

TEST REPORT

Specific Wireless Devices

for

Products Name: VB 212 mini V Mount Battery

Model No.: VB 212

Report No.: SST2512E1948

Issued Date: 2025-12-15

Issued for

Shenzhen LC Co., Ltd

Room 201, Building 4, Gonglianfuji Innovation Park, No. 58, Ping'an Road, Dafu Community, Guanlan Street,
Longhua District, Shenzhen, China

Issued by

Dongguan Qiyang Testing Technology Co., Ltd.

Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China

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1. Basic Introduction

Applicant's name :	Shenzhen LC Co., Ltd	
Address	Room 201, Building 4, Gonglianfuji Innovation Park, No. 58, Ping'an Road, Dafu Community, Guanlan Street, Longhua District, Shenzhen, China	
Manufacturer's name	Shenzhen Leqi Innovation Co., Ltd.	
Address	Rooms 101, 701, 901, Building 4, Gonglianfuji Innovation Park, No. 58, Ping'an Road, Dafu Community, Guanlan Street, Longhua District, Shenzhen, China	
Factory's name	Shenzhen Leqi Innovation Co., Ltd.	
Address	Rooms 101, 701, 901, Building 4, Gonglianfuji Innovation Park, No. 58, Ping'an Road, Dafu Community, Guanlan Street, Longhua District, Shenzhen, China	
Products Name :	VB 212 mini V Mount Battery	
Model No :	VB 212	
Trade Mark	SmallRig x Caleb Pike	
Rating(s) :	Input: USB-C1 / USB-C2: DC 5V-3A, 9V-3A, 12V-3A, 15V-3A, 20V-5A, 28V-5A; 140W(Max) BP / D-Tap1 / D-Tap2: DC 16.8V-8A (Max) Output: USB-C1 / USB-C2: DC 5V-3A, 9V-3A, 12V-3A, 15V-3A, 20V-5A, 28V-5A; 140W(Max) USB-A:DC 5V-3A, 9V-3A, 12V-2.5A 30W (Max) BP:DC 14.76V-10A(Rated) D-Tap1 / D-Tap2: DC 14.76V, 8A(Rated) 8V-OUT: DC 8V-3A (Max) 12V-OUT: DC 12V-3A (Max) Battery Rated: DC 14.76V, 14.4Ah, 212.544Wh Rated Total Output: 212W(Max)	
Date of sample receipt :	2025-11-24	
Date of Test :	2025-11-24~2025-12-12	
Standard(s)	Article 2 paragraph 1 item(19) MIC Notice No.88 Annex 1 MIC Notice No.88 Annex 43	
Tested by (+signature) :	Connor Ma	
Check by (+signature) :	Davis Zhou	
Approved by (+signature) :	Tiger Chen	



2. General description

2.1. EUT description

Products Name	VB 212 mini V Mount Battery			
Model No.	VB 212			
Rating(s)	Input: USB-C1 / USB-C2: DC 5V-3A, 9V-3A, 12V-3A, 15V-3A, 20V-5A, 28V-5A; 140W(Max) BP / D-Tap1 / D-Tap2: DC 16.8V-8A (Max) Output: USB-C1 / USB-C2: DC 5V-3A, 9V-3A, 12V-3A, 15V-3A, 20V-5A, 28V-5A: 140W(Max) USB-A:DC 5V-3A, 9V-3A, 12V-2.5A 30W (Max) BP:DC 14.76V-10A(Rated) D-Tap1 / D-Tap2: DC 14.76V, 8A(Rated) 8V-OUT: DC 8V-3A (Max) 12V-OUT: DC 12V-3A (Max) Battery Rated: DC 14.76V, 14.4Ah, 212.544Wh Rated Total Output: 212W(Max)			
Software version.....	V0.00.30			
Hardware version	V0.00.02			
Operation frequency	2402MHz ~ 2480MHz			
Channel numbers	40			
Modulation technology	GFSK			
Antenna type	PCB antenna			
Antenna Gain	-6.02dBi			
Cable	Port(s)	Specified length in (m)	Attached during test	Shielded
	/	/	☐	☐

2.2.Serial model(s) and model difference

Main model(s)	VB 212
Serial model(s)	/
Model difference	/

2.3.Auxiliary equipment

Support equipment list			
Description	Manufacturer	Model No.	Serial No.
Power source	Lodestar	LPS6010D	/

PC	HP	Zhan 66P	/
UART	Tengfei	USB TO TTL	/
Support cable list			
Description	Specified length(m)	Shielded	Unshielded
/	/	☐	☐

2.4. Description of test modes and condition

Mode 1	Continuously transmit
Mode 2	Receiver status
Mode 3	Normal operation
Temperature(°C):	23.9
Humidity (%):	53
Atmospheric pressure:	100.9kPa
Condition	
Normal voltage	DC 14.76V
Low voltage (-10%)	DC 13.28V
High voltage (+10%)	DC 16.24V

2.5. Test environmental conditions

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.		
The climatic conditions during the tests were within the following limits:		
Ambient temperature	Relative humidity	Atmospheric pressure
15 °C ~ 35 °C	30 % ~ 60 %	86 kPa ~ 106 kPa
If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.		

2.6. Statement of Measurement Uncertainty

Test Item	Uncertainty
Uncertainty for Conducted emissions	3.31 dB

Uncertainty for Radiated emission (30 MHz to 1 GHz)	4.53 dB
Uncertainty for Radiated emission (above 1 GHz)	4.80 dB
RF power, conducted	1.08 dB
Power Spectral Density, Conducted	1.46 dB
Spurious Emissions, Conducted	2.94 dB
Occupied bandwidth	57.74kHz
Measurement Uncertainty Decision Rule Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.	

2.7. Report modification record

Report No.	Issue Date	Description
SST2512E1948	2025-12-15	Original Report

2.8. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:	
CNAS	Registration No.: L17883
Location	Dongguan Qiyang Testing Technology Co., Ltd. Room 101-1, Building 1, No.19, Tianxin Butterfly 1st Road, Huangjiang, Dongguan, Guangdong, China

2.9. Additional Instruction

Test Software	RFTTest_0901_boxed
Power level setup	Default

2.10. Other information

The laboratory responsible for all the information provided in the report, except those information provided by the applicant.

The applicant shall fully responsible for the information they provided.

The report would be invalid without a stamp of test laboratory and the signatures of compiler and approver.

The laboratory has not been responsible for the sampling stage; the test report merely corresponds to the test sample received.

Any objection to the test report shall submitted to the test laboratory within 15 days from the date of receipt of the report.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3. Verdict summary section

Requirement – Test case	Result
RF shielding method	Pass
Tolerance of Frequency	Pass
Antenna Power	Pass
Occupied bandwidth	Pass
Spurious Emissions Intensity	Pass
Secondary radiated emissions	Pass
Interference suppression	Pass
Transmission Antenna Gain	Pass
Transmission Radiation Angle Width(3dB Beam width)	N/A, EIRP less than 12.14 dbm

Test case verdicts	
- Test case does not apply to the test object	N/A
- Test object does meet the requirement	P (Pass)
- Test object does not meet the requirement	F (Fail)

4. List of Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
RF conducted					
Spectrum Analyzer	keysight	N9020A	MY51280659	2025/04/16	2026/04/16
Signal Generator	Agilent	N5181A	MY48180054	2025/04/16	2026/04/16
Signal Generator	keysight	N5172B	MY57281610	2025/04/16	2026/04/16
Spectrum Analyzer	R&S	FSV40-N	101791	2025/04/16	2026/04/16
Wideband Radio Communication Tester	R&S	CMW500	123123	2025/04/16	2026/04/16
RF Switch Box	TST PASS	TST V2	/	2025/04/16	2026/04/16
Thermohygrometer	KTJ	TA218A	879032	2025/04/20	2026/04/20
DC power supply	Lodestar	LPS6010D	LP2303371	/	/
Temperature and humidity chamber	Guangdong fenghe	FH-TH-1000	FH24032017	2025/04/26	2026/04/26
Test Software	TST PASS	TST PASS	V2.0	/	/

Calibration Information (Article 24-2, Paragraph 4 of the Radio Act)

	a. Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18-1 of the Radio Act
	b. Calibration conducted based on the regulations of Articles 135 or 144 of the measurement Act
✓	c. Calibration conducted in foreign countries, which is equivalent to calibration conducted by the NICT or a designated calibration agency under Article 102-18-1 of the Radio Act
	d. Calibration, etc. conducted by using measuring instruments and other facilities listed at the bottom of appended table 3 of the Radio Act, which is to have been calibrated as described in (a)through (c) above

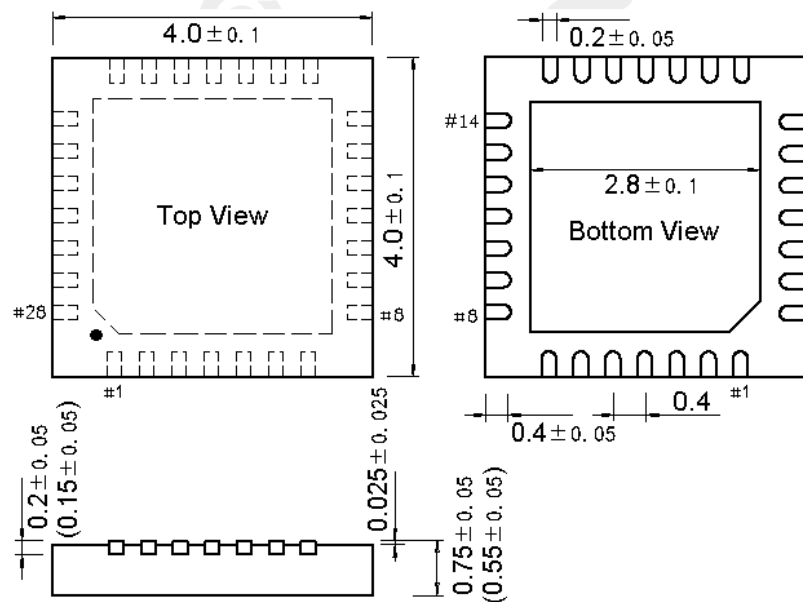
5. Technical Requirement and Measurement Data

5.1. Cabinet

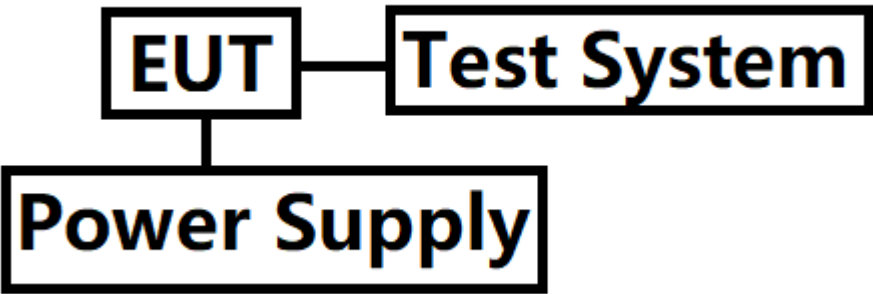
Requirement:

The high-frequency section and modulation section (except for the antenna system) shall not be capable of being opened easily

Shielding method: The radio part was embedded on board with 28pin, with 0.4mm pitch of lead pin



5.2. Antenna Power

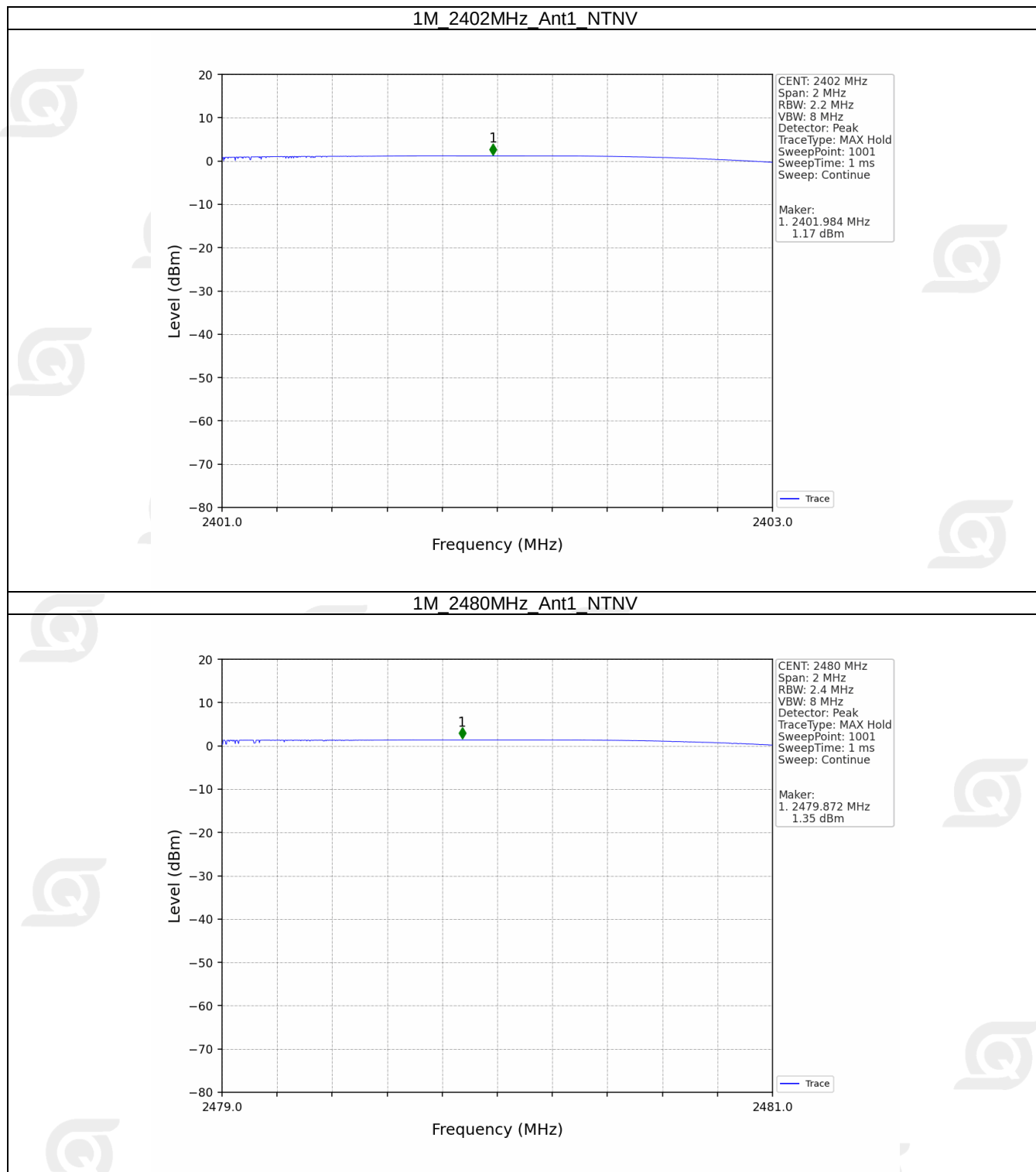
Limit
10mW
Tolerance: +20%
Block diagram of Test Setup
 <pre> graph LR PS[Power Supply] --- EUT[EUT] EUT --- TS[Test System] </pre>
Test Procedure
Test Frequency: centre Frequency Span: Max allowed to capture the trace RBW: >Occupied Bandwidth VBW: =RBW Sweep Time: Auto Detector: Peak Trace: Max hold
Verdict
Pass

