



FCC RADIO TEST REPORT

FCC ID : A4RGBDU9
Equipment : Wireless Device
Model Name : GBDU9
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : 47 CFR FCC Part 15.519

The product was received on Feb. 21, 2024, and testing was performed from Mar. 06, 2024 to Apr. 15, 2024. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR412509I	01	Initial issue of report	Apr. 22, 2024
FR412509I	02	Revise Test Result of UWB Bandwidth This report is an updated version, replacing the report issued on Apr. 22, 2024.	Apr. 24, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1	15.203	Antenna Requirement	PASS	15.203
3.1	15.207	AC Power-line Conducted Emissions	PASS	15.207
3.2	15.503	UWB Bandwidth	PASS	≥ 500MHz
3.3	15.519(a)(1)	Technical requirements for Hand Held UWB systems	PASS	15.519(a)(1)
3.4	15.519(e)	Peak Power Measurement	PASS	≤ 0 dBm/50MHz
3.5	15.519(c) /15.519(d)	Radiated Emissions	PASS	UWB Emissions: 15.519(c) GPS Emissions: 15.519(d) Digital Emissions: 15.209

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs WCDMA/LTE, Bluetooth, BLE, BLE (CH2-76), Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, NFC, UWB and GPS.	
Antenna Type UWB: PIFA Antenna	

Antenna information		
6489.6 MHz	Peak Gain (dBi)	-0.2
7987.2 MHz	Peak Gain (dBi)	0.4

Remark: The above EUT's information was declared by manufacturer. Please refer to Disclaimer in report summary.

EUT Information List	
S/N	Performed Test Item
41291JEAVL008P	Equivalent Isotropic Radiated Power
	Radiated Spurious Emission
41311JEAVW004U	Conducted Emission

1.2 Modification of EUT

No modifications are made to the EUT during all test items.



1.3 Type of EUT

Operational Condition	
EUT Power Type	AC mains: AC voltage 120 V
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

1.4 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01

Remark: The TAF code is not including all the FCC KDB listed without accreditation.



1.5 Testing Location Information

Test Site	Sporton International Inc. Wensan Laboratory	
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
Test Site No.	Sporton Site No.	
	CO07-HY	03CH20-HY

Note: The test site complies with ANSI C63.4 2014 requirement.
FCC designation No.: TW3786

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Conduction	CO07-HY	Louis Chung	23.1~25.7 °C 42.2~53.3 %	Apr. 15, 2024
Radiated	03CH20-HY	John Chuang and David Dai	18.2~19.6 °C 65.3~69.4 %	Mar. 06, 2024~ Apr. 11, 2024

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Conduction (150kHz ~ 30MHz)	3.44 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1000MHz)	6.4 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 6GHz)	4.5 dB	Confidence levels of 95%
Radiated Emission (6GHz ~ 18GHz)	4.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.4 dB	Confidence levels of 95%





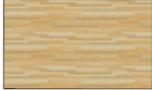
2 Test Configuration of EUT

2.1 Test Mode

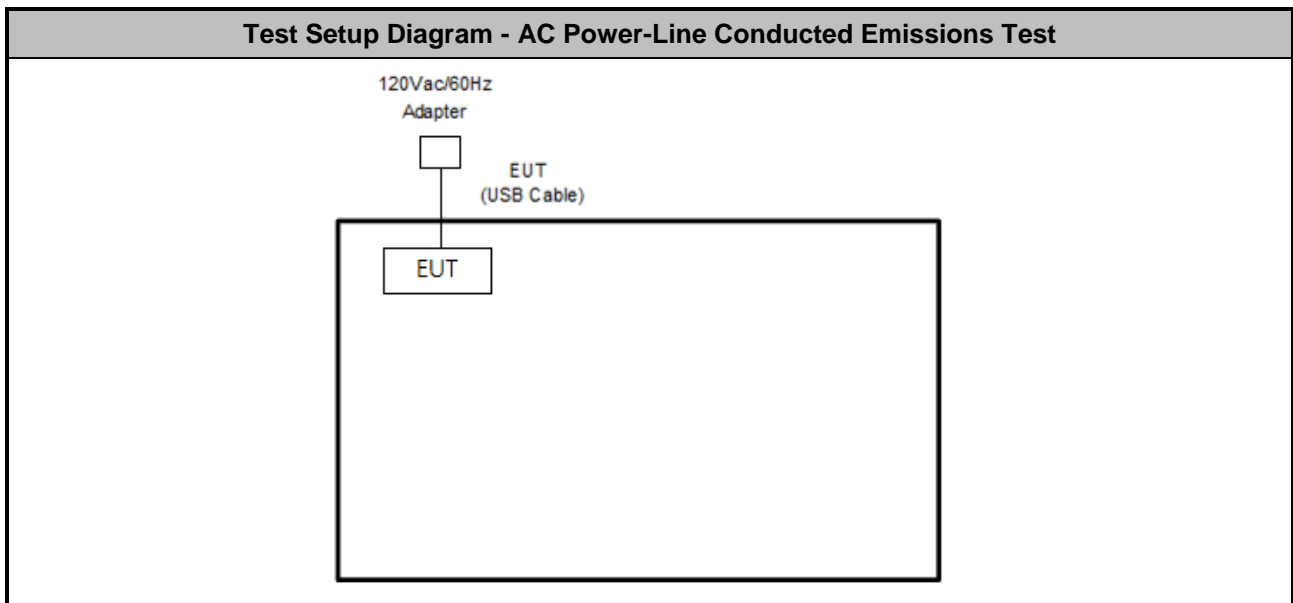
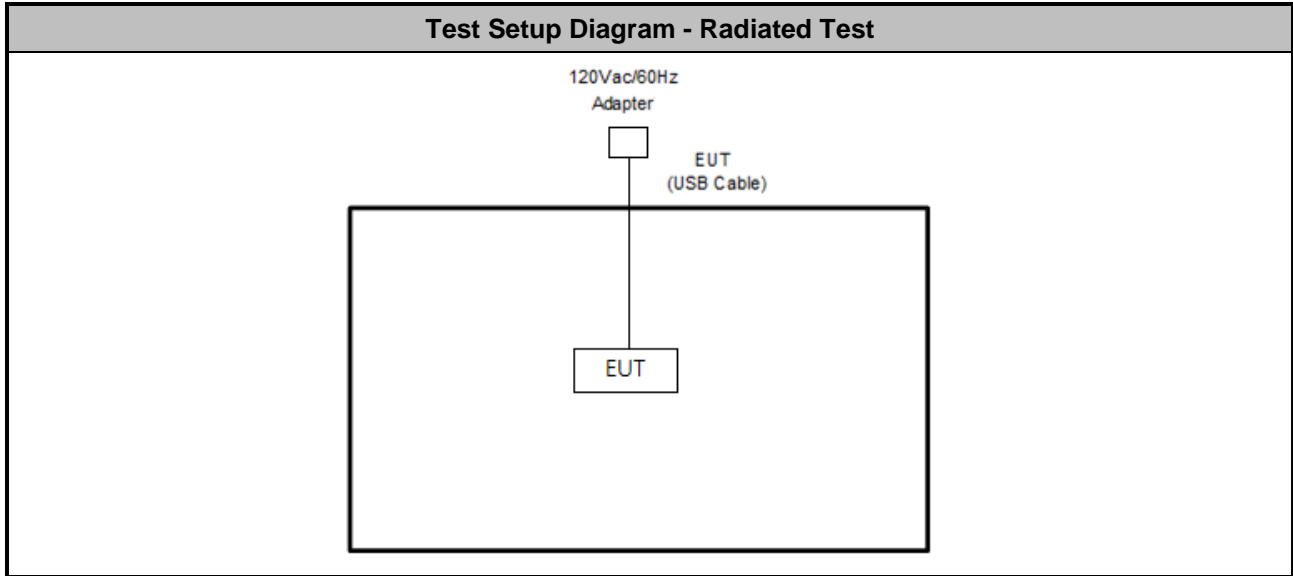
Test Configuration					
Config	Channel	Modulation	UWB Frame	HPRF Set #	Payload Length (bytes)
Mode 1	5	BPRF9	0	0	127
Mode 2	5	BPRF10	0	0	127
Mode 3	5	BPRF9	1	1	127
Mode 4	5	BPRF10	1	1	127
Mode 5	5	BPRF9	3	1	0
Mode 6	5	BPRF10	3	1	0
Mode 7	5	HPRF27	0	0	127
Mode 8	5	HPRF27	1	2	127
Mode 9	5	HPRF27	3	2	0
Mode 10	9	BPRF9	0	0	127
Mode 11	9	BPRF10	0	0	127
Mode 12	9	BPRF9	1	1	127
Mode 13	9	BPRF10	1	1	127
Mode 14	9	BPRF9	3	1	0
Mode 15	9	BPRF10	3	1	0
Mode 16	9	HPRF27	0	0	127
Mode 17	9	HPRF27	1	2	127
Mode 18	9	HPRF27	3	2	0

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
Operating Mode	CTX
1	Adapter Mode
<p>Remark: Please refer to 15.207 which states, “Measurements to demonstrate compliance with the conducted limits are not required for devices employ Battery for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines”.</p>	

The Worst Case Mode for Following Conformance Tests			
Tests Item	UWB Bandwidth, Peak Power Measurement, Radiated Emissions		
Test Condition	Radiated measurement		
Operating Mode	CTX		
1	Adapter Mode		
Mode 1 configuration was tested and found to be the worst case and measured during the test.			
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			
CH05		V	
CH09	V		
<p>Remark: The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find as worst plane, and recorded in this report.</p>			

2.3 Test Setup Diagram



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Adapter	Chicony	G9BR1	N/A	N/A	N/A
2.	Adapter	Aohai	G9BR1	N/A	N/A	N/A

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

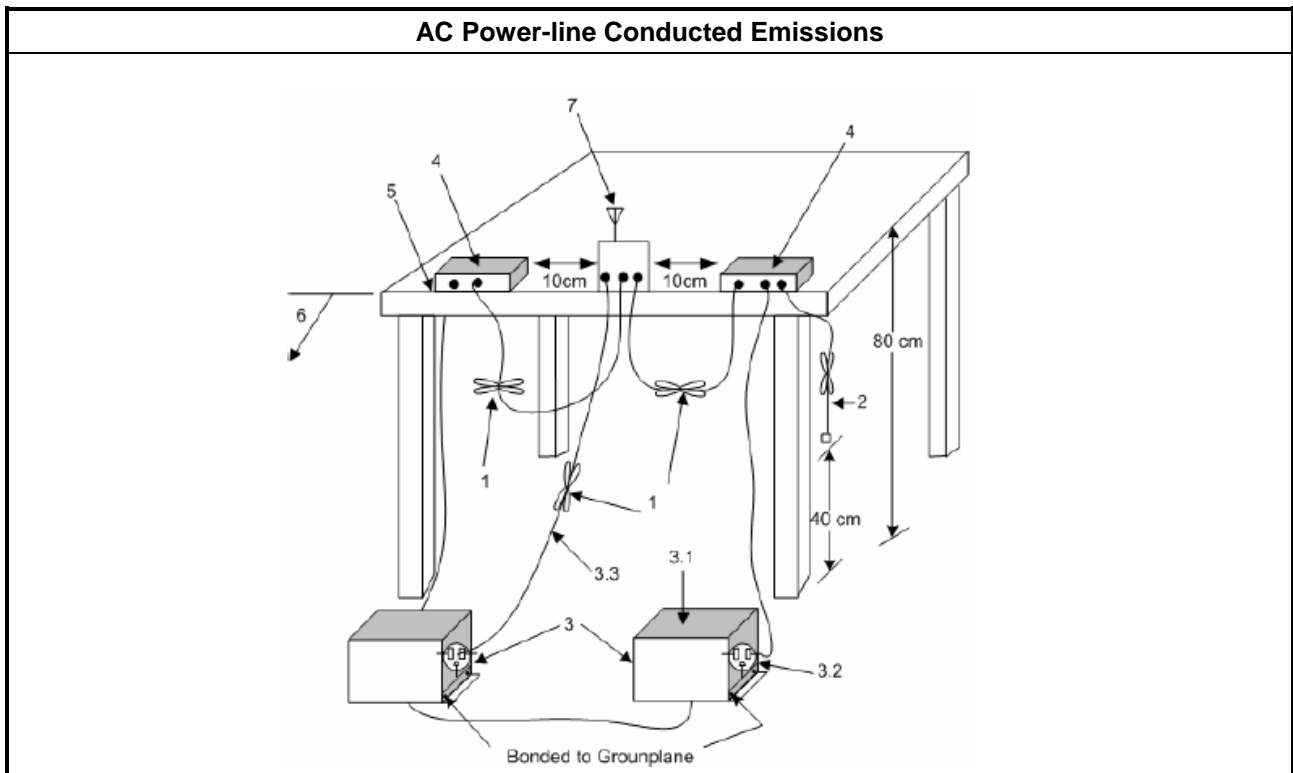
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
■ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Test Result

Please refer to Appendix A.

3.2 UWB bandwidth

3.2.1 UWB bandwidth Limit

UWB bandwidth Limit
UWB bandwidth \geq 500 MHz or Fractional bandwidth \geq 0.2; Fractional bandwidth = $2(f_H - f_L) / (f_H + f_L)$

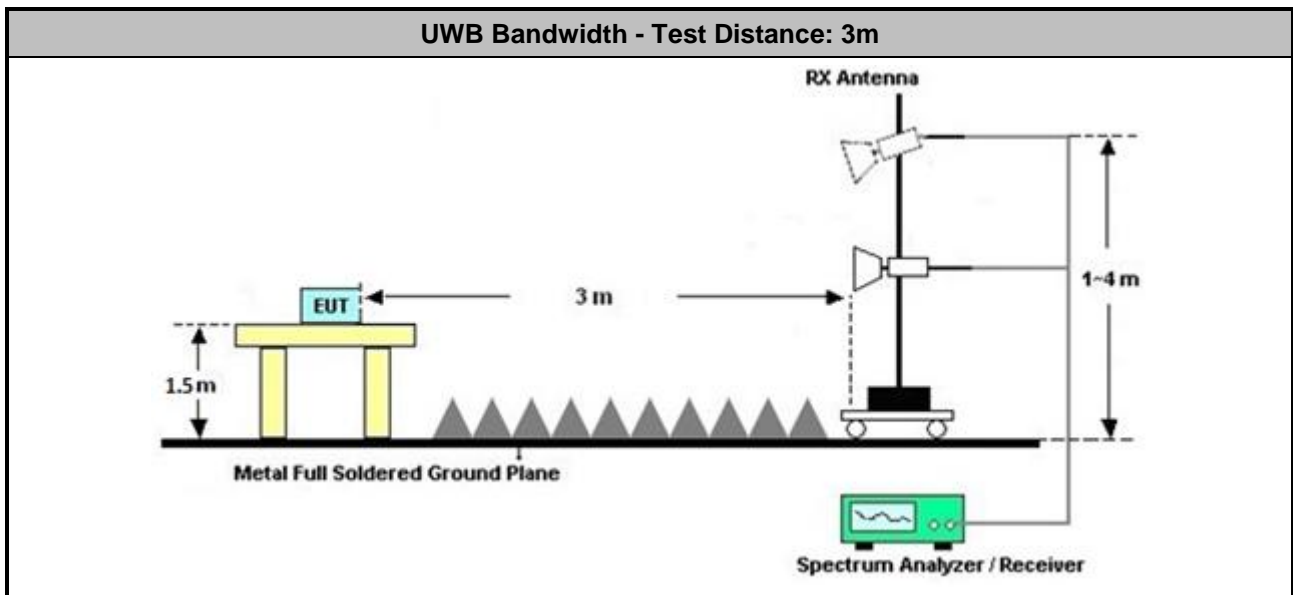
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method
<ul style="list-style-type: none"> ■ For the UWB bandwidth shall be measured using one of the options below:
<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 6.9.2 and clause 10.1 for UWB bandwidth testing.

3.2.4 Test Setup





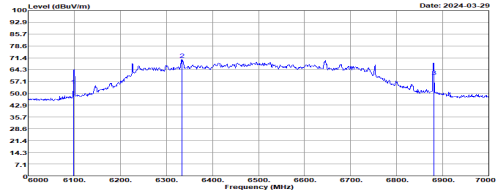
3.2.5 Test Result of UWB Bandwidth

Test mode	F _L (MHz)	F _H (MHz)	UWB Bandwidth (MHz)	Bandwidth limit (MHz)	Result	PoI [H/V]
1	6098	6881	783	≥ 500	Pass	V
2	6296	6881	585	≥ 500	Pass	V
3	6098	6881	783	≥ 500	Pass	V
4	6225	6881	656	≥ 500	Pass	V
5	6098	6882	784	≥ 500	Pass	V
6	6098	6882	784	≥ 500	Pass	V
7	6098	6881	783	≥ 500	Pass	V
8	6216	6881	665	≥ 500	Pass	V
9	6098	6881	783	≥ 500	Pass	V
10	7595	8379	784	≥ 500	Pass	V
11	7723	8252	529	≥ 500	Pass	V
12	7595	8379	784	≥ 500	Pass	V
13	7596	8252	656	≥ 500	Pass	V
14	7595	8379	784	≥ 500	Pass	V
15	7595	8379	784	≥ 500	Pass	V
16	7595	8379	784	≥ 500	Pass	V
17	7596	8379	783	≥ 500	Pass	V
18	7595	8379	784	≥ 500	Pass	V



UWB Bandwidth

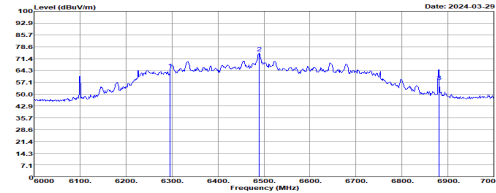
Mode 1



Site : 03CH20-HY
Condition : 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF9
Config : 0
STS Nums : 0
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Contains 3 rows of peak data.

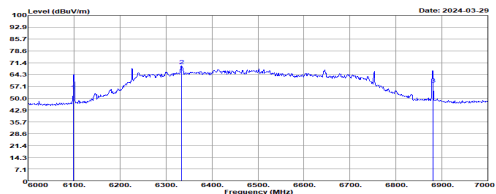
Mode 2



Site : 03CH20-HY
Condition : 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF10
Config : 0
STS Nums : 0
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Contains 3 rows of peak data.

