RF MEASUREMENT REPORT

FCC ID:	XCO-SR1020
Applicant:	Hansong(Nanjing) Technology Ltd.
Product:	UWB Module
Model No.:	SR1020
FCC Classification:	Ultra Wideband Transmitter
FCC Rule Part(s):	Part 15 Subpart F (Section 15.519)
Received Date:	2023-04-23
Test Date:	2023-05-22 ~ 2023-06-06

Reviewed By: Kevin Guo

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2304RSU033-U1	V01	Initial Report	2023-07-25	Invalid
2304RSU033-U1	V02	Add product info	2023-08-09	Valid

CONTENTS

1. General Information

1.1. Applicant

Hansong(Nanjing) Technology Ltd.

8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211100, China

1.2. Manufacturer

Hansong(Nanjing) Technology Ltd.

8th Kangping Road, Jiangning Economy and Technology Development Zone, Nanjing, 211100, China

1.3. Testing Facility

<table>
<tr><td>☒</td><td colspan="5">Test Site – MRT Suzhou Laboratory</td></tr>
<tr><td></td><td colspan="5">Laboratory Location (Suzhou – Wuzhong)
D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Laboratory Location (Suzhou – SIP)
4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China</td></tr>
<tr><td></td><td colspan="5">Laboratory Accreditations</td></tr>
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FCC: CN1166 ISED: CN0001
VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020
☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104</td></tr>
<tr><td>☐</td><td colspan="5">Test Site – MRT Shenzhen Laboratory</td></tr>
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1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China</td></tr>
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<tr><td></td><td colspan="5">Laboratory Location (Taiwan)
No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)</td></tr>
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<tr><td></td><td colspan="5">TAF: L3261-190725
FCC: 291082, TW3261 ISED: TW3261</td></tr>
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1.4. Product Information

Product Name	UWB Module
Model No.	SR1020
UWB Specification	7270MHz
Sample No.	20230420Sample#03
Power Type	DC Source

Notes:

1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.
2. The UWB module will be used into the indoor device, declared by the applicant.

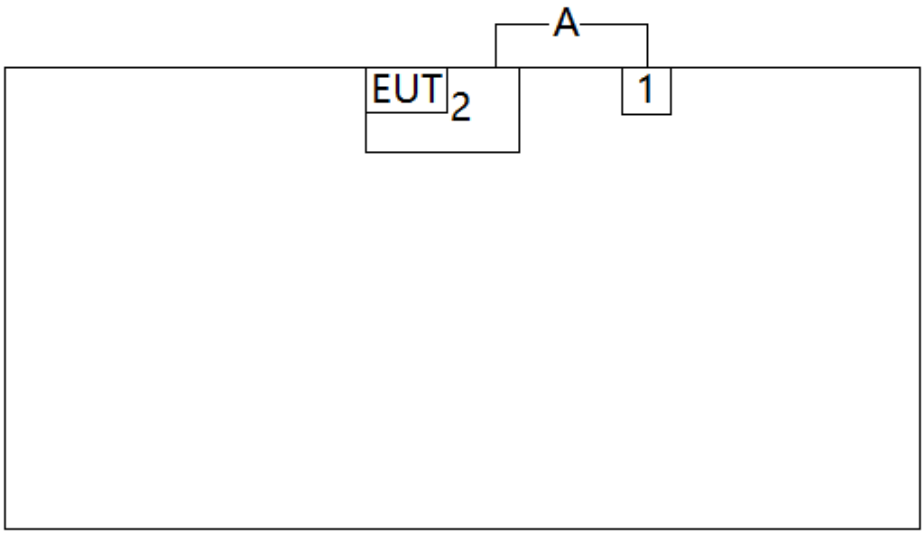
1.5. Radio Specification under Test

Operation Frequency	7270MHz
Channel Number	1
Type of modulation	2BPPM
Antenna Type	Monopole Antenna
Antenna Gain	1.8dBi

2. Test Configuration

2.1. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram


Cable Type		Cable Description
A	Power Cable	Non-Shielding, 1.0m

Product		Manufacturer	Model No.
1	Adapter	SHENZHEN FUJIA APPLIANCE CO., LTD	FJ-SW1261201000DN
2	Test Fixture	N/A	Main board-VC2_0

2.2. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.519
- 393764 D01 UWB FAQ v02r01
- ANSI C63.10-2013

2.3. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2023-12-28	SIP-AC1
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2023-12-22	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2023-11-01	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06620	1 year	2023-11-27	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2023-07-30	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2023-11-05	SIP-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2023-11-05	SIP-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06601	1 year	2023-11-22	SIP-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2023-10-10	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06623	1 year	2023-11-27	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06624	1 year	2023-11-27	SIP-AC2
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06647	1 year	2023-07-13	SIP-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06648	1 year	2023-10-22	SIP-AC2
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2023-12-22	SIP-AC2
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2023-10-25	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2023-07-30	SIP-AC3
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2024-05-23	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2023-11-01	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2023-11-27	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2024-01-12	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2023-08-16	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2023-12-22	SIP-AC3
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2024-02-26	SIP-AC3

Software	Version	Function
EMI V3	V 3.0.0	EMI Test Software
Controller_MF 7802BS	1.02	RE Antenna & Turntable

4. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

5. Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test 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.

Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Coaxial: 9kHz~30MHz: 2.59dB Coplanar: 9kHz~30MHz: 2.60dB Horizontal: 30MHz~200MHz: 3.85dB 200MHz~1GHz: 4.36dB 1GHz~40GHz: 4.98dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.28dB 1GHz~40GHz: 4.91dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.5dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.3dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.2%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Test Result
15.519(b) 2.1049	UWB Bandwidth & 99% Occupied Bandwidth	Radiated	Pass
15.519(c) 15.519(e)	Average Transmit Power & Peak Power Density		Pass
15.519(c) 12.209	Radiated Spurious Emissions		Pass
15.519 (d)	Radiated Spurious Emissions		Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	N/A

Notes:

1. For radiated emission test, every axis (X, Y, Z) was also verified and showed the worst axis in the test setup photos. The test results shown in the following sections represent the worst-case emissions.
2. N/A" means that this item is not applicable, and the detail information refer to relevant section.

