CFR 47 FCC PART 15 SUBPART C

TEST REPORT

For

DJI Relay

MODEL NUMBER: RL01-65

REPORT NUMBER: 4790741213-RF-1

ISSUE DATE: May 6, 2023

FCC ID: SS3-RL016523

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	May 6, 2023	Initial Issue	

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Summary of Test Results			
Clause	**Test Items**	**FCC Rules**	**Test Results**
1	6dB Bandwidth	FCC Part 15.247 (a) (2)	Pass
2	Average Conducted Output Power	FCC Part 15.247 (b) (3)	Pass
3	Power Spectral Density	FCC Part 15.247 (e)	Pass
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d)	Pass
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205	Pass
6	Conducted Emission Test for AC Power Port	FCC Part 15.207	Pass
7	Antenna Requirement	FCC Part 15.203	Pass

Note:
1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C > when <Accuracy Method> decision rule is applied.

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	SZ DJI TECHNOLOGY CO., LTD
Address:	Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen, China

Manufacturer Information

Company Name:	SZ DJI TECHNOLOGY CO., LTD
Address:	Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen, China

EUT Information

EUT Name:	DJI Relay
Model:	RL01-65
Sample Received Date:	February 24, 2023
Sample ID:	5825096
Date of Tested:	February 28, 2023 to May 6, 2023

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 FCC PART 15 SUBPART C	PASS

Prepared By:

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2, CFR 47 FCC Part 15, ANSI C63.10-2013.

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-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note 1:
All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, 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.

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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 26 GHz)	5.78 dB (1 GHz ~ 18 GHz)
	5.23 dB (18 GHz ~ 26 GHz)
Duty Cycle	±0.028%
DTS and 99% Occupied Bandwidth	±0.0196%
Maximum Conducted Output Power	±0.686 dB
Maximum Power Spectral Density Level	±0.743 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.	

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	DJI Relay
Model	RL01-65
Radio Technology	SRD 2.4G
Operation Frequency	2.4G 1.4 MHz Bandwidth (2403.5 MHz ~ 2469.5 MHz) 2.4G 1.4 MHz Bandwidth (CA Mode) (2405.12 MHz ~ 2471.12 MHz) 2.4G 3 MHz Bandwidth (2405.5 MHz ~ 2468.5 MHz) 2.4G 3 MHz Bandwidth (CA Mode) (2408.2 MHz ~ 2471.2 MHz) 2.4G 10 MHz Bandwidth (2407.5 MHz ~ 2467.5 MHz) 2.4G 20 MHz Bandwidth (2412.5 MHz ~ 2462.5 MHz) 2.4G 40 MHz Bandwidth (2422.5 MHz ~ 2452.5 MHz)
Modulation	OFDM (QPSK, 16QAM, 64QAM)
Supply Voltage	DC 7.2 V by Battery

5.2. MAXIMUM OUTPUT POWER

SRD 2.4G	Frequency (MHz)	Channel Number	Maximum Conducted Average Output Power (dBm)
1.4 MHz Mode	2403.5 MHz ~ 2469.5 MHz	1-34[34]	24.47
1.4 MHz CA Mode	2405.12 MHz ~ 2471.12 MHz	1-34[34]	24.51
3 MHz Mode	2405.5 MHz ~ 2468.5 MHz	1-22[22]	26.19
3 MHz CA Mode	2408.2 MHz ~ 2471.2 MHz	1-22[22]	26.46
10 MHz Mode	2407.5 MHz ~ 2467.5 MHz	1-61[61]	23.48
20 MHz Mode	2412.5 MHz ~ 2462.5 MHz	1-51[51]	21.42
40 MHz Mode	2422.5 MHz ~ 2452.5 MHz	1-31[31]	20.65

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5.3. CHANNEL LIST

2.4G 1.4 MHz Bandwidth (2403.5 MHz ~ 2469.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2403.5	10	2421.5	19	2439.5	28	2457.5
2	2405.5	11	2423.5	20	2441.5	29	2459.5
3	2407.5	12	2425.5	21	2443.5	30	2461.5
4	2409.5	13	2427.5	22	2445.5	31	2463.5
5	2411.5	14	2429.5	23	2447.5	32	2465.5
6	2413.5	15	2431.5	24	2449.5	33	2467.5
7	2415.5	16	2433.5	25	2451.5	34	2469.5
8	2417.5	17	2435.5	26	2453.5	/	/
9	2419.5	18	2437.5	27	2455.5	/	/

2.4G 1.4 MHz Bandwidth CA Mode (2405.12 MHz ~ 2471.12 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405.12	10	2423.12	19	2441.12	28	2459.12
2	2407.12	11	2425.12	20	2443.12	29	2461.12
3	2409.12	12	2427.12	21	2445.12	30	2463.12
4	2411.12	13	2429.12	22	2447.12	31	2465.12
5	2413.12	14	2431.12	23	2449.12	32	2467.12
6	2415.12	15	2433.12	24	2451.12	33	2469.12
7	2417.12	16	2435.12	25	2453.12	34	2471.12
8	2419.12	17	2437.12	26	2455.12	/	/
9	2421.12	18	2439.12	27	2457.12	/	/

2.4G 3 MHz Bandwidth Mode (2405.5 MHz ~ 2468.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405.5	7	2423.5	13	2441.5	19	2459.5
2	2408.5	8	2426.5	14	2444.5	20	2462.5
3	2411.5	9	2429.5	15	2447.5	21	2465.5
4	2414.5	10	2432.5	16	2450.5	22	2468.5
5	2417.5	11	2435.5	17	2453.5	/	/
6	2420.5	12	2438.5	18	2456.5	/	/

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2.4G 3 MHz Bandwidth CA Mode (2408.2 MHz ~ 2471.2 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2408.2	7	2426.2	13	2444.2	19	2462.2
2	2411.2	8	2429.2	14	2447.2	20	2465.2
3	2414.2	9	2432.2	15	2450.2	21	2468.2
4	2417.2	10	2435.2	16	2453.2	22	2471.2
5	2420.2	11	2438.2	17	2456.2	/	/
6	2423.2	12	2441.2	18	2459.2	/	/

2.4G 10 MHz Bandwidth (2407.5 MHz ~ 2467.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2407.5	17	2423.5	33	2439.5	49	2455.5
2	2408.5	18	2424.5	34	2440.5	50	2456.5
3	2409.5	19	2425.5	35	2441.5	51	2457.5
4	2410.5	20	2426.5	36	2442.5	52	2458.5
5	2411.5	21	2427.5	37	2443.5	53	2459.5
6	2412.5	22	2428.5	38	2444.5	54	2460.5
7	2413.5	23	2429.5	39	2445.5	55	2461.5
8	2414.5	24	2430.5	40	2446.5	56	2462.5
9	2415.5	25	2431.5	41	2447.5	57	2463.5
10	2416.5	26	2432.5	42	2448.5	58	2464.5
11	2417.5	27	2433.5	43	2449.5	59	2465.5
12	2418.5	28	2434.5	44	2450.5	60	2466.5
13	2419.5	29	2435.5	45	2451.5	61	2467.5
14	2420.5	30	2436.5	46	2452.5	/	/
15	2421.5	31	2437.5	47	2453.5	/	/
16	2422.5	32	2438.5	48	2454.5	/	/

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2.4G 20 MHz Bandwidth (2412.5 MHz ~ 2462.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412.5	14	2425.5	27	2438.5	40	2451.5
2	2413.5	15	2426.5	28	2439.5	41	2452.5
3	2414.5	16	2427.5	29	2440.5	42	2453.5
4	2415.5	17	2428.5	30	2441.5	43	2454.5
5	2416.5	18	2429.5	31	2442.5	44	2455.5
6	2417.5	19	2430.5	32	2443.5	45	2456.5
7	2418.5	20	2431.5	33	2444.5	46	2457.5
8	2419.5	21	2432.5	34	2445.5	47	2458.5
9	2420.5	22	2433.5	35	2446.5	48	2459.5
10	2421.5	23	2434.5	36	2447.5	49	2460.5
11	2422.5	24	2435.5	37	2448.5	50	2461.5
12	2423.5	25	2436.5	38	2449.5	51	2462.5
13	2424.5	26	2437.5	39	2450.5	/	/

2.4G 40 MHz Bandwidth (2422.5 MHz ~ 2452.5 MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2422.5	9	2430.5	17	2438.5	25	2446.5
2	2423.5	10	2431.5	18	2439.5	26	2447.5
3	2424.5	11	2432.5	19	2440.5	27	2448.5
4	2425.5	12	2433.5	20	2441.5	28	2449.5
5	2426.5	13	2434.5	21	2442.5	29	2450.5
6	2427.5	14	2435.5	22	2443.5	30	2451.5
7	2428.5	15	2436.5	23	2444.5	31	2452.5
8	2429.5	16	2437.5	24	2445.5	/	/

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5.4. TEST CHANNEL CONFIGURATION

SRD 2.4G	Test Channel Number	Frequency
1.4 MHz Mode	CH 1(Low Channel), CH 17(MID Channel), CH 34(High Channel)	2403.5 MHz, 2435.5 MHz, 2469.5 MHz
1.4 MHz CA Mode	CH 1(Low Channel), CH 17(MID Channel), CH 34(High Channel)	2405.12 MHz, 2437.12 MHz, 2471.12 MHz
3 MHz Mode	CH 1(Low Channel), CH 11(MID Channel), CH 22(High Channel)	2405.5 MHz, 2435.5 MHz, 2468.5 MHz
3 MHz CA Mode	CH 1(Low Channel), CH 11(MID Channel), CH 22(High Channel)	2408.2 MHz, 2438.2 MHz, 2471.2 MHz
10 MHz Mode	CH 1(Low Channel), CH 31(MID Channel), CH 61(High Channel)	2407.5 MHz, 2437.5 MHz, 2467.5 MHz
20 MHz Mode	CH 1(Low Channel), CH 26(MID Channel), CH 51(High Channel)	2412.5 MHz, 2437.5 MHz, 2462.5 MHz
40 MHz Mode	CH 1(Low Channel), CH 16(MID Channel), CH 31(High Channel)	2422.5 MHz, 2437.5 MHz, 2452.5 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5 MHz Band				
Test Software		DjiSdrConsole		
Modulation Mode	Transmit Antenna Number	Test Software setting value		
		NCB: 1.4 MHz/1.4 MHz CA /3 MHz/3 MHz CA /10 MHz/20 MHz/40 MHz		
		Low Channel	MID Channel	High Channel
All	All	Default	Default	Default

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5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	Maximum Antenna Gain (dBi)
0	2400 ~ 2483.5	Dipole	3.5
1	2400 ~ 2483.5	Dipole	3.5
2	2400 ~ 2483.5	Dipole	3.5
3	2400 ~ 2483.5	Dipole	3.5

MIMO output power port and MIMO PSD port summing were performed in accordance with KDB 662911 D01. For the STBC mode results the Directional Gain was calculated in accordance with the following mothed.

For output power measurements:
Directional gain= G_{ANT} + Array Gain = 3.5 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

For power spectral density (PSD) measurements:
Directional gain= G_{ANT} + Array Gain = 3.5 dBi
G_{ANT}: equal to the gain of the antenna having the highest gain
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$

Test Mode	Transmit and Receive Mode	Description
1.4 MHz Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
1.4 MHz CA Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
3 MHz Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
3 MHz CA Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
10 MHz Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
20 MHz Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.
40 MHz Mode	☒ 2TX, 4RX	ANT 0,1 / 0,3 / 2,1 / 2,3 can be used as transmitting antenna. ANT 0,1, 2, 3 can be used as receiving antenna.

Note: 1. The value of the antenna gain was declared by customer.
2. SRD 2.4G and SRD 5.8G can transmit simultaneously.

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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 2.4G-1.4 MHz Mode/QPSK
SRD 2.4G-1.4 MHz CA Mode/QPSK
SRD 2.4G-3 MHz Mode/QPSK
SRD 2.4G-3 MHz CA Mode/QPSK
SRD 2.4G-10 MHz Mode/QPSK
SRD 2.4G-20 MHz Mode/QPSK
SRD 2.4G-40 MHz Mode/QPSK

The EUT has 4 separate antennas which correspond to 4 separate antenna ports, core ANT 0, core ANT 1, core ANT 2, core ANT 3 correspond to antenna 0, antenna 1, antenna 2, antenna 3 respectively, the EUT only support 2TX4RX mode, antenna 0 and antenna 1/ antenna 0 and antenna 3/ antenna 2 and antenna 1/ antenna 2 and antenna 3 used as transmit antennas and all the 4 antennas can use as receive antennas, all the transmit combination(ANT0 and ANT1 / ANT0 and ANT3 / ANT2 and ANT1 / ANT2 and ANT3) had been tested, but only the worst data was recorded in the report.

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

Radiated emissions tests were performed with the MIMO modes. These were found to be the worst modulation scheme with regards to emissions after preliminary investigations and, as this mode emits the highest conducted output power level, it was deemed to be the worst case.

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5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	Lenovo	E42-80	/

I/O CABLES

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

ACCESSORIES

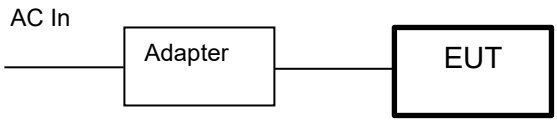
Item	Accessory	Brand Name	Model Name	Description
1	Adapter	/	PD-30CN	Input: AC 100 ~ 240 V, 50/60 Hz Output: DC 5 V, 3 A

TEST SETUP

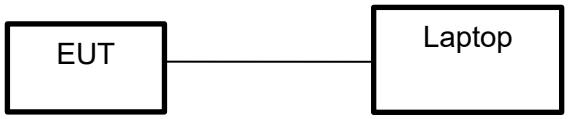
The EUT can work in engineering mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS

For Conducted Emission Test for AC Power Port Test:



For other tests:



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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	Apr.02,2022	Apr.01,2023
Vector Signal Generator	R&S	SMBV100A	261637	Oct.17, 2022	Oct.16, 2023
Signal Generator	R&S	SMB100A	178553	Oct.17, 2022	Oct.16, 2023
Signal Analyzer	R&S	FSV40	101118	Oct.17, 2022	Oct.16, 2023

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.17, 2022	Oct.16, 2023
MXG Vector Signal Generator	Keysight	N5182B	MY56200284	Oct.17, 2022	Oct.16, 2023
MXG Vector Signal Generator	Keysight	N5172B	MY56200301	Oct.17, 2022	Oct.16, 2023
Attenuator	Agilent	8495B	2814a12853	Oct.18, 2022	Oct.17, 2023

Software			
Description	Manufacturer	Name	Version
Tonsend SRD Test System	Tonsend	JS1120-3 RF Test System	2.6.77.0518

Conducted Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
EMI Test Receiver	R&S	ESR3	101961	Oct.17, 2022	Oct.16, 2023
Two-Line V-Network	R&S	ENV216	101983	Oct.17, 2022	Oct.16, 2023

Software			
Description	Manufacturer	Name	Version
Test Software for Conducted Emissions	Farad	EZ-EMC	Ver. UL-3A1

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Radiated Emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Oct.17, 2022	Oct.16, 2023
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Aug.02, 2021	Aug.01, 2024
Preamplifier	HP	8447D	2944A09099	Oct.17, 2022	Oct.16, 2023
EMI Measurement Receiver	R&S	ESR26	101377	Oct.17, 2022	Oct.16, 2023
Horn Antenna	TDK	HRN-0118	130940	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-0118	TRS-305-00067	Oct.17, 2022	Oct.16, 2023
Horn Antenna	Schwarzbeck	BBHA9170	697	July 20, 2021	July 19, 2024
Preamplifier	TDK	PA-02-2	TRS-307-00003	Oct.17, 2022	Oct.16, 2023
Preamplifier	TDK	PA-02-3	TRS-308-00002	Oct.17, 2022	Oct.16, 2023
Loop antenna	Schwarzbeck	1519B	00008	Dec.14, 2021	Dec.13, 2024
Preamplifier	TDK	PA-02-001-3000	TRS-302-00050	Oct.17, 2022	Oct.16, 2023
High Pass Filter	Wi	WHKX10-2700-3000-18000-40SS	23	/	/
Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	4	/	/

Software			
Description	Manufacturer	Name	Version
Test Software for Radiated Emissions	Farad	EZ-EMC	Ver. UL-3A1

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7. ANTENNA PORT TEST RESULTS

7.1. CONDUCTED OUTPUT POWER

LIMITS

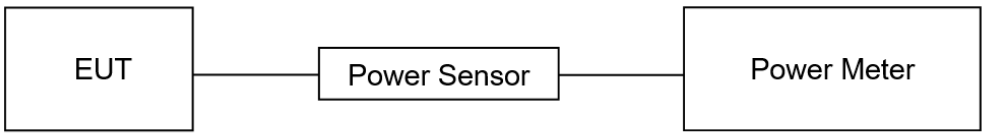
CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(b)(3)	Average Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.9.2.3.1.

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).
Measure peak emission level, the indicated level is the average output power, after any corrections for external attenuators and cables.
The test result in dBm by adding [10 log (1 / D)], where D is the duty cycle.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.5 °C	Relative Humidity	57 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

Please refer to section "Test Data" - Appendix C

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7.2. 6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247(a)(2)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

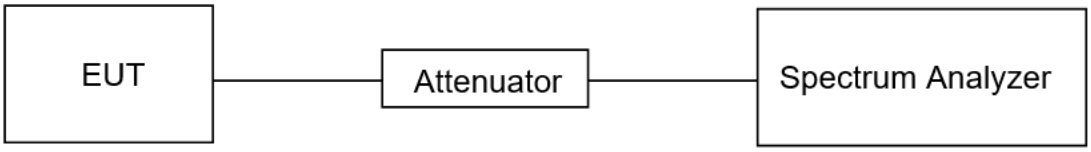
Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Frequency Span	For 6 dB Bandwidth: Enough to capture all products of the modulation carrier emission For 99 % Occupied Bandwidth: Between 1.5 times and 5.0 times the OBW
Detector	Peak
RBW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × 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 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP



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TEST ENVIRONMENT

Temperature	24.5 °C	Relative Humidity	57 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

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

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7.3. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5

TEST PROCEDURE

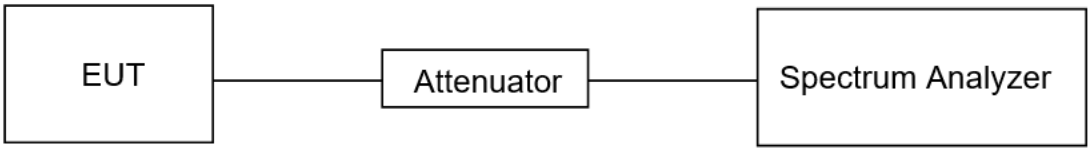
Refer to ANSI C63.10-2013 clause 11.10.3.

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

Center Frequency	The center frequency of the channel under test
Detector	power averaging (rms)
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥3 × RBW
Span	1.5 x OBW bandwidth
Trace	Average or Peak
Sweep time	Auto couple

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.5 °C	Relative Humidity	57 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

Please refer to section "Test Data" - Appendix D

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7.4. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.11 and 11.13.

Connect the EUT to the spectrum analyzer and use the following settings for reference level measurement:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level.
Change the settings for emission level measurement:

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11.

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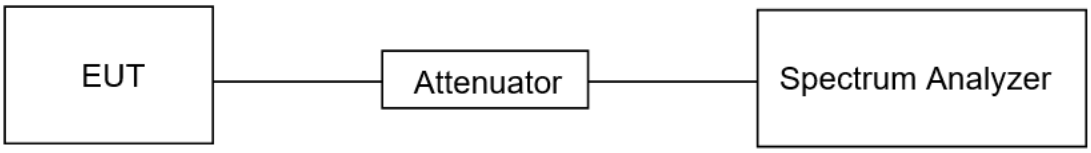
TEST SETUP



TEST ENVIRONMENT

Temperature	24.5 °C	Relative Humidity	57 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

Please refer to section "Test Data" - Appendix E & F

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7.5. DUTY CYCLE

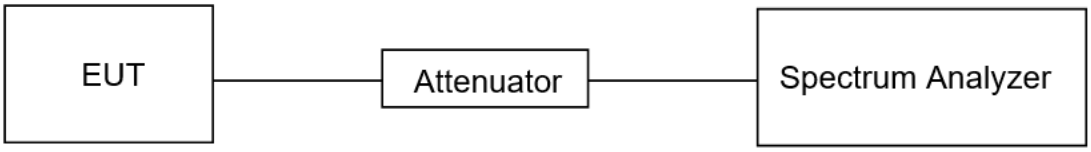
LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.6 Zero – Span Spectrum Analyzer method.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.5 °C	Relative Humidity	57 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

Please refer to section "Test Data" - Appendix G

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8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

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

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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: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

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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.

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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.

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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 ANSI C63.10-2013 clause 6.6.

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 7.5. DUTY CYCLE.

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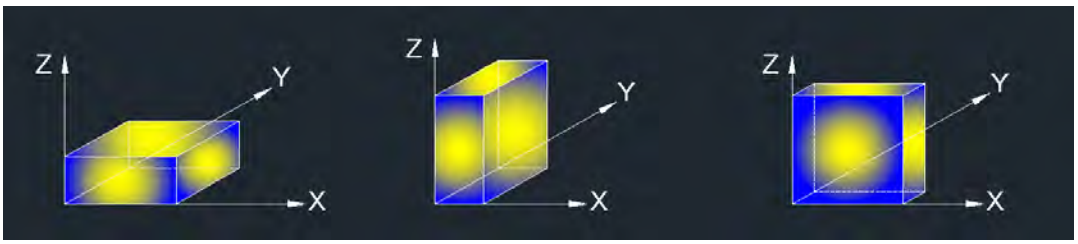
X axis, Y axis, Z axis positions:



Note: 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.

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. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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, channels and antennas have been tested, 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, channels and antennas have been tested, only the worst data was recorded in the report.

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, channels and antennas have been tested, only the worst data was recorded in the report.

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For Radiate Spurious Emission (1 GHz ~ 3 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 7.5.
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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

For Radiate Spurious Emission (3 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/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.5.
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. All modes, channels and antennas have been tested, 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, channels and antennas have been tested, only the worst data was recorded in the report.

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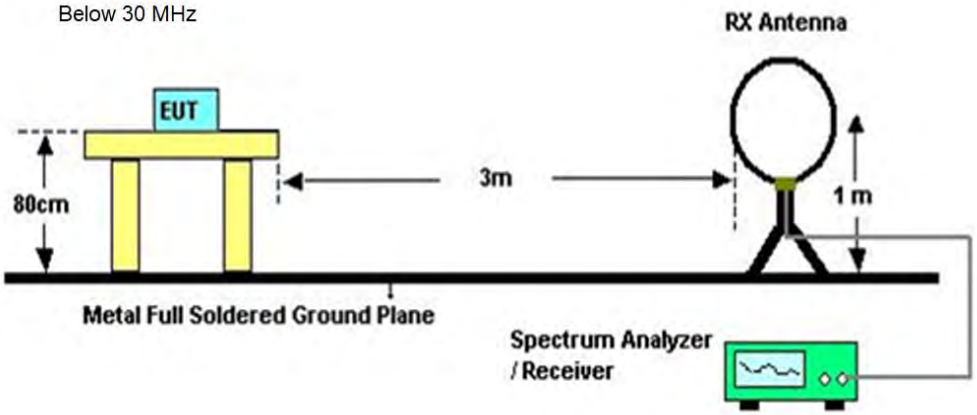
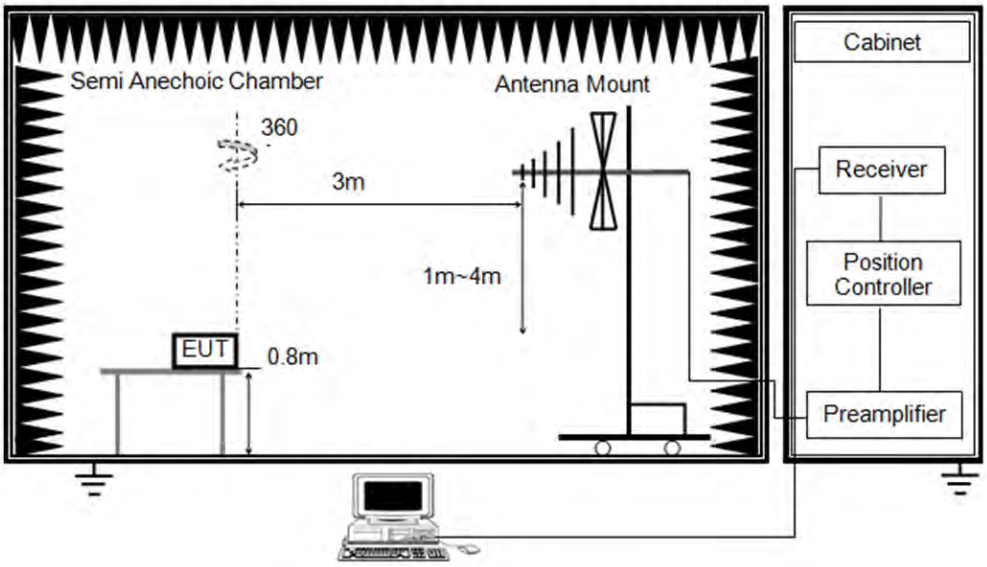
TEST SETUP

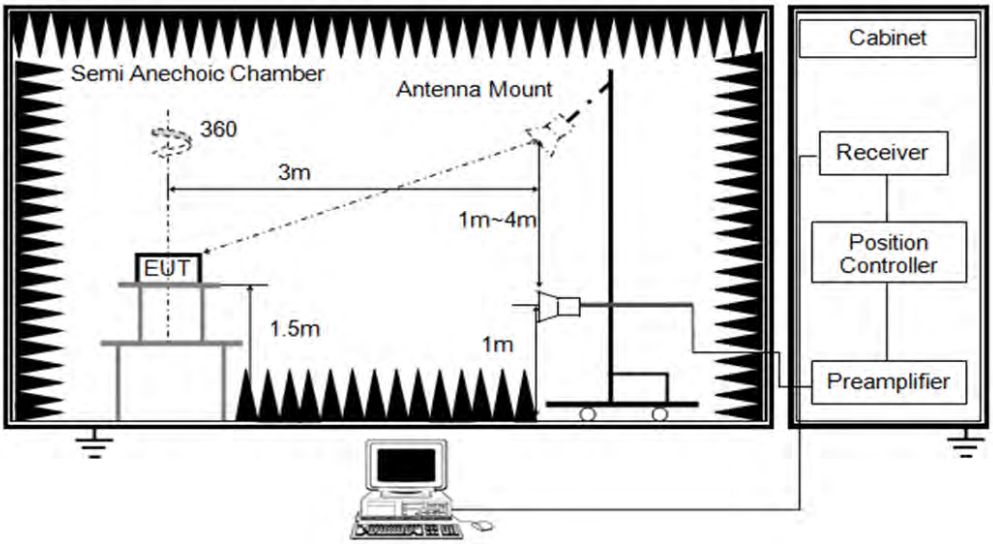
Below 30 MHz



Below 1 GHz and above 30 MHz



Above 1 GHz



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TEST ENVIRONMENT

Temperature	25.2 °C	Relative Humidity	66 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 7.2 V

TEST RESULTS

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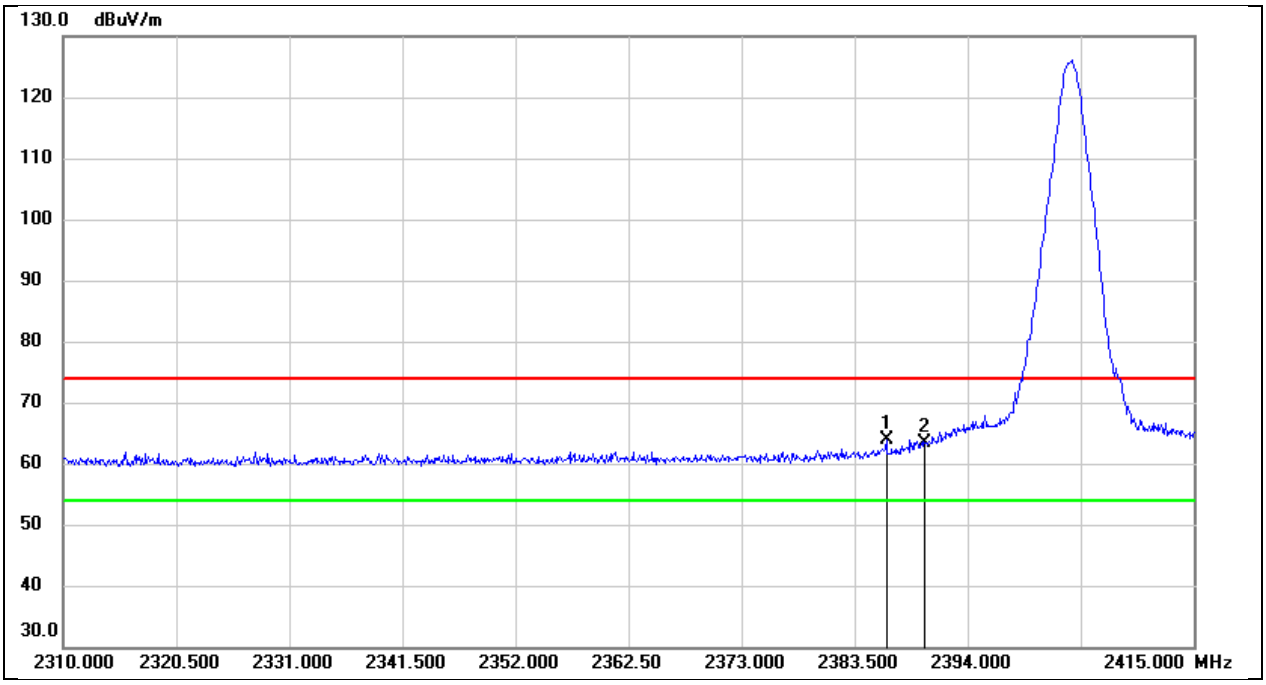
8.1. RESTRICTED BANDEDGE

Test Mode:	1.4 MHz PEAK	Channel:	2403.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.440	31.69	32.14	63.83	74.00	-10.17	peak
2	2390.000	31.26	32.16	63.42	74.00	-10.58	peak

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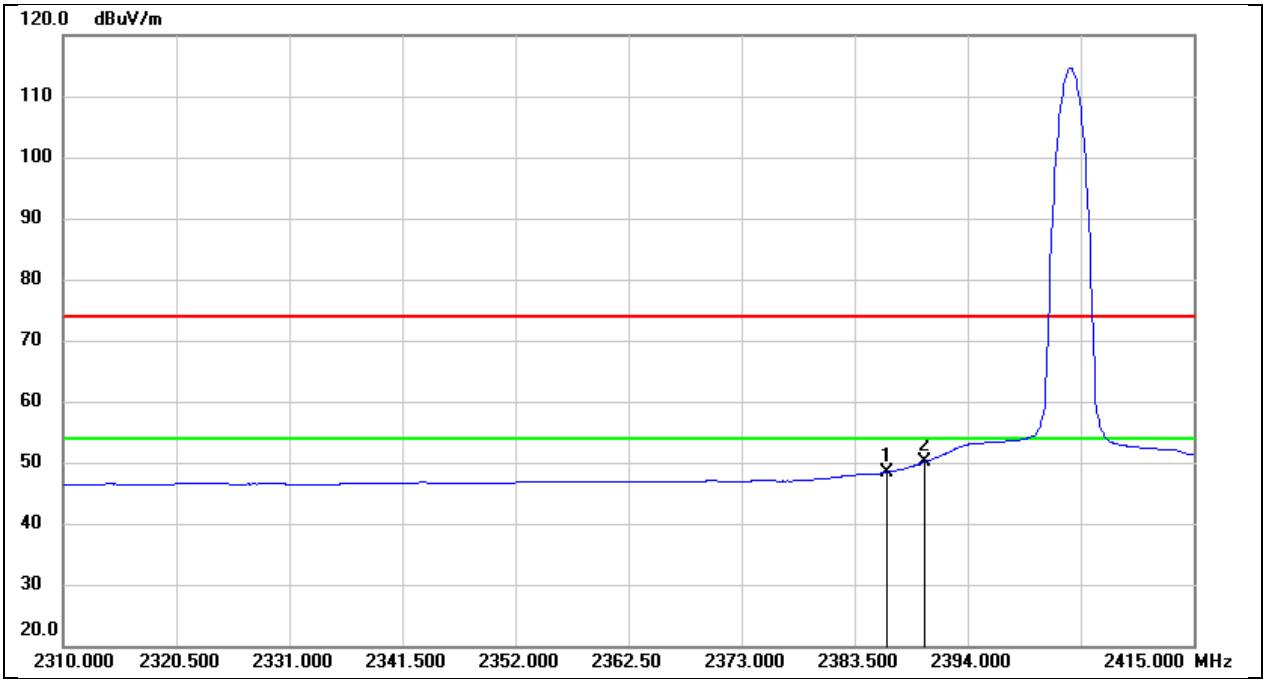
Test Mode:	1.4 MHz Average	Channel:	2403.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.440	16.23	32.14	48.37	54.00	-5.63	AVG
2	2390.000	17.90	32.16	50.06	54.00	-3.94	AVG

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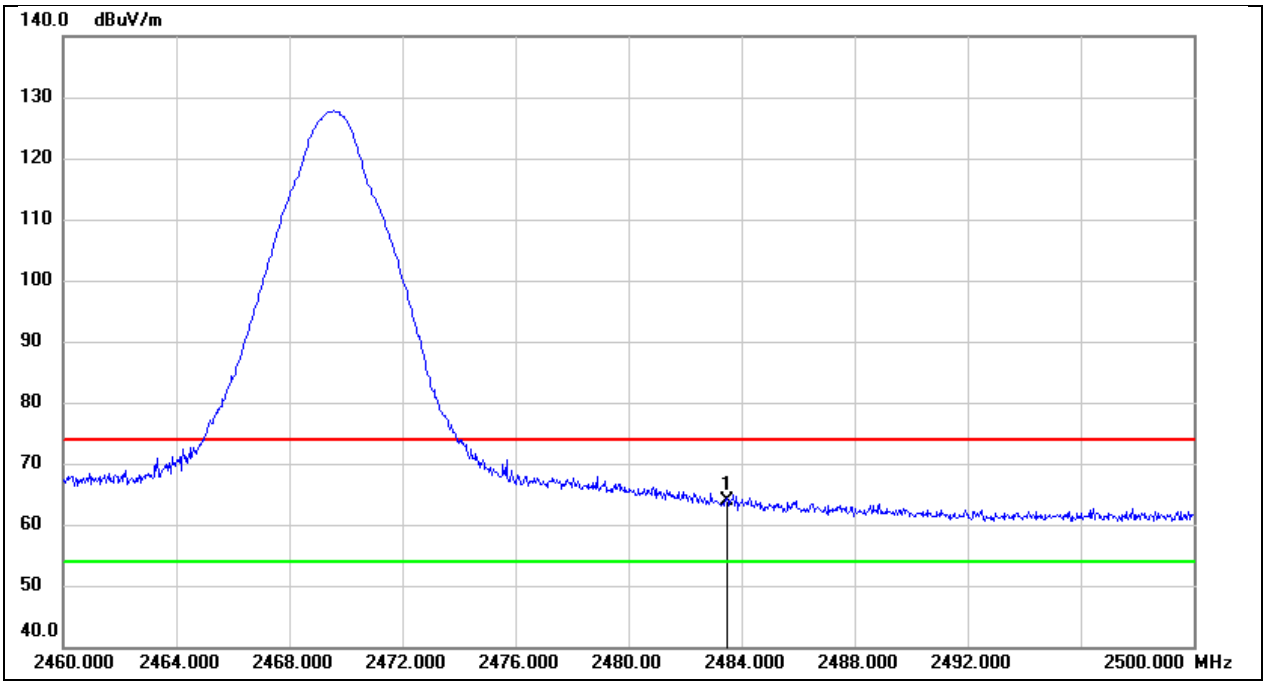
Test Mode:	1.4 MHz PEAK	Channel:	2469.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.48	32.44	63.92	74.00	-10.08	peak

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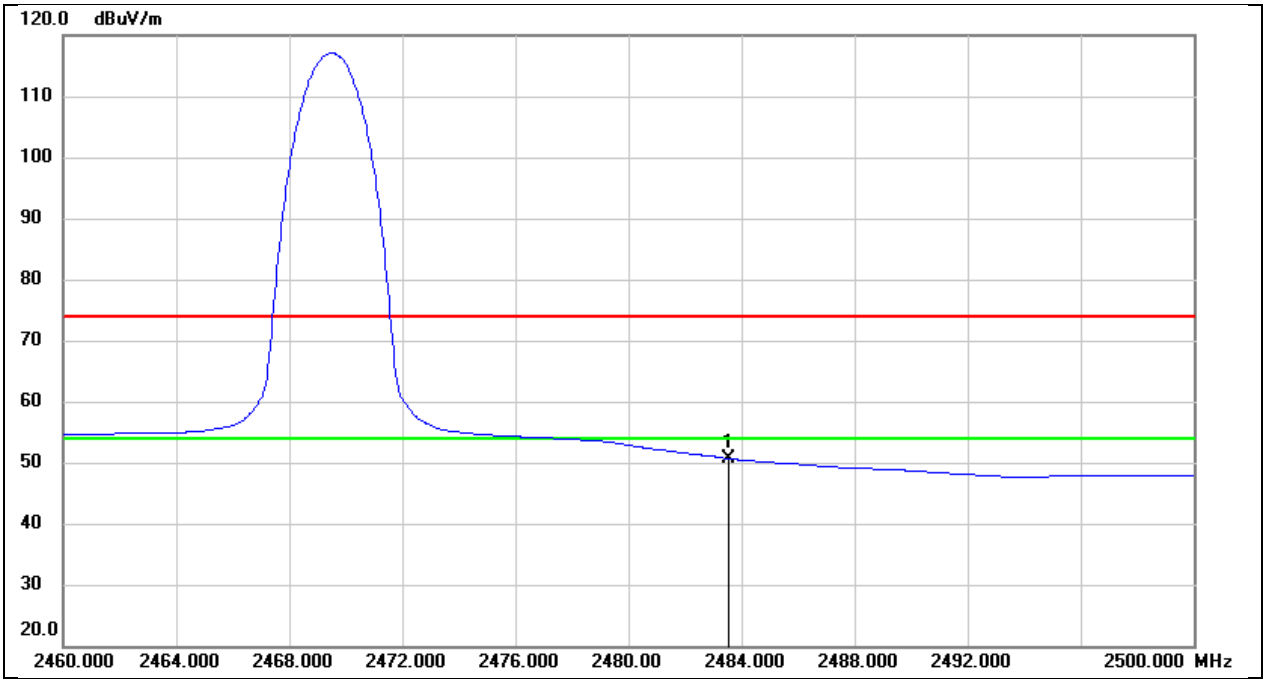
Test Mode:	1.4 MHz Average	Channel:	2469.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.30	32.44	50.74	54.00	-3.26	AVG

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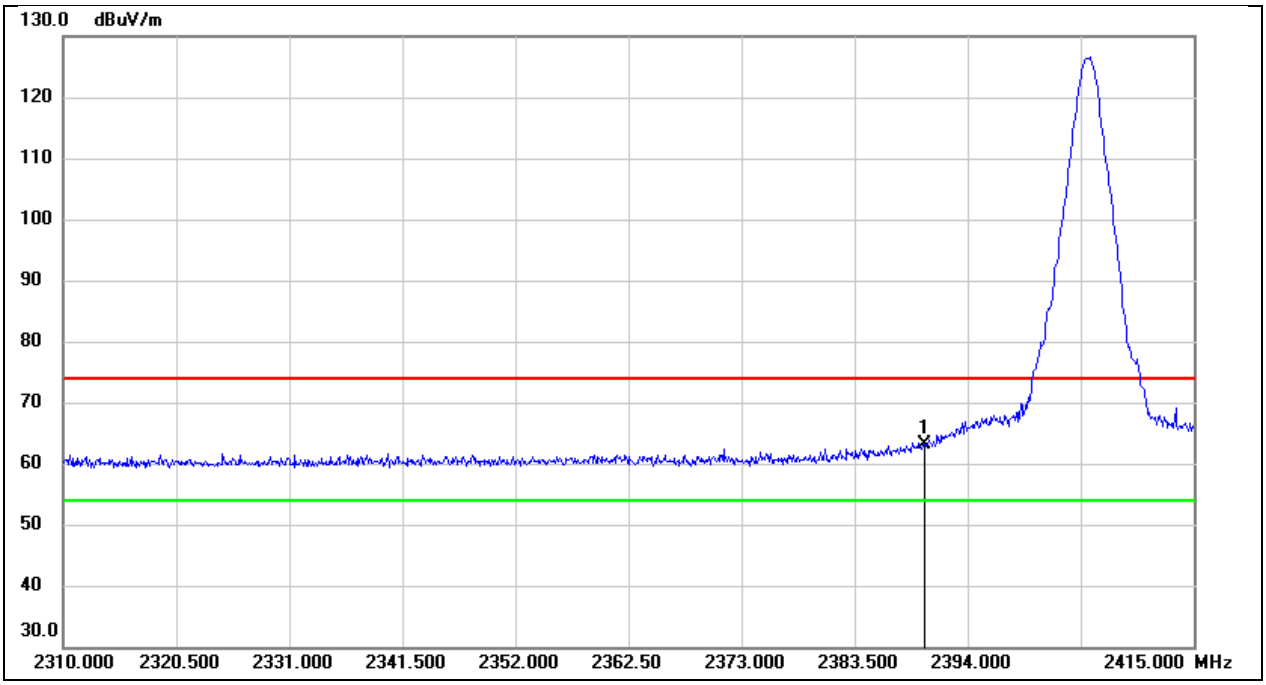
Test Mode:	1.4 MHz CA Mode PEAK	Channel:	2405.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	30.94	32.16	63.10	74.00	-10.90	peak

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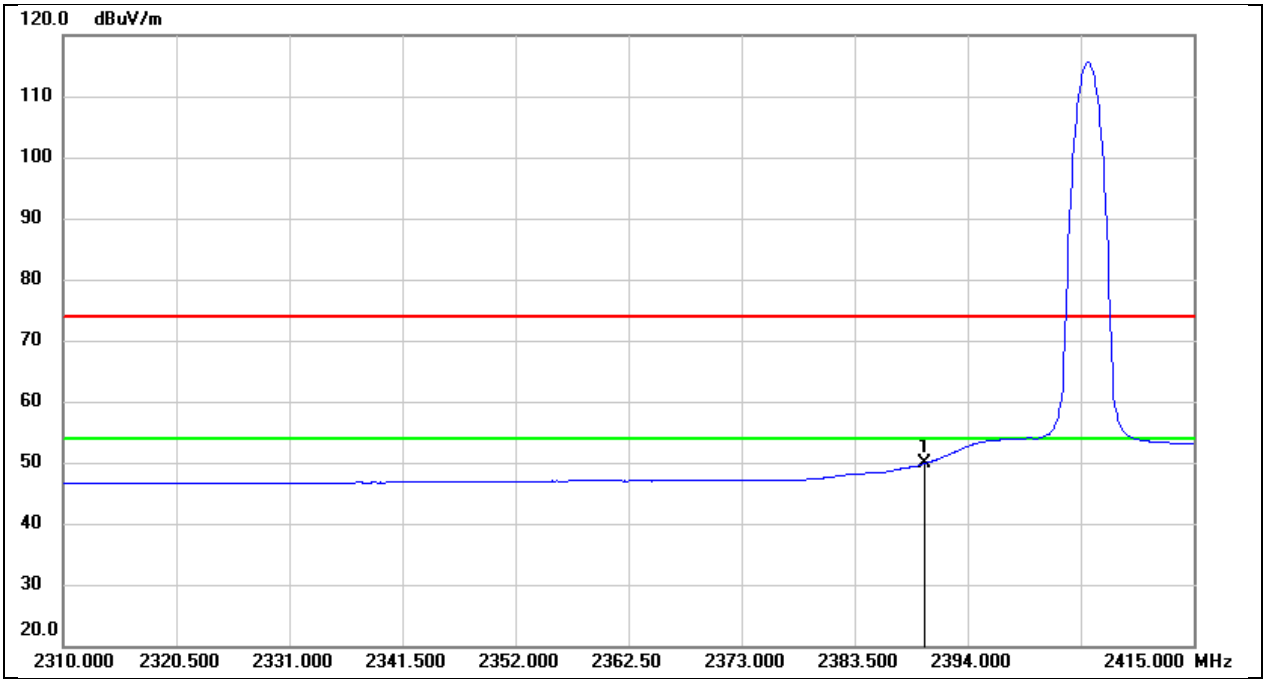
Test Mode:	1.4 MHz CA Mode Average	Channel:	2405.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	17.72	32.16	49.88	54.00	-4.12	AVG

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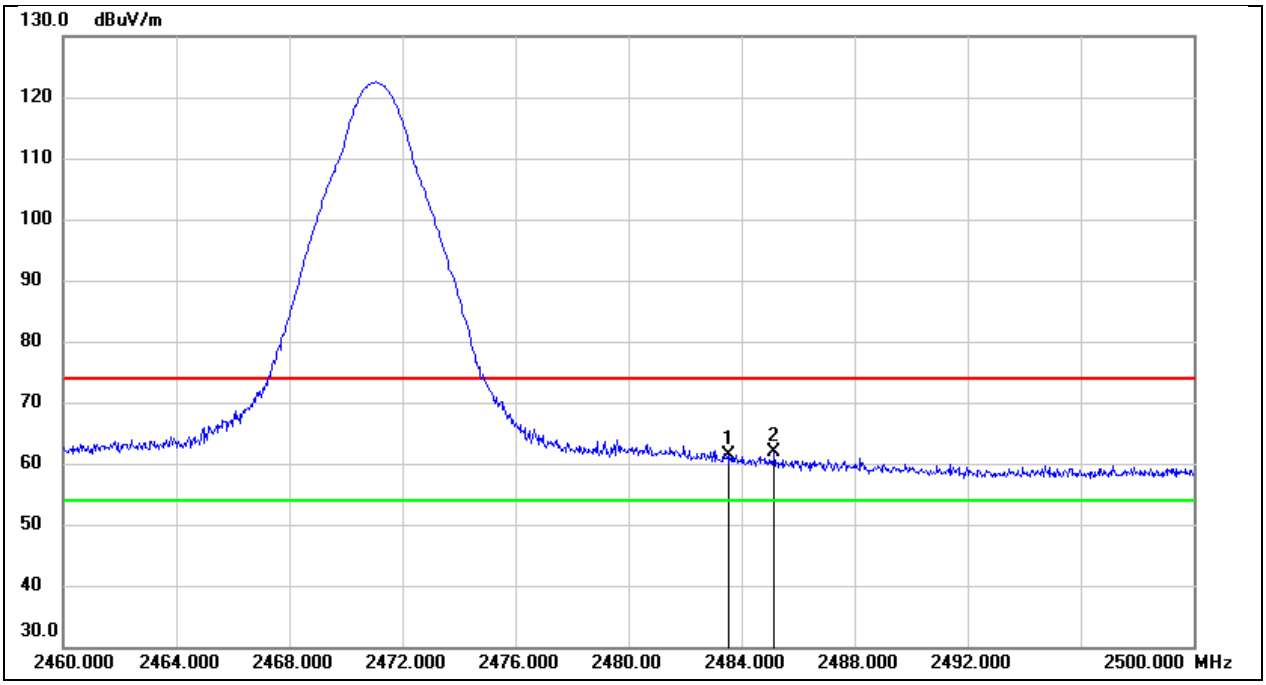
Test Mode:	1.4 MHz CA Mode PEAK	Channel:	2471.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	31.94	29.44	61.38	74.00	-12.62	peak
2	2485.160	32.39	29.44	61.83	74.00	-12.17	peak

