WaveLynx Technologies Corporation
TEST REPORT

SCOPE OF WORK
EMC TESTING – Door Lock, Model(s): Mortise Sectional, Mortise Escutcheon, Exit Trim, Cylindrical

REPORT NUMBER
104902494MPK-001

ISSUE DATE
October 28, 2022

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Non-Specific EMC Report Shell Rev. December 2017 MPK

TEST REPORT

Report Number: 104902494MPK-001
Project Number: G104902494
Issue Date: October 28, 2022

Product Designation: **Door Lock**
Model(s): **Mortise Sectional,**
Mortise Escutcheon,
Exit Trim,
Cylindrical

FCC ID: 2AEI3-HB01-HL01
IC: 20063-WLTHB01HL01

to

FCC Part 15 Subpart C (15.225)
Industry Canada RSS-210 Issue 10

for

WaveLynx Technologies Corporation

Test Performed by:	**Test Authorized by:**
Intertek	WaveLynx Technologies Corporation
1365 Adams Court	100 Technology Drive, Suite 130B
Menlo Park, CA 94025 USA	Broomfield, CO 80021 USA

Prepared by: Kenneth Roque **Date:** October 28, 2022

Kenneth Roque

Reviewed by: **Date:** October 28, 2022

Anderson Soungpanya

Report No. 104902494MPK-001	
Equipment Under Test:	Door Lock
Model Number:	Mortise Sectional, Mortise Escutcheon, Exit Trim, Cylindrical
Applicant:	WaveLynx Technologies Corporation
Contact:	Daniel Field
Address:	100 Technology Drive, Suite 130B Broomfield, CO 80021 USA
Country:	USA
Tel. Number:	1 (530) 391-1155
Email:	danielfield@wavelynxtech.com
Applicable Regulation:	FCC Part 15 Subpart C (15.225) Industry Canada RSS-210 Issue 10
Date of Test:	September 26, 2022 – October 21, 2022

We attest to the accuracy of this report:

Kenneth Roque
EMC Project Engineer

Anderson Soungpanya
EMC Team Leader

TABLE OF CONTENTS

1.0 Summary of Tests

TEST	REFERENCE FCC 15.225	REFERENCE RSS-210	RESULTS
Field Strength of Fundamental	15.225(a)	B.6	Complies
Radiated Emissions Outside the Band	15.225(b), 15.225(c), 15.225(d), 15.209	B.6	Complies
Frequency Tolerance of the Carrier	15.225(e)	B.6	Complies
Line Conducted Emissions	15.207	RSS-GEN	Not Applicable. The EUT does not contain an AC Power Port.
Occupied Bandwidth	15.215	RSS-GEN	Complies
Antenna Requirement	15.203	RSS-GEN	Complies[1]

[1] The EUT utilizes an internal Antenna.

EUT receive date: September 23, 2022
EUT receive condition: The pre-production version of the EUT was received in good condition with no apparent damage. As declared by the Applicant, it is identical to the production units.
Test start date: September 26, 2022
Test completion date: October 21, 2022

2.0 General Description

2.1 Product Description

Battery Powered RFID and Mobile Smart Lock.

This test report covers only the RFID radio.

Information about the RFID radio is presented below:

Applicant name & address	WaveLynx Technologies Corporation 100 Technology Drive, Suite 130B Broomfield, CO 80021 USA
Contact info / Email	Daniel Field / danielfield@wavelynxtech.com
Model (s)	Mortise Sectional, Mortise Escutcheon, Exit Trim, Cylindrical
FCC Identifier	2AEI3-HB01-HL01
IC Identifier	20063-WLTHB01HL01
Operating Frequency	13.56 MHz
Number of Channels	1
Type of Modulation	ASK Modulation
Antenna Type	Internal Antenna

2.2 Related Submittal(s) Grants

None

2.3 Test Methodology

Radiated tests were performed at an antenna to EUT distance of 10 meters, unless stated otherwise in this test report. All other measurements were made in accordance with the procedures in part 2 of CFR 47 7, ANSI C63.10: 2013, RSS-210 Issue 10 & RSS-GEN Issue 5.

2.4 Test Facility

The radiated emission test site and conducted measurement facility used to collect the data is 10m semi-anechoic chamber located in Menlo Park, California. This test facility and site measurement data have been fully placed on file with the FCC and Industry Canada (Site # 2042L-1).

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn't take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz
RF Power and Power Density – antenna conducted	-	0.7 dB	-
Unwanted emissions - antenna conducted	1.1 dB	1.3 dB	1.9 dB
Bandwidth – antenna conducted	-	30 Hz	-

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 30MHz	30 MHz – 1 GHz	1 GHz – 18 GHz
Radiated emissions	-	4.7	5.1 dB
AC mains conducted emissions	2.1 dB	-	-

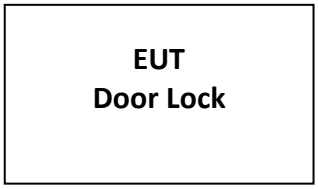
3.0 System Test Configuration

3.1 Support Equipment

Equipment Under Test			
Description	**Model #**	**Part #**	**Serial #**
Door Lock	Mortise Sectional	EQ38S	100122-0000-0002
Door Lock	Mortise Escutcheon	EQ38E	100122-0000-0003
Door Lock	Exit Trim	EQ45	100122-0000-0004
Door Lock	Cylindrical	EQ34	100122-0000-0001

3.2 Block Diagram of Test Setup

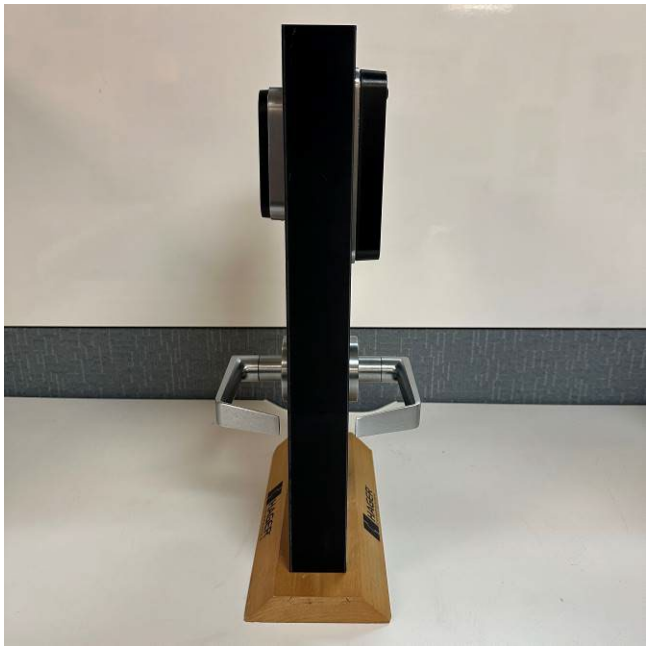
The diagram shown below details the interconnection of the EUT and support equipment. For specific layout, refer to the test configuration photograph in the relevant section of this report.



S = Shielded **U** = Unshielded	**F** = With Ferrite **m** = Length in Meters

EUT Photo

Mortise Sectional



Mortise Escutcheon

Exit Trim

Cylindrical

3.3 Justification

For radiated emission measurements the EUT is placed on a non-conductive table. The EUT was configured to continuously transmit. The fundamental frequency is 13.56MHz and the highest clock frequency used is 2.48GHz, therefore radiated emissions were performed up to 18GHz.

Per manufacturer, identical PC boards and RF circuit will be populated in each door locks, the difference are enclosure & mechanical platforms. Radiated Spurious testing was performed on all 4 models listed below.

1. Cylindrical
2. Mortise Sectional
3. Mortise Escutcheon
4. Exit Trim

3.4 Software Exercise Program

None

3.5 Mode of Operation during test

The Mortise Sectional, Mortise Escutcheon, Exit Trim, and Cylindrical was set up to continuously transmitting at 13.56MHz and BLE powered on.

3.6 Modifications required for Compliance

No modifications were made by the manufacturer to bring the EUT into compliance.

3.7 Additions, deviations and exclusions from standards

No additions, deviations or exclusion have been made from standard.

4.0 Measurement Results

4.1 Field Strength of Fundamental and Radiated Emissions Outside the band

4.1.1 Requirements

FCC Rules 15.225

a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter (84 dBuV) at 30 meters.

b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

§15.209 Radiated emission limits; general requirements.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

4.1.2 Procedure

Radiated Measurements Below 30 MHz

During the test the EUT is rotated and the measuring antenna angles are varied during the search for maximum signal level.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements for below 30 MHz were made at 10 meters. Below 30 MHz limits are corrected for distance to 10 meters. Distance correction factor=$40*\log_{10}$(limit distance/measured distance)

Radiated Measurements Above 30 MHz

During the test the EUT is rotated and the measuring antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at ten meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. Measurements from 30 MHz – 1GHz were made at 10 meters & Measurements above 1GHz were made at 3 meters.

Radiated emission measurements were performed from 9kHz to 18 GHz. Analyzer resolution is:
200Hz or greater for 9kHz to 150kHz
9 kHz or greater for 150kHz to 30 MHz
120 kHz or greater for 30MHz to 1000 MHz
1 MHz or greater for 30MHz to 1000 MHz

Data includes of the worst-case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

Field Strength Calculation
The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation is as follows:

FS = RA + AF + CF – AG – DCF

Where FS = Field Strength in dB (μV/m)
RA = Receiver Amplitude (including preamplifier) in dB (μV)
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB (1/m)
AG = Amplifier Gain in dB
DCF = Distance Correction Factor

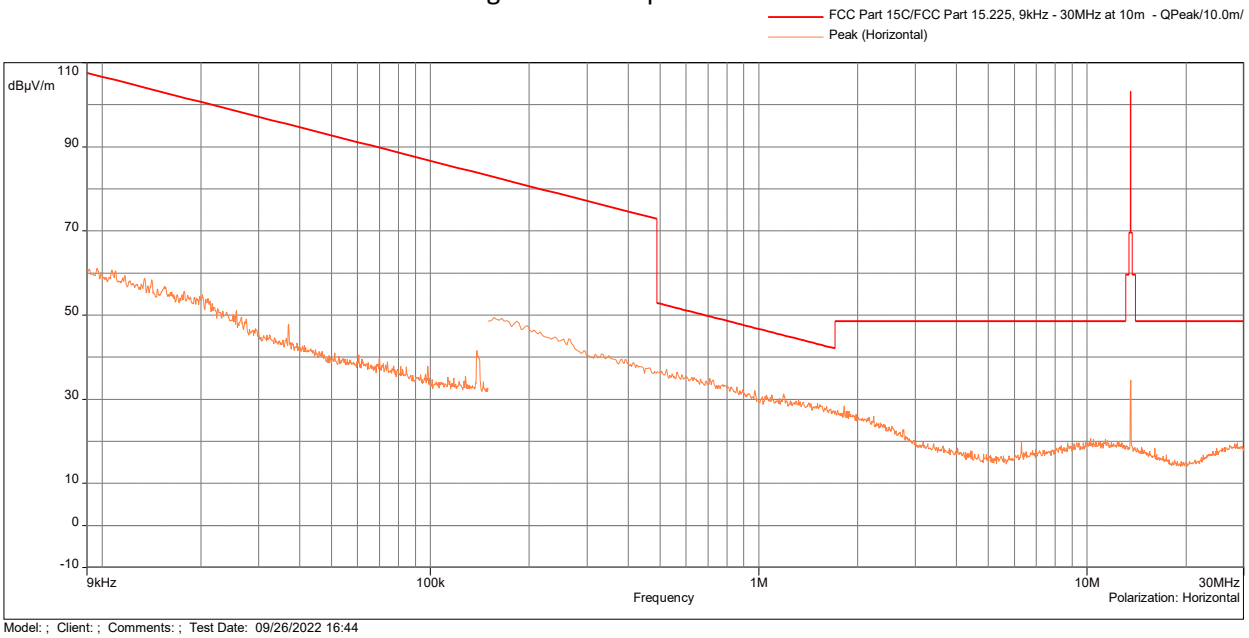
Note: FS was measured with loop antenna below 30MHz

4.1.3 Test Result 15.225 (a) (b) (c) (d) and 15.209

Mortise Sectional

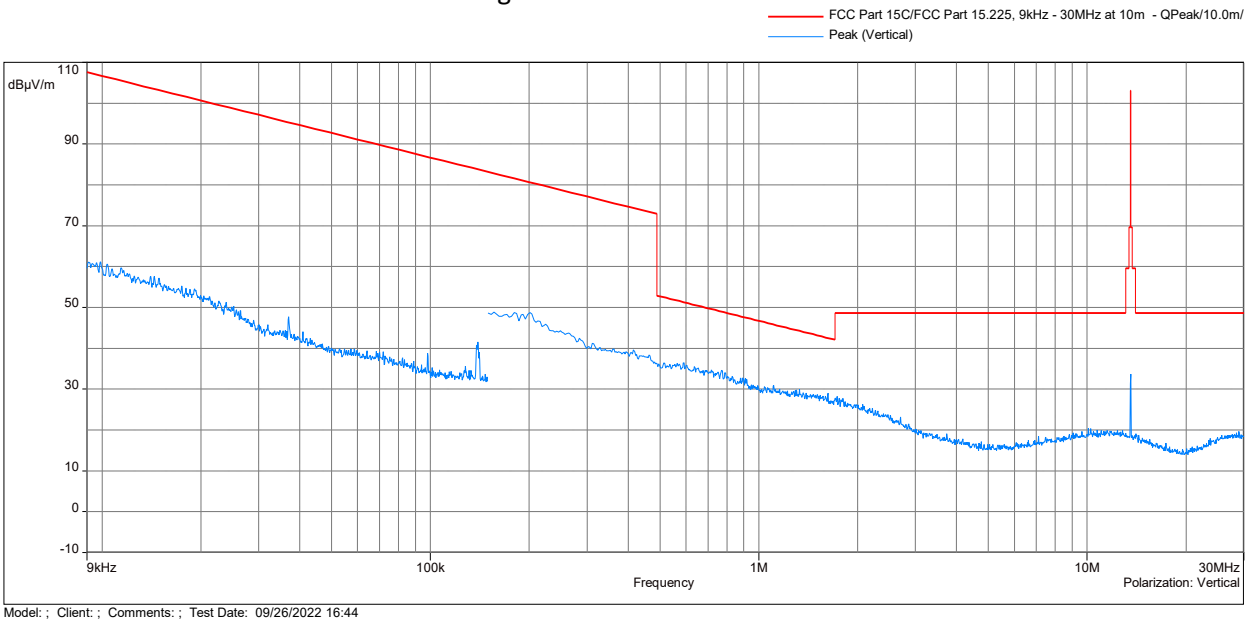
Radiated Spurious Emissions from 9 kHz to 30MHz

