



Verily Life Sciences LLC

VLY-600

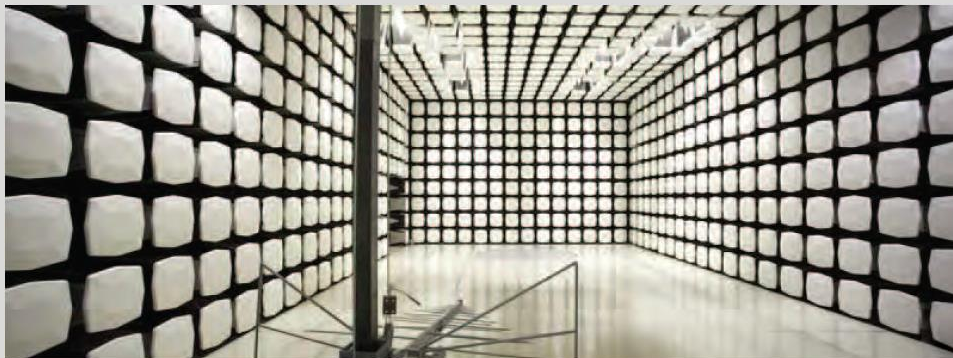
FCC 15.247:2025

RSS-247 Issue 3:2023

RSS-Gen Issue 5:2018+A1:2019+A2:2021

Bluetooth radio

Report: F3EN0214.0 Rev. 0, Issue Date: January 17, 2025



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CERTIFICATE OF TEST

Last Date of Test: December 17, 2024

Verily Life Sciences

EUT: VLY-600

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2025	ANSI C63.10:2013
RSS-247 Issue 3:2023	
RSS-Gen Issue 5:2018+A1:2019+A2:2021	

Guidance

FCC KDB 558074 v05r02:2019
Notice 2021 - CEB0001

Note: FCC 15.247 has been updated superseding prior issues. The changes between the specifications do not affect the results of the prior testing

Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Powerline Conducted Emissions	N/A	15.207	RSS-Gen 8.8	6.2	Not included for a C2PC related to adding a passive filter.
Duty Cycle	N/A	KDB 558074 -6.0	RSS-Gen 3.2	11.6	
DTS Bandwidth (6 dB)	Pass	15.247(a)(2), KDB 558074 -8.2	RSS-247 5.2(a)	11.8.2	
Occupied Bandwidth (99%)	Pass	KDB 558074 -2.1	RSS-Gen 6.7	6.9.3	
Output Power	Pass	15.247(b)(3), KDB 558074 -8.3.1	RSS-247 5.4(d, f), RSS-Gen 6.12	11.9.1.1	
Equivalent Isotropic Radiated Power	Pass	15.247(b)(3), KDB 558074 -8.3.1	RSS-247 5.4(d, f), RSS-Gen 6.12	11.9.1.1	
Power Spectral Density	N/A	15.247(e), KDB 558074 -8.4	RSS-247 5.2(b)	11.10.2	Not included for a C2PC related to adding a passive filter.
Band Edge Compliance	Pass	15.247(d), KDB 558074 -8.5	RSS-247 5.5	11.11	
Spurious Conducted Emissions	Pass	15.247(d), KDB 558074 -8.5	RSS-247 5.5	11.11	
Spurious Radiated Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 5.5, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.5, 6.6	

Deviations From Test Standards

None

Approved By:

Trevor Buls

Trevor Buls, Principal EMC Test Engineer
Signed for and on behalf of Element

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY



Revision Number	Description	Date (yyyy-mm-dd)	Page Number
00	None		

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIT / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

[California](#)

[Minnesota](#)

[Oregon](#)

[Texas](#)

[Washington](#)

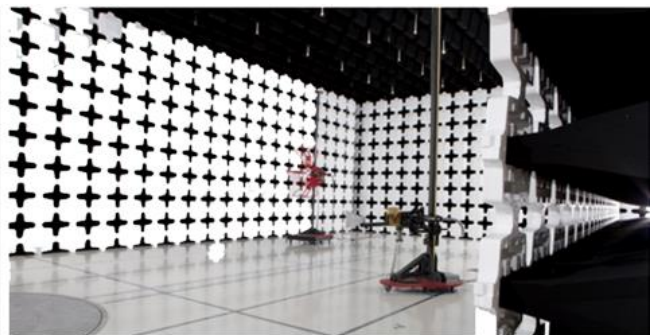
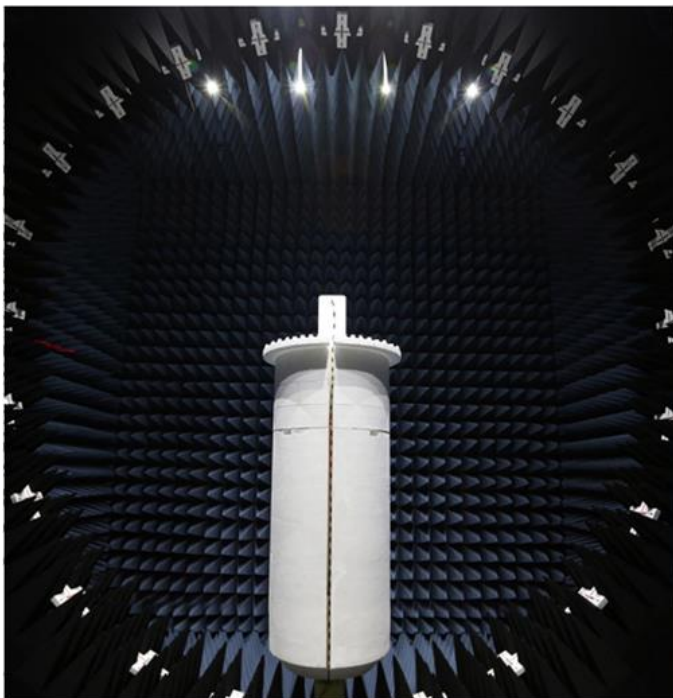
FACILITIES

Testing was performed at the following location(s)

	Location	Labs ⁽¹⁾	Address	A2LA ⁽²⁾	ISED ⁽³⁾	BSMI ⁽⁴⁾	VCCI ⁽⁵⁾	CAB ⁽⁶⁾	FDA ⁽⁷⁾
<input type="checkbox"/>	California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
<input checked="" type="checkbox"/>	Minnesota	MN01-11	9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	3310.05	2834E	SL2-IN-E-1152R	A-0109	US0175	TL-57
<input type="checkbox"/>	Oregon	EV01-12	6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	3310.02	2834D	SL2-IN-E-1017	A-0108	US0017	TL-56
<input type="checkbox"/>	Plano Texas	PT01-15	1701 E Plano Pkwy, Ste 150 Plano, TX 75074 (972) 509-2566	214.19	32637	SL2-IN-E-057R	A-0426	US0054	TL-137
<input type="checkbox"/>	Washington	NC01-05	19201 120th Ave NE Bothell, WA 98011 (425) 984-6600	3310.06	2834F	SL2-IN-E-1153R	A-0110	US0157	TL-67
<input type="checkbox"/>	Offsite	N/A	See Product Description	N/A	N/A	N/A	N/A	N/A	N/A

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) CAB Identifier. Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA
- (7) FDA ASCA No.



MEASUREMENT UNCERTAINTY

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty ($k=2$) can be found in the table below. A lab specific value may also be found in the applicable test description section. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable) and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Various Measurements

Test	All Labs (+/-)
Frequency Accuracy (%)	0.0007
Amplitude Accuracy (dB)	1.2
Conducted Power (dB)	1.2
Radiated Power via Substitution (dB)	0.7
Temperature (degrees C)	0.7
Humidity (% RH)	2.5
Voltage (AC) (%)	1
Voltage (DC) (%)	0.7

Field Strength Measurements (dB)

Range	MN05 (+/-)	MN11 (+/-)
10kHz-30MHz	1.8	N/A
30MHz-1GHz 3m	4.6	N/A
1GHz-6GHz	5.1	N/A
6GHz-40GHz	5.2	N/A

TEST SETUP BLOCK DIAGRAMS

Measurement Bandwidths

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)	Factor			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

Measured Level (Amplitude)	Factor		External Attenuation	Adjusted Level
	Transducer Factor	Cable Factor		
26.7	0.3	0.1	20.0	47.1

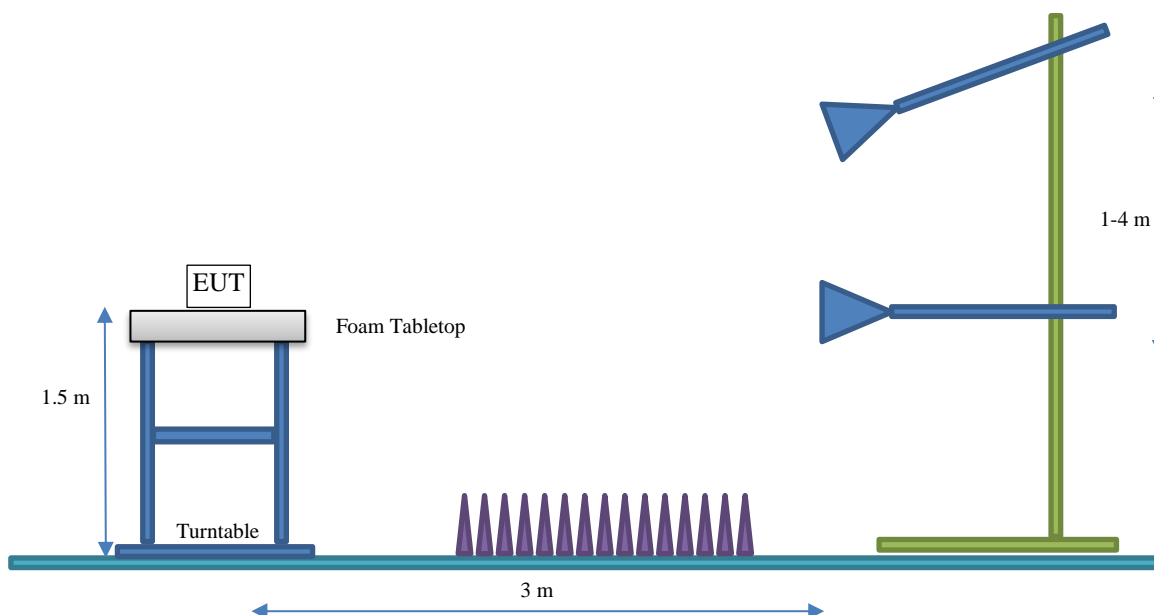
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)	Substitution Antenna Factor (dBi)	EIRP to ERP (if applicable)	Measured power (dBm ERP/EIRP)
10.0	6.0	2.15	13.9/16.0

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION

Client and Equipment under Test (EUT) Information

Company Name:	Verily Life Sciences LLC
Address:	999 Bayhill Dr
City, State, Zip:	San Bruno, CA 94066
Test Requested By:	Jeet Singh
EUT:	VLV-600
First Date of Test:	October 16, 2024
Last Date of Test:	December 17, 2024
Receipt Date of Samples:	October 16, 2024
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

This is a hub for a wearable device. The wearable device connects to the EUT via Bluetooth to upload data over the EUT's LTE connection. Contains the Bluetooth radio (FCC ID: SQG-LYRAS) and an LTE radio module. The NA variant uses the RC7611-1 (FCC ID: N7NRC76B / IC: 2417C-RC76B), the EU variant uses the RC7620-1, and the APAC variant uses the RC7630-1.

