

TEST REPORT

Report Number: R15626970-E1

Applicant : Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062-3426, USA

Model : A04807

FCC ID : IPH-04807

IC : 1792A-04807

EUT Description : Extremity Worn Digital Transceiver

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C: 2025
RSS-210 ISSUE 11: 2024
RSS-GEN ISSUE 5 + A1 + A2: 2021

Date Of Issue:
2025-07-23

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REPORT REVISION HISTORY

| Rev. | Issue Date | Revisions | Revised By |
|------|------------|---------------|--------------|
| v1 | 2025-07-23 | Initial Issue | Manish Baral |

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Garmin International Inc.
1200 East 151st Street
Olathe, KS 66062-3426, USA

EUT DESCRIPTION: Extremity Worn Digital Transceiver

MODEL: A04807

SERIAL NUMBER: 511423961, 511423988

SAMPLE RECEIPT DATE: 2025-03-04

DATE TESTED: 2025-04-21 to 2025-04-23

| APPLICABLE STANDARDS | |
|--------------------------------------|--------------------|
| STANDARD | TEST RESULTS |
| FCC PART 15 SUBPART C: 2025 | |
| ISED RSS-210 Issue 11: 2024 | Refer to Section 3 |
| ISED RSS-GEN Issue 5 + A1 + A2: 2021 | |

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC By:

Prepared By:



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Engineer
Consumer, Medical and IT Segment
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with:

- ANSI C63.10-2020
- FCC 47 CFR Part 2
- FCC 47 CFR Part 15C
- RSS-GEN Issue 5 + A1 + A2: 2021
- RSS-210 Issue 11: 2024

3. SUMMARY OF TEST RESULTS

| Requirement Description | Requirement Clause Number | Result | Remarks |
|-----------------------------------|---|---------------|--|
| Occupied Bandwidth | FCC §15.215 (c) RSS-Gen 6.7 | Compliant | None |
| Fundamental Measurements. | FCC §15.225 (a-d) FCC §15.209 (d) | | |
| Tx Spurious Emissions | IC RSS-210, Annex B.6 IC RSS-GEN, Section 8.9 (Transmitter) | | |
| Frequency Stability | FCC §15.225 (e) RSS-210, Annex B.6 | | |
| AC Mains Line Conducted Emissions | FCC §15.207 IC RSS-GEN, Section 8.8 | Not Performed | NFC mode not supported during charging |

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, Certificate Number #0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

| | Address | ISED CABID | ISED Company Number | FCC Registration |
|-------------------------------------|--|------------|---------------------|------------------|
| <input type="checkbox"/> | Building: 12 Laboratory Dr Durham, NC 27713, USA | US0067 | 2180C | 825374 |
| <input checked="" type="checkbox"/> | Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A | | 27265 | |

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| PARAMETER | U _{Lab} |
|--|-----------------------------|
| Radio Frequency (Spectrum Analyzer) | 141.16 Hz |
| Occupied Channel Bandwidth | 1.22% |
| RF output power, conducted | 1.3 dB (PK) 0.45 dB (AV) |
| Power Spectral Density, conducted | 2.47 dB |
| Unwanted Emissions, conducted | 1.94 dB |
| All emissions, radiated | 6.01 dB |
| Conducted Emissions (0.150-30MHz) - LISN | 3.40 dB |
| Temperature | 0.57°C |
| Humidity | 3.39% |
| DC Supply voltages | 1.70% |

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

$$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$$

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a Extremity Worn Digital Transceiver with BT, BLE, ANT+, 802.11b/g/n 2.4GHz WLAN, NFC, and Global Navigation Satellite System (GNSS) receiver. This report covers full testing of the NFC radio.

6.2. MAXIMUM ELECTRIC FIELD STRENGTH

The transmitter has a maximum peak radiated electric field strength at 30m as follows:

| Fundamental Frequency (MHz) | E-Field (dBuV/m) |
|-----------------------------|------------------|
| 13.56 | 29.88 |

6.3. SOFTWARE AND FIRMWARE

FW Version: 16.29.

6.4. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated under three orthogonal orientations X, Y, and Z. The Z orientation was determined to be the worst-case orientation. Therefore, all final radiated testing was performed with the EUT in the Z orientation.

In addition, Type A, B, AB, F, and AF with and without a tag were investigated to determine the worst case based on the highest power and spurious emissions. The client had declared that using a card reader would produce the worst-case results, so type B with a tag was determined to be the worst case and therefore selected for all final tests.

The distance between the EUT and NFC reader was also investigated, and the worst-case condition occurs when the NFC reader and EUT are separated by 3cm; therefore, all final radiated testing was performed with the EUT and NFC reader separated by 3cm.

Note – Charging is not a mode of operation for NFC.

6.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

| Support Equipment List | | | | |
|------------------------|-----------------------|------------|---------------|------------|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| Tag Reader | Advanced Card Systems | ACR1252U | RR554-214365 | V5MACR1252 |
| Laptop | Lenovo | 21AJS0KL00 | PF4FKVZE | - |

I/O CABLES

| I/O Cable List | | | | | | |
|----------------|-------------|----------------------|----------------|------------|------------------|--------------------|
| Cable No. | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | Proprietary | 1 | USB-C | Shielded | <3m | Program/Charge EUT |

SETUP DIAGRAM

Please refer to R15626970-EP1 for setup diagrams

7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

| Equip. ID | Description | Manufacturer | Model Number | Last Cal. | Next Cal. |
|----------------------------------|-------------------------------|------------------------|---------------------------|------------|------------|
| 0.009-30MHz | | | | | |
| 135144 | Active Loop Antenna | ETS-Lindgren | 6502 | 2024-10-02 | 2025-10-02 |
| 30-1000 MHz | | | | | |
| 90629 | Hybrid Broadband Antenna | Sunol Sciences Corp. | JB3 | 2024-01-30 | 2026-01-30 |
| Gain-Loss Chains | | | | | |
| 91974 | Gain-loss string: 0.009-30MHz | Various | Various | 2024-05-08 | 2025-05-08 |
| 91976 | Gain-loss string: 25-1000MHz | Various | Various | 2024-05-08 | 2025-05-08 |
| Receiver & Software | | | | | |
| 206496 | Spectrum Analyzer | Rohde & Schwarz | ESW44 | 2024-08-29 | 2025-08-29 |
| SOFTEMI | EMI Software | UL | Version 9.5 (18 Oct 2021) | | |
| Additional Equipment used | | | | | |
| 241205 | Environmental Meter | Fisher Scientific | 15-077-963 | 2023-09-05 | 2025-09-05 |
| 236853 | AC Power Source | California Instruments | AST3001 | NA | NA |

