RADIO TEST REPORT

Report No: STS1912237W01

Issued for

Flextronics Computing (Suzhou) Co., Ltd

Address: No.1 Guanpu Road, Guoxiang Street, WuZhong District Suzhou, Jiangsu, China, 215124

Product Name:	Activity key
Brand Name:	flex
Model Name:	ACTIVITY KEY
Series Model:	N/A
FCC ID:	2AVSM-AK02
Test Standard:	Title 47 of the CFR, Part 15. Subpart F

Shenzhen STS Test Services Co., Ltd.
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TEST RESULT CERTIFICATION

Applicant's Name .....:	Flextronics Computing (Suzhou) Co., Ltd
Address.....:	Address: No.1 Guanpu Road, Guoxiang Street, WuZhong District Suzhou, Jiangsu, China, 215124
Manufacture's Name .....:	Flextronics Computing (Suzhou) Co., Ltd
Address.....:	Address: No.1 Guanpu Road, Guoxiang Street, WuZhong District Suzhou, Jiangsu, China, 215124

Product Description

Product Name .....:	Activity key
Brand Name .....:	flex
Model Name.....:	ACTIVITY KEY
Series Model .....:	N/A
Test Standards.....:	Title 47 of the CFR, Part 15. Subpart F
Test Procedure .....:	ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....:	
Date of receipt of test item.....:	12 Dec. 2019
Date of performance of tests ..:	12 Dec. 2019 ~ 28 Aug. 2020
Date of Issue.....:	28 Aug. 2020
Test Result .....:	**Pass**

Testing Engineer : (Chris Chen)

Technical Manager : (Sean she)

Authorized Signatory : (Vita Li)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	28 Aug. 2020	STS1912237W01	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part 15. Subpart F			
Standard Section	Test Item	Judgment	Remark
15.207	AC Power Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.209 15.519(c)	Radiated Spurious Emission	Pass	
15.209 15.519(d)	Radiated Spurious Emission in GPS Band	Pass	
15.519(e)	Peak Emissions within a 50MHz Bandwidth	Pass	
15.519(b)	UWB Bandwidth	Pass	
15.519(a)(1)	Cessation Time	Pass	

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
FCC test Firm Registration Number: 625569
IC test Firm Registration Number: 12108A
A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.68dB
2	Unwanted Emissions, conducted	±2.988dB
3	All emissions, radiated 30-1GHz	±6.7dB
4	All emissions, radiated 1G-6GHz	±5.5dB
5	All emissions, radiated>6G	±5.8dB
6	Conducted Emission (9KHz-150KHz)	±4.43dB
7	Conducted Emission (150KHz-30MHz)	±5dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Activity key
Trade Name	flex
Model Name	ACTIVITY KEY
Series Model	N/A
Model Difference	N/A
Product Description	The EUT is a Activity key Operation Frequency: 3.9936GHz, 4.4928GHz Modulation Type: BPM/BPSK Antenna Designation: Please refer to the Note 3. Antenna Gain(Peak): Internanl Antenna Based on the application, features, or specification exhibited in User Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User Manual.
Channel List	Please refer to the Note 2.
Power Rating	Input: DC 5V/1A
Battery	Rated Voltage: 3.7V
Hardware version number	N/A
Software version number	N/A
Connecting I/O Port(s)	Please refer to the Note 1.

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2.

Test channel	Frequency(GHz)	Test channel	Frequency(GHz)
1	3.9936	2	4.4928

3. Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	flex	ACTIVITY KEY	Internal	N/A	-2	Antenna

2.2 DESCRIPTION OF THE TEST MODES

For Radiated spurious emissions
Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Pretest Mode	Description	Modulation
Mode 1	TX Low channel	BPM/BPSK
Mode 2	TX High channel	BPM/BPSK

Note:

(1) All above mode have been measurement, only worst data was reported.

(2) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V,50/60Hz is shown in the report.

For AC Conducted Emission

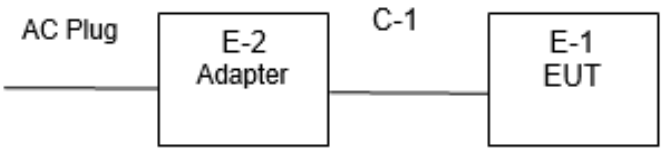
Test Case	
AC Conducted Emission	Mode 3 : Keeping TX

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters.

Radiated Spurious Emission Test

Conducted Emission Test



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-2	Adapter	LITEON	PA-1650-86	N/A	N/A
C-1	DC Cable	N/A	100cm	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
N/A	N/A	N/A	N/A	N/A	N/A

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
Signal Analyzer	Agilent	N9020A	MY51110105	2020.03.04	2021.03.04
Active loop Antenna	ZHINAN	ZN30900C	16035	2018.03.11	2021.03.10
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.01
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2019.10.09	2020.10.08
Pre-mplifier(18G-40G)	SKET	LNPA_1840-50	SK2018101801	2019.10.22	2020.10.21
Spectrum Analyzer	R&S	FSV40-N	101823	2019.10.11	2020.10.10
Temperature & Humidity	HH660	Mieo	N/A	2019.10.09	2020.10.08
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
LISN	R&S	ENV216	101242	2019.10.09	2020.10.08
LISN	EMCO	3810/2NM	23625	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 CE)			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY49100060	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	FARAD	LZ-RF /LzRf-3A3			

3. EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 15.207 limit in the table below has to be followed.

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

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.

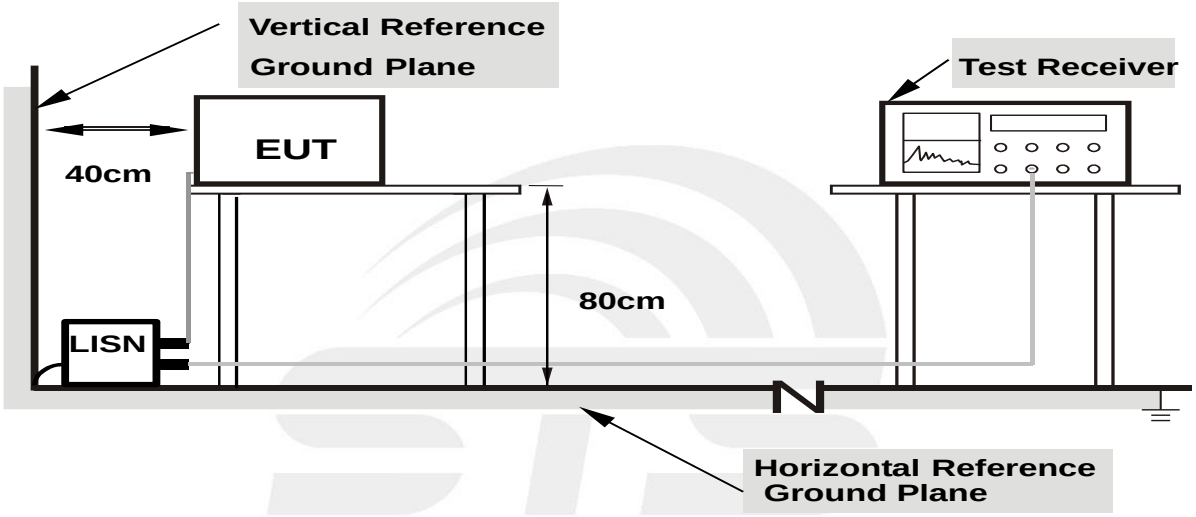
The following table is the setting of the receiver

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

3.1.2 TEST PROCEDURE

a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical 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 –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

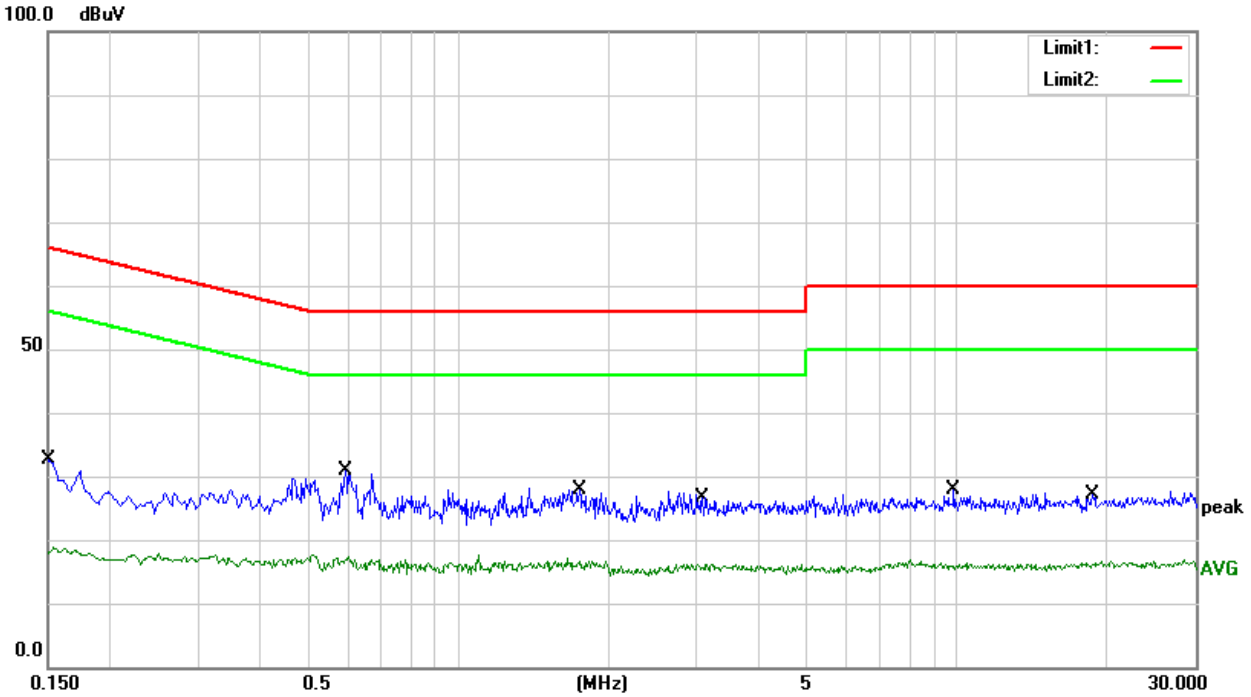
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.5 TEST RESULT

Temperature:	23.5(C)	Relative Humidity:	47%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 3		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	12.72	19.79	32.51	66.00	-33.49	QP
2	0.1500	-0.88	19.79	18.91	56.00	-37.09	AVG
3	0.5940	10.97	19.94	30.91	56.00	-25.09	QP
4	0.5940	-2.66	19.94	17.28	46.00	-28.72	AVG
5	1.7460	8.08	19.79	27.87	56.00	-28.13	QP
6	1.7460	-3.09	19.79	16.70	46.00	-29.30	AVG
7	3.0860	6.73	19.81	26.54	56.00	-29.46	QP
8	3.0860	-3.71	19.81	16.10	46.00	-29.90	AVG
9	9.8140	7.60	20.19	27.79	60.00	-32.21	QP
10	9.8140	-4.06	20.19	16.13	50.00	-33.87	AVG
11	18.6420	6.60	20.40	27.00	60.00	-33.00	QP
12	18.6420	-4.02	20.40	16.38	50.00	-33.62	AVG

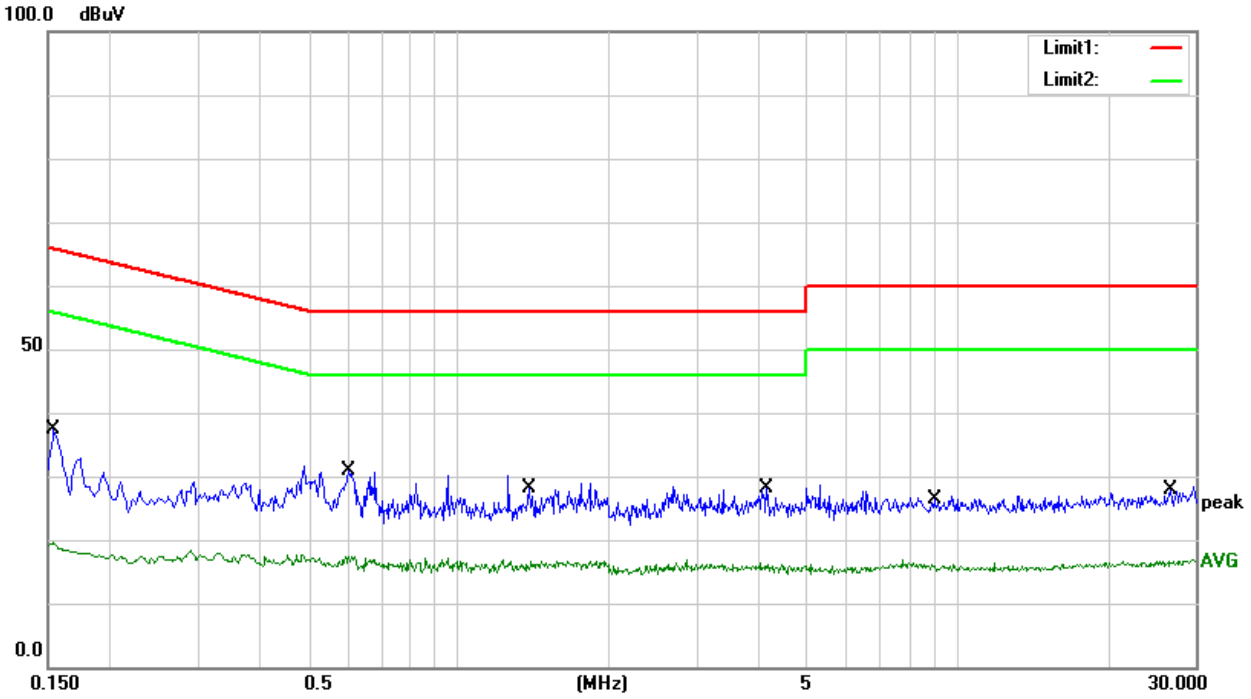
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.5(C)	Relative Humidity:	47%RH
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 3		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1547	17.09	19.79	36.88	65.74	-28.86	QP
2	0.1547	-0.27	19.79	19.52	55.74	-36.22	AVG
3	0.6020	10.87	19.93	30.80	56.00	-25.20	QP
4	0.6020	-2.59	19.93	17.34	46.00	-28.66	AVG
5	1.3860	8.46	19.79	28.25	56.00	-27.75	QP
6	1.3860	-3.25	19.79	16.54	46.00	-29.46	AVG
7	4.1380	8.32	19.84	28.16	56.00	-27.84	QP
8	4.1380	-3.45	19.84	16.39	46.00	-29.61	AVG
9	8.9980	6.28	20.10	26.38	60.00	-33.62	QP
10	8.9980	-3.73	20.10	16.37	50.00	-33.63	AVG
11	26.7020	7.73	20.20	27.93	60.00	-32.07	QP
12	26.7020	-3.45	20.20	16.75	50.00	-33.25	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



3.2 RADIATED EMISSION MEASUREMENT (FOR 15.519(c))

3.2.1 RADIATED EMISSION LIMITS

The radiated emissions at or below 960MHz from a device operating under the provisions of this section shall not exceed the emission levels in Section 15.209.

Frequencies (MHz)	Field Strength (micorvolts/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

Note: 1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

The radiated emissions above 960MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1MHz:

Frequency of Emission (MHz)	**EIRP (dBm)**	**Field Strength (dBuV/m@3m)**	**Field Strength (dBuV/m@1m)**
960~1610	-75.3	19.9	29.54
1610~1990	-63.3	31.9	41.54
1990~3100	-61.3	33.9	43.54
3100~10600	-41.3	53.9	63.54
Above 10600	-61.3	33.9	43.54

Notes: 1. Transfer rules follow 15.521(g),15.31(f)(1).
2. 15.521(c) Emissions from digital circuitry used to enable the operation of the UWB transmitter shall comply with the limits in Section 15.209 of this chapter, rather than the limits specified in this subpart.
3. E(dBuV/m)@3m = P(dBm EIRP) + 95.2;
E(dBuV/m)@1m= E(dBuV/m)@3m+20*log(3/1)

Spectrum Parameter	Setting
Detector	RMS
Attenuation	Auto
Start Frequency	960 MHz
Stop Frequency	10th of the highest fundamental frequency or to 40 GHz, whichever is lower
RB	1MHz
VB	3MHz
Sweep Point	960 MHz -1610MHz: 1001 1610MHz – 1990MHz: 1001 1990MHz – 3100MHz: 1110 3100MHz – 10600MHz: 7500 10600MHz – 18000MHz: 7400 18000MHz – 40000MHz: 22000
SweepTime	1s

Receiver Parameter	**Setting**
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
	90kHz~110kHz / RB 200Hz for QP
	110kHz~490kHz / RB 200Hz for PK & AV
	490kHz~30MHz / RB 9kHz for QP
	30MHz~960MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of arotating table 0.8meter (above 1GHz is 1.5 m) above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization Of the antenna are set to make the measurement.

c. The initial step in collecting radiated emission data is a receive peak detector mode. Pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

d. All readings are peak unless otherwise stated QP in column of Note. Peak denoted that the Peak reading compliance with the QP limits and then QP Mode measurement didn't perform (Below 960MHz)

e. All readings are RMS mode value , for each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading . (Above 960MHz)

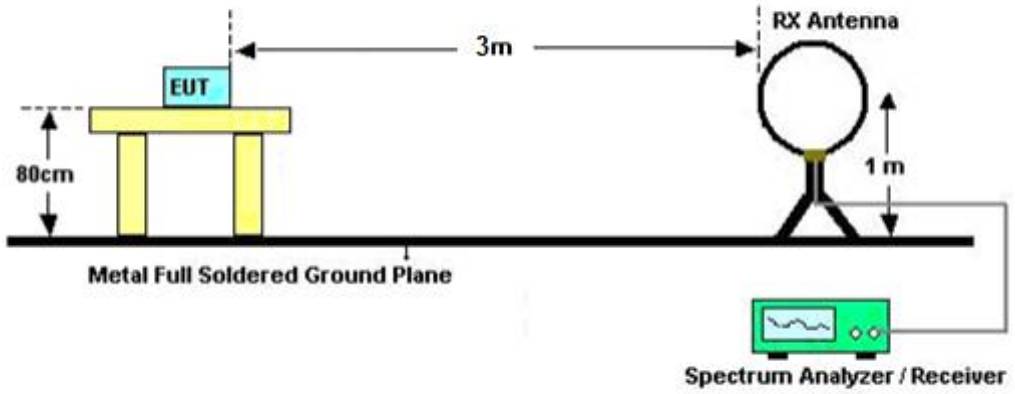
f. For the actual test configuration, please refer to the related Item –EUT Test Photos. Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 DEVIATION FROM TEST STANDARD

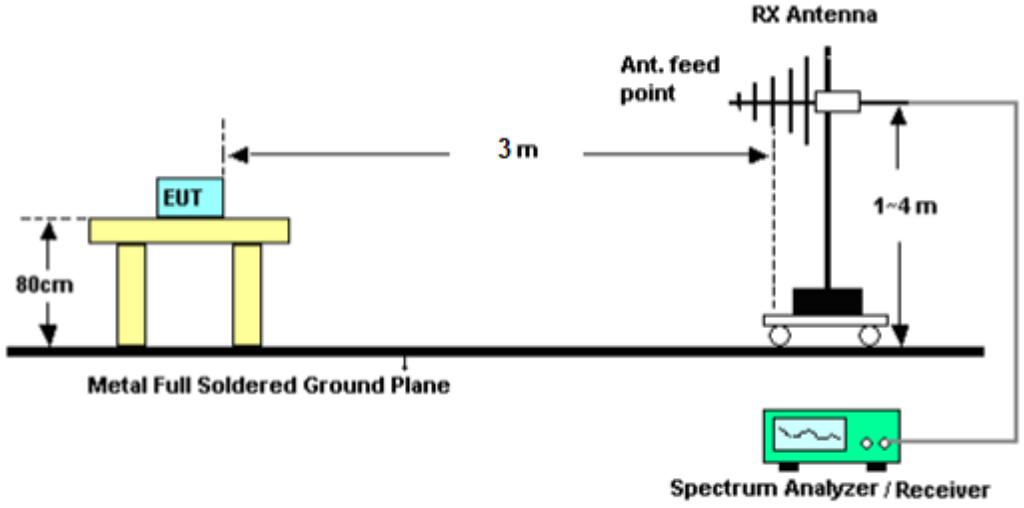
No deviation

3.2.4 TEST SETUP

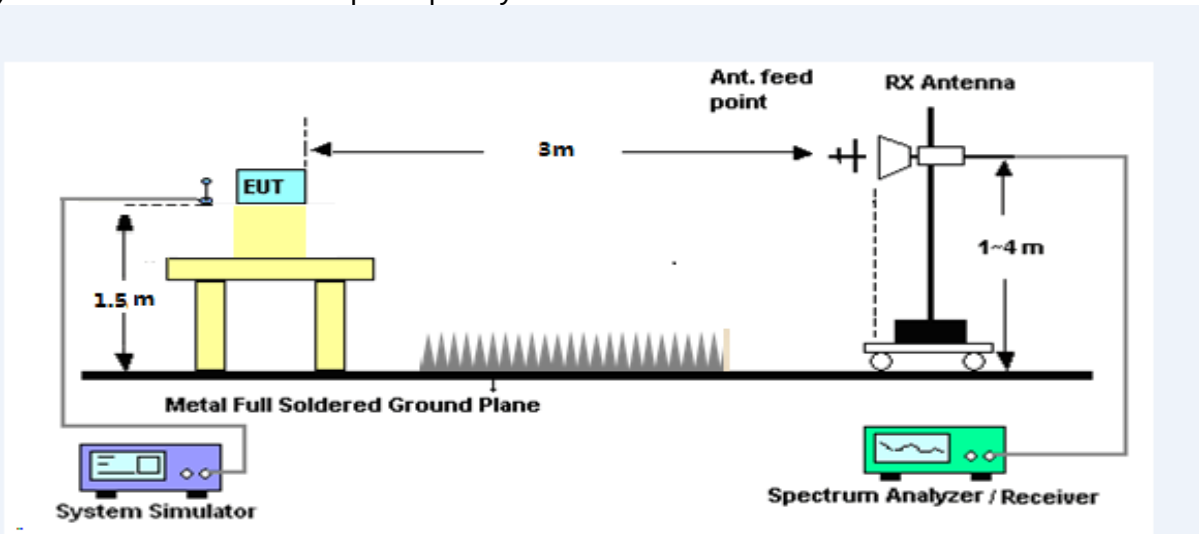
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:
Margin=PL-PK L or AL- AV L; Margin only shown the worst case.
Where
PR = Peak Reading
AR = Average Reading
PL = Peak Level
AL = Average Level
AF = Antenna Factor
PK L = Peak Limit
AV L = AV Limit
For example

Frequency	PR	AR	AF	PL	AL	PK L	AV L	Margin
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dBμV/m)	(dB)
2178	40.23	30.31	9.83	50.06	40.14	74.00	54.00	-13.86

3.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.7 TEST RESULTS

Note: We pretested the battery powered and adapter powered mode, find the worst case in battery powered mode and shown in this report.