6.2. UWB Bandwidth & 99% Bandwidth Measurement

6.2.1. Test Limit

§15.503 (a) UWB bandwidth. For the purpose of this subpart, the UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated f_H and the lower boundary is designated f_L. The frequency at which the highest radiated emission occurs is designated f_M.

§15.503 (b) Center frequency. The center frequency, f_C, equals $(f_H + f_L)/2$.

§15.503 (c) Fractional bandwidth. The fractional bandwidth equals $2(f_H - f_L)/ (f_H + f_L)$.

§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.

§15.519 (b) The UWB bandwidth of a device operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

6.2.2. Test Procedure

ANSI C63.10 – 2013 – Section 10.1 & 6.9.3

6.2.3. Test Setting

The frequency at which the maximum power level is measured with the peak detector is designated f_M. The peak power measurements shall be made using a spectrum analyzer or EMI receiver with a 1 MHz resolution bandwidth and a video bandwidth of 1 MHz or greater. The instrument shall be set to peak detection using the maximum-hold trace mode. The outermost 1 MHz segments above and below f_M, where the peak power falls by 10 dB relative to the level at f_M, are designated as f_H and f_L, respectively:

a) For the lowest frequency bound f_L, the emission is searched from a frequency lower than f_M that has, by inspection, a peak power much lower than 10 dB less than the power at f_M and increased toward f_M until the peak power indicates 10 dB less than the power at f_M. The frequency of that segment is recorded.

b) This process is repeated for the highest frequency bound f_H, beginning at a frequency higher than f_M that has, by inspection, a peak power much lower than 10 dB below the power at f_M. The frequency of that segment is recorded.

c) The two recorded frequencies represent the highest f_H and lowest f_L bounds of the UWB transmission, and the −10 dB bandwidth (B – 10) is defined as ($f_H – f_L$). The center frequency (fc) is mathematically determined from ($f_H – f_L$) / 2.

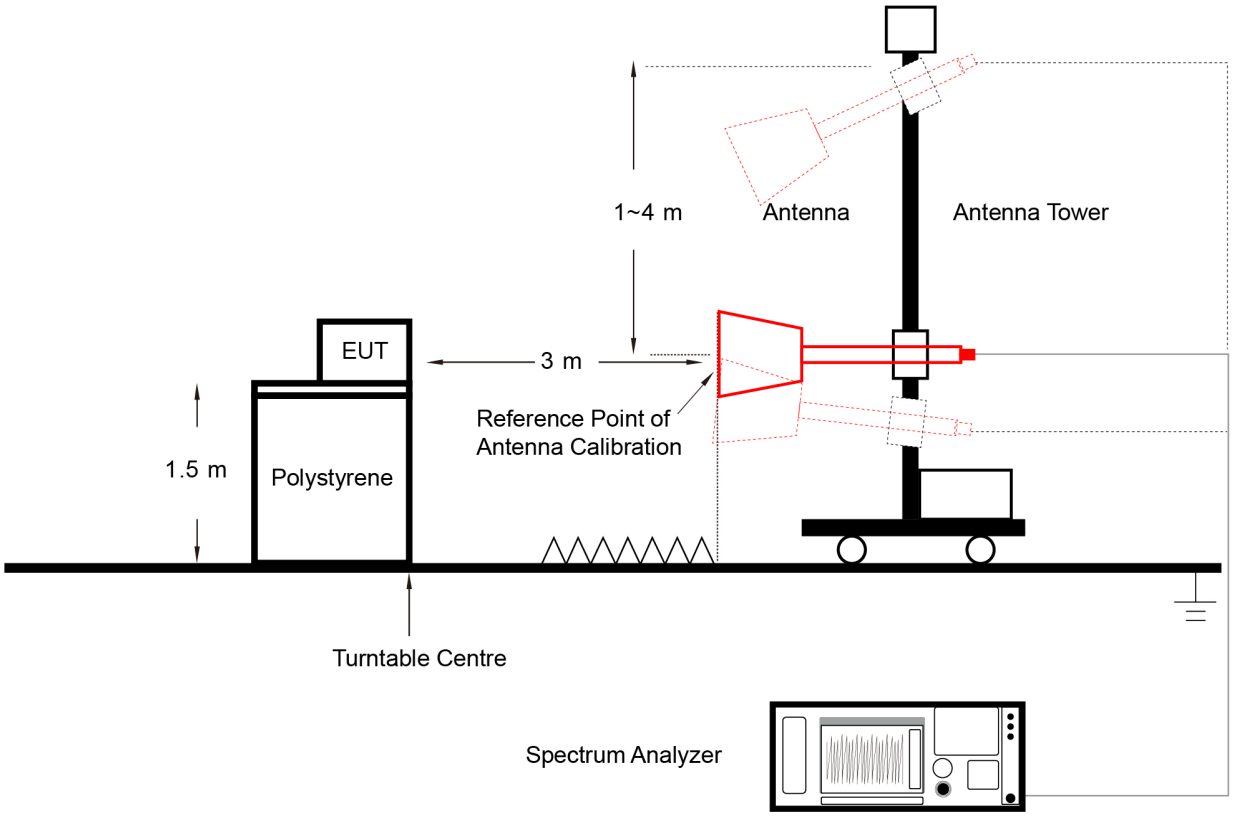
d) The fractional bandwidth is defined as $2(f_H – f_L) / (f_H + f_L)$.

e) Determine whether the −10 dB bandwidth ($f_H – f_L$) is ≥500 MHz, or whether the fractional bandwidth $2(f_H – f_L) / (f_H + f_L)$ is ≥0.2.

99% Bandwidth

1. Span = 1.5 times to 5 times the OBW
2. Set RBW = 1% to 5% the OBW
3. VBW = approximately three times RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.1.

6.3. Average Transmit Power and Peak Power Density

6.3.1. Test Limit

§15.519 (c) 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:

Assigned frequency band (MHz)	EIRP in dBm
3100 – 10600	-41.3

§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, f_M. That limit is 0 dBm EIRP.

6.3.2. Test Procedure

ANSI C63.10 – 2013 – Section 10.3

6.3.3. Test Setting

The radiated emission of 6~9GHz frequency band are performed at 3 meters test distance.

Peak Power within 50 MHz bandwidth

Peak EIRP power is measured using RBW of 40MHz.

