



Test Report

Prepared for: Southwest Microwave, Inc.

Model: MS30-POE-S

Description: Short Range K-Band Transceiver

Serial Number: EP001

FCC ID: CA6MS30

Project No: p2620005

Test Results: Pass

To

FCC Part 15.249

Date of Issue: March 9, 2026

On the behalf of the applicant:

Southwest Microwave, Inc.
9055 South McKemy Street
Tempe, Arizona 85284

Attention of:

Holger Stuehrmann, Vice President
Ph: (480)783-0201 Ext 3750
E-Mail: HolgerS@southwestmw.com

Prepared By:

Compliance Testing, LLC
Mesa, AZ 85204
(480) 926-3100 phone / (480) 926-3598 fax
www.compliancetesting.com
ANAB Cert#: AT-2901
FCC Site Reg.#750616
ISED Site Reg. #2044A-2

Reviewed / Authorized By:

Madhava Gooduru,
EMC RF Test Engineer

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Test Results Summary
Test Date Range: Feb 26 - Mar 3, 2026

FCC Specification	Test Name	Pass, Fail, N/A	Comments
15.249(a)	Field Strength of Fundamental	Pass	
15.249(a), 15.249(d), 15.209(a), 15.205	General Field Strength Emissions, Spurious Harmonic Emission, Restricted Bands	Pass	
15.215(c)	20dB Bandwidth of Emission	Pass	
15.207	A/C Powerline Conducted Emissions	Pass	PoE Powered Device

Method Deviations/Additions: No

Statements of conformity are reported as:

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

References/Methods	Description
ANSI C63.4-2014	Method and Measurements of Radio-Noise Emissions from low-Voltage Electrical and Electronic Equipment in the range 9kHz to 40GHz.
ANSI C63.10:2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ISO/IEC 17025:2017	General requirements for the Competence of Testing and Calibrations Laboratories

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Test Report Revision History

Revision	Date	Revised By	Reason for Revision
1.0	Mar 9, 2026	Madhava Gooduru	Original Document

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

EUT Description

Model:	MS30-POE-S
Serial:	EP001
Firmware:	K-LD7 APP RFB-0105
Software:	6447639-A01 REV 0xy
Description:	Short Range K-Band Transceiver
Additional Information:	This EUT is K-Band Short Range Digital Radar Transceiver provides reliable three-dimensional perimeter protection in outdoor environments. Type of Modulation: FSK Highest Frequency Generated: Frequency < 24.250 GHz EUT operates at 48 VDC (POE). Antenna: Integrated patch antenna Usage: Perimeter security for fencelines, open areas, gates, entryways, walls and rooftop applications The EUT incorporates a pre-certified radio module/IC that has been granted FCC certification under its FCC ID: 2ASYV-K-LD7
Receipt of Sample(s):	Feb 19, 2026
EUT Condition:	Visual Damage No State of Development Production/Production Equivalent

The applicant has been cautioned as to the following

15.21 - Information to User

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

15.27(a) - Special Accessories

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

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

Authorization Requirements

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

-47 CFR Part 2 Subpart J

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

Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rule Parts: 15.249.

Subpart 2.1033(b)

Standard Engineering Practices

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

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

Standard Test Conditions and Engineering Practices

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

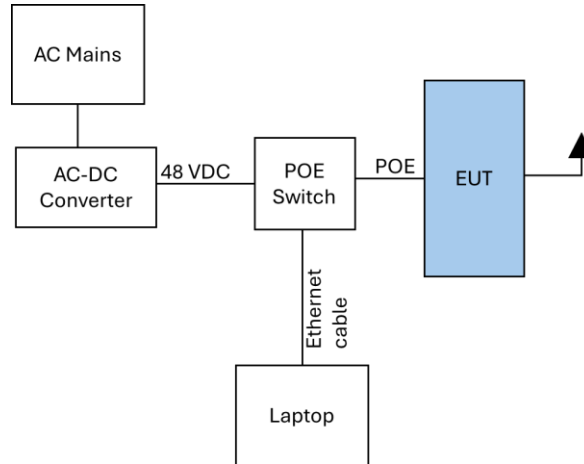
Environmental Conditions		
Temperature (°C)	Humidity (%)	Barometric Pressure (mbar)
24.7 – 27.6	30.5 – 35.8	965.6 – 972.5

Test Setup and Modes of Operation

EUT Operation during Tests

The EUT was connected to power and operated using the installed firmware/software. The 24 GHz radio was configured for maximum output power. The EUT was powered via a PoE switch, which was connected to the AC mains through an AC/DC adapter. Upon power-up, the EUT defaulted to the Low channel.

The EUT supports Low, Mid, and High channel selections and distance resolution 5 mtr and 20 mtr. Channels and distance resolution were selected using web-based GUI. The test set up configuration is shown below.



Configuration of system under test

Accessories:

Qty	Description	Manufacturer	Model	S/No
1	POE Switch*	Netgear	FS108Pv3	3BN159738155B
1	AC Adaptor*	Netgear	NU60-F480125-I1NN	NA

Cables:

Qty	Description	Length (M)	Ferrites (Y/N)	Shielding Y/N	Shielded Hood Y/N	Termination / Connection
1	Power Cable	1.8	N	N	N	AC Mains to AC adaptor

Software/Firmware:

Name	Description	Version	Installation Info
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Modifications to EUT(s) (Y/N): N

Note *: During testing, the EUT was powered via external PoE power sourcing equipment (support equipment; not marketed with the EUT) to represent normal operating conditions.