Testing Objective:

To demonstrate compliance of the Bluetooth radio to FCC 15.247/RSS-247 requirements.

POWER SETTINGS AND ANTENNAS



The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Provided by:	Frequency Range (MHz)	Gain (dBi)
Microstrip Loop Antenna	Ezurio	2402-2480	2.3

The EUT was tested using the power settings provided by the manufacturer which were based upon:

- ☐ Test software settings Test software/firmware installed on EUT: Sulu 05 V0.2.1
☒ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types / Data Rates	Channels	Power Setting
BLE GFSK 1 Mbps, 2 Mbps, 125 kbps, 500 kbps	Low Channel (2402 MHz) Mid Channel (2442 MHz) High Channel (2480 MHz)	+6 dBm

CONFIGURATIONS



Configuration F3EN0214-1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
VLV-600 (US)	Verily Life Sciences LLC	VLV-600	SLVMV04X24354075

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Medical Power Supply (US)	GlobTek, Inc	GTM86100-1005-W2	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Power Cable	No	1.0m	No	VLV-600	Power Supply
USB Cable	No	1.8m	No	VLV-600	Unterminated

Configuration F3EN0214-3

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
VLV-600 (US-Direct)	Verily Life Sciences LLC	VLV-600	SLVMV04X24354058

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Medical Power Supply (US)	GlobTek, Inc	GTM86100-1005-W2	None
Laptop	Lenovo	20TK-001GUS	R9-12YL12
USB to Ethernet (Verilysync)	TP-Link	UE300	Y2360E9005155
USB to Ethernet (Anker)	Anker	Premium USB-C Hub	AW3H220850200259

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
Power Cable	No	1.0m	No	VLV-600	Power Supply
USB Cable	No	1.8m	No	VLV-600	Unterminated
Ethernet Cable	No	1.1 m	No	USB to Ethernet (Verilysync)	USB to Ethernet (Anker)

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2024-10-29	Duty Cycle	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2024-10-30	Spurious Conducted Emissions	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2024-10-30	Band Edge Compliance	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2024-10-30	DTS Bandwidth (6 dB)	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2024-10-30	Occupied Bandwidth (99%)	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2024-10-30	Output Power	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2024-10-30	Equivalent Isotropic Radiated Power	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2024-12-17	Spurious Radiated Emissions	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

DUTY CYCLE

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31

DUTY CYCLE

EUT:	VLY-600	Work Order:	F3EN0214
Serial Number:	SLVMV04X24354058	Date:	2024-10-29
Customer:	Verily Life Sciences	Temperature:	21.4°C
Attendees:	Franz Sherman	Relative Humidity:	43.3%
Customer Project:	None	Bar. Pressure (PMSL):	1002 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	F3EN0214-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

Power Setting 6dBm.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

N/A

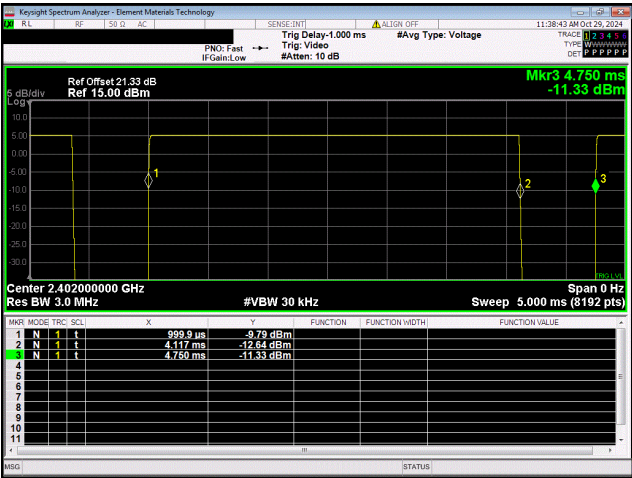


Tested By

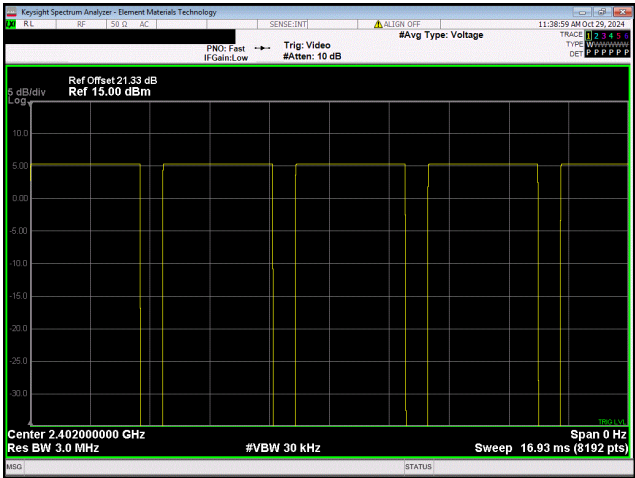
TEST RESULTS

	Pulse Width	Period	Number of Pulses	Value (%)	Limit N/A ()	Results
Normal Test Conditions						
BLE/GFSK 125 kbps Low Channel, 2402 MHz	3.117 ms	3.75 ms	1	83.1	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 125 kbps Mid Channel, 2442 MHz	3.116 ms	3.75 ms	1	83.1	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 125 kbps High Channel, 2480 MHz	3.116 ms	3.75 ms	1	83.1	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 500 kbps Low Channel, 2402 MHz	1.083 ms	1.876 ms	1	57.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 500 kbps Mid Channel, 2442 MHz	1.082 ms	1.875 ms	1	57.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 500 kbps High Channel, 2480 MHz	1.082 ms	1.875 ms	1	57.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 1 Mbps Low Channel, 2402 MHz	419.5 us	624.9 us	1	67.1	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz	419.3 us	625.1 us	1	67.1	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 1 Mbps High Channel, 2480 MHz	419.1 us	625.2 us	1	67	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 2 Mbps Low Channel, 2402 MHz	235.4 us	625.2 us	1	37.7	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz	234.5 us	624.9 us	1	37.5	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
BLE/GFSK 2 Mbps High Channel, 2480 MHz	236.6 us	624.9 us	1	37.9	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A

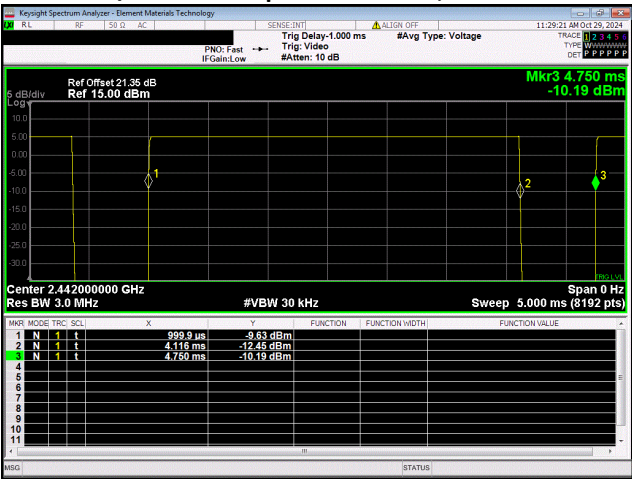
DUTY CYCLE



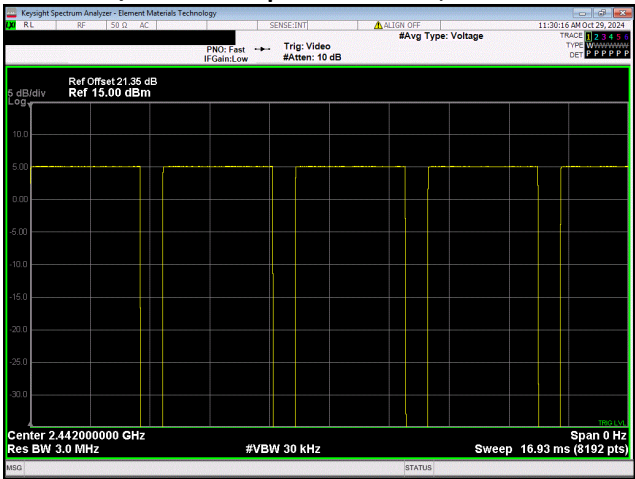
Normal Test Conditions
BLE/GFSK 125 kbps Low Channel, 2402 MHz



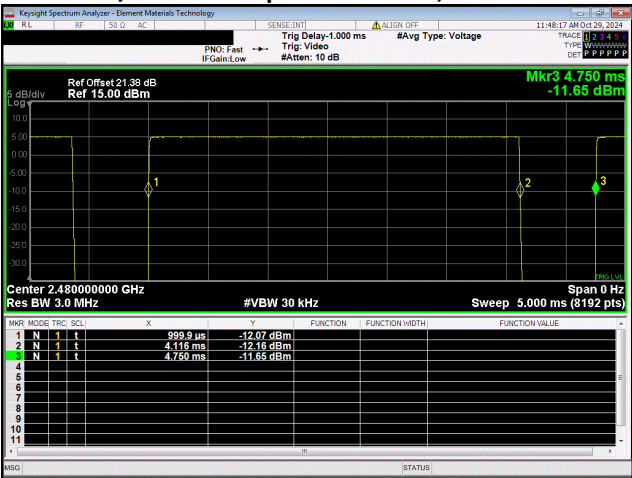
Normal Test Conditions
BLE/GFSK 125 kbps Low Channel, 2402 MHz