The peak detector of the instrument is selected and the maximum hold feature activated.

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 MHz)] relationship.

For example, the peak power limit could be expressed in a 40 MHz bandwidth as follows in Equation:

EIRP40MHz = EIRP50MHz + 20log(40MHz/50MHz) = 0dBm + (-1.94dB) = -1.94dBm.

Maximum Average Emissions

The following procedure shall be used for evaluating rms-average power spectral density:

a) Set the RBW to 1 MHz

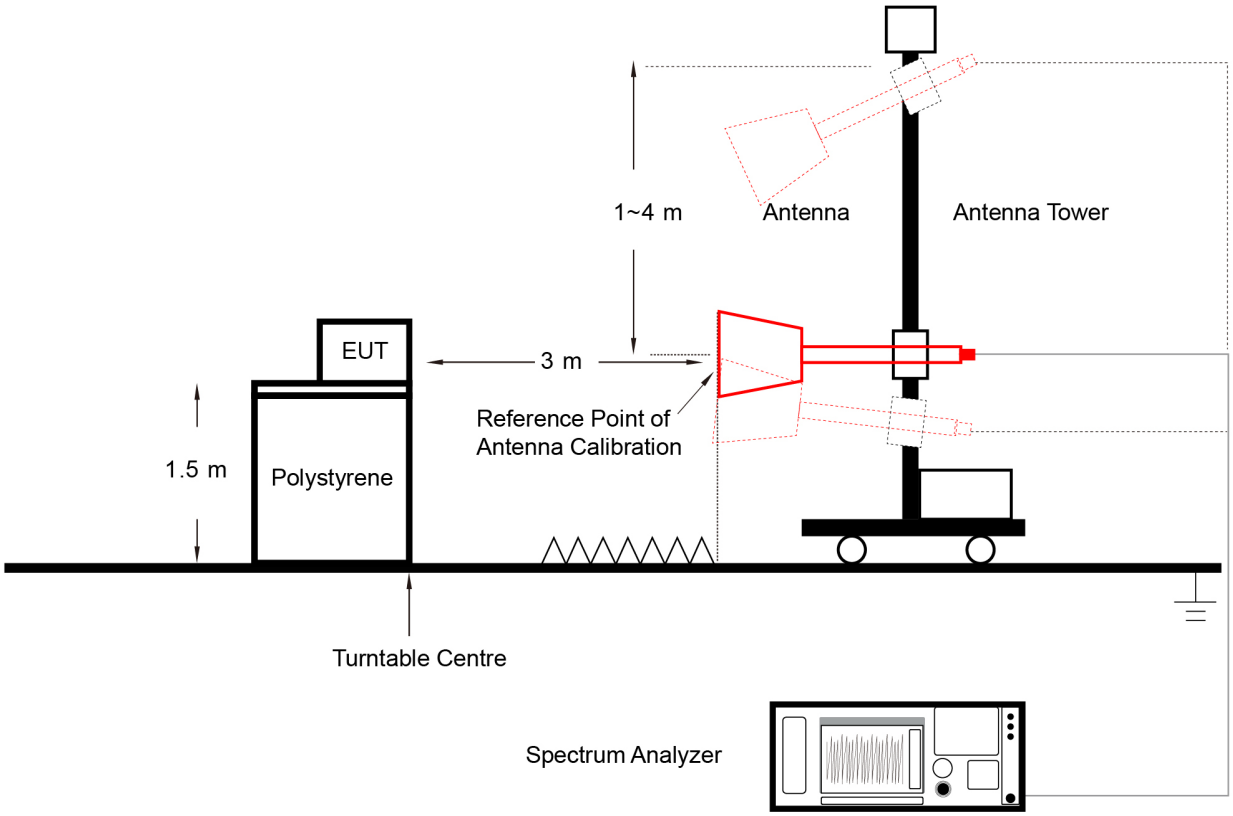
b) Set the VBW to 3 MHz

c) Set the frequency span to examine the spectrum across a convenient frequency segment

d) Select the power averaging (rms) detector

e) Set the sweep time so that there is no more than a 1 ms integration period over each measurement bin

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.2.

6.4. Radiated Spurious Emission Measurement

6.4.1. Test Limit

§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.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 – 30	30	30
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

§15.519 (c) 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 [MHz]	RBW [kHz]	EIRP of spurious [dBm]
960 – 1610	1000	-75.3
1610 – 1990	1000	-63.3
1990 – 3100	1000	-61.3
3100 – 10600	1000	-41.3
Above 10600	1000	-61.3

6.4.2. Test Procedure

ANSI C63.10 – 2013 – Section 6.5 & 10.2 & 10.3

6.4.3. Test Setting

Measurement of harmonic and spurious emissions above 1GHz

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz(100 ~ 120 kHz for below 1GHz)
3. VBW = 3 * RBW
4. Detector = Peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

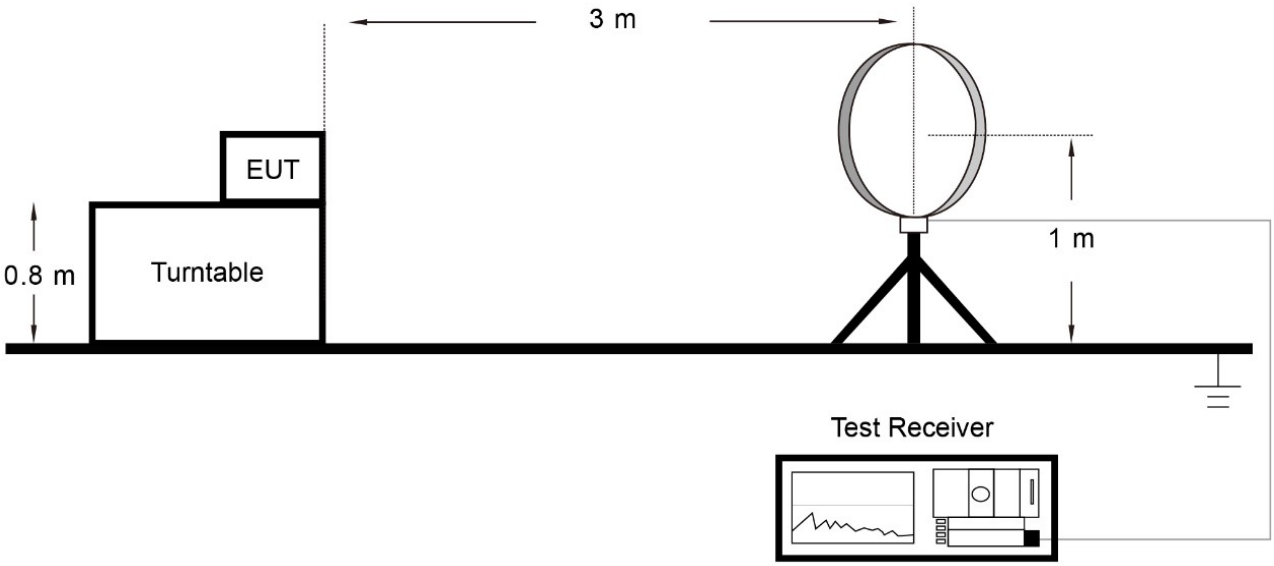
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Average
5. Sweep points = 2 * Span / RBW
6. Sweep time = Sweep points * 1ms
7. Trace mode = average
8. Trace was allowed to stabilize