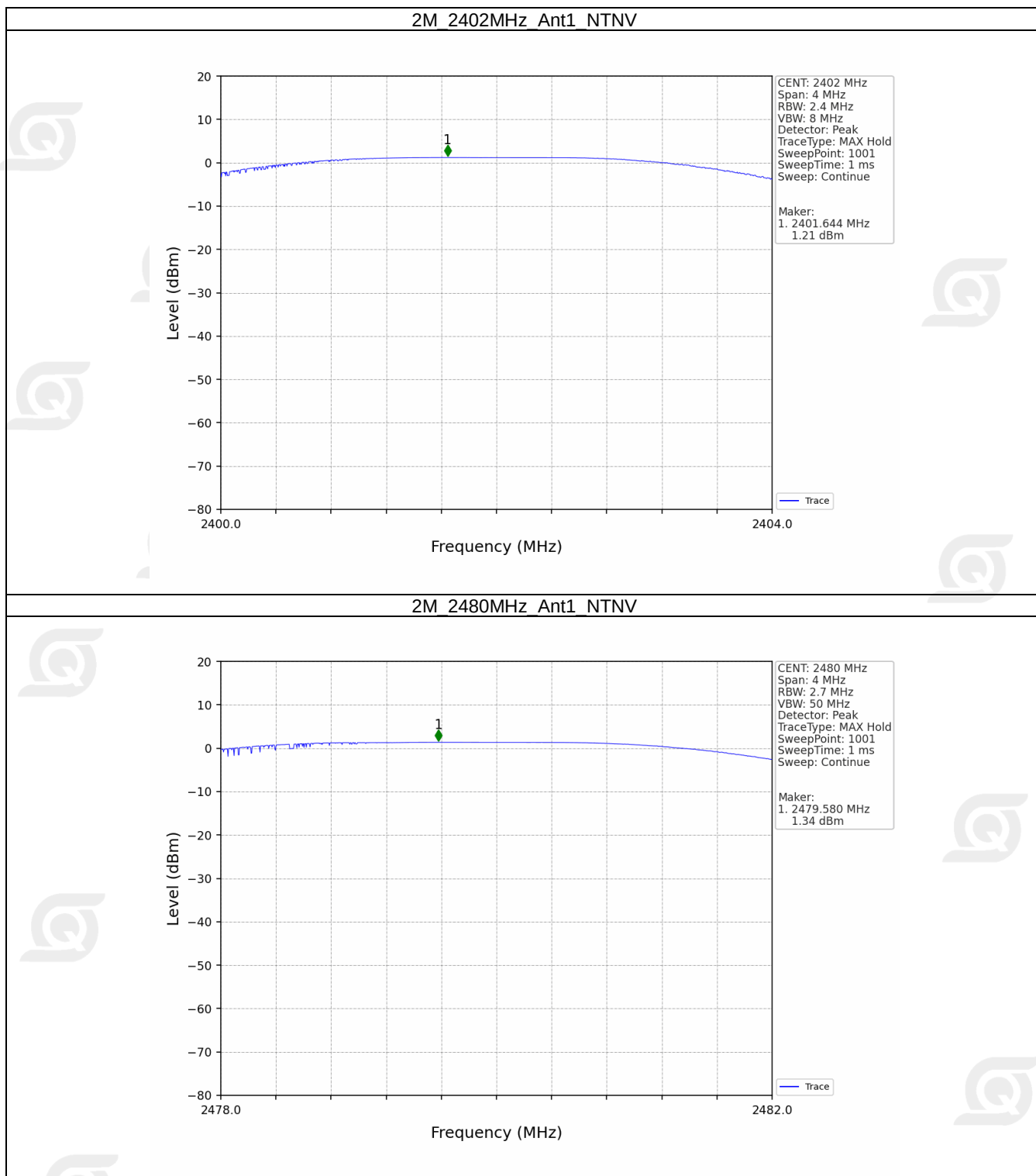
5.2.1. Test Result

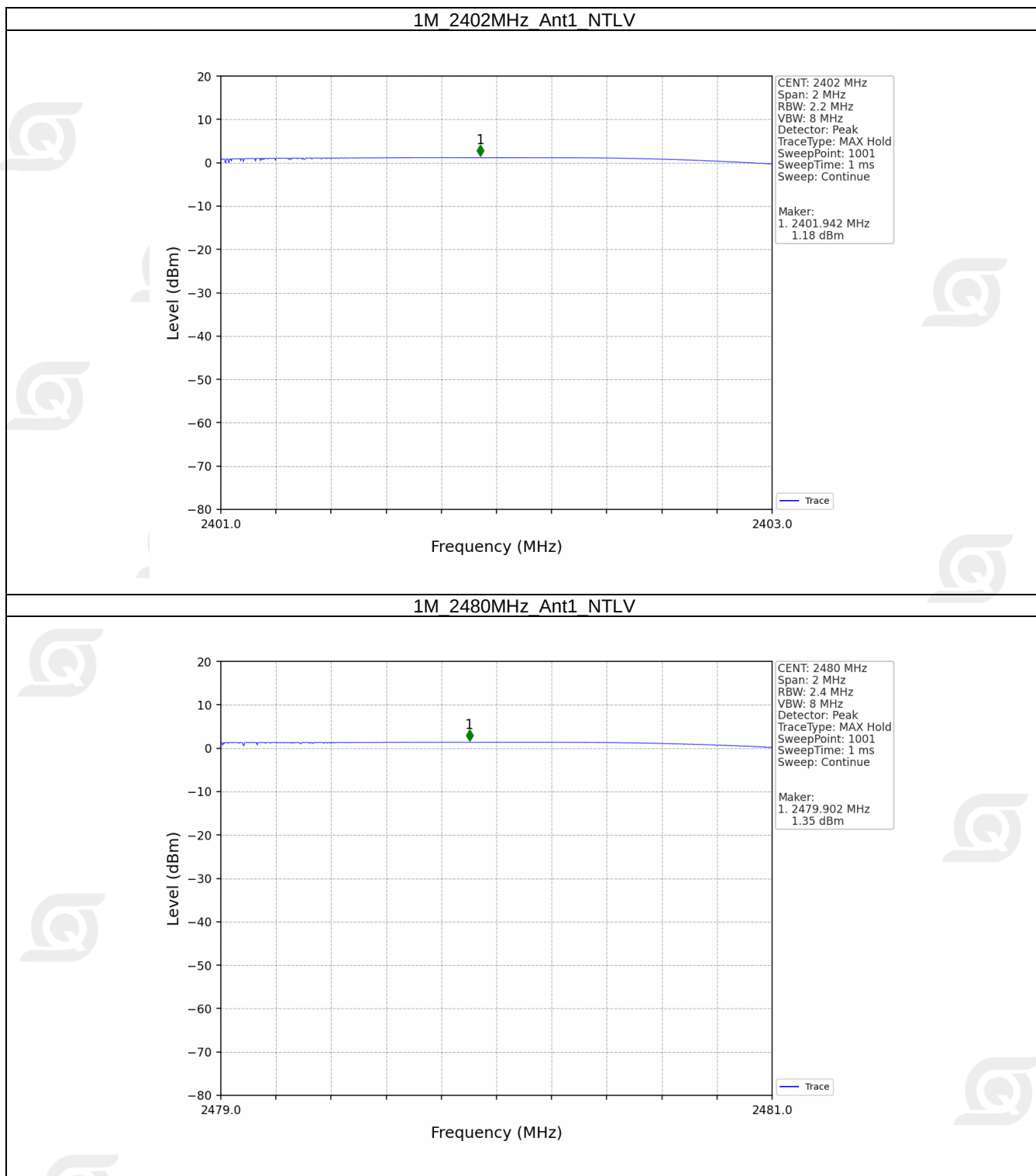
ENV	Mode	TX Type	Frequency (MHz)	Antenna Power			Nominal Power (mW)	Tolerance (%)		Verdict
				Measured (dBm)	Measured (mW)	Limit		Measured	Limit	
NTNV	1M	SISO	2402	1.17	1.31	<=10.00	1.50	-12.72	<=20	Pass
			2480	1.35	1.36	<=10.00	1.50	-9.03	<=20	Pass
	2M	SISO	2402	1.21	1.32	<=10.00	1.50	-11.91	<=20	Pass
			2480	1.34	1.36	<=10.00	1.50	-9.24	<=20	Pass
NTLV	1M	SISO	2402	1.18	1.31	<=10.00	1.50	-12.52	<=20	Pass
			2480	1.35	1.36	<=10.00	1.50	-9.03	<=20	Pass
	2M	SISO	2402	1.2	1.32	<=10.00	1.50	-12.12	<=20	Pass
			2480	1.34	1.36	<=10.00	1.50	-9.24	<=20	Pass
NTHV	1M	SISO	2402	1.17	1.31	<=10.00	1.50	-12.72	<=20	Pass
			2480	1.35	1.36	<=10.00	1.50	-9.03	<=20	Pass
	2M	SISO	2402	1.21	1.32	<=10.00	1.50	-11.91	<=20	Pass
			2480	1.34	1.36	<=10.00	1.50	-9.24	<=20	Pass

ENV	Mode	TX Type	Frequency (MHz)	ANT	Gain (dBi)	EIRP (dBm)		Verdict
						Result	Limit	
NTNV	1M	SISO	2402	1	-6.02	-4.85	<=12.14	Pass
			2480	1	-6.02	-4.67	<=12.14	Pass
	2M	SISO	2402	1	-6.02	-4.81	<=12.14	Pass
			2480	1	-6.02	-4.68	<=12.14	Pass
NTLV	1M	SISO	2402	1	-6.02	-4.84	<=12.14	Pass
			2480	1	-6.02	-4.67	<=12.14	Pass
	2M	SISO	2402	1	-6.02	-4.82	<=12.14	Pass
			2480	1	-6.02	-4.68	<=12.14	Pass
NTHV	1M	SISO	2402	1	-6.02	-4.85	<=12.14	Pass
			2480	1	-6.02	-4.67	<=12.14	Pass
	2M	SISO	2402	1	-6.02	-4.81	<=12.14	Pass
			2480	1	-6.02	-4.68	<=12.14	Pass

