

TEST REPORT

Applicant: Arduino S.r.l.
Address: Via Andrea Appiani, 25, 20900 MONZA (Italy)
Equipment Type: UNO UWB SHIELD
Model Name: ASX00087
Brand Name: Arduino
FCC ID: 2AN9S-ASX00087
Test Standard: 47 CFR Part 15 Subpart F
(refer to section 3.1)
Sample Arrival Date: Jun. 10, 2026
Test Date: Jul. 01, 2026 - Jul. 16, 2026
Date of Issue: Sep. 30, 2026

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Julie Zhu**Checked by:** Li Ganming**Approved by:** Tolan Tu

(Testing Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Sep. 16, 2026</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Sep. 30, 2026</u>	<u>Add data ranging from 18 to 40G in Chapter A.4</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	601, 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	☒ Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong
	☐ 1/F., Building B, Ganghongji High-Tech Intelligent Industrial Park, No.1008, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Arduino S.r.l.
Address	Via Andrea Appiani, 25, 20900 MONZA (Italy)

2.2 Manufacturer Information

Manufacturer	Arduino S.r.l.
Address	Via Andrea Appiani, 25, 20900 MONZA (Italy)

2.3 General Description for Equipment under Test (EUT)

EUT Name	UNO UWB SHIELD
Model Name Under Test	ASX00087
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V0110
Software Version	V1.0.0
Dimensions (Approx.)	53.3mmx67.2mmx18.6mm
Weight (Approx.)	16.1g

2.4 Technical Information

Network and Wireless connectivity	UWB
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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
		☒ Portable
		☐ Fix Location
Operating Frequency		6.24 GHz - 8.24 GHz
Antenna Type		PCB Antenna
Antenna	CH5	5.3 dBi
Gain	CH9	5.8 dBi

All channel was listed on the following table:

Channel Number	Frequency (MHz)
CH5	6489.6
CH9	7987.2

Note: The above EUT information in section 2.4 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	ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024	American National Standard for Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	--	Pass	Note
2	Conducted Emission	15.207	ANNEX A.1	Pass	--
3	Operational Limitations	15.519(a)	ANNEX A.2	Pass	--
4	UWB Bandwidth	15.519(b)	ANNEX A.3	Pass	--
5	Radiated Emissions	15.519(c)/15.209	ANNEX A.4	Pass	--
6	Radiated Emissions in GPS Bands	15.519(d)	ANNEX A.5	Pass	--
7	Peak Emissions within a 50 MHz Bandwidth	15.519(e)	ANNEX A.6	Pass	--

Note: Please refer to section 5.1.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity	48% to 65%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.2℃ to +24.1℃
Working Voltage of the EUT	NV (Normal Voltage)	1.8 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2025.10.30	2026.10.29
Spectrum Analyzer	KEYSIGHT	N9020A	MY54432240	2026.03.24	2027.03.23
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	00884	2025.03.01	2028.02.29
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	EMC Electronic Co, Ltd	9m*6m*6m	213	2026.03.03	2028.03.02
Amplifier	COM-MV	LSCX_LNA1-12G-01	180602	2026.05.20	2027.05.19
Amplifier	COM-MV	XKu_LNA7-18G-01	180601	2026.05.20	2027.05.19
Amplifier	COM-MV	KA LNA18 40G-01	10248150	2025.12.04	2026.12.03
EMI Receiver	Keysight	N9048B	MY59290112	2026.01.28	2027.01.27
Amplifier	COM-MV	ZT30-1000M	10233263	2026.04.23	2027.04.22
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	1884	2025.11.23	2028.11.22
Anechoic Chamber	Changning	9m*6m*6m	107-1	2026.01.09	2029.01.08
EMI Receiver	ROHDE&SCHWARZ	ESR7	103027	2025.10.30	2026.10.29
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2018054558	2025.11.26	2026.11.25
Anechoic Chamber	YiHeng	21m*11m*8m	101-1	2025.10.16	2028.10.15

4.3 Measurement Uncertainty

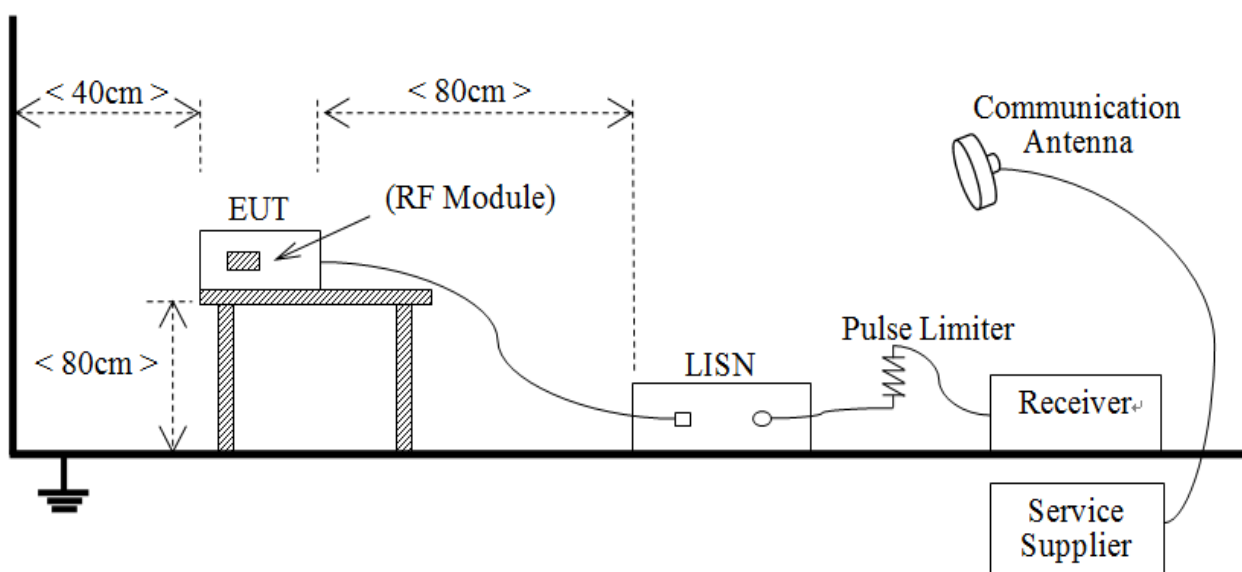
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

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%

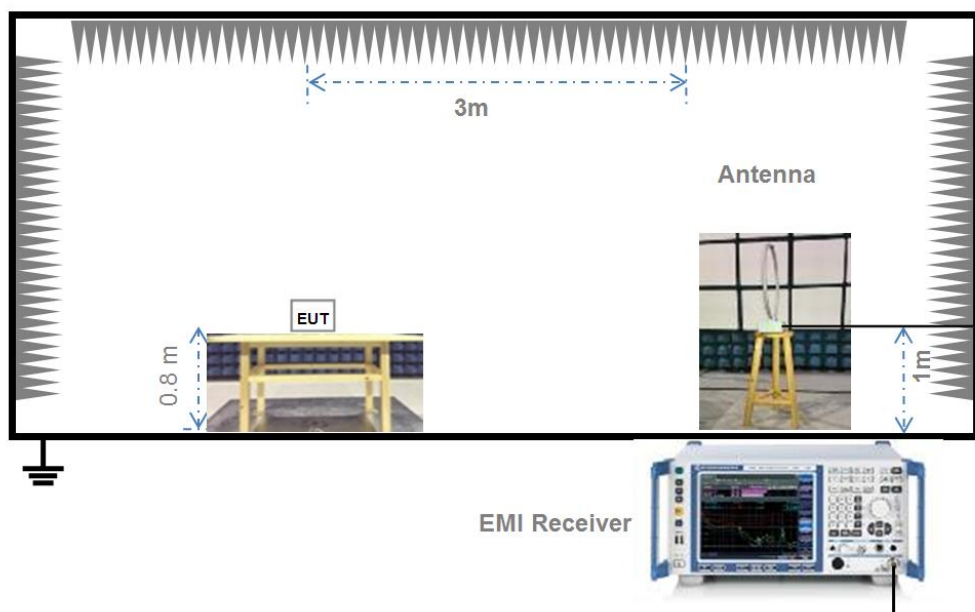
4.4 Description of Test Setup

4.4.1 For AC Power Supply Port Test



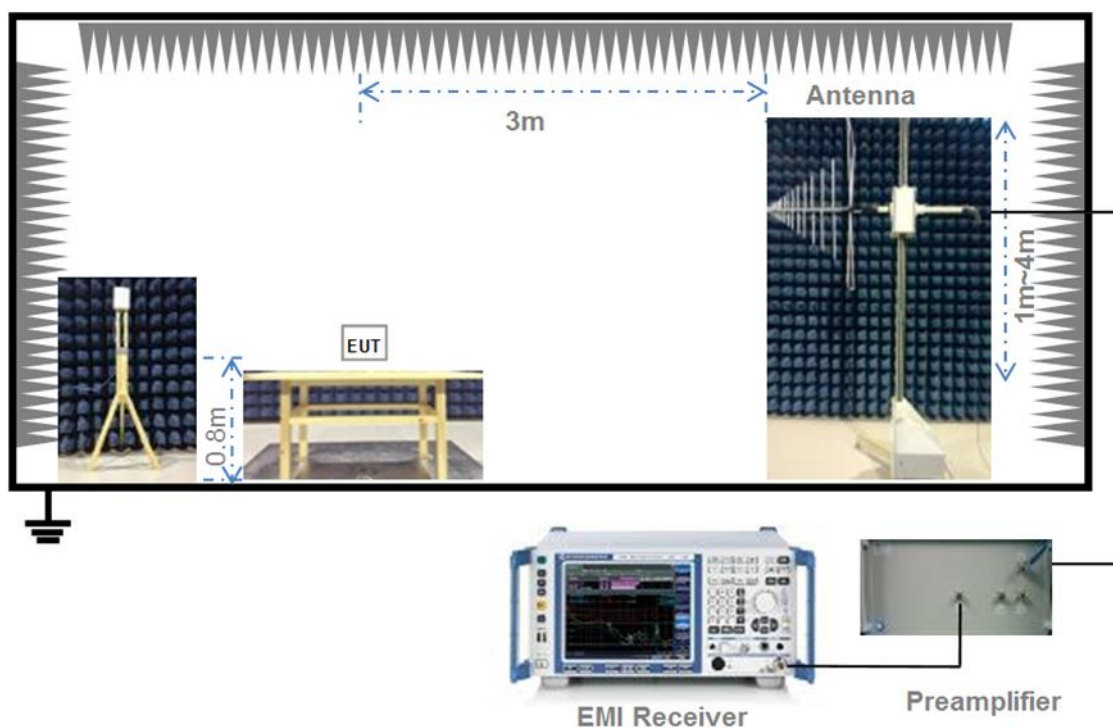
(Diagram 1)

