



TEST REPORT

Applicant: OnPoint Systems, LLC
Address: 7 Perimeter Rd. Manchester NH 03103 United States
Equipment Type: SpotOn GPS Fence
Product Market Name: SpotOn Nova Edition
Model Name: SOF-11-0001
Brand Name: SpotOn Fence™
FCC ID: 2APPWSOF11
ISED Number: 24233-SOF11
Test Standard: 47 CFR Part 15 Subpart F
RSS-220 Issue 1
(refer section 3.1)
Sample Arrival Date: Aug. 20, 2025
Test Date: Sep. 06, 2025 - Oct. 16, 2025
Date of Issue: Dec. 15, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie Zhu**Checked by:** Ye Hongji**Approved by:** Tolan Tu
(Testing Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Oct. 19, 2025</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Oct. 19, 2025</u>	<u>Add Product Market Name on the report cover.</u>
<u>Rev. 03</u>	<u>Dec. 15, 2025</u>	<u>Add Operational Limitations Test Data and Plots in ANNEX A.6.</u>

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GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Contact Address	Building 2, Intelligent Connected Vehicle Industrial Park, No. 55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☒ Building 2, Intelligent Connected Vehicle Industrial Park, No. 55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.2 Manufacturer Information

Manufacturer	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.3 General Description for Equipment under Test (EUT)

EUT Name	SpotOn GPS Fence
Model Name Under Test	SOF-11-0001
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V2.0
Software Version	V1.1.0.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	4G Network LTE CAT-M Band 2/4/5/12/13/25/66 LTE NB-IoT Band 2/4/5/12/13/25/66 UWB, BLE, 2.4GWIFI, 5GWIFI, GPS
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The requirement for the following technical information of the EUT was tested in this report:

Modulation Type	UWB
Product Type	☒ Mobile
Operating Frequency	The frequency range used is 3100MHz-10600MHz The frequency block is 6000MHz-8500MHz
Antenna Type	Monpole Antenna
Antenna Gain	0.65 dBi

All channel was listed on the following table:

Channel number	Freq. (MHz)
5	6489.6
9	7987.2

Note: The above EUT information in section 2.4 and 2.5 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart F	Ultra - Wideband Operation
2	RSS-220 Issue 1	Devices Using Ultra-Wideband (UWB) Technology
3	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus
4	ANSI C63.10-2020 + Corrigendum 1-2023 + Amendment a-2024	American National Standard for Testing Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	ISED Part No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	RSS-220, 5.3.1(a)	--	Pass	Note ¹
2	Conducted Emission	15.207	RSS-Gen, 8.8	ANNEX A.1	Pass	--
3	Operational Limitations	15.519(a)	RSS-220, 5.3.1(b)	--	Pass	Note ²
4	UWB Bandwidth	15.519(b)	RSS-220, 5.1	ANNEX A.3	Pass	--
5	Radiated Emissions	15.519(c)/15. 209	RSS-220, 5.3.1(c)(d)	ANNEX A.3	Pass	--
6	Radiated Emissions in GPS Bands	15.519(d)	RSS-220, 5.3.1(e)	ANNEX A.4	Pass	--
7	Peak Emissions within a 50 MHz Bandwidth	15.519(e)	RSS-220, 5.3.1(g)	ANNEX A.5	Pass	--

Note ¹: Please refer to section 5.1

Note ²: Please refer to section 5.3

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	53% to 58%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.5°C to +24.1°C
Working Voltage of the EUT	NV (Normal Voltage)	3.7V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2024.12.16	2025.12.15
Power Sensor	KEYSIGHT	U2063XA	MY58000247	2025.06.16	2026.06.15
Spectrum Analyzer	KEYSIGHT	N9020A	MY52510065	2025.06.16	2026.06.15
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2025.04.28	2026.04.27
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01631	2025.02.22	2028.02.21
Test Antenna-Horn	A-INFO	LB- 180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	144	2025.01.04	2028.01.03
Amplifier	COM-MV	LSCX_LNA 1-12G-01	180602	2025.06.17	2026.06.16
Amplifier	COM-MV	XKu_LNA7- 18G-01	180601	2025.06.17	2026.06.16
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2024.12.05	2025.12.04
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2025.06.16	2026.06.15
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-01162	2023.08.04	2026.08.03
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30- 1000M	B2018054558	2024.11.28	2025.11.27
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	130	2024.07.13	2027.07.12

4.3 Measurement Uncertainty

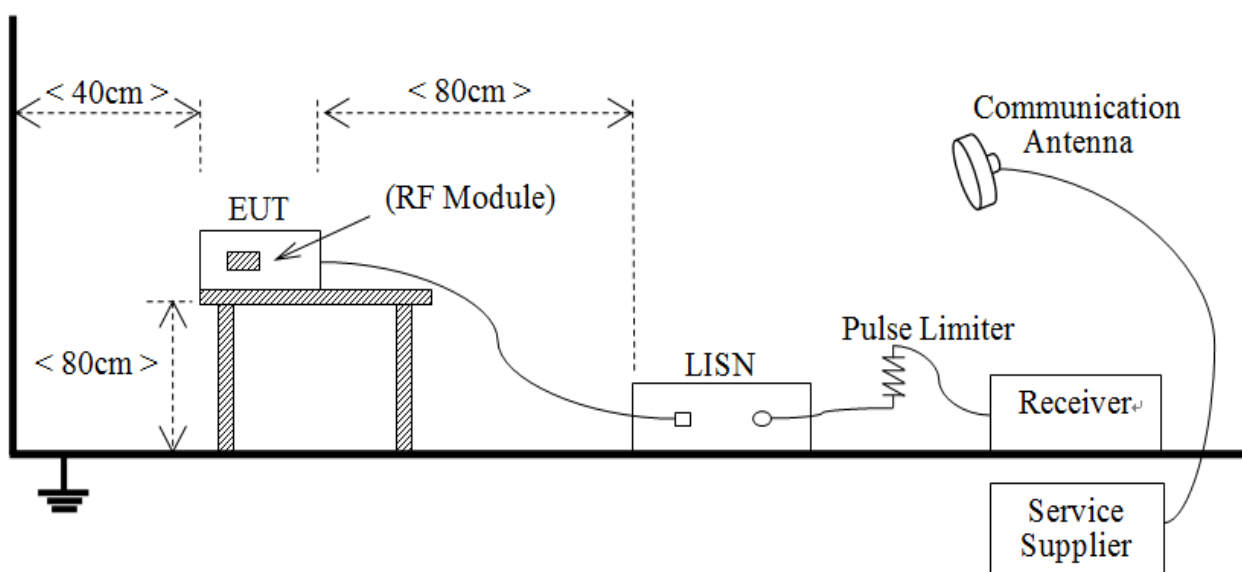
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