Test Equipment Used - Wireless Conducted Measurement Equipment

| Equipment ID | Description | Manufacturer | Model Number | Last Cal. | Next Cal. |
|----------------------------------|---|------------------------------------|-----------------------|------------|------------|
| Conducted Room 1 | | | | | |
| 90411 | Spectrum Analyzer | Keysight Technologies | N9030A | 2024-08-01 | 2025-08-01 |
| 207726 | Temp/Humid Chamber | Thermotron | SM-32-8200 | 2025-01-15 | 2026-01-15 |
| 179892 | Environmental Meter | Fisher Scientific | 15-077-963 | 2024-08-12 | 2025-08-12 |
| SOFTEMI | Antenna Port Software | UL | Version 2022.8.16 | NA | NA |
| Power Software | Boonton Power Analyzer | Boonton | Version 3.0.13.0 | NA | NA |
| Additional Equipment used | | | | | |
| 211057 | Real-Time Peak Power Sensor 50MHz to 8GHz | Boonton | RTP5000 | 2024-08-01 | 2025-08-01 |
| Attenuators | | | | | |
| IV | SMA Coaxial 20dB Attenuator 25MHz-18GHz | CentricRF | C18S2-20 | 2025-04-11 | 2026-04-11 |
| CBL091 | Micro-Coax UTIFLEX Cable Assembly, Low Loss,40Ghz | Carlisle Interconnect Technologies | UFA147A-2-0360-200200 | 2025-03-07 | 2026-03-07 |

8. 20dB and 99% BANDWIDTH

LIMITS

§15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1-5% of the 20dB bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

8.1. RESULTS – TAG ON

| Mode | Frequency (MHz) | 20dB Bandwidth (kHz) | 99% Bandwidth (kHz) |
|--------|-----------------|----------------------|---------------------|
| Type B | 13.56 | 39.24 | 357.83 |

8.1.1. Type B (CE Mode)



Note: Because the measured signal is CW or CW-like, adjusting the RBW per C63.10 would not be practical since the measured bandwidth will always follow the RBW.

9. RADIATED EMISSION TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMIT

FCC §15.225
 IC RSS-210, Annex B.6
 IC RSS-GEN, Section 8.9 (Transmitter)

- (a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.
- (b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:
 §15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Limits for radiated disturbance of an intentional radiator | | |
|--|-----------------|--------------------------|
| Frequency range (MHz) | Limits (µV/m) | Measurement Distance (m) |
| 0.009 – 0.490 | 2400 / F (kHz) | 300 |
| 0.490 – 1.705 | 24000 / F (kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 – 88 | 100** | 3 |
| 88 - 216 | 150** | 3 |
| 216 – 960 | 200** | 3 |
| Above 960 | 500 | 3 |

RSS-GEN, Section 8.9 and 8.10.

| Frequency Range (MHz) | Field Strength Limit (uA/m) at 3 m | Field Strength Limit (dBuA/m) at 3 m |
|-----------------------|------------------------------------|--------------------------------------|
| 0.009-0.490 | 6.37/F(kHz) @ 300 m | - |
| 0.490-1.705 | 63.7/F(kHz) @ 30 m | - |
| 1.705 - 30 | 0.08 @ 30m | - |
| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the filed strength from uV/m to dBuV/m is:
Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10 - 2020

The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 9kHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

Note: For all Below 30MHz test data, all measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{test distance} / \text{specification distance})$

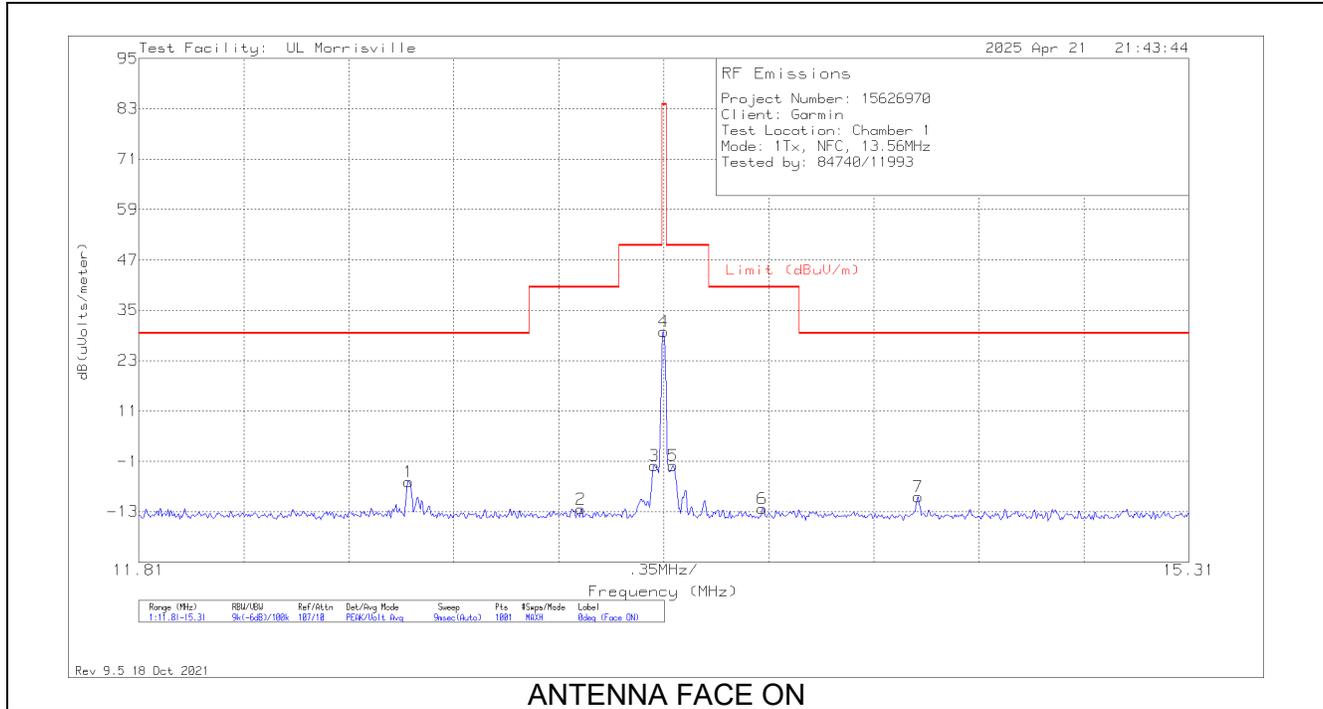
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