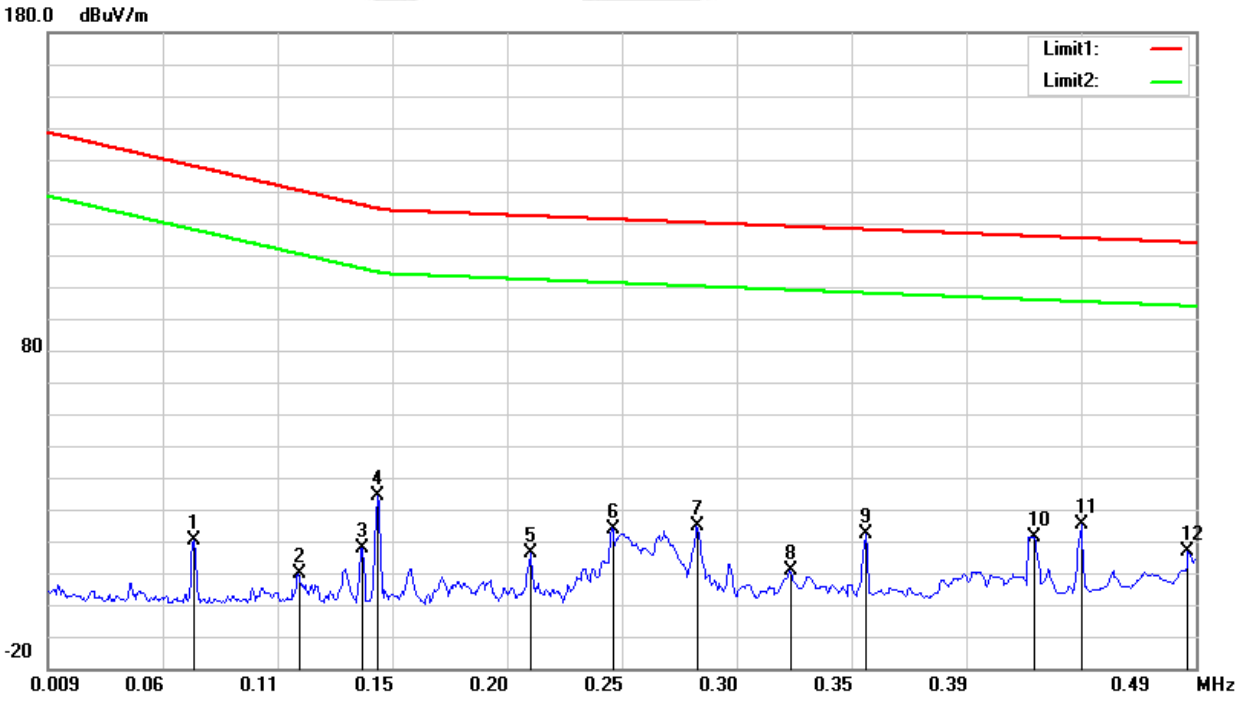
Below 30MHz

Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 1(9KHz - 490KHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0703	20.32	0.00	20.32	137.89	-117.57	peak
2	0.1142	9.61	0.00	9.61	130.29	-120.68	peak
3	0.1408	17.71	0.00	17.71	125.67	-107.96	peak
4	0.1473	34.31	0.00	34.31	124.55	-90.24	peak
5	0.2112	16.14	0.00	16.14	122.23	-106.09	peak
6	0.2457	24.00	0.00	24.00	121.19	-97.19	peak
7	0.2812	24.78	0.00	24.78	120.11	-95.33	peak
8	0.3202	10.70	0.00	10.70	118.93	-108.23	peak
9	0.3520	22.33	0.00	22.33	117.97	-95.64	peak
10	0.4223	21.23	0.00	21.23	115.85	-94.62	peak
11	0.4421	25.16	0.00	25.16	115.25	-90.09	peak
12	0.4870	16.54	0.00	16.54	113.89	-97.35	peak

Remark:

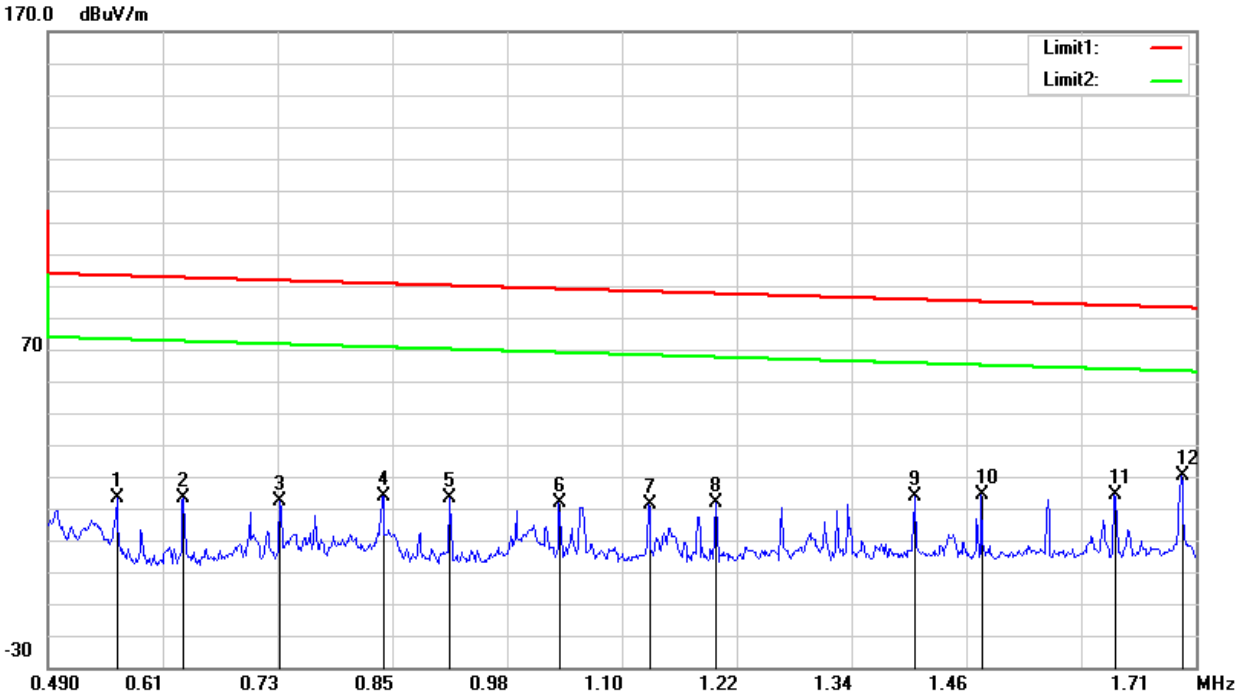
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 1 (490KHz – 1.705MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5631	23.14	0.00	23.14	93.15	-70.01	QP
2	0.6336	23.14	0.00	23.14	92.52	-69.38	QP
3	0.7365	22.34	0.00	22.34	91.60	-69.26	QP
4	0.8450	23.71	0.00	23.71	90.64	-66.93	QP
5	0.9154	23.10	0.00	23.10	90.01	-66.91	QP
6	1.0313	21.52	0.00	21.52	88.98	-67.46	QP
7	1.1267	21.43	0.00	21.43	88.12	-66.69	QP
8	1.1971	21.90	0.00	21.90	87.50	-65.60	QP
9	1.4083	23.79	0.00	23.79	85.61	-61.82	QP
10	1.4788	24.42	0.00	24.42	84.99	-60.57	QP
11	1.6198	24.08	0.00	24.08	83.73	-59.65	QP
12	1.6902	30.42	0.00	30.42	83.10	-52.68	QP

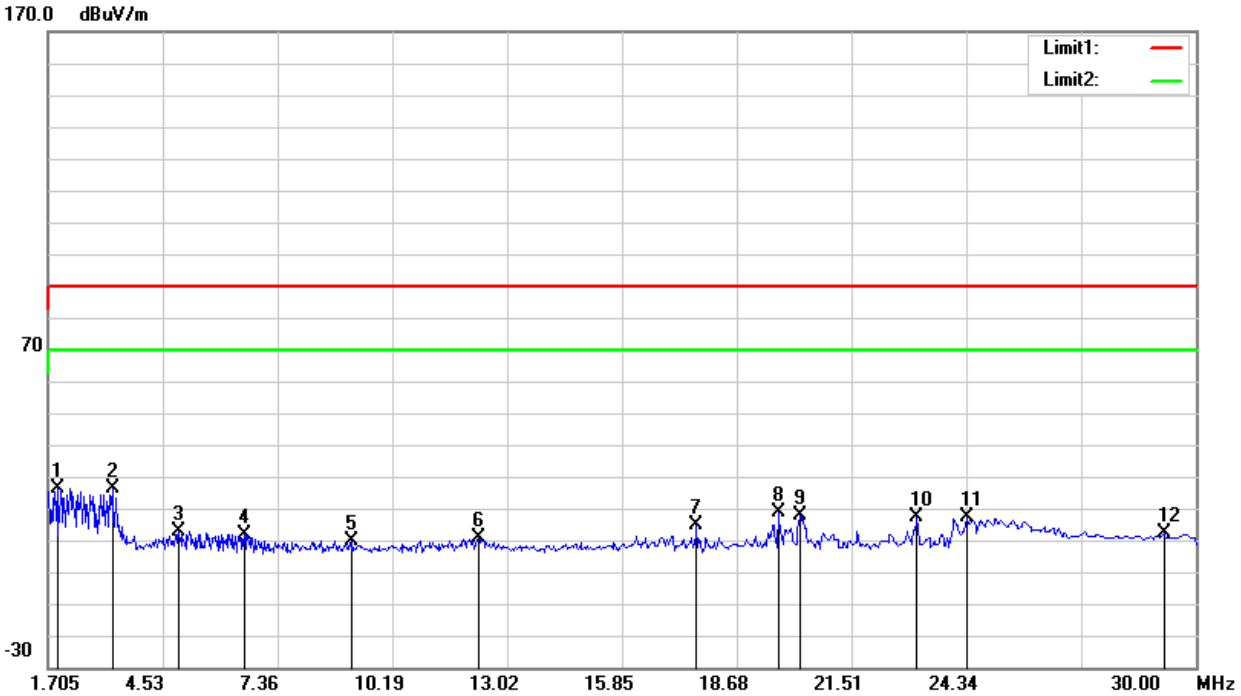
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 1 (1.705MHz – 30MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1.9710	26.26	0.00	26.26	89.54	-63.28	QP
2	3.3092	26.14	0.00	26.14	89.54	-63.40	QP
3	4.9306	12.95	0.00	12.95	89.54	-76.59	QP
4	6.5491	14.05	-2.32	11.73	89.54	-77.81	QP
5	9.2256	15.47	-5.67	9.80	89.54	-79.74	QP
6	12.3270	19.88	-9.15	10.73	89.54	-78.81	QP
7	17.6944	26.15	-11.53	14.62	89.54	-74.92	QP
8	19.7090	31.42	-12.43	18.99	89.54	-70.55	QP
9	20.2580	30.48	-12.67	17.81	89.54	-71.73	QP
10	23.1300	30.80	-13.43	17.37	89.54	-72.17	QP
11	24.3492	13.07	4.25	17.32	89.54	-72.22	QP
12	29.2162	9.27	2.75	12.02	89.54	-77.52	QP

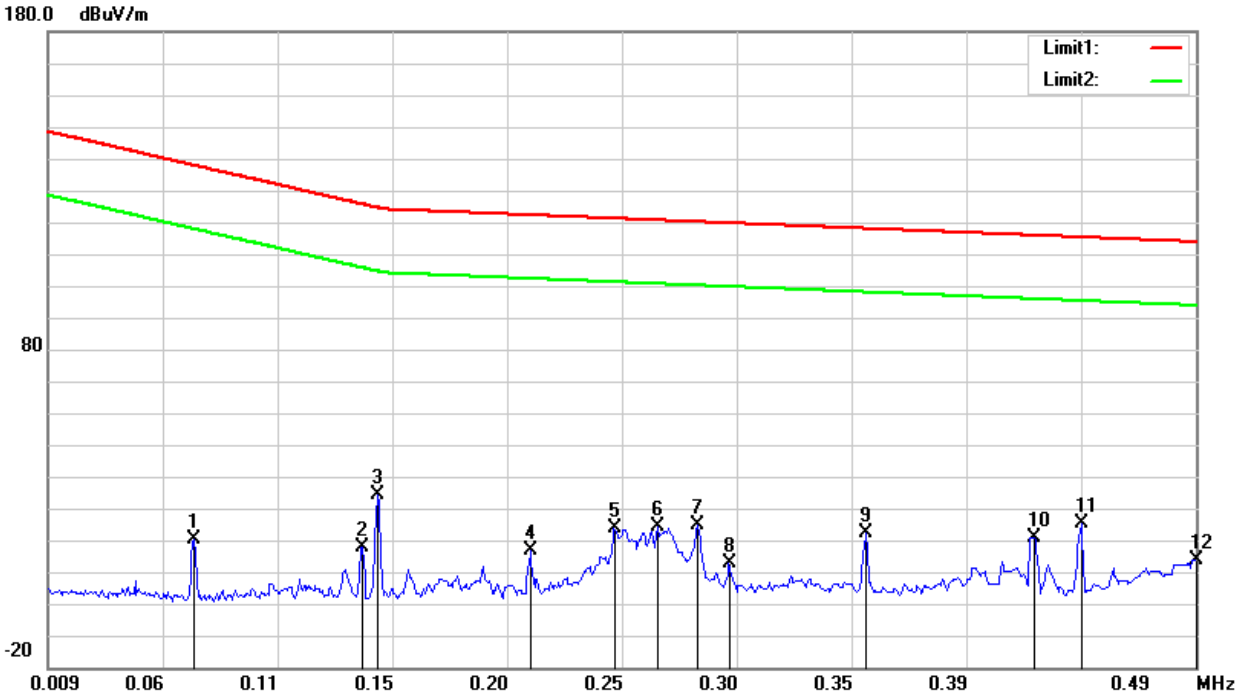
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 2(9KHz - 490KHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0704	20.39	0.00	20.39	137.88	-117.49	peak
2	0.1408	17.52	0.00	17.52	125.67	-108.15	peak
3	0.1473	34.30	0.00	34.30	124.55	-90.25	peak
4	0.2112	16.67	0.00	16.67	122.23	-105.56	peak
5	0.2465	23.56	0.00	23.56	121.16	-97.60	peak
6	0.2644	24.11	0.00	24.11	120.62	-96.51	peak
7	0.2813	24.98	0.00	24.98	120.11	-95.13	peak
8	0.2945	12.58	0.00	12.58	119.71	-107.13	peak
9	0.3520	22.31	0.00	22.31	117.97	-95.66	peak
10	0.4224	20.68	0.00	20.68	115.84	-95.16	peak
11	0.4420	25.27	0.00	25.27	115.25	-89.98	peak
12	0.4900	13.77	0.00	13.77	93.80	-80.03	peak

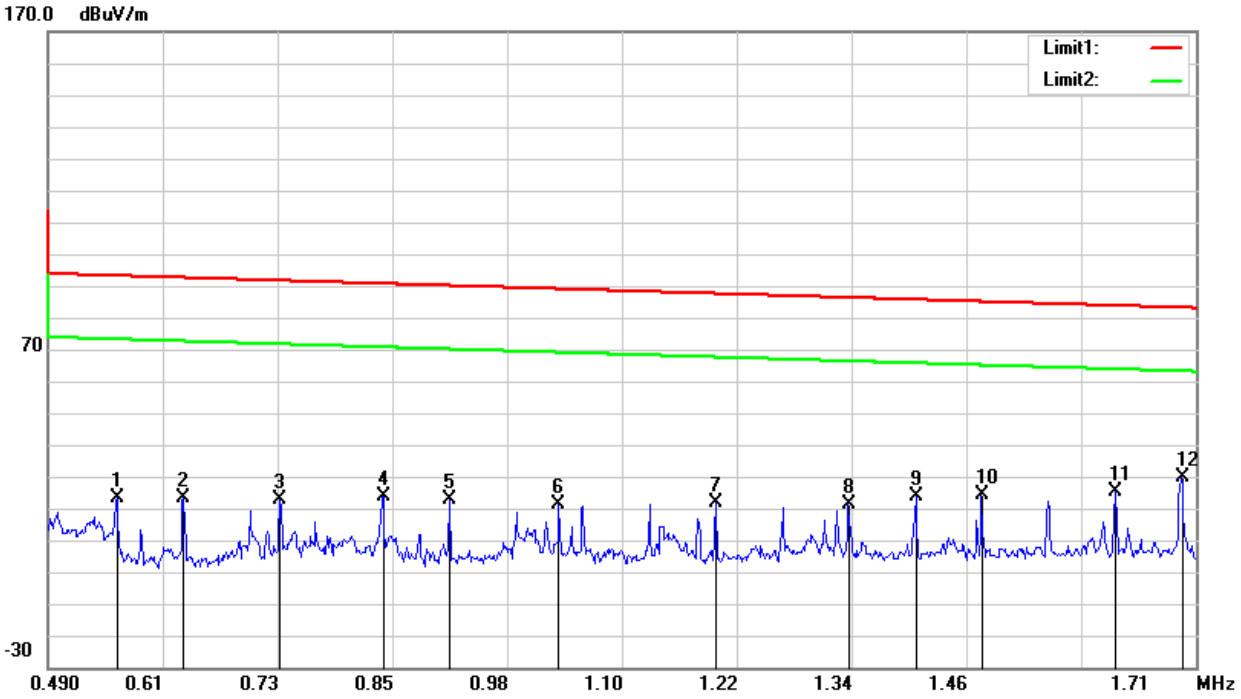
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 2 (490KHz – 1.705MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5631	23.37	0.00	23.37	93.15	-69.78	QP
2	0.6336	23.07	0.00	23.07	92.52	-69.45	QP
3	0.7364	22.56	0.00	22.56	91.60	-69.04	QP
4	0.8450	23.79	0.00	23.79	90.64	-66.85	QP
5	0.9155	22.54	0.00	22.54	90.01	-67.47	QP
6	1.0310	21.50	0.00	21.50	88.98	-67.48	QP
7	1.1971	21.84	0.00	21.84	87.50	-65.66	QP
8	1.3381	21.05	0.00	21.05	86.24	-65.19	QP
9	1.4085	23.76	0.00	23.76	85.61	-61.85	QP
10	1.4788	24.38	0.00	24.38	84.99	-60.61	QP
11	1.6200	25.07	0.00	25.07	83.73	-58.66	QP
12	1.6902	29.95	0.00	29.95	83.10	-53.15	QP

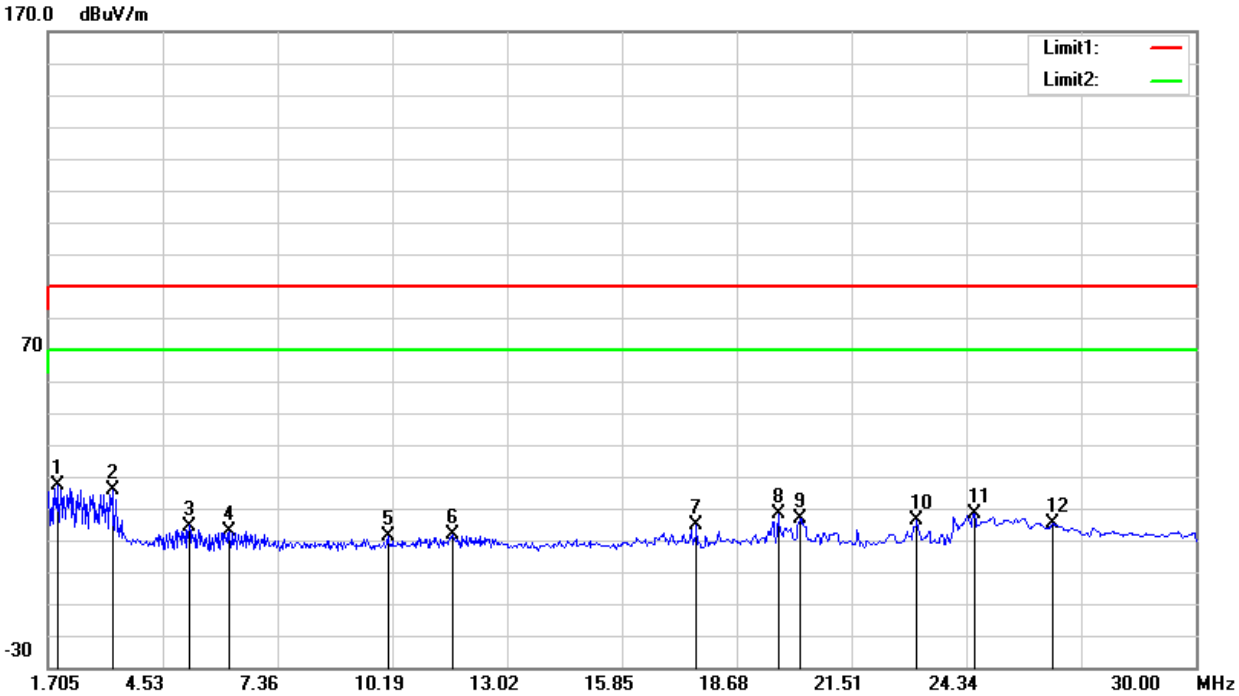
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.7(C)	Relative Humidity:	61%RH
Test Voltage:	DC 3.7V	Test Mode:	CH 2 (1.705MHz – 30MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1.9710	27.13	0.00	27.13	89.54	-62.41	QP
2	3.3092	25.91	0.00	25.91	89.54	-63.63	QP
3	5.2107	15.29	-0.79	14.50	89.54	-75.04	QP
4	6.1954	14.78	-1.79	12.99	89.54	-76.55	QP
5	10.0887	17.72	-6.71	11.01	89.54	-78.53	QP
6	11.6930	20.36	-8.63	11.73	89.54	-77.81	QP
7	17.6944	26.45	-11.53	14.92	89.54	-74.62	QP
8	19.7090	30.89	-12.43	18.46	89.54	-71.08	QP
9	20.2580	29.49	-12.67	16.82	89.54	-72.72	QP
10	23.1300	29.53	-13.43	16.10	89.54	-73.44	QP
11	24.5333	14.23	4.22	18.45	89.54	-71.09	QP
12	26.4883	11.36	3.65	15.01	89.54	-74.53	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



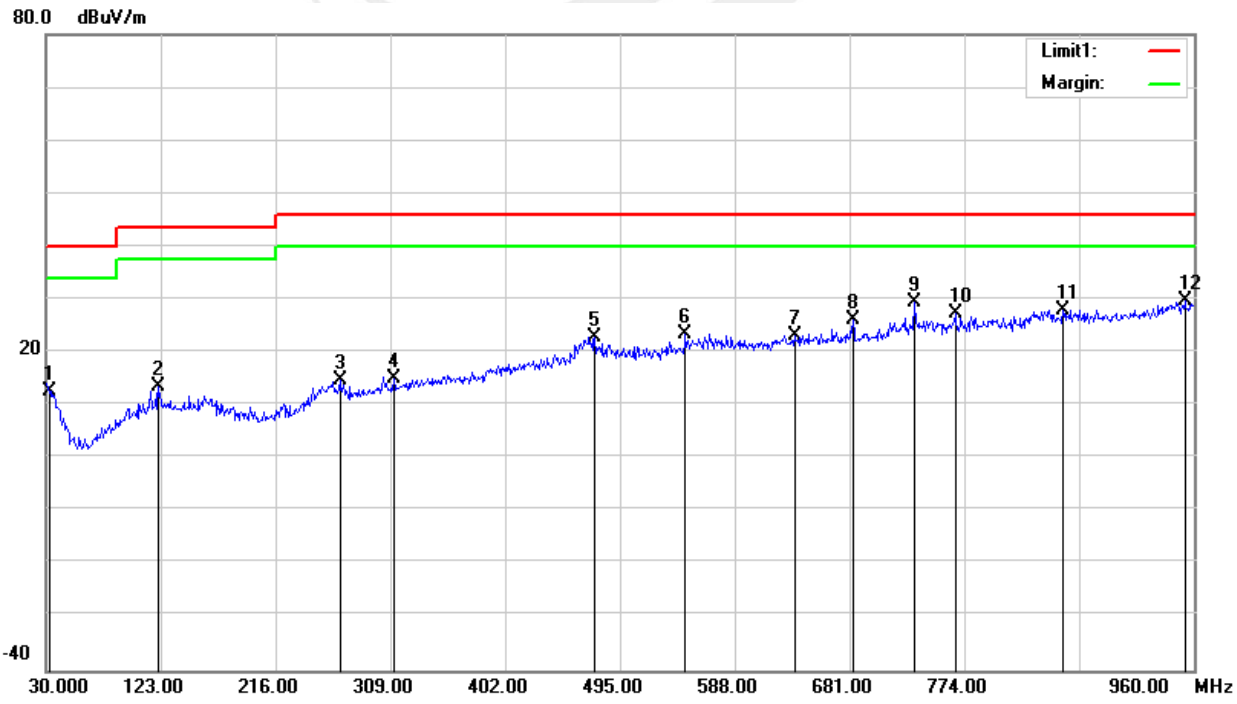
Note: The position of the measurement polarization (Horizontal / Face-on / Face-off) all has been tested, only shown the worst mode of Horizontal position.

30MHz – 960MHz Radiation Spurious

Temperature:	23.3(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.7900	26.96	-14.27	12.69	40.00	-27.31	QP
2	121.1400	31.77	-18.32	13.45	43.50	-30.05	QP
3	268.0800	29.99	-15.11	14.88	46.00	-31.12	QP
4	311.7900	29.31	-14.38	14.93	46.00	-31.07	QP
5	474.5400	31.74	-8.84	22.90	46.00	-23.10	QP
6	548.0100	29.54	-5.99	23.55	46.00	-22.45	QP
7	636.3600	28.07	-4.92	23.15	46.00	-22.85	QP
8	683.7900	30.43	-4.31	26.12	46.00	-19.88	QP
9	733.0800	31.78	-2.36	29.42	46.00	-16.58	QP
10	766.5600	29.56	-2.27	27.29	46.00	-18.71	QP
11	853.9800	28.51	-0.62	27.89	46.00	-18.11	QP
12	952.5600	28.08	1.63	29.71	46.00	-16.29	QP

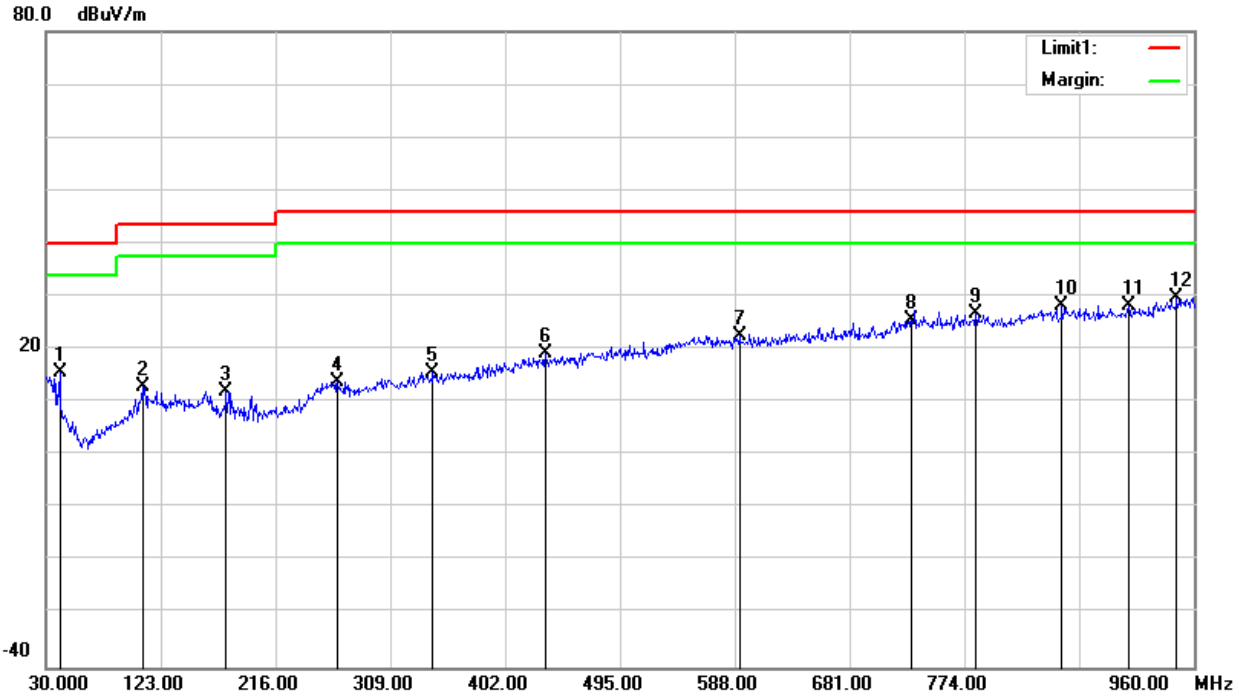
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.3(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	41.1600	34.32	-18.67	15.65	40.00	-24.35	QP
2	108.1200	32.35	-19.27	13.08	43.50	-30.42	QP
3	176.0100	32.00	-20.04	11.96	43.50	-31.54	QP
4	266.2200	28.62	-14.89	13.73	46.00	-32.27	QP
5	343.4100	28.89	-13.29	15.60	46.00	-30.40	QP
6	434.5500	29.23	-10.12	19.11	46.00	-26.89	QP
7	591.7200	28.48	-5.83	22.65	46.00	-23.35	QP
8	731.2200	27.85	-2.42	25.43	46.00	-20.57	QP
9	783.3000	28.76	-2.13	26.63	46.00	-19.37	QP
10	853.0500	28.77	-0.65	28.12	46.00	-17.88	QP
11	906.9900	28.62	-0.27	28.35	46.00	-17.65	QP
12	946.0500	28.34	1.51	29.85	46.00	-16.15	QP