Receiving Antenna Coplanar Orientation



Model: ; Client: ; Comments: ; Test Date: 09/26/2022 16:44

Receiving Antenna Coaxial Orientation



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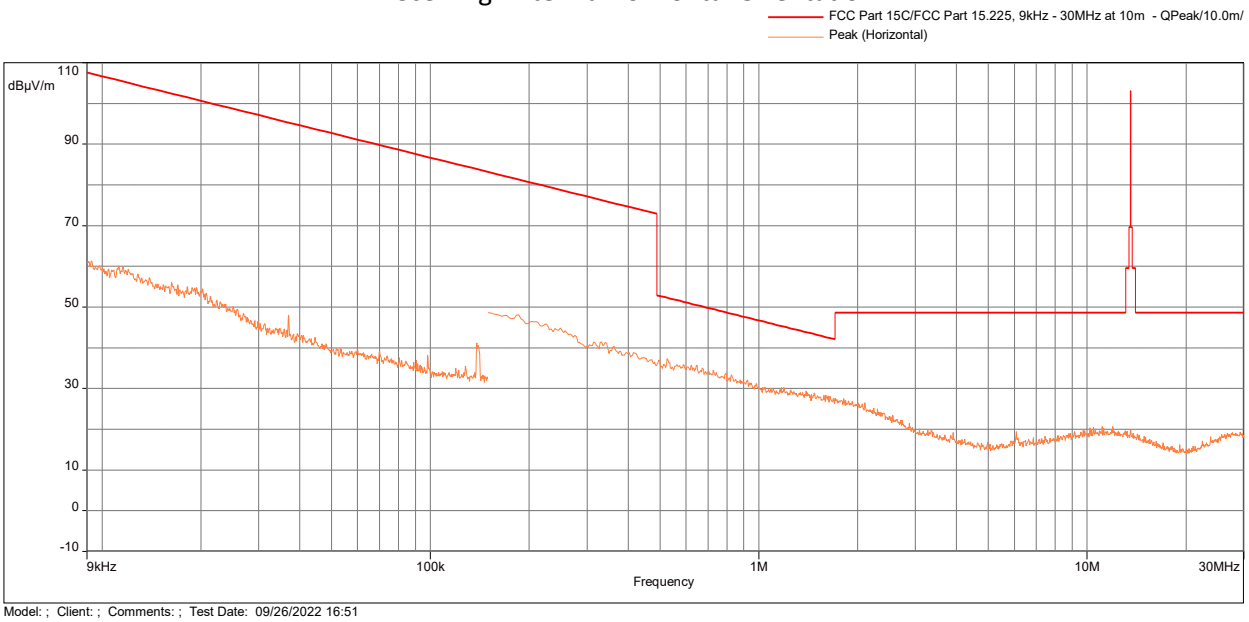
Receiving Antenna Horizontal Orientation



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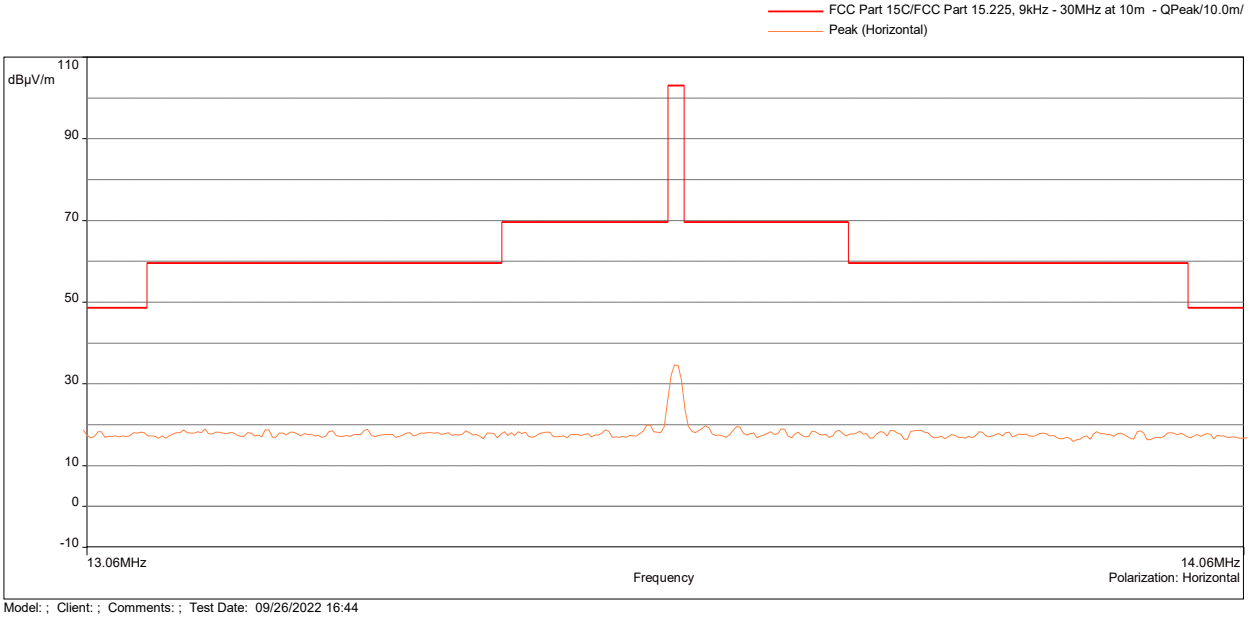
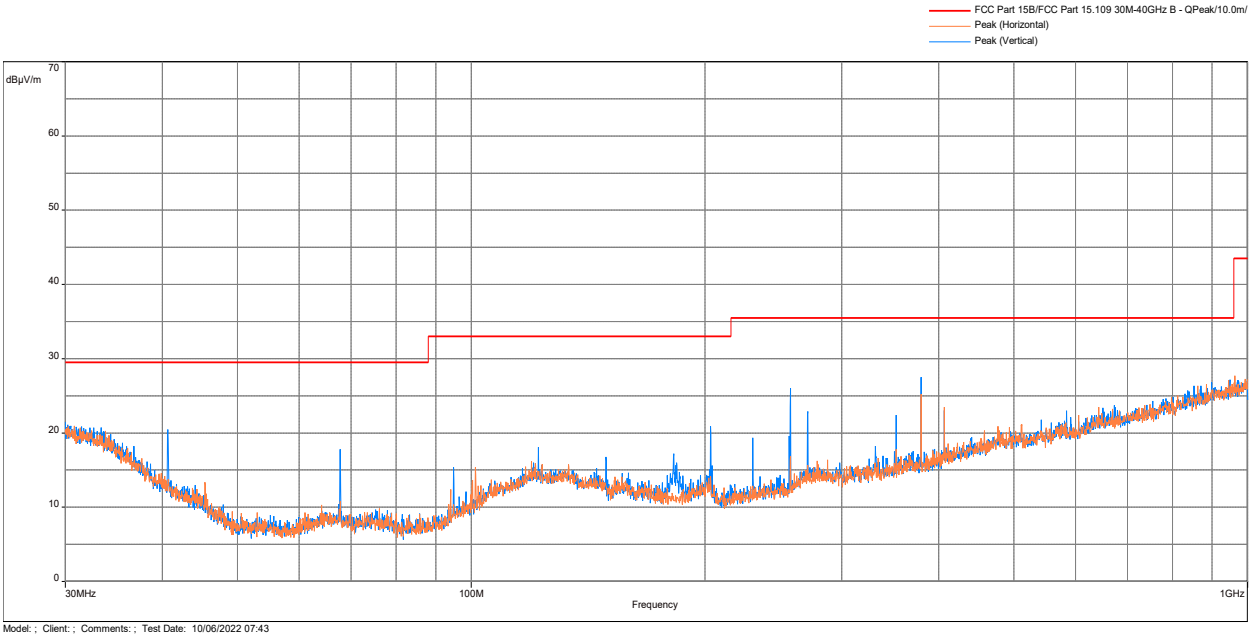
Test Result 15.225 (a)(b)(c) *Radiated Spurious Emissions Mask*



Model: ; Client: ; Comments: ; Test Date: 09/26/2022 16:44

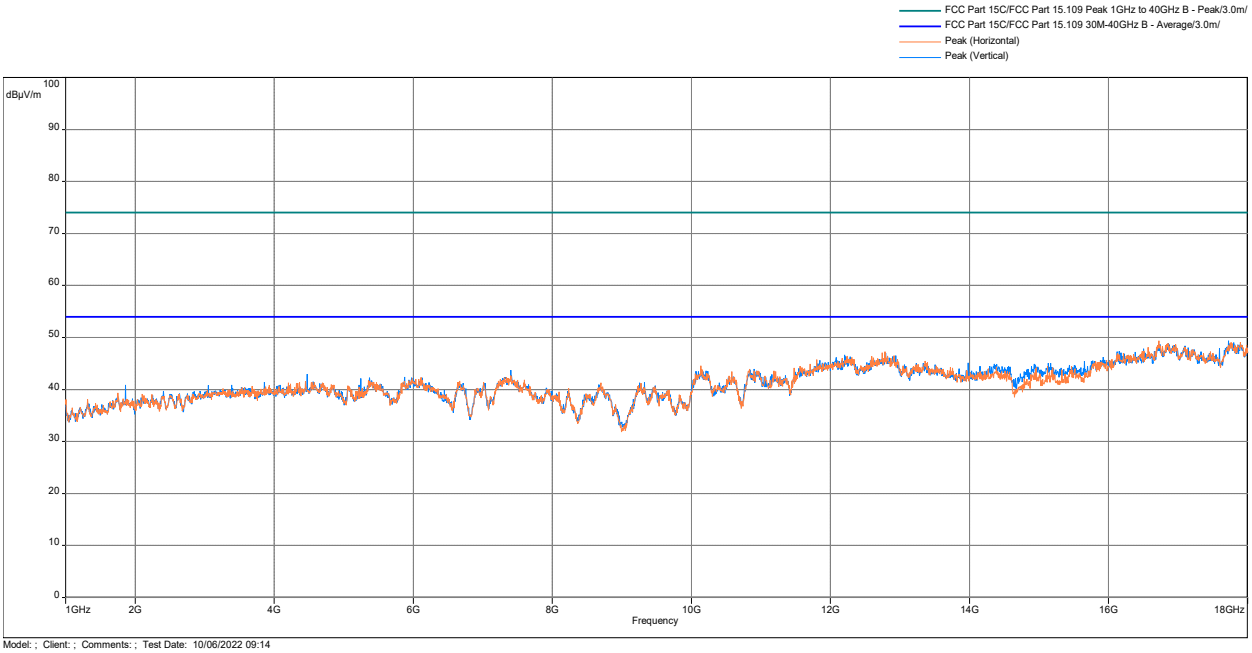
Frequency	Peak FS @10m	Limit @10m	Margin	Angle (°)	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB			dB
13.56	34.56	103.10	-68.54	0.50	Coplanar	-48.92

Radiated Spurious Emissions from 30 to 1000 MHz



Freq (MHz)	Peak FS @10m dB(uV/m)	Limit @10m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
379.685	27.53	35.50	-7.97	4.00	117.00	Vertical	-10.24
30.000	21.49	29.50	-8.01	1.98	173.00	Vertical	-6.18
948.946	27.18	35.50	-8.32	2.96	187.25	Vertical	0.31
944.645	27.11	35.50	-8.39	3.00	275.50	Horizontal	0.17
30.808	20.95	29.50	-8.55	0.99	165.25	Horizontal	-6.74
898.635	26.85	35.50	-8.65	1.98	41.25	Vertical	-0.44

Radiated Spurious Emissions from 1 to 18 GHz, Peak Scan vs Avg and Peak Limits



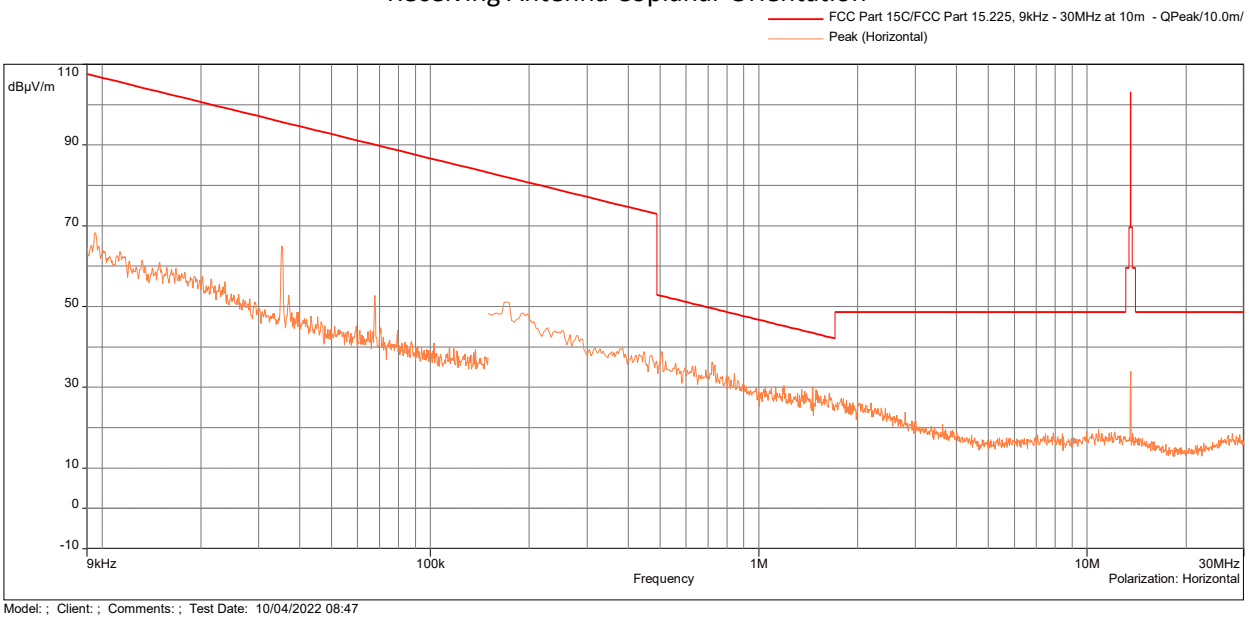
Freq (MHz)	Peak @3m dB(uV/m)	Avg Limit @3m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
16724.433	49.40	54.00	-4.60	1.26	345.00	Horizontal	4.61
17727.433	49.39	54.00	-4.61	1.26	260.75	Vertical	7.16
12784.400	47.30	54.00	-6.70	2.26	310.00	Horizontal	2.10

