



MSA Innovation, LLC

G1 SCBA Power Module Type 5

HVINs: Beacon, Type 5 and Telemetry and Beacon, Type 5

FCC 15.247, RSS-247 Issue 4:2025, RSS-Gen Issue 5:2018+A1:2019+A2:2021

2.4 GHz DTS Radio

Report: F3EN0262.1 Rev. 01, Issue Date: August 13, 2026



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CERTIFICATE OF TEST

Last Date of Test: July 16, 2026
MSA Innovation, LLC
EUT: G1 SCBA Power Module Type 5

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247	ANSI C63.10:2020 Cor.1:2023
RSS-247 Issue 4:2025	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
RSS-Gen Issue 5:2018+A1:2019+A2:2021	

Guidance

FCC KDB 558074 v05r02:2019
Notice 2021 - CEB0001

Results

Test Description	Result	FCC Spec Section(s)	ISED Spec Section(s)	Method Section(s)	Comments
Powerline Conducted Emissions	N/A	15.207	RSS-Gen 8.8	6.2	Not required for a battery powered EUT.
Duty Cycle	N/A	KDB 558074 - 6.0	RSS-Gen 3.2	11.6	Not required since the EUT has a 100% duty cycle.
DTS Bandwidth (6 dB)	Pass	15.247(a)(2), KDB 558074 - 8.2	RSS-247 6.3.1(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 6.3.2, RSS-Gen 6.12	11.9.1.1	
Equivalent Isotropic Radiated Power	Pass	15.247(b)(3), KDB 558074 - 8.3.1	RSS-247 6.3.2, RSS-Gen 6.12	11.9.1.1	
Power Spectral Density	Pass	15.247(e), KDB 558074 - 8.4	RSS-247 6.3.1(b)	11.10.2	
Band Edge Compliance	Pass	15.247(d), KDB 558074 - 8.5	RSS-247 6.6	11.11	
Spurious Conducted Emissions	Pass	15.247(d), KDB 558074 - 8.5	RSS-247 6.6	11.11	
Radiated Band Edge Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 6.6, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.6	
Spurious Radiated Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 6.6, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.4, 6.5, 6.6	Simultaneous Transmissions with the other radios in this host was tested separately.

Deviations From Test Standards

None

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.

CERTIFICATE OF TEST



Approved By:

Cole Ghizzone, Operations Manager
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
01	Added Radiated Band Edge Emissions 2.4 GHz no 900 MHz Radio data.	2026-08-11	22-24
	Removed plots for EIRP, which are identical with Output Power plots.	2026-08-11	N/A
	Remeasured Occupied Bandwidth with 100 kHz RBW, 300 kHz VBW and a longer hold time.	2026-08-11	20-24
	Remeasured Power Spectral Density with EUT in correct mode.	2026-08-11	35-39
	Added new Radiated Spurious Emissions data.	2026-08-11	64-77

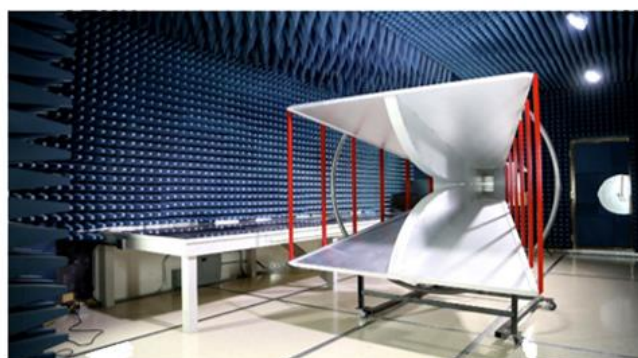
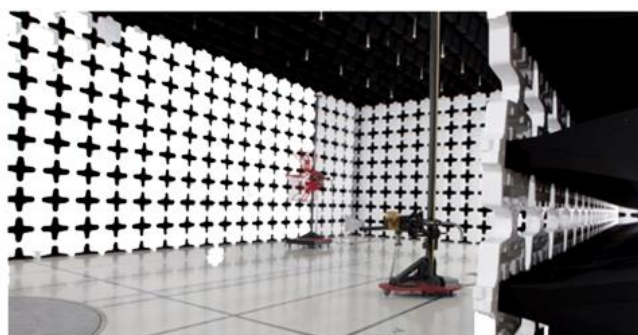
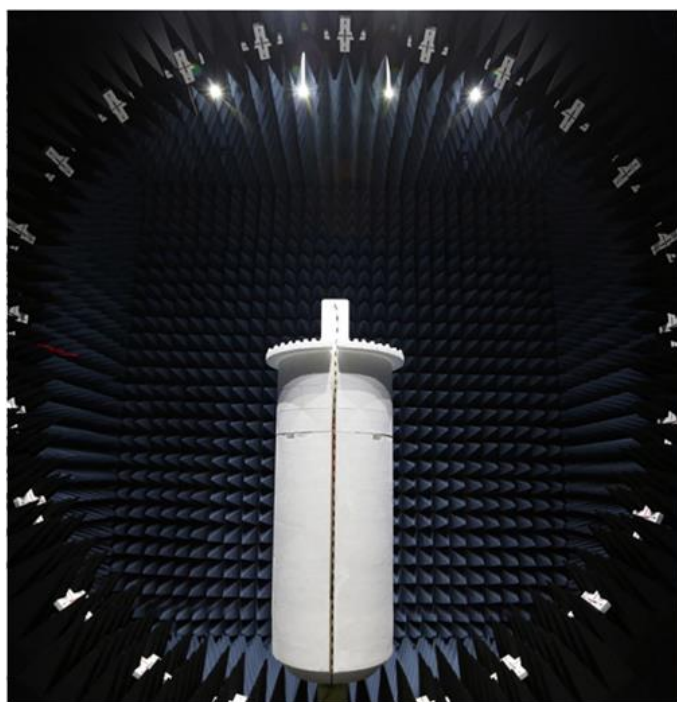
FACILITIES

Testing was performed at the following location(s)

	Location	Labs ⁽¹⁾	Address	A2LA ⁽²⁾	ISED ⁽³⁾	BSMI ⁽⁴⁾	VCCI ⁽⁵⁾	CAB	FDA ⁽⁶⁾
☐	California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
☐	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
☒	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
☐	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
☐	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) 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 reported is based on statistical analysis that was performed by the laboratory. 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
Near-field Measurement of E-Field (dB)	1.89
Near-field Measurement of H-Field (dB)	2.65

Field Strength Measurements (dB)

Range	EV01 (+/-)
9kHz-30MHz	1.8
30MHz-1GHz 3m	4.6
1GHz-6GHz	5.1
6GHz-40GHz	5.2
40GHz-220GHz	4.9

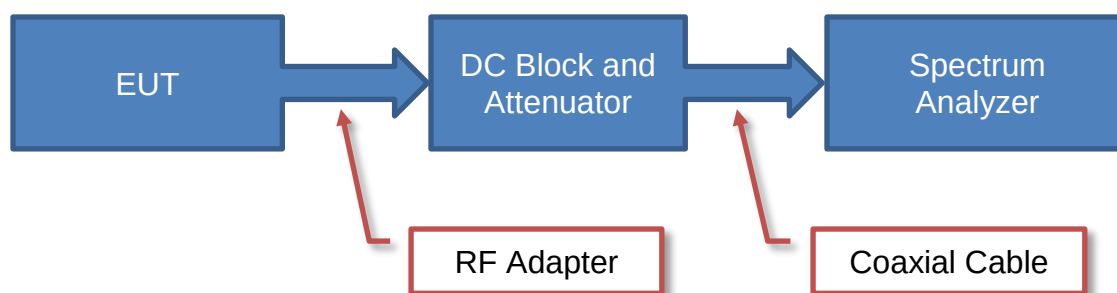
TEST SETUP BLOCK DIAGRAMS

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.

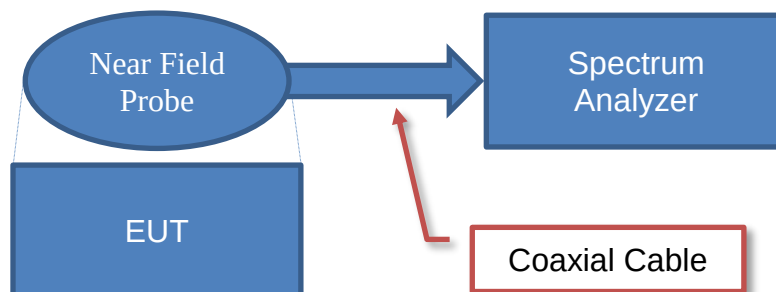
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

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

Near Field Test Fixture Measurements

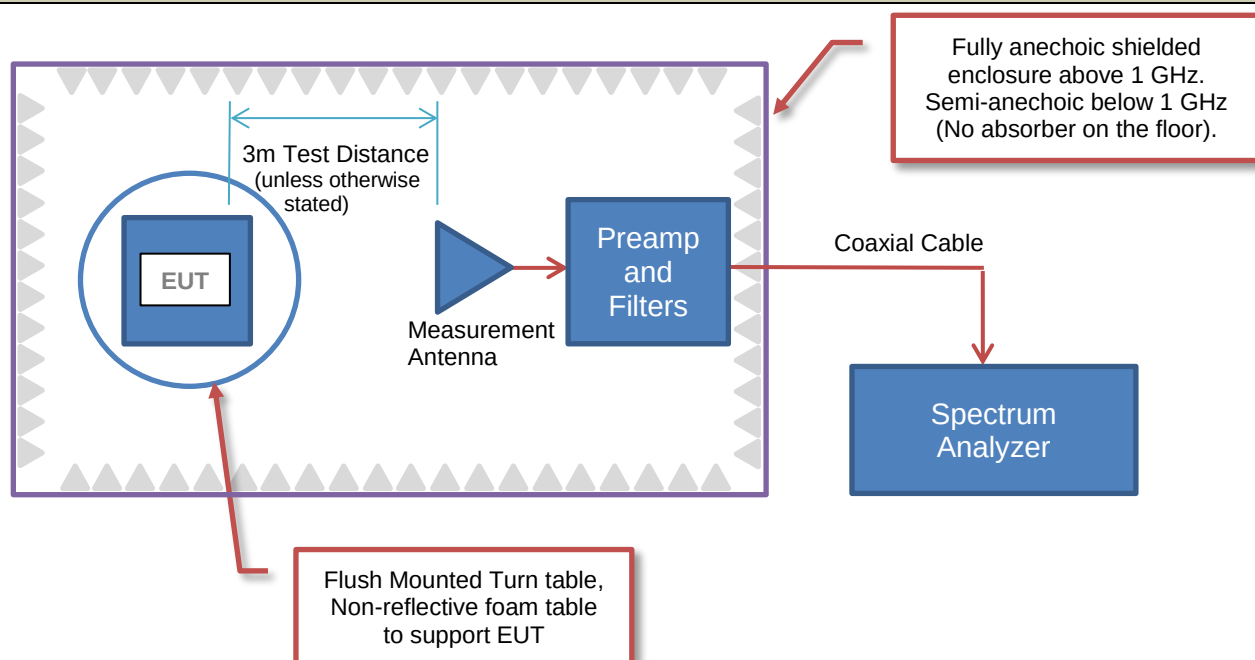


Sample Calculation (logarithmic units)

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

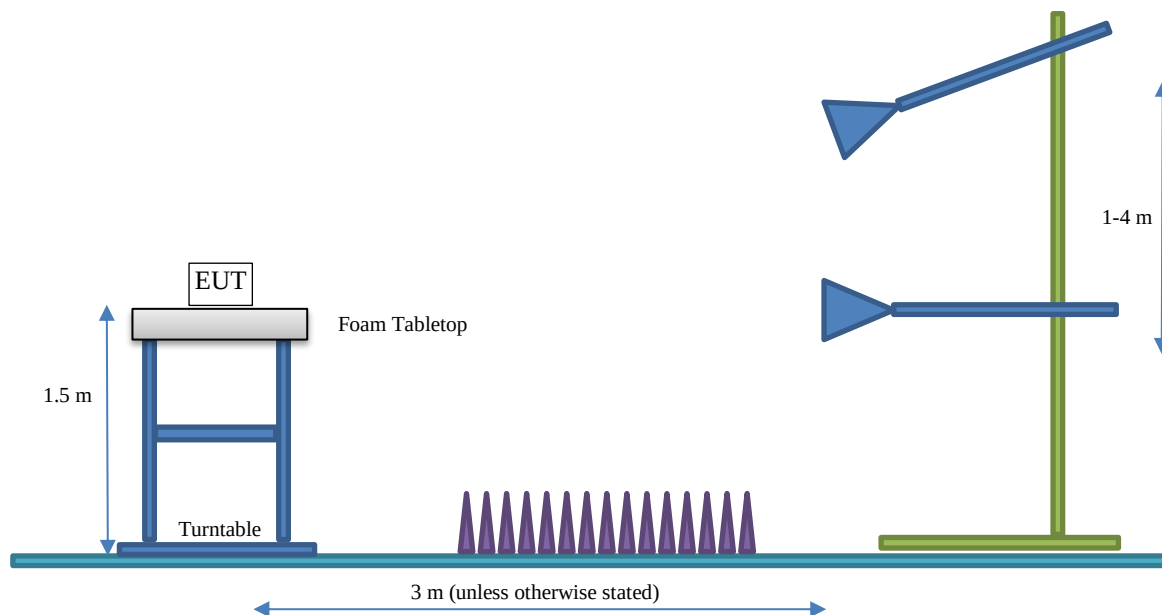
Radiated Power (ERP/EIRP) – Substitution Method:

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:	MSA Innovation, LLC
Address:	1000 Cranberry Woods Drive
City, State, Zip:	Cranberry Township, PA 16066
Test Requested By:	Clint Flemming
EUT:	G1 SCBA Power Module Type 5
First Date of Test:	June 2, 2026
Last Date of Test:	July 16, 2026
Receipt Date of Samples:	June 2, 2026
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

Self-contained breathing apparatus for firefighters

The 802.15.4 radio cannot transmit on both antenna ports simultaneously.

Testing was performed with the 900 MHz radio populated (Config 5) and depopulated (Config 3)

Testing Objective:

To demonstrate compliance of the 2.4 GHz DTS radio to FCC 15.247 requirements and to RSS-247 requirements under technology category other.

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	Manufacturer:	Frequency Range (MHz)	Gain (dBi)
PCB Trace	MSA Innovation, LLC	2400-2483.5	3.22
PCB Trace	MSA Innovation, LLC	2400-2483.5	4

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

- ☒ Test software settings Software / firmware used for testing: V5.06
☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

MSA G1 SCBA	Power Setting
Antenna 1	20 dBm
Antenna 2	20 dBm

CONFIGURATIONS



Configuration F3EN0262-3

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Stand Alone Device - HVIN: Beacon, Type 5	MSA Innovation, LLC	G1 SCBA Power Module Type 5	Unit 2

Configuration F3EN0262-4

Software/Firmware Running During Test	
Description	Version
Firmware	V5.06

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Stand Alone Device - Conducted Sample	MSA Innovation, LLC	G1 SCBA Power Module Type 5	Unit 4

Configuration F3EN0262-5

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Stand Alone Device - HVIN: Telemetry and Beacon, Type 5	MSA Innovation, LLC	G1 SCBA Power Module Type 5	Unit 3

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2026-06-02	Spurious Radiated 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.
2	2026-06-03	Radiated Band Edge 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	2026-06-04	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	2026-06-04	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.
5	2026-06-04	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	2026-06-04	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	2026-06-04	Power Spectral Density	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	2026-06-04	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.
9	2026-07-16	DTS Bandwidth (6 dB)	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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 the following analyzer settings:

Detector: Peak

Sweep time: Auto

Resolution Bandwidth: 1% to 5% of the OBW but not less than 100 kHz

Video Bandwidth: $\geq 3 * RBW$

Trace: Max Hold

Span: Large enough 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	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	N5181A	TIG	2026-04-16	2029-04-16
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

DTS BANDWIDTH (6 dB)

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-07-16
Customer:	MSA Innovation, LLC	Temperature:	21.5°C
Attendees:	Dustin Morris	Relative Humidity:	40.9%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

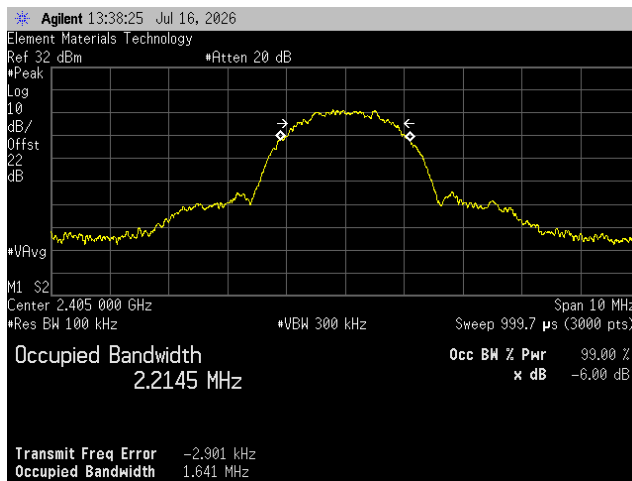


Tested By

TEST RESULTS

		Value	Limit	Result
Antenna 1				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	1.641 MHz	≥ 500 kHz	Pass
	Mid Channel (2442 MHz)	1.55 MHz	≥ 500 kHz	Pass
	High Channel (2475 MHz)	1.583 MHz	≥ 500 kHz	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	1.562 MHz	≥ 500 kHz	Pass
	Mid Channel (2442 MHz)	1.536 MHz	≥ 500 kHz	Pass
	High Channel (2475 MHz)	1.435 MHz	≥ 500 kHz	Pass
Antenna 2				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	1.573 MHz	≥ 500 kHz	Pass
	Mid Channel (2442 MHz)	1.551 MHz	≥ 500 kHz	Pass
	High Channel (2475 MHz)	1.548 MHz	≥ 500 kHz	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	1.554 MHz	≥ 500 kHz	Pass
	Mid Channel (2442 MHz)	1.567 MHz	≥ 500 kHz	Pass
	High Channel (2475 MHz)	1.571 MHz	≥ 500 kHz	Pass

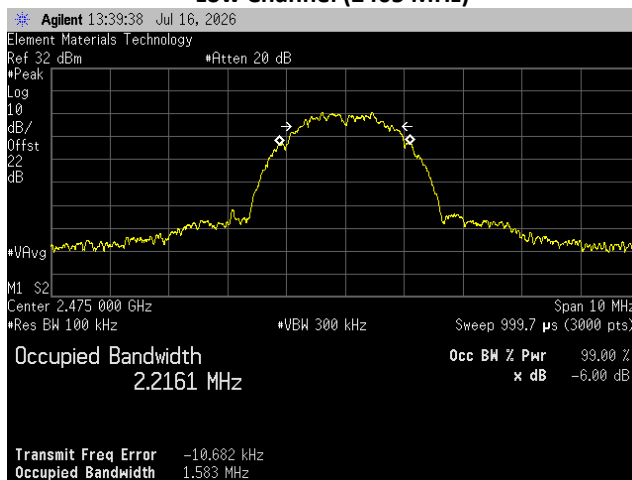
DTS BANDWIDTH (6 dB)



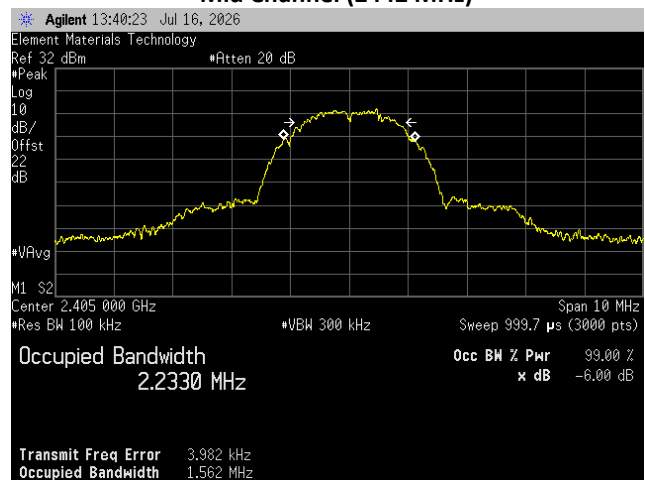
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

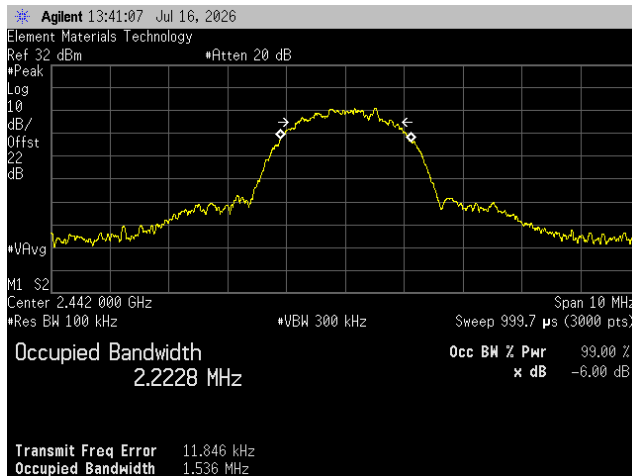


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

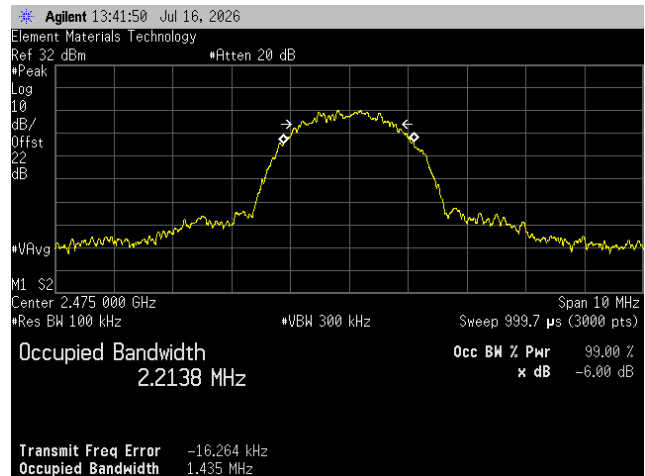


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

DTS BANDWIDTH (6 dB)



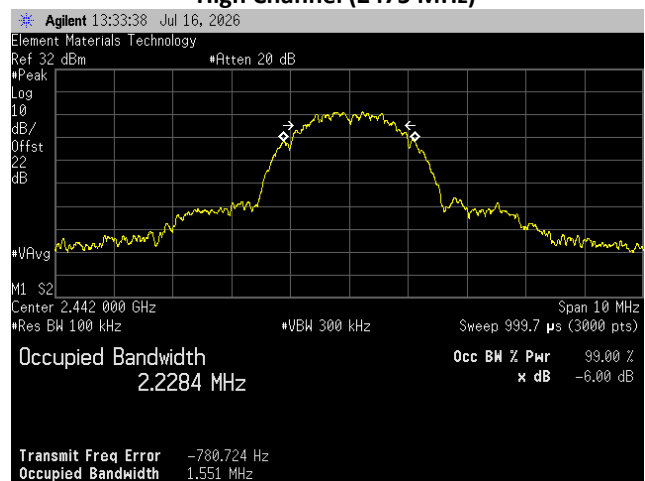
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

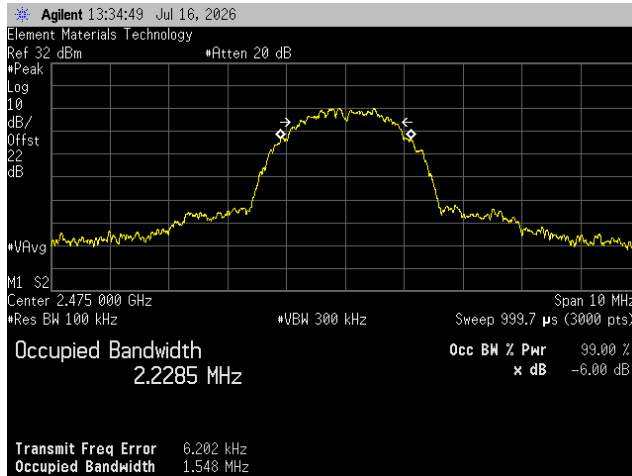


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

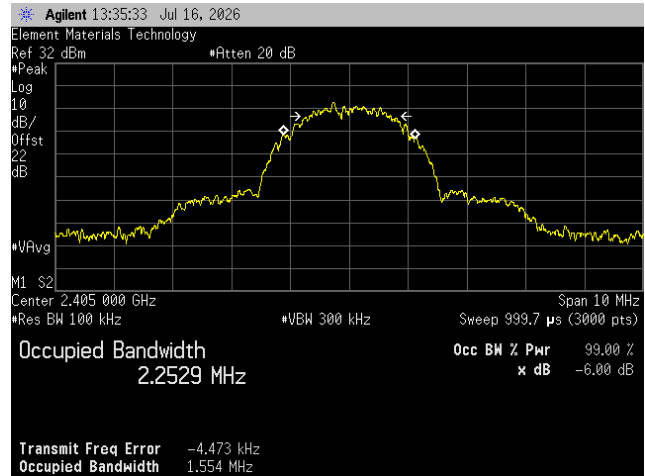


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

DTS BANDWIDTH (6 dB)



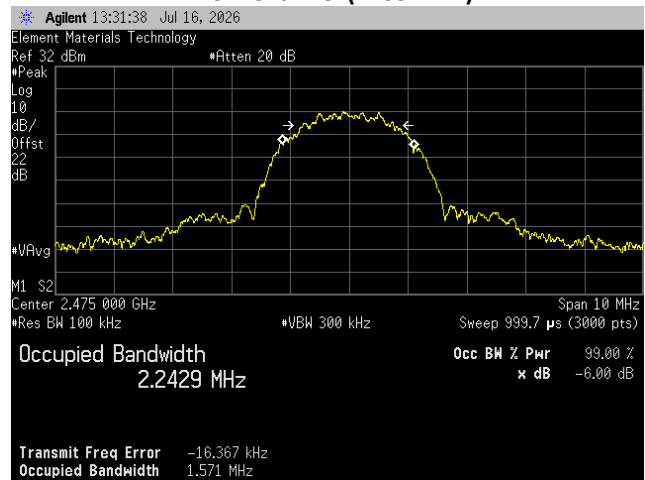
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 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 C63.10:2020, 6.9.3, the spectrum analyzer was configured as follows:

Sweep time: Auto

Resolution Bandwidth: 1% to 5% of the OBW

Video Bandwidth: $\geq 3 \times \text{RBW}$

Trace: Max Hold

Span: Large enough to capture all products of the modulation process, including the emission skirts.