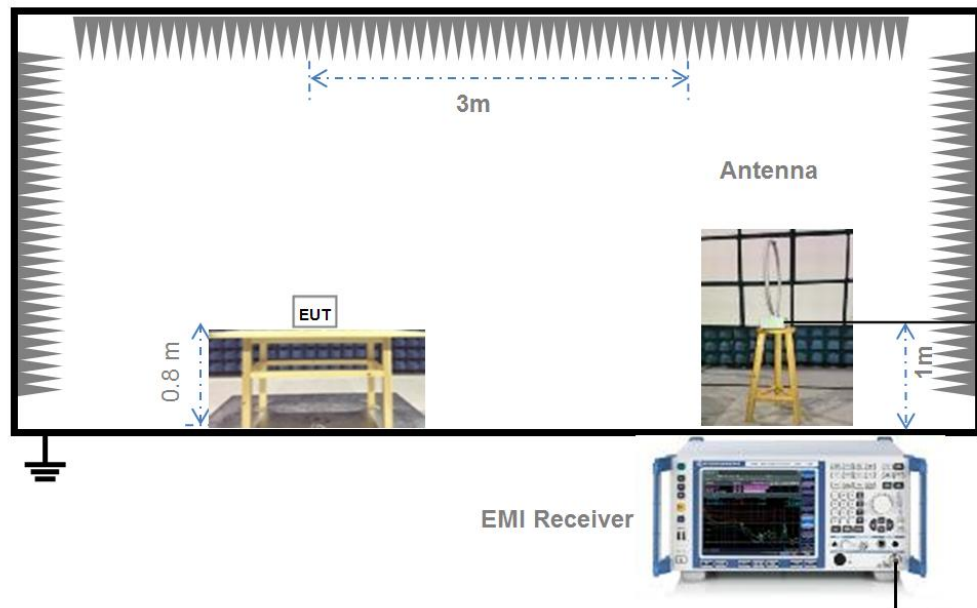
4.4 Description of Test Setup

4.4.1 For AC Power Supply Port Test



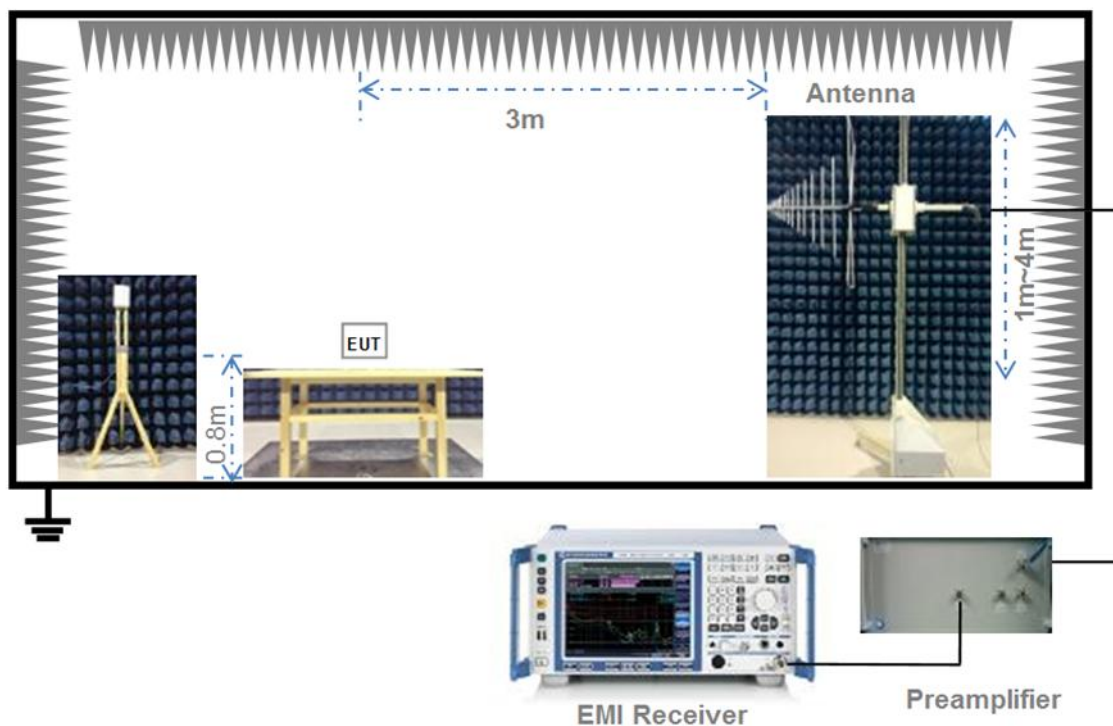
(Diagram 1)

4.4.2 For Radiated Test (Below 30 MHz)



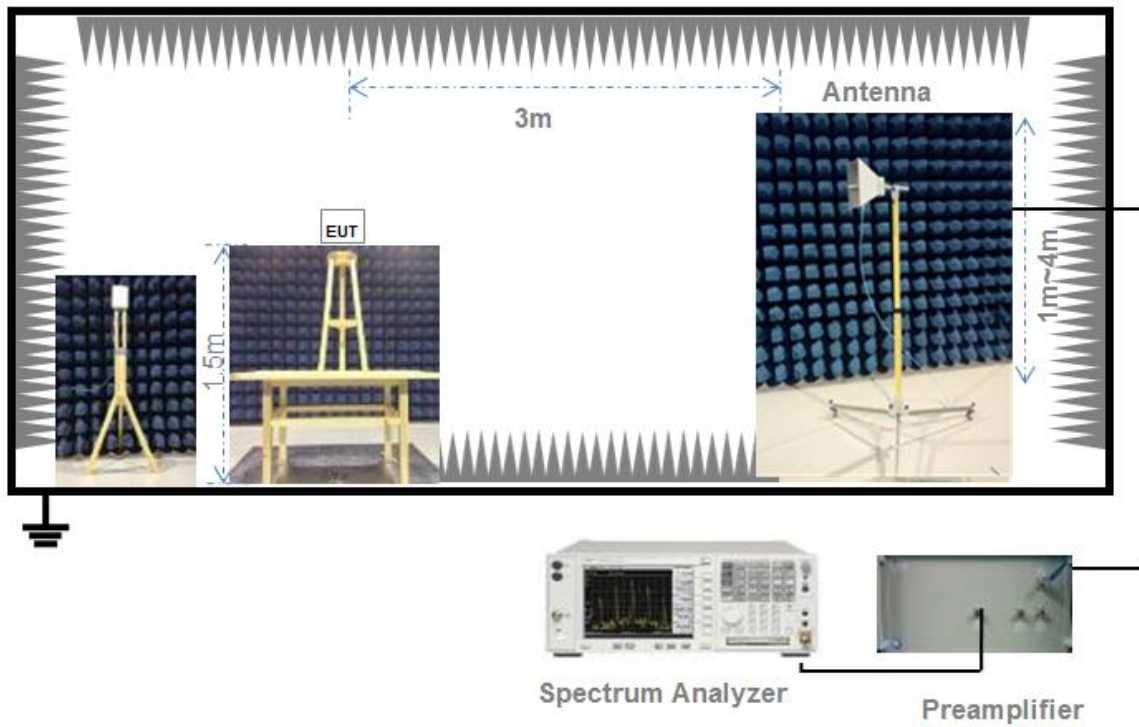
(Diagram 2)

4.4.3 or Radiated Test (30 MHz-1 GHz)



(Diagram 3)

4.4.4 For Radiated Test (Above 1 GHz)



(Diagram 4)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203; RSS-220, 5.1(b)

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. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.2 Conducted Emission

5.2.1 Limit

FCC §15.207; RSS-Gen, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

5.2.2 Test Setup

See section 4.4.1 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 Operational Limitations

5.3.1 Relevant Standards

FCC §15.519(a)(1); RSS-220, 5.3.1(b)

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

The client has been informed of this requirement.

FCC §15.519(a)(2); RSS-220, 5.3.1(a)

The use of antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole, or any fixed outdoors infrastructure is prohibited. Antennas may be mounted only on the hand held UWB device.

The client has been informed of this requirement.

FCC §15.519(a)(3)

UWB devices operating under the provisions of this section may operate indoors or outdoors.

The client has been informed of this requirement.

5.3.2 Test Result

Please refer to ANNEX A.6.

5.4 UWB Bandwidth

5.4.1 Limit

FCC §15.503(d); RSS-220, 2

Ultra-wideband (UWB) transmitter. An intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

FCC §15.519(b); RSS-220, 5.1(a)

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

5.4.2 Test Setups

See section 4.4.4 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

Use the following spectrum analyzer settings:

RBW = 1 MHz

VBW $\geq$ 3 MHz

Sweep = auto

Detector function = RMS

Trace = max hold

5.4.4 Test Result

Please refer to ANNEX A.2.

5.5 Radiated Emissions

5.5.1 Limit

FCC §15.519(c)

The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in §15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIPR in dBm
960–1610	-75.3
1610–1990	-63.3
1990–3100	-61.3
3100–10600	-41.3
Above 10600	-61.3

RSS-220, 5.3.1(d)

Radiated emissions above 960 MHz from a device shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz.