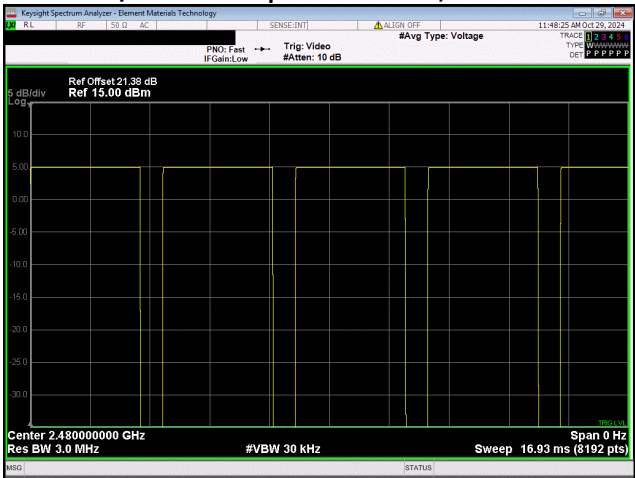
Normal Test Conditions
BLE/GFSK 125 kbps Mid Channel, 2442 MHz



Normal Test Conditions
BLE/GFSK 125 kbps Mid Channel, 2442 MHz

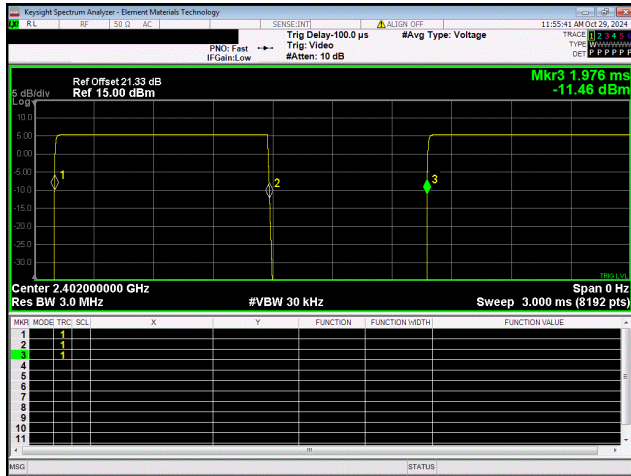


Normal Test Conditions
BLE/GFSK 125 kbps High Channel, 2480 MHz

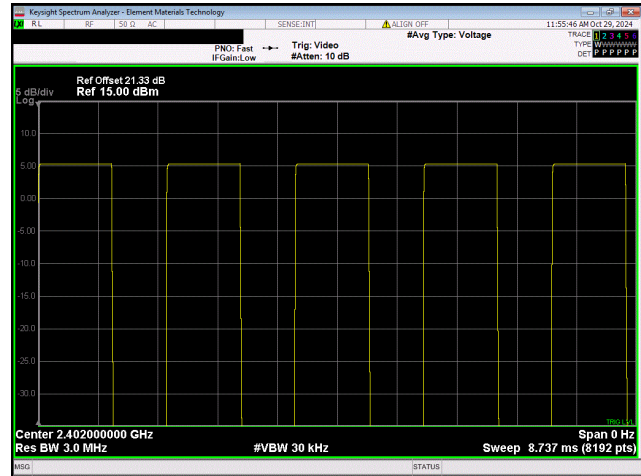


Normal Test Conditions
BLE/GFSK 125 kbps High Channel, 2480 MHz

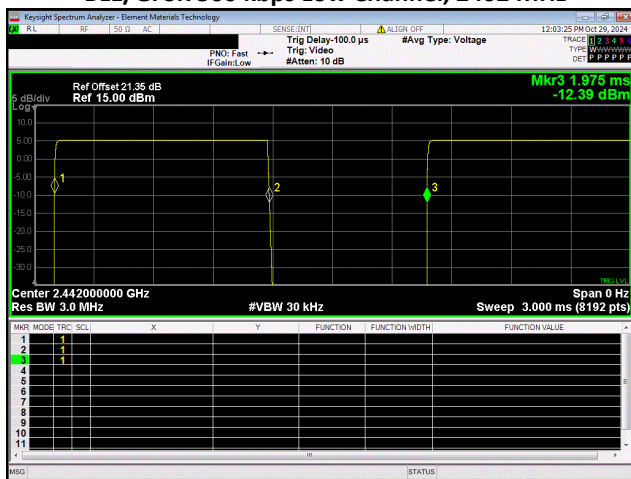
DUTY CYCLE



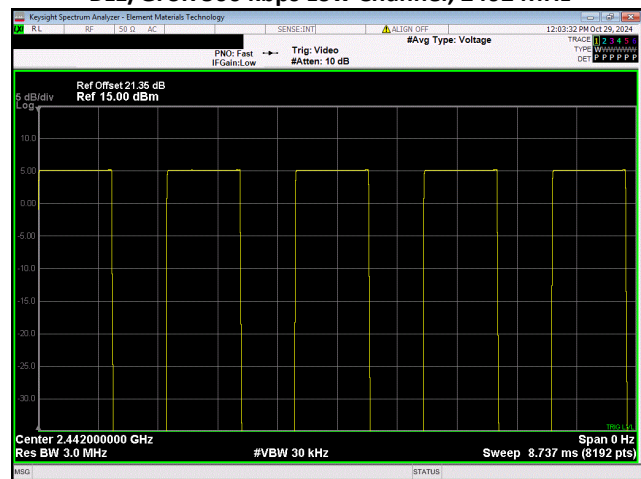
Normal Test Conditions
BLE/GFSK 500 kbps Low Channel, 2402 MHz



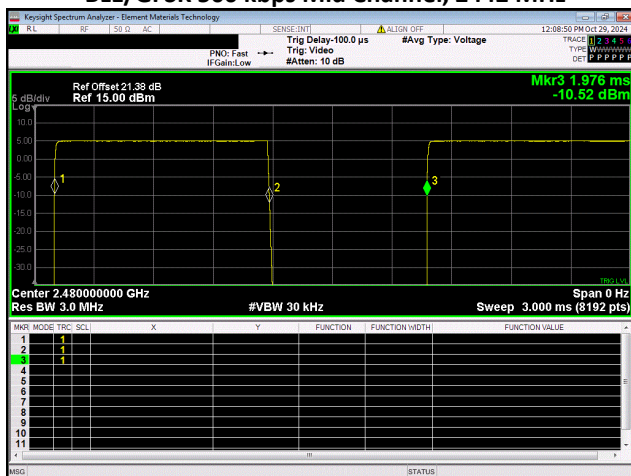
Normal Test Conditions
BLE/GFSK 500 kbps Low Channel, 2402 MHz



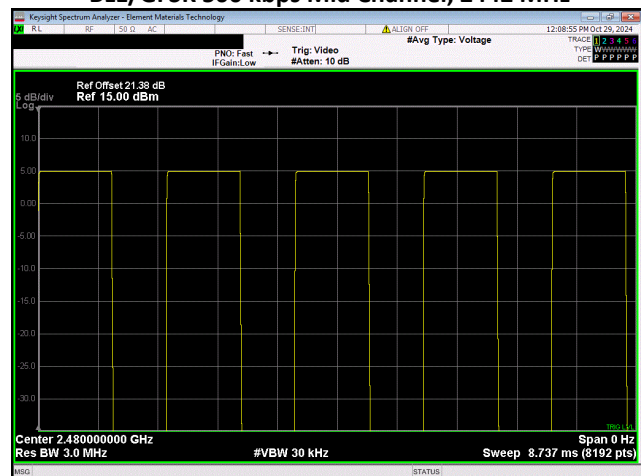
Normal Test Conditions
BLE/GFSK 500 kbps Mid Channel, 2442 MHz