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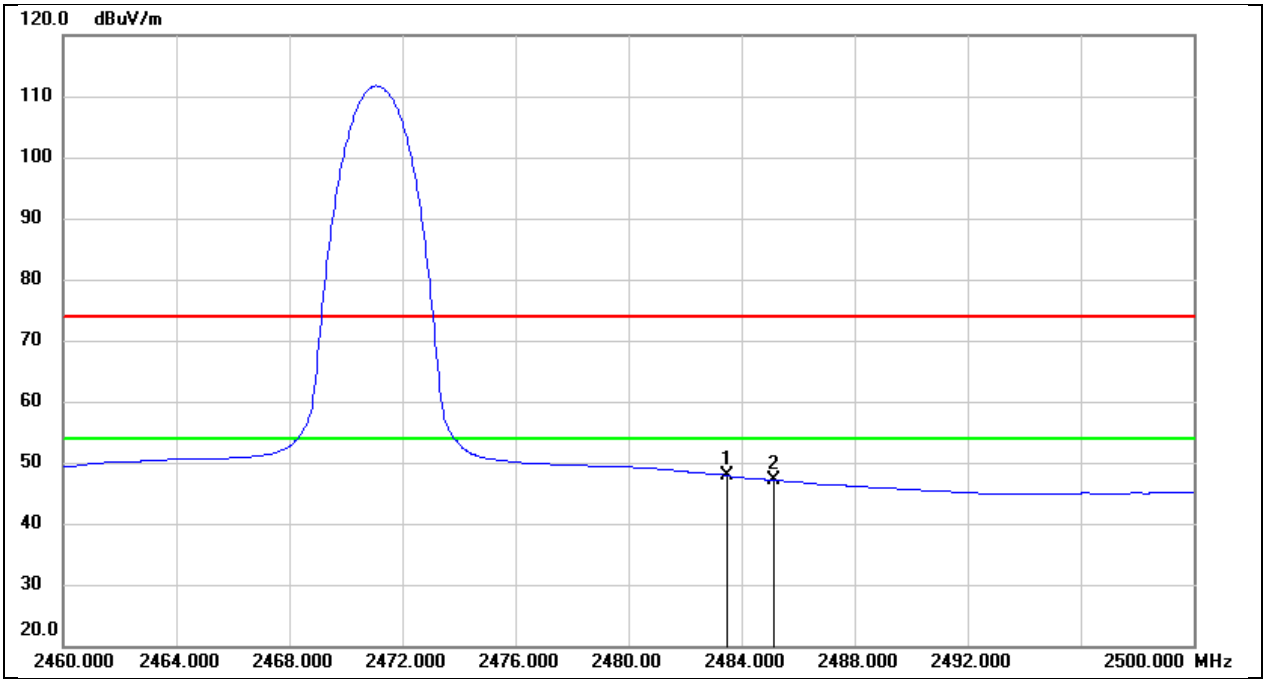
Test Mode:	1.4 MHz CA Mode Average	Channel:	2471.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.37	29.44	47.81	54.00	-6.19	AVG
2	2485.160	17.78	29.44	47.22	54.00	-6.78	AVG

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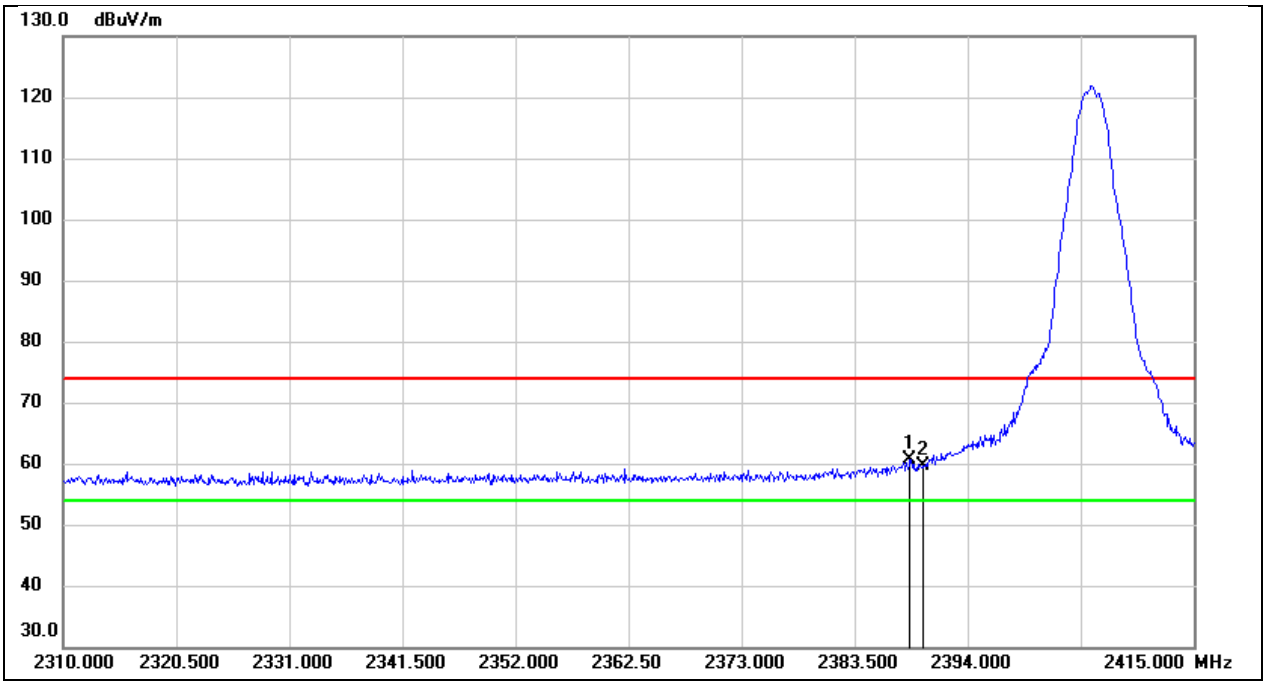
Test Mode:	3 MHz PEAK	Channel:	2405.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.645	31.47	29.16	60.63	74.00	-13.37	peak
2	2390.000	30.47	29.16	59.63	74.00	-14.37	peak

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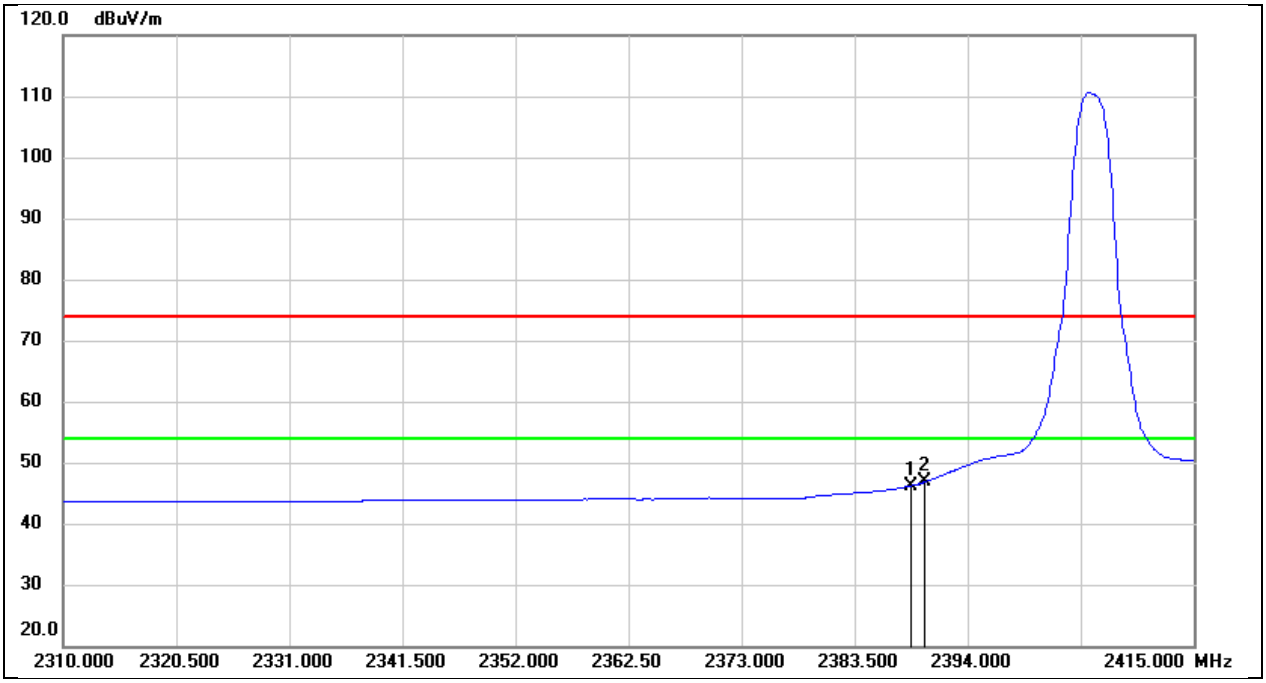
Test Mode:	3 MHz Average	Channel:	2405.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.645	17.05	29.16	46.21	54.00	-7.79	AVG
2	2390.000	17.70	29.16	46.86	54.00	-7.14	AVG

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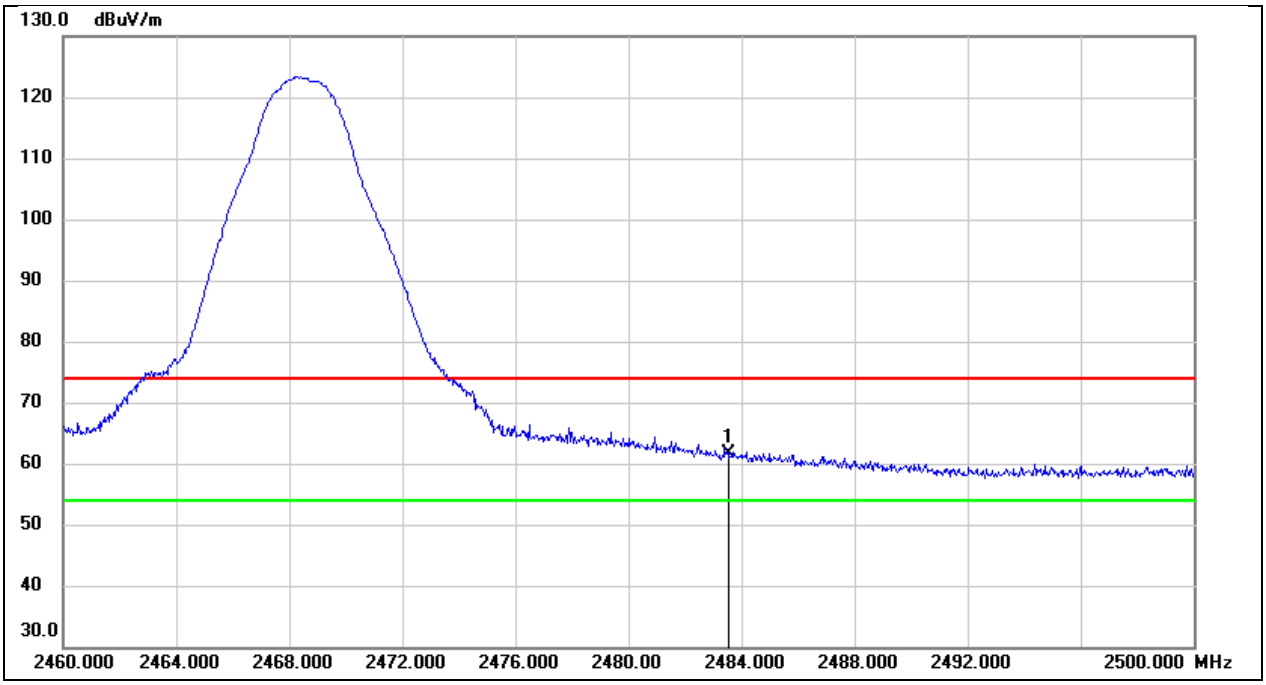
Test Mode:	3 MHz PEAK	Channel:	2468.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	32.28	29.44	61.72	74.00	-12.28	peak

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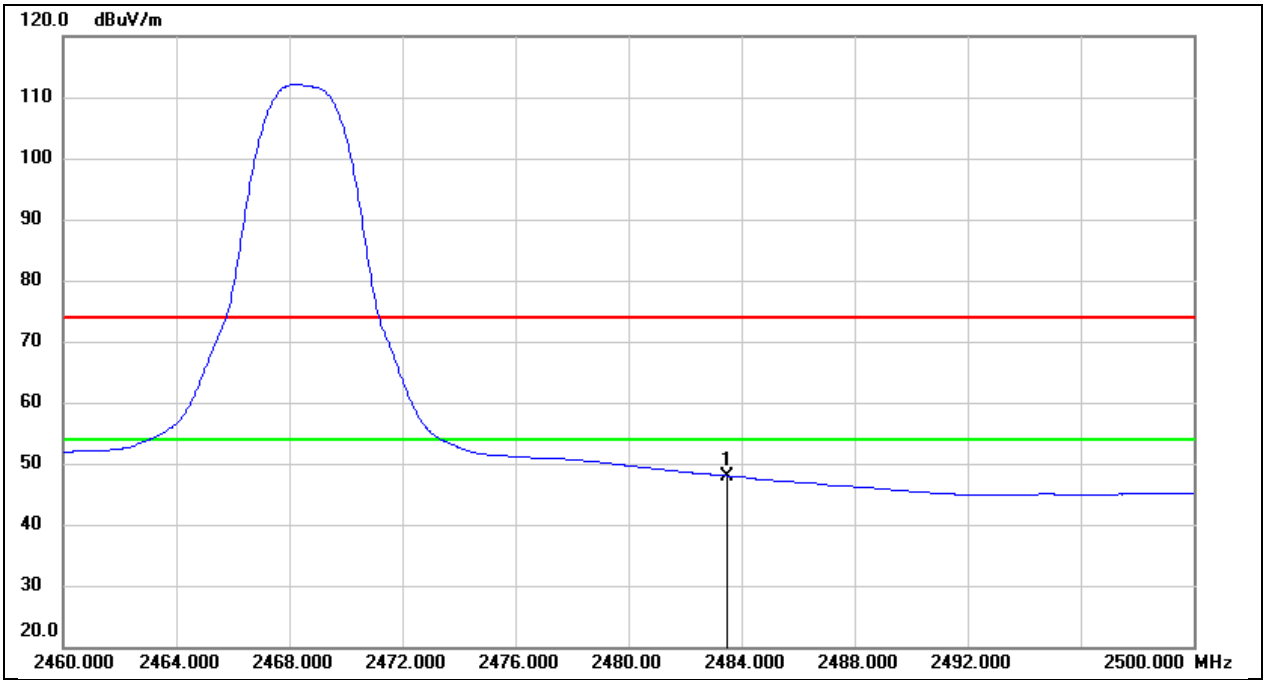
Test Mode:	3 MHz Average	Channel:	2468.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	18.49	29.44	47.93	54.00	-6.07	AVG

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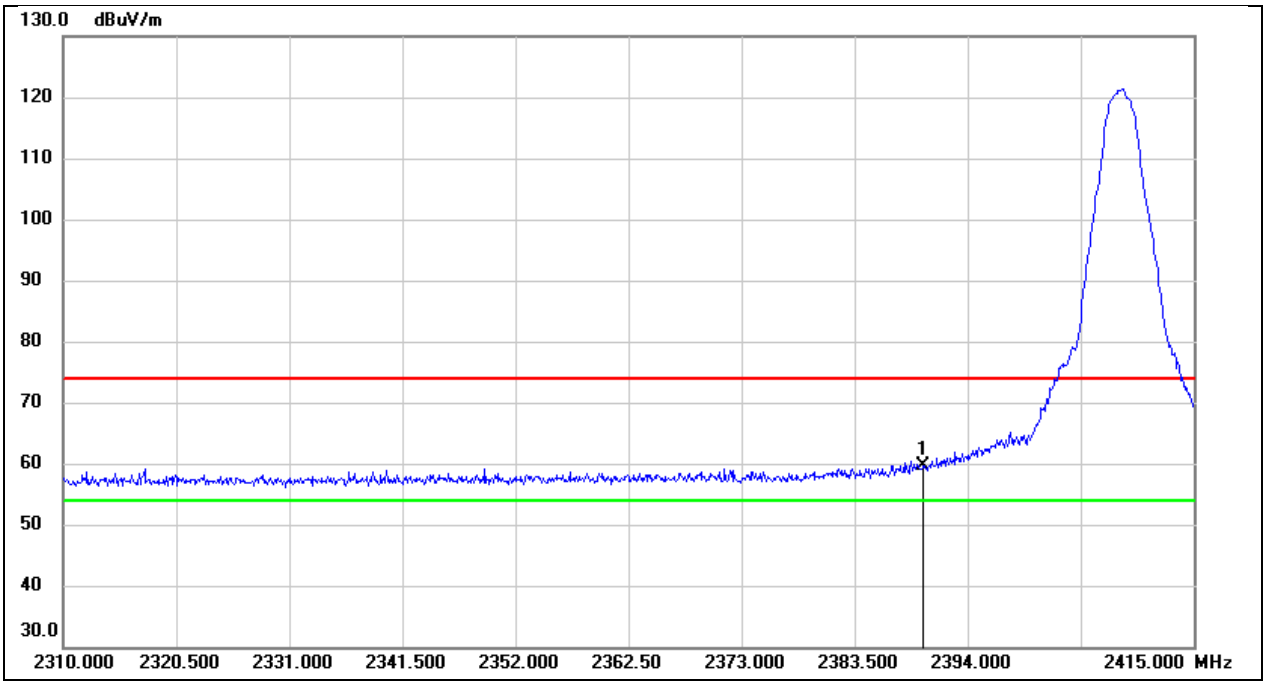
Test Mode:	3 MHz CA Mode PEAK	Channel:	2408.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	30.39	29.16	59.55	74.00	-14.45	peak

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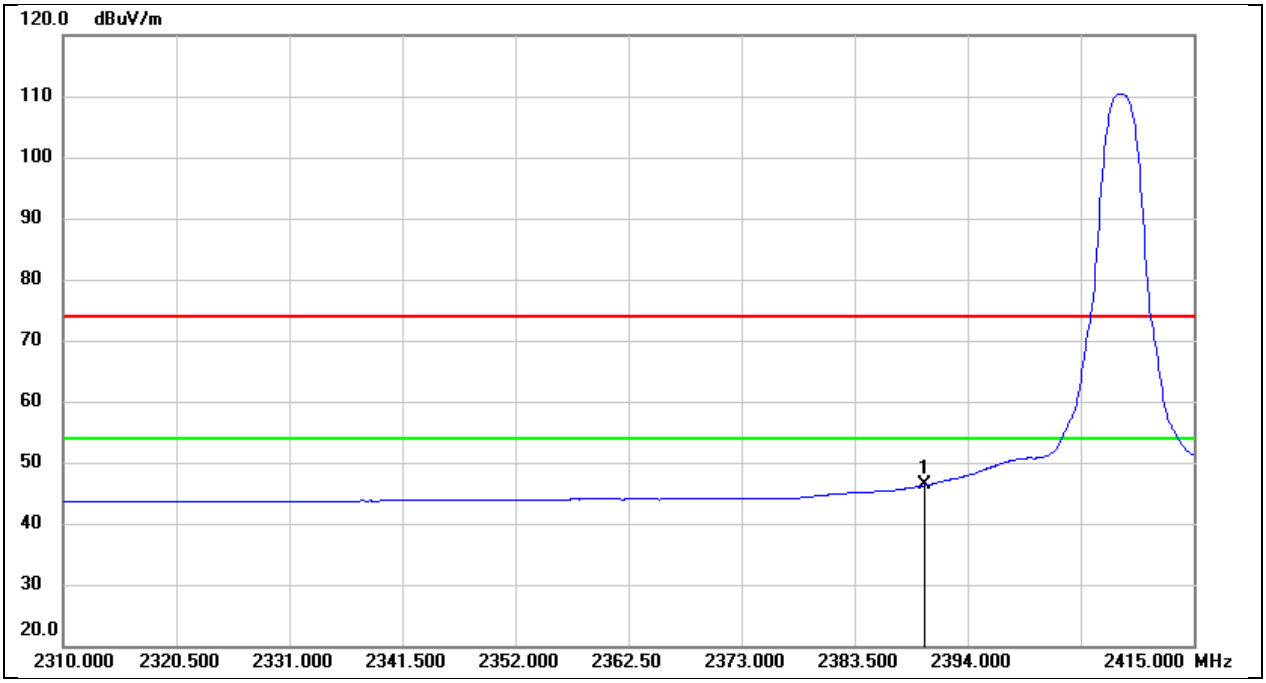
Test Mode:	3 MHz CA Mode Average	Channel:	2408.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	17.12	29.16	46.28	54.00	-7.72	AVG

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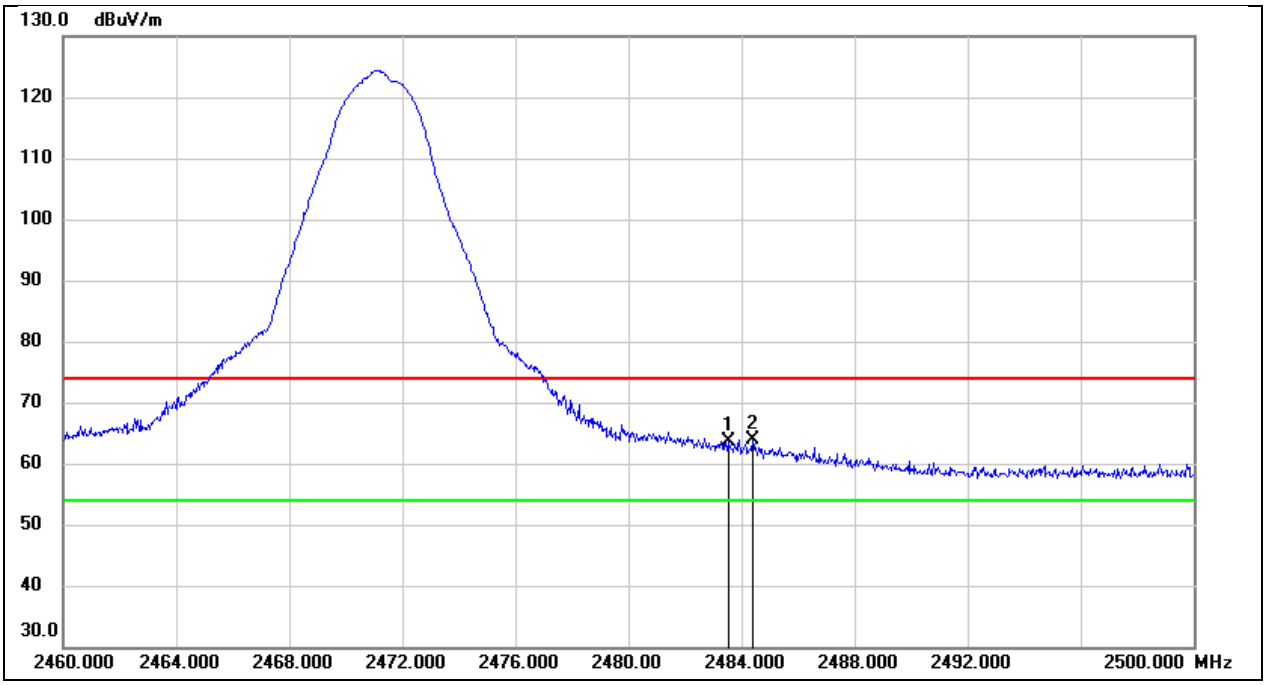
Test Mode:	3 MHz CA Mode PEAK	Channel:	2471.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	34.11	29.44	63.55	74.00	-10.45	peak
2	2484.400	34.34	29.44	63.78	74.00	-10.22	peak

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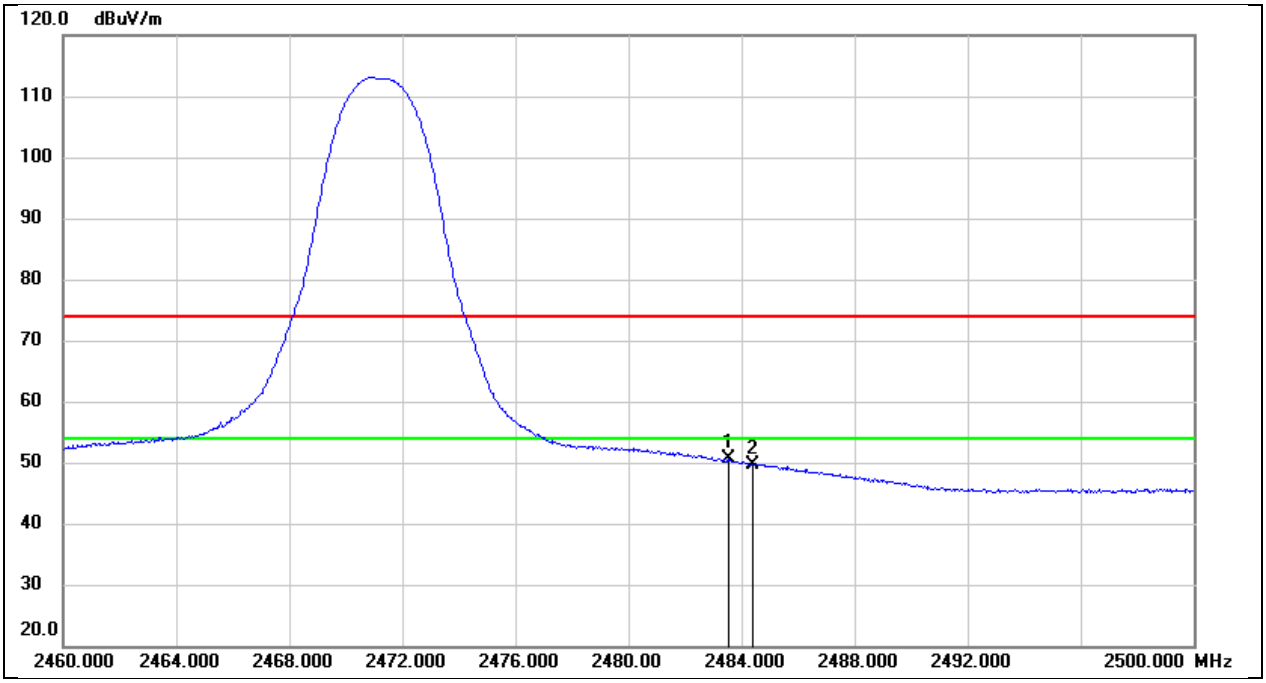
Test Mode:	3 MHz CA Mode Average	Channel:	2471.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	21.19	29.44	50.63	54.00	-3.37	AVG
2	2484.400	20.11	29.44	49.55	54.00	-4.45	AVG

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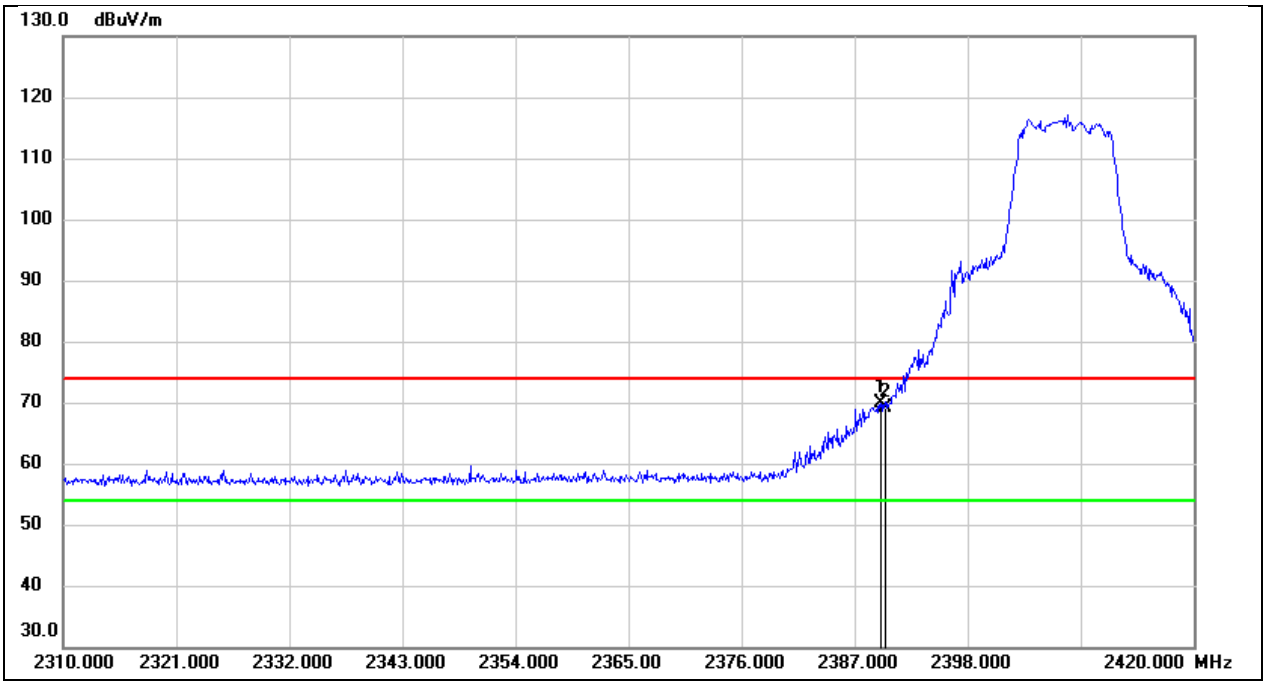
Test Mode:	10 MHz PEAK	Channel:	2407.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.530	40.80	29.16	69.96	74.00	-4.04	peak
2	2390.000	39.96	29.16	69.12	74.00	-4.88	peak

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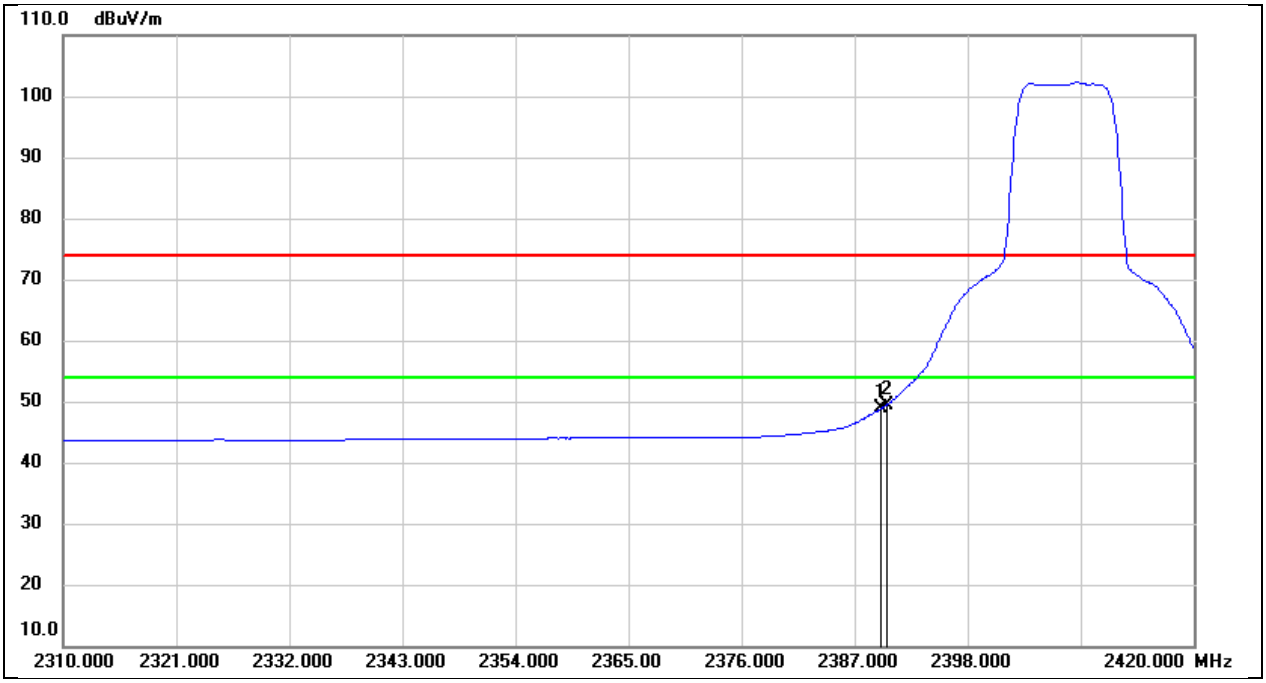
Test Mode:	10 MHz Average	Channel:	2407.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.530	19.64	29.16	48.80	54.00	-5.20	AVG
2	2390.000	20.26	29.16	49.42	54.00	-4.58	AVG

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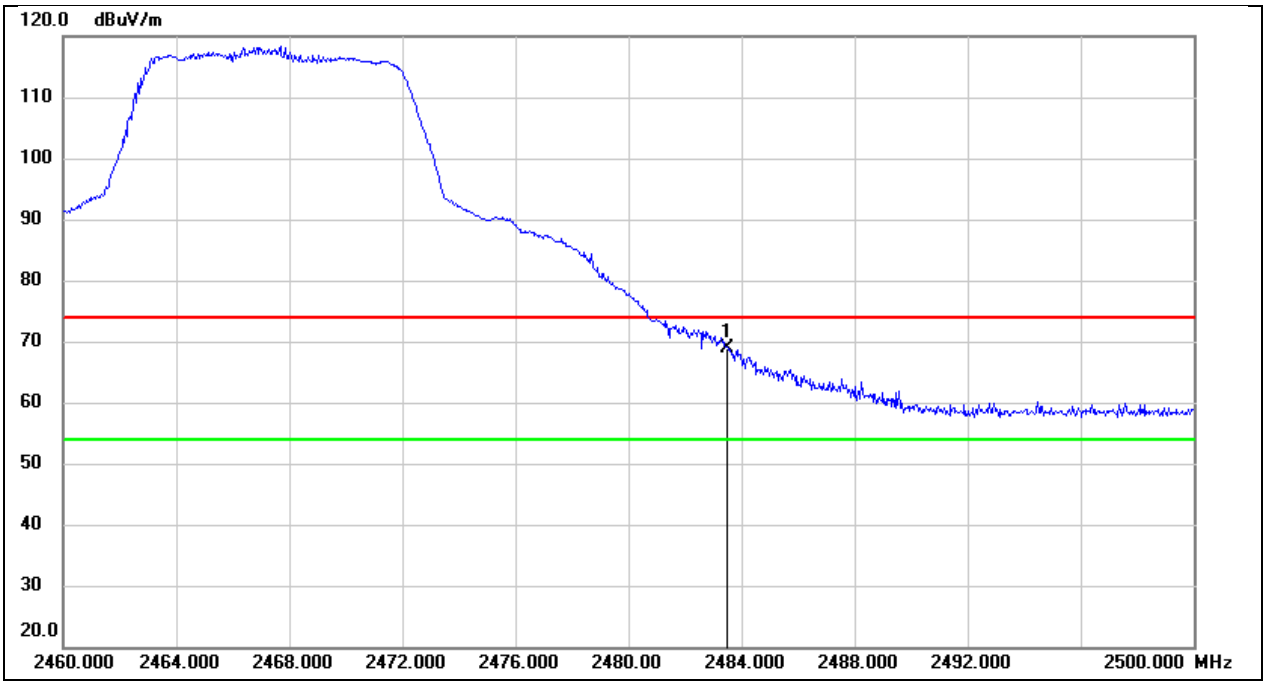
Test Mode:	10 MHz PEAK	Channel:	2467.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	39.37	29.44	68.81	74.00	-5.19	peak

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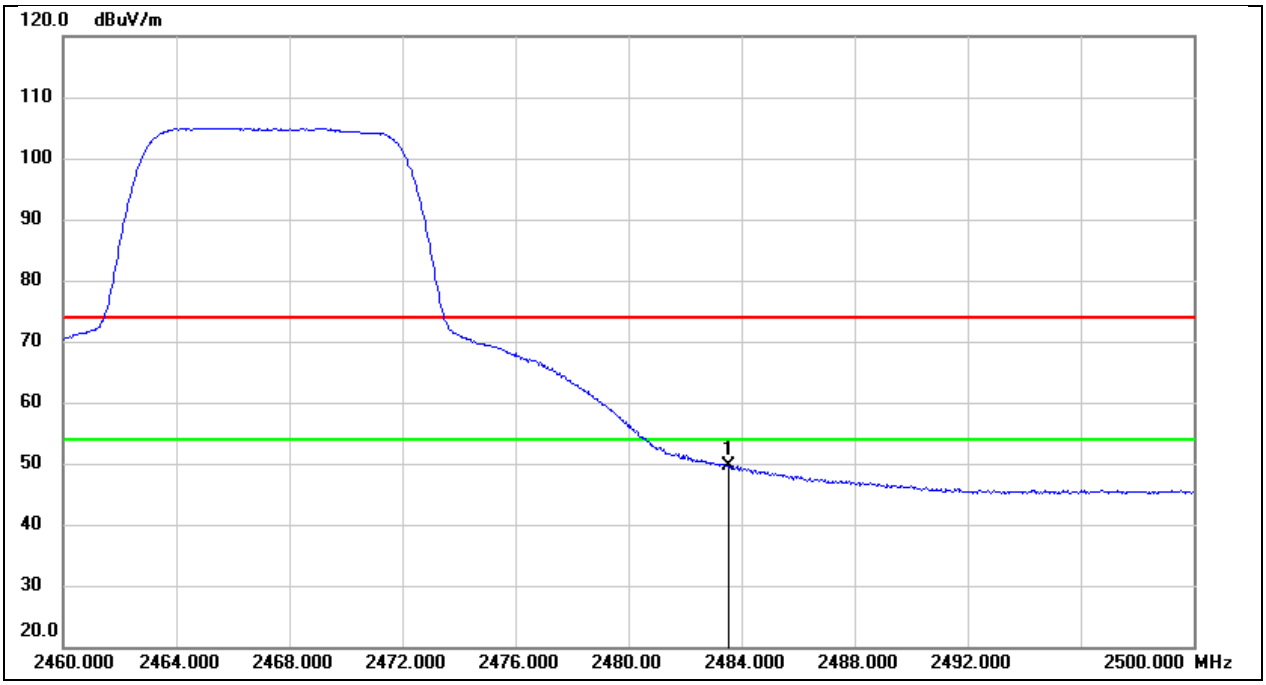
Test Mode:	10 MHz Average	Channel:	2467.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	20.15	29.44	49.59	54.00	-4.41	AVG

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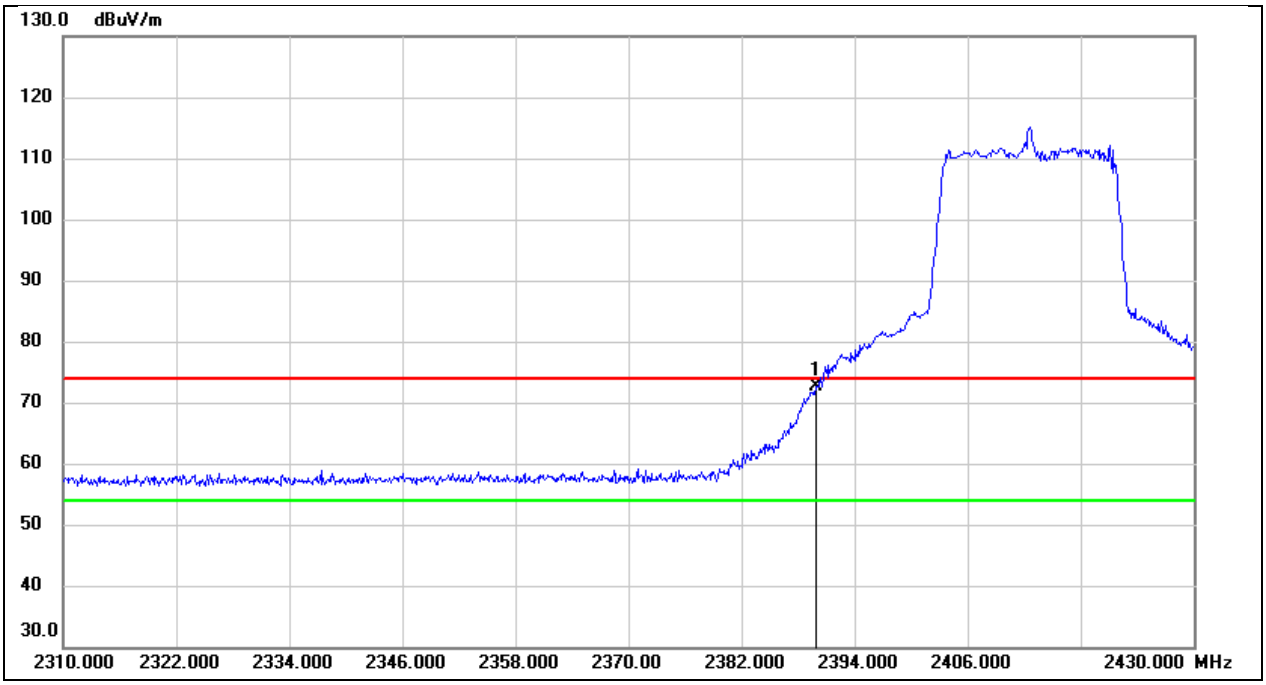
Test Mode:	20 MHz PEAK	Channel:	2412.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	43.51	29.16	72.67	74.00	-1.33	peak

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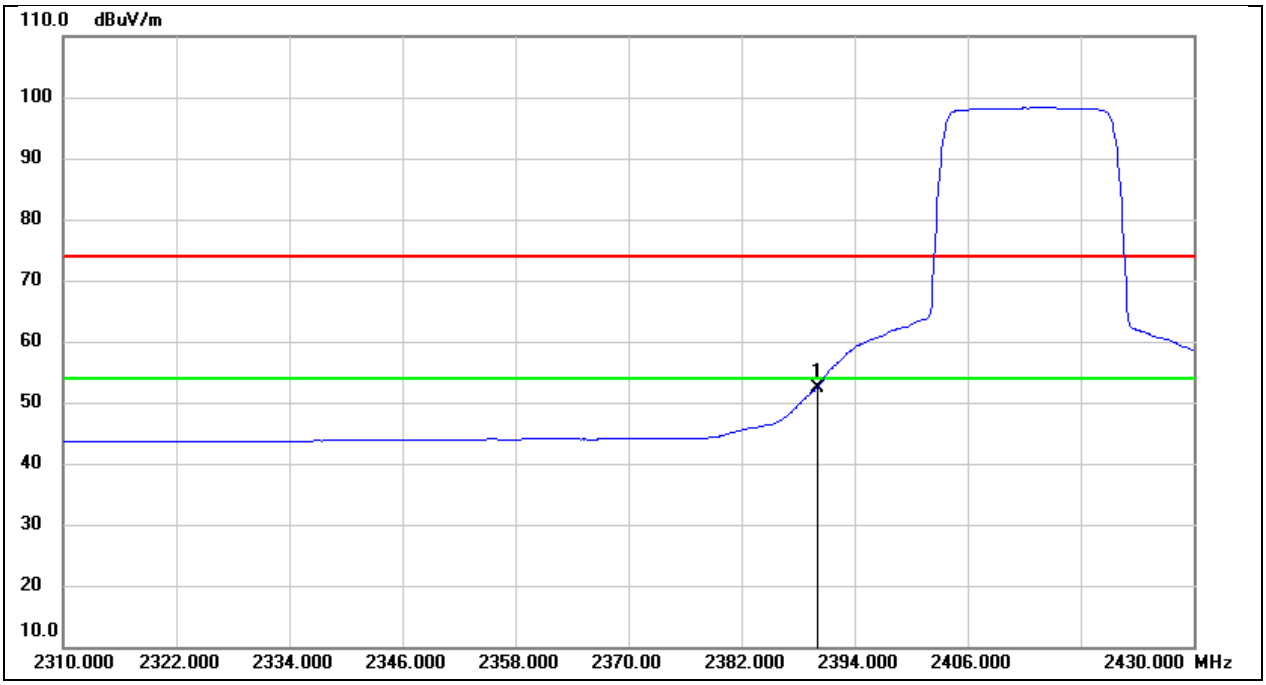
Test Mode:	20 MHz Average	Channel:	2412.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	23.31	29.16	52.47	54.00	-1.53	AVG

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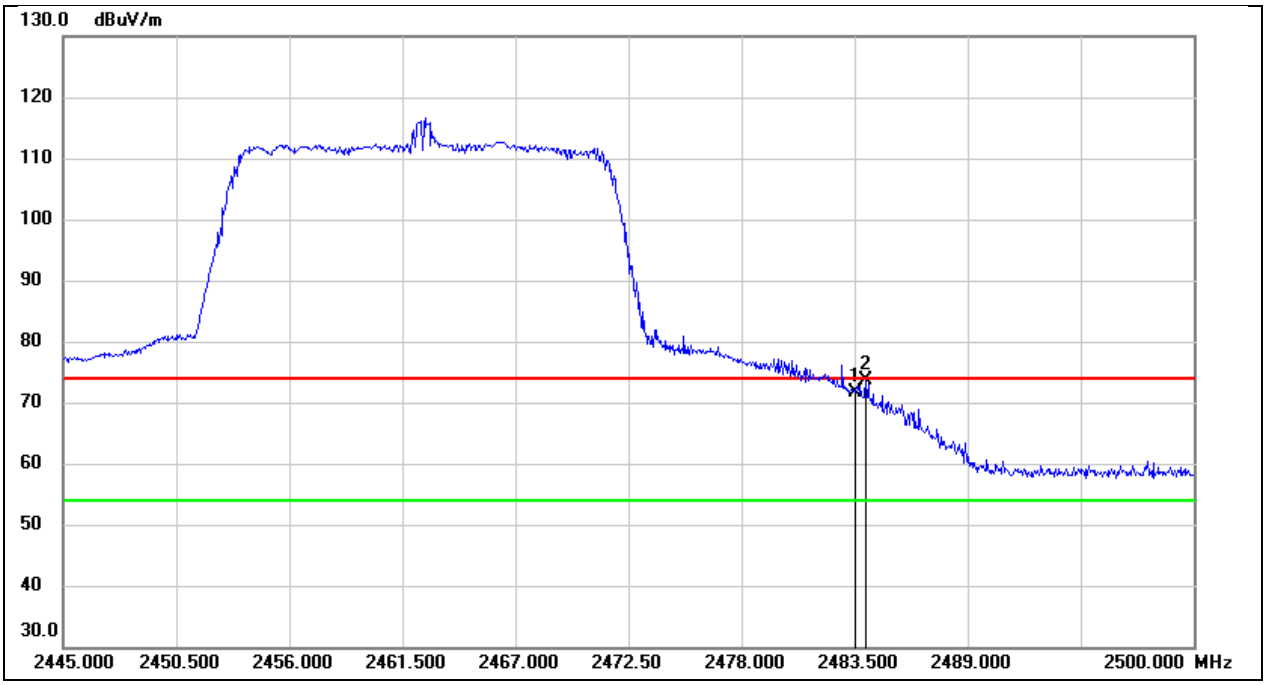
Test Mode:	20 MHz PEAK	Channel:	2462.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	42.26	29.44	71.70	74.00	-2.30	peak
2	2484.050	44.15	29.44	73.59	74.00	-0.41	peak

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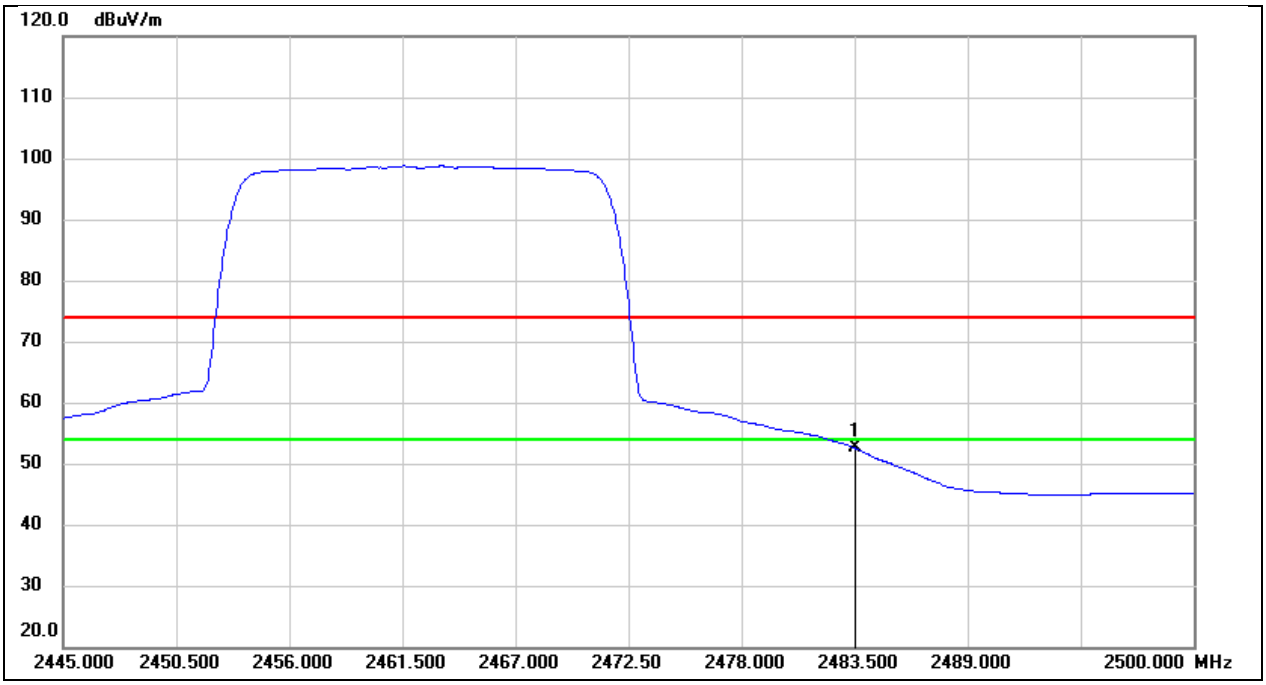
Test Mode:	20 MHz Average	Channel:	2462.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.11	29.44	52.55	54.00	-1.45	AVG