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	AFP	2026-06-12	2027-06-12
Generator - Signal	Keysight	N5182B	TFU	2025-03-21	2027-03-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Attenuator	S.M. Electronics	SA26B-20	AUY	2026-04-02	2027-04-02
Block - DC	Fairview Microwave	SD3379	AMX	2026-04-02	2027-04-02

OCCUPIED BANDWIDTH (99%)

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-08-07
Customer:	MSA Innovation, LLC	Temperature:	21.5°C
Attendees:	None	Relative Humidity:	40.8%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV06
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

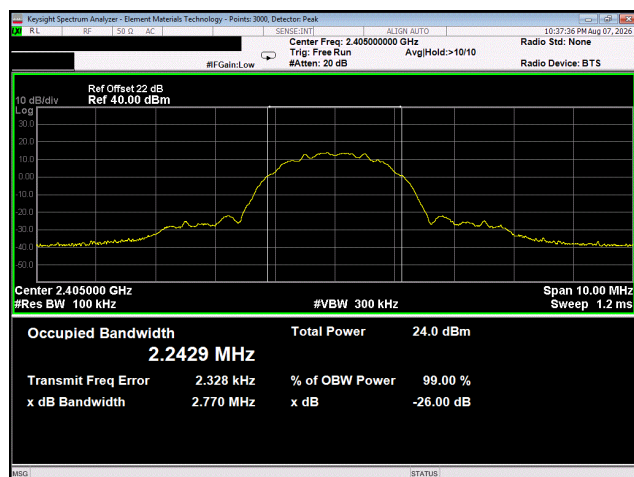


Tested By

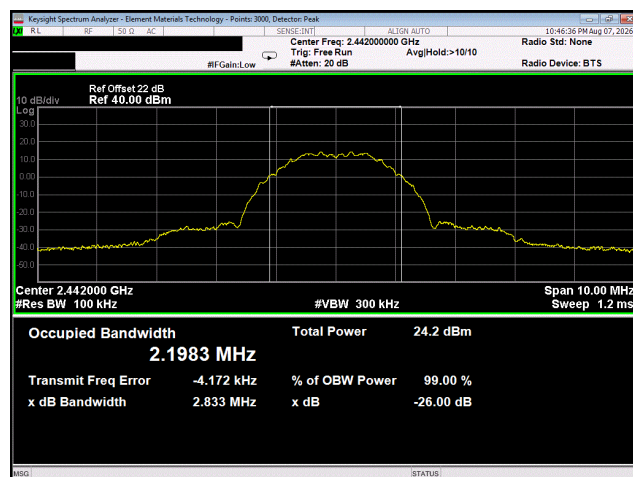
TEST RESULTS

		Value	Limit	Result
Antenna 1				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	2.243 MHz	N/A	N/A
	Mid Channel (2442 MHz)	2.199 MHz	N/A	N/A
	High Channel (2475 MHz)	2.2 MHz	N/A	N/A
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	2.2 MHz	N/A	N/A
	Mid Channel (2442 MHz)	2.224 MHz	N/A	N/A
	High Channel (2475 MHz)	2.228 MHz	N/A	N/A
Antenna 2				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	2.232 MHz	N/A	N/A
	Mid Channel (2442 MHz)	2.202 MHz	N/A	N/A
	High Channel (2475 MHz)	2.203 MHz	N/A	N/A
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	2.201 MHz	N/A	N/A
	Mid Channel (2442 MHz)	2.227 MHz	N/A	N/A
	High Channel (2475 MHz)	2.231 MHz	N/A	N/A

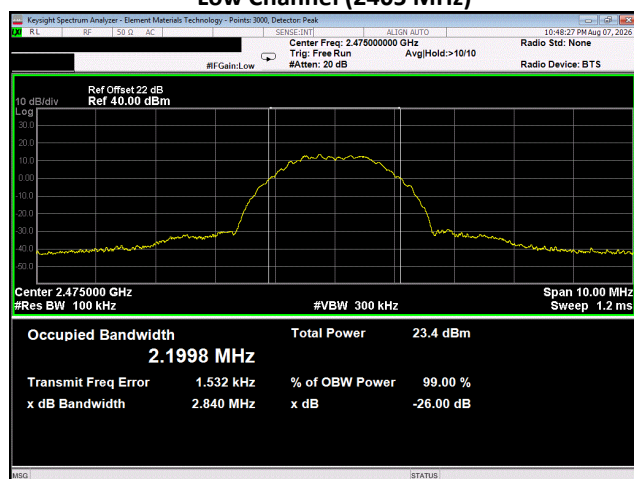
OCCUPIED BANDWIDTH (99%)



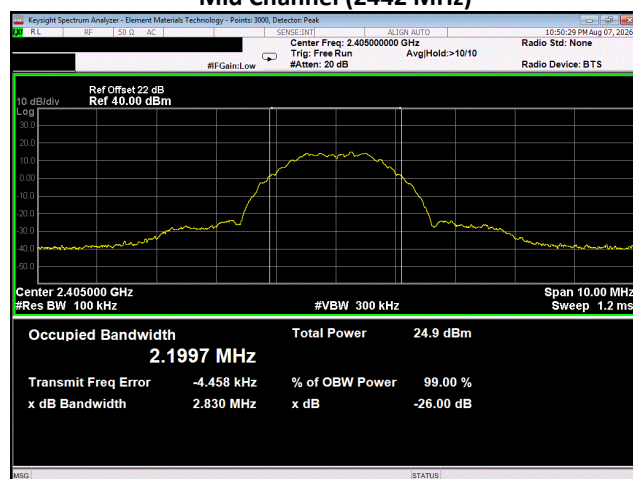
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

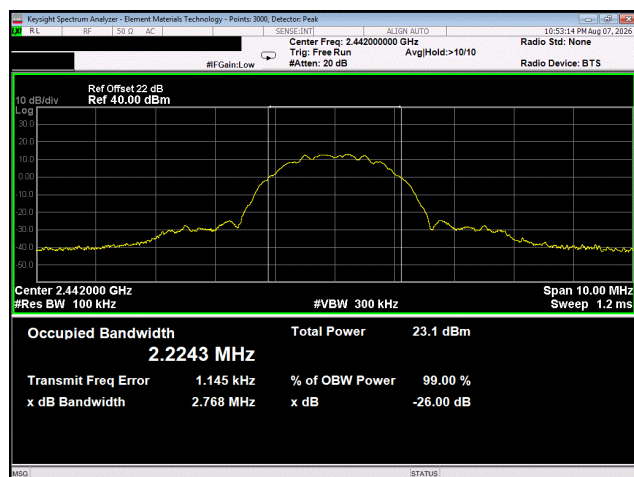


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

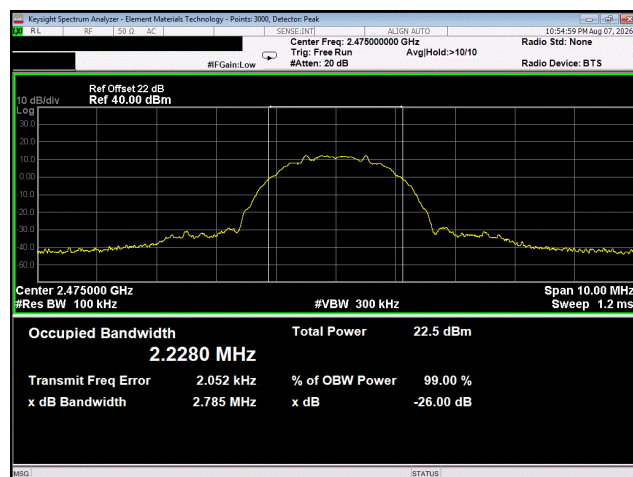


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

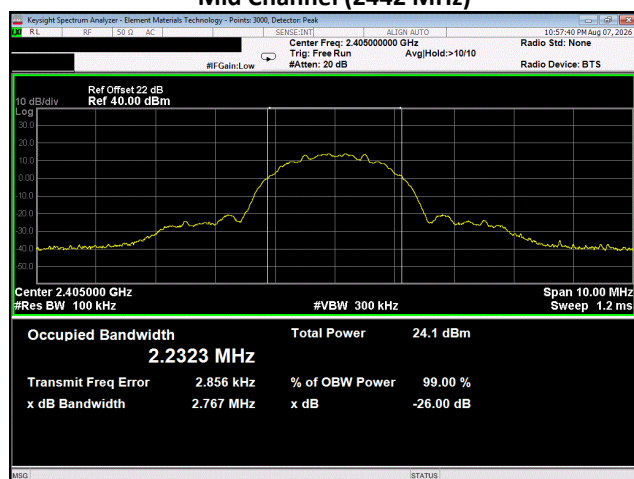
OCCUPIED BANDWIDTH (99%)



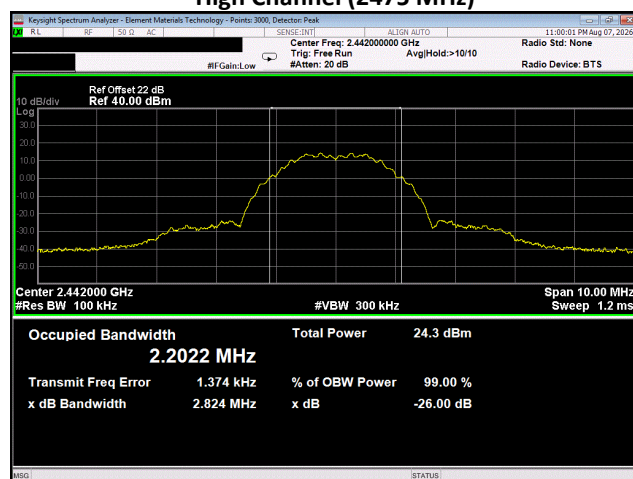
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

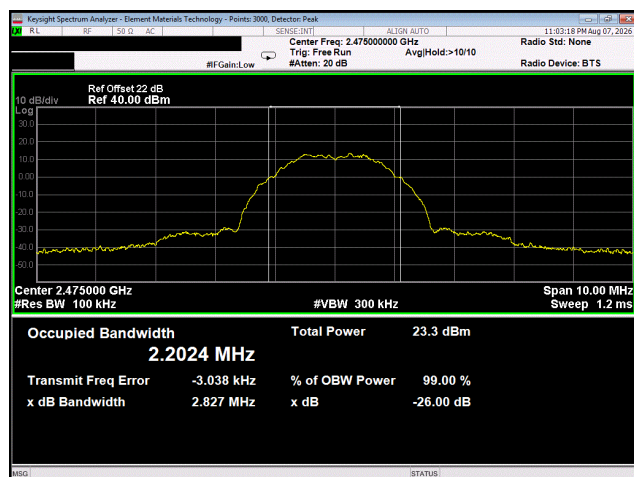


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

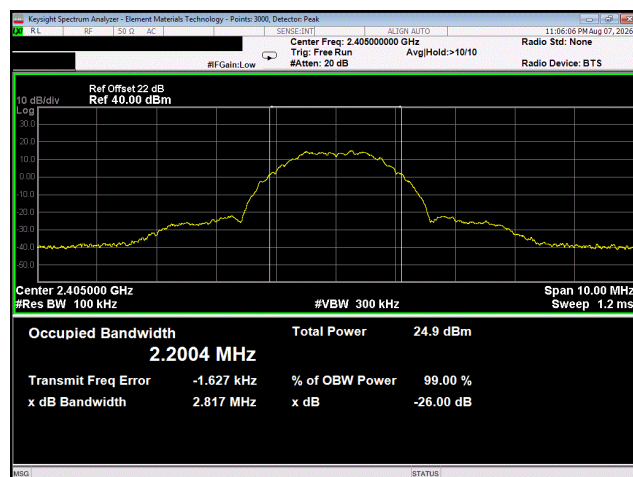


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

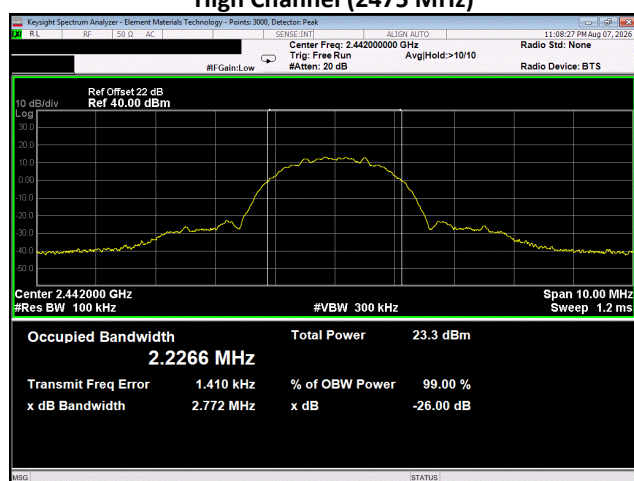
OCCUPIED BANDWIDTH (99%)



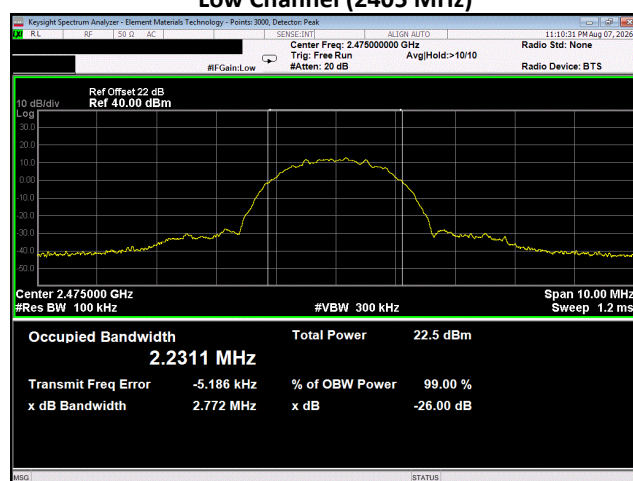
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 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 C63.10:2020 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Analyzer settings:

Detector: Peak

Sweep time: Auto

Resolution Bandwidth: $\geq$ DTS bandwidth

Video Bandwidth: $\geq 3 * RBW$

Trace: Max Hold

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	E8257D	TGX	2025-07-03	2026-07-03
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

OUTPUT POWER

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-06-04
Customer:	MSA Innovation, LLC	Temperature:	21.6°C
Attendees:	Dustin Morris	Relative Humidity:	41%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

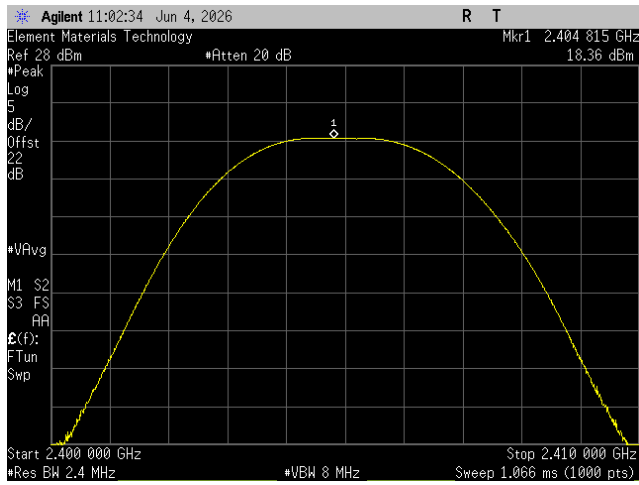


Tested By

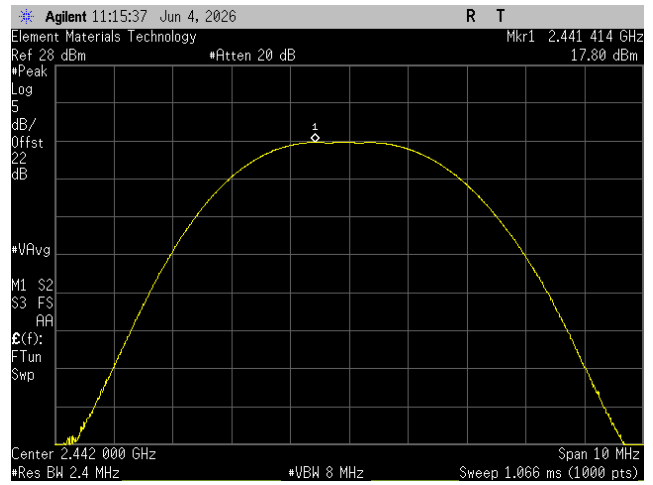
TEST RESULTS

		Out Pwr (dBm)	Limit (dBm)	Result
Antenna 1				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	18.359	30	Pass
	Mid Channel (2442 MHz)	17.802	30	Pass
	High Channel (2475 MHz)	16.979	30	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	18.321	30	Pass
	Mid Channel (2442 MHz)	17.785	30	Pass
	High Channel (2475 MHz)	16.996	30	Pass
Antenna 2				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	18.505	30	Pass
	Mid Channel (2442 MHz)	17.933	30	Pass
	High Channel (2475 MHz)	17.08	30	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	18.502	30	Pass
	Mid Channel (2442 MHz)	17.912	30	Pass
	High Channel (2475 MHz)	17.063	30	Pass

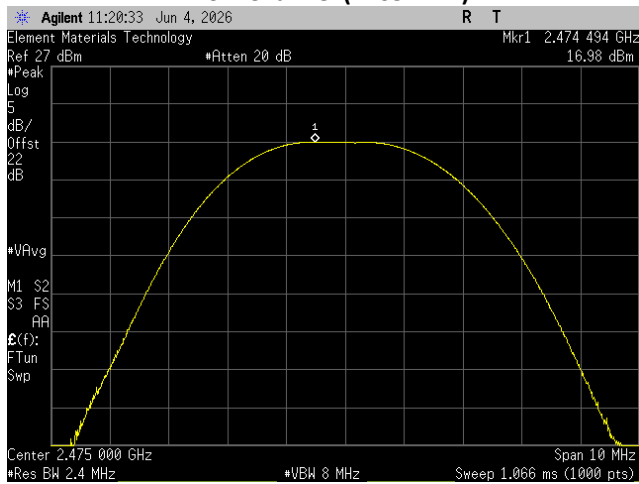
OUTPUT POWER



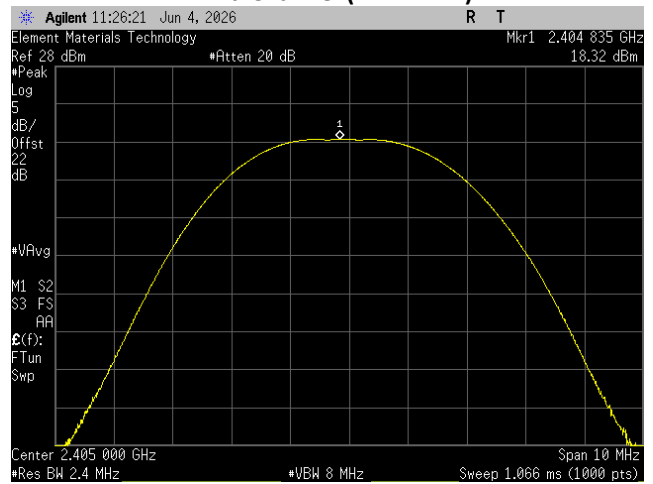
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

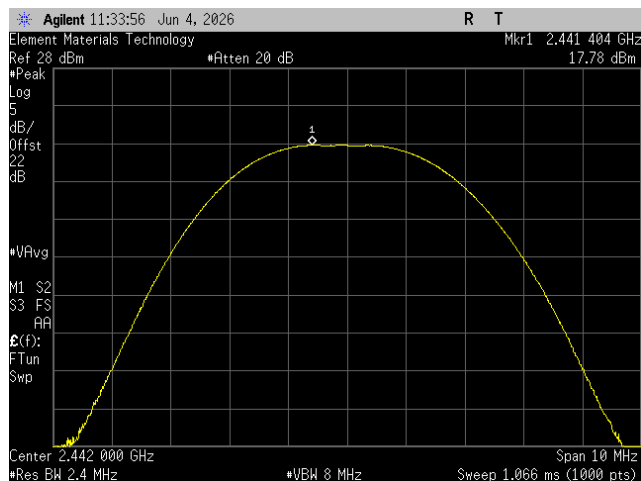


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

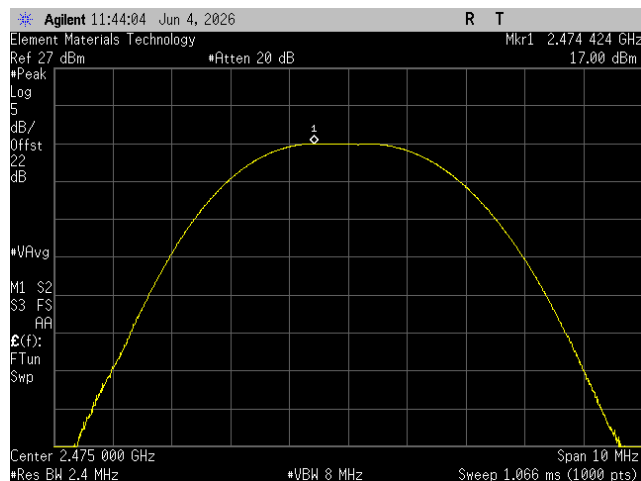


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

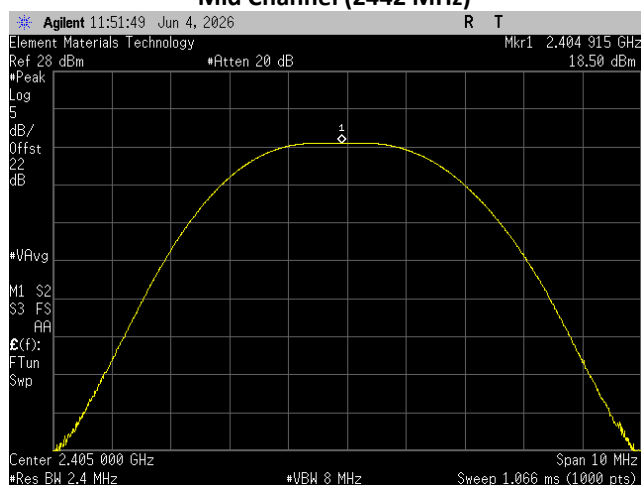
OUTPUT POWER



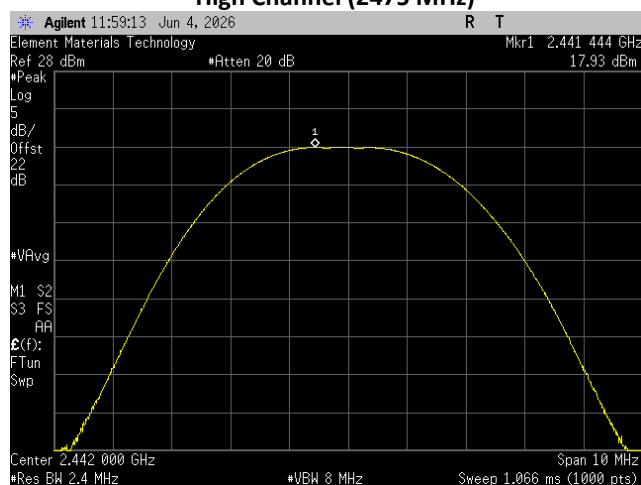
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