4.4.2 For Radiated Test (Below 30 MHz)



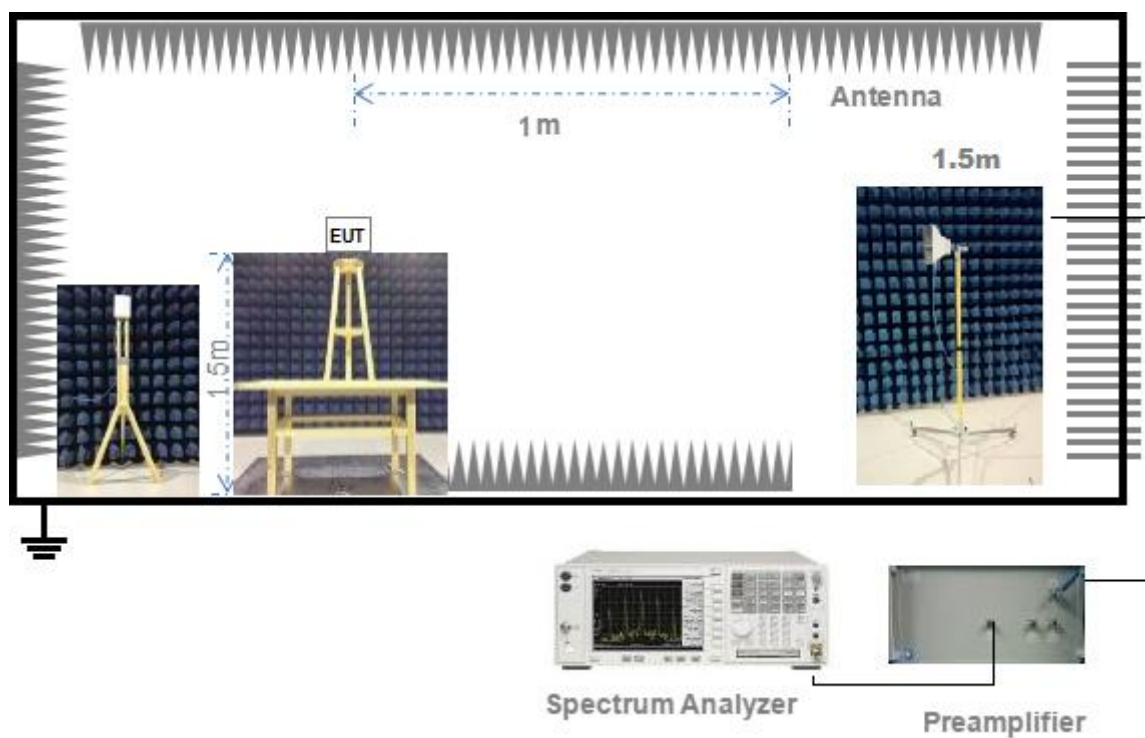
(Diagram 2)

4.4.3 For 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

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

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
0.50 - 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)

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.

FCC §15.519(a)(2);

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.

5.3.2 Test Result

Please refer to ANNEX A.2.

5.4 UWB Bandwidth

5.4.1 Limit

FCC §15.503(d)

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)

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.3.

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

FCC §15.209

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 ($\mu\text{V/m}$)	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.4.

5.6 Radiated Emissions in GPS Bands

5.6.1 Limit

FCC §15.519(d)

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.5.

5.7 Peak Emissions within a 50MHz Bandwidth

5.7.1 Limit

FCC §15.519(e)

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.6.

ANNEX A TEST RESULT

A.1 Conducted Emissions

Note ¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

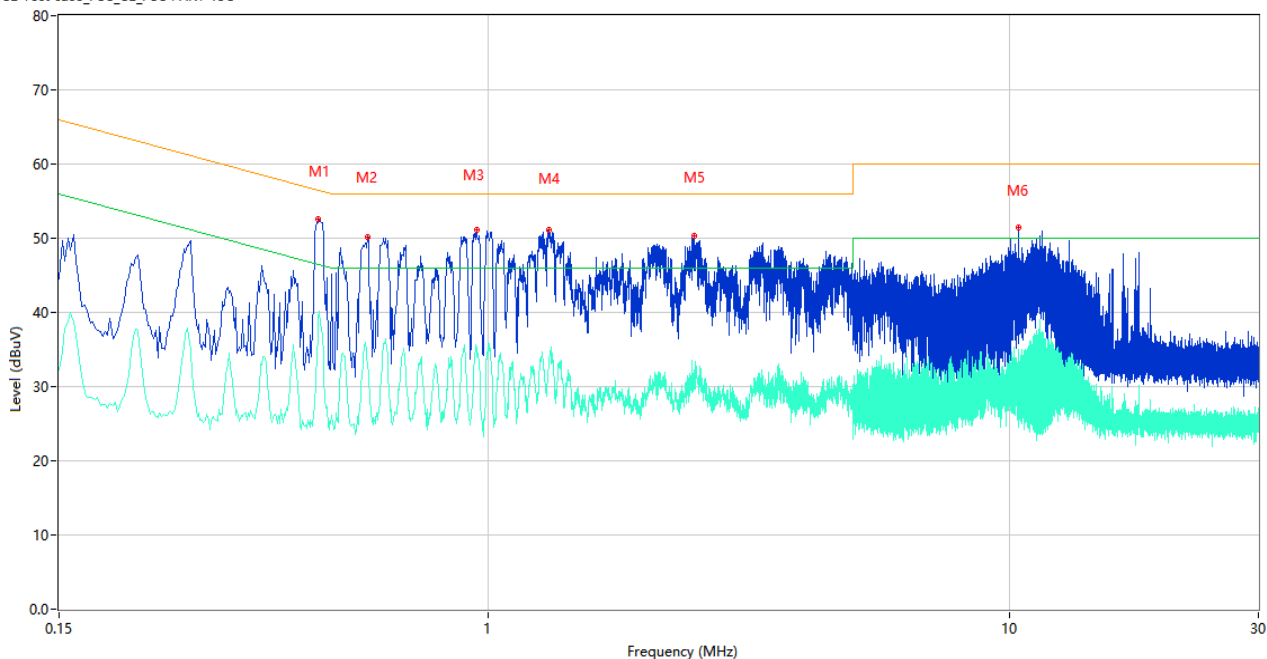
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note ³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

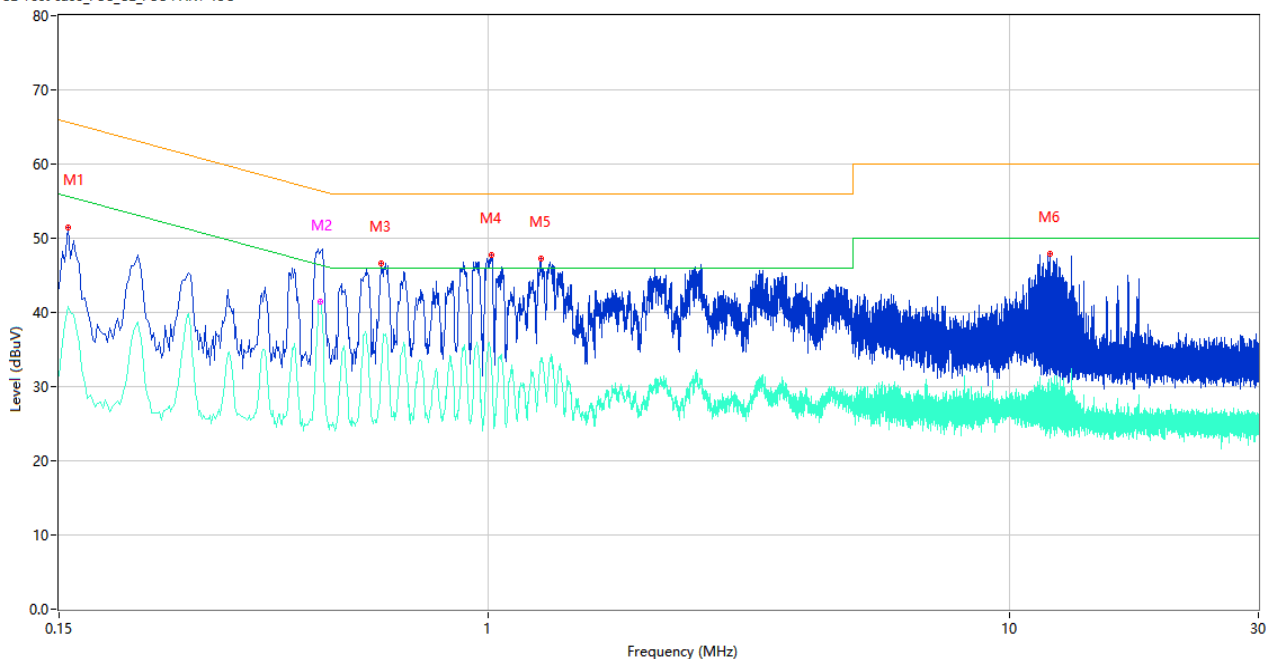
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.470	52.52	10.07	56.51	3.99	Peak	L	Pass
1**	0.470	36.79	10.07	46.51	9.72	AV	L	Pass
2	0.586	50.11	10.18	56.00	5.89	Peak	L	Pass
2**	0.586	33.04	10.18	46.00	12.96	AV	L	Pass
3	0.950	51.06	10.12	56.00	4.94	Peak	L	Pass
3**	0.950	34.07	10.12	46.00	11.93	AV	L	Pass
4	1.308	51.08	10.48	56.00	4.92	Peak	L	Pass
4**	1.308	33.79	10.48	46.00	12.21	AV	L	Pass
5	2.476	50.37	10.23	56.00	5.63	Peak	L	Pass
5**	2.476	30.67	10.23	46.00	15.33	AV	L	Pass
6	10.380	51.50	10.43	60.00	8.50	Peak	L	Pass
6**	10.380	28.84	10.43	50.00	21.16	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.156	51.40	9.86	65.67	14.27	Peak	N	Pass
1**	0.156	40.74	9.86	55.67	14.93	AV	N	Pass
2	0.476	48.05	10.06	56.41	8.36	Peak	N	Pass
2**	0.476	41.40	10.06	46.41	5.01	AV	N	Pass
3	0.622	46.61	10.24	56.00	9.39	Peak	N	Pass
3**	0.622	32.00	10.24	46.00	14.00	AV	N	Pass
4	1.014	47.74	10.09	56.00	8.26	Peak	N	Pass
4**	1.014	32.18	10.09	46.00	13.82	AV	N	Pass
5	1.264	47.23	10.52	56.00	8.77	Peak	N	Pass
5**	1.264	33.37	10.52	46.00	12.63	AV	N	Pass
6	11.940	47.95	10.41	60.00	12.05	Peak	N	Pass
6**	11.940	29.38	10.41	50.00	20.62	AV	N	Pass

