



FCC RADIO TEST REPORT

FCC ID : A4RG1MNW
Equipment : Phone
Model Name : G1MNW
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : 47 CFR FCC Part 15.519

The product was received on Apr. 11, 2023, and testing was performed from Apr. 22, 2023 to Jun. 20, 2023. 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.

Louis Wu

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
FR2D0206-01F	01	Initial issue of report	Jun. 23, 2023
FR2D0206-01F	02	Revise Product Specification of Equipment Under Test This report is an updated version, replacing the report issued on Jun. 23, 2023.	Jun. 30, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.2	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/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: William Chen
Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Phone
Model Name	G1MNW
FCC ID	A4RG1MNW
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS/ WPT/UWB WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 WLAN 11be EHT20/EHT40/EHT80/EHT160 Bluetooth BR/EDR/LE/HR

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
33161FDJG0009S	Equivalent Isotropic Radiated Power
	Radiated Spurious Emission
	Conducted Emission

1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
Channel Number & Tx/Rx Frequency Range	CH05: 6489.6 MHz CH09: 7987.2 MHz
Antenna Type	<UWB Ant1 - Ranging Antenna>: PIFA Antenna <UWB Ant2 - Common AoA Antenna>: Patch Antenna
Type of Modulation	BPM-BPSK / BPSK

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

1.3 Modification of EUT

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

1.4 Type of EUT

Operational Condition	
EUT Power Type	AC mains: AC voltage 120 V
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:

1.5 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.

1.6 Testing Location Information

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory

Note: The test site complies with ANSI C63.4 2014 requirement.

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. 03CH23-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Conduction	CO05-HY	Calvin Wang	23 ~ 26 °C 45 ~ 55 %	May 17, 2023
Radiated	03CH23-HY	Watt Tseng and JC Liang	18~20 °C 65~69 %	Apr. 22, 2023~ Jun. 20, 2023

1.7 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)	3.5 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1000MHz)	5.8 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 6GHz)	4.4 dB	Confidence levels of 95%
Radiated Emission (6GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.2 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Mode

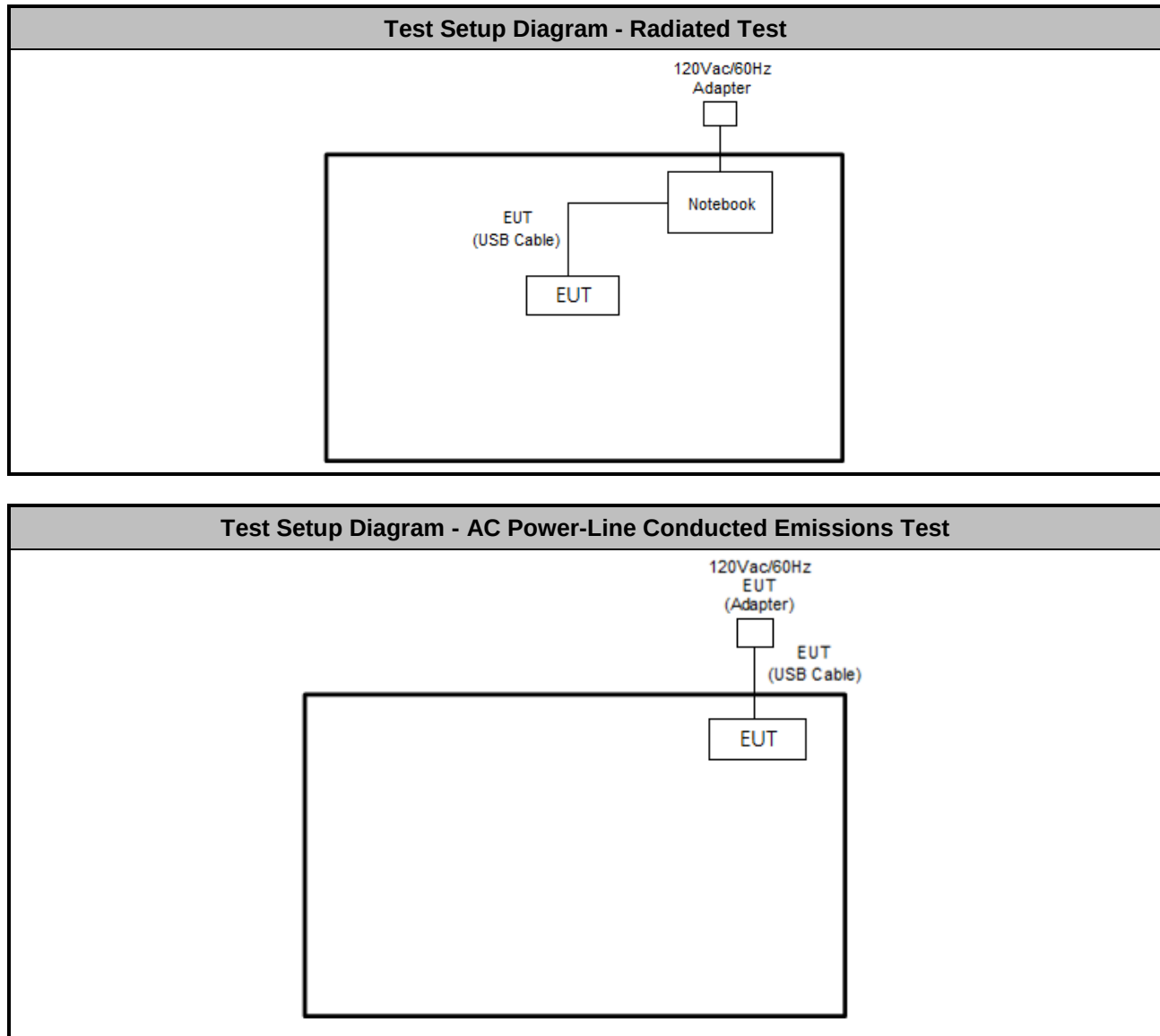
Test Configuration					
Mode	Antenna	Channel	Modulation	Config ID	Payload Length (bytes)
1	Ranging Antenna	5	BPRF	0	125
2	Ranging Antenna	9	BPRF	0	125
3	Common AoA	9	BPRF	0	125
4	Ranging Antenna	5	BPRF	1	125
5	Ranging Antenna	9	BPRF	1	125
6	Common AoA	9	BPRF	1	125
7	Ranging Antenna	5	BPRF	2	NA
8	Ranging Antenna	9	BPRF	2	NA
9	Common AoA	9	BPRF	2	NA
10	Ranging Antenna	5	HPRF	3	150
11	Ranging Antenna	9	HPRF	3	150
12	Common AoA	9	HPRF	3	150
13	Ranging Antenna	5	HPRF	4	150
14	Ranging Antenna	9	HPRF	4	150
15	Common AoA	9	HPRF	4	150
16	Ranging Antenna	5	HPRF	5	N/A
17	Ranging Antenna	9	HPRF	5	N/A
18	Common AoA	9	HPRF	5	N/A
19	Ranging Antenna	5	HPRF	6	N/A
20	Ranging Antenna	9	HPRF	6	N/A
21	Common AoA	9	HPRF	6	N/A

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
Remark: 1. 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". 2. For Conducted Emission Test Cases, the tests were performed with Adapter 1 and USB Cable 1.	

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	Notebook 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
			
Plane of all Test Modes	V	V	V
Remark:			
1. 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 accessory (Adapter or Earphone), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find as worst plane, and recorded in this report.			
2. For Radiated Test Cases, the tests were performed with USB Cable 1.			

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.	Notebook	DELL	Latitude5310	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

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.

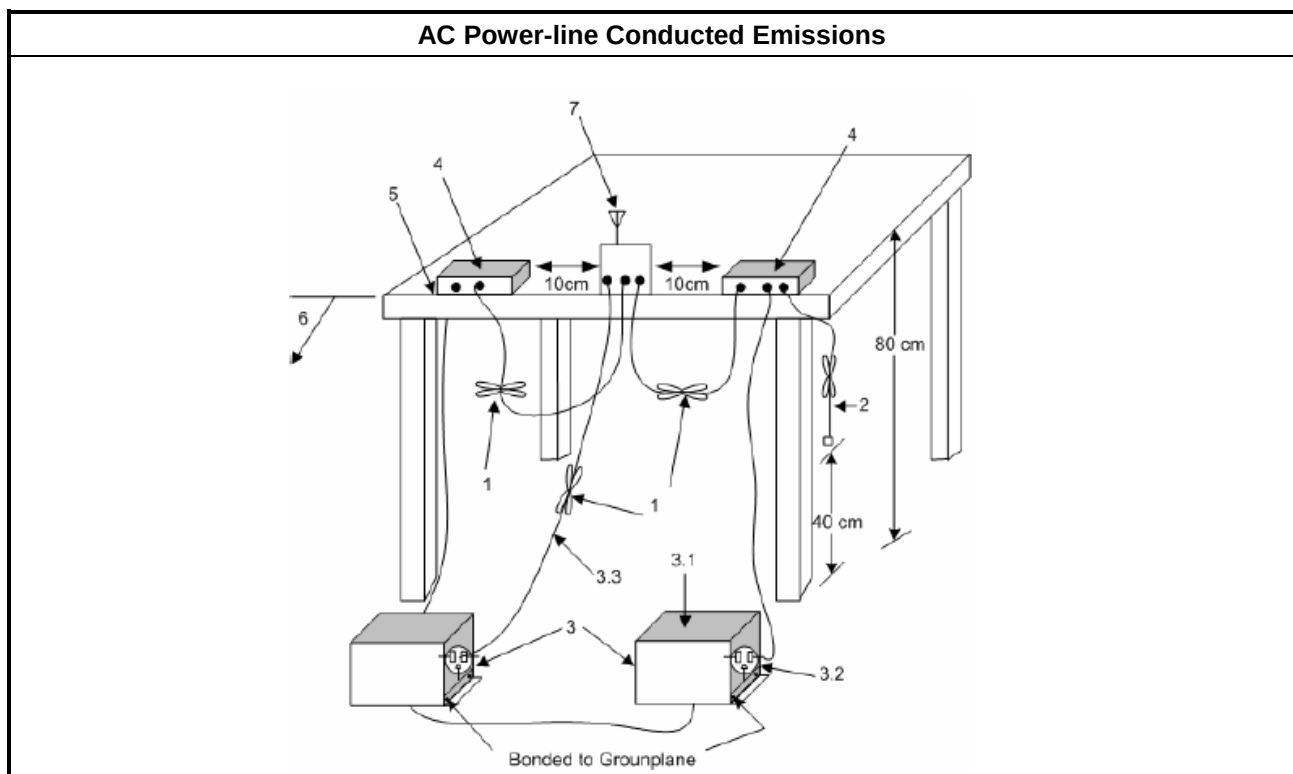
3.1.2 Measuring Instruments

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

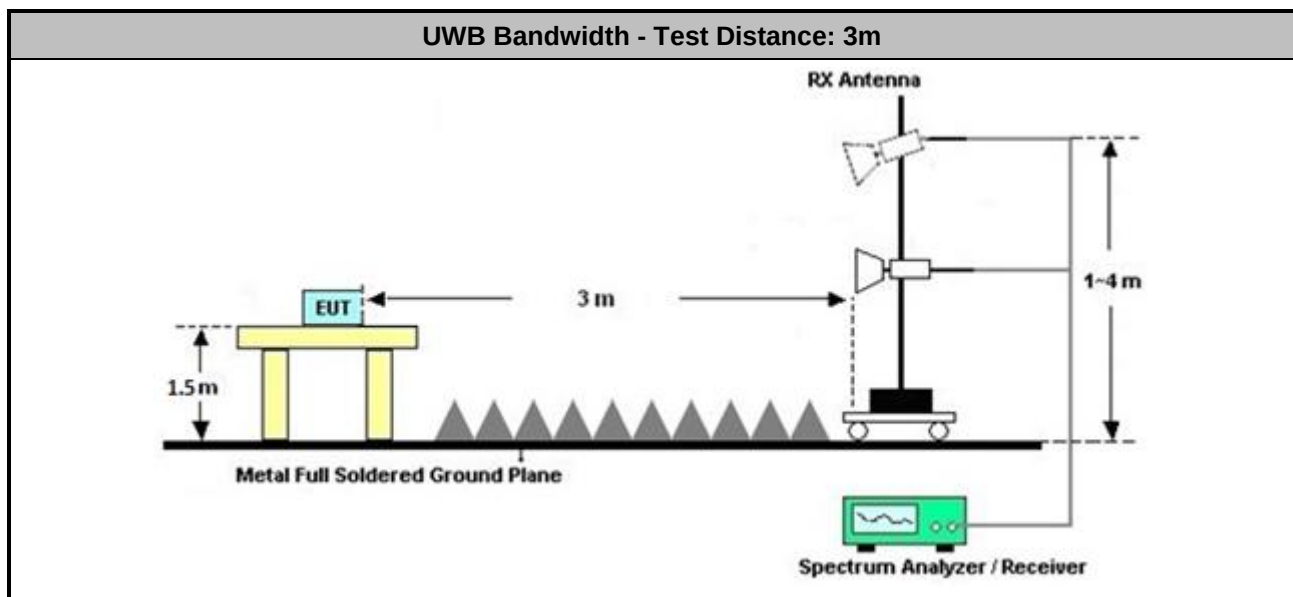
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

Test Method
■ 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.

3.2.4 Test Setup



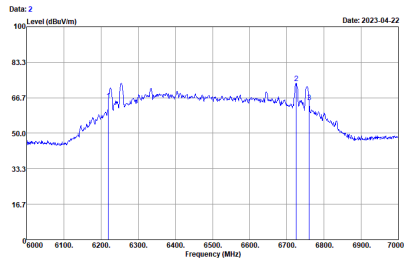
3.2.5 Test Result of UWB Bandwidth

Test mode	F _L (MHz)	F _H (MHz)	UWB Bandwidth (MHz)	Bandwidth limit (MHz)	Result	Pol [H/V]
1	6220	6760	540	≥ 500	Pass	H
2	7718	8259	541	≥ 500	Pass	H
3	7719	8257	538	≥ 500	Pass	H
4	6220	6760	540	≥ 500	Pass	H
5	7717	8254	537	≥ 500	Pass	H
6	7718	8257	539	≥ 500	Pass	H
7	6220	6760	540	≥ 500	Pass	H
8	7717	8254	537	≥ 500	Pass	H
9	7719	8257	538	≥ 500	Pass	H
10	6220	6760	540	≥ 500	Pass	H
11	7717	8253	536	≥ 500	Pass	V
12	7719	8257	538	≥ 500	Pass	H
13	6221	6771	550	≥ 500	Pass	H
14	7718	8254	536	≥ 500	Pass	H
15	7749	8254	505	≥ 500	Pass	H
16	6221	6760	539	≥ 500	Pass	H
17	7718	8253	535	≥ 500	Pass	V
18	7719	8257	538	≥ 500	Pass	H
19	6219	6776	557	≥ 500	Pass	H
20	7717	8253	536	≥ 500	Pass	V
21	7720	8255	535	≥ 500	Pass	H



UWB Bandwidth

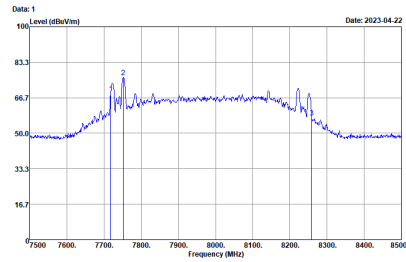
Mode 1



Site : 03CH23-HY
Condition : 3m LEZC05A18ENL_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH05
Modulation : BPRF
Config ID : 0
Payload Length : 125
Plane : X with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	6228.00	65.49	-----	-----	50.81	34.98	14.22	34.52	---	Peak
2	6725.00	73.44	-----	-----	57.21	36.45	14.88	35.82	---	Peak
3	6750.00	64.54	-----	-----	48.26	36.50	14.84	35.86	---	Peak

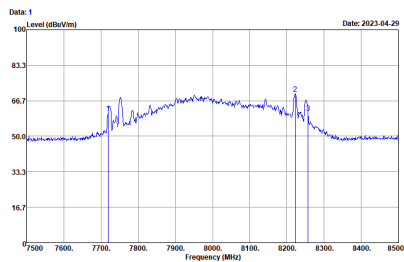
Mode 2



Site : 03CH23-HY
Condition : 3m LEZC05A18ENL_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : BPRF
Config ID : 0
Payload Length : 125
Plane : X with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7718.00	68.78	-----	-----	52.01	36.90	15.90	36.03	---	Peak
2	7752.00	76.29	-----	-----	59.54	36.90	15.92	36.67	---	Peak
3	8259.00	57.46	-----	-----	40.65	37.02	16.48	36.69	---	Peak

Mode 3



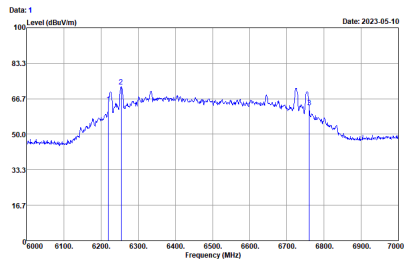
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: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : BPRF
Config ID : 0
Payload Length : 125
Plane : Y with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7719.00	60.97	-----	-----	44.20	36.90	15.90	36.03	---	Peak
2	8223.00	69.94	-----	-----	53.14	37.00	16.44	36.64	---	Peak
3	8257.00	60.88	-----	-----	44.08	37.01	16.48	36.69	---	Peak



UWB Bandwidth

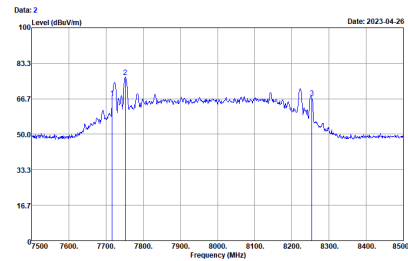
Mode 4



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000GHz VBW:3000.000GHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

	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	6220.00	64.38	-----	-----	49.70	34.90	14.22	34.52	---	--- Peak
2	6254.00	72.46	-----	-----	57.64	35.12	14.25	34.55	---	--- Peak
3	6760.00	62.68	-----	-----	46.40	36.50	14.84	35.86	---	--- Peak

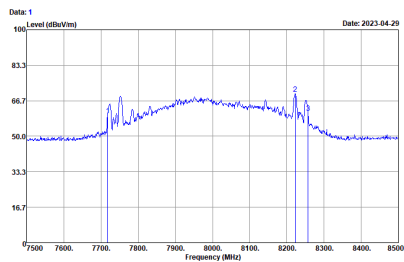
Mode 5



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000GHz VBW:3000.000GHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

	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	7717.00	67.08	-----	-----	50.31	36.90	15.90	36.03	---	--- Peak
2	7752.00	76.78	-----	-----	60.03	36.90	15.52	36.07	---	--- Peak
3	8254.00	67.24	-----	-----	50.44	37.01	16.48	36.69	---	--- Peak