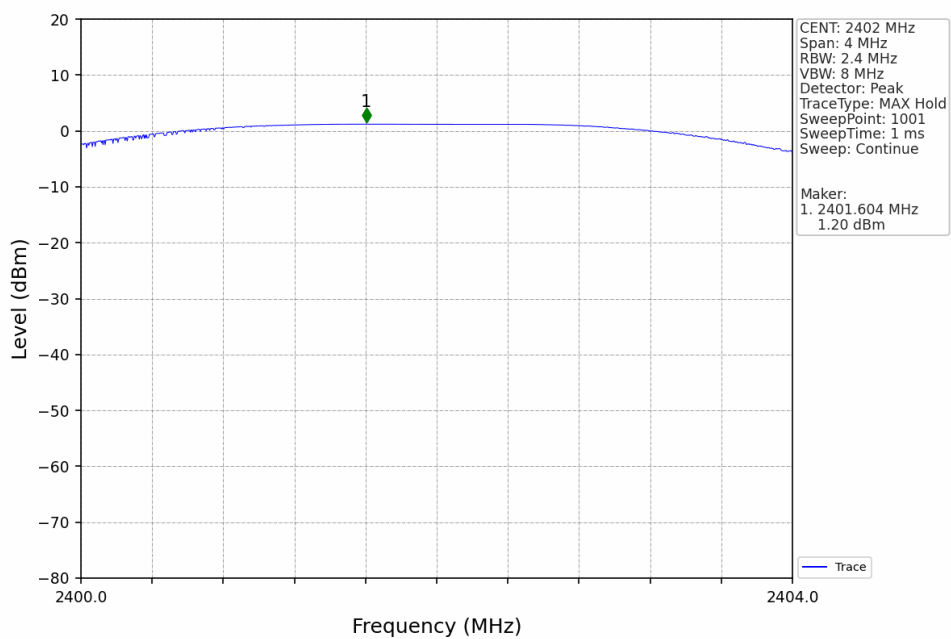
Test Graph



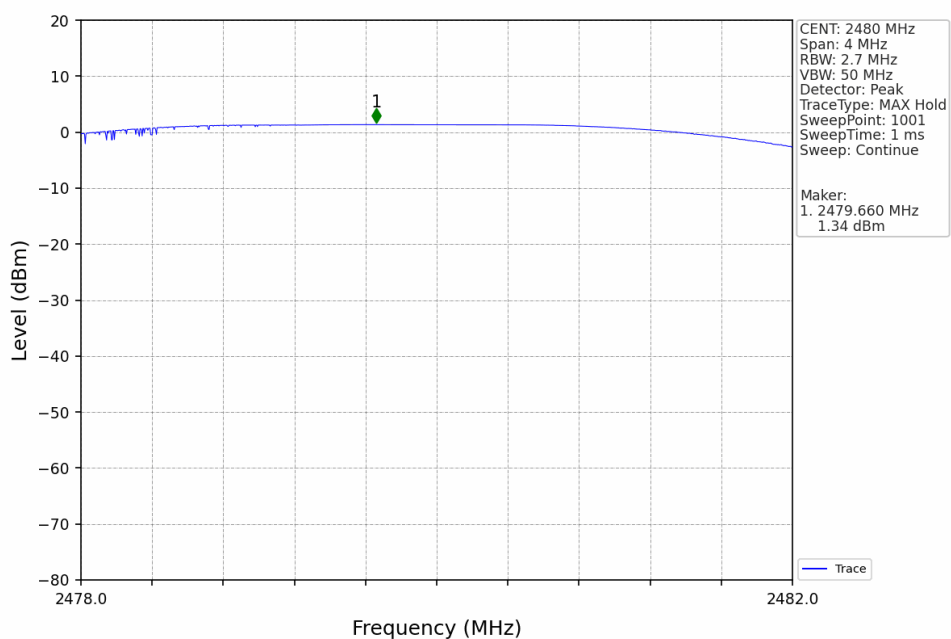


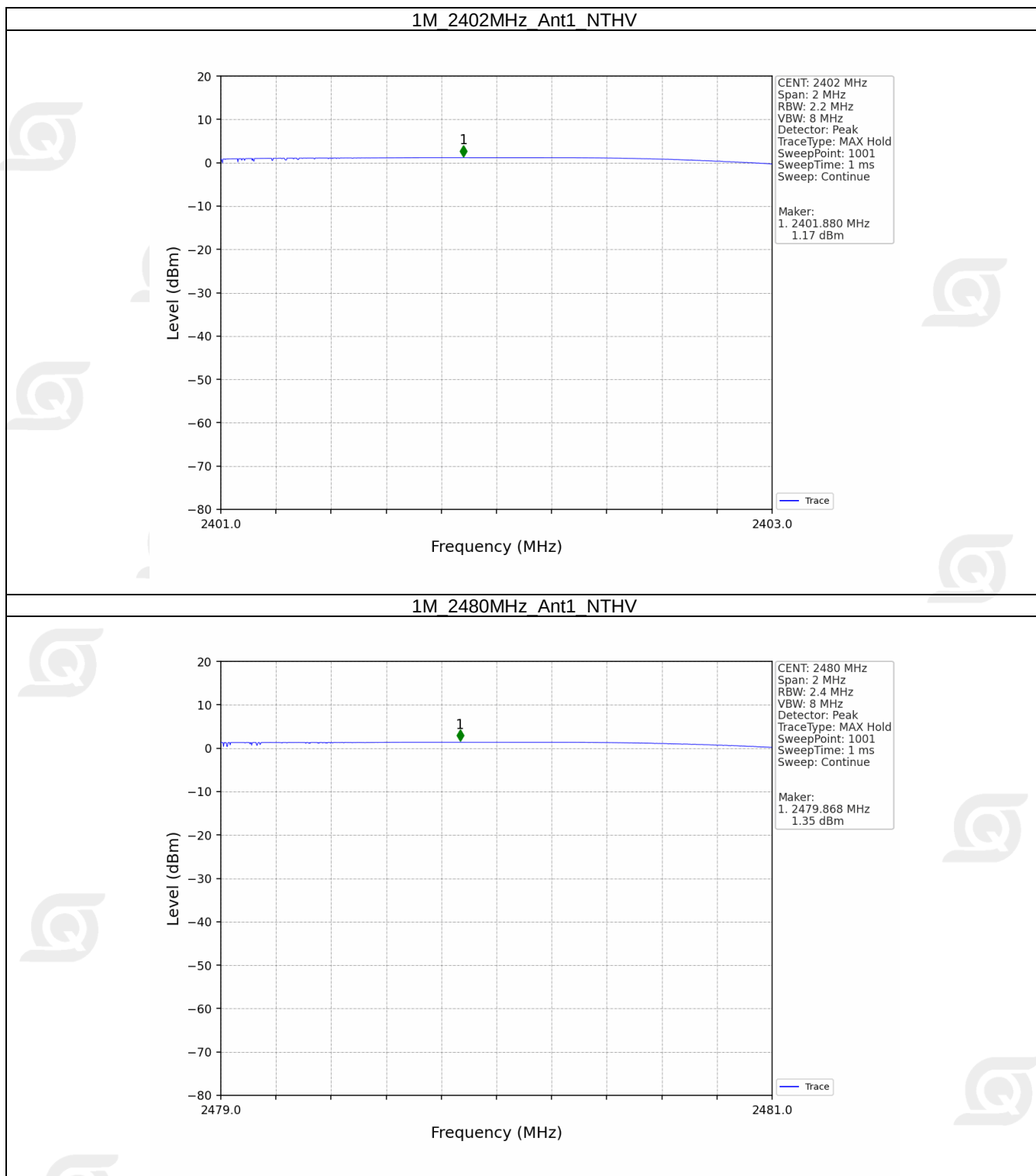


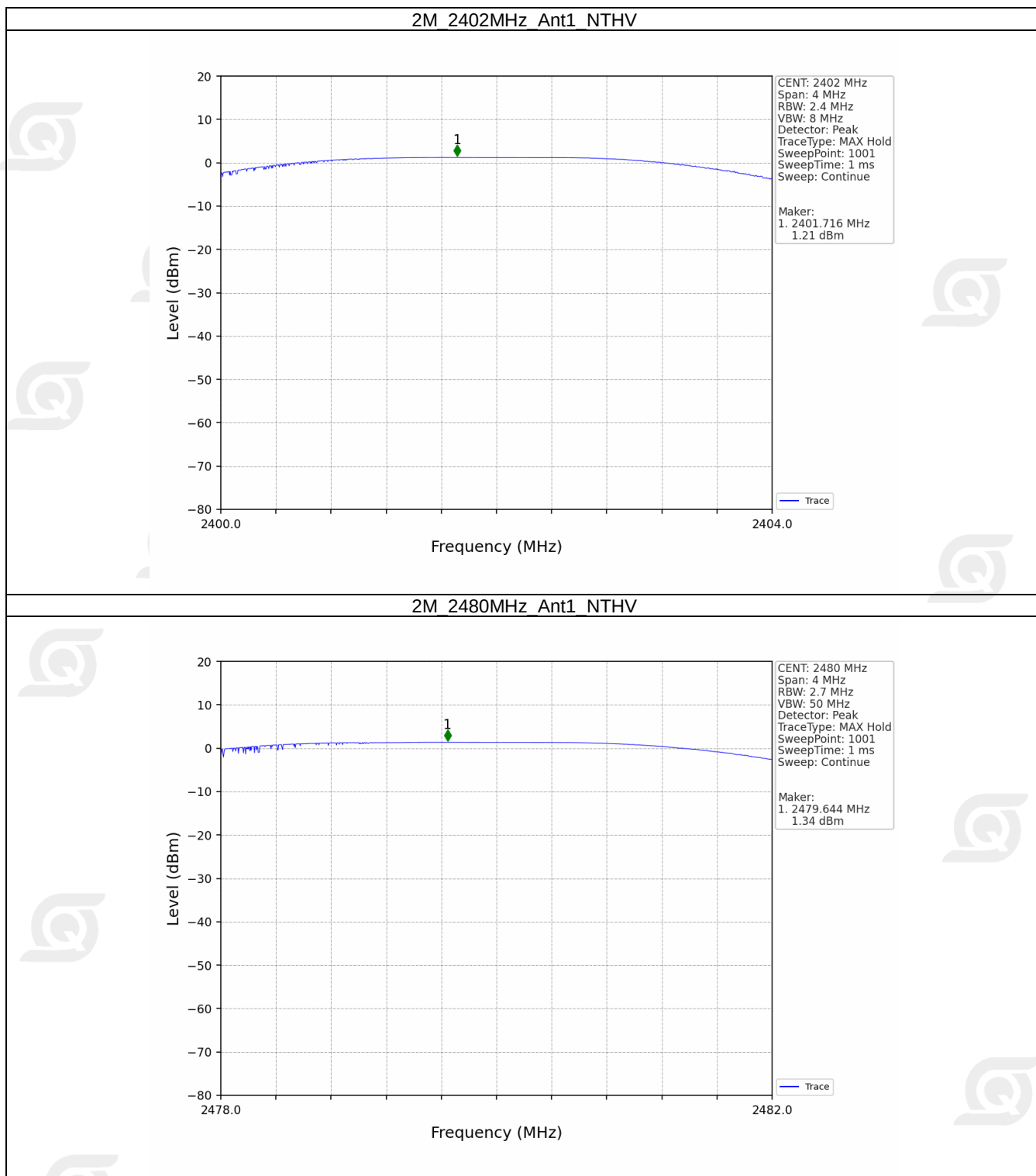
2M 2402MHz Ant1 NTLV



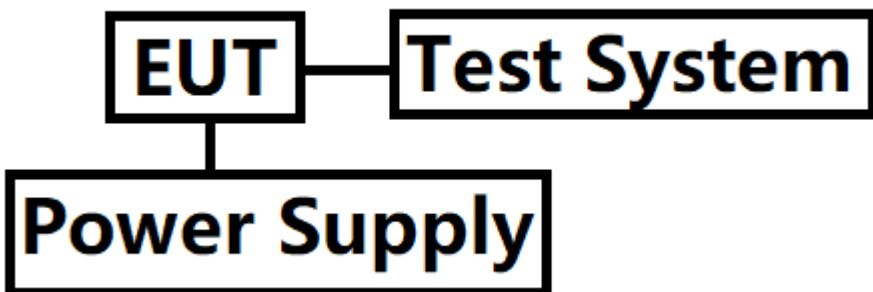
2M 2480MHz Ant1 NTLV







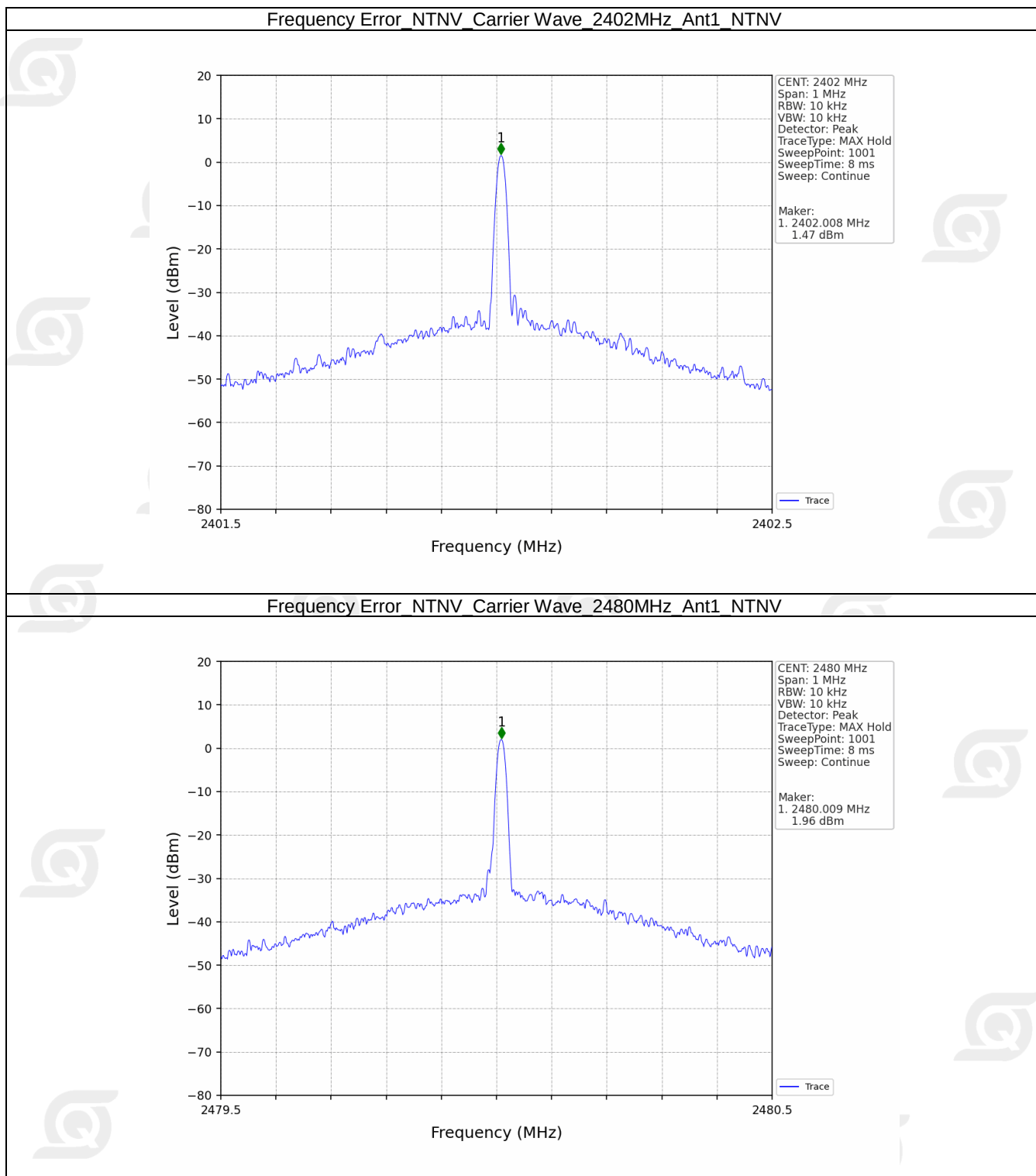
5.3. Frequency Tolerance

Limit
$\pm 50 \times 10^{-6}$
Block diagram of Test Setup
 <pre> graph TD PS[Power Supply] --- EUT[EUT] EUT --- TS[Test System] </pre>
Test Procedure
Test Frequency: centre Frequency Span: 1MHz RBW: 10kHz VBW: =RBW Sweep Time: Auto Detector: Peak Trace: Max hold While the trace is stabilized, mark the highest transmit frequency
Verdict
Pass

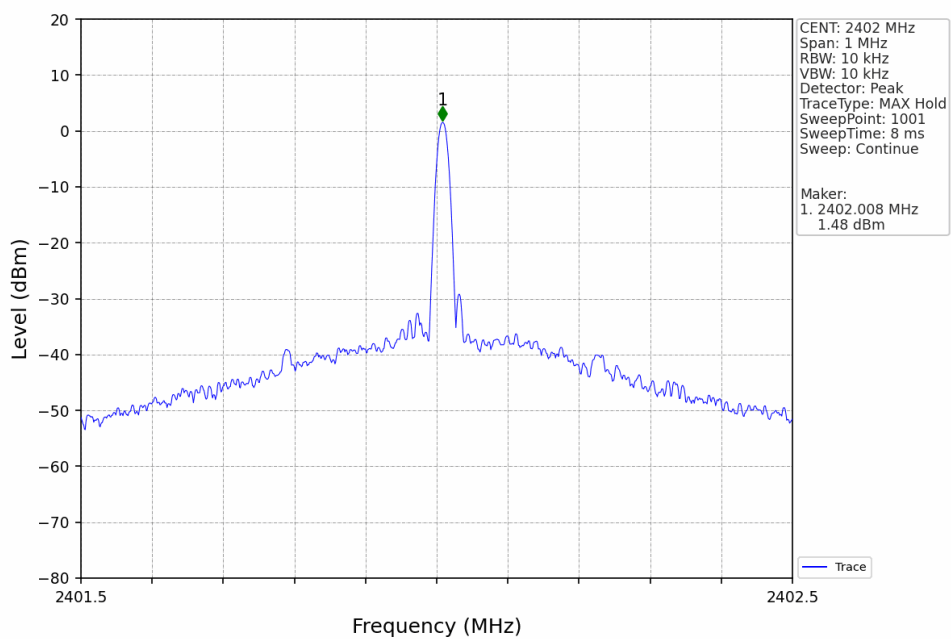
5.3.1. Test Result

Ant1							
ENV	Mode	TX Type	Frequency (MHz)	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
					Result	Limit	
NTNV	Carrier Wave	SISO	2402	2402.008	3.33	-50 to 50	Pass
			2480	2480.009	3.63	-50 to 50	Pass
NTLV	Carrier Wave	SISO	2402	2402.008	3.33	-50 to 50	Pass
			2480	2480.009	3.63	-50 to 50	Pass
NTHV	Carrier Wave	SISO	2402	2402.008	3.33	-50 to 50	Pass
			2480	2480.009	3.63	-50 to 50	Pass

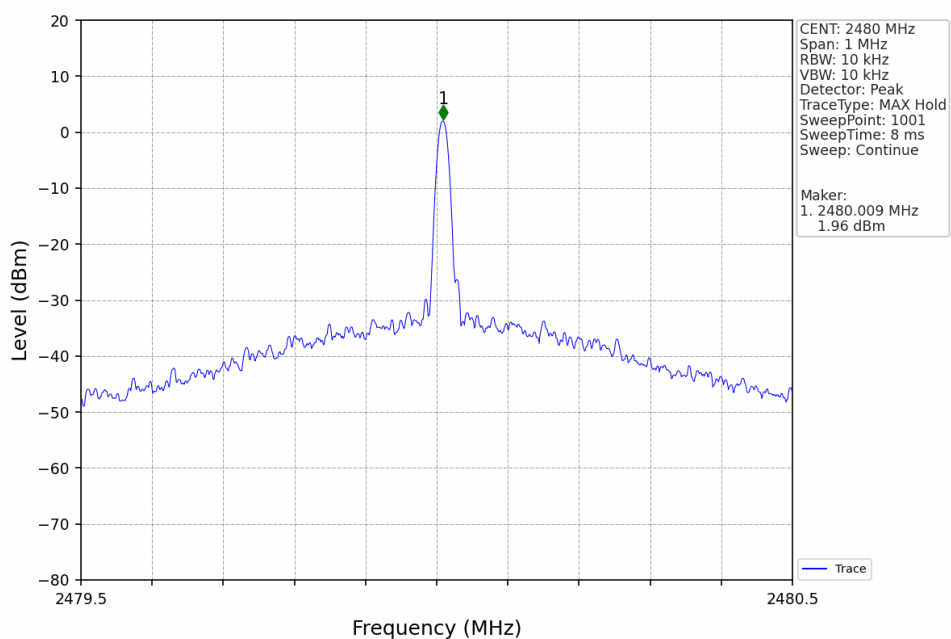
Test Graph



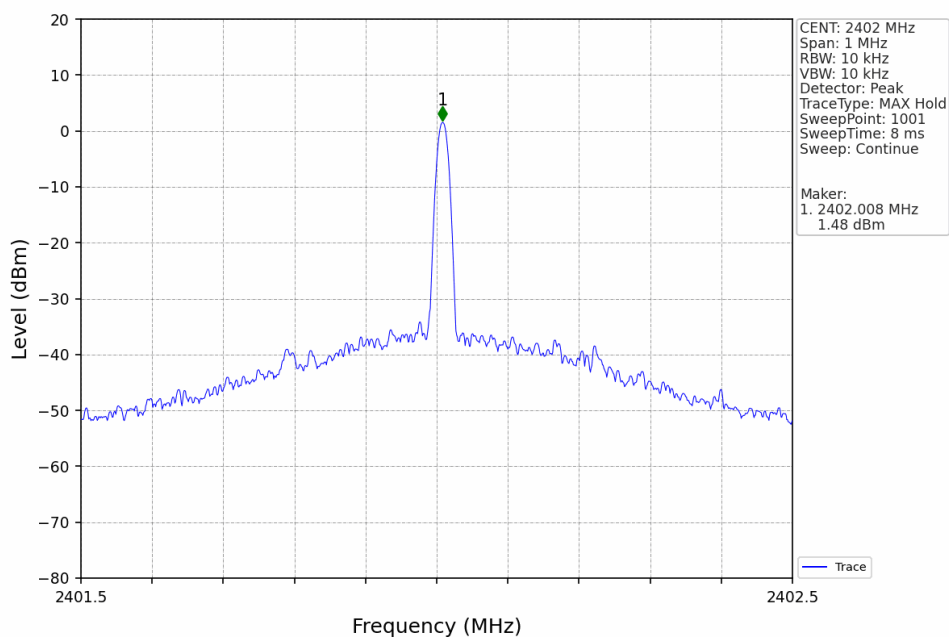
Frequency Error NTLV Carrier Wave 2402MHz Ant1 NTLV



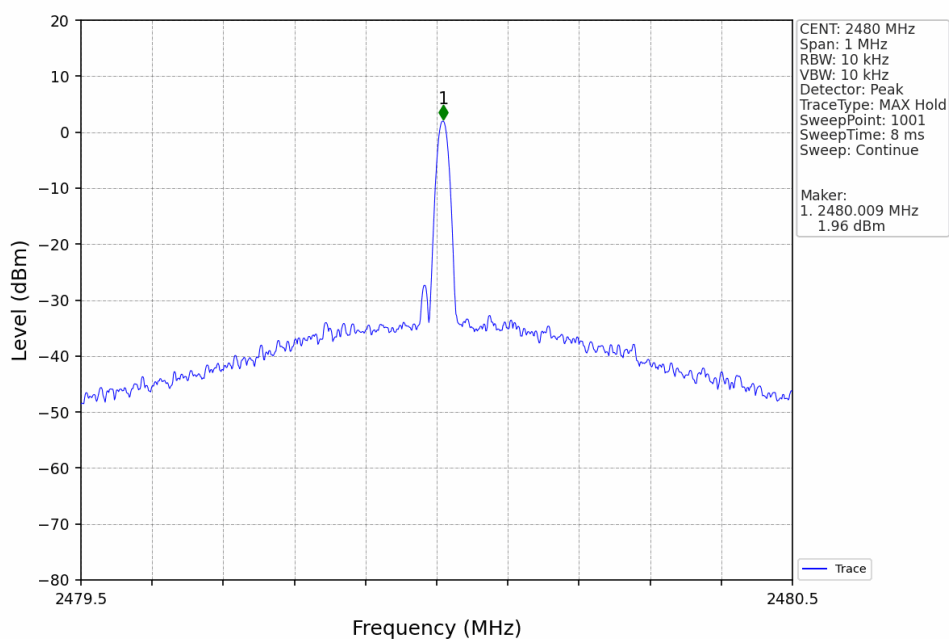
Frequency Error NTLV Carrier Wave 2480MHz Ant1 NTLV



