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MYOLEX, INC.
TEST REPORT

SCOPE OF WORK
Emissions Testing on EIM1301

REPORT NUMBER
104228375BOX-001

ISSUE DATE
February 12, 2020

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July 1, 2020

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DOCUMENT CONTROL NUMBER
Non-Specific Radio Report Shell Rev. December 2017

EMISSIONS TEST REPORT

(FULL COMPLIANCE)

Report Number: 104228375BOX-001
Project Number: G104228375

Report Issue Date: 02/12/2020
Revised Date: 07/01/2020

Model(s) Tested: EIM1301
Model(s) Partially Tested: None
Model(s) Not Tested but declared equivalent by the client: None

Standards: CFR47 FCC Part 15.247 Subpart C: 01/2020,
CFR47 FCC Part 15 Subpart B: 01/2020,
RSS-247 Issue 2 February 2017,
ICES-003 Issue 6 Published: January 2016 Updated: April 2019,
RSS-Gen Issue 5 April 2018 +Amendment 1 March 2019,
RSS-102 Issue 5 March 2015

Tested by:
Intertek Testing Services NA, Inc.
70 Codman Hill Road
Boxborough, MA 01719
USA

Client:
Myolex Inc.
1309 Beacon St.
Brookline, MA 02465
USA

Report prepared by

Kouma Sinn / EMC Staff Engineer

Report reviewed by

Vathana Ven / EMC Staff Engineer

Table of Contents

1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test full name	Result
3	Client Information	--
4	Description of Equipment Under Test and Variant Models	--
5	System Setup and Method	--
6	Maximum Peak Output Power and Human RF exposure CFR47 FCC Part 15 Subpart C:01/2020, Section 15.247 (b)(3) RSS-247 Issue 2 February 2017, RSS-102 Issue 5 March 2015	Pass
7	6 dB Bandwidth and Occupied Bandwidth CFR47 FCC Part 15 Subpart C: 01/2020, Section 15.247 (a)(2) RSS-247 Issue 2 February 2017	Pass
8	Maximum Power Spectral Density CFR47 FCC Part 15 Subpart C: 01/2020, Section 15.247 (e) RSS-247 Issue 2 February 2017	Pass
9	Band Edge Compliance CFR47 FCC Part 15 Subpart C: 01/2020, Section 15.247 (d) RSS-247 Issue 2: 02/2017)	Pass
10	Transmitter spurious emissions CFR47 FCC Part 15 Subpart C: 12/2019, Section 15.247 (d) RSS-247 Issue 2 February 2017	Pass
11	Digital Device and Receiver Radiated Spurious Emissions (CFR47 FCC Part 15 Subpart B 15.109: 12/2019, ICES-003 Issue 6 Published: January 2016 Updated: April 2019	Pass
12	AC Mains Conducted Emissions FCC 47CFR Part 15.107: 12/2019 ICES-003 Issue 6 Published: January 2016 Updated: April 2019	Pass
13	Revision History	--

3 Client Information

This EUT was tested at the request of:

Client: Myolex, Inc.
1309 Beacon Street
Brookline, MA 02465
USA

Contact: Baoguo, Wei
Telephone: (617) 4474735
Fax: None
Email: bwei@myolex.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Myolex, Inc.
1309 Beacon Street
Brookline, MA 02465
USA

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
The EIM1301 mScan	Myolex, Inc	EIM1301	2019110900001

Receive Date:	01/03/2020
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)
The EIM1301 mScan is an electrical impedance myography device. It is intended to measure, monitor and assess muscle health status.

Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of Phases
3.7V-4.2 VDC	1 A	DC	1

Operating modes of the EUT:

No.	Descriptions of EUT Exercising
1	The EUT was set to transmit at Low, Mid, and High channel continuous with modulation at 100 % duty cycle.
2	The EUT was set to receive

Software used by the EUT:

No.	Descriptions of EUT Exercising
1	Used HyperTerminal

Radio/Receiver Characteristics	
Frequency Band(s)	2402-2480 MHz
Modulation Type(s)	GFSK
Maximum Output Power	Low Channel (2402 MHz): +0.01 dBm Mid Channel (2442 MHz): -1.2 dBm High Channel (2480 MHz): -4.54 dBm
Test Channels	Low Channel (2402 MHz) Mid Channel (2442 MHz) High Channel (2480 MHz)
Occupied Bandwidth	Low Channel (2402 MHz): 1.058 MHz Mid Channel (2442 MHz): 1.058 MHz High Channel (2480 MHz): 1.066 MHz
6 dB Bandwidth	Low Channel (2402 MHz): 705.120 kHz Mid Channel (2442 MHz): 686.317 kHz High Channel (2480 MHz): 695.720 kHz
Frequency Hopper: Number of Hopping Channels	N/A
Frequency Hopper: Channel Dwell Time	N/A
Frequency Hopper: Max interval between two instances of use of the same channel	N/A
MIMO Information (# of Transmit and Receive antenna ports)	1
Equipment Type	Standalone
Antenna Type and Gain	Integrated, 0.5 dBi

Variant Models:

The following variant models were not tested as part of this evaluation, but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

None

5 System Setup and Method

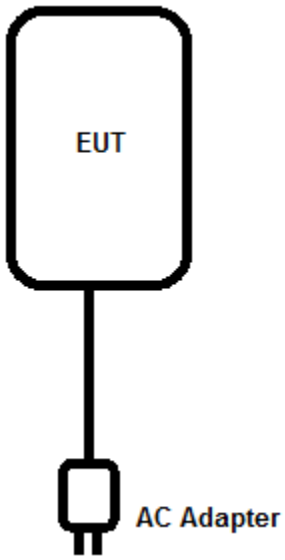
Cables					
ID	Description	Length (m)	Shielding	Ferrites	Termination
--	None	--	--	--	--

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
USB Power Supply	Travel Charger	ES-KC15	Not Labelled

5.1 Method:

Configuration as required by Configuration as required by FCC Part 15 Subpart C 15.247: 01/2020, FCC Part 15 Subpart B: 01/2020, RSS 247 Issue 2: 02/2017, ICES 003 Issue 6: 01/2016 updated 06/2016, RSS-Gen Issue 5 April 2018 +Amendment 1 March 2019, RSS-102 Issue 5 March 2015, ANSI C 63.10: 2013, ANSI C 63.4: 2014, and 558074 D0115.247Meas Guidancev05r02.

5.2 EUT Block Diagram:



6 Maximum Peak Output Power and Human RF exposure

6.1 Method

Tests are performed in accordance with CFR47 FCC Part 15.247, RSS-247, RSS-102, ANSI C63.10, and KDB 558074 D0115.247Meas Guidancev05r02. Note the antenna-port conducted method was not possible so, the radiated method was used per ANSI C63.10 Section 11.3.

TEST SITE: 10m ALSE

The 10m Absorber-lined Shielded Enclosures (ALSE) is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	5.6 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	4.9 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.4 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	4.9 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	4.6 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	4.6 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

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

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

6.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xls	Intertek	08/27/2010

6.3 Results:

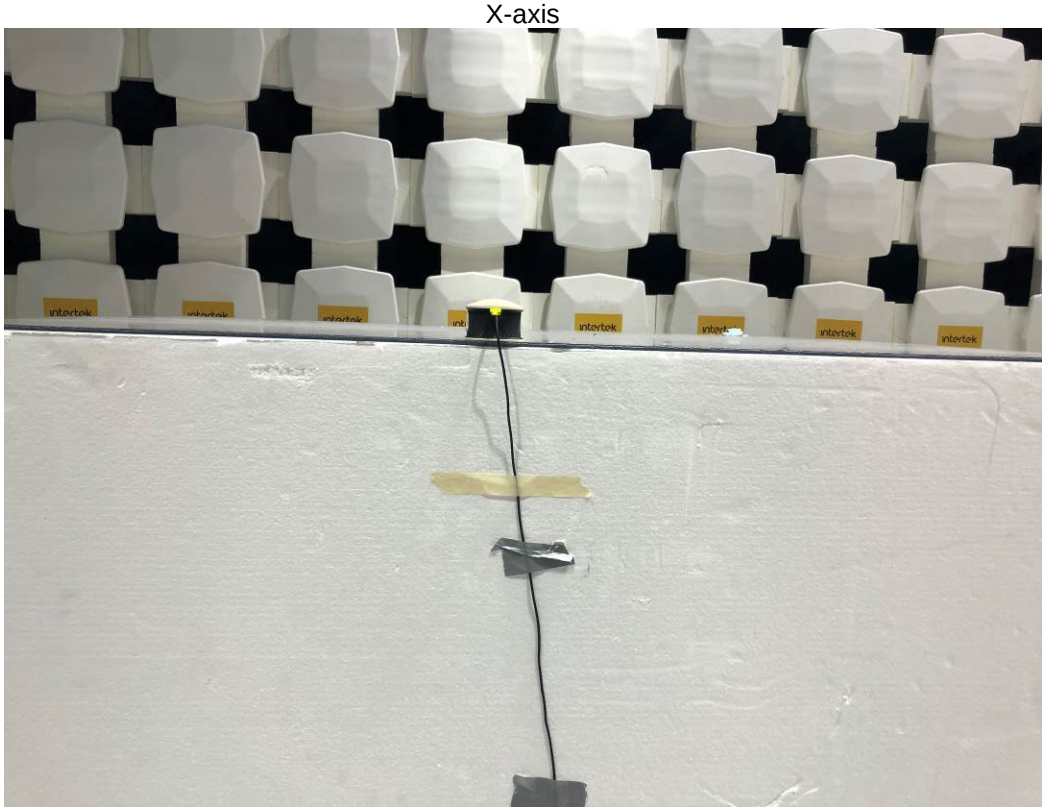
The sample tested was found to Comply.

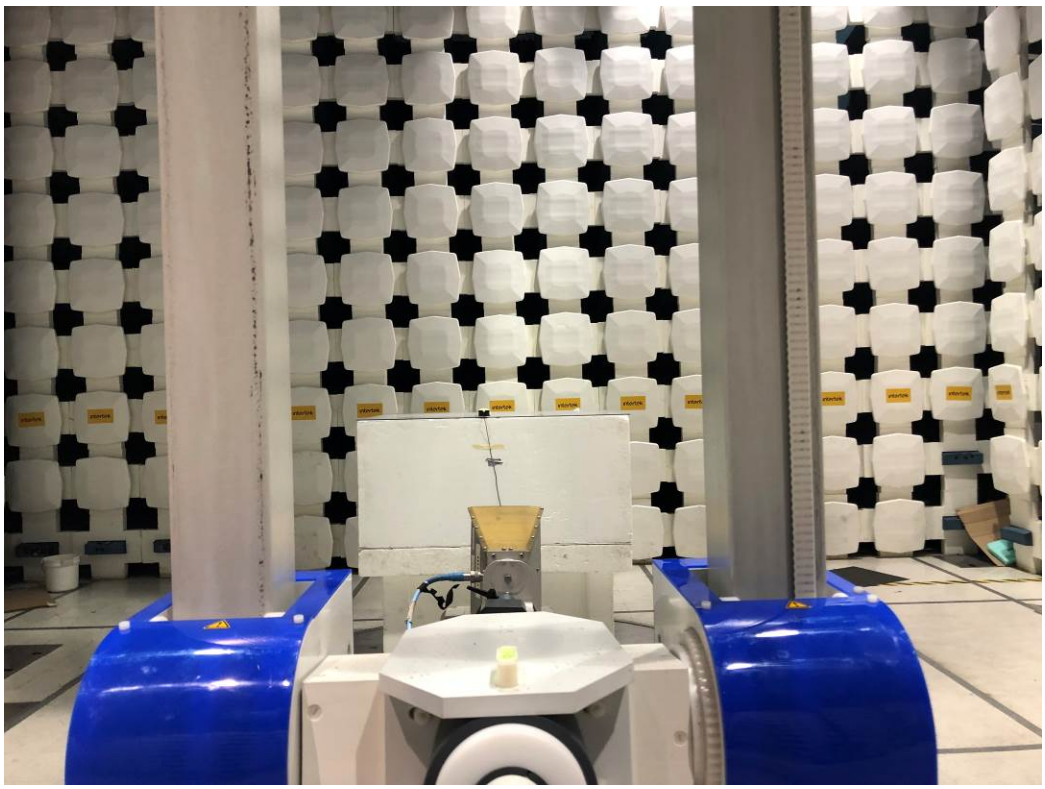
§15.247 (b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt or 30 dBm.

Frequency (MHz)	Output Power (dBm)
2402	+0.01
2442	-1.20
2480	-4.54

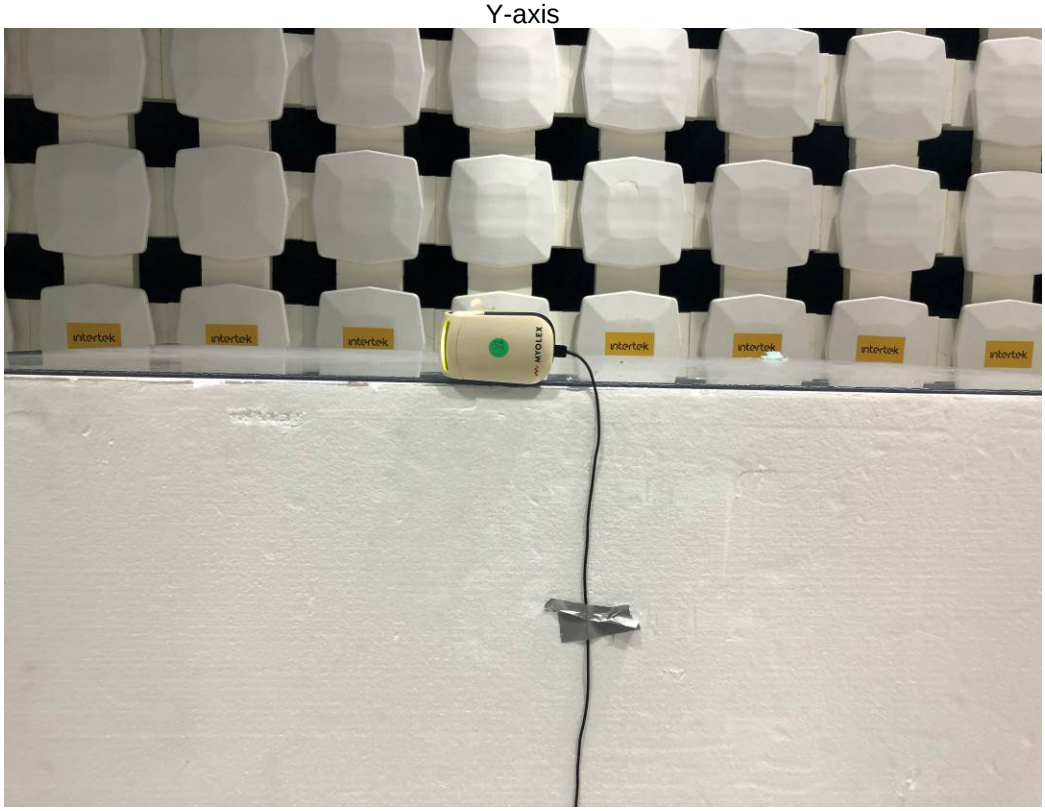
6.4 Setup Photograph:

X-axis

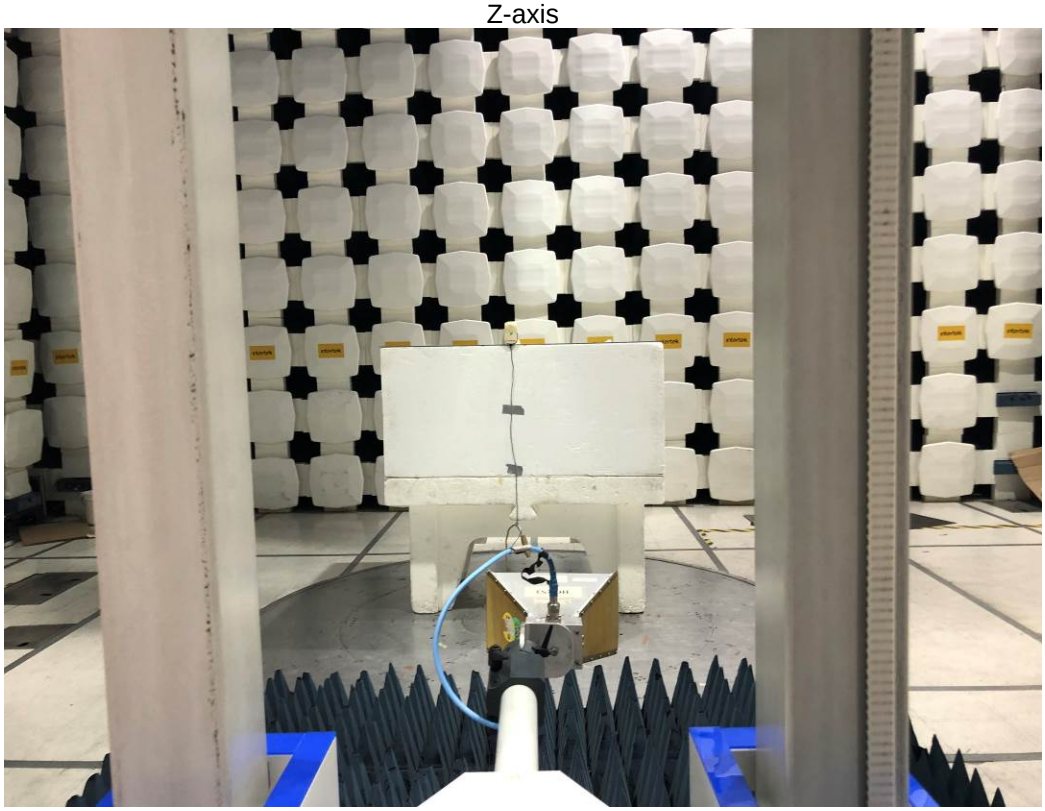


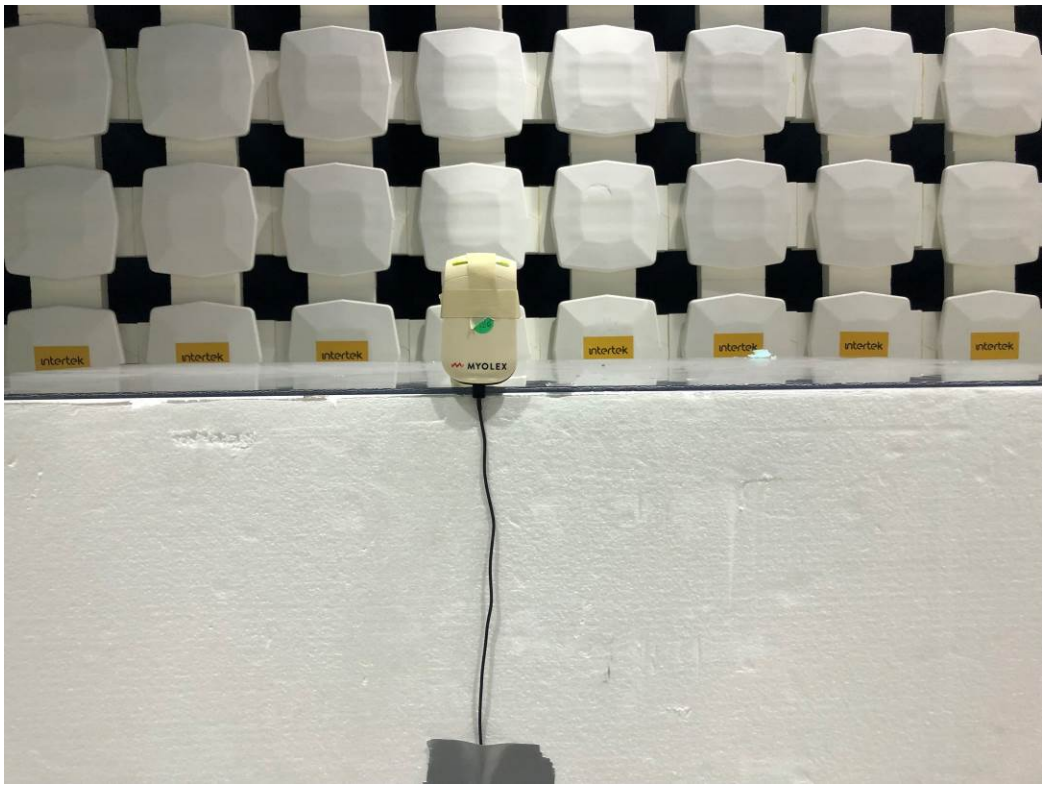


Y-axis



Z-axis





6.5 Test Data:

Company: Myolex, Inc. | Antenna & Cables: LF | Bands: N, LF, HF, SHF
Model #: EIM1301 | Antenna: HORN3__3M vert__5-30-2020.txt HORN3__3M vert__5-30-2020.txt
Serial #: 2019110900001 | Cable(s): 145-416__7-22-2020.txt NONE.
Engineers: Kouma Sinn | Location: 10m Chamber | Barometer: DS40 | Filter: NONE
Project #: G104228375 | Date(s): 01/03/20
Standard: FCC Part 15 Subpart C 15.247 | Temp/Humidity/Pressure: 22C 12% 1017mbar
Receiver: 145-108 | Limit Distance (m): 3
PreAmp: BONN001_07-11-2020.txt | Test Distance (m): 3
PreAmp Used? (Y or N): N | Voltage/Frequency: Internal Battery | Frequency Range: Fundamental
Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dBm	Limit dBm	Margin dB	Bandwidth
EUT Flat, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	60.08	28.46	7.23	0.00	0.00	0.01	30.00	-29.99	1/3MHz
PK	V	2402.000	57.64	28.46	7.23	0.00	0.00	-1.93	30.00	-31.93	1/3MHz
EUT long side, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	57.53	28.46	7.23	0.00	0.00	-2.54	30.00	-32.54	1/3MHz
PK	V	2402.000	59.49	28.46	7.23	0.00	0.00	-0.58	30.00	-30.58	1/3MHz
EUT Short, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	56.29	28.46	7.23	0.00	0.00	-3.78	30.00	-33.78	1/3MHz
PK	V	2402.000	55.43	28.46	7.23	0.00	0.00	-4.64	30.00	-34.64	1/3MHz
EUT Short, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	55.81	28.43	7.24	0.00	0.00	-4.28	30.00	-34.28	1/3MHz
PK	V	2442.000	55.16	28.43	7.24	0.00	0.00	-4.93	30.00	-34.93	1/3MHz
EUT Long, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	58.85	28.43	7.24	0.00	0.00	-1.24	30.00	-31.24	1/3MHz
PK	V	2442.000	57.15	28.43	7.24	0.00	0.00	-2.94	30.00	-32.94	1/3MHz
EUT Back, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	57.62	28.43	7.24	0.00	0.00	-2.47	30.00	-32.47	1/3MHz
PK	V	2442.000	46.76	28.43	7.24	0.00	0.00	-13.33	30.00	-43.33	1/3MHz
EUT Short, High Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	54.40	28.55	7.25	0.00	0.00	-5.57	30.00	-35.57	1/3MHz
PK	V	2480.000	52.20	28.55	7.25	0.00	0.00	-7.77	30.00	-37.77	1/3MHz
EUT Long, High Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	55.13	28.55	7.25	0.00	0.00	-4.84	30.00	-34.84	1/3MHz
PK	V	2480.000	55.43	28.55	7.25	0.00	0.00	-4.54	30.00	-34.54	1/3MHz
EUT Back, High Channel. EIRP = (E (dBuV/m) - 95.26) dBm, , Maximum Output Power = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	55.13	28.55	7.25	0.00	0.00	-4.84	30.00	-34.84	1/3MHz
PK	V	2480.000	46.91	28.55	7.25	0.00	0.00	-13.06	30.00	-43.06	1/3MHz

Notes: The output power was derived from field strength readings at 3 meters using the formula in ANSI C63.10 Section 12.7.2. and Power = EIRP – Antenna Factor (dBi).

MPE Calculation

§ 1.1310: The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

Part 1.1310 Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

RSS-102 Issue 5 Exposure Limits:

Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10[21]	83	90	-	Instantaneous*
0.1-10	-	$0.73/f$	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158f^{0.5}$	$4.21 \times 10^{-4}f^{0.5}$	$6.67 \times 10^{-5}f$	$616000/f^{1.2}$

Note: f is frequency in MHz.
*Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

1.1 Test Procedure

An MPE evaluation for was performed in order to show that the device was compliant with §2.1091. The maximum power density was calculated for each transmitter at a separation distance of 20cm.

For each transmitter the maximum RF exposure at a 20 cm distance using the formula:

$$ConductedPower_{mW} = 10^{ConductedPower(dBm)/10}$$

$$PowerDensity = \frac{ConductedPower_{mW} \times Ant.Gain}{4\pi \times (20_{cm})^2}$$

1.2 Results:

Maximum EIRP = +0.51 dBm

Maximum Conducted Output Power = +0.51 dBm – 0.5 dBi

Maximum Conducted Output Power = 0.01 dBm or 1 mW

Power Density = 1/5025.6

Power Density = 0.0002 mW/cm^2

Limit at 2.402 GHz = $1mW/cm^2$

RSS-102 Issue 5 Exposure Limit at 2.402GHz = 5.35 W/m^2

Power Density = 0.002 W/m^2

The calculated maximum power density at 20cm distance is less than the limit for general

population / uncontrolled exposure.