15.203: Antenna Requirement:

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

Field Strength of Fundamental

Engineer: Madhava Gooduru

Test Date: Feb 26, 2026

Limits

As per FCC 47 CFR Part 15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency Range	Limit (Average)	Limit (Peak)	Distance
24.0 GHz – 24.25 GHz	108 dB μ V/m	128 dB μ V/m	3 m

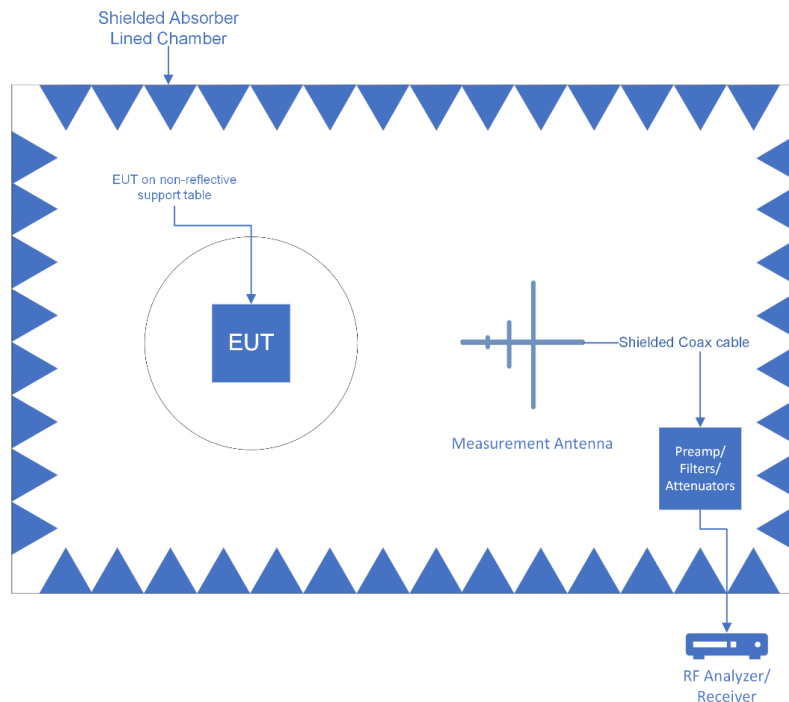
§15.249 (e) As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Test Procedure

RADIATED METHOD

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

Test Setup



The Spectrum Analyzer was set to the following:

RBW $\geq$ 1MHz
 VBW $\geq$ 3 x RBW
 Span $\geq$ FMCW BW
 Sweep time = 10s
 Detector = Peak and Avg
 Trace Mode = max hold for peak

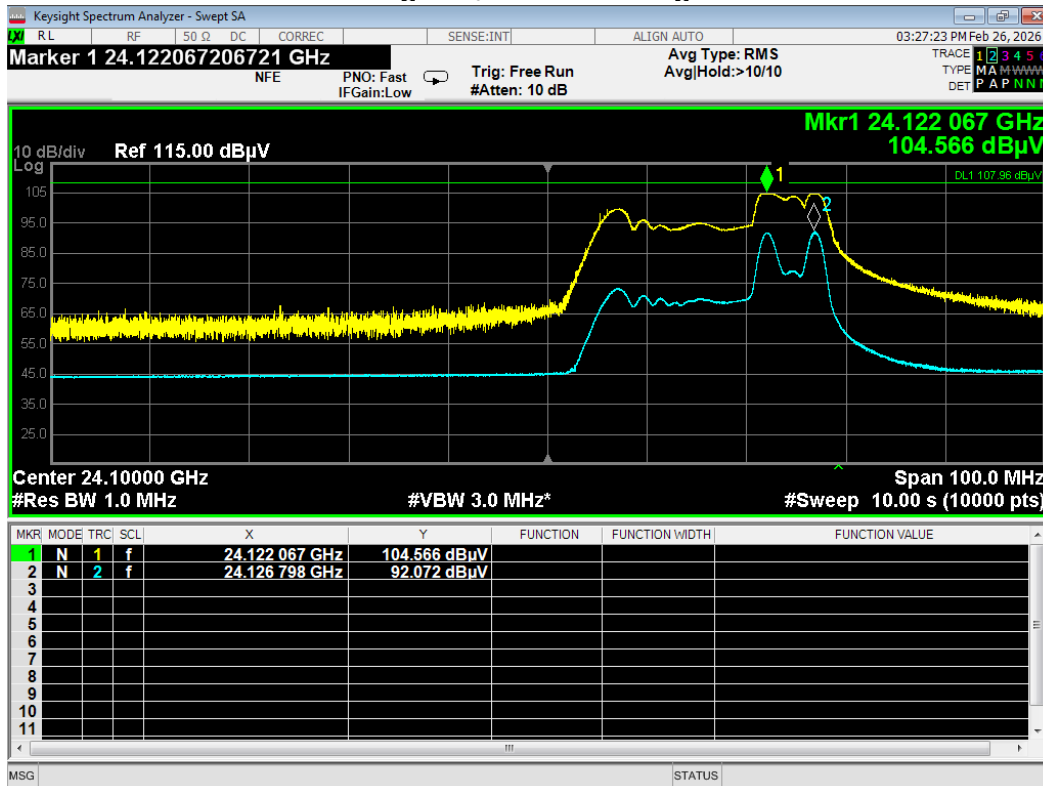
Field Strength of Fundamental Summary Table (worse case axis and polarity)

Tuned Frequency	Mode of Operation*	Type Detector	Measured	Specification Limit (dBuV/m)	Result
			(dBuV)		
F _{low}	FSK -20m	Avg	92.072	107.95	Pass
F _{Mid}	FSK -20m		92.516	107.95	Pass
F _{High}	FSK -20m		92.33	107.95	Pass
F _{low}	FSK -20m	Peak	104.566	127.95	Pass
F _{Mid}	FSK -20m		104.889	127.95	Pass
F _{High}	FSK -20m		104.988	127.95	Pass

Note * Distance resolution 20 m is the worst mode

Field Strength of Fundamental Plots

Fundamental Strength F_{low} Ch Peak& Avg - FSK-20m Mode



General Field Strength Emissions / Spurious Harmonic Emissions / Restricted Bands

Engineer: Madhava Gooduru

Test Date: Feb 26 – Mar 3, 2026

Limits

As per FCC 47 CFR Part 15.249(d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

