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Alcohol Monitoring Systems Inc. TEST REPORT

SCOPE OF WORK

EMC TESTING – GPS BRACELET 900/910

REPORT NUMBER

105373087LEX-028.2

ISSUE DATE

8/13/2024

REVISED DATE

10/21/2024

PAGES

36

DOCUMENT CONTROL NUMBER

Non-Specific EMC Report Shell Rev. December 2017
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EMC TEST REPORT (FULL COMPLIANCE)

Report Number: 105373087LEX-028.2

Project Number: G105373087

Report Issue Date: 8/13/2024

Report Revised Date: 10/21/2024

Model(s) Tested: GPS Bracelet 900/910

Standards: FCC Parts 15.247, 22, 24, 27, 90
RSS-247 Issue 3, RSS-130 Issue 2,
RSS-132 Issue 4, RSS-133 Issue 6,
RSS-139 Issue 4, RSS-140 Issue 1
(Limited to Radiated Spurious Emissions)

Tested by:
Intertek Testing Services NA, Inc.
731 Enterprise Dr.
Lexington, KY 40510
USA

Client:
Alcohol Monitoring Systems Inc.
6251 Greenwood Plaza Blvd
Suite #300
Greenwood Village, CO 80111
USA

Report prepared by



Brian Lackey, Staff Engineer

Report reviewed by



Michael Carlson, Team Leader

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1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test full name	Result
6	Radiated Spurious Emissions (Transmitters Active) (ANSI C63.10:2020, ANSI C63.26:2015)	Pass



3 Client Information

This product was tested at the request of the following:

Client Information	
Client Name:	Alcohol Monitoring Systems Inc.
Address:	6251 Greenwood Plaza Blvd Suite #300 Greenwood Village, CO 80111 USA
Contact:	Don Pruitt
Telephone:	+1 (678) 387-1902
Email:	dpruitt@scramsystems.com
Manufacturer Information	
Manufacturer Name:	Alcohol Monitoring Systems Inc.
Manufacturer Address:	6251 Greenwood Plaza Blvd Suite #300 Greenwood Village, CO 80111 USA



4 Description of Equipment under Test and Variant Models

Equipment Under Test	
Product Name	GPS Bracelet 900/910
Model Number	GPS Bracelet 900/910
Serial Number	GM10001G9
Supported Transmit Bands	LTE Bands: 2, 4, 5, 12, 13, 14, 25, 26, 66 Wi-Fi: 2412 – 2462 MHz
Embedded Module	LTE: Telit ME310G1-W3 Wi-Fi: Silicon Labs RS9116 B00
Embedded Module FCCID	LTE: P8M-GPS900W3 Wi-Fi: P8M-GPS900
Embedded Module ICID	LTE: 8549A-GPS900W3 Wi-Fi: 8549A-GPS900
Receive Date	6/2/2024
Test Start Date	7/9/2024
Test End Date	9/18/2024
Device Received Condition	Good
Test Sample Type	Production
Rated Voltage	3.6VDC
Description of Equipment Under Test (provided by client)	
The Alcohol Monitoring Systems Inc. GPS Bracelet 900/910 is a GPS bracelet with LTE capabilities.	

4.1 Variant Models:

There were no variant models covered by this evaluation.



5 System Setup and Method

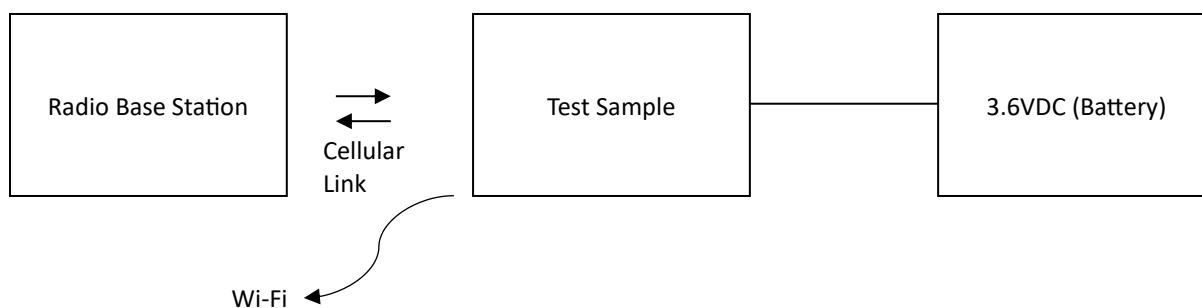
5.1 Method:

Configuration as required by ANSI C63.10:2020 and ANSI C63.26:2015.

No.	Descriptions of EUT Exercising
1	EUT Powered on with cellular modem transmitting to a CMW500 Base Station Simulator. The Wi-Fi radio was configured for continuous transmission.

Cables					
ID	Description	Length (m)	Shielding	Ferrites	Termination
-	None	-	-	-	-

5.2 EUT Block Diagram:



**6 Radiated Emissions****6.1 Method**

Tests are performed in accordance with ANSI C63.10 and ANSI C63.26:2015.

TEST SITE: 10m ALSE

Site Designation: 10m Chamber

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucisp
Radiated Emissions, 10m	30-1000 MHz	3.9dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	4.0dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.7dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	4.7dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	4.7dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	4.7dB	5.5 dB

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required.



6.2 Sample 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:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength in dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a 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/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dB μ V/m

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$
$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$
$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

6.3 Field Strength to Power Calculation

As allowable by ANSI C63.26: 2015 section 5.2.7, the output power of unwanted emissions can be calculated from a field strength measurement. The transmitter measurements that follow in this report have applied the following calculation to the -13dBm limit to arrive an equivalent field strength limit at 3 meters as follows:

$$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8; \text{ where } D \text{ is the measurement distance (in the far field region) in m.}$$

Example:

$$\text{Limit (dB}\mu\text{V/m)} = -13 - 20\log(3) + 104.8 = 82.25\text{dB}\mu\text{V/m}$$

**6.4 Test Equipment Used:**

Description	Asset	Manufacturer	Model	Cal Date	Cal Due
EMI Test Receiver	8258	Rohde & Schwarz	ESW44	9/19/2023	9/19/2024
Bilog Antenna	7085	SunAR	JB6	3/18/2024	3/18/2025
Horn Antenna	3780	ETS Lindgren	3117	8/8/2023 7/18/2024	8/8/2024 7/18/2025
Horn Antenna (18-40GHz)	3779	ETS	3116c	8/28/2024	8/28/2025
Preamplifier (18-40GHz)	3921	Rohde & Schwarz	TS-PR40	1/12/2024	1/12/2025
18-40GHz Signal Path with Preamplifier	7020, 3921, 7021			1/12/2024	1/12/2025
System Controller	4096	ETS Lindgren	2090	Verify at Time of Use	Verify at Time of Use
System Controller	3957	Sunol Sciences	SC99V	Verify at Time of Use	Verify at Time of Use
Preamplifier	3918	TS-PR18	122005	3/1/2024	3/1/2025
Coaxial Cable	3074			3/1/2024	3/1/2025
Coaxial Cable	2588			3/1/2024	3/1/2025
Coaxial Cable	2593			3/1/2024	3/1/2025
Coaxial Cable	2592			3/1/2024	3/1/2025
Coaxial Cable	8188			3/1/2024	3/1/2025
Coaxial Cable	8185			3/1/2024	3/1/2025

6.5 Software Utilized:

Name	Manufacturer	Version
EMC32	Rohde & Schwarz	Version 10.60.20

6.6 Results:

The sample tested was found to Comply.

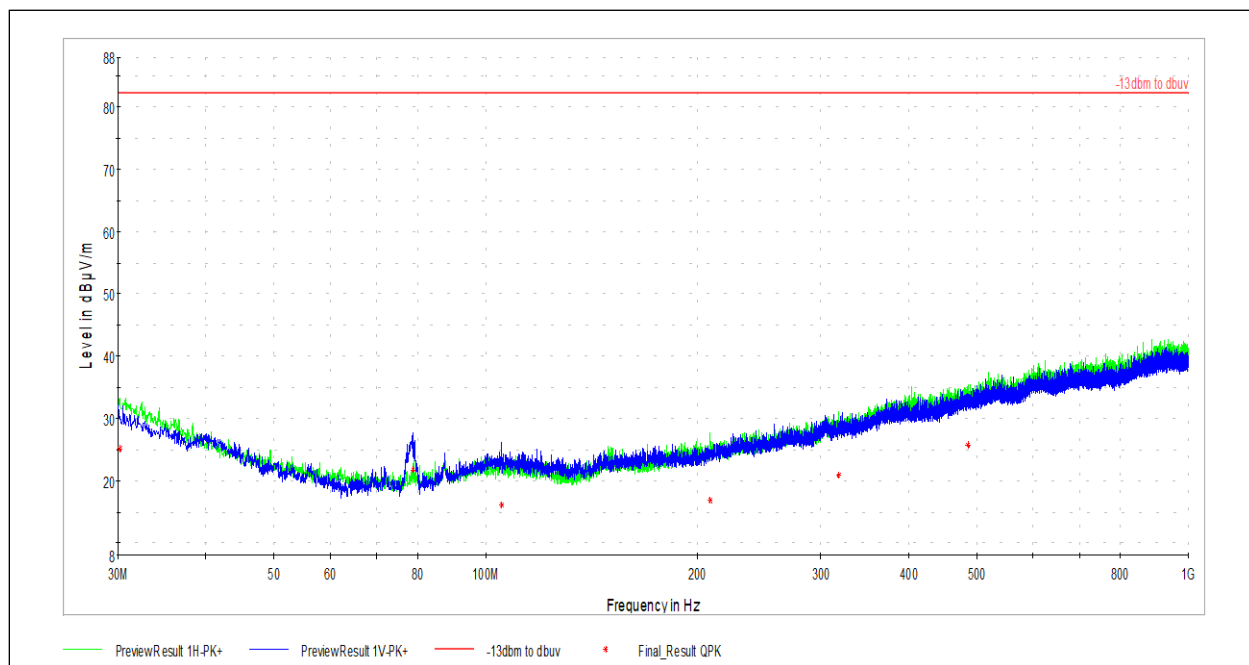


EMC Test Report

6.7 FCC Part 15.247 Radiated Spurious Emissions

6.7.1 Radiated Spurious Emissions, 30 MHz – 1 GHz

6.7.1.1 802.11b Channel 6 + LTE B2



Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.161667	25.19	82.25	57.06	184.0	H	270.0	24.7
78.715556	21.69	82.25	60.56	100.0	V	0.0	12.9
105.336667	16.08	82.25	66.17	100.0	V	191.0	16.7
208.641667	16.85	82.25	65.40	388.0	H	91.0	18.4
317.820556	20.83	82.25	61.42	298.0	H	183.0	22.4
485.576667	25.65	82.25	56.60	355.0	H	174.0	26.9