Normal Test Conditions
BLE/GFSK 500 kbps Mid Channel, 2442 MHz

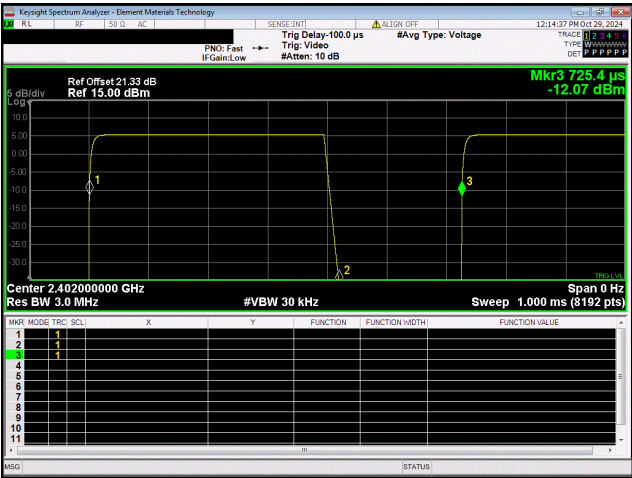


Normal Test Conditions
BLE/GFSK 500 kbps High Channel, 2480 MHz

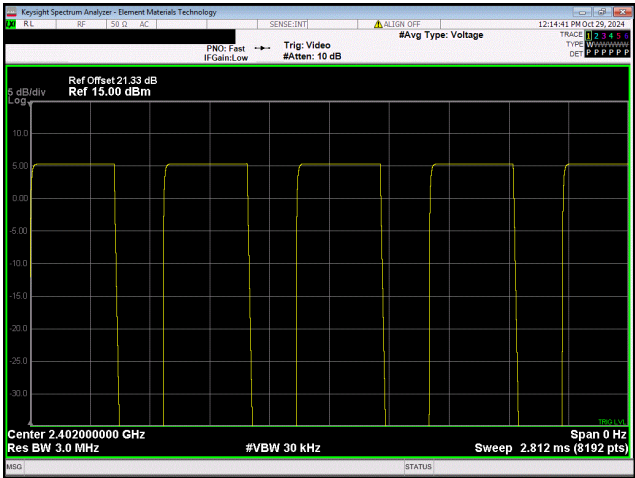


Normal Test Conditions
BLE/GFSK 500 kbps High Channel, 2480 MHz

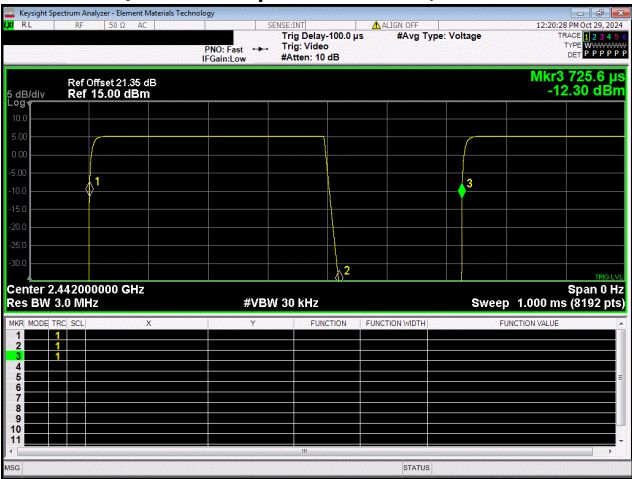
DUTY CYCLE



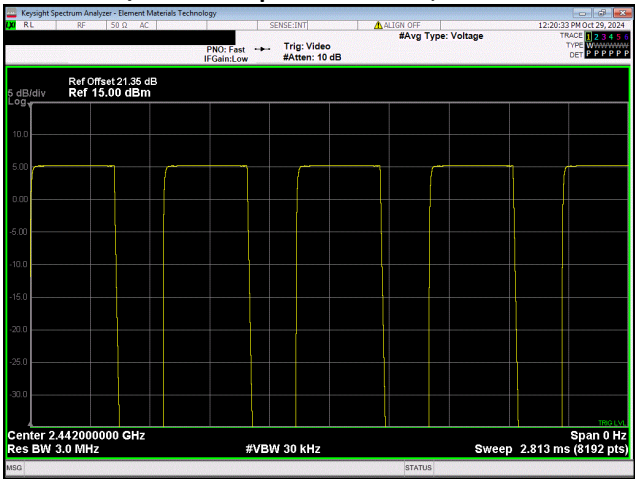
Normal Test Conditions
BLE/GFSK 1 Mbps Low Channel, 2402 MHz



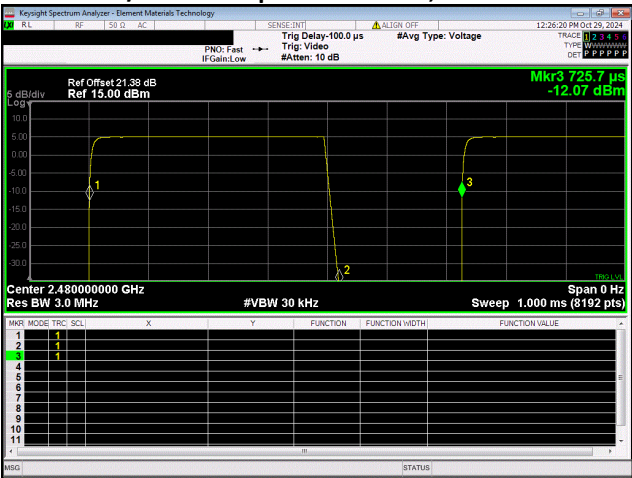
Normal Test Conditions
BLE/GFSK 1 Mbps Low Channel, 2402 MHz



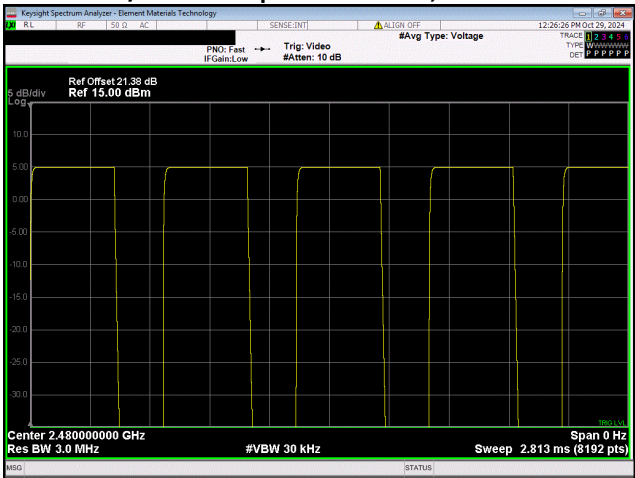
Normal Test Conditions
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz



Normal Test Conditions
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz

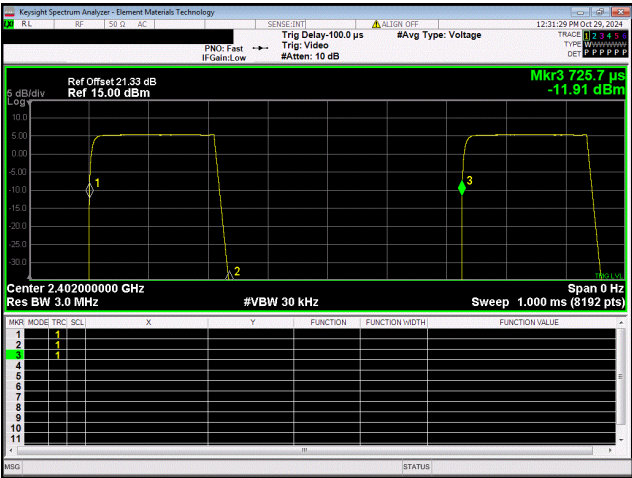


Normal Test Conditions
BLE/GFSK 1 Mbps High Channel, 2480 MHz

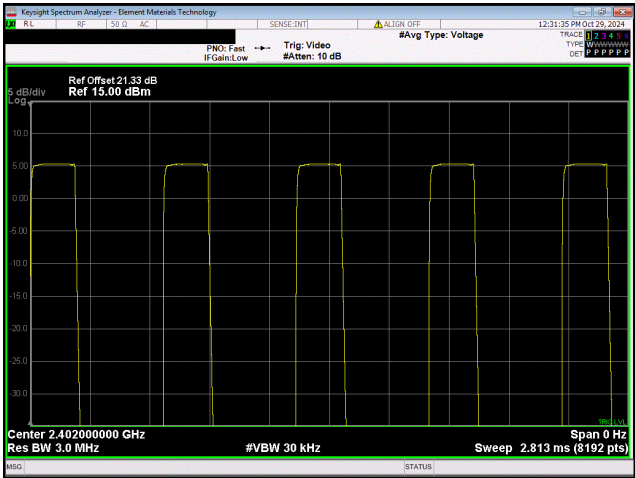


Normal Test Conditions
BLE/GFSK 1 Mbps High Channel, 2480 MHz

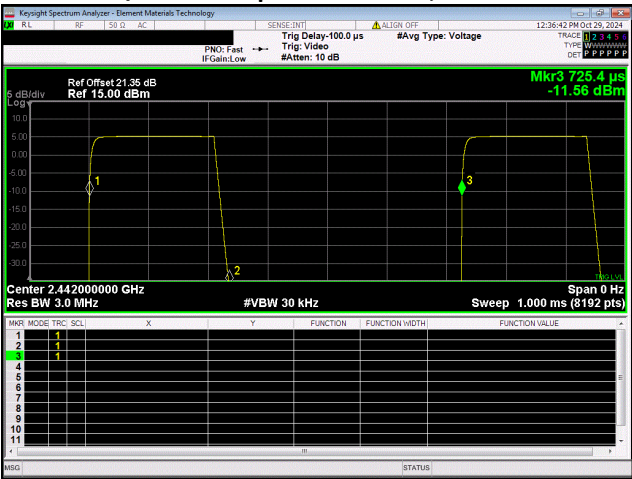
DUTY CYCLE



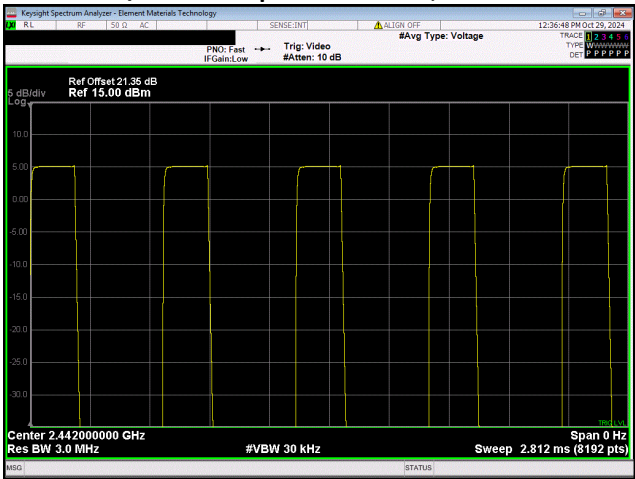
Normal Test Conditions
BLE/GFSK 2 Mbps Low Channel, 2402 MHz



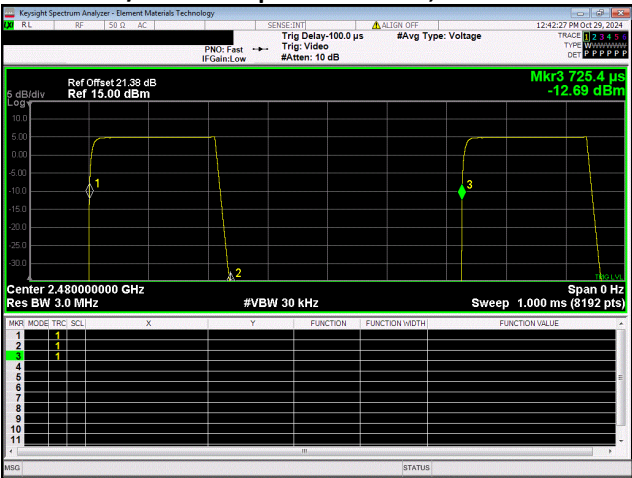
Normal Test Conditions
BLE/GFSK 2 Mbps Low Channel, 2402 MHz



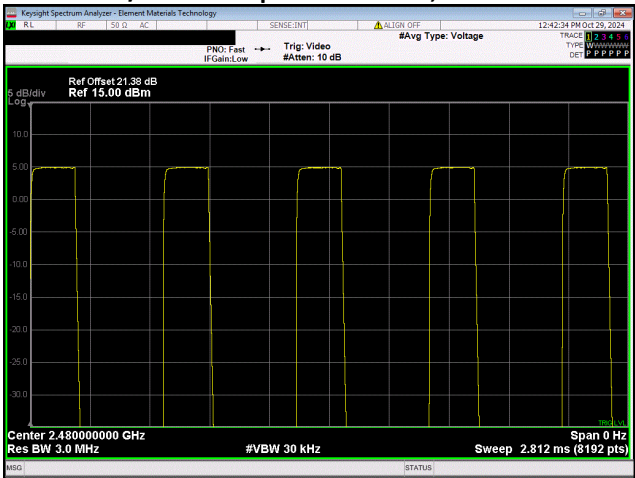
Normal Test Conditions
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz



Normal Test Conditions
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz



Normal Test Conditions
BLE/GFSK 2 Mbps High Channel, 2480 MHz



Normal Test Conditions
BLE/GFSK 2 Mbps High Channel, 2480 MHz

DTS BANDWIDTH (6 dB)

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The EUT was set to the channels and modes listed in the datasheet.