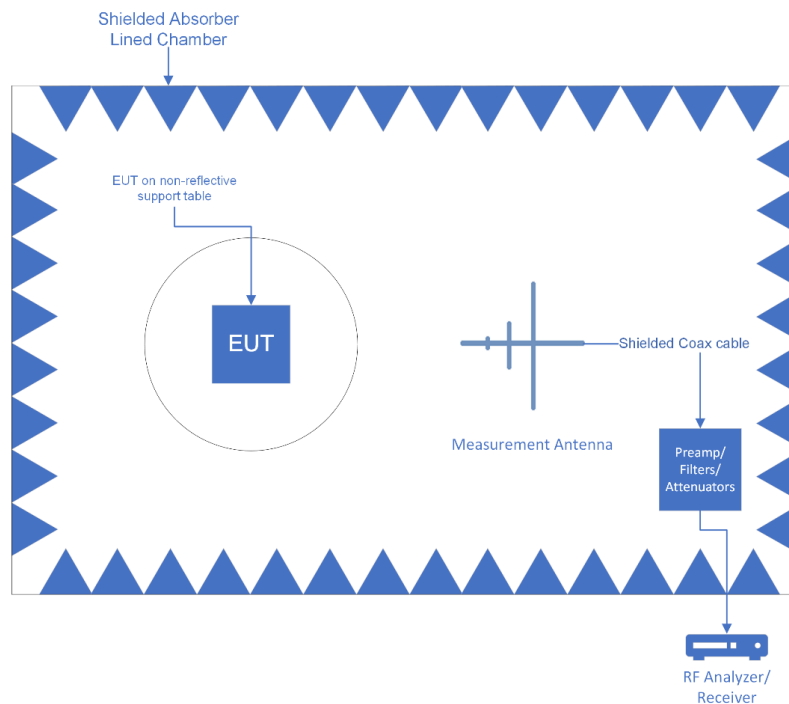
Table – General Radiated Emission Limits (§15.209)

Frequency (MHz)	Field Strength Limit ($\mu\text{V/m}$)	Limit (dB $\mu\text{V/m}$)	Distance
30.0 – 88.0	100	40.0	3 m
88.0 – 216.0	150	43.5	3 m
216.0 – 960.0	200	46.0	3 m
Above 960	500	54.0	3 m

Test Procedure for Radiated emissions Below 1000 MHz and Above 1GHz

The EUT was setup in a semi-anechoic test chamber set 3m for frequencies up to 50 GHz and 1m for frequencies above 50GHz from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level into its permanently attached antenna. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Spurious Emissions. All emissions across the required range were evaluated.

Basic Test Setup



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

Sample Calculations

For 30-40000 MHz

Corrected Value = Measured Value + Correction factor

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

For 40-100 GHz

As per ANSI C63-10-2020 Equation (19):

$$E = 126.8 - 20 \log_{10}(\lambda) + P - G$$

where:

- E = field strength of the emission at the measurement distance, in dB μ V/m
- λ = wavelength of the emission under investigation, in meters (m)

$$\lambda = \frac{300}{f(\text{MHz})}$$

- P = power measured at the output of the measurement antenna, in dBm (including applicable instrument correction factors up to the antenna connection)
- G = gain of the measurement antenna, in dBi

As per ANSI C63-10-2020 Equation (20):

$$E_{\text{SpecLimit}} = E_{\text{Meas}} + 20 \log_{10} \left(\frac{D_{\text{Meas}}}{D_{\text{SpecLimit}}} \right)$$

where:

- $E_{\text{SpecLimit}}$ = field strength extrapolated to the specification (limit) distance, in dB μ V/m
- E_{Meas} = field strength measured at the measurement distance, in dB μ V/m
- D_{Meas} = measurement distance, in meters (m)
- $D_{\text{SpecLimit}}$ = specification/limit distance, in meters (m)

Radiated Emissions Test Summary Table 30-40000MHz

S.No	Det Type	Frequency Span	Radiated Spurious		Limit	Margin	Result
			Frequency	Level			
		GHz	MHz	dB μ V/m	dB μ V/m	dB	
F _{low}	QP	0.03-1	55.898	33.2	40	-6.8	Pass
F _{Mid}	QP	0.03-1	56.001	33.8	40	-6.2	Pass
F _{High}	QP	0.03-1	55.878	33.2	40	-6.8	Pass
F _{low}	Avg	18-40	39090.3	53.09	54	-0.91	Pass
F _{Mid}	Avg	18-40	39961.5	52.92	54	-1.08	Pass
F _{High}	Avg	18-40	39495.1	52.71	54	-1.29	Pass
F _{low}	Peak	18-40	34596.2	65.16	74	-8.84	Pass
F _{Mid}	Peak	18-40	34581.4	63.39	74	-10.61	Pass
F _{High}	Peak	18-40	34625.4	64.97	74	-9.03	Pass

Note 1 Radiated spurious emissions measured from 1–18 GHz were more than 20 dB below the applicable limit; therefore, tabulated results are not provided, and the measurement plots were included for reference.

Note 2 A Notch filter was used to suppress the fundamentals in 18-40GHz measurements

Note 3 On the 18-40 GHz graphs in Annex A, the fundamental transmit signals were above the limit/display line and are exempt for the spurious emission limits.

Radiated Emissions Test Summary Table 40-110 GHz

Tuned Freq.	Freq. Band	Det	Radiated Spurious (raw data)			Measured Distance	Cable Insertion Loss	Ext Amp Gain	Mixer Loss	Rx Ant. Gain	Final	Limit	Margin	Result
			Freq	Amplitude							Value			
	GHz		MHz	dBuV	dBm	mtr					dB			
F _{low}	40-50*	Peak	40091	48.09	-58.91	3	5.22	41.98	0.00	23.10	50.54	54	-3.46	Pass
F _{Mid}	40-50*	Peak	40840	48.31	-58.69	3	5.69	41.83	0.00	23.10	51.55	54	-2.45	Pass
F _{High}	40-50*	Peak	40096	48.76	-58.24	3	5.22	41.90	0.00	23.10	51.29	54	-2.71	Pass
F _{low}	50-75	Avg	53989	5.37	-101.63	1	0.5	42.47	44.09	22.70	49.69	54	-4.31	Pass
F _{Mid}	50-75	Avg	51828	5.66	-101.34	1	0.5	42.47	44.78	22.49	50.52	54	-3.48	Pass
F _{High}	50-75	Avg	50464	5.52	-101.48	1	0.5	42.47	44.78	22.43	50.21	54	-3.79	Pass
F _{low}	50-75	Peak	53687	17.06	-89.94	1	0.5	42.79	43.98	22.67	60.93	74	-13.07	Pass
F _{Mid}	50-75	Peak	55314	16.41	-90.59	1	0.5	42.47	43.71	22.82	60.45	74	-13.55	Pass
F _{High}	50-75	Peak	52707	15.65	-91.35	1	0.5	42.47	44.78	22.57	60.58	74	-13.42	Pass
F _{low}	75-100	Avg	98158	5.39	-101.61	1	1	36.92	43.75	23.35	50.42	54	-3.58	Pass
F _{Mid}	75-100	Avg	97295	5.54	-101.46	1	1	36.94	43.65	23.34	50.39	54	-3.61	Pass
F _{High}	75-100	Avg	97321	5.50	-101.50	1	1	37.00	44.78	23.34	51.42	54	-2.58	Pass
F _{low}	75-100	Peak	97209	17.09	-89.91	1	1	36.94	43.64	23.33	61.93	74	-12.07	Pass
F _{Mid}	75-100	Peak	98152	17.74	-89.26	1	1	36.92	43.74	23.35	62.76	74	-11.24	Pass
F _{High}	75-100	Peak	98110	17.53	-89.47	1	1	36.92	44.78	23.35	63.58	74	-10.42	Pass

