

Test Report

Prepared for: Band Connect

Model: BCUE1

Serial Number: TST_RF_UFL_1, TST_RF_ANT_1

Project No: p25c0011

FCC ID: 2BVEW-BC1

To

FCC Part 15.247

Test Results: Pass

Date of Issue: February 20, 2026

On the behalf of the applicant:

Band Connect
1116 Race Street
Cincinnati, OH, 45202

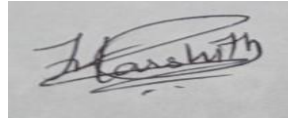
Attention of:

Rohit Nayak
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Prepared By:

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ANAB Cert#: AT-2901
FCC Site Reg. #750616
ISED Site Reg. #2044A-2

Reviewed / Authorized By:



Harshith Devaraja, EMC Engineer

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Test Results Summary

Test Date Range: February 16, 2026 – February 20, 2026

Specification	Test Name	Pass, Fail, N/A	Comments
FCC			
15.247(a)(2)	Occupied Bandwidth	Pass	
15.247(b)(3)	Transmitter Output Power	Pass	
15.247(d)	Conducted Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Radiated Spurious Emissions	Pass	
15.247(d), 15.209(a), 15.205	Emissions At Band Edges	Pass	
15.247(e)	Power Spectral density	Pass	
15.207	A/C Powerline Conducted Emissions	Pass	
15.203	Antenna Requirement	Pass	
Method Deviations/Additions: 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

Table of Contents

<u>Description</u>	<u>Page</u>
Test Results Summary	2
Test Report Revision History	4
EUT Description.....	5
Test and Measurement Data	7
Test Setup and Modes of Operation	8
Transmitter Output Power.....	10
Radiated Spurious Emissions	18
Restricted Band Edges.....	49
Occupied Bandwidth	54
Power Spectral Density	62
Conducted Spurious Emissions	70
AC Line Conducted Emissions.....	77
Test Equipment Utilized.....	80
Measurement Uncertainty	80

Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	February 20, 2026	Harshith Devaraja	Original Document

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

EUT Description

Model:	BCUE1
Serial:	TST_RF_UFL_1, TST_RF_ANT_1
Firmware: Application core	v11
Firmware: BLE module core	1.17.0
Description:	Health Monitoring therapy band
Additional Information:	Radio Frequency Range and Operational Info: 2.4 – 2.4835 GHz BLE GFSK (1Mbps & 2 Mbps) Usage: Portable
Receipt of Sample(s):	September 17, 2025
EUT Condition:	Visual Damage No State of Development Production/Production Equivalent

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

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.

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)
20.33 - 22.56	35.3 - 41.5	962.5 - 969.8

Test Setup and Modes of Operation

EUT Operation during Tests

EUT was connected to a test laptop to control the channel selection. The EUT was operated to control the continuous transmission in low, mid and high channels in the 2.4-2.4835 GHz frequency range (BLE).

EUT:

Qty	Description	Manufacturer	Model	S/N
1	Health Monitoring therapy band	Band Connect	BCUE1	TST_RF_UFL_1, TST_RF_ANT_1

AC Line Conducted Emission test sample

EUT:

Qty	Description	Manufacturer	Model	S/N
1	Therapy Band Handle (Left)	Band Connect	BCUE1	AEFB290120
1	Therapy Band Handle (Right)	Band Connect	BCUE1	AEFB290028

Accessories:

Qty	Description	Manufacturer	Model	S/N
1	Laptop	Lenovo	Think pad	PY-12YA0U
1	Wall power adapter (AC Line Conducted Emission test)	Belkin	F8Z240	N/A

Cables:

Qty	Description	Length (M)	Ferrites (Y/N)	Shielding Y/N	Shielded Hood Y/N	Termination / Connection
1	USB-C Cable	0.8	N	N	N	Laptop / EUT
2	USB-C cable	0.8	N	N	N	EUT / Charger

Software/Firmware:

Name	Description	Version	Installation Info
STM32CMonRF	Software tool to test RF performance	v2.5.0	N/A

Modifications to EUT(s): N/A

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 1.95 dBi

Transmitter Output Power

Engineer: Harshith Devaraja

Test Date: 02/18/26

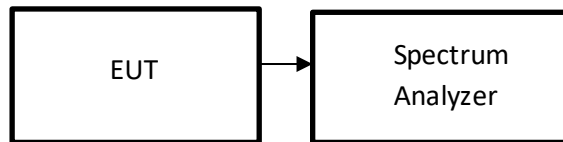
Test Procedure

Conducted Method

EUT, via a pigtail cable, was directly connected to the spectrum analyzer to verify that the EUT met the requirements for Output Power.

As per the manufacturer, the power index of “28” was set on the software RF tool. This power index is set to be the maximum power level in normal operation of the EUT.

Test Setup



The Spectrum Analyzer was set to the following:

RBW $\geq$ OBW 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

BLE GFSK 1Mbps

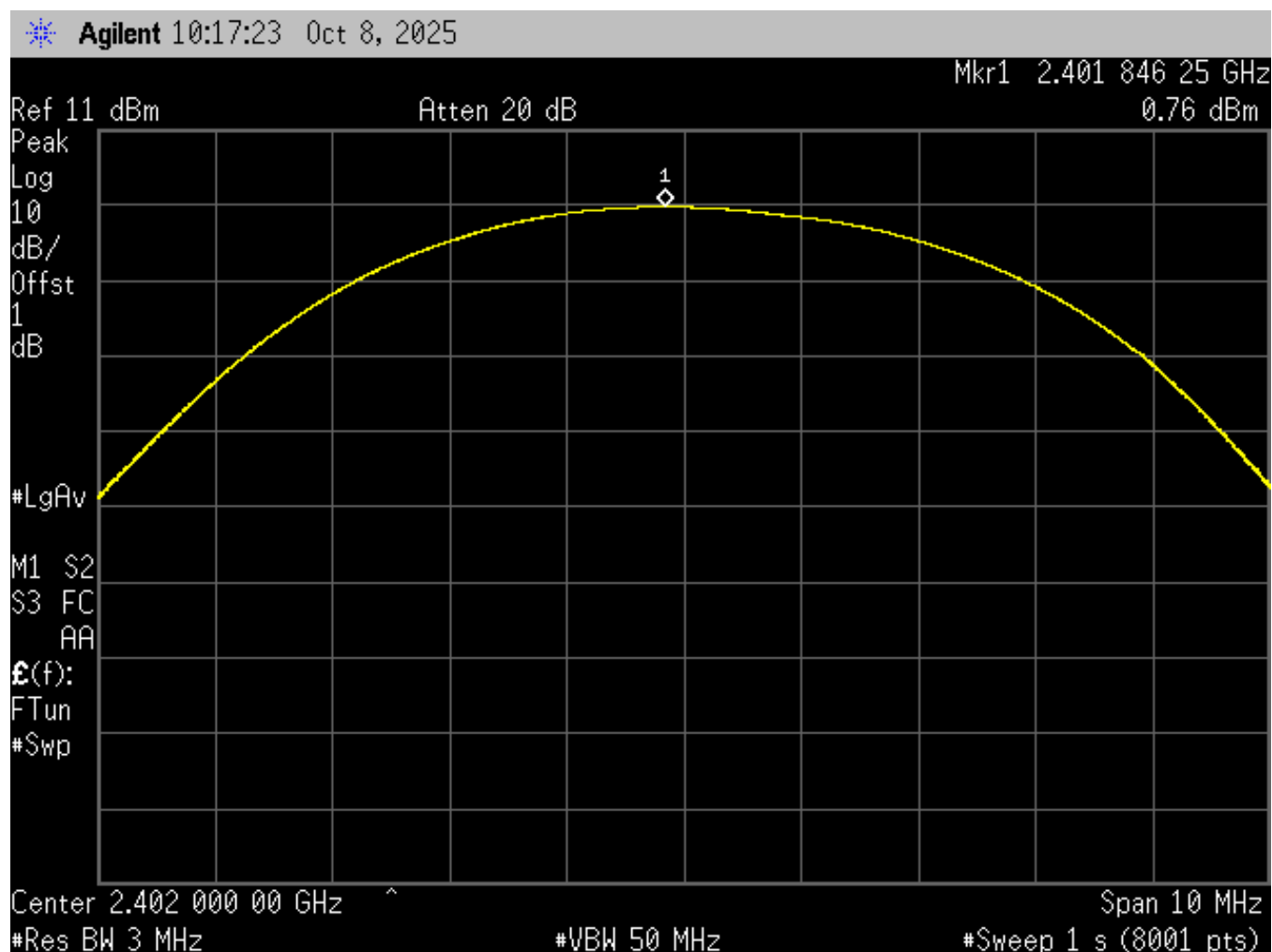
Tuned Frequency (MHz)	Conducted Peak power (dBm)	Conducted peak power (mW)	Specification Limit	Result
2402	0.76	1.2	1 W (30 dBm)	Pass
2440	1.70	1.5	1 W (30 dBm)	Pass
2480	1.45	1.4	1 W (30 dBm)	Pass

BLE GFSK 2Mbps

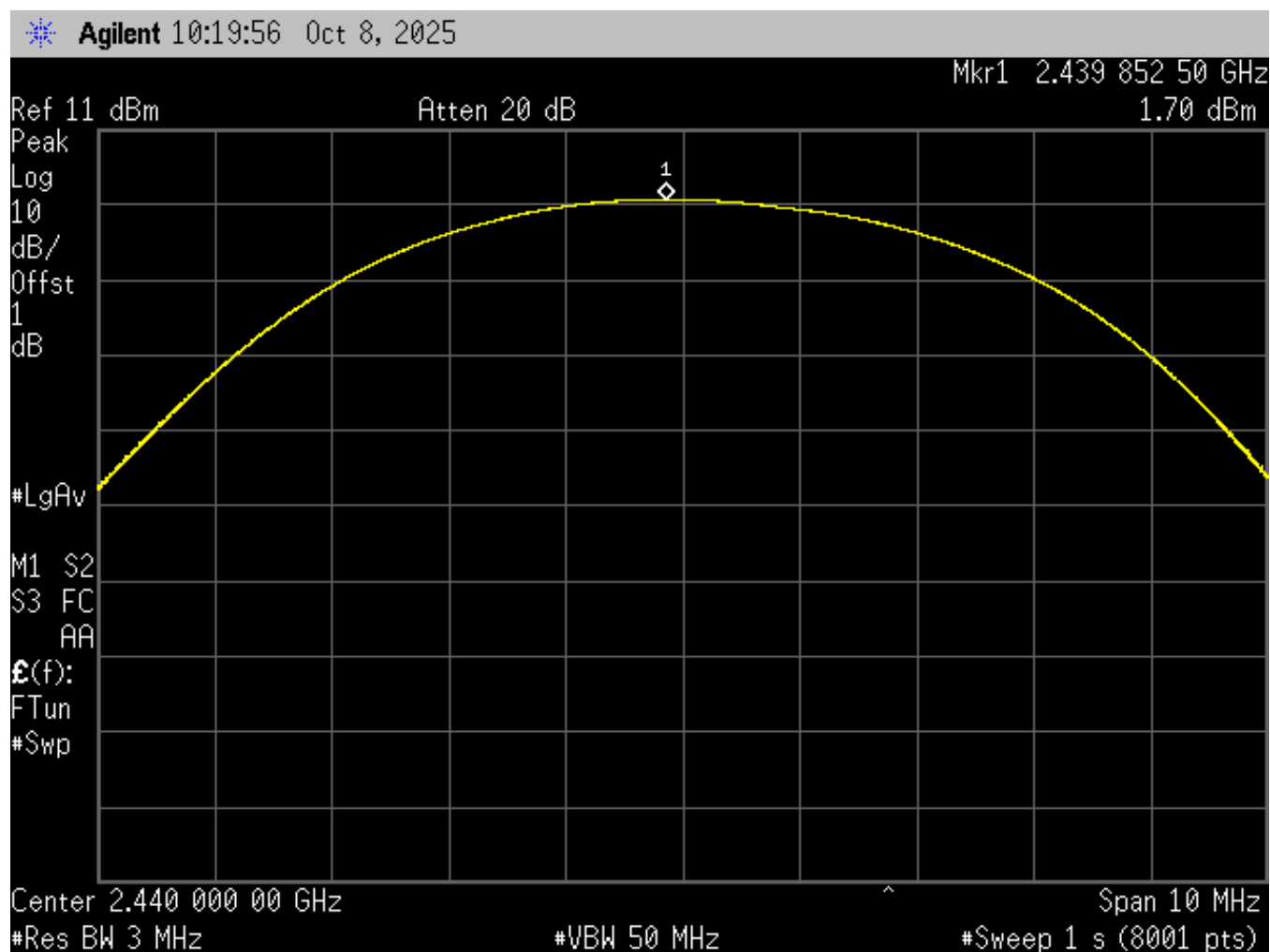
Tuned Frequency (MHz)	Conducted Peak power (dBm)	Conducted peak power (mW)	Specification Limit	Result
2402	0.76	1.2	1 W (30 dBm)	Pass
2440	1.70	1.5	1 W (30 dBm)	Pass
2480	1.44	1.4	1 W (30 dBm)	Pass