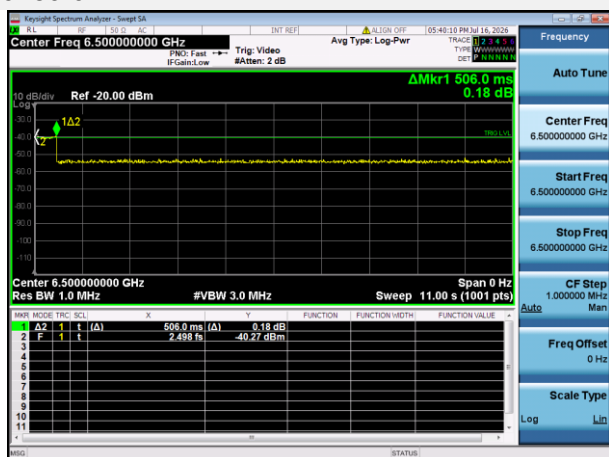
A.2 Operational Limitations

Test Data

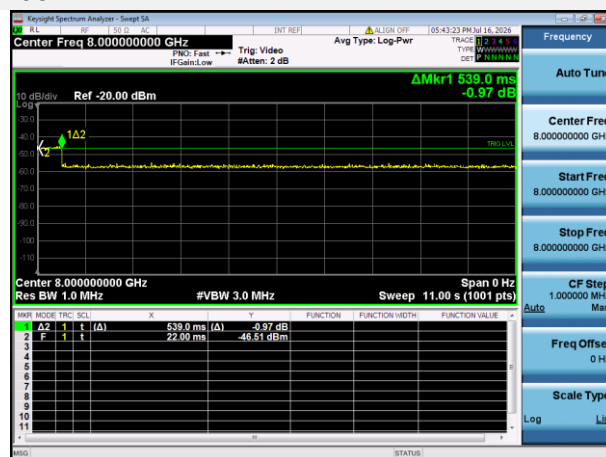
Measured Channel (MHz)	Transmission Time (s)	Limit (s)	Verdict
6489.6	0.506	10	Pass
7987.2	0.539		Pass

Test Plots

6489.6 MHz



7987.2 MHz



A.3 UWB Bandwidth

Test Data

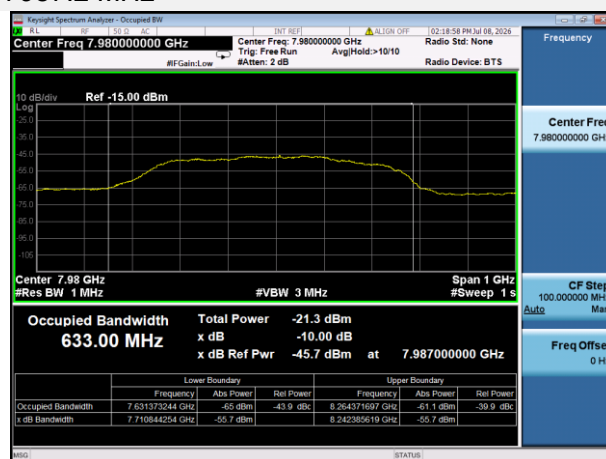
Measured Channel (MHz)	F _M (MHz)	F _L (MHz)	F _H (MHz)	UWB Bandwidth (MHz)	Limit (MHz)	Verdict
6489.6	6539.99	6265.93	6814.05	548.12	UWB Bandwidth $\geq$ 500 MHz 10 dB bandwidth contained between 3100 to 10600 MHz	Pass
7987.2	7947.87	7631.37	8264.37	633.00		Pass

Test Plots

6489.6 MHz



7987.2 MHz



A.4 Radiated Emissions

Note ¹: The symbol of "--" in the table which means not application.

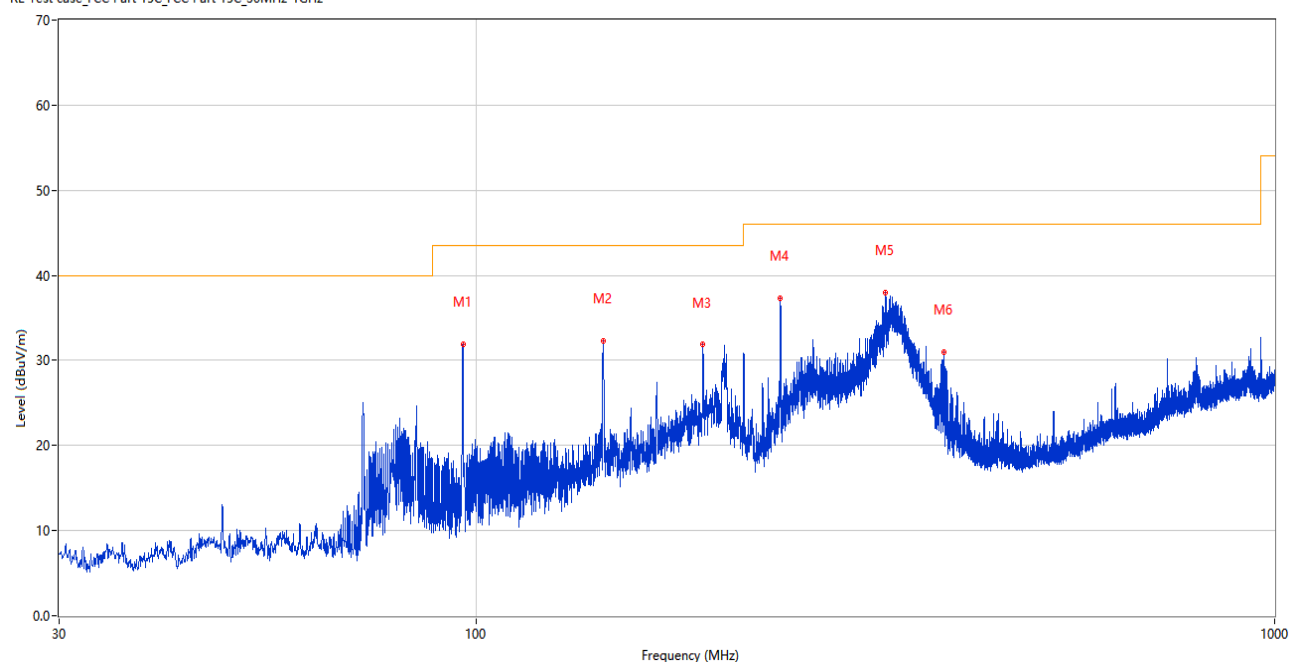
Note ²: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.209 was not reported.

Note ³: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

Test Data and Plots

30 MHz to 1 GHz, ANT H

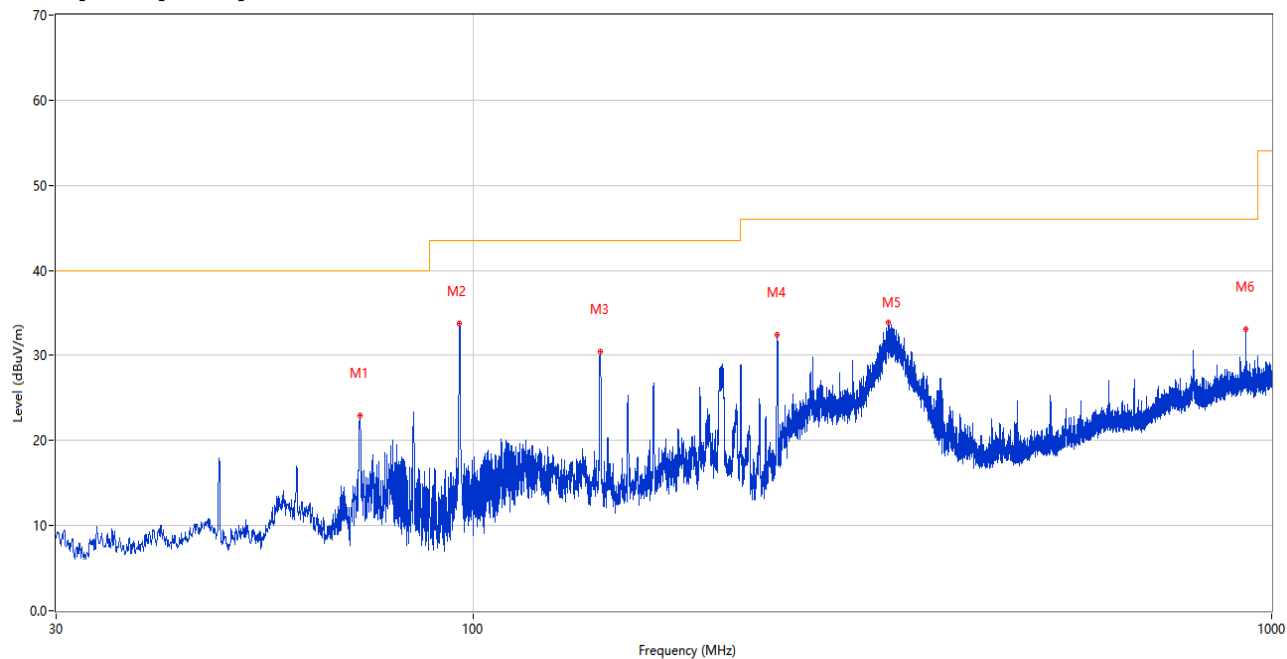
RE Test case_FCC Part 15C_FCC Part 15C_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	96.154	31.93	-33.97	43.5	11.57	Peak	123.80	200	Horizontal	Pass
2	144.169	32.27	-28.29	43.5	11.23	Peak	128.50	200	Horizontal	Pass
3	192.184	31.84	-30.79	43.5	11.66	Peak	108.20	200	Horizontal	Pass
4	240.102	37.36	-29.23	46.0	8.64	Peak	286.00	100	Horizontal	Pass
5	325.753	37.99	-25.42	46.0	8.01	Peak	261.20	100	Horizontal	Pass
6	384.729	30.96	-23.83	46.0	15.04	Peak	244.90	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

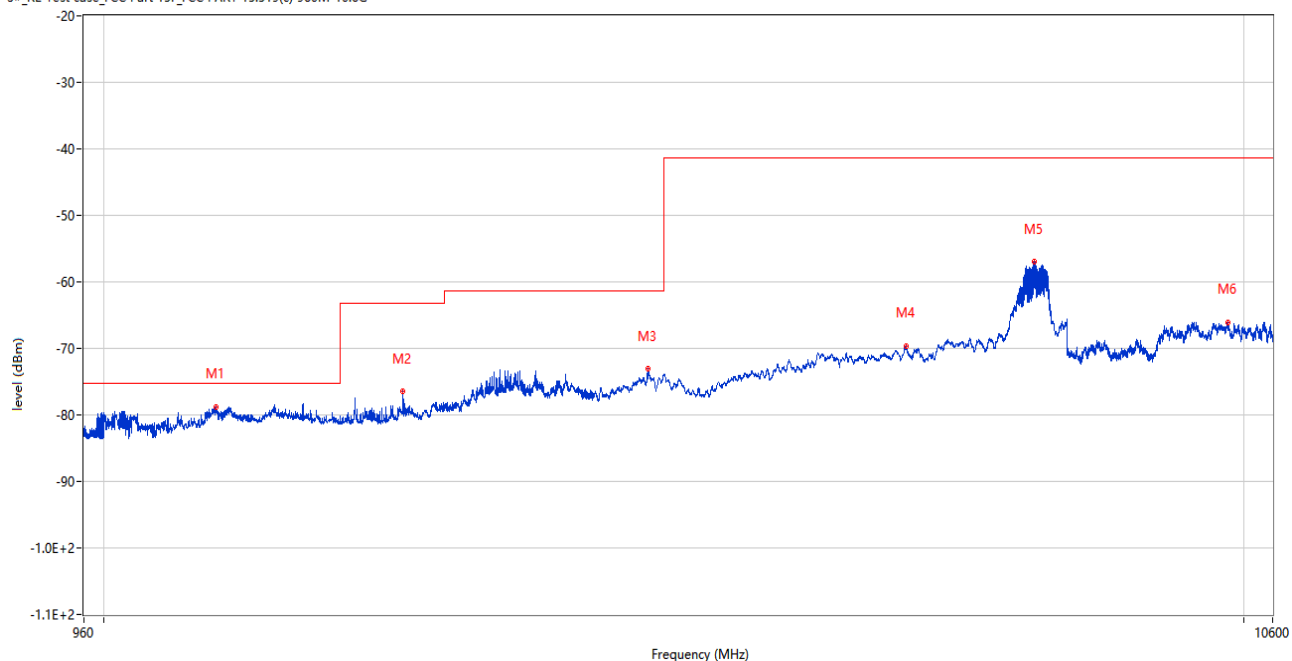
RE Test case_FCC Part 15C_FCC Part 15C_30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	72.049	22.94	-31.31	40.0	17.06	Peak	35.90	200	Vertical	Pass
2	96.057	33.78	-33.99	43.5	9.72	Peak	236.10	100	Vertical	Pass
3	144.218	30.50	-28.28	43.5	13.00	Peak	360.00	100	Vertical	Pass
4	240.199	32.45	-29.23	46.0	13.55	Peak	35.20	100	Vertical	Pass
5	330.700	33.86	-25.13	46.0	12.14	Peak	137.20	100	Vertical	Pass
6	929.433	33.07	-11.19	46.0	12.93	Peak	135.00	100	Vertical	Pass

