

CFR 47 FCC PART 15 SUBPART E

TEST REPORT

For

SPECTA Mini

MODEL NUMBER: TQFDUB1

REPORT NUMBER: 4791156651.2-1-RF-2

ISSUE DATE: February 7, 2024

FCC ID: 2BCHV-TQFDUB1

Prepared for

**COGITO TECH COMPANY LIMITED
21/F Tai Yau Building, 181 Johnston Road, Wanchai Hong Kong**

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch

Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

Tel: +86 769 22038881

Fax: +86 769 33244054

Website: www.ul.com

The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	February 7, 2024	Initial Issue	

Summary of Test Results

Test Item	Clause	Limit/Requirement	Result
On Time And Duty Cycle	ANSI C63.10-2013, Clause 12.2	None; for reporting purposes only.	Pass
6db AND 26db EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH	KDB 789033 D02 v02r01 Section C.1	FCC Part 15.407 (a)/(e),	Pass
Conducted Output Power	KDB 789033 D02 v02r01 Section E.3.a (Method PM)	FCC 15.407 (a)	Pass
Power Spectral Density	KDB 789033 D02 v02r01 Section F	FCC 15.407 (a)	Pass
Ac Power Line Conducted Emission	ANSI C63.10-2013, Clause 6.2.	FCC 15.207	Pass
Radiated Emissions And Band Edge Measurement	KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6	FCC 15.407 (b) FCC 15.209 FCC 15.205	Pass
Frequency Stability	ANSI C63.10-2013, Clause 6.8	FCC 15.407 (g)	Pass
Antenna Requirement	/	FCC 47 CFR Part 15.203/ 15.407(a)(1) (2)	Pass

*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

*The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 15 SUBPART E > when <Simple Acceptance> decision rule is applied.

CONTENTS

1. ATTESTATION OF TEST RESULTS.....	6
2. TEST METHODOLOGY.....	7
3. FACILITIES AND ACCREDITATION.....	7
4. CALIBRATION AND UNCERTAINTY	8
4.1. MEASURING INSTRUMENT CALIBRATION	8
4.2. MEASUREMENT UNCERTAINTY.....	8
5. EQUIPMENT UNDER TEST	9
5.1. DESCRIPTION OF EUT	9
5.2. CHANNEL LIST	9
5.3. MAXIMUM OUTPUT POWER.....	12
5.4. TEST CHANNEL CONFIGURATION.....	13
5.5. THE WORSE CASE POWER SETTING PARAMETER	13
5.6. DESCRIPTION OF AVAILABLE ANTENNAS	14
5.7. THE WORSE CASE CONFIGURATIONS.....	14
5.8. DESCRIPTION OF TEST SETUP.....	15
6. MEASURING EQUIPMENT AND SOFTWARE USED.....	16
7. ANTENNA PORT TEST RESULTS	18
7.1. ON TIME AND DUTY CYCLE	18
7.2. 6DB AND 26DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH ...	19
7.3. CONDUCTED OUTPUT POWER	21
7.4. POWER SPECTRAL DENSITY	23
7.5. FREQUENCY STABILITY.....	25
8. RADIATED TEST RESULTS.....	27
8.1. RESTRICTED BANDEDGE	36
8.2. SPURIOUS EMISSIONS (1 GHZ ~ 7 GHZ)	46
8.3. SPURIOUS EMISSIONS (7 GHZ ~ 18 GHZ)	52
8.4. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ).....	82
8.5. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)	85
8.6. SPURIOUS EMISSIONS (26 GHZ ~ 40 GHZ)	87
8.7. SPURIOUS EMISSIONS (30 MHZ ~ 1 GHZ)	89
9. AC POWER LINE CONDUCTED EMISSION	91
10. ANTENNA REQUIREMENT	94
11. TEST DATA.....	95

11.1.	<i>APPENDIX A: EMISSION BANDWIDTH.....</i>	95
11.1.1.	Test Result.....	95
11.1.2.	Test Graphs	96
11.2.	<i>APPENDIX B: OCCUPIED CHANNEL BANDWIDTH.....</i>	106
11.2.1.	Test Result.....	106
11.2.2.	Test Graphs	107
11.3.	<i>APPENDIX C: MAXIMUM CONDUCTED AVERAGE OUTPUT POWER.....</i>	116
11.3.1.	Test Result.....	116
11.4.	<i>APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY</i>	117
11.4.1.	Test Result.....	117
11.4.2.	Test Graphs	118
11.5.	<i>APPENDIX E: FREQUENCY STABILITY.....</i>	127
11.5.1.	Test Result.....	127
11.6.	<i>APPENDIX F: DUTY CYCLE</i>	128
11.6.1.	Test Result.....	128
11.6.2.	Test Graphs	129

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: COGITO TECH COMPANY LIMITED
Address: 21/F Tai Yau Building, 181 Johnston Road, Wanchai Hong Kong

Manufacturer Information

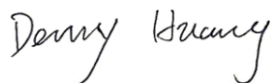
Company Name: COGITO TECH COMPANY LIMITED
Address: 21/F Tai Yau Building, 181 Johnston Road, Wanchai Hong Kong

EUT Information

EUT Name: SPECTA Mini
Model: TQFDUB1
Brand: SPECTA
Sample Received Date: January 15, 2024
Sample Status: Normal
Sample ID: 6847974
Date of Tested: January 29, 2024 to February 5, 2024

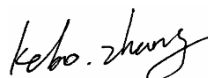
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 15 SUBPART E	Pass

Prepared By:



Denny Huang
Senior Project Engineer

Checked By:



Kebo Zhang
Senior Project Engineer

Approved By:



Stephen Guo
Operations Manager

2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART E, ANSI C63.10-2013, CFR 47 FCC Part 2, KDB 789033 D02 v02r01, KDB414788 D01 Radiated Test Site v01, KDB 662911 D01 Multiple Transmitter Output v02r01.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20192 and R-20202 Shielding Room B, the VCCI registration No. is C-20153 and T-20155
---------------------------	--

Note 1:

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

Note 2:

The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3:

For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.62 dB
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB
Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
	5.37 dB (26 GHz ~ 40 GHz)
Duty Cycle	±0.028%
Emission Bandwidth and 99% Occupied Bandwidth	±0.0196%
Maximum Conducted Output Power	±0.766 dB
Maximum Power Spectral Density Level	±1.22 dB
Frequency Stability	±2.76%
Dynamic Frequency Selection	±1.01 dB
Conducted Band-edge Compliance	±1.328 dB
Conducted Unwanted Emissions In Non-restricted Frequency Bands	±0.746 dB (9 kHz ~ 1 GHz)
	±1.328dB (1 GHz ~ 26 GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	SPECTA Mini
Model	TQFDUB1
Ratings	Input: DC 5 V, 2 A Battery: DC 7.7 V, 17.32 Wh

Radio Technology	SRD 5.8G
Operation Frequency	5.8GHz 1.4 MHz Bandwidth (5728.5 MHz ~ 5844.5 MHz) 5.8GHz 1.4 MHz Bandwidth (CA Mode) (5730.12 MHz ~ 5846.12 MHz) 5.8GHz 3 MHz Bandwidth (5730.5 MHz ~ 5844.5 MHz) 5.8GHz 10 MHz Bandwidth (5732.5 MHz ~ 5844.5 MHz) 5.8GHz 20 MHz Bandwidth (5735.5 MHz ~ 5839.5 MHz)
Modulation	OFDM (QPSK, 16QAM, 64QAM)

5.2. CHANNEL LIST

5.8G 1.4 MHz Bandwidth (5728.5 MHz ~ 5844.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5728.5	17	5760.5	33	5792.5	49	5824.5
2	5730.5	18	5762.5	34	5794.5	50	5826.5
3	5732.5	19	5764.5	35	5796.5	51	5828.5
4	5734.5	20	5766.5	36	5798.5	52	5830.5
5	5736.5	21	5768.5	37	5800.5	53	5832.5
6	5738.5	22	5770.5	38	5802.5	54	5834.5
7	5740.5	23	5772.5	39	5804.5	55	5836.5
8	5742.5	24	5774.5	40	5806.5	56	5838.5
9	5744.5	25	5776.5	41	5808.5	57	5840.5
10	5746.5	26	5778.5	42	5810.5	58	5842.5
11	5748.5	27	5780.5	43	5812.5	59	5844.5
12	5750.5	28	5782.5	44	5814.5	/	/
13	5752.5	29	5784.5	45	5816.5	/	/
14	5754.5	30	5786.5	46	5818.5	/	/
15	5756.5	31	5788.5	47	5820.5	/	/
16	5758.5	32	5790.5	48	5822.5	/	/

5.8G 1.4 MHz Bandwidth CA Mode (5730.12 MHz ~ 5846.12 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5730.12	17	5762.12	33	5794.12	49	5826.12
2	5732.12	18	5764.12	34	5796.12	50	5828.12
3	5734.12	19	5766.12	35	5798.12	51	5830.12
4	5736.12	20	5768.12	36	5800.12	52	5832.12
5	5738.12	21	5770.12	37	5802.12	53	5834.12
6	5740.12	22	5772.12	38	5804.12	54	5836.12
7	5742.12	23	5774.12	39	5806.12	55	5838.12
8	5744.12	24	5776.12	40	5808.12	56	5840.12
9	5746.12	25	5778.12	41	5810.12	57	5842.12
10	5748.12	26	5780.12	42	5812.12	58	5844.12
11	5750.12	27	5782.12	43	5814.12	59	5846.12
12	5752.12	28	5784.12	44	5816.12	/	/
13	5754.12	29	5786.12	45	5818.12	/	/
14	5756.12	30	5788.12	46	5820.12	/	/
15	5758.12	31	5790.12	47	5822.12	/	/
16	5760.12	32	5792.12	48	5824.12	/	/

5.8G 3 MHz Bandwidth Mode (5730.5 MHz ~ 5844.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5730.5	11	5760.5	21	5790.5	31	5820.5
2	5733.5	12	5763.5	22	5793.5	32	5823.5
3	5736.5	13	5766.5	23	5796.5	33	5826.5
4	5739.5	14	5769.5	24	5799.5	34	5829.5
5	5742.5	15	5772.5	25	5802.5	35	5832.5
6	5745.5	16	5775.5	26	5805.5	36	5835.5
7	5748.5	17	5778.5	27	5808.5	37	5838.5
8	5751.5	18	5781.5	28	5811.5	38	5841.5
9	5754.5	19	5784.5	29	5814.5	39	5844.5
10	5757.5	20	5787.5	30	5817.5	/	/

5.8G 10 MHz Bandwidth (5732.5 MHz ~ 5844.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5732.5	30	5761.5	59	5790.5	88	5819.5
2	5733.5	31	5762.5	60	5791.5	89	5820.5
3	5734.5	32	5763.5	61	5792.5	90	5821.5
4	5735.5	33	5764.5	62	5793.5	91	5822.5
5	5736.5	34	5765.5	63	5794.5	92	5823.5
6	5737.5	35	5766.5	64	5795.5	93	5824.5
7	5738.5	36	5767.5	65	5796.5	94	5825.5
8	5739.5	37	5768.5	66	5797.5	95	5826.5
9	5740.5	38	5769.5	67	5798.5	96	5827.5
10	5741.5	39	5770.5	68	5799.5	97	5828.5
11	5742.5	40	5771.5	69	5800.5	98	5829.5
12	5743.5	41	5772.5	70	5801.5	99	5830.5
13	5744.5	42	5773.5	71	5802.5	100	5831.5
14	5745.5	43	5774.5	72	5803.5	101	5832.5
15	5746.5	44	5775.5	73	5804.5	102	5833.5
16	5747.5	45	5776.5	74	5805.5	103	5834.5
17	5748.5	46	5777.5	75	5806.5	104	5835.5
18	5749.5	47	5778.5	76	5807.5	105	5836.5
19	5750.5	48	5779.5	77	5808.5	106	5837.5
20	5751.5	49	5780.5	78	5809.5	107	5838.5
21	5752.5	50	5781.5	79	5810.5	108	5839.5
22	5753.5	51	5782.5	80	5811.5	109	5840.5
23	5754.5	52	5783.5	81	5812.5	110	5841.5
24	5755.5	53	5784.5	82	5813.5	111	5842.5
25	5756.5	54	5785.5	83	5814.5	112	5843.5
26	5757.5	55	5786.5	84	5815.5	113	5844.5
27	5758.5	56	5787.5	85	5816.5	/	/
28	5759.5	57	5788.5	86	5817.5	/	/
29	5760.5	58	5789.5	87	5818.5	/	/

5.8G 20 MHz Bandwidth (5735.5 MHz ~ 5839.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5735.5	28	5762.5	55	5789.5	82	5816.5
2	5736.5	29	5763.5	56	5790.5	83	5817.5
3	5737.5	30	5764.5	57	5791.5	84	5818.5
4	5738.5	31	5765.5	58	5792.5	85	5819.5
5	5739.5	32	5766.5	59	5793.5	86	5820.5
6	5740.5	33	5767.5	60	5794.5	87	5821.5
7	5741.5	34	5768.5	61	5795.5	88	5822.5
8	5742.5	35	5769.5	62	5796.5	89	5823.5
9	5743.5	36	5770.5	63	5797.5	90	5824.5
10	5744.5	37	5771.5	64	5798.5	91	5825.5
11	5745.5	38	5772.5	65	5799.5	92	5826.5
12	5746.5	39	5773.5	66	5800.5	93	5827.5
13	5747.5	40	5774.5	67	5801.5	94	5828.5
14	5748.5	41	5775.5	68	5802.5	95	5829.5
15	5749.5	42	5776.5	69	5803.5	96	5830.5
16	5750.5	43	5777.5	70	5804.5	97	5831.5
17	5751.5	44	5778.5	71	5805.5	98	5832.5
18	5752.5	45	5779.5	72	5806.5	99	5833.5
19	5753.5	46	5780.5	73	5807.5	100	5834.5
20	5754.5	47	5781.5	74	5808.5	101	5835.5
21	5755.5	48	5782.5	75	5809.5	102	5836.5
22	5756.5	49	5783.5	76	5810.5	103	5837.5
23	5757.5	50	5784.5	77	5811.5	104	5838.5
24	5758.5	51	5785.5	78	5812.5	105	5839.5
25	5759.5	52	5786.5	79	5813.5	/	/
26	5760.5	53	5787.5	80	5814.5	/	/
27	5761.5	54	5788.5	81	5815.5	/	/

5.3. MAXIMUM OUTPUT POWER

SRD 5G	Frequency (MHz)	Maximum Conducted Average Output Power (dBm)
1.4 MHz Mode	5728.5 MHz ~ 5844.5 MHz	12.18
1.4 MHz CA Mode	5730.12 MHz ~ 5846.12 MHz	12.30
3 MHz Mode	5730.5 MHz ~ 5844.5 MHz	12.18
10 MHz Mode	5732.5 MHz ~ 5844.5 MHz	21.77
20 MHz Mode	5735.5 MHz ~ 5839.5 MHz	21.95

5.4. TEST CHANNEL CONFIGURATION

SRD 5.8G	Test Channel Number	Frequency
1.4 MHz Mode	CH 1(Low Channel), CH 30(MID Channel), CH 60(High Channel)	5728.5 MHz, 5786.5 MHz, 5844.5 MHz
1.4 MHz CA Mode	CH 1(Low Channel), CH 30(MID Channel), CH 60(High Channel)	5730.12 MHz, 5788.12 MHz, 5846.12 MHz
3 MHz Mode	CH 1(Low Channel), CH 20(MID Channel), CH 40(High Channel)	5730.5 MHz, 5784.5 MHz, 5844.5 MHz
10 MHz Mode	CH 1(Low Channel), CH 58(MID Channel), CH 115(High Channel)	5732.5 MHz, 5787.5 MHz, 5844.5 MHz
20 MHz Mode	CH 1(Low Channel), CH 53(MID Channel), CH 105(High Channel)	5735.5 MHz, 5787.5 MHz, 5839.5 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 5728.5 ~ 5846.12 MHz Band				
Test Software		SdrConsole		
Mode	Transmit Antenna Number	Test Software setting value		
		NCB: 1.4 MHz/1.4 MHz CA/3 MHz/10 MHz/20 MHz		
		Low Channel	MID Channel	High Channel
1.4 MHz Mode	1	-2	0	0
	2	-2	0	0
1.4 MHz Mode CA	1	-1	-1	0
	2	-1	-1	0
3 MHz Mode	1	1	1	3
	2	1	1	3
10 MHz Mode	1	0	0	2
	2	0	0	2
20 MHz Mode	1	0	0	2
	2	0	0	2

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	Maximum Antenna Gain (dBi)
1	5728.5 ~ 5846.12	Dipole Antenna	3.5
2	5728.5 ~ 5846.12	Dipole Antenna	3.5

Test Mode	Transmit and Receive Mode	Description
1.4 MHz Mode	☒ 1TX, 2RX (Note 3)	ANT 1 & 2 can be used as transmitting antenna. ANT 1 & 2 can be used as receiving antenna.
1.4 MHz CA Mode	☒ 1TX, 2RX (Note 3)	ANT 1 & 2 can be used as transmitting antenna. ANT 1 & 2 can be used as receiving antenna.
3 MHz Mode	☒ 1TX, 2RX (Note 3)	ANT 1 & 2 can be used as transmitting antenna. ANT 1 & 2 can be used as receiving antenna.
10 MHz Mode	☒ 1TX, 2RX (Note 3)	ANT 1 & 2 can be used as transmitting antenna. ANT 1 & 2 can be used as receiving antenna.
20 MHz Mode	☒ 1TX, 2RX (Note 3)	ANT 1 & 2 can be used as transmitting antenna. ANT 1 & 2 can be used as receiving antenna.

Note: 1. The value of the antenna gain was declared by customer.
2. 2.4GHz and 5.8GHz radio doesn't support simultaneous transmission.
3. The EUT has two antennas, but only one antenna was used as transmit antenna during used.

5.7. THE WORSE CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):
Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst case Data Rates declared by the customer:

SRD 5G-1.4 MHz Mode/QPSK
SRD 5G-1.4 MHz CA Mode/QPSK
SRD 5G-3 MHz Mode/QPSK
SRD 5G-10 MHz Mode/QPSK
SRD 5G-20 MHz Mode/QPSK

The EUT has 2 separate antennas which correspond to 2 separate antenna ports. Core 1 and Core 2 correspond to antenna 1 and antenna 2 respectively.

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.

The EUT has two antennas, but only one antenna was enabled during used.

Radiated emissions tests were performed with both two antennas, but only the worst data (ANT2) was recorded in the report.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Lenovo	E42-80	/
2	Adapter Power	/	QC18-US	Input: AC 100 ~ 240 V, 50/60 Hz, 0.3 A Output: DC 5 V, 3 A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	Type C	Unshielded	1.0	/

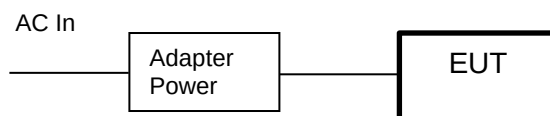
ACCESSORIES

Item	Accessory	Brand Name	Model Name	Description
/	/	/	/	/

TEST SETUP

The EUT can work in engineering mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS



6. MEASURING EQUIPMENT AND SOFTWARE USED

R&S TS 8997 Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Power sensor, Power Meter	R&S	OSP120	100921	Mar.31,2023	Mar.30,2024
Vector Signal Generator	R&S	SMBV100A	261637	Oct.12, 2023	Oct.11, 2024
Signal Generator	R&S	SMB100A	178553	Oct.12, 2023	Oct.11, 2024
Signal Analyzer	R&S	FSV40	101118	Oct.12, 2023	Oct.11, 2024
Software					
Description	Manufacturer		Name	Version	
For R&S TS 8997 Test System	Rohde & Schwarz		EMC 32	10.60.10	
Tonsend RF Test System					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
PXA Signal Analyzer	Keysight	N9030A	MY55410512	Oct.12, 2023	Oct.11, 2024
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.12, 2023	Oct.11, 2024
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.12, 2023	Oct.11, 2024
DC power supply	Keysight	E3642A	MY55159130	Oct.12, 2023	Oct.11, 2024
Temperature & Humidity Chamber	SANMOOD	SG-80-CC-2	2088	Oct.12, 2023	Oct.11, 2024
Attenuator	Aglient	8495B	2814a12853	Oct.12, 2023	Oct.11, 2024
RF Control Unit	Tonscend	JS0806-2	23B80620666	April 18, 2023	April 17, 2024
Software					
Description	Manufacturer	Name		Version	
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System		V3.2.22	

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.13, 2023	Oct.12, 2024
Two-Line V-Network	R&S	ENV216	101983	Oct.13, 2023	Oct.12, 2024
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Oct.13, 2023	Oct.12, 2024
Software					
Description		Manufacturer	Name	Version	
Test Software for Conducted Emissions		Farad	EZ-EMC	Ver. UL-3A1	

Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.12, 2023	Oct.11, 2024
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.12, 2023	Oct.11, 2024
EMI Measurement Receiver	R&S	ESR26	101377	Oct.12, 2023	Oct.11, 2024
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.12, 2023	Oct.11, 2024
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.12, 2023	Oct.11, 2024
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.12, 2023	Oct.11, 2024
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.12, 2023	Oct.11, 2024
Highpass Filter	Wainwright	WHKX10-5850-6500-1800-40SS	4	Oct.12, 2023	Oct.11, 2024
Band Reject Filter	Wainwright	WRCJV12-5695-5725-5850-5880-40SS	4	Oct.12, 2023	Oct.11, 2024
Software					
Description		Manufacturer	Name	Version	
Test Software for Radiated Emissions		Farad	EZ-EMC	Ver. UL-3A1	

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

LIMITS

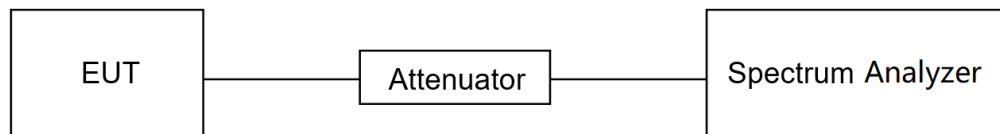
None; for reporting purposes only.

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.B.

The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value. Set VBW $\geq$ RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4 °C	Relative Humidity	64.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

TEST RESULTS

Please refer to section "Test Data" - Appendix F

7.2. 6DB AND 26DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
26 dB Emission Bandwidth	For reporting purposes only.	5150 ~ 5250
6 dB Emission Bandwidth	The minimum 6 dB emission bandwidth shall be 500 kHz.	5725 ~ 5850
99 % Occupied Bandwidth	For reporting purposes only.	5150 ~ 5825 (For ISSED)

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.C1. for 26 dB Emission Bandwidth; section II.C2. for 6 dB Emission Bandwidth; section II.D. for 99 % Occupied Bandwidth.

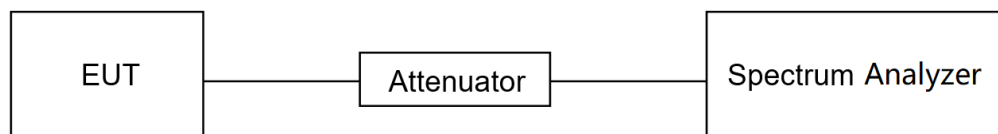
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Emission Bandwidth: RBW=100 kHz For 26 dB Emission bandwidth: approximately 1 % of the EBW. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW.
VBW	For 6 dB Bandwidth: $\geq 3 \times \text{RBW}$ For 26 dB Bandwidth: $> 3 \times \text{RBW}$ For 99 % Bandwidth: $> 3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6/26 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4 °C	Relative Humidity	64.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

TEST RESULTS

Please refer to section "Test Data" - Appendix A&B

7.3. CONDUCTED OUTPUT POWER

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Outdoor Access Point: 1 W (30 dBm) ☐ Indoor Access Point: 1 W (30 dBm) ☐ Fixed Point-To-Point Access Points: 1 W (30 dBm) ☐ Client Devices: 250 mW (24 dBm)	5150 ~ 5250
	Shall not exceed 1 Watt (30 dBm).	5725 ~ 5850

Note:

The above limits are based upon the maximum antenna gain does not exceed 6 dBi.

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.E.

Method SA-2 (trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction.):

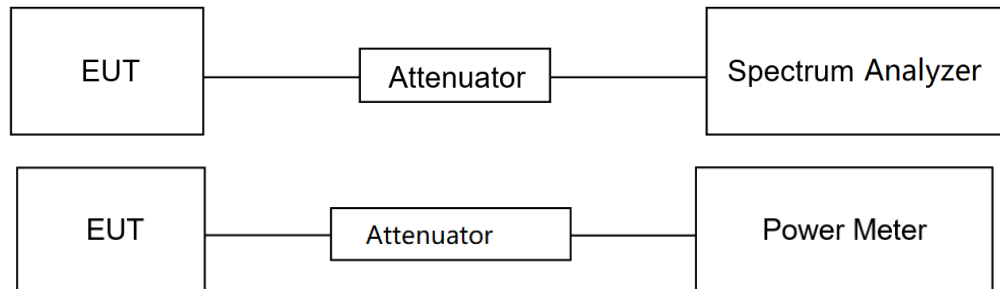
- Measure the duty cycle D of the transmitter output signal.
- Set span to encompass the entire 26 dB EBW or 99% OBW of the signal.
- Set RBW = 1 MHz.
- Set VBW $\geq$ 3 MHz.
- Number of points in sweep $\geq$ $[2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq$ RBW / 2, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- Do not use sweep triggering. Allow the sweep to “free run.”
- Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
- Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.
- Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add $[10 \log (1 / 0.25)] = 6$ dB if the duty cycle is 25%.

Method PM (Measurement using an RF average power meter):

- Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
 - The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
 - At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.

- c. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- (ii) If the transmitter does not transmit continuously, measure the duty cycle, x , of the transmitter output signal as described in II.B.
- (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
- (iv) Adjust the measurement in dBm by adding $10 \log (1/x)$ where x is the duty cycle (e.g., $10 \log (1/0.25)$ if the duty cycle is 25 %).

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4 °C	Relative Humidity	64.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

TEST RESULTS

Please refer to section "Test Data" - Appendix C

7.4. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	☐ Outdoor Access Point: 17 dBm/MHz ☐ Indoor Access Point: 17 dBm/MHz ☐ Fixed Point-To-Point Access Points: 17 dBm/MHz ☐ Client Devices: 11 dBm/MHz	5150 ~ 5250
	30 dBm/500kHz	5725 ~ 5850

ISED RSS-247 ISSUE 2		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.	5150 ~ 5250
	30 dBm / 500 kHz	5725 ~ 5850

Note:

The above limits are based upon the maximum antenna gain does not exceed 6 dBi.
If transmitting antennas of directional gain greater than 6 dBi are used, maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.F.

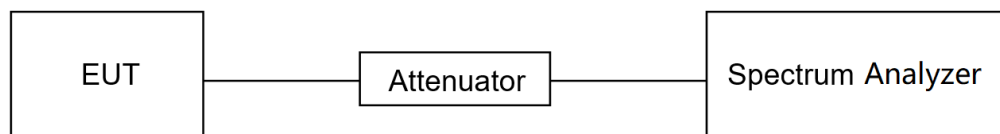
Connect the EUT to the spectrum analyzer and use the following settings:

For U-NII-3:

Center Frequency	The center frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

Allow trace to fully stabilize and use the peak search function on the instrument to find the peak of the spectrum and record its value.

Add $10 \log (1/x)$, where x is the duty cycle, to the peak of the spectrum, the result is the Maximum PSD over 1 MHz / 500 kHz reference bandwidth.

TEST SETUP**TEST ENVIRONMENT**

Temperature	23.4 °C	Relative Humidity	64.5%
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

TEST RESULTS

Please refer to section "Test Data" - Appendix D

7.5. FREQUENCY STABILITY

LIMITS

The frequency of the carrier signal shall be maintained within band of operation.

TEST PROCEDURE

1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between 0 °C ~ 40 °C (declared by customer).
2. The temperature was incremented by 10 °C intervals and the unit allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.
3. The primary supply voltage is varied from 85 % to 115 % of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Connect the EUT to the spectrum analyzer and use the following settings:

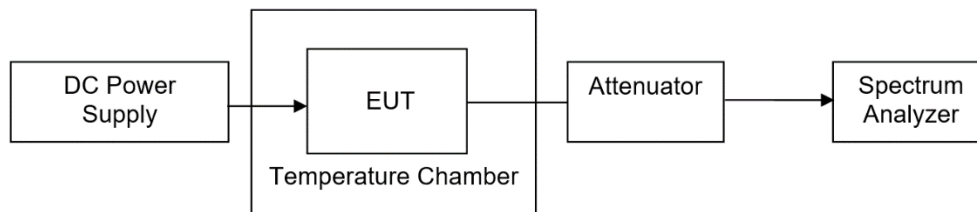
Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	10 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

4. While maintaining a constant temperature inside the environmental chamber, turn the EUT on and record the operating frequency at startup, and at 2 minutes, 5minutes, and 10 minutes after the EUT is energized.
5. Allow the trace to stabilize, find the peak value of the power envelope and record the frequency, then calculated the frequency drift.

TEST ENVIRONMENT

	Normal Test Conditions	Extreme Test Conditions
Relative Humidity	20 % ~ 75 %	/
Atmospheric Pressure	100 kPa ~ 102 kPa	/
Temperature	T_N (Normal Temperature): 25.1 °C	T_L (Low Temperature): 0 °C
		T_H (High Temperature): 40 °C
Supply Voltage	V_N (Normal Voltage): DC 5 V	V_L (Low Voltage): DC 4.25 V
		V_H (High Voltage): DC 5.75 V

TEST SETUP



TEST ENVIRONMENT

Temperature	23.4°C	Relative Humidity	64.5%
Atmosphere Pressure	101kPa	Test Voltage	DC 5 V

TEST RESULTS

Please refer to section "Test Data" - Appendix E

8. RADIATED TEST RESULTS

LIMITS

Refer to CFR 47 FCC §15.205, §15.209 and §15.407 (b).

Refer to ISED RSS-GEN Clause 8.9, Clause 8.10 and ISED RSS-247 6.2.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m	
		Quasi-Peak	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
		74	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

FCC Restricted bands of operation refer to FCC §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

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

²Above 38.6c

Limits of unwanted/undesirable emission out of the restricted bands refer to CFR 47 FCC §15.407 (b) and ISSED RSS-247 6.2.

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1GHz)		
Frequency Range (MHz)	EIRP Limit	Field Strength Limit (dBuV/m) at 3 m
5150~5250 MHz	PK: -27 (dBm/MHz)	PK:68.2(dBμV/m)
5725~5850 MHz	PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK: 105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK: 122.2 (dBμV/m) *4
Note: *1 beyond 75 MHz or more above of the band edge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.		

TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyzer

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

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.
6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.
8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y-51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

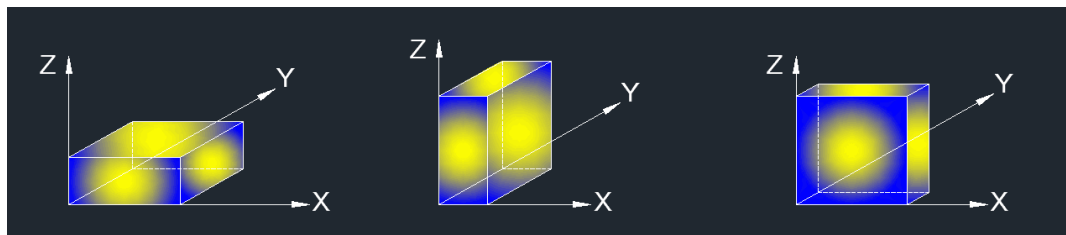
Above 1 GHz

The setting of the spectrum analyzer

RBW	1 MHz
VBW	PEAK: 3 MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.G.3 ~ II.G.6.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 1.5 m above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1. ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



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

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

For Restricted Bandedge:

Note:

1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. PK=Peak: Peak detector.
4. AV=Average: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
8. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious emission (9 kHz ~ 30 MHz):

Note:

1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
4. All modes have been tested, but only the worst data was recorded in the report.
5. $\text{dBuA/m} = \text{dBuV/m} - 20\log_{10}[120\pi] = \text{dBuV/m} - 51.5$

For Radiate Spurious Emission (30 MHz ~ 1 GHz):

Note:

1. Result Level = Read Level + Correct Factor.
2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
3. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious Emission (1 GHz ~ 7 GHz):

1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27 dBm/MHz (68.2 dBuV/m) limit.
9. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious Emission (7 GHz ~ 18 GHz):

Note:

1. Peak Result = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/T_{on}$, where: T_{on} is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27 dBm/MHz (68.2 dBuV/m) limit.
9. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious emission (18 GHz ~ 26 GHz):

Note:

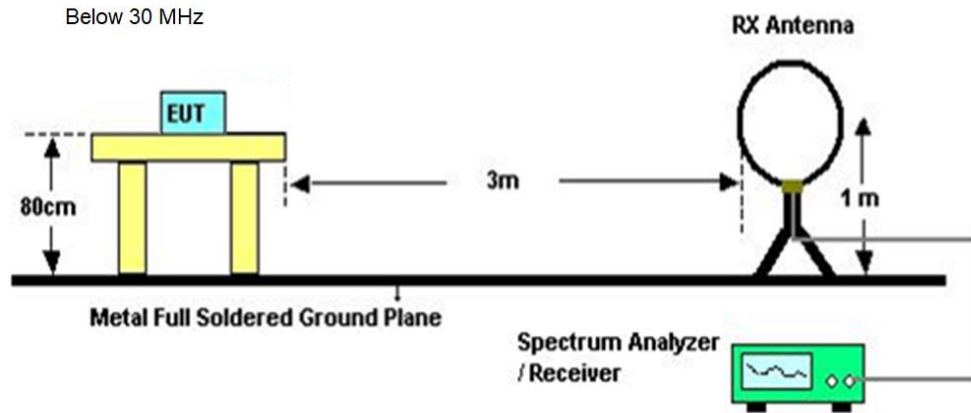
1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious emission (26 GHz ~ 40 GHz):

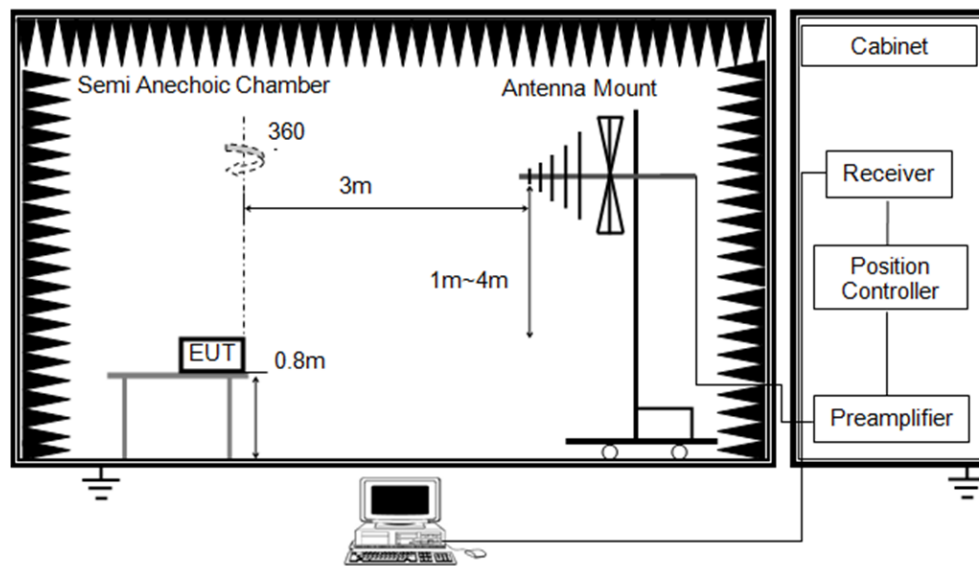
Note:

1. Measurement = Reading Level + Correct Factor.
2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
3. Peak: Peak detector.
4. All modes have been tested, but only the worst data was recorded in the report.

