

**COMPLIANCE WORLDWIDE INC.
TEST REPORT 201-24**

**In Accordance with the Requirements of
FCC PART 15.209, SUBPART C**

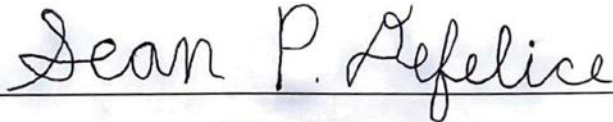
**Issued to
Napco Security Technologies, Inc.
333 Bayview Avenue
Amityville, NY 11701**

**for the
R-PH 125 kHz Proximity Card Reader
Model: R-PH**

FCC ID: AD8R-PH

Report Issued on June 28, 2024

Tested by



Sean P. Defelice

Reviewed By



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1. Scope

This test report certifies that the Napco Security Technologies R-PH 125 kHz Proximity Card Reader, as tested, meets the FCC Part 15.209 Subpart C requirements. The scope of this test report is limited to the test sample provided by the client, only in as much as that sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated, and a retest may be required. Measurement Uncertainty will not be applied to any of the measurement / testing results in this test report to determine pass/fail criteria per the Decision Rule as defined in ISO/IEC Guide 17025-2017 Clause 3.7.

2. Product Details

- 2.1. Manufacturer:** Napco Security Technologies
2.2. Model Number: R-PH
2.3. Serial Number: Preproduction
2.4. Description: The R-PH 125 kHz Proximity Card Reader is used for scanning passive ID cards in a security environment. Connection is provided via a Wiegand interface.
2.5. Power Source: 7 - 16 VDC from control panel
2.6. Hardware Revision: N/A
2.7. Software Revision: N/A
2.8. Modulation Type: Pulse Modulation
2.9. Operating Frequency: 125 kHz
2.10. EMC Modifications: None

3. Product Configuration

3.1. Operational Characteristics & Software

Once powered is applied to the product via the support equipment the EUT is configured to transmit continuously.

3.2. EUT Hardware

Manufacturer	Model/Part # / Options	Serial Number	Volts	Freq (Hz)	Description/Function
Napco Security Technologies	R-PH	Preproduction	7-16	VDC	125 kHz Prox Card Reader

3.3. EUT Cables/Transducers

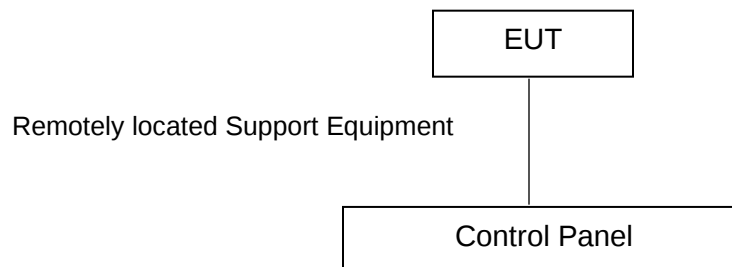
Cable Type	Length	Shield	From	To
24 AWG Wiegand	10M	No	EUT	Panel

3. Product Configuration (continued)

3.4. Support Equipment

Device	Manufacturer	Model	Serial #
None			

3.5. Block Diagram



4. Measurements Parameters

4.1. Measurement Equipment and Software Used to Perform Test

Device	Manufacturer	Model No.	Serial No.	Cal Due	Interval
EMI Test Receiver, 9kHz - 7GHz ¹	Rohde & Schwarz	ESR7	101156	10/26/2024	3 Years
EMI Test Receiver, 10 Hz - 7GHz ¹	Rohde & Schwarz	ESR7	101770	7/23/2025	1 Year
Loop Antenna 9 kHz - 30 MHz	EMCO	6512	9309-1139	4/14/2025	3 Years
Loop Antenna 20 Hz – 5 MHz	ETS-Lindgren	6511	00108119	3/31/2025	3 Years
Biconilog Antenna, 30 MHz - 2 GHz	Sunol Sciences	JB1	A050913	7/1/2024	3 Years
Digital Barometer	Control Company	4195	ID236	3/15/2025	1 Year

¹ ESR7 Firmware revision: V3.48, SP3 Date installed: 09/30/2020

Manufacturer	Software Description	Title or Model #	Rev.	Report Sections
Compliance Worldwide	Test Report Generation Software	Test Report Generator	1.0	Used to process conducted emissions data

4.2. Measurement & Equipment Setup

Test Dates:	June 20 th , 21 st , 2024
Test Engineer:	Sean Defelice
Normal Site Temperature (15 – 35 °C):	20.5
Relative Humidity (20 - 75 %RH):	46 %
Frequency Range:	9 kHz to 1 GHz
Measurement Distance:	3 Meters
EMI Receiver IF Bandwidth:	200 Hz – 10 to 150 kHz 9 kHz – 150 kHz to 30 MHz 120 kHz - 30 MHz to 1 GHz 1 MHz - Above 1 GHz
EMI Receiver Avg Bandwidth:	>= 3 * RBW
Detector Function:	Peak, QP - 30 MHz to 1 GHz Peak, Avg - Above 1 GHz Unless otherwise specified.

4.3 Measurement Procedure

The test measurements contained in this report are based on the requirements detailed in FCC Part 15, Subpart C - Intentional Radiators, notably Section 15.209, Radiated emission limits; general requirements and ANSI C63.10:2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

5. Choice of Equipment for Test Suites

5.1. Choice of Model

This test report is based on the test samples supplied by the manufacturer and are reported by the manufacturer to be equivalent to the production units.

5.2. Presentation

The test sample was tested complete with all required ancillary equipment. Refer to Section 3 of this report for the product equipment configuration.

5.3. Choice of Operating Frequencies

The transmitter in the unit under test utilizes a single operating frequency at approximately 125 kHz.

6. Measurements Summary

Test Requirement	FCC Rule Requirement	Report Section	Result
Antenna requirement	15.203	7.1	Compliant
Radiated Field Strength of Fundamental	15.209(a)	7.2	Compliant
Emission Bandwidth	15.209 Not Specified	7.3	Compliant
Combined Spurious Harmonic Emissions	15.209	7.4	Compliant
Spurious Radiated Emissions	15.209	7.5	Compliant
Power Line Conducted Emissions	15.207	7.6 7.7	Compliant

7. Measurement Data

7.1. Antenna Requirement (15.203)

Requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.

Status: For the 125 kHz transmitter, the device under test utilizes an internal, PCB mounted coil antenna. There is no user access to this antenna.