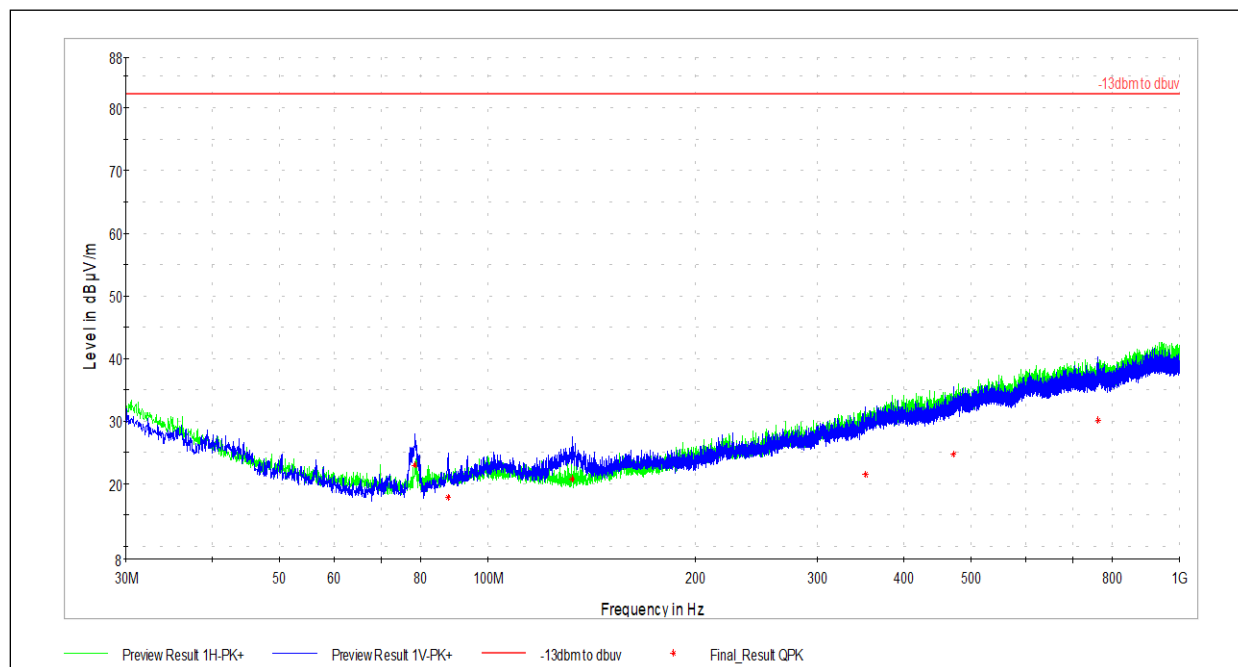
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 9/18/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.1.2 802.11g Channel 6 + LTE B2



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
78.446111	22.93	82.25	59.32	119.0	V	0.0	12.9
87.715000	17.87	82.25	64.38	104.0	V	107.0	14.0
132.335000	20.73	82.25	61.52	104.0	V	186.0	15.2
351.932222	21.53	82.25	60.72	249.0	V	295.0	23.0
471.134444	24.75	82.25	57.50	109.0	V	243.0	25.8
762.673333	30.13	82.25	52.12	299.0	V	-6.0	30.0

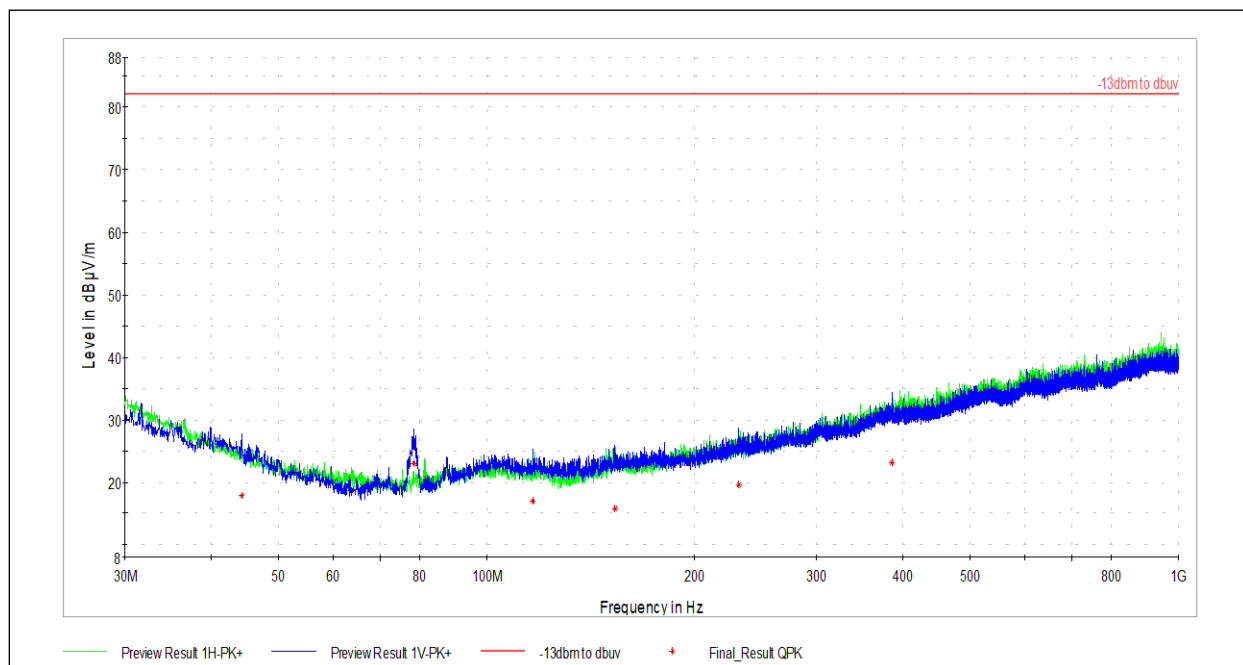
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/18/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.1.3 802.11n Channel 6 + LTE B2

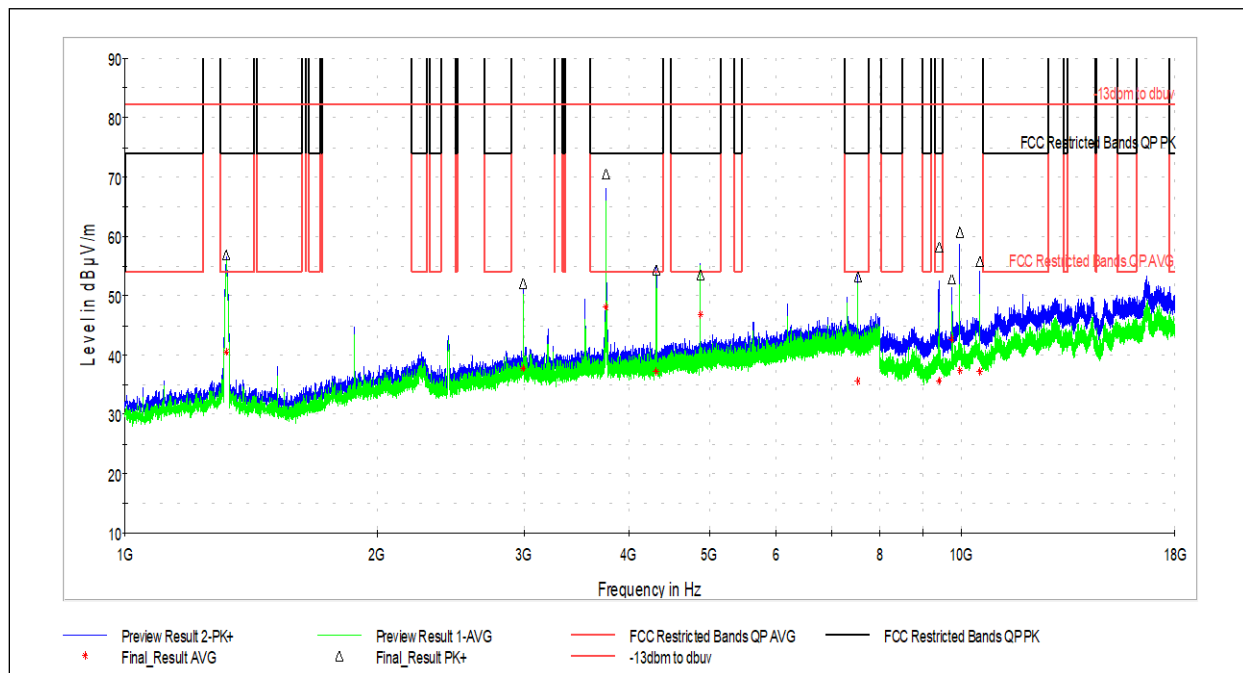


Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.226667	17.86	82.25	64.39	100.0	V	131.0	16.0
78.446111	23.03	82.25	59.22	100.0	V	182.0	12.9
116.707222	17.00	82.25	65.25	100.0	V	166.0	15.6
153.028333	15.80	82.25	66.45	133.0	V	217.0	16.7
231.382778	19.61	82.25	62.64	250.0	V	192.0	19.4
385.451111	23.20	82.25	59.05	100.0	V	214.0	23.8

Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/18/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None