Quasi-Peak Measurements below 1GHz

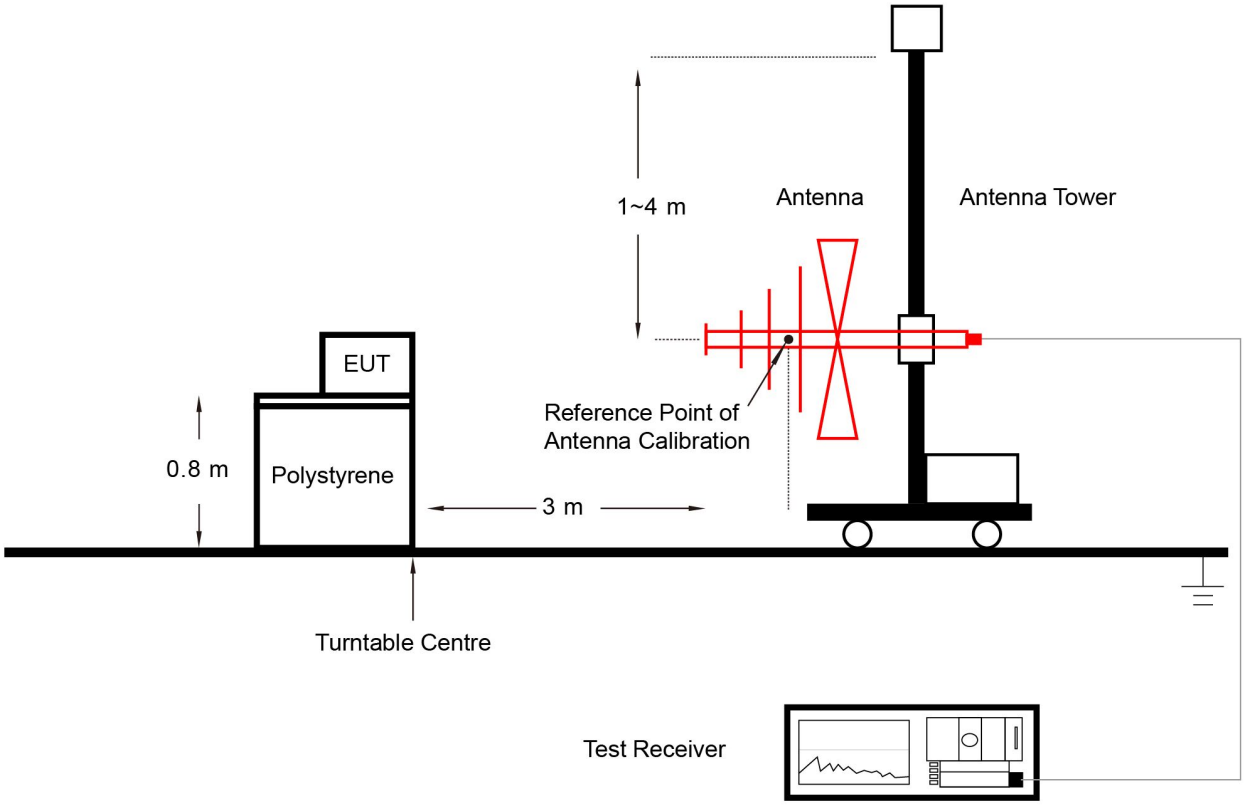
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 100 ~ 120 kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