7.2. Radiated Field Strength of Fundamental (15.209, Section (a))

Requirement: Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

For 125 kHz: Field Strength ($\mu\text{V/m}$) = $2400/F(\text{kHz})$ at 300 meters.
 Field Strength ($\mu\text{V/m}$) = $2400/125.000$
 Field Strength ($\mu\text{V/m}$) = 19.20
 Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \text{ LOG}_{10}(19.20)$
 Field Strength ($\text{dB}\mu\text{V/m}$) = 25.67 at 300 meters.

Test Notes: From 110 kHz to 490 kHz, the field strength limit employs an average detector (FCC Part 15.209(d)).

Reference ANSI C63.10-2013 sections 5.3.2 and 6.4.4.2. The following formula was used to extrapolate the measurement distance to the limit distance:

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{near field}}}{d_{\text{measure}}} \right) - 20 \log \left(\frac{d_{\text{limit}}}{d_{\text{near field}}} \right) \quad \text{Equation 1}$$

FS_{limit} is the calculation of field strength at the limit distance ($\text{dB}\mu\text{V/m}$)	6.97
FS_{max} is the measured field strength, expressed in ($\text{dB}\mu\text{V/m}$) (average)	86.97
$d_{\text{near field}}$ is the $\lambda/2\pi$ distance (Meters)	381.97
d_{measure} is the distance of the measurement point from the EUT (Meters)	3.00
d_{limit} is the reference limit distance (Meters)	300.00

Since $d_{\text{near field}}$ is greater than d_{limit} , the measurement formula was simplified to:

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log (d_{\text{limit}}/d_{\text{measure}}).$$

Results: Compliant

7. Measurement Data (continued)

7.2. Radiated Field Strength of Fundamental (15.209, Section (a), RSS-GEN Table 6)

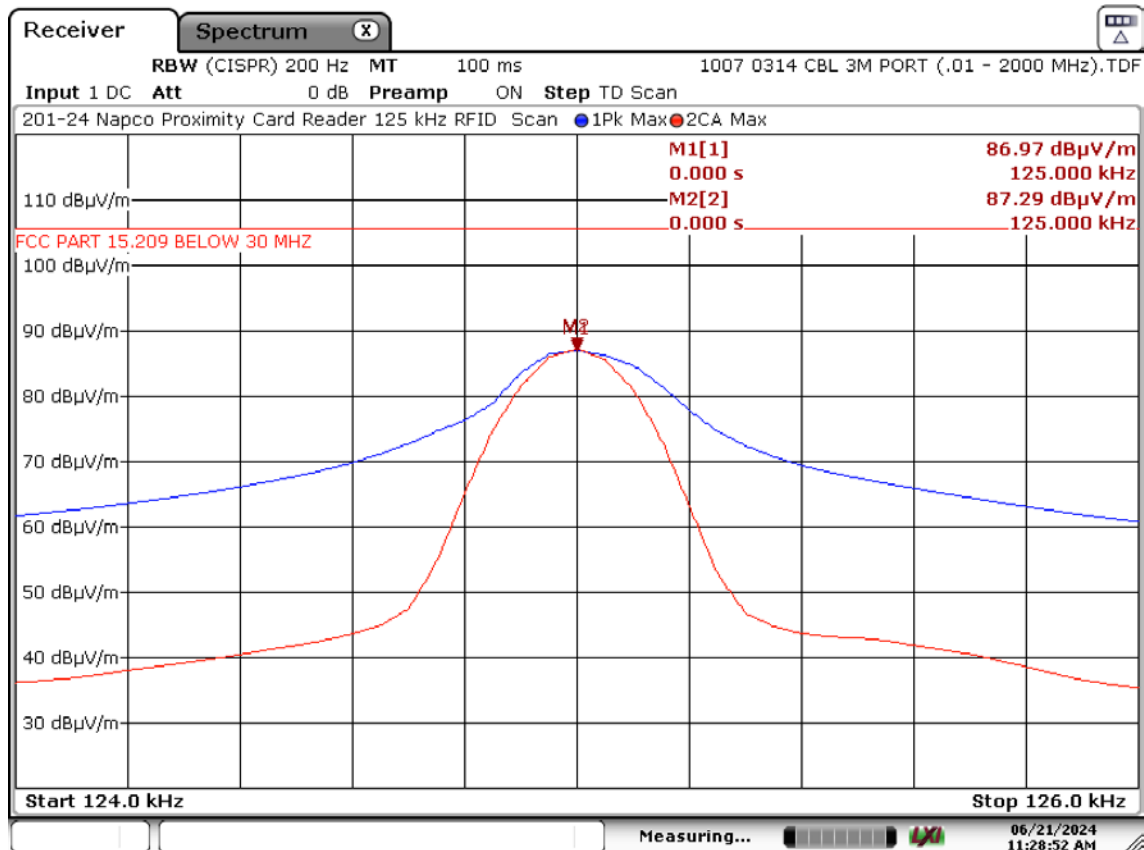
7.2.1. Worst Case Radiated Field Strength of Fundamental

Freq. (MHz)	Amplitude ¹ (dBμV/m)	Duty Cycle Correction ²	Corr. Ampl. ² (dBμV/m)	FCC 15.209 Limit (dBμV/m)	Margin (dB)	Ant Position	Ant Height	Turntable Azimuth	Result
	Average	dB	Average	(Average)		Par/Per	cm	Deg	
0.125000	6.97	0.00	6.97	25.67	-18.70	Par	100	354	Compliant

¹ Measurement has been extrapolated from 3 meters to 300 meters using Equation 1 on the previous page.

² The test signal was transmitting at close to a 100% duty cycle. Therefore, a correction factor to the peak field strength is not necessary.