The 6dB DTS bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31

DTS BANDWIDTH (6 dB)

EUT:	VLV-600	Work Order:	F3EN0214
Serial Number:	SLVMV04X24354058	Date:	2024-10-30
Customer:	Verily Life Sciences	Temperature:	22.1°C
Attendees:	Franz Sherman	Relative Humidity:	44.3%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	F3EN0214-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

PRBS9.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

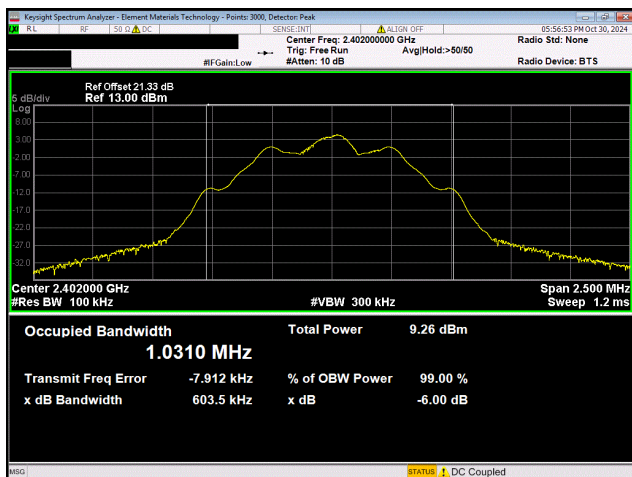


Tested By

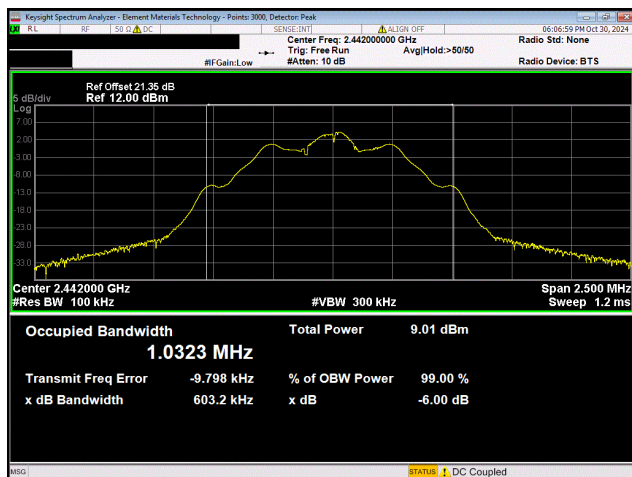
TEST RESULTS

		Value	Limit (≥)	Result
BLE/GFSK 125 kbps				
	Low Channel, 2402 MHz	603.497 kHz	500 kHz	Pass
	Mid Channel, 2442 MHz	603.225 kHz	500 kHz	Pass
	High Channel, 2480 MHz	601.638 kHz	500 kHz	Pass
BLE/GFSK 500 kbps				
	Low Channel, 2402 MHz	660.167 kHz	500 kHz	Pass
	Mid Channel, 2442 MHz	658.744 kHz	500 kHz	Pass
	High Channel, 2480 MHz	660.046 kHz	500 kHz	Pass
BLE/GFSK 1 Mbps				
	Low Channel, 2402 MHz	652.526 kHz	500 kHz	Pass
	Mid Channel, 2442 MHz	647.44 kHz	500 kHz	Pass
	High Channel, 2480 MHz	649.858 kHz	500 kHz	Pass
BLE/GFSK 2 Mbps				
	Low Channel, 2402 MHz	1.163 MHz	500 kHz	Pass
	Mid Channel, 2442 MHz	1.162 MHz	500 kHz	Pass
	High Channel, 2480 MHz	1.163 MHz	500 kHz	Pass

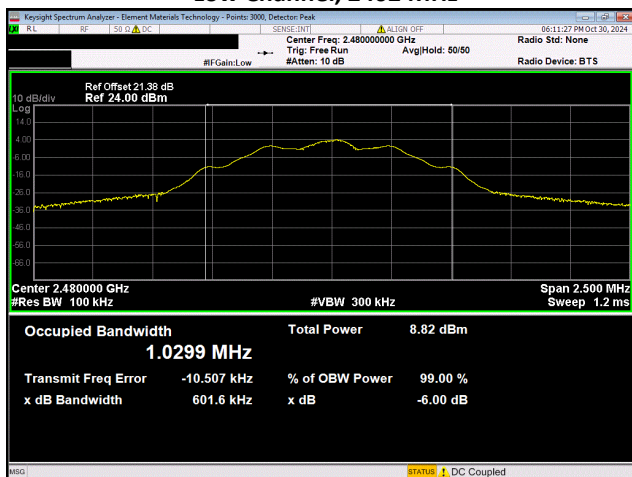
DTS BANDWIDTH (6 dB)



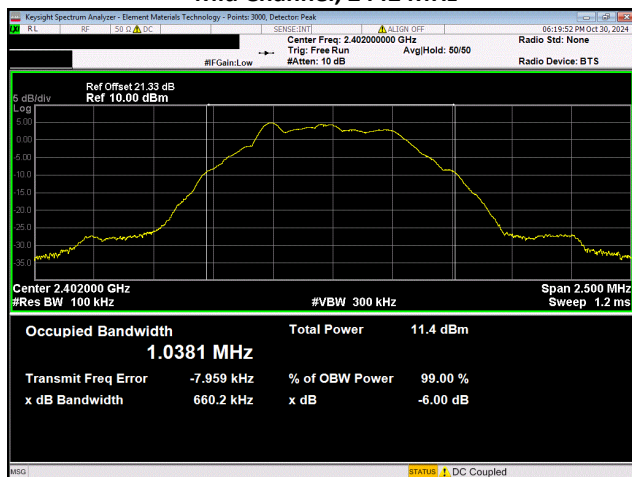
BLE/GFSK 125 kbps
Low Channel, 2402 MHz



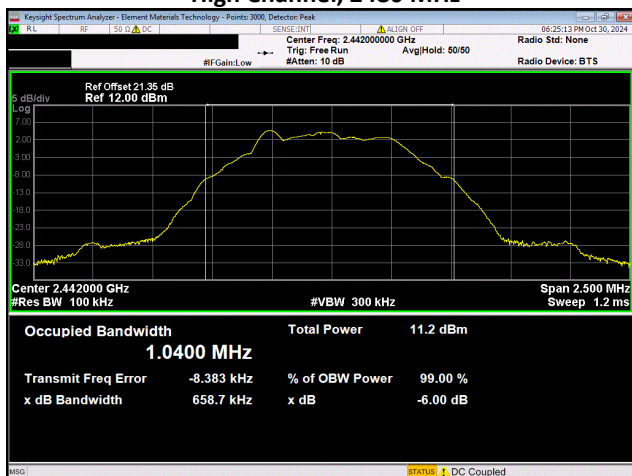
BLE/GFSK 125 kbps
Mid Channel, 2442 MHz



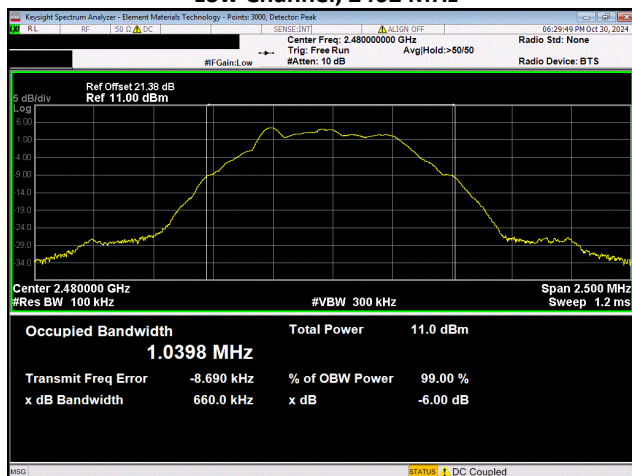
BLE/GFSK 125 kbps
High Channel, 2480 MHz



