



FCC RADIO TEST REPORT

FCC ID : 2AIHD-AT13
Equipment : AT13
Brand Name : samsara
Model Name : 030-00025
Applicant : SAMSARA INC
1 De Haro Street San Francisco California 94107 United States
Manufacturer : SAMSARA INC
1 De Haro Street San Francisco California 94107 United States
Standard : 47 CFR FCC Part 15.519

The product was received on Feb. 05, 2026, and testing was performed from Feb. 09, 2026 to Feb. 12, 2026. 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 from 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
FR620524B	01	Initial issue of report	Mar. 05, 2026
FR620524B	02	Revise section 3.2.5 This report is an updated version, replacing the report issued on Mar. 05, 2026.	Mar. 25, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1	15.203	Antenna Requirement	PASS	15.203
-	15.207	AC Power-line Conducted Emissions	Not Required	15.207
3.1	15.503	UWB Bandwidth	PASS	≥ 500MHz
3.2	15.519(a)(1)	Technical requirements for Hand Held UWB systems	PASS	15.519(a)(1)
3.3	15.519(e)	Peak Power Measurement	PASS	≤ 0 dBm/50MHz
3.4	15.519(c) /15.519(d)	Radiated Emissions	PASS	UWB Emissions: 15.519(c) GPS Emissions: 15.519(d) Digital Emissions: 15.209

Remark: Not required means after assessing, test items are not necessary to carry out.

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/manufacture 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: Dara Chiu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Bluetooth-LE and UWB Antenna Type UWB: PIFA Antenna

Antenna information		
6489.6 MHz	Peak Gain (dBi)	1.5
7987.2 MHz	Peak Gain (dBi)	1.3

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

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	DC 3.0V
Type of EUT	
☒	Stand-alone
☐	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
☐	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
☐	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 C63.10-2020 + Cor.1-2023
- ♦ 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. 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
Radiated	03CH20-HY	John Chuang, David Dai, and Sam Chou	18.5 ~ 20.1 °C 64.9 ~ 69.7 %	Feb. 09, 2026 ~ Feb. 12, 2026

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
Radiated Emission (30MHz ~ 1000MHz)	6.50 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 6GHz)	4.70 dB	Confidence levels of 95%
Radiated Emission (6GHz ~ 18GHz)	5.70 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.20 dB	Confidence levels of 95%

2 Test Configuration of EUT

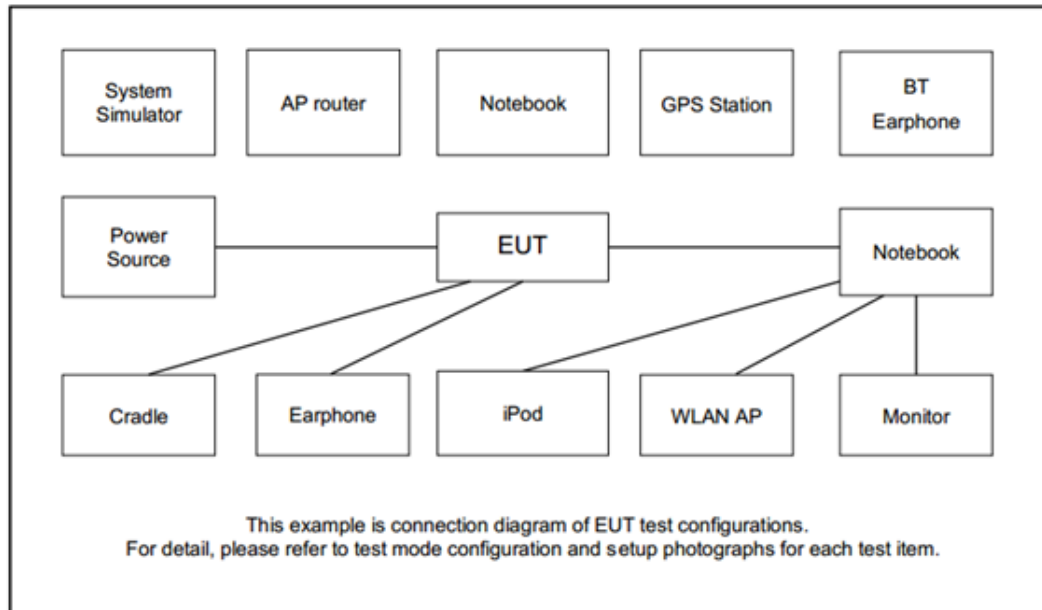
2.1 Test Mode

Config	Channel	Modulation
Mode 1	5	BPSK
Mode 2	9	BPSK

2.2 The Worst Case Measurement Configuration

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	Standalone 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		
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.			

2.3 Test Setup Diagram



3 Transmitter Test Result

3.1 UWB bandwidth

3.1.1 UWB bandwidth Limit

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

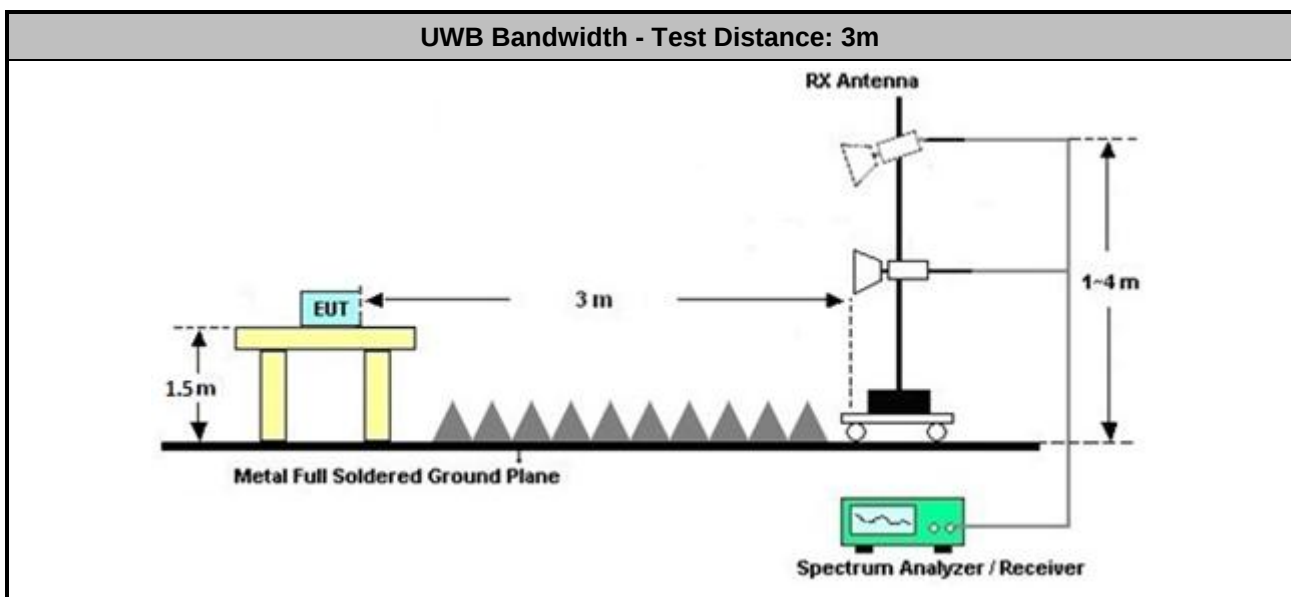
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

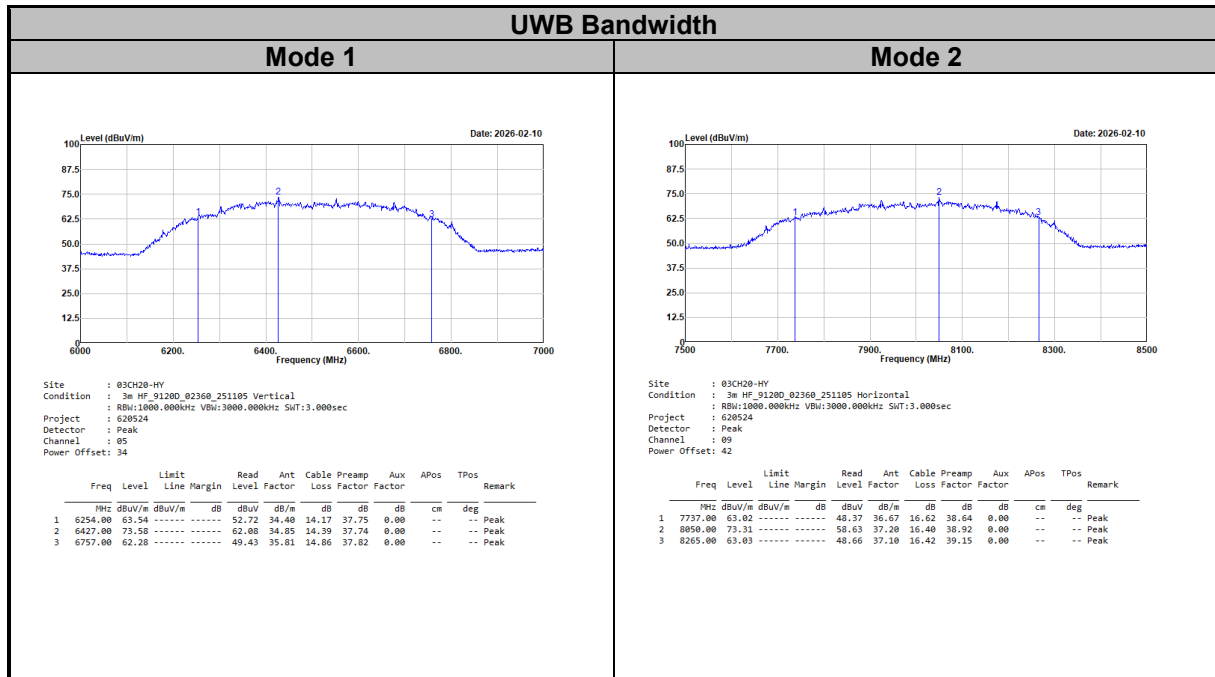
Test Method
■ For the UWB bandwidth shall be measured using one of the options below:
■ Refer as ANSI C63.10, clause 6.9.2 and clause 10.1 for UWB bandwidth testing.

3.1.4 Test Setup



3.1.5 Test Result of UWB Bandwidth

Test mode	F _L (MHz)	F _H (MHz)	UWB Bandwidth (MHz)	Bandwidth limit (MHz)	Result	Pol [H/V]
1	6254	6757	503	≥ 500	Pass	V
2	7737	8265	528	≥ 500	Pass	H



3.2 Technical requirements for hand held UWB systems

3.2.1 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.