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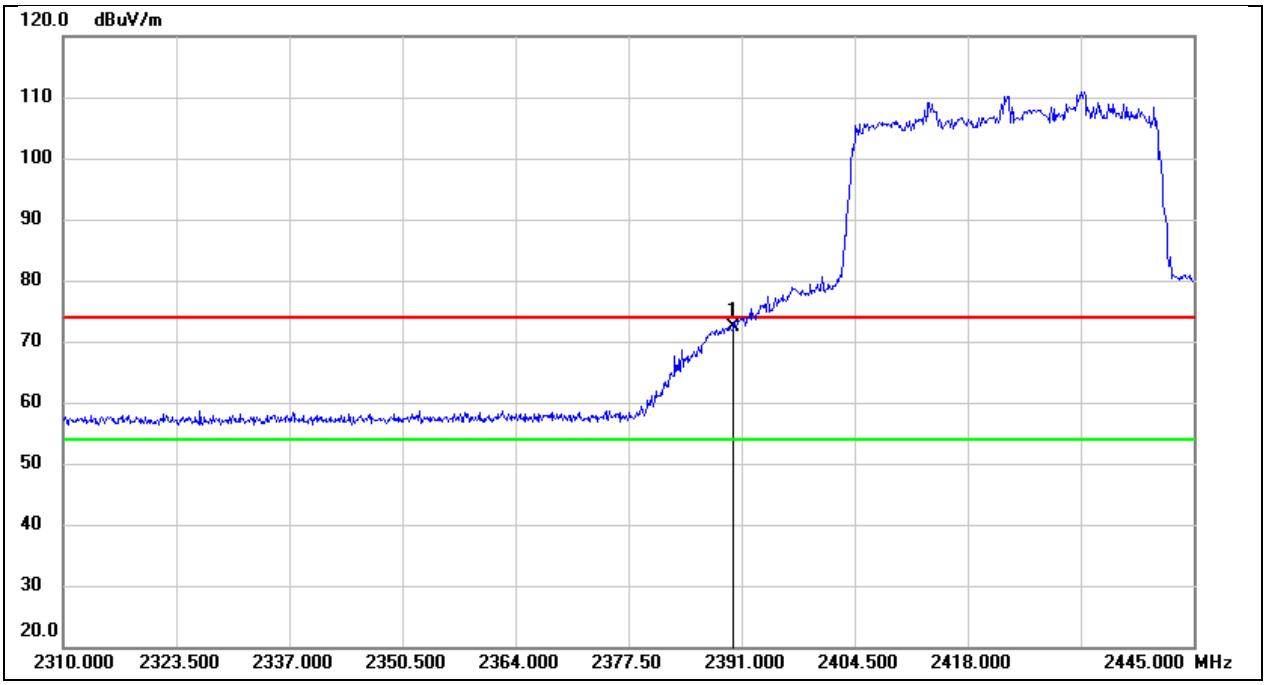
Test Mode:	40 MHz PEAK	Channel:	2422.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	43.15	29.16	72.31	74.00	-1.69	peak

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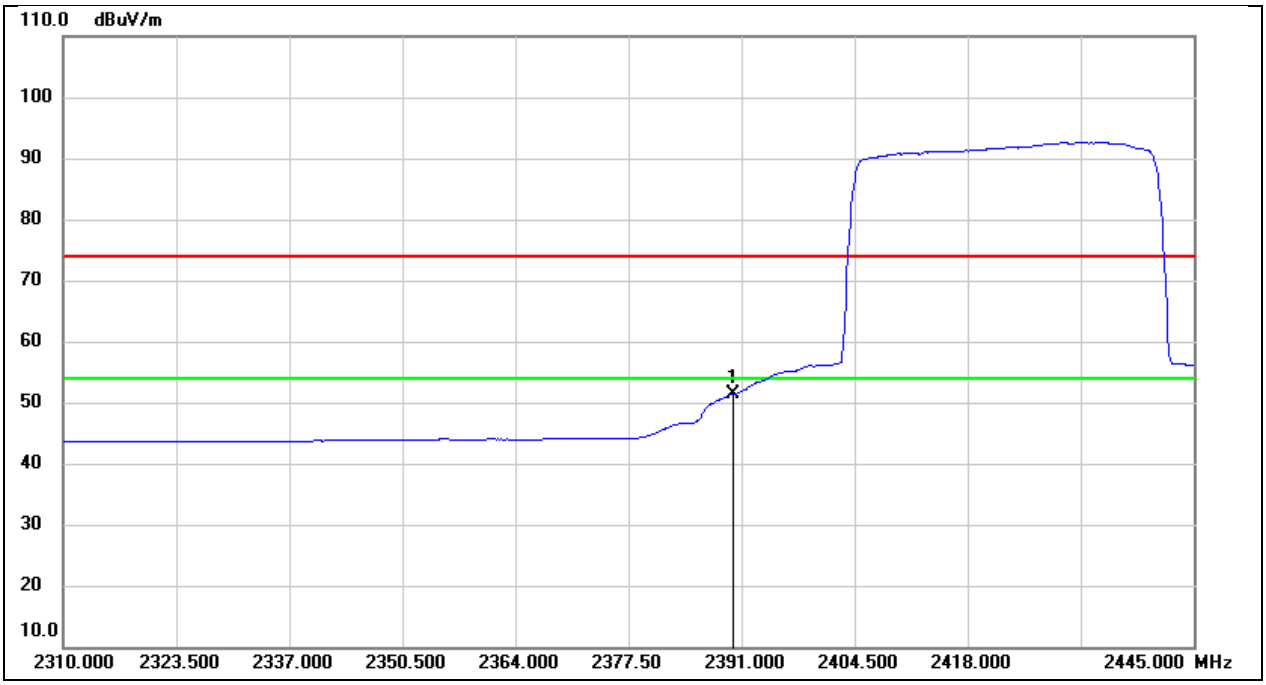
Test Mode:	40 MHz Average	Channel:	2422.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	22.25	29.16	51.41	54.00	-2.59	AVG

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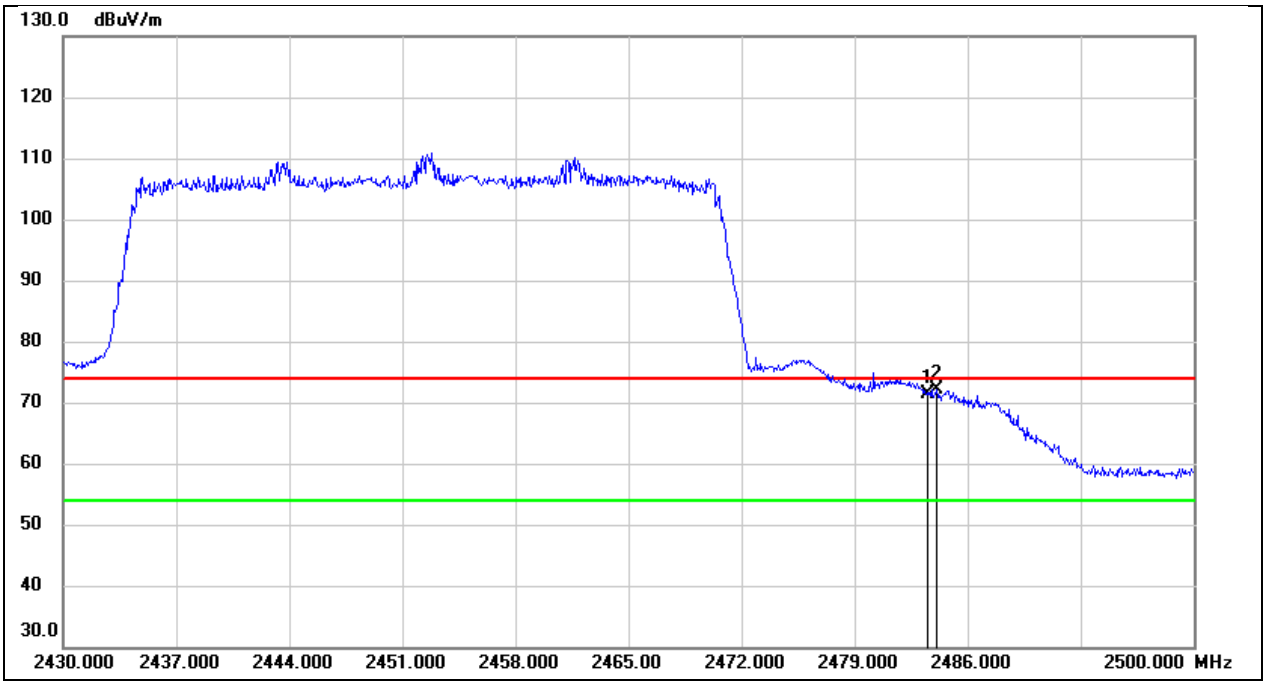
Test Mode:	40 MHz PEAK	Channel:	2452.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	41.86	29.44	71.30	74.00	-2.70	peak
2	2484.110	42.81	29.44	72.25	74.00	-1.75	peak

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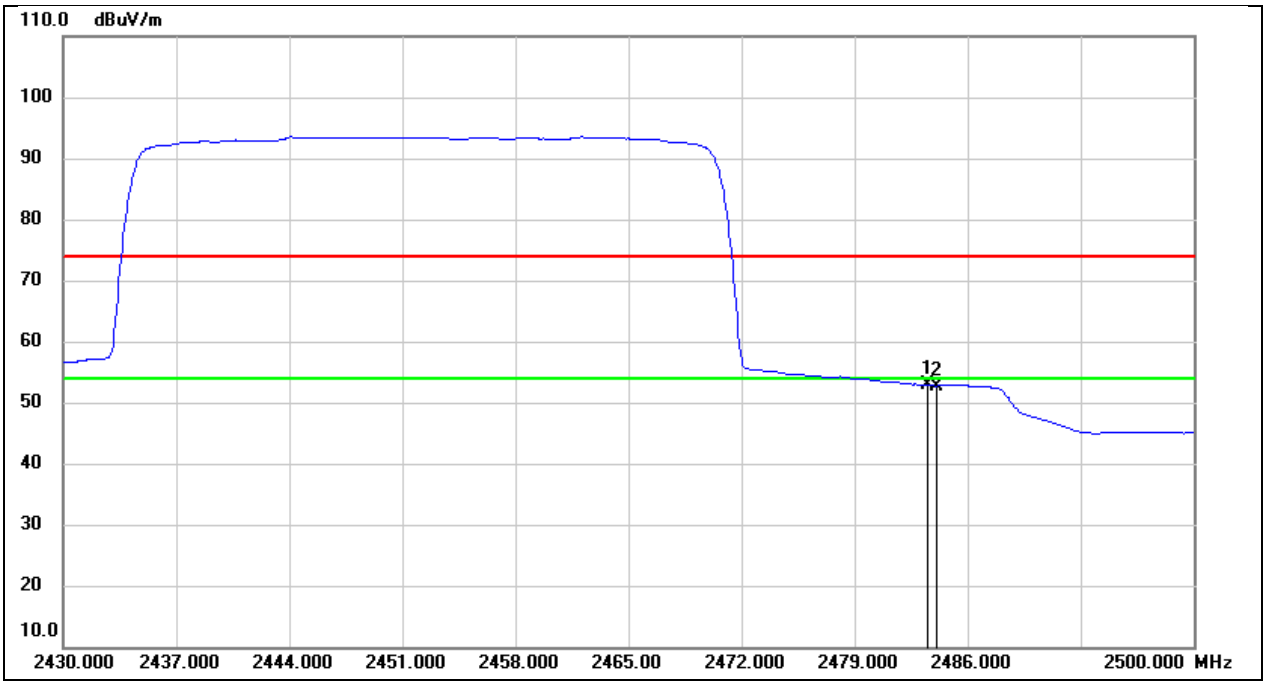
Test Mode:	40 MHz Average	Channel:	2452.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	23.32	29.44	52.76	54.00	-1.24	AVG
2	2484.110	23.31	29.44	52.75	54.00	-1.25	AVG

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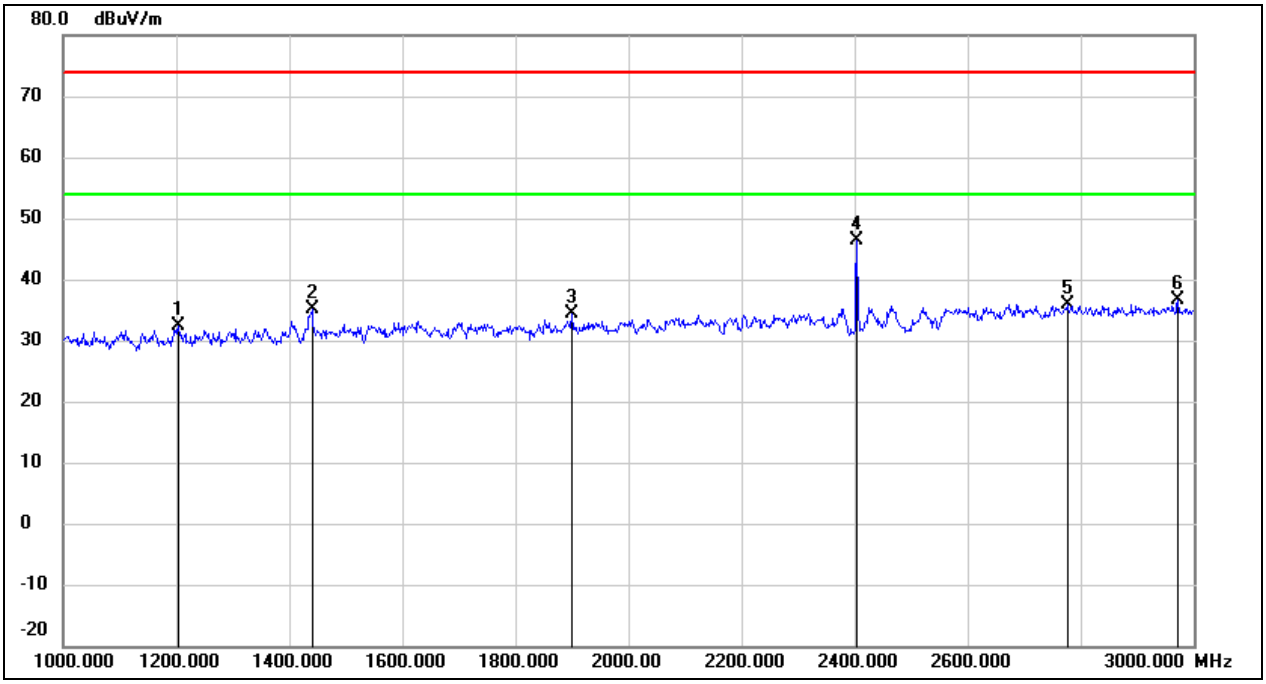
8.2. SPURIOUS EMISSIONS (1 GHZ ~ 3 GHZ)

Test Mode:	3 MHz CA	Channel:	2408.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1204.000	46.46	-14.09	32.37	74.00	-41.63	peak
2	1440.000	48.17	-12.98	35.19	74.00	-38.81	peak
3	1900.000	45.75	-11.39	34.36	74.00	-39.64	peak
4	2408.200	55.27	-8.99	46.28	/	/	Fundamental
5	2776.000	43.49	-7.66	35.83	74.00	-38.17	peak
6	2972.000	43.69	-7.06	36.63	74.00	-37.37	peak

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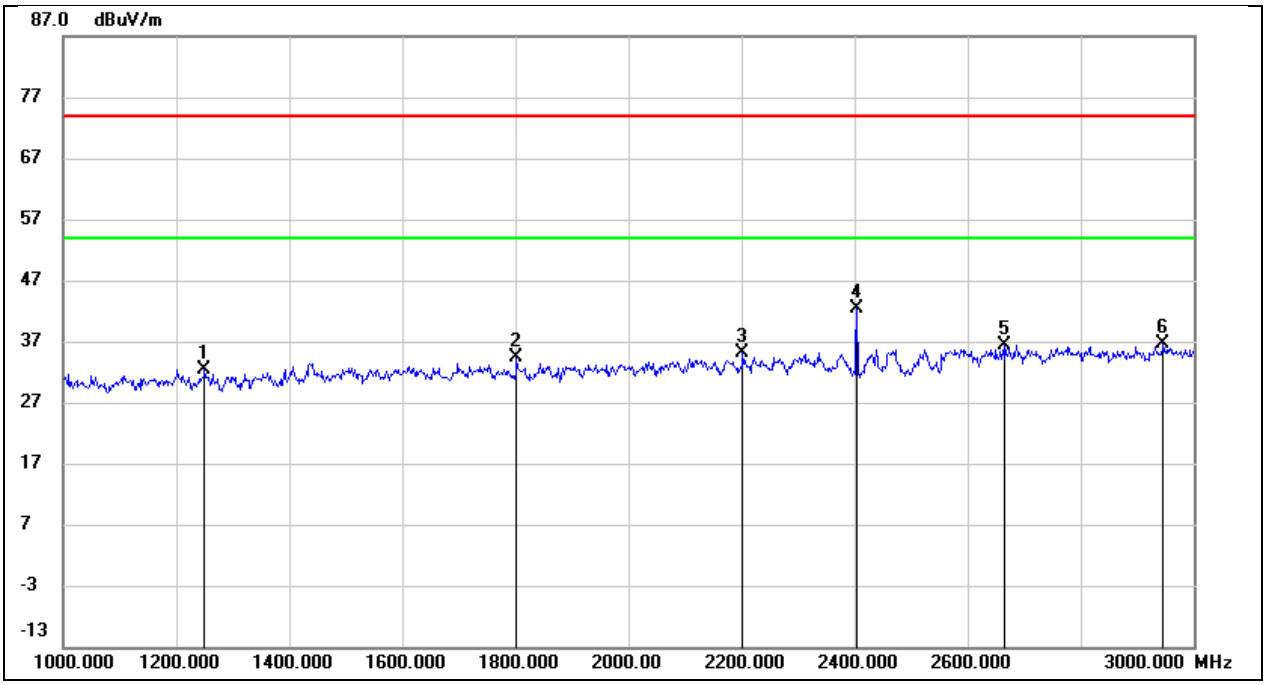
Test Mode:	3 MHz CA	Channel:	2408.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1250.000	46.27	-13.87	32.40	74.00	-41.60	peak
2	1802.000	45.99	-11.72	34.27	74.00	-39.73	peak
3	2202.000	45.08	-10.02	35.06	74.00	-38.94	peak
4	2408.200	51.39	-8.99	42.40	/	/	Fundamental
5	2666.000	44.37	-7.98	36.39	74.00	-37.61	peak
6	2946.000	43.73	-7.15	36.58	74.00	-37.42	peak

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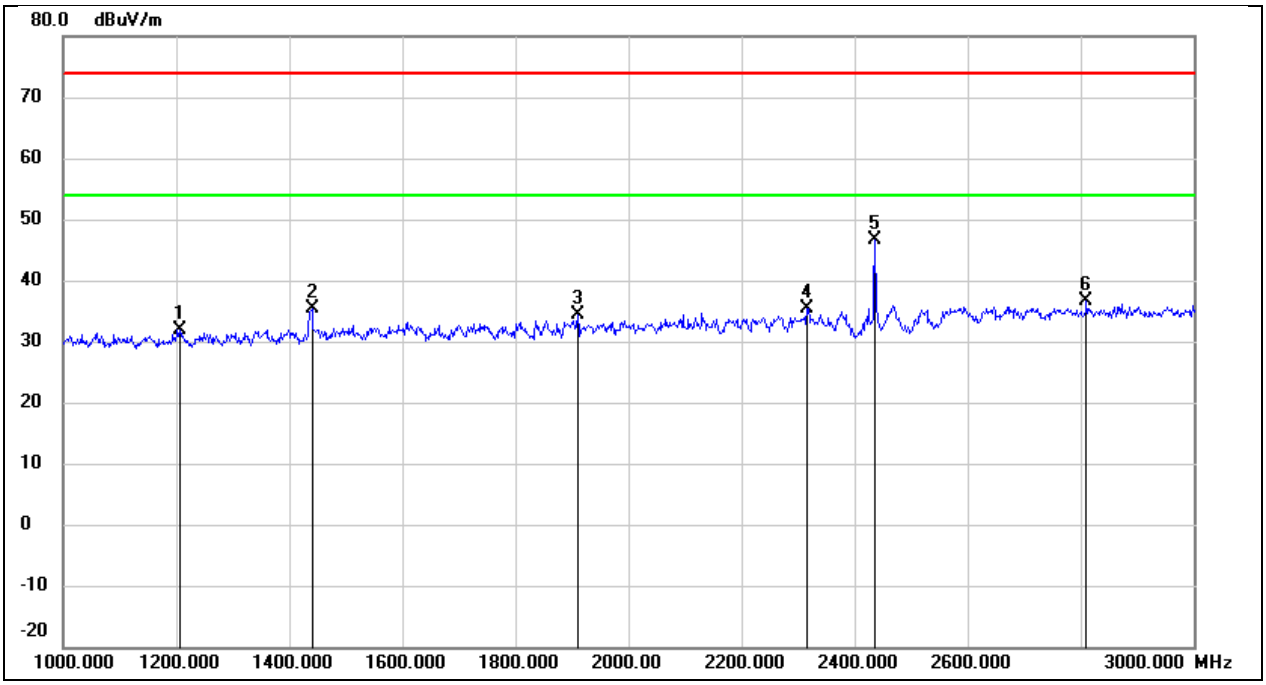
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1206.000	46.02	-14.07	31.95	74.00	-42.05	peak
2	1440.000	48.34	-12.98	35.36	74.00	-38.64	peak
3	1910.000	45.69	-11.36	34.33	74.00	-39.67	peak
4	2316.000	44.93	-9.44	35.49	74.00	-38.51	peak
5	2438.200	55.42	-8.82	46.60	/	/	Fundamental
6	2810.000	44.14	-7.55	36.59	74.00	-37.41	peak

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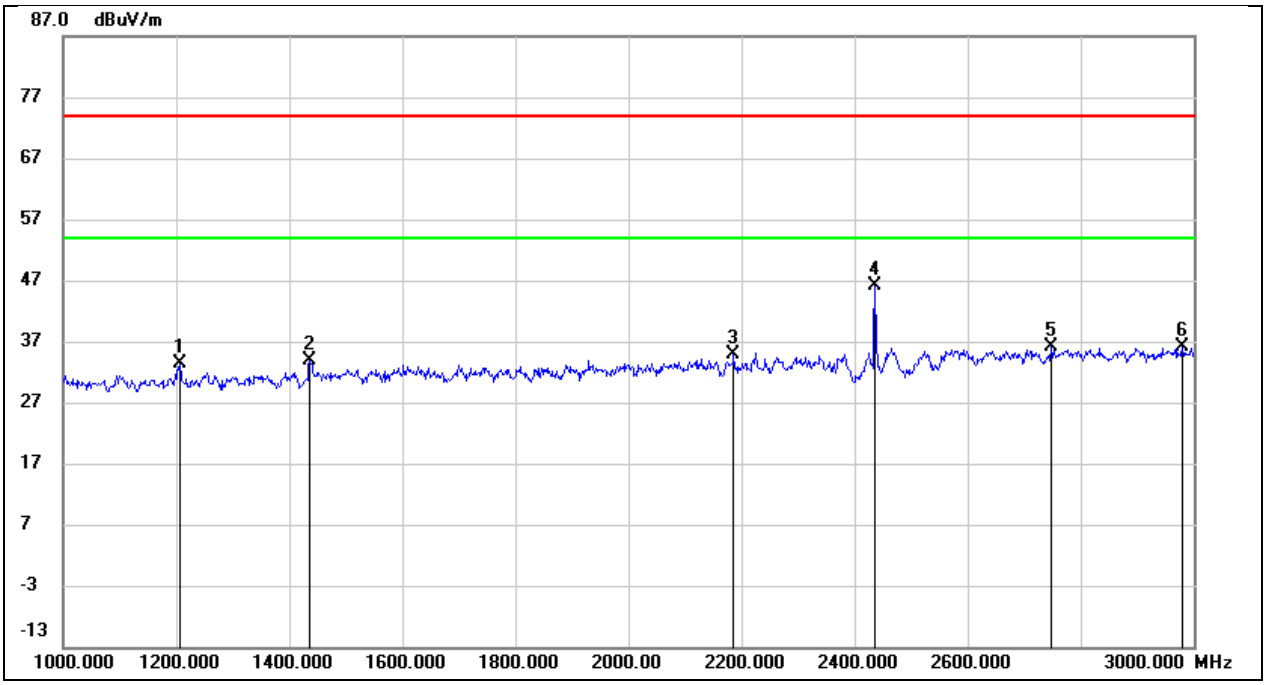
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1206.000	47.52	-14.07	33.45	74.00	-40.55	peak
2	1436.000	46.99	-13.01	33.98	74.00	-40.02	peak
3	2186.000	44.90	-10.11	34.79	74.00	-39.21	peak
4	2438.200	55.06	-8.82	46.24	/	/	Fundamental
5	2748.000	43.78	-7.74	36.04	74.00	-37.96	peak
6	2980.000	43.13	-7.04	36.09	74.00	-37.91	peak

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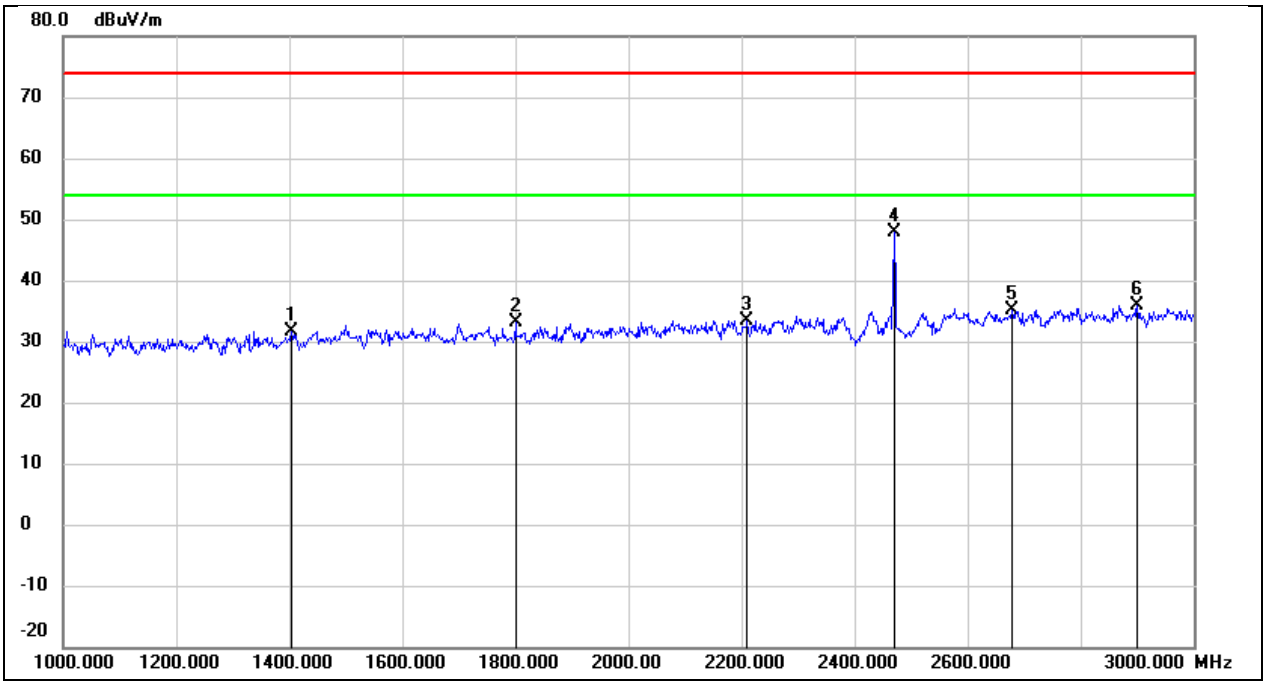
Test Mode:	3 MHz CA	Channel:	2471.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1404.000	44.85	-13.16	31.69	74.00	-42.31	peak
2	1800.000	44.78	-11.72	33.06	74.00	-40.94	peak
3	2210.000	43.42	-9.97	33.45	74.00	-40.55	peak
4	2471.200	56.53	-8.65	47.88	/	/	Fundamental
5	2678.000	43.09	-7.96	35.13	74.00	-38.87	peak
6	2900.000	43.15	-7.28	35.87	74.00	-38.13	peak

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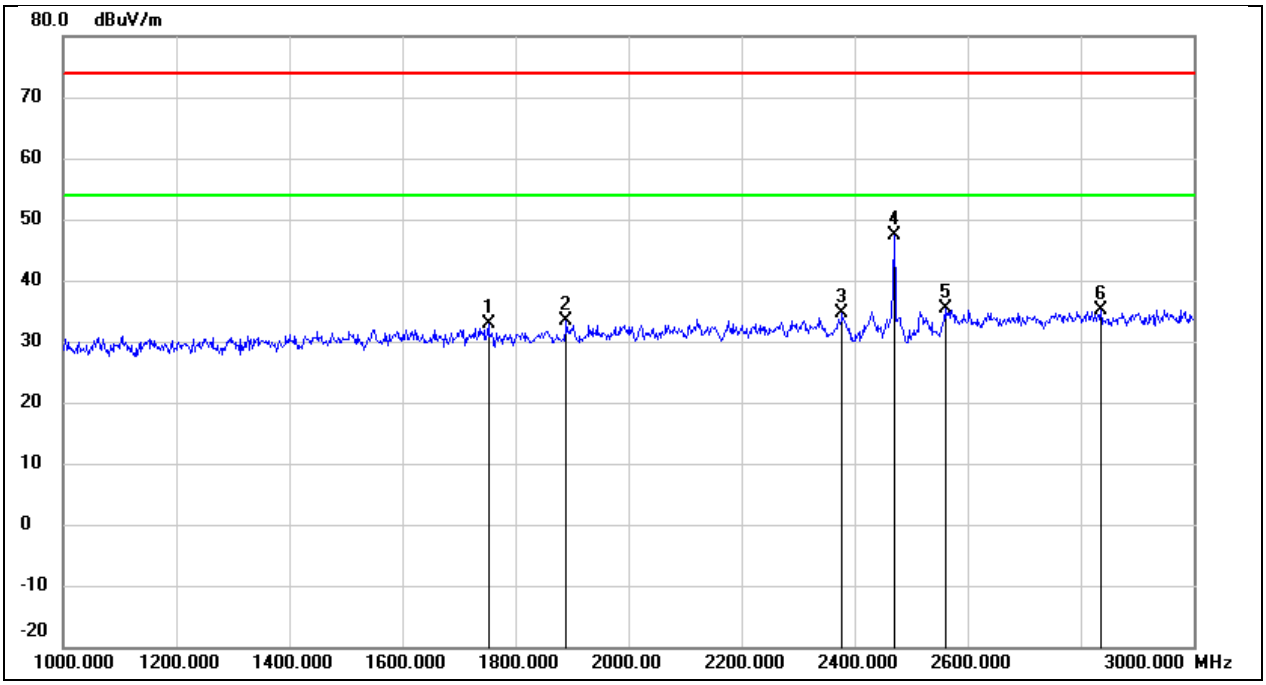
Test Mode:	3 MHz CA	Channel:	2471.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1752.000	44.71	-11.88	32.83	74.00	-41.17	peak
2	1890.000	44.74	-11.42	33.32	74.00	-40.68	peak
3	2378.000	43.84	-9.12	34.72	74.00	-39.28	peak
4	2471.200	55.98	-8.65	47.33	/	/	Fundamental
5	2560.000	43.75	-8.31	35.44	74.00	-38.56	peak
6	2836.000	42.57	-7.48	35.09	74.00	-38.91	peak

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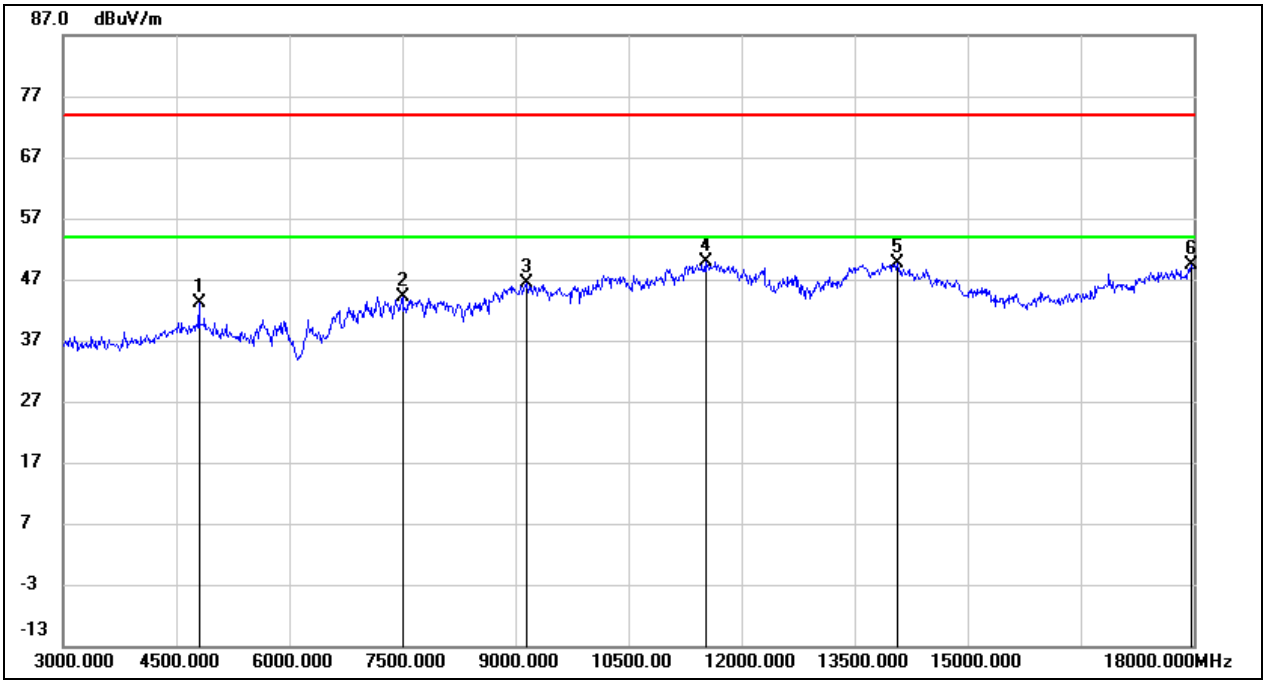
8.3. SPURIOUS EMISSIONS (3 GHZ ~ 18 GHZ)

Test Mode:	1.4 MHz	Channel:	2403.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	43.33	-0.31	43.02	74.00	-30.98	peak
2	7500.000	37.81	6.33	44.14	74.00	-29.86	peak
3	9150.000	35.94	10.54	46.48	74.00	-27.52	peak
4	11520.000	33.34	16.65	49.99	74.00	-24.01	peak
5	14070.000	27.90	21.67	49.57	74.00	-24.43	peak
6	17970.000	23.79	25.51	49.30	74.00	-24.70	peak

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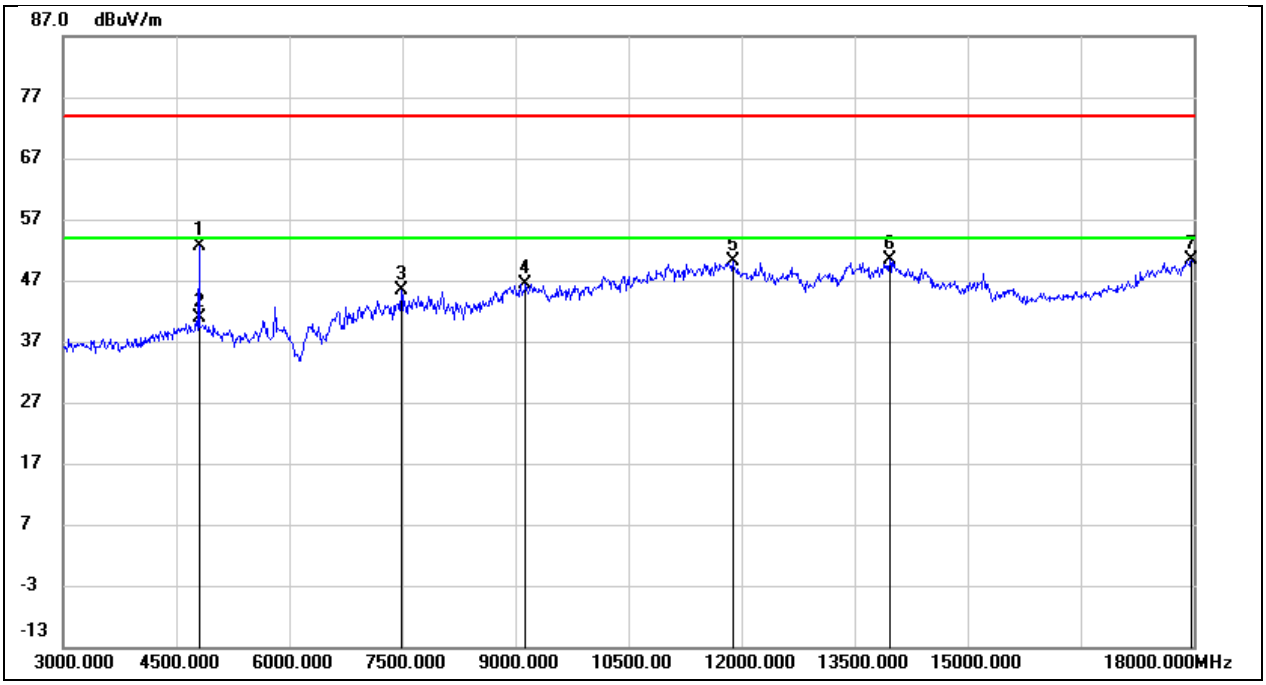
Test Mode:	1.4 MHz	Channel:	2403.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	52.99	-0.31	52.68	74.00	-21.32	peak
2	4800.000	41.17	-0.31	40.86	54.00	-13.14	AVG
3	7485.000	38.92	6.34	45.26	74.00	-28.74	peak
4	9135.000	35.78	10.55	46.33	74.00	-27.67	peak
5	11880.000	32.40	17.63	50.03	74.00	-23.97	peak
6	13965.000	28.60	21.89	50.49	74.00	-23.51	peak
7	17970.000	24.85	25.51	50.36	74.00	-23.64	peak

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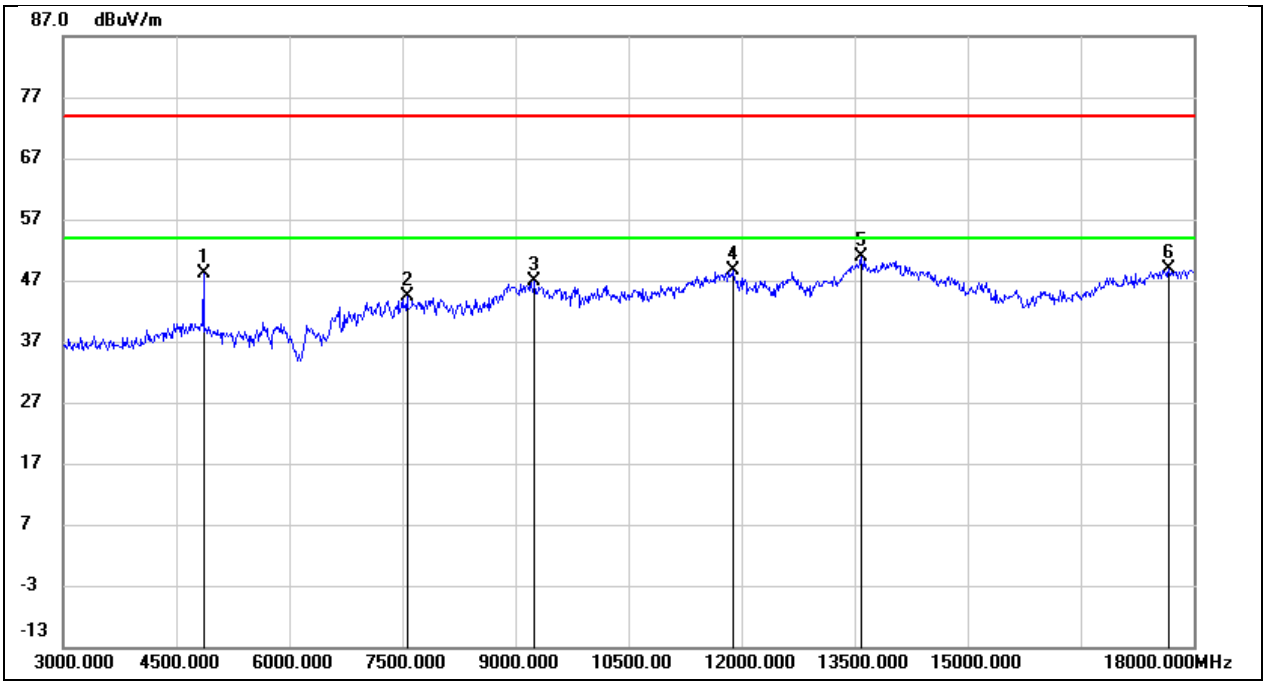
Test Mode:	1.4 MHz	Channel:	2435.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	48.24	-0.09	48.15	74.00	-25.85	peak
2	7560.000	38.17	6.33	44.50	74.00	-29.50	peak
3	9255.000	36.26	10.59	46.85	74.00	-27.15	peak
4	11880.000	31.03	17.63	48.66	74.00	-25.34	peak
5	13590.000	29.89	21.09	50.98	74.00	-23.02	peak
6	17670.000	25.03	23.73	48.76	74.00	-25.24	peak

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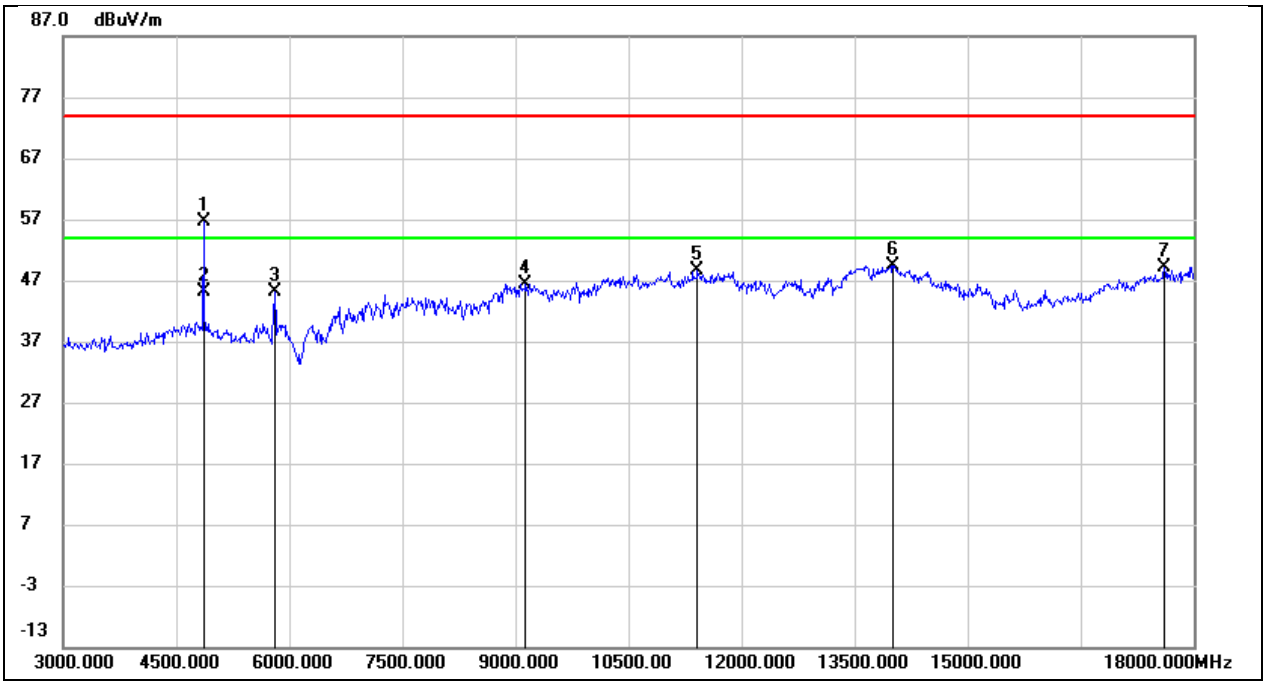
Test Mode:	1.4 MHz	Channel:	2435.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	56.68	-0.09	56.59	74.00	-17.41	peak
2	4860.000	45.21	-0.09	45.12	54.00	-8.88	AVG
3	5805.000	43.35	1.71	45.06	74.00	-28.94	peak
4	9135.000	35.94	10.55	46.49	74.00	-27.51	peak
5	11415.000	32.23	16.29	48.52	74.00	-25.48	peak
6	14010.000	27.47	21.93	49.40	74.00	-24.60	peak
7	17610.000	25.79	23.38	49.17	74.00	-24.83	peak

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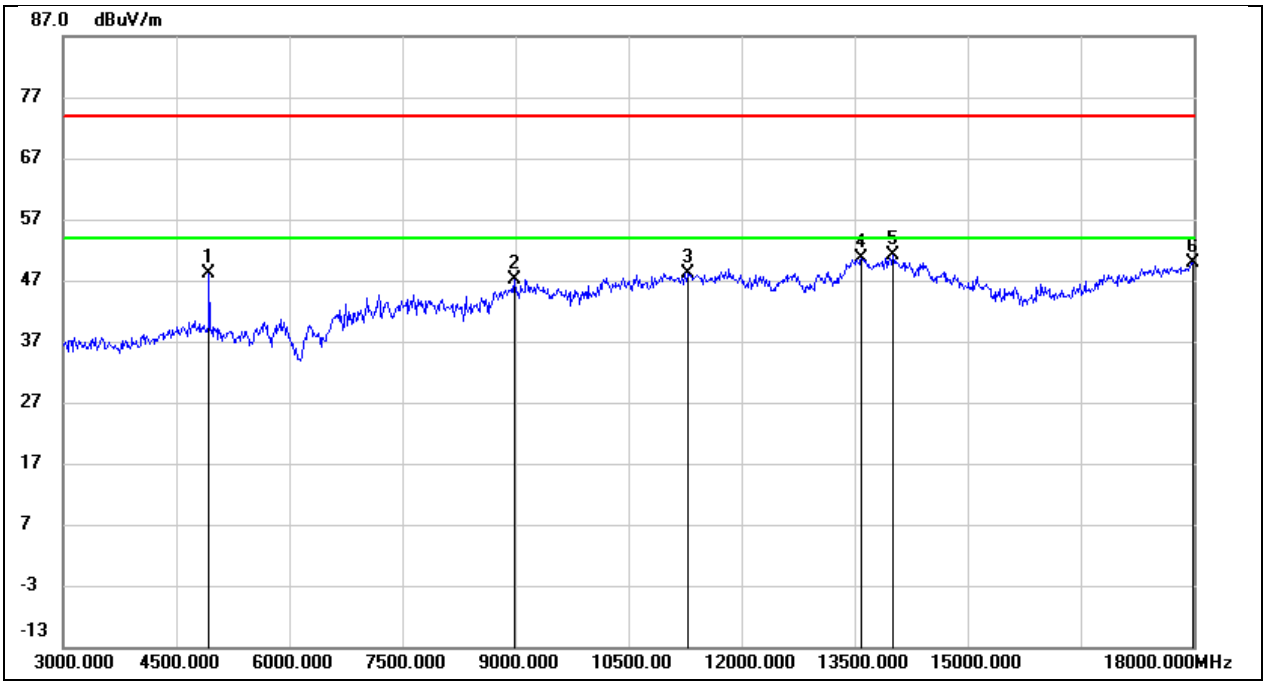
Test Mode:	1.4 MHz	Channel:	2469.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	47.94	0.20	48.14	74.00	-25.86	peak
2	8985.000	36.68	10.37	47.05	74.00	-26.95	peak
3	11295.000	32.20	15.85	48.05	74.00	-25.95	peak
4	13590.000	29.45	21.09	50.54	74.00	-23.46	peak
5	14010.000	29.18	21.93	51.11	74.00	-22.89	peak
6	17985.000	24.22	25.60	49.82	74.00	-24.18	peak