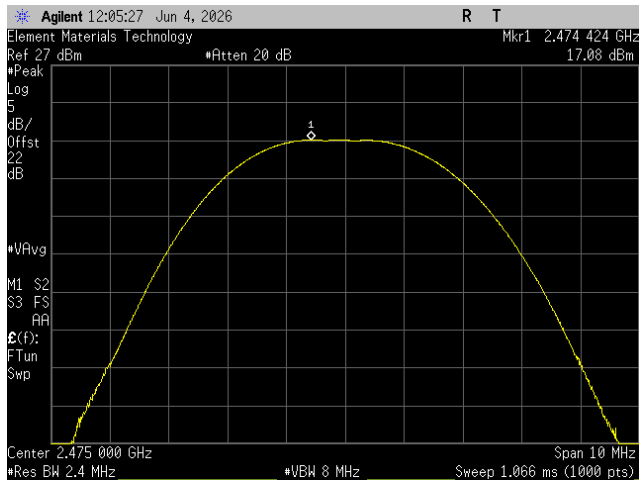


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

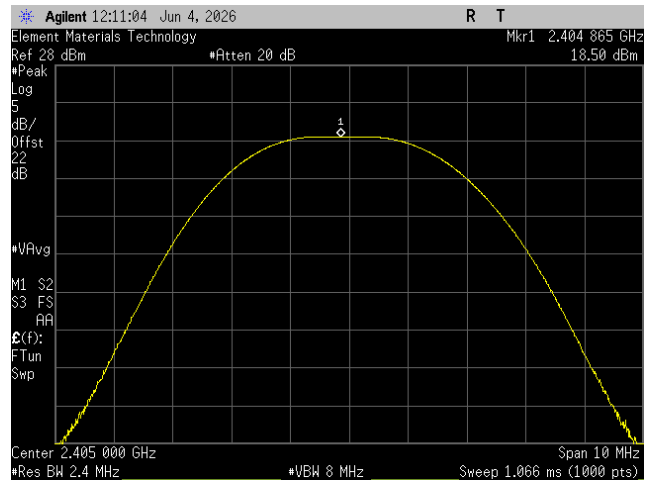


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

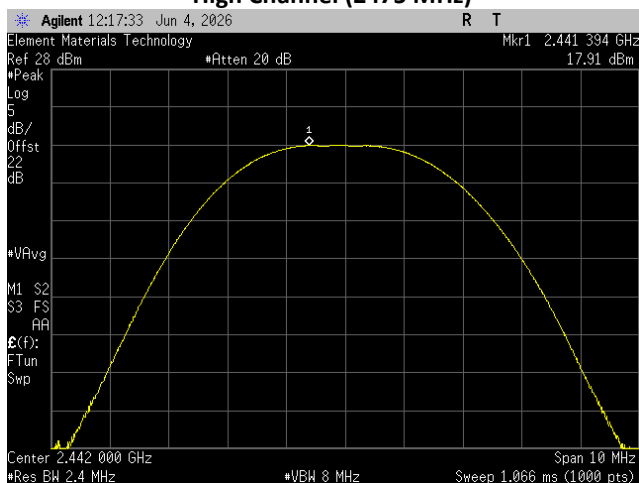
OUTPUT POWER



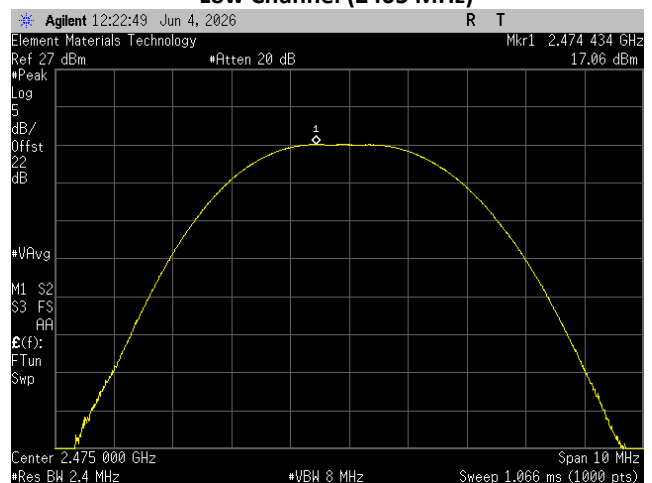
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 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 C63.10:2020 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)

Analyzer settings:

Detector: Peak

Sweep time: Auto

Resolution Bandwidth: $\geq$ DTS bandwidth

Video Bandwidth: $\geq 3 * \text{RBW}$

Trace: Max Hold

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	E8257D	TGX	2025-07-03	2026-07-03
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-06-04
Customer:	MSA Innovation, LLC	Temperature:	21.6°C
Attendees:	Dustin Morris	Relative Humidity:	40.9%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

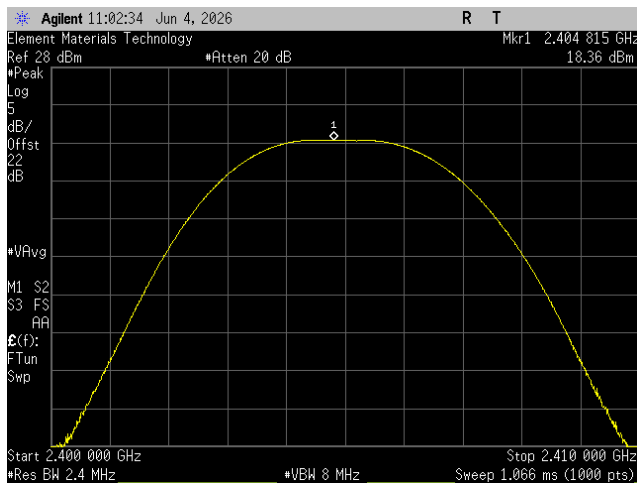
Pass

Tested By

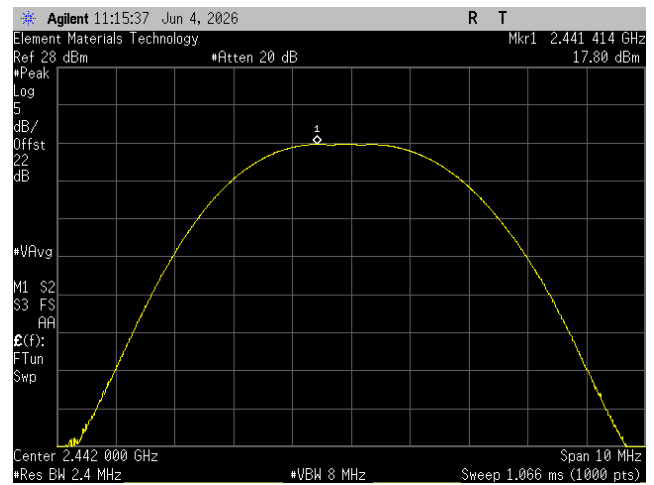
TEST RESULTS

	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
Antenna 1					
QPSK-2000-Leg-250					
Low Channel (2405 MHz)	18.359	3.2	21.559	36	Pass
Mid Channel (2442 MHz)	17.802	3.2	21.002	36	Pass
High Channel (2475 MHz)	16.979	3.2	20.179	36	Pass
QPSK-2000-Leg-1000					
Low Channel (2405 MHz)	18.321	3.2	21.521	36	Pass
Mid Channel (2442 MHz)	17.785	3.2	20.985	36	Pass
High Channel (2475 MHz)	16.996	3.2	20.196	36	Pass
Antenna 2					
QPSK-2000-Leg-250					
Low Channel (2405 MHz)	18.505	4	22.505	36	Pass
Mid Channel (2442 MHz)	17.933	4	21.933	36	Pass
High Channel (2475 MHz)	17.08	4	21.08	36	Pass
QPSK-2000-Leg-1000					
Low Channel (2405 MHz)	18.502	4	22.502	36	Pass
Mid Channel (2442 MHz)	17.912	4	21.912	36	Pass
High Channel (2475 MHz)	17.063	4	21.063	36	Pass

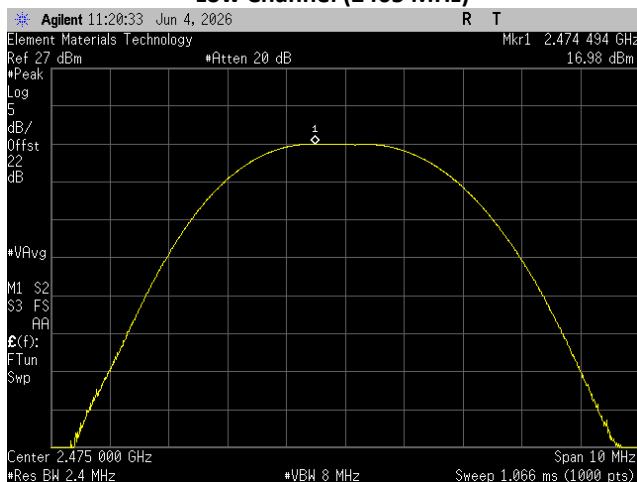
EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



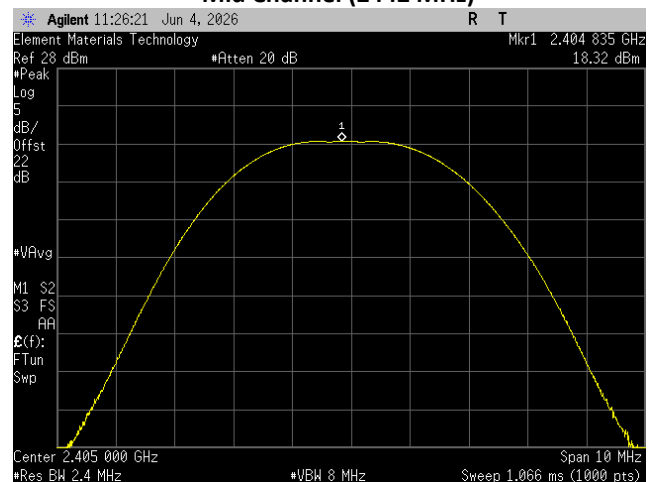
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

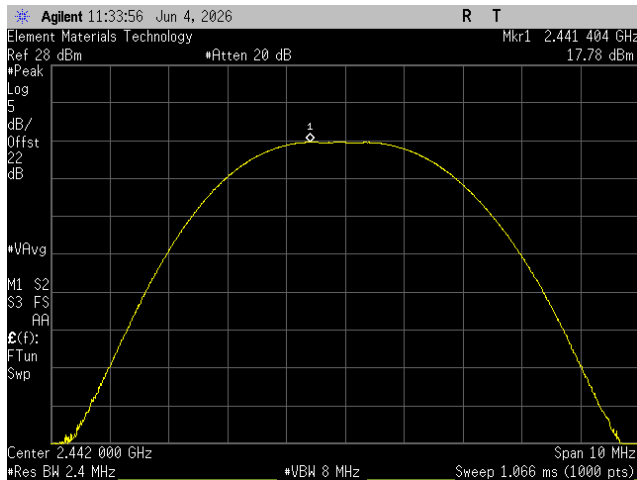


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

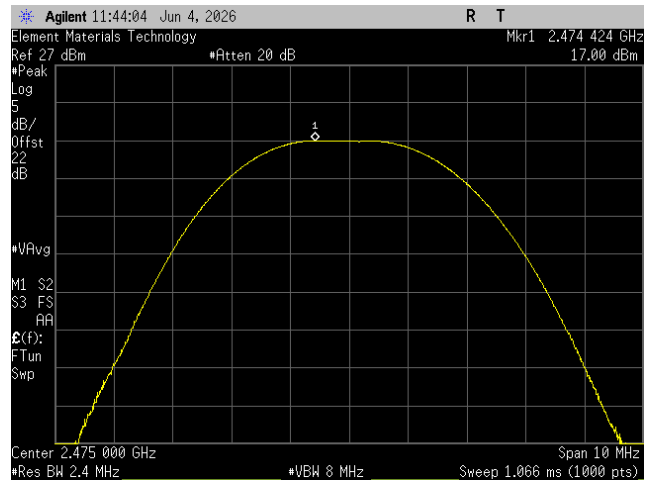


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

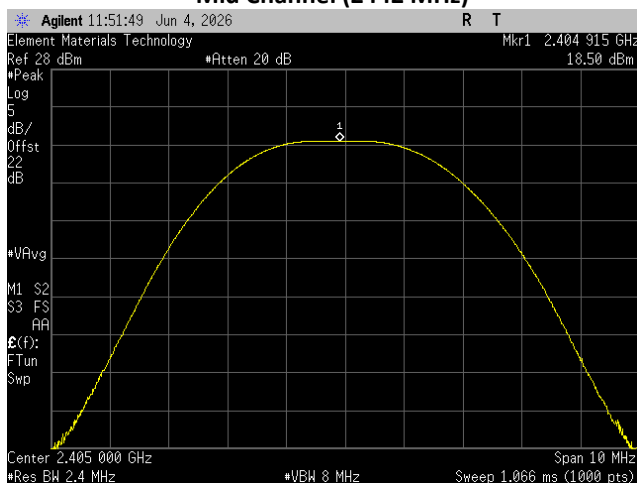
EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



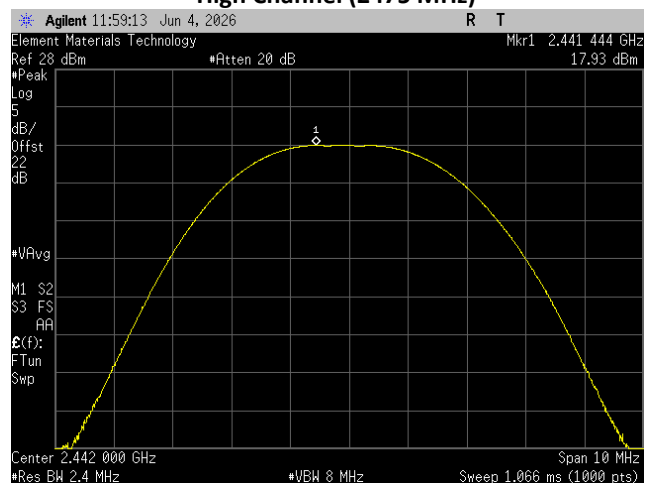
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

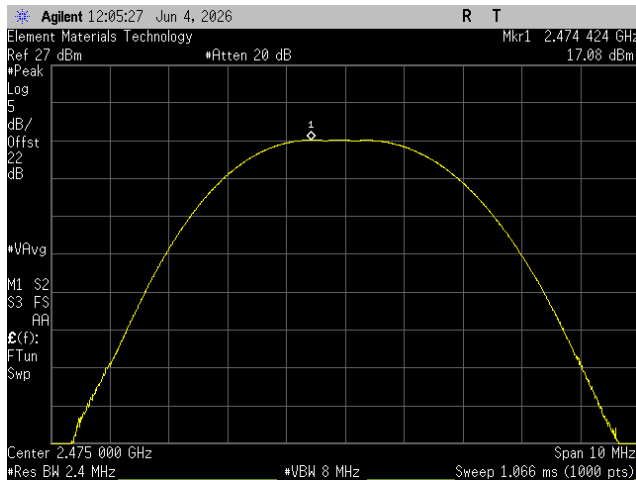


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

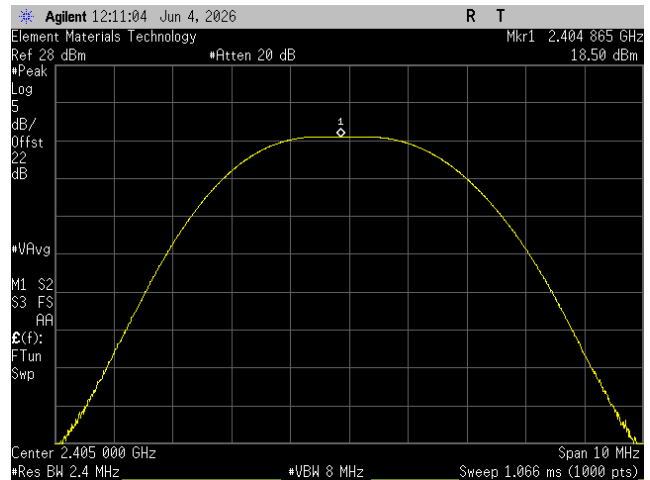


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

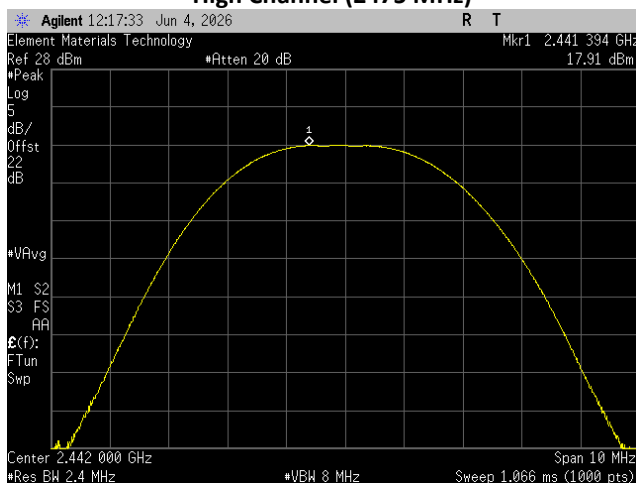
EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



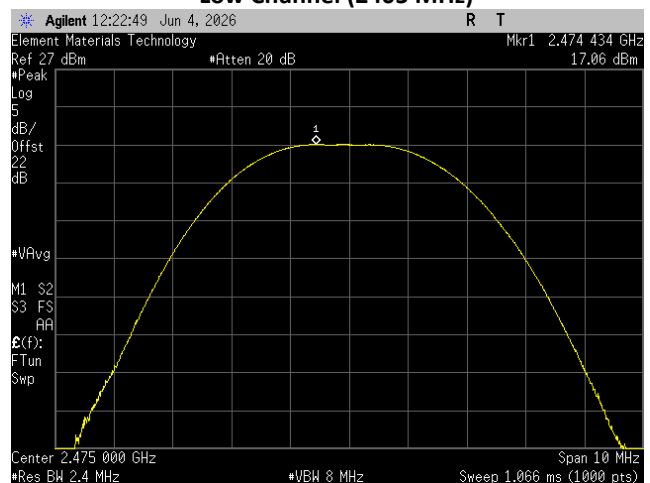
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

POWER SPECTRAL DENSITY

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 maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	E8257D	TGX	2025-07-03	2026-07-03
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

POWER SPECTRAL DENSITY

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-08-11
Customer:	MSA Innovation, LLC	Temperature:	21.4°C
Attendees:	Dustin Morris	Relative Humidity:	41%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

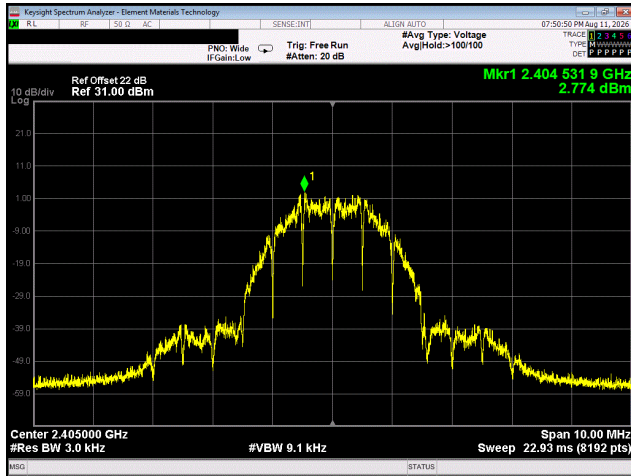


Tested By

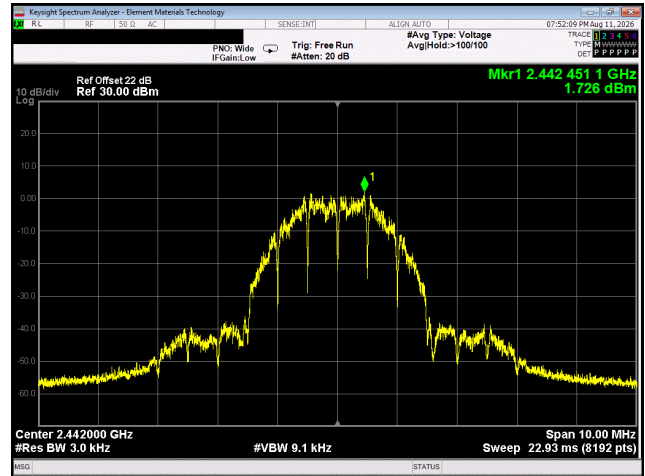
TEST RESULTS

		Value dBm/3kHz	Limit ≤ (dBm/3kHz)	Results
Antenna 1				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	2.774	8	Pass
	Mid Channel (2442 MHz)	1.726	8	Pass
	High Channel (2475 MHz)	0.182	8	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	3.124	8	Pass
	Mid Channel (2442 MHz)	2.243	8	Pass
	High Channel (2475 MHz)	1.314	8	Pass
Antenna 2				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	2.278	8	Pass
	Mid Channel (2442 MHz)	2.623	8	Pass
	High Channel (2475 MHz)	1.352	8	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	3.04	8	Pass
	Mid Channel (2442 MHz)	1.318	8	Pass
	High Channel (2475 MHz)	1.399	8	Pass

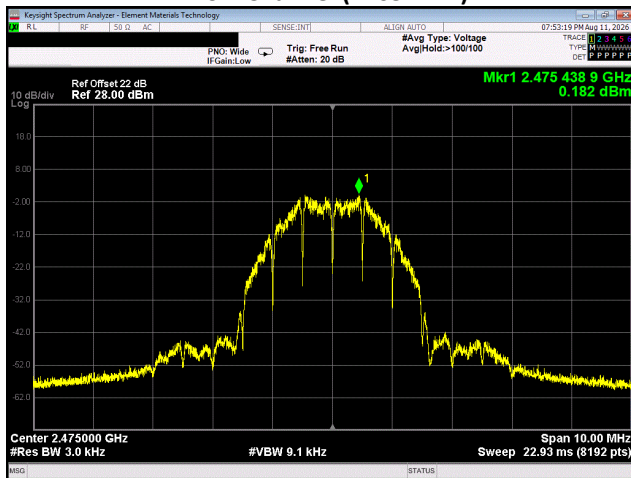
POWER SPECTRAL DENSITY



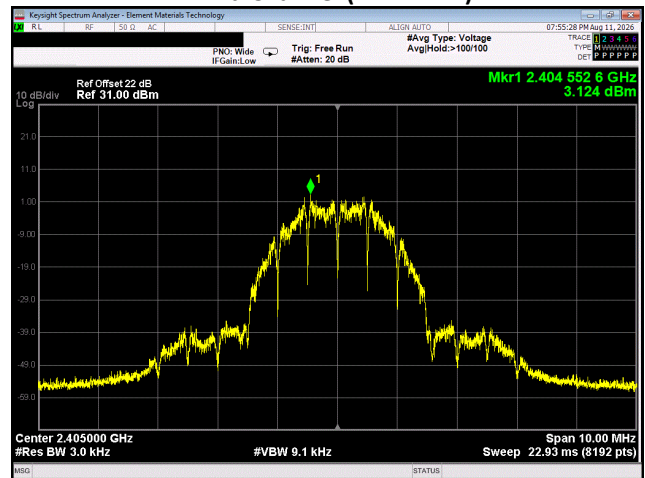
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