3.2.2 Measuring Instruments

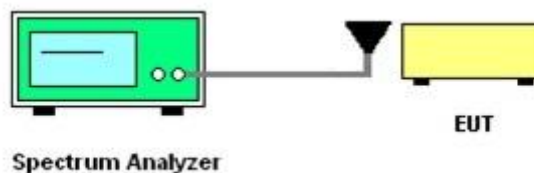
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedure

Follow the test step as below:

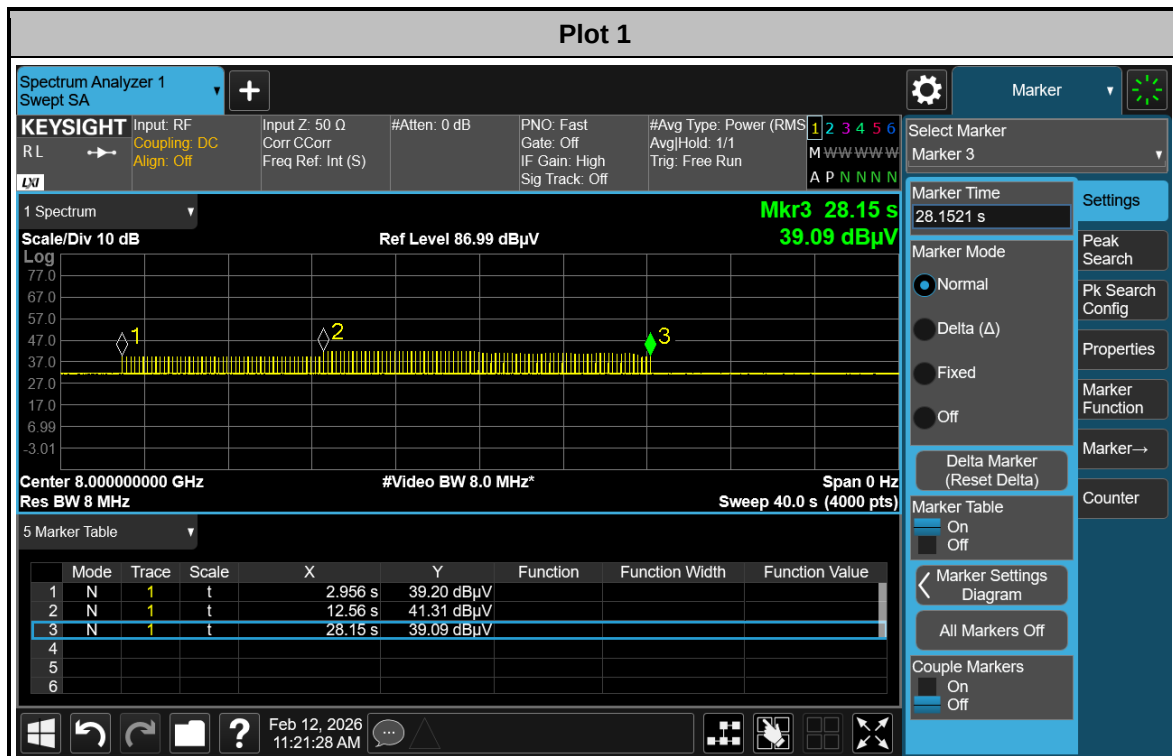
1. Turn on both EUT and companion receiver.
2. Set the EUT to TX mode, and EUT starts polling.
3. Set the companion receiver to associate EUT and EUT starts to transmit.
4. Disable the RX function of the companion receiver to disassociate the EUT.
5. Check if EUT stop transmitting once step 4 is made.

3.2.4 Test Setup





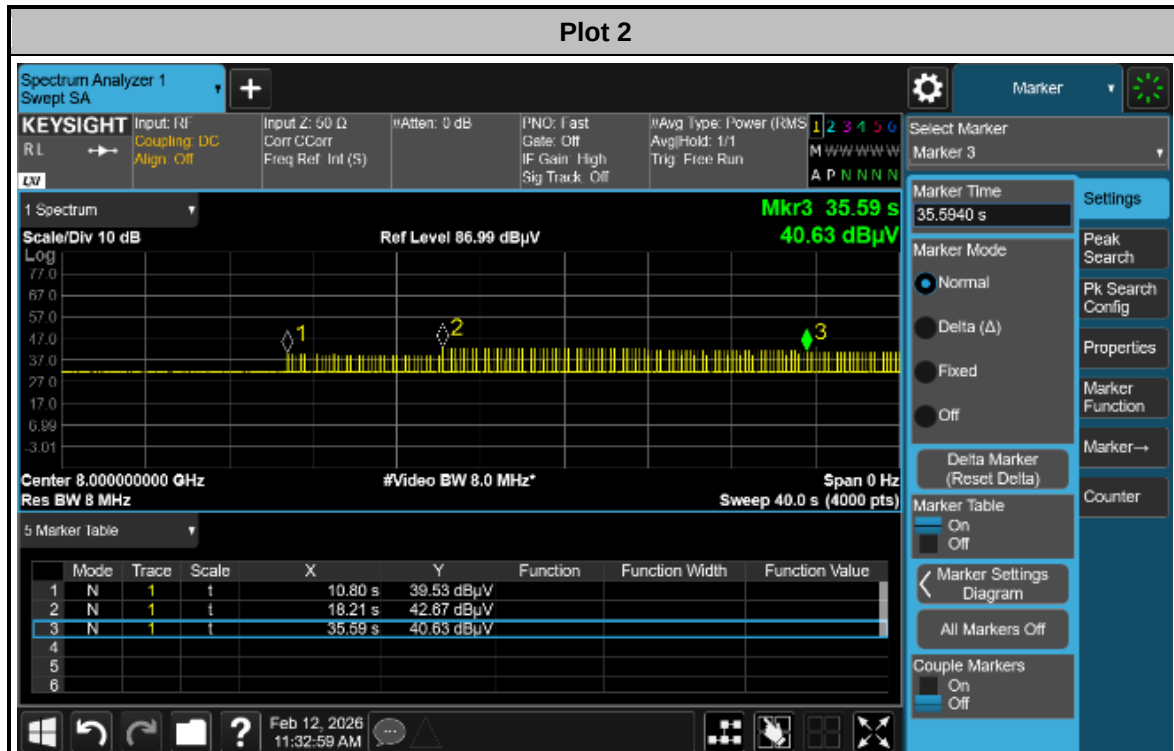
3.2.5 Test Result



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.

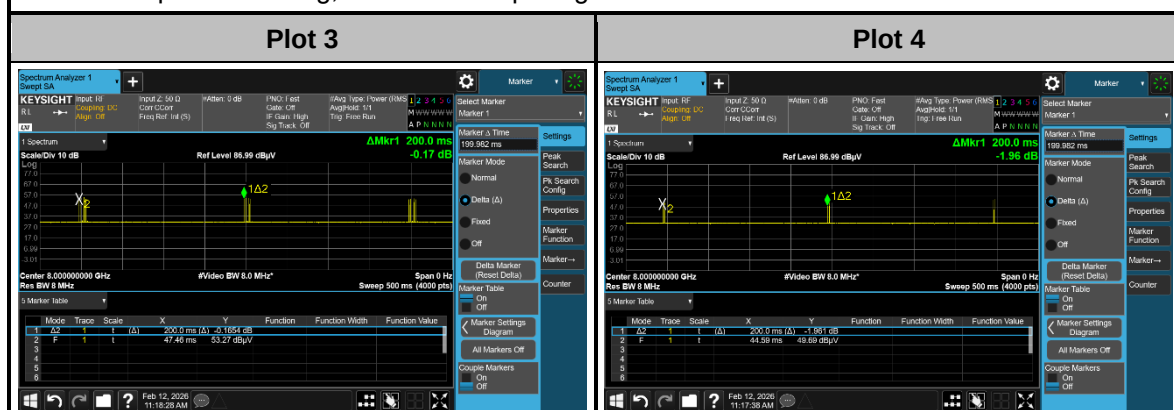
M3: Disable the TX function of EUT. EUT stops transmitting and polling.



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)

3.3 Peak Power Measurement

3.3.1 Peak Power Measurement Limit

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

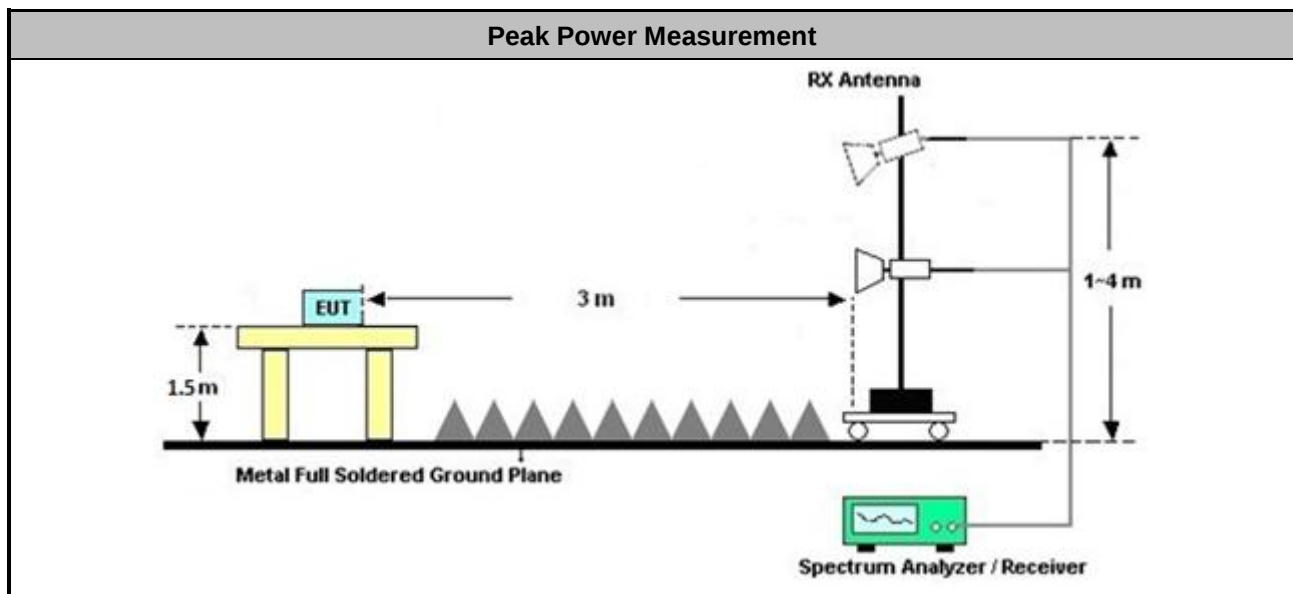
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method
Peak Power Measurement
- Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing. - Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m. - Refer as ANSI C63.10, clause 10.3.5 for peak detector procedure testing. - Refer as ANSI C63.10, clause 10.3.6 for bandwidth conversion of peak power.
- 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: - Central frequency: Worst frequency point - Span: Zero span - RBW: 50MHz - VBW: 80MHz - Detector: Peak detector - Trace: Max hold

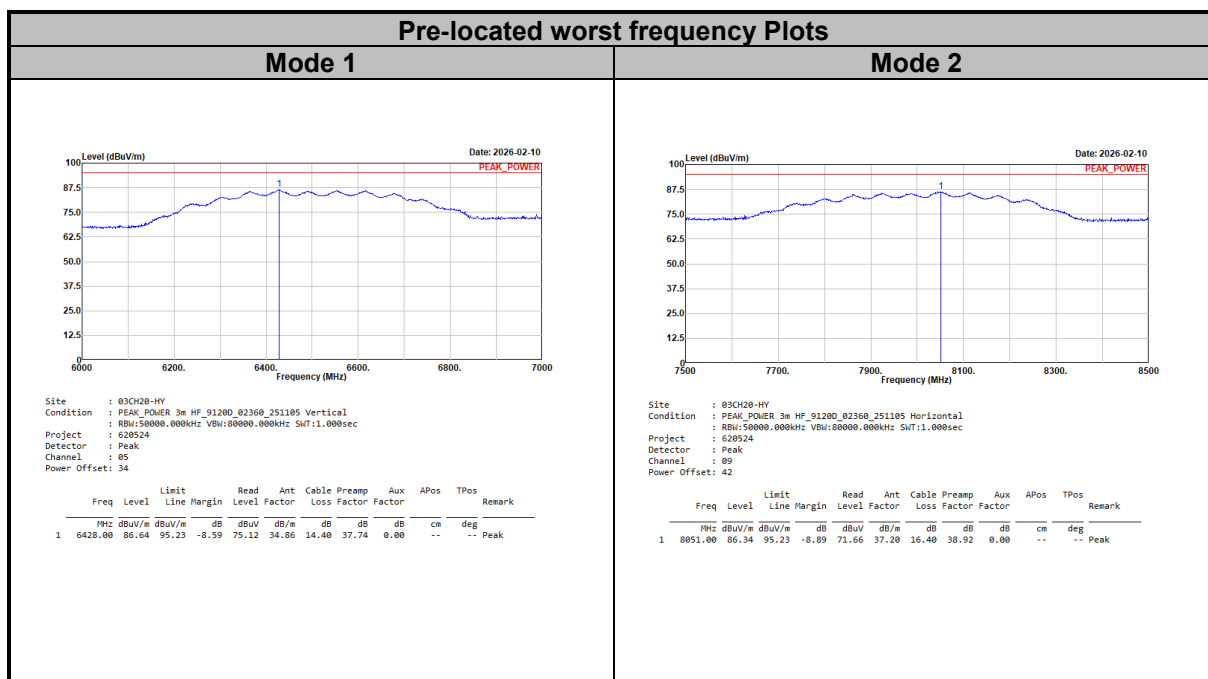
3.3.4 Test Setup



3.3.5 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	6428	86.64	-8.59	0	-8.59	Pass	V
2	8051	86.34	-8.89	0	-8.89	Pass	H