Hand-held (Outdoor) Communication, Measurement, Location Sensing, and Tracking Devices	
Frequency in MHz	EIPR in dBm
960–1610	-75.3
1610–4750	-70.0
4750–10600	-41.3
Above 10600	-61.3

FCC §15.209; RSS-220, 5.3.1(c)

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency(MHz)	Field Strength (μV/m)	Measurement Distance(m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.5.2 Test Setups

See section 4.4.2 to 4.4.4 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The height of the antenna was varied from 1 to 4 meters. For each suspected emissions, the antenna tower was scan (from 1m to 4m) and the the turntables was turned (from 0° to 360°) to find the maximum reading.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

9 kHz to 960 MHz:

Span = wide enough to fully capture the emission being measured

RBW = 100 kHz

VBW = 300 kHz

Sweep time = auto

Detector function = peak(Margin which is less than 3 dB will be repeated one by one using the quasi-peak)

Trace = max hold

960 MHz to 40 GHz:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz

VBW = 3 MHz

Sweep time = 1s

Detector function = RMS

Trace = max hold

5.5.4 Test Result

Please refer to ANNEX A.3.

5.6 Radiated Emissions in GPS Bands

5.6.1 Limit

FCC §15.519(d); RSS-220, 5.3.1(e)

In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIPR in dBm
1164–1240	-85.3
1559–1610	-85.3

5.6.2 Test Setups

See section 4.4.4 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The height of the antenna was varied from 1 to 4 meters. For each suspected emissions, the antenna tower was scan (from 1m to 4m) and the the turntables was turned (from 0° to 360°) to find the maximum reading.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 kHz

VBW = 3 kHz

Sweep time = 1s

Detector function = RMS

Trace = max hold

5.6.4 Test Result

Please refer to ANNEX A.4.

5.7 Peak Emissions within a 50MHz Bandwidth

5.7.1 Limit

FCC §15.519(e); RSS-220, 5.3.1(g)

There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs, fM. That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in §15.521.

It is acceptable to employ an RBW of less than 50 MHz (but no less than 1 MHz) when performing the required peak power measurements. When this approach is employed, the peak emissions EIRP limit (0 dBm / 50 MHz) is converted to a limit commensurate with the RBW by employing a $[20 \log (RBW/50 \text{ MHz})]$ relationship. For example, the peak power limit could be expressed in a 1 MHz bandwidth as follows in Equation :

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

5.7.2 Test Setups

See section 4.4.4 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The height of the antenna was varied from 1 to 4 meters. For each suspected emissions, the antenna tower was scan (from 1m to 4m) and the the turntables was turned (from 0° to 360°) to find the maximum reading.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz

VBW = 3 MHz

Sweep = auto

Detector function = peak

Trace = max hold

5.7.4 Test Result

Please refer to ANNEX A.5.

ANNEX A TEST RESULT

A.1 Conducted Emissions

Note: Not applicable

A.2 UWB Bandwidth

Test Data

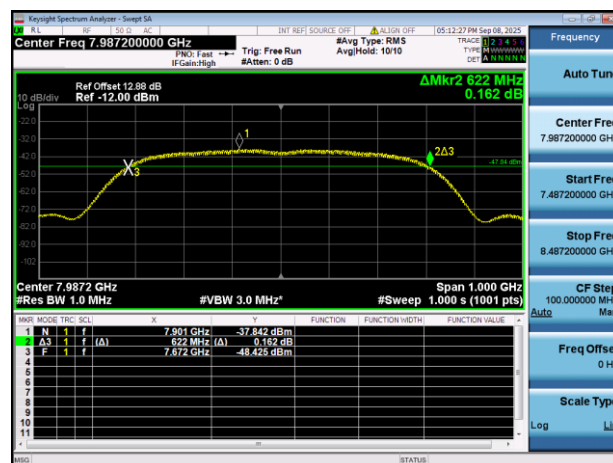
Channel	FM (MHz)	FL (MHz)	FH (MHz)	UWB Bandwidth (MHz)	(MHz)	Verdict
CH5	6400	6191	6777	607.32	The UWB bandwidth of a device operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.	Pass
CH9	7901	7672	8294	624.36		Pass

Test plots

10 dB Bandwidth

6489.6MHz

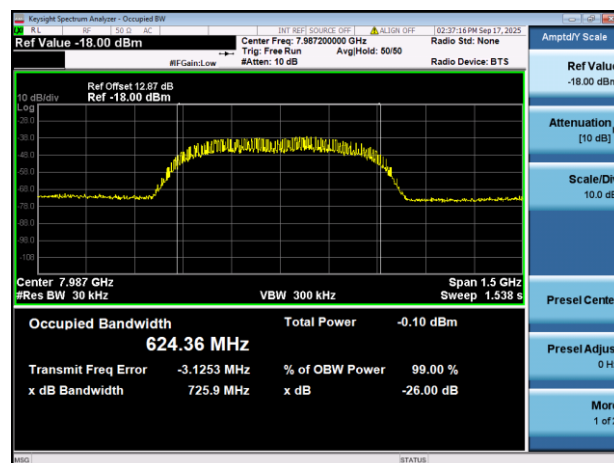
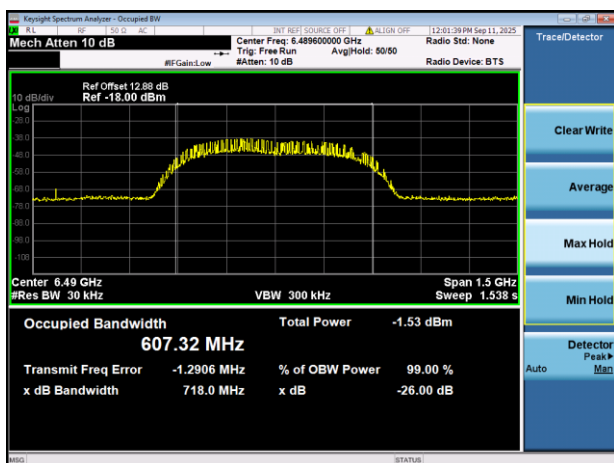
7987.2MHz