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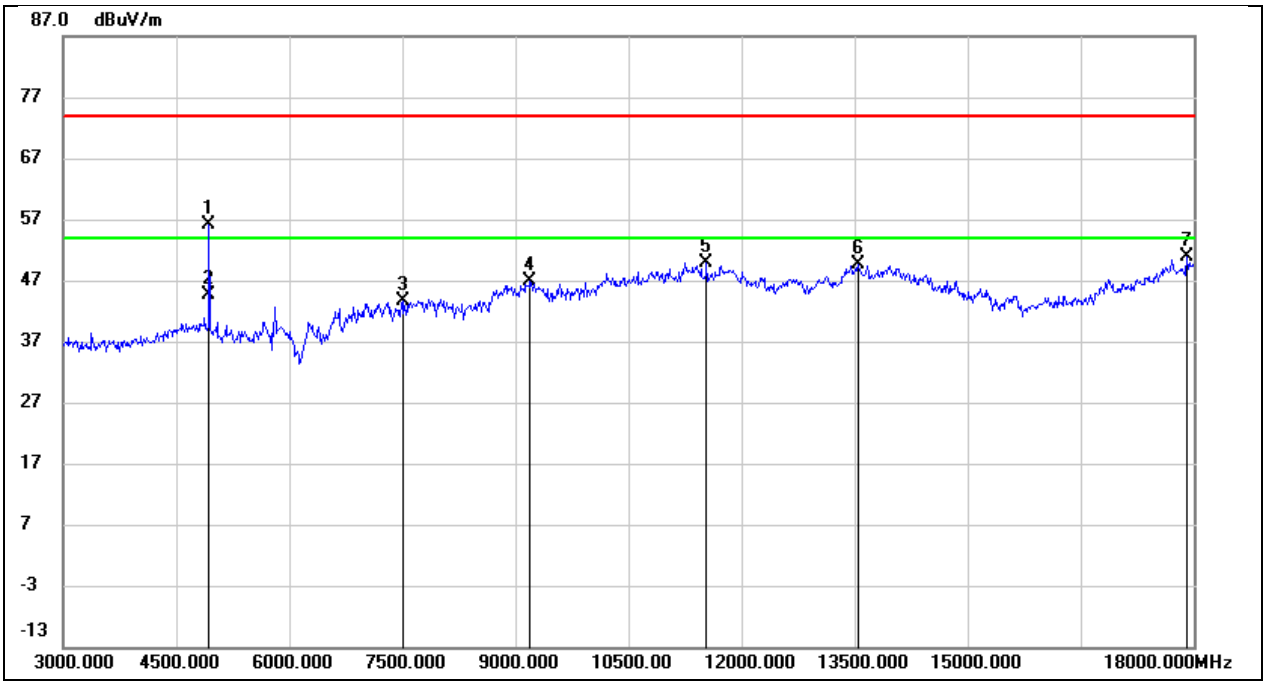
Test Mode:	1.4 MHz	Channel:	2469.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	55.81	0.20	56.01	74.00	-17.99	peak
2	4935.000	44.55	0.20	44.75	54.00	-9.25	AVG
3	7500.000	37.28	6.33	43.61	74.00	-30.39	peak
4	9195.000	36.20	10.56	46.76	74.00	-27.24	peak
5	11535.000	33.20	16.70	49.90	74.00	-24.10	peak
6	13545.000	28.56	20.99	49.55	74.00	-24.45	peak
7	17910.000	25.83	25.16	50.99	74.00	-23.01	peak

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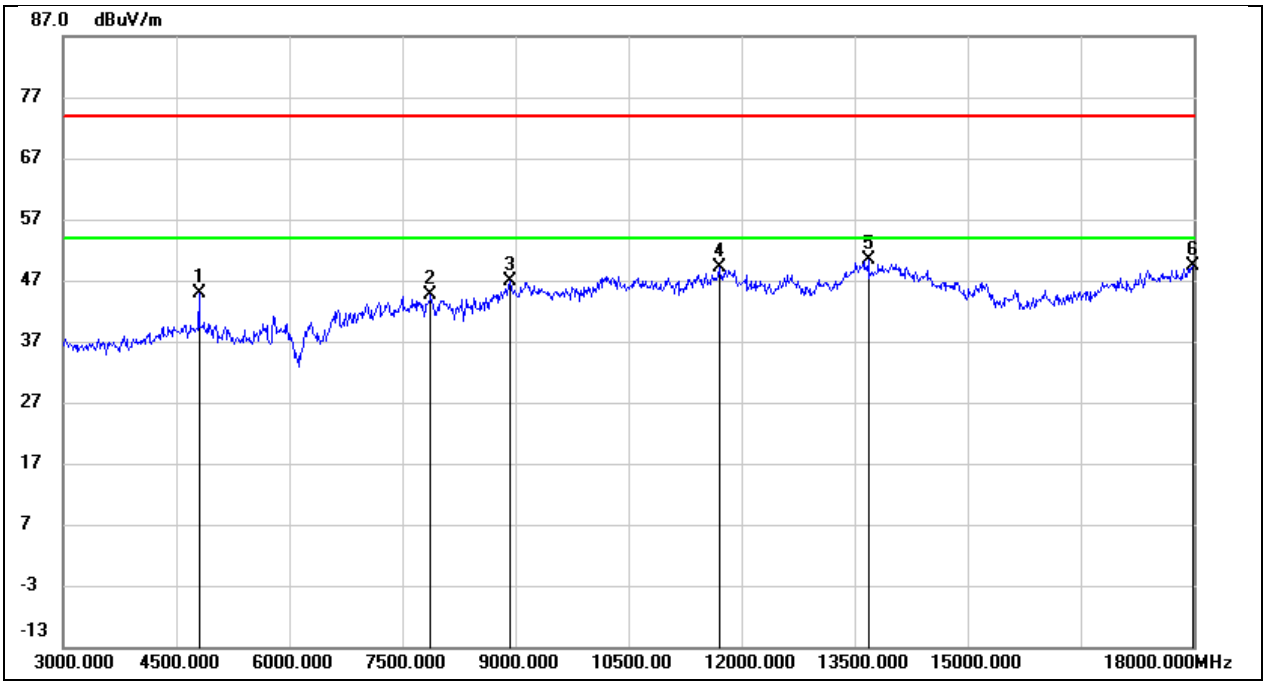
Test Mode:	1.4 MHz CA Mode	Channel:	2405.12 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	45.17	-0.31	44.86	74.00	-29.14	peak
2	7875.000	38.30	6.31	44.61	74.00	-29.39	peak
3	8925.000	36.98	9.94	46.92	74.00	-27.08	peak
4	11700.000	32.02	17.14	49.16	74.00	-24.84	peak
5	13680.000	29.09	21.29	50.38	74.00	-23.62	peak
6	17985.000	23.86	25.60	49.46	74.00	-24.54	peak

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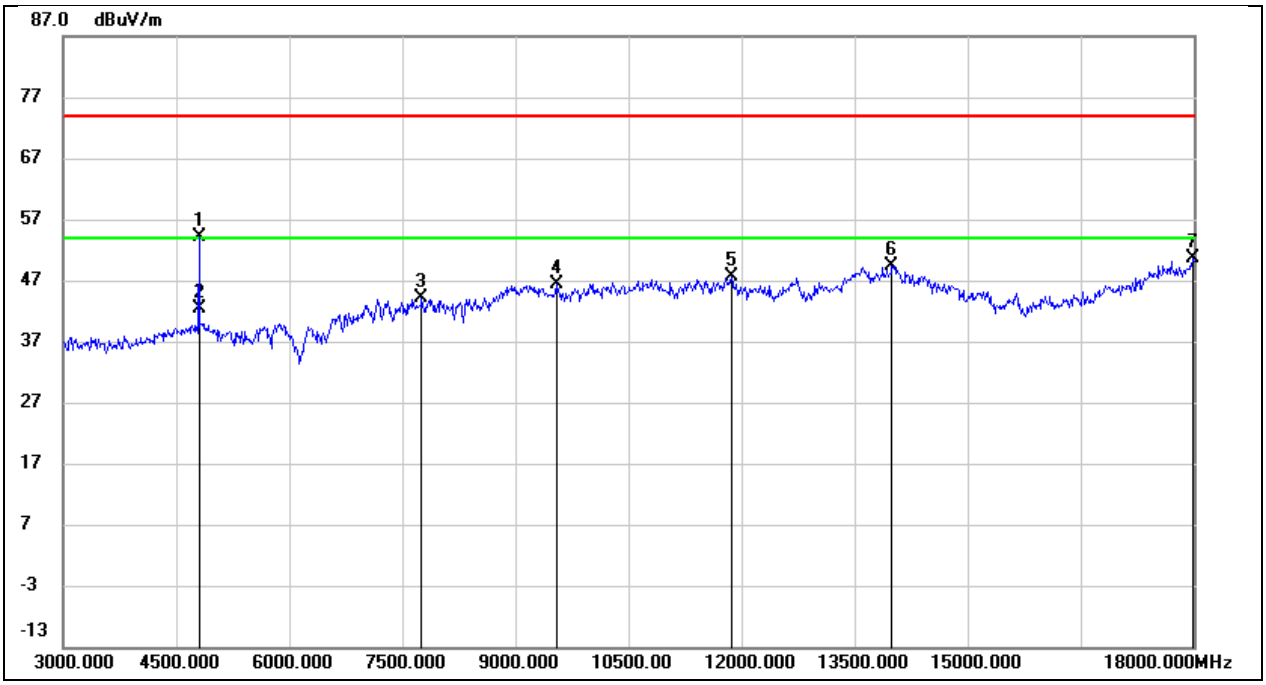
Test Mode:	1.4 MHz CA Mode	Channel:	2405.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	54.37	-0.31	54.06	74.00	-19.94	peak
2	4800.000	42.67	-0.31	42.36	54.00	-11.64	AVG
3	7755.000	37.77	6.31	44.08	74.00	-29.92	peak
4	9540.000	35.50	10.80	46.30	74.00	-27.70	peak
5	11865.000	29.96	17.59	47.55	74.00	-26.45	peak
6	13995.000	27.49	21.95	49.44	74.00	-24.56	peak
7	17985.000	24.93	25.60	50.53	74.00	-23.47	peak

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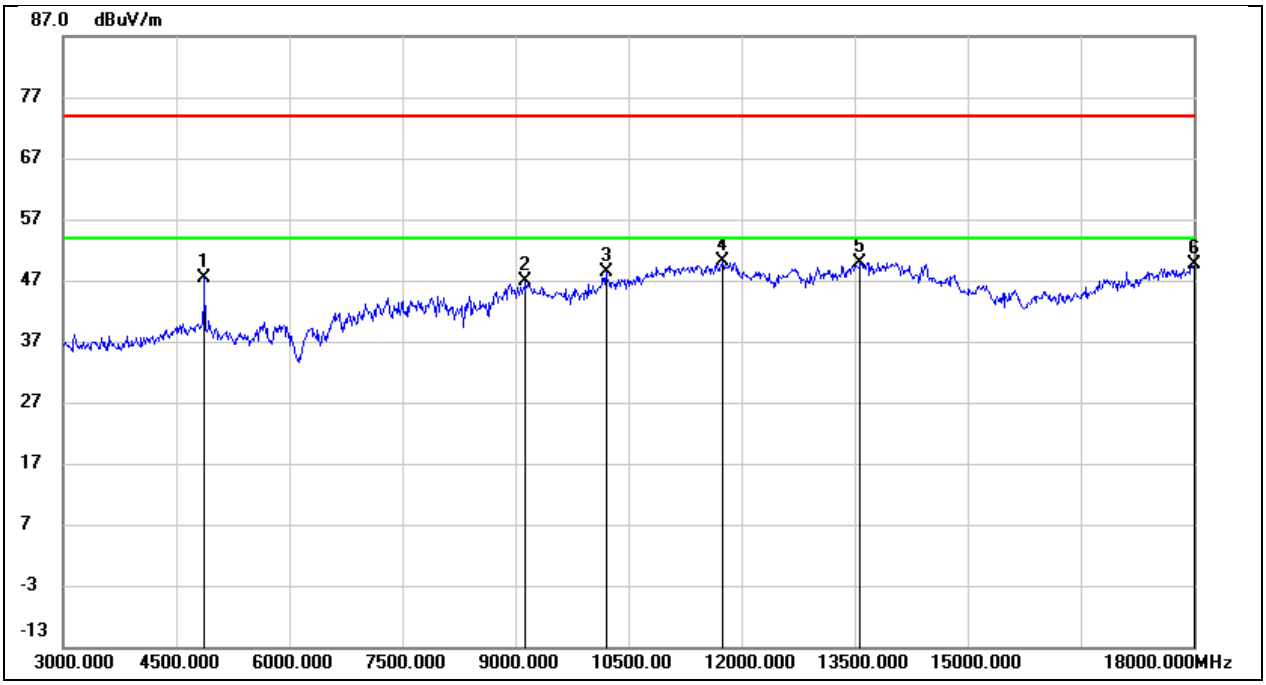
Test Mode:	1.4 MHz CA Mode	Channel:	2437.12 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	47.39	-0.03	47.36	74.00	-26.64	peak
2	9135.000	36.25	10.55	46.80	74.00	-27.20	peak
3	10200.000	35.90	12.40	48.30	74.00	-25.70	peak
4	11745.000	32.85	17.27	50.12	74.00	-23.88	peak
5	13575.000	28.93	21.06	49.99	74.00	-24.01	peak
6	18000.000	24.06	25.69	49.75	74.00	-24.25	peak

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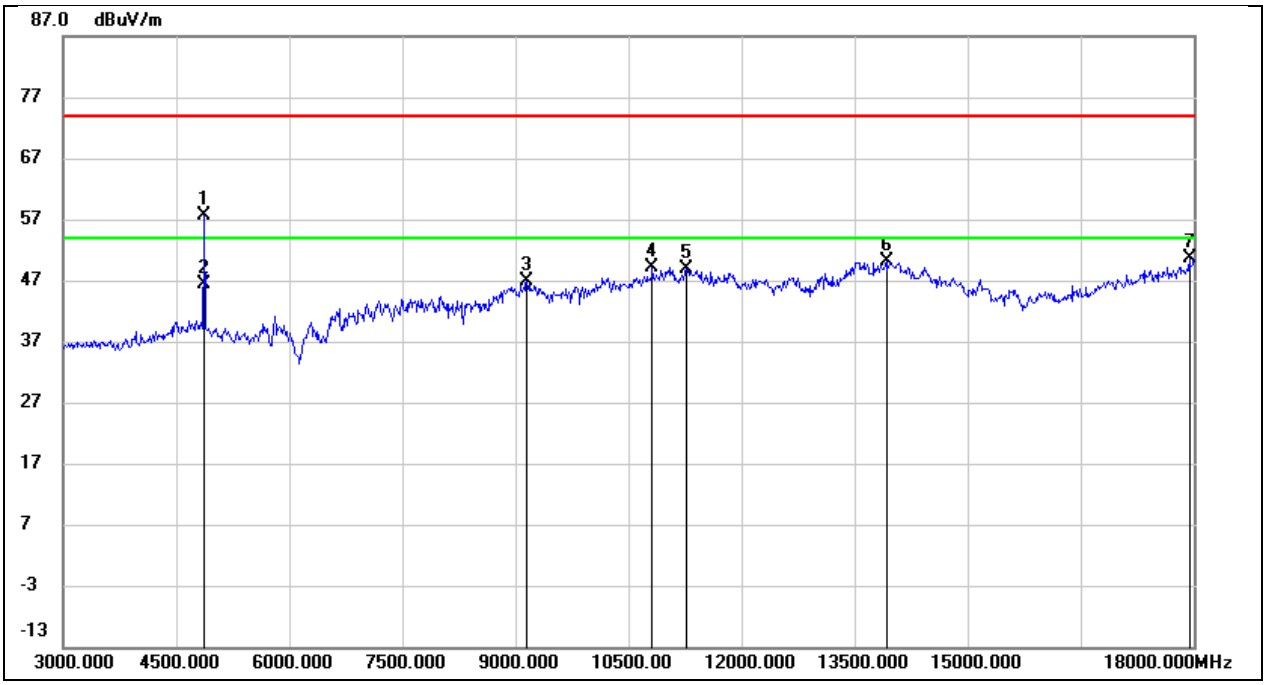
Test Mode:	1.4 MHz CA Mode	Channel:	2437.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	57.65	-0.03	57.62	74.00	-16.38	peak
2	4875.000	46.43	-0.03	46.40	54.00	-7.60	AVG
3	9150.000	36.32	10.54	46.86	74.00	-27.14	peak
4	10815.000	35.11	14.11	49.22	74.00	-24.78	peak
5	11265.000	33.14	15.74	48.88	74.00	-25.12	peak
6	13920.000	28.39	21.79	50.18	74.00	-23.82	peak
7	17940.000	25.30	25.34	50.64	74.00	-23.36	peak

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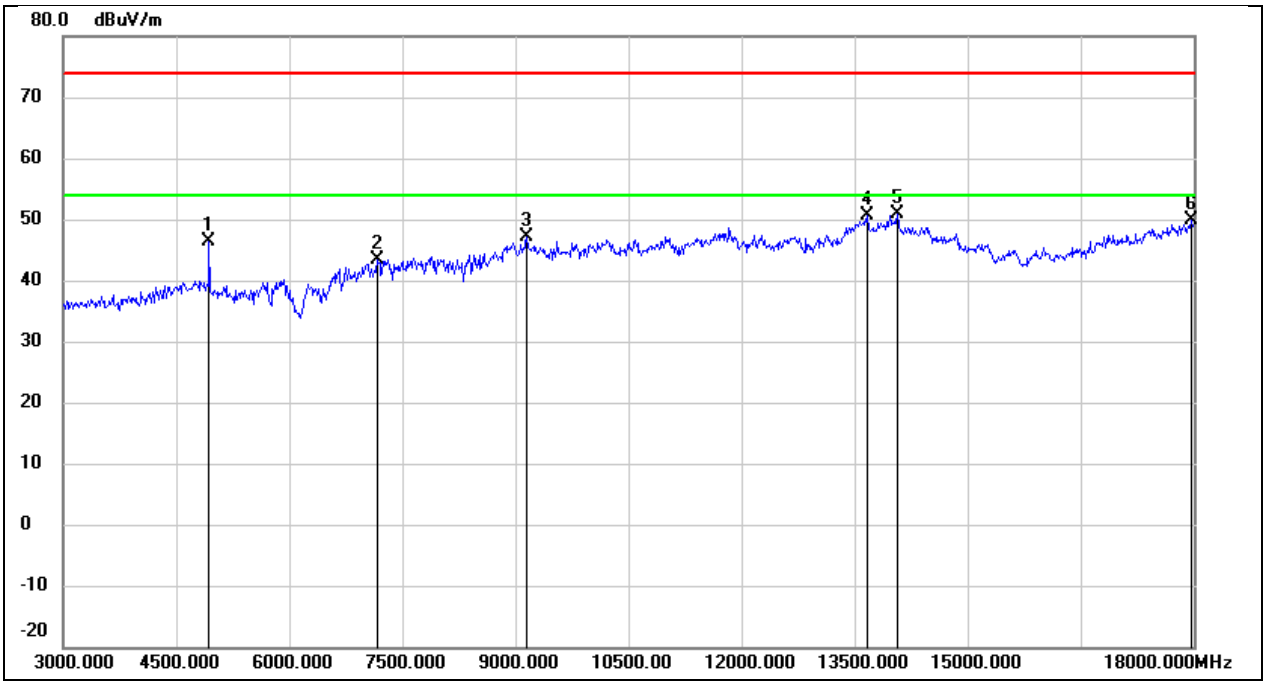
Test Mode:	1.4 MHz CA Mode	Channel:	2471.12 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	46.06	0.20	46.26	74.00	-27.74	peak
2	7170.000	36.88	6.56	43.44	74.00	-30.56	peak
3	9150.000	36.53	10.54	47.07	74.00	-26.93	peak
4	13665.000	29.34	21.25	50.59	74.00	-23.41	peak
5	14070.000	29.32	21.67	50.99	74.00	-23.01	peak
6	17970.000	24.29	25.51	49.80	74.00	-24.20	peak

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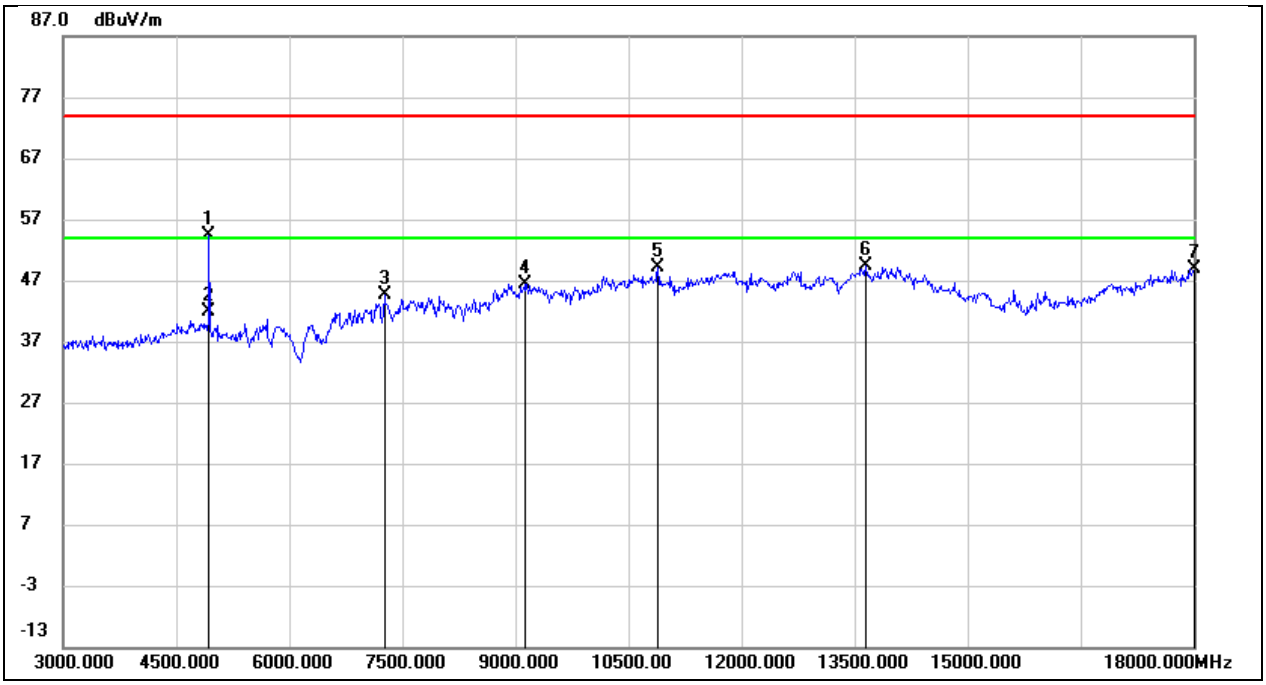
Test Mode:	1.4 MHz CA Mode	Channel:	2471.12 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	54.19	0.20	54.39	74.00	-19.61	peak
2	4935.000	41.58	0.20	41.78	54.00	-12.22	AVG
3	7260.000	38.08	6.50	44.58	74.00	-29.42	peak
4	9135.000	35.90	10.55	46.45	74.00	-27.55	peak
5	10890.000	34.67	14.39	49.06	74.00	-24.94	peak
6	13650.000	28.20	21.21	49.41	74.00	-24.59	peak
7	18000.000	23.16	25.69	48.85	74.00	-25.15	peak

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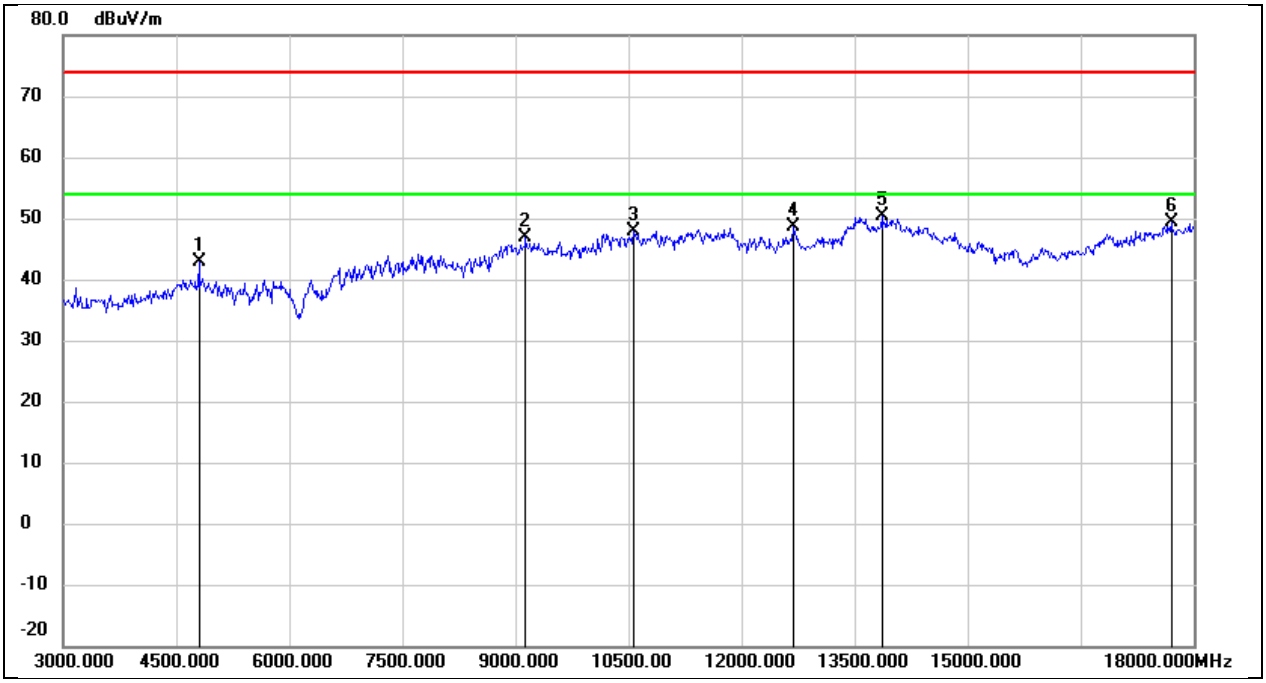
Test Mode:	3 MHz	Channel:	2405.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	43.10	-0.31	42.79	74.00	-31.21	peak
2	9135.000	36.35	10.55	46.90	74.00	-27.10	peak
3	10575.000	34.60	13.25	47.85	74.00	-26.15	peak
4	12690.000	30.68	18.02	48.70	74.00	-25.30	peak
5	13860.000	28.67	21.67	50.34	74.00	-23.66	peak
6	17700.000	25.49	23.91	49.40	74.00	-24.60	peak

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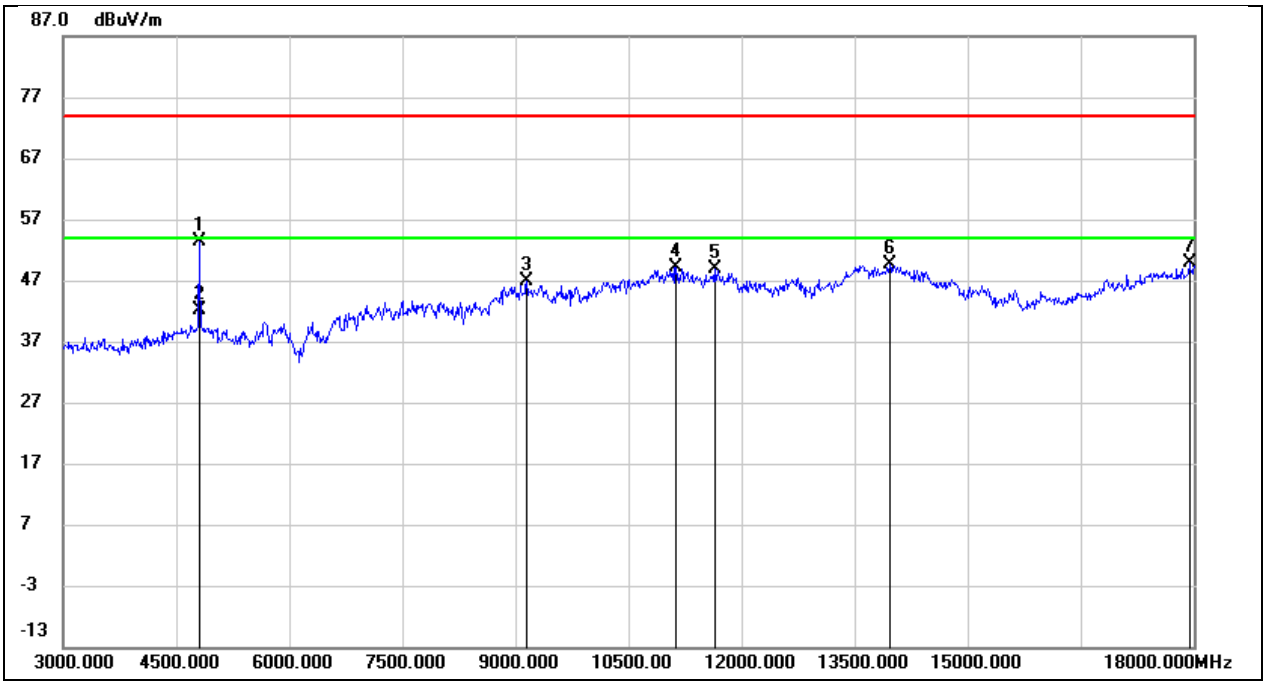
Test Mode:	3 MHz	Channel:	2405.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4800.000	53.64	-0.31	53.33	74.00	-20.67	peak
2	4800.000	42.46	-0.31	42.15	54.00	-11.85	AVG
3	9150.000	36.25	10.54	46.79	74.00	-27.21	peak
4	11130.000	33.90	15.25	49.15	74.00	-24.85	peak
5	11640.000	31.86	16.98	48.84	74.00	-25.16	peak
6	13965.000	27.66	21.89	49.55	74.00	-24.45	peak
7	17940.000	24.53	25.34	49.87	74.00	-24.13	peak

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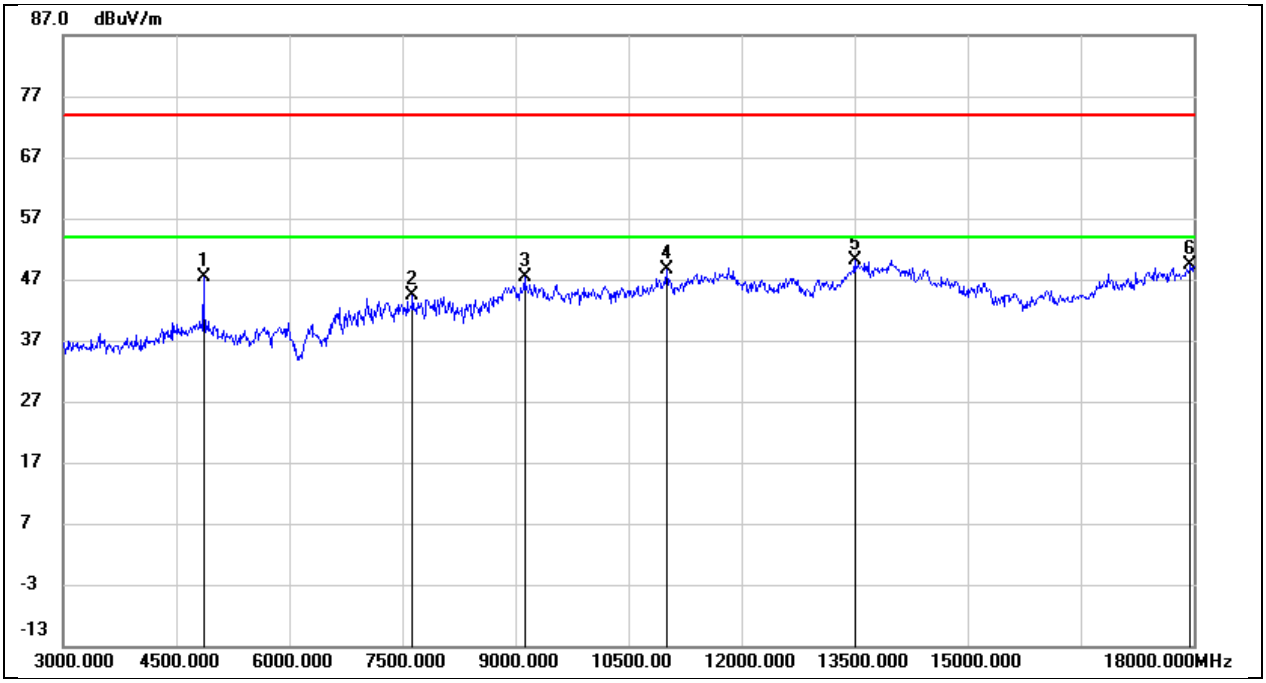
Test Mode:	3 MHz	Channel:	2435.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	47.47	-0.09	47.38	74.00	-26.62	peak
2	7635.000	37.93	6.33	44.26	74.00	-29.74	peak
3	9120.000	36.92	10.53	47.45	74.00	-26.55	peak
4	11010.000	33.71	14.81	48.52	74.00	-25.48	peak
5	13500.000	29.24	20.90	50.14	74.00	-23.86	peak
6	17955.000	23.97	25.42	49.39	74.00	-24.61	peak

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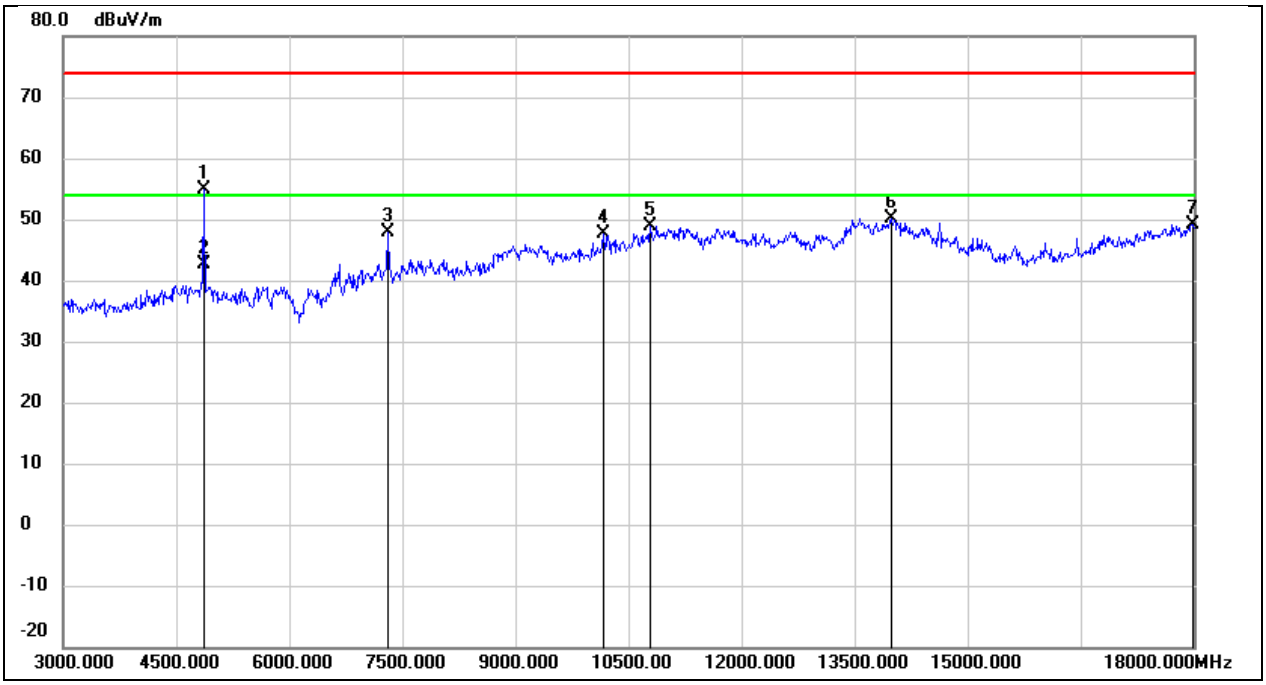
Test Mode:	3 MHz	Channel:	2435.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	55.06	-0.09	54.97	74.00	-19.03	peak
2	4860.000	42.77	-0.09	42.68	54.00	-11.32	AVG
3	7305.000	41.48	6.47	47.95	74.00	-26.05	peak
4	10170.000	35.20	12.34	47.54	74.00	-26.46	peak
5	10785.000	34.93	14.01	48.94	74.00	-25.06	peak
6	13980.000	28.33	21.92	50.25	74.00	-23.75	peak
7	17985.000	23.65	25.60	49.25	74.00	-24.75	peak

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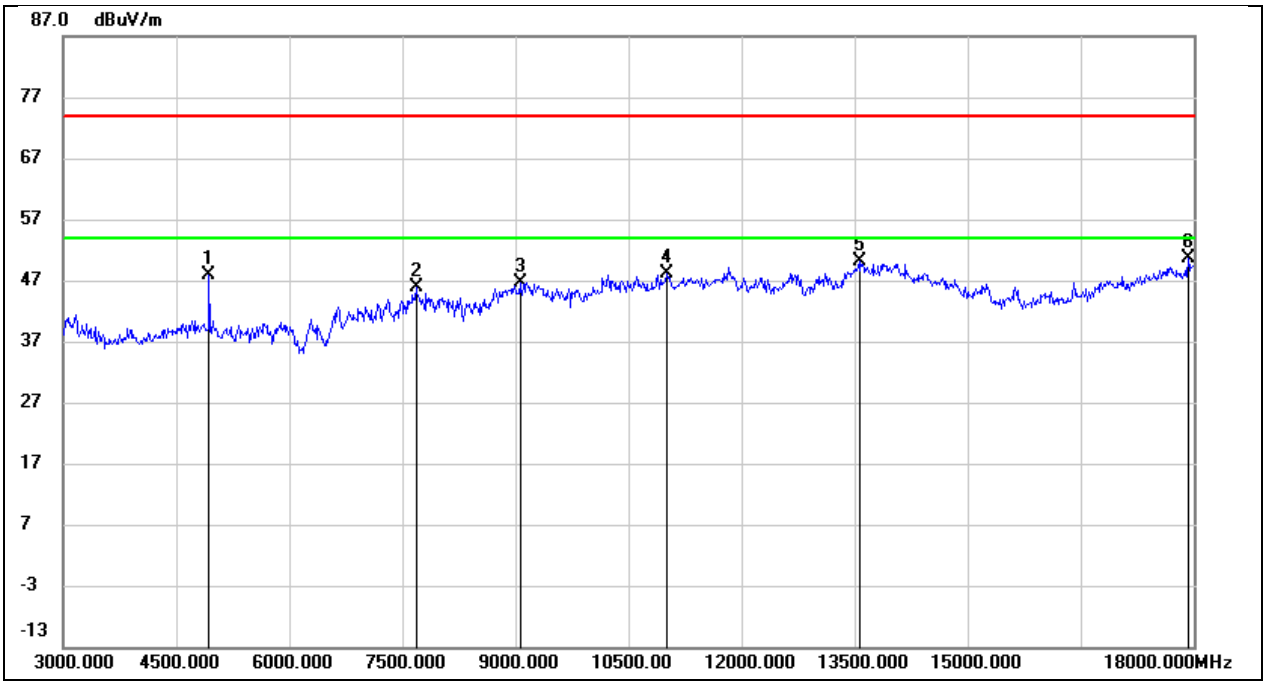
Test Mode:	3 MHz	Channel:	2468.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	47.80	0.20	48.00	74.00	-26.00	peak
2	7680.000	39.53	6.32	45.85	74.00	-28.15	peak
3	9060.000	36.15	10.51	46.66	74.00	-27.34	peak
4	11010.000	33.24	14.81	48.05	74.00	-25.95	peak
5	13560.000	29.04	21.04	50.08	74.00	-23.92	peak
6	17925.000	25.37	25.25	50.62	74.00	-23.38	peak

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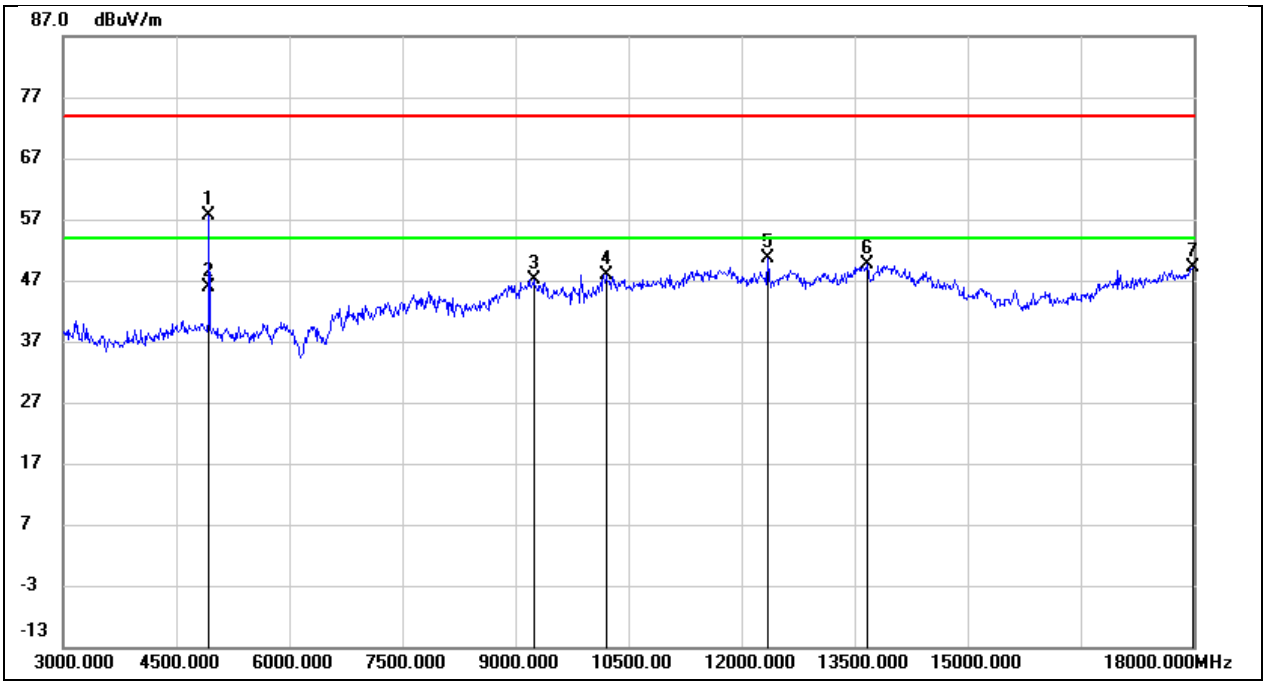
Test Mode:	3 MHz	Channel:	2468.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	57.49	0.20	57.69	74.00	-16.31	peak
2	4935.000	45.62	0.20	45.82	54.00	-8.18	AVG
3	9240.000	36.55	10.58	47.13	74.00	-26.87	peak
4	10200.000	35.53	12.40	47.93	74.00	-26.07	peak
5	12345.000	32.83	17.71	50.54	74.00	-23.46	peak
6	13665.000	28.27	21.25	49.52	74.00	-24.48	peak
7	17985.000	23.59	25.60	49.19	74.00	-24.81	peak

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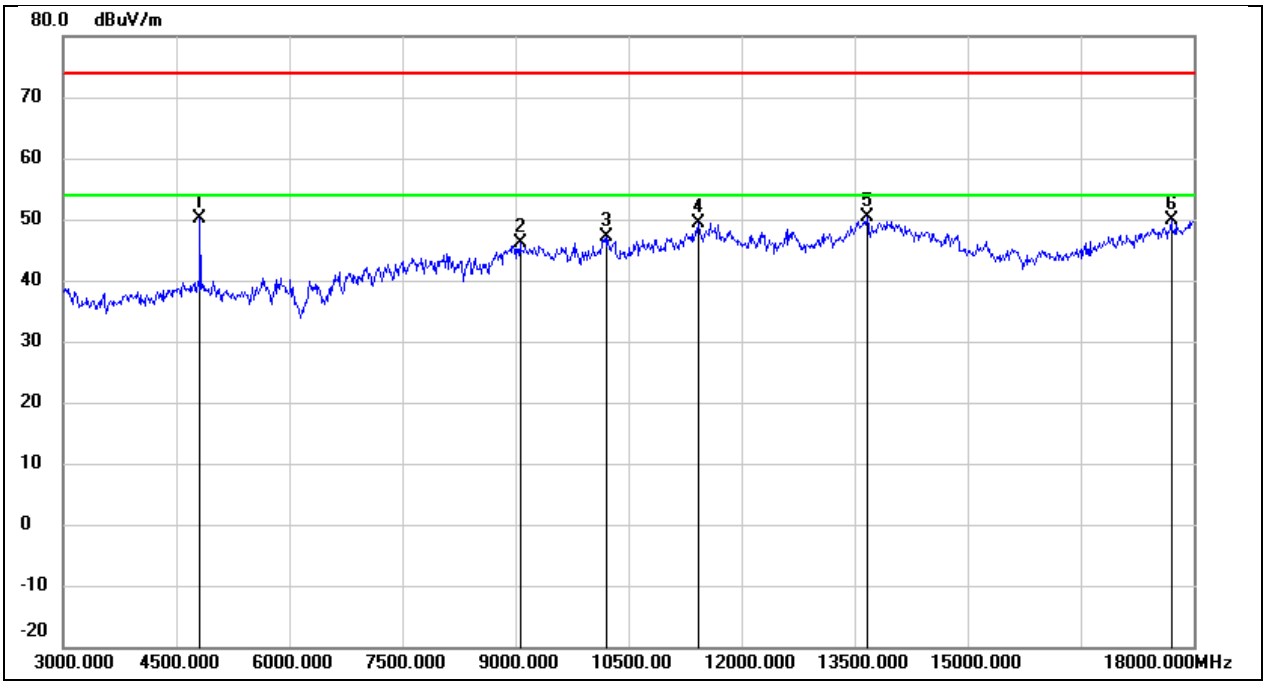
Test Mode:	3 MHz CA Mode	Channel:	2408.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	50.45	-0.26	50.19	74.00	-23.81	peak
2	9060.000	35.61	10.51	46.12	74.00	-27.88	peak
3	10215.000	34.72	12.43	47.15	74.00	-26.85	peak
4	11430.000	32.97	16.34	49.31	74.00	-24.69	peak
5	13665.000	29.12	21.25	50.37	74.00	-23.63	peak
6	17700.000	25.86	23.91	49.77	74.00	-24.23	peak

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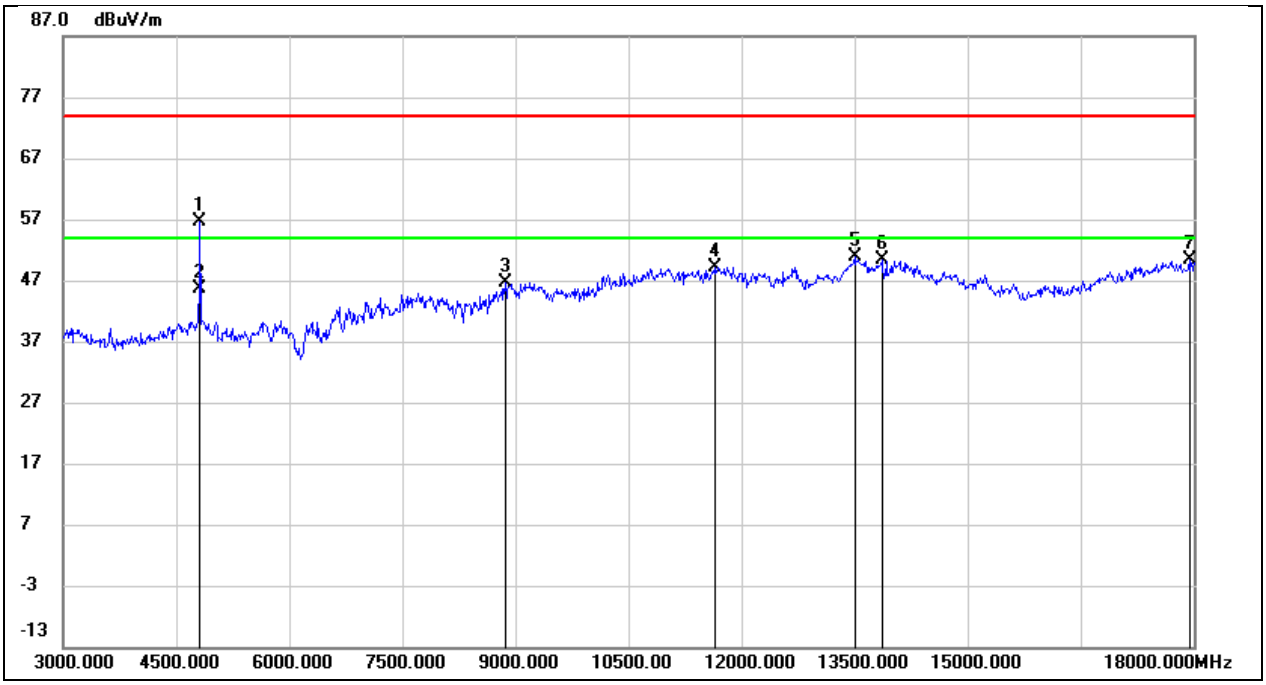
Test Mode:	3 MHz CA Mode	Channel:	2408.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	56.88	-0.26	56.62	74.00	-17.38	peak
2	4815.000	45.81	-0.26	45.55	54.00	-8.45	AVG
3	8865.000	37.14	9.50	46.64	74.00	-27.36	peak
4	11640.000	32.15	16.98	49.13	74.00	-24.87	peak
5	13500.000	29.90	20.90	50.80	74.00	-23.20	peak
6	13860.000	28.73	21.67	50.40	74.00	-23.60	peak
7	17940.000	25.03	25.34	50.37	74.00	-23.63	peak