UWB CH5, 960 MHz to 10.6 GHz, ANT H

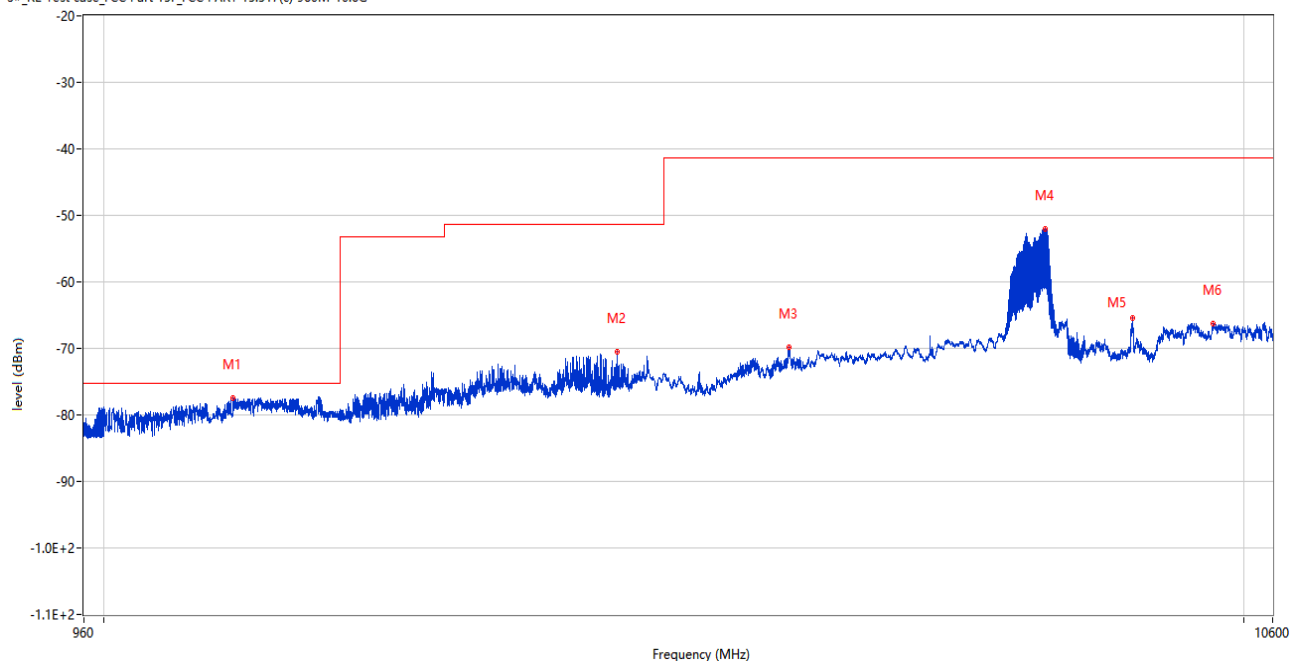
3#_RE Test case_FCC Part 15F_FCC PART 15.519(c) 960M-10.6G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1252.500	-78.88	-75.3	3.58	238.00	Horizontal	Horizontal	Pass
2	1828.000	-76.40	-63.3	13.10	178.00	Horizontal	Horizontal	Pass
3	3000.000	-74.43	-61.3	13.13	145.00	Horizontal	Horizontal	Pass
4	5052.000	-69.66	-41.3	28.36	80.00	Horizontal	Horizontal	Pass
5	6548.000	-57.00	-41.3	15.70	51.00	Horizontal	Horizontal	Pass
6	9676.599	-66.12	-41.3	24.82	314.00	Horizontal	Horizontal	Pass

UWB CH5, 960 MHz to 10.6 GHz, ANT V

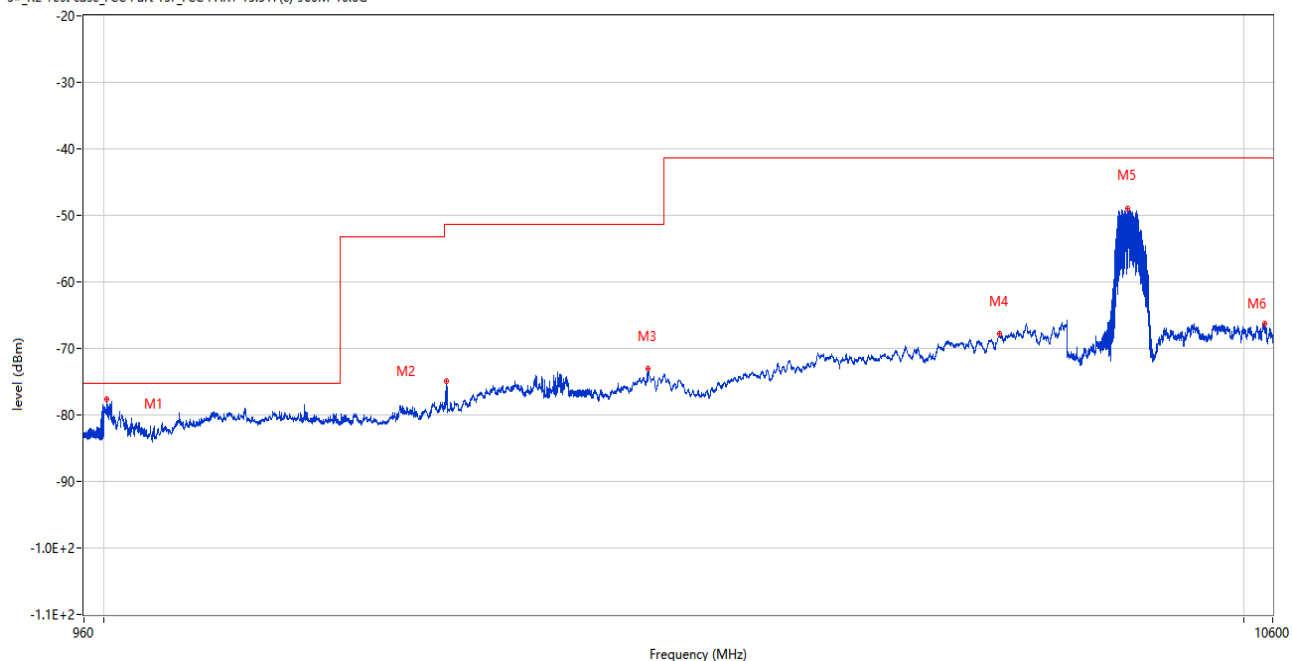
3#_RE Test case_FCC Part 15F_FCC PART 15.517(c) 960M-10.6G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1297.000	-77.47	-75.3	2.17	155.00	Vertical	Horizontal	Pass
2	2818.000	-70.53	-51.3	19.23	220.00	Vertical	Horizontal	Pass
3	3986.000	-69.82	-41.3	28.52	191.00	Vertical	Horizontal	Pass
4	6697.000	-52.01	-41.3	10.71	222.00	Vertical	Horizontal	Pass
5	7989.100	-65.47	-41.3	24.17	159.00	Vertical	Horizontal	Pass
6	9399.400	-66.22	-41.3	24.92	258.00	Vertical	Horizontal	Pass

UWB CH9, 960 MHz to 10.6 GHz, ANT H

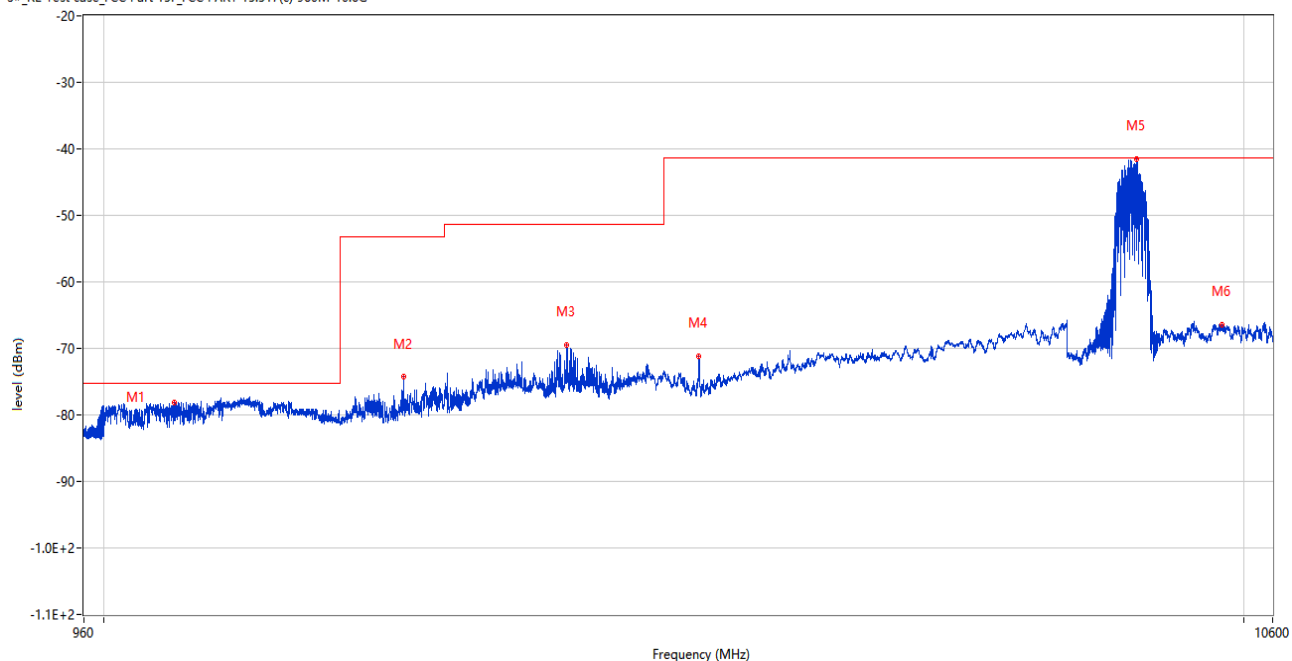
3#_RE Test case_FCC Part 15F_FCC PART 15.517(c) 960M-10.6G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1006.000	-77.60	-75.3	2.30	90.00	Horizontal	Horizontal	Pass
2	1998.000	-74.98	-51.3	23.68	137.00	Horizontal	Horizontal	Pass
3	3000.000	-74.93	-51.3	23.63	173.00	Horizontal	Horizontal	Pass
4	6102.000	-67.88	-41.3	26.58	317.00	Horizontal	Horizontal	Pass
5	7911.700	-48.95	-41.3	7.65	39.00	Horizontal	Horizontal	Pass
6	10420.901	-66.19	-41.3	24.89	277.00	Horizontal	Horizontal	Pass