7.2.2. Worst Case Radiated Field Strength of Fundamental @ 3 Meters



Date: 21.JUN.2024 11:28:53

7. Measurement Data (continued)

7.3. Emission Bandwidth (FCC Sections 15.209, RSS-210 Section A2.3)

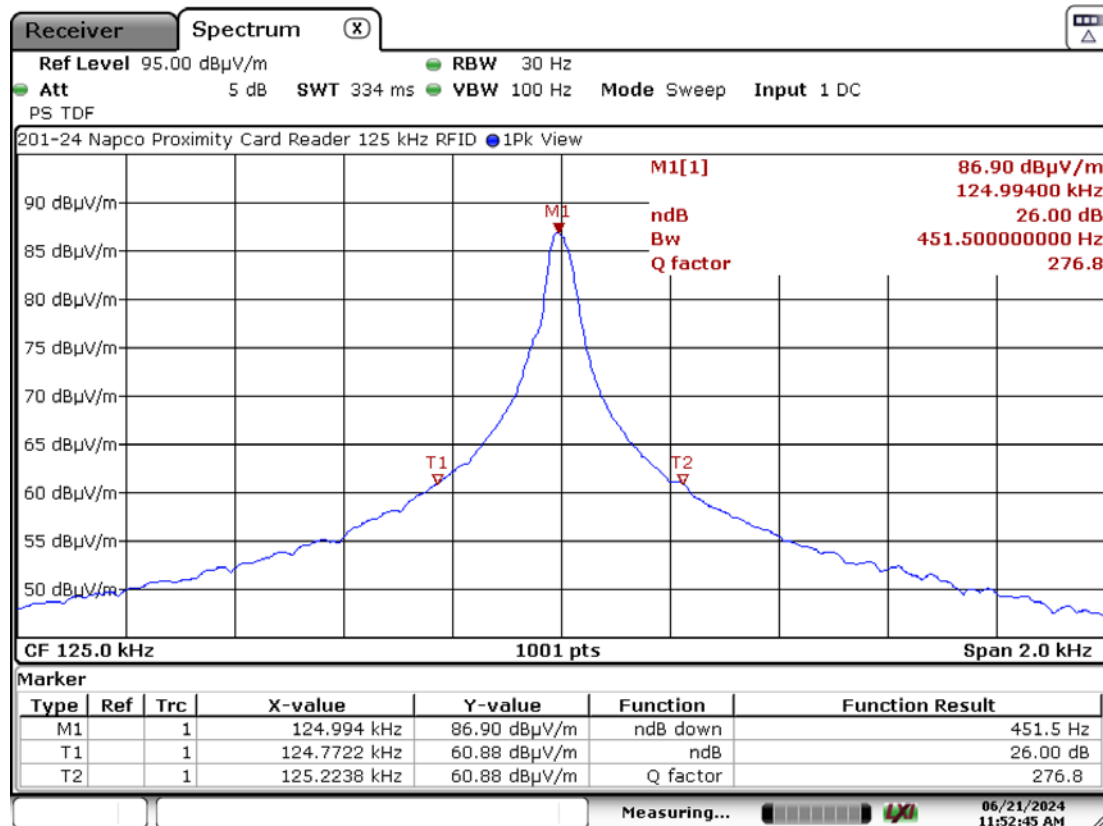
Requirement: For FCC Part 15.209, the bandwidth requirement is not specified. The 26 dB bandwidth has been included as part of this test report.

Test Note: Reference ANSI C63.10-2013, Section 6.9.1. for the bandwidth measurement method.

7.3.1. -26 dB Bandwidth of the Fundamental Frequency

Fundamental Frequency	-26 dB Bandwidth	Required Bandwidth	Result
(MHz)	(kHz)	(kHz)	
0.125	0.4515	Not Specified	N/A

7.3.2. Emission Bandwidth Measurement Results



Date: 21.JUN.2024 11:52:45

7. Measurement Data (continued)

7.4. Combined Spurious Harmonic Emissions (FCC Part 15.209)

Requirement: Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (reference Section 15.205(c)).

Test Note: The following table represents the worst-case measurement of each harmonic emission.

Results: Compliant

Freq. (MHz)	Measured Field Strength (dB μ V/m)		Limit (dB μ V/m)		Margin (dB μ V/m) ²		w/c Antenna Position (Par/Per G Par)	Turntable Position (Deg)	Result
	Peak	Quasi-Pk ¹	Peak	Quasi-Pk	Peak	Quasi-Pk			
0.250	49.89	31.60	119.64	99.64	-66.88	-57.32	Par	354	Compliant
0.375	45.23	42.80	116.12	96.12	-67.00	-58.76	Par	344	Compliant
0.500	50.52	31.98	93.63	73.63	-45.79	-33.12	Per	354	Compliant
0.625	34.48	30.89	91.69	71.69	-44.26	-32.37	Par	354	Compliant
0.750	36.31	25.11	90.11	70.11	-48.06	-30.74	Per	354	Compliant
0.875	28.93	23.60	88.78	68.78	-44.11	-29.44	Par	354	Compliant
1.000	43.66	20.58	87.62	67.62	-43.96	-28.27	Per	180	Compliant
1.125	29.46	19.94	86.60	66.60	-38.18	-24.23	Par	348	Compliant
1.250	36.33	26.39	85.69	65.69	-42.26	-26.76	Per	210	Compliant

¹ The measurements made at 250 kHz and 375 kHz utilized a CISPR average detector.

7. Measurement Data (continued)

7.5. Spurious Radiated Emissions (15.209)

Requirement: Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Regulatory Limits: FCC Part 15.209

Frequency Range (MHz)	Distance (Meters)	Limit (dBμV/m) ¹
0.009 to 0.490	3	128.5 to 93.8
0.490 to 1.705	3	73.8 to 63.0
1.705 to 30	3	69.5
30 to 88	3	40.0
88 to 216	3	43.5
216 to 960	3	46.0
>960	3	54.0

¹ Measurements in the 9 to 90 kHz, 110 to 490 kHz and above 1000 MHz ranges employ an average detector. Otherwise, a quasi-peak detector is used.

Procedure: Test measurements were made in accordance with ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.

Results: Compliant. The device under test met the spurious radiated emissions requirements.

Sample Calculation: Final Result (dBμV/m) = Measurement Value (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB) – Pre-amplifier Gain (dB) Internal or External.

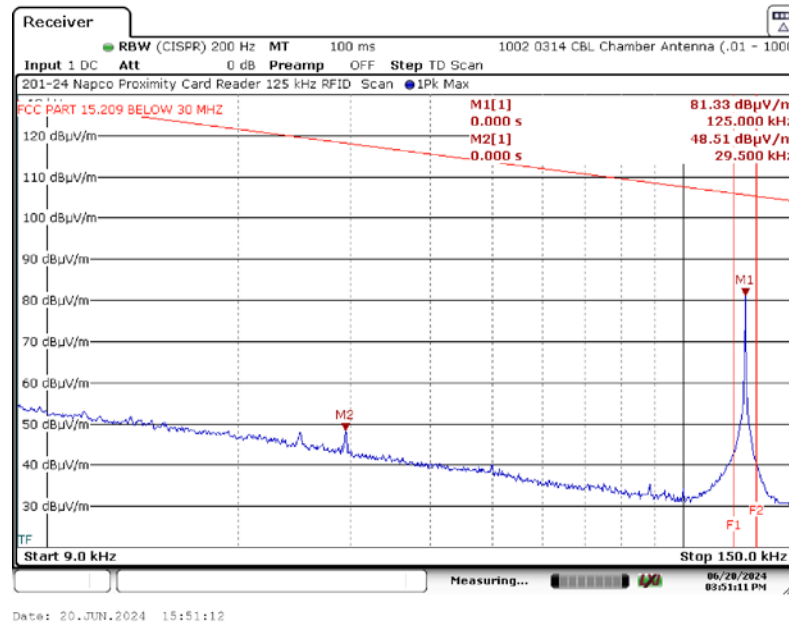
Note: All correction factors are loaded into the measurement instrument prior to testing to determine the final result.