**6.7.2 Radiated Spurious Emissions, 1 GHz – 18 GHz****6.7.2.1 802.11b Channel 6 + LTE B2**

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1320.833333	56.79	73.98	17.19	152.0	H	141.0	0.7
2994.222222	52.02	82.23	30.21	209.0	H	70.0	6.4
3760.722222	70.61	73.98	3.37	220.0	H	71.0	8.0
4314.888889	54.41	73.98	19.57	314.0	V	0.0	8.8
4874.111111	53.45	73.98	20.53	295.0	H	10.0	9.8
7520.500000	53.12	73.98	20.86	328.0	H	237.0	13.6
9400.000000	58.33	73.98	15.65	192.0	V	-1.0	16.2
9748.125000	52.79	82.23	29.44	397.0	H	297.0	17.4
9958.750000	60.67	82.23	21.56	265.0	H	343.0	18.0
10515.000000	55.82	82.23	26.41	287.0	V	12.0	18.5



Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1320.833333	40.61	53.98	13.37	152.0	H	141.0	0.7
2994.222222	37.69	82.23	44.54	209.0	H	70.0	6.4
3760.722222	48.06	53.98	5.92	220.0	H	71.0	8.0
4314.888889	37.17	53.98	16.81	314.0	V	0.0	8.8
4874.111111	46.80	53.98	7.18	295.0	H	10.0	9.8
7520.500000	35.61	53.98	18.37	328.0	H	237.0	13.6
9400.000000	35.61	53.98	18.37	192.0	V	-1.0	16.2
9748.125000	42.71	82.23	39.52	397.0	H	297.0	17.4
9958.750000	37.40	82.23	44.83	265.0	H	343.0	18.0
10515.000000	37.27	82.23	44.96	287.0	V	12.0	18.5

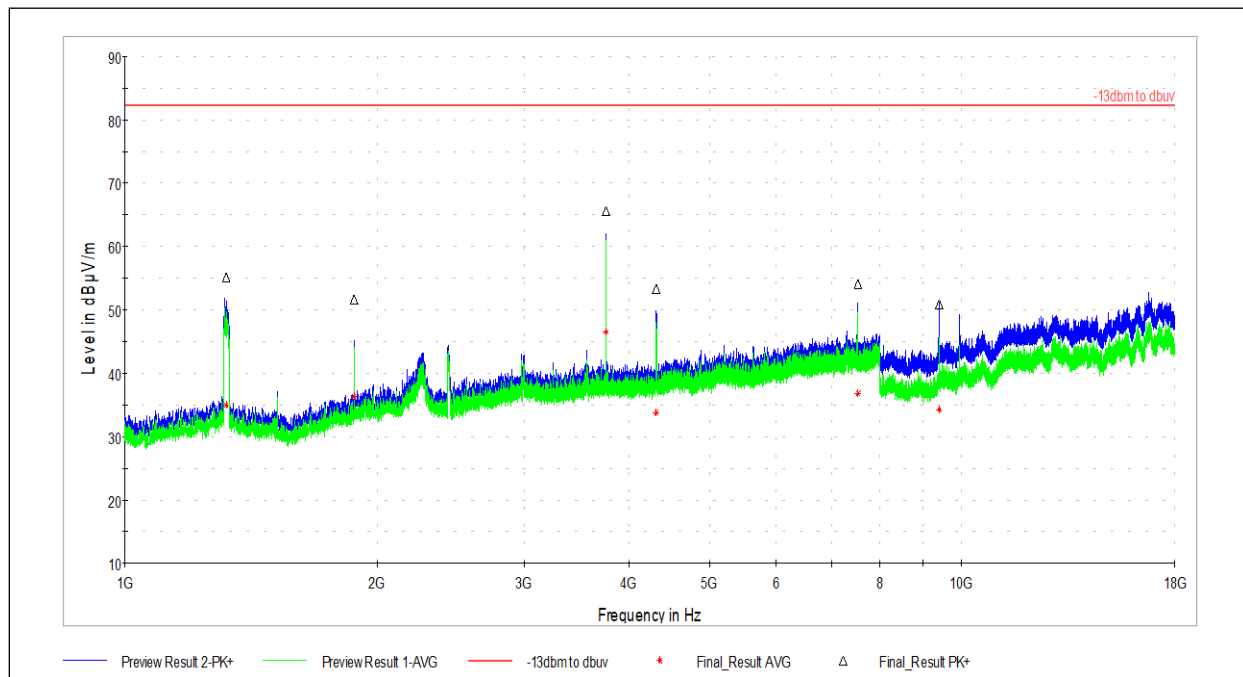
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient _____
Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.2.2 802.11g Channel 6 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1320.833333	55.18	82.25	27.07	100.0	H	152.0	0.7
1880.055556	51.74	82.25	30.51	255.0	H	124.0	3.3
3759.944444	65.65	82.25	16.60	326.0	V	71.0	8.1
4319.555556	53.27	82.25	28.98	136.0	V	140.0	8.9
7520.111111	54.11	82.25	28.14	263.0	V	0.0	13.6
9399.375000	50.97	82.25	31.28	358.0	V	185.0	16.2

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1320.833333	35.06	82.25	47.19	100.0	H	152.0	0.7
1880.055556	36.31	82.25	45.94	255.0	H	124.0	3.3
3759.944444	46.44	82.25	35.81	326.0	V	71.0	8.1
4319.555556	33.86	82.25	48.39	136.0	V	140.0	8.9
7520.111111	36.79	82.25	45.46	263.0	V	0.0	13.6
9399.375000	34.18	82.25	48.07	358.0	V	185.0	16.2

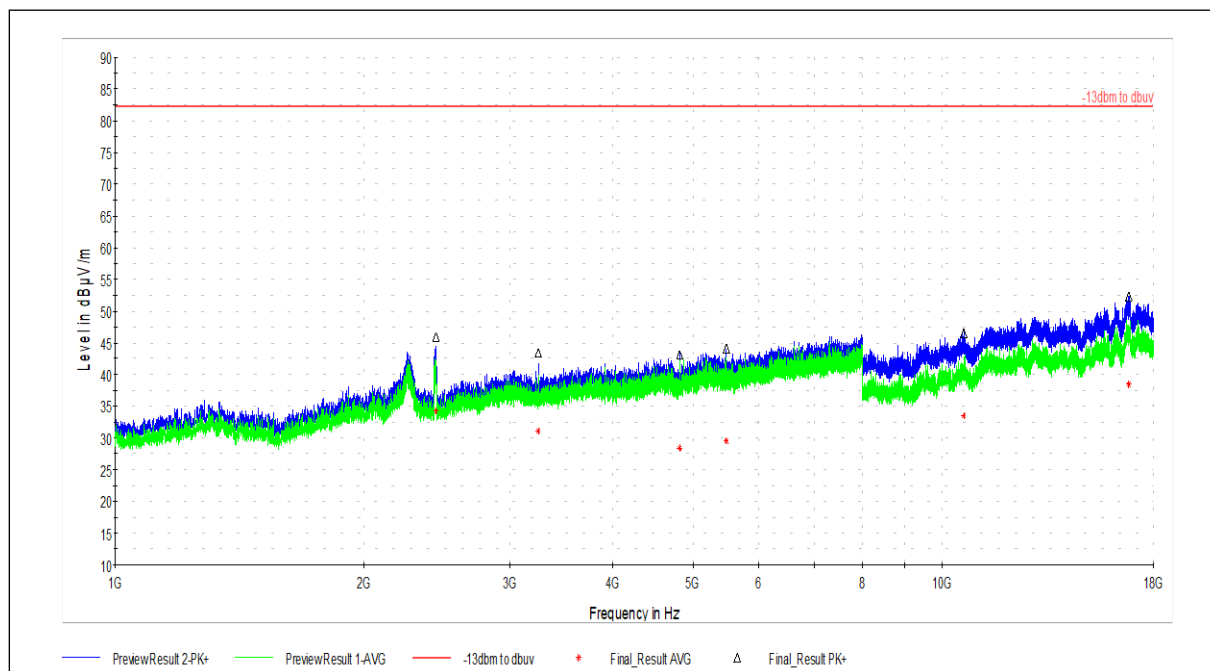
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/18/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.2.3 802.11n Channel 6 + LTE B2



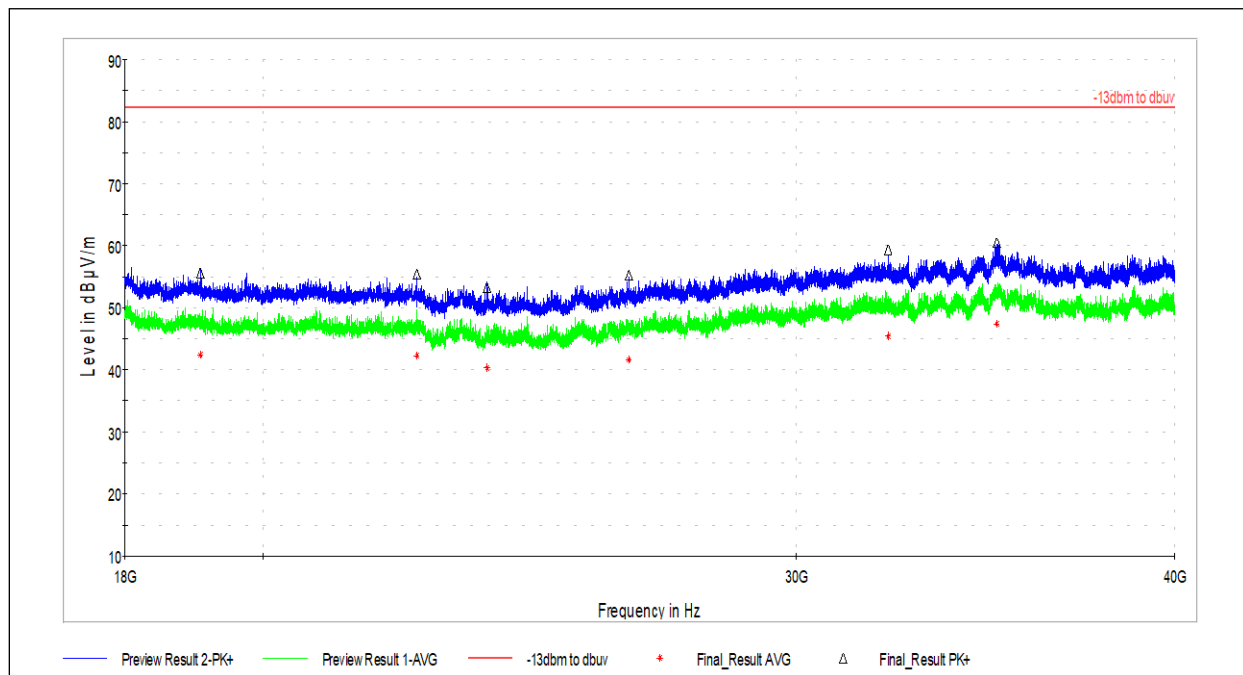
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2443.555556	45.98	82.25	36.27	192.0	H	102.0	5.4
3249.722222	43.37	82.25	38.88	393.0	V	239.0	6.9
4816.555556	43.15	82.25	39.10	410.0	H	108.0	9.7
5484.277778	44.10	82.25	38.15	410.0	V	11.0	10.7
10623.125000	46.58	82.25	35.67	410.0	H	232.0	18.7
16811.250000	52.39	82.25	29.86	100.0	V	128.0	26.4