BLE/GFSK 500 kbps
Low Channel, 2402 MHz

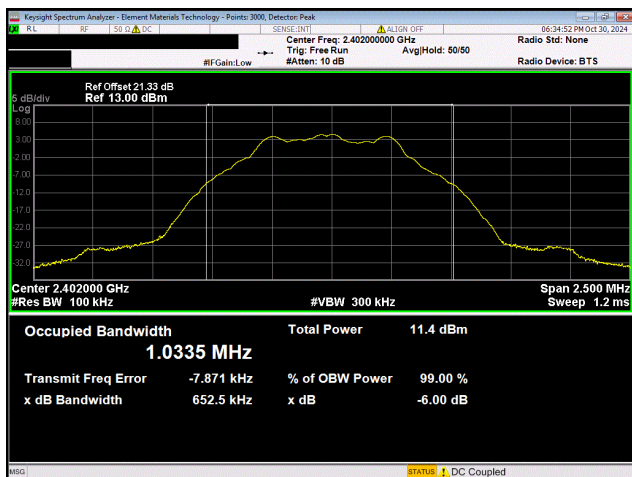


BLE/GFSK 500 kbps
Mid Channel, 2442 MHz

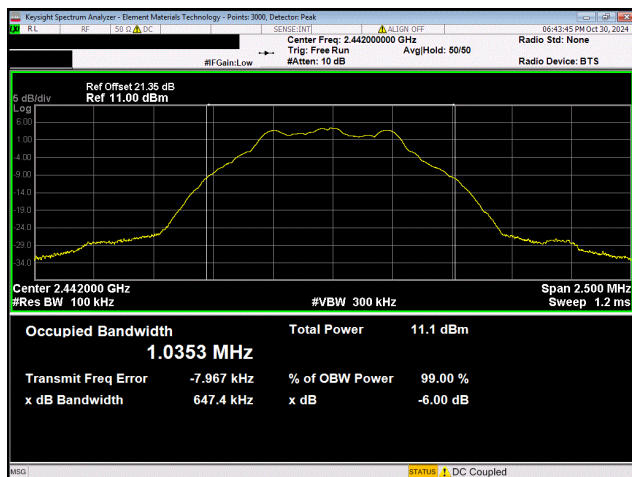


BLE/GFSK 500 kbps
High Channel, 2480 MHz

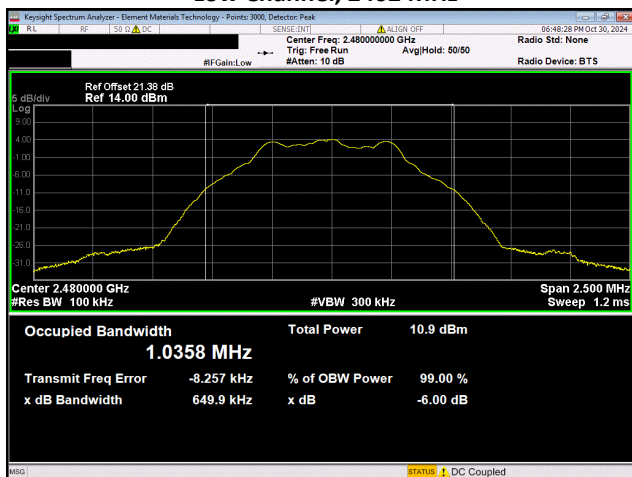
DTS BANDWIDTH (6 dB)



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



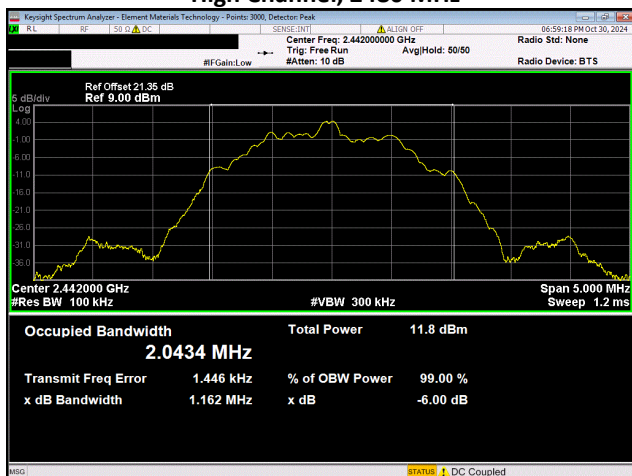
BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 1 Mbps
High Channel, 2480 MHz



BLE/GFSK 2 Mbps
Low Channel, 2402 MHz



BLE/GFSK 2 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 2 Mbps
High Channel, 2480 MHz

OCCUPIED BANDWIDTH (99%)

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The 99% occupied bandwidth was measured with the EUT configured for continuous modulated operation.

Per ANSI C63.10:2013, 6.9.3, the spectrum analyzer was configured as follows:

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) of the spectrum analyzer was set to the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) bandwidth was set to at least 3 times the resolution bandwidth. The analyzer sweep time was set to auto to prevent video filtering or averaging. A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to sum the power of the transmission in linear terms to obtain the 99% bandwidth.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31

OCCUPIED BANDWIDTH (99%)

EUT:	VLY-600	Work Order:	F3EN0214
Serial Number:	SLVMV04X24354058	Date:	2024-10-30
Customer:	Verily Life Sciences	Temperature:	22.1°C
Attendees:	Franz Sherman	Relative Humidity:	44.3%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	F3EN0214-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

PRBS9.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

N/A

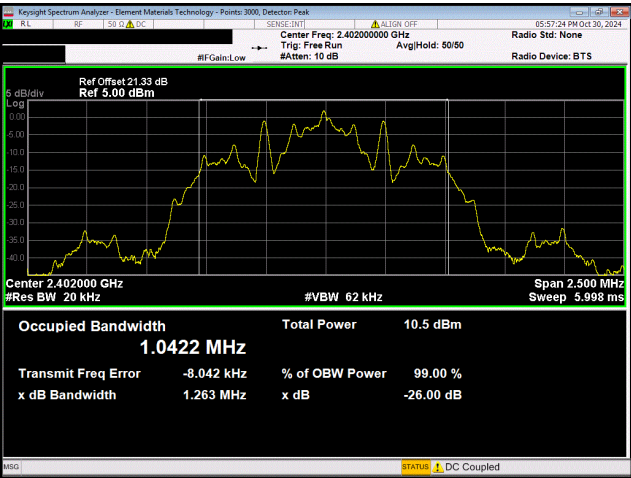


Tested By

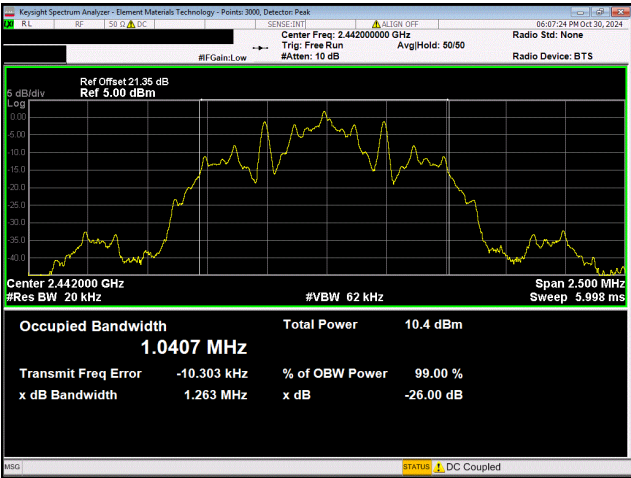
TEST RESULTS

		Value	Limit	Result
BLE/GFSK 125 kbps				
	Low Channel, 2402 MHz	1.042 MHz	N/A	N/A
	Mid Channel, 2442 MHz	1.041 MHz	N/A	N/A
	High Channel, 2480 MHz	1.041 MHz	N/A	N/A
BLE/GFSK 500 kbps				
	Low Channel, 2402 MHz	1.016 MHz	N/A	N/A
	Mid Channel, 2442 MHz	1.016 MHz	N/A	N/A
	High Channel, 2480 MHz	1.016 MHz	N/A	N/A
BLE/GFSK 1 Mbps				
	Low Channel, 2402 MHz	1.025 MHz	N/A	N/A
	Mid Channel, 2442 MHz	1.026 MHz	N/A	N/A
	High Channel, 2480 MHz	1.027 MHz	N/A	N/A
BLE/GFSK 2 Mbps				
	Low Channel, 2402 MHz	2.037 MHz	N/A	N/A
	Mid Channel, 2442 MHz	2.037 MHz	N/A	N/A
	High Channel, 2480 MHz	2.038 MHz	N/A	N/A

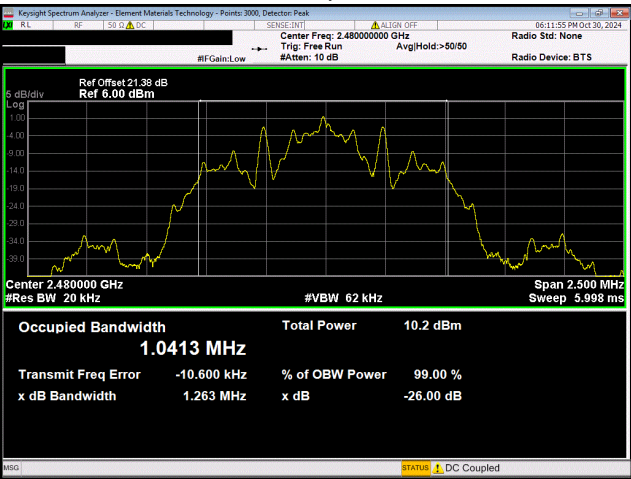
OCCUPIED BANDWIDTH (99%)



