FCC Part15, Subpart B
ICES-003

TEST REPORT

For

TOY Receiver

MODEL NUMBER: 1060B

FCC ID: G6D1060B

REPORT NUMBER: 4788934416.1-2

ISSUE DATE: May 24, 2019

Prepared for

NEW BRIGHT INDUSTRIAL CO., LTD
9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON,HONG KONG.

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch
Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China
Tel: +86 769 22038881
Fax: +86 769 33244054
Website: www.ul.com

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	05/24/2019	Initial Issue	

Summary of Test Results				
Standard	**Test Item**	**Limit**	**Result**	**Remark**
FCC Part15, Subpart B ICES-003 Issue 6 ANSI C63.4-2014	Conducted Disturbance	Class B	PASS	
	Radiated Disturbance below 1 GHz	Class B	PASS	
	Radiated Disturbance above 1 GHz	Class B	PASS	**NOTE (2)**

Note:
(1) “N/A” denotes test is not applicable in this Test Report
(2) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.

CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	NEW BRIGHT INDUSTRIAL CO., LTD
Address:	9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON,HONG KONG.

Manufacturer Information

Company Name:	NEW BRIGHT INDUSTRIAL CO., LTD
Address:	9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON,HONG KONG.

EUT Information

EUT Name:	TOY Receiver
Model:	1060B
Brand:	/
Sample Received Date:	March 11, 2019
Date of Tested:	March 11, 2019 ~ May 23 2019

APPLICABLE STANDARDS	
STANDARDS	**TEST RESULTS**
FCC Part15, Subpart B ICES-003 Issue 6 ANSI C63.4-2014	**PASS**

Prepared By:

Gary Zhang
Engineer Project Associate

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo
Laboratory Manager

2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC Part15 Subpart B, ANSI C63.4-2014, and ICES-003 Issue 6

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 Industry Canada. 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: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

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	Measurement Frequency Range	K	U(dB)
Conducted emissions from the AC mains power ports	0.009MHz ~ 0.15MHz	2	4.00
Conducted emissions from the AC mains power ports	0.15MHz ~ 30MHz	2	3.62
Radiated emissions	30MHz ~ 1GHz	2	4.00
Radiated emissions	1GHz ~ 18GHz	2	5.78
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

<table>
<tr><td>EUT Name</td><td colspan="4">TOY Receiver</td></tr>
<tr><td>Model</td><td colspan="4">1060B</td></tr>
<tr><td rowspan="5">Supply Voltage:</td><td colspan="2">☐AC mains State</td><td colspan="2"></td></tr>
<tr><td rowspan="4">☒DC State</td><td>☐Internal Power Supply</td><td colspan="2"></td></tr>
<tr><td rowspan="2">☒External Power Supply or AC/DC adapter</td><td>Rate Input:</td><td>AC 120V 60Hz</td></tr>
<tr><td>Rate Output:</td><td>DC 9.6V</td></tr>
<tr><td>☒Battery</td><td colspan="2">DC 9.6V</td></tr>
<tr><td>☐Other</td><td colspan="2"></td></tr>
</table>

5.2. Test Mode

Test Mode	Description
Mode 1	Charging
Mode 2	Running

5.3. EUT Accessory

Item	Accessory	Brand Name	Model Name	Description
1	Remote control	NEW BRIGHT	21HB2	/
2	Charger	NEW BRIGHT	SGC096500CU	Input: AC 120V 60Hz output: DC 9.6V
3	Battery	NEW BRIGHT	/	9.6V, 500mAh

5.4. Support Units or Accessories for System Test

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
/	/	/	/	/	/

The following cables were used to form a representative test configuration during the tests.

Item	Type of cable	Shielded Type	Ferrite Core	Specification
/	/	/	/	/

6. MEASURING EQUIPMENT AND SOFTWARE USED

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Dec. 10, 2018	Dec. 10, 2019
Two-Line V-Network	R&S	ENV216	101983	Dec. 10, 2018	Dec. 10, 2019
Software					
Description			Manufacturer	Name	Version
Test Software for Conducted Emissions			Farad	EZ-EMC	Ver. UL-3A1
Radiated Emissions					
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	Sept. 17, 2018	Sept. 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	Sept. 17, 2018	Sept. 17, 2021
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Dec. 10, 2018	Dec. 10, 2019
Software					
Description			Manufacturer	Name	Version
Test Software for Radiated Emissions			Farad	EZ-EMC	Ver. UL-3A1

7. EMISSION TEST

7.1. Conducted Disturbance Measurement

7.1.1. Limits of conducted disturbance voltage

FREQUENCY (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46*
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