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2443.555556	34.28	82.25	47.97	192.0	H	102.0	5.4
3249.722222	31.03	82.25	51.22	393.0	V	239.0	6.9
4816.555556	28.34	82.25	53.91	410.0	H	108.0	9.7
5484.277778	29.61	82.25	52.64	410.0	V	11.0	10.7
10623.125000	33.45	82.25	48.80	410.0	H	232.0	18.7
16811.250000	38.45	82.25	43.80	100.0	V	128.0	26.4

Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/17/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None

**6.7.3 Radiated Spurious Emissions, 18 GHz – 40 GHz****6.7.3.1 802.11b Channel 6 + LTE B2**

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
19064.000000	55.61	82.25	26.64	251.0	H	0.0	26.3
22474.000000	55.44	82.25	26.81	278.0	V	0.0	15.0
23707.000000	53.31	82.25	28.94	410.0	V	254.0	13.7
26411.000000	55.22	82.25	27.03	410.0	V	0.0	15.0
32159.000000	59.43	82.25	22.82	311.0	V	336.0	22.3
34935.000000	60.52	82.25	21.73	245.0	H	0.0	24.2

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
19064.000000	42.37	82.25	39.88	251.0	H	0.0	26.3
22474.000000	42.30	82.25	39.95	278.0	V	0.0	15.0
23707.000000	40.23	82.25	42.02	410.0	V	254.0	13.7
26411.000000	41.53	82.25	40.72	410.0	V	0.0	15.0
32159.000000	45.44	82.25	36.81	311.0	V	336.0	22.3
34935.000000	47.41	82.25	34.84	245.0	H	0.0	24.2

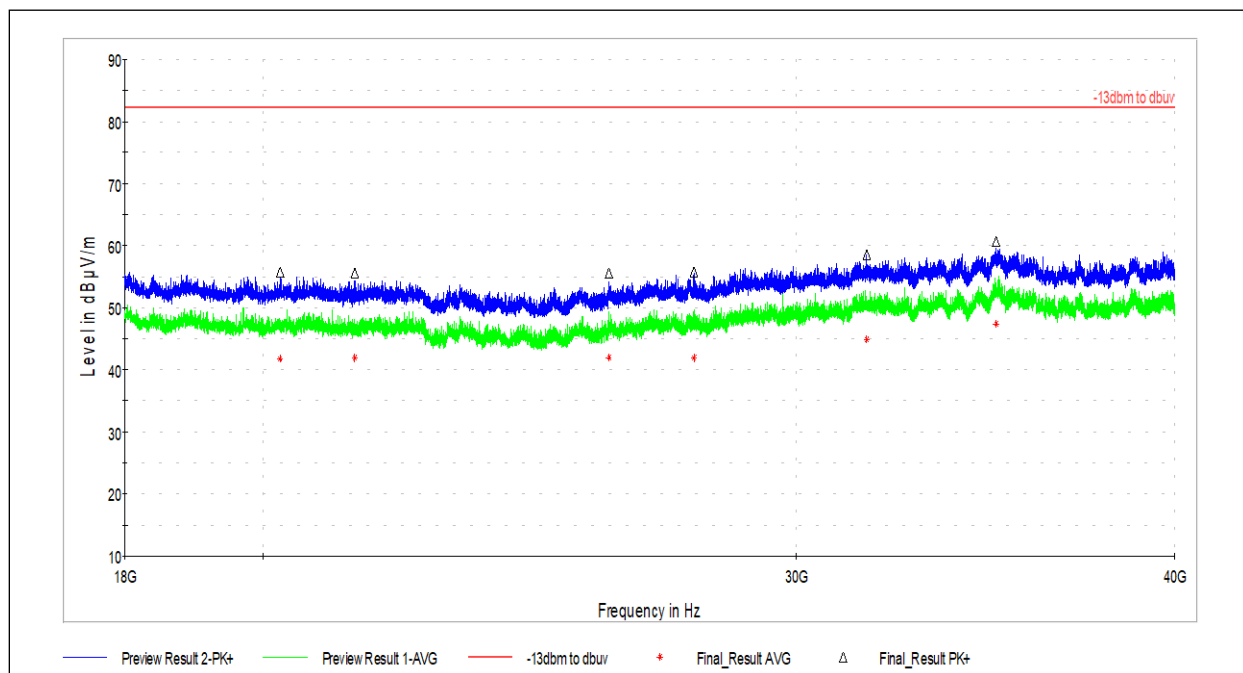
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/17/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.3.2 802.11g Channel 6 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
20253.000000	55.68	82.25	26.57	100.0	V	0.0	22.0
21443.000000	55.60	82.25	26.65	100.0	V	0.0	18.4
26004.000000	55.54	82.25	26.71	100.0	H	0.0	15.0
27738.000000	55.78	82.25	26.47	100.0	V	0.0	17.2
31637.000000	58.48	82.25	23.77	410.0	V	0.0	22.4
34911.000000	60.62	82.25	21.63	100.0	H	0.0	24.1

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
20253.000000	41.76	82.25	40.49	100.0	V	0.0	22.0
21443.000000	41.90	82.25	40.35	100.0	V	0.0	18.4
26004.000000	41.90	82.25	40.35	100.0	H	0.0	15.0
27738.000000	41.97	82.25	40.28	100.0	V	0.0	17.2
31637.000000	44.86	82.25	37.39	410.0	V	0.0	22.4
34911.000000	47.42	82.25	34.83	100.0	H	0.0	24.1

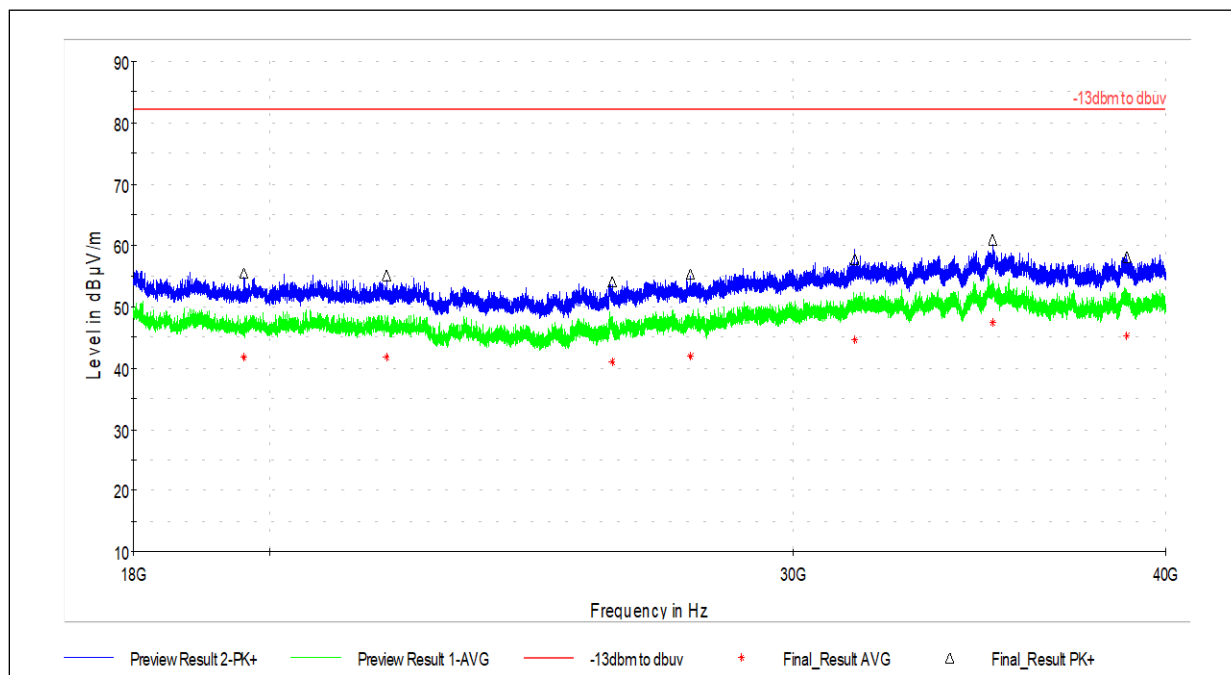
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/17/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None



