



RADIO TEST REPORT

Report No: STS2209306W02

Issued for

HELLA GmbH & Go. KGaA

Rixbecker Straße 75 59552 Lippstadt / Germany

Product Name:	Passive Entry - Passive Start Radio identification device
Brand Name:	Hella
Model Name:	FS19S
Series Model:	N/A
FCC ID:	NBGFS19S
Test Standard:	Title 47 of the CFR, Part 15. Subpart F

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**TEST RESULT CERTIFICATION****Applicant's Name** HELLA GmbH & Go. KGaA

Address..... Rixbecker Straße 75 59552 Lippstadt / Germany

Manufacture's Name HELLA GmbH & Go. KGaA

Address..... Rixbecker Straße 75 59552 Lippstadt / Germany

Product Description

Product Name Passive Entry - Passive Start Radio identification device

Brand Name Hella

Model Name FS19S

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/IC 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..... 08 Sept. 2022

Date of performance of tests ... 08 Sept. 2022 ~ 20 Sept. 2022

Date of Issue 20 Sept. 2022

Test Result **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	20 Sept. 2022	STS2209306W02	ALL	Initial Issue





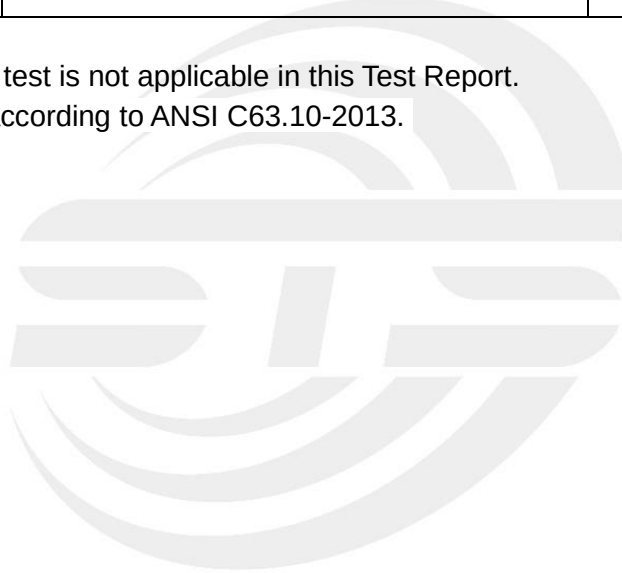
1. SUMMARY OF TEST RESULTS

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 15.517I	Radiated Spurious Emission	Pass	
15.209 15.517(d)	Radiated Spurious Emission in GPS Band	Pass	
15.517I	Peak Emissions within a 50MHz Bandwidth	Pass	
15.517(b)	UWB Bandwidth	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 $y \pm U$, 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	$\pm 0.87\text{Db}$
2	Unwanted Emissions, conducted	$\pm 2.895\text{Db}$
3	All emissions, radiated 9K-30MHz	$\pm 3.80\text{Db}$
4	All emissions, radiated 30M-1GHz	$\pm 4.09\text{Db}$
5	All emissions, radiated 1G-6GHz	$\pm 4.92\text{Db}$
6	All emissions, radiated >6G	$\pm 5.49\text{Db}$
7	Conducted Emission (9KHz-30MHz)	$\pm 2.73\text{Db}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Passive Entry – Passive Start Radio identification device	
Trade Name	Hella	
Model Name	FS19S	
Series Model	N/A	
Model Difference	N/A	
Product Description	The EUT is a Passive Entry – Passive Start Radio identification device.	
	Operation Frequency:	6.52GHz, 7.04 GHz, 7.56 GHz
	Modulation Type:	FSK
	Antenna Type:	PCB antenna
	Antenna Gain(Peak):	0dBi
	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 3.	
Rating	Input: 3V,0.235mA	
Hardware version number	21	
Software version number	7	
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. The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.

3.	Test channel	Frequency(GHz)	Test channel	Frequency(GHz)
	01	6.52	02	7.04
	03	7.56	-	-



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 CH01	FSK
Mode 2	TX CH02	FSK
Mode 3	TX CH03	FSK

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.

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
UWB	6.52GHz,7.04 GHz,7.56 GHz	FSK	0	Default	The EUT has signal transmission when it is powered on

2.4 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



2.5 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.	Length	Note
N/A	N/A	N/A	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	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.



2.6 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	2021.09.30	2022.09.29
Signal Analyzer	R&S	FSV 40-N	101823	2021.09.30	2022.09.29
Active loop Antenna	ZHINAN	ZN30900C	16035	2021.04.11	2023.04.10
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2021.10.11	2023.10.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2021.10.08	2022.10.07
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK201808090 1	2021.09.30	2022.09.29
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
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)			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Agilent	N9020A	MY51110105	2022.03.01	2023.02.28
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
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.

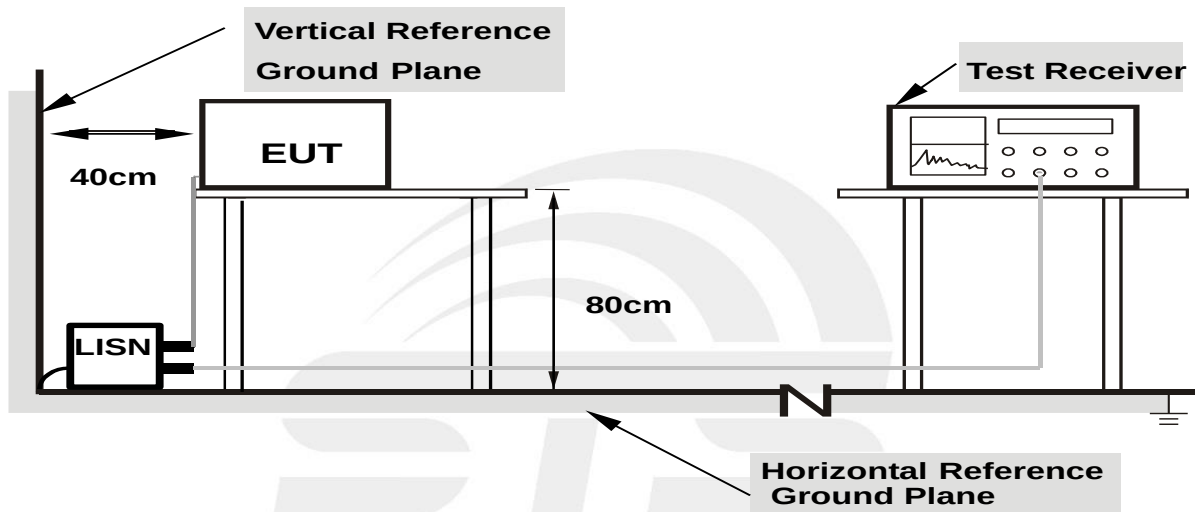
The following table is the setting of the receiver

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

3.1.2 TEST PROCEDURE

- 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- 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:	--(C)	Relative Humidity:	--%RH
Test Voltage:	N/A	Phase:	L/N
Test Mode:	N/A		

Note: EUT is only power by DC Power, So it is not applicable for this test.



3.2 RADIATED EMISSION MEASUREMENT (FOR 15.517(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	29.44
1610~1990	-53.3	41.9	51.44
1990~3100	-51.3	43.9	53.44
3100~10600	-41.3	53.9	63.44
Above 10600	-51.3	43.9	53.44

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. $E(\text{dBuV/m})@3\text{m} = P(\text{dBm EIRP}) + 95.2$;

$E(\text{dBuV/m})@1\text{m} = E(\text{dBuV/m})@3\text{m} + 20 \cdot \log(3/1)$



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	1001
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

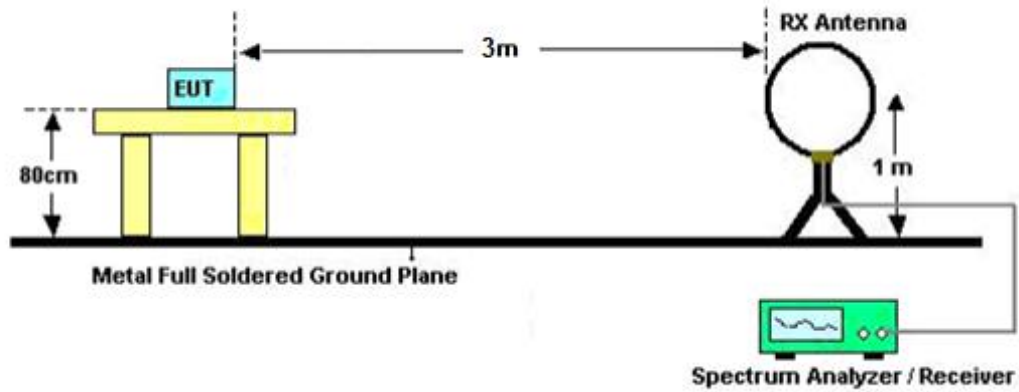
- The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8meter (above 1GHz is 1.5 m) above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the test antenna shall vary between 1m to 4m. Both horizontal and vertical polarization of the antenna are set to make the measurement.
- 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.
- 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)
- 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)
- 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

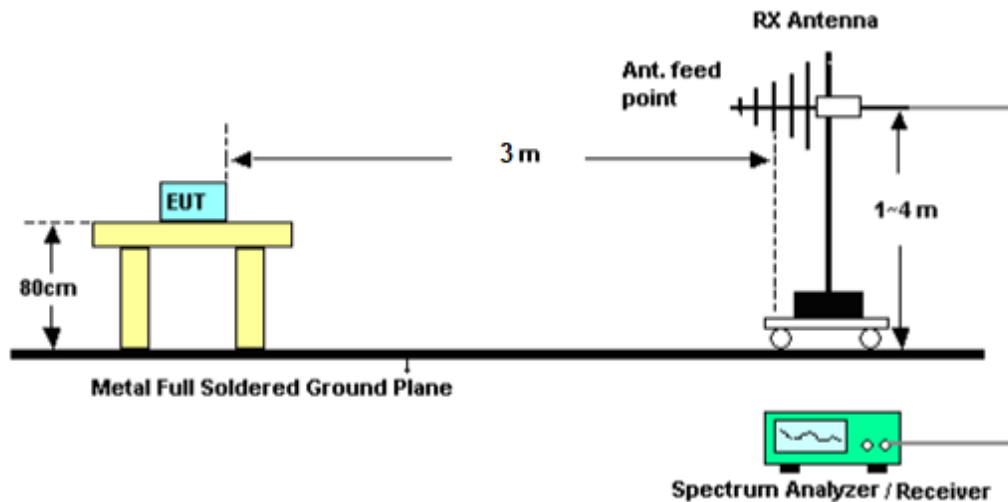
No deviation

3.2.4 TEST SETUP

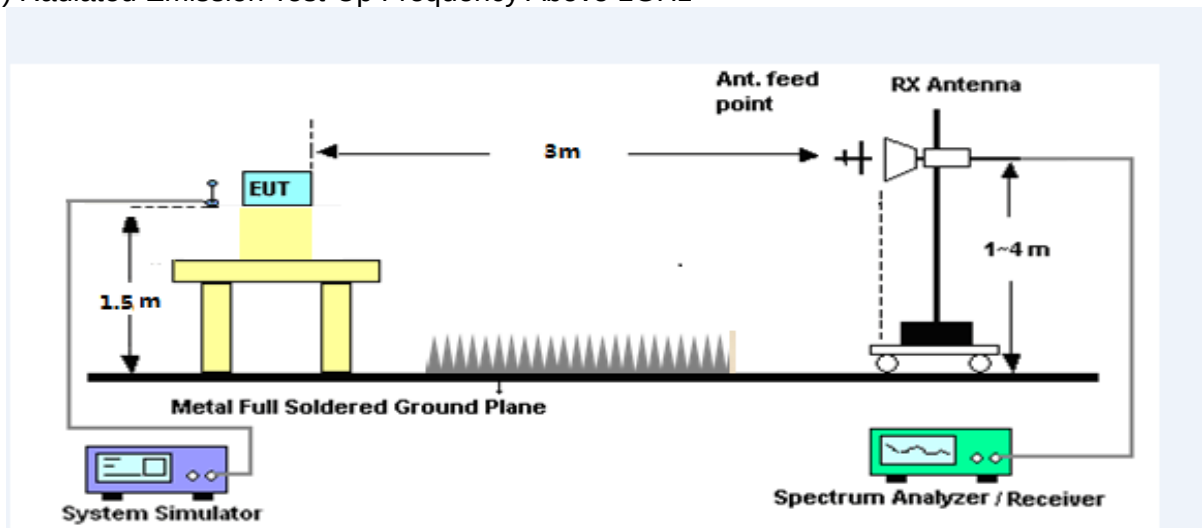
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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

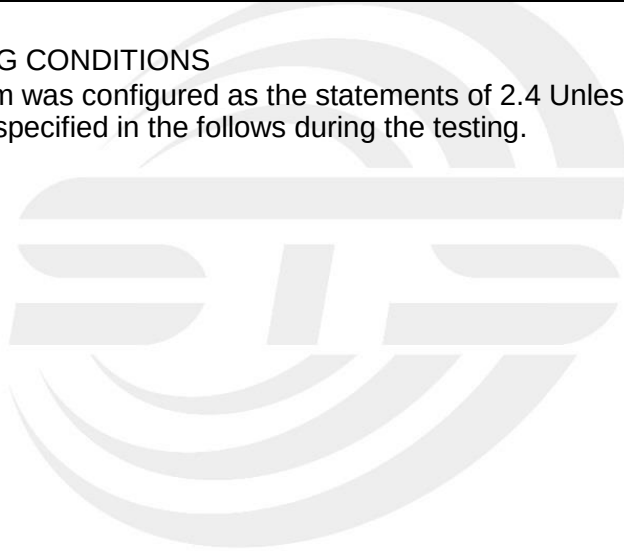
AV L = AV Limit

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

Below 30MHz

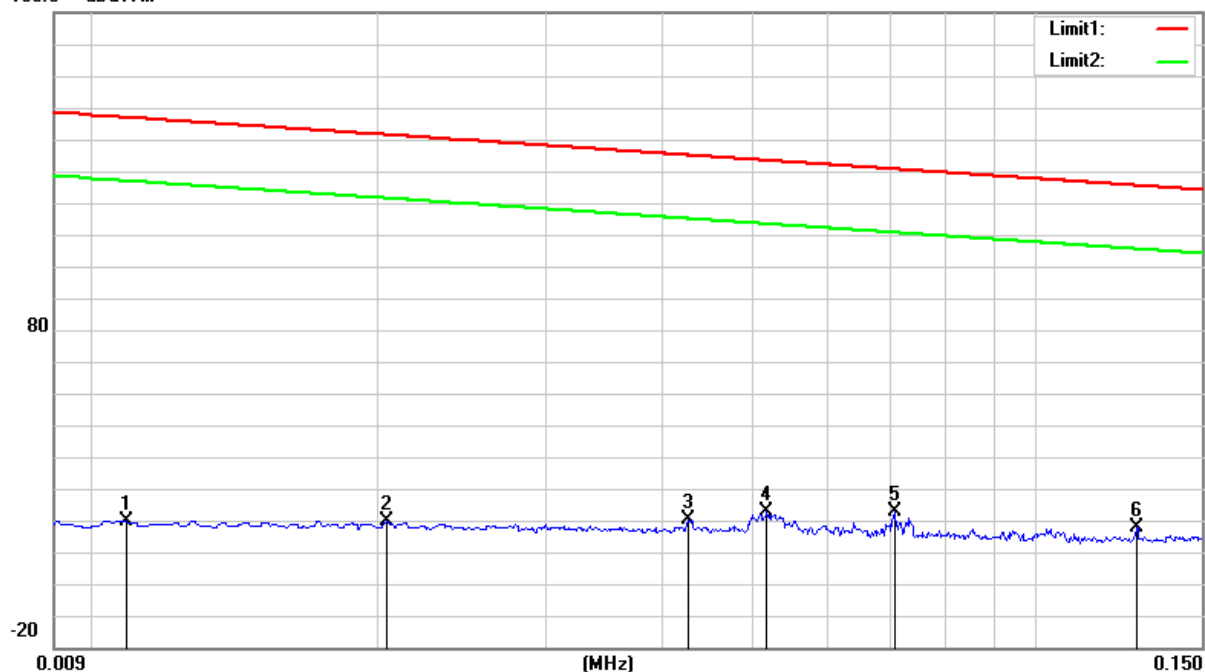
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 1(9KHz - 150KHz)
Test distance:	3m		

No.	Frequency (KHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0107	0.32	19.42	19.74	147.02	-127.28	peak
2	0.0204	-0.46	20.09	19.63	141.41	-121.78	peak
3	0.0427	0.59	19.65	20.24	134.99	-114.75	peak
4	0.0517	3.08	19.45	22.53	133.33	-110.80	peak
5	0.0706	3.64	18.92	22.56	130.63	-108.07	peak
6	0.1280	0.40	17.54	17.94	125.46	-107.52	peak

Remark:

- Margin = Result (Result = Reading + Factor) - Limit
- Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

180.0 dBuV/m



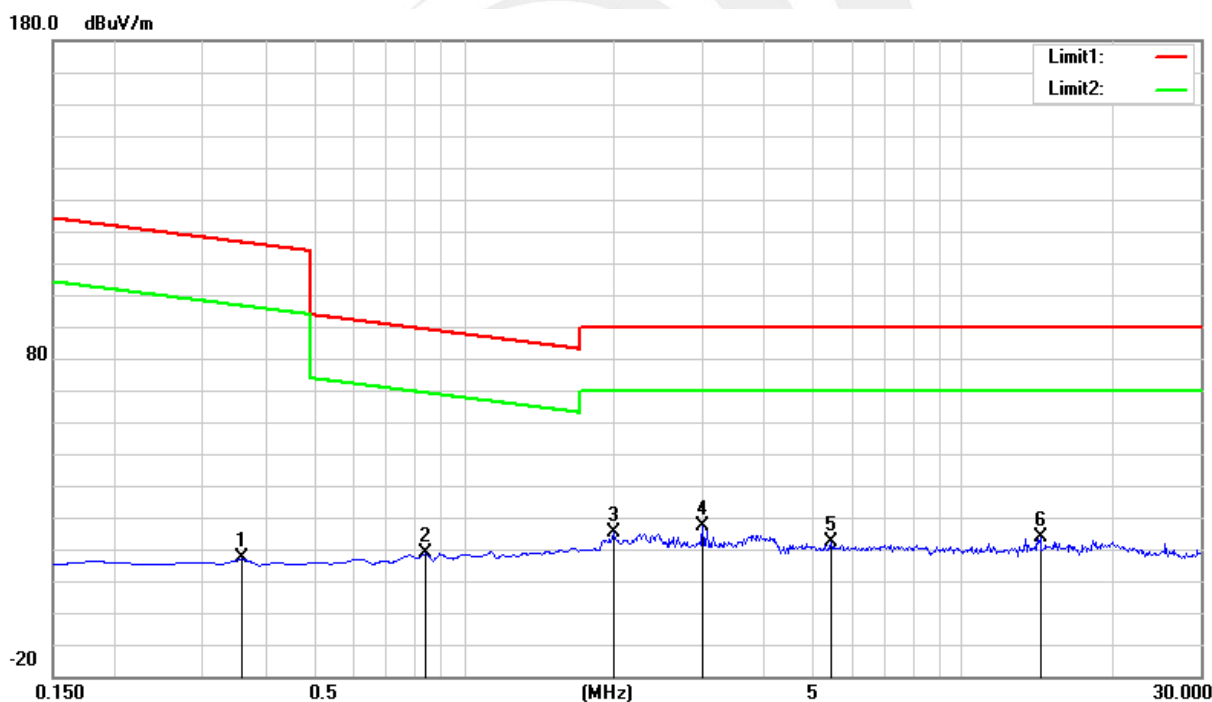


Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 1 (150KHz – 30MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3590	-3.04	20.14	17.10	116.50	-99.40	peak
2	0.8366	-1.53	20.27	18.74	89.15	-70.41	peak
3	2.0007	4.99	20.40	25.39	89.54	-64.15	peak
4	3.0156	6.98	20.10	27.08	89.54	-62.46	peak
5	5.4633	1.55	20.47	22.02	89.54	-67.52	peak
6	14.3287	2.72	21.15	23.87	89.54	-65.67	peak

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor (cable loss)} - \text{Amplifier gain}$





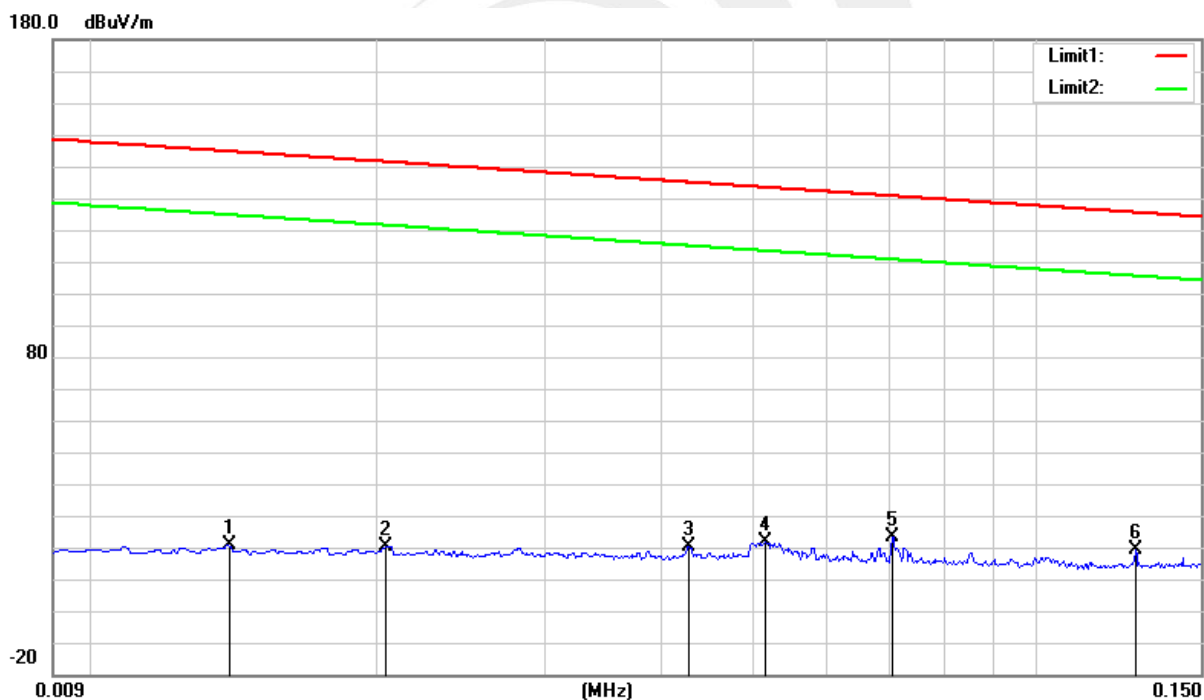
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 2 (9KHz - 150KHz)
Test distance:	3m		

No.	Frequency (KHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0138	0.86	19.65	20.51	144.81	-124.30	peak
2	0.0204	0.18	20.09	20.27	141.41	-121.14	peak
3	0.0428	0.81	19.64	20.45	134.97	-114.52	peak
4	0.0516	2.34	19.46	21.80	133.35	-111.55	peak
5	0.0704	4.50	18.93	23.43	130.65	-107.22	peak
6	0.1280	1.62	17.54	19.16	125.46	-106.30	peak

Remark:

3. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

4. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor (cable loss)} - \text{Amplifier gain}$





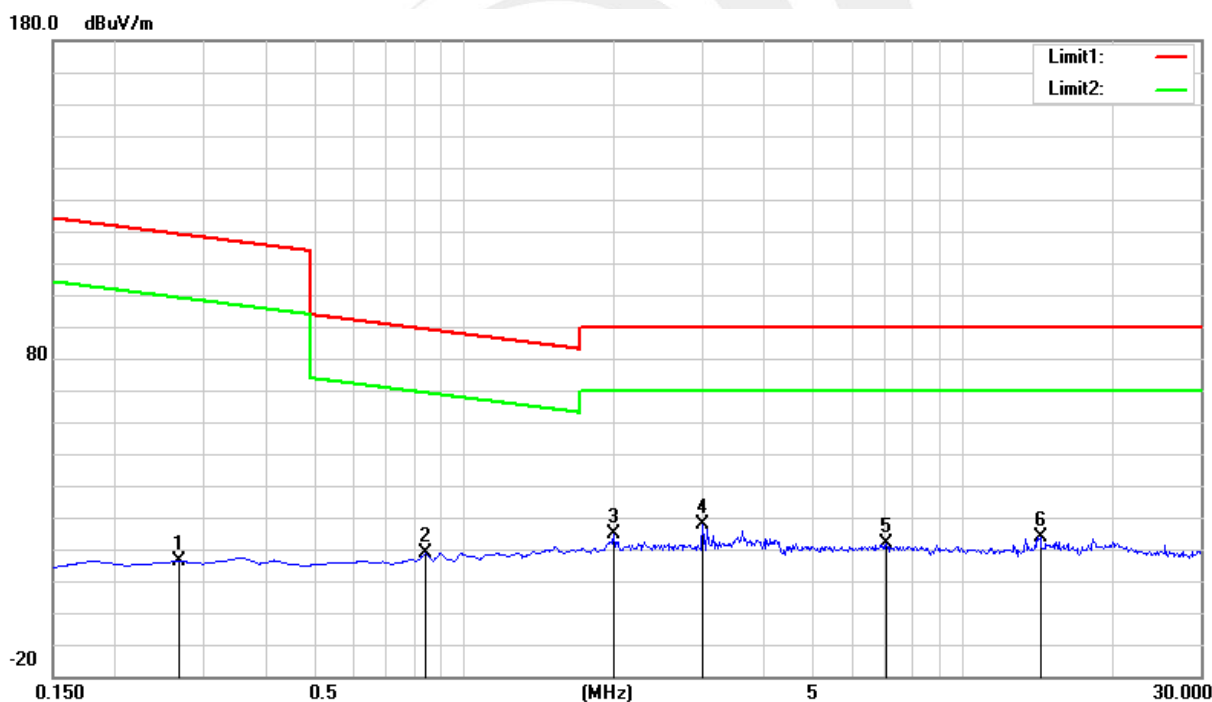
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 2 (150KHz – 30MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2694	-3.87	20.11	16.24	118.99	-102.75	peak
2	0.8366	-1.43	20.27	18.84	89.15	-70.31	peak
3	2.0007	4.37	20.40	24.77	89.54	-64.77	peak
4	3.0156	7.65	20.10	27.75	89.54	-61.79	peak
5	7.0454	1.31	20.38	21.69	89.54	-67.85	peak
6	14.3287	2.81	21.15	23.96	89.54	-65.58	peak

Remark:

3. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

4. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor (cable loss)} - \text{Amplifier gain}$





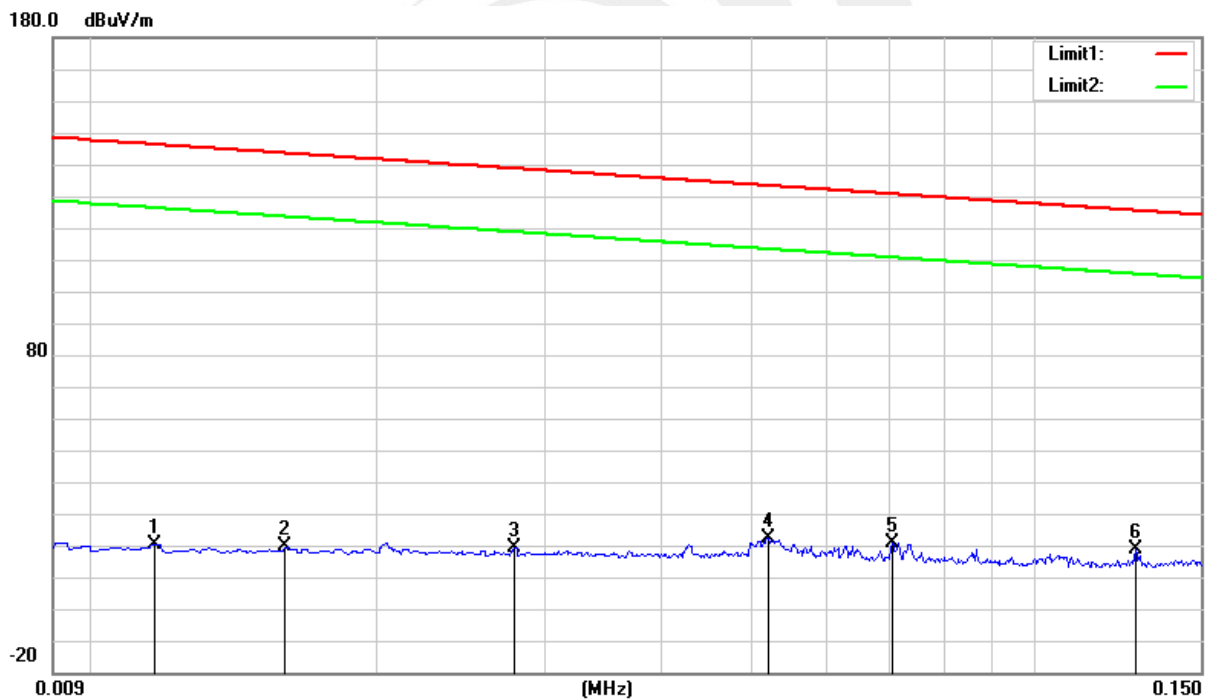
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 3 (9KHz - 150KHz)
Test distance:	3m		

No.	Frequency (KHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0115	0.75	19.48	20.23	146.39	-126.16	peak
2	0.0160	-0.12	19.81	19.69	143.52	-123.83	peak
3	0.0280	-0.63	19.94	19.31	138.66	-119.35	peak
4	0.0518	2.94	19.45	22.39	133.32	-110.93	peak
5	0.0704	1.89	18.93	20.82	130.65	-109.83	peak
6	0.1280	1.12	17.54	18.66	125.46	-106.80	peak

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor (cable loss)} - \text{Amplifier gain}$





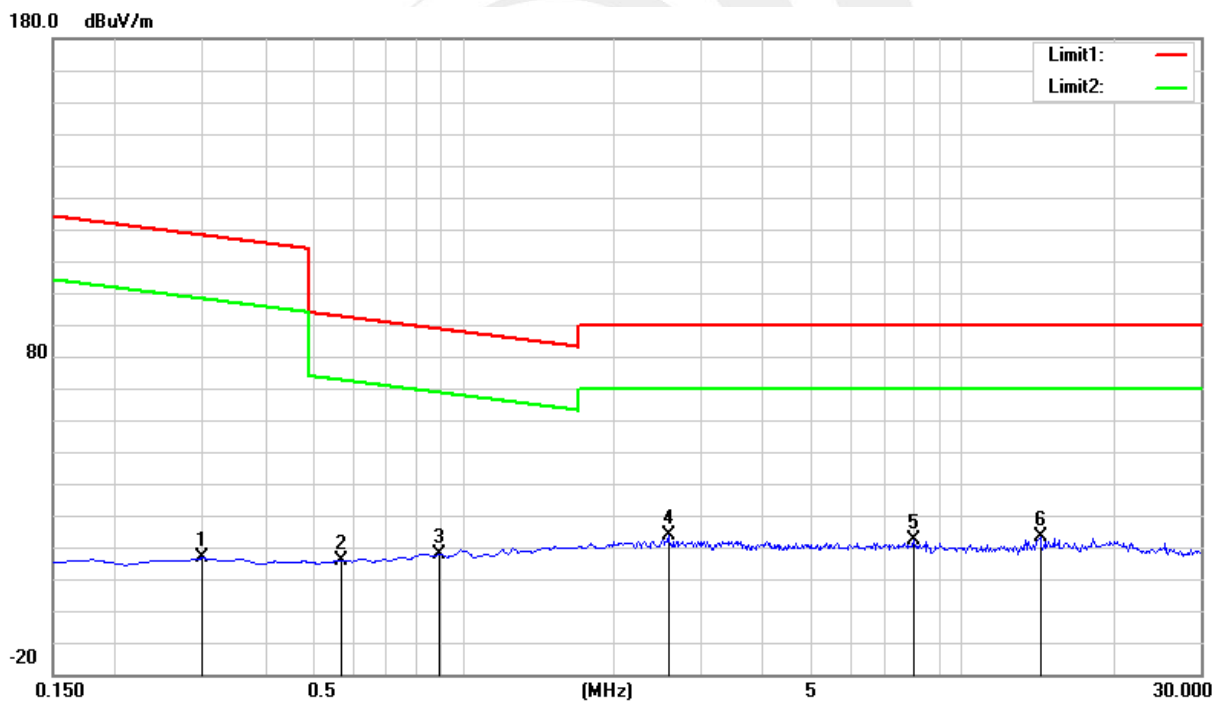
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Test Mode:	CH 3 (150KHz – 30MHz)
Test distance:	3m		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2993	-3.54	20.12	16.58	118.08	-101.50	peak
2	0.5680	-4.39	20.23	15.84	92.52	-76.68	peak
3	0.8962	-2.48	20.24	17.76	88.56	-70.80	peak
4	2.5678	3.56	20.23	23.79	89.54	-65.75	peak
5	8.0006	1.95	20.32	22.27	89.54	-67.27	peak
6	14.3287	1.91	21.15	23.06	89.54	-66.48	peak