Output Power Plots

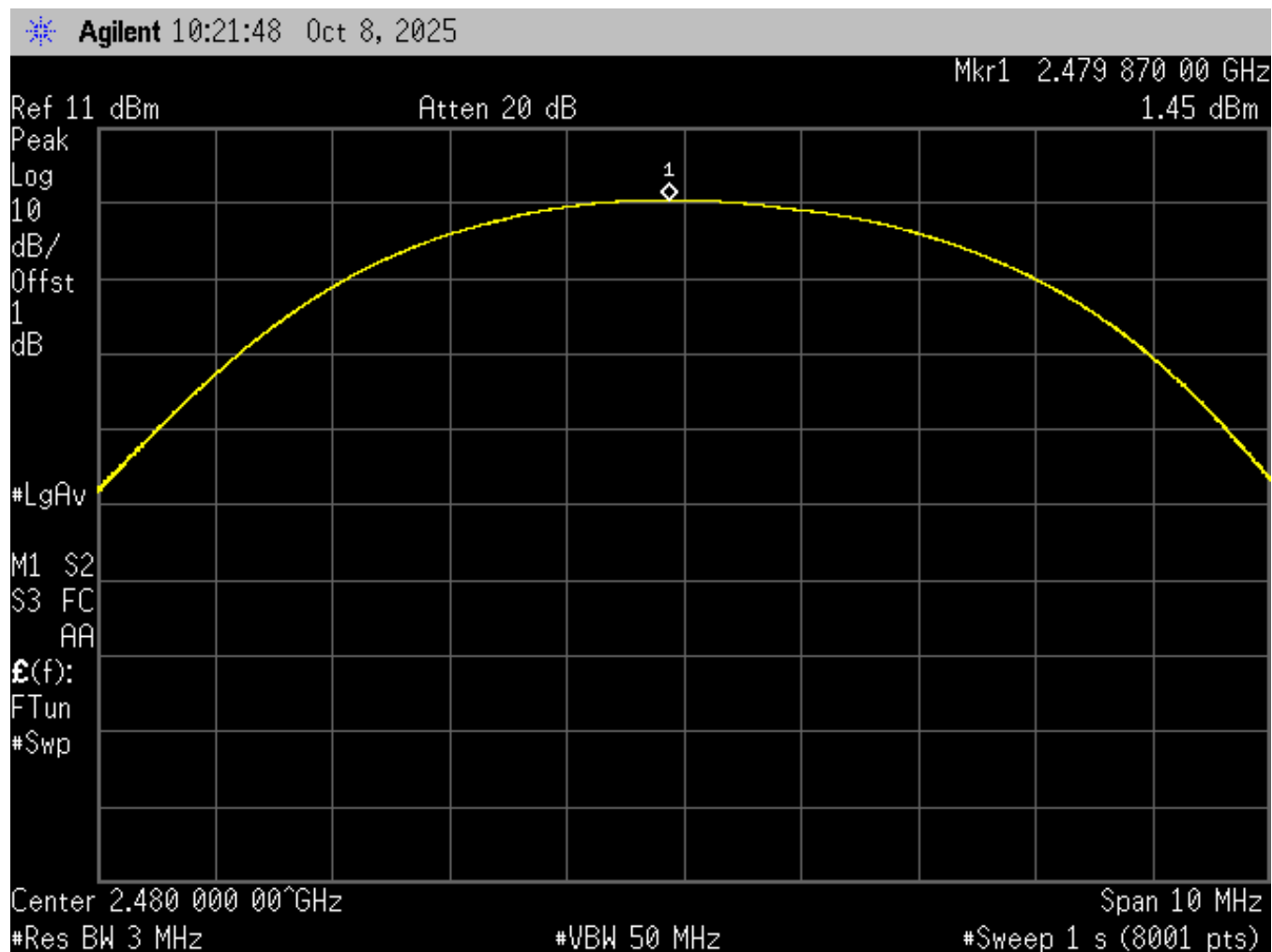
BLE GFSK 1Mbps Low Channel



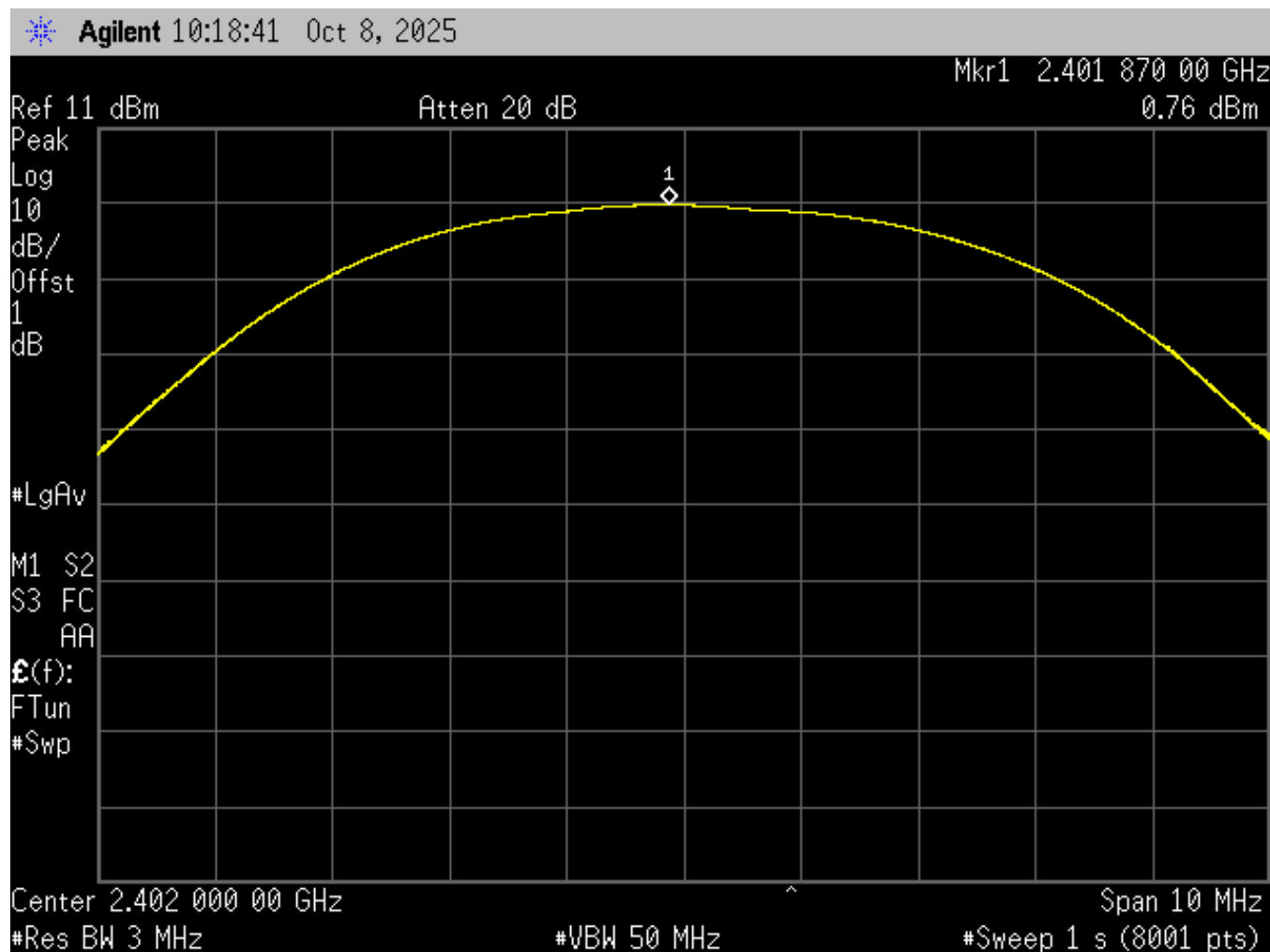
Mid Channel



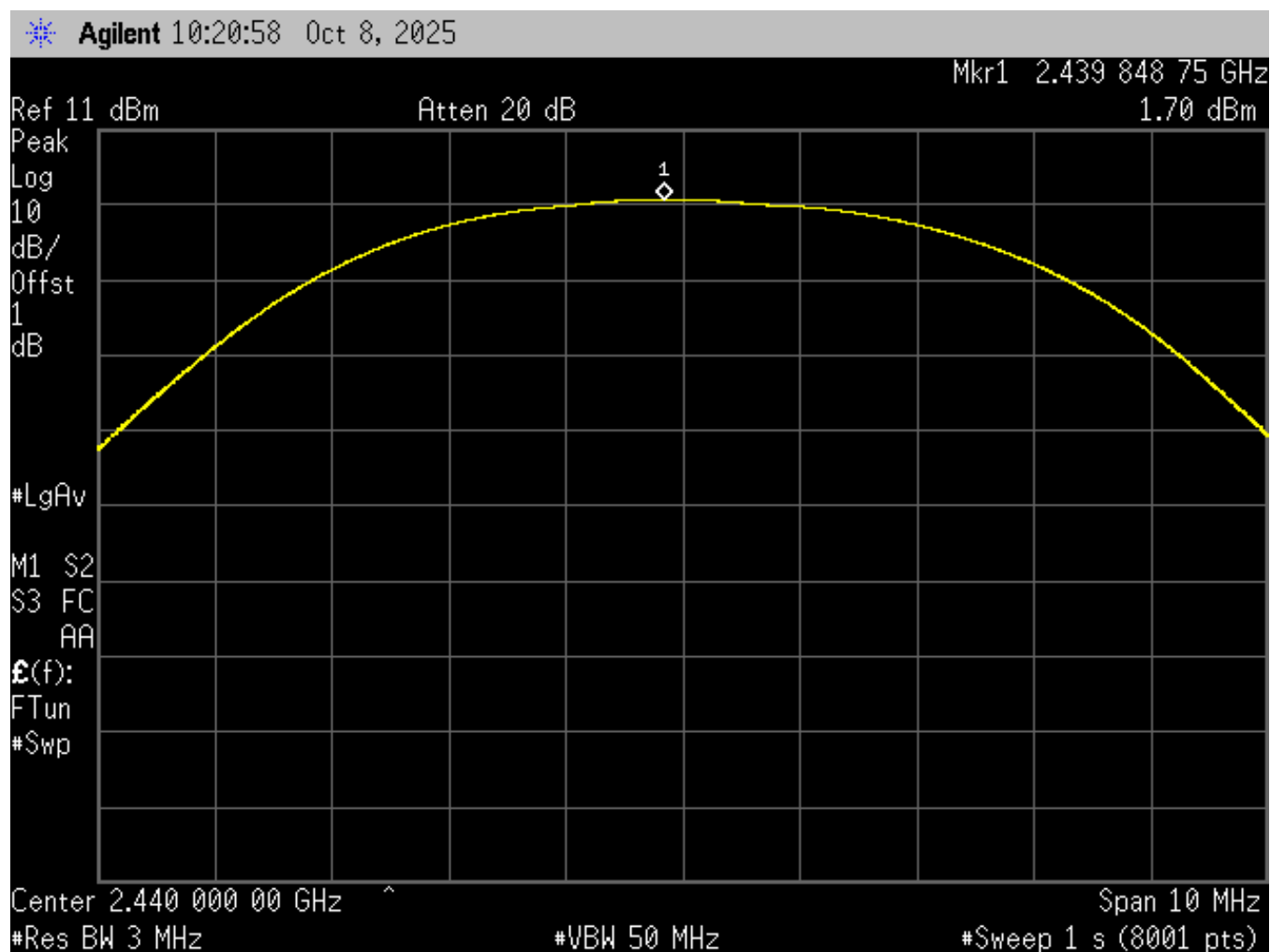
High Channel



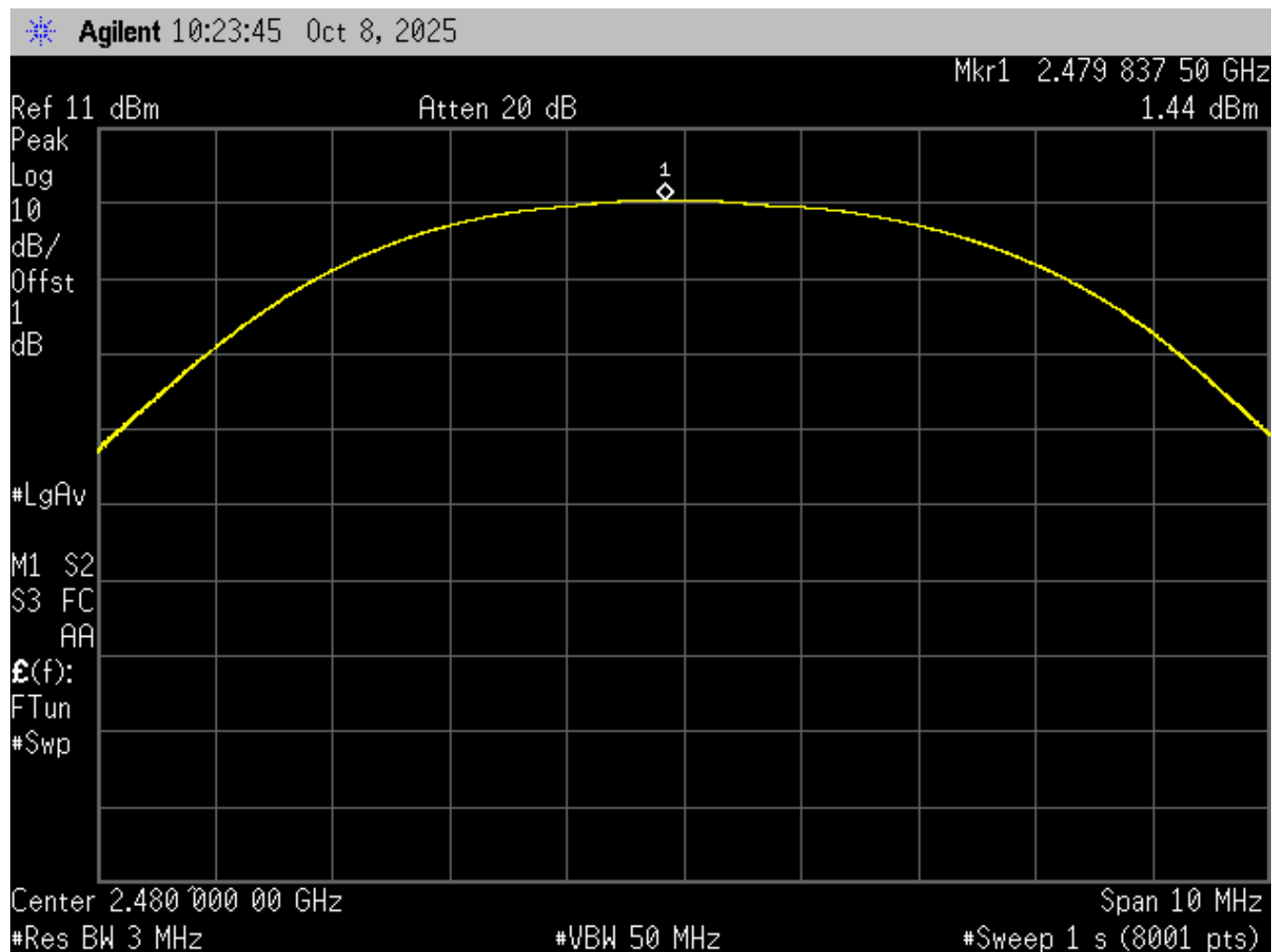
BLE GFSK 2Mbps Low Channel



Mid Channel



High Channel



Radiated Spurious Emissions

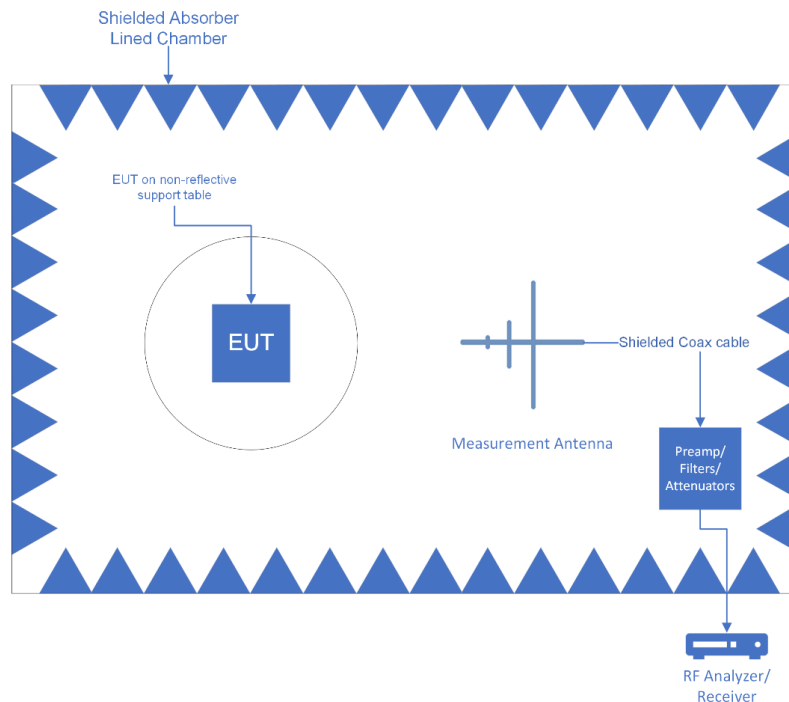
Engineer: Harshith Devaraja

Test Date: 02/18/26 – 02/20/26

Test Procedure

The EUT was set up 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 axes, 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. EUT set in the Y axis was determined as the worst-case position. 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 and emissions within 20dB margin are reported.

Basic Test Setup



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

Sample Calculations

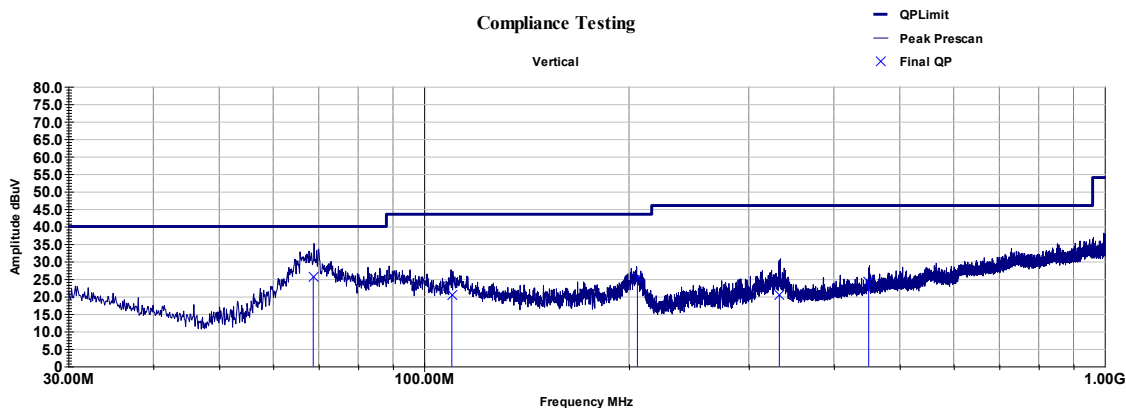
Corrected Value = Measured Value + Correction factor

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

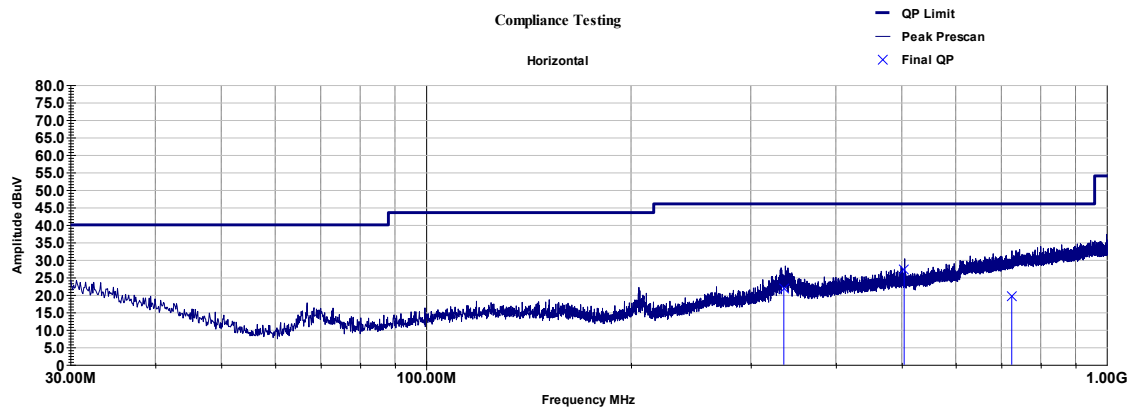
Below 1GHz: Worst case; BLE GFSK 1Mbps (low, mid and high) channels reported.

Above 1GHz: BLE GFSK 1Mbps & 2Mbps (low, mid, high) channels reported.

Radiated Emissions Plots Below 1 GHz BLE GFSK 1Mbps Low Channel 2402 MHz

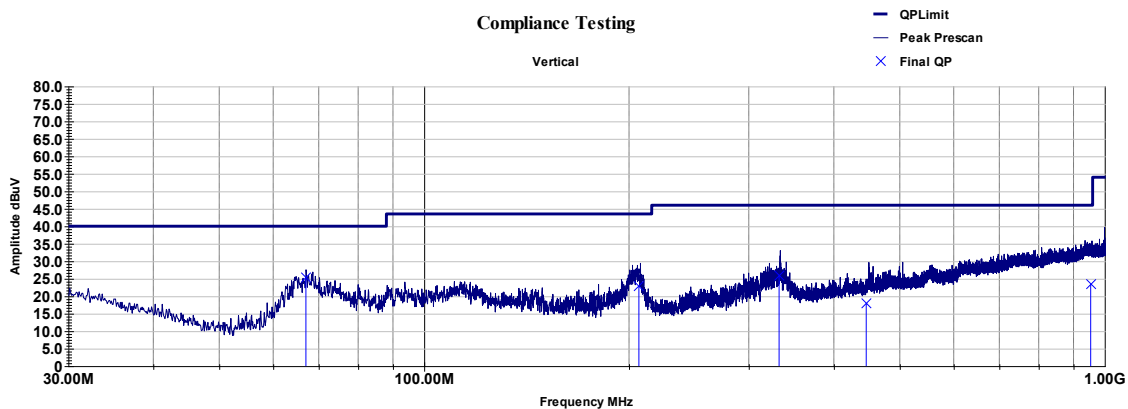


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
68.709	114.00	125.00	50.48	-24.84	25.60	40.00	-14.40
109.836	130.00	100.00	39.35	-18.90	20.50	43.50	-23.00
205.731	331.00	100.00	45.78	-20.34	25.40	43.50	-18.10
332.665	228.00	233.00	36.18	-15.80	20.40	46.00	-25.60
449.978	223.00	117.00	36.74	-12.59	24.10	46.00	-21.90
Final = Raw + Path Loss							
Margin = Final - Limit							

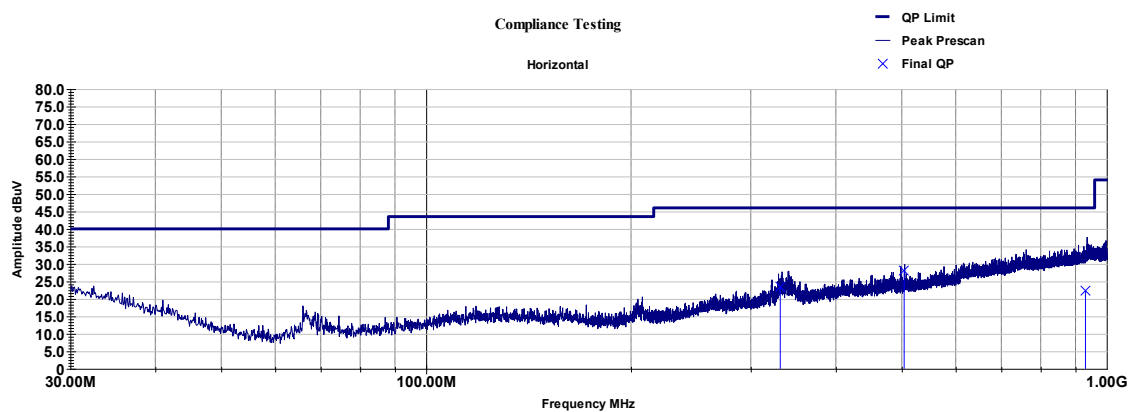


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
335.358	165.00	113.00	37.13	-15.26	21.90	46.00	-24.10
503.964	281.00	105.00	38.24	-10.95	27.30	46.00	-18.70
725.127	121.00	325.00	25.86	-6.26	19.60	46.00	-26.40
Final = Raw + Path Loss							
Margin = Final - Limit							

BLE GFSK 1Mbps Mid Channel 2440 MHz

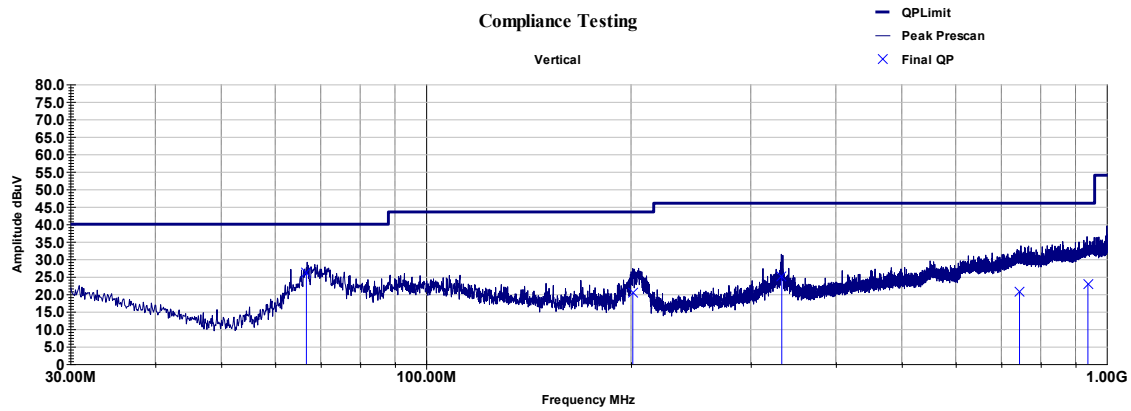


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
67.023	215.00	168.00	50.50	-25.08	25.40	40.00	-14.60
206.77	10.00	100.00	43.10	-20.25	22.90	43.50	-20.60
332.28	345.00	105.00	41.79	-15.84	25.90	46.00	-20.10
446.247	249.00	100.00	30.62	-12.70	17.90	46.00	-28.10
953.612	202.00	100.00	24.92	-1.52	23.40	46.00	-22.60
Final = Raw + Path Loss							
Margin = Final - Limit							

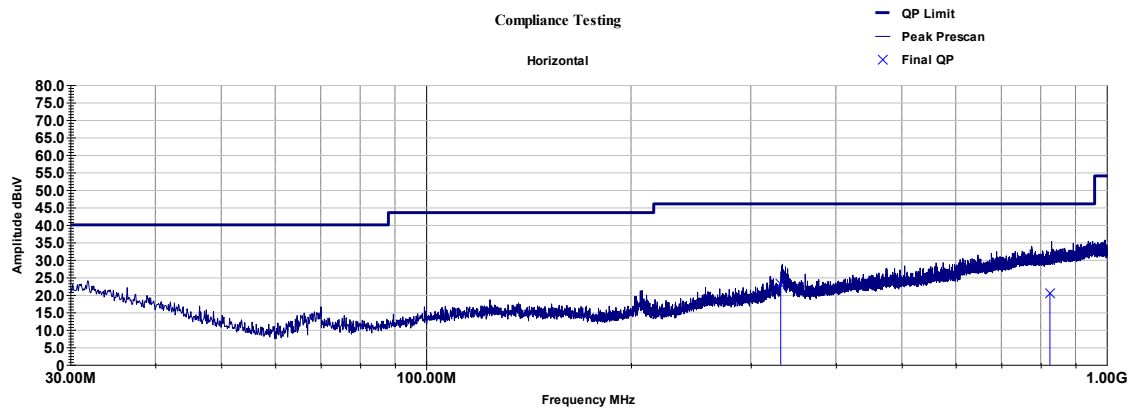


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
331.344	141.00	106.00	38.70	-15.38	23.30	46.00	-22.70
503.969	272.00	100.00	39.07	-10.95	28.10	46.00	-17.90
930.719	111.00	117.00	24.63	-2.35	22.30	46.00	-23.70
Final = Raw + Path Loss							
Margin = Final - Limit							

BLE GFSK 1Mbps High Channel 2480 MHz

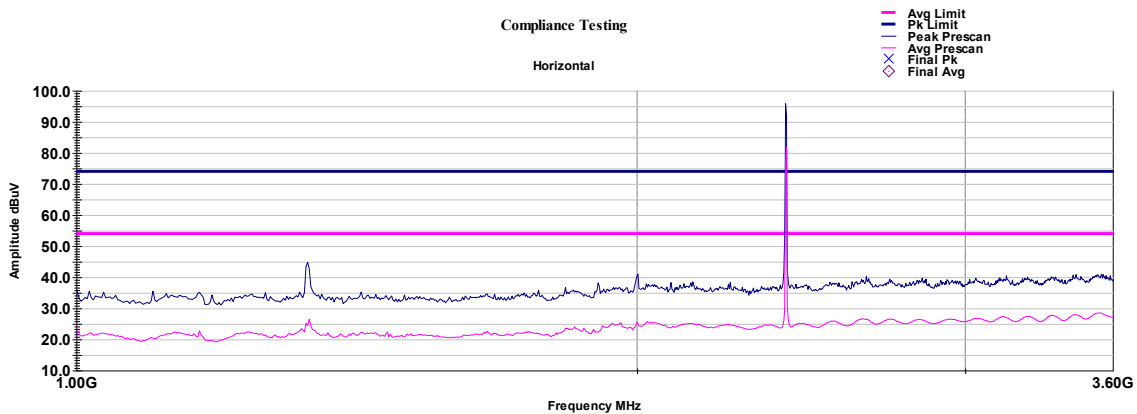
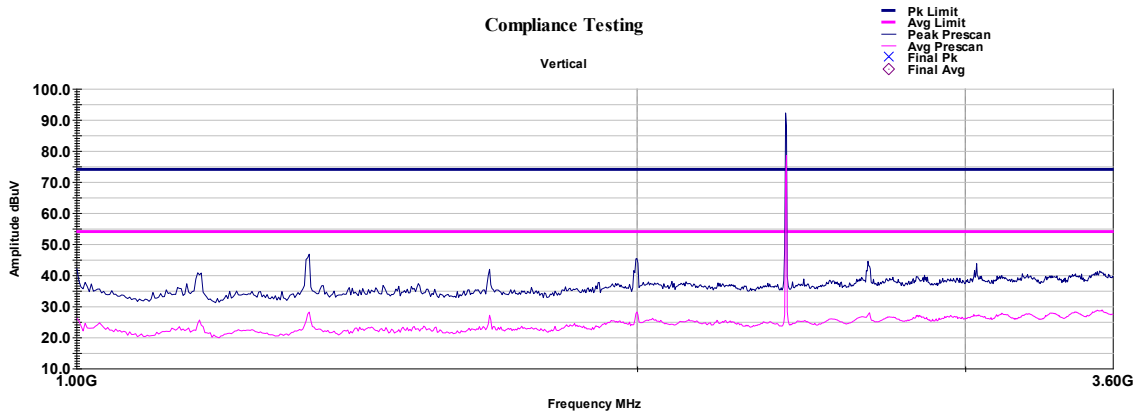


Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
66.689	0.00	106.00	51.25	-25.09	26.20	40.00	-13.80
201.231	215.00	105.00	40.76	-20.47	20.30	43.50	-23.20
333.045	340.00	106.00	40.84	-15.76	25.10	46.00	-20.90
744.557	267.00	142.00	25.89	-5.18	20.70	46.00	-25.30
938.269	322.00	366.00	24.52	-1.61	22.90	46.00	-23.10
Final = Raw + Path Loss							
Margin = Final - Limit							



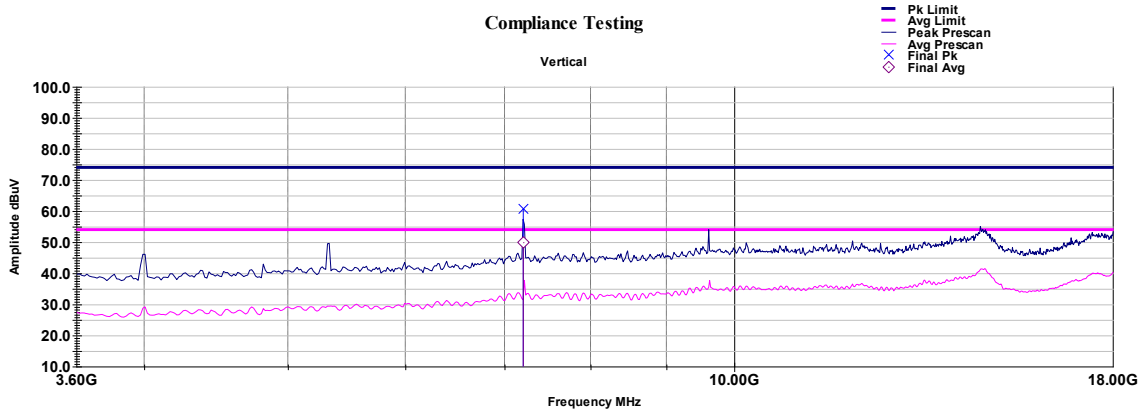
Frequency	Azimuth	Height	Raw QP	Correction	Final QP	Limit	QP Margin
MHz	deg	cm	dBuV	dB	dBuV/m	dBuV/m	dB
331.87	345.00	110.00	38.60	-15.38	23.20	46.00	-22.80
825.244	85.00	142.00	25.01	-4.58	20.40	46.00	-25.60
Final = Raw + Path Loss							
Margin = Final - Limit							

Above 1 GHz
BLE GFSK low channel 1Mbps 2402 MHz
1 - 3.6 GHz Range

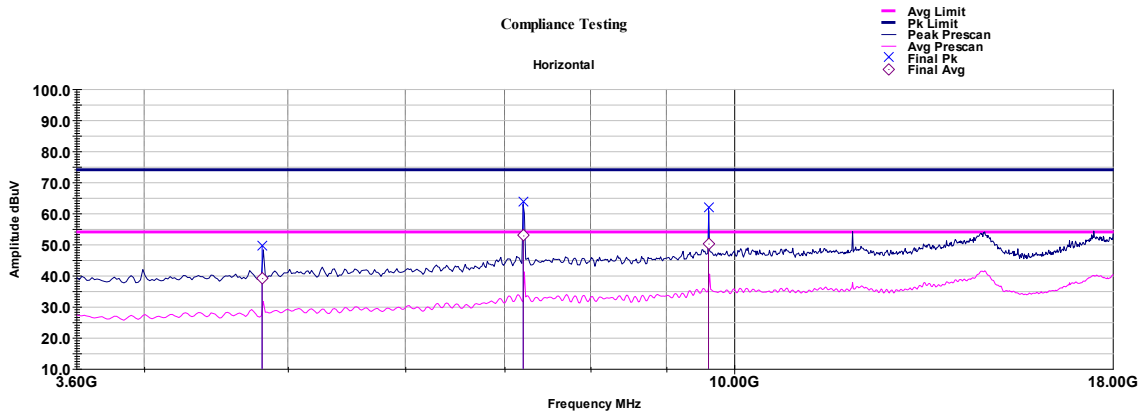


***BLE fundamental**

3.6 - 18 GHz Range

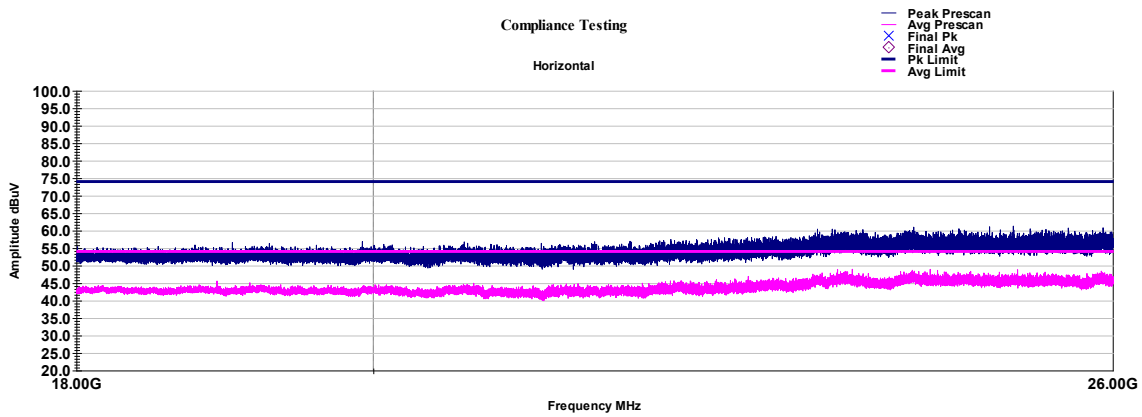
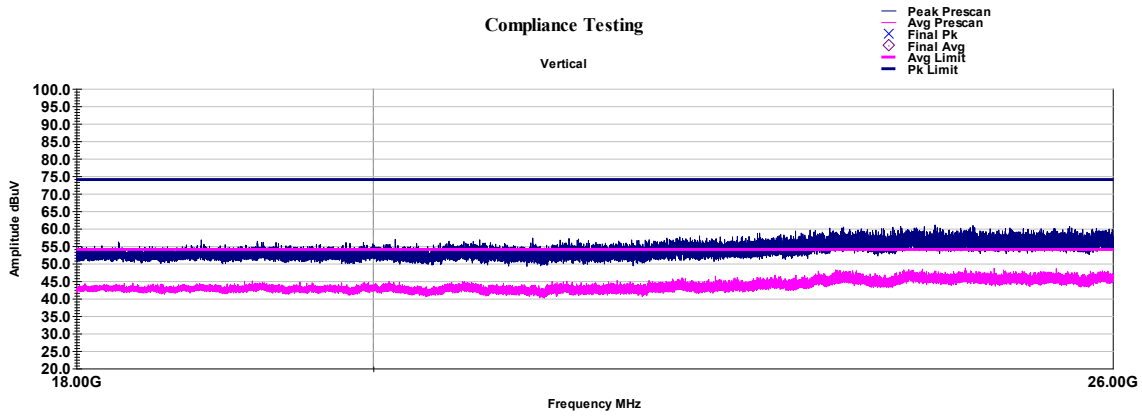