Test Personnel:	Kouma Sinn KPS	Test Date:	01/30/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	CFR47 FCC Part 15.247 RSS-247, RSS-102	Limit Applied:	See report section 6.3
Input Voltage:	120VAC 60Hz	Ambient Temperature:	22 ºC
Pretest Verification w/ Ambient Signals or BB Source:	**N/A**	Relative Humidity:	12 %
		Atmospheric Pressure:	1017 mbars

Deviations, Additions, or Exclusions: None

7 6 dB Bandwidth and Occupied Bandwidth

7.1 Method

Tests are performed in accordance with CFR47 FCC Part 15.247, RSS-247, and ANSI C63.10.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

7.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020

Software Utilized:

Name	Manufacturer	Version
None	--	--

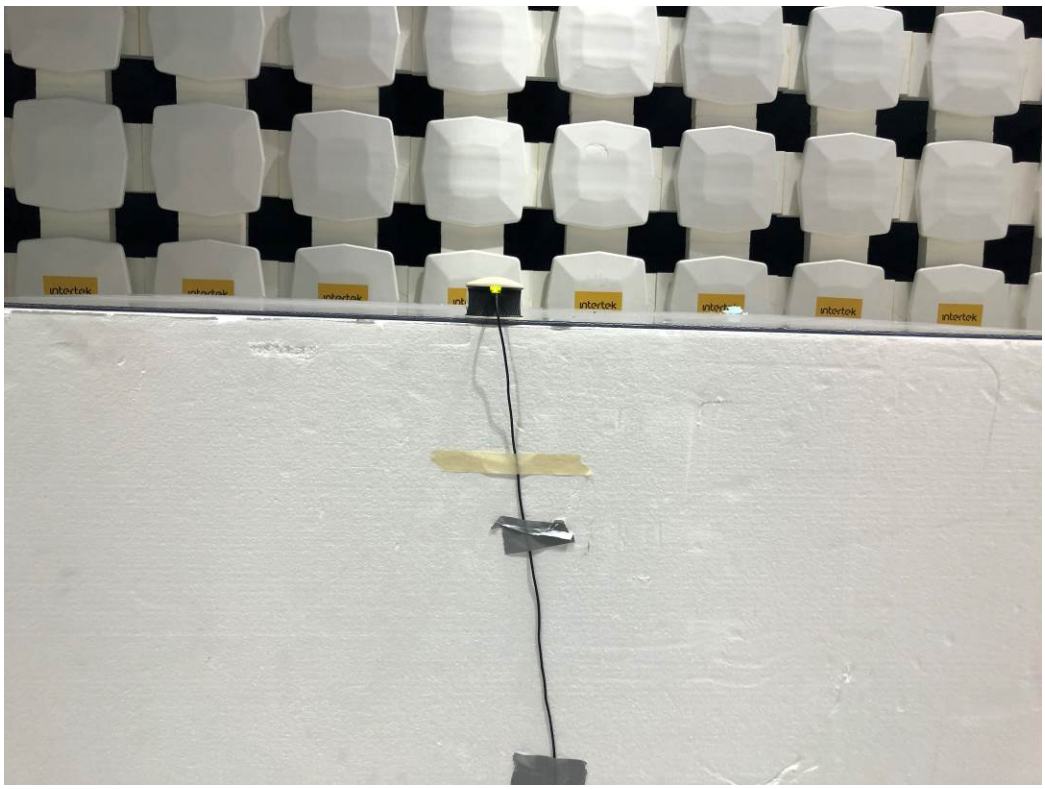
7.3 Results:

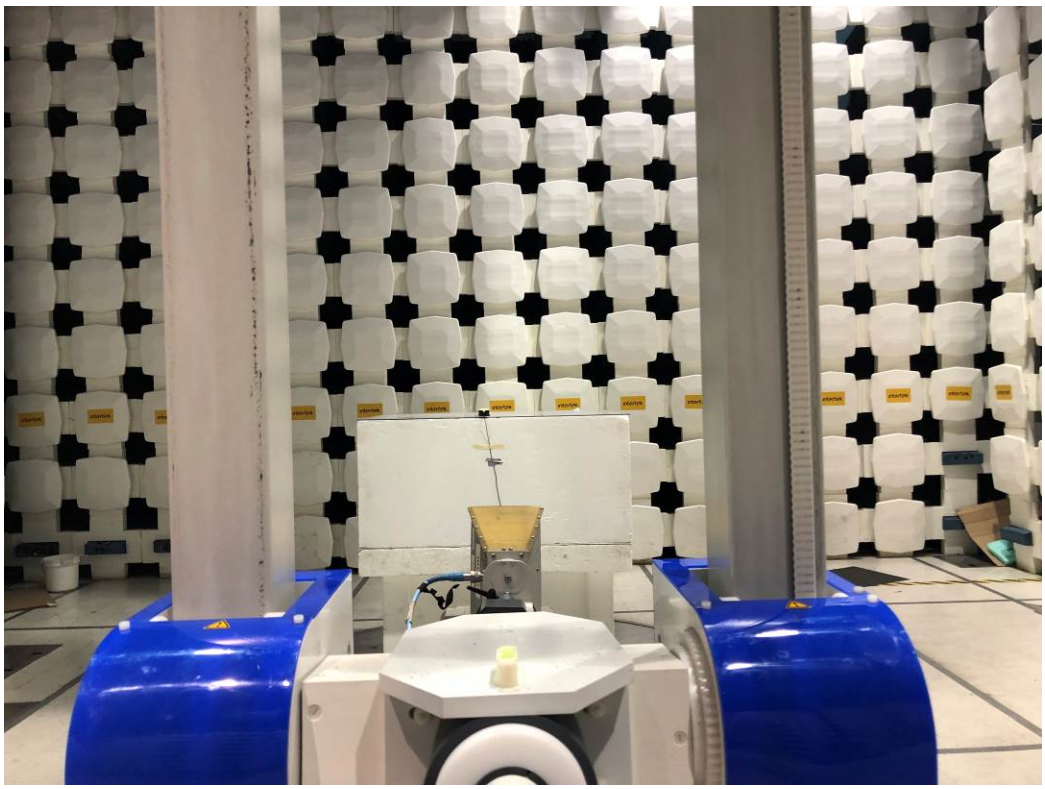
The sample tested was found to Comply.

§15.247 (a) (2) Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Frequency	DTS Bandwidth (6 dB Bandwidth)	Occupied Bandwidth
(MHz)	(MHz)	(MHz)
2402	0.705120	1.058
2442	0.686317	1.058
2480	0.695720	1.066

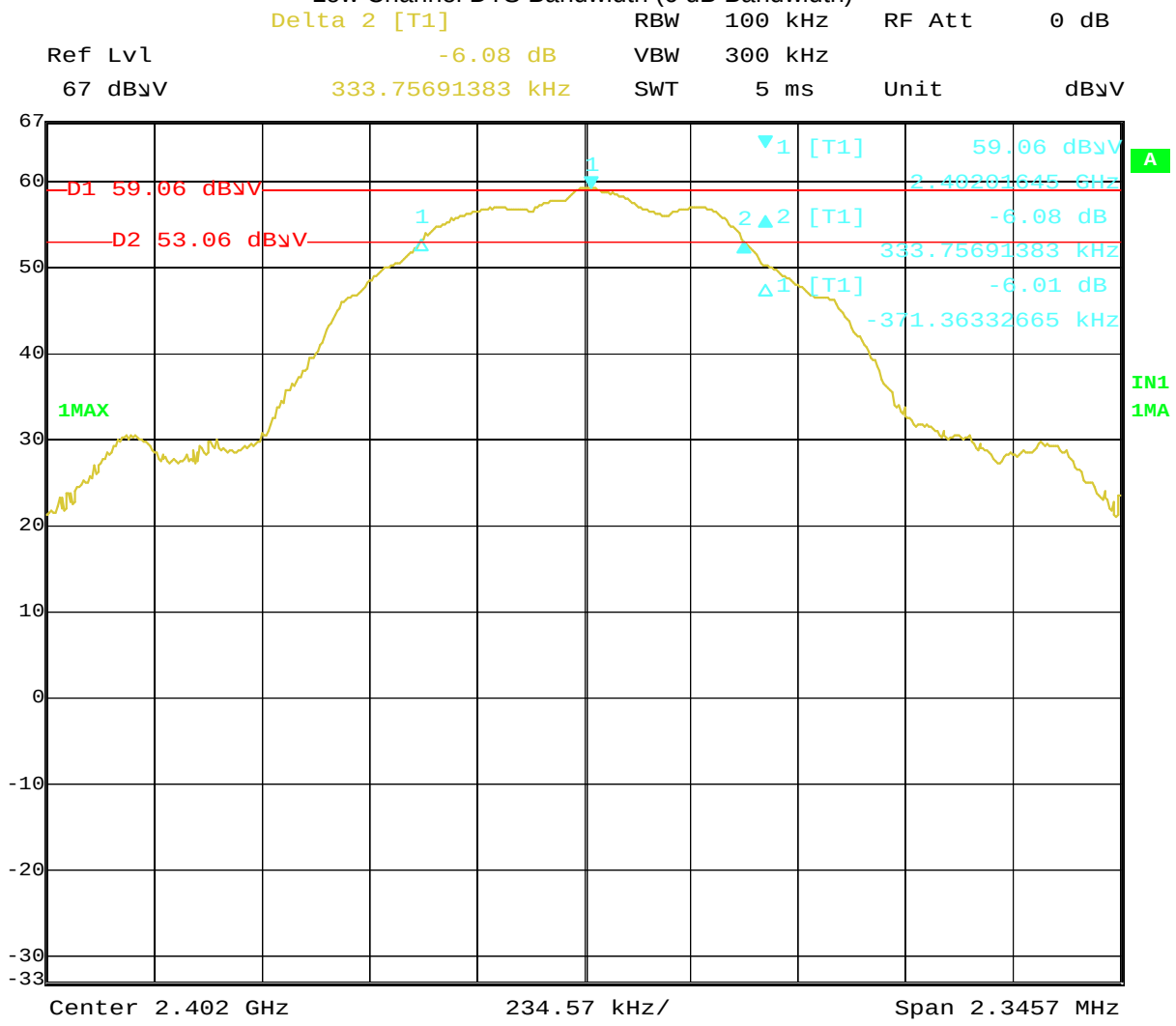
7.4 Setup Photographs:



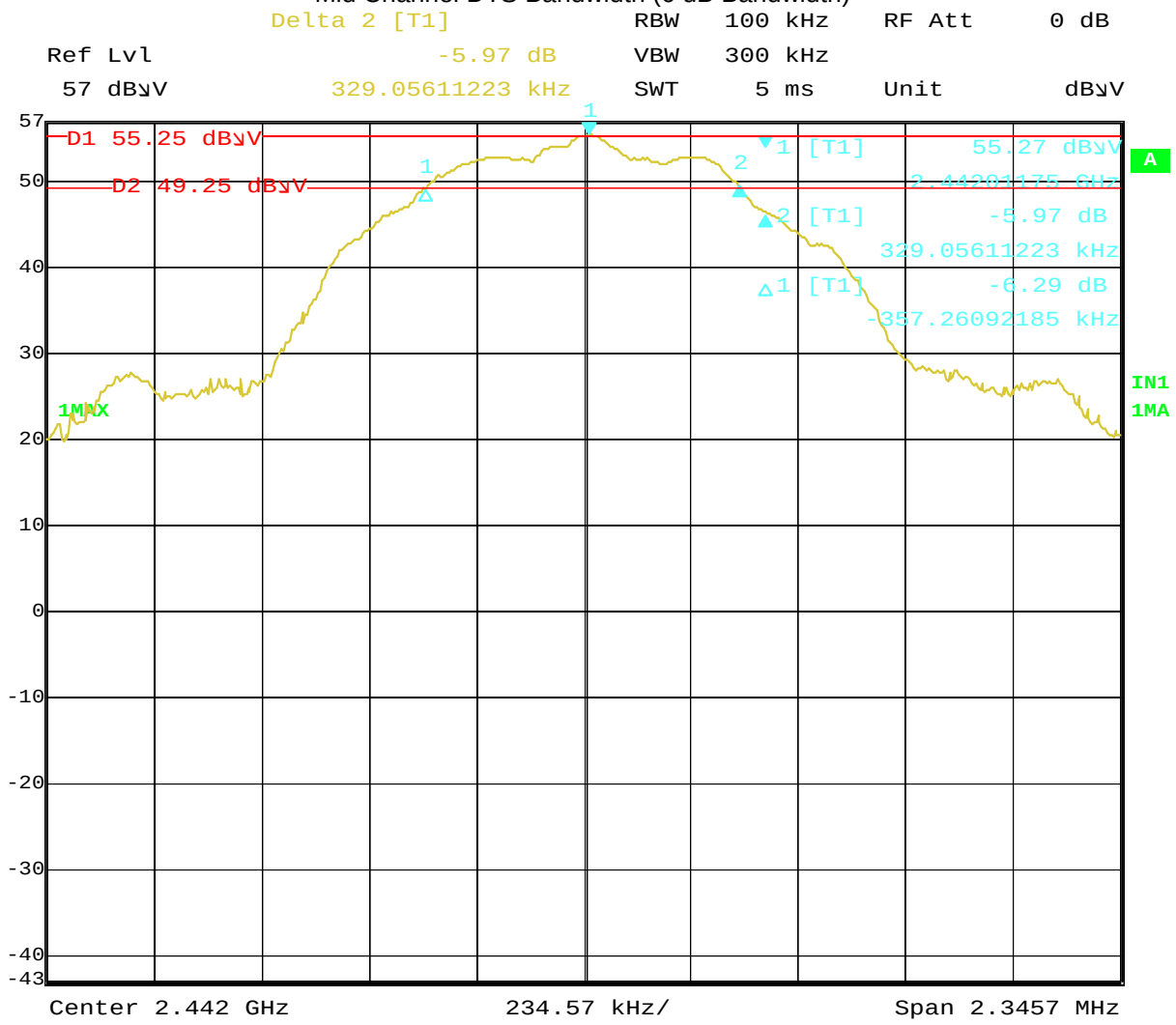


7.5 Plots/Data:

Low Channel DTS Bandwidth (6 dB Bandwidth)

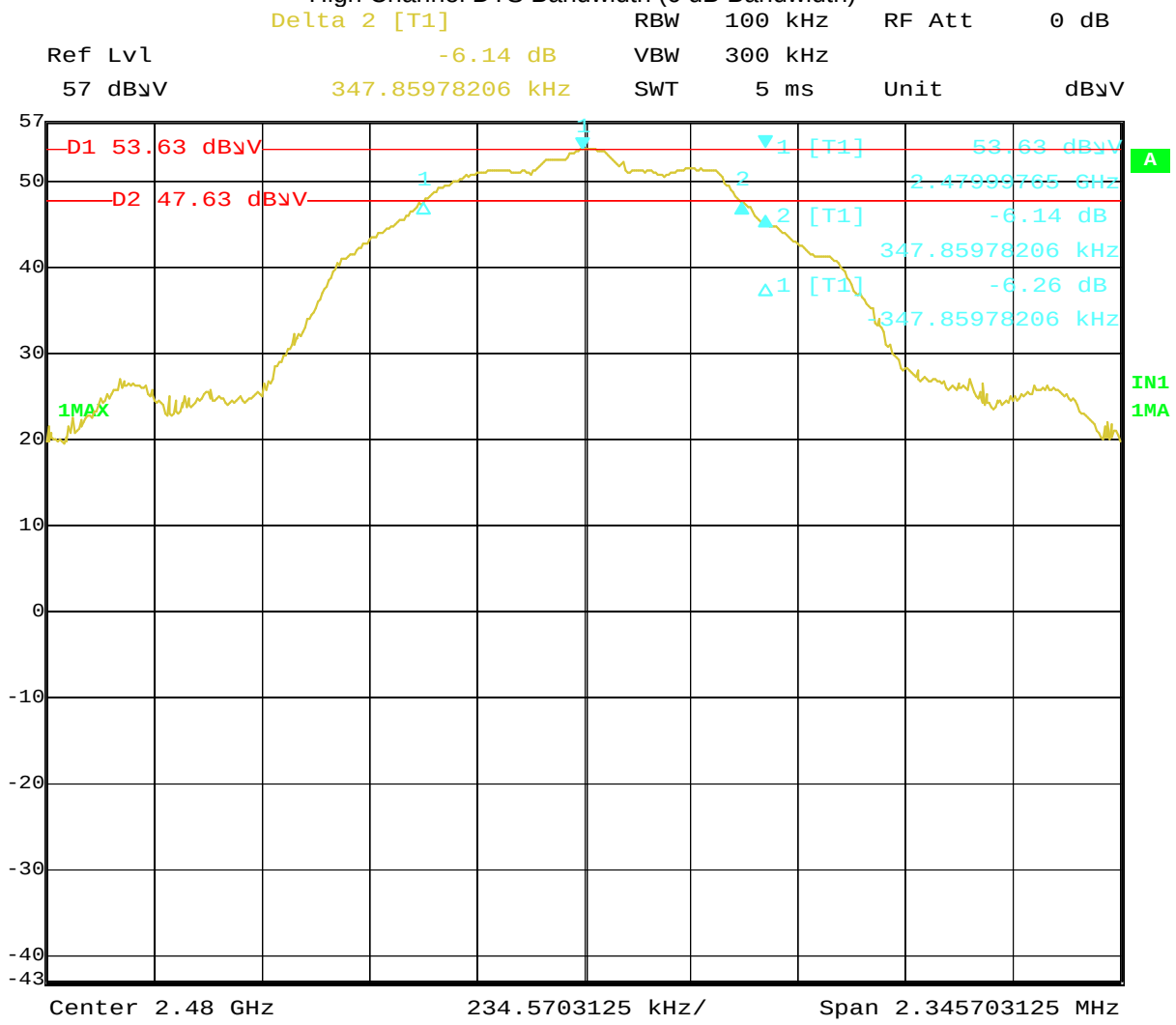


Mid Channel DTS Bandwidth (6 dB Bandwidth)

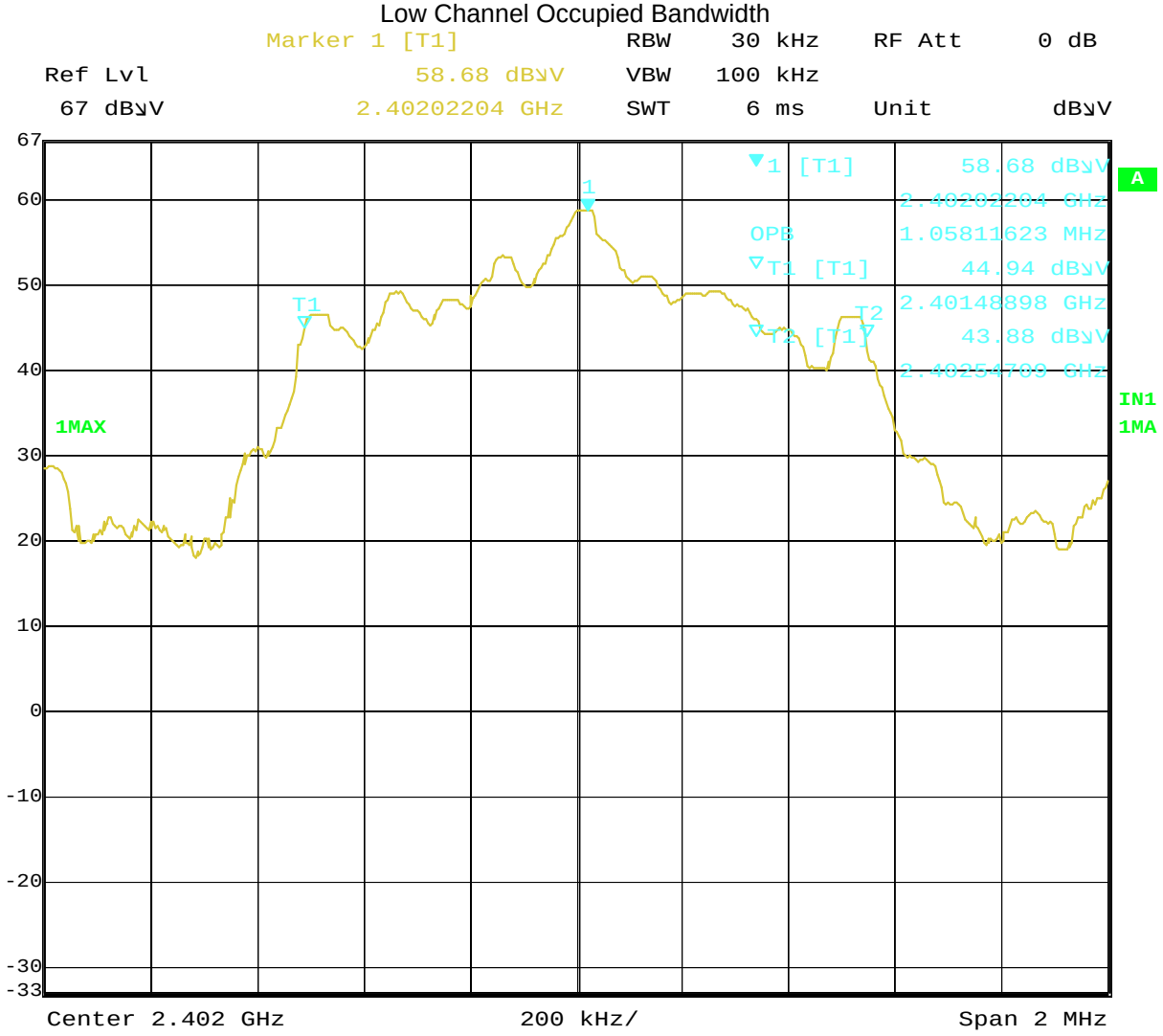


Date: 3.JAN.1997 23:19:39

High Channel DTS Bandwidth (6 dB Bandwidth)

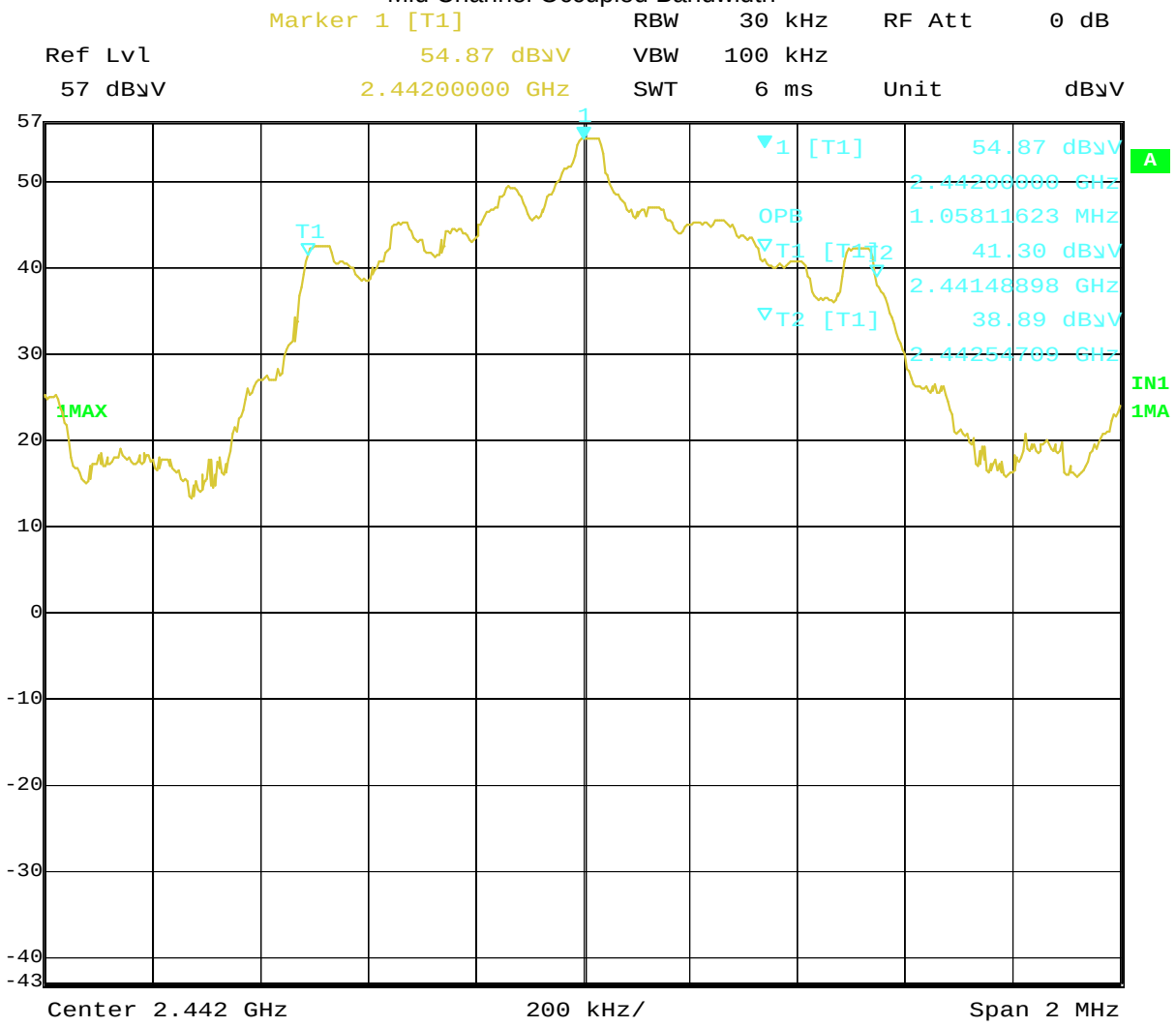


Low Channel Occupied Bandwidth

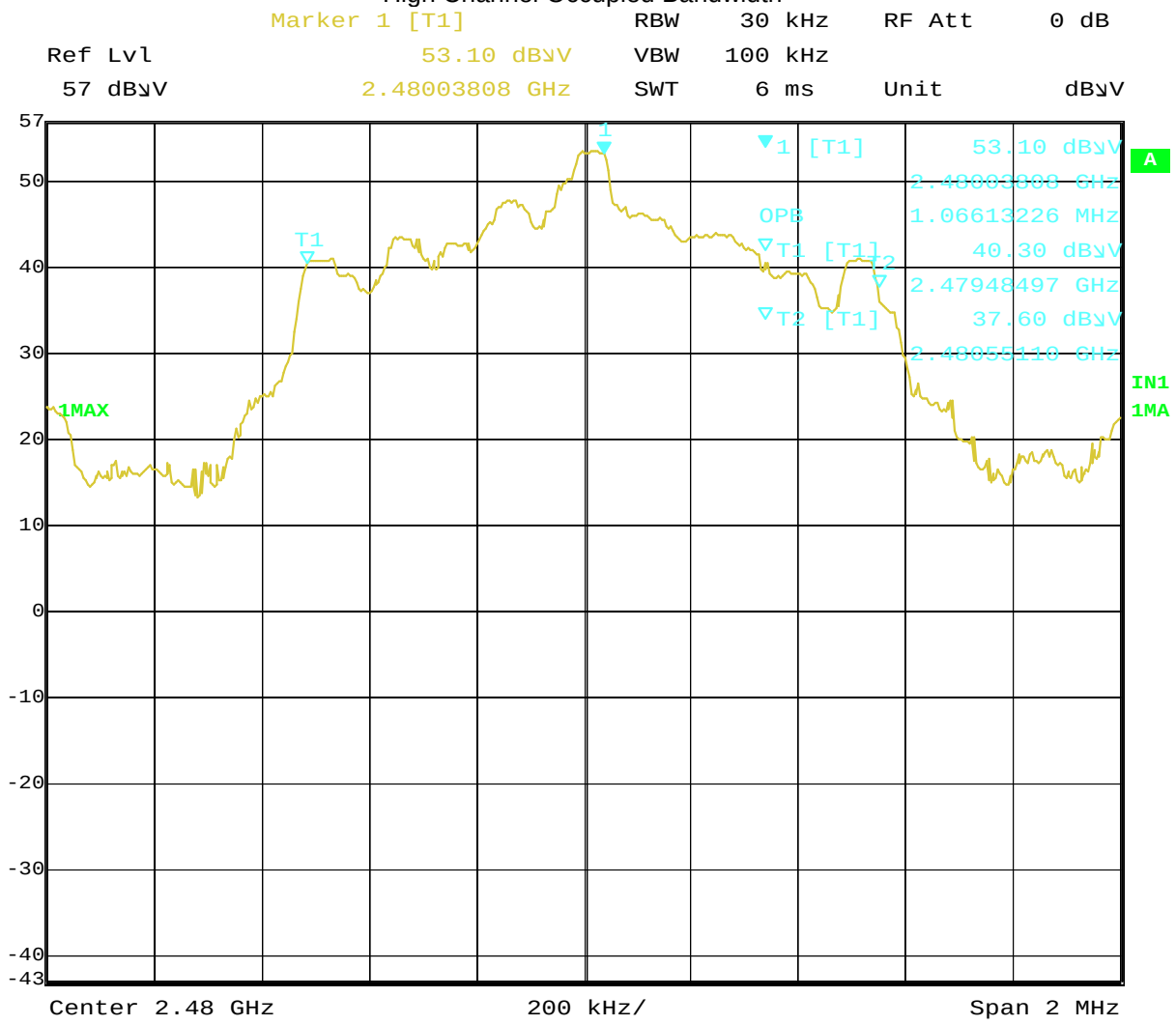


Date: 3.JAN.1997 23:26:53

Mid Channel Occupied Bandwidth



High Channel Occupied Bandwidth



Date: 3.JAN.1997 23:10:22

Test Personnel:	Kouma Sinn KPS	Test Date:	01/30/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	CFR47 FCC Part 15.247 RSS-247	Limit Applied:	See report section 7.3
Input Voltage:	120VAC 60Hz	Ambient Temperature:	22 ºC
Pretest Verification w/ Ambient Signals or BB Source:	**N/A**	Relative Humidity:	12 %
		Atmospheric Pressure:	1017 mbars