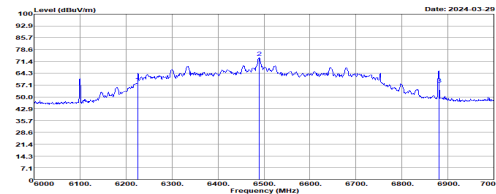
Mode 3



Site : 03CH20-HY
Condition : 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF9
Config : 1
STS Nums : 1
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

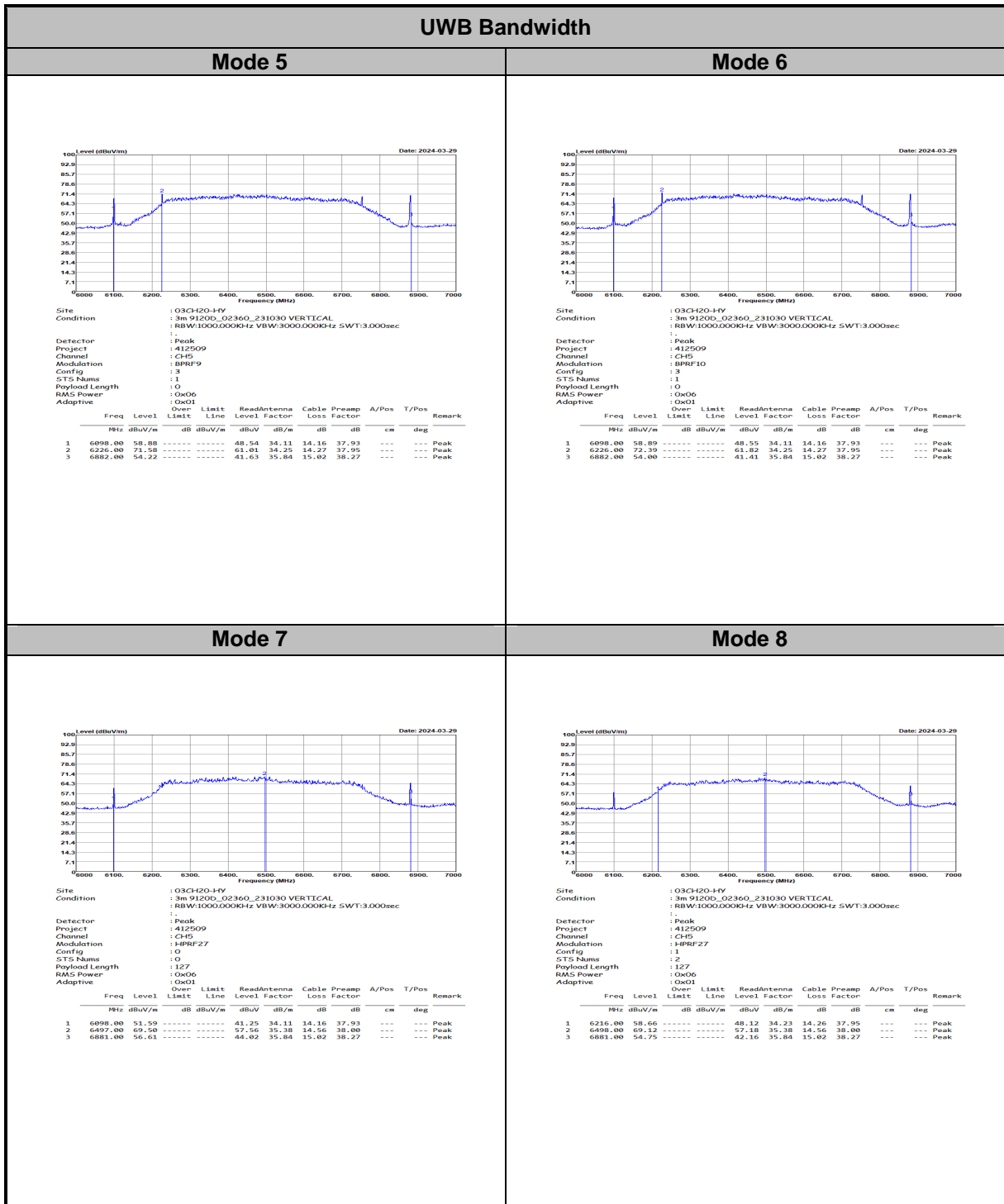
Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Contains 3 rows of peak data.

Mode 4



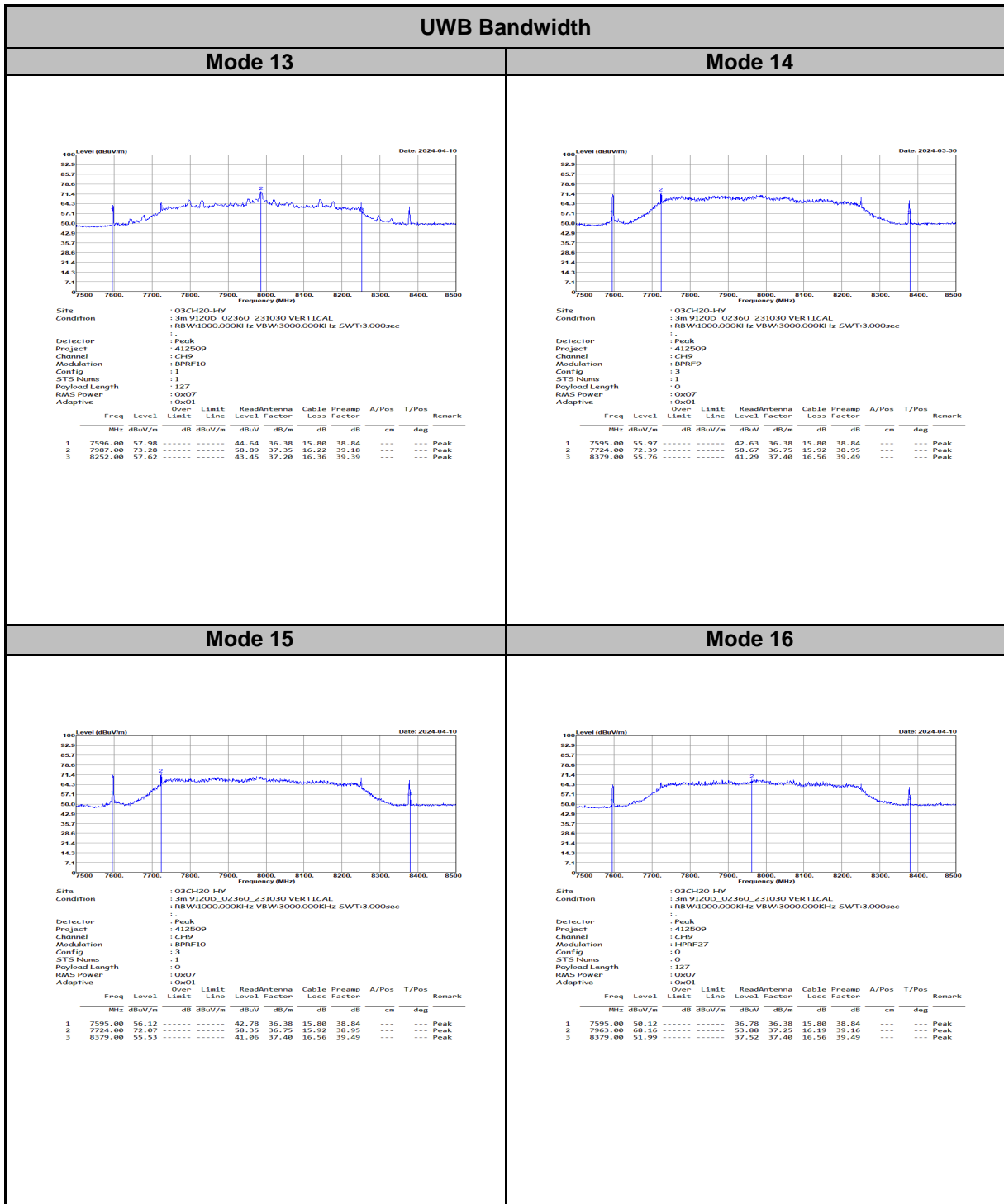
Site : 03CH20-HY
Condition : 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF10
Config : 1
STS Nums : 1
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

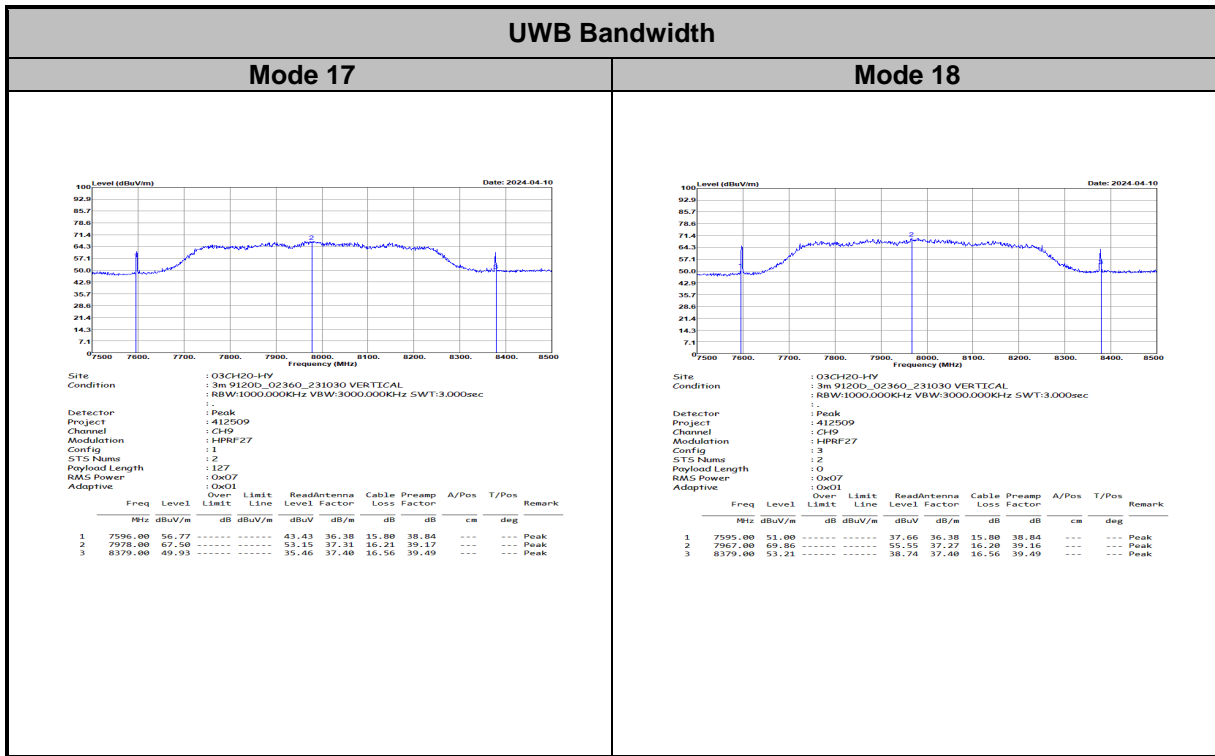
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UWB Bandwidth																																																																																																															
Mode 9	Mode 10																																																																																																														
<p>Site : 03CH20-HV Condition : 3m 91200_02360_231030 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:3.000sec</p> <p>Detector : Peak Project : A12509 Channel : CH9 Modulation : BPRF27 Config : 0 STS Num : 2 Payload Length : 0 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Peak</th> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>Level Factor</th> <th>Loss Factor</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6098.00</td> <td>51.57</td> <td>-----</td> <td>-----</td> <td>41.23</td> <td>34.11</td> <td>14.16</td> <td>37.93</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>6477.00</td> <td>70.53</td> <td>-----</td> <td>-----</td> <td>59.08</td> <td>34.95</td> <td>14.47</td> <td>37.99</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>3</td> <td>6881.00</td> <td>57.42</td> <td>-----</td> <td>-----</td> <td>44.83</td> <td>35.84</td> <td>15.02</td> <td>38.27</td> <td>---</td> <td>Peak</td> </tr> </tbody> </table>	Peak	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark		MHz	dBuV/m	dB	dBuV/m	Level Factor	Loss Factor	dB	dB	cm	deg	1	6098.00	51.57	-----	-----	41.23	34.11	14.16	37.93	---	Peak	2	6477.00	70.53	-----	-----	59.08	34.95	14.47	37.99	---	Peak	3	6881.00	57.42	-----	-----	44.83	35.84	15.02	38.27	---	Peak	<p>Site : 03CH20-HV Condition : 3m 91200_02360_231030 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:3.000sec</p> <p>Detector : Peak Project : A12509 Channel : CH9 Modulation : BPRF9 Config : 0 STS Num : 0 Payload Length : 127 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Peak</th> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>Level Factor</th> <th>Loss Factor</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7595.00</td> <td>52.80</td> <td>-----</td> <td>-----</td> <td>39.46</td> <td>36.38</td> <td>15.80</td> <td>38.84</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>7832.00</td> <td>78.15</td> <td>-----</td> <td>-----</td> <td>56.07</td> <td>37.18</td> <td>16.63</td> <td>39.85</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>3</td> <td>8379.00</td> <td>53.19</td> <td>-----</td> <td>-----</td> <td>38.72</td> <td>37.48</td> <td>16.56</td> <td>39.49</td> <td>---</td> <td>Peak</td> </tr> </tbody> </table>	Peak	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark		MHz	dBuV/m	dB	dBuV/m	Level Factor	Loss Factor	dB	dB	cm	deg	1	7595.00	52.80	-----	-----	39.46	36.38	15.80	38.84	---	Peak	2	7832.00	78.15	-----	-----	56.07	37.18	16.63	39.85	---	Peak	3	8379.00	53.19	-----	-----	38.72	37.48	16.56	39.49	---	Peak
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<p>Site : 03CH20-HV Condition : 3m 91200_02360_231030 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:3.000sec</p> <p>Detector : Peak Project : A12509 Channel : CH9 Modulation : BPRF10 Config : 0 STS Num : 0 Payload Length : 127 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Peak</th> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>Level Factor</th> <th>Loss Factor</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7723.00</td> <td>62.97</td> <td>-----</td> <td>-----</td> <td>49.25</td> <td>36.75</td> <td>15.92</td> <td>38.95</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>7987.00</td> <td>74.56</td> <td>-----</td> <td>-----</td> <td>68.27</td> <td>37.35</td> <td>16.22</td> <td>39.18</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>3</td> <td>8252.00</td> <td>59.84</td> <td>-----</td> <td>-----</td> <td>45.67</td> <td>37.20</td> <td>16.36</td> <td>39.39</td> <td>---</td> <td>Peak</td> </tr> </tbody> </table>	Peak	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark		MHz	dBuV/m	dB	dBuV/m	Level Factor	Loss Factor	dB	dB	cm	deg	1	7723.00	62.97	-----	-----	49.25	36.75	15.92	38.95	---	Peak	2	7987.00	74.56	-----	-----	68.27	37.35	16.22	39.18	---	Peak	3	8252.00	59.84	-----	-----	45.67	37.20	16.36	39.39	---	Peak	<p>Site : 03CH20-HV Condition : 3m 91200_02360_231030 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:3.000sec</p> <p>Detector : Peak Project : A12509 Channel : CH9 Modulation : BPRF9 Config : 0 STS Num : 1 Payload Length : 127 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Peak</th> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>Level Factor</th> <th>Loss Factor</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7595.00</td> <td>58.39</td> <td>-----</td> <td>-----</td> <td>37.05</td> <td>36.38</td> <td>15.80</td> <td>38.84</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>2</td> <td>8181.00</td> <td>69.29</td> <td>-----</td> <td>-----</td> <td>55.22</td> <td>37.18</td> <td>16.27</td> <td>39.38</td> <td>---</td> <td>Peak</td> </tr> <tr> <td>3</td> <td>8379.00</td> <td>53.03</td> <td>-----</td> <td>-----</td> <td>38.56</td> <td>37.48</td> <td>16.56</td> <td>39.49</td> <td>---</td> <td>Peak</td> </tr> </tbody> </table>	Peak	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark		MHz	dBuV/m	dB	dBuV/m	Level Factor	Loss Factor	dB	dB	cm	deg	1	7595.00	58.39	-----	-----	37.05	36.38	15.80	38.84	---	Peak	2	8181.00	69.29	-----	-----	55.22	37.18	16.27	39.38	---	Peak	3	8379.00	53.03	-----	-----	38.56	37.48	16.56	39.49	---	Peak
Peak	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark																																																																																																					
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3.3 Technical requirements for hand held UWB systems

3.3.1 Technical Requirements for transmission Limit

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.

3.3.2 Measuring Instruments

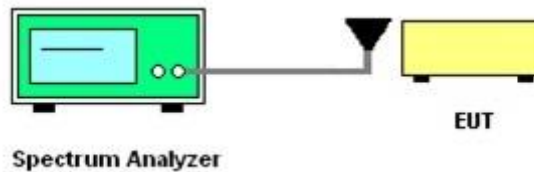
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedure

Follow the test step as below:

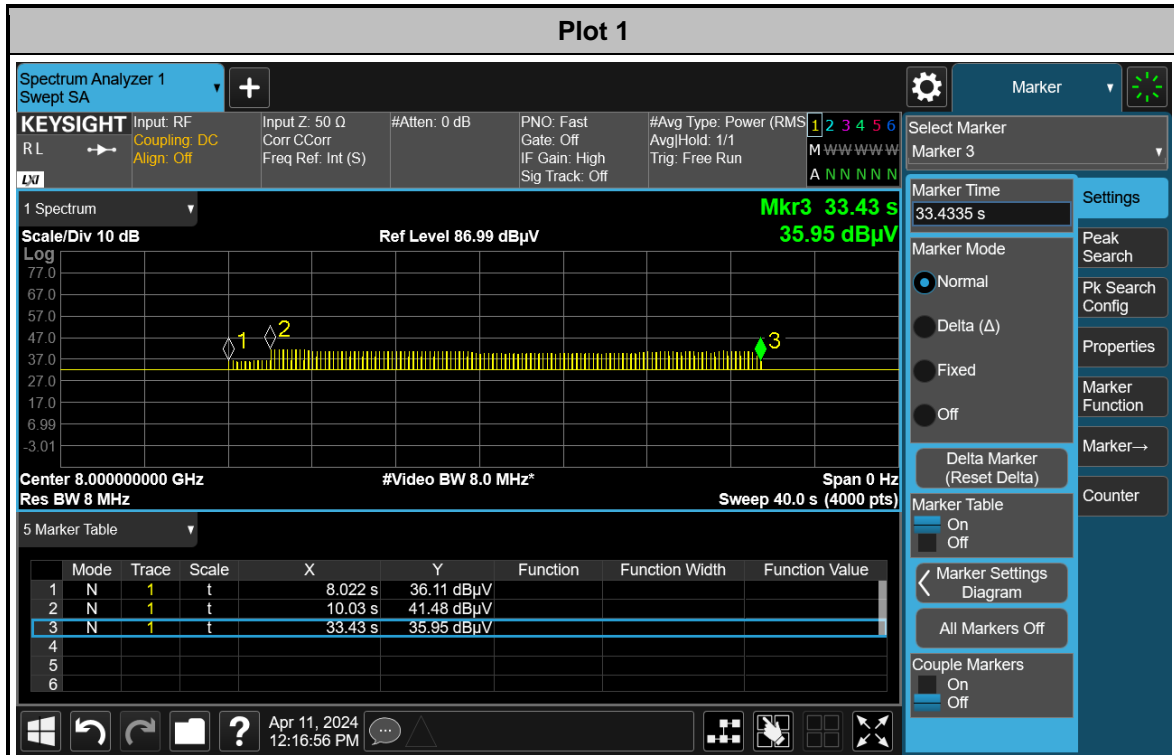
1. Turn on both EUT and companion receiver.
2. Set the EUT to TX mode, and EUT starts polling.
3. Set the companion receiver to associate EUT and EUT starts to transmit.
4. Disable the RX function of the companion receiver to disassociate the EUT.
5. Check if EUT stop transmitting once step 4 is made.