Result	Complies

Mortise Escutcheon

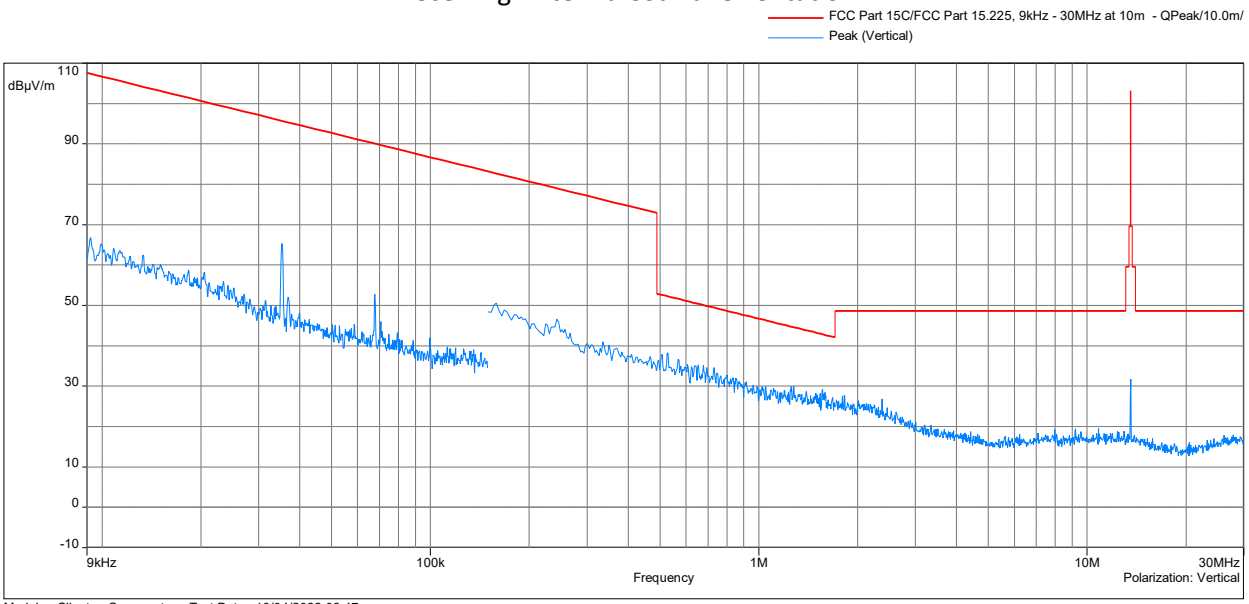
Radiated Spurious Emissions from 9 kHz to 30MHz

Receiving Antenna Coplanar Orientation



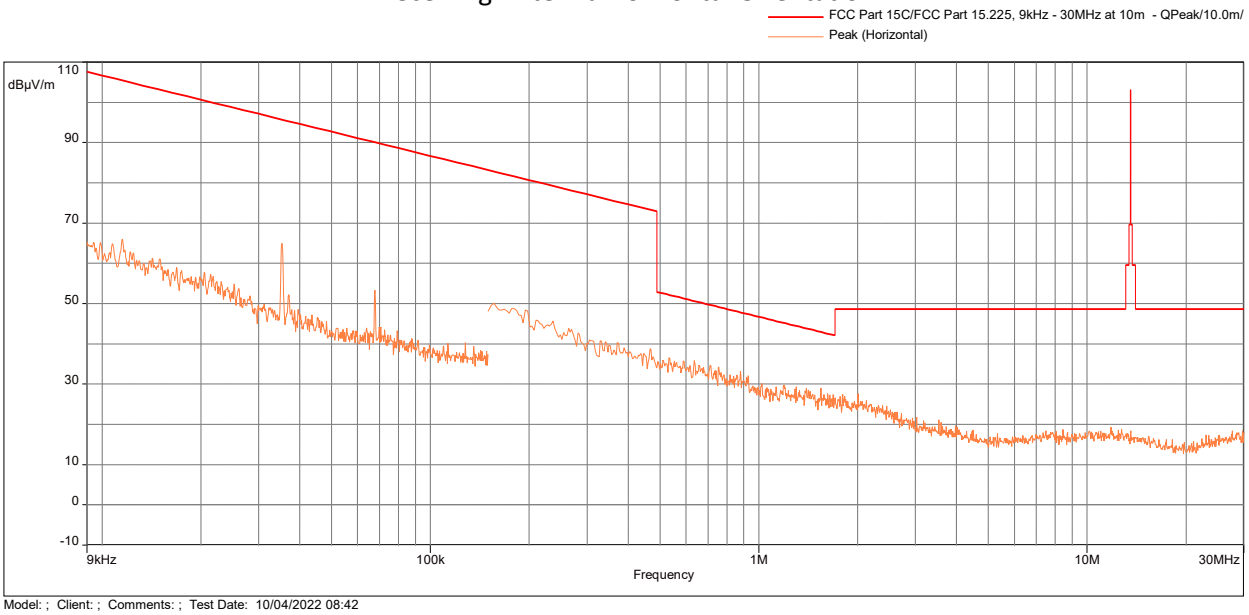
Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:47

Receiving Antenna Coaxial Orientation



Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:47

Receiving Antenna Horizontal Orientation



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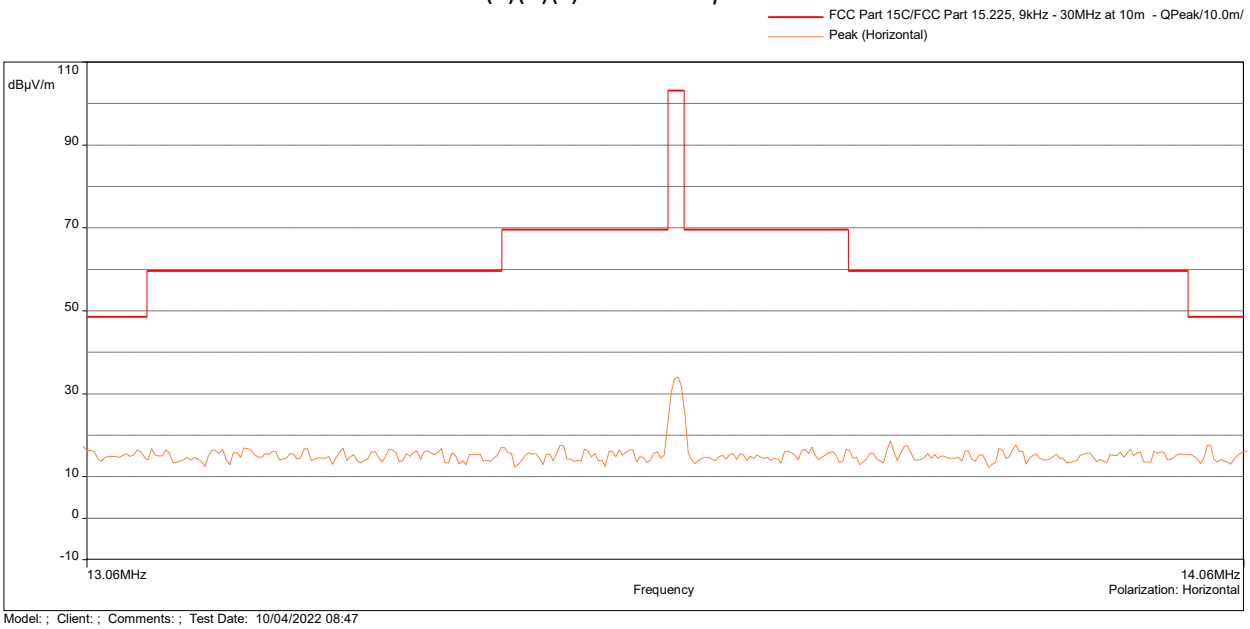
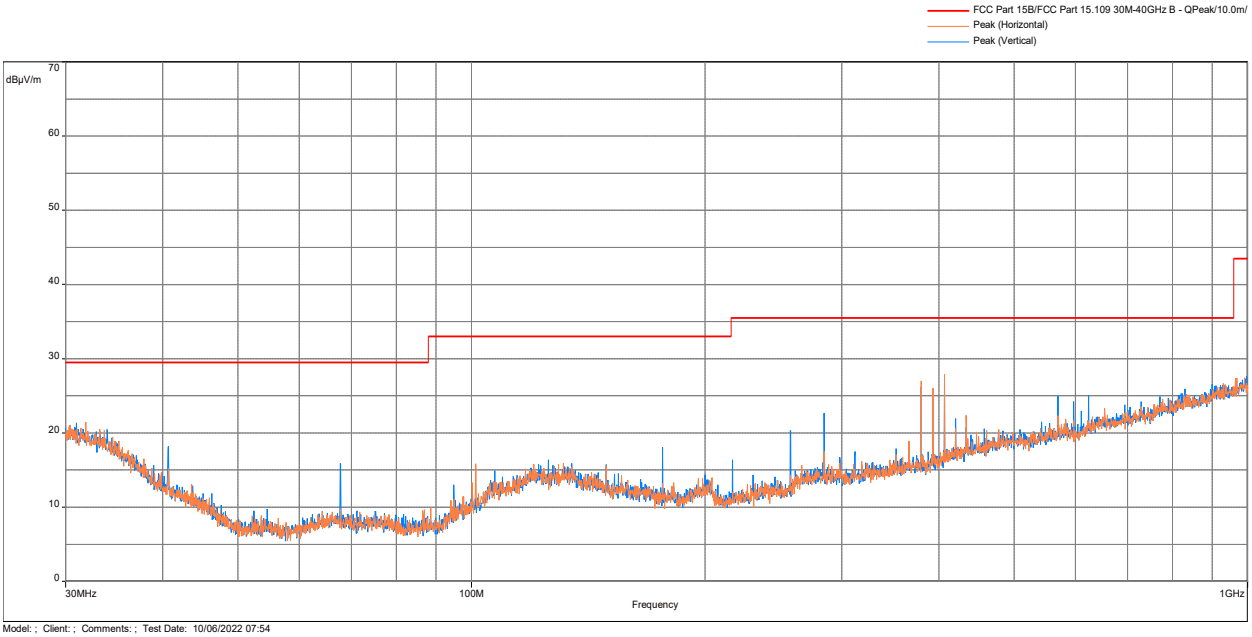
Test Result 15.225 (a)(b)(c) *Radiated Spurious Emissions Mask*



Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:47

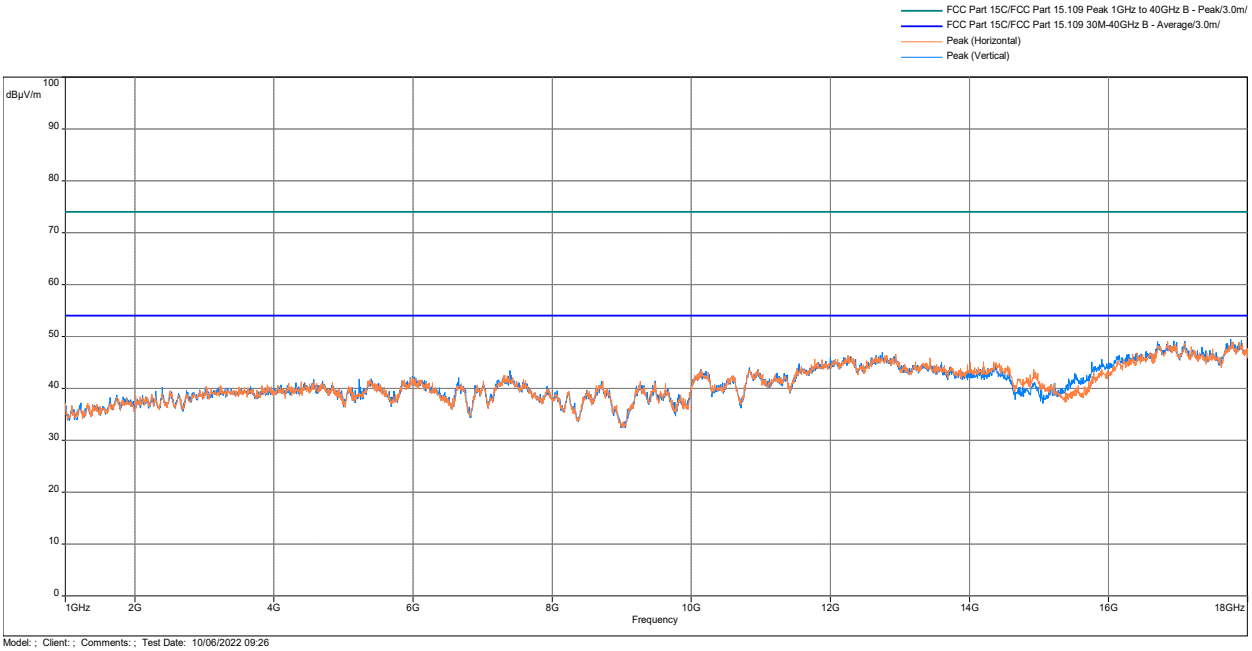
Frequency	Peak FS @10m	Limit @10m	Margin	Angle (°)	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB			dB
13.56	34.02	103.10	-69.08	2.00	Coplanar	2.58

Radiated Spurious Emissions from 30 to 1000 MHz



Freq (MHz)	Peak FS @10m dB(uV/m)	Limit @10m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
406.813	27.90	35.50	-7.60	2.00	32.25	Horizontal	-9.52
31.843	21.47	29.50	-8.03	4.00	151.50	Horizontal	-7.37
30.970	21.34	29.50	-8.16	4.00	280.25	Vertical	-6.86
379.685	27.03	35.50	-8.47	2.00	103.00	Horizontal	-10.24
930.095	26.66	35.50	-8.84	2.99	2.25	Horizontal	-0.01
900.219	26.55	35.50	-8.95	4.00	316.00	Vertical	-0.28