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor (cable loss)} - \text{Amplifier gain}$



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

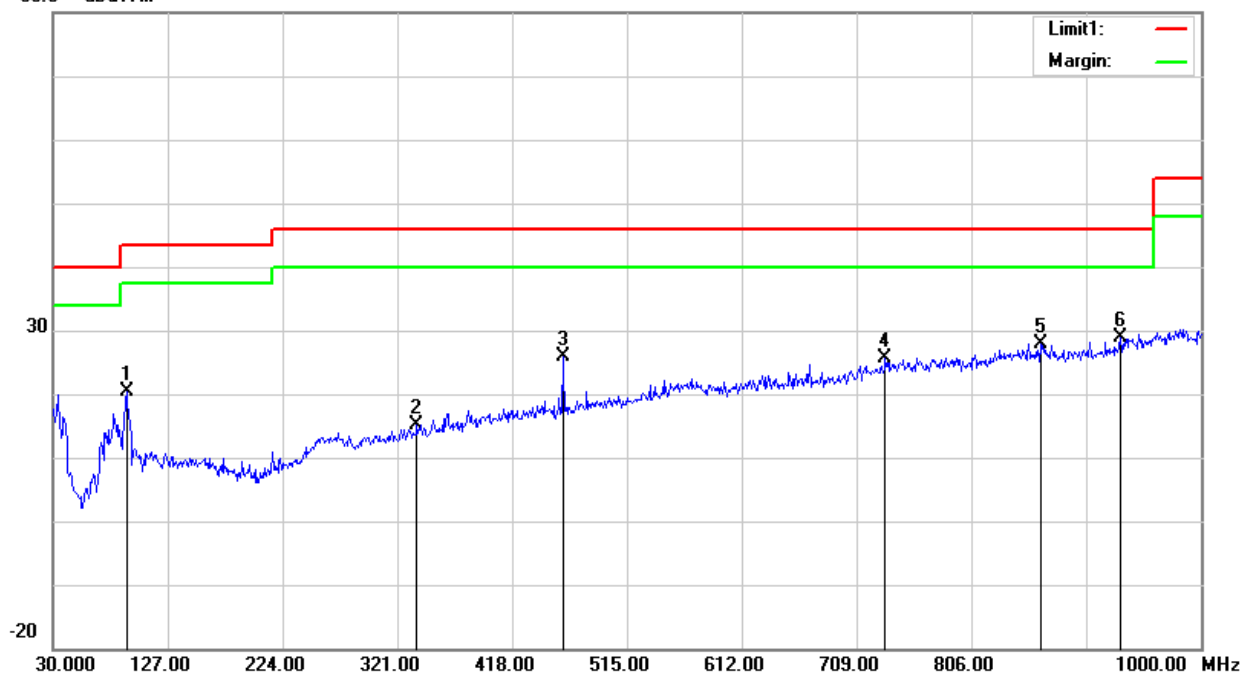
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	92.0800	41.57	-21.20	20.37	43.50	-23.13	peak
2	337.4900	28.59	-13.49	15.10	46.00	-30.90	peak
3	460.6800	35.32	-9.43	25.89	46.00	-20.11	peak
4	733.2500	28.03	-2.35	25.68	46.00	-20.32	peak
5	864.2000	28.41	-0.46	27.95	46.00	-18.05	peak
6	932.1000	28.23	0.72	28.95	46.00	-17.05	peak

Remark:

- Margin = Result (Result = Reading + Factor) – Limit
- Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m



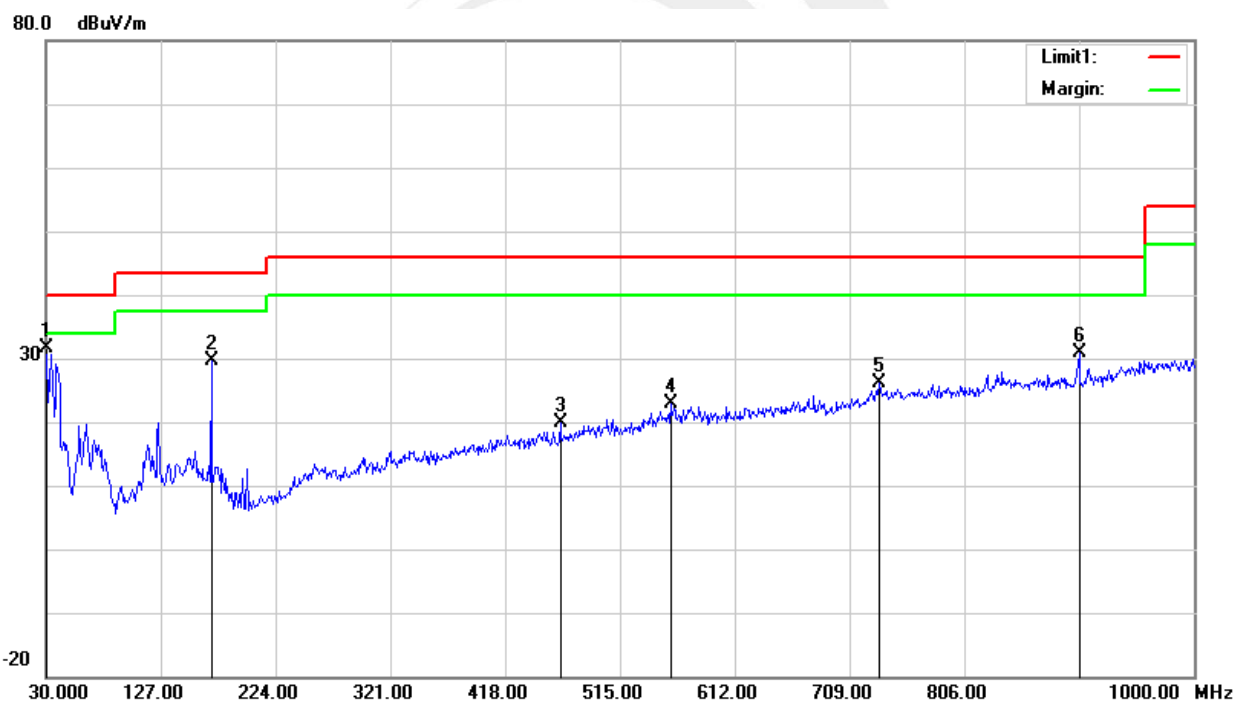


Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	44.38	-12.85	31.53	40.00	-8.47	peak
2	169.6800	49.39	-19.76	29.63	43.50	-13.87	peak
3	464.5600	29.01	-9.25	19.76	46.00	-26.24	peak
4	557.6800	28.33	-5.55	22.78	46.00	-23.22	peak
5	734.2200	28.41	-2.31	26.10	46.00	-19.90	peak
6	903.0000	31.14	-0.37	30.77	46.00	-15.23	peak

Remark:

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2	Test distance:	3m

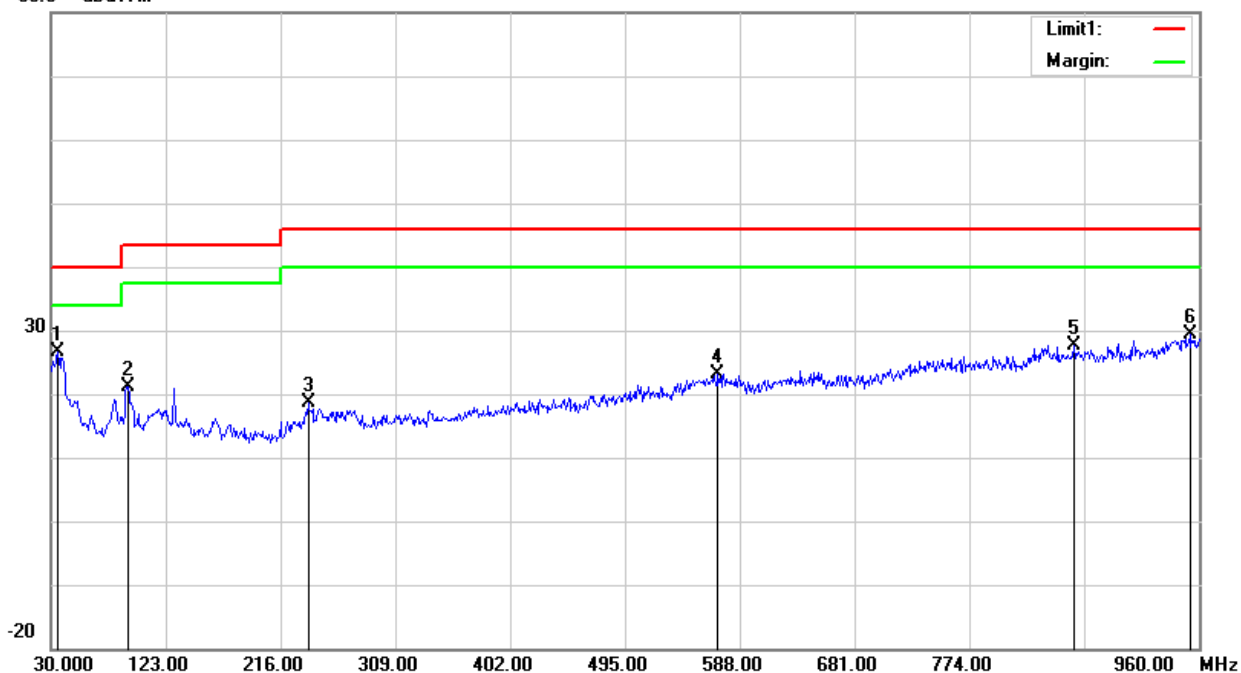
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	35.5800	42.52	-15.77	26.75	40.00	-13.25	peak
2	92.3100	42.22	-21.17	21.05	43.50	-22.45	peak
3	238.3200	36.77	-18.25	18.52	46.00	-27.48	peak
4	570.3300	28.85	-5.61	23.24	46.00	-22.76	peak
5	858.6300	28.12	-0.47	27.65	46.00	-18.35	peak
6	952.5600	27.77	1.63	29.40	46.00	-16.60	peak

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2	Test distance:	3m

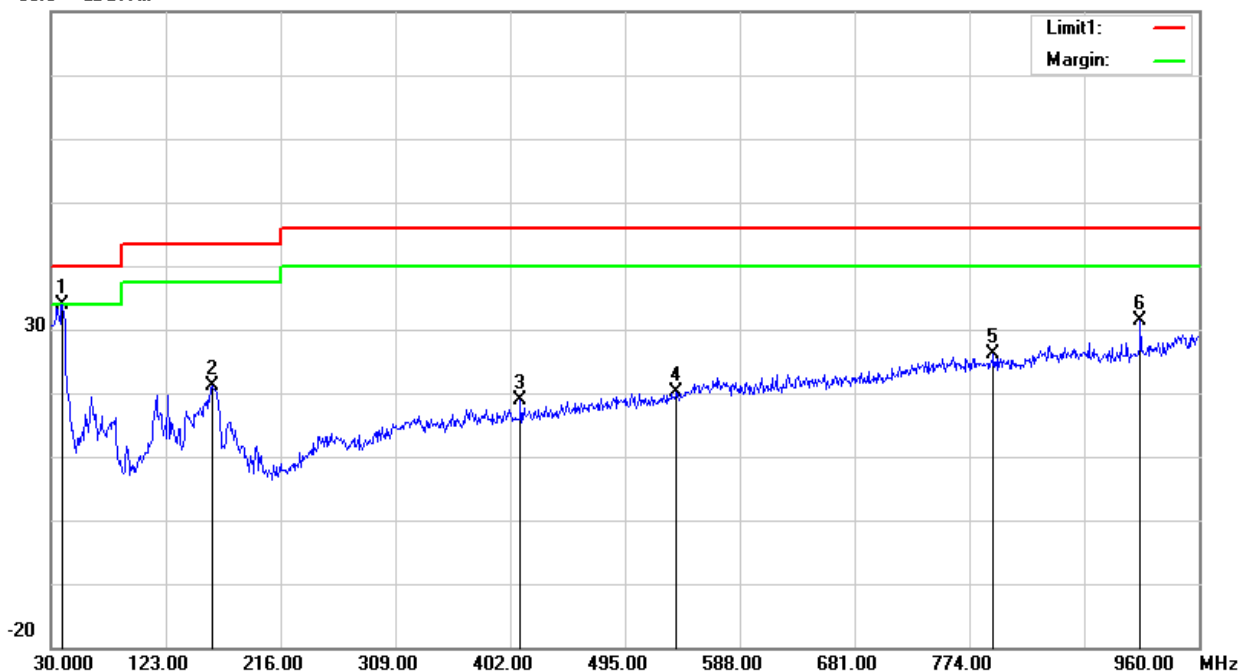
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	39.3000	51.50	-17.67	33.83	40.00	-6.17	peak
2	161.1300	40.12	-18.93	21.19	43.50	-22.31	peak
3	410.3700	29.37	-10.55	18.82	46.00	-27.18	peak
4	536.8500	27.21	-7.05	20.16	46.00	-25.84	peak
5	793.5300	28.09	-1.99	26.10	46.00	-19.90	peak
6	912.5700	31.63	-0.14	31.49	46.00	-14.51	peak

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3	Test distance:	3m

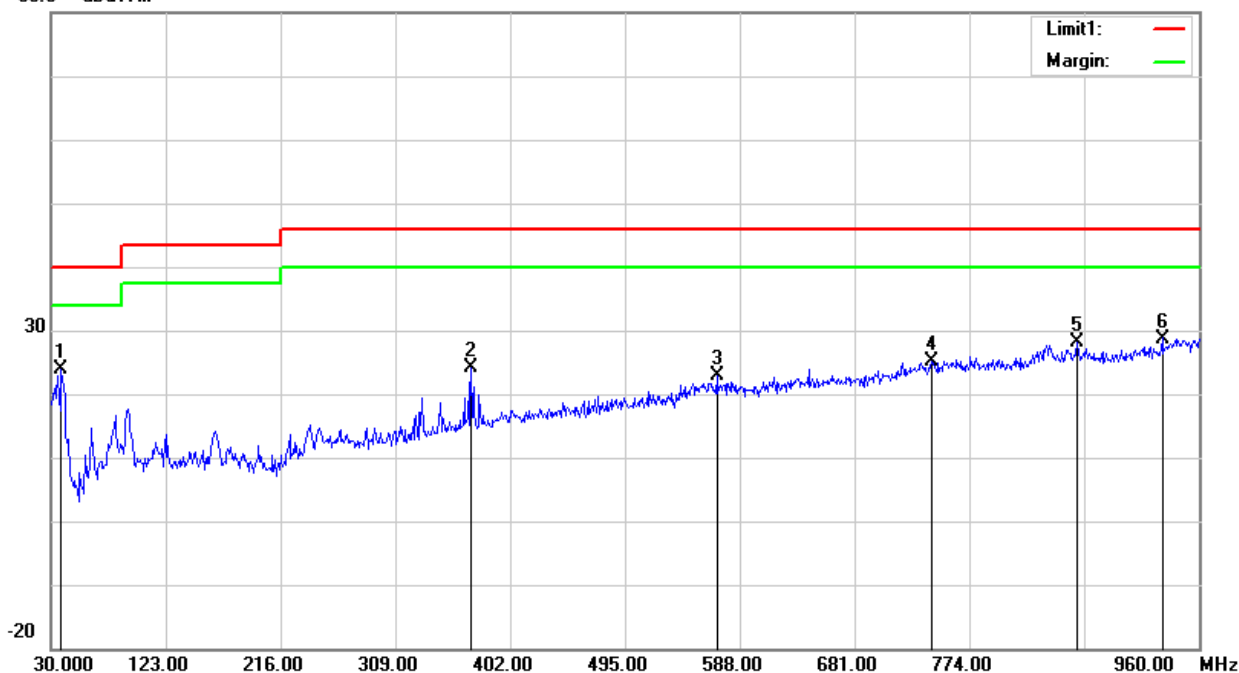
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	38.3700	40.96	-17.16	23.80	40.00	-16.20	peak
2	370.3800	36.65	-12.49	24.16	46.00	-21.84	peak
3	569.4000	28.36	-5.59	22.77	46.00	-23.23	peak
4	743.3100	27.19	-2.12	25.07	46.00	-20.93	peak
5	861.4200	28.62	-0.43	28.19	46.00	-17.81	peak
6	930.2400	28.18	0.57	28.75	46.00	-17.25	peak

Remark:

5. Margin = Result (Result =Reading + Factor)-Limit

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3	Test distance:	3m

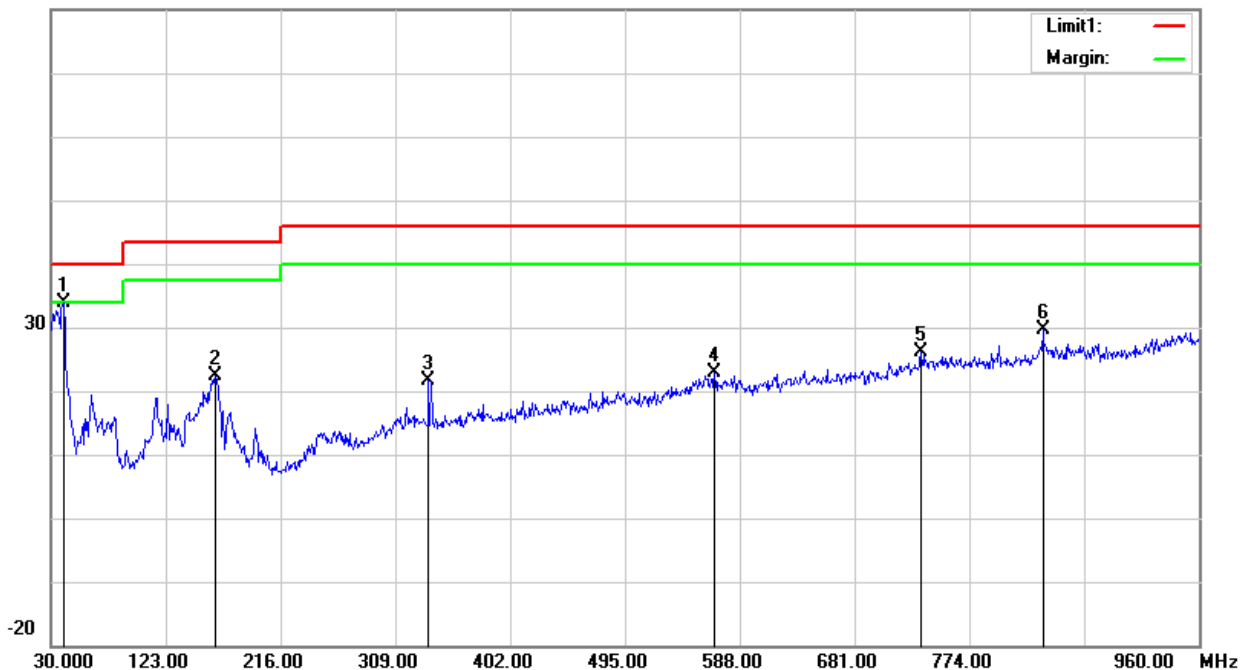
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	40.2300	52.02	-18.16	33.86	40.00	-6.14	peak
2	162.9900	41.56	-19.13	22.43	43.50	-21.07	peak
3	335.9700	35.15	-13.53	21.62	46.00	-24.38	peak
4	567.5400	28.43	-5.58	22.85	46.00	-23.15	peak
5	734.9400	28.43	-2.29	26.14	46.00	-19.86	peak
6	833.5200	30.36	-0.61	29.75	46.00	-16.25	peak

Remark:

5. Margin = Result (Result =Reading + Factor)-Limit

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Above 960MHz Radiation Spurious

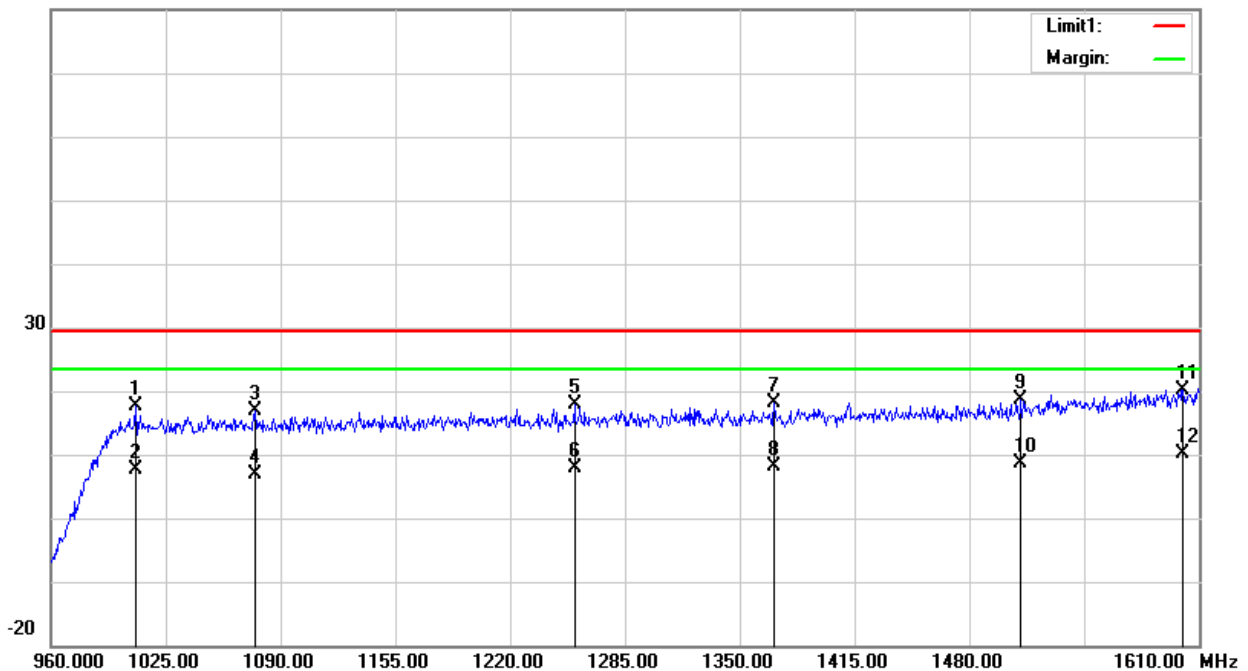
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1008.100	19.13	-1.57	17.56	29.44	-11.88	peak
2	1008.100	9.14	-1.57	7.57	29.44	-21.87	RMS
3	1075.700	18.04	-1.22	16.82	29.44	-12.62	peak
4	1075.700	8.05	-1.22	6.83	29.44	-22.61	RMS
5	1256.400	18.33	-0.46	17.87	29.44	-11.57	peak
6	1256.400	8.35	-0.46	7.89	29.44	-21.55	RMS
7	1369.500	18.03	0.15	18.18	29.44	-11.26	peak
8	1369.500	8.04	0.15	8.19	29.44	-21.25	RMS
9	1509.250	16.95	1.70	18.65	29.44	-10.79	peak
10	1509.250	6.96	1.70	8.66	29.44	-20.78	RMS
11	1600.900	16.00	4.24	20.24	29.44	-9.20	peak
12	1600.900	6.01	4.24	10.25	29.44	-19.19	RMS

Remark:

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





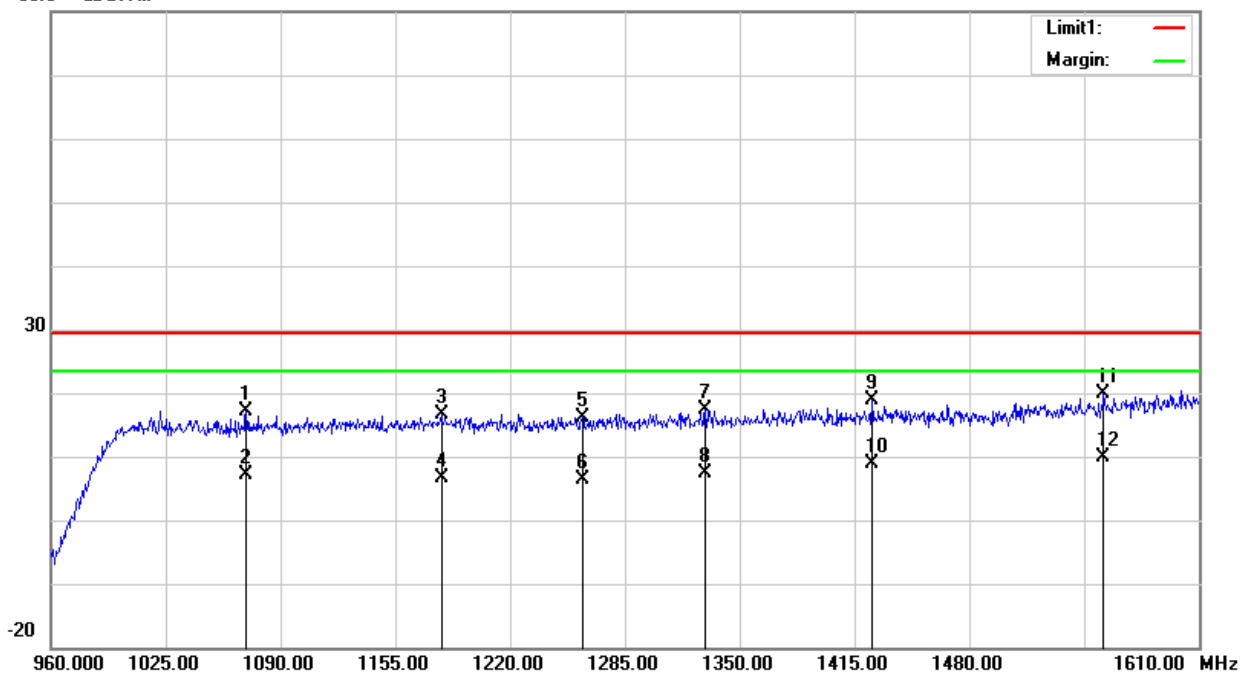
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1(960MHz -1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1070.500	18.41	-1.25	17.16	29.44	-12.28	peak
2	1070.500	8.42	-1.25	7.17	29.44	-22.27	RMS
3	1181.000	17.33	-0.61	16.72	29.44	-12.72	peak
4	1181.000	7.34	-0.61	6.73	29.44	-22.71	RMS
5	1260.950	16.68	-0.43	16.25	29.44	-13.19	peak
6	1260.950	6.69	-0.43	6.26	29.44	-23.18	RMS
7	1330.500	17.50	-0.01	17.49	29.44	-11.95	peak
8	1330.500	7.51	-0.01	7.50	29.44	-21.94	RMS
9	1424.750	18.20	0.58	18.78	29.44	-10.66	peak
10	1424.750	8.21	0.58	8.79	29.44	-20.65	RMS
11	1556.050	17.06	2.86	19.92	29.44	-9.52	peak
12	1556.050	7.07	2.86	9.93	29.44	-19.51	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





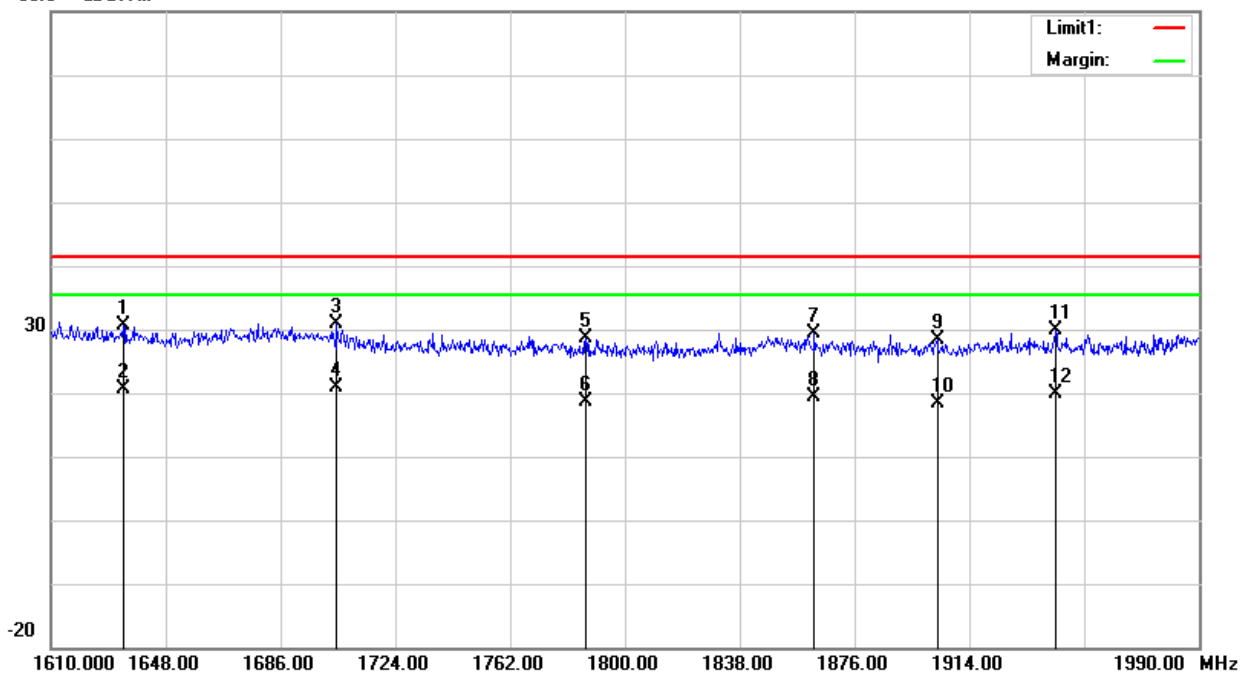
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1633.940	26.47	4.24	30.71	41.44	-10.73	peak
2	1633.940	16.48	4.24	20.72	41.44	-20.72	RMS
3	1704.620	25.78	5.07	30.85	41.44	-10.59	peak
4	1704.620	15.79	5.07	20.86	41.44	-20.58	RMS
5	1787.080	26.32	2.26	28.58	41.44	-12.86	peak
6	1787.080	16.33	2.26	18.59	41.44	-22.85	RMS
7	1862.700	27.30	2.13	29.43	41.44	-12.01	peak
8	1862.700	17.31	2.13	19.44	41.44	-22.00	RMS
9	1903.360	26.94	1.47	28.41	41.44	-13.03	peak
10	1903.360	16.95	1.47	18.42	41.44	-23.02	RMS
11	1942.500	28.40	1.51	29.91	41.44	-11.53	peak
12	1942.500	18.41	1.51	19.92	41.44	-21.52	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