7. Measurement Data (continued)

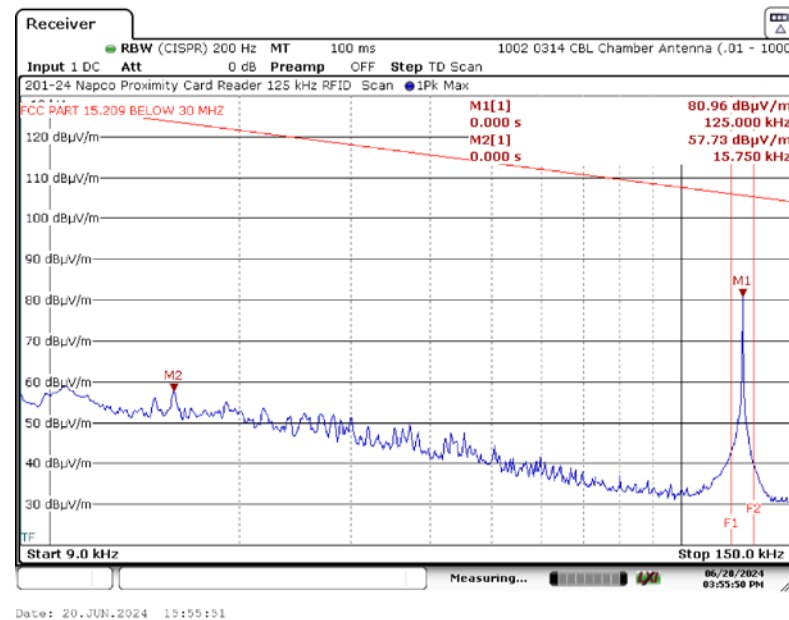
7.5. Spurious Radiated Emissions Test Results (15.209) (continued)

7.5.1. 9 kHz to 150 kHz

7.5.1.1. Parallel Receive Antenna Orientation



7.5.1.2. Perpendicular Receive Antenna Orientation

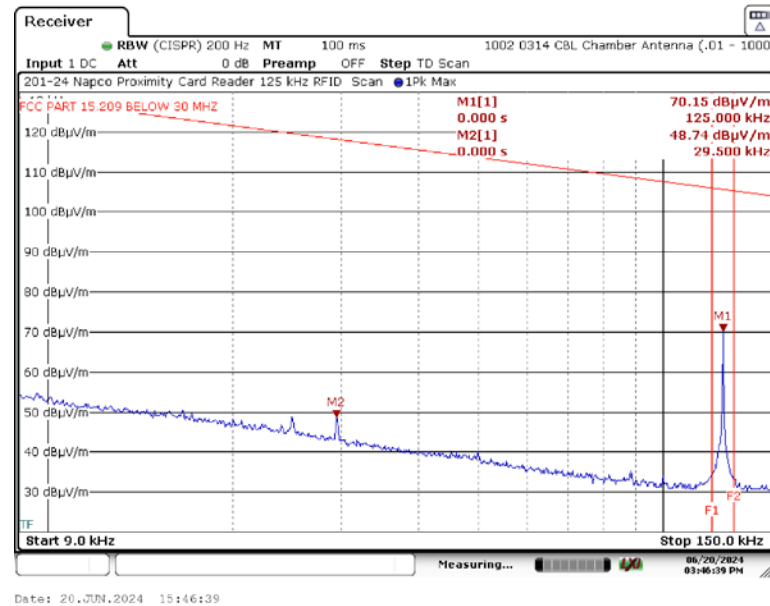


7. Measurement Data (continued)

7.5. Spurious Radiated Emissions Test Results (15.209) (continued)

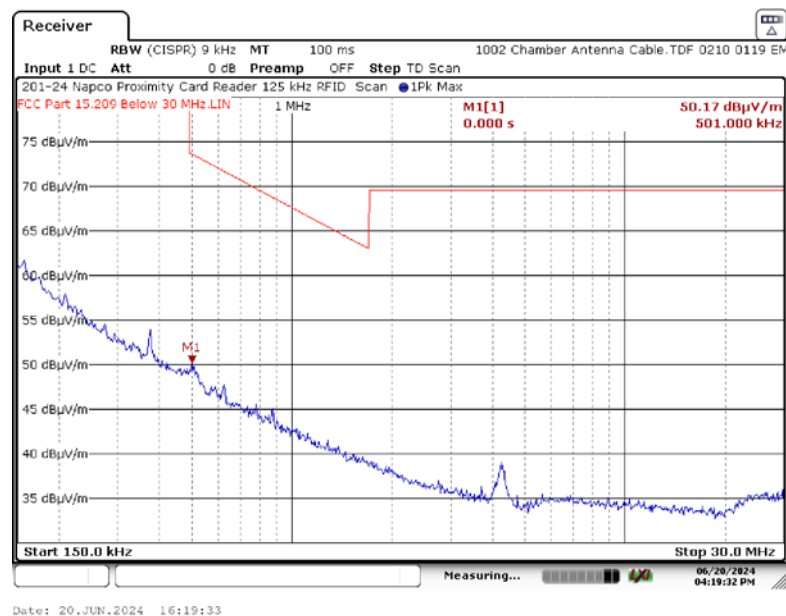
7.5.1. 9 kHz to 150 kHz

7.5.1.3. Ground Parallel Receive Antenna Orientation



7.5.2. 150 kHz to 30 MHz

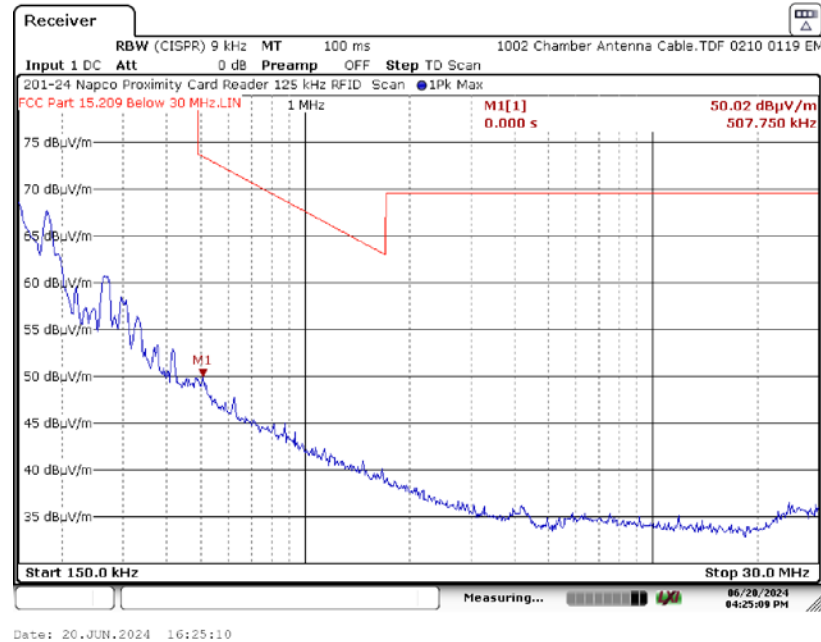
7.5.2.1. Parallel Receive Antenna Orientation



