

TEST REPORT

Report Number: 105875905DAL-001

Project Numbers: G105875905

Report Issue Date: August 05, 2024

Testing performed on

Earpiece

Models Tested: E10824

to

FCC Part 15 Subpart C (15.247)

For

STAT Health Informatics, Inc.

Test Performed by:

Intertek Testing Services NA, Inc.
1809 10th Street Suite 400
Plano, TX 75074
USA

Test Authorized by:

STAT Health Informatics, Inc.
119 Braintree Street, Suite 301
Allston, MA 02134
USA

Prepared by:



Kaushal Patel

Date: August 05, 2024

c

Reviewed by:


Minh Ly

Date: August 05, 2024

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Report No. 105875905DAL-001	
Equipment Under Test:	Earpiece
Model Numbers:	E10824
Applicant:	STAT Health Informatics, Inc.
Contact:	Paul Jin
Address:	119 Braintree Street, Suite 301 Allston, MA 02134 USA
Country:	USA
Email:	paul@stat-health.com
Applicable Regulation:	FCC Part 15 Subpart C (15.247)
Date of Test:	July 15, 2024, to August 05, 2024

We attest to the accuracy of this report:



Kaushal Patel
Compliance Investigator



Minh Ly
EMC Team Lead

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1.0 Summary of Tests

Test	Reference FCC	Result
RF Output Power	15.247(b)(3)	Complies
6 dB Bandwidth	15.247(a)(2)	Complies
Power Density	15.247(e)	Complies
Out of Band Antenna Conducted Emission	15.247(d)	Complies
Transmitter Radiated Emissions	15.247(d), 15.209, 15.205	Complies
AC Line Conducted Emission	15.207	Complies
Antenna Requirement	15.203	Complies (Internal Antenna)

EUT is rechargeable battery powered.

EUT receive date: July 15, 2024

EUT receive condition: The production version of the EUT was received in good condition with no apparent damage.

Test start date: July 15, 2024

Test completion date: August 05, 2024

The test results in this report pertain only to the item tested.

2.0 General Information

2.1 Product Description

STAT Health Informatics, Inc. supplied the following description of the EUT:
Earpiece Model # E10824 with Bluetooth (BLE)

For more information, refer to the manufacturer user manual.

The following product specification, declared by the manufacturer.

Information about the 2.4 GHz BLE radio is presented below:

Applicant	STAT Health Informatics, Inc.
Model No.	E10824
Type of transmission	Digital Transmission System (DTS)
Rated RF Output	0 dBm
Antenna(s) & Gain	Internal Antenna, Gain: -17.3 dBi
Frequency Range	2402 – 2480 MHz
Type of modulation/data rate	GFSK / 1Mbit/s
Number of Channel(s)	40 Channels
Test Channels	2402 MHz, 2440 MHz, 2480 MHz
Power Configuration	1.4VDC Battery
Applicant Name & Address	STAT Health Informatics, Inc. 119 Braintree Street, Suite 301 Allston, MA 02134 USA

*: Antenna gain was provided by STAT Health Informatics, Inc. Intertek takes no responsibility for the accuracy of the antenna gain.

*: This test report covers the BLE transmitter only.

2.2 Related Submittal(s) Grants

None.

2.3 Test Facility

The test site used to collect the radiated data is site 1 (3-m semi-anechoic chamber). This test facility and site measurement data have been fully placed on file with the FCC, IC and A2LA accredited.

2.4 Test Methodology

Antenna conducted measurements were performed according to the FCC documents “Guidance for Performing Compliance Measurement on Digital Transmission Systems (DTS) Operating under §15.247” (KDB 558074 D01 DTS Meas Guidance v05r02).

Radiated emissions and AC mains conducted emissions measurements were performed according to the procedures in ANSI C63.10: 2020. Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the “Data Sheet” of this report.

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn’t take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz
RF Power and Power Density – antenna conducted	-	0.7 dB	-
Unwanted emissions – antenna conducted	1.1 dB	1.3 dB	1.9 dB
Bandwidth – antenna conducted	-	30 Hz	-

Measurement	Expanded Uncertainty (k=2)			
	0.15 MHz – 30MHz	30 – 200 MHz	200 MHz – 1 GHz	1 GHz – 18 GHz
Radiated emissions	-	4.7	4.6	5.1 dB
AC mains conducted emissions	2.1 dB	-	-	-

3.0 System Test Configuration

3.1 Support Equipment

Equipment Under Test				
Description	Manufacturer	Type	Model	Serial Number
Radiated Sample	STAT Health Informatics, Inc.	Earpiece	E10824	ear240710150230
Conducted Sample	STAT Health Informatics, Inc.	Earpiece	E10824	ear240710150843

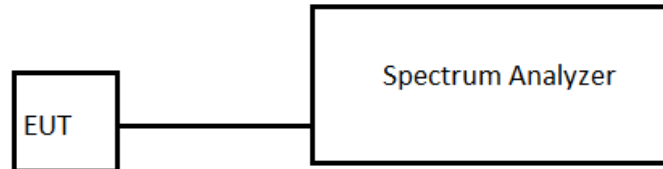
Equipment Under Test Power Configuration			
Rated Voltage	Rated Current	Rated Frequency	Number of phases
1.4 Vdc – External	N/A	N/A	N/A

Note: New Batteries used before each test.

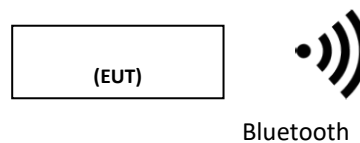
Support Equipment			
Description	Manufacturer	Model	Serial Number
Base Station	STAT Health Informatics, Inc.	B10824	NA

3.2 Block Diagram of Test Setup

Conducted Measurements SETUP



Radiated Measurements SETUP



S = Shielded	F = With Ferrite
U = Unshielded	m = Length in Meters

3.3 EUT Photo

Model: E10824



3.4 Justification

For radiated emission measurements the EUT is placed on a non-conductive table. Different orientations of the EUT were tested and only the worse-case emissions were reported.

3.5 Software Exercise Program

The EUT exercise program used during radiated and conducted testing was provided by STAT Health Informatics, Inc.

3.6 Mode of Operation during Test

During transmitter testing, the transmitter was setup to transmit at maximum RF power on low, middle and high channel.

EUT was placed into transmit mode at the lowest (2402MHz) middle (2440MHz), and highest (2480MHz) channels.

3.7 Modifications Required for Compliance

No modifications were made by the manufacturer or Intertek to the EUT in order to bring the EUT into compliance.

3.8 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusions from the standard were made.

4.0 Measurement Results

4.1 6-dB Bandwidth and 99% Occupied Bandwidth FCC Rule: 15.247(a)(2)

4.1.1 Requirement

The minimum 6-dB bandwidth shall be at least 500 kHz

4.1.2 Procedure

A spectrum analyzer was connected to the antenna port of the transmitter.

For FCC 6dB Channel Bandwidth the Procedure described in the FCC Publication KDB 558074 D01 Meas Guidance v05r02 was used to determine the DTS occupied bandwidth. Section 11.8.1 Option 1 of ANSI 63.10 was used.

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

For 99% power bandwidth measurement, the bandwidth was determined by using the built-in 99% occupied bandwidth function of the spectrum analyzer. The resolution bandwidth is set to 1% of the selected span as is without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.

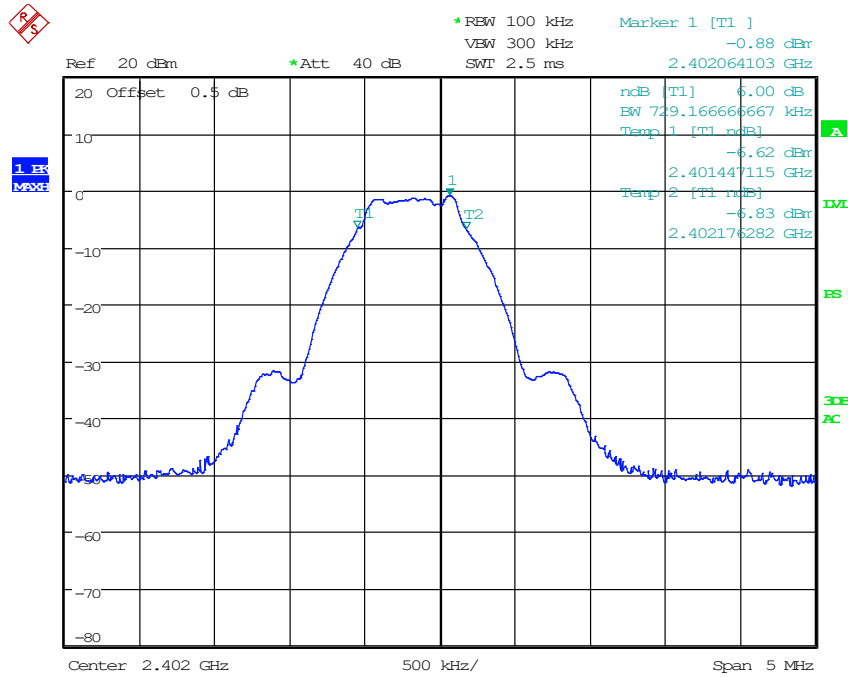
4.1.3 Test Result

Earpiece-Model E10824

Frequency (MHz)	6-dB bandwidth FCC 15.247 kHz	Plot
2402	729.16	1.1
2440	745.19	1.2
2480	753.20	1.3