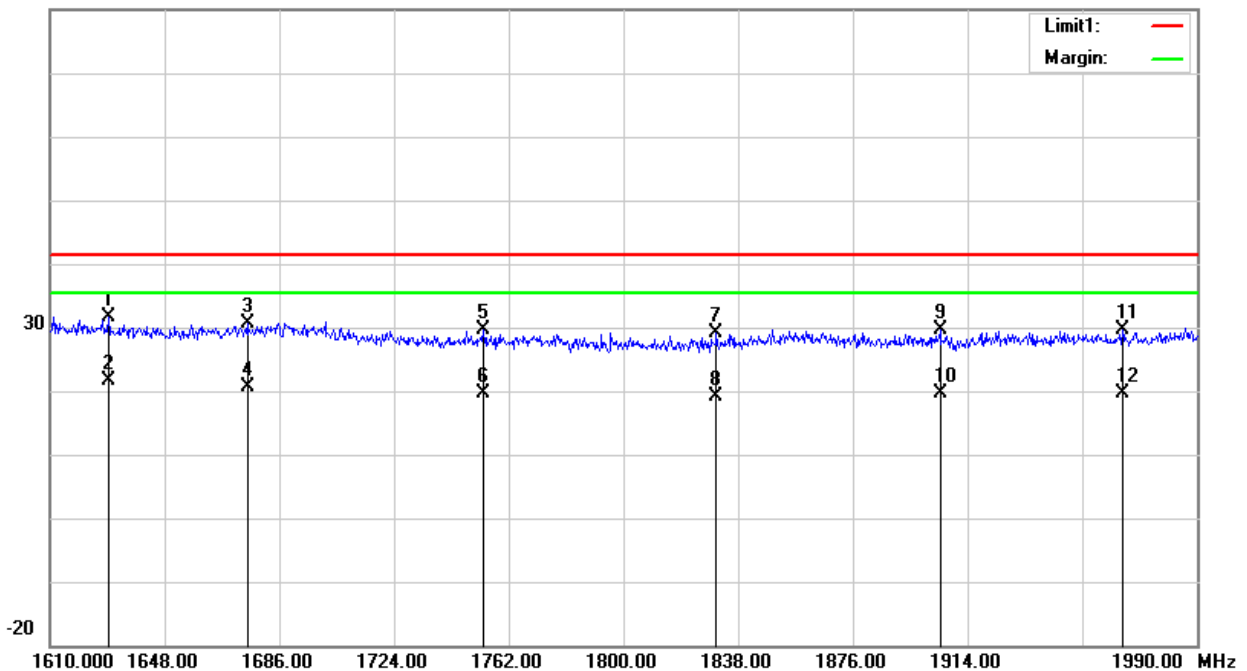
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1(1610MHz – 1990MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1629.380	27.28	4.23	31.51	41.44	-9.93	peak
2	1629.380	17.29	4.23	21.52	41.44	-19.92	RMS
3	1675.360	25.95	4.74	30.69	41.44	-10.75	peak
4	1675.360	15.96	4.74	20.70	41.44	-20.74	RMS
5	1753.640	26.18	3.53	29.71	41.44	-11.73	peak
6	1753.640	16.19	3.53	19.72	41.44	-21.72	RMS
7	1830.780	27.08	2.13	29.21	41.44	-12.23	peak
8	1830.780	17.09	2.13	19.22	41.44	-22.22	RMS
9	1904.880	28.20	1.46	29.66	41.44	-11.78	peak
10	1904.880	18.21	1.46	19.67	41.44	-21.77	RMS
11	1965.300	27.98	1.67	29.65	41.44	-11.79	peak
12	1965.300	17.99	1.67	19.66	41.44	-21.78	RMS

Remark:

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





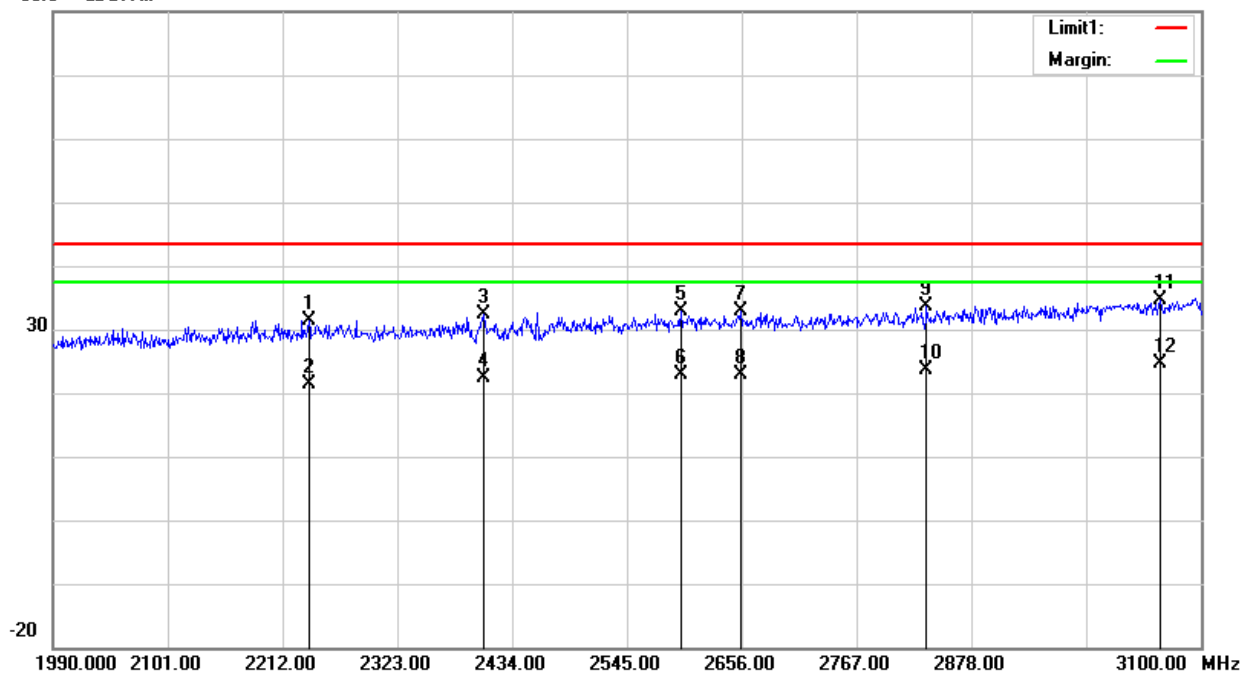
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2237.530	27.87	3.56	31.43	43.44	-12.01	peak
2	2237.530	17.88	3.56	21.44	43.44	-22.00	RMS
3	2406.250	28.00	4.49	32.49	43.44	-10.95	peak
4	2406.250	18.01	4.49	22.50	43.44	-20.94	RMS
5	2597.170	27.75	5.03	32.78	43.44	-10.66	peak
6	2597.170	17.76	5.03	22.79	43.44	-20.65	RMS
7	2654.890	27.41	5.56	32.97	43.44	-10.47	peak
8	2654.890	17.42	5.56	22.98	43.44	-20.46	RMS
9	2834.710	27.17	6.46	33.63	43.44	-9.81	peak
10	2834.710	17.18	6.46	23.64	43.44	-19.80	RMS
11	3061.150	6.44	28.24	34.68	43.44	-8.76	peak
12	3061.150	-3.55	28.24	24.69	43.44	-18.75	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





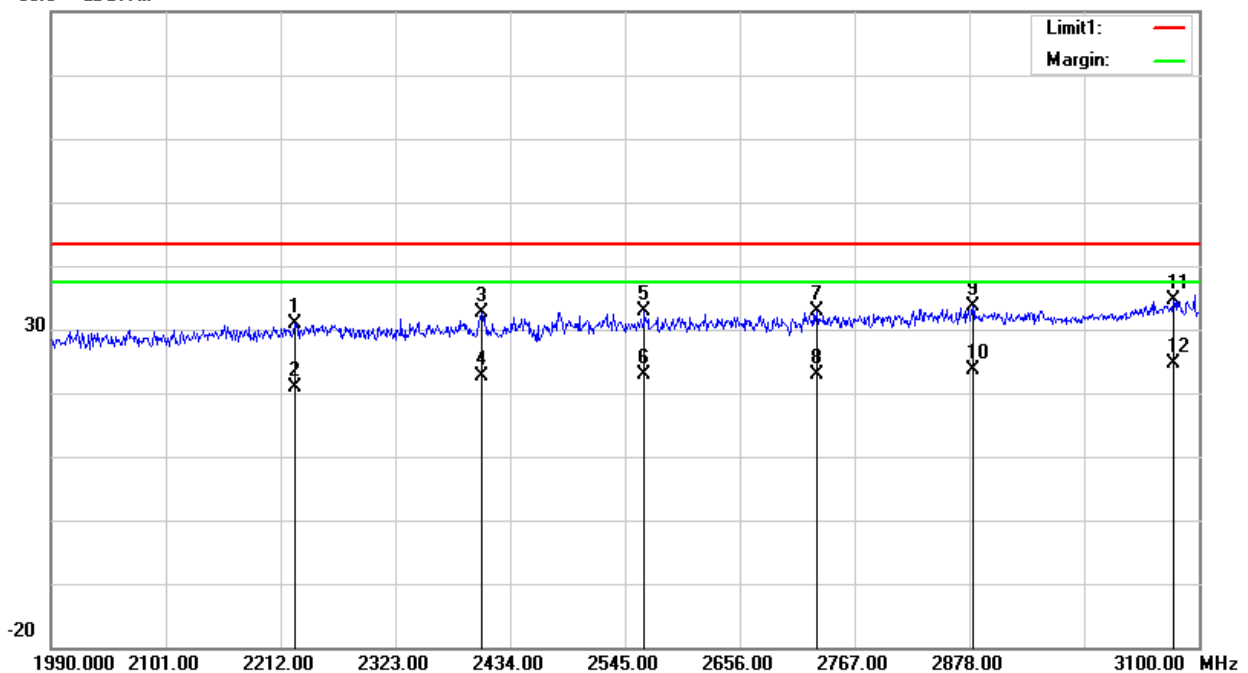
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1(1990MHz – 3100MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2225.320	27.52	3.36	30.88	43.44	-12.56	peak
2	2225.320	17.53	3.36	20.89	43.44	-22.55	RMS
3	2406.250	28.17	4.49	32.66	43.44	-10.78	peak
4	2406.250	18.18	4.49	22.67	43.44	-20.77	RMS
5	2563.870	27.82	5.00	32.82	43.44	-10.62	peak
6	2563.870	17.83	5.00	22.83	43.44	-20.61	RMS
7	2730.370	27.00	5.89	32.89	43.44	-10.55	peak
8	2730.370	17.01	5.89	22.90	43.44	-20.54	RMS
9	2881.330	26.93	6.66	33.59	43.44	-9.85	peak
10	2881.330	16.94	6.66	23.60	43.44	-19.84	RMS
11	3075.580	27.49	7.12	34.61	43.44	-8.83	peak
12	3075.580	17.50	7.12	24.62	43.44	-18.82	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





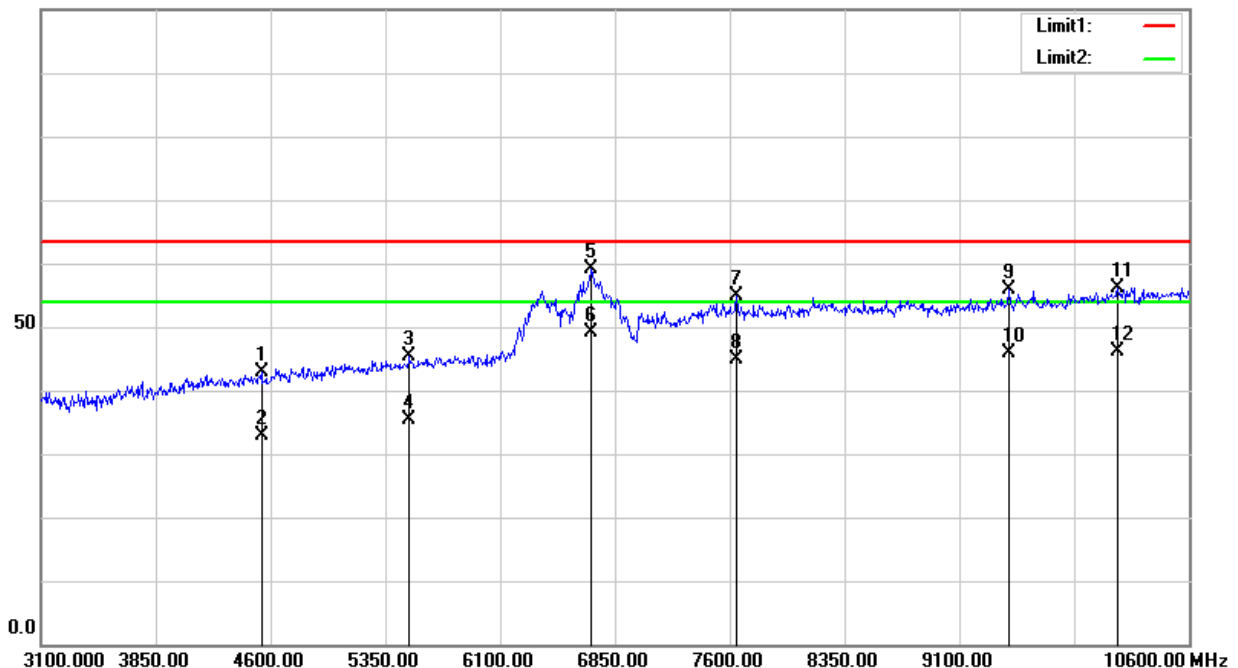
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4540.000	50.78	-7.92	42.86	63.44	-20.58	peak
2	4540.000	40.79	-7.92	32.87	63.44	-30.57	RMS
3	5507.500	50.31	-5.00	45.31	63.44	-18.13	peak
4	5507.500	40.32	-5.00	35.32	63.44	-28.12	RMS
5	6692.500	60.28	-1.08	59.20	63.44	-4.24	peak
6	6692.500	50.29	-1.08	49.21	63.44	-14.23	RMS
7	7645.000	53.13	1.79	54.92	63.44	-8.52	peak
8	7645.000	43.14	1.79	44.93	63.44	-18.51	RMS
9	9422.500	52.84	3.04	55.88	63.44	-7.56	peak
10	9422.500	42.85	3.04	45.89	63.44	-17.55	RMS
11	10135.000	52.43	3.80	56.23	63.44	-7.21	peak
12	10135.000	42.44	3.80	46.24	63.44	-17.20	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

100.0 dBuV/m





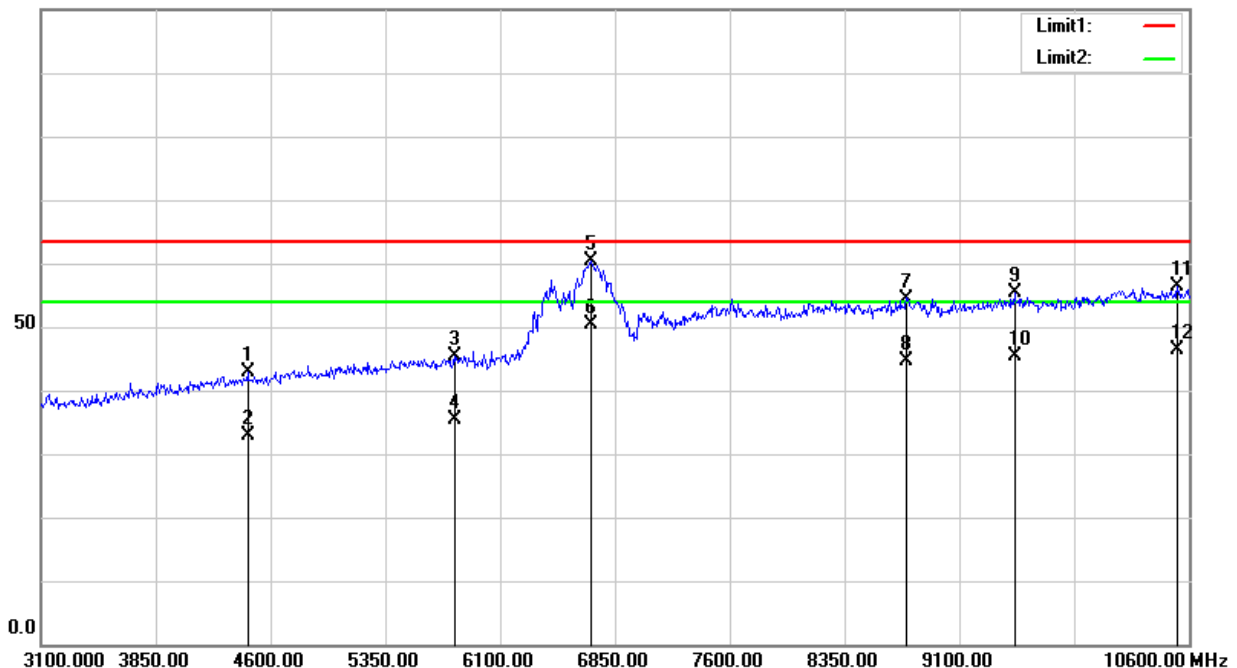
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1 (3100MHz – 10600MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4450.000	50.80	-8.00	42.80	63.44	-20.64	peak
2	4450.000	40.81	-8.00	32.81	63.44	-30.63	RMS
3	5800.000	49.66	-4.32	45.34	63.44	-18.10	peak
4	5800.000	39.67	-4.32	35.35	63.44	-28.09	RMS
5	6692.500	61.40	-1.08	60.32	63.44	-3.12	peak
6	6692.500	51.41	-1.08	50.33	63.44	-13.11	RMS
7	8755.000	51.91	2.59	54.50	63.44	-8.94	peak
8	8755.000	41.92	2.59	44.51	63.44	-18.93	RMS
9	9460.000	52.22	3.08	55.30	63.44	-8.14	peak
10	9460.000	42.23	3.08	45.31	63.44	-18.13	RMS
11	10525.000	51.44	5.04	56.48	63.44	-6.96	peak
12	10525.000	41.45	5.04	46.49	63.44	-16.95	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

100.0 dBuV/m





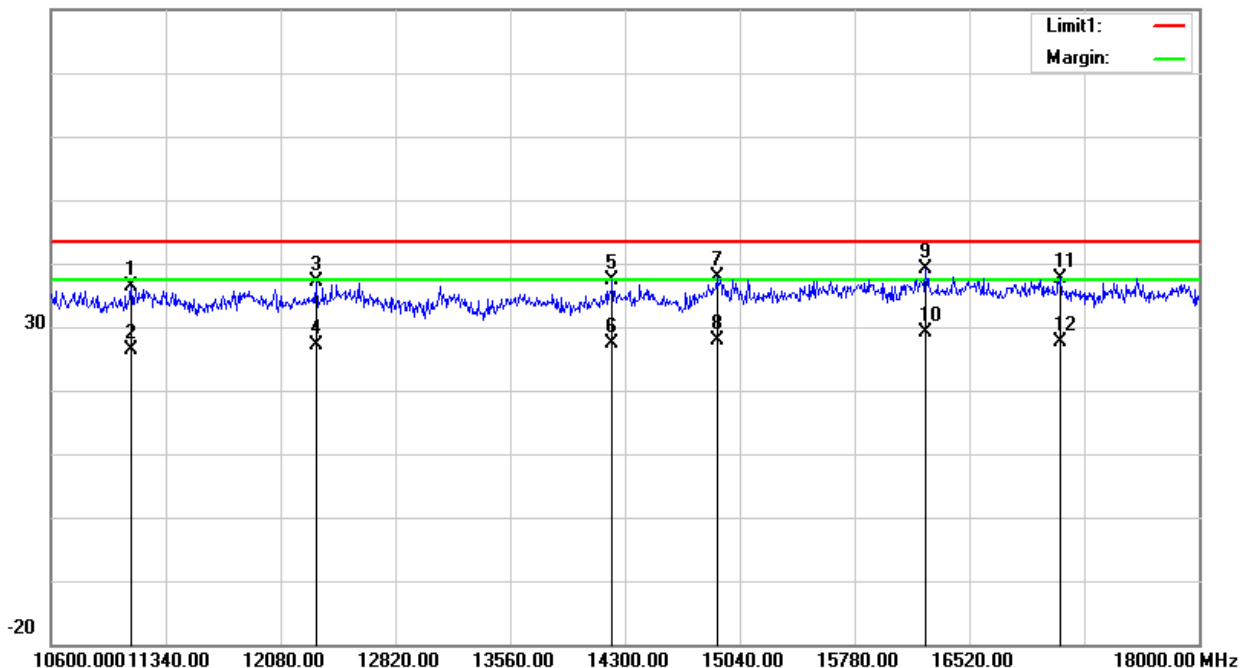
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11118.000	30.25	6.02	36.27	43.44	-7.17	peak
2	11118.000	20.26	6.02	26.28	43.44	-17.16	RMS
3	12309.400	31.78	5.45	37.23	43.44	-6.21	peak
4	12309.400	21.79	5.45	27.24	43.44	-16.20	RMS
5	14218.600	25.80	11.56	37.36	43.44	-6.08	peak
6	14218.600	15.81	11.56	27.37	43.44	-16.07	RMS
7	14892.000	28.91	8.95	37.86	43.44	-5.58	peak
8	14892.000	18.92	8.95	27.87	43.44	-15.57	RMS
9	16238.800	29.71	9.42	39.13	43.44	-4.31	peak
10	16238.800	19.72	9.42	29.14	43.44	-14.30	RMS
11	17104.600	26.20	11.51	37.71	43.44	-5.73	peak
12	17104.600	16.21	11.51	27.72	43.44	-15.72	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





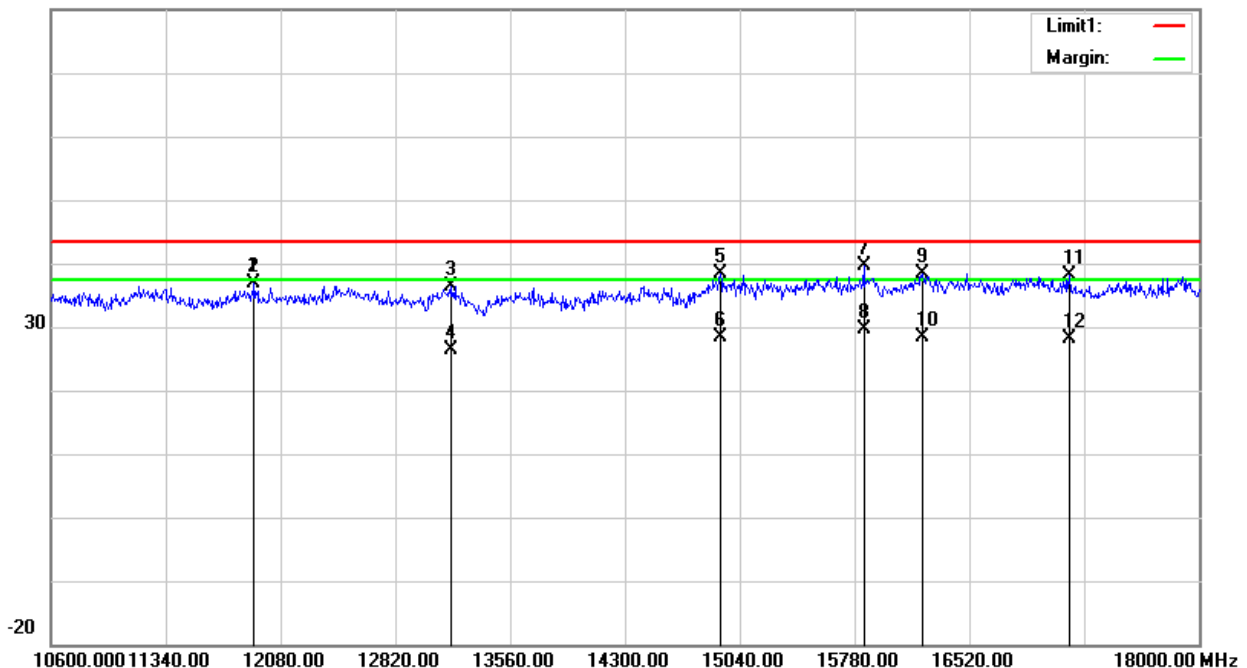
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1 (10600MHz – 18000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11909.800	30.82	6.00	36.82	43.44	-6.62	peak
2	11909.800	30.83	6.00	36.83	43.44	-6.61	RMS
3	13182.600	31.04	5.42	36.46	43.44	-6.98	peak
4	13182.600	21.05	5.42	26.47	43.44	-16.97	RMS
5	14914.200	26.85	11.51	38.36	43.44	-5.08	peak
6	14914.200	16.86	11.51	28.37	43.44	-15.07	RMS
7	15839.200	30.79	8.88	39.67	43.44	-3.77	peak
8	15839.200	20.80	8.88	29.68	43.44	-13.76	RMS
9	16216.600	29.07	9.34	38.41	43.44	-5.03	peak
10	16216.600	19.08	9.34	28.42	43.44	-15.02	RMS
11	17163.800	26.71	11.49	38.20	43.44	-5.24	peak
12	17163.800	16.72	11.49	28.21	43.44	-15.23	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





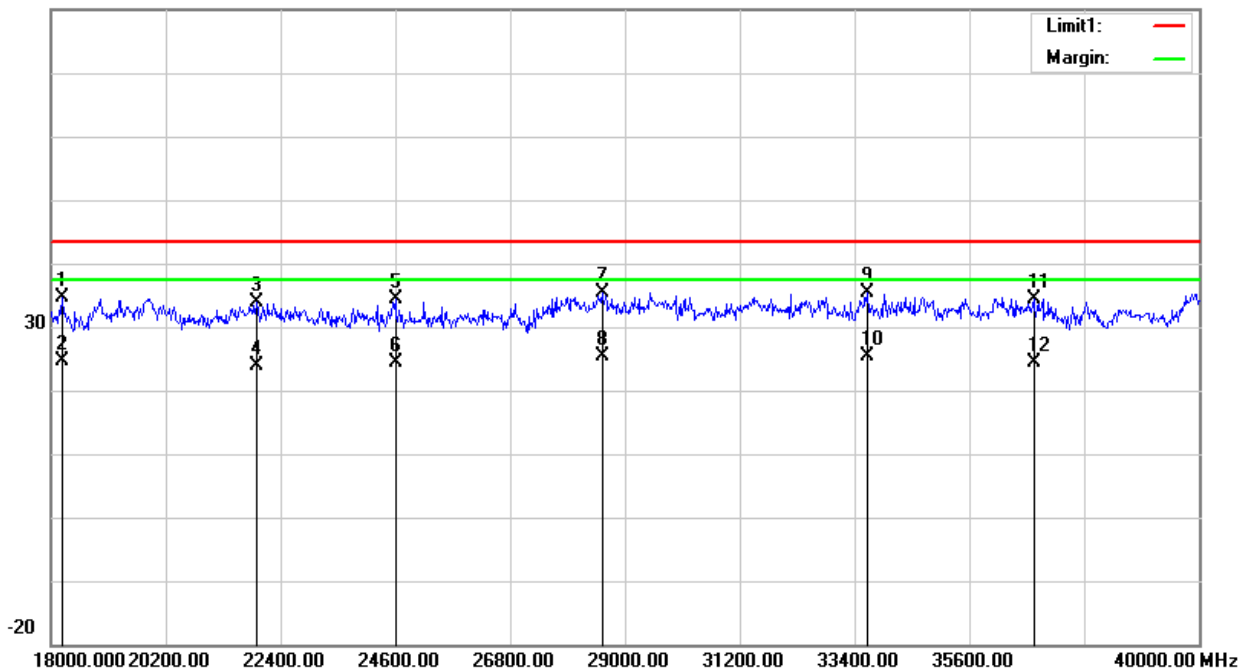
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18220.000	33.06	1.47	34.53	43.44	-8.91	peak
2	18220.000	23.07	1.47	24.54	43.44	-18.90	RMS
3	21938.000	31.69	2.22	33.91	43.44	-9.53	peak
4	21938.000	21.70	2.22	23.92	43.44	-19.52	RMS
5	24600.000	31.56	2.73	34.29	43.44	-9.15	peak
6	24600.000	21.57	2.73	24.30	43.44	-19.14	RMS
7	28560.000	32.67	2.63	35.30	43.44	-8.14	peak
8	28560.000	22.68	2.63	25.31	43.44	-18.13	RMS
9	33642.000	32.32	3.06	35.38	43.44	-8.06	peak
10	33642.000	22.33	3.06	25.39	43.44	-18.05	RMS
11	36832.000	32.20	2.28	34.48	43.44	-8.96	peak
12	36832.000	22.21	2.28	24.49	43.44	-18.95	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





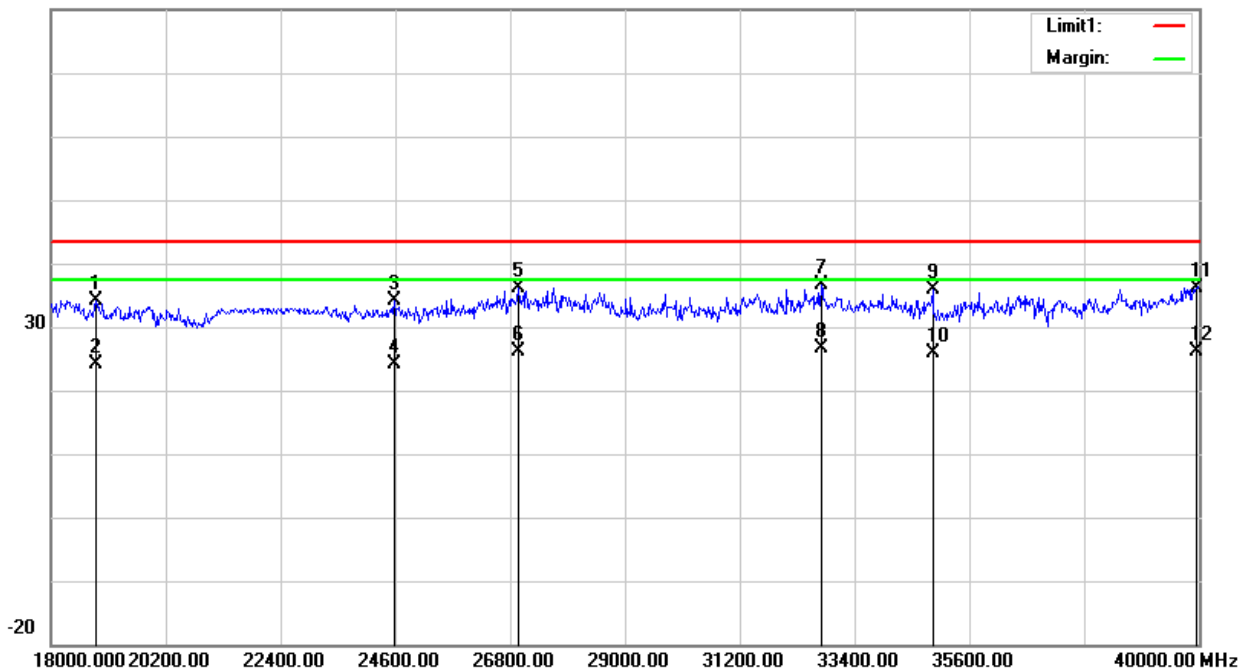
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1 (18000MHz – 40000MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18858.000	32.73	1.46	34.19	43.44	-9.25	peak
2	18858.000	22.74	1.46	24.20	43.44	-19.24	RMS
3	24578.000	31.88	2.28	34.16	43.44	-9.28	peak
4	24578.000	21.89	2.28	24.17	43.44	-19.27	RMS
5	26954.000	33.34	2.72	36.06	43.44	-7.38	peak
6	26954.000	23.35	2.72	26.07	43.44	-17.37	RMS
7	32762.000	34.03	2.59	36.62	43.44	-6.82	peak
8	32762.000	24.04	2.59	26.63	43.44	-16.81	RMS
9	34896.000	32.78	3.04	35.82	43.44	-7.62	peak
10	34896.000	22.79	3.04	25.83	43.44	-17.61	RMS
11	39956.000	33.83	2.36	36.19	43.44	-7.25	peak
12	39956.000	23.84	2.36	26.20	43.44	-17.24	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2(960MHz -1610MHz)	Test distance:	1m