RESULTS

9.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (<30MHz)

9.2.1. TYPE B, TAG ON

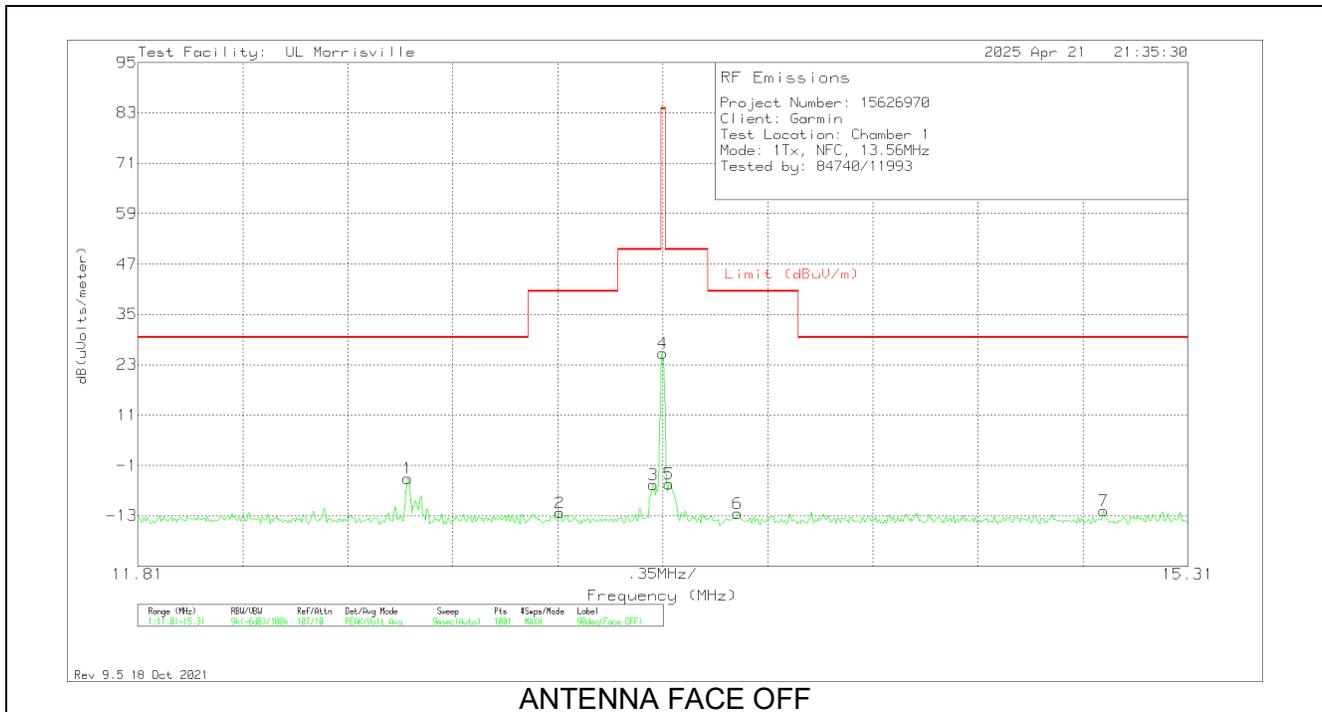
FUNDAMENTAL



ANTENNA FACE ON

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | ANT (dB/m) | Gain/Loss (dB) | Dist. Corr. Factor (dB) | Corrected Reading dB(uVolts/meter) | Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Loop Angle |
|--------|-----------------|----------------------|-----|------------|----------------|-------------------------|------------------------------------|----------------|-------------|----------------|-------------|------------|
| 1 | 12.7095 | 22.98 | Pk | 10.6 | .6 | -40 | -5.82 | 29.5 | -35.32 | 173 | 100 | 0 degs |
| 2 | 13.2835 | 16.45 | Pk | 10.6 | .6 | -40 | -12.35 | 40.5 | -52.85 | 173 | 100 | 0 degs |
| 3 | 13.5285 | 26.81 | Pk | 10.6 | .6 | -40 | -1.99 | 50.5 | -52.49 | 173 | 100 | 0 degs |
| 4 | 13.56 | 58.88 | Pk | 10.6 | .6 | -40 | 29.88 | 84 | -54.12 | 173 | 100 | 0 degs |
| 5 | 13.5915 | 26.81 | Pk | 10.6 | .6 | -40 | -1.99 | 50.5 | -52.49 | 173 | 100 | 0 degs |
| 6 | 13.889 | 16.52 | Pk | 10.6 | .6 | -40 | -12.28 | 40.5 | -52.78 | 173 | 100 | 0 degs |
| 7 | 14.407 | 19.41 | Pk | 10.6 | .6 | -40 | -9.39 | 29.5 | -38.89 | 173 | 100 | 0 degs |