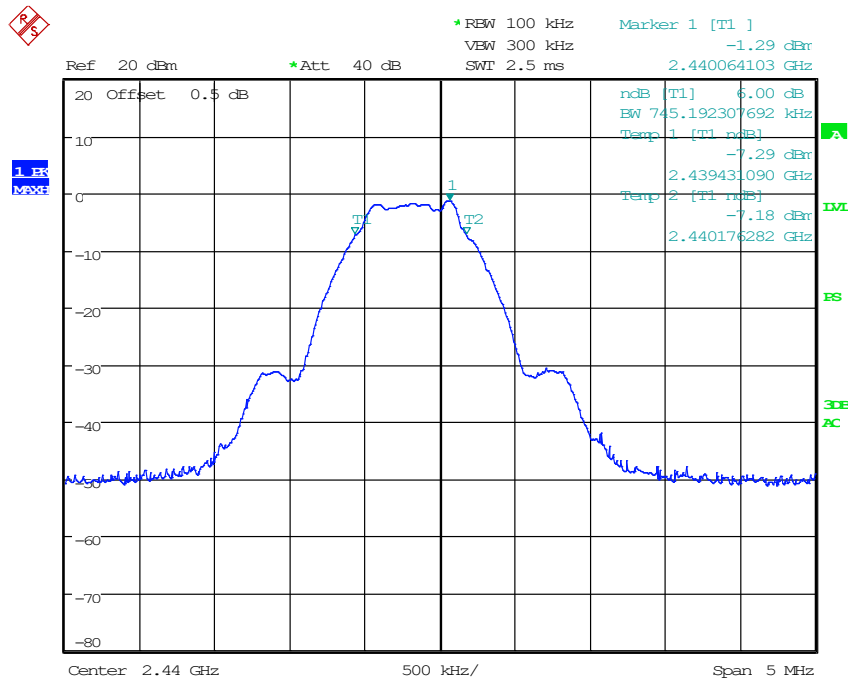
Tested By	Test Date	Results
Kaushal Patel	July 24, 2024	Complies

Plot 1.1



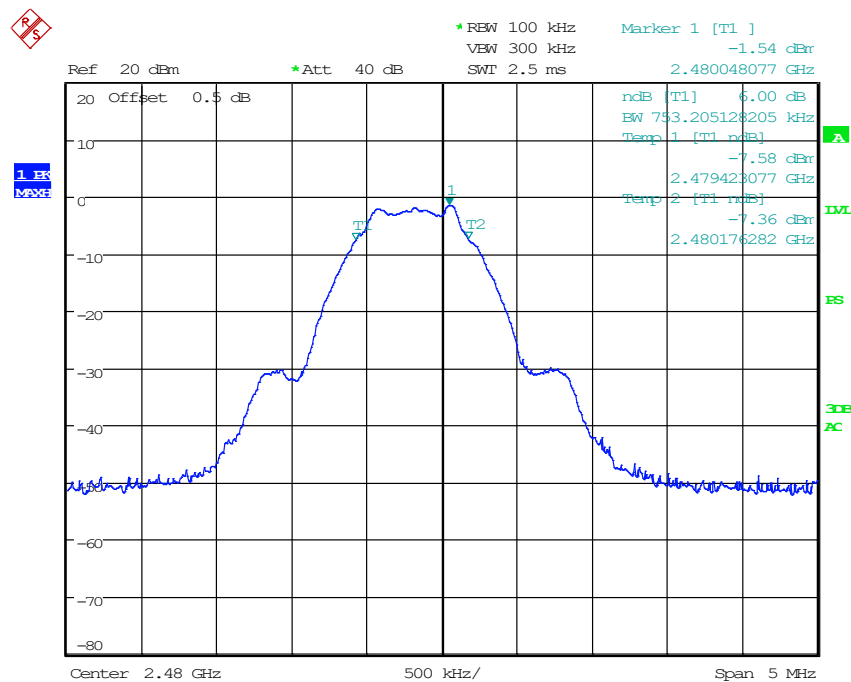
Date: 24.JUL.2024 13:29:17

Plot 1.2



Date: 24.JUL.2024 13:39:45

Plot 1.3



Date: 24.JUL.2024 14:09:03

Results	Complies
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4.2 Maximum Peak Conducted Output Power at Antenna Terminals FCC Rule: 15.247(b)(3);

4.2.1 Requirement

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt or 30 dBm. For antennas with gains greater than 6 dBi, transmitter output level must be decreased appropriately, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2.2 Procedure

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02 was used. Specifically, section 11.9.1.1 RBW $\geq$ DTS bandwidth in ANSI 63.10.

1. Set the RBW $\geq$ DTS Bandwidth
2. Set the VBW $\geq 3 \times$ RBW
3. Set the span $\geq 3 \times$ RBW
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max Hold
7. Allow trace to fully stabilize
8. Use peak marker function to determine the peak amplitude level.

A spectrum analyzer was connected to the antenna port of the transmitter.

4.2.3 Test Result

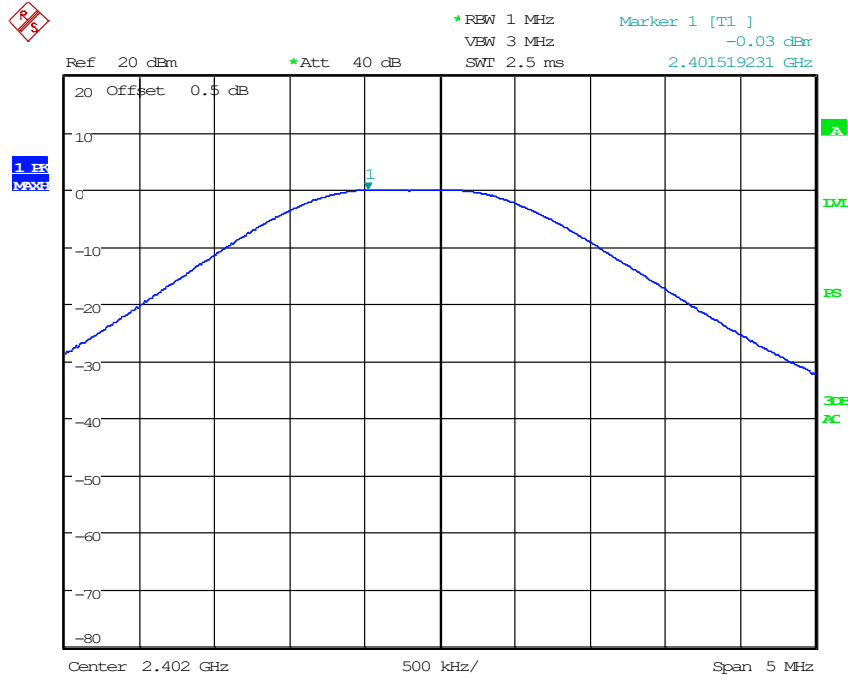
Refer to the following plots 2.1 – 2.3 for the test details.

Earpiece Model E10824

Frequency	Conducted Power (peak)		Plot
MHz	dBm	mW	
2402	-0.03	0.993	2.1
2440	-0.39	0.914	2.2
2480	-0.54	0.883	2.3

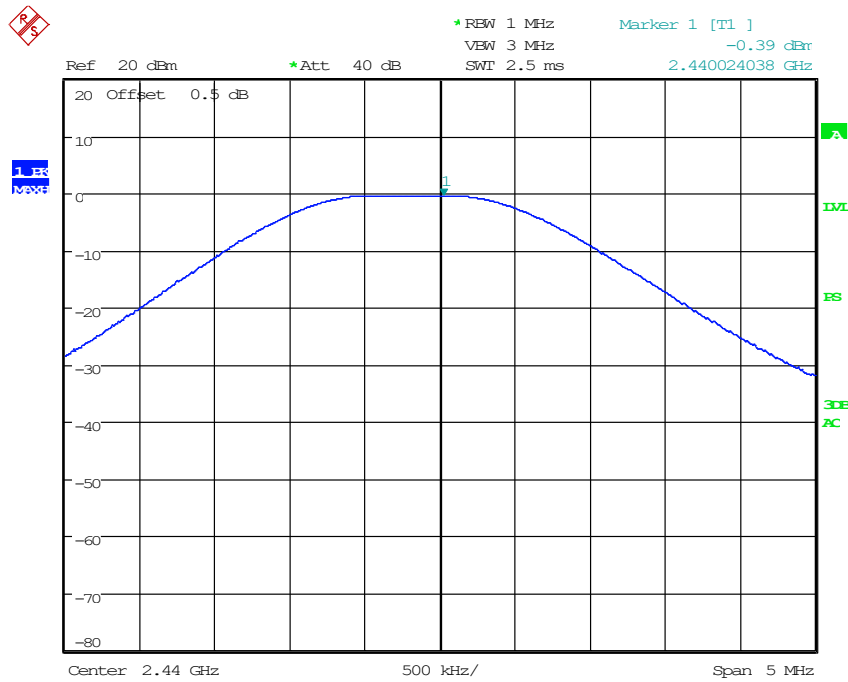
Tested By	Test Date	Results
Kaushal Patel	July 24, 2024	Complies

Plot 2.1



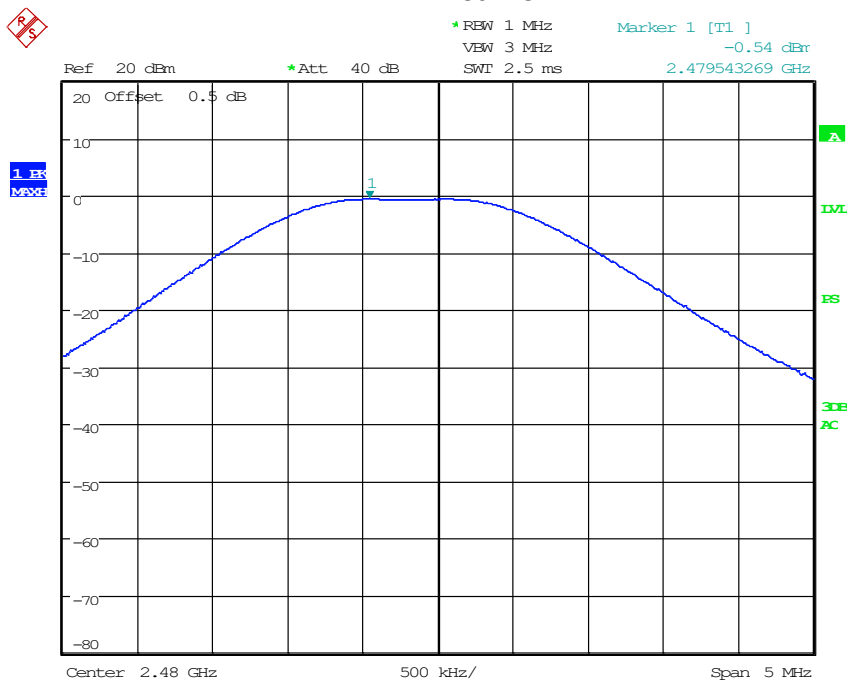
Date: 24.JUL.2024 13:33:15

Plot 2.2



Date: 24.JUL.2024 13:41:04

Plot 2.3



Date: 24.JUL.2024 14:08:21

Results

Complies

4.3 Maximum Power Spectral Density FCC: 15.247 (e);

4.3.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna should not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2 Procedure

A spectrum analyzer was connected to the antenna port of the transmitter.