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



3.4 Radiated Emissions

3.4.1 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 = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)

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

Note E (dBuV/m) = EIRP (dBm) + 95.23, example, E(dBuV/m) = $-85.3 + 95.23 = 9.93\text{dBuV/m}$

3.4.2 Measuring Instruments

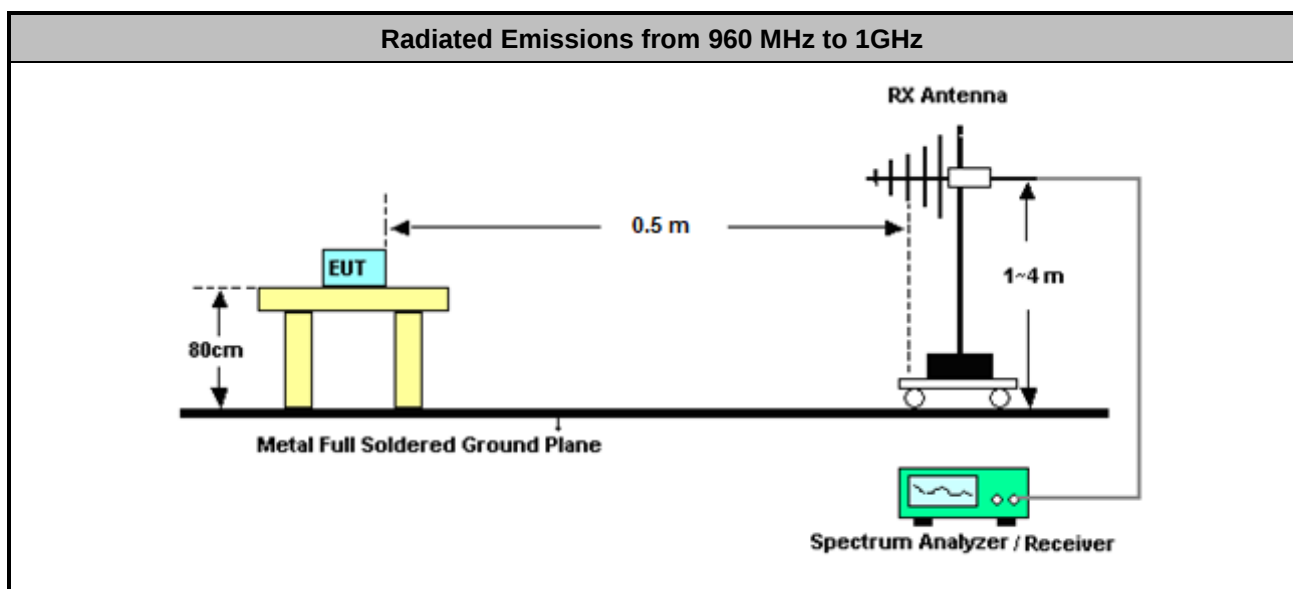
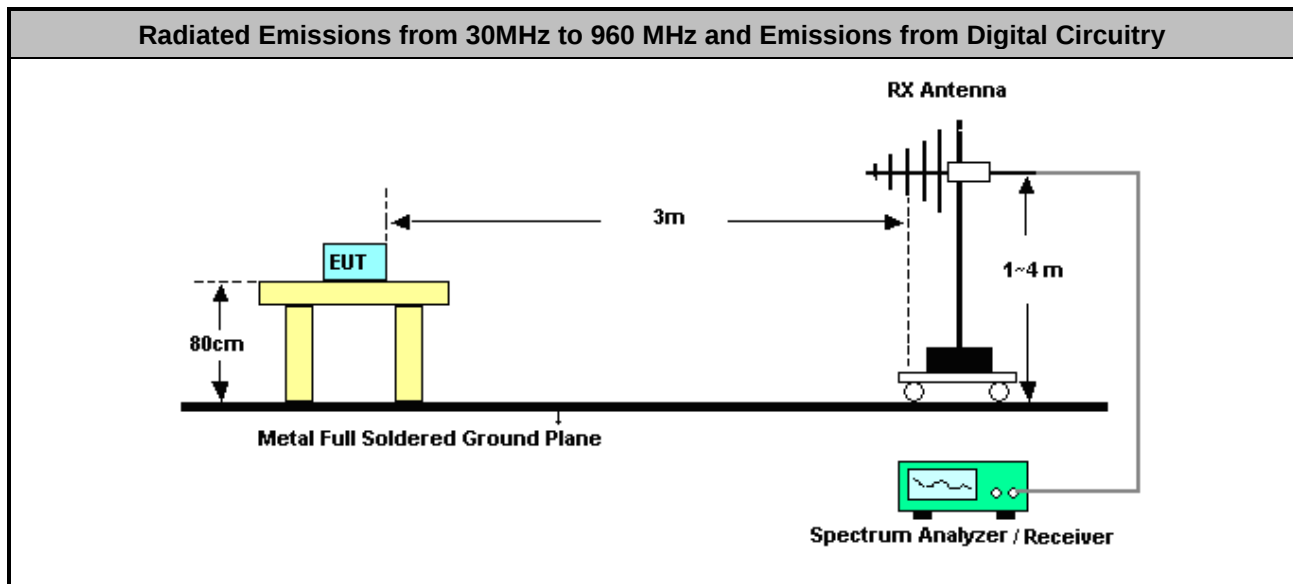
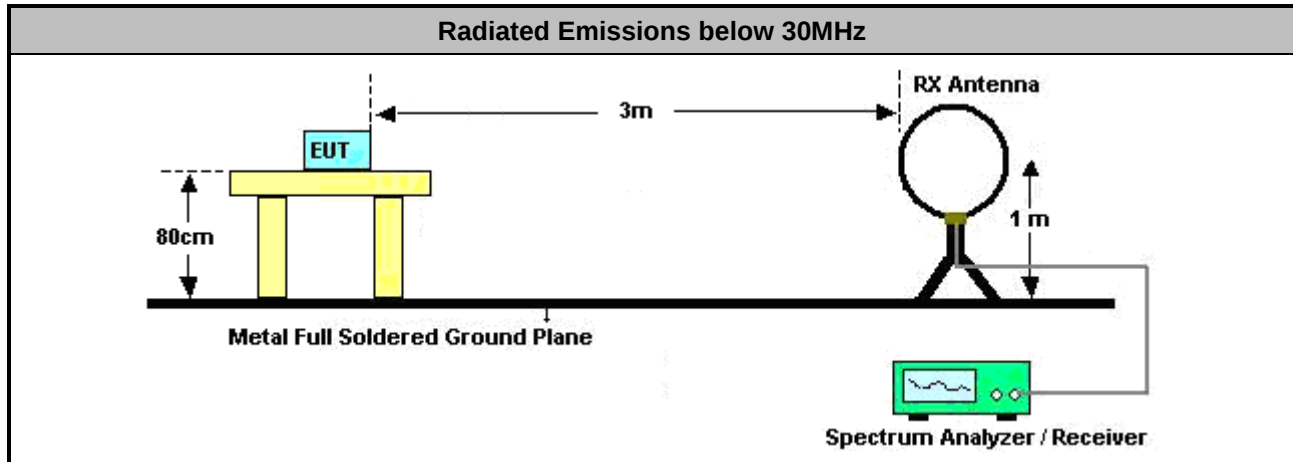
Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

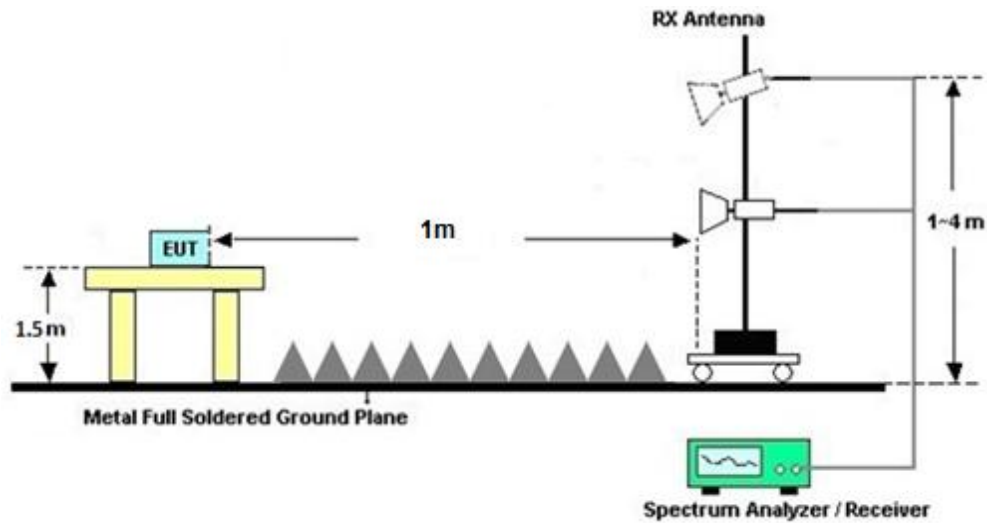
Test Method for Radiated Emissions above 960MHz	
■ Radiated Emissions above 960MHz	
■	Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
■	Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m. In some cases, it may be necessary to measure the radiated UWB emissions 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)
■	Refer as ANSI C63.10, clause 10.3.4 for rms detector procedure testing.
■	Refer as ANSI C63.10, clause 10.3.7 for evaluating AVG-PSD (RBW=1MHz).
■	Refer as ANSI C63.10, clause 10.3.10 for evaluating AVG-PSD in GPS Band (RBW≥1kHz).
■ For radiated measurement.	
■	Refer as ANSI C63.10, clause 10.3.8 following eirp can be used radiated test configuration.
■	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	
■ 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.	
■ For the transmitter unwanted emissions shall be measured using following options below:	
■	Refer as ANSI C63.10, clause 4.1.4 Detector functions and selection of bandwidth
□	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).
■	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
■ For radiated measurement.	
■	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
■	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
■	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.
■	If the noise floor can't meet the limit, the test distance will be shorten and described in the report.
■ Any unwanted emissions level shall not exceed the fundamental emission level.	