7.1.2. Test Procedure

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

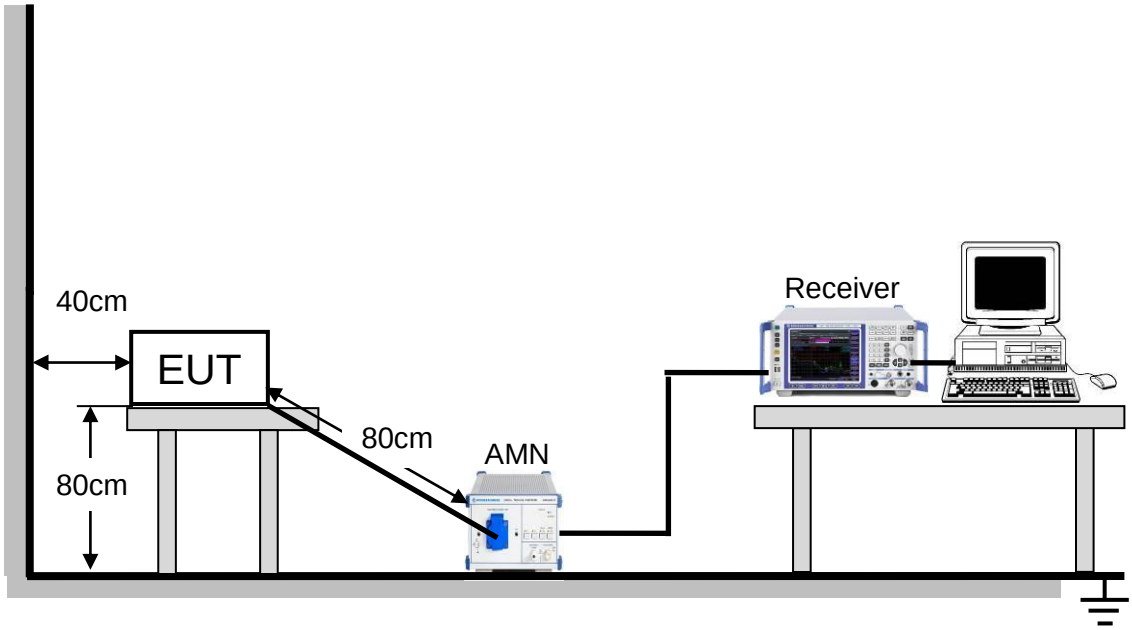
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item: Photographs of Test Configuration.