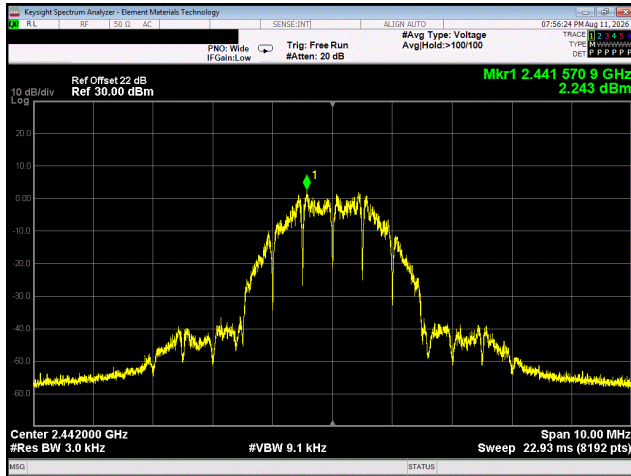


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

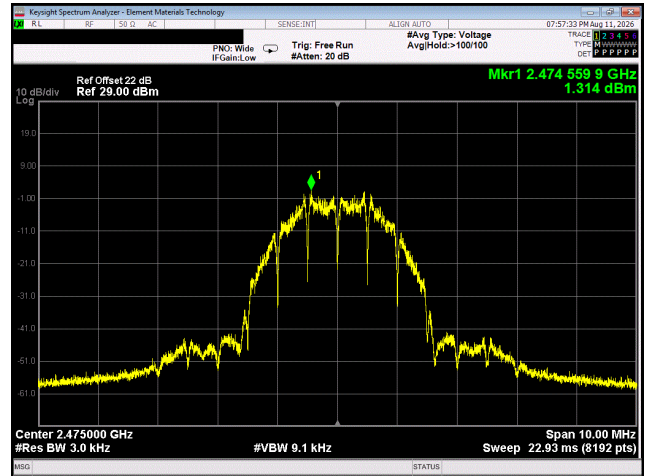


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

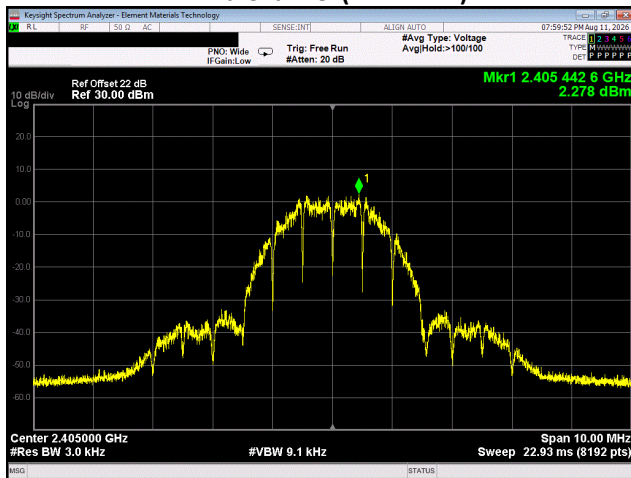
POWER SPECTRAL DENSITY



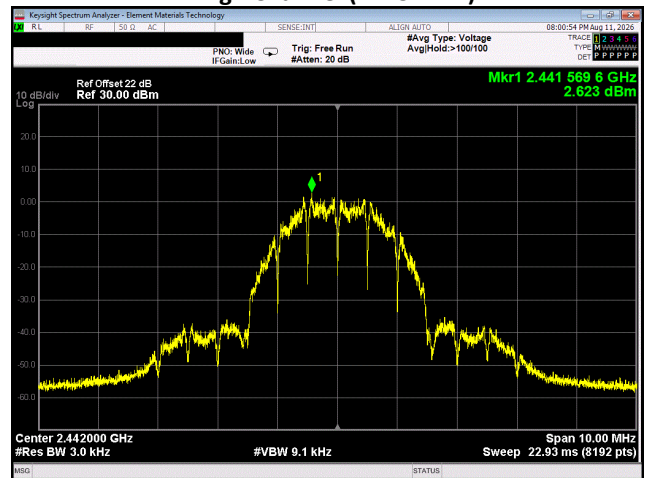
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

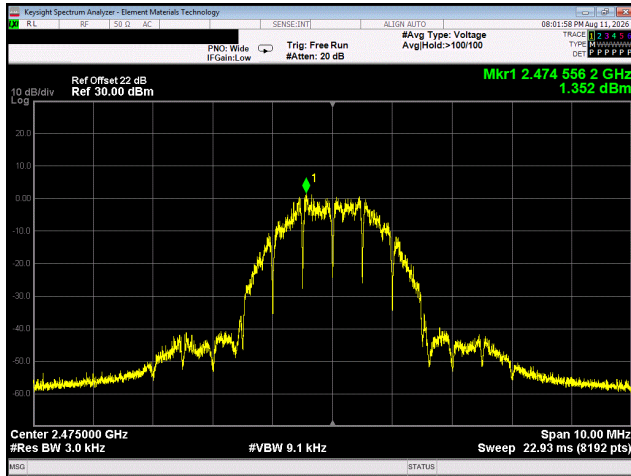


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

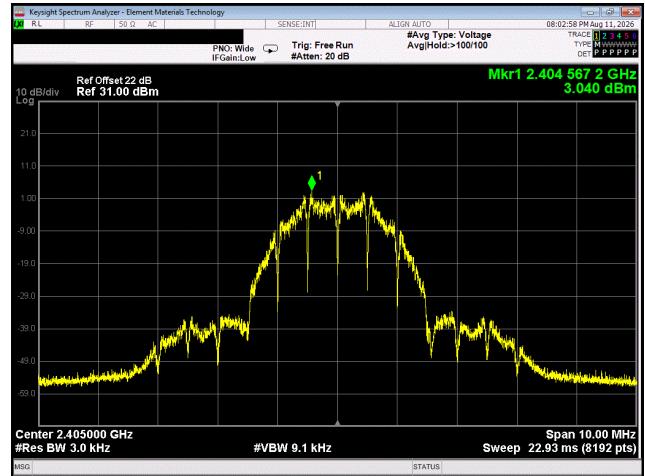


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

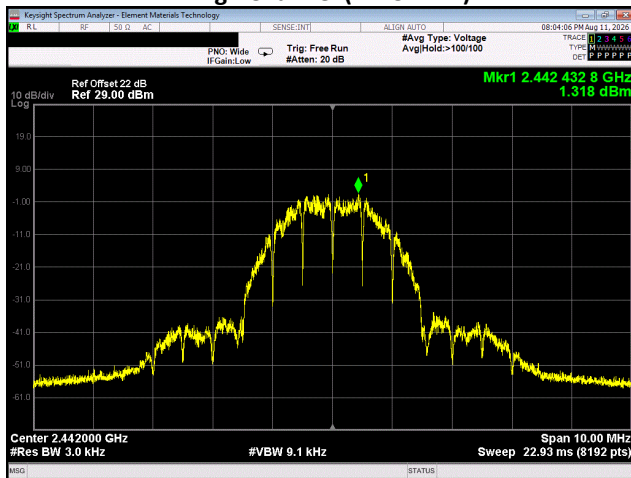
POWER SPECTRAL DENSITY



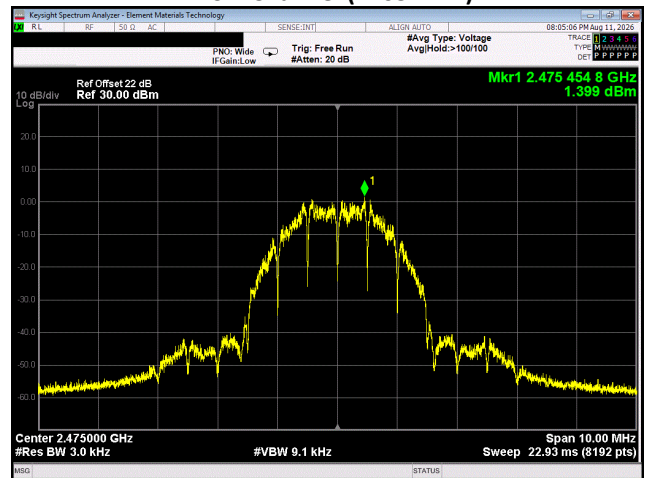
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

BAND EDGE COMPLIANCE

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 spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	E8257D	TGX	2025-07-03	2026-07-03
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

BAND EDGE COMPLIANCE



EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-06-04
Customer:	MSA Innovation, LLC	Temperature:	21.5°C
Attendees:	Dustin Morris	Relative Humidity:	41.1%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

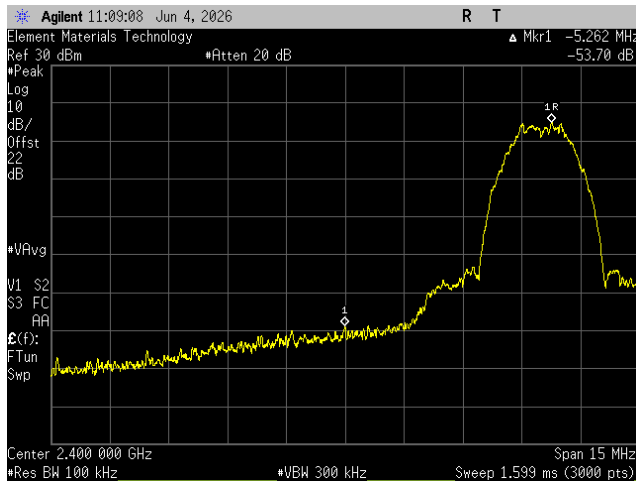
Pass

Tested By

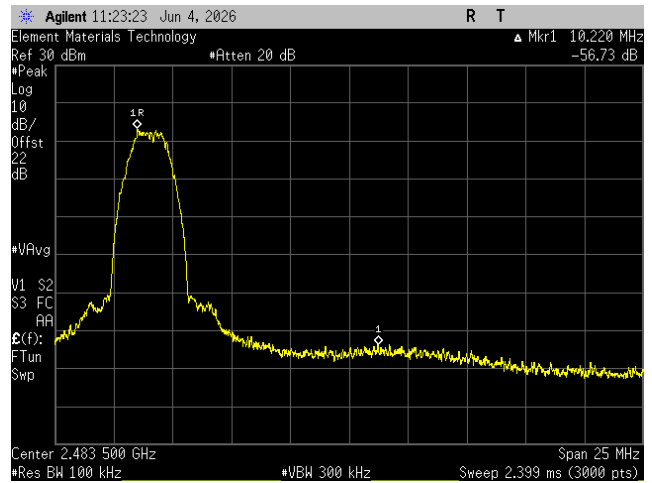
TEST RESULTS

		Value (dBc)	Limit ≤ (dBc)	Result
Antenna 1				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	-53.7	-20	Pass
	High Channel (2475 MHz)	-56.73	-20	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	-54.33	-20	Pass
	High Channel (2475 MHz)	-56.44	-20	Pass
Antenna 2				
QPSK-2000-Leg-250				
	Low Channel (2405 MHz)	-53.62	-20	Pass
	High Channel (2475 MHz)	-57.28	-20	Pass
QPSK-2000-Leg-1000				
	Low Channel (2405 MHz)	-54.26	-20	Pass
	High Channel (2475 MHz)	-56.17	-20	Pass

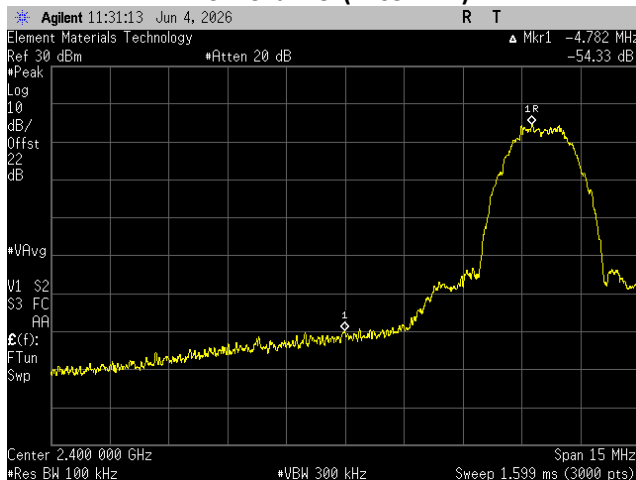
BAND EDGE COMPLIANCE



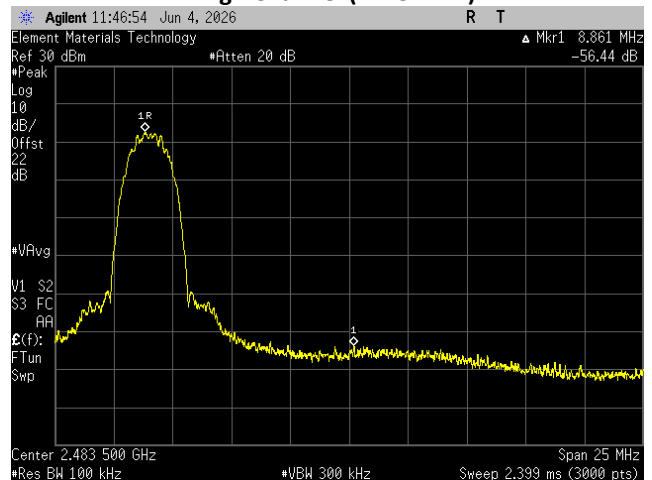
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

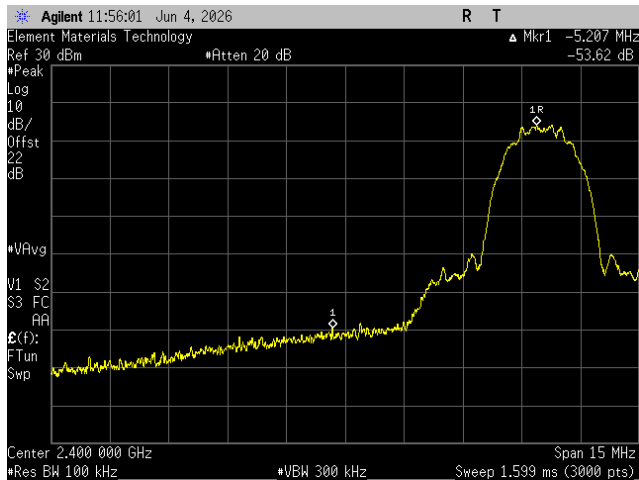


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

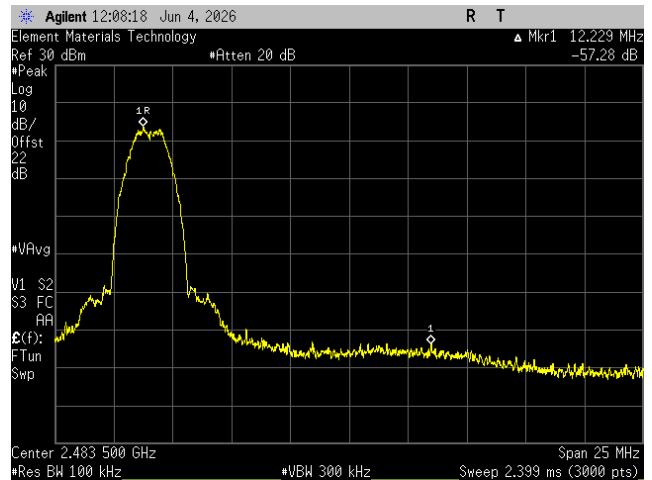


Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

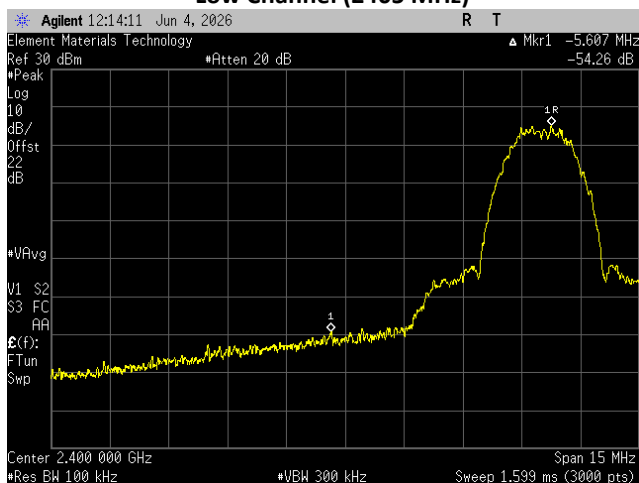
BAND EDGE COMPLIANCE



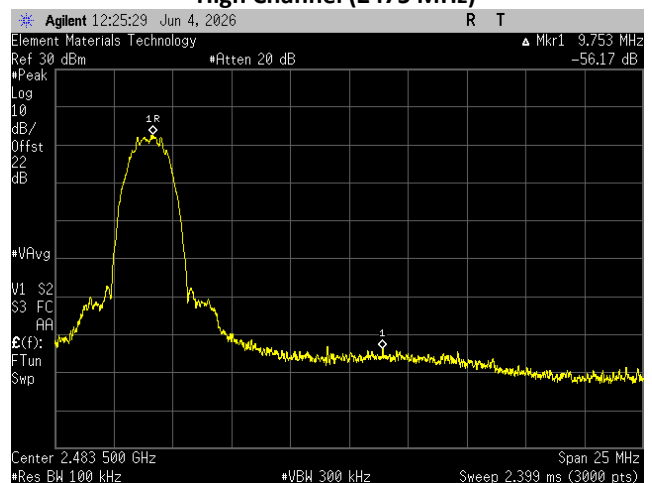
Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

SPURIOUS CONDUCTED EMISSIONS

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 spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

The reference level offset for the fundamental screen capture was based on a measured value of the loss between the spectrum analyzer and the EUT which was verified at the time of test. The remaining screen capture(s) use an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Fundamental Offset = Ref Lvl Offset showing measured composite factor of all losses

Remaining Screen capture(s) Offset = "Internal" cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFE	2026-03-06	2027-03-06
Generator - Signal	Agilent	E8257D	TGX	2025-07-03	2026-07-03
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	2026-04-02	2027-04-02
Block - DC	Centric RF	C0140	ANN	2026-03-10	2027-03-10
Attenuator	S.M. Electronics	SA26B-20	AWV	2026-04-02	2027-04-02

SPURIOUS CONDUCTED EMISSIONS



EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 4	Date:	2026-06-04
Customer:	MSA Innovation, LLC	Temperature:	21.5°C
Attendees:	Dustin Morris	Relative Humidity:	41.1%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-4

COMMENTS

Reference level offset includes measurement cable, 20 dB attenuator and DC block.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

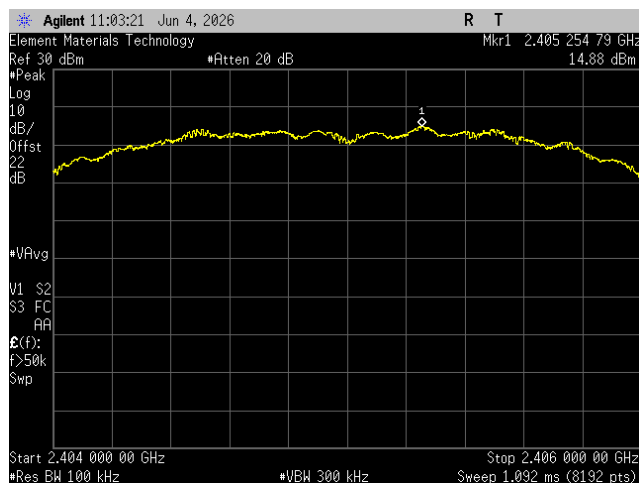
TEST RESULTS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Antenna 1					
QPSK-2000-Leg-250					
Low Channel (2405 MHz)	Fundamental	2405.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9994.1	-60.5	-20	Pass
	12.5 GHz - 25 GHz	24446	-55.95	-20	Pass
Mid Channel (2442 MHz)	Fundamental	2442.26	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9904.3	-59.02	-20	Pass
	12.5 GHz - 25 GHz	24987.8	-55.22	-20	Pass
High Channel (2475 MHz)	Fundamental	2475.26	N/A	N/A	N/A
	30 MHz - 12.5 GHz	7479.1	-59.01	-20	Pass
	12.5 GHz - 25 GHz	24456.7	-54.85	-20	Pass
QPSK-2000-Leg-1000					
Low Channel (2405 MHz)	Fundamental	2404.74	N/A	N/A	N/A
	30 MHz - 12.5 GHz	10083.9	-60	-20	Pass
	12.5 GHz - 25 GHz	24838.2	-55.41	-20	Pass
Mid Channel (2442 MHz)	Fundamental	2441.84	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9991.1	-58.26	-20	Pass
	12.5 GHz - 25 GHz	24476.6	-53.52	-20	Pass
High Channel (2475 MHz)	Fundamental	2474.83	N/A	N/A	N/A
	30 MHz - 12.5 GHz	7713.6	-58.3	-20	Pass
	12.5 GHz - 25 GHz	23533.5	-53.59	-20	Pass
Antenna 2					
QPSK-2000-Leg-250					
Low Channel (2405 MHz)	Fundamental	2404.85	N/A	N/A	N/A
	30 MHz - 12.5 GHz	7657.2	-59.17	-20	Pass
	12.5 GHz - 25 GHz	24508.6	-55.16	-20	Pass

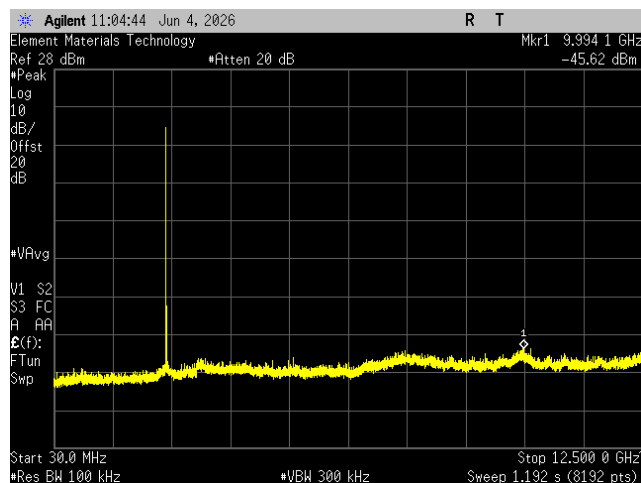
SPURIOUS CONDUCTED EMISSIONS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Mid Channel (2442 MHz)	Fundamental	2441.74	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9896.7	-60.01	-20	Pass
	12.5 GHz - 25 GHz	24819.9	-55.42	-20	Pass
High Channel (2475 MHz)	Fundamental	2475.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12419.3	-59.69	-20	Pass
	12.5 GHz - 25 GHz	23850.9	-54.51	-20	Pass
QPSK-2000-Leg-1000					
Low Channel (2405 MHz)	Fundamental	2404.75	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12433	-60.49	-20	Pass
	12.5 GHz - 25 GHz	24548.3	-55.96	-20	Pass
Mid Channel (2442 MHz)	Fundamental	2441.84	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9837.3	-58.57	-20	Pass
	12.5 GHz - 25 GHz	24156.1	-54.44	-20	Pass
High Channel (2475 MHz)	Fundamental	2475.18	N/A	N/A	N/A
	30 MHz - 12.5 GHz	7352.8	-57.99	-20	Pass
	12.5 GHz - 25 GHz	23470.9	-53.84	-20	Pass