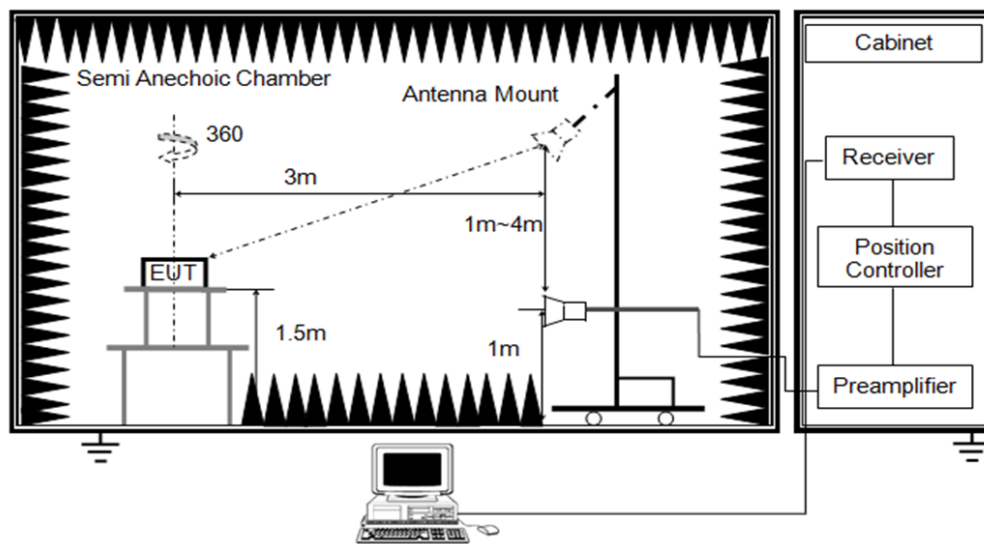
TEST SETUP



Below 1 GHz and above 30 MHz



Above 1 GHz



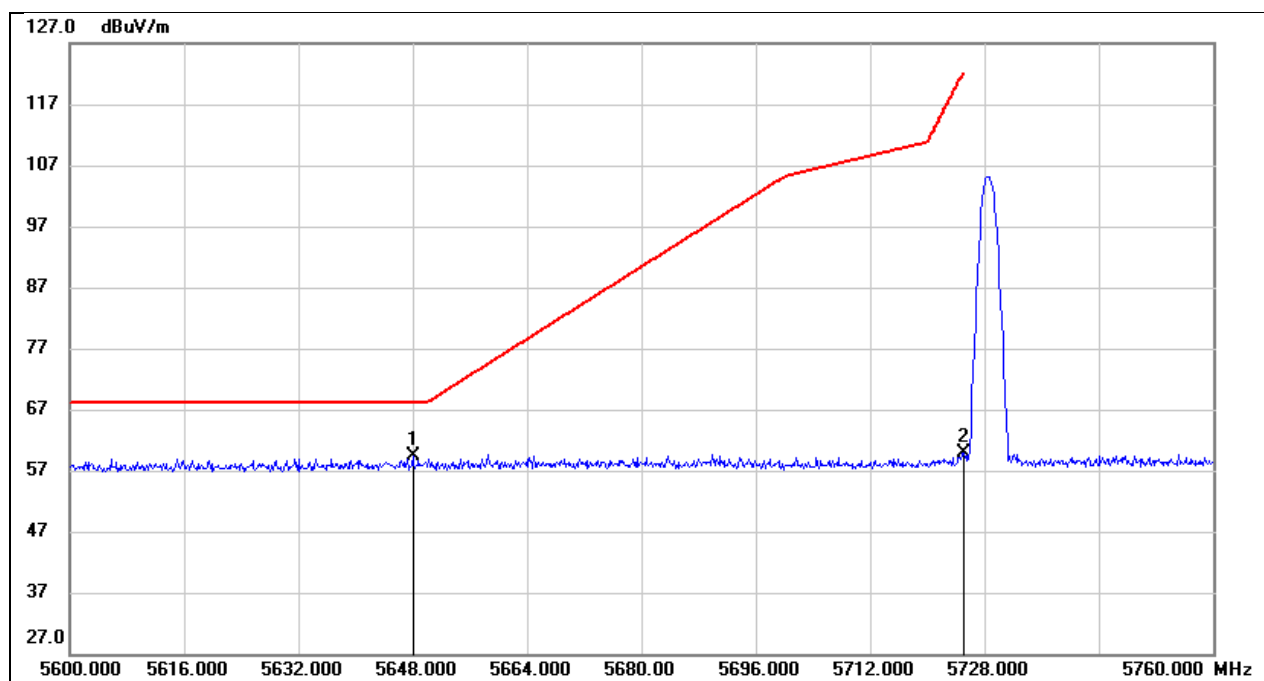
TEST ENVIRONMENT

Temperature	24.7 °C	Relative Humidity	55%
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

TEST RESULTS

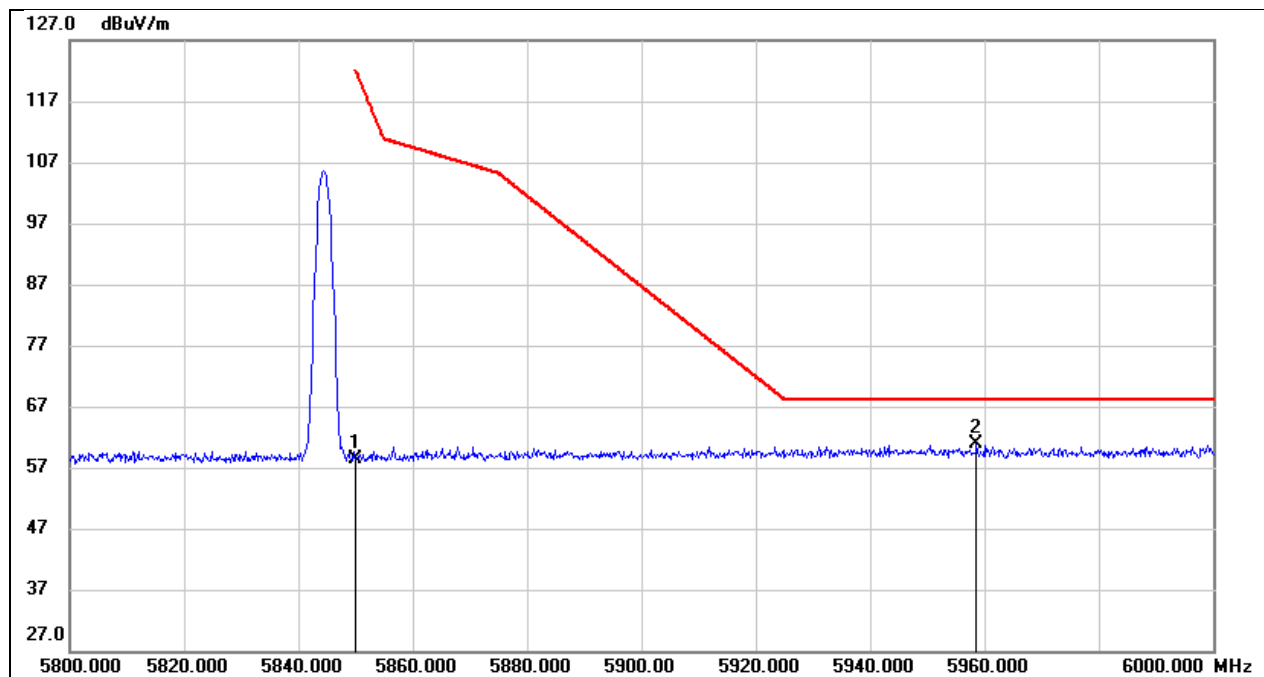
8.1. RESTRICTED BANDEDGE

Test Mode:	SRD 1.4MHz PK	Frequency(MHz):	5728.5
Polarity:	Vertical	Test Voltage:	DC 5 V



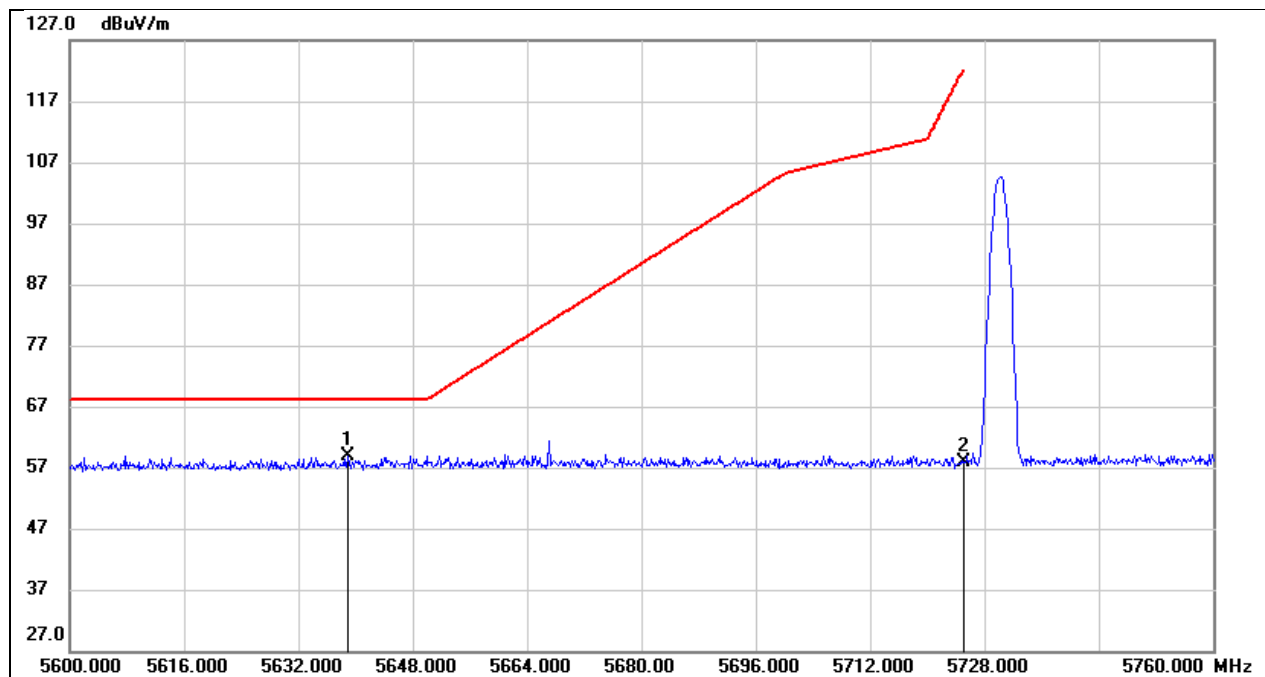
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5648.000	18.30	41.06	59.36	68.20	-8.84	peak
2	5725.000	18.61	41.27	59.88	122.20	-62.32	peak

Test Mode:	SRD 1.4MHz PK	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



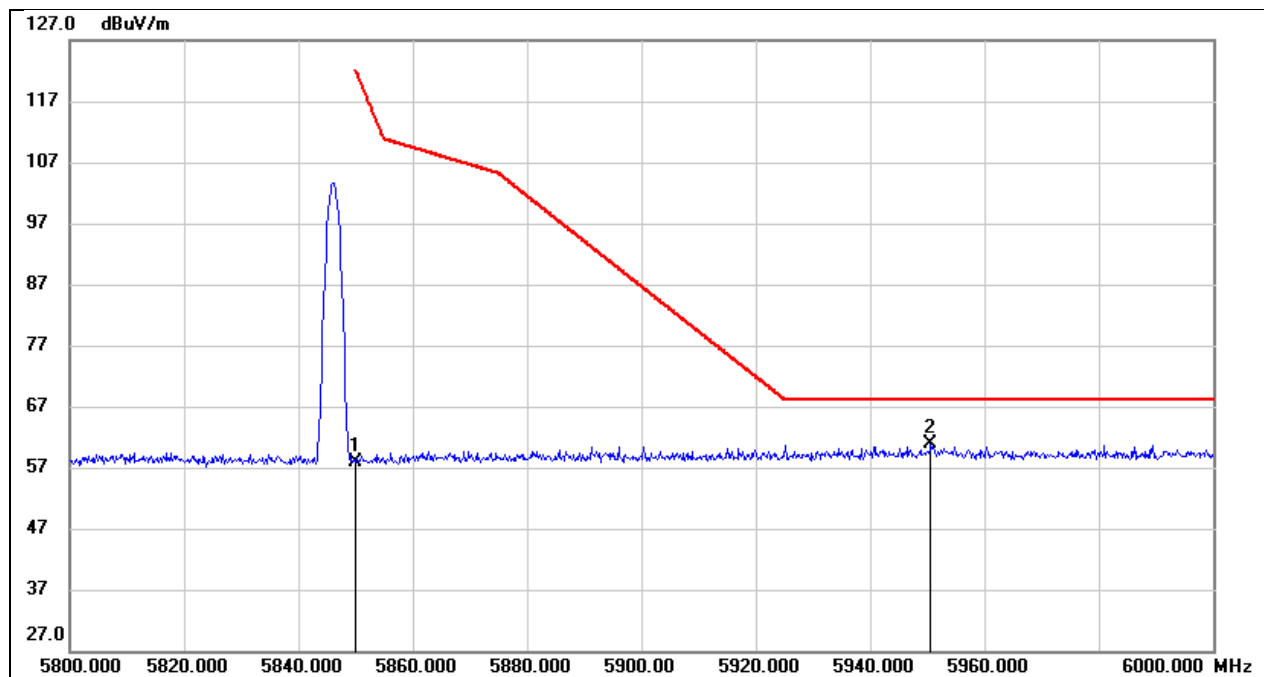
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	16.75	41.60	58.35	122.20	-63.85	peak
2	5958.600	18.92	41.89	60.81	68.20	-7.39	peak

Test Mode:	SRD 1.4MHz CA PK	Frequency(MHz):	5730.12
Polarity:	Vertical	Test Voltage:	DC 5 V



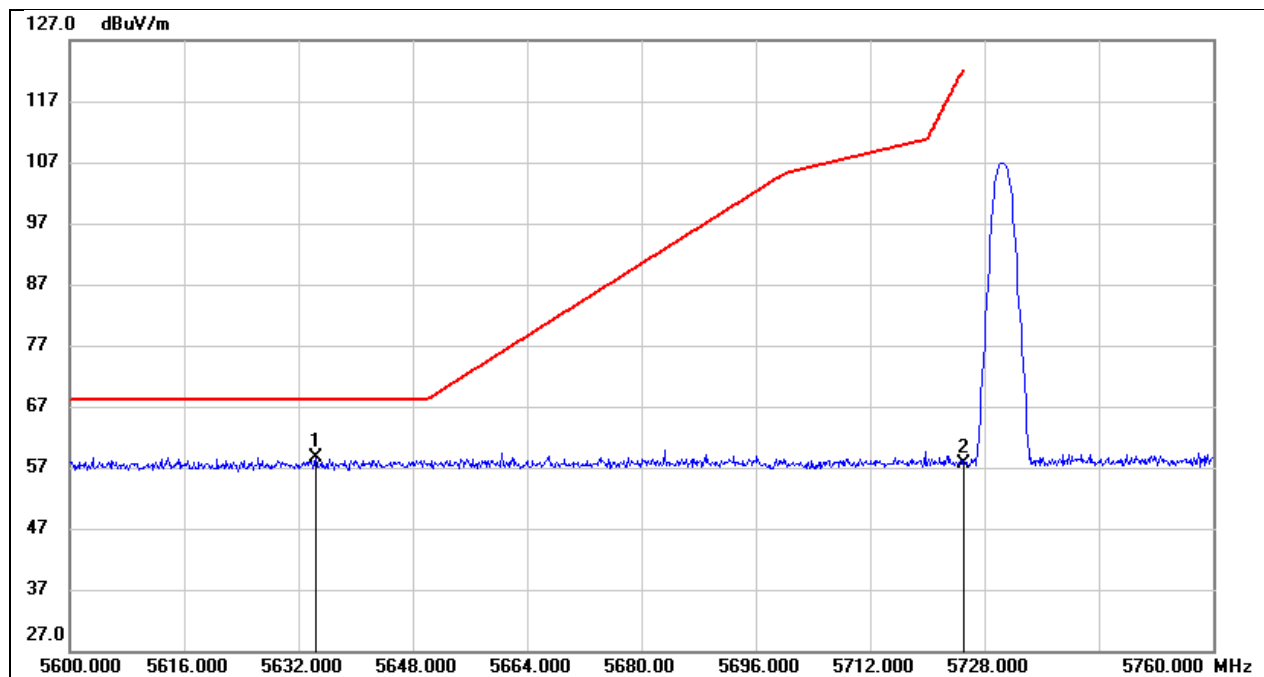
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5638.880	17.91	41.03	58.94	68.20	-9.26	peak
2	5725.000	16.72	41.27	57.99	122.20	-64.21	peak

Test Mode:	SRD 1.4MHz CA PK	Frequency(MHz):	5846.12
Polarity:	Vertical	Test Voltage:	DC 5 V



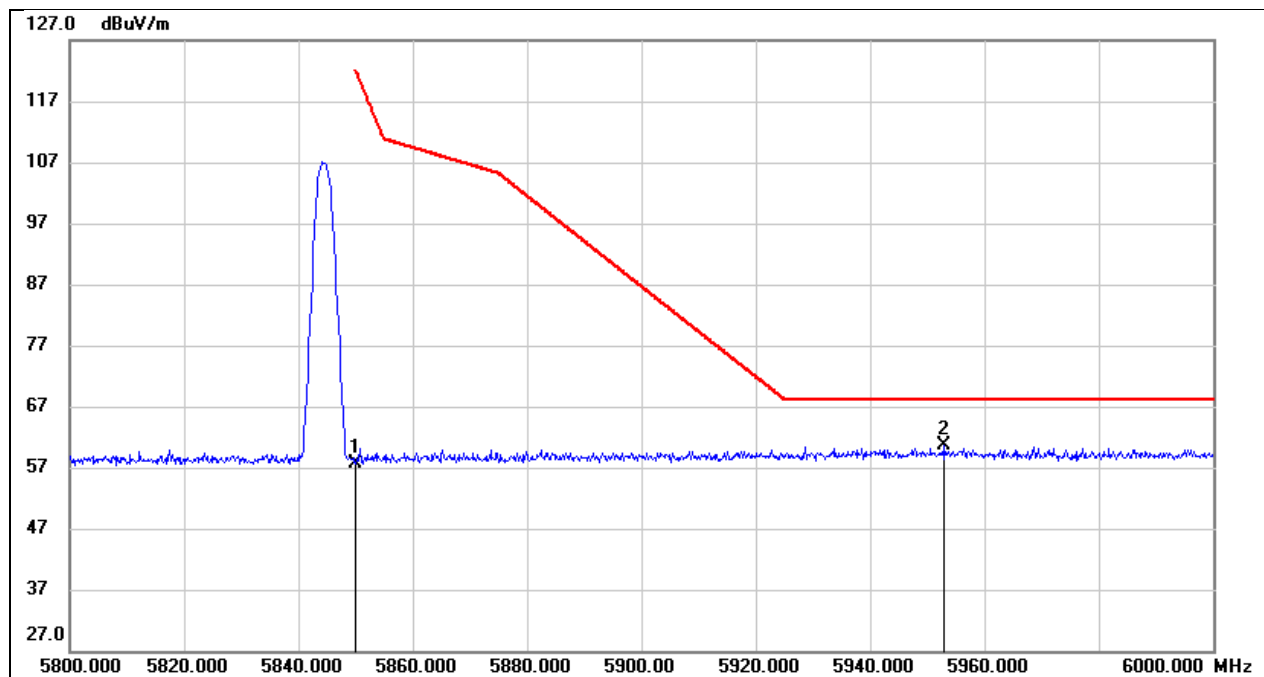
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	16.29	41.60	57.89	122.20	-64.31	peak
2	5950.600	18.93	41.87	60.80	68.20	-7.40	peak

Test Mode:	SRD 3MHz PK	Frequency(MHz):	5730.5
Polarity:	Vertical	Test Voltage:	DC 5 V



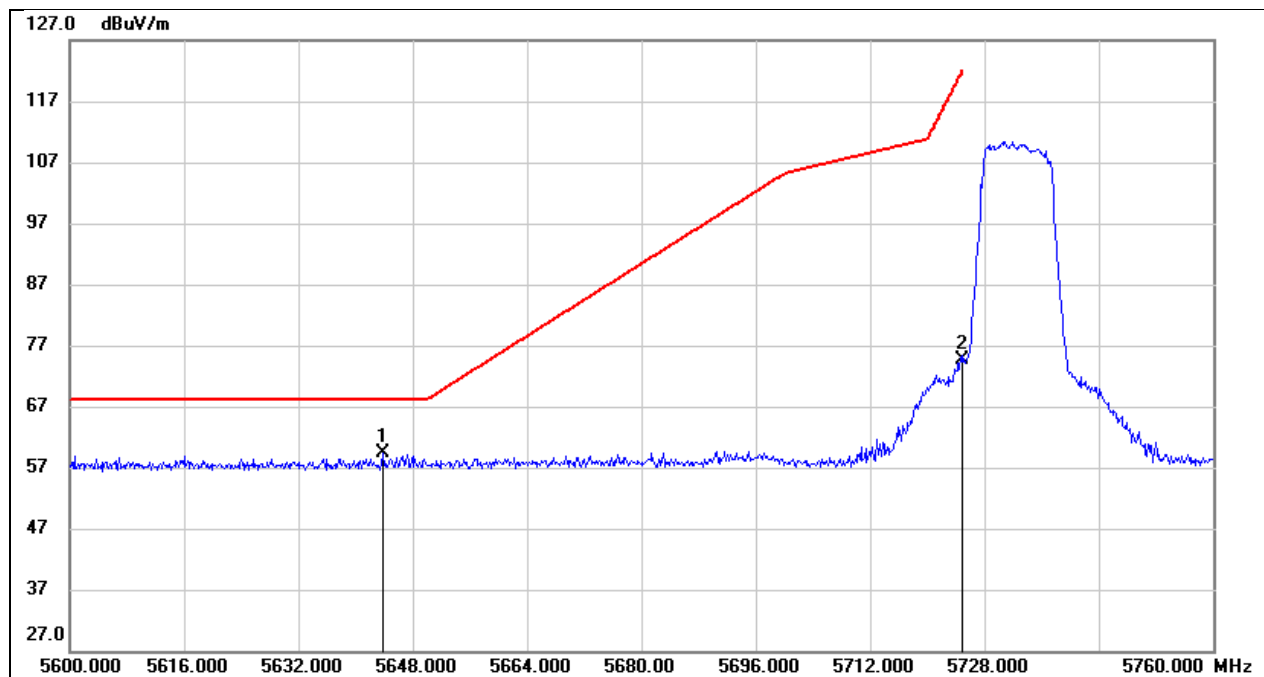
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5634.400	17.65	41.02	58.67	68.20	-9.53	peak
2	5725.000	16.46	41.27	57.73	122.20	-64.47	peak

Test Mode:	SRD 3MHz PK	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



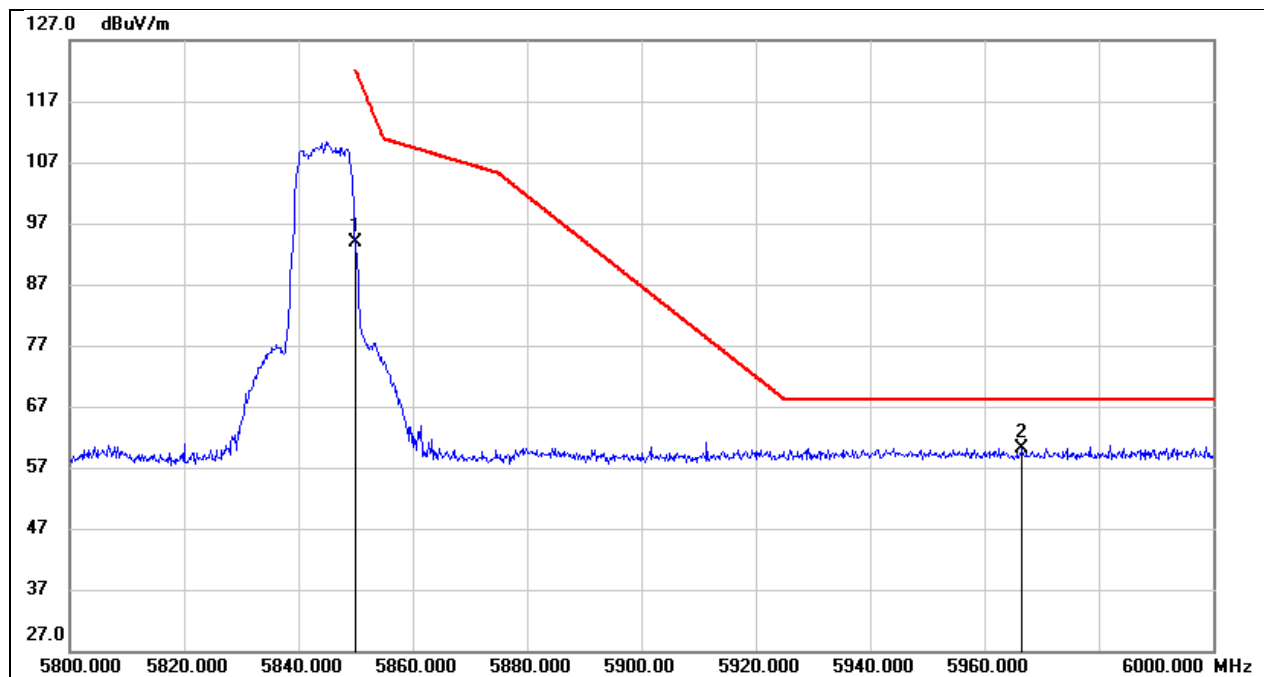
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	16.14	41.60	57.74	122.20	-64.46	peak
2	5953.000	18.77	41.87	60.64	68.20	-7.56	peak

Test Mode:	SRD 10MHz PK	Frequency(MHz):	5732.5
Polarity:	Vertical	Test Voltage:	DC 5 V



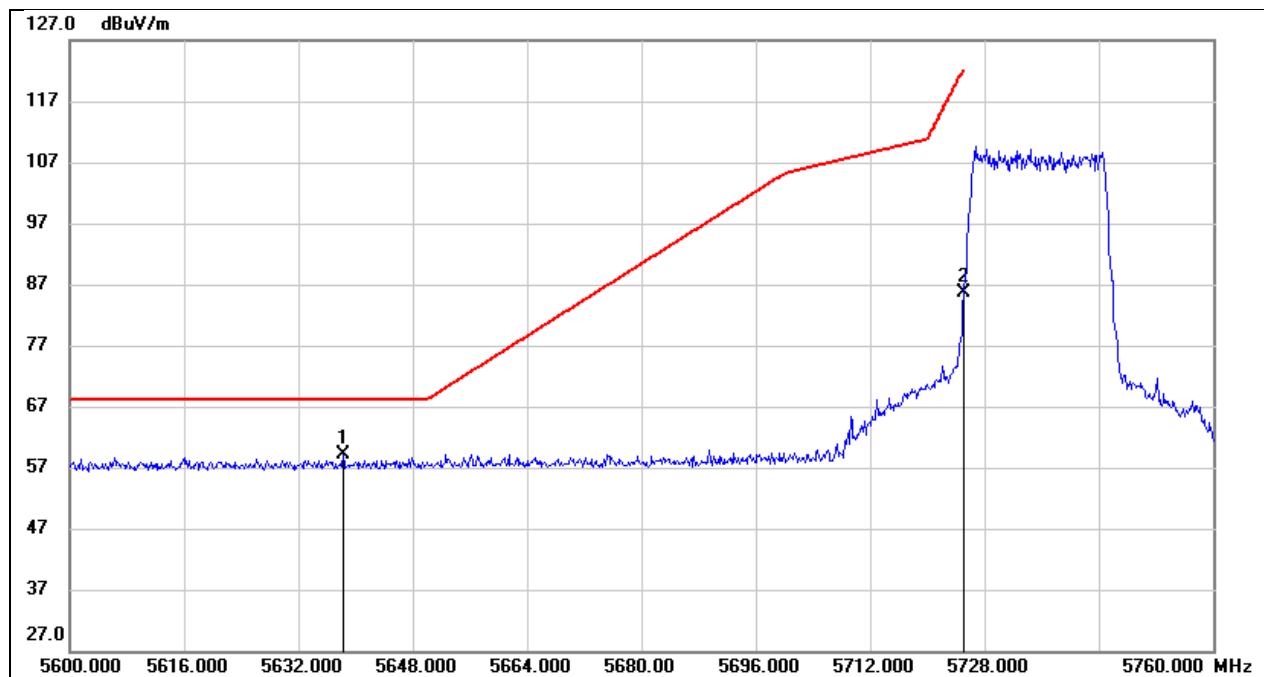
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5643.840	18.24	41.04	59.28	68.20	-8.92	peak
2	5725.000	33.37	41.27	74.64	122.20	-47.56	peak

Test Mode:	SRD 10MHz PK	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



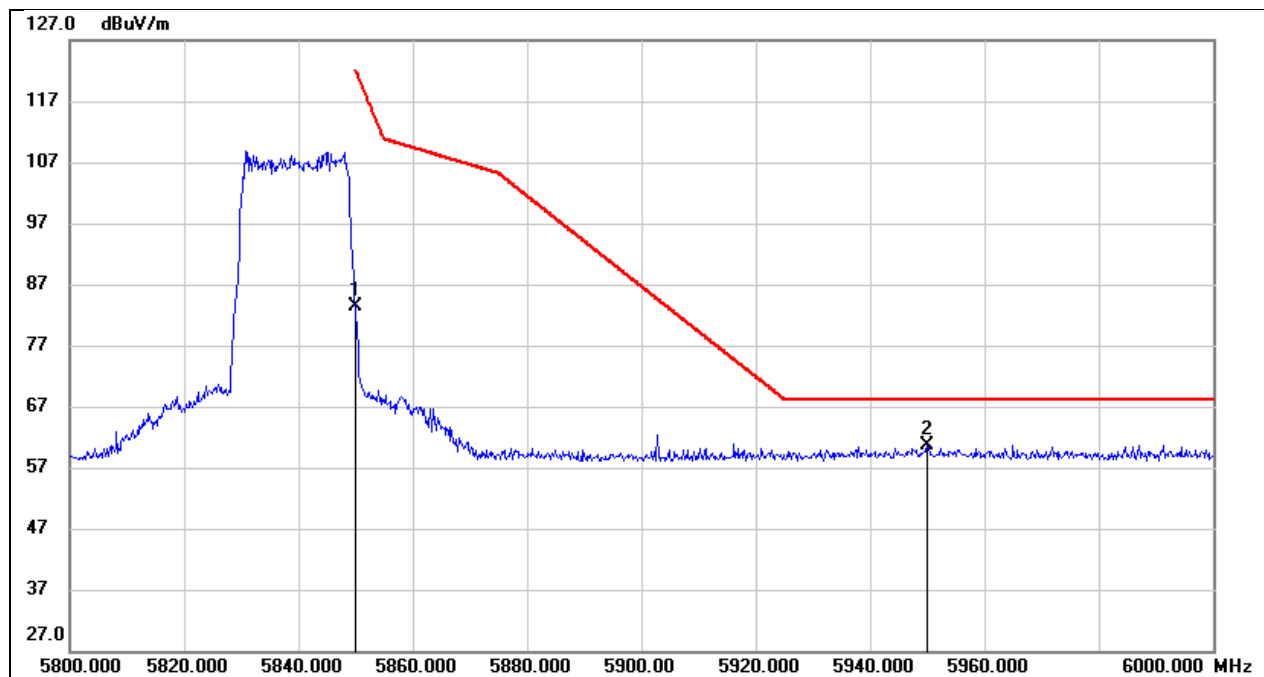
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	52.30	41.60	93.90	122.20	-28.30	peak
2	5966.600	18.25	41.91	60.16	68.20	-8.04	peak

Test Mode:	SRD 20MHz PK	Frequency(MHz):	5735.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5638.240	17.99	41.03	59.02	68.20	-9.18	peak
2	5725.000	44.25	41.27	85.52	122.20	-36.68	peak