Radiated Spurious Emissions from 1 to 18 GHz, Peak Scan vs Avg and Peak Limits



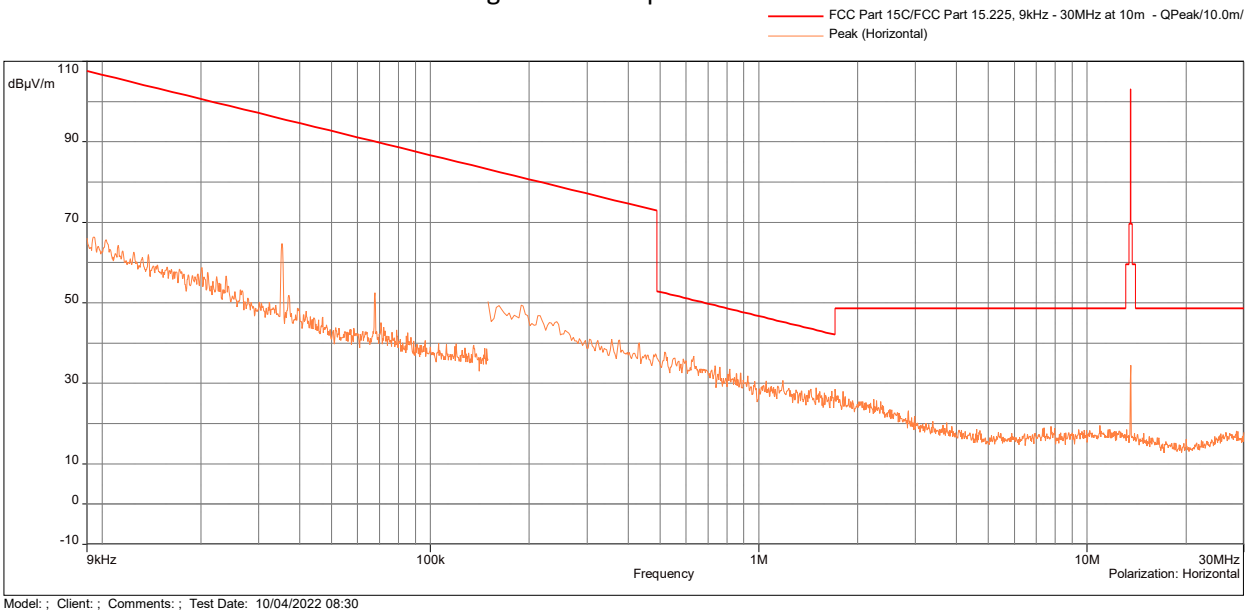
Freq (MHz)	Peak @3m dB(uV/m)	Avg Limit @3m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
17758.033	49.55	54.00	-4.45	2.24	0.00	Vertical	7.34
16849.100	49.12	54.00	-4.88	1.26	297.25	Horizontal	4.84
12745.300	46.96	54.00	-7.04	2.24	13.50	Vertical	2.06

Result	Complies

Exit Trim

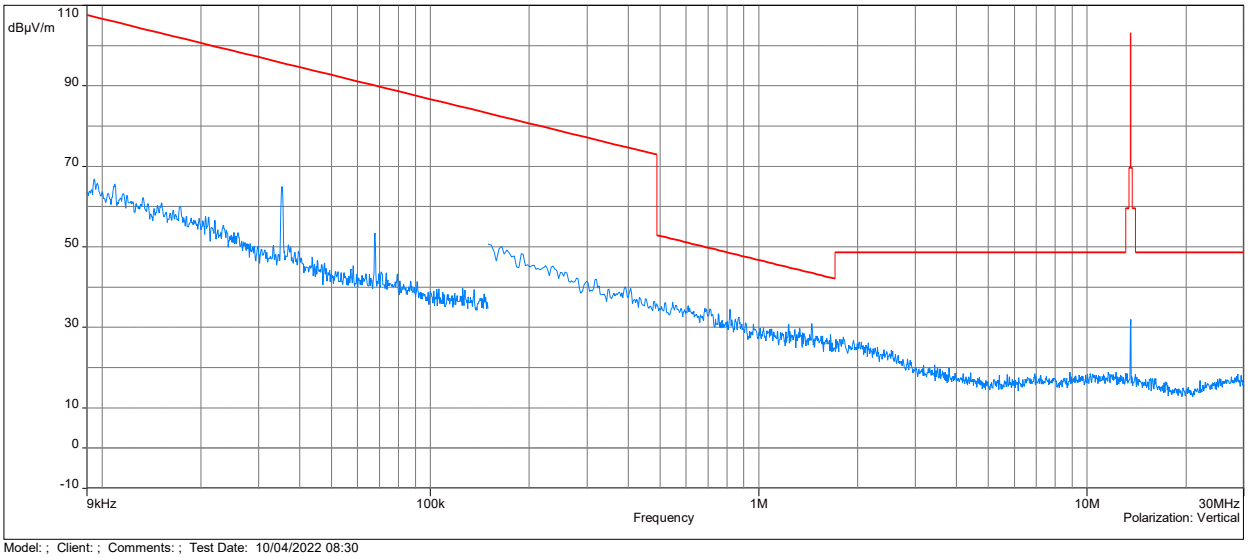
Radiated Spurious Emissions from 9 kHz to 30MHz

Receiving Antenna Coplanar Orientation



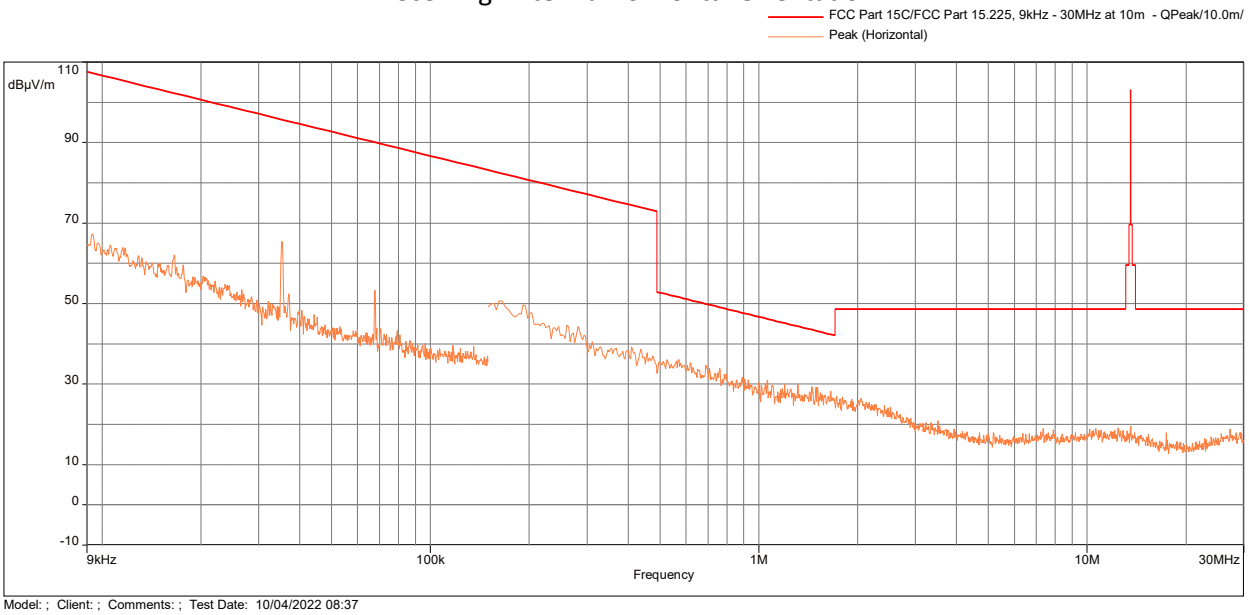
Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:30

Receiving Antenna Coaxial Orientation



Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:30

Receiving Antenna Horizontal Orientation



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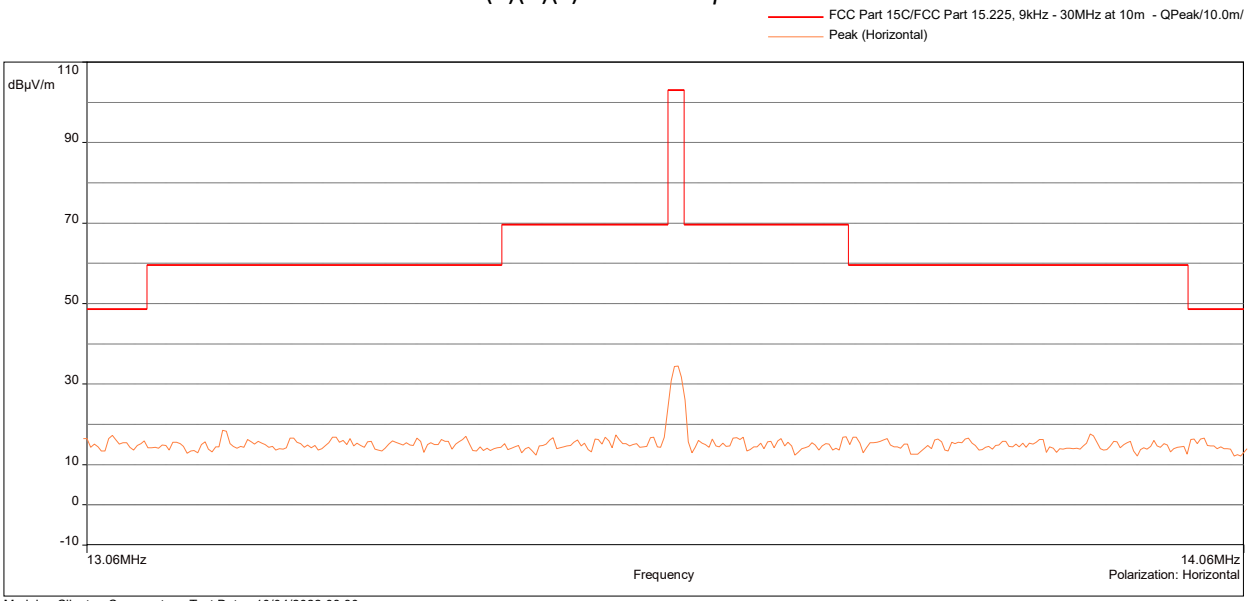
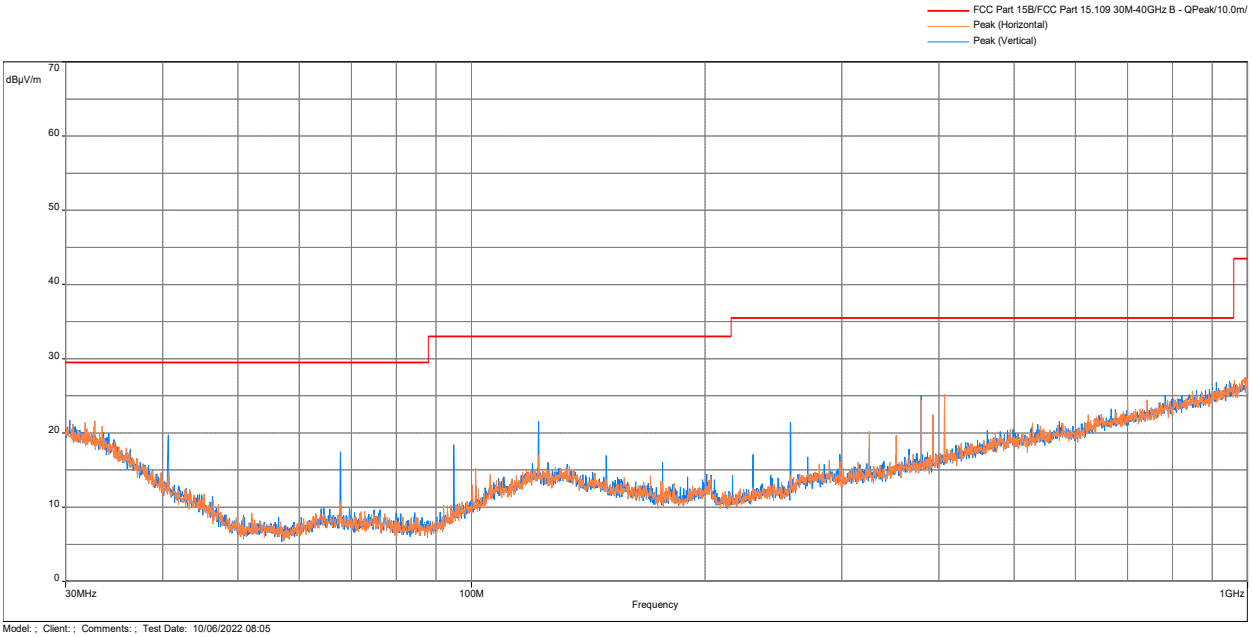
Test Result 15.225 (a)(b)(c) *Radiated Spurious Emissions Mask*



Model: ; Client: ; Comments: ; Test Date: 10/04/2022 08:30

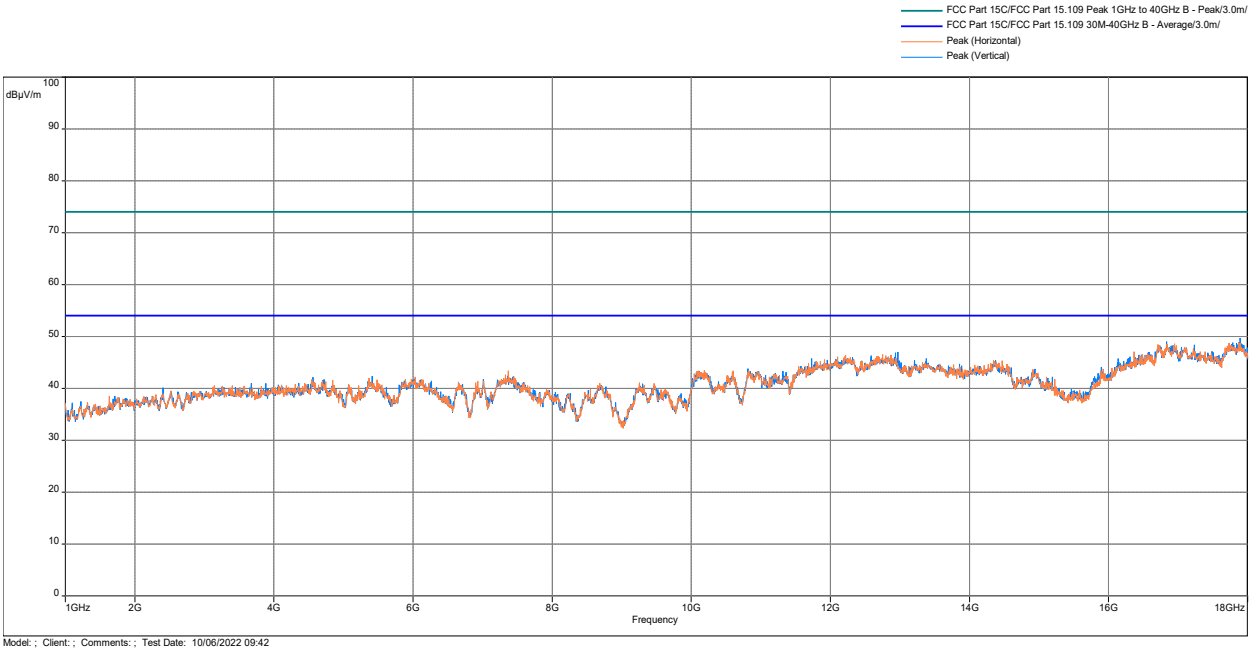
Frequency	Peak FS @10m	Limit @10m	Margin	Angle (°)	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB			dB
13.56	34.54	103.10	-68.56	2.50	Coplanar	2.58