UWB CH9, 960 MHz to 10.6 GHz, ANT V

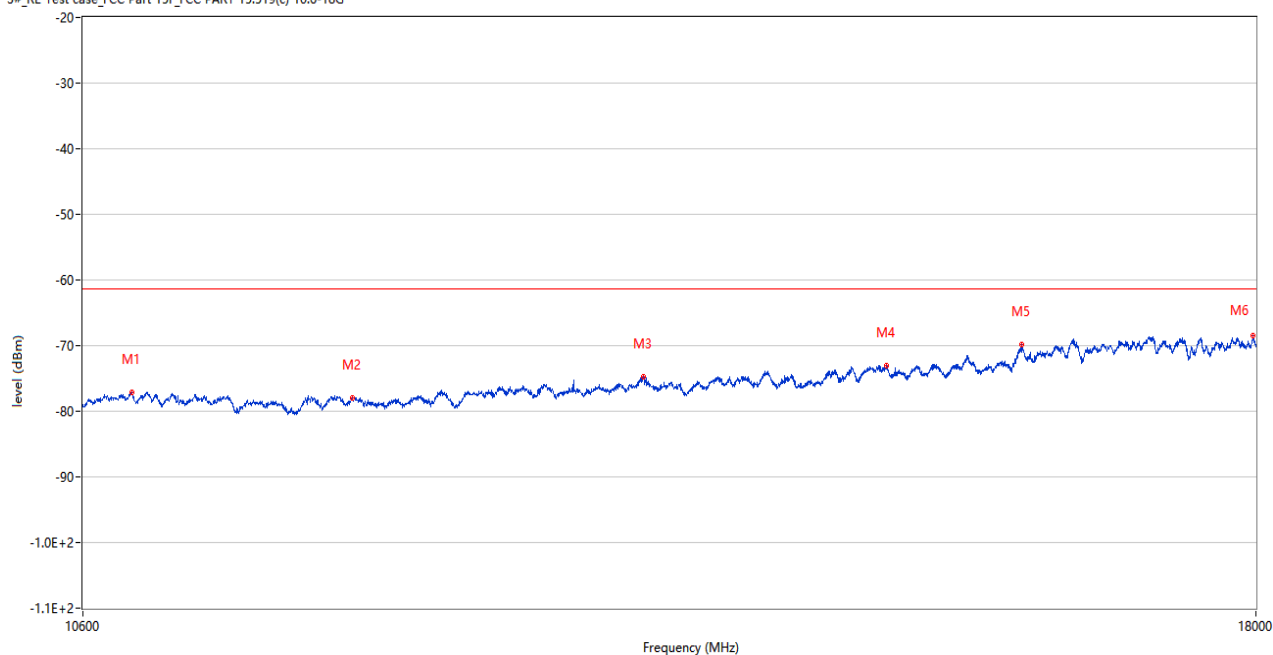
3#_RE Test case_FCC Part 15F_FCC PART 15.517(c) 960M-10.6G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1152.000	-78.17	-75.3	2.87	148.00	Vertical	Horizontal	Pass
2	1831.500	-74.29	-53.3	20.99	96.00	Vertical	Horizontal	Pass
3	2546.000	-69.46	-51.3	18.16	207.00	Vertical	Horizontal	Pass
4	3326.000	-71.21	-41.3	29.91	205.00	Vertical	Horizontal	Pass
5	8046.700	-41.54	-41.3	0.24	330.0	Vertical	Horizontal	Pass
6	9574.000	-66.51	-41.3	25.21	12.0	Vertical	Horizontal	Pass

UWB CH5, 10.6 GHz to 18 GHz, ANT H

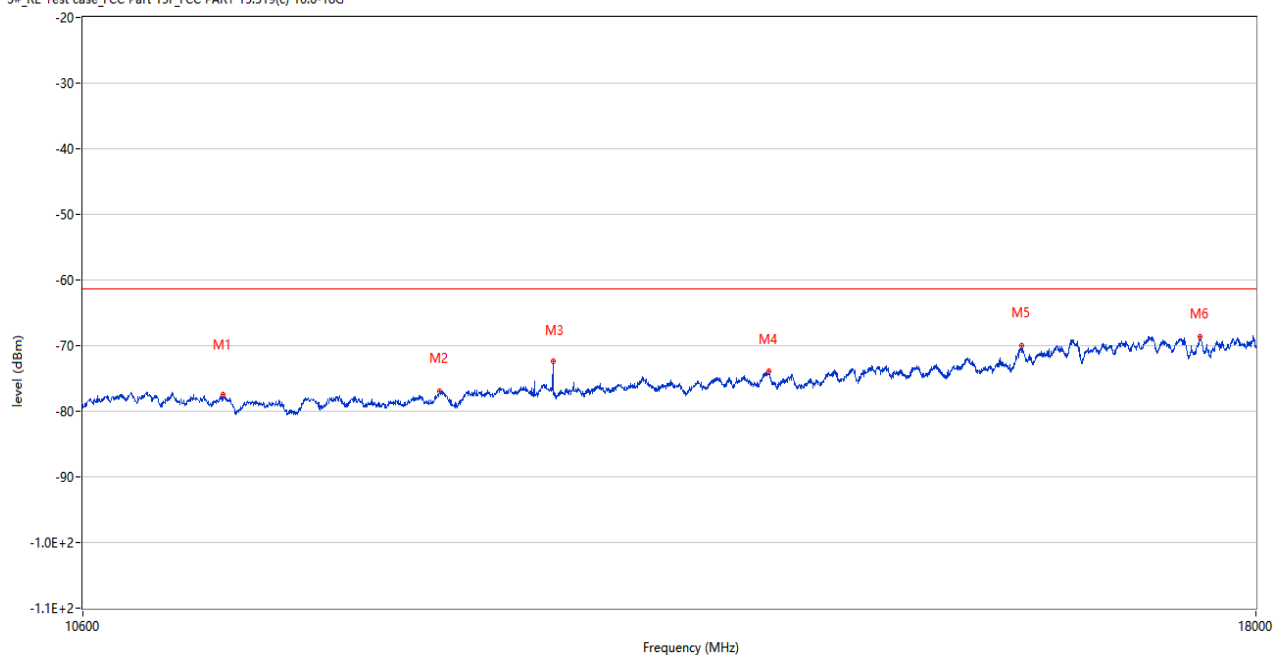
3#_RE Test case_FCC Part 15F_FCC PART 15.519(c) 10.6-18G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	10836.799	-77.05	-61.3	15.75	221.00	Horizontal	Horizontal	Pass
2	11969.000	-77.93	-61.3	16.63	360.00	Horizontal	Horizontal	Pass
3	13654.350	-74.83	-61.3	13.53	287.00	Horizontal	Horizontal	Pass
4	15237.950	-72.99	-61.3	11.69	203.00	Horizontal	Horizontal	Pass
5	16190.701	-69.85	-61.3	8.55	349.00	Horizontal	Horizontal	Pass
6	17975.949	-68.45	-61.3	7.15	312.00	Horizontal	Horizontal	Pass

UWB CH5, 10.6 GHz to 18 GHz, ANT V

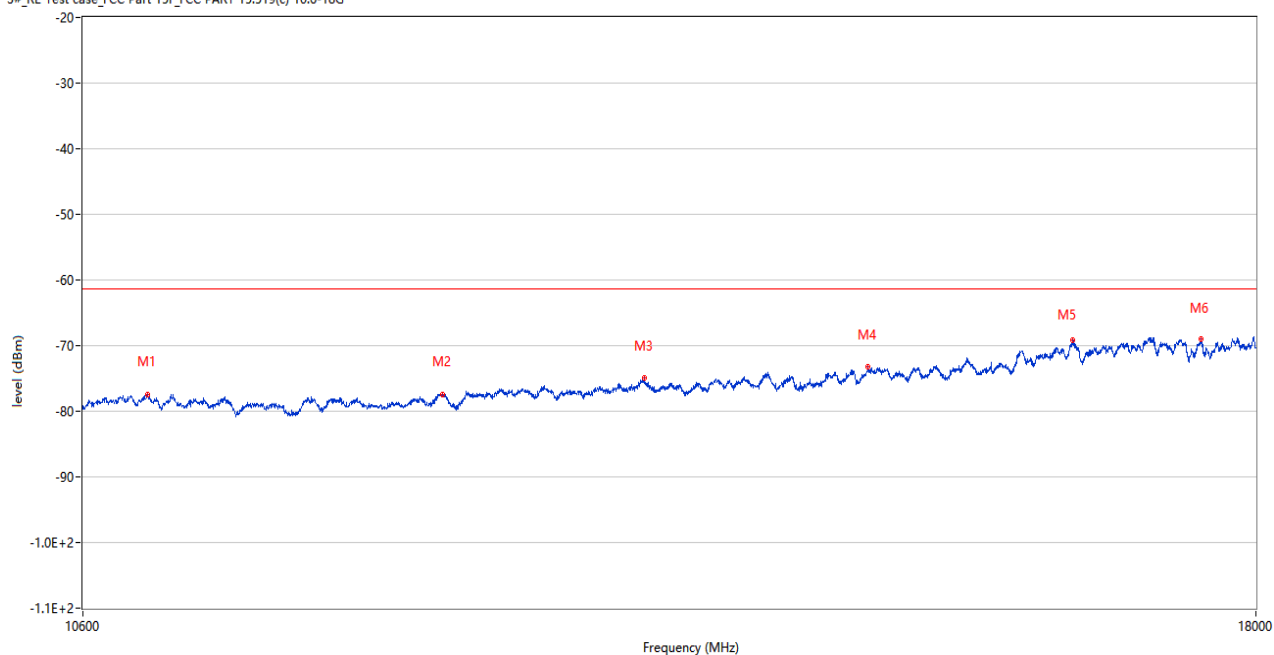
3#_RE Test case_FCC Part 15F_FCC PART 15.519(c) 10.6-18G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	11291.900	-77.54	-61.3	16.24	360.00	Vertical	Horizontal	Pass
2	12451.849	-76.99	-61.3	15.69	82.00	Vertical	Horizontal	Pass
3	13104.900	-72.35	-61.3	11.05	79.00	Vertical	Horizontal	Pass
4	14446.151	-73.85	-61.3	12.55	254.00	Vertical	Horizontal	Pass
5	16194.400	-70.08	-61.3	8.78	152.00	Vertical	Horizontal	Pass
6	17552.300	-68.68	-61.3	7.38	6.00	Vertical	Horizontal	Pass