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02, specifically section 11.10.2 Method PKPSD (peak PSD) of ANSI 63.10.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the *DTS bandwidth*.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.3.3 Test Result

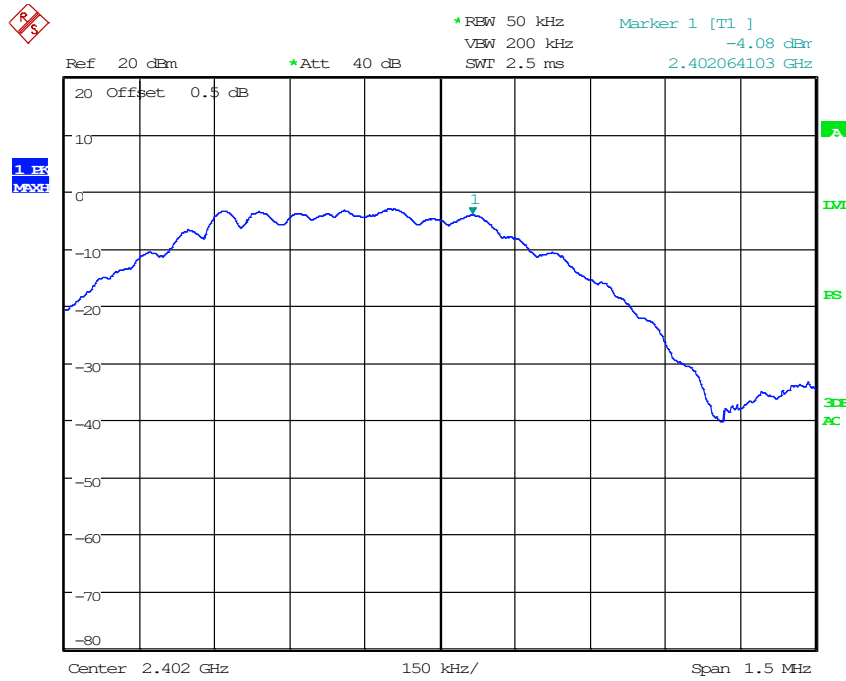
Refer to the following plots for the test result

Earpiece Model-E10824

Frequency, MHz	Maximum Power Spectral Density, dBm	Maximum Power Spectral Density Limit, dBm	Margin, dB	Plot
2402	-4.08	8.0	12.08	3.1
2440	-3.58	8.0	11.58	3.2
2480	-3.88	8.0	11.88	3.3

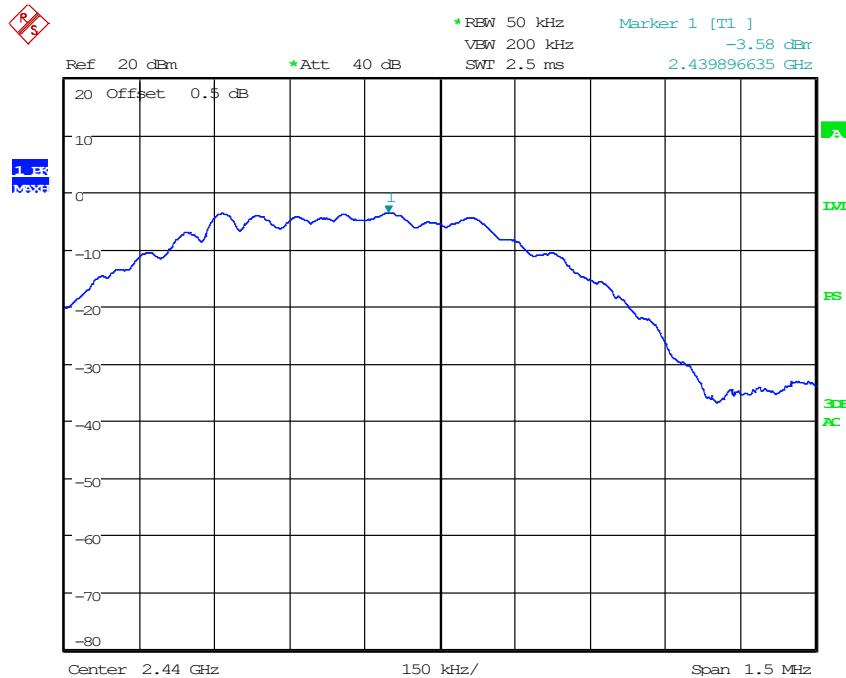
Tested By	Test Date	Results
Kaushal Patel	July 24, 2024	Complies

Plot 3. 1



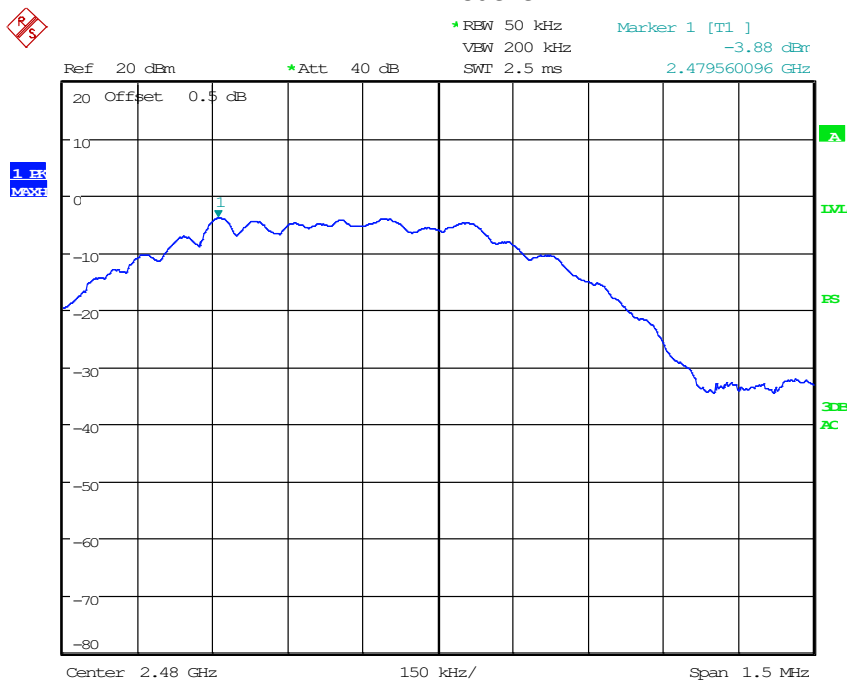
Date: 24.JUL.2024 13:30:36

Plot 3. 2



Date: 24.JUL.2024 13:40:35

Plot 3.3



Date: 24.JUL.2024 14:09:53

Results

Complies

4.4 Out of Band Antenna Conducted Emission FCC: 15.247(d);

4.4.1 Requirement

In any 100 kHz bandwidth outside the EUT pass-band, the RF power shall be below the maximum in-band 100 kHz emissions by at least 20 dB (if peak power of in-band emission is measured) or 30 dB (if average power of in-band emission is measured).

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)

4.4.2 Procedure

The procedure described in FCC Publication KDB 558074 D01 Meas Guidance v05r02, specifically section 11.11 DTS Emissions in non-restricted frequency bands of ANSI 63.10.

A spectrum analyzer was connected to the antenna port of the transmitter.

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq 3 \times$ RBW.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

The unwanted emissions were measured from 30 MHz to 25 GHz. Plots below are corrected for cable loss and then compared to the limits.

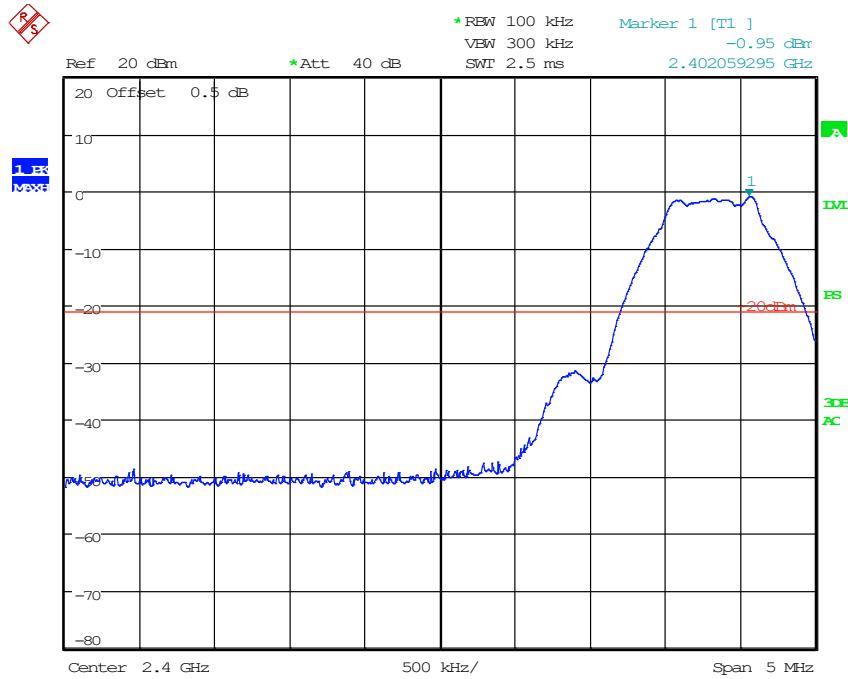
4.4.3 Test Result

Refer to the following plots 4.3 – 4.5 and plots 4.2.3 – 4.2.5 for unwanted conducted emissions. The plot shows -20dB attenuation limit line.