Radiated Spurious Emissions from 30 to 1000 MHz



Freq (MHz)	Peak FS @10m dB(uV/m)	Limit @10m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
30.388	21.72	29.50	-7.78	4.00	130.50	Vertical	-6.45
32.716	21.65	29.50	-7.85	4.00	328.00	Horizontal	-7.95
947.814	26.94	35.50	-8.56	0.99	14.25	Vertical	0.30
946.618	26.62	35.50	-8.88	3.00	130.25	Horizontal	0.29
40.670	19.76	29.50	-9.74	2.96	284.25	Vertical	-13.86
67.798	17.46	29.50	-12.04	2.96	111.25	Vertical	-18.87

Radiated Spurious Emissions from 1 to 18 GHz, Peak Scan vs Avg and Peak Limits



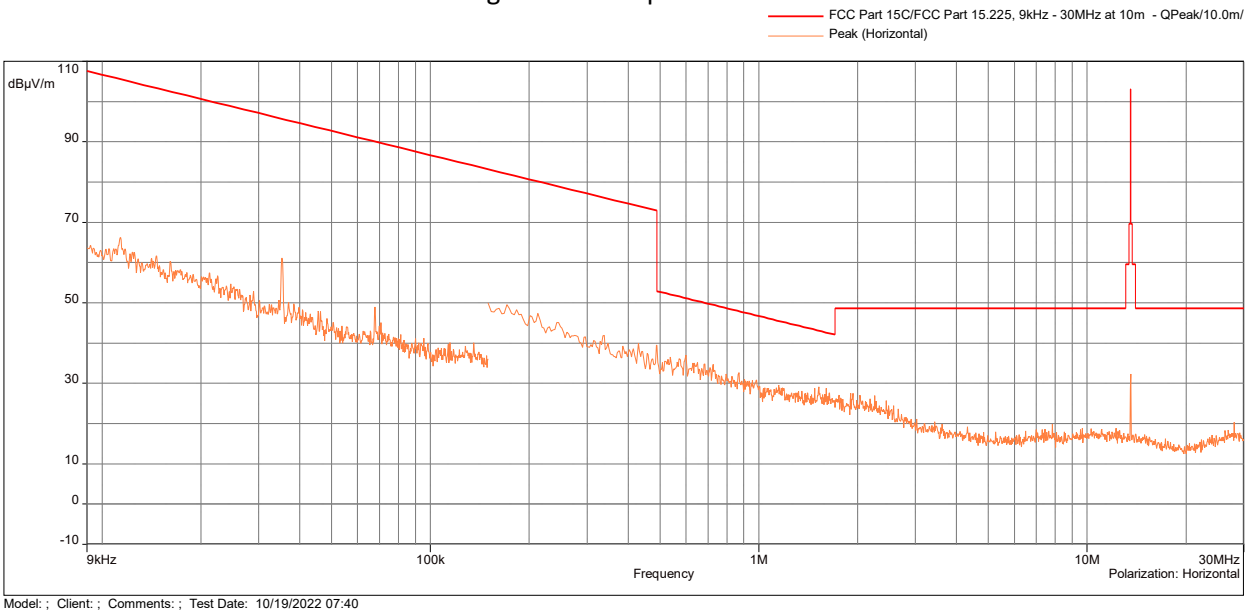
Freq (MHz)	Peak @3m dB(uV/m)	Avg Limit @3m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
17892.900	49.76	54.00	-4.24	3.24	72.00	Vertical	8.23
17871.933	48.81	54.00	-5.19	1.26	117.50	Horizontal	8.09
12969.700	47.03	54.00	-6.97	2.26	245.25	Vertical	2.37

Result	Complies

Cylindrical

Radiated Spurious Emissions from 9 kHz to 30MHz

Receiving Antenna Coplanar Orientation



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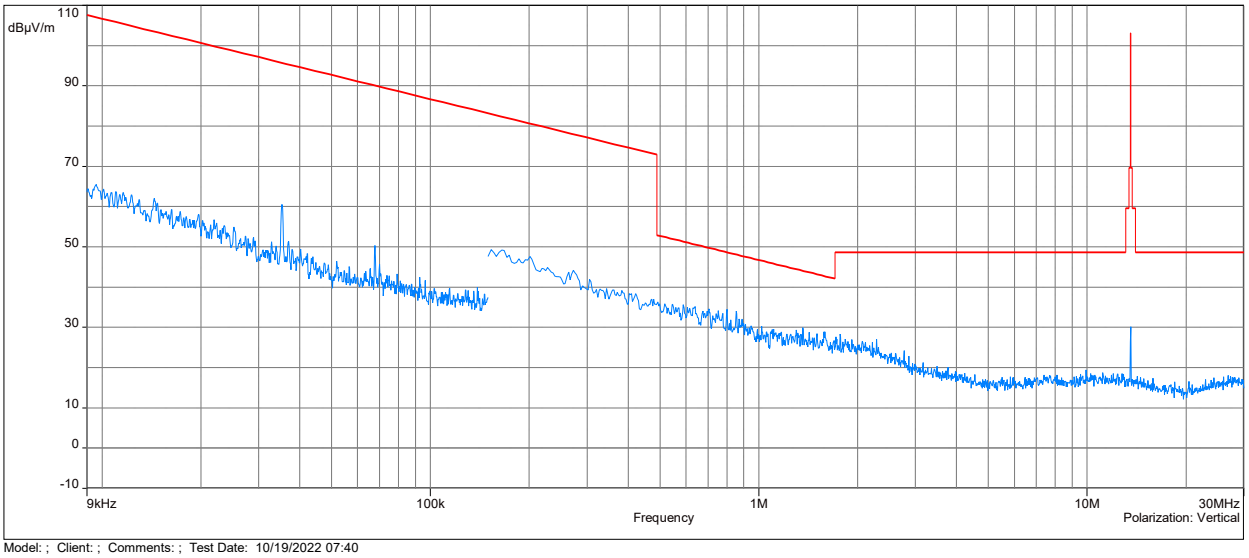
Receiving Antenna Coaxial Orientation



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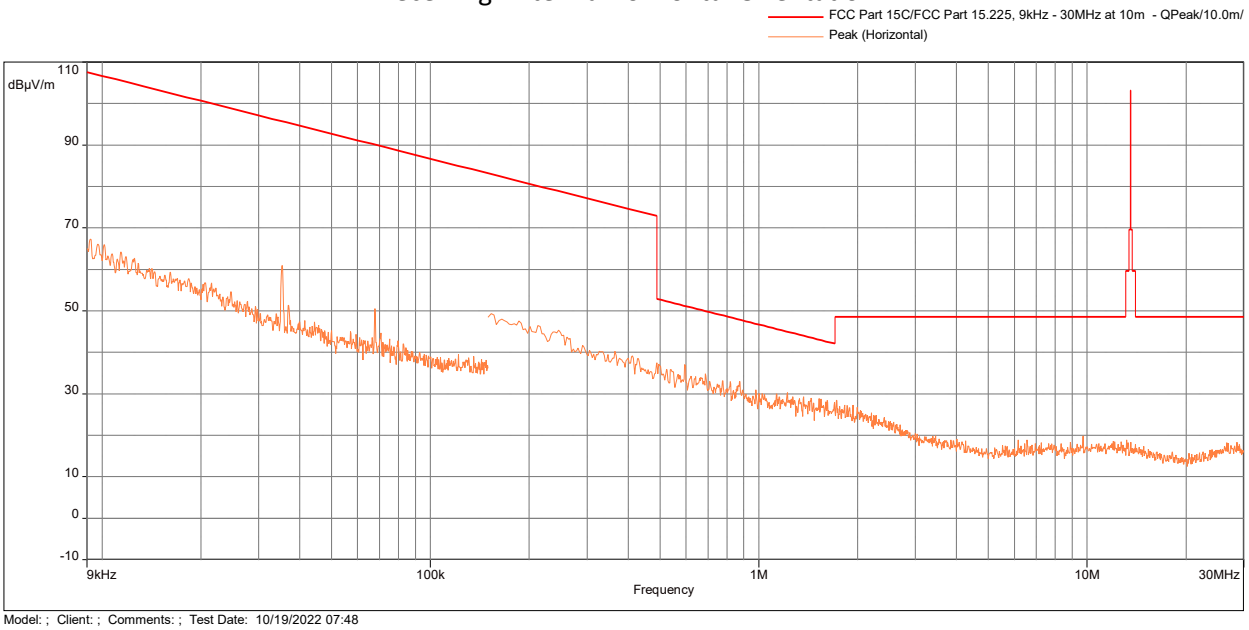
Receiving Antenna Horizontal Orientation



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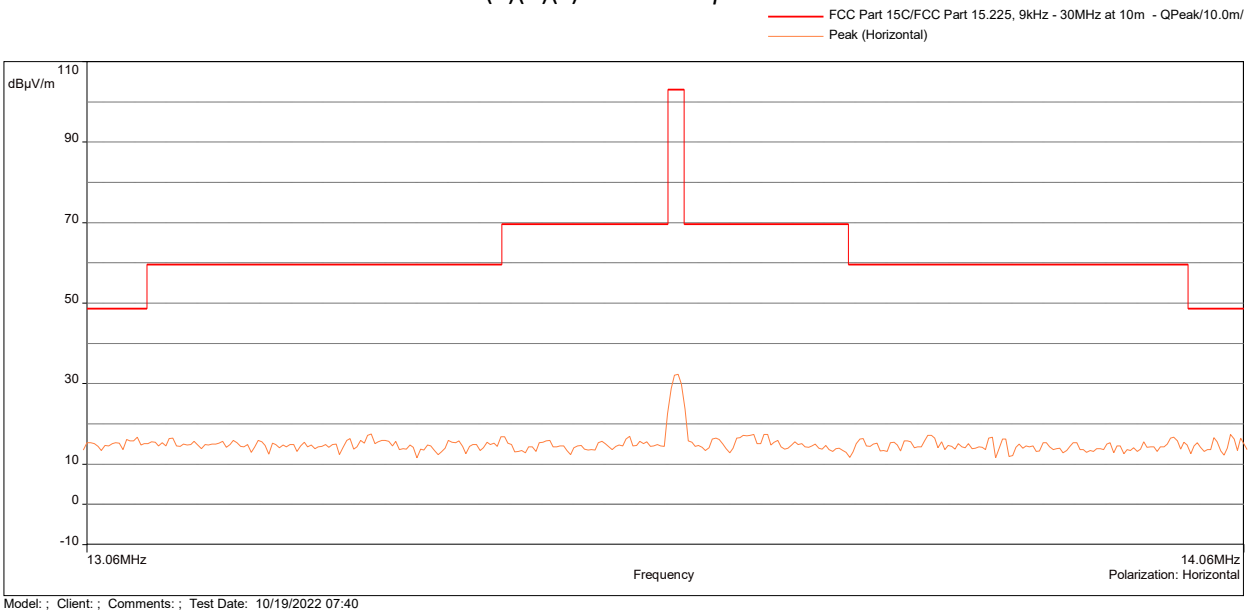
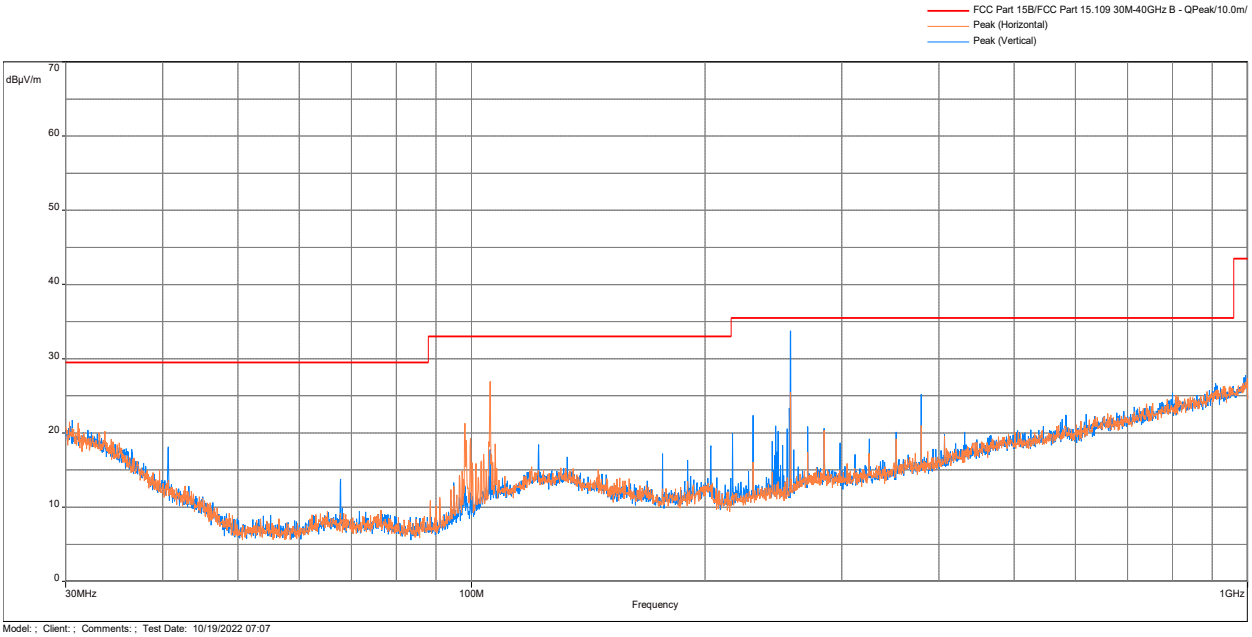
Test Result 15.225 (a)(b)(c) *Radiated Spurious Emissions Mask*