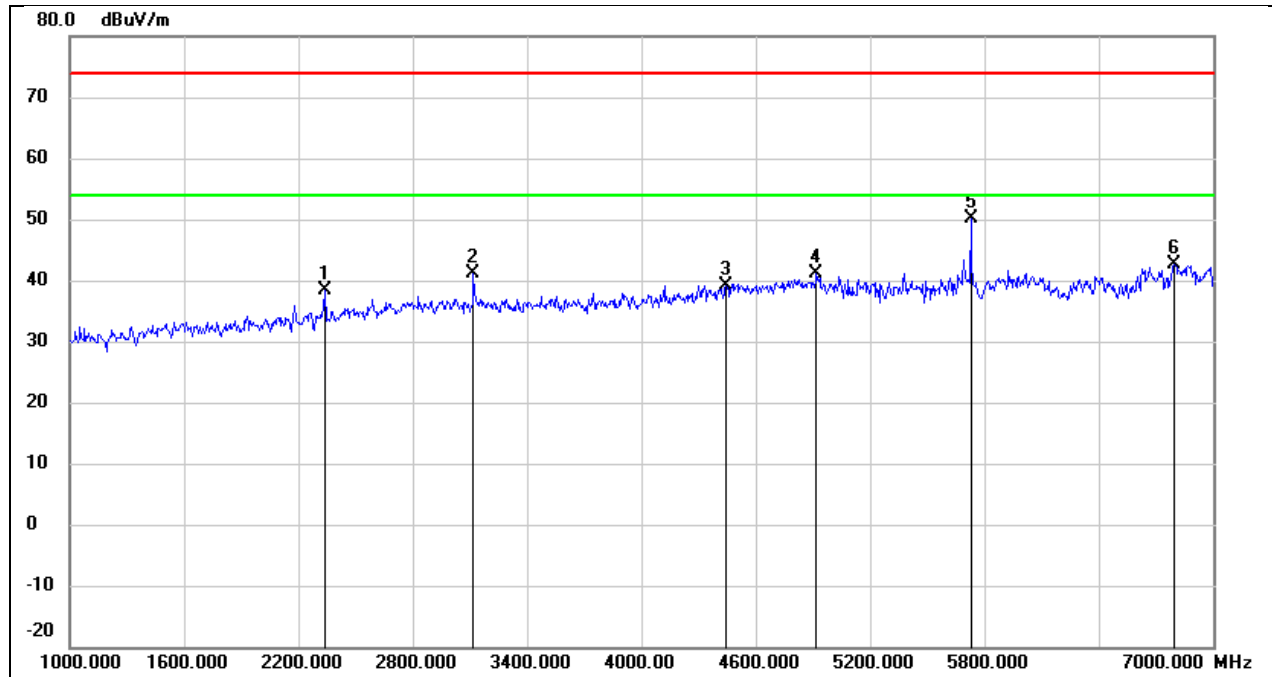
Test Mode:	SRD 20MHz PK	Frequency(MHz):	5839.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	41.73	41.60	83.33	122.20	-38.87	peak
2	5950.000	18.65	41.87	60.52	68.20	-7.68	peak

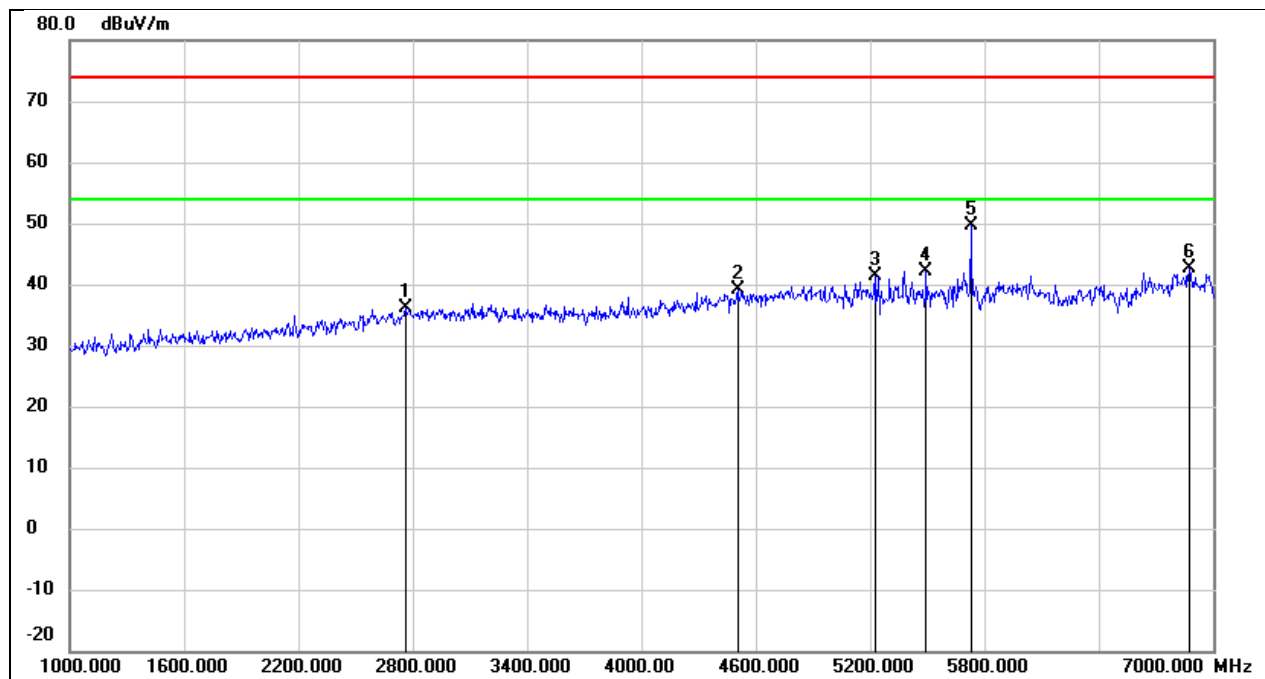
8.2. SPURIOUS EMISSIONS (1 GHZ ~ 7 GHZ)

Test Mode:	SRD 20MHz	Frequency(MHz):	5735.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



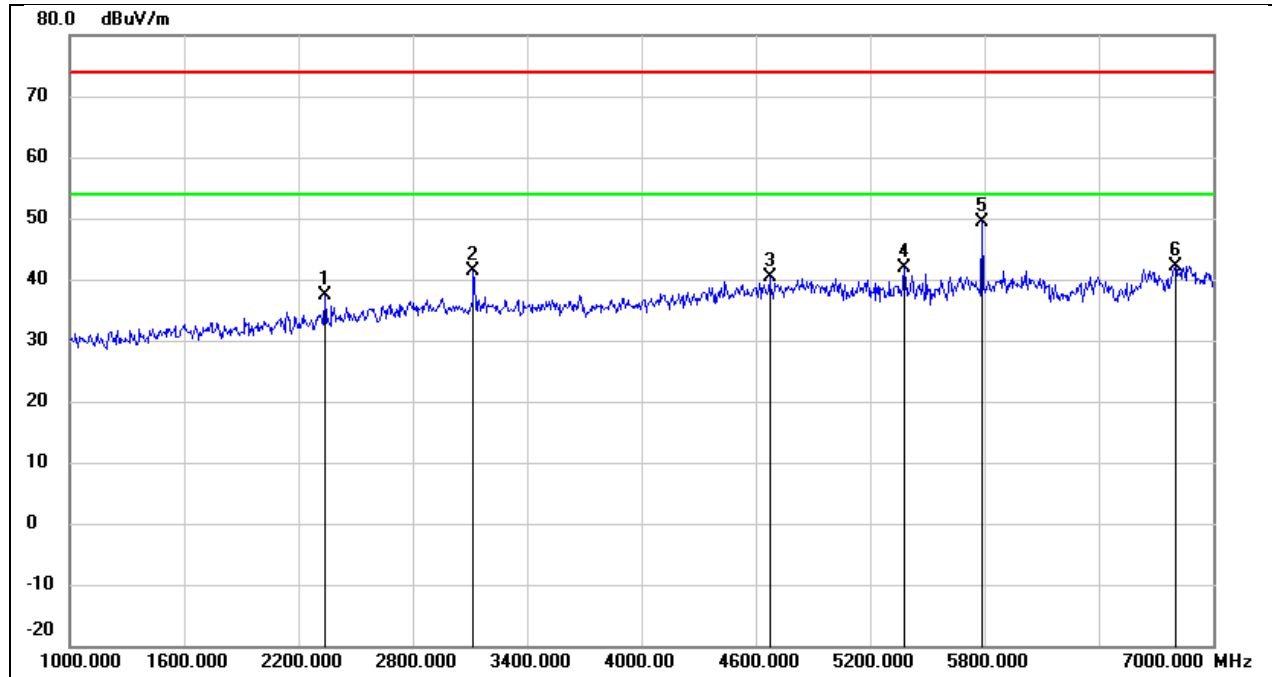
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2338.000	47.58	-9.32	38.26	74.00	-35.74	peak
2	3118.000	47.12	-5.95	41.17	74.00	-32.83	peak
3	4444.000	41.61	-2.40	39.21	74.00	-34.79	peak
4	4918.000	41.69	-0.47	41.22	74.00	-32.78	peak
5	5735.500	48.94	1.07	50.01	/	/	Fundamental
6	6796.000	37.45	5.19	42.64	74.00	-31.36	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5735.5
Polarity:	Vertical	Test Voltage:	DC 5 V



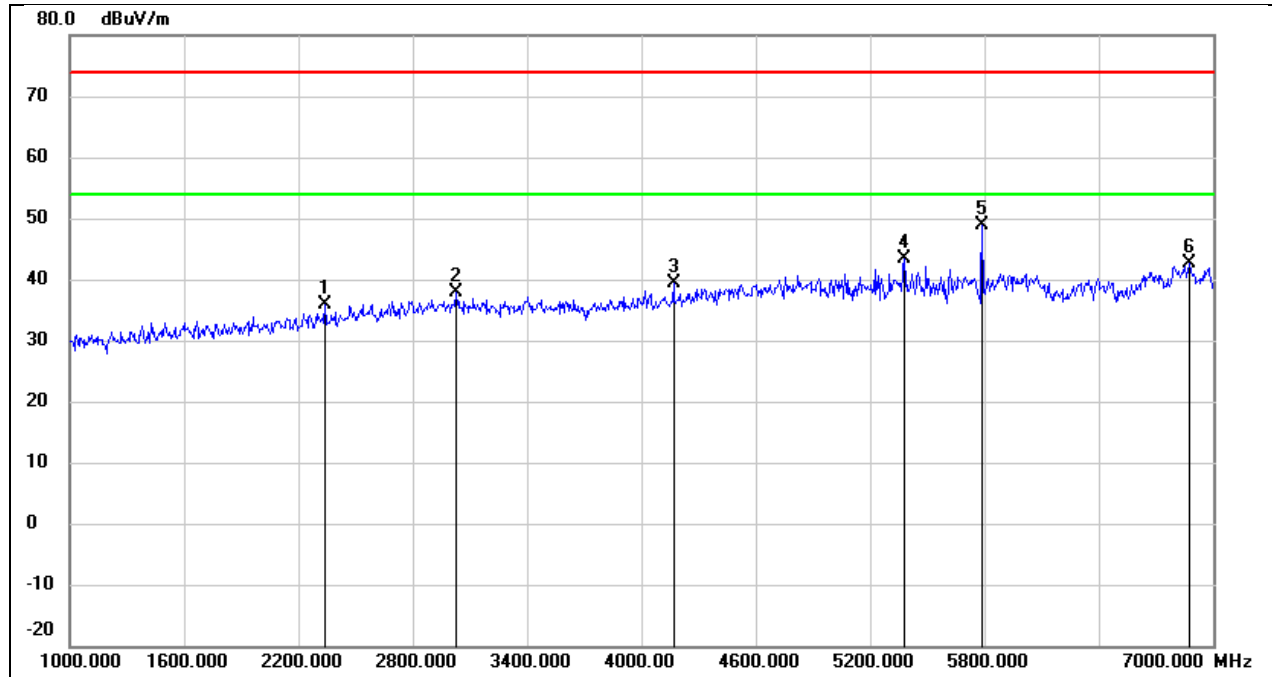
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2764.000	43.22	-7.16	36.06	74.00	-37.94	peak
2	4504.000	41.21	-2.12	39.09	74.00	-34.91	peak
3	5224.000	41.21	0.10	41.31	74.00	-32.69	peak
4	5494.000	41.76	0.42	42.18	74.00	-31.82	peak
5	5735.500	48.54	1.07	49.61	/	/	Fundamental
6	6874.000	37.15	5.57	42.72	74.00	-31.28	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



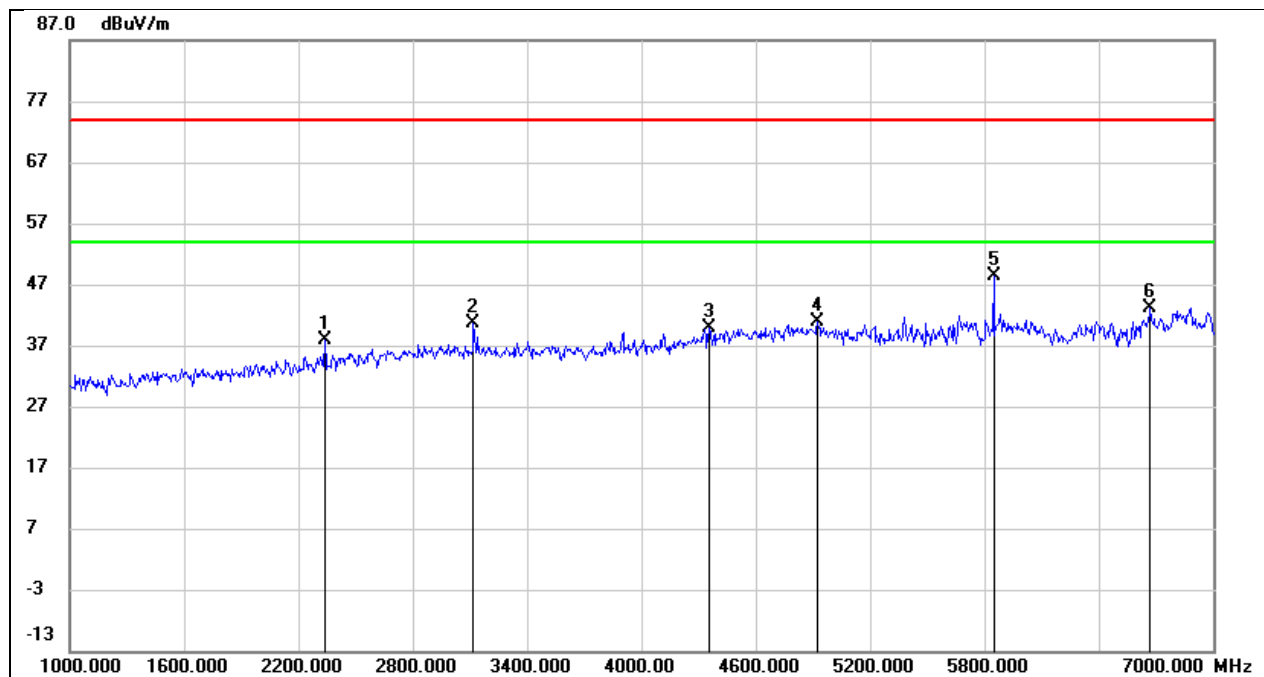
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2338.000	46.79	-9.32	37.47	74.00	-36.53	peak
2	3118.000	47.25	-5.95	41.30	74.00	-32.70	peak
3	4672.000	41.76	-1.46	40.30	74.00	-33.70	peak
4	5380.000	41.67	0.29	41.96	74.00	-32.04	peak
5	5787.500	48.04	1.25	49.29	/	/	Fundamental
6	6802.000	36.82	5.21	42.03	74.00	-31.97	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



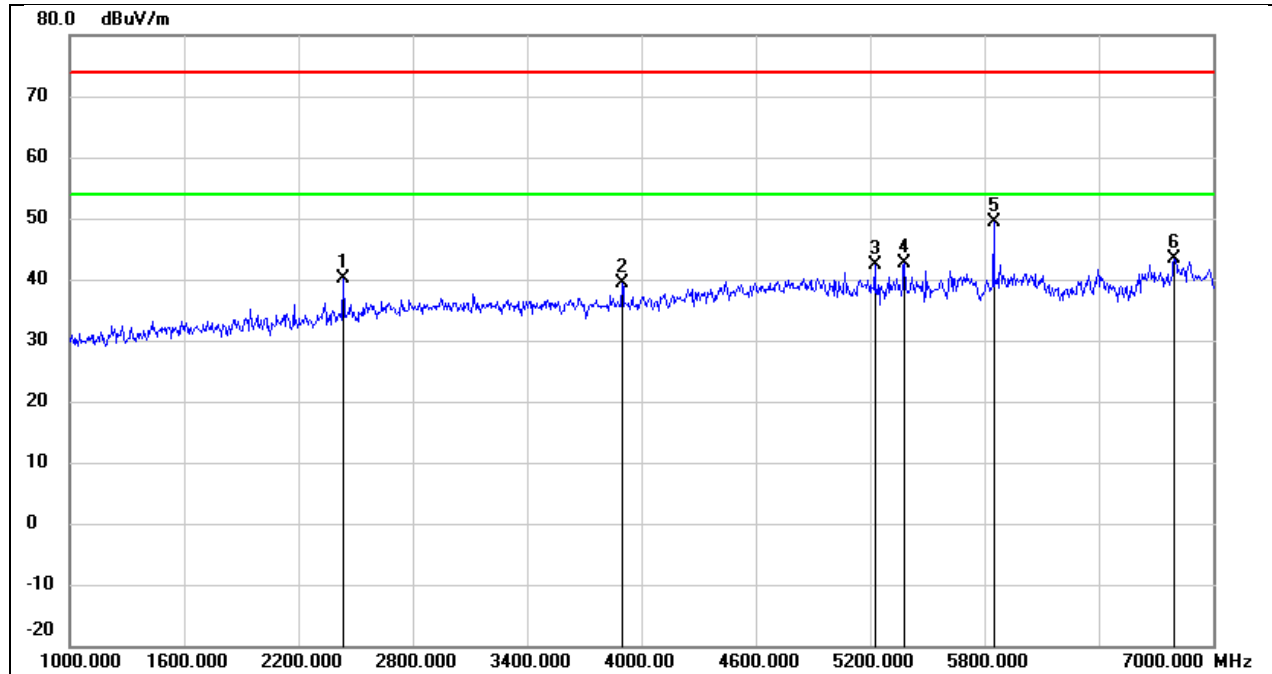
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2338.000	45.22	-9.32	35.90	74.00	-38.10	peak
2	3028.000	43.78	-5.98	37.80	74.00	-36.20	peak
3	4168.000	42.98	-3.69	39.29	74.00	-34.71	peak
4	5380.000	43.06	0.29	43.35	74.00	-30.65	peak
5	5787.500	47.61	1.25	48.86	/	/	Fundamental
6	6874.000	36.96	5.57	42.53	74.00	-31.47	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5839.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2338.000	47.13	-9.32	37.81	74.00	-36.19	peak
2	3118.000	46.61	-5.95	40.66	74.00	-33.34	peak
3	4354.000	42.81	-2.82	39.99	74.00	-34.01	peak
4	4924.000	41.32	-0.45	40.87	74.00	-33.13	peak
5	5839.500	46.86	1.41	48.27	/	/	Fundamental
6	6670.000	38.47	4.57	43.04	74.00	-30.96	peak

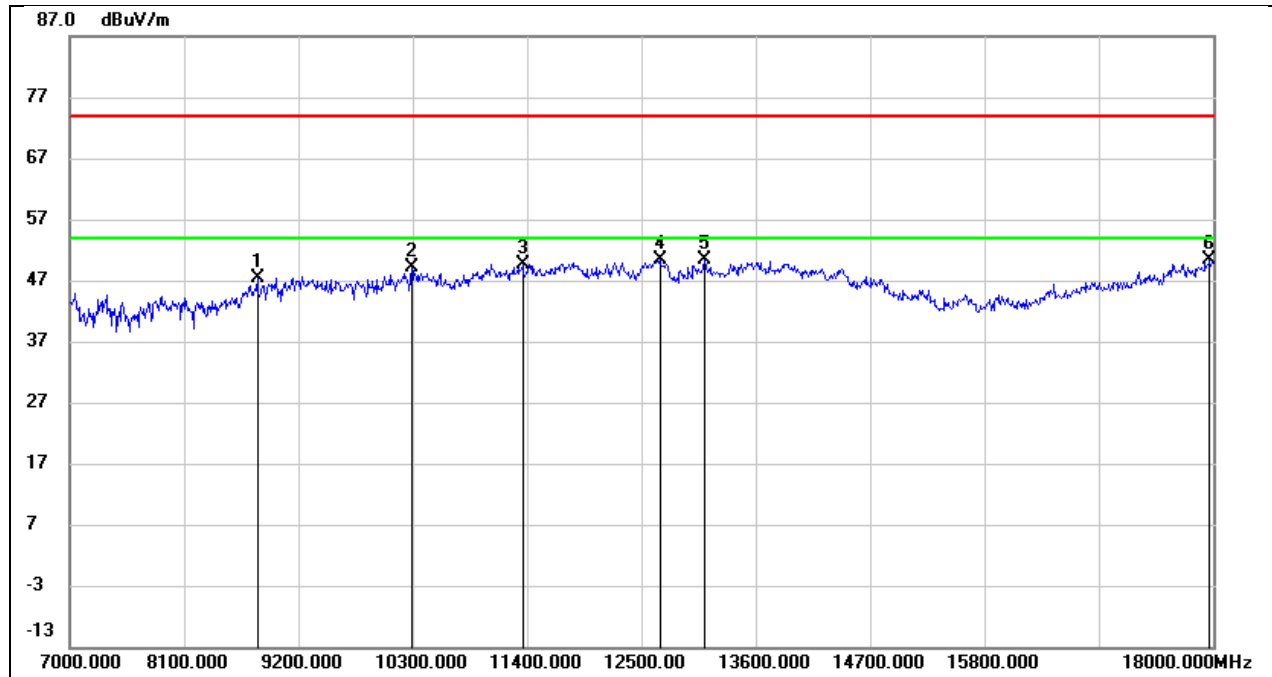
Test Mode:	SRD 20MHz	Frequency(MHz):	5839.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2434.000	48.86	-8.83	40.03	74.00	-33.97	peak
2	3898.000	44.10	-4.76	39.34	74.00	-34.66	peak
3	5224.000	42.20	0.10	42.30	74.00	-31.70	peak
4	5380.000	42.27	0.29	42.56	74.00	-31.44	peak
5	5839.500	48.07	1.41	49.48	/	/	Fundamental
6	6796.000	38.30	5.19	43.49	74.00	-30.51	peak

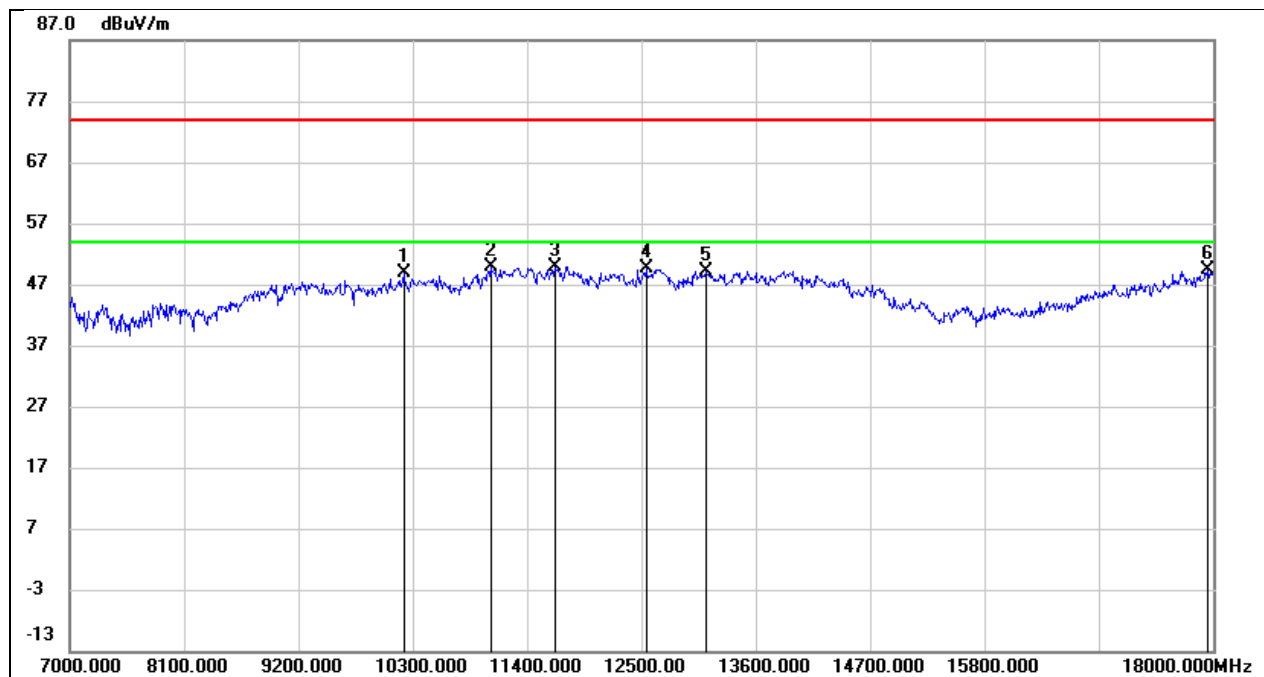
8.3. SPURIOUS EMISSIONS (7 GHZ ~ 18 GHZ)

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5728.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



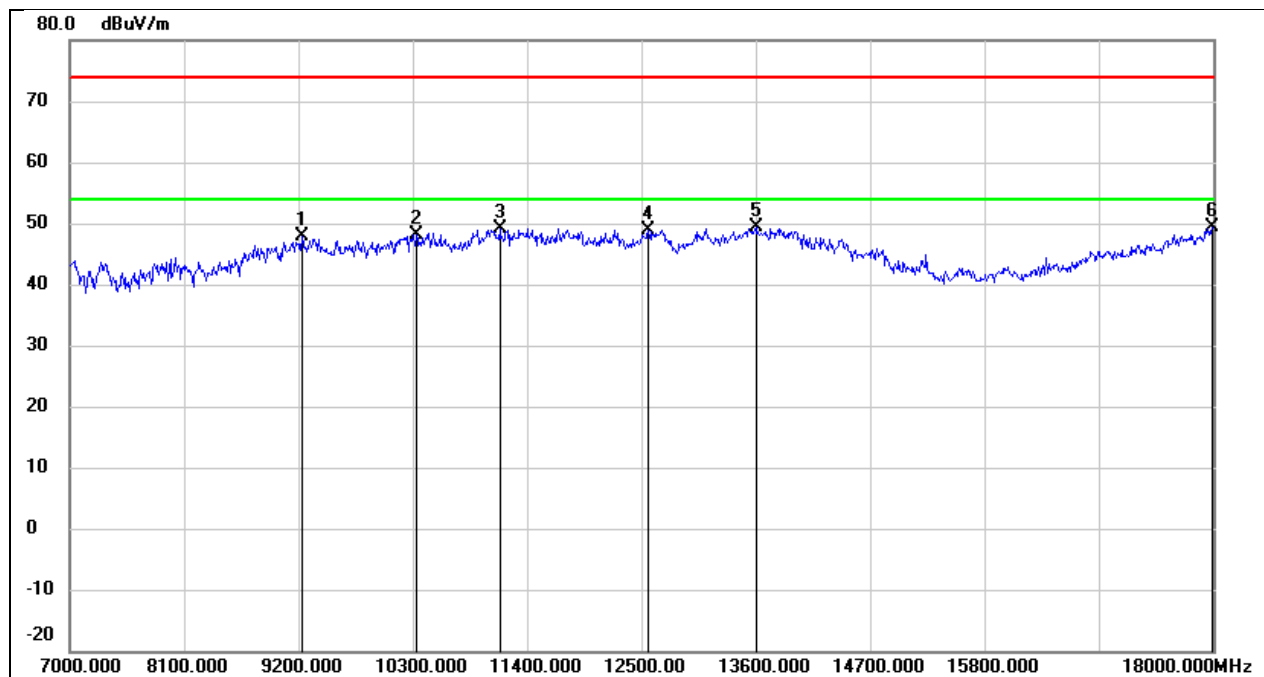
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8804.000	38.46	8.98	47.44	74.00	-26.56	peak
2	10289.000	36.65	12.38	49.03	74.00	-24.97	peak
3	11356.000	33.47	16.19	49.66	74.00	-24.34	peak
4	12676.000	32.31	18.05	50.36	74.00	-23.64	peak
5	13105.000	31.41	18.91	50.32	74.00	-23.68	peak
6	17967.000	24.51	25.89	50.40	74.00	-23.60	peak

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5728.5
Polarity:	Vertical	Test Voltage:	DC 5 V



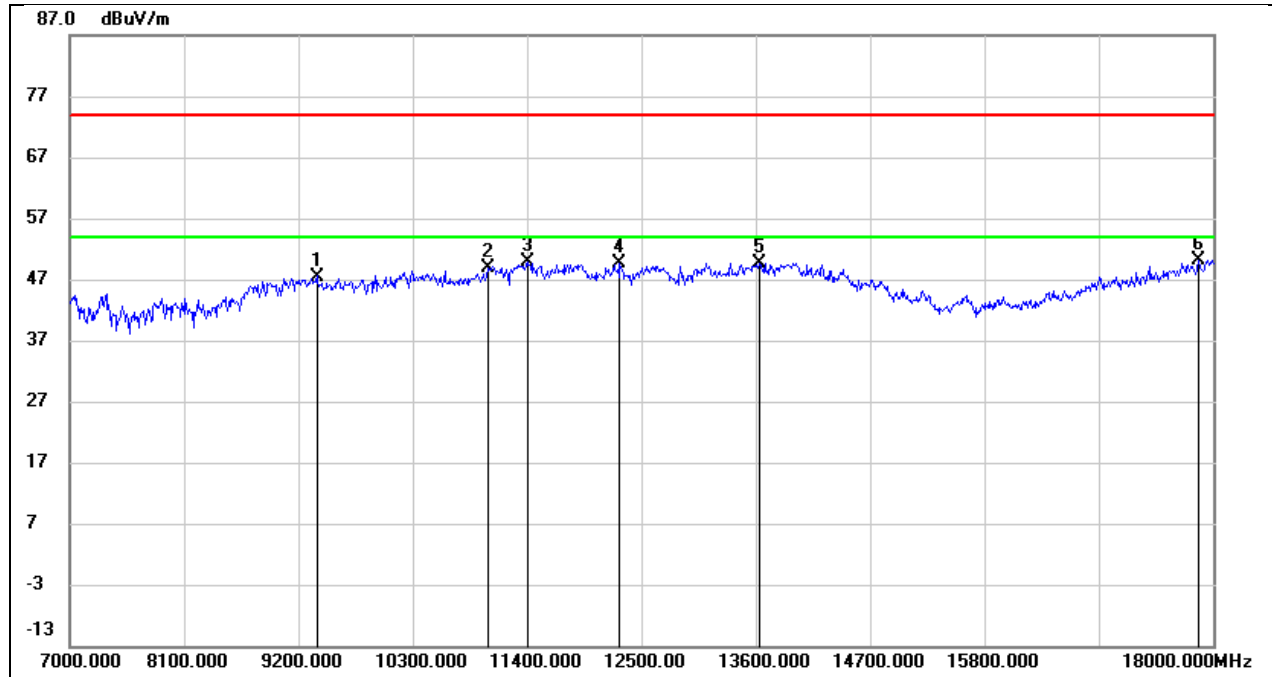
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10212.000	36.69	12.21	48.90	74.00	-25.10	peak
2	11048.000	35.01	14.91	49.92	74.00	-24.08	peak
3	11664.000	32.90	17.08	49.98	74.00	-24.02	peak
4	12544.000	31.87	17.88	49.75	74.00	-24.25	peak
5	13127.000	30.16	19.01	49.17	74.00	-24.83	peak
6	17945.000	23.60	25.75	49.35	74.00	-24.65	peak

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5786.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



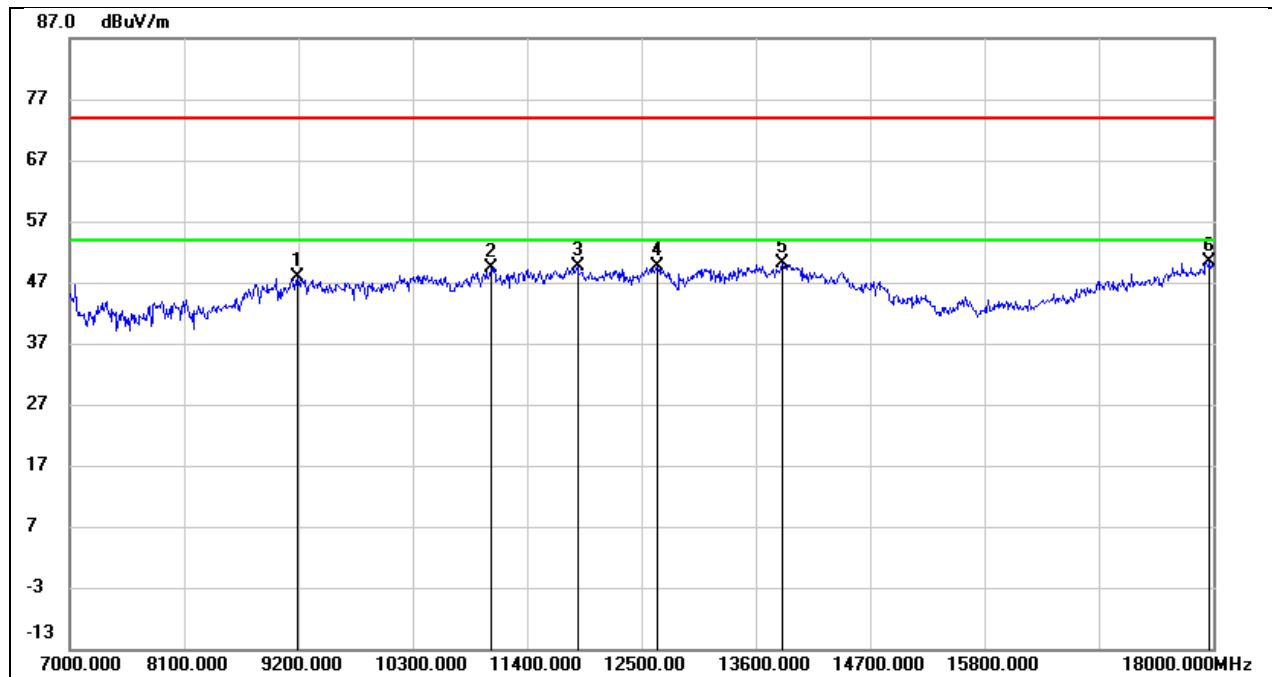
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9233.000	37.48	10.48	47.96	74.00	-26.04	peak
2	10333.000	35.62	12.47	48.09	74.00	-25.91	peak
3	11136.000	33.84	15.27	49.11	74.00	-24.89	peak
4	12566.000	31.07	17.91	48.98	74.00	-25.02	peak
5	13600.000	28.58	20.89	49.47	74.00	-24.53	peak
6	17989.000	23.24	26.04	49.28	74.00	-24.72	peak