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7207014000	84.00	100.00	58.33	47.56	2.40	60.73	74.00	-13.27	49.96	54	-4.05
Final = Raw + Path Loss											
Margin = Final - Limit											



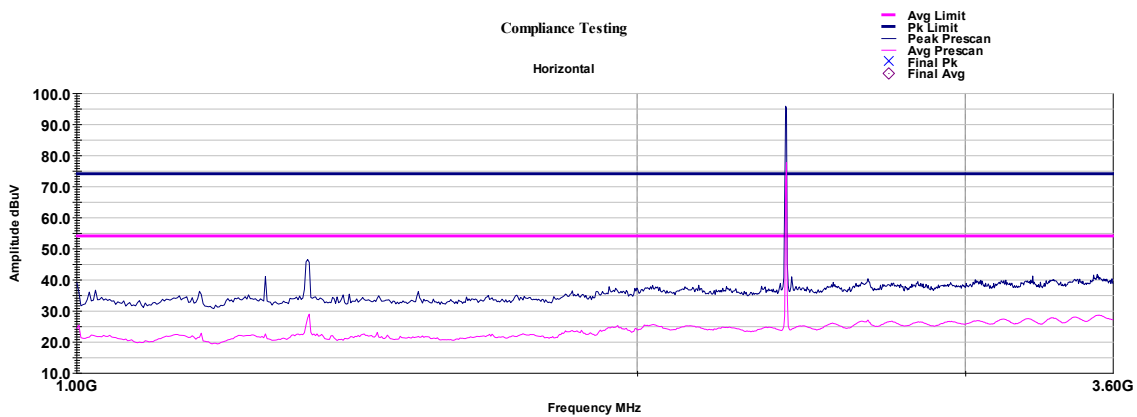
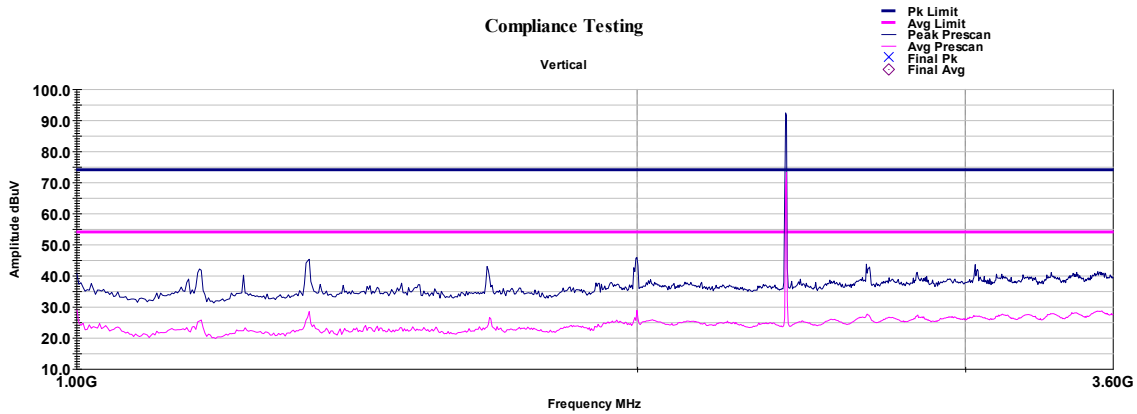
Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4804134000	59.00	105.00	53.88	43.36	-4.22	49.66	74.00	-24.34	39.14	54	-14.86
7206930000	59.00	113.00	61.21	50.45	2.40	63.60	74.00	-10.40	52.85	54	-1.15
9609151000	46.00	118.00	57.92	46.31	3.92	61.84	74.00	-12.16	50.23	54	-3.78
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



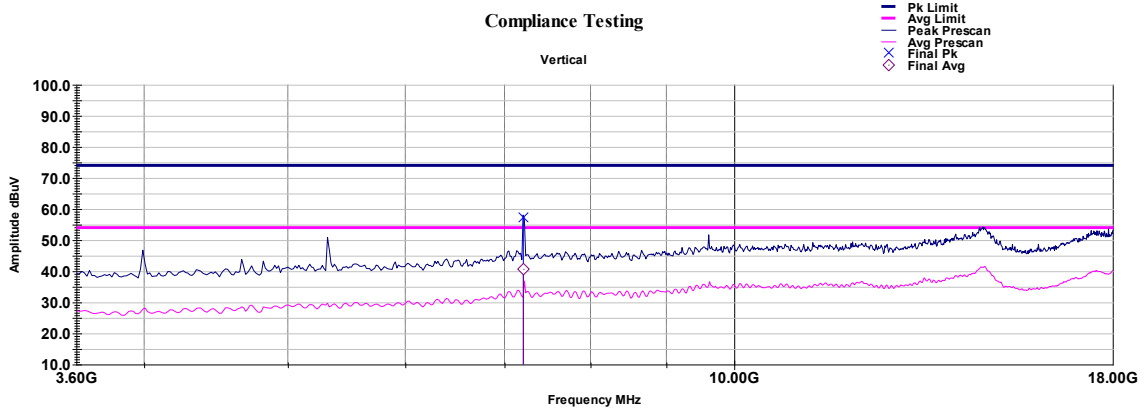
BLE GFSK low channel 2Mbps 2402 MHz

1 - 3.6 GHz Range

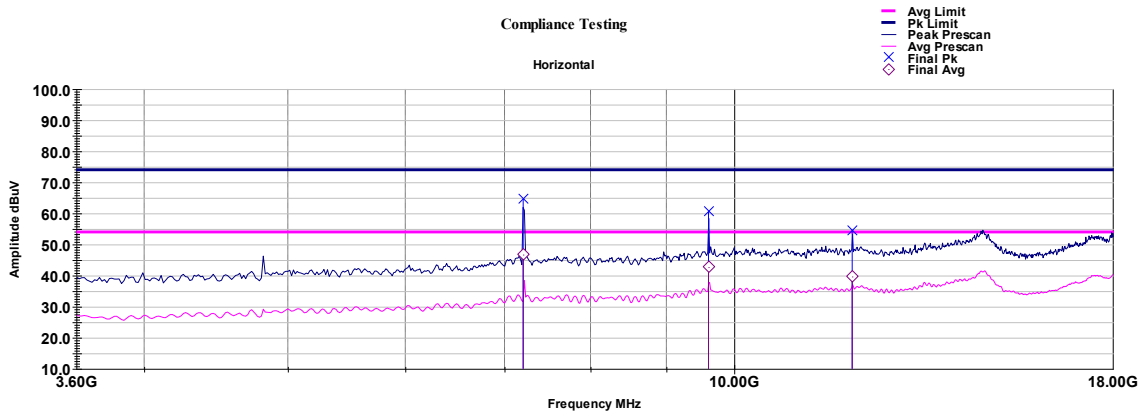


*BLE fundamental

3.6 - 18 GHz Range

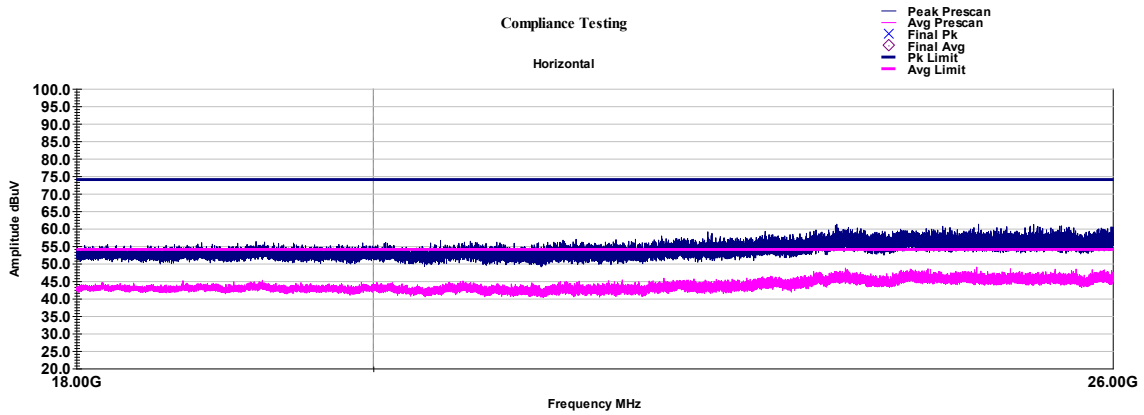
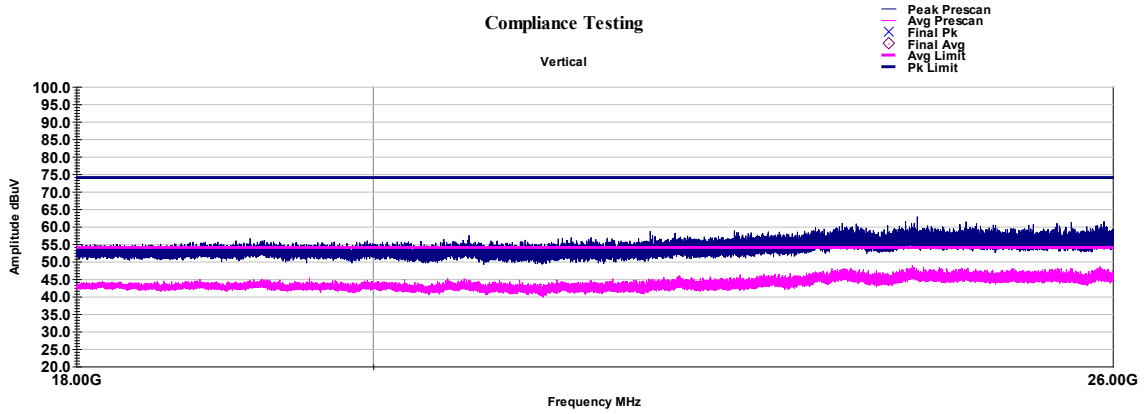


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7207722000	113.00	100.00	54.96	38.35	2.39	57.35	74.00	-16.65	40.74	54	-13.26
Final = Raw + Path Loss											
Margin = Final - Limit											



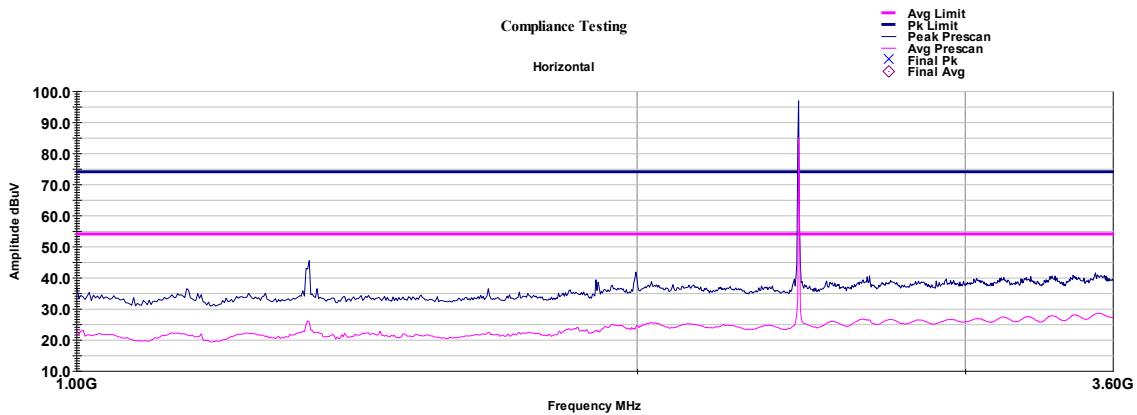
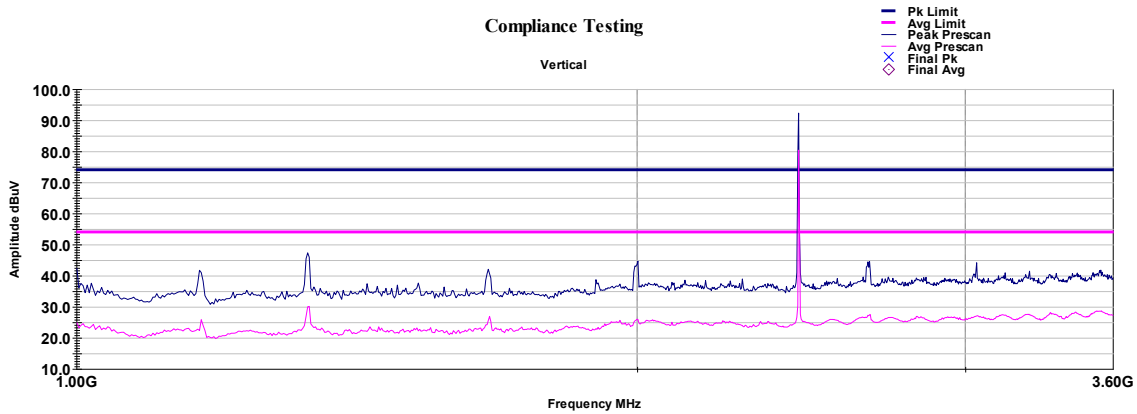
Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7206234000	51.00	105.00	62.29	44.34	2.40	64.69	74.00	-9.31	46.74	54	-7.26
9608294000	51.00	118.00	56.63	38.79	3.92	60.55	74.00	-13.45	42.71	54	-11.29
12010410000	344.00	100.00	49.40	34.40	5.27	54.67	74.00	-19.33	39.67	54	-14.33
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



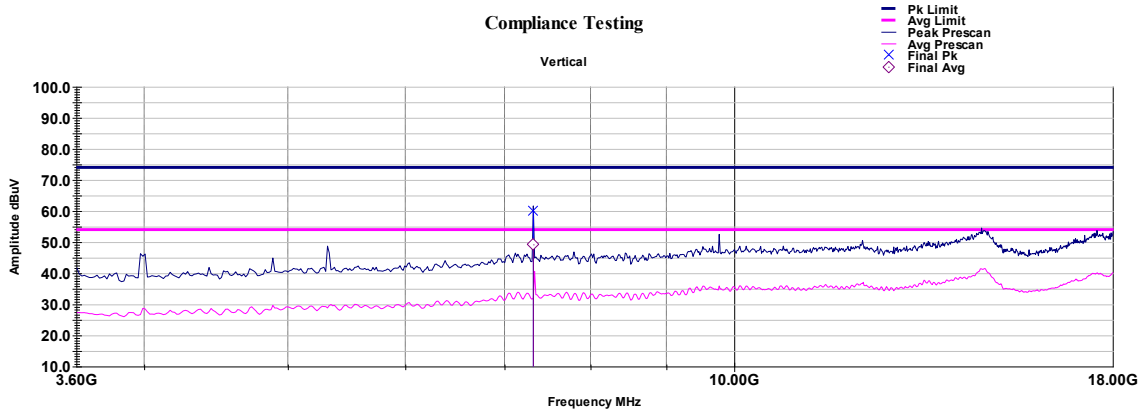
BLE GFSK mid channel 1Mbps 2440 MHz

1 - 3.6 GHz Range

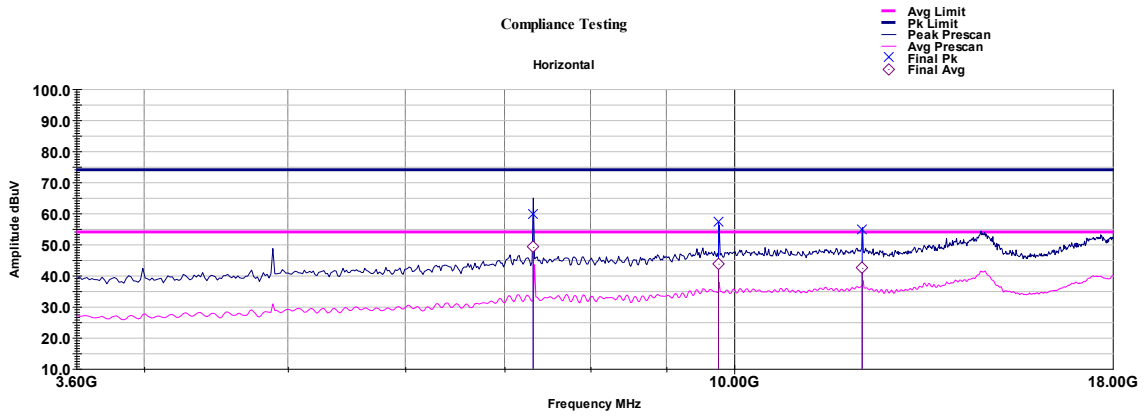


*BLE fundamental

3.6 - 18 GHz Range

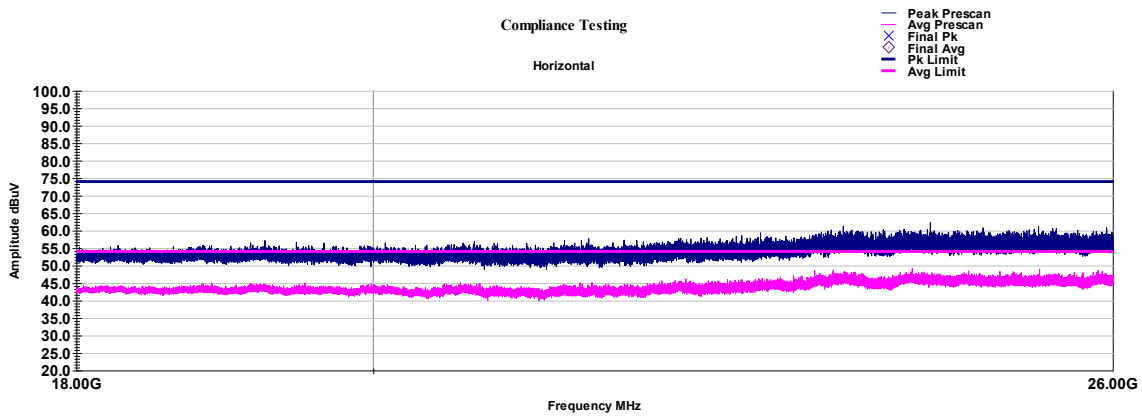
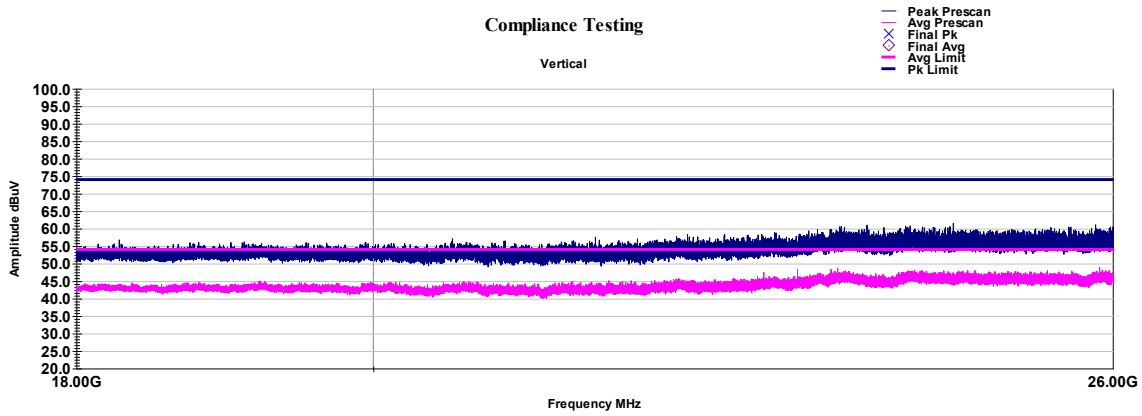


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7320973000	58.00	100.00	57.84	47.11	2.14	59.97	74.00	-14.03	49.25	54	-4.75
Final = Raw + Path Loss											
Margin = Final - Limit											



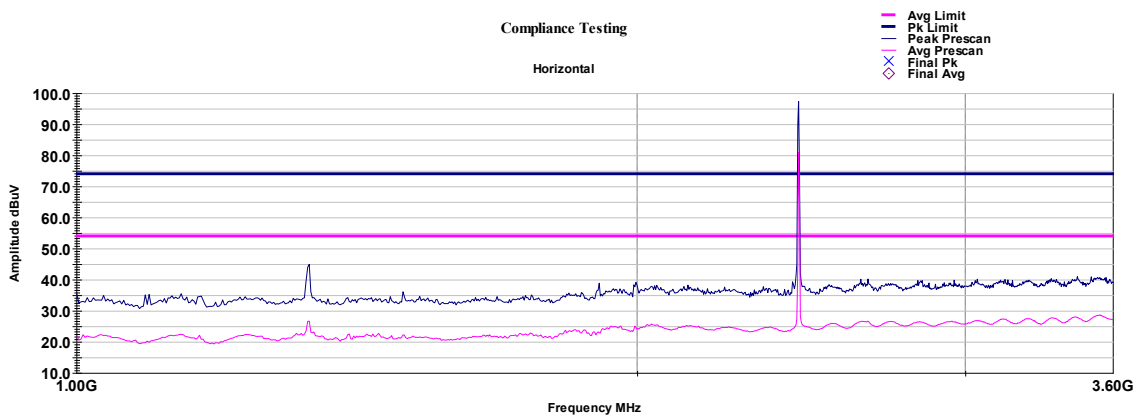
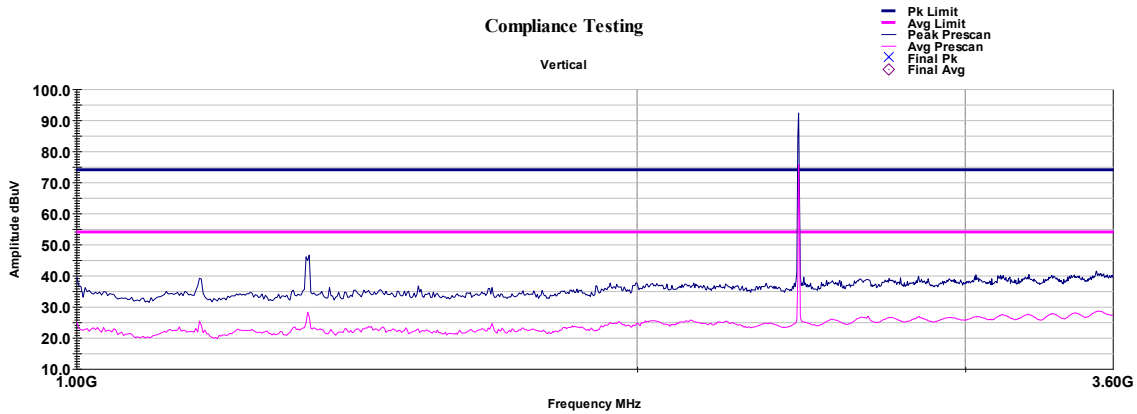
Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7319467000	53.00	100.00	57.63	46.99	2.14	59.77	74.00	-14.23	49.14	54	-4.87
9759259000	54.00	100.00	53.12	39.76	4.01	57.13	74.00	-16.87	43.77	54	-10.23
12199300000	323.00	100.00	49.52	37.00	5.37	54.90	74.00	-19.11	42.37	54	-11.63
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