7.1.3. Test Setup



For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

7.1.4. Test Environment

Temperature:	24℃
Humidity:	54%
ATM pressure:	101kPa

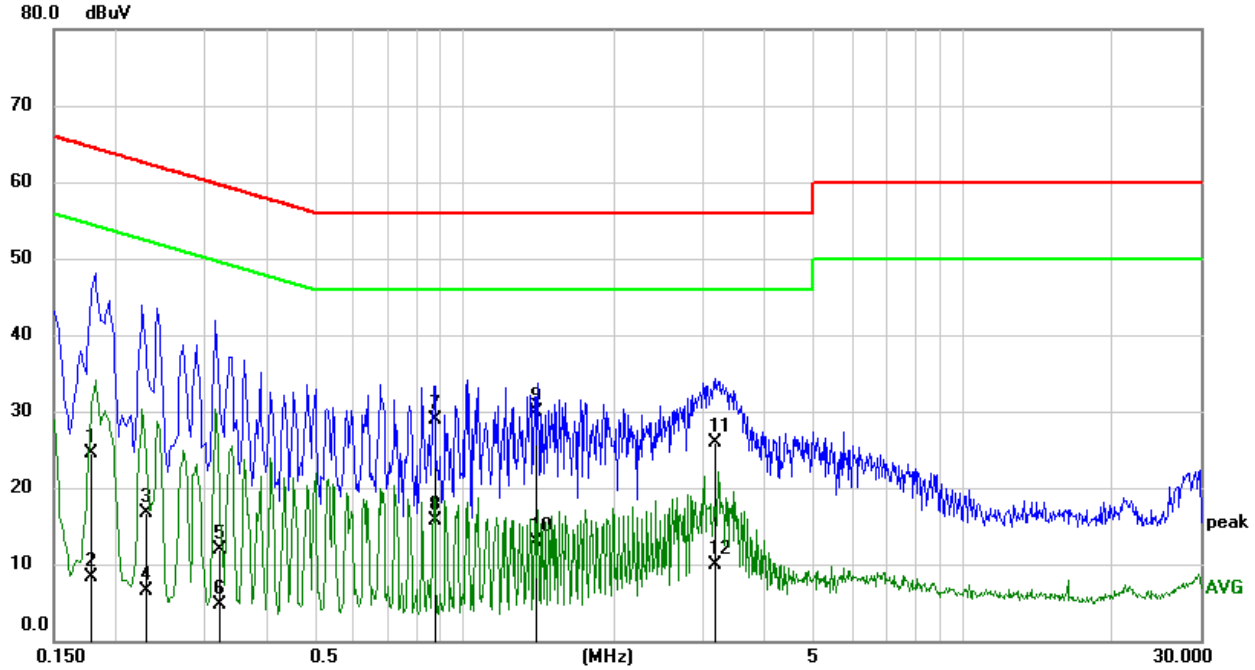
7.1.5. Test Mode

Pre-test Mode:	Mode 1
Final Test Mode:	Mode 1

7.1.6. Test Results

Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz

Phase: Line

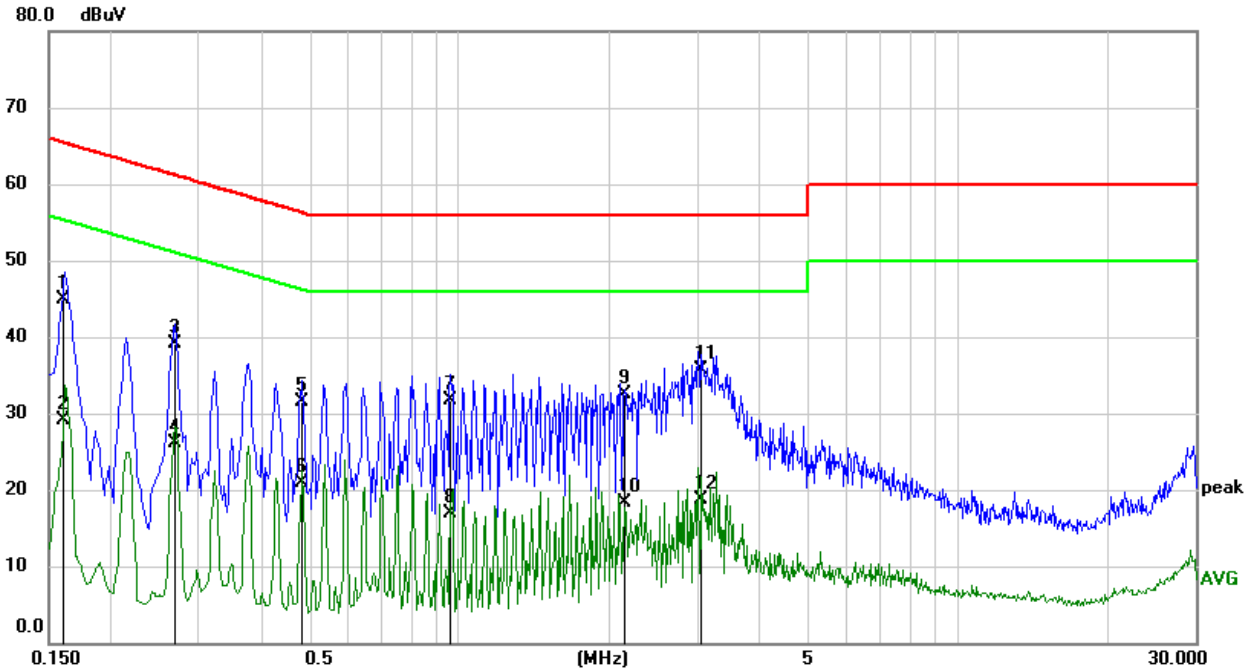


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1771	14.80	9.61	24.41	64.62	-40.21	QP
2	0.1771	-1.37	9.61	8.24	54.62	-46.38	AVG
3	0.2300	7.11	9.60	16.71	62.45	-45.74	QP
4	0.2300	-3.17	9.60	6.43	52.45	-46.02	AVG
5	0.3223	2.25	9.60	11.85	59.65	-47.80	QP
6	0.3223	-4.84	9.60	4.76	49.65	-44.89	AVG
7	0.8701	19.31	9.60	28.91	56.00	-27.09	QP
8	0.8701	6.08	9.60	15.68	46.00	-30.32	AVG
9	1.3970	20.26	9.61	29.87	56.00	-26.13	QP
10	1.3970	3.29	9.61	12.90	46.00	-33.10	AVG
11	3.1921	16.29	9.64	25.93	56.00	-30.07	QP
12	3.1921	0.25	9.64	9.89	46.00	-36.11	AVG

Remark:
Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)
Margin = Result - Limit

Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz

Phase: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1607	35.34	9.60	44.94	65.43	-20.49	QP
2	0.1607	19.42	9.60	29.02	55.43	-26.41	AVG
3	0.2682	29.50	9.60	39.10	61.17	-22.07	QP
4	0.2682	16.58	9.60	26.18	51.17	-24.99	AVG
5	0.4832	21.99	9.60	31.59	56.28	-24.69	QP
6	0.4832	11.26	9.60	20.86	46.28	-25.42	AVG
7	0.9616	22.11	9.61	31.72	56.00	-24.28	QP
8	0.9616	7.26	9.61	16.87	46.00	-29.13	AVG
9	2.1519	22.82	9.63	32.45	56.00	-23.55	QP
10	2.1519	8.71	9.63	18.34	46.00	-27.66	AVG
11	3.0660	26.13	9.65	35.78	56.00	-20.22	QP
12	3.0660	9.03	9.65	18.68	46.00	-27.32	AVG

Remark:
Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)
Margin = Result - Limit

7.2. Radiated Disturbance Measurement

7.2.1. Limits of radiated disturbance measurement

Below 1 GHz
Measurement Method and Applied Limits:
ANSI C63.4:

Frequency (MHz)	Class A		Class B
	Field strength (uV/m) (at 10m)	Field strength (dBuV/m) (at 3m)	Field strength (dBuV/m) (at 3m)
30 - 88	90	49.5	40
88 - 216	150	53.9	43.5
216 - 960	210	56.9	46
Above 960	300	60	54

Above 1 GHz
Measurement Method and Applied Limits:
ANSI C63.4:

Frequency (MHz)	Class A				Class B	
	(dBuV/m) (at 3m)		(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