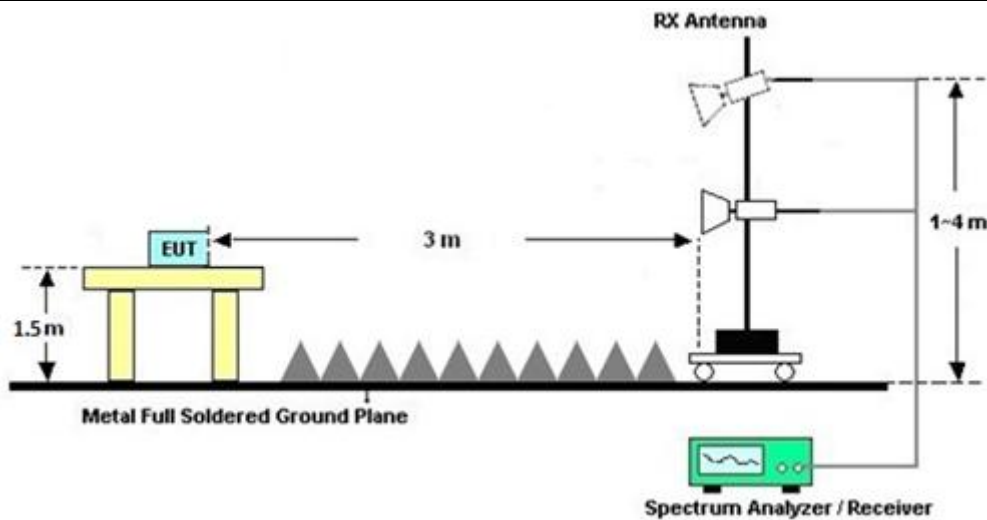
3.4.4 Test Setup

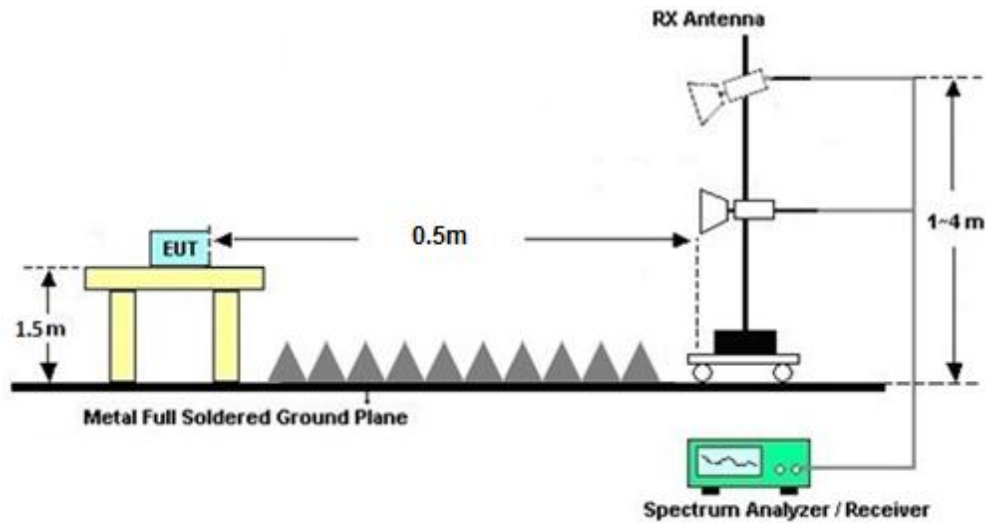
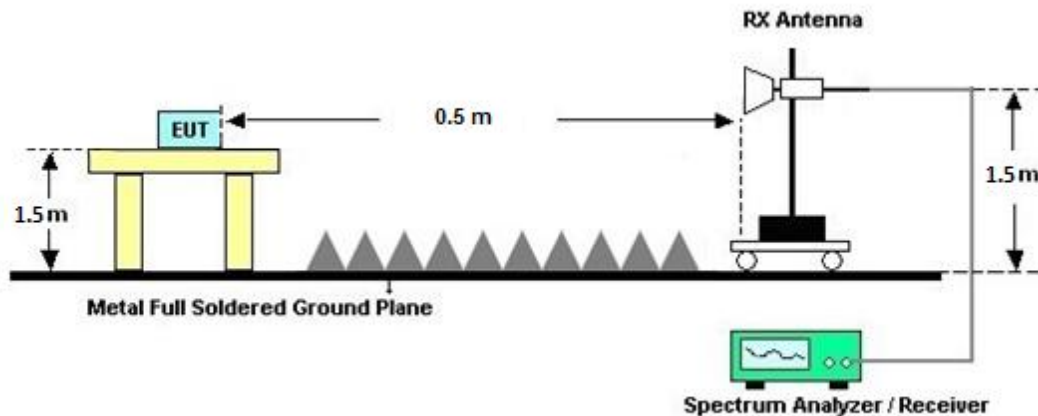


Radiated Emissions from 1GHz to 1.61 GHz



Radiated Emissions from 1.61 GHz to 10.60 GHz



Radiated Emissions from 10.60 GHz to 18GHz

Radiated Emissions above 18GHz


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.

3.4.5 Radiated Emissions (Below 30MHz)

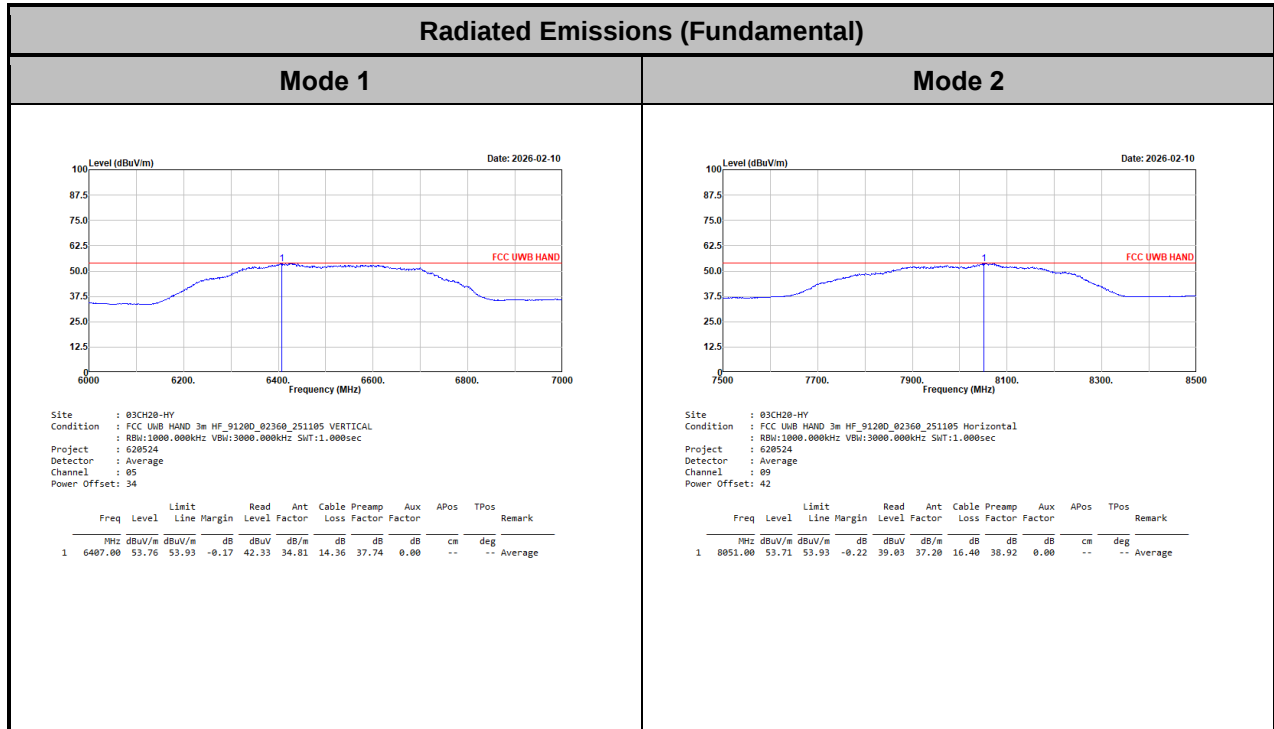
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

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.

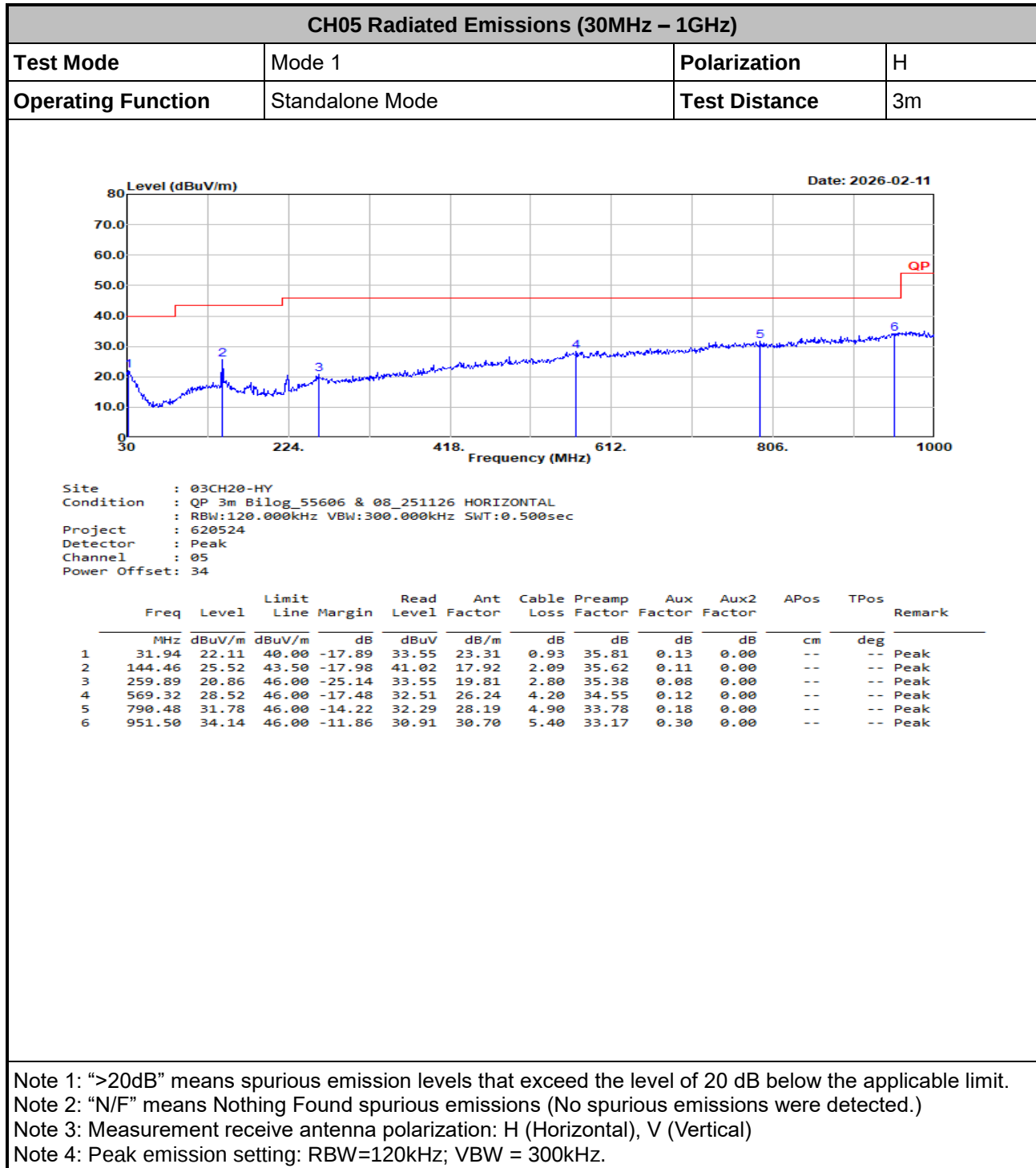
3.4.6 Average Power Spectral Density

Test mode	Frequency (MHz)	Emission Level (dBuV/m)	Emission Limit (dBm/MHz)	Emission Limit (dBuV/m)	Margin (dB)	Result	Pol [H/V]
1	6407	53.76	-41.3	53.93	-0.17	Pass	V
2	8051	53.71	-41.3	53.93	-0.22	Pass	H

Note : Measurement worst emissions of receive antenna polarization.