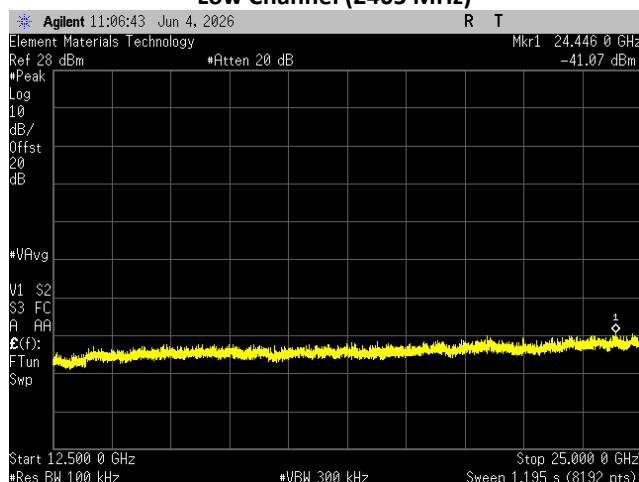
SPURIOUS CONDUCTED EMISSIONS



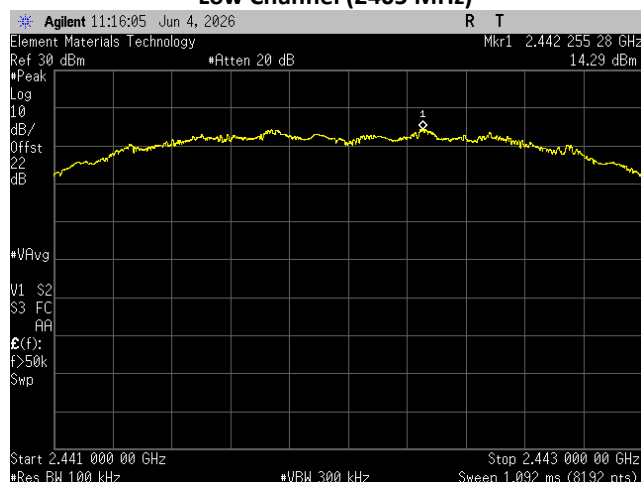
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)

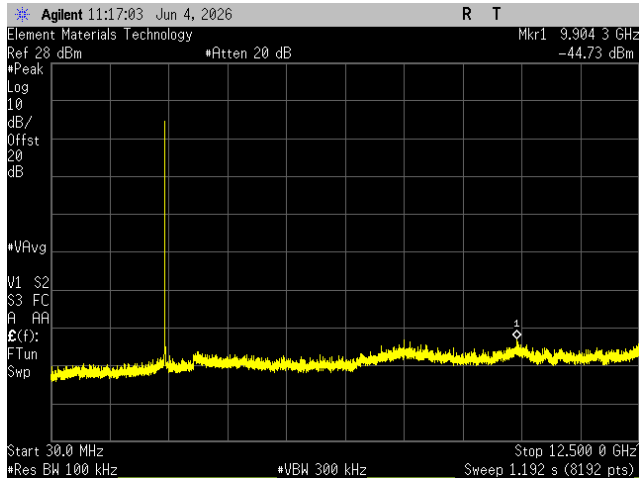


Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)

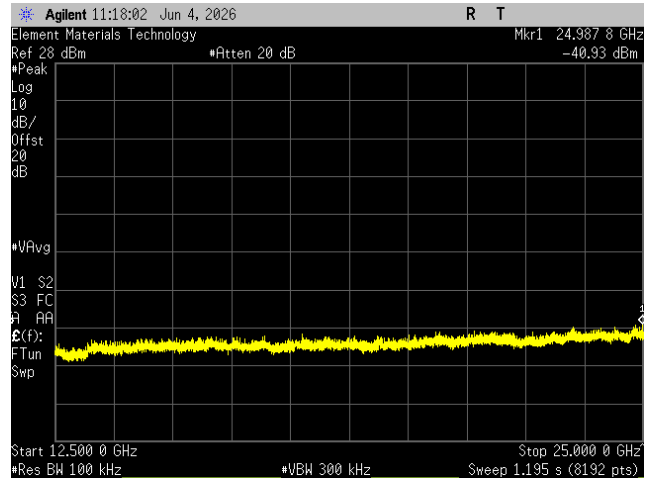


Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

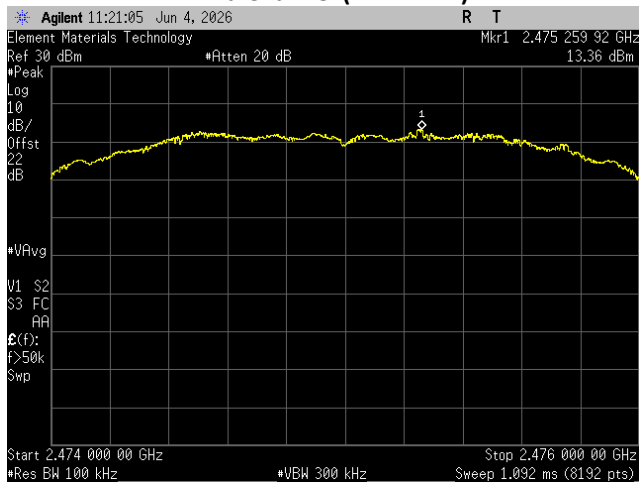
SPURIOUS CONDUCTED EMISSIONS



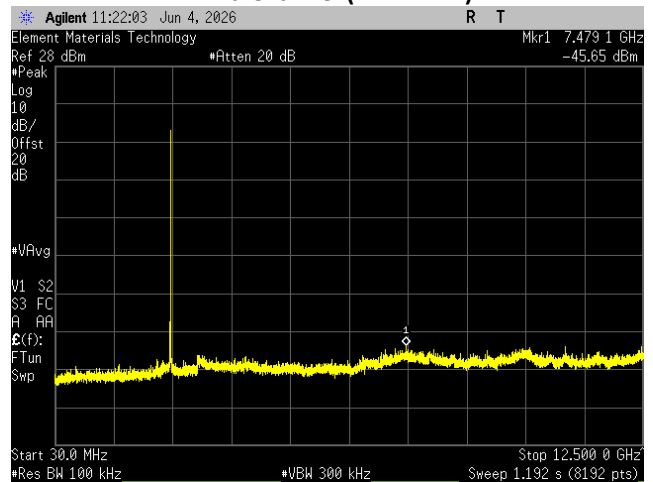
Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

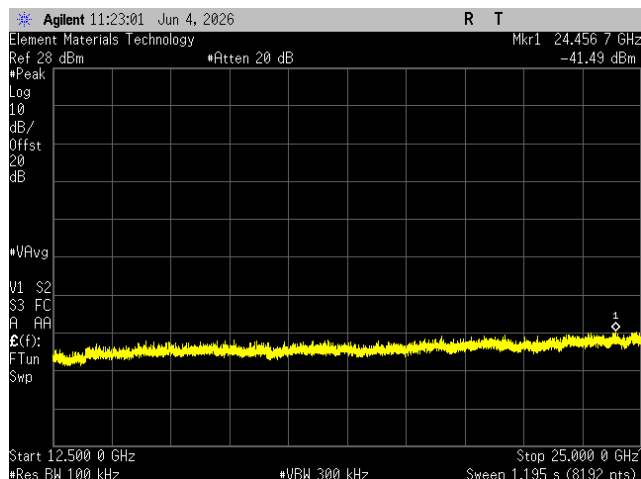


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

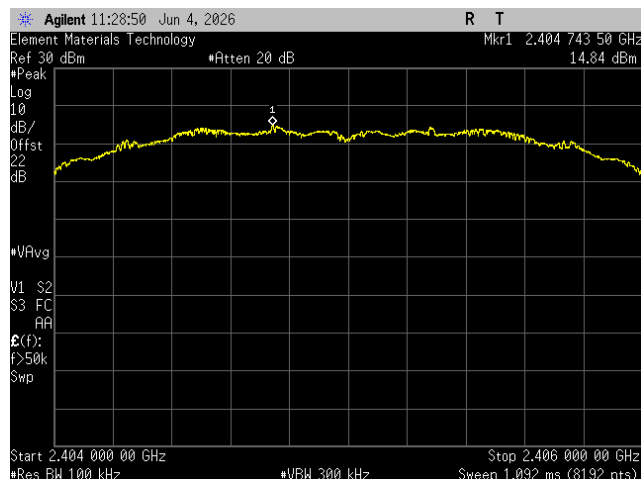


Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

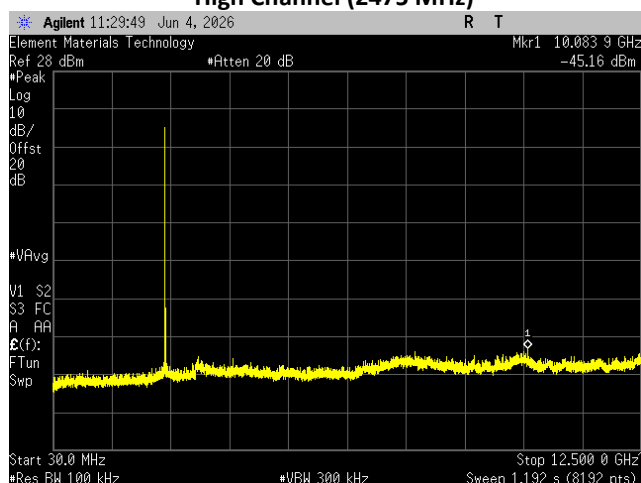
SPURIOUS CONDUCTED EMISSIONS



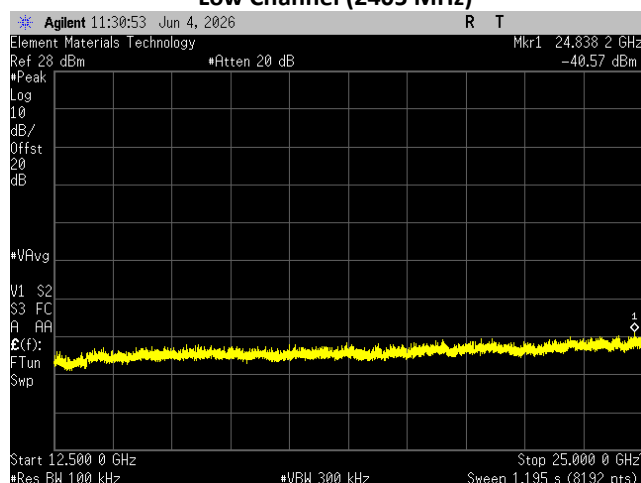
Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

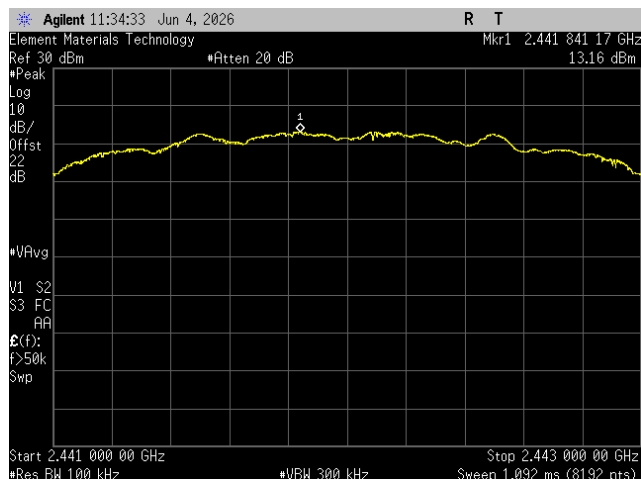


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

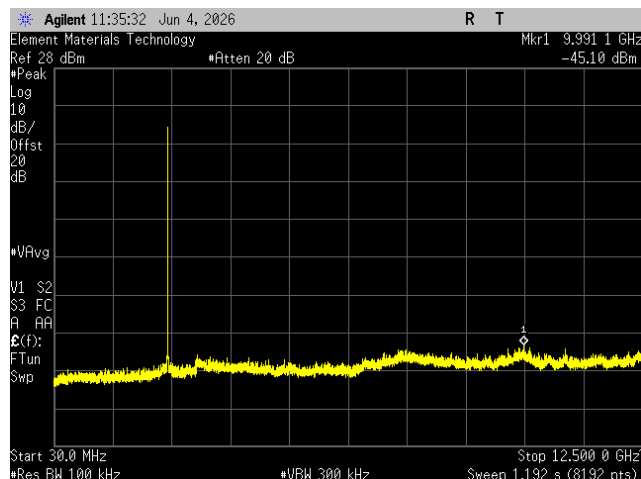


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

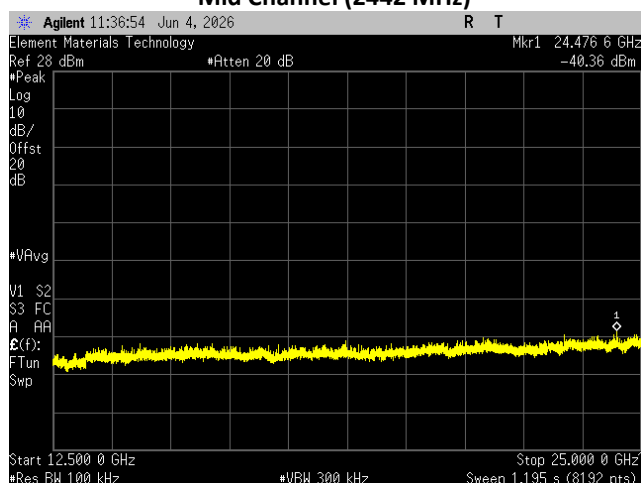
SPURIOUS CONDUCTED EMISSIONS



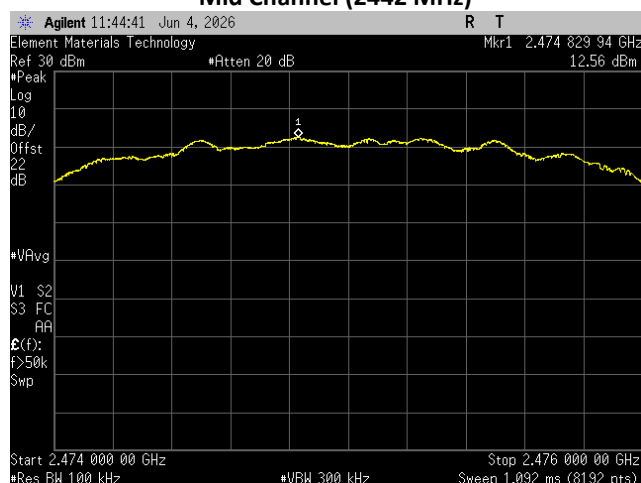
Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)

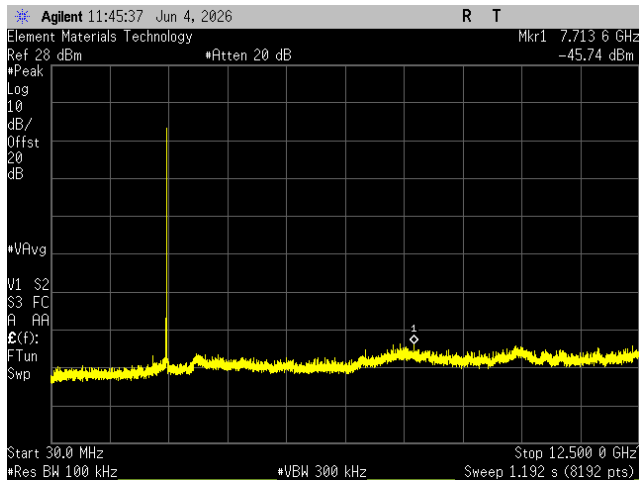


Antenna 1
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)

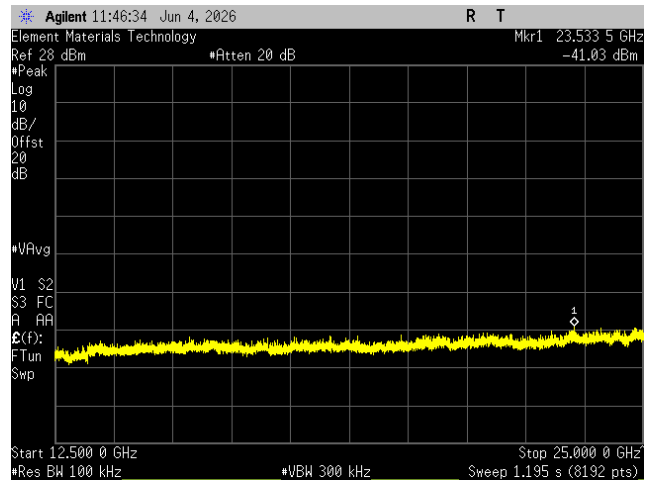


Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

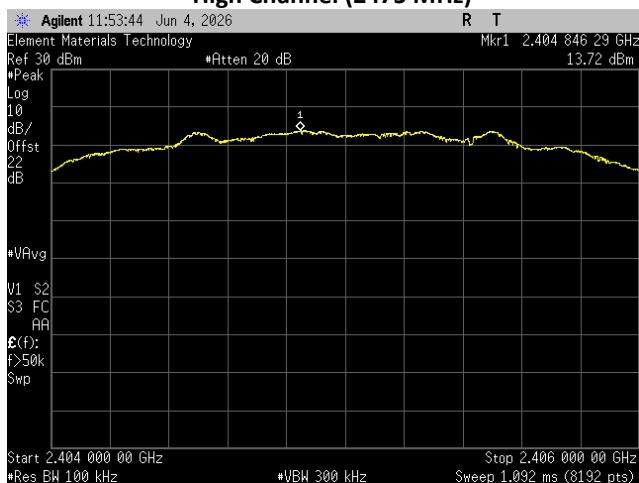
SPURIOUS CONDUCTED EMISSIONS



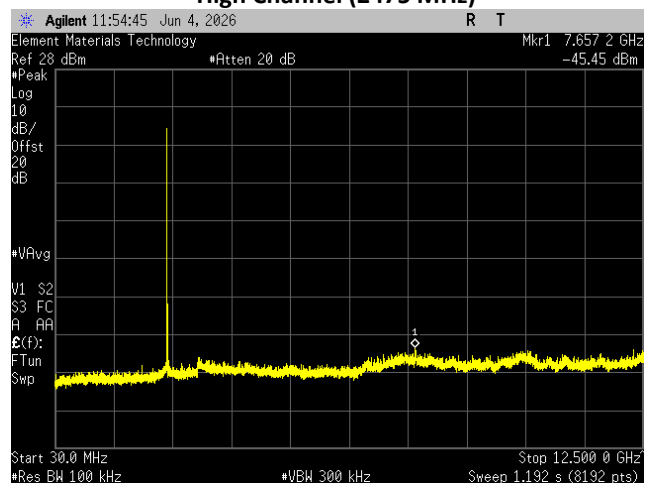
Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)



Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

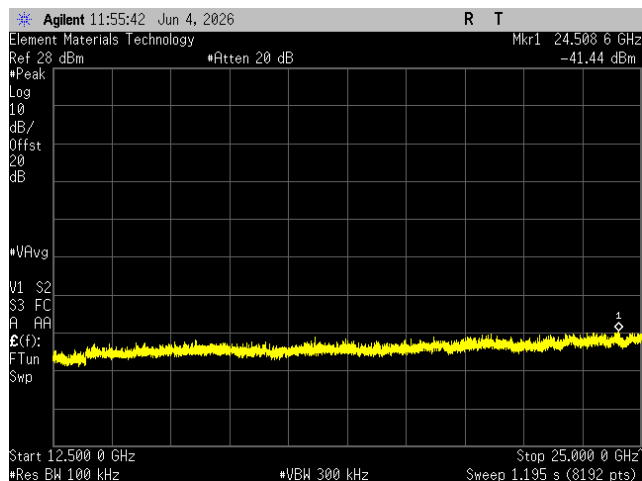


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

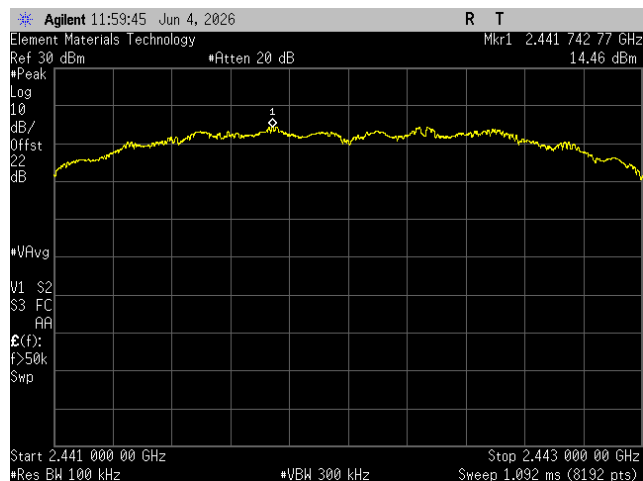


Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)

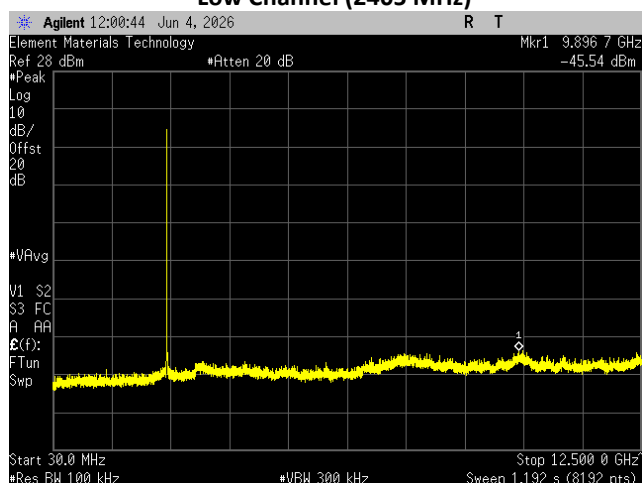
SPURIOUS CONDUCTED EMISSIONS



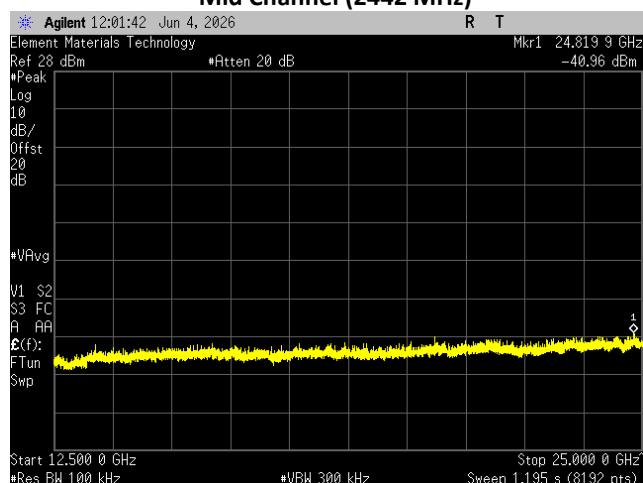
Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

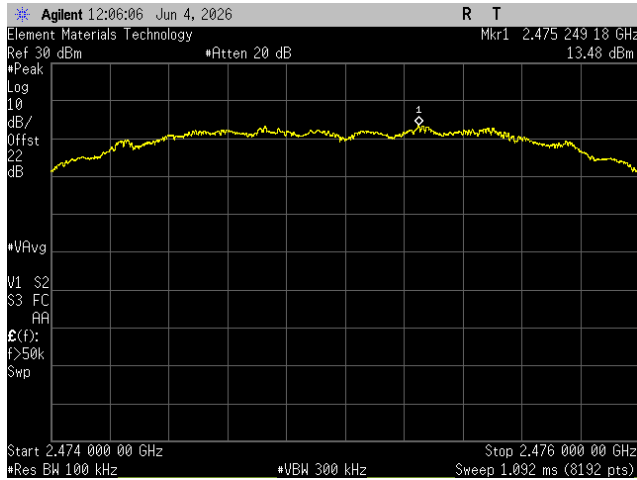


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

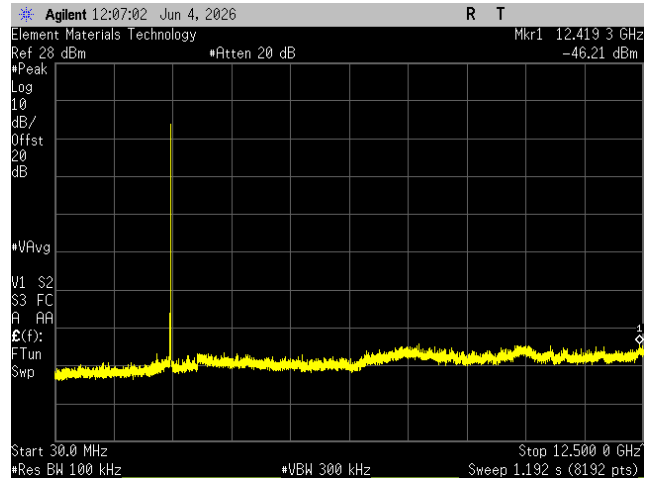


Antenna 2
QPSK-2000-Leg-250
Mid Channel (2442 MHz)