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5786.5
Polarity:	Vertical	Test Voltage:	DC 5 V



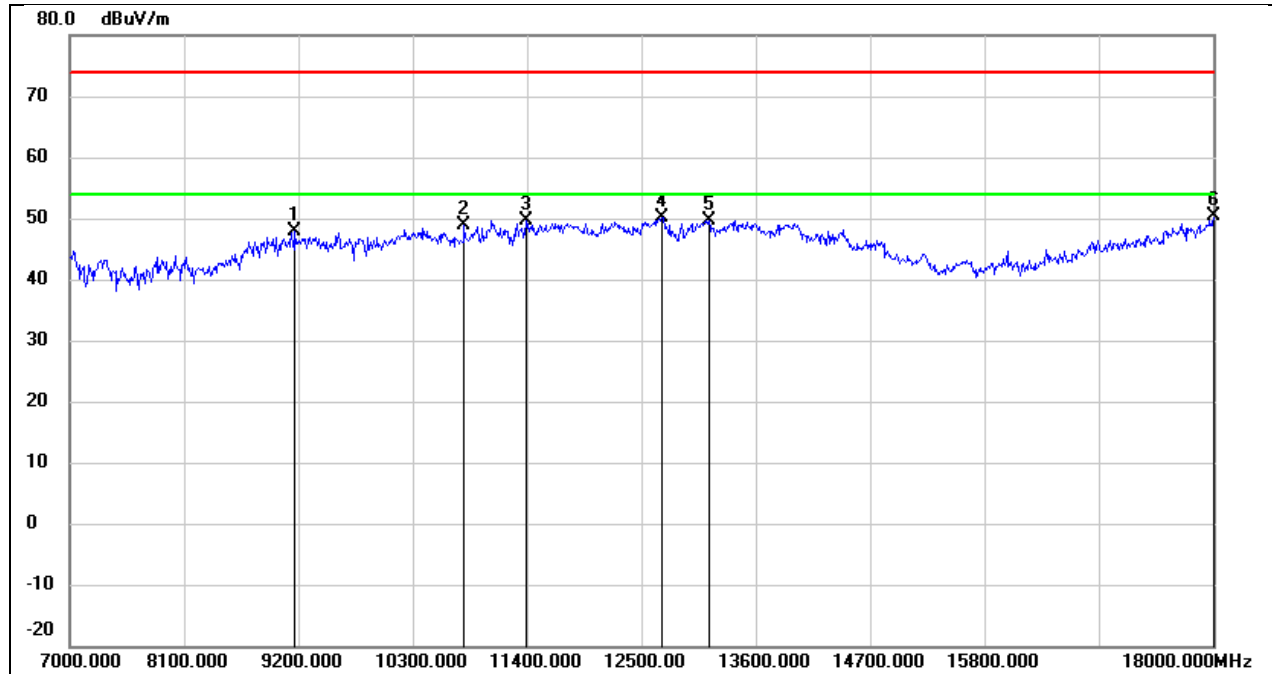
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9376.000	36.92	10.58	47.50	74.00	-26.50	peak
2	11026.000	34.05	14.82	48.87	74.00	-25.13	peak
3	11400.000	33.45	16.36	49.81	74.00	-24.19	peak
4	12291.000	31.95	17.78	49.73	74.00	-24.27	peak
5	13633.000	28.74	20.97	49.71	74.00	-24.29	peak
6	17857.000	24.91	25.14	50.05	74.00	-23.95	peak

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5844.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



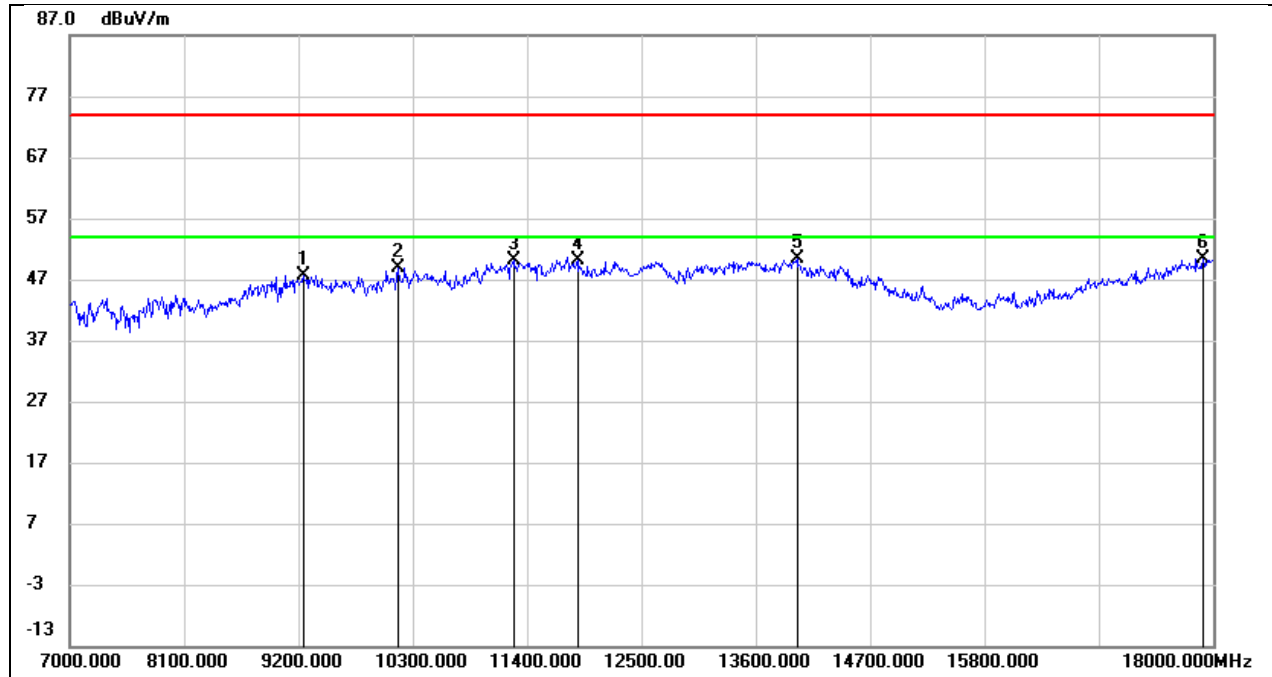
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9189.000	37.35	10.46	47.81	74.00	-26.19	peak
2	11048.000	34.57	14.91	49.48	74.00	-24.52	peak
3	11884.000	32.05	17.48	49.53	74.00	-24.47	peak
4	12654.000	31.67	18.01	49.68	74.00	-24.32	peak
5	13853.000	28.51	21.52	50.03	74.00	-23.97	peak
6	17967.000	24.49	25.89	50.38	74.00	-23.62	peak

Test Mode:	SRD 1.4MHz	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



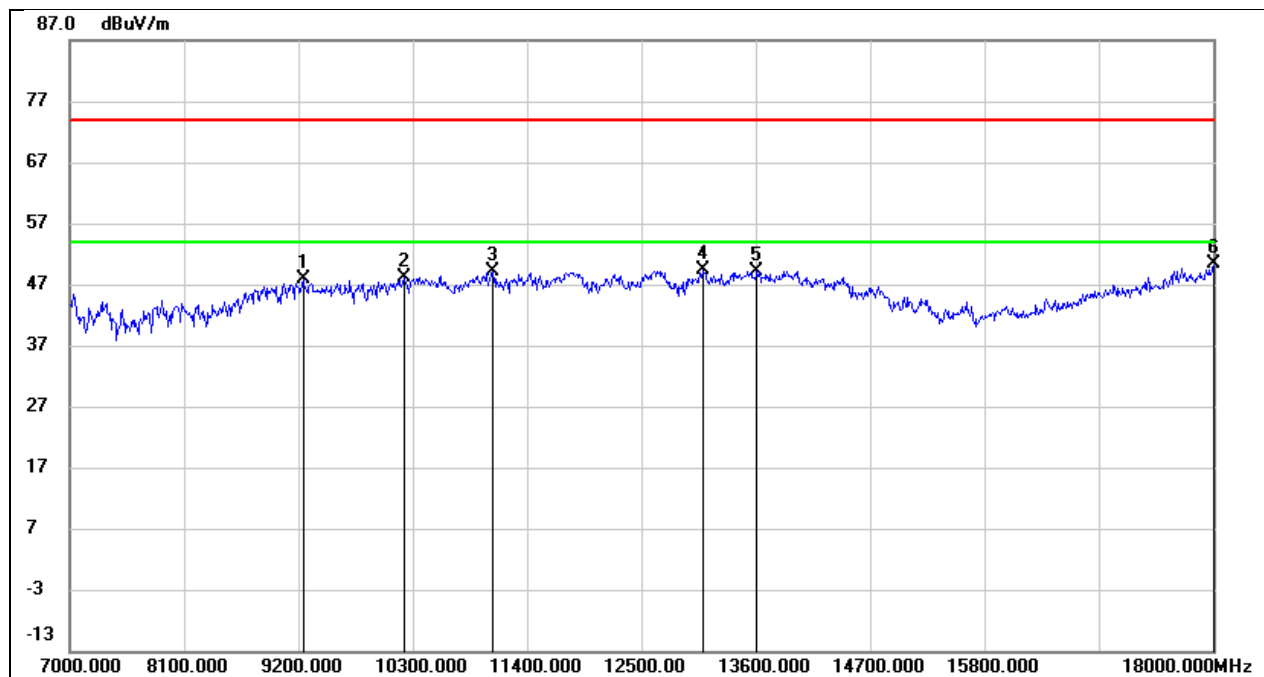
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9167.000	37.32	10.45	47.77	74.00	-26.23	peak
2	10795.000	34.85	13.94	48.79	74.00	-25.21	peak
3	11389.000	33.39	16.31	49.70	74.00	-24.30	peak
4	12698.000	32.03	18.08	50.11	74.00	-23.89	peak
5	13149.000	30.53	19.10	49.63	74.00	-24.37	peak
6	18000.000	24.32	26.12	50.44	74.00	-23.56	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5730.12
Polarity:	Horizontal	Test Voltage:	DC 5 V



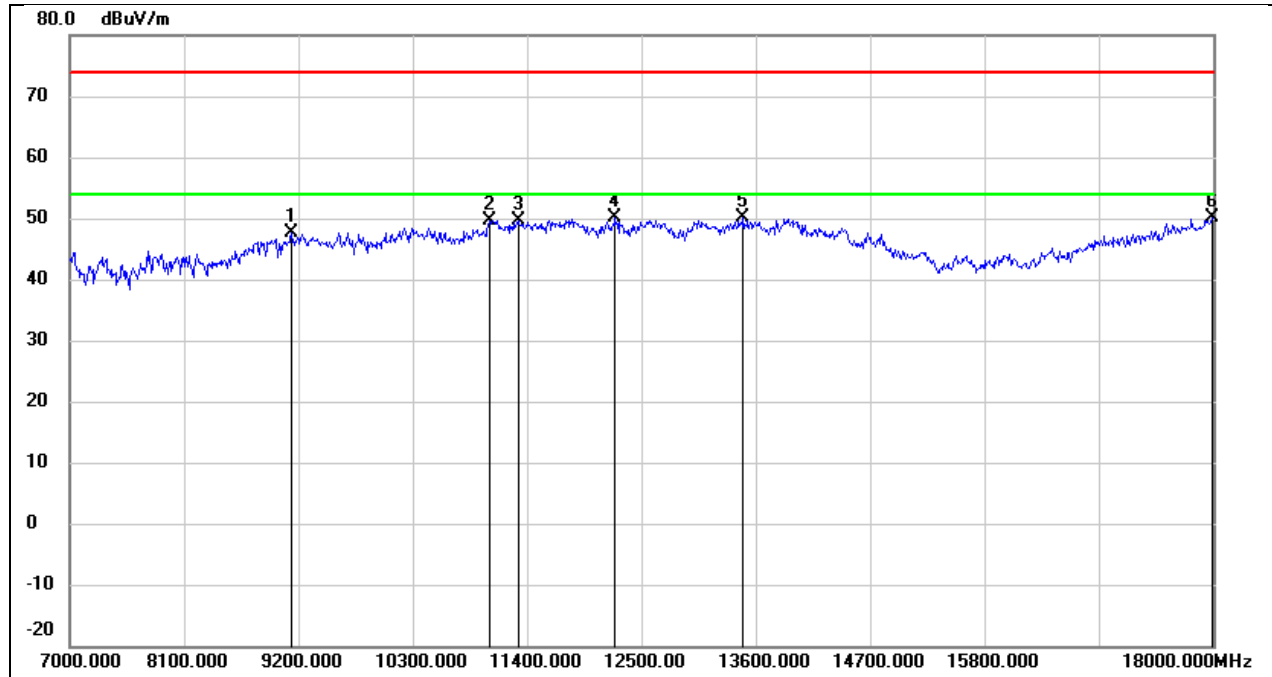
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9244.000	37.13	10.49	47.62	74.00	-26.38	peak
2	10157.000	36.89	12.10	48.99	74.00	-25.01	peak
3	11268.000	34.20	15.83	50.03	74.00	-23.97	peak
4	11884.000	32.54	17.48	50.02	74.00	-23.98	peak
5	13996.000	28.47	21.87	50.34	74.00	-23.66	peak
6	17901.000	24.89	25.45	50.34	74.00	-23.66	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5730.12
Polarity:	Vertical	Test Voltage:	DC 5 V



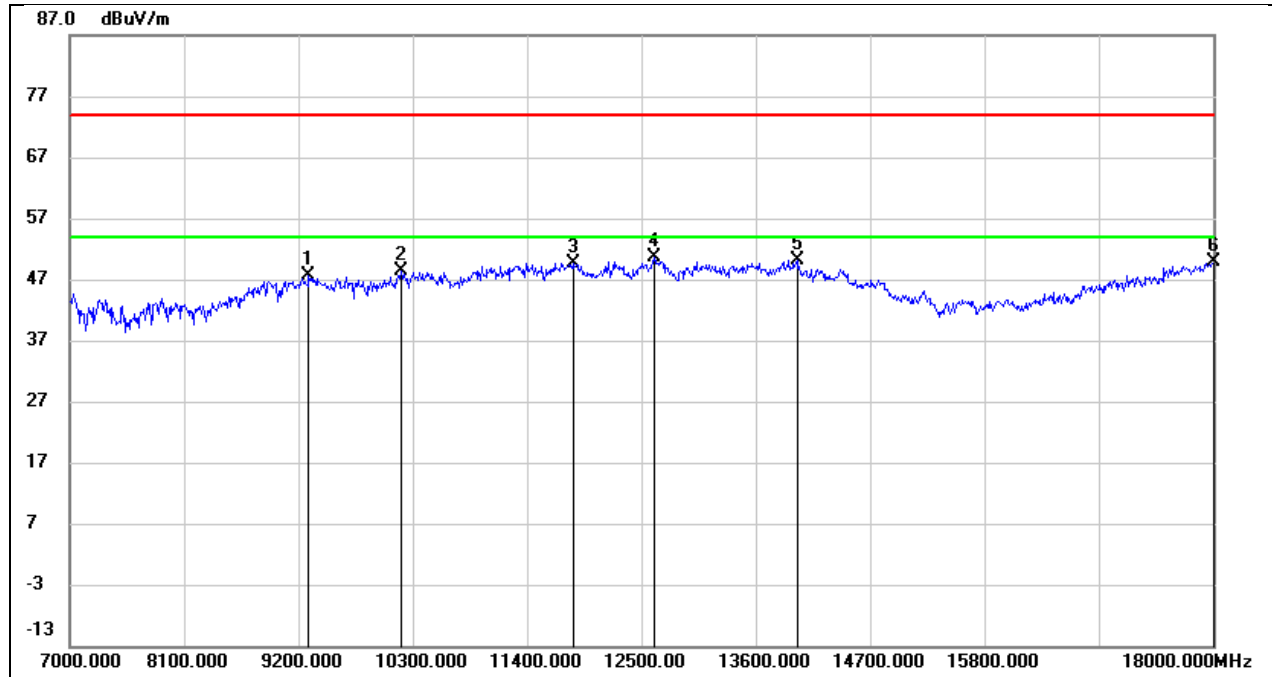
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9244.000	37.29	10.49	47.78	74.00	-26.22	peak
2	10212.000	36.03	12.21	48.24	74.00	-25.76	peak
3	11070.000	34.05	15.01	49.06	74.00	-24.94	peak
4	13094.000	30.54	18.87	49.41	74.00	-24.59	peak
5	13611.000	28.32	20.92	49.24	74.00	-24.76	peak
6	18000.000	24.26	26.12	50.38	74.00	-23.62	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5788.12
Polarity:	Horizontal	Test Voltage:	DC 5 V



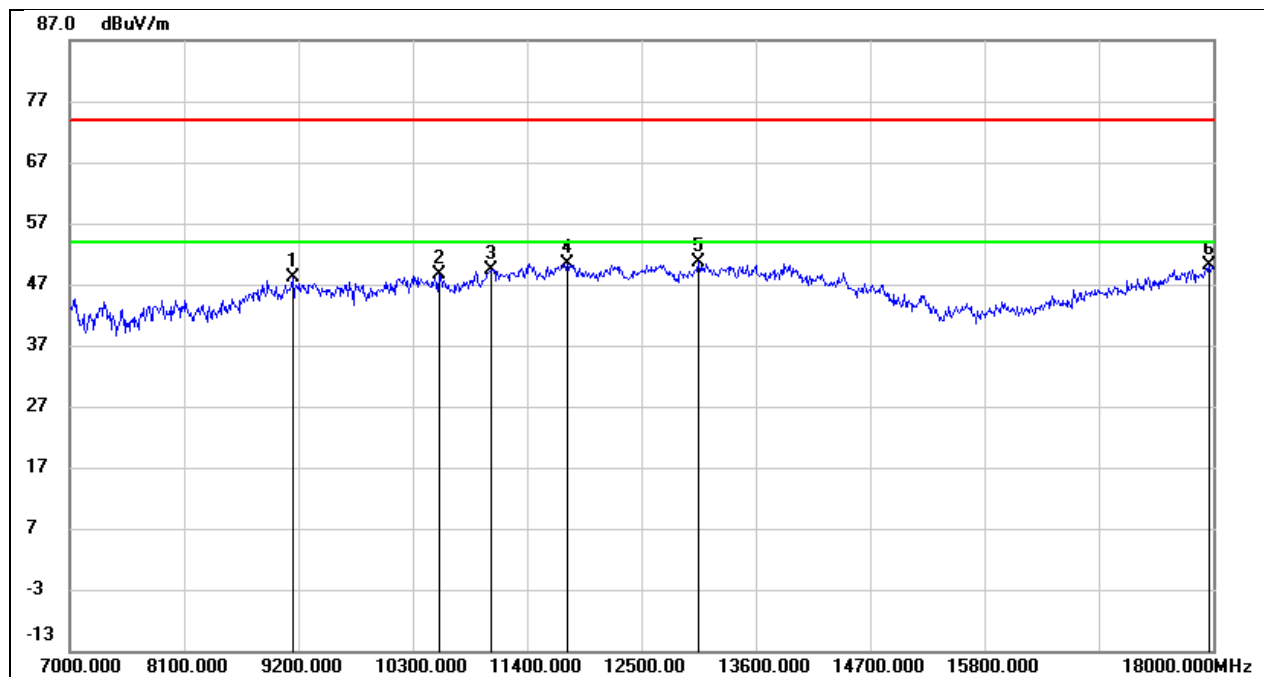
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	37.16	10.41	47.57	74.00	-26.43	peak
2	11037.000	34.75	14.87	49.62	74.00	-24.38	peak
3	11312.000	33.72	16.00	49.72	74.00	-24.28	peak
4	12247.000	32.44	17.77	50.21	74.00	-23.79	peak
5	13479.000	29.55	20.55	50.10	74.00	-23.90	peak
6	17989.000	24.14	26.04	50.18	74.00	-23.82	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5788.12
Polarity:	Vertical	Test Voltage:	DC 5 V



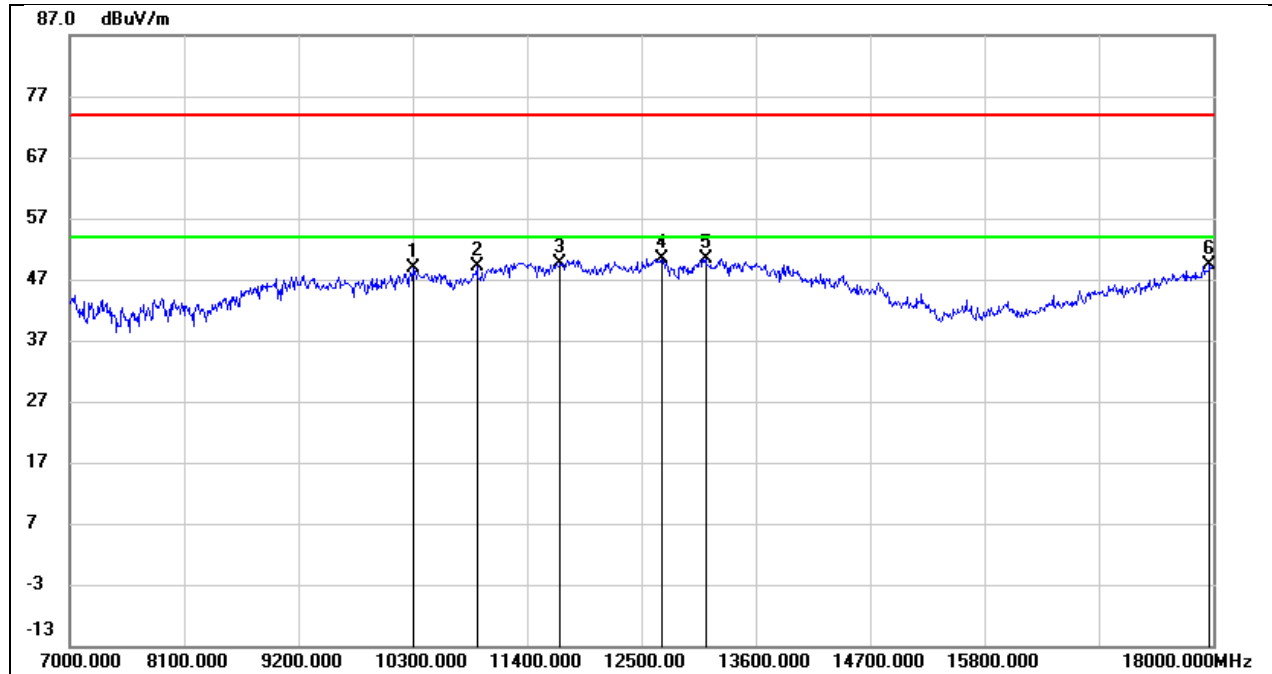
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9299.000	37.04	10.53	47.57	74.00	-26.43	peak
2	10190.000	36.13	12.18	48.31	74.00	-25.69	peak
3	11840.000	32.32	17.40	49.72	74.00	-24.28	peak
4	12621.000	32.66	17.98	50.64	74.00	-23.36	peak
5	13996.000	28.30	21.87	50.17	74.00	-23.83	peak
6	18000.000	23.86	26.12	49.98	74.00	-24.02	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5846.12
Polarity:	Horizontal	Test Voltage:	DC 5 V



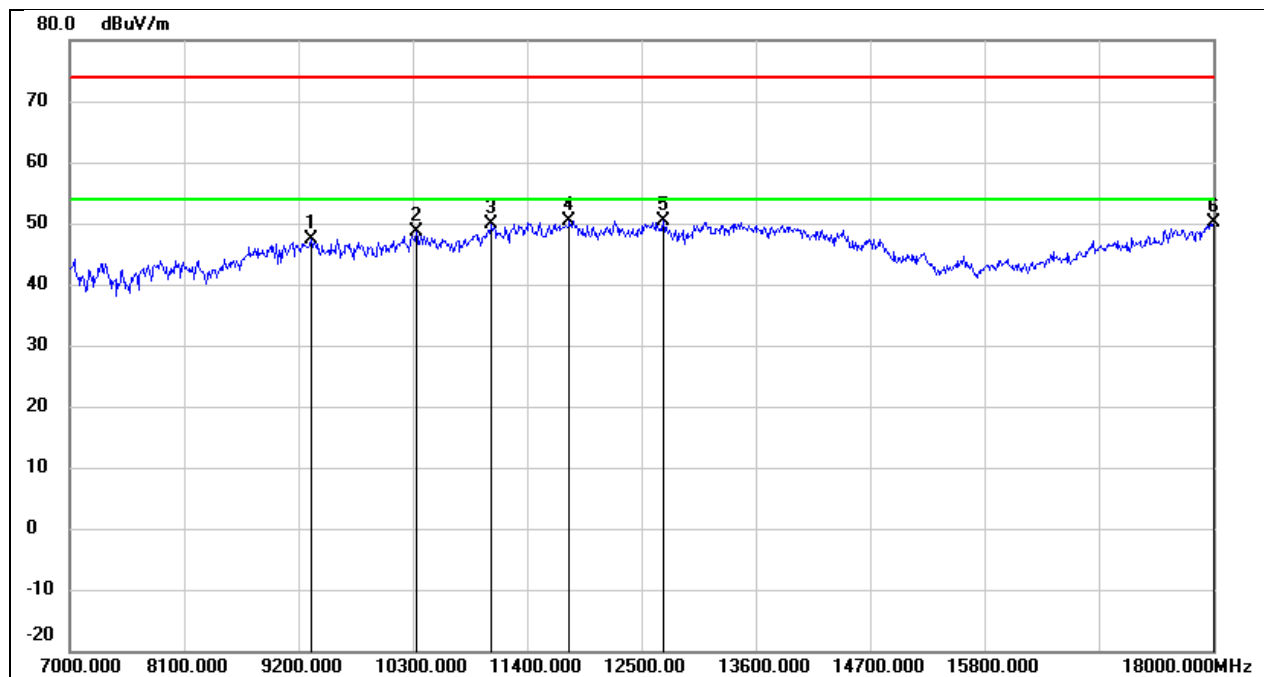
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	37.63	10.43	48.06	74.00	-25.94	peak
2	10553.000	35.62	13.02	48.64	74.00	-25.36	peak
3	11059.000	34.41	14.96	49.37	74.00	-24.63	peak
4	11785.000	33.12	17.30	50.42	74.00	-23.58	peak
5	13050.000	31.91	18.66	50.57	74.00	-23.43	peak
6	17956.000	24.31	25.82	50.13	74.00	-23.87	peak

Test Mode:	SRD 1.4MHz CA	Frequency(MHz):	5846.12
Polarity:	Vertical	Test Voltage:	DC 5 V



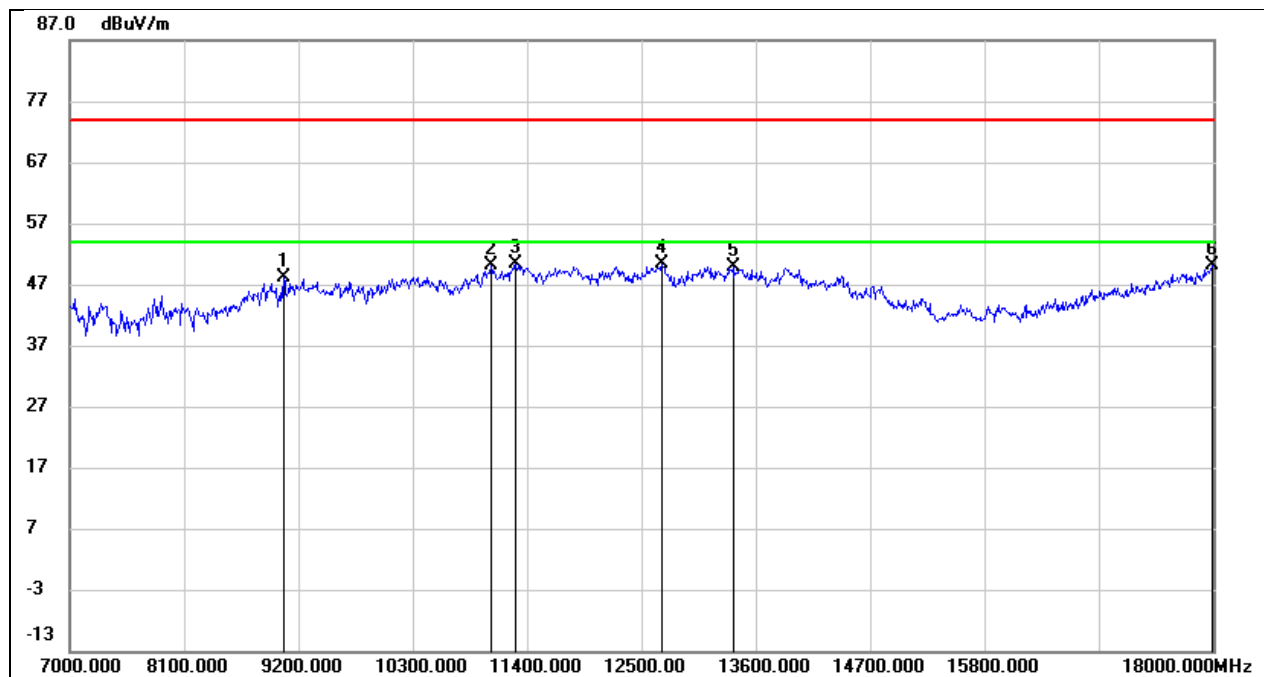
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10300.000	36.37	12.40	48.77	74.00	-25.23	peak
2	10916.000	34.86	14.39	49.25	74.00	-24.75	peak
3	11719.000	32.52	17.18	49.70	74.00	-24.30	peak
4	12698.000	32.35	18.08	50.43	74.00	-23.57	peak
5	13116.000	31.53	18.96	50.49	74.00	-23.51	peak
6	17967.000	23.49	25.89	49.38	74.00	-24.62	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5730.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



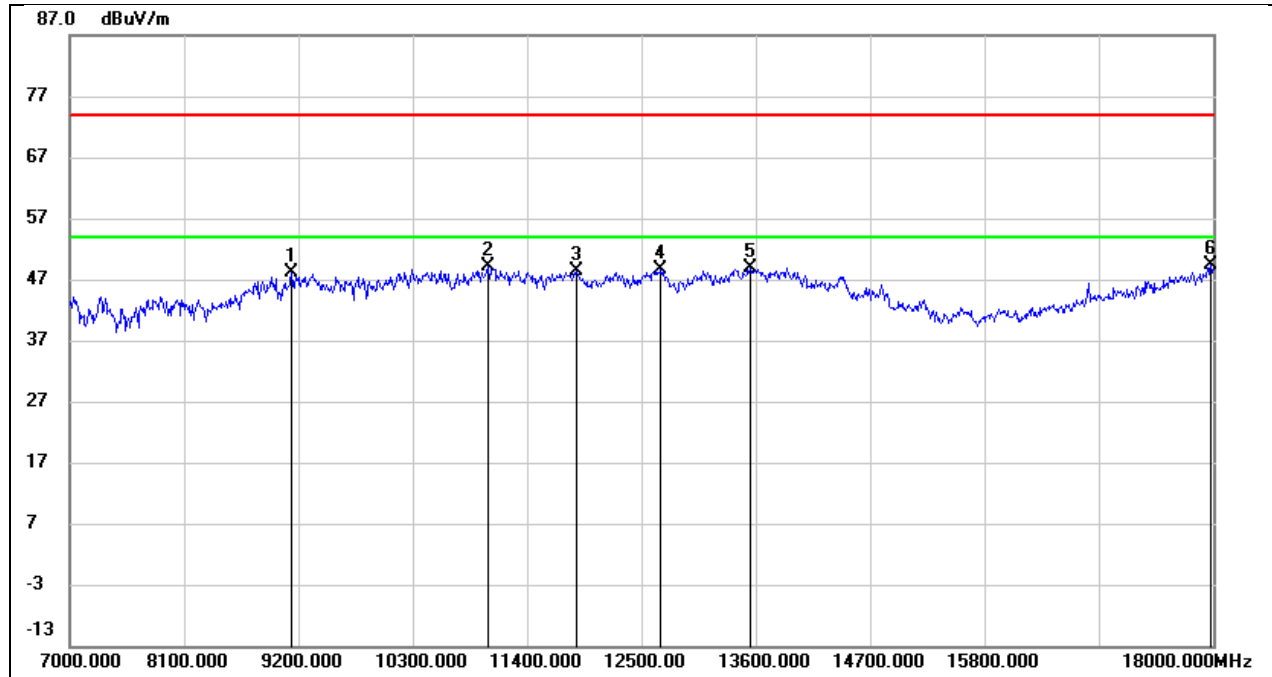
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9321.000	36.74	10.53	47.27	74.00	-26.73	peak
2	10333.000	36.25	12.47	48.72	74.00	-25.28	peak
3	11059.000	35.02	14.96	49.98	74.00	-24.02	peak
4	11807.000	33.13	17.34	50.47	74.00	-23.53	peak
5	12709.000	32.29	18.09	50.38	74.00	-23.62	peak
6	18000.000	23.99	26.12	50.11	74.00	-23.89	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5730.5
Polarity:	Vertical	Test Voltage:	DC 5 V