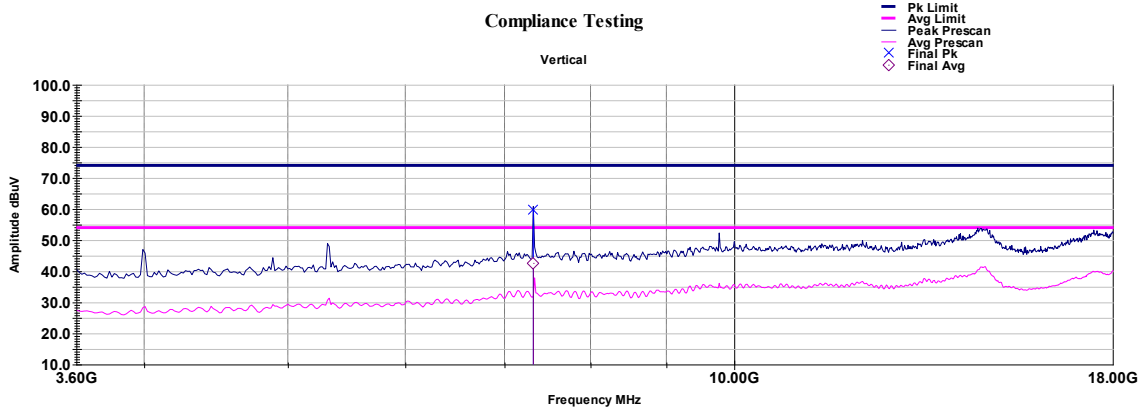
BLE GFSK mid channel 2Mbps 2440 MHz

1 - 3.6 GHz Range

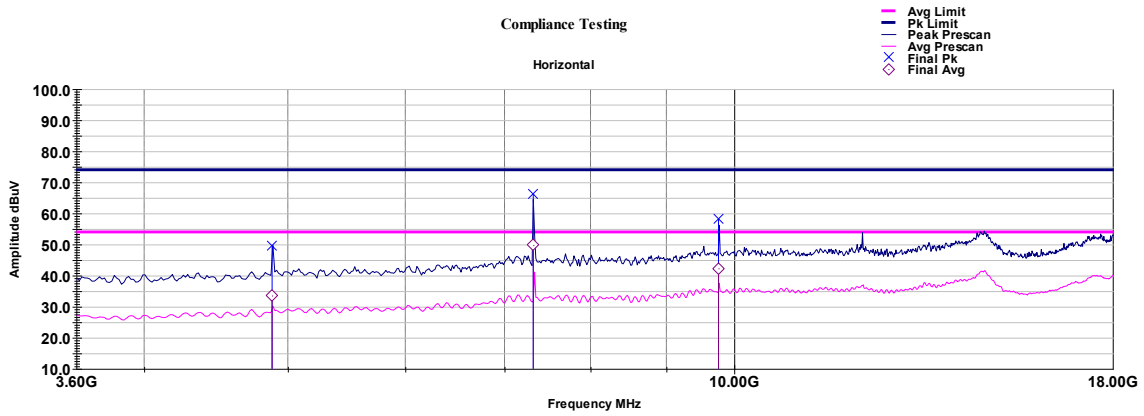


*BLE fundamental

3.6 - 18 GHz Range

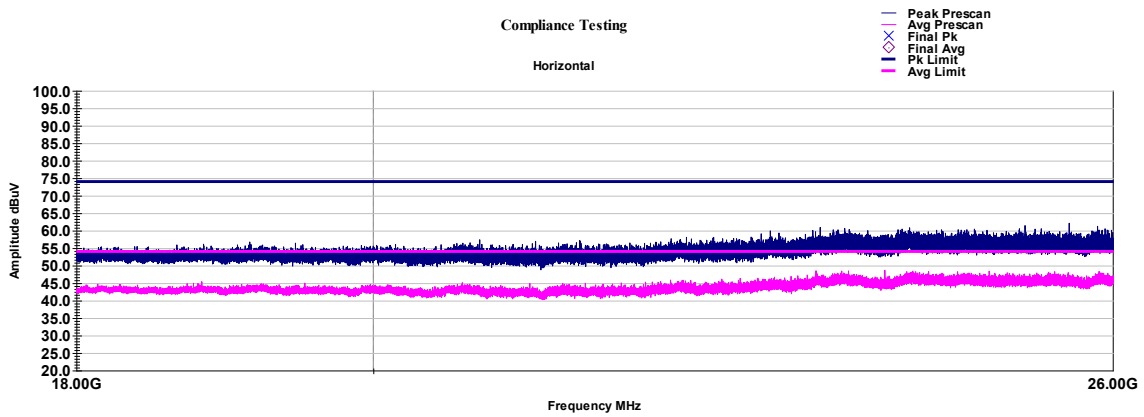
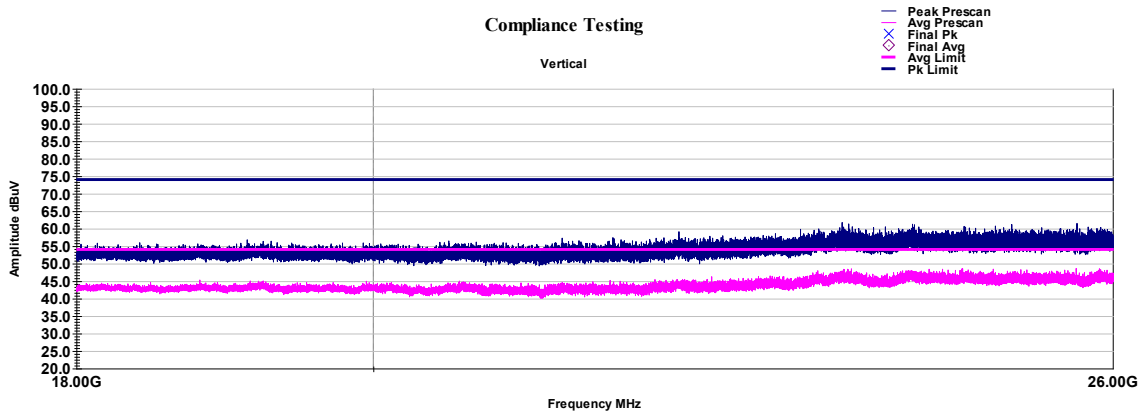


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7321547000	114.00	100.00	57.65	40.52	2.14	59.79	74.00	-14.21	42.66	54	-11.34
Final = Raw + Path Loss											
Margin = Final - Limit											



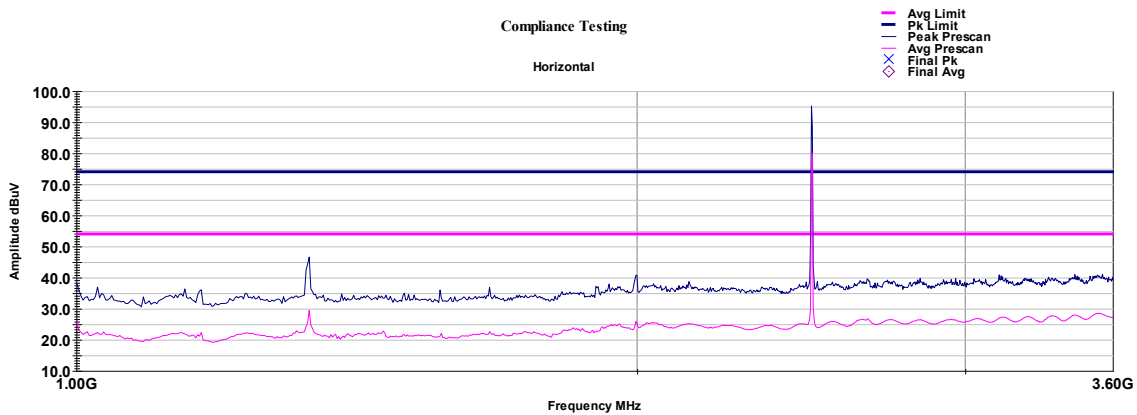
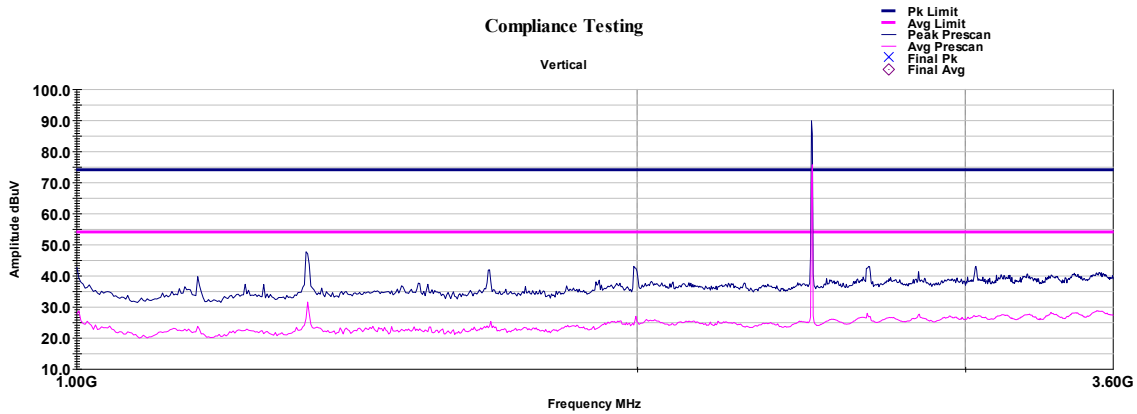
Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4879248000	59.00	113.00	53.52	37.62	-4.05	49.47	74.00	-24.53	33.56	54	-20.44
7320264000	59.00	100.00	64.01	47.68	2.14	66.15	74.00	-7.85	49.82	54	-4.18
9760224000	45.00	117.00	54.29	38.30	4.01	58.30	74.00	-15.70	42.31	54	-11.69
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



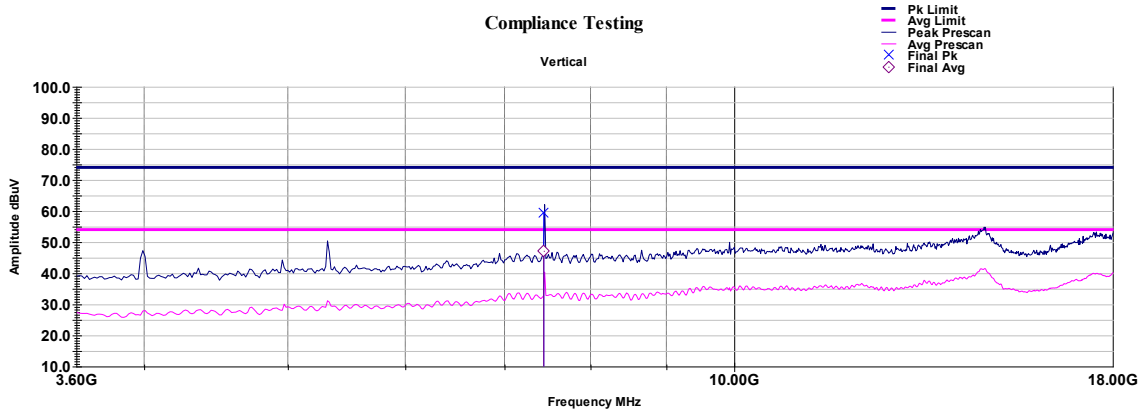
BLE GFSK high channel 1Mbps 2480 MHz

1 - 3.6 GHz Range

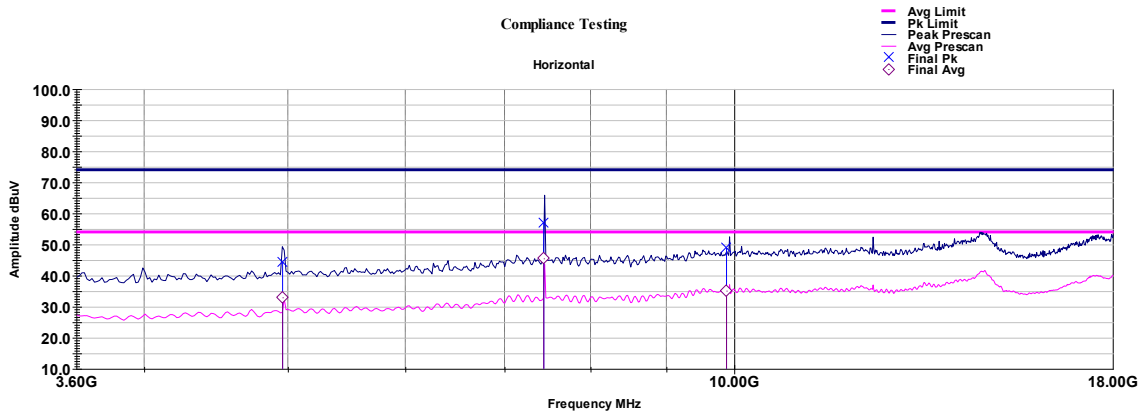


*BLE fundamental

3.6 - 18 GHz Range

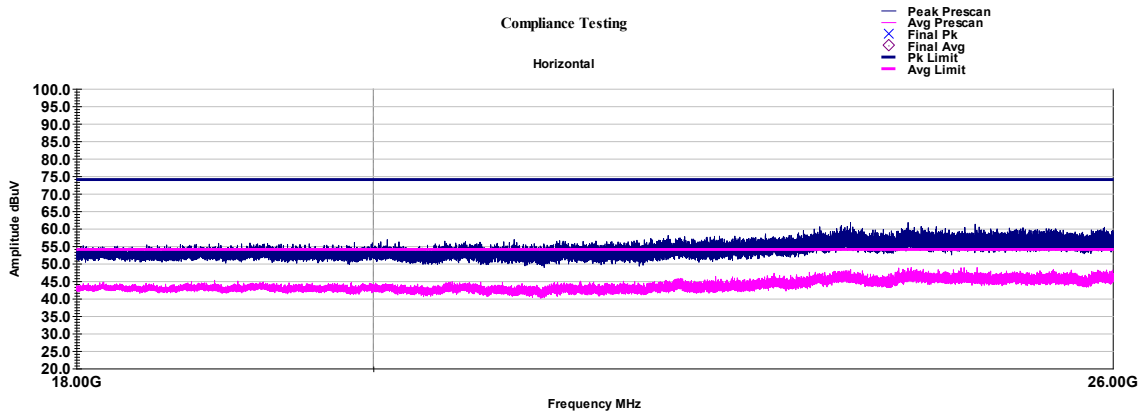
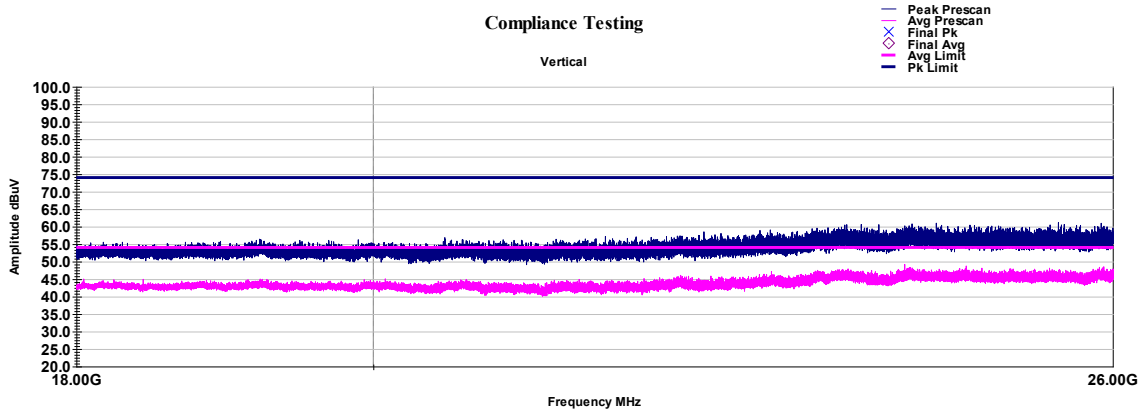


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
7440163000	113.00	106.00	57.55	45.34	1.85	59.40	74.00	-14.60	47.19	54	-6.81
Final = Raw + Path Loss											
Margin = Final - Limit											



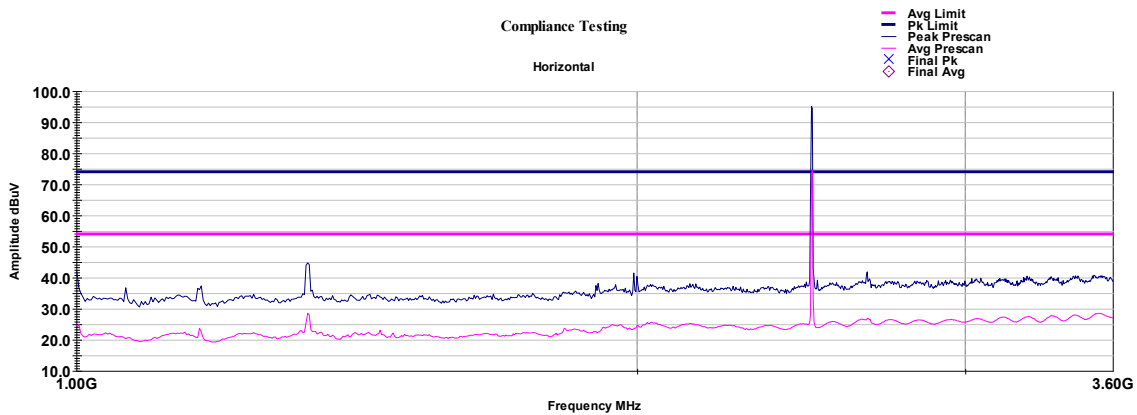
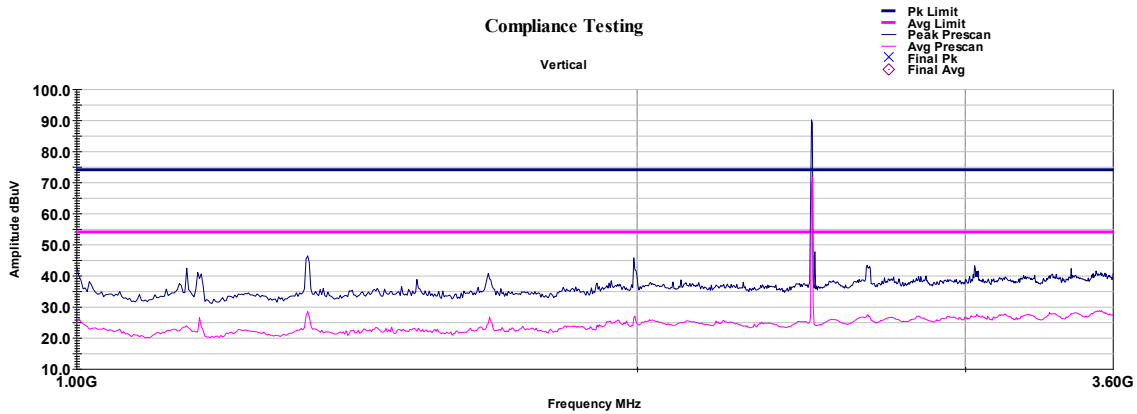
Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
4959749000	47.00	113.00	48.32	37.05	-4.08	44.23	74.00	-29.77	32.96	54	-21.04
7440899000	28.00	113.00	55.08	43.67	1.85	56.93	74.00	-17.07	45.51	54	-8.49
9881258000	58.00	175.00	44.68	30.98	4.15	48.84	74.00	-25.16	35.14	54	-18.87
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



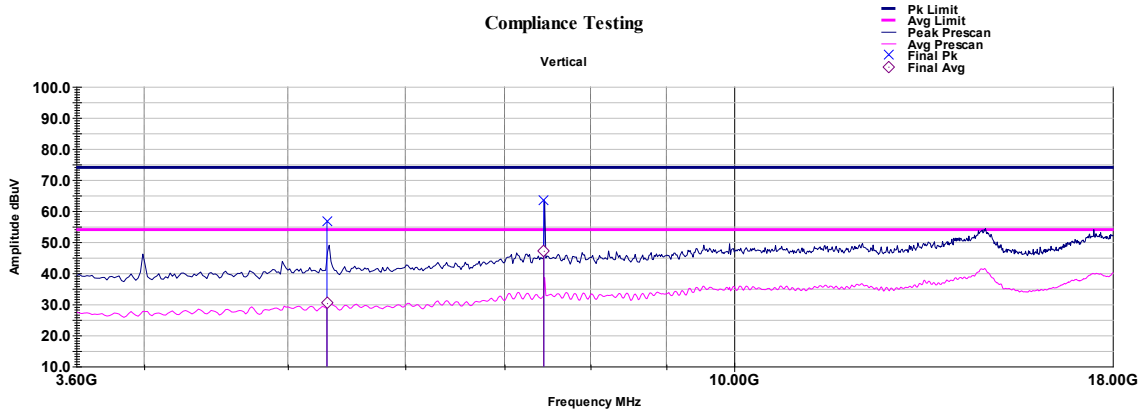
BLE GFSK high channel 2Mbps 2480 MHz

1 - 3.6 GHz Range

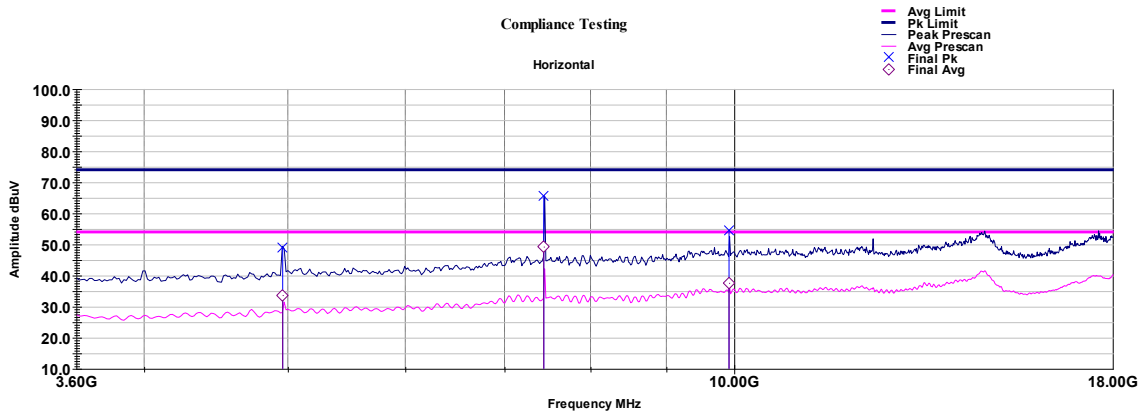


*BLE fundamental

3.6 - 18 GHz Range

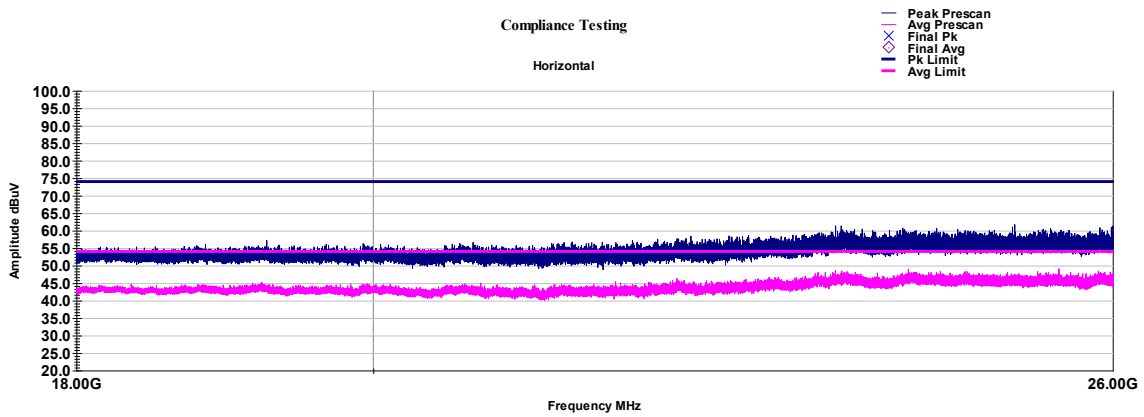
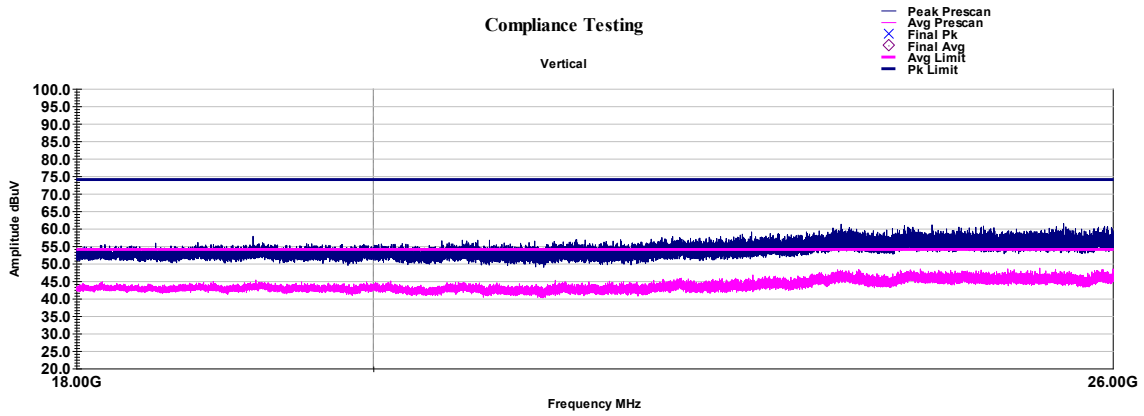


Frequency	Azimuth	Height	Raw Pk	Raw Avg	Correction	Final Pk	Pk Limit	Pk Margin	Final Avg	Avg Limit	Avg Margin
MHz	deg	cm	dBuV	dBuV	dB	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB
5313462000	184.00	100.00	60.12	33.94	-3.58	56.54	74.00	-17.46	30.36	54	-23.64
7440199000	83.00	106.00	61.70	45.34	1.85	63.55	74.00	-10.45	47.19	54	-6.81
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
4960169000	57.00	125.00	53.00	37.79	-4.08	48.92	74.00	-25.08	33.71	54	-20.29
7440214000	57.00	100.00	63.87	47.44	1.85	65.72	74.00	-8.28	49.29	54	-4.71
9920119000	54.00	114.00	50.44	33.43	4.20	54.64	74.00	-19.36	37.63	54	-16.37
Final = Raw + Path Loss											
Margin = Final - Limit											

18 - 26 GHz Range



Restricted Band Edges

Engineer: Harshith Devaraja

Test Date: 02/18/26

Test Procedure

Conducted Method

As per ANSI C63.10 Section 11.12.2

EUT, via a pigtail cable, was directly connected to the spectrum analyzer to verify that the EUT met the requirements for restricted band edge.