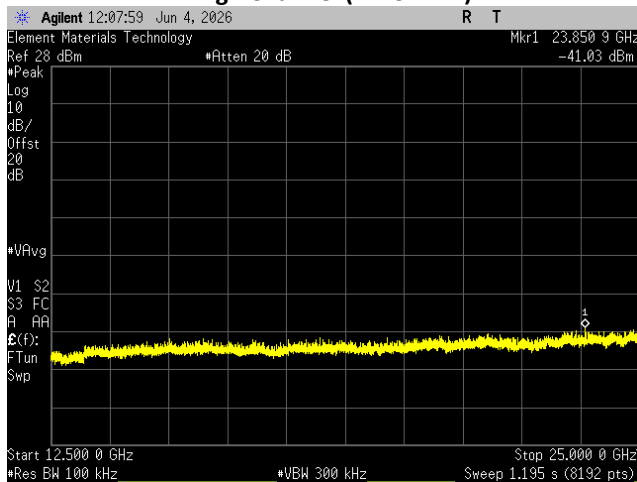
SPURIOUS CONDUCTED EMISSIONS



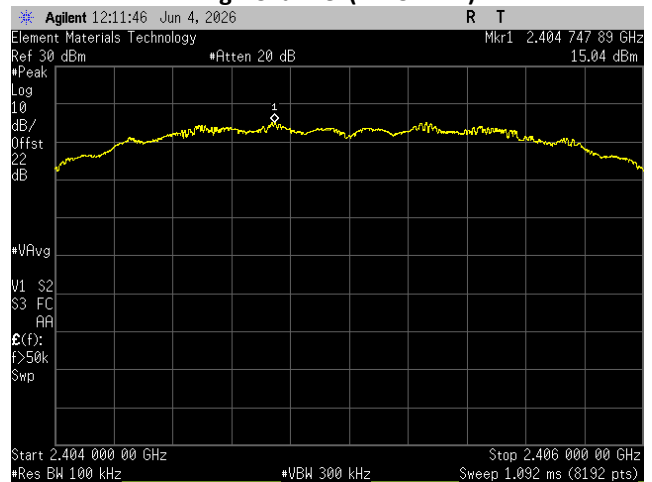
Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)

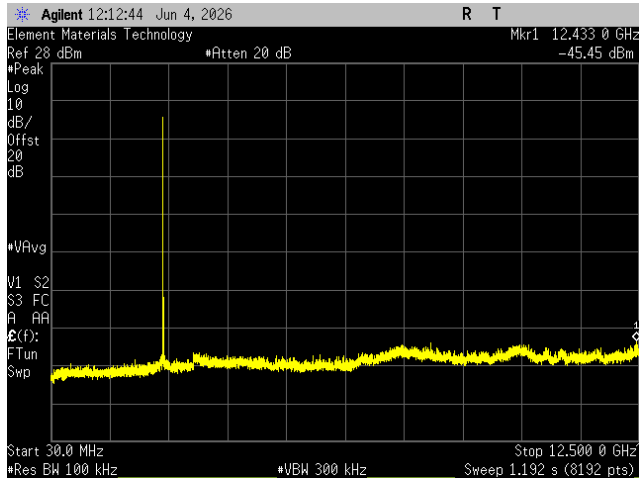


Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)

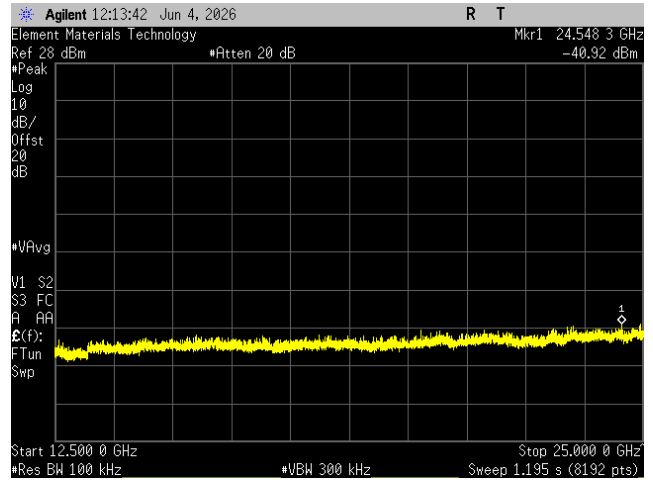


Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

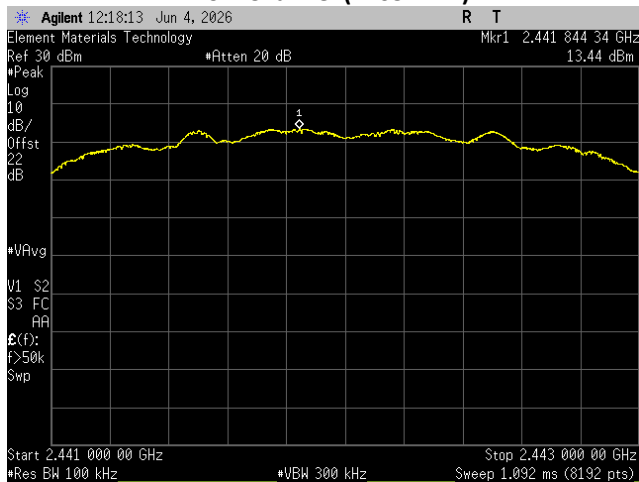
SPURIOUS CONDUCTED EMISSIONS



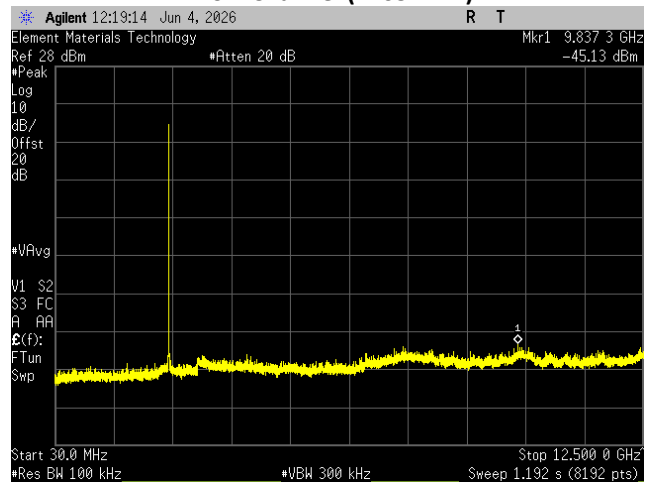
Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

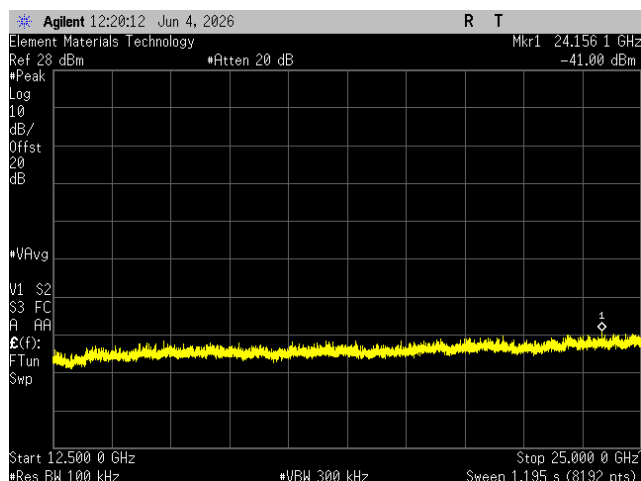


Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)

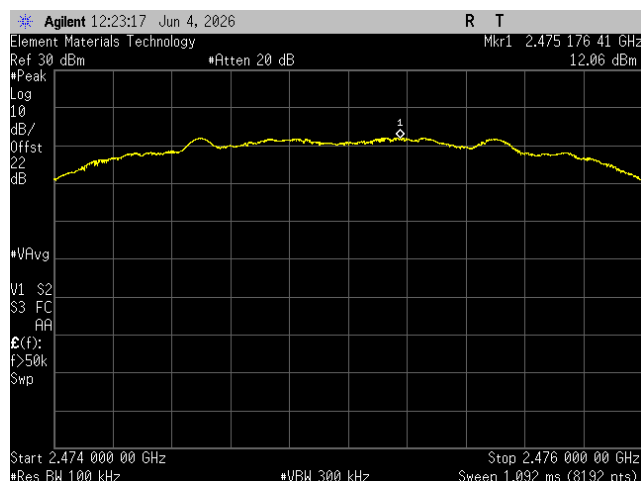


Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)

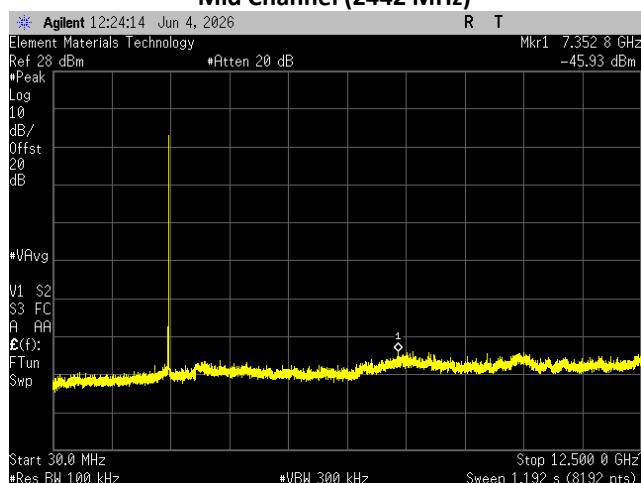
SPURIOUS CONDUCTED EMISSIONS



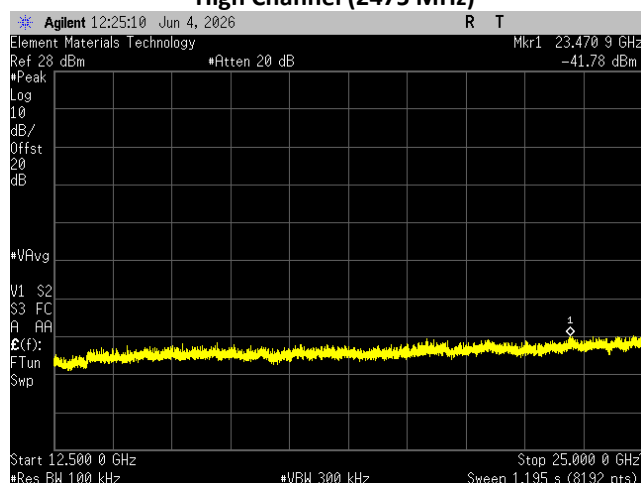
Antenna 2
QPSK-2000-Leg-1000
Mid Channel (2442 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

RADIATED BAND EDGE EMISSIONS – TELEMETRY RADIO INCLUDED



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 in a radiated configuration of the fundamental with the carrier fully maximized for its highest radiated power.

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

The emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and attenuation were used (if needed) for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

PK = Peak Detector
AV = RMS Detector

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2026-03-25	2028-03-25
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2025-10-23	2026-10-23
Cable	N/A	Double Ridge Horn Cables	EVB	2025-10-23	2026-10-23
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2026-02-26	2027-02-26

RADIATED BAND EDGE EMISSIONS – TELEMETRY RADIO INCLUDED



EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 3	Date:	2026-06-03
Customer:	MSA Innovation, LLC	Temperature:	21.8°C
Attendees:	Dustin Morris	Relative Humidity:	40.4%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-5

COMMENTS

All combinations of receive antenna polarity and EUT orientation investigated. Worst case combination shown.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

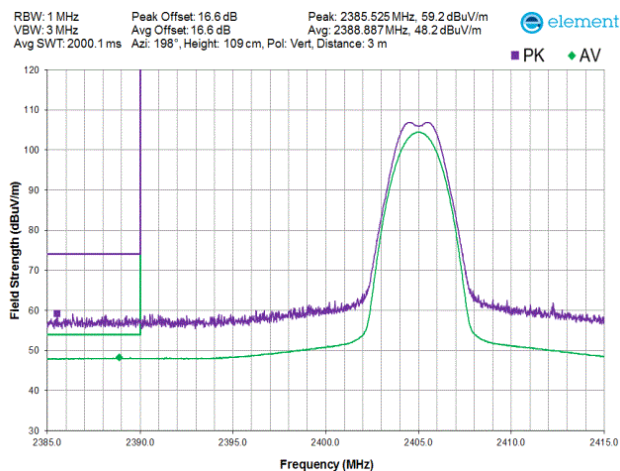
Pass

Tested By

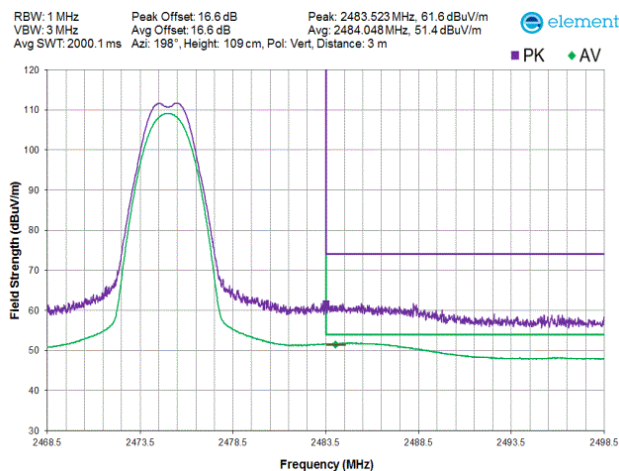
TEST RESULTS

		Frequency (MHz)	PK (dBuV/m) AV (dBuV/m)	PK Lim (dBuV/m) AV Lim (dBuV/m)	Worst Margin (dB)	Pol. (H/V)	EUT Orientation	Results
Antenna 1								
QPSK-2000-Leg-250								
Low Channel (2405 MHz)	2385.525	59.2	74.0	-5.8	V	Vertical	Pass	
	2388.887	48.2	54.0					
High Channel (2475 MHz)	2483.523	61.6	74.0	-2.6	V	Vertical	Pass	
	2484.048	51.4	54.0					
QPSK-2000-Leg-1000								
Low Channel (2405 MHz)	2385.795	58.7	74.0	-5.7	V	Vertical	Pass	
	2388.092	48.3	54.0					
High Channel (2475 MHz)	2485.849	61.0	74.0	-3.9	V	Vertical	Pass	
	2484.663	50.1	54.0					
Antenna 2								
QPSK-2000-Leg-250								
Low Channel (2405 MHz)	2387.011	59.6	74.0	-5.3	V	Vertical	Pass	
	2388.872	48.7	54.0					
High Channel (2475 MHz)	2485.083	62.2	74.0	-2.4	V	Vertical	Pass	
	2485.068	51.6	54.0					
QPSK-2000-Leg-1000								
Low Channel (2405 MHz)	2387.956	60.0	74.0	-5.3	V	Vertical	Pass	
	2388.227	48.7	54.0					
High Channel (2475 MHz)	2484.228	59.8	74.0	-5.0	V	Vertical	Pass	
	2485.218	49.0	54.0					

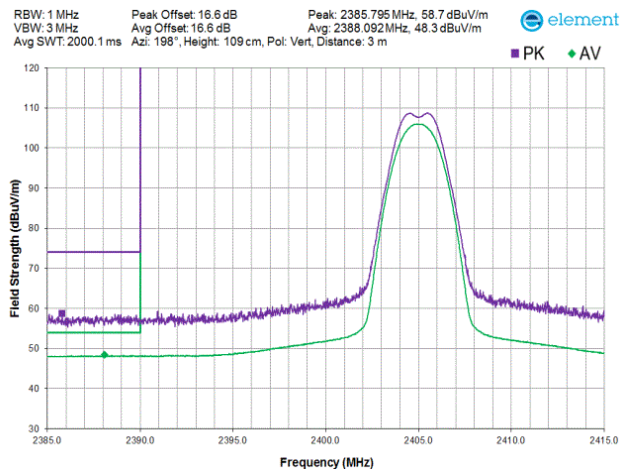
RADIATED BAND EDGE EMISSIONS – TELEMETRY RADIO INCLUDED



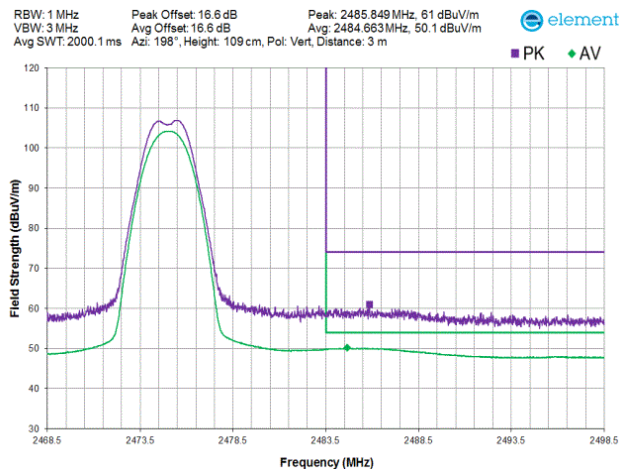
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

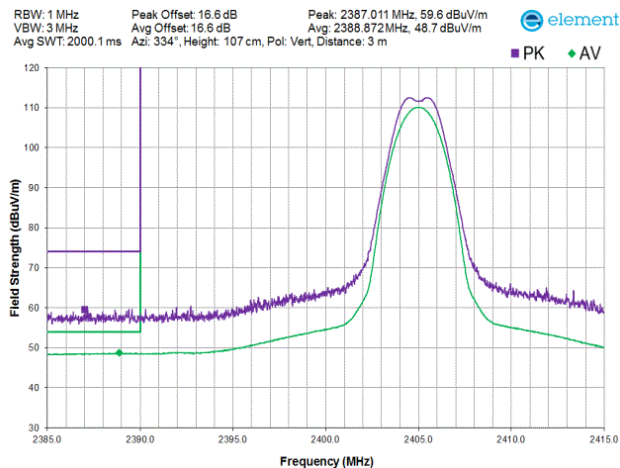


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

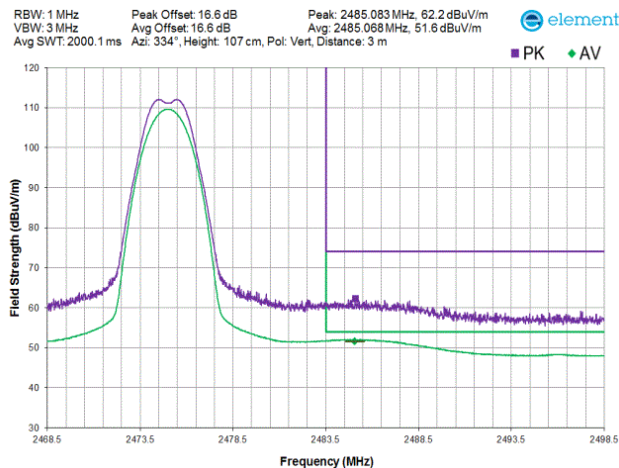


Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

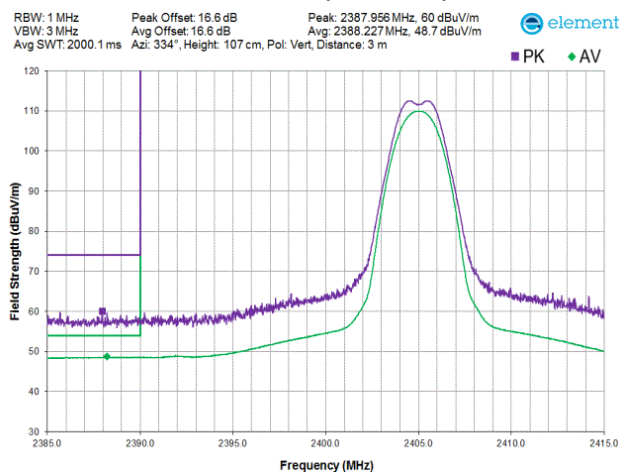
RADIATED BAND EDGE EMISSIONS – TELEMETRY RADIO INCLUDED



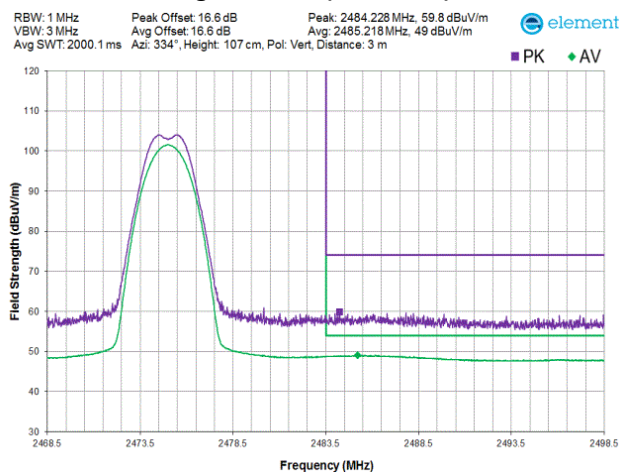
Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

RADIATED BAND EDGE EMISSIONS – NO TELEMETRY RADIO



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 in a radiated configuration of the fundamental with the carrier fully maximized for its highest radiated power.