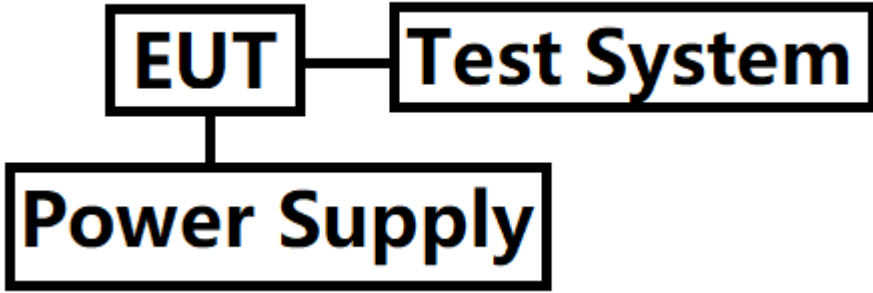
Frequency Error NTHV Carrier Wave 2402MHz Ant1 NTHV



Frequency Error NTHV Carrier Wave 2480MHz Ant1 NTHV



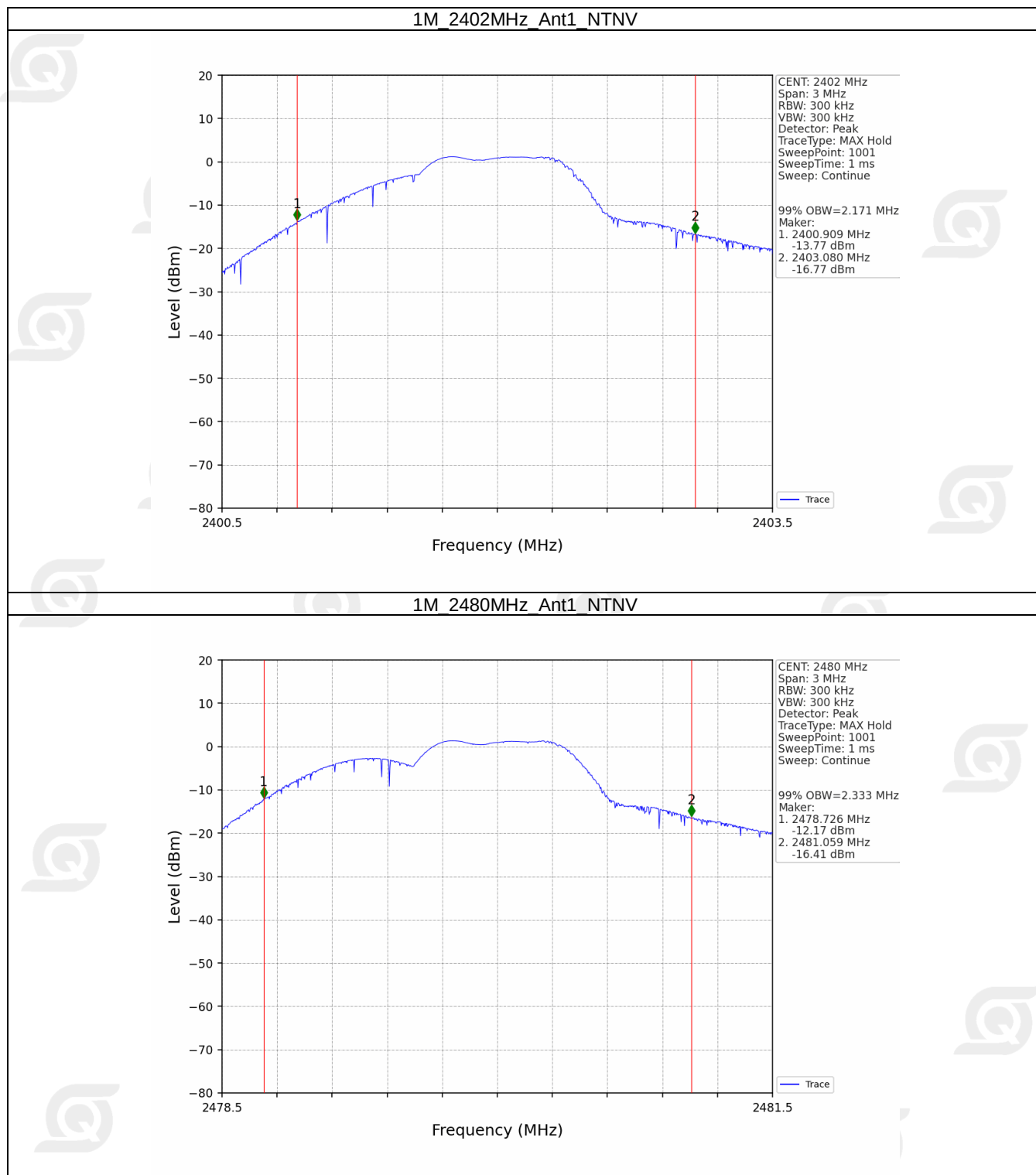
5.4. Occupied Bandwidth

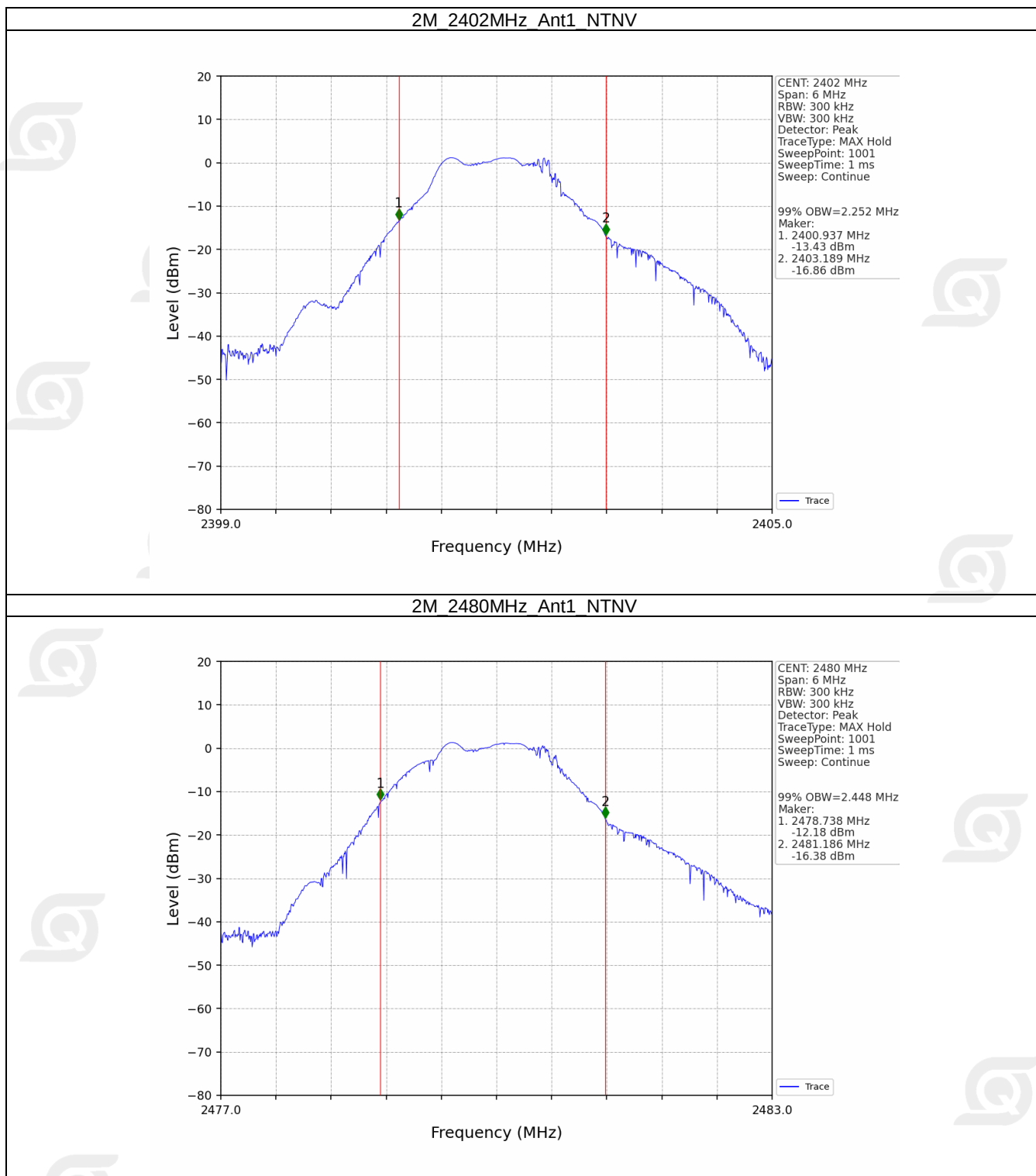
Limit
26MHz or less
Block diagram of Test Setup
 <pre> graph LR PS[Power Supply] --- EUT[EUT] EUT --- TS[Test System] </pre>
Test Procedure
Test Frequency: centre Frequency Span: Max allowed to capture hole trace RBW: 300kHz VBW: =RBW Sweep Time: Auto Detector: Peak Trace: Max hold While the trace is stabilized, Use the 99 % bandwidth function of the spectrum analyser to measure the Occupied Channel Bandwidth of the UUT. This value shall be recorded. Mark lowest frequency FL of the 99% bandwidth and the highest Frequency FH of 99% bandwidth.
Verdict
Pass

5.4.1. Test Result

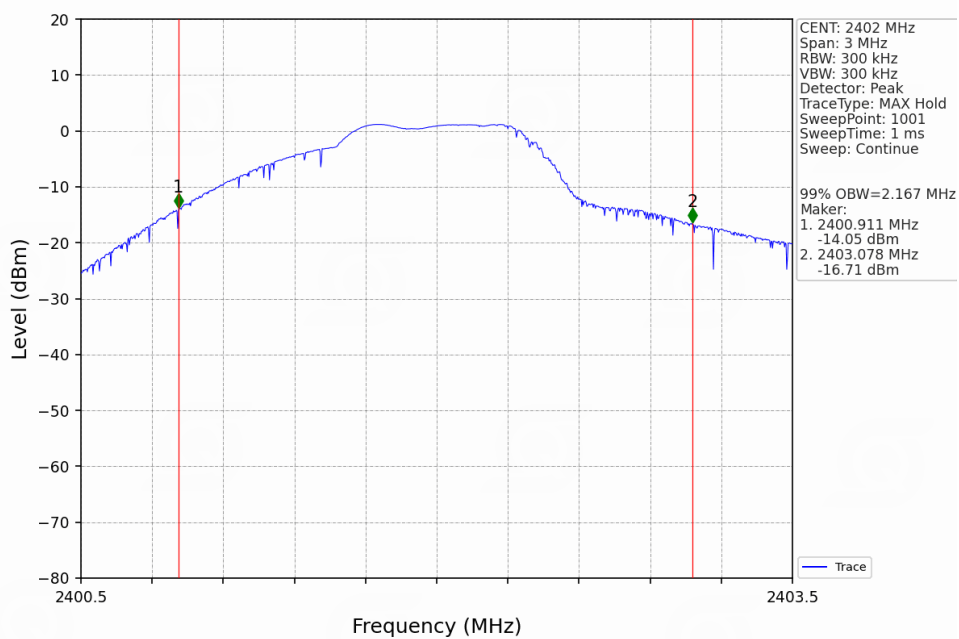
ENV	Mode	TX Type	Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
				ANT1	Limit	
NTNV	1M	SISO	2402	2.171	<=26	Pass
			2480	2.333	<=26	Pass
	2M	SISO	2402	2.252	<=26	Pass
			2480	2.448	<=26	Pass
NTLV	1M	SISO	2402	2.167	<=26	Pass
			2480	2.326	<=26	Pass
	2M	SISO	2402	2.252	<=26	Pass
			2480	2.443	<=26	Pass
NTHV	1M	SISO	2402	2.179	<=26	Pass
			2480	2.333	<=26	Pass
	2M	SISO	2402	2.250	<=26	Pass
			2480	2.443	<=26	Pass