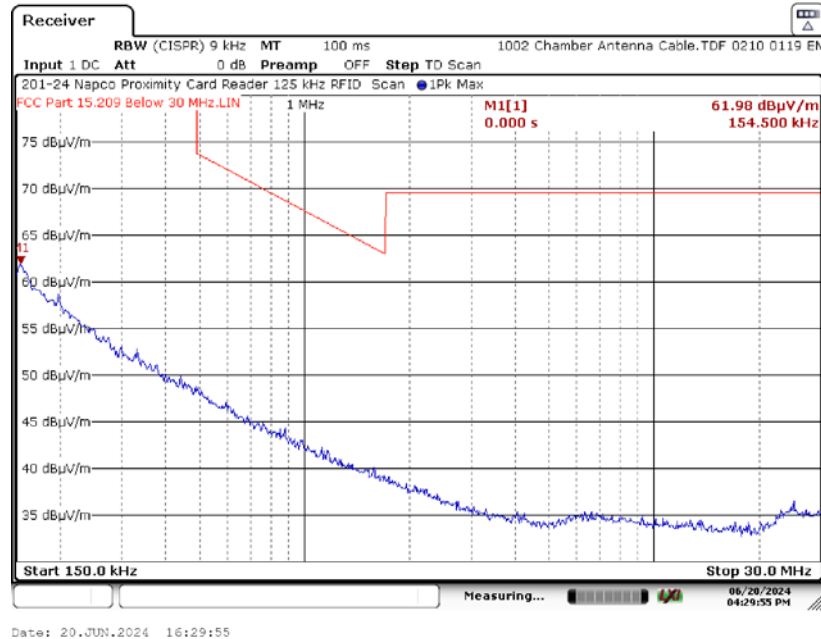
7. Measurement Data (continued)