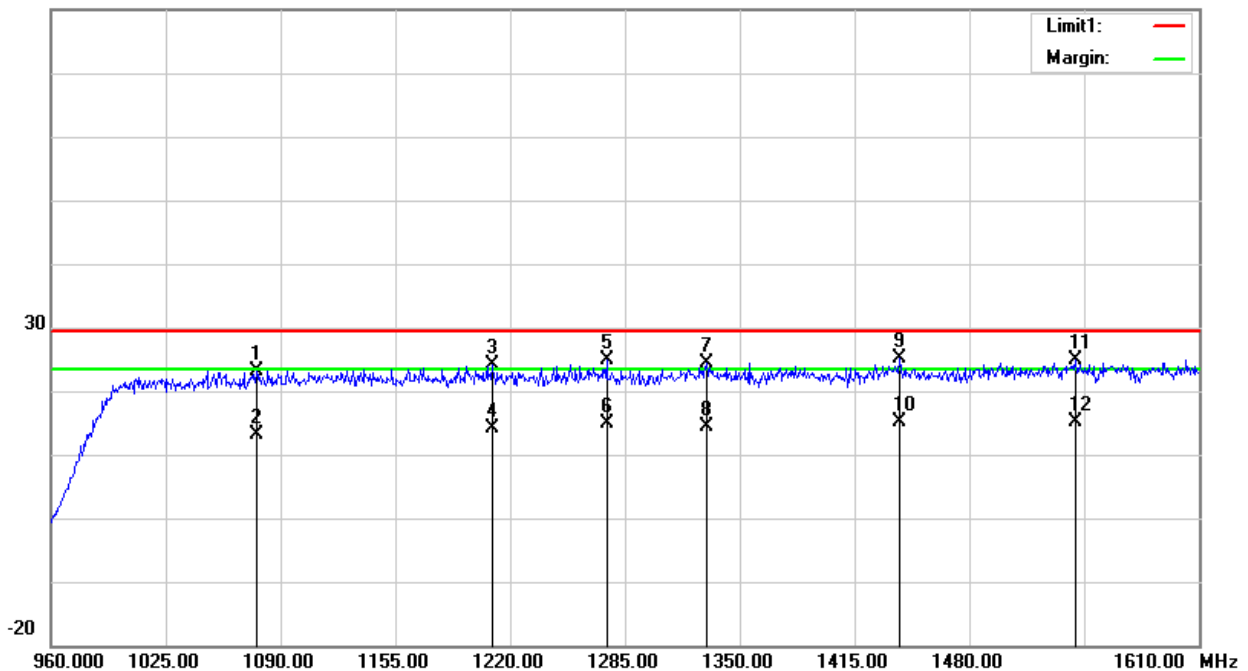
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1076.350	24.40	-1.22	23.18	29.44	-6.26	peak
2	1076.350	14.41	-1.22	13.19	29.44	-16.25	RMS
3	1209.600	24.58	-0.43	24.15	29.44	-5.29	peak
4	1209.600	14.59	-0.43	14.16	29.44	-15.28	RMS
5	1274.600	25.10	-0.33	24.77	29.44	-4.67	peak
6	1274.600	15.11	-0.33	14.78	29.44	-14.66	RMS
7	1331.150	24.41	-0.01	24.40	29.44	-5.04	peak
8	1331.150	14.42	-0.01	14.41	29.44	-15.03	RMS
9	1440.350	24.38	0.77	25.15	29.44	-4.29	peak
10	1440.350	14.39	0.77	15.16	29.44	-14.28	RMS
11	1539.800	22.56	2.43	24.99	29.44	-4.45	peak
12	1539.800	12.58	2.43	15.01	29.44	-14.43	RMS

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2(960MHz -1610MHz)	Test distance:	1m

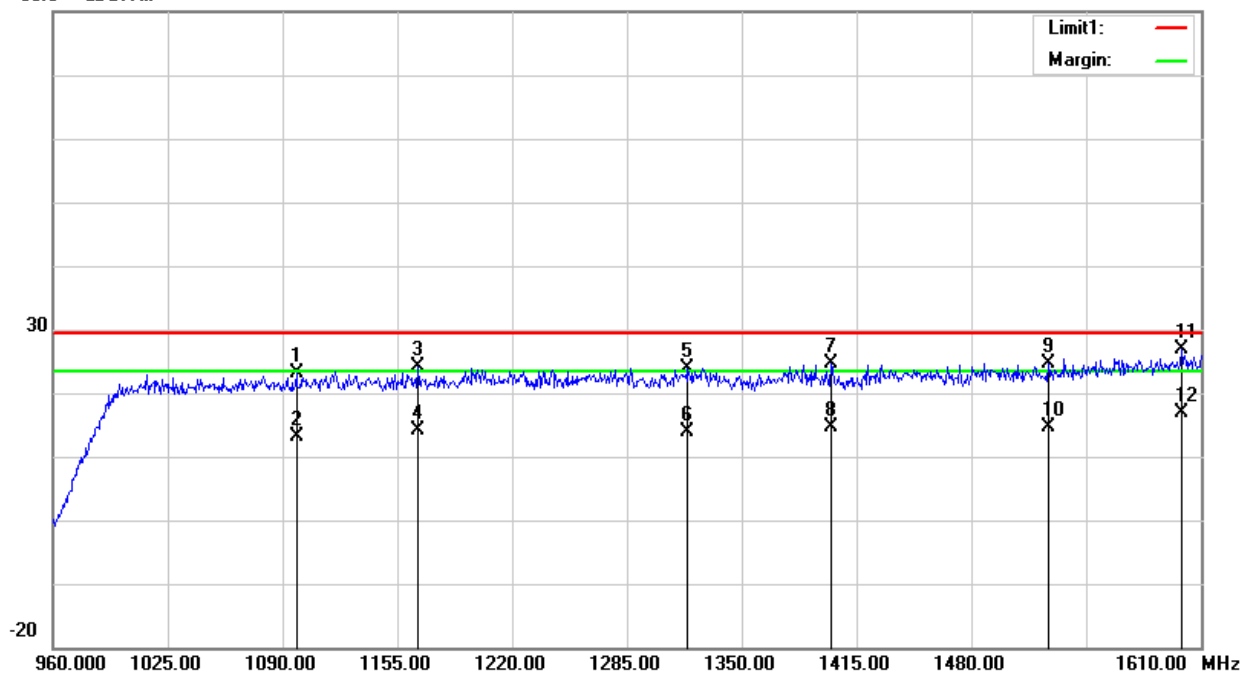
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1097.800	24.15	-1.09	23.06	29.44	-6.38	peak
2	1097.800	14.16	-1.09	13.07	29.44	-16.37	RMS
3	1166.700	24.93	-0.75	24.18	29.44	-5.26	peak
4	1166.700	14.94	-0.75	14.19	29.44	-15.25	RMS
5	1319.450	24.04	-0.06	23.98	29.44	-5.46	peak
6	1319.450	14.05	-0.06	13.99	29.44	-15.45	RMS
7	1400.700	24.36	0.28	24.64	29.44	-4.80	peak
8	1400.700	14.37	0.28	14.65	29.44	-14.79	RMS
9	1523.550	22.70	2.04	24.74	29.44	-4.70	peak
10	1523.550	12.71	2.04	14.75	29.44	-14.69	RMS
11	1598.950	22.71	4.21	26.92	29.44	-2.52	peak
12	1598.950	12.72	4.21	16.93	29.44	-12.51	RMS

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2(1610MHz – 1990MHz)	Test distance:	1m

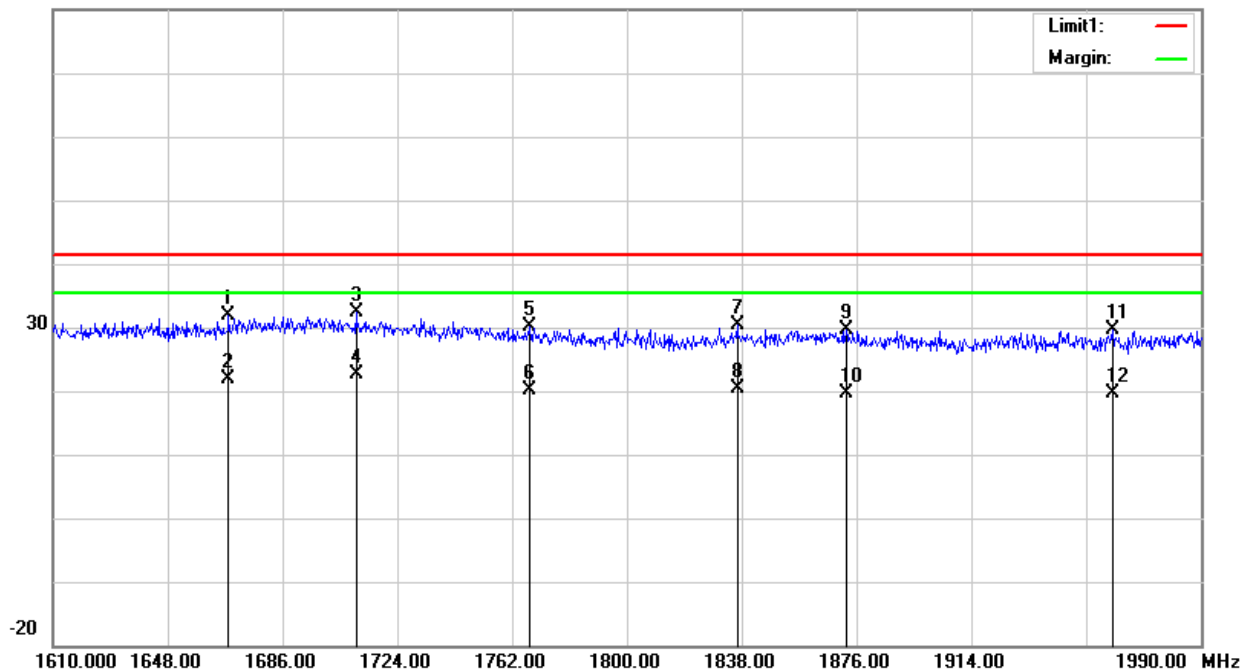
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1668.140	27.21	4.59	31.80	41.44	-9.64	peak
2	1668.140	17.22	4.59	21.81	41.44	-19.63	RMS
3	1710.320	27.60	4.90	32.50	41.44	-8.94	peak
4	1710.320	17.61	4.90	22.51	41.44	-18.93	RMS
5	1767.700	27.02	2.99	30.01	41.44	-11.43	peak
6	1767.700	17.03	2.99	20.02	41.44	-21.42	RMS
7	1836.480	28.20	2.19	30.39	41.44	-11.05	peak
8	1836.480	18.21	2.19	20.40	41.44	-21.04	RMS
9	1872.580	27.63	1.95	29.58	41.44	-11.86	peak
10	1872.580	17.64	1.95	19.59	41.44	-21.85	RMS
11	1960.740	28.01	1.63	29.64	41.44	-11.80	peak
12	1960.740	18.03	1.63	19.66	41.44	-21.78	RMS

Remark:

3. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

4. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2(1610MHz – 1990MHz)	Test distance:	1m

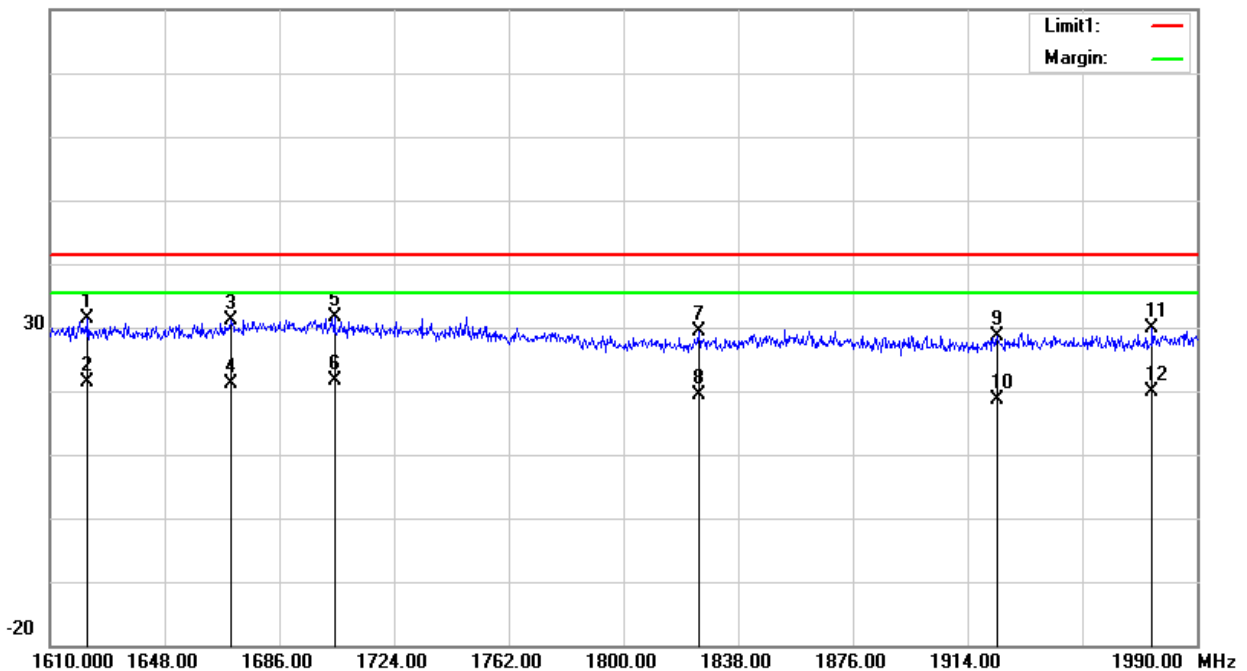
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1622.540	27.09	4.24	31.33	41.44	-10.11	peak
2	1622.540	17.10	4.24	21.34	41.44	-20.10	RMS
3	1670.040	26.57	4.63	31.20	41.44	-10.24	peak
4	1670.040	16.58	4.63	21.21	41.44	-20.23	RMS
5	1704.240	26.59	5.09	31.68	41.44	-9.76	peak
6	1704.240	16.60	5.09	21.69	41.44	-19.75	RMS
7	1825.080	27.36	2.06	29.42	41.44	-12.02	peak
8	1825.080	17.37	2.06	19.43	41.44	-22.01	RMS
9	1923.880	27.05	1.49	28.54	41.44	-12.90	peak
10	1923.880	17.06	1.49	18.55	41.44	-22.89	RMS
11	1975.180	28.03	1.77	29.80	41.44	-11.64	peak
12	1975.180	18.04	1.77	19.81	41.44	-21.63	RMS

Remark:

3. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

4. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2(1990MHz – 3100MHz)	Test distance:	1m

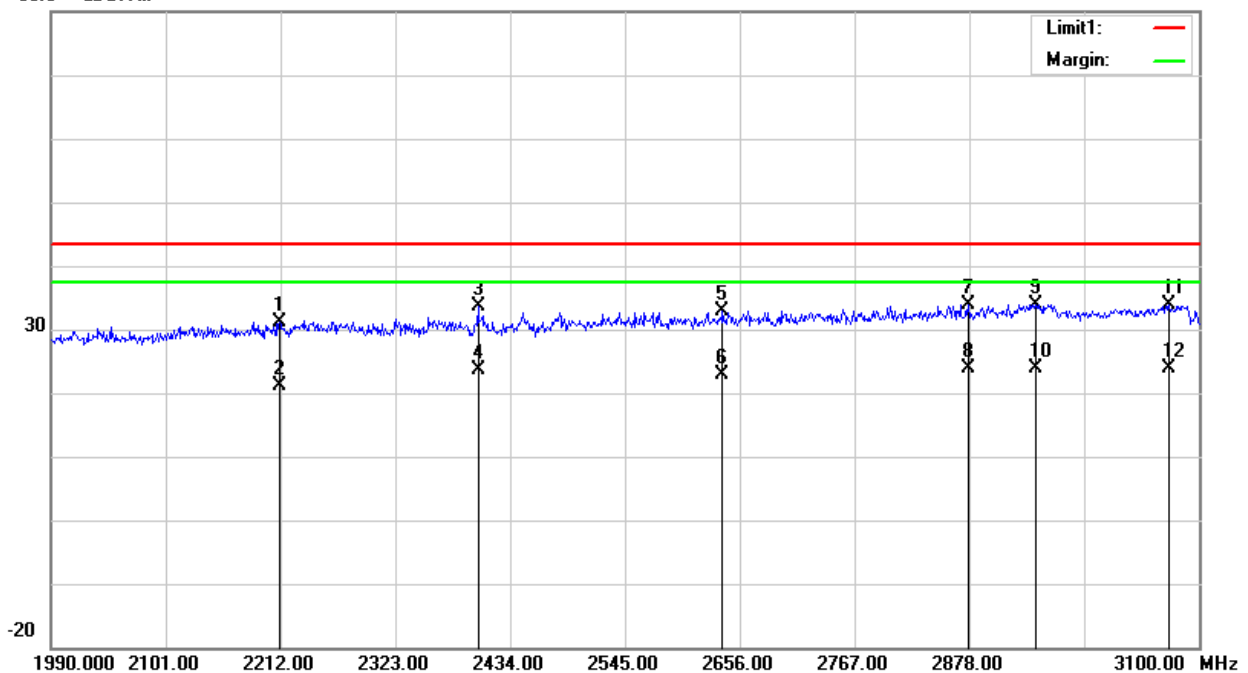
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2210.890	28.00	3.12	31.12	43.44	-12.32	peak
2	2210.890	18.01	3.12	21.13	43.44	-22.31	RMS
3	2402.920	29.22	4.49	33.71	43.44	-9.73	peak
4	2402.920	19.23	4.49	23.72	43.44	-19.72	RMS
5	2639.350	27.42	5.44	32.86	43.44	-10.58	peak
6	2639.350	17.43	5.44	22.87	43.44	-20.57	RMS
7	2876.890	27.19	6.64	33.83	43.44	-9.61	peak
8	2876.890	17.20	6.64	23.84	43.44	-19.60	RMS
9	2942.380	27.03	6.94	33.97	43.44	-9.47	peak
10	2942.380	17.04	6.94	23.98	43.44	-19.46	RMS
11	3071.140	26.88	7.08	33.96	43.44	-9.48	peak
12	3071.140	16.89	7.08	23.97	43.44	-19.47	RMS

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2(1990MHz – 3100MHz)	Test distance:	1m

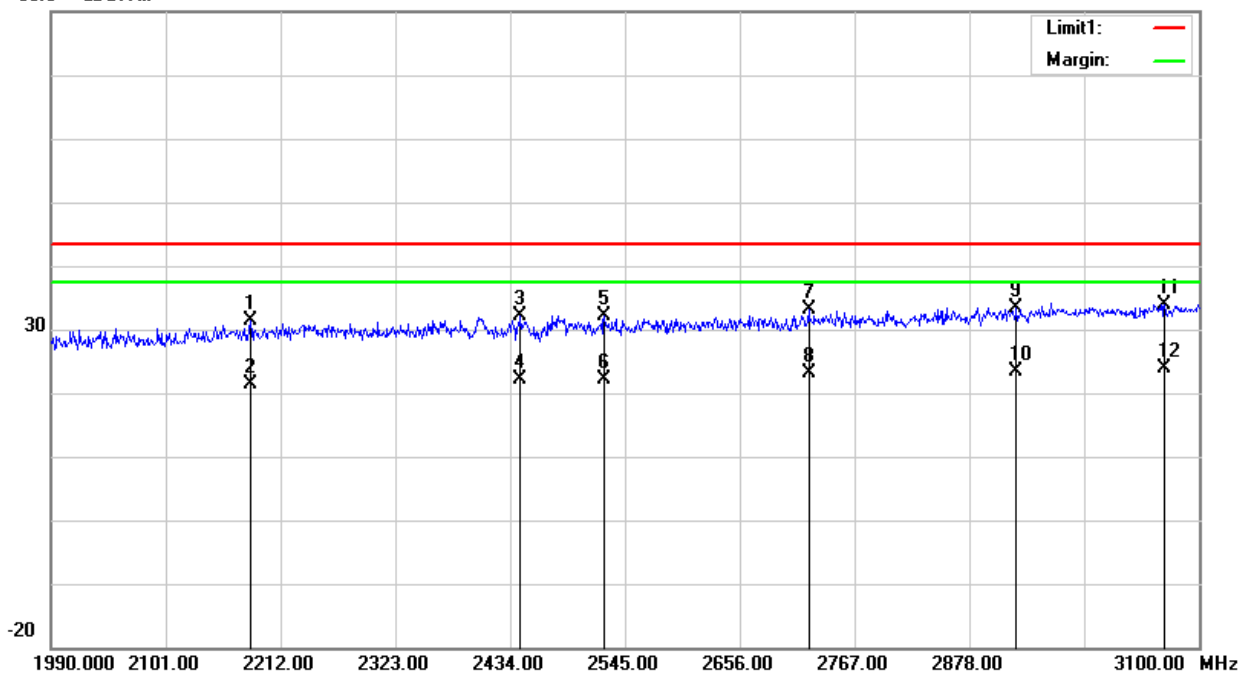
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2183.140	28.25	3.05	31.30	43.44	-12.14	peak
2	2183.140	18.26	3.05	21.31	43.44	-22.13	RMS
3	2443.990	27.58	4.52	32.10	43.44	-11.34	peak
4	2443.990	17.59	4.52	22.11	43.44	-21.33	RMS
5	2525.020	27.33	4.82	32.15	43.44	-11.29	peak
6	2525.020	17.34	4.82	22.16	43.44	-21.28	RMS
7	2722.600	27.31	5.82	33.13	43.44	-10.31	peak
8	2722.600	17.32	5.82	23.14	43.44	-20.30	RMS
9	2923.510	26.63	6.84	33.47	43.44	-9.97	peak
10	2923.510	16.64	6.84	23.48	43.44	-19.96	RMS
11	3066.700	26.91	7.05	33.96	43.44	-9.48	peak
12	3066.700	16.92	7.05	23.97	43.44	-19.47	RMS

Remark:

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

4. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2 (3100MHz – 10600MHz)	Test distance:	1m

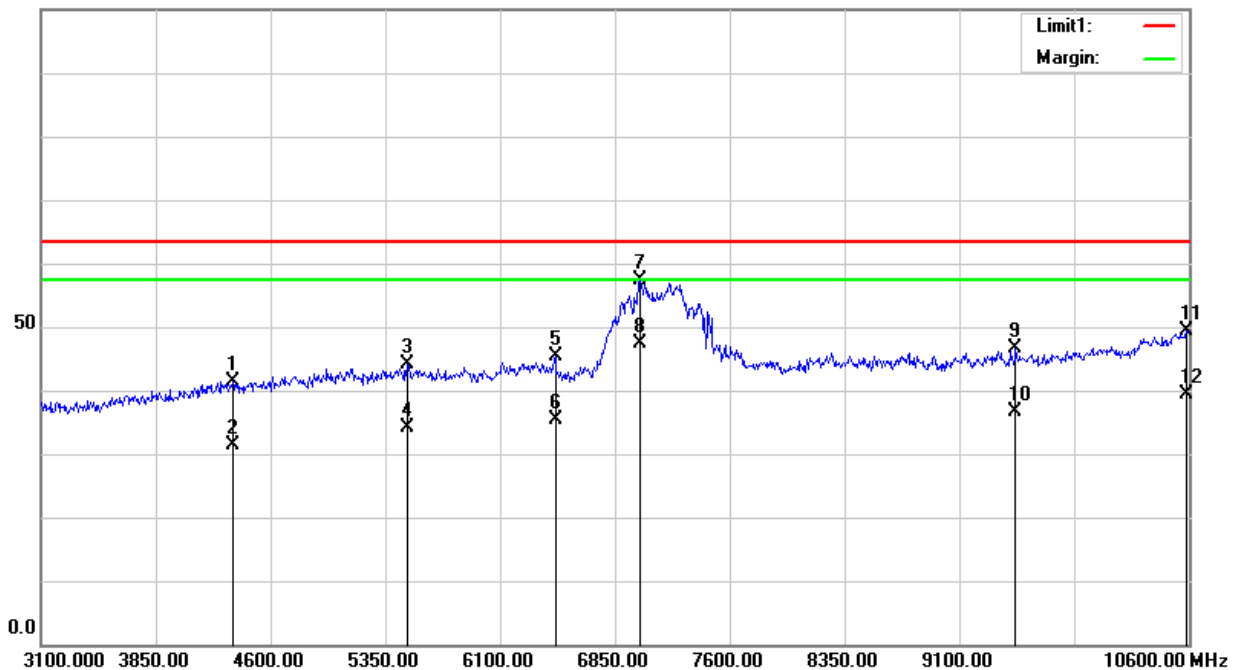
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4352.500	49.51	-8.16	41.35	63.44	-22.09	peak
2	4352.500	39.52	-8.16	31.36	63.44	-32.08	RMS
3	5492.500	49.23	-5.04	44.19	63.44	-19.25	peak
4	5492.500	39.24	-5.04	34.20	63.44	-29.24	RMS
5	6460.000	47.55	-2.06	45.49	63.44	-17.95	peak
6	6460.000	37.56	-2.06	35.50	63.44	-27.94	RMS
7	7015.000	57.62	-0.15	57.47	63.44	-5.97	peak
8	7015.000	47.63	-0.15	47.48	63.44	-15.96	RMS
9	9467.500	43.56	3.10	46.66	63.44	-16.78	peak
10	9467.500	33.57	3.10	36.67	63.44	-26.77	RMS
11	10585.000	44.17	5.20	49.37	63.44	-14.07	peak
12	10585.000	34.18	5.20	39.38	63.44	-24.06	RMS

Remark:

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

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2 (3100MHz – 10600MHz)	Test distance:	1m

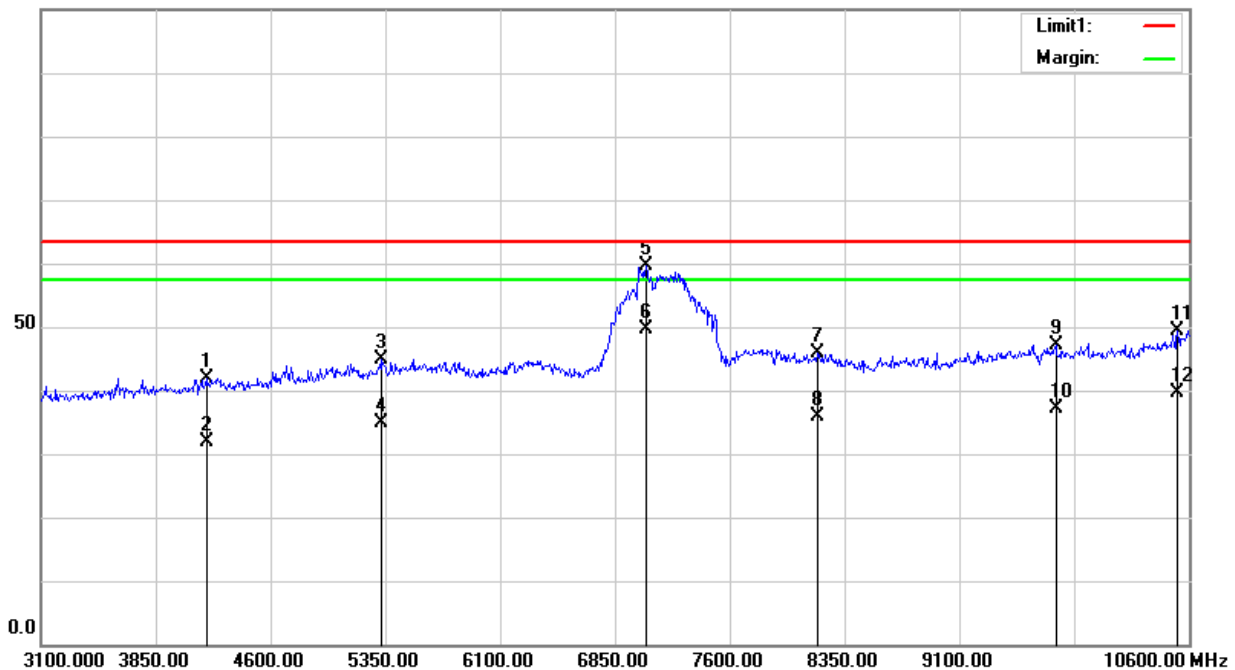
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4180.000	50.50	-8.60	41.90	63.44	-21.54	peak
2	4180.000	40.51	-8.60	31.91	63.44	-31.53	RMS
3	5320.000	50.13	-5.21	44.92	63.44	-18.52	peak
4	5320.000	40.14	-5.21	34.93	63.44	-28.51	RMS
5	7052.500	59.55	-0.01	59.54	63.44	-3.90	peak
6	7052.500	49.56	-0.01	49.55	63.44	-13.89	RMS
7	8177.500	43.55	2.36	45.91	63.44	-17.53	peak
8	8177.500	33.56	2.36	35.92	63.44	-27.52	RMS
9	9730.000	43.81	3.24	47.05	63.44	-16.39	peak
10	9730.000	33.82	3.24	37.06	63.44	-26.38	RMS
11	10525.000	44.46	5.04	49.50	63.44	-13.94	peak
12	10525.000	34.47	5.04	39.51	63.44	-23.93	RMS

Remark:

3. Margin = Result (Result = Reading + Factor) - Limit

4. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2 (10600MHz – 18000MHz)	Test distance:	1m

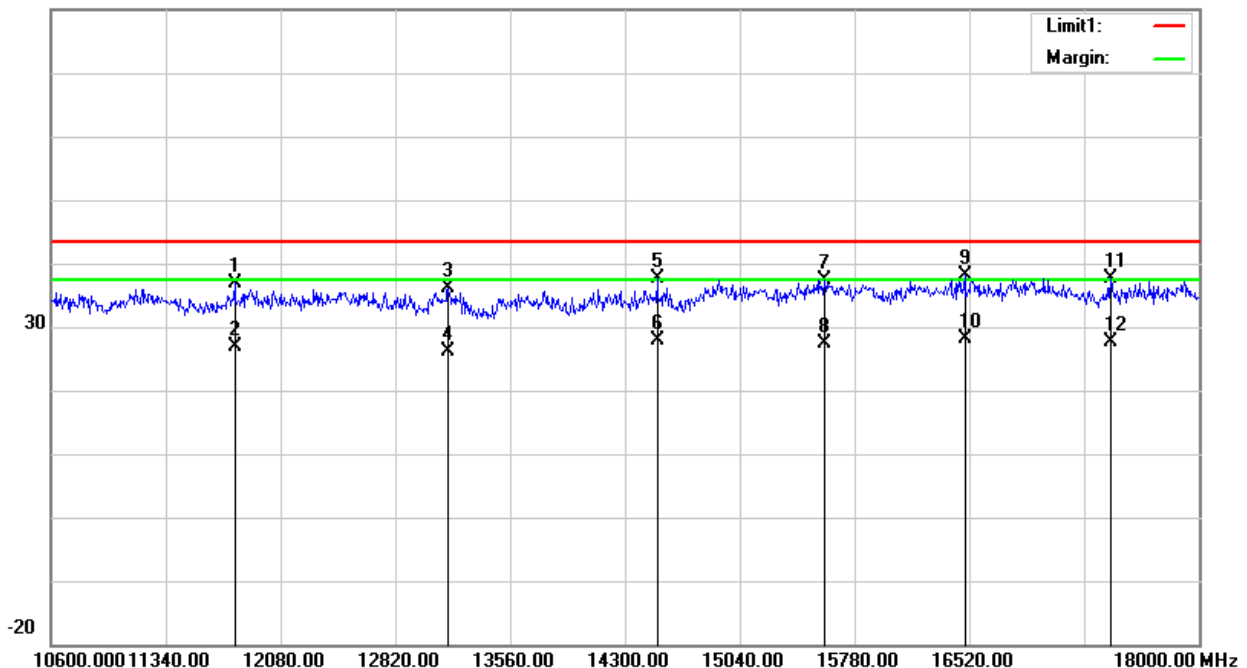
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11784.000	30.99	5.86	36.85	43.44	-6.59	peak
2	11784.000	21.00	5.86	26.86	43.44	-16.58	RMS
3	13160.400	30.60	5.52	36.12	43.44	-7.32	peak
4	13160.400	20.61	5.52	26.13	43.44	-17.31	RMS
5	14507.200	26.14	11.48	37.62	43.44	-5.82	peak
6	14507.200	16.35	11.48	27.83	43.44	-15.61	RMS
7	15587.600	28.51	8.89	37.40	43.44	-6.04	peak
8	15587.600	18.52	8.89	27.41	43.44	-16.03	RMS
9	16490.400	28.78	9.38	38.16	43.44	-5.28	peak
10	16490.400	18.79	9.38	28.17	43.44	-15.27	RMS
11	17430.200	26.26	11.47	37.73	43.44	-5.71	peak
12	17430.200	16.27	11.47	27.74	43.44	-15.70	RMS

Remark:

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

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2 (10600MHz – 18000MHz)	Test distance:	1m