Tested By	Test Date	Results
Kaushal Patel	July 19, 2024 & July 24, 2024	Complies

Tx @ Low Channel, 2402 MHz Band Edge

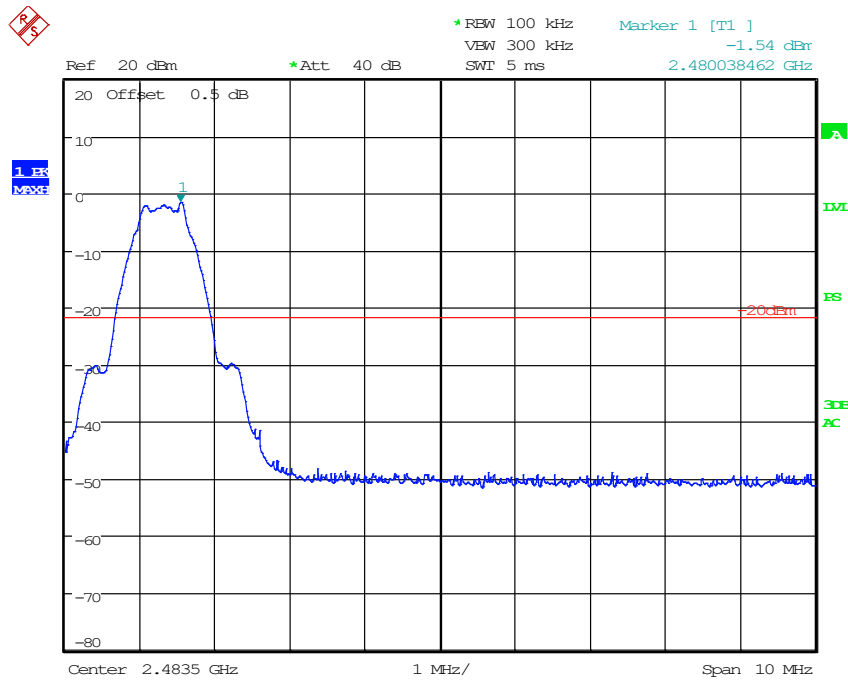
Plot 4.1



Date: 24.JUL.2024 13:35:13

Tx @ High Channel, 2480 MHz Band Edge

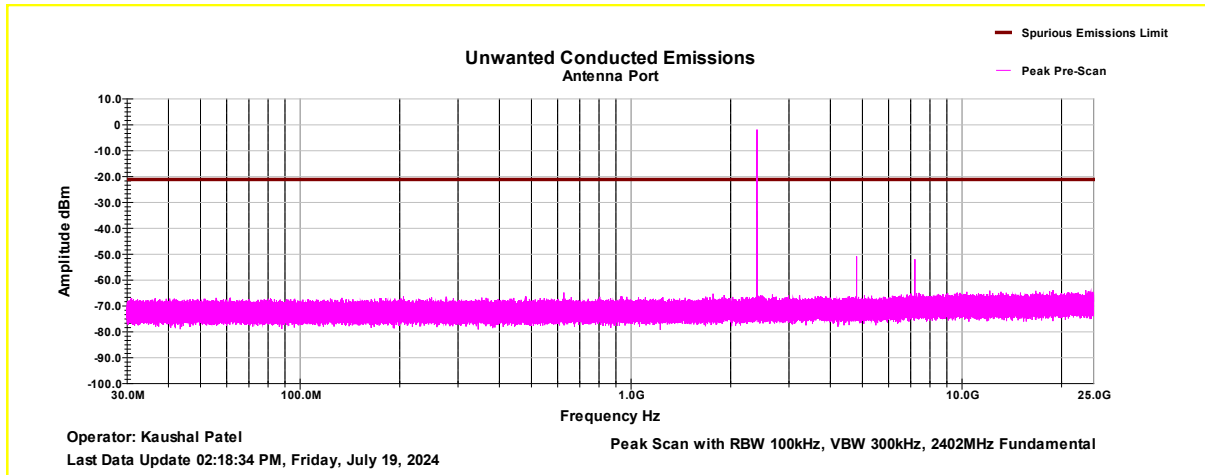
Plot 4.2



Date: 24.JUL.2024 14:11:10

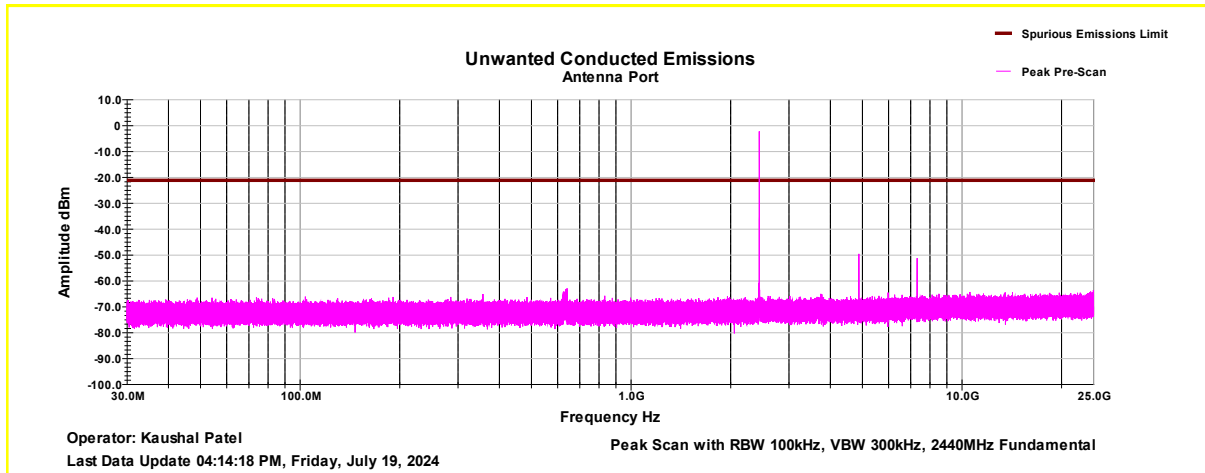
Tx @ Low Channel, 2402 MHz
30MHz -25GHz Conducted Spurious

Plot 4.3

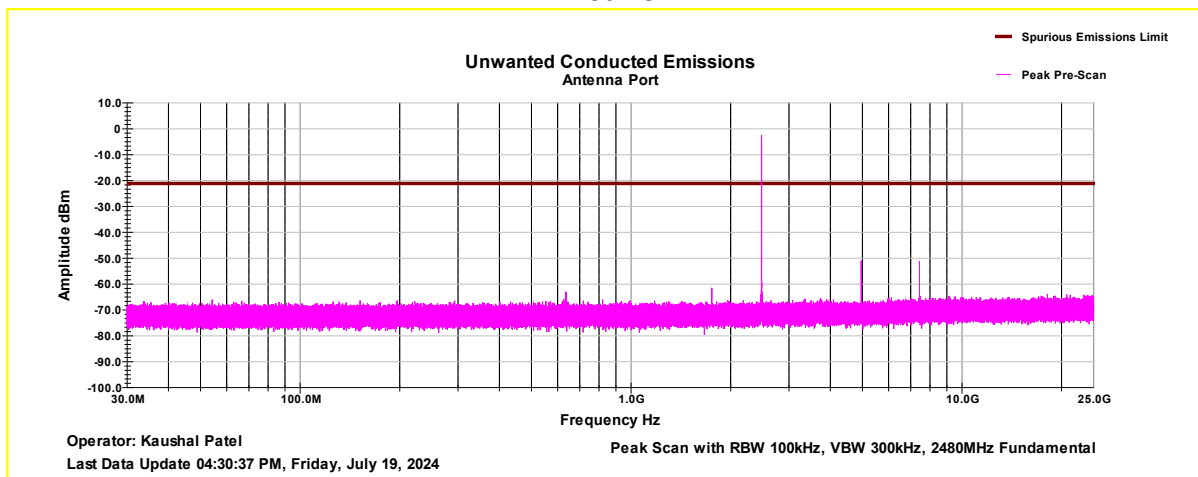


Tx @ Mid Channel, 2440 MHz
30MHz -25GHz Conducted Spurious

Plot 4.4



Tx @ High Channel, 2480 MHz
30MHz -25GHz Conducted Spurious
Plot 4.5



Results

Complies

4.5 Transmitter Radiated Emissions FCC Rules: 15.247(d),

4.5.1 Requirement

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

For out of band radiated emissions (except for frequencies in restricted bands), in any 100 kHz bandwidths outside the EUT pass-band, the RF power shall be at least 20dB (peak) or 30 dB (average) below that of the maximum in-band 100 kHz emissions.

4.5.2 Procedure

Radiated emission measurements were performed from 9 kHz to 26.5 GHz according to the procedure described in ANSI C63.10: 2020. Spectrum Analyzer Resolution Bandwidth is 200Hz or greater for frequencies 9kHz to 30MHz, 100 kHz or greater for frequencies 30 MHz to 1000 MHz, 1 MHz for frequencies above 1000 MHz. Above 1000 MHz Peak and Average measurements were performed.

The EUT is placed on a plastic turntable that is 80 cm in height for below 1000MHz and 1.5m in height for above 1GHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters for frequencies above 1 GHz and at 3 meters for frequencies below 1 GHz.

Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place. A preamp was used from 9kHz to 26.5GHz.

All measurements were made with a Peak Detector and compared to QP limits for 30MHz – 1GHz and Average limits for 1GHz – 26.5GHz.

Data is presented with the worst-case configuration (the configuration which resulted in the highest emission levels).

For Charging Mode Testing, the earpiece is placed in the Base Station and tested with the original battery. Due to the battery's small size, the BLE transmitter cannot operate at a 100% duty cycle. Instead, during testing, the BLE transmitter is active for 100 ms and inactive for 1.9 s.

4.5.3 Field Strength Calculation

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$FS = RA + AF + CF - AG$; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where FS = Field Strength in dB(μ V/m)

RA = Receiver Amplitude (including preamplifier) in dB(μ V); AF = Antenna Factor in dB(1/m)

CF = Cable Attenuation Factor in dB; AG = Amplifier Gain in dB

Assume a receiver reading of 52.0 dB(μ V) is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of 32 dB(μ V/m). This value in dB(μ V/m) was converted to its corresponding level in μ V/m.

RA = 52.0 dB(μ V)

AF = 7.4 dB(1/m)

CF = 1.6 dB

AG = 29.0 dB

$FS = 52.0 + 7.4 + 1.6 - 29.0 = 32 \text{ dB}(\mu\text{V/m})$.

Level in μ V/m = Common Antilogarithm $[(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$.

