



## Test Report

Prepared for: Tag-N-Trac

Model: SLB1.1

Serial Number: NA

Project No: p24b0009

Test Results: Pass

To

FCC Part 15.247

and

RSS-247: Issue 3 (August 2023)

Date of Issue: January 24, 2025

On the behalf of the applicant:

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Attention of:

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ANAB Cert#: AT-2901  
FCC Site Reg. #US2901  
ISED Site Reg. #2044A-2

Reviewed / Authorized By:

John Michalowicz, Test Engineer

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### Test Results Summary

Test Date Range: December 27<sup>th</sup>, 2024 – December 30<sup>th</sup>, 2024

Specification		Test Name	Pass, Fail, N/A	Comments
FCC	RSS			
15.247(b)	Section 5.4(d)	Output Power	Pass	
15.247(d)	Section 5.5	Conducted Spurious Emissions	N/A	EUT does not have a conducted port
15.247(d), 15.209(a), 15.205	Section 5.5 / RSS-GEN Section 8.9	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Section 5.5	Emissions At Band Edges	Pass	
15.247(a)(2)	Sections 5.2(a)	Occupied Bandwidth	Pass	
15.247(e)	Section 5.2(b)	Transmitter Power Spectral Density	Pass	
15.247(a)	Section 5.1 (c)	Dwell Time	N/A	The EUT is a DTS device
15.247(a)	Section 5.1 (c)	Number of Hopping Channels	N/A	The EUT is a DTS device
15.247(a)	Section 5.1 (b)	Channel Separation	N/A	The EUT is a DTS device
15.207	RSS-GEN Section 8.8	A/C Powerline Conducted Emissions	N/A	The EUT is a battery-operated device
<b>Method Deviations/Additions:</b> No				

Statements of conformity are reported as:

- Pass - the measured value is below the acceptance limit, *acceptance limit = test limit*.
- Fail - the measured value is above the acceptance limit, *acceptance limit = test limit*.

References/Methods	Description
ANSI C63.4-2014	Method and Measurements of Radio-Noise Emissions from low-Voltage Electrical and Electronic Equipment in the range 9kHz to 40GHz.
ANSI C63.10:2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
558074 D01 15.247 Meas Guidance v05r02	Guidance for Compliance Measurements on DTS, FHSS, and Hybrid System Devices Operating Under Section 15.247 of the FCC Rules
ISO/IEC 17025:2017	General requirements for the Competence of Testing and Calibrations Laboratories

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### Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	January 24 <sup>th</sup> 2025	John Michalowicz	Original Document
2.0	March 17, 2025	John Michalowicz	Updated the bandwidth values. Included the distance correction calculation. Updated the high channel EIRP measurement

*Current revision of the test report replaces any prior versions. Only the current version of the test report is valid.*

### EUT Description

<b>Model:</b>	<b>SLB1.1</b>
<b>Serial:</b>	<b>NA</b>
<b>Firmware:</b>	<b>1.8</b>
<b>Software:</b>	<b>NA</b>
<b>Description:</b>	<b>Flexible BLE tracker tag used for packages</b>
<b>Additional Information:</b>	<b>The device is powered using an internal non-replaceable battery at a nominal voltage of 3 vdc</b> <b>Radio Frequency Range and Operational Info: 2402 – 2480 MHz</b> <b>Usage: Portable</b>
<b>Receipt of Sample(s):</b>	<b>December 16<sup>th</sup>, 2024</b>
<b>EUT Condition:</b>	<b>Visual Damage No</b> <b>State of Development</b> Engineering Sample/Prototype



**The applicant has been cautioned as to the following**

#### **15.21 - Information to User**

The user's manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **15.27(a) - Special Accessories**

Equipment marked to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer without an additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

#### **Authorization Requirements**

Intentional Radios may require authorization covered under the following rule parts or standards:

-47 CFR Part 2 Subpart J

-RSS-Gen — General Requirements for Compliance of Radio Apparatus

*Note: These notices are specific to the methods and standards related to the testing within this report. Customers should also consider and review additional legal regulations for import/export documentation and labeling for the countries and geographies under consideration by the manufacturer.*

## Test and Measurement Data

### Subpart 2.1033(b)

All tests and measurement data shown were performed in accordance with FCC Rule Parts: 15.247.

All tests and measurement data shown are deemed satisfactory evidence of compliance with Industry Canada Radio Standards Specification RSS-Gen and RSS-247.

## Standard Engineering Practices

Unless otherwise indicated, the procedures contained in ANSI C63.10 and ANSI C63.4 were observed during testing.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing. Measurement results, unless otherwise noted, are worst case measurement.

## Standard Test Conditions and Engineering Practices

Unless otherwise indicated in the specific measurement results, the ambient temperature was maintained within the range of 10° to 40°C (50° to 104°F) and the relative humidity levels were in the range of 10% to 90%.

Environmental Conditions		
Temperature (°C)	Humidity (%)	Barometric Pressure (mbar)
20.3 - 23	23.6 – 26.3	969.1 – 976.6

## Test Setup and Modes of Operation

### EUT Operation during Tests

The EUT was placed into a constant transmit mode using a test jig and software provided by the manufacturer. The jig was removed once the device was programmed for proper test transmission

#### Accessories:

Qty	Description	Manufacturer	Model	S/N
1	Test Jig	Tag N Trac	NA	NA
1	Laptop	Lenovo	Idea Pad S	NA

**Cables:** NA

**Modifications to EUT(s) (Y/N): N**

**15.203: Antenna Requirement:**

- The antenna is permanently attached to the EUT
- The antenna uses a unique coupling
- The EUT must be professionally installed
- The antenna requirement does not apply

The antenna gain stated by the manufacturer is 4.28 dBi

## Output Power

**Engineer: John Michalowicz**

**Test Date: 12/27/24**

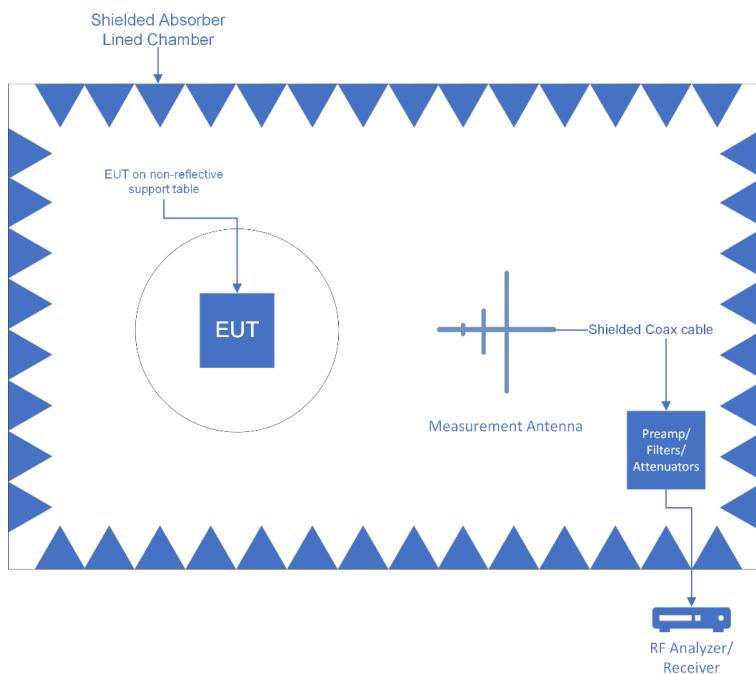
## Test Procedure

### RADIATED METHOD

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the requirements for Output Power.

Distance correction formula is  $20\log(d_1/d_2) = 20\log(3/1) = 9.54$

### Test Setup



The Spectrum Analyzer was set to the following:

$RBW \geq DTS$  Bandwidth

$VBW \geq 3 \times RBW$

Span  $\geq 3 \times RBW$

Sweep time = auto couple

Detector = peak

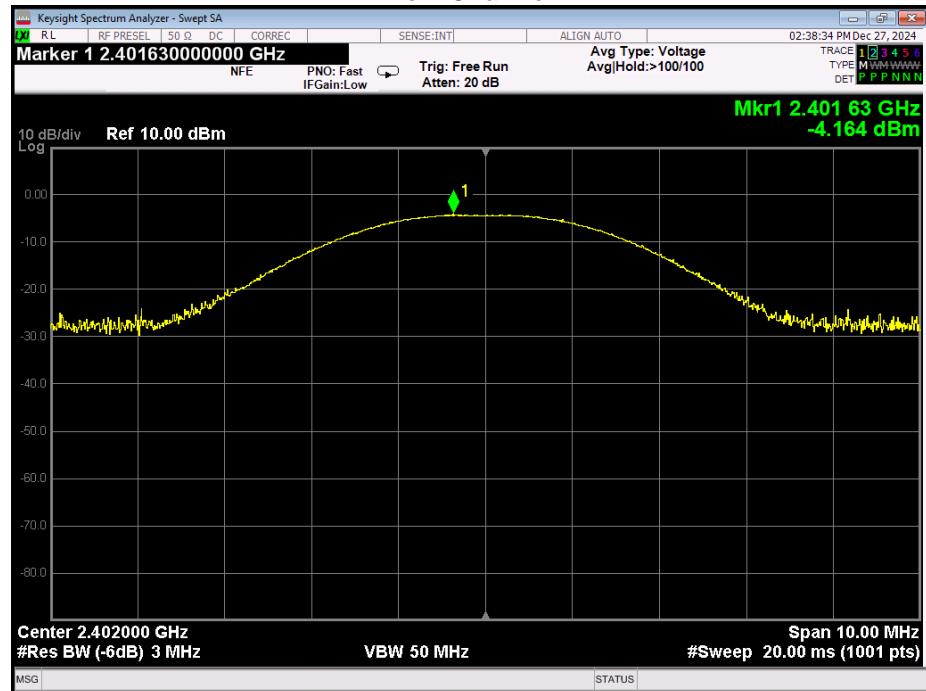
Trace Mode = max hold

The RF output power was measured using the spectrum analyzer's marker peak function