99% Bandwidth

6489.6MHz

7987.2MHz

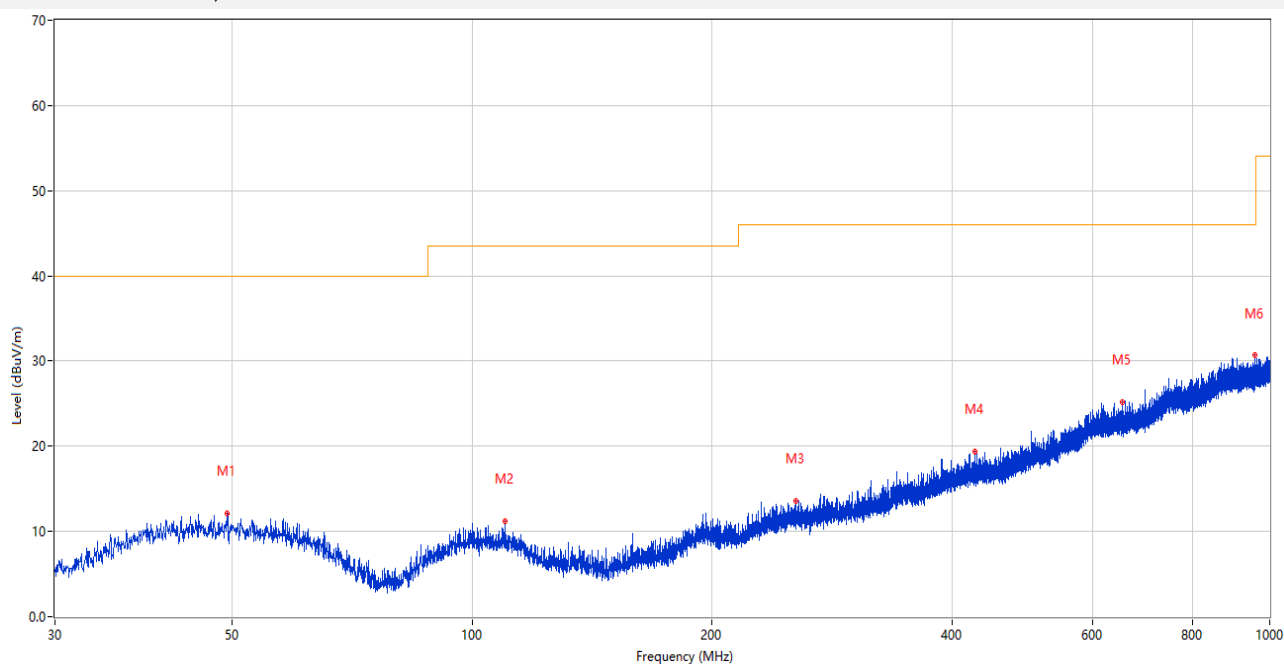


A.3 Radiated Emissions

Note: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.209 was not reported.

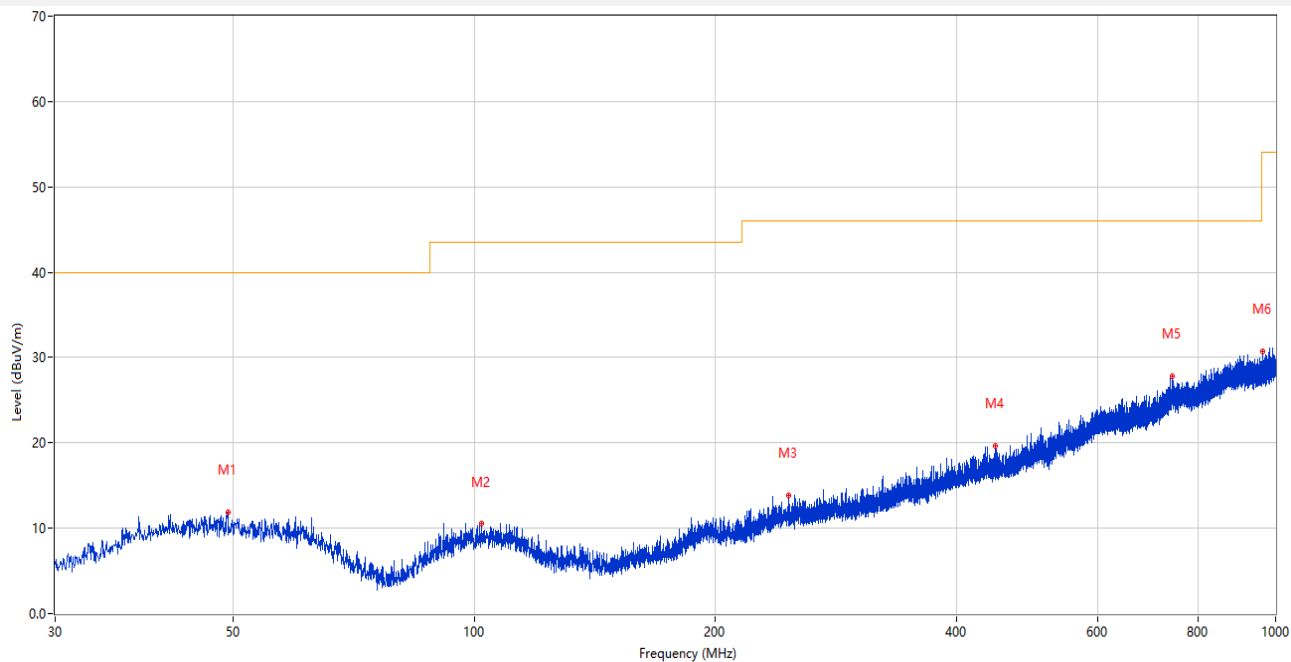
Test Data and Plots

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBUV/m)	Factor (dB)	Limit (dBUV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	54.352	12.19	-24.52	40.0	27.81	Peak	0.00	100	Horizontal	Pass
2	110.122	11.20	-26.59	43.5	32.30	Peak	298.00	100	Horizontal	Pass
3	254.894	13.53	-24.07	46.0	32.47	Peak	360.00	200	Horizontal	Pass
4	427.603	19.42	-19.81	46.0	26.58	Peak	262.00	100	Horizontal	Pass
5	653.080	25.17	-14.40	46.0	20.83	Peak	0.00	100	Horizontal	Pass
6	957.756	30.65	-8.76	46.0	15.35	Peak	231.00	200	Horizontal	Pass

30 MHz to 1 GHz, ANT V

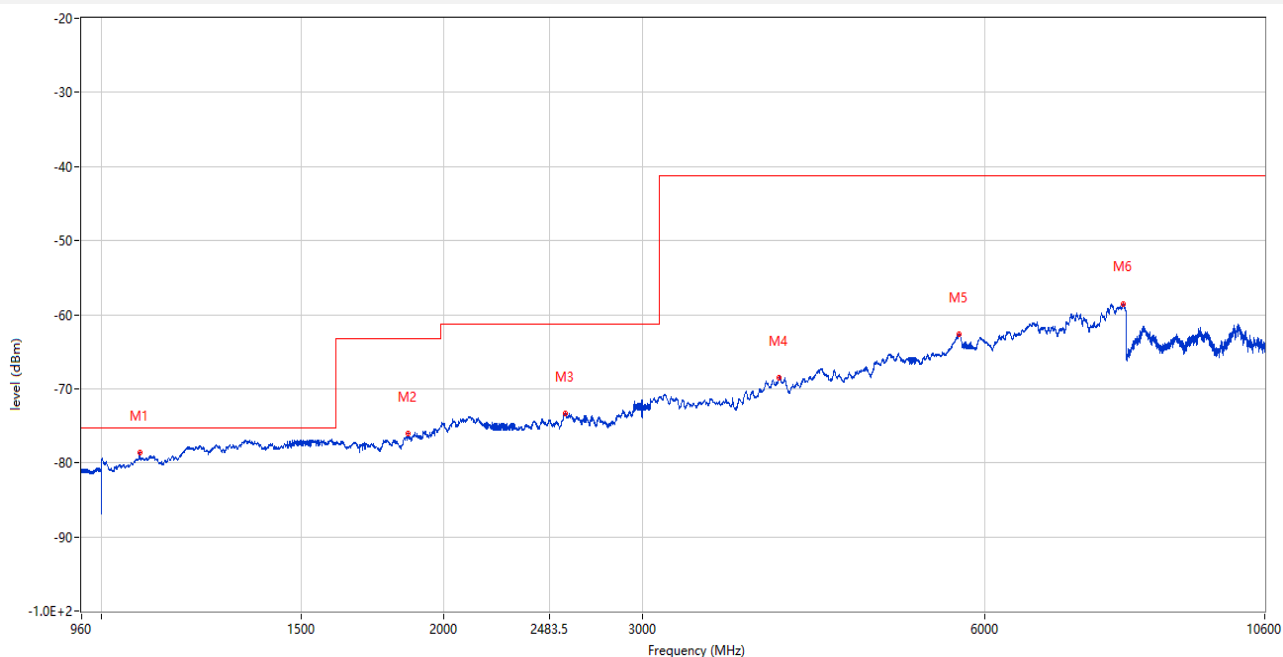


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	54.255	11.85	-24.52	40.0	28.15	Peak	283.00	100	Vertical	Pass
2	102.168	10.54	-26.09	43.5	33.01	Peak	185.00	100	Vertical	Pass
3	247.086	13.83	-24.17	46.0	32.17	Peak	137.00	200	Vertical	Pass
4	446.712	19.66	-19.51	46.0	26.34	Peak	0.00	100	Vertical	Pass
5	742.708	27.85	-11.98	46.0	18.15	Peak	22.00	200	Vertical	Pass
6	963.722	30.76	-8.71	54.0	23.24	Peak	253.00	200	Vertical	Pass

Note: The spurious above 18G is noise only, do not show on the report.