6.4.4. Test Setup

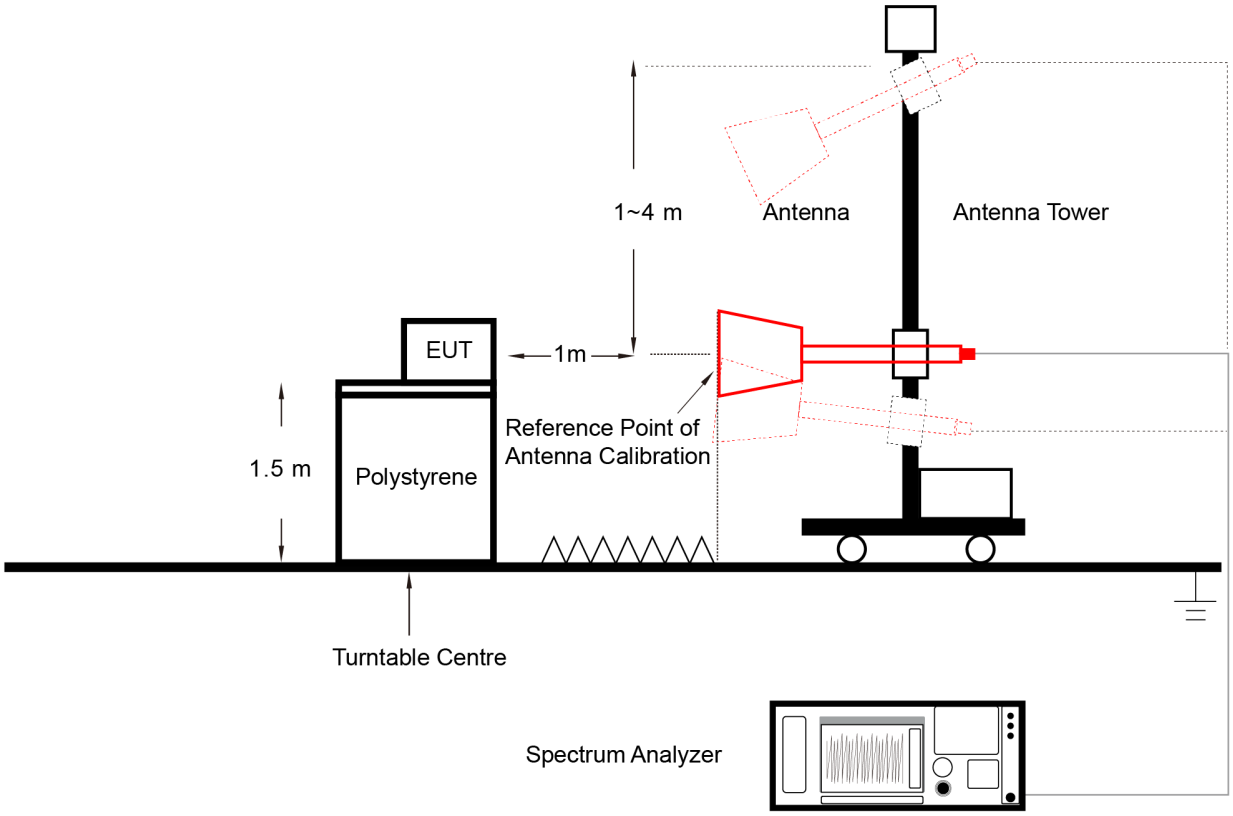
Below 30MHz Test Setup



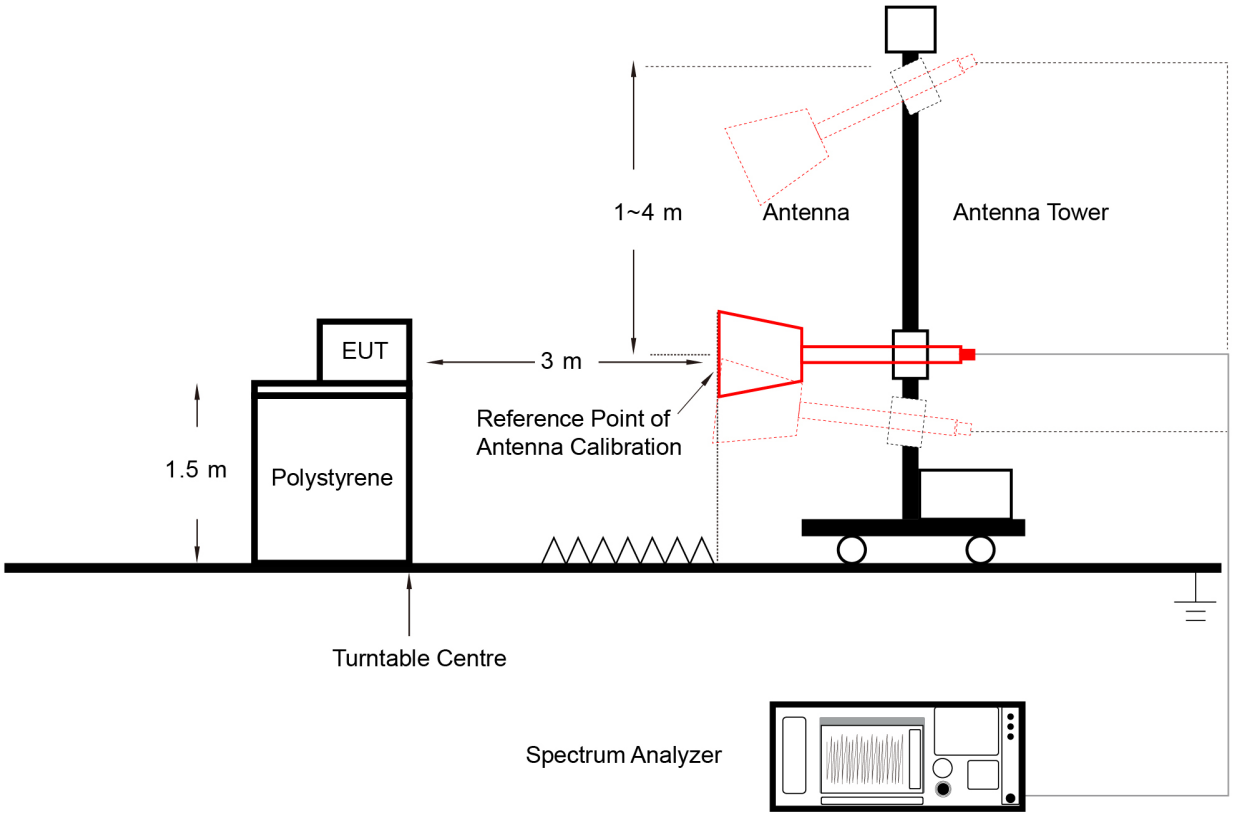
Above 30MHz Test Setup:



Above 1GHz Test Setup:



Above 18GHz Test Setup:



6.4.5. Test Result

Refer to Appendix A.3.

6.5. Radiated Spurious Emission in GPS Band Measurement

6.5.1. Test Limit

§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 [MHz]	RBW [kHz]	EIRP of spurious [dBm]
1164 – 1240	≥ 1	-85.3
1559 – 1610	≥ 1	-85.3