The conducted measurement plot reported below involves the resultant conversion from the EIRP to an equivalent electric field.

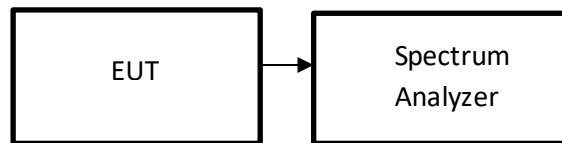
$$E = \text{EIRP} - 20 \log(3) + 104.8$$

The conversion is factored into the spectrum analyzer as the reference offset.

The maximum transmit antenna gain is set to 3 dB.as an offset on the analyzer.

(The actual antenna gain of the EUT = 1.95 dBi)

Test Setup



Band Edge Emissions Summary

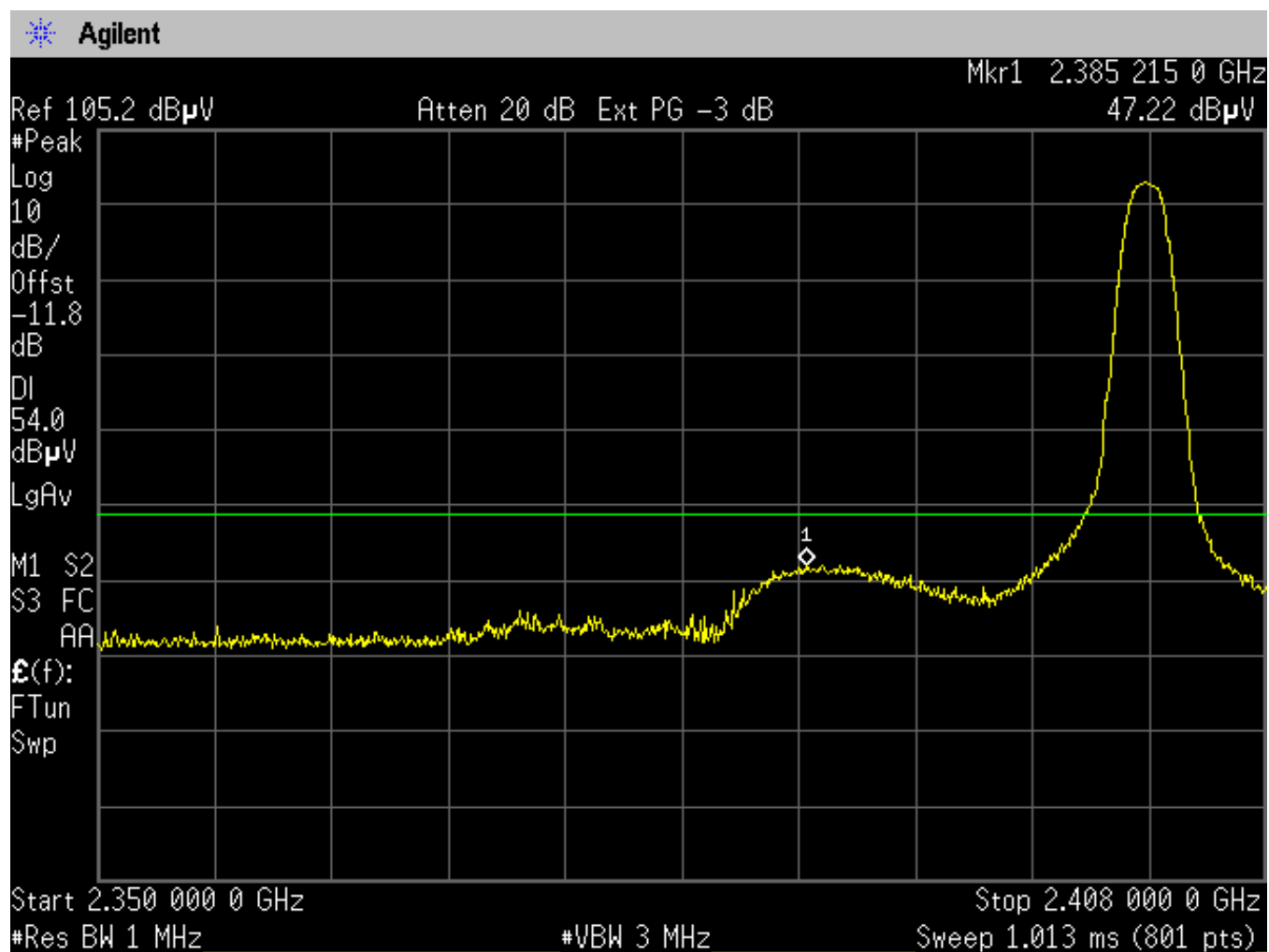
Band edge	Modulation	Monitored Level (dBμV/m)	Detector	Limit (dBuV)	Margin (dB)	Result
Lower 2402 MHz	1 Mbps	47.22	Peak*	54	-6.78	Pass
	2 Mbps	47.08	Peak*	54	-6.92	Pass
Upper 2483.5 MHz	1 Mbps	52.51	Peak*	54	-1.49	Pass
	2 Mbps	53.26	Peak*	54	-0.74	Pass

Margin = Monitored Level – Limit

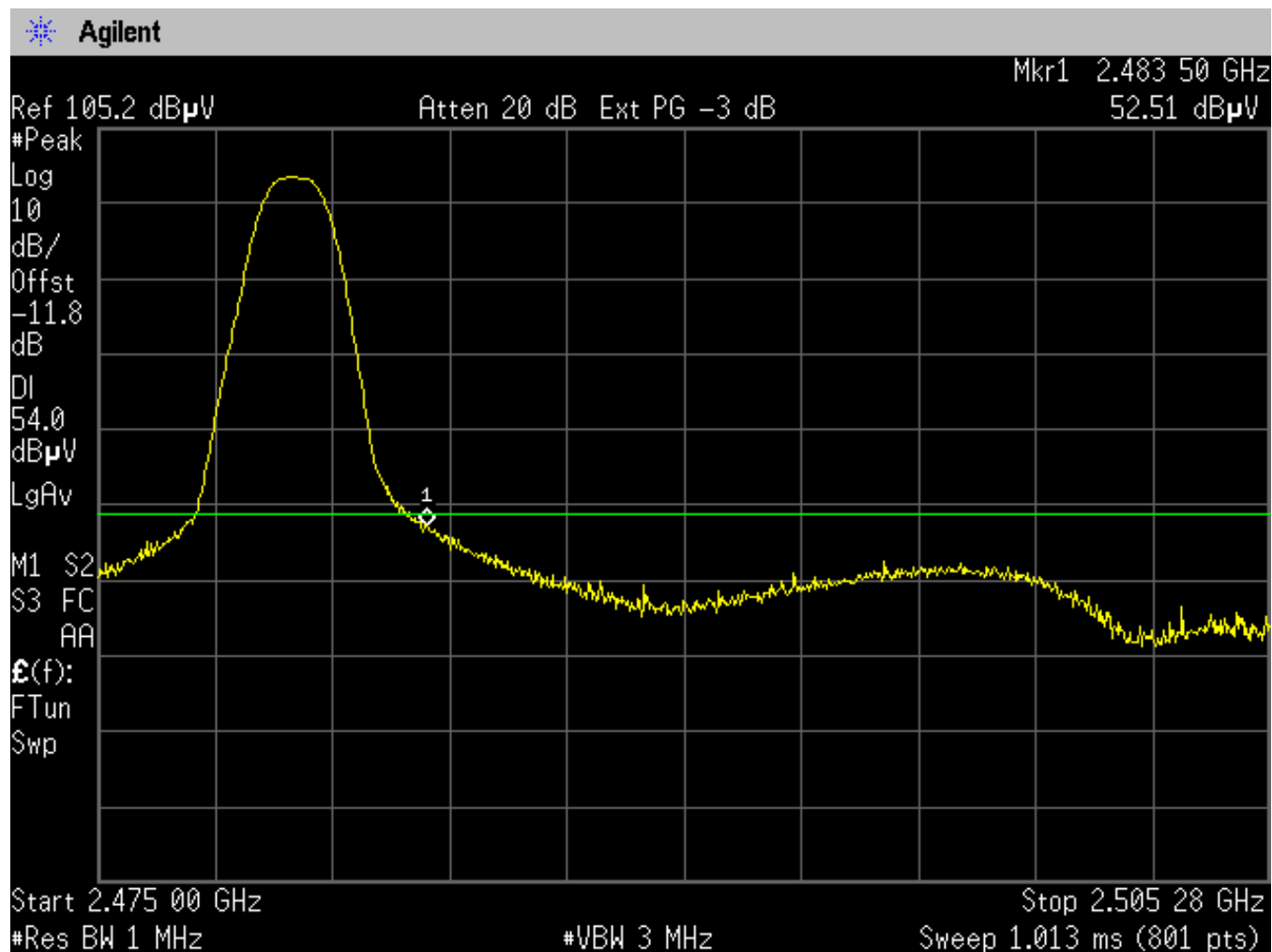
***Monitored level with peak detector under the average limit.**

Band Edge Plots

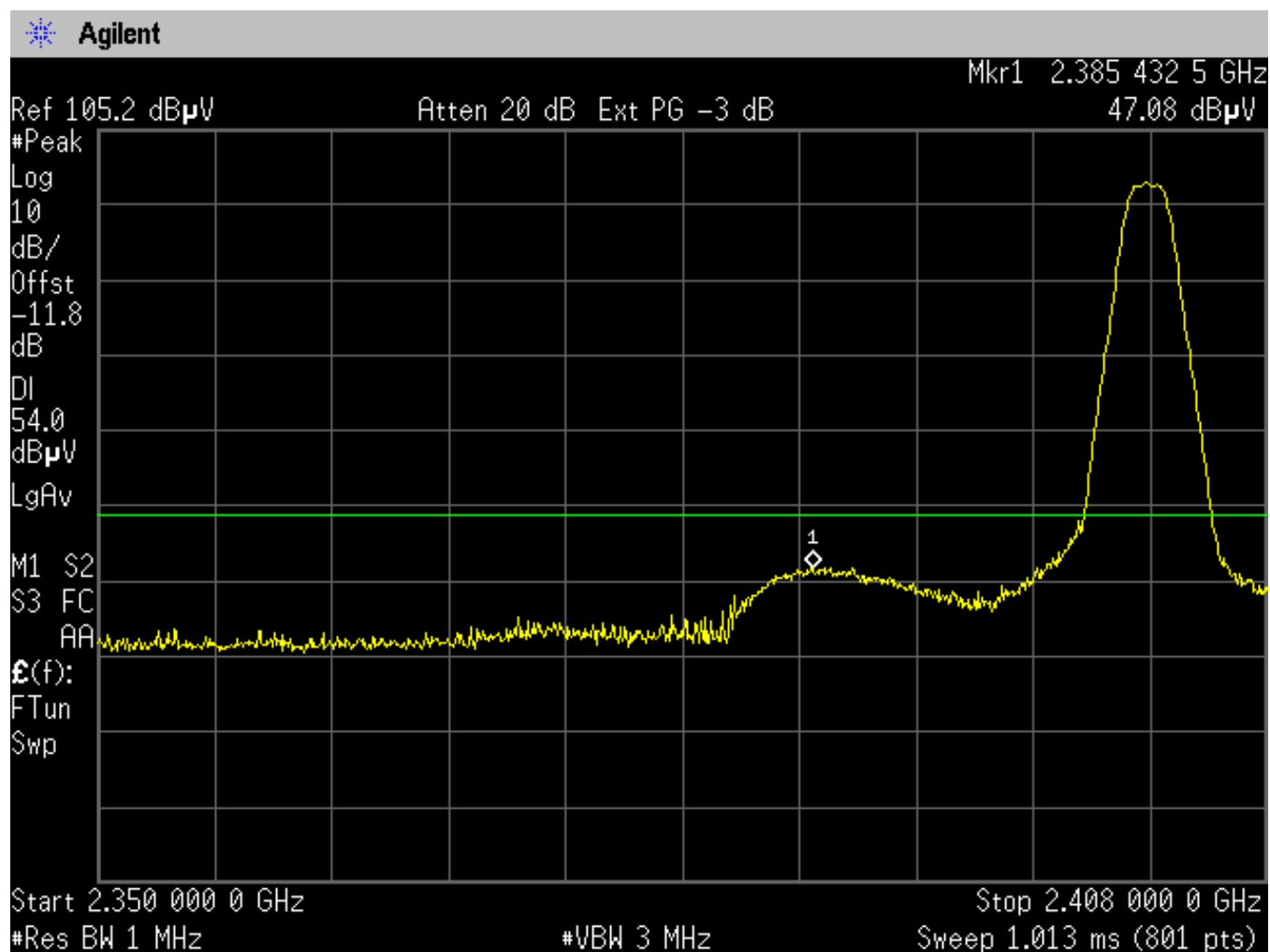
BLE GFSK 1Mbps low channel 2402 MHz



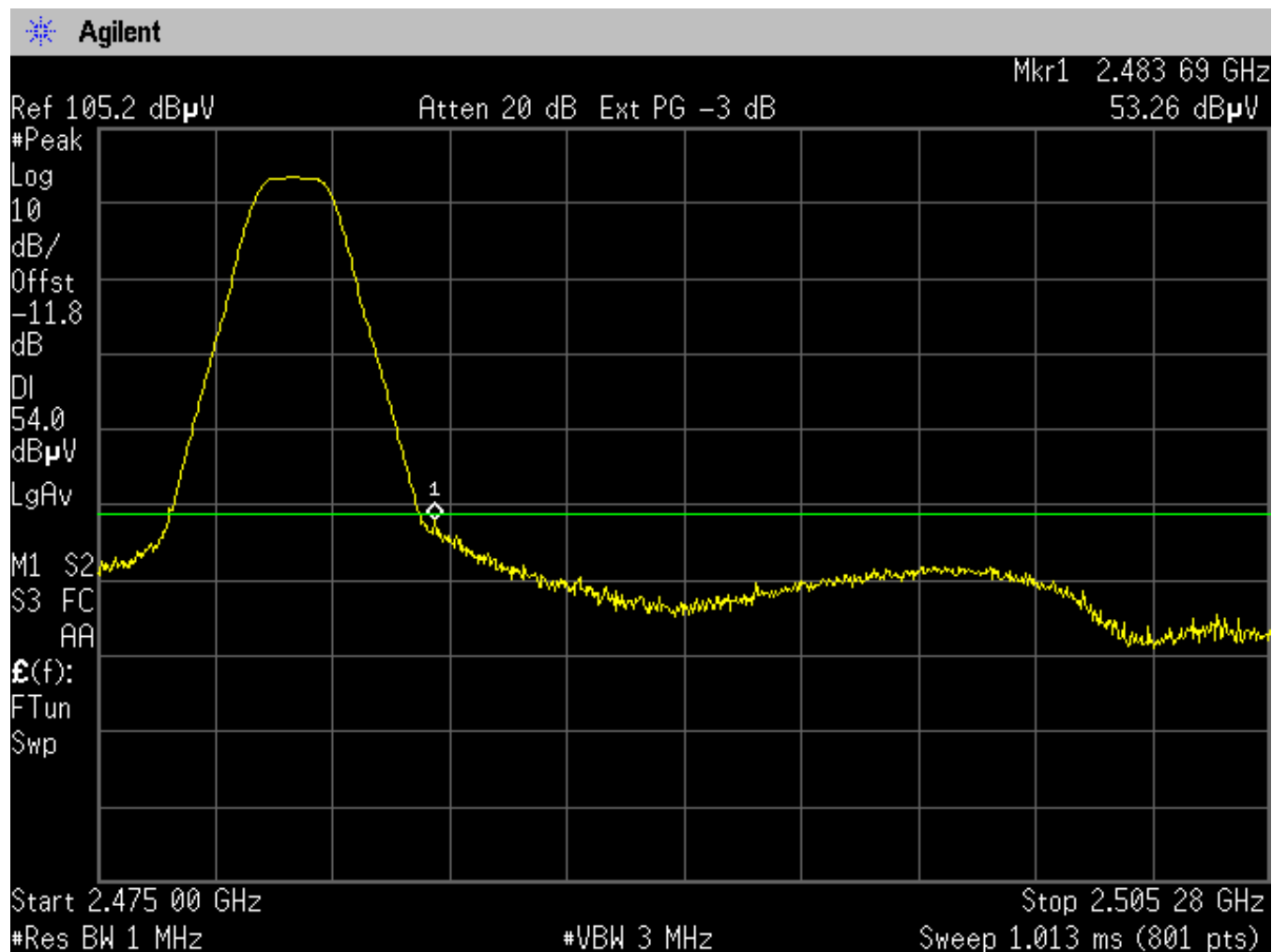
BLE GFSK 1Mbps high channel 2480 MHz



BLE GFSK 2Mbps low channel 2402 MHz



BLE GFSK 2Mbps high channel 2480 MHz



Occupied Bandwidth

Engineer: Harshith Devaraja

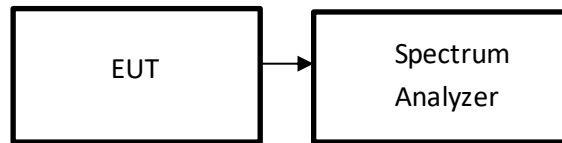
Test Date: 02/18/26

Test Procedure

Conducted Method

EUT, via a pigtail cable, was directly connected to the spectrum analyzer to verify that the EUT met the requirements for Occupied Bandwidth.

Test Setup



The Spectrum Analyzer was set to the following:

RBW = 100 kHz

VBW $\geq 3 \times$ RBW

Peak Detector

Trace mode = max hold

Sweep = auto couple

Span = $(1.5 - 5) \times$ OBW

-6 dB Occupied Bandwidth Summary

BLE GFSK 1Mbps

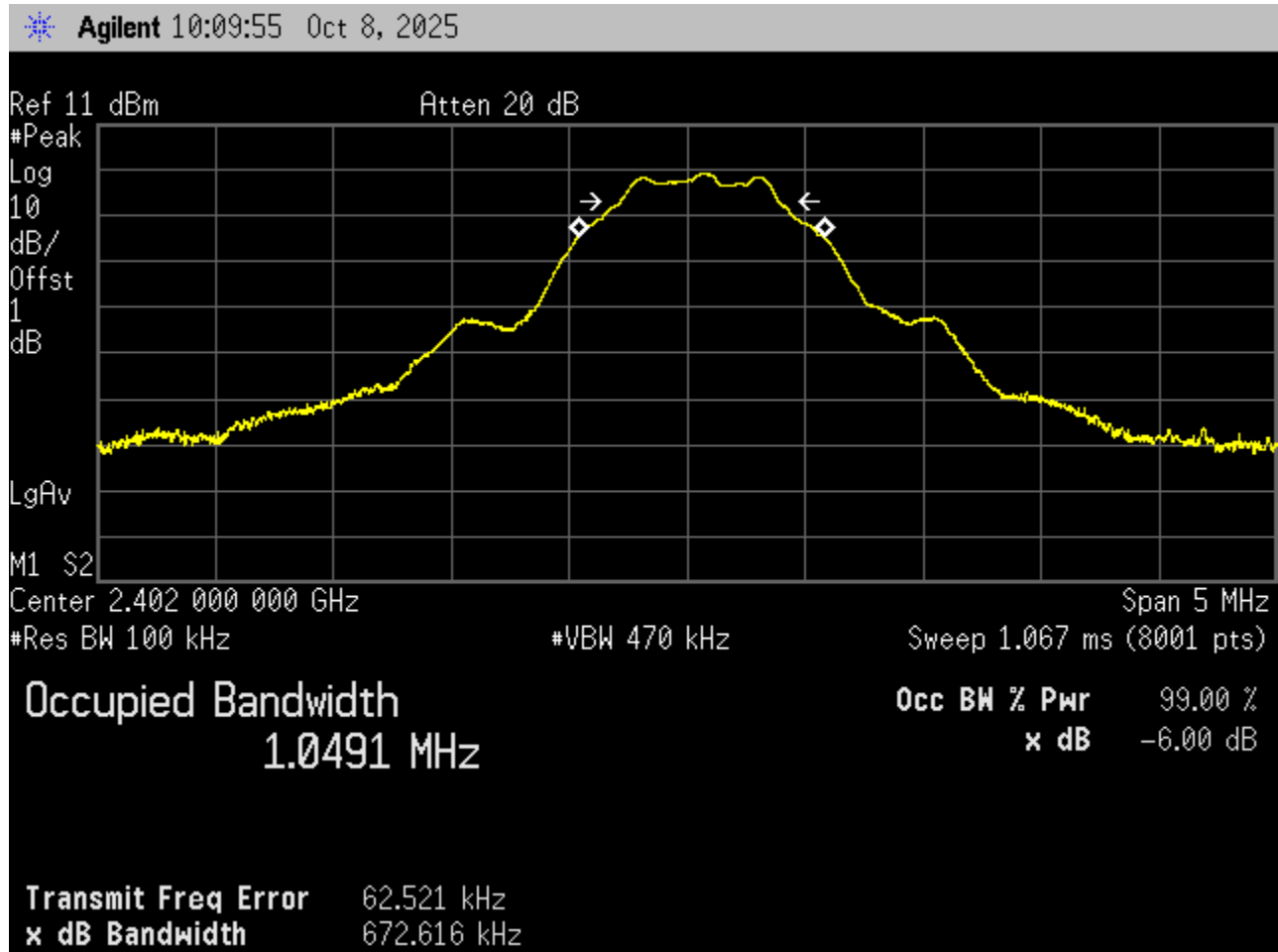
Frequency (MHz)	Measured Bandwidth (kHz)	Specification Limit (kHz)	Result
2402	672.616	> 500	Pass
2440	666.383	> 500	Pass
2480	667.644	> 500	Pass