UWB CH9, 10.6 GHz to 18 GHz, ANT H

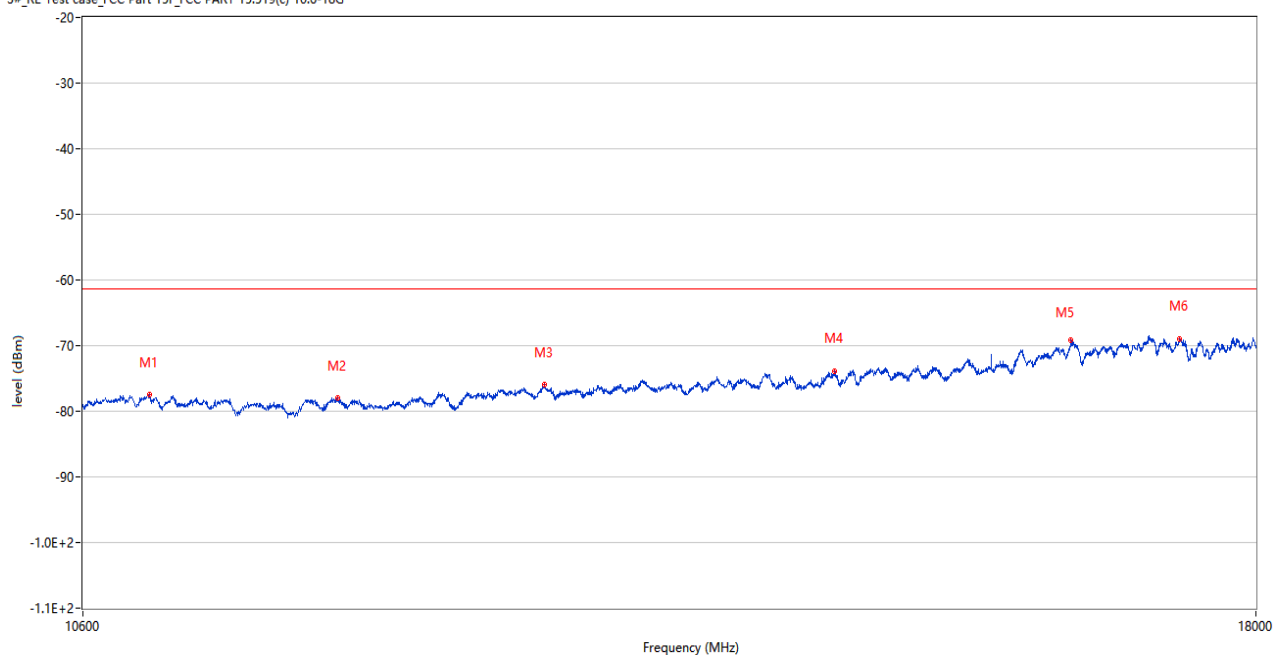
3#_RE Test case_FCC Part 15F_FCC PART 15.519(c) 10.6-18G



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	10912.650	-77.40	-61.3	16.10	317.00	Horizontal	Horizontal	Pass
2	12470.350	-77.52	-61.3	16.22	279.00	Horizontal	Horizontal	Pass
3	13658.050	-74.92	-61.3	13.62	194.00	Horizontal	Horizontal	Pass
4	15110.300	-73.27	-61.3	11.97	295.00	Horizontal	Horizontal	Pass
5	16571.801	-69.24	-61.3	7.94	166.00	Horizontal	Horizontal	Pass
6	17556.001	-69.05	-61.3	7.75	356.00	Horizontal	Horizontal	Pass

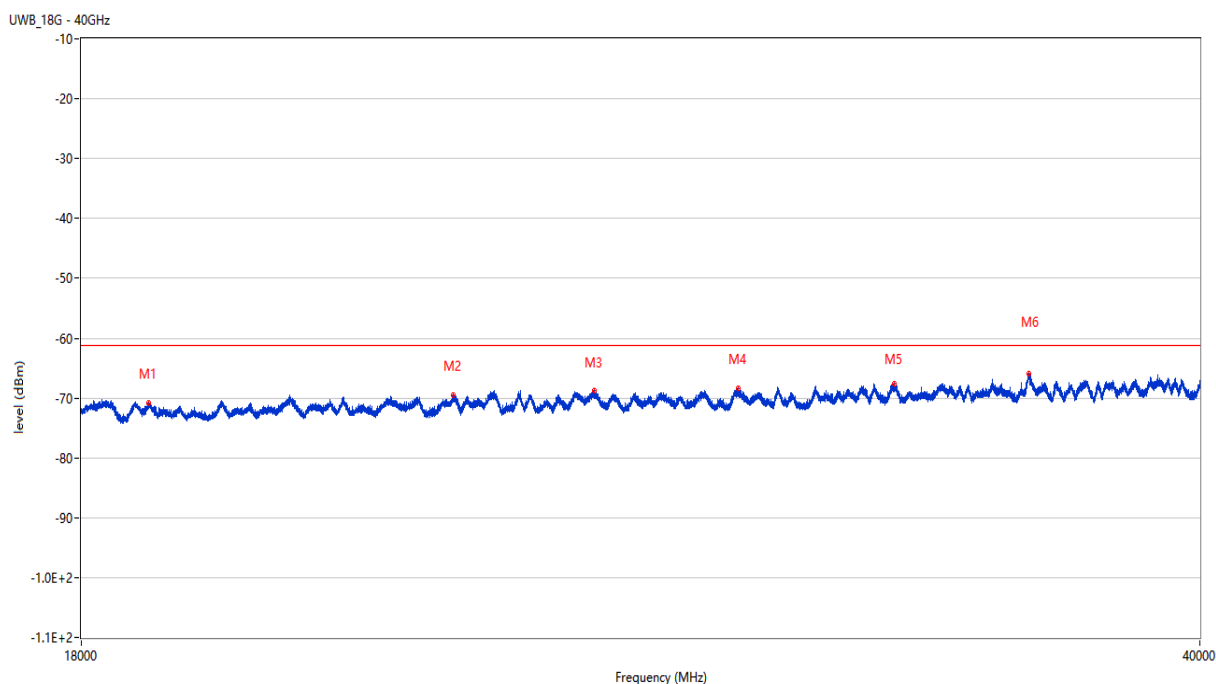
UWB CH9, 10.6 GHz to 18 GHz, ANT V

3#_RE Test case_FCC Part 15F_FCC PART 15.519(c) 10.6-18G



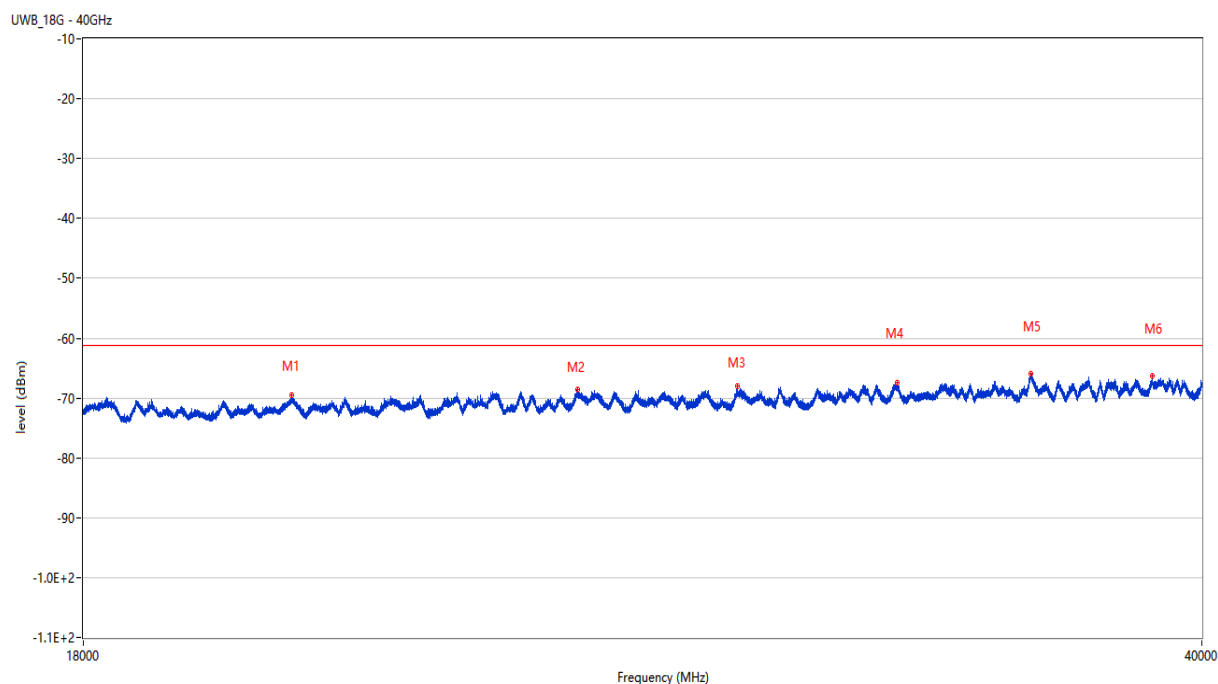
No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	10923.750	-77.49	-61.3	16.19	138.00	Vertical	Horizontal	Pass
2	11889.450	-78.02	-61.3	16.72	177.00	Vertical	Horizontal	Pass
3	13054.950	-75.94	-61.3	14.64	79.00	Vertical	Horizontal	Pass
4	14884.600	-73.82	-61.3	12.52	299.00	Vertical	Horizontal	Pass
5	16557.000	-69.21	-61.3	7.91	288.00	Vertical	Horizontal	Pass
6	17389.500	-68.99	-61.3	7.69	96.00	Vertical	Horizontal	Pass