Mode 6



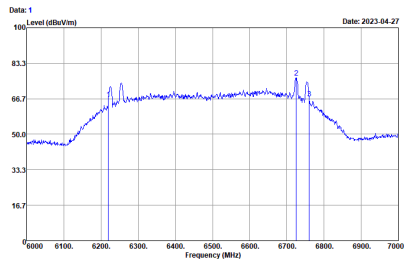
Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000GHz VBW:3000.000GHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : Y with NB

	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	7718.00	59.88	-----	-----	43.11	36.90	15.90	36.03	---	--- Peak
2	8223.00	69.87	-----	-----	53.07	37.00	16.44	36.64	---	--- Peak
3	8257.00	60.87	-----	-----	44.07	37.01	16.48	36.69	---	--- Peak



UWB Bandwidth

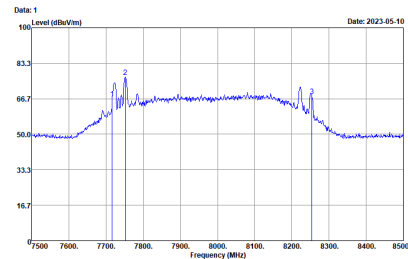
Mode 7



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 2
Payload Length : 0
Plane : X with NB

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	6220.00	66.59	-----	51.91	34.98	14.22	34.52	---	Peak
2	6725.00	76.49	-----	60.26	36.45	14.80	35.82	---	Peak
3	6760.00	66.90	-----	50.62	36.50	14.84	35.86	---	Peak

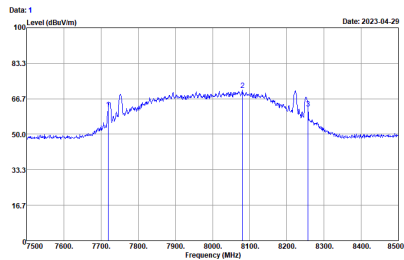
Mode 8



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : 0
Plane : X with NB

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	7717.00	66.84	-----	50.07	36.90	15.90	36.03	---	Peak
2	7752.00	76.80	-----	60.05	36.90	15.52	36.07	---	Peak
3	8254.00	68.02	-----	51.22	37.01	16.48	36.69	---	Peak

Mode 9



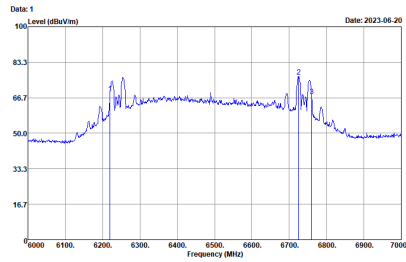
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Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

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	7719.00	61.83	-----	45.06	36.90	15.90	36.03	---	Peak
2	8081.00	70.89	-----	54.08	36.90	16.31	36.46	---	Peak
3	8257.00	62.12	-----	45.32	37.01	16.48	36.69	---	Peak



UWB Bandwidth

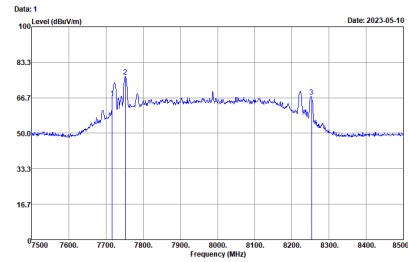
Mode 10



Site : 03CH23-HY
Condition : 3m LEZ05A18EN_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 3
Payload Length : 150
Plane : X with NB

	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	6220.00	68.86	-----	-----	54.18	34.98	14.22	34.52	---	Peak
2	6725.00	76.71	-----	-----	60.48	36.45	14.88	35.82	---	Peak
3	6760.00	67.51	-----	-----	51.23	36.98	14.84	35.86	---	Peak

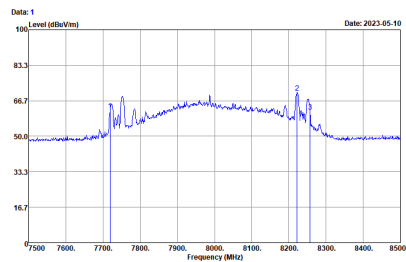
Mode 11



Site : 03CH23-HY
Condition : 3m LEZ05A18EN_230705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 3
Payload Length : 150
Plane : Z with NB

	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	7717.00	66.64	-----	-----	49.87	36.90	15.90	36.03	---	Peak
2	7752.00	76.55	-----	-----	59.80	36.90	15.92	36.07	---	Peak
3	8253.00	67.10	-----	-----	50.29	37.01	16.48	36.68	---	Peak

Mode 12



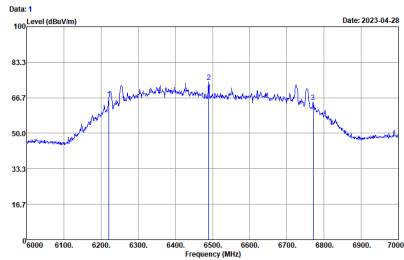
Site : 03CH23-HY
Condition : 3m LEZ05A18EN_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 3
Payload Length : 150
Plane : Y with NB

	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	7719.00	62.13	-----	-----	45.36	36.90	15.90	36.03	---	Peak
2	8222.00	70.59	-----	-----	53.79	37.00	16.44	36.64	---	Peak
3	8257.00	61.59	-----	-----	44.79	37.01	16.48	36.69	---	Peak



UWB Bandwidth

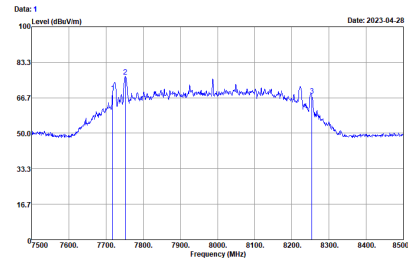
Mode 13



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH05
Modulation : HPRF
Config ID : -4
Payload Length : 150
Plane : X with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	6221.00	66.17	-----	-----	51.49	34.98	14.22	34.52	---	Peak
2	6498.00	74.15	-----	-----	58.31	36.10	14.51	34.77	---	Peak
3	6771.00	64.50	-----	-----	48.22	36.50	14.85	35.87	---	Peak

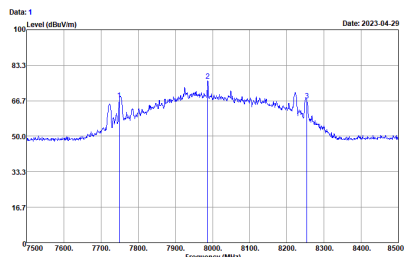
Mode 14



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : -4
Payload Length : 150
Plane : X with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7718.00	69.00	-----	-----	52.23	36.90	15.90	36.03	---	Peak
2	7752.00	76.61	-----	-----	59.86	36.90	15.92	36.67	---	Peak
3	8254.00	67.72	-----	-----	50.92	37.01	16.48	36.69	---	Peak

Mode 15



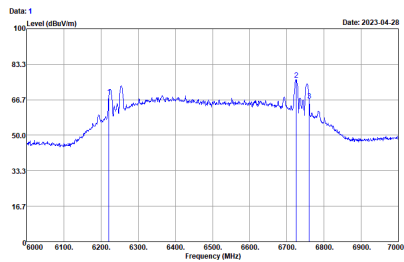
Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : -4
Payload Length : 150
Plane : Y with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	7749.00	67.00	-----	-----	50.24	36.90	15.92	36.06	---	Peak
2	7987.00	75.99	-----	-----	59.11	37.00	16.22	36.34	---	Peak
3	8254.00	66.86	-----	-----	50.06	37.01	16.48	36.69	---	Peak



UWB Bandwidth

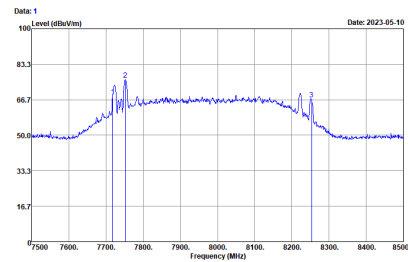
Mode 16



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH05
Modulation : HPRF
Config ID : 5
Payload Length : 0
Plane : X with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	dB	cm	deg	
1	6221.00	68.28	-----	53.60	34.98	14.22	34.52	---	---	Peak
2	6725.00	76.13	-----	59.90	36.45	14.80	35.82	---	---	Peak
3	6760.00	66.30	-----	50.02	36.50	14.84	35.86	---	---	Peak

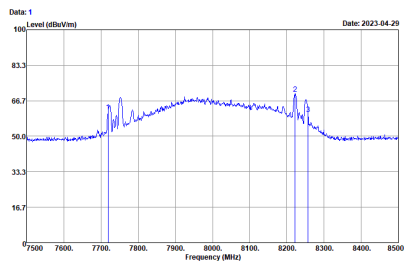
Mode 17



Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 5
Payload Length : 0
Plane : Z with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	dB	cm	deg	
1	7718.00	68.36	-----	51.59	36.90	15.90	36.03	---	---	Peak
2	7752.00	76.17	-----	59.42	36.90	15.92	36.07	---	---	Peak
3	8253.00	66.76	-----	49.95	37.01	16.48	36.68	---	---	Peak

Mode 18



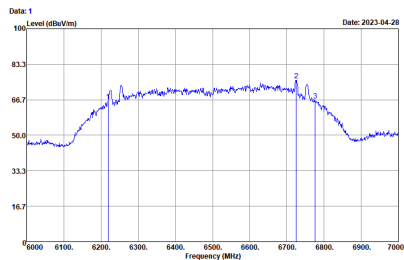
Site : 03CH23-HY
Condition : 3m LEZC05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 5
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	dB	cm	deg	
1	7719.00	61.44	-----	44.67	36.90	15.90	36.03	---	---	Peak
2	8222.00	69.88	-----	53.08	37.00	16.44	36.64	---	---	Peak
3	8257.00	60.54	-----	43.74	37.01	16.48	36.69	---	---	Peak



UWB Bandwidth

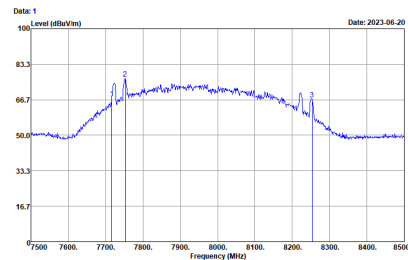
Mode 19



Site : 03CH23-HY
Condition : 3m LEZ05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH05
Modulation : HPRF
Config ID : 6
Payload Length : 0
Plane : X with NB

	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	6219.00	66.10	-----	-----	51.42	34.98	14.22	34.52	---	Peak
2	6725.00	75.90	-----	-----	59.67	36.45	14.88	35.82	---	Peak
3	6776.00	66.35	-----	-----	50.00	36.50	14.86	35.87	---	Peak

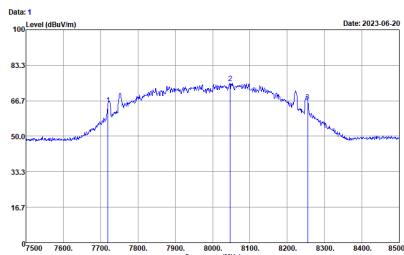
Mode 20



Site : 03CH23-HY
Condition : 3m LEZ05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 6
Payload Length : 0
Plane : X with NB

	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	7717.00	67.29	-----	-----	50.52	36.90	15.90	36.03	---	Peak
2	7752.00	76.64	-----	-----	59.89	36.90	15.92	36.07	---	Peak
3	8253.00	66.83	-----	-----	50.02	37.01	16.48	36.68	---	Peak

Mode 21



Site : 03CH23-HY
Condition : 3m LEZ05A18EN_L230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 6
Payload Length : 0
Plane : Y with NB

	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	7720.00	64.97	-----	-----	48.20	36.90	15.90	36.03	---	Peak
2	8047.00	74.93	-----	-----	58.15	36.91	16.28	36.41	---	Peak
3	8255.00	66.39	-----	-----	49.59	37.01	16.48	36.69	---	Peak

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

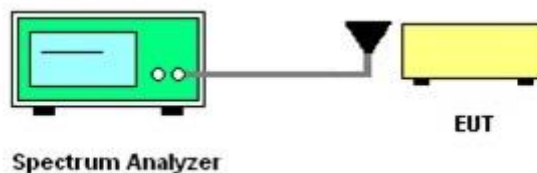
Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedure

Follow the test step as below:

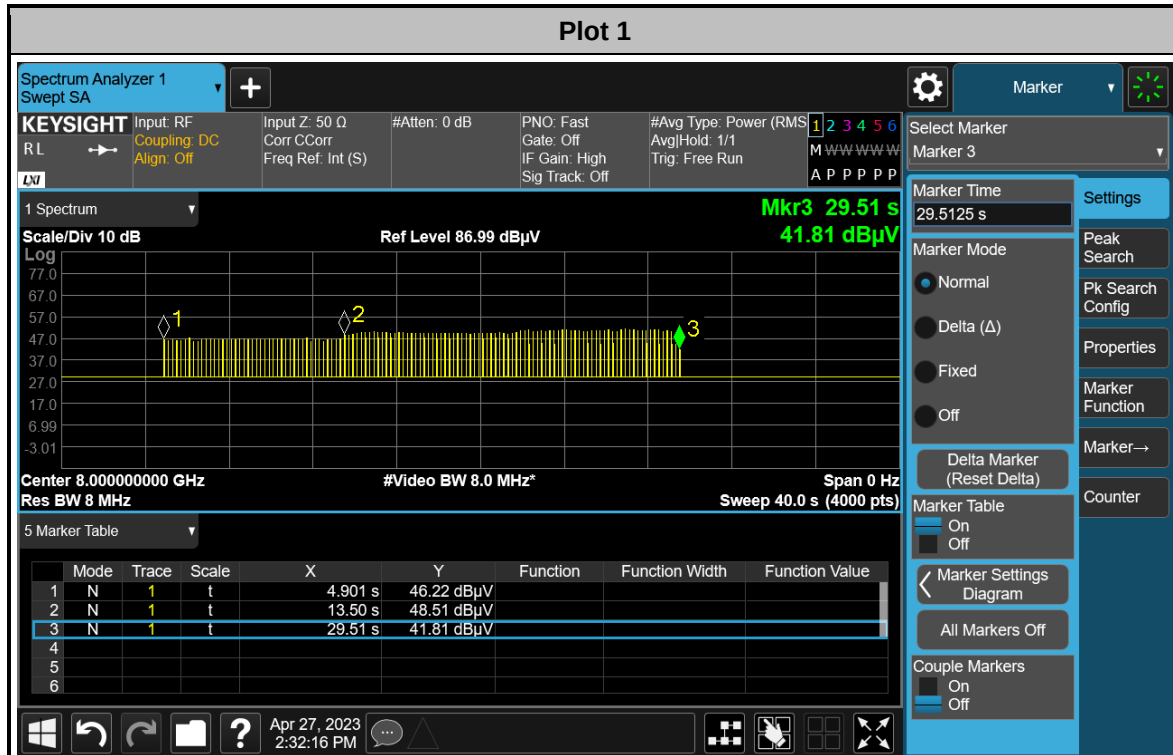
1. Turn on both EUT and companion receiver.
2. Set the EUT to TX mode, and EUT starts polling.
3. Set the companion receiver to associate EUT and EUT starts to transmit.
4. Disable the RX function of the companion receiver to disassociate the EUT.
5. Check if EUT stop transmitting once step 4 is made.

3.3.4 Test Setup





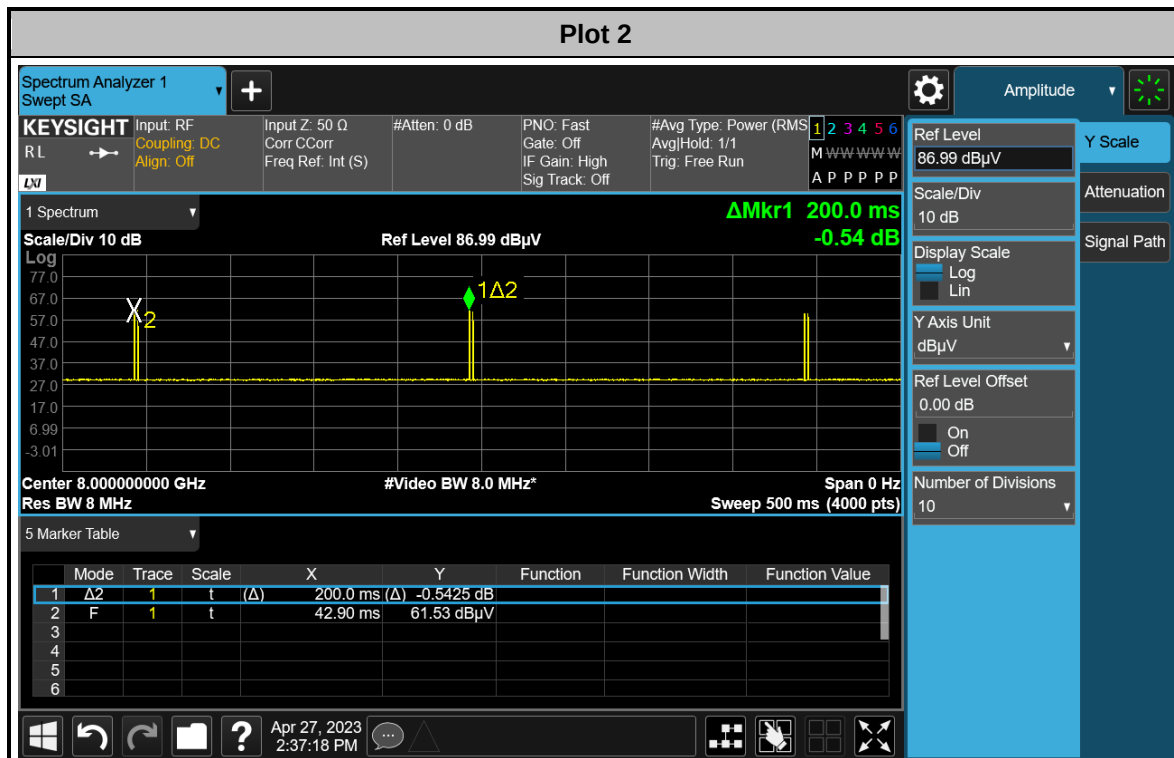
3.3.5 Test Result



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.