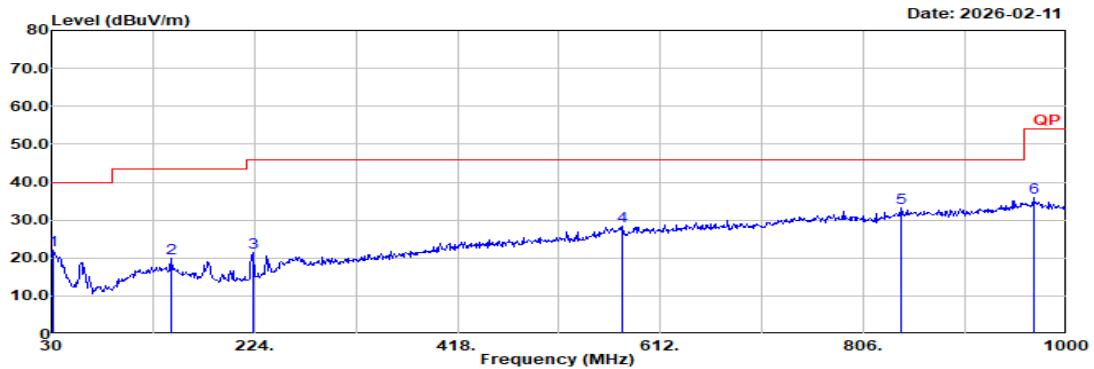
3.4.7 Radiated Emissions (30MHz – 1GHz)





CH05 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 1	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : QP 3m Bilog_55606 & 08_251126 VERTICAL
RBW:120.000kHz VBW:300.000kHz SWT:0.500sec
Project : 620524
Detector : Peak
Channel : 05
Power Offset: 34

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	30.97	22.18	40.00	-17.82		32.95	23.98	0.92	35.81	0.14	0.00	--	--	Peak
2	144.46	20.02	43.50	-23.48		35.52	17.92	2.09	35.62	0.11	0.00	--	--	Peak
3	222.06	21.29	46.00	-24.71		38.51	15.59	2.58	35.46	0.07	0.00	--	--	Peak
4	576.11	28.23	46.00	-17.77		32.17	26.25	4.22	34.53	0.12	0.00	--	--	Peak
5	841.89	33.07	46.00	-12.93		32.54	28.83	5.10	33.54	0.14	0.00	--	--	Peak
6	967.99	35.81	54.00	-18.19		31.93	31.24	5.45	33.12	0.31	0.00	--	--	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.)

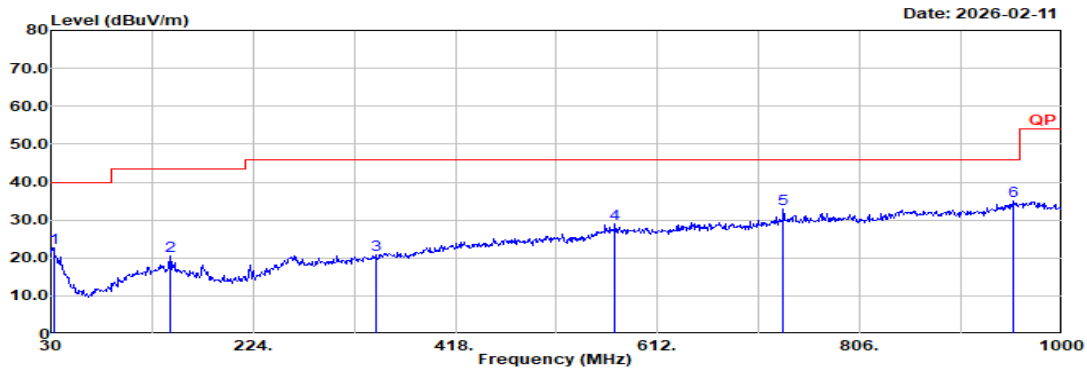
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



CH09 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 2	Polarization	H
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : QP 3m Bilog_55606 & 08_251126 HORIZONTAL
RBW:120.000kHz VBW:300.000kHz SWT:0.500sec
Project : 620524
Detector : Peak
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	Loss	Factor	Factor	Factor	cm	deg	
1	32.91	22.72	40.00	-17.28		34.06	23.38	0.95	35.80	0.13	0.00	--	--	Peak
2	144.46	20.55	43.50	-22.95		36.05	17.92	2.09	35.62	0.11	0.00	--	--	Peak
3	341.37	20.70	46.00	-25.30		32.31	20.18	3.24	35.16	0.13	0.00	--	--	Peak
4	571.26	28.84	46.00	-17.16		32.83	26.22	4.21	34.54	0.12	0.00	--	--	Peak
5	732.28	32.94	46.00	-13.06		34.23	27.74	4.74	33.98	0.21	0.00	--	--	Peak
6	952.47	34.97	46.00	-11.03		31.69	30.74	5.41	33.17	0.30	0.00	--	--	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.)

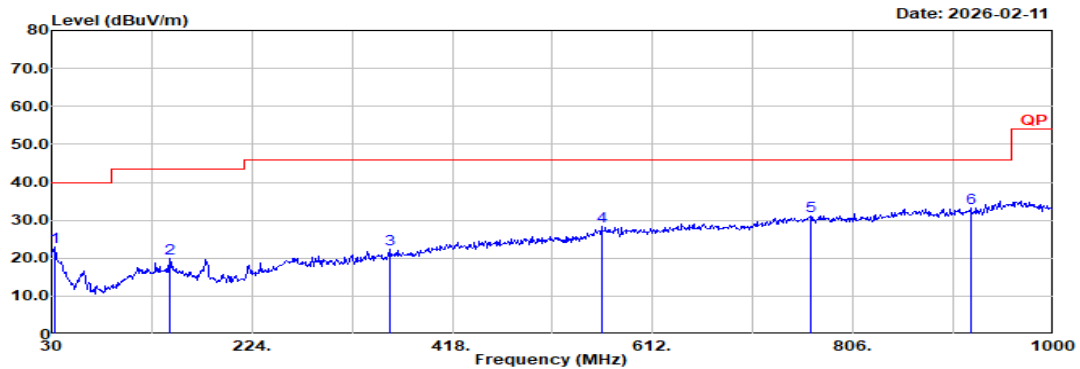
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



CH09 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 2	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : QP 3m Bilog_55606 & 08_251126 VERTICAL
RBW:120.000kHz VBW:300.000kHz SWT:0.500sec
Project : 620524
Detector : Peak
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	33.88	23.03	40.00	-16.97	35.28	22.47	0.96	35.80	0.12	0.00	0.00	--	--	Peak
2	144.46	19.88	43.50	-23.62	35.38	17.92	2.09	35.62	0.11	0.00	0.00	--	--	Peak
3	356.89	22.35	46.00	-23.65	33.43	20.58	3.31	35.11	0.14	0.00	0.00	--	--	Peak
4	562.53	28.37	46.00	-17.63	32.32	26.32	4.18	34.56	0.11	0.00	0.00	--	--	Peak
5	764.29	31.13	46.00	-14.87	31.85	28.11	4.83	33.86	0.20	0.00	0.00	--	--	Peak
6	919.49	33.24	46.00	-12.76	31.72	29.21	5.36	33.29	0.24	0.00	0.00	--	--	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.)

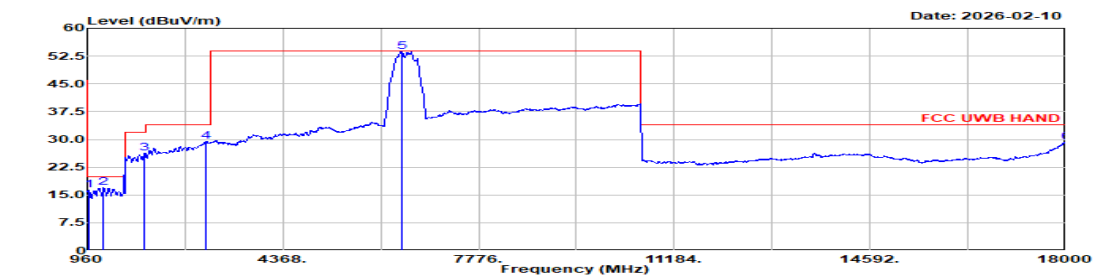
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: Peak emission setting: RBW=120kHz; VBW = 300kHz.



3.4.8 Radiated Emissions (960MHz – 18GHz)

CH05 Radiated Emissions (960MHz – 18GHz)			
Test Mode	Mode 1	Polarization	H
Operating Function	Standalone 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 HF_9120D_02360_251105 Horizontal
 Project : RBW:1000.000kHz VBW:3000.000kHz SWT:7.500sec
 Detector : Average
 Channel : 05
 Power Offset: 34

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	Loss	Factor	Factor	Factor	dB	cm	deg
1	979.08	16.25	19.93	-3.68		28.34	30.75	5.48	33.08	-15.56	0.32	--	--	Average
2	1238.51	16.87	19.93	-3.06		30.23	25.80	6.12	35.74	-9.54	0.00	--	--	Average
3	1952.76	26.26	31.93	-5.67		28.53	26.17	7.73	36.17	0.00	0.00	--	--	Average
4	3033.40	29.44	33.93	-4.49		25.95	29.70	9.86	36.07	0.00	0.00	--	--	Average
5	6430.00	53.70	53.93	-0.23		42.18	34.86	14.40	37.74	0.00	0.00	--	--	Average
6	17992.60	29.23	33.93	-4.70		23.72	41.87	24.80	45.60	-15.56	0.00	--	--	Average

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.

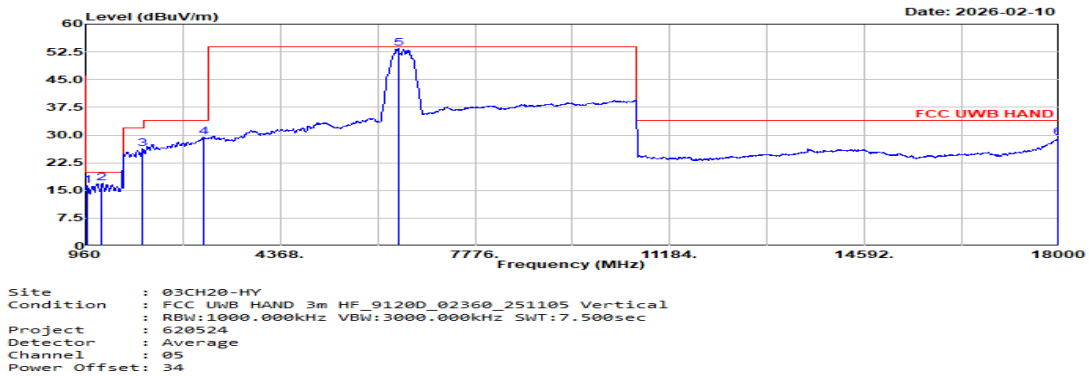
Note 6: #5 is fundamental signal.