6.7.3.3 802.11n Channel 6 + LTE B2



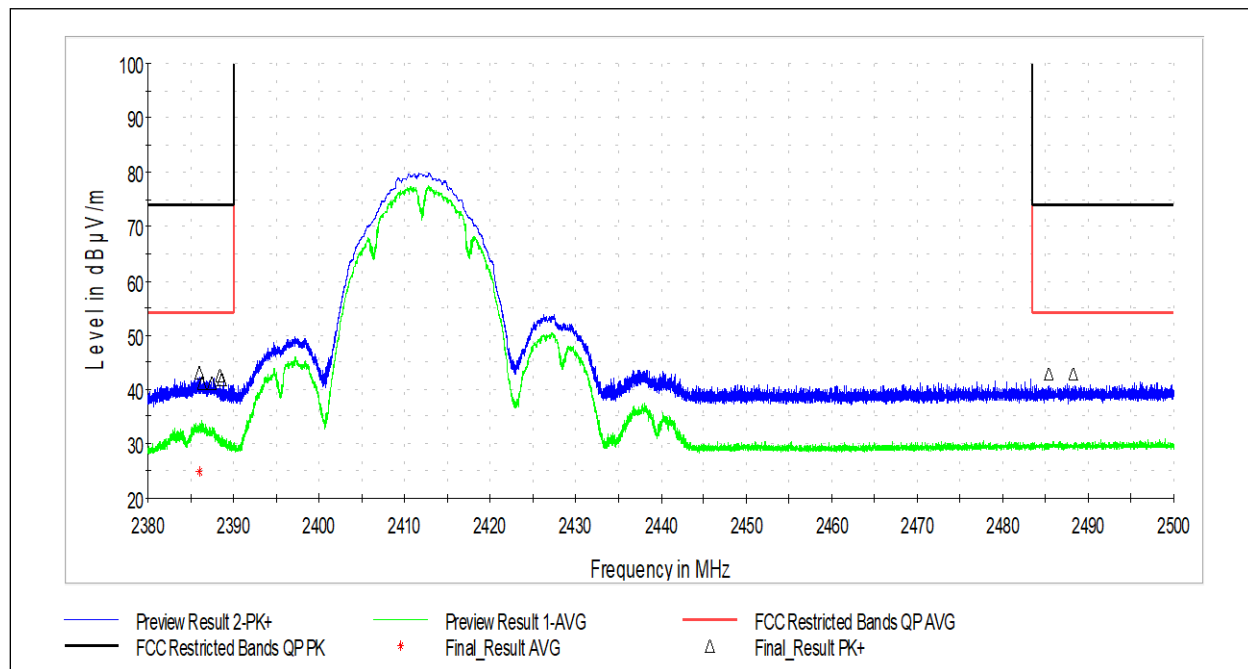
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
19605.000000	55.43	82.25	26.82	100.0	V	0.0	24.3
21890.000000	55.07	82.25	27.18	100.0	H	0.0	16.8
26076.000000	54.07	82.25	28.18	100.0	H	0.0	14.9
27683.000000	55.36	82.25	26.89	100.0	V	0.0	17.0
31459.000000	57.78	82.25	24.47	100.0	V	0.0	22.6
35000.000000	60.91	82.25	21.34	100.0	V	0.0	24.3
38831.000000	58.17	82.25	24.08	100.0	V	317.0	22.9

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
19605.000000	41.64	82.25	40.61	100.0	V	0.0	24.3
21890.000000	41.64	82.25	40.61	100.0	H	0.0	16.8
26076.000000	41.09	82.25	41.16	100.0	H	0.0	14.9
27683.000000	41.97	82.25	40.28	100.0	V	0.0	17.0
31459.000000	44.47	82.25	37.78	100.0	V	0.0	22.6
35000.000000	47.27	82.25	34.98	100.0	V	0.0	24.3
38831.000000	45.23	82.25	37.02	100.0	V	317.0	22.9

Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: Brian Lackey
(Where Applicable) FCC Part 15.247, RSS-247
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/17/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 26.3°C
Relative Humidity: 43.9%
Atmospheric Pressure: 985.4mbar

Deviations, Additions, or Exclusions: None

**6.7.4 Emissions at the Band Edge****6.7.4.1 802.11b Channel 1 + LTE B2**

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2386.020000	43.06	73.98	30.92	177.0	V	110.0	38.5
2386.346667	41.07	73.98	32.91	118.0	V	314.0	38.5
2387.486667	41.25	73.98	32.73	142.0	V	12.0	38.5
2388.373333	42.56	73.98	31.42	177.0	V	112.0	38.5
2388.593333	41.98	73.98	32.00	247.0	V	108.0	38.5
2485.386667	42.77	73.98	31.21	372.0	V	70.0	38.8
2488.253333	42.78	73.98	31.20	297.0	H	177.0	38.8

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2386.020000	24.94	53.98	29.04	177.0	V	110.0	38.5
2386.346667	7.60	53.98	46.38	118.0	V	314.0	38.5
2387.486667	7.62	53.98	46.36	142.0	V	12.0	38.5
2388.373333	19.47	53.98	34.51	177.0	V	112.0	38.5
2388.593333	15.45	53.98	38.53	247.0	V	108.0	38.5
2485.386667	15.22	53.98	38.76	372.0	V	70.0	38.8
2488.253333	14.97	53.98	39.01	297.0	H	177.0	38.8

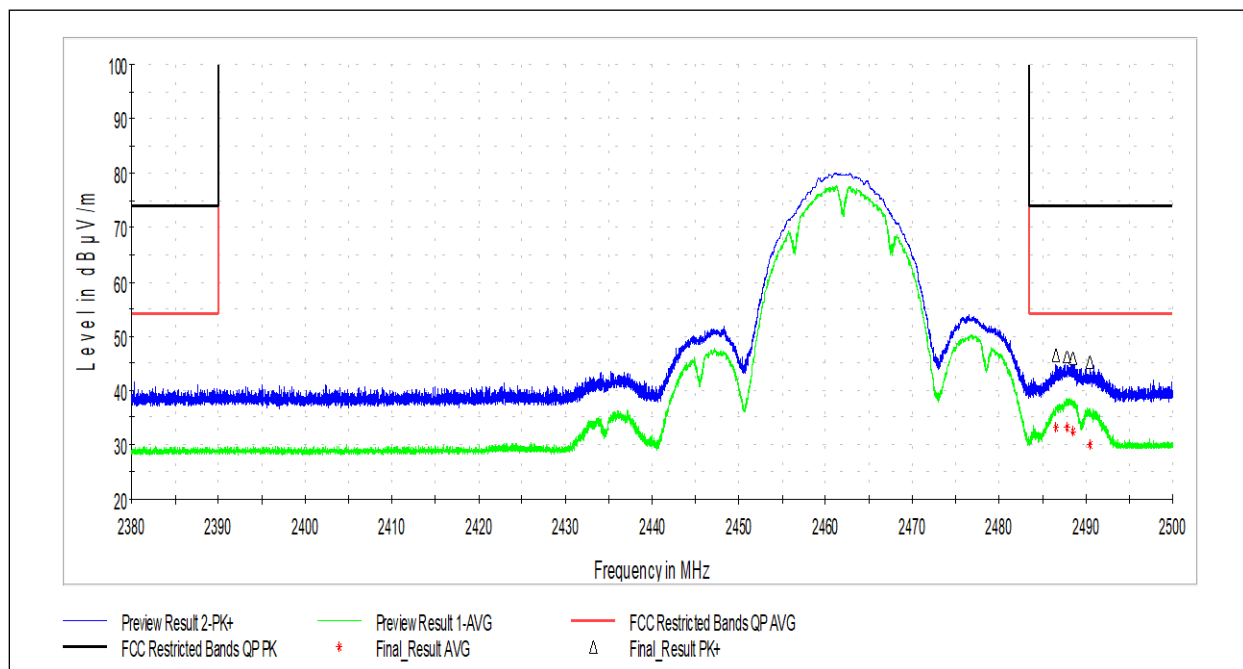
Test Personnel: David Perry
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/12/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None



6.7.4.2 802.11b Channel 11 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.580000	46.53	73.98	27.45	221.0	V	89.0	38.8
2487.826667	46.22	73.98	27.76	165.0	V	71.0	38.8
2488.540000	46.03	73.98	27.95	165.0	V	71.0	38.8
2490.433333	45.22	73.98	28.76	166.0	V	71.0	38.8

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.580000	33.11	53.98	20.87	221.0	V	89.0	38.8
2487.826667	33.20	53.98	20.78	165.0	V	71.0	38.8
2488.540000	32.50	53.98	21.48	165.0	V	71.0	38.8
2490.433333	29.86	53.98	24.12	166.0	V	71.0	38.8

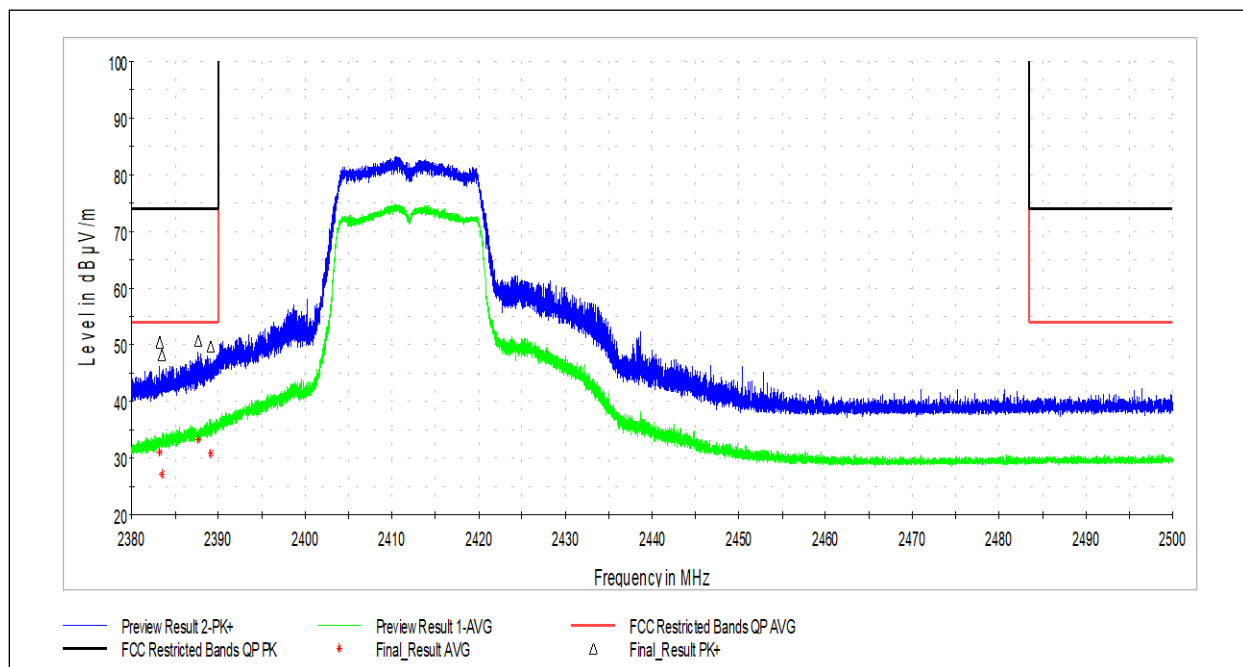
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: NA
(Where Applicable)
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None