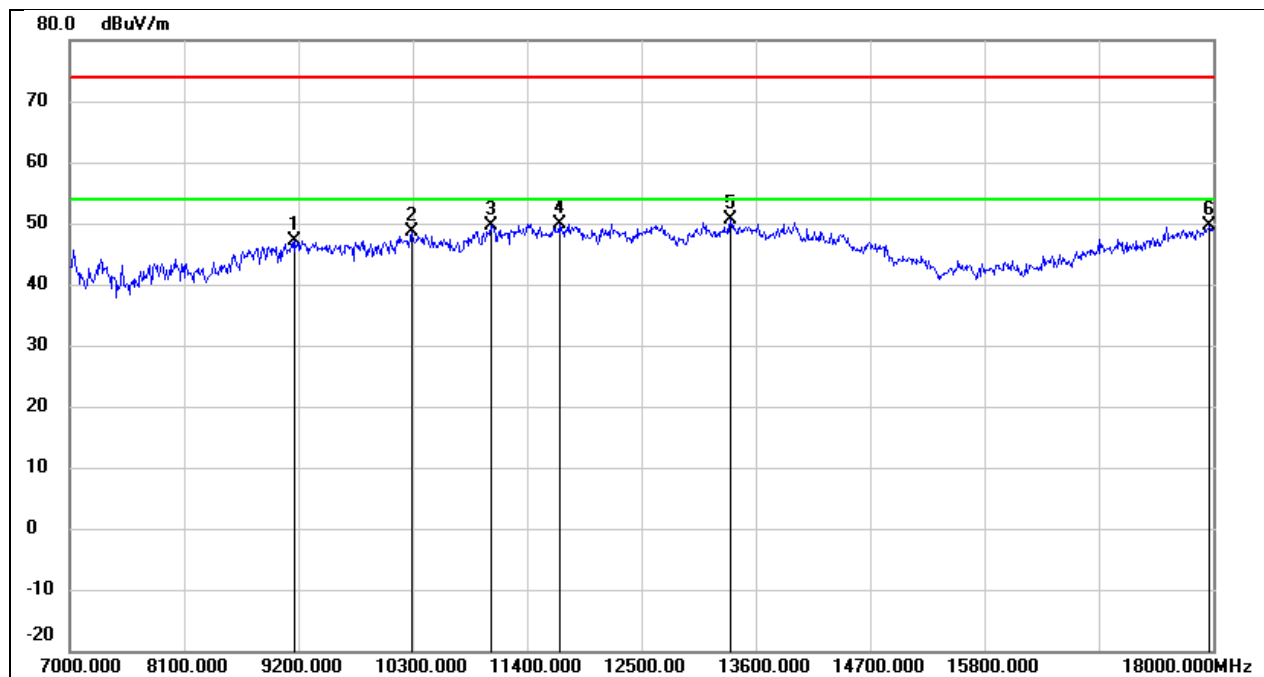
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9057.000	37.86	10.38	48.24	74.00	-25.76	peak
2	11059.000	35.23	14.96	50.19	74.00	-23.81	peak
3	11290.000	34.43	15.90	50.33	74.00	-23.67	peak
4	12698.000	32.24	18.08	50.32	74.00	-23.68	peak
5	13380.000	29.73	20.12	49.85	74.00	-24.15	peak
6	17989.000	24.14	26.04	50.18	74.00	-23.82	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



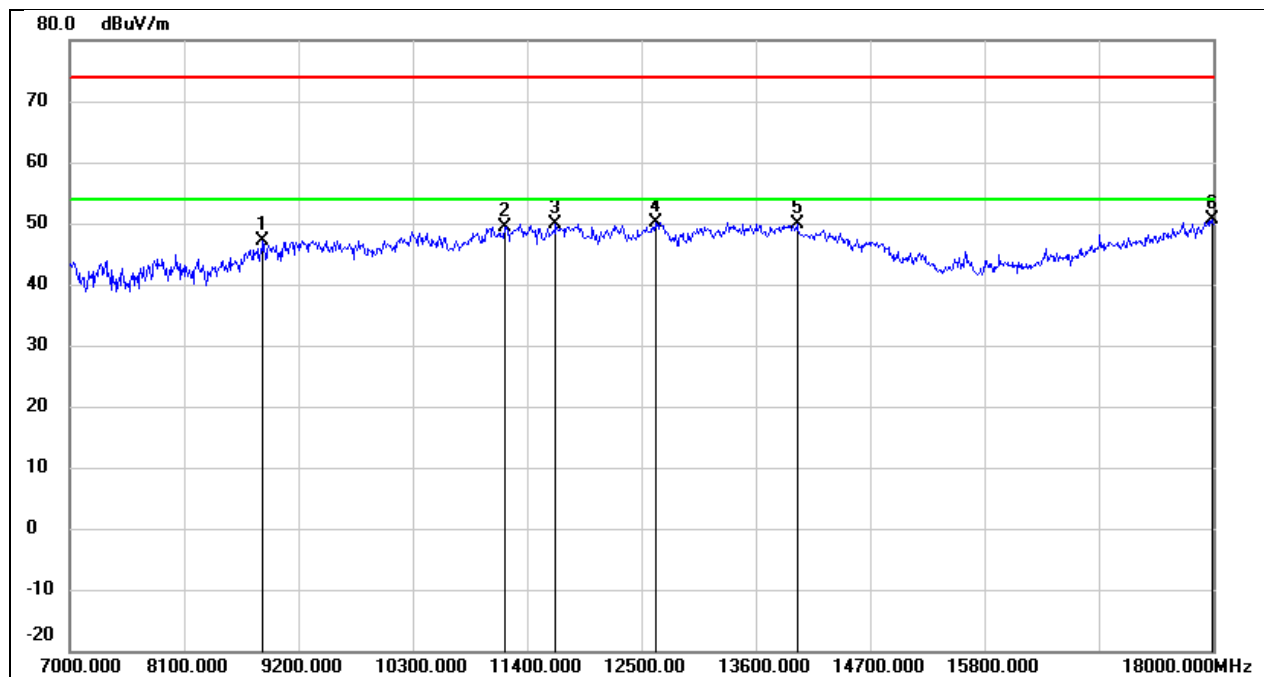
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	37.67	10.41	48.08	74.00	-25.92	peak
2	11026.000	34.24	14.82	49.06	74.00	-24.94	peak
3	11873.000	30.84	17.46	48.30	74.00	-25.70	peak
4	12687.000	30.60	18.05	48.65	74.00	-25.35	peak
5	13545.000	28.06	20.74	48.80	74.00	-25.20	peak
6	17978.000	23.53	25.97	49.50	74.00	-24.50	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



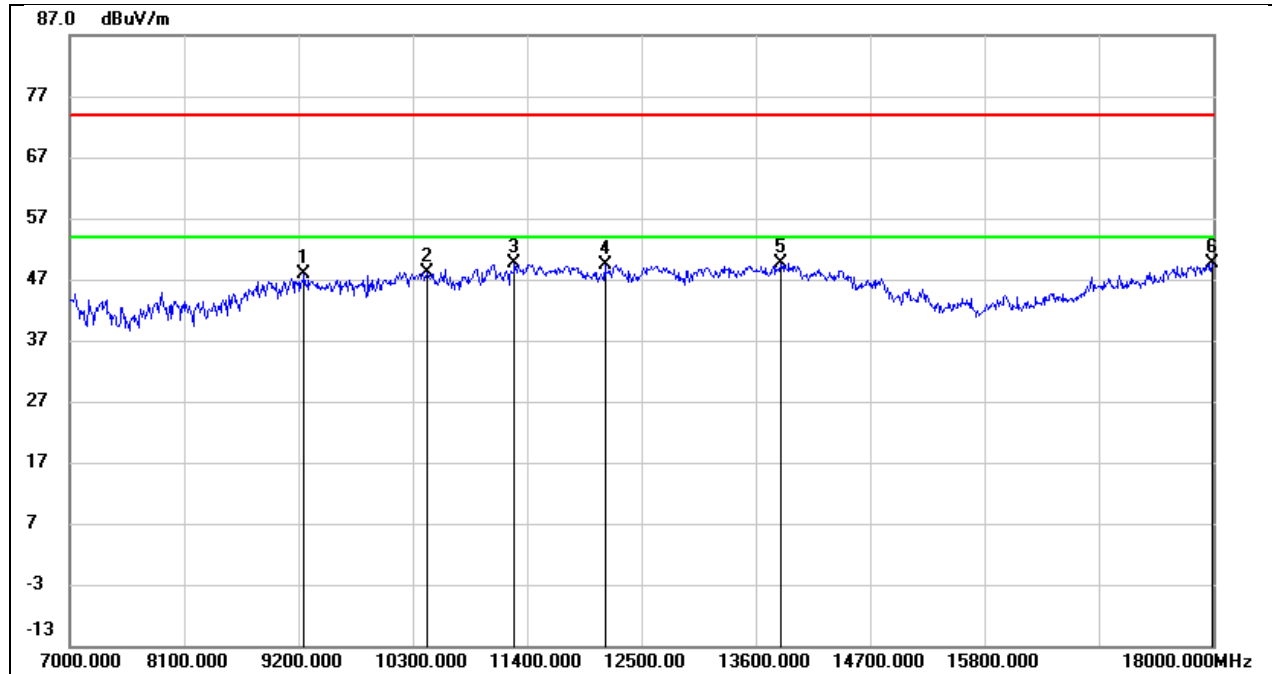
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9167.000	36.69	10.45	47.14	74.00	-26.86	peak
2	10289.000	36.33	12.38	48.71	74.00	-25.29	peak
3	11048.000	34.62	14.91	49.53	74.00	-24.47	peak
4	11708.000	32.81	17.16	49.97	74.00	-24.03	peak
5	13358.000	30.68	20.02	50.70	74.00	-23.30	peak
6	17967.000	23.77	25.89	49.66	74.00	-24.34	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5844.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



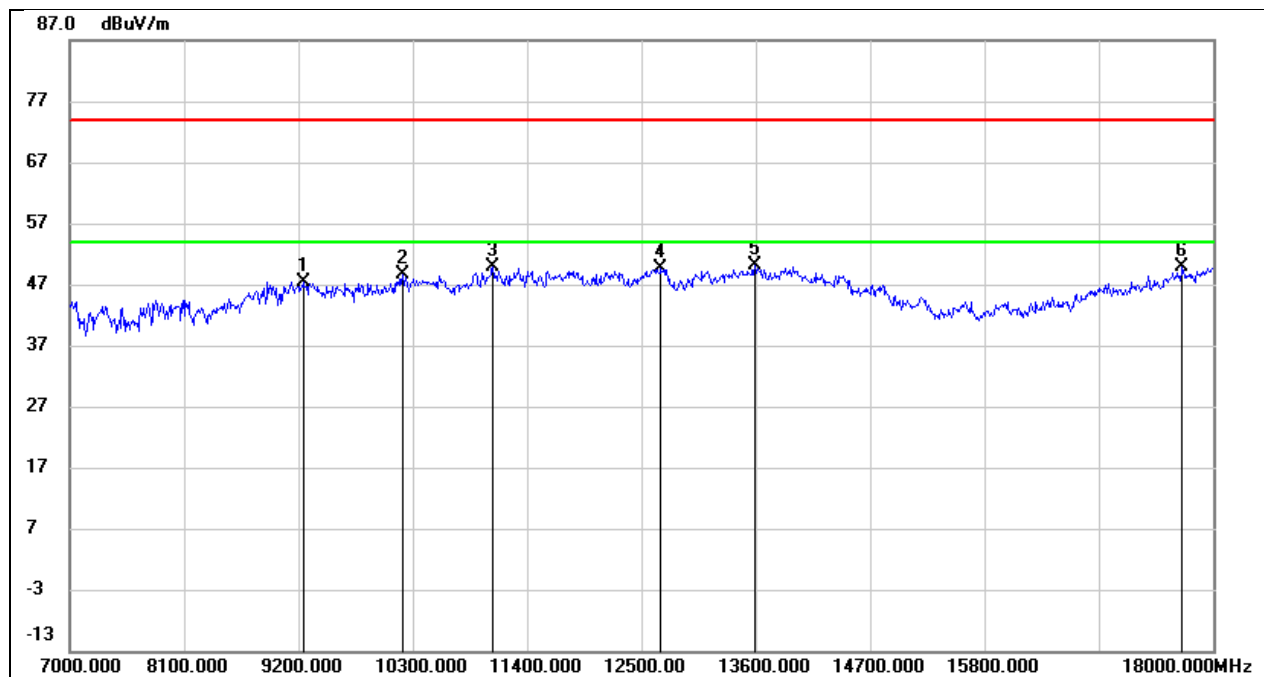
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8859.000	37.84	9.36	47.20	74.00	-26.80	peak
2	11180.000	34.04	15.46	49.50	74.00	-24.50	peak
3	11675.000	32.75	17.10	49.85	74.00	-24.15	peak
4	12632.000	32.20	17.99	50.19	74.00	-23.81	peak
5	13996.000	28.09	21.87	49.96	74.00	-24.04	peak
6	17989.000	24.47	26.04	50.51	74.00	-23.49	peak

Test Mode:	SRD 3MHz	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



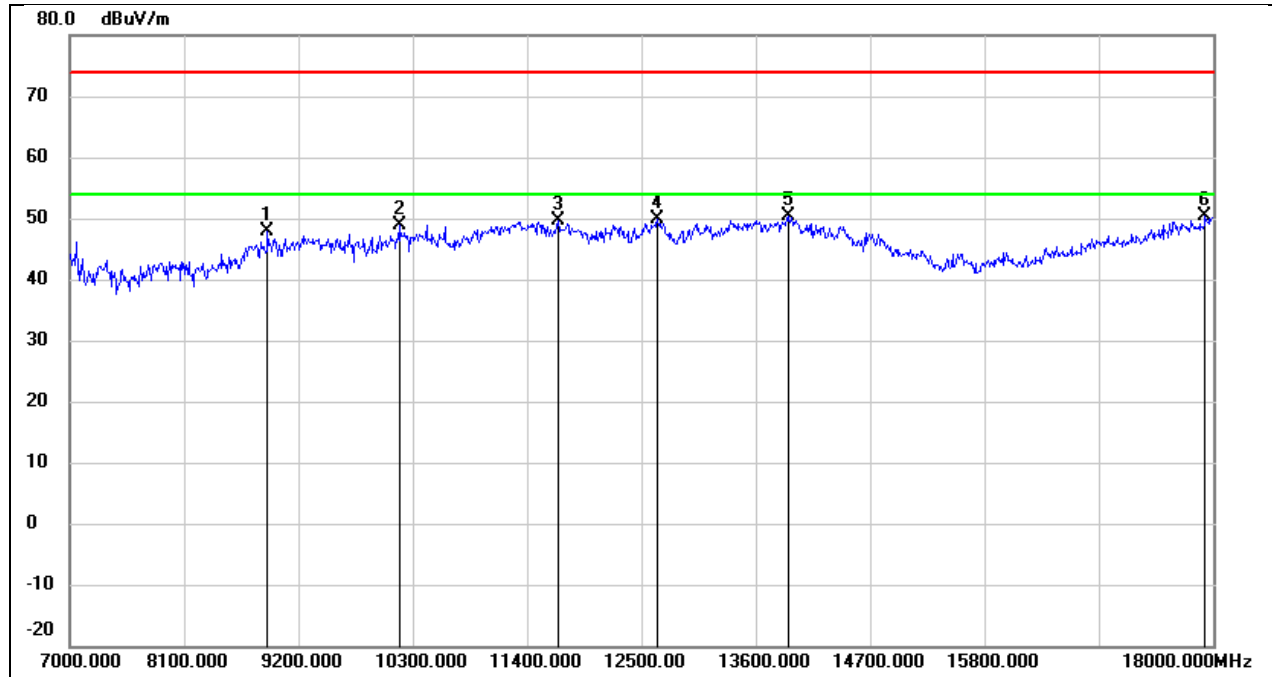
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9255.000	37.27	10.51	47.78	74.00	-26.22	peak
2	10443.000	35.51	12.70	48.21	74.00	-25.79	peak
3	11279.000	33.76	15.86	49.62	74.00	-24.38	peak
4	12148.000	31.71	17.74	49.45	74.00	-24.55	peak
5	13842.000	28.11	21.49	49.60	74.00	-24.40	peak
6	17989.000	23.68	26.04	49.72	74.00	-24.28	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5732.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



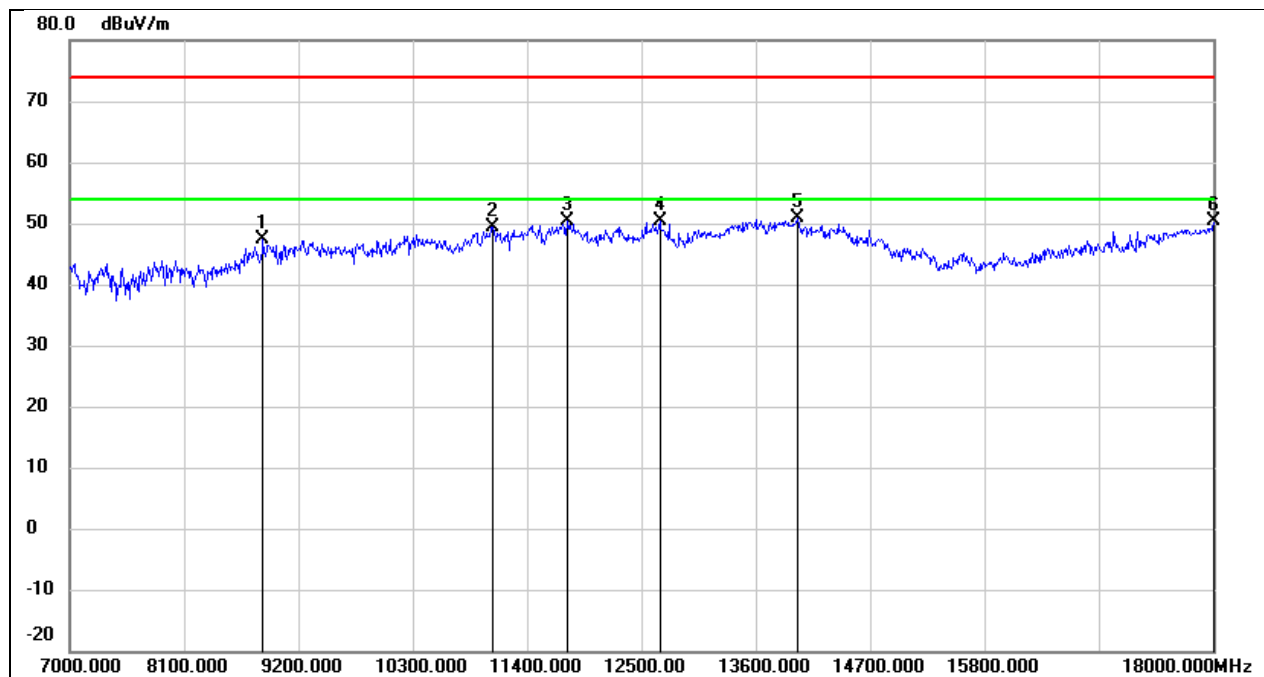
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9244.000	36.85	10.49	47.34	74.00	-26.66	peak
2	10201.000	36.38	12.19	48.57	74.00	-25.43	peak
3	11070.000	34.90	15.01	49.91	74.00	-24.09	peak
4	12687.000	31.49	18.05	49.54	74.00	-24.46	peak
5	13589.000	29.17	20.86	50.03	74.00	-23.97	peak
6	17703.000	25.69	24.09	49.78	74.00	-24.22	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5732.5
Polarity:	Vertical	Test Voltage:	DC 5 V



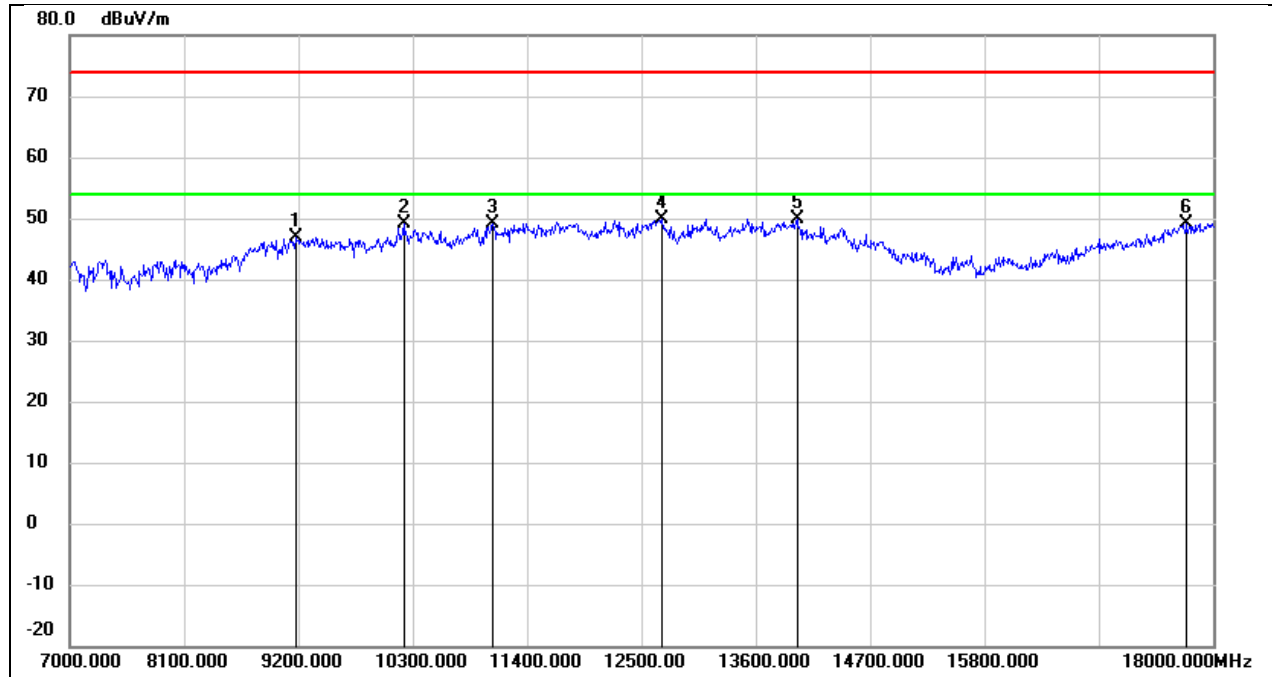
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8903.000	38.28	9.66	47.94	74.00	-26.06	peak
2	10168.000	36.72	12.13	48.85	74.00	-25.15	peak
3	11697.000	32.39	17.13	49.52	74.00	-24.48	peak
4	12654.000	31.94	18.01	49.95	74.00	-24.05	peak
5	13908.000	28.67	21.66	50.33	74.00	-23.67	peak
6	17923.000	24.66	25.60	50.26	74.00	-23.74	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



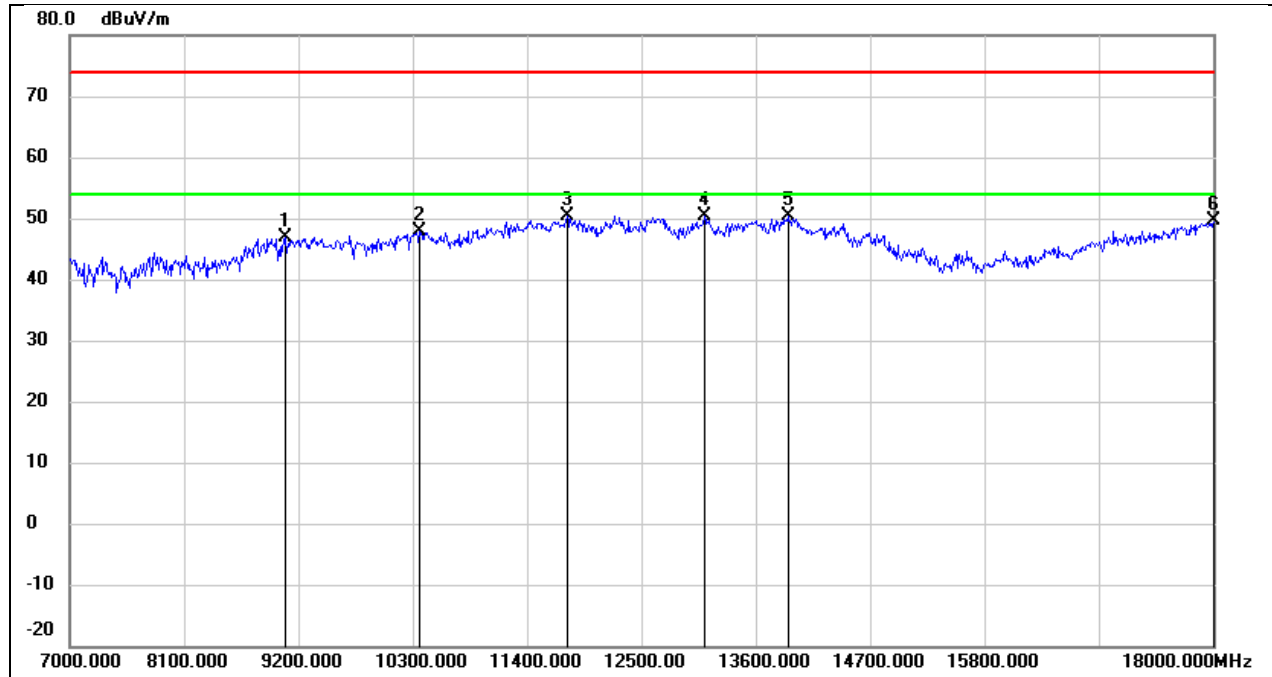
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8859.000	37.92	9.36	47.28	74.00	-26.72	peak
2	11070.000	34.39	15.01	49.40	74.00	-24.60	peak
3	11785.000	33.09	17.30	50.39	74.00	-23.61	peak
4	12676.000	32.25	18.05	50.30	74.00	-23.70	peak
5	14007.000	28.99	21.85	50.84	74.00	-23.16	peak
6	18000.000	24.34	26.12	50.46	74.00	-23.54	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



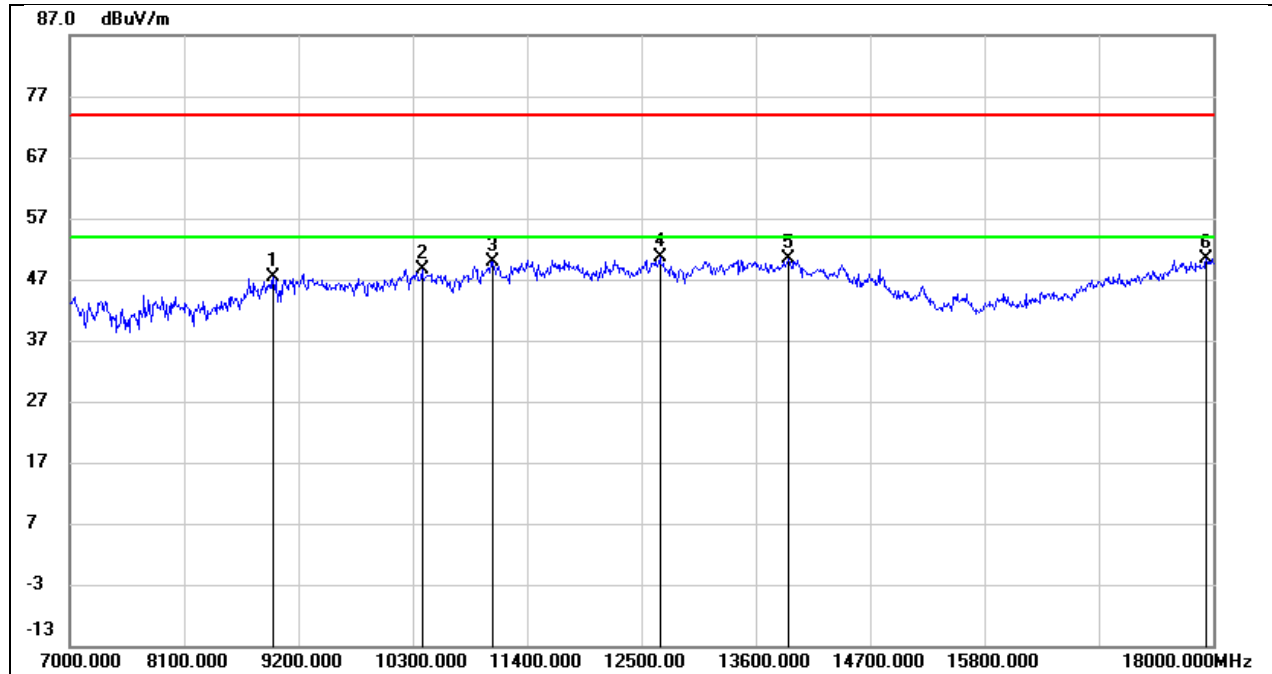
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9178.000	36.43	10.45	46.88	74.00	-27.12	peak
2	10212.000	36.95	12.21	49.16	74.00	-24.84	peak
3	11070.000	34.23	15.01	49.24	74.00	-24.76	peak
4	12698.000	31.69	18.08	49.77	74.00	-24.23	peak
5	13996.000	28.01	21.87	49.88	74.00	-24.12	peak
6	17747.000	24.83	24.39	49.22	74.00	-24.78	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5844.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



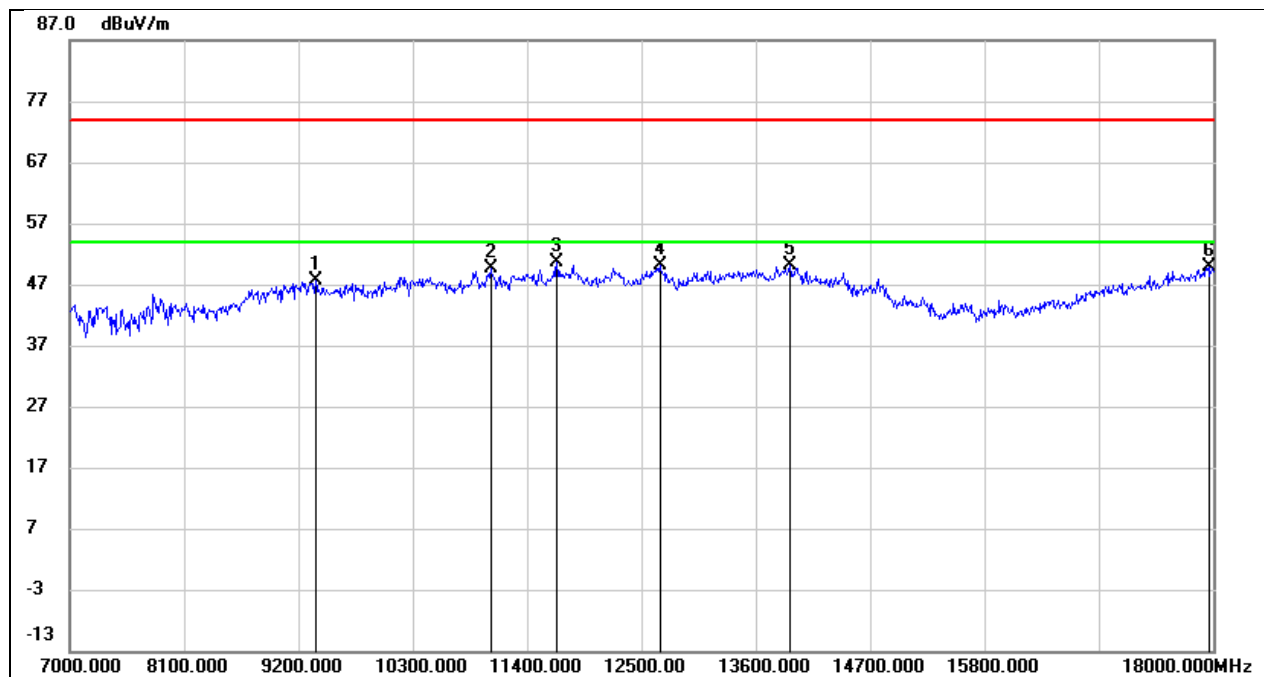
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9079.000	36.51	10.39	46.90	74.00	-27.10	peak
2	10366.000	35.41	12.54	47.95	74.00	-26.05	peak
3	11785.000	33.11	17.30	50.41	74.00	-23.59	peak
4	13105.000	31.36	18.91	50.27	74.00	-23.73	peak
5	13908.000	28.63	21.66	50.29	74.00	-23.71	peak
6	18000.000	23.45	26.12	49.57	74.00	-24.43	peak

Test Mode:	SRD 10MHz	Frequency(MHz):	5844.5
Polarity:	Vertical	Test Voltage:	DC 5 V