4.5.4 Test Results

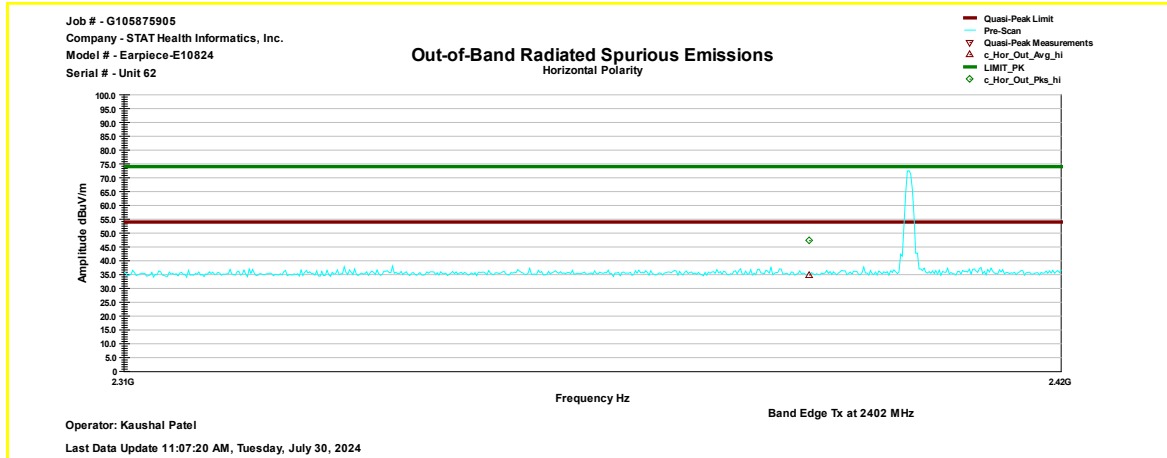
All testing in this section were performed by radiated measurements.

Tested By	Test Date	Results
Kaushal Patel	July 15, 2024, to August 05, 2024	Complies

Test Results: 15.209/15.205 Radiated Restricted Band Emissions

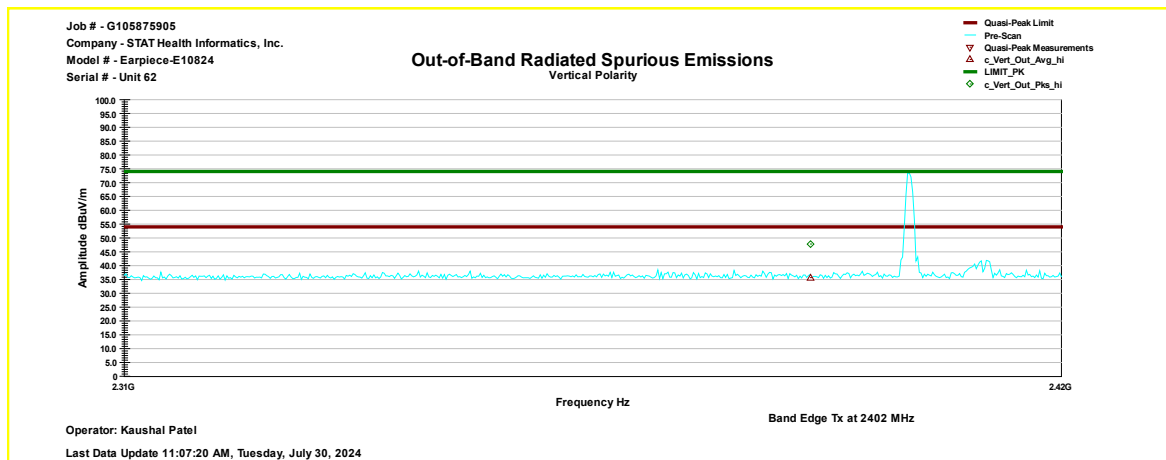
Earpiece Model E10824

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance 2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	34.9	54	-19.1	340	98	Horizontal	-0.7

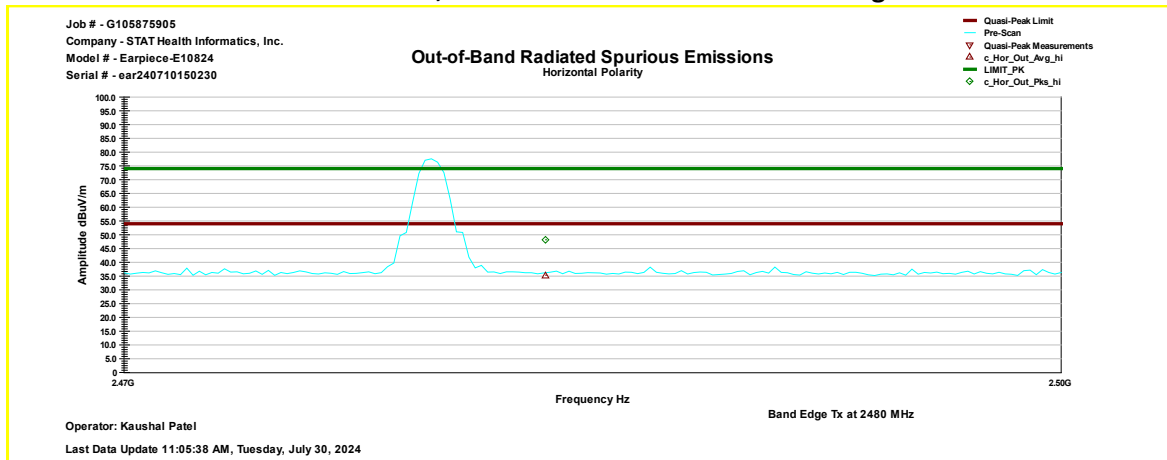
Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	47.2	74	-26.8	340	98	Horizontal	-0.7



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	35.6	54	-18.3	250	148	Vertical	-0.77

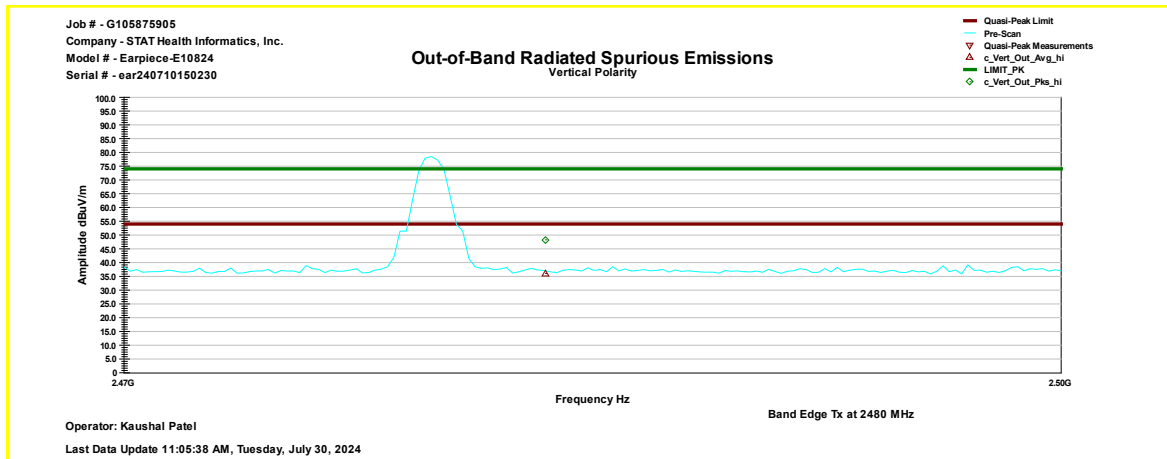
Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	47.8	74	-26.2	250	148	Vertical	-0.77

**Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit**



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	35.3	54	-18.7	399	254	Horizontal	-0.1

Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	48.1	74	-25.8	399	254	Horizontal	-0.1

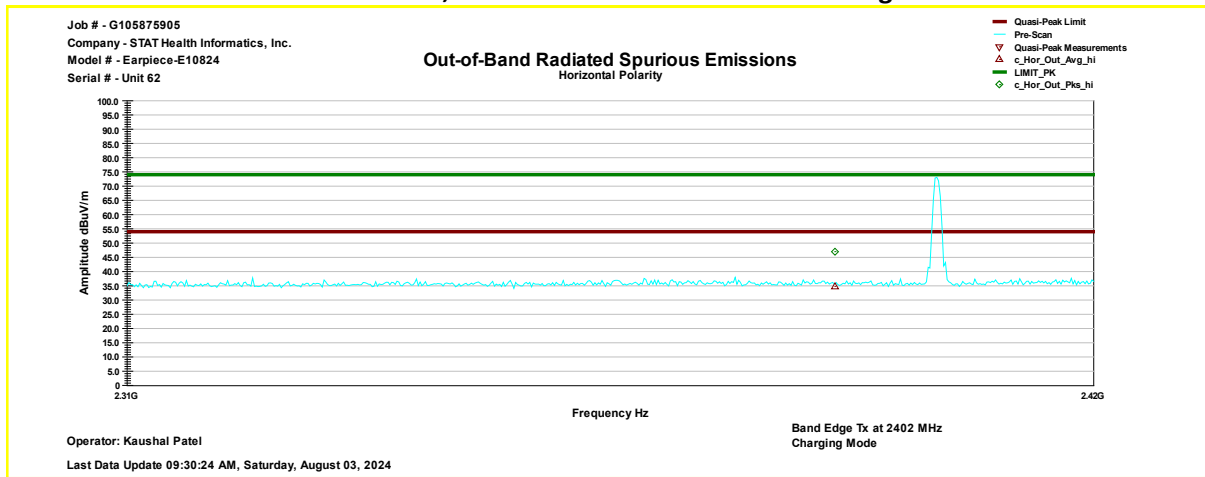


Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	36	54	-18	218	156	Vertical	-0.29

Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	48.4	74	-25.6	218	156	Vertical	-0.29