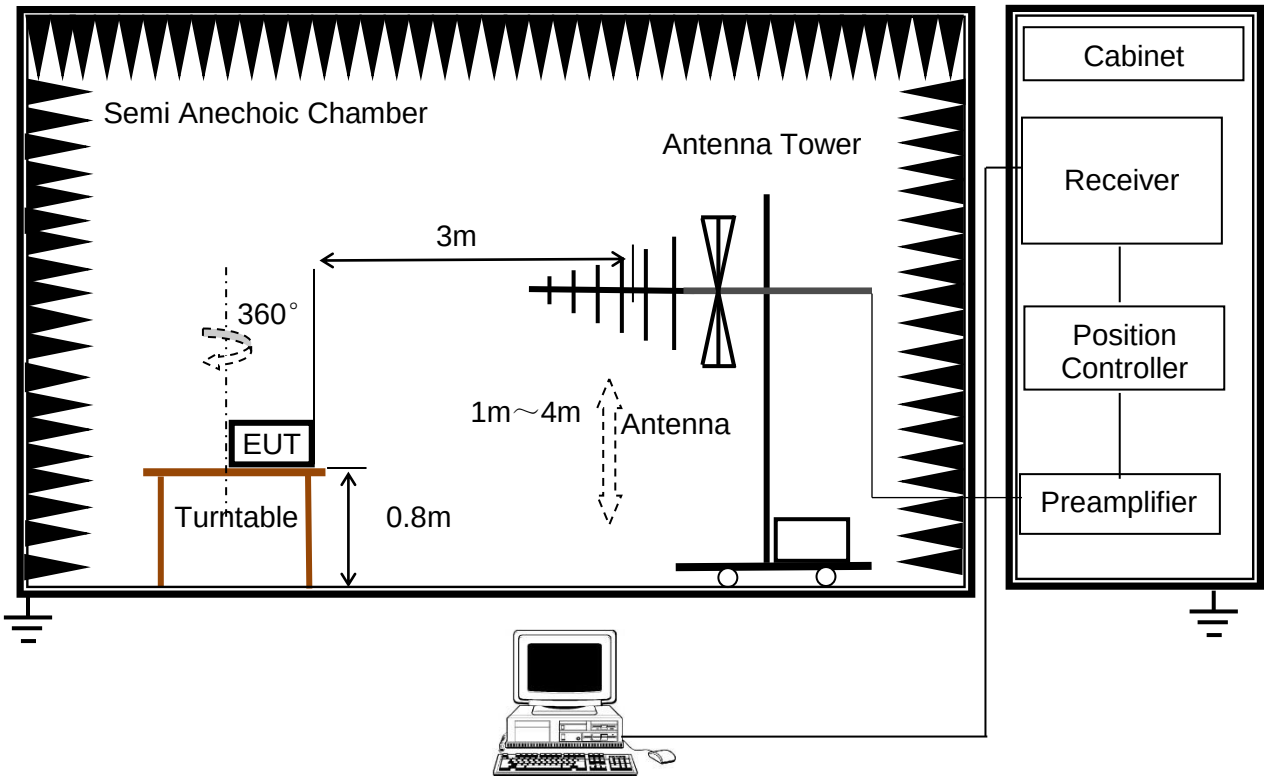
NOTE:
(1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
(2) The tighter limit applies at the band edges;
(3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 10m Emission level + 20log(10m/3m);

7.2.2. Test Procedure

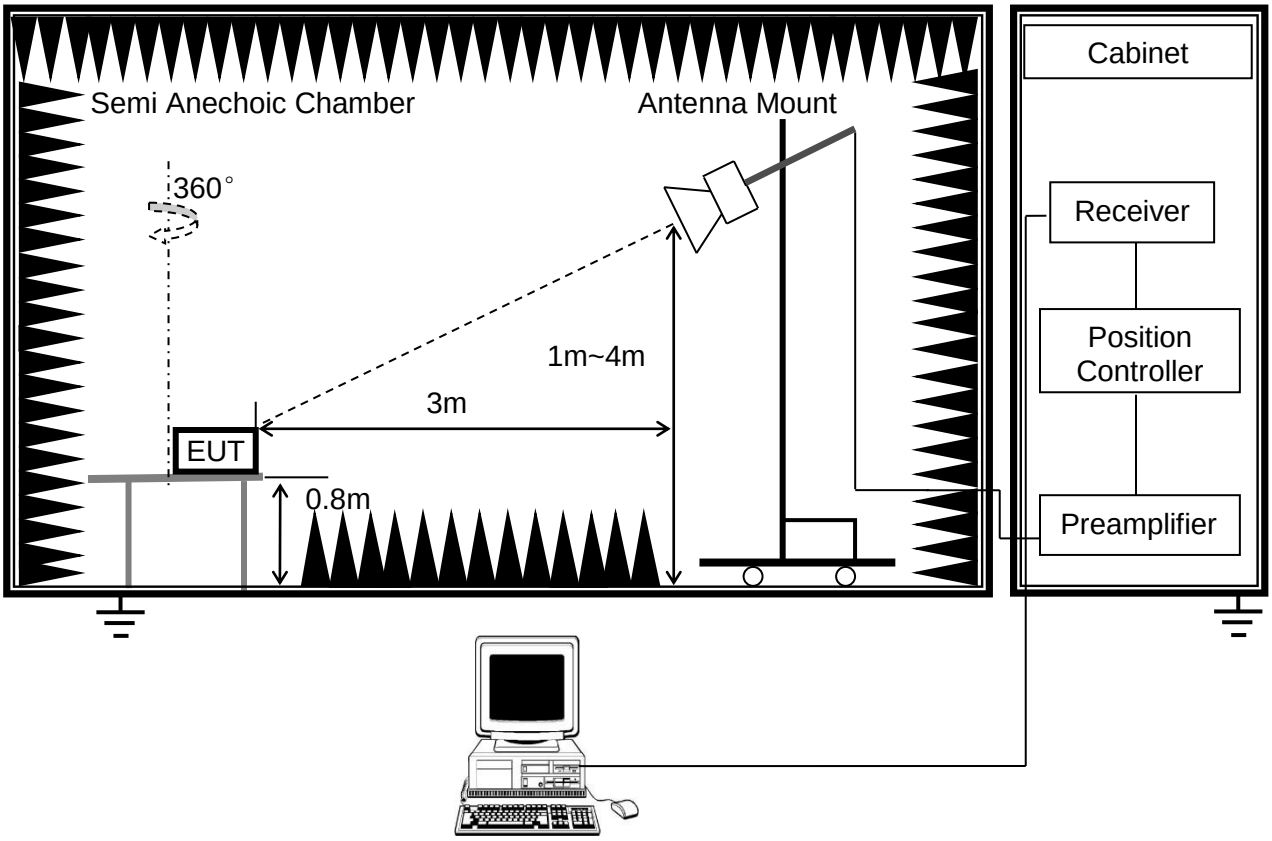
a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For the actual test configuration, please refer to the related Item:EUT Photographs of Test Configuration.