BLE GFSK 2Mbps

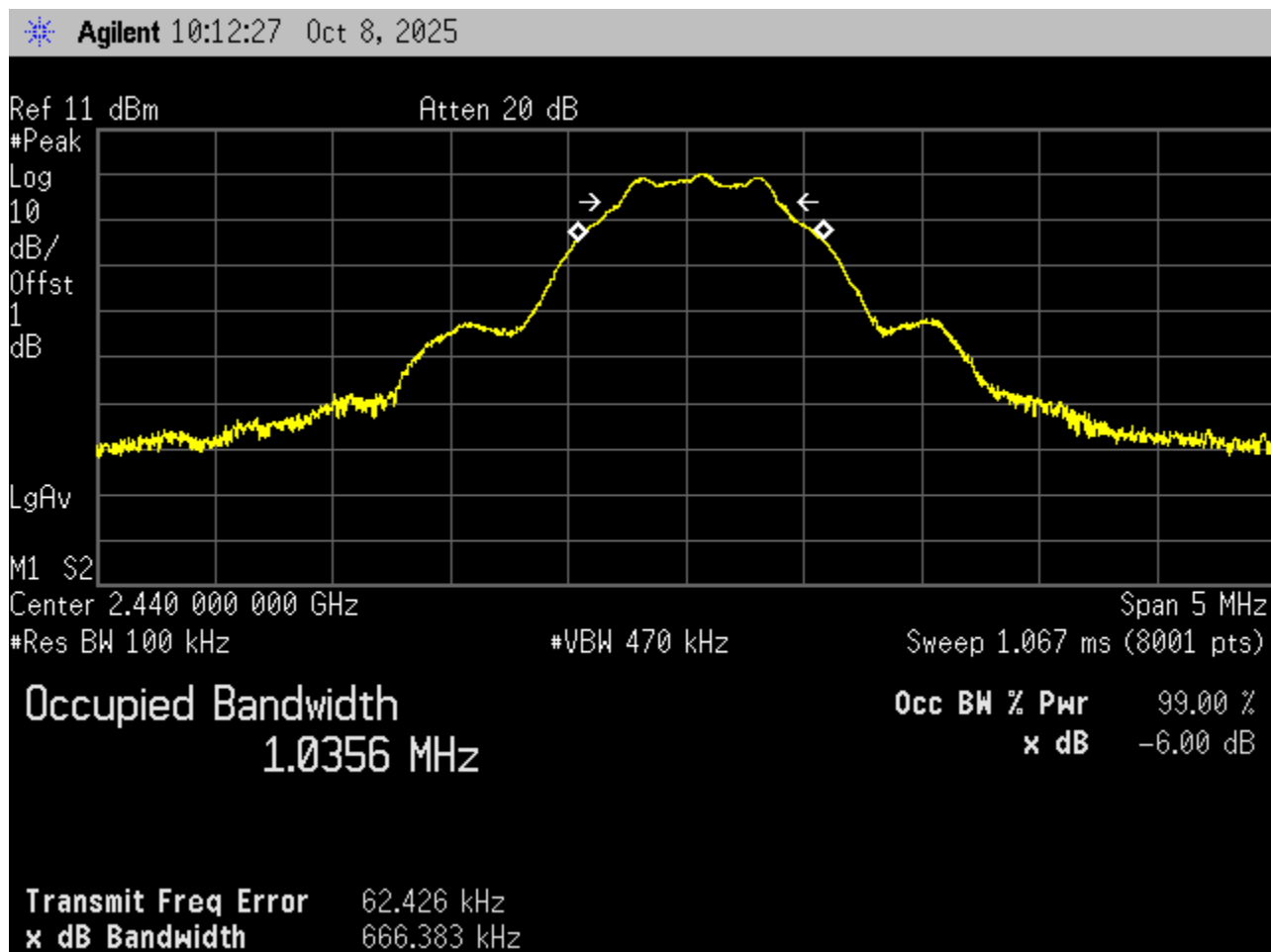
Frequency (MHz)	Measured Bandwidth (kHz)	Specification Limit (kHz)	Result
2402	1128	> 500	Pass
2440	1118	> 500	Pass
2480	1115	> 500	Pass

-6 dB and 99% Bandwidth Plots

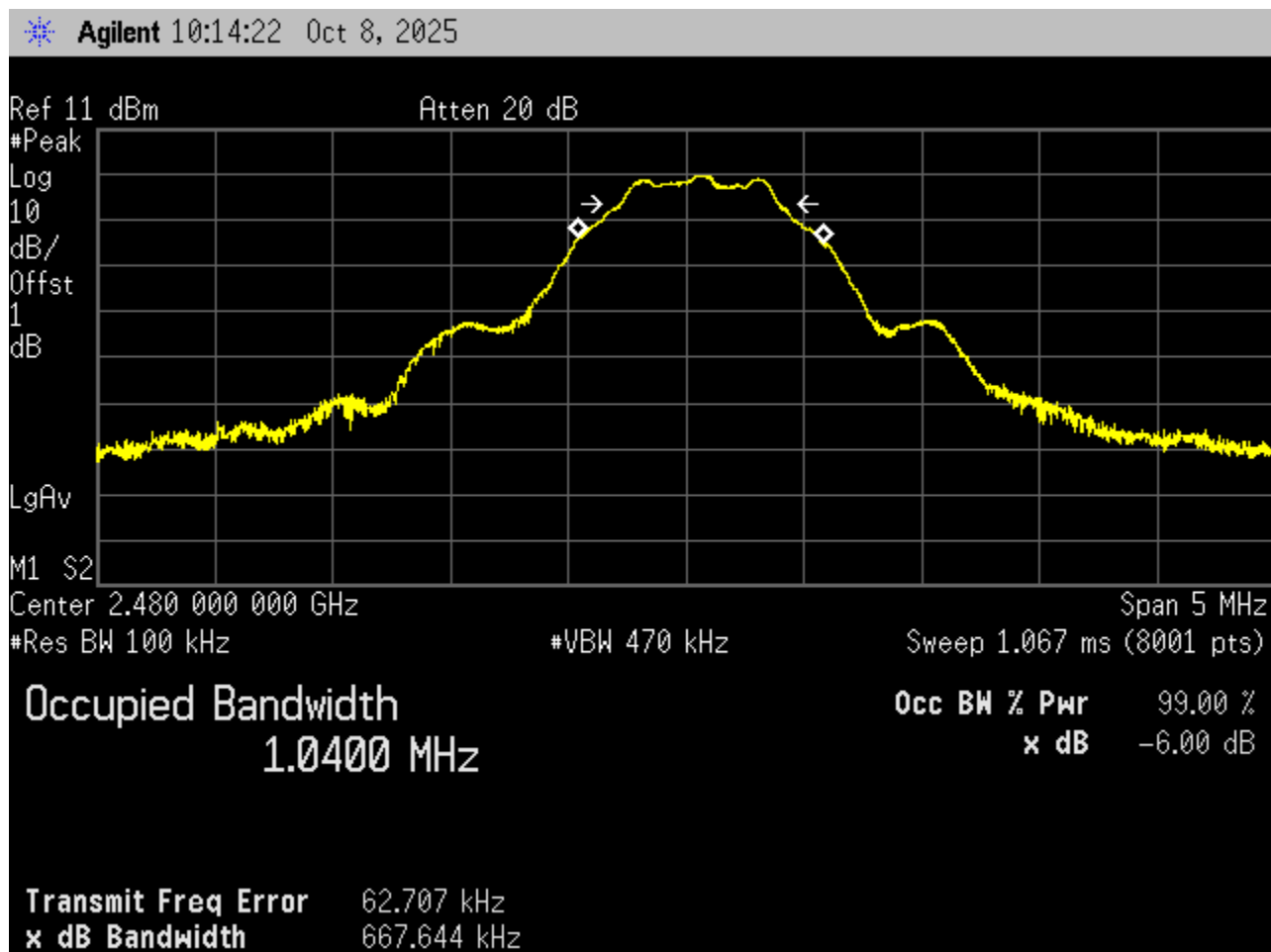
BLE GFSK 1Mbps low channel 2402 MHz



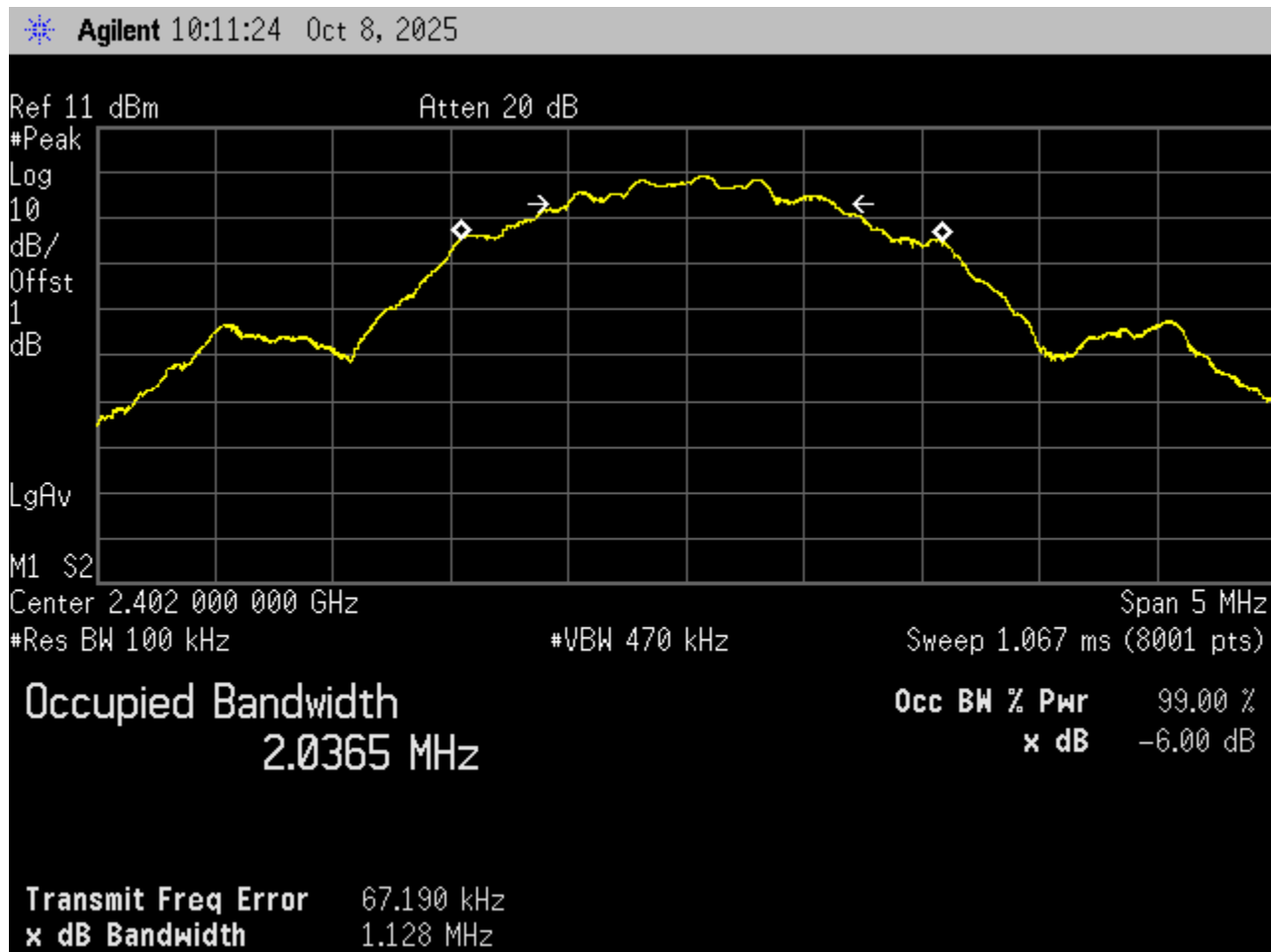
BLE GFSK 1Mbps mid channel 2440 MHz



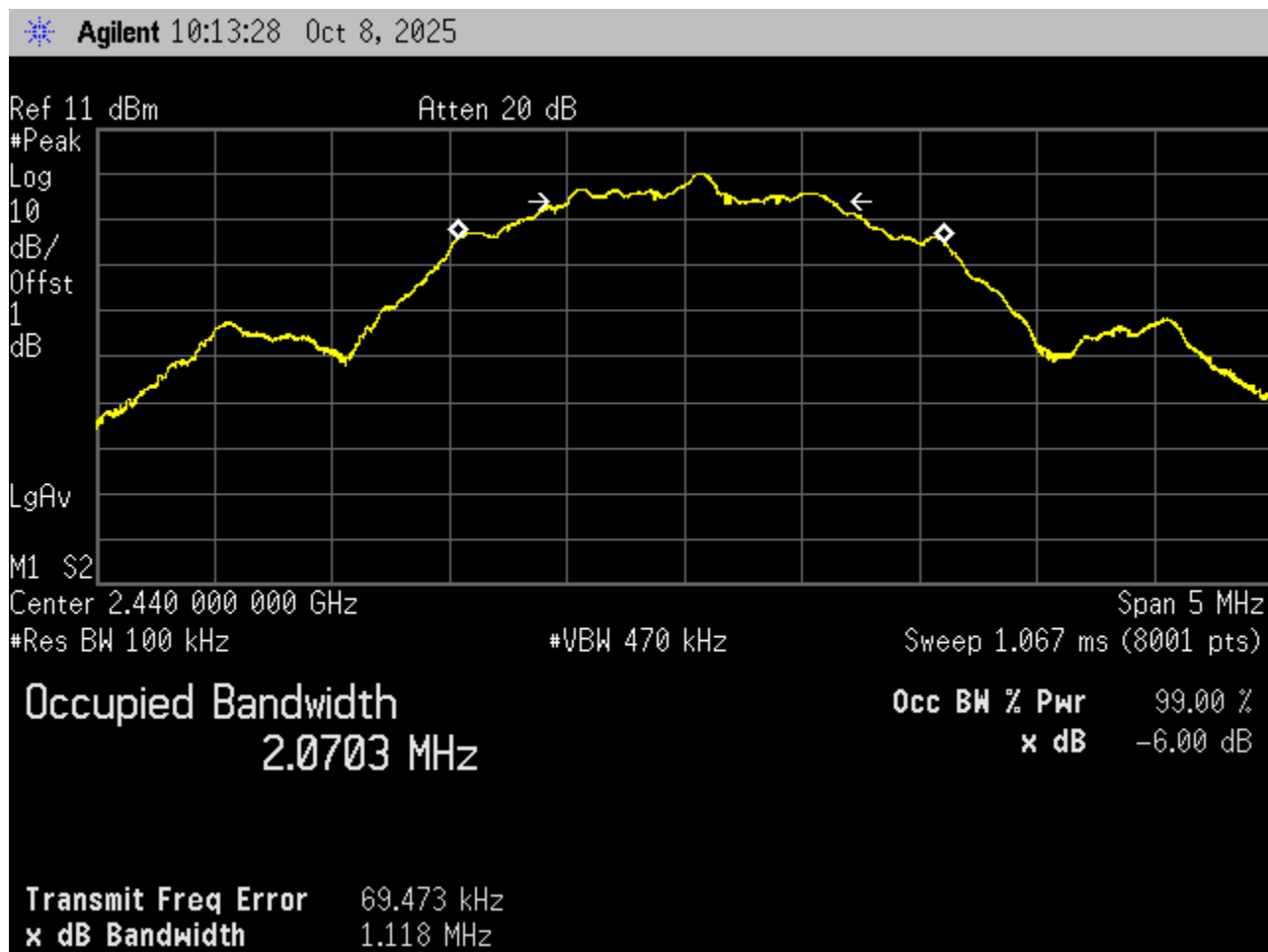
BLE GFSK 1Mbps high channel 2480 MHz



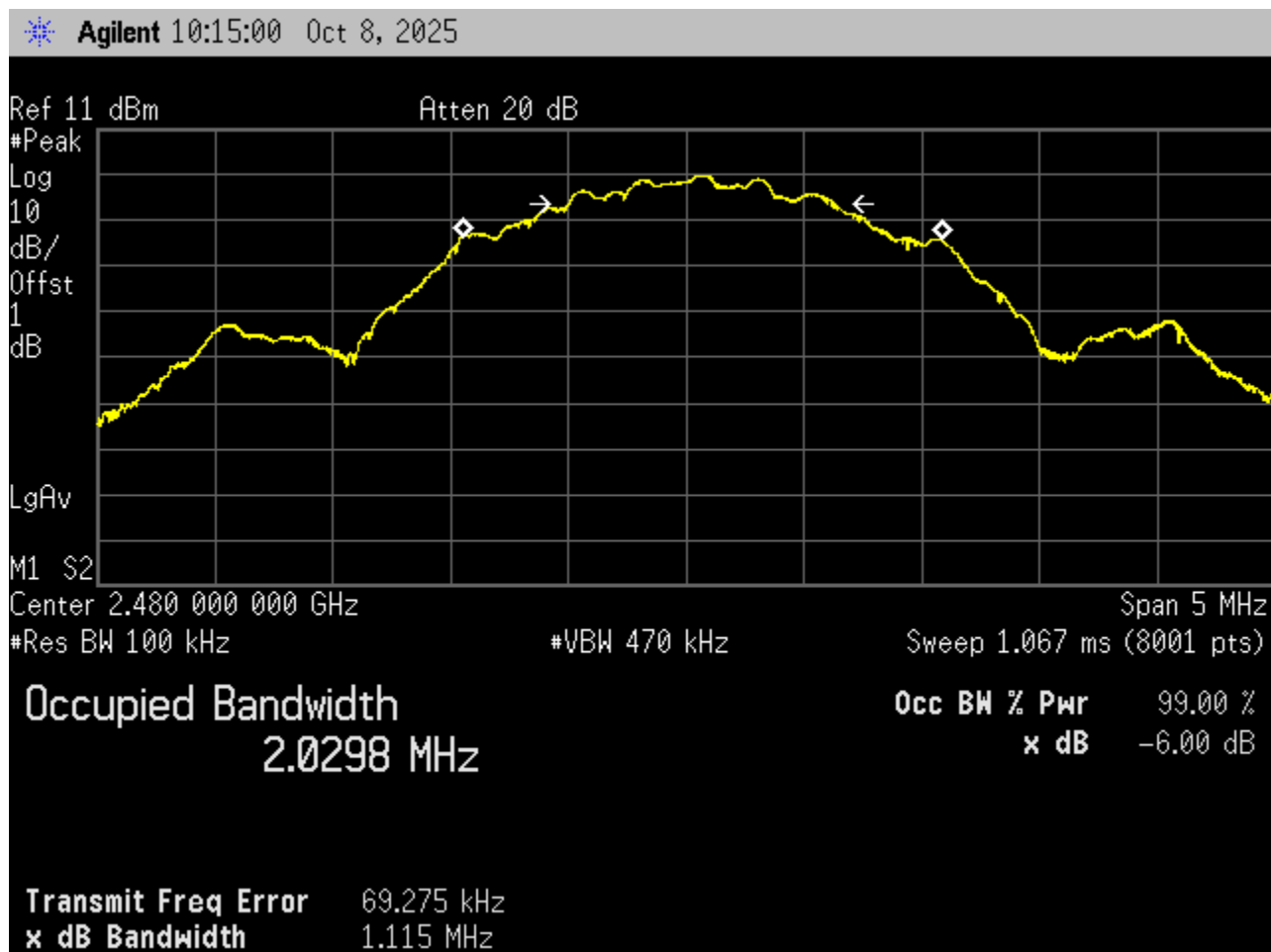
BLE GFSK 2Mbps low channel 2402 MHz



BLE GFSK 2Mbps mid channel 2440 MHz



BLE GFSK 2Mbps high channel 2480 MHz



Power Spectral Density

Engineer: Harshith Devaraja

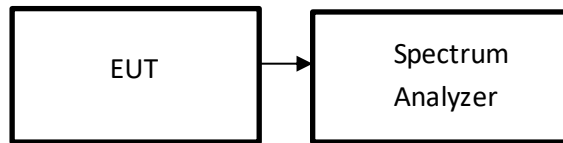
Test Date:02/18/26

Test Procedure

Conducted Method

EUT, via a pigtail cable, was directly connected to the spectrum analyzer to verify that the EUT met the requirements for power spectral density.

Test Setup



The Spectrum Analyzer was set to the following:

RBW = 3 kHz
VBW $\geq 3 \times$ RBW
Peak Detector
Trace mode = max hold
Sweep = auto couple
Span $> 1.5 \times$ OBW

Power Spectral Density Summary

BLE GFSK 1Mbps

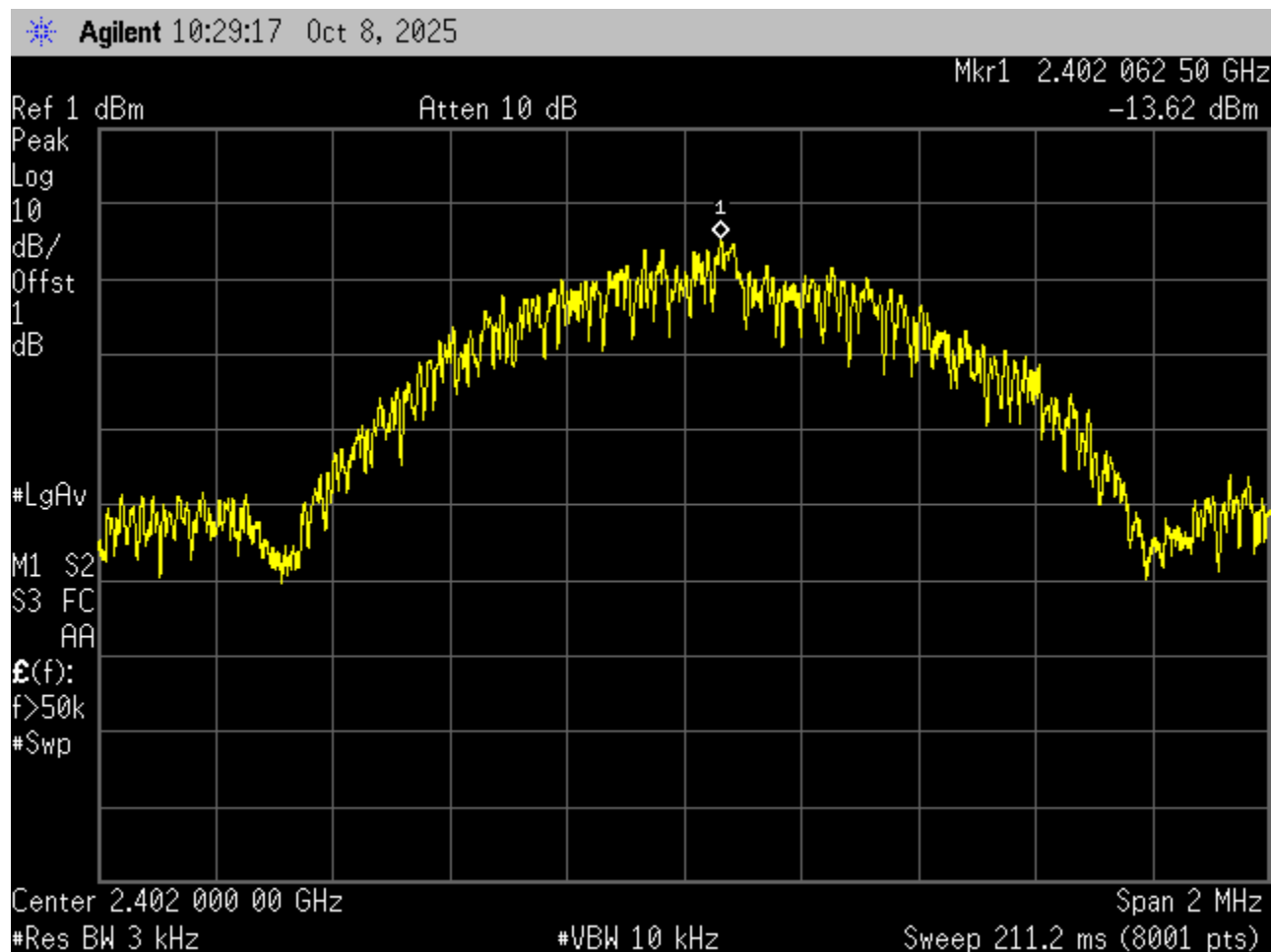
Frequency (MHz)	PSD (dBm/3kHz)	Specification Limit (dBm/3kHz)	Result
2402	-13.62	8	Pass
2440	-12.45	8	Pass
2480	-12.66	8	Pass