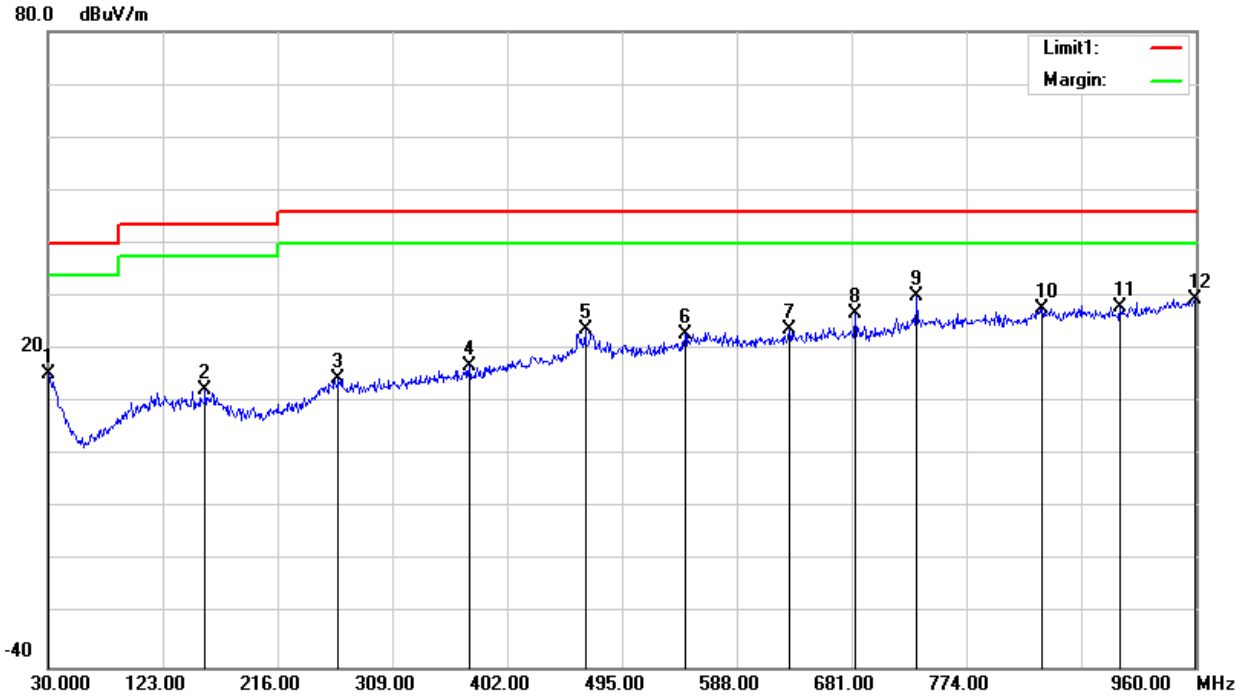
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.3(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.9300	28.68	-13.33	15.35	40.00	-24.65	QP
2	157.4100	31.16	-18.71	12.45	43.50	-31.05	QP
3	265.2900	29.26	-14.79	14.47	46.00	-31.53	QP
4	371.3100	29.31	-12.47	16.84	46.00	-29.16	QP
5	465.2400	33.05	-9.22	23.83	46.00	-22.17	QP
6	546.1500	28.94	-6.19	22.75	46.00	-23.25	QP
7	630.7800	28.74	-5.03	23.71	46.00	-22.29	QP
8	683.7900	31.13	-4.31	26.82	46.00	-19.18	QP
9	734.0100	32.29	-2.33	29.96	46.00	-16.04	QP
10	835.3800	28.28	-0.53	27.75	46.00	-18.25	QP
11	898.6200	28.31	-0.48	27.83	46.00	-18.17	QP
12	959.0700	27.78	1.75	29.53	46.00	-16.47	QP

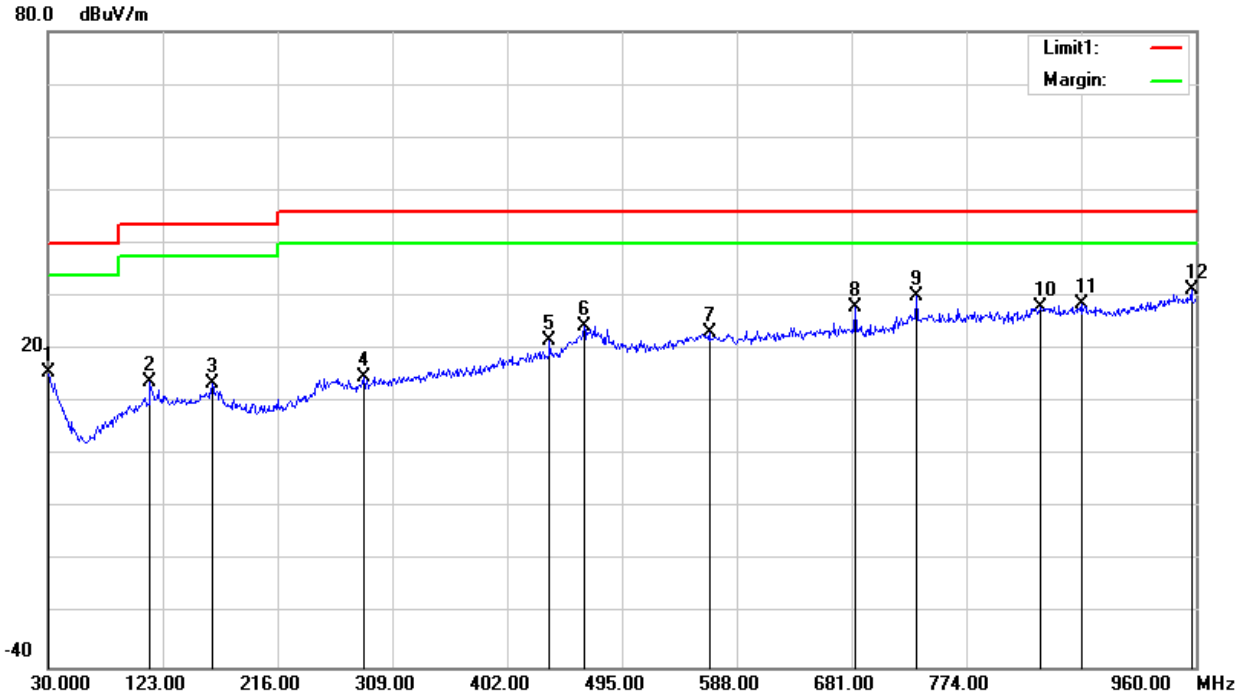
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.3(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	28.39	-12.85	15.54	40.00	-24.46	QP
2	112.7700	32.69	-18.79	13.90	43.50	-29.60	QP
3	162.9900	32.65	-19.13	13.52	43.50	-29.98	QP
4	285.7500	30.12	-15.39	14.73	46.00	-31.27	QP
5	436.4100	31.63	-10.11	21.52	46.00	-24.48	QP
6	464.3100	33.64	-9.26	24.38	46.00	-21.62	QP
7	565.6800	28.83	-5.55	23.28	46.00	-22.72	QP
8	683.7900	32.30	-4.31	27.99	46.00	-18.01	QP
9	734.0100	32.24	-2.33	29.91	46.00	-16.09	QP
10	834.4500	28.59	-0.56	28.03	46.00	-17.97	QP
11	867.0000	29.16	-0.50	28.66	46.00	-17.34	QP
12	956.2800	29.55	1.70	31.25	46.00	-14.75	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit

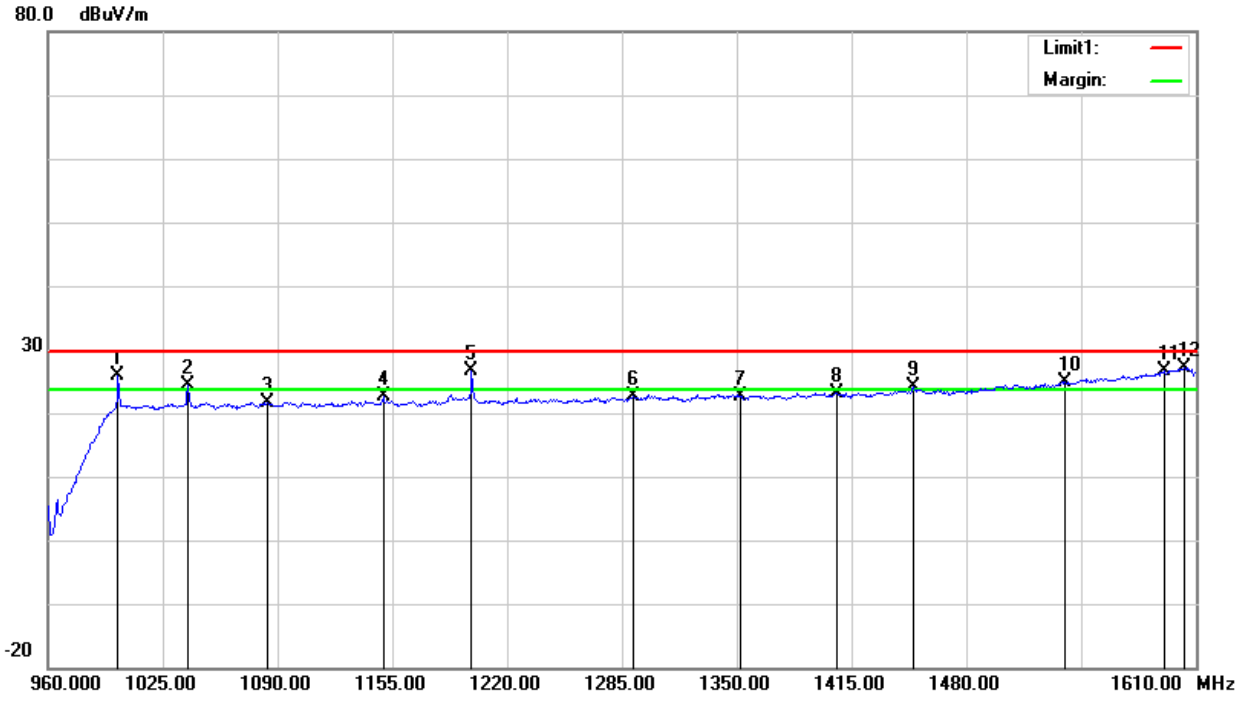


Above 960MHz Radiation Spurious

Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	999.6500	51.87	-26.00	25.87	29.54	-3.67	RMS
2	1039.300	25.91	-1.42	24.49	29.54	-5.05	RMS
3	1084.150	22.89	-1.17	21.72	29.54	-7.82	RMS
4	1149.800	23.67	-0.92	22.75	29.54	-6.79	RMS
5	1199.850	27.07	-0.42	26.65	29.54	-2.89	RMS
6	1291.500	22.76	-0.20	22.56	29.54	-6.98	RMS
7	1351.950	22.68	0.07	22.75	29.54	-6.79	RMS
8	1406.550	22.81	0.35	23.16	29.54	-6.38	RMS
9	1450.100	23.16	0.89	24.05	29.54	-5.49	RMS
10	1535.900	22.62	2.33	24.95	29.54	-4.59	RMS
11	1591.800	22.54	3.98	26.52	29.54	-3.02	RMS
12	1603.500	22.80	4.24	27.04	29.54	-2.50	RMS

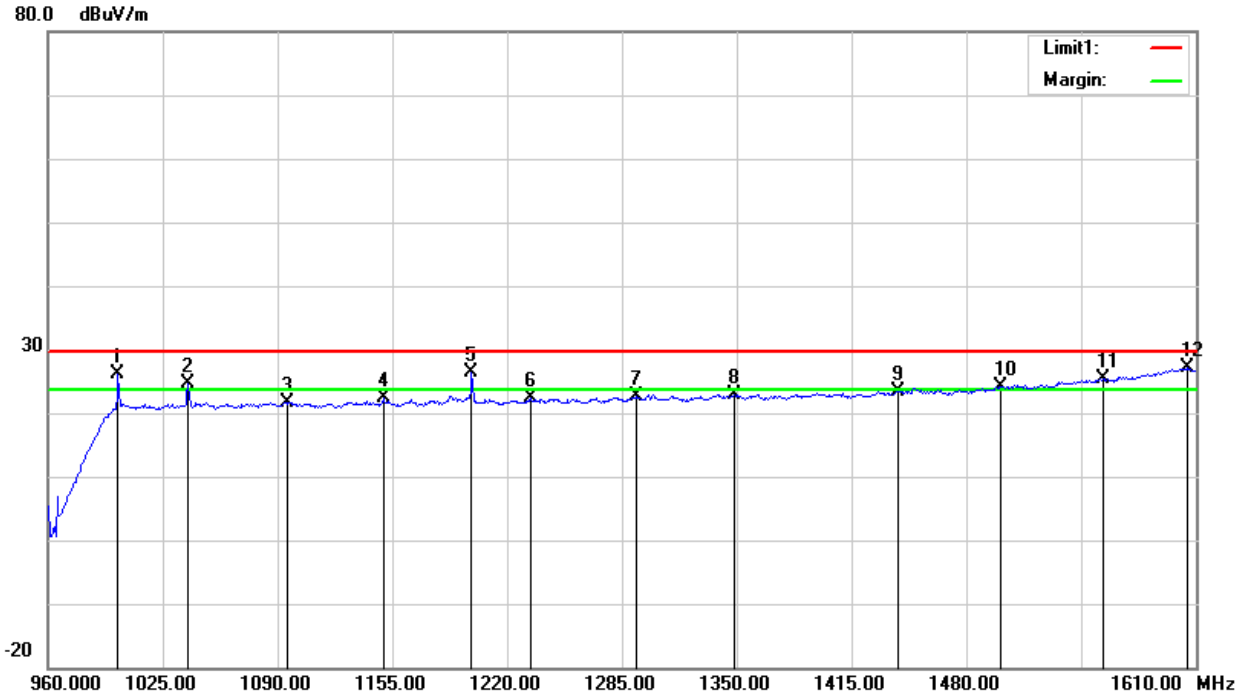
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	999.6500	52.13	-26.00	26.13	29.54	-3.41	RMS
2	1039.300	26.17	-1.42	24.75	29.54	-4.79	RMS
3	1095.850	22.81	-1.10	21.71	29.54	-7.83	RMS
4	1149.800	23.31	-0.92	22.39	29.54	-7.15	RMS
5	1199.850	26.88	-0.42	26.46	29.54	-3.08	RMS
6	1233.000	22.86	-0.48	22.38	29.54	-7.16	RMS
7	1292.800	22.72	-0.19	22.53	29.54	-7.01	RMS
8	1348.700	22.86	0.06	22.92	29.54	-6.62	RMS
9	1441.650	22.66	0.79	23.45	29.54	-6.09	RMS
10	1499.500	22.72	1.47	24.19	29.54	-5.35	RMS
11	1557.350	22.46	2.90	25.36	29.54	-4.18	RMS
12	1604.800	22.79	4.24	27.03	29.54	-2.51	RMS

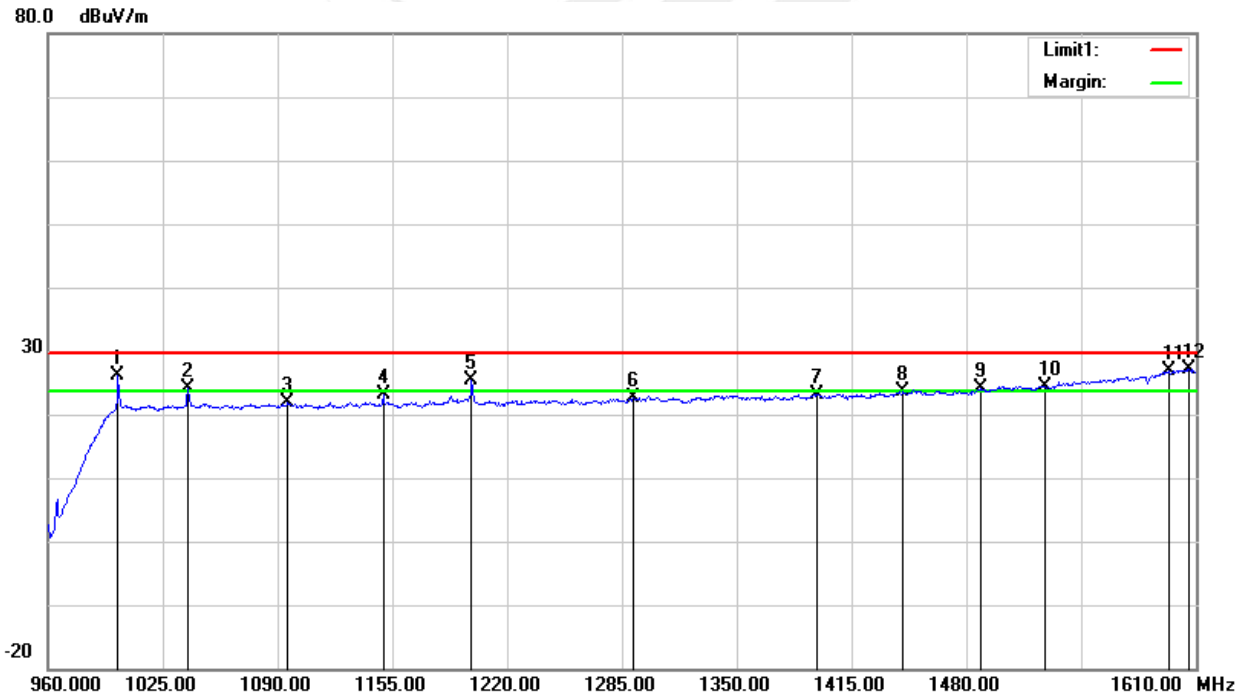
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	999.6500	52.09	-26.00	26.09	29.54	-3.45	RMS
2	1039.300	25.49	-1.42	24.07	29.54	-5.47	RMS
3	1095.850	22.93	-1.10	21.83	29.54	-7.71	RMS
4	1149.800	23.97	-0.92	23.05	29.54	-6.49	RMS
5	1199.850	25.68	-0.42	25.26	29.54	-4.28	RMS
6	1291.500	22.81	-0.20	22.61	29.54	-6.93	RMS
7	1395.500	22.99	0.25	23.24	29.54	-6.30	RMS
8	1444.250	22.69	0.82	23.51	29.54	-6.03	RMS
9	1488.450	22.70	1.34	24.04	29.54	-5.50	RMS
10	1524.850	22.40	2.08	24.48	29.54	-5.06	RMS
11	1595.050	22.82	4.08	26.90	29.54	-2.64	RMS
12	1606.100	22.95	4.24	27.19	29.54	-2.35	RMS

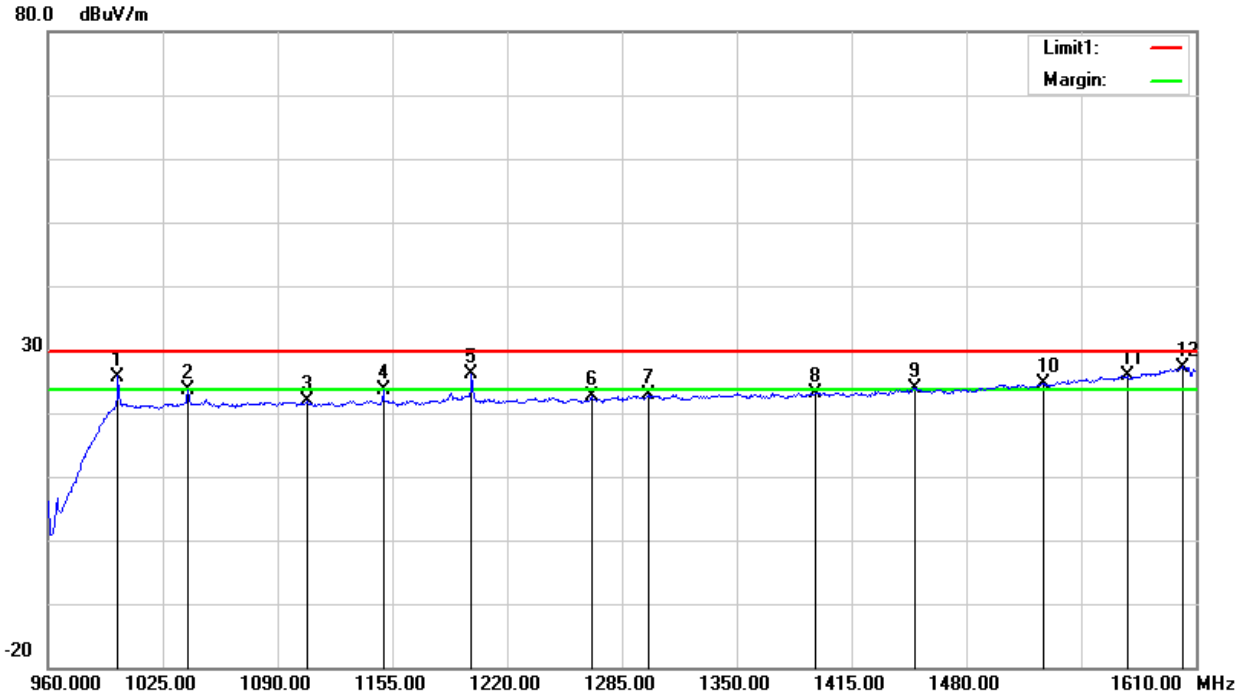
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	999.6500	51.75	-26.00	25.75	29.54	-3.79	RMS
2	1039.300	24.94	-1.42	23.52	29.54	-6.02	RMS
3	1106.900	23.04	-1.05	21.99	29.54	-7.55	RMS
4	1149.800	24.46	-0.92	23.54	29.54	-6.00	RMS
5	1199.850	26.49	-0.42	26.07	29.54	-3.47	RMS
6	1268.100	22.93	-0.38	22.55	29.54	-6.99	RMS
7	1299.950	22.91	-0.14	22.77	29.54	-6.77	RMS
8	1394.850	22.90	0.25	23.15	29.54	-6.39	RMS
9	1450.750	23.03	0.90	23.93	29.54	-5.61	RMS
10	1523.550	22.53	2.04	24.57	29.54	-4.97	RMS
11	1571.000	22.49	3.33	25.82	29.54	-3.72	RMS
12	1602.200	23.01	4.24	27.25	29.54	-2.29	RMS

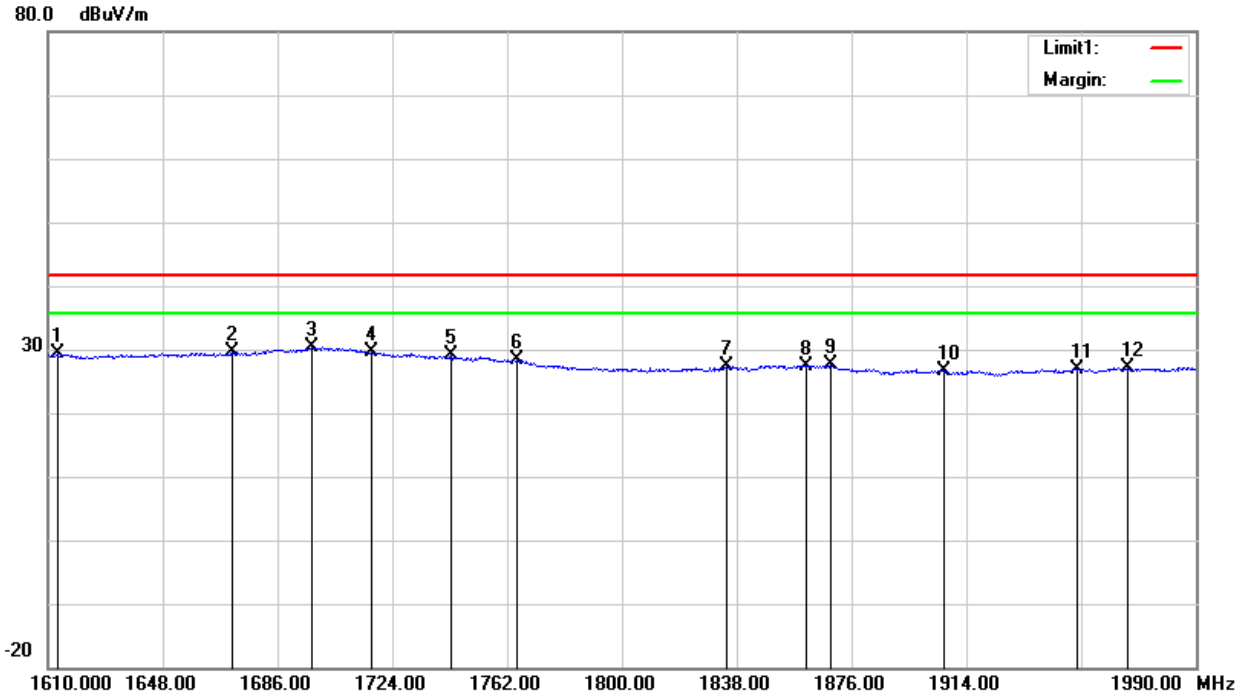
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1613.040	25.02	4.24	29.26	41.54	-12.28	RMS
2	1670.800	24.97	4.65	29.62	41.54	-11.92	RMS
3	1697.400	25.13	5.17	30.30	41.54	-11.24	RMS
4	1717.160	24.84	4.69	29.53	41.54	-12.01	RMS
5	1743.380	25.15	3.87	29.02	41.54	-12.52	RMS
6	1765.420	25.33	3.08	28.41	41.54	-13.13	RMS
7	1834.580	25.14	2.18	27.32	41.54	-14.22	RMS
8	1861.180	25.32	2.16	27.48	41.54	-14.06	RMS
9	1869.160	25.50	2.01	27.51	41.54	-14.03	RMS
10	1906.400	25.25	1.47	26.72	41.54	-14.82	RMS
11	1950.860	25.36	1.53	26.89	41.54	-14.65	RMS
12	1967.200	25.49	1.69	27.18	41.54	-14.36	RMS

