	39.47	46.00	-6.53	QP
6	749.7400	42.16	-7.52	34.64	46.00	-11.36	QP

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

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

Spot check for the new sample:

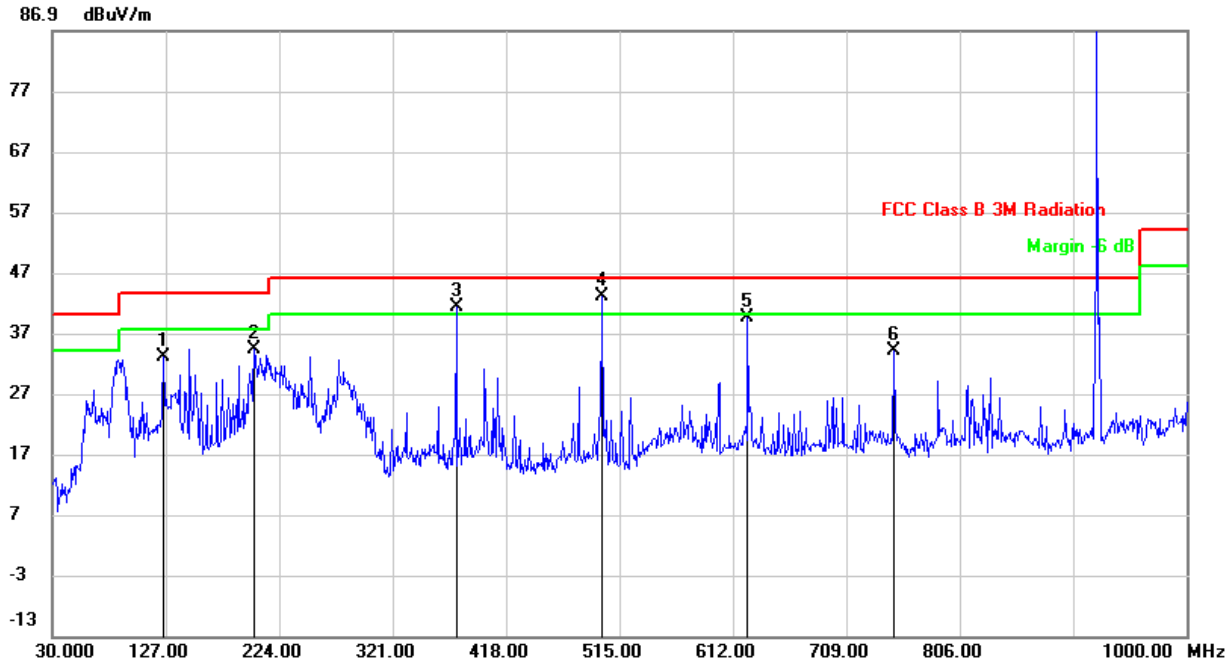
SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	125.0600	57.11	-18.82	38.29	43.50	-5.21	QP
2	375.3200	53.98	-13.05	40.93	46.00	-5.07	QP
3	500.4500	49.73	-11.11	38.62	46.00	-7.38	QP
4	624.6100	42.90	-8.80	34.10	46.00	-11.90	QP
5	749.7400	46.27	-7.52	38.75	46.00	-7.25	QP
6	832.1900	47.43	-6.48	40.95	46.00	-5.05	QP

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

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



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	125.0600	51.74	-18.82	32.92	43.50	-10.58	QP
2	202.6600	49.37	-15.11	34.26	43.50	-9.24	QP
3	375.3200	54.35	-13.05	41.30	46.00	-4.70	QP
4	500.4500	54.05	-11.11	42.94	46.00	-3.06	QP
5	624.6100	48.27	-8.80	39.47	46.00	-6.53	QP
6	749.7400	41.66	-7.52	34.14	46.00	-11.86	QP

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

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

END OF REPORT