

March 04, 2022

BRISA AMERICA CORP
Paulo Toledo
1420 Celebration Blvd., Suite 200
Orlando, FL 34747

Dear Paulo Toledo,

Enclosed is the RF Wireless test report for compliance testing of the Brisa, EZYLOCK Electronic Controlled Door Lock as tested to the requirements of the FCC Part 2, 22(H), 24(E), 27(L), 27(M), 27(H), 27(F),.

Thank you for using the services of Eurofins Electrical and Electronic Testing NA, Inc. Please contact me if you have any questions regarding these results or if Eurofins E&E can be of further service to you.

Sincerely yours,

Gary Chou

Documentation Department
Eurofins Electrical and Electronic Testing NA, Inc.



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FCC Test Report

Applicant name: BRISA AMERICA CORP

Product: Electronic Controlled Door Lock

Report: WIR117103-FCC LTE

Applicant Address:

**1420 Celebration Blvd., Suite 200
Orlando, FL 34747**

Prepared By:
Eurofins Electrical and Electronic Testing NA, Inc.
3162 Belick St.
Santa Clara CA, 95054

Applicant name: BRISA AMERICA CORP

Product: Electronic Controlled Door Lock

Standard

47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(H), 27(F)

Gary Chou

Gary Chou

Wireless Engineering Manager, Wireless Laboratory

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Part 22 Subpart H and Part 24 Subpart E and Part 27 Subpart L of the FCC Rules under normal use and maintenance.

Eleazar Zuniga

Eleazar Zuniga,

Director, Wireless Laboratory

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	March 04, 2022	Initial Issue.

Table of Contents

I.	Executive Summary	1
	A. Purpose of Test	1
	B. Executive Summary	1
II.	Equipment Information.....	2
	A. Overview.....	2
	B. References.....	3
	C. Test Site	4
	D. Measurement Uncertainty.....	4
	E. Modifications	5
	Modifications to EUT	5
	Modifications to Test Standard.....	5
	F. Disposition of EUT.....	5
III.	Electromagnetic Compatibility Criteria for Intentional Radiators.....	6
	A. Radiated Emission and Bandage Measurement	6

I. Executive Summary

A. Purpose of Test

An EMC evaluation was performed to determine compliance of the Brisa, EZYLOCK, Controlled Door Lock, with the requirements of 47 CFR FCC CFR Part 2, 22(H), 24(E), 27. All references are to the most current version of Title 47 of the Code of Federal Regulations in effect. In accordance with PVG-04 technical requirements, the following data is presented in support of the Certification of the EZYLOCK Controlled Door Lock. Brisa should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the T10-R Tablet, has been **permanently** discontinued.

B. Executive Summary

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with 47 CFR Part 2, 22(H), 24(E), 27, in accordance with Brisa. All tests were conducted using measurement procedure.

FCC Clause	Description	Compliance
§2.1053 §24.238(a) §22.917(a) §27.53(c) §27.53(g) §27.53(h)	Radiated Spurious Emissions	Compliant

Note: For other test items please refer to
FCC ID report: XPY2AGQN4NNN

Rationale:

Per KDB 996369 D04 “Modular Transmitter Integration Guide – Guidance for Host Product Manufacturers” only spot checks are reported in this filing.

Per ANSI C63.26: 2015 section 5.1.2.2, the results include worst case modulation only.

II. Equipment Information

A. Overview

Eurofins Electrical and Electronic Testing NA, Inc. was contracted by Brisa to perform testing on the EZYLOCK Electronic Controlled Door Lock.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of Brisa, EZYLOCK Electronic Controlled Door Lock.

The results obtained relate only to the item(s) tested.

EUT Summary Table

Model(s) Tested:	EZYLOCK	
EUT Specifications:	Primary Power: Voltage: 6 Vdc powered by battery AC or DC: DC Voltage Frequency: NA Number of Phases: 1	
	Type of Modulations:	QPSK, 16QAM
	Modulation Technology	OFDM
	Technology:	CAT-M
	Operating Frequency :	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 12: 699 MHz ~ 716 MHz LYE Band 13: 777 MHz ~ 787 MHz
	Product:	Electronic Controlled Door Lock
	Brand:	Brisa
	FCC ID:	2A6CYEZYLOCKUSW40
	ISED ID:	N/A
	Antenna Type:	PCB Antenna
	Antenna Gain:	0 dBi
	Antenna Port:	N/A
Analysis:	The results obtained relate only to the item(s) tested.	
Environmental Test Conditions:	Temperature: 15-35° C	
	Relative Humidity: 30-60%	
	Barometric Pressure: 860-1060 mbar	
Evaluated by:	Rafael Aguilar	

Date(s):	February 28, 2021
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B. General Description of Applied Standards**References**

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

- **FCC 47 CFR Part 2**
- **FCC 47 CFR Part 24(E)**
- **FCC 47 CFR Part 27(L), 27(M), 27(H), 27(F)**
- **KDB 971168 D01 Power Meas License Digital Systems v02r02**
- **ANSI/TIA/EIA-603-E 2016**
- **ANSI 63.26-2015**

C. Test Site

All testing was performed at Eurofins Electrical and Electronic Testing NA, Inc., 3162 Belick St. Santa Clara, CA 95054. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Eurofins Electrical and Electronic Testing NA, Inc. has been accredited by the American Association for Laboratory Accreditation (A2LA) (Certificate #: 0591.02) in accordance with ISO/IEC 17025:2017.

Eurofins Electrical and Electronic Testing NA, Inc. is part of the Eurofins Electrical & Electronics (E&E) global compliance network.

D. Measurement Uncertainty

Test Method	Typical Expanded Uncertainty	K	Confidence Level
RF Frequencies	±4.52 Hz	2	95%
RF Power Conducted Emissions	±2.32 dB	2	95%
RF Power Conducted Spurious Emissions	±2.25 dB	2	95%
RF Power Radiated Emissions	±3.01 dB	2	95%

Uncertainty Calculations Summary

E. Modifications**a) Modifications to EUT**

No modifications were made to the EUT.

b) Modifications to Test Standard

No modifications were made to the test standard.

F. Disposition of EUT

The test sample including all support equipment (if any), submitted to the Electromagnetic Compatibility Lab for testing was returned to Syncwise upon completion of testing.

III. Electromagnetic Compatibility Criteria for Intentional Radiators

Radiated Emission Measurement

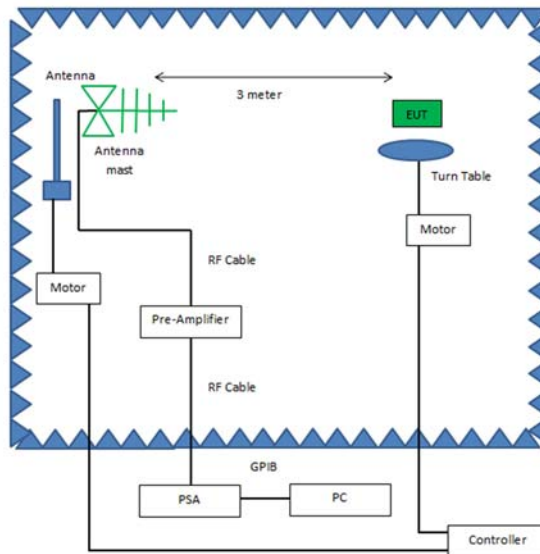
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB. The limit of emission equal to -13dBm

Test Procedures:

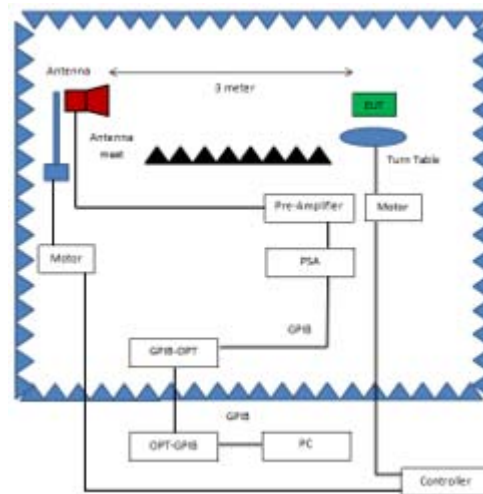
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}.$

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

Deviation from Test Standard
No deviation.



Radiated Emissions, Below 1GHz, Test Setup



Radiated Emissions, Above 1GHz, Test Setup

Test Engineer: Rafael Aguilar

Test Date(s): 02/28/2022

Test Data:

Band 2 Bandwidth 1.4 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3759.1	V	-52.5	-13	-39.5
5641	V	-47.9	-13	-34.9
7521.2	V	-48.3	-13	-35.3
9403.1	V	-55.4	-13	-42.4
3760.8	H	-46.7	-13	-33.7
5641	H	-48.1	-13	-35.1

Band 2 Bandwidth 3 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3762.5	V	-53.47	-13	-40.47
5644.4	V	-45.57	-13	-32.57
7524.6	V	-54.79	-13	-41.79
3762.5	H	-47.31	-13	-34.31
5644.4	H	-43.34	-13	-30.34
7524.6	H	-58.62	-13	-45.62

Band 2 Bandwidth 5 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	High Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3764.2	V	-55.57	-13	-42.57
5646.1	V	-47.12	-13	-34.12
7528	V	-52.37	-13	-39.37
3755.7	H	-48.91	-13	-35.91
5646.1	H	-44.60	-13	-31.60
7528	H	-53.83	-13	-40.83

Band 2 Bandwidth 10 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3760.8	V	-54.9	-13	-41.90
5641	V	-43.7	-13	-30.70
7529.7	V	-52.1	-13	-39.10
3750.6	V	-47.5	-13	-34.50
5627.4	H	-48.8	-13	-35.80
7521.2	H	-59	-13	-46.00

Band 2 Bandwidth 15 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3777.8	V	-53.80	-13	-40.80
5666.5	V	-42.79	-13	-29.79
7555.2	V	-56.73	-13	-43.73
3777.8	H	-48.31	-13	-35.31
5666.5	H	-46.97	-13	-33.97
7555.2	H	-54.81	-13	-41.81

Band 2 Bandwidth 20 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	High Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3777.8	V	-54.85	-13	-41.85
5666.5	V	-44.47	-13	-31.47
7555.2	V	-53.52	-13	-40.52
3777.8	H	-44.30	-13	-31.30
5615.5	H	-46.26	-13	-33.26

Band 4 Bandwidth 1.4 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3465	V	-48.2	-13	-35.20
5199	V	-30.6	-13	-17.60
6929.6	V	-60.4	-13	-47.40
3465	H	-42.4	-13	-29.40
5197.3	H	-36.7	-13	-23.70
6931.3	H	-54	-13	-41.00

Band 4 Bandwidth 3 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3463.3	V	-51.50	-13	-38.50
5200.7	V	-33.93	-13	-20.93
8668.7	V	-61.94	-13	-48.94
3466.7	H	-41.82	-13	-28.82
5200.7	H	-37.30	-13	-24.30
6934.7	H	-55.80	-13	-42.80

Band 4 Bandwidth 5 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3470.1	V	-47.52	-13	-34.52
5204.1	V	-35.07	-13	-22.07
6938.1	V	-58.68	-13	-45.68
3468.4	H	-41.71	-13	-28.71
5204.1	H	-40.99	-13	-27.99
6938.1	H	-57.16	-13	-44.16

Band 4 Bandwidth 10 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3473.5	V	-48.43	-13	-35.43
5210.9	V	-34.32	-13	-21.32
3456.5	H	-43.13	-13	-30.13
5185.4	H	-37.84	-13	-24.84
6948.3	H	-54.77	-13	-41.77

Band 4 Bandwidth 15 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3453.1	V	-46.45	-13	-33.45
5178.6	V	-39.86	-13	-26.86
3453.1	V	-42.00	-13	-29.00
5217.7	H	-40.40	-13	-27.40
6905.8	H	-56.47	-13	-43.47

Band 4 Bandwidth 20 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
3482	V	-41.95	-13	-28.95
5224.5	V	-34.83	-13	-21.83
3482	H	-43.98	-13	-30.98
5224.5	H	-40.18	-13	-27.18
6965.3	H	-55.40	-13	-42.40

Band 5 Bandwidth 1.4 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1673.2	V	-44.7	-13	-31.70
2509.6	V	-36.2	-13	-23.20
3347.7	V	-56.7	-13	-43.70
1673.2	H	-45.10	-13	-32.10
2507.9	H	-35.97	-13	-22.97
3346	H	-50.85	-13	-37.85

Band 5 Bandwidth 3 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1674.9	V	-47.89	-13	-34.89
2506.2	V	-35.74	-13	-22.74
3351.1	V	-55.38	-13	-42.38
1674.9	H	-41.72	-13	-28.72
2507.9	H	-35.26	-13	-22.26
3351.1	H	-53.58	-13	-40.58

Band 5 Bandwidth 5 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1676.6	V	-44.83	-13	-31.83
2504.5	V	-34.73	-13	-21.73
3339.2	V	-53.99	-13	-40.99
1676.6	H	-44.63	-13	-31.63
2516.4	H	-39.06	-13	-26.06
3354.5	H	-51.35	-13	-38.35

Band 5 Bandwidth 10 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1664.7	V	-46.26	-13	-33.26
2523.2	V	-34.81	-13	-21.81
3330.7	H	-54.95	-13	-41.95
1664.7	H	-44.01	-13	-31.01
2523.2	H	-35.26	-13	-22.26
3363	H	-52.31	-13	-39.31

Band 12 Bandwidth 3 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1406.3	V	-51.9	-13	-38.90
3514.3	V	-59.8	-13	-46.80
1404.6	H	-50.42	-13	-37.42
3514.3	H	-59.81	-13	-46.81

Band 12 Bandwidth 1.4 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1402.9	V	-52.69	-13	-39.69
3509.2	V	-59.72	-13	-46.72
1402.9	H	-51.84	-13	-38.84
3509.2	H	-61.38	-13	-48.38

Band 12 Bandwidth 5 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1399.5	V	-52.02	-13	-39.02
1408	V	-51.52	-13	-38.52
3517.7	H	-58.95	-13	-45.95

Band 12 Bandwidth 10 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1411.4	V	-56.56	-13	-43.56
1411.4	H	-56.43	-13	-43.43

Band 13 Bandwidth 5 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1567.8	V	-48.7	-13	-35.70
3920.6	V	-51.8	-13	-38.80
1567.8	H	-49.06	-13	-36.06
2353.2	H	-56.1	-13	-43.10
3920.6	H	-53.19	-13	-40.19

Band 13 Bandwidth 10 MHz

Frequency Range	1GHz ~ 26.5GHz	Operating Channel	Middle Channel
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SPURIOUS EMISSION LEVEL				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1572.9	V	-47.99	-13	-34.99
2358.3	V	-55.59	-13	-42.59
3890	V	-51.69	-13	-38.69
1572.9	H	-47.66	-13	-34.66
2334.5	H	-57.01	-13	-44.01
3890	H	-56.27	-13	-43.27

Test Setup Photo

(Please refer to the attached file (Test Setup Photo))

Test Equipment List

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2017.

Asset #	Equipment	Manufacturer	Model	Last Cal Date	Cal Due Date
1S2003	PXA Signal Analyzer	Keysight	N9030B	10/08/2021	10/08/2022
1S2399	Turntable Controller	SUNOL SCIENCE	SC99V	Not Required	Not Required
1S2435	Horn Antenna (Medium)	ETS-Lindgren	3117	03/09/2021	03/09/2023
1S3826	Horn Antenna (Medium)	ETS-Lindgren	3117	03/09/2021	03/09/2023
N/A	EXG Vector Signal Generator	Keysight	N5172B	07/08/2021	07/08/2022
1S2486	5 Meter Chamber Control Room	Panashield	5 Meter Control Room	Not Required	Not Required
1S2587	Preamplifier	AML Communications	AML0126L3801	Note 1	Note 1
Note 1: Verified by calibrated instrumentation at the time of testing					

Table 1. Radiated Emission and Bandage Measurement, Test Equipment List

END OF REPORT