Testing Tomorrow's Technology

Application

For

Title 47 USC Part 2, Subpart J, Paragraph 2.907 Equipment Authorization of Certification for an Intentional Radiator per Part 15, Subpart C, Paragraphs 15.207 and 15.209

And

Industry Canada, Radio Standards Specifications: RSS Gen Issue 5 and RSS-210 Issue 10

For the

Radio Systems Corporation

SmartDoor™

Model: 300-3672

FCC ID: KE3-3003672
IC: 2721A-3003672

Issue Date: May 20, 2022

Test Dates: March 4-9, 2022 and May 8-18, 2022

UST Project No.: 22-0139

Total Pages in This Report : 20

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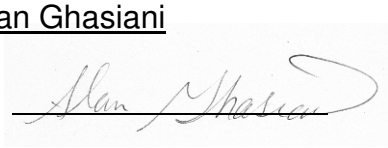
I, Alan Ghasiani, certify that I am authorized to sign for the Test Agency and that all of the statements in this report and in the Exhibits attached hereto are true and correct to the best of my knowledge and belief:

US TECH (Agent Responsible For Test):

Name: Alan Ghasiani

Signature: 

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MEASUREMENT TECHNICAL REPORT

COMPANY NAME: Radio Systems Corporation
MODEL: 300-3672
FCC ID: KE3-3003672
IC ID: 2721A-3003672
DATE: May 20, 2022

This report concerns (check one): ☒Original grant ☐Class II Permissive Change

Equipment type: Low Power Transmitter General Field Limits (9 kHz–30 MHz)

Transmitter details:
Frequency of operation: 125 kHz and 134.4 kHz
Type of modulation: AM
Data/Bit Rate: N/A
Antenna Gain: integral antenna (Coil)
Maximum Output Power: 94.26 dBuV/m @ 3 meter
Software used to program EUT: N/A
EUT firmware number: 0.2.3
Power setting: Maximum setting

Summary of Test Results

FCC & ISED Rule	Description of Test	Result
RSS-Gen 6.7	99% Occupied Bandwidth	PASS
15.209 & RSS-Gen 6.13, RSS-210, 7.2	Spurious Radiated Emissions	PASS
15.207 & RSS-Gen 8.8, RSS-210, 7.2	Power line Conducted Emissions	PASS

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1 General Information

1.1 Purpose of this Report

This report is prepared as a means of conveying test results and information concerning the suitability of this exact product for public distribution according to the FCC Rules and Regulations Part 15, Sections 207 and 209, and IC RSS 210 Issue 10.

1.2 Characterization of Test Sample

The sample used for testing was received by US Tech on March 3, 2022 in good operating condition.

1.3 Product Description

The Equipment under Test (EUT) is the Radio Systems Corporation, SmartDoor™ Electronic Pet Door, model: 300-3672. This electronic pet door is designed to allow the pet access to go outside when needed without assistance. The pet door has 3 basic modes of operation: Auto, Locked, and Unlocked. These modes can be set manually at any time or controlled by a timed schedule. The Auto mode is the mode that exercises the LF-RFID feature. A collar is worn by the pet to activate the door. The door operates at either 125 kHz or 134.4 kHz depending on the LF-RFID signal that is detected and will read the RFID to either allow access to the pet or deny access. The EUT has an additional wireless feature, it is also equipped with Wi-Fi and Bluetooth technology to communicate with a user's mobile phone over Bluetooth via app or local area network over WiFi. With the app the user can set schedules, control the doors settings and mode of operation, and monitor last known location of the pet (inside/outside).

The EUT operates either on four, 1.5 V, type C-cell, alkaline batteries, or by an AC/DC adaptor. AC/DC adaptor operates with an input of 100-240V, 50/60Hz, and 1A max and output of 12V, 2A, and 24W.

This report conveys test results related to the 125 kHz and 134.4 kHz intentional radiator part of the device. The Bluetooth and Wi-Fi radios are pre-certified radio modules used per their grant requirements.

1.4 Configuration of Tested System

The Test Sample was tested per *ANSI C63.4:2014, Methods of Measurement of Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (2014)* for FCC subpart B Unintentional Radiators requirements and per *ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices* for FCC subpart C Intentional Radiators.

A list of EUT and Peripherals is found in Table 1 below. A test configuration diagram of the tested system is shown in Figure 1. Test configuration photographs are provided in separate appendices.

1.5 Test Facility

Testing was performed at US Tech's measurement facility at 3505 Francis Circle, Alpharetta, GA 30004. This site has been fully described and registered with the FCC. Its designation number is US5301. Additionally, this site has also been fully described and submitted to Industry Canada (IC), and has been approved under file number 9900A-1.

1.6 Related Submittals

The EUT is subject to the additional following FCC authorizations:

a) SDoC under Section 15 Subpart B as an Unintentional Radiator; this report is provided under separate cover.