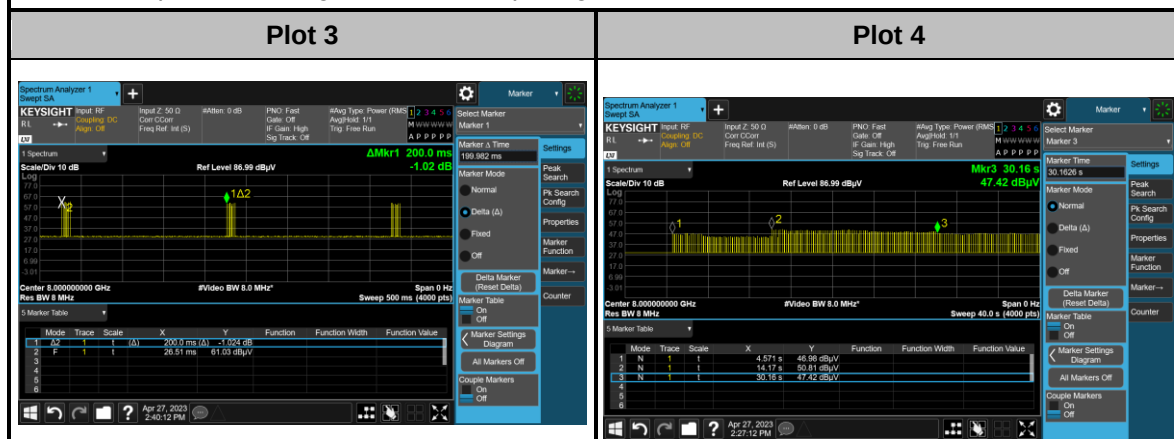
M3: Disable the TX function of EUT. EUT stops transmitting and polling.



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
$P_{eip} = 0 \text{ dBm/50MHz}$

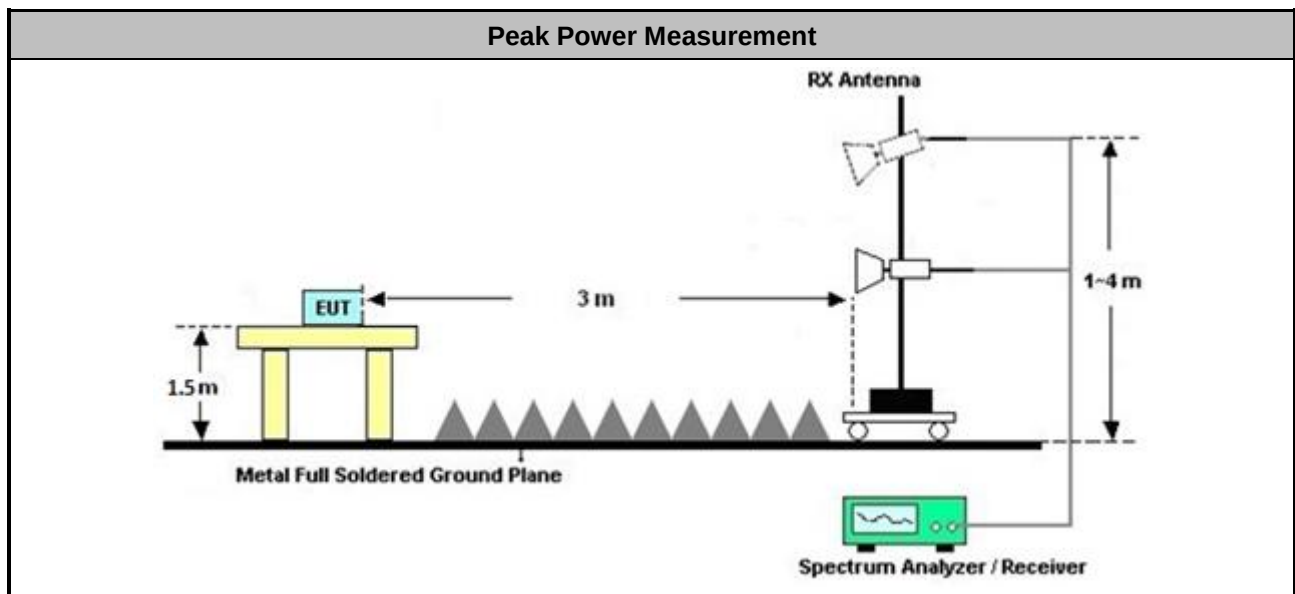
3.4.2 Measuring Instruments

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

3.4.3 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

3.4.4 Test Setup



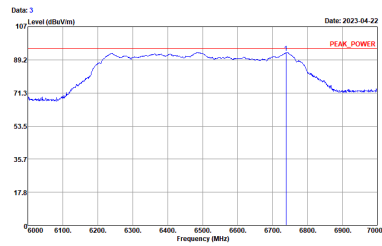
3.4.5 Test Result of Peak Power Measurement

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	6739	93.10	-2.13	0	-2.13	Pass	H
2	7737	94.89	-0.34	0	-0.34	Pass	H
3	7983	93.18	-2.05	0	-2.05	Pass	H
4	6484	91.59	-3.64	0	-3.64	Pass	H
5	7738	95.07	-0.16	0	-0.16	Pass	H
6	7983	92.56	-2.67	0	-2.67	Pass	H
7	6739	94.96	-0.27	0	-0.27	Pass	H
8	7736	94.40	-0.33	0	-0.33	Pass	H
9	8240	89.35	-5.88	0	-5.88	Pass	H
10	6740	94.86	-0.37	0	-0.37	Pass	H
11	7738	94.66	-0.57	0	-0.57	Pass	V
12	8239	89.53	-5.70	0	-5.70	Pass	H
13	6740	91.69	-3.54	0	-3.54	Pass	H
14	7738	94.82	-0.41	0	-0.41	Pass	H
15	8240	89.22	-6.01	0	-6.01	Pass	H
16	6742	95.12	-0.11	0	-0.11	Pass	H
17	7738	94.65	-0.58	0	-0.58	Pass	V
18	8238	88.70	-6.53	0	-6.53	Pass	H
19	6741	95.00	-0.23	0	-0.23	Pass	H
20	7736	95.05	-0.18	0	-0.18	Pass	V
21	8230	90.21	-5.02	0	-5.02	Pass	H
Note 1: EIRP [dBm] = E-Field [dBuV/m] - 95.23; Note 2: Measurement worst emissions of receive antenna polarization.							



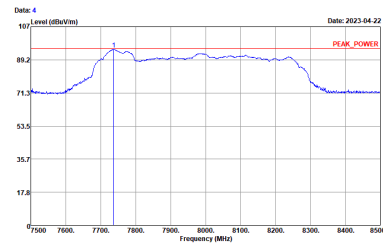
Pre-located worst frequency Plots

Mode 1



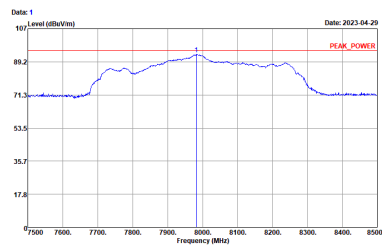
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A1BEN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: BPRF									
Config ID	: 0									
Payload Length	: 125									
Pole	: X with NB									
	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	6739.00	93.10	-2.13	95.23	76.84	36.48	14.81	35.83	---	--- Average

Mode 2



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A1BEN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 0									
Payload Length	: 125									
Pole	: X with NB									
	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	7737.00	94.89	-0.34	95.23	78.13	36.90	15.91	36.05	---	--- Average

Mode 3

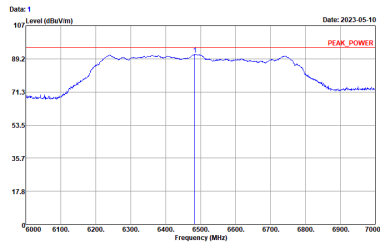


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A1BEN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 0									
Payload Length	: 125									
Pole	: Y with NB									
	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	7983.00	93.18	-2.05	95.23	76.29	37.00	16.22	36.33	---	--- Peak



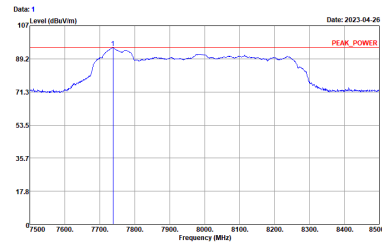
Pre-located worst frequency Plots

Mode 4



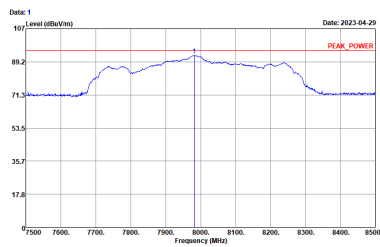
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: BPRF									
Config ID	: 1									
Payload Length	: 125									
Polar	: X with NB									
	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	6484.00	91.59	-3.64	95.23	75.76	36.10	14.50	34.77	---	Peak

Mode 5



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 1									
Payload Length	: 125									
Polar	: X with NB									
	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	7738.00	95.07	-0.16	95.23	78.31	36.90	15.91	36.05	---	Average

Mode 6

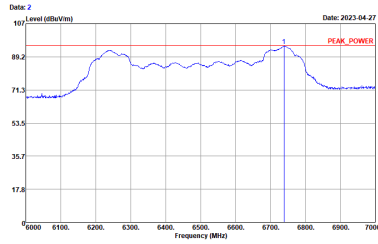


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 1									
Payload Length	: 125									
Polar	: Y with NB									
	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	7983.00	92.56	-2.67	95.23	75.67	37.00	16.22	36.33	---	Average



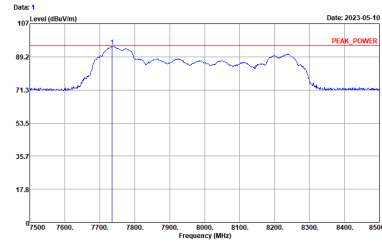
Pre-located worst frequency Plots

Mode 7



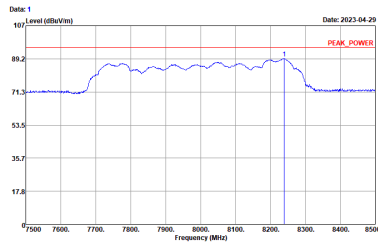
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 2									
Payload Length	: 0									
Polar	: X with NB									
	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	6739.00	94.96	-0.27	95.23	78.70	36.48	14.81	35.83	---	Peak

Mode 8



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 2									
Payload Length	: 0									
Polar	: X with NB									
	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	7736.00	94.90	-0.33	95.23	78.14	36.90	15.91	36.05	---	Peak

Mode 9

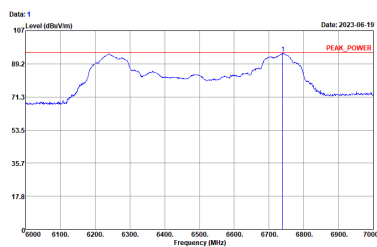


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPRF									
Config ID	: 2									
Payload Length	: N/A									
Polar	: Y with NB									
	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	8240.00	89.35	-5.88	95.23	72.56	37.00	16.46	36.67	---	Peak



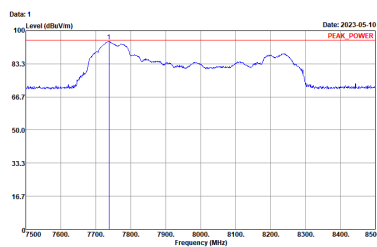
Pre-located worst frequency Plots

Mode 10



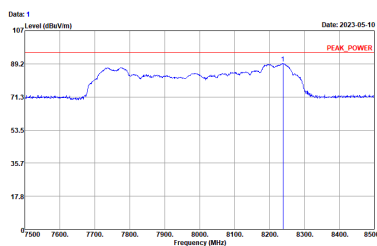
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
Project	: 210206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 3									
Payload Length	: 150									
Plane	: X with NB									
	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	6748.80	94.86	-0.37	95.23	78.59	36.48	14.82	35.03	---	Peak

Mode 11



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 VERTICAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:3.000sec									
Project	: 210206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 3									
Payload Length	: 150									
Plane	: Z with NB									
	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	7738.80	94.66	-0.57	95.23	77.90	36.90	15.91	36.05	---	Peak

Mode 12

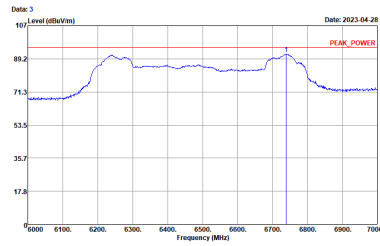


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
Project	: 210206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 3									
Payload Length	: 150									
Plane	: Y with NB									
	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	8239.80	89.53	-5.78	95.23	72.74	37.80	16.46	36.67	---	Average



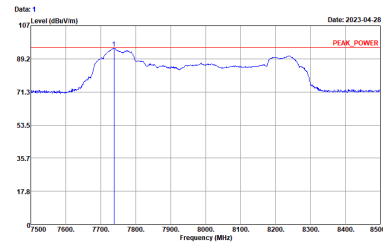
Pre-located worst frequency Plots

Mode 13



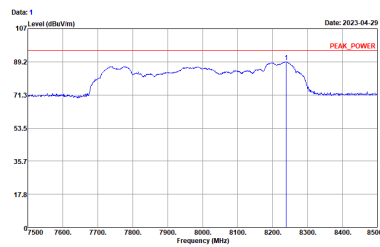
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 4									
Payload Length	: 150									
Plane	: X with NB									
	Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	6740.00	91.69	-3.54	95.23	75.42	36.48	14.82	35.83	---	Peak

Mode 14



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 4									
Payload Length	: 150									
Plane	: X with NB									
	Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	7738.00	94.82	-0.41	95.23	78.06	36.90	15.91	36.05	---	Peak

Mode 15

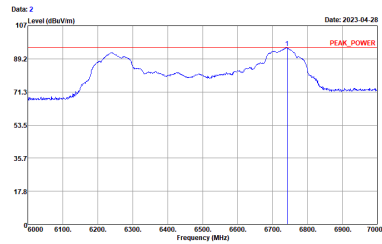


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 4									
Payload Length	: 150									
Plane	: Y with NB									
	Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	8240.00	89.22	-6.01	95.23	72.43	37.00	16.46	36.67	---	Average



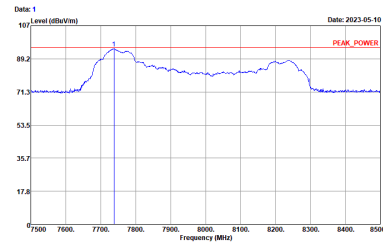
Pre-located worst frequency Plots

Mode 16



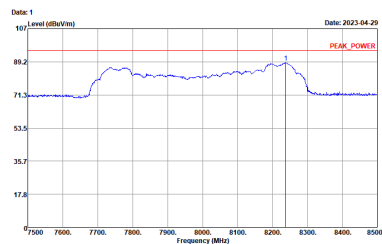
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: HPRF									
Config ID	: 5									
Payload Length	: 0									
Polar	: X with NB									
	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	6742.00	95.12	-0.11	95.23	78.86	36.48	14.82	35.84	---	Peak

Mode 17



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 VERTICAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 5									
Payload Length	: 0									
Polar	: Z with NB									
	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	7738.00	94.65	-0.58	95.23	77.89	36.90	15.91	36.05	---	Peak

Mode 18

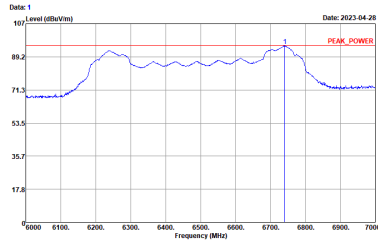


Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 5									
Payload Length	: N/A									
Polar	: Y with NB									
	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	8238.00	88.70	-6.53	95.23	71.90	37.00	16.46	36.66	---	Average



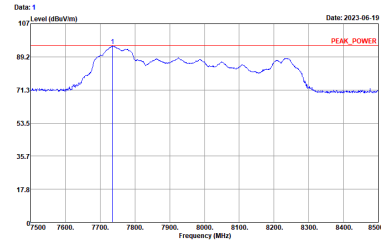
Pre-located worst frequency Plots

Mode 19



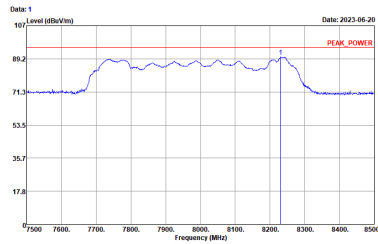
Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Polar	: X with NB									
	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	6711.00	95.00	-0.23	95.23	78.74	36.48	14.82	35.84	---	--- Peak

Mode 20



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Polar	: X with NB									
	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	7736.00	95.05	-0.18	95.23	78.29	36.90	15.91	36.05	---	--- Peak

Mode 21



Site	: 03CH23-HY									
Condition	: PEAK_POWER 3m LEZC05A18EN_230705 HORIZONTAL									
	: RBW:50000.000KHz VBW:80000.000KHz SWT:1.000sec									
	: .									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Polar	: Y with NB									
	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	8230.00	90.21	-5.02	95.23	73.41	37.00	16.45	36.65	---	--- 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