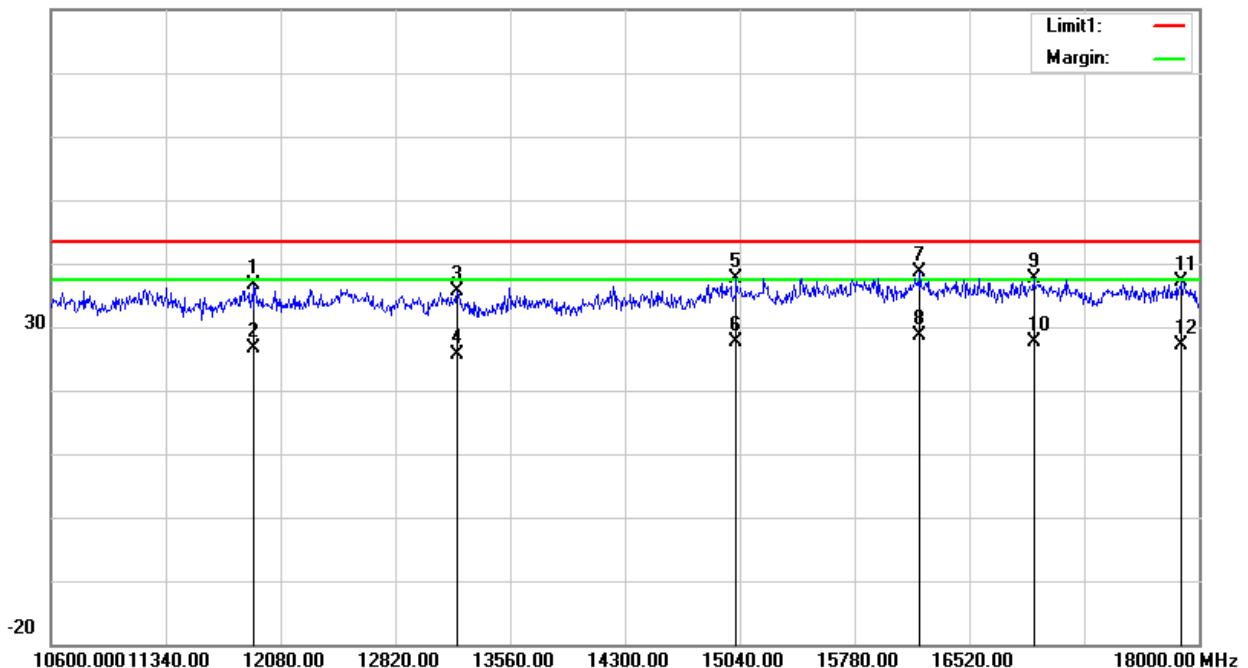
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11909.800	30.53	6.01	36.54	43.44	-6.90	peak
2	11909.800	20.54	6.01	26.55	43.44	-16.89	RMS
3	13219.600	30.07	5.51	35.58	43.44	-7.86	peak
4	13219.600	20.08	5.51	25.59	43.44	-17.85	RMS
5	15017.800	26.04	11.54	37.58	43.44	-5.86	peak
6	15017.800	16.05	11.54	27.59	43.44	-15.85	RMS
7	16201.800	29.62	8.91	38.53	43.44	-4.91	peak
8	16201.800	19.63	8.91	28.54	43.44	-14.90	RMS
9	16934.400	28.19	9.45	37.64	43.44	-5.80	peak
10	16934.400	18.22	9.45	27.67	43.44	-15.77	RMS
11	17889.000	25.48	11.56	37.04	43.44	-6.40	peak
12	17889.000	15.49	11.56	27.05	43.44	-16.39	RMS

Remark:

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

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2 (18000MHz – 40000MHz)	Test distance:	1m

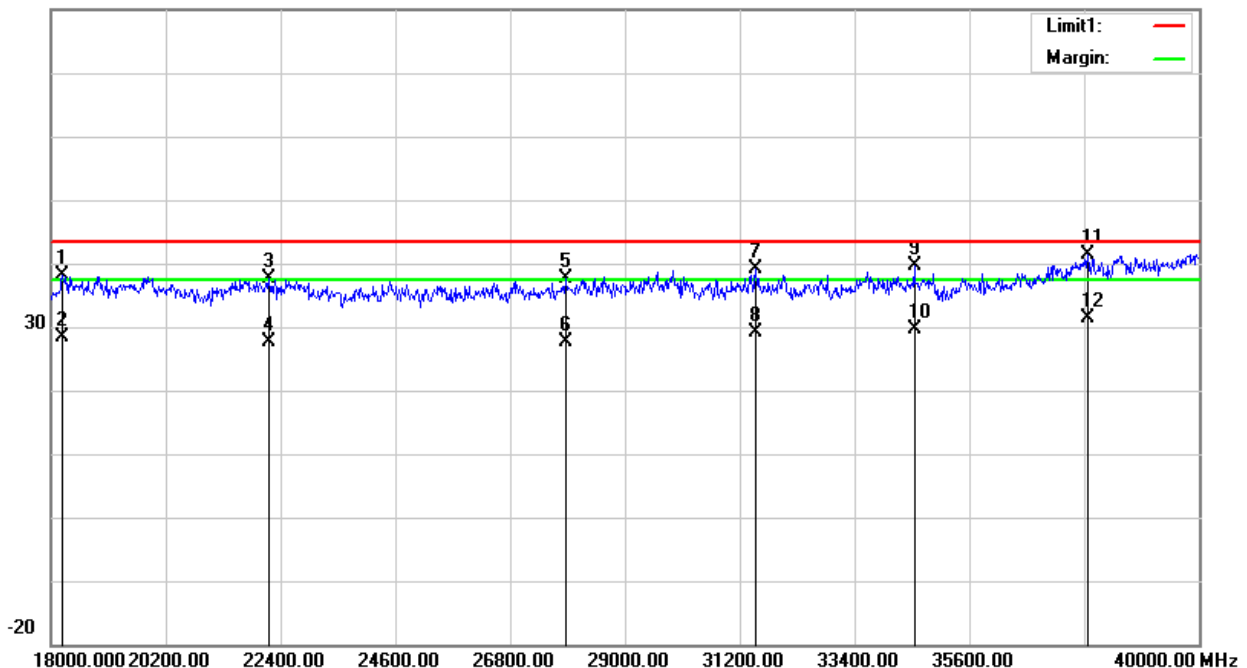
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18220.000	36.79	1.42	38.21	43.44	-5.23	peak
2	18220.000	26.91	1.42	28.33	43.44	-15.11	RMS
3	22180.000	35.46	2.20	37.66	43.44	-5.78	peak
4	22180.000	25.48	2.20	27.68	43.44	-15.76	RMS
5	27856.000	35.01	2.65	37.66	43.44	-5.78	peak
6	27856.000	25.02	2.65	27.67	43.44	-15.77	RMS
7	31508.000	36.44	2.62	39.06	43.44	-4.38	peak
8	31508.000	26.46	2.62	29.08	43.44	-14.36	RMS
9	34544.000	36.74	2.95	39.69	43.44	-3.75	peak
10	34544.000	26.77	2.95	29.72	43.44	-13.72	RMS
11	37866.000	38.89	2.37	41.26	43.44	-2.18	peak
12	37866.000	28.91	2.37	31.28	43.44	-12.16	RMS

Remark:

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

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2 (18000MHz – 40000MHz)	Test distance:	1m

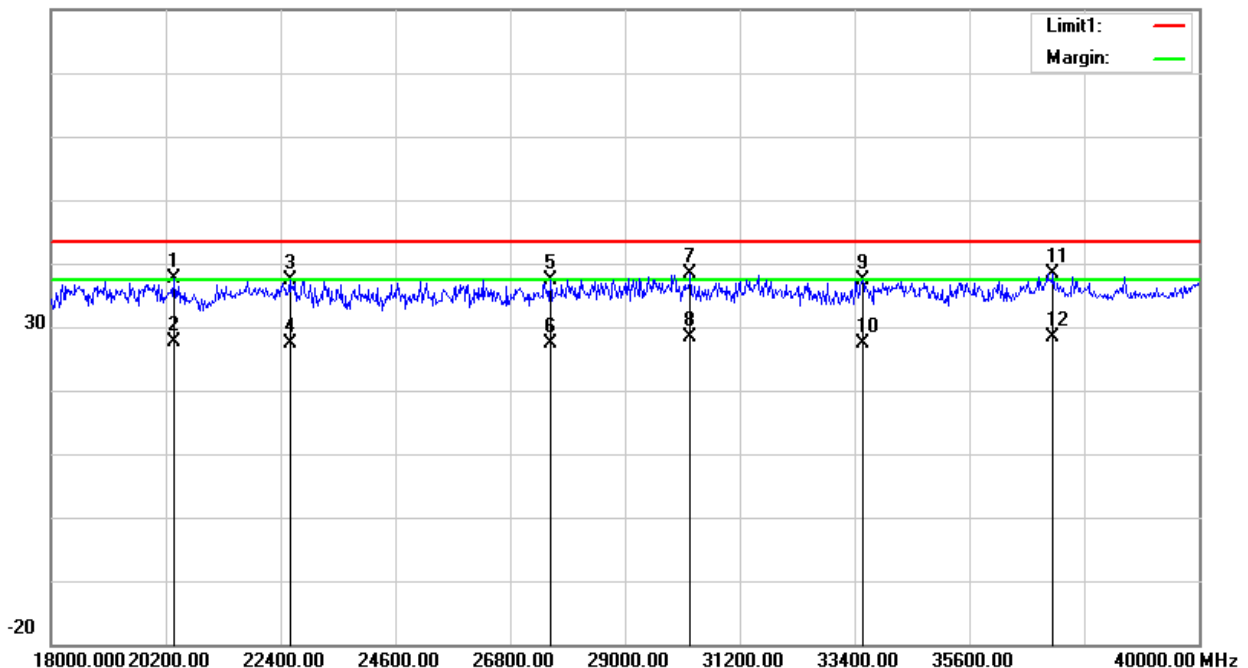
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20354.000	36.17	1.39	37.56	43.44	-5.88	peak
2	20354.000	26.17	1.39	27.56	43.44	-15.88	RMS
3	22576.000	35.17	2.32	37.49	43.44	-5.95	peak
4	22576.000	25.18	2.32	27.50	43.44	-15.94	RMS
5	27570.000	34.65	2.72	37.37	43.44	-6.07	peak
6	27570.000	24.66	2.72	27.38	43.44	-16.06	RMS
7	30254.000	35.61	2.65	38.26	43.44	-5.18	peak
8	30254.000	25.64	2.65	28.29	43.44	-15.15	RMS
9	33554.000	34.22	3.09	37.31	43.44	-6.13	peak
10	33554.000	24.23	3.09	27.32	43.44	-16.12	RMS
11	37206.000	36.00	2.34	38.34	43.44	-5.10	peak
12	37206.000	26.01	2.34	28.35	43.44	-15.09	RMS

Remark:

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

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3(960MHz -1610MHz)	Test distance:	1m

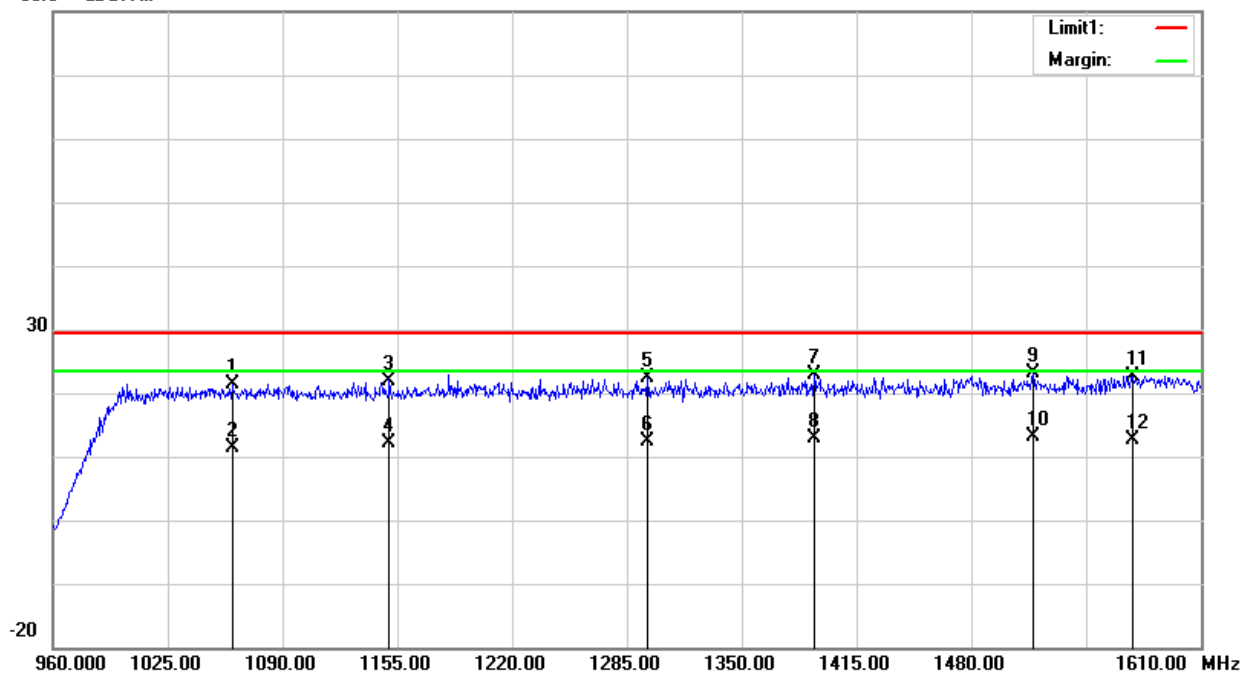
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1061.400	22.73	-1.30	21.43	29.44	-8.01	peak
2	1061.400	12.74	-1.30	11.44	29.44	-18.00	RMS
3	1150.450	22.92	-0.92	22.00	29.44	-7.44	peak
4	1150.450	12.93	-0.92	12.01	29.44	-17.43	RMS
5	1296.700	22.62	-0.16	22.46	29.44	-6.98	peak
6	1296.700	12.63	-0.16	12.47	29.44	-16.97	RMS
7	1390.950	22.67	0.23	22.90	29.44	-6.54	peak
8	1390.950	12.68	0.23	12.91	29.44	-16.53	RMS
9	1515.100	21.19	1.83	23.02	29.44	-6.42	peak
10	1515.100	11.20	1.83	13.03	29.44	-16.41	RMS
11	1571.000	19.39	3.33	22.72	29.44	-6.72	peak
12	1571.000	9.40	3.33	12.73	29.44	-16.71	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3(960MHz -1610MHz)	Test distance:	1m

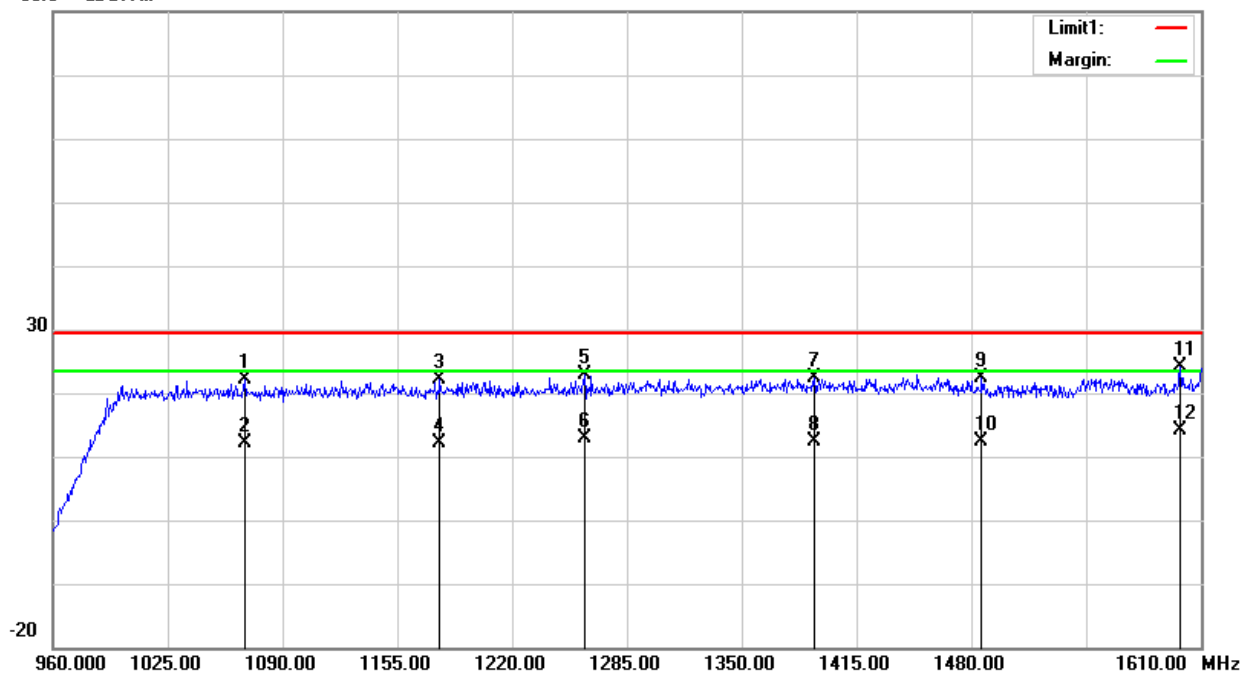
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1068.550	23.45	-1.26	22.19	29.44	-7.25	peak
2	1068.550	13.46	-1.26	12.20	29.44	-17.24	RMS
3	1179.050	22.81	-0.63	22.18	29.44	-7.26	peak
4	1179.050	12.82	-0.63	12.19	29.44	-17.25	RMS
5	1260.950	23.28	-0.43	22.85	29.44	-6.59	peak
6	1260.950	13.29	-0.43	12.86	29.44	-16.58	RMS
7	1390.950	22.23	0.23	22.46	29.44	-6.98	peak
8	1390.950	12.24	0.23	12.47	29.44	-16.97	RMS
9	1485.850	21.09	1.31	22.40	29.44	-7.04	peak
10	1485.850	11.10	1.31	12.41	29.44	-17.03	RMS
11	1598.300	19.86	4.18	24.04	29.44	-5.40	peak
12	1598.300	9.87	4.18	14.05	29.44	-15.39	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3(1610MHz – 1990MHz)	Test distance:	1m

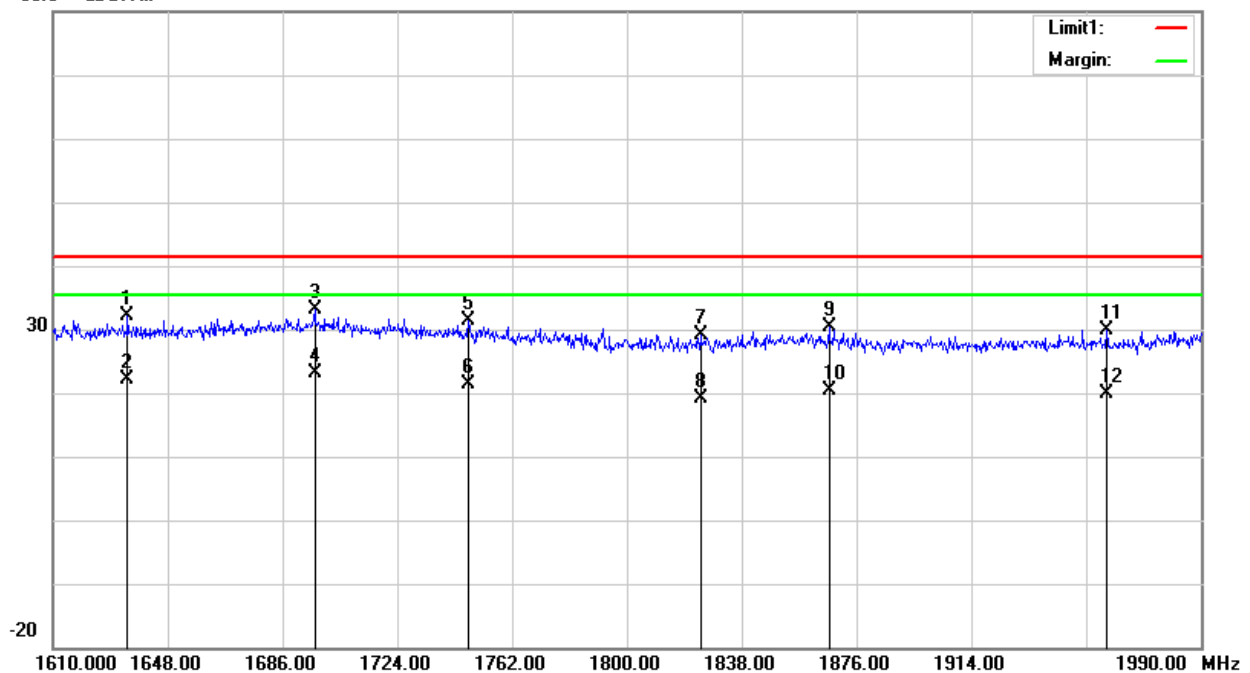
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1634.700	27.86	4.24	32.10	41.44	-9.34	peak
2	1634.700	17.87	4.24	22.11	41.44	-19.33	RMS
3	1696.640	28.03	5.16	33.19	41.44	-8.25	peak
4	1696.640	18.04	5.16	23.20	41.44	-18.24	RMS
5	1747.560	27.53	3.74	31.27	41.44	-10.17	peak
6	1747.560	17.54	3.74	21.28	41.44	-20.16	RMS
7	1824.320	27.10	2.06	29.16	41.44	-12.28	peak
8	1824.320	17.11	2.06	19.17	41.44	-22.27	RMS
9	1866.880	28.28	2.05	30.33	41.44	-11.11	peak
10	1866.880	18.29	2.05	20.34	41.44	-21.10	RMS
11	1958.840	28.26	1.61	29.87	41.44	-11.57	peak
12	1958.840	18.27	1.61	19.88	41.44	-21.56	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3(1610MHz – 1990MHz)	Test distance:	1m

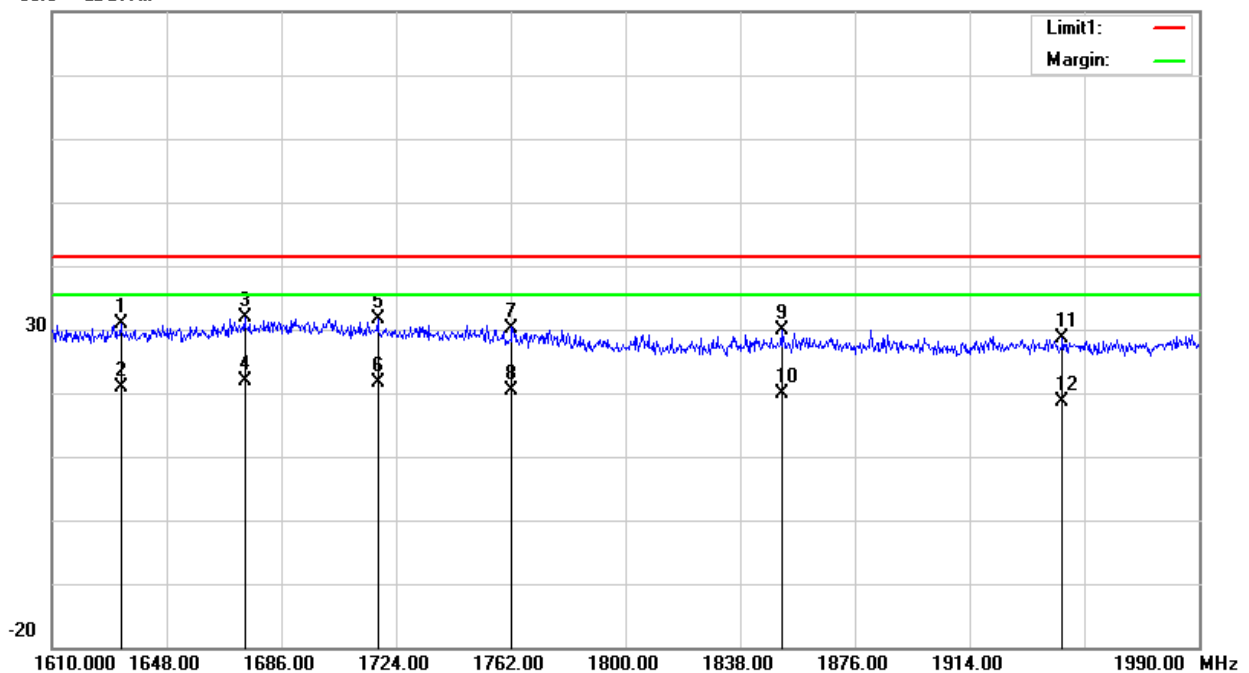
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1632.800	26.65	4.24	30.89	41.44	-10.55	peak
2	1632.800	16.66	4.24	20.90	41.44	-20.54	RMS
3	1673.840	27.11	4.71	31.82	41.44	-9.62	peak
4	1673.840	17.12	4.71	21.83	41.44	-19.61	RMS
5	1717.920	26.95	4.66	31.61	41.44	-9.83	peak
6	1717.920	16.96	4.66	21.62	41.44	-19.82	RMS
7	1762.380	27.06	3.19	30.25	41.44	-11.19	peak
8	1762.380	17.07	3.19	20.26	41.44	-21.18	RMS
9	1851.680	27.54	2.32	29.86	41.44	-11.58	peak
10	1851.680	17.55	2.32	19.87	41.44	-21.57	RMS
11	1944.780	27.14	1.52	28.66	41.44	-12.78	peak
12	1944.780	17.15	1.52	18.67	41.44	-22.77	RMS

Remark:

5. Margin = Result (Result =Reading + Factor)-Limit

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3(1990MHz – 3100MHz)	Test distance:	1m

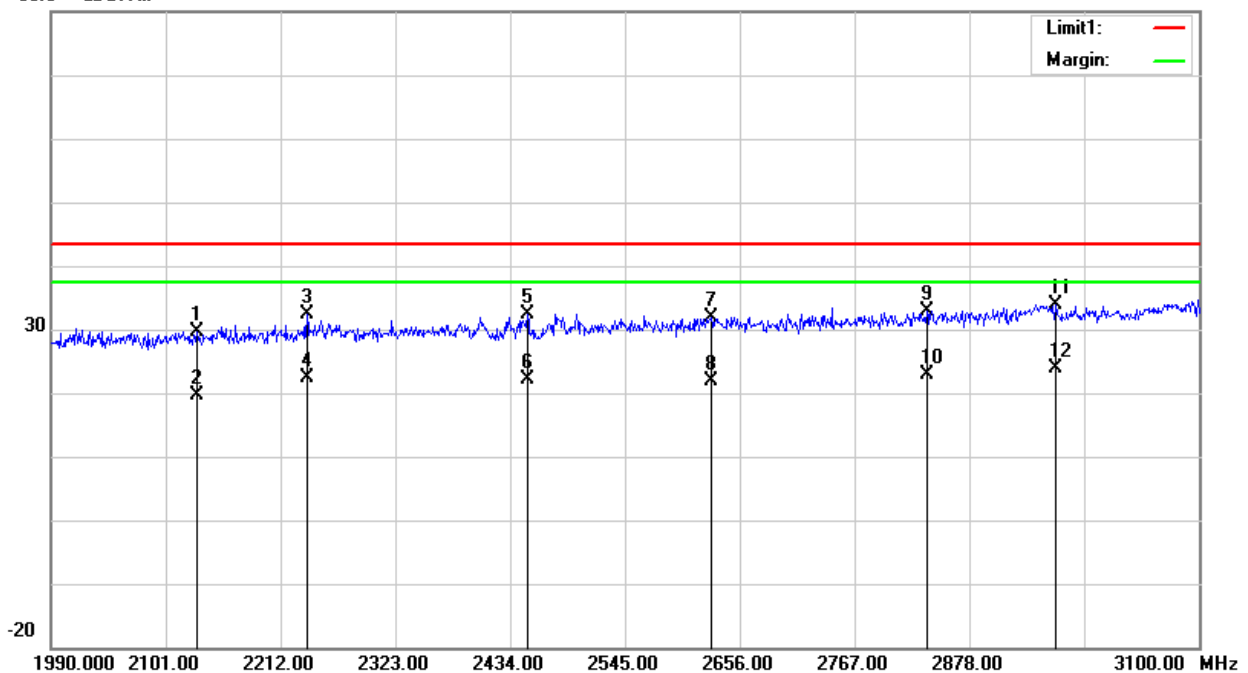
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2130.970	26.66	2.96	29.62	43.44	-13.82	peak
2	2130.970	16.67	2.96	19.63	43.44	-23.81	RMS
3	2237.530	28.89	3.56	32.45	43.44	-10.99	peak
4	2237.530	18.90	3.56	22.46	43.44	-20.98	RMS
5	2450.650	27.76	4.52	32.28	43.44	-11.16	peak
6	2450.650	17.72	4.52	22.24	43.44	-21.20	RMS
7	2628.250	26.55	5.32	31.87	43.44	-11.57	peak
8	2628.250	16.56	5.32	21.88	43.44	-21.56	RMS
9	2836.930	26.49	6.47	32.96	43.44	-10.48	peak
10	2836.930	16.50	6.47	22.97	43.44	-20.47	RMS
11	2961.250	26.98	6.99	33.97	43.44	-9.47	peak
12	2961.250	16.99	6.99	23.98	43.44	-19.46	RMS

Remark:

5. Margin = Result (Result =Reading + Factor)-Limit

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3(1990MHz – 3100MHz)	Test distance:	1m

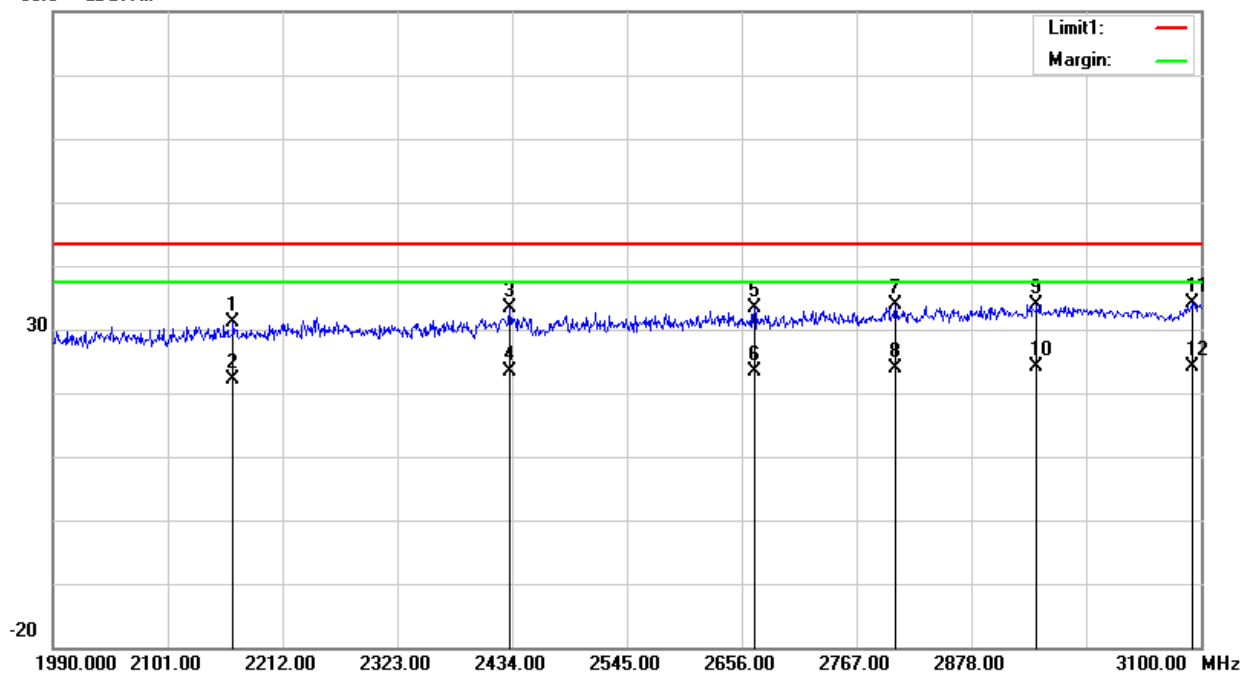
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2164.270	27.92	3.19	31.11	43.44	-12.33	peak
2	2164.270	18.93	3.19	22.12	43.44	-21.32	RMS
3	2431.780	28.77	4.51	33.28	43.44	-10.16	peak
4	2431.780	18.78	4.51	23.29	43.44	-20.15	RMS
5	2668.210	27.73	5.57	33.30	43.44	-10.14	peak
6	2668.210	17.74	5.57	23.31	43.44	-20.13	RMS
7	2804.740	27.49	6.27	33.76	43.44	-9.68	peak
8	2804.740	17.50	6.27	23.77	43.44	-19.67	RMS
9	2941.270	27.05	6.94	33.99	43.44	-9.45	peak
10	2941.270	17.07	6.94	24.01	43.44	-19.43	RMS
11	3091.120	27.13	7.03	34.16	43.44	-9.28	peak
12	3091.120	17.14	7.03	24.17	43.44	-19.27	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3 (3100MHz – 10600MHz)	Test distance:	1m