Table 1. EUT and Peripherals

EUT/ MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC/ IC ID	CABLES P/D
SmartDoor™ (EUT) Radio Systems Corp.	300-3672	Engineering sample	Pending FCC ID: KE3-3003672 and IC: 2721A-3003672 Contains FCC ID: VPYLBEE59B1LV IC: 772C-LBEE59B1LV	P
PERIPHERAL/ MANUFACTURER	**MODEL NUMBER**	**SERIAL NUMBER**	**FCC/ IC ID**	**CABLES P/D**
AC/DC Adapter Panda Jensin Technology	TP03-120200US	Engineering Sample	N/A	P

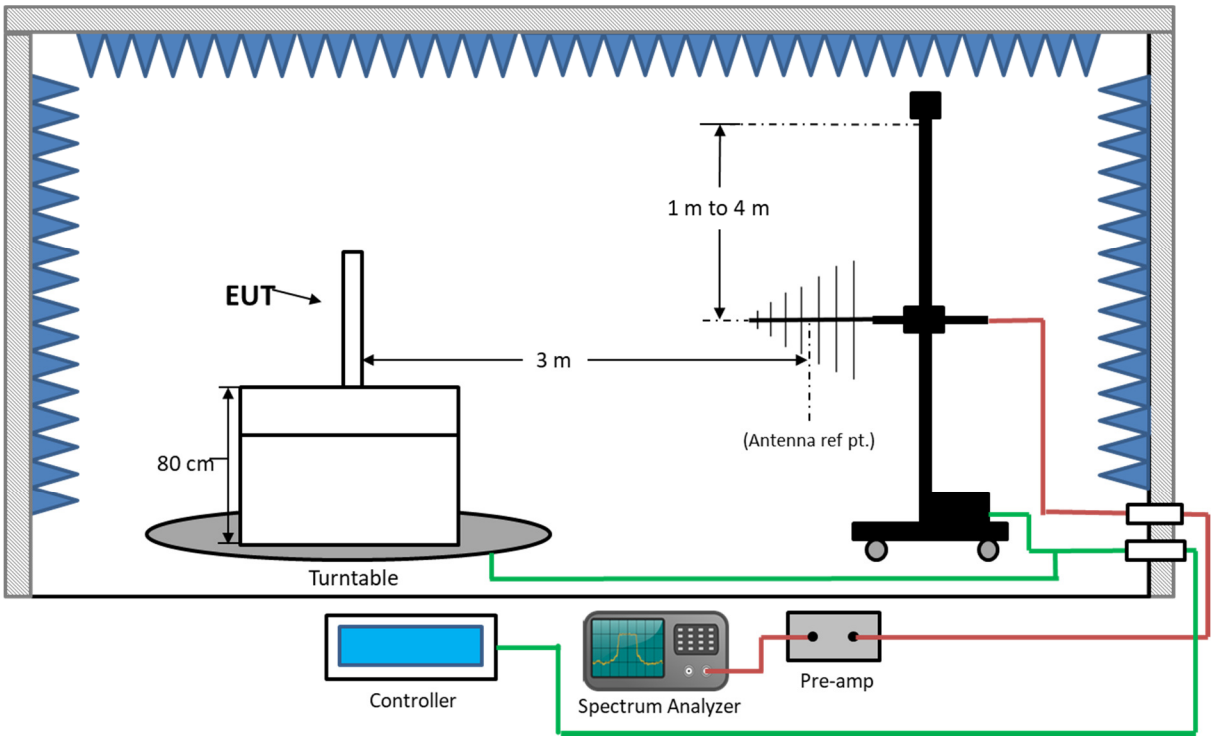


Figure 1. EUT Test Configuration – Radiated Emissions

2 Tests and Measurements

2.1 Test Equipment

The table below lists test equipment used to evaluate this product. Model numbers, serial numbers and their calibration status are indicated.

Table 2. Test Instruments

TEST INSTRUMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
Spectrum Analyzer	Agilent	E4407B	US41442935	9/02/2022 2 yr.
Spectrum Analyzer	Hewlett-Packard	8593E	3205A00124	5/29/2022 Extended 2 yr.
Loop Antenna	EMCO	6502	9810-3246	6/3/2023 2 yr.
Biconical Antenna	EMCO	3110B	9306-1708	8/17/2023 2 yr.
Log Periodic Antenna	EMCO	3146	9110-3236	12/13/2023 2 yr.
Horn Antenna	EMCO	3115	9107-3723	2/3/2023 2 yr.
Rf Preamp 100 kHz To 1.3 GHz	Hewlett-Packard	8447D	1937A02980	6/9/2022
Preamp 1.0 GHz To 26.0 GHz	Hewlett-Packard	8449B	3008A00480	8/27/2022

Note: The calibration interval of the above test instruments are 12 months unless stated otherwise and all calibrations are traceable to NIST/USA.

2.2 Modifications to EUT Hardware

No modifications were made to the EUT during testing.

2.3 Number of Measurements for Intentional Radiators (15.31(m))

Measurements of intentional radiators or receivers shall be performed and reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in Table 3 below.

Table 3. Number of Test Frequencies for Intentional Radiators

Frequency Range over which the device operates	Number of Frequencies	Location in the Range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near the top 1 near the bottom
Greater than 10 MHz	3	1 near top 1 near middle 1 near bottom

The EUT operates at 125 kHz and 134.4 kHz; therefore, two test frequency were used.

2.4 Frequency Range of Radiated Measurements (Part 15.33)

2.4.1 Intentional Radiator

The spectrum shall be investigated for the intentional radiator from the lowest RF signal generated in the EUT, without going below 9 kHz to the 10th harmonic of the highest fundamental frequency generated or 40 GHz, whichever is the lowest.

2.4.2 Unintentional Radiator

For the digital device, an unintentional radiator, the frequency range shall be 30 MHz to 1000 MHz, or to 5 times the highest internal clock frequency.