Deviations, Additions, or Exclusions: None

8 Maximum Power Spectral Density

8.1 Method

Tests are performed in accordance with CFR47 FCC Part 15.247, RSS-247, and ANSI C63.10.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

8.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xls	Intertek	08/27/2010

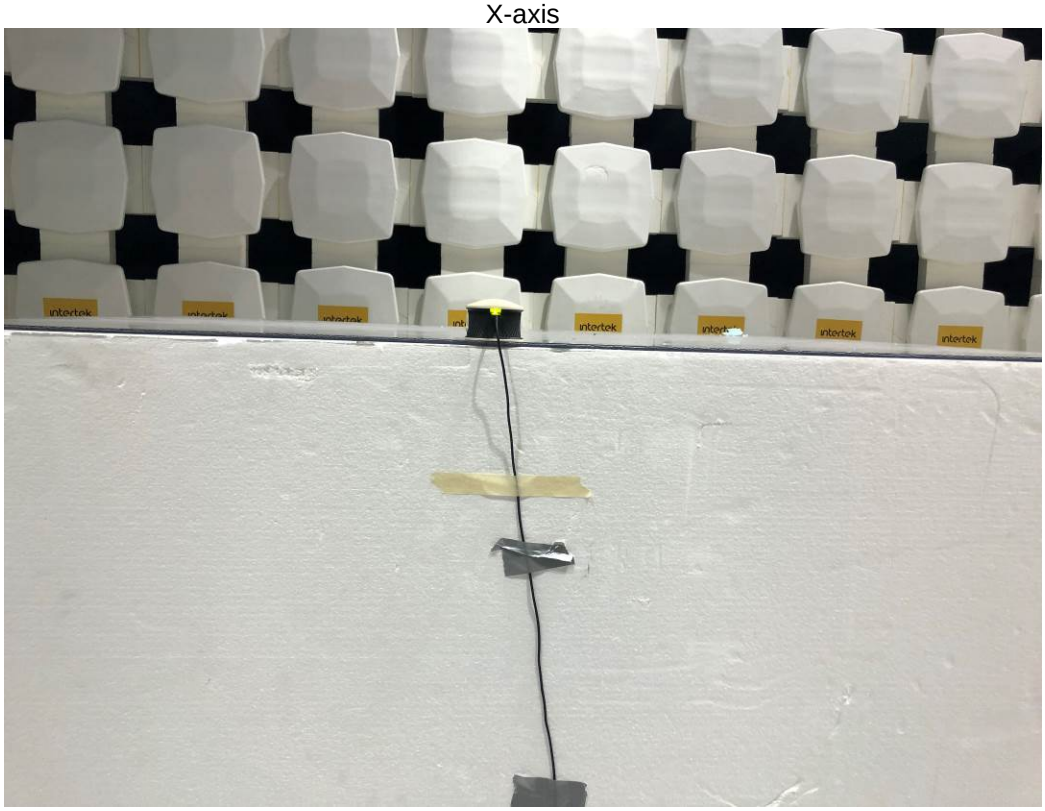
8.3 Results:

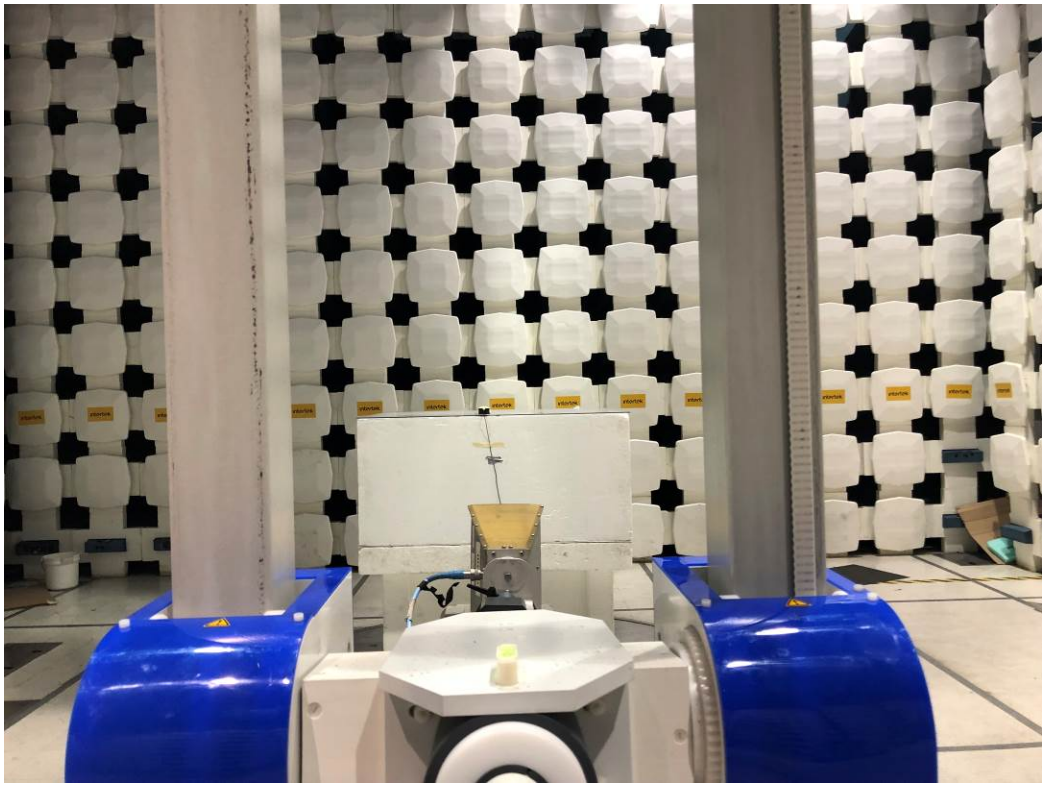
The sample tested was found to Comply.

§15.247 (e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

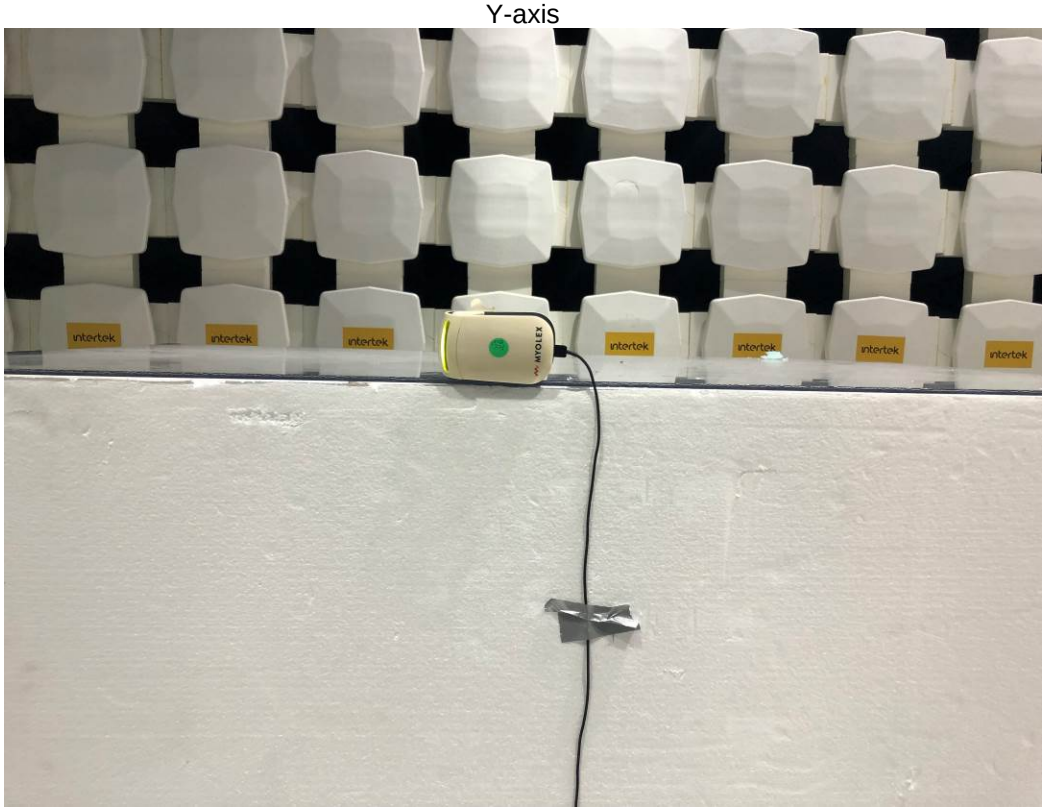
8.4 Setup Photographs:

X-axis

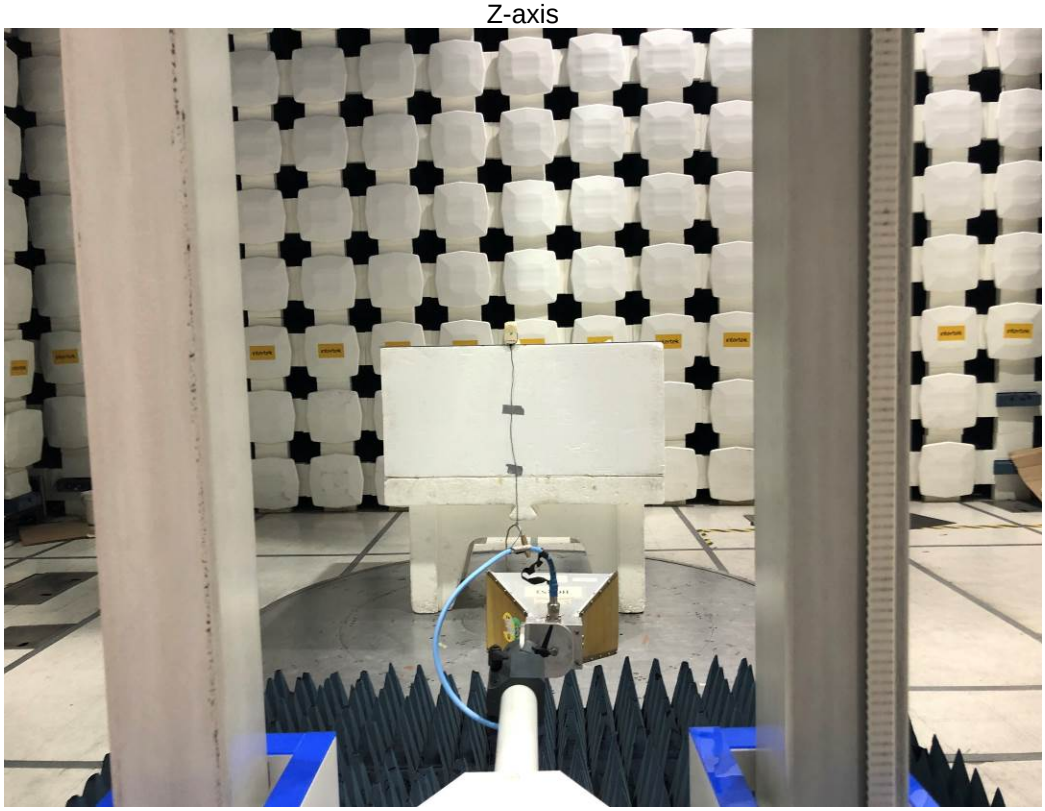


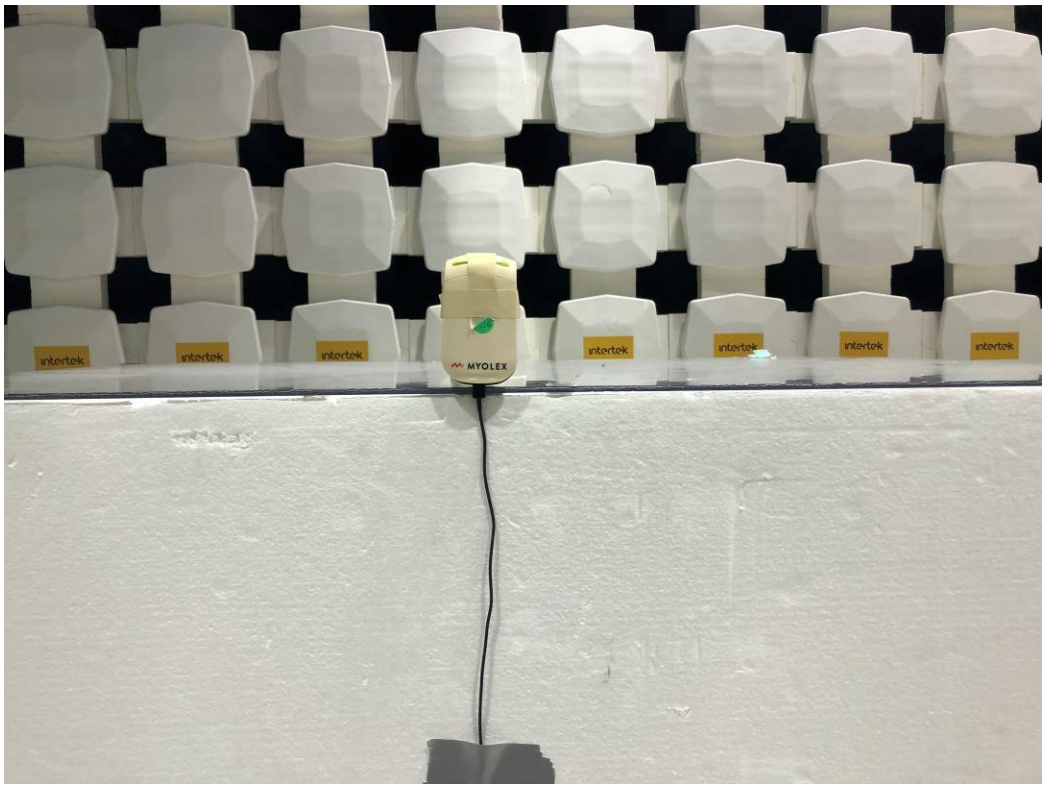


Y-axis



Z-axis





8.5 Test Data:

Company: Myolex, Inc. Antenna & Cables: LF Bands: N, LF, HF, SHF
Model #: EIM1301 Antenna: HORN3__3M vert__5-30-2020.txt HORN3__3M vert__5-30-2020.txt
Serial #: 2019110900001 Cable(s): 145-416__7-22-2020.txt NONE.
Engineers: Kouma Sinn Location: 10m Chamber Barometer: DS40 Filter: NONE
Project #: G104228375 Date(s): 01/03/20
Standard: FCC Part 15 Subpart C 15.247 Temp/Humidity/Pressure: 22C 12% 1017mbar
Receiver: 145-108 Limit Distance (m): 3
PreAmp: BONN001_07-11-2020.txt Test Distance (m): 3
PreAmp Used? (Y or N): N Voltage/Frequency: Internal Battery Frequency Range: Fundamental
Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dBm	Limit dBm	Margin dB	Bandwidth
EUT Flat, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	58.51	28.46	7.23	0.00	0.00	-1.56	8.00	-9.56	3/30kHz
PK	V	2402.000	56.09	28.46	7.23	0.00	0.00	-3.98	8.00	-11.98	3/30kHz
EUT long side, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	56.47	28.46	7.23	0.00	0.00	-3.60	8.00	-11.60	3/30kHz
PK	V	2402.000	57.98	28.46	7.23	0.00	0.00	-2.09	8.00	-10.09	3/30kHz
EUT Short, Low Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2402.000	54.58	28.46	7.23	0.00	0.00	-5.49	8.00	-13.49	3/30kHz
PK	V	2402.000	53.40	28.46	7.23	0.00	0.00	-6.67	8.00	-14.67	3/30kHz
EUT Short, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	53.85	28.43	7.24	0.00	0.00	-6.24	8.00	-14.24	3/30kHz
PK	V	2442.000	53.00	28.43	7.24	0.00	0.00	-7.09	8.00	-15.09	3/30kHz
EUT Long, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	57.35	28.43	7.24	0.00	0.00	-2.74	8.00	-10.74	3/30kHz
PK	V	2442.000	55.64	28.43	7.24	0.00	0.00	-4.45	8.00	-12.45	3/30kHz
EUT Back, Mid Channel. EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2442.000	56.09	28.43	7.24	0.00	0.00	-4.00	8.00	-12.00	3/30kHz
PK	V	2442.000	43.00	28.43	7.24	0.00	0.00	-17.09	8.00	-25.09	3/30kHz
EUT Short, High Channel.EIRP = (E (dBuV/m) - 95.26) dBm, Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	52.50	28.55	7.25	0.00	0.00	-7.47	8.00	-15.47	3/30kHz
PK	V	2480.000	50.16	28.55	7.25	0.00	0.00	-9.81	8.00	-17.81	3/30kHz
EUT Long, High Channel. EIRP = (E (dBuV/m) - 95.26) dBm , Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	53.13	28.55	7.25	0.00	0.00	-6.84	8.00	-14.84	3/30kHz
PK	V	2480.000	53.53	28.55	7.25	0.00	0.00	-6.44	8.00	-14.44	3/30kHz
EUT Back, High Channel. EIRP = (E (dBuV/m) - 95.26) dBm , Power Spectral Density = EIRP - (antenna gain in dBi), 0.5 dBi											
PK	H	2480.000	53.43	28.55	7.25	0.00	0.00	-6.54	8.00	-14.54	3/30kHz
PK	V	2480.000	43.23	28.55	7.25	0.00	0.00	-16.74	8.00	-24.74	3/30kHz

Notes: The power spectral density (PSD) was derived from field strength readings at 3 meters using the formula in ANSI C63.10 Section 12.7.2. and PSD = EIRP – Antenna Factor (dBi).

Test Personnel:	Kouma Sinn KPS	Test Date:	01/30/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	CFR47 FCC Part 15.247, RSS-247	Limit Applied:	See report section 8.3
Input Voltage:	120VAC 60Hz	Ambient Temperature:	22 ºC
Pretest Verification w/ Ambient Signals or BB Source:	**N/A**	Relative Humidity:	12 %
		Atmospheric Pressure:	1017 mbars

Deviations, Additions, or Exclusions: None

9 Band Edge Compliance

9.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C 15.247 RSS 247, ANSI C 63.10, and ANSI C 63.4.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

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

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

9.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020

Software Utilized:

Name	Manufacturer	Version
None	--	--

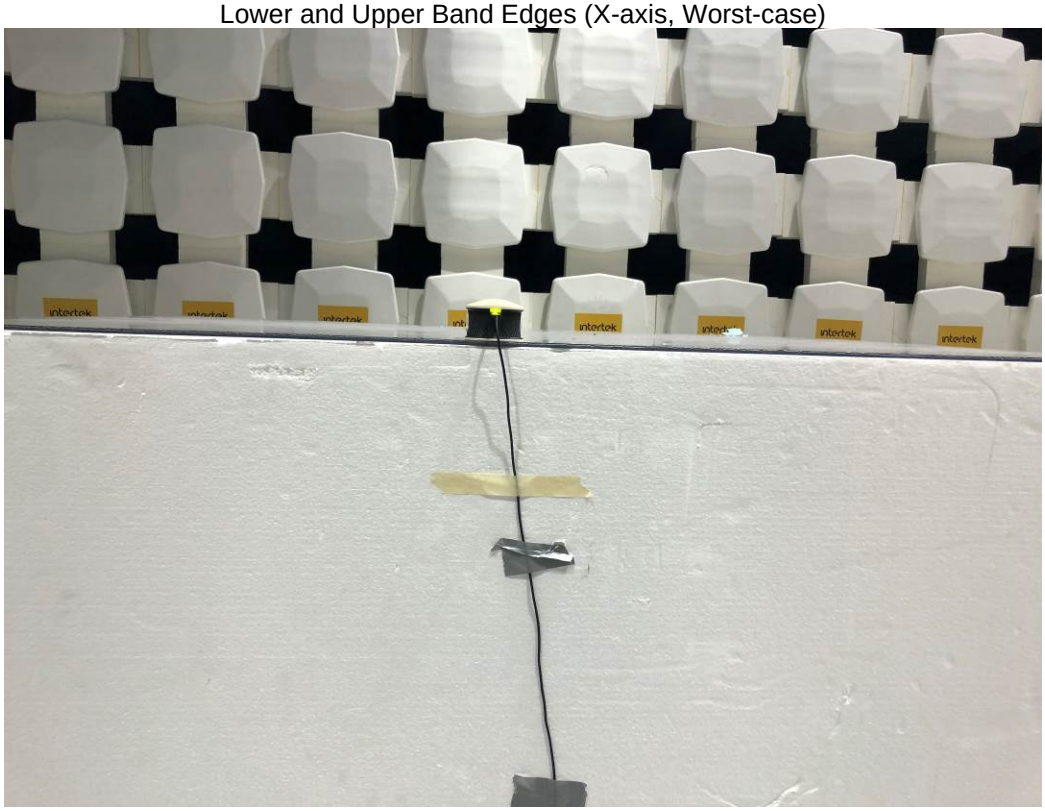
9.3 Results:

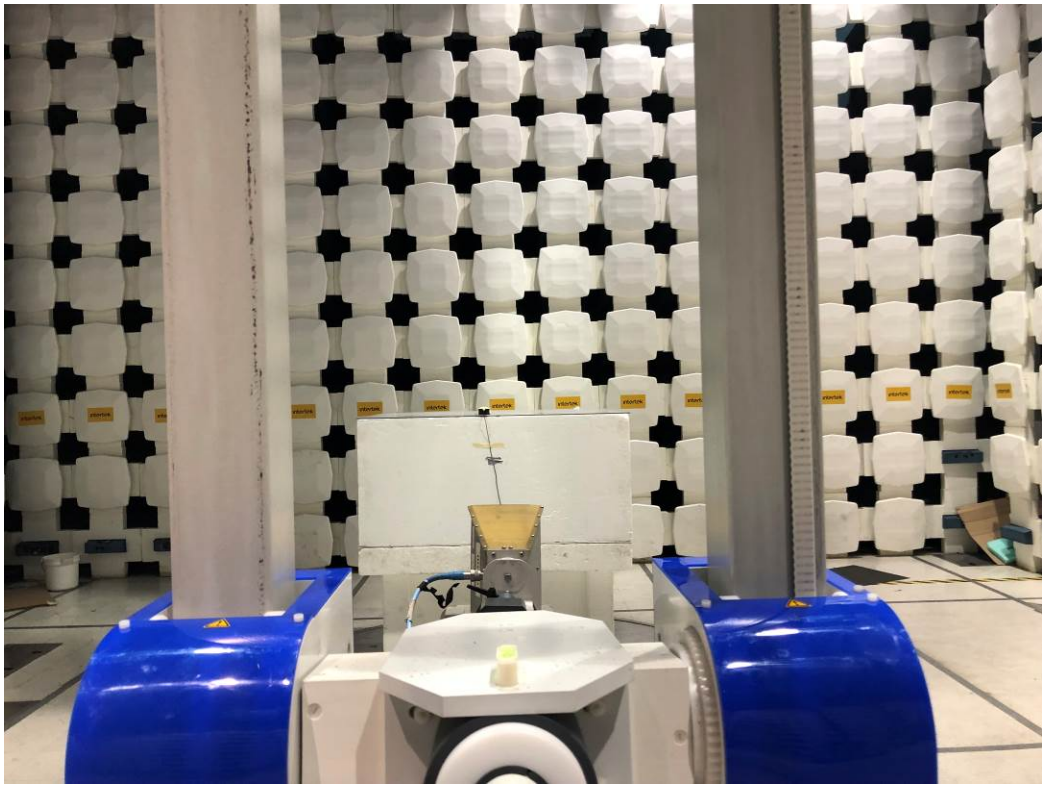
The sample tested was found to Comply.