6.5.2. Test Procedure

ANSI C63.10 – 2013 – Section 10.3

6.5.3. Test Setting

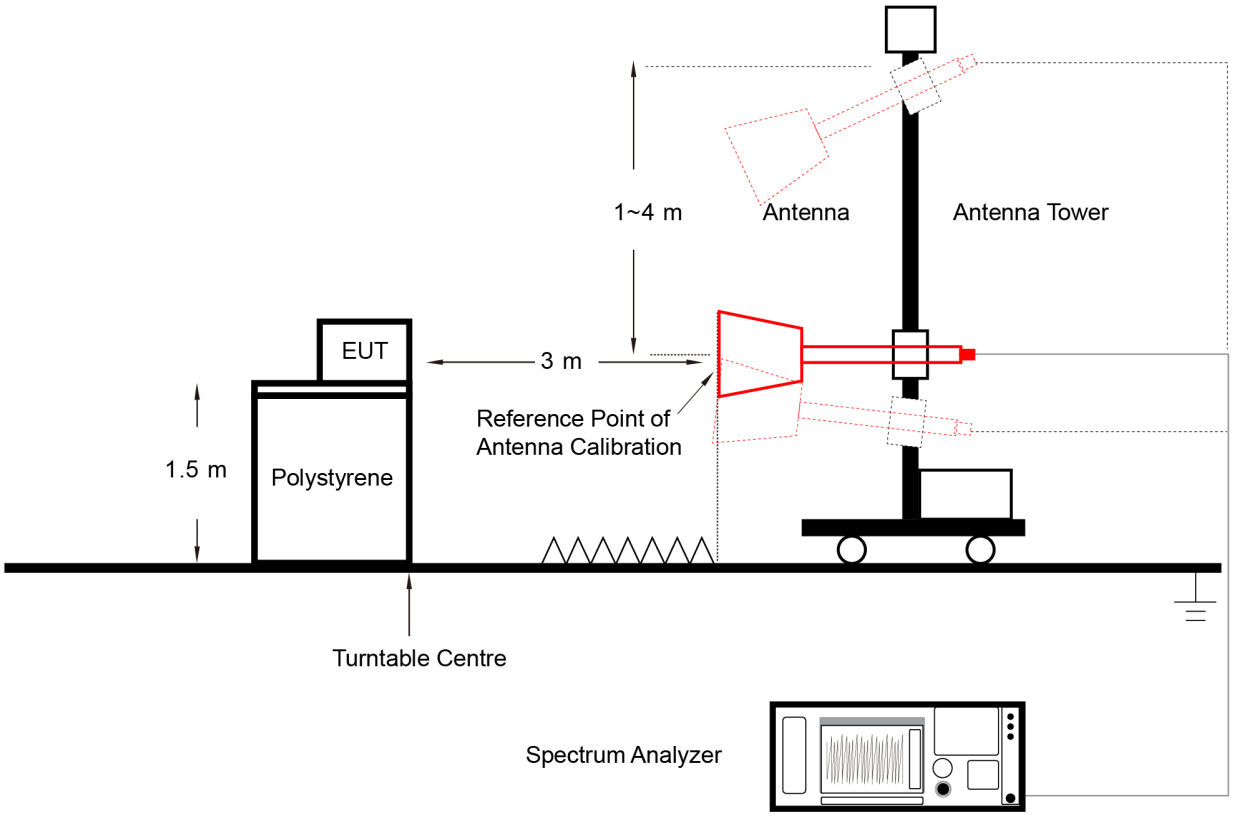
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1kHz
3. VBW = 3kHz
4. Detector = Peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1kHz
3. VBW = 3kHz
4. Detector = Average
5. Sweep points = 2 * Span / RBW
6. Sweep time = Sweep points * 1ms
7. Trace mode = Average
8. Trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

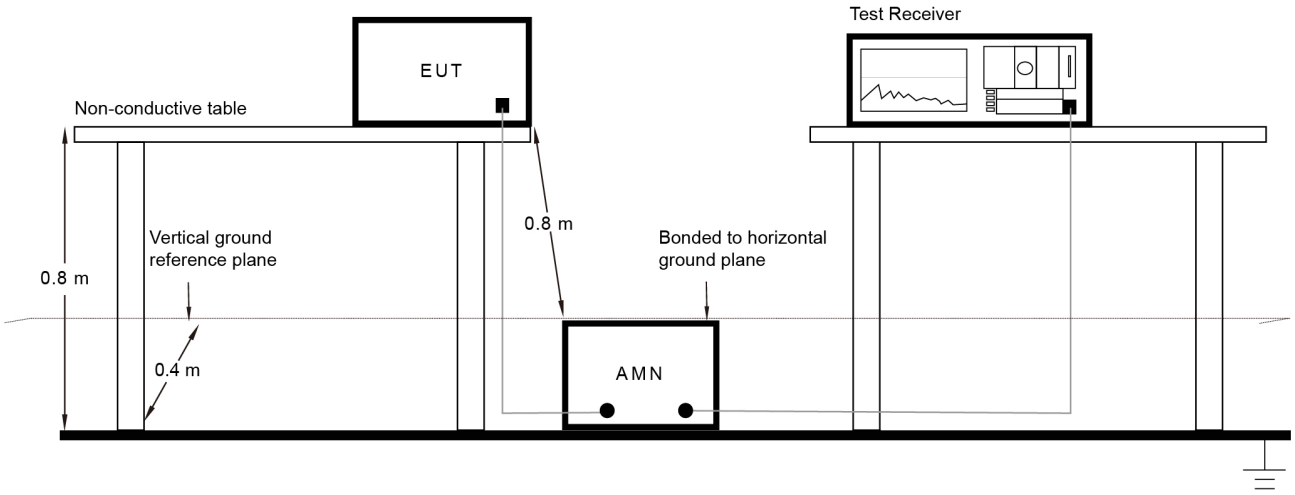
Refer to Appendix A.4.

6.6. AC Conducted Emissions Measurement

6.6.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

6.6.2. Test Setup



6.6.3. Test Result

The device, UWB modular, is powered by DC power supply and will only be integrated into other devices. So this item is not applicable.