BLE GFSK 2Mbps

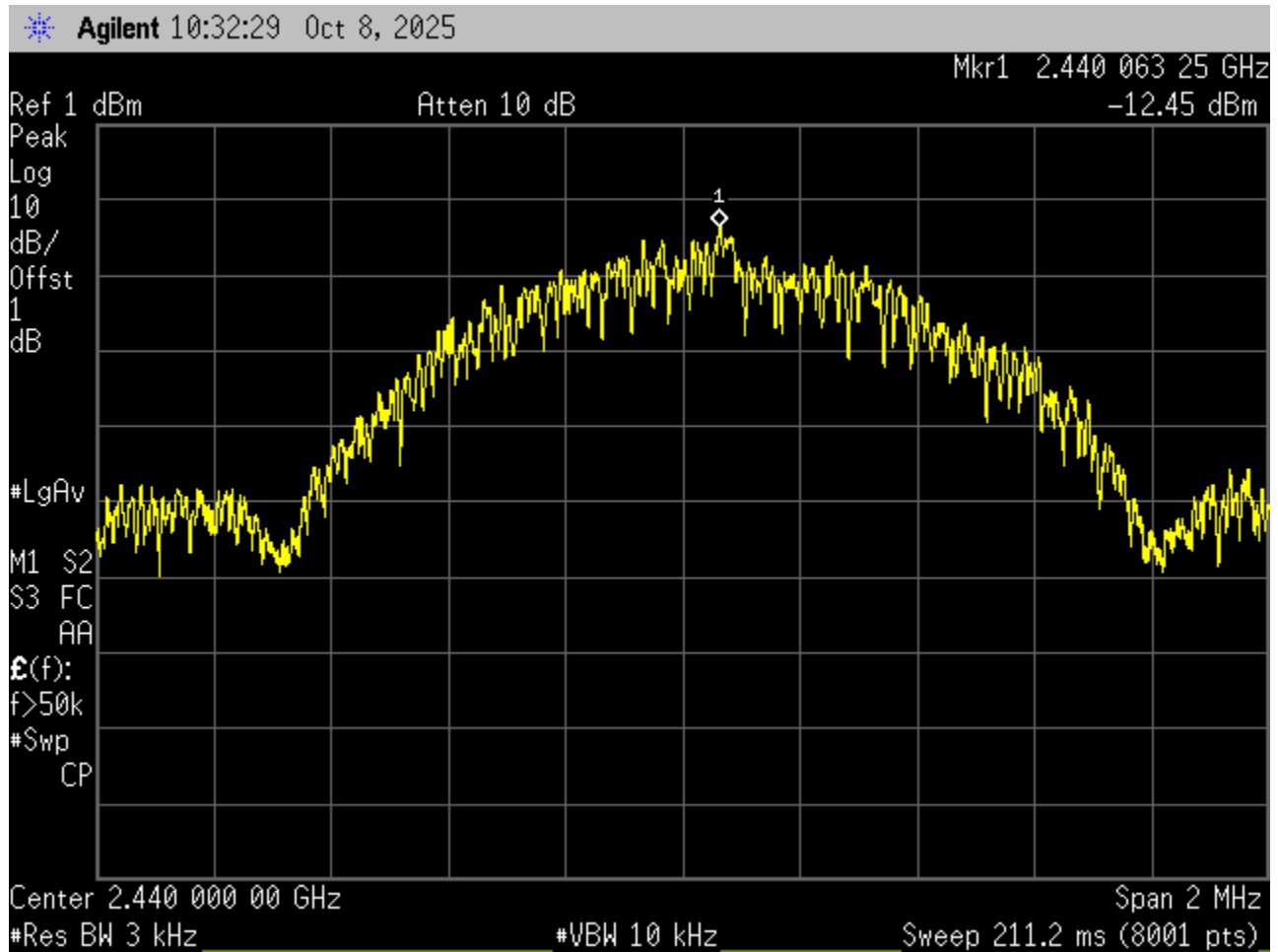
Frequency (MHz)	PSD (dBm/3kHz)	Specification Limit (dBm/3kHz)	Result
2402	-13.97	8	Pass
2440	-13.06	8	Pass
2480	-13.24	8	Pass

PSD Plots

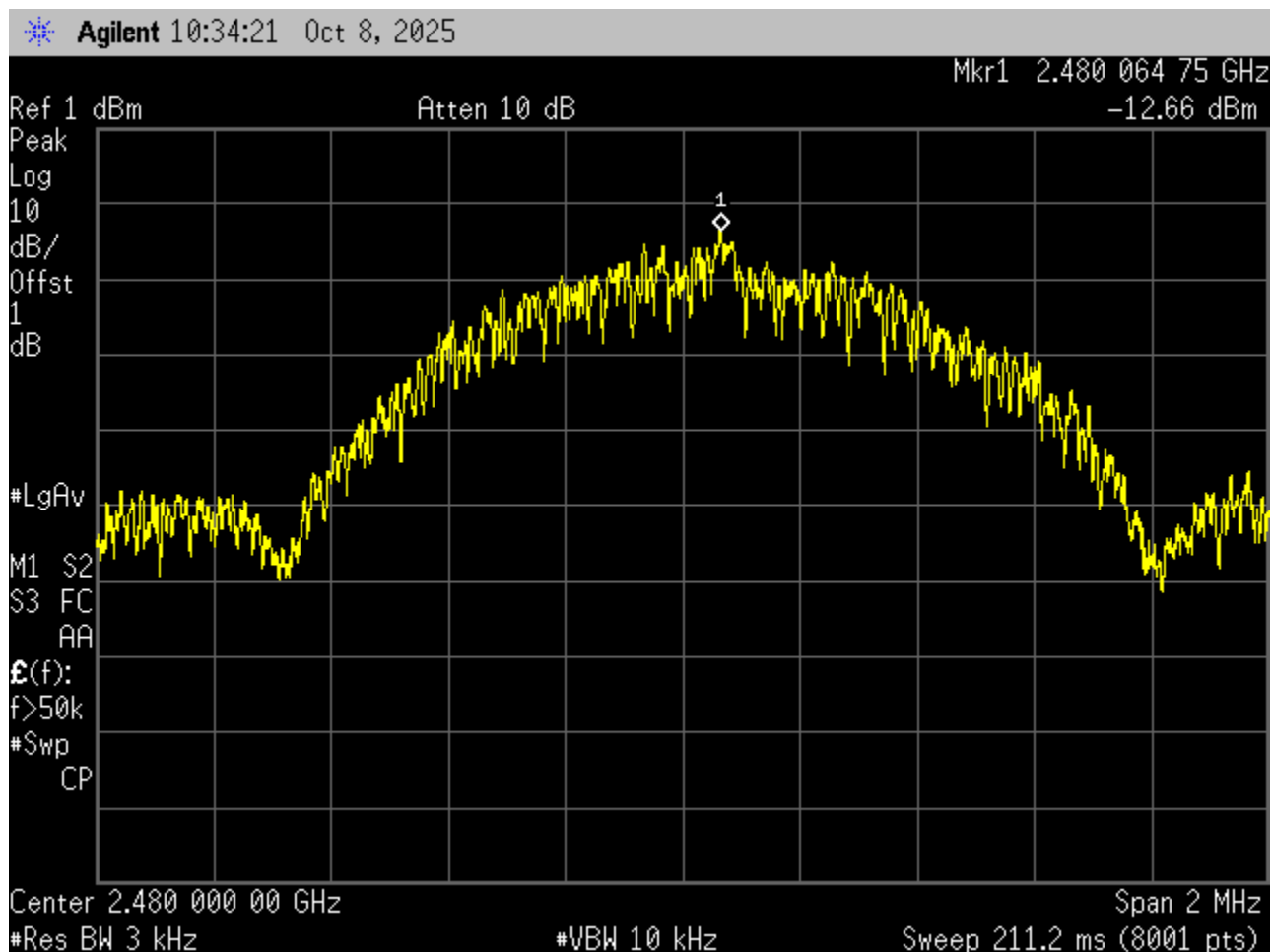
BLE GFSK 1Mbps low channel 2402 MHz



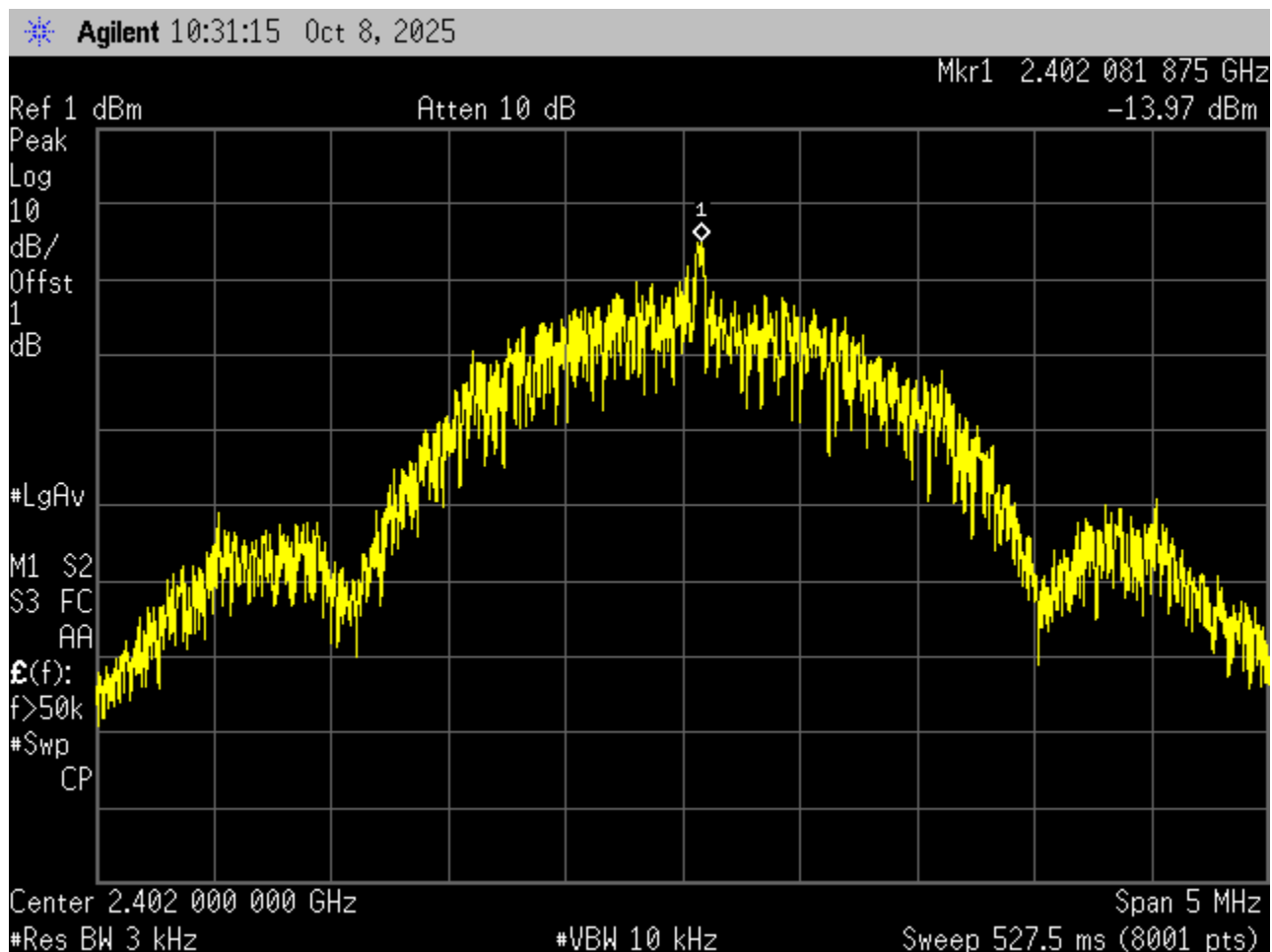
BLE GFSK 1Mbps mid channel 2440 MHz



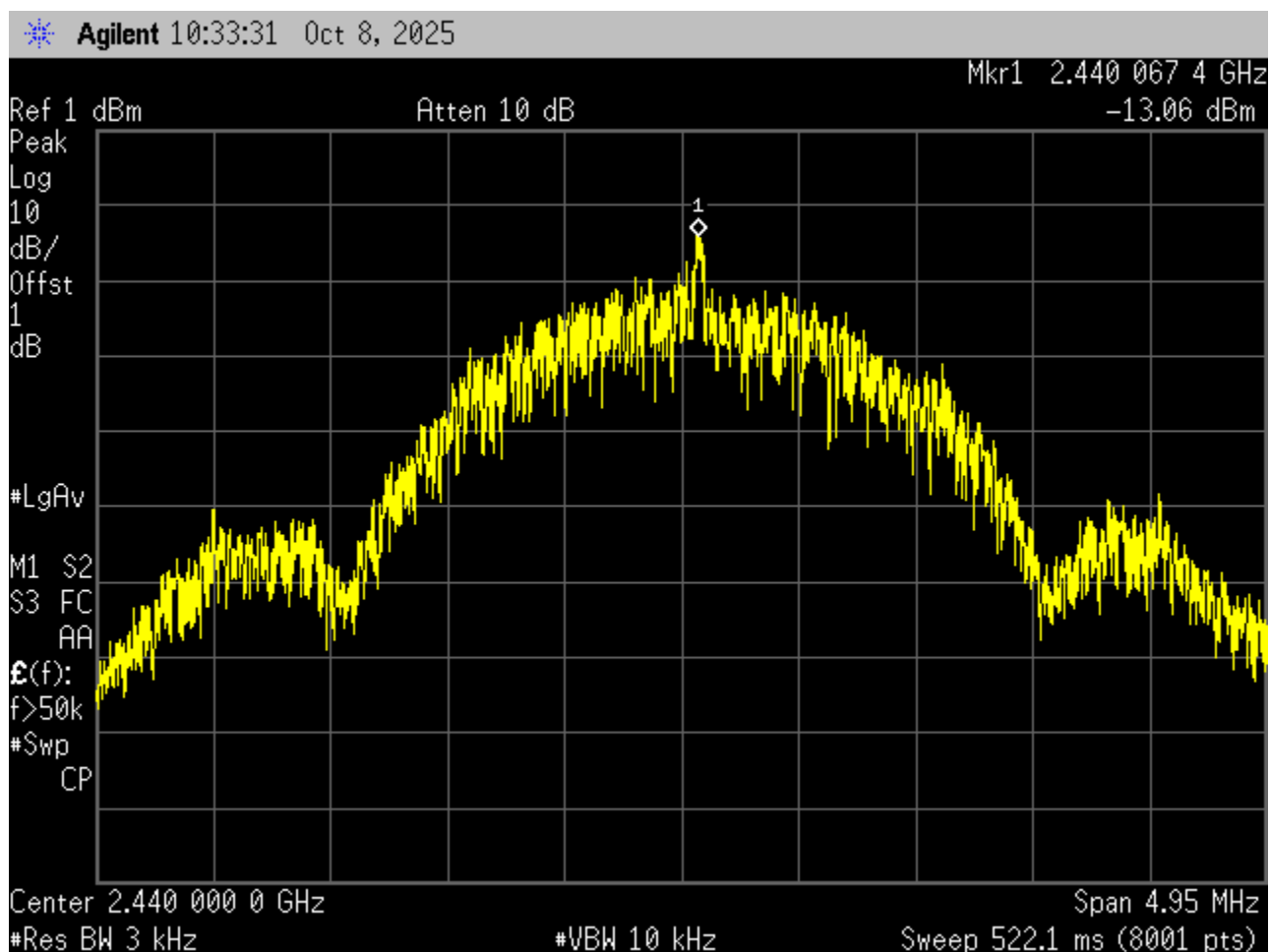
BLE GFSK 1Mbps high channel 2480 MHz



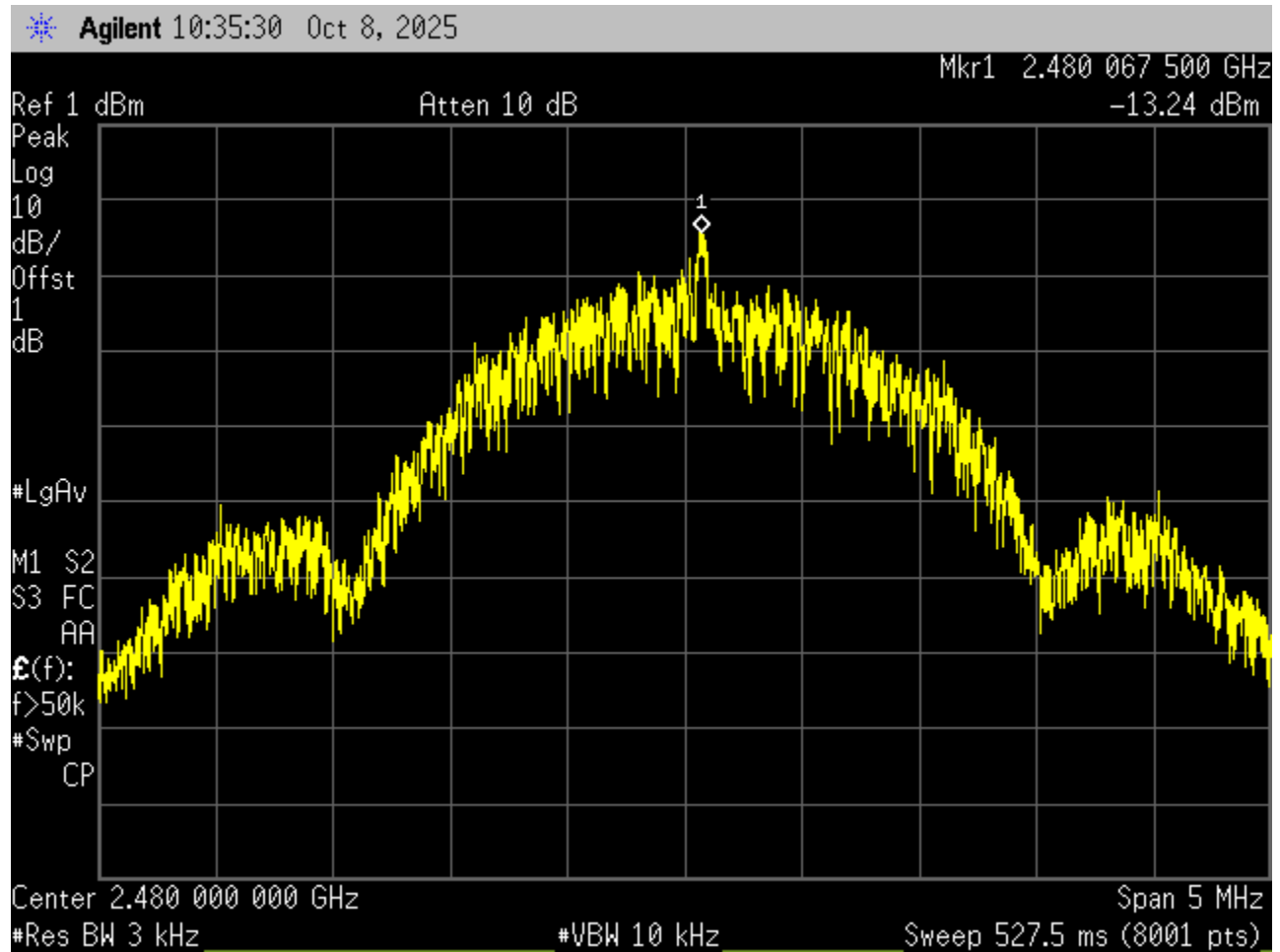
BLE GFSK 2Mbps low channel 2402 MHz



BLE GFSK 2Mbps mid channel 2440 MHz



BLE GFSK 2Mbps high channel 2480 MHz



Conducted Spurious Emissions

Engineer: Harshith Devaraja

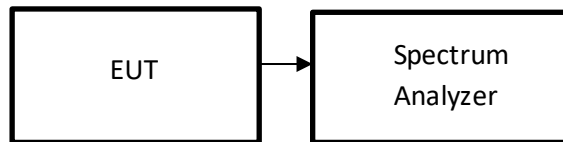
Test Date: 02/18/26

Test Procedure

Conducted Method

EUT, via a pigtail cable, was directly connected to the spectrum analyzer to verify that the EUT met the requirements for out of band emission in the 100 kHz bandwidth.

Test Setup



The Spectrum Analyzer was set to the following:

RBW = 100 kHz

VBW $\geq 3 \times$ RBW

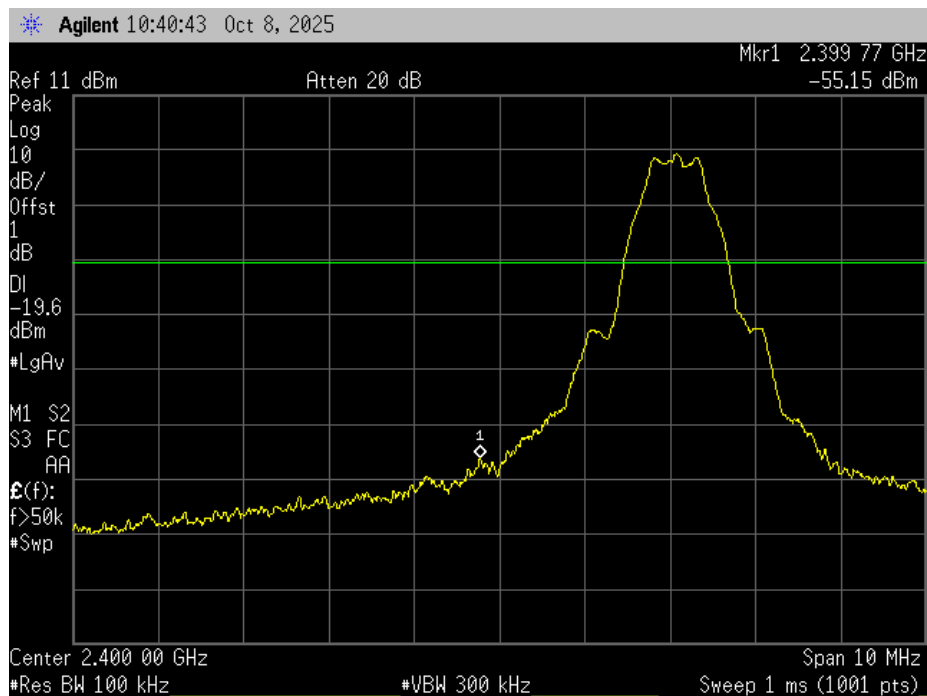
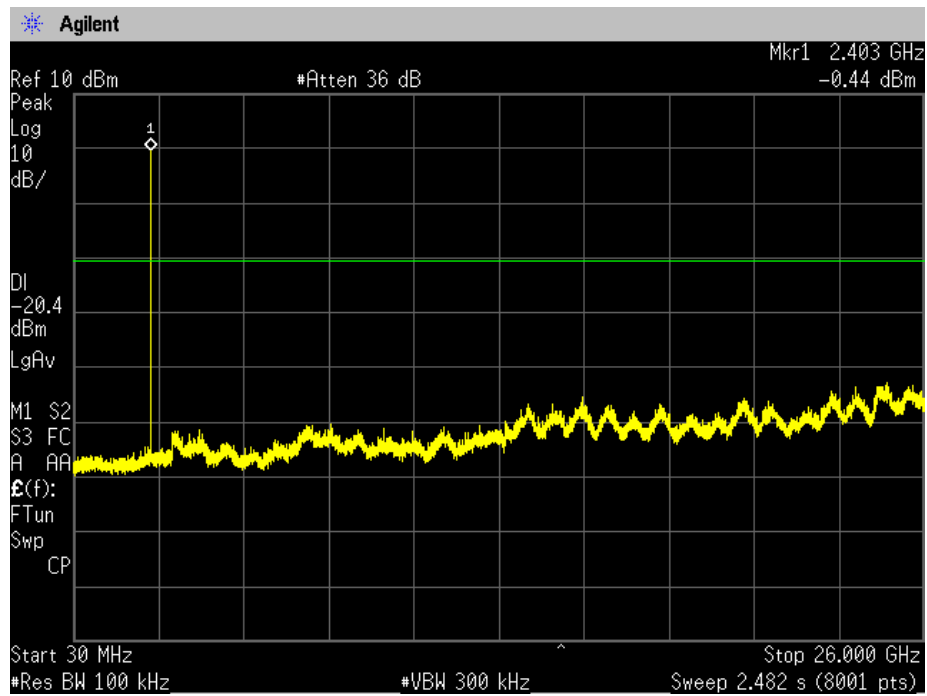
Peak Detector