Model: ; Client: ; Comments: ; Test Date: 10/19/2022 07:40

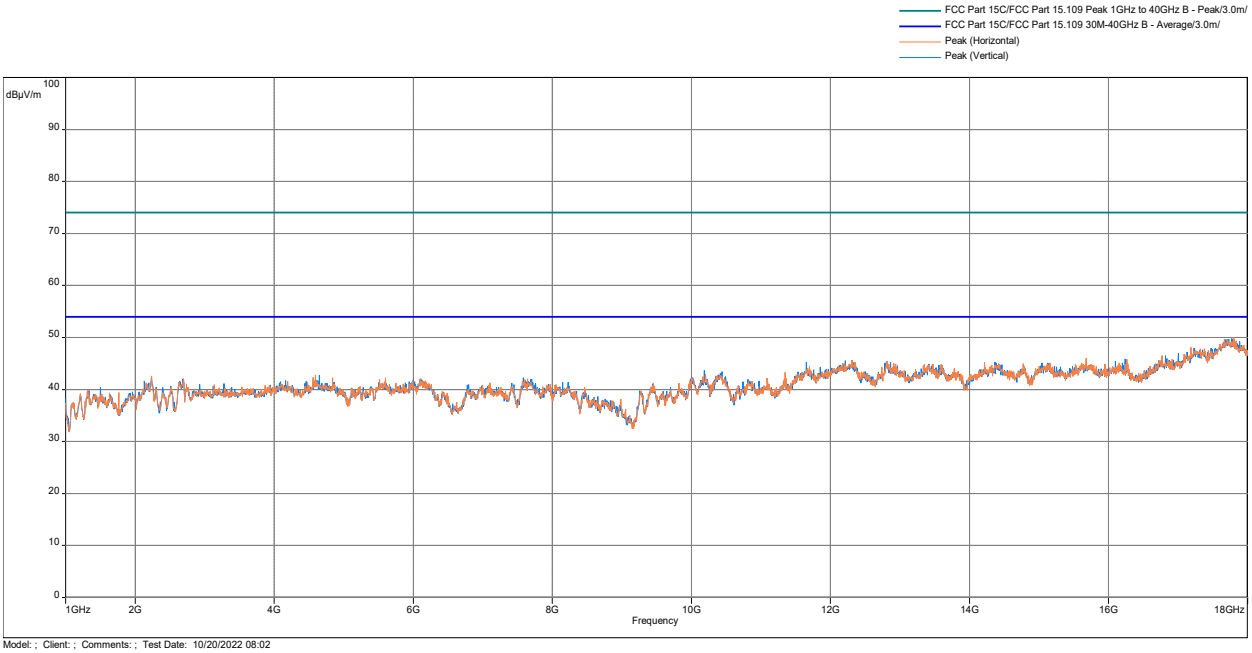
Frequency	Peak FS @10m	Limit @10m	Margin	Angle (°)	Polarity	Correction
(MHz)	dB(uV/m)	dB(uV/m)	dB			dB
13.56	32.29	103.10	-70.81	359.50	Coplanar	2.58

Radiated Spurious Emissions from 30 to 1000 MHz



Freq (MHz)	Peak FS @10m dB(uV/m)	Limit @10m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
257.641	32.93	35.50	-2.57	1.04	123.25	Vertical	-13.98
105.692	26.97	33.00	-6.03	2.00	85.50	Horizontal	-15.01
30.582	21.72	29.50	-7.78	3.00	301.00	Vertical	-6.58
30.356	21.52	29.50	-7.98	4.00	95.00	Horizontal	-6.43
909.143	26.65	35.50	-8.85	3.00	50.50	Vertical	-0.03
934.460	26.35	35.50	-9.15	2.00	0.00	Horizontal	0.01

Radiated Spurious Emissions from 1 to 18 GHz, Peak Scan vs Avg and Peak Limits



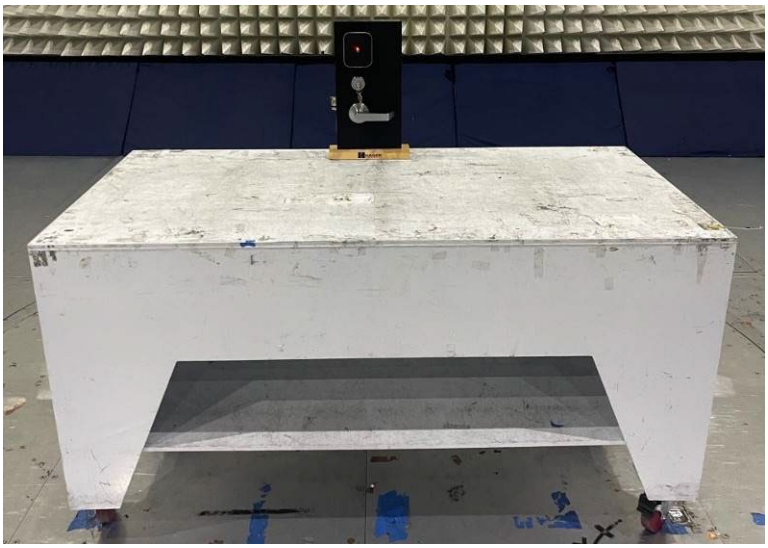
Freq (MHz)	Peak @3m dB(uV/m)	Avg Limit @3m dB(uV/m)	Margin (dB)	Height (m)	Azimuth (Deg)	Polarity	Correction (dB)
17794.300	50.05	54.00	-3.95	3.24	224.75	Horizontal	5.61
17771.067	49.77	54.00	-4.23	1.26	137.50	Vertical	5.79
15676.667	46.06	54.00	-7.94	1.26	222.00	Horizontal	2.93

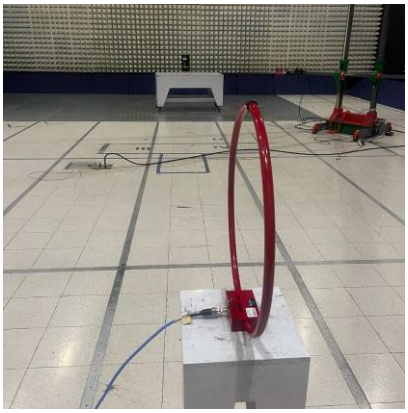
Result	Complies

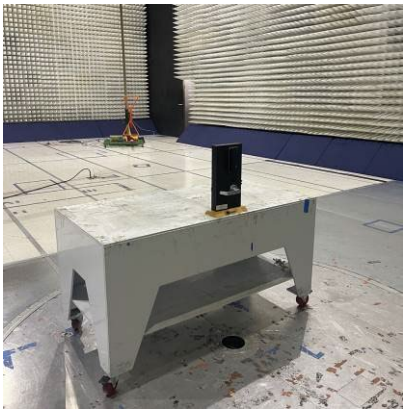
4.1.4 Test Configuration Photographs

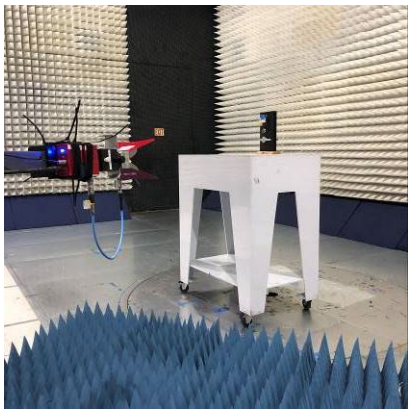
The following photographs show the testing configurations used.

Mortise Sectional

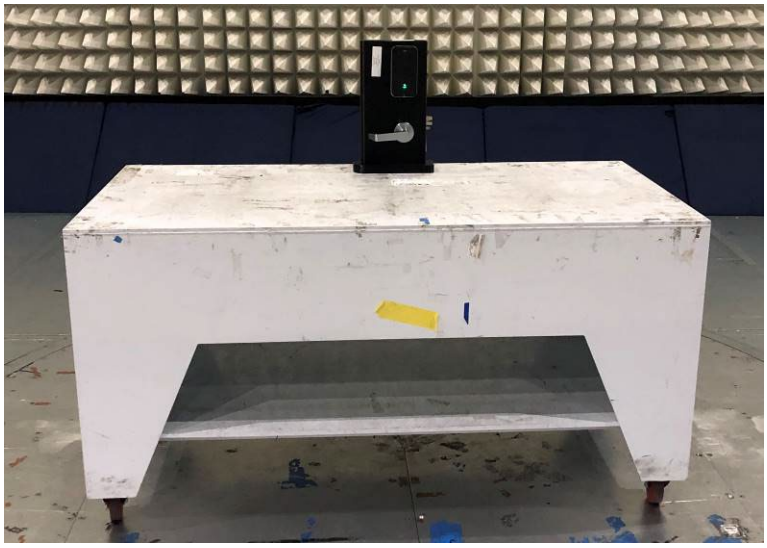


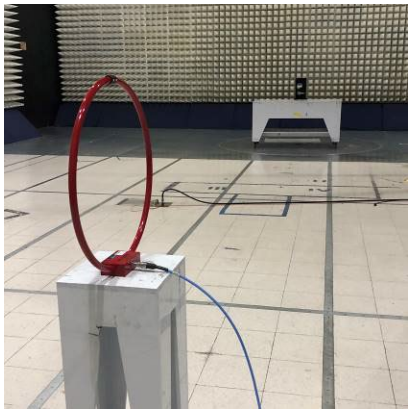


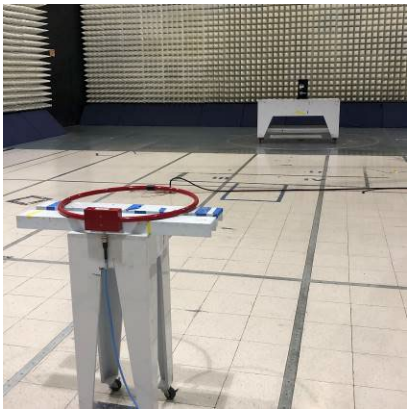


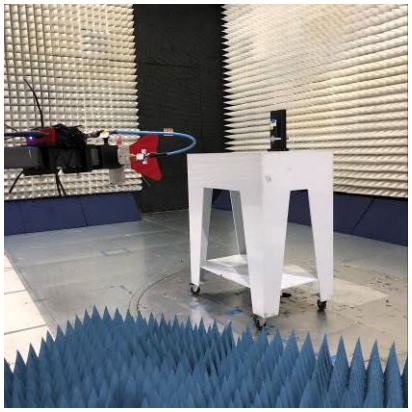


Mortise Escutcheon

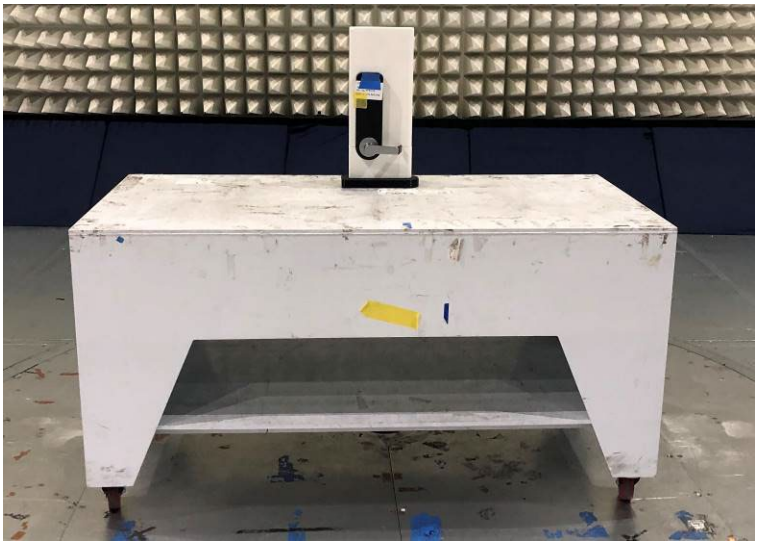


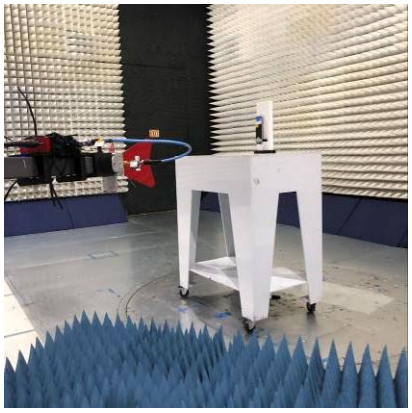




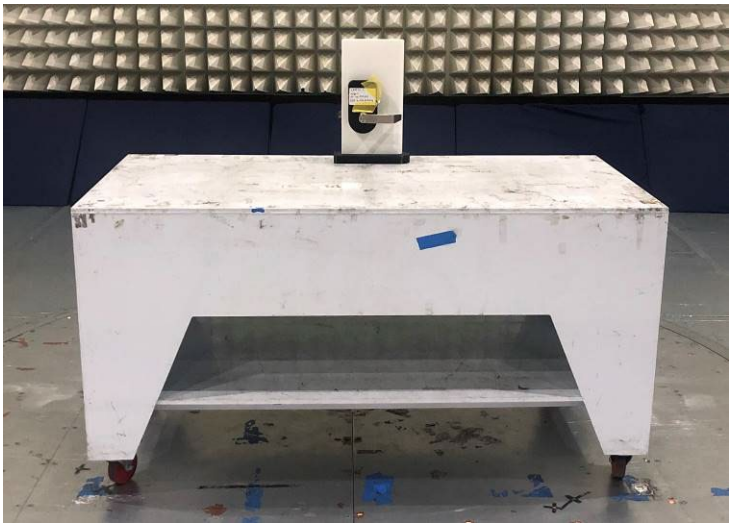


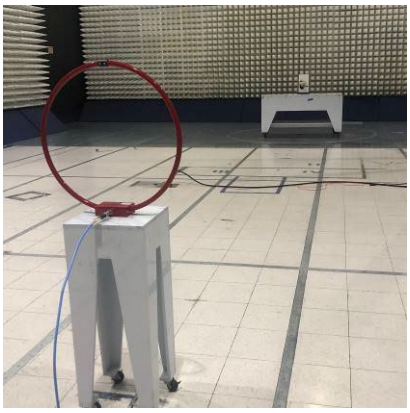
Exit Trim

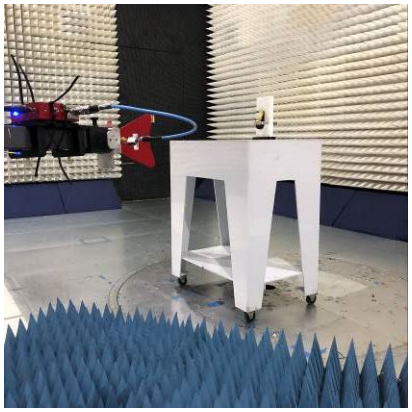




Cylindrical







4.2 Frequency Tolerance

4.2.1 Requirement

FCC 15.225 (e)

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

4.2.2 Procedure

The EUT was placed in the temperature chamber. The frequency counter was connected to the transmitter output. For each temperature, the carrier frequency was recorded with the battery fully charged.

4.2.3 Test Results 15.225 (e)

Nominal Frequency: 13.559978365 MHz

Voltage (DC)	Temperature (C)	Measured Frequency (MHz)	Deviation (%)	Deviation Limit (%)	Results
Fully charged Battery	50	13.559907853	-0.000520001	±0.01	Pass
	40	13.559926282	-0.000384094	±0.01	Pass
	30	13.559951923	-0.000195000	±0.01	Pass
	20	13.559978365	0.000000000	±0.01	Pass
	10	13.559992788	0.000106364	±0.01	Pass
	0	13.559997596	0.000141822	±0.01	Pass
	-10	13.560001596	0.000171320	±0.01	Pass
	-20	13.560005596	0.000200819	±0.01	Pass

4.3 Occupied Bandwidth
FCC 15.215

4.3.1 Requirements

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage.