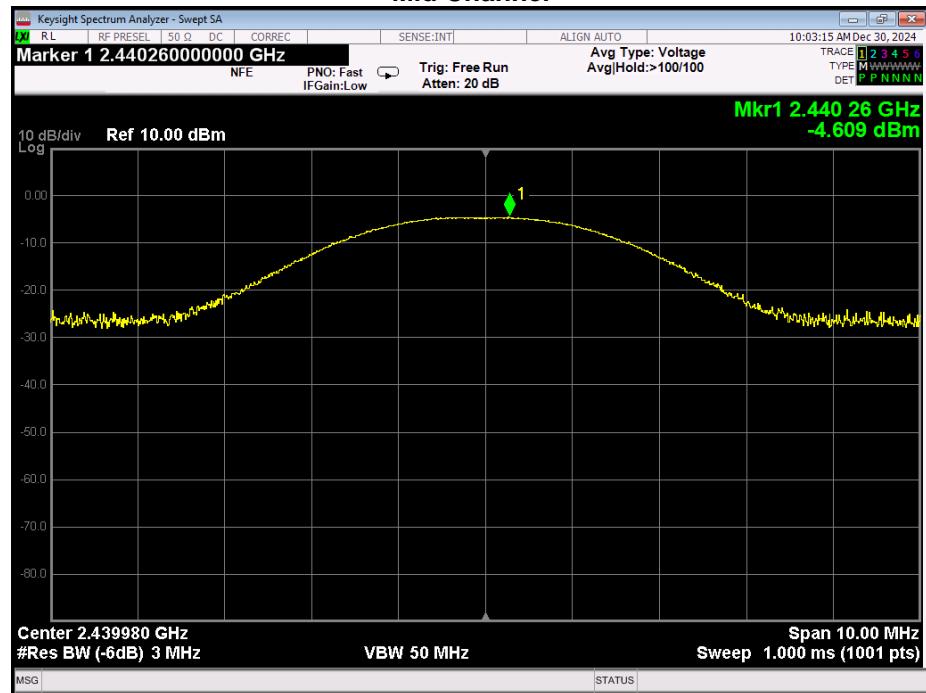
**Transmitter Output Power Summary Table**

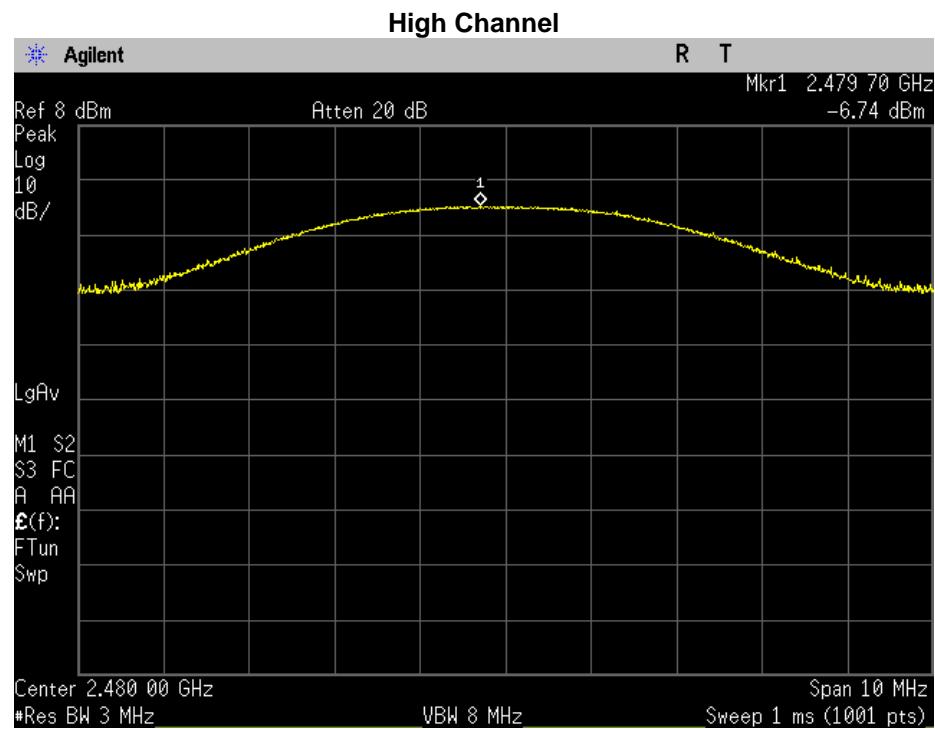
Tuned Frequency (MHz)	Mode of Operation	Measured Value (dBm)	Distance correction (dB)	Output Power (dBm)	Specification Limit	Result
2402	1Mbps	-4.2	9.54	5.38	1 W (30 dBm)	Pass
2440	1Mbps	-4.6	9.54	4.93	1 W (30 dBm)	Pass
2480	1Mbps	-6.7	9.54	2.8	1 W (30 dBm)	Pass

### Low Channel



### Mid Channel





## Radiated Spurious Emissions

Engineer: John Michalowicz

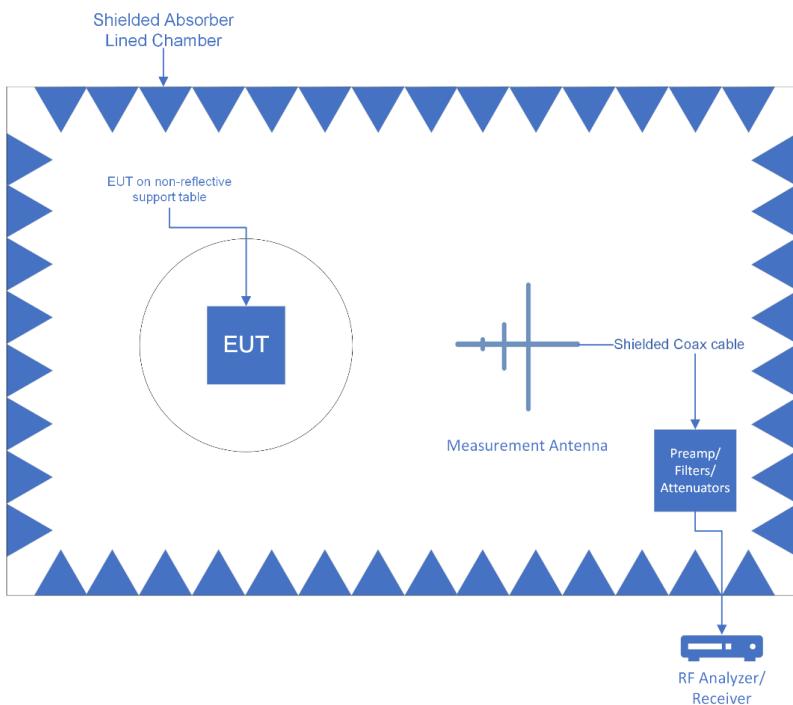
Test Date: 12/30/24

### Test Procedure

#### Radiated Spurious Emissions: 30 – 1000 MHz and Above 1GHz

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Spurious Emissions. All emissions across the required range were evaluated. No emissions were observed from 3.2 GHz to 25 GHz. The fundamental emission can be observed on pages 20 – 22 below. The fundamental frequency is not bound by the spurious requirements.

### Basic Test Setup



	Settings Below 1GHz	Settings Above 1GHz
<b>RBW</b>	120 kHz	1 MHz
<b>VBW</b>	300 kHz	3 MHz
<b>Detector</b>	Quasi Peak	Peak / Average

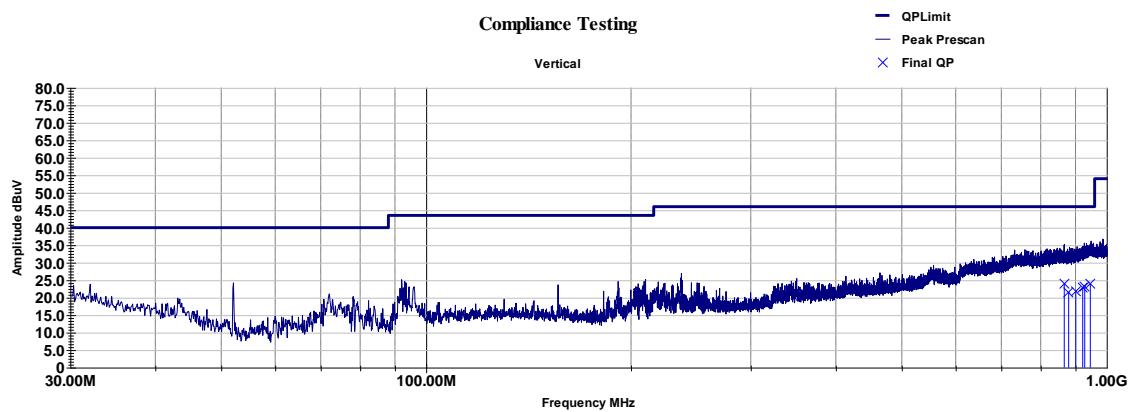
### Sample Calculations

Corrected Value = Measured Value + Correction factor

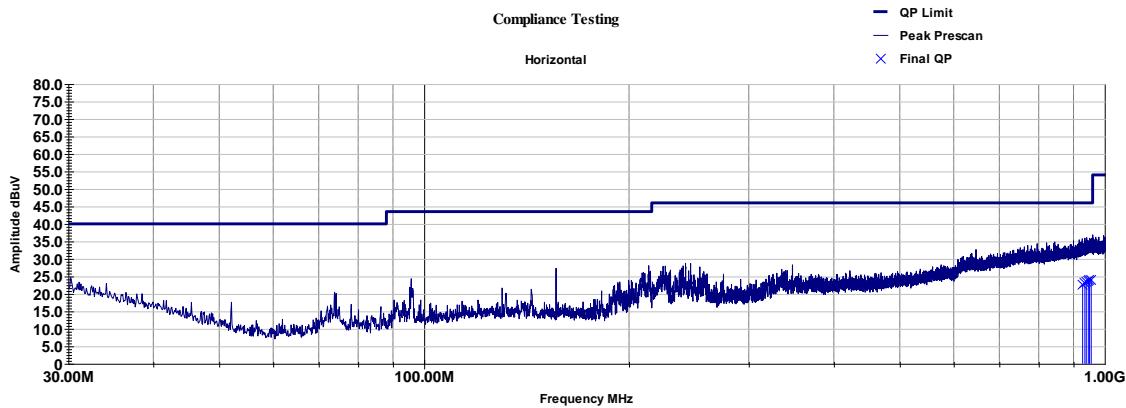
Correction factor = Antenna Correction Factor + Cable loss + Preamp/Attenuator Factor