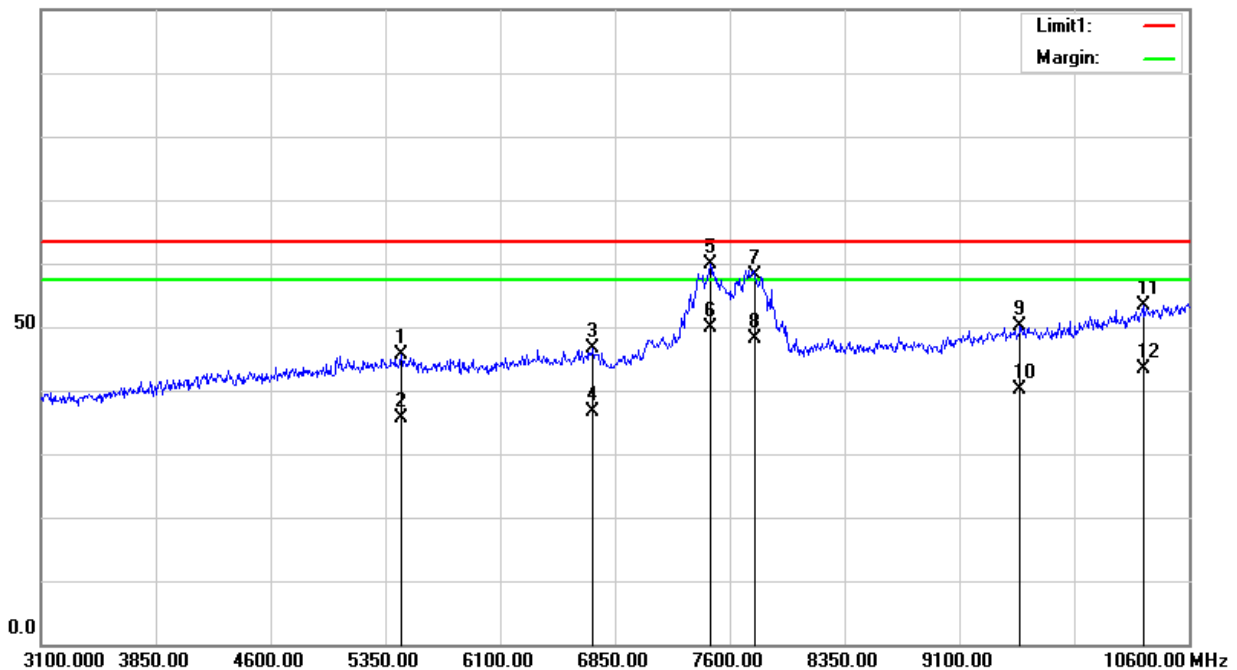
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5455.000	50.69	-5.13	45.56	63.44	-17.88	peak
2	5455.000	40.70	-5.13	35.57	63.44	-27.87	RMS
3	6707.500	47.59	-1.01	46.58	63.44	-16.86	peak
4	6707.500	37.60	-1.01	36.59	63.44	-26.85	RMS
5	7472.500	58.24	1.53	59.77	63.44	-3.67	peak
6	7472.500	48.25	1.53	49.78	63.44	-13.66	RMS
7	7765.000	56.23	1.92	58.15	63.44	-5.29	peak
8	7765.000	46.24	1.92	48.16	63.44	-15.28	RMS
9	9497.500	46.94	3.14	50.08	63.44	-13.36	peak
10	9497.500	36.95	3.14	40.09	63.44	-23.35	RMS
11	10300.000	48.98	4.33	53.31	63.44	-10.13	peak
12	10300.000	38.99	4.33	43.32	63.44	-20.12	RMS

Remark:

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

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3 (3100MHz – 10600MHz)	Test distance:	1m

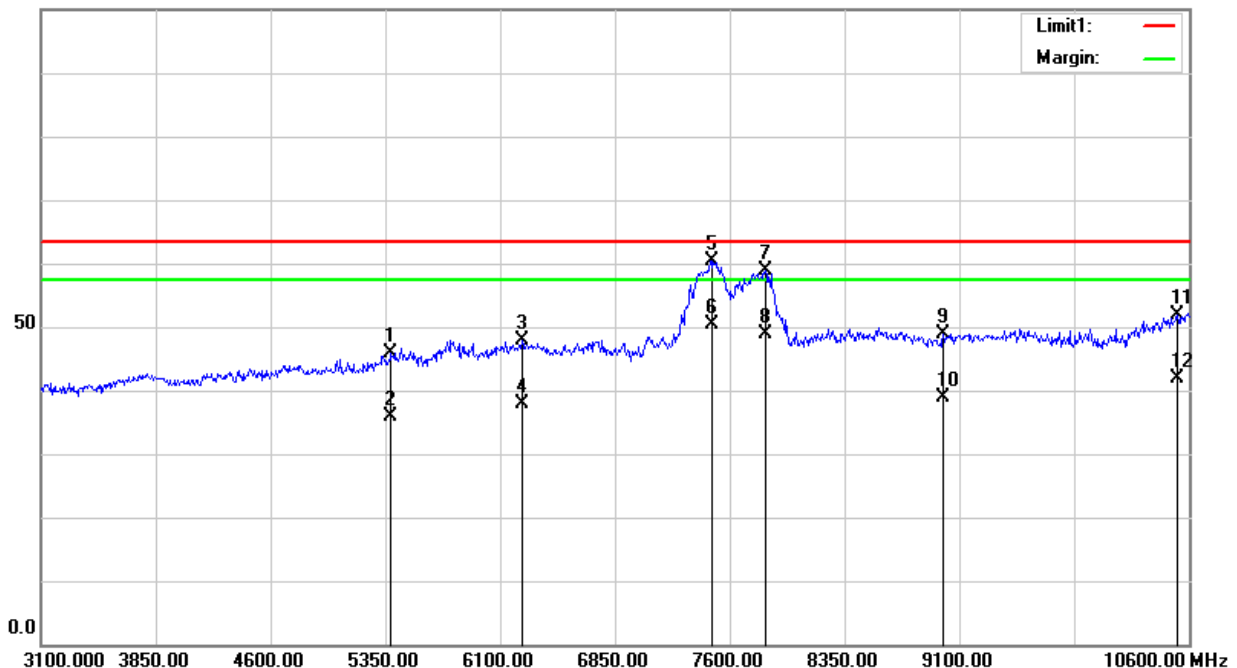
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5387.500	51.07	-5.25	45.82	63.44	-17.62	peak
2	5387.500	41.08	-5.25	35.83	63.44	-27.61	RMS
3	6242.500	50.68	-2.90	47.78	63.44	-15.66	peak
4	6242.500	40.69	-2.90	37.79	63.44	-25.65	RMS
5	7480.000	58.89	1.56	60.45	63.44	-2.99	peak
6	7480.000	48.90	1.56	50.46	63.44	-12.98	RMS
7	7832.500	56.78	1.99	58.77	63.44	-4.67	peak
8	7832.500	46.79	1.99	48.78	63.44	-14.66	RMS
9	8995.000	46.52	2.46	48.98	63.44	-14.46	peak
10	8995.000	36.53	2.46	38.99	63.44	-24.45	RMS
11	10525.000	46.82	5.04	51.86	63.44	-11.58	peak
12	10525.000	36.83	5.04	41.87	63.44	-21.57	RMS

Remark:

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

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3 (10600MHz – 18000MHz)	Test distance:	1m

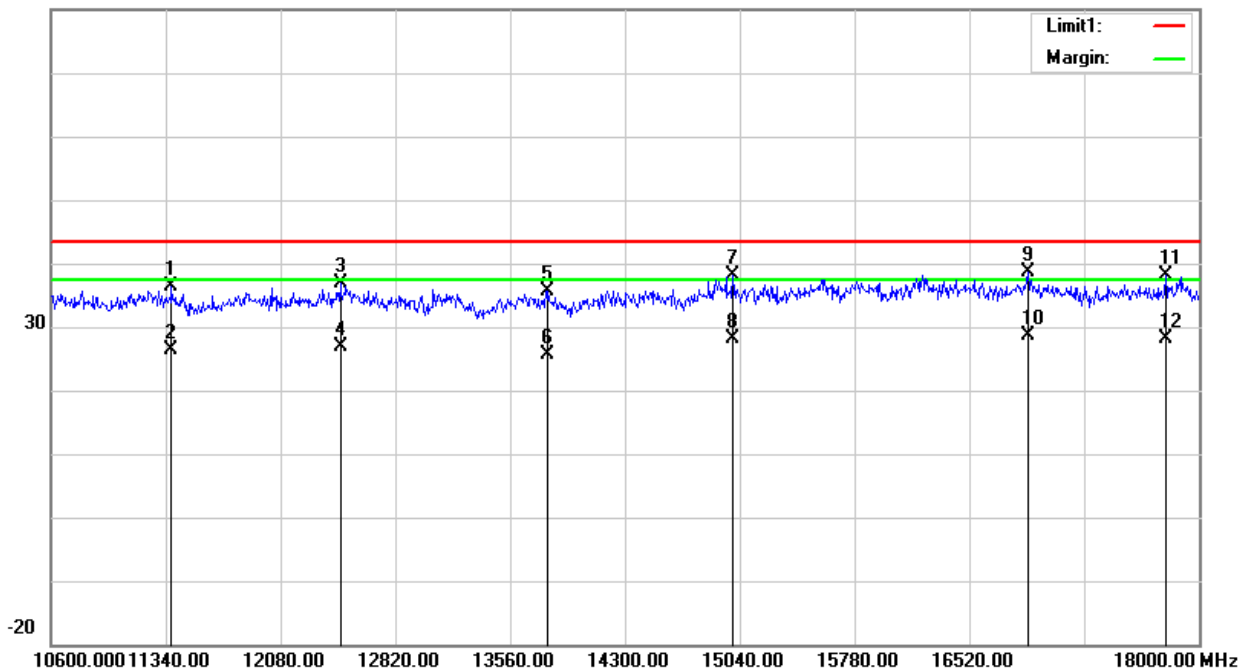
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11377.000	30.48	5.93	36.41	43.44	-7.03	peak
2	11377.000	20.49	5.93	26.42	43.44	-17.02	RMS
3	12464.800	31.36	5.51	36.87	43.44	-6.57	peak
4	12464.800	21.37	5.51	26.88	43.44	-16.56	RMS
5	13804.200	24.24	11.48	35.72	43.44	-7.72	peak
6	13804.200	14.25	11.48	25.73	43.44	-17.71	RMS
7	14995.600	29.10	9.05	38.15	43.44	-5.29	peak
8	14995.600	19.11	9.05	28.16	43.44	-15.28	RMS
9	16897.400	29.08	9.45	38.53	43.44	-4.91	peak
10	16897.400	19.09	9.45	28.54	43.44	-14.90	RMS
11	17785.400	26.42	11.60	38.02	43.44	-5.42	peak
12	17785.400	16.43	11.60	28.03	43.44	-15.41	RMS

Remark:

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

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3 (10600MHz – 18000MHz)	Test distance:	1m

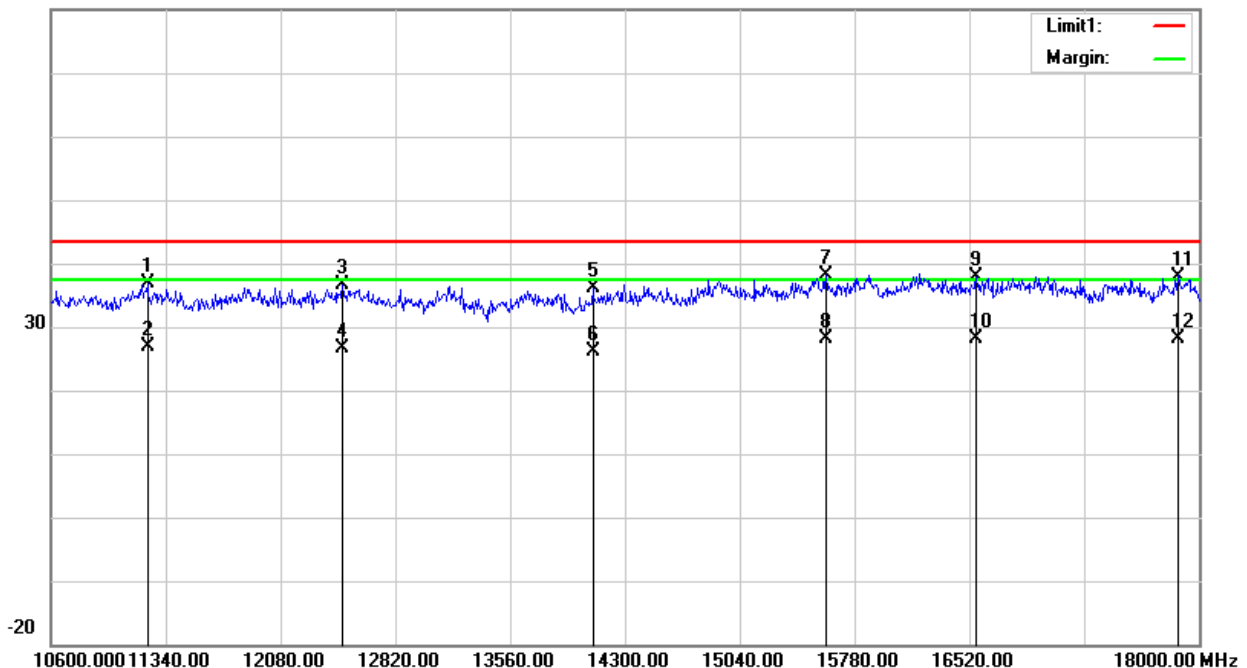
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11221.600	30.84	5.99	36.83	43.44	-6.61	peak
2	11221.600	20.79	5.99	26.84	43.44	-16.60	RMS
3	12479.600	31.12	5.39	36.51	43.44	-6.93	peak
4	12479.600	21.10	5.39	26.52	43.44	-16.92	RMS
5	14092.800	24.72	11.44	36.16	43.44	-7.28	peak
6	14092.800	14.69	11.44	26.17	43.44	-17.27	RMS
7	15595.000	29.13	8.93	38.06	43.44	-5.38	peak
8	15595.000	19.11	8.93	28.07	43.44	-15.37	RMS
9	16564.400	28.62	9.37	37.99	43.44	-5.45	peak
10	16564.400	18.60	9.37	28.01	43.44	-15.43	RMS
11	17866.800	26.39	11.61	38.00	43.44	-5.44	peak
12	17866.800	16.42	11.61	28.03	43.44	-15.41	RMS

Remark:

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

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3 (18000MHz – 40000MHz)	Test distance:	1m

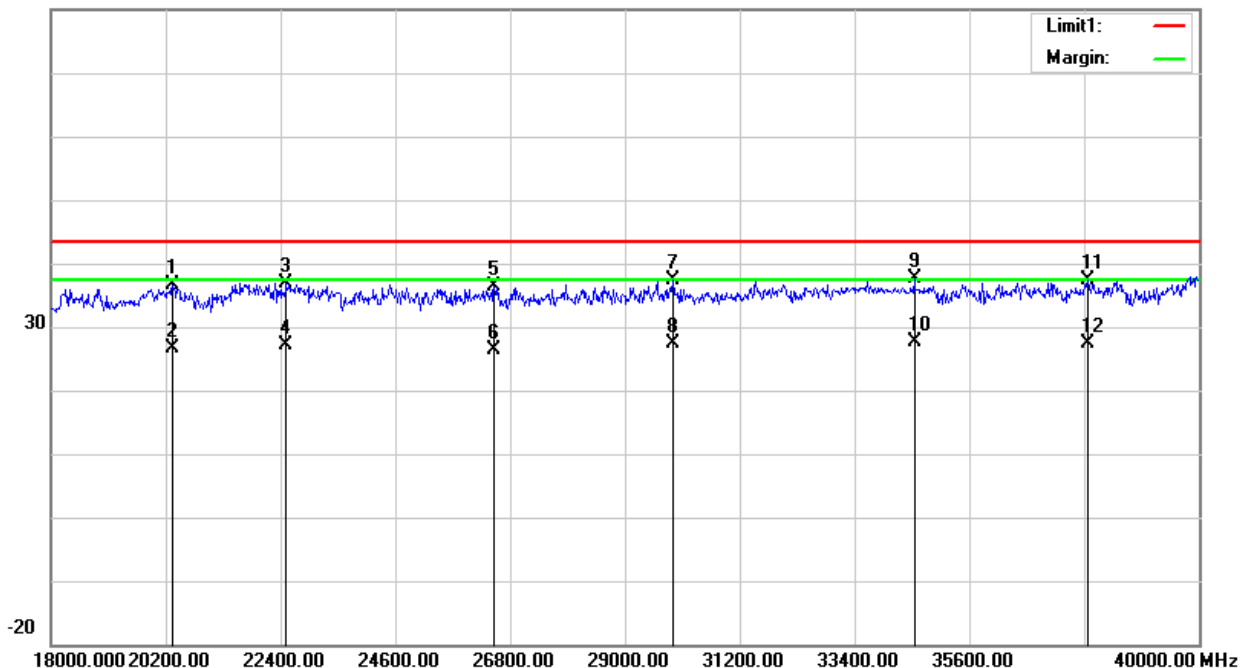
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20332.000	35.16	1.40	36.56	43.44	-6.88	peak
2	20332.000	25.23	1.40	26.63	43.44	-16.81	RMS
3	22510.000	34.76	2.23	36.99	43.44	-6.45	peak
4	22510.000	24.79	2.23	27.02	43.44	-16.42	RMS
5	26492.000	33.59	2.79	36.38	43.44	-7.06	peak
6	26492.000	23.63	2.79	26.42	43.44	-17.02	RMS
7	29924.000	34.70	2.69	37.39	43.44	-6.05	peak
8	29924.000	24.72	2.69	27.41	43.44	-16.03	RMS
9	34544.000	34.67	3.02	37.69	43.44	-5.75	peak
10	34544.000	24.69	3.02	27.71	43.44	-15.73	RMS
11	37866.000	34.89	2.37	37.26	43.44	-6.18	peak
12	37866.000	24.94	2.37	27.31	43.44	-16.13	RMS

Remark:

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

6. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3 (18000MHz – 40000MHz)	Test distance:	1m

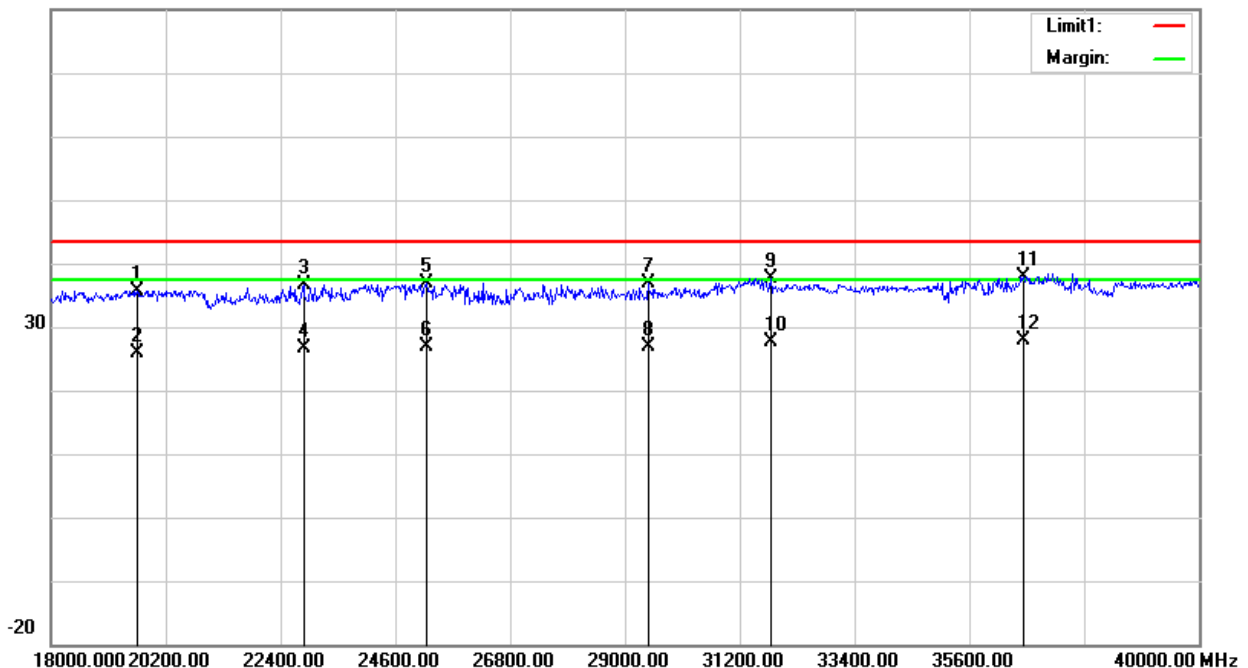
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19650.000	34.43	1.32	35.75	43.44	-7.69	peak
2	19650.000	24.33	1.32	25.79	43.44	-17.65	RMS
3	22840.000	34.40	2.26	36.66	43.44	-6.78	peak
4	22840.000	24.40	2.26	26.69	43.44	-16.75	RMS
5	25194.000	34.14	2.76	36.90	43.44	-6.54	peak
6	25194.000	24.23	2.76	26.94	43.44	-16.50	RMS
7	29440.000	34.10	2.71	36.81	43.44	-6.63	peak
8	29440.000	24.15	2.71	26.84	43.44	-16.60	RMS
9	31794.000	34.54	2.98	37.52	43.44	-5.92	peak
10	31794.000	24.52	2.98	27.57	43.44	-15.87	RMS
11	36634.000	35.33	2.48	37.81	43.44	-5.63	peak
12	36634.000	25.53	2.48	27.95	43.44	-15.49	RMS

Remark:

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

6. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

80.0 dBuV/m





3.3 RADIATED EMISSION MEASUREMENT (FOR 15.517(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 $E(\text{dBuV/m}) = P(\text{dBmEIRP}) + 95.2$.

3. $\text{dBuV/m@1m} = \text{dBuV/m@3m} + 20 \cdot \log(3/1)$

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

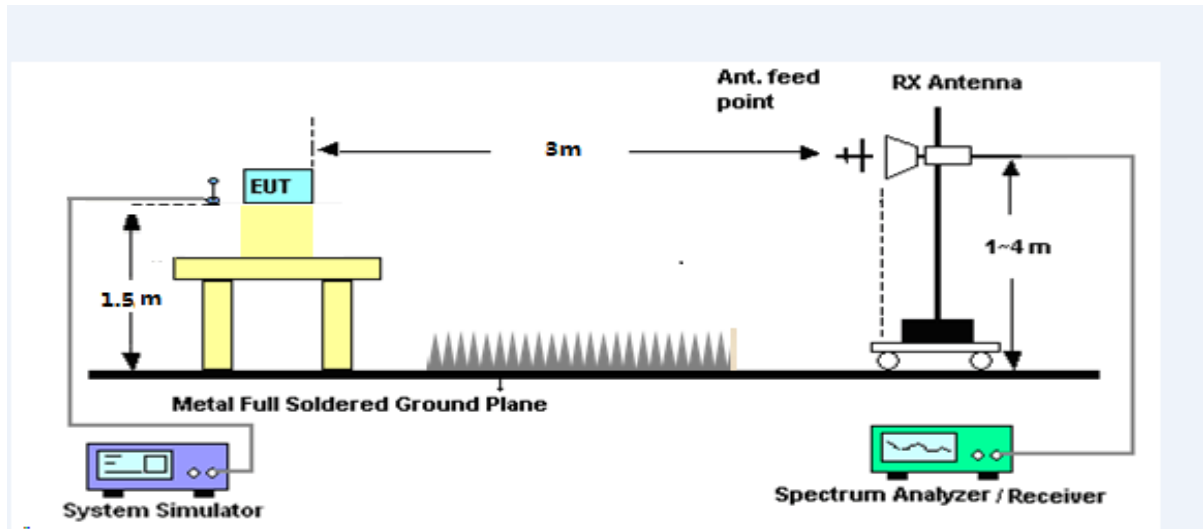
3.3.2 TEST PROCEDURE

- The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of a rotating 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.
- 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.
- 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)
- 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

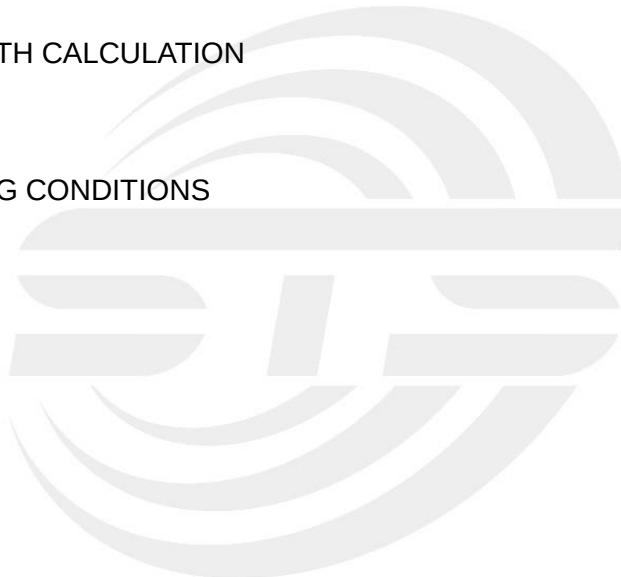


3.3.5 FIELD STRENGTH CALCULATION

Same as 3.2.5

3.3.6 EUT OPERATING CONDITIONS

Same as 3.2.6





3.3.7 TEST RESULTS

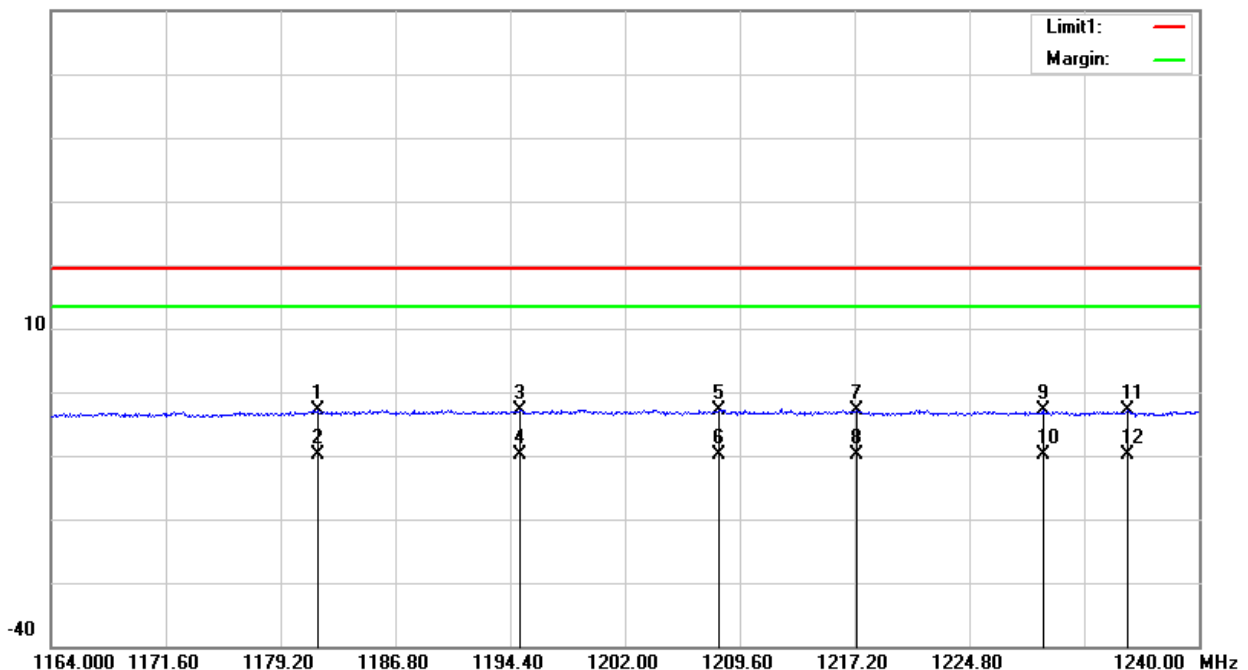
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1181.708	-2.33	-0.60	-2.93	19.44	-22.37	peak
2	1181.708	-9.34	-0.60	-9.94	19.44	-29.38	RMS
3	1195.008	-2.43	-0.47	-2.90	19.44	-22.34	peak
4	1195.008	-9.44	-0.47	-9.91	19.44	-29.35	RMS
5	1208.232	-2.40	-0.44	-2.84	19.44	-22.28	peak
6	1208.232	-9.41	-0.44	-9.85	19.44	-29.29	RMS
7	1217.352	-2.46	-0.45	-2.91	19.44	-22.35	peak
8	1217.352	-9.47	-0.45	-9.92	19.44	-29.36	RMS
9	1229.664	-2.50	-0.48	-2.98	19.44	-22.42	peak
10	1229.664	-9.51	-0.48	-9.99	19.44	-29.43	RMS
11	1235.288	-2.44	-0.49	-2.93	19.44	-22.37	peak
12	1235.288	-9.45	-0.49	-9.94	19.44	-29.38	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

60.0 dBuV/m





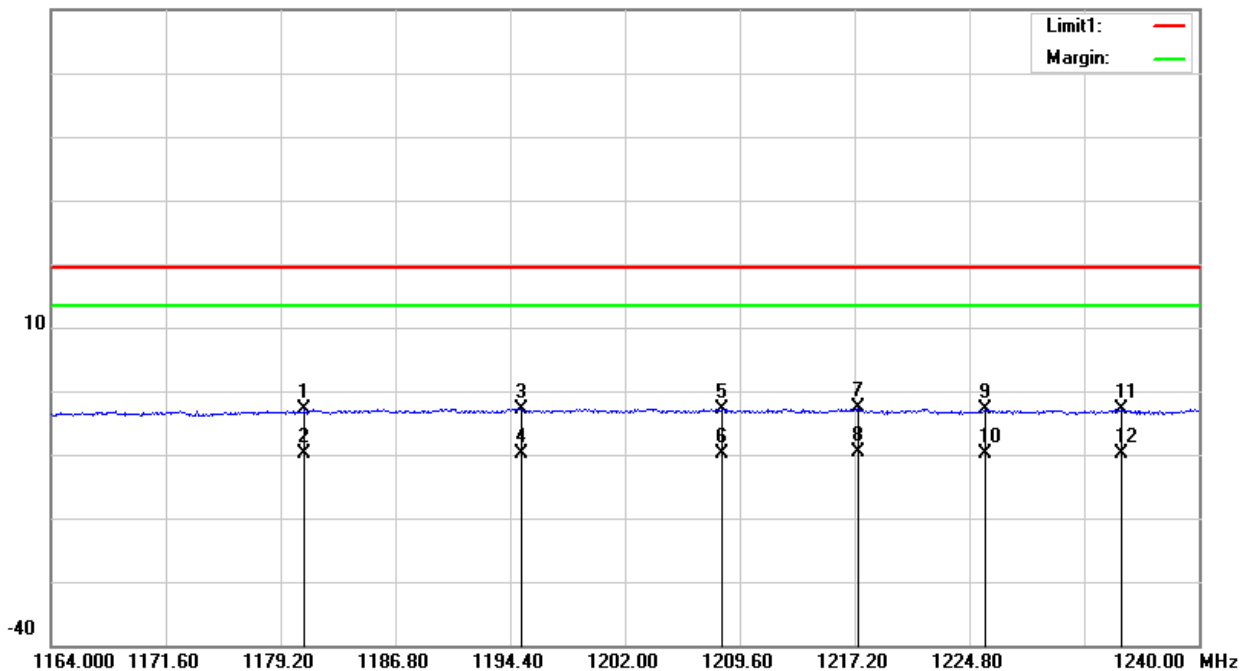
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1(1164Hz – 1240MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1180.796	-2.29	-0.61	-2.90	19.44	-22.34	peak
2	1180.796	-9.30	-0.61	-9.91	19.44	-29.35	RMS
3	1195.160	-2.31	-0.47	-2.78	19.44	-22.22	peak
4	1195.160	-9.32	-0.47	-9.79	19.44	-29.23	RMS
5	1208.384	-2.46	-0.44	-2.90	19.44	-22.34	peak
6	1208.384	-9.48	-0.44	-9.92	19.44	-29.36	RMS
7	1217.428	-2.24	-0.45	-2.69	19.44	-22.13	peak
8	1217.428	-9.26	-0.45	-9.71	19.44	-29.15	RMS
9	1225.864	-2.47	-0.46	-2.93	19.44	-22.37	peak
10	1225.864	-9.48	-0.46	-9.94	19.44	-29.38	RMS
11	1234.832	-2.49	-0.49	-2.98	19.44	-22.42	peak
12	1234.832	-9.50	-0.49	-9.99	19.44	-29.43	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