6.7.4.3 802.11g Channel 1 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2383.206667	50.57	73.98	23.41	100.0	V	108.0	38.4
2383.520000	48.28	73.98	25.70	118.0	V	91.0	38.4
2387.700000	50.74	73.98	23.24	153.0	V	91.0	38.5
2389.086667	49.74	73.98	24.24	152.0	V	91.0	38.5

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2383.206667	30.98	53.98	23.00	100.0	V	108.0	38.4
2383.520000	27.25	53.98	26.73	118.0	V	91.0	38.4
2387.700000	33.25	53.98	20.73	153.0	V	91.0	38.5
2389.086667	30.84	53.98	23.14	152.0	V	91.0	38.5

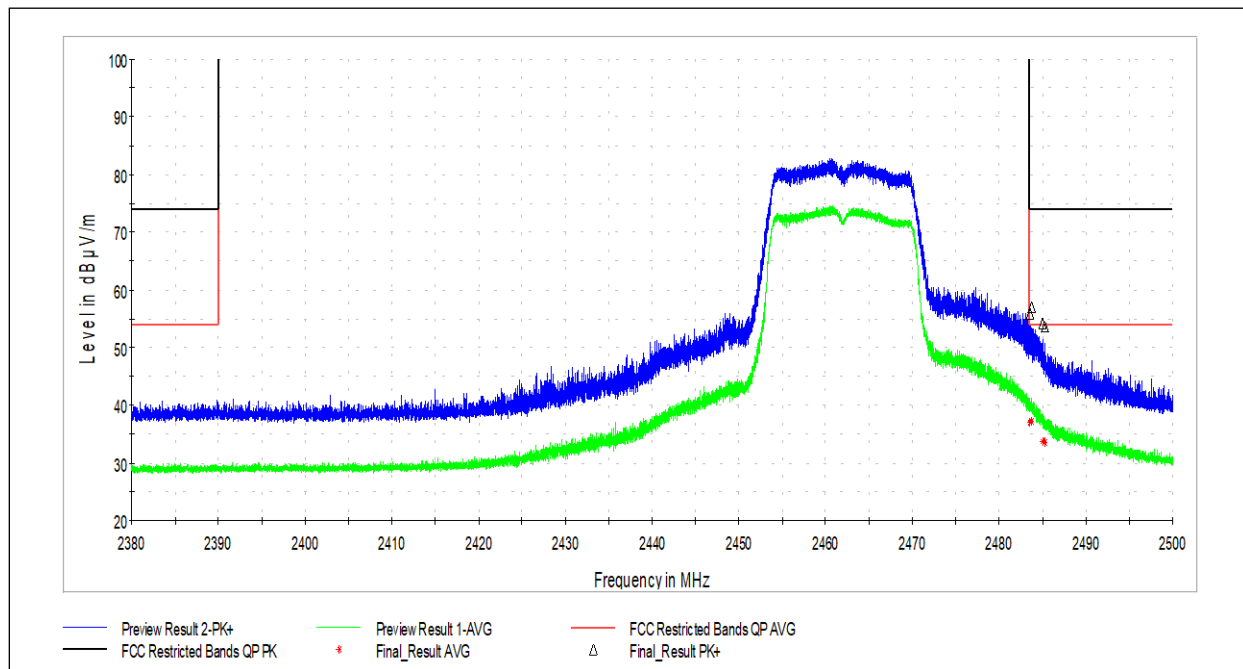
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: NA
(Where Applicable)
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None



6.7.4.4 802.11g Channel 11 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.553333	55.97	73.98	18.01	152.0	V	89.0	38.8
2483.700000	57.10	73.98	16.88	152.0	V	91.0	38.8
2485.013333	54.13	73.98	19.85	155.0	V	91.0	38.8
2485.253333	53.61	73.98	20.37	191.0	V	90.0	38.8

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.553333	36.91	53.98	17.07	152.0	V	89.0	38.8
2483.700000	37.09	53.98	16.89	152.0	V	91.0	38.8
2485.013333	33.81	53.98	20.17	155.0	V	91.0	38.8
2485.253333	33.48	53.98	20.50	191.0	V	90.0	38.8

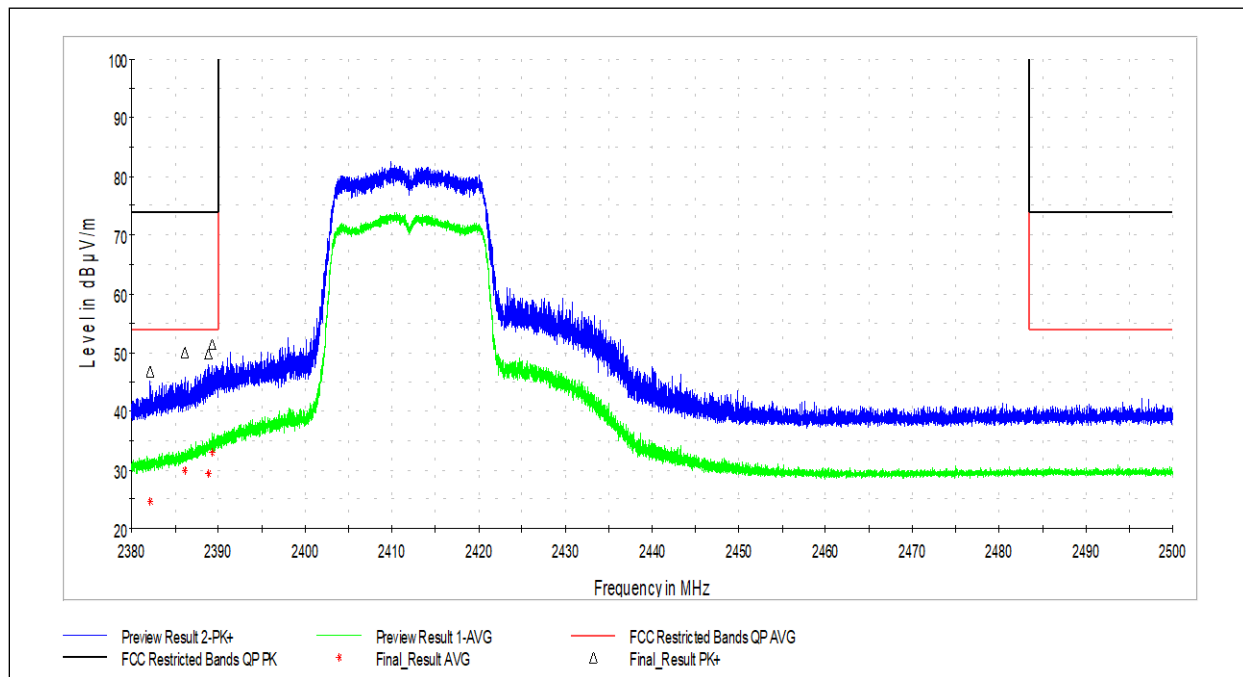
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: NA
(Where Applicable)
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None



6.7.4.5 802.11n Channel 1 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2382.166667	46.81	73.98	27.17	175.0	V	70.0	38.4
2386.146667	50.07	73.98	23.91	100.0	V	112.0	38.5
2388.873333	49.73	73.98	24.25	177.0	V	71.0	38.5
2389.313333	51.51	73.98	22.47	154.0	V	91.0	38.5

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2382.166667	24.61	53.98	29.37	175.0	V	70.0	38.4
2386.146667	29.93	53.98	24.05	100.0	V	112.0	38.5
2388.873333	29.46	53.98	24.52	177.0	V	71.0	38.5
2389.313333	32.99	53.98	20.99	154.0	V	91.0	38.5

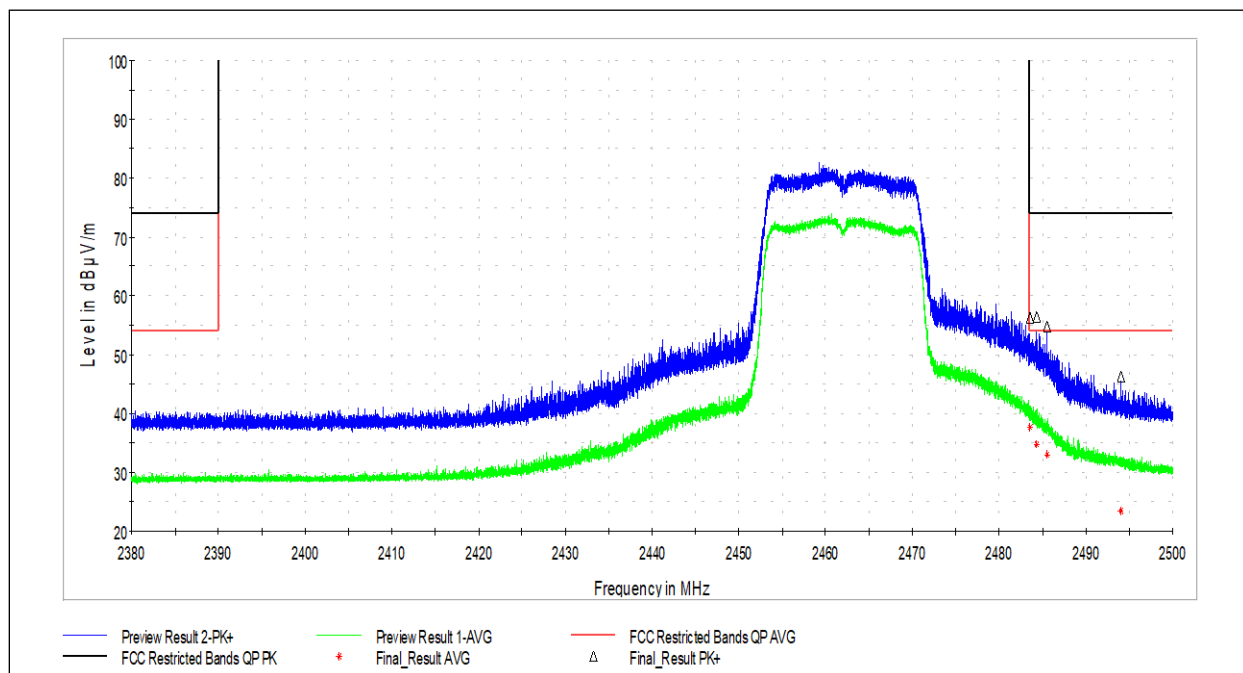
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: _____
(Where Applicable) NA
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None