Note: * Per ANSI C63.10 §6.6.4.3 (Note 1), average limits were evaluated using peak detector measurements.

Annex A Radiated Spurious Emission

Refer to Annex A for Radiated Spurious Emission plots

Band Edge (Radiated)

Engineer: Madhava Gooduru

Test Date: Mar 2, 2026

Limits

As per FCC 47 CFR Part 15.249(d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

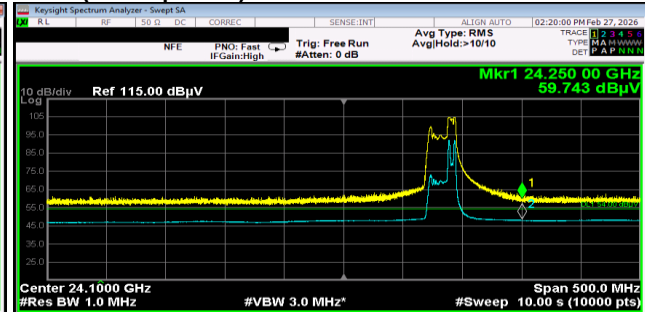
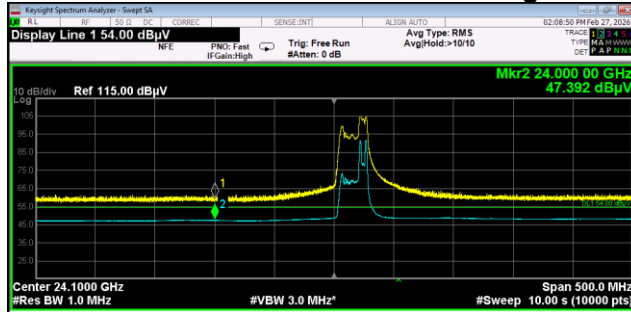
Table – General Radiated Emission Limits (§15.209)

Frequency (MHz)	Field Strength Limit (µV/m)	Limit (dBµV/m)	Distance
30.0 – 88.0	100	40.0	3 m
88.0 – 216.0	150	43.5	3 m
216.0 – 960.0	200	46.0	3 m
Above 960	500	54.0	3 m

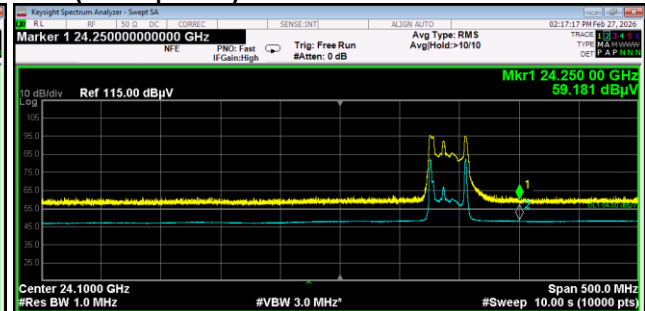
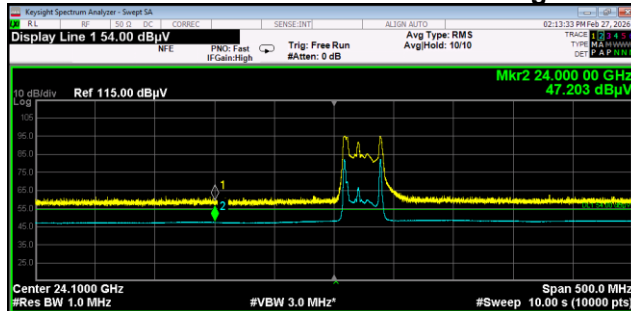
Band Edge Summary Table

Tuned Frequency	Mode of Operation	AVG Measured Value (dBuV/m)	PK Measured Value (dBuV/m)	AVG / PK Specification Limit (dBuV/m)	Result
F _{Low}	FSK -20m	47.4	59.3	54 / 74	Pass
F _{Low}	FSK -5m	47.2	59.8	54 / 74	Pass
F _{High}	FSK -20m	47.1	59.7	54 / 74	Pass
F _{High}	FSK -5m	46.9	59.2	54 / 74	Pass

Band Edge – FSK 20m (Peak | AVG)



Band Edge – FSK 5m (Peak | AVG)



Harmonics (Radiated)