Test Graph

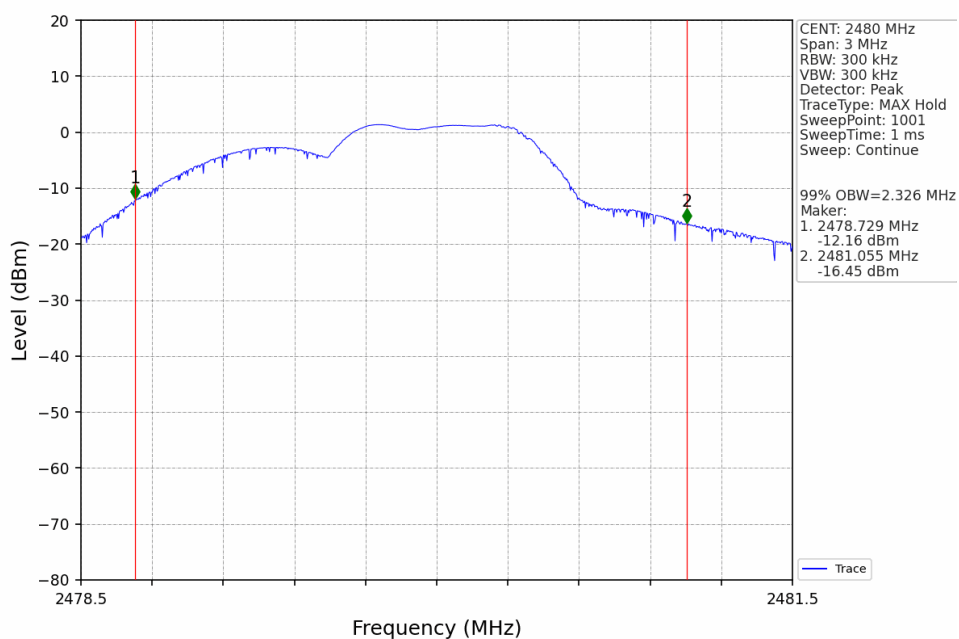




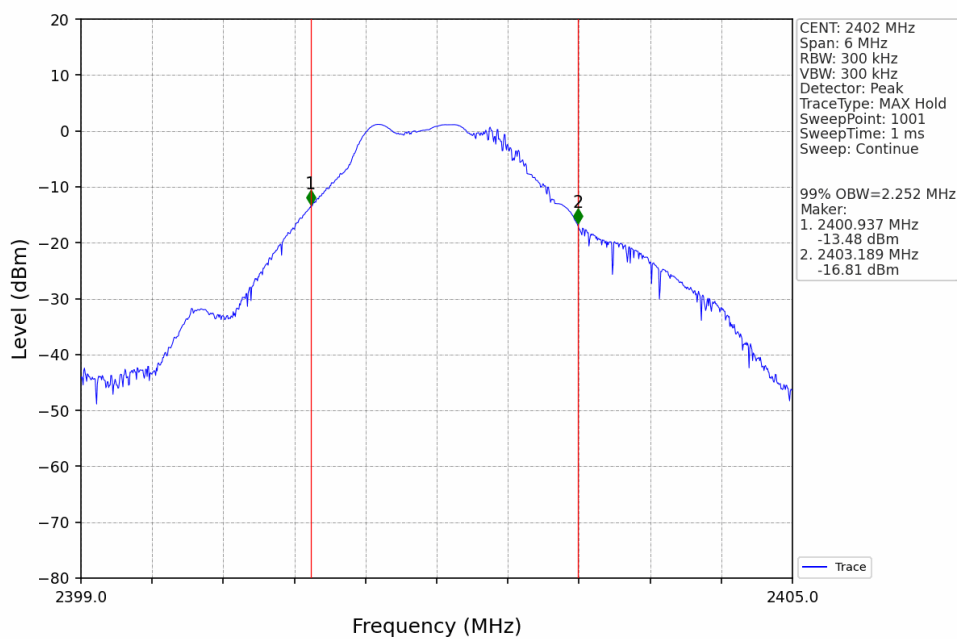
1M 2402MHz Ant1 NTLV



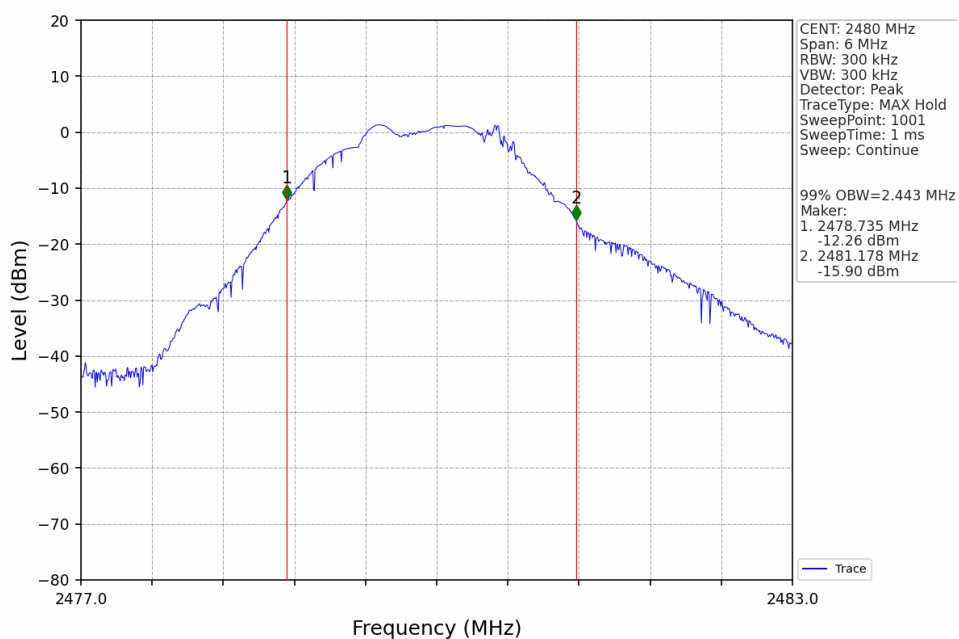
1M 2480MHz Ant1 NTLV

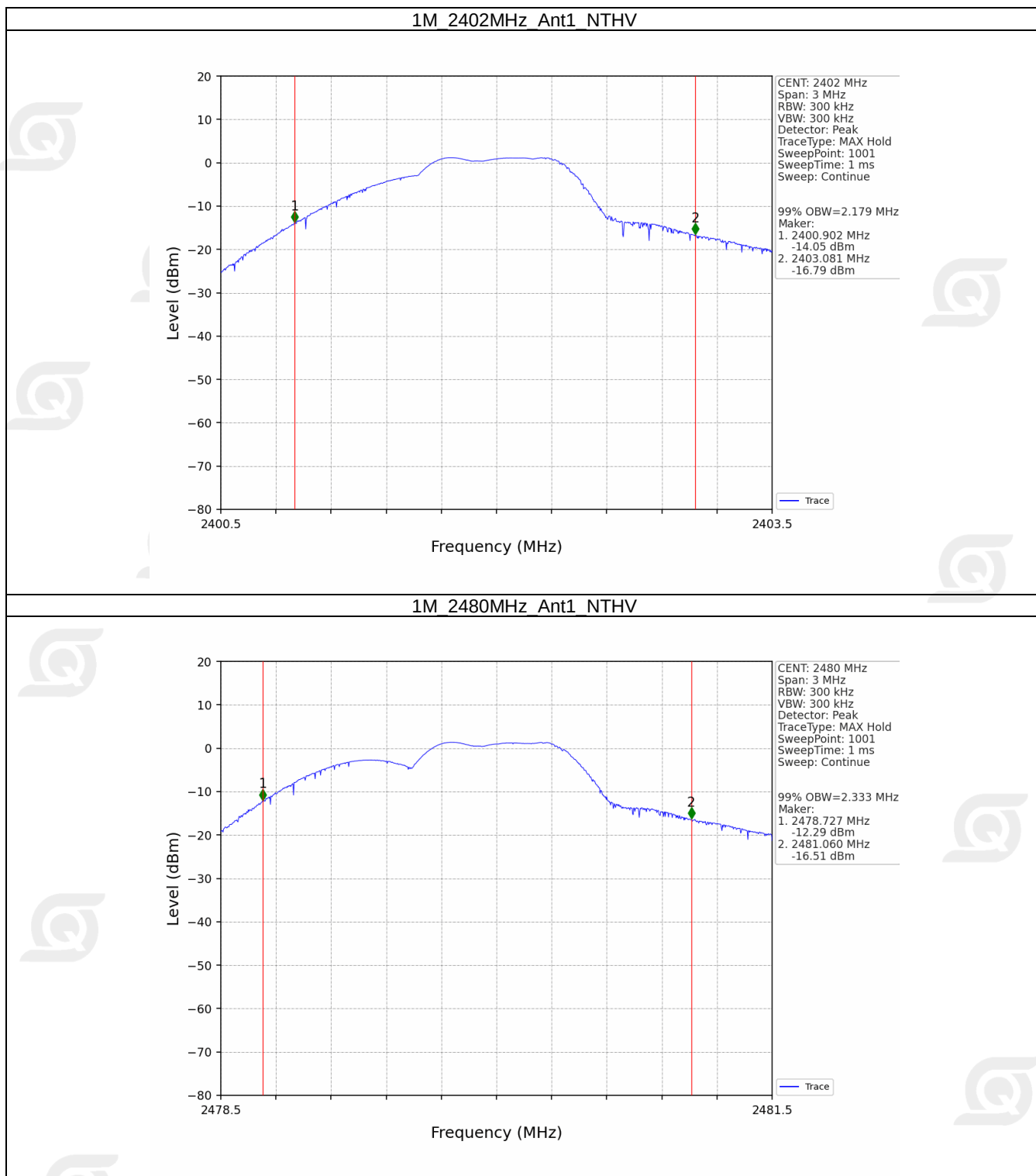


2M 2402MHz Ant1 NTLV

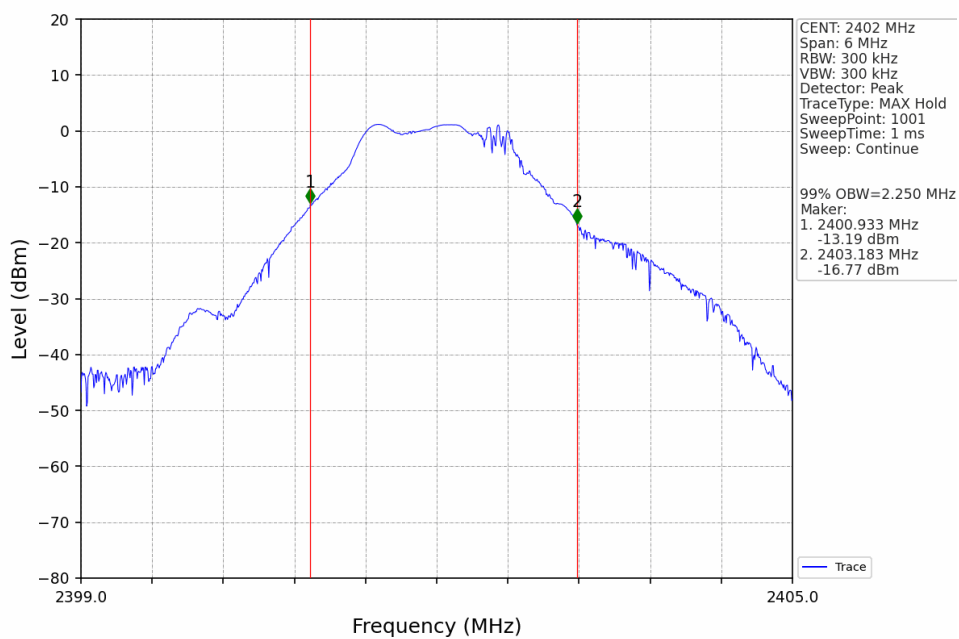


2M 2480MHz Ant1 NTLV

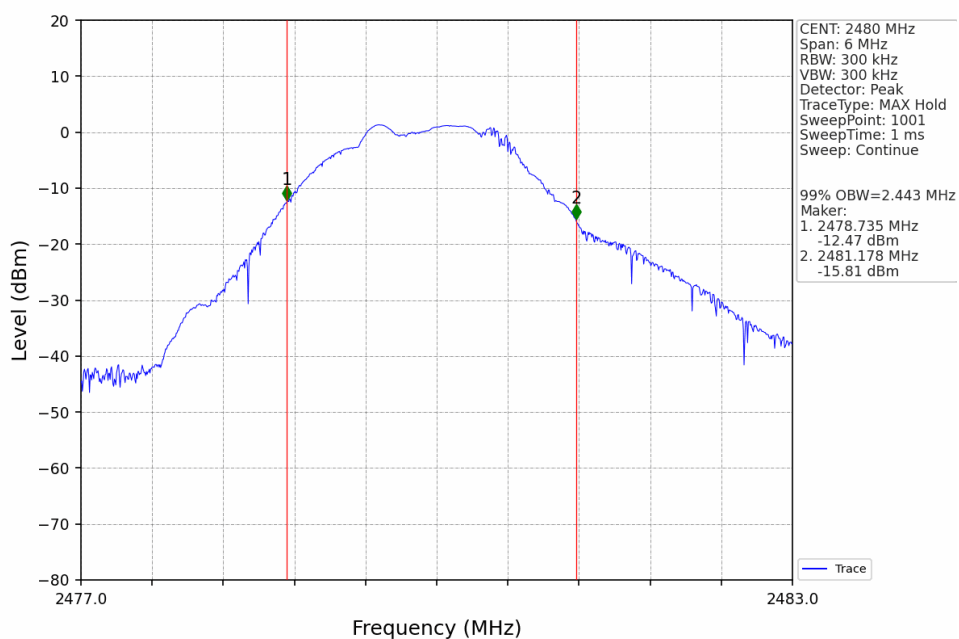




2M 2402MHz Ant1 NTHV



2M 2480MHz Ant1 NTHV



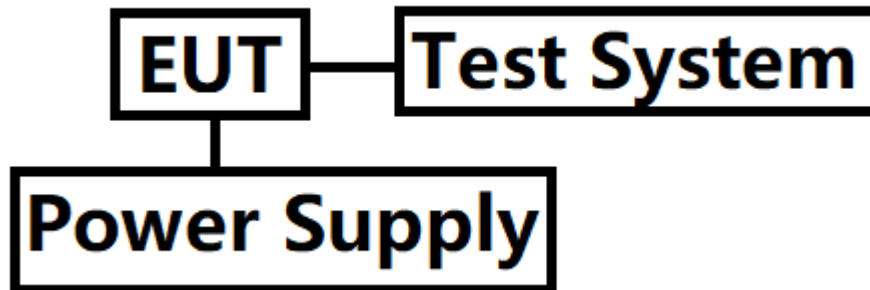
5.5. Spurious Emission Intensity

Limit

Permissible mean power of spurious emission of each frequency supplied to a feeder, that is, mean power of spurious emission in the 1 MHz bandwidth at frequency f other than frequency band used shall be as follows:

- a. $2,387 \text{ MHz} \leq f \leq 2,400 \text{ MHz}$ and $2,483.5 \text{ MHz} < f \leq 2,496.5 \text{ MHz}$: 25 $\mu\text{W}/\text{MHz}$ or less
- b. $2,387 \text{ MHz} > f$ and $2,496.5 \text{ MHz} < f$: 2.5 $\mu\text{W}/\text{MHz}$ or less

Block diagram of Test Setup



Test Procedure

Analyser frequency set to the wanted transmitting frequency

Frequency Range: 30MHz ~ 12.5GHz

RBW: 1MHz

VBW:=RBW

Sweep time: Auto

Detector: Peak

Trace: Max Hold

Allow the trace to stabilize. Use mark-peak function to mark the highest emission level.

While PK value is not satisfy, a AV value shall be measured

Test Frequency: centre frequency

Span: 0MHz

RBW: 1MHz

VBW:=RBW

Sweep time: Auto

Detector: RMS

Trace: Clear

Sweep: Single

Verdict

Pass

5.5.1. Test Result

NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
1M	SISO	2402	1	30	2387	2372	-39.37	0.116	/	/	2.5	Pass
				2387	2400	2399.974	-18.09	15.524	-37.14	0.193	25	Pass
				2483.5	2496.5	2496.5	-51.66	0.007	/	/	25	Pass
				2496.5	12500	7206	-30.00	1.000	/	/	2.5	Pass
		2480	1	30	2387	2376	-46.67	0.022	/	/	2.5	Pass
				2387	2400	2391.251	-45.46	0.028	/	/	25	Pass
				2483.5	2496.5	2483.513	-30.99	0.796	/	/	25	Pass
				2496.5	12500	7440	-28.46	1.426	-31.61	0.690	2.5	Pass
2M	SISO	2402	1	30	2387	2386.5	-32.56	0.555	/	/	2.5	Pass
				2387	2400	2399.961	-18.72	13.428	-27.31	1.858	25	Pass
				2483.5	2496.5	2496.461	-51.32	0.007	/	/	25	Pass

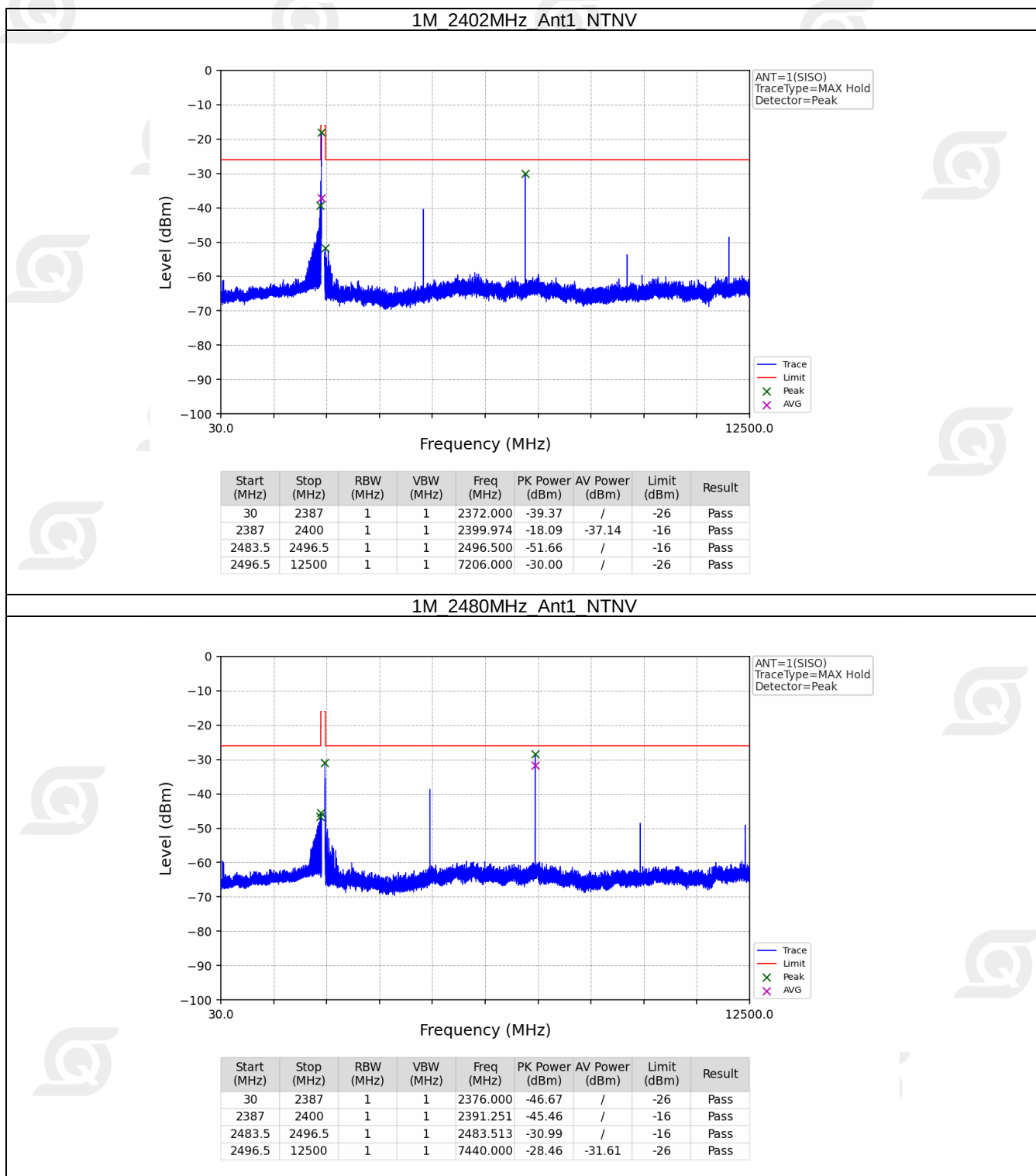
				2496.5	12500	7205	-29.63	1.089	/	/	2.5	Pass
		2480	1	30	2387	2376	-46.47	0.023	/	/	2.5	Pass
				2387	2400	2391.472	-45.75	0.027	/	/	25	Pass
				2483.5	2496.5	2483.539	-31.37	0.729	/	/	25	Pass
				2496.5	12500	7439	-28.93	1.279	-32.37	0.579	2.5	Pass