7.5. Spurious Radiated Emissions Test Results (15.209) (continued)

7.5.2.2. Perpendicular Receive Antenna Orientation



7.5.2.3. Ground Parallel Receive Antenna Orientation

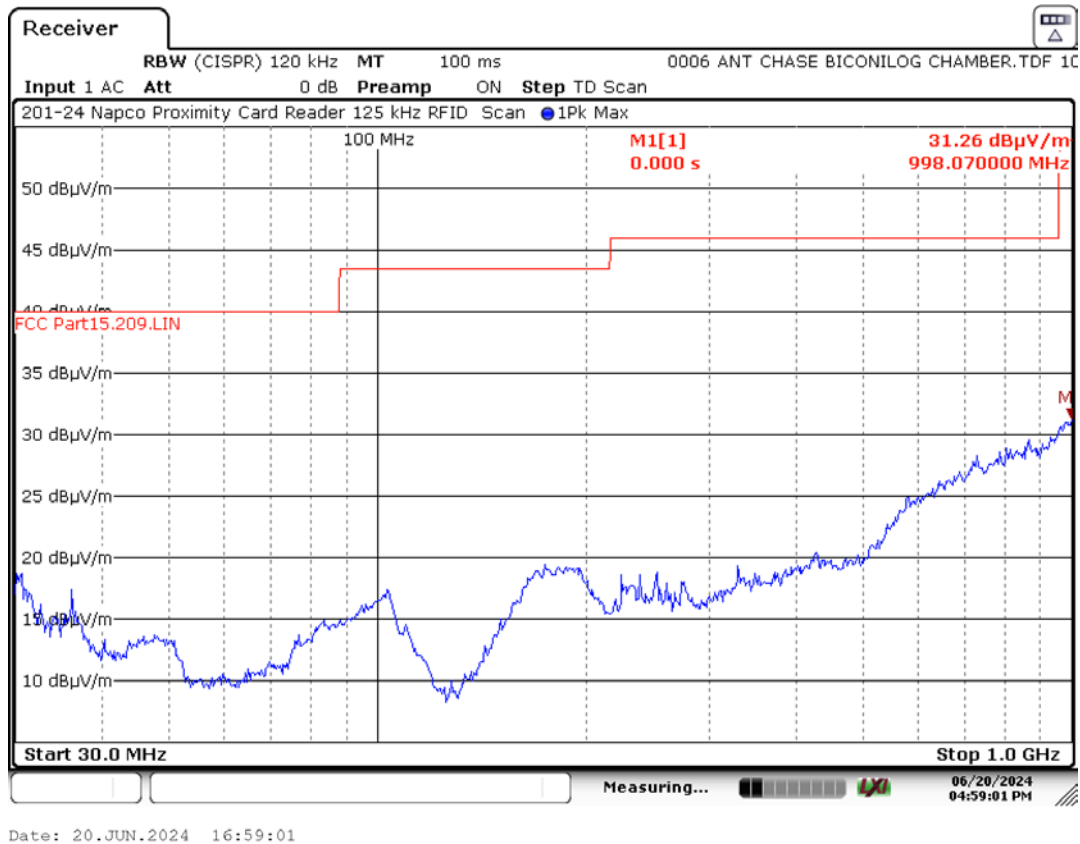


7. Measurement Data (continued)

7.5. Spurious Radiated Emissions Test Results (15.209) (continued)

7.5.3. 30 MHz to 1 GHz

7.5.3.1. Horizontal Polarity

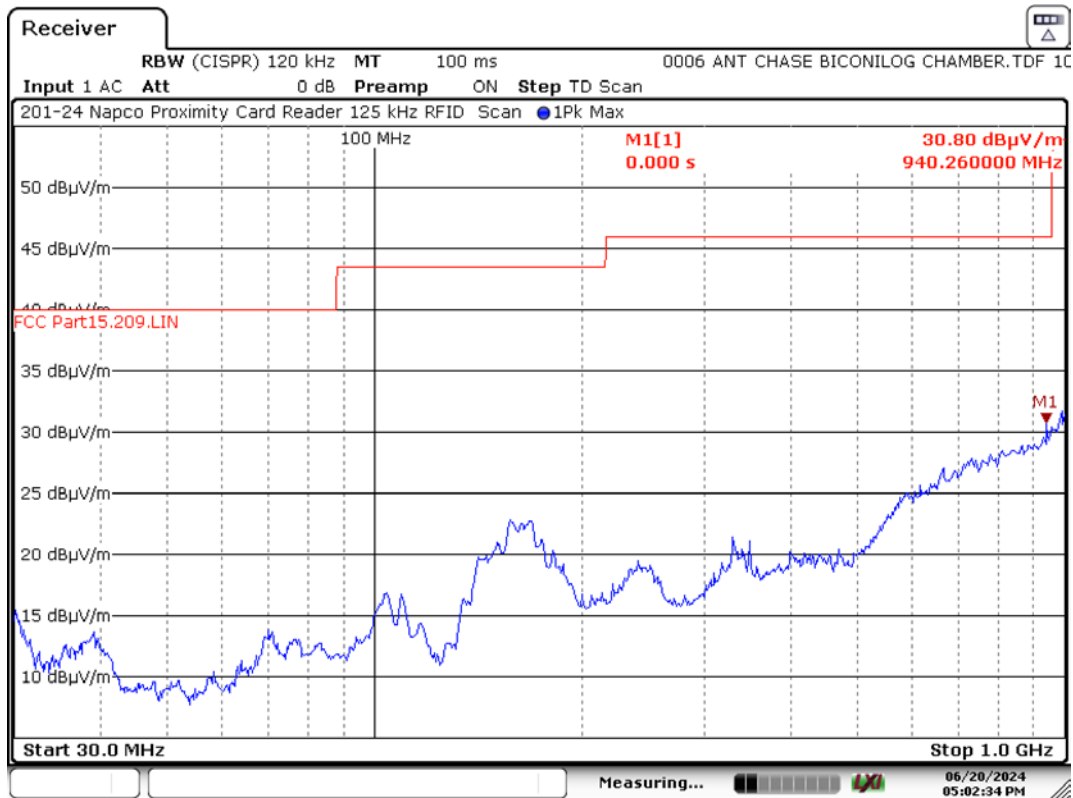


7. Measurement Data (continued)

7.5. Spurious Radiated Emissions Test Results (15.209) (continued)

7.5.3. 30 MHz to 1 GHz

7.5.3.2. Vertical Polarity



Date: 20.JUN.2024 17:02:35

7. Measurement Data (continued)

7.6. Power Line Conducted Emissions (15.207)

Requirement: An intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges. (FCC Part 15.207(a).

Regulatory Limits: FCC Part 15.207

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-Peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5.0	56	46
5.0 to 30.0	60	50
* Decreases with the logarithm of the frequency.		

Measurement & Equipment Setup

Test Date:	6/24/2024
Test Engineer:	Sean Defelice
Site Temperature (°C):	20.5
Relative Humidity (%RH):	46
Frequency Range:	0.15 MHz to 30 MHz
EMI Receiver IF Bandwidth:	9 kHz
EMI Receiver Avg Bandwidth:	≥ 3 * RBW (IF) BW
Detector Functions:	Peak, Quasi-Peak. & Average
Measurement Uncertainty	± 3.40 dB

Procedure: Test measurements were made in accordance with ANSI C63.10-2013, American National Standard for Testing Unlicensed Wireless Devices.

Results: Compliant

Sample Calculation: Final Result = Measurement Value + LISN Factor + Cable Loss.

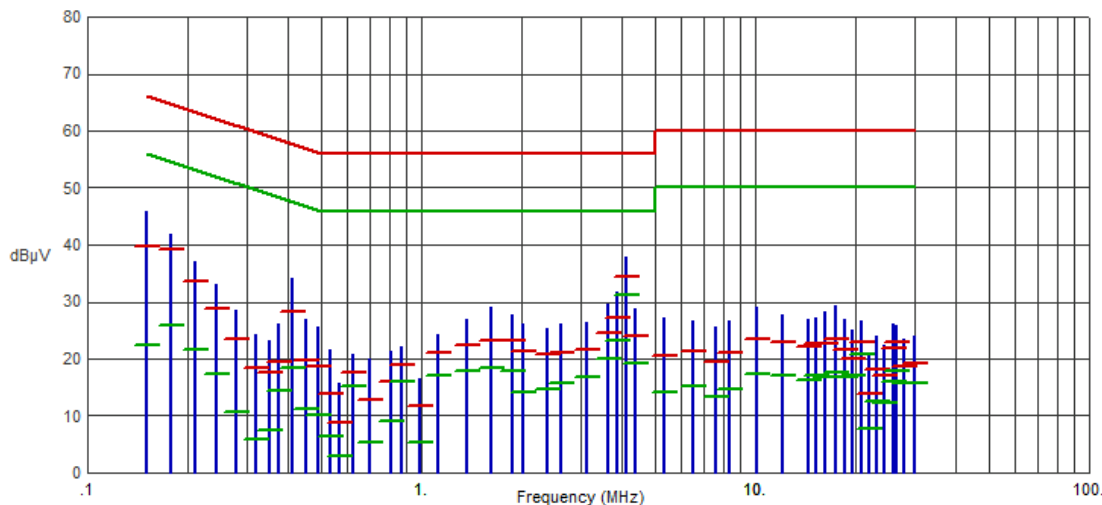
Note: All correction factors are loaded into the measurement instrument prior to testing to determine the final result.