7.2.3. Test Setup

(a) Radiated Disturbance Test Set-Up Frequency 30MHz - 1GHz



(b) Radiated Disturbance Test Set-Up Frequency above 1GHz



For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

7.2.4. Test Environment

Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Temperature:	22℃	Temperature:	24.2℃
Humidity:	58%	Humidity:	57%
ATM pressure:	101kPa	ATM pressure:	101kPa

7.2.5. Test Mode

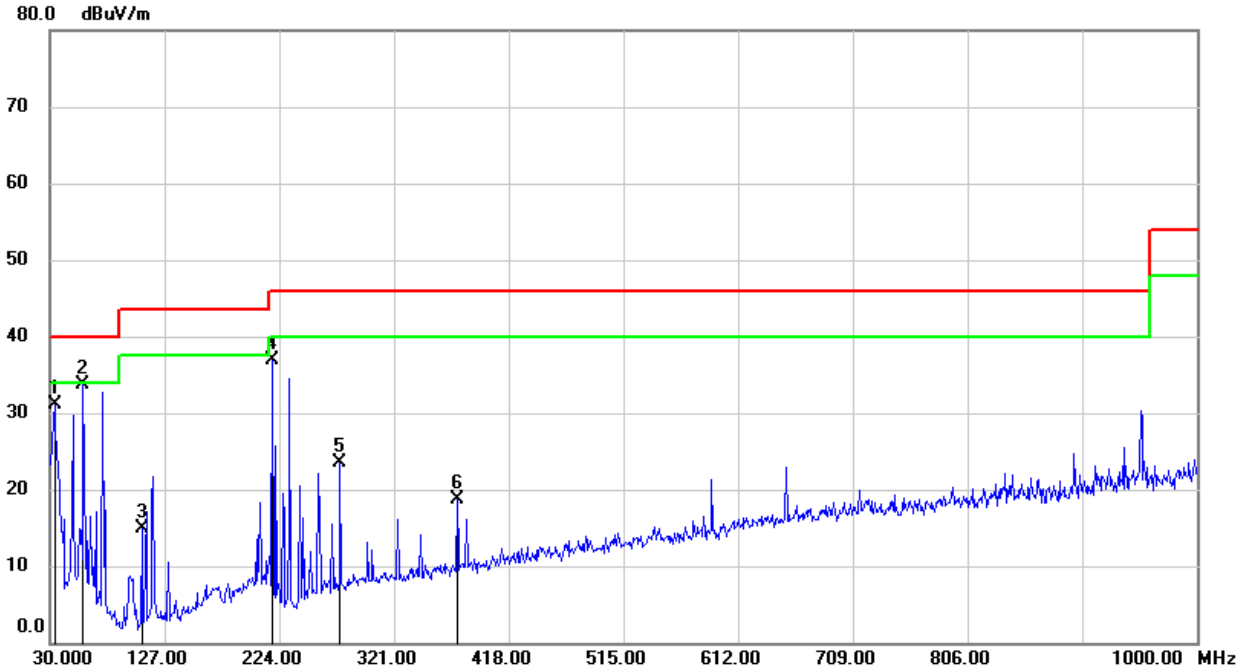
Radiated Disturbance - below 1 GHz		Radiated Disturbance - above 1 GHz	
Pre-test Mode:	Mode 1 & Mode 2	Pre-test Mode:	Mode 1 & Mode 2
Final Test Mode:	Mode 1 & Mode 2	Final Test Mode:	Mode 2