### Radiated Emissions 30-1000MHz

30 - 1000 MHz\_Low Channel

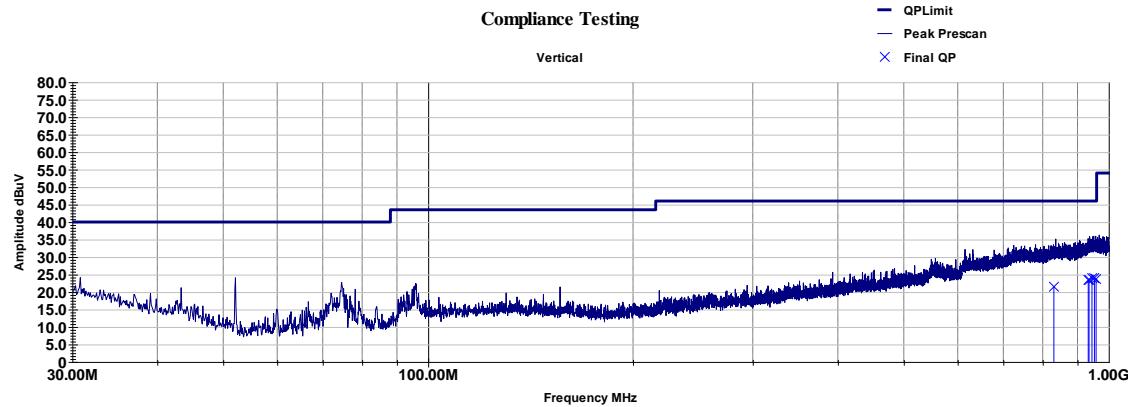


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
866.187	224.00	325.00	27.47	-3.41	24.10	46.00	-21.90
879.273	279.00	342.00	25.11	-3.51	21.60	46.00	-24.40
900.69	165.00	325.00	24.95	-3.04	21.90	46.00	-24.10
922.25	339.00	100.00	24.98	-2.07	22.90	46.00	-23.10
928.176	172.00	285.00	24.91	-1.72	23.20	46.00	-22.80
946.058	260.00	255.00	25.01	-1.10	23.90	46.00	-22.10
Final = Raw + Path Loss							
Margin = Final - Limit							

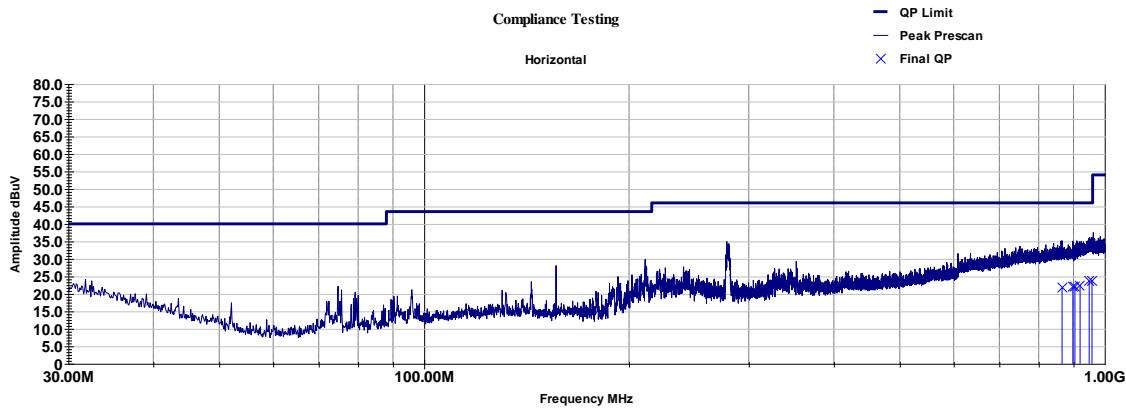


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
928.043	33.00	242.00	24.96	-2.22	22.70	46.00	-23.30
935.139	78.00	105.00	25.09	-1.96	23.10	46.00	-22.90
939.523	85.00	381.00	25.01	-1.58	23.40	46.00	-22.60
946.167	314.00	390.00	25.03	-1.29	23.70	46.00	-22.30
950.147	286.00	325.00	25.15	-1.16	24.00	46.00	-22.00
955.38	81.00	351.00	25.23	-1.13	24.10	46.00	-21.90
Final = Raw + Path Loss							
Margin = Final - Limit							

30 - 1000 MHz\_Mid Channel

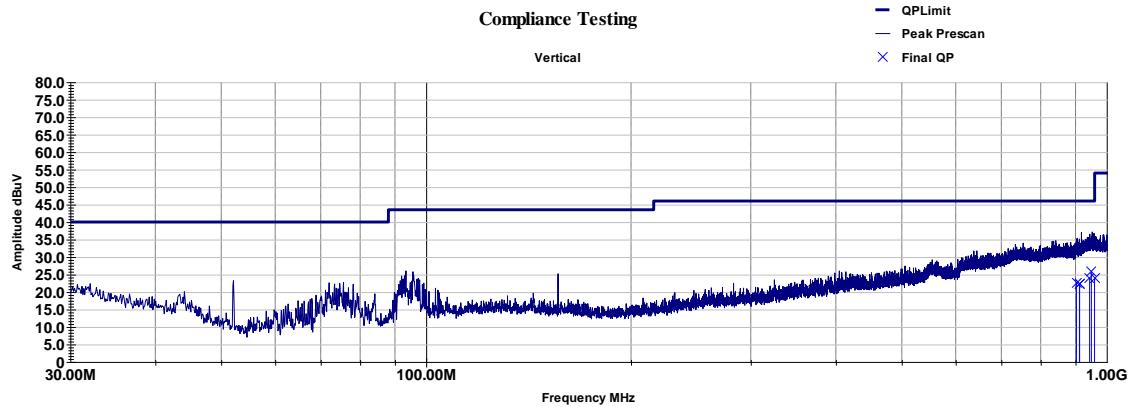


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
830.764	69.00	325.00	25.15	-3.61	21.50	46.00	-24.50
932.878	55.00	338.00	24.92	-1.59	23.30	46.00	-22.70
935.554	168.00	325.00	24.90	-1.51	23.40	46.00	-22.60
944.803	210.00	329.00	25.03	-1.13	23.90	46.00	-22.10
952.814	271.00	177.00	25.14	-1.14	24.00	46.00	-22.00
958.318	90.00	359.00	24.88	-1.21	23.70	46.00	-22.30
Final = Raw + Path Loss							
Margin = Final - Limit							

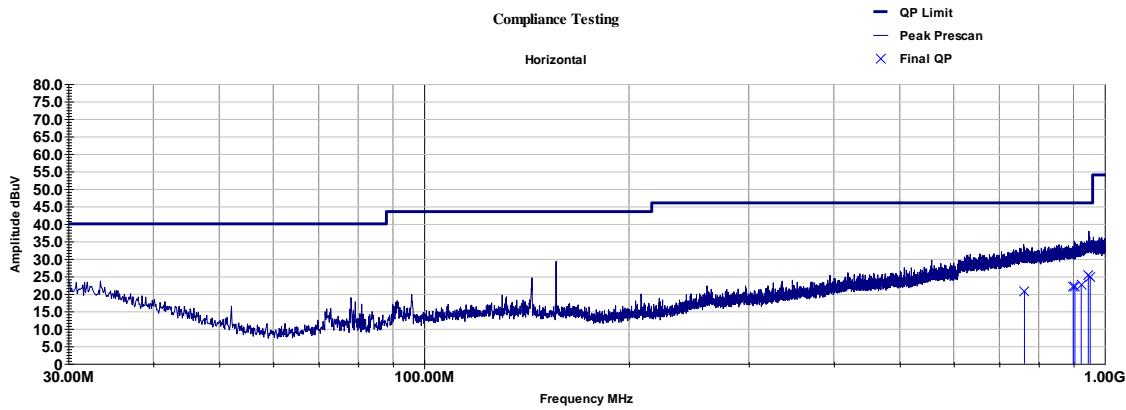


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
865.825	223.00	100.00	25.18	-3.47	21.70	46.00	-24.30
897.95	350.00	100.00	25.11	-3.07	22.00	46.00	-24.00
904.138	169.00	182.00	25.04	-2.91	22.10	46.00	-23.90
920.147	302.00	171.00	24.77	-2.37	22.40	46.00	-23.60
948.967	208.00	400.00	24.99	-1.18	23.80	46.00	-22.20
957.955	318.00	355.00	24.96	-1.21	23.70	46.00	-22.30
Final = Raw + Path Loss							
Margin = Final - Limit							

30 - 1000 MHz\_High Channel



Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
902.745	181.00	156.00	25.58	-2.93	22.60	46.00	-23.40
911.996	0.00	105.00	24.83	-2.55	22.30	46.00	-23.70
912.414	0.00	129.00	25.01	-2.55	22.50	46.00	-23.50
943.753	244.00	242.00	25.20	-1.21	24.00	46.00	-22.00
949.331	181.00	100.00	26.83	-1.08	25.80	46.00	-20.20
959.89	244.00	297.00	25.06	-1.20	23.90	46.00	-22.10
Final = Raw + Path Loss							
Margin = Final - Limit							

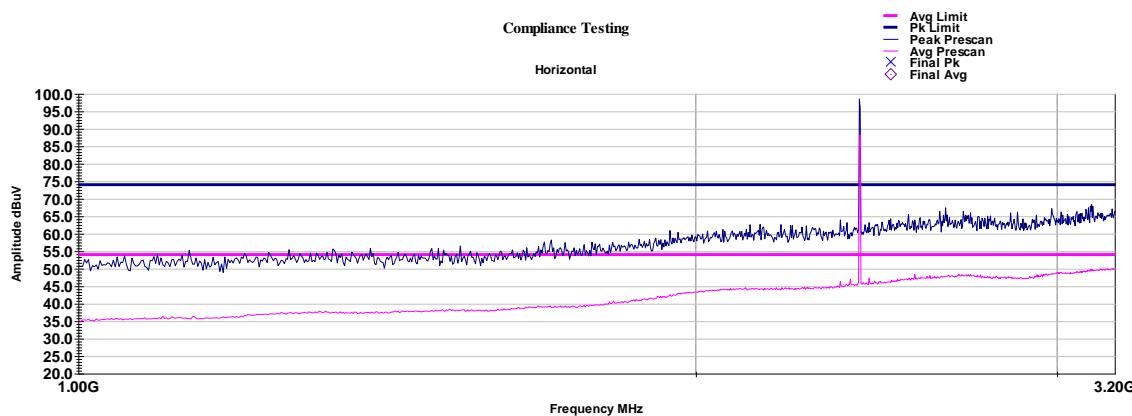
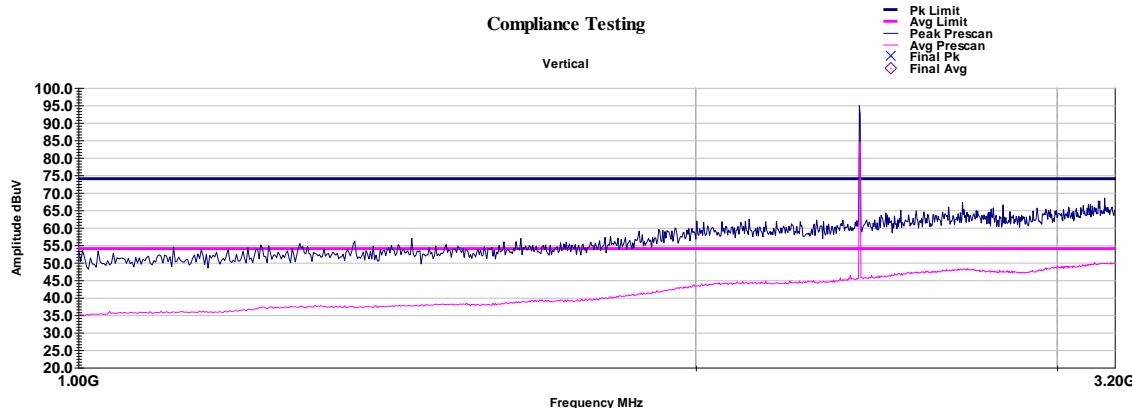