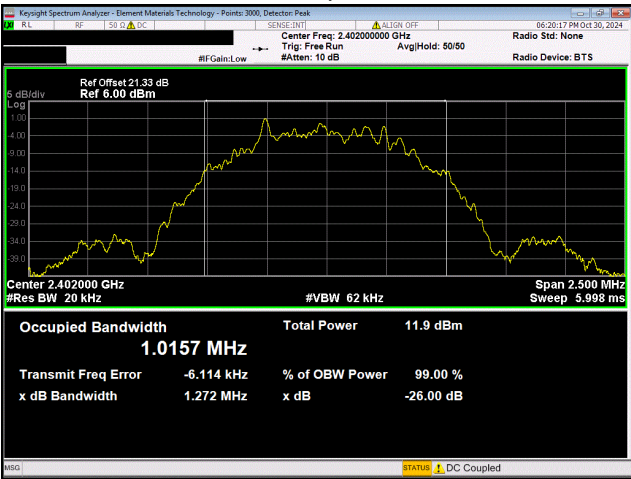
BLE/GFSK 125 kbps
Low Channel, 2402 MHz



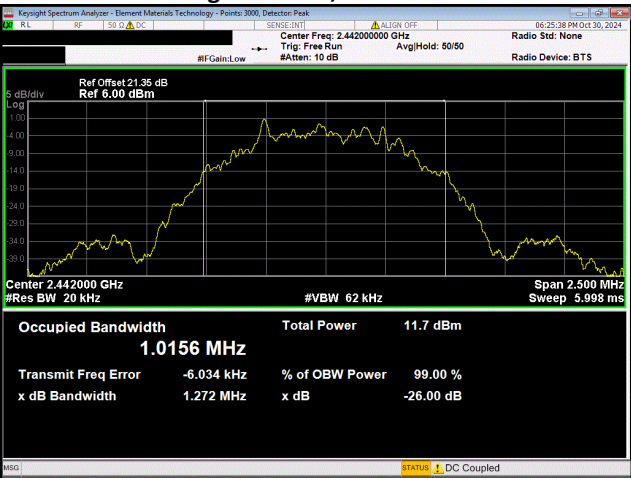
BLE/GFSK 125 kbps
Mid Channel, 2442 MHz



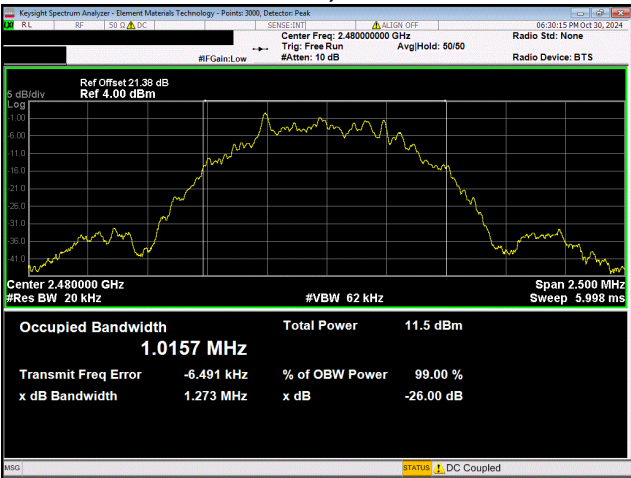
BLE/GFSK 125 kbps
High Channel, 2480 MHz



BLE/GFSK 500 kbps
Low Channel, 2402 MHz



BLE/GFSK 500 kbps
Mid Channel, 2442 MHz



BLE/GFSK 500 kbps
High Channel, 2480 MHz

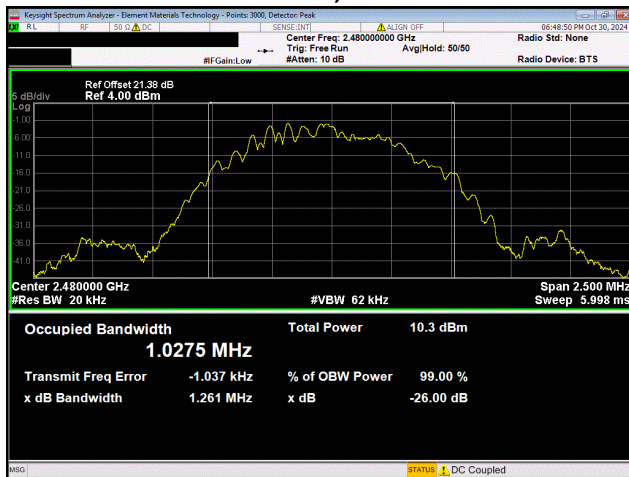
OCCUPIED BANDWIDTH (99%)



BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



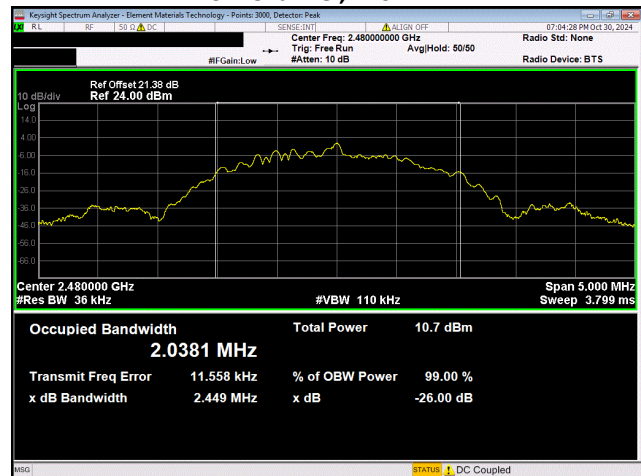
BLE/GFSK 1 Mbps
High Channel, 2480 MHz



BLE/GFSK 2 Mbps
Low Channel, 2402 MHz



BLE/GFSK 2 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 2 Mbps
High Channel, 2480 MHz

OUTPUT POWER

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31

OUTPUT POWER

EUT:	VLV-600	Work Order:	F3EN0214
Serial Number:	SLVMV04X24354058	Date:	2024-10-30
Customer:	Verily Life Sciences	Temperature:	22.1°C
Attendees:	Franz Sherman	Relative Humidity:	44.3%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	F3EN0214-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

PRBS9.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

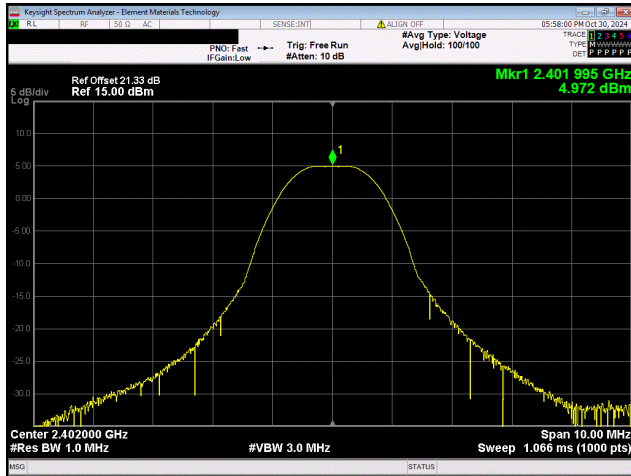


Tested By

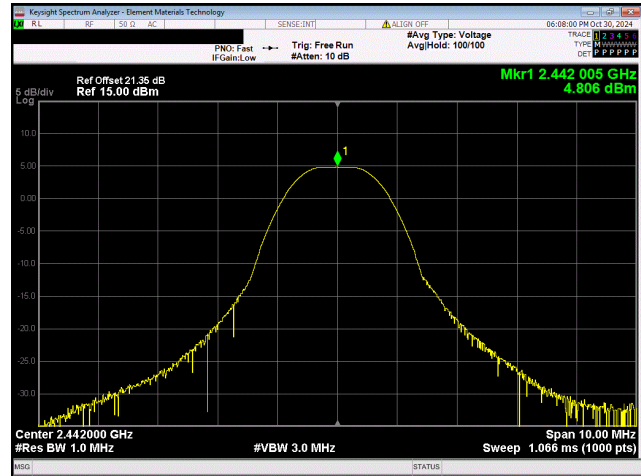
TEST RESULTS

		Out Pwr (dBm)	Limit (dBm)	Result
BLE/GFSK 125 kbps				
	Low Channel, 2402 MHz	4.972	30	Pass
	Mid Channel, 2442 MHz	4.806	30	Pass
	High Channel, 2480 MHz	4.557	30	Pass
BLE/GFSK 500 kbps				
	Low Channel, 2402 MHz	4.971	30	Pass
	Mid Channel, 2442 MHz	4.811	30	Pass
	High Channel, 2480 MHz	4.578	30	Pass
BLE/GFSK 1 Mbps				
	Low Channel, 2402 MHz	4.989	30	Pass
	Mid Channel, 2442 MHz	4.752	30	Pass
	High Channel, 2480 MHz	4.513	30	Pass
BLE/GFSK 2 Mbps				
	Low Channel, 2402 MHz	4.941	30	Pass
	Mid Channel, 2442 MHz	4.782	30	Pass
	High Channel, 2480 MHz	4.551	30	Pass