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

7.2.6. Test Results – below 1GHz

Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz

Polarization: Vertical

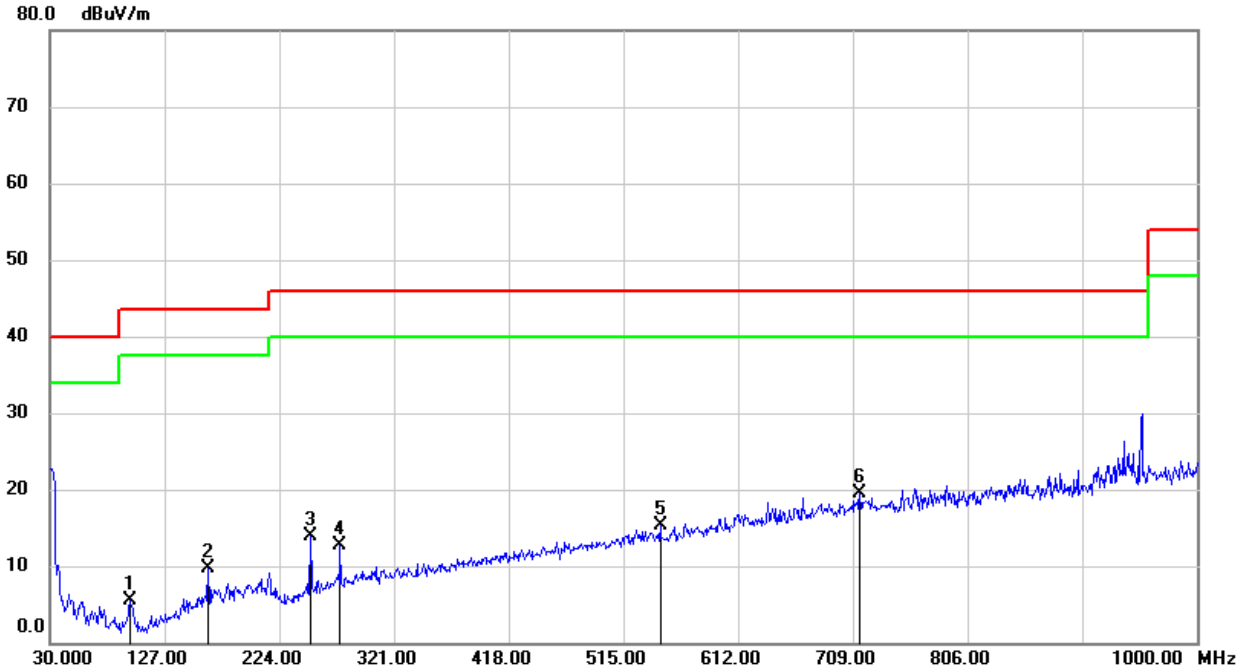


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	33.8800	48.59	-17.49	31.10	40.00	-8.90	QP
2	58.1300	52.84	-19.14	33.70	40.00	-6.30	QP
3	107.6000	36.49	-21.56	14.93	43.50	-28.57	QP
4	218.1800	53.74	-16.79	36.95	46.00	-9.05	QP
5	275.4100	38.59	-15.05	23.54	46.00	-22.46	QP
6	374.3500	31.35	-12.73	18.62	46.00	-27.38	QP

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz

Polarization: Horizontal

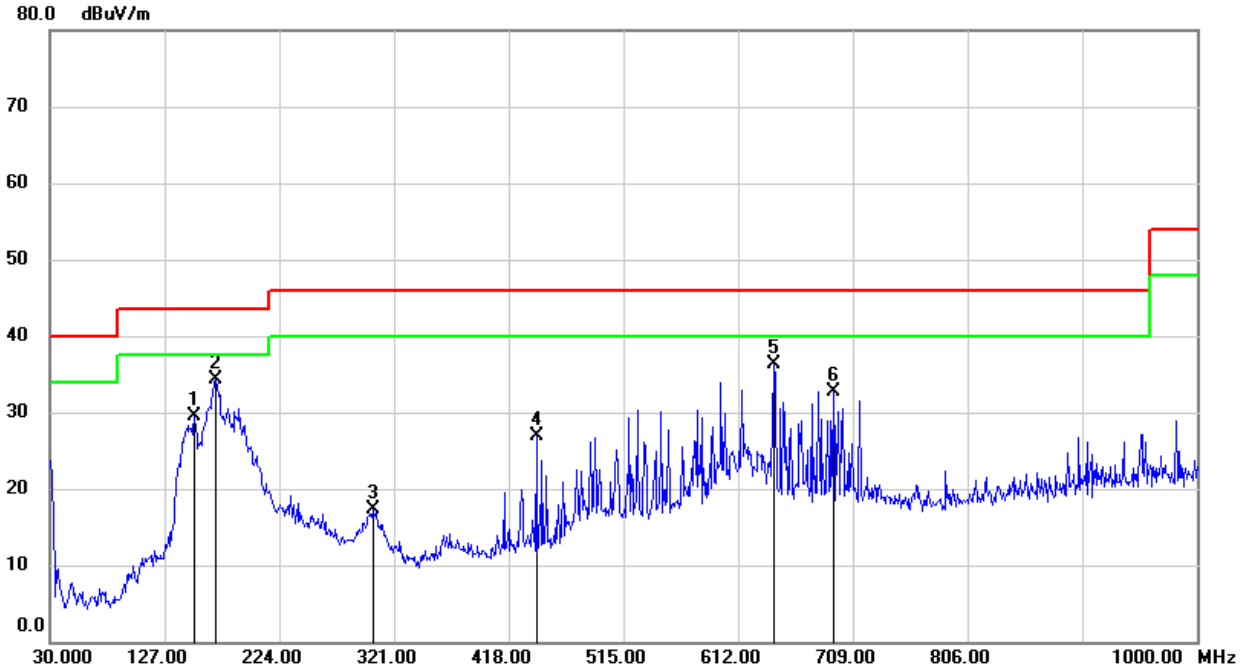


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	97.9000	27.10	-21.66	5.44	43.50	-38.06	QP
2	163.8600	27.24	-17.59	9.65	43.50	-33.85	QP
3	250.1900	30.09	-16.12	13.97	46.00	-32.03	QP
4	275.4100	27.74	-15.05	12.69	46.00	-33.31	QP
5	546.0400	24.90	-9.51	15.39	46.00	-30.61	QP
6	714.8200	25.70	-6.25	19.45	46.00	-26.55	QP