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
762.251	286.00	216.00	25.60	-4.83	20.80	46.00	-25.20
898.927	256.00	113.00	25.04	-3.06	22.00	46.00	-24.00
898.927	256.00	113.00	25.04	-3.06	22.00	46.00	-24.00
904.06	98.00	381.00	25.00	-2.91	22.10	46.00	-23.90
898.927	256.00	113.00	25.04	-3.06	22.00	46.00	-24.00
923.481	276.00	175.00	24.80	-2.26	22.50	46.00	-23.50
946.17	149.00	121.00	26.65	-1.29	25.40	46.00	-20.60
952.292	173.00	140.00	25.91	-1.15	24.80	46.00	-21.20
Final = Raw + Path Loss							

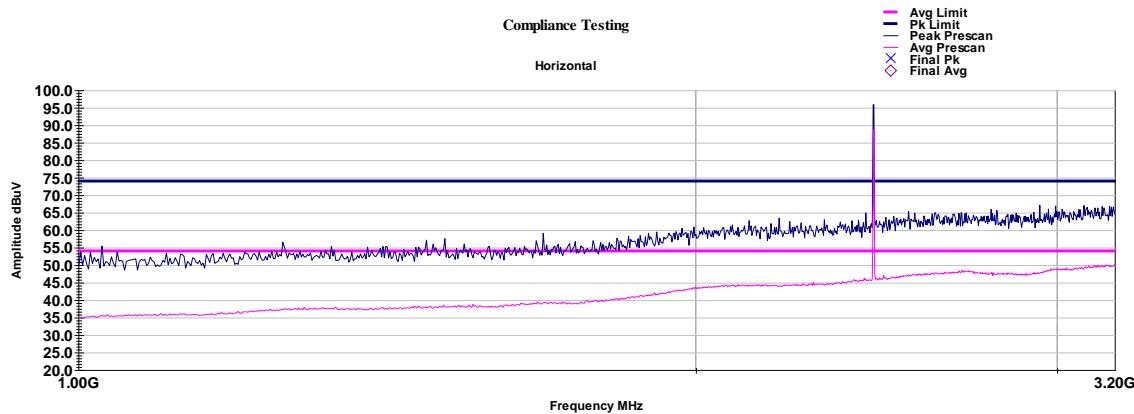
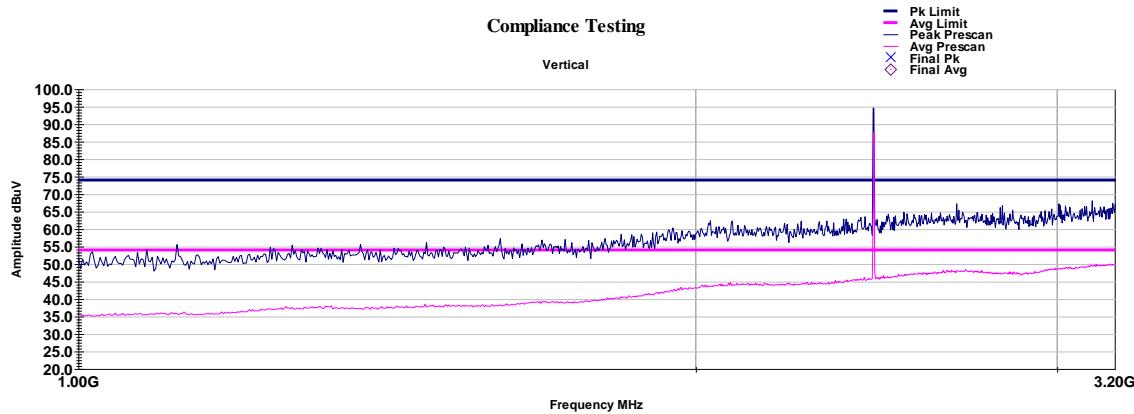
Margin = Final - Limit

### Radiated Emissions Above 1000MHz

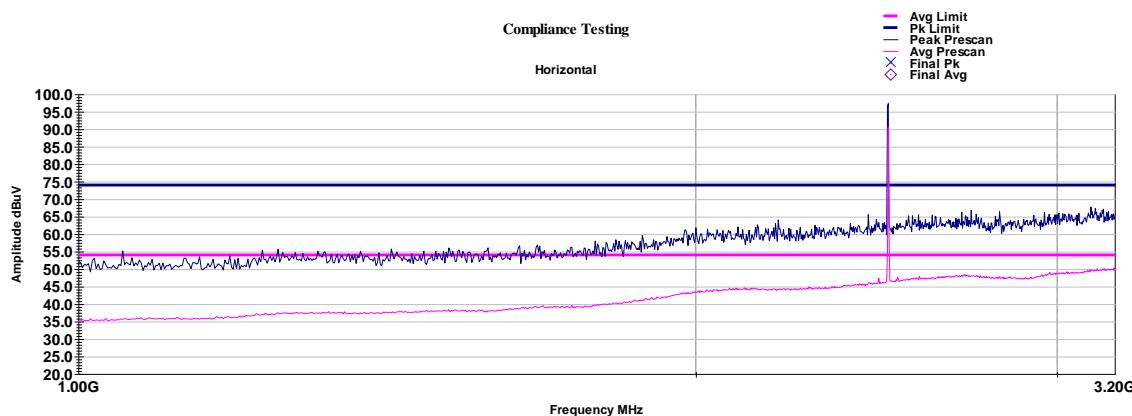
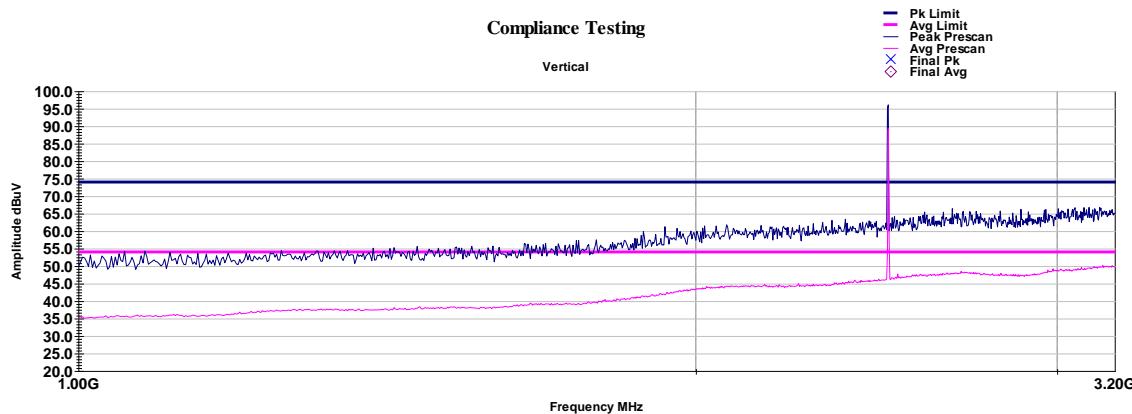
1 - 3.2 GHz\_Low Channel