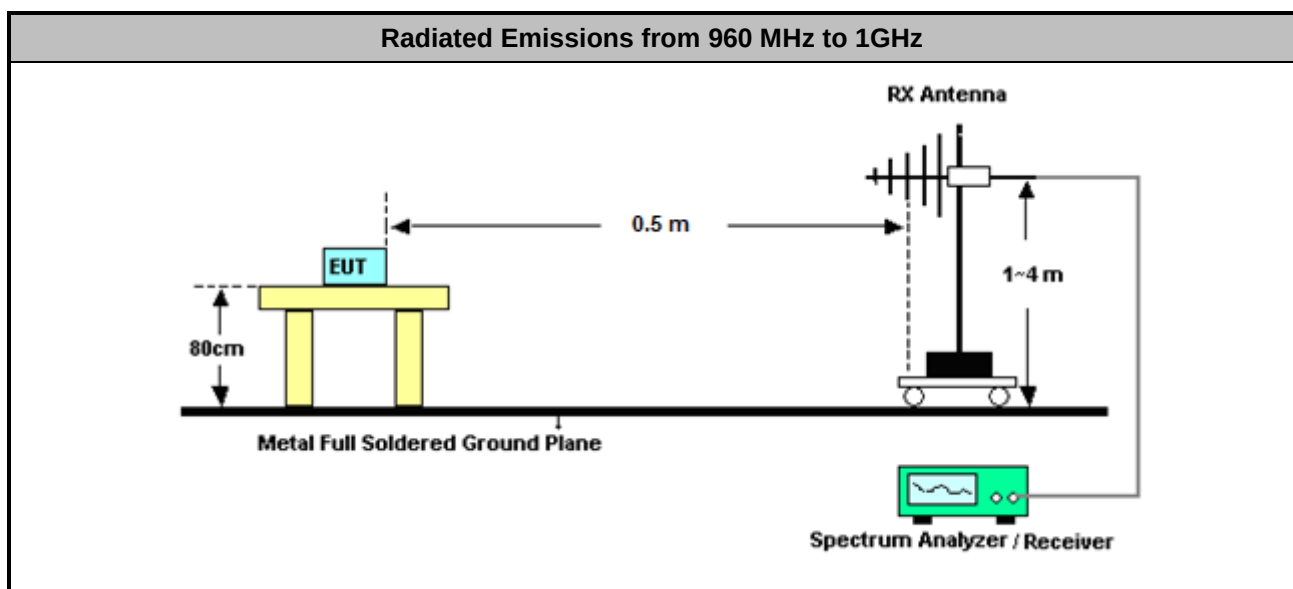
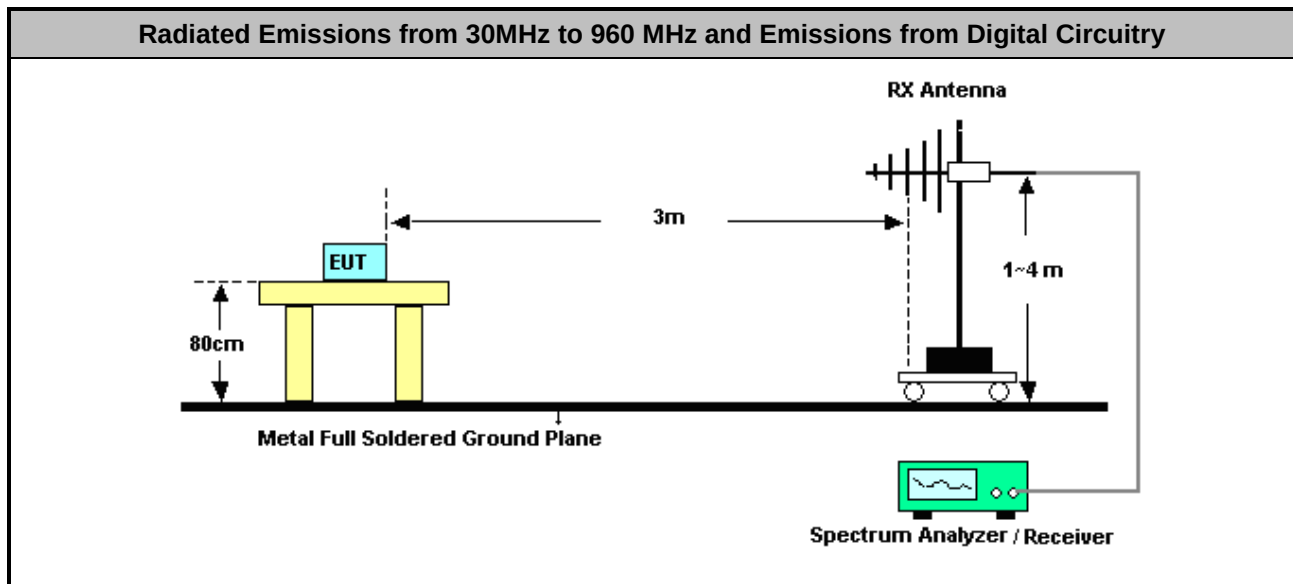
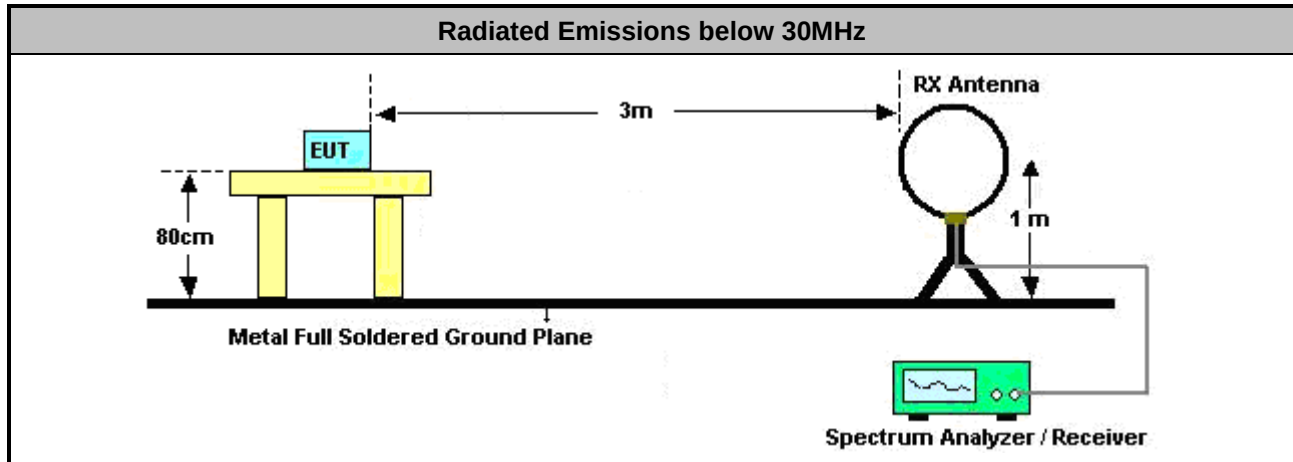
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

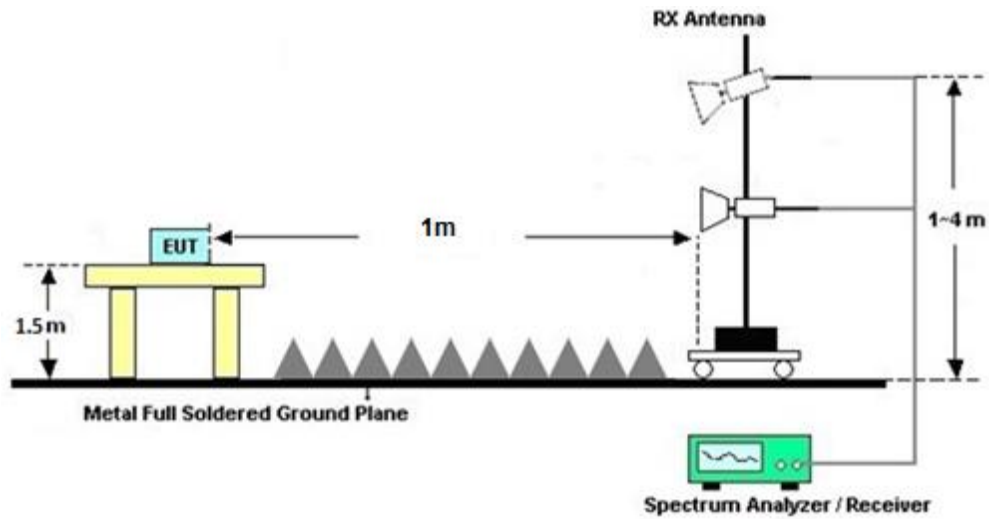
Test Method for Radiated Emissions above 960MHz	
■ Radiated Emissions above 960MHz	
■	Refer as ANSI C63.10, clause 10.3.1 for radiated measurement procedure testing.
■	Refer as ANSI C63.10, clause 10.3.2 for measurement distance is 3m. In some cases, it may be necessary to measure the radiated UWB emissions at a closer distance to obtain enough signal and margin to overcome the measurement system noise floor. Distance extrapolation factor = $20 \log(\text{test distance [X m]}/\text{specific distance [3 m]})$ (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 $\geq$ 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 $20 \log(\text{dwell time}/100 \text{ ms})$. Average emission = peak emission + $20 \log(\text{duty cycle})$.
■	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.	

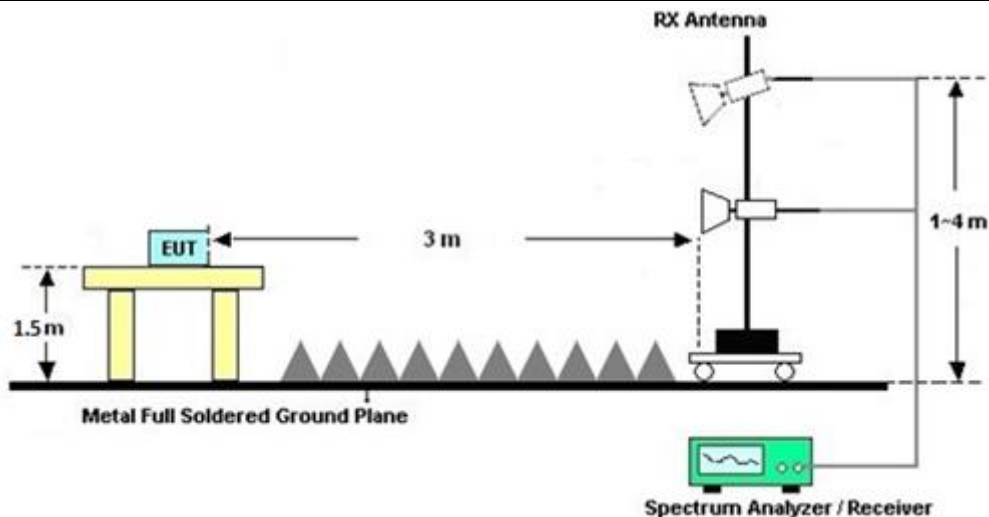
3.5.4 Test Setup

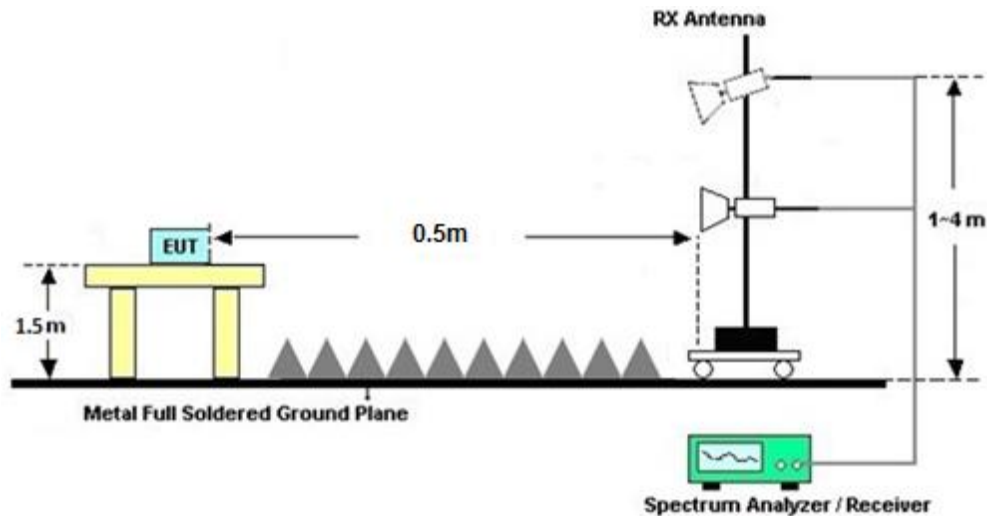
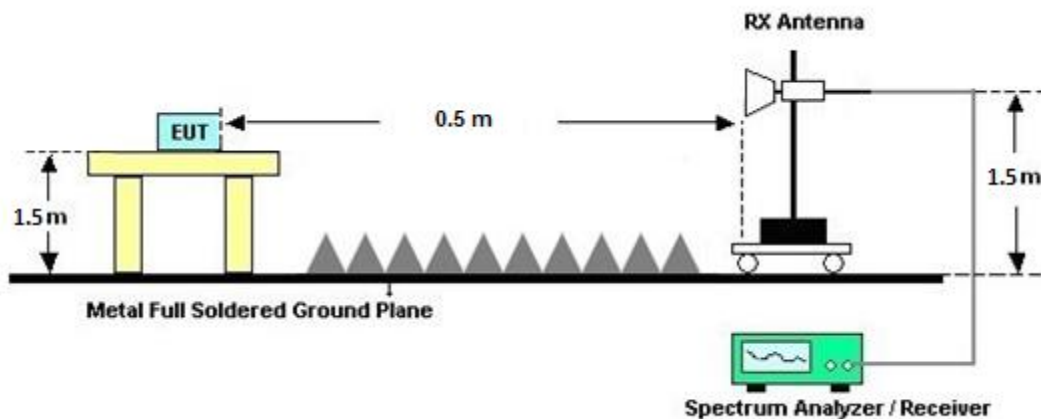


Radiated Emissions from 1GHz to 1.61 GHz



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.

3.5.5 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	6388	53.76	-41.3	53.93	-0.17	Pass	H
2	8136	52.69	-41.3	53.93	-1.24	Pass	H
3	7956	53.66	-41.3	53.93	-0.27	Pass	H
4	6388	53.62	-41.3	53.93	-0.31	Pass	H
5	8089	53.18	-41.3	53.93	-0.75	Pass	H
6	7956	53.69	-41.3	53.93	-0.24	Pass	H
7	6615	53.76	-41.3	53.93	-0.17	Pass	H
8	8078	52.58	-41.3	53.93	-1.35	Pass	H
9	8069	53.61	-41.3	53.93	-0.32	Pass	H
10	6365	53.68	-41.3	53.93	-0.25	Pass	H
11	8071	53.35	-41.3	53.93	-0.58	Pass	V
12	7958	53.70	-41.3	53.93	-0.23	Pass	H
13	6351	53.80	-41.3	53.93	-0.13	Pass	H
14	8028	53.53	-41.3	53.93	-0.40	Pass	H
15	7946	53.50	-41.3	53.93	-0.43	Pass	H
16	6365	53.74	-41.3	53.93	-0.19	Pass	H
17	8063	53.75	-41.3	53.93	-0.18	Pass	V
18	7938	53.71	-41.3	53.93	-0.22	Pass	H
19	6630	53.80	-41.3	53.93	-0.13	Pass	H
20	7942	53.29	-41.3	53.93	-0.64	Pass	V
21	8053	53.82	-41.3	53.93	-0.11	Pass	H



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

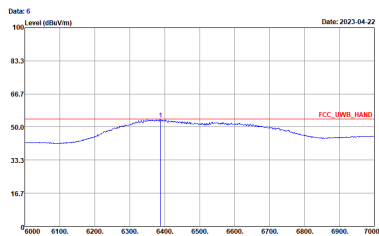
Polarization

H

Test Distance

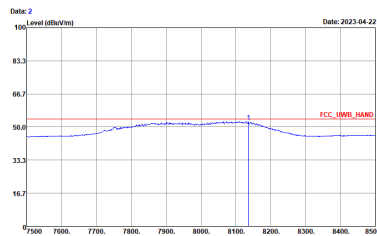
3m

Mode 1



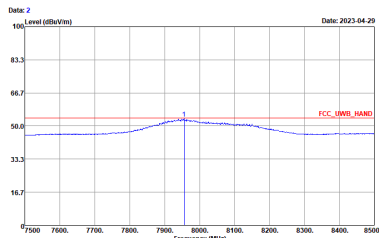
Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: BPSK									
Config ID	: 0									
Payload Length	: 125									
Plane	: X with NB									
	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	6388.00	53.76	-0.17	53.93	38.02	36.83	14.39	34.68	---	--- Average

Mode 2



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPSK									
Config ID	: 0									
Payload Length	: 125									
Plane	: X with NB									
	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	8136.00	52.69	-1.24	53.93	35.79	37.07	16.36	36.53	---	--- Average

Mode 3



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPSK									
Config ID	: 0									
Payload Length	: 125									
Plane	: Y with NB									
	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	7956.00	53.66	-0.27	53.93	36.78	37.00	16.18	36.30	---	--- Average



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

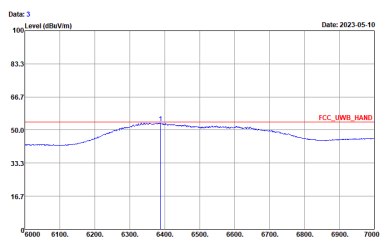
Polarization

H

Test Distance

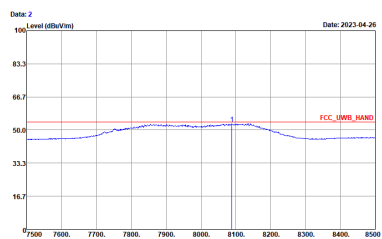
3m

Mode 4



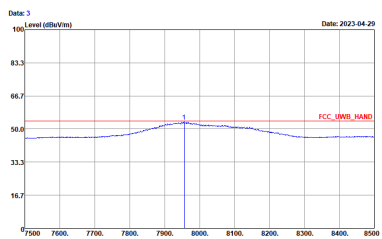
Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: BPSK									
Config ID	: 1									
Payload Length	: 125									
Plane	: X with NB									
	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	6388.00	53.62	-0.31	53.93	37.88	36.83	14.39	34.68	---	--- Average

Mode 5



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPSK									
Config ID	: 1									
Payload Length	: 125									
Plane	: X with NB									
	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	8089.00	53.18	-0.75	53.93	36.35	36.98	16.32	36.47	---	--- Average

Mode 6



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BPSK									
Config ID	: 1									
Payload Length	: 125									
Plane	: Y with NB									
	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	7956.00	53.69	-0.24	53.93	36.81	37.00	16.18	36.30	---	--- Average



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

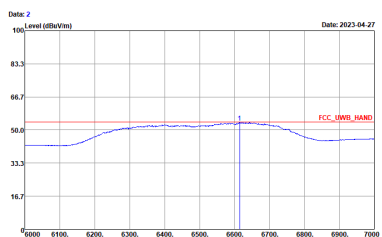
Polarization

H

Test Distance

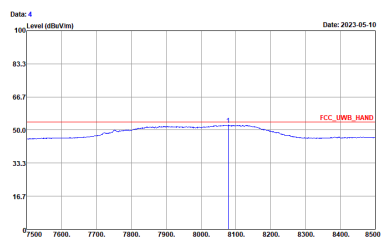
3m

Mode 7



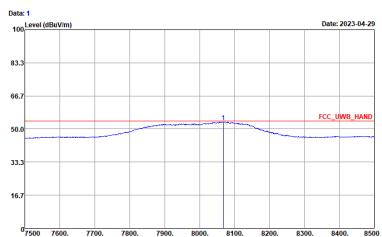
Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: BRPF									
Config ID	: 2									
Payload Length	: 0									
Plane	: X with NB									
	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	6615.00	53.76	-0.17	53.93	37.73	36.27	14.66	34.90	---	--- Average

Mode 8



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BRPF									
Config ID	: 2									
Payload Length	: 0									
Plane	: X with NB									
	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	8078.00	52.58	-1.35	53.93	35.76	36.96	16.31	36.45	---	--- Average

Mode 9



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000kHz VBW:3000.000kHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: BRPF									
Config ID	: 2									
Payload Length	: N/A									
Plane	: Y with NB									
	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	8069.00	53.61	-0.32	53.93	36.81	36.94	16.30	36.44	---	--- Average