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

Test Mode:	Mode 2

Polarization: Vertical

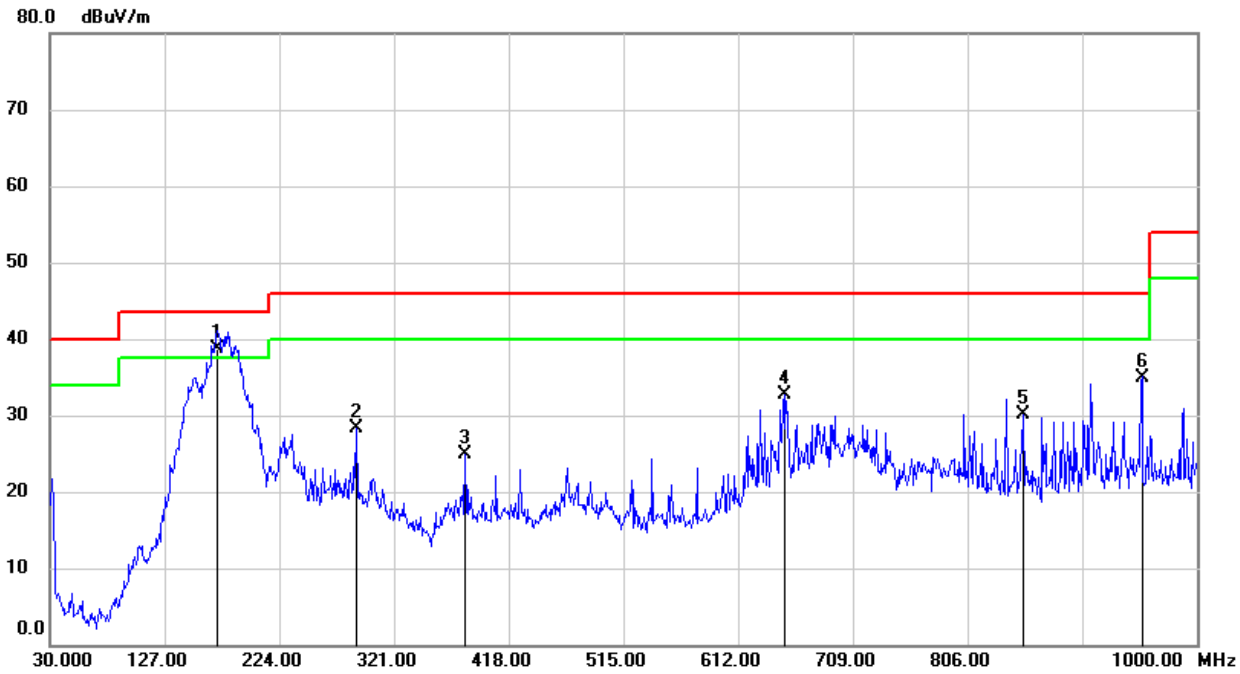


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	152.2200	47.63	-18.14	29.49	43.50	-14.01	QP
2	170.6500	51.21	-16.86	34.35	43.50	-9.15	QP
3	303.5400	31.12	-13.82	17.30	46.00	-28.70	QP
4	441.2800	38.39	-11.58	26.81	46.00	-19.19	QP
5	642.0700	44.01	-7.67	36.34	46.00	-9.66	QP
6	692.5100	39.47	-6.80	32.67	46.00	-13.33	QP

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

Test Mode:	Mode 2

Polarization: Horizontal



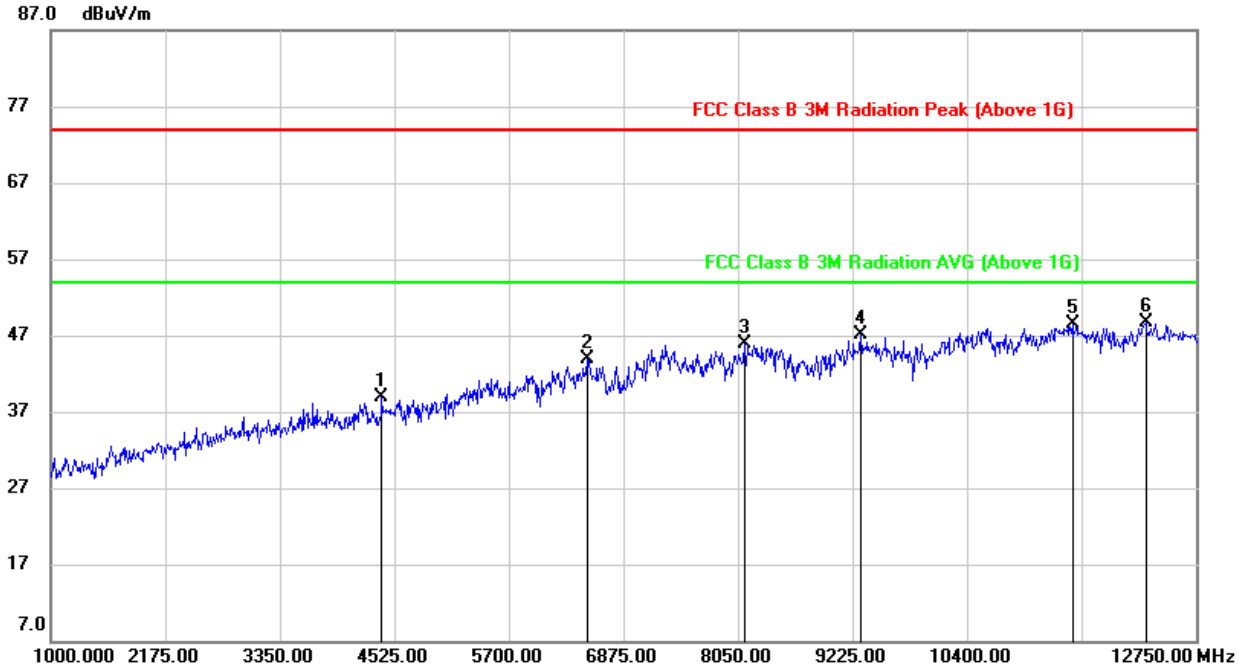
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	171.6200	55.59	-16.93	38.66	43.50	-4.84	QP
2	288.9900	42.75	-14.49	28.26	46.00	-17.74	QP
3	381.1400	37.54	-12.64	24.90	46.00	-21.10	QP
4	650.8000	40.33	-7.58	32.75	46.00	-13.25	QP
5	853.5300	34.75	-4.57	30.18	46.00	-15.82	QP
6	953.4400	38.37	-3.37	35.00	46.00	-11.00	QP