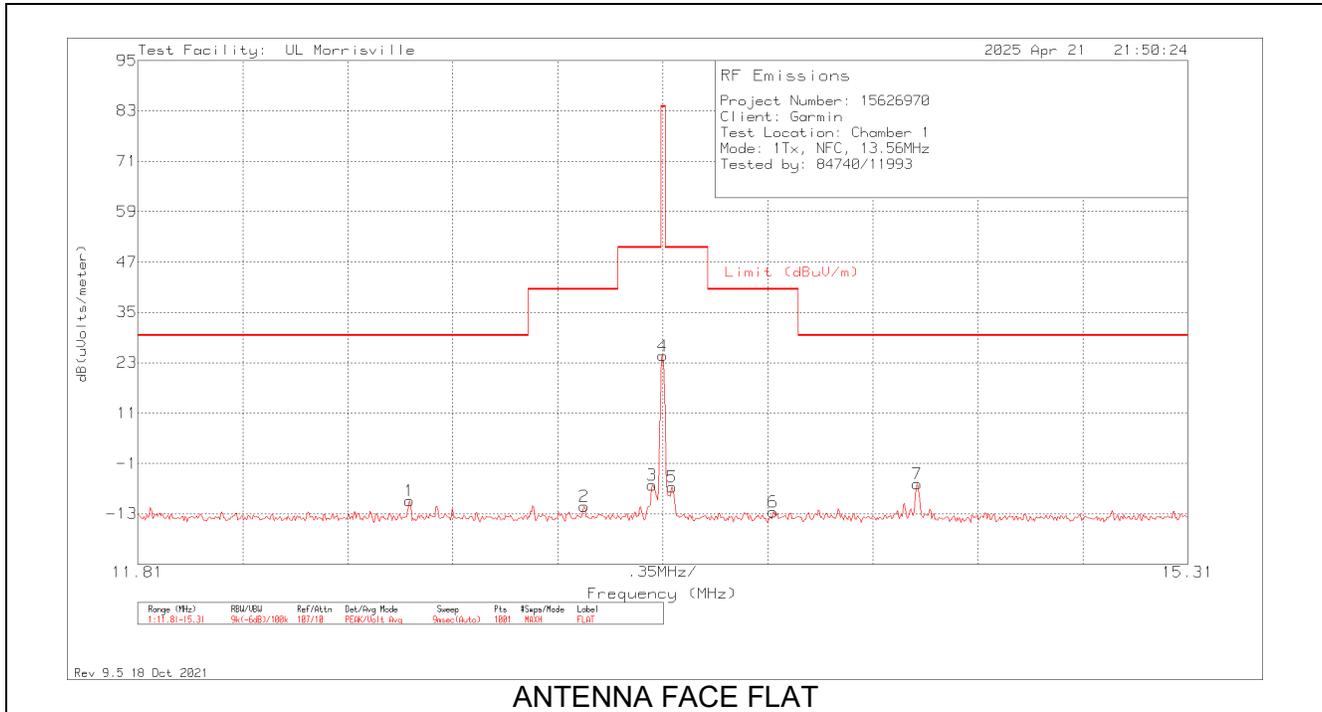
Pk - Peak detector



ANTENNA FACE OFF

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | ANT (dB/m) | Gain/Loss (dB) | Dist. Corr. Factor (dB) | Corrected Reading dB(uVolts/meter) | Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Loop Angle |
|--------|-----------------|----------------------|-----|------------|----------------|-------------------------|------------------------------------|----------------|-------------|----------------|-------------|------------|
| 1 | 12.7095 | 24.7 | Pk | 10.6 | .6 | -40 | -4.1 | 29.5 | -33.6 | 90 | 100 | 90 degs |
| 2 | 13.217 | 16.47 | Pk | 10.6 | .6 | -40 | -12.33 | 40.5 | -52.83 | 90 | 100 | 90 degs |
| 3 | 13.5285 | 23.21 | Pk | 10.6 | .6 | -40 | -5.59 | 50.5 | -56.09 | 90 | 100 | 90 degs |
| 4 | 13.56 | 54.5 | Pk | 10.6 | .6 | -40 | 25.7 | 84 | -58.3 | 90 | 100 | 90 degs |
| 5 | 13.581 | 23.4 | Pk | 10.6 | .6 | -40 | -5.4 | 50.5 | -55.9 | 90 | 100 | 90 degs |
| 6 | 13.8085 | 16.32 | Pk | 10.6 | .6 | -40 | -12.48 | 40.5 | -52.98 | 90 | 100 | 90 degs |
| 7 | 15.03 | 17.08 | Pk | 10.5 | .6 | -40 | -11.82 | 29.5 | -41.32 | 90 | 100 | 90 degs |