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

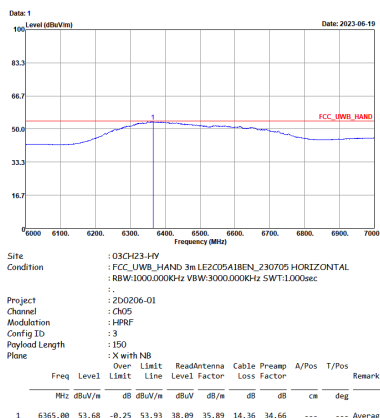
Polarization

H for Mode 10 and Mode 12
V for Mode 11

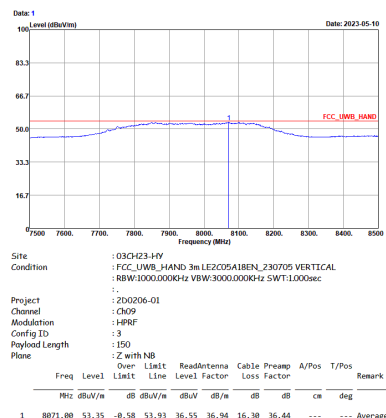
Test Distance

3m

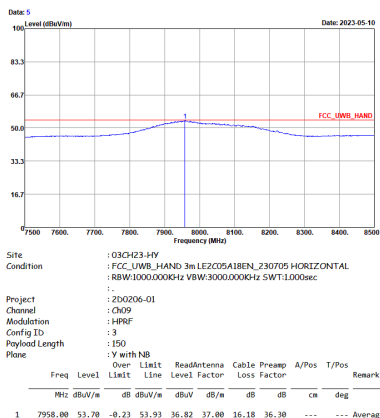
Mode 10



Mode 11



Mode 12





Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

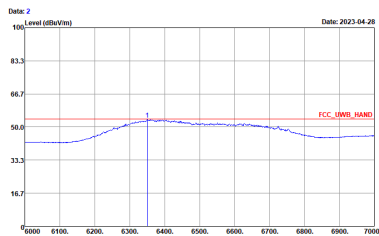
Polarization

H

Test Distance

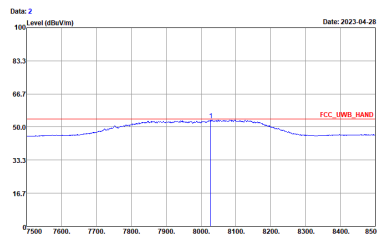
3m

Mode 13



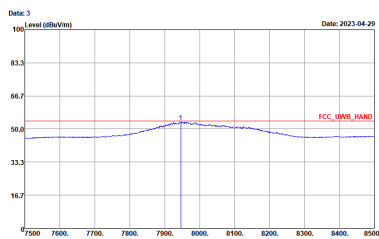
Site		: 03CH23-HY									
Condition		: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
		: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project		: 2D0206-01									
Channel		: CH09									
Modulation		: HPRF									
Config ID		: 4									
Payload Length		: 150									
Plane		: X with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark			
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm				
1	6351.00	53.80	-0.13	53.93	38.28	35.81	14.35	34.64	---	---	Average

Mode 14



Site		: 03CH23-HY									
Condition		: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
		: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project		: 2D0206-01									
Channel		: CH09									
Modulation		: HPRF									
Config ID		: 4									
Payload Length		: 150									
Plane		: X with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark			
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm				
1	8028.00	53.53	-0.40	53.93	36.71	36.94	16.27	36.39	---	---	Average

Mode 15



Site		: 03CH23-HY									
Condition		: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
		: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project		: 2D0206-01									
Channel		: CH09									
Modulation		: HPRF									
Config ID		: 4									
Payload Length		: 150									
Plane		: Y with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable Preamp	A/Pos	T/Pos	Remark			
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm				
1	7946.00	53.50	-0.43	53.93	36.63	37.00	16.16	36.29	---	---	Average



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

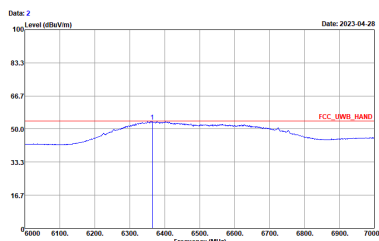
Polarization

H for Mode 16 and Mode 18
V for Mode 17

Test Distance

3m

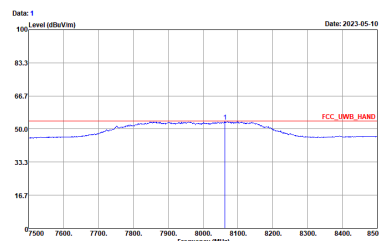
Mode 16



Site : 03CH23-HY
Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec
:
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 5
Payload Length : 0
Plane : X with NB

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg	
1	6365.00	53.74	-0.19	53.93	38.15	35.89	14.36	34.66	--- Average

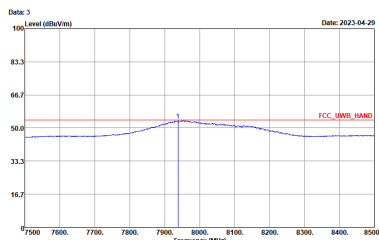
Mode 17



Site : 03CH23-HY
Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec
:
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 5
Payload Length : 0
Plane : Z with NB

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg	
1	8063.00	53.75	-0.18	53.93	36.95	36.93	16.30	36.43	--- Average

Mode 18



Site : 03CH23-HY
Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec
:
Project : 2D0206-01
Channel : CH09
Modulation : HPRF
Config ID : 5
Payload Length : N/A
Plane : Y with NB

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg	
1	7938.00	53.71	-0.22	53.93	36.84	37.00	16.15	36.28	--- Average



Radiated Emissions (Fundamental)

Operating Function

Notebook Mode

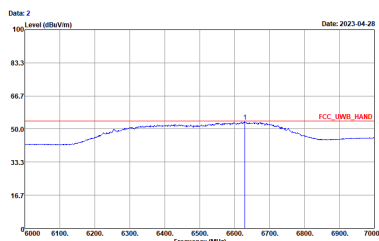
Polarization

H for Mode 19 and Mode 21
V for Mode 20

Test Distance

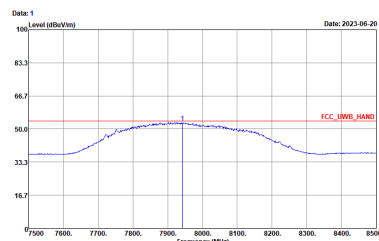
3m

Mode 19



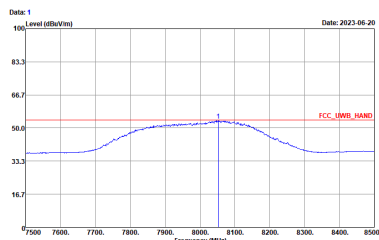
Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH05									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Plane	: X with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg		
1	6630.00	53.00	-0.13	53.93	37.00	36.24	14.68	34.92	---	--- Average

Mode 20



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Plane	: X with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg		
1	7942.00	53.29	-0.64	53.93	36.41	37.00	16.16	36.28	---	--- Average

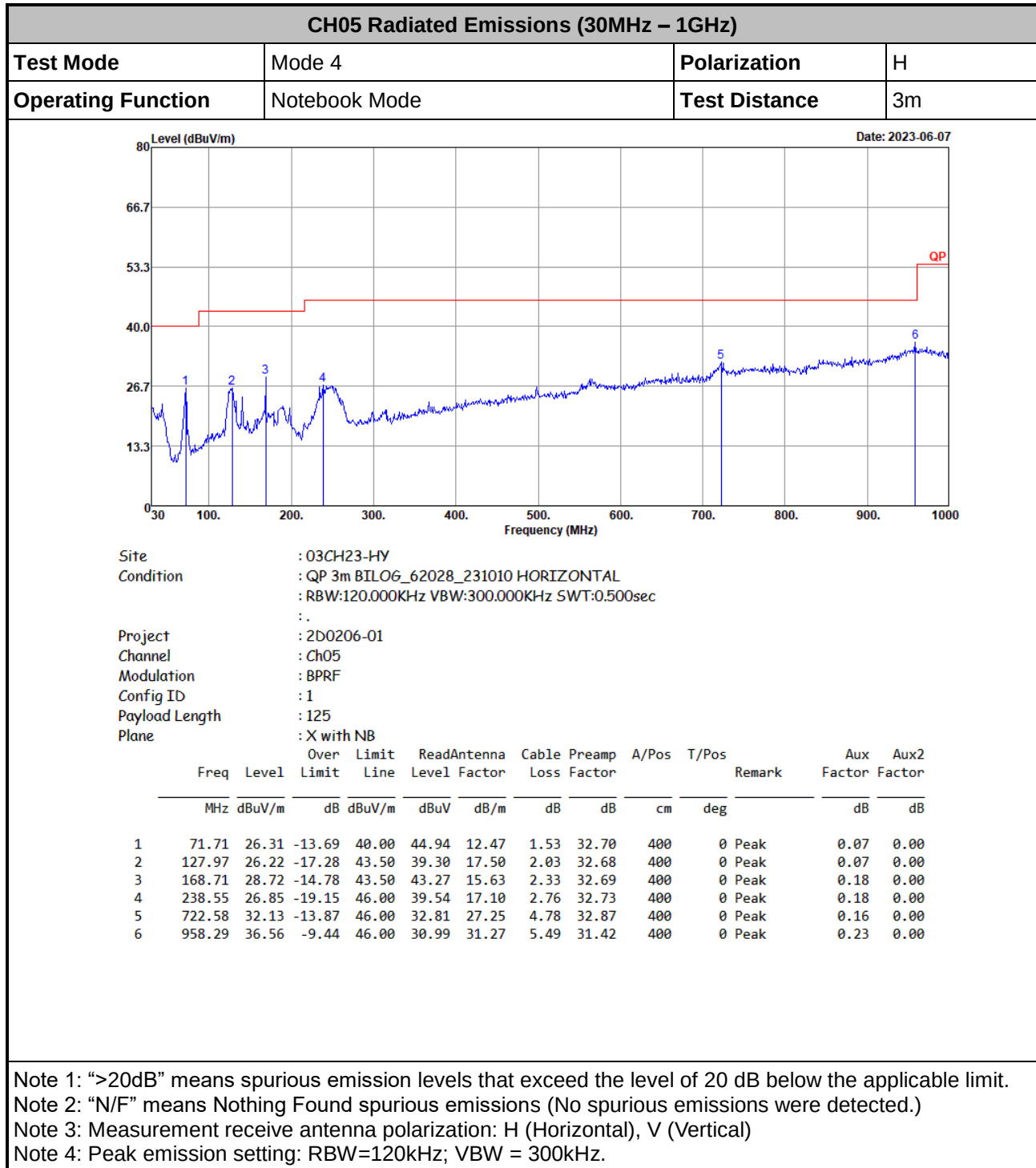
Mode 21



Site	: 03CH23-HY									
Condition	: FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL									
	: RBW:1000.000KHz VBW:3000.000KHz SWT:1.000sec									
Project	: 2D0206-01									
Channel	: CH09									
Modulation	: HPRF									
Config ID	: 6									
Payload Length	: 0									
Plane	: Y with NB									
Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	
MHz	dBuV/m	dB	dBuV/m	dB/m	dB	dB	cm	deg		
1	8053.00	53.02	-0.11	53.93	37.04	36.91	16.29	36.42	---	--- Average



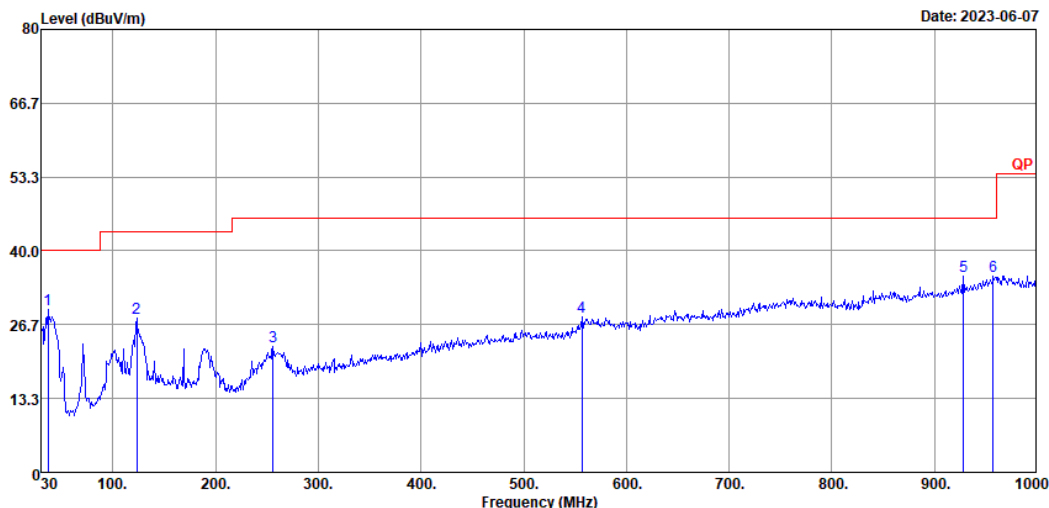
3.5.7 Radiated Emissions (30MHz – 1GHz)





CH05 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 4	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HV
Condition : QP 3m BILOG_62028_231010 VERTICAL
: RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
: .

Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

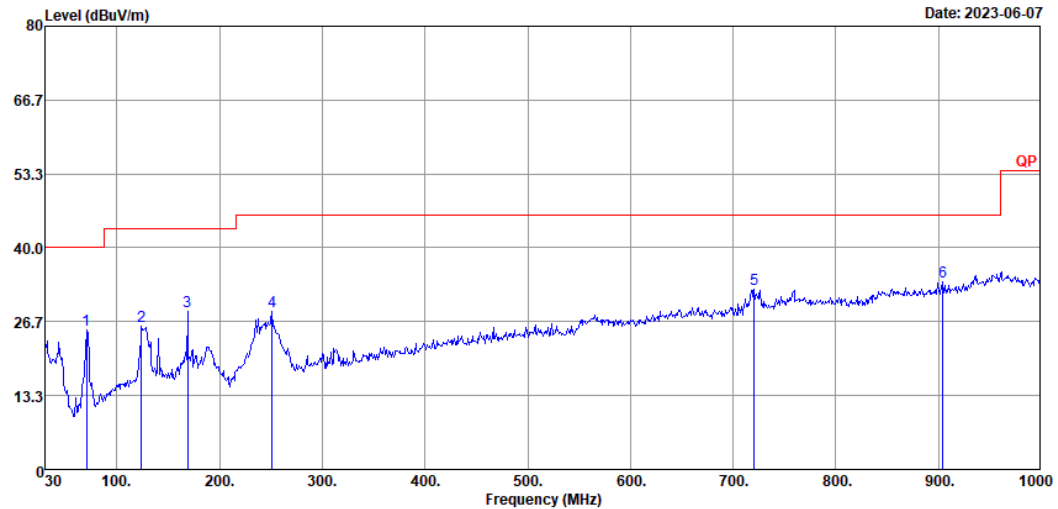
Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		dB	dB
1	36.79	29.48	-10.52	40.00	39.85	21.28	1.09	32.75	100	0 Peak	0.01	0.00
2	123.12	27.87	-15.63	43.50	41.01	17.48	1.98	32.68	100	0 Peak	0.08	0.00
3	256.01	22.66	-23.34	46.00	33.10	19.28	2.85	32.74	100	0 Peak	0.17	0.00
4	556.71	28.18	-17.82	46.00	30.79	26.04	4.20	33.00	100	0 Peak	0.15	0.00
5	928.22	35.37	-10.63	46.00	31.57	29.93	5.41	31.74	100	0 Peak	0.20	0.00
6	957.32	35.46	-10.54	46.00	29.92	31.25	5.49	31.43	100	0 Peak	0.23	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 9	Polarization	H
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HV
Condition : QP 3m BILOG_62028_231010 HORIZONTAL
: RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
: .
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		dB	dB
1	70.74	25.09	-14.91	40.00	43.89	12.32	1.52	32.71	400	0 Peak	0.07	0.00
2	124.09	25.89	-17.61	43.50	39.18	17.32	1.99	32.68	400	0 Peak	0.08	0.00
3	168.71	28.49	-15.01	43.50	43.04	15.63	2.33	32.69	400	0 Peak	0.18	0.00
4	251.16	28.49	-17.51	46.00	39.59	18.64	2.83	32.74	400	0 Peak	0.17	0.00
5	720.64	32.49	-13.51	46.00	33.21	27.21	4.78	32.87	400	0 Peak	0.16	0.00
6	903.97	33.78	-12.22	46.00	30.94	29.30	5.35	31.99	400	0 Peak	0.18	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.)