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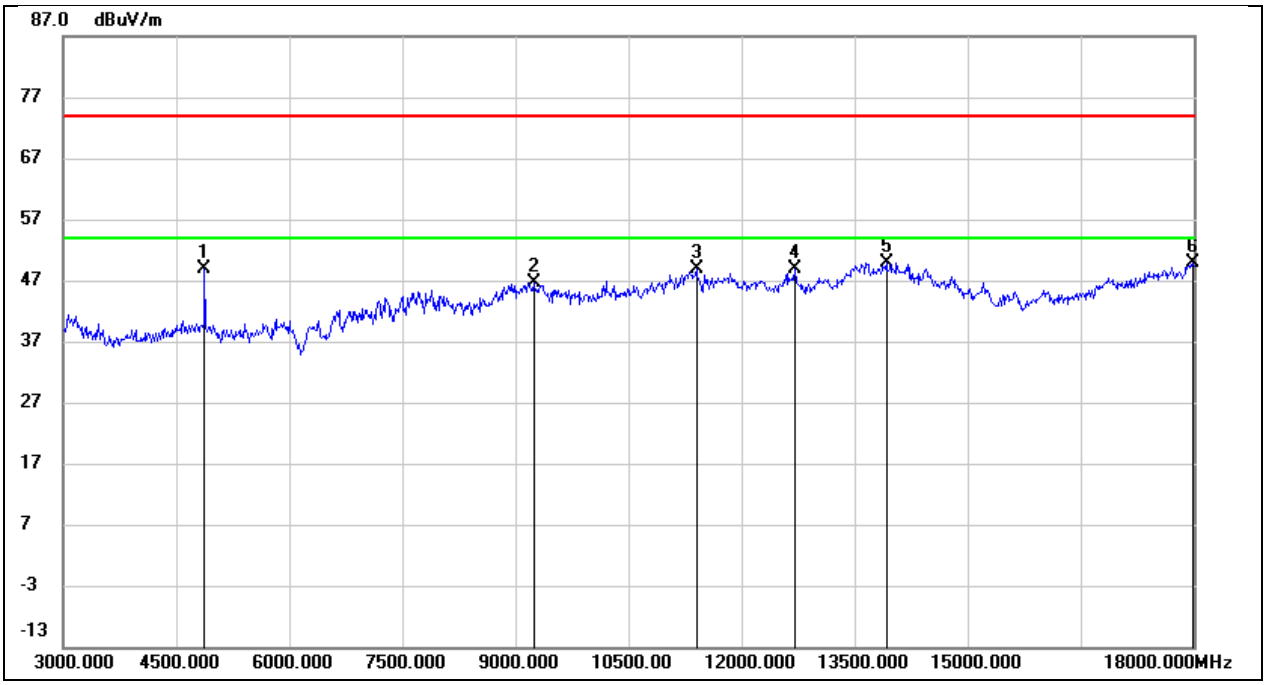
Test Mode:	3 MHz CA Mode	Channel:	2438.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	48.99	-0.03	48.96	74.00	-25.04	peak
2	9240.000	36.13	10.58	46.71	74.00	-27.29	peak
3	11400.000	32.62	16.23	48.85	74.00	-25.15	peak
4	12705.000	30.87	18.06	48.93	74.00	-25.07	peak
5	13920.000	28.12	21.79	49.91	74.00	-24.09	peak
6	17985.000	24.29	25.60	49.89	74.00	-24.11	peak

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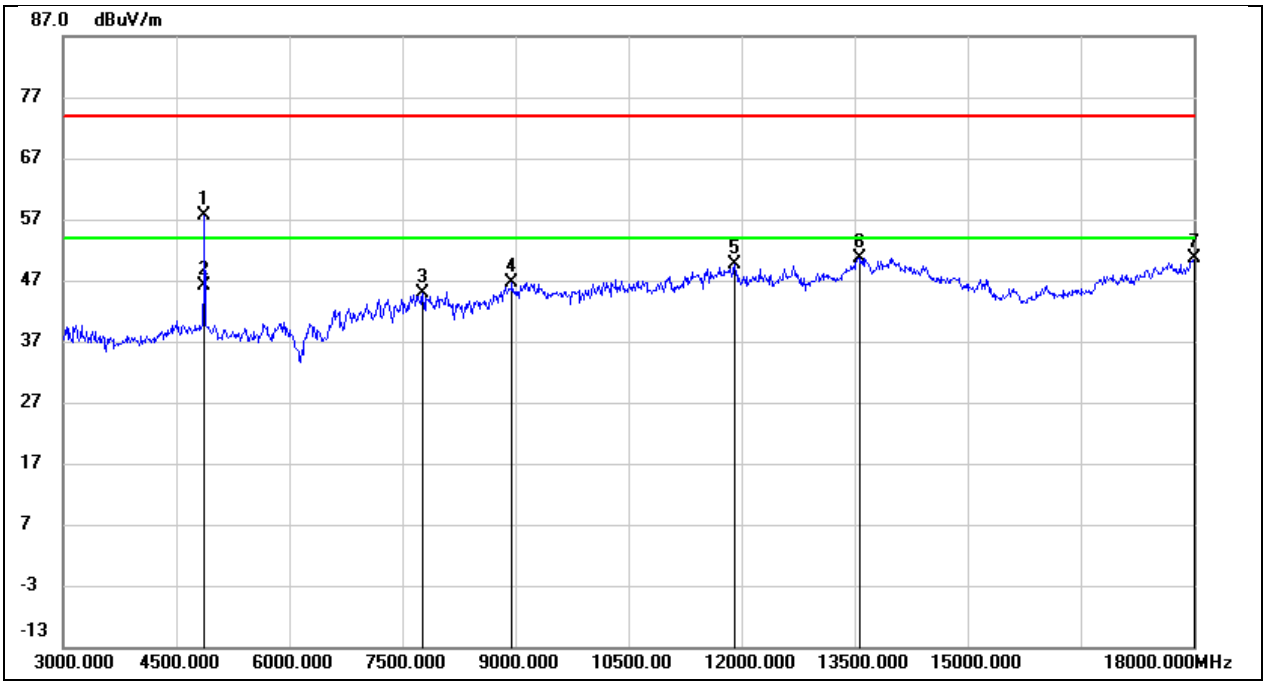
Test Mode:	3 MHz CA Mode	Channel:	2438.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	57.60	-0.03	57.57	74.00	-16.43	peak
2	4875.000	46.13	-0.03	46.10	54.00	-7.90	AVG
3	7770.000	38.62	6.31	44.93	74.00	-29.07	peak
4	8955.000	36.57	10.16	46.73	74.00	-27.27	peak
5	11910.000	31.98	17.72	49.70	74.00	-24.30	peak
6	13560.000	29.70	21.04	50.74	74.00	-23.26	peak
7	18000.000	24.86	25.69	50.55	74.00	-23.45	peak

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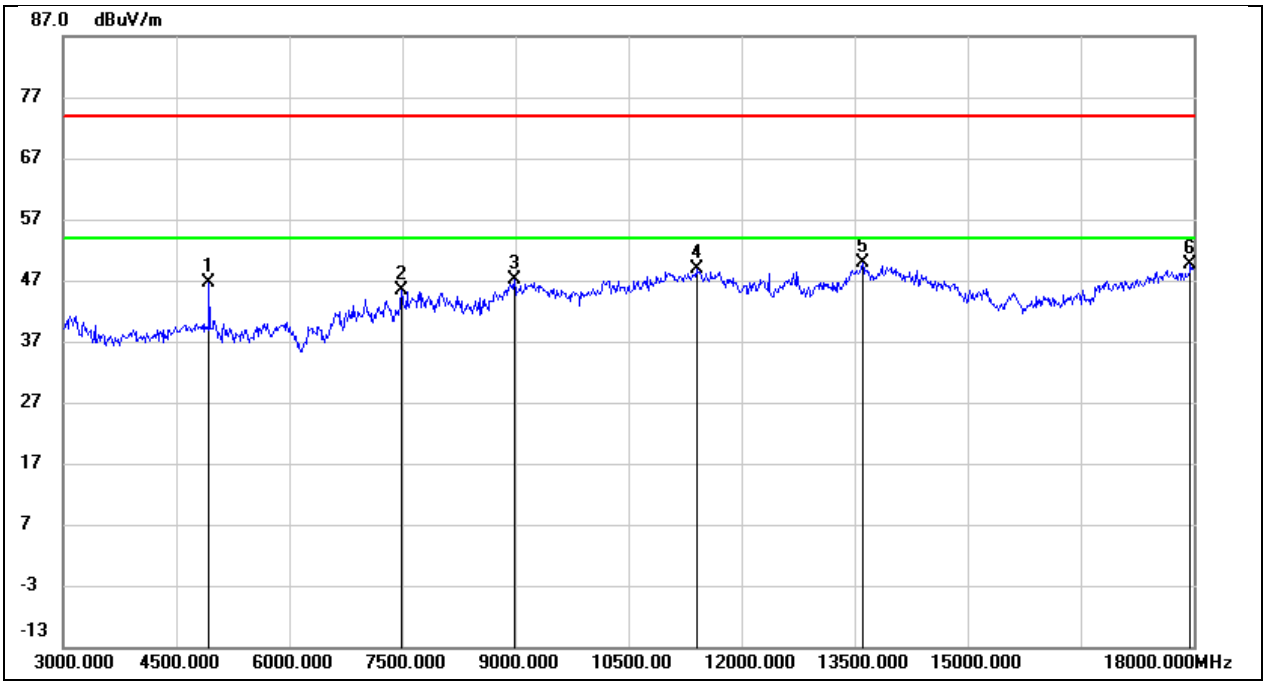
Test Mode:	3 MHz CA Mode	Channel:	2471.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	46.33	0.20	46.53	74.00	-27.47	peak
2	7485.000	39.00	6.34	45.34	74.00	-28.66	peak
3	8985.000	36.74	10.37	47.11	74.00	-26.89	peak
4	11400.000	32.57	16.23	48.80	74.00	-25.20	peak
5	13605.000	28.87	21.12	49.99	74.00	-24.01	peak
6	17955.000	24.22	25.42	49.64	74.00	-24.36	peak

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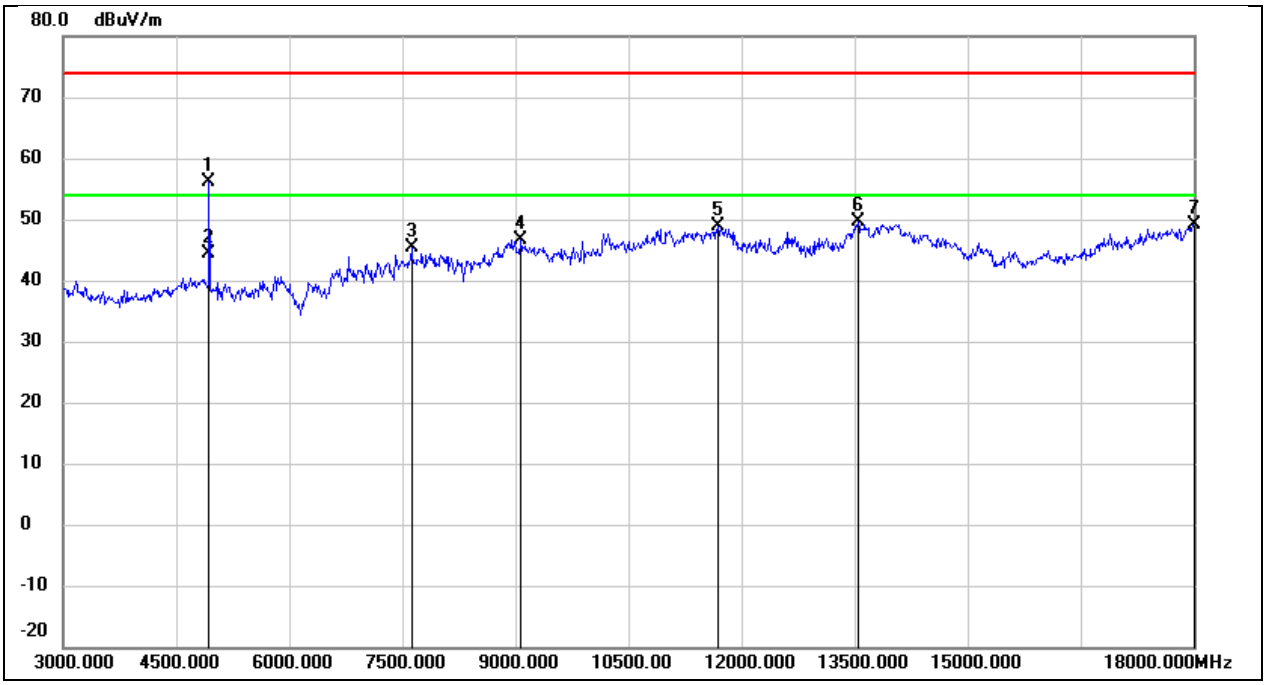
Test Mode:	3 MHz CA Mode	Channel:	2471.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	55.89	0.20	56.09	74.00	-17.91	peak
2	4935.000	44.15	0.20	44.35	54.00	-9.65	AVG
3	7620.000	38.97	6.33	45.30	74.00	-28.70	peak
4	9075.000	36.20	10.52	46.72	74.00	-27.28	peak
5	11685.000	31.80	17.10	48.90	74.00	-25.10	peak
6	13545.000	28.53	20.99	49.52	74.00	-24.48	peak
7	18000.000	23.55	25.69	49.24	74.00	-24.76	peak

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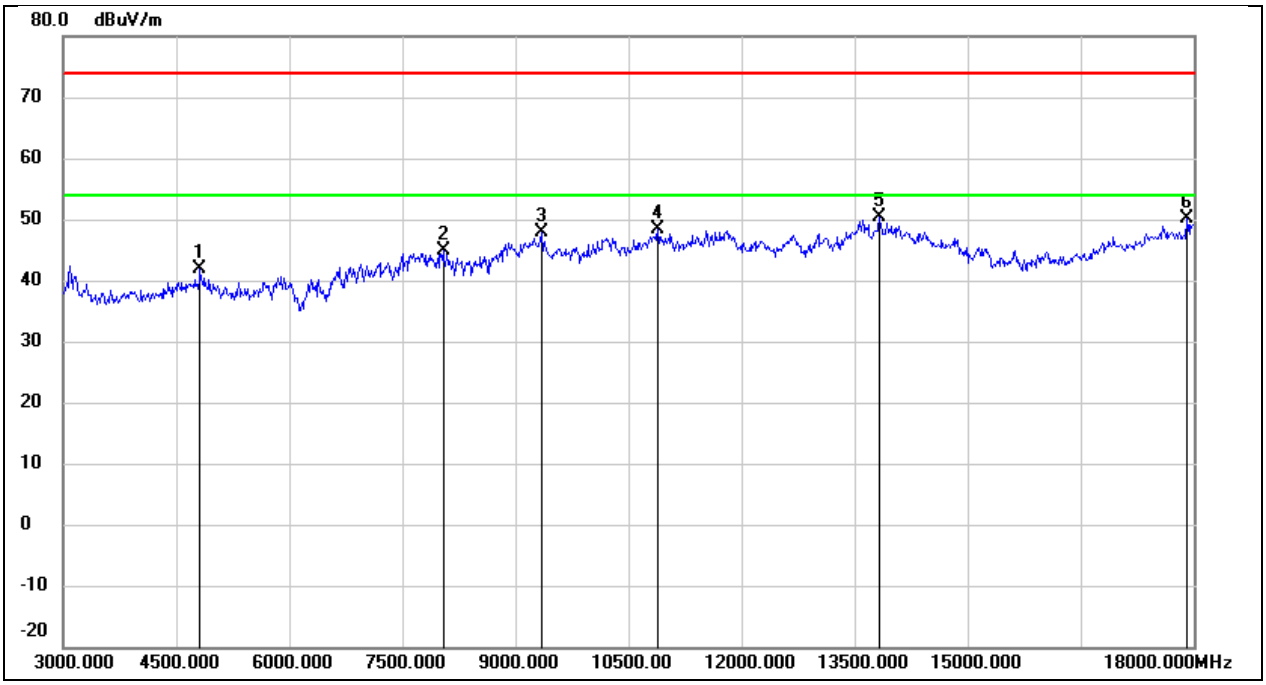
Test Mode:	10 MHz	Channel:	2407.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	42.26	-0.26	42.00	74.00	-32.00	peak
2	8040.000	38.64	6.34	44.98	74.00	-29.02	peak
3	9345.000	37.21	10.63	47.84	74.00	-26.16	peak
4	10890.000	34.10	14.39	48.49	74.00	-25.51	peak
5	13830.000	28.66	21.60	50.26	74.00	-23.74	peak
6	17910.000	24.90	25.16	50.06	74.00	-23.94	peak

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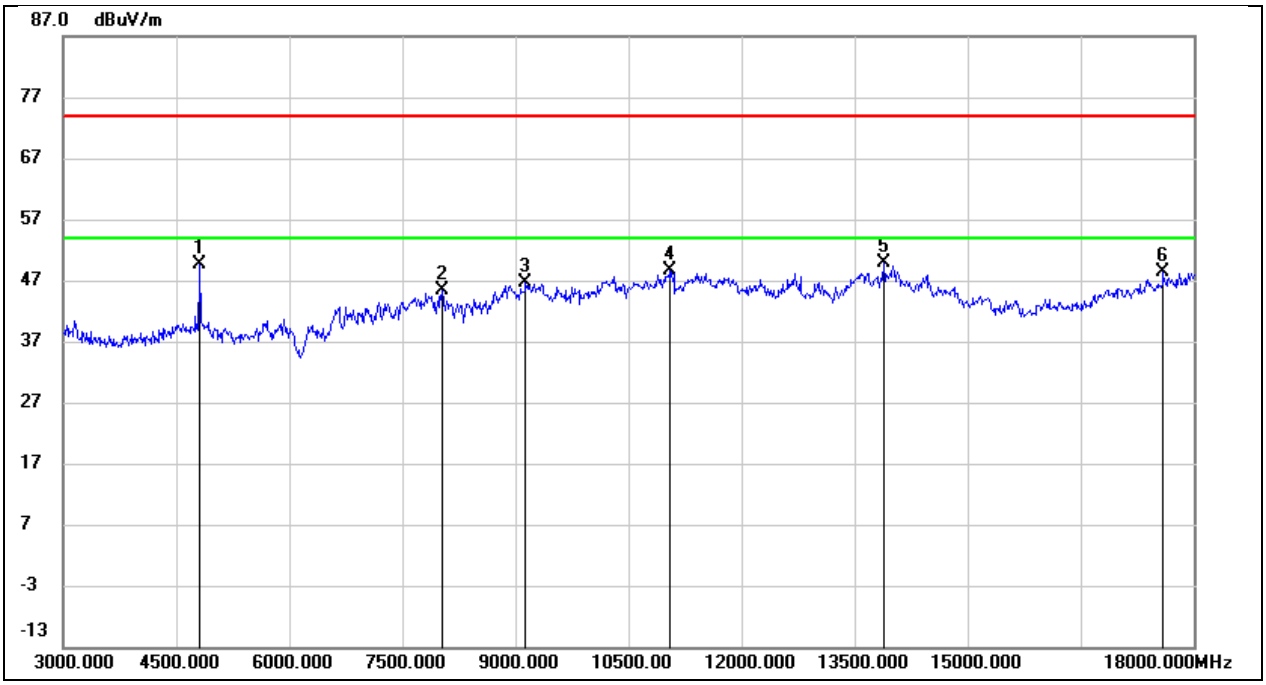
Test Mode:	10 MHz	Channel:	2407.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	49.85	-0.26	49.59	74.00	-24.41	peak
2	8025.000	39.11	6.34	45.45	74.00	-28.55	peak
3	9135.000	36.06	10.55	46.61	74.00	-27.39	peak
4	11055.000	33.63	14.96	48.59	74.00	-25.41	peak
5	13890.000	28.13	21.72	49.85	74.00	-24.15	peak
6	17595.000	25.03	23.29	48.32	74.00	-25.68	peak

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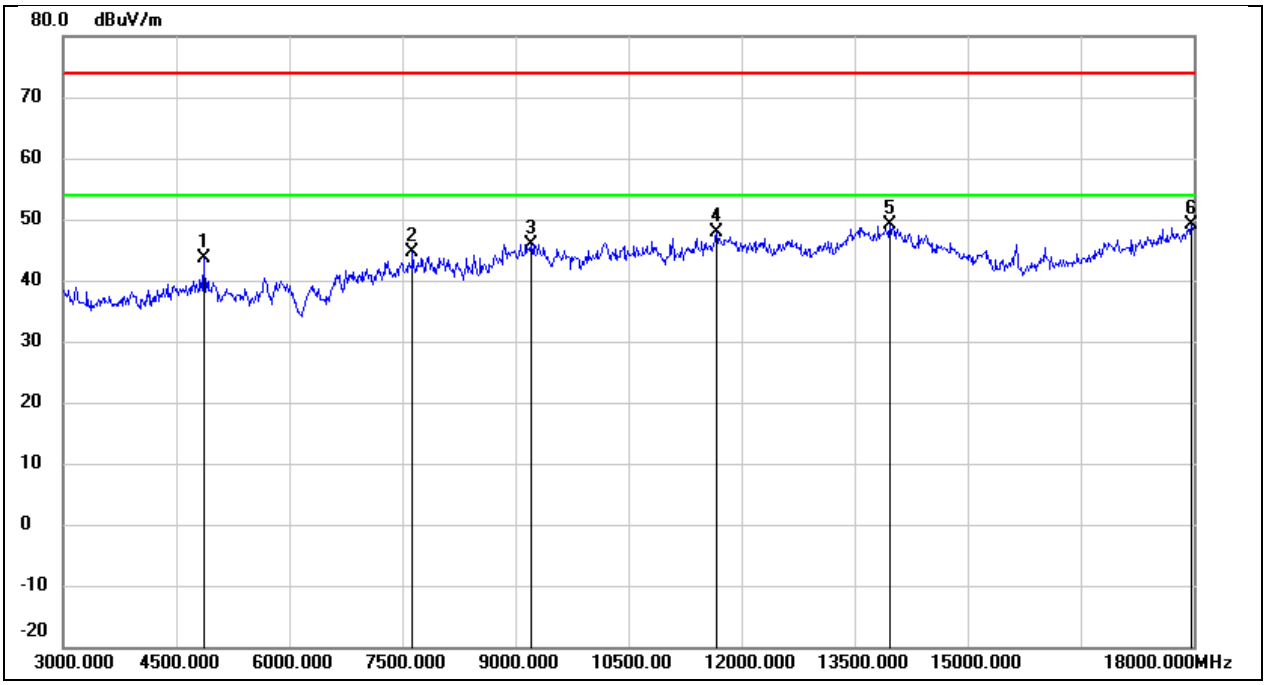
Test Mode:	10 MHz	Channel:	2437.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	43.82	-0.09	43.73	74.00	-30.27	peak
2	7635.000	38.41	6.33	44.74	74.00	-29.26	peak
3	9210.000	35.41	10.57	45.98	74.00	-28.02	peak
4	11670.000	30.84	17.07	47.91	74.00	-26.09	peak
5	13965.000	27.19	21.89	49.08	74.00	-24.92	peak
6	17970.000	23.64	25.51	49.15	74.00	-24.85	peak

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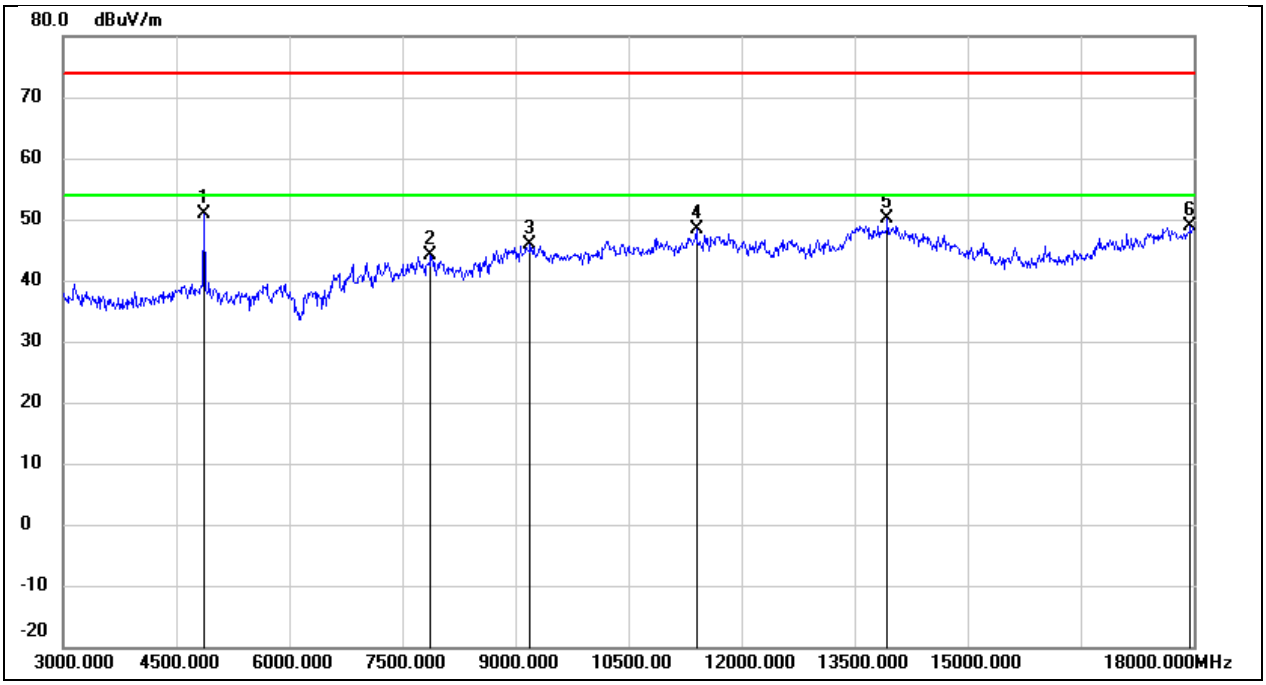
Test Mode:	10 MHz	Channel:	2437.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	50.86	-0.03	50.83	74.00	-23.17	peak
2	7875.000	37.84	6.31	44.15	74.00	-29.85	peak
3	9195.000	35.43	10.56	45.99	74.00	-28.01	peak
4	11400.000	32.13	16.23	48.36	74.00	-25.64	peak
5	13935.000	28.37	21.82	50.19	74.00	-23.81	peak
6	17955.000	23.47	25.42	48.89	74.00	-25.11	peak

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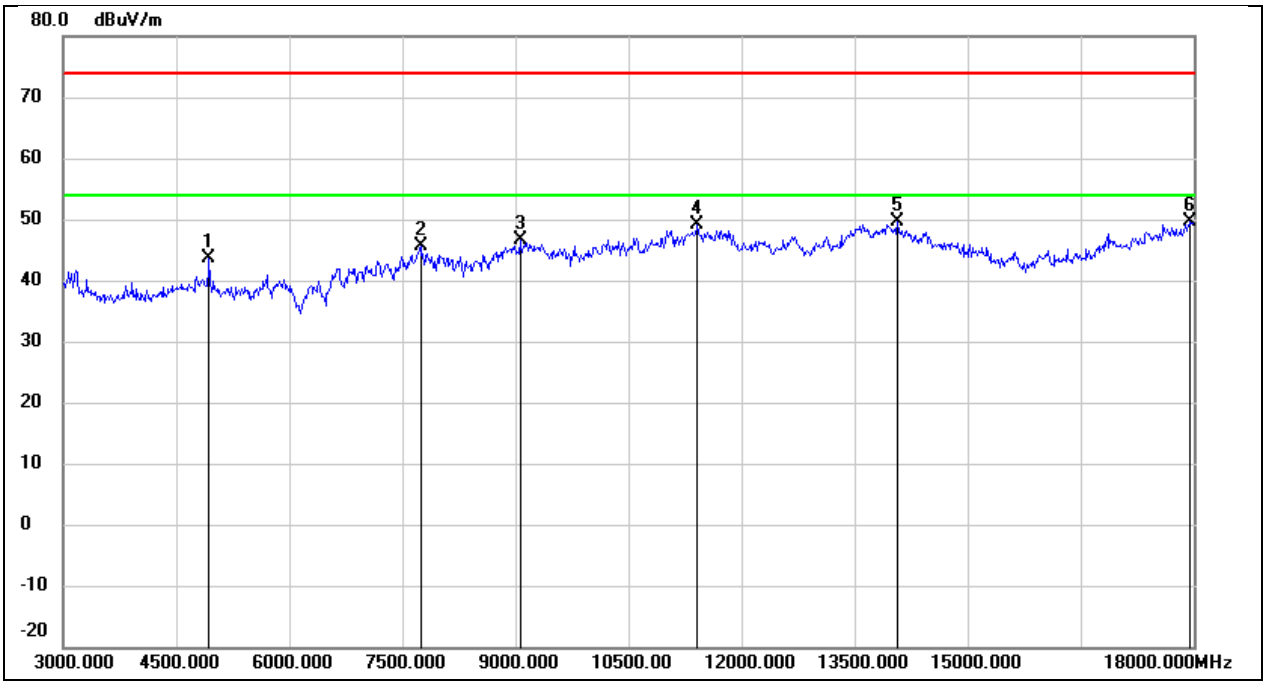
Test Mode:	10 MHz	Channel:	2467.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4935.000	43.32	0.20	43.52	74.00	-30.48	peak
2	7740.000	39.36	6.32	45.68	74.00	-28.32	peak
3	9060.000	36.11	10.51	46.62	74.00	-27.38	peak
4	11415.000	32.82	16.29	49.11	74.00	-24.89	peak
5	14070.000	27.88	21.67	49.55	74.00	-24.45	peak
6	17955.000	24.27	25.42	49.69	74.00	-24.31	peak

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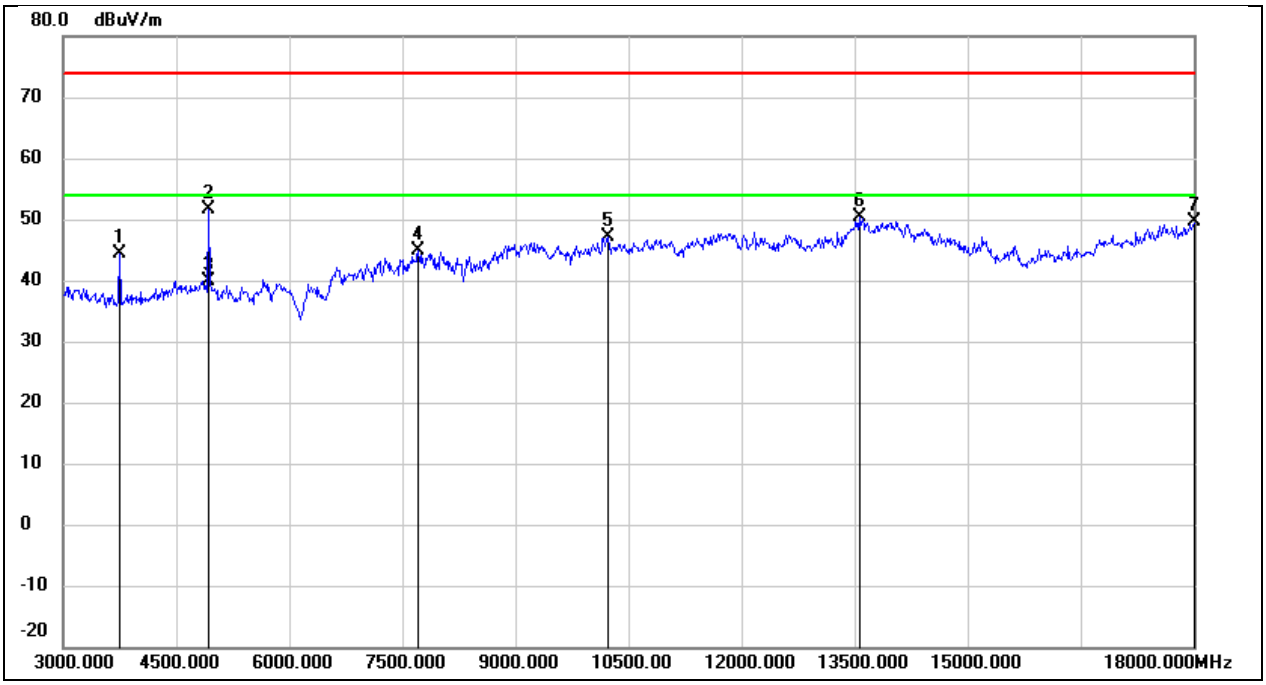
Test Mode:	10 MHz	Channel:	2467.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3750.000	48.65	-4.38	44.27	74.00	-29.73	peak
2	4935.000	51.43	0.20	51.63	74.00	-22.37	peak
3	4935.000	39.68	0.20	39.88	54.00	-14.12	AVG
4	7710.000	38.64	6.33	44.97	74.00	-29.03	peak
5	10230.000	34.61	12.46	47.07	74.00	-26.93	peak
6	13560.000	29.24	21.04	50.28	74.00	-23.72	peak
7	18000.000	23.83	25.69	49.52	74.00	-24.48	peak

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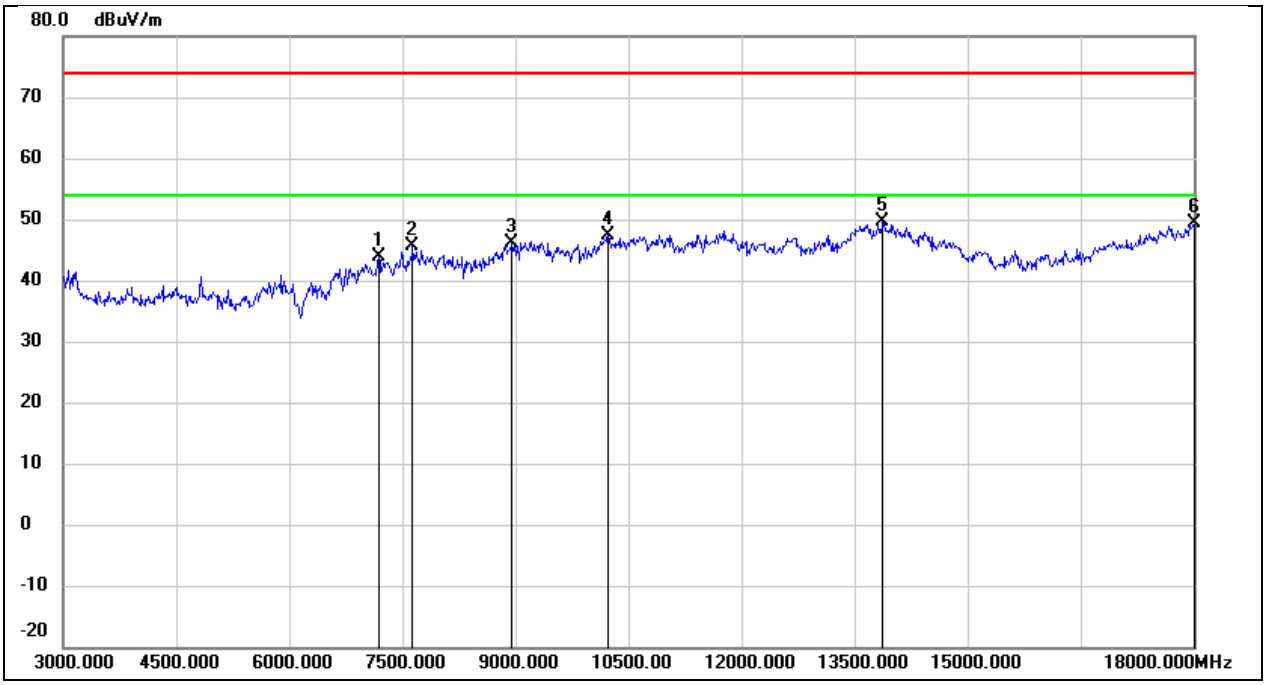
Test Mode:	20 MHz	Channel:	2412.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7185.000	37.36	6.55	43.91	74.00	-30.09	peak
2	7635.000	39.20	6.33	45.53	74.00	-28.47	peak
3	8955.000	36.08	10.16	46.24	74.00	-27.76	peak
4	10230.000	34.97	12.46	47.43	74.00	-26.57	peak
5	13875.000	27.88	21.70	49.58	74.00	-24.42	peak
6	18000.000	23.62	25.69	49.31	74.00	-24.69	peak

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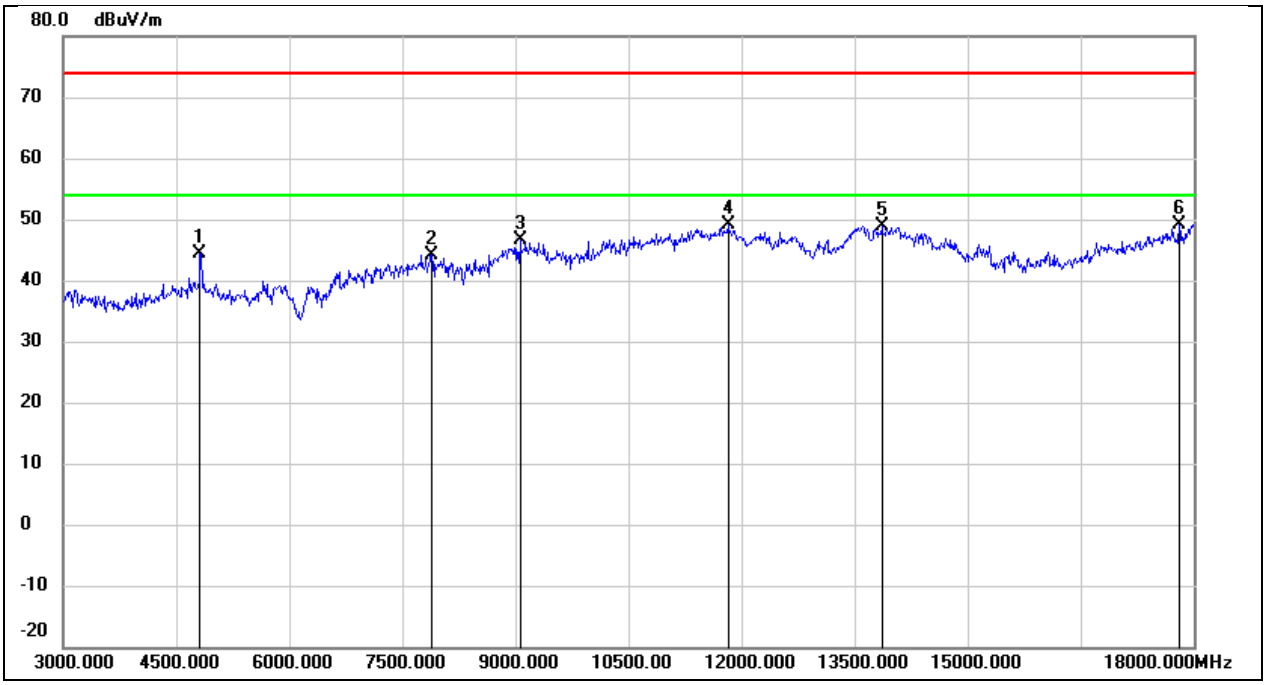
Test Mode:	20 MHz	Channel:	2412.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4815.000	44.61	-0.26	44.35	74.00	-29.65	peak
2	7890.000	37.93	6.31	44.24	74.00	-29.76	peak
3	9060.000	36.14	10.51	46.65	74.00	-27.35	peak
4	11820.000	31.61	17.47	49.08	74.00	-24.92	peak
5	13860.000	27.30	21.67	48.97	74.00	-25.03	peak
6	17805.000	24.66	24.54	49.20	74.00	-24.80	peak

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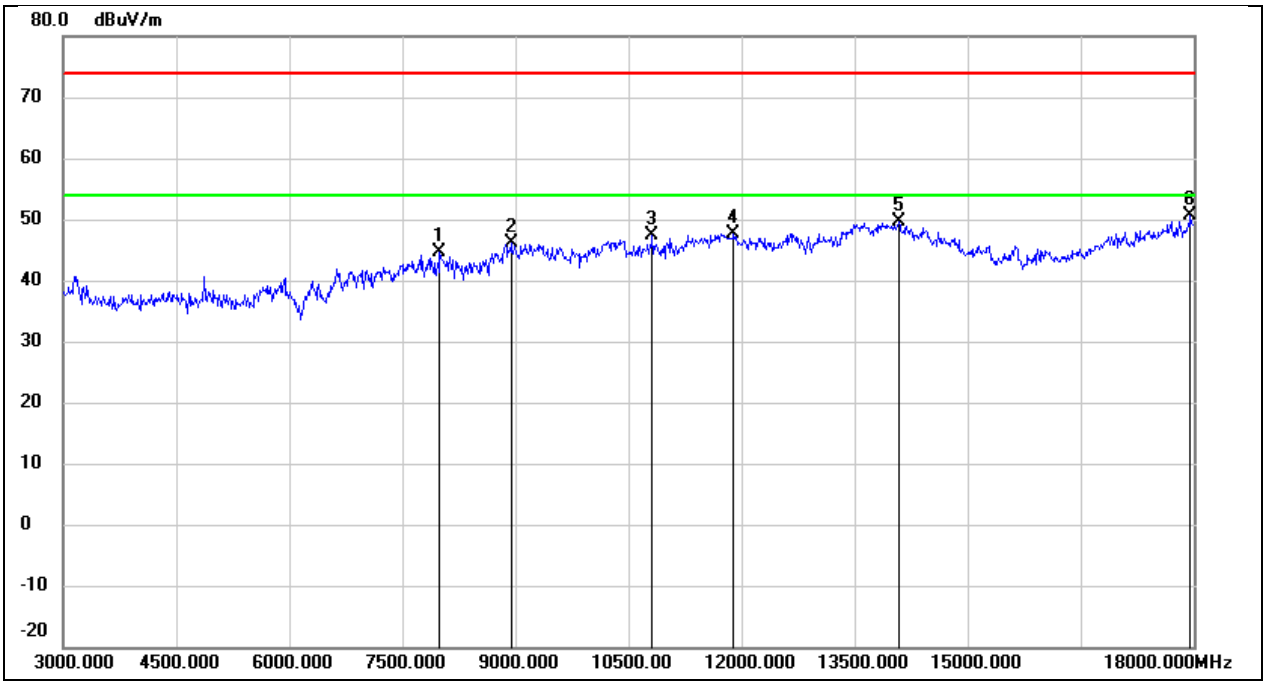
Test Mode:	20 MHz	Channel:	2437.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7995.000	38.34	6.31	44.65	74.00	-29.35	peak
2	8940.000	36.07	10.04	46.11	74.00	-27.89	peak
3	10815.000	33.38	14.11	47.49	74.00	-26.51	peak
4	11895.000	29.97	17.68	47.65	74.00	-26.35	peak
5	14085.000	28.06	21.61	49.67	74.00	-24.33	peak
6	17955.000	25.18	25.42	50.60	74.00	-23.40	peak

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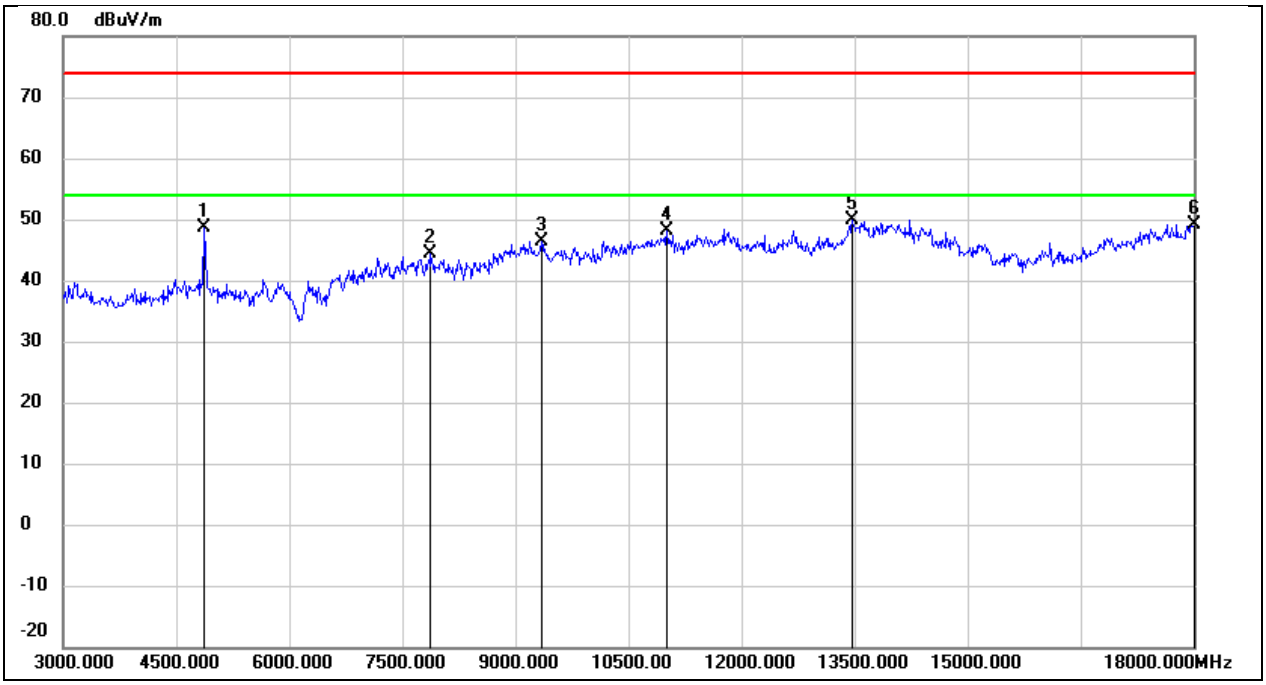
Test Mode:	20 MHz	Channel:	2437.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	48.68	-0.09	48.59	74.00	-25.41	peak
2	7875.000	37.97	6.31	44.28	74.00	-29.72	peak
3	9345.000	35.87	10.63	46.50	74.00	-27.50	peak
4	11010.000	33.20	14.81	48.01	74.00	-25.99	peak
5	13470.000	28.99	20.77	49.76	74.00	-24.24	peak
6	18000.000	23.40	25.69	49.09	74.00	-24.91	peak