Engineer: Madhava Gooduru

Test Date: Mar 3, 2026

Limits

As per FCC 47 CFR Part 15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

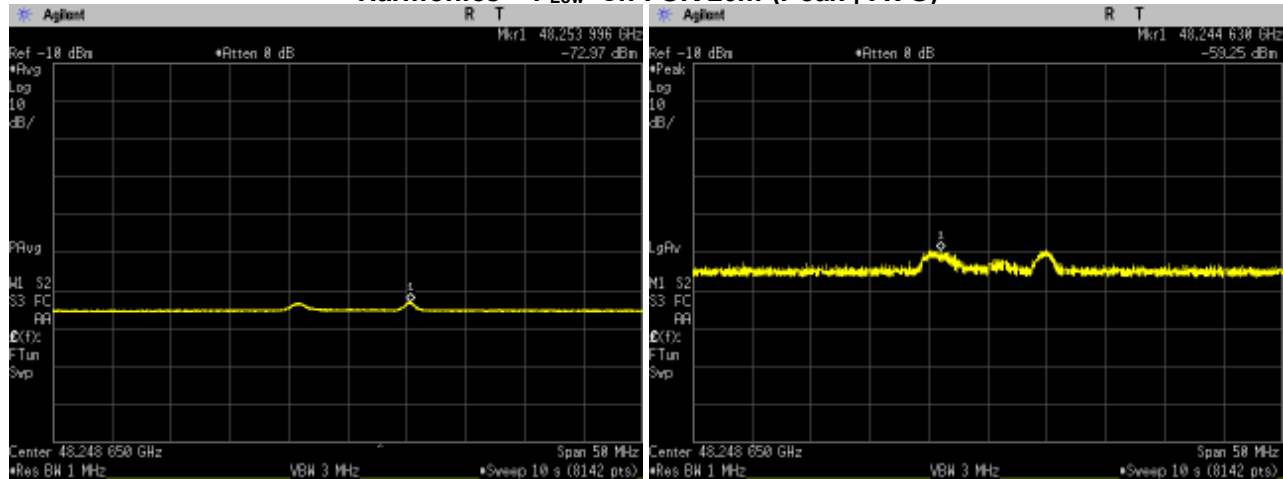
Frequency Range	Limit (Average)	Limit (Peak)	Distance
24.0 GHz – 24.25 GHz	68 dB μ V/m	88 dB μ V/m	3 m

§15.249 (e) As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

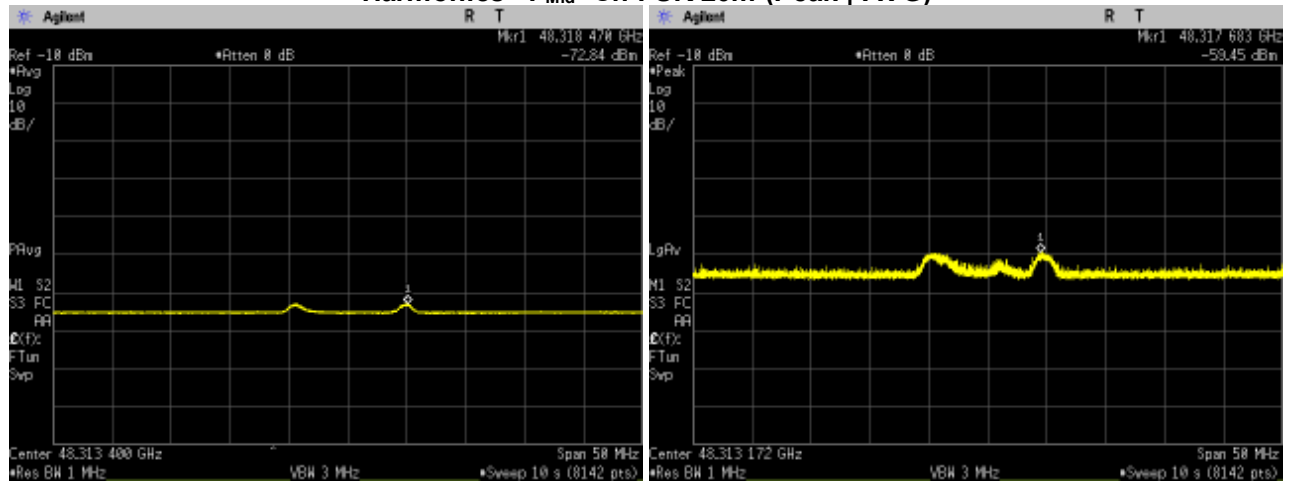
Harmonics Summary Table

Tuned Freq.	Det	Radiated Spurious (raw data)			Distance	Cable Insertion Loss	Ext Amplifier Gain	Rx Mixer Loss	Rx Ant. Gain	Final	Limit	Margin	Result
		Freq	Amplitude							Value			
		MHz	dBuV	dBm						mtr			
F _{low}	Avg	47253	34.03	-72.97	1	8.64	40.55	0	23.4	32.92	68	-35.08	Pass
F _{Mid}	Avg	48318	34.16	-72.84	1	9.08	40.34	0	23.41	33.89	68	-34.11	Pass
F _{High}	Avg	48386	34.69	-72.31	1	9.12	40.32	0	23.41	34.49	68	-33.51	Pass
F _{low}	Peak	48244	47.75	-59.25	1	9.08	40.34	0	23.41	47.47	88	-40.53	Pass
F _{Mid}	Peak	48317	47.55	-59.45	1	9.08	40.34	0	23.41	47.28	88	-40.72	Pass
F _{High}	Peak	48377	48.7	-58.3	1	9.12	40.32	0	23.41	48.5	88	-39.5	Pass

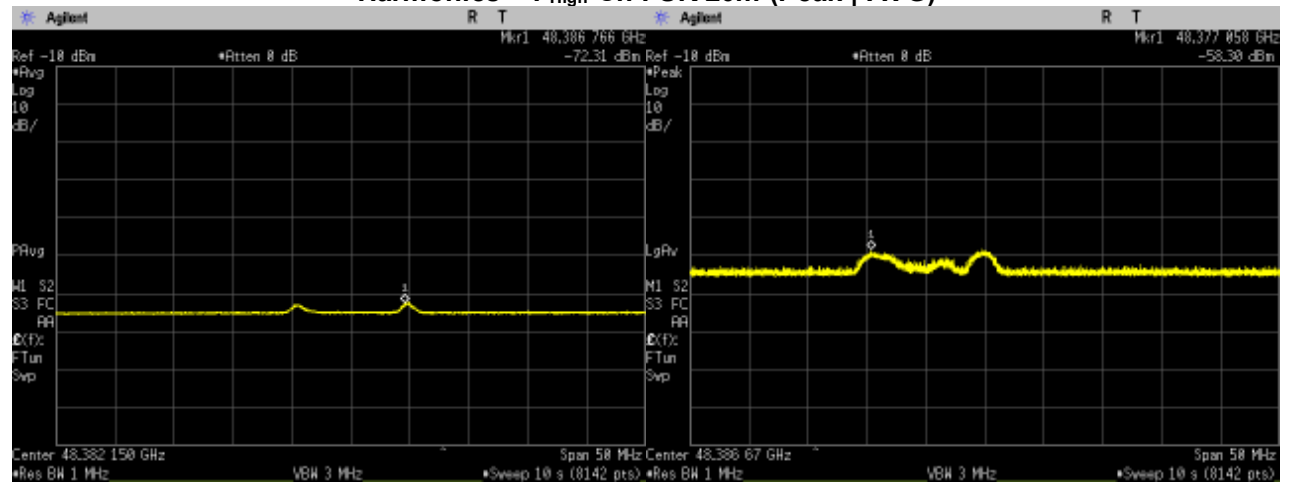
Harmonics – F_{Low} Ch FSK 20m (Peak | AVG)