3.3.4 Test Setup

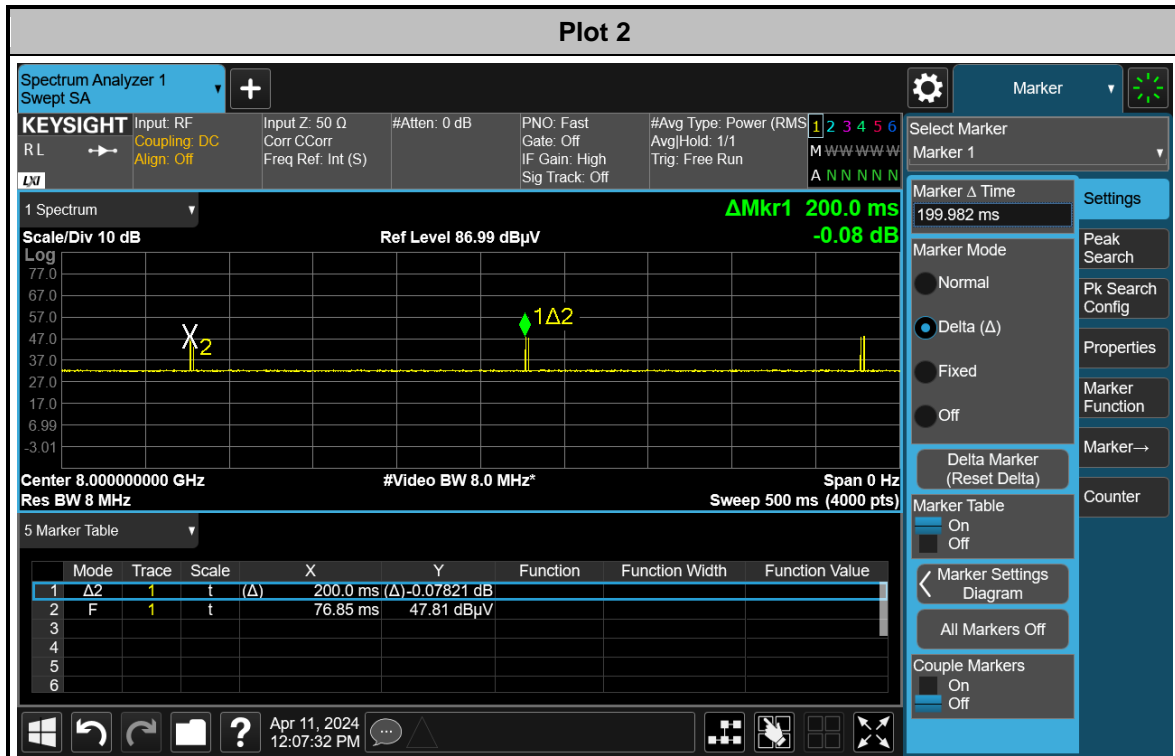




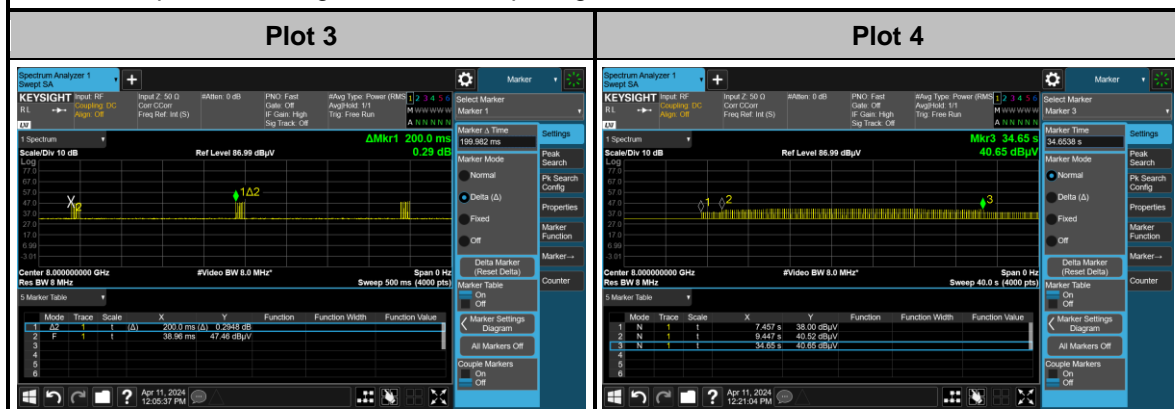
3.3.5 Test Result



M1 to M2: Set the EUT to TX mode, and EUT starts polling.
M2 to M3: Set the companion receiver to associate EUT and EUT starts to transmit.
M3: Disable the TX function of EUT. EUT stops transmitting and polling.



M1 to M2: Set the EUT to TX mode, and EUT starts polling.
 M2 to M3: Set the companion receiver to associate EUT and EUT starts to transmit.
 M3: RX function of the companion receiver is disabled. EUT disassociates the companion receiver and stops transmitting, but continues polling.



Plot 3 is zoom in plot of M2 to M3 (transmission)
 Plot 4 is zoom in plot after M3 (polling only)

3.4 Peak Power Measurement

3.4.1 Peak Power Measurement Limit

Peak Power Measurement Limit
$P_{eirp} = 0 \text{ dBm}/50\text{MHz}$

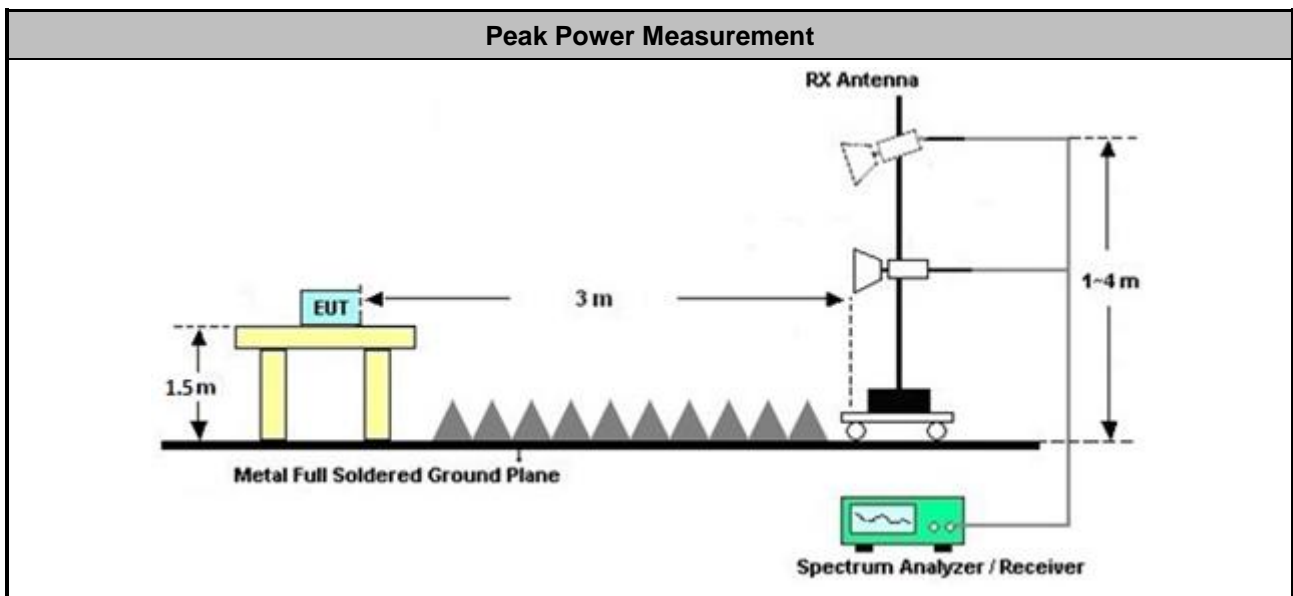
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method
<ul style="list-style-type: none"> ■ Peak Power Measurement
<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m.
<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.5 for peak detector procedure testing.
<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.6 for bandwidth conversion of peak power.
<ul style="list-style-type: none"> ■ Frequency of max peak power is pre-located: The span bandwidth is continuously reduced to find the worst frequency. Once the worst frequency is found, the setting of spectrum analyzer is set as below: <ul style="list-style-type: none"> • Central frequency: Worst frequency point • Span: Zero span • RBW: 50MHz • VBW: 80MHz • Detector: Peak detector • Trace: Max hold

3.4.4 Test Setup





3.4.5 Test Result of Peak Power Measurement

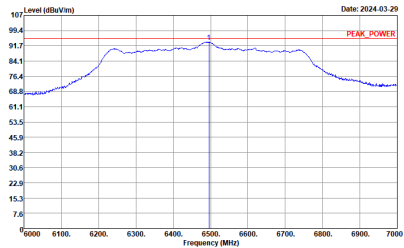
Peak Measurement Result							
Test Mode	Freq. (MHz)	E-Field (dBuV/m)	ERIP _{50MHz} (dBm)	ERIP _{50MHz} Limit (dBm)	Margin (dB)	Result	Pol [H/V]
1	6496	93.51	-1.72	0	-1.72	Pass	V
2	6493	92.97	-2.26	0	-2.26	Pass	V
3	6491	91.95	-3.28	0	-3.28	Pass	V
4	6490	91.99	-3.24	0	-3.24	Pass	V
5	6427	86.91	-8.32	0	-8.32	Pass	V
6	6491	87.54	-7.69	0	-7.69	Pass	V
7	6491	86.35	-8.88	0	-8.88	Pass	V
8	6491	85.61	-9.62	0	-9.62	Pass	V
9	6489	84.08	-11.15	0	-11.15	Pass	V
10	7990	93.11	-2.12	0	-2.12	Pass	V
11	7987	92.95	-2.28	0	-2.28	Pass	V
12	7989	92.91	-2.32	0	-2.32	Pass	V
13	7986	91.42	-3.81	0	-3.81	Pass	V
14	7867	86.15	-9.08	0	-9.08	Pass	V
15	7858	85.87	-9.36	0	-9.36	Pass	V
16	7981	85.57	-9.66	0	-9.66	Pass	V
17	7987	84.97	-10.26	0	-10.26	Pass	V
18	7987	83.58	-11.65	0	-11.65	Pass	V

Note 1: EIRP [dBm] = E-Field [dBuV/m] - 95.23;
Note 2: Measurement worst emissions of receive antenna polarization.



Pre-located worst frequency Plots

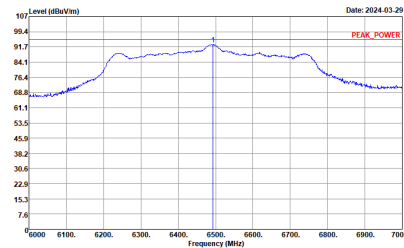
Mode 1



Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH5
 Modulation : BPSK9
 Config : 0
 STS Nums : 0
 Payload Length : 127
 RMS Power : 0x05
 Adaptive : 0x01

1	6496.00	93.51	-1.72	95.23	81.58	35.37	14.56	38.00	---	---	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------

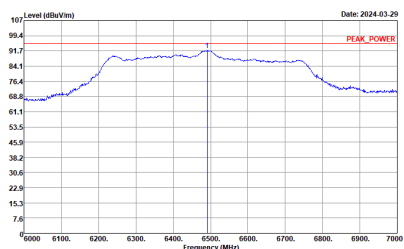
Mode 2



Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH5
 Modulation : BPSK10
 Config : 0
 STS Nums : 0
 Payload Length : 127
 RMS Power : 0x06
 Adaptive : 0x01

1	6493.00	92.97	-2.26	95.23	81.07	35.34	14.56	38.00	---	---	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------

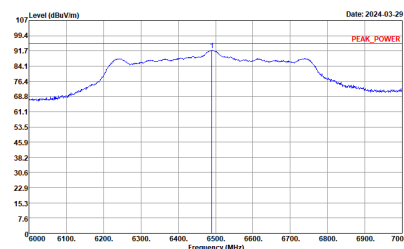
Mode 3



Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH5
 Modulation : BPSK9
 Config : 1
 STS Nums : 1
 Payload Length : 127
 RMS Power : 0x06
 Adaptive : 0x01

1	6491.00	91.95	-3.28	95.23	80.07	35.33	14.55	38.00	---	---	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------

Mode 4



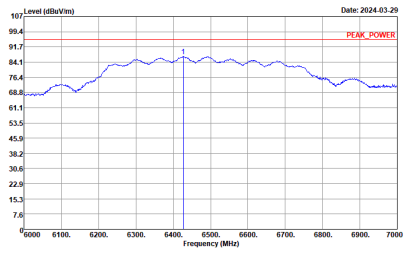
Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH5
 Modulation : BPSK10
 Config : 1
 STS Nums : 1
 Payload Length : 127
 RMS Power : 0x06
 Adaptive : 0x01

1	6490.00	91.99	-3.24	95.23	80.12	35.32	14.55	38.00	---	---	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------



Pre-located worst frequency Plots

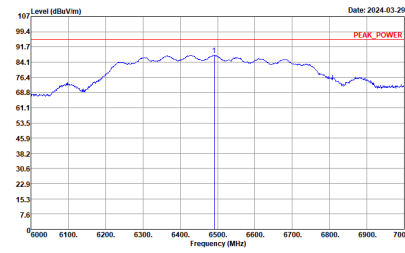
Mode 5



Site : 03CH20-HY
Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF9
Config : 3
STS Name : 1
Payload Length : 0
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Row 1: 6427.00, 86.91, -8.32, 95.23, 75.48, 34.95, 14.47, 37.99, ---, ---, Peak

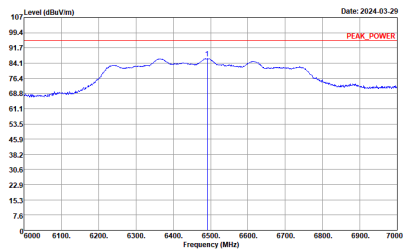
Mode 6



Site : 03CH20-HY
Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : BPRF10
Config : 3
STS Name : 1
Payload Length : 0
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Row 1: 6491.00, 87.54, -7.69, 95.23, 75.66, 35.33, 14.55, 38.00, ---, ---, Peak

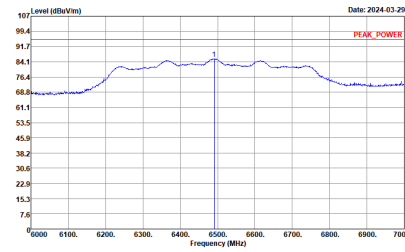
Mode 7



Site : 03CH20-HY
Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : HPRF27
Config : 0
STS Name : 0
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Row 1: 6491.00, 86.35, -8.88, 95.23, 74.47, 35.33, 14.55, 38.00, ---, ---, Peak

Mode 8



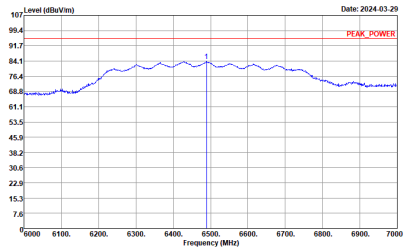
Site : 03CH20-HY
Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
Detector : Peak
Project : 412509
Channel : CH5
Modulation : HPRF27
Config : 1
STS Name : 2
Payload Length : 127
RMS Power : 0x06
Adaptive : 0x01

Table with 11 columns: Freq, Level, Over, Limit, ReadAntenna, Cable, Preamp, A/Pos, T/Pos, Remark. Row 1: 6491.00, 85.61, -9.62, 95.23, 73.73, 35.33, 14.55, 38.00, ---, ---, Peak



Pre-located worst frequency Plots

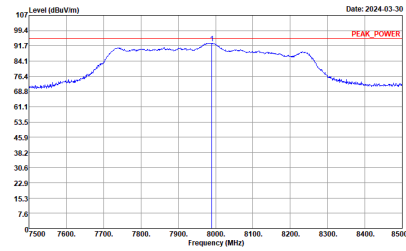
Mode 9



Date: 2024-03-29
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF27
 Config : 3
 STS Name : 0
 Payload Length : 127
 RMS Power : 0x06
 Adaptive : 0x01

1	6489.00	84.08	-11.15	95.23	72.22	35.31	14.55	38.00	---	---	Peak
---	---------	-------	--------	-------	-------	-------	-------	-------	-----	-----	------

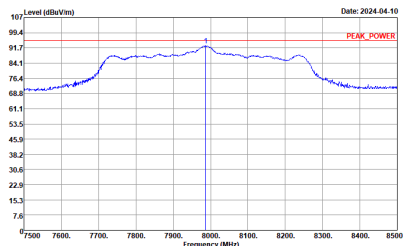
Mode 10



Date: 2024-03-30
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 0
 STS Name : 0
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

1	7998.00	93.11	-2.12	95.23	78.70	37.36	16.23	39.18	---	---	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------