2.5 Measurement Detector Function and Bandwidth (CFR 15.35)

The radiated and conducted emissions limits shown herein are based on the parameters described in the following sections.

2.5.1 Detector Function and Associated Bandwidth

On frequencies below 1000 MHz, the limits herein are based upon measurement equipment employing a CISPR Quasi-peak detector function and related measurement bandwidths (i.e., 9 kHz from 150 kHz to 30 MHz and 120 kHz from 30 MHz to 1000 MHz). Alternatively, measurements may be made with equipment employing a peak detector function as long as the same bandwidths specified for the quasi-peak device are used.

2.5.2 Corresponding Peak and Average Requirements

Above 1000 MHz, radiated limits are based on measuring instrumentation employing an average detector function. When average radiated emissions are specified, there is also a corresponding Peak requirement, as measured using a peak detector, of 20 dB greater than the average limit. For all measurements above 1000 MHz the Resolution Bandwidth shall be at least 1 MHz

2.5.3 Pulsed Transmitter Averaging

When the radiated emissions limit is expressed as an average value, and the transmitter is pulsed, the measured field strength shall be determined by applying a Duty Cycle Correction Factor based upon dividing the total ON time during the first 100 ms period by 100 ms (or by the period if less than 100 ms). The duty cycle may be expressed logarithmically in dB.

NOTE: If the transmitter was programmed to transmit at >98% duty cycle, then, wherever applicable (where the detection mode was AVG) the duty cycle factor calculated will be applied.

2.6 EUT Antenna Requirements (CFR 15.203)

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. Only the antenna(s) listed in Table 4 will be used with this module.

Table 4. Allowed Antenna(s)

REPORT REFERENCE	MANUFACTURER	TYPE OF ANTENNA	MODEL	TYPE OF CONNECTOR
Antenna 1	Radio Systems Corp.	Integrated Loop	Integrated loop antenna	solder

Note: This antenna is internally mounted and not user replaceable without damaging the device.

2.7 Restricted Bands of Operation (Part 15.205)

Only spurious emissions can fall in the frequency bands of CFR 15.205. The field strength of these spurious emissions cannot exceed the limits of 15.209. Radiated Harmonics and other Spurious Emissions are examined for this requirement; see paragraph 2.1.

2.8 Intentional Radiator, Power Line Conducted Emissions (CFR 15.207)

Power line conducted emissions testing was performed to ensure that with the EUT in operation (exercising all transmitter functions), the complete system continues to meet the applicable requirements for CFR 15.207. Results are displayed along with the 15.107 power line test data in the sections below.

2.9 Intentional Radiator, Radiated Emissions (CFR 15.209, (IC RSS 210))

Radiated Radio measurements: The EUT was placed into a continuous transmit mode of operation with an on time of 100 ms and a down time of 300 ms . A preliminary scan was performed on the EUT to find signal frequencies that were caused by the transmitter part of the product. To obtain the worst-case results, the EUT was placed on a table top of a non-conductive table, 80 cm above the ground floor. The EUT was positioned 3 meters away from the receiving antenna during testing (1 meter at frequencies above 6 GHz and if the emissions were less than 6 dB from the noise floor). The EUT was tested in X, Y and Z axes or the position of normal operation to determine the worst-case orientation. Radiated measurements below 30 MHz were tested with a RBW = 9 kHz; emissions below 1 GHz were tested

with a RBW = 120 kHz and radiated measurements above 1 GHz were measured using a RBW =1 MHz VBW was set to three times the RBW value.

For radiated emissions, any emission that was greater than 20 dB from the applicable limit was not recorded. If radiated emissions above 1 GHz were measured at a distance of 1 meter, the measured value at 1 meter was extrapolated to the results at 3 meters using an inverse distance extrapolation factor of -20 dB/decade. Results are displayed along with the 15.109 test data in the sections below.

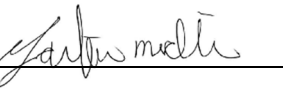
2.10 99% Occupied Bandwidth (IC RSS Gen, 6.7)

According to RSS-Gen, 6.7: The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

Table 5. 99% Occupied Bandwidth

Frequency (kHz)	99% Occupied Bandwidth (kHz)
125.0	1.24
134.4	1.16

Test Date: May 19, 2022
Tested By:

Signature:  Name: Gabriel Medina

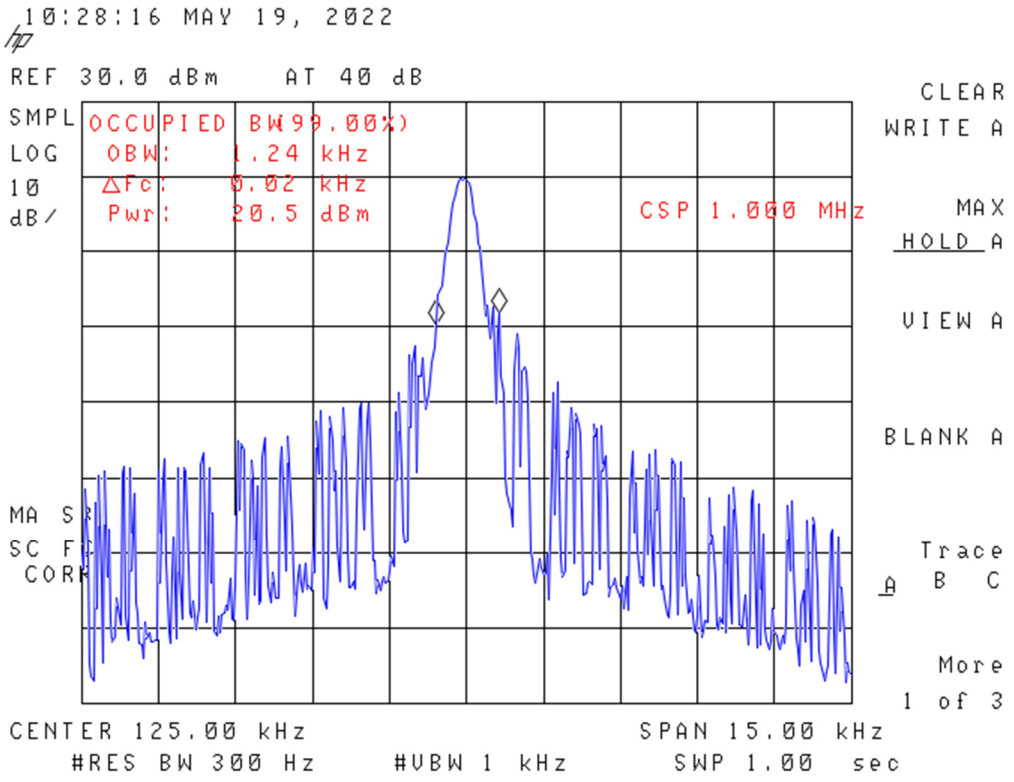


Figure 2. 99% Occupied Bandwidth at 125.0 kHz

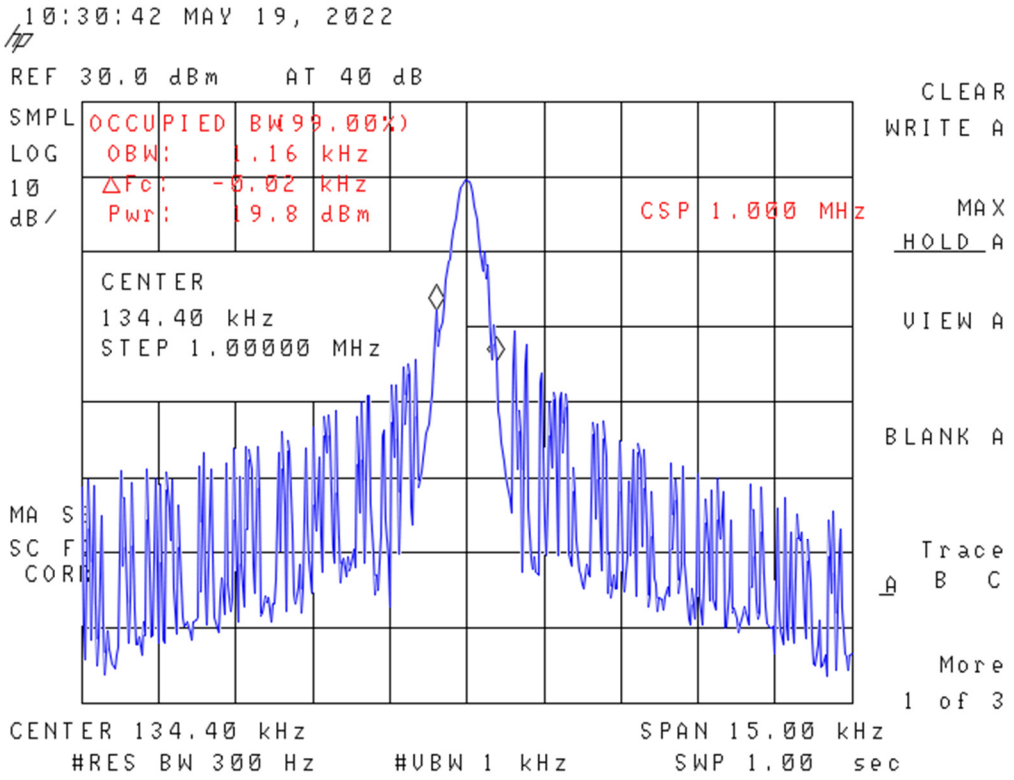


Figure 3. 99% Occupied Bandwidth at 134.4 kHz

2.11 Conducted Emissions Test Data (CFR 15.207)

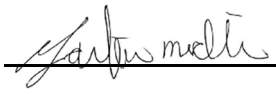
The worst-case line conducted emission for the EUT was 2.2 dB below the limit at .4522 MHz on the phase lead. All other conducted emissions were at least 10.8 dB below the FCC Part 15 Class B limits. This worst-case emission is found in table 4.