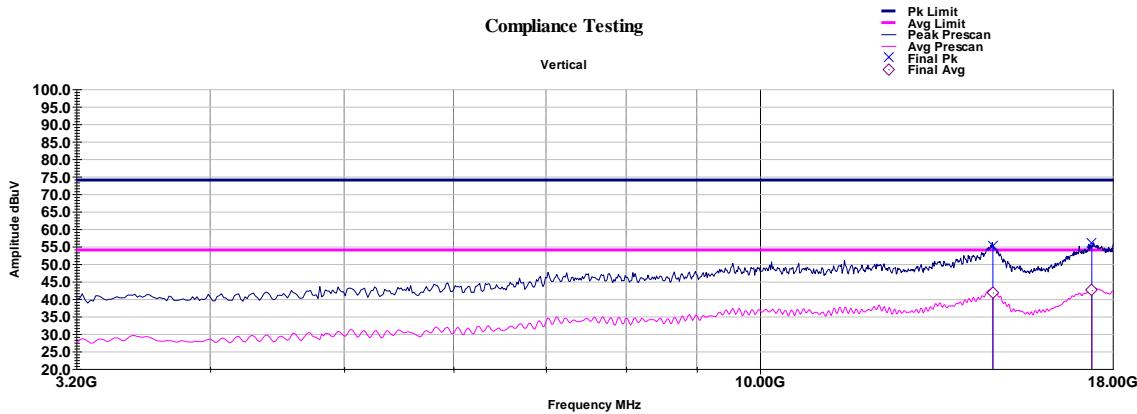
1 - 3.2 GHz GHZ\_Mid Channel



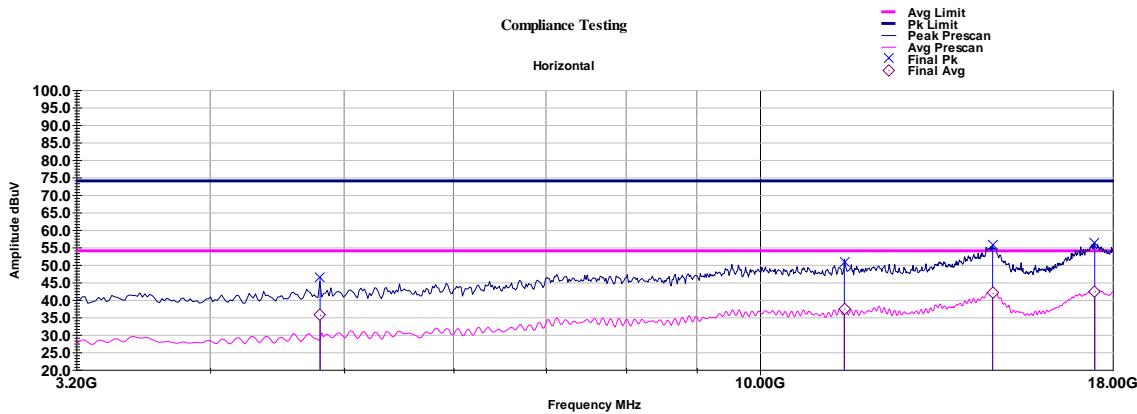
1 - 3.2 GHz GHz\_High Channel



### 3.2 - 18 GHz\_Low Channel

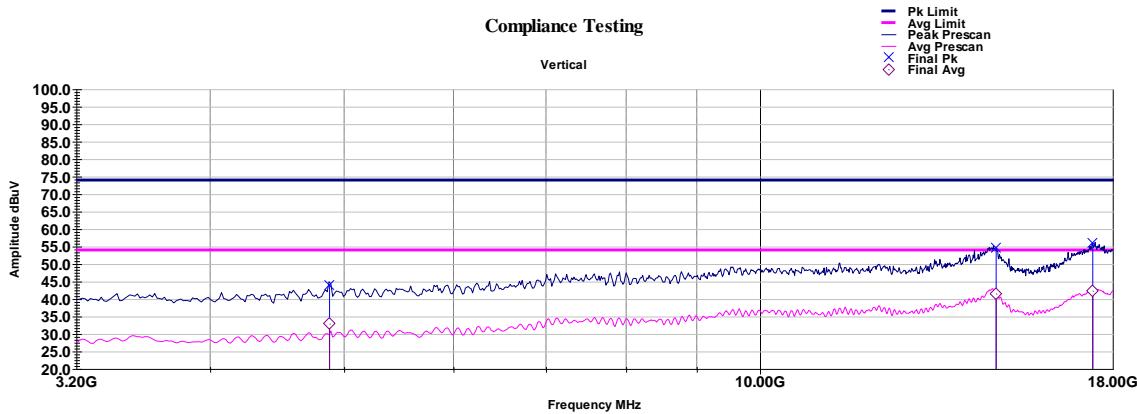


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
14742400000	205.00	155.00	45.39	31.95	9.88	55.27	74.00	-18.73	41.83	54	-12.17
17385710000	189.00	105.00	43.04	29.55	12.93	55.98	74.00	-18.02	42.48	54	-11.52
Final = Raw + Path Loss											
Margin = Final - Limit											

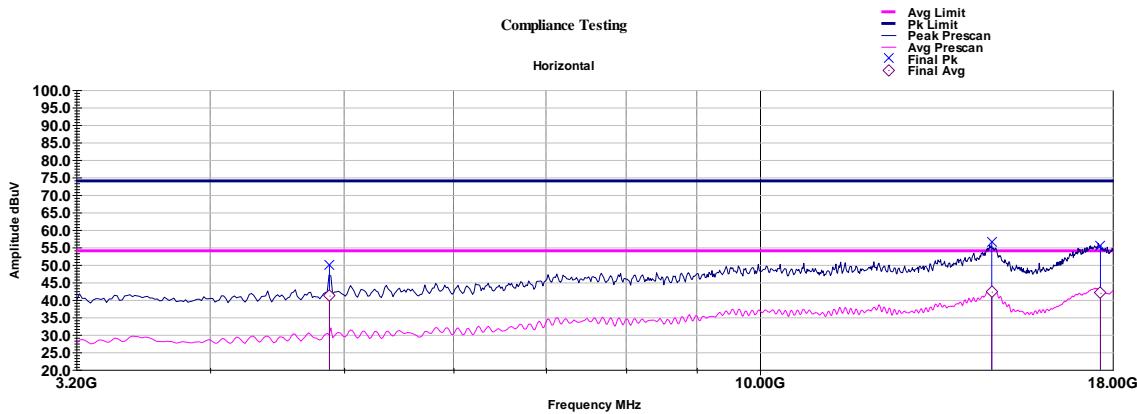


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4804458000	323.00	100.00	50.10	39.27	-3.61	46.49	74.00	-27.51	35.66	54	-18.34
11509190000	243.00	163.00	46.69	33.52	4.00	50.70	74.00	-23.31	37.52	54	-16.48
14735530000	60.00	343.00	45.77	32.01	9.91	55.68	74.00	-18.32	41.92	54	-12.08
17470400000	347.00	132.00	43.07	29.16	13.26	56.33	74.00	-17.67	42.42	54	-11.58
Final = Raw + Path Loss											
Margin = Final - Limit											

### 3.2 - 18 GHz\_Mid Channel

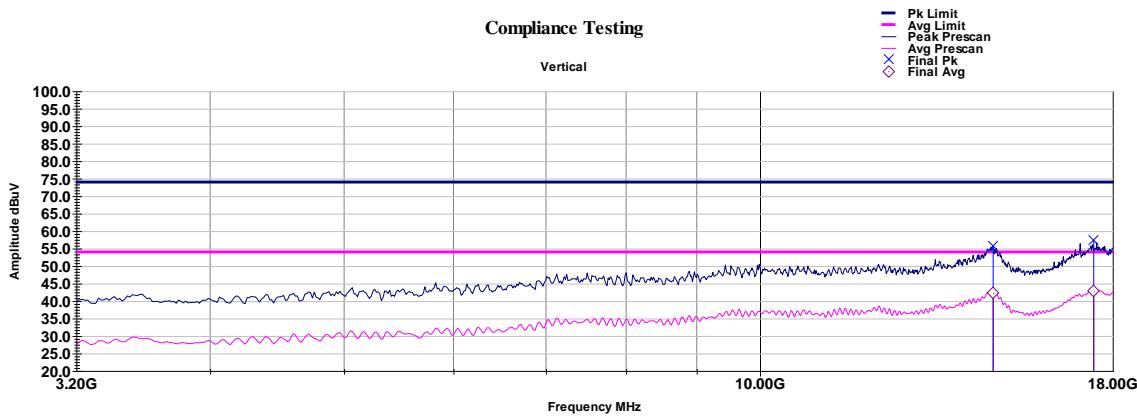


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4880289000	224.00	325.00	47.49	36.36	-3.44	44.05	74.00	-29.95	32.92	54	-21.08
14821960000	161.00	200.00	45.59	32.49	9.07	54.66	74.00	-19.35	41.56	54	-12.44
17411470000	6.00	163.00	42.94	29.25	13.08	56.02	74.00	-17.98	42.33	54	-11.67
Final = Raw + Path Loss											
Margin = Final - Limit											

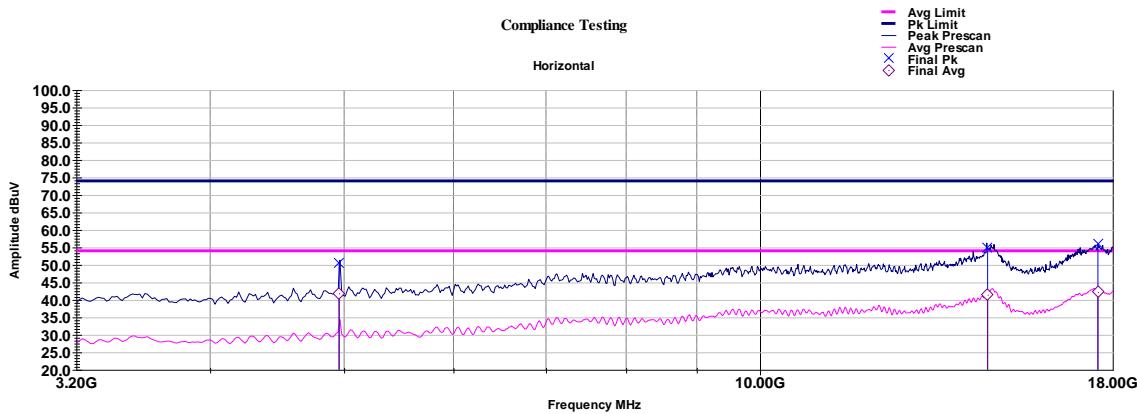


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4879578000	303.00	100.00	53.55	44.63	-3.44	50.11	74.00	-23.89	41.20	54	-12.81
14714350000	232.00	144.00	46.61	32.30	10.00	56.61	74.00	-17.39	42.30	54	-11.70
17636330000	256.00	100.00	42.60	28.99	13.00	55.60	74.00	-18.40	41.98	54	-12.02
Final = Raw + Path Loss											
Margin = Final - Limit											

### 3.2 - 18 GHz\_High Channel



Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
14747750000	256.00	105.00	45.85	32.41	9.86	55.71	74.00	-18.29	42.27	54	-11.73
17439220000	23.00	100.00	44.08	29.55	13.19	57.28	74.00	-16.72	42.75	54	-11.25
Final = Raw + Path Loss											
Margin = Final - Limit											



Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4959294000	36.00	100.00	53.96	45.29	-3.45	50.51	74.00	-23.49	41.85	54	-12.15
14614390000	299.00	100.00	45.18	31.82	9.65	54.83	74.00	-19.17	41.47	54	-12.53
17561460000	359.00	209.00	42.88	29.01	13.22	56.09	74.00	-17.91	42.22	54	-11.78
Final = Raw + Path Loss											
Margin = Final - Limit											

## Emissions at Band Edges

Engineer: John Michalowicz

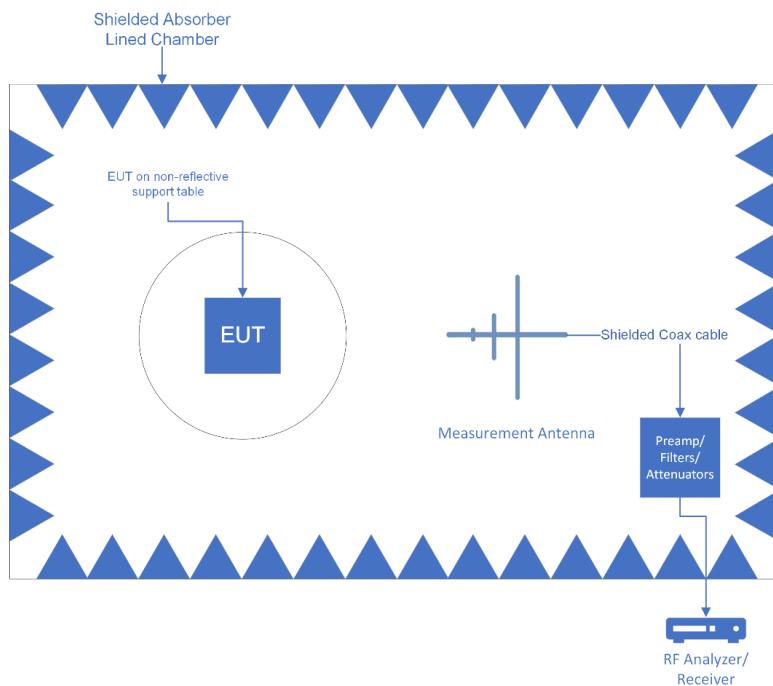
Test Date: 12/30/24

### Test Procedure

#### RADIATED METHOD

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the requirements for band edges.