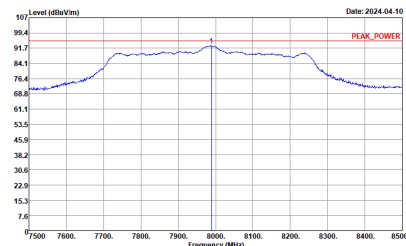
Mode 11



Date: 2024-04-10
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF10
 Config : 0
 STS Name : 0
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

1	7987.00	92.95	-2.28	95.23	78.56	37.35	16.22	39.18	300	310	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------

Mode 12



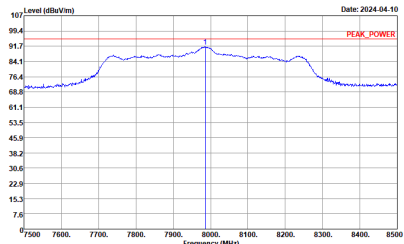
Date: 2024-04-10
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 1
 STS Name : 1
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

1	7989.00	92.91	-2.32	95.23	78.50	37.36	16.23	39.18	300	319	Peak
---	---------	-------	-------	-------	-------	-------	-------	-------	-----	-----	------



Pre-located worst frequency Plots

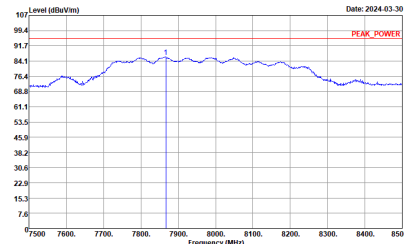
Mode 13



Date: 2024-04-10
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPSK10
 Config : 1
 STS Nums : 1
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
Mhz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7986.00	91.42	-3.81	95.23	77.04	37.34	16.22	39.18	300 309 Peak

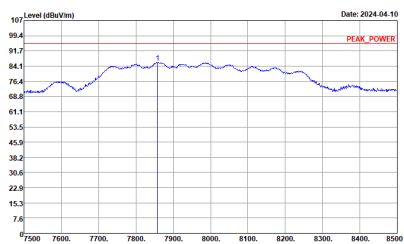
Mode 14



Date: 2024-03-30
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPSK9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
Mhz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7867.00	86.15	-9.08	95.23	72.06	37.10	16.07	39.08	--- --- Peak

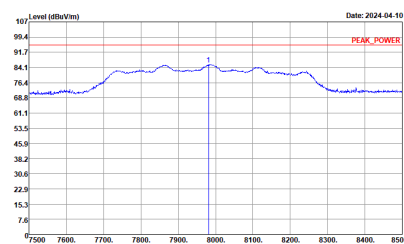
Mode 15



Date: 2024-04-10
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPSK10
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
Mhz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7858.00	85.87	-9.36	95.23	71.78	37.10	16.06	39.07	400 312 Peak

Mode 16



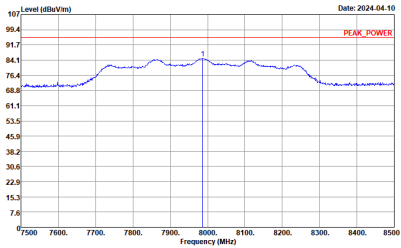
Date: 2024-04-10
 Site : 03CH20-HY
 Condition : PEAK_POWER 3m 9120D_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPSK27
 Config : 0
 STS Nums : 0
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
Mhz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7981.00	85.57	-9.66	95.23	71.20	37.32	16.22	39.17	300 324 Peak



Pre-located worst frequency Plots

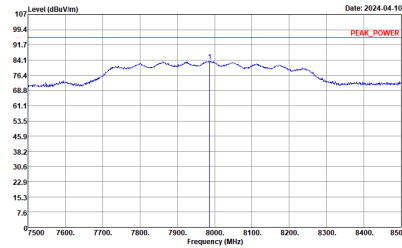
Mode 17



Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : HPRF27
 Config : 1
 STS Nums : 2
 Payload Length : 127
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
Hz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	cm	deg	
1	7987.00	84.97	-10.26	95.23	70.58	37.35	16.22	39.18	400	320 Peak

Mode 18



Site : 03CH20-HY
 Condition : PEAK_POWER 3m 91200_02360_231030 VERTICAL
 : RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : HPRF27
 Config : 3
 STS Nums : 2
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
Hz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	cm	deg	
1	7987.00	83.58	-11.65	95.23	69.19	37.35	16.22	39.18	400	319 Peak



3.5 Radiated Emissions

3.5.1 Radiated Emissions Limit

Radiated Emissions below 960MHz and Emissions from Digital Circuitry Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Radiated Emissions above 960MHz Limit	
Frequency Range (MHz)	EIRP (dBm), RBW = 1MHz
960-1610	-75.3
1610-1990	-63.3
1990-3100	-61.3
3100-10600	-41.3
Above 10600	-61.3

Note: Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)

Radiated Emissions in GPS Bands Limit	
Frequency Range (MHz)	EIRP (dBm), RBW ≥ 1kHz
1164-1240	-85.3
1559-1610	-85.3

Note E (dBuV/m) = EIRP (dBm) + 95.23, example, E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m



3.5.2 Measuring Instruments

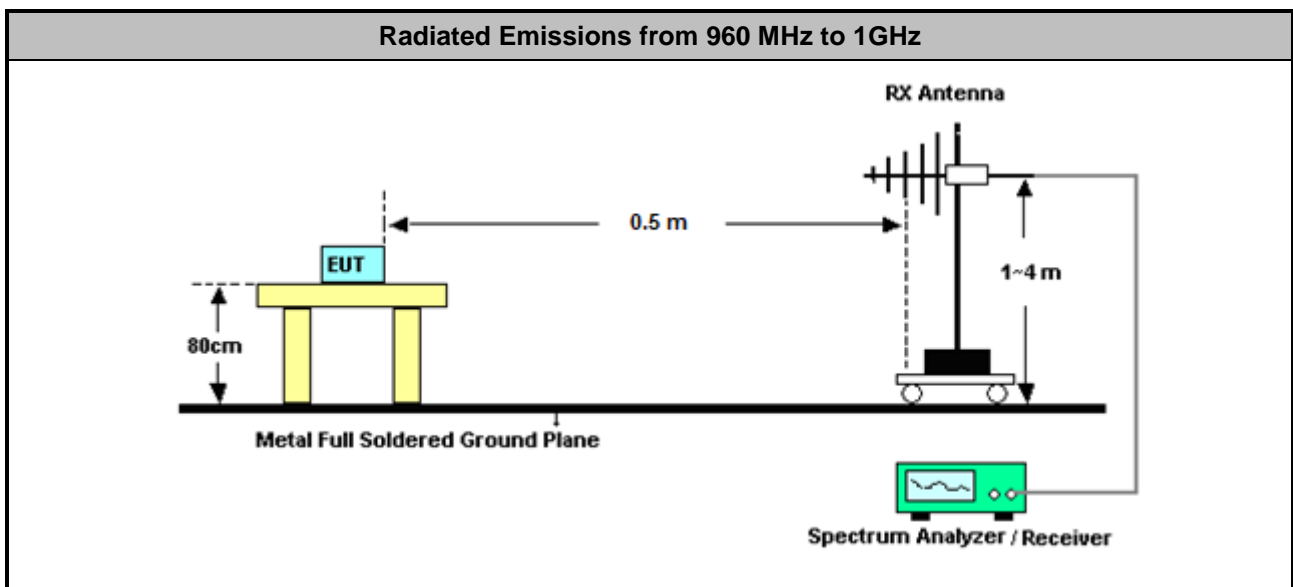
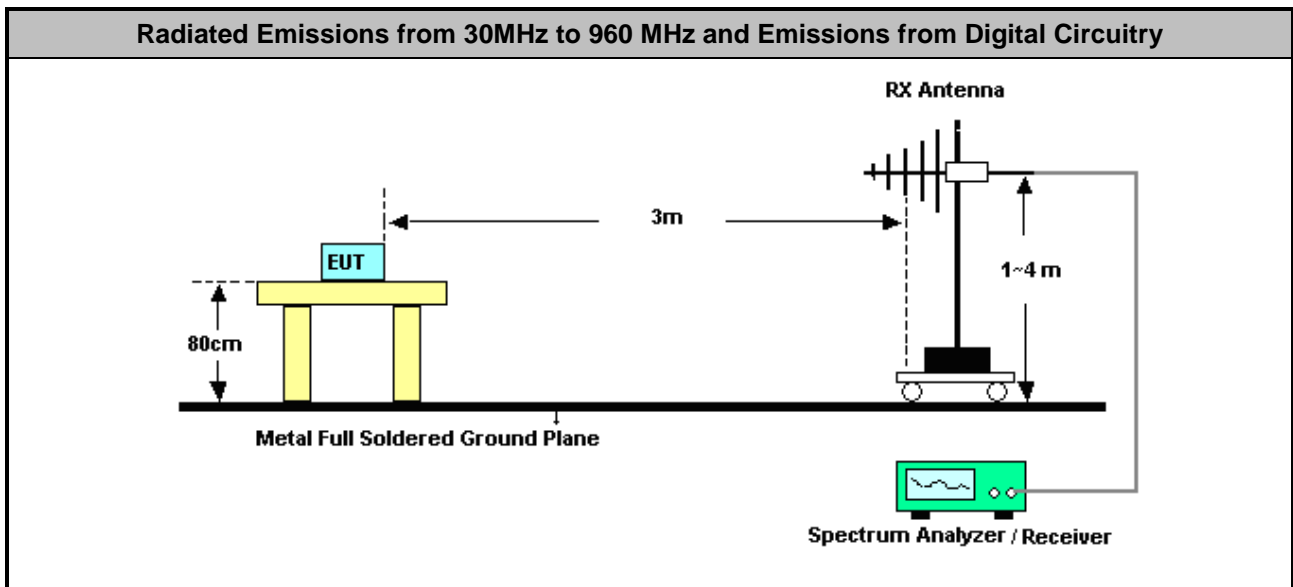
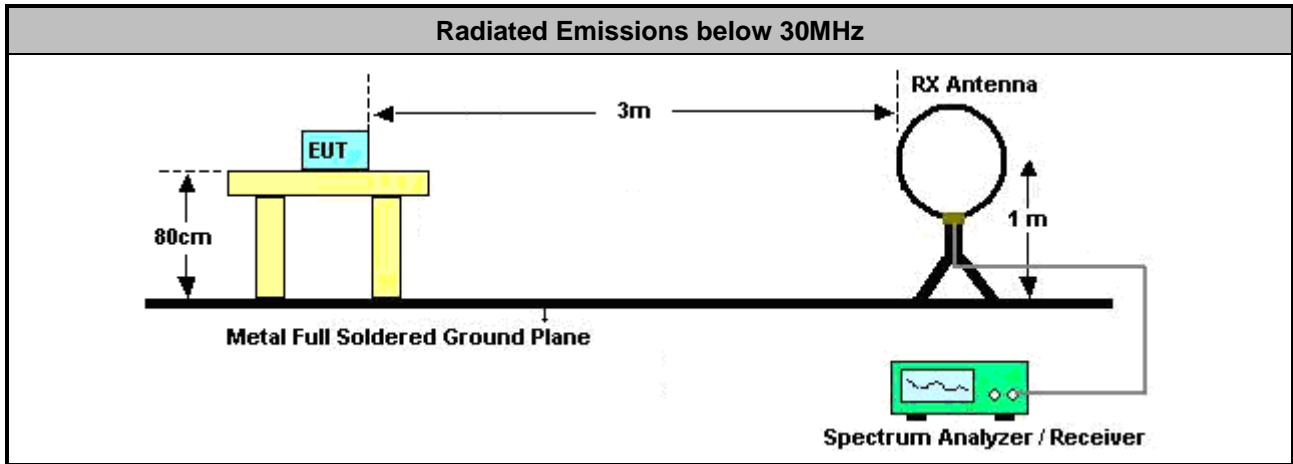
Refer a test equipment and calibration data table in this test report.

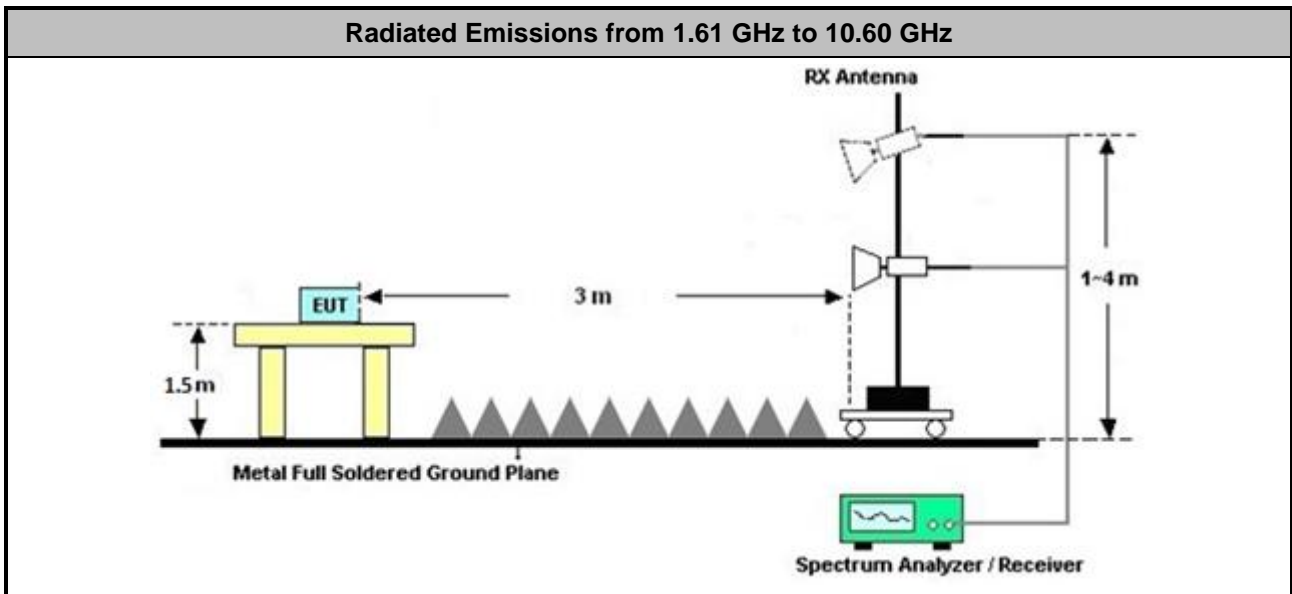
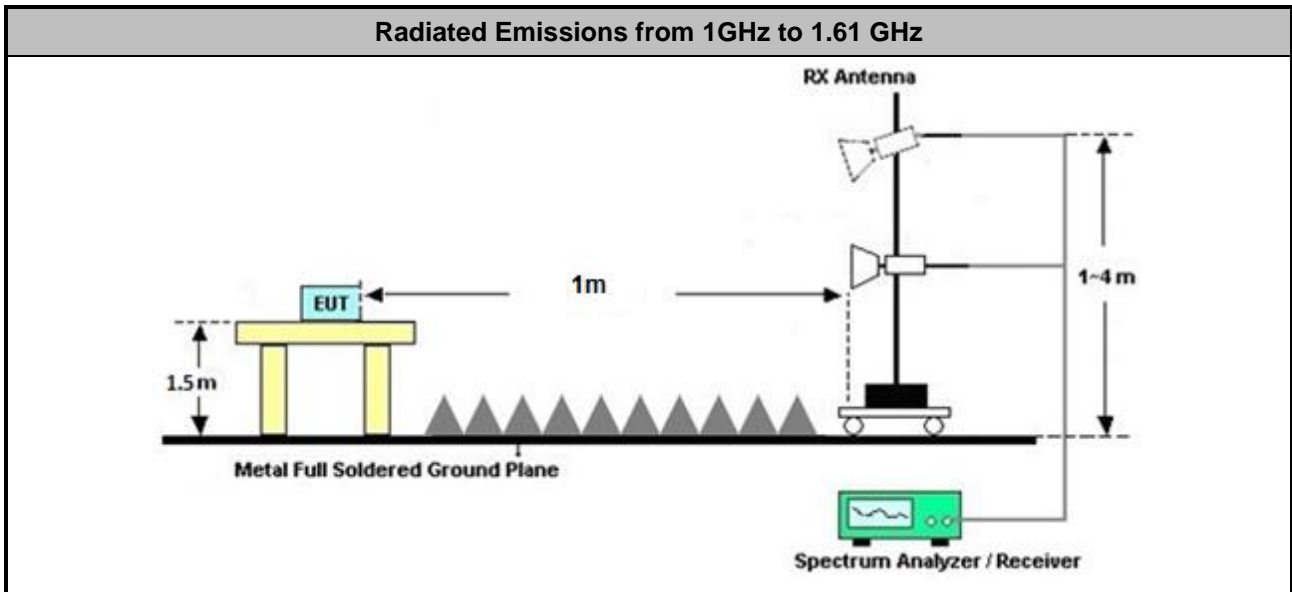
3.5.3 Test Procedures