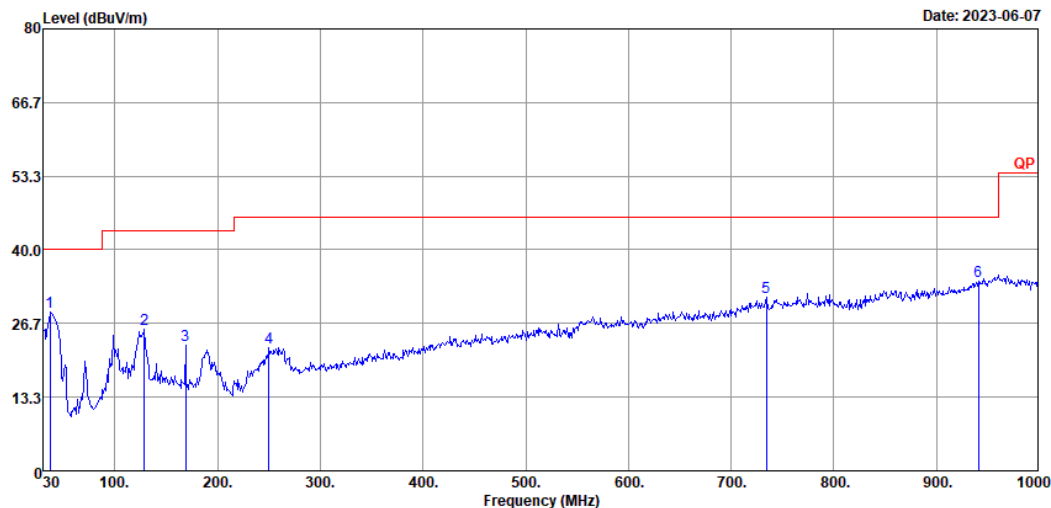
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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



CH09 Radiated Emissions (30MHz – 1GHz)

Test Mode	Mode 9	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY
Condition : QP 3m BILOG_62028_231010 VERTICAL
: RBW:120.000KHz VBW:300.000KHz SWT:0.500sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		dB	dB
1	36.79	28.77	-11.23	40.00	39.14	21.28	1.09	32.75	100	0 Peak	0.01	0.00
2	128.94	25.66	-17.84	43.50	38.74	17.50	2.03	32.68	100	0 Peak	0.07	0.00
3	168.71	22.71	-20.79	43.50	37.26	15.63	2.33	32.69	100	0 Peak	0.18	0.00
4	250.19	22.33	-23.67	46.00	33.56	18.52	2.82	32.74	100	0 Peak	0.17	0.00
5	734.22	31.43	-14.57	46.00	31.56	27.75	4.81	32.84	100	0 Peak	0.15	0.00
6	940.83	34.30	-11.70	46.00	29.62	30.63	5.45	31.61	100	0 Peak	0.21	0.00

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

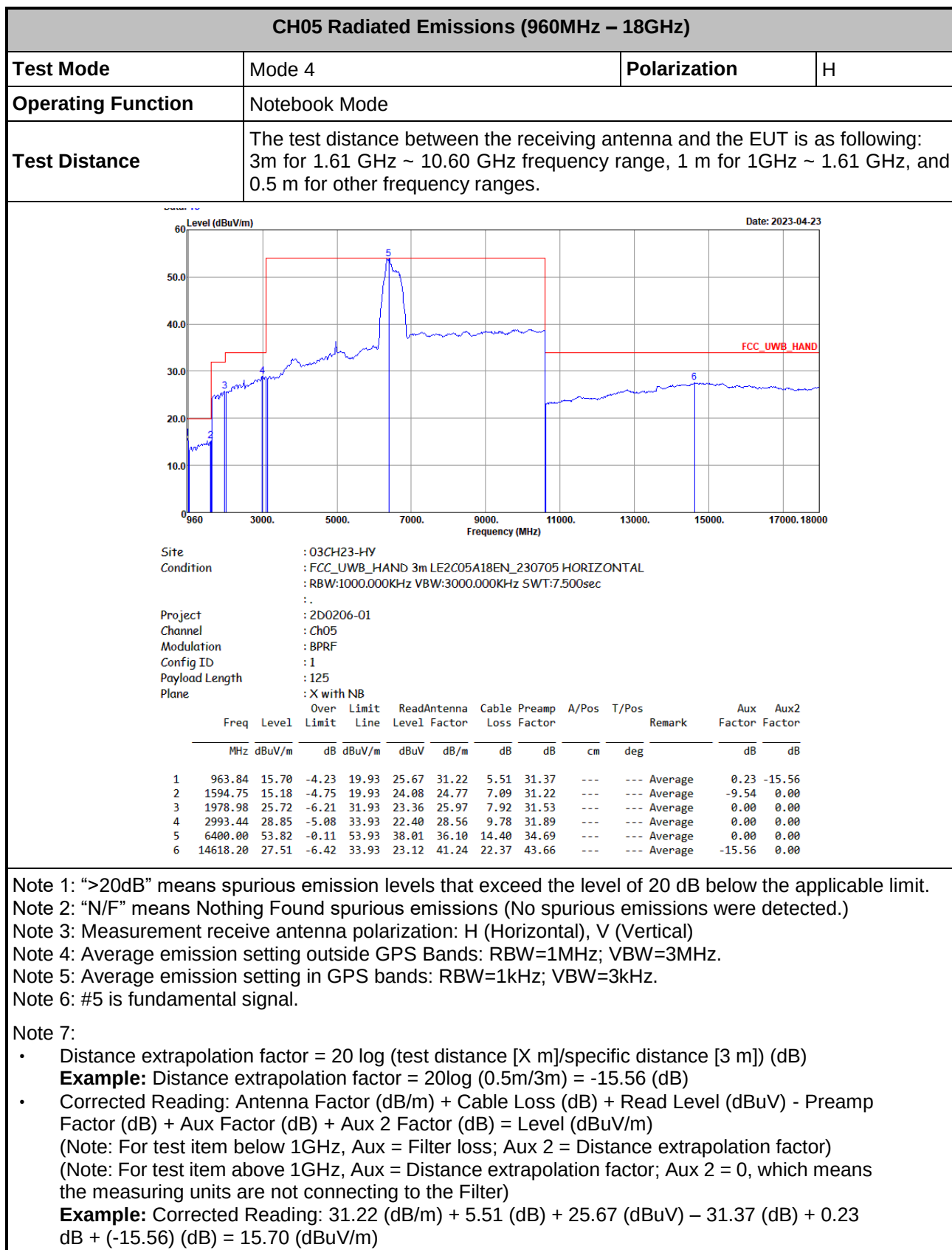
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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

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



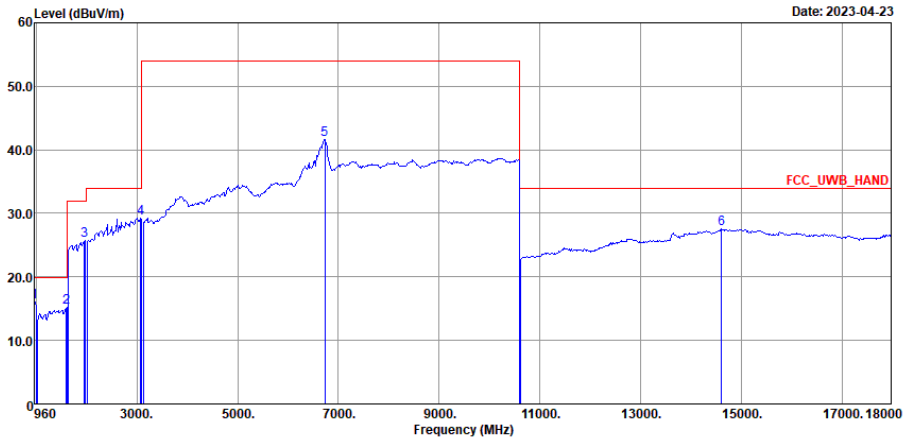
3.5.8 Radiated Emissions (960MHz – 18GHz)





CH05 Radiated Emissions (960MHz – 18GHz)

Test Mode	Mode 4	Polarization	V
Operating Function	Notebook 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 : 03CH23-HY
 Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 VERTICAL
 : RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
 :
 Project : 2D0206-01
 Channel : Ch05
 Modulation : BPRF
 Config ID : 1
 Payload Length : 125
 Plane : X with NB

	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	963.44	15.97	-3.96	19.93	25.93	31.23	5.51	31.37	---	---	Average	0.23 -15.56
2	1593.53	15.22	-4.71	19.93	24.13	24.76	7.09	31.22	---	---	Average	-9.54 0.00
3	1953.90	25.66	-6.27	31.93	23.49	25.82	7.86	31.51	---	---	Average	0.00 0.00
4	3073.36	29.26	-4.67	33.93	23.04	28.31	9.90	31.99	---	---	Average	0.00 0.00
5	6730.00	41.58	-12.35	53.93	25.34	36.46	14.80	35.02	---	---	Average	0.00 0.00
6	14610.80	27.57	-6.36	33.93	23.20	41.22	22.36	43.65	---	---	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.

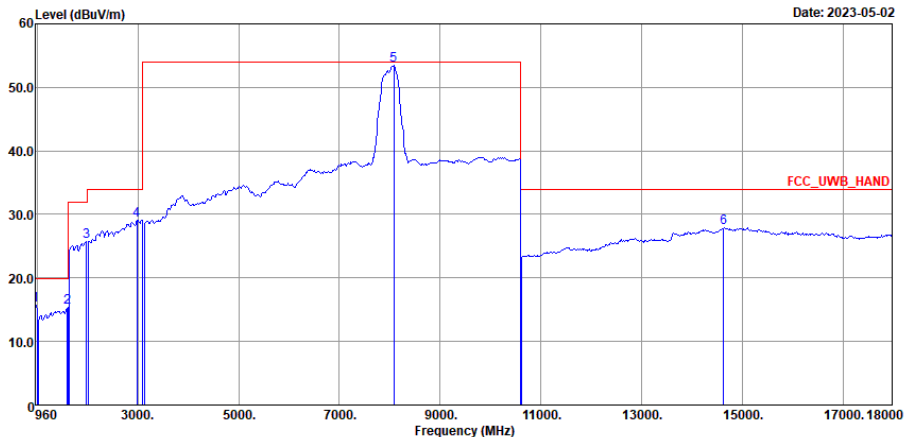
Note 7:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
(Note: 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 9	Polarization	H
Operating Function	Notebook 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 : 03CH23-HY
Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor				Factor	Factor
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB
1	962.32	15.72	-4.21	19.93	25.67	31.25	5.51	31.38	---	---	Average	0.23 -15.56
2	1597.19	15.34	-4.59	19.93	24.23	24.78	7.09	31.22	---	---	Average	-9.54 0.00
3	1978.98	25.80	-6.13	31.93	23.44	25.97	7.92	31.53	---	---	Average	0.00 0.00
4	2977.90	29.09	-4.84	33.93	22.76	28.47	9.75	31.89	---	---	Average	0.00 0.00
5	8080.00	53.42	-0.51	53.93	36.61	36.96	16.31	36.46	---	---	Average	0.00 0.00
6	14633.00	27.91	-6.02	33.93	23.50	41.27	22.38	43.68	---	---	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.

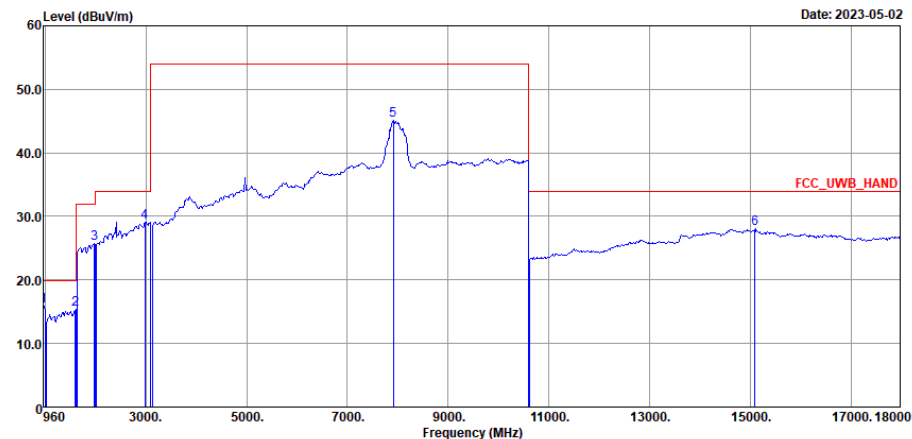
Note 7:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux Factor (dB) = Level (dBuV/m)
(Note: 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 9	Polarization	V
Operating Function	Notebook 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 : 03CH23-HY
Condition : FCC_UWB_HAND 3m LE2C05A18EN_230705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:7.500sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark	Aux	Aux2
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor			Factor	Factor
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB
1	964.40	15.90	-4.03	19.93	25.87	31.21	5.51	31.36	---	---	Average	0.23 -15.56
2	1597.80	15.38	-4.55	19.93	24.25	24.79	7.10	31.22	---	---	Average	-9.54 0.00
3	1984.30	25.79	-6.14	31.93	23.39	26.01	7.93	31.54	---	---	Average	0.00 0.00
4	2977.90	29.11	-4.82	33.93	22.78	28.47	9.75	31.89	---	---	Average	0.00 0.00
5	7915.00	45.12	-8.81	53.93	28.25	37.00	16.12	36.25	---	---	Average	0.00 0.00
6	15091.80	28.06	-5.87	33.93	23.61	41.50	22.76	44.25	---	---	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.

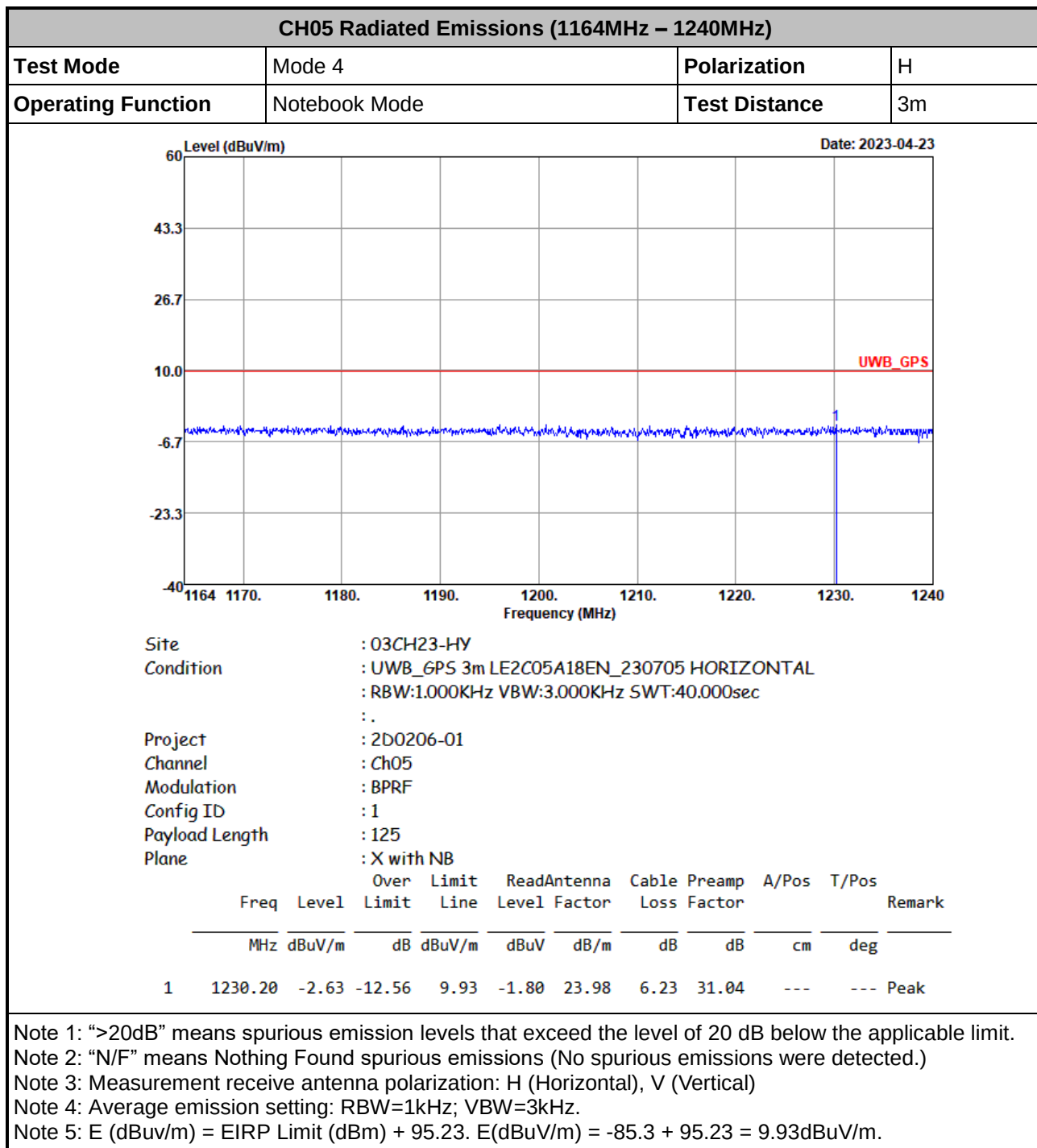
Note 6: #5 is fundamental signal.

Note 7:

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



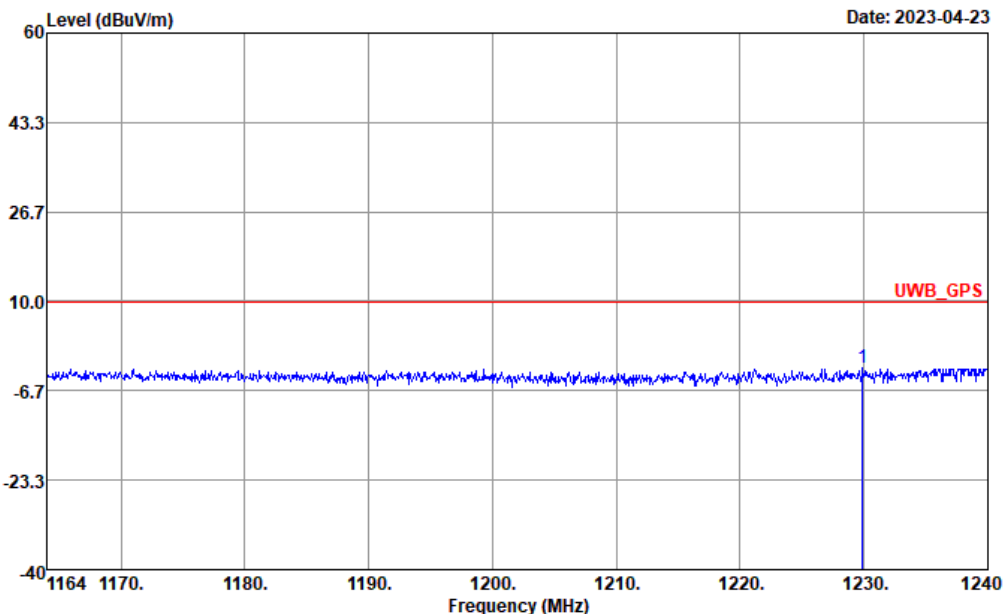
3.5.9 Radiated Emissions (1164MHz – 1240MHz)





CH05 Radiated Emissions (1164MHz – 1240MHz)

Test Mode	Mode 4	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY
Condition : UWB_GPS 3m LE2C05A18EN_230705 VERTICAL
: RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
:
Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Preamp Loss	Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1229.89	-2.51	-12.44	9.93	-1.67	23.98	6.22	31.04	---	---	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)

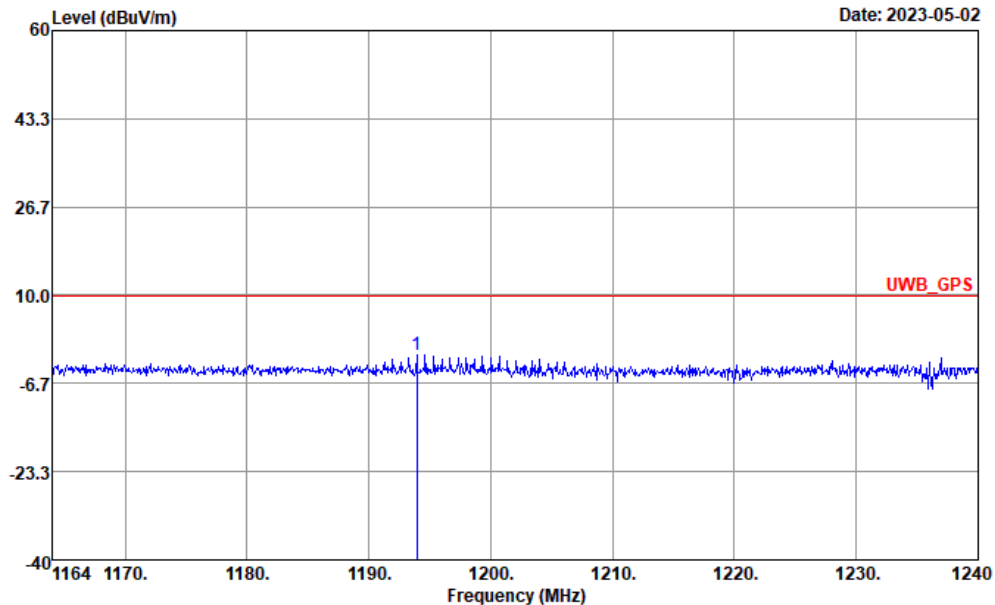
Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.