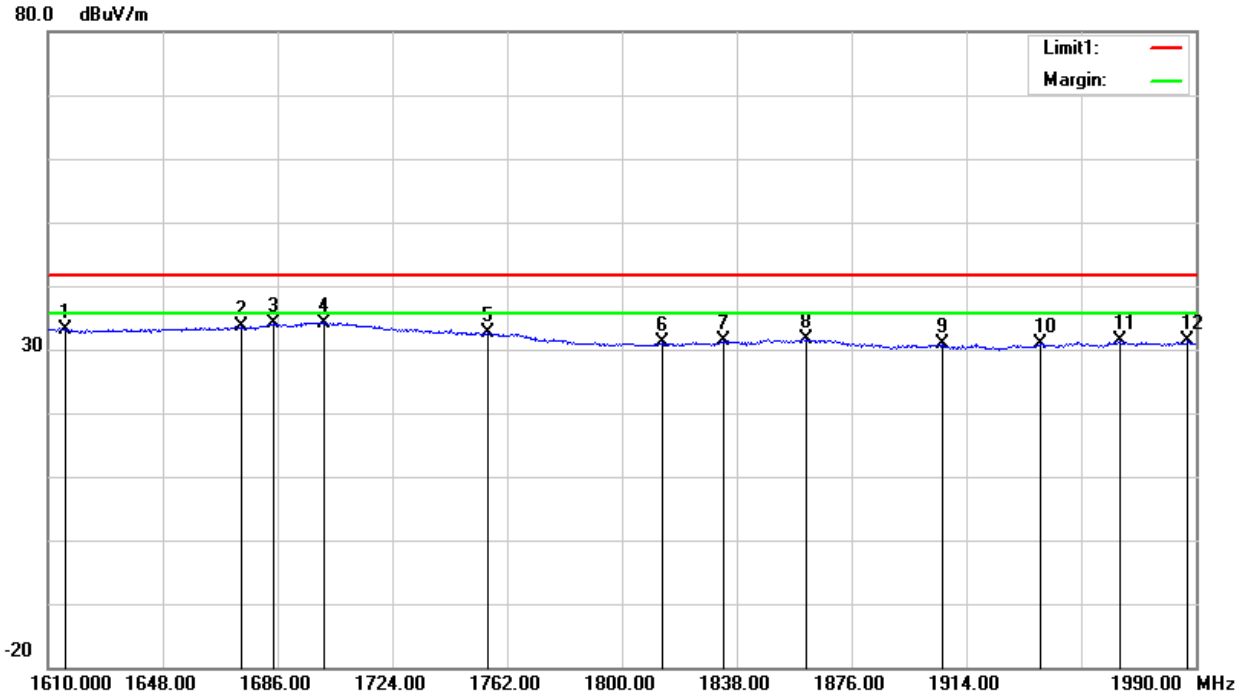
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1615.700	28.93	4.24	33.17	41.54	-8.37	RMS
2	1674.220	28.98	4.72	33.70	41.54	-7.84	RMS
3	1684.480	29.12	4.91	34.03	41.54	-7.51	RMS
4	1701.200	29.07	5.18	34.25	41.54	-7.29	RMS
5	1755.540	29.13	3.46	32.59	41.54	-8.95	RMS
6	1813.300	29.19	1.93	31.12	41.54	-10.42	RMS
7	1833.440	29.22	2.16	31.38	41.54	-10.16	RMS
8	1861.180	29.52	2.16	31.68	41.54	-9.86	RMS
9	1906.020	29.38	1.47	30.85	41.54	-10.69	RMS
10	1938.700	29.41	1.51	30.92	41.54	-10.62	RMS
11	1964.920	29.63	1.67	31.30	41.54	-10.24	RMS
12	1987.340	29.45	1.88	31.33	41.54	-10.21	RMS

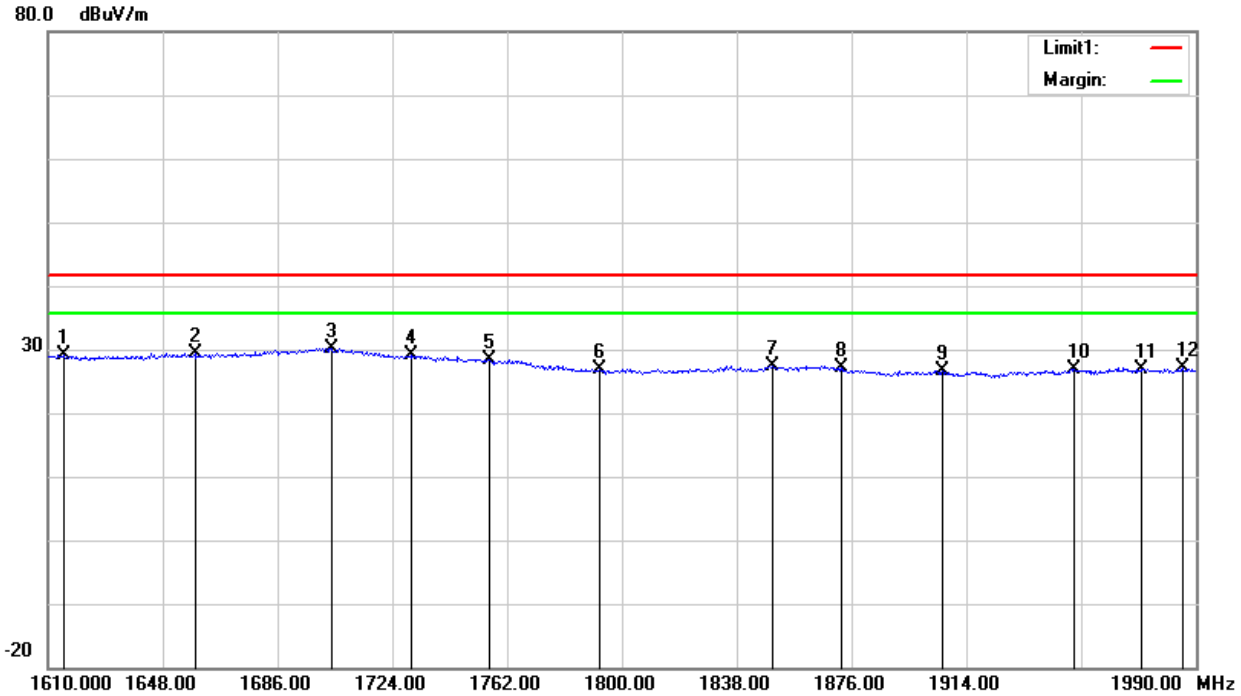
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1615.320	24.87	4.24	29.11	41.54	-12.43	RMS
2	1658.640	25.04	4.41	29.45	41.54	-12.09	RMS
3	1703.860	24.97	5.10	30.07	41.54	-11.47	RMS
4	1730.460	24.86	4.28	29.14	41.54	-12.40	RMS
5	1755.920	25.01	3.44	28.45	41.54	-13.09	RMS
6	1792.400	24.84	2.06	26.90	41.54	-14.64	RMS
7	1849.780	25.13	2.35	27.48	41.54	-14.06	RMS
8	1872.580	25.21	1.95	27.16	41.54	-14.38	RMS
9	1906.020	25.12	1.47	26.59	41.54	-14.95	RMS
10	1949.720	25.37	1.52	26.89	41.54	-14.65	RMS
11	1972.140	25.09	1.74	26.83	41.54	-14.71	RMS
12	1985.440	25.37	1.86	27.23	41.54	-14.31	RMS

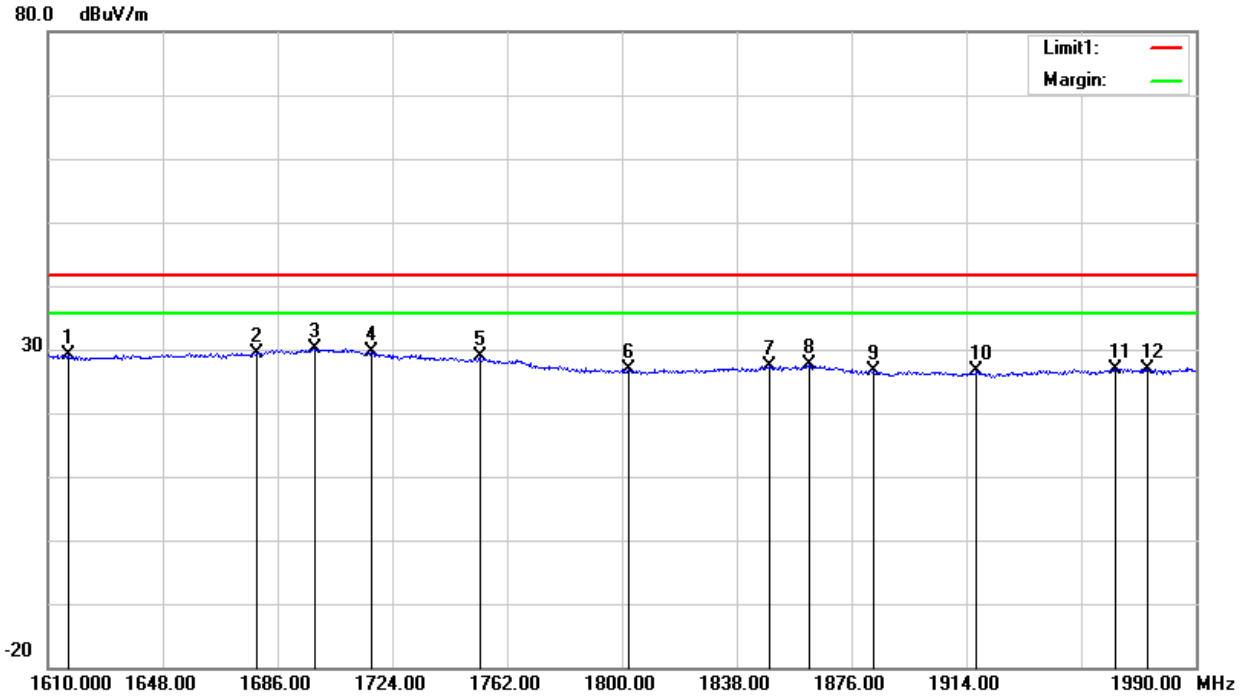
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1616.840	24.95	4.24	29.19	41.54	-12.35	RMS
2	1679.160	24.53	4.81	29.34	41.54	-12.20	RMS
3	1698.540	24.96	5.19	30.15	41.54	-11.39	RMS
4	1717.160	24.83	4.69	29.52	41.54	-12.02	RMS
5	1752.880	25.25	3.56	28.81	41.54	-12.73	RMS
6	1802.280	24.99	1.80	26.79	41.54	-14.75	RMS
7	1849.020	25.06	2.34	27.40	41.54	-14.14	RMS
8	1861.940	25.45	2.14	27.59	41.54	-13.95	RMS
9	1883.220	24.87	1.76	26.63	41.54	-14.91	RMS
10	1917.420	25.14	1.48	26.62	41.54	-14.92	RMS
11	1963.400	25.31	1.66	26.97	41.54	-14.57	RMS
12	1974.040	25.22	1.76	26.98	41.54	-14.56	RMS

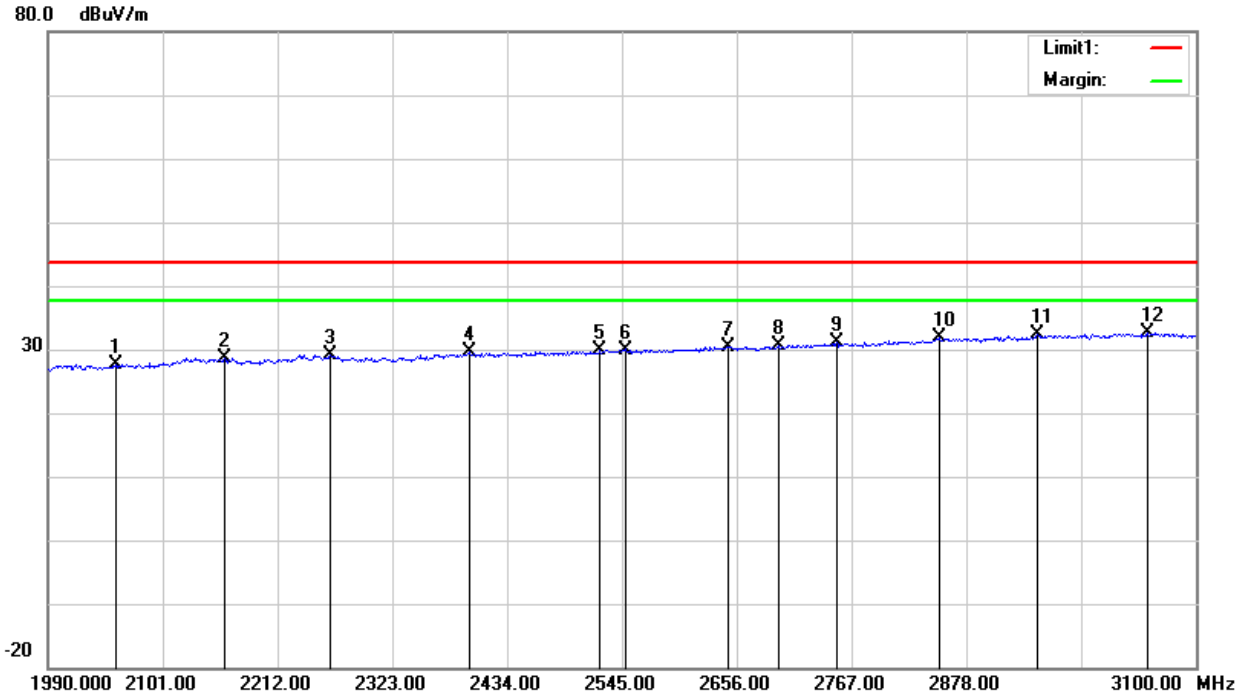
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2055.490	25.42	2.14	27.56	43.54	-15.98	RMS
2	2160.940	25.39	3.21	28.60	43.54	-14.94	RMS
3	2263.060	25.39	3.69	29.08	43.54	-14.46	RMS
4	2397.370	25.07	4.45	29.52	43.54	-14.02	RMS
5	2523.910	24.99	4.81	29.80	43.54	-13.74	RMS
6	2548.330	25.03	4.97	30.00	43.54	-13.54	RMS
7	2647.120	24.95	5.52	30.47	43.54	-13.07	RMS
8	2697.070	24.92	5.61	30.53	43.54	-13.01	RMS
9	2752.570	25.00	6.08	31.08	43.54	-12.46	RMS
10	2852.470	25.21	6.56	31.77	43.54	-11.77	RMS
11	2946.820	25.30	6.97	32.27	43.54	-11.27	RMS
12	3053.380	4.30	28.23	32.53	43.54	-11.01	RMS

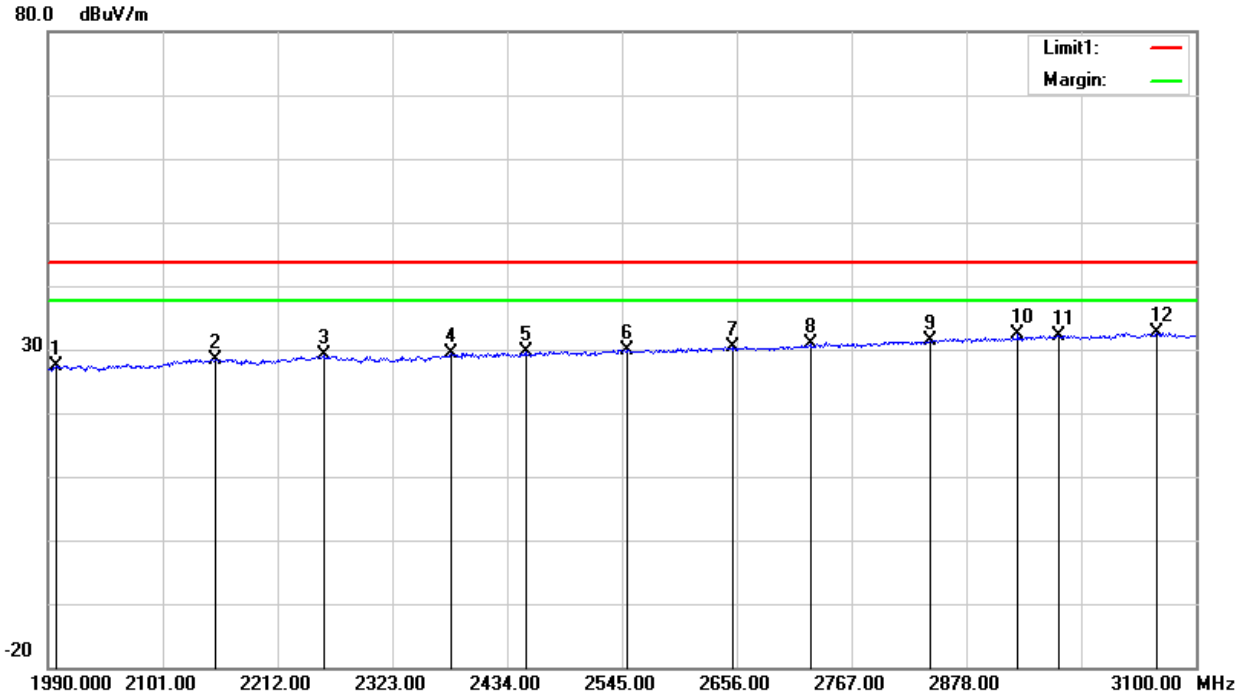
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1997.770	25.51	1.99	27.50	43.54	-16.04	RMS
2	2152.060	25.19	3.28	28.47	43.54	-15.07	RMS
3	2256.400	25.45	3.73	29.18	43.54	-14.36	RMS
4	2379.610	25.32	4.18	29.50	43.54	-14.04	RMS
5	2451.760	25.07	4.53	29.60	43.54	-13.94	RMS
6	2549.440	24.97	4.98	29.95	43.54	-13.59	RMS
7	2652.670	24.82	5.55	30.37	43.54	-13.17	RMS
8	2728.150	25.00	5.87	30.87	43.54	-12.67	RMS
9	2842.480	24.91	6.51	31.42	43.54	-12.12	RMS
10	2927.950	25.41	6.86	32.27	43.54	-11.27	RMS
11	2967.910	25.21	7.00	32.21	43.54	-11.33	RMS
12	3062.260	4.36	28.24	32.60	43.54	-10.94	RMS

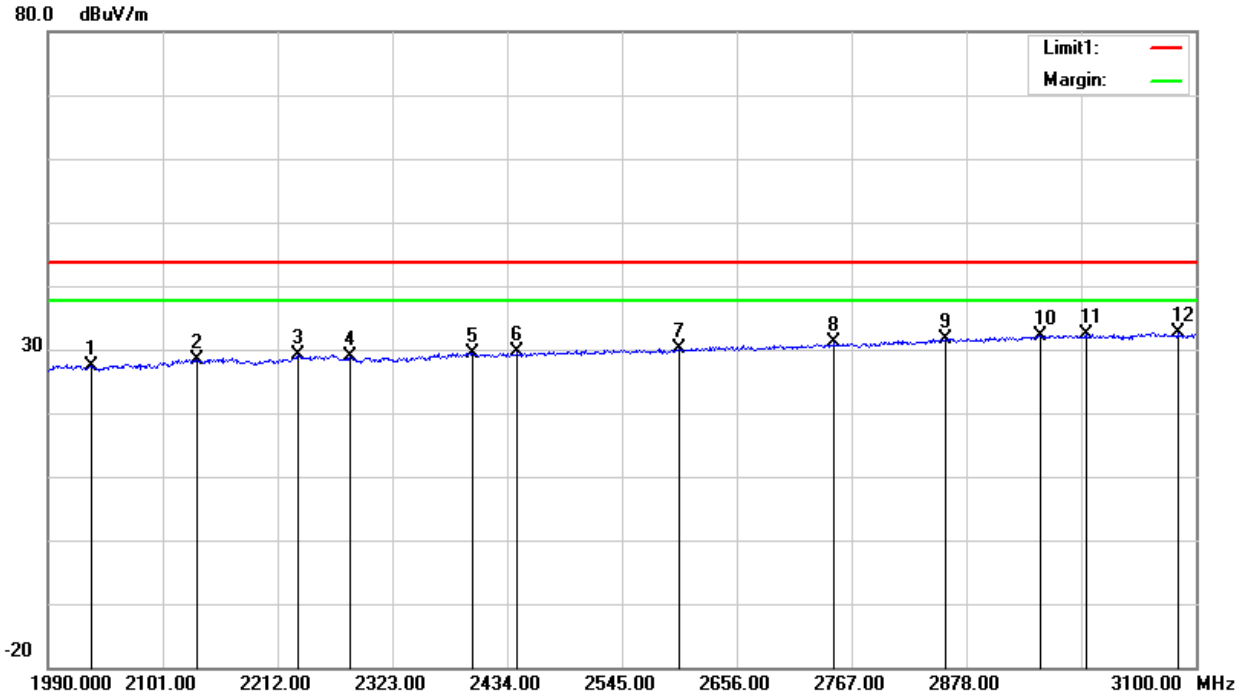
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2032.180	25.41	2.07	27.48	43.54	-16.06	RMS
2	2134.300	25.45	3.02	28.47	43.54	-15.07	RMS
3	2231.980	25.59	3.47	29.06	43.54	-14.48	RMS
4	2281.930	25.18	3.58	28.76	43.54	-14.78	RMS
5	2400.700	24.90	4.49	29.39	43.54	-14.15	RMS
6	2443.990	25.02	4.52	29.54	43.54	-14.00	RMS
7	2600.500	25.20	5.03	30.23	43.54	-13.31	RMS
8	2750.350	24.99	6.07	31.06	43.54	-12.48	RMS
9	2858.020	25.07	6.59	31.66	43.54	-11.88	RMS
10	2949.040	25.08	6.98	32.06	43.54	-11.48	RMS
11	2993.440	25.35	7.03	32.38	43.54	-11.16	RMS
12	3082.240	4.30	28.25	32.55	43.54	-10.99	RMS

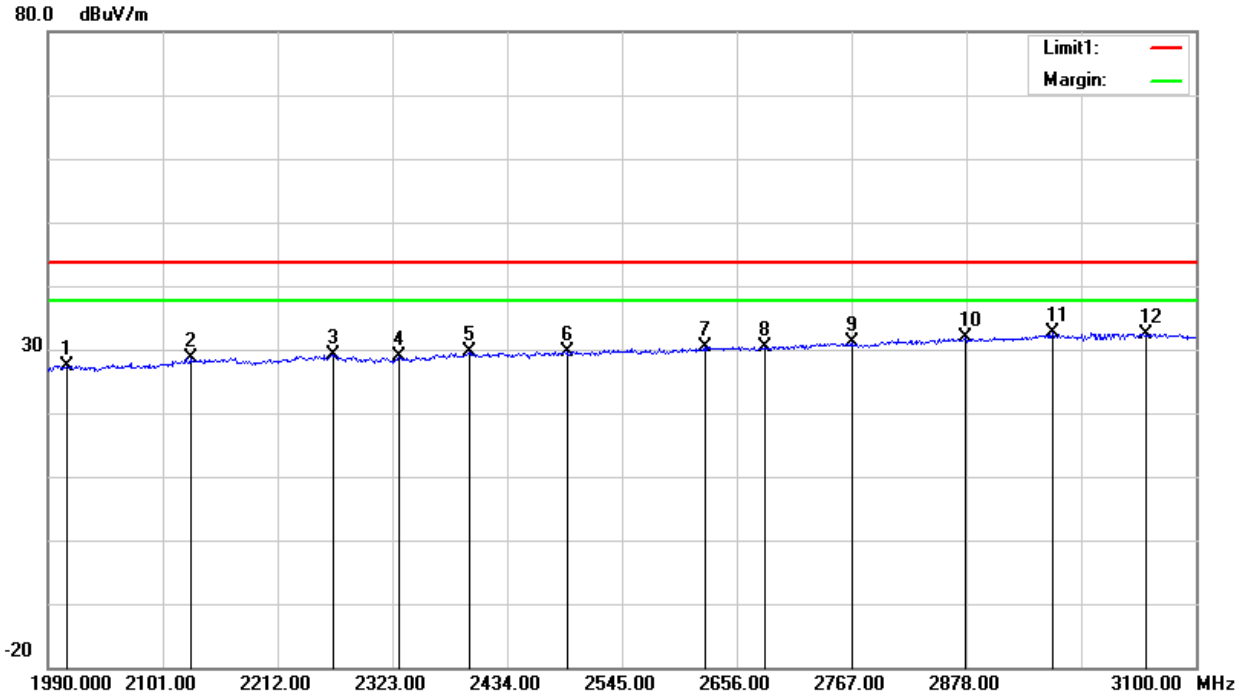
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2008.870	25.40	2.03	27.43	43.54	-16.11	RMS
2	2127.640	25.69	2.90	28.59	43.54	-14.95	RMS
3	2265.280	25.41	3.68	29.09	43.54	-14.45	RMS
4	2329.660	25.19	3.63	28.82	43.54	-14.72	RMS
5	2397.370	25.13	4.45	29.58	43.54	-13.96	RMS
6	2491.720	25.12	4.63	29.75	43.54	-13.79	RMS
7	2624.920	25.03	5.29	30.32	43.54	-13.22	RMS
8	2682.640	24.82	5.59	30.41	43.54	-13.13	RMS
9	2767.000	24.95	6.12	31.07	43.54	-12.47	RMS
10	2876.890	25.17	6.64	31.81	43.54	-11.73	RMS
11	2961.250	25.61	6.99	32.60	43.54	-10.94	RMS
12	3051.160	4.24	28.23	32.47	43.54	-11.07	RMS