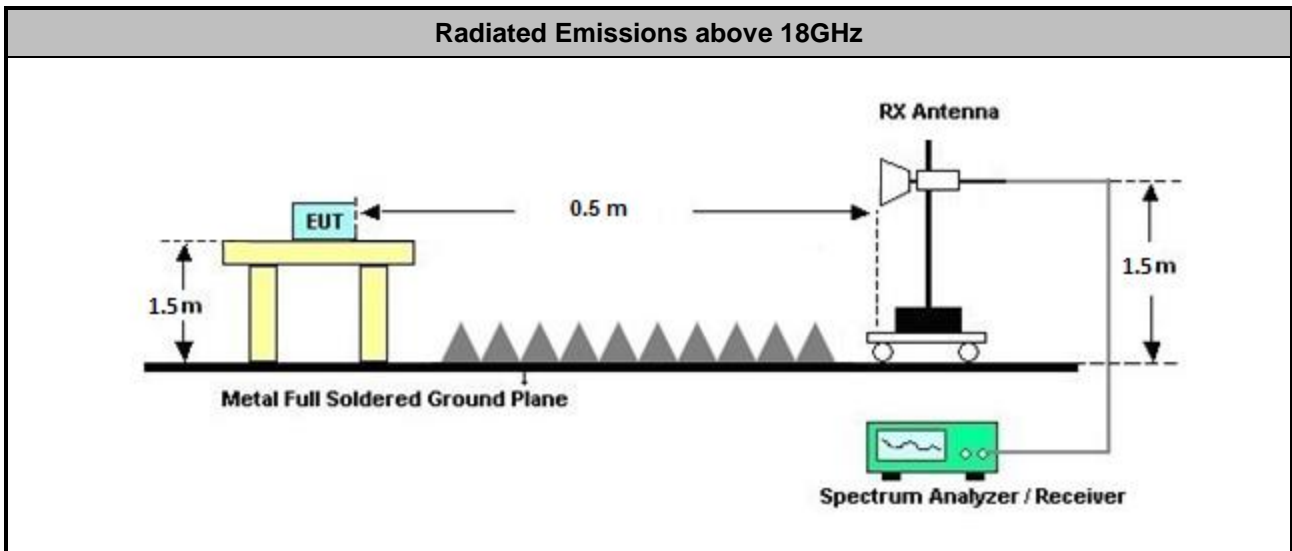
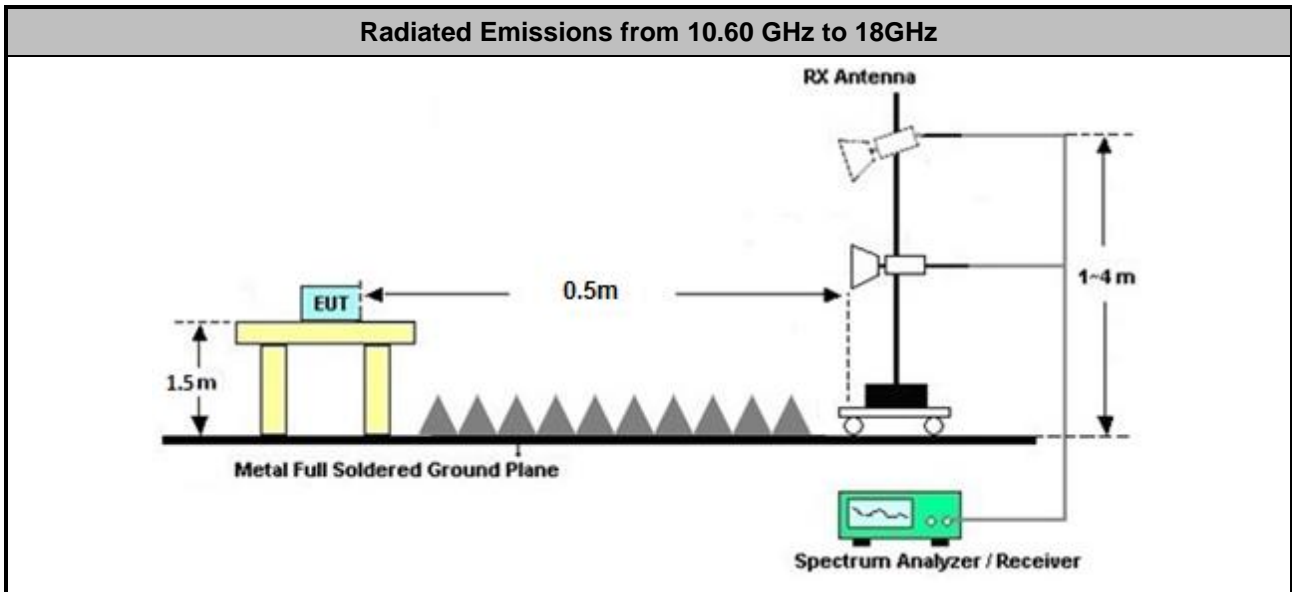
Test Method for Radiated Emissions above 960MHz	
<ul style="list-style-type: none"> ■ Radiated Emissions above 960MHz 	
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m. In some cases, it may be necessary to measure the radiated UWB emissions at a closer distance to obtain enough signal and margin to overcome the measurement system noise floor. Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.4 for rms detector procedure testing.
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.7 for evaluating AVG-PSD (RBW=1MHz).
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.10 for evaluating AVG-PSD in GPS Band (RBW≥1kHz).
<ul style="list-style-type: none"> ■ For radiated measurement. 	
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.8 following eirp can be used radiated test configuration.
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 10.3.9 following eirp can be directly determined using the field strength.

Test Method for Radiated Emissions below 960MHz and Emissions from Digital Circuitry	
<ul style="list-style-type: none"> ■ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements) for above 30MHz-960MHz; 40dB/decade for frequency below 30MHz. 	
<ul style="list-style-type: none"> ■ For the transmitter unwanted emissions shall be measured using following options below: 	
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 4.1.4 Detector functions and selection of bandwidth
	<ul style="list-style-type: none"> <input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions. Adjusted by a “duty cycle correction factor”, derived from 20log (dwell time/100 ms). Average emission = peak emission + 20 log (duty cycle).
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<ul style="list-style-type: none"> ■ For radiated measurement. 	
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
	<ul style="list-style-type: none"> ■ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.
	<ul style="list-style-type: none"> ■ If the noise floor can't meet the limit, the test distance will be shorten and described in the report.
<ul style="list-style-type: none"> ■ Any unwanted emissions level shall not exceed the fundamental emission level. 	

3.5.4 Test Setup







Note 1: Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna and the frequency range of 1 GHz to 40 GHz using a calibrated horn antenna.
 Note 2: If test distance other than 3m is used, the used test distance will be recorded in test result.

3.5.5 Radiated Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



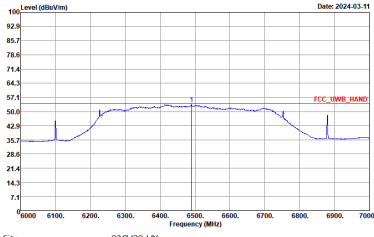
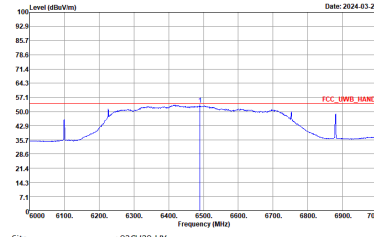
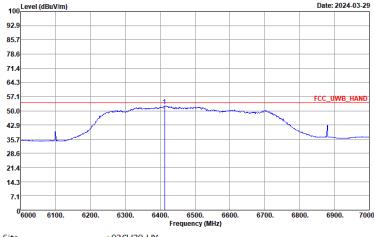
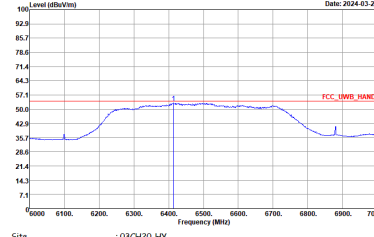
3.5.6 Average Power Spectral Density

Test mode	Frequency (MHz)	Emission Level (dBuV/m)	Emission Limit (dBm/MHz)	Emission Limit (dBuV/m)	Margin (dB)	Result	Pol [H/V]
1	6490	51.89	-41.3	53.93	-2.04	Pass	V
2	6490	51.89	-41.3	53.93	-2.04	Pass	V
3	6414	52.62	-41.3	53.93	-1.31	Pass	V
4	6490	51.90	-41.3	53.93	-2.03	Pass	V
5	6490	53.77	-41.3	53.93	-0.16	Pass	V
6	6490	53.40	-41.3	53.93	-0.53	Pass	V
7	6413	52.39	-41.3	53.93	-1.54	Pass	V
8	6414	53.14	-41.3	53.93	-0.79	Pass	V
9	6420	53.30	-41.3	53.93	-0.63	Pass	V
10	7987	52.63	-41.3	53.93	-1.30	Pass	V
11	7987	52.26	-41.3	53.93	-1.67	Pass	V
12	7974	53.08	-41.3	53.93	-0.85	Pass	V
13	7987	51.58	-41.3	53.93	-2.35	Pass	V
14	7987	53.73	-41.3	53.93	-0.20	Pass	V
15	7987	52.74	-41.3	53.93	-1.19	Pass	V
16	7986	51.31	-41.3	53.93	-2.26	Pass	V
17	7983	52.48	-41.3	53.93	-1.45	Pass	V
18	7987	53.10	-41.3	53.93	-0.83	Pass	V

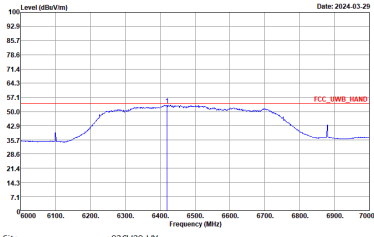
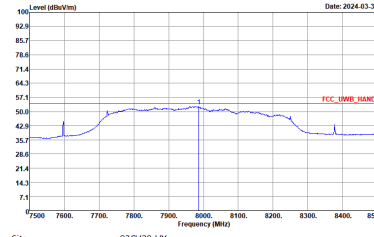
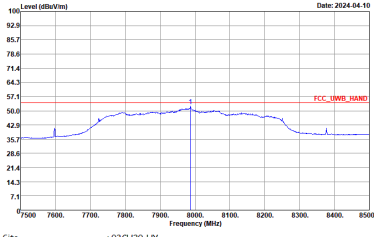
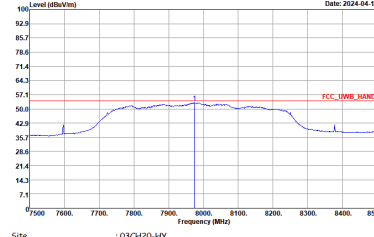


Radiated Emissions (Fundamental)																																																															
Operating Function	Adapter Mode	Polarization	V																																																												
		Test Distance	3m																																																												
Mode 1		Mode 2																																																													
<p style="font-size: small;">Date: 2024-03-29</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec</p> <p>Detector : Average Project : 412509 Channel : CH5 Modulation : BPRF10 Config : 0 STS Name : 0 Payload Length : 127 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1" style="width: 100%; font-size: x-small;"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6498.00</td> <td>51.89</td> <td>-2.04</td> <td>53.93</td> <td>40.02</td> <td>35.32</td> <td>14.55</td> <td>38.00</td> <td>--- Average</td> </tr> </tbody> </table> <p style="font-size: x-small;">Date: 1</p>		Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	1	6498.00	51.89	-2.04	53.93	40.02	35.32	14.55	38.00	--- Average	<p style="font-size: small;">Date: 2024-03-29</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec</p> <p>Detector : Average Project : 412509 Channel : CH5 Modulation : BPRF10 Config : 0 STS Name : 0 Payload Length : 127 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1" style="width: 100%; font-size: x-small;"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6498.00</td> <td>51.89</td> <td>-2.04</td> <td>53.93</td> <td>40.02</td> <td>35.32</td> <td>14.55</td> <td>38.00</td> <td>--- Average</td> </tr> </tbody> </table>		Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	1	6498.00	51.89	-2.04	53.93	40.02	35.32	14.55	38.00	--- Average
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 <p>Date: 2024-03-11</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:1.000sec</p> <p>Detector : Average Project : 412509 Channel : CH5 Modulation : BPRF9 Config : 3 STS Name : 1 Payload Length : 0 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6498.80</td> <td>53.77</td> <td>-0.16</td> <td>53.93</td> <td>41.90</td> <td>35.32</td> <td>14.55</td> <td>38.00</td> <td>--- Average</td> </tr> </tbody> </table>		Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	1	6498.80	53.77	-0.16	53.93	41.90	35.32	14.55	38.00	--- Average	 <p>Date: 2024-03-29</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:1.000sec</p> <p>Detector : Average Project : 412509 Channel : CH5 Modulation : BPRF10 Config : 3 STS Name : 1 Payload Length : 0 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>6498.80</td> <td>53.48</td> <td>-0.53</td> <td>53.93</td> <td>41.53</td> <td>35.32</td> <td>14.55</td> <td>38.00</td> <td>--- Average</td> </tr> </tbody> </table>		Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	1	6498.80	53.48	-0.53	53.93	41.53	35.32	14.55	38.00	--- Average
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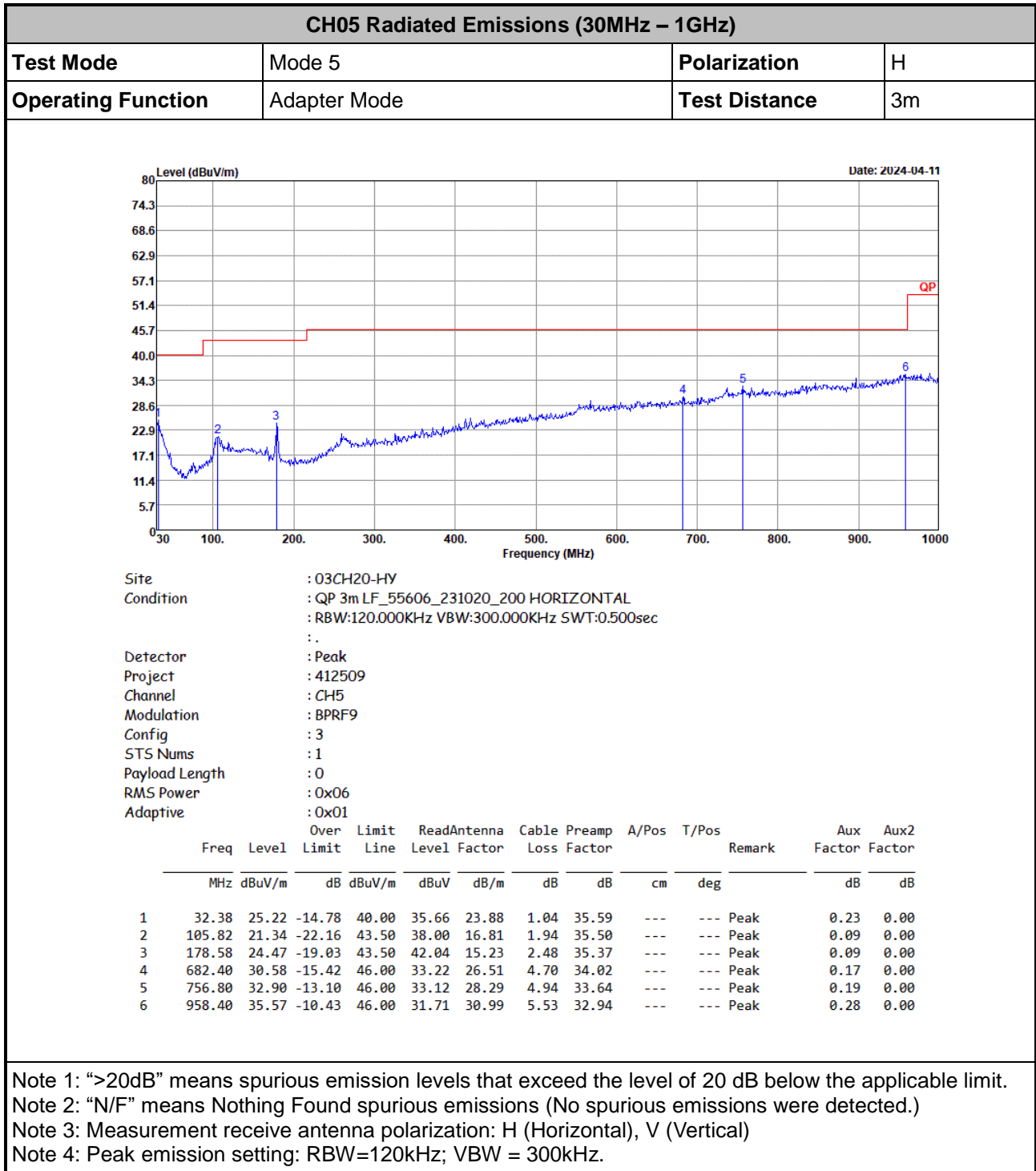
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1	7987.00	53.73	-0.20	53.93	39.34	37.35	16.22	39.18	--- --- Average																																																						
Mode 15				Mode 16																																																											
<p>Level (dBuV/m) vs Frequency (MHz) plot for Mode 15. The y-axis ranges from 7.1 to 100 dBuV/m, and the x-axis ranges from 7500 to 8500 MHz. A red horizontal line at approximately 57.1 dBuV/m is labeled 'FCC_UWB_HAND'. The blue test curve fluctuates around 45-50 dBuV/m, staying below the limit line.</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec : Detector : Average Project : 412509 Channel : CH9 Modulation : BPRF10 Config : 3 SFS:Name : 1 Payload Length : 0 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7987.00</td> <td>52.74</td> <td>-1.19</td> <td>53.93</td> <td>38.35</td> <td>37.35</td> <td>16.22</td> <td>39.18</td> <td>--- --- Average</td> </tr> </tbody> </table>				Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	1	7987.00	52.74	-1.19	53.93	38.35	37.35	16.22	39.18	--- --- Average	<p>Level (dBuV/m) vs Frequency (MHz) plot for Mode 16. The y-axis ranges from 7.1 to 100 dBuV/m, and the x-axis ranges from 7500 to 8500 MHz. A red horizontal line at approximately 57.1 dBuV/m is labeled 'FCC_UWB_HAND'. The blue test curve fluctuates around 45-50 dBuV/m, staying below the limit line.</p> <p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec : Detector : Average Project : 412509 Channel : CH9 Modulation : HPRF27 Config : 0 SFS:Name : 0 Payload Length : 127 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7986.00</td> <td>51.31</td> <td>-2.62</td> <td>53.93</td> <td>36.93</td> <td>37.34</td> <td>16.22</td> <td>39.18</td> <td>--- --- Average</td> </tr> </tbody> </table>				Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	1	7986.00	51.31	-2.62	53.93	36.93	37.34	16.22	39.18	--- --- Average
Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark																																																							
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg																																																							
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Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark																																																							
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg																																																							
1	7986.00	51.31	-2.62	53.93	36.93	37.34	16.22	39.18	--- --- Average																																																						



Radiated Emissions (Fundamental)																																																															
Operating Function		Adapter Mode		Polarization		V																																																									
				Test Distance		3m																																																									
Mode 17				Mode 18																																																											
<p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:1.000sec : Detector : Average Project : 412509 Channel : CH9 Modulation : HPRFZ7 Config : 1 SFS Name : 2 Payload Length : 127 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7983.00</td> <td>52.48</td> <td>-1.45</td> <td>53.93</td> <td>38.11</td> <td>37.33</td> <td>16.22</td> <td>39.18</td> <td>--- Average</td> </tr> </tbody> </table>				Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	1	7983.00	52.48	-1.45	53.93	38.11	37.33	16.22	39.18	--- Average	<p>Site : 03CH20-HY Condition : FCC_UWB_HAND 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:1.000sec : Detector : Average Project : 412509 Channel : CH9 Modulation : HPRFZ7 Config : 1 SFS Name : 2 Payload Length : 0 RMS Power : 0x07 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7987.00</td> <td>53.18</td> <td>-0.83</td> <td>53.93</td> <td>38.71</td> <td>37.35</td> <td>16.22</td> <td>39.18</td> <td>--- Average</td> </tr> </tbody> </table>				Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	1	7987.00	53.18	-0.83	53.93	38.71	37.35	16.22	39.18	--- Average
Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark																																																							
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg																																																							
1	7983.00	52.48	-1.45	53.93	38.11	37.33	16.22	39.18	--- Average																																																						
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MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg																																																							
1	7987.00	53.18	-0.83	53.93	38.71	37.35	16.22	39.18	--- Average																																																						