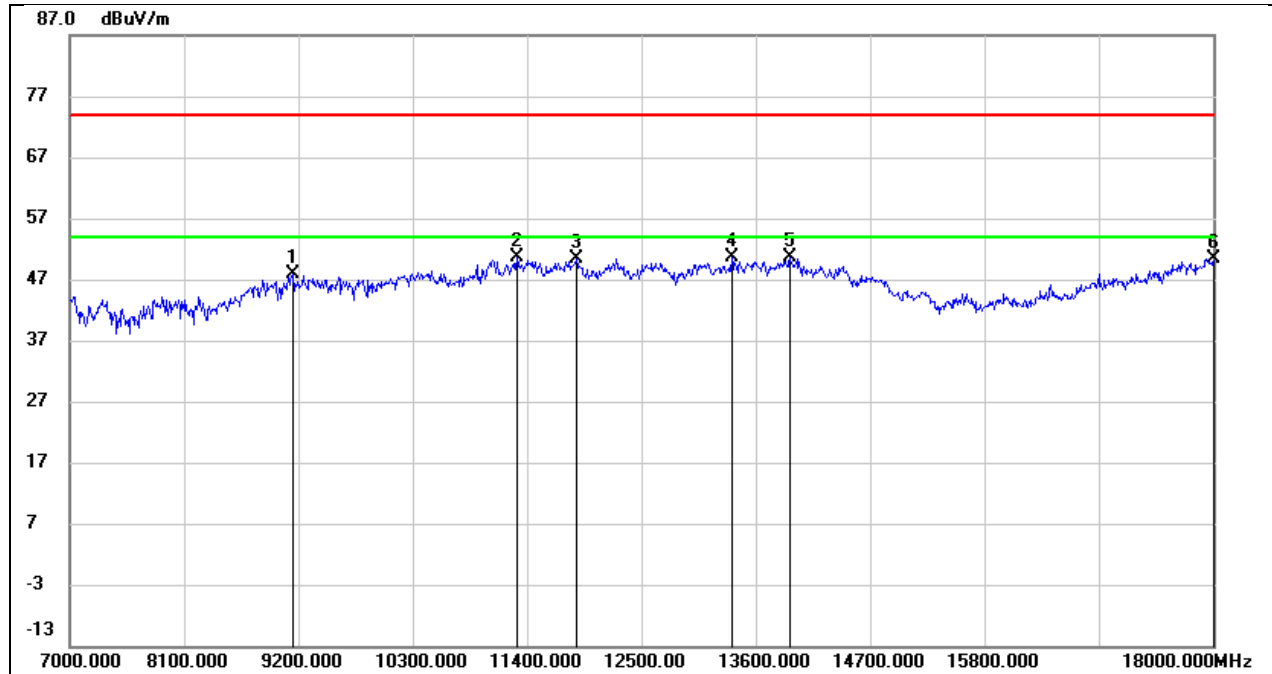
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8958.000	37.21	10.05	47.26	74.00	-26.74	peak
2	10388.000	36.04	12.59	48.63	74.00	-25.37	peak
3	11070.000	34.77	15.01	49.78	74.00	-24.22	peak
4	12676.000	32.48	18.05	50.53	74.00	-23.47	peak
5	13919.000	28.79	21.68	50.47	74.00	-23.53	peak
6	17934.000	24.81	25.67	50.48	74.00	-23.52	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5735.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



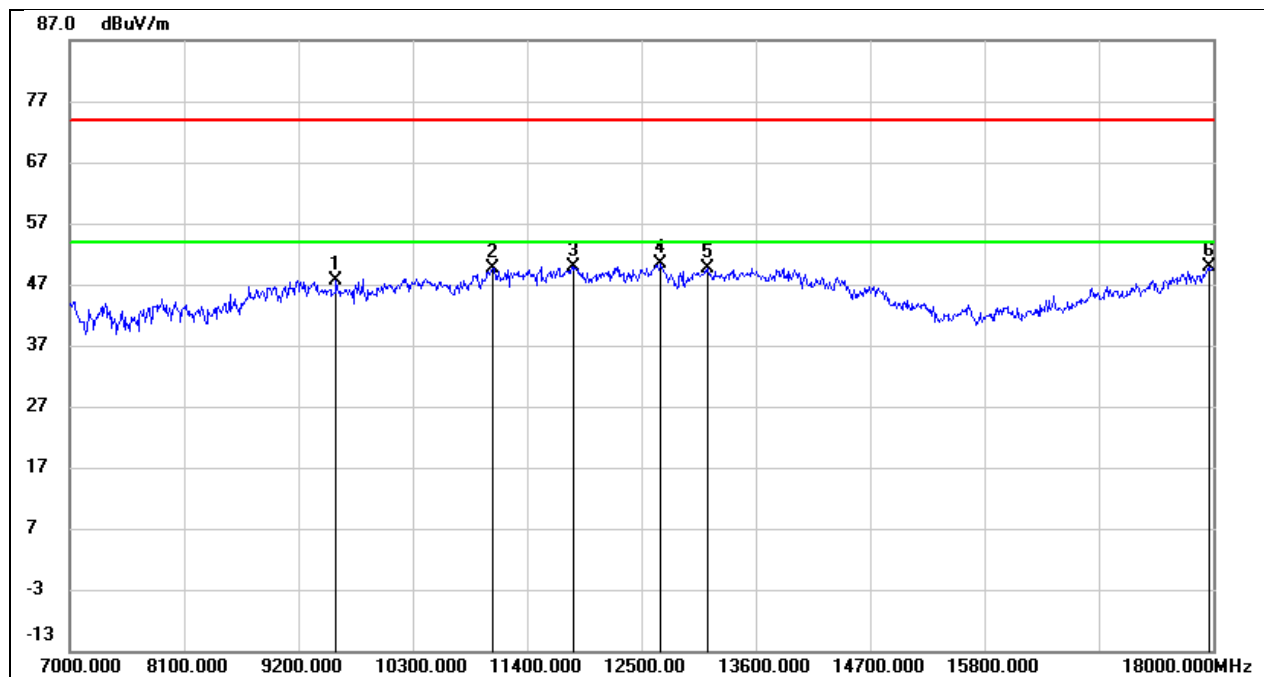
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9365.000	37.02	10.57	47.59	74.00	-26.41	peak
2	11048.000	34.81	14.91	49.72	74.00	-24.28	peak
3	11686.000	33.50	17.12	50.62	74.00	-23.38	peak
4	12676.000	32.00	18.05	50.05	74.00	-23.95	peak
5	13930.000	28.51	21.71	50.22	74.00	-23.78	peak
6	17956.000	24.00	25.82	49.82	74.00	-24.18	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5735.5
Polarity:	Vertical	Test Voltage:	DC 5 V



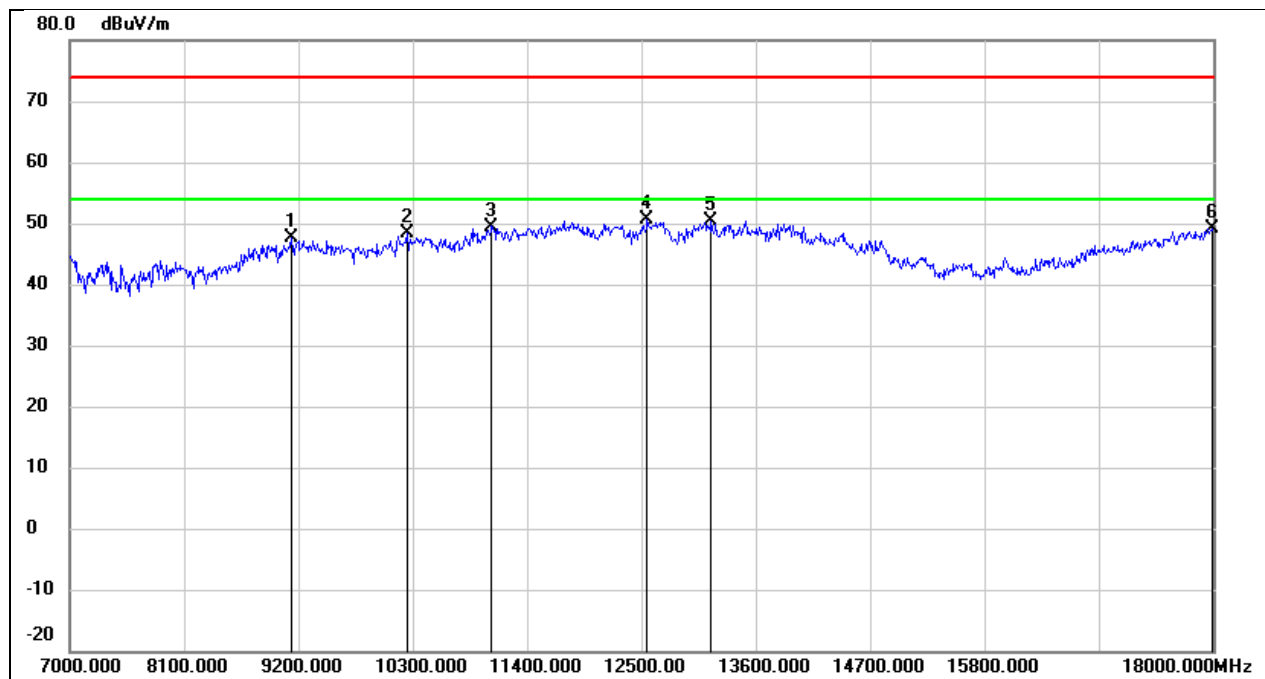
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	37.38	10.43	47.81	74.00	-26.19	peak
2	11301.000	34.64	15.95	50.59	74.00	-23.41	peak
3	11873.000	32.88	17.46	50.34	74.00	-23.66	peak
4	13369.000	30.56	20.06	50.62	74.00	-23.38	peak
5	13930.000	28.87	21.71	50.58	74.00	-23.42	peak
6	18000.000	24.25	26.12	50.37	74.00	-23.63	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



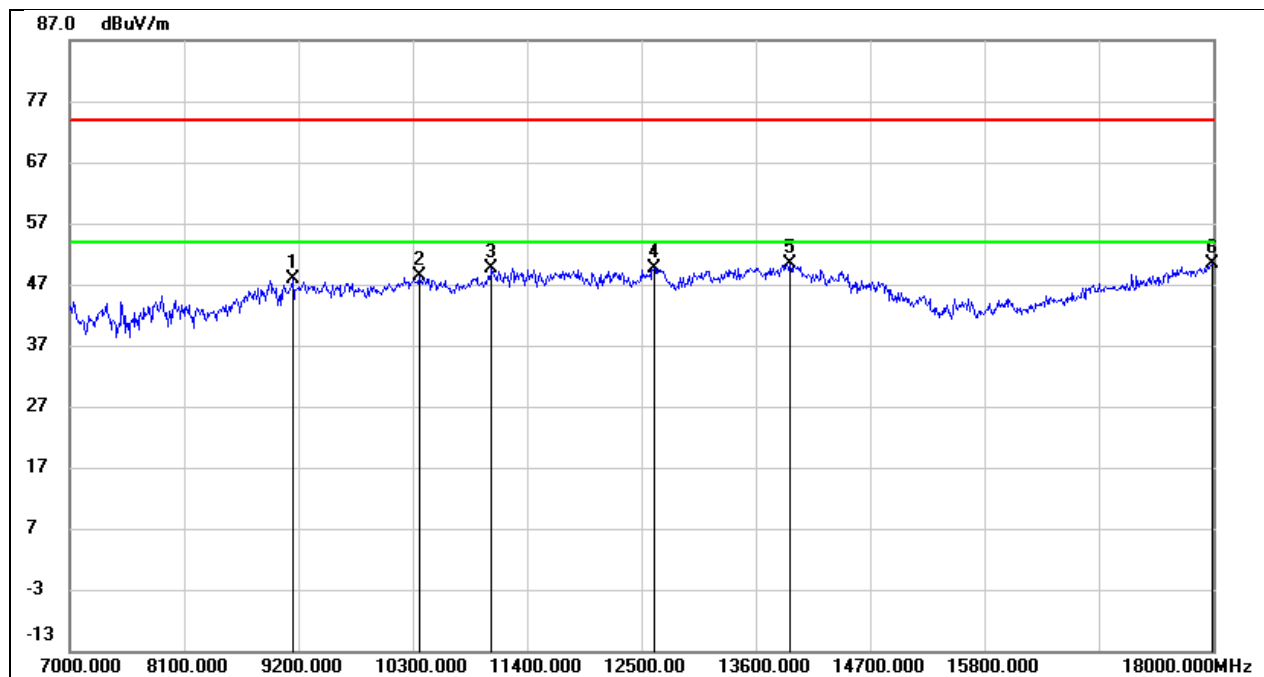
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9563.000	36.89	10.79	47.68	74.00	-26.32	peak
2	11070.000	34.72	15.01	49.73	74.00	-24.27	peak
3	11851.000	32.57	17.43	50.00	74.00	-24.00	peak
4	12687.000	32.25	18.05	50.30	74.00	-23.70	peak
5	13138.000	30.68	19.05	49.73	74.00	-24.27	peak
6	17956.000	23.97	25.82	49.79	74.00	-24.21	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



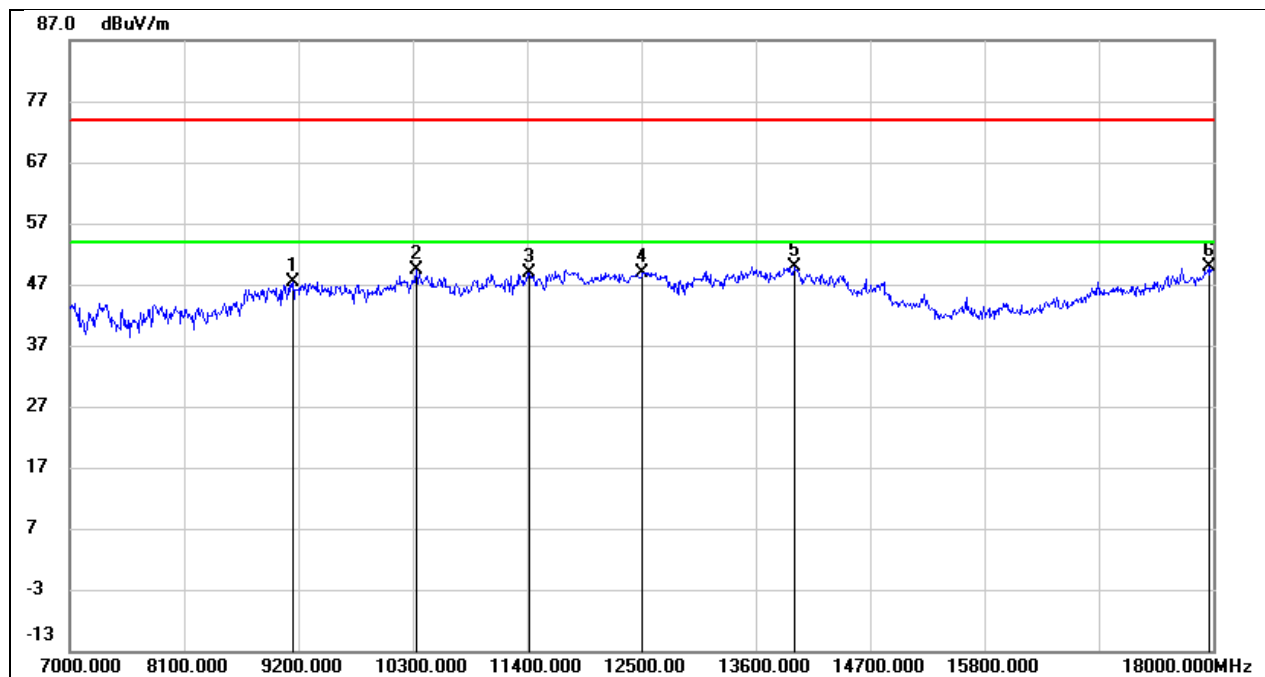
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9134.000	37.31	10.41	47.72	74.00	-26.28	peak
2	10245.000	36.15	12.28	48.43	74.00	-25.57	peak
3	11059.000	34.54	14.96	49.50	74.00	-24.50	peak
4	12555.000	32.65	17.90	50.55	74.00	-23.45	peak
5	13171.000	31.16	19.20	50.36	74.00	-23.64	peak
6	17989.000	23.09	26.04	49.13	74.00	-24.87	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5839.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	37.49	10.43	47.92	74.00	-26.08	peak
2	10366.000	35.86	12.54	48.40	74.00	-25.60	peak
3	11059.000	34.71	14.96	49.67	74.00	-24.33	peak
4	12621.000	31.69	17.98	49.67	74.00	-24.33	peak
5	13930.000	28.62	21.71	50.33	74.00	-23.67	peak
6	17989.000	24.33	26.04	50.37	74.00	-23.63	peak

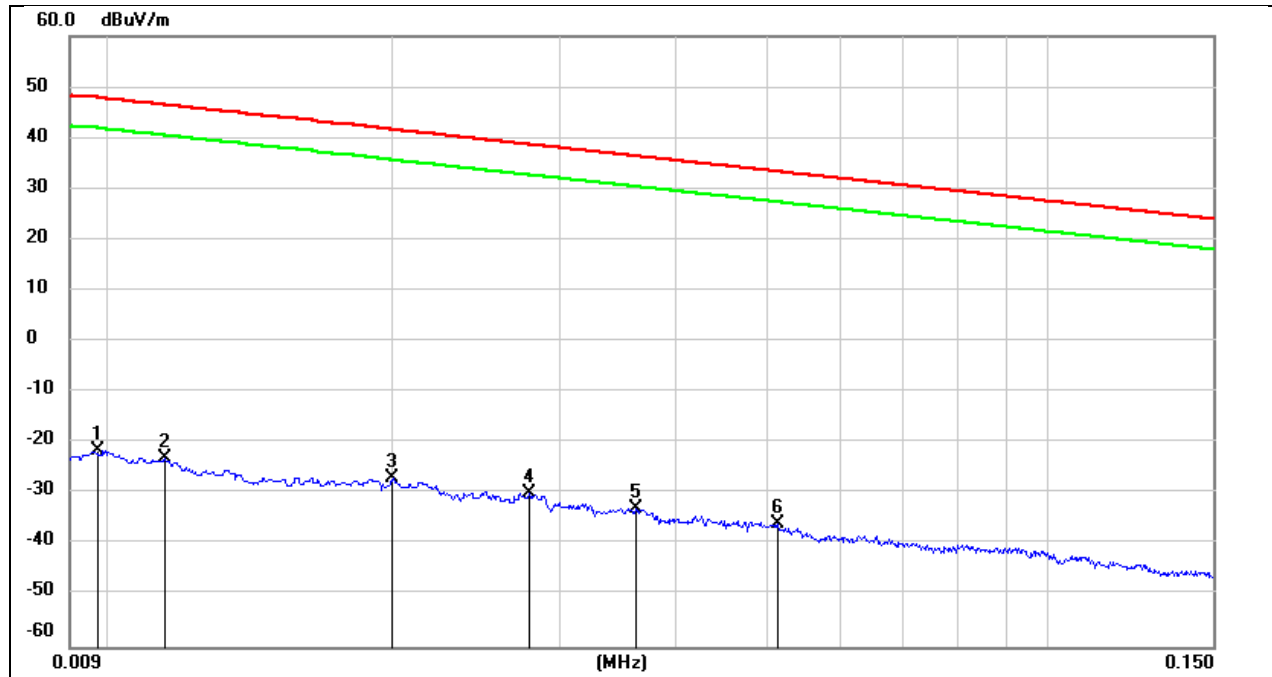
Test Mode:	SRD 20MHz	Frequency(MHz):	5839.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9145.000	36.99	10.43	47.42	74.00	-26.58	peak
2	10333.000	36.86	12.47	49.33	74.00	-24.67	peak
3	11422.000	32.52	16.46	48.98	74.00	-25.02	peak
4	12511.000	31.11	17.84	48.95	74.00	-25.05	peak
5	13974.000	27.99	21.82	49.81	74.00	-24.19	peak
6	17956.000	24.01	25.82	49.83	74.00	-24.17	peak

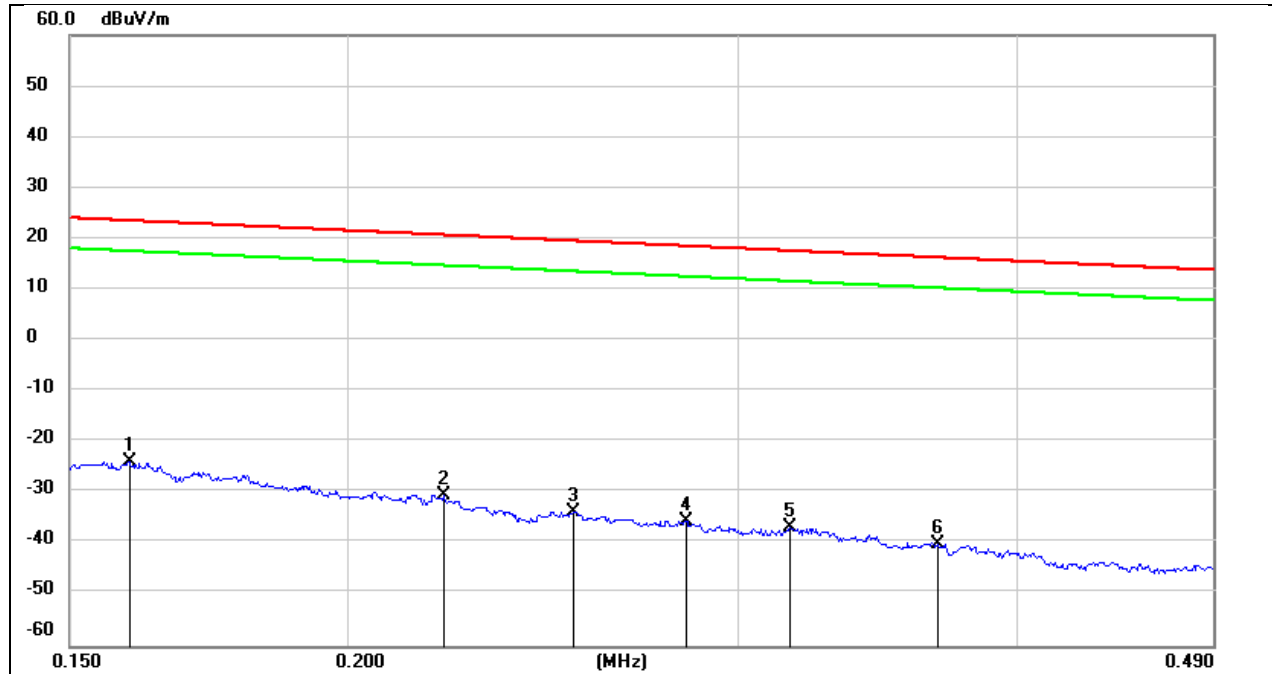
8.4. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



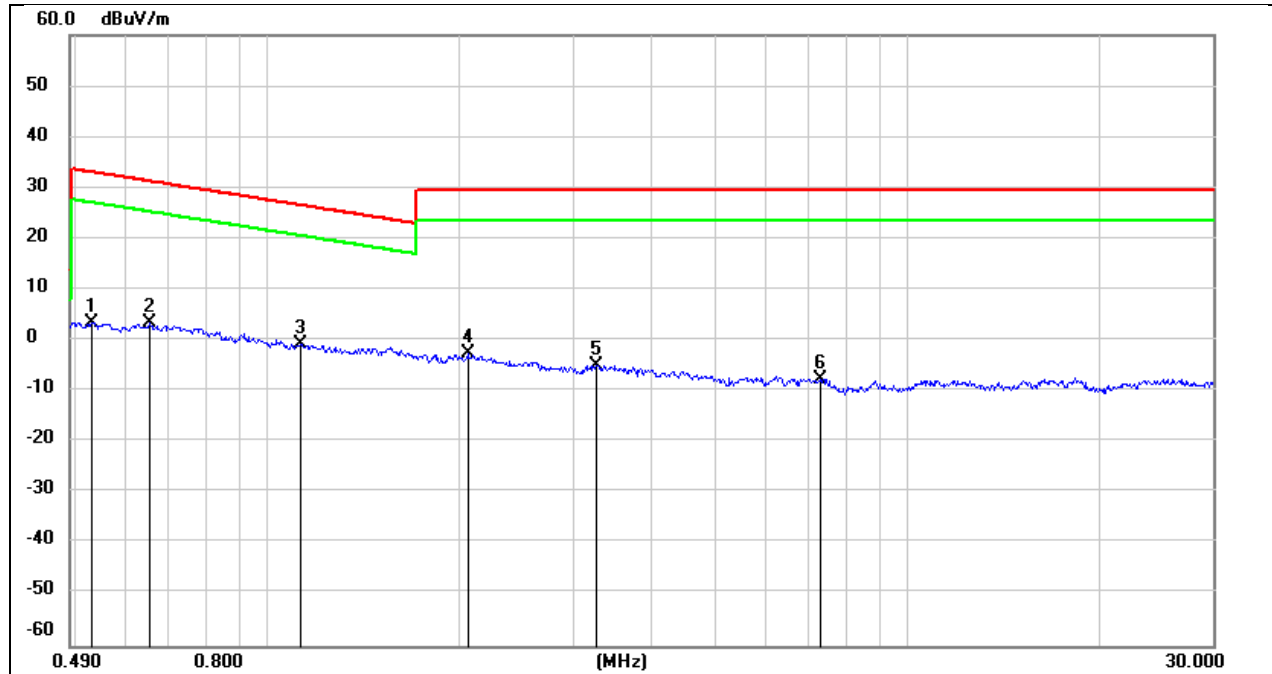
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuV/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	0.0097	79.93	-101.38	-21.45	-72.95	47.82	-3.68	-69.27	peak
2	0.0114	78.38	-101.4	-23.02	-74.52	46.46	-5.04	-69.48	peak
3	0.02	74.36	-101.34	-26.98	-78.48	41.58	-9.92	-68.56	peak
4	0.0279	71.67	-101.38	-29.71	-81.21	38.69	-12.81	-68.40	peak
5	0.0362	68.51	-101.42	-32.91	-84.41	36.43	-15.07	-69.34	peak
6	0.0514	65.68	-101.48	-35.8	-87.30	33.38	-18.12	-69.18	peak

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuV/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	0.1595	77.86	-101.65	-23.79	-75.29	23.55	-27.95	-47.34	peak
2	0.221	71.34	-101.75	-30.41	-81.91	20.71	-30.79	-51.12	peak
3	0.253	68.14	-101.8	-33.66	-85.16	19.54	-31.96	-53.20	peak
4	0.2837	66.22	-101.83	-35.61	-87.11	18.54	-32.96	-54.15	peak
5	0.3163	65.2	-101.87	-36.67	-88.17	17.6	-33.9	-54.27	peak
6	0.3684	61.98	-101.93	-39.95	-91.45	16.27	-35.23	-56.22	peak

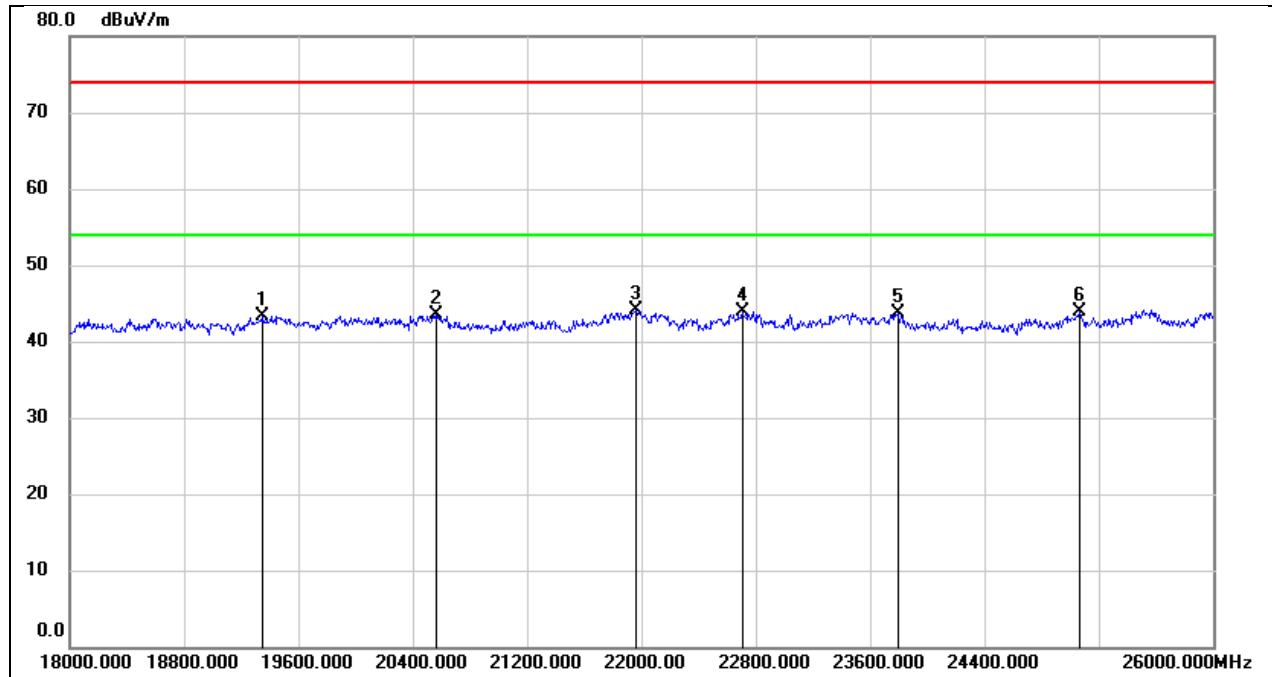
Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Result (dBuA/m)	Limit (dBuV/m)	Limit (dBuA/m)	Margin (dB)	Remark
1	0.5298	65.53	-62.08	3.45	-48.05	33.12	-18.38	-29.67	peak
2	0.6532	65.48	-62.1	3.38	-48.12	31.3	-20.2	-27.92	peak
3	1.125	61.56	-62.21	-0.65	-52.15	26.58	-24.92	-27.23	peak
4	2.0539	59.2	-61.81	-2.61	-54.11	29.54	-21.96	-32.15	peak
5	3.2639	56.59	-61.51	-4.92	-56.42	29.54	-21.96	-34.46	peak
6	7.3361	53.58	-61.17	-7.59	-59.09	29.54	-21.96	-37.13	peak

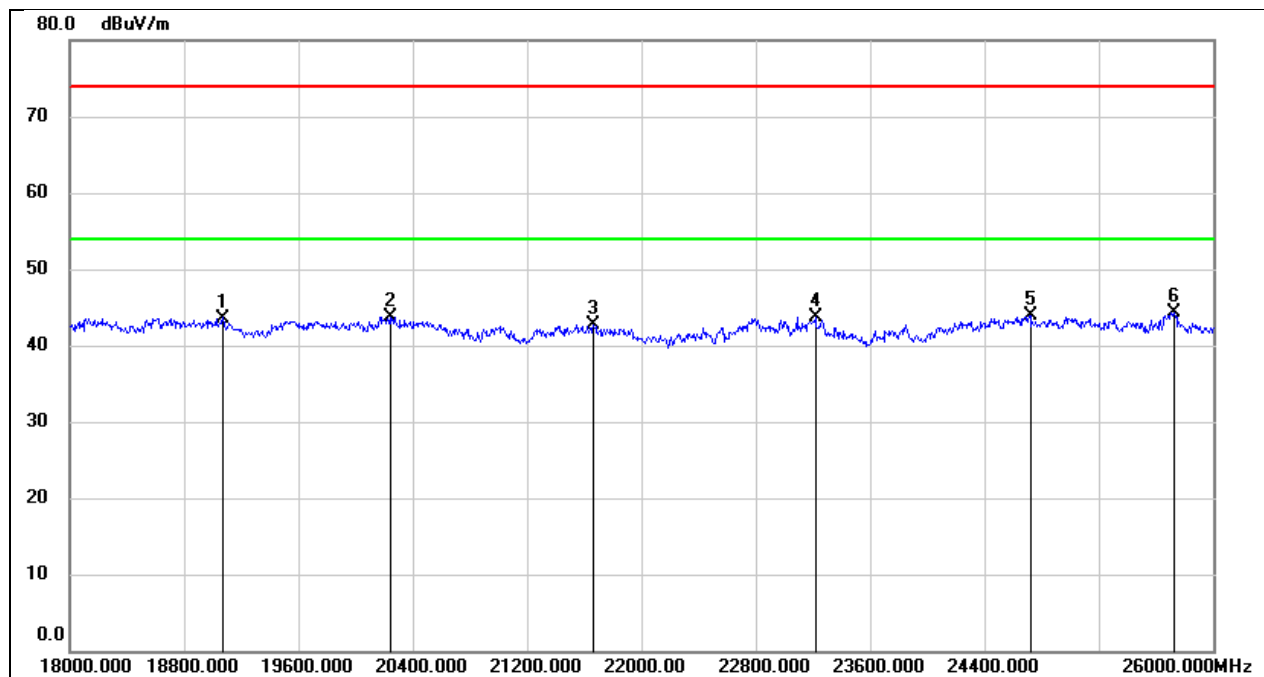
8.5. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19352.000	48.86	-5.57	43.29	74.00	-30.71	peak
2	20560.000	48.73	-5.30	43.43	74.00	-30.57	peak
3	21960.000	48.50	-4.45	44.05	74.00	-29.95	peak
4	22704.000	47.58	-3.73	43.85	74.00	-30.15	peak
5	23800.000	46.91	-3.11	43.80	74.00	-30.20	peak
6	25064.000	45.92	-1.99	43.93	74.00	-30.07	peak

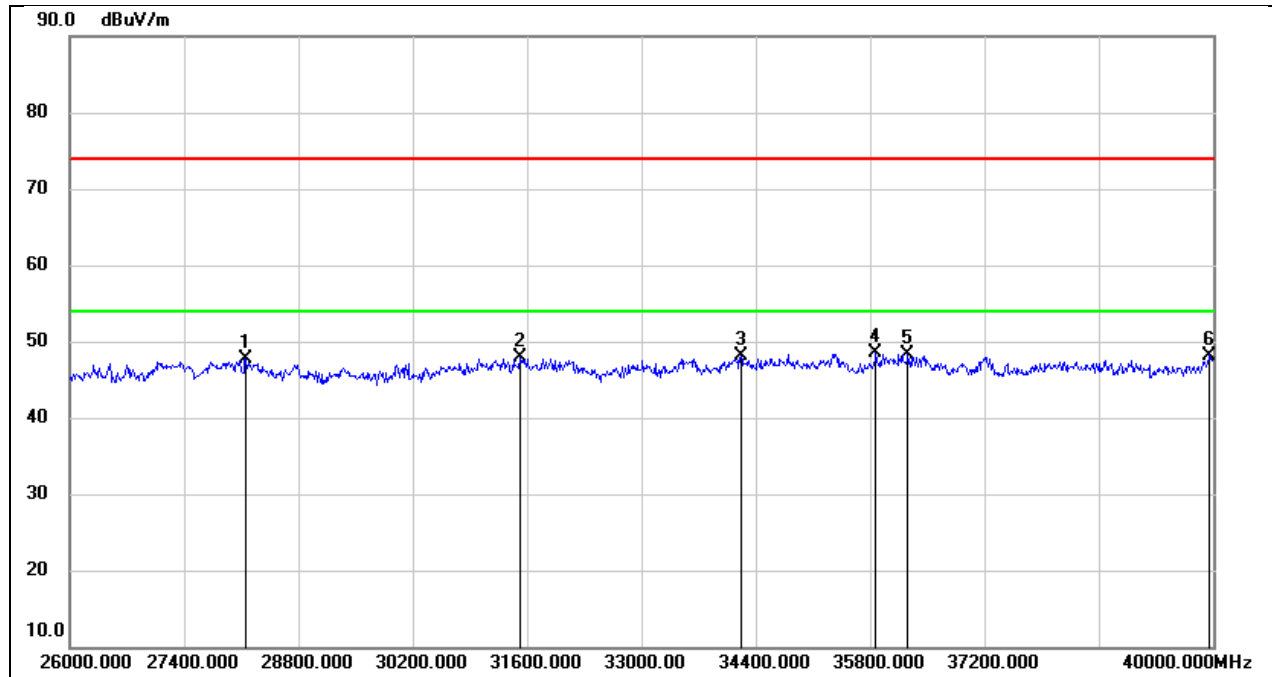
Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19072.000	48.91	-5.31	43.60	74.00	-30.40	peak
2	20240.000	49.32	-5.61	43.71	74.00	-30.29	peak
3	21664.000	47.23	-4.45	42.78	74.00	-31.22	peak
4	23216.000	47.01	-3.38	43.63	74.00	-30.37	peak
5	24720.000	46.22	-2.33	43.89	74.00	-30.11	peak
6	25728.000	45.11	-0.72	44.39	74.00	-29.61	peak