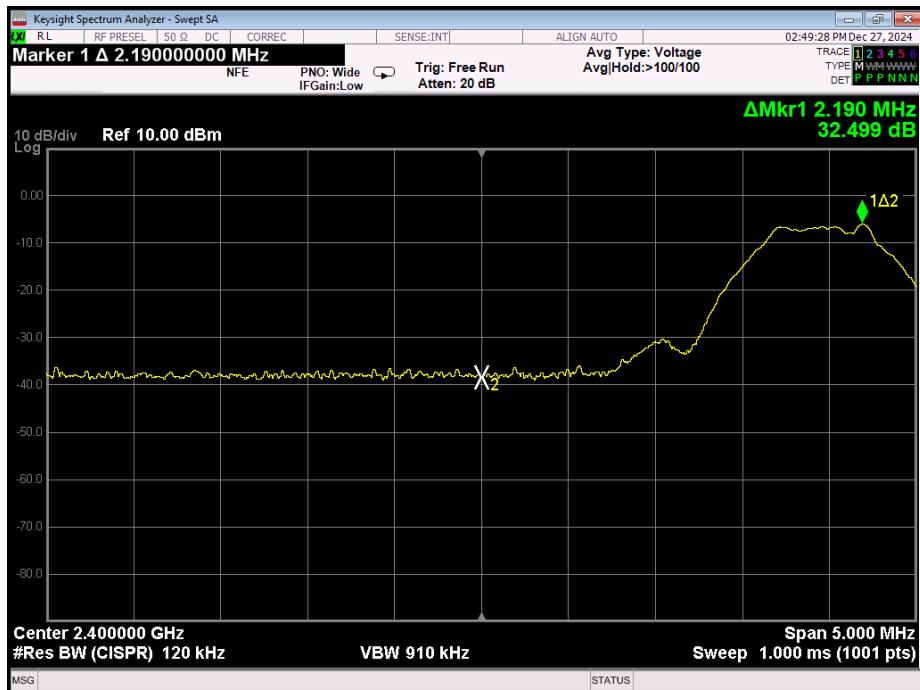
### Test Setup



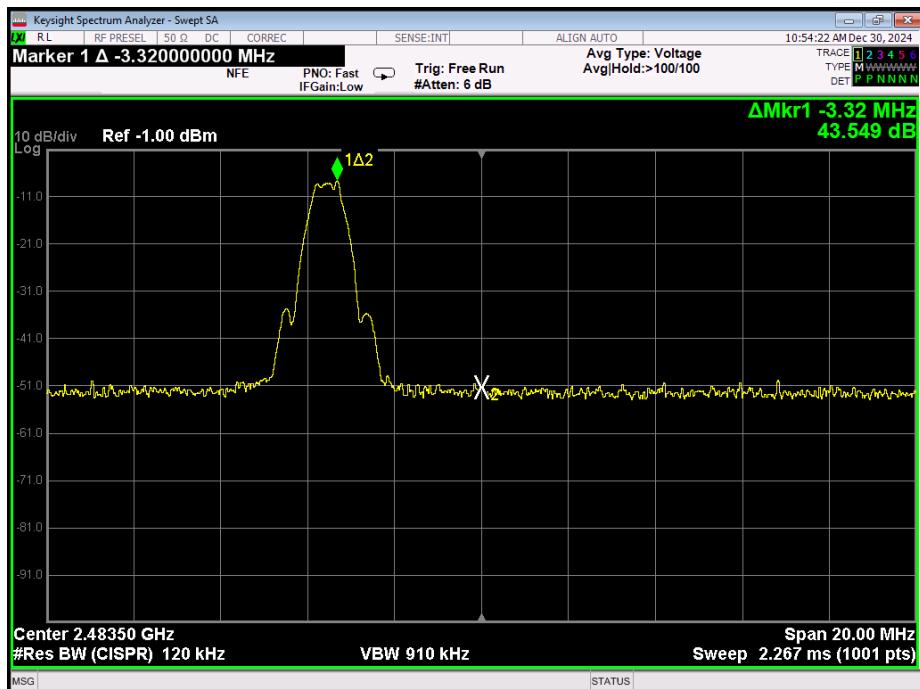
### Band Edge Emissions Summary

Tuned Frequency (MHz)	Emission Frequency (MHz)	Monitored Level	Detector	Limit	Result
2402	2400	-32.5	Peak	-20 dBc	Pass
2480	2483.5	-43.5	Peak	-20 dBc	Pass

## Band Edge Plots



Low Channel



High Channel

## DTS Bandwidth

Engineer: John Michalowicz

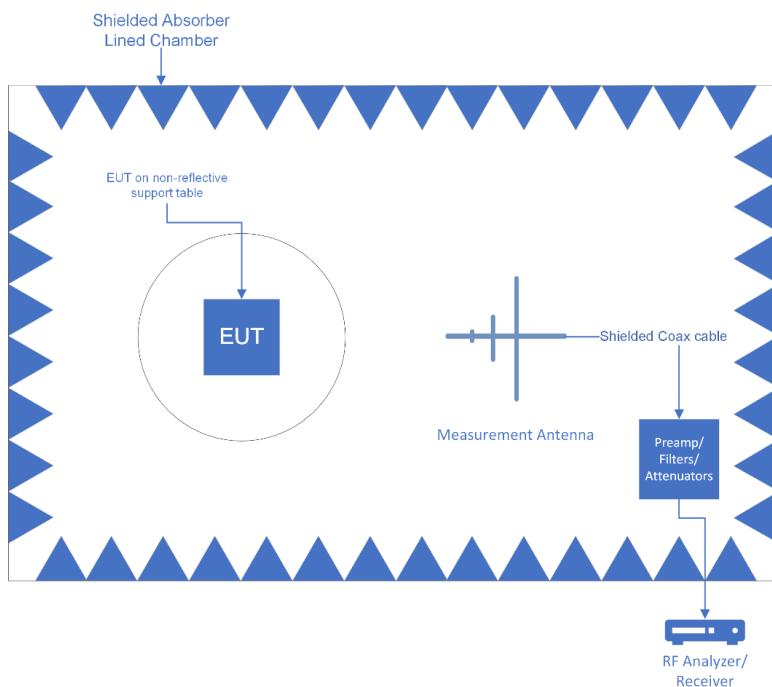
Test Date: 12/27/24

### Test Procedure

#### RADIATED METHOD

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the Bandwidth requirements.

### Test Setup



The Spectrum Analyzer was set to the following:

RBW = 100 kHz  
 VBW  $\geq$  3 x RBW  
 Peak Detector  
 Trace mode = max hold  
 Sweep = auto couple  
 Span = 1.5 x EBW

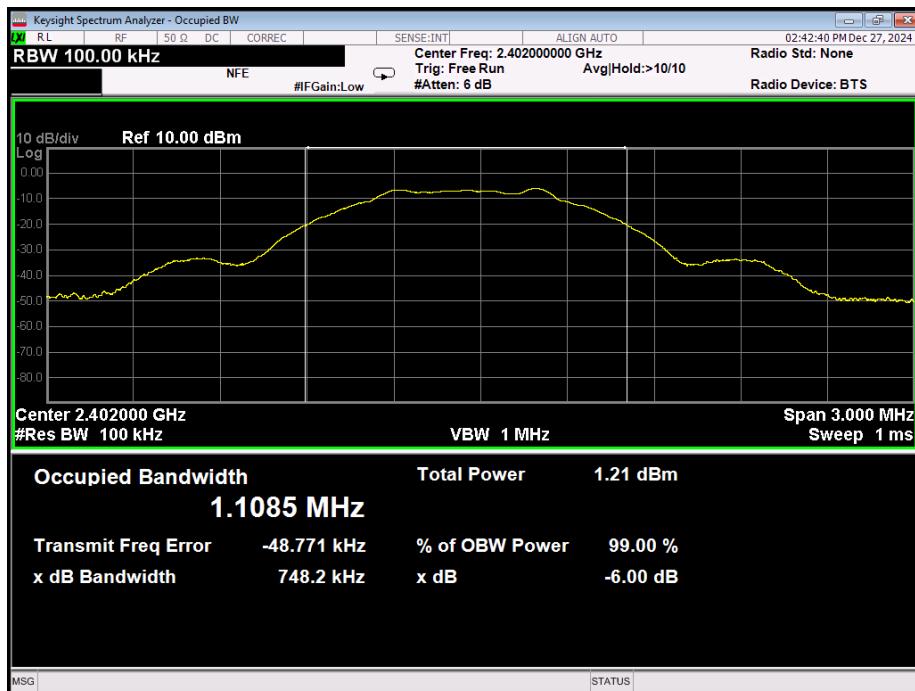
**6 dB Occupied Bandwidth Summary**

Frequency (MHz)	Mode of Operation	Measured Bandwidth (kHz)	Specification Limit (kHz)	Result
2402	1Mbps	748.2	≥ 500	Pass
2440	1Mbps	748.6	≥ 500	Pass
2480	1Mbps	743	≥ 500	Pass