Pk - Peak detector

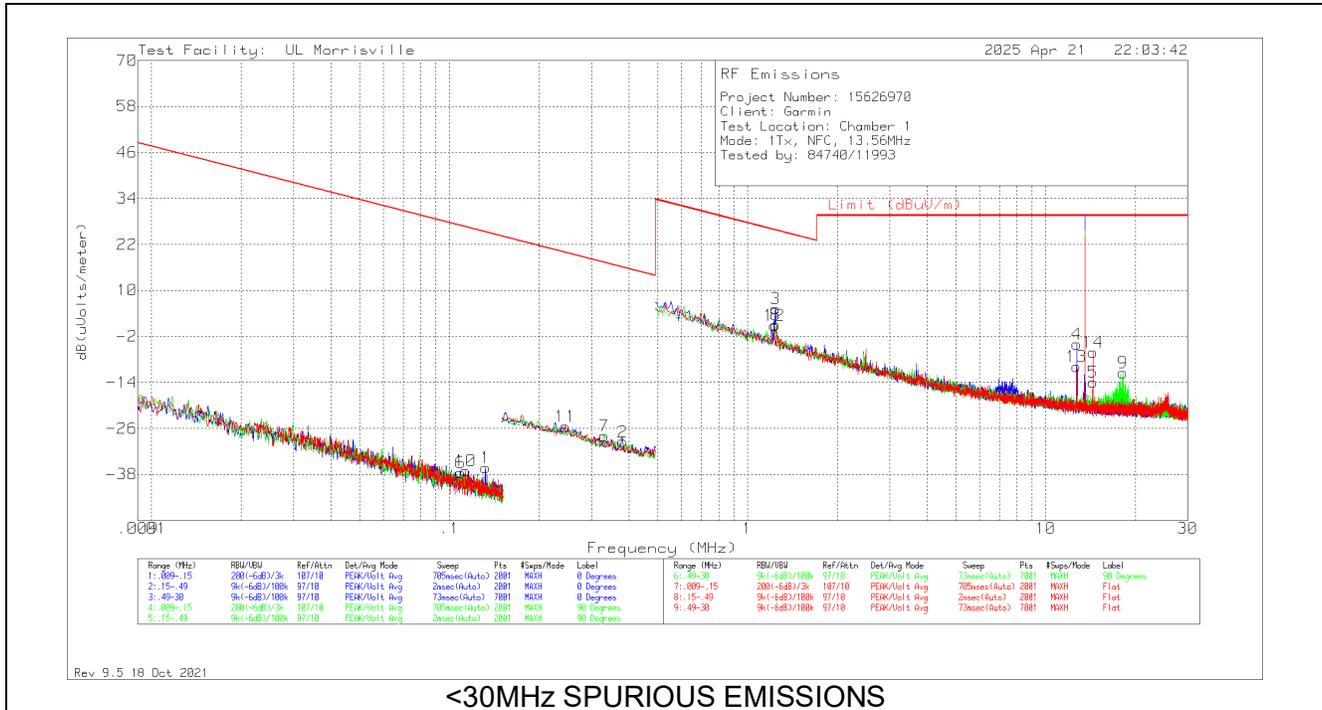


ANTENNA FACE FLAT

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | ANT (dB/m) | Gain/Loss (dB) | Dist. Corr. Factor (dB) | Corrected Reading dB(uVolts/meter) | Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Loop Angle |
|--------|-----------------|----------------------|-----|------------|----------------|-------------------------|------------------------------------|----------------|-------------|----------------|-------------|------------|
| 1 | 12.7165 | 18.96 | Pk | 10.6 | .6 | -40 | -9.84 | 29.5 | -39.34 | 141 | 100 | Flat |
| 2 | 13.2975 | 17.53 | Pk | 10.6 | .6 | -40 | -11.27 | 40.5 | -51.77 | 141 | 100 | Flat |
| 3 | 13.525 | 22.62 | Pk | 10.6 | .6 | -40 | -6.18 | 50.5 | -56.68 | 141 | 100 | Flat |
| 4 | 13.56 | 53.45 | Pk | 10.6 | .6 | -40 | 24.65 | 84 | -59.35 | 141 | 100 | Flat |
| 5 | 13.5915 | 22.16 | Pk | 10.6 | .6 | -40 | -6.64 | 50.5 | -57.14 | 141 | 100 | Flat |
| 6 | 13.9275 | 16.27 | Pk | 10.6 | .6 | -40 | -12.53 | 40.5 | -53.03 | 141 | 100 | Flat |
| 7 | 14.407 | 22.97 | Pk | 10.6 | .6 | -40 | -5.83 | 29.5 | -35.33 | 141 | 100 | Flat |