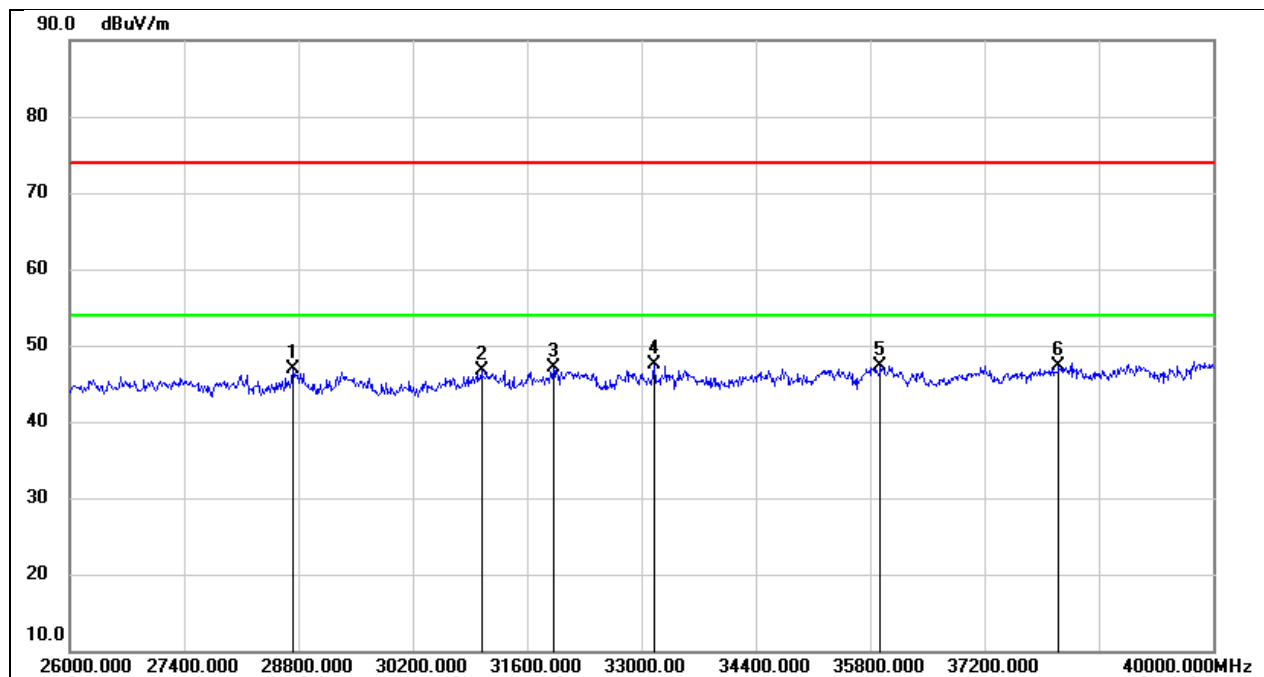
8.6. SPURIOUS EMISSIONS (26 GHZ ~ 40 GHZ)

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	28156.000	50.64	-3.02	47.62	74.00	-26.38	peak
2	31516.000	49.06	-1.19	47.87	74.00	-26.13	peak
3	34218.000	46.96	1.13	48.09	74.00	-25.91	peak
4	35870.000	44.83	3.75	48.58	74.00	-25.42	peak
5	36262.000	45.10	3.28	48.38	74.00	-25.62	peak
6	39958.000	43.08	5.12	48.20	74.00	-25.80	peak

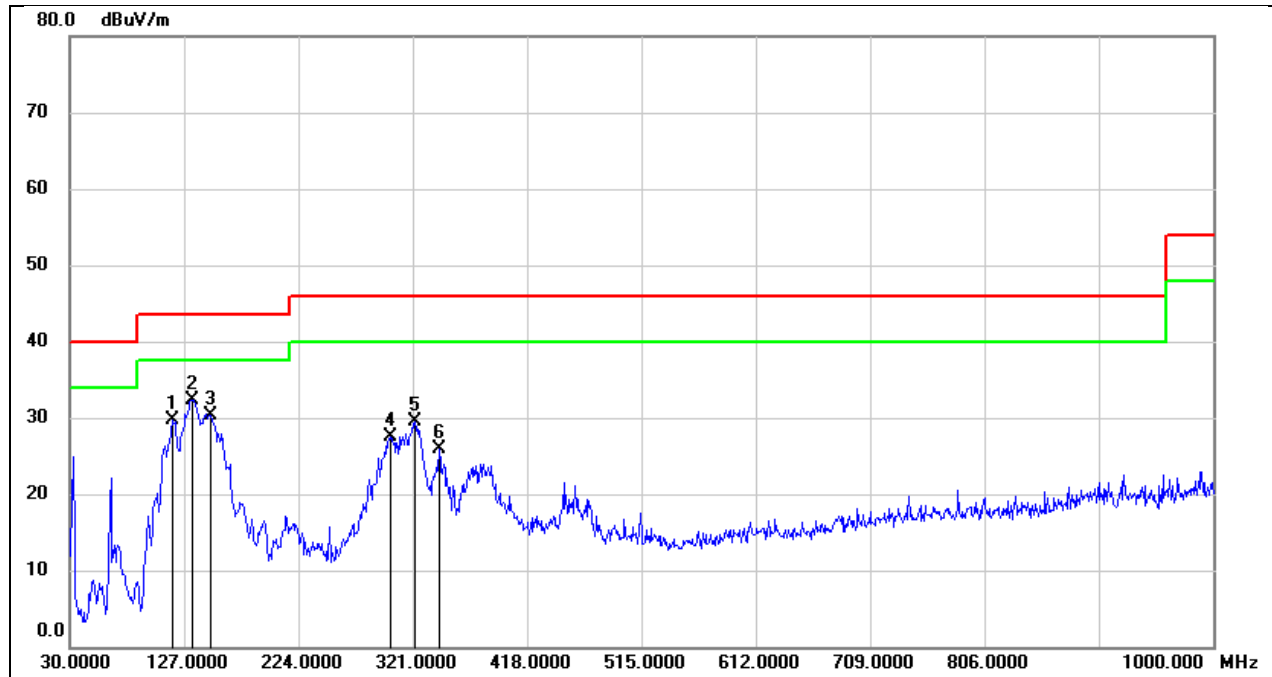
Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	28730.000	47.51	-0.69	46.82	74.00	-27.18	peak
2	31040.000	47.45	-0.72	46.73	74.00	-27.27	peak
3	31922.000	48.89	-1.86	47.03	74.00	-26.97	peak
4	33154.000	48.05	-0.54	47.51	74.00	-26.49	peak
5	35926.000	43.44	3.88	47.32	74.00	-26.68	peak
6	38110.000	43.83	3.53	47.36	74.00	-26.64	peak

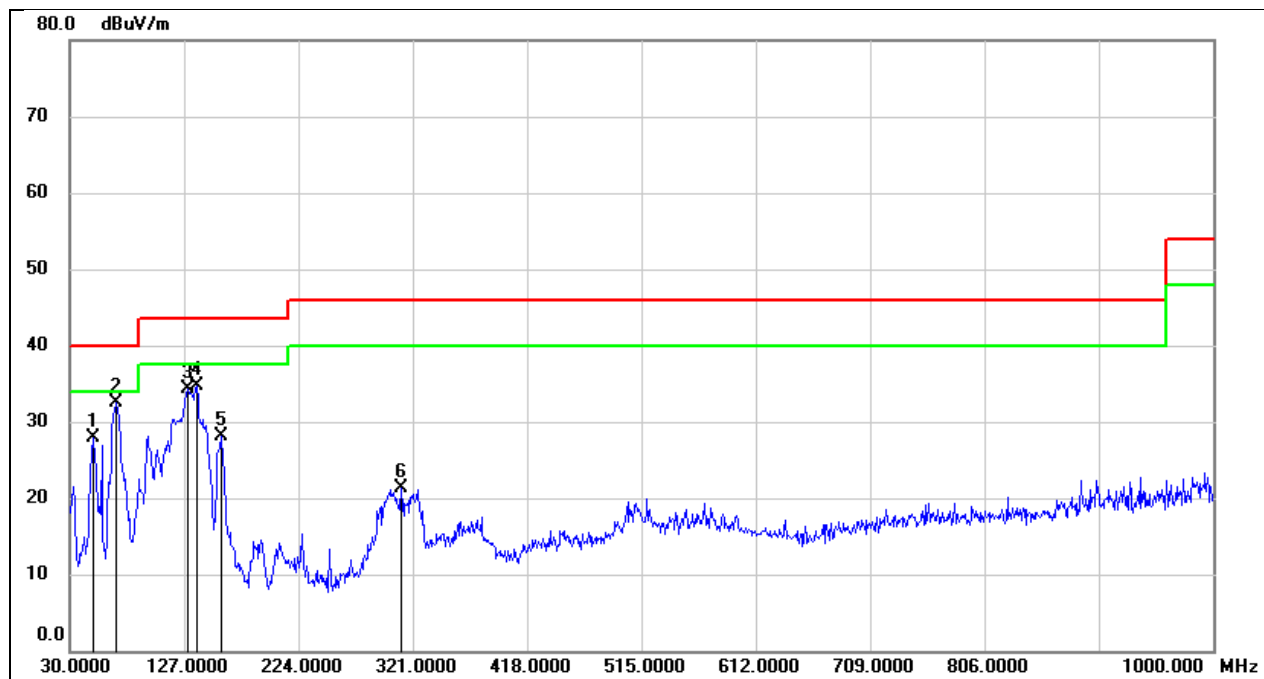
8.7. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Horizontal	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	117.3000	49.19	-19.55	29.64	43.50	-13.86	QP
2	133.7899	51.05	-18.69	32.36	43.50	-11.14	QP
3	149.3100	48.21	-17.94	30.27	43.50	-13.23	QP
4	302.5700	42.24	-14.68	27.56	46.00	-18.44	QP
5	322.9400	43.24	-13.74	29.50	46.00	-16.50	QP
6	343.3100	38.65	-12.82	25.83	46.00	-20.17	QP

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Polarity:	Vertical	Test Voltage:	DC 5 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	49.4000	48.04	-20.04	28.00	40.00	-12.00	QP
2	69.7699	52.86	-20.28	32.58	40.00	-7.42	QP
3	129.9100	53.11	-18.88	34.23	43.50	-9.27	QP
4	137.6700	53.19	-18.50	34.69	43.50	-8.81	QP
5	158.0399	45.35	-17.17	28.18	43.50	-15.32	QP
6	311.3000	35.55	-14.28	21.27	46.00	-24.73	QP

9. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISED RSS-Gen Clause 8.8

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

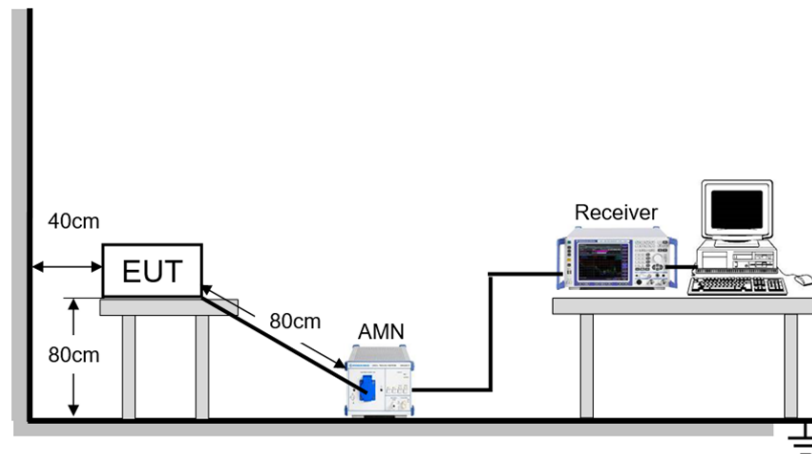
TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

TEST SETUP

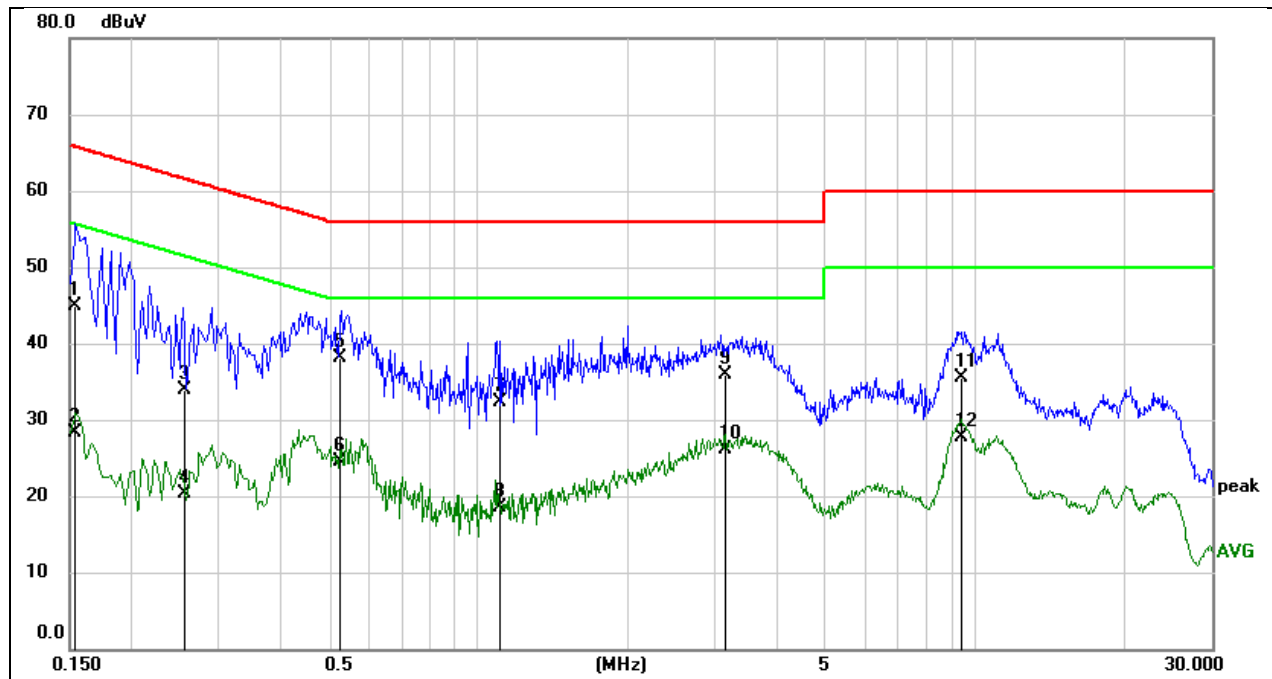


TEST ENVIRONMENT

Temperature	22.4°C	Relative Humidity	53%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST RESULTS

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Line	L		

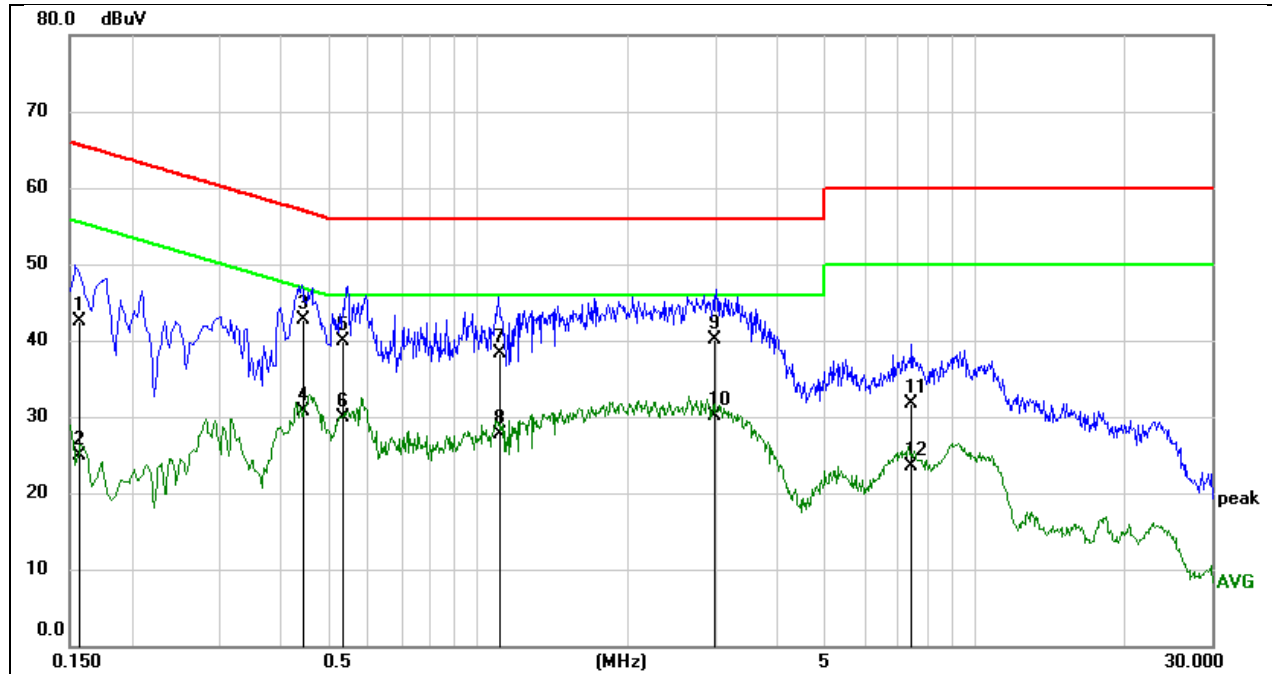


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1528	35.23	9.59	44.82	65.85	-21.03	QP
2	0.1528	18.62	9.59	28.21	55.85	-27.64	AVG
3	0.2548	24.37	9.59	33.96	61.60	-27.64	QP
4	0.2548	10.80	9.59	20.39	51.60	-31.21	AVG
5	0.5247	28.42	9.60	38.02	56.00	-17.98	QP
6	0.5247	14.87	9.60	24.47	46.00	-21.53	AVG
7	1.1038	22.76	9.61	32.37	56.00	-23.63	QP
8	1.1038	8.97	9.61	18.58	46.00	-27.42	AVG
9	3.1390	26.13	9.68	35.81	56.00	-20.19	QP
10	3.1390	16.48	9.68	26.16	46.00	-19.84	AVG
11	9.3993	25.76	9.72	35.48	60.00	-24.52	QP
12	9.3993	18.06	9.72	27.78	50.00	-22.22	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Test Mode:	SRD 20MHz	Frequency(MHz):	5787.5
Line	N		



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1573	32.95	9.50	42.45	65.61	-23.16	QP
2	0.1573	15.35	9.50	24.85	55.61	-30.76	AVG
3	0.4426	33.18	9.52	42.70	57.01	-14.31	QP
4	0.4426	21.17	9.52	30.69	47.01	-16.32	AVG
5	0.5335	30.43	9.50	39.93	56.00	-16.07	QP
6	0.5335	20.39	9.50	29.89	46.00	-16.11	AVG
7	1.1083	28.85	9.52	38.37	56.00	-17.63	QP
8	1.1083	18.23	9.52	27.75	46.00	-18.25	AVG
9	2.9978	30.43	9.62	40.05	56.00	-15.95	QP
10	2.9978	20.46	9.62	30.08	46.00	-15.92	AVG
11	7.4667	22.11	9.62	31.73	60.00	-28.27	QP
12	7.4667	13.97	9.62	23.59	50.00	-26.41	AVG

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

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

10. ANTENNA REQUIREMENT

REQUIREMENT

Please refer to FCC part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC part 15.407(a)

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DESCRIPTION

Pass

11. TEST DATA

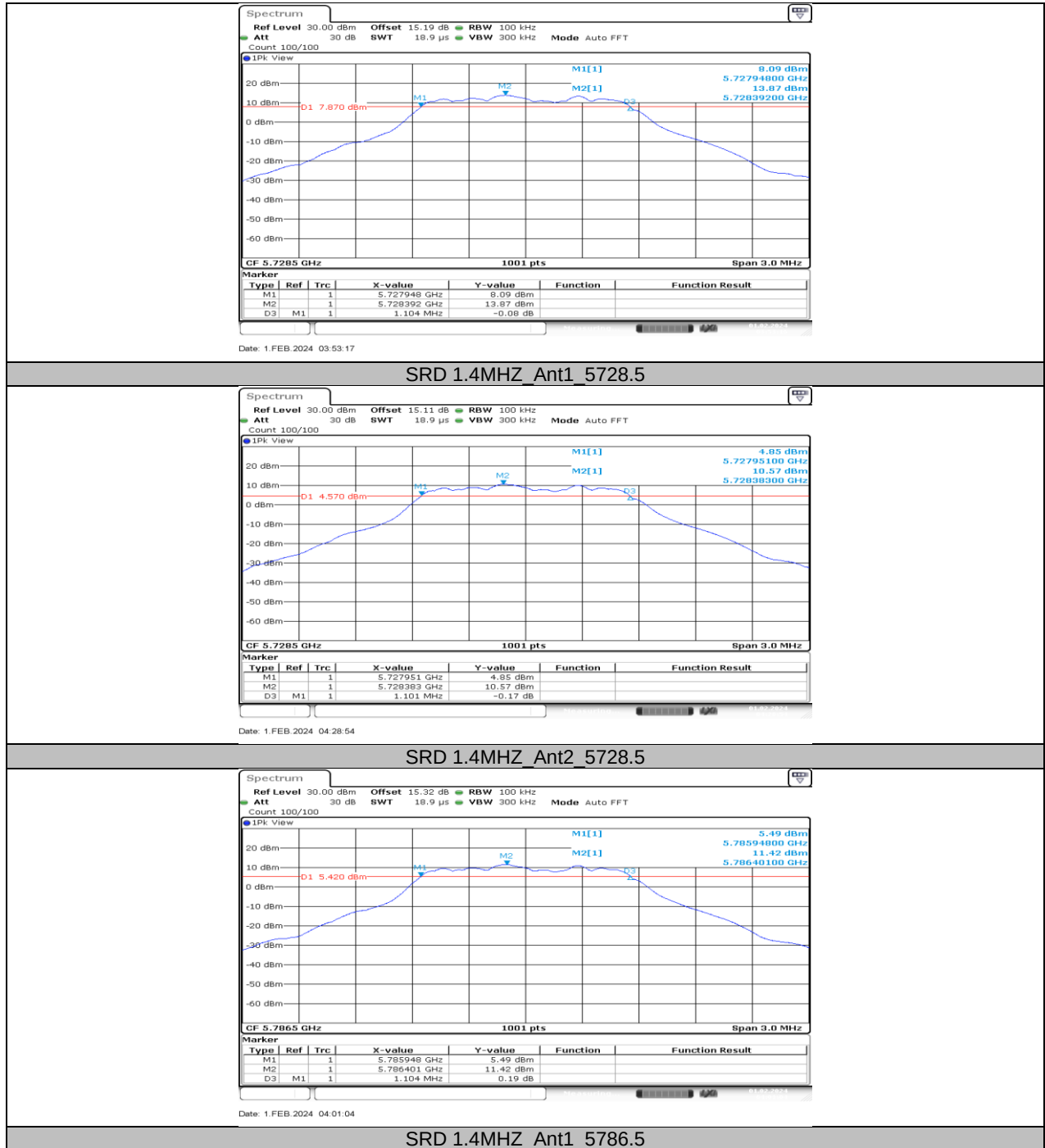
11.1. APPENDIX A: EMISSION BANDWIDTH

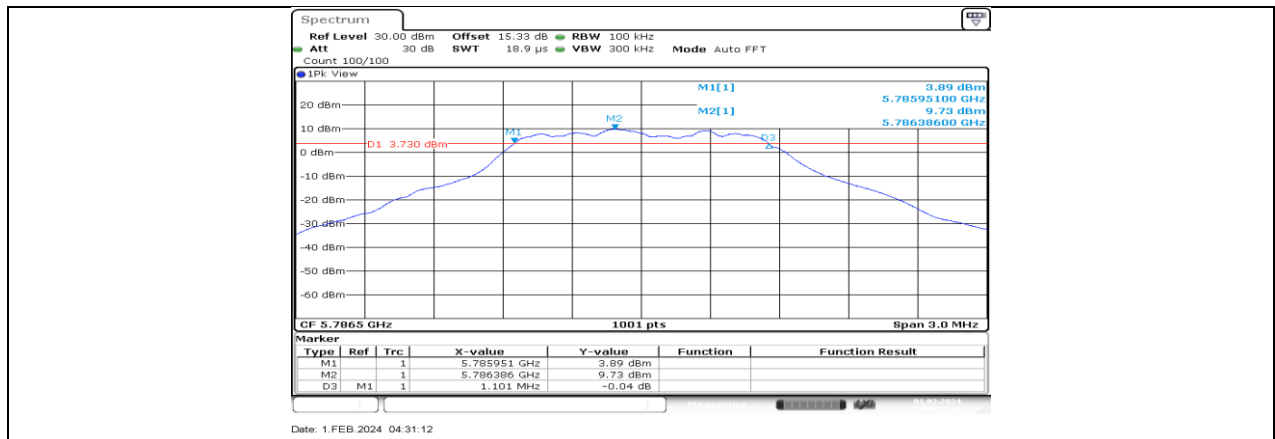
11.1.1. Test Result

Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
SRD 1.4MHZ	Ant1	5728.5	1.10	5727.95	5729.05	≥0.5	PASS
	Ant2	5728.5	1.10	5727.95	5729.05	≥0.5	PASS
	Ant1	5786.5	1.10	5785.95	5787.05	≥0.5	PASS
	Ant2	5786.5	1.10	5785.95	5787.05	≥0.5	PASS
	Ant1	5844.5	1.10	5843.95	5845.05	≥0.5	PASS
	Ant2	5844.5	1.10	5843.95	5845.05	≥0.5	PASS
SRD 1.4MHZ CA	Ant1	5730.12	1.10	5729.57	5730.67	≥0.5	PASS
	Ant2	5730.12	1.10	5729.57	5730.67	≥0.5	PASS
	Ant1	5788.12	1.08	5787.58	5788.66	≥0.5	PASS
	Ant2	5788.12	1.10	5787.57	5788.67	≥0.5	PASS
	Ant1	5846.12	1.10	5845.57	5846.67	≥0.5	PASS
	Ant2	5846.12	1.10	5845.57	5846.67	≥0.5	PASS
SRD 3MHZ	Ant1	5730.5	2.21	5729.41	5731.62	≥0.5	PASS
	Ant2	5730.5	2.18	5729.41	5731.59	≥0.5	PASS
	Ant1	5787.5	2.18	5786.41	5788.59	≥0.5	PASS
	Ant2	5787.5	2.19	5786.41	5788.60	≥0.5	PASS
	Ant1	5844.5	2.18	5843.41	5845.59	≥0.5	PASS
	Ant2	5844.5	2.21	5843.41	5845.62	≥0.5	PASS

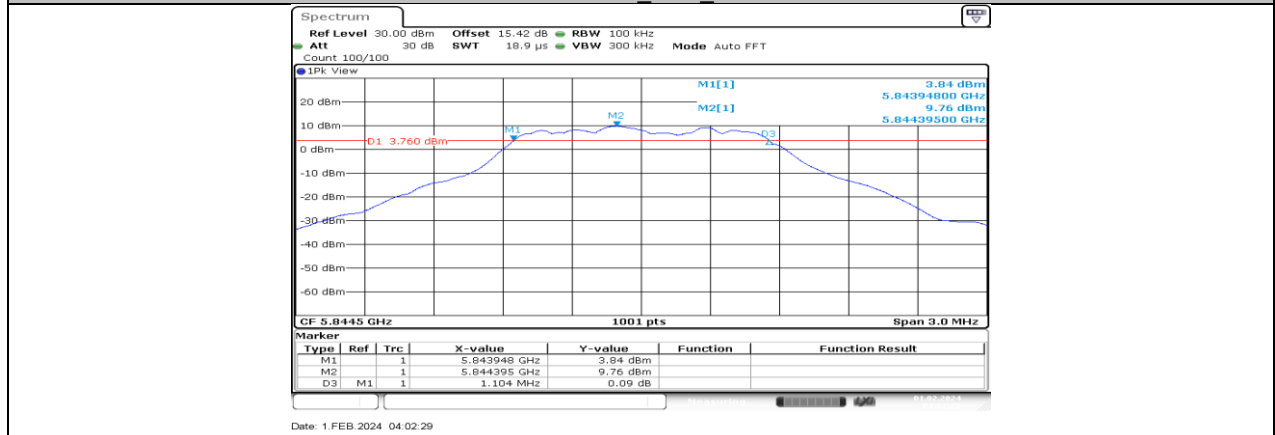
Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
SRD 10MHZ	Ant1	5732.5	8.98	5728.02	5737.00	≥0.5	PASS
	Ant2	5732.5	8.98	5728.04	5737.02	≥0.5	PASS
	Ant1	5787.5	9.00	5783.00	5792.00	≥0.5	PASS
	Ant2	5787.5	9.00	5783.00	5792.00	≥0.5	PASS
	Ant1	5844.5	9.02	5839.98	5849.00	≥0.5	PASS
	Ant2	5844.5	8.94	5840.02	5848.96	≥0.5	PASS
SRD 20MHZ	Ant1	5735.5	18.00	5726.50	5744.50	≥0.5	PASS
	Ant2	5735.5	17.92	5726.54	5744.46	≥0.5	PASS
	Ant1	5787.5	18.00	5778.50	5796.50	≥0.5	PASS
	Ant2	5787.5	18.00	5778.50	5796.50	≥0.5	PASS
	Ant1	5839.5	18.00	5830.50	5848.50	≥0.5	PASS
	Ant2	5839.5	17.96	5830.50	5848.46	≥0.5	PASS