Appendix A - Test Result

A.1 UWB Bandwidth & 99% Bandwidth Test Result

Test Site	SIP-AC2	Test Engineer	Arvin Ding
Test Date	2023-05-30 ~ 2023-06-06		

Frequency (MHz)	F_L (MHz)	Limit (MHz)	F_H (MHz)	Limit (MHz)	Result
7270	6440	≥ 3100	7958	≤10600	Pass

Frequency (MHz)	F_C (MHz)	10dB Bandwidth (MHz)	Limit (MHz)	Result
7270	7199	1518	≥ 500	Pass

Notes:

1. 10dB Bandwidth = $F_H - F_L$ = 7958 – 6440 = 1518 MHz
2. $F_C = (F_H + F_L) / 2$ = 7199 MHz

Frequency (MHz)	99% Bandwidth (MHz)
7270	1927.8

10dB Bandwidth

99% Bandwidth

A.2 Average Transmit Power and Peak Power Density Test Result

Test Site	SIP-AC2	Test Engineer	Arvin Ding
Test Date	2023-05-23		

Test Result of Peak Power Density

Frequency (MHz)	Peak Power (dBμV/m)	Peak Power (dBm/40MHz)	Limit (dBm/40MHz)	Conversion Factor(dB)	Margin (dB)	Result
7270	92.45	-2.75	-1.94	-1.94	0.81	Pass

Note: Conversion Factor (dB) = 20 * Log (40MHz / 50MHz) = -1.94

Limit (dBm/40MHz) = Limit (dBm/50MHz) + Conversion Factor (dB) = 0 dBm/50MHz – 1.94 dB = -1.94 dBm/40MHz

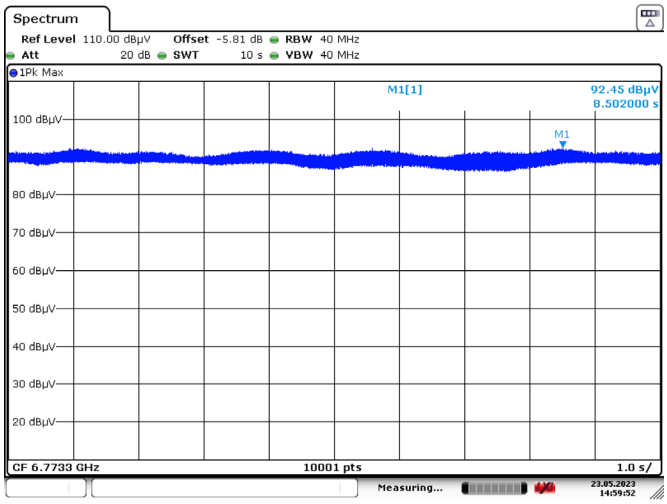
Peak Power (dBm/40MHz) = Peak Power (dBμV/m) – 95.2

Test Result of Average Transmit Power

Frequency (MHz)	Average Power (dBμV/m)	Average Power (dBm/MHz)	Limit (dBm/MHz)	Margin (dB)	Result
7270	52.91	-42.29	-41.3	0.99	Pass

Note: Average Power(dBm/40MHz) = Average Power (dBμV/m) – 95.2

Peak Power



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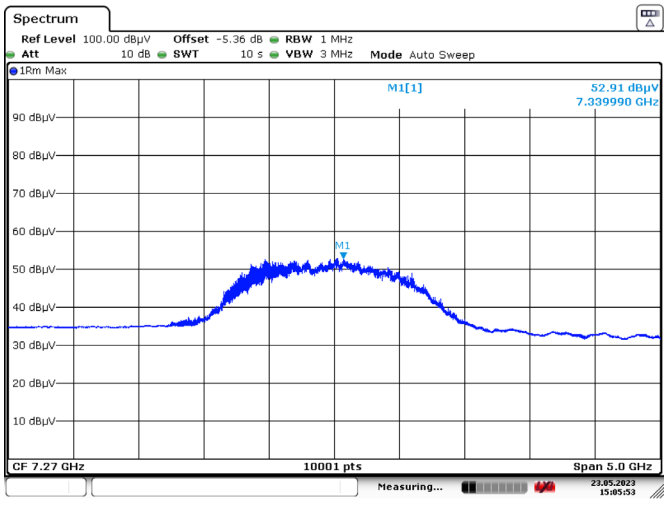
Average Emission



Date: 23.MAY.2023 15:05:53

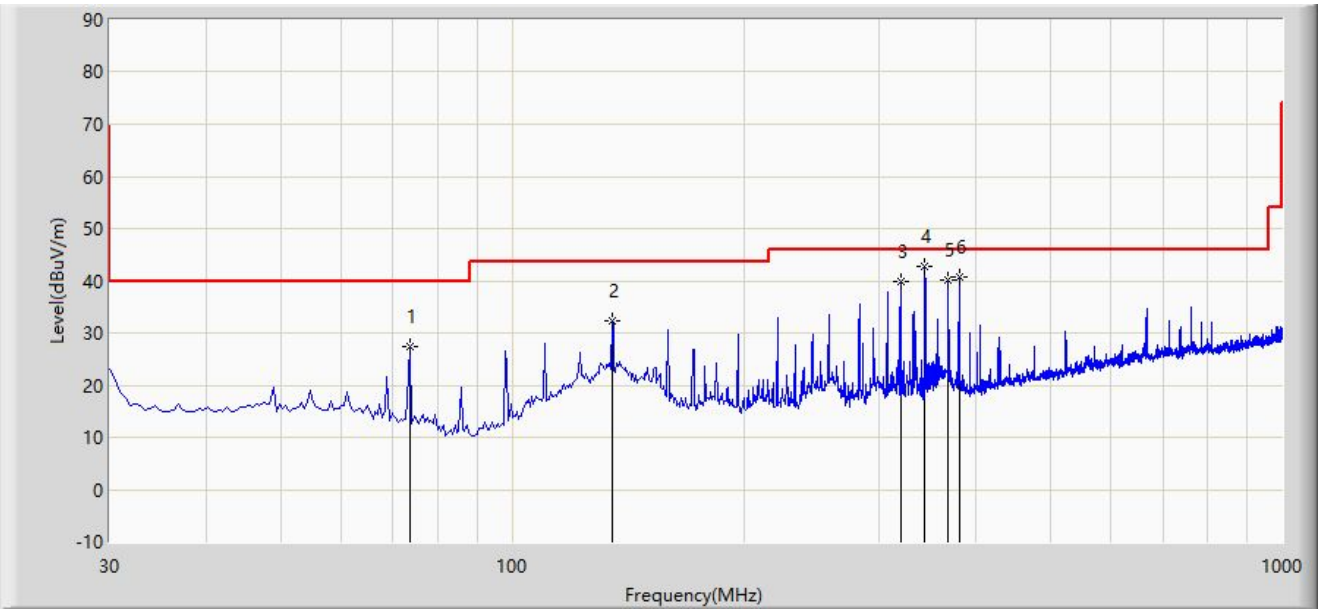
A.3 Radiated Spurious Emission Test Result