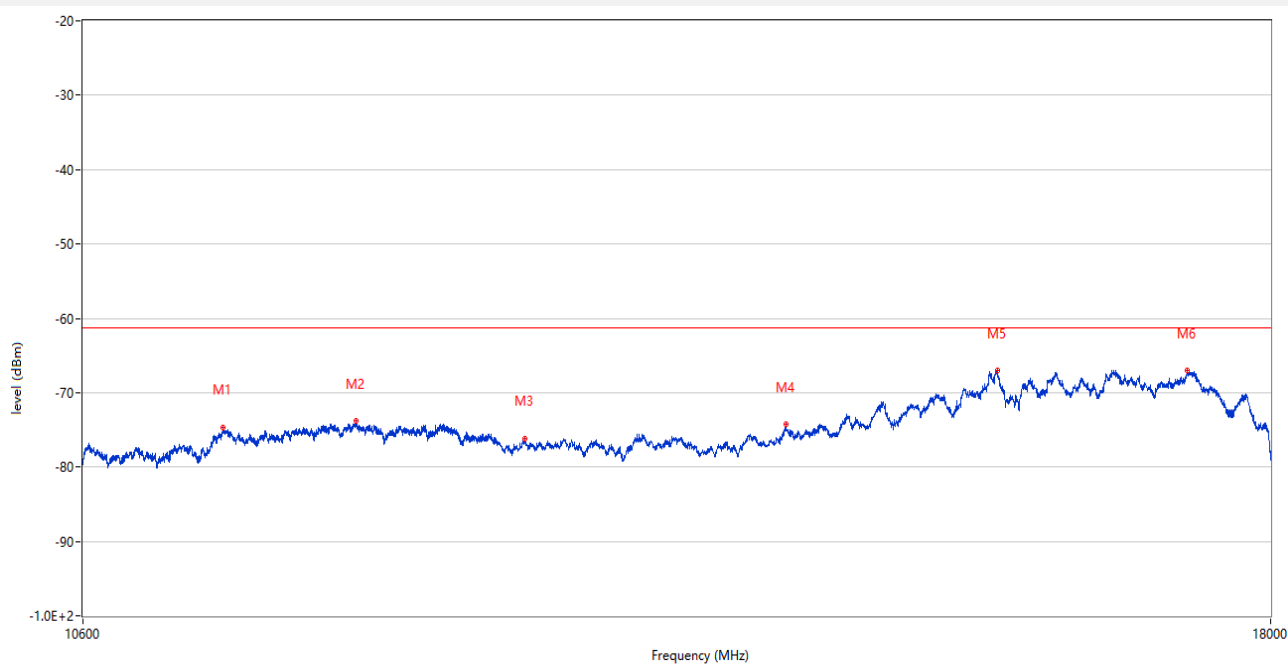
CH5

960 MHz to 18 GHz, ANT H



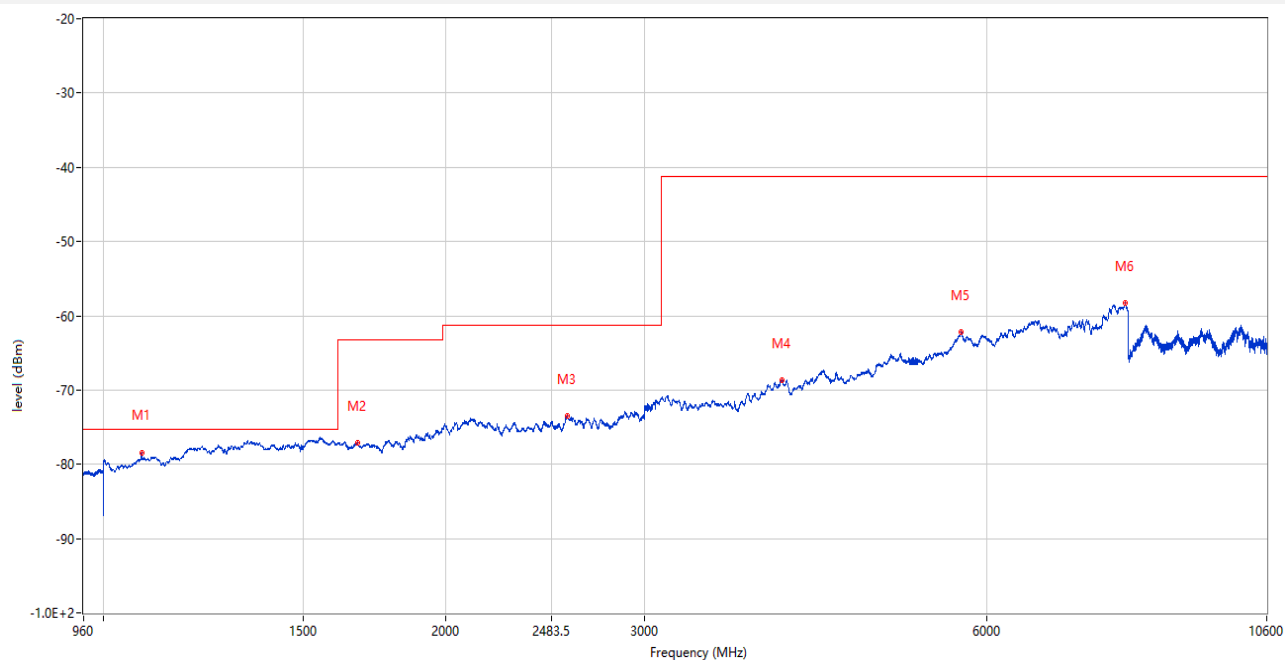
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1080.000	-78.67	-15.12	-75.3	3.37	Peak	304.00	150	Horizontal	Pass
2	1863.000	-76.09	-12.78	-63.3	12.79	Peak	285.00	150	Horizontal	Pass
3	2562.500	-73.33	-9.26	-61.3	12.03	Peak	125.00	150	Horizontal	Pass
4	3957.500	-68.48	-1.71	-41.3	27.18	Peak	323.00	150	Horizontal	Pass
5	5696.250	-62.62	4.14	-41.3	21.32	Peak	288.00	150	Horizontal	Pass
6	7951.250	-58.50	8.04	-41.3	17.20	Peak	37.00	150	Horizontal	Pass