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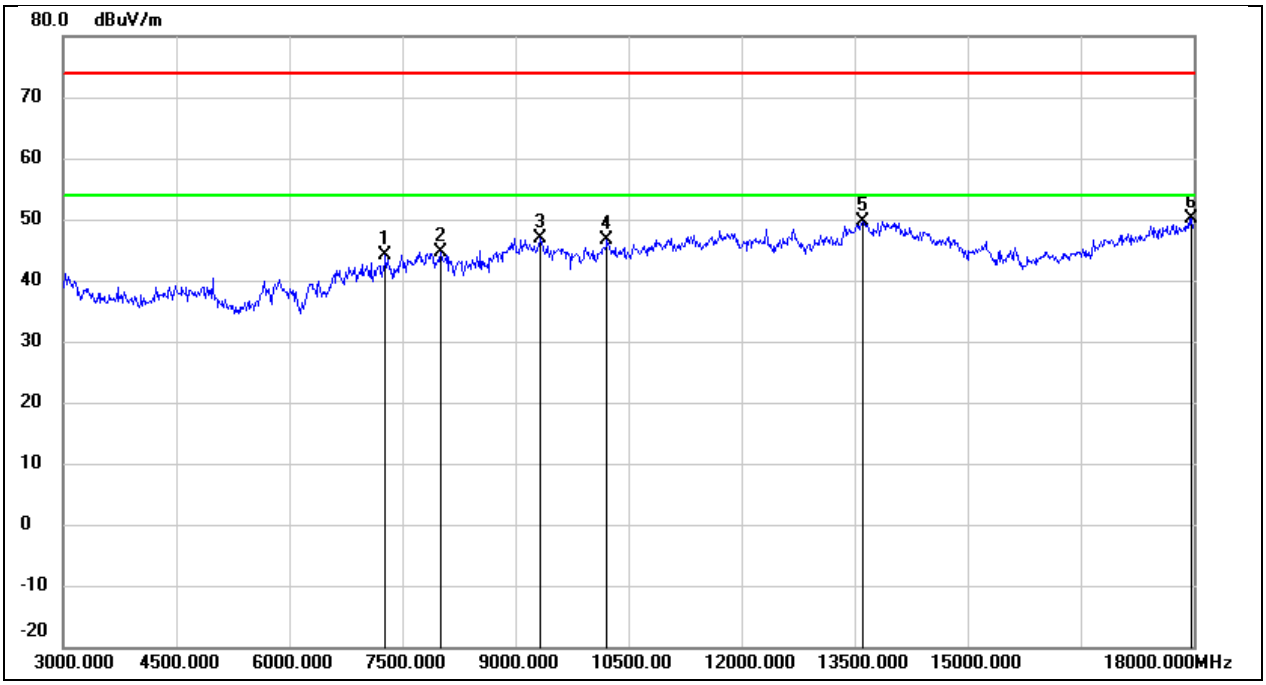
Test Mode:	20 MHz	Channel:	2462.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7275.000	37.70	6.49	44.19	74.00	-29.81	peak
2	8010.000	38.28	6.32	44.60	74.00	-29.40	peak
3	9330.000	36.32	10.62	46.94	74.00	-27.06	peak
4	10215.000	34.28	12.43	46.71	74.00	-27.29	peak
5	13605.000	28.49	21.12	49.61	74.00	-24.39	peak
6	17970.000	24.62	25.51	50.13	74.00	-23.87	peak

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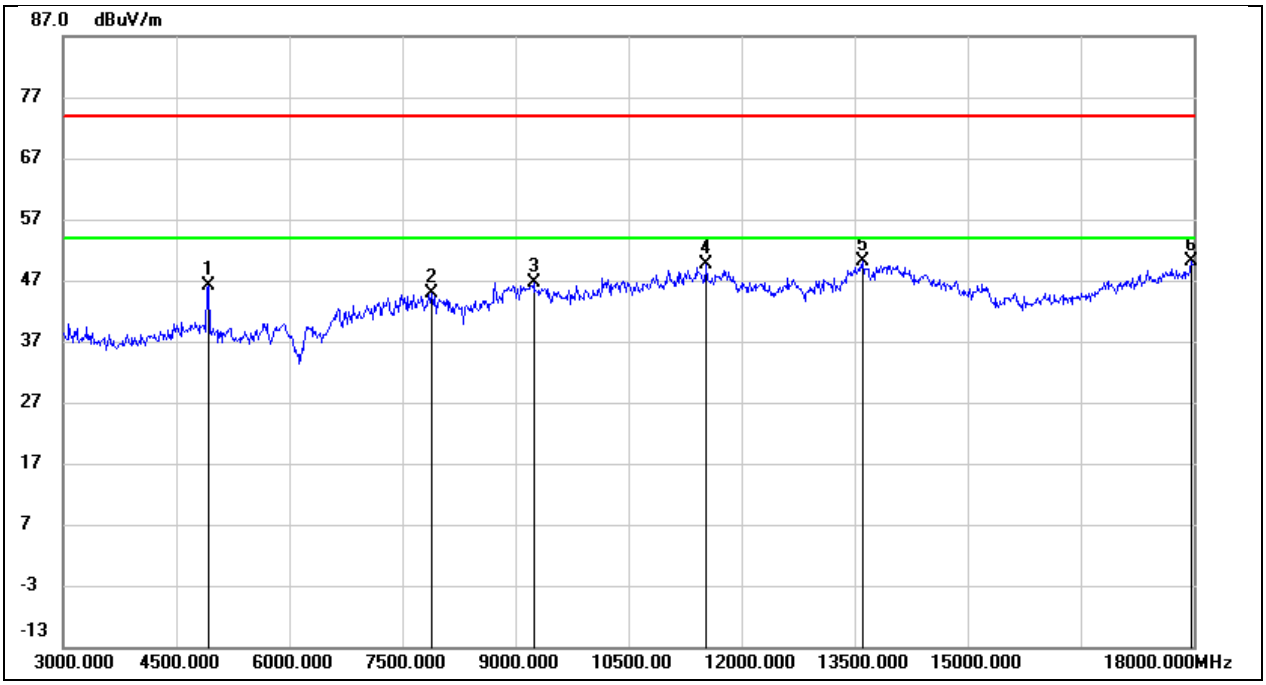
Test Mode:	20 MHz	Channel:	2462.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4920.000	46.10	0.14	46.24	74.00	-27.76	peak
2	7890.000	38.56	6.31	44.87	74.00	-29.13	peak
3	9240.000	35.97	10.58	46.55	74.00	-27.45	peak
4	11535.000	32.92	16.70	49.62	74.00	-24.38	peak
5	13605.000	28.98	21.12	50.10	74.00	-23.90	peak
6	17970.000	24.61	25.51	50.12	74.00	-23.88	peak

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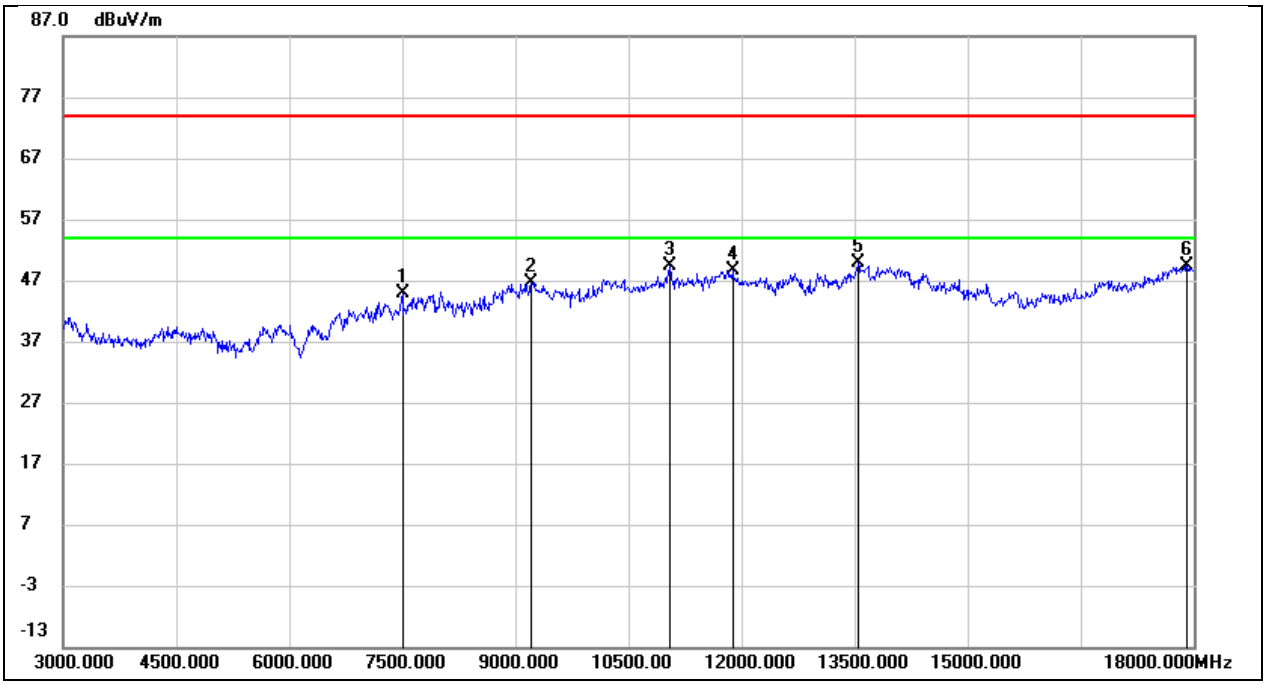
Test Mode:	40 MHz	Channel:	2422.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7500.000	38.49	6.33	44.82	74.00	-29.18	peak
2	9210.000	36.10	10.57	46.67	74.00	-27.33	peak
3	11055.000	34.38	14.96	49.34	74.00	-24.66	peak
4	11880.000	31.10	17.63	48.73	74.00	-25.27	peak
5	13545.000	28.98	20.99	49.97	74.00	-24.03	peak
6	17910.000	24.26	25.16	49.42	74.00	-24.58	peak

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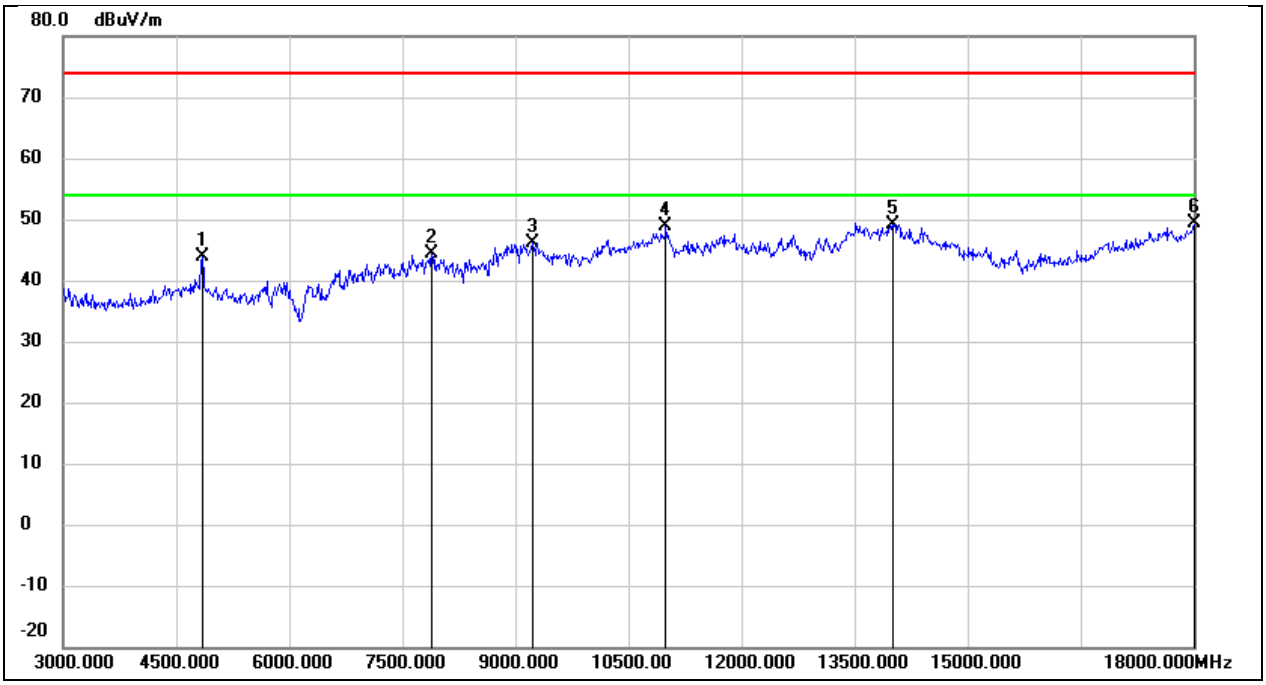
Test Mode:	40 MHz	Channel:	2422.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4845.000	44.10	-0.15	43.95	74.00	-30.05	peak
2	7890.000	37.99	6.31	44.30	74.00	-29.70	peak
3	9225.000	35.50	10.58	46.08	74.00	-27.92	peak
4	10995.000	34.15	14.75	48.90	74.00	-25.10	peak
5	14010.000	27.31	21.93	49.24	74.00	-24.76	peak
6	18000.000	23.67	25.69	49.36	74.00	-24.64	peak

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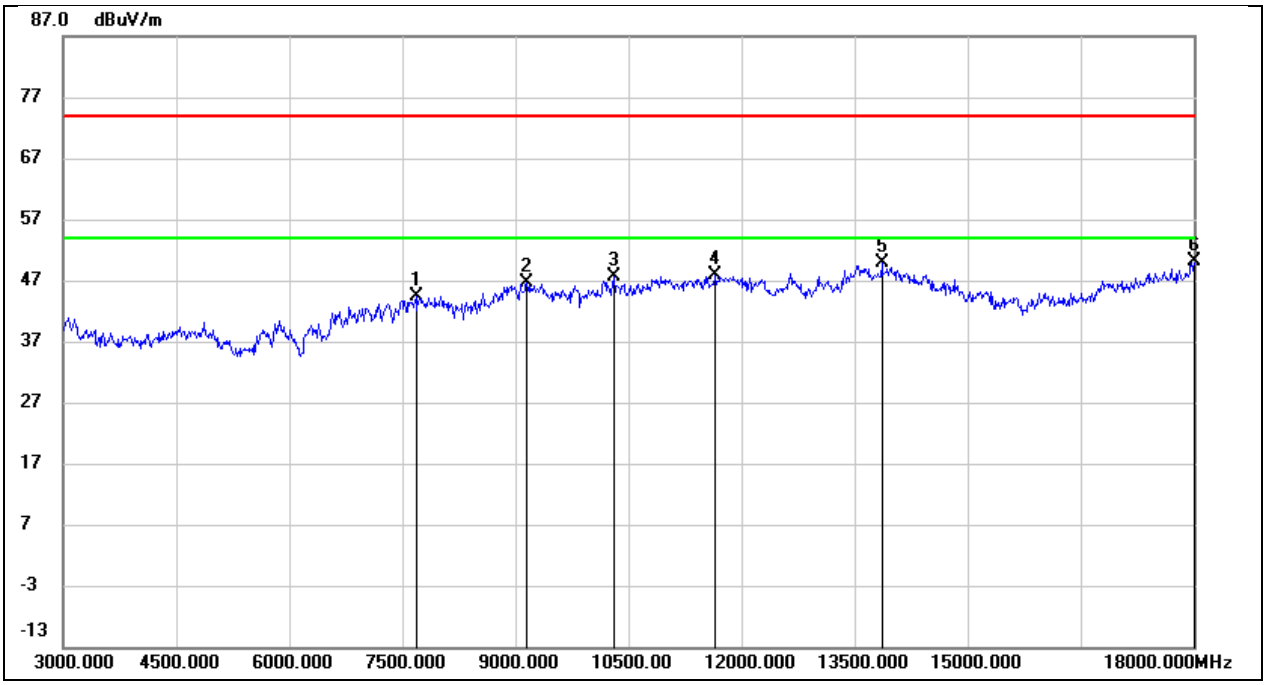
Test Mode:	40 MHz	Channel:	2437.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7680.000	38.12	6.32	44.44	74.00	-29.56	peak
2	9150.000	36.21	10.54	46.75	74.00	-27.25	peak
3	10305.000	34.96	12.61	47.57	74.00	-26.43	peak
4	11655.000	30.84	17.01	47.85	74.00	-26.15	peak
5	13860.000	28.13	21.67	49.80	74.00	-24.20	peak
6	18000.000	24.44	25.69	50.13	74.00	-23.87	peak

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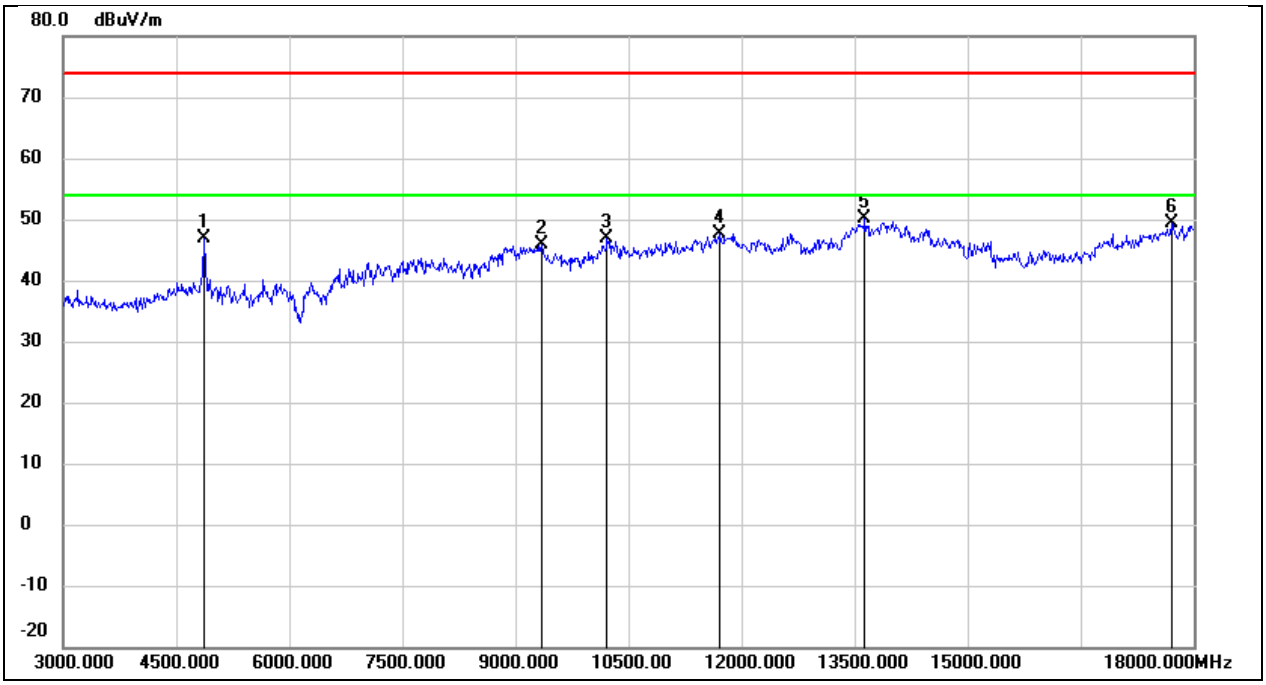
Test Mode:	40 MHz	Channel:	2437.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4860.000	46.97	-0.09	46.88	74.00	-27.12	peak
2	9345.000	35.36	10.63	45.99	74.00	-28.01	peak
3	10215.000	34.41	12.43	46.84	74.00	-27.16	peak
4	11715.000	30.43	17.19	47.62	74.00	-26.38	peak
5	13635.000	28.93	21.19	50.12	74.00	-23.88	peak
6	17700.000	25.43	23.91	49.34	74.00	-24.66	peak

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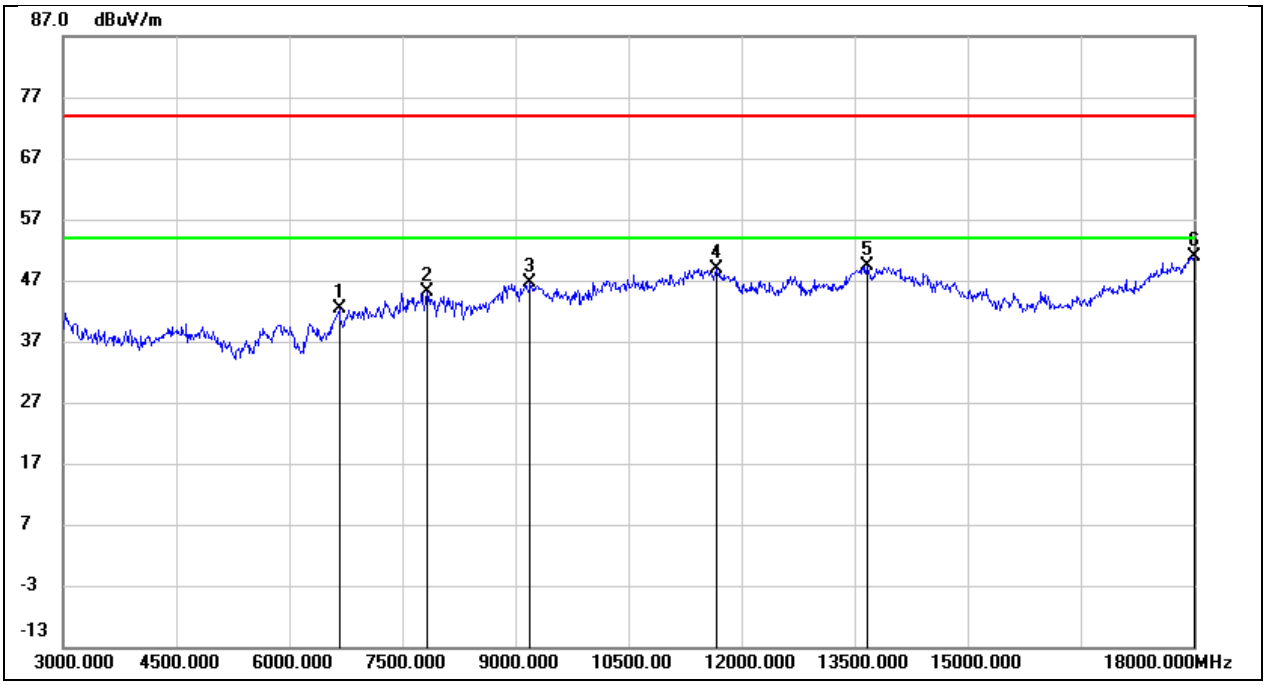
Test Mode:	40 MHz	Channel:	2452.5 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6660.000	37.48	5.02	42.50	74.00	-31.50	peak
2	7830.000	38.69	6.32	45.01	74.00	-28.99	peak
3	9195.000	36.18	10.56	46.74	74.00	-27.26	peak
4	11670.000	31.89	17.07	48.96	74.00	-25.04	peak
5	13665.000	28.18	21.25	49.43	74.00	-24.57	peak
6	18000.000	25.15	25.69	50.84	74.00	-23.16	peak

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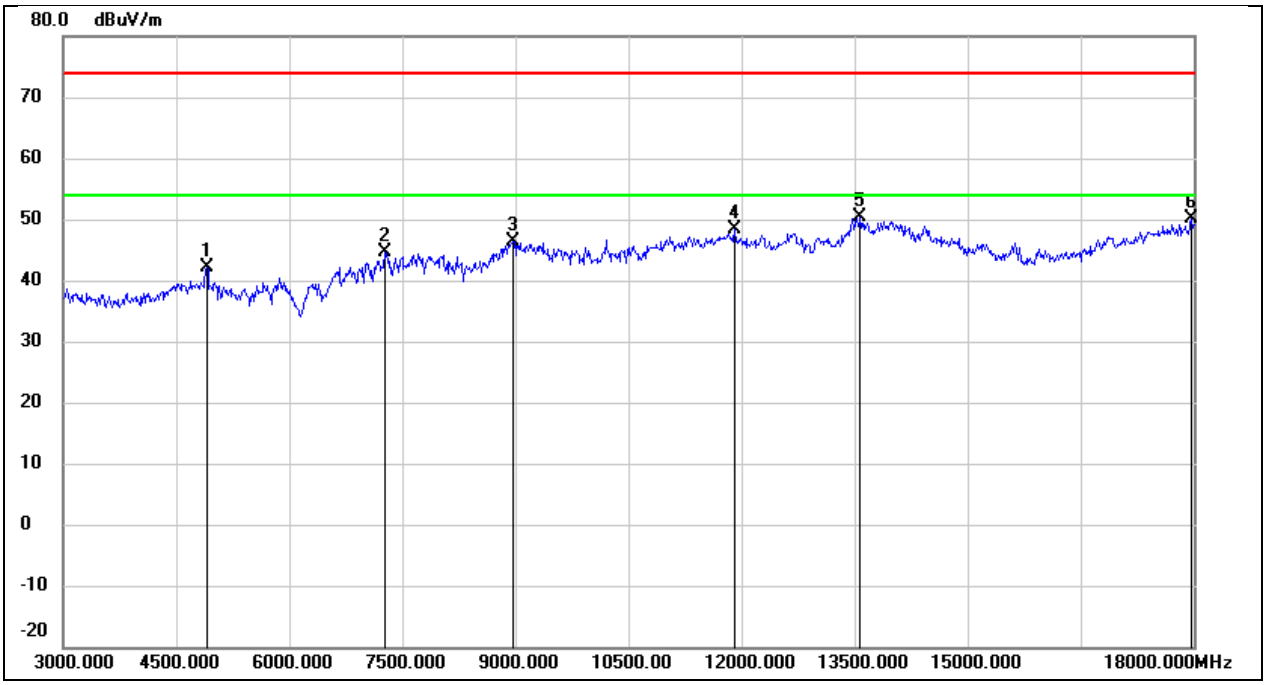
Test Mode:	40 MHz	Channel:	2452.5 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4905.000	42.07	0.09	42.16	74.00	-31.84	peak
2	7260.000	38.12	6.50	44.62	74.00	-29.38	peak
3	8970.000	36.03	10.26	46.29	74.00	-27.71	peak
4	11910.000	30.71	17.72	48.43	74.00	-25.57	peak
5	13575.000	29.21	21.06	50.27	74.00	-23.73	peak
6	17970.000	24.60	25.51	50.11	74.00	-23.89	peak

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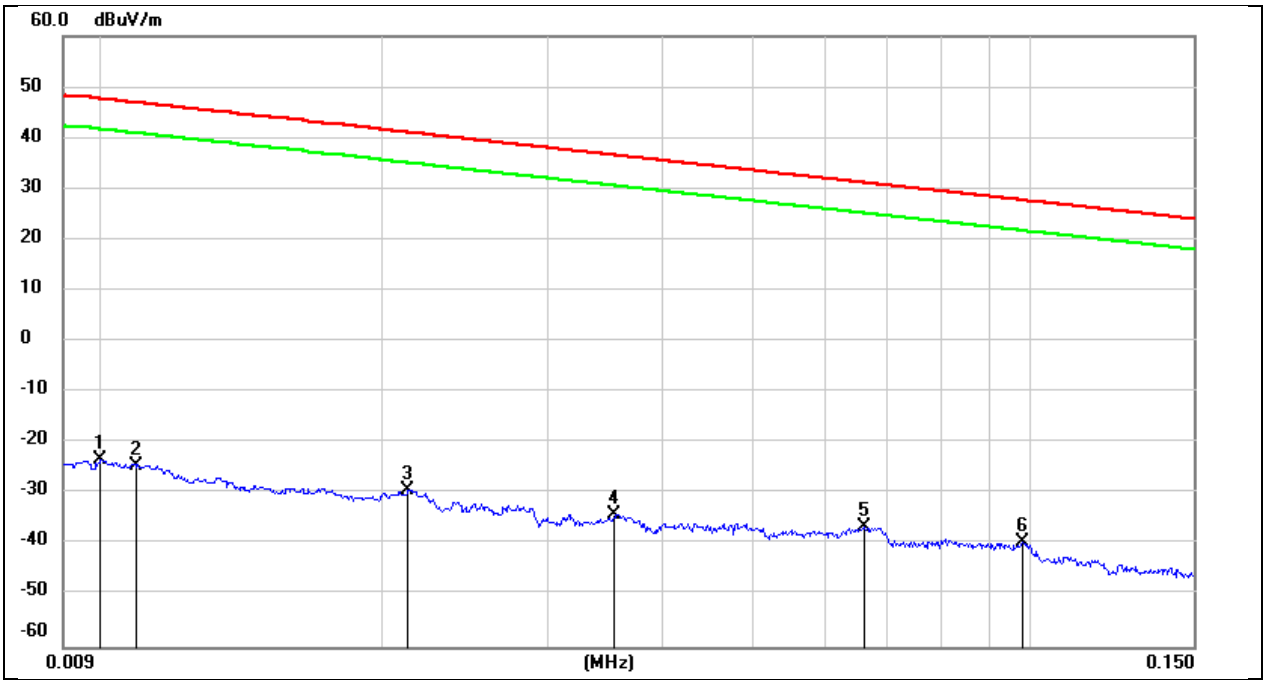
8.4. SPURIOUS EMISSIONS (9 KHZ ~ 30 MHZ)

Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	78.22	-101.40	-23.18	47.60	-70.78	peak
2	0.0108	77.01	-101.39	-24.38	46.93	-71.31	peak
3	0.0212	72.04	-101.35	-29.31	41.07	-70.38	peak
4	0.0354	67.47	-101.41	-33.94	36.62	-70.56	peak
5	0.0661	65.14	-101.55	-36.41	31.20	-67.61	peak
6	0.0981	62.27	-101.78	-39.51	27.77	-67.28	peak

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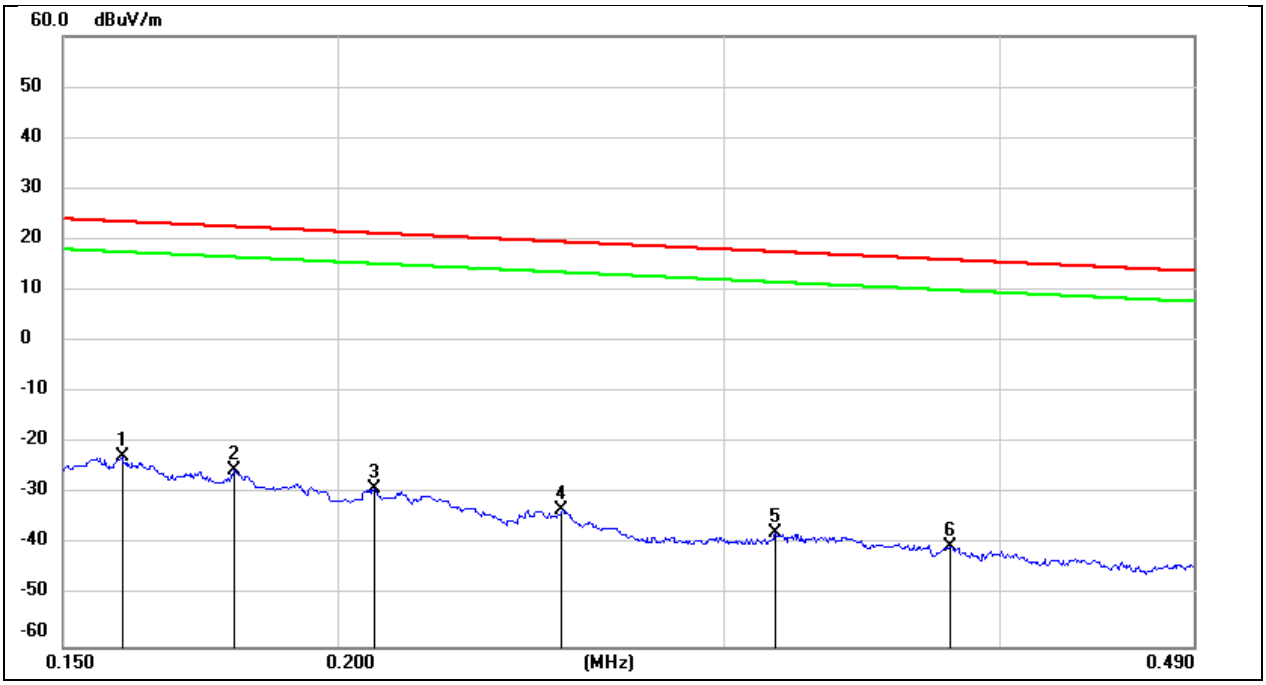
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1595	78.86	-101.65	-22.79	23.55	-46.34	peak
2	0.1794	76.27	-101.68	-25.41	22.53	-47.94	peak
3	0.2078	72.74	-101.73	-28.99	21.25	-50.24	peak
4	0.2530	68.64	-101.80	-33.16	19.54	-52.70	peak
5	0.3163	64.20	-101.87	-37.67	17.60	-55.27	peak
6	0.3800	61.52	-101.94	-40.42	16.01	-56.43	peak

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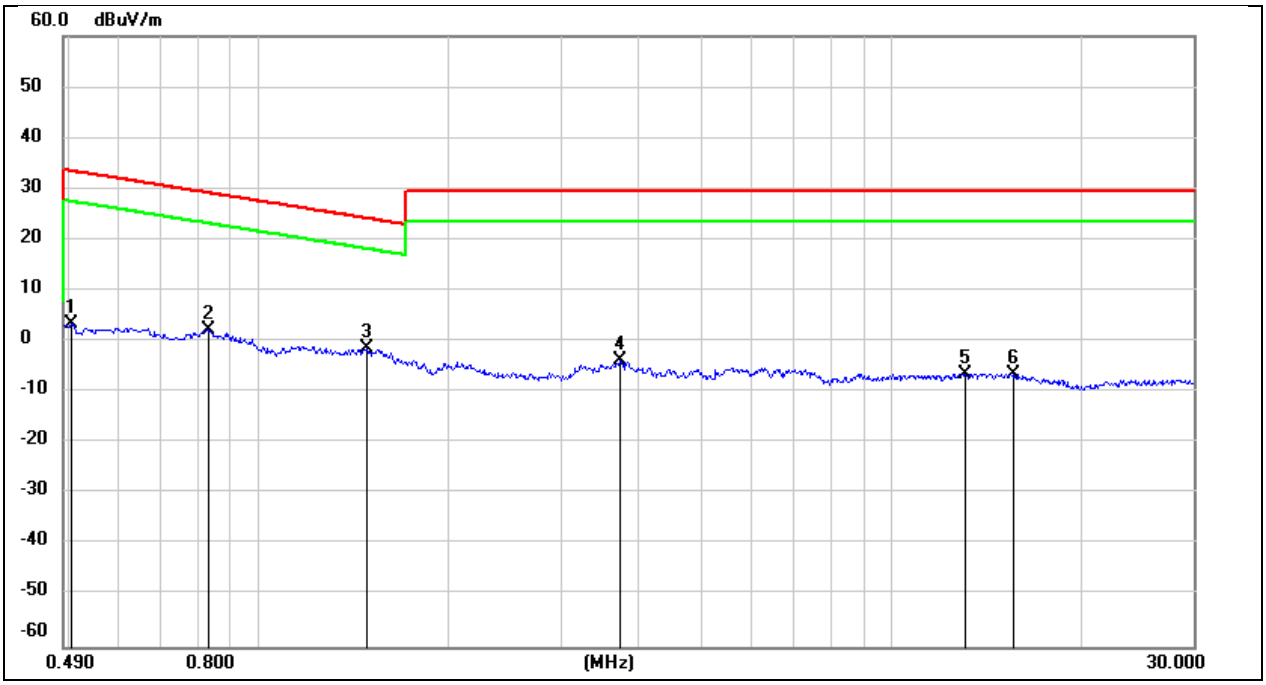
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Loop Antenna Face On To The EUT	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.5039	65.43	-62.07	3.36	33.56	-30.20	peak
2	0.8296	64.44	-62.17	2.27	29.23	-26.96	peak
3	1.4818	60.61	-62.05	-1.44	24.19	-25.63	peak
4	3.7100	57.70	-61.41	-3.71	29.54	-33.25	peak
5	13.0907	54.63	-60.93	-6.30	29.54	-35.84	peak
6	15.5990	54.60	-61.00	-6.40	29.54	-35.94	peak

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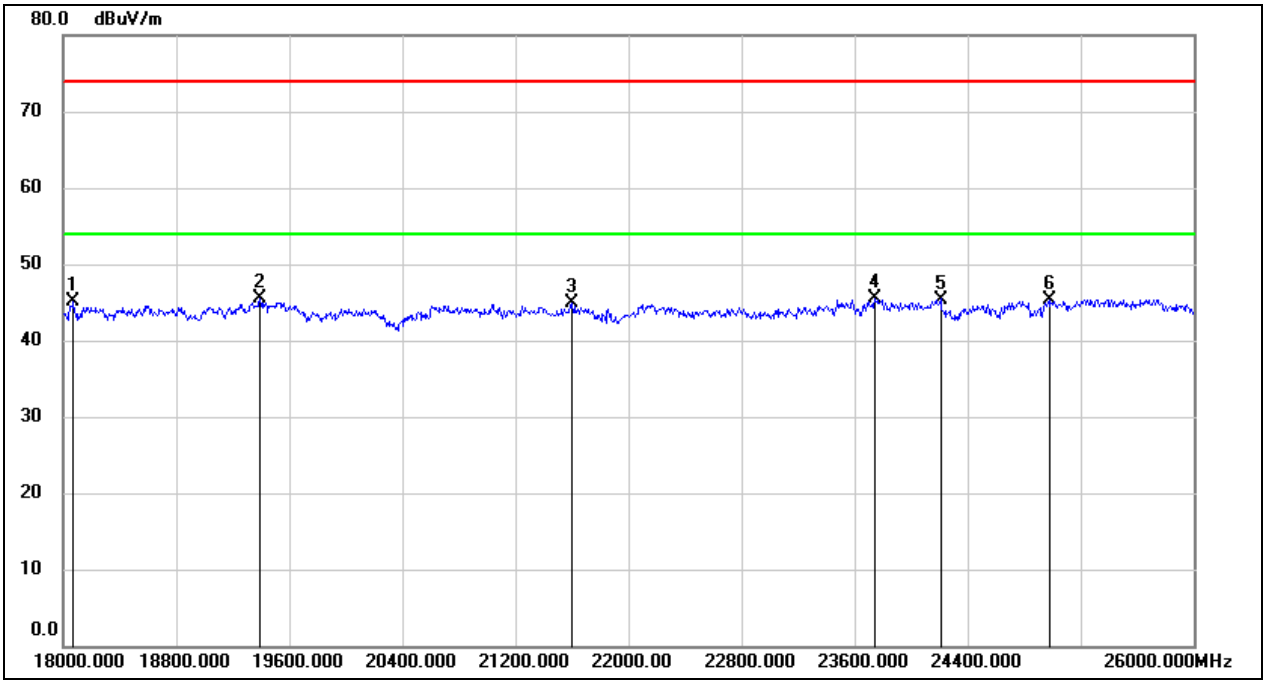
8.5. SPURIOUS EMISSIONS (18 GHZ ~ 26 GHZ)

Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18072.000	50.45	-5.43	45.02	74.00	-28.98	peak
2	19392.000	51.12	-5.57	45.55	74.00	-28.45	peak
3	21600.000	49.52	-4.54	44.98	74.00	-29.02	peak
4	23744.000	48.65	-3.20	45.45	74.00	-28.55	peak
5	24208.000	48.21	-2.81	45.40	74.00	-28.60	peak
6	24976.000	47.49	-2.11	45.38	74.00	-28.62	peak

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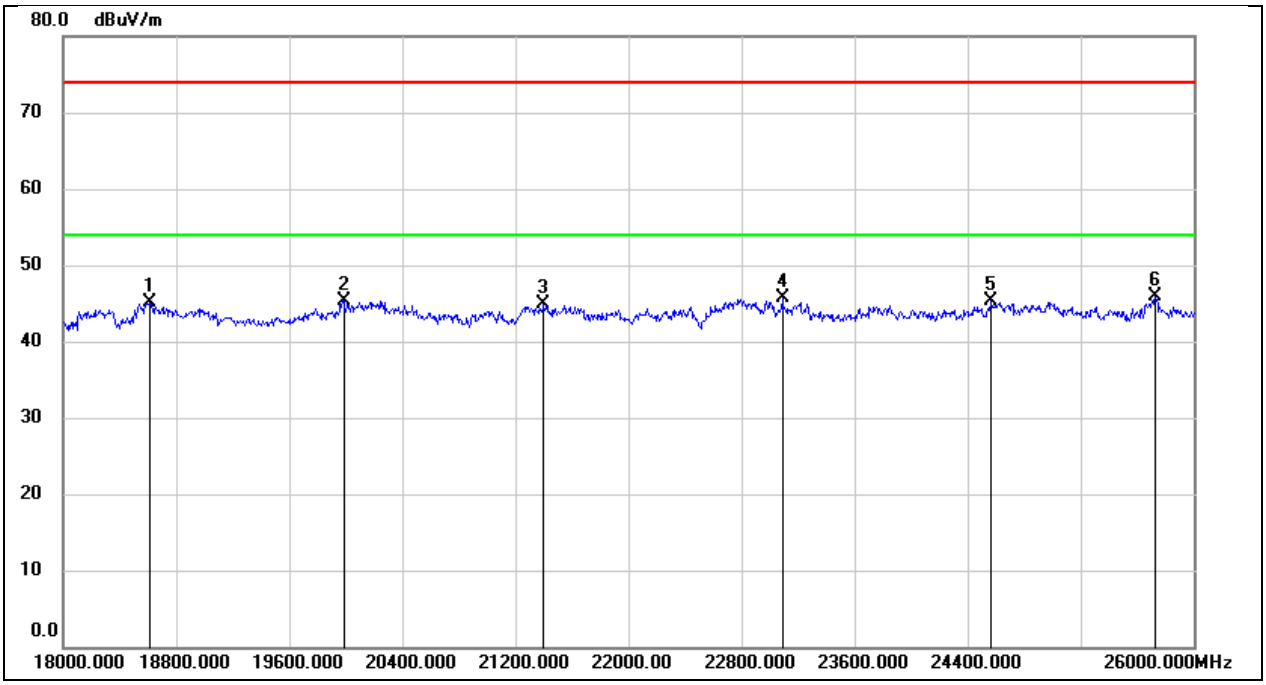
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18616.000	50.39	-5.34	45.05	74.00	-28.95	peak
2	19984.000	50.71	-5.44	45.27	74.00	-28.73	peak
3	21400.000	49.54	-4.72	44.82	74.00	-29.18	peak
4	23088.000	49.02	-3.41	45.61	74.00	-28.39	peak
5	24568.000	47.60	-2.33	45.27	74.00	-28.73	peak
6	25728.000	46.61	-0.72	45.89	74.00	-28.11	peak

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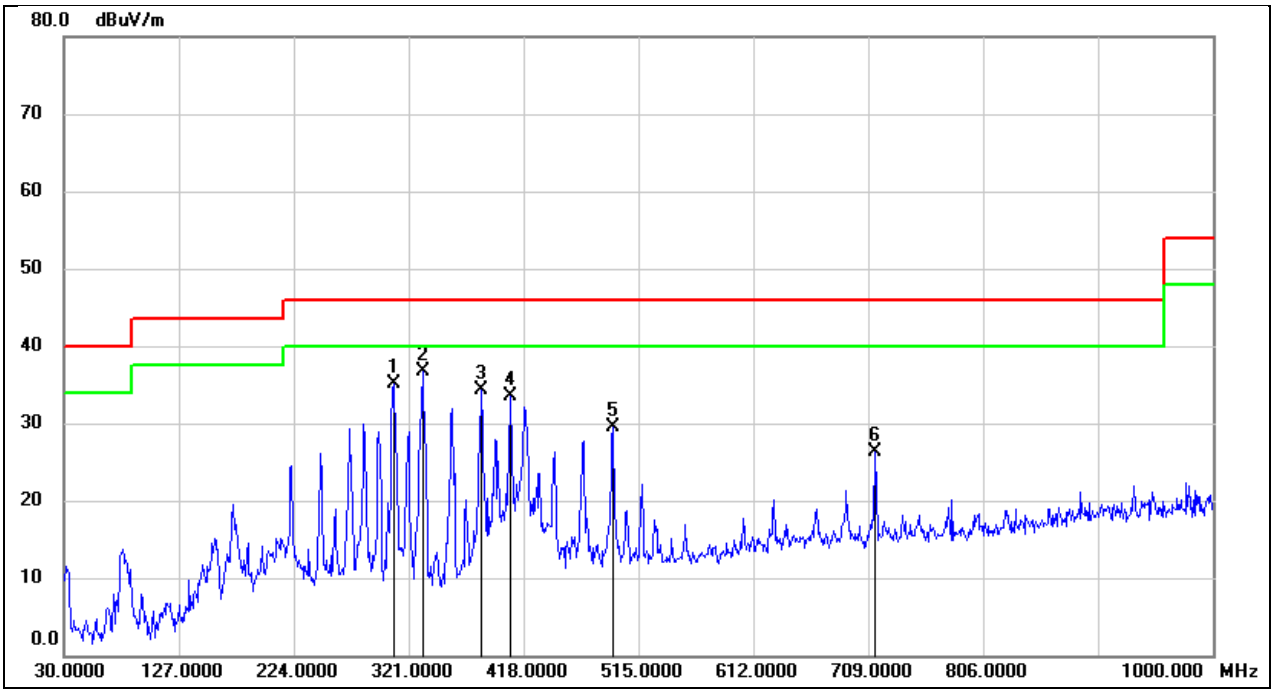
8.6. SPURIOUS EMISSIONS (30 MHZ ~ 1 GHZ)

Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Horizontal	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	308.3900	50.30	-15.12	35.18	46.00	-10.82	QP
2	332.6400	51.37	-14.62	36.75	46.00	-9.25	QP
3	382.1099	47.85	-13.60	34.25	46.00	-11.75	QP
4	407.3299	46.76	-13.20	33.56	46.00	-12.44	QP
5	493.6600	41.12	-11.61	29.51	46.00	-16.49	QP
6	714.8200	34.38	-8.17	26.21	46.00	-19.79	QP

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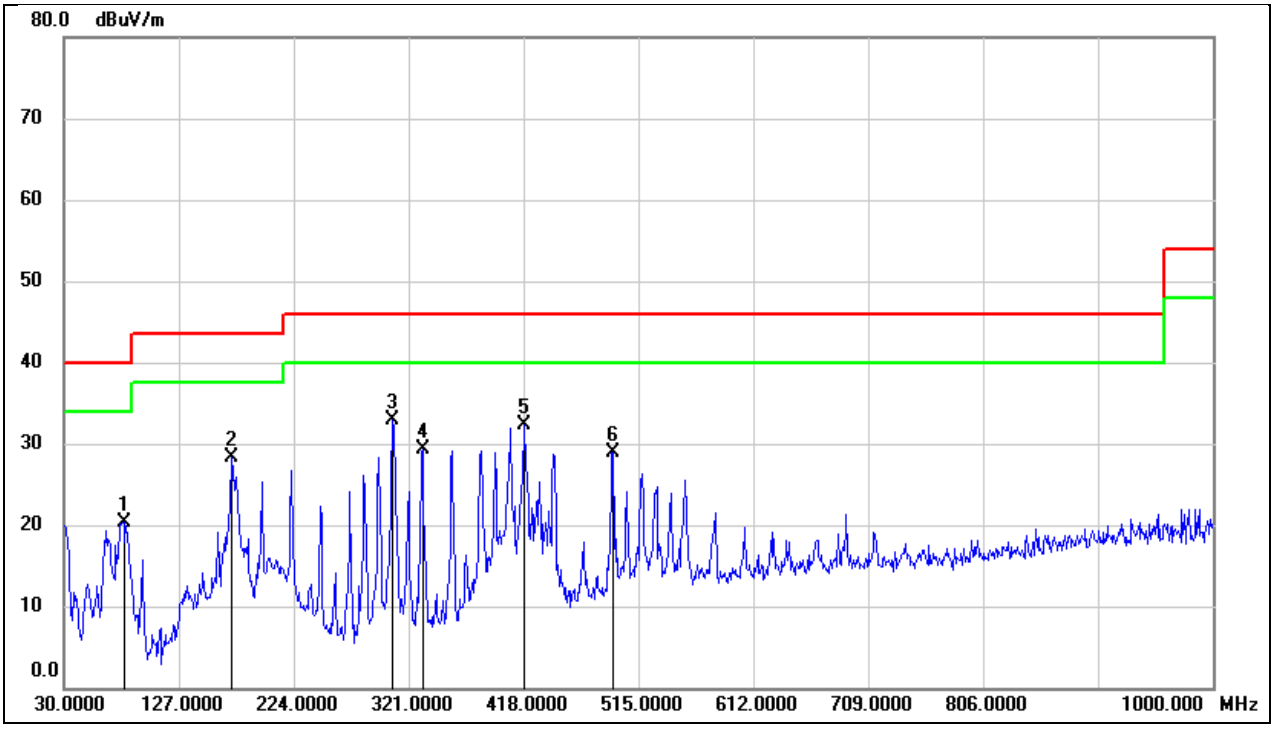
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Polarity:	Vertical	Test Voltage:	DC 7.2 V



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	80.4400	41.75	-21.38	20.37	40.00	-19.63	QP
2	171.6200	45.55	-17.26	28.29	43.50	-15.21	QP
3	307.4200	48.11	-15.13	32.98	46.00	-13.02	QP
4	332.6400	43.98	-14.62	29.36	46.00	-16.64	QP
5	418.9700	45.24	-13.01	32.23	46.00	-13.77	QP
6	493.6600	40.61	-11.61	29.00	46.00	-17.00	QP