4.3.2 Procedure

The EUT was setup to transmit in normal operating condition.

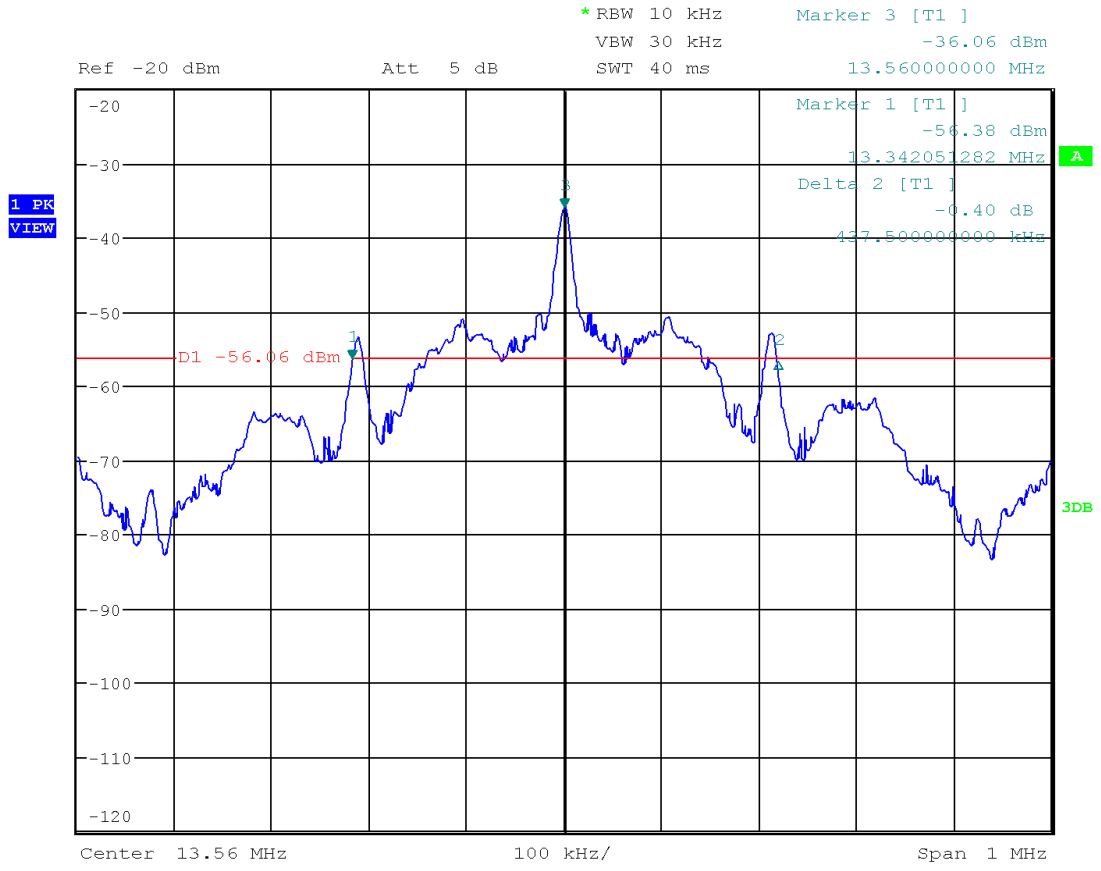
Measurements were made with the loop antenna in close proximity of the EUT. Following the procedures of ANSI 63.10: 2013, the 20dB bandwidth measurements were taken. The following plots show Occupied Bandwidth.

4.3.3 Test Results

Mortise Sectional

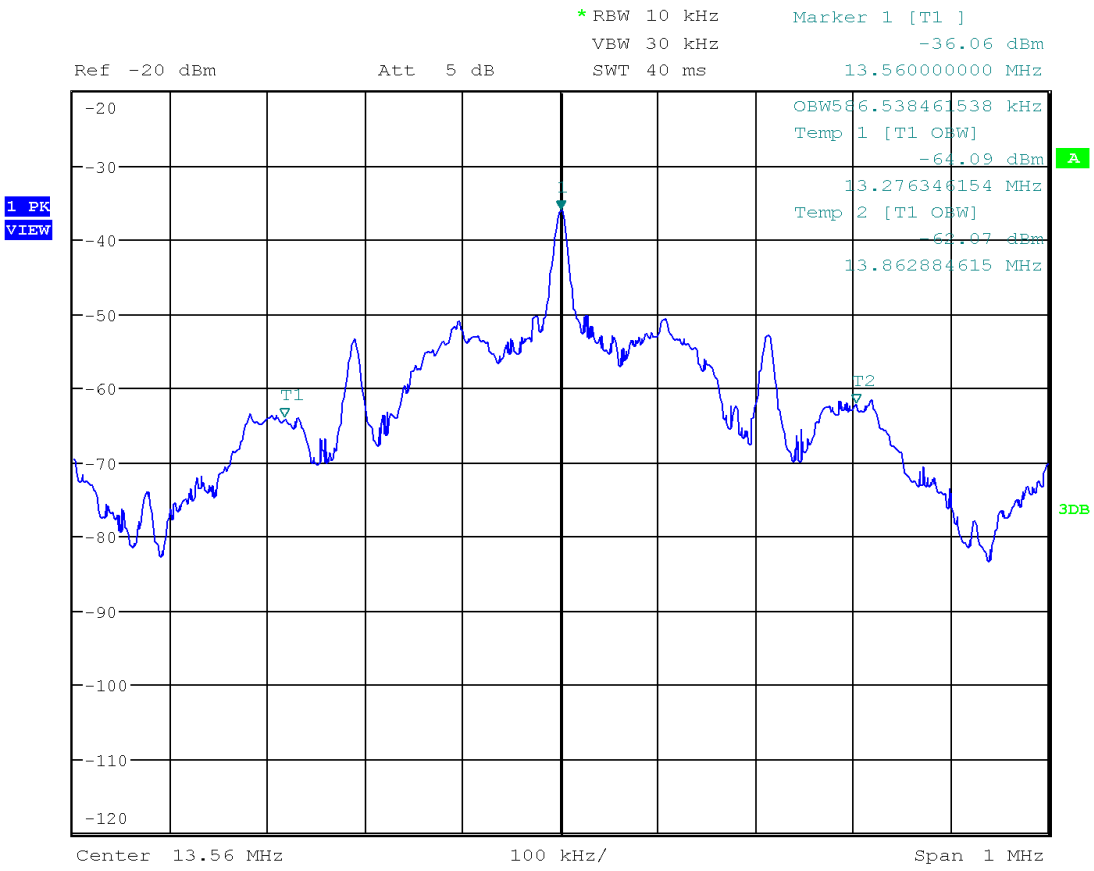
Frequency (MHz)	-20 dB Channel Bandwidth (Hz)	99% Channel Bandwidth (kHz)
13.56	437.50000	591.34615

-20dB Channel Bandwidth



Date: 21.OCT.2022 12:53:02

99% Channel Bandwidth Plot

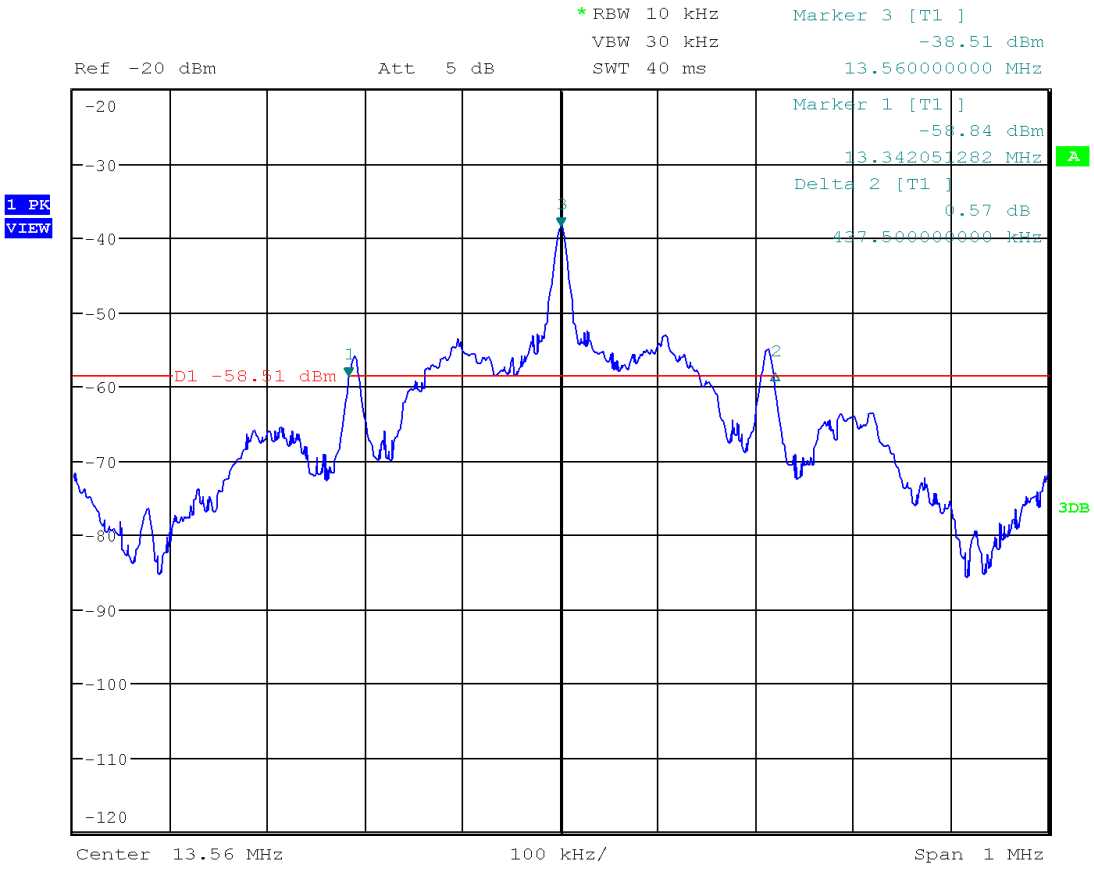


Date: 21.OCT.2022 12:55:07

Mortise Escutcheon

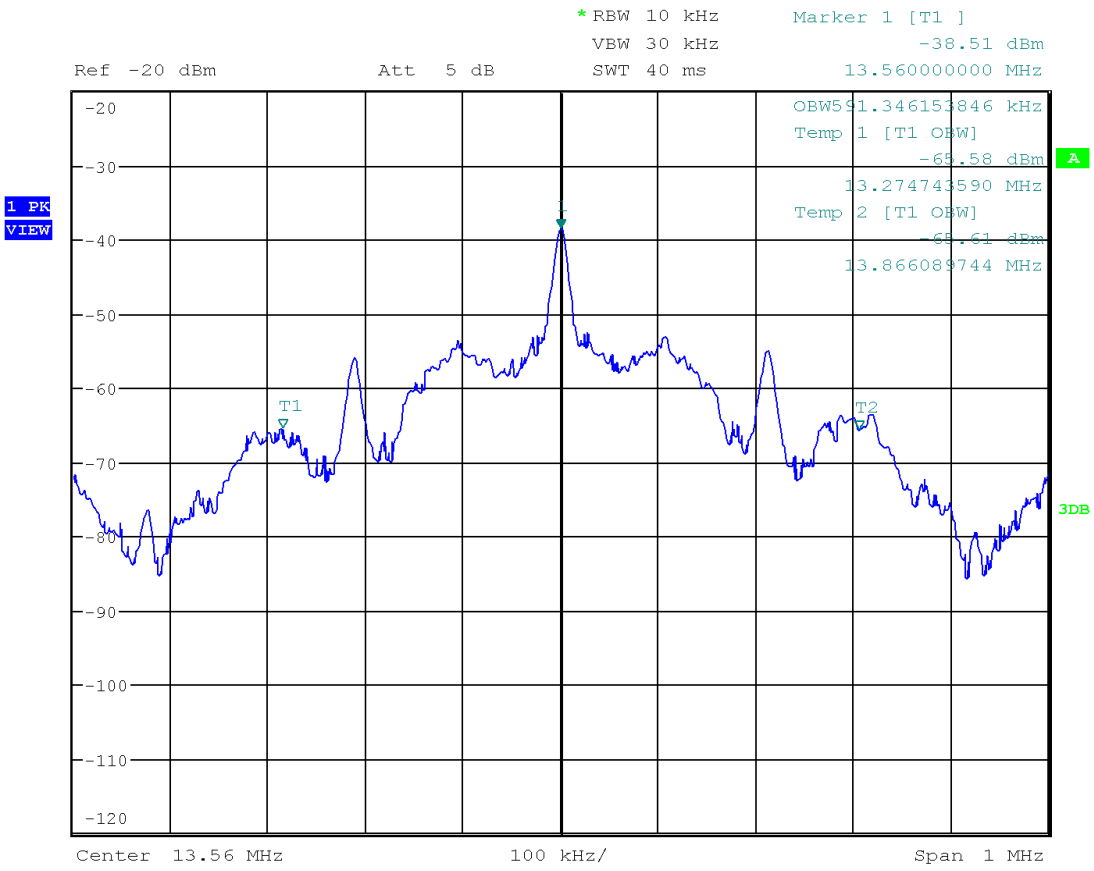
Frequency (MHz)	-20 dB Channel Bandwidth (Hz)	99% Channel Bandwidth (kHz)
13.56	437.50000	591.34615