NTLV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
1M	SISO	2402	1	30	2387	2386.5	-38.26	0.149	/	/	2.5	Pass
				2387	2400	2399.987	-17.83	16.482	-36.75	0.211	25	Pass
				2483.5	2496.5	2496.331	-51.69	0.007	/	/	25	Pass
				2496.5	12500	7207.5	-29.83	1.040	/	/	2.5	Pass
		2480	1	30	2387	2376	-46.02	0.025	/	/	2.5	Pass
				2387	2400	2391.134	-45.54	0.028	/	/	25	Pass
				2483.5	2496.5	2483.513	-31.04	0.787	/	/	25	Pass
				2496.5	12500	7441.5	-28.45	1.429	-41.12	0.077	2.5	Pass
2M	SISO	2402	1	30	2387	2386.5	-32.67	0.541	/	/	2.5	Pass
				2387	2400	2399.987	-18.24	14.997	-26.78	2.099	25	Pass
				2483.5	2496.5	2496.331	-52.17	0.006	/	/	25	Pass
				2496.5	12500	7206.5	-29.69	1.074	/	/	2.5	Pass
		2480	1	30	2387	2376.5	-46.38	0.023	/	/	2.5	Pass
				2387	2400	2391.199	-45.98	0.025	/	/	25	Pass
				2483.5	2496.5	2483.526	-31.06	0.783	/	/	25	Pass
				2496.5	12500	7439	-29.43	1.140	/	/	2.5	Pass

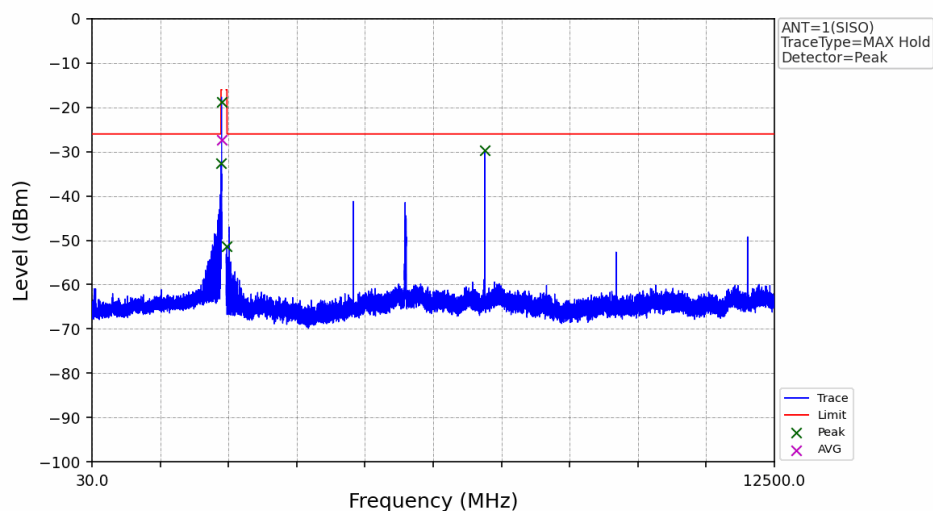
NTHV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
1M	SISO	2402	1	30	2387	2371	-39.61	0.109	/	/	2.5	Pass
				2387	2400	2399.987	-18.11	15.453	-36.69	0.214	25	Pass
				2483.5	2496.5	2496.383	-51.69	0.007	/	/	25	Pass
				2496.5	12500	7207	-29.94	1.014	/	/	2.5	Pass
		2480	1	30	2387	2376.5	-46.58	0.022	/	/	2.5	Pass
				2387	2400	2391.277	-45.33	0.029	/	/	25	Pass
				2483.5	2496.5	2483.513	-30.75	0.841	/	/	25	Pass
				2496.5	12500	7440	-28.40	1.445	-31.62	0.689	2.5	Pass
2M	SISO	2402	1	30	2387	2386	-33.13	0.486	/	/	2.5	Pass
				2387	2400	2399.987	-17.89	16.255	-26.75	2.113	25	Pass
				2483.5	2496.5	2496.487	-51.39	0.007	/	/	25	Pass
				2496.5	12500	7206.5	-29.68	1.076	/	/	2.5	Pass
		2480	1	30	2387	2377	-47.70	0.017	/	/	2.5	Pass
				2387	2400	2391.368	-45.90	0.026	/	/	25	Pass
				2483.5	2496.5	2483.513	-31.07	0.782	/	/	25	Pass
				2496.5	12500	7439	-28.39	1.449	-32.35	0.582	2.5	Pass

Test Graph

TxSe_NTNV

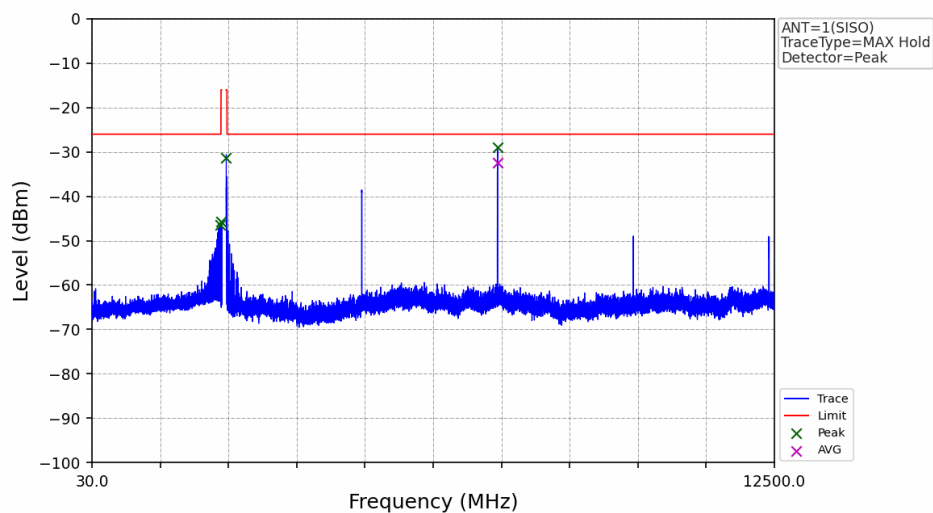


2M 2402MHz Ant1 NTNV



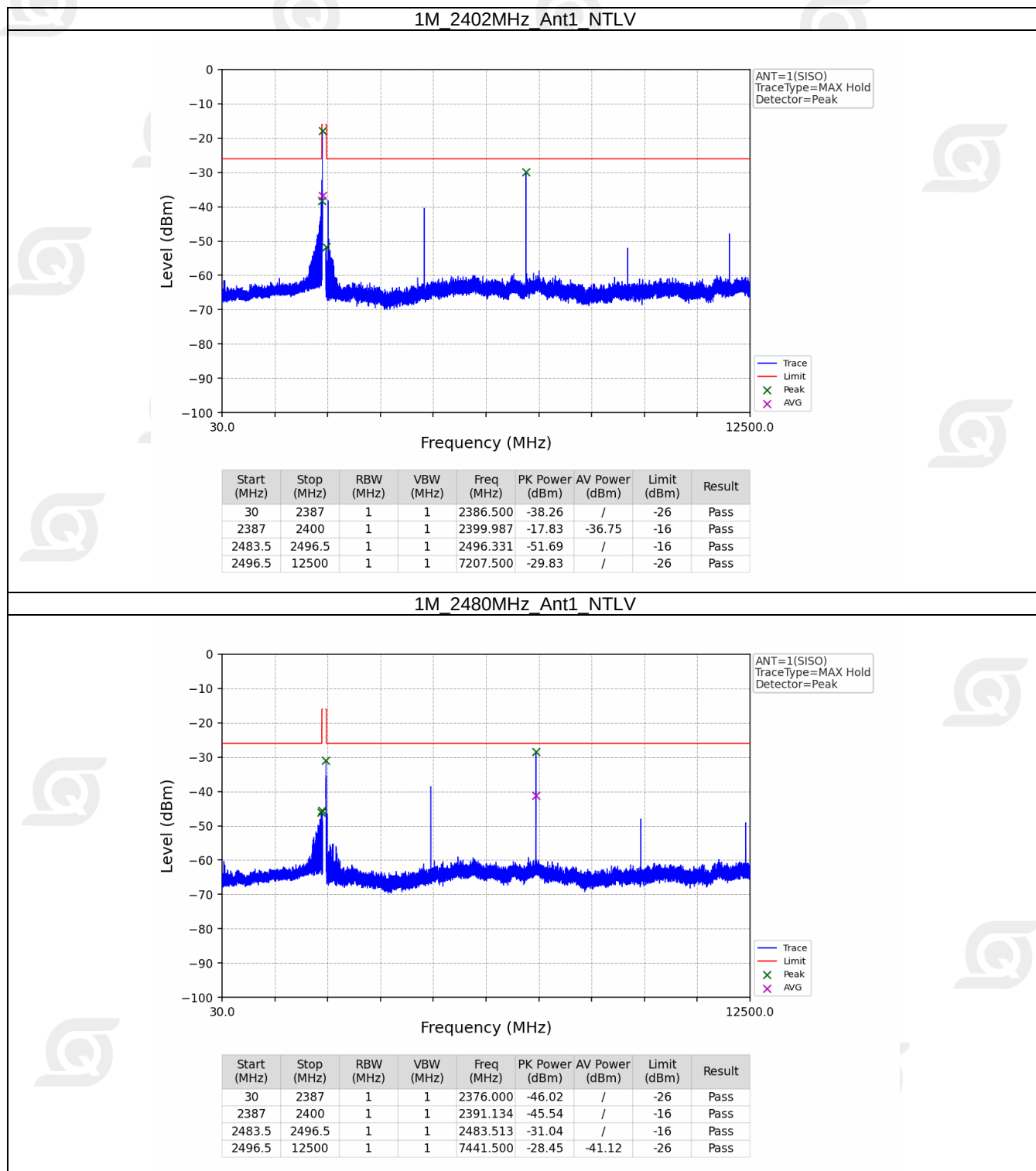
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2386.500	-32.56	/	-26	Pass
2387	2400	1	1	2399.961	-18.72	-27.31	-16	Pass
2483.5	2496.5	1	1	2496.461	-51.32	/	-16	Pass
2496.5	12500	1	1	7205.000	-29.63	/	-26	Pass

2M 2480MHz Ant1 NTNV

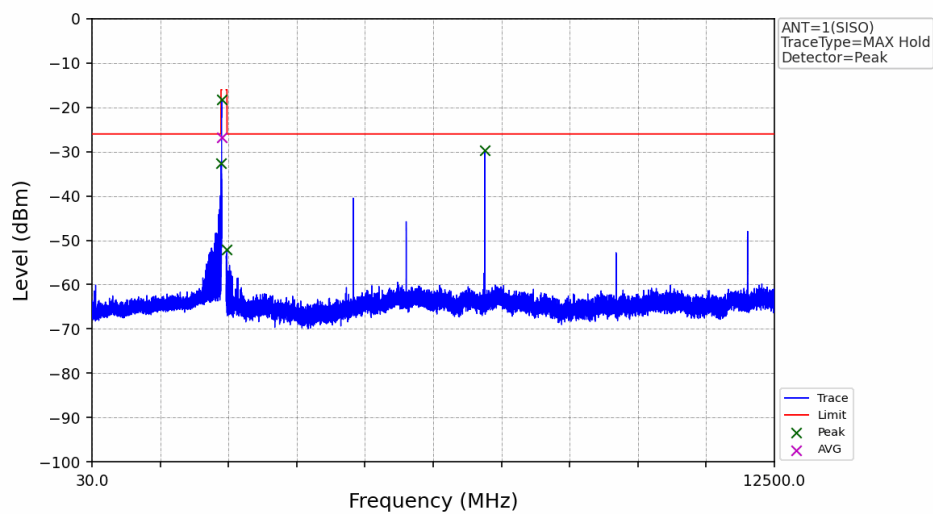


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2376.000	-46.47	/	-26	Pass
2387	2400	1	1	2391.472	-45.75	/	-16	Pass
2483.5	2496.5	1	1	2483.539	-31.37	/	-16	Pass
2496.5	12500	1	1	7439.000	-28.93	-32.37	-26	Pass

TxSe_NTLV

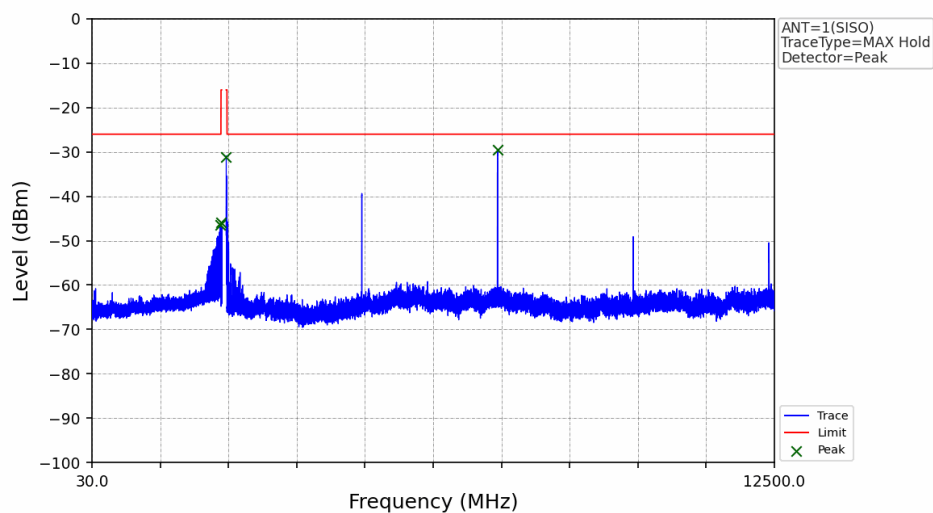


2M 2402MHz Ant1 NTLV



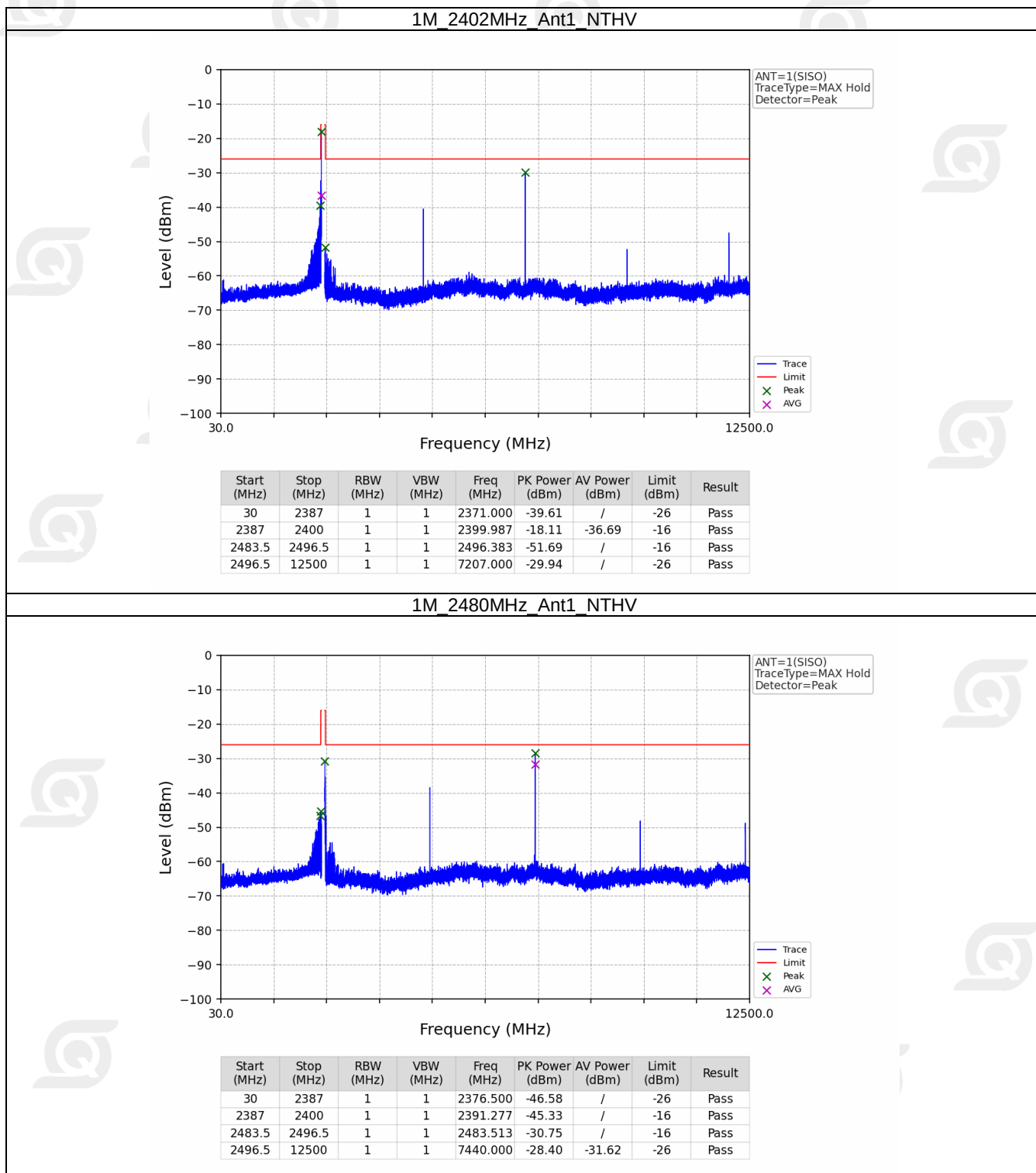
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2386.500	-32.67	/	-26	Pass
2387	2400	1	1	2399.987	-18.24	-26.78	-16	Pass
2483.5	2496.5	1	1	2496.331	-52.17	/	-16	Pass
2496.5	12500	1	1	7206.500	-29.69	/	-26	Pass