Pk - Peak detector

SPURIOUS EMISSION – E FIELD

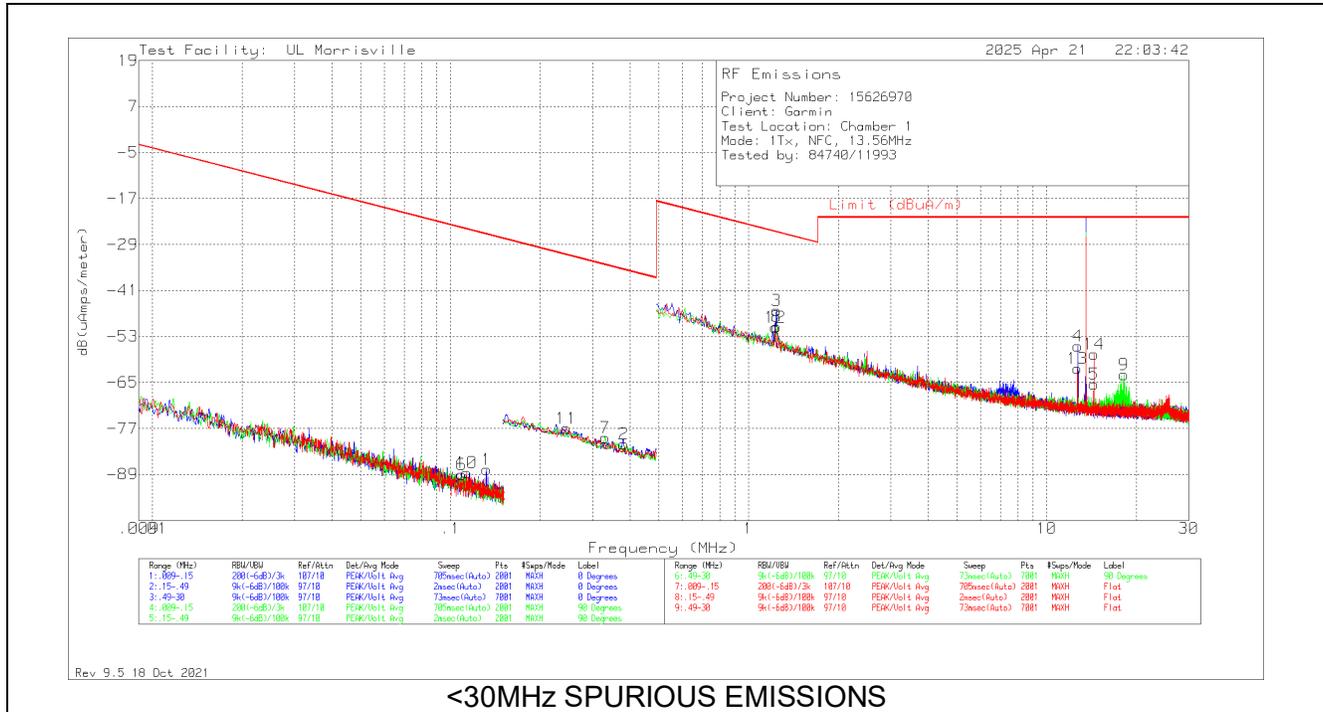


<30MHz SPURIOUS EMISSIONS

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | ANT (dB/m) | Gain/Loss (dB) | Dist. Corr. Factor (dB) | Corrected Reading dB(uVolts/meter) | QP/AV Limit (dBuV/m) | PK Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Loop Angle |
|--------|-----------------|----------------------|-----|------------|----------------|-------------------------|------------------------------------|----------------------|-------------------|-------------|----------------|------------|
| 6 | .10893 | 31.27 | Pk | 11.1 | .1 | -80 | -37.53 | 26.86 | - | -64.39 | 0-360 | 90 degs |
| 10 | .11309 | 31.76 | Pk | 11.1 | .1 | -80 | -37.04 | 26.54 | 46.54 | -63.58 | 0-360 | Flat |
| 1 | .1319 | 32.7 | Pk | 11 | .1 | -80 | -36.2 | 25.2 | 45.2 | -61.4 | 0-360 | 0 degs |
| 11 | .24478 | 43.57 | Pk | 10.9 | .1 | -80 | -25.43 | 19.83 | 39.83 | -45.26 | 0-360 | Flat |
| 7 | .33088 | 41.07 | Pk | 10.9 | .1 | -80 | -27.93 | 17.21 | 37.21 | -45.14 | 0-360 | 90 degs |
| 2 | .38188 | 39.43 | Pk | 11 | .1 | -80 | -29.47 | 15.97 | 35.97 | -45.44 | 0-360 | 0 degs |
| 12 | 1.2278 | 29.67 | Pk | 11 | .2 | -40 | .87 | 25.82 | - | -24.95 | 0-360 | Flat |
| 3 | 1.24045 | 34.07 | Pk | 11 | .2 | -40 | 5.27 | 25.73 | - | -20.46 | 0-360 | 0 degs |
| 8 | 1.24045 | 29.86 | Pk | 11 | .2 | -40 | 1.06 | 25.73 | - | -24.67 | 0-360 | 90 degs |
| 13 | 12.6911 | 18.89 | Pk | 10.6 | .6 | -40 | -9.91 | 29.54 | - | -39.45 | 0-360 | Flat |
| 4 | 12.70797 | 24.78 | Pk | 10.6 | .6 | -40 | -4.02 | 29.54 | - | -33.56 | 0-360 | 0 degs |
| 5 | 14.40702 | 14.85 | Pk | 10.6 | .6 | -40 | -13.95 | 29.54 | - | -43.49 | 0-360 | 0 degs |
| 14 | 14.40702 | 22.71 | Pk | 10.6 | .6 | -40 | -6.09 | 29.54 | - | -35.63 | 0-360 | Flat |
| 9 | 18.13396 | 17.54 | Pk | 10.3 | .7 | -40 | -11.46 | 29.54 | - | -41 | 0-360 | 90 degs |