150KHz to 30MHz with 15.207 Limits						
Frequency (MHz)	**Test Data (dBuv)**	**LISN+CL-PA (dB)**	**Results (dBuV)**	**AVG Limits (dBuV)**	**Margin (dB)**	**Detector PK, QP, or AVG**
120 VAC, 60 Hz Phase						
0.4522	42.69	2.72	45.41	56.8*	11.4	**PK**
0.4522	41.97	2.69	44.66	46.8	2.2	**AVG**
0.5108	30.52	2.70	33.22	46.0	12.8	**PK**
1.6660	30.92	0.25	31.17	46.0	14.8	**PK**
6.3580	30.16	0.32	30.48	50.0	19.5	**PK**
13.3830	27.19	0.88	28.07	50.0	21.9	**PK**
29.5500	26.77	1.90	28.67	50.0	21.3	**PK**
120VAC, 60 Hz Neutral						
0.1576	42.92	0.13	43.05	55.6	12.5	**PK**
0.5242	32.34	0.07	32.41	46.0	13.6	**PK**
3.2533	34.88	0.30	35.18	46.0	10.8	**PK**
7.0000	30.69	0.58	31.27	50.0	18.7	**PK**
10.9330	26.73	0.80	27.53	50.0	22.5	**PK**
26.0500	25.78	1.87	27.65	50.0	22.4	**PK**

Note: (*) Indicates that the limit used is Quasi-Peak (QP)

Sample Calculation at 0.4522 MHz:

Magnitude of Measured Frequency	42.69	dBuV
+Correction Factors	2.69	dB
Corrected Result	44.66	dBuV

Test Date: March 4, 2022
Tested by
Signature:  Name: Gabriel Medina

2.12 Intentional Radiator, Spurious Radiated Emissions (CFR 15.209)

Radiated emissions disturbance measurements were performed with EUT in constant transmit mode with an operating time of 100 ms and down time of 300 ms, representative of worst case operation, and using an instrument having both peak and quasi-peak detectors over the frequency range of 9 kHz to 1 GHz. Measurements of the radiated emissions were made with the receiver antenna at a distance of 3 m from the boundary of the test unit.

The antenna polarization and test sample azimuth were varied during the measurements to find the maximum field strength readings to record.

2.13 Radiated Emission Limits - General Requirements

(a) 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:

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

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

Fundamental Limit calculation:

at 125 kHz = 2400/25 = 224.3 uV/m @ 300 m
Conversion from uV/m to dBuV/m = 20 log(224.3) = 47.02 dBuV/m
Conversion from 300 to 3 m = 40 log (300/3)= 80
Limit at 3 meter = 47.02 + 80 = 127.02 dBuV/m

2.14 Radiated Emission for 125.0 kHz Frequency

Table 6. Radiated Emissions 9 kHz to 30MHz (15.209) for 125.0 kHz

Test: FCC Part 15, Part 15.209							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector Mode**
0.126**	82.01	12.25	94.26	105.6	3m./Loop.	11.3	**PK**
0.150	72.13	12.26	84.39	104.0	3m./Loop.	19.6	**PK**
0.500	57.75	11.94	69.69	73.6	3m./Loop.	3.9	**PK**
2.510	45.85	11.61	57.46	69.5	3m./Loop.	12.1	**PK**
0.125**	59.79	12.25	72.04	105.7	3m./Loop.	33.6	**AVG**
0.250**	66.18	12.15	78.33	99.6	3m./Loop.	21.3	**PK**
0.370**	61.94	11.82	73.76	96.1	3m./Loop.	22.4	**PK**
0.500**	57.84	11.94	69.78	73.6	3m./Loop.	3.8	**PK**
0.630**	55.33	11.86	67.19	71.7	3m./Loop.	4.5	**PK**
0.750**	53.15	11.90	65.05	70.1	3m./Loop.	5.1	**PK**
0.870**	51.21	11.79	63.00	68.8	3m./Loop.	5.8	**PK**
1.000**	48.62	12.00	60.62	67.6	3m./Loop.	7.0	**PK**
1.130**	46.72	12.00	58.72	66.6	3m./Loop.	7.9	**PK**
1.250**	45.13	12.01	57.14	65.7	3m./Loop.	8.5	**PK**

1.(*) Falls within the restricted bands of CFR 15.205. Limits based on CFR15.209 & 20 dB relaxation for peak measurements of CFR 15.35.
2. (**) These Frequencies are the fundamental and harmonic measurements for intentional radiators
3. No other signals detected within 20 dB of specification limit. Harmonics investigated up to the 10th harmonic

Sample Calculation at 0.126 MHz:

Magnitude of Measured Frequency	82.01	dBuV
+ Antenna Factor + Cable Loss - Amplifier Gain	12.25	dB/m
Corrected Result	94.26	dBuV/m

Test Date: May 9, 2022
Tested By:

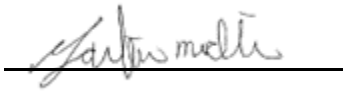
Signature:  Name: Gabriel Medina

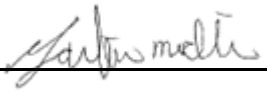
Table 7. Spurious Radiated Emissions (CFR 15.209), 30MHz - 1000MHz for 125.0 kHz

30 MHz to 1000 MHz with Class B Limits							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**QP Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector PK, or QP**
74.52	47.69	-17.83	29.86	40.0	3m./HORZ	10.1	**PK**
170.93	47.99	-13.83	34.16	43.5	3m./HORZ	9.3	**PK**
242.90	47.44	-14.16	33.28	46.0	3m./HORZ	12.7	**PK**
549.92	41.85	-7.67	34.18	46.0	3m./HORZ	11.8	**PK**
833.28	41.85	-3.68	38.17	46.0	3m./HORZ	7.8	**PK**
35.68	52.31	-15.09	37.22	40.0	3m./VERT	2.8	**QP**
30.01	33.33	-13.57	19.76	40.0	3m./VERT	20.2	**QP**
74.01	29.99	-18.23	11.76	40.0	3m./VERT	28.2	**QP**
120.11	52.33	-15.10	37.23	43.5	3m./VERT	6.3	**PK**
242.90	47.44	-15.16	32.28	46.0	3m./VERT	13.7	**PK**
499.94	43.66	-9.42	34.24	46.0	3m./VERT	11.8	**PK**
905.24	41.06	-5.44	35.62	46.0	3m./VERT	10.4	**PK**