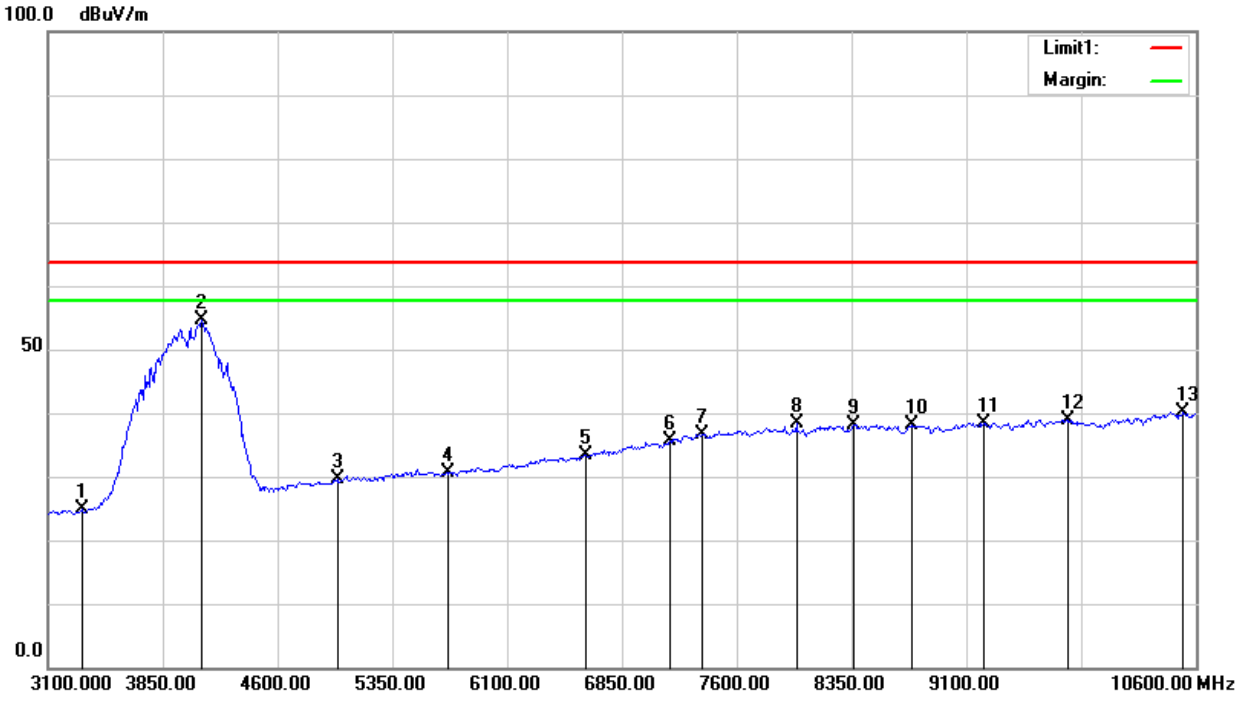
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3325.000	36.80	-11.95	24.85	63.54	-38.69	RMS
2	4105.000	63.67	-9.05	54.62	63.54	-8.92	RMS
3	4990.000	35.92	-6.26	29.66	63.54	-33.88	RMS
4	5717.500	35.34	-4.60	30.74	63.54	-32.80	RMS
5	6610.000	35.11	-1.68	33.43	63.54	-30.11	RMS
6	7165.000	35.22	0.41	35.63	63.54	-27.91	RMS
7	7375.000	35.56	1.17	36.73	63.54	-26.81	RMS
8	7990.000	36.25	2.15	38.40	63.54	-25.14	RMS
9	8365.000	35.56	2.58	38.14	63.54	-25.40	RMS
10	8740.000	35.47	2.60	38.07	63.54	-25.47	RMS
11	9212.500	35.66	2.75	38.41	63.54	-25.13	RMS
12	9760.000	35.67	3.25	38.92	63.54	-24.62	RMS
13	10517.500	35.03	5.01	40.04	63.54	-23.50	RMS

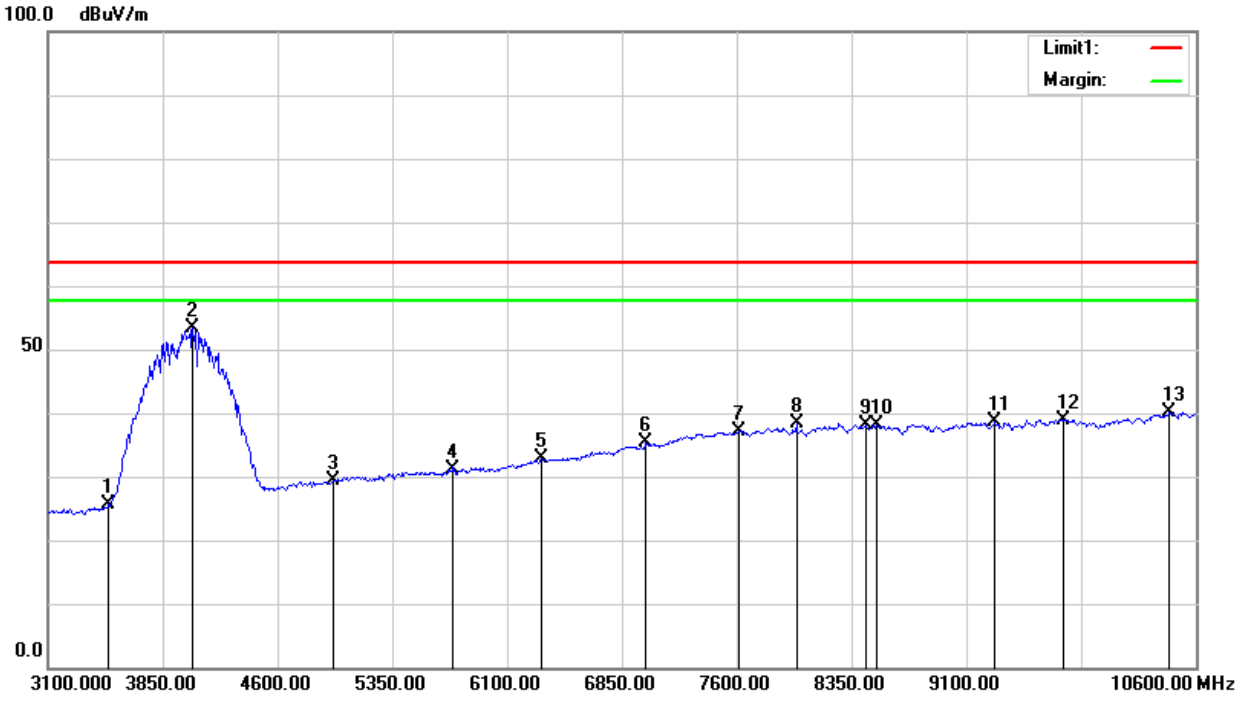
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3497.500	37.04	-11.48	25.56	63.54	-37.98	RMS
2	4045.000	62.69	-9.40	53.29	63.54	-10.25	RMS
3	4960.000	35.77	-6.45	29.32	63.54	-34.22	RMS
4	5747.500	35.73	-4.49	31.24	63.54	-32.30	RMS
5	6325.000	35.15	-2.38	32.77	63.54	-30.77	RMS
6	7007.500	35.60	-0.17	35.43	63.54	-28.11	RMS
7	7615.000	35.40	1.75	37.15	63.54	-26.39	RMS
8	7990.000	36.19	2.15	38.34	63.54	-25.20	RMS
9	8440.000	35.44	2.66	38.10	63.54	-25.44	RMS
10	8515.000	35.37	2.72	38.09	63.54	-25.45	RMS
11	9287.500	35.66	2.85	38.51	63.54	-25.03	RMS
12	9737.500	35.71	3.25	38.96	63.54	-24.58	RMS
13	10427.500	35.48	4.74	40.22	63.54	-23.32	RMS

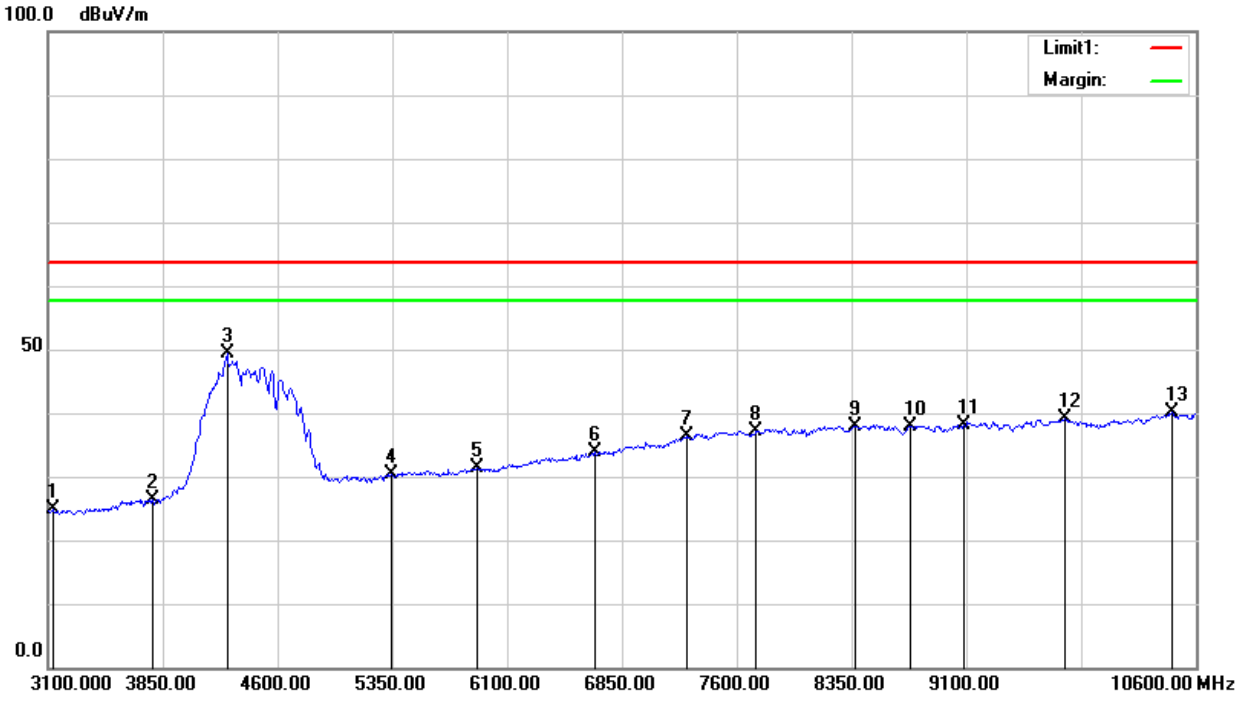
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3137.500	37.07	-12.31	24.76	63.54	-38.78	RMS
2	3782.500	37.04	-10.64	26.40	63.54	-37.14	RMS
3	4270.000	57.65	-8.33	49.32	63.54	-14.22	RMS
4	5342.500	35.56	-5.23	30.33	63.54	-33.21	RMS
5	5905.000	35.16	-3.89	31.27	63.54	-32.27	RMS
6	6670.000	35.02	-1.24	33.78	63.54	-29.76	RMS
7	7270.000	35.55	0.79	36.34	63.54	-27.20	RMS
8	7727.500	35.28	1.87	37.15	63.54	-26.39	RMS
9	8372.500	35.42	2.58	38.00	63.54	-25.54	RMS
10	8732.500	35.36	2.60	37.96	63.54	-25.58	RMS
11	9085.000	35.50	2.58	38.08	63.54	-25.46	RMS
12	9745.000	35.77	3.25	39.02	63.54	-24.52	RMS
13	10442.500	35.26	4.79	40.05	63.54	-23.49	RMS

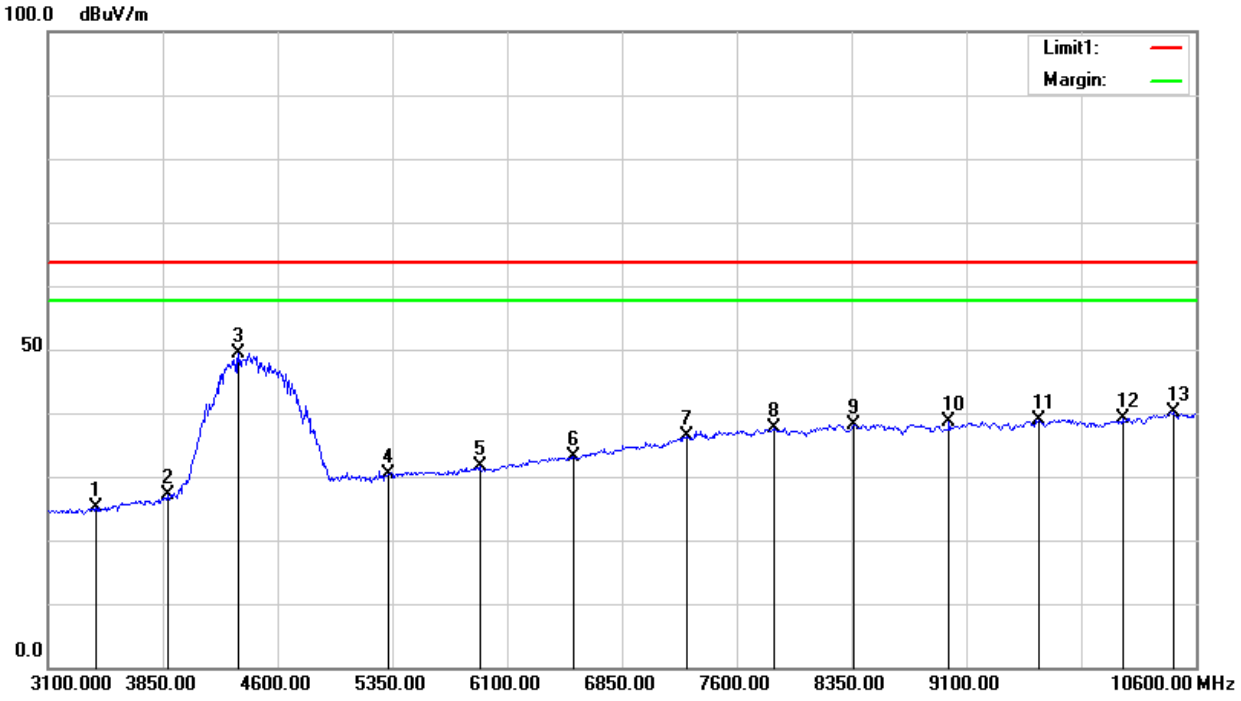
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3415.000	36.67	-11.57	25.10	63.54	-38.44	RMS
2	3880.000	37.35	-10.25	27.10	63.54	-36.44	RMS
3	4345.000	57.58	-8.18	49.40	63.54	-14.14	RMS
4	5327.500	35.71	-5.22	30.49	63.54	-33.05	RMS
5	5920.000	35.43	-3.92	31.51	63.54	-32.03	RMS
6	6535.000	34.95	-1.88	33.07	63.54	-30.47	RMS
7	7277.500	35.46	0.82	36.28	63.54	-27.26	RMS
8	7840.000	35.54	2.00	37.54	63.54	-26.00	RMS
9	8365.000	35.64	2.58	38.22	63.54	-25.32	RMS
10	8987.500	36.28	2.46	38.74	63.54	-24.80	RMS
11	9572.500	35.73	3.17	38.90	63.54	-24.64	RMS
12	10120.000	35.42	3.75	39.17	63.54	-24.37	RMS
13	10450.000	35.21	4.81	40.02	63.54	-23.52	RMS

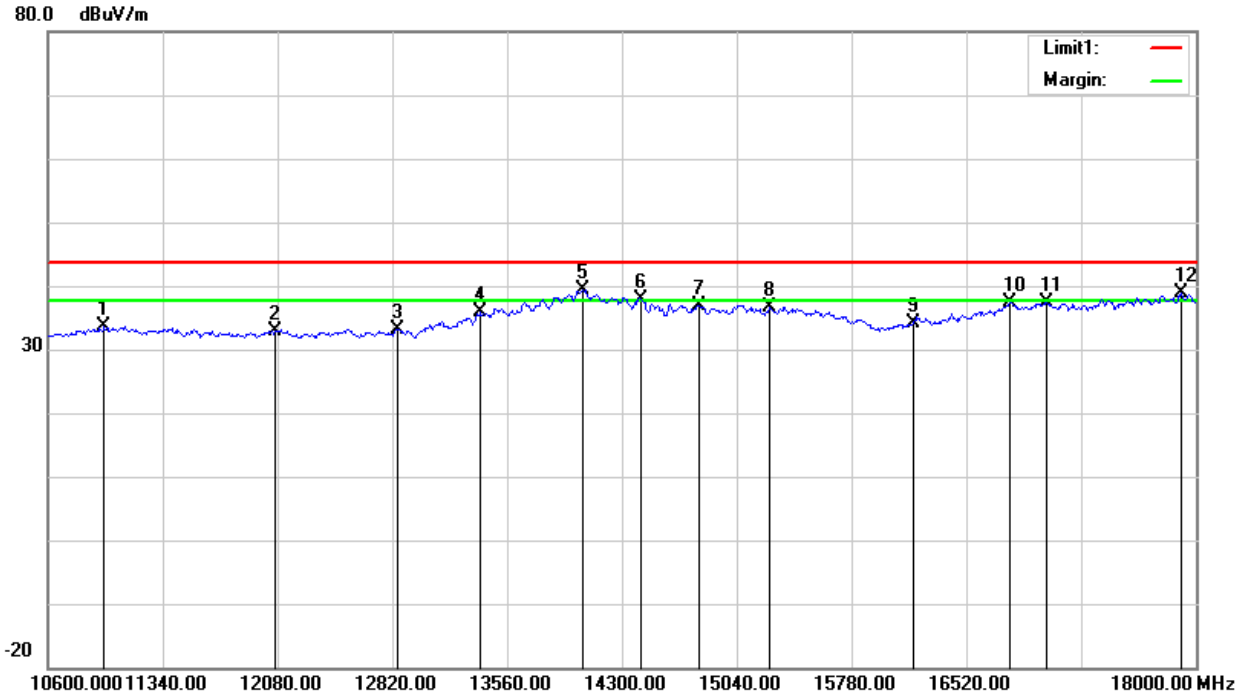
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10962.600	27.44	6.19	33.63	43.54	-9.91	RMS
2	12065.200	27.17	5.80	32.97	43.54	-10.57	RMS
3	12857.000	26.84	6.36	33.20	43.54	-10.34	RMS
4	13389.800	26.91	8.93	35.84	43.54	-7.70	RMS
5	14048.400	27.18	12.23	39.41	43.54	-4.13	RMS
6	14425.800	26.31	11.55	37.86	43.54	-5.68	RMS
7	14795.800	26.29	10.62	36.91	43.54	-6.63	RMS
8	15247.200	26.72	9.89	36.61	43.54	-6.93	RMS
9	16179.600	26.64	7.59	34.23	43.54	-9.31	RMS
10	16801.200	27.73	9.61	37.34	43.54	-6.20	RMS
11	17038.000	26.98	10.34	37.32	43.54	-6.22	RMS
12	17903.800	16.16	22.63	38.79	43.54	-4.75	RMS

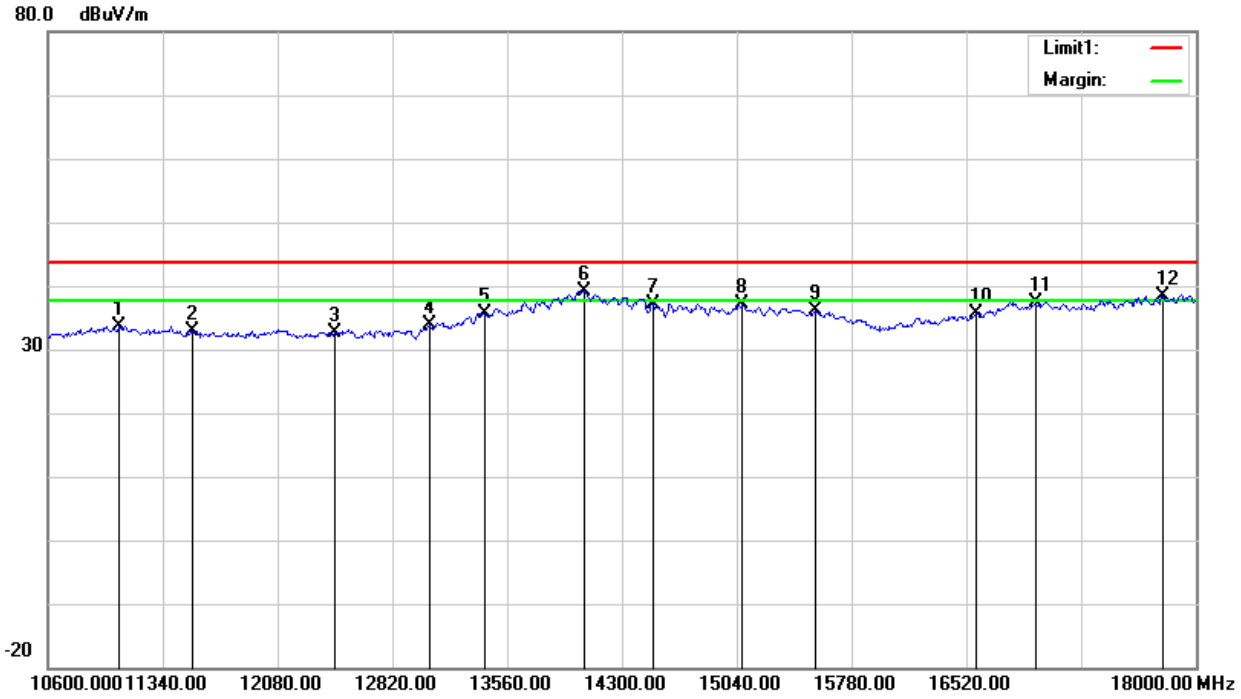
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11058.800	27.39	6.31	33.70	43.54	-9.84	RMS
2	11532.400	26.58	6.37	32.95	43.54	-10.59	RMS
3	12450.000	26.91	5.82	32.73	43.54	-10.81	RMS
4	13056.800	26.94	6.92	33.86	43.54	-9.68	RMS
5	13412.000	26.62	9.07	35.69	43.54	-7.85	RMS
6	14055.800	27.02	12.22	39.24	43.54	-4.30	RMS
7	14499.800	25.72	11.41	37.13	43.54	-6.41	RMS
8	15077.000	27.09	10.01	37.10	43.54	-6.44	RMS
9	15550.600	26.73	9.41	36.14	43.54	-7.40	RMS
10	16586.600	26.20	9.38	35.58	43.54	-7.96	RMS
11	16971.400	27.57	9.79	37.36	43.54	-6.18	RMS
12	17785.400	27.03	11.45	38.48	43.54	-5.06	RMS

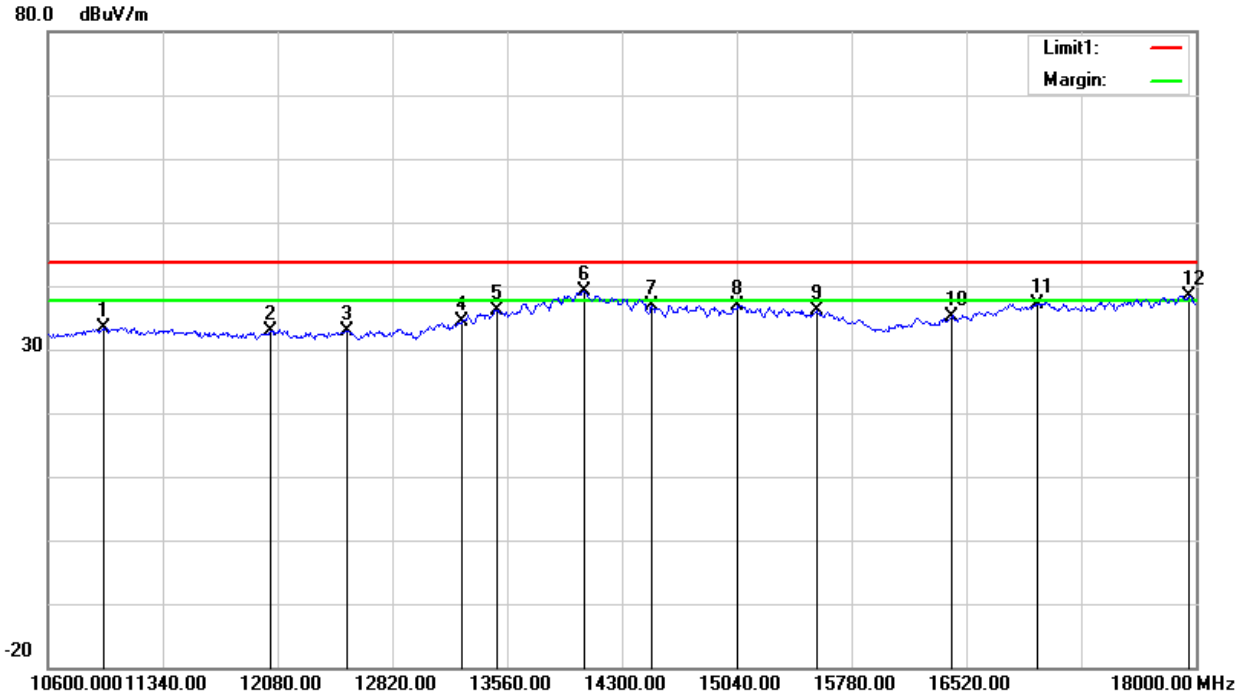
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10962.600	27.20	6.19	33.39	43.54	-10.15	RMS
2	12035.600	27.06	5.80	32.86	43.54	-10.68	RMS
3	12531.400	27.09	5.88	32.97	43.54	-10.57	RMS
4	13271.400	26.06	8.22	34.28	43.54	-9.26	RMS
5	13493.400	26.68	9.56	36.24	43.54	-7.30	RMS
6	14055.800	26.92	12.22	39.14	43.54	-4.40	RMS
7	14492.400	25.50	11.42	36.92	43.54	-6.62	RMS
8	15047.400	26.92	10.02	36.94	43.54	-6.60	RMS
9	15558.000	26.88	9.36	36.24	43.54	-7.30	RMS
10	16423.800	26.15	8.88	35.03	43.54	-8.51	RMS
11	16978.800	27.44	9.79	37.23	43.54	-6.31	RMS
12	17955.600	26.55	11.93	38.48	43.54	-5.06	RMS

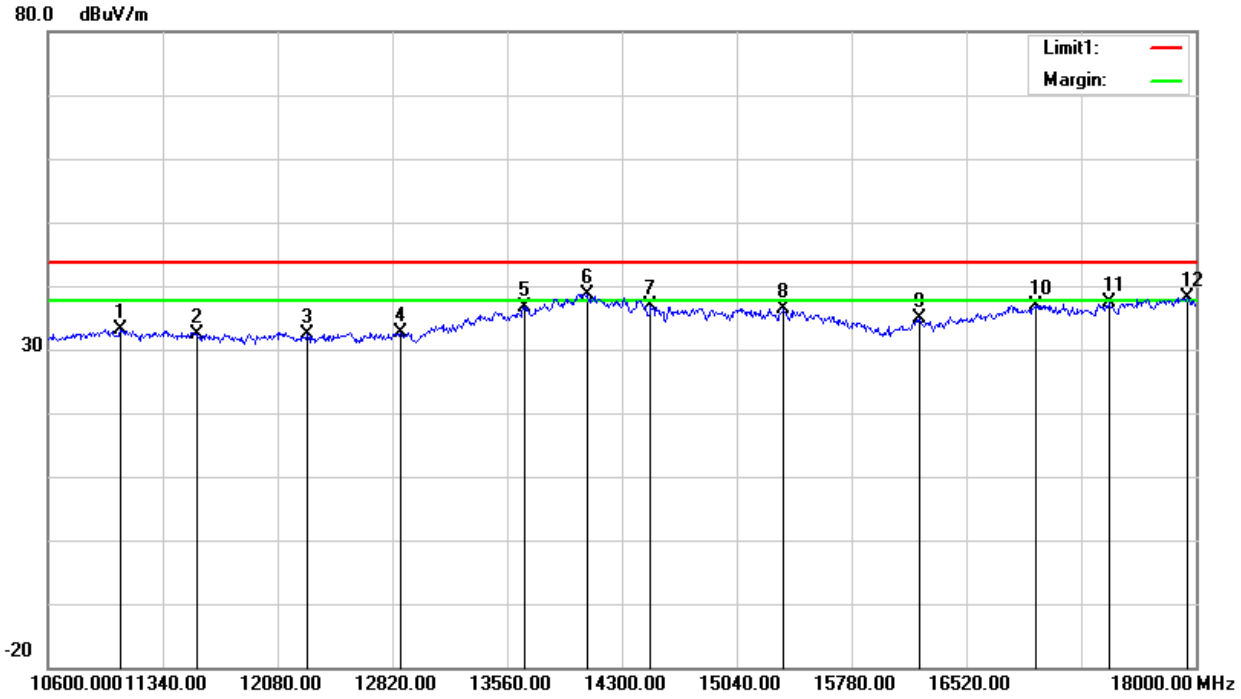
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11066.200	26.91	6.31	33.22	43.54	-10.32	RMS
2	11562.000	26.11	6.33	32.44	43.54	-11.10	RMS
3	12272.400	26.53	5.81	32.34	43.54	-11.20	RMS
4	12871.800	26.32	6.38	32.70	43.54	-10.84	RMS
5	13671.000	26.17	10.53	36.70	43.54	-6.84	RMS
6	14078.000	26.54	12.18	38.72	43.54	-4.82	RMS
7	14485.000	25.48	11.44	36.92	43.54	-6.62	RMS
8	15343.400	26.53	9.83	36.36	43.54	-7.18	RMS
9	16216.600	27.03	7.78	34.81	43.54	-8.73	RMS
10	16964.000	27.11	9.78	36.89	43.54	-6.65	RMS
11	17437.600	26.74	10.54	37.28	43.54	-6.26	RMS
12	17940.800	26.32	11.89	38.21	43.54	-5.33	RMS