UWB CH5, 18 GHz to 40 GHz, ANT H



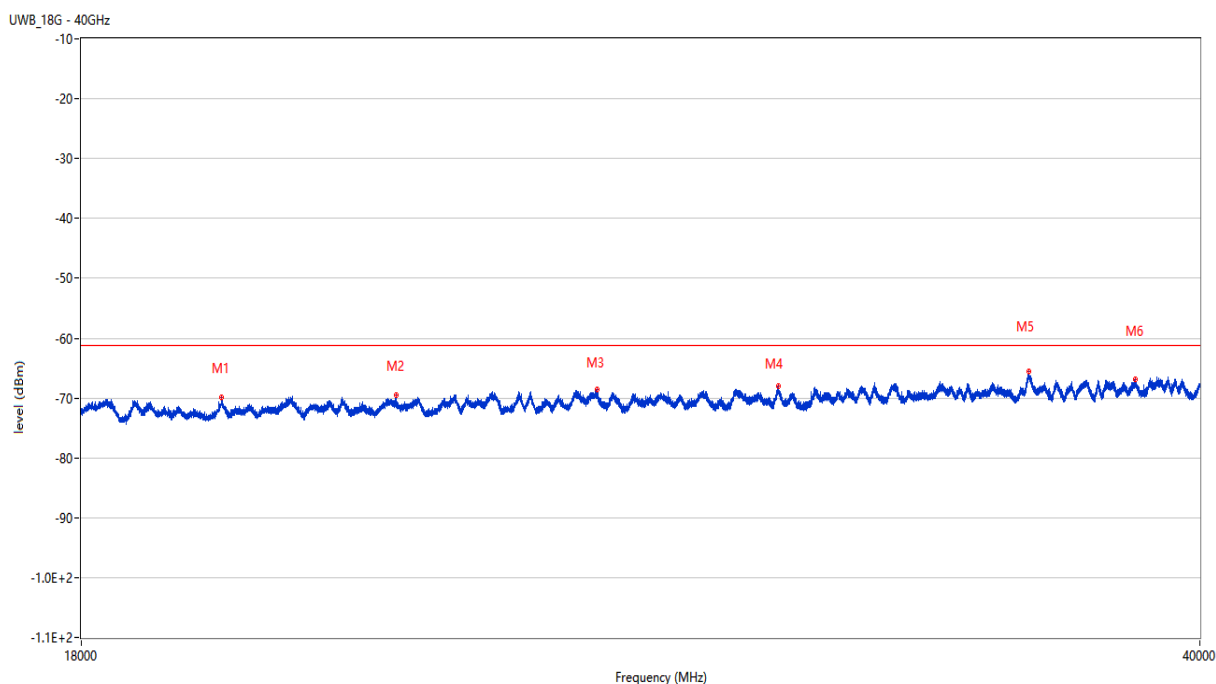
No.	Frequency (MHz)	RMS Average Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	18887.334	-70.78	-61.3	9.48	198.00	Horizontal	Horizontal	Pass
2	23471.400	-69.56	-61.3	8.26	216.00	Horizontal	Horizontal	Pass
3	25964.000	-68.77	-61.3	7.47	135.00	Horizontal	Horizontal	Pass
4	28765.334	-68.36	-61.3	7.06	216.00	Horizontal	Horizontal	Pass
5	32153.334	-67.68	-61.3	6.38	54.00	Horizontal	Horizontal	Pass
6	35391.734	-65.98	-61.3	4.68	126.00	Horizontal	Horizontal	Pass

UWB CH5, 18 GHz to 40 GHz, ANT V



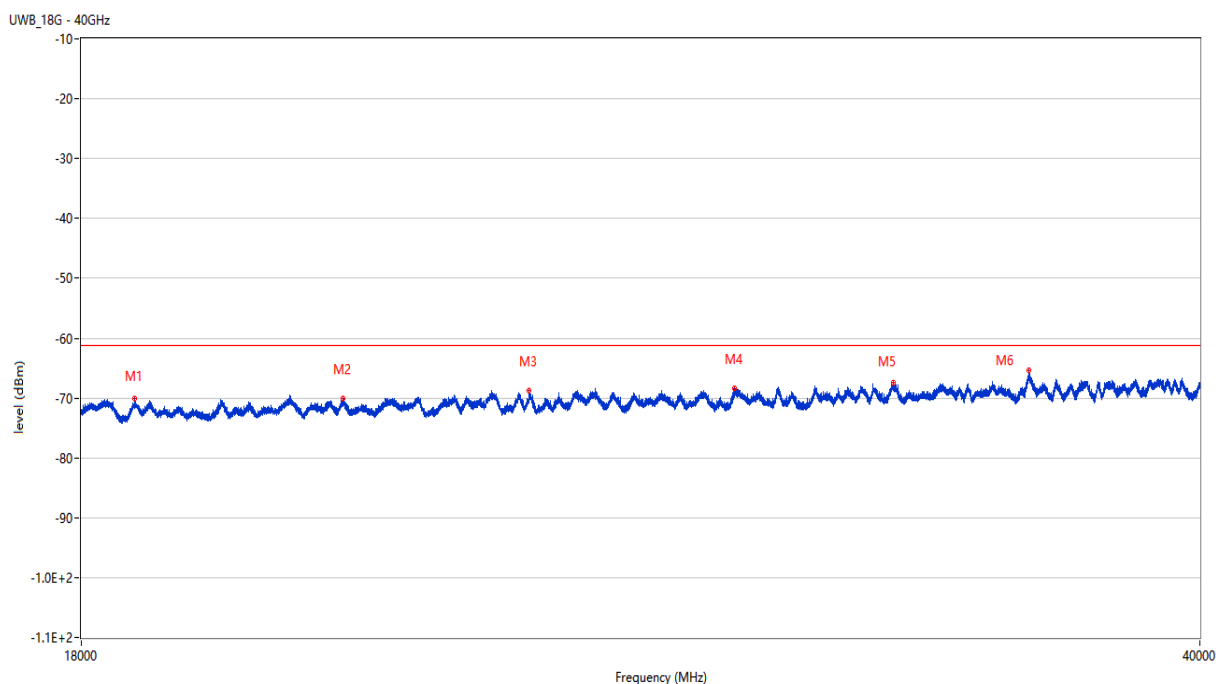
No.	Frequency (MHz)	RMS Average Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	20893.000	-69.58	-61.3	8.28	207.00	Vertical	Horizontal	Pass
2	25613.467	-68.63	-61.3	7.33	135.00	Vertical	Horizontal	Pass
3	28706.666	-68.09	-61.3	6.79	288.00	Vertical	Horizontal	Pass
4	32179.000	-67.47	-61.3	6.17	54.00	Vertical	Horizontal	Pass
5	35393.934	-65.92	-61.3	4.62	45.00	Vertical	Horizontal	Pass
6	38600.066	-66.31	-61.3	5.01	99.00	Vertical	Horizontal	Pass

UWB CH9, 18 GHz to 40 GHz, ANT H



No.	Frequency (MHz)	RMS Average Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	19897.867	-69.90	-61.3	8.60	324.00	Horizontal	Horizontal	Pass
2	22539.334	-69.54	-61.3	8.24	63.00	Horizontal	Horizontal	Pass
3	26008.000	-68.65	-61.3	7.35	117.00	Horizontal	Horizontal	Pass
4	29599.867	-67.98	-61.3	6.68	54.00	Horizontal	Horizontal	Pass
5	35402.000	-65.63	-61.3	4.33	27.00	Horizontal	Horizontal	Pass
6	38204.801	-66.92	-61.3	5.62	216.00	Horizontal	Horizontal	Pass

UWB CH9, 18 GHz to 40 GHz, ANT V



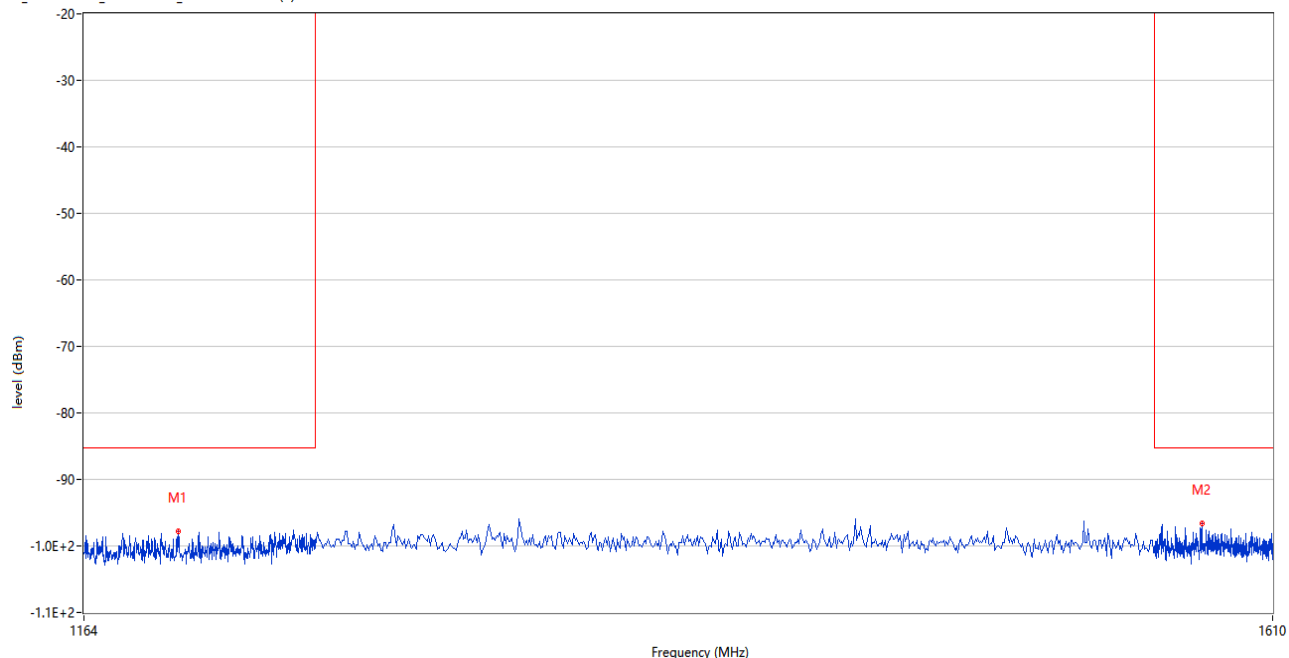
No.	Frequency (MHz)	RMS Average Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	18701.801	-70.15	-61.3	8.85	288.00	Vertical	Horizontal	Pass
2	21703.334	-70.10	-61.3	8.80	153.00	Vertical	Horizontal	Pass
3	24780.400	-68.85	-61.3	7.55	207.00	Vertical	Horizontal	Pass
4	28697.867	-68.43	-61.3	7.13	225.00	Vertical	Horizontal	Pass
5	32146.000	-67.39	-61.3	6.09	99.00	Vertical	Horizontal	Pass
6	35400.535	-65.35	-61.3	4.05	81.00	Vertical	Horizontal	Pass

A.5 Radiated Emissions in GPS Bands

Test Data and Plots

UWB CH5, 1.164 GHz to 1.61 GHz ANT H

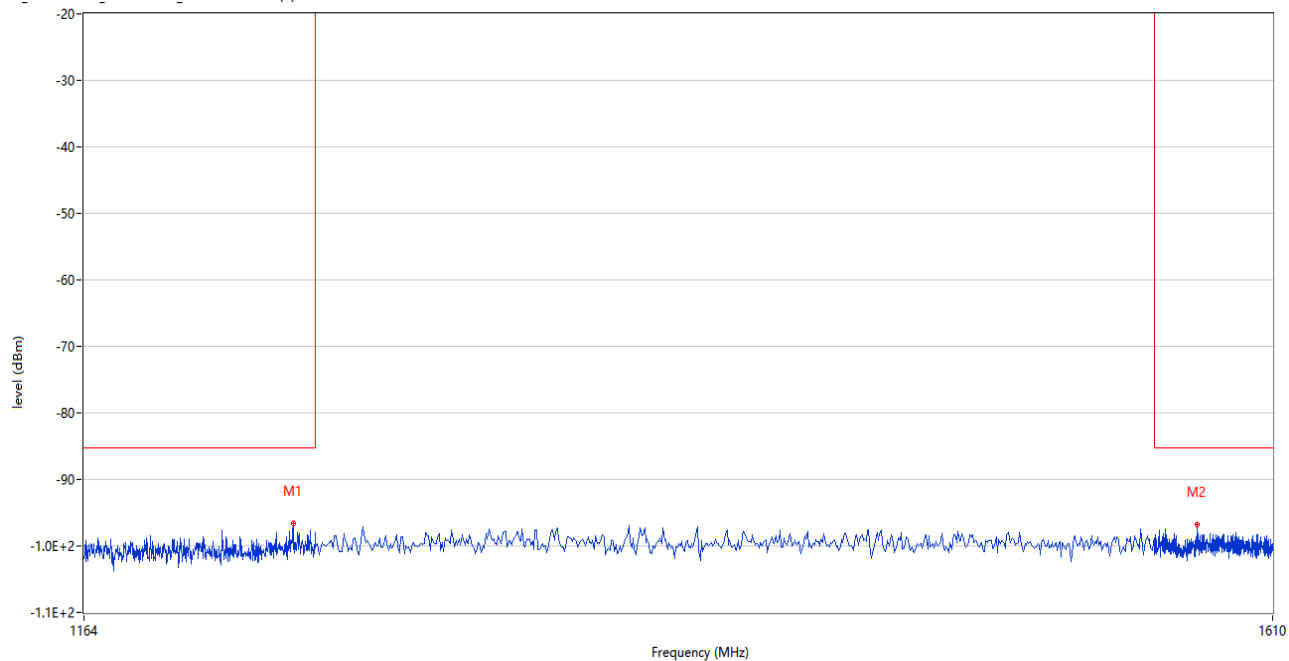
3#_RE Test case_FCC Part 15F_FCC PART 15.519(d)