Pk - Peak detector

SPURIOUS EMISSION – H FIELD



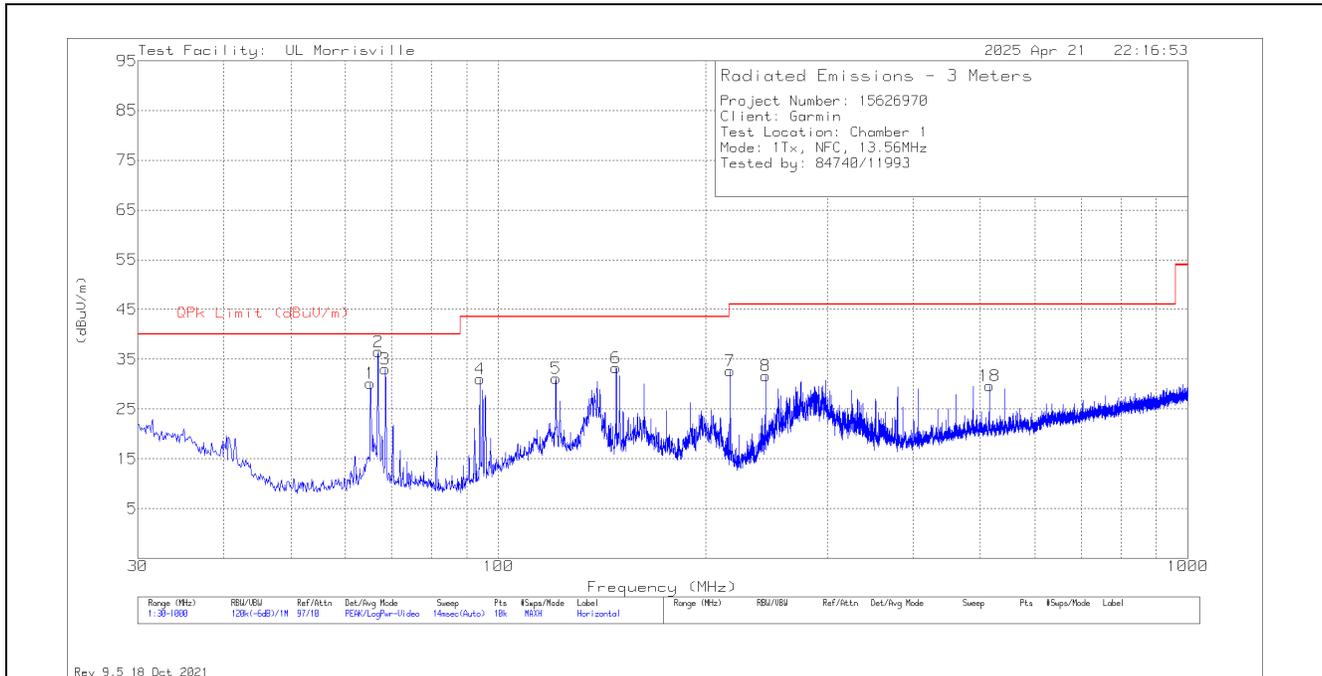
<30MHz SPURIOUS EMISSIONS

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | ANT (dB/m) | Gain/Loss (dB) | Dist. Corr. Factor (dB) | Corrected Reading dB(uAmps/meter) | QP/AV Limit (dBuA/m) | PK Limit (dBuA/m) | Margin (dB) | Azimuth (Degs) | Loop Angle |
|--------|-----------------|----------------------|-----|------------|----------------|-------------------------|-----------------------------------|----------------------|-------------------|-------------|----------------|------------|
| 6 | .10893 | 31.27 | Pk | -40.4 | .1 | -80 | -89.03 | -24.64 | - | -64.39 | 0-360 | 90 degs |
| 10 | .11309 | 31.76 | Pk | -40.4 | .1 | -80 | -88.54 | -24.96 | -4.96 | -63.58 | 0-360 | Flat |
| 1 | .1319 | 32.7 | Pk | -40.5 | .1 | -80 | -87.7 | -26.3 | -6.3 | -61.4 | 0-360 | 0 degs |
| 11 | .24478 | 43.57 | Pk | -40.6 | .1 | -80 | -76.93 | -31.67 | -11.67 | -45.26 | 0-360 | Flat |
| 7 | .33088 | 41.07 | PK | -40.6 | .1 | -80 | -79.43 | -34.29 | -14.29 | -45.14 | 0-360 | 90 degs |
| 2 | .38188 | 39.43 | Pk | -40.5 | .1 | -80 | -80.97 | -35.53 | -15.53 | -45.44 | 0-360 | 0 degs |
| 12 | 1.2278 | 29.67 | PK | -40.5 | .2 | -40 | -50.63 | -25.68 | - | -24.95 | 0-360 | Flat |
| 3 | 1.24045 | 34.07 | PK | -40.5 | .2 | -40 | -46.23 | -25.77 | - | -20.46 | 0-360 | 0 degs |
| 8 | 1.24045 | 29.86 | PK | -40.5 | .2 | -40 | -50.44 | -25.77 | - | -24.67 | 0-360 | 90 degs |
| 13 | 12.6911 | 18.89 | PK | -40.9 | .6 | -40 | -61.41 | -21.96 | - | -39.45 | 0-360 | Flat |
| 4 | 12.70797 | 24.78 | PK | -40.9 | .6 | -40 | -55.52 | -21.96 | - | -33.56 | 0-360 | 0 degs |
| 5 | 14.40702 | 14.85 | PK | -40.9 | .6 | -40 | -65.45 | -21.96 | - | -43.49 | 0-360 | 0 degs |
| 14 | 14.40702 | 22.71 | PK | -40.9 | .6 | -40 | -57.59 | -21.96 | - | -35.63 | 0-360 | 0 degs |
| 9 | 18.13396 | 17.54 | PK | -41.2 | .7 | -40 | -62.96 | -21.96 | - | -41 | 0-360 | 90 degs |