11.1.2. Test Graphs

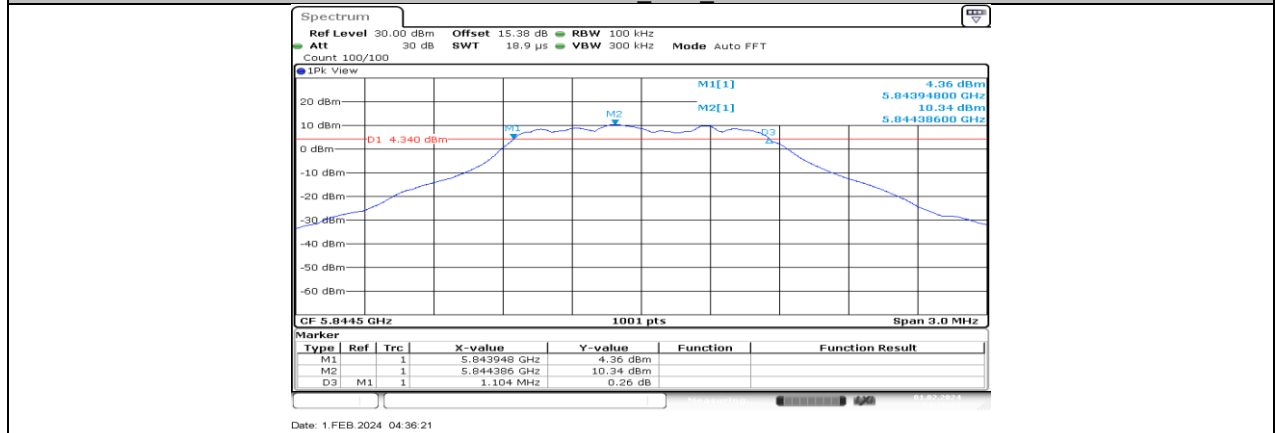




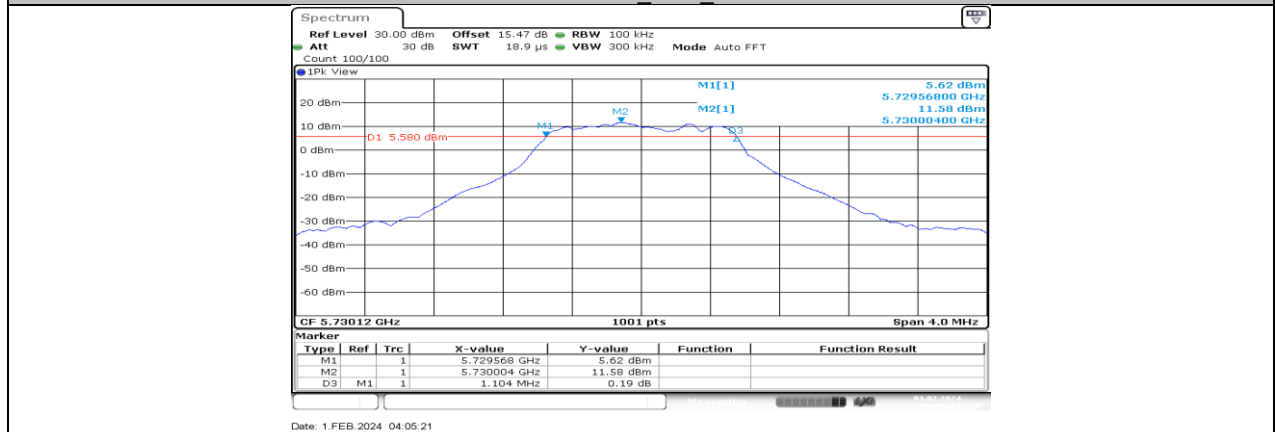
SRD 1.4MHz Ant2 5786.5



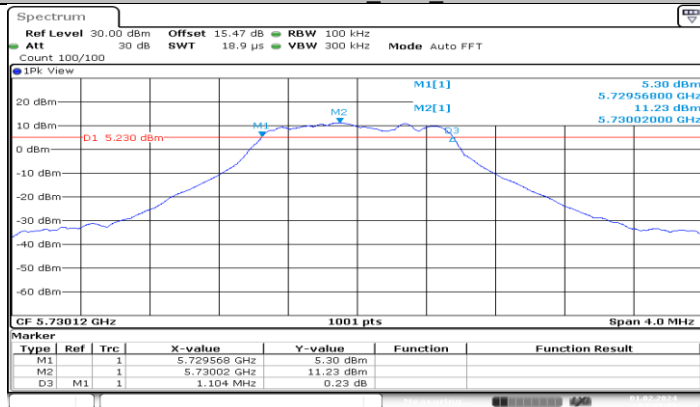
SRD 1.4MHz Ant1 5844.5



SRD 1.4MHz Ant2 5844.5

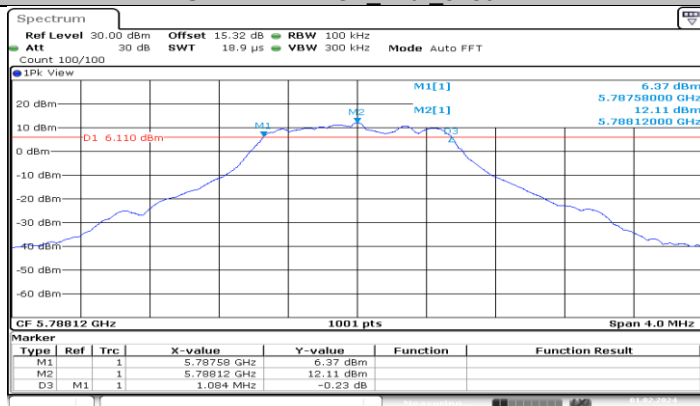


SRD 1.4MHZ CA_Ant1_5730.12



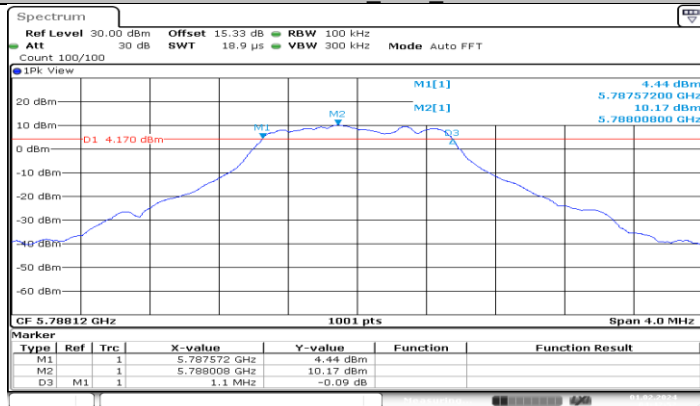
Date: 1.FEB.2024 04:41:03

SRD 1.4MHZ CA_Ant2_5730.12



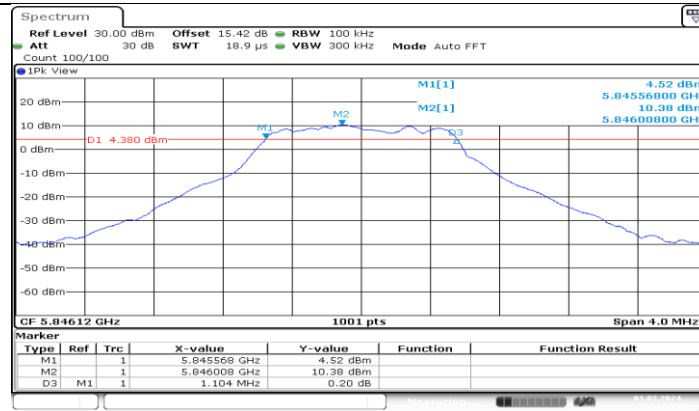
Date: 1.FEB.2024 04:09:34

SRD 1.4MHZ CA_Ant1_5788.12



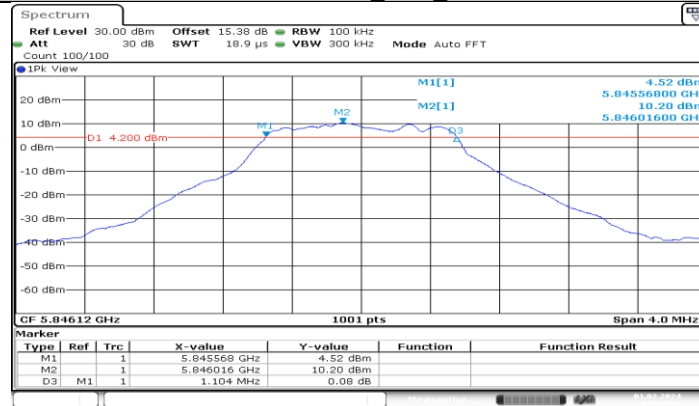
Date: 1.FEB.2024 04:42:53

SRD 1.4MHZ CA_Ant2_5788.12



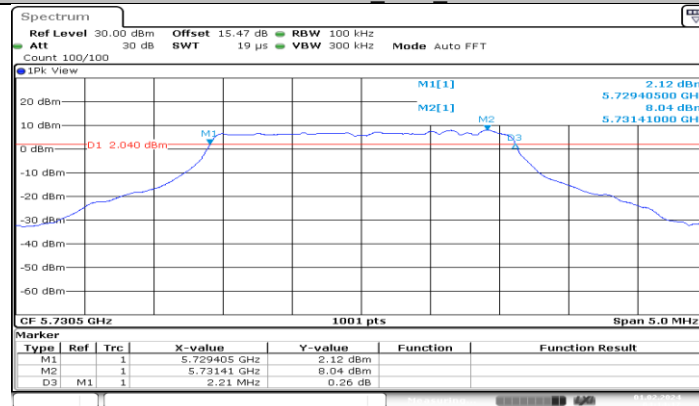
Date: 1.FEB.2024 04:11:02

SRD 1.4MHz CA Ant1_5846.12



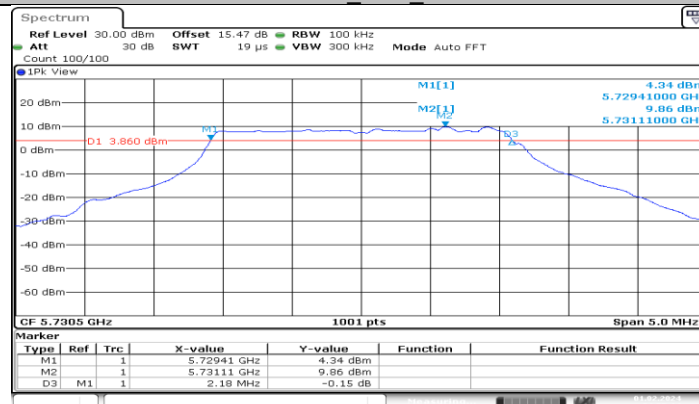
Date: 1.FEB.2024 04:47:05

SRD 1.4MHz CA Ant2_5846.12



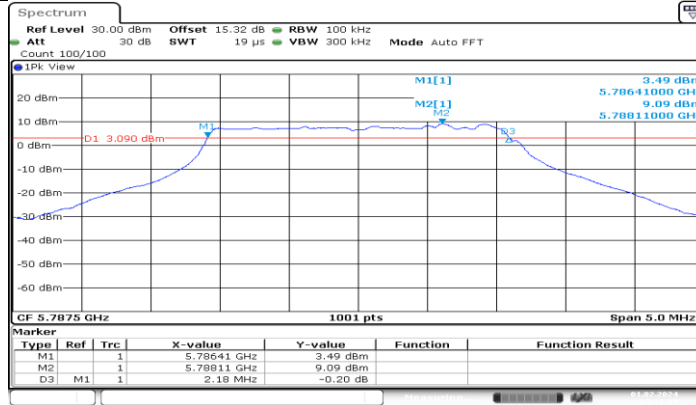
Date: 1.FEB.2024 04:14:17

SRD 3MHz Ant1_5730.5



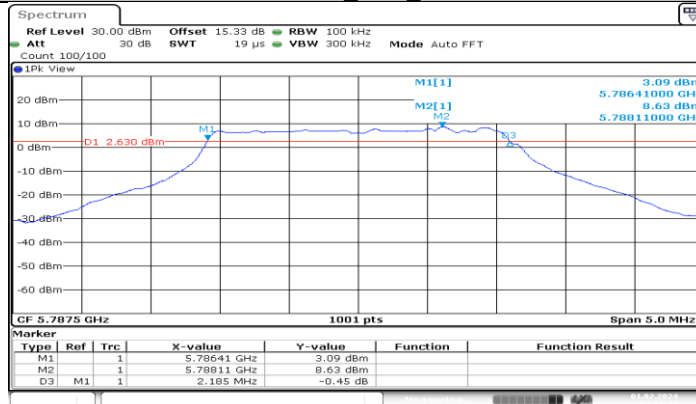
Date: 1.FEB.2024 04:55:13

SRD 3MHZ_Ant2_5730.5



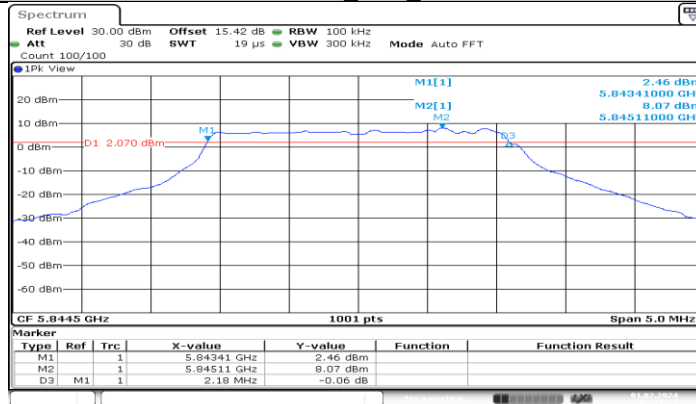
Date: 1.FEB.2024 04:18:09

SRD 3MHZ_Ant1_5787.5



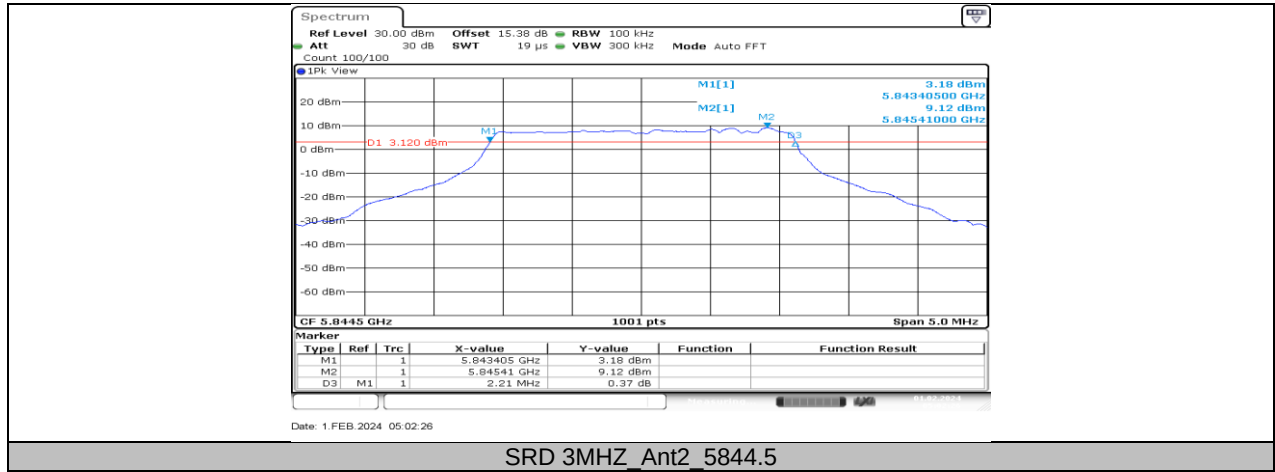
Date: 1.FEB.2024 04:57:41

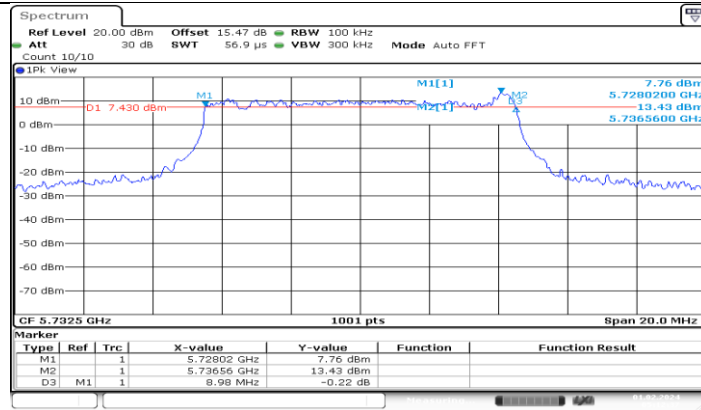
SRD 3MHZ_Ant2_5787.5



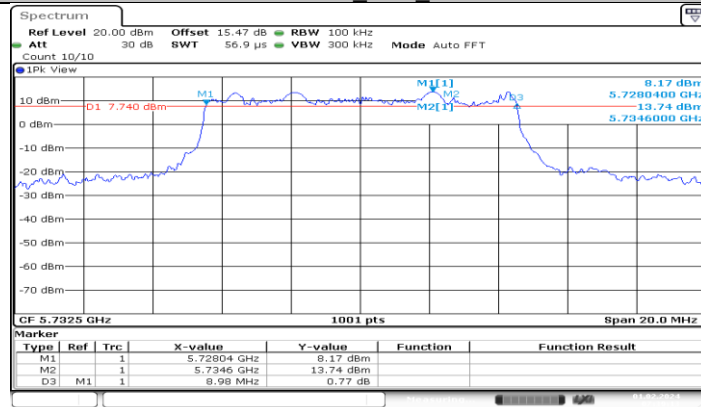
Date: 1.FEB.2024 04:21:29

SRD 3MHZ_Ant1_5844.5

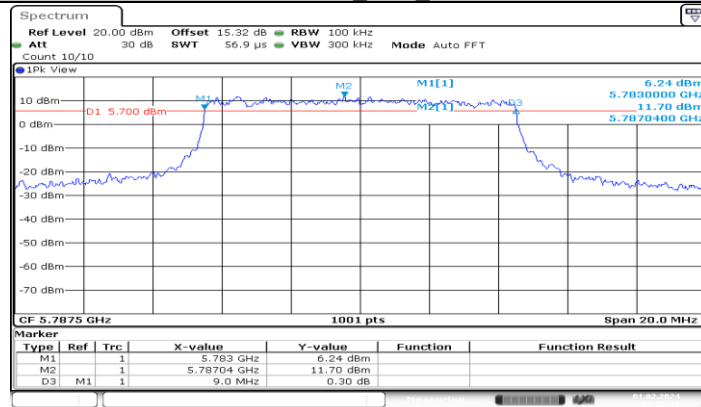




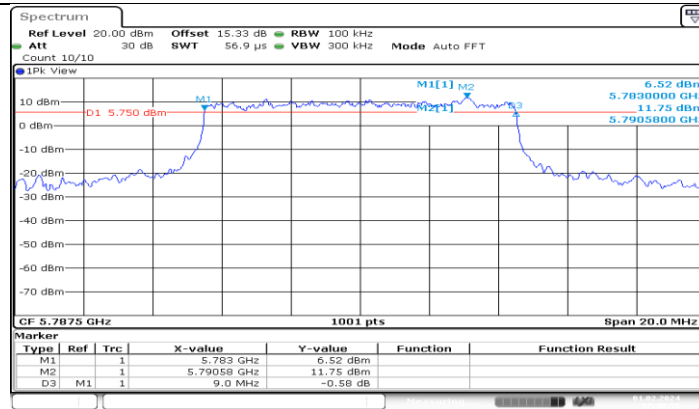
SRD 10MHZ_Ant1_5732.5



SRD 10MHZ_Ant2_5732.5

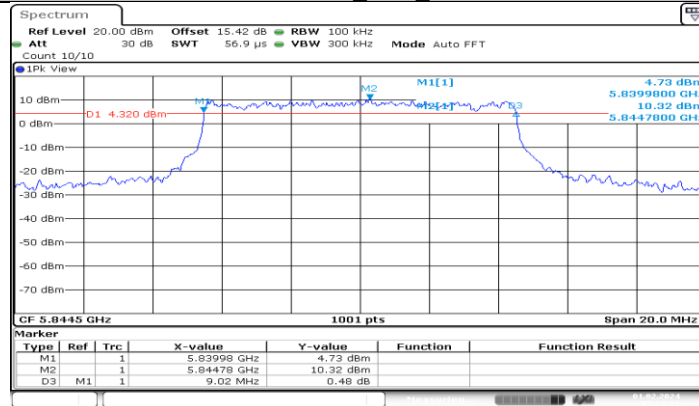


SRD 10MHZ_Ant1_5787.5



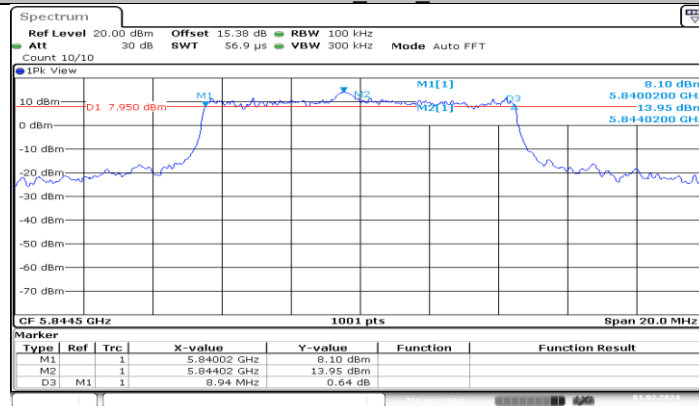
Date: 1.FEB.2024 07:40:56

SRD 10MHz_Ant2_5787.5



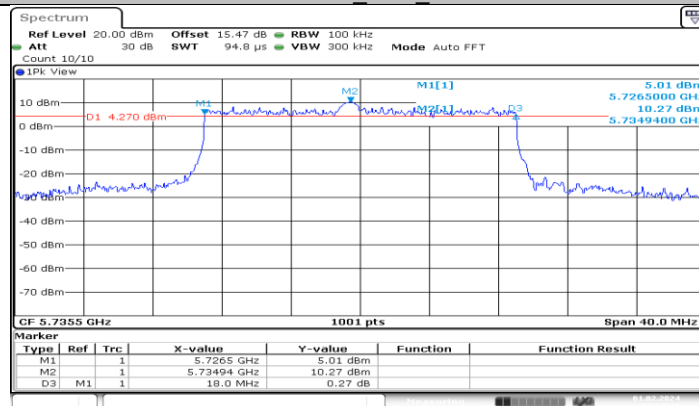
Date: 1.FEB.2024 05:27:21

SRD 10MHz_Ant1_5844.5



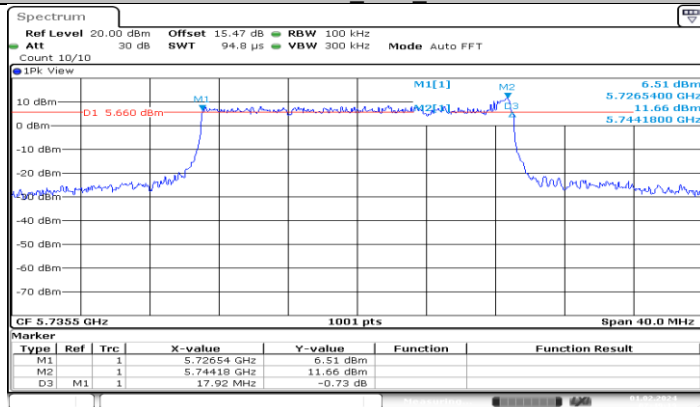
Date: 1.FEB.2024 07:45:18

SRD 10MHz_Ant2_5844.5



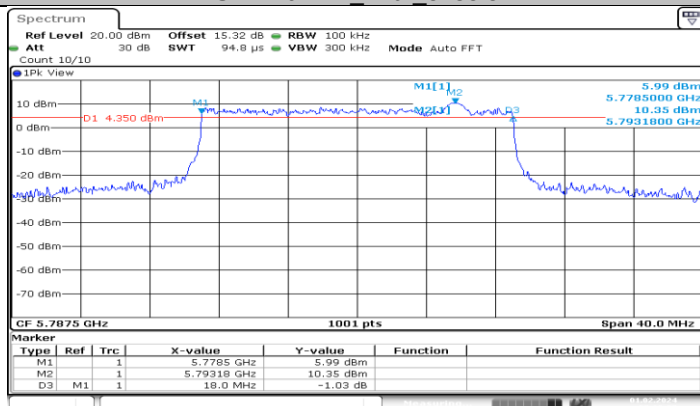
Date: 1.FEB.2024 07:17:49

SRD 20MHZ_Ant1_5735.5



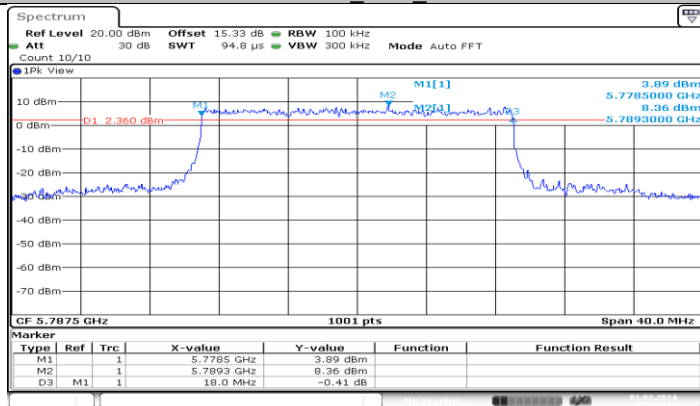
Date: 1.FEB.2024 07:49:19

SRD 20MHZ_Ant2_5735.5



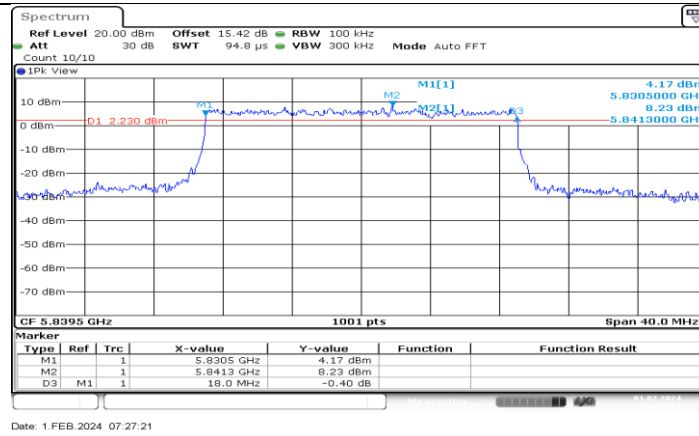
Date: 1.FEB.2024 07:20:07

SRD 20MHZ_Ant1_5787.5

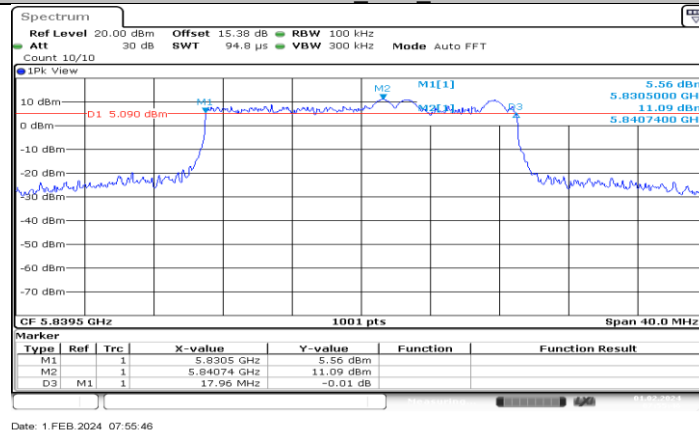


Date: 1.FEB.2024 07:52:14

SRD 20MHZ_Ant2_5787.5



SRD 20MHz_Ant1_5839.5



SRD 20MHz_Ant2_5839.5

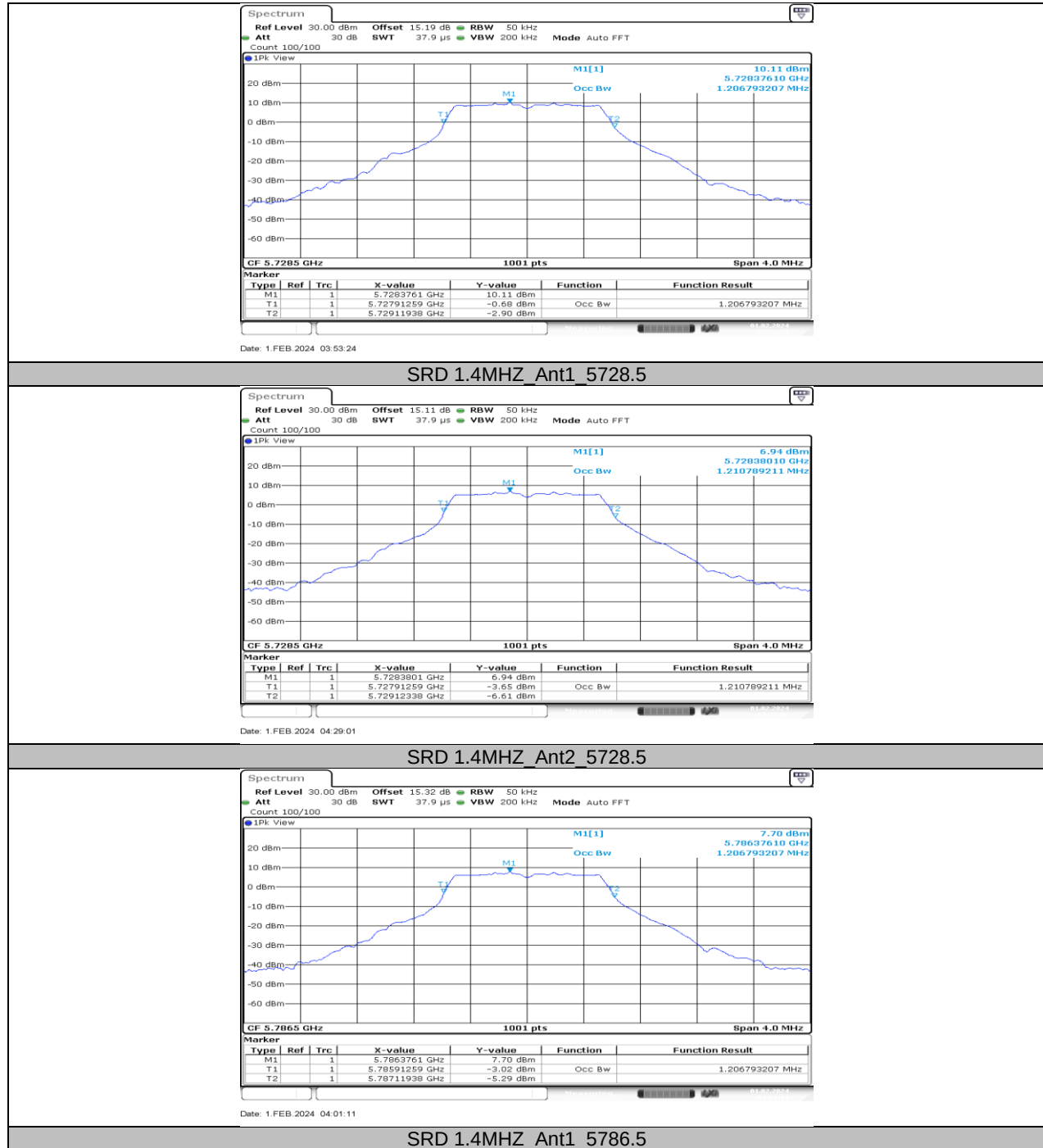
11.2. APPENDIX B: OCCUPIED CHANNEL BANDWIDTH

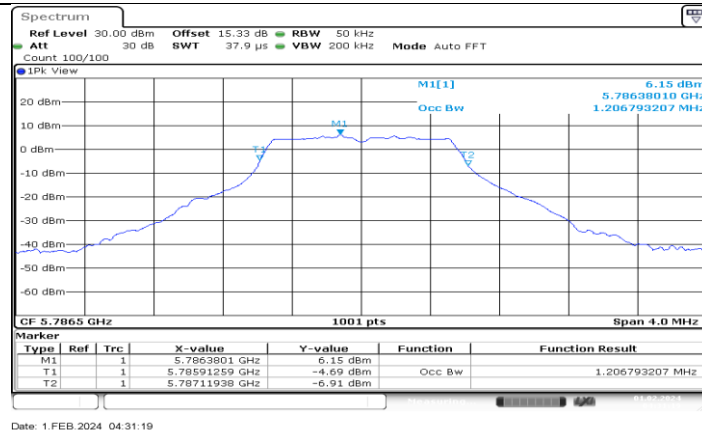
11.2.1. Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
SRD 1.4MHZ	Ant1	5728.5	1.207	5727.9126	5729.1194	PASS
	Ant2	5728.5	1.211	5727.9126	5729.1234	PASS
	Ant1	5786.5	1.207	5785.9126	5787.1194	PASS
	Ant2	5786.5	1.207	5785.9126	5787.1194	PASS
	Ant1	5844.5	1.207	5843.9126	5845.1194	PASS
	Ant2	5844.5	1.211	5843.9126	5845.1234	PASS
SRD 1.4MHZ CA	Ant1	5730.12	1.171	5729.5366	5730.7074	PASS
	Ant2	5730.12	1.171	5729.5366	5730.7074	PASS
	Ant1	5788.12	1.175	5787.5326	5788.7074	PASS
	Ant2	5788.12	1.175	5787.5326	5788.7074	PASS
	Ant1	5846.12	1.187	5845.5286	5846.7154	PASS
	Ant2	5846.12	1.179	5845.5326	5846.7114	PASS
SRD 3MHZ	Ant1	5730.5	2.198	5729.4111	5731.6089	PASS
	Ant2	5730.5	2.208	5729.4011	5731.6089	PASS
	Ant1	5787.5	2.198	5786.4111	5788.6089	PASS
	Ant2	5787.5	2.198	5786.4111	5788.6089	PASS
	Ant1	5844.5	2.198	5843.4111	5845.6089	PASS
	Ant2	5844.5	2.198	5843.4111	5845.6089	PASS

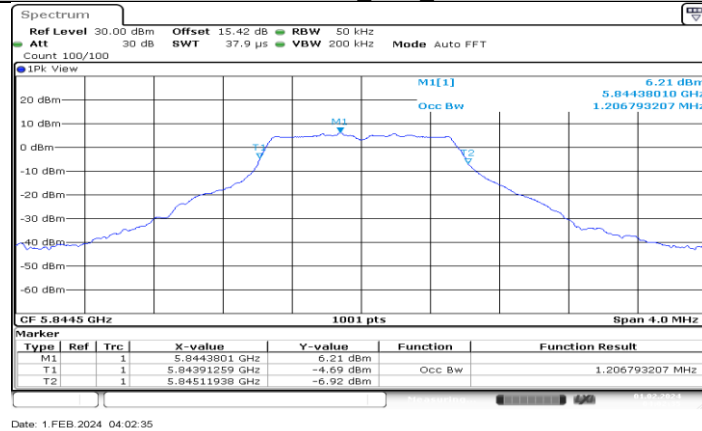
Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
SRD 10MHZ	Ant1	5732.5	9.331	5727.9046	5737.2353	PASS
	Ant2	5732.5	9.311	5727.8447	5737.1553	PASS
	Ant1	5787.5	9.311	5782.8646	5792.1753	PASS
	Ant2	5787.5	9.331	5782.8846	5792.2153	PASS
	Ant1	5844.5	9.291	5839.8846	5849.1753	PASS
	Ant2	5844.5	9.271	5839.8447	5849.1154	PASS
SRD 20MHZ	Ant1	5735.5	18.062	5726.5490	5744.6109	PASS
	Ant2	5735.5	18.022	5726.4690	5744.4910	PASS
	Ant1	5787.5	18.062	5778.5090	5796.5709	PASS
	Ant2	5787.5	18.022	5778.5090	5796.5310	PASS
	Ant1	5839.5	18.022	5830.5090	5848.5310	PASS
	Ant2	5839.5	18.102	5830.4690	5848.5709	PASS

11.2.2. Test Graphs

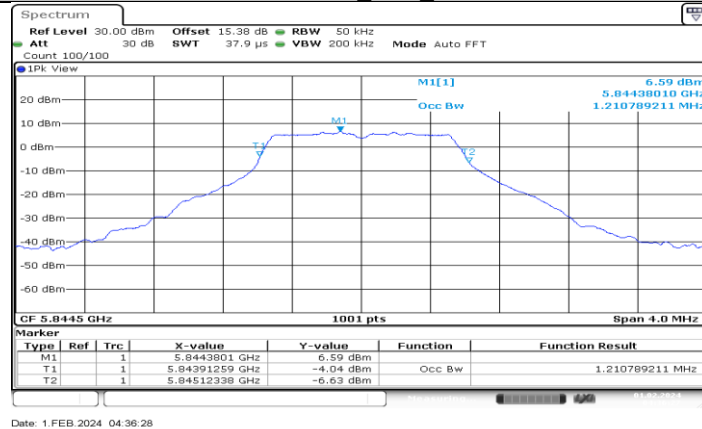




SRD 1.4MHz Ant2 5786.5



SRD 1.4MHz Ant1 5844.5



SRD 1.4MHz Ant2 5844.5