15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))

9.4 Setup Photographs:

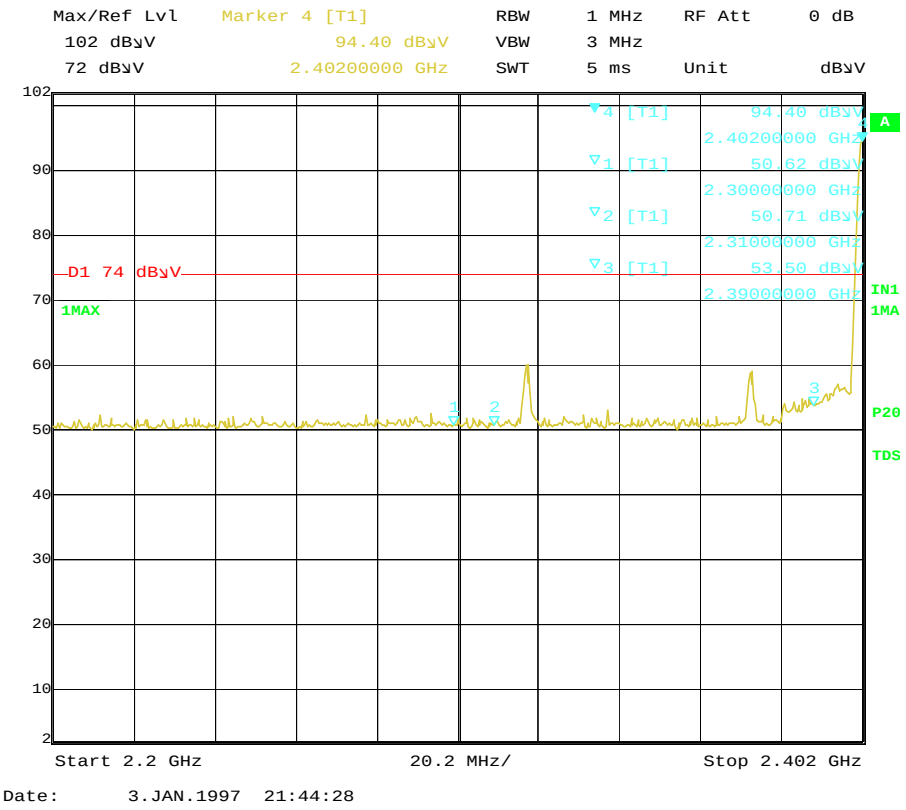
Lower and Upper Band Edges (X-axis, Worst-case)



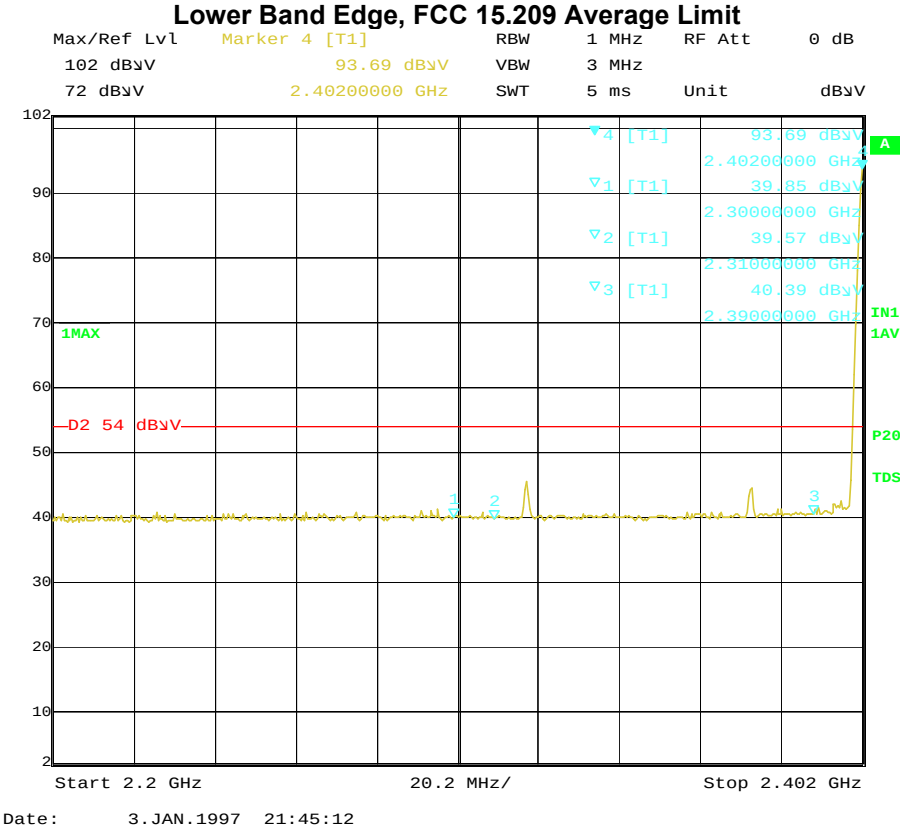


9.5 Test Data:

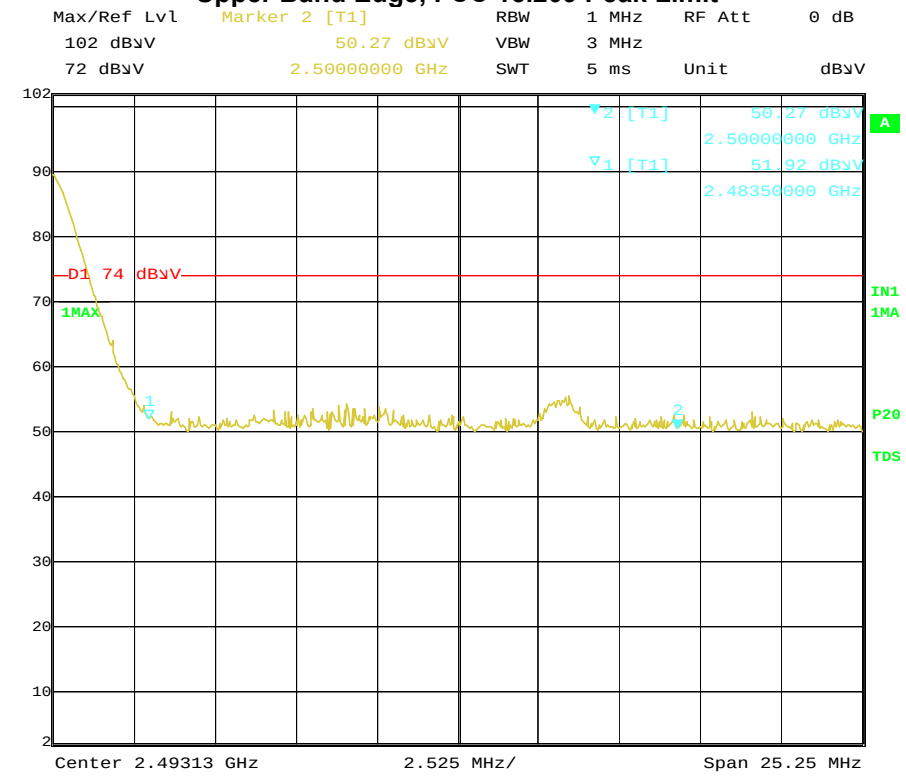
Lower Band Edge, FCC 15.209 Peak Limit



Lower Band Edge, FCC 15.209 Average Limit

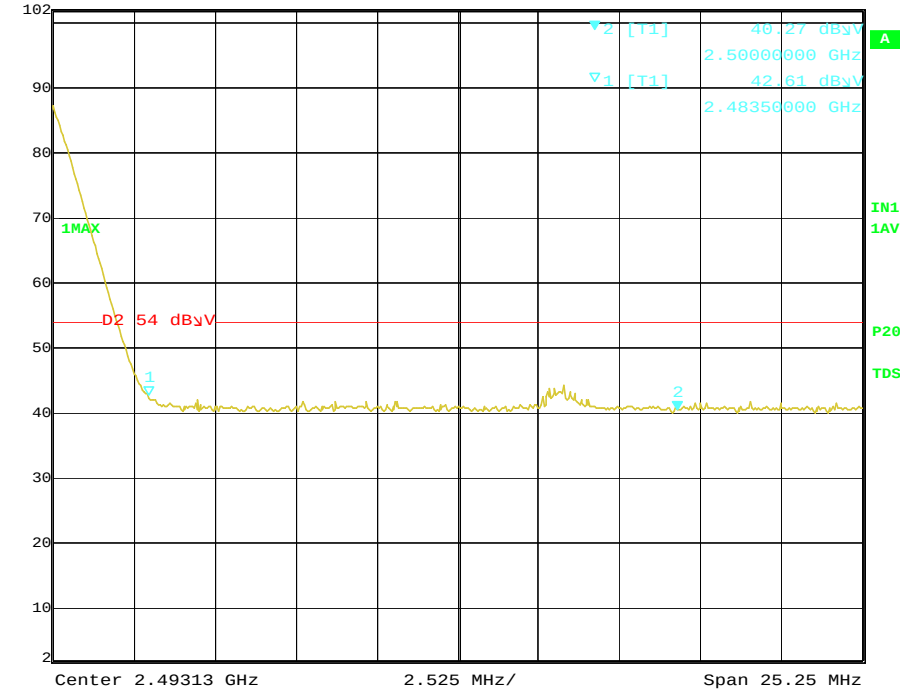


Upper Band Edge, FCC 15.209 Peak Limit



Date: 3.JAN.1997 22:33:57

Upper Band Edge, FCC 15.209 Average Limit



Date: 3.JAN.1997 22:34:38

Test Personnel:	Kouma Sinn KPS	Test Date:	01/30/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	CFR47 FCC Part 15.247, RSS-247	Limit Applied:	See report section 9.3
Input Voltage:	120VAC 60Hz	Ambient Temperature:	22 ºC
Pretest Verification w/ Ambient Signals or BB Source:	**N/A**	Relative Humidity:	12 %
		Atmospheric Pressure:	1017 mbars

Notes: Worst-case orientation and antenna polarity from output power measurements were used for all testing. The antenna factor and cable loss were compensated in the EMI receiver as transducer factor.

Deviations, Additions, or Exclusions: None

10 Transmitter spurious emissions

10.1 Method

Tests are performed in accordance with FCC Part 15 Subpart C 15.247, FCC Part 15 Subpart B, RSS 247 ICES 003, ANSI C 63.10, and ANSI C 63.4.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

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

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

10.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020
PRE11'	50dB gain pre-amp	Pasternack	PRE11	PRE11	08/30/2019	08/30/2020
145145'	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	06/12/2019	06/12/2020
REA004'	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G-S11	06-1	02/25/2019	02/25/2020
REA008'	band reject filter 2.4GHz	Reactel, Inc	12RX7-2441.75-x140 S	17-01	07/11/2019	07/11/2020
BONN001'	1-18GHz low noise pre-amp	Bonn	BLMA 0118-M	1811749	07/11/2019	07/11/2020
145-410'	Cables 145-420 145-421 145-422 145-406	Huber + Suhner	10m Track A Cables	multiple	07/22/2019	07/22/2020
CBLHF2012-2M-1'	2m 9kHz-40GHz Coaxial Cable - SET1	Huber & Suhner	SF102	252675001	02/14/2019	02/14/2020
CBLHF2012-2M-2'	2m 9kHz-40GHz Coaxial Cable – SET2	Huber & Suhner	SF102	252675002	02/14/2019	02/14/2020
REA004'	3GHz High Pass Filter	Reactel, Inc	7HSX-3G/18G-S11	06-1	02/25/2019	02/25/2020
REA006'	18GHz High Pass Filter	Reactel, Inc	7HS-18G/40G K11	(06)1	02/25/2019	02/25/2020
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	12/10/2019	12/10/2020
145029`	Guided Ridged Horn (1 GHz to 18 GHz)	EMCO	EMCO 3115	5520	08/05/2019	08/05/2020
PRE8'	PREAMPLFIER 1- 40 GHz	MITEQ	NSP4000-NF	507145	04/23/2019	04/23/2020
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Shwartz	FSW43	100646	10/14/2019	10/14/2020

Software Utilized:

Name	Manufacturer	Version
EMI Boxborough.xls	Intertek	08/27/2010
BAT-EMC	Nexio	3.18.0.16

10.3 Results:

The sample tested was found to Comply.

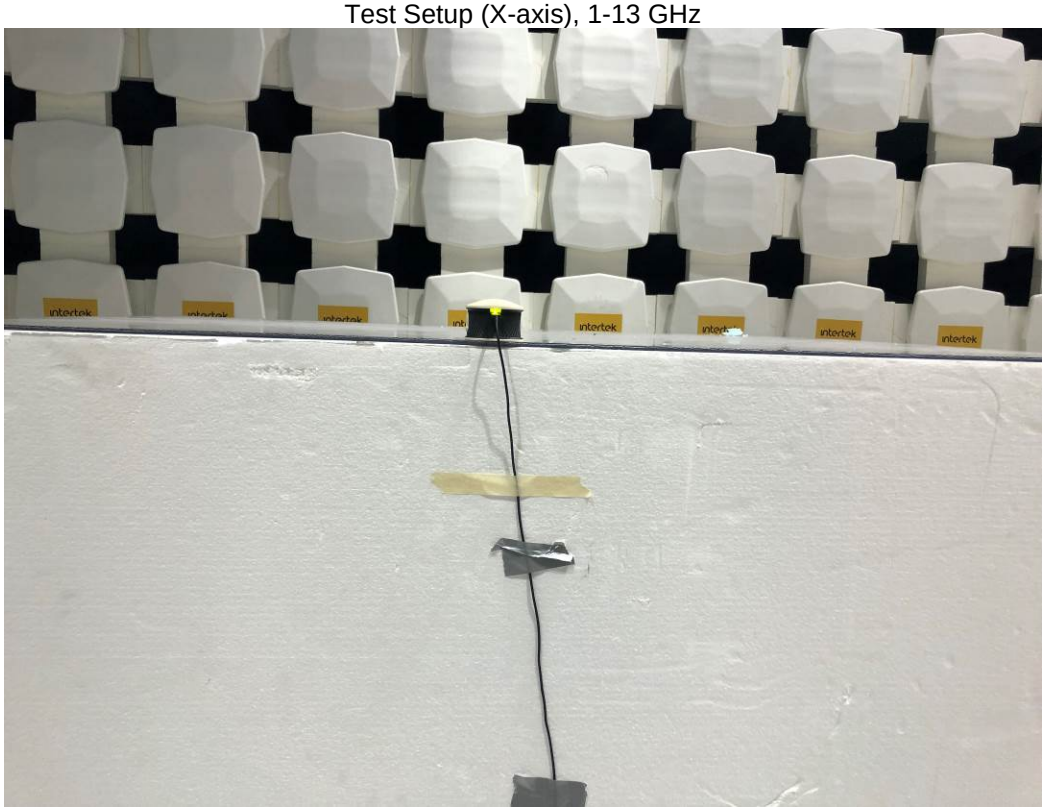
15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c))

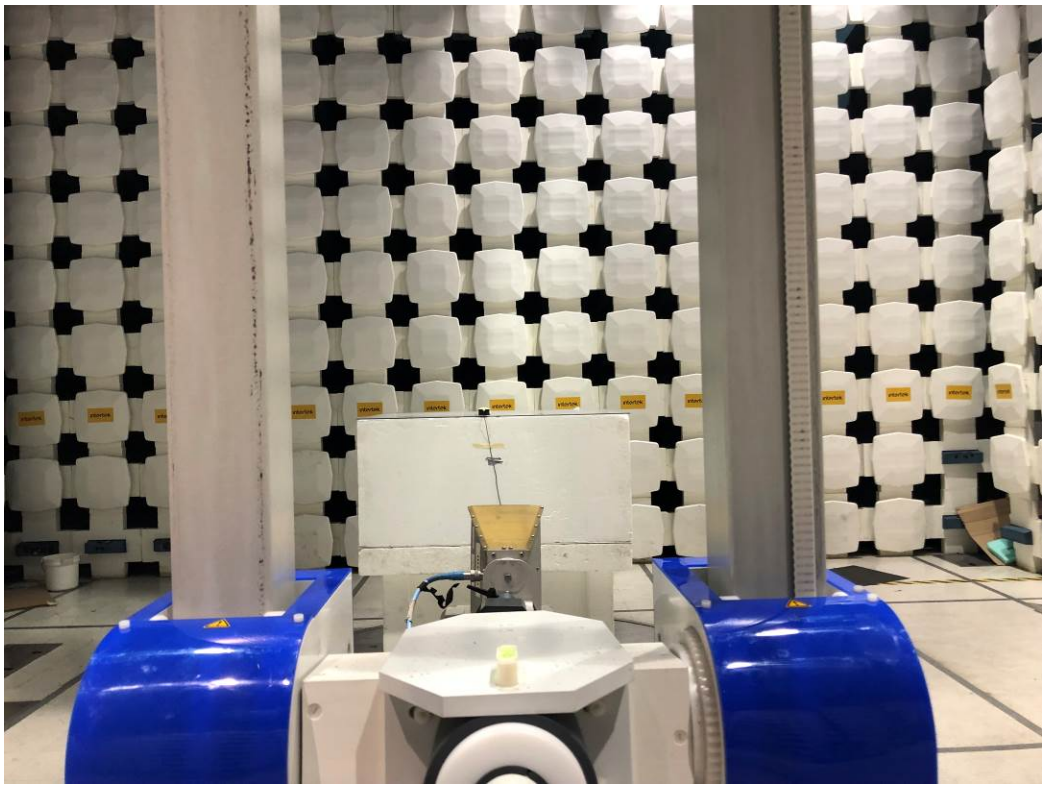
10.4 Setup Photographs:

Test Setup, 30-1000 MHz

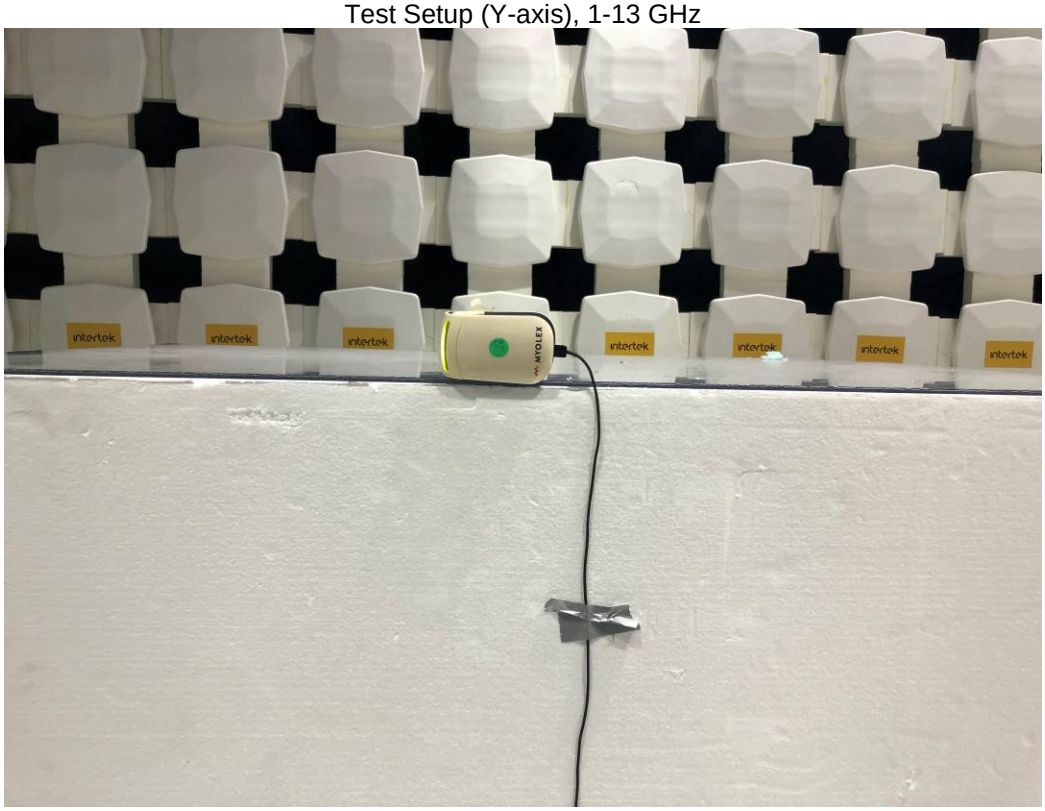
Photos not available

Test Setup (X-axis), 1-13 GHz

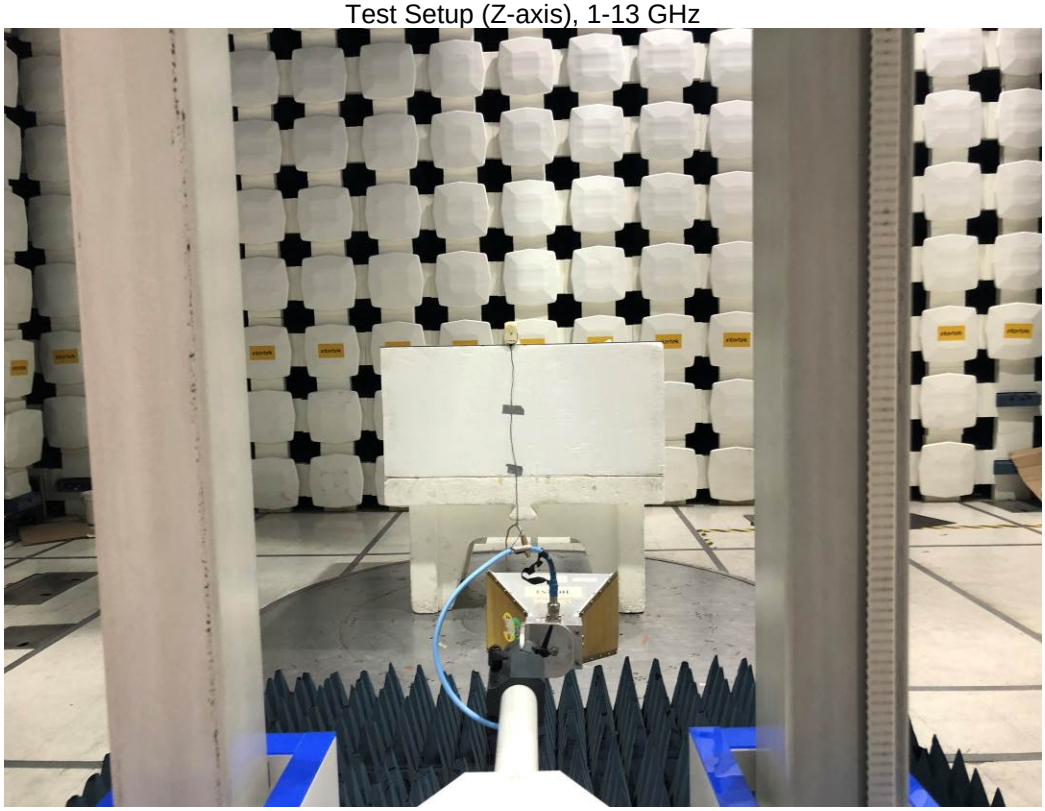


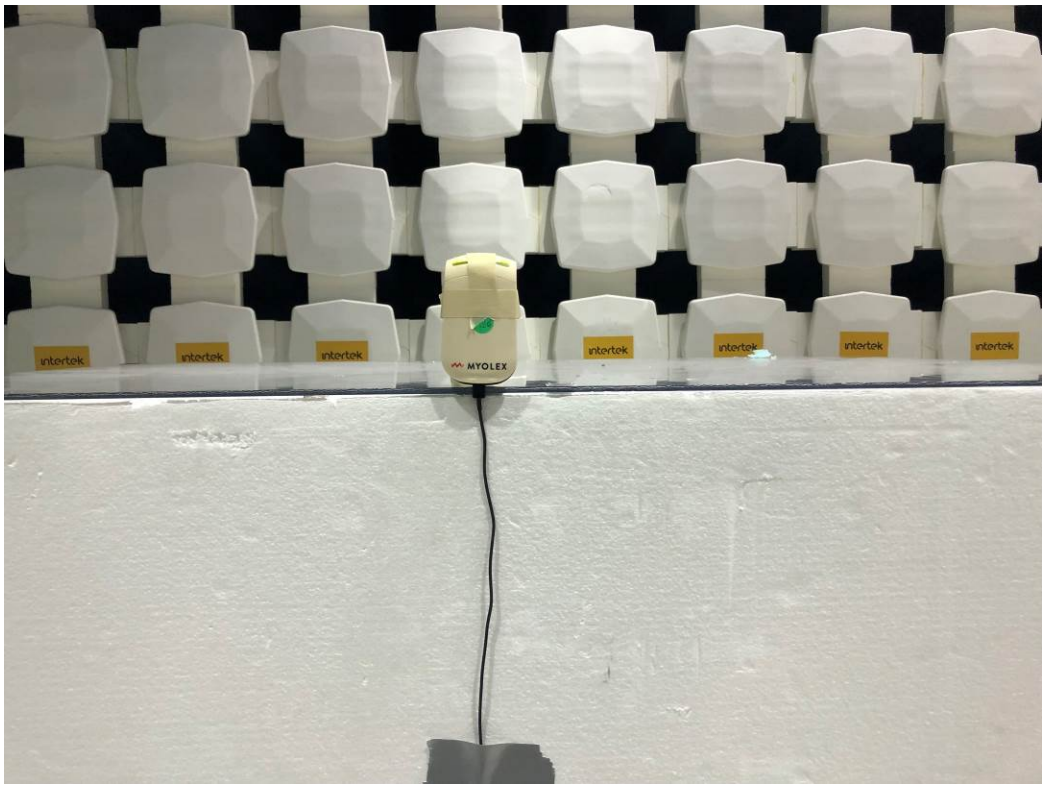


Test Setup (Y-axis), 1-13 GHz



Test Setup (Z-axis), 1-13 GHz





Manual scan at a distance of 10 cm, 13-25 GHz

Photos not available

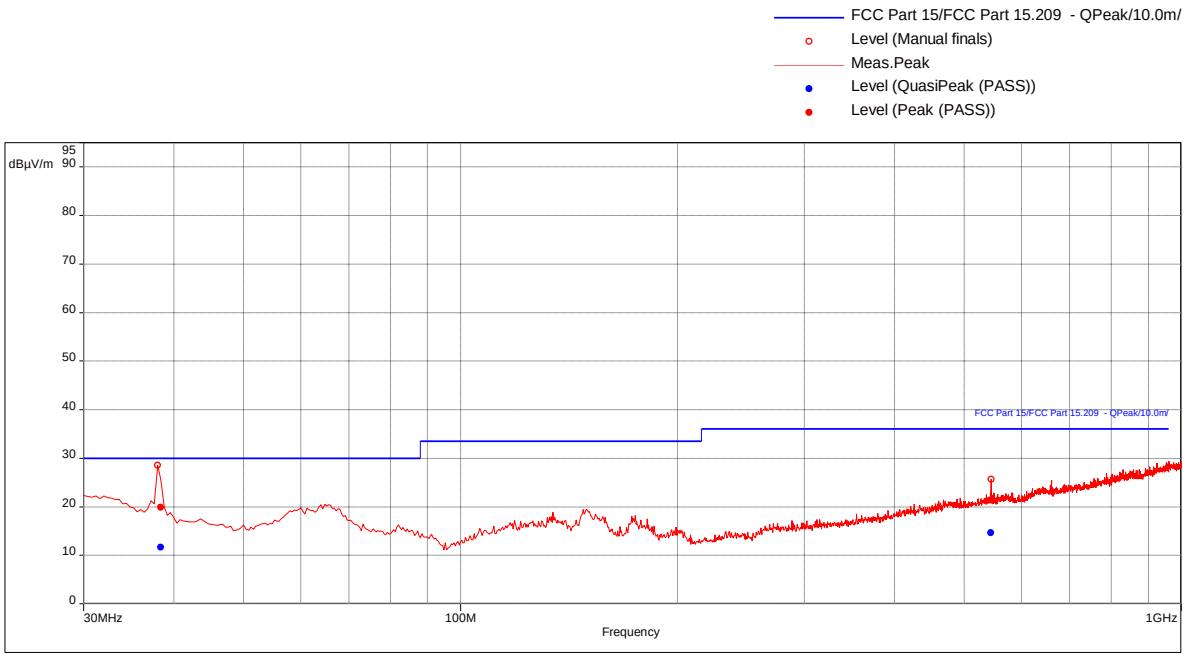
10.5 Plots/Data:

Transmit at Low Channel (X-axis), 30-1000 MHz

Test Information:

Date and Time	1/25/2020 8:43:55 AM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Low Ch - X-Axis - RE 30-1000MHz SA mode

Graph:



Results:

QuasiPeak (PASS) (2)

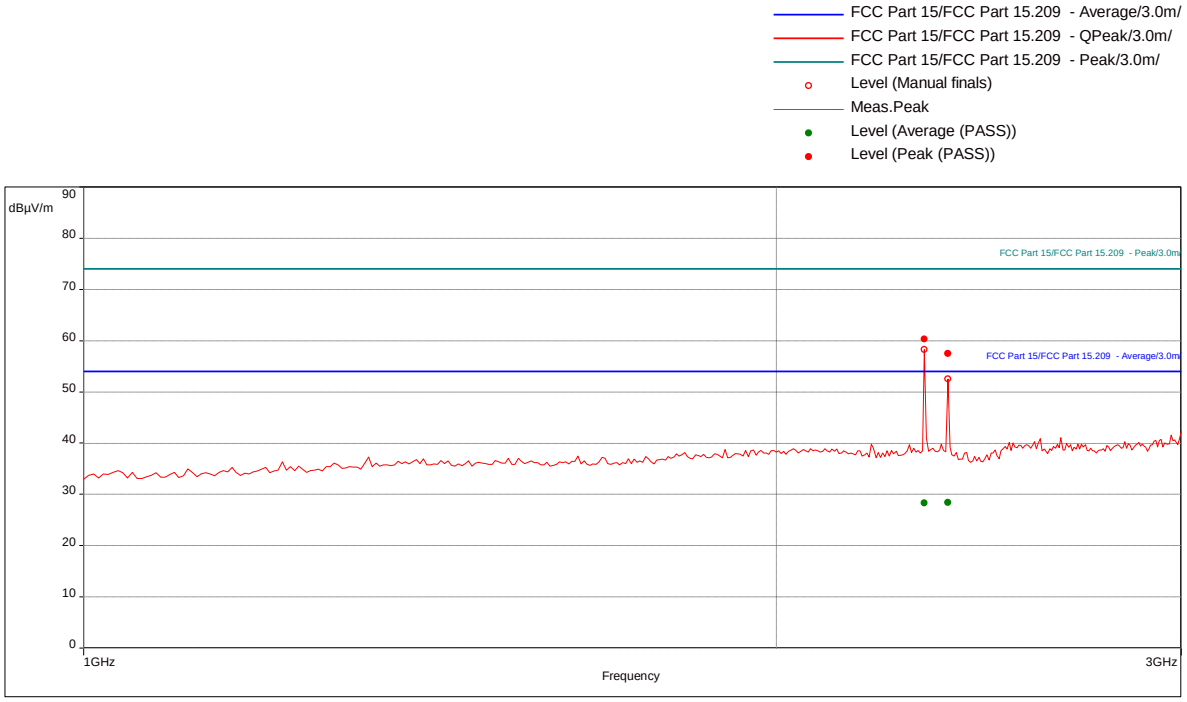
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°) (	Height (m) (	Pol.	RBW (Hz)	Correction (dB)
38.44210526	11.67	30.00	-18.33	350.00	3.07	Vertical	120000.00	-18.61
544.2947368	14.67	36.00	-21.33	61.00	1.29	Horizontal	120000.00	-12.75

Transmit at Low Channel (X-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:11:08 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Low Ch X-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	60.34	74.00	-13.66	84.00	1.05	Horizontal	1000000.00	-20.43
2374.473684	57.46	74.00	-16.54	91.00	1.00	Horizontal	1000000.00	-19.96

Average (PASS) (2)

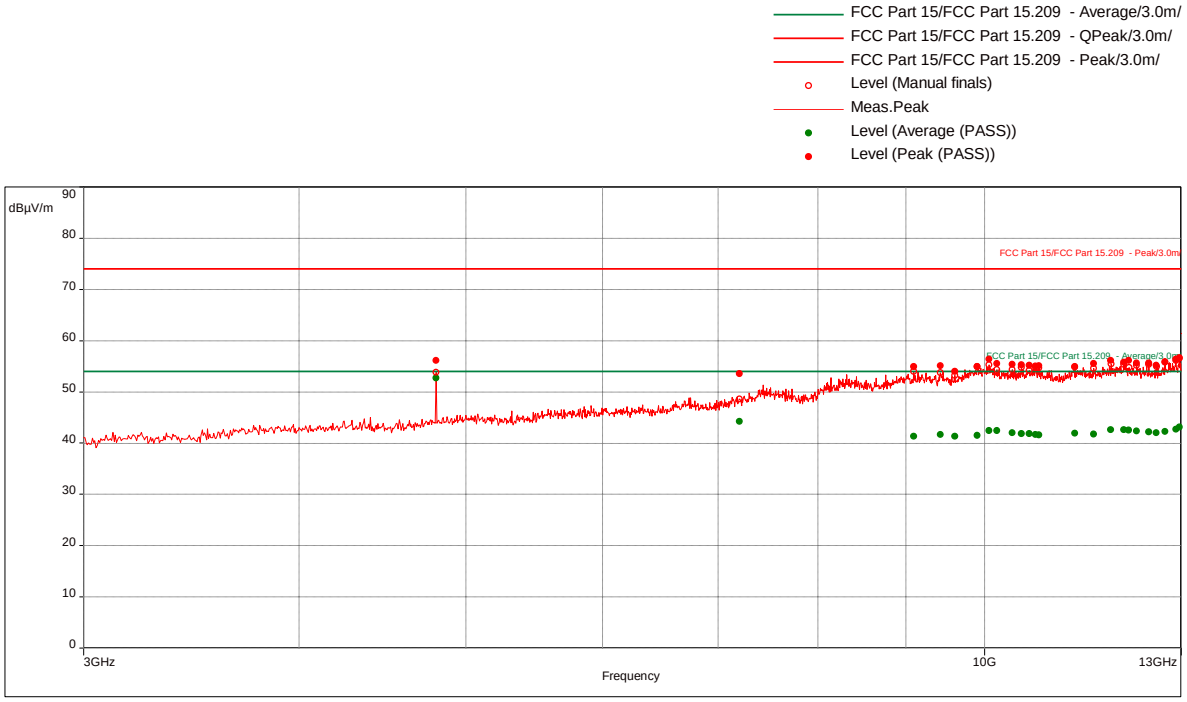
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	28.36	54.00	-25.64	84.00	1.05	Horizontal	1000000.00	-20.43
2374.473684	28.44	54.00	-25.56	91.00	1.00	Horizontal	1000000.00	-19.96

Transmit at Low Channel (X-axis), 3-13 GHz

Test Information:

Date and Time	1/25/2020 2:59:18 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Low Ch - X-Axis - RE 3 to 13 GHz SA mode

Graph:



Results:

Peak (PASS) (24)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	56.13	74.00	-17.87	92.00	1.20	Vertical	1000000.00	-11.20
7206.052632	53.59	74.00	-20.41	0.00	3.25	Vertical	1000000.00	-5.91
9095.263158	54.92	74.00	-19.08	305.00	1.25	Horizontal	1000000.00	-1.63
9426.052632	55.12	74.00	-18.88	145.00	3.84	Vertical	1000000.00	-0.78
9607.631579	54.02	74.00	-19.98	69.00	2.10	Vertical	1000000.00	-0.53
9899.736842	54.95	74.00	-19.05	336.00	3.25	Horizontal	1000000.00	0.11
10054.73684	56.37	74.00	-17.63	276.00	2.75	Horizontal	1000000.00	0.60
10160.78947	55.53	74.00	-18.47	261.00	1.45	Vertical	1000000.00	0.70
10370	55.40	74.00	-18.60	83.00	2.95	Vertical	1000000.00	0.71
10499.47368	55.26	74.00	-18.74	334.00	1.75	Horizontal	1000000.00	0.71
10612.10526	55.22	74.00	-18.78	194.00	3.54	Horizontal	1000000.00	0.67
10702.36842	54.98	74.00	-19.02	336.00	2.70	Vertical	1000000.00	0.57
10750.26316	55.13	74.00	-18.87	173.00	2.45	Vertical	1000000.00	0.58
11281.31579	54.90	74.00	-19.10	166.00	2.85	Vertical	1000000.00	1.32
11566.05263	55.52	74.00	-18.48	359.00	1.70	Horizontal	1000000.00	1.81
11836.05263	56.10	74.00	-17.90	0.00	2.10	Vertical	1000000.00	2.93
12043.42105	55.82	74.00	-18.18	98.00	2.45	Horizontal	1000000.00	3.24
12121.05263	56.11	74.00	-17.89	56.00	1.20	Vertical	1000000.00	3.22
12247.36842	55.60	74.00	-18.40	150.00	3.94	Vertical	1000000.00	3.31
12450.26316	55.63	74.00	-18.37	0.00	2.55	Vertical	1000000.00	3.49
12577.10526	55.18	74.00	-18.82	127.00	2.90	Horizontal	1000000.00	3.32
12723.94737	55.81	74.00	-18.19	319.00	1.50	Vertical	1000000.00	3.52
12907.89474	56.35	74.00	-17.65	262.00	1.00	Vertical	1000000.00	3.91
12970.52632	56.66	74.00	-17.34	173.00	1.00	Vertical	1000000.00	4.08

Average (PASS) (24)

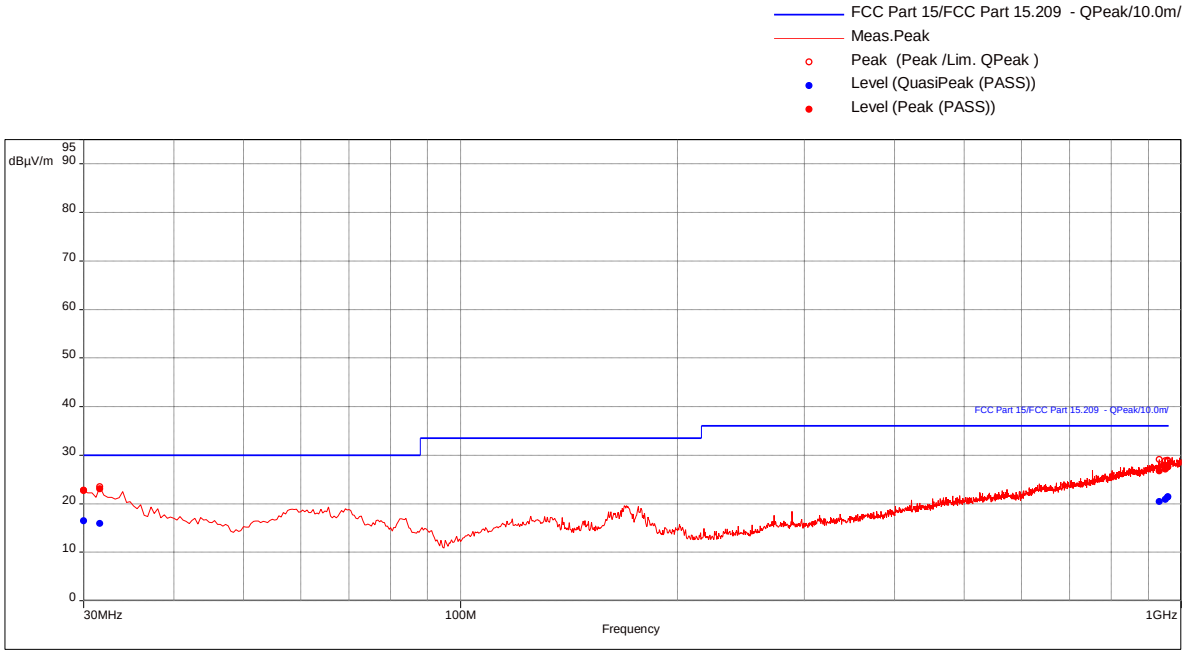
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	52.75	54.00	-1.25	92.00	1.20	Vertical	1000000.00	-11.20
7206.052632	44.24	54.00	-9.76	0.00	3.25	Vertical	1000000.00	-5.91
9095.263158	41.32	54.00	-12.68	305.00	1.25	Horizontal	1000000.00	-1.63
9426.052632	41.70	54.00	-12.30	145.00	3.84	Vertical	1000000.00	-0.78
9607.631579	41.31	54.00	-12.69	69.00	2.10	Vertical	1000000.00	-0.53
9899.736842	41.51	54.00	-12.49	336.00	3.25	Horizontal	1000000.00	0.11
10054.73684	42.43	54.00	-11.57	276.00	2.75	Horizontal	1000000.00	0.60
10160.78947	42.42	54.00	-11.58	261.00	1.45	Vertical	1000000.00	0.70
10370	42.02	54.00	-11.98	83.00	2.95	Vertical	1000000.00	0.71
10499.47368	41.88	54.00	-12.12	334.00	1.75	Horizontal	1000000.00	0.71
10612.10526	41.83	54.00	-12.17	194.00	3.54	Horizontal	1000000.00	0.67
10702.36842	41.66	54.00	-12.34	336.00	2.70	Vertical	1000000.00	0.57
10750.26316	41.59	54.00	-12.41	173.00	2.45	Vertical	1000000.00	0.58
11281.31579	41.90	54.00	-12.10	166.00	2.85	Vertical	1000000.00	1.32
11566.05263	41.75	54.00	-12.25	359.00	1.70	Horizontal	1000000.00	1.81
11836.05263	42.62	54.00	-11.38	0.00	2.10	Vertical	1000000.00	2.93
12043.42105	42.64	54.00	-11.36	98.00	2.45	Horizontal	1000000.00	3.24
12121.05263	42.51	54.00	-11.49	56.00	1.20	Vertical	1000000.00	3.22
12247.36842	42.33	54.00	-11.67	150.00	3.94	Vertical	1000000.00	3.31
12450.26316	42.21	54.00	-11.79	0.00	2.55	Vertical	1000000.00	3.49
12577.10526	42.01	54.00	-11.99	127.00	2.90	Horizontal	1000000.00	3.32
12723.94737	42.31	54.00	-11.69	319.00	1.50	Vertical	1000000.00	3.52
12907.89474	42.68	54.00	-11.32	262.00	1.00	Vertical	1000000.00	3.91
12970.52632	43.10	54.00	-10.90	173.00	1.00	Vertical	1000000.00	4.08

Transmit at Low Channel (Y-axis), 30-1000 MHz

Test Information:

Date and Time	1/25/2020 10:07:42 AM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Low Ch - Y-Axis - RE 30-1000MHz SA mode

Graph:



Results:

QuasiPeak (PASS) (6)

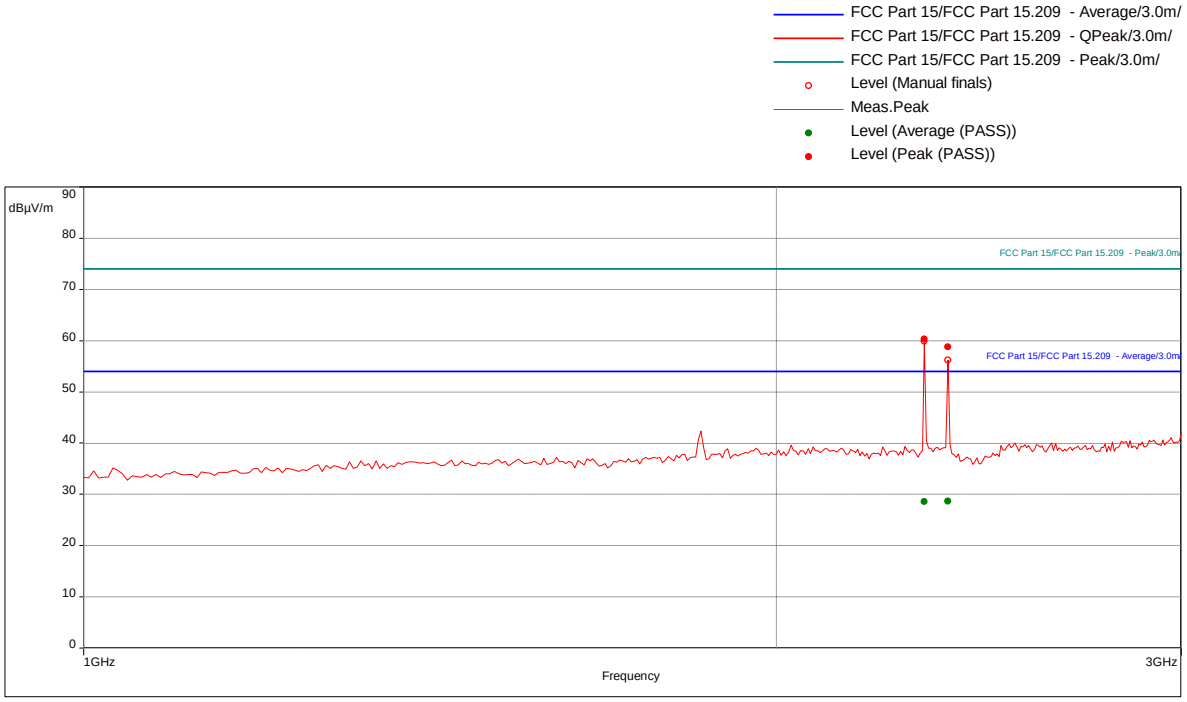
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
30.12631579	16.41	30.00	-13.59	84.00	3.49	Horizontal	120000.00	-12.84
31.66315789	15.87	30.00	-14.13	343.00	2.53	Vertical	120000.00	-13.72
931.9684211	20.42	36.00	-15.58	100.00	3.28	Vertical	120000.00	-6.02
951.3684211	20.83	36.00	-15.17	62.00	1.66	Vertical	120000.00	-5.61
958	21.30	36.00	-14.70	316.00	3.25	Vertical	120000.00	-5.35
959.3473684	21.38	36.00	-14.62	314.00	1.37	Horizontal	120000.00	-5.34

Transmit at Low Channel (Y-axis) 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:21:51 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Low Ch Y-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	60.34	74.00	-13.66	107.00	1.25	Vertical	1000000.00	-20.43
2374.473684	58.75	74.00	-15.25	121.00	1.05	Vertical	1000000.00	-19.96

Average (PASS) (2)

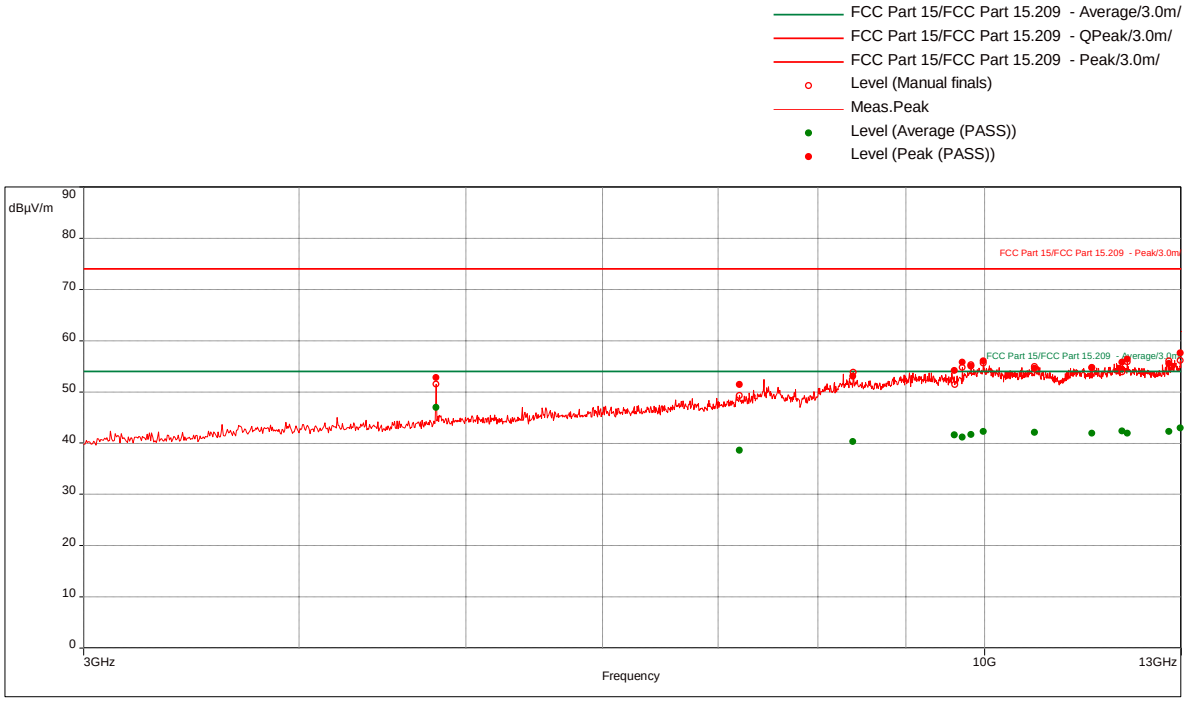
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	28.62	54.00	-25.38	107.00	1.25	Vertical	1000000.00	-20.43
2374.473684	28.65	54.00	-25.35	121.00	1.05	Vertical	1000000.00	-19.96

Transmit at Low Channel (Y-axis) 3-13 GHz

Test Information:

Date and Time	1/25/2020 4:42:18 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_Low CH_Tx mode_Y-Axis

Graph:



Results:

Peak (PASS) (13)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	52.83	74.00	-21.17	240.00	1.02	Vertical	1000000.00	-11.20
7205.789474	51.46	74.00	-22.54	327.00	2.45	Vertical	1000000.00	-5.91
8386.578947	53.05	74.00	-20.95	32.00	2.40	Horizontal	1000000.00	-3.24
9606.315789	54.16	74.00	-19.84	4.00	1.30	Horizontal	1000000.00	-0.53
9705.526316	55.82	74.00	-18.18	0.00	1.40	Vertical	1000000.00	-0.47
9817.631579	55.06	74.00	-18.94	86.00	1.40	Vertical	1000000.00	-0.06
9979.473684	56.03	74.00	-17.97	47.00	3.25	Vertical	1000000.00	0.39
10682.89474	54.59	74.00	-19.41	152.00	3.49	Horizontal	1000000.00	0.61
11535.52632	54.69	74.00	-19.31	0.00	2.60	Horizontal	1000000.00	1.66
12007.63158	55.80	74.00	-18.20	4.00	2.10	Horizontal	1000000.00	3.22
12097.89474	56.40	74.00	-17.60	77.00	3.20	Horizontal	1000000.00	3.23
12789.47368	55.54	74.00	-18.46	210.00	1.10	Vertical	1000000.00	3.68
12983.68421	57.56	74.00	-16.44	334.00	3.69	Horizontal	1000000.00	4.12

Average (PASS) (13)