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

The emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and attenuation were used (if needed) for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

PK = Peak Detector
AV = RMS Detector

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2026-03-25	2028-03-25
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2025-10-23	2026-10-23
Cable	N/A	Double Ridge Horn Cables	EVB	2025-10-23	2026-10-23
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2026-02-26	2027-02-26

RADIATED BAND EDGE EMISSIONS – NO TELEMETRY RADIO



EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 2	Date:	2026-06-03
Customer:	MSA Innovation, LLC	Temperature:	21.6°C
Attendees:	Dustin Morris	Relative Humidity:	40.8%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mbar
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-3

COMMENTS

Worst case Receive polarity and EUT orientation determined on Unit 3.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

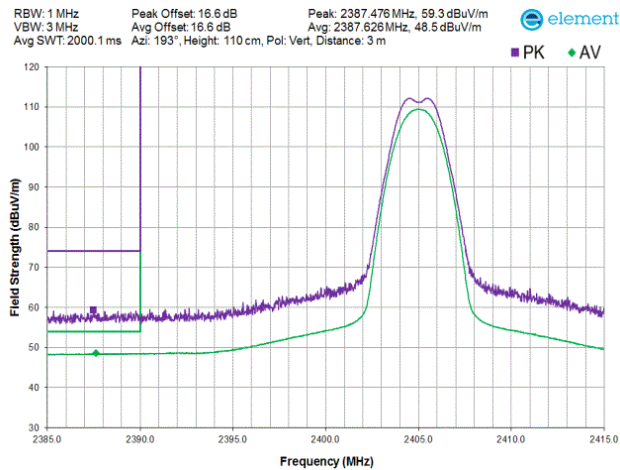
Pass

Tested By

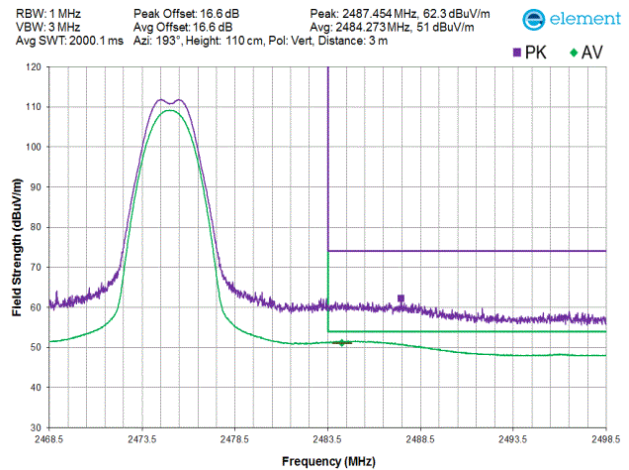
TEST RESULTS

		Frequency (MHz)	PK (dBuV/m) AV (dBuV/m)	PK Lim (dBuV/m) AV Lim (dBuV/m)	Worst Margin (dB)	Pol. (H/V)	EUT Orientation	Results
Antenna 1								
QPSK-2000-Leg-250								
Low Channel (2405 MHz)	2387.476	59.3	74.0	-5.5	V	Vertical	Pass	
	2387.626	48.5	54.0					
High Channel (2475 MHz)	2487.454	62.3	74.0	-3.0	V	Vertical	Pass	
	2484.273	51.0	54.0					
QPSK-2000-Leg-1000								
Low Channel (2405 MHz)	2386.186	59.2	74.0	-5.7	V	Vertical	Pass	
	2387.581	48.3	54.0					
High Channel (2475 MHz)	2485.218	61.7	74.0	-3.4	V	Vertical	Pass	
	2484.753	50.6	54.0					
Antenna 2								
QPSK-2000-Leg-250								
Low Channel (2405 MHz)	2386.021	58.8	74.0	-6.0	V	Vertical	Pass	
	2385.270	48.0	54.0					
High Channel (2475 MHz)	2485.939	60.1	74.0	-4.4	V	Vertical	Pass	
	2485.188	49.6	54.0					
QPSK-2000-Leg-1000								
Low Channel (2405 MHz)	2389.082	59.0	74.0	-5.9	V	Vertical	Pass	
	2388.707	48.1	54.0					
High Channel (2475 MHz)	2486.959	60.5	74.0	-4.5	V	Vertical	Pass	
	2485.263	49.5	54.0					

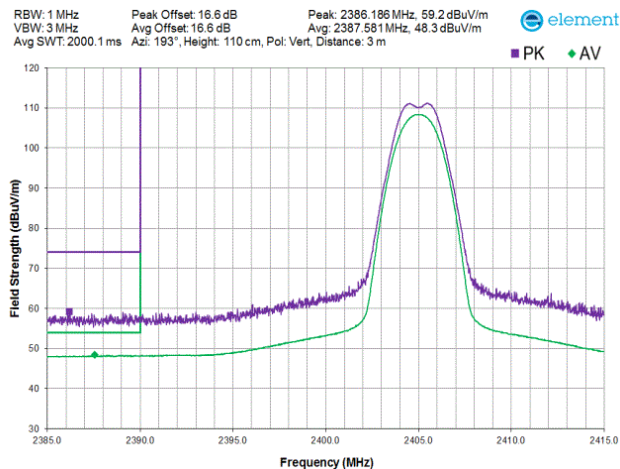
RADIATED BAND EDGE EMISSIONS – NO TELEMETRY RADIO



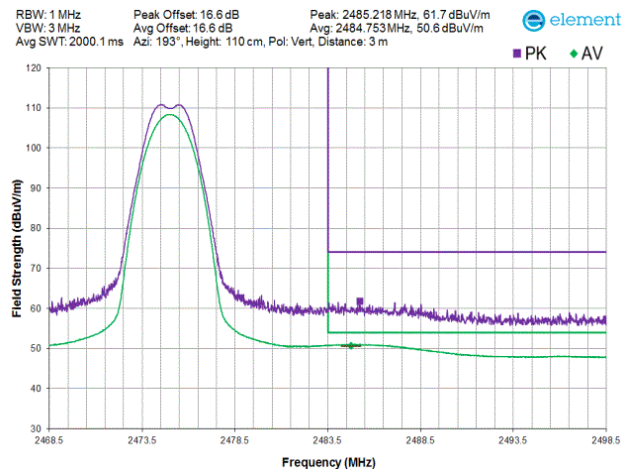
Antenna 1
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 1
QPSK-2000-Leg-250
High Channel (2475 MHz)

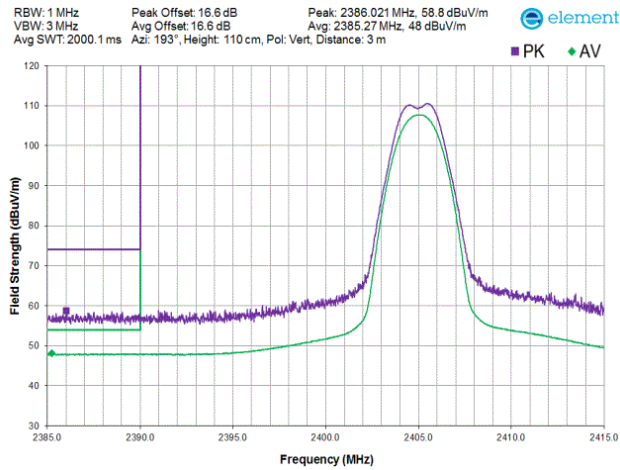


Antenna 1
QPSK-2000-Leg-1000
Low Channel (2405 MHz)

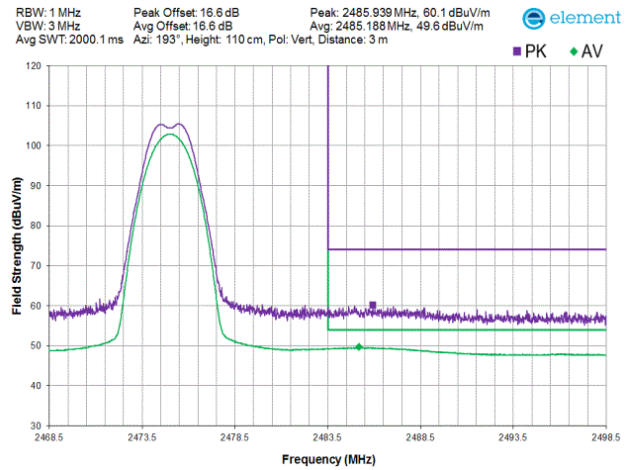


Antenna 1
QPSK-2000-Leg-1000
High Channel (2475 MHz)

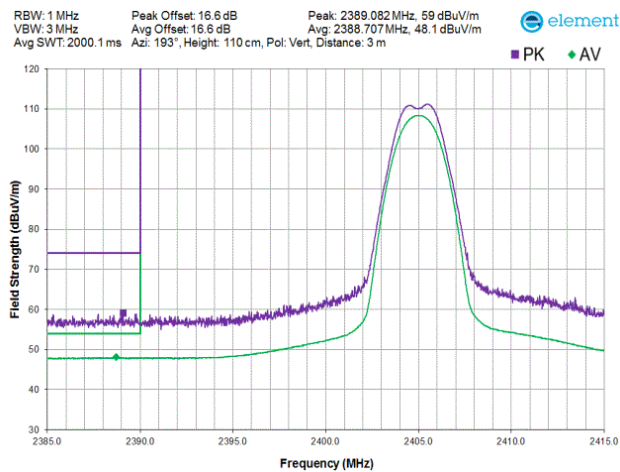
RADIATED BAND EDGE EMISSIONS – NO TELEMETRY RADIO



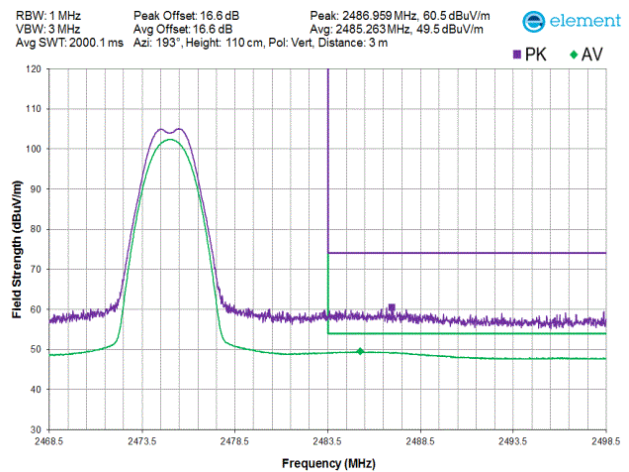
Antenna 2
QPSK-2000-Leg-250
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-250
High Channel (2475 MHz)



Antenna 2
QPSK-2000-Leg-1000
Low Channel (2405 MHz)



Antenna 2
QPSK-2000-Leg-1000
High Channel (2475 MHz)

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. A reference preview scan (pre-scan) is included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of $10 \cdot \log(1/dc)$.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Loop	EMCO	6502	AOA	2024-10-23	2026-10-23
Antenna - Biconilog	Teseq	CBL 6141B	AXR	2025-04-15	2027-04-15
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2026-03-25	2028-03-25
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	2026-01-19	2027-01-19
Antenna - Standard Gain	ETS Lindgren	3160-08	AHV	2026-01-19	2027-01-19
Antenna - Standard Gain	ETS Lindgren	3160-09	AIV	2026-01-19	2027-01-19
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2025-12-09	2026-12-09
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2025-10-23	2026-10-23
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2025-10-23	2026-10-23
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2025-10-23	2026-10-23
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	2026-04-03	2027-04-03
Cable	N/A	Bilog Cables	EVA	2025-10-24	2026-10-24
Cable	N/A	Double Ridge Horn Cables	EVB	2025-10-23	2026-10-23
Cable	None	Standard Gain Horn Cables	EVF	2025-10-23	2026-10-23
Cable	ESM Cable Corp.	TTBJ141-KMKM-72	EVY	2026-04-03	2027-04-03
Attenuator	Coaxicom	3910-20	AXZ	2025-10-23	2026-10-23
Filter - Low Pass	Micro-Tronics	LPM50004	LFD	2025-10-24	2026-10-24
Filter - High Pass	Micro-Tronics	HPM50111	HFO	2025-10-24	2026-10-24
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2026-02-26	2027-02-26

SPURIOUS RADIATED EMISSIONS

FREQUENCY RANGE INVESTIGATED

9 kHz TO 26 GHz

POWER INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

F3EN0262-3

F3EN0262-5

MODES INVESTIGATED

EUT operating mode and orientation are listed in the Comments column of the data table.

SPURIOUS RADIATED EMISSIONS

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 3	Date:	2026-06-02
Customer:	MSA Innovation, LLC	Temperature:	21.9°C
Attendees:	Dustin Morris	Relative Humidity:	39.2%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mb
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-5

TEST PARAMETERS

Run #:	38	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

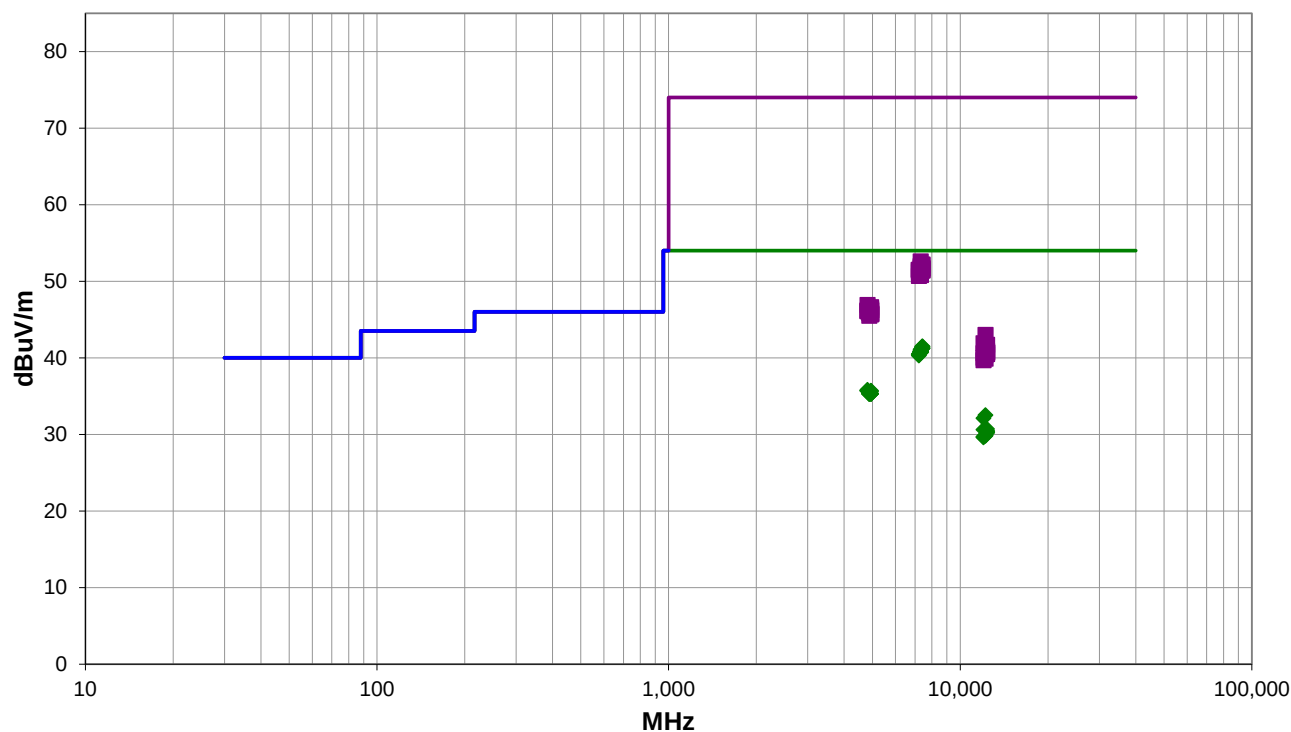
None

EUT OPERATING MODES

EUT operating mode and orientation are listed in the Comments column of the data table.

DEVIATIONS FROM TEST STANDARD

None



Run #: 38

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #38

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7425.158	28.1	13.4	1.5	258.0	3.0	0.0	Horz	AV	0.0	41.5	54.0	-12.5	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7423.350	28.0	13.4	1.5	191.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7426.050	28.0	13.4	1.5	345.0	3.0	0.0	Horz	AV	0.0	41.4	54.0	-12.6	Antenna 2; QPSK-2000 Leg 1000; High Channel (2475 MHz); EUT Vertical
7423.892	27.9	13.4	1.5	104.0	3.0	0.0	Horz	AV	0.0	41.3	54.0	-12.7	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7426.717	27.8	13.4	1.5	118.0	3.0	0.0	Horz	AV	0.0	41.2	54.0	-12.8	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7425.158	27.8	13.4	1.5	256.0	3.0	0.0	Vert	AV	0.0	41.2	54.0	-12.8	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7424.283	27.8	13.4	1.5	14.0	3.0	0.0	Vert	AV	0.0	41.2	54.0	-12.8	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7325.533	28.0	13.1	3.8	98.0	3.0	0.0	Horz	AV	0.0	41.1	54.0	-12.9	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7325.992	27.8	13.1	1.0	148.0	3.0	0.0	Horz	AV	0.0	40.9	54.0	-13.1	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7325.725	27.8	13.1	1.2	88.0	3.0	0.0	Vert	AV	0.0	40.9	54.0	-13.1	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7323.517	27.7	13.1	1.3	74.0	3.0	0.0	Vert	AV	0.0	40.8	54.0	-13.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7323.775	27.7	13.1	1.5	246.0	3.0	0.0	Horz	AV	0.0	40.8	54.0	-13.2	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7324.467	27.7	13.1	1.5	232.0	3.0	0.0	Vert	AV	0.0	40.8	54.0	-13.2	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7324.492	27.7	13.1	1.5	135.0	3.0	0.0	Horz	AV	0.0	40.8	54.0	-13.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7324.100	27.7	13.1	1.5	159.0	3.0	0.0	Horz	AV	0.0	40.8	54.0	-13.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7326.317	27.7	13.1	1.5	181.0	3.0	0.0	Vert	AV	0.0	40.8	54.0	-13.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7324.117	27.7	13.1	1.5	234.0	3.0	0.0	Vert	AV	0.0	40.8	54.0	-13.2	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7327.092	27.6	13.1	2.0	333.0	3.0	0.0	Vert	AV	0.0	40.7	54.0	-13.3	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7327.183	27.6	13.1	1.5	40.0	3.0	0.0	Horz	AV	0.0	40.7	54.0	-13.3	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7326.525	27.6	13.1	1.5	146.0	3.0	0.0	Horz	AV	0.0	40.7	54.0	-13.3	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4810.942	28.6	7.2	1.5	359.0	3.0	0.0	Horz	AV	0.0	35.8	54.0	-18.2	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4811.342	28.5	7.2	4.0	81.0	3.0	0.0	Vert	AV	0.0	35.7	54.0	-18.3	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4811.650	28.5	7.2	2.5	223.0	3.0	0.0	Horz	AV	0.0	35.7	54.0	-18.3	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4809.200	28.5	7.2	1.5	229.0	3.0	0.0	Vert	AV	0.0	35.7	54.0	-18.3	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4948.375	28.5	7.2	1.5	255.0	3.0	0.0	Horz	AV	0.0	35.7	54.0	-18.3	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4951.067	28.4	7.2	1.5	80.0	3.0	0.0	Vert	AV	0.0	35.6	54.0	-18.4	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4882.450	28.0	7.3	3.4	203.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4886.350	28.0	7.3	1.5	328.0	3.0	0.0	Vert	AV	0.0	35.3	54.0	-18.7	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4881.967	28.0	7.3	1.5	360.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4881.858	28.0	7.3	1.5	352.0	3.0	0.0	Vert	AV	0.0	35.3	54.0	-18.7	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4948.183	28.1	7.2	1.5	223.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4948.750	28.1	7.2	1.5	92.0	3.0	0.0	Vert	AV	0.0	35.3	54.0	-18.7	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4948.583	28.1	7.2	1.8	58.0	3.0	0.0	Horz	AV	0.0	35.3	54.0	-18.7	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4949.967	28.1	7.2	3.3	161.0	3.0	0.0	Vert	AV	0.0	35.3	54.0	-18.7	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7326.142	39.5	13.1	1.1	136.0	3.0	0.0	Horz	PK	0.0	52.6	74.0	-21.4	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12207.580	32.0	0.5	2.9	193.0	3.0	0.0	Horz	AV	0.0	32.5	54.0	-21.5	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7427.042	38.8	13.4	1.5	345.0	3.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	Antenna 2; QPSK-2000 Leg 1000; High Channel (2475 MHz); EUT Vertical
7426.342	38.7	13.4	1.5	191.0	3.0	0.0	Vert	PK	0.0	52.1	74.0	-21.9	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12027.420	31.8	0.3	3.9	214.0	3.0	0.0	Horz	AV	0.0	32.1	54.0	-21.9	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7325.492	38.9	13.1	1.3	74.0	3.0	0.0	Vert	PK	0.0	52.0	74.0	-22.0	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7324.833	38.7	13.1	1.5	232.0	3.0	0.0	Vert	PK	0.0	51.8	74.0	-22.2	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7423.342	38.3	13.4	1.5	118.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7425.608	38.3	13.4	1.5	258.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7324.417	38.5	13.1	3.8	98.0	3.0	0.0	Horz	PK	0.0	51.6	74.0	-22.4	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7423.783	38.2	13.4	1.5	256.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7326.925	38.4	13.1	1.5	135.0	3.0	0.0	Horz	PK	0.0	51.5	74.0	-22.5	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7325.750	38.4	13.1	1.5	181.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7324.292	38.3	13.1	2.0	333.0	3.0	0.0	Vert	PK	0.0	51.4	74.0	-22.6	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal
7324.608	38.3	13.1	1.5	40.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7422.858	38.0	13.4	1.5	104.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-22.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7425.075	38.0	13.4	1.5	14.0	3.0	0.0	Vert	PK	0.0	51.4	74.0	-22.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7324.025	38.2	13.1	1.2	88.0	3.0	0.0	Vert	PK	0.0	51.3	74.0	-22.7	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7326.717	38.2	13.1	1.5	246.0	3.0	0.0	Horz	PK	0.0	51.3	74.0	-22.7	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Horizontal

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7324.192	38.0	13.1	1.5	234.0	3.0	0.0	Vert	PK	0.0	51.1	74.0	-22.9	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
7324.208	37.9	13.1	1.5	146.0	3.0	0.0	Horz	PK	0.0	51.0	74.0	-23.0	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
7327.358	37.7	13.1	1.5	159.0	3.0	0.0	Horz	PK	0.0	50.8	74.0	-23.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT On Side
12373.130	29.5	1.2	1.5	55.0	3.0	0.0	Vert	AV	0.0	30.7	54.0	-23.3	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12027.390	30.3	0.3	1.5	232.0	3.0	0.0	Vert	AV	0.0	30.6	54.0	-23.4	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
12374.070	29.2	1.2	3.4	138.0	3.0	0.0	Vert	AV	0.0	30.4	54.0	-23.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12376.130	29.2	1.2	2.2	8.0	3.0	0.0	Horz	AV	0.0	30.4	54.0	-23.6	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12376.120	29.0	1.2	4.0	293.0	3.0	0.0	Horz	AV	0.0	30.2	54.0	-23.8	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12211.390	29.4	0.5	1.5	340.0	3.0	0.0	Vert	AV	0.0	29.9	54.0	-24.1	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12207.830	29.4	0.5	3.4	203.0	3.0	0.0	Vert	AV	0.0	29.9	54.0	-24.1	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12210.990	29.3	0.5	2.9	242.0	3.0	0.0	Horz	AV	0.0	29.8	54.0	-24.2	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12027.220	29.4	0.3	1.5	162.0	3.0	0.0	Horz	AV	0.0	29.7	54.0	-24.3	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
12026.130	29.3	0.3	2.5	167.0	3.0	0.0	Vert	AV	0.0	29.6	54.0	-24.4	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4812.292	39.7	7.2	4.0	81.0	3.0	0.0	Vert	PK	0.0	46.9	74.0	-27.1	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4949.500	39.4	7.2	1.5	255.0	3.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4883.508	39.2	7.3	1.5	360.0	3.0	0.0	Horz	PK	0.0	46.5	74.0	-27.5	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4949.792	39.2	7.2	3.3	161.0	3.0	0.0	Vert	PK	0.0	46.4	74.0	-27.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4808.967	39.0	7.2	2.5	223.0	3.0	0.0	Horz	PK	0.0	46.2	74.0	-27.8	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4951.542	39.0	7.2	1.5	80.0	3.0	0.0	Vert	PK	0.0	46.2	74.0	-27.8	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4808.967	38.9	7.2	1.5	359.0	3.0	0.0	Horz	PK	0.0	46.1	74.0	-27.9	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4811.683	38.9	7.2	1.5	229.0	3.0	0.0	Vert	PK	0.0	46.1	74.0	-27.9	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4882.267	38.6	7.3	1.5	352.0	3.0	0.0	Vert	PK	0.0	45.9	74.0	-28.1	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4883.708	38.5	7.3	3.4	203.0	3.0	0.0	Horz	PK	0.0	45.8	74.0	-28.2	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
4951.958	38.6	7.2	1.5	223.0	3.0	0.0	Horz	PK	0.0	45.8	74.0	-28.2	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4948.858	38.5	7.2	1.5	92.0	3.0	0.0	Vert	PK	0.0	45.7	74.0	-28.3	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4952.025	38.5	7.2	1.8	58.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
4882.858	38.2	7.3	1.5	328.0	3.0	0.0	Vert	PK	0.0	45.5	74.0	-28.5	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12207.520	42.5	0.5	2.9	193.0	3.0	0.0	Horz	PK	0.0	43.0	74.0	-31.0	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12027.360	41.6	0.3	3.9	214.0	3.0	0.0	Horz	PK	0.0	41.9	74.0	-32.1	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
12372.820	40.5	1.2	3.4	138.0	3.0	0.0	Vert	PK	0.0	41.7	74.0	-32.3	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12374.630	39.7	1.2	2.2	8.0	3.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12377.490	39.5	1.2	1.5	55.0	3.0	0.0	Vert	PK	0.0	40.7	74.0	-33.3	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12211.710	40.1	0.5	2.9	242.0	3.0	0.0	Horz	PK	0.0	40.6	74.0	-33.4	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12026.030	40.3	0.3	1.5	232.0	3.0	0.0	Vert	PK	0.0	40.6	74.0	-33.4	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
12373.980	39.3	1.2	4.0	293.0	3.0	0.0	Horz	PK	0.0	40.5	74.0	-33.5	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
12211.180	39.9	0.5	1.5	340.0	3.0	0.0	Vert	PK	0.0	40.4	74.0	-33.6	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12025.980	39.7	0.3	1.5	162.0	3.0	0.0	Horz	PK	0.0	40.0	74.0	-34.0	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
12211.230	39.4	0.5	3.4	203.0	3.0	0.0	Vert	PK	0.0	39.9	74.0	-34.1	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2442 MHz); EUT Vertical
12026.680	39.4	0.3	2.5	167.0	3.0	0.0	Vert	PK	0.0	39.7	74.0	-34.3	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7212.567	38.9	12.6	1.5	64.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-148.5	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7214.250	38.7	12.7	1.5	303.0	3.0	0.0	Horz	PK	0.0	51.4	74.0	-148.6	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7217.492	38.5	12.7	1.7	350.0	3.0	0.0	Horz	PK	0.0	51.2	200.0	-148.8	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7215.917	38.0	12.7	1.5	224.0	3.0	0.0	Vert	PK	0.0	50.7	200.0	-149.3	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7216.675	27.8	12.7	1.7	350.0	3.0	0.0	Horz	AV	0.0	40.5	200.0	-159.5	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7217.283	27.7	12.7	1.5	303.0	3.0	0.0	Horz	AV	0.0	40.4	54.0	-159.6	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7217.350	27.7	12.7	1.5	64.0	3.0	0.0	Vert	AV	0.0	40.4	54.0	-159.6	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7216.383	27.6	12.7	1.5	224.0	3.0	0.0	Vert	AV	0.0	40.3	200.0	-159.7	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	G1 SCBA Power Module Type 5	Work Order:	F3EN0262
Serial Number:	Unit 2	Date:	2026-06-03
Customer:	MSA Innovation, LLC	Temperature:	21.8°C
Attendees:	Dustin Morris	Relative Humidity:	40%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mb
Tested By:	Christopher Pinkham	Job Site:	EV01
Power:	Battery	Configuration:	F3EN0262-3