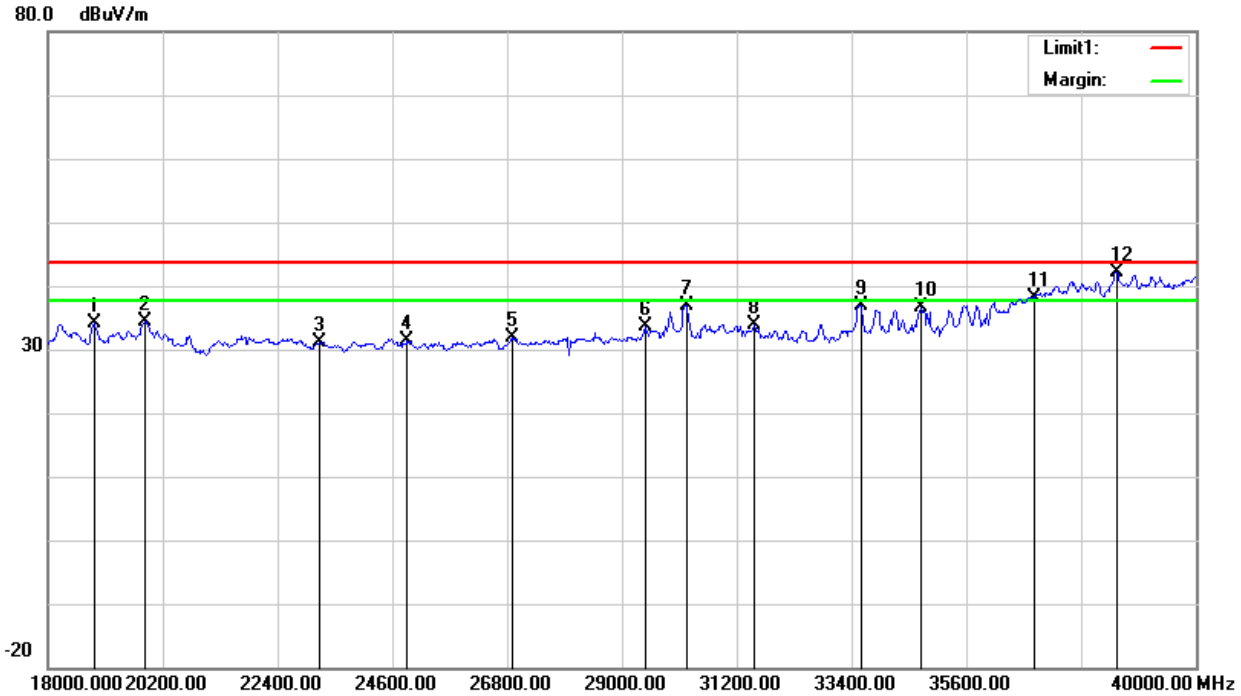
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18880.000	28.01	6.01	34.02	43.54	-9.52	RMS
2	19870.000	28.44	5.91	34.35	43.54	-9.19	RMS
3	23214.000	24.31	6.90	31.21	43.54	-12.33	RMS
4	24886.000	24.40	6.88	31.28	43.54	-12.26	RMS
5	26888.000	25.61	6.33	31.94	43.54	-11.60	RMS
6	29440.000	80.35	-46.72	33.63	43.54	-9.91	RMS
7	30232.000	83.79	-46.83	36.96	43.54	-6.58	RMS
8	31530.000	80.86	-47.03	33.83	43.54	-9.71	RMS
9	33576.000	84.20	-47.26	36.94	43.54	-6.60	RMS
10	34742.000	83.92	-47.26	36.66	43.54	-6.88	RMS
11	36898.000	85.63	-47.38	38.25	43.54	-5.29	RMS
12	38482.000	90.73	-48.54	42.19	43.54	-1.35	RMS

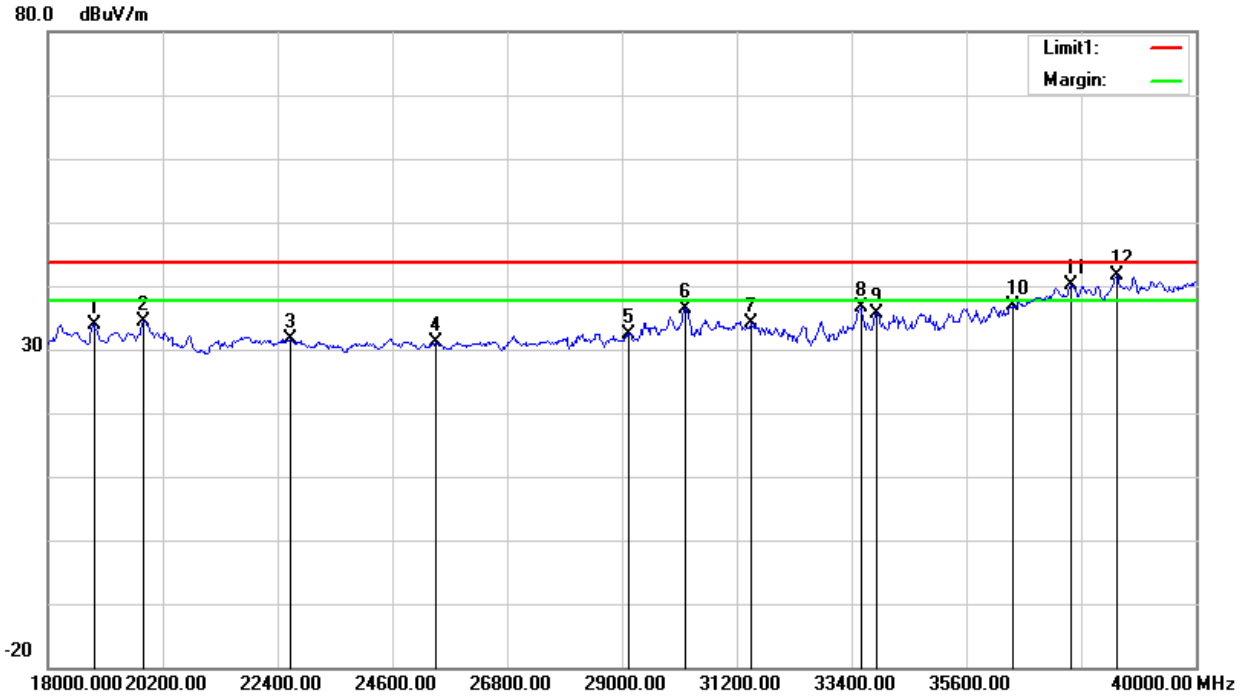
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18880.000	39.97	-5.99	33.98	43.54	-9.56	RMS
2	19826.000	40.52	-6.08	34.44	43.54	-9.10	RMS
3	22642.000	36.87	-5.24	31.63	43.54	-11.91	RMS
4	25436.000	36.36	-5.26	31.10	43.54	-12.44	RMS
5	29132.000	79.08	-46.67	32.41	43.54	-11.13	RMS
6	30210.000	83.31	-46.83	36.48	43.54	-7.06	RMS
7	31464.000	81.21	-47.02	34.19	43.54	-9.35	RMS
8	33576.000	83.79	-47.26	36.53	43.54	-7.01	RMS
9	33884.000	82.84	-47.29	35.55	43.54	-7.99	RMS
10	36502.000	84.12	-47.30	36.82	43.54	-6.72	RMS
11	37602.000	87.59	-47.52	40.07	43.54	-3.47	RMS
12	38482.000	90.22	-48.54	41.68	43.54	-1.86	RMS

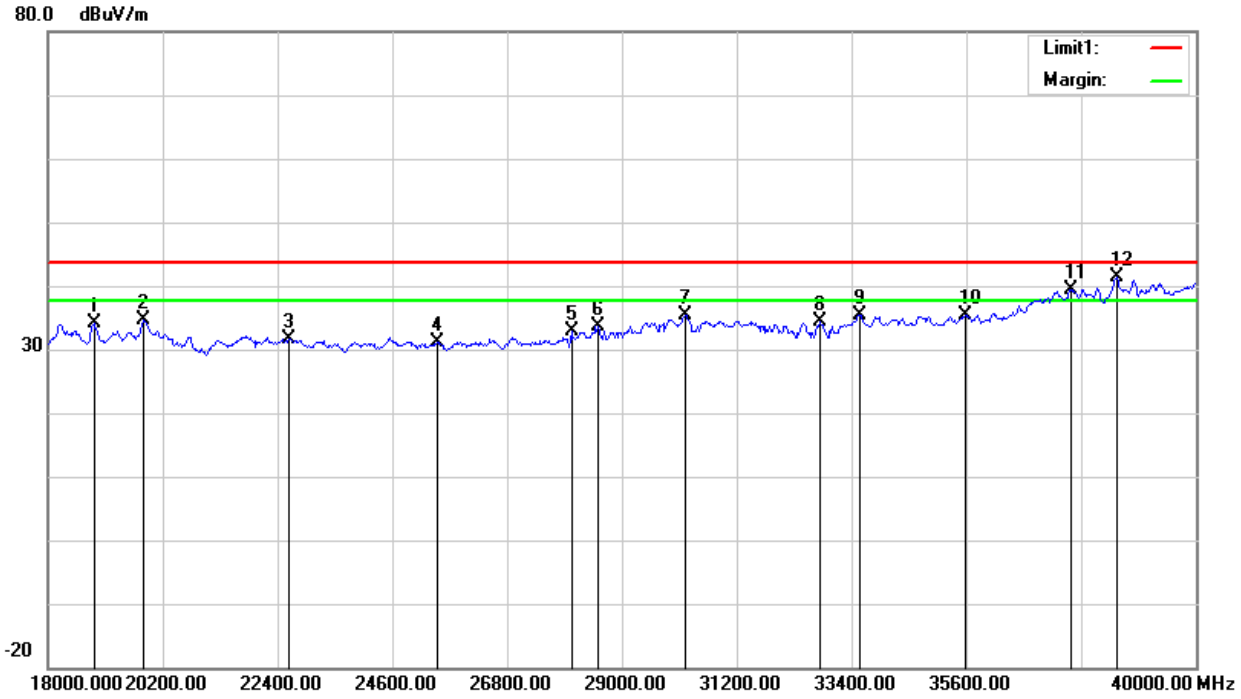
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18880.000	28.13	6.01	34.14	43.54	-9.40	RMS
2	19826.000	28.61	5.92	34.53	43.54	-9.01	RMS
3	22620.000	24.93	6.76	31.69	43.54	-11.85	RMS
4	25458.000	24.44	6.74	31.18	43.54	-12.36	RMS
5	28032.000	79.46	-46.50	32.96	43.54	-10.58	RMS
6	28538.000	80.12	-46.58	33.54	43.54	-10.00	RMS
7	30210.000	82.23	-46.83	35.40	43.54	-8.14	RMS
8	32806.000	81.50	-47.18	34.32	43.54	-9.22	RMS
9	33554.000	82.75	-47.26	35.49	43.54	-8.05	RMS
10	35578.000	82.54	-47.22	35.32	43.54	-8.22	RMS
11	37602.000	87.00	-47.52	39.48	43.54	-4.06	RMS
12	38482.000	89.90	-48.54	41.36	43.54	-2.18	RMS

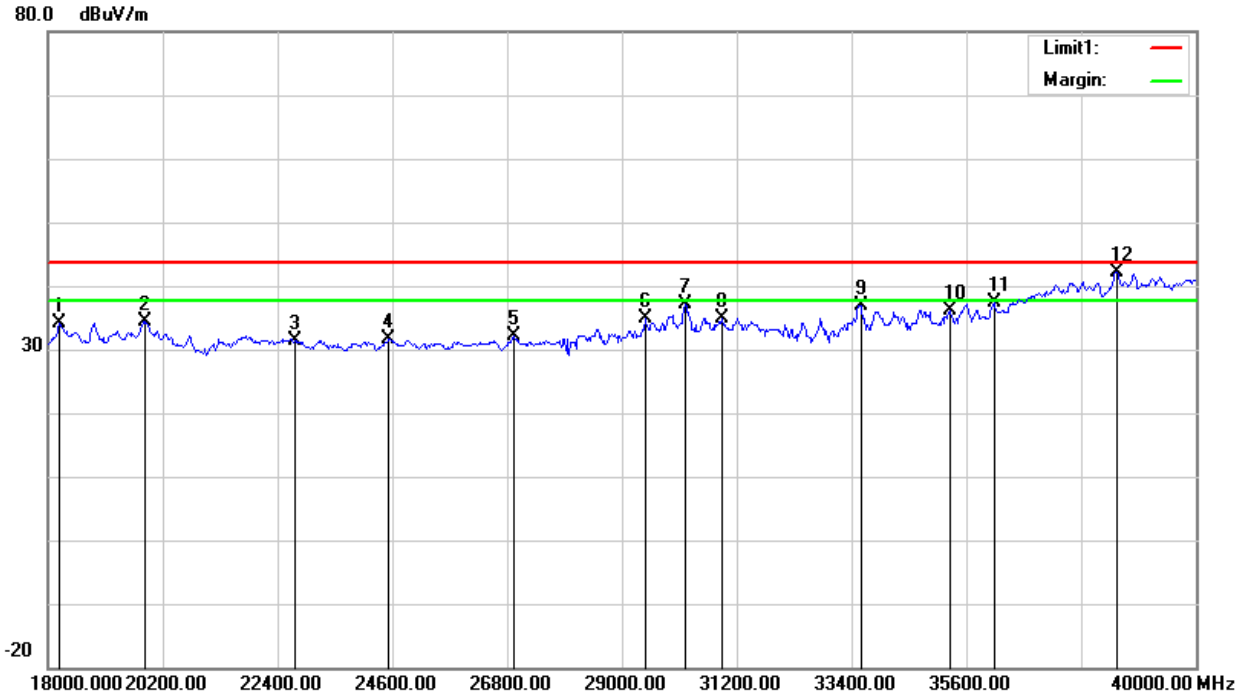
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18220.000	27.96	6.08	34.04	43.54	-9.50	RMS
2	19848.000	28.51	5.92	34.43	43.54	-9.11	RMS
3	22730.000	24.58	6.78	31.36	43.54	-12.18	RMS
4	24534.000	24.70	6.97	31.67	43.54	-11.87	RMS
5	26932.000	25.78	6.32	32.10	43.54	-11.44	RMS
6	29440.000	81.67	-46.72	34.95	43.54	-8.59	RMS
7	30210.000	83.90	-46.83	37.07	43.54	-6.47	RMS
8	30914.000	81.87	-46.94	34.93	43.54	-8.61	RMS
9	33576.000	84.24	-47.26	36.98	43.54	-6.56	RMS
10	35292.000	83.39	-47.24	36.15	43.54	-7.39	RMS
11	36128.000	84.52	-47.23	37.29	43.54	-6.25	RMS
12	38482.000	90.79	-48.54	42.25	43.54	-1.29	RMS

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



3.3 RADIATED EMISSION MEASUREMENT (FOR 15.519(d))

3.3.1 RADIATED EMISSION LIMITS

Frequency of Emission (MHz)	EIRP (dBm)	Field Strength (dBuV/m@3m)	Field Strength (dBuV/m@1m)
1164~1240	-85.3	10	19.54
1559~1610	-85.3	10	19.54

Notes: 1. Transfer rules follow 15.521(g),15.31(f)(1).

2. 15.521(g) converted to a peak field strength level at 3 meters using E(dBuV/m) = P(dBmEIRP) + 95.3.

3. dBuV/m@1m= dBuV/m@3m+20*log(3/1)

UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency Range	RBW	VBW	Detector	Measurement Distance
1164~1240	1kHz	3kHz	RMS	1 Meter
1559~1610	1kHz	3kHz	RMS	1 Meter

3.3.2 TEST PROCEDURE

a. The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of arotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization of the antenna are set to make the measurement.

c. All readings are RMS mode value , for each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading . (Above 960MHz)

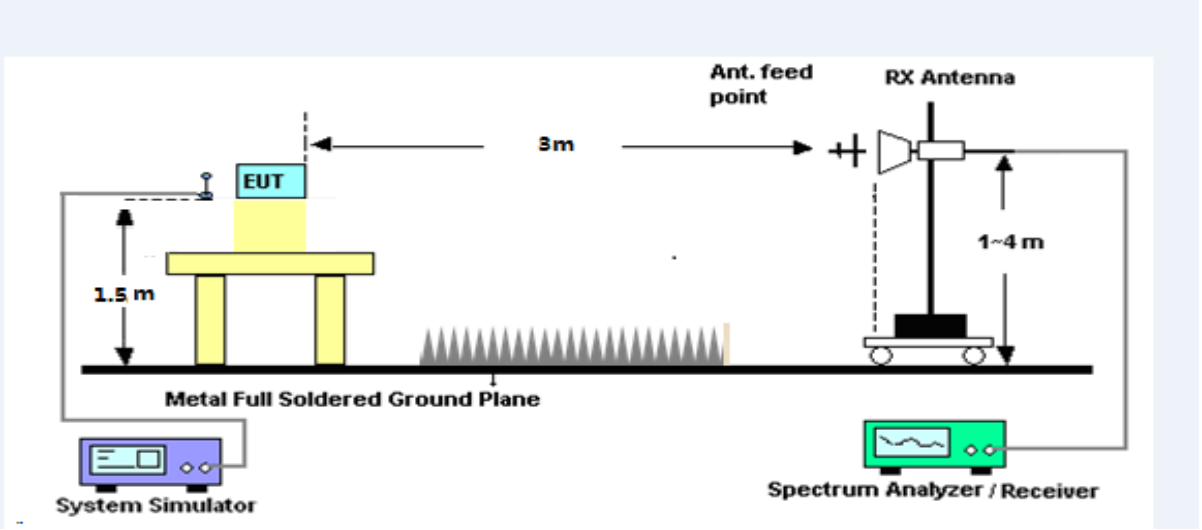
d. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP



3.3.5 FIELD STRENGTH CALCULATION

Same as 3.2.5

3.3.6 EUT OPERATING CONDITIONS

Same as 3.2.6

3.3.7 TEST RESULTS

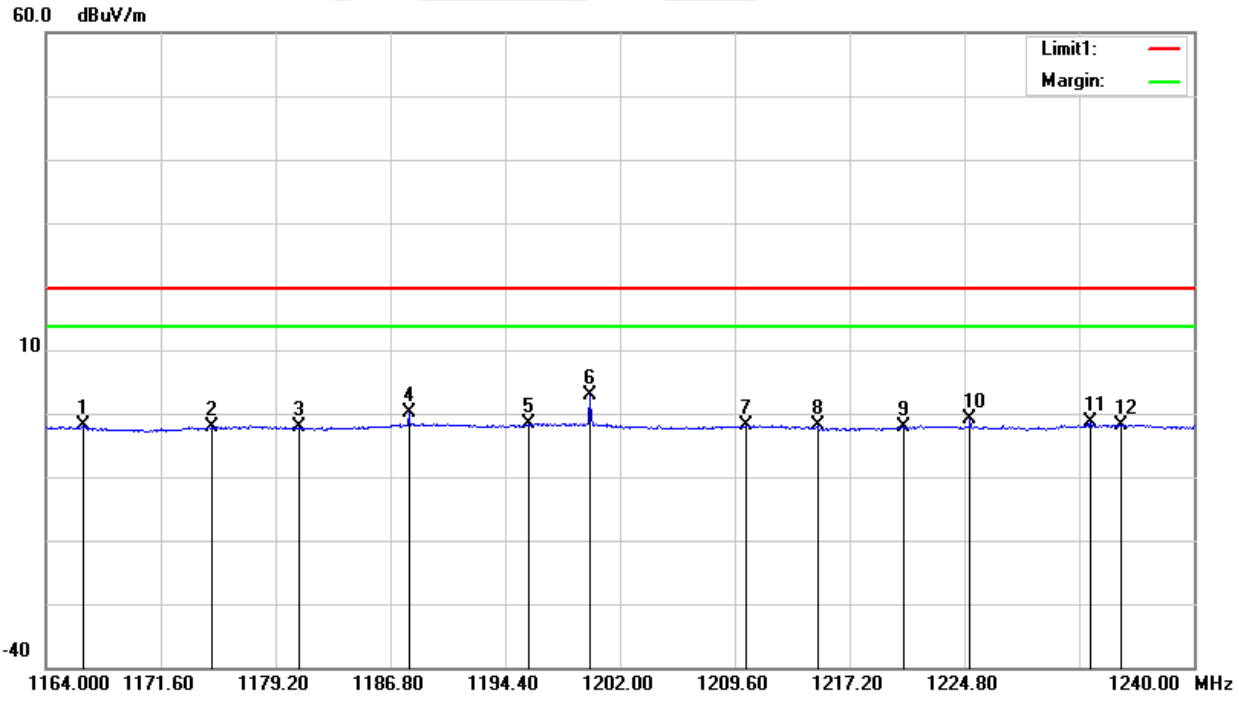
Note: We pretested the battery powered and adapter powered mode, find the worst case in battery powered mode and shown in this report.

Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1166.432	-1.03	-0.76	-1.79	19.54	-21.33	RMS
2	1174.944	-1.40	-0.67	-2.07	19.54	-21.61	RMS
3	1180.720	-1.57	-0.61	-2.18	19.54	-21.72	RMS
4	1188.016	0.67	-0.54	0.13	19.54	-19.41	RMS
5	1195.996	-1.20	-0.46	-1.66	19.54	-21.20	RMS
6	1200.024	3.40	-0.42	2.98	19.54	-16.56	RMS
7	1210.360	-1.47	-0.44	-1.91	19.54	-21.45	RMS
8	1215.072	-1.43	-0.44	-1.87	19.54	-21.41	RMS
9	1220.772	-1.68	-0.45	-2.13	19.54	-21.67	RMS
10	1225.180	-0.52	-0.47	-0.99	19.54	-20.53	RMS
11	1233.160	-0.94	-0.48	-1.42	19.54	-20.96	RMS
12	1235.136	-1.28	-0.49	-1.77	19.54	-21.31	RMS

Remark:

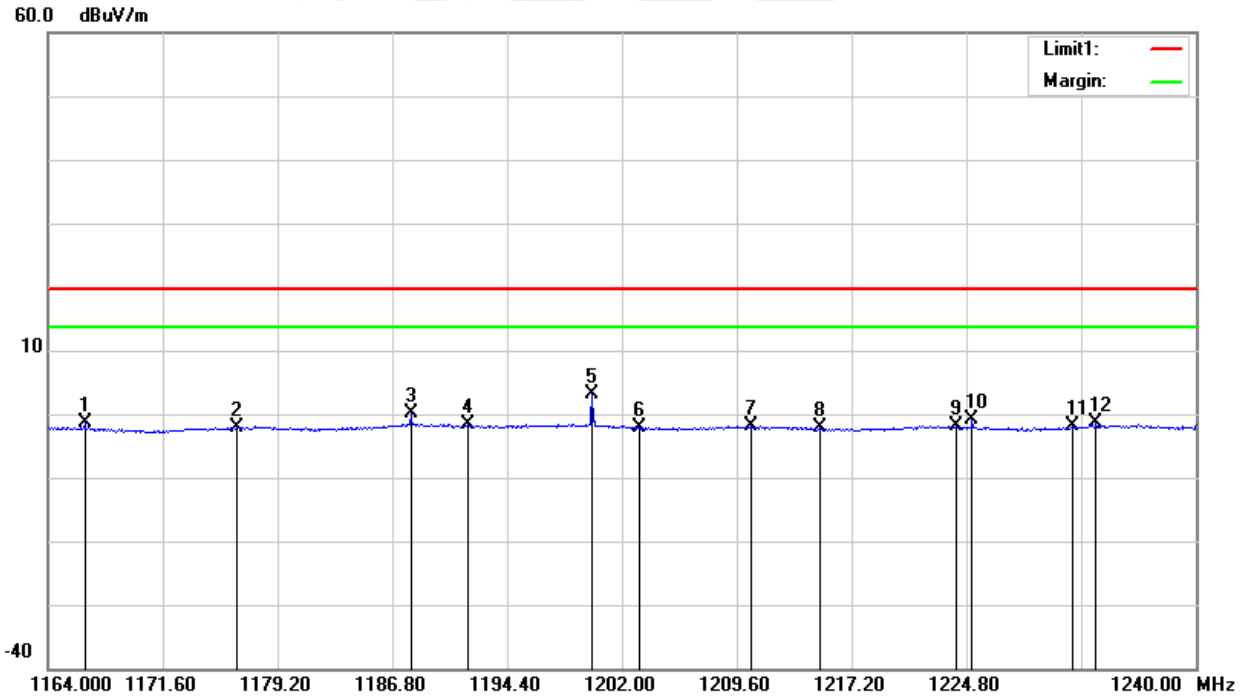
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1166.432	-0.71	-0.76	-1.47	19.54	-21.01	RMS
2	1176.540	-1.45	-0.65	-2.10	19.54	-21.64	RMS
3	1188.016	0.72	-0.54	0.18	19.54	-19.36	RMS
4	1191.816	-1.18	-0.50	-1.68	19.54	-21.22	RMS
5	1200.024	3.47	-0.42	3.05	19.54	-16.49	RMS
6	1203.140	-1.63	-0.42	-2.05	19.54	-21.59	RMS
7	1210.512	-1.34	-0.44	-1.78	19.54	-21.32	RMS
8	1215.072	-1.69	-0.44	-2.13	19.54	-21.67	RMS
9	1224.116	-1.39	-0.47	-1.86	19.54	-21.40	RMS
10	1225.180	-0.49	-0.47	-0.96	19.54	-20.50	RMS
11	1231.868	-1.50	-0.47	-1.97	19.54	-21.51	RMS
12	1233.388	-0.87	-0.48	-1.35	19.54	-20.89	RMS