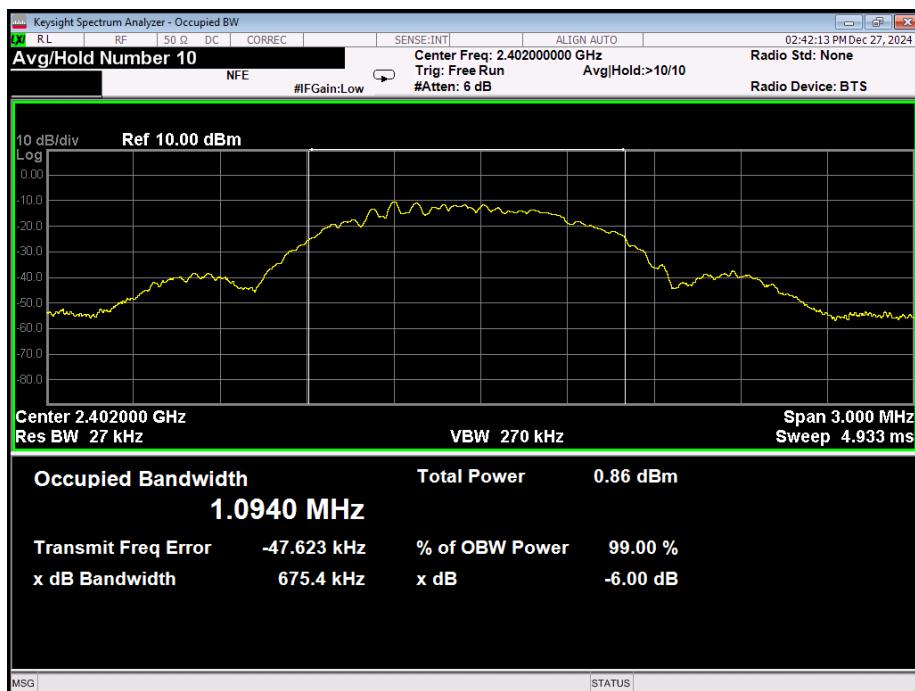
**99% Bandwidth Summary**

Frequency (MHz)	Mode of Operation	Measured Bandwidth (kHz)	Result
2402	1Mbps	1094	Pass
2440	1Mbps	1099	Pass
2480	1Mbps	1092	Pass