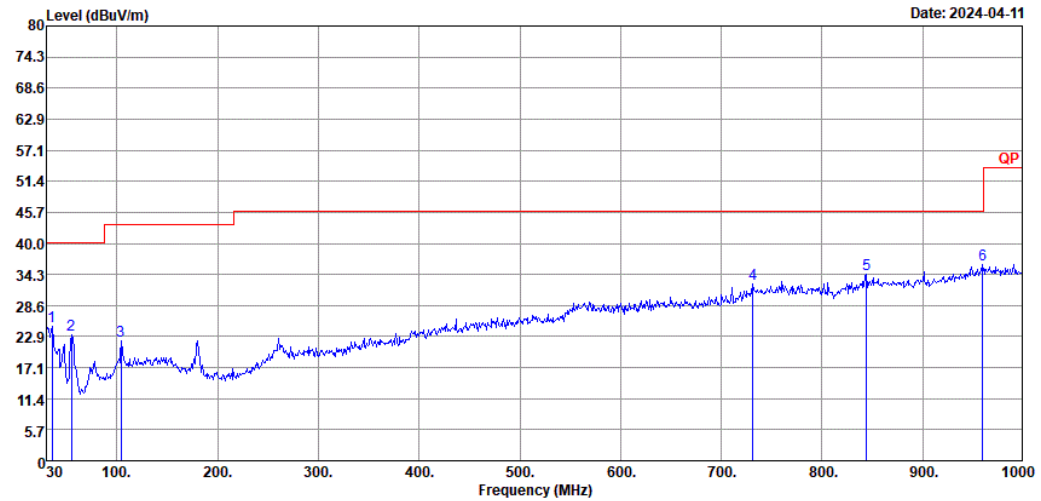
3.5.7 Radiated Emissions (30MHz – 1GHz)





CH05 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 5	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : QP 3m LF_55606_231020_200 VERTICAL
 : RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH5
 Modulation : BPRF9
 Config : 3
 STS Num : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

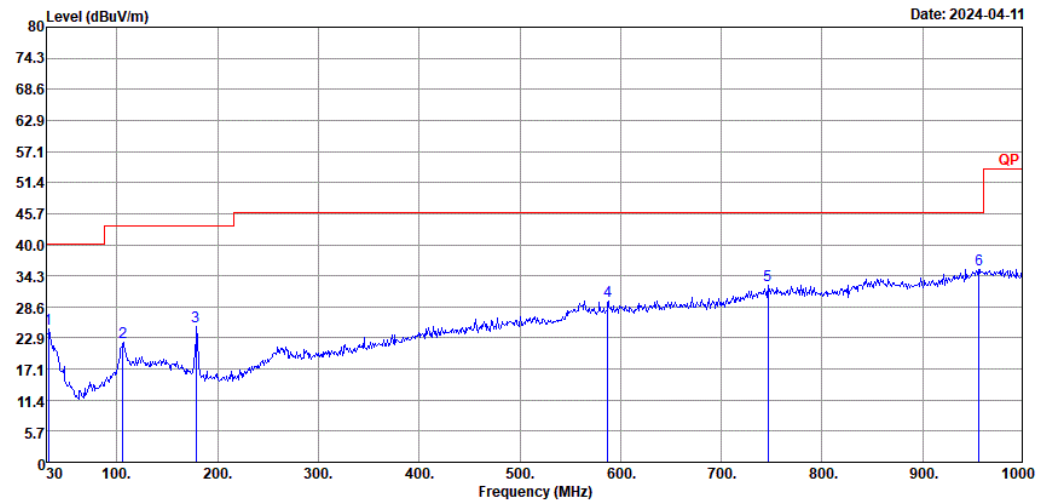
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	35.61	24.73	-15.27	40.00	36.92	22.14	1.10	35.58	---	---	Peak	0.15	0.00
2	54.82	23.12	-16.88	40.00	44.23	12.98	1.40	35.57	---	---	Peak	0.08	0.00
3	104.29	22.05	-21.45	43.50	38.84	16.71	1.92	35.50	---	---	Peak	0.08	0.00
4	731.20	32.57	-13.43	46.00	33.42	27.89	4.86	33.78	---	---	Peak	0.18	0.00
5	844.00	34.22	-11.78	46.00	33.18	29.00	5.17	33.41	---	---	Peak	0.28	0.00
6	959.20	36.01	-9.99	46.00	32.14	31.00	5.53	32.94	---	---	Peak	0.28	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



CH09 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 14	Polarization	H
Operating Function	Adapter Mode	Test Distance	3m



Site : O3CH20-HY
 Condition : QP 3m LF_55606_231020_200 HORIZONTAL
 : RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
 : .
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

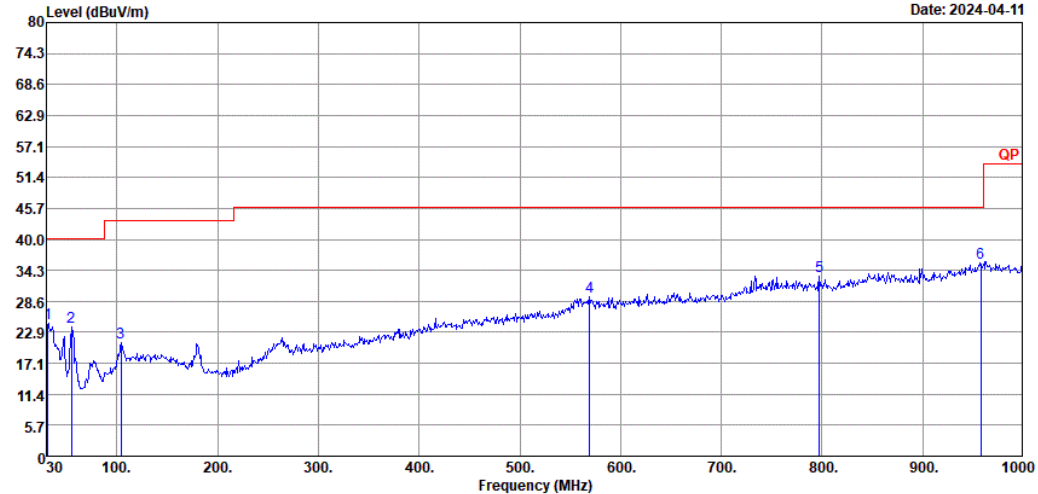
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	32.04	24.57	-15.43	40.00	34.82	24.06	1.04	35.59	---	---	Peak	0.24	0.00
2	105.99	22.08	-21.42	43.50	38.73	16.82	1.94	35.50	---	---	Peak	0.09	0.00
3	178.75	25.06	-18.44	43.50	42.64	15.22	2.48	35.37	---	---	Peak	0.09	0.00
4	587.20	29.57	-16.43	46.00	33.49	25.75	4.38	34.25	---	---	Peak	0.20	0.00
5	746.40	32.44	-13.56	46.00	32.80	28.23	4.91	33.69	---	---	Peak	0.19	0.00
6	956.00	35.45	-10.55	46.00	31.63	30.98	5.52	32.95	---	---	Peak	0.27	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



CH09 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 14	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : QP 3m LF_55606_231020_200 VERTICAL
 : RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
 :
 Detector : Peak
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

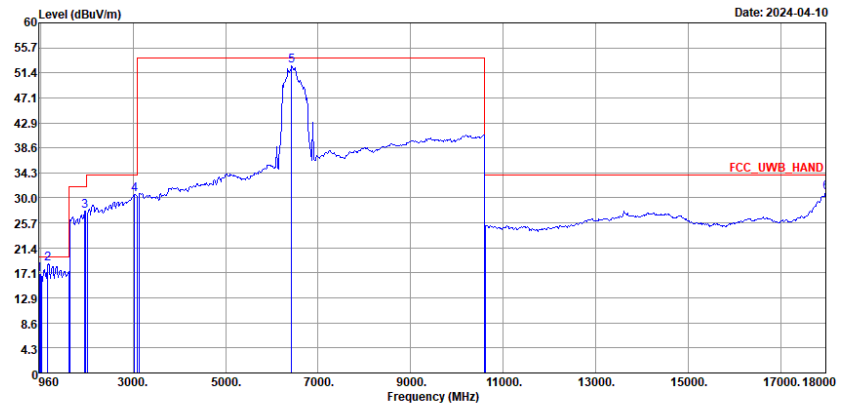
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	31.70	24.45	-15.55	40.00	34.56	24.19	1.03	35.59	---	---	Peak	0.26	0.00
2	55.16	23.93	-16.07	40.00	45.10	12.92	1.40	35.57	---	---	Peak	0.08	0.00
3	103.95	20.93	-22.57	43.50	37.74	16.69	1.92	35.50	---	---	Peak	0.08	0.00
4	569.60	29.32	-16.68	46.00	33.02	26.12	4.32	34.33	---	---	Peak	0.19	0.00
5	797.60	33.22	-12.78	46.00	33.41	28.03	5.05	33.47	---	---	Peak	0.20	0.00
6	957.60	35.61	-10.39	46.00	31.77	30.99	5.52	32.94	---	---	Peak	0.27	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



3.5.8 Radiated Emissions (960MHz – 18GHz)

CH05 Radiated Emissions (960MHz – 18GHz)			
Test Mode	Mode 5	Polarization	H
Operating Function	Adapter Mode		
Test Distance	The test distance between the receiving antenna and the EUT is as following: 3m for 1.61 GHz ~ 10.60 GHz frequency range, 1 m for 1GHz ~ 1.61 GHz, and 0.5 m for other frequency ranges.		



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 3m 9120D_02360_231030 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

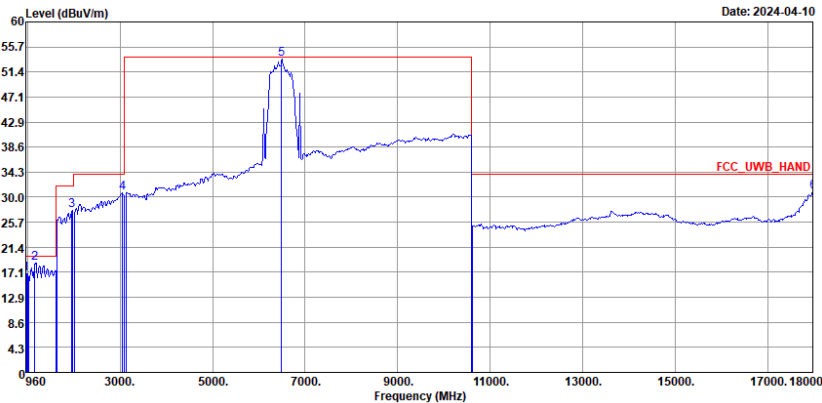
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Aux	Aux2				
Freq	Level	Limit	Level	Loss	Factor	cm	deg	Factor	Factor				
MHz	dBuV/m	dB	dBuV	dB/m	dB	cm	deg	dB	dB				
1	978.64	16.89	-3.04	19.93	28.73	30.68	5.59	32.84	---	---	Average	0.29	-15.56
2	1158.60	18.74	-1.19	19.93	32.01	25.87	6.10	35.70	---	---	Average	-9.54	0.00
3	1953.90	27.82	-4.11	31.93	29.94	26.12	7.85	36.09	---	---	Average	0.00	0.00
4	3028.96	30.64	-3.29	33.93	27.14	29.72	9.89	36.11	---	---	Average	0.00	0.00
5	6430.00	52.61	-1.32	53.93	41.17	34.96	14.47	37.99	---	---	Average	0.00	0.00
6	17985.20	30.88	-3.05	33.93	25.04	42.41	24.56	45.57	---	---	Average	-15.56	0.00

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: “N/F” means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting outside GPS Bands: RBW=1MHz; VBW=3MHz.
 Note 5: Average emission setting in GPS bands: RBW=1kHz; VBW=3kHz.
 Note 6: #5 is fundamental signal.

Note 7:
 • Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
Example: Distance extrapolation factor = 20log (0.5m/3m) = -15.56 (dB)
 • Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) + Aux 2 Factor (dB) = Level (dBuV/m)
 (Note: For test item below 1GHz, Aux = Filter loss; Aux 2 = Distance extrapolation factor)
 (Note: For test item above 1GHz, Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)
Example: Corrected Reading: 30.68 (dB/m) + 5.59 (dB) + 28.73 (dBuV) – 32.84 (dB) + 0.29 dB + (-15.56) (dB) = 16.89 (dBuV/m)



CH05 Radiated Emissions (960MHz – 18GHz)			
Test Mode	Mode 5	Polarization	V
Operating Function	Adapter Mode		
Test Distance	The test distance between the receiving antenna and the EUT is as following: 3m for 1.61 GHz ~ 10.60 GHz frequency range, 1 m for 1GHz ~ 1.61 GHz, and 0.5 m for other frequency ranges.		



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 3m 9120D_02360_231030 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	976.96	16.90	-3.03	19.93	28.65	30.78	5.59	32.85	---	---	Average	0.29	-15.56
2	1159.21	18.69	-1.24	19.93	31.97	25.86	6.10	35.70	---	---	Average	-9.54	0.00
3	1959.22	27.70	-4.23	31.93	29.77	26.16	7.86	36.09	---	---	Average	0.00	0.00
4	3048.94	30.68	-3.25	33.93	27.09	29.80	9.93	36.14	---	---	Average	0.00	0.00
5	6490.00	53.67	-0.26	53.93	41.80	35.32	14.55	38.00	---	---	Average	0.00	0.00
6	17992.60	30.95	-2.98	33.93	25.06	42.46	24.57	45.58	---	---	Average	-15.56	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting outside GPS Bands: RBW=1MHz; VBW=3MHz.
 Note 5: Average emission setting in GPS bands: RBW=1kHz; VBW=3kHz.
 Note 6: #5 is fundamental signal.

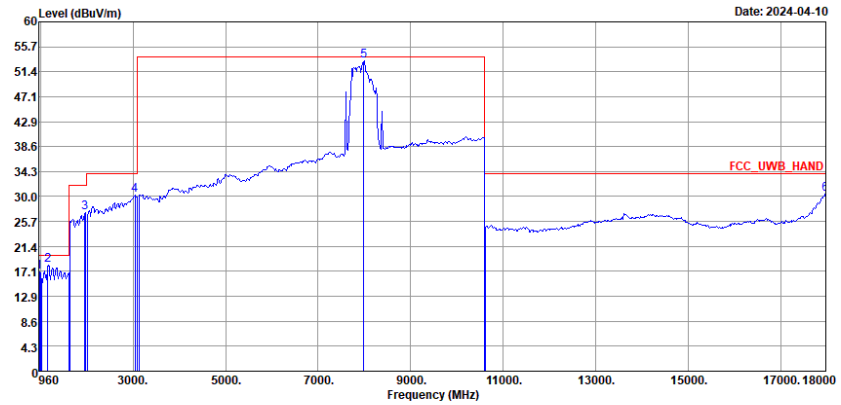
Note 7:

- Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
 (Note: For test item below 1GHz, Aux = Filter loss; Aux 2 = Distance extrapolation factor)
 (Note: For test item above 1GHz, Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



CH09 Radiated Emissions (960MHz – 18GHz)

Test Mode	Mode 14	Polarization	H
Operating Function	Adapter Mode		
Test Distance	The test distance between the receiving antenna and the EUT is as following: 3m for 1.61 GHz ~ 10.60 GHz frequency range, 1 m for 1GHz ~ 1.61 GHz, and 0.5 m for other frequency ranges.		



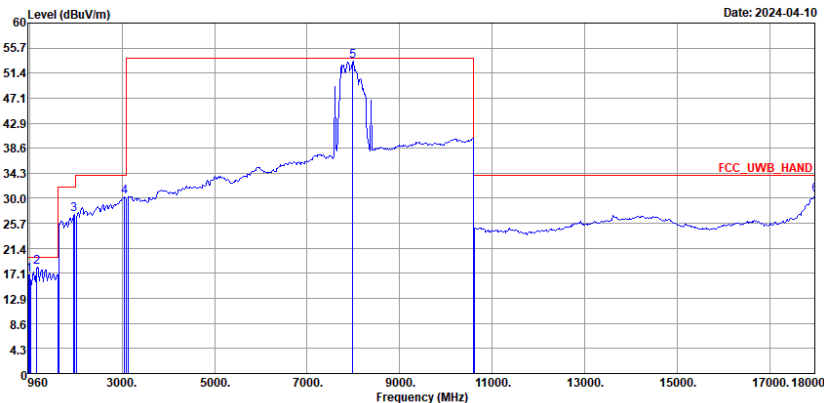
Site : 03CH20-HY
 Condition : FCC_UWB_HAND 3m 9120D_02360_231030 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux Factor	Aux2
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB
1	975.48	16.97	-2.96	19.93	28.69	30.83	5.58	32.86	---	---	Average	0.29 -15.56
2	1159.21	18.16	-1.77	19.93	31.44	25.86	6.10	35.70	---	---	Average	-9.54 0.00
3	1955.80	27.24	-4.69	31.93	29.35	26.13	7.85	36.09	---	---	Average	0.00 0.00
4	3041.17	30.23	-3.70	33.93	26.69	29.76	9.91	36.13	---	---	Average	0.00 0.00
5	7990.00	53.37	-0.56	53.93	38.96	37.36	16.23	39.18	---	---	Average	0.00 0.00
6	17977.80	30.48	-3.45	33.93	24.67	42.37	24.56	45.56	---	---	Average	-15.56 0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting outside GPS Bands: RBW=1MHz; VBW=3MHz.
 Note 5: Average emission setting in GPS bands: RBW=1kHz; VBW=3kHz.
 Note 6: #5 is fundamental signal.
 Note 7:
 • Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
 • Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
 (Note: For test item below 1GHz, Aux = Filter loss; Aux 2 = Distance extrapolation factor)
 (Note: For test item above 1GHz, Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



CH09 Radiated Emissions (960MHz – 18GHz)			
Test Mode	Mode 14	Polarization	V
Operating Function	Adapter Mode		
Test Distance	The test distance between the receiving antenna and the EUT is as following: 3m for 1.61 GHz ~ 10.60 GHz frequency range, 1 m for 1GHz ~ 1.61 GHz, and 0.5 m for other frequency ranges.		