-20dB Channel Bandwidth Plot



Date: 21.OCT.2022 13:07:51

99% Channel Bandwidth Plot

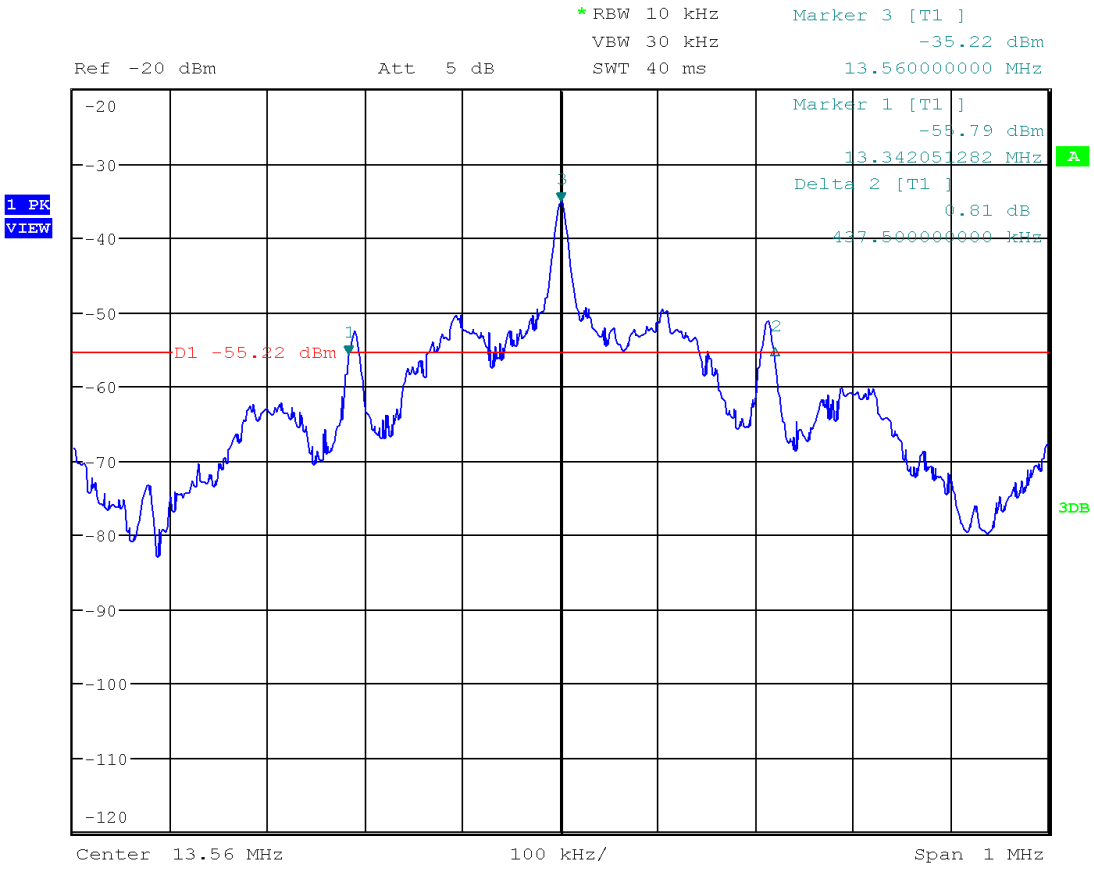


Date: 21.OCT.2022 13:08:34

Exit Trim

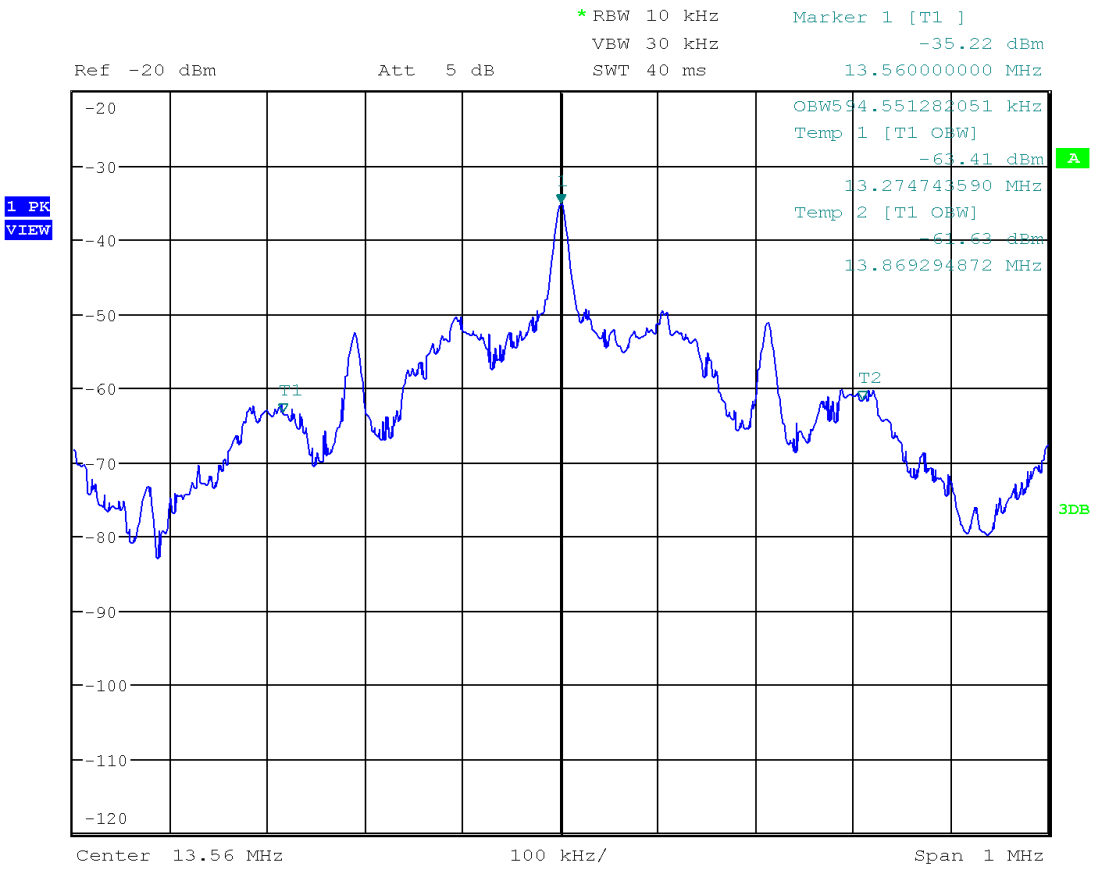
Frequency (MHz)	-20 dB Channel Bandwidth (Hz)	99% Channel Bandwidth (kHz)
13.56	437.50000	594.55128

-20dB Channel Bandwidth Plot



Date: 21.OCT.2022 13:16:50

99% Channel Bandwidth Plot

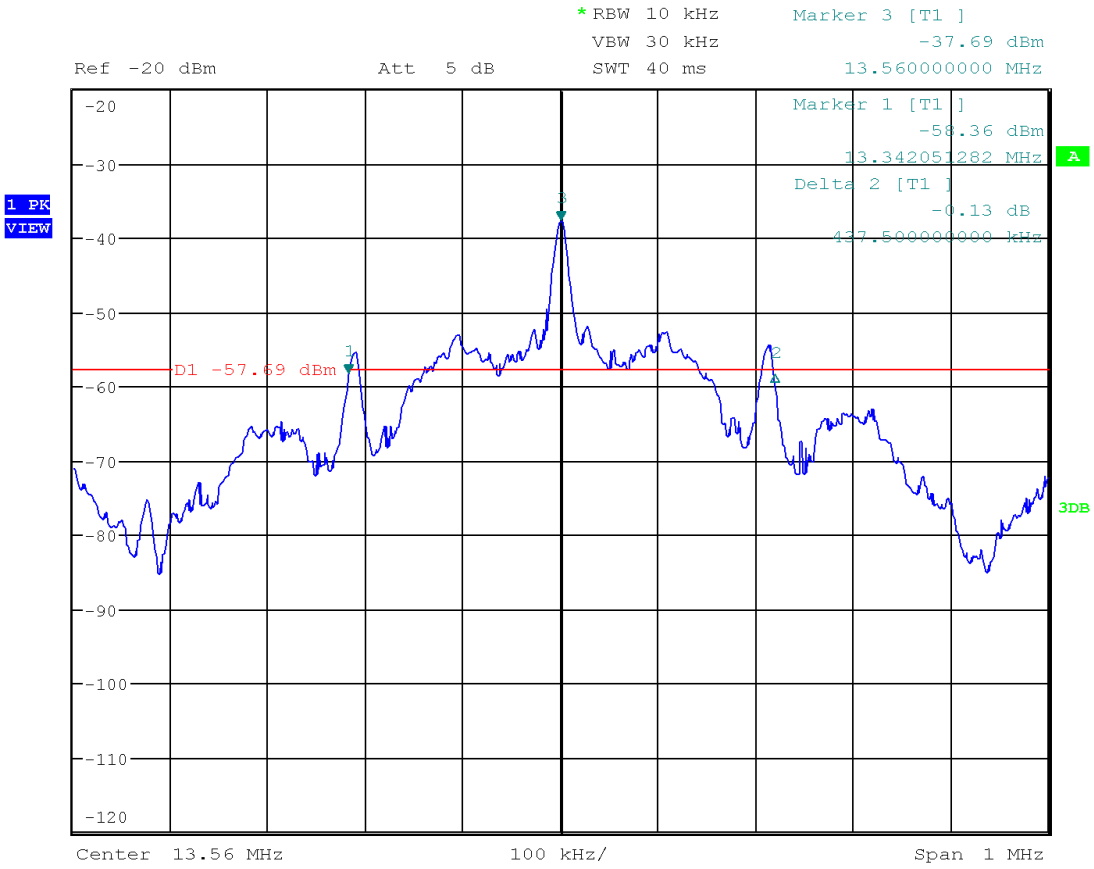


Date: 21.OCT.2022 13:17:27

Cylindrical

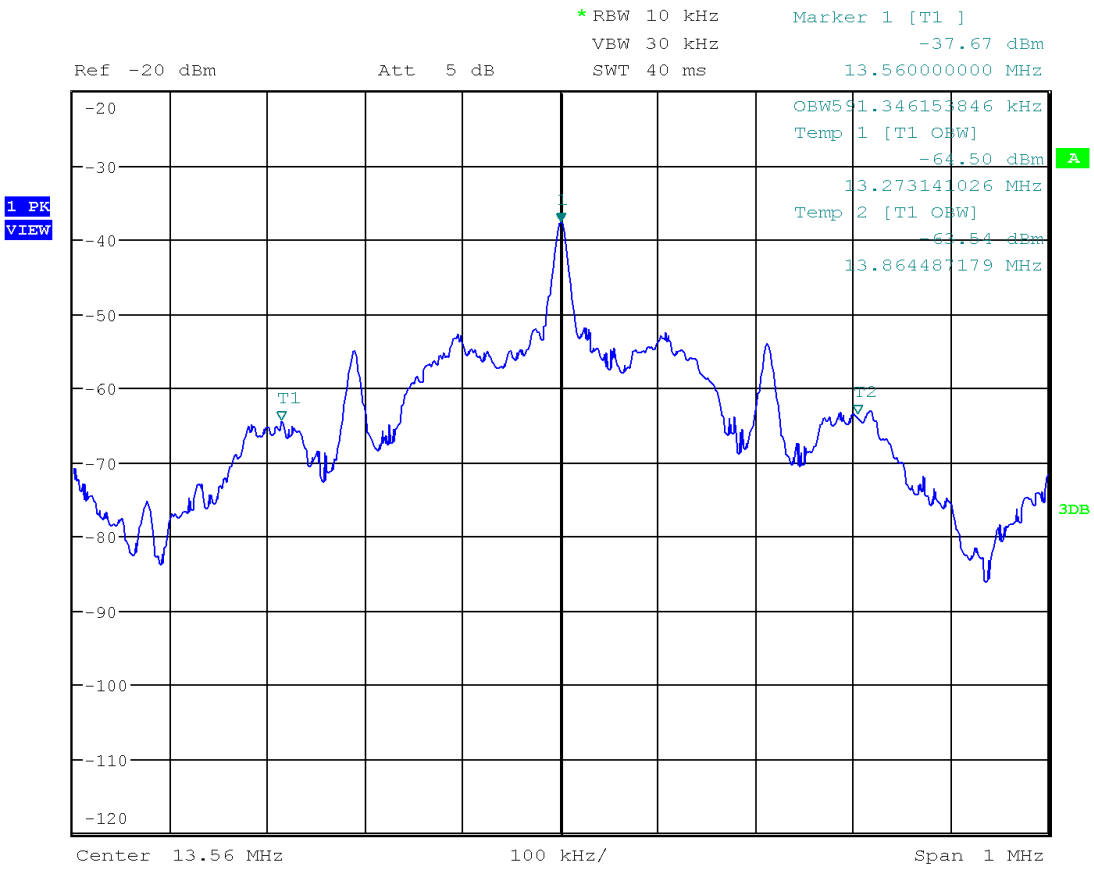
Frequency (MHz)	-20 dB Channel Bandwidth (Hz)	99% Channel Bandwidth (kHz)
13.56	437.50000	591.34615

-20dB Channel Bandwidth Plot



Date: 21.OCT.2022 13:27:26

99% Channel Bandwidth Plot



Date: 21.OCT.2022 13:35:10

4.4 AC Line Conducted Emission
FCC: 15.207; RSS-GEN;

4.4.1 Requirement

Frequency Band MHz	Class B Limit dB(μV)		Class A Limit dB(μV)	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15-0.50	66 to 56 *	56 to 46 *	79	66
0.50-5.00	56	46	73	60
5.00-30.00	60	50	73	60

*Note: *Decreases linearly with the logarithm of the frequency. At the transition frequency the lower limit applies.*

4.4.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

Equipment setup for conducted disturbance tests followed the guidelines of ANSI C63.10-2013.

4.4.3 Test Result

Results:	Not applicable. The EUT is Battery powered (non-rechargeable) only and does not contain an AC Power Port.

5.0 List of test equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Due
EMI Receiver	Rohde and Schwarz	ESU40	ITS 00961	12	03/10/23
Spectrum Analyzer	Rohde and Schwarz	FSU	ITS 00913	12	05/17/23
Horn Antenna	ETS Lindgren	3117PA	ITS 01824	12	08/25/23
Loop Antenna	ETS Lindgren	6512	ITS 01573	12	11/09/22
BI-Log Antenna	SunAR RF Motion	JB1	ITS 01577	12	02/10/23
Pre-Amplifier	Sonoma Instrument	310N	ITS 01713	12	02/17/23
RF Cable	TRU Corporation	TRU CORE 300	ITS 01340	12	07/21/23
RF Cable	TRU Corporation	TRU CORE 300	ITS 01343	12	07/21/23
RF Cable	TRU Corporation	TRU CORE 300	ITS 01461	12	09/21/23
RF Cable	TRU Corporation	TRU CORE 300	ITS 01470	12	09/21/23
RF Cable	Mega Phase	EMC1-K1K1-236	ITS 01885	12	04/25/23
10m Semi-Anechoic Chamber	Panashield	10m Chamber	ITS 00984	36	07/22/23

Software used for emission compliance testing utilized the following:

Name	Manufacturer	Version	Template/Profile
BAT-EMC	Nexio	3.20.0.23	ESU and ESR Intertek Emissions Template
RS Commander	Rohde Schwarz	1.6.4	Not Applicable (Screen grabber)

6.0 Document History

Revision/ Job Number	Writer Initials	Reviewer Initials	Date	Change
1.0 / G104902494	KR	AS	October 28, 2022	Original Document

END OF REPORT