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

7.2.7. Test Results – above 1GHz

Test Mode:	Mode 2

Polarization: Vertical

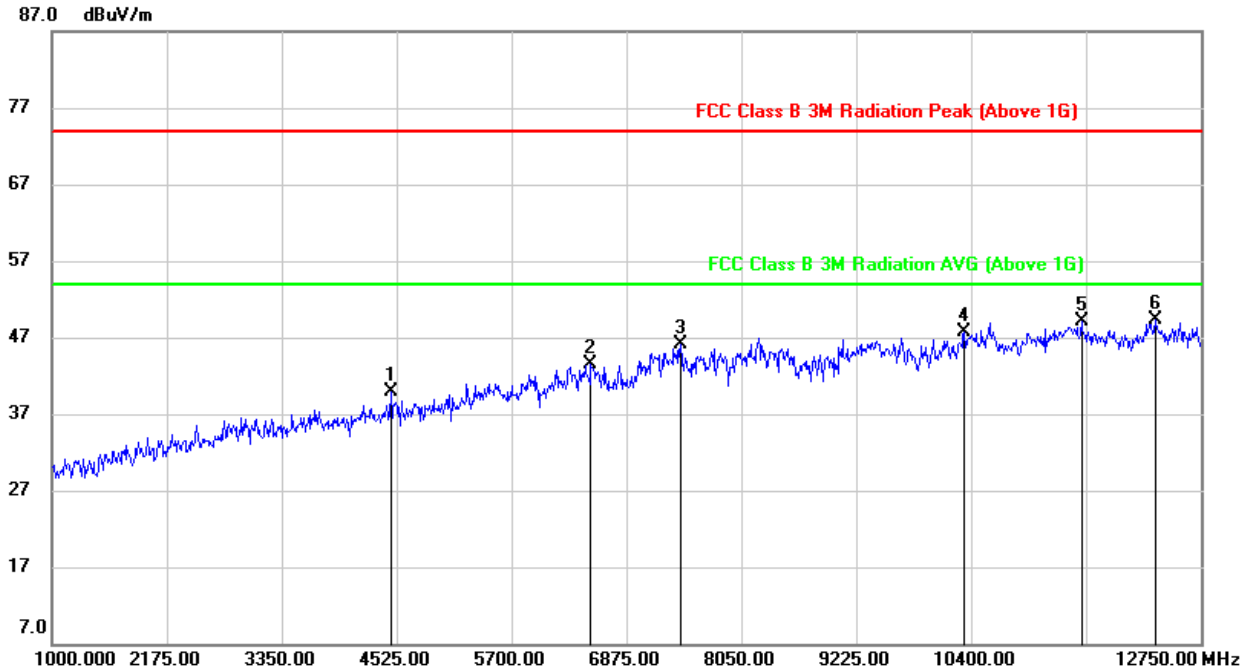


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4395.750	41.84	-3.02	38.82	74.00	-35.18	peak
2	6499.000	37.95	5.87	43.82	74.00	-30.18	peak
3	8120.500	37.00	8.96	45.96	74.00	-28.04	peak
4	9307.250	37.31	9.76	47.07	74.00	-26.93	peak
5	11481.000	34.30	14.21	48.51	74.00	-25.49	peak
6	12233.000	34.10	14.62	48.72	74.00	-25.28	peak

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

Test Mode:	Mode 2

Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4466.250	42.27	-2.41	39.86	74.00	-34.14	peak
2	6510.750	37.59	5.85	43.44	74.00	-30.56	peak
3	7427.250	39.02	7.03	46.05	74.00	-27.95	peak
4	10329.500	35.93	11.70	47.63	74.00	-26.37	peak
5	11528.000	34.74	14.31	49.05	74.00	-24.95	peak
6	12280.000	34.70	14.68	49.38	74.00	-24.62	peak

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

END OF REPORT