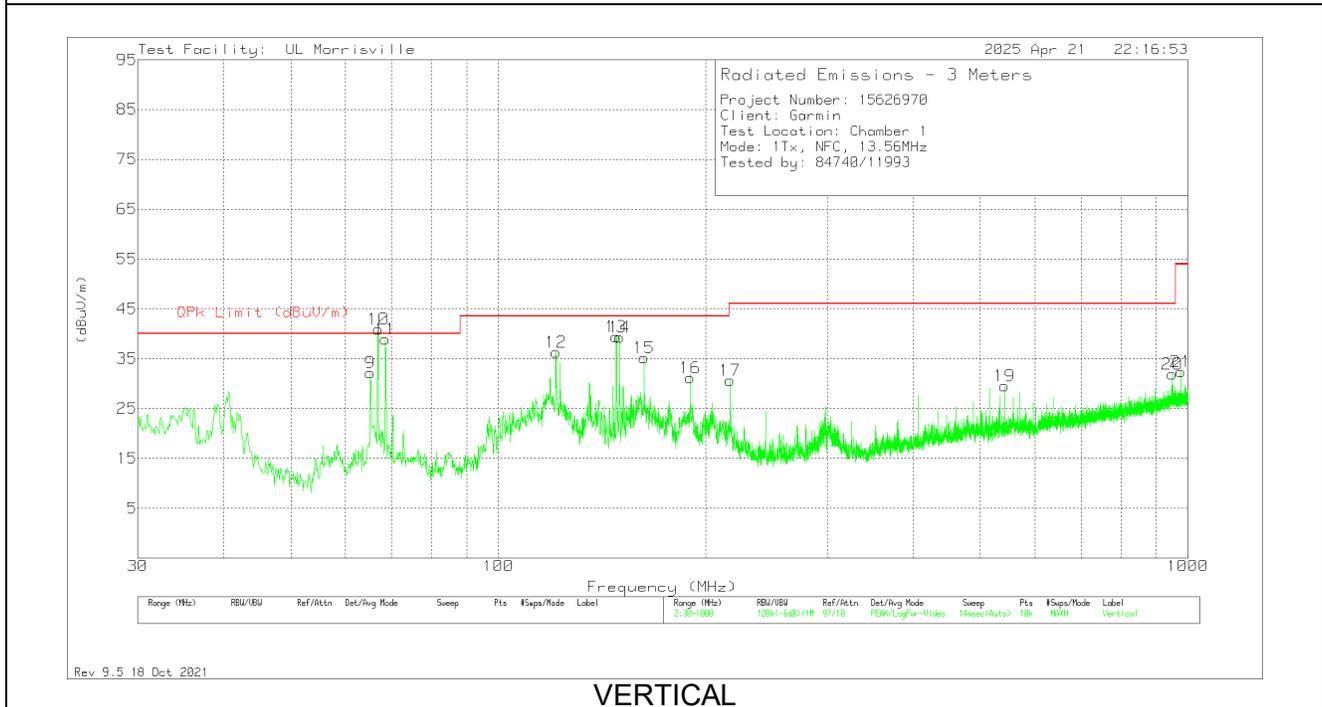
Pk - Peak detector

9.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

9.3.1. TYPE B, WITH TAG



HORIZONTAL



VERTICAL

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 90629 (dB/m) | Gain/Loss (dB) | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|--------------|----------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 1 | 65.211 | 47.11 | Pk | 14.3 | -31.2 | 30.21 | 40 | -9.79 | 0-360 | 399 | H |
| 9 | 65.211 | 49.09 | Pk | 14.3 | -31.2 | 32.19 | 40 | -7.81 | 0-360 | 100 | V |
| 2 | 66.946 | 49.53 | Qp | 14.4 | -31.3 | 32.63 | 40 | -7.37 | 289 | 267 | H |
| 10 | 66.9455 | 55.33 | Qp | 14.4 | -31.3 | 38.43 | 40 | -1.57 | 52 | 100 | V |
| 3 | 68.606 | 50.03 | Pk | 14.4 | -31.4 | 33.03 | 40 | -6.97 | 0-360 | 299 | H |
| 11 | 68.6482 | 52.12 | Qp | 14.4 | -31.4 | 35.12 | 40 | -4.88 | 26 | 140 | V |
| 4 | 94.02 | 46.96 | Pk | 15 | -30.9 | 31.06 | 43.52 | -12.46 | 0-360 | 200 | H |
| 5 | 121.18 | 41.55 | Pk | 20 | -30.4 | 31.15 | 43.52 | -12.37 | 0-360 | 299 | H |
| 12 | 121.18 | 46.75 | Pk | 20 | -30.4 | 36.35 | 43.52 | -7.17 | 0-360 | 100 | V |
| 6 | 148.243 | 44.71 | Pk | 18.8 | -30.2 | 33.31 | 43.52 | -10.21 | 0-360 | 399 | H |
| 13 | 148.3058 | 48.66 | Qp | 18.8 | -30.2 | 37.26 | 43.52 | -6.26 | 38 | 112 | V |
| 14 | 150.0096 | 48.35 | Qp | 18.8 | -30.5 | 36.65 | 43.52 | -6.87 | 60 | 103 | V |
| 15 | 162.696 | 46.78 | Pk | 18.5 | -30.1 | 35.18 | 43.52 | -8.34 | 0-360 | 100 | V |
| 16 | 189.759 | 43.45 | Pk | 17.8 | -30.1 | 31.15 | 43.52 | -12.37 | 0-360 | 100 | V |
| 7 | 216.919 | 45.87 | Pk | 16.8 | -30 | 32.67 | 46.02 | -13.35 | 0-360 | 99 | H |
| 17 | 216.919 | 43.84 | Pk | 16.8 | -30 | 30.64 | 46.02 | -15.38 | 0-360 | 100 | V |
| 8 | 244.079 | 43.77 | Pk | 17.7 | -29.8 | 31.67 | 46.02 | -14.35 | 0-360 | 299 | H |
| 18 | 515.291 | 34.02 | Pk | 23.8 | -28.2 | 29.62 | 46.02 | -16.4 | 0-360 | 200 | H |
| 19 | 542.354 | 33.55 | Pk | 24.3 | -28.3 | 29.55 | 46.02 | -16.47 | 0-360 | 100 | V |
| 20 | 949.269 | 29.31 | Pk | 28.9 | -26.3 | 31.91 | 46.02 | -14.11 | 0-360 | 100 | V |
| 21 | 976.332 | 29.1 | Pk | 29 | -25.7 | 32.4 | 53.97 | -21.57 | 0-360 | 100 | V |

Pk - Peak detector
 Qp - Quasi-Peak detector

10. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

IC RSS-210, Annex B.6

Carrier frequency stability shall be maintained to $\pm 0.01\%$ (± 100 ppm).

TEST PROCEDURE

ANSI C63.10-2020 Clause 6.8

RESULTS

No non-compliance noted.

Nominal/High Voltage: 5.5Vdc.

10.1. TYPE B, 3cm Separation WITH TAG

| Reference Frequency: EUT Channel 13.56 MHz @ 20°C | | | | | | | | | | |
|---|-------------|---|--------------|-------------------|--------------|-------------------|--------------|-------------------|---------------|-----------------------------|
| Limit: ± 100 ppm = 1.356 kHz | | | | | | | | | | |
| Power Supply | Envir. Temp | Frequency Deviation Measured with Time Elapse | | | | | | | | |
| (Vdc) | (°C) | Startup (MHz) | Delta (ppm) | @ 2 mins (MHz) | Delta (ppm) | @ 5 mins (MHz) | Delta (ppm) | @ 10 mins (MHz) | Delta (ppm) | Limit (ppm) |
| 5.50 | 50 | 13.5595044 | 0.721 | 13.5595034 | 0.799 | 13.5595019 | 0.907 | 13.5595018 | 0.914 | ± 100 |
| 5.50 | 40 | 13.5595095 | 0.351 | 13.5595076 | 0.487 | 13.5595060 | 0.608 | 13.5595049 | 0.686 | ± 100 |
| 5.50 | 30 | 13.5594912 | 1.697 | 13.5595395 | -1.863 | 13.5594345 | 5.882 | 13.5595247 | -0.771 | ± 100 |
| 5.50 | 20 | 13.5595142 | 0.000 | 13.5595138 | 0.031 | 13.5595134 | 0.063 | 13.5595278 | -1.004 | ± 100 |
| 5.50 | 10 | 13.5595130 | 0.094 | 13.5595347 | -1.507 | 13.5594940 | 1.490 | 13.5595319 | -1.303 | ± 100 |
| 5.50 | 0 | 13.5595127 | 0.115 | 13.5595130 | 0.093 | 13.5595123 | 0.138 | 13.5595108 | 0.253 | ± 100 |
| 5.50 | -10 | 13.5595115 | 0.203 | 13.5595133 | 0.065 | 13.5595104 | 0.284 | 13.5595168 | -0.188 | ± 100 |
| 5.50 | -20 | 13.5595198 | -0.408 | 13.5595137 | 0.042 | 13.5595138 | 0.031 | 13.5595143 | -0.008 | ± 100 |
| 4.50 | 20 | 13.5595188 | -0.337 | 13.5595190 | -0.355 | 13.5595187 | -0.330 | 13.5595194 | -0.382 | ± 100 |

Tested by: 33499/84740

Test date: 2025-04-22

11. SETUP PHOTOS

Please refer to R15626970-EP1 for setup photos

END OF TEST REPORT