Harmonics– F_{Mid} Ch FSK 20m (Peak | AVG)



Harmonics – F_{High} Ch FSK 20m (Peak | AVG)



20dB Bandwidth of Emission

Engineer: Madhava Gooduru

Test Date: Feb 27, 2026

Limits

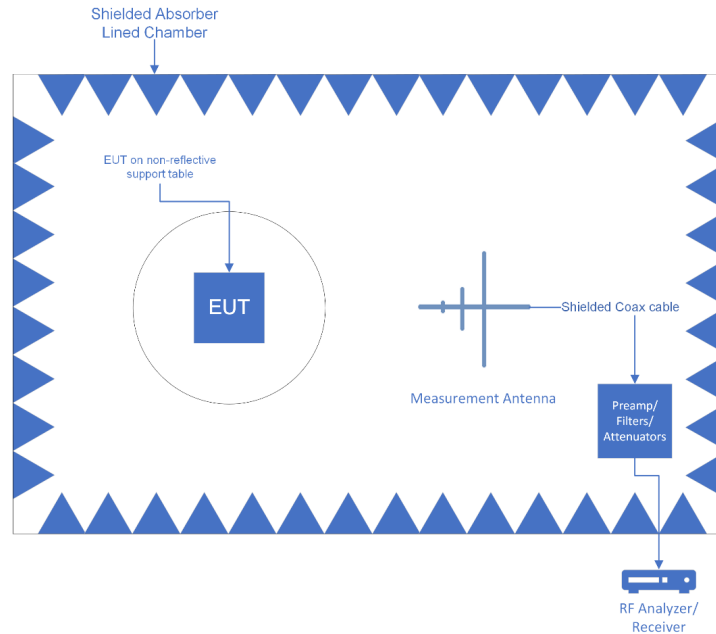
As per FCC §15.216(c), intentional radiators operating under §§ 15.217 through 15.257 and in subpart E shall be designed to ensure that the 20 dB emission bandwidth is contained within the authorized frequency band .

Test Procedure

RADIATED METHOD

The EUT was set up in a semi-anechoic test chamber set 3m from the receiving antenna. The EUT was set to transmit on the lowest, middle and highest frequency of operation at the maximum power level. The EUT was tested, in 3 orthogonal axis, by rotating it 360° with the receive antenna in both the vertical and horizontal orientation while raised from 1 to 4 meters to ensure the TX signal levels were maximized. A spectrum analyzer was used to record the 20dB Bandwidth frequency points at maximum output power.

Test Setup



The Spectrum Analyzer was set to the following:

RBW = 1 MHz & VBW $\geq$ 3 x RBW

Peak Detector, Trace mode = max hold

Marker = Placed at -20dB point from fundamental peak.

20 dB Bandwidth of Emission Summary

Tuned Frequency	Modulation & distance resolution	*F _{low}		F _{peak}	*F _{high}		20dB Bandwidth	Result
		Measured	Calculated	Measured	Measured	Calculated		
		(MHz)	(MHz)	(MHz)	(MHz)	(MHz)		
F _{low}	FSK -20m	-16.951	24105.366	24122.317	8.692	24131.009	25.643	Pass
F _{Mid}	FSK -20m	-22.997	24135.939	24158.936	3.045	24161.981	26.042	Pass
F _{High}	FSK -20m	-23.112	24170.442	24193.554	2.65	24196.204	25.762	Pass
F _{low}	FSK -5m	-2.43	24106.226	24108.656	33.563	24142.219	35.993	Pass
F _{Mid}	FSK -5m	-32.163	24138.774	24170.937	3.22	24174.157	35.383	Pass
F _{High}	FSK -5m	-2.37	24173.183	24175.553	32.993	24208.546	35.363	Pass

Note:* the 20 dB emission bandwidth points (F_{low} and F_{high}) are within the authorized frequency band(24-24.25 GHz)

20 dB Bandwidth Spectrum Plots

20dB Bandwidth – F_{Low} Ch FSK 20m



20dB Bandwidth – F_{Mid} Ch FSK 20m



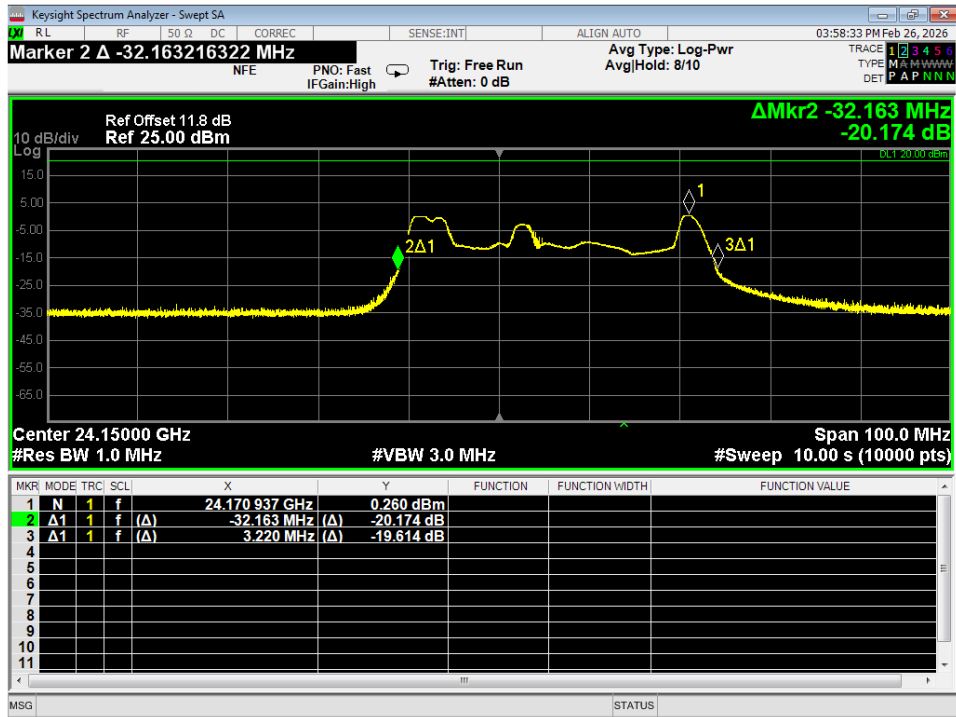
20dB Bandwidth – F_{High} Ch FSK 20m



20dB Bandwidth – F_{Low} Ch FSK 5m



20dB Bandwidth – F_{Mid} Ch FSK 5m



20dB Bandwidth – F_{High} Ch FSK 5m



Powerline Conducted Emissions

Engineer: Madhava Gooduru

Test Date: Mar 2, 2026

Limits

FCC: 47 CFR §15.207(a) and **ISED (Canada):** RSS-Gen Issue 5 §8.8

Conducted emissions shall not exceed the following limits:

Frequency (MHz) Quasi-Peak (dBμV) Average (dBμV)

0.15 – 0.50	66 to 56*	56 to 46*
0.50 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases linearly with the logarithm of frequency.

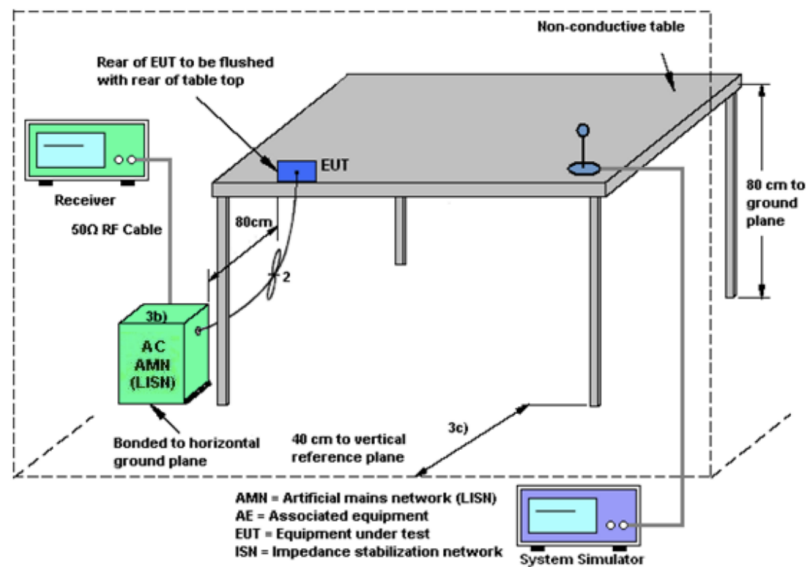
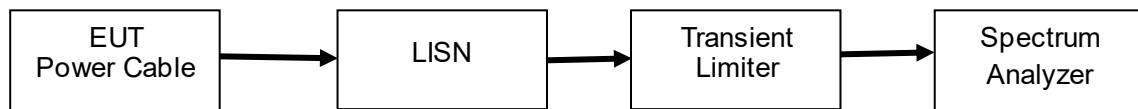
Test Procedure

The EUT AC power cord was connected to a Line Impedance Stabilization Network (LISN). The monitored output port of the LISN was connected to a transient limiter and then directly to a spectrum analyzer.

Conducted emissions were measured from 150 kHz to 30 MHz on both line and neutral conductors. The transmitter was configured for continuous Bluetooth operation during the test.

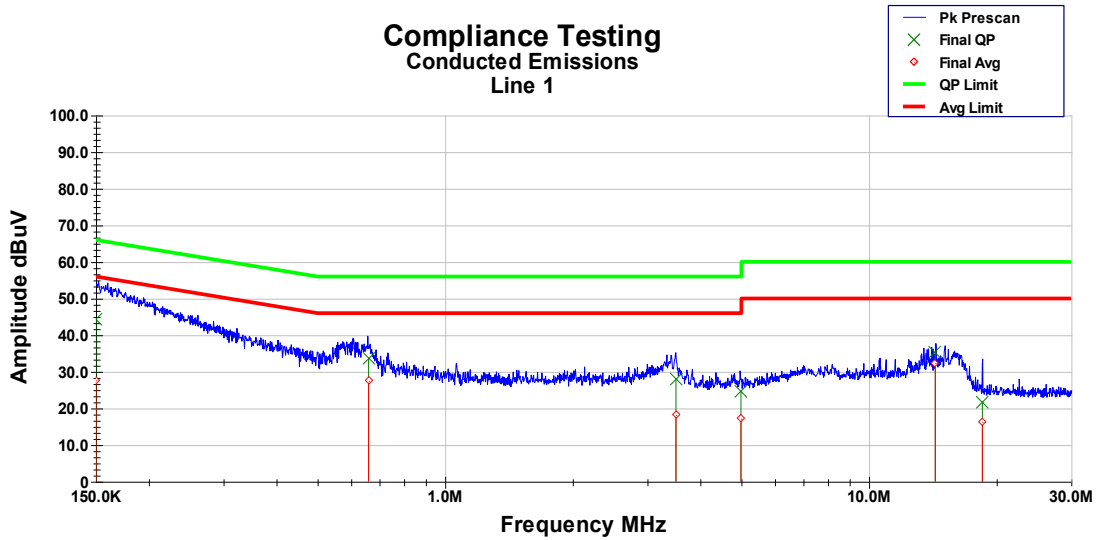
The measurements were performed in accordance with ANSI C63.10 Clause 6.2.