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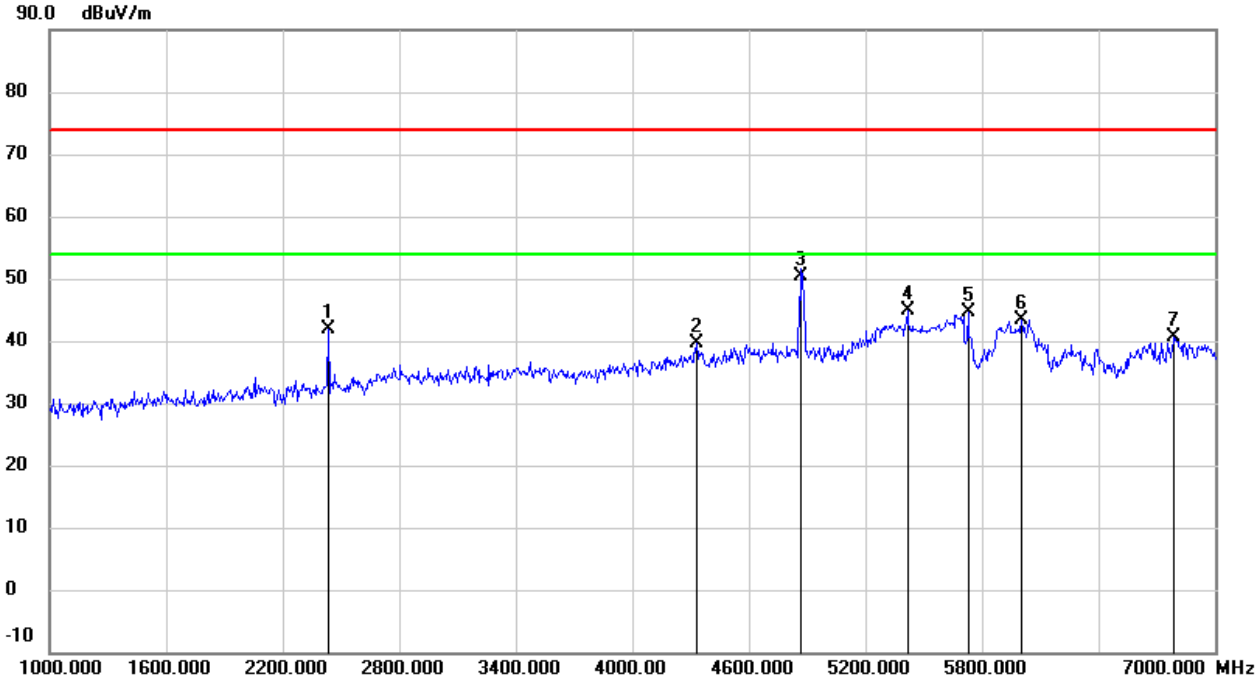
8.7. SPURIOUS EMISSIONS FOR SIMULTANEOUS TRANSMISSION

SPURIOUS EMISSIONS (2.4G BAND 3M CA MID CHANNEL, 5.8G BAND 3M CA MODE HIGH CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

1-7 GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2438.200	50.58	-8.80	41.78	74.00	-32.22	peak
2	4330.000	42.66	-2.94	39.72	74.00	-34.28	peak
3	4875.000	51.09	-0.65	50.44	74.00	-23.56	peak
4	5416.000	44.55	0.32	44.87	74.00	-29.13	peak
5	5728.000	43.48	1.07	44.55	74.00	-29.45	peak
6	6004.000	41.57	1.87	43.44	74.00	-30.56	peak
7	6790.000	35.42	5.15	40.57	74.00	-33.43	peak

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 7.7.
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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

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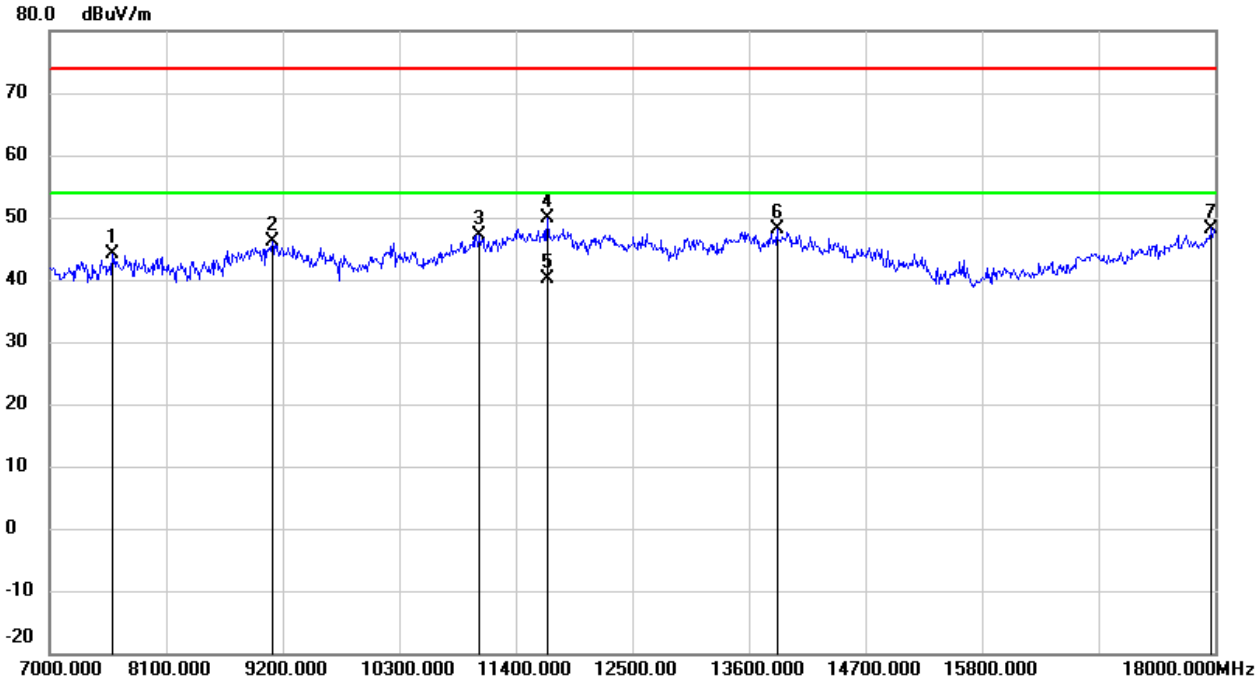
7-18 GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7594.000	37.25	6.79	44.04	74.00	-29.96	peak
2	9101.000	35.66	10.40	46.06	74.00	-27.94	peak
3	11059.000	32.26	14.96	47.22	74.00	-26.78	peak
4	11697.000	32.85	17.13	49.98	74.00	-24.02	peak
5	11697.000	23.07	17.13	40.20	54.00	-13.80	AVG
6	13864.000	26.63	21.53	48.16	74.00	-25.84	peak
7	17967.000	22.36	25.89	48.25	74.00	-25.75	peak

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/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.7.
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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

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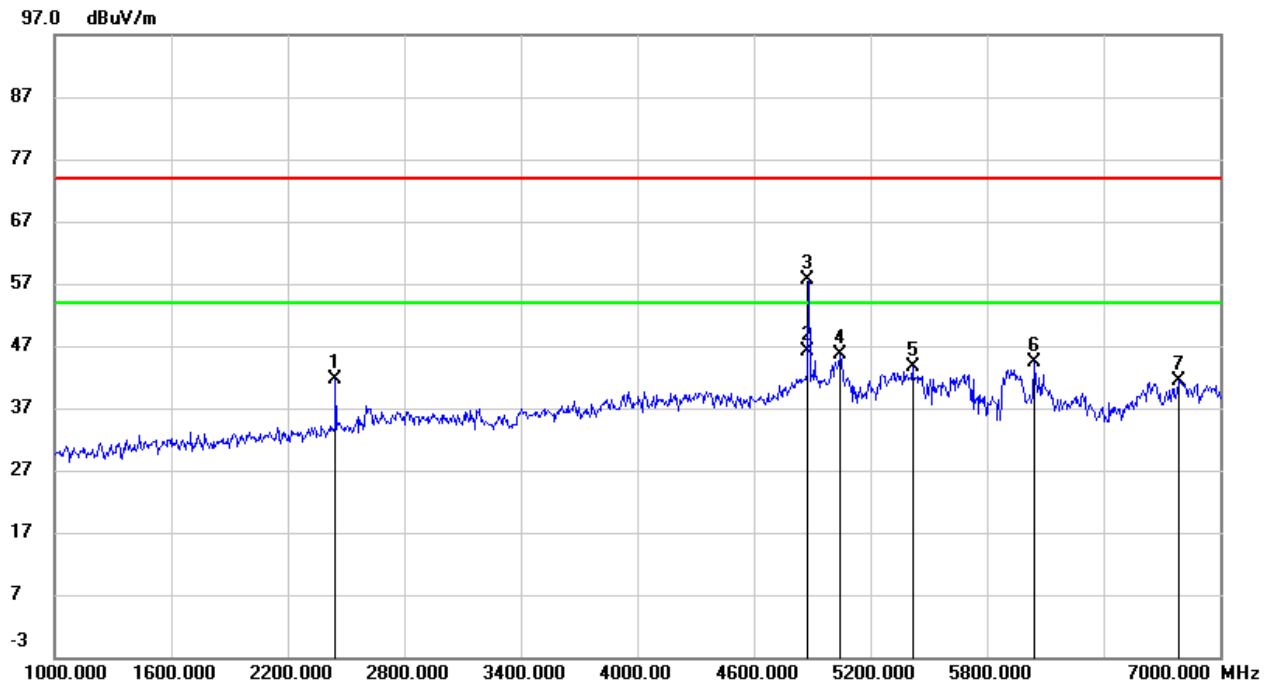
SPURIOUS EMISSIONS (2.4G BAND 3M CA MID CHANNEL, 5.8G BAND 3M CA MODE HIGH CHANNEL, WORST-CASE CONFIGURATION, WORST-CASE CONFIGURATION, VERTICAL)

1-7 GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2438.200	50.54	-8.80	41.74	74.00	-32.26	peak
2	4875.000	46.85	-0.65	46.20	54.00	-7.80	AVG
3	4875.000	58.27	-0.65	57.62	74.00	-16.38	peak
4	5044.000	45.83	-0.10	45.73	74.00	-28.27	peak
5	5416.000	43.38	0.32	43.70	74.00	-30.30	peak
6	6040.000	42.42	1.99	44.41	74.00	-29.59	peak
7	6790.000	36.33	5.15	41.48	74.00	-32.52	peak

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 7.7.
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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

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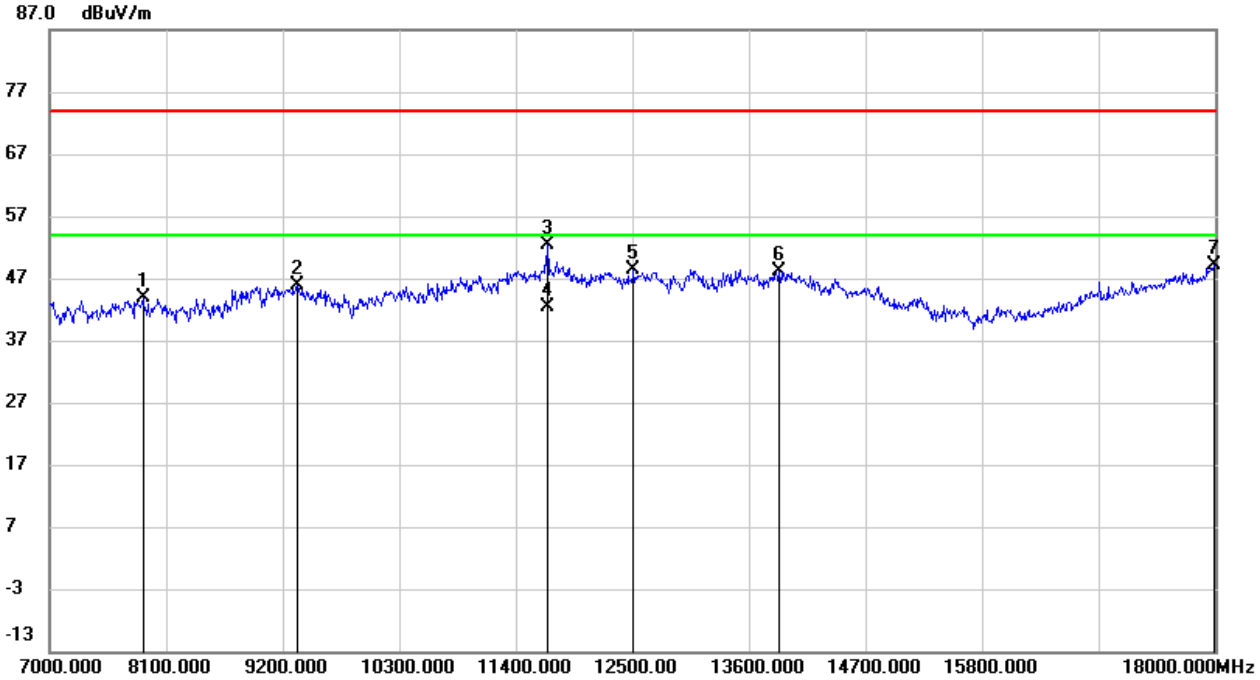
7-18 GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7880.000	37.24	6.54	43.78	74.00	-30.22	peak
2	9332.000	35.32	10.54	45.86	74.00	-28.14	peak
3	11697.000	35.30	17.13	52.43	74.00	-21.57	peak
4	11697.000	25.37	17.13	42.50	54.00	-11.50	AVG
5	12511.000	30.65	17.84	48.49	74.00	-25.51	peak
6	13886.000	26.42	21.60	48.02	74.00	-25.98	peak
7	17989.000	22.99	26.04	49.03	74.00	-24.97	peak

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/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.7.
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. All modes, channels and antennas have been tested, only the worst data was recorded in the report.

Note: For spurious emissions in other bands, no worst spurious emission was found, do not report.

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9. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a).

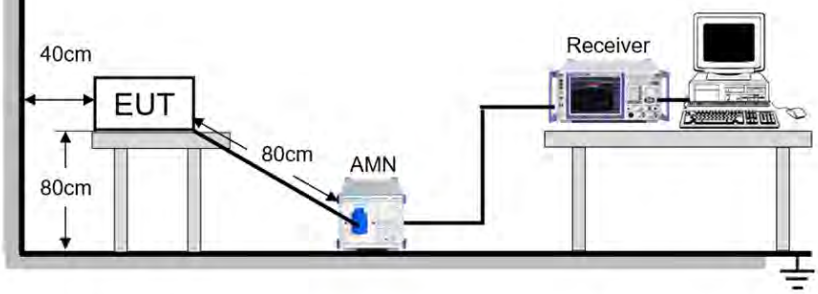
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST PROCEDURE

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	23.6 °C	Relative Humidity	53 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V/60 Hz

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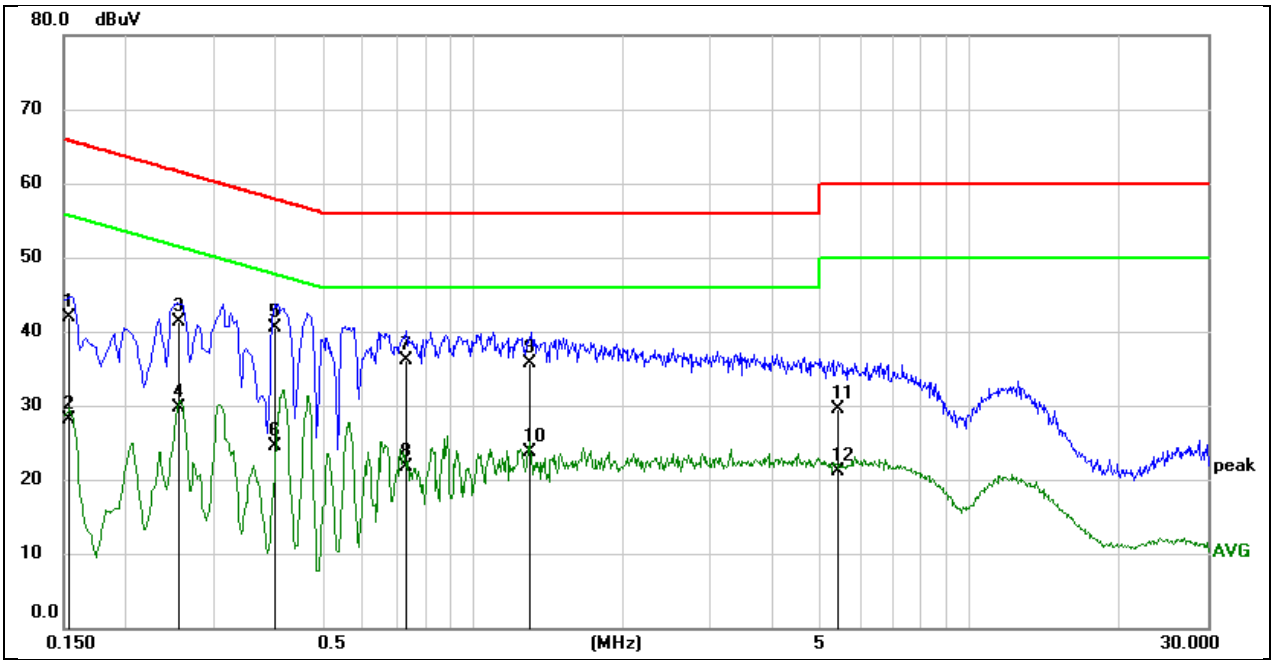
TEST RESULTS

Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Line	L1	Test Voltage	AC 120 V/60 Hz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1542	32.38	9.50	41.88	65.77	-23.89	QP
2	0.1542	18.52	9.50	28.02	55.77	-27.75	AVG
3	0.2552	31.79	9.57	41.36	61.59	-20.23	QP
4	0.2552	20.18	9.57	29.75	51.59	-21.84	AVG
5	0.4015	30.88	9.53	40.41	57.82	-17.41	QP
6	0.4015	14.94	9.53	24.47	47.82	-23.35	AVG
7	0.7331	26.67	9.50	36.17	56.00	-19.83	QP
8	0.7331	12.23	9.50	21.73	46.00	-24.27	AVG
9	1.3004	26.15	9.54	35.69	56.00	-20.31	QP
10	1.3004	14.15	9.54	23.69	46.00	-22.31	AVG
11	5.3682	19.86	9.62	29.48	60.00	-30.52	QP
12	5.3682	11.41	9.62	21.03	50.00	-28.97	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.

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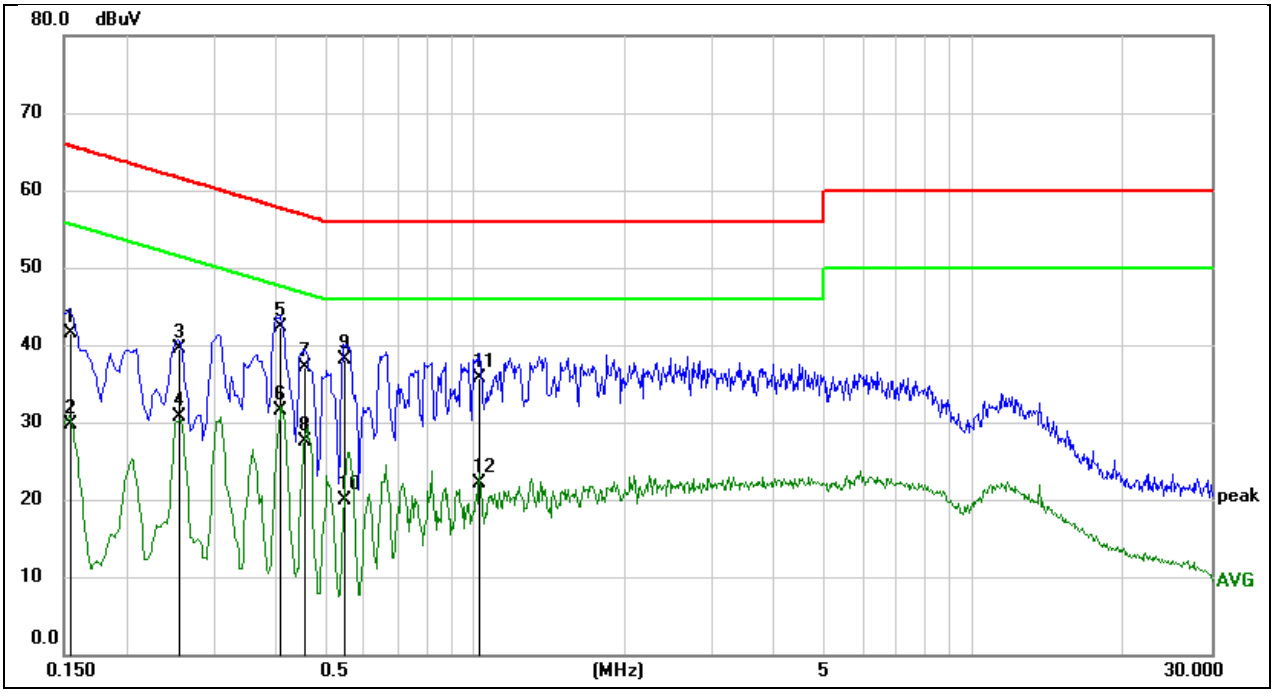
Test Mode:	3 MHz CA	Channel:	2438.2 MHz
Line	N	Test Voltage	AC 120 V/60 Hz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1555	31.95	9.50	41.45	65.70	-24.25	QP
2	0.1555	20.16	9.50	29.66	55.70	-26.04	AVG
3	0.2560	29.84	9.57	39.41	61.56	-22.15	QP
4	0.2560	21.17	9.57	30.74	51.56	-20.82	AVG
5	0.4093	32.68	9.53	42.21	57.66	-15.45	QP
6	0.4093	22.02	9.53	31.55	47.66	-16.11	AVG
7	0.4558	27.67	9.51	37.18	56.77	-19.59	QP
8	0.4558	18.00	9.51	27.51	46.77	-19.26	AVG
9	0.5472	28.53	9.50	38.03	56.00	-17.97	QP
10	0.5472	10.48	9.50	19.98	46.00	-26.02	AVG
11	1.0229	26.25	9.51	35.76	56.00	-20.24	QP
12	1.0229	12.64	9.51	22.15	46.00	-23.85	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.

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10. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §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 §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

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11. TEST DATA

11.1. APPENDIX A: DTS BANDWIDTH

11.1.1. Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4 MHz	Ant0	2403.5	1.10	2402.95	2404.05	>=0.5	PASS
	Ant1	2403.5	1.13	2402.93	2404.06	>=0.5	PASS
	Ant0	2435.5	1.10	2434.96	2436.06	>=0.5	PASS
	Ant1	2435.5	1.13	2434.93	2436.06	>=0.5	PASS
	Ant0	2469.5	1.11	2468.95	2470.06	>=0.5	PASS
	Ant1	2469.5	1.13	2468.93	2470.07	>=0.5	PASS
1.4 MHz CA	Ant0	2405.12	1.11	2404.57	2405.68	>=0.5	PASS
	Ant1	2405.12	1.12	2404.55	2405.68	>=0.5	PASS
	Ant0	2437.12	1.11	2436.57	2437.68	>=0.5	PASS
	Ant1	2437.12	1.14	2436.55	2437.69	>=0.5	PASS
	Ant0	2471.12	1.10	2470.58	2471.68	>=0.5	PASS
	Ant1	2471.12	1.14	2470.53	2471.68	>=0.5	PASS

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3 MHz	Ant0	2405.5	2.14	2404.44	2406.58	>=0.5	PASS
	Ant1	2405.5	2.20	2404.40	2406.61	>=0.5	PASS
	Ant0	2435.5	2.13	2434.44	2436.57	>=0.5	PASS
	Ant1	2435.5	2.20	2434.41	2436.61	>=0.5	PASS
	Ant0	2468.5	2.12	2467.44	2469.56	>=0.5	PASS
	Ant1	2468.5	2.21	2467.39	2469.60	>=0.5	PASS
3 MHz CA	Ant0	2408.2	2.12	2407.15	2409.27	>=0.5	PASS
	Ant1	2408.2	2.20	2407.10	2409.30	>=0.5	PASS
	Ant0	2438.2	2.14	2437.14	2439.28	>=0.5	PASS
	Ant1	2438.2	2.21	2437.09	2439.30	>=0.5	PASS
	Ant0	2471.2	2.12	2470.14	2472.26	>=0.5	PASS
	Ant1	2471.2	2.20	2470.09	2472.29	>=0.5	PASS

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
10 MHz	Ant0	2407.5	9.02	2402.98	2412.00	>=0.5	PASS
	Ant1	2407.5	9.02	2402.98	2412.00	>=0.5	PASS
	Ant0	2437.5	9.02	2432.98	2442.00	>=0.5	PASS
	Ant1	2437.5	9.02	2433.00	2442.02	>=0.5	PASS
	Ant0	2467.5	9.02	2462.98	2472.00	>=0.5	PASS
	Ant1	2467.5	9.02	2462.98	2472.00	>=0.5	PASS
20 MHz	Ant0	2412.5	18.00	2403.50	2421.50	>=0.5	PASS
	Ant1	2412.5	18.00	2403.46	2421.46	>=0.5	PASS
	Ant0	2437.5	18.00	2428.50	2446.50	>=0.5	PASS
	Ant1	2437.5	18.00	2428.50	2446.50	>=0.5	PASS
	Ant0	2462.5	18.00	2453.50	2471.50	>=0.5	PASS
	Ant1	2462.5	17.92	2453.54	2471.46	>=0.5	PASS
40 MHz	Ant0	2422.5	36.00	2404.50	2440.50	>=0.5	PASS
	Ant1	2422.5	36.00	2404.50	2440.50	>=0.5	PASS
	Ant0	2437.5	36.00	2419.50	2455.50	>=0.5	PASS
	Ant1	2437.5	35.36	2419.58	2454.94	>=0.5	PASS
	Ant0	2452.5	36.00	2434.42	2470.42	>=0.5	PASS
	Ant1	2452.5	35.92	2434.50	2470.42	>=0.5	PASS

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

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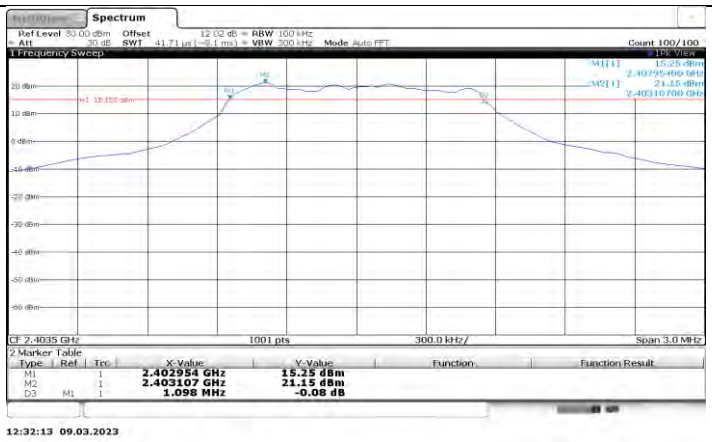
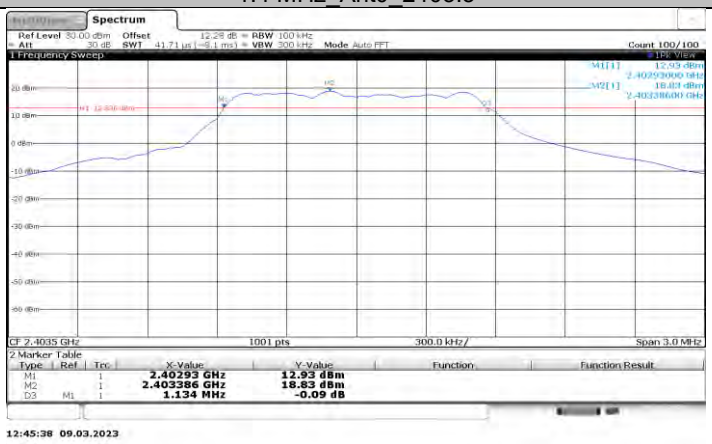
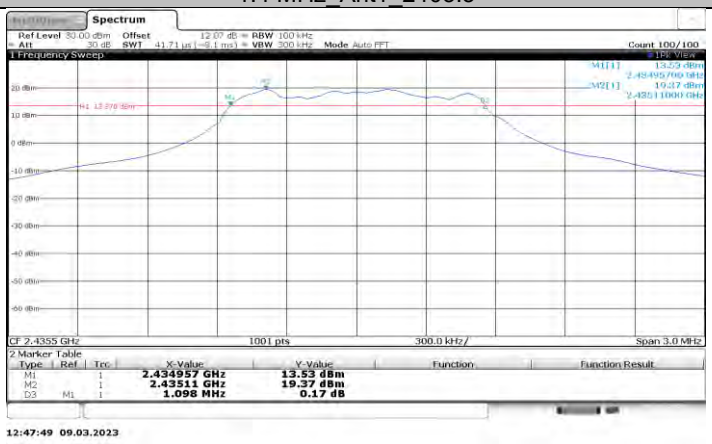
11.1.2. Test Graphs



1.4 MHz_Ant0_2403.5



1.4 MHz_Ant1_2403.5



1.4 MHz_Ant0_2435.5

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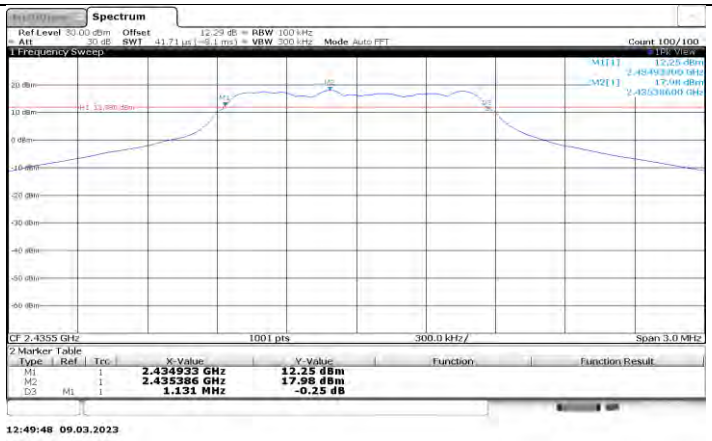
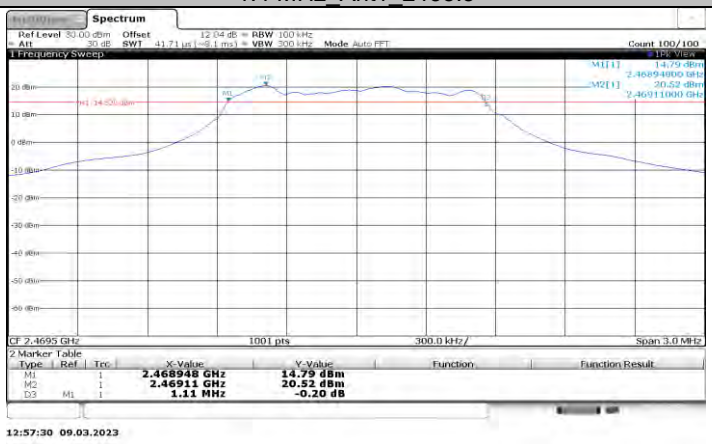
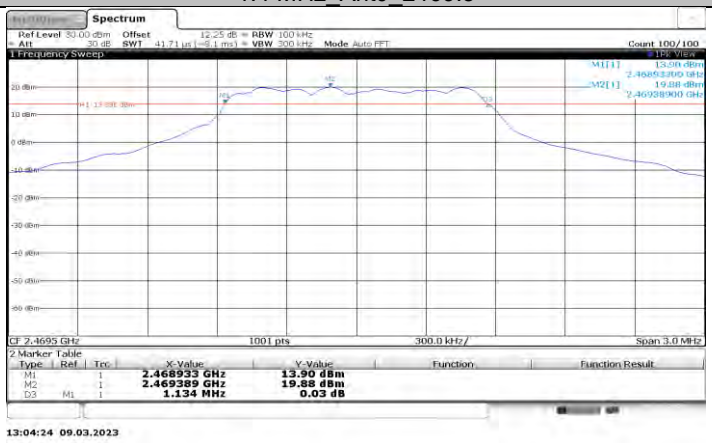


1.4 MHz_Ant1_2435.5



1.4 MHz_Ant0_2469.5



1.4 MHz_Ant1_2469.5

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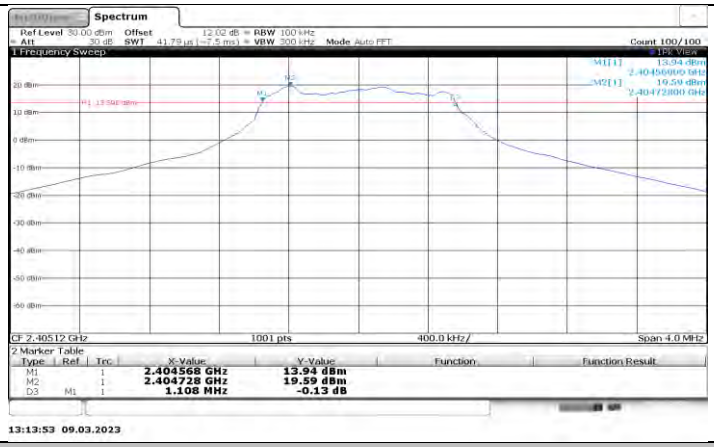
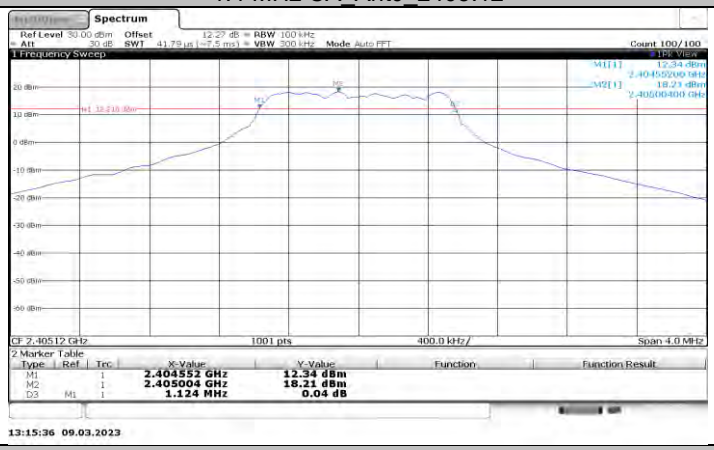
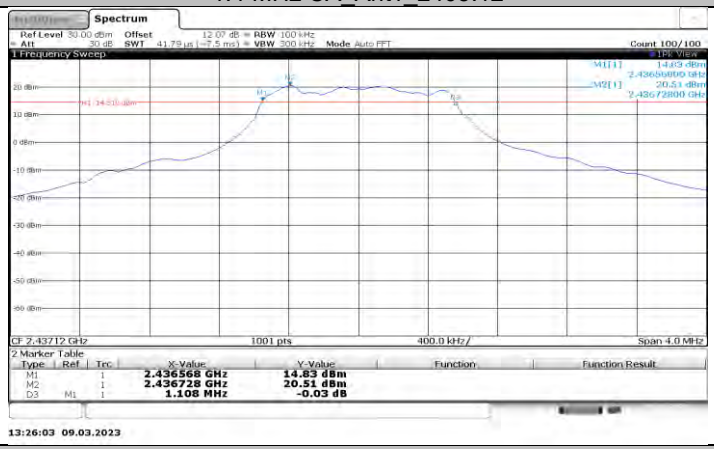


1.4 MHz CA_Ant0_2405.12



1.4 MHz CA_Ant1_2405.12



1.4 MHz CA_Ant0_2437.12

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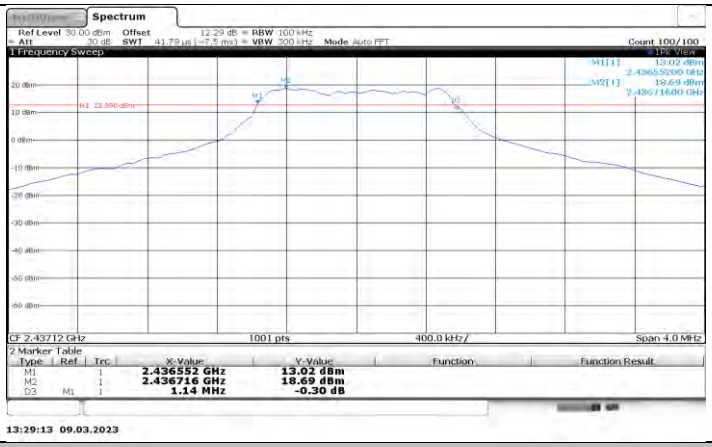
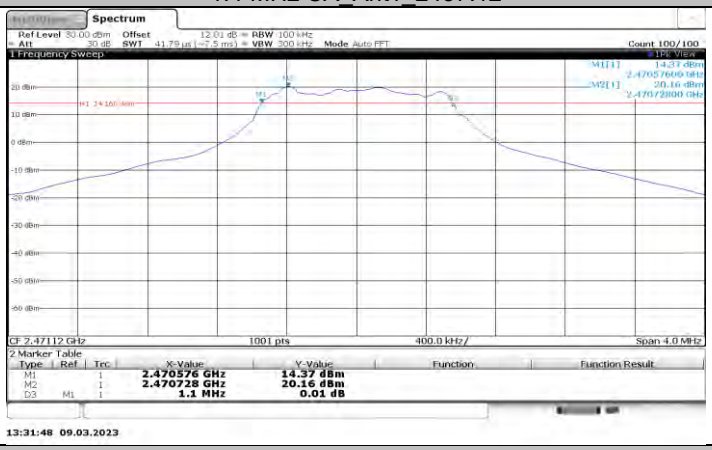
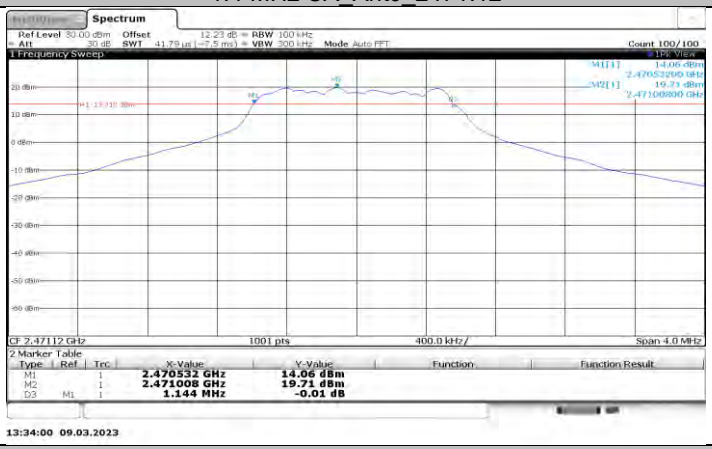


1.4 MHz CA_Ant1_2437.12



1.4 MHz CA_Ant0_2471.12



1.4 MHz CA_Ant1_2471.12

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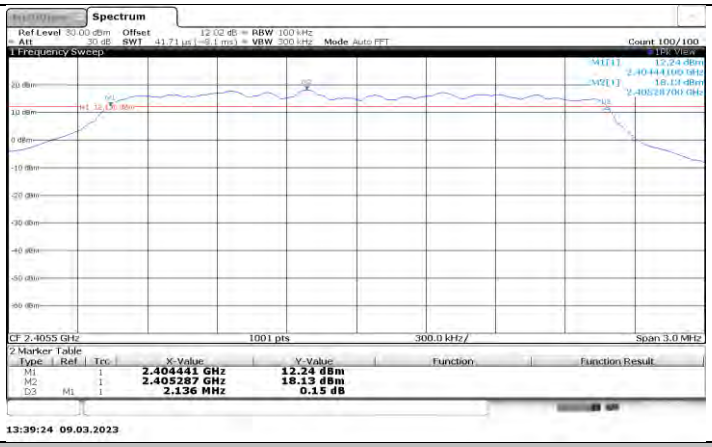
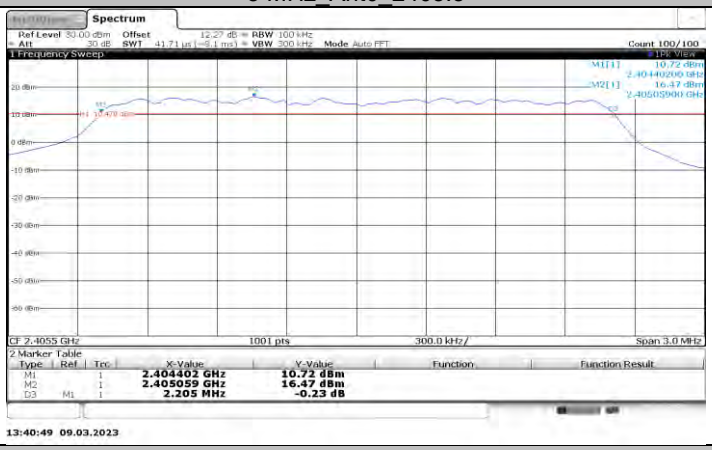
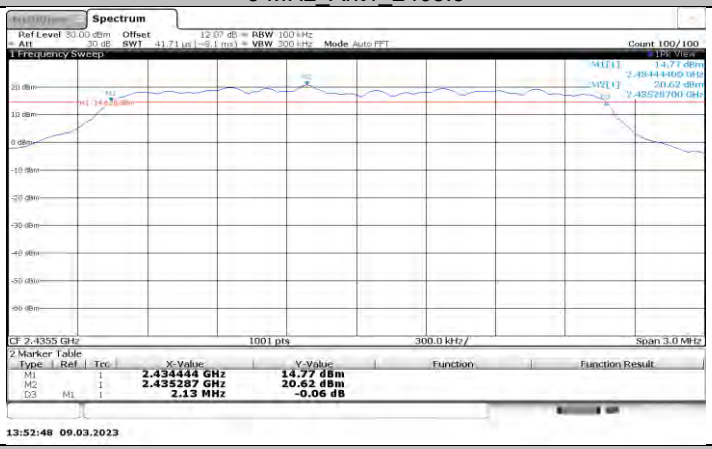


3 MHz_Ant0_2405.5



3 MHz_Ant1_2405.5



3 MHz_Ant0_2435.5

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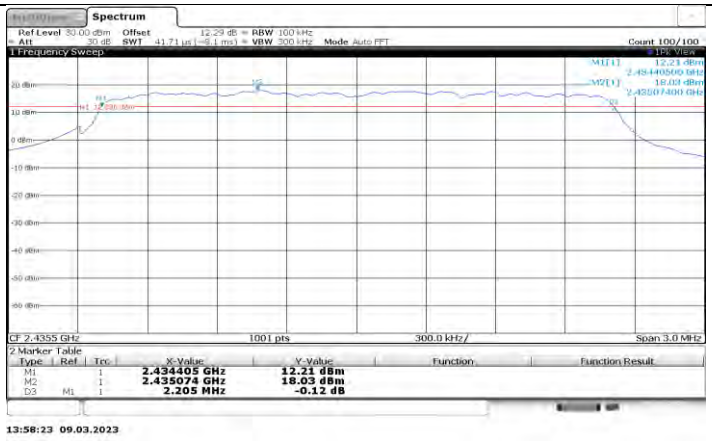
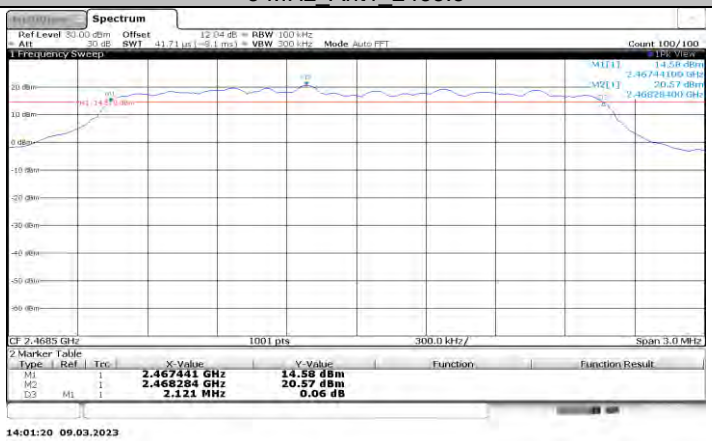
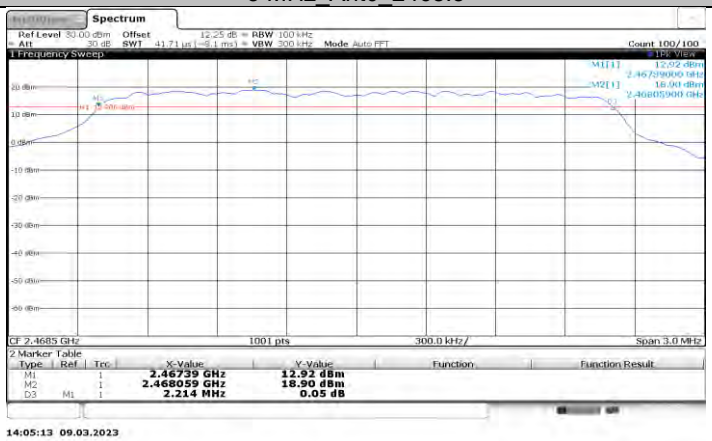


3 MHz_Ant1_2435.5



3 MHz_Ant0_2468.5



3 MHz_Ant1_2468.5

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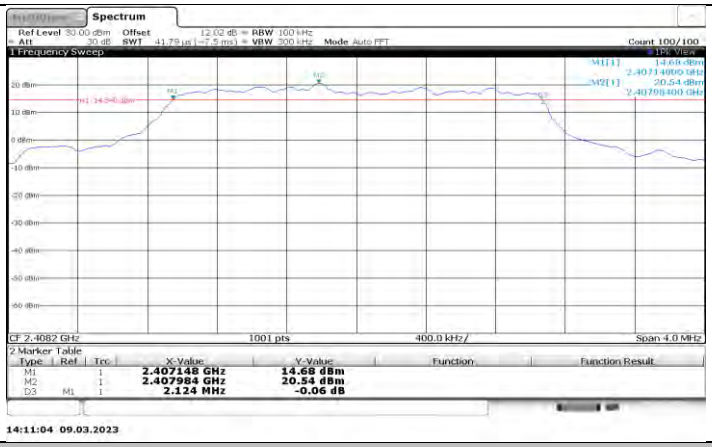
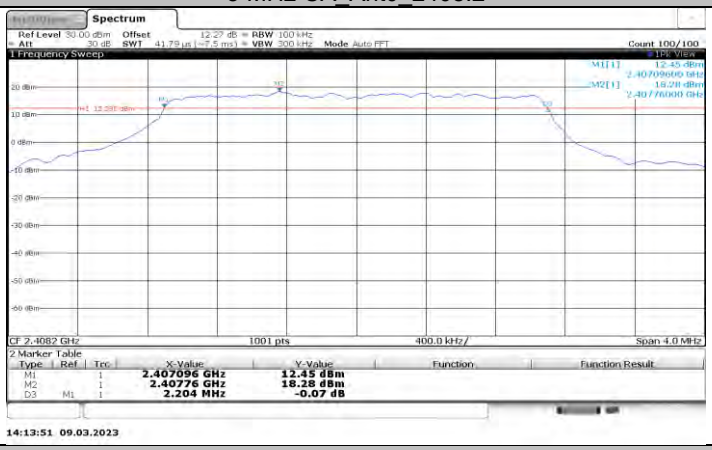
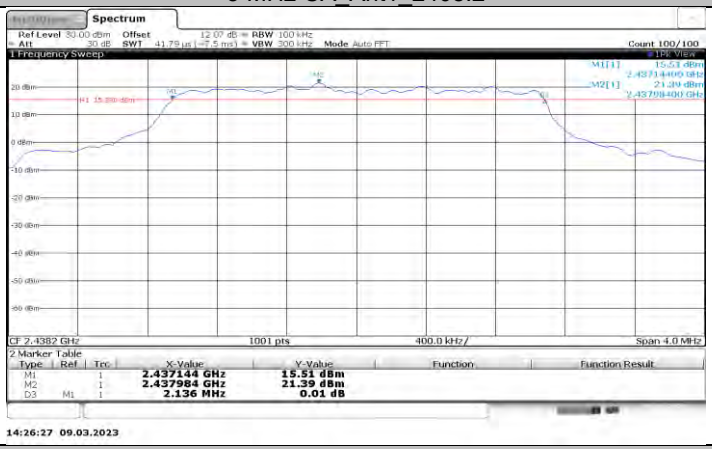