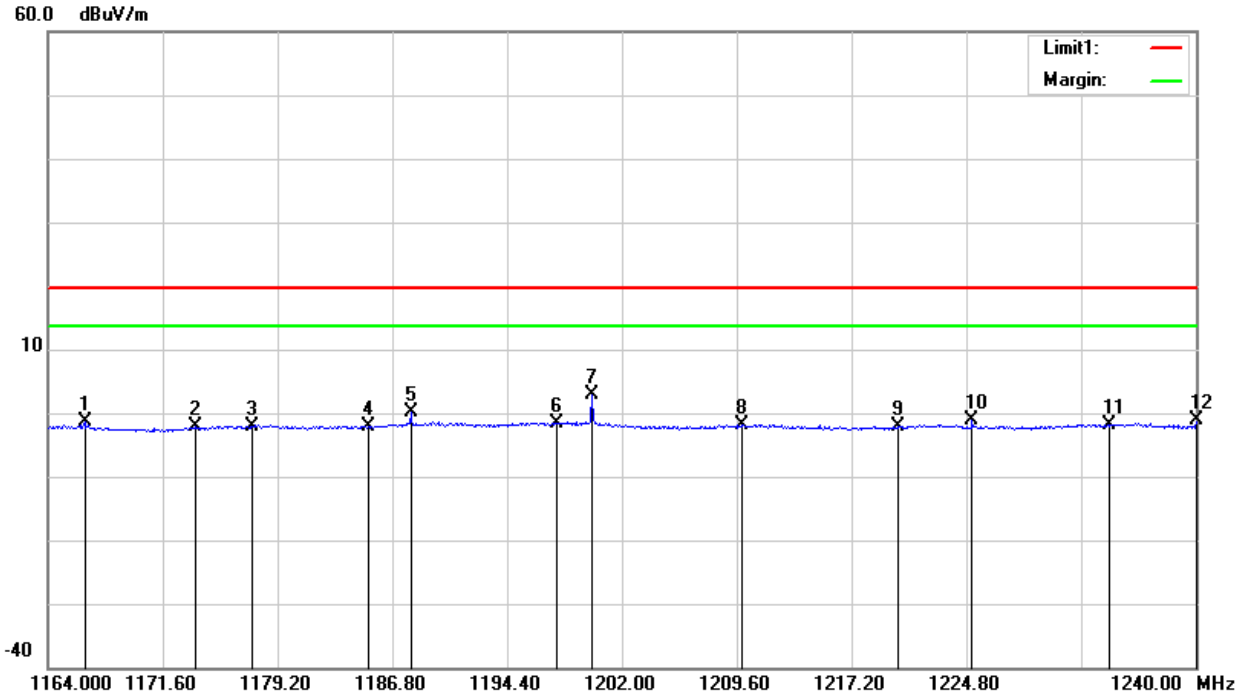
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1166.432	-0.66	-0.76	-1.42	19.54	-20.96	RMS
2	1173.804	-1.39	-0.68	-2.07	19.54	-21.61	RMS
3	1177.528	-1.37	-0.64	-2.01	19.54	-21.55	RMS
4	1185.204	-1.46	-0.57	-2.03	19.54	-21.57	RMS
5	1188.016	0.60	-0.54	0.06	19.54	-19.48	RMS
6	1197.668	-1.06	-0.44	-1.50	19.54	-21.04	RMS
7	1200.024	3.27	-0.42	2.85	19.54	-16.69	RMS
8	1209.904	-1.50	-0.44	-1.94	19.54	-21.48	RMS
9	1220.240	-1.66	-0.45	-2.11	19.54	-21.65	RMS
10	1225.180	-0.62	-0.47	-1.09	19.54	-20.63	RMS
11	1234.300	-1.30	-0.48	-1.78	19.54	-21.32	RMS
12	1240.000	-0.74	-0.49	-1.23	19.54	-20.77	RMS

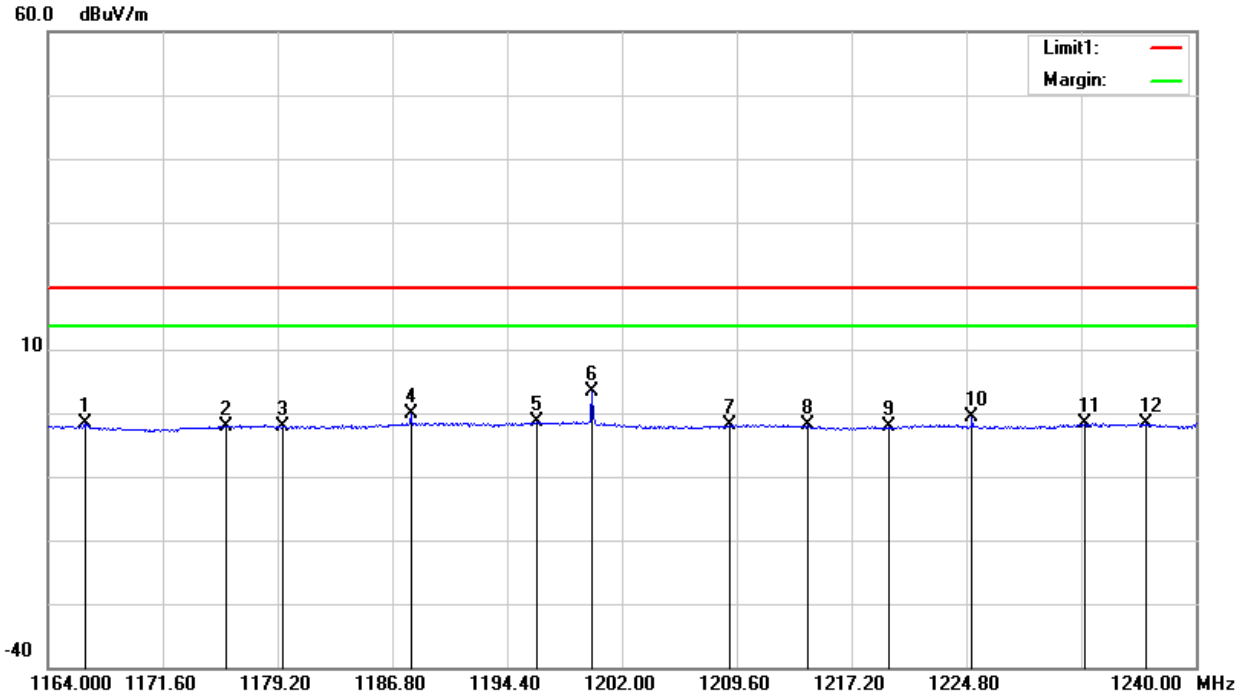
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1166.432	-0.76	-0.76	-1.52	19.54	-21.06	RMS
2	1175.780	-1.38	-0.66	-2.04	19.54	-21.58	RMS
3	1179.504	-1.38	-0.63	-2.01	19.54	-21.55	RMS
4	1188.016	0.36	-0.54	-0.18	19.54	-19.72	RMS
5	1196.376	-0.99	-0.46	-1.45	19.54	-20.99	RMS
6	1200.024	3.71	-0.42	3.29	19.54	-16.25	RMS
7	1209.144	-1.46	-0.43	-1.89	19.54	-21.43	RMS
8	1214.312	-1.54	-0.44	-1.98	19.54	-21.52	RMS
9	1219.708	-1.64	-0.46	-2.10	19.54	-21.64	RMS
10	1225.180	-0.27	-0.47	-0.74	19.54	-20.28	RMS
11	1232.628	-1.25	-0.48	-1.73	19.54	-21.27	RMS
12	1236.732	-1.19	-0.49	-1.68	19.54	-21.22	RMS

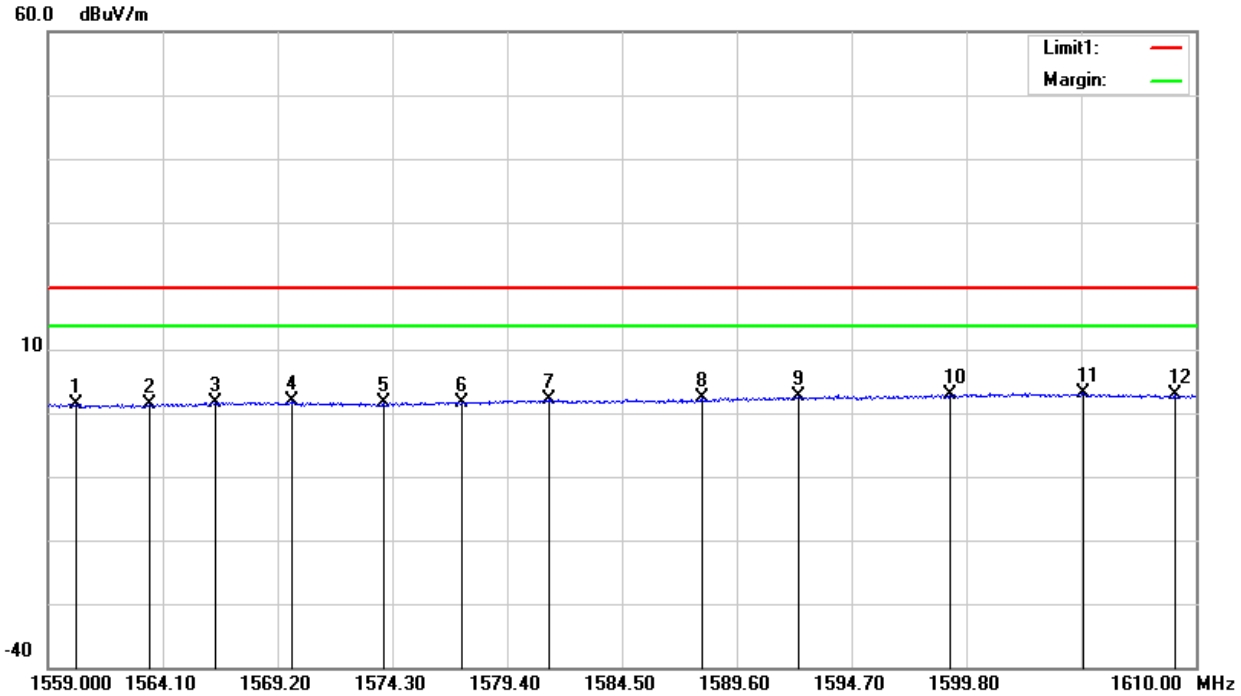
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1560.224	-1.54	2.99	1.45	19.54	-18.09	RMS
2	1563.539	-1.61	3.10	1.49	19.54	-18.05	RMS
3	1566.446	-1.54	3.18	1.64	19.54	-17.90	RMS
4	1569.863	-1.49	3.29	1.80	19.54	-17.74	RMS
5	1573.892	-1.75	3.42	1.67	19.54	-17.87	RMS
6	1577.411	-1.86	3.53	1.67	19.54	-17.87	RMS
7	1581.236	-1.53	3.65	2.12	19.54	-17.42	RMS
8	1588.070	-1.38	3.86	2.48	19.54	-17.06	RMS
9	1592.354	-1.47	4.00	2.53	19.54	-17.01	RMS
10	1599.086	-1.29	4.21	2.92	19.54	-16.62	RMS
11	1605.002	-1.19	4.24	3.05	19.54	-16.49	RMS
12	1609.082	-1.27	4.23	2.96	19.54	-16.58	RMS

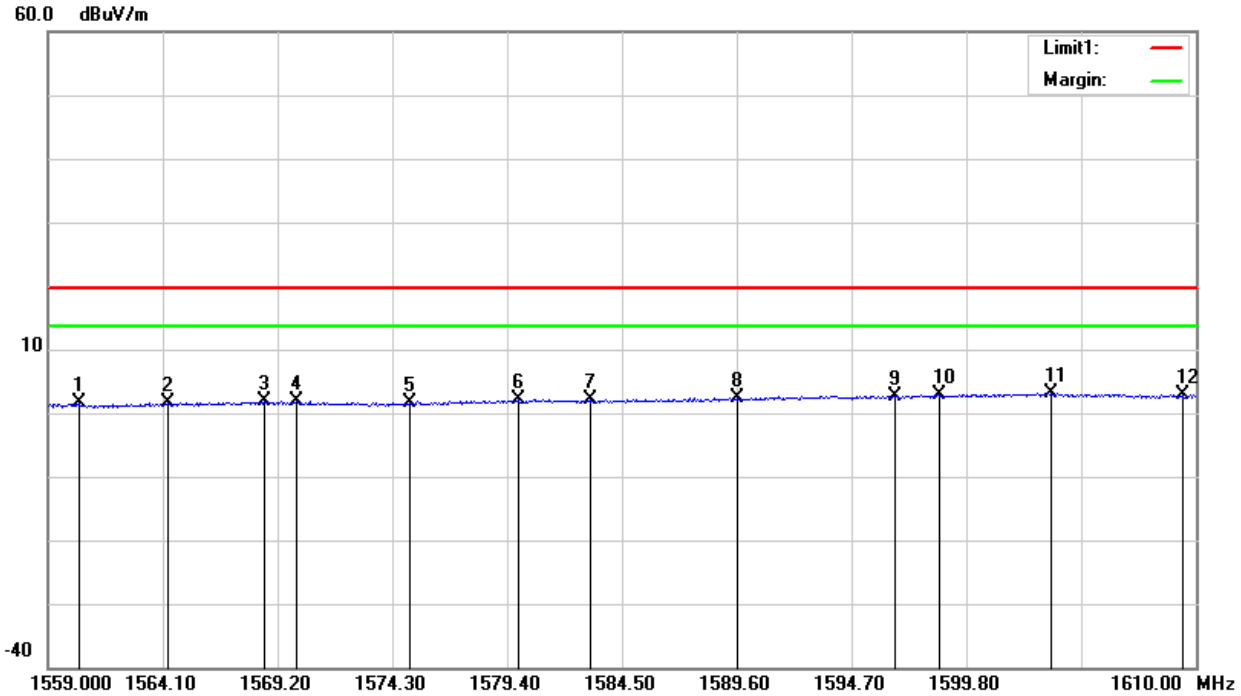
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1560.377	-1.49	3.00	1.51	19.54	-18.03	RMS
2	1564.304	-1.49	3.12	1.63	19.54	-17.91	RMS
3	1568.588	-1.48	3.25	1.77	19.54	-17.77	RMS
4	1570.067	-1.45	3.30	1.85	19.54	-17.69	RMS
5	1575.065	-1.72	3.45	1.73	19.54	-17.81	RMS
6	1579.910	-1.54	3.61	2.07	19.54	-17.47	RMS
7	1583.123	-1.61	3.71	2.10	19.54	-17.44	RMS
8	1589.600	-1.56	3.91	2.35	19.54	-17.19	RMS
9	1596.638	-1.45	4.13	2.68	19.54	-16.86	RMS
10	1598.576	-1.33	4.19	2.86	19.54	-16.68	RMS
11	1603.574	-1.17	4.24	3.07	19.54	-16.47	RMS
12	1609.388	-1.41	4.23	2.82	19.54	-16.72	RMS

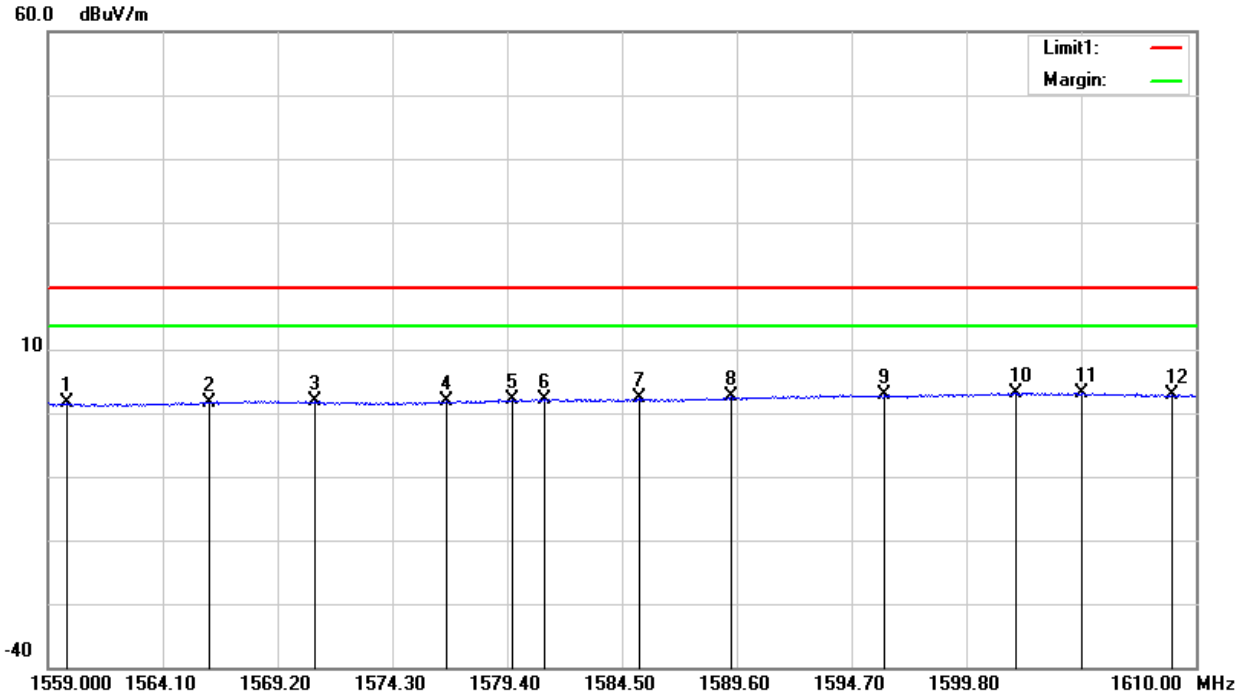
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1559.867	-1.38	2.98	1.60	19.54	-17.94	RMS
2	1566.140	-1.47	3.17	1.70	19.54	-17.84	RMS
3	1570.832	-1.43	3.32	1.89	19.54	-17.65	RMS
4	1576.697	-1.60	3.50	1.90	19.54	-17.64	RMS
5	1579.655	-1.44	3.60	2.16	19.54	-17.38	RMS
6	1581.083	-1.49	3.65	2.16	19.54	-17.38	RMS
7	1585.265	-1.50	3.77	2.27	19.54	-17.27	RMS
8	1589.345	-1.39	3.90	2.51	19.54	-17.03	RMS
9	1596.179	-1.32	4.12	2.80	19.54	-16.74	RMS
10	1601.993	-1.06	4.24	3.18	19.54	-16.36	RMS
11	1604.900	-1.15	4.24	3.09	19.54	-16.45	RMS
12	1608.929	-1.36	4.23	2.87	19.54	-16.67	RMS

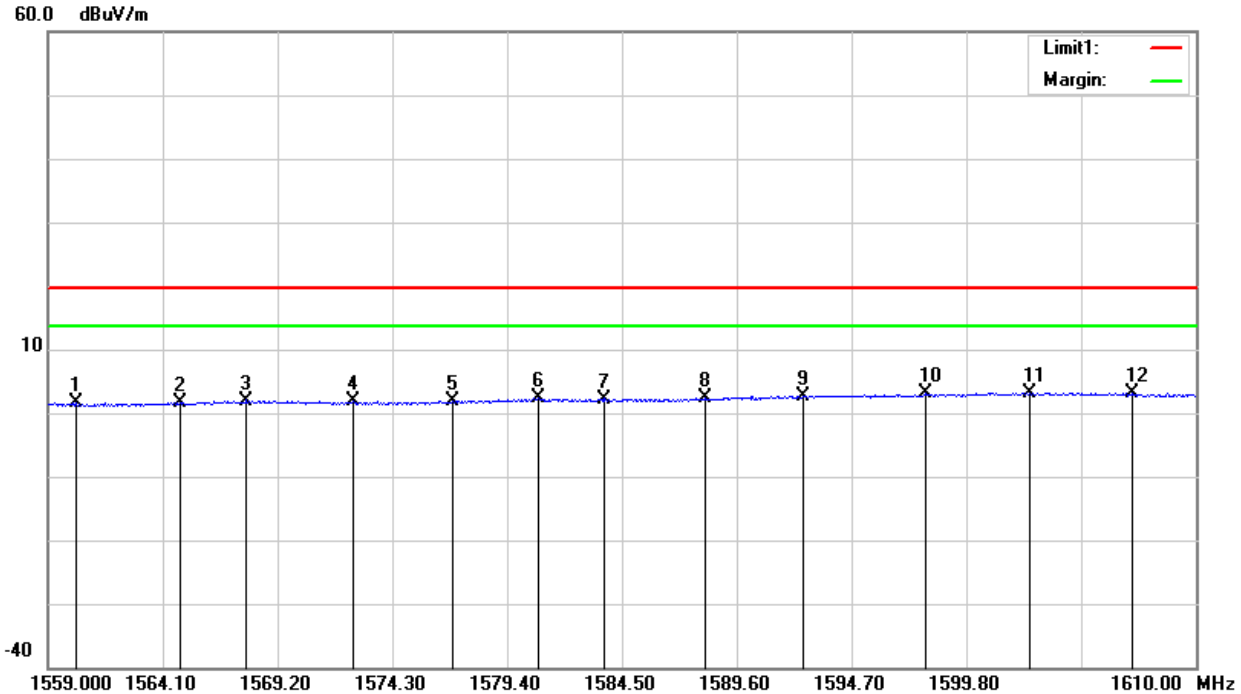
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22.9(C)	Relative Humidity:	51%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1560.224	-1.37	2.99	1.62	19.54	-17.92	RMS
2	1564.865	-1.47	3.14	1.67	19.54	-17.87	RMS
3	1567.823	-1.23	3.23	2.00	19.54	-17.54	RMS
4	1572.566	-1.60	3.38	1.78	19.54	-17.76	RMS
5	1577.003	-1.53	3.51	1.98	19.54	-17.56	RMS
6	1580.777	-1.34	3.64	2.30	19.54	-17.24	RMS
7	1583.684	-1.48	3.73	2.25	19.54	-17.29	RMS
8	1588.223	-1.58	3.87	2.29	19.54	-17.25	RMS
9	1592.558	-1.28	4.01	2.73	19.54	-16.81	RMS
10	1598.015	-1.17	4.18	3.01	19.54	-16.53	RMS
11	1602.605	-1.02	4.24	3.22	19.54	-16.32	RMS
12	1607.144	-1.12	4.24	3.12	19.54	-16.42	RMS

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



4. UWB BANDWIDTH

4.1 LIMITS OF UWB BANDWIDTH MEASUREMENT

The UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

At any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

4.2 INSTRUMENT SETUP VALUE AND MEASUREMENT DISTANCE

Frequency Range	RBW	VBW	Detector	Measurement Distance
3100~10600	1MHz	1MHz	PEAK	1 Meter

4.3 TEST PROCEDURE

a. The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of arotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The height of the test antenna shall vary between 1m to 4m.Both horizontal and vertical polarization of the antenna are set to make the measurement.

c. All readings are RMS mode value , for each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading .

d. For the actual test configuration, please refer to the related Item –EUT Test Photos.

e. The Spectrum Analyzer system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. The UWB Bandwidth is measured at the 10 dB point (FL, FH).

Note: Both horizontal and vertical antenna polarities were tested. The worst case emissions were reported.

4.4 TEST SETUP

Same as 3.3.4

4.5 EUT OPERATION CONDITIONS

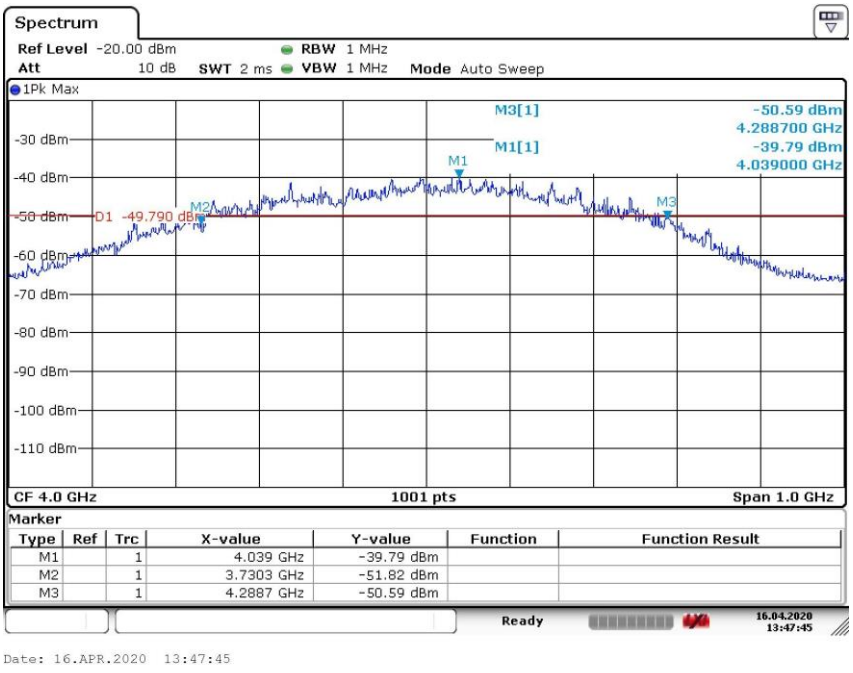
Same as 3.2.6

4.6 TEST RESULTS

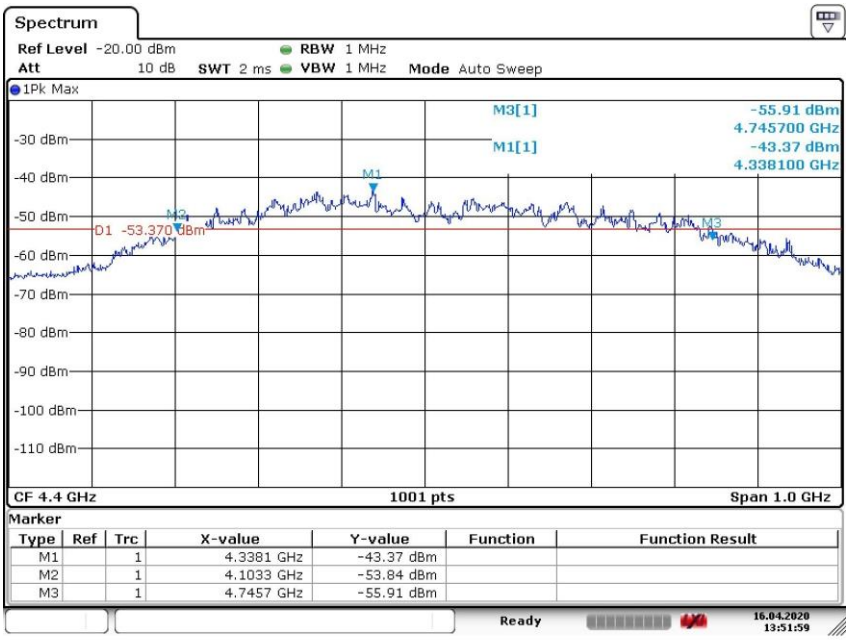
Temperature:	25 ℃	Relative Humidity:	50%
Test Voltage:	DC 3.7V		

Test Channel	f_M (MHz)	f_L (MHz)	f_H (MHz)	-10dB Bandwidth (MHz)	f_C (MHz)	Fractional Bandwidth (MHz)	Limit	Result
CH1	4039	3730.3	4288.7	558.4	4009.5	0.14	-10dB Bandwidth≥500MHz or Fractional Bandwidth≥0.2	Pass
CH2	4338.1	4103.3	4745.7	642.4	4424.5	0.15		

CH 1



CH 2



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5 PEAK EMISSION WITHIN A 50MHZ BANDWIDTH (FOR 15.519(e))

5.1 LIMITS OF PEAK EMISSION

The Maximum Peak Output Power Measurement is 0dBm(RBW=50MHz).
If a resolution bandwidth other than 50 MHz is Employed, the peak EIRP limit shall be 20 log (RBW/50) dBm where RBW is the resolution bandwidth in megahertz that is employed. The resolution bandwidth used to make the peak measurement was 1MHz, resulting in a limit of –34dBm.