Test Setup

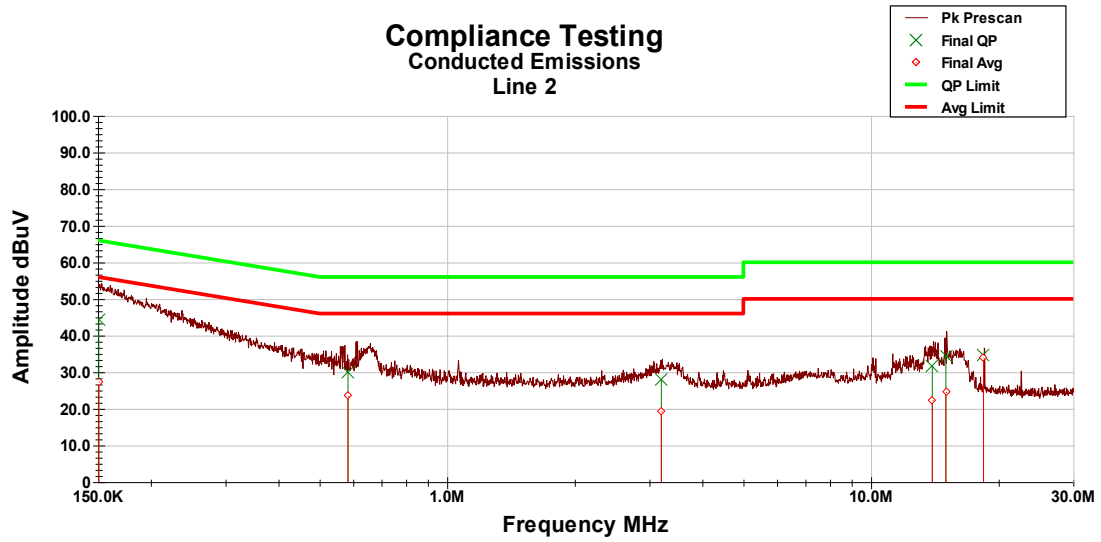


Note: AC mains conducted emissions were measured using a representative AC-DC adapter and PoE switch to power the EUT (support equipment; not marketed with the EUT)

Test Data



Frequency	Raw QP	Raw Avg	Path Loss	Final QP	Final Avg	QP Limit	QP Margin	Avg Limit	Avg Margin
(MHz)	dBuV	dBuV	dB	dBuV	dBuV	dBuV	dB	dBuV	dB
150.13 KHz	34.40	17.80	9.90	44.20	27.70	66.00	-21.80	56.00	-28.30
660.08 KHz	23.70	17.50	10.10	33.80	27.50	56.00	-22.20	46.00	-18.50
3.5052 MHz	18.00	8.10	10.20	28.10	18.20	56.00	-27.90	46.00	-27.80
4.9895 MHz	14.40	7.00	10.20	24.60	17.20	56.00	-31.40	46.00	-28.80
14.336 MHz	25.10	22.00	10.40	35.50	32.40	60.00	-24.50	50.00	-17.60
18.512 MHz	11.30	5.80	10.50	21.80	16.30	60.00	-38.20	50.00	-33.70
Final = Raw + Path Loss									
Margin = Final - Limit									



Frequency (MHz)	Raw QP dBuV	Raw Avg dBuV	Path Loss dB	Final QP dBuV	Final Avg dBuV	QP Limit dBuV	QP Margin dB	Avg Limit dBuV	Avg Margin dB
150.81 KHz	34.61	17.60	9.80	44.40	27.50	66.00	-21.60	56.00	-28.50
583.74 KHz	20.08	13.50	10.00	30.10	23.50	56.00	-25.90	46.00	-22.50
3.203 MHz	17.74	9.20	10.10	27.80	19.30	56.00	-28.20	46.00	-26.70
13.953 MHz	21.24	11.90	10.40	31.60	22.30	60.00	-28.40	50.00	-27.70
15.027 MHz	23.97	14.20	10.40	34.40	24.60	60.00	-25.60	50.00	-25.40
18.433 MHz	24.05	23.30	10.50	34.60	33.80	60.00	-25.40	50.00	-16.20
Final = Raw + Path Loss									
Margin = Final - Limit									

Test Equipment Utilized

Description	Manufacturer	Model #	CT Asset #	Last Cal Date	Cal Due Date
3 Meter Semi-Anechoic Chamber	Panashield	3 Meter Semi-Anechoic Chamber	i00428	7/13/23	7/13/26
Temp./humidity/pressure monitor (Main Lab)	Omega Engineering	iBTHX-W-5	i00686	01/28/26	01/28/27
Voltmeter	Fluke	179	i00488	6/25/25	6/25/26
spectrum analyzer 3 Hz - 50 GHz	Keysight	E4448A	i00688	10/22/25	10/22/26
MXE EMI receiver	Keysight	N9038A	i00552	3/17/25	3/17/26
Bi-Log Antenna	Schaffner	CBL 6111D	i00349	2/27/25	2/27/27
Horn Antenna	ARA	DRG-118/A	i00271	8/9/24	8/9/26
Horn Antenna (18-40GHz)	EMCO	3116	i00085	3/18/25	3/18/27
Horn Antenna, standard gain	CMI	HO22R	i00484	NR	NR
Horn Antenna, standard gain	CMI	HO15R	i00477	NR	NR
Horn Antenna, standard gain	CMI	HO10R	i00476	NR	NR
Harmonic Mixer	Agilent	11970W	i00464	Verified on: 7/23/25	
Mixer with Preselector	Hewlett Packard	11974	i00726	Verified on: 7/23/25	
Preamplifier	Eravant	SBB-0115034019-2F2F-E3	i00588	Verified on: 7/21/25	
LNA	Eravant	SBL-7531143550-1010-E1	i00589	Verified on: 7/22/25	
Preamplifier	Com Power	PAM-103	i00734	Verified on: 2/23/26	
Preamplifier	Eravant	SBB-0115034019-2F2F-E3	i00756	Verified on: 2/23/26	
notch filter 23.75-24.25GHz	ELETTRONICA spa	594.120.502B	i00731	Verified on: 2/26/26	

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

Measurement Uncertainty

Measurement Uncertainty (U_{lab}) for Compliance Testing is listed in the table below.

Measurement	U_{lab}
Radio Frequency	$\pm 3.3 \times 10^{-8}$
RF Power, conducted	$\pm .54$ dB
RF Power Density, conducted	± 1.0 dB
Conducted Emissions	± 0.94 dB
Radiated Emissions 9kHz-30MHz	± 2.76 dB
Radiated Emissions 30MHz-1000MHz	± 4.25 dB
Radiated Emissions – 1GHz-18GHz	± 4.49 dB
Temperature	± 1.5 deg C
Humidity	± 4.3 %
DC voltage	± 0.20 VDC
AC Voltage	± 1.2 VAC

The reported expanded uncertainty $\pm U_{lab}$ (dB) has been estimated at a 95% confidence level ($k=2$)

U_{lab} is less than or equal to U_{ETSI} therefore

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

END OF TEST REPORT