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1194.400	-97.79	-85.3	12.49	112.00	Horizontal	Horizontal	Pass
2	1579.145	-96.57	-85.3	11.27	217.00	Horizontal	Horizontal	Pass

UWB CH5, 1.164 GHz to 1.61 GHz ANT V

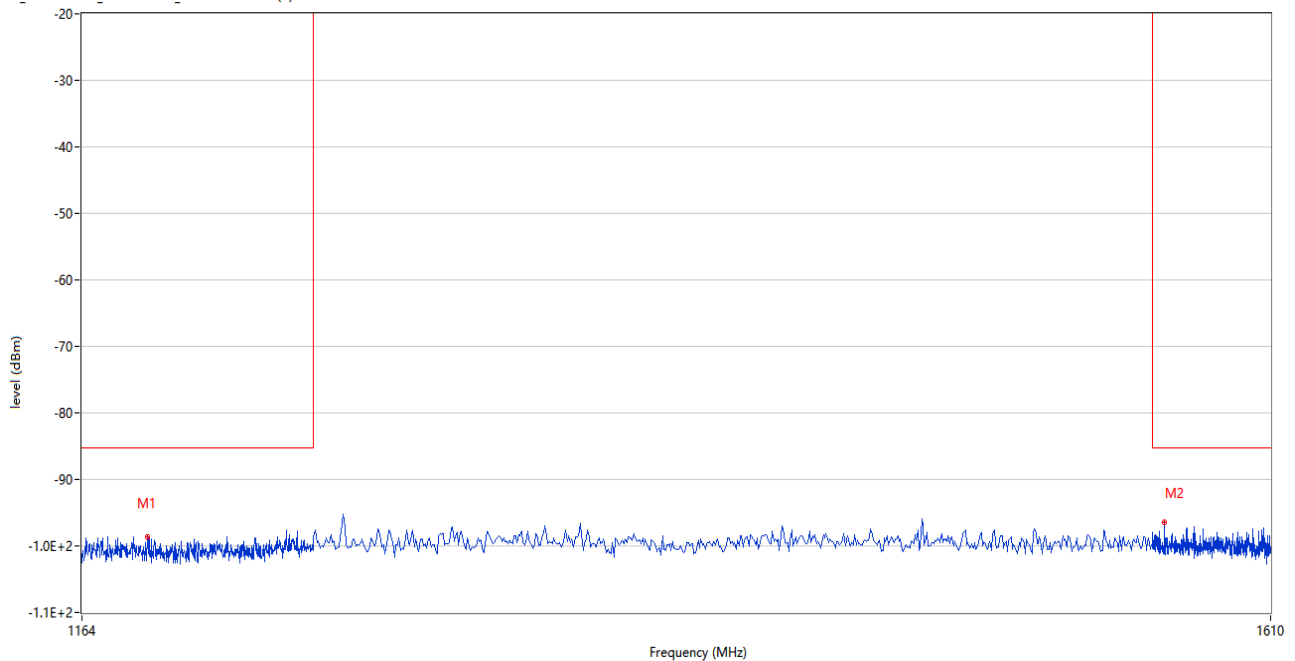
3#_RE Test case_FCC Part 15F_FCC PART 15.519(d)



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1232.400	-96.63	-85.3	11.33	336.00	Vertical	Horizontal	Pass
2	1577.360	-96.83	-85.3	11.53	286.00	Vertical	Horizontal	Pass

UWB CH9, 1.164 GHz to 1.61 GHz ANT H

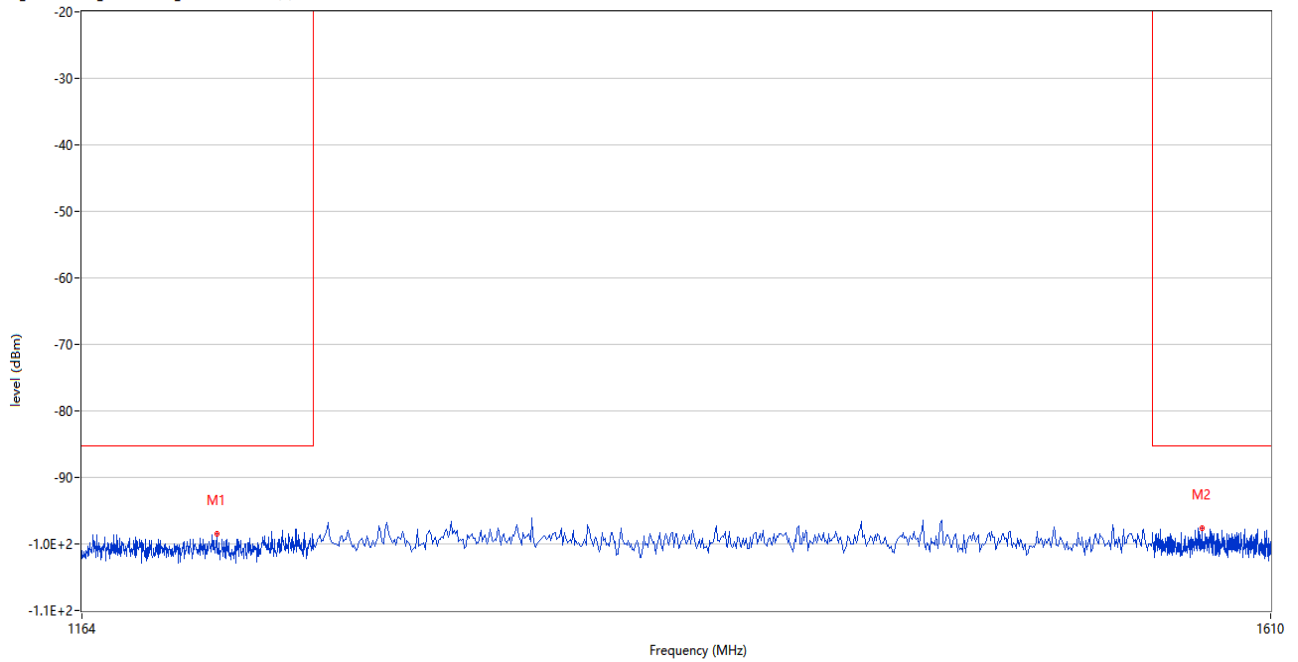
3#_RE Test case_FCC Part 15F_FCC PART 15.519(d)



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1185.027	-98.68	-85.3	13.38	209.00	Horizontal	Horizontal	Pass
2	1563.930	-96.43	-85.3	11.13	229.00	Horizontal	Horizontal	Pass

UWB CH9, 1.164 GHz to 1.61 GHz ANT V

3#_RE Test case_FCC Part 15F_FCC PART 15.519(d)



No.	Frequency (MHz)	Result (dBm)	Limit (dBm)	Margin (dB)	Table (o)	ANT	EUT	Verdict
1	1207.573	-98.54	-85.3	13.24	202.00	Vertical	Horizontal	Pass
2	1580.165	-97.67	-85.3	12.37	188.00	Vertical	Horizontal	Pass

A.6 Peak Emissions within a 50MHz Bandwidth

Test Data

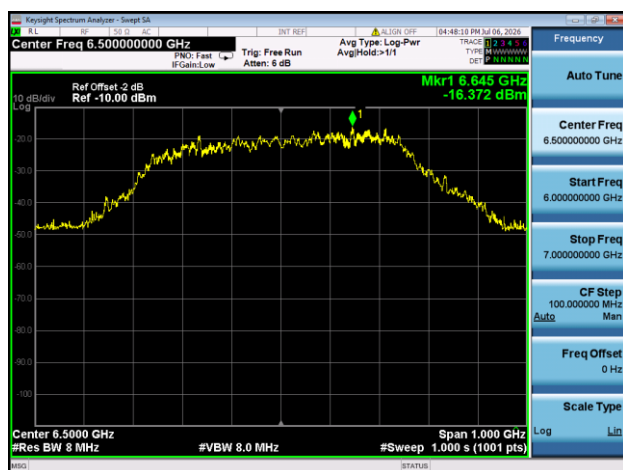
Note: $EIRP_{50\text{ MHz}} = EIRP_{8\text{ MHz}} + 20\log(50\text{ MHz}/8\text{ MHz})$

Measured Channel (MHz)	Maximum value of peak power (dBm/8MHz)	Maximum value of peak power (dBm/50MHz)	Limit (dBm/50MHz)	Verdict
6489.6	-16.372	-0.452	≤ 0	Pass
7987.2	-16.227	-0.307	≤ 0	Pass

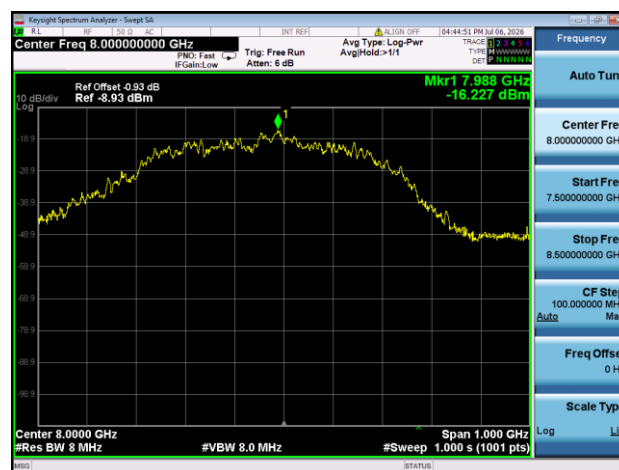
Test Plots

Maximum value of peak power

6489.6 MHz



7987.2 MHz



ANNEX B TEST SETUP PHOTOS

Please refer the document “Ti-EE26060997-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “Ti-EE26060997-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “Ti-EE26060997-AI.PDF”.

Statement

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2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
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7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--