This may be converted to a peak field strength level at 3 meters using
E(dBuV/m) = P(dBm EIRP) + 95.3 = -34 + 95.3 = 61.3 dBuV/m
Note: $EIRP_{1MHz}=EIRP_{50MHz}+20\log(1MHz/50\ MHz) = 0\ dBm + -34\ dB = -34\ dBm$

5.2 INSTRUMENT SETUP VALUE AND MEASUREMENT DISTANCE

Frequency Range	RBW	VBW	Detector	Measurement Distance
3100~10600	1MHz	3MHz	PEAK	3 Meter

5.3 TEST PROCEDURE

Same as 3.3.2

5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5 TEST SETUP

Same as 3.3.4

5.6 FIELD STRENGTH CALCULATION

Same as 3.2.5

5.7 EUT OPERATING CONDITIONS

Same as 3.2.5

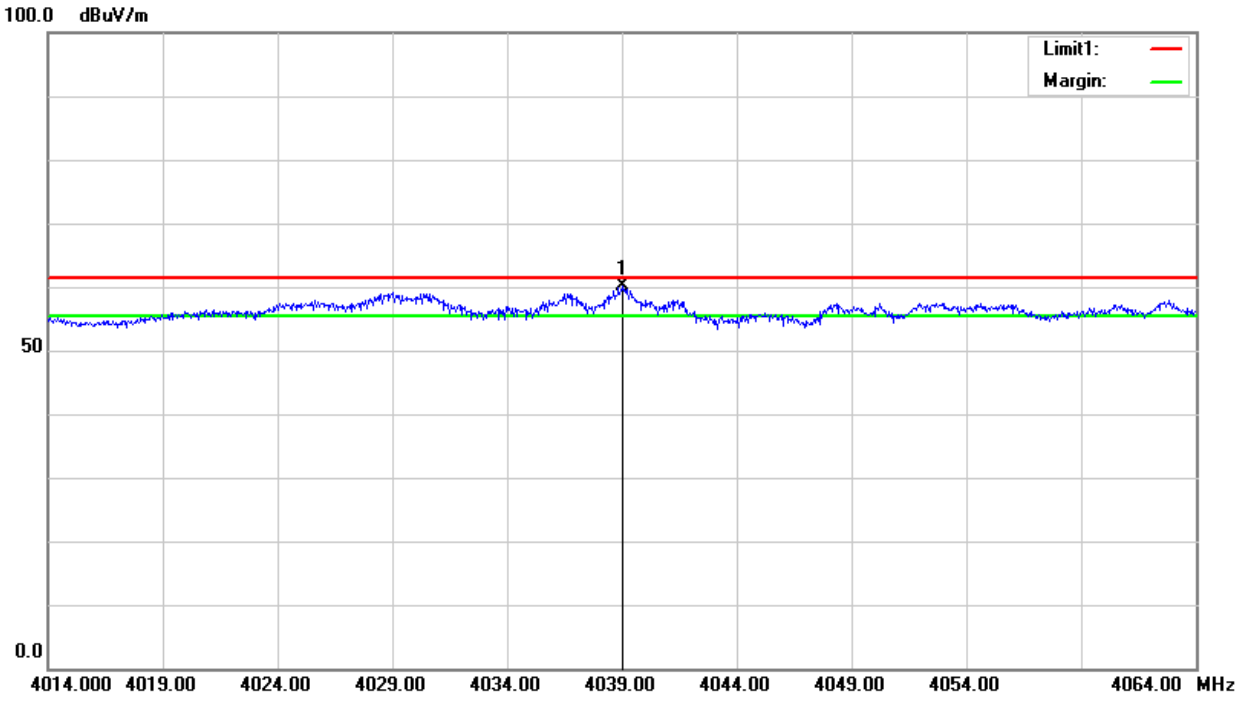
5.8 TEST RESULTS

Note: We pretested the battery powered and adapter powered mode, find the worst case in battery powered mode and shown in this report.

Temperature:	23.5(C)	Relative Humidity:	62%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4039.000	69.63	-9.43	60.20	61.30	-1.10	peak

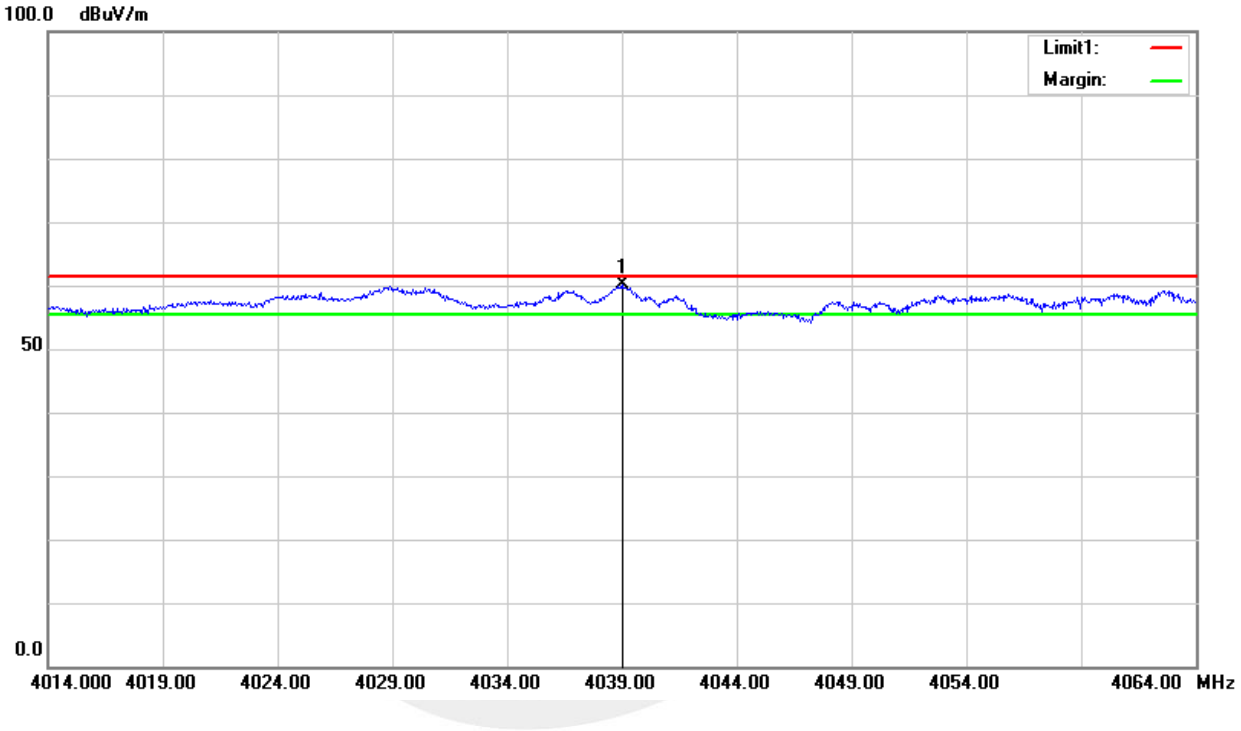
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.5(C)	Relative Humidity:	62%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4039.000	69.60	-9.43	60.17	61.30	-1.13	peak

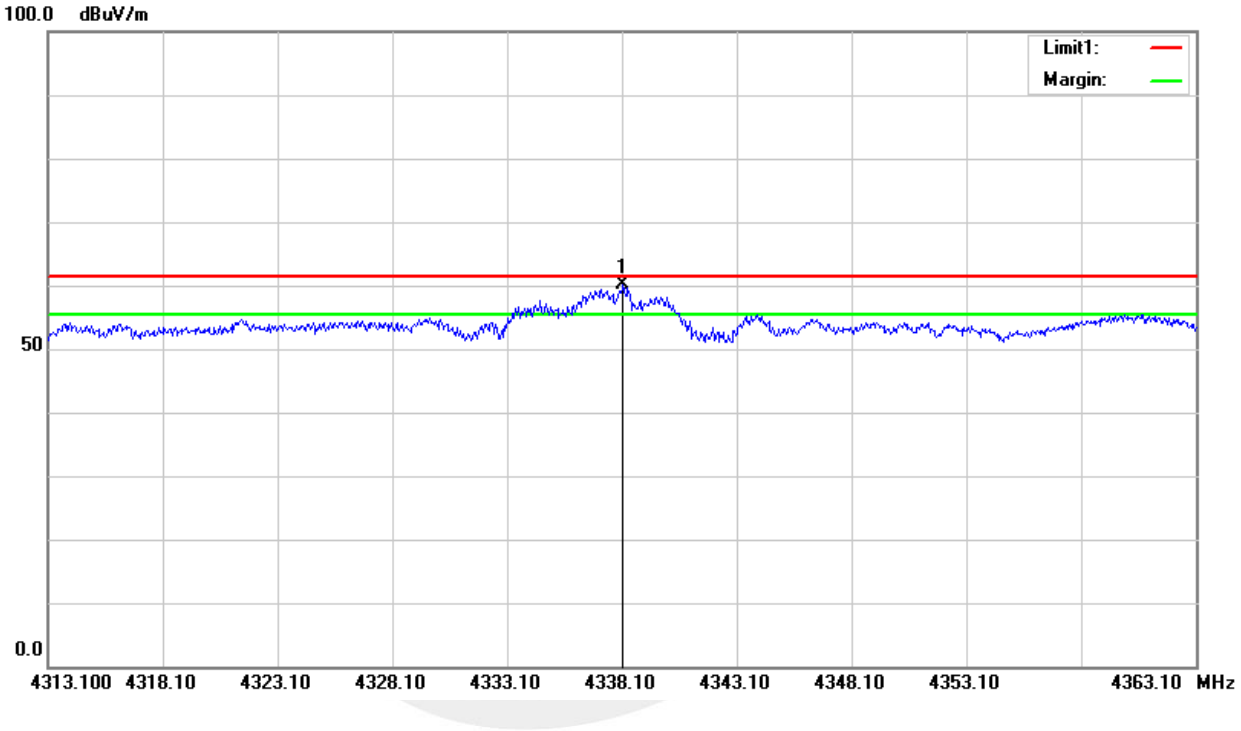
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.5(C)	Relative Humidity:	62%RH
Test Voltage:	DC 3.7V	Phase:	Horizontal
Test Mode:	CH 2	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4338.100	68.33	-8.19	60.14	61.30	-1.16	peak

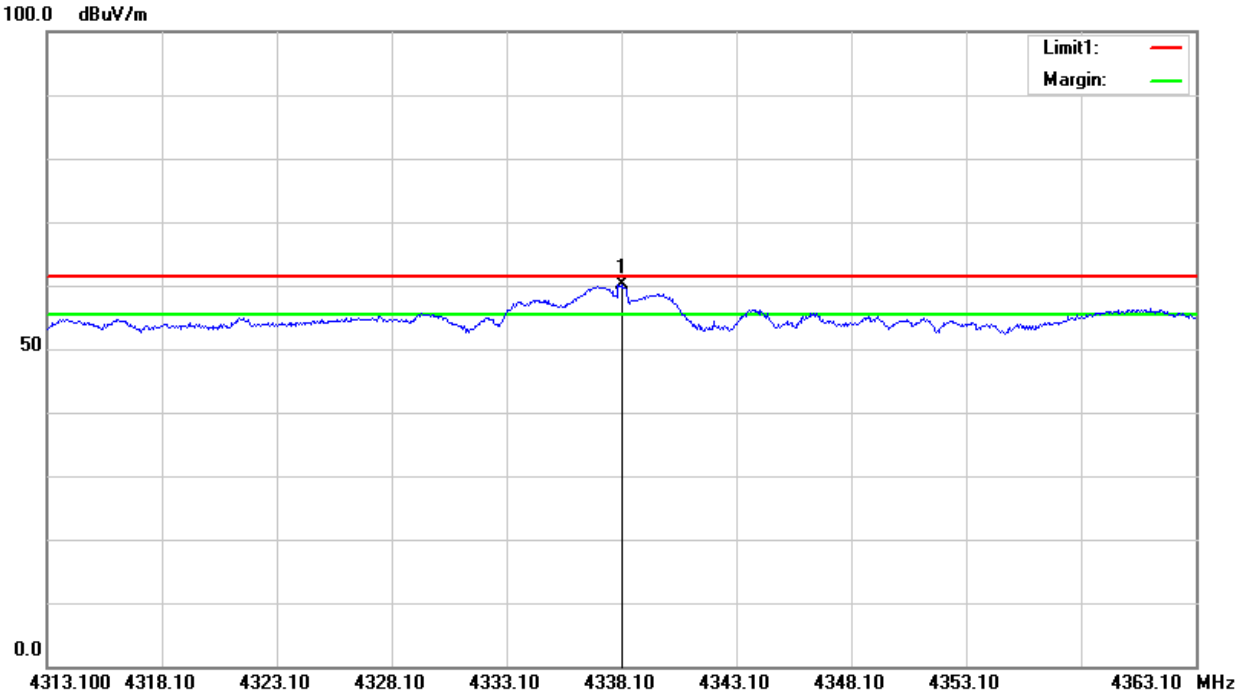
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	23.5(C)	Relative Humidity:	62%RH
Test Voltage:	DC 3.7V	Phase:	Vertical
Test Mode:	CH 2	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4338.100	68.43	-8.19	60.24	61.30	-1.06	peak

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



6 CESSATION TIME

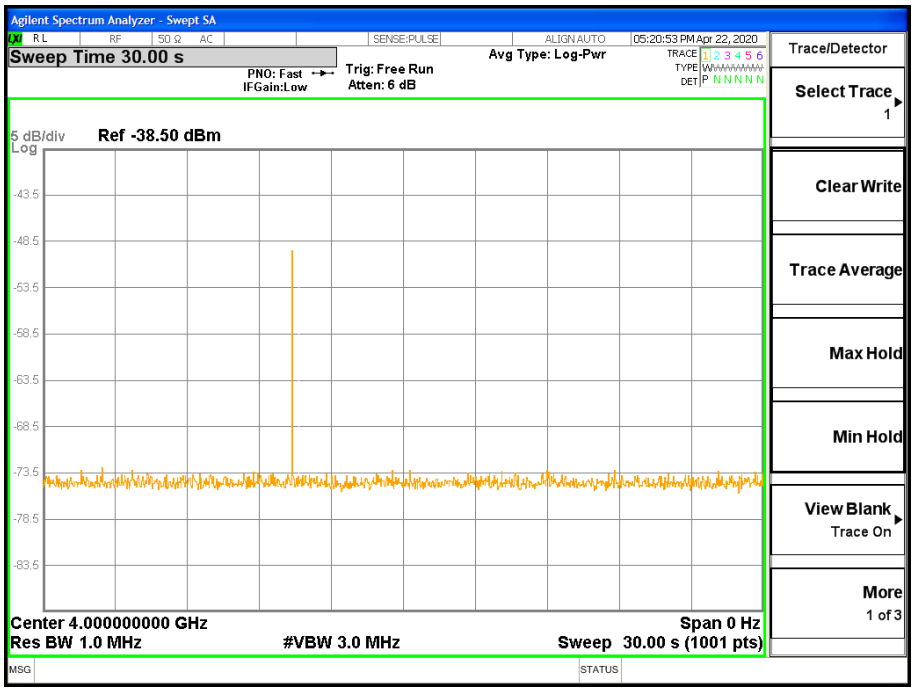
6.1 CESSATION TIME

FCC Part 15.519(a)(1): A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

6.2 TEST PROCEDURE

EUT and receiving pairing device keep UWB normal connection.

6.3 TEST RESULTS



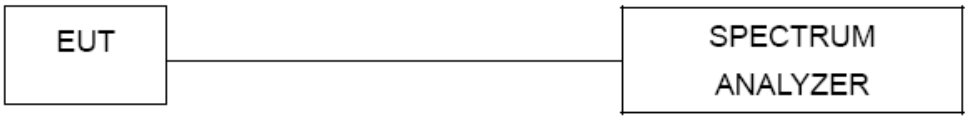
Note: The EUT will stop working after one cycle of normal operation, and will not work again within 10s.

7 DUTY CYCLE

7.1 TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
The Duty Cycle Was Determined By The Following Equation:
Duty Cycle(%)=T_{on}/T_{off}

7.2 TEST SETUP

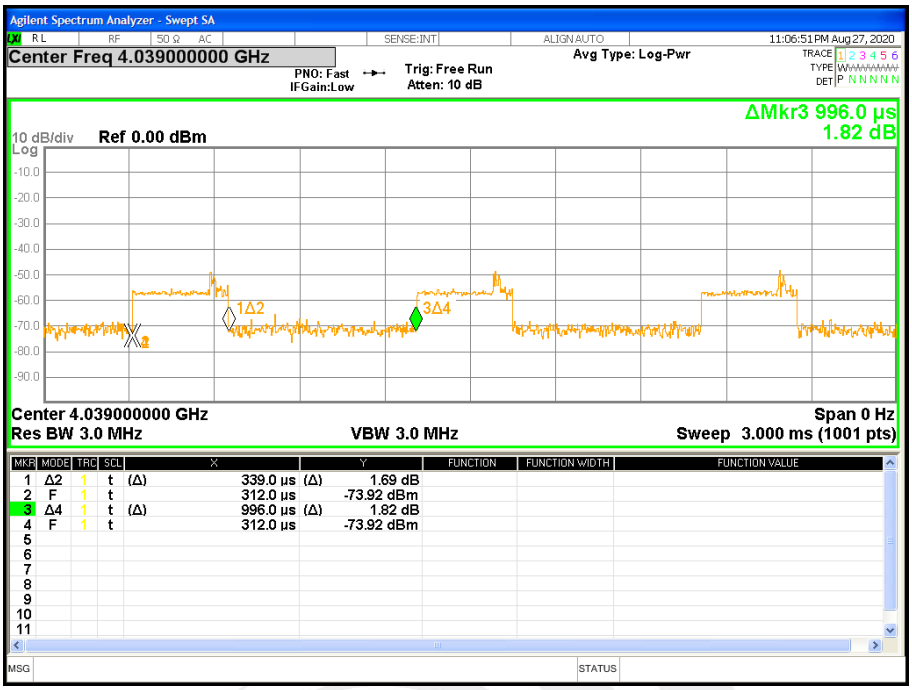


7.3 TEST RESULTS

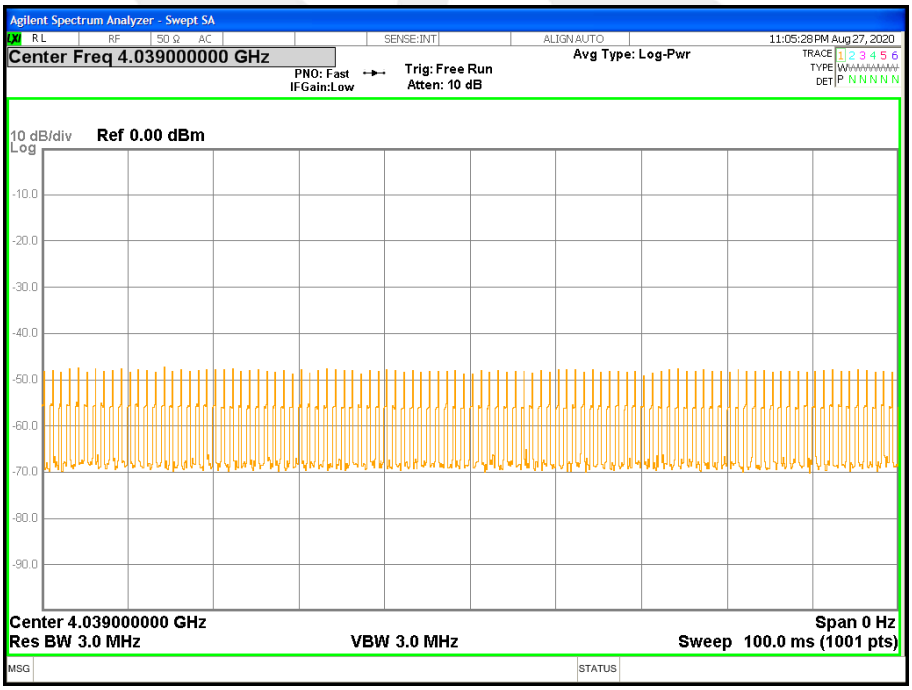
Channel	T_{on} (ms)	T_{off} (ms)	Duty Cycle
1	339	996	34.04%
2	339	987	34.35%

CH 1

3ms

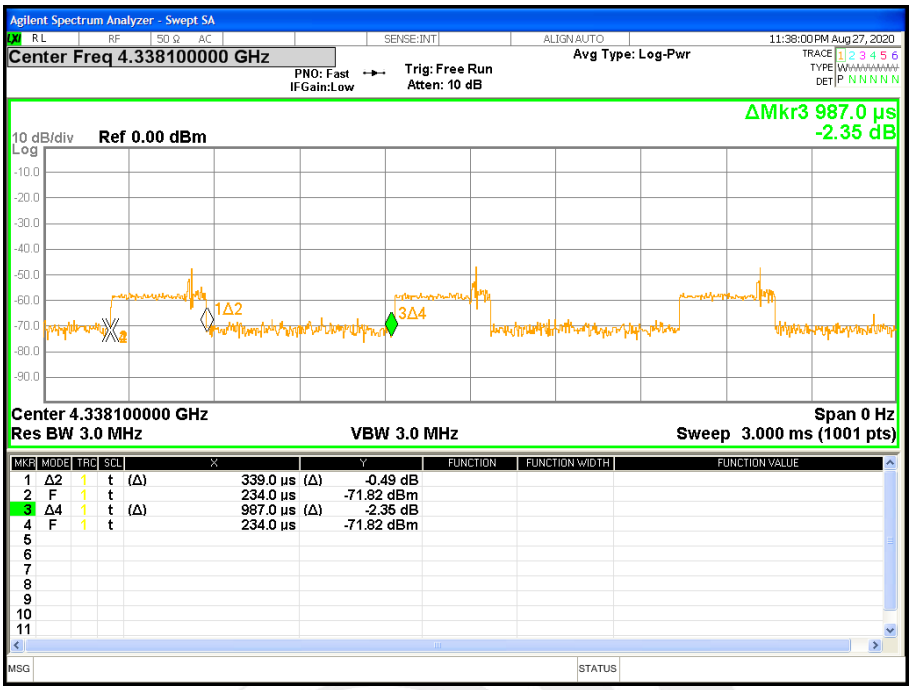


100ms

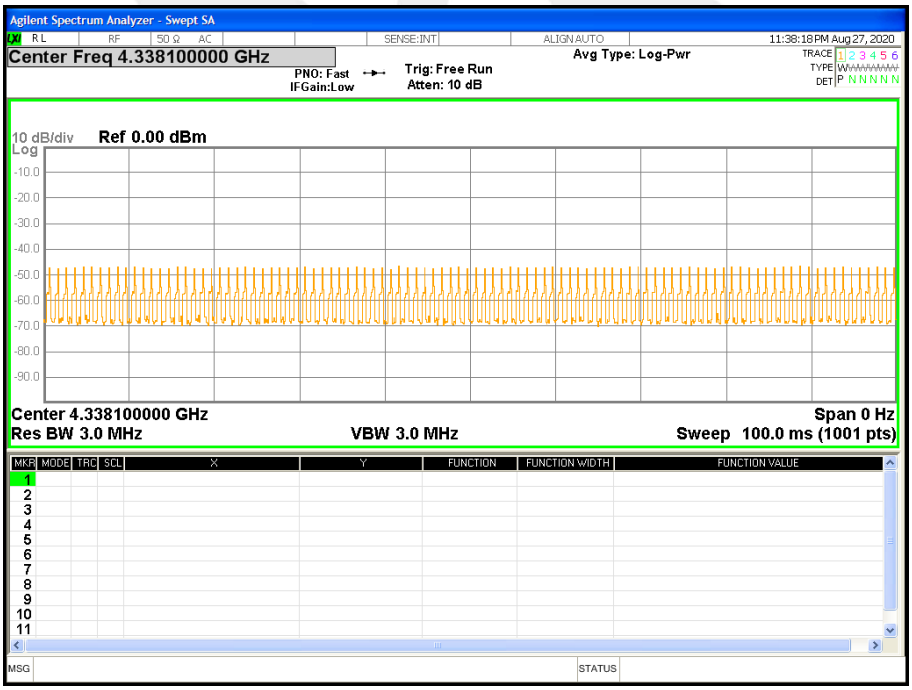


CH 2

3ms



100ms



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

According to the FCC Part 15 Paragraph 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.

8.2 EUT ANTENNA

The EUT antenna is Internal Antenna.It conforms to the standard requirements.

APPENDIX- PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※