7.7 Conducted Emissions Test Results

7.7.1. 120 Volts, 60 Hz Phase

Test No.: 202-24, 120 Volts, 60 Hz Phase

FCC, Class B



Frequency (MHz)	Pk Amp (dBμV)	QP Amp (dBμV)	QP Limit (dBμV)	QP Margin (dB)	Avg Amp (dBμV)	Avg Limit (dBμV)	Avg Margin (dB)	Comments
.1500	45.81	39.75	66.00	-26.25	22.40	56.00	-33.60	
.1770	41.80	39.11	64.63	-25.52	25.82	54.63	-28.81	
.2108	37.02	33.65	63.17	-29.52	21.61	53.17	-31.56	
.2445	32.95	28.73	61.94	-33.21	17.35	51.94	-34.59	
.2783	28.41	23.54	60.87	-37.33	10.77	50.87	-40.10	
.3210	24.27	18.45	59.68	-41.23	5.92	49.68	-43.76	
.3503	23.24	17.51	58.96	-41.45	7.56	48.96	-41.40	
.3750	26.14	19.37	58.39	-39.02	14.34	48.39	-34.05	
.4088	34.24	28.18	57.67	-29.49	18.44	47.67	-29.23	
.4515	26.88	19.82	56.85	-37.03	11.15	46.85	-35.70	
.4920	25.60	18.74	56.13	-37.39	10.07	46.13	-36.06	
.5325	21.65	13.97	56.00	-42.03	6.46	46.00	-39.54	
.5708	15.78	8.77	56.00	-47.23	2.97	46.00	-43.03	
.6248	20.87	17.52	56.00	-38.48	15.24	46.00	-30.76	
.6990	20.09	12.68	56.00	-43.32	5.28	46.00	-40.72	
.8070	21.46	15.99	56.00	-40.01	9.04	46.00	-36.96	
.8745	22.16	19.04	56.00	-36.96	16.12	46.00	-29.88	
.9848	16.66	11.69	56.00	-44.31	5.22	46.00	-40.78	
1.1243	24.35	20.96	56.00	-35.04	17.03	46.00	-28.97	
1.3740	27.05	22.33	56.00	-33.67	17.75	46.00	-28.25	
1.6238	29.15	23.33	56.00	-32.67	18.38	46.00	-27.62	
1.8758	27.66	23.08	56.00	-32.92	17.98	46.00	-28.02	
2.0108	26.24	21.42	56.00	-34.58	14.16	46.00	-31.84	
2.3753	25.25	20.68	56.00	-35.32	14.78	46.00	-31.22	
2.6250	26.03	21.11	56.00	-34.89	15.73	46.00	-30.27	
3.1245	26.48	21.72	56.00	-34.28	16.93	46.00	-29.07	
3.6240	29.53	24.64	56.00	-31.36	20.12	46.00	-25.88	
3.8760	31.79	27.30	56.00	-28.70	23.21	46.00	-22.79	
4.1235	37.99	34.28	56.00	-21.72	31.29	46.00	-14.71	
4.3755	28.70	23.88	56.00	-32.12	19.20	46.00	-26.80	
5.3093	27.29	20.48	60.00	-39.52	14.24	50.00	-35.76	

7.7. Conducted Emissions Test Results (continued)

7.7.1. 120 Volts, 60 Hz Phase (continued)

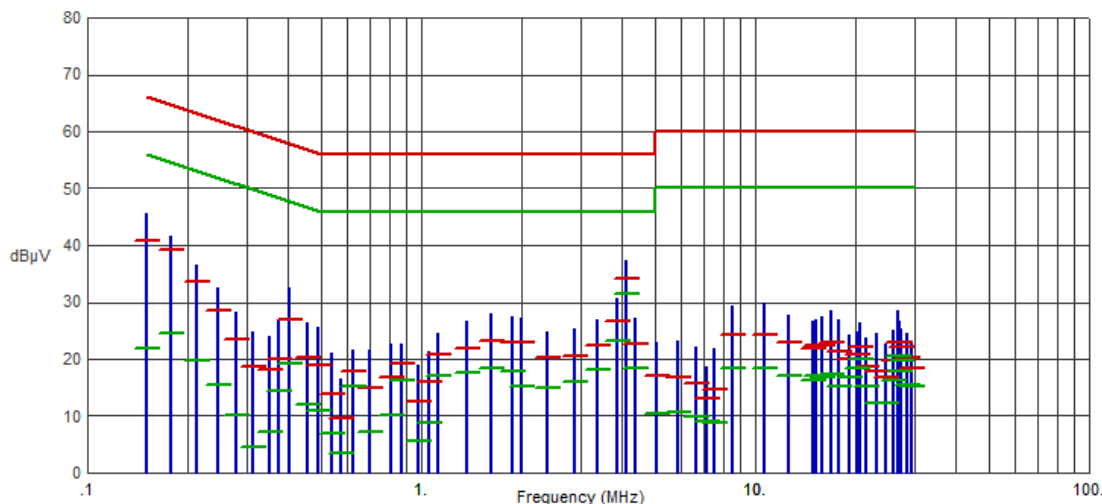
Frequency (MHz)	Pk Amp (dBμV)	QP Amp (dBμV)	QP Limit (dBμV)	QP Margin (dB)	Avg Amp (dBμV)	Avg Limit (dBμV)	Avg Margin (dB)	Comments
6.5085	26.77	21.33	60.00	-38.67	15.28	50.00	-34.72	
7.6268	25.66	19.47	60.00	-40.53	13.33	50.00	-36.67	
8.3760	26.68	21.11	60.00	-38.89	14.78	50.00	-35.22	
10.1243	29.09	23.41	60.00	-36.59	17.40	50.00	-32.60	
12.1245	27.62	23.05	60.00	-36.95	17.11	50.00	-32.89	
14.3745	26.85	22.06	60.00	-37.94	16.17	50.00	-33.83	
15.1238	27.29	22.55	60.00	-37.45	17.06	50.00	-32.94	
16.1228	28.29	22.58	60.00	-37.42	16.85	50.00	-33.15	
17.3760	29.22	23.42	60.00	-36.58	17.49	50.00	-32.51	
18.6248	26.88	21.55	60.00	-38.45	16.82	50.00	-33.18	
19.6238	24.95	20.04	60.00	-39.96	17.19	50.00	-32.81	
20.8748	26.72	22.89	60.00	-37.11	20.90	50.00	-29.10	
21.8715	20.79	13.84	60.00	-46.16	7.79	50.00	-42.21	
23.1248	23.91	18.01	60.00	-41.99	12.47	50.00	-37.53	
24.3735	22.41	17.02	60.00	-42.98	12.18	50.00	-37.82	
25.8765	26.26	21.77	60.00	-38.23	16.13	50.00	-33.87	
26.4863	25.89	23.05	60.00	-36.95	17.79	50.00	-32.21	
27.8745	23.53	18.73	60.00	-41.27	15.63	50.00	-34.37	
29.8725	23.89	19.10	60.00	-40.90	15.64	50.00	-34.36	