960 MHz to 18 GHz, ANT V



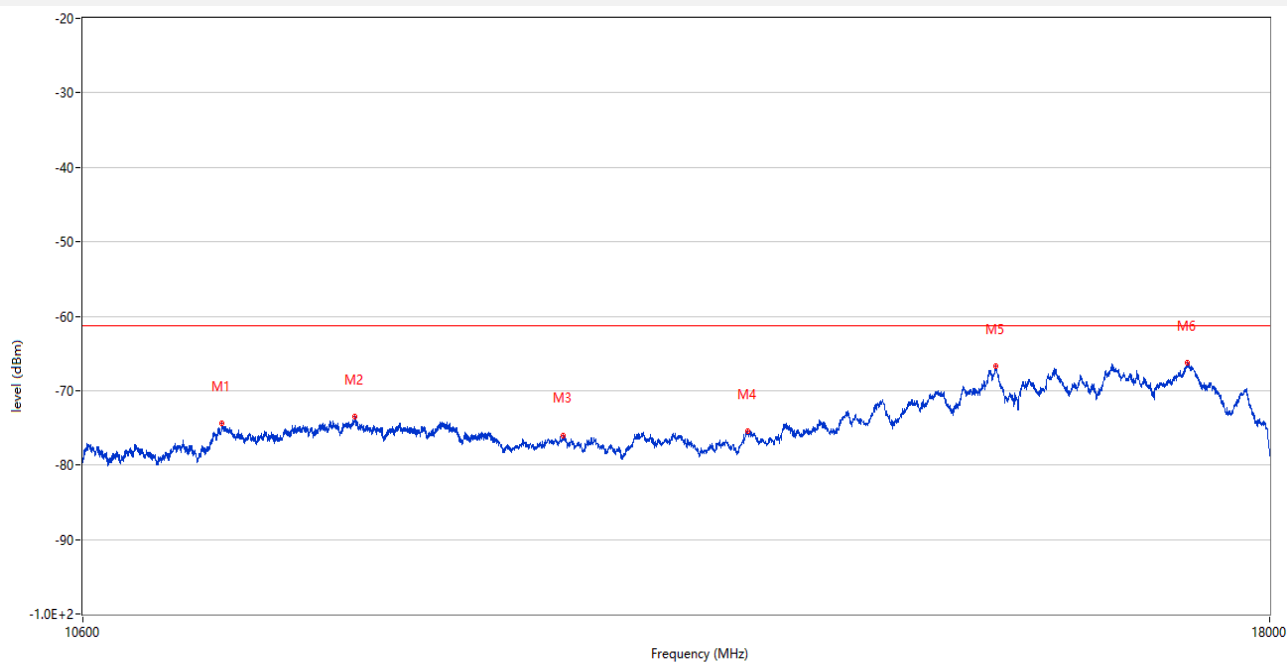
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	11282.088	-74.63	9.24	-61.3	13.33	Peak	63.00	150	Horizontal	Pass
2	11973.313	-73.75	9.83	-61.3	12.45	Peak	140.00	150	Horizontal	Pass
3	12907.500	-76.26	8.81	-61.3	14.96	Peak	-0.00	150	Horizontal	Pass
4	14502.187	-74.26	10.93	-61.3	12.96	Peak	82.00	150	Horizontal	Pass
5	15935.438	-66.96	19.11	-61.3	5.66	Peak	-0.00	150	Horizontal	Pass
6	17346.376	-67.04	17.97	-61.3	5.74	Peak	316.00	150	Horizontal	Pass

960 MHz to 10.6 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1080.000	-78.48	-15.12	-75.3	3.18	Peak	255.00	150	Vertical	Pass
2	1673.000	-77.11	-13.64	-63.3	13.81	Peak	135.00	150	Vertical	Pass
3	2562.500	-73.54	-9.26	-61.3	12.24	Peak	0.00	150	Vertical	Pass
4	3966.250	-68.69	-2.04	-41.3	27.39	Peak	20.00	150	Vertical	Pass
5	5700.000	-62.23	4.15	-41.3	20.93	Peak	184.00	150	Vertical	Pass
6	7952.500	-58.31	8.05	-41.3	17.01	Peak	42.00	150	Vertical	Pass

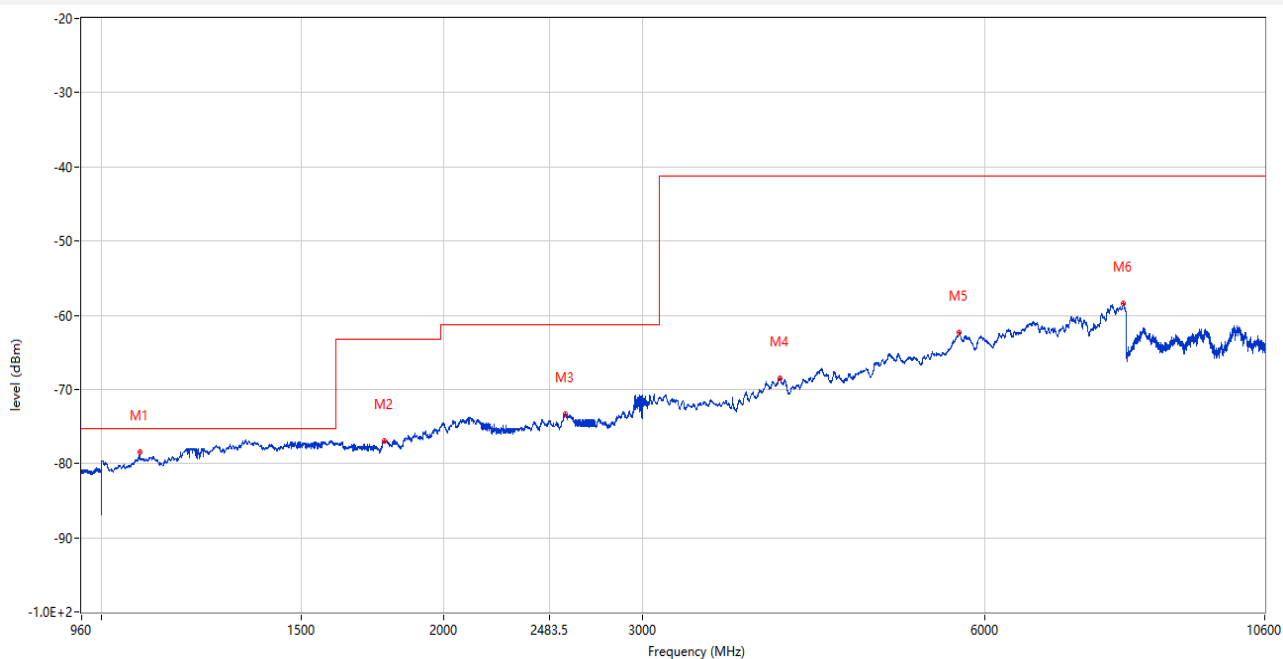
10600 MHz to 18 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	11279.938	-74.42	9.27	-61.3	13.12	Peak	273.00	150	Vertical	Pass
2	11967.400	-73.54	9.87	-61.3	12.24	Peak	196.00	150	Vertical	Pass
3	13131.938	-76.11	8.95	-61.3	14.81	Peak	297.00	150	Vertical	Pass
4	14262.000	-75.51	9.51	-61.3	14.21	Peak	143.00	150	Vertical	Pass
5	15931.500	-66.73	19.09	-61.3	5.43	Peak	278.00	150	Vertical	Pass
6	17350.312	-66.25	18.07	-61.3	4.95	Peak	259.00	150	Vertical	Pass