3 MHz CA_Ant0_2408.2



3 MHz CA_Ant1_2408.2



3 MHz CA_Ant0_2438.2

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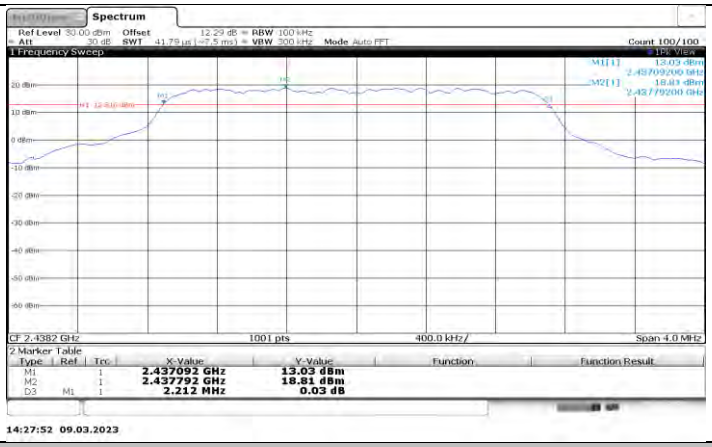
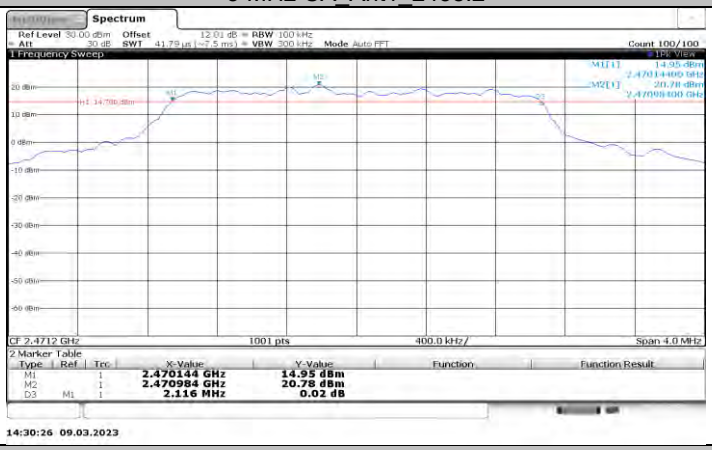
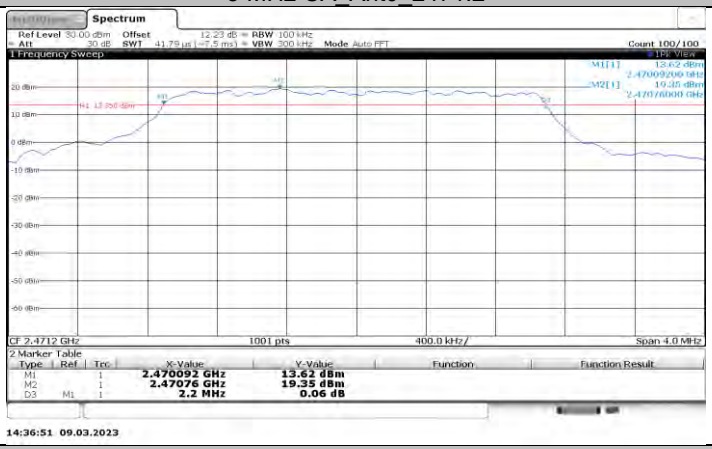


3 MHz CA_Ant1_2438.2



3 MHz CA_Ant0_2471.2



3 MHz CA_Ant1_2471.2

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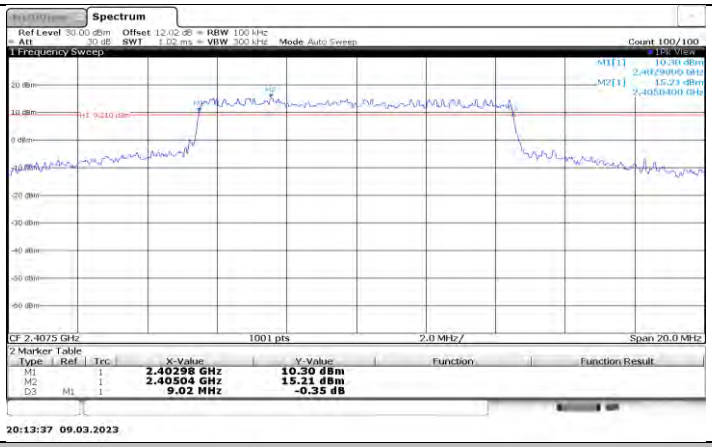
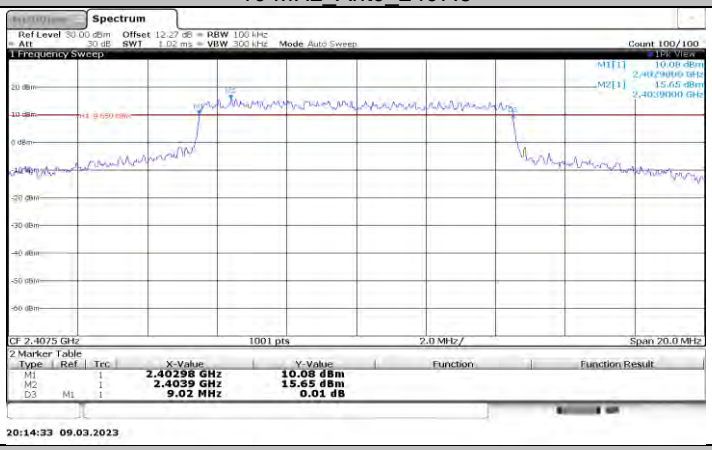
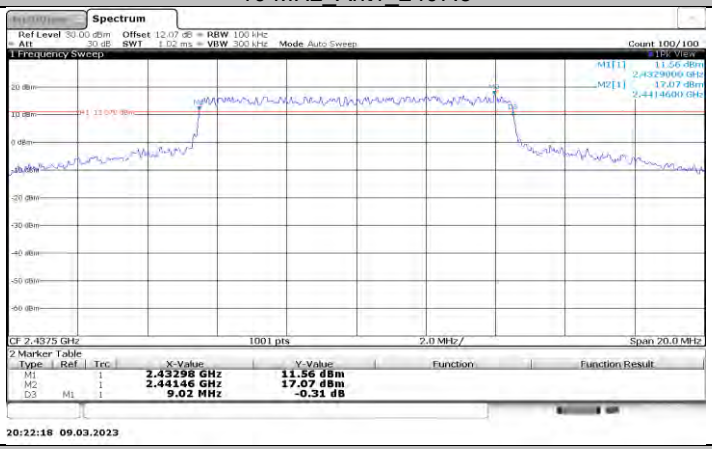


10 MHz_Ant0_2407.5



10 MHz_Ant1_2407.5



10 MHz_Ant0_2437.5

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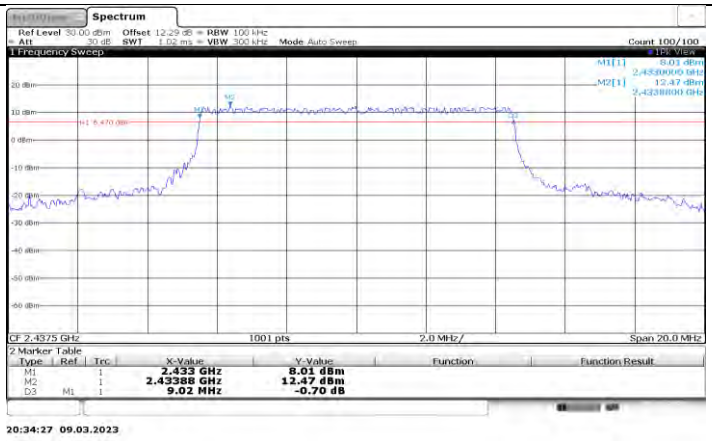
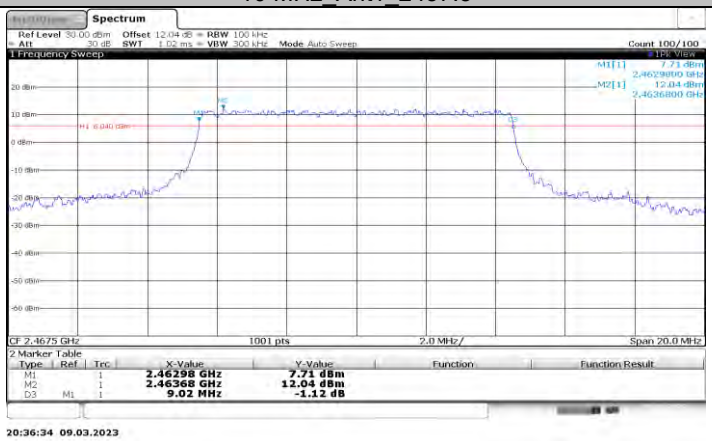
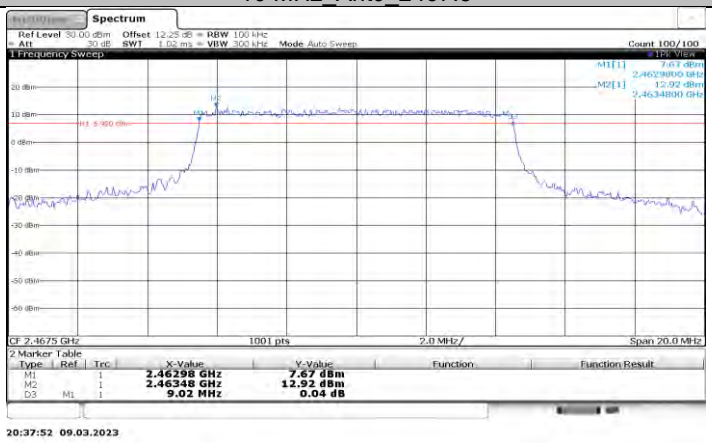


10 MHz_Ant1_2437.5



10 MHz_Ant0_2467.5



10 MHz_Ant1_2467.5

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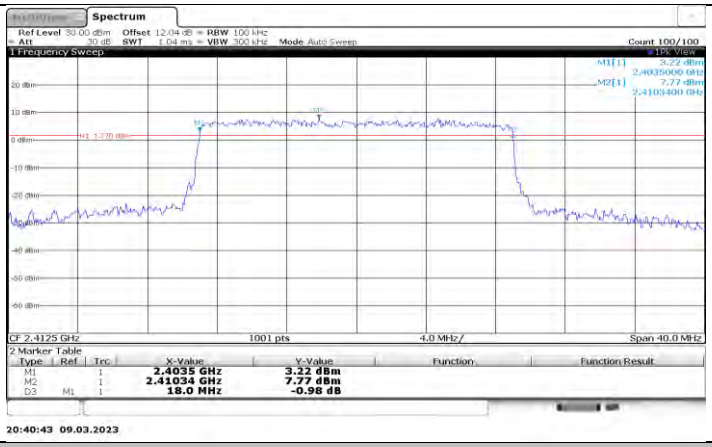
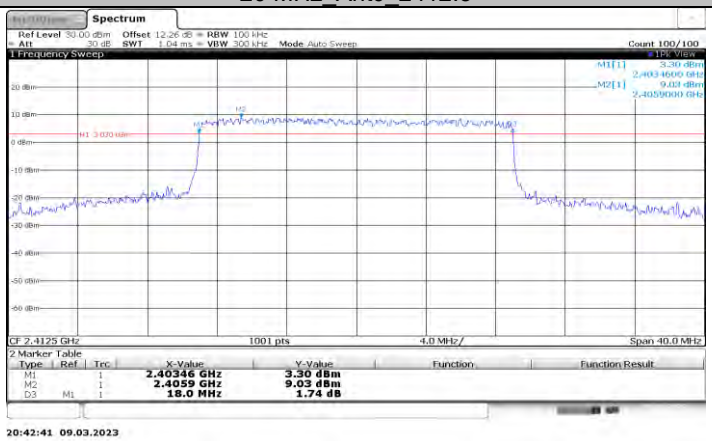
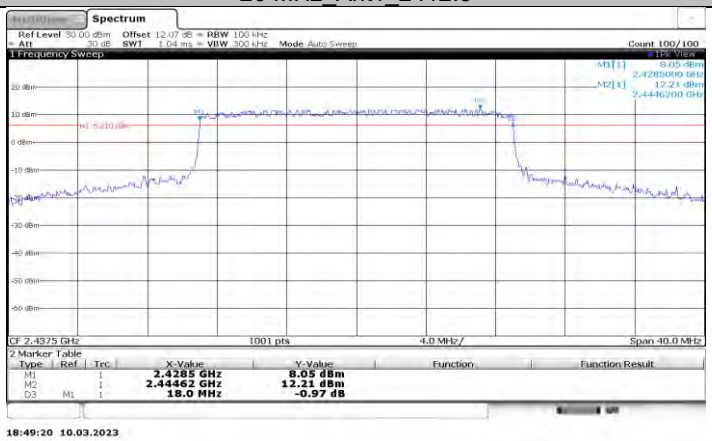


20 MHz_Ant0_2412.5



20 MHz_Ant1_2412.5



20 MHz_Ant0_2437.5

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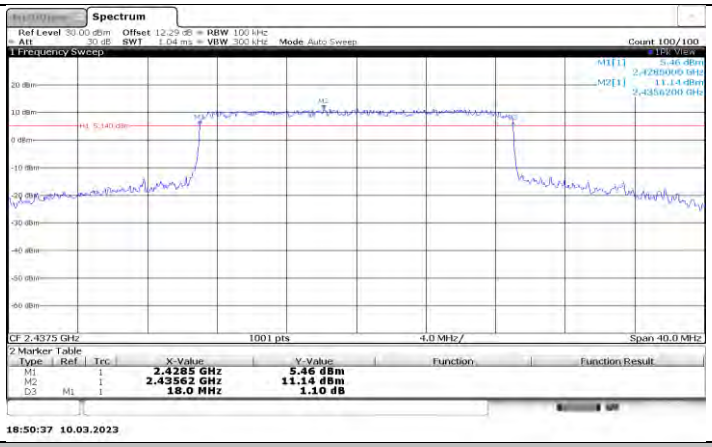
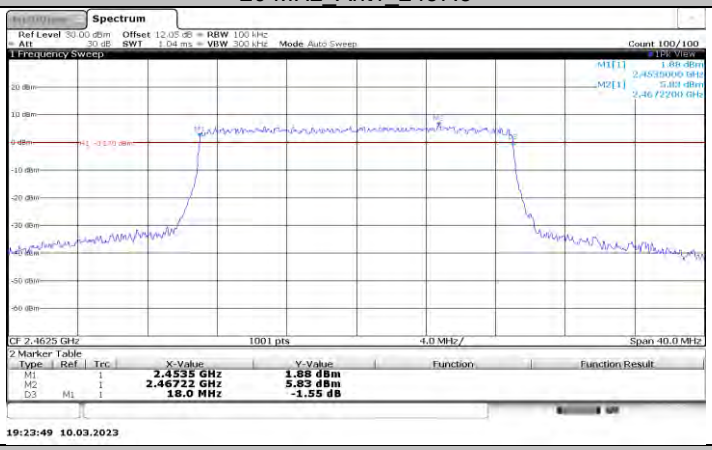
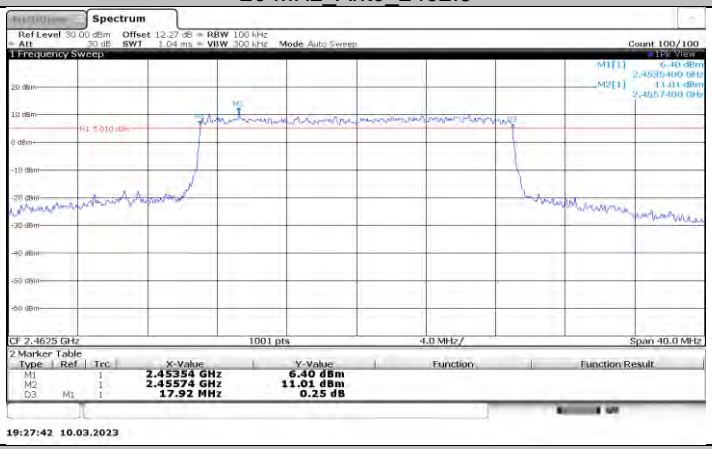


20 MHz_Ant1_2437.5



20 MHz_Ant0_2462.5



20 MHz_Ant1_2462.5

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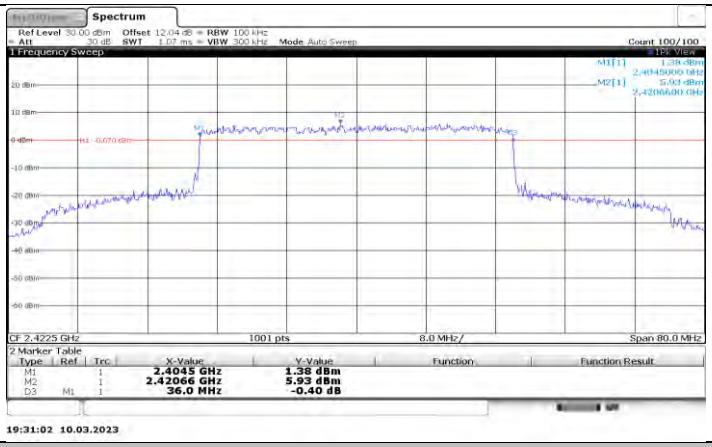
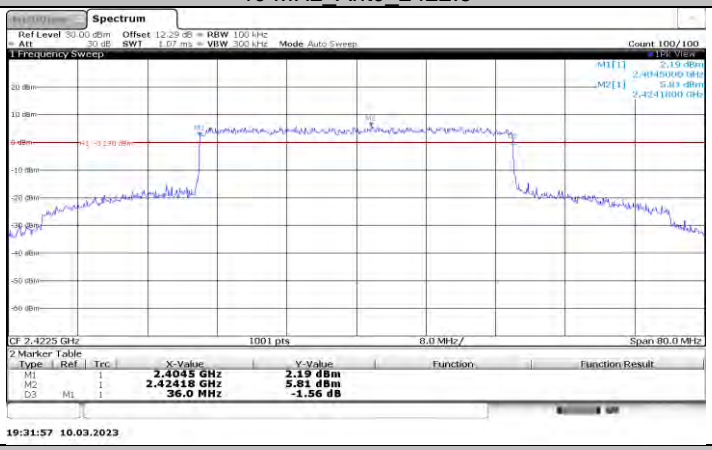
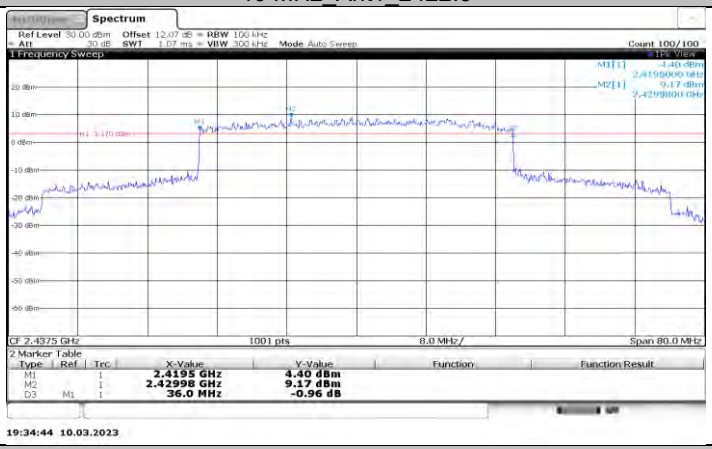


40 MHz_Ant0_2422.5



40 MHz_Ant1_2422.5



40 MHz_Ant0_2437.5

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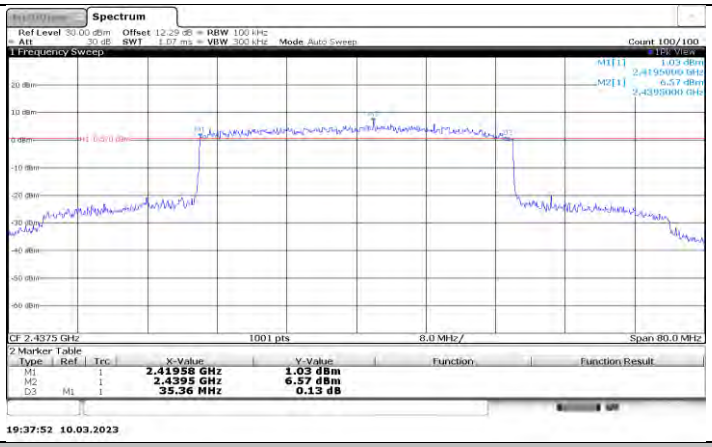
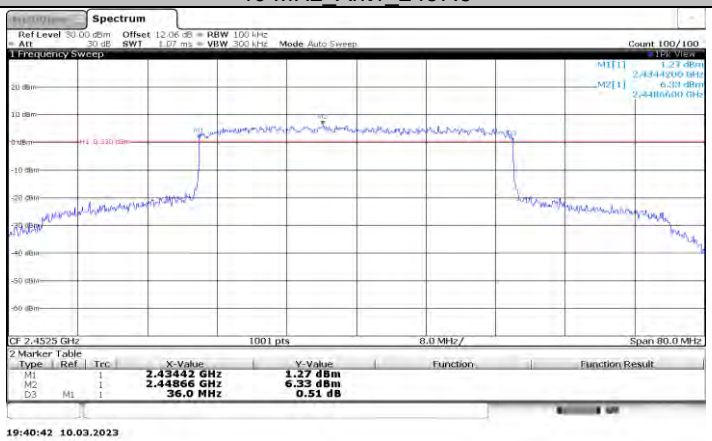
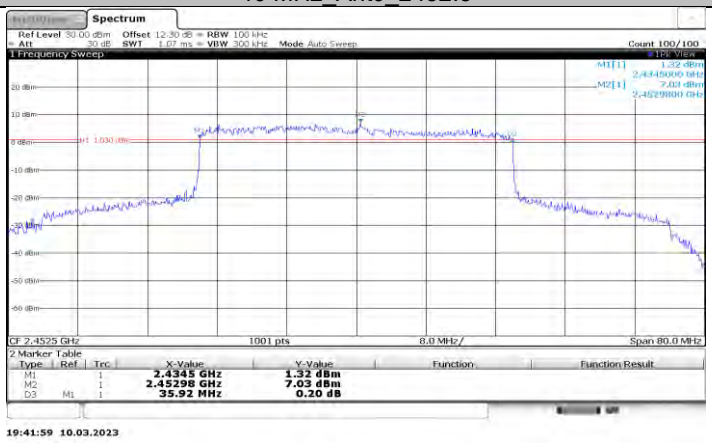


40 MHz_Ant1_2437.5



40 MHz_Ant0_2452.5



40 MHz_Ant1_2452.5

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

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11.2. APPENDIX B: OCCUPIED CHANNEL BANDWIDTH

11.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1.4 MHz	Ant0	2403.5	1.248	2402.8994	2404.1471	---	---
	Ant1	2403.5	1.381	2402.8021	2404.1828	---	---
	Ant0	2435.5	1.224	2434.9147	2436.1389	---	---
	Ant1	2435.5	1.38	2434.8121	2436.1921	---	---
	Ant0	2469.5	1.236	2468.9083	2470.1441	---	---
	Ant1	2469.5	1.346	2468.8175	2470.1638	---	---
1.4 MHz CA	Ant0	2405.12	1.241	2404.5308	2405.7722	---	---
	Ant1	2405.12	1.394	2404.4182	2405.8121	---	---
	Ant0	2437.12	1.238	2436.5335	2437.7711	---	---
	Ant1	2437.12	1.385	2436.4276	2437.8126	---	---
	Ant0	2471.12	1.222	2470.5313	2471.7536	---	---
	Ant1	2471.12	1.361	2470.4241	2471.7856	---	---

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
3 MHz	Ant0	2405.5	2.197	2404.3885	2406.5851	---	---
	Ant1	2405.5	2.201	2404.3915	2406.5928	---	---
	Ant0	2435.5	2.196	2434.3938	2436.5902	---	---
	Ant1	2435.5	2.21	2434.3875	2436.5971	---	---
	Ant0	2468.5	2.219	2467.3760	2469.5946	---	---
	Ant1	2468.5	2.24	2467.3592	2469.5997	---	---
3 MHz CA	Ant0	2408.2	2.227	2407.0709	2409.2979	---	---
	Ant1	2408.2	2.232	2407.0668	2409.2986	---	---
	Ant0	2438.2	2.219	2437.0767	2439.2955	---	---
	Ant1	2438.2	2.22	2437.0791	2439.2993	---	---
	Ant0	2471.2	2.247	2470.0511	2472.2985	---	---
	Ant1	2471.2	2.276	2470.0286	2472.3044	---	---

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
10 MHz	Ant0	2407.5	10.132	2402.2891	2412.4211	---	---
	Ant1	2407.5	9.642	2402.6010	2412.2426	---	---
	Ant0	2437.5	9.883	2432.5894	2442.4722	---	---
	Ant1	2437.5	9.274	2432.8556	2442.1297	---	---
	Ant0	2467.5	9.281	2462.8529	2472.1340	---	---
	Ant1	2467.5	9.253	2462.8771	2472.1302	---	---
20 MHz	Ant0	2412.5	17.847	2403.5535	2421.4001	---	---
	Ant1	2412.5	17.882	2403.5443	2421.4268	---	---
	Ant0	2437.5	17.985	2428.5194	2446.5043	---	---
	Ant1	2437.5	18.01	2428.5152	2446.5253	---	---
	Ant0	2462.5	17.904	2453.5648	2471.4684	---	---
	Ant1	2462.5	17.942	2453.4780	2471.4197	---	---
40 MHz	Ant0	2422.5	36.382	2404.2673	2440.6490	---	---
	Ant1	2422.5	36.192	2404.3356	2440.5280	---	---
	Ant0	2437.5	37.053	2419.1692	2456.2218	---	---
	Ant1	2437.5	36.025	2419.3978	2455.4224	---	---
	Ant0	2452.5	35.965	2434.5264	2470.4915	---	---
	Ant1	2452.5	35.836	2434.4102	2470.2461	---	---

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

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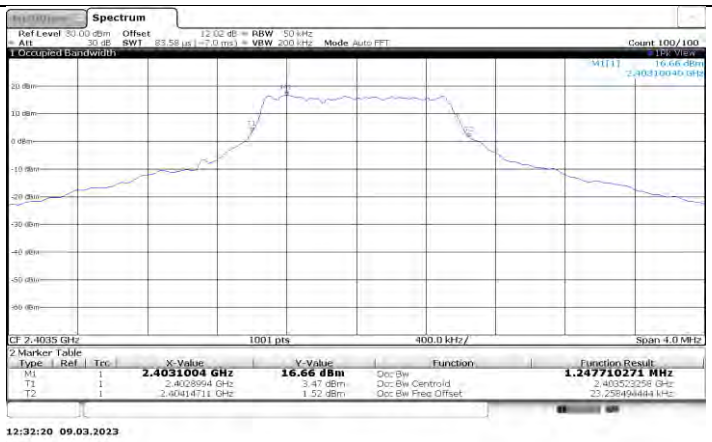
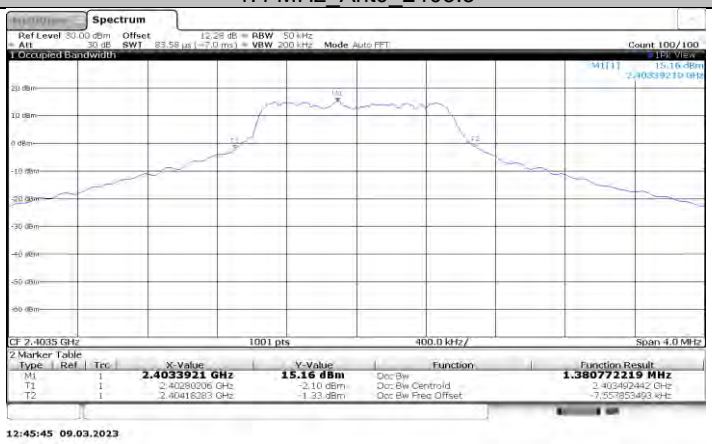
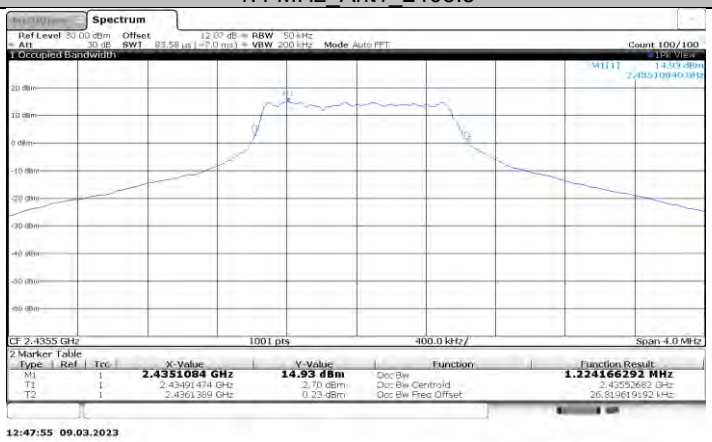
11.2.2. Test Graphs



1.4 MHz_Ant0_2403.5



1.4 MHz_Ant1_2403.5



1.4 MHz_Ant0_2435.5

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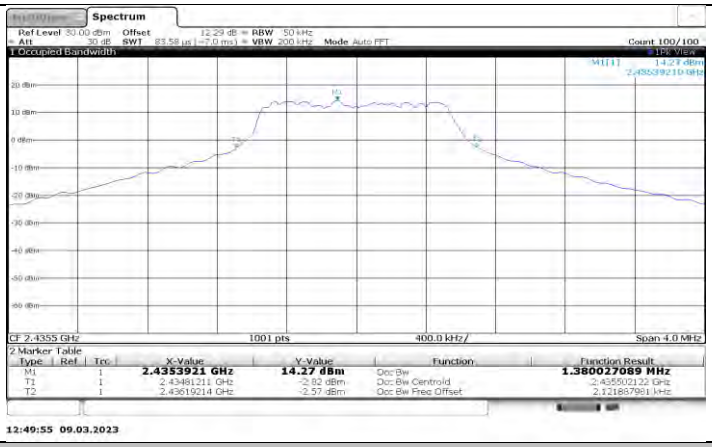
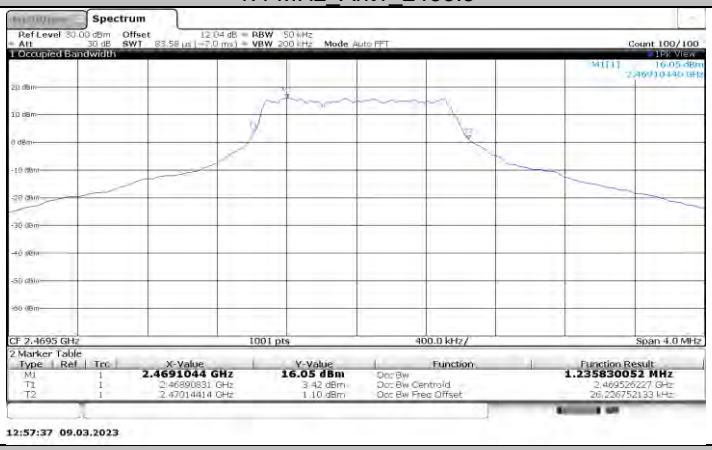
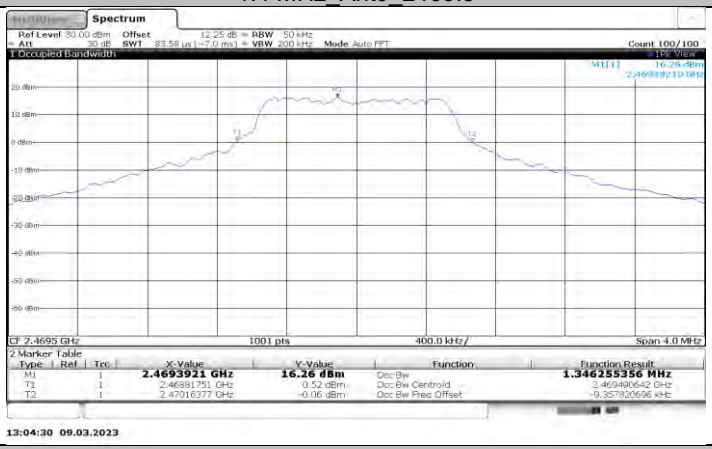


1.4 MHz_Ant1_2435.5



1.4 MHz_Ant0_2469.5



1.4 MHz_Ant1_2469.5

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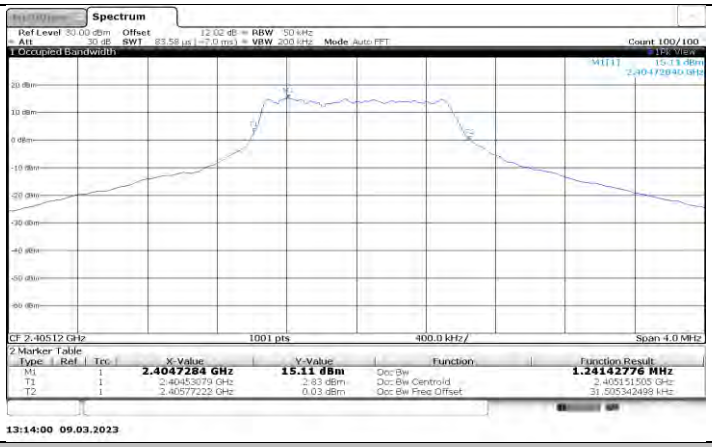
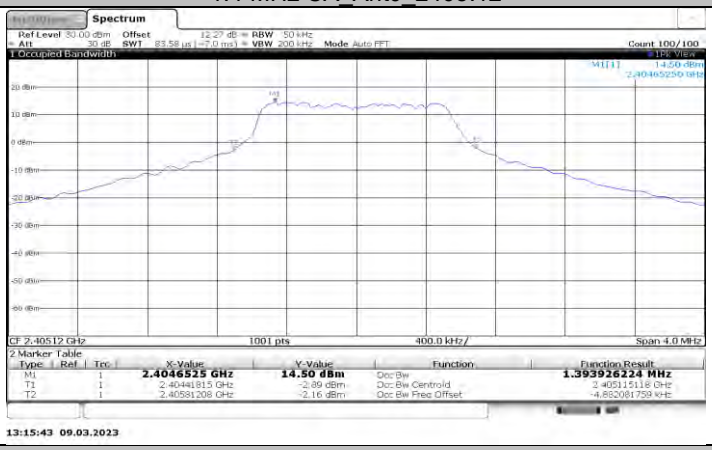
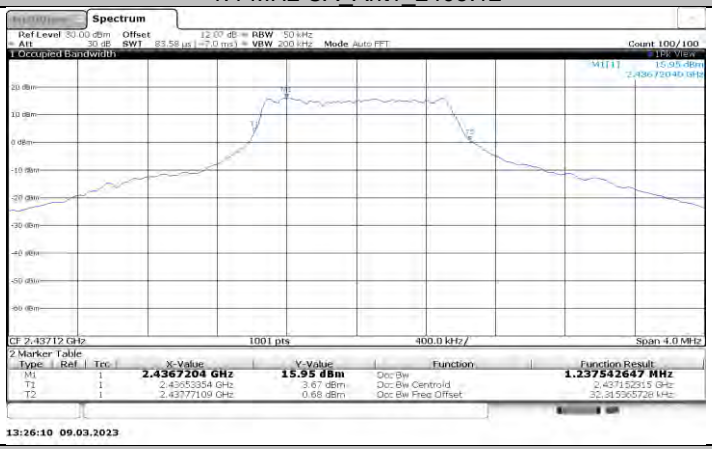


1.4 MHz CA_Ant0_2405.12



1.4 MHz CA_Ant1_2405.12



1.4 MHz CA_Ant0_2437.12

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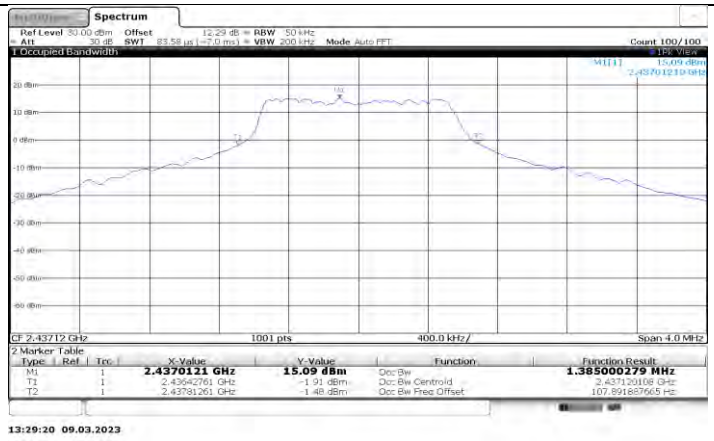
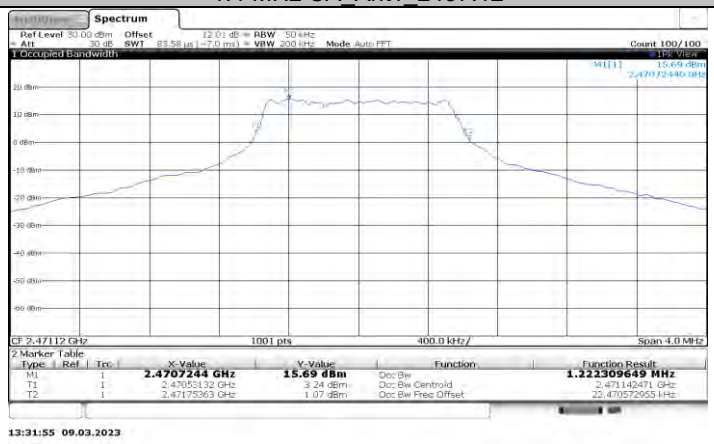
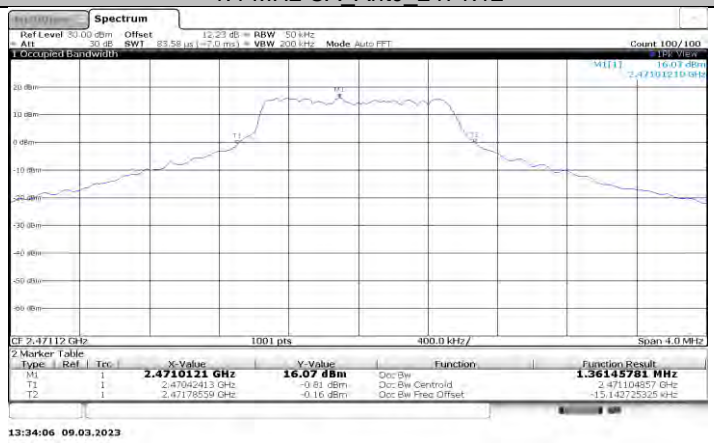


1.4 MHz CA_Ant1_2437.12



1.4 MHz CA_Ant0_2471.12



1.4 MHz CA_Ant1_2471.12

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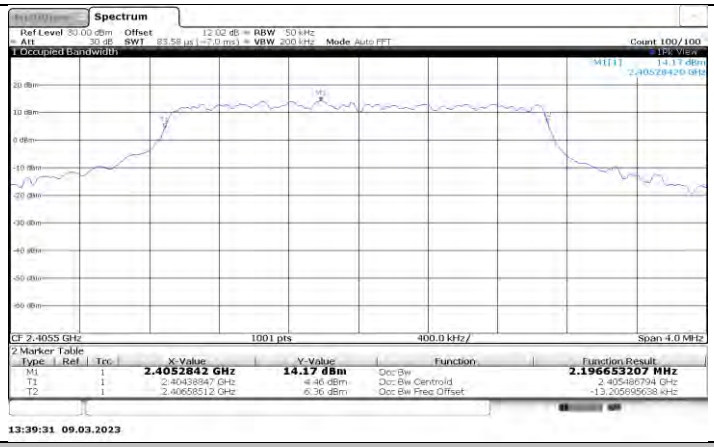
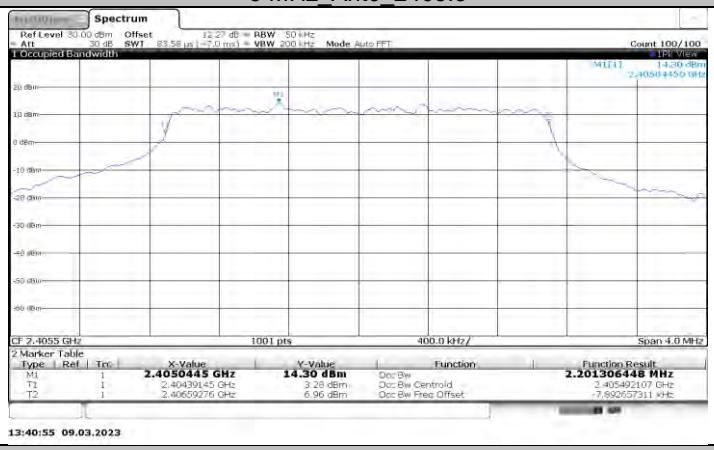
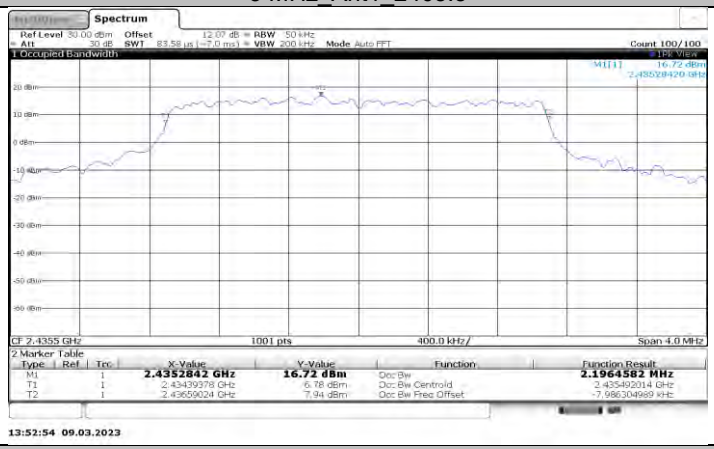


3 MHz_Ant0_2405.5



3 MHz_Ant1_2405.5



3 MHz_Ant0_2435.5

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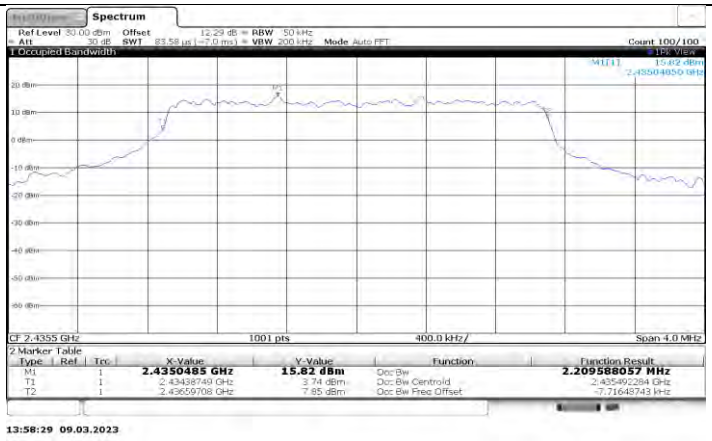
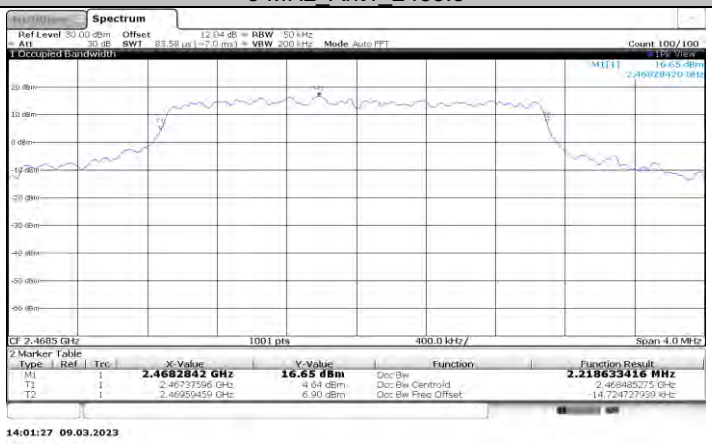
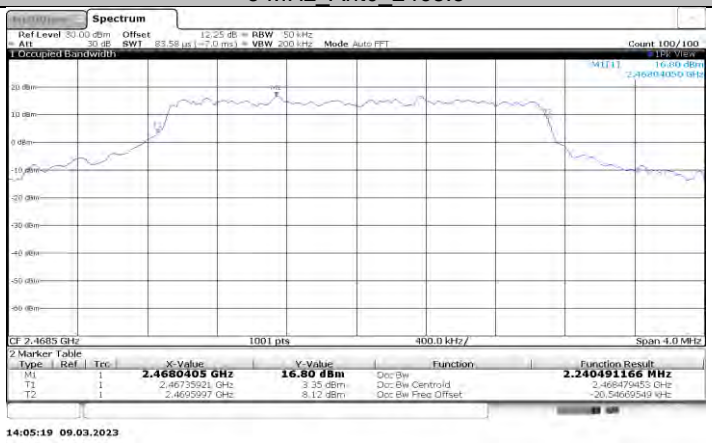


3 MHz_Ant1_2435.5



3 MHz_Ant0_2468.5



3 MHz_Ant1_2468.5

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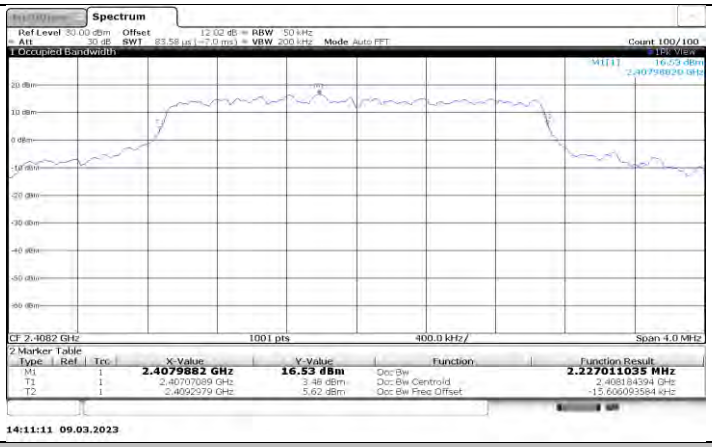
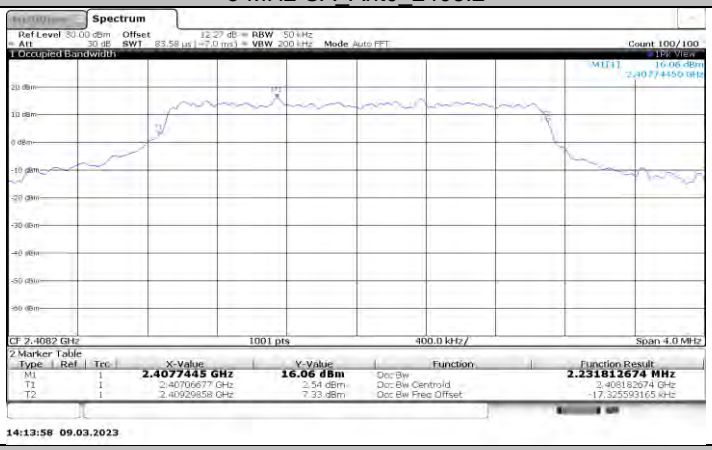
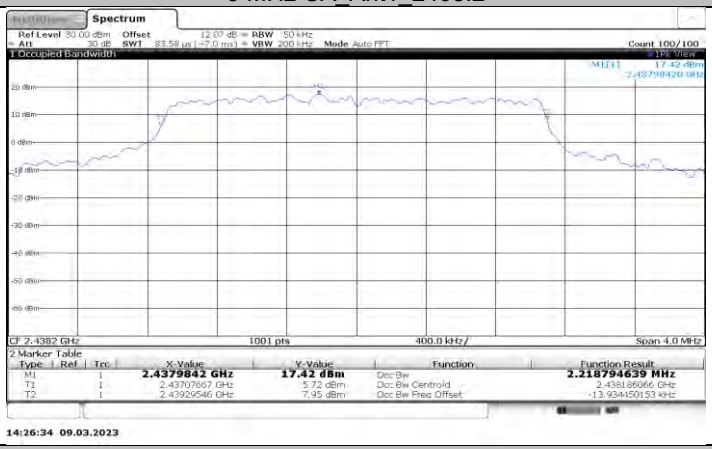


3 MHz CA_Ant0_2408.2



3 MHz CA_Ant1_2408.2



3 MHz CA_Ant0_2438.2

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