6.7.4.6 802.11n Channel 11 + LTE B2



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.600000	56.27	73.98	17.71	221.0	V	90.0	38.8
2484.326667	56.34	73.98	17.64	107.0	V	93.0	38.8
2485.526667	54.71	73.98	19.27	196.0	V	91.0	38.8
2494.066667	46.30	73.98	27.68	153.0	V	91.0	38.8

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.600000	37.72	53.98	16.26	221.0	V	90.0	38.8
2484.326667	34.86	53.98	19.12	107.0	V	93.0	38.8
2485.526667	32.95	53.98	21.03	196.0	V	91.0	38.8
2494.066667	23.45	53.98	30.53	153.0	V	91.0	38.8

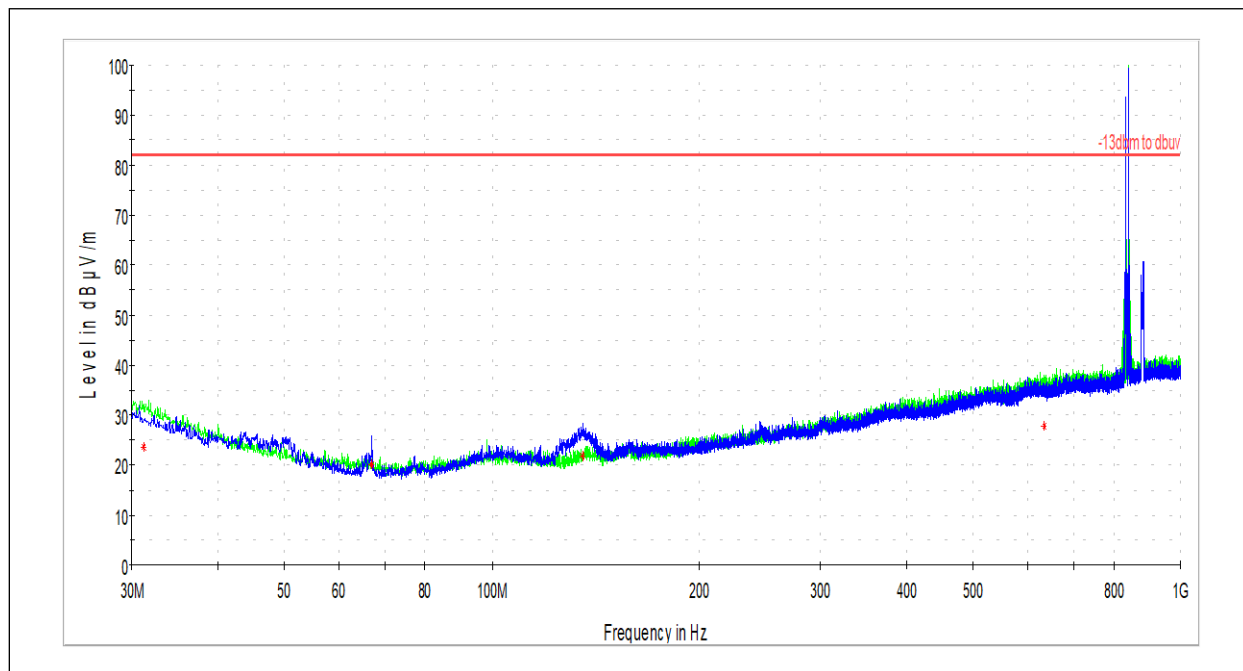
Test Personnel: Brian Lackey
Supervising/Reviewing Engineer: (Where Applicable) NA
Product Standard: FCC Part 15.247, RSS-247
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 9/13/2024
Limit Applied: FCC Part 15.209 in Restricted Bands from FCC Part 15.205
Ambient Temperature: 22.3°C
Relative Humidity: 52.0%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.8 FCC Part 22 Radiated Spurious Emissions (LTE B5)****6.8.1 Radiated Spurious Emissions, 30 MHz – 1 GHz**

LTE Band 5



*The large peak shown is the fundamental frequency of the operating band.

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.185556	23.64	82.25	58.61	221.0	H	84.0	24.2
66.913889	20.20	82.25	62.05	100.0	V	0.0	12.6
135.406667	21.92	82.25	60.33	100.0	V	184.0	15.8
634.902778	27.85	82.25	54.40	231.0	H	170.0	29.5

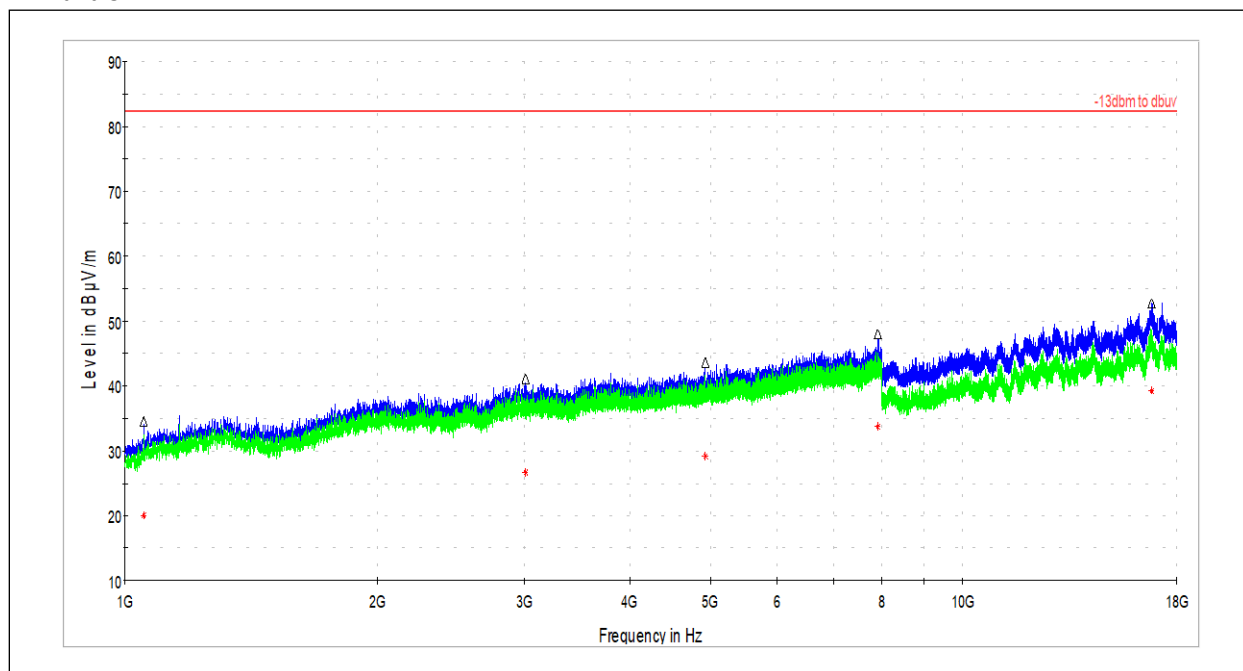
Test Personnel: Seth Parker
Supervising/Reviewing Engineer: _____
(Where Applicable) N/A
Product Standard: FCC Part 22, RSS-132
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/9/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.8.2 Radiated Spurious Emissions, 1 GHz – 18 GHz**

LTE Band 5



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1051.722	34.52	82.25	47.73	151.0	H	314.0	-1.9
3003.167	41.07	82.25	41.18	392.0	V	242.0	6.6
4928.944	43.69	82.25	38.56	410.0	V	56.0	9.8
7915.222	47.96	82.25	34.29	410.0	V	65.0	14.2
16797.500	52.76	82.25	29.49	410.0	V	0.0	26.4

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1051.722	20.08	82.25	62.17	151.0	H	314.0	-1.9
3003.167	26.71	82.25	55.54	392.0	V	242.0	6.6
4928.944	29.21	82.25	53.04	410.0	V	56.0	9.8
7915.222	33.73	82.25	48.52	410.0	V	65.0	14.2
16797.500	39.21	82.25	43.04	410.0	V	0.0	26.4

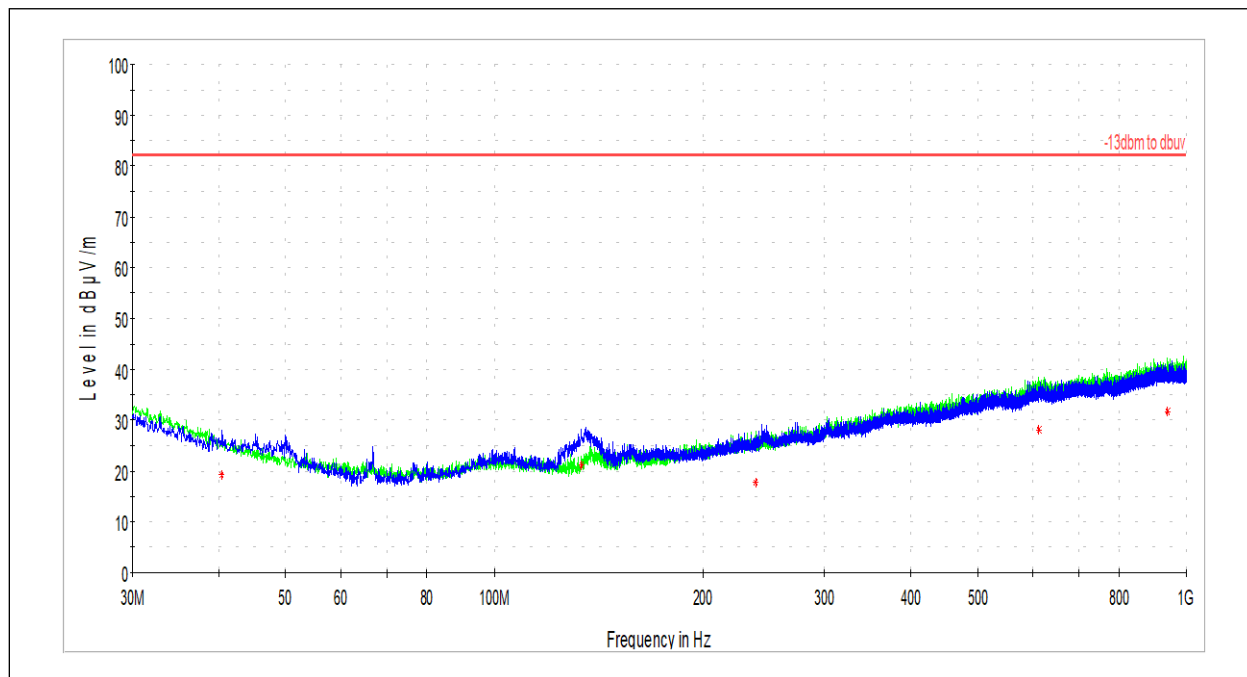
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: N/A
(Where Applicable)
Product Standard: FCC Part 22, RSS-132
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/10/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.9 FCC Part 24 Radiated Spurious Emissions (LTE B2/B25)****6.9.1 Radiated Spurious Emissions, 30 MHz – 1 GHz**