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 9	Polarization	H
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY
Condition : UWB_GPS 3m LE2C05A18EN_230705 HORIZONTAL
: RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1193.94	-1.22	-11.15	9.93	-0.11	23.79	6.13	31.03	---	---	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)

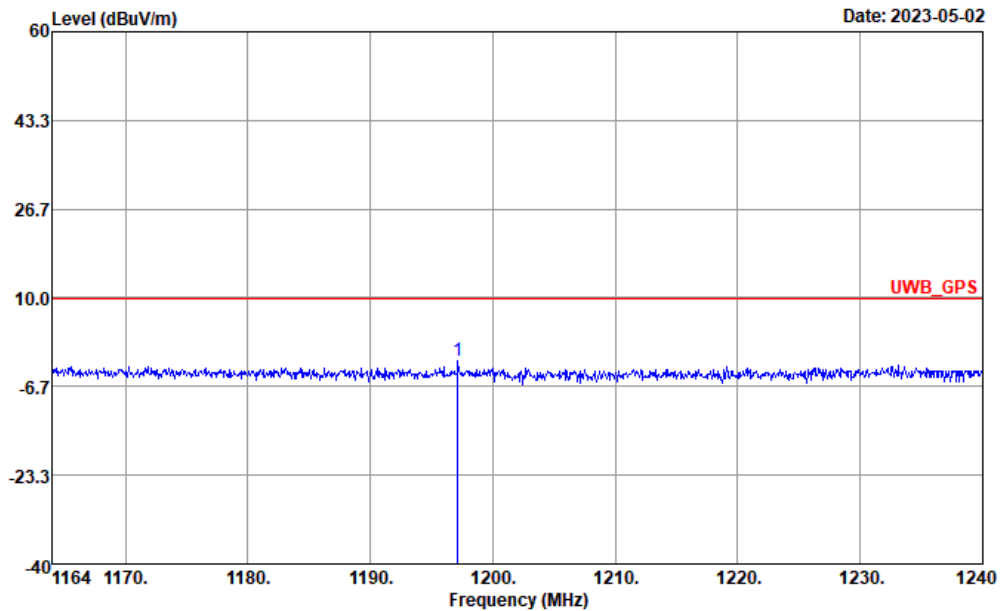
Note 4: Average emission setting: RBW=1kHz; VBW=3kHz.

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 9	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY
Condition : UWB_GPS 3m LE2C05A18EN_230705 VERTICAL
: RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	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	1197.14	-1.94	-11.87	9.93	-0.84	23.79	6.14	31.03	---	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.)

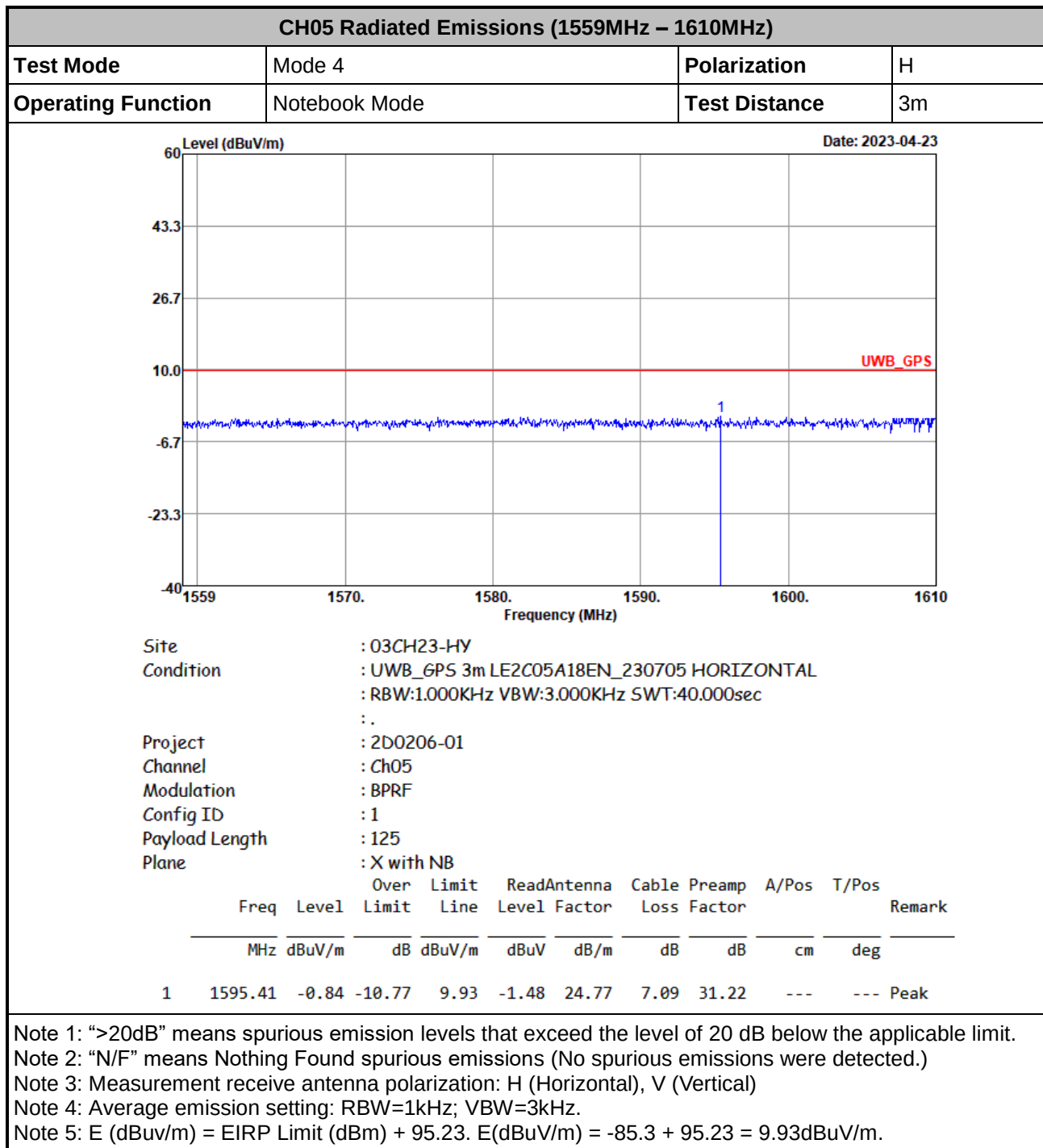
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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.



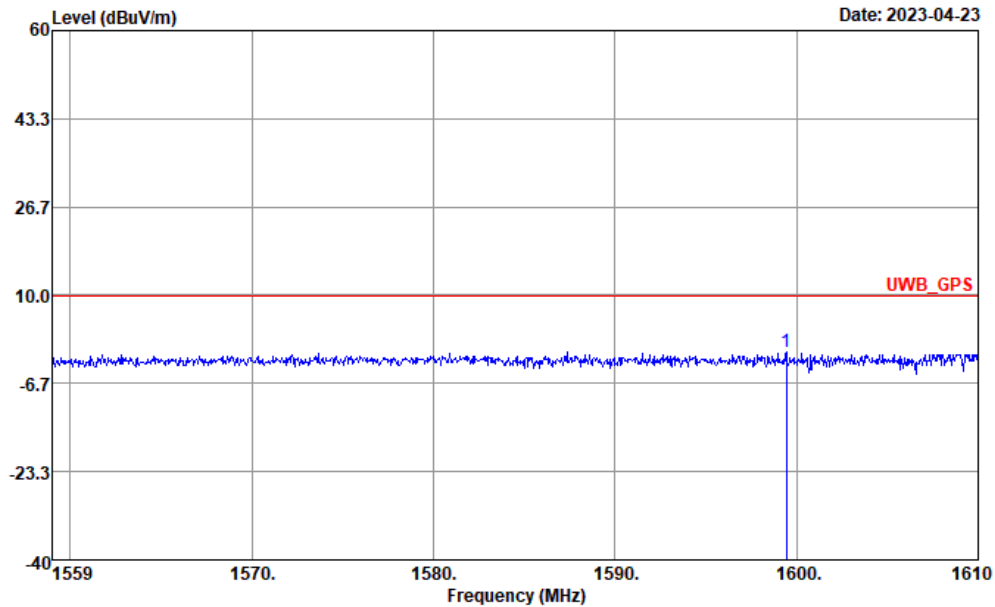
3.5.10 Radiated Emissions (1559MHz – 1610MHz)





CH05 Radiated Emissions (1559MHz – 1610MHz)

Test Mode	Mode 4	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY
Condition : UWB_GPS 3m LE2C05A18EN_230705 VERTICAL
: RBW:1.000KHz VBW:3.000KHz SWT:40.000sec
:
Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamplifier	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1599.44	-0.65	-10.58	9.93	-1.33	24.80	7.10	31.22	---	---	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.

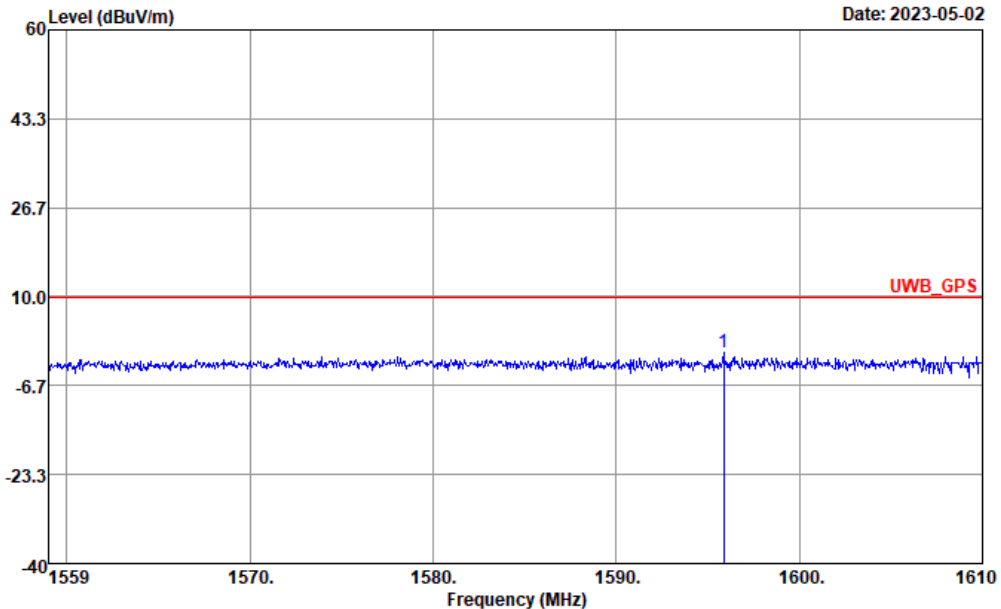


CH09 Radiated Emissions (1559MHz – 1610MHz)																																											
Test Mode	Mode 9						Polarization		H																																		
Operating Function	Notebook Mode						Test Distance		3m																																		
Level (dBuV/m) Date: 2023-05-02 Site : 03CH23-HY Condition : UWB_GPS 3m LE2C05A18EN_230705 HORIZONTAL : RBW:1.000KHz VBW:3.000KHz SWT:40.000sec : Project : 2D0206-01 Channel : Ch09 Modulation : BPRF Config ID : 2 Payload Length : N/A Plane : Y with NB <table><tr><th>Freq</th><th>Level</th><th>Over Limit</th><th>Limit Line</th><th>ReadAntenna Level</th><th>Factor</th><th>Cable Loss</th><th>Preamp Factor</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><th></th></tr><tr><td>1</td><td>1576.24</td><td>-0.65</td><td>-10.58</td><td>9.93</td><td>-1.16</td><td>24.66</td><td>7.05</td><td>31.20</td><td>---</td><td>Peak</td></tr></table>											Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		1	1576.24	-0.65	-10.58	9.93	-1.16	24.66	7.05	31.20	---	Peak
Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark																																	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg																																		
1	1576.24	-0.65	-10.58	9.93	-1.16	24.66	7.05	31.20	---	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 9	Polarization	V
Operating Function	Notebook Mode	Test Distance	3m



Site : 03CH23-HY

Condition : UWB_GPS 3m LE2C05A18EN_230705 VERTICAL

: RBW:1.000KHz VBW:3.000KHz SWT:40.000sec

: .

Project : 2D0206-01

Channel : Ch09

Modulation : BPRF

Config ID : 2

Payload Length : N/A

Plane : Y with NB

Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	A/Pos	T/Pos	Remark
MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	cm	deg
1	1595.87	-0.56	-10.49	9.93	-1.21	24.78	7.09	31.22	--- --- 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.)

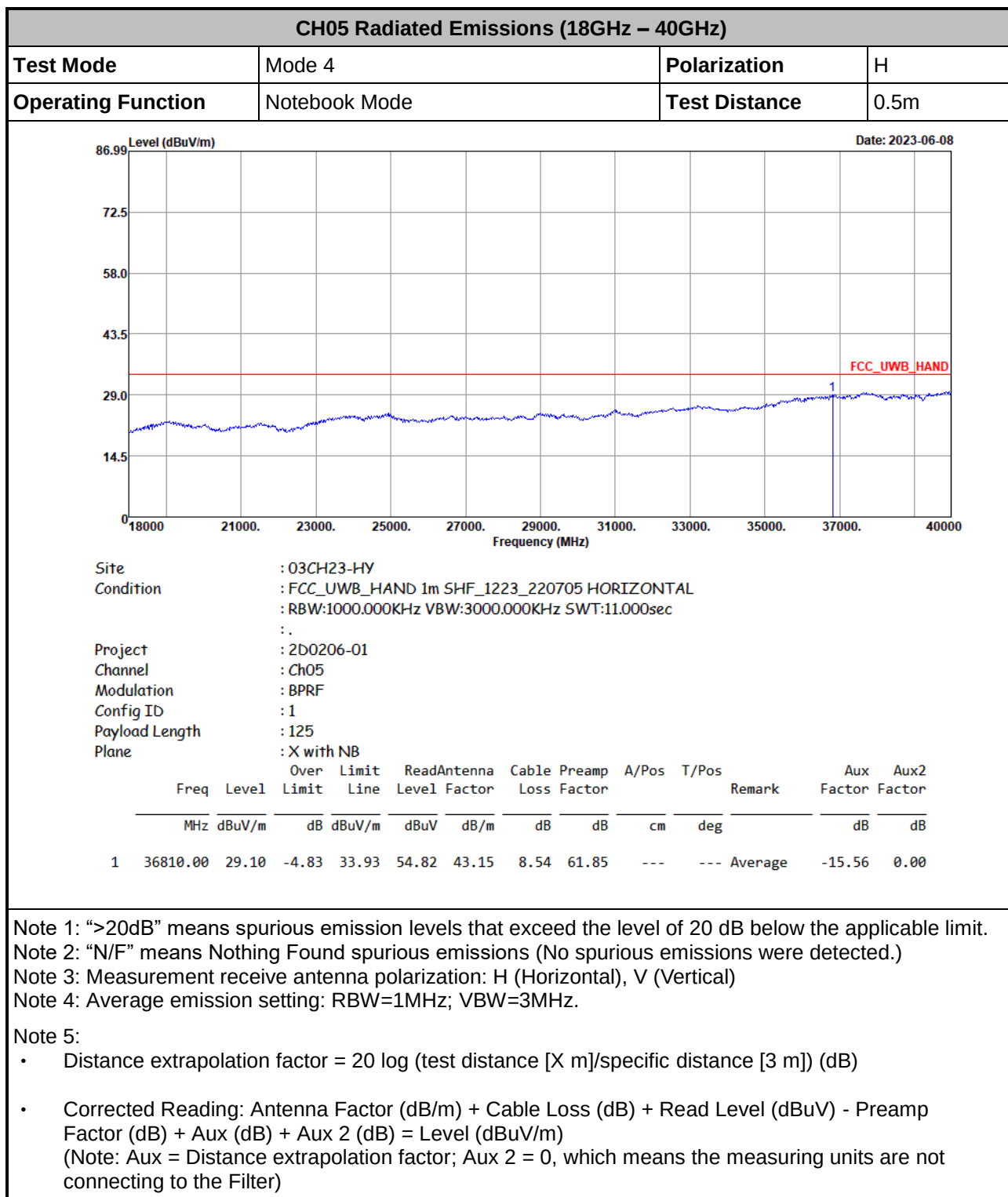
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

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.



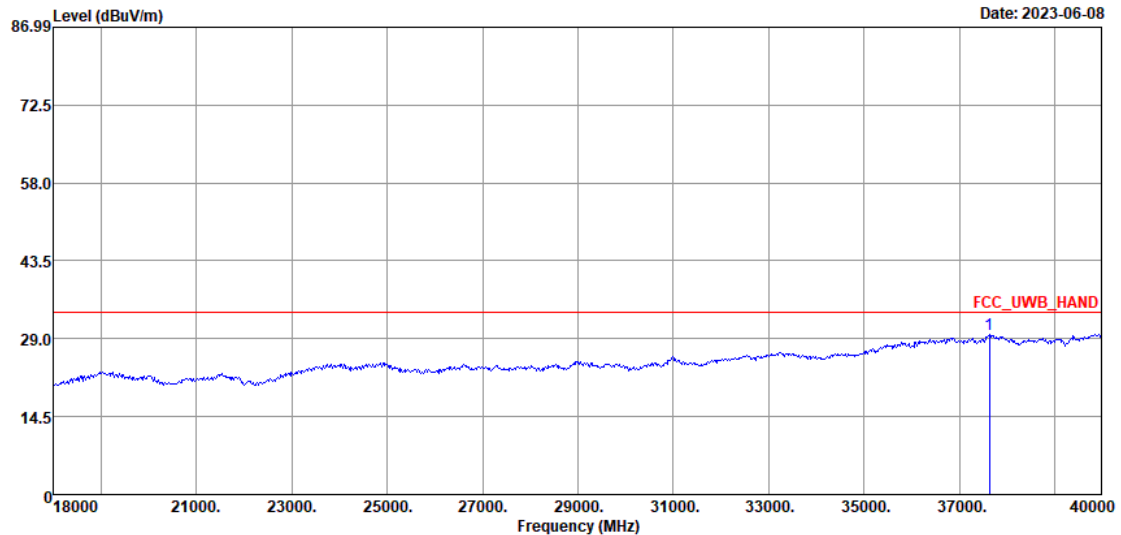
3.5.11 Radiated Emissions (18GHz – 40GHz)





CH05 Radiated Emissions (18GHz – 40GHz)

Test Mode	Mode 4	Polarization	V
Operating Function	Notebook Mode	Test Distance	0.5m



Site : 03CH23-HY
Condition : FCC_UWB_HAND 1m SHF_1223_220705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
:
Project : 2D0206-01
Channel : Ch05
Modulation : BPRF
Config ID : 1
Payload Length : 125
Plane : X with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB	
1	37624.00	29.79	-4.14	33.93	56.50	43.00	8.48	62.63	---	---	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.