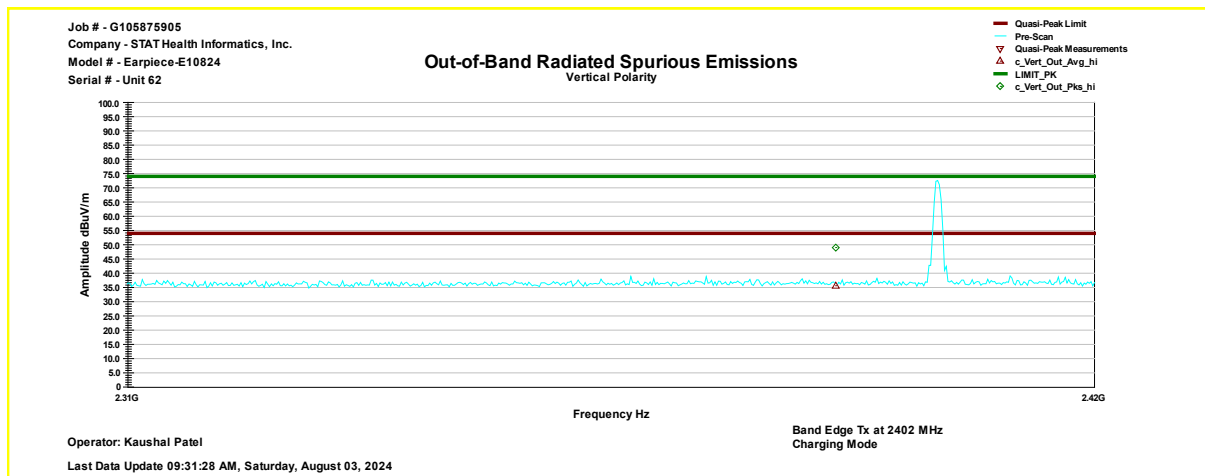
Charging Mode

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance 2310–2390 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	34.8	54	-19.2	186	143	Horizontal	-0.7

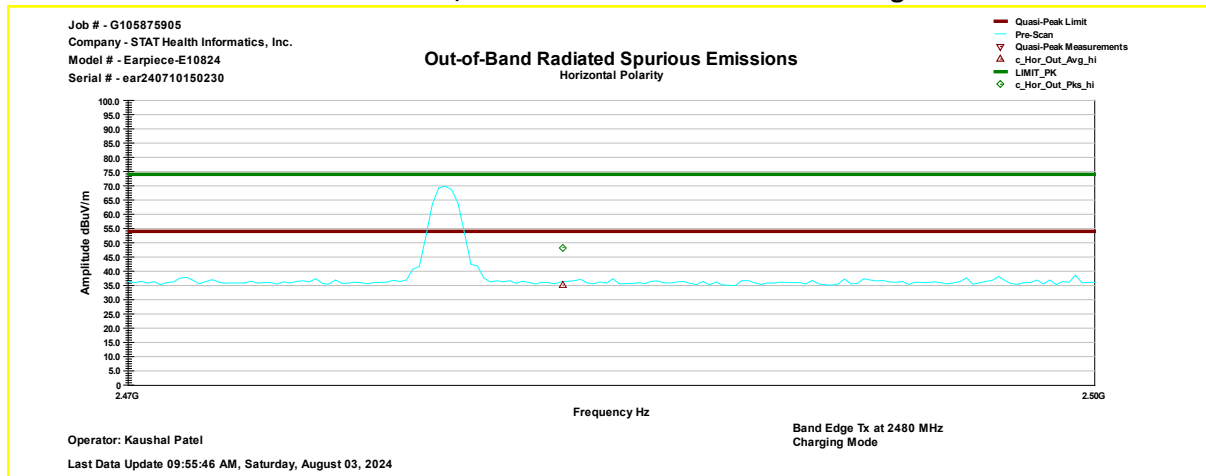
Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	47	74	-27	186	143	Horizontal	-0.7



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	35.8	54	-18.2	340	273	Vertical	-0.77

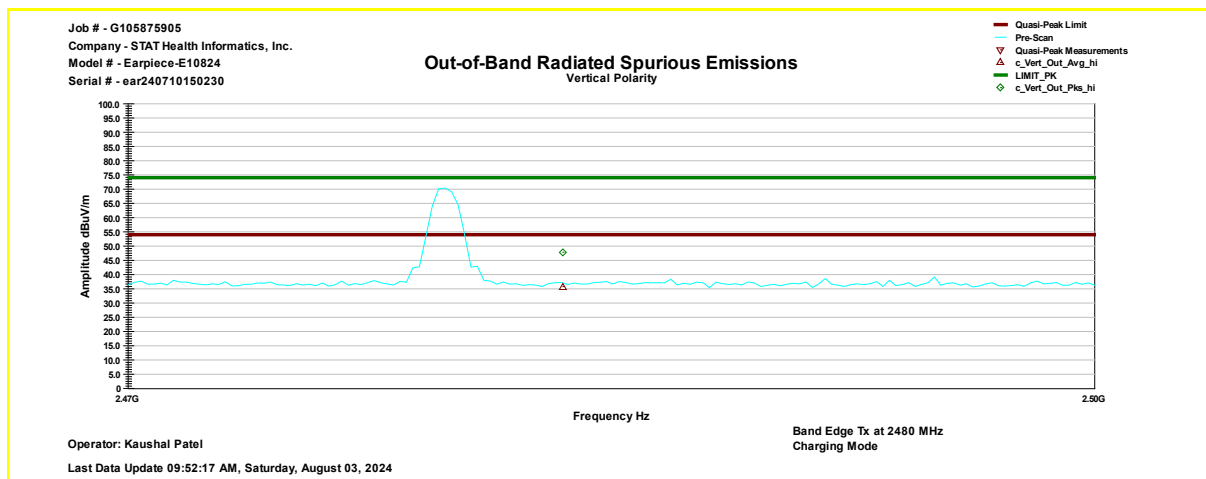
Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2390.000	49	74	-25	340	273	Vertical	-0.77

Out-of-Band Radiated spurious emissions at the Band-edge @3m distance
2483.5–2500 MHz, Peak Scan with Peak Limit & Average Limit



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	35.1	54	-18.9	209	177	Horizontal	-0.1

Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	48.3	74	-25.7	209	177	Horizontal	-0.1



Freq. MHz	Avg@3m dB(uV/m)	Avg Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	35.8	54	-18.2	145	228	Vertical	-0.29

Freq. MHz	Pk@3m dB(uV/m)	Pk Limit dB(μV/m)	Margin dB	Height cm	Azimuth deg	Polarity	Correction dB
2483.50	47.8	74	-26.2	145	228	Vertical	-0.29

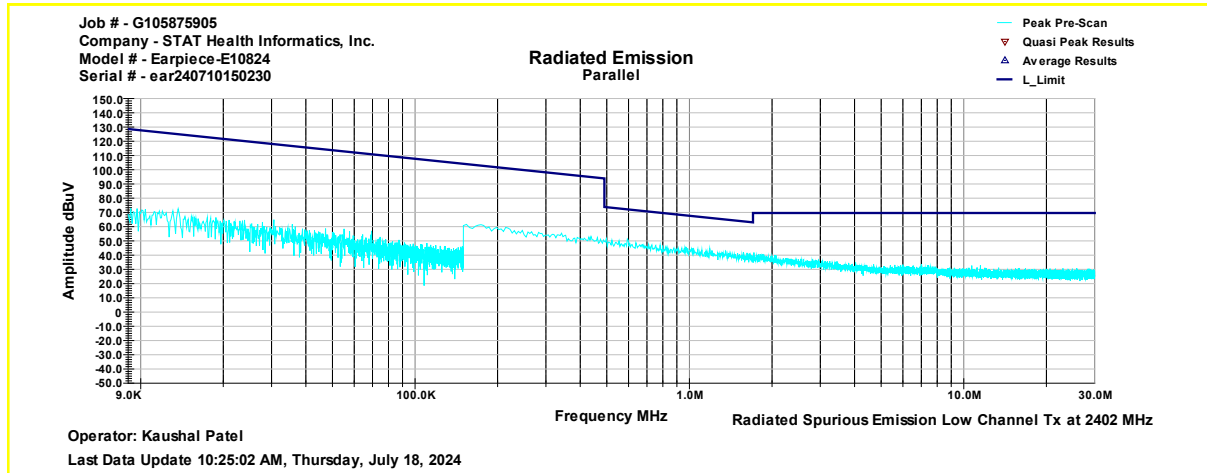
Results

Complies

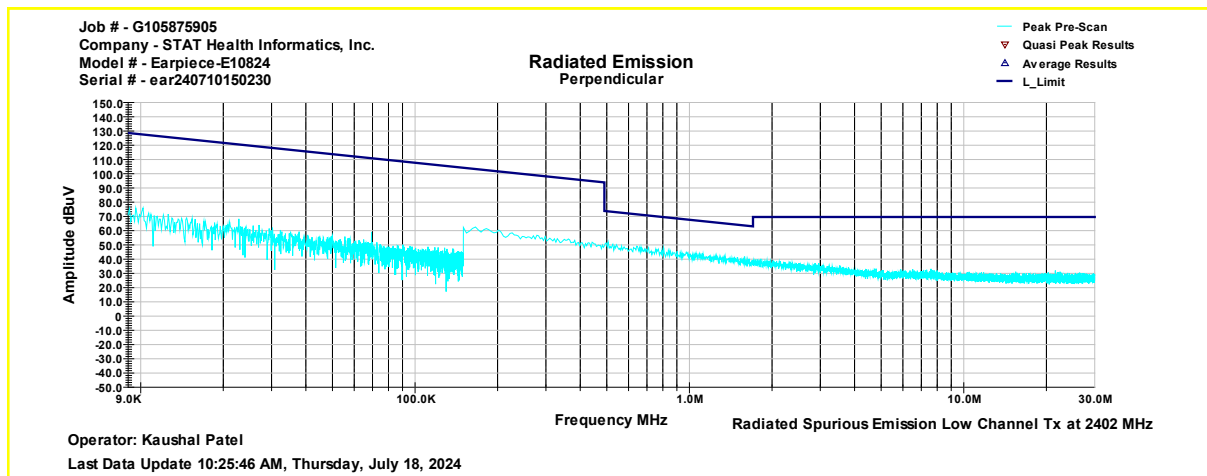
Earpiece Model E81024

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 2402MHz

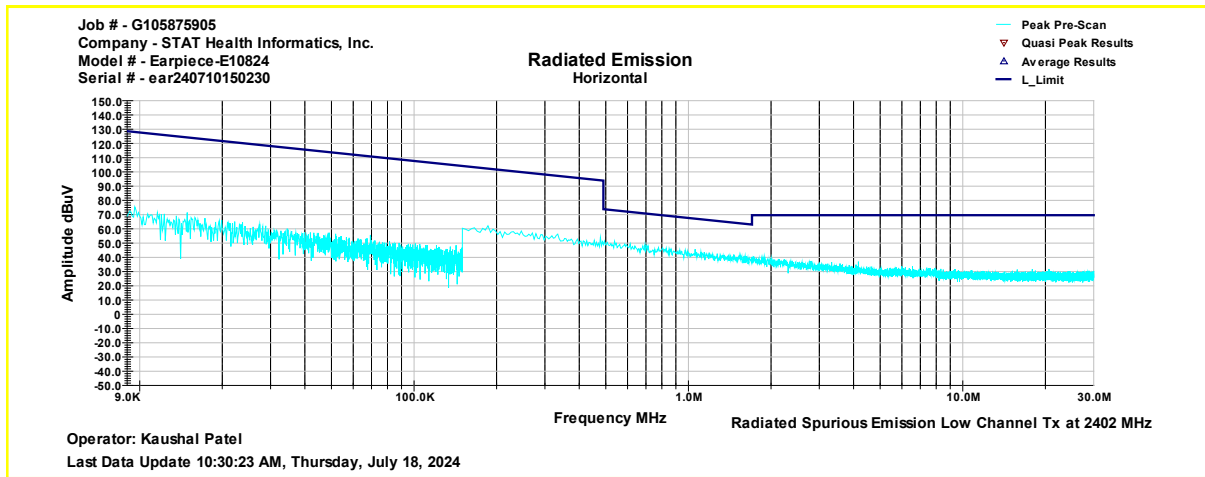
Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