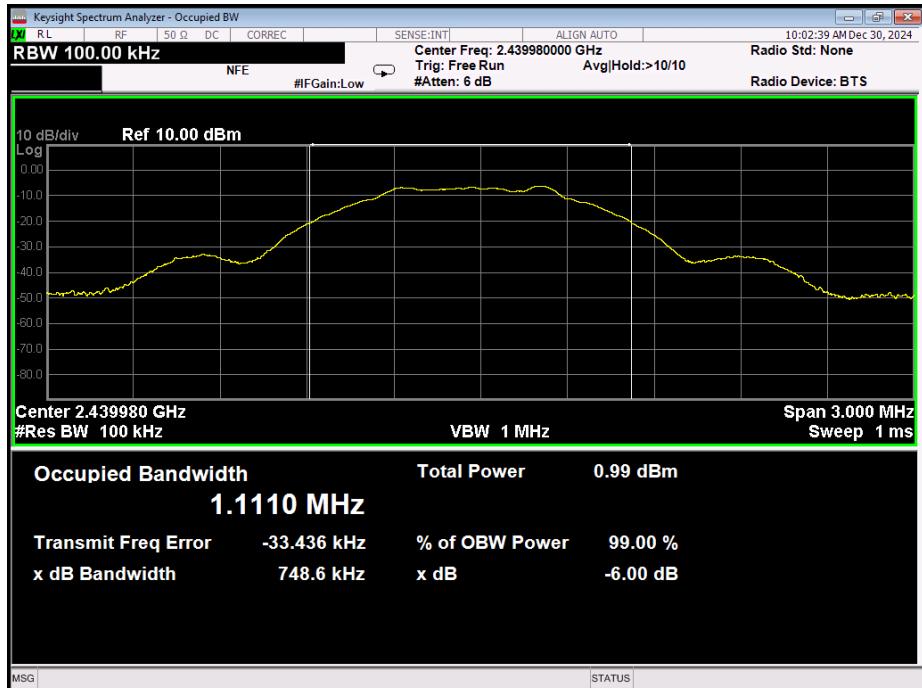
## 6 dB and 99% Bandwidth Plots



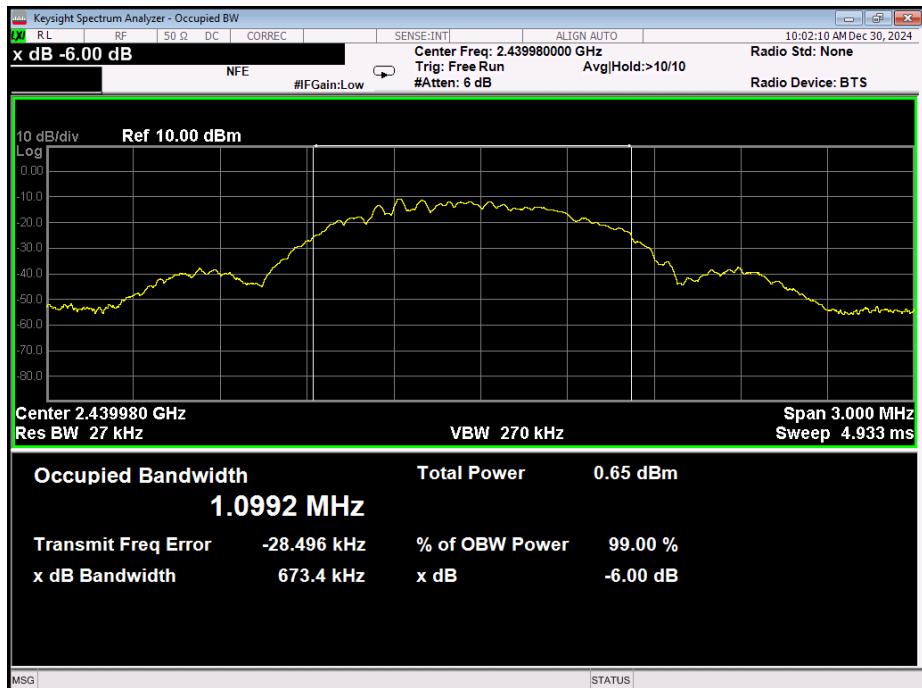
## Low Channel 6dB BW



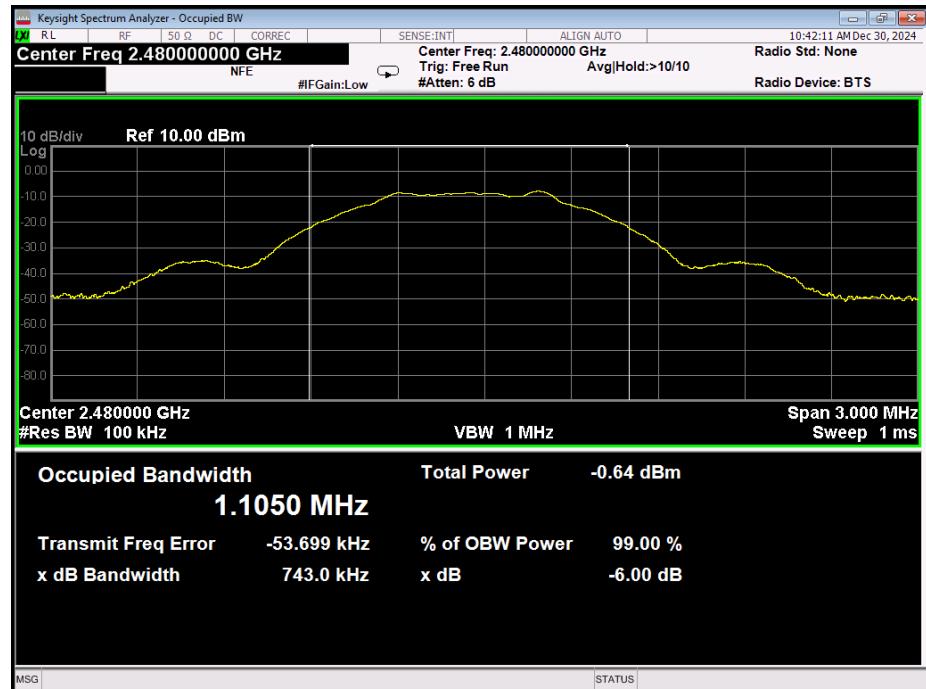
## Low Channel 99% BW



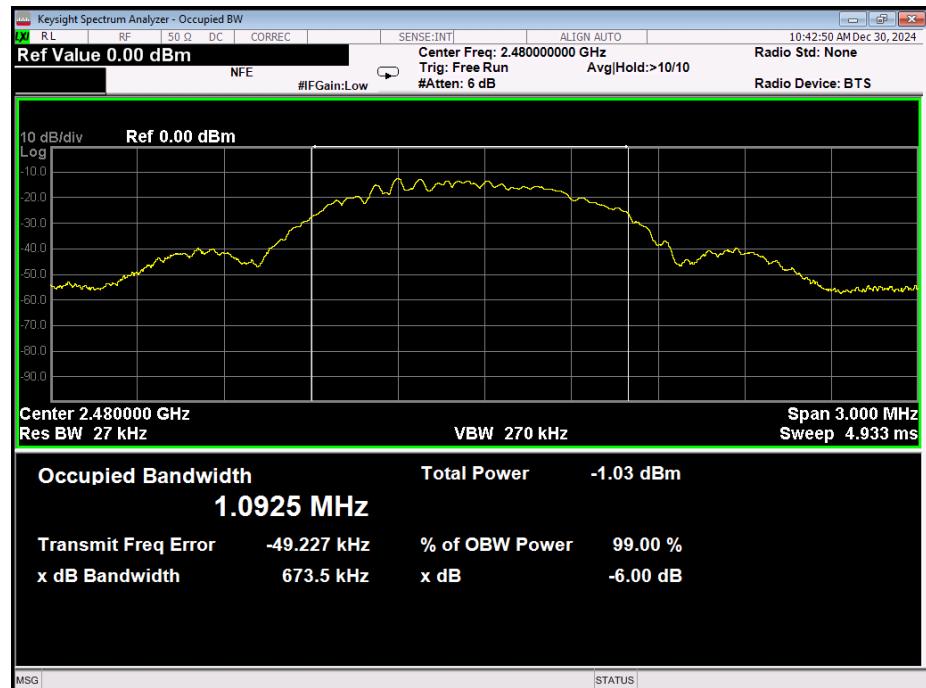
### Mid Channel 6dB BW



### Mid Channel 99% BW



### High Channel 6dB BW



### High Channel 99% BW

## Transmitter Power Spectral Density (PSD)

**Engineer: John Michalowicz**

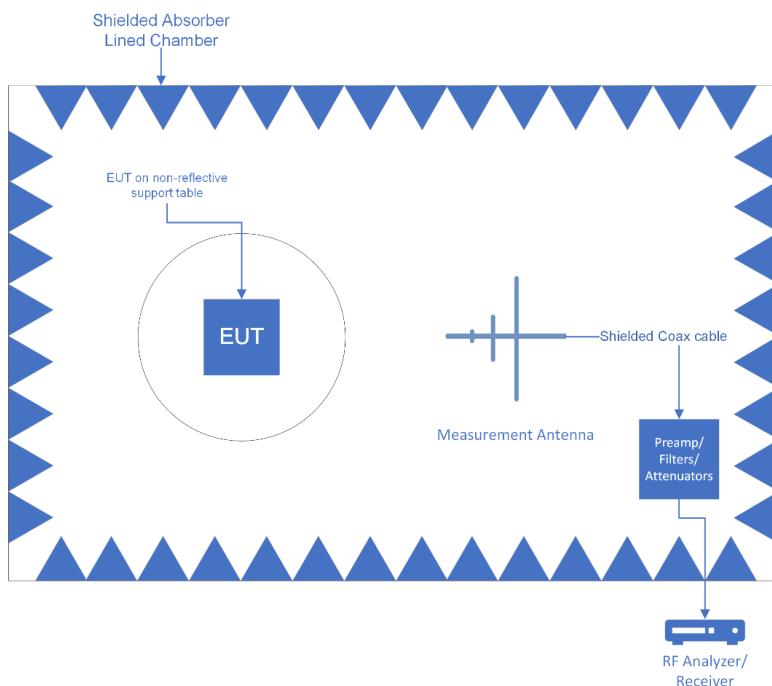
**Test Date: 12/27/24**

### Test Procedure

#### RADIATED METHOD

The EUT was setup in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the power spectral density requirements.

### Test Setup



The Spectrum Analyzer was set to the following:

DTS channel center frequency

Span 1.5 x DTS bandwidth

RBW = 3 kHz ≤ RBW ≤ 100 kHz

VBW ≥ 3 x RBW

Peak Detector

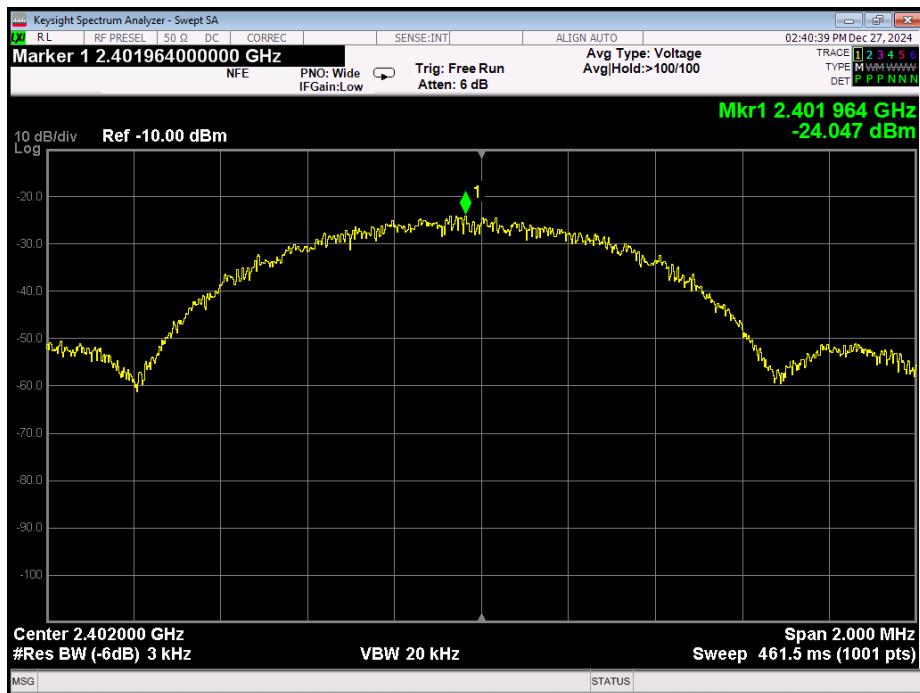
Sweep time = auto couple

Trace mode = max hold

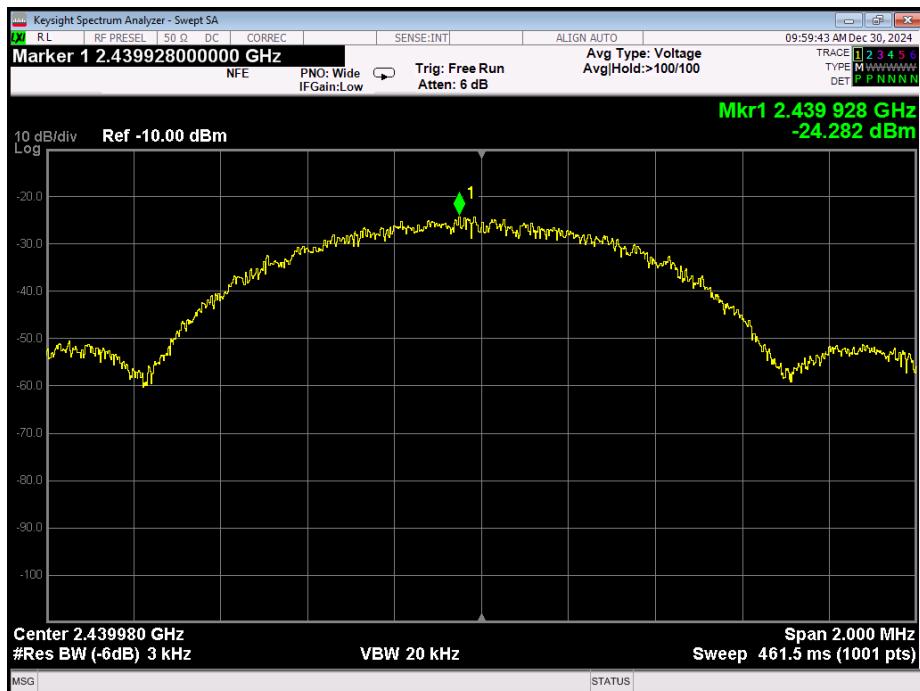
### PSD Summary

Frequency (MHz)	Mode of Operation	Measured Data (dBm)	Distance correction (dB)	Power Spectral Density (dBm)	Specification Limit (dBm)	Result
2402	1Mbps	-24	9.54	-14.46	8	Pass
2440	1Mbps	-24.3	9.54	-14.76	8	Pass
2480	1Mbps	-25.8	9.54	-16.26	8	Pass

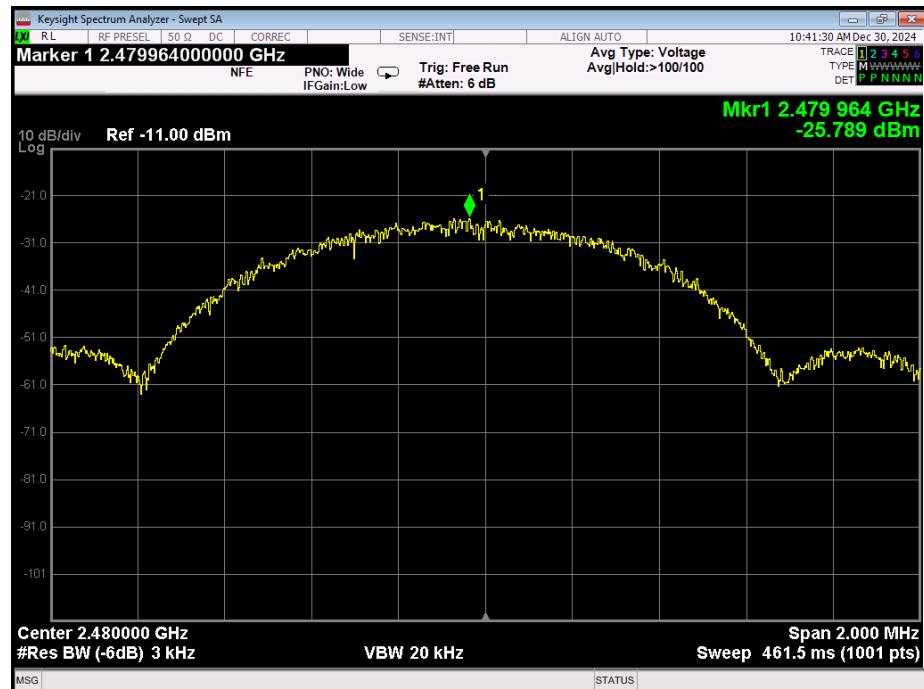
## PSD Plots



Low Channel



Mid Channel



**High Channel**

### Test Equipment Utilized

Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
Horn Antenna	EMCO	3116	i00085	3/14/23	3/14/25
Horn Antenna	ARA	DRG-118/A	i00271	8/09/24	8/09/26
Bi-Log Antenna	Schaffner	CBL 6111D	i00349	2/7/23	2/7/25
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	7/13/23	7/13/26
MXE EMI receiver	Keysight	N9038A	i00552	3/1/24	3/1/25
Temp./humidity/pressure monitor (rad. immunity)	Omega Engineering	iBTHX-W-5	i00629	1/25/24	1/25/25
Spectrum Analyzer	Keysight	E4448A	i00688	10/26/24	10/26/25

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

### Measurement Uncertainty

Measurement Uncertainty for Compliance Testing is listed in the table below.

Measurement	$U_{lab}$
Radio Frequency	$\pm 3.3 \times 10^{-8}$
RF Power, conducted	$\pm 1.5$ dB
RF Power Density, conducted	$\pm 1.0$ dB
Conducted Emissions	$\pm 1.8$ dB
Radiated Emissions 9kHz-30MHz	$\pm 3.6$ dB
Radiated Emissions 30MHz-1000MHz	$\pm 4.25$ dB
Radiated Emissions – 1GHz-18GHz	$\pm 4.5$ dB
Temperature	$\pm 1.5$ deg C
Humidity	$\pm 4.3$ %
DC voltage	$\pm 0.20$ VDC
AC Voltage	$\pm 1.2$ VAC

The reported expanded uncertainty  $+\/- U_{lab}$ (dB) has been estimated at a 95% confidence level ( $k=2$ )  
 $U_{lab}$  is less than or equal to  $U_{EMC}$  therefore;

- Compliance is deemed to occur if no measured disturbance exceeds the disturbance limit.
- Non-Compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.

END OF TEST REPORT