Sample Calculation at 74.52 MHz:

Magnitude of Measured Frequency	47.69	dBuV
+ Antenna Factor + Cable Loss - Amplifier Gain	-17.83	dB/m
Corrected Result	29.86	dBuV/m

Test Date: May 9, 2022
Tested By:

Signature:  Name: Gabriel Medina

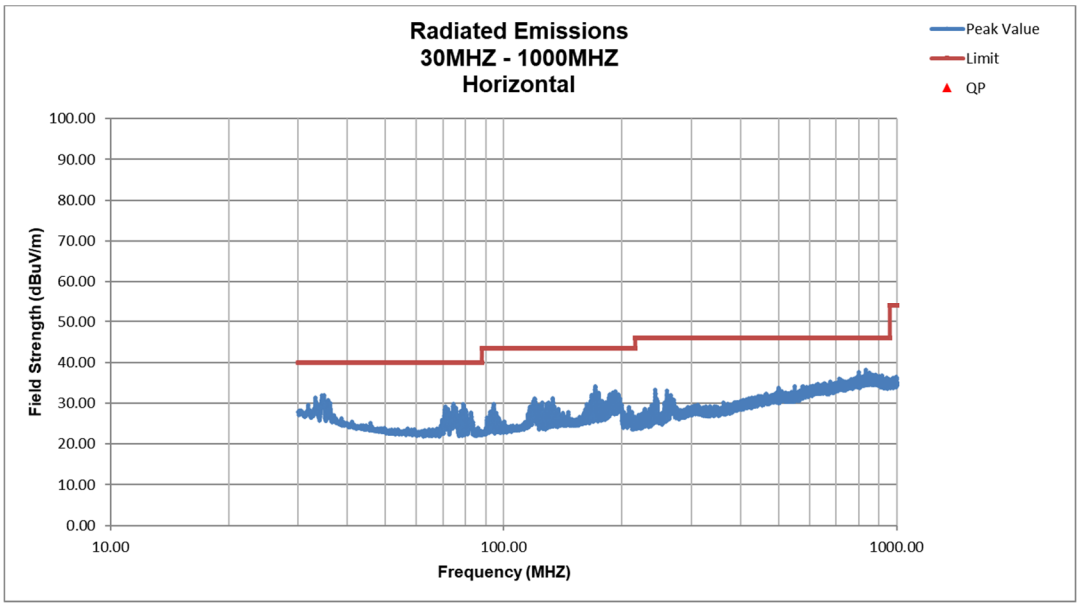


Figure 4. Radiated Emissions, Horizontal 30MHz – 1000MHz

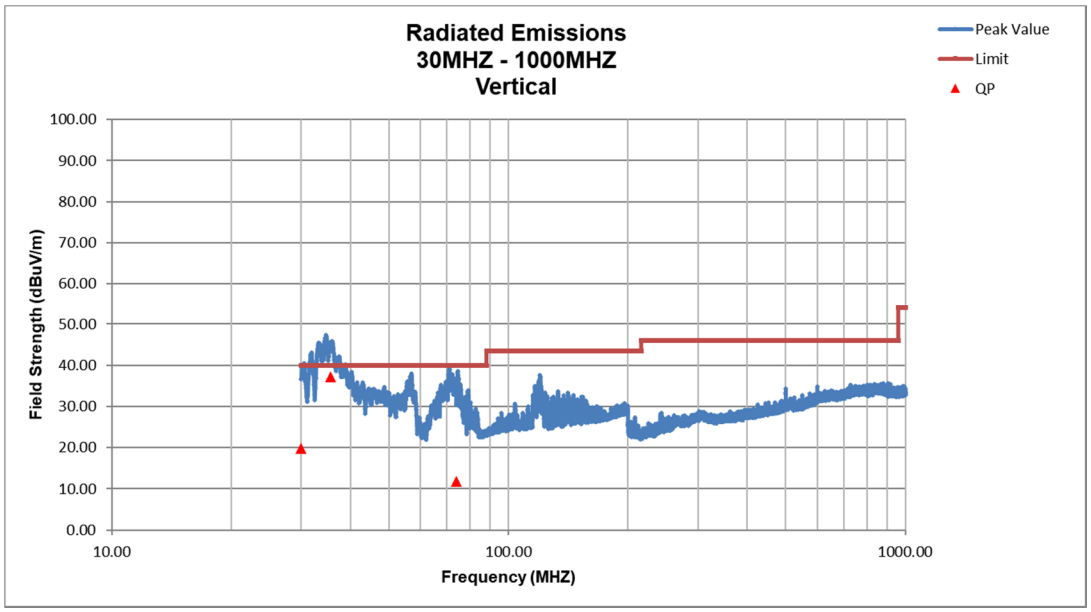
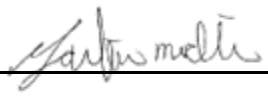