7.7. Conducted Emissions Test Results (continued)

7.7.2. 120 Volts, 60 Hz Neutral

Test No.: 202-24, 120 Volts, 60 Hz Neutral

FCC, Class B



Frequency (MHz)	Pk Amp (dBμV)	QP Amp (dBμV)	QP Limit (dBμV)	QP Margin (dB)	Avg Amp (dBμV)	Avg Limit (dBμV)	Avg Margin (dB)	Comments
.1500	45.58	40.68	66.00	-25.32	21.92	56.00	-34.08	
.1770	41.64	39.21	64.63	-25.42	24.51	54.63	-30.12	
.2130	36.50	33.64	63.09	-29.45	19.75	53.09	-33.34	
.2468	32.58	28.66	61.86	-33.20	15.48	51.86	-36.38	
.2783	28.21	23.43	60.87	-37.44	10.15	50.87	-40.72	
.3143	24.85	18.78	59.86	-41.08	4.49	49.86	-45.37	
.3525	23.88	18.02	58.90	-40.88	7.17	48.90	-41.73	
.3750	26.75	20.11	58.39	-38.28	14.40	48.39	-33.99	
.4043	32.52	26.88	57.76	-30.88	19.11	47.76	-28.65	
.4538	26.44	20.28	56.81	-36.53	12.01	46.81	-34.80	
.4920	25.57	19.04	56.13	-37.09	10.97	46.13	-35.16	
.5370	21.08	13.93	56.00	-42.07	6.87	46.00	-39.13	
.5730	16.58	9.61	56.00	-46.39	3.38	46.00	-42.62	
.6248	21.56	17.84	56.00	-38.16	15.30	46.00	-30.70	
.6990	21.50	14.96	56.00	-41.04	7.22	46.00	-38.78	
.8070	22.75	16.90	56.00	-39.10	10.25	46.00	-35.75	
.8745	22.76	19.20	56.00	-36.80	16.19	46.00	-29.81	
.9803	18.83	12.55	56.00	-43.45	5.68	46.00	-40.32	
1.0568	21.37	15.89	56.00	-40.11	8.91	46.00	-37.09	
1.1243	24.60	20.81	56.00	-35.19	17.01	46.00	-28.99	
1.3740	26.56	21.98	56.00	-34.02	17.60	46.00	-28.40	
1.6260	28.06	23.18	56.00	-32.82	18.28	46.00	-27.72	
1.8735	27.47	22.88	56.00	-33.12	17.75	46.00	-28.25	
2.0040	27.27	22.87	56.00	-33.13	15.24	46.00	-30.76	
2.3753	24.69	20.22	56.00	-35.78	15.03	46.00	-30.97	
2.8748	25.38	20.55	56.00	-35.45	16.01	46.00	-29.99	
3.3743	26.95	22.45	56.00	-33.55	18.07	46.00	-27.93	
3.8760	30.69	26.75	56.00	-29.25	23.13	46.00	-22.87	
4.1235	37.35	34.12	56.00	-21.88	31.34	46.00	-14.66	
4.3733	27.07	22.56	56.00	-33.44	18.31	46.00	-27.69	
5.0438	22.88	17.05	60.00	-42.95	10.45	50.00	-39.55	

7.7. Conducted Emissions Test Results (continued)

7.7.2. 120 Volts, 60 Hz Neutral (continued)

Frequency (MHz)	Pk Amp (dBμV)	QP Amp (dBμV)	QP Limit (dBμV)	QP Margin (dB)	Avg Amp (dBμV)	Avg Limit (dBμV)	Avg Margin (dB)	Comments
5.8785	23.13	16.86	60.00	-43.14	10.54	50.00	-39.46	
6.6255	22.08	15.61	60.00	-44.39	9.78	50.00	-40.22	
7.1250	18.78	13.07	60.00	-46.93	8.99	50.00	-41.01	
7.5503	21.88	14.69	60.00	-45.31	8.72	50.00	-41.28	
8.5133	29.32	24.14	60.00	-35.86	18.32	50.00	-31.68	
10.6260	29.85	24.18	60.00	-35.82	18.34	50.00	-31.66	
12.6240	27.64	22.98	60.00	-37.02	17.06	50.00	-32.94	
14.8740	26.75	21.93	60.00	-38.07	16.17	50.00	-33.83	
15.1238	27.03	22.41	60.00	-37.59	17.06	50.00	-32.94	
15.8730	27.41	22.36	60.00	-37.64	16.73	50.00	-33.27	
16.8743	28.50	22.90	60.00	-37.10	17.42	50.00	-32.58	
17.8710	26.98	21.22	60.00	-38.78	15.31	50.00	-34.69	
19.1243	24.16	20.03	60.00	-39.97	16.90	50.00	-33.10	
20.1233	24.83	20.77	60.00	-39.23	18.30	50.00	-31.70	
20.6228	26.30	22.26	60.00	-37.74	19.92	50.00	-30.08	
21.3743	23.67	18.75	60.00	-41.25	15.32	50.00	-34.68	
23.1248	24.46	17.82	60.00	-42.18	12.17	50.00	-37.83	
24.6233	22.78	16.87	60.00	-43.13	12.20	50.00	-37.80	
25.8743	25.07	19.69	60.00	-40.31	16.38	50.00	-33.62	
26.6100	28.63	22.84	60.00	-37.16	20.47	50.00	-29.53	
27.1590	26.63	22.85	60.00	-37.15	17.78	50.00	-32.22	
27.3413	25.44	22.01	60.00	-37.99	19.65	50.00	-30.35	
28.6238	24.60	20.24	60.00	-39.76	15.60	50.00	-34.40	
29.3730	22.85	18.32	60.00	-41.68	15.15	50.00	-34.85	

8. Test Site Description

Compliance Worldwide is located at 357 Main Street in Sandown, New Hampshire. The test sites at Compliance Worldwide are used for conducted and radiated emissions testing in accordance with the Federal Communications Commission (FCC) and Industry Canada standards. Through our American Association for Laboratory Accreditation (A2LA) ISO Guide 17025 Accreditation our test sites are designated with the FCC (designation number **US1091**), Industry Canada (file number **IC 3023A-1**) and VCCI (Member number 3168) under registration number A-0274.

Compliance Worldwide is also designated as a Phase 1 CAB under APEC-MRA (US0132) for Australia/New Zealand AS/NZS CISPR 11, AS/NZS CISPR 14-1, AS/NZS CISPR 15, AS/NZS CISPR 32, Chinese-Taipei (Taiwan) BSMI CNS 15936 and Korea (RRA) KS C 9811, KS C 9814-1, KS C 9815, KS C 9832, KS C 9610-6-3 & KS C 9610-6-4.

The radiated emissions test site is a 3- and 10-meter enclosed open area test site (OATS). Personnel, support equipment and test equipment are located in the basement beneath the OATS ground plane.

The conducted emissions site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical ground plane. A second conducted emissions site is also located in the basement of the OATS site with a 2.3 x 2.5-meter ground plane and a 2.4 x 2.4 meter vertical wall.

The radiated emissions test site for measurements above 1GHz is a 3 Meter open area test site (OATS) with a 3.6 by 3.6-meter anechoic absorber floor patch to achieve a quasi-free space measurement environment per ANSI C63.4/C63.10 and CISPR 16-1-4 standards.

The sites are designed to test products or systems 1.5 meters W x 1.5 meters L x 2.0 meters H, floor standing or tabletop.

9. Test Setup Images

9.1. Radiated Emissions – Front View



9. Test Setup Images

9.2. Radiated Emissions – Rear View Below 30 MHz



9. Test Setup Images

9.3. Radiated Emissions – Rear View 30 MHz to 1 GHz



9. Test Images (continued)

9.4. Conducted Emissions, Front View



9. Test Images (continued)

9.5. Conducted Emissions, Rear View