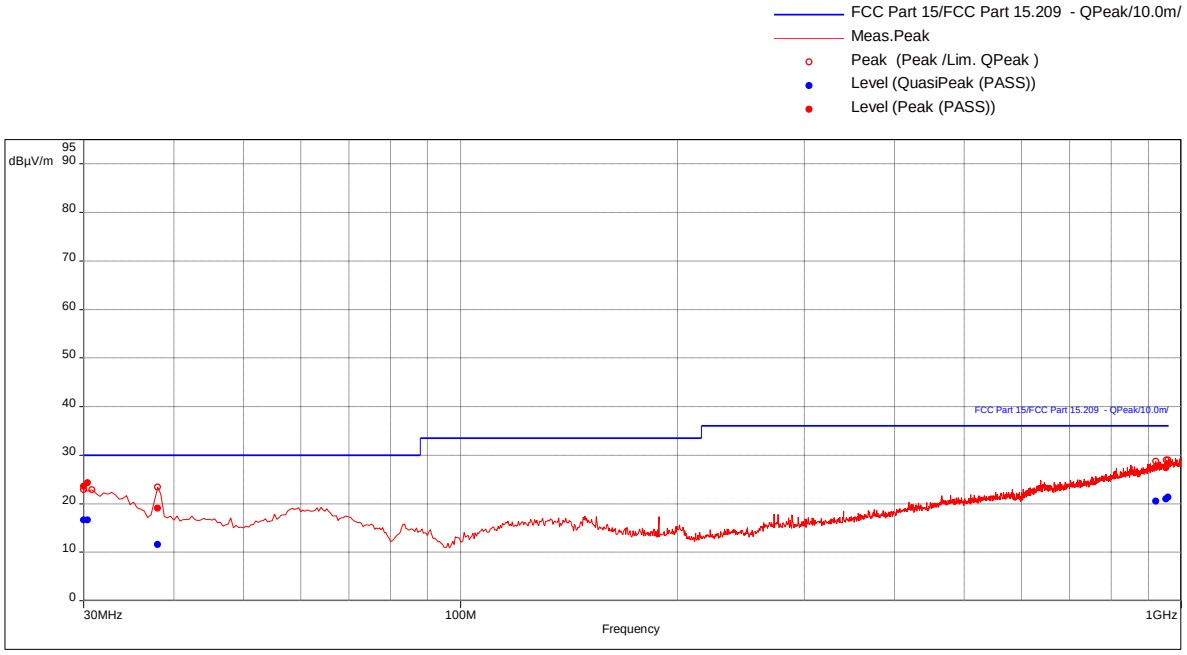
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	47.01	54.00	-6.99	240.00	1.02	Vertical	1000000.00	-11.20
7205.789474	38.63	54.00	-15.37	327.00	2.45	Vertical	1000000.00	-5.91
8386.578947	40.27	54.00	-13.73	32.00	2.40	Horizontal	1000000.00	-3.24
9606.315789	41.62	54.00	-12.38	4.00	1.30	Horizontal	1000000.00	-0.53
9705.526316	41.12	54.00	-12.88	0.00	1.40	Vertical	1000000.00	-0.47
9817.631579	41.67	54.00	-12.33	86.00	1.40	Vertical	1000000.00	-0.06
9979.473684	42.28	54.00	-11.72	47.00	3.25	Vertical	1000000.00	0.39
10682.89474	42.10	54.00	-11.90	152.00	3.49	Horizontal	1000000.00	0.61
11535.52632	41.90	54.00	-12.10	0.00	2.60	Horizontal	1000000.00	1.66
12007.63158	42.40	54.00	-11.60	4.00	2.10	Horizontal	1000000.00	3.22
12097.89474	41.89	54.00	-12.11	77.00	3.20	Horizontal	1000000.00	3.23
12789.47368	42.28	54.00	-11.72	210.00	1.10	Vertical	1000000.00	3.68
12983.68421	42.98	54.00	-11.02	334.00	3.69	Horizontal	1000000.00	4.12

Transmit at Low Channel (Z-axis), 30-1000 MHz

Test Information:

Date and Time	1/25/2020 9:22:58 AM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Low Ch - Z-Axis - RE 30-1000MHz SA mode

Graph:



Results:

QuasiPeak (PASS) (6)

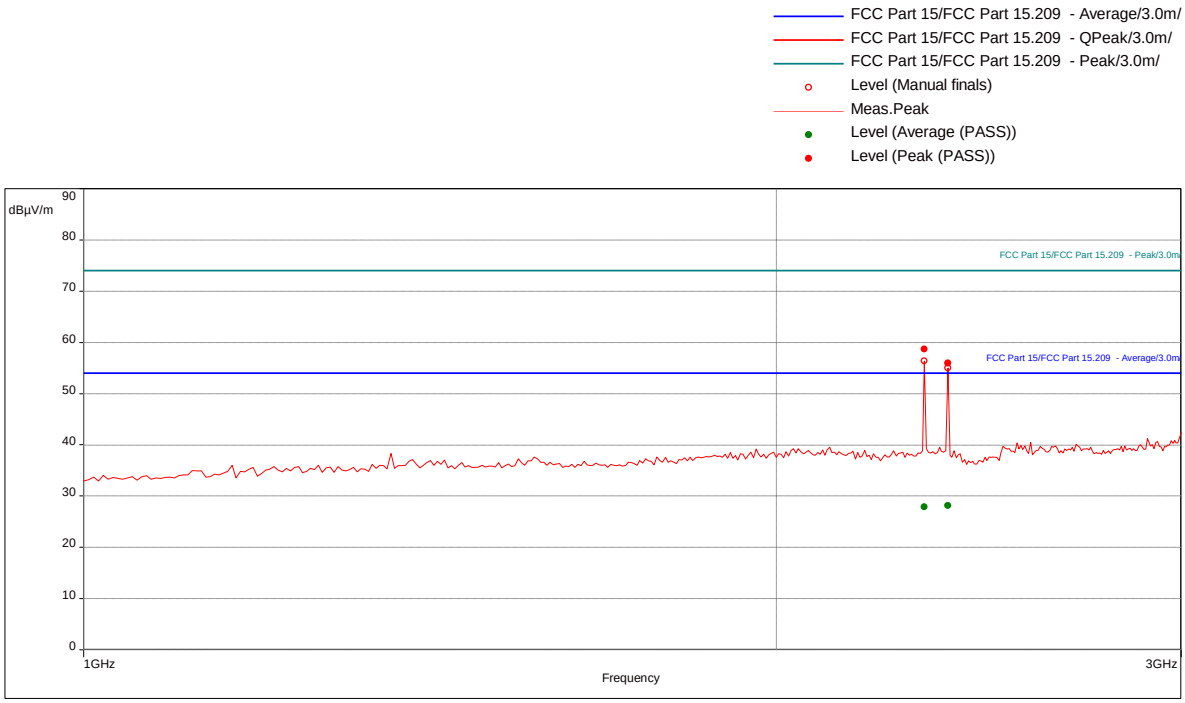
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°) (dB)	Height (m) (dB)	Pol. (dB)	RBW (dB)	Correction (dB)
30	16.67	30.00	-13.33	25.00	3.37	Vertical	120000.00	-12.78
30.48421053	16.63	30.00	-13.37	135.00	1.00	Vertical	120000.00	-13.01
38.12631579	11.55	30.00	-18.45	335.00	2.54	Vertical	120000.00	-18.36
921.9789474	20.48	36.00	-15.52	196.00	2.40	Horizontal	120000.00	-5.97
952.8210526	20.99	36.00	-15.01	210.00	3.22	Horizontal	120000.00	-5.52
958.4947368	21.30	36.00	-14.70	90.00	1.75	Vertical	120000.00	-5.34

Transmit at Low Channel (Z-axis) 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:35:14 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Low Ch Z-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	58.70	74.00	-15.30	0.00	1.10	Horizontal	1000000.00	-20.43
2374.210526	55.95	74.00	-18.05	0.00	1.10	Horizontal	1000000.00	-19.96

Average (PASS) (2)

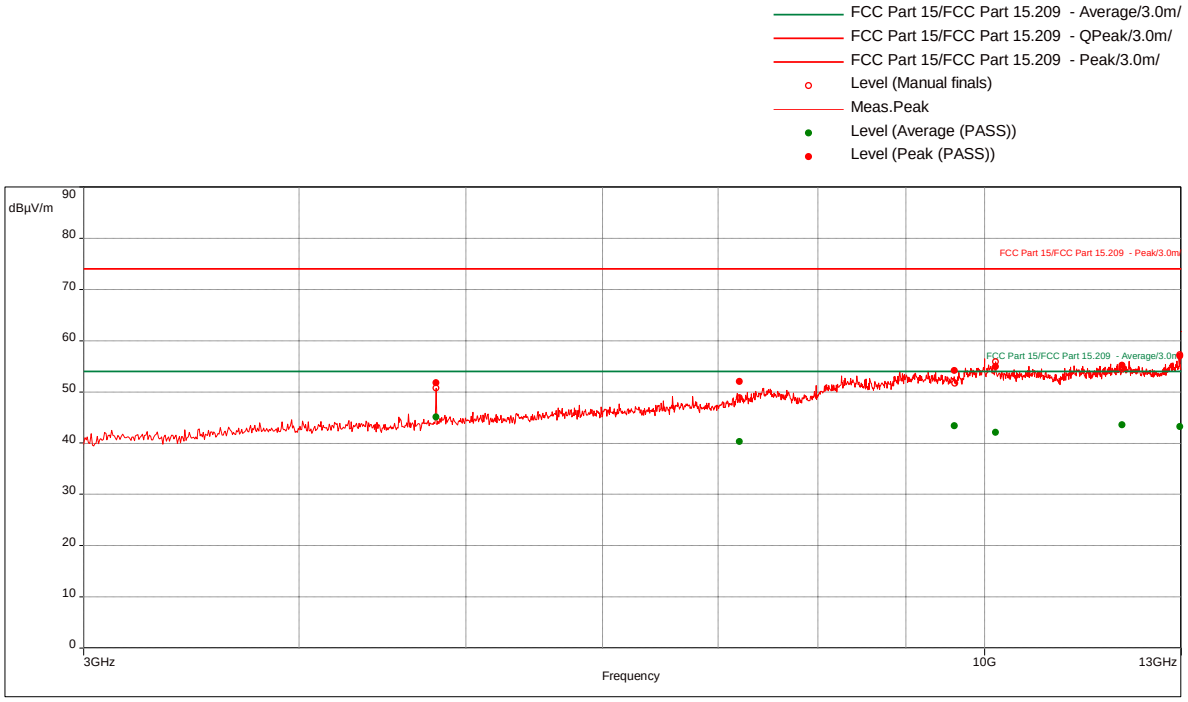
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2318.421053	27.90	54.00	-26.10	0.00	1.10	Horizontal	1000000.00	-20.43
2374.210526	28.15	54.00	-25.85	0.00	1.10	Horizontal	1000000.00	-19.96

Transmit at Low Channel (Z-axis) 3-13 GHz

Test Information:

Date and Time	1/25/2020 5:42:43 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_Low CH_Tx mode_Z-Axis

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	51.78	74.00	-22.22	48.00	2.05	Horizontal	1000000.00	-11.20
7206.052632	52.06	74.00	-21.94	32.00	3.39	Vertical	1000000.00	-5.91
9605.526316	54.16	74.00	-19.84	106.00	1.80	Horizontal	1000000.00	-0.53
10143.15789	54.95	74.00	-19.05	40.00	3.94	Vertical	1000000.00	0.69
12009.21053	55.22	74.00	-18.78	76.00	2.60	Vertical	1000000.00	3.22
12973.68421	56.97	74.00	-17.03	3.00	3.79	Vertical	1000000.00	4.09

Average (PASS) (6)

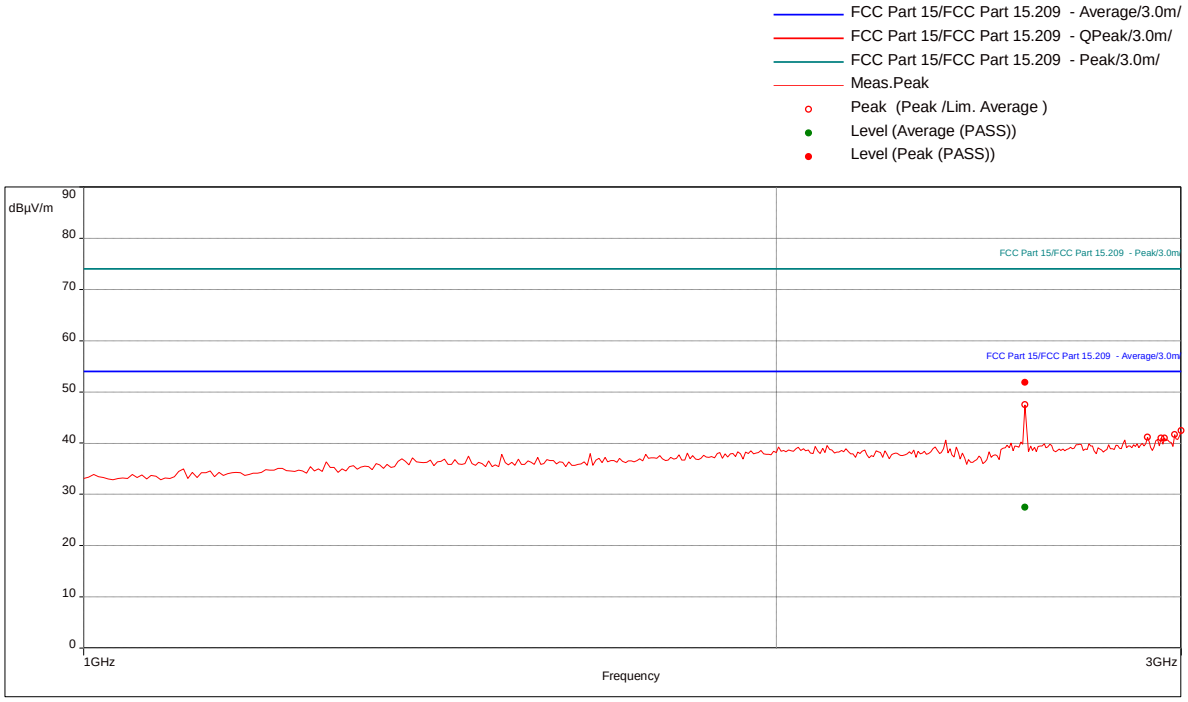
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4803.947368	45.08	54.00	-8.92	48.00	2.05	Horizontal	1000000.00	-11.20
7206.052632	40.32	54.00	-13.68	32.00	3.39	Vertical	1000000.00	-5.91
9605.526316	43.41	54.00	-10.59	106.00	1.80	Horizontal	1000000.00	-0.53
10143.15789	42.12	54.00	-11.88	40.00	3.94	Vertical	1000000.00	0.69
12009.21053	43.56	54.00	-10.44	76.00	2.60	Vertical	1000000.00	3.22
12973.68421	43.17	54.00	-10.83	3.00	3.79	Vertical	1000000.00	4.09

Transmit at Mid Channel (X-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:58:54 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Mid Ch X-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	51.86	74.00	-22.14	100.00	1.00	Vertical	1000000.00	-19.17

Average (PASS) (1)

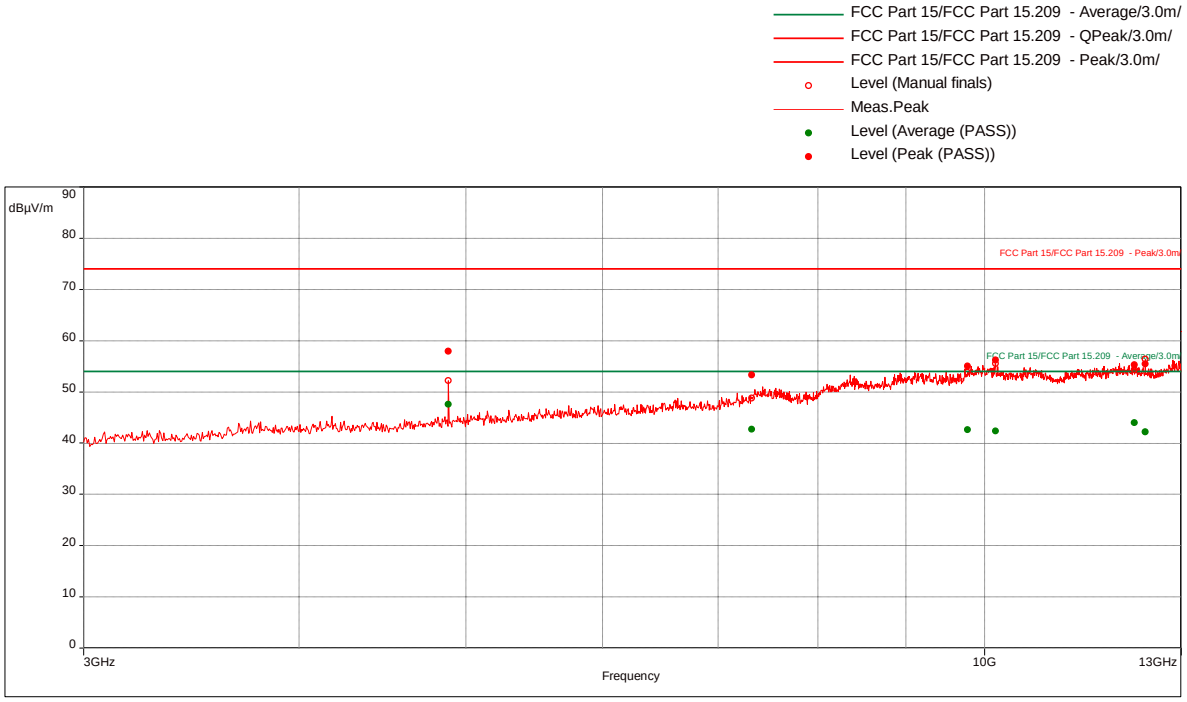
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	27.46	54.00	-26.54	100.00	1.00	Vertical	1000000.00	-19.17

Transmit at Mid Channel (X-axis), 3-13 GHz

Test Information:

Date and Time	1/25/2020 7:16:13 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_Mid CH_Tx mode_X-Axis

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	57.95	74.00	-16.05	92.00	1.05	Vertical	1000000.00	-10.92
7326.052632	53.29	74.00	-20.71	231.00	3.54	Vertical	1000000.00	-5.32
9770.789474	55.04	74.00	-18.96	224.00	1.70	Horizontal	1000000.00	-0.21
10147.10526	56.20	74.00	-17.80	41.00	2.75	Horizontal	1000000.00	0.69
12209.21053	55.27	74.00	-18.73	232.00	3.05	Horizontal	1000000.00	3.27
12389.73684	55.47	74.00	-18.53	136.00	1.95	Vertical	1000000.00	3.47

Average (PASS) (6)

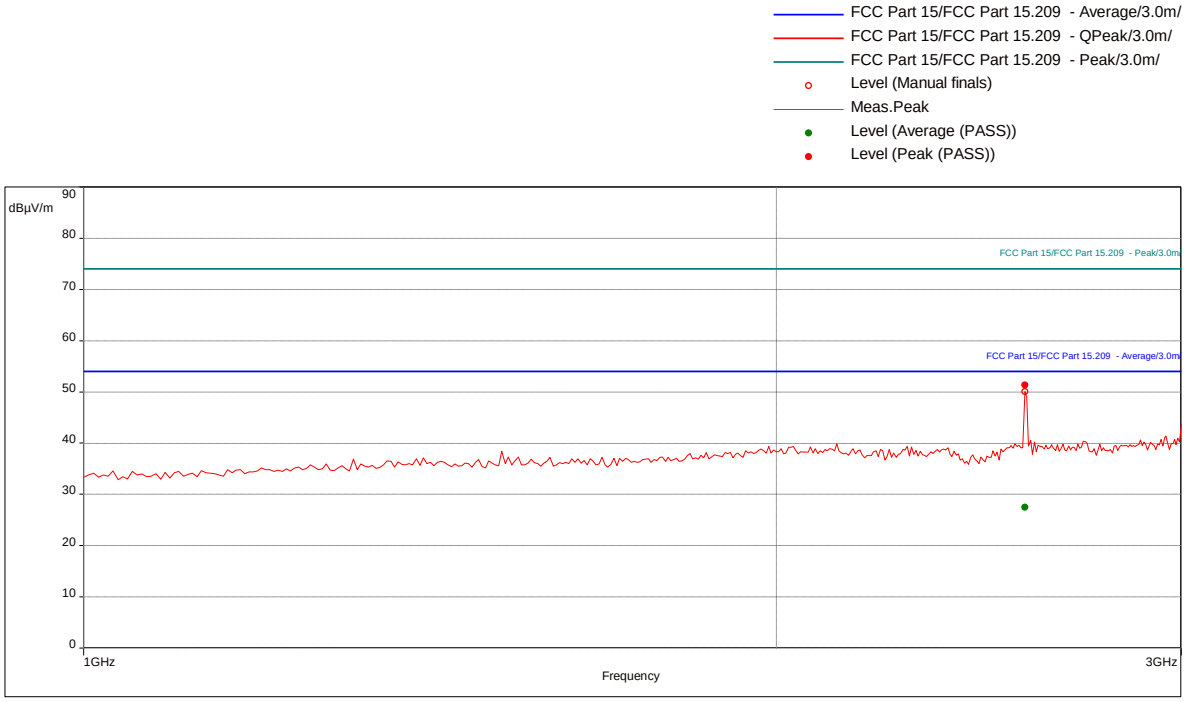
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	47.60	54.00	-6.40	92.00	1.05	Vertical	1000000.00	-10.92
7326.052632	42.74	54.00	-11.26	231.00	3.54	Vertical	1000000.00	-5.32
9770.789474	42.62	54.00	-11.38	224.00	1.70	Horizontal	1000000.00	-0.21
10147.10526	42.38	54.00	-11.62	41.00	2.75	Horizontal	1000000.00	0.69
12209.21053	44.00	54.00	-10.00	232.00	3.05	Horizontal	1000000.00	3.27
12389.73684	42.21	54.00	-11.79	136.00	1.95	Vertical	1000000.00	3.47

Transmit at Mid Channel (Y-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:53:03 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Mid Ch Y-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	51.31	74.00	-22.69	90.00	1.00	Vertical	1000000.00	-19.17

Average (PASS) (1)

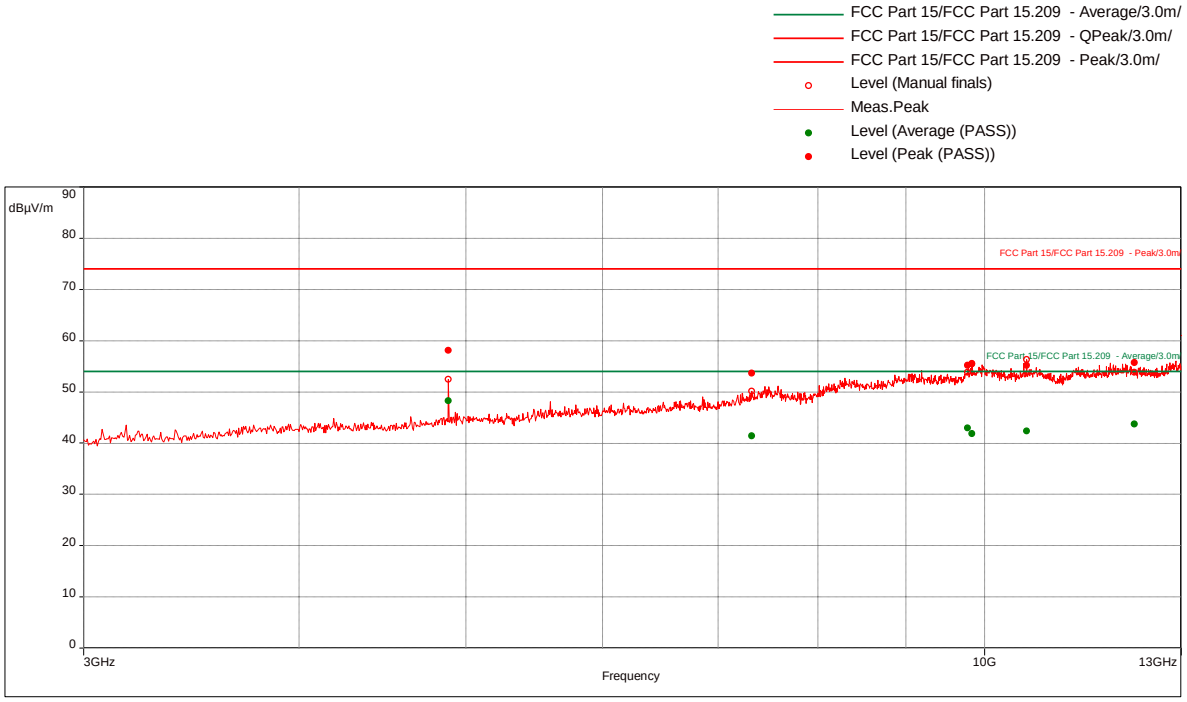
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	27.43	54.00	-26.57	90.00	1.00	Vertical	1000000.00	-19.17

Transmit at Mid Channel (Y-axis), 3-13 GHz

Test Information:

Date and Time	1/25/2020 6:47:24 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_Mid CH_Tx mode_Y-Axis

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	58.09	74.00	-15.91	70.00	1.55	Horizontal	1000000.00	-10.92
7325	53.65	74.00	-20.35	63.00	1.01	Vertical	1000000.00	-5.33
9769.210526	55.16	74.00	-18.84	76.00	2.66	Vertical	1000000.00	-0.22
9829.473684	55.47	74.00	-18.53	68.00	1.25	Vertical	1000000.00	-0.04
10575.52632	55.22	74.00	-18.78	261.00	1.10	Vertical	1000000.00	0.66
12208.94737	55.71	74.00	-18.29	209.00	2.25	Horizontal	1000000.00	3.27

Average (PASS) (6)