Figure 5. Radiated Emissions, Vertical 30MHz – 1000MHz

Table 8. Spurious Radiated Emissions (CFR 15.209), Above 1000MHz for 125.0 kHz

Above 1000 MHz with Class B Limits							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**AVG Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector PK, or AVG**
No emissions were detected above 1000 MHz							

Test Date: May 9, 2022
Tested By:

Signature:  Name: Gabriel Medina

2.15 Radiated Emission for 134.4 kHz Frequency

Table 9. Radiated Emissions 9 kHz to 30 MHz (15.209) for 134.4 kHz

Test: FCC Part 15, Part 15.209							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector Mode**
0.1300**	71.27	12.26	83.53	105.2	3m./Loop.	21.7	**PK**
0.1500	73.88	12.26	86.14	104.1	3m./Loop.	17.9	**PK**
0.5400	57.06	11.93	68.99	73.0	3m./Loop.	4.0	**PK**
2.4100	45.06	11.61	56.67	69.5	3m./Loop.	12.9	**PK**
0.1344**	58.41	12.25	70.66	105.0	3m./Loop.	34.4	**AVG**
0.3700**	65.97	11.82	77.79	96.3	3m./Loop.	18.5	**PK**
0.4000**	61.51	11.83	73.34	95.5	3m./Loop.	22.2	**PK**
0.5400**	57.33	11.93	69.26	73.0	3m./Loop.	3.7	**PK**
0.6700**	56.56	11.87	68.43	71.1	3m./Loop.	2.7	**PK**
0.8100**	51.79	11.80	63.59	69.5	3m./Loop.	5.9	**PK**
0.9400**	49.93	11.79	61.72	68.1	3m./Loop.	6.4	**PK**
1.0800**	48.41	12.00	60.41	67.0	3m./Loop.	6.6	**PK**
1.3500**	44.44	12.00	56.44	65.0	3m./Loop.	8.6	**PK**

1.(*) Falls within the restricted bands of CFR 15.205. Limits based on CFR15.209 & 20 dB relaxation for peak measurements of CFR 15.35.
2. (**) These Frequencies are the fundamental and harmonic measurements for intentional radiator
3. No other signals detected within 20 dB of specification limit. Harmonics investigated up to the 10th harmonic

Sample Calculation at 0.13 MHz:

Magnitude of Measured Frequency	71.27	dBuV
+ Antenna Factor + Cable Loss - Amplifier Gain	12.26	dB/m
Corrected Result	83.53	dBuV/m

Test Date: May 9, 2022
Tested By:

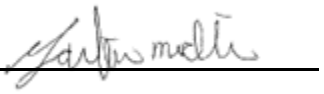
Signature:  Name: Gabriel Medina

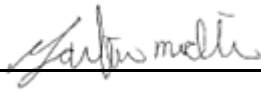
Table 10. Spurious Radiated Emissions (CFR 15.209), 30MHz - 1000MHz for 134.4 kHz

30 MHz to 1000 MHz with Class B Limits							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**QP Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector PK, or QP**
120.00	47.51	-15.70	31.81	43.5	3m./HORZ	11.7	**PK**
125.01	49.26	-15.25	34.01	43.5	3m./HORZ	9.5	**PK**
236.20	44.62	-14.57	30.05	46.0	3m./HORZ	15.9	**PK**
548.00	42.01	-7.67	34.34	46.0	3m./HORZ	11.7	**PK**
860.60	41.45	-3.83	37.62	46.0	3m./HORZ	8.4	**PK**
32.00	33.72	-14.29	19.43	40.0	3m./VERT	20.6	**QP**
31.00	35.97	-13.49	22.48	40.0	3m./VERT	17.5	**QP**
34.99	26.48	-14.79	11.69	40.0	3m./VERT	28.3	**QP**
123.15	51.18	-14.85	36.33	43.5	3m./VERT	7.2	**PK**
474.98	44.44	-5.93	38.51	46.0	3m./VERT	7.5	**PK**
524.96	43.94	-5.72	38.22	46.0	3m./VERT	7.8	**PK**
852.04	41.84	-5.31	36.53	46.0	3m./VERT	9.5	**PK**

Sample Calculation at 120.00 MHz:

Magnitude of Measured Frequency	47.51	dBuV
+ Antenna Factor + Cable Loss - Amplifier Gain	-15.70	dB/m
Corrected Result	31.81	dBuV/m

Test Date: May 9, 2022
Tested By:

Signature:  Name: Gabriel Medina

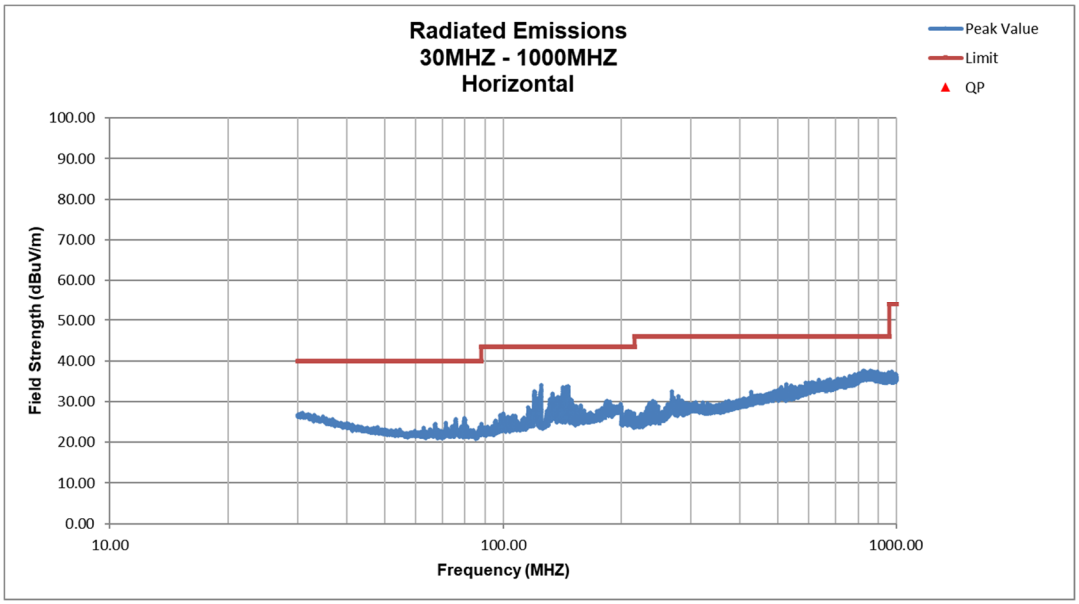


Figure 6. Radiated Emissions, Horizontal 30MHz – 1000MHz

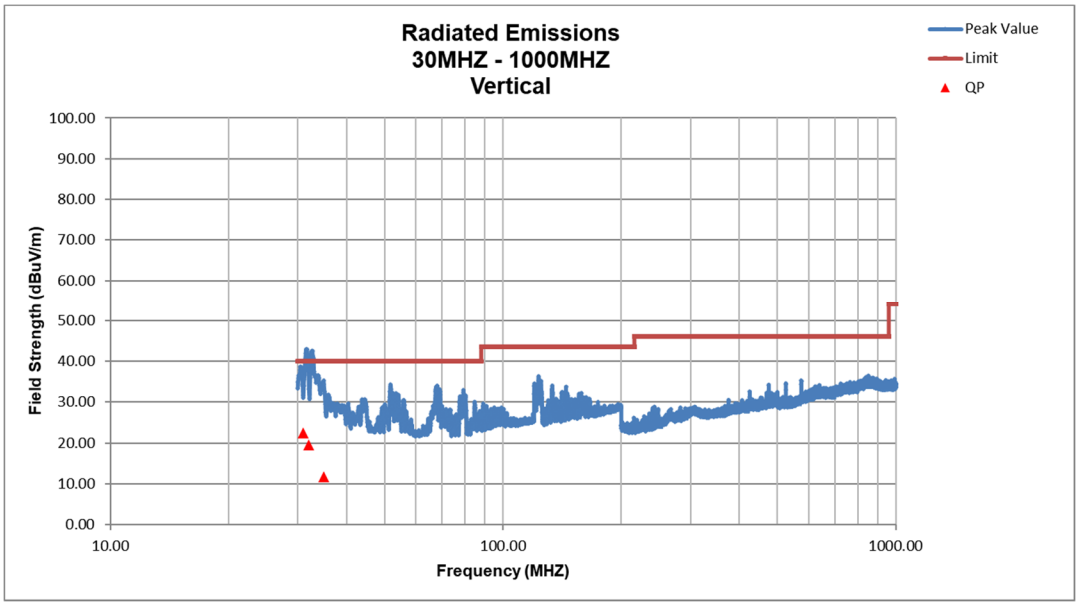
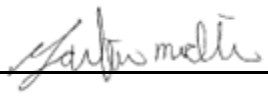


Figure 7. Radiated Emissions, Vertical 30MHz – 1000MHz

Table 11. Spurious Radiated Emissions (CFR 15.209), Above 1000 MHz for 134.4 kHz

Above 1000 MHz with Class B Limits							
Frequency (MHz)	**Test Data (dBuv)**	**AF+CA-AMP (dB/m)**	**Results (dBuV/m)**	**AVG Limits (dBuV/m)**	**Antenna Distance/ Polarization**	**Margin (dB)**	**Detector PK, or AVG**
No emissions were detected above 1000 MHz							

Test Date: May 9, 2022
Tested By:

Signature:  Name: Gabriel Medina

2.16 Measurement Uncertainty

The measurement uncertainties given were calculated using the method detailed in CISPR 16-4. A coverage factor of k=2 was used to give a level of confidence of approximately 95%.

2.16.1 Conducted Emissions Measurement Uncertainty

Measurement Uncertainty (within a 95% confidence level) for this test is ± 2.85 dB.

2.16.2 Radiated Emissions Measurement Uncertainty

30 MHz to 200 MHz at 3 m:

The measurement uncertainty (with a 95% confidence level) for this test using a Biconical Antenna is ± 5.40 dB.

200 MHz to 1000 MHz at 3 m:

The measurement uncertainty (with a 95% confidence level) for this test using a Log Periodic Antenna is ± 5.19 dB.

Above 1 GHz at 3 m:

The measurement uncertainty (with a 95% confidence level) for this test using a Horn Antenna is ± 5.08 dB.

3 Conclusions

The EUT meets the requirements of Part 15.207/209 of Subpart C and RSS-Gen and RSS-210 based on the test results presented in this test report.