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 3m 9120D_02360_231030 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB
1	981.92	16.95	-2.98	19.93	28.85	30.60	5.60	32.83	---	---	Average	0.29 -15.56
2	1157.99	18.22	-1.71	19.93	31.50	25.87	6.09	35.70	---	---	Average	-9.54 0.00
3	1952.76	27.31	-4.62	31.93	29.42	26.12	7.85	36.08	---	---	Average	0.00 0.00
4	3047.83	30.27	-3.66	33.93	26.69	29.79	9.93	36.14	---	---	Average	0.00 0.00
5	7990.00	53.44	-0.49	53.93	39.03	37.36	16.23	39.18	---	---	Average	0.00 0.00
6	17992.60	30.63	-3.30	33.93	24.74	42.46	24.57	45.58	---	---	Average	-15.56 0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting outside GPS Bands: RBW=1MHz; VBW=3MHz.
 Note 5: Average emission setting in GPS bands: RBW=1kHz; VBW=3kHz.
 Note 6: #5 is fundamental signal.

Note 7:

- Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
 (Note: For test item below 1GHz, Aux = Filter loss; Aux 2 = Distance extrapolation factor)
 (Note: For test item above 1GHz, Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



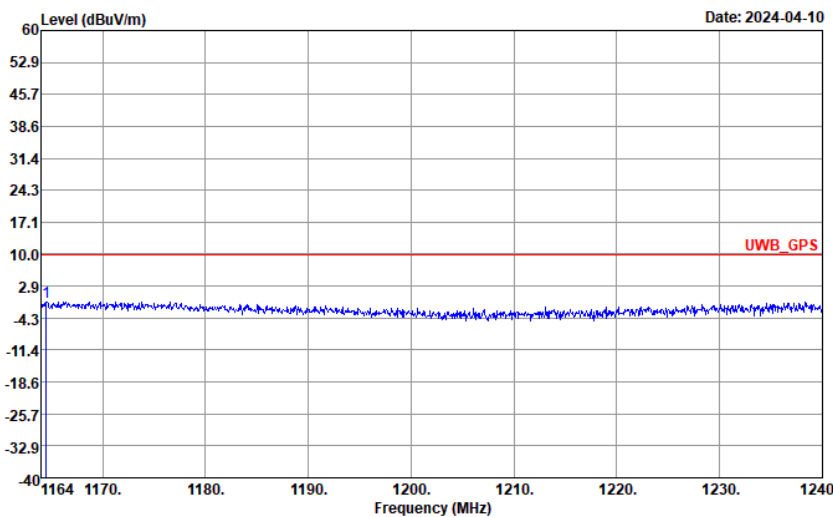
3.5.9 Radiated Emissions (1164MHz – 1240MHz)

CH05 Radiated Emissions (1164MHz – 1240MHz)																																											
Test Mode	Mode 5	Polarization	H																																								
Operating Function	Adapter Mode	Test Distance	3m																																								
<div style="text-align: right;">Date: 2024-04-10</div> <p>Site : 03CH20-HY Condition : UWB_GPS 3m 9120D_02360_231030 HORIZONTAL : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec : . Detector : Peak Project : 412509 Channel : Ch5 Modulation : BPRF9 Config : 3 STS Nums : 1 Payload Length : 0 RMS Power : 0x06 Adaptive : 0x01</p> <table border="1"> <thead> <tr> <th></th> <th>Over</th> <th>Limit</th> <th>ReadAntenna</th> <th>Cable</th> <th>Preamp</th> <th>A/Pos</th> <th>T/Pos</th> <th>Remark</th> </tr> <tr> <th>Freq</th> <th>Level</th> <th>Limit</th> <th>Level</th> <th>Factor</th> <th>Loss</th> <th>Factor</th> <th></th> <th></th> </tr> <tr> <th>MHz</th> <th>dBuV/m</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>cm</th> <th>deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1173.42</td> <td>-0.41</td> <td>-10.34</td> <td>9.93</td> <td>3.35</td> <td>25.81</td> <td>6.14</td> <td>35.71</td> <td>---</td> <td>---</td> <td>Peak</td> </tr> </tbody> </table>					Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Freq	Level	Limit	Level	Factor	Loss	Factor			MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	1	1173.42	-0.41	-10.34	9.93	3.35	25.81	6.14	35.71	---	---	Peak
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark																																			
Freq	Level	Limit	Level	Factor	Loss	Factor																																					
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg																																		
1	1173.42	-0.41	-10.34	9.93	3.35	25.81	6.14	35.71	---	---	Peak																																
<p>Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.) Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical) Note 4: Average emission setting: RBW=1kHz; VBW=3kHz. Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.</p>																																											



CH05 Radiated Emissions (1164MHz – 1240MHz)

Test Mode	Mode 5	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 VERTICAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

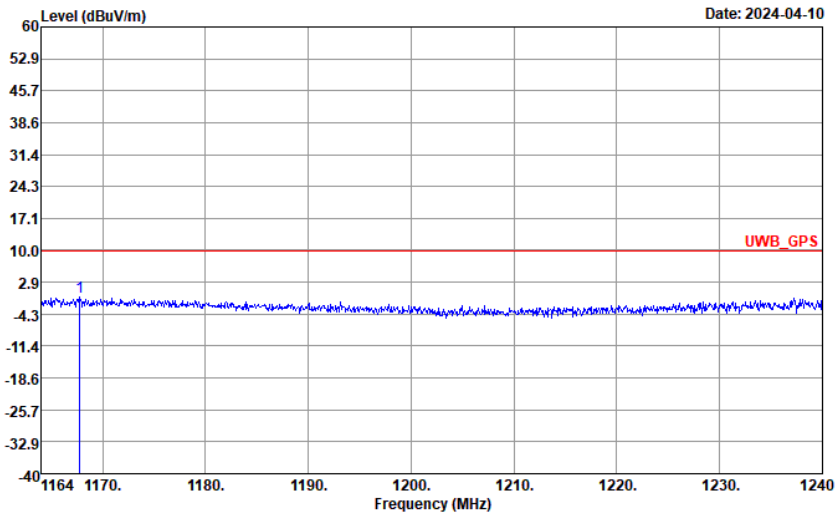
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark			
Freq	Level	Limit	Level	Loss	Loss						
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	1164.53	-0.59	-10.52	9.93	3.17	25.84	6.11	35.71	---	---	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
- Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



CH09 Radiated Emissions (1164MHz – 1240MHz)

Test Mode	Mode 14	Polarization	H
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 HORIZONTAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

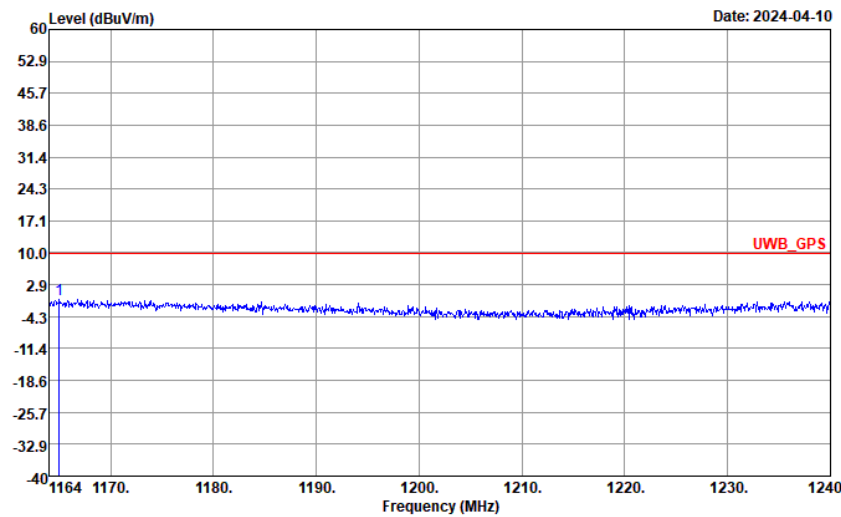
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark			
Freq	Level	Limit	Level	Loss	Factor						
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	1167.80	-0.44	-10.37	9.93	3.32	25.83	6.12	35.71	---	---	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
- Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



CH09 Radiated Emissions (1164MHz – 1240MHz)

Test Mode	Mode 14	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 VERTICAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

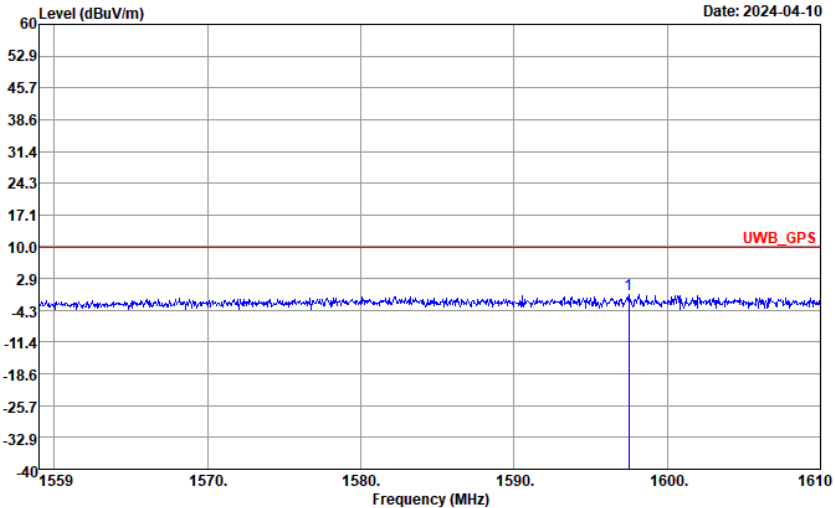
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark			
Freq	Level	Line	Level	Loss	Factor	cm	deg				
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	1164.99	-0.47	-10.40	9.93	3.29	25.84	6.11	35.71	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
 Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



3.5.10 Radiated Emissions (1559MHz – 1610MHz)

CH05 Radiated Emissions (1559MHz – 1610MHz)			
Test Mode	Mode 5	Polarization	H
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 HORIZONTAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

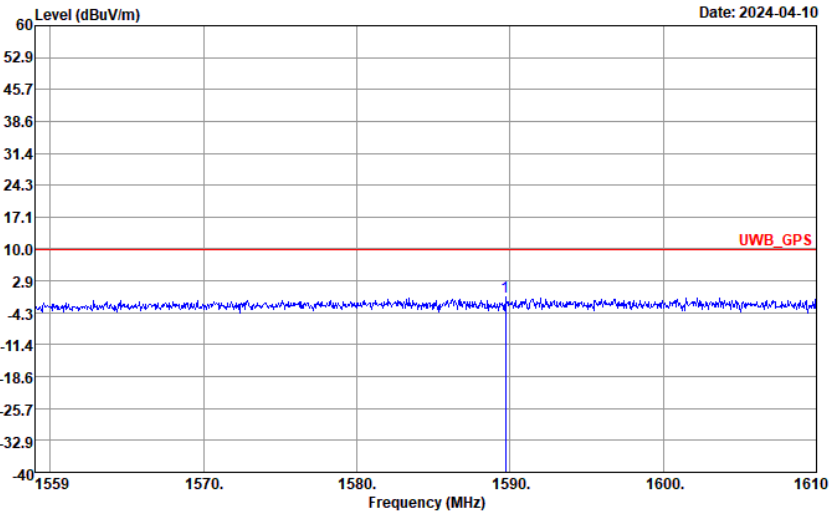
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor		
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm deg	
1	1597.51	-0.66	-10.59	9.93	2.73	25.40	7.10	35.89	--- --- Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
- Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



CH05_Ranging Antenna Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 5	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 VERTICAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 :.
 Detector : Peak
 Project : 412509
 Channel : Ch5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

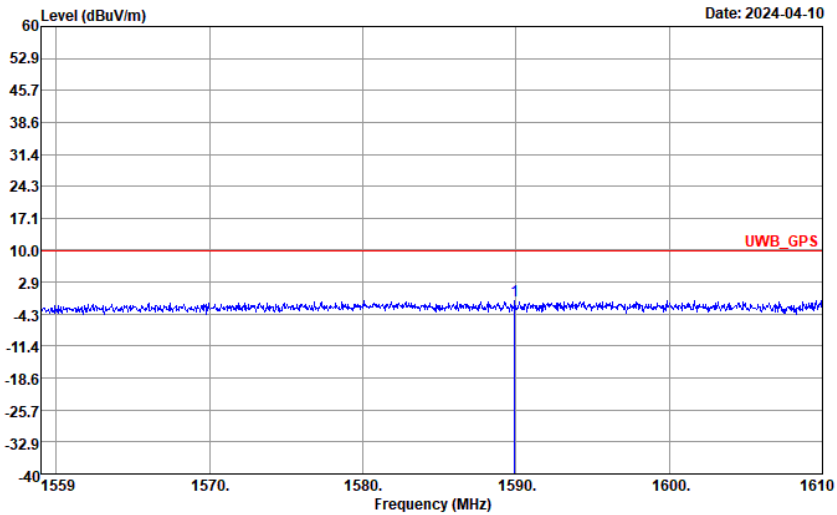
Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	1589.70	-0.61	-10.54	9.93	2.77	25.42	7.09	35.89	--- Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
- Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



CH09 Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 14	Polarization	H
Operating Function	Adapter Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 HORIZONTAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

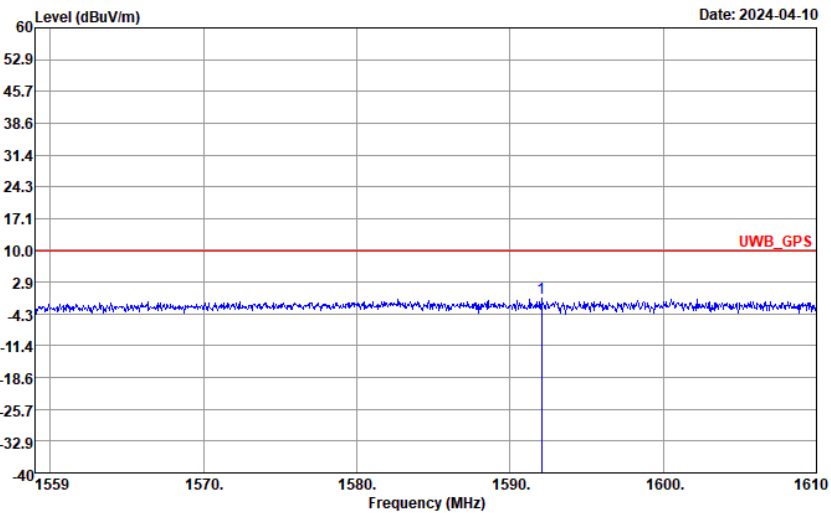
	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos				
Freq	Level	Limit	Level	Loss	Factor	cm	deg	Remark			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	1589.91	-1.19	-11.12	9.93	2.19	25.42	7.09	35.89	---	---	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
 Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



CH09 Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 14	Polarization	V
Operating Function	Adapter Mode	Test Distance	3m



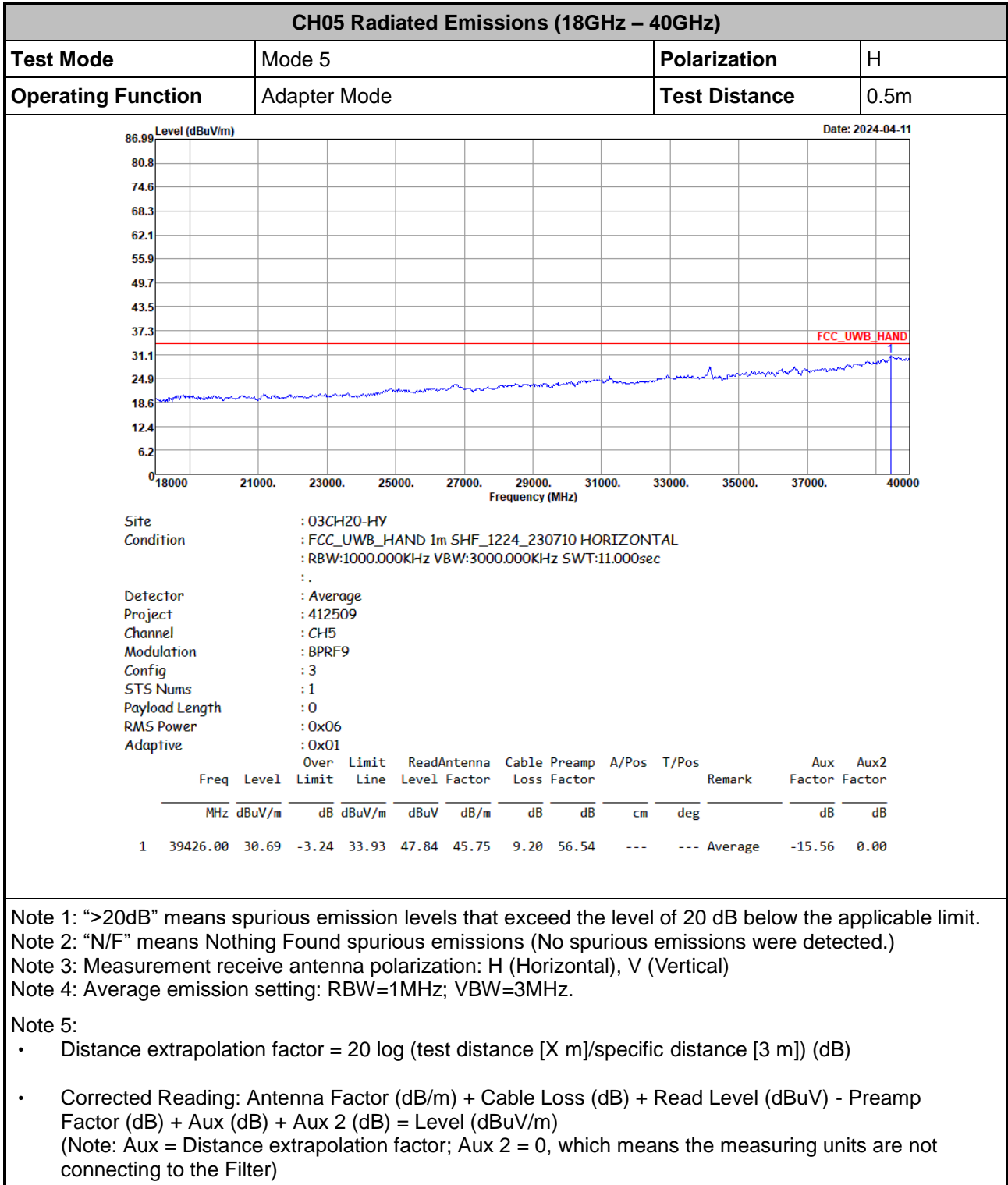
Site : 03CH20-HY
 Condition : UWB_GPS 3m 9120D_02360_231030 VERTICAL
 : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
 : .
 Detector : Peak
 Project : 412509
 Channel : Ch9
 Modulation : BPRF9
 Config : 3
 STS Num : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	1592.05	-0.82	-10.75	9.93	2.56	25.42	7.09	35.89	--- Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.
- Note 5: E (dBuV/m) = EIRP Limit (dBm) + 95.23. E(dBuV/m) = -85.3 + 95.23 = 9.93dBuV/m.