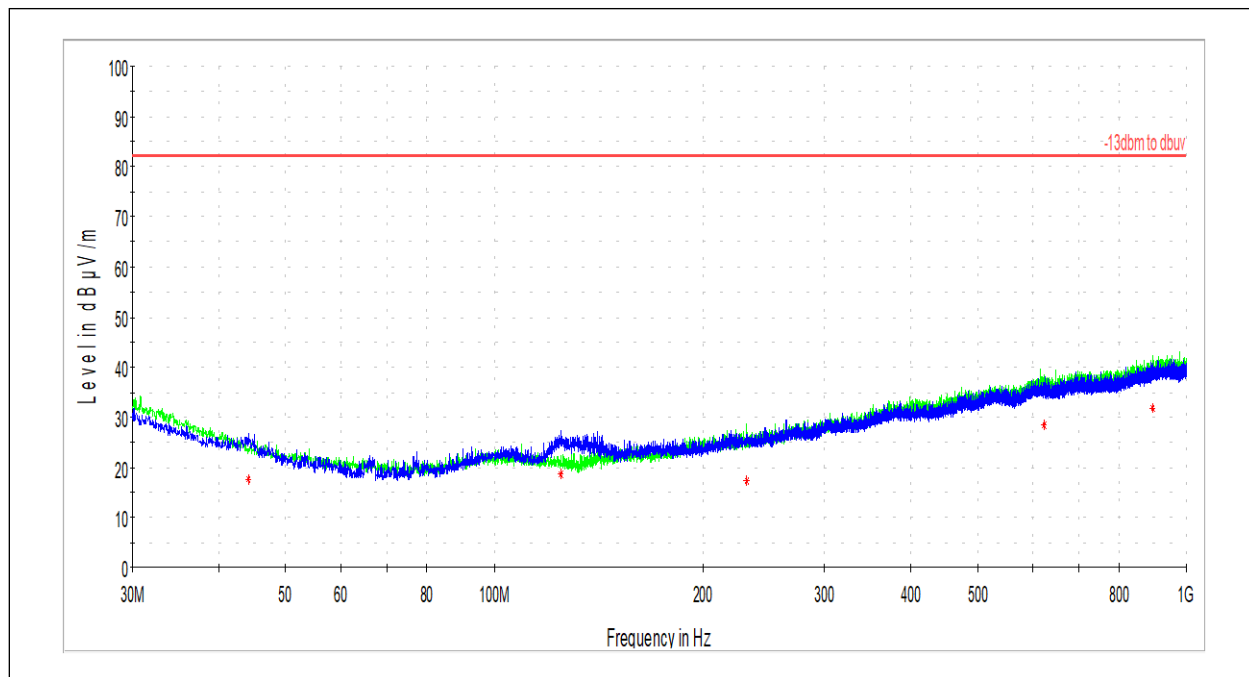
LTE Band 2



Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.400556	19.31	82.25	62.94	100.0	V	0.0	17.4
133.628333	21.20	82.25	61.05	100.0	V	211.0	15.3
238.657778	17.68	82.25	64.57	335.0	H	254.0	19.7
612.431111	28.11	82.25	54.14	347.0	H	267.0	29.8
940.237222	31.67	82.25	50.58	200.0	H	242.0	33.0



LTE Band 25

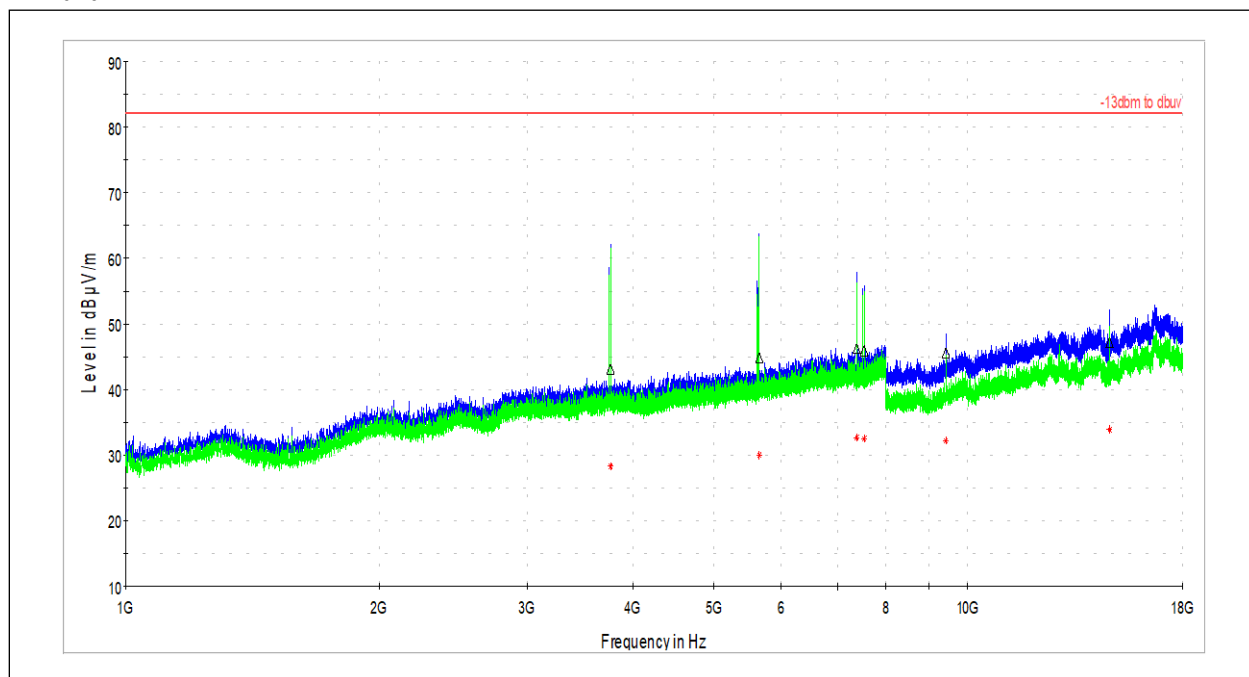


Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.172778	17.53	82.25	64.72	100.0	V	217.0	16.1
124.844444	18.68	82.25	63.57	100.0	V	149.0	15.5
231.436667	17.26	82.25	64.99	245.0	H	359.0	19.4
622.831667	28.51	82.25	53.74	227.0	H	154.0	29.8
893.569444	31.66	82.25	50.59	303.0	H	184.0	32.6

Test Personnel: Seth Parker
Supervising/Reviewing Engineer: _____
(Where Applicable) N/A
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient _____
Signals or BB Source: Yes

Test Date: 7/9/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

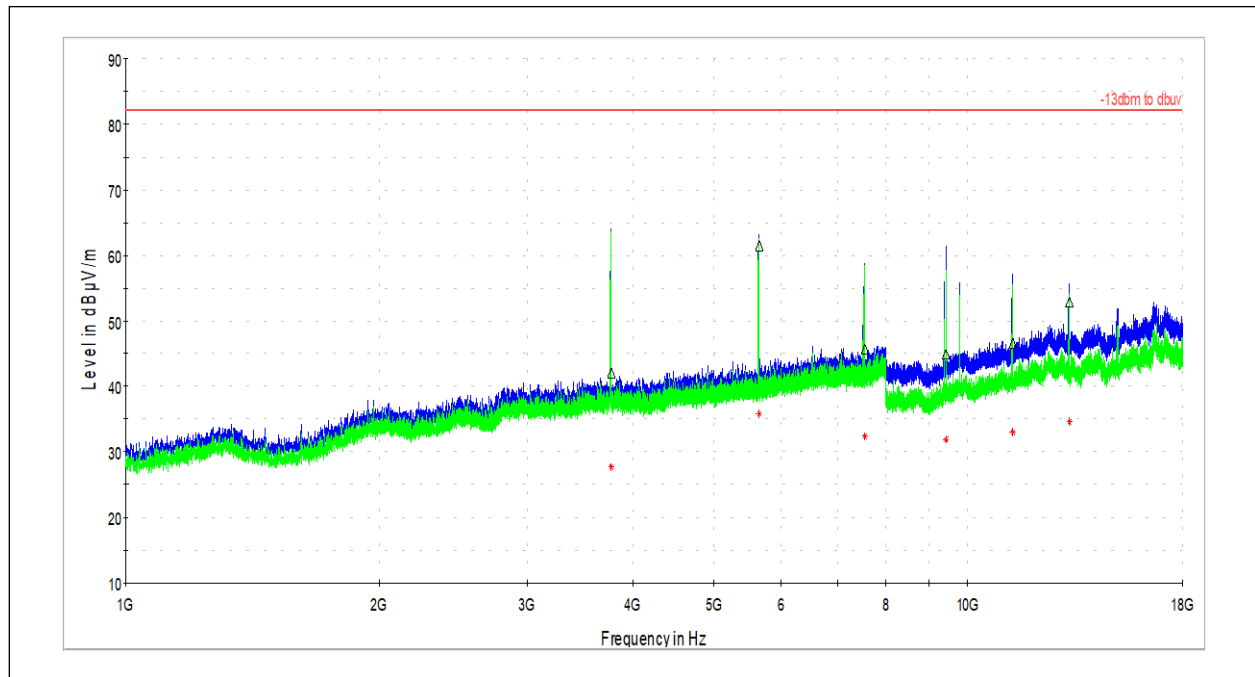
**6.9.2 Radiated Spurious Emissions, 1 GHz – 18 GHz****