Note 7:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
Example: Distance extrapolation factor = $20 \log (0.5\text{m}/3\text{m}) = -15.56$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) + Aux2 Factor (dB) = Level (dBuV/m)
 (Note1: Aux Factor = Distance extrapolation factor)
 (Note2: Aux2 Factor = Filter loss(dB))
Example: Corrected Reading: 30.75 (dB/m) + 5.48 (dB) + 28.34 (dBuV) – 33.08 (dB) + (-15.56) (dB) + $0.32 = 16.25$ (dBuV/m)

**CH05 Radiated Emissions (960MHz – 18GHz)**

Test Mode	Mode 1	Polarization	V
Operating Function	Standalone 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.		



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.

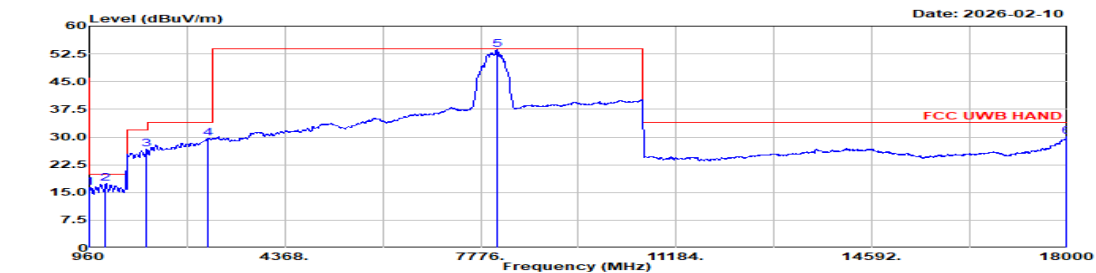
Note 7:

- 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) + Aux2 Factor (dB) = Level (dBuV/m)
(Note1: Aux Factor = Distance extrapolation factor)
(Note2: Aux2 Factor = Filter loss(dB))



CH09 Radiated Emissions (960MHz – 18GHz)

Test Mode	Mode 2	Polarization	H
Operating Function	Standalone 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 HF_9120D_02360_251105 Horizontal
Project : RBW:1000.000kHz VBW:3000.000kHz SWT:7.500sec
Detector : Average
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	Level	Factor	Loss	Factor	Factor	Factor	dB	cm	deg
1	968.08	16.26	19.93	-3.67	27.94	31.23	5.45	33.11	-15.56	0.31	--	--	Average
2	1242.17	17.37	19.93	-2.56	30.75	25.78	6.13	35.75	-9.54	0.00	--	--	Average
3	1955.42	26.69	31.93	-5.24	28.98	26.15	7.73	36.17	0.00	0.00	--	--	Average
4	3926.74	29.71	33.93	-4.22	26.23	29.70	9.84	36.06	0.00	0.00	--	--	Average
5	8965.00	53.67	53.93	-0.26	39.01	37.20	16.40	38.94	0.00	0.00	--	--	Average
6	17985.20	30.05	33.93	-3.88	24.56	41.84	24.80	45.59	-15.56	0.00	--	--	Average

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.

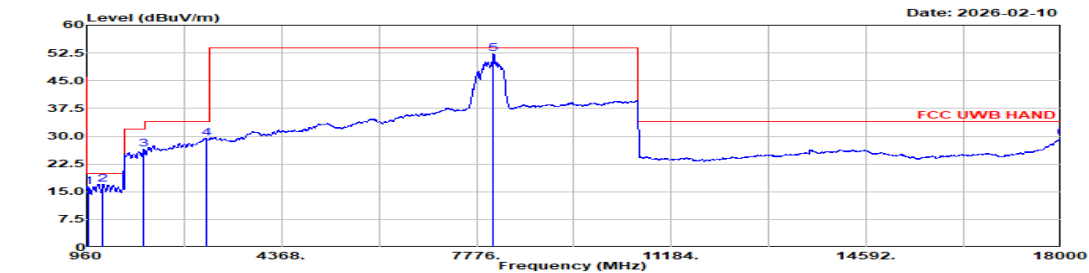
Note 7:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) + Aux2 Factor (dB) = Level (dBuV/m)
(Note1: Aux Factor = Distance extrapolation factor)
(Note2: Aux2 Factor = Filter loss(dB))



CH09 Radiated Emissions (960MHz – 18GHz)

Test Mode	Mode 2	Polarization	V
Operating Function	Standalone 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.		



	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	978.36	16.29	19.93	-3.64	28.35	30.79	5.47	33.08	-15.56	0.32	--	--	Average
2	1246.44	17.08	19.93	-2.85	30.49	25.74	6.14	35.75	-9.54	0.00	--	--	Average
3	1953.90	26.43	31.93	-5.50	28.71	26.16	7.73	36.17	0.00	0.00	--	--	Average
4	3046.72	29.37	33.93	-4.56	25.87	29.70	9.89	36.09	0.00	0.00	--	--	Average
5	8072.50	52.33	53.93	-1.60	37.68	37.20	16.40	38.95	0.00	0.00	--	--	Average
6	17992.60	29.43	33.93	-4.50	23.92	41.87	24.80	45.60	-15.56	0.00	--	--	Average

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.

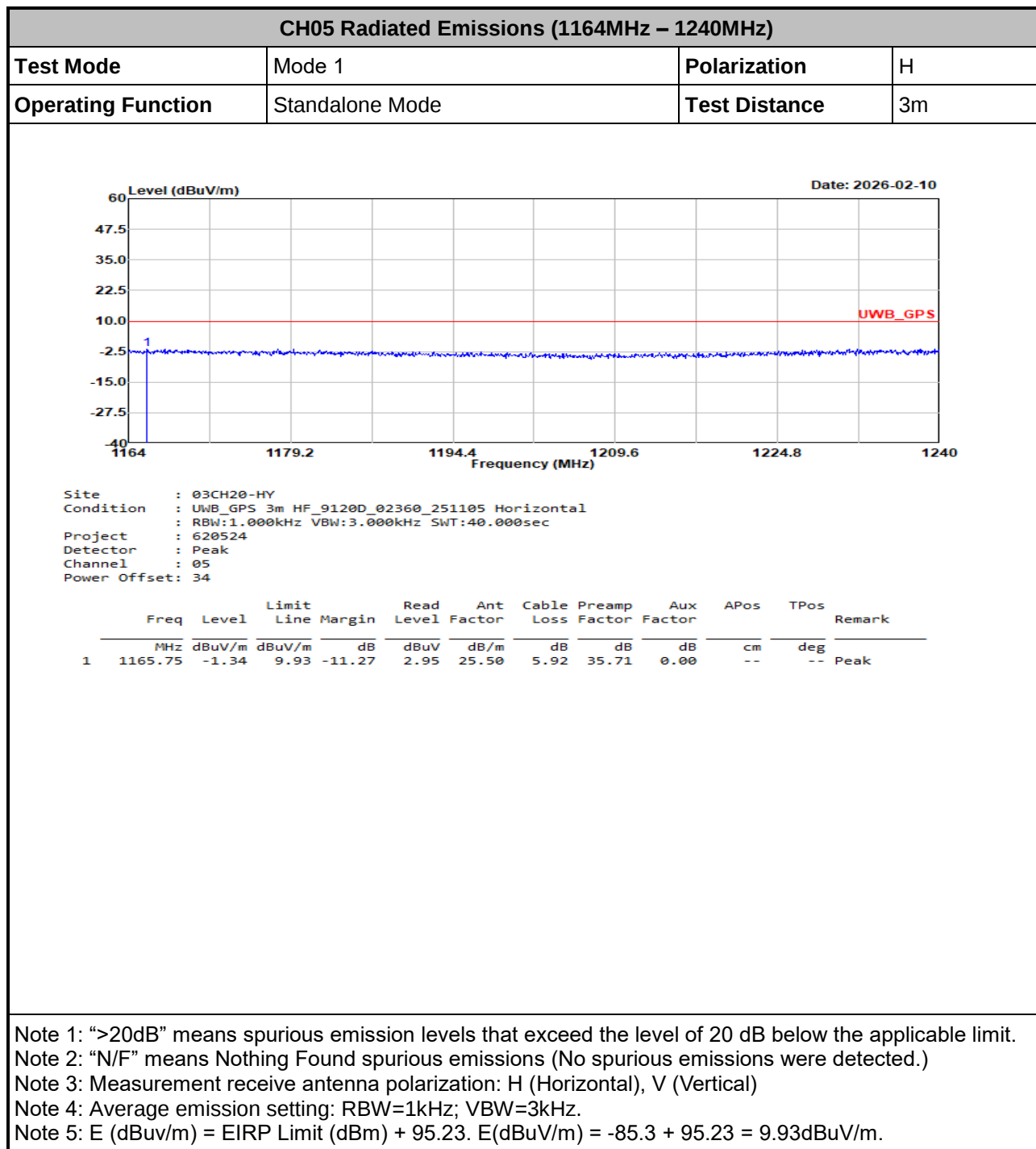
Note 6: #5 is fundamental signal.

Note 7:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) + Aux2 Factor (dB) = Level (dBuV/m)
(Note1: Aux Factor = Distance extrapolation factor)
(Note2: Aux2 Factor = Filter loss(dB))



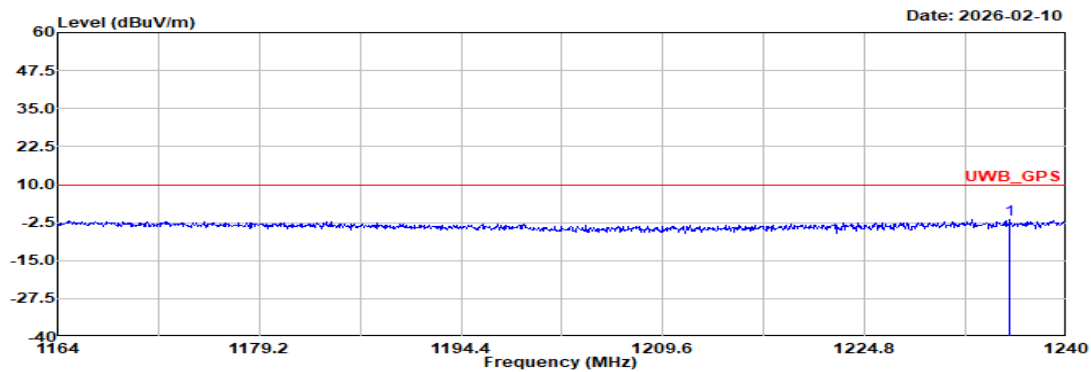
3.4.9 Radiated Emissions (1164MHz – 1240MHz)





CH05 Radiated Emissions (1164MHz – 1240MHz)

Test Mode	Mode 1	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : UWB_GPS 3m HF_9120D_02360_251105 Vertical
RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
Project : 620524
Detector : Peak
Channel : 05
Power Offset: 34

	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	1235.74	-1.49	9.93	-11.42	2.34	25.80	6.11	35.74	0.00	--	--	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)

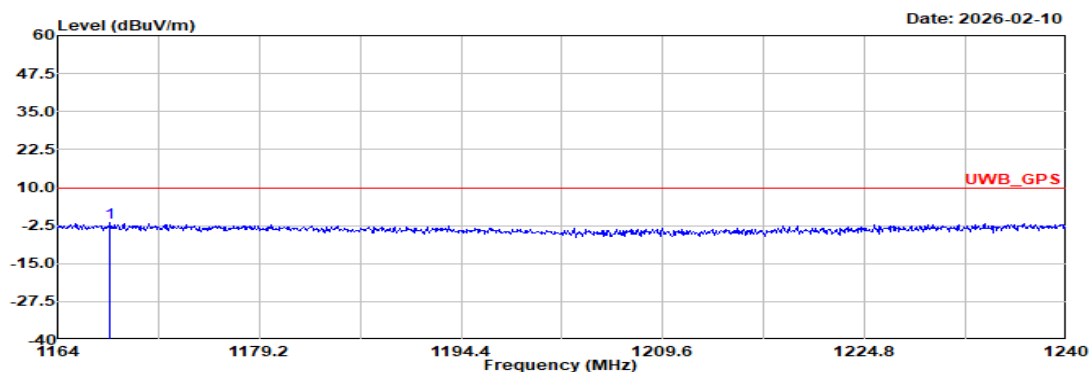
Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.