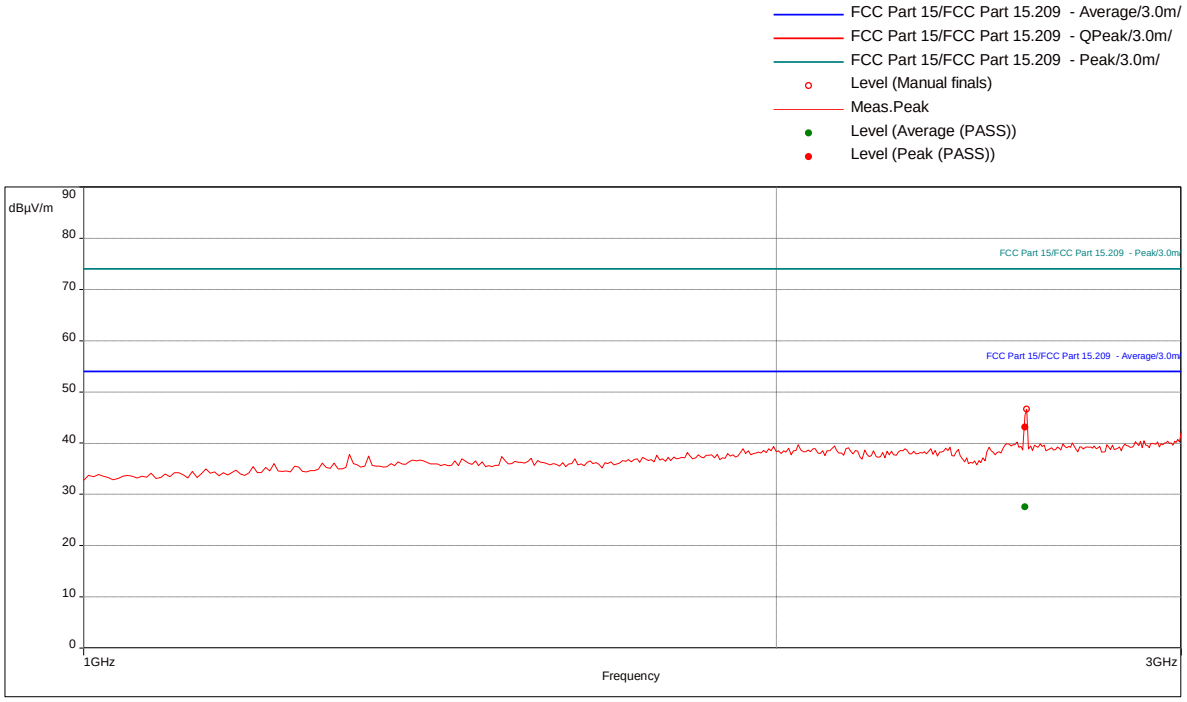
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	48.26	54.00	-5.74	70.00	1.55	Horizontal	1000000.00	-10.92
7325	41.41	54.00	-12.59	63.00	1.01	Vertical	1000000.00	-5.33
9769.210526	42.95	54.00	-11.05	76.00	2.66	Vertical	1000000.00	-0.22
9829.473684	41.84	54.00	-12.16	68.00	1.25	Vertical	1000000.00	-0.04
10575.52632	42.32	54.00	-11.68	261.00	1.10	Vertical	1000000.00	0.66
12208.94737	43.75	54.00	-10.25	209.00	2.25	Horizontal	1000000.00	3.27

Transmit at Mid Channel (Z-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:46:41 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	Mid Ch Z-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2566.578947	43.14	74.00	-30.86	24.00	2.00	Horizontal	1000000.00	-19.17

Average (PASS) (1)

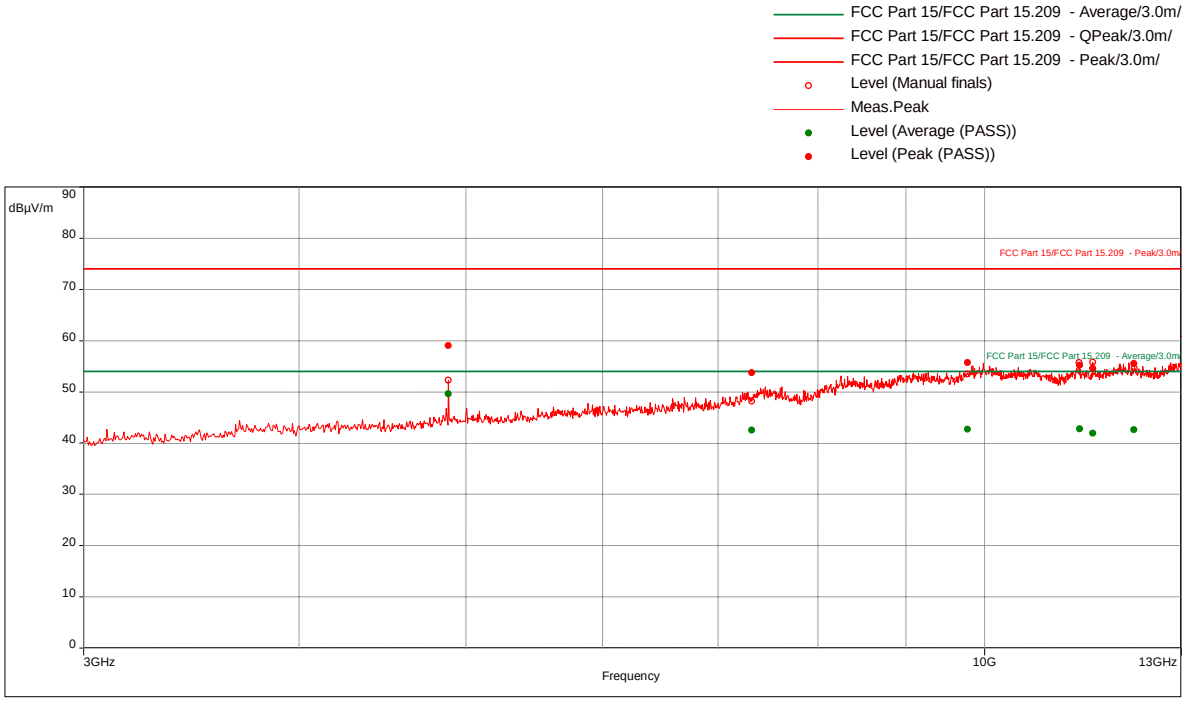
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2566.578947	27.54	54.00	-26.46	24.00	2.00	Horizontal	1000000.00	-19.17

Transmit at Mid Channel (Z-axis), 3-13 GHz

Test Information:

Date and Time	1/25/2020 6:17:45 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_Mid CH_Tx mode_Z-Axis

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	59.06	74.00	-14.94	41.00	2.50	Horizontal	1000000.00	-10.92
7326.315789	53.77	74.00	-20.23	92.00	2.15	Vertical	1000000.00	-5.32
9770	55.68	74.00	-18.32	105.00	1.75	Horizontal	1000000.00	-0.22
11347.89474	55.16	74.00	-18.84	77.00	2.00	Horizontal	1000000.00	1.31
11554.21053	54.62	74.00	-19.38	262.00	1.65	Vertical	1000000.00	1.74
12206.05263	55.56	74.00	-18.44	173.00	2.05	Horizontal	1000000.00	3.27

Average (PASS) (6)

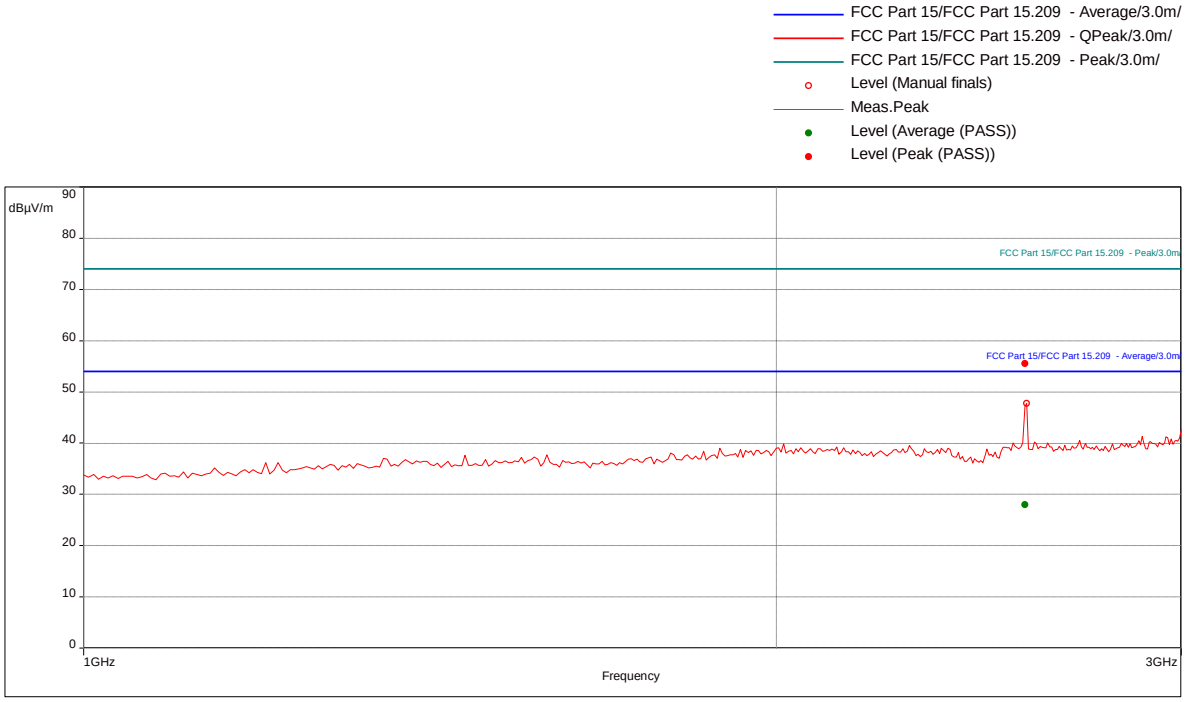
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4883.947368	49.67	54.00	-4.33	41.00	2.50	Horizontal	1000000.00	-10.92
7326.315789	42.53	54.00	-11.47	92.00	2.15	Vertical	1000000.00	-5.32
9770	42.71	54.00	-11.29	105.00	1.75	Horizontal	1000000.00	-0.22
11347.89474	42.78	54.00	-11.22	77.00	2.00	Horizontal	1000000.00	1.31
11554.21053	41.91	54.00	-12.09	262.00	1.65	Vertical	1000000.00	1.74
12206.05263	42.63	54.00	-11.37	173.00	2.05	Horizontal	1000000.00	3.27

Transmit at High Channel (X-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 3:03:21 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	High Ch X-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	55.51	74.00	-18.49	142.00	1.55	Horizontal	1000000.00	-19.17

Average (PASS) (1)

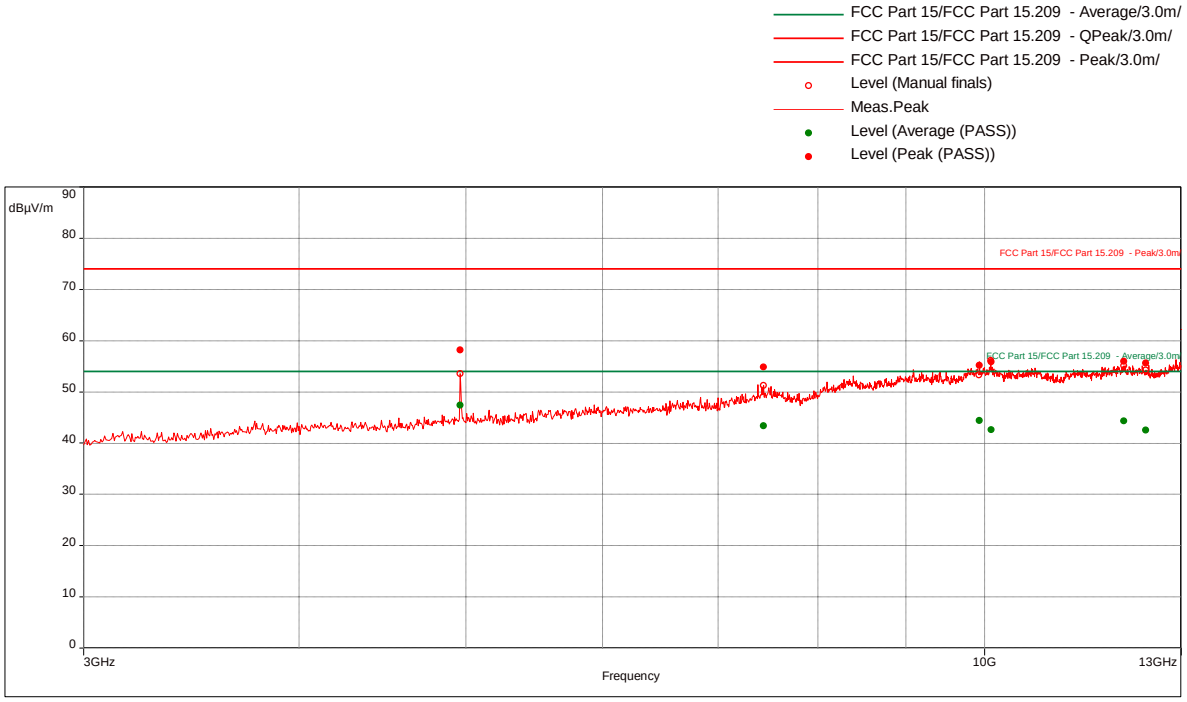
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	27.98	54.00	-26.02	142.00	1.55	Horizontal	1000000.00	-19.17

Transmit at High Channel (X-axis), 3-13 GHz

Test Information:

Date and Time	1/25/2020 7:47:22 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	RE 3 to 13 GHz_High CH_Tx mode_X-Axis

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4960	58.20	74.00	-15.80	90.00	3.69	Vertical	1000000.00	-10.80
7439.736842	54.86	74.00	-19.14	61.00	3.74	Vertical	1000000.00	-5.16
9923.684211	55.18	74.00	-18.82	85.00	1.95	Vertical	1000000.00	0.20
10083.15789	55.90	74.00	-18.10	143.00	1.35	Vertical	1000000.00	0.65
12040	55.97	74.00	-18.03	114.00	3.79	Horizontal	1000000.00	3.24
12401.31579	55.63	74.00	-18.37	32.00	1.95	Vertical	1000000.00	3.48

Average (PASS) (6)

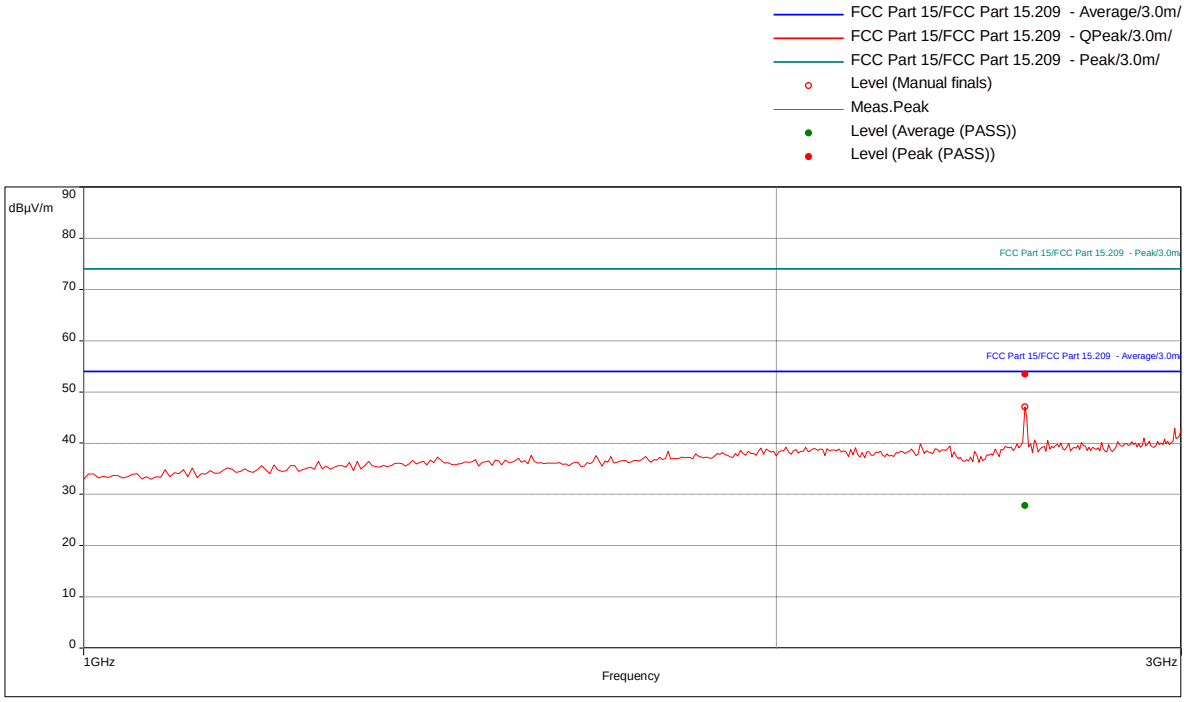
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4960	47.38	54.00	-6.62	90.00	3.69	Vertical	1000000.00	-10.80
7439.736842	43.38	54.00	-10.62	61.00	3.74	Vertical	1000000.00	-5.16
9923.684211	44.39	54.00	-9.61	85.00	1.95	Vertical	1000000.00	0.20
10083.15789	42.57	54.00	-11.43	143.00	1.35	Vertical	1000000.00	0.65
12040	44.36	54.00	-9.64	114.00	3.79	Horizontal	1000000.00	3.24
12401.31579	42.53	54.00	-11.47	32.00	1.95	Vertical	1000000.00	3.48

Transmit at High Channel (Y-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 2:54:44 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	High Ch Y-axis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	53.45	74.00	-20.55	121.00	1.11	Vertical	1000000.00	-19.17

Average (PASS) (1)

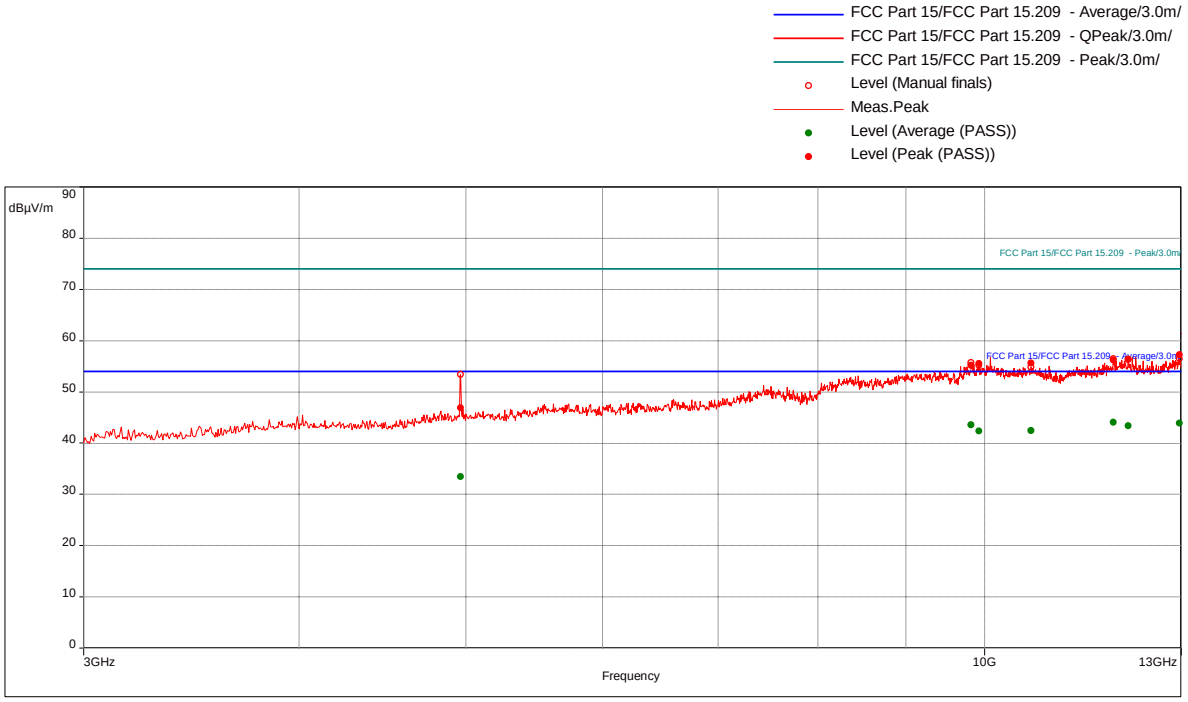
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	27.80	54.00	-26.20	121.00	1.11	Vertical	1000000.00	-19.17

Transmit at High Channel (Y-axis), 3-13 GHz

Test Information:

Date and Time	1/30/2020 1:41:02 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	High Ch Y-axjis 3-13 GHz

Graph:



Results:

Peak (PASS) (7)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4965.526316	46.89	74.00	-27.11	267.00	3.30	Horizontal	1000000.00	-10.78
9818.947368	55.19	74.00	-18.81	328.00	1.05	Horizontal	1000000.00	-0.06
9918.157895	55.56	74.00	-18.44	329.00	1.70	Horizontal	1000000.00	0.18
10637.63158	55.65	74.00	-18.35	71.00	3.59	Vertical	1000000.00	0.67
11875.78947	56.21	74.00	-17.79	84.00	3.00	Vertical	1000000.00	3.04
12113.15789	56.26	74.00	-17.74	275.00	1.60	Horizontal	1000000.00	3.23
12970.26316	57.25	74.00	-16.75	231.00	2.30	Vertical	1000000.00	4.08

Average (PASS) (7)

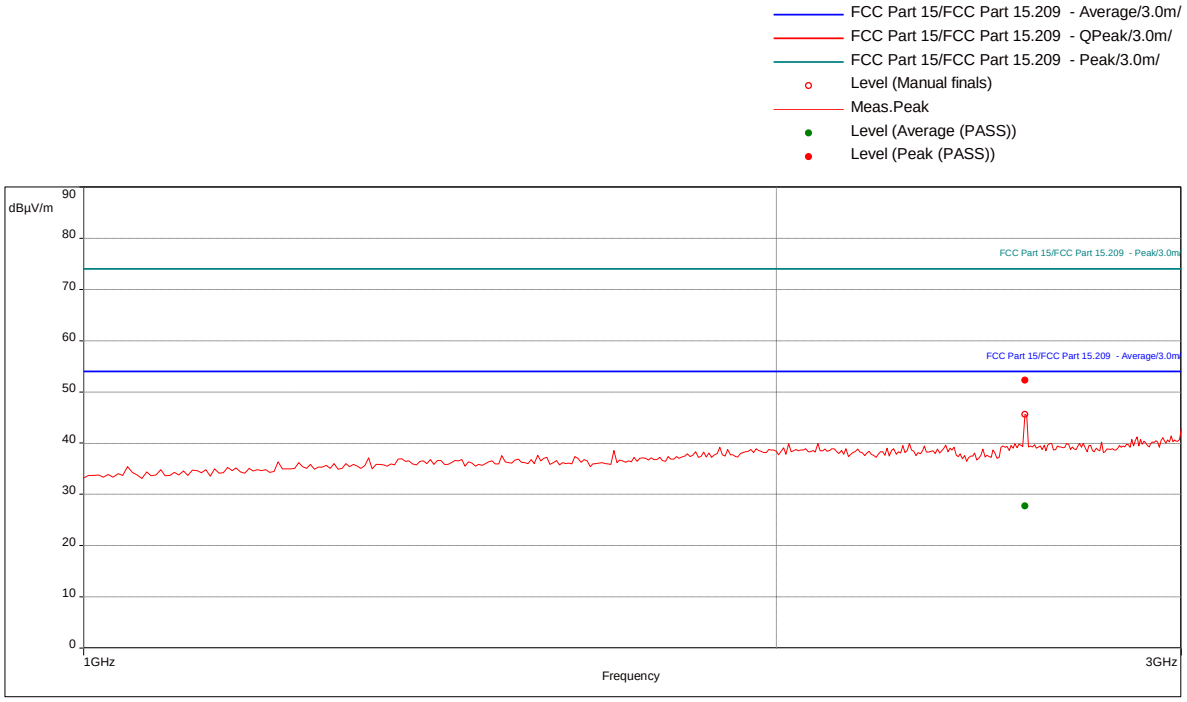
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4965.526316	33.42	54.00	-20.58	267.00	3.30	Horizontal	1000000.00	-10.78
9818.947368	43.57	54.00	-10.43	328.00	1.05	Horizontal	1000000.00	-0.06
9918.157895	42.33	54.00	-11.67	329.00	1.70	Horizontal	1000000.00	0.18
10637.63158	42.42	54.00	-11.58	71.00	3.59	Vertical	1000000.00	0.67
11875.78947	44.06	54.00	-9.94	84.00	3.00	Vertical	1000000.00	3.04
12113.15789	43.40	54.00	-10.60	275.00	1.60	Horizontal	1000000.00	3.23
12970.26316	43.90	54.00	-10.10	231.00	2.30	Vertical	1000000.00	4.08

Transmit at High Channel (Z-axis), 1-3 GHz

Test Information:

Date and Time	1/30/2020 2:46:27 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	High Ch Z-axjis 1-3 GHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	52.24	74.00	-21.76	91.00	1.00	Vertical	1000000.00	-19.17

Average (PASS) (1)