2M 2480MHz Ant1 NTLV

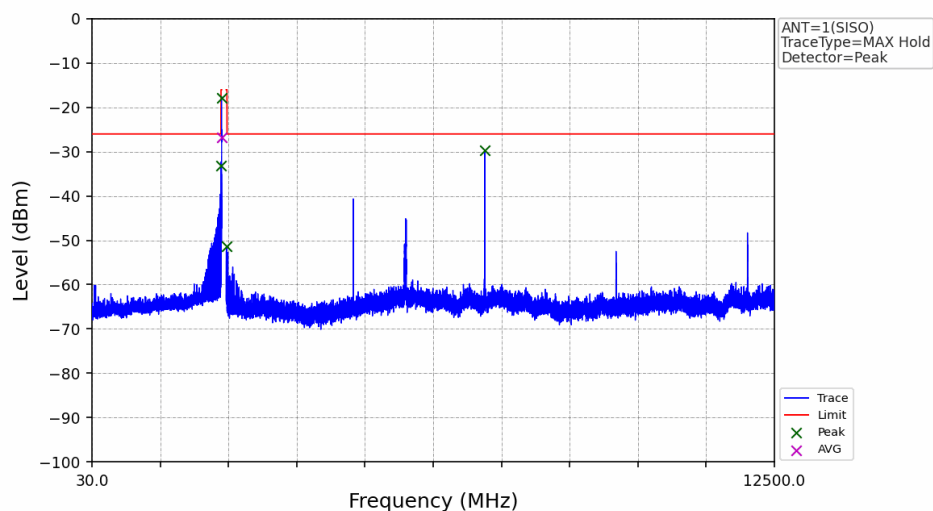


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2376.500	-46.38	/	-26	Pass
2387	2400	1	1	2391.199	-45.98	/	-16	Pass
2483.5	2496.5	1	1	2483.526	-31.06	/	-16	Pass
2496.5	12500	1	1	7439.000	-29.43	/	-26	Pass

TxSe_NTHV

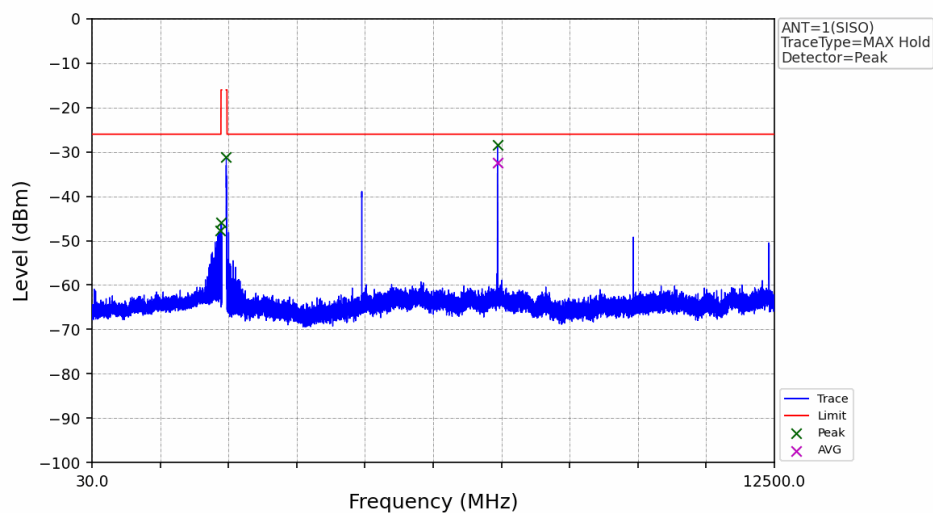


2M 2402MHz Ant1 NTHV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2386.000	-33.13	/	-26	Pass
2387	2400	1	1	2399.987	-17.89	-26.75	-16	Pass
2483.5	2496.5	1	1	2496.487	-51.39	/	-16	Pass
2496.5	12500	1	1	7206.500	-29.68	/	-26	Pass

2M 2480MHz Ant1 NTHV



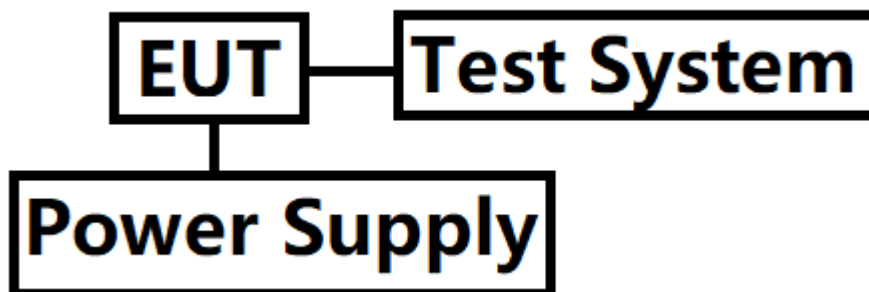
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2377.000	-47.70	/	-26	Pass
2387	2400	1	1	2391.368	-45.90	/	-16	Pass
2483.5	2496.5	1	1	2483.513	-31.07	/	-16	Pass
2496.5	12500	1	1	7439.000	-28.39	-32.35	-26	Pass

5.6. Second Radiated Emission

Limit

4nW or less at a frequency below 1 GHz and 20 nW or less at a frequency of 1 GHz or higher

Block diagram of Test Setup



Test Procedure

Analyser frequency set to the wanted transmitting frequency

Frequency Range: 30MHz ~ 12.5GHz

RBW: 100 kHz < 1GHz; 1MHz > 1GHz

VBW: = RBW

Sweep time: Auto

Detector: Peak

Trace: Max Hold

Allow the trace to stabilize. Use mark-peak function to mark the highest emission level.

Verdict

Pass

5.6.1. Test Result

NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
1M	SISO	2402	1	30	1000	140.05	-74.52	0.035	/	/	4	Pass
				1000	12500	11769	-64.82	0.330	/	/	20	Pass
		2480	1	30	1000	96.05	-61.32	0.738	/	/	4	Pass
				1000	12500	2403	-57.64	1.722	/	/	20	Pass
2M	SISO	2402	1	30	1000	140	-75.13	0.031	/	/	4	Pass
				1000	12500	5641.5	-63.99	0.399	/	/	20	Pass
		2480	1	30	1000	96.05	-62.38	0.578	/	/	4	Pass
				1000	12500	2403	-57.19	1.910	/	/	20	Pass

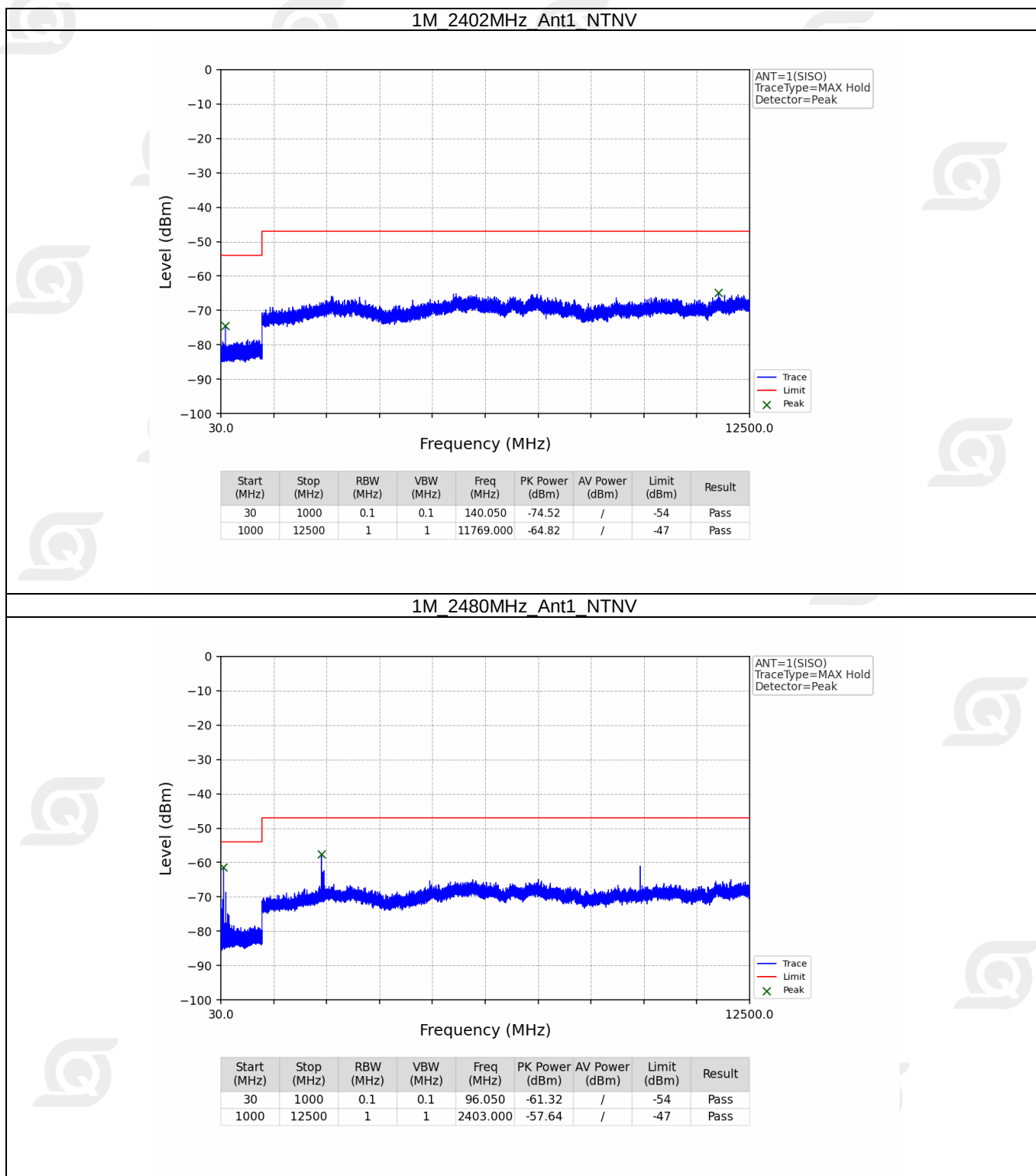
NTLV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
1M	SISO	2402	1	30	1000	96.05	-61.31	0.740	/	/	4	Pass
				1000	12500	2402.5	-56.56	2.208	/	/	20	Pass
		2480	1	30	1000	96.05	-61.25	0.750	/	/	4	Pass
				1000	12500	2403	-55.07	3.112	/	/	20	Pass
2M	SISO	2402	1	30	1000	96.05	-61.46	0.714	/	/	4	Pass
				1000	12500	2403	-55.03	3.141	/	/	20	Pass
		2480	1	30	1000	96.05	-62.46	0.568	/	/	4	Pass
				1000	12500	2403	-55.64	2.729	/	/	20	Pass

NTHV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		

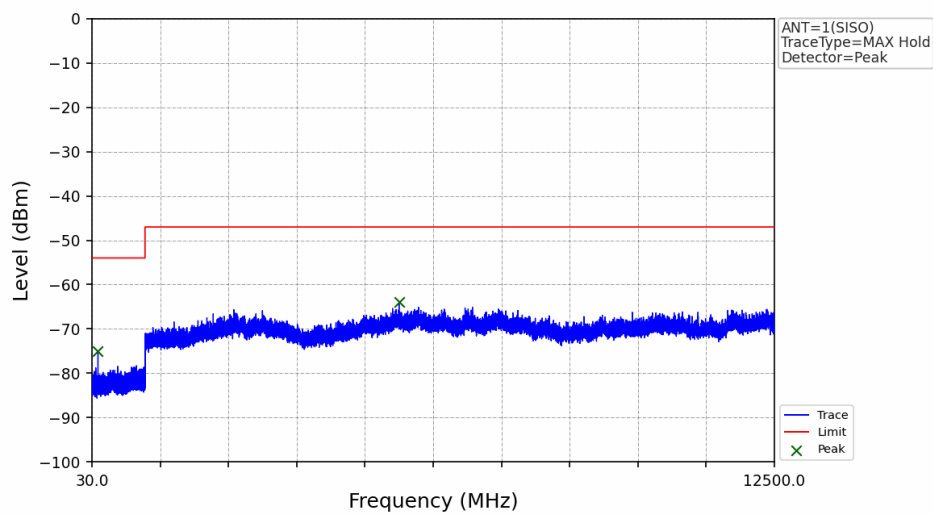
1M	SISO	2402	1	30	1000	96.05	-61.65	0.684	/	/	4	Pass
				1000	12500	2403	-56.64	2.168	/	/	20	Pass
		2480	1	30	1000	140.05	-74.90	0.032	/	/	4	Pass
				1000	12500	6100	-64.63	0.344	/	/	20	Pass
2M	SISO	2402	1	30	1000	96.05	-61.45	0.716	/	/	4	Pass
				1000	12500	9600.5	-60.48	0.895	/	/	20	Pass
		2480	1	30	1000	96.05	-62.53	0.558	/	/	4	Pass
				1000	12500	2402.5	-58.17	1.524	/	/	20	Pass

Test Graph

RxSe_NTNV

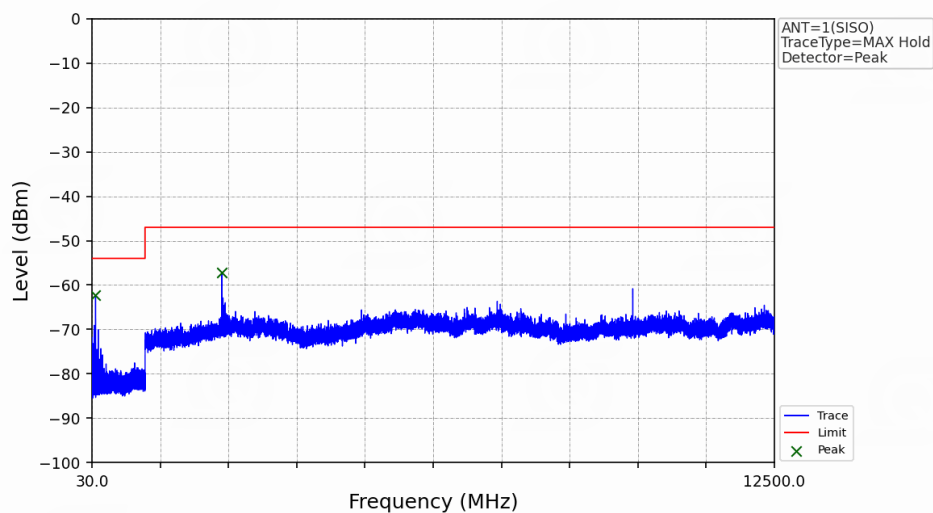


2M 2402MHz Ant1 NTV



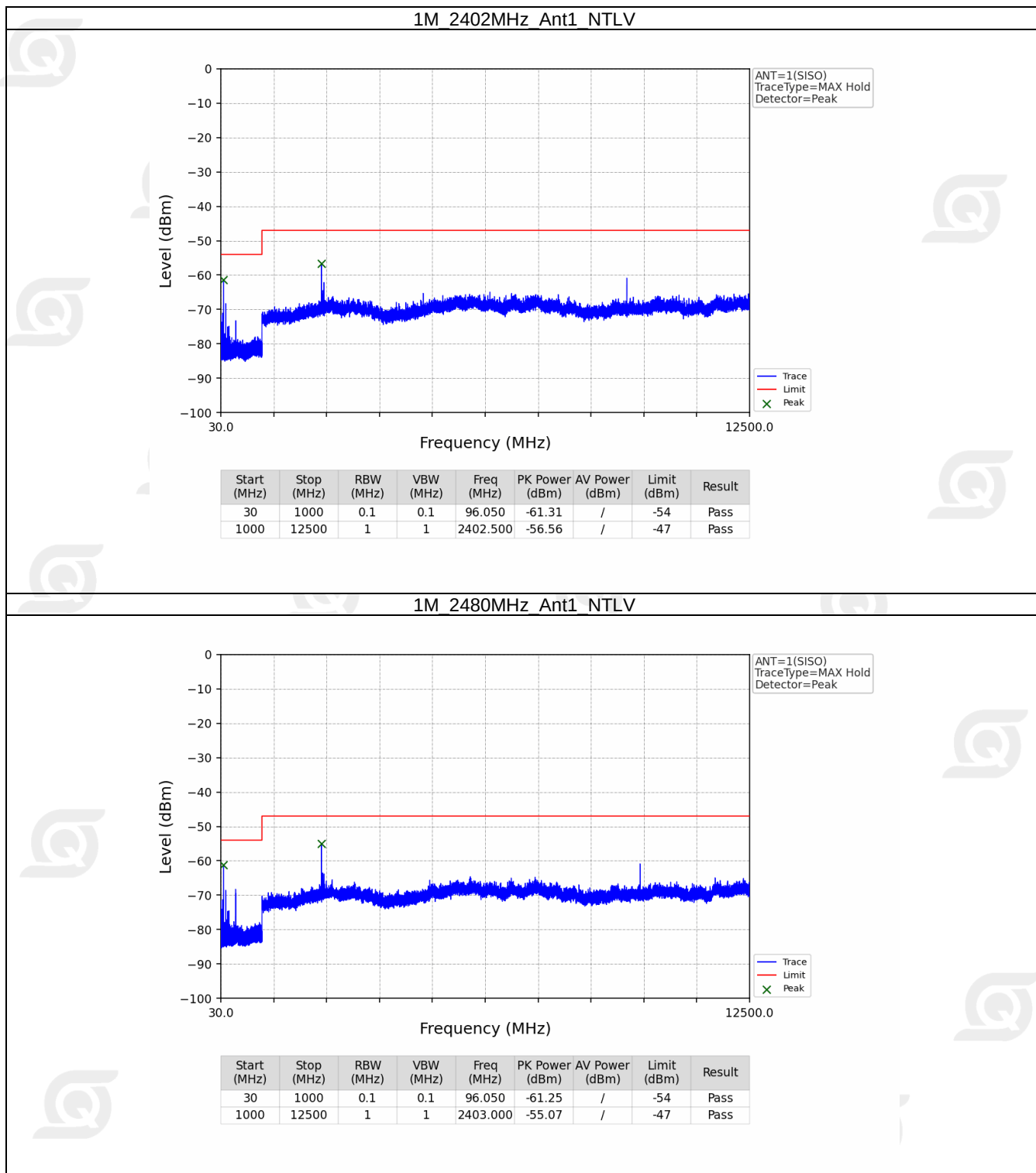
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	140.000	-75.13	/	-54	Pass
1000	12500	1	1	5641.500	-63.99	/	-47	Pass