60.0 dBuV/m





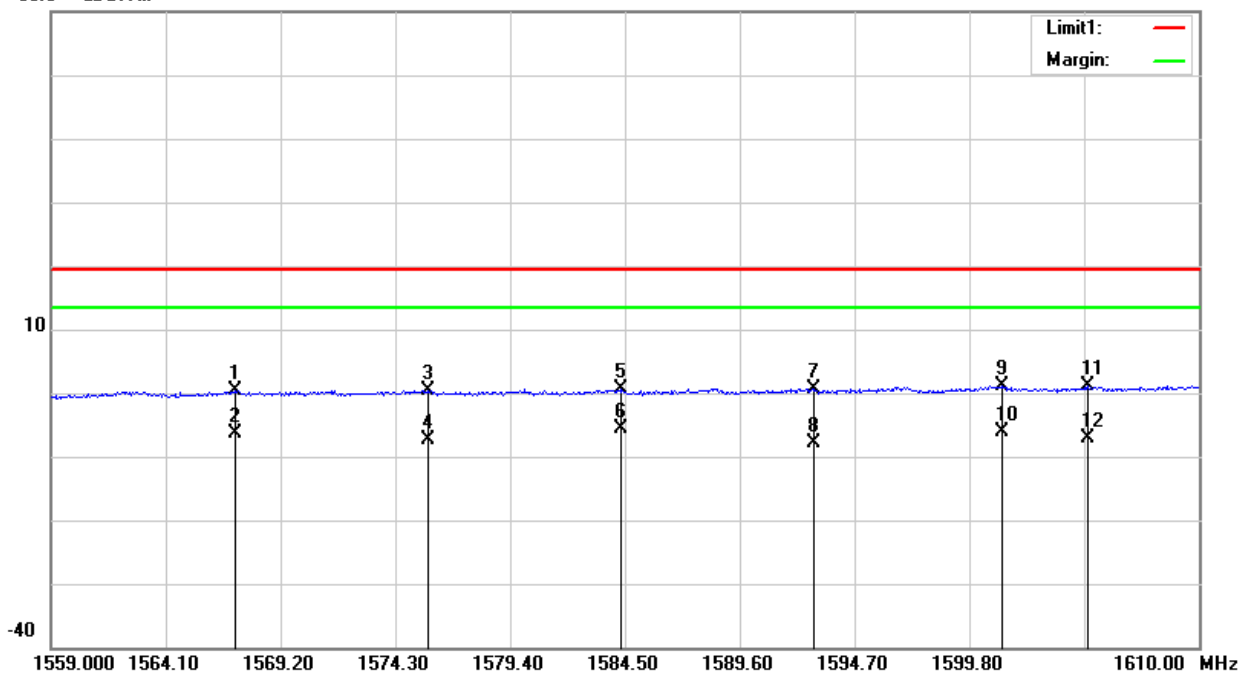
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1567.211	-2.85	3.21	0.36	19.44	-19.08	peak
2	1567.211	-9.58	3.21	-6.37	19.44	-25.81	RMS
3	1575.728	-3.03	3.47	0.44	19.44	-19.00	peak
4	1575.728	-10.92	3.47	-7.45	19.44	-26.89	RMS
5	1584.347	-3.24	3.75	0.51	19.44	-18.93	peak
6	1584.347	-9.31	3.75	-5.56	19.44	-25.00	RMS
7	1592.864	-3.32	4.02	0.70	19.44	-18.74	peak
8	1592.864	-11.80	4.02	-7.78	19.44	-27.22	RMS
9	1601.279	-3.17	4.24	1.07	19.44	-18.37	peak
10	1601.279	-10.28	4.24	-6.04	19.44	-25.48	RMS
11	1605.053	-3.17	4.24	1.07	19.44	-18.37	peak
12	1605.053	-11.31	4.24	-7.07	19.44	-26.51	RMS

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

60.0 dBuV/m





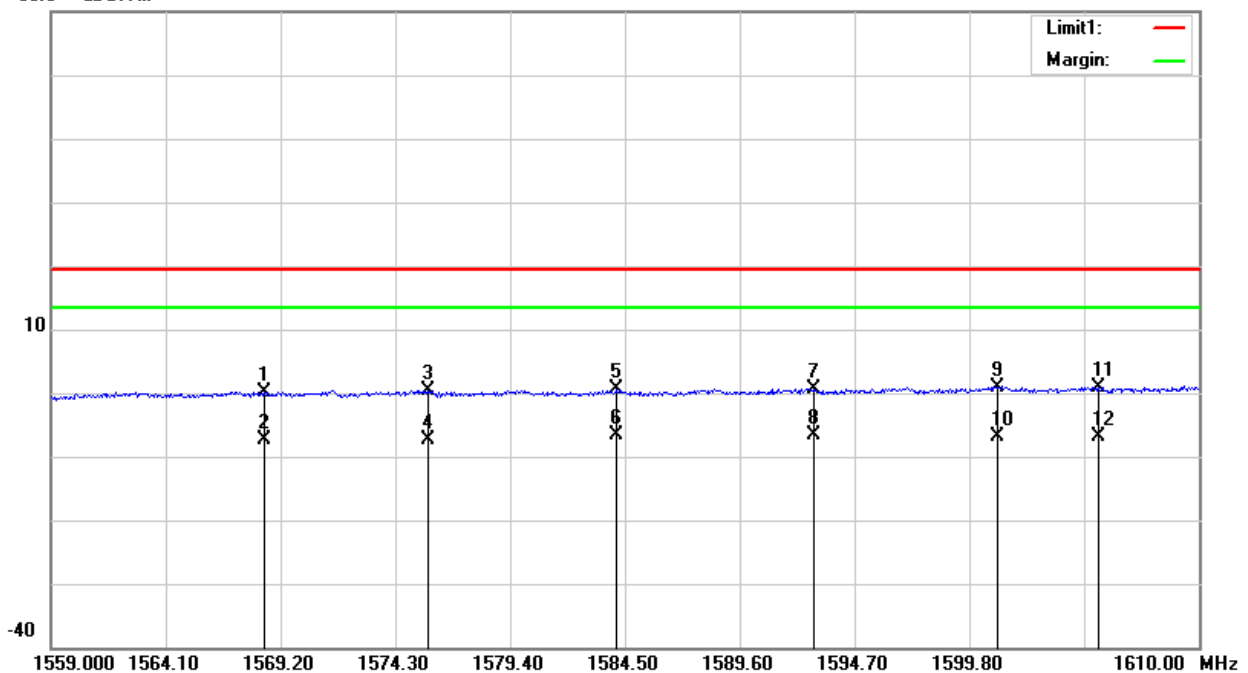
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1(1559Hz – 1610MHz)	Test distance:	1m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1568.486	-3.01	3.25	0.24	19.44	-19.20	peak
2	1568.486	-10.50	3.25	-7.25	19.44	-26.69	RMS
3	1575.728	-3.09	3.47	0.38	19.44	-19.06	peak
4	1575.728	-10.86	3.47	-7.39	19.44	-26.83	RMS
5	1584.143	-3.22	3.75	0.53	19.44	-18.91	peak
6	1584.143	-10.29	3.75	-6.54	19.44	-25.98	RMS
7	1592.864	-3.29	4.02	0.73	19.44	-18.71	peak
8	1592.864	-10.76	4.02	-6.74	19.44	-26.18	RMS
9	1601.024	-3.30	4.24	0.94	19.44	-18.50	peak
10	1601.024	-11.19	4.24	-6.95	19.44	-26.39	RMS
11	1605.512	-3.26	4.24	0.98	19.44	-18.46	peak
12	1605.512	-11.23	4.24	-6.99	19.44	-26.43	RMS

Remark:

1. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
2. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2(1164Hz – 1240MHz)	Test distance:	1m

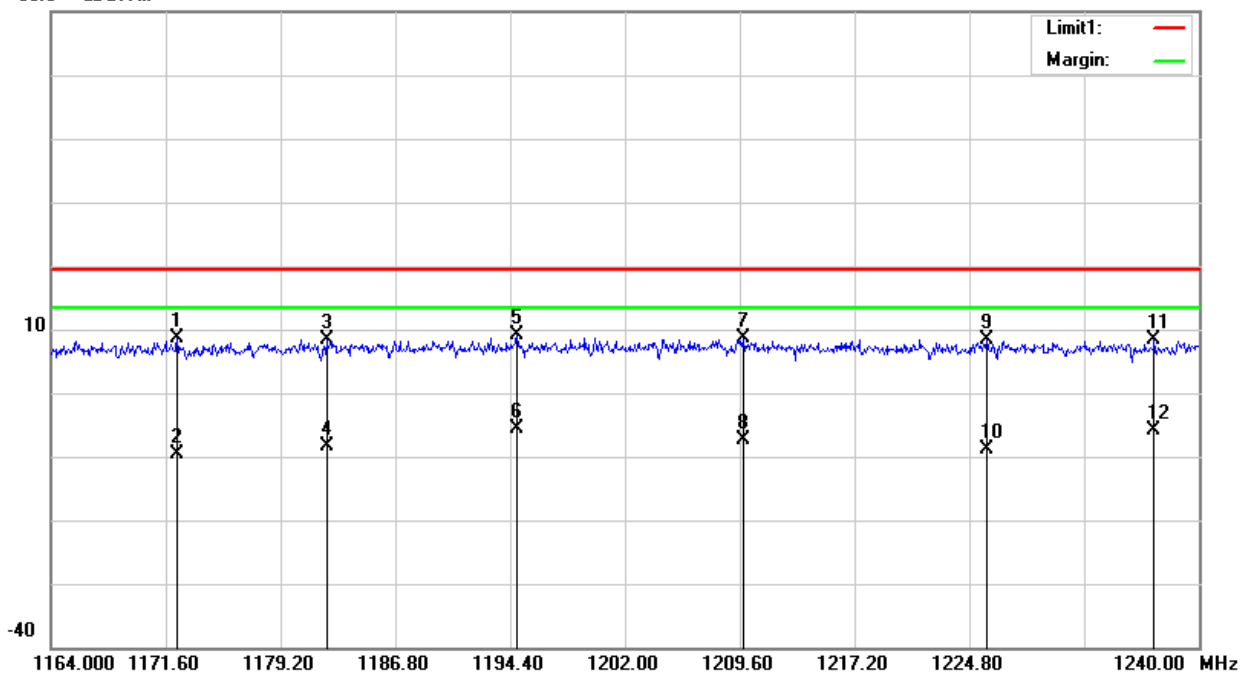
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1172.360	9.26	-0.70	8.56	19.44	-10.88	peak
2	1172.360	-8.87	-0.70	-9.57	19.44	-29.01	RMS
3	1182.240	9.02	-0.60	8.42	19.44	-11.02	peak
4	1182.240	-7.85	-0.60	-8.45	19.44	-27.89	RMS
5	1194.856	9.49	-0.47	9.02	19.44	-10.42	peak
6	1194.856	-5.22	-0.47	-5.69	19.44	-25.13	RMS
7	1209.828	9.16	-0.44	8.72	19.44	-10.72	peak
8	1209.828	-6.92	-0.44	-7.36	19.44	-26.80	RMS
9	1225.940	8.91	-0.46	8.45	19.44	-10.99	peak
10	1225.940	-8.49	-0.46	-8.95	19.44	-28.39	RMS
11	1237.036	8.84	-0.49	8.35	19.44	-11.09	peak
12	1237.036	-5.49	-0.49	-5.98	19.44	-25.42	RMS

Remark:

3. Margin = Result (Result = Reading + Factor) - Limit

4. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2(1164Hz – 1240MHz)	Test distance:	1m

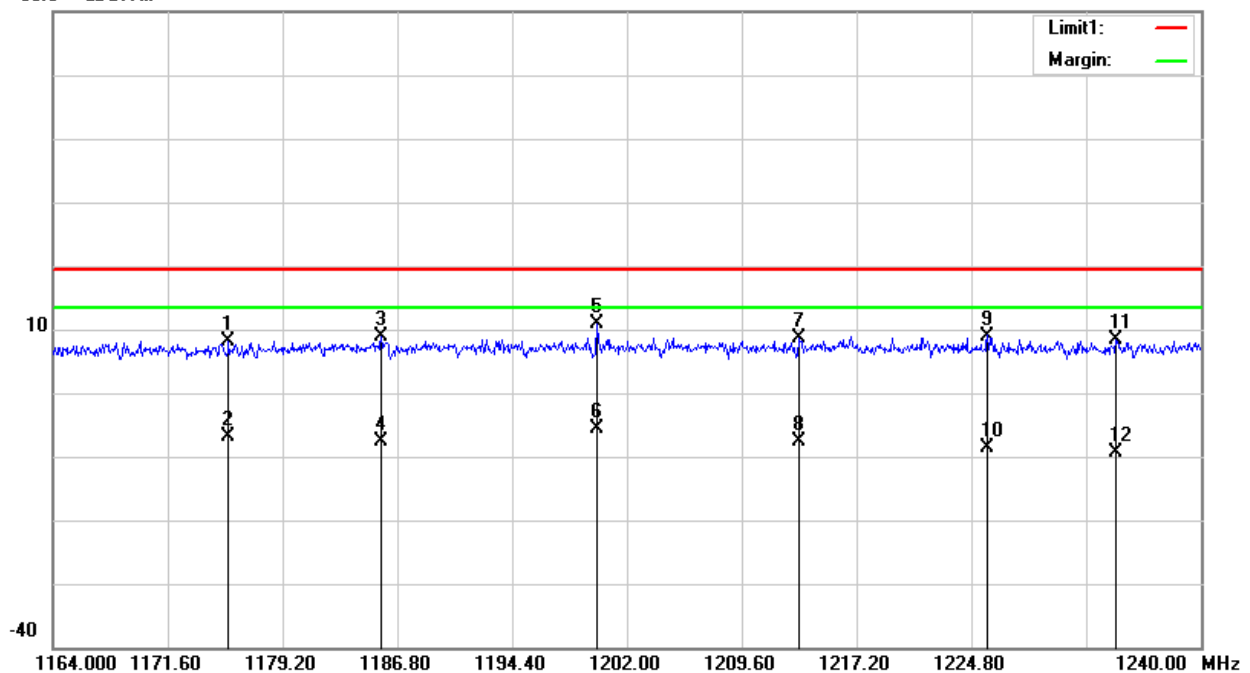
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1175.628	8.78	-0.66	8.12	19.44	-11.32	peak
2	1175.628	-6.32	-0.66	-6.98	19.44	-26.42	RMS
3	1185.736	9.39	-0.56	8.83	19.44	-10.61	peak
4	1185.736	-7.03	-0.56	-7.59	19.44	-27.03	RMS
5	1200.024	11.30	-0.42	10.88	19.44	-8.56	peak
6	1200.024	-5.27	-0.42	-5.69	19.44	-25.13	RMS
7	1213.400	8.97	-0.45	8.52	19.44	-10.92	peak
8	1213.400	-7.14	-0.45	-7.59	19.44	-27.03	RMS
9	1225.864	9.46	-0.46	9.00	19.44	-10.44	peak
10	1225.864	-8.23	-0.46	-8.69	19.44	-28.13	RMS
11	1234.376	8.80	-0.48	8.32	19.44	-11.12	peak
12	1234.376	-8.98	-0.48	-9.46	19.44	-28.90	RMS

Remark:

3. Margin = Result (Result = Reading + Factor) - Limit

4. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2(1559Hz – 1610MHz)	Test distance:	1m

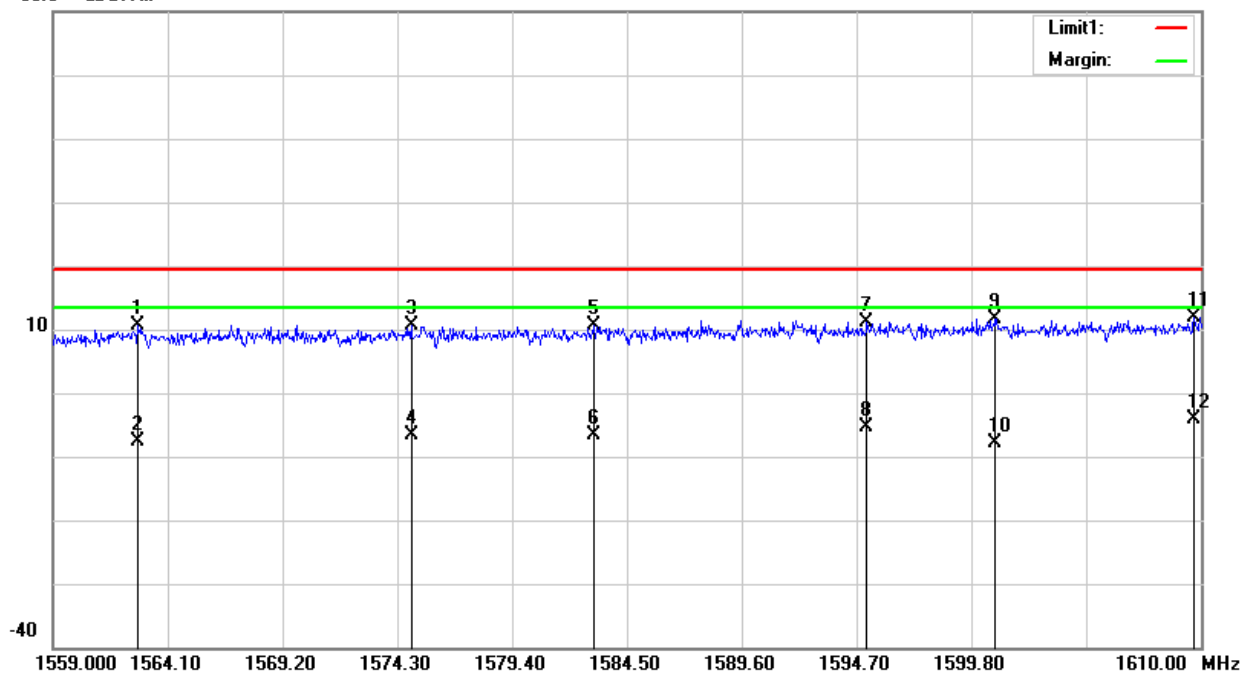
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1562.774	7.47	3.07	10.54	19.44	-8.90	peak
2	1562.774	-10.61	3.07	-7.54	19.44	-26.98	RMS
3	1574.912	7.08	3.46	10.54	19.44	-8.90	peak
4	1574.912	-10.02	3.46	-6.56	19.44	-26.00	RMS
5	1583.021	6.88	3.71	10.59	19.44	-8.85	peak
6	1583.021	-10.38	3.71	-6.67	19.44	-26.11	RMS
7	1595.159	7.17	4.08	11.25	19.44	-8.19	peak
8	1595.159	-9.33	4.08	-5.25	19.44	-24.69	RMS
9	1600.871	7.50	4.24	11.74	19.44	-7.70	peak
10	1600.871	-12.02	4.24	-7.78	19.44	-27.22	RMS
11	1609.694	7.60	4.23	11.83	19.44	-7.61	peak
12	1609.694	-8.26	4.23	-4.03	19.44	-23.47	RMS

Remark:

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

4. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2(1559Hz – 1610MHz)	Test distance:	1m

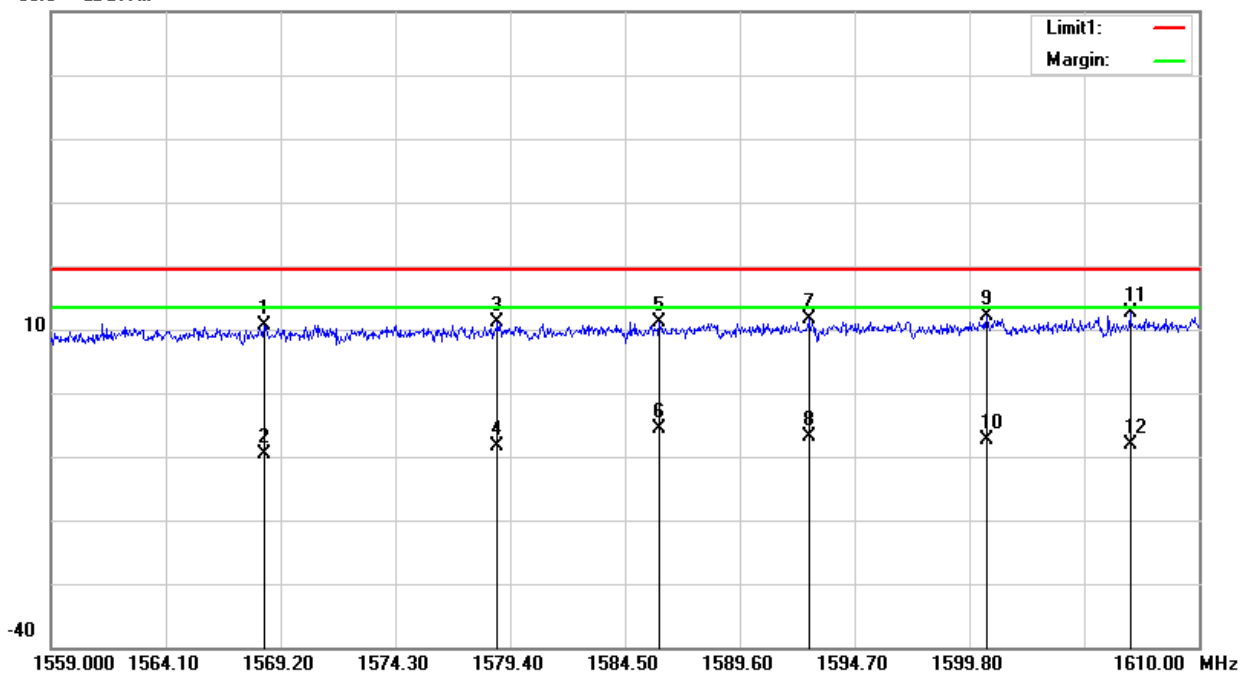
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1568.486	7.49	3.25	10.74	19.44	-8.70	peak
2	1568.486	-12.93	3.25	-9.68	19.44	-29.12	RMS
3	1578.839	7.63	3.57	11.20	19.44	-8.24	peak
4	1578.839	-11.83	3.57	-8.26	19.44	-27.70	RMS
5	1586.030	7.29	3.80	11.09	19.44	-8.35	peak
6	1586.030	-9.49	3.80	-5.69	19.44	-25.13	RMS
7	1592.660	7.58	4.01	11.59	19.44	-7.85	peak
8	1592.660	-10.90	4.01	-6.89	19.44	-26.33	RMS
9	1600.565	7.83	4.24	12.07	19.44	-7.37	peak
10	1600.565	-11.56	4.24	-7.32	19.44	-26.76	RMS
11	1606.940	8.50	4.24	12.74	19.44	-6.70	peak
12	1606.940	-12.47	4.24	-8.23	19.44	-27.67	RMS

Remark:

3. Margin = Result (Result = Reading + Factor) - Limit

4. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3(1164Hz – 1240MHz)	Test distance:	1m

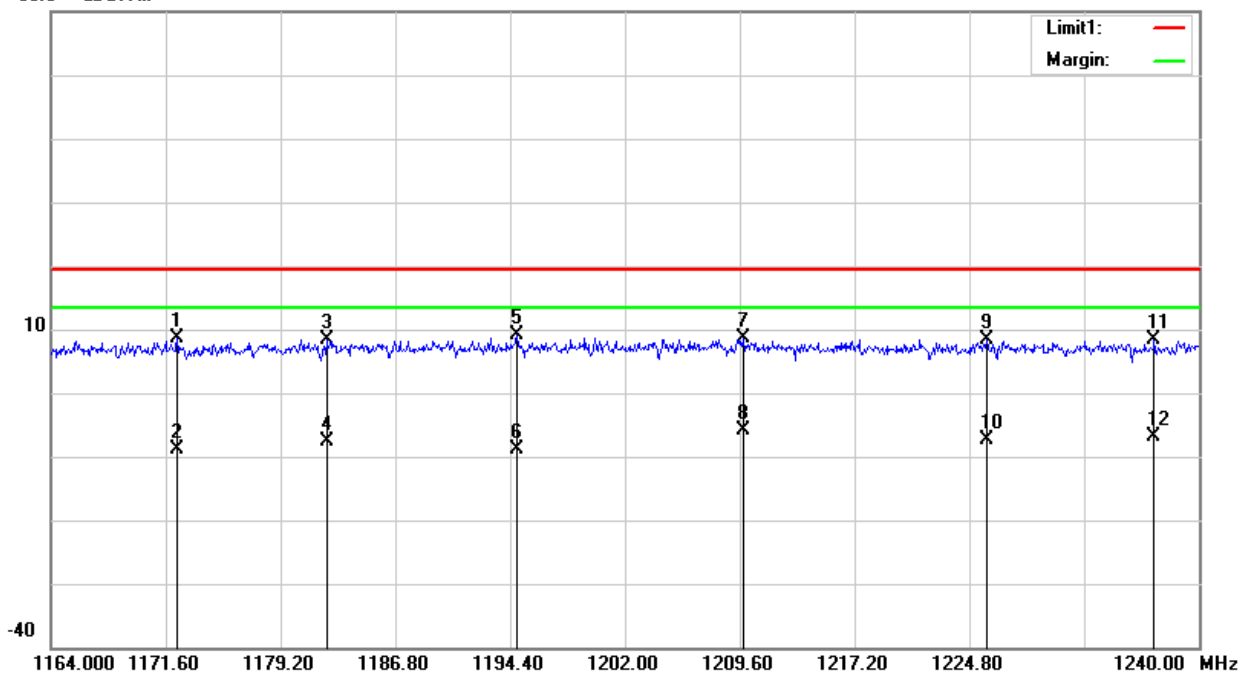
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1172.360	9.26	-0.70	8.56	19.44	-10.88	peak
2	1172.360	-8.27	-0.70	-8.97	19.44	-28.41	RMS
3	1182.240	9.02	-0.60	8.42	19.44	-11.02	peak
4	1182.240	-6.96	-0.60	-7.56	19.44	-27.00	RMS
5	1194.856	9.49	-0.47	9.02	19.44	-10.42	peak
6	1194.856	-8.46	-0.47	-8.93	19.44	-28.37	RMS
7	1209.828	9.16	-0.44	8.72	19.44	-10.72	peak
8	1209.828	-5.45	-0.44	-5.89	19.44	-25.33	RMS
9	1225.940	8.91	-0.46	8.45	19.44	-10.99	peak
10	1225.940	-6.99	-0.46	-7.45	19.44	-26.89	RMS
11	1237.036	8.84	-0.49	8.35	19.44	-11.09	peak
12	1237.036	-6.40	-0.49	-6.89	19.44	-26.33	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3(1164Hz – 1240MHz)	Test distance:	1m

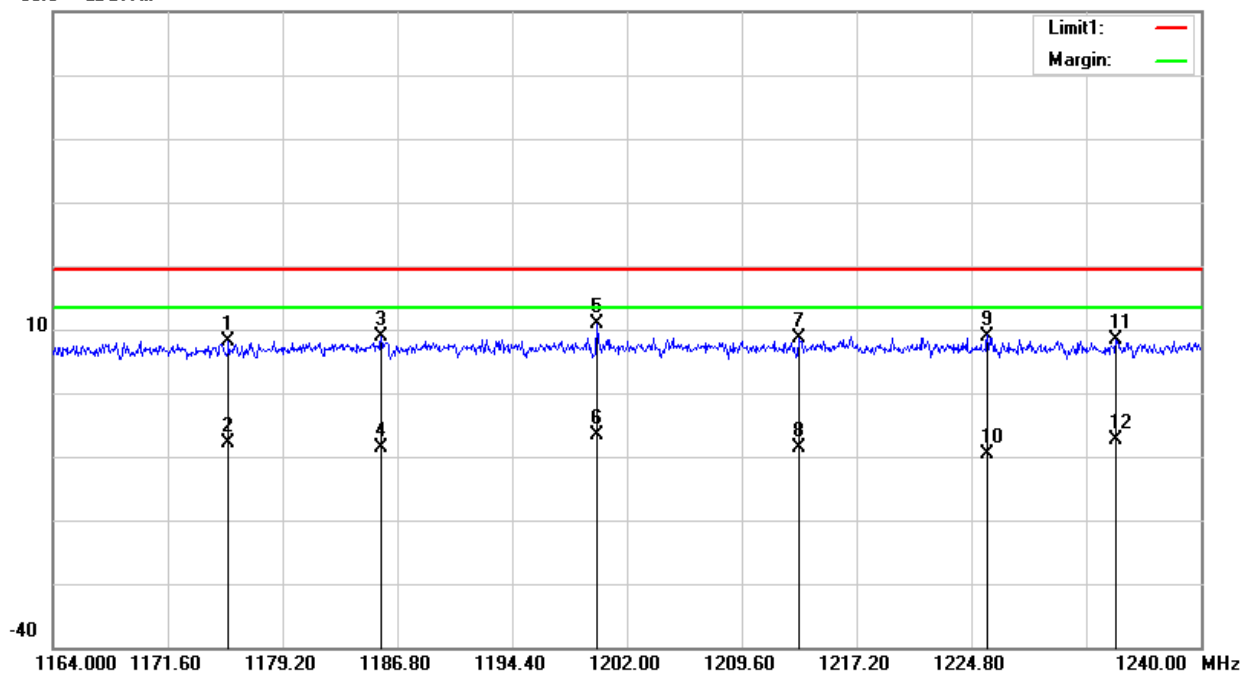
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1175.628	8.78	-0.66	8.12	19.44	-11.32	peak
2	1175.628	-7.32	-0.66	-7.98	19.44	-27.42	RMS
3	1185.736	9.39	-0.56	8.83	19.44	-10.61	peak
4	1185.736	-8.03	-0.56	-8.59	19.44	-28.03	RMS
5	1200.024	11.30	-0.42	10.88	19.44	-8.56	peak
6	1200.024	-6.27	-0.42	-6.69	19.44	-26.13	RMS
7	1213.400	8.97	-0.45	8.52	19.44	-10.92	peak
8	1213.400	-8.14	-0.45	-8.59	19.44	-28.03	RMS
9	1225.864	9.46	-0.46	9.00	19.44	-10.44	peak
10	1225.864	-9.23	-0.46	-9.69	19.44	-29.13	RMS
11	1234.376	8.80	-0.48	8.32	19.44	-11.12	peak
12	1234.376	-6.98	-0.48	-7.46	19.44	-26.90	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3(1559Hz – 1610MHz)	Test distance:	1m