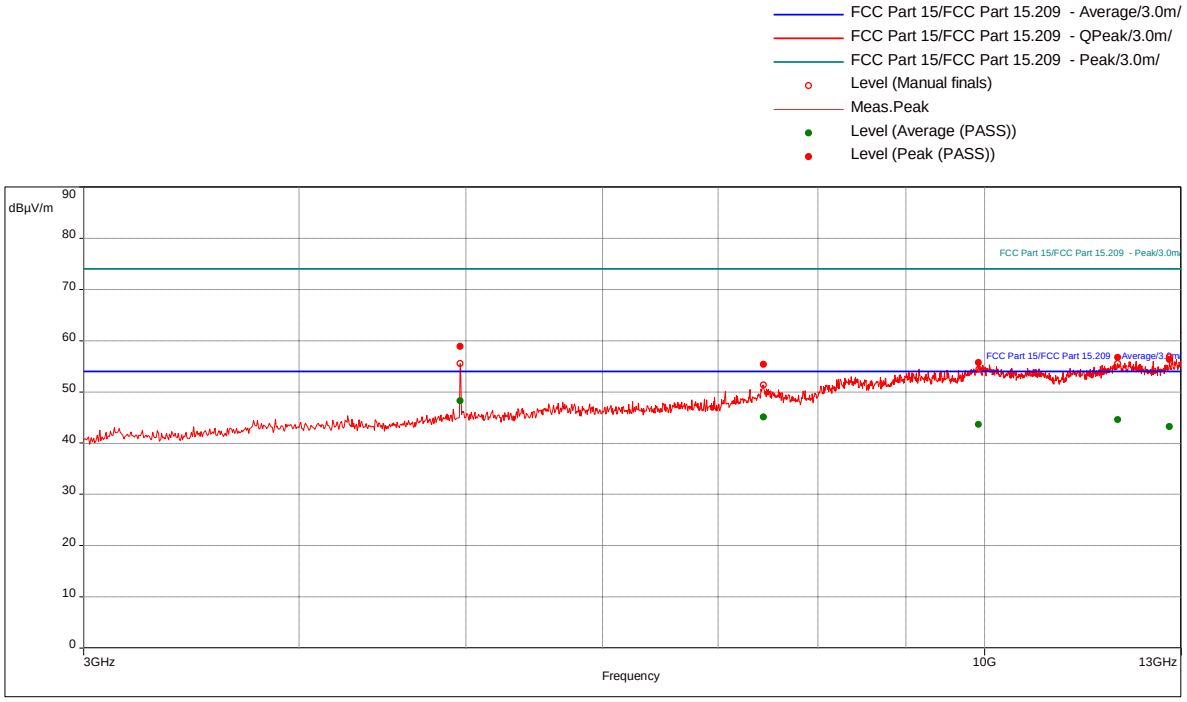
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2565.789474	27.76	54.00	-26.24	91.00	1.00	Vertical	1000000.00	-19.17

Transmit at High Channel (Z-axis), 3-13 GHz

Test Information:

Date and Time	1/30/2020 2:14:31 PM
Client and Project Number	Myolex
Engineer	Kouma Sinn
Temperature	22C
Humidity	12%
Atmospheric Pressure	1017mbar
Comments	High Ch Z-axjis 3-13 GHz

Graph:



Results:

Peak (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4960	58.82	74.00	-15.18	40.00	1.35	Horizontal	1000000.00	-10.80
7440.263158	55.36	74.00	-18.64	172.00	2.35	Vertical	1000000.00	-5.16
9917.105263	55.68	74.00	-18.32	62.00	1.85	Horizontal	1000000.00	0.17
11940.52632	56.72	74.00	-17.28	143.00	2.75	Horizontal	1000000.00	3.15
12802.10526	56.29	74.00	-17.71	33.00	1.55	Vertical	1000000.00	3.70

Average (PASS) (5)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
4960	48.24	54.00	-5.76	40.00	1.35	Horizontal	1000000.00	-10.80
7440.263158	45.12	54.00	-8.88	172.00	2.35	Vertical	1000000.00	-5.16
9917.105263	43.64	54.00	-10.36	62.00	1.85	Horizontal	1000000.00	0.17
11940.52632	44.57	54.00	-9.43	143.00	2.75	Horizontal	1000000.00	3.15
12802.10526	43.22	54.00	-10.78	33.00	1.55	Vertical	1000000.00	3.70

Transmit at Low, Mid, and High Channels on all three axis, 13-25 GHz

Radiated Emissions

Company: Myolex, Inc. | Antenna & Cables: LF | Bands: N, LF, HF, SHF
Model #: mScan | Antenna: 145-029 | EMC04
Serial #: FCC1QLE | Cable(s): CBLHF2021-2M-2 | CBLHF2012-2M-1
Engineers: Kouma Sinn | Location: 10M | Barometer: DS40 | Filter: REA006 REA004
Project #: G104228375 | Date(s): 02/07/20
Standard: 15.247/RSS-247 | Temp/Humidity/Pressure: 23C 25% 983mbar
Receiver: ROS005-1 | Limit Distance (m): 3
PreAmp: PRE8 | Test Distance (m): 0.1
PreAmp Used? (Y or N): Y | Voltage/Frequency: Internal Battery | Frequency Range: 13-25 GHz
Net = Reading (dBuV/m) + Antenna Factor (dB1/m) + Cable Loss (dB) - Preamp Factor (dB) - Distance Factor (dB)
Peak: PK Quasi-Peak: QP Average: AVG RMS: RMS; NF = Noise Floor, RB = Restricted Band; Bandwidth denoted as RBW/VBW

Detector Type	Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Distance Factor dB	Net dB(uV/m)	Limit dB(uV/m)	Margin dB	Bandwidth	FCC	IC
Manually scan was performed at a distance of 10 cm with no emissions were detected above the measuring equipment noise floor.													

Test Personnel: Vathana F. Ven VFV — Test Date: 01/25/2020

Kouma Sinn KPS — 01/30/2020

Supervising/Reviewing Engineer: (Where Applicable) N/A

Product Standard: CFR47 FCC Part 15.247 RSS-247 — Limit Applied: See report section 10.3

Input Voltage: Internal Battery

Pretest Verification w/ Ambient Signals or BB Source: BB Source — Ambient Temperature: 22, 23 ºC

Relative Humidity: 12, 22 %

Atmospheric Pressure: 1017, 1017mbars

Deviations, Additions, or Exclusions: None

11 Digital Device and Receiver Radiated Spurious Emissions

11.1 Method

Tests are performed in accordance with FCC Part 15 Subpart B, ICES 003, and ANSI C 63.4.

TEST SITE: 10m ALSE

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

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

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

11.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/13/2019	11/13/2020
HORN3'	HORN ANTENNA	EMCO	3115	9610-4980	05/30/2019	05/30/2020
145416'	Cables 145-420 145-423 145-425 145-408	Huber + Suhner	3m Track B cables	multiple	07/22/2019	07/22/2020
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/06/2019	06/06/2020
PRE11'	50dB gain pre-amp	Pasternack	PRE11	PRE11	08/30/2019	08/30/2020
145145'	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	06/12/2019	06/12/2020
BONN001'	1-18GHz low noise pre-amp	Bonn	BLMA 0118-M	1811749	07/11/2019	07/11/2020
145-410'	Cables 145-420 145-421 145-422 145-406	Huber + Suhner	10m Track A Cables	multiple	07/22/2019	07/22/2020

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	3.18.0.16

11.3 Results:

The sample tested was found to Comply.

§15.109 Radiated emission limits.

The field strength of radiated emissions form unintentional radiators at a distance of 3 meters shall not exceed the following values.

Frequency of emission (MHz)	Field strength (microvolts/meter)	Field strength (dBµV/m)
30-88	100	40.00
88-216	150	43.52
216-960	200	46.02
Above 960	500	54.00

11.4 Setup Photographs:

Photos not available

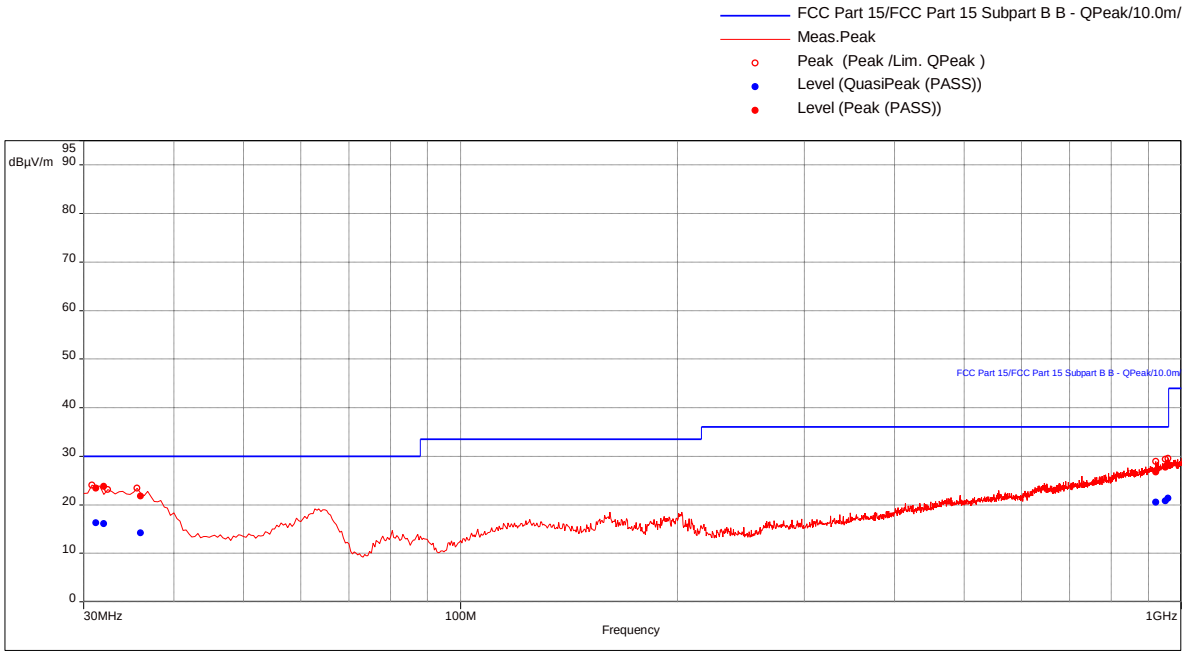
11.5 Plots/Data:

30-1000 MHz

Test Information:

Date and Time	1/25/2020 10:59:47 AM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Normal Operation - RE 30-1000MHz SA mode

Graph:



Results:

QuasiPeak (PASS) (6)

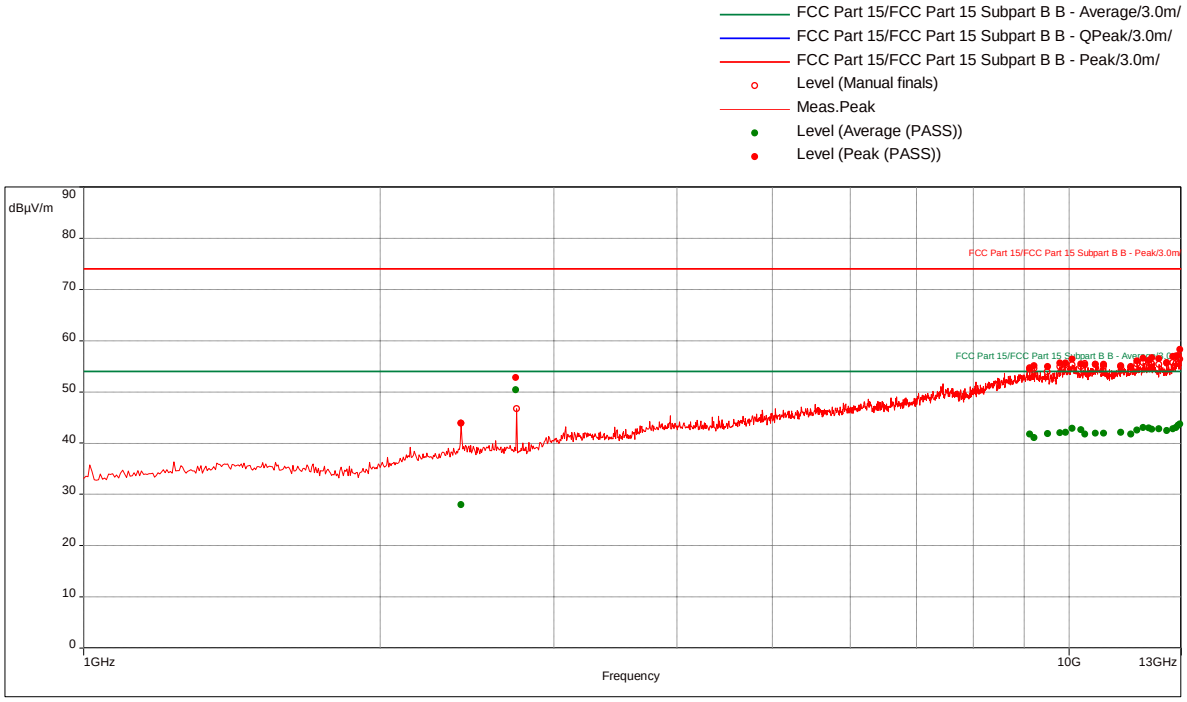
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
31.02105263	16.26	30.00	-13.74	84.00	3.21	Vertical	120000.00	-13.28
31.95789474	16.09	30.00	-13.91	145.00	1.02	Vertical	120000.00	-13.92
36.07368421	14.14	30.00	-15.86	292.00	2.39	Vertical	120000.00	-16.86
921.5368421	20.47	36.00	-15.53	150.00	3.49	Vertical	120000.00	-5.97
950.7789474	20.76	36.00	-15.24	173.00	1.99	Vertical	120000.00	-5.62
958.9789474	21.31	36.00	-14.69	129.00	1.60	Vertical	120000.00	-5.34

1-13 GHz

Test Information:

Date and Time	1/25/2020 1:02:22 PM
Client and Project Number	Myolex - G104228375
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	22%
Atmospheric Pressure	1017 mB
Comments	Normal Operation - RE 1 to 13 GHz SA mode

Graph:



Results:

Peak (PASS) (24)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2414.210526	43.85	74.00	-30.15	359.00	1.11	Vertical	1000000.00	-19.78
2747.368421	52.83	74.00	-21.17	172.00	2.55	Horizontal	1000000.00	-19.13
9122.631579	54.68	74.00	-19.32	143.00	1.45	Horizontal	1000000.00	-1.61
9216.578947	55.13	74.00	-18.87	233.00	1.05	Horizontal	1000000.00	-1.55
9513.421053	54.90	74.00	-19.10	11.00	2.20	Vertical	1000000.00	-0.61
9788.421053	55.62	74.00	-18.38	335.00	2.50	Horizontal	1000000.00	-0.15
9922.105263	55.57	74.00	-18.43	359.00	1.00	Horizontal	1000000.00	0.19
10078.68421	56.41	74.00	-17.59	188.00	1.10	Vertical	1000000.00	0.64
10285	55.44	74.00	-18.56	0.00	2.75	Vertical	1000000.00	0.75
10381.84211	55.26	74.00	-18.74	303.00	2.60	Vertical	1000000.00	0.71
10638.42105	55.36	74.00	-18.64	159.00	2.95	Vertical	1000000.00	0.67
10842.63158	55.37	74.00	-18.63	231.00	3.44	Horizontal	1000000.00	0.68
11284.47368	54.90	74.00	-19.10	239.00	3.79	Horizontal	1000000.00	1.32
11559.21053	54.80	74.00	-19.20	209.00	3.44	Horizontal	1000000.00	1.77
11726.05263	56.02	74.00	-17.98	83.00	1.15	Vertical	1000000.00	2.57
11892.10526	56.53	74.00	-17.47	33.00	1.35	Horizontal	1000000.00	3.08
12050	56.13	74.00	-17.87	136.00	2.10	Horizontal	1000000.00	3.24
12138.15789	56.66	74.00	-17.34	70.00	3.98	Vertical	1000000.00	3.21
12344.21053	56.44	74.00	-17.56	210.00	1.05	Horizontal	1000000.00	3.41
12569.47368	55.62	74.00	-18.38	343.00	3.49	Horizontal	1000000.00	3.32
12743.42105	56.89	74.00	-17.11	157.00	1.05	Vertical	1000000.00	3.58
12846.84211	56.99	74.00	-17.01	356.00	2.00	Horizontal	1000000.00	3.82
12906.84211	57.08	74.00	-16.92	165.00	2.10	Vertical	1000000.00	3.91
12958.42105	58.30	74.00	-15.70	127.00	2.30	Horizontal	1000000.00	4.04

Average (PASS) (24)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2414.210526	27.94	54.00	-26.06	359.00	1.11	Vertical	1000000.00	-19.78
2747.368421	50.41	54.00	-3.59	172.00	2.55	Horizontal	1000000.00	-19.13
9122.631579	41.72	54.00	-12.28	143.00	1.45	Horizontal	1000000.00	-1.61
9216.578947	41.09	54.00	-12.91	233.00	1.05	Horizontal	1000000.00	-1.55
9513.421053	41.83	54.00	-12.17	11.00	2.20	Vertical	1000000.00	-0.61
9788.421053	42.01	54.00	-11.99	335.00	2.50	Horizontal	1000000.00	-0.15
9922.105263	42.08	54.00	-11.92	359.00	1.00	Horizontal	1000000.00	0.19
10078.68421	42.88	54.00	-11.12	188.00	1.10	Vertical	1000000.00	0.64
10285	42.65	54.00	-11.35	0.00	2.75	Vertical	1000000.00	0.75
10381.84211	41.79	54.00	-12.21	303.00	2.60	Vertical	1000000.00	0.71
10638.42105	41.97	54.00	-12.03	159.00	2.95	Vertical	1000000.00	0.67
10842.63158	41.89	54.00	-12.11	231.00	3.44	Horizontal	1000000.00	0.68
11284.47368	42.06	54.00	-11.94	239.00	3.79	Horizontal	1000000.00	1.32
11559.21053	41.79	54.00	-12.21	209.00	3.44	Horizontal	1000000.00	1.77
11726.05263	42.54	54.00	-11.46	83.00	1.15	Vertical	1000000.00	2.57
11892.10526	43.02	54.00	-10.98	33.00	1.35	Horizontal	1000000.00	3.08
12050	42.99	54.00	-11.01	136.00	2.10	Horizontal	1000000.00	3.24
12138.15789	42.71	54.00	-11.29	70.00	3.98	Vertical	1000000.00	3.21
12344.21053	42.74	54.00	-11.26	210.00	1.05	Horizontal	1000000.00	3.41
12569.47368	42.46	54.00	-11.54	343.00	3.49	Horizontal	1000000.00	3.32
12743.42105	42.79	54.00	-11.21	157.00	1.05	Vertical	1000000.00	3.58
12846.84211	43.00	54.00	-11.00	356.00	2.00	Horizontal	1000000.00	3.82
12906.84211	43.44	54.00	-10.56	165.00	2.10	Vertical	1000000.00	3.91
12958.42105	43.70	54.00	-10.30	127.00	2.30	Horizontal	1000000.00	4.04

Test Personnel:	Vathana F. Ven VFV	Test Date:	01/25/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC Part 15 Subpart B, ICES-003	Limit Applied:	See report section 11.3
Input Voltage:	120VAC 60Hz	Ambient Temperature:	23 ºC
Pretest Verification w/ Ambient Signals or BB Source:	BB Source	Relative Humidity:	22 %
		Atmospheric Pressure:	1017 mbars

Deviations, Additions, or Exclusions: None

12 AC Mains Conducted Emissions

12.1 Method

Tests are performed in accordance with FCC Part 15 Subpart B, ICES 003, and ANSI C 63.4.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
AC Line Conducted Emissions	150 kHz - 30 MHz	1.2 dB	3.4dB
Telco Port Emissions	150 kHz - 30 MHz	2.8 dB	5.0dB

As shown in the table above our conducted emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculations

The following is how net line-conducted readings were determined:

NF = RF + LF + CF + AF
Where NF = Net Reading in dBμV
RF = Reading from receiver in dBμV
LF = LISN or ISN Correction Factor in dB
CF = Cable Correction Factor in dB
AF = Attenuator Loss Factor in dB

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

NF = RF + LF + CF + AF = 28.5 + 0.2 + 0.4 + 20.0 = 49.1 dBμV
$UF = 10^{(49.1\ dB\mu V / 20)}$ = 285.1 μV/m

Alternately, when C5 Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. “TF” is the LISN or ISN Correction Factor; “PA+CL” are Attenuator and Cable Loss. These are already accounted for in the “Level” column.

12.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
LISN34'	LISN - CISPR16 Compliant 9kHz-30MHz	Com-Power	LI-215A	191956	04/17/2019	04/17/2020
LISN35'	LISN 50uH/250uH 50ohm	Com Power	LI-215A	191960	05/05/2019	05/05/2020
HEW42'	Power Source - 16A	Hewlett Packard	6843A	3531A00114	VBU	Verified
DS27'	Attenuator, 20dB	Mini Circuits	20dB, 50 ohm	DS27	10/25/2019	10/25/2020
CBLBNC2012-4'	50 Ohm Coaxial Cable	Pomona	RG58C/U	CBLBCN2012-4	05/07/2019	05/07/2020
DAV002'	Weather Station	Davis Instruments	7400	PE80519A93	06/13/2019	06/13/2020
ROS002'	9kHz to 3GHz EMI Test Receiver	Rohde & Schwartz	ESCI 1166.5950K03	100067	06/12/2019	06/12/2020
HEW63'	Generator, Signal	Hewlett Packard	8648C	3847A05291	04/26/2019	04/26/2020

Software Utilized:

Name	Manufacturer	Version
Compliance 5	Teseq	5.26.46.46

12.3 Results:

The sample tested was found to Comply.

§15.207 Conducted limits.

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

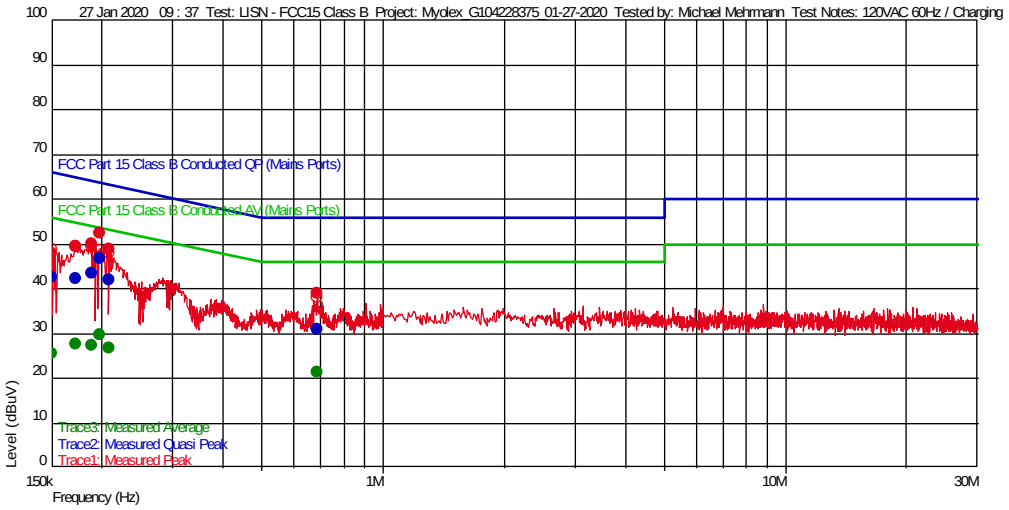
12.4 Setup Photographs:

12.5 Plots/Data:

Test Information

Test Details	User Entry	Additional Information
Test:	LISN - FCC15 Class B	
Project:	Myolex_G104228375_01-27-2020	
Test Notes:	120VAC 60Hz / Charging	
Temperature:	22	
Humidity:	21% 992MBARS	
Tested by:	Michael Mehrmann	
Test Started:	27 Jan 2020 09 : 37	

Prescan Emission Graph



Measured Peak Value
Measured Quasi Peak Value
Measured Average Value
Maximum Value of Mast and Turntable
Swept Peak Data
Swept Quasi Peak Data
Swept Average Data

Emissions Test Data

Trace2: Measured Quasi Peak

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
685.5 k	31.03	0.040	20.155	56.000	-24.97	9 k		N
150.0 k	42.64	0.450	20.094	66.000	-23.36	9 k		L1
172.95 k	42.37	0.276	20.095	64.818	-22.45	9 k		L1
208.65 k	41.98	0.068	20.097	63.259	-21.28	9 k		L1
189.95 k	43.45	0.146	20.096	64.039	-20.59	9 k		L1
198.45 k	46.64	0.082	20.097	63.675	-17.03	9 k		N

Trace3: Measured Average

Frequency(Hz)	Level(dBuV)	TF	PA+CL	Limit(dBuV)	Margin(dBuV)	RBW(Hz)	Comment	LINE
150.0 k	25.39	0.450	20.094	56.000	-30.61	9 k		L1
172.95 k	27.62	0.276	20.095	54.818	-27.20	9 k		L1
189.95 k	27.45	0.146	20.096	54.039	-26.58	9 k		L1
208.65 k	26.75	0.068	20.097	53.259	-26.51	9 k		L1
685.5 k	21.21	0.040	20.155	46.000	-24.79	9 k		N
198.45 k	29.60	0.082	20.097	53.675	-24.08	9 k		N

Test Personnel:	Michael Mehrmann M. M.	Test Date:	01/27/2020
Supervising/Reviewing Engineer: (Where Applicable)	N/A		
Product Standard:	FCC 15 Subpart B, ICES-003	Limit Applied:	All Class B
Input Voltage:	120VAC 60Hz		
Pretest Verification w/ Ambient Signals or BB Source:	**BB Source**	Ambient Temperature:	22 ºC
		Relative Humidity:	21 %
		Atmospheric Pressure:	992 mbars

Deviations, Additions, or Exclusions: None

13 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	02/12/2020	104228375BOX-001	KPS	VFV	Original Issue
1	06/26/2020	104228375BOX-001	KPS	VFV	See Note # 1 below
2	07/01/2020	104228375BOX-001	KPS	VFV	See Note # 2 below

Note # 1: The following corrections were made to the report.

a) Added 'EIRP' for the maximum output power in 'Radio/Receiver Characteristics' table on page 6.
b) Referenced ANSI C63.10 Section 11.3 in report section 6.1 on page 8.
c) Removed 36 dBm EIRP output power limit from report section 6.3 on page 10.
d) Corrected the output power to 30 dBm, test distance from 10m to 3m, and included output power calculation reference in report section 6.5 on page 14.
e) Removed 14 dBm EIRP power spectral density limit from report section 8.3 on page 26.
f) Corrected the power spectral density limit to 8 dBm, test distance from 10m to 3m, included power spectral density calculation reference in report section 8.5 page 30.
g) Included Absorber-lined Shielded Enclosures (ALSE) in Site Description in report section 6.1 on page 8.

Note # 2: The following corrections were made to the report.

a) Corrected output power reading by, Power = EIRP – AF (dBi) in 'Radio/Receiver Characteristics' table on page 6.
b) Corrected output power reading by, Power = EIRP – AF (dBi) on page 14.
c) Corrected power spectral density (PSD) by PSD = EIRP – AF (dBi) on page 30.