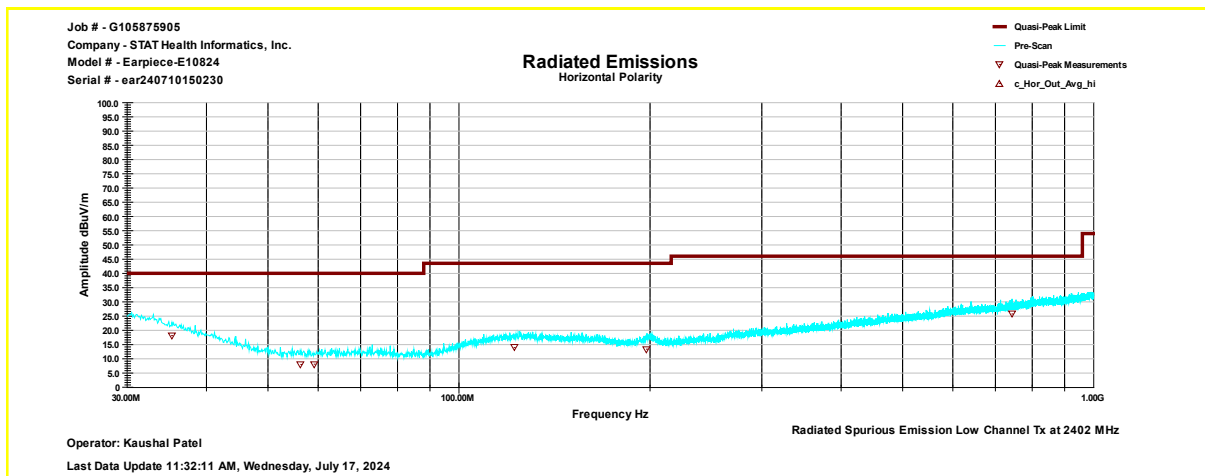
Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Horizontal Antenna Polarization



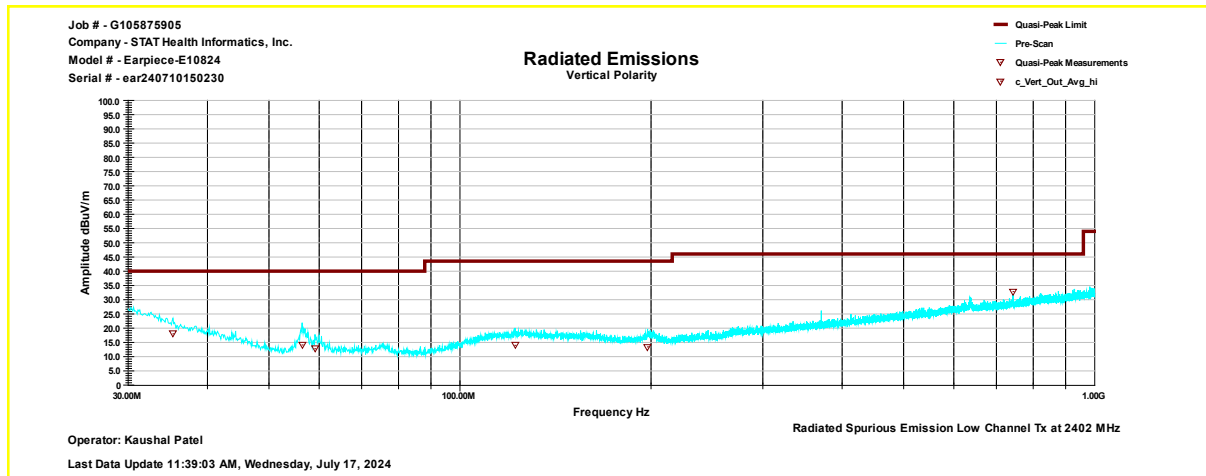
Radiated Spurious Emissions 30 MHz - 1000 MHz Horizontal Antenna Polarization



Frequency (MHz)	QPeak@ 3m (dBμV/m)	Lim. QPeak @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
35.25	18.1	40	-21.9	290	238	Horizontal	-11.8
56.35	8	40	-32	250	293	Horizontal	-22.2
59.15	8.1	40	-31.9	108	100	Horizontal	-22.1
122.15	13.9	43.5	-29.6	340	190	Horizontal	-16
197.45	13.4	43.5	-30.2	324	179	Horizontal	-16.9
743.61	25.7	46	-20.3	223	246	Horizontal	-5.6

Note: Correction = AF + CF - Preamp

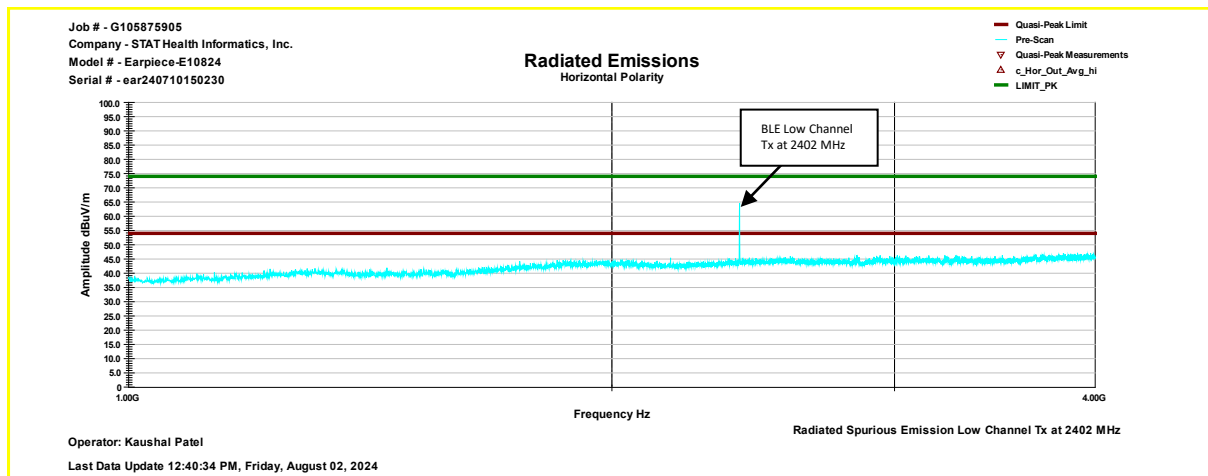
Radiated Spurious Emissions 30 MHz - 1000 MHz Vertical Antenna Polarization



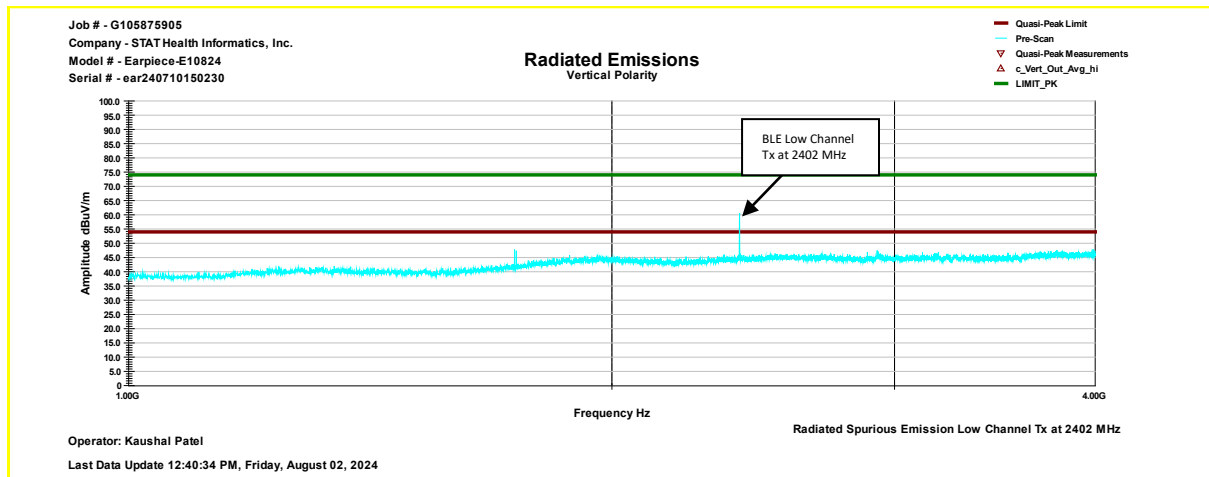
Frequency (MHz)	QPeak@ 3m (dBuV/m)	Lim. QPeak @3m (dBuV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
35.3	18	40	-22	100	318	Vertical	-12
56.38	14.1	40	-25.9	149	306	Vertical	-22.2
59.05	12.7	40	-27.3	149	206	Vertical	-22.1
122.05	14	43.5	-29.6	249	129	Vertical	-16
197.47	13.4	43.5	-30.1	324	40	Vertical	-16.9
743.58	32.8	46	-13.2	207	172	Vertical	-5.6