2M 2480MHz Ant1 NTV

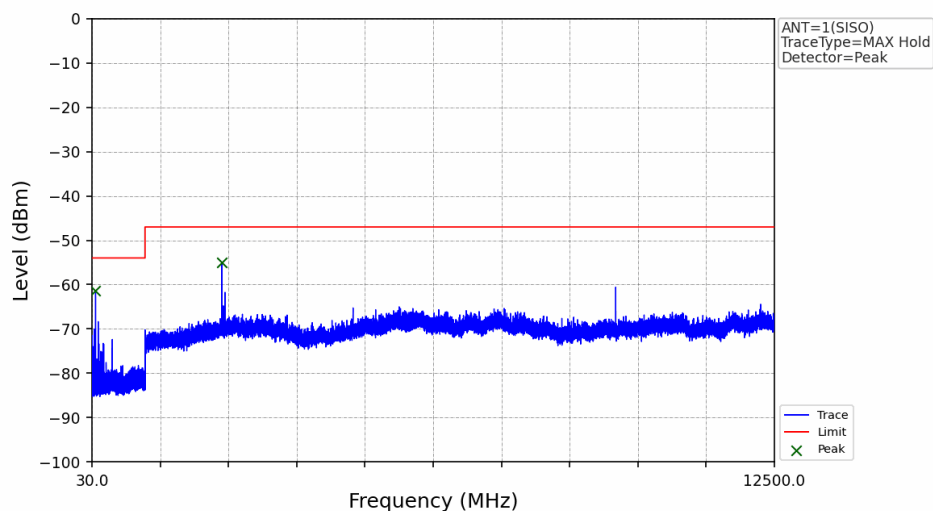


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	96.050	-62.38	/	-54	Pass
1000	12500	1	1	2403.000	-57.19	/	-47	Pass

RxSe_NTLV

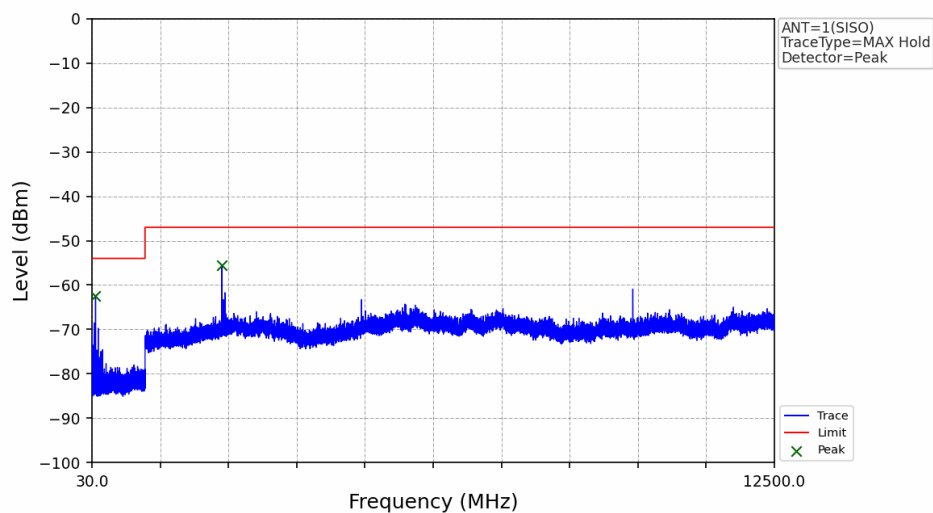


2M 2402MHz Ant1 NTLV



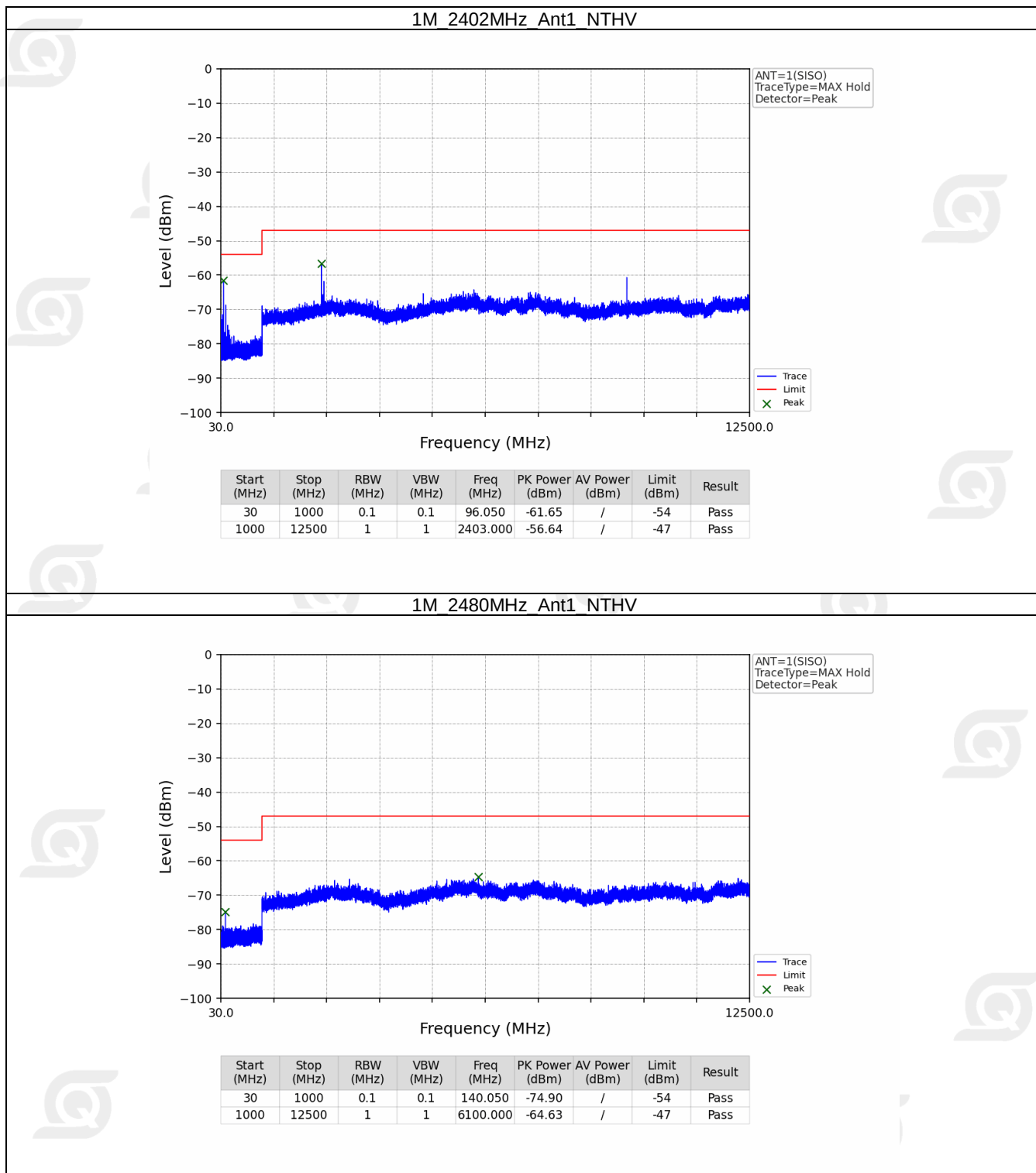
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	96.050	-61.46	/	-54	Pass
1000	12500	1	1	2403.000	-55.03	/	-47	Pass

2M 2480MHz Ant1 NTLV

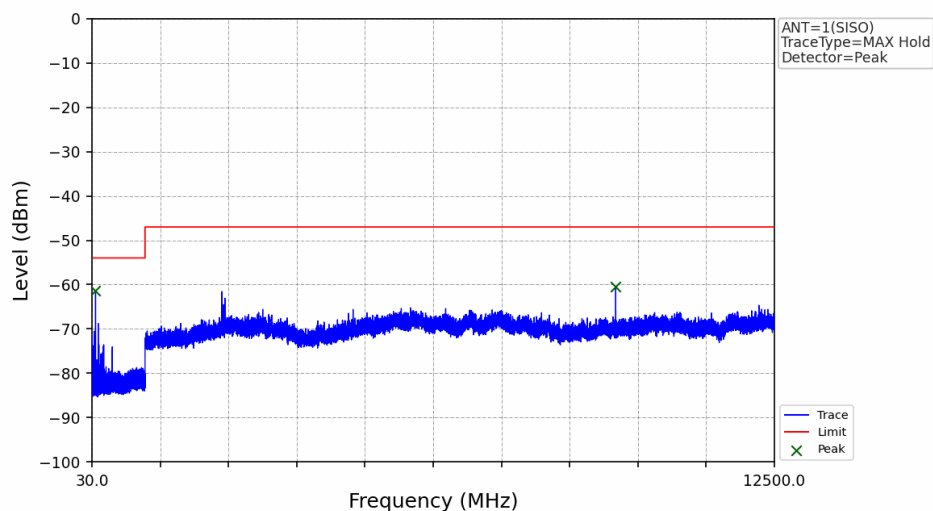


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	96.050	-62.46	/	-54	Pass
1000	12500	1	1	2403.000	-55.64	/	-47	Pass

RxSe_NTHV

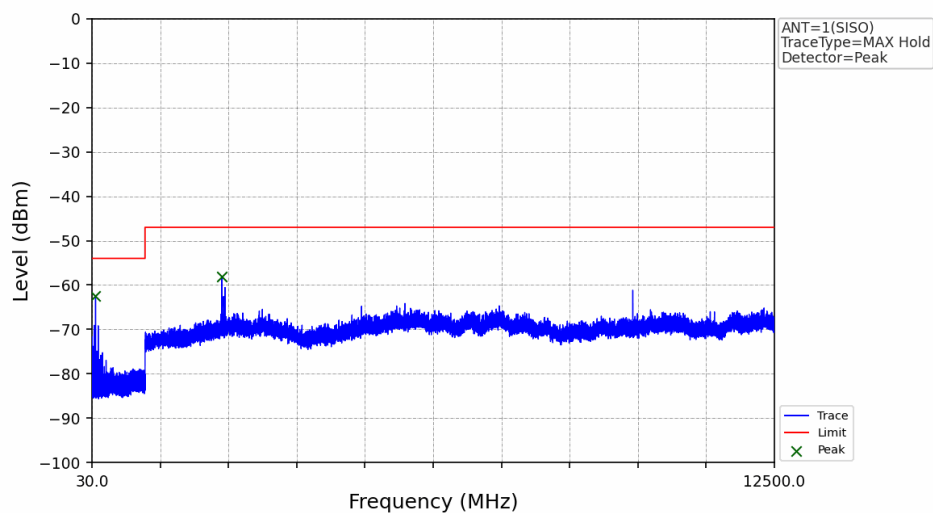


2M 2402MHz Ant1 NTHV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	96.050	-61.45	/	-54	Pass
1000	12500	1	1	9600.500	-60.48	/	-47	Pass

2M 2480MHz Ant1 NTHV



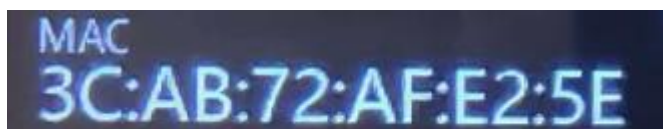
Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	96.050	-62.53	/	-54	Pass
1000	12500	1	1	2402.500	-58.17	/	-47	Pass

5.7. Interference Prevention Function

Limit		
a. Identification code transmission/reception: Radio equipment used mainly on the same premises and automatically transmits or receives identification code b. Frequency switching and other functions: Users shall be able to choose operating frequencies and halt emission.		
Block diagram of Test Setup		
	Radio equipment	Dummy load Attenuator
Verdict		
Pass		

5.7.1. Test Result

VB 212 BT MAC:

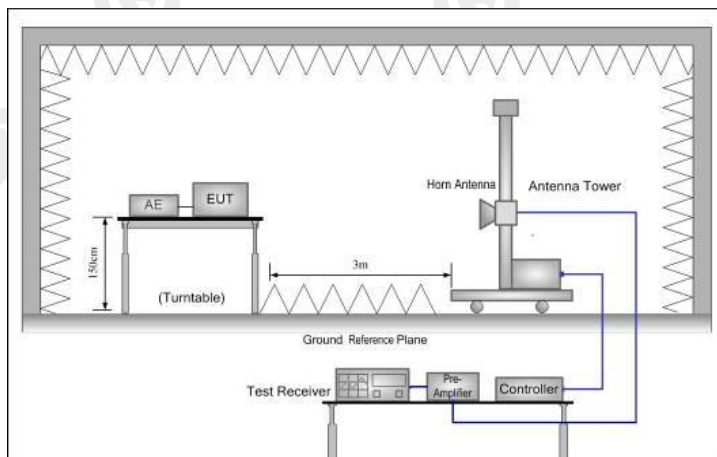


5.8. Equivalent Isotropic Radiated Power

Limit

12.14dBm

Block diagram of Test Procedure



Test Procedures

Step 1

Set the test equipment at test frequency, and in continuous transmitting mode or intermittent burst mode (constant frequency and constant burst time). Stop the spread.

Step 2

Set the height and direction of test equipment and measurement antenna approximately facing each other.

Step 3

In the frequency derived in D), change the height of the measurement antenna from the ground by $\pm 50\text{cm}$ with a central focus on the antenna of test equipment. Search the location that the power is maximum by adjusting the direction of measurement antenna. Set the indicator of spectrum analyzer at this point as "E".

Step 4

Remove the test equipment from the turntable, set the opening of substitution antenna at the same location as the opening of the test equipment, and receive by outputting radio wave of the same frequency from the standard signal generator for substitution.

Step 5

Adjust at the maximum power point, turning the substitution antenna.

Step 6

Change the height of the measurement antenna from the ground by $\pm 50\text{cm}$ with a central focus on the substitution antenna, and adjust the direction of measurement antenna to the location that the received power is maximum.

Step 7

Adjust output of standard signal generator and record the power P_s that is equal to "E". Or record P_s by counting backward from the difference with "E" as the close value to "E" (within $\pm 1\text{dB}$).

Step 8

EIRP is derived from the following calculating formula:

$$\text{EIRP} = G_s - L_F + P_s$$

G_s ; Absolute gain of substitution antenna (dBi).

L_F ; Loss of electric supply line between standard signal generator and substitution antenna (dB).

P_s ; Output of standard signal generator (dBm).

Verdict

N/A, EIRP less than 12.14 dbm

6. Test setup photo

Refer to appendix I for details

7. Photo of the EUT

Refer to appendix II for details

*****End of report*****