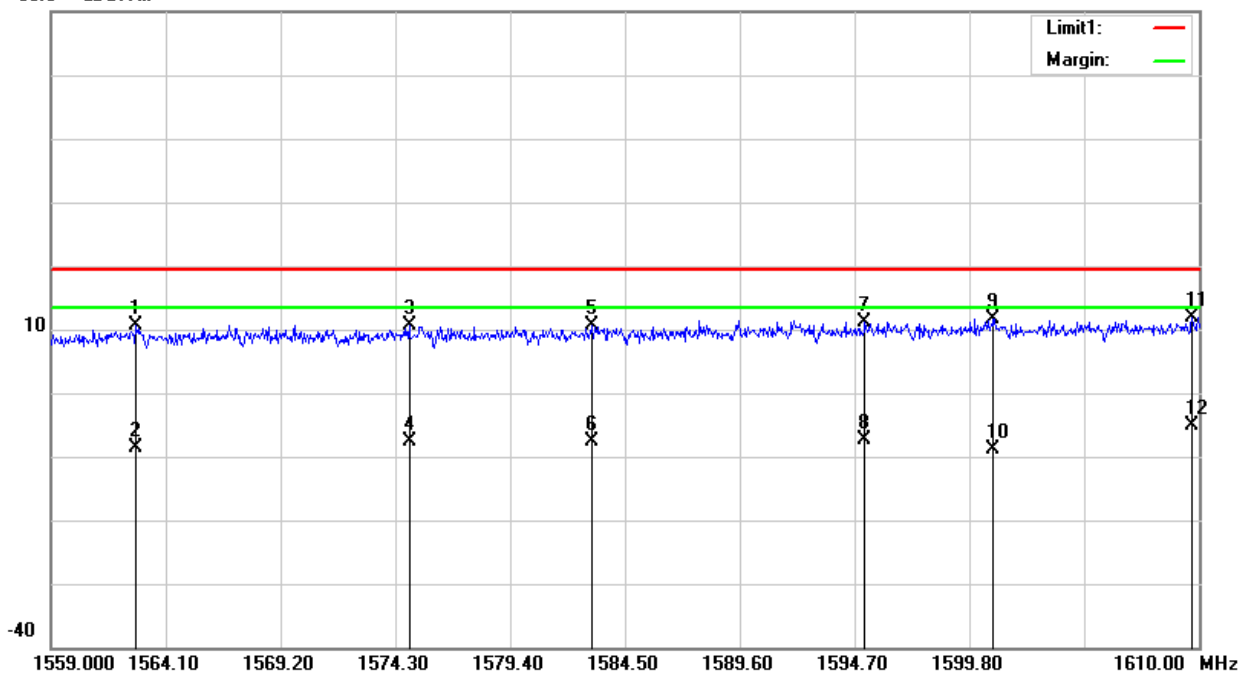
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1562.774	7.47	3.07	10.54	19.44	-8.90	peak
2	1562.774	-11.61	3.07	-8.54	19.44	-27.98	RMS
3	1574.912	7.08	3.46	10.54	19.44	-8.90	peak
4	1574.912	-11.02	3.46	-7.56	19.44	-27.00	RMS
5	1583.021	6.88	3.71	10.59	19.44	-8.85	peak
6	1583.021	-11.38	3.71	-7.67	19.44	-27.11	RMS
7	1595.159	7.17	4.08	11.25	19.44	-8.19	peak
8	1595.159	-11.33	4.08	-7.25	19.44	-26.69	RMS
9	1600.871	7.50	4.24	11.74	19.44	-7.70	peak
10	1600.871	-13.02	4.24	-8.78	19.44	-28.22	RMS
11	1609.694	7.60	4.23	11.83	19.44	-7.61	peak
12	1609.694	-9.26	4.23	-5.03	19.44	-24.47	RMS

Remark:

5. Margin = Result (Result = Reading + Factor) - Limit

6. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

60.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3(1559Hz – 1610MHz)	Test distance:	1m

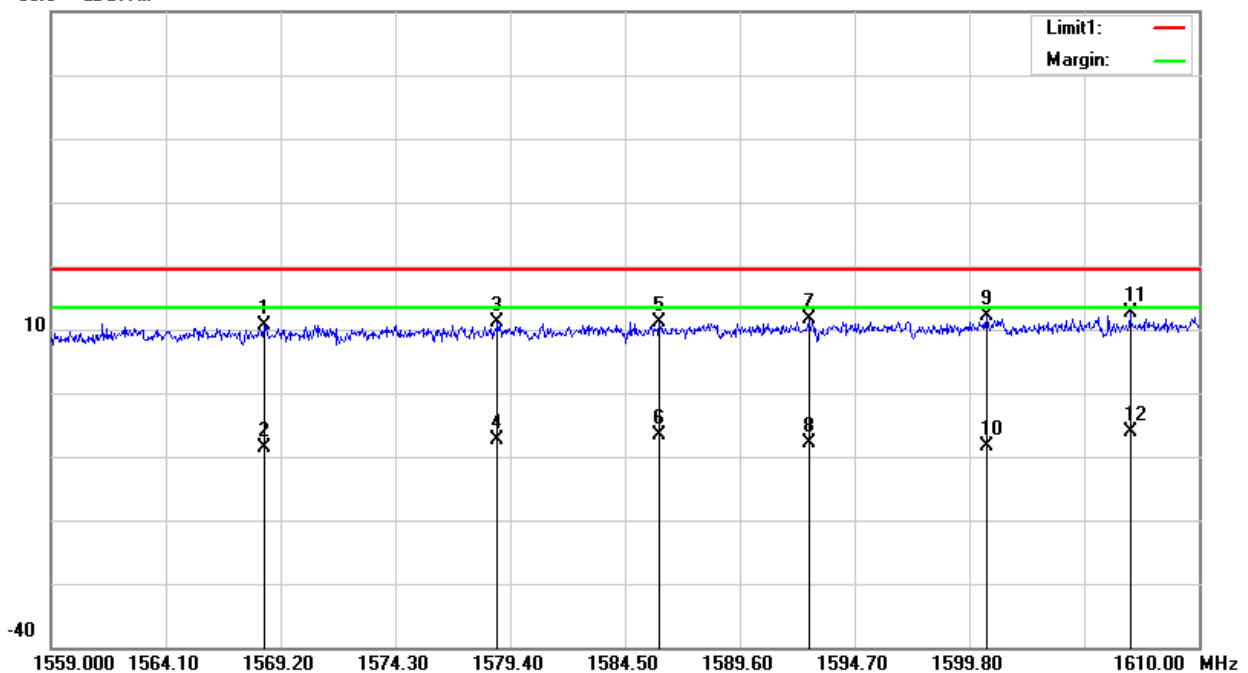
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1568.486	7.49	3.25	10.74	19.44	-8.70	peak
2	1568.486	-11.93	3.25	-8.68	19.44	-28.12	RMS
3	1578.839	7.63	3.57	11.20	19.44	-8.24	peak
4	1578.839	-10.83	3.57	-7.26	19.44	-26.70	RMS
5	1586.030	7.29	3.80	11.09	19.44	-8.35	peak
6	1586.030	-10.49	3.80	-6.69	19.44	-26.13	RMS
7	1592.660	7.58	4.01	11.59	19.44	-7.85	peak
8	1592.660	-11.90	4.01	-7.89	19.44	-27.33	RMS
9	1600.565	7.83	4.24	12.07	19.44	-7.37	peak
10	1600.565	-12.56	4.24	-8.32	19.44	-27.76	RMS
11	1606.940	8.50	4.24	12.74	19.44	-6.70	peak
12	1606.940	-10.47	4.24	-6.23	19.44	-25.67	RMS

Remark:

5. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

60.0 dBuV/m





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

- The measuring distance of 1m shall be used for measurements. The EUT was placed on the top of a rotating 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.
- 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.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.
- The Spectrum Analyzer system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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

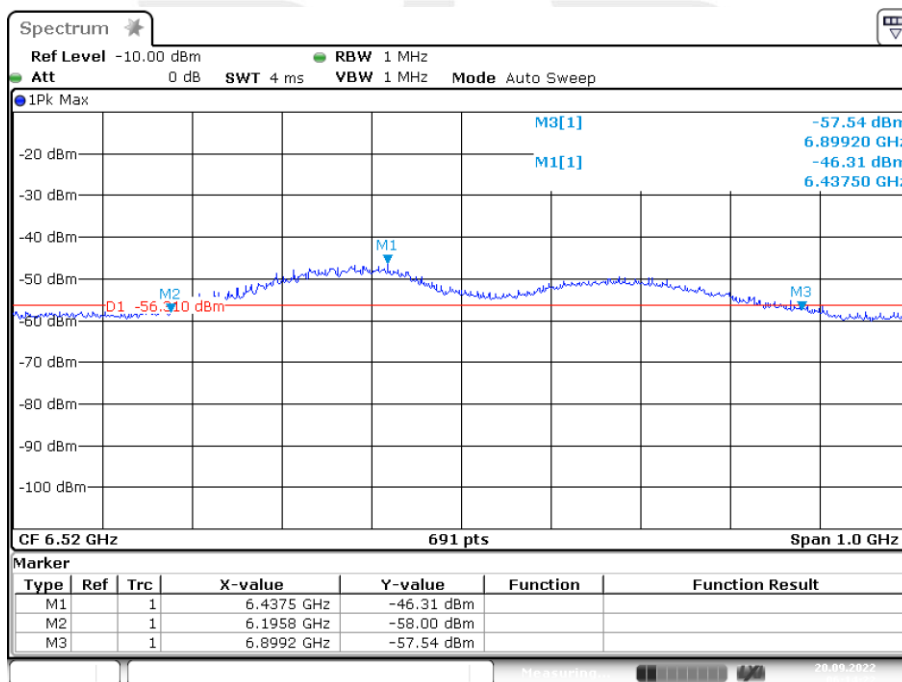


4.6 TEST RESULTS

Temperature:	25 °C	Relative Humidity:	50%
Test Voltage:	DC 3V		

Test Channel	f _M (MHz)	f _L (MHz)	f _H (MHz)	-10dB Bandwidth (MHz)	f _c (MHz)	Fractional Bandwidth (MHz)	Limit	Result
CH1	6437.5	6195.8	6899.2	703.4	6547.5	0.11	-10dB Bandwidth ≥ 500MHz or Fractional Bandwidth ≥ 0.2	Pass
CH2	7197.7	6802.5	7517.6	715.13	7160	0.10	-10dB Bandwidth ≥ 500MHz or Fractional Bandwidth ≥ 0.2	Pass
CH3	7716.3	7280.7	8000.7	720	7640.7	0.09	-10dB Bandwidth ≥ 500MHz or Fractional Bandwidth ≥ 0.2	Pass

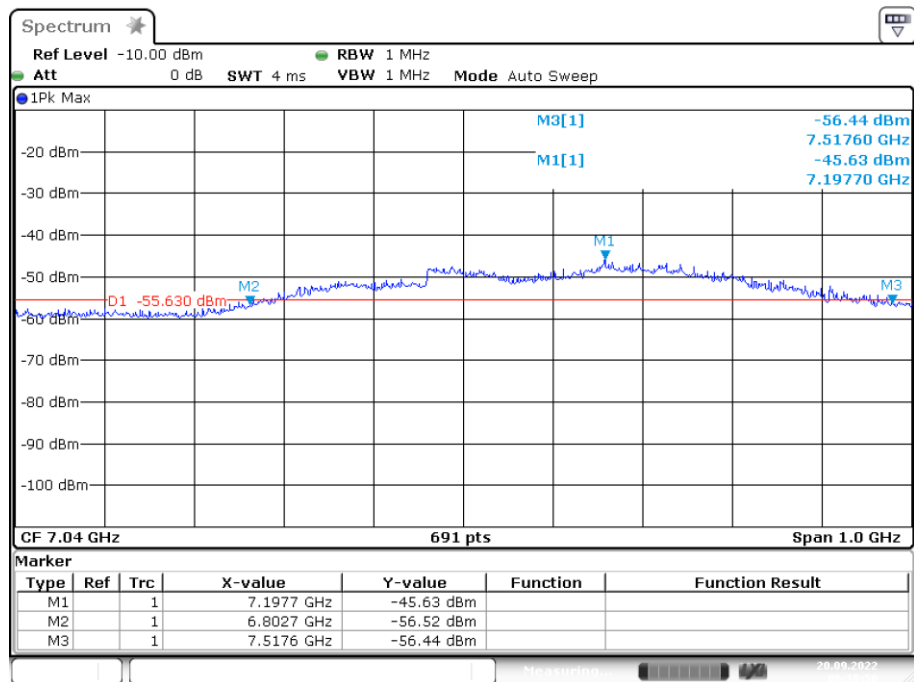
CH 1



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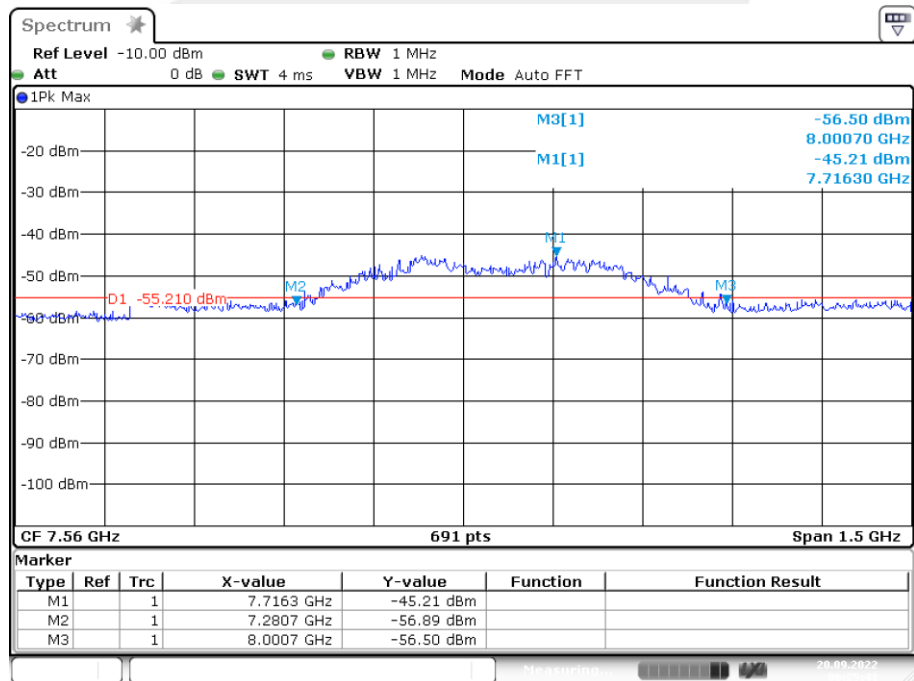


CH 2



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CH 3



Date: 20.SEP.2022 06:25:41



5 PEAK EMISSION WITHIN A 50MHZ BANDWIDTH (FOR 15.517(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

$$E(\text{dBuV/m}) = P(\text{dBm EIRP}) + 95.2 = -34 + 95.2 = 61.2 \text{ dBuV/m}$$

Note: $\text{EIRP}_{1\text{MHz}} = \text{EIRP}_{50\text{MHz}} + 20\log(1\text{MHz} / 50 \text{ MHz}) = 0 \text{ dBm} + -34 \text{ dB} = -34 \text{ dBm}$

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

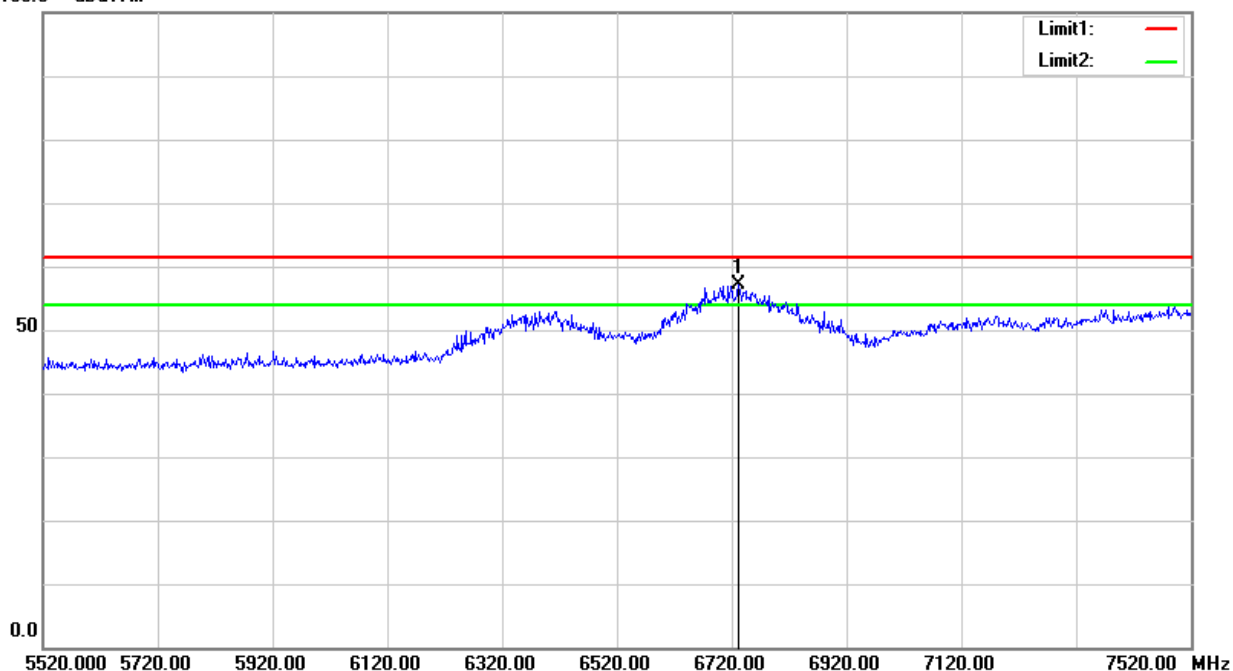
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6732.000	58.15	-0.96	57.19	61.30	-4.11	peak

Remark:

- Margin = Result (Result = Reading + Factor) – Limit
- Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

100.0 dBuV/m





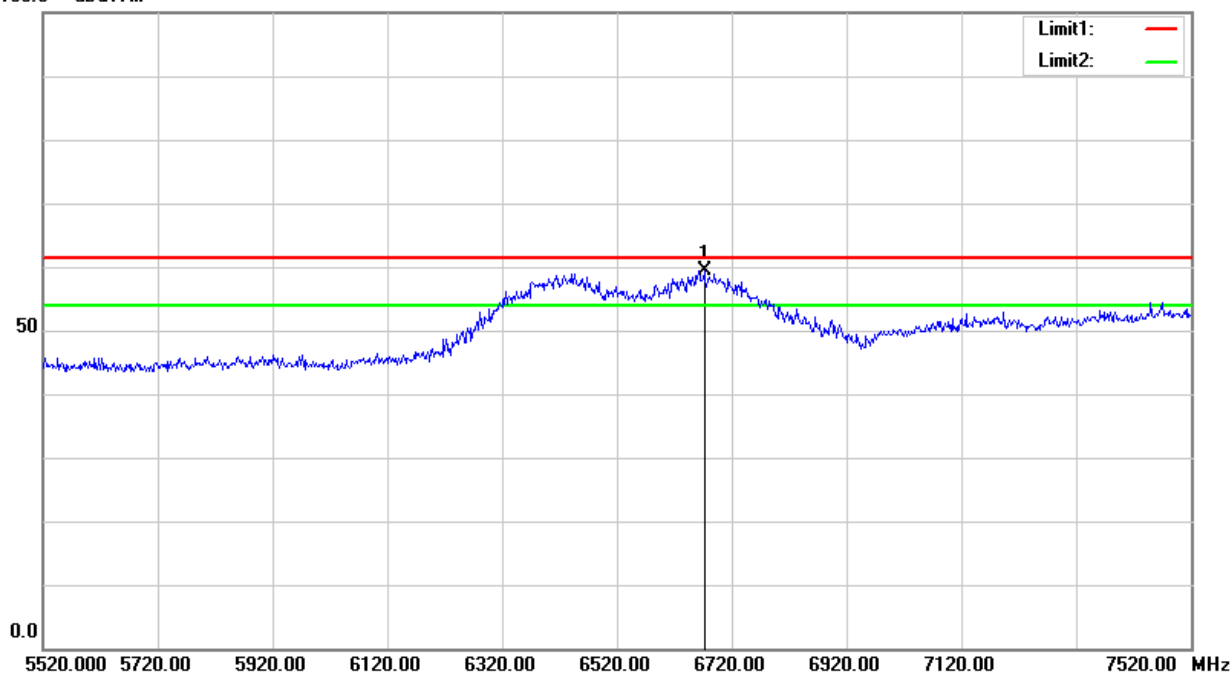
Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 1	Test distance:	3m

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6672.000	60.54	-1.23	59.31	61.30	-1.99	peak

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) – Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 2	Test distance:	3m

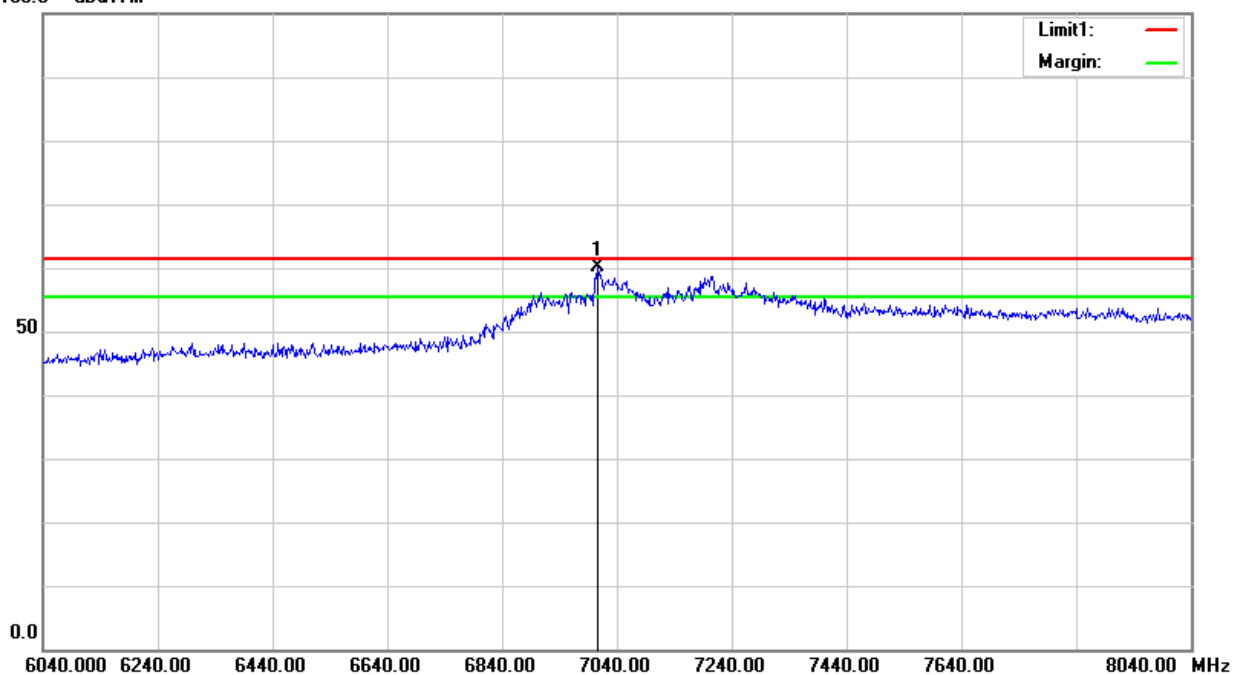
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7006.000	60.42	-0.18	60.24	61.30	-1.06	peak

Remark:

3. Margin = Result (Result =Reading + Factor)-Limit

4. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 2	Test distance:	3m

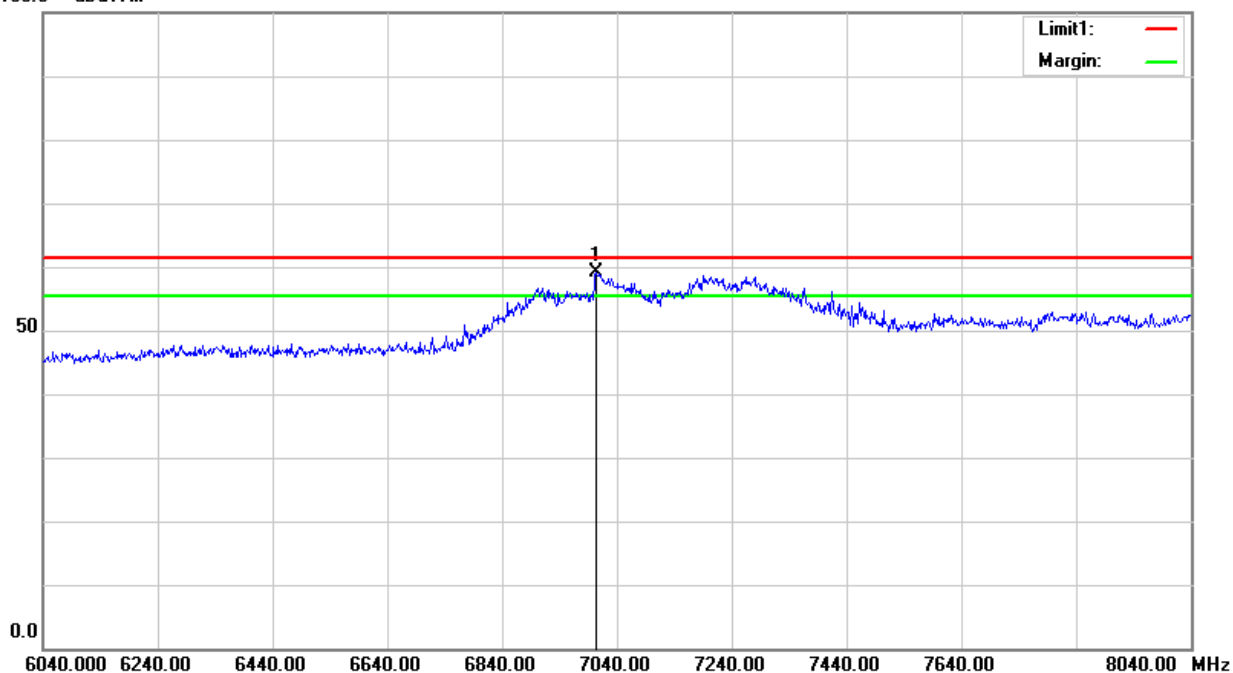
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7004.000	59.31	-0.18	59.13	61.30	-2.17	peak

Remark:

3. Margin = Result (Result = Reading + Factor) - Limit

4. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Horizontal
Test Mode:	CH 3	Test distance:	3m

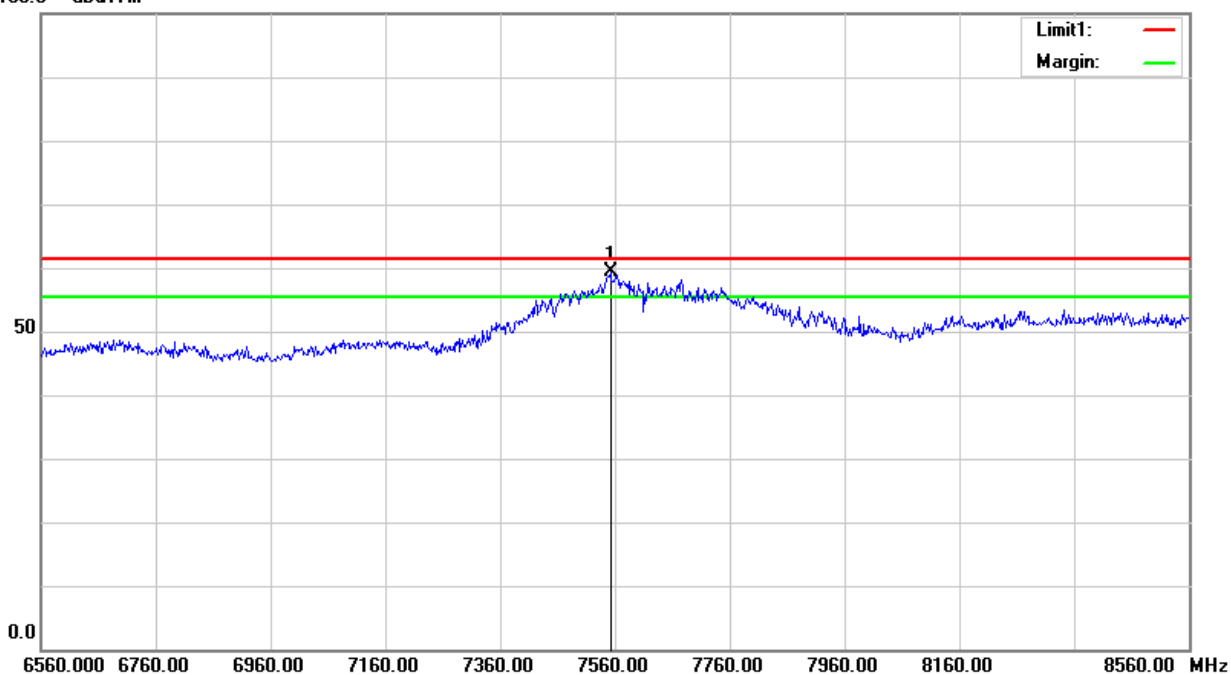
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7552.000	57.59	1.69	59.28	61.30	-2.02	peak

Remark:

5. Margin = Result (Result =Reading + Factor)-Limit

6. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

100.0 dBuV/m





Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 3V	Phase:	Vertical
Test Mode:	CH 3	Test distance:	3m

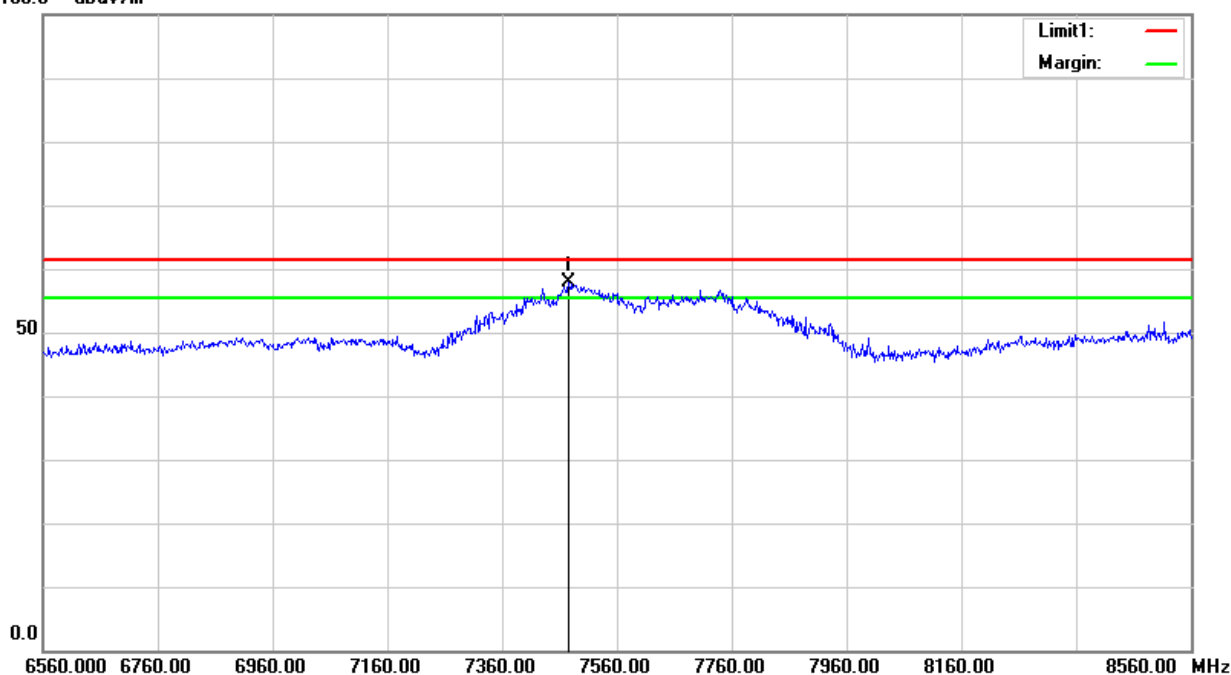
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7476.000	56.24	1.54	57.78	61.30	-3.52	peak

Remark:

5. $\text{Margin} = \text{Result} - (\text{Reading} + \text{Factor}) - \text{Limit}$

6. $\text{Factor} = \text{Antenna factor} + \text{Cable attenuation factor}(\text{cable loss}) - \text{Amplifier gain}$

100.0 dBuV/m





6. ANTENNA REQUIREMENT

6.1 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.

6.2 EUT ANTENNA

The EUT antenna is PCB 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*****