Test Site	SIP-AC1 & SIP-AC2 & SIP-AC3	Test Engineer	Arvin Ding
Test Date	2023-05-22 ~ 2023-05-30		

Frequency Range (MHz)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarity	Verdict
960 ~ 1610	-85.327	-75.3	10.027	Average	Horizontal	Pass
	-79.753	-75.3	4.453	Average	Vertical	Pass
1610 ~ 1990	-83.474	-63.3	20.174	Average	Horizontal	Pass
	-78.142	-63.3	14.842	Average	Vertical	Pass
1990 ~ 3100	-82.538	-61.3	21.238	Average	Horizontal	Pass
	-77.597	-61.3	16.297	Average	Vertical	Pass
3100 - 10600	-80.991	-41.3	39.691	Average	Horizontal	Pass
	-78.486	-41.3	37.186	Average	Vertical	Pass
Above 10600	-68.841	-61.3	7.541	Average	Horizontal	Pass
	-66.697	-61.3	5.397	Average	Vertical	Pass

The Result of Radiated Emission below 1GHz:

Site: SIP-AC1	Test Date: 2023-05-26
Limit: FCC_Part15.209_RSE(3m)	Engineer: Barry Wu
Probe: VULB 9168_00998_25-2000MHz	Polarity: Horizontal
EUT: UWB Module	Power: AC 120V/60Hz
Test Mode: Transmit by UWB at channel 7270MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		73.650	27.347	12.303	-12.653	40.000	15.044	PK
2		134.760	32.271	15.264	-11.229	43.500	17.008	PK
3		319.545	39.838	20.854	-6.162	46.000	18.984	PK
4	*	343.795	42.661	23.305	-3.339	46.000	19.356	PK
5		368.530	40.186	20.170	-5.814	46.000	20.016	PK
6		380.655	40.751	20.393	-5.249	46.000	20.358	PK

Note 1: " * ", means this data is the worst emission level.

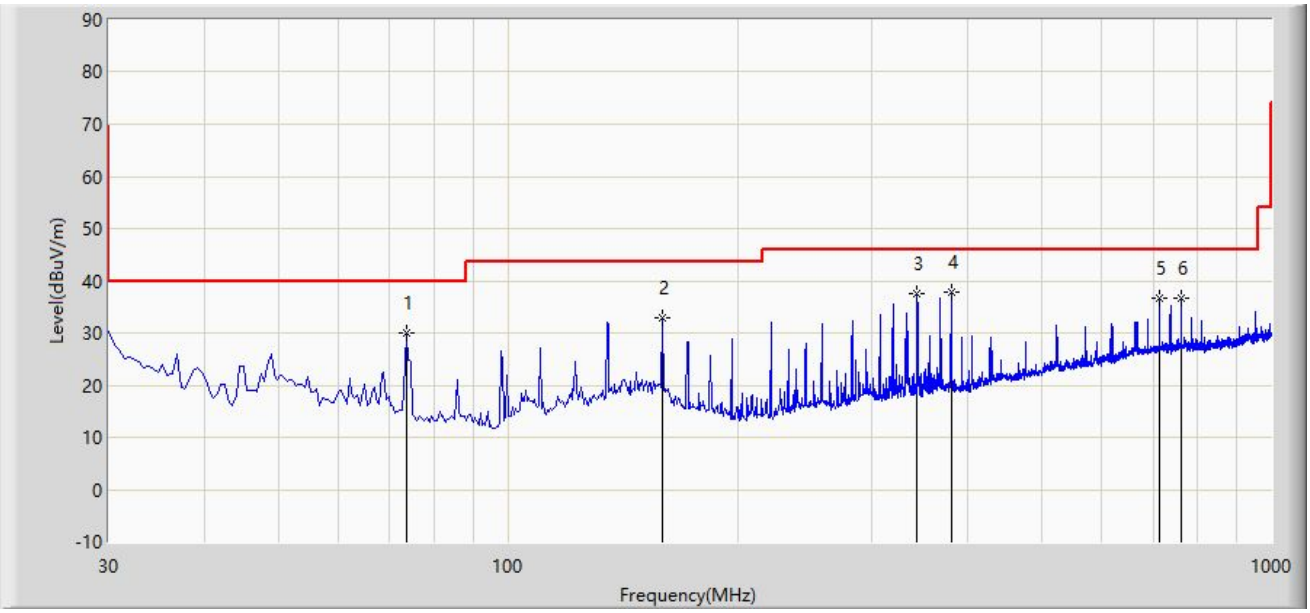
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: SIP-AC1	Test Date: 2023-05-26
Limit: FCC_Part15.209_RSE(3m)	Engineer: Barry Wu
Probe: VULB 9168_00998_25-2000MHz	Polarity: Vertical
EUT: UWB Module	Power: AC 120V/60Hz
Test Mode: Transmit by UWB at channel 7270MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		73.650	29.953	14.909	-10.047	40.000	15.044	PK
2		159.495	33.011	14.936	-10.489	43.500	18.075	PK
3		343.795	37.490	18.134	-8.510	46.000	19.356	PK
4	*	380.655	37.731	17.373	-8.269	46.000	20.358	PK
5		712.880	36.578	9.655	-9.422	46.000	26.923	PK
6		761.865	36.733	8.424	-9.267	46.000	28.310	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: Quasi-Peak measurement was not performed when peak measure level was lower than the quasi-peak limit.

Note 5: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

A.4 Radiated Spurious Emission in GPS Band Test Result

Test Site	SIP-AC1 & SIP-AC2 & SIP-AC3	Test Engineer	Arvin Ding
Test Date	2023-05-22 ~ 2023-05-23		

Frequency Range (MHz)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Polarity	Verdict
1164 ~ 1240	-94.307	-85.3	9.007	Average	Horizontal	Pass
	-93.798	-85.3	8.498	Average	Vertical	Pass
1559 ~ 1610	-100.587	-85.3	15.287	Average	Horizontal	Pass
	-95.079	-85.3	9.779	Average	Vertical	Pass

Appendix B - Test Setup Photograph

Refer to “2304RSU033-UT” file.

Appendix C - EUT Photograph

Refer to “2304RSU033-UE” file.

The End