TEST PARAMETERS

Run #:	48	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

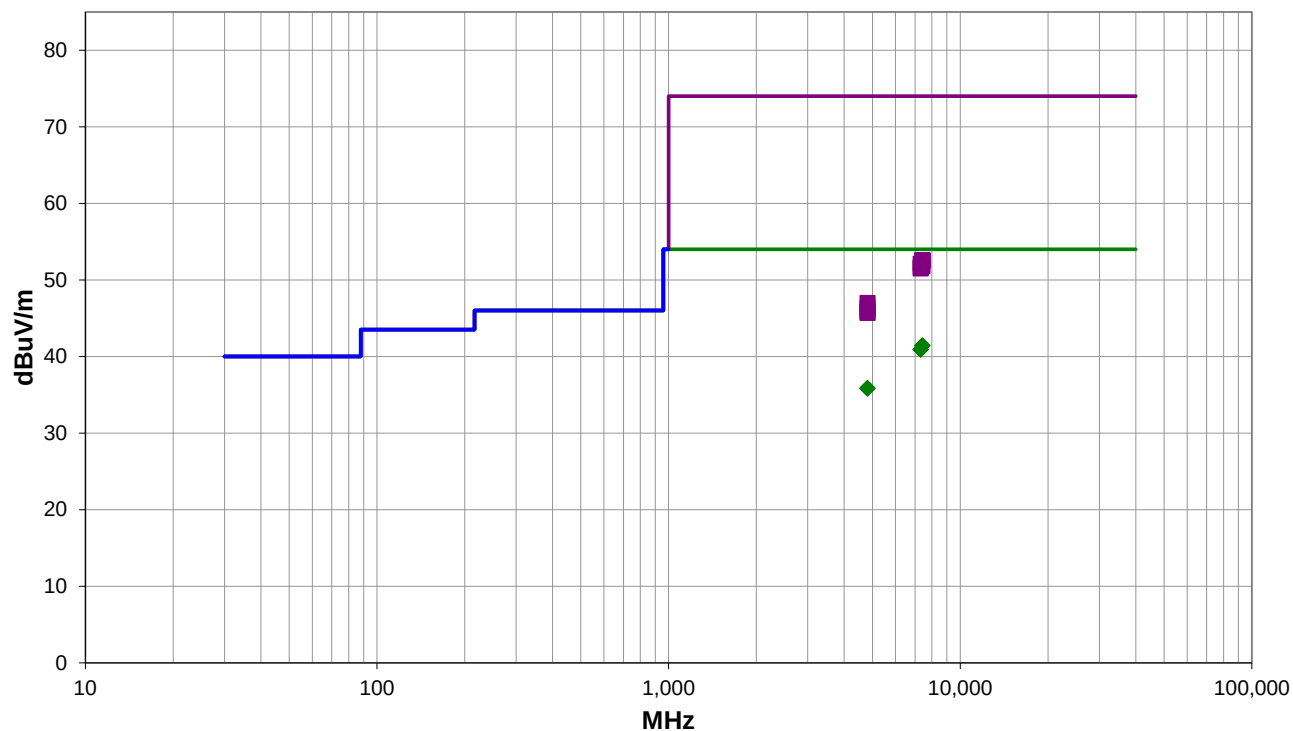
SPOT CHECKS

EUT OPERATING MODES

EUT operating mode and orientation are listed in the Comments column of the data table.

DEVIATIONS FROM TEST STANDARD

None



Run #: 48

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #48

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7427.492	27.9	13.5	1.5	297.0	3.0	0.0	Horz	AV	0.0	41.4	54.0	-12.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7423.258	28.0	13.4	1.5	246.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7426.833	28.0	13.4	1.5	145.0	3.0	0.0	Horz	AV	0.0	41.4	54.0	-12.6	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7423.042	28.0	13.4	1.5	255.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7323.525	27.8	13.1	1.5	344.0	3.0	0.0	Horz	AV	0.0	40.9	54.0	-13.1	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7325.958	27.8	13.1	1.5	6.0	3.0	0.0	Vert	AV	0.0	40.9	54.0	-13.1	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7324.408	27.8	13.1	1.5	347.0	3.0	0.0	Horz	AV	0.0	40.9	54.0	-13.1	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7323.883	27.8	13.1	1.5	237.0	3.0	0.0	Vert	AV	0.0	40.9	54.0	-13.1	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
4812.142	28.7	7.2	1.5	152.0	3.0	0.0	Vert	AV	0.0	35.9	54.0	-18.1	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4807.992	28.6	7.2	1.5	145.0	3.0	0.0	Horz	AV	0.0	35.8	54.0	-18.2	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4810.392	28.6	7.2	1.51	178.0	3.0	0.0	Vert	AV	0.0	35.8	54.0	-18.2	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4809.700	28.6	7.2	1.5	0.0	3.0	0.0	Horz	AV	0.0	35.8	54.0	-18.2	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
7423.433	39.2	13.4	1.5	255.0	3.0	0.0	Vert	PK	0.0	52.6	74.0	-21.4	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7423.192	39.1	13.4	1.5	297.0	3.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7424.992	39.1	13.4	1.5	246.0	3.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Antenna 1; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7325.117	39.0	13.1	1.5	344.0	3.0	0.0	Horz	PK	0.0	52.1	74.0	-21.9	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7425.575	38.4	13.4	1.5	145.0	3.0	0.0	Horz	PK	0.0	51.8	74.0	-22.2	Antenna 2; QPSK-2000 Leg 250; High Channel (2475 MHz); EUT Vertical
7327.817	38.6	13.1	1.5	347.0	3.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7327.633	38.5	13.1	1.5	6.0	3.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Antenna 1; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
7323.750	38.4	13.1	1.5	237.0	3.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	Antenna 2; QPSK-2000 Leg 250; Mid Channel (2445 MHz); EUT Vertical
4808.200	39.8	7.2	1.5	152.0	3.0	0.0	Vert	PK	0.0	47.0	74.0	-27.0	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4809.775	39.1	7.2	1.5	145.0	3.0	0.0	Horz	PK	0.0	46.3	74.0	-27.7	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4811.883	38.7	7.2	1.51	178.0	3.0	0.0	Vert	PK	0.0	45.9	74.0	-28.1	Antenna 1; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical
4811.542	38.5	7.2	1.5	0.0	3.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	Antenna 2; QPSK-2000 Leg 250; Low Channel (2405 MHz); EUT Vertical

SPURIOUS RADIATED EMISSIONS

CONCLUSION

Pass



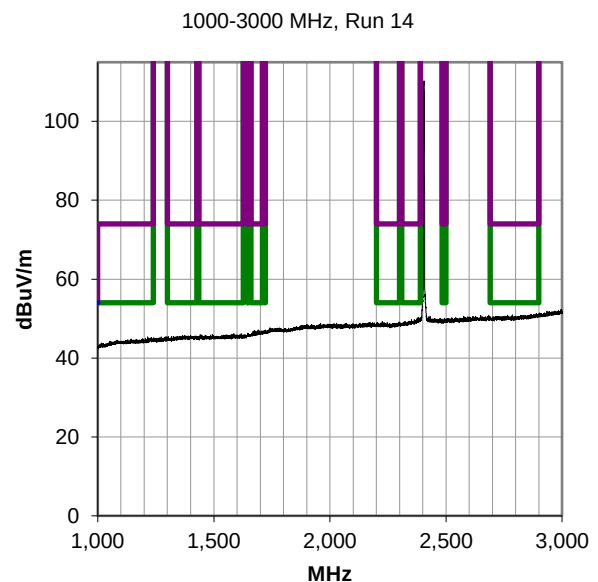
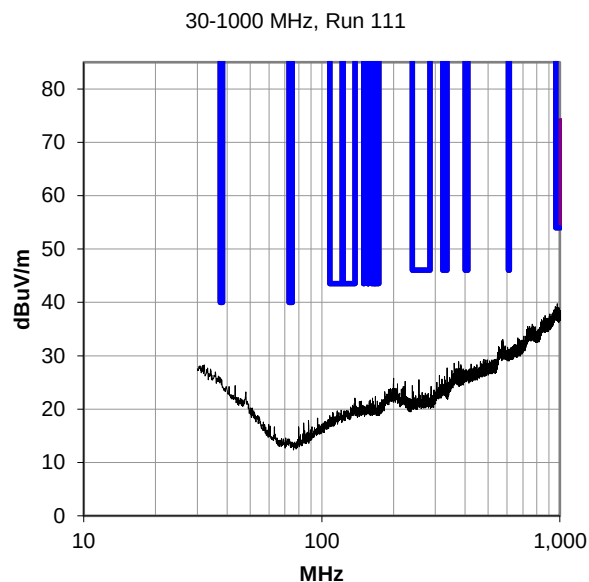
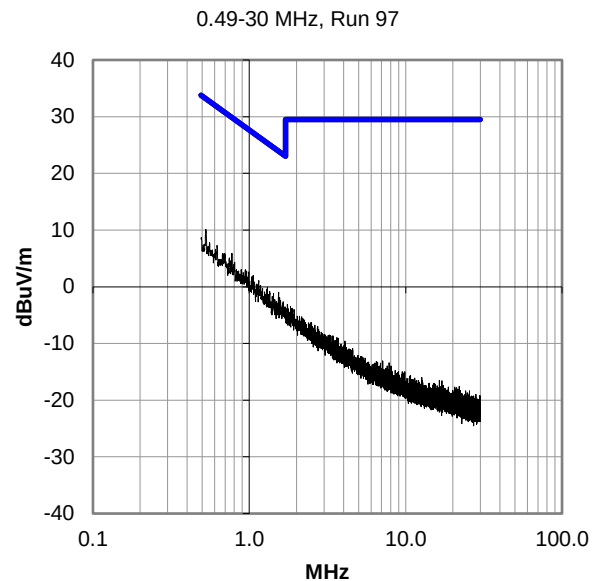
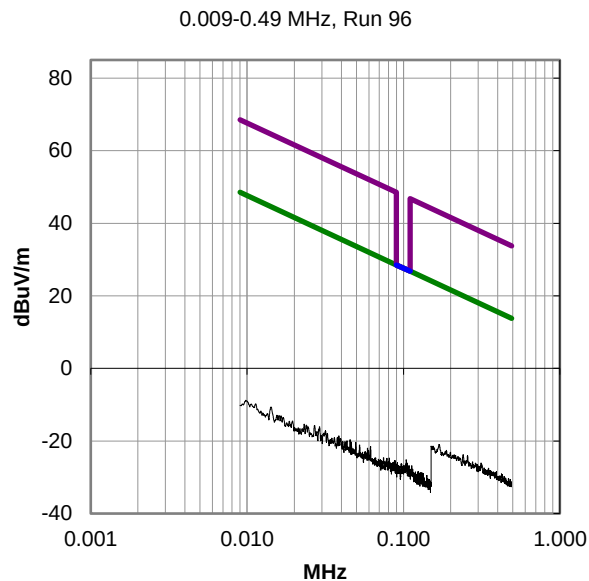
Tested By

SPURIOUS RADIATED EMISSIONS

PRESCAN DATA

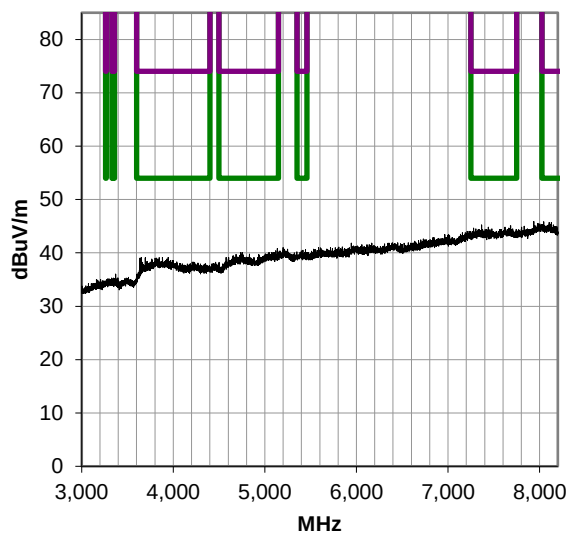
Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

ANTENNA 1

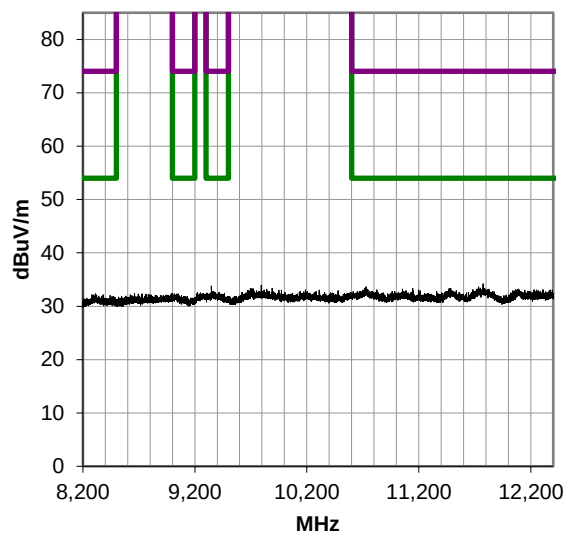


SPURIOUS RADIATED EMISSIONS

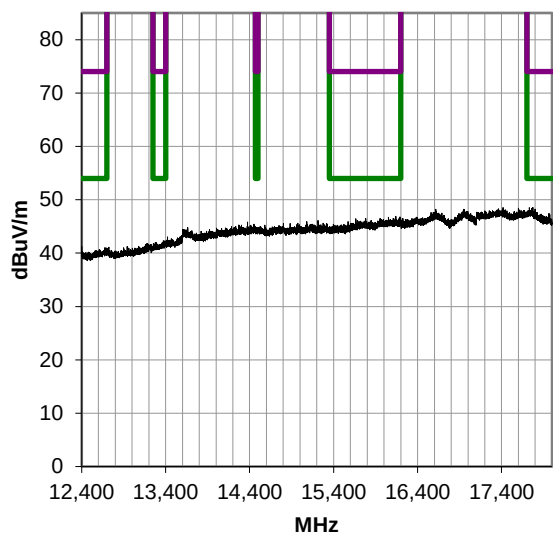
3000-8200 MHz, Run 15



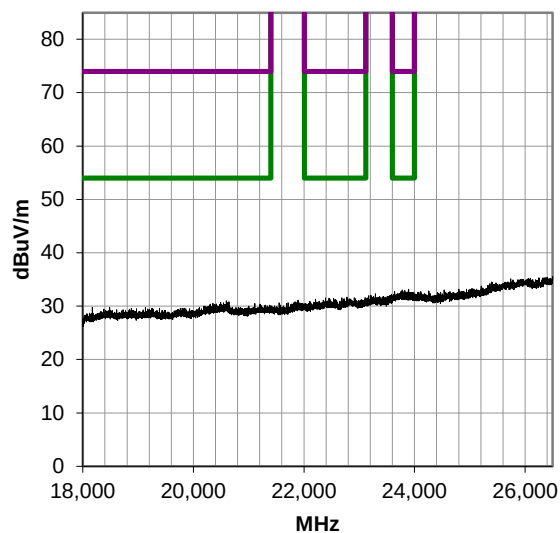
8200-12400 MHz, Run 16



12400-18000 MHz, Run 17

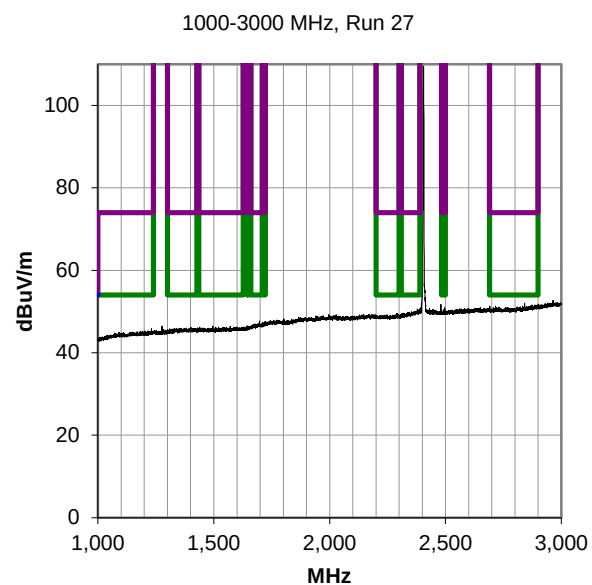
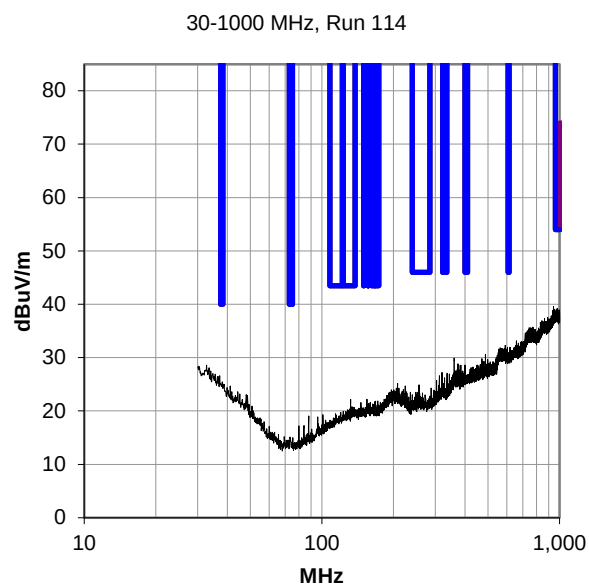
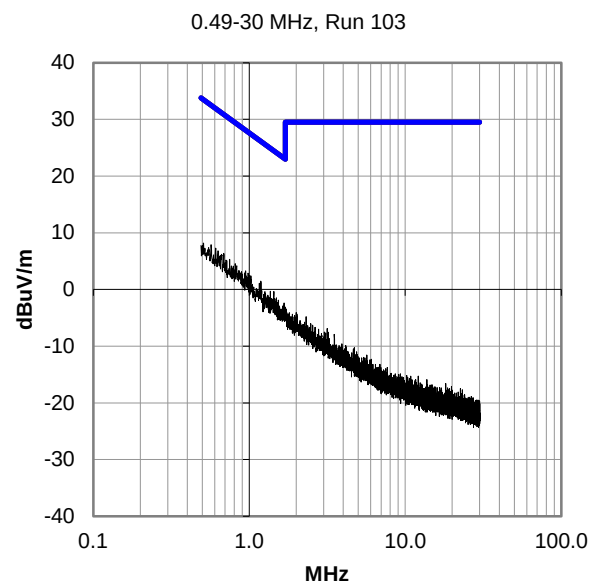
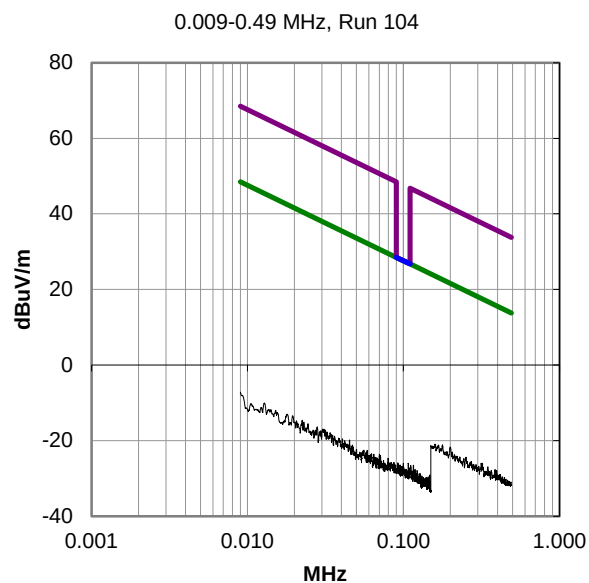


18000-26500 MHz, Run 117



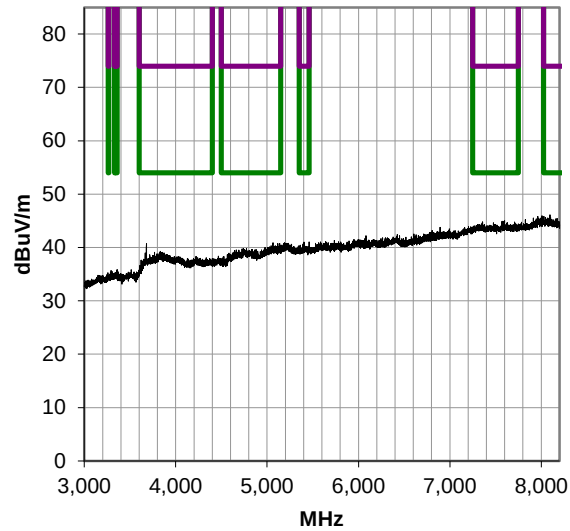
SPURIOUS RADIATED EMISSIONS

ANTENNA 2

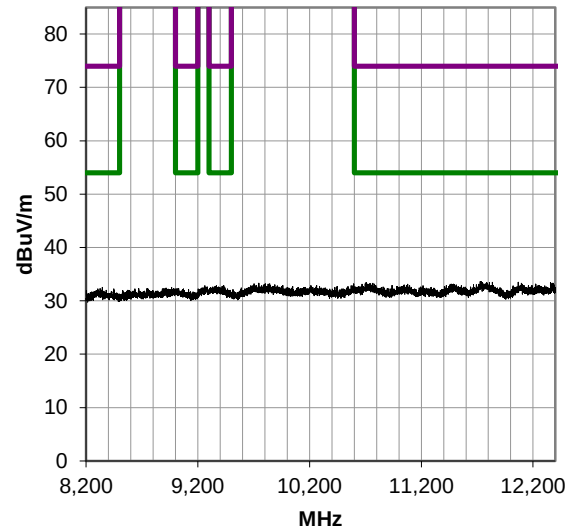


SPURIOUS RADIATED EMISSIONS

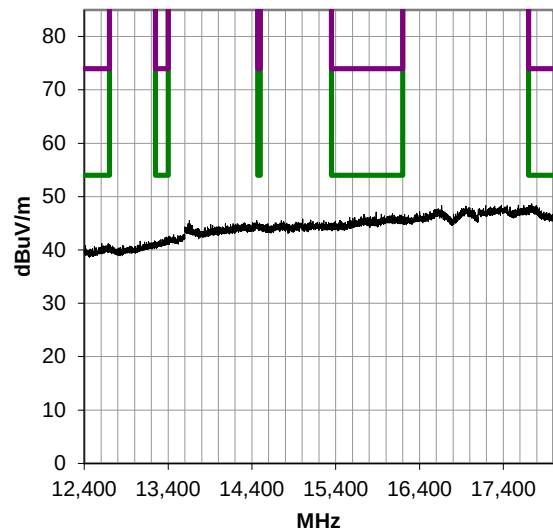
3000-8200 MHz, Run 28



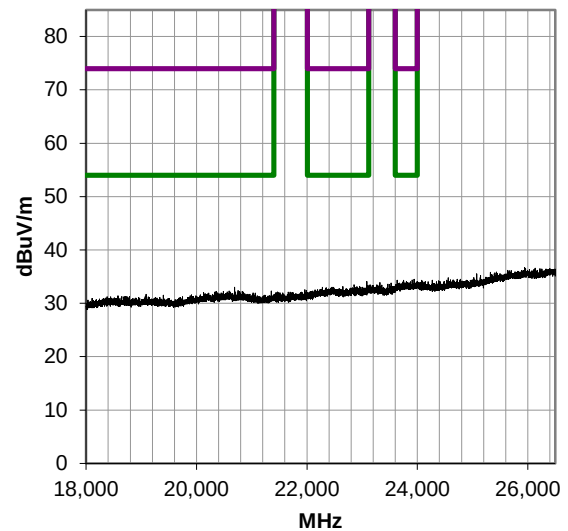
8200-12400 MHz, Run 29



12400-18000 MHz, Run 30



18000-26500 MHz, Run 120



End of Test Report