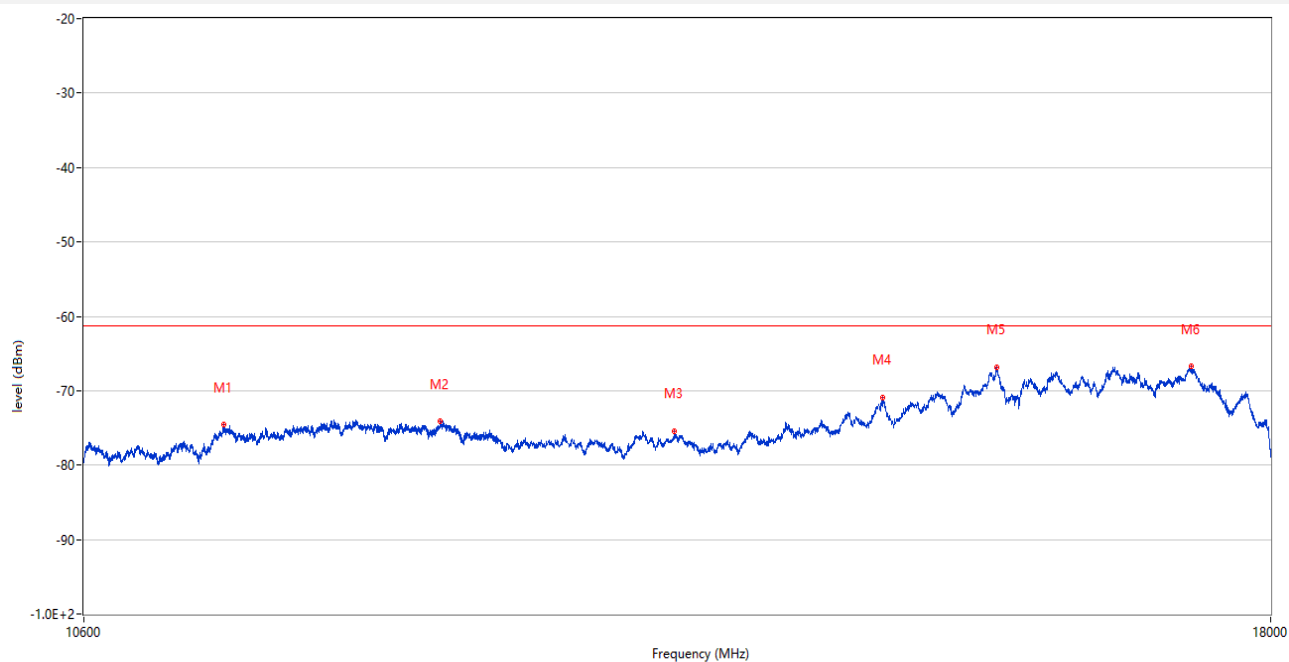
CH9

960 MHz to 10.6 GHz, ANT H



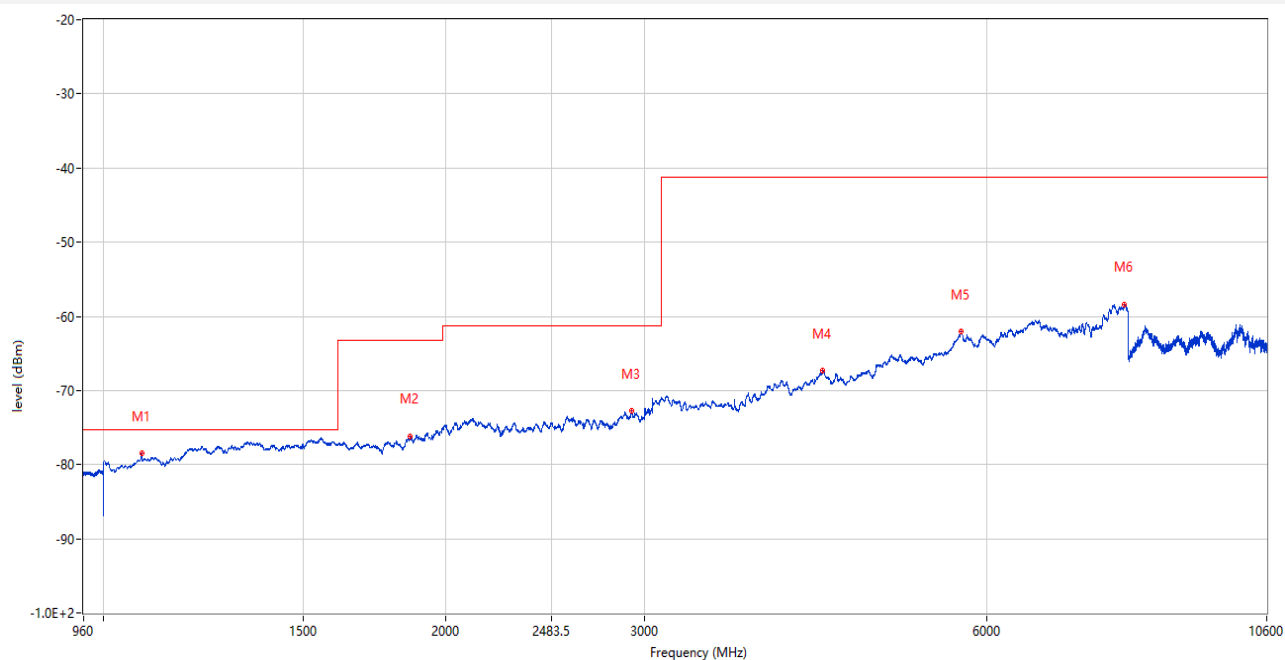
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1080.000	-78.51	-15.12	-75.3	3.21	Peak	151.00	150	Horizontal	Pass
2	1776.000	-76.94	-13.51	-63.3	13.64	Peak	133.00	150	Horizontal	Pass
3	2562.500	-73.31	-9.26	-61.3	12.01	Peak	281.00	150	Horizontal	Pass
4	3965.000	-68.47	-2.03	-41.3	27.17	Peak	5.00	150	Horizontal	Pass
5	5702.500	-62.34	4.06	-41.3	21.04	Peak	359.00	150	Horizontal	Pass
6	7951.250	-58.43	8.04	-41.3	17.13	Peak	358.00	150	Horizontal	Pass

10600 MHz to 18 GHz, ANT H



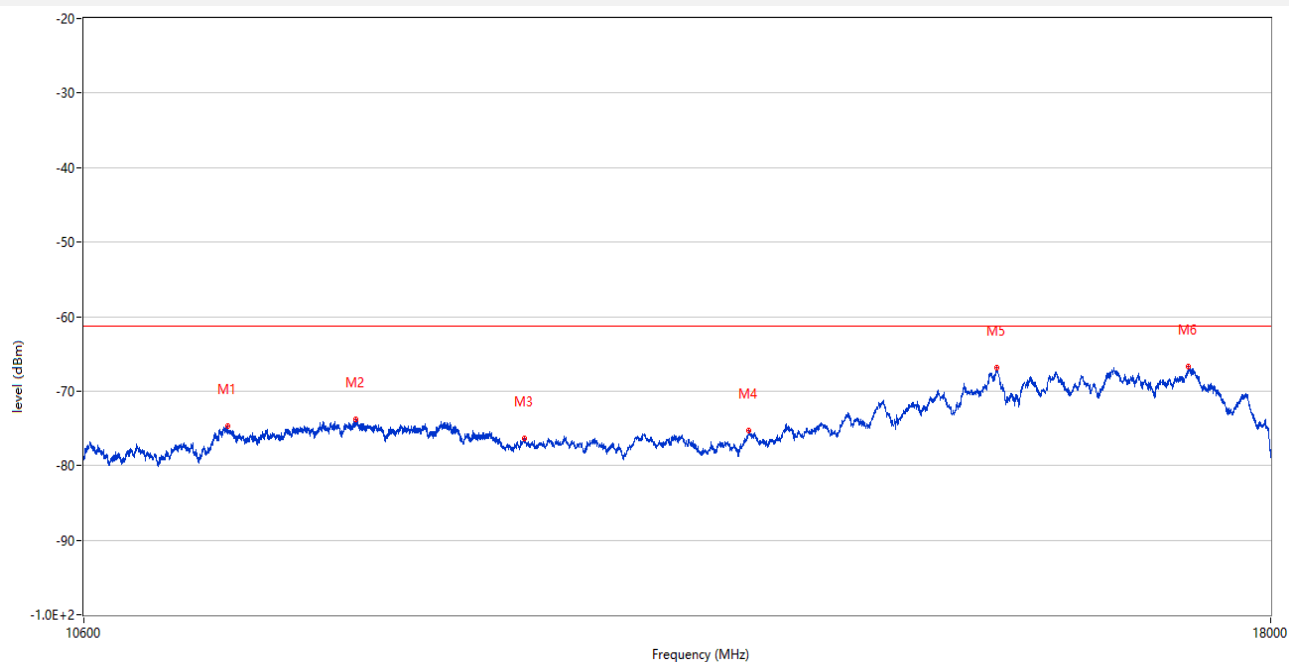
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	11280.474	-74.58	9.26	-61.3	13.28	Peak	281.00	150	Horizontal	Pass
2	12426.424	-74.13	10.16	-61.3	12.83	Peak	142.00	150	Horizontal	Pass
3	13794.750	-75.37	8.63	-61.3	14.07	Peak	295.00	150	Horizontal	Pass
4	15141.375	-70.94	13.88	-61.3	9.64	Peak	177.00	150	Horizontal	Pass
5	15931.500	-66.79	19.09	-61.3	5.54	Peak	117.00	150	Horizontal	Pass
6	17376.563	-66.66	18.01	-61.3	5.36	Peak	97.00	150	Horizontal	Pass