Note: Correction = AF + CF - Preamp

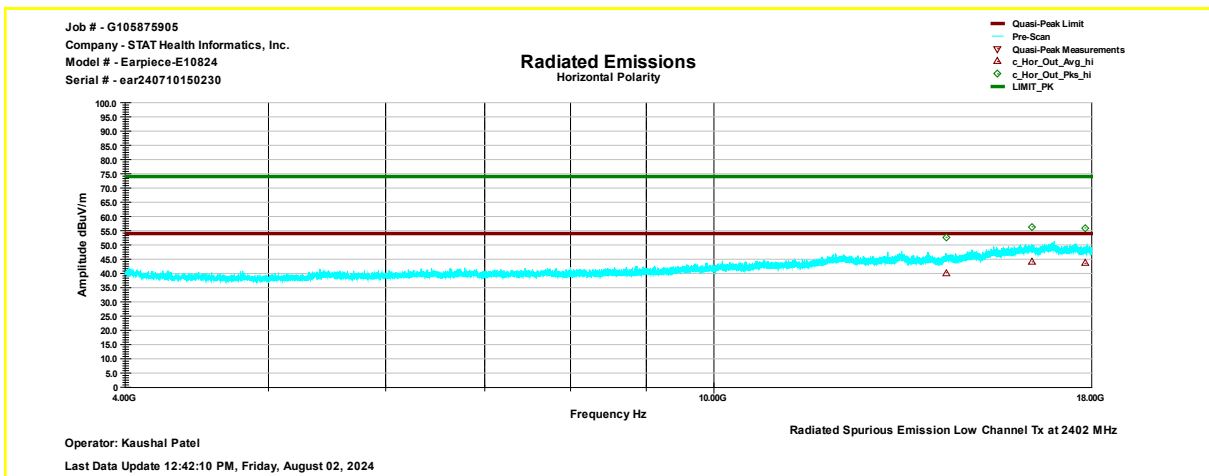
Radiated Spurious Emissions 1000 MHz - 4000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Radiated Spurious Emissions 1000 MHz - 4000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Radiated Spurious Emissions 4000 MHz - 18000 MHz Horizontal Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

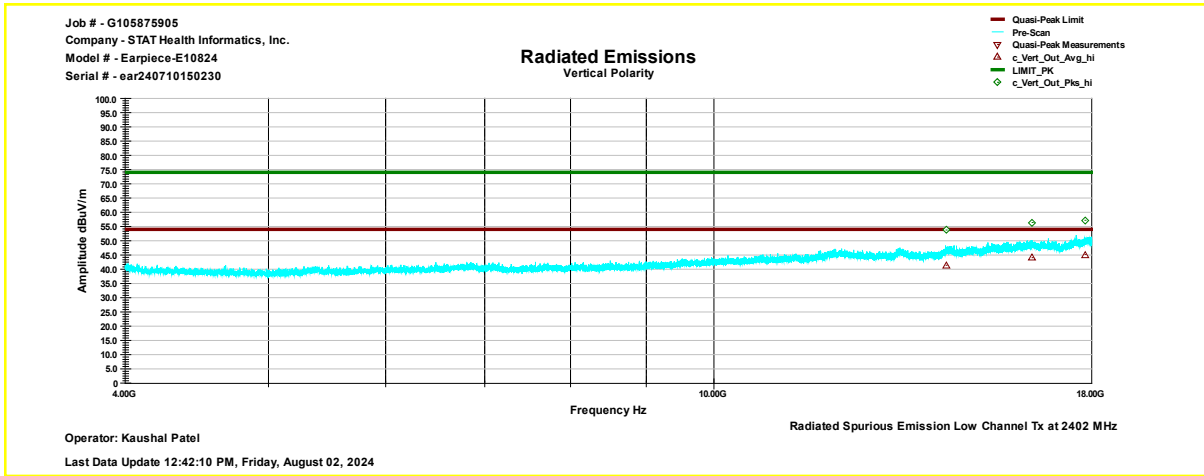
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
14350.55	52.7	74	-21.3	125	89	Horizontal	10.7
16407.45	56.4	74	-17.6	100	133	Horizontal	15.8
17811.55	55.9	74	-18.1	193	297	Horizontal	18.3

Note: Correction = AF + CF - Preamp

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
14350.55	40.2	54	-13.8	125	89	Horizontal	10.7
16407.45	44	54	-9.9	100	133	Horizontal	15.8
17811.55	43.5	54	-10.4	193	297	Horizontal	18.3

Note: Correction = AF + CF - Preamp

Radiated Spurious Emissions 4000 MHz - 18000 MHz Vertical Antenna Polarization vs Avg & Peak Limit



Note: Measurements made from 4 GHz to 18GHz had a 2.4-2.5GHz notch filter in place

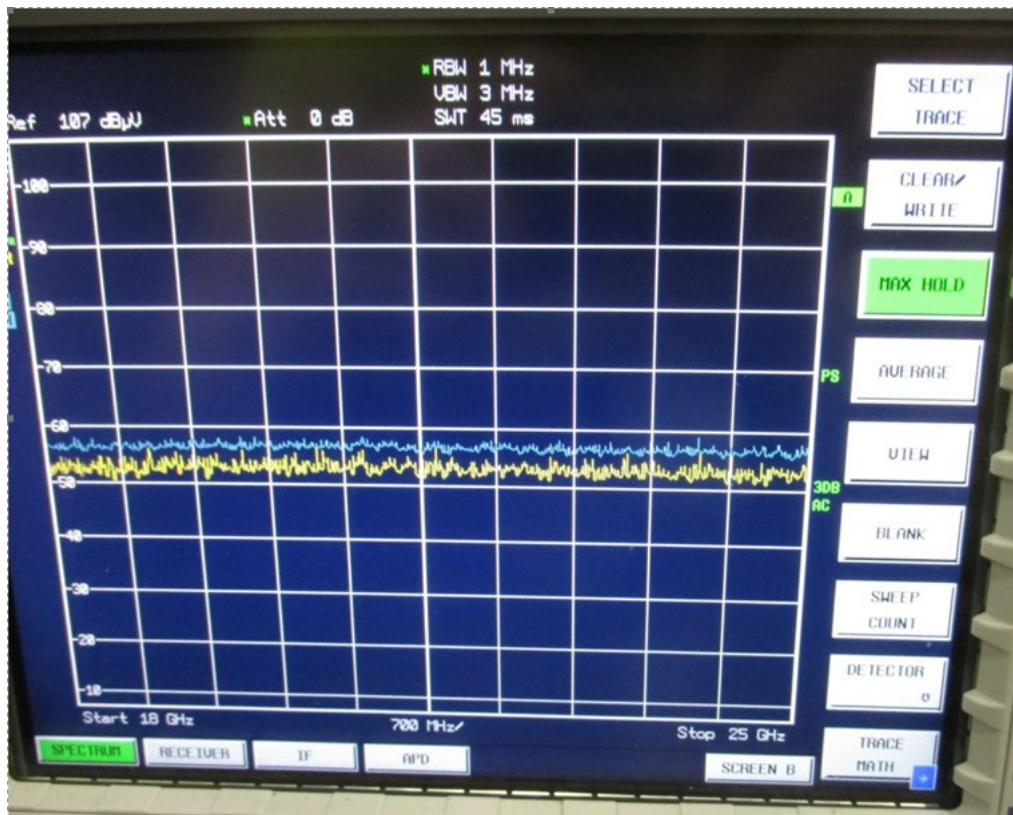
Frequency (MHz)	Pk@ 3m (dBμV/m)	Lim. Pk @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
14350.55	-20.3	-20.3	-20.3	227	294	Vertical	2.89
16407.45	-17.6	-17.6	-17.6	176	297	Vertical	5.30
17811.55	-16.9	-16.9	-16.9	381	220	Vertical	7.78

Note: $\text{Correction} = \text{AF} + \text{CF} - \text{Preamp}$

Frequency (MHz)	Avg@ 3m (dBμV/m)	Lim. Avg @3m (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Comment	Correction (dB)
14350.55	41.4	54	-12.6	227	294	Vertical	2.89
16407.45	44	54	-9.9	176	297	Vertical	5.30
17811.55	45.1	54	-8.9	381	220	Vertical	7.78

Note: $\text{Correction} = \text{AF} + \text{CF} - \text{Preamp}$

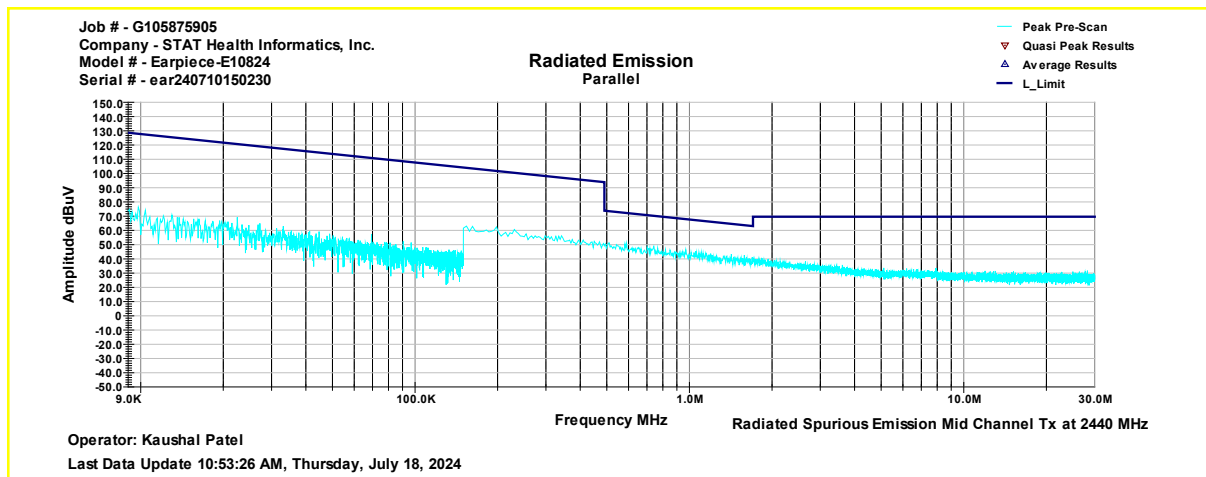
Note: Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz



Note: FS@3m = RA + Correction
Correction = AF + CF - Preamp

Test Results: 15.209 Radiated Spurious Emissions Mid Channel, Tx at 2440MHz

Radiated Spurious Emissions 9kHz - 30 MHz Parallel Antenna Polarization



Radiated Spurious Emissions 9kHz - 30 MHz Perpendicular Antenna Polarization