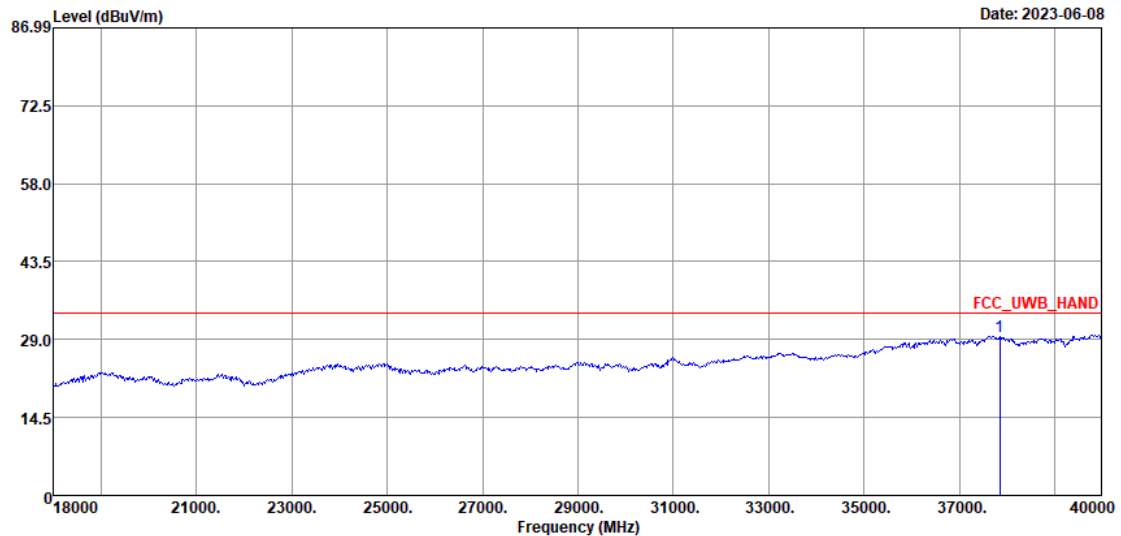
Note 5:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (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 9	Polarization	H
Operating Function	Notebook Mode	Test Distance	0.5m



Site : 03CH23-HY
Condition : FCC_UWB_HAND 1m SHF_1223_220705 HORIZONTAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	dB	dB
1	37844.00	29.68	-4.25	33.93	55.66	43.44	8.63	62.49	---	---	Peak	-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.

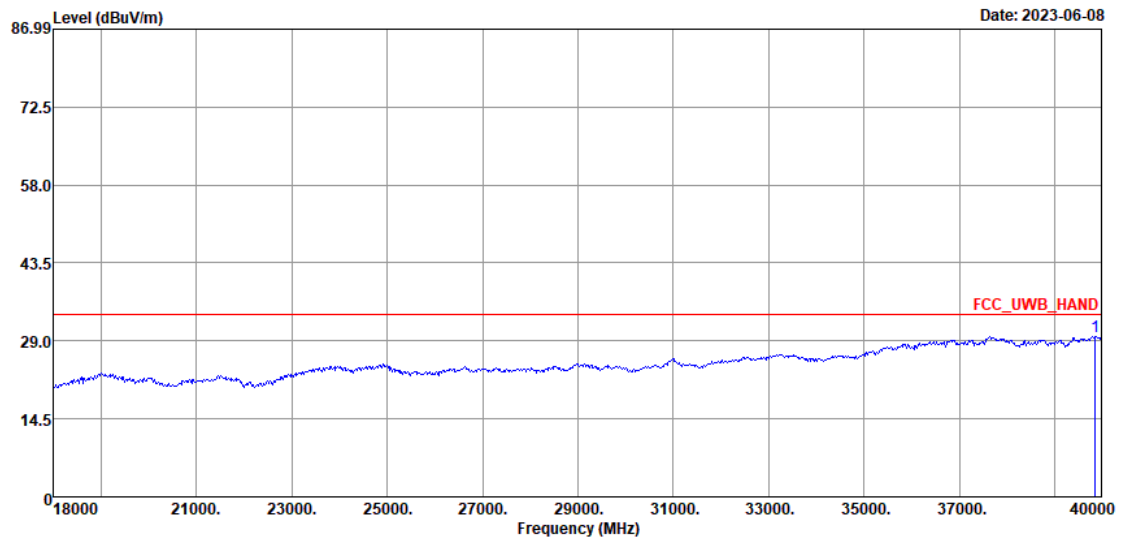
Note 5:

- Distance extrapolation factor = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (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 9	Polarization	V
Operating Function	Notebook Mode	Test Distance	0.5m



Site : 03CH23-HY
Condition : FCC_UWB_HAND 1m SHF_1223_220705 VERTICAL
: RBW:1000.000KHz VBW:3000.000KHz SWT:11.000sec
:
Project : 2D0206-01
Channel : Ch09
Modulation : BPRF
Config ID : 2
Payload Length : N/A
Plane : Y with NB

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Aux Factor	Aux2 Factor
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		dB	dB
1	39846.00	29.87	-4.06	33.93	55.09	44.94	9.14	63.74	---	---	Peak	-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 = $20 \log (\text{test distance [X m]}/\text{specific distance [3 m]})$ (dB)
- Corrected Reading: Antenna Factor (dB/m) + Cable Loss (dB) + Read Level (dBuV) - Preamp Factor (dB) + Aux (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
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 17, 2023	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2022	May 17, 2023	Nov. 30, 2023	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2022	May 17, 2023	Nov. 16, 2023	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 17, 2022	May 17, 2023	Nov. 16, 2023	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	May 17, 2023	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Aug. 01, 2022	May 17, 2023	Jul. 31, 2023	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 29, 2022	May 17, 2023	Dec. 28, 2023	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 20, 2022	Apr. 22, 2023~Jun. 20, 2023	Sep. 19, 2023	Radiation (03CH23-HY)
Bilog Antenna with 6dB pad	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	62028 & 003	N/A	Oct. 11, 2022	Apr. 22, 2023~Jun. 20, 2023	Oct. 10, 2023	Radiation (03CH23-HY)
Amplifier	SONOMA	310N	421582	N/A	Jul. 16, 2022	Apr. 22, 2023~Jun. 20, 2023	Jul. 15, 2023	Radiation (03CH23-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C05A18EN	1GHz~18GHz	Jul. 06, 2022	Apr. 22, 2023~Jun. 20, 2023	Jul. 05, 2023	Radiation (03CH23-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	1223	18GHz~40GHz	Jul. 05, 2022	Apr. 22, 2023~Jun. 20, 2023	Jul. 04, 2023	Radiation (03CH23-HY)
Amplifier	EMEC	EM01G18GA	060878	N/A	Sep. 29, 2022	Apr. 22, 2023~Jun. 20, 2023	Sep. 28, 2023	Radiation (03CH23-HY)
Preamplifier	EMEC	EM18G40G	060801	18-40GHz	Jun. 28, 2022	Apr. 22, 2023~Jun. 20, 2023	Jun. 27, 2023	Radiation (03CH23-HY)
Signal Analyzer	Keysight	N9010B	MY62170337	N/A	Sep. 11, 2022	Apr. 22, 2023~Jun. 20, 2023	Sep. 10, 2023	Radiation (03CH23-HY)
Signal Analyzer	Rohde & Schwarz	FSW43	101456	RBW 50MHz	Feb. 23, 2023	Apr. 22, 2023~Jun. 20, 2023	Feb. 22, 2024	Radiation (03CH23-HY)
Hygrometer	TECPEL	DTM-303B	TP211542	N/A	Nov. 17, 2022	Apr. 22, 2023~Jun. 20, 2023	Nov. 16, 2023	Radiation (03CH23-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Apr. 22, 2023~Jun. 20, 2023	N/A	Radiation (03CH23-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 22, 2023~Jun. 20, 2023	N/A	Radiation (03CH23-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 22, 2023~Jun. 20, 2023	N/A	Radiation (03CH23-HY)
Software	Audix	E3 6.09824_2019122	RK-002347	N/A	N/A	Apr. 22, 2023~Jun. 20, 2023	N/A	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 07, 2023	Apr. 22, 2023~Jun. 20, 2023	Mar. 06, 2024	Radiation (03CH23-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804392/2,804610/2,804613/2	N/A	Oct. 25, 2022	Apr. 22, 2023~Jun. 20, 2023	Oct. 24, 2023	Radiation (03CH23-HY)

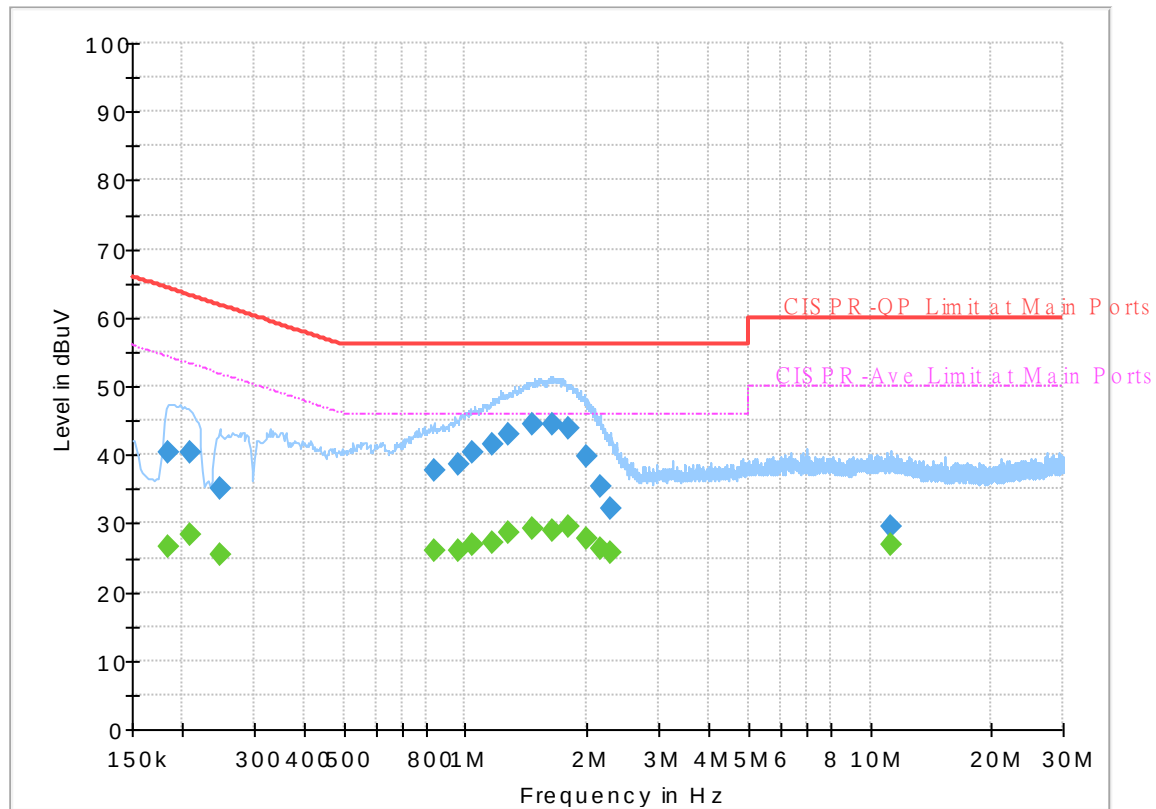


Appendix A. AC Conducted Emission Test Results

EUT Information

Report NO : 2D0206-01
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

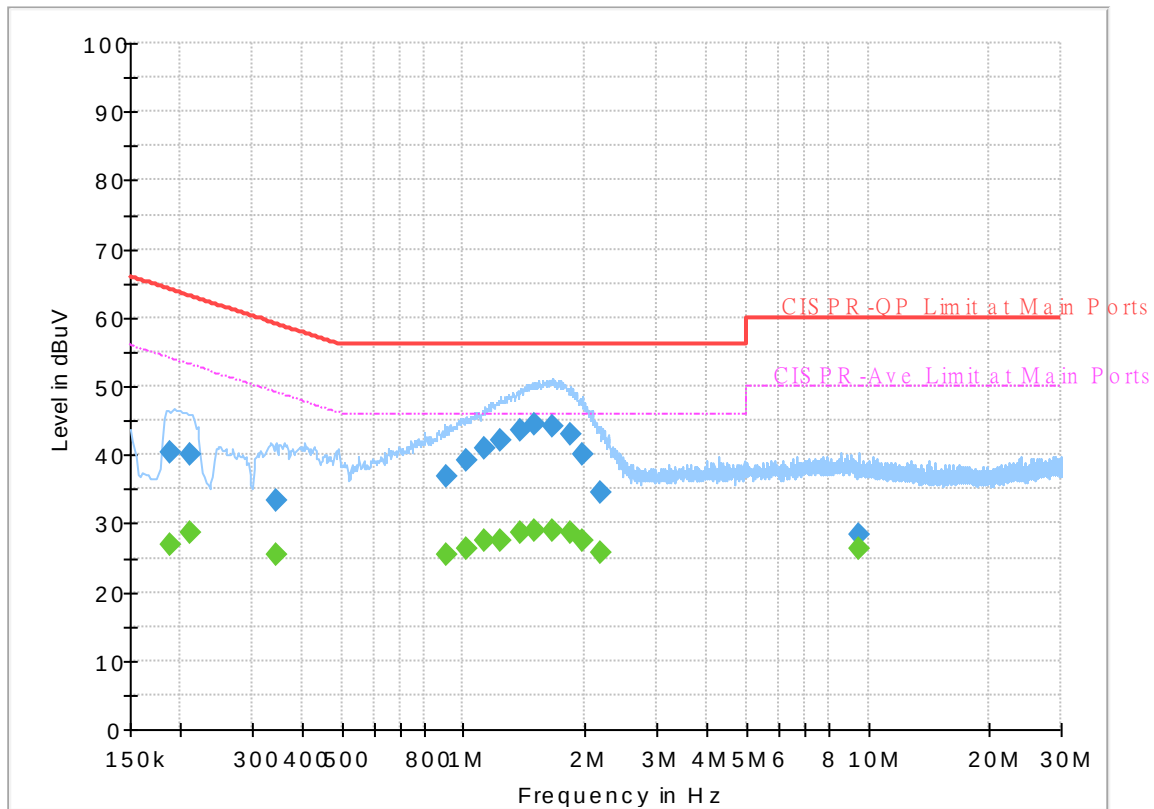
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.183750	---	26.62	54.31	27.69	L1	OFF	19.9
0.183750	40.25	---	64.31	24.06	L1	OFF	19.9
0.208500	---	28.25	53.27	25.02	L1	OFF	19.9
0.208500	40.41	---	63.27	22.86	L1	OFF	19.9
0.246750	---	25.58	51.87	26.29	L1	OFF	19.9
0.246750	34.97	---	61.87	26.90	L1	OFF	19.9
0.834000	---	25.99	46.00	20.01	L1	OFF	19.9
0.834000	37.82	---	56.00	18.18	L1	OFF	19.9
0.957750	---	26.05	46.00	19.95	L1	OFF	19.9
0.957750	38.68	---	56.00	17.32	L1	OFF	19.9
1.041000	---	26.89	46.00	19.11	L1	OFF	19.9
1.041000	40.33	---	56.00	15.67	L1	OFF	19.9
1.162500	---	27.22	46.00	18.78	L1	OFF	19.9
1.162500	41.59	---	56.00	14.41	L1	OFF	19.9
1.284000	---	28.59	46.00	17.41	L1	OFF	19.9
1.284000	43.06	---	56.00	12.94	L1	OFF	19.9
1.473000	---	29.11	46.00	16.89	L1	OFF	19.9
1.473000	44.54	---	56.00	11.46	L1	OFF	19.9
1.646250	---	29.08	46.00	16.92	L1	OFF	19.9
1.646250	44.39	---	56.00	11.61	L1	OFF	19.9
1.803750	---	29.40	46.00	16.60	L1	OFF	19.9

1.803750	43.76	---	56.00	12.24	L1	OFF	19.9
2.001750	---	27.79	46.00	18.21	L1	OFF	19.9
2.001750	39.89	---	56.00	16.11	L1	OFF	19.9
2.163750	---	26.32	46.00	19.68	L1	OFF	19.9
2.163750	35.39	---	56.00	20.61	L1	OFF	19.9
2.294250	---	25.76	46.00	20.24	L1	OFF	19.9
2.294250	32.10	---	56.00	23.90	L1	OFF	19.9
11.238000	---	26.94	50.00	23.06	L1	OFF	20.3
11.238000	29.55	---	60.00	30.45	L1	OFF	20.3

EUT Information

Report NO : 2D0206-01
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)
0.188250	---	26.88	54.11	27.23	N	OFF	19.9
0.188250	40.27	---	64.11	23.84	N	OFF	19.9
0.210750	---	28.51	53.18	24.67	N	OFF	19.9
0.210750	40.10	---	63.18	23.08	N	OFF	19.9
0.343500	---	25.34	49.12	23.78	N	OFF	19.9
0.343500	33.28	---	59.12	25.84	N	OFF	19.9
0.910500	---	25.36	46.00	20.64	N	OFF	19.9
0.910500	36.92	---	56.00	19.08	N	OFF	19.9
1.011750	---	26.23	46.00	19.77	N	OFF	19.9
1.011750	39.06	---	56.00	16.94	N	OFF	19.9
1.128750	---	27.43	46.00	18.57	N	OFF	19.9
1.128750	41.02	---	56.00	14.98	N	OFF	19.9
1.236750	---	27.51	46.00	18.49	N	OFF	19.9
1.236750	42.17	---	56.00	13.83	N	OFF	19.9
1.378500	---	28.71	46.00	17.29	N	OFF	19.9
1.378500	43.66	---	56.00	12.34	N	OFF	19.9
1.502250	---	28.81	46.00	17.19	N	OFF	19.9
1.502250	44.32	---	56.00	11.68	N	OFF	19.9
1.653000	---	29.04	46.00	16.96	N	OFF	19.9
1.653000	44.16	---	56.00	11.84	N	OFF	19.9
1.835250	---	28.51	46.00	17.49	N	OFF	19.9

1.835250	42.95	---	56.00	13.05	N	OFF	19.9
1.968000	---	27.61	46.00	18.39	N	OFF	19.9
1.968000	40.13	---	56.00	15.87	N	OFF	19.9
2.179500	---	25.83	46.00	20.17	N	OFF	19.9
2.179500	34.55	---	56.00	21.45	N	OFF	19.9
9.521250	---	26.26	50.00	23.74	N	OFF	20.2
9.521250	28.24	---	60.00	31.76	N	OFF	20.2

————THE END————