960 MHz to 10.6 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1080.000	-78.43	-15.12	-75.3	3.13	Peak	44.00	150	Vertical	Pass
2	1864.000	-76.12	-12.78	-63.3	12.82	Peak	184.00	150	Vertical	Pass
3	2920.500	-72.74	-7.30	-61.3	11.44	Peak	62.00	150	Vertical	Pass
4	4305.000	-67.32	-0.87	-41.3	26.02	Peak	359.00	150	Vertical	Pass
5	5700.000	-62.09	4.15	-41.3	20.79	Peak	359.00	150	Vertical	Pass
6	7945.000	-58.36	8.10	-41.3	17.06	Peak	107.00	150	Vertical	Pass

10600 MHz to 18 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	11301.437	-74.72	8.95	-61.3	13.42	Peak	333.00	150	Vertical	Pass
2	11968.474	-73.83	9.86	-61.3	12.53	Peak	295.00	150	Vertical	Pass
3	12903.562	-76.39	8.83	-61.3	15.09	Peak	102.00	150	Vertical	Pass
4	14263.312	-75.25	9.52	-61.3	13.95	Peak	141.00	150	Vertical	Pass
5	15931.500	-66.92	19.09	-61.3	5.62	Peak	0.00	150	Vertical	Pass
6	17348.999	-66.77	18.04	-61.3	5.47	Peak	44.00	150	Vertical	Pass

A.4 Radiated Emissions in GPS Bands

Test Data and Plots

CH5

1.164 GHz to 1.61 GHz, ANT H

Frequency (MHz)	Result (dBm)	Factor (dB)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1235.256	-98.9	-85.3	13.60	185.00	300	Horizontal	Pass
2	1576.369	-98.3	-85.3	13.00	260.00	200	Horizontal	Pass

1.164 GHz to 1.61 GHz, ANT V

Frequency (MHz)	Result (dBm)	Factor (dB)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1312.568	-98.32	-85.3	13.02	76.00	100	Vertical	Pass
2	1572.614	-97.25	-85.3	12.25	115.00	200	Vertical	Pass

CH9

1.164 GHz to 1.61 GHz, ANT H

Frequency (MHz)	Result (dBm)	Factor (dB)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1177.522	-99.61	-85.3	14.31	281.00	100	Horizontal	Pass
2	1585.265	-96.92	-85.3	11.62	180.00	100	Horizontal	Pass

1.164 GHz to 1.61 GHz, ANT V

Frequency (MHz)	Result (dBm)	Factor (dB)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1231.957	-97.94	-85.3	12.64	14.00	200	Horizontal	Pass
2	1572.515	-98.1	-85.3	12.80	264.00	300	Horizontal	Pass

A.5 Peak Emissions within a 50MHz Bandwidth

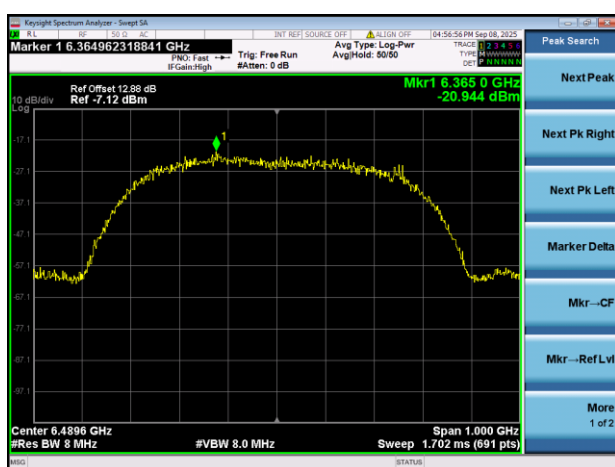
Note: the correct factor of RBW 8MHz to 50MHz is $20 \log (50\text{MHz}/8 \text{ MHz}) = 15.92$

Test Data

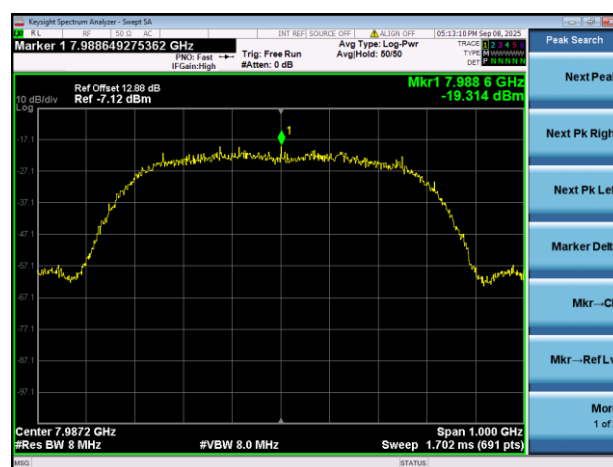
Measured Channel (MHz)	Measured Peak e.i.r.p. power (dBm/8 MHz)	Peak e.i.r.p. power (dBm/50 MHz)	Limit (dBm/50 MHz)	Verdict
6489.6	-20.94	-5.02	≤ 0	Pass
7987.2	-19.31	-3.39	≤ 0	Pass

Test Data and Plots

6489.6MHz



7987.2MHz



A.6 Operational Limitations

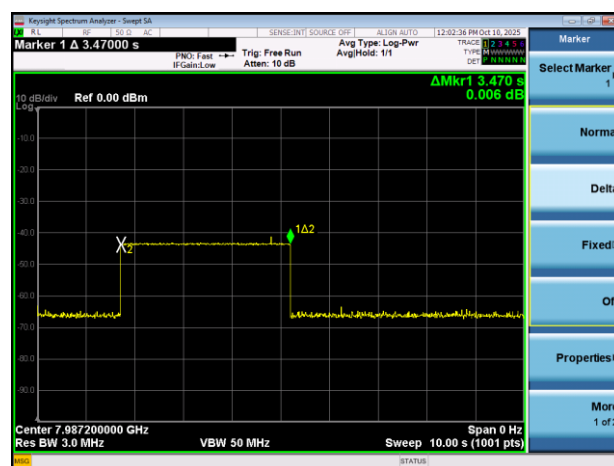
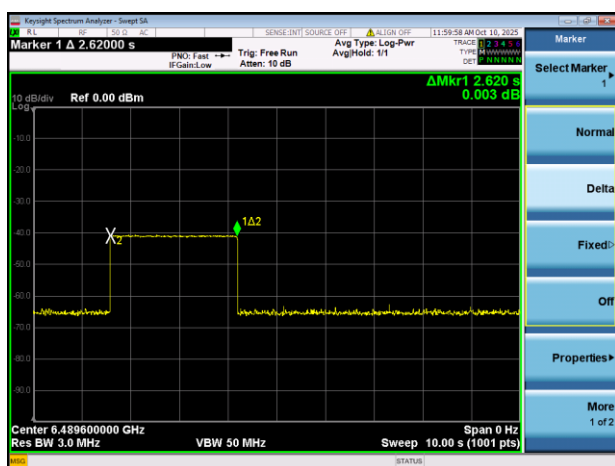
Test data

Measured Channel (MHz)	Transmission Time (s)	Limit (s)	Verdict
6489.6	2.620	≤10	Pass
7987.2	3.470	≤10	Pass

Test Data and Plots

6489.6MHz

7987.2MHz



TEST SETUP PHOTOS

Please refer the document “BL-SH2580953-AR-1.PDF”.

ANNEX B EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2580953-AW.PDF”.

ANNEX C EUT INTERNAL PHOTOS

Please refer the document “BL-SH2580953-AI.PDF”.

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--END OF REPORT--