Trace mode = max hold

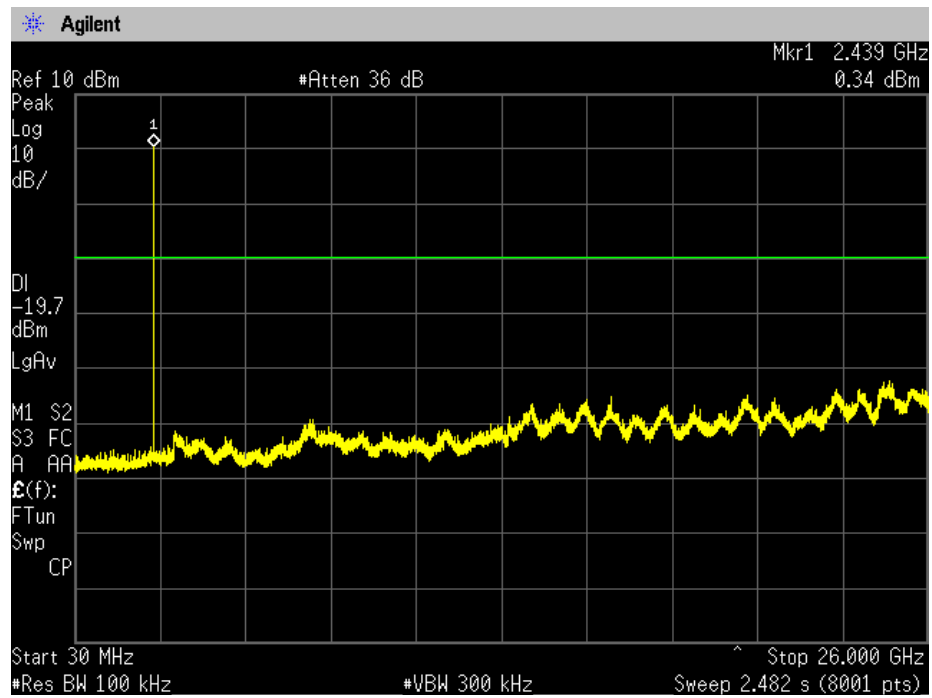
Sweep = auto couple

Conducted Spurious emission plots

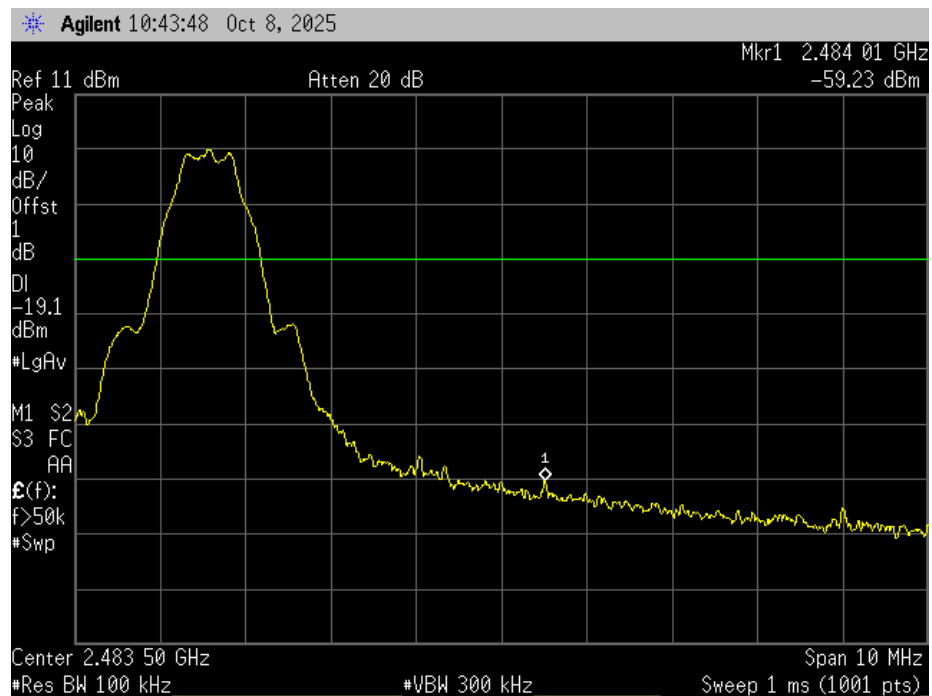
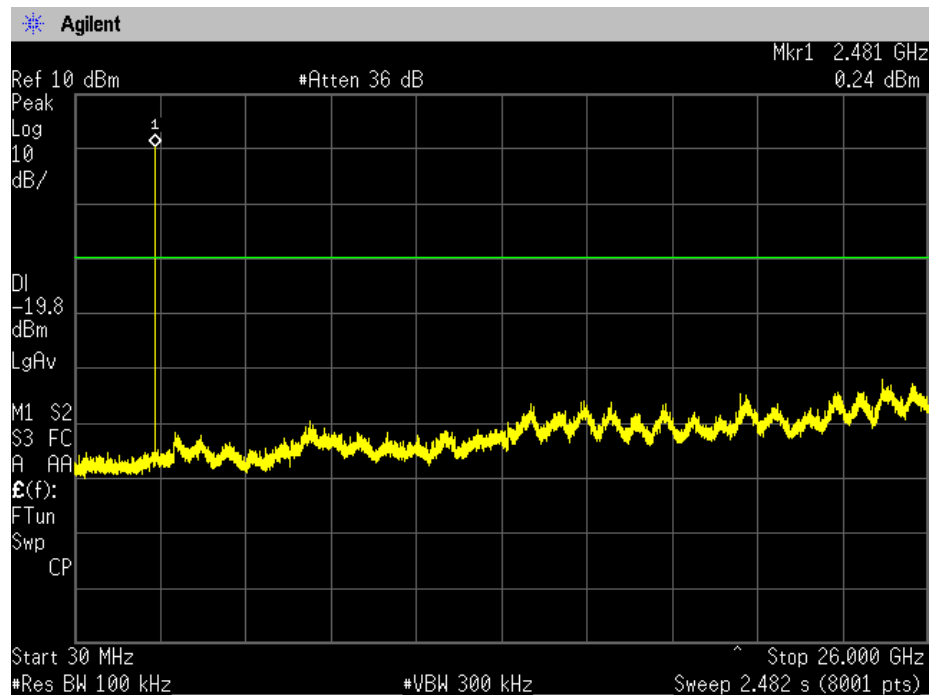
BLE GFSK 1Mbps low channel 2402 MHz



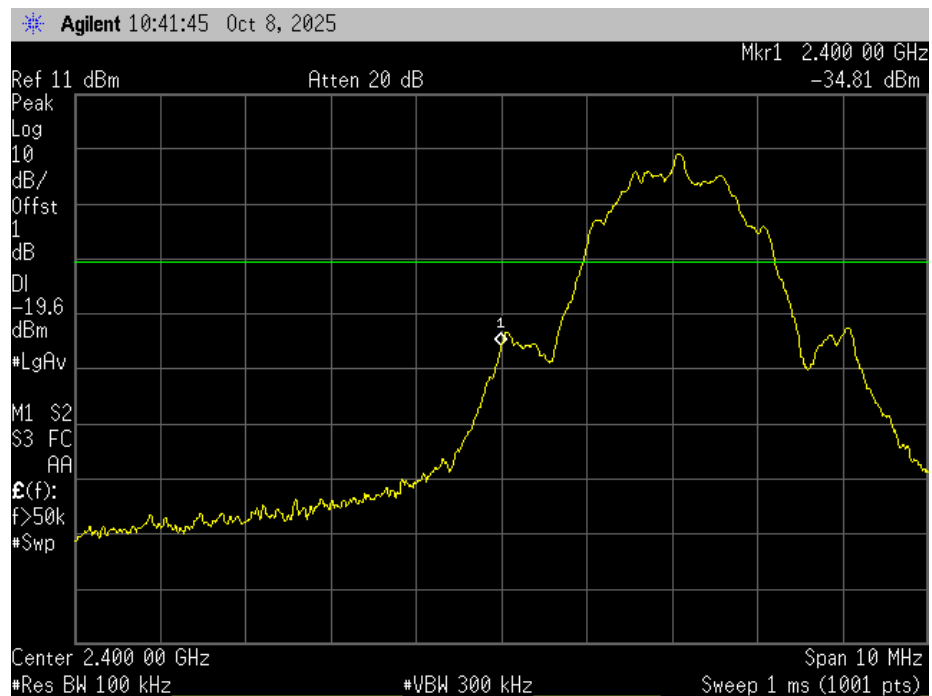
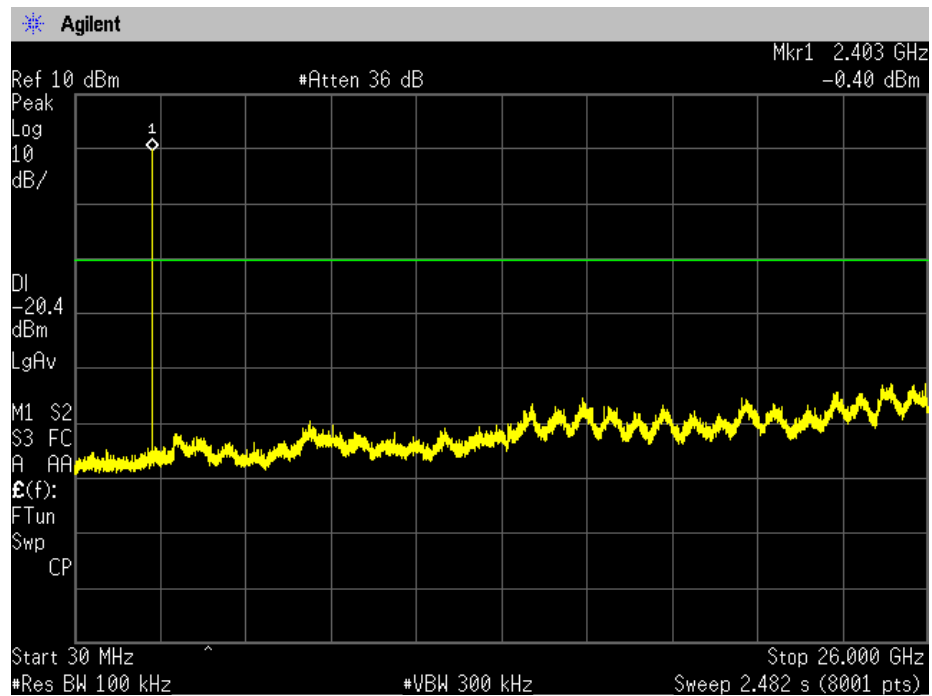
BLE GFSK 1Mbps mid channel 2440 MHz



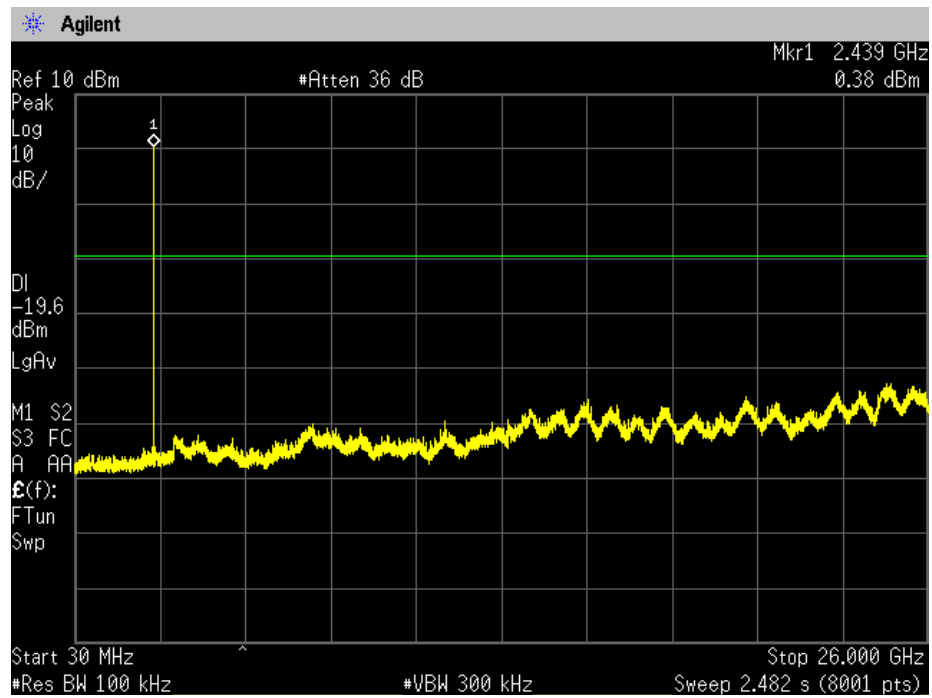
BLE GFSK 1Mbps high channel 2480 MHz



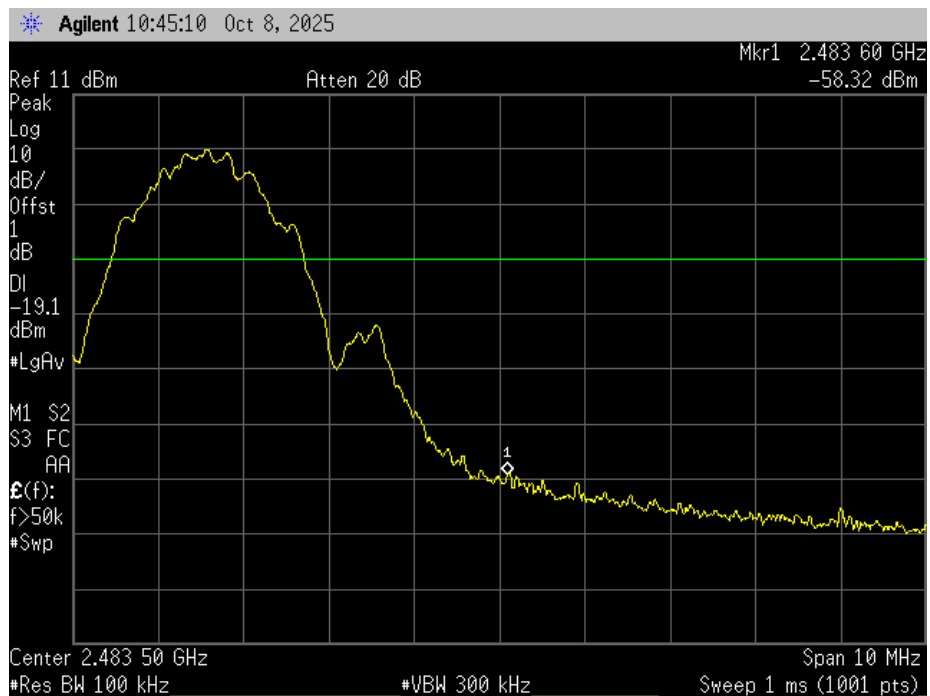
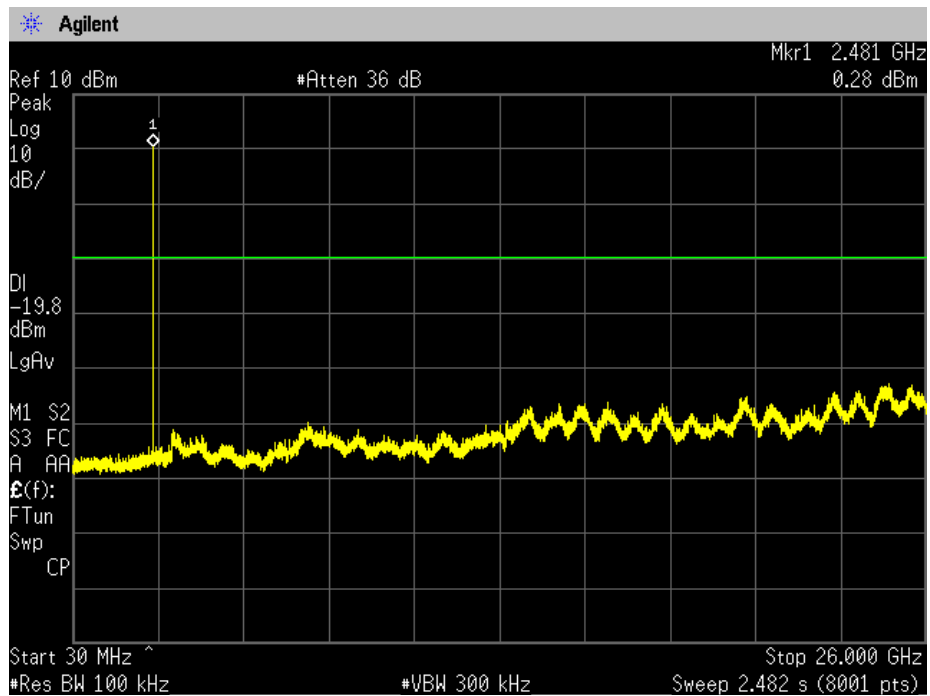
BLE GFSK 2 Mbps low channel 2402 MHz



BLE GFSK 2 Mbps mid channel 2440 MHz



BLE GFSK 2 Mbps high channel 2480 MHz



AC Line Conducted Emissions

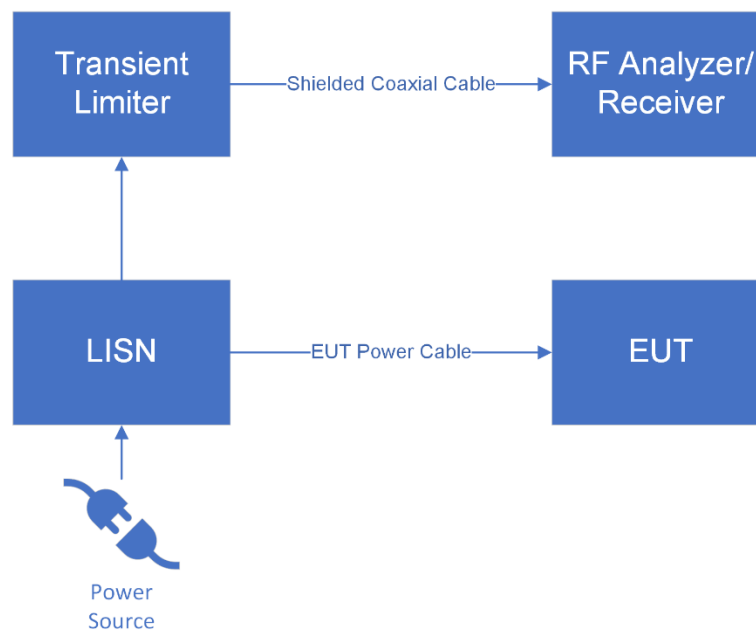
Engineer: Harshith Devaraja

Test Date: 02/16/26

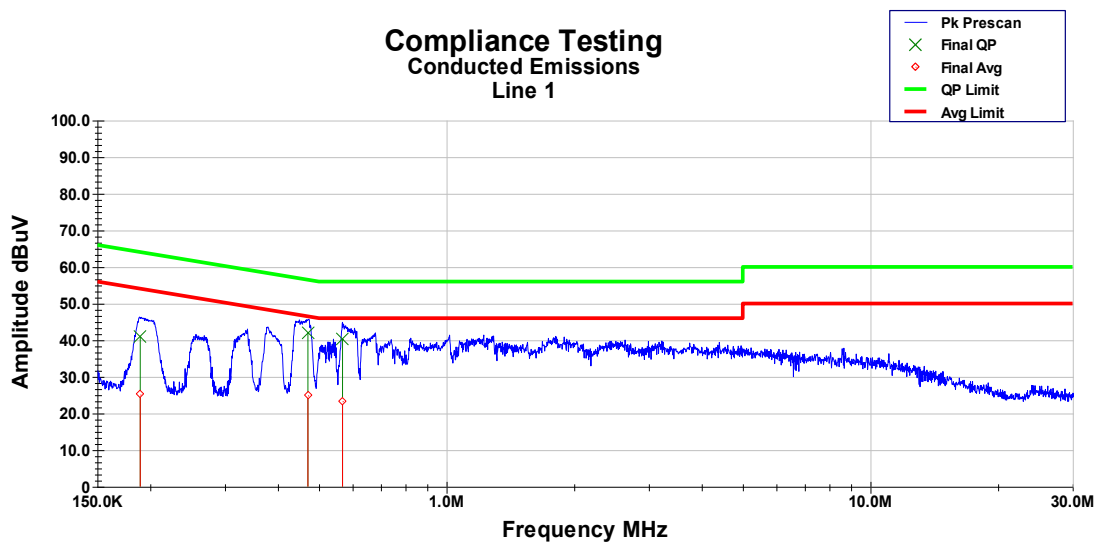
Test Procedure

The EUT power cable was connected to a LISN and the monitored output of the LISN was connected to a transient limiter, which then connected directly to a spectrum analyzer. The conducted emissions from 150 kHz to 30 MHz were measured and compared to the specification limits.

Basic Test Setup

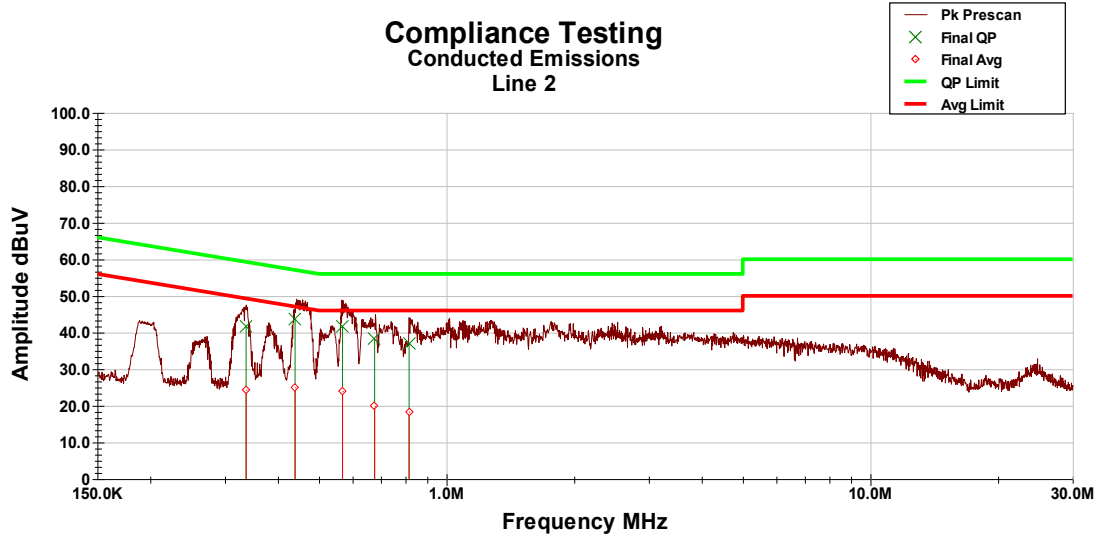


AC Line Conducted emission plot



Frequency (MHz)	Raw QP dBuV	Raw Avg dBuV	Path Loss dB	Final QP dBuV	Final Avg dBuV	QP Limit dBuV	QP Margin dB	Avg Limit dBuV	Avg Margin dB
189.48 KHz	31.00	15.20	9.90	40.90	25.20	64.90	-23.90	54.90	-29.70
471.02 KHz	32.00	14.90	10.10	42.10	24.90	56.80	-14.70	46.80	-21.90
568.64 KHz	30.30	13.30	10.10	40.30	23.30	56.00	-15.70	46.00	-22.70
Final = Raw + Path Loss									
Margin = Final - Limit									

Compliance Testing Conducted Emissions Line 2



Frequency	Raw QP	Raw Avg	Path Loss	Final QP	Final Avg	QP Limit	QP Margin	Avg Limit	Avg Margin
(MHz)	dBuV	dBuV	dB	dBuV	dBuV	dBuV	dB	dBuV	dB
336.84 KHz	31.61	14.40	10.00	41.60	24.40	60.70	-19.00	50.70	-26.30
439.37 KHz	33.59	15.00	10.00	43.60	25.00	57.70	-14.10	47.70	-22.70
568.64 KHz	31.45	14.00	10.00	41.50	24.10	56.00	-14.50	46.00	-21.90
676.71 KHz	28.13	9.90	10.00	38.20	19.90	56.00	-17.80	46.00	-26.10
816.29 KHz	26.93	8.30	10.10	37.00	18.40	56.00	-19.00	46.00	-27.60
Final = Raw + Path Loss									
Margin = Final - Limit									

Test Equipment Utilized

Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
Horn Antenna (1-18GHz)	ARA	DRG-118/A	i00271	8/9/24	8/9/26
Bi-Log Antenna	Schaffner	CBL 6111D	i00349	2/27/25	2/27/27
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	7/13/23	7/13/26
44GHz EMI receiver	Keysight	N9038A	i00552	3/17/25	3/17/26
PSA Spectrum Analyzer	Agilent	E4445A	i00688	10/22/25	10/22/26
44GHz EMI receiver	Keysight	N9038A	i00552	3/17/25	3/17/26
Temp./humidity/pressure monitor (Main Lab)	Omega Engineering	iBTHX-W-5	i00686	1/25/26	1/25/27
Preamplifier	COM-Power	PAM-103	i00734	Verified on: 01/05/26	
Preamplifier	Eravant	SBB-0115034019-2F2F-E3	i00756	Verified on: 01/05/26	

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	U_{lab}
Radio Frequency	$\pm 3.3 \times 10^{-8}$
RF Power, conducted	± 1.5 dB
RF Power Density, conducted	± 1.0 dB
Conducted Emissions	± 1.8 dB
Radiated Emissions	± 4.5 dB
Temperature	± 1.5 deg C
Humidity	± 4.3 %
DC voltage	± 0.20 VDC
AC Voltage	± 1.2 VAC

The reported expanded uncertainty $\pm U_{lab}$ (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