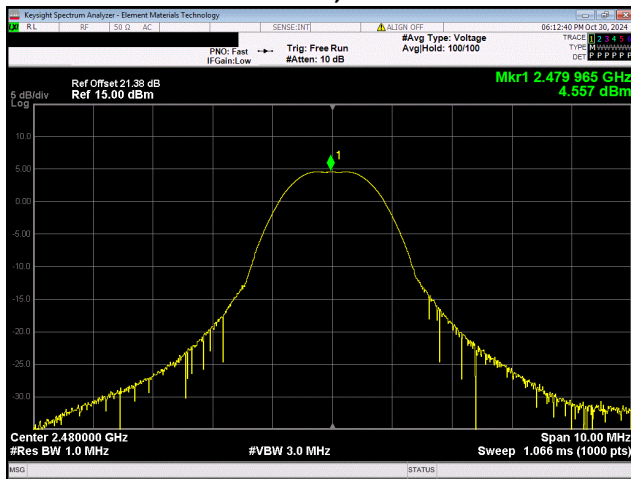
OUTPUT POWER



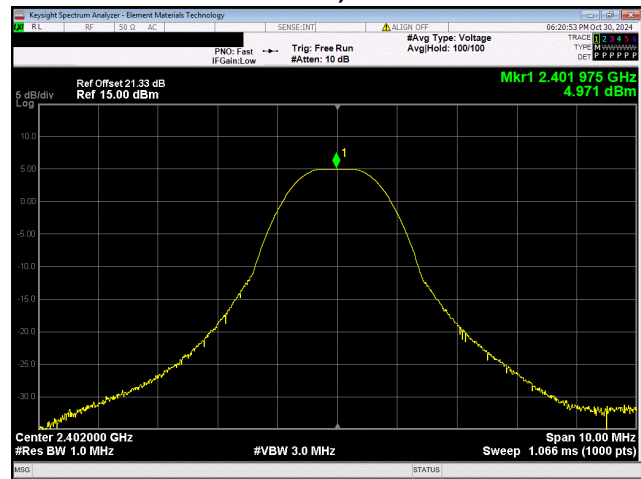
BLE/GFSK 125 kbps
Low Channel, 2402 MHz



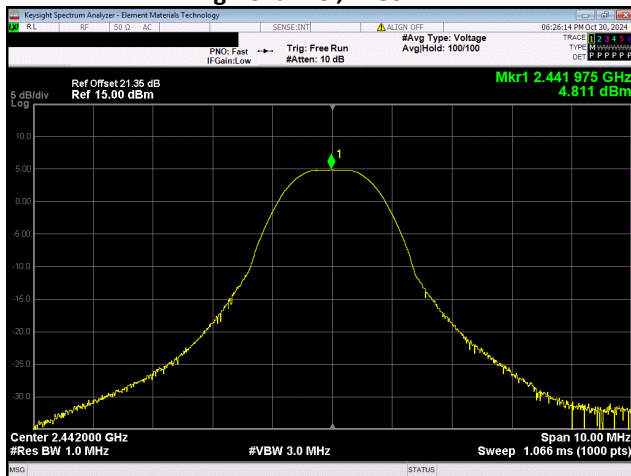
BLE/GFSK 125 kbps
Mid Channel, 2442 MHz



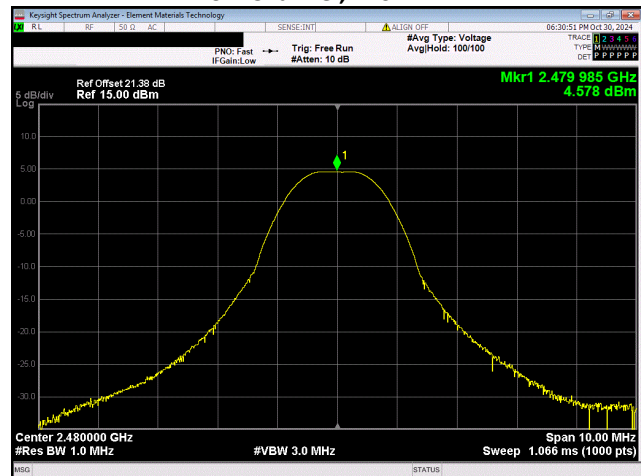
BLE/GFSK 125 kbps
High Channel, 2480 MHz



BLE/GFSK 500 kbps
Low Channel, 2402 MHz

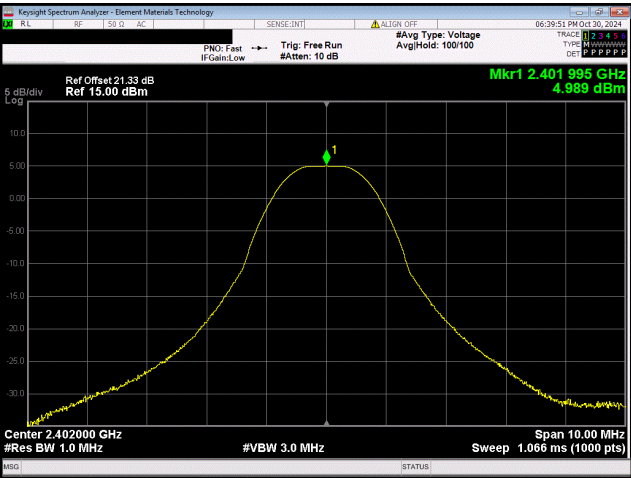


BLE/GFSK 500 kbps
Mid Channel, 2442 MHz

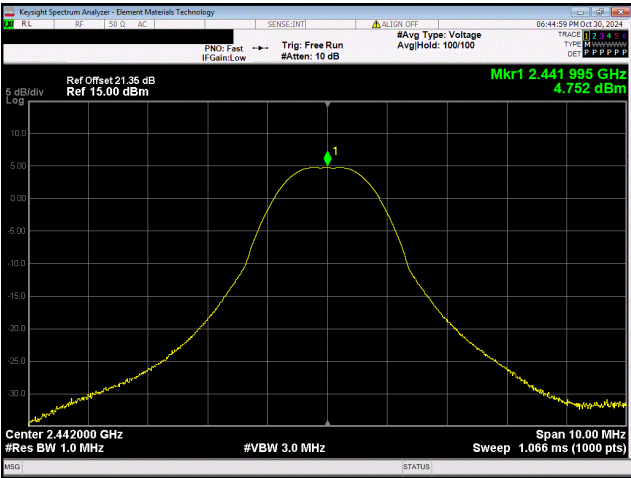


BLE/GFSK 500 kbps
High Channel, 2480 MHz

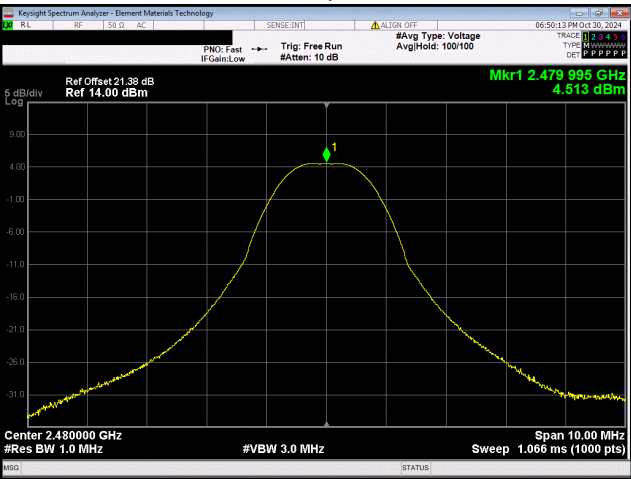
OUTPUT POWER



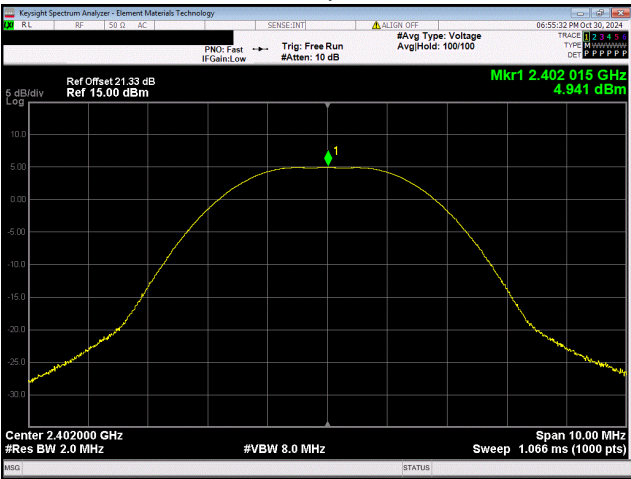
BLE/GFSK 1 Mbps
Low Channel, 2402 MHz



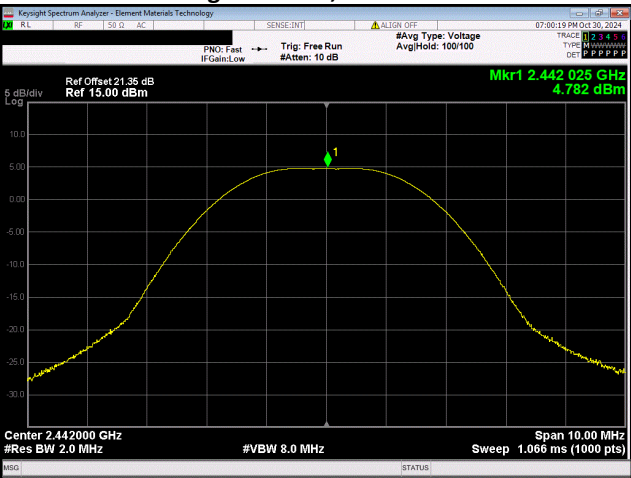
BLE/GFSK 1 Mbps
Mid Channel, 2442 MHz



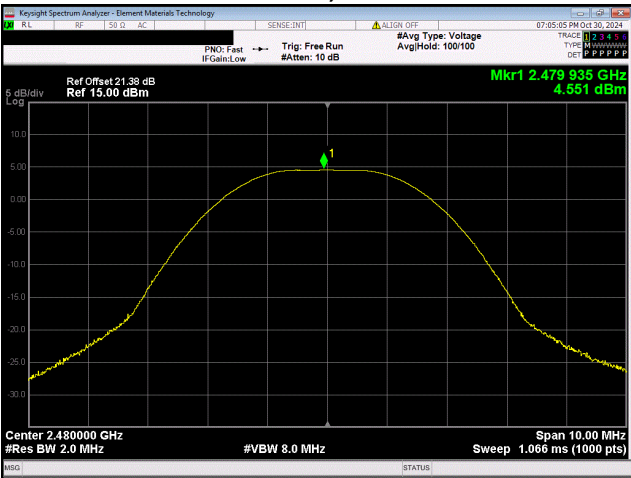
BLE/GFSK 1 Mbps
High Channel, 2480 MHz



BLE/GFSK 2 Mbps
Low Channel, 2402 MHz



BLE/GFSK 2 Mbps
Mid Channel, 2442 MHz



BLE/GFSK 2 Mbps
High Channel, 2480 MHz

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Keysight	N5171B (EXG)	TEY	2024-01-11	2027-01-11
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2024-08-28	2025-08-28
Block - DC	Fairview Microwave	SD3379	ANH	2024-08-28	2025-08-28
Attenuator	S.M. Electronics	SA26B-20	RFW	2024-01-31	2025-01-31

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



EUT:	VLY-600	Work Order:	F3EN0214
Serial Number:	SLVMV04X24354058	Date:	2024-10-30
Customer:	Verily Life Sciences	Temperature:	22.1°C
Attendees:	Franz Sherman	Relative Humidity:	44.3%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Christopher Heintzelman	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	F3EN0214-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

PRBS9.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
BLE/GFSK 125 kbps					
Low Channel, 2402 MHz	4.972	2.3	7.272	36	Pass
Mid Channel, 2442 MHz	4.806	2.3	7.106	36	Pass
High Channel, 2480 MHz	4.557	2.3	6.857	36	Pass
BLE/GFSK 500 kbps					
Low Channel, 2402 MHz	4.971	2.3	7.271	36	Pass
Mid Channel, 2442 MHz	4.811	2.3	7.111	36	Pass
High Channel, 2480 MHz	4.578	2.3	6.878	36	Pass
BLE/GFSK 1 Mbps					
Low Channel, 2402 MHz	4.989	2.3	7.289	36	Pass
Mid Channel, 2442 MHz	4.752	2.3	7.052	36	Pass
High Channel, 2480 MHz	4.513	2.3	6.813	36	Pass
BLE/GFSK 2 Mbps					
Low Channel, 2402 MHz	4.941	2.3	7.241	36	Pass
Mid Channel, 2442 MHz	4.782	2.3	7.082	36	Pass
High Channel, 2480 MHz	4.551	2.3	6.851	36	Pass