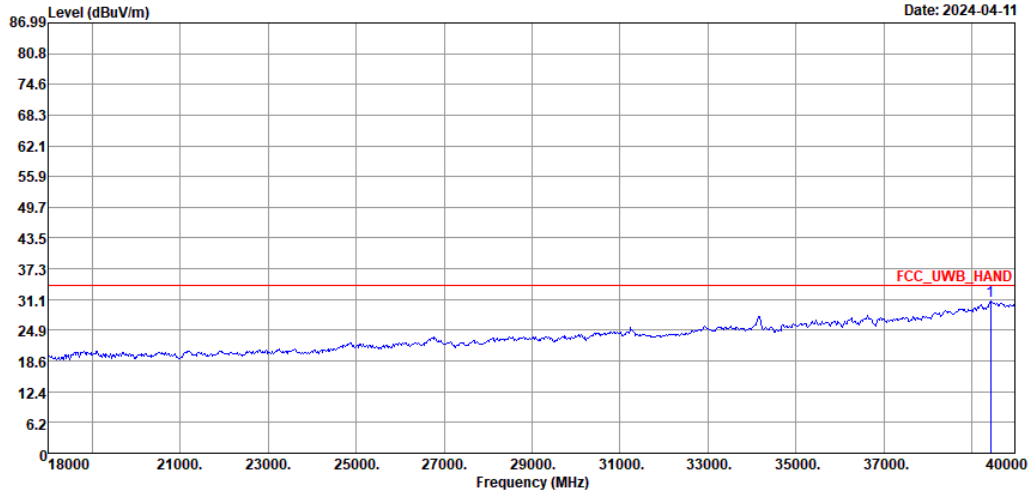
3.5.11 Radiated Emissions (18GHz – 40GHz)





CH05 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 5	Polarization	V
Operating Function	Adapter Mode	Test Distance	0.5m



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 1m SHF_1224_230710 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH5
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x06
 Adaptive : 0x01

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	39426.00	30.77	-3.16	33.93	47.92	45.75	9.20	56.54	---	---	Average	-15.56	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
 Note 4: Average emission setting: RBW=1MHz; VBW=3MHz.

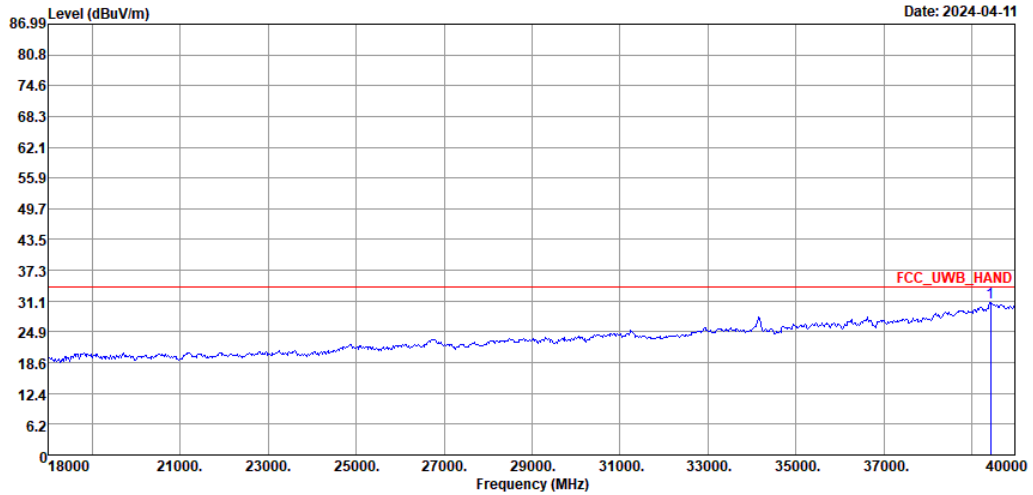
Note 5:

- Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (dB) + Aux 2 (dB) = Level (dBuV/m)
 (Note: Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



CH09 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 14	Polarization	H
Operating Function	Adapter Mode	Test Distance	0.5m



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 1m SHF_1224_230710 HORIZONTAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos		Aux	Aux2			
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Factor	Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		dB	dB			
1	39426.00	30.69	-3.24	33.93	47.84	45.75	9.20	56.54	---	---	Average	-15.56	0.00

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: Average emission setting: RBW=1MHz; VBW=3MHz.

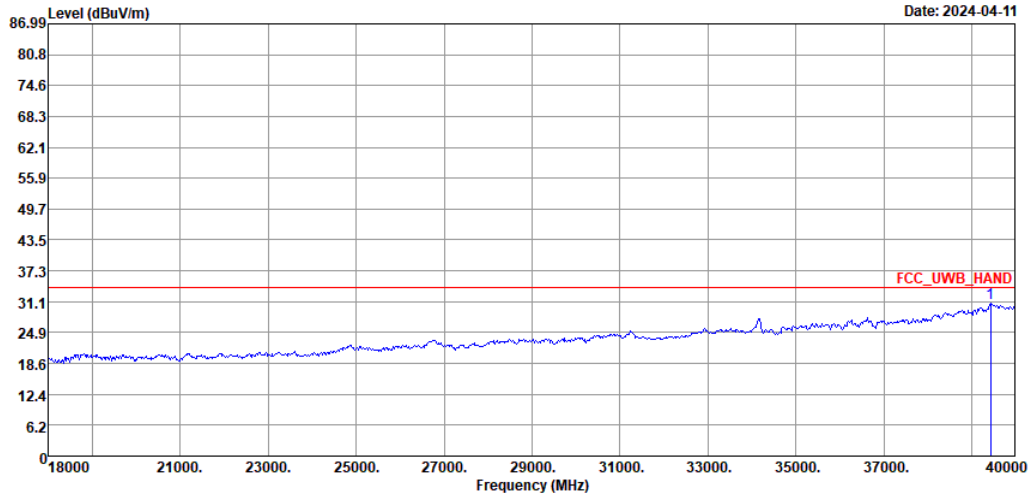
Note 5:

- Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (dB) + Aux 2 (dB) = Level (dBuV/m)
(Note: Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



CH09 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 14	Polarization	V
Operating Function	Adapter Mode	Test Distance	0.5m



Site : 03CH20-HY
 Condition : FCC_UWB_HAND 1m SHF_1224_230710 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
 :.
 Detector : Average
 Project : 412509
 Channel : CH9
 Modulation : BPRF9
 Config : 3
 STS Nums : 1
 Payload Length : 0
 RMS Power : 0x07
 Adaptive : 0x01

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	cm	deg	Factor	Factor	
			dB	dBuV/m	dBuV	dB/m	dB	dB			dB	dB	
1	39426.00	30.78	-3.15	33.93	47.93	45.75	9.20	56.54	---	---	Average	-15.56	0.00

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: “N/F” means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: Average emission setting: RBW=1MHz; VBW=3MHz.

Note 5:

- Distance extrapolation factor = 20 log (test distance [X m]/specific distance [3 m]) (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (dB) + Aux 2 (dB) = Level (dBuV/m)
 (Note: Aux = Distance extrapolation factor; Aux 2 = 0, which means the measuring units are not connecting to the Filter)



4 Test Equipment and Calibration Data

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	N/A	Oct. 06, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Oct. 05, 2024	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Sep. 11, 2024	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 27, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Jun. 26, 2024	Radiation (03CH20-HY)
Controller	ChainTek	EM1000	N/A	Control Turn table & Ant Mast	N/A	Mar. 06, 2024 ~ Apr. 11, 2024	N/A	Radiation (03CH20-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Mar. 06, 2024 ~ Apr. 11, 2024	N/A	Radiation (03CH20-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Mar. 06, 2024 ~ Apr. 11, 2024	N/A	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	N/A	Dec. 12, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Dec. 11, 2024	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802N1 D01N-06	55606 & 08	30MHz~1GHz	Oct. 20, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Oct. 19, 2024	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	02360	1GHz-18GHz	Oct. 30, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Oct. 29, 2024	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz-40GHz	Jul. 10, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Jul. 09, 2024	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Jan. 01, 2024	Mar. 06, 2024 ~ Apr. 11, 2024	Dec. 31, 2024	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 13, 2023	Mar. 06, 2024 ~ Apr. 11, 2024	Nov. 12, 2024	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,8040 15/2,804027/2	N/A	Jan. 17, 2024	Mar. 06, 2024 ~ Apr. 11, 2024	Jan. 16, 2025	Radiation (03CH20-HY)
Software	Audix	N/A	RK-002156	N/A	N/A	Mar. 06, 2024 ~ Apr. 11, 2024	N/A	Radiation (03CH20-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Apr. 15, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 15, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 20, 2023	Apr. 15, 2024	Oct. 19, 2024	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Apr. 15, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 07, 2024	Apr. 15, 2024	Mar. 06, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 20, 2023	Apr. 15, 2024	Sep. 19, 2024	Conduction (CO07-HY)

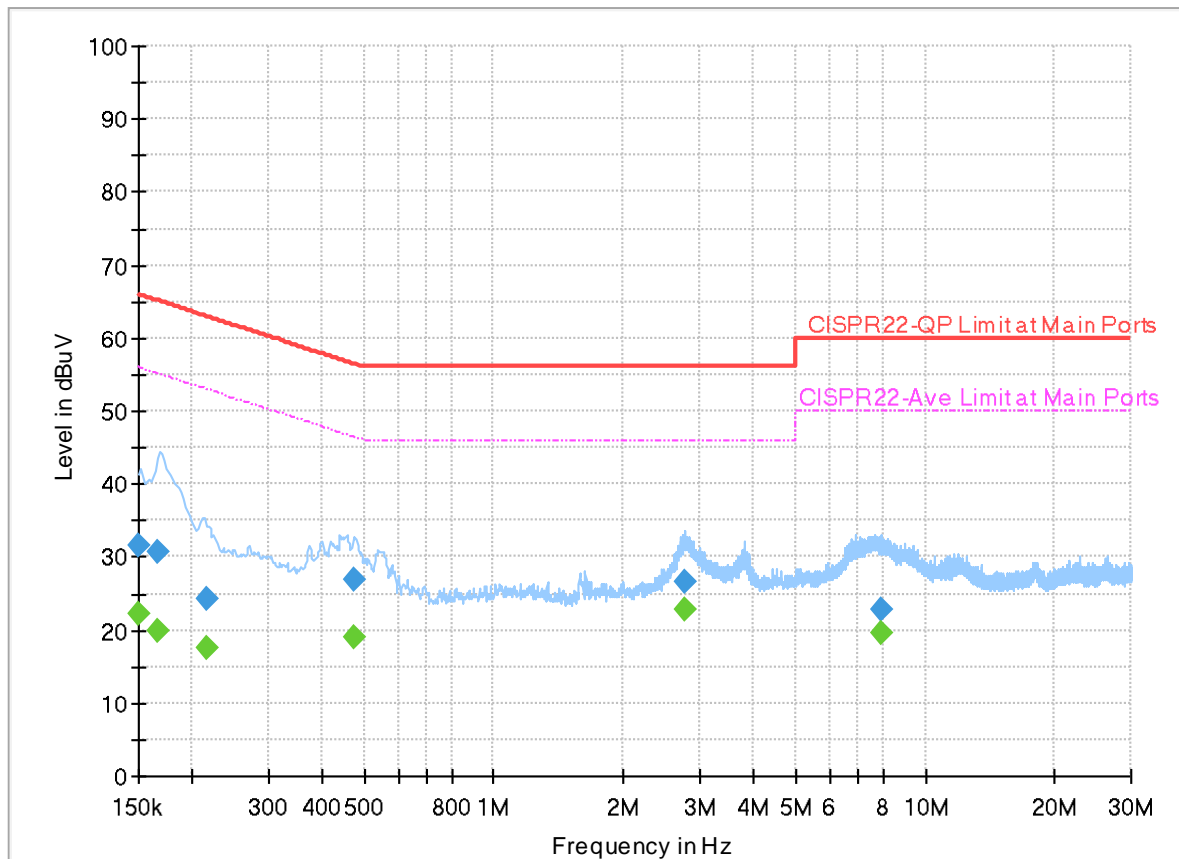


Appendix A. AC Conducted Emission Test Results

EUT Information

Report NO : 412509
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



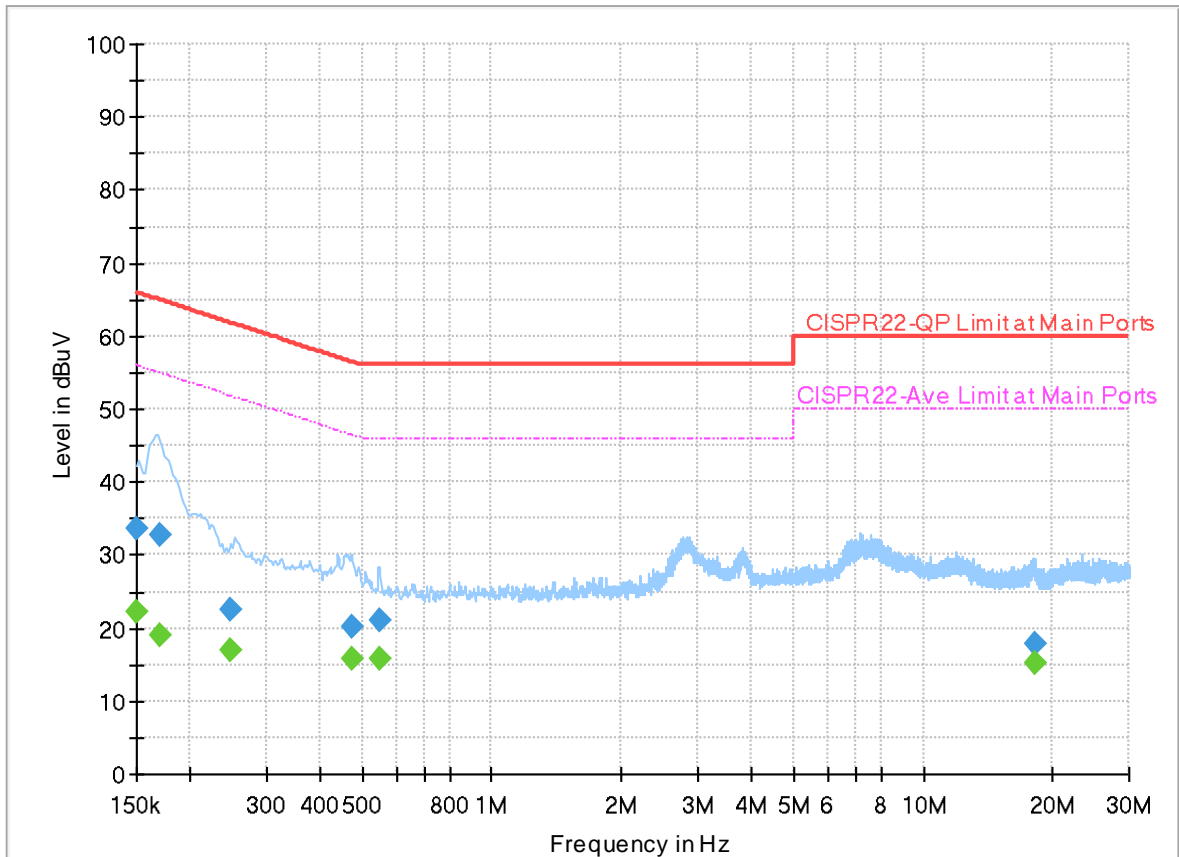
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	22.15	56.00	33.85	L1	OFF	19.9
0.150000	31.68	---	66.00	34.32	L1	OFF	19.9
0.165750	---	19.97	55.17	35.20	L1	OFF	19.9
0.165750	30.76	---	65.17	34.41	L1	OFF	19.9
0.215250	---	17.68	53.00	35.32	L1	OFF	19.9
0.215250	24.31	---	63.00	38.69	L1	OFF	19.9
0.472290	---	19.07	46.47	27.40	L1	OFF	19.9
0.472290	26.77	---	56.47	29.70	L1	OFF	19.9
2.763600	---	22.91	46.00	23.09	L1	OFF	20.0
2.763600	26.73	---	56.00	29.27	L1	OFF	20.0
7.944180	---	19.48	50.00	30.52	L1	OFF	20.0
7.944180	22.77	---	60.00	37.23	L1	OFF	20.0

EUT Information

Report NO : 412509
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150045	---	22.17	56.00	33.83	N	OFF	19.9
0.150045	33.58	---	66.00	32.42	N	OFF	19.9
0.170250	---	19.11	54.95	35.84	N	OFF	19.9
0.170250	32.79	---	64.95	32.16	N	OFF	19.9
0.249000	---	16.87	51.79	34.92	N	OFF	19.9
0.249000	22.64	---	61.79	39.15	N	OFF	19.9
0.476250	---	15.92	46.40	30.48	N	OFF	19.9
0.476250	20.26	---	56.40	36.14	N	OFF	19.9
0.548160	---	15.66	46.00	30.34	N	OFF	19.9
0.548160	21.15	---	56.00	34.85	N	OFF	19.9
18.136860	---	15.34	50.00	34.66	N	OFF	20.2
18.136860	17.90	---	60.00	42.10	N	OFF	20.2