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 2	Polarization	H
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : UWB_GPS 3m HF_9120D_02360_251105 Horizontal
RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
Project : 620524
Detector : Peak
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	Level	Factor	Loss	Factor	Factor	cm	deg	
1	1167.95	-1.66	9.93		-11.59	2.63	25.50	5.92	35.71	0.00	--	--	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)

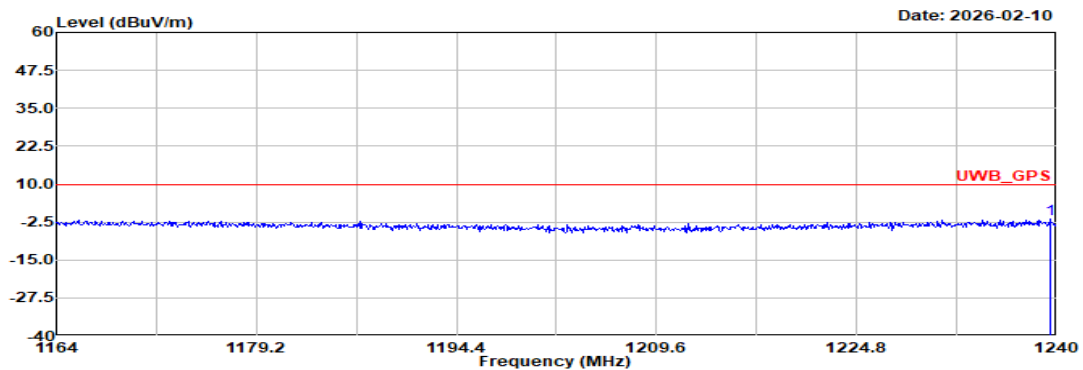
Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.

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 2	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : UWB_GPS 3m HF_9120D_02360_251105 Vertical
RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
Project : 620524
Detector : Peak
Channel : 09
Power Offset: 42

Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1 1239.47	-1.57	9.93		-11.50	2.26	25.80	6.12	35.75	0.00	--	--	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.)

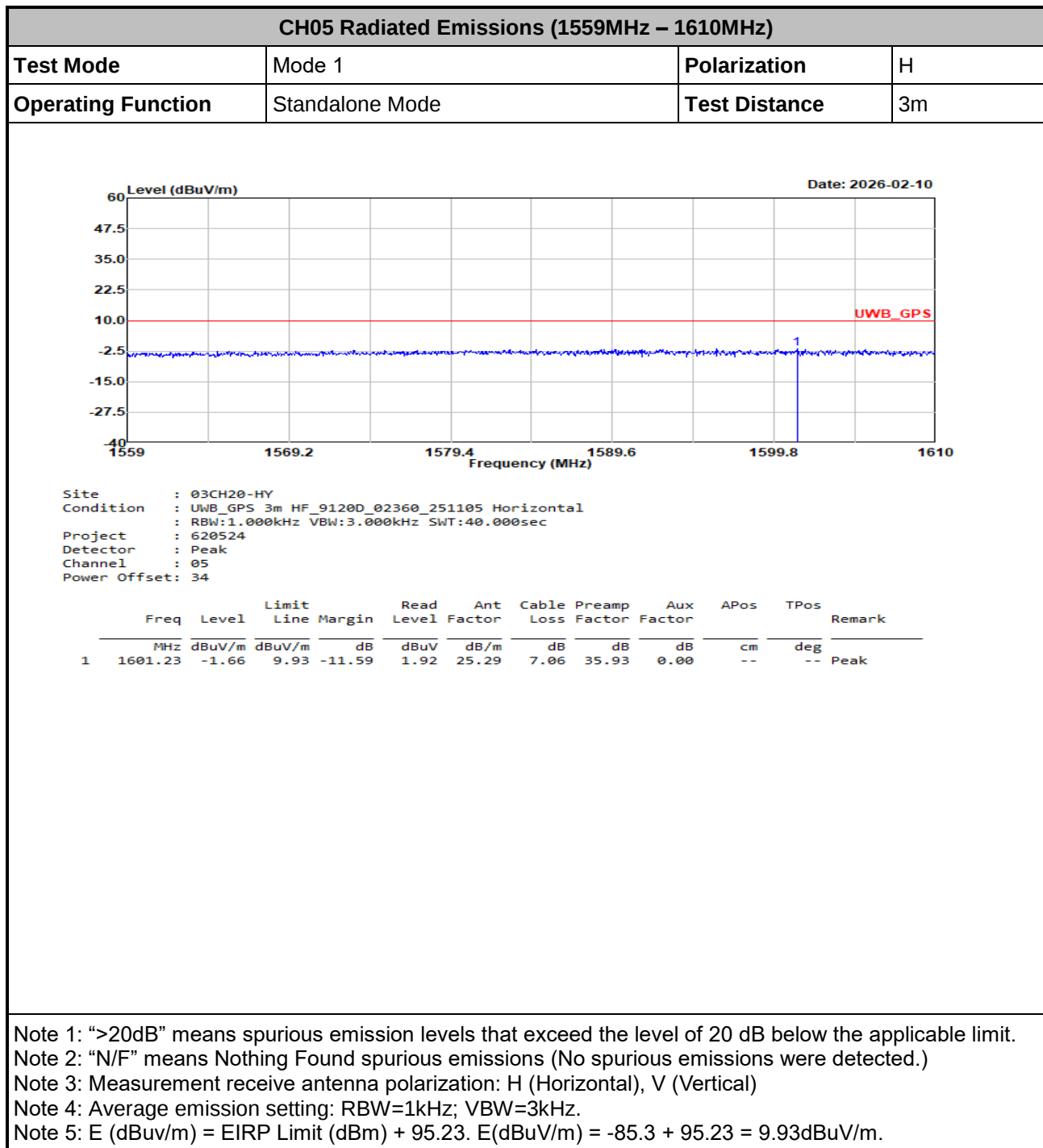
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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

Note 5: $E \text{ (dBuV/m)} = \text{EIRP Limit (dBm)} + 95.23$. $E \text{ (dBuV/m)} = -85.3 + 95.23 = 9.93 \text{ dBuV/m}$.



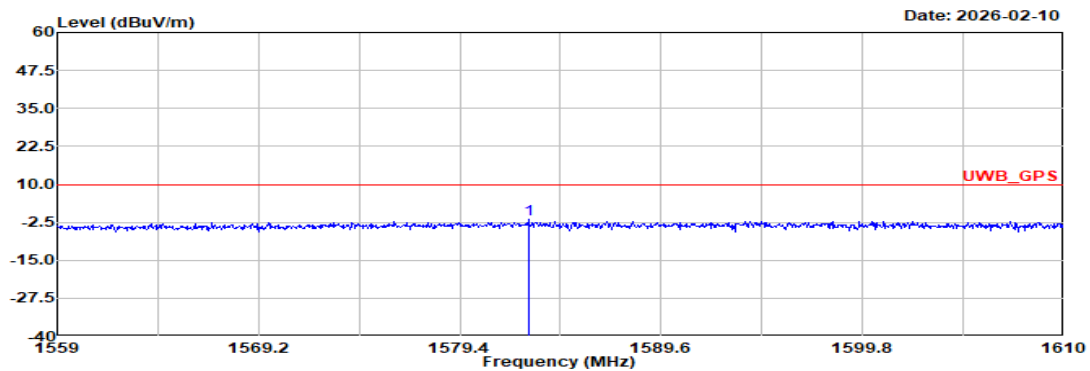
3.4.10 Radiated Emissions (1559MHz – 1610MHz)





CH05 Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 1	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : UWB_GPS 3m HF_9120D_02360_251105 Vertical
RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
Project : 620524
Detector : Peak
Channel : 05
Power Offset: 34

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	1582.87	-1.63	9.93		-11.56	1.94	25.33	7.02	35.92	0.00	--	--	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.)

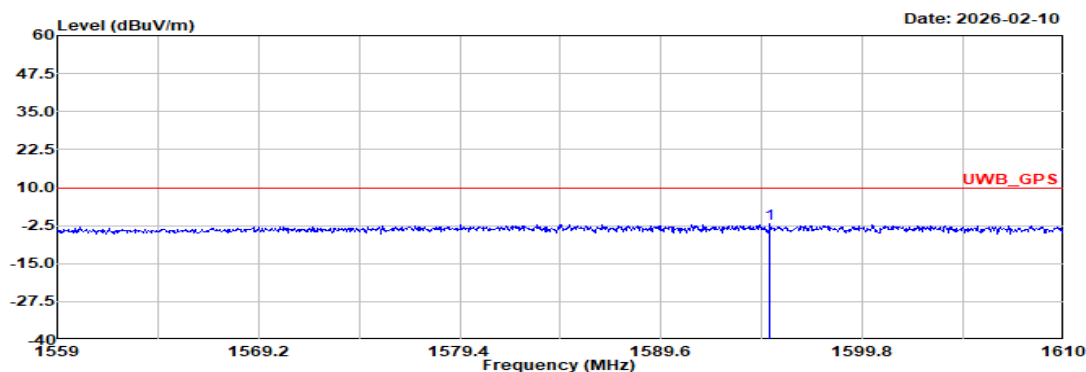
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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 2	Polarization	H
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
 Condition : UWB_GPS 3m HF_9120D_02360_251105 Horizontal
 : RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
 Project : 620524
 Detector : Peak
 Channel : 09
 Power Offset: 42

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	1595.11	-1.81	9.93		-11.74	1.71	25.35	7.05	35.92	0.00	--	--	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)

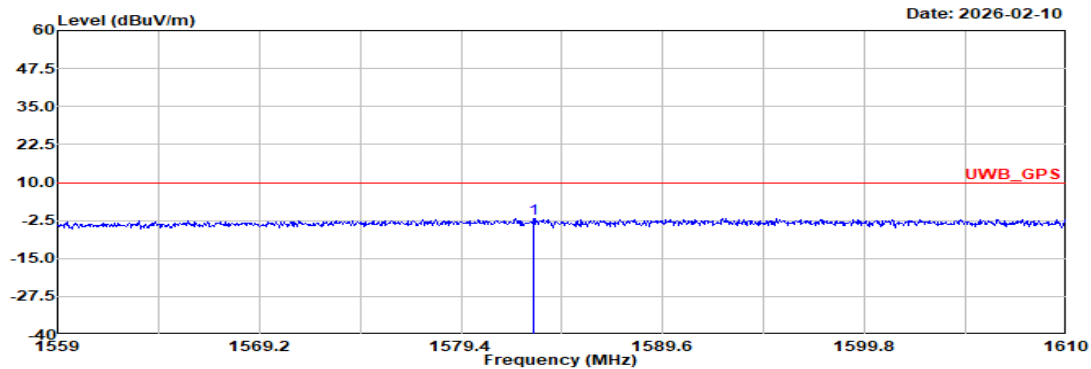
Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.

Note 5: $E \text{ (dBuV/m)} = \text{EIRP Limit (dBm)} + 95.23$. $E \text{ (dBuV/m)} = -85.3 + 95.23 = 9.93 \text{ dBuV/m}$.



CH09 Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 2	Polarization	V
Operating Function	Standalone Mode	Test Distance	3m



Site : 03CH20-HY
Condition : UWB_GPS 3m HF_9120D_02360_251105 Vertical
RBW:1.000kHz VBW:3.000kHz SWT:40.000sec
Project : 620524
Detector : Peak
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Line	Margin	Read	Ant	Cable	Preamp	Aux	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m		dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	1583.07	-1.75	9.93		-11.68	1.82	25.33	7.02	35.92	0.00	--	--	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.)

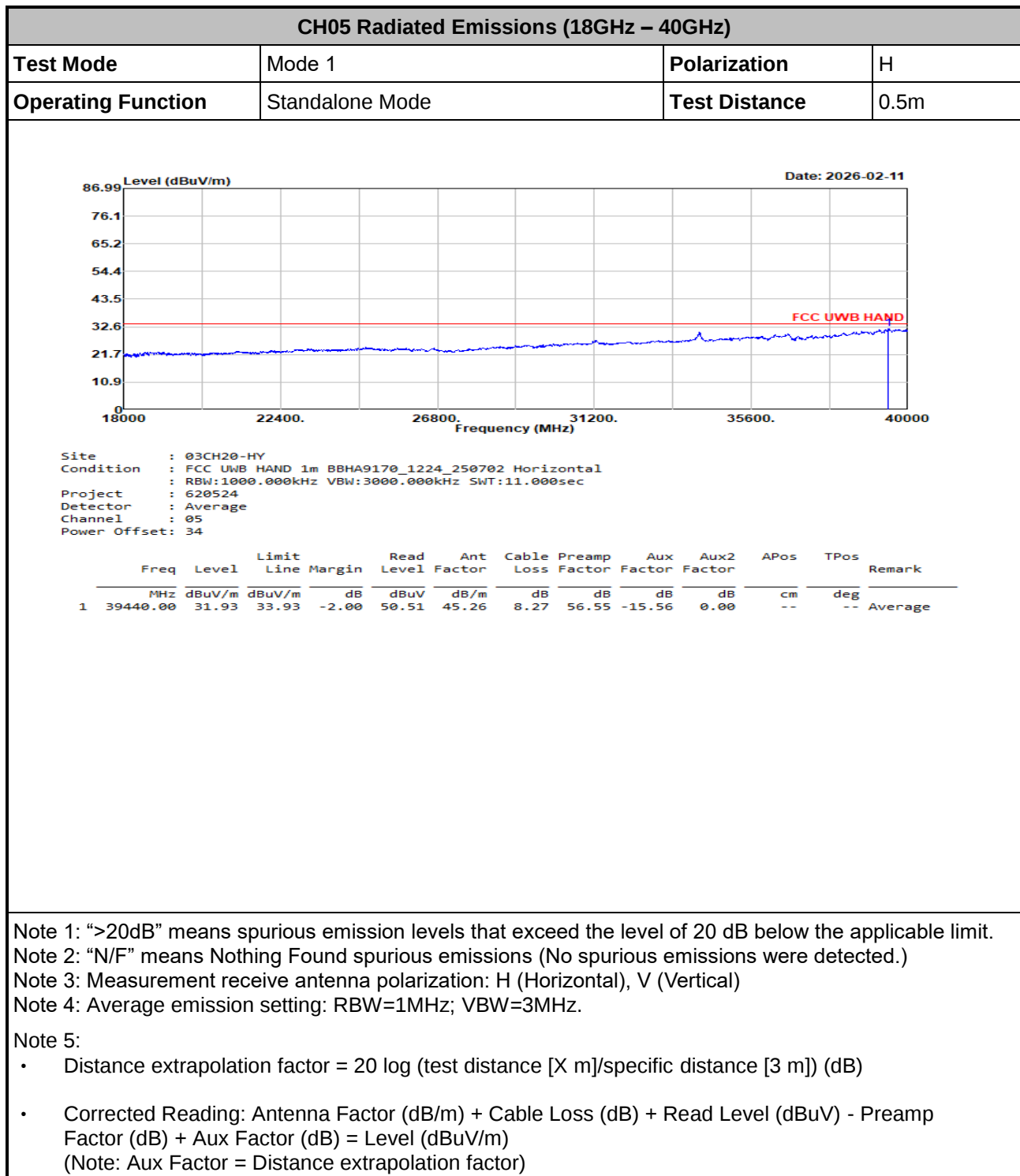
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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.



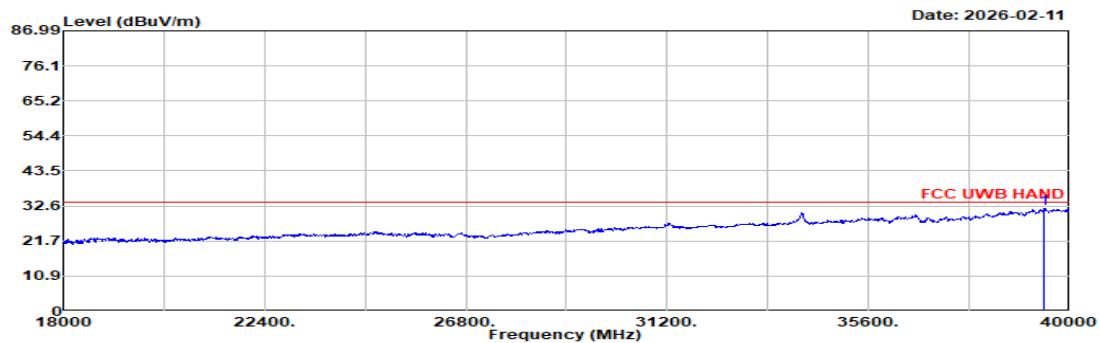
3.4.11 Radiated Emissions (18GHz – 40GHz)





CH05 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 1	Polarization	V
Operating Function	Standalone Mode	Test Distance	0.5m



Site : 03CH20-HY
Condition : FCC UWB HAND 1m BBHA9170_1224_250702 Vertical
Project : 620524
Detector : Average
Channel : 05
Power Offset: 34

	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	39440.00	31.96	33.93	-1.97	50.54	45.26	8.27	56.55	-15.56	0.00	--	--	Average

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)

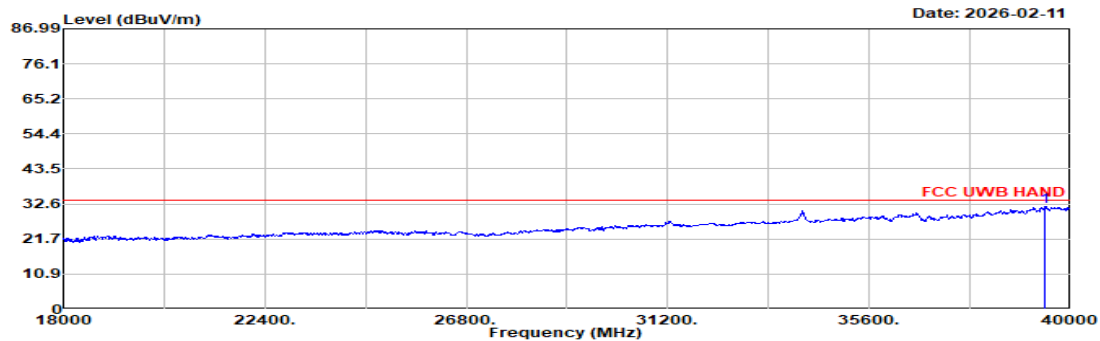
Note 4: Average emission setting: RBW=1MHz; VBW=3MHz.

Note 5:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
(Note: Aux Factor = Distance extrapolation factor)

CH09 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 2	Polarization	H
Operating Function	Standalone Mode	Test Distance	0.5m



Site : 03CH20-HY
 Condition : FCC UWB HAND 1m BBHA9170_1224_250702 Horizontal
 : RBW:1000.000kHz VBW:3000.000kHz SWT:11.000sec
 Project : 620524
 Detector : Average
 Channel : 09
 Power Offset: 42

	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	39440.00	31.85	33.93	-2.08	50.43	45.26	8.27	56.55	-15.56	0.00	--	--	Average

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.

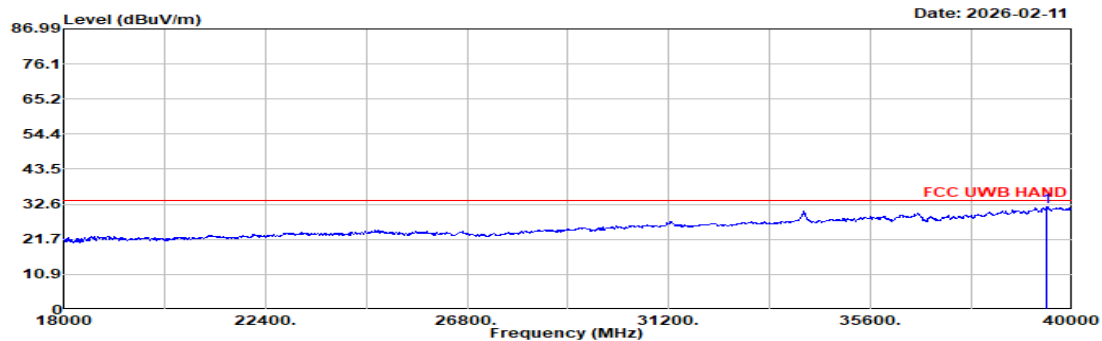
Note 5:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
(Note: Aux Factor = Distance extrapolation factor)



CH09 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 2	Polarization	V
Operating Function	Standalone Mode	Test Distance	0.5m



Site : 03CH20-HY
Condition : FCC UWB HAND 1m BBHA9170_1224_250702 Vertical
Project : 620524
Detector : Average
Channel : 09
Power Offset: 42

	Freq	Level	Limit	Margin	Read	Ant	Cable	Preamp	Aux	Aux2	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	dB	cm	deg	
1	39440.00	31.92	33.93	-2.01	50.50	45.26	8.27	56.55	-15.56	0.00	--	--	Average

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 = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
(Note: Aux Factor = Distance extrapolation factor)



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. 16, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Oct. 15, 2026	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 11, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Dec. 10, 2026	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May. 26, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	May. 25, 2026	Radiation (03CH20-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Feb. 09, 2026 ~ Feb. 12, 2026	N/A	Radiation (03CH20-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Feb. 09, 2026 ~ Feb. 12, 2026	N/A	Radiation (03CH20-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Feb. 09, 2026 ~ Feb. 12, 2026	N/A	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	10Hz~44GHz	Dec. 10, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Dec. 09, 2026	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N-06	47020 & 06	30MHz~1GHz	Oct. 04, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Oct. 03, 2026	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	02360	1GHz-18GHz	Nov. 05, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Nov. 04, 2026	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz-40GHz	Jul. 02, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Jul. 01, 2026	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Dec. 30, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Dec. 29, 2026	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 11, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Nov. 10, 2026	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,804015/2,804027/2	N/A	Jan. 15, 2026	Feb. 09, 2026 ~ Feb. 12, 2026	Jan. 14, 2027	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP211382	N/A	Mar. 31, 2025	Feb. 09, 2026 ~ Feb. 12, 2026	Mar. 30, 2026	Radiation (03CH20-HY)
Software	Audix	N/A	RK-002156	N/A	N/A	Feb. 09, 2026 ~ Feb. 12, 2026	N/A	Radiation (03CH20-HY)