



VERIFICATION TEST REPORT

FCC Part 22, 24, 27, 90
IC RSS 130, 132, 133, 139

Report No.: LYFT16-U6 Rev A

Company: Lyft, Inc.

Model: STN010

VERIFICATION TEST REPORT

Company: Lyft, Inc.

Model: STN010

Standard: FCC Part 22, 24, 27, 90 & ISED RSS 130, 132, 133, 139

Test Report Serial No.: LYFT16-U6 Rev A

This report supersedes: NONE

Applicant: Lyft, Inc
185 Berry St #5000
San Francisco,
California 94107
USA

Issue Date: 8th November 2022

This Test Report is Issued Under the Authority of:

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MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2017. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; <http://www.a2la.org/scopepdf/2381-01.pdf>



Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 14th day of January 2022.



Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. RECOGNITION

MiCOM Labs, Inc is widely recognized for its wireless testing and certification capabilities. In addition to being recognized for Testing and Certification under Phase 2 Mutual Recognition Agreements (MRA) with Canada, Europe, United Kingdom and Japan, our international recognition includes Conformity Assessment Body (CAB) designation status under agreements with Asia Pacific (APEC) MRA Phase 1 countries giving acceptance of MiCOM Labs test reports. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	MRA Phase	Identification No.
USA	Federal Communications Commission (FCC)	TCB	-	US0159 Test Firm Designation#: US1084
Canada	Industry Canada (ISED)	FCB	APEC MRA 2	US0159 ISED#: 4143A
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	Japan MRA 2	RCB 210
	Japan Approvals Institute for Telecommunication Equipment (JATE)			
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA 2	NB 2280
United Kingdom	Department for Business, Energy & Industrial Strategy (BEIS)	AB	UK MRA 2	AB 2280
Mexico	Instituto Federal de Telecomunicaciones (IFT)	CAB	Mexico MRA 1	US0159
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)			
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)			
Singapore	Infocomm Development Authority (IDA)			
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)			
Vietnam	Ministry of Communication (MIC)			

TCB – Telecommunications Certification Bodies (TCB)
 FCB – Foreign Certification Body
 CAB – Conformity Assessment Body
 NB – Notified Body
 AB – Approved Body
 MRA – Mutual Recognition Agreement
 MRA Phase I - recognition for product testing
 MRA Phase II – recognition for both product testing and certification

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; <http://www.a2la.org/scopepdf/2381-02.pdf>



United States of America – Telecommunication Certification Body (TCB)
Industry Canada – Certification Body, CAB Identifier – US0159
Europe – Notified Body (NB), NB Identifier - 2280
UK – Approved Body (AB), AB Identifier - 2280
Japan – Recognized Certification Body (RCB), RCB Identifier - 210

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	28th October 2022	Draft report for client review.
Draft 2	4 th November 2022	Draft 2 report for client review and comment.
Rev A	8 th November 2022	Initial release.

In the above table the latest report revision will replace all earlier versions.

3. TEST RESULT CERTIFICATE

Manufacturer: Lyft, Inc 185 Berry St #5000 San Francisco California 94107 USA	Tested By: MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Model: STN010	Telephone: +1 925 462 0304
Equipment Type: Bikeshare Station Computer	Fax: +1 925 462 0306
S/N's: Last 4 numbers: 00176	
Test Date(s): 19 th – 21 st October 2022	Website: www.micomlabs.com

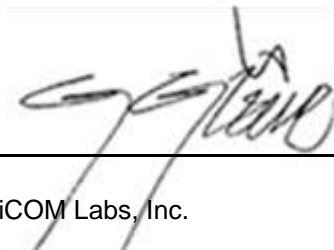
STANDARD(S)	TEST RESULTS
FCC Part 22, 24, 27, 90 & ISED RSS 130, 132, 133, 139	EQUIPMENT COMPLIES

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

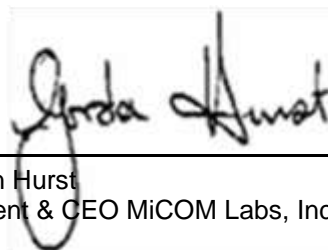
Notes:

1. This document reports conditions under which testing was conducted and the results of testing performed.
2. Details of test methods used have been recorded and kept on file by the laboratory.
3. Test results apply only to the item(s) tested.

Approved & Released for MiCOM Labs, Inc. by:



Graeme Grieve
Quality Manager MiCOM Labs, Inc.



Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	A2LA	22nd June 2022	R105 - Requirement's When Making Reference to A2LA Accreditation Status
II	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
III	M 3003	Edition 3 Nov.2012	Expression of Uncertainty and Confidence in Measurements
IV	KDB 412172 D01	August 7, 2015	EIRP and ERP are similarly defined as the product of the power supplied to the antenna and the antenna gain. The primary difference is that for ERP the antenna gain is expressed relative to an ideal half-wave dipole antenna, whereas with EIRP the antenna gain is expressed relative to an ideal (theoretical) isotropic antenna. EIRP and ERP can be expressed mathematically as described in the following sections.1
V	RSS-130 Issue 2	February 2019	RSS-130 Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
VI	RSS-132 Issue 3	January 2013	RSS-132 Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
VII	RSS-133 Issue 6, Amendment 1	January 2018	RSS-133 2GHz Personal Communications Services. This Radio Standards Specification (RSS) sets out the requirements for certification of transmitters and receivers used in radio communications systems to provide Personal Communications Services (PCS) in the bands 1850-1915 MHz and 1930-1995 MHz.
VIII	RSS-139 Issue 3	July 2015	RSS-139 Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
IX	FCC Part 22H	June 10, 2022	Subpart H – Cellular Radio Telephone Service: The rules in this subpart govern the licensing and operation of cellular radiotelephone systems. (a) Block A: 824-835 MHz and 845-846.5 MHz (b) Block B: 835-845 MHz and 846.5-849 MHz
X	FCC Part 24E	June 10, 2022	Subpart E—Broadband PCS; (c) This subpart sets out the regulations licensing and operations of personal communications services authorized in the 1850-1910 and 1930-1990 MHz bands.
XI	FCC Part 27C, H	June 10, 2022	Miscellaneous Wireless Communications Services This part .. for the provision of wireless communications services in the following bands. (2) 746-758 MHz, 775-788 MHz, and 805-806 MHz. (3) 698-746 MHz, 1710-1755 MHz
XII	FCC Part 90S	June 10, 2022	Subpart S - Regulations Governing Licensing and Use of Frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz Bands

4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Lyft, Inc. STN010 to requirements of FCC Part 22, 24E, 27C, 90S & ISSED RSS-130, 132, 133, 199
Applicant:	Lyft, Inc 185 Berry St #5000 San Francisco, California 94107 USA
Manufacturer:	Same as Applicant
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	LYFT16-U6 Draft
Date EUT received:	19 th October 2022
Standard(s) applied:	FCC Part 22, 24E, 27C, 90S & ISSED RSS-130, 132, 133, 139
Dates of test (from - to):	19 th – 21 st October 2022
No of Units Tested:	1
Type Of Equipment:	Bikeshare Station Computer
Model(s):	STN010
Equipment Secondary Function(s):	None
Type of Technology:	Bikeshare Station Computer
Installation type:	Fixed installation
Construction/Location for Use:	Outdoor
Declared Frequency Range(s):	LTE Band 2:1850 - 1910 MHz; LTE Band 4: 1710 - 1755 MHz; LTE Band 5: 824-849 MHz; LTE Band 13: 777-787 MHz; LTE Band 17: 704 - 716 MHz
Type of Modulation:	QPSK and 16QAM
Declared Nominal Output Power (dBm):	23
Transmit/Receive Operation:	Transceiver
Rated Input Voltage and Current:	12V DC 500mA typical.
Operating Temperature Range:	-20°C to +60°C
Equipment Dimensions:	220 x 155 x 75 mm
Weight:	1.7 Kg
Hardware Rev:	Rev 8G
Software Rev:	3.10.82

5.2. Scope Of Test Program

Lyft, Inc. STN010

The scope of the test program was a verification test of the Lyft, Inc. STN010 Bikeshare Station Computer configurations with the pre-certified LTE Module in the specified frequency bands for compliance against the following IMT Cellular Network specifications:

FCC Part 22 Subpart H – Cellular Radio Telephone Service

The rules in this subpart govern the licensing and operation of cellular radiotelephone systems.

- (a) Block A: 824-835 MHz and 845-846.5 MHz
- (b) Block B: 835-845 MHz and 846.5-849 MHz

FCC Part 24 Subpart E – Broadband PCS

This subpart sets out the regulations governing the licensing and operations of personal communications services authorized in the 1850-1910 and 1930-1990 MHz bands.

FCC Part 27 - Miscellaneous Wireless Communications Services

This part states the conditions under which spectrum is made available and licensed for the provision of wireless communications services in the following bands... 746-758 MHz, 775-788 MHz, and 805-806 MHz, 698-746 MHz. 1710 - 1755 MHz

FCC Part 90 Subpart S Private Land Mobile Radio Services

Regulations Governing Licensing and Use of Frequencies in the 806-824, 851-869, 896-901, and 935-940 MHz Bands

Industry Canada RSS-130 Issue 2

This Radio Standards Specification (RSS) sets out the requirements for equipment operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz bands.

Industry Canada RSS-132 Issue 3

RSS-132 Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz

Industry Canada RSS-133 Issue 6

RSS-133 2 GHz Personal Communications Services sets out the requirements for certification of transmitters and receivers used in radio communications systems to provide Personal Communications Services (PCS) in the bands 1850-1915 MHz and 1930-1995 MHz.

Industry Canada RSS-139 Issue 3

RSS-139 Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz

Pre Certified Gemalto M2M GmbH Wireless Module PLS8-X LTE Radio Module tested by CETECOM, with test results reported in the test reports below:

- Test report no.: 1-9521/15-01-04-A Dated 2015-08-05
- Test report no.: 1-9521/15-01-03-A Dated 2015-08-24
- Test report no.: 1-9521/15-01-02-A Dated 2015-08-04
- Test report no.: 1-9521/15-01-01_Annex A Dated 2015-03-25

5.3. Equipment Model(s) and Serial Number(s)

Type (EUT/Support)	Equipment Description (Including Brand Name)	Mfr.	Model No.	Serial No.
EUT	Bikeshare Station Computer	Lyft Inc	STN010	S/N Last 5 digits: 00176
Support	Laptop	Lenovo	N/A	N/A

5.4. External A.C/D.C. Power Adaptor

The STN010 is powered via 12V Battery in normal usage, no external ac/dc adaptor is used.

5.5. Antenna Details

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
External	MobileMark	RM-WLF-1C-BLK-120	Permanent Mount	3.0	-	360		694 - 894
External	MobileMark	RM-WLF-1C-BLK-120	Permanent Mount	3.0	-	360		1700 - 2700

BF Gain - Beamforming Gain
 Dir BW - Directional BeamWidth
 X-Pol - Cross Polarization

5.6. Cabling and I/O Ports

Port Type	Max Cable Length	Conn Type	Environment
RF LTE Main	<3m	Analog	End-User
RF NFC	<3m	Analog	End-User
RF DIV	<3m	Analog	End-User
USB	<3m	USB Type A	End-User
Digital I/O	<3m	4 pin	End-User
Digital I/O	<3m	6 pin	End-User
Digital I/O	<3m	8 pin	End-User
Digital I/O	<3m	10 pin	End-User
Ethernet	<3m	RJ45	End-User
Console Port	<3m	10 pin IDC	End-User
Programming Port	<3m	6 pin IDC	End-User
Power Port	<3m	12 pin Molex	End-User

5.7. Test Configurations

Test configurations are as noted in the test results.

LTE Band No.	Bandwidth (MHz)	Channels No.'s	Frequencies (MHz)
2	1.4	18607, 18900, 19192	1850.7, 1880.0, 1909.2
4	1.4	19957, 20175, 20392	1710.7, 1732.0, 1754.2
5	1.4	20407, 20525, 20642	824.7, 836.5 848.2
13	5	23205, 23230, 23254	779.5, 782.0, 784.5
17	5	23755, 23790, 23825	706.5, 710.0, 713.6

Verification testing only of Pre Certified LTE Radio Module (Gemalto M2M GmbH Wireless Module PLS8-X) tested by CETECOM, noted in the test report below:

Test report no.: 1-9521/15-01-04-A Dated 2015-08-05
Test report no.: 1-9521/15-01-03-A Dated 2015-08-24
Test report no.: 1-9521/15-01-02-A Dated 2015-08-04
Test report no.: 1-9521/15-01-01_Annex A Dated 2015-03-25

5.8. Equipment Modifications

The following modifications were required to bring the equipment into compliance:

1. NONE

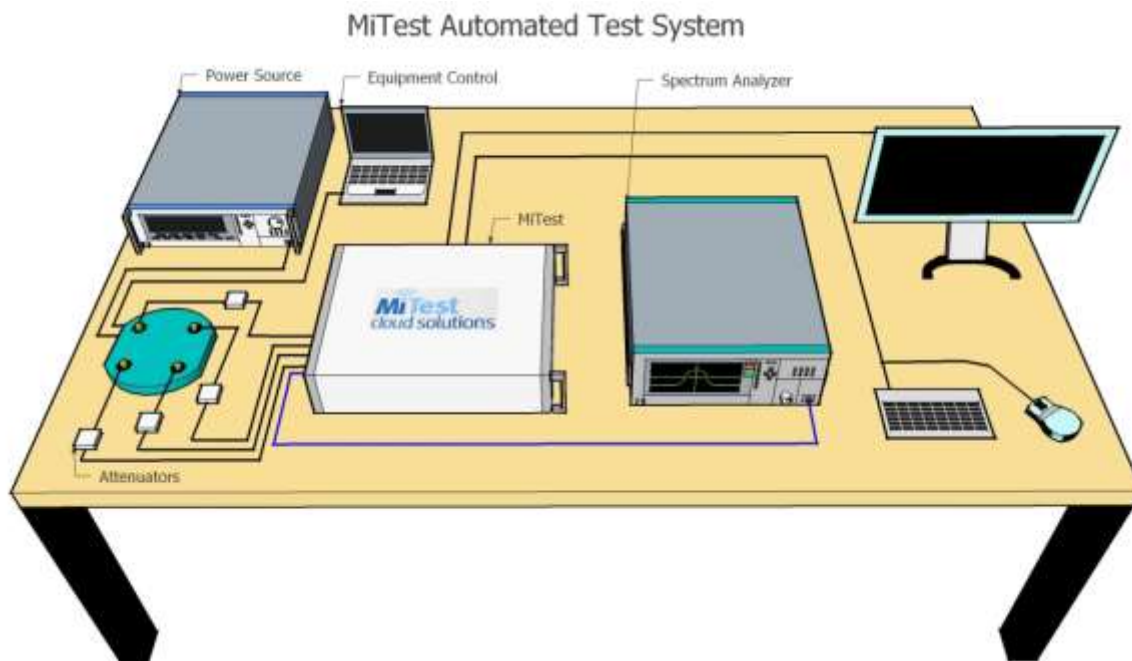
5.9. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:

1. NONE

6. TEST EQUIPMENT CONFIGURATION(S)

6.1. RF Conducted Testing

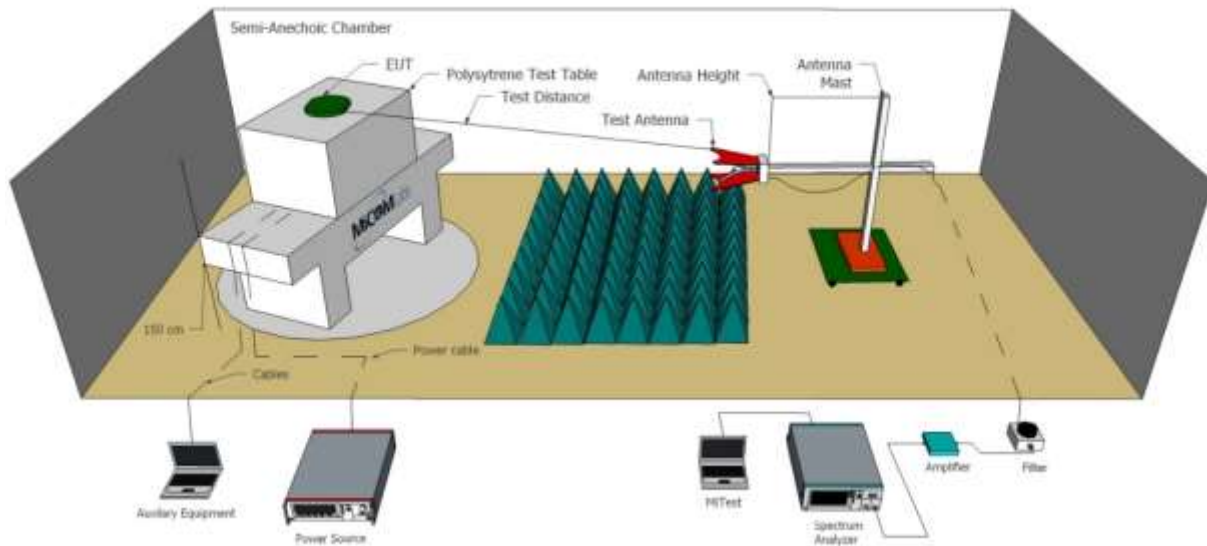


Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
#3 SA	MiTest Box to SA	Fairview Microwave	SCA1814-0101-72	#3 SA	29 Jun 2023
#3P1	EUT to MiTest box port 1	Fairview Microwave	SCA1814-0101-72	#3P1	29 Jun 2023
#3P2	EUT to MiTest box port 2	Fairview Microwave	SCA1814-0101-72	#3P2	29 Jun 2023
#3P3	EUT to MiTest box port 3	Fairview Microwave	SCA1814-0101-72	#3P3	29 Jun 2023
#3P4	EUT to MiTest box port 4	Fairview Microwave	SCA1812-0101-72	#3P4	29 Jun 2023
249	Thermocouple; Resistance Thermometer	Thermotronics	GR2105-02	9340 #2	29 Jun 2023
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	8 Oct 2023
398	MiTest RF Conducted Test Software	MiCOM	MiTest ATS	Version 4.2.3.0	Not Required
405	DC Power Supply 0-60V	Agilent	6654A	MY4001826	Cal when used
408	USB to GPIB interface	National Instruments	GPIB-USB HS	14C0DE9	Not Required
441	USB Wideband Power Sensor	Boonton	55006	9179	20 Sep 2023
442	USB Wideband Power Sensor	Boonton	55006	9181	19 Oct 2023
445	PoE Injector	D-Link	DPE-101GL	QTAH1E2000625	Not Required
461	Spectrum Analyzer	Agilent	E4440A	MY46185537	27 Sep 2023
493	USB Wideband Power Sensor	Boonton	55006	9634	8 Oct 2023
494	USB Wideband Power Sensor	Boonton	55006	9726	19 Oct 2023
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2023
512	MiTest Cloud Solutions RF Test Box	MiCOM	2nd Gen with DFS	512	29 Jun 2023
555	Rhode & Schwarz Receiver (Firmware Version : 2.00 SP1)	Rhode & Schwarz	ESW 44	101893	28 Jun 2023
75	Environmental Chamber	Thermatron	SE-300-2-2	27946	20 Feb 2023

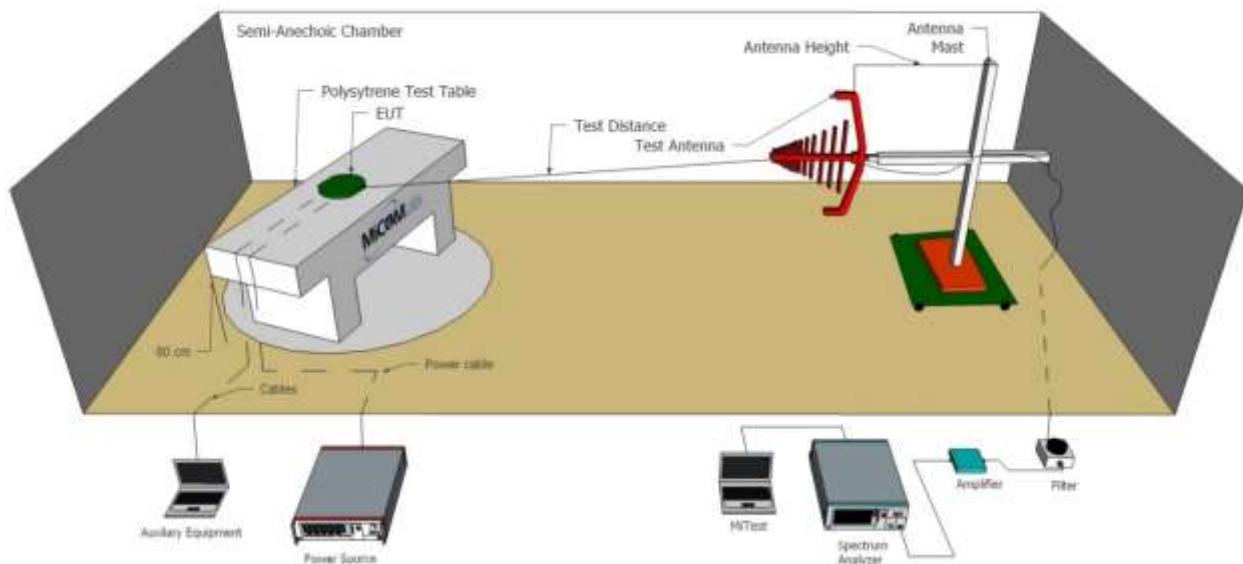
6.2. Radiated Emissions - 3m Chamber

The following tests were performed using the radiated test set-up shown in the diagram below. Radiated emissions above and below 1GHz.

Radiated Emissions Above 1GHz Test Setup



Radiated Emissions Below 1GHz Test Setup



Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	8 Oct 2023
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	24 Jan 2023
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	29 Sep 2023
346	1.6 TO 10GHz High Pass Filter	EWT	EWT-57-0112	H1	6 Oct 2023
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	27 Oct 2023
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	30 Sep 2023
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	2 Nov 2023
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
414	DC Power Supply 0-60V	HP	6274	1029A01285	Cal when used
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
447	MiTest Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0	447	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	27 Oct 2023
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	27 Oct 2023
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	27 Oct 2023
466	Low Pass Filter DC-1500 MHz	Mini-Circuits	NLP-1750+	VUU10401438	6 Oct 2023
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	6 Oct 2023
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	6 Oct 2023
510	Barometer/Thermometer	Digi Sense	68000-49	170871375	4 Jan 2023
554	Precision SMA Cable	Fairview Microwave	SCE18060101-400CM	554	6 Oct 2023
555	Rhode & Schwarz Receiver (Firmware Version : 2.00)	Rhode & Schwarz	ESW 44	101893	28 Jun 2023

	SP1)				
557	LTE Filter 703 - 748 4 MHz	Warison	WFIL-N703-748F-04	557	27 Apr 2023
558	LTE Filter 832-862 MHz	Warison	WFIL-N832-862F-02	558	26 Apr 2023
559	LTE Filter 880 - 915 MHz	Warison	WFIL-N880-915F-05	559	26 Apr 2023
560	LTE Filter 1710-1785 MHz	Warison	WFIL-N1710-1785F-05	560	26 Apr 2023
561	LTE Filter 1920-1980 MHz	Warison	WFIL-N1920-1980F-02	561	26 Apr 2023
CC05	Confidence Check	MiCOM	CC05	None	27 Feb 2023

7. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data'.

Test and report automation was performed by [MiTest](#). [MiTest](#) is an automated test system developed by MiCOM Labs. [MiTest](#) is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.



The MiCOM Labs "[MiTest](#)" Automated Test System" (Patent Pending)

8. TEST SUMMARY

Test Header	Result	Data Link
Transmitter Test Parameters		
Conducted Output Power	Complies	View Data
Transmitter Spurious Emissions	Complies	View Data

Note: The EUT (host device) contains a pre-certified LTE with antennas. The scope of the test program was a verification test of the Lyft, Inc. STN010 Bikeshare Station Computer configurations with the pre-certified LTE Module in the specified frequency bands for compliance against the following IMT Cellular Network specifications:

Verification testing only of Pre Certified LTE Radio Module (Gemalto M2M GmbH Wireless Module PLS8-X) tested by CETECOM, noted in the test reports below:

Test report no.: 1-9521/15-01-04-A Dated 2015-08-05
Test report no.: 1-9521/15-01-03-A Dated 2015-08-24
Test report no.: 1-9521/15-01-02-A Dated 2015-08-04
Test report no.: 1-9521/15-01-01_Annex A Dated 2015-03-25

9. TEST RESULTS

9.1. Conducted Output Power

Conducted Test Conditions for Output Power			
Standard:	FCC Part 22, 24E, 27C, H IC RSS-130, 132, 133, 139	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	EIRP	Rel. Humidity (%):	32 - 45
Standard Section(s):	FCC 22, FCC 24E: 24.232 (d) FCC 27C: 27.50 (b), (d) FCC 90S: RSS-130: 4.6, RSS-132:5.4, RSS-133: 6.4, RSS-139: 6.5	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Output Power

With reference to the test configuration identified in Section 8.1 Conducted Test Setup the EUT was set to transmit on the appropriate centre frequency of the selected frequency band and bandwidth. Output Power was measured on each of the active chain(s) (antenna outputs) using a power sensor connected to each antenna terminal.

Testing was performed under ambient conditions.

Limits Output Power - Band 2

FCC 24E: §24.232

(c) Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

RSS-133: 6.4 Transmitter Output Power and Equivalent Isotropically Radiated Power:

The equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510.

Limits Output Power - Band 4,13:

FCC 27.50

(b) (10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

(d)(4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

RSS-130: 4.6 Transmitter Output Power and Effective Radiated Power:

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

RSS-139: 6.6 Transmitter Output Power and Effective Radiated Power:

The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters shall not exceed one watt.

Limits Output Power - Band 5:

FCC 22.913: (5): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

RSS-132: 5.4: Transmitter Output Power and Effective Radiated Power:

The transmitter output power shall be measured in terms of average power. The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment shall not exceed 11.5 watts. Refer to SRSP-503 for base station e.i.r.p. limits.

Limits Output Power - Band 17:

FCC 27H: §27.50 (C) (10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP

RSS-130: 4.6.3 Frequency bands 698-756 MHz and 777-787 MHz

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

Band 2: Conducted Output Power

Equipment Configuration for Maximum Output Power

Variant:	LTE Band 2	Duty Cycle (%):	99
Data Rate:	Not Applicable	Antenna Gain (dBi):	0.0
Modulation:	QPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	Power Class 3; 1.4MHz Bandwidth		

Test Measurement Results

Test Frequency (MHz)	Temperature	Measured Power	Limit	Margin	Tolerance
		dBm	dBm	dB	dB
1850.70	20 °C	20.99	23.00	-2.01	Pass
1880.00		21.07	23.00	-1.93	Pass
1909.30		21.21	23.00	-1.79	Pass

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	1.33 dB

Band 4: Conducted Output Power

Equipment Configuration for Maximum Output Power

Variant:	LTE Band 4	Duty Cycle (%):	99
Data Rate:	Not Applicable	Antenna Gain (dBi):	0.0
Modulation:	QPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	Power Class 3; 1.4MHz Bandwidth		

Test Measurement Results

Test Frequency (MHz)	Temperature	Measured Power	Limit	Margin	Tolerance
		dBm	dBm	dB	dB
1710.70	20 °C	21.47	23.00	-1.53	Pass
1732.50		21.97	23.00	-1.03	Pass
1754.20		21.42	23.00	-1.58	Pass

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	1.33 dB

Band 5: Conducted Output Power

Equipment Configuration for Maximum Output Power

Variant:	LTE Band 5	Duty Cycle (%):	99
Data Rate:	Not Applicable	Antenna Gain (dBi):	0.0
Modulation:	QPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	Power Class 3; 1.4MHz Bandwidth		

Test Measurement Results

Test Frequency (MHz)	Temperature	Measured Power	Limit	Margin	Tolerance
		dBm	dBm	dB	dB
824.70	20 °C	22.30	23.00	-0.70	Pass
836.50		22.46	23.00	-0.54	Pass
848.20		22.41	23.00	-0.59	Pass

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	1.33 dB

Band 13: Conducted Output Power

Equipment Configuration for Maximum Output Power

Variant:	LTE Band 13	Duty Cycle (%):	99
Data Rate:	Not Applicable	Antenna Gain (dBi):	0.0
Modulation:	QPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	Power Class 3; 5.0MHz Bandwidth		

Test Measurement Results

Test Frequency (MHz)	Temperature	Measured Power	Limit	Margin	Tolerance
		dBm	dBm	dB	dB
779.50	20 °C	22.94	23.00	-0.06	Pass
782.00		22.72	23.00	-0.28	Pass
785.50		22.86	23.00	-0.14	Pass

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	1.33 dB

Band 17: Conducted Output Power

Equipment Configuration for Maximum Output Power

Variant:	LTE Band 17	Duty Cycle (%):	99
Data Rate:	Not Applicable	Antenna Gain (dBi):	0.0
Modulation:	QPSK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:	Power Class 3; 5MHz Bandwidth		

Test Measurement Results

Test Frequency (MHz)	Temperature	Measured Power	Limit	Margin	Tolerance
		dBm	dBm	dB	dB
706.5	20 °C	22.89	23.00	-0.11	Pass
710.0		22.81	23.00	-0.19	Pass
713.6		22.88	23.00	-0.12	Pass

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	1.33 dB

9.2. Radiated Transmitter Emissions

Radiated Test Conditions for Transmitter Spurious Emissions			
Standard:	FCC Part 22, 24E, 27C, IC RSS-130, 132, 133, 139	Ambient Temp. (°C):	20.0 - 24.5
Test Heading:	Out of Band Emissions	Rel. Humidity (%):	32 - 45
Standard Section(s):	FCC 22:917(a), FCC 24E: 238(a) FCC 27C, H: 27.53 (c), (g) FCC 90S, RSS-130: 4.7.1 RSS-132:5.5, RSS-133: 6.5, RSS-139: 6.5	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Out of Band Emissions

With reference to the test configuration identified in Section 8.1 Conducted Test Setup the EUT was set to transmit on the appropriate center frequency of the selected frequency band and bandwidth. Out of Band emissions was tested under QPSK.

Testing was performed under ambient conditions.

Limits Out of Band Emissions

Band 2:

FCC 24E: §24.238 Emission limitations for Broadband PCS equipment.

- (a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

RSS-133: 6.5 (i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p(\text{watts})$. 2 GHz Personal Communications Services RSS-133 4

(ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p(\text{watts})$. If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

- (b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (*i.e.* 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Band 4, 13:

FCC 27C: §27.53 Emission limits for Miscellaneous Wireless Communications Services.

(c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) AWS emission limits—(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

RSS-130: 4.7.1 The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$ (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

RSS-139: 6.6 Transmitter Unwanted Emissions

(i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block,² which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

(ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

Band 5:

FCC 22H: 917(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

RSS-132: 5.5 Transmitter Unwanted Emissions

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

(i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

Band 17:

FCC 27.53(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

RSS-130: 4.7.1 The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least $43 + 10 \log_{10} p$ (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

Band 2: Radiated Transmitter Emissions

FCC 24E: §24.238 Emission limitations for Broadband PCS equipment.

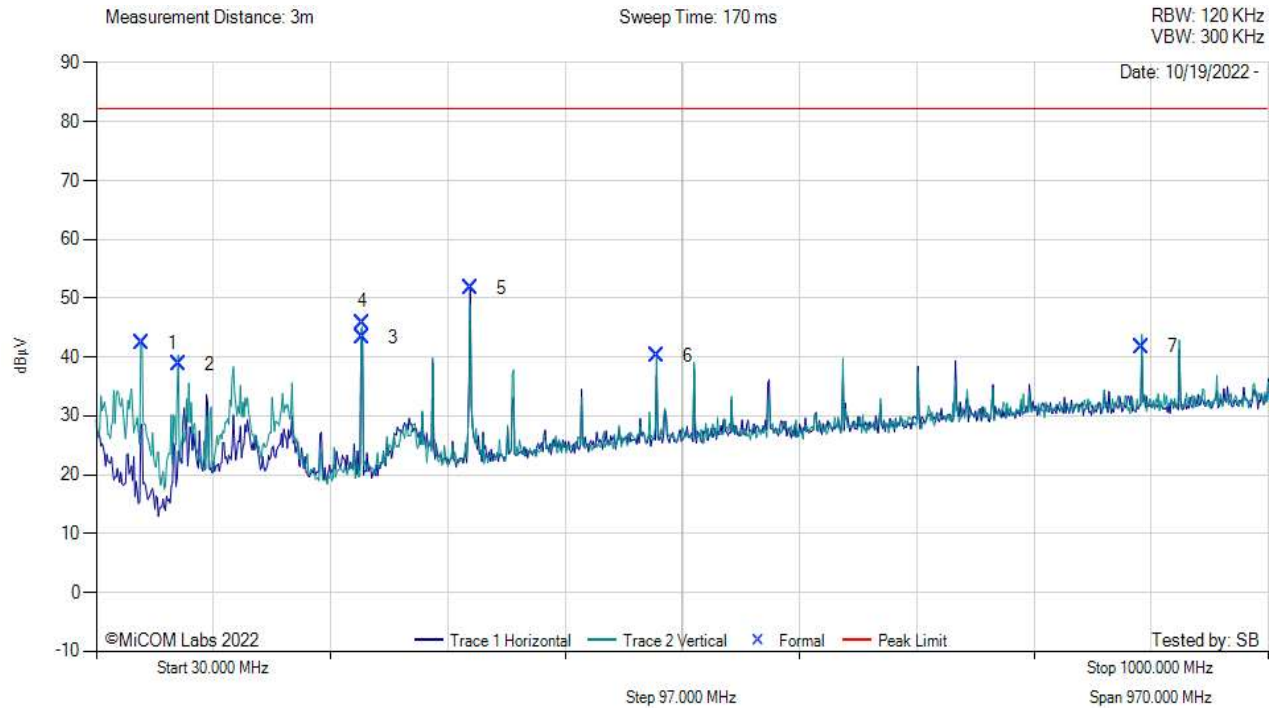
(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. ~ -13 dBm or 82.23 dBuV/m.

Spurious Emissions 30-1000 MHz

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1850.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB



30 MHz to 1 GHz



30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	67.81	55.80	3.88	-17.28	42.39	MaxQP	Vertical	98	85	82.23	-39.84	Pass
2	98.17	50.43	4.08	-15.76	38.76	MaxQP	Vertical	115	180	82.23	-43.47	Pass
3	249.99	52.64	4.80	-14.11	43.33	MaxQP	Horizontal	100	208	82.23	-38.90	Pass
4	250.00	55.17	4.80	17.18	45.85	MaxQP	Vertical	108	179	82.23	-36.38	Pass
5	339.41	57.38	5.18	-10.81	51.75	MaxQP	Horizontal	99	40	82.23	-30.48	Pass
6	493.68	42.31	5.67	-7.73	40.25	MaxQP	Vertical	101	72	82.23	-41.98	Pass
7	894.80	37.88	6.90	-2.99	41.80	MaxQP	Vertical	116	42	82.23	-40.43	Pass

Test Notes: Battery Powered 12VDC, Band 2 LTE Active

Spurious Emissions 1-18 GHz

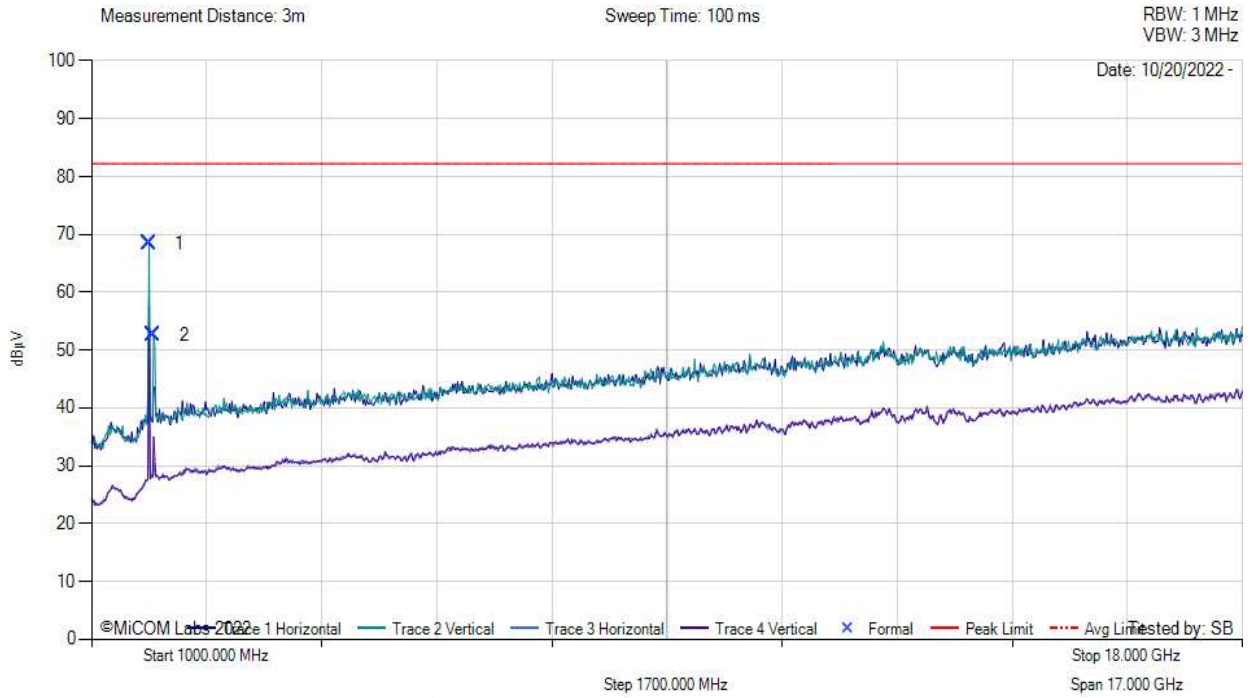
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1850.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1850.00	80.72	1.70	30.93	68.47	Fundamental	Vertical	99	--	--	--	Pass
2	1918.00	64.12	1.77	31.42	52.60	Fundamental	Vertical	150	--	--	--	Pass

Test Notes: Battery Powered 12VDC

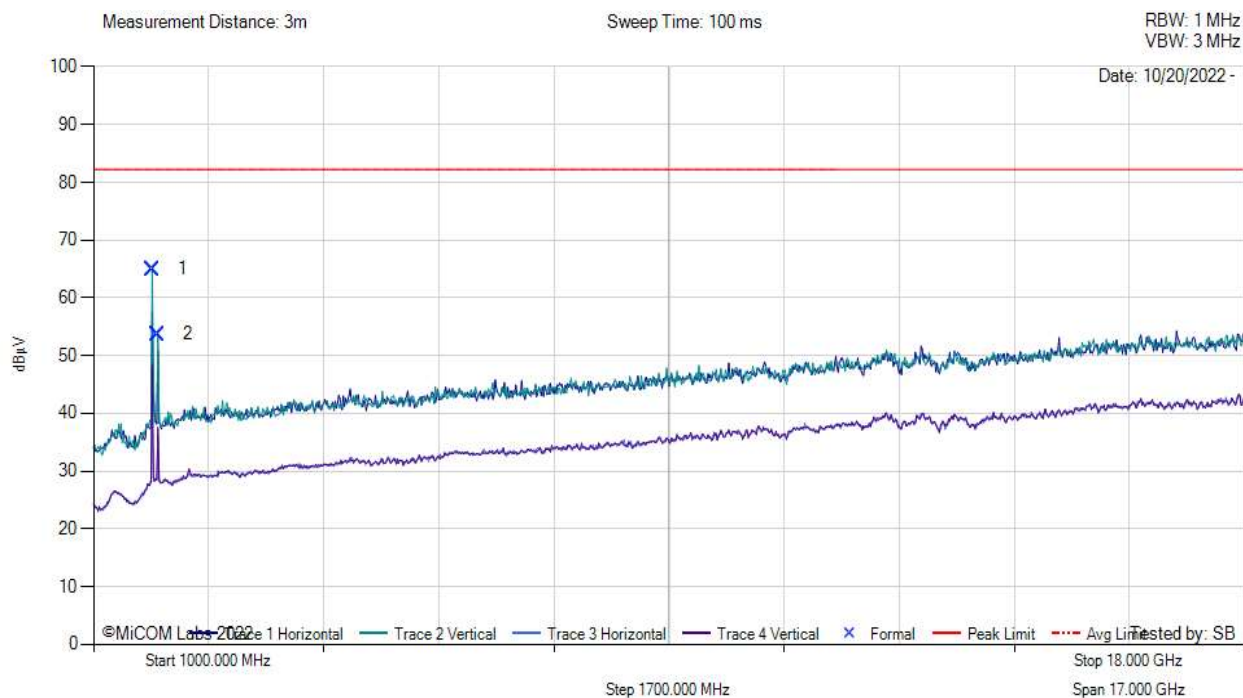
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1880.00	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1867.00	76.99	1.72	31.04	64.93	Fundamental	Vertical	149	--	--	--	Pass
2	1952.00	64.86	1.81	31.67	53.70	Fundamental	Vertical	149	--	--	--	Pass

Test Notes: Battery Powered 12VDC

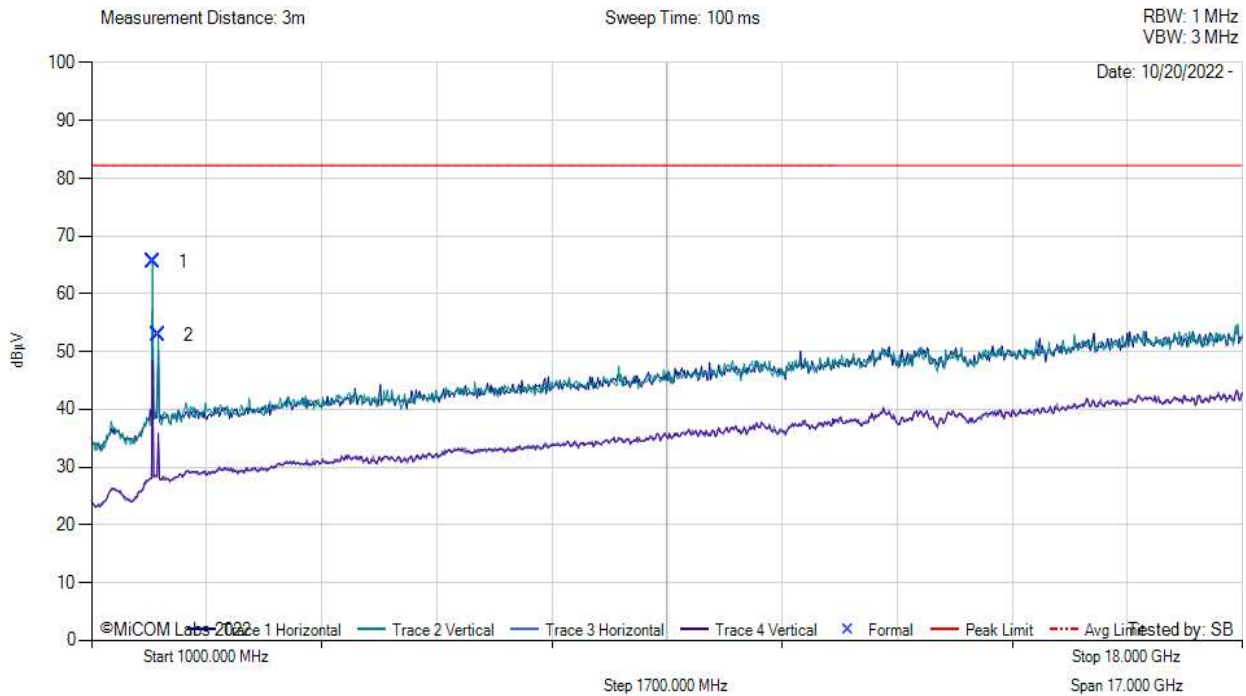
Equipment Configuration for FCC SPURIOUS 1 GHZ -18 GHZ

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1909.30	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1901.00	77.38	1.74	31.28	65.63	Fundamental	Vertical	149	--	--	--	Pass
2	1986.00	64.20	1.79	31.45	52.82	Fundamental	Vertical	99	--	--	--	Pass

Test Notes: Battery Powered 12VDC

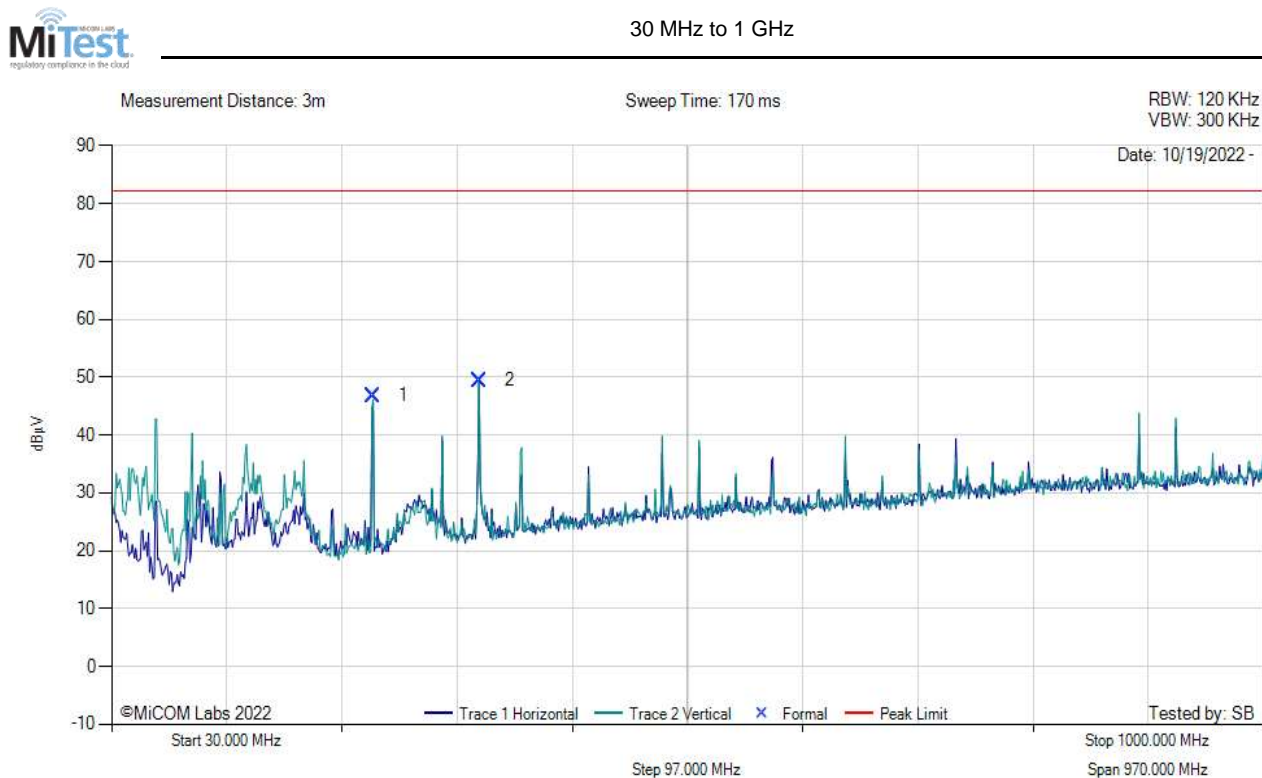
Band 4: Radiated Transmitter Emissions

FCC 27.53 h: *AWS emission limits—(1) General protection levels.* Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB. ~ -13 dBm or 82.23 dBuV/m

Spurious Emissions 30-1000 MHz

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1710.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBuV	Cable Loss dB	AF dB/m	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail
1	250.00	56.16	4.80	17.18	46.85	MaxQP	Vertical	108	179	82.23	-35.38	Pass
2	339.41	55.04	5.18	-10.81	49.41	MaxQP	Horizontal	99	40	82.23	-32.82	Pass

Test Notes: Battery Powered 12VDC, Band 4 LTE Active

Spurious Emissions 1-18 GHz

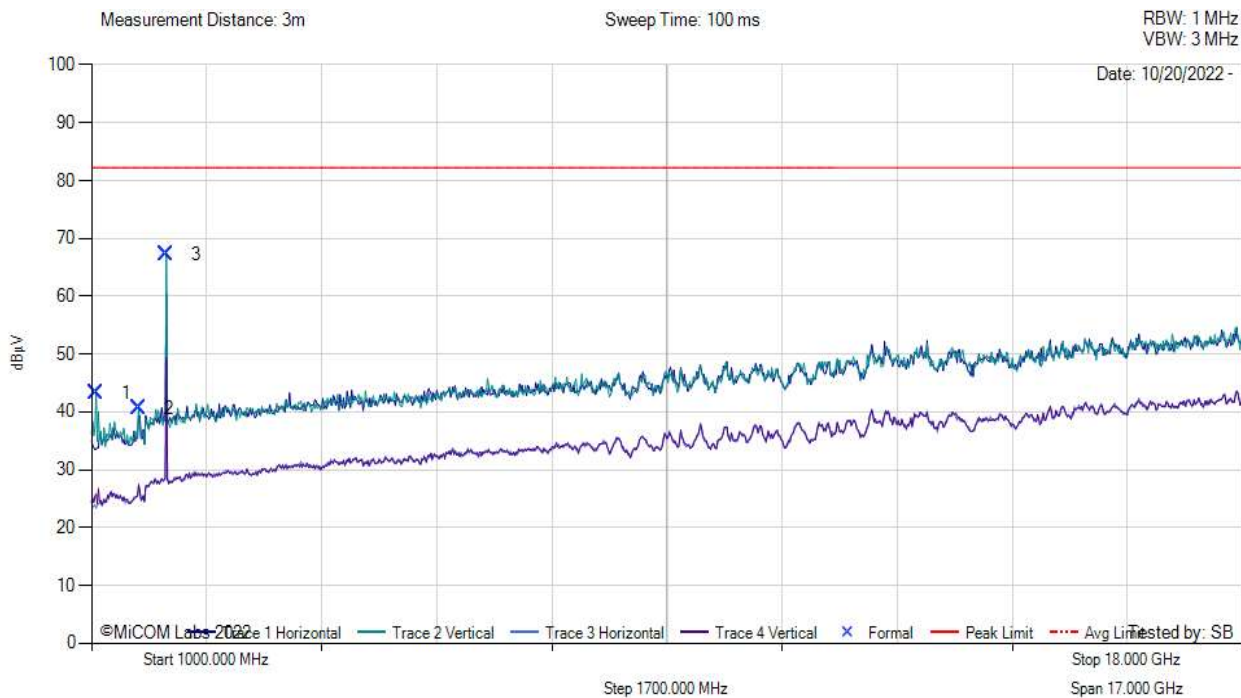
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1710.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1068.00	59.59	1.32	27.62	43.28	MaxP	Vertical	100	0	82.23	-38.95	Pass
2	1697.00	54.55	1.67	29.48	40.66	MaxP	Vertical	99	119	82.23	-41.57	Pass
3	2105.00	77.84	1.85	31.89	67.17	Fundamental	Vertical	149	--	--	--	Pass

Test Notes: Battery Powered 12VDC

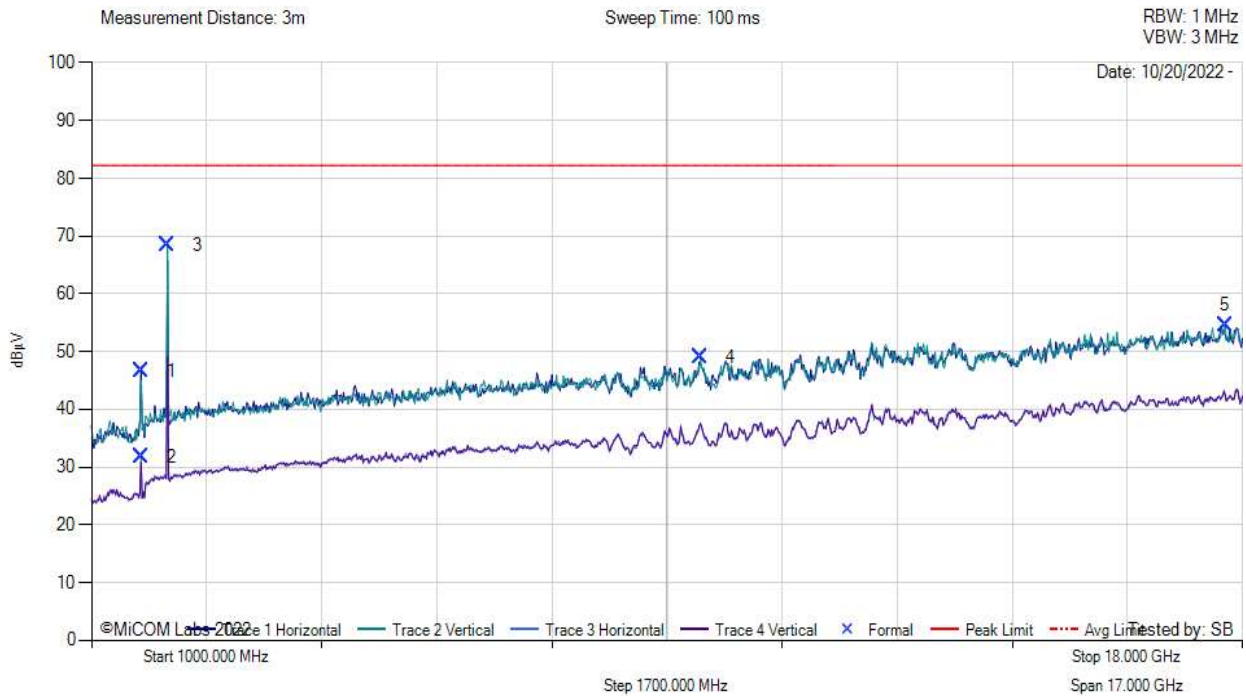
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1732.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1731.00	60.35	1.66	29.69	46.68	Fundamental	Horizontal	98	--	--	--	Pass
2	1731.00	45.41	1.66	29.69	31.73	Fundamental	Horizontal	98	--	--	--	Pass
3	2122.00	79.21	1.85	31.74	68.43	Fundamental	Vertical	149	--	--	--	Pass
4	9993.00	50.10	4.66	36.97	49.06	MaxP	Vertical	200	89	82.23	-33.17	Pass
5	17745.00	49.09	6.45	40.70	54.62	MaxP	Vertical	200	239	82.23	-27.61	Pass

Test Notes: Battery Powered 12VDC

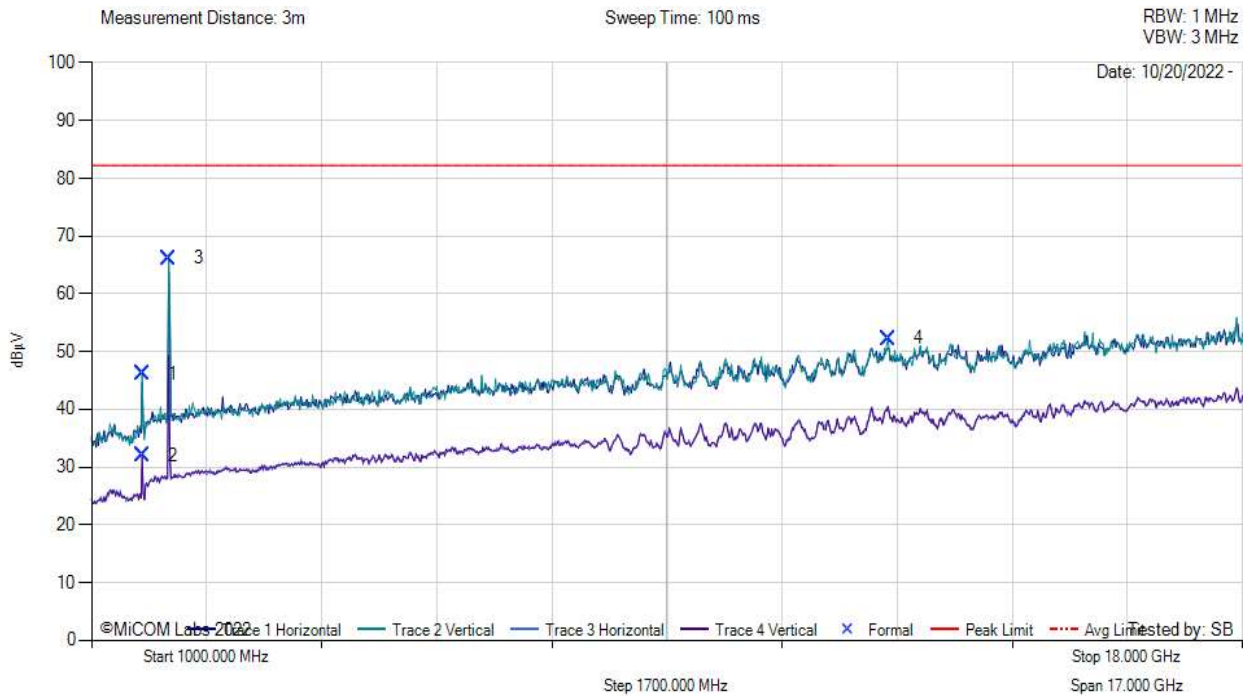
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	1754.2	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1748.00	59.74	1.69	29.77	46.19	Fundamental	Vertical	199	--	--	--	Pass
2	1748.00	45.58	1.69	29.77	32.03	Fundamental	Vertical	149	--	--	--	Pass
3	2139.00	77.10	1.89	31.59	66.19	Fundamental	Vertical	100	--	--	--	Pass
4	12764.00	54.96	5.26	39.26	52.29	MaxP	Vertical	199	239	82.23	-29.94	Pass

Test Notes: Battery Powered 12VDC

Band 5: Radiated Transmitter Emissions

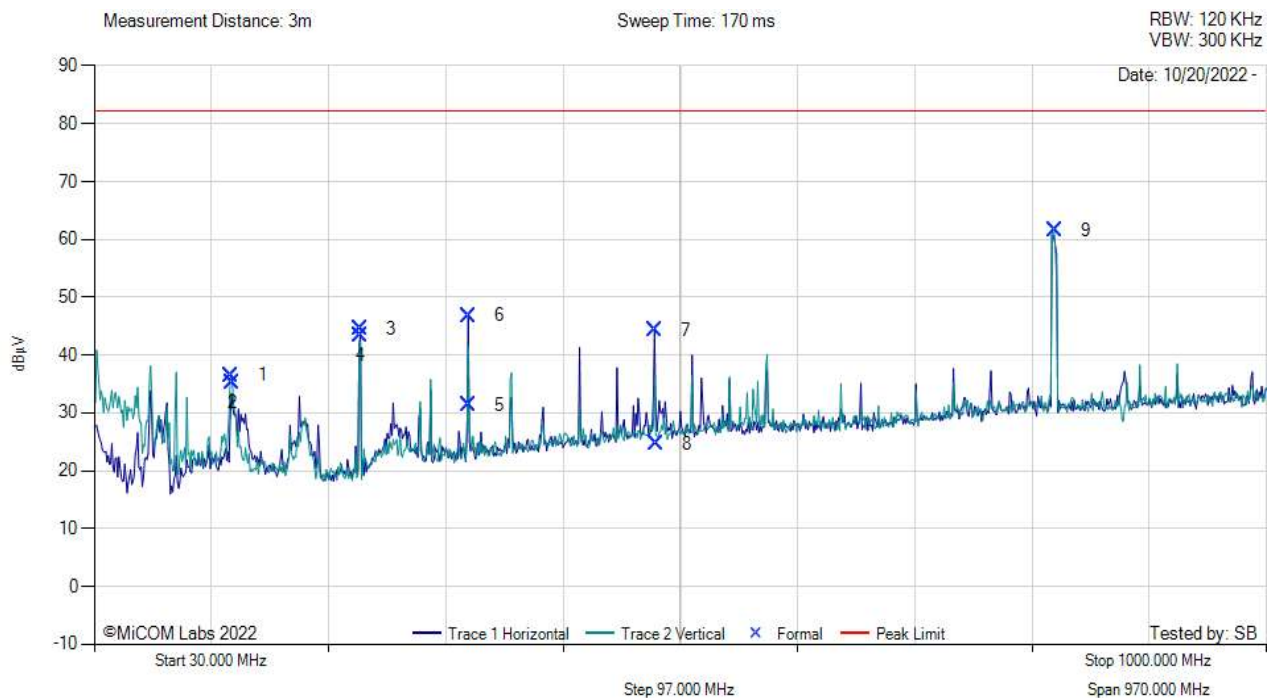
FCC 22H:917(a) *Out of band emissions.* The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. ~ -13 dBm or 82.23 dBuV/m.

Spurious Emissions 30-1000 MHz

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	824.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB



30 MHz to 1 GHz



30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	143.49	44.57	4.32	-12.38	36.50	MaxP	Vertical	98	0	82.23	-45.73	Pass
2	143.98	43.41	4.32	-12.42	35.31	MaxQP	Vertical	112	0	82.23	-46.92	Pass
3	249.98	53.78	4.80	-14.11	44.47	MaxQP	Horizontal	195	248	82.23	-37.76	Pass
4	250.19	52.74	4.80	-14.12	43.42	MaxP	Horizontal	199	240	82.23	-38.81	Pass
5	339.43	37.06	5.18	-10.81	31.43	MaxQP	Horizontal	145	196	82.23	-50.80	Pass
6	339.43	52.47	5.18	-10.81	46.85	MaxP	Horizontal	98	210	82.23	-35.38	Pass
7	493.66	46.42	5.67	-7.73	44.36	MaxP	Horizontal	98	150	82.23	-37.87	Pass
8	494.63	26.75	5.67	-7.72	24.71	MaxQP	Horizontal	100	122	82.23	-57.52	Pass
9	824.60	57.69	6.88	-3.06	61.51	Fundamental	Vertical	98	--	--	--	Pass

Test Notes: Battery Powered 12VDC

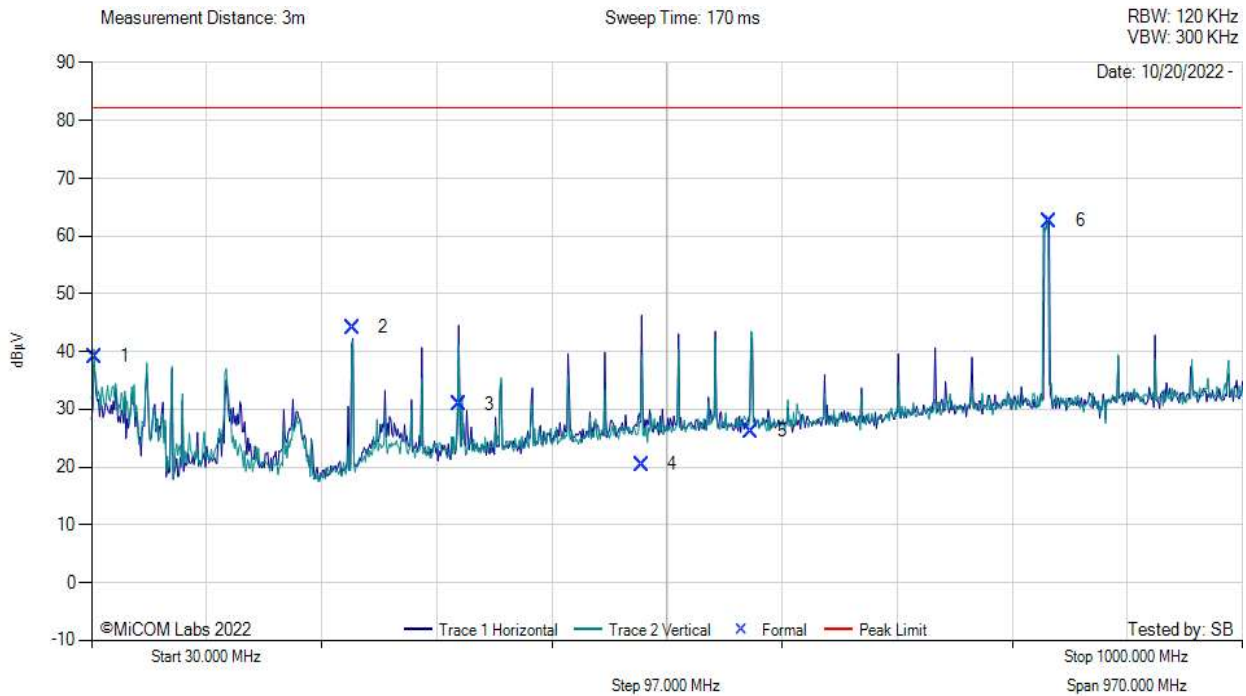
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	836.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	32.59	40.65	3.54	-5.09	39.10	MaxQP	Vertical	101	298	82.23	-43.13	Pass
2	249.99	53.51	4.80	-14.11	44.19	MaxQP	Horizontal	193	257	82.23	-38.04	Pass
3	339.40	36.45	5.18	-10.81	30.82	MaxQP	Horizontal	148	175	82.23	-51.41	Pass
4	493.77	22.49	5.67	-7.73	20.43	MaxQP	Horizontal	130	210	82.23	-61.80	Pass
5	586.21	26.82	5.98	-6.56	26.24	MaxQP	Vertical	141	146	82.23	-55.99	Pass
6	837.63	58.78	6.88	-3.06	62.60	Fundamental	Vertical	141	--	--	--	Pass

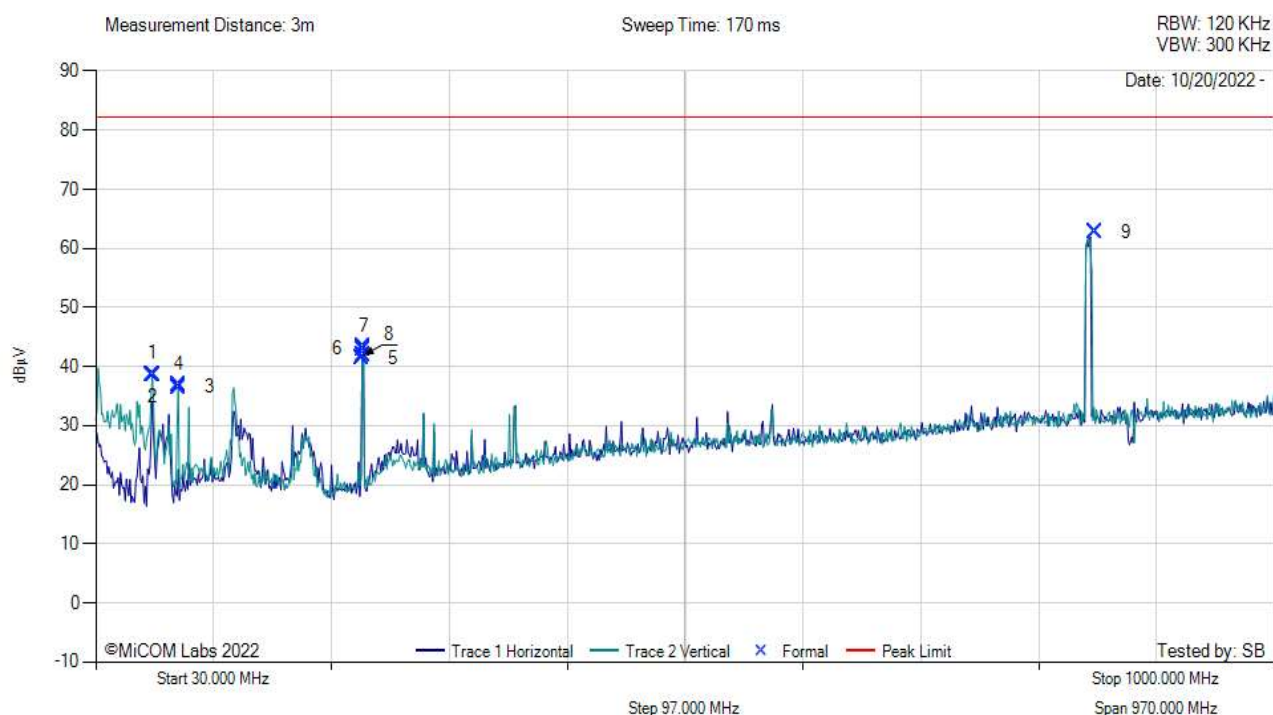
Test Notes: Battery Powered 12VDC

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	848.2	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	76.56	52.07	3.94	-17.34	38.67	MaxP	Vertical	99	0	82.23	-43.56	Pass
2	77.19	52.02	3.94	-17.37	38.60	MaxQP	Vertical	99	2	82.23	-43.63	Pass
3	97.90	48.22	4.08	-15.83	36.48	MaxP	Vertical	99	119	82.23	-45.75	Pass
4	98.15	48.53	4.08	-15.76	36.85	MaxQP	Vertical	98	97	82.23	-45.38	Pass
5	249.22	50.67	4.79	-14.07	41.39	MaxP	Horizontal	99	210	82.23	-40.84	Pass
6	250.00	52.26	4.80	-14.11	42.95	MaxP	Vertical	99	90	82.23	-39.28	Pass
7	250.00	52.62	4.80	-14.11	43.30	MaxQP	Vertical	121	93	82.23	-38.93	Pass
8	250.00	51.21	4.80	-14.11	41.90	MaxQP	Horizontal	99	196	82.23	-40.33	Pass
9	852.63	58.86	6.88	-3.05	62.69	Fundamental	Vertical	141	--	--	--	Pass

Test Notes: Battery Powered 12VDC

Spurious Emissions 1-18 GHz

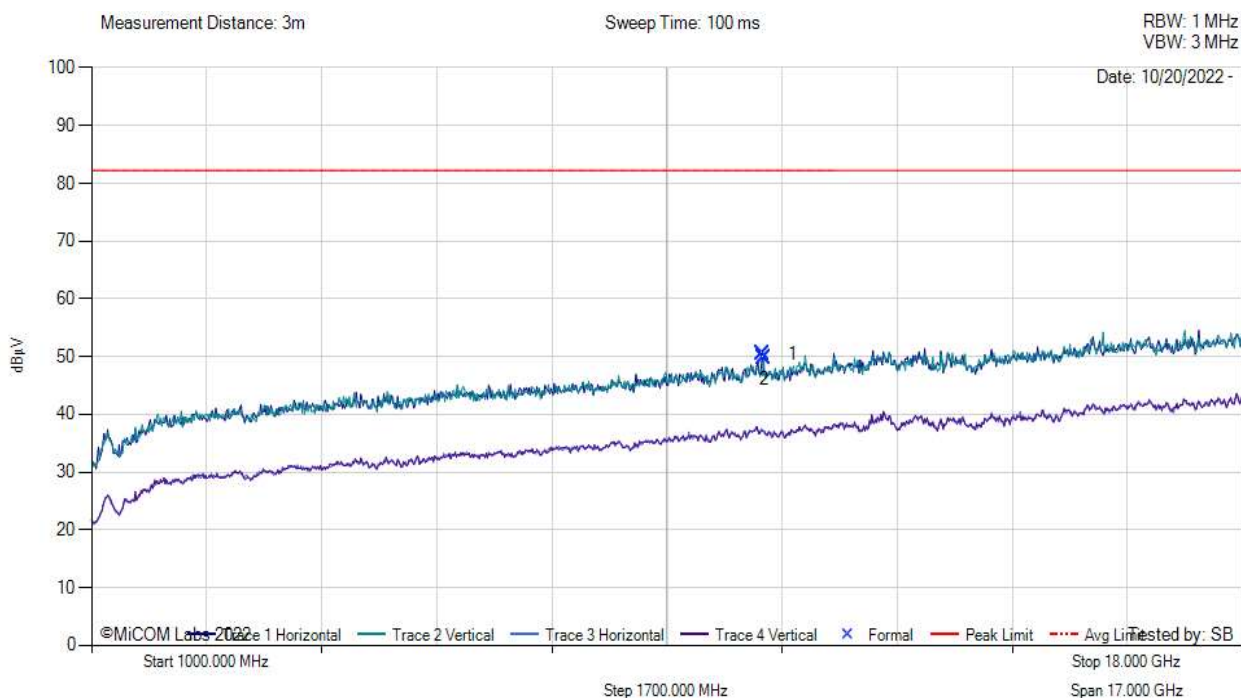
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	824.7	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	10911.00	50.39	4.54	37.74	50.46	MaxP	Horizontal	99	240	82.23	-31.77	Pass
2	10928.00	49.75	4.48	37.74	49.68	MaxP	Vertical	99	179	82.23	-32.55	Pass

Test Notes: Battery Powered 12VDC

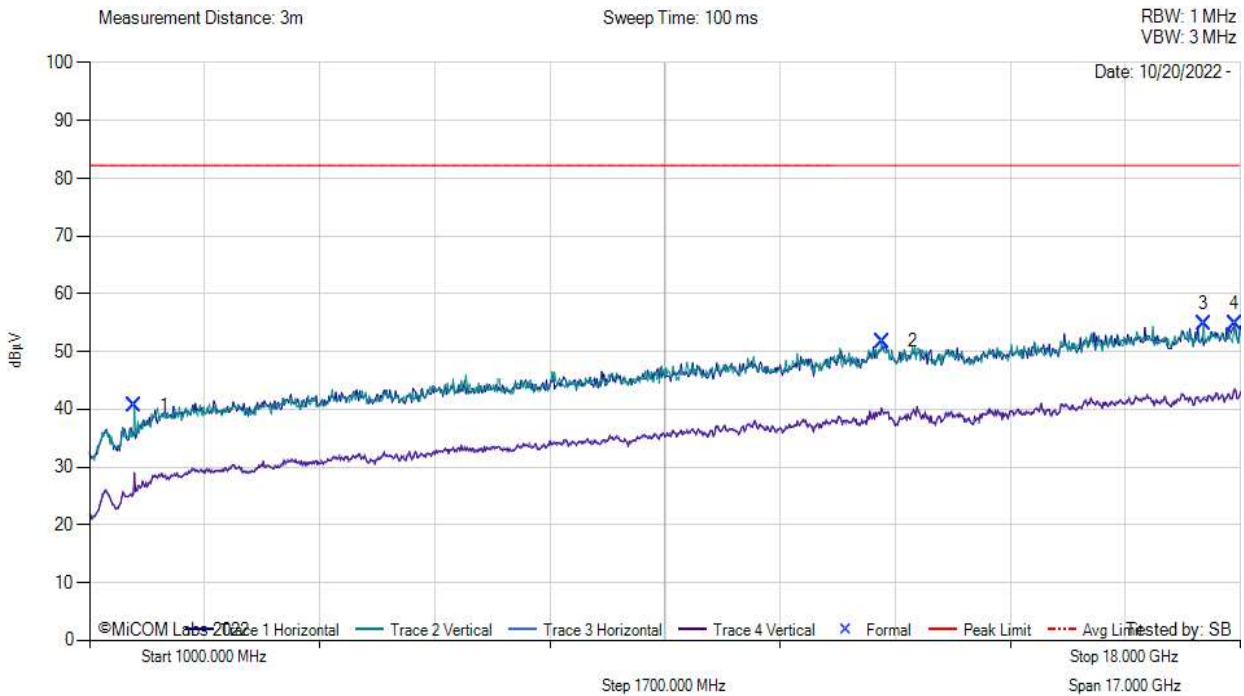
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	836.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



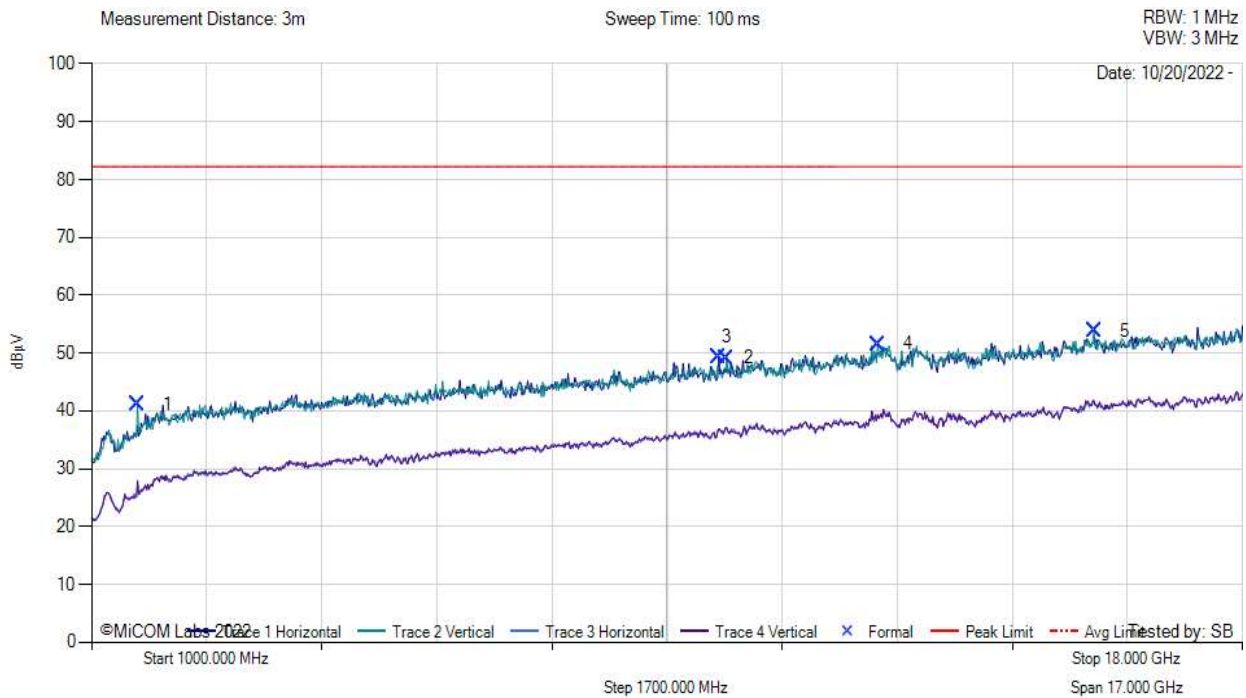
1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1663.00	55.12	1.66	28.88	40.61	MaxP	Vertical	149	209	82.23	-41.62	Pass
2	12713.00	53.59	5.43	39.32	51.78	MaxP	Vertical	199	0	82.23	-30.45	Pass
3	17456.00	49.79	6.11	40.81	54.81	MaxP	Vertical	199	149	82.23	-27.42	Pass
4	17915.00	47.68	6.67	40.74	54.82	MaxP	Vertical	99	29	82.23	-27.41	Pass

Test Notes: Battery Powered 12VDC

Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	1.4 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	848.2	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1680.00	55.30	1.65	29.18	41.08	MaxP	Vertical	199	179	82.23	-41.15	Pass
2	10265.00	49.92	4.76	37.00	49.24	MaxP	Horizontal	199	180	82.23	-32.99	Pass
3	10384.00	49.46	4.82	37.05	49.18	MaxP	Vertical	149	209	82.23	-33.05	Pass
4	12611.00	52.53	5.26	39.29	51.52	MaxP	Vertical	98	300	82.23	-30.71	Pass
5	15807.00	49.20	5.62	40.82	53.79	MaxP	Vertical	199	299	82.23	-28.44	Pass

Test Notes: Battery Powered 12VDC

Band 13: Radiated Transmitter Emissions

FCC 27.53c: Emission limits for Miscellaneous Wireless equipment.

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB; ~ -13 dBm or 82.23 dBuV/m

Spurious Emissions 30-1000 MHz

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	779.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz												
Num	Frequency MHz	Raw dBμV	Cable Loss dB	AF dB/m	Level dBμV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBμV/m	Margin dB	Pass /Fail
1	779.82	39.59	6.37	-4.94	41.03	MaxP	Horizontal	200	30	82.23	-41.20	Pass

Test Notes: Battery Powered 12VDC

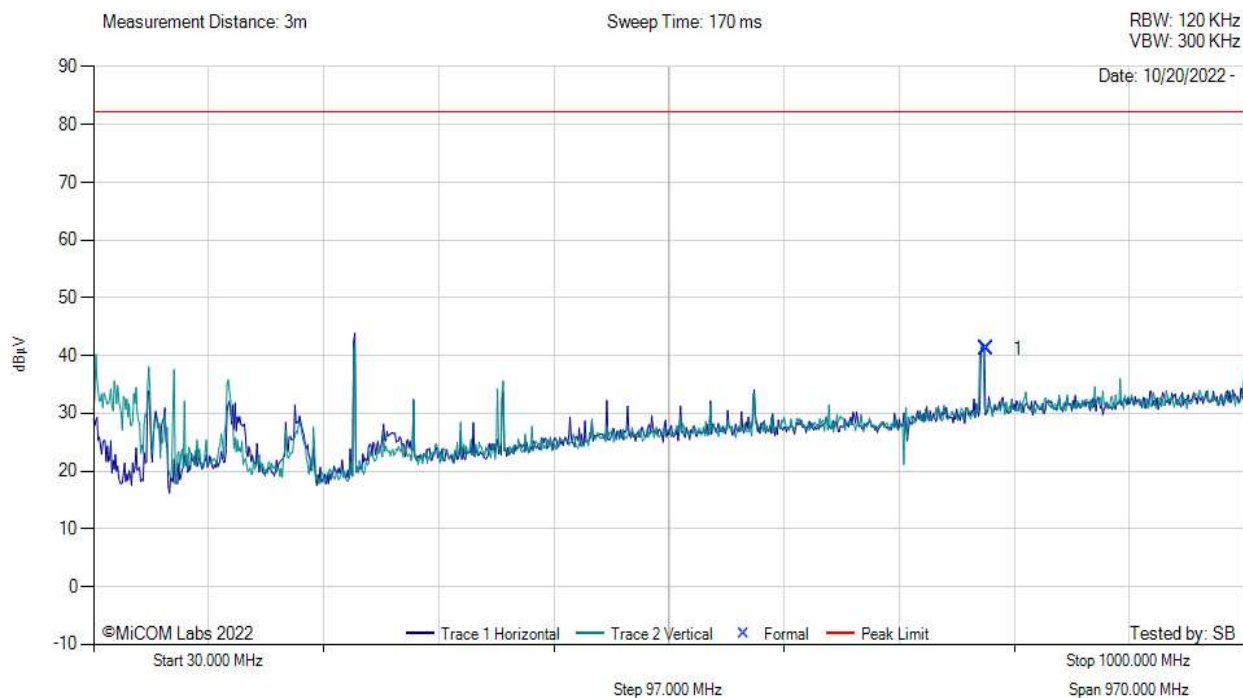
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	782.0	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	782.88	39.83	6.37	-5.03	41.17	MaxP	Vertical	98	29	82.23	-41.06	Pass

Test Notes: Battery Powered 12VDC

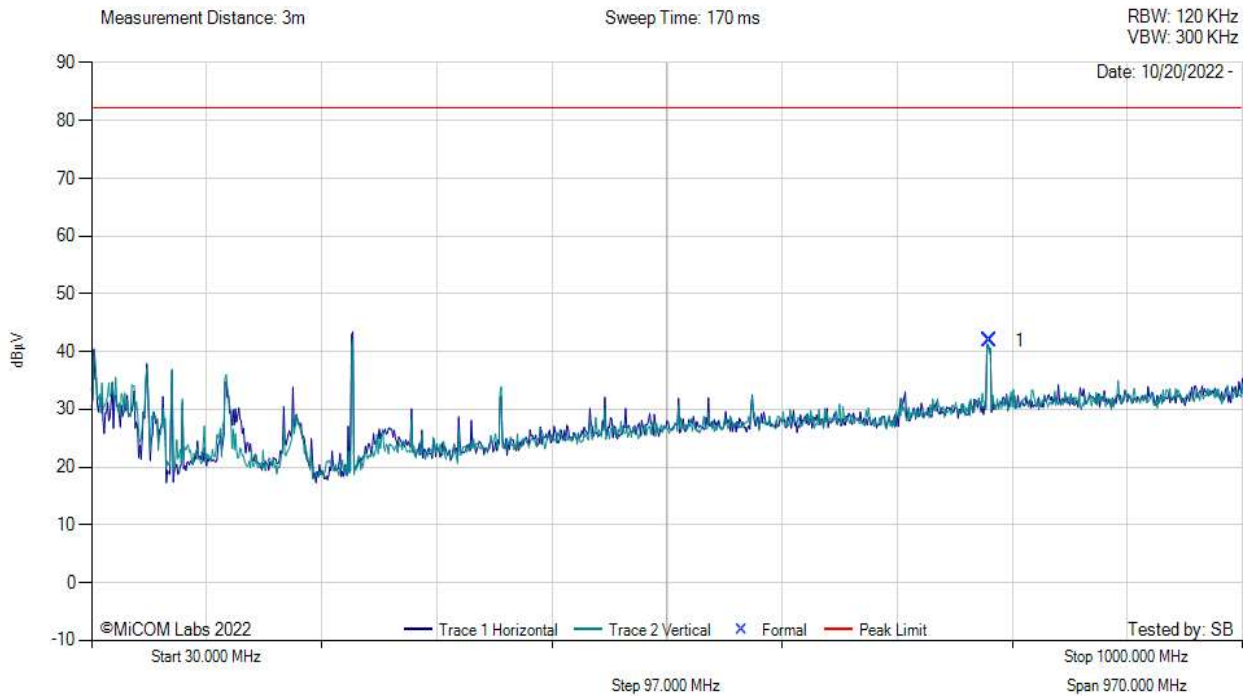
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	784.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	786.88	40.53	6.37	-5.03	41.87	MaxP	Vertical	199	29	82.23	-40.36	Pass

Test Notes: Battery Powered 12VDC

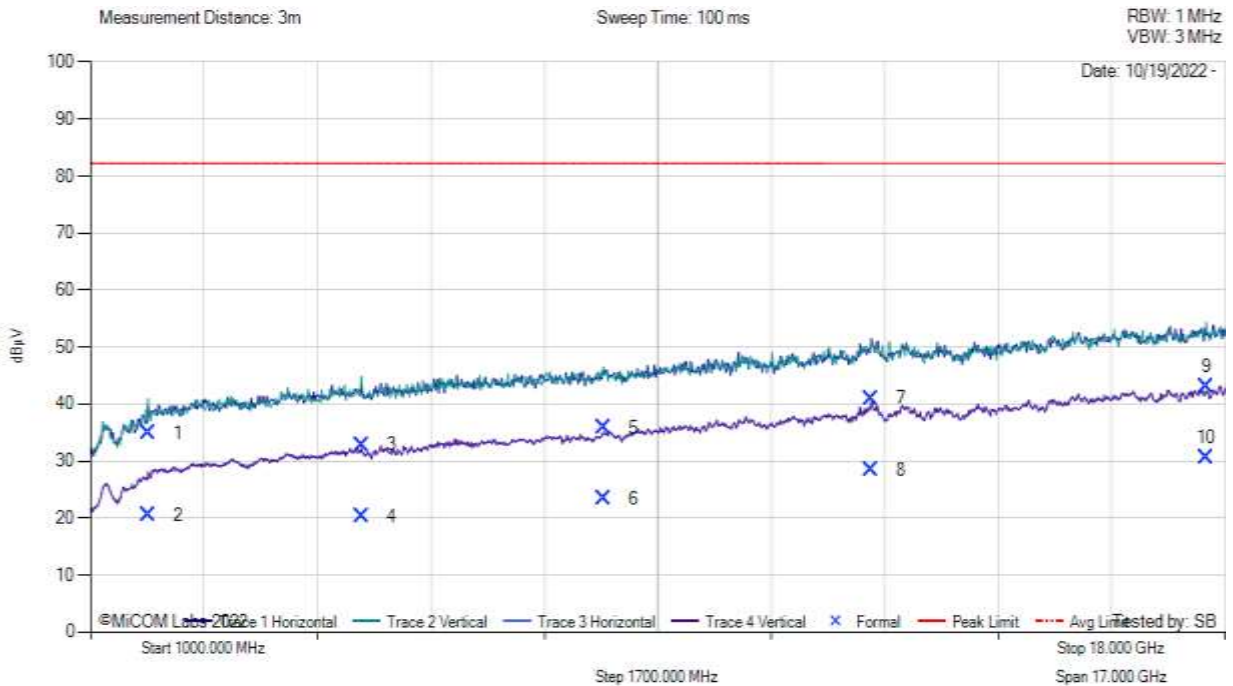
Spurious Emissions 1-18 GHz

Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	779.5	Data Rate:	Full RB
Power Setting:		Tested By:	SB
Test Measurement Results			



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1865.86	46.91	1.72	-13.79	34.85	MaxP	Vertical	198	19	82.23	-47.38	Pass
2	1865.86	32.52	1.72	-13.79	20.46	AVG	Vertical	198	19	82.23	-61.77	Pass
3	5063.40	41.72	2.95	-11.80	32.87	MaxP	Vertical	111	188	82.23	-49.36	Pass
4	5063.40	29.20	2.95	-11.80	20.35	AVG	Vertical	111	188	82.23	-61.88	Pass
5	8684.98	39.72	4.07	-7.96	35.83	MaxP	Vertical	102	337	82.23	-46.40	Pass
6	8684.98	27.23	4.07	-7.96	23.33	AVG	Vertical	102	337	82.23	-58.90	Pass
7	12694.72	42.43	5.25	-6.68	40.99	MaxP	Horizontal	134	109	82.23	-41.24	Pass
8	12694.72	29.83	5.25	-6.68	28.40	AVG	Horizontal	134	109	82.23	-53.83	Pass
9	17710.62	37.65	6.18	-0.86	42.97	MaxP	Vertical	100	23	82.23	-39.26	Pass
10	17710.62	25.27	6.18	-0.86	30.59	AVG	Vertical	100	23	82.23	-51.64	Pass

Test Notes: Battery Powered 12VDC

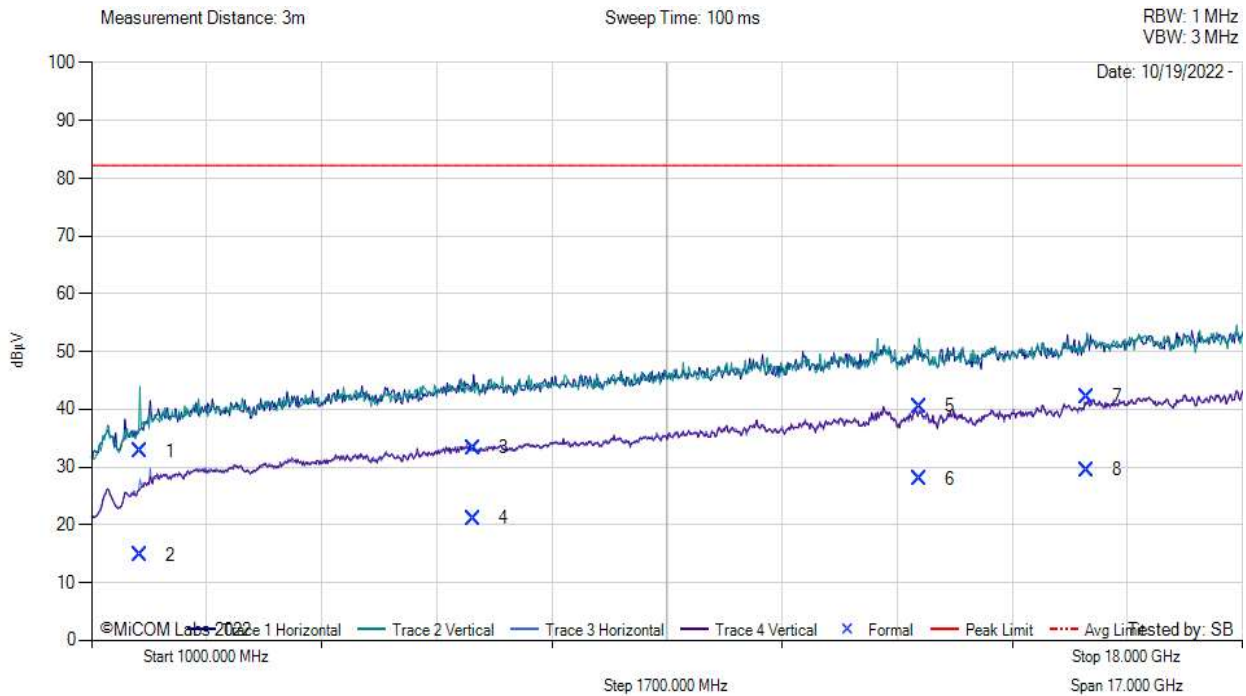
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	782.0	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1712.29	46.54	1.67	-15.44	32.78	MaxP	Vertical	152	3	82.23	-49.45	Pass
2	1712.29	28.56	1.67	-15.44	14.80	AVG	Vertical	152	3	82.23	-67.43	Pass
3	6643.13	38.59	3.43	-8.70	33.32	MaxP	Horizontal	187	148	82.23	-48.91	Pass
4	6643.13	26.42	3.43	-8.70	21.15	AVG	Horizontal	187	148	82.23	-61.08	Pass
5	13224.42	42.22	5.07	-6.79	40.50	MaxP	Vertical	130	0	82.23	-41.73	Pass
6	13224.42	29.67	5.07	-6.79	27.96	AVG	Vertical	130	0	82.23	-54.27	Pass
7	15703.28	37.69	5.62	-1.12	42.18	MaxP	Vertical	147	20	82.23	-40.05	Pass
8	15703.28	24.99	5.62	-1.12	29.48	AVG	Vertical	147	20	82.23	-52.75	Pass

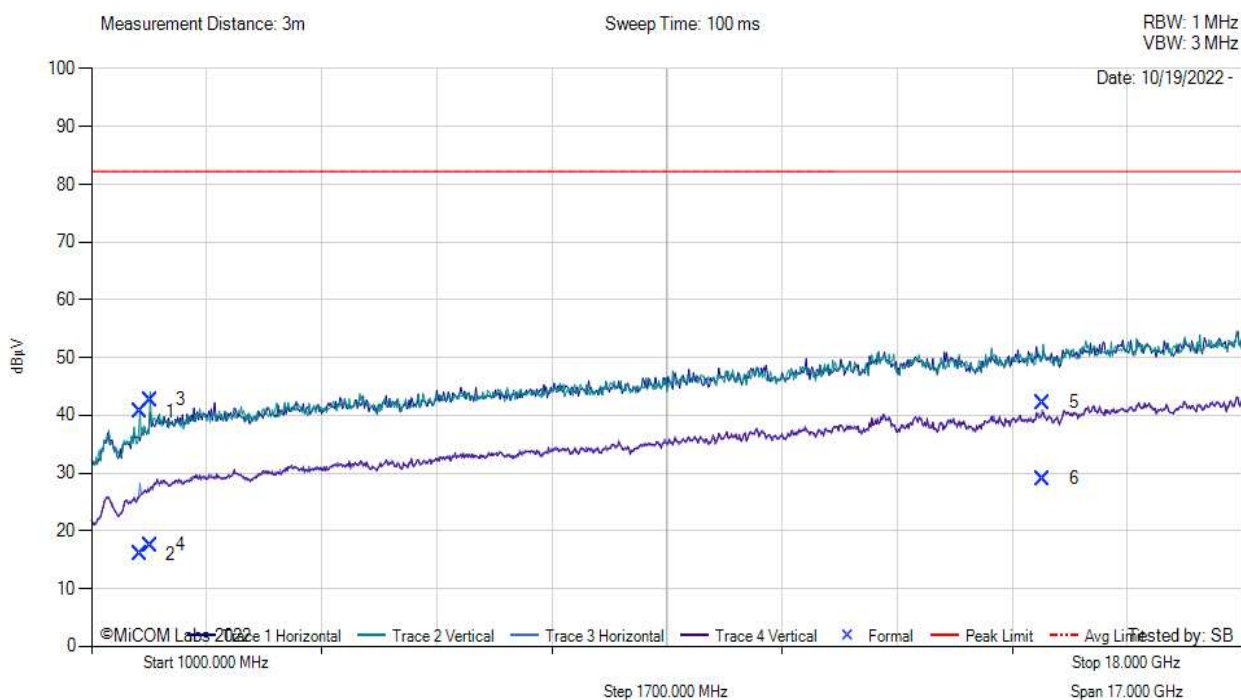
Test Notes: Battery Powered 12VDC

Equipment Configuration for FCC Spurious 1 GHz -18 GHz			
Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	784.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	1712.00	54.41	1.67	-15.44	40.64	MaxP	Vertical	196	330	82.23	-41.59	Pass
2	1712.00	29.77	1.67	-15.44	16.00	AVG	Vertical	196	330	82.23	-66.23	Pass
3	1868.76	54.69	1.72	-13.76	42.65	MaxP	Vertical	176	202	82.23	-39.58	Pass
4	1868.76	29.54	1.72	-13.76	17.50	AVG	Vertical	176	202	82.23	-64.73	Pass
5	15059.25	40.61	5.73	-4.15	42.19	MaxP	Vertical	188	319	82.23	-40.04	Pass
6	15059.25	27.48	5.73	-4.15	29.06	AVG	Vertical	188	319	82.23	-53.17	Pass

Test Notes: Battery Powered 12VDC

Band 17: Radiated Transmitter Emissions

FCC 27.53(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Spurious Emissions 30-1000 MHz

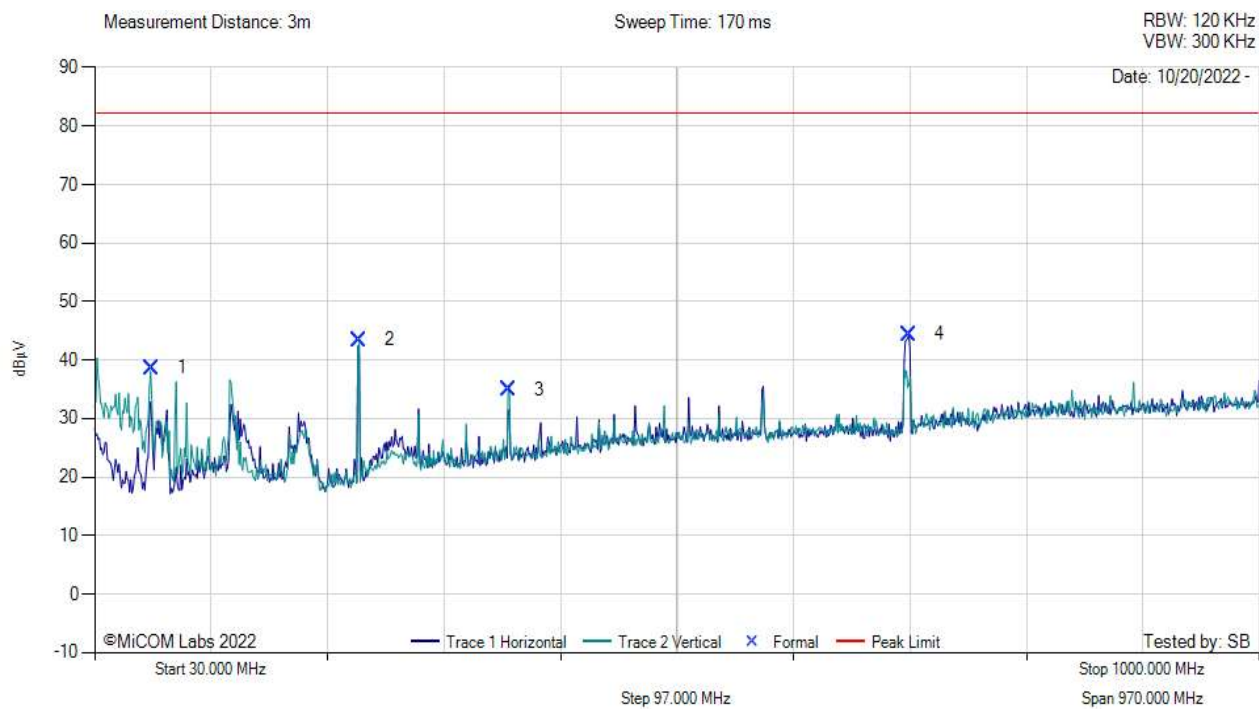
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	706.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	77.21	52.09	3.94	-17.37	38.66	MaxQP	Vertical	102	0	82.23	-43.57	Pass
2	250.01	52.78	4.80	-14.11	43.46	MaxQP	Vertical	106	100	82.23	-38.77	Pass
3	374.98	39.19	5.27	-9.52	34.93	MaxQP	Vertical	142	247	82.23	-47.30	Pass
4	708.03	43.24	6.34	-5.18	44.39	MaxP	Horizontal	98	270	82.23	-43.57	Pass

Test Notes: Battery Powered 12VDC

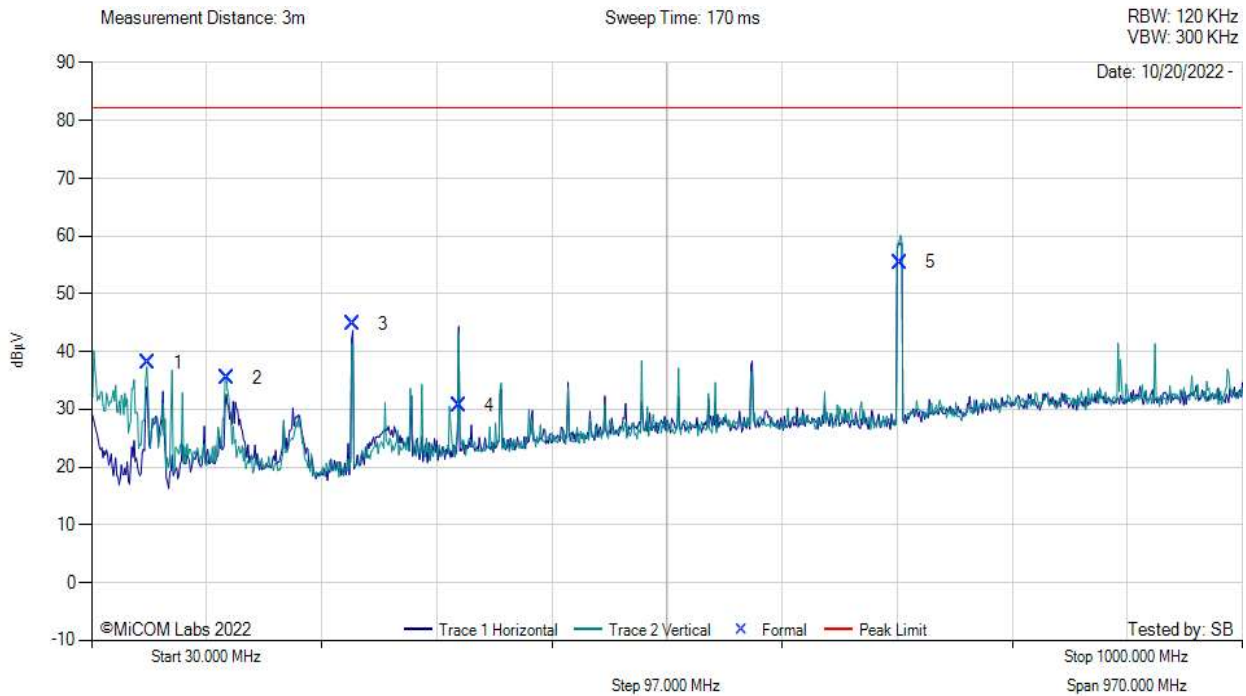
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	710.0	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	77.19	51.56	3.94	-17.37	38.13	MaxQP	Vertical	103	14	82.23	-44.10	Pass
2	143.99	43.48	4.32	-12.42	35.38	MaxQP	Vertical	145	0	82.23	-46.85	Pass
3	250.00	54.06	4.80	-14.11	44.74	MaxQP	Horizontal	191	252	82.23	-37.49	Pass
4	339.41	36.21	5.18	-10.81	30.58	MaxQP	Horizontal	163	360	82.23	-51.65	Pass
5	711.76	54.21	6.37	-5.10	55.48	MaxP	Vertical	98	-1	82.23	-26.75	Pass

Test Notes: Battery Powered 12VDC

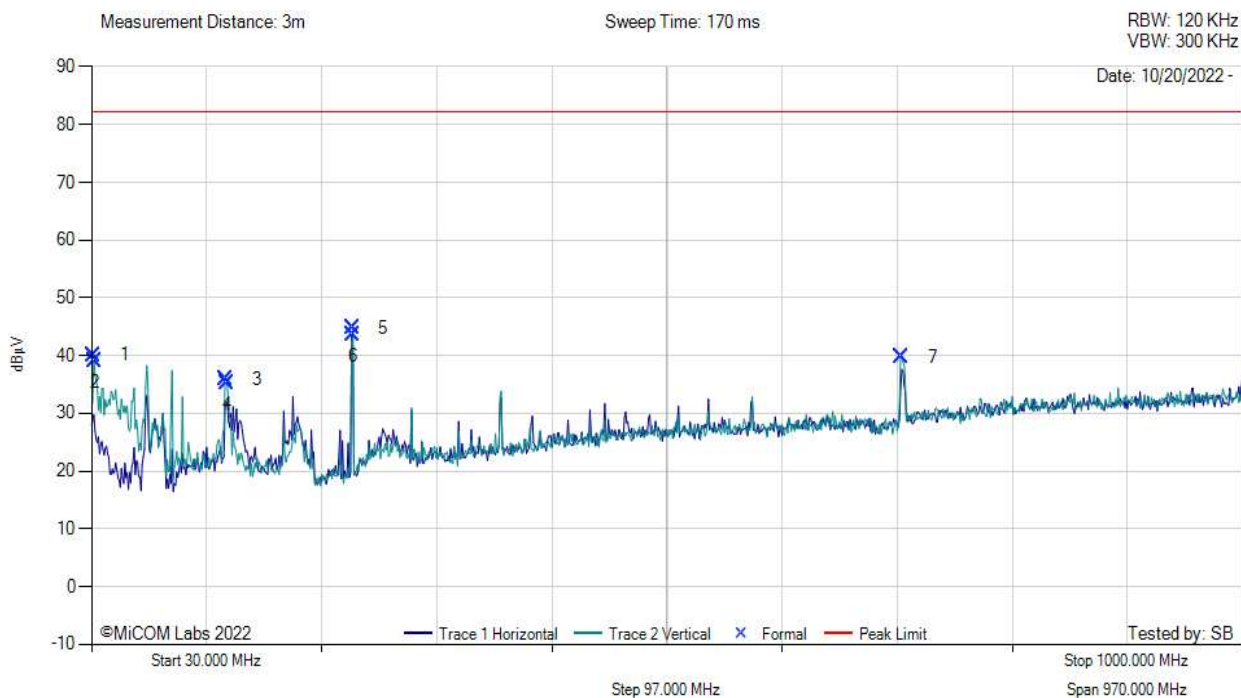
Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	713.6	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



30 MHz to 1 GHz



30.00 - 1000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	31.94	41.17	3.53	-4.59	40.12	MaxP	Vertical	100	270	82.23	-42.11	Pass
2	32.61	40.64	3.54	-5.10	39.08	MaxQP	Vertical	100	292	82.23	-43.15	Pass
3	143.49	43.95	4.32	-12.38	35.88	MaxP	Vertical	199	0	82.23	-46.35	Pass
4	144.00	43.30	4.32	-12.42	35.20	MaxQP	Vertical	170	0	82.23	-47.03	Pass
5	249.99	54.03	4.80	-14.11	44.71	MaxQP	Horizontal	194	249	82.23	-37.52	Pass
6	250.19	52.97	4.80	-14.12	43.64	MaxP	Horizontal	199	240	82.23	-38.59	Pass
7	712.88	38.37	6.37	-5.03	39.71	MaxP	Vertical	199	29	82.23	-42.52	Pass

Test Notes: Battery Powered 12VDC

Spurious Emissions 1-18 GHz

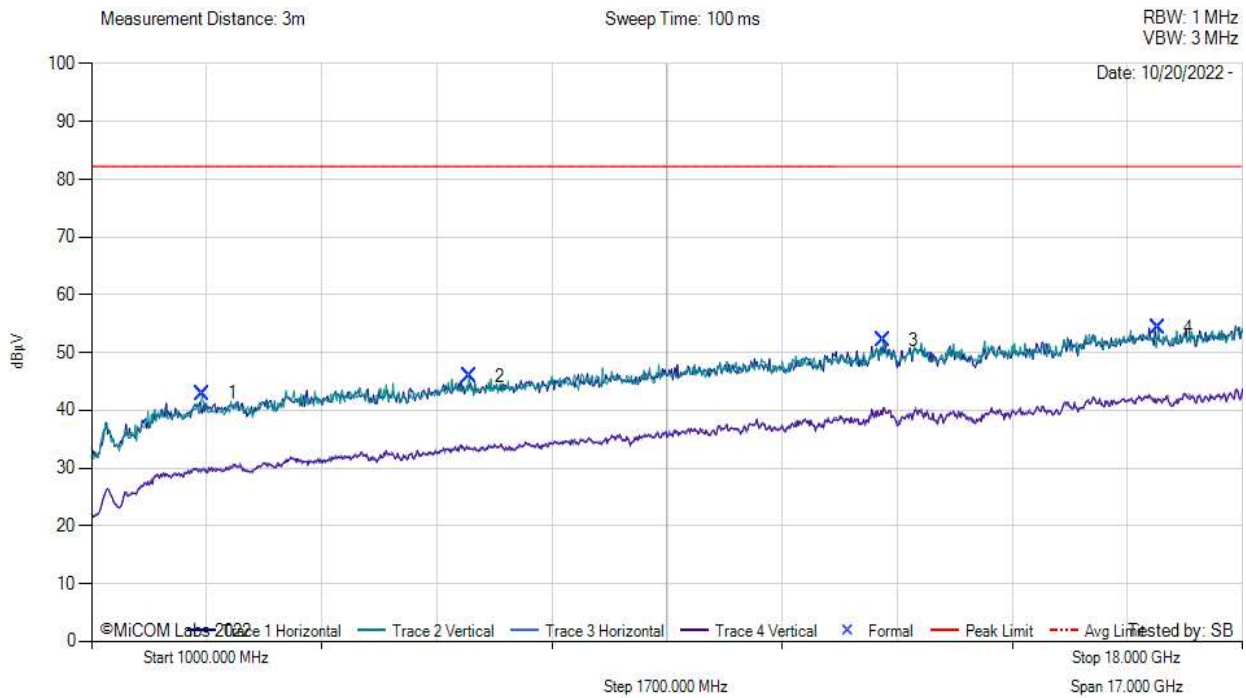
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	706.5	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz

Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	2632.00	52.48	2.06	32.57	42.91	MaxP	Vertical	99	59	82.23	-39.32	Pass
2	6576.00	51.21	3.40	35.74	45.88	MaxP	Vertical	199	119	82.23	-36.35	Pass
3	12696.00	53.64	5.26	39.33	52.20	MaxP	Vertical	149	59	82.23	-30.03	Pass
4	16759.00	48.84	6.65	41.13	54.29	MaxP	Vertical	199	29	82.23	-27.94	Pass

Test Notes: Battery Powered 12VDC

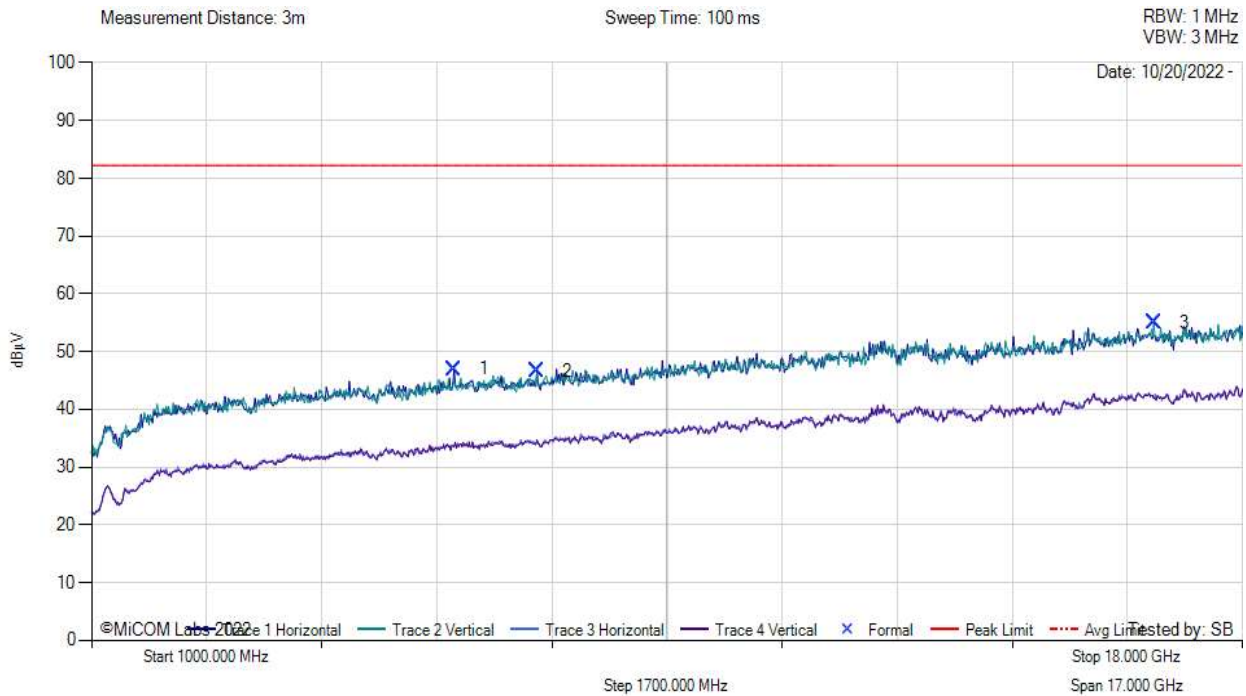
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	710.0	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	6355.00	52.39	3.32	35.68	46.99	MaxP	Horizontal	99	330	82.23	-35.24	Pass
2	7579.00	50.47	3.94	35.84	46.56	MaxP	Vertical	199	299	82.23	-35.67	Pass
3	16691.00	49.78	6.22	41.11	54.95	MaxP	Vertical	99	149	82.23	-27.28	Pass

Test Notes: Battery Powered 12VDC

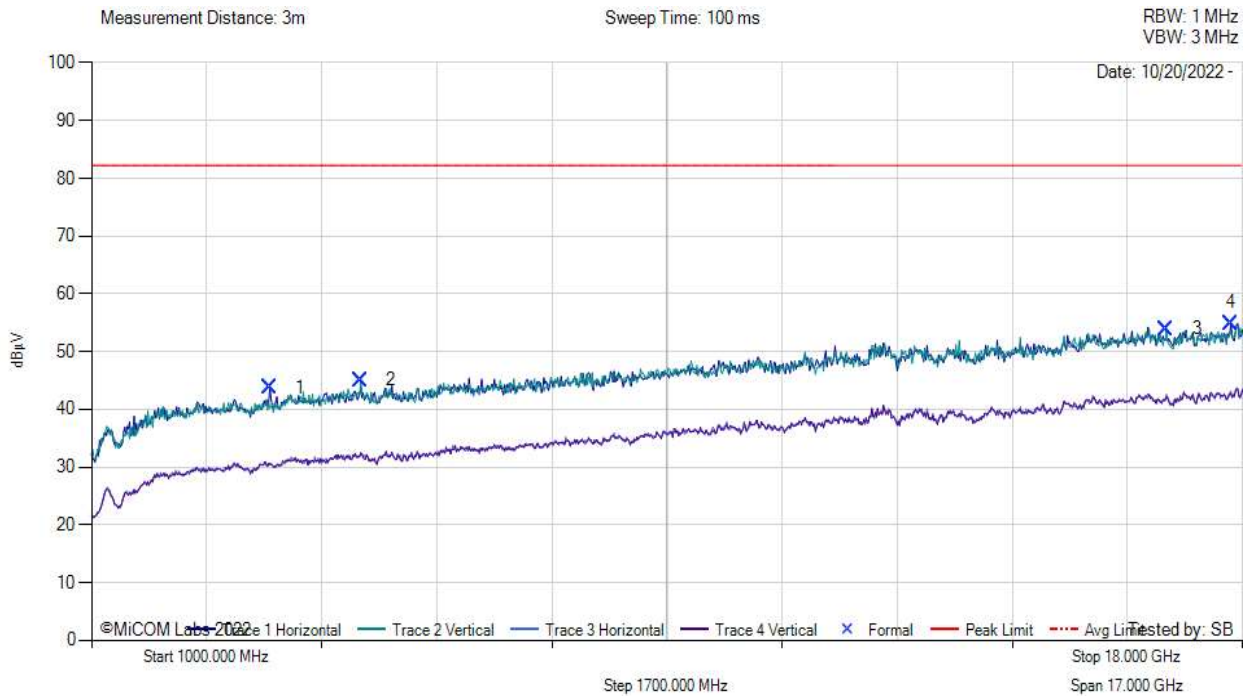
Equipment Configuration for FCC Spurious 1 GHz -18 GHz

Antenna:	External	Variant:	5 MHz
Antenna Gain (dBi):	3.0	Modulation:	QPSK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	713.6	Data Rate:	Full RB
Power Setting:	Max	Tested By:	SB

Test Measurement Results



FCC Spurious 1 GHz -18 GHz



1000.00 - 18000.00 MHz												
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB/m	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail
1	3635.00	53.02	2.43	33.20	43.72	MaxP	Horizontal	149	120	82.23	-38.51	Pass
2	4978.00	53.96	2.94	34.24	45.03	MaxP	Vertical	199	179	82.23	-37.20	Pass
3	16878.00	48.56	6.59	41.02	53.92	MaxP	Vertical	149	330	82.23	-28.31	Pass
4	17830.00	48.64	6.29	40.69	54.92	MaxP	Horizontal	99	30	82.23	-27.31	Pass

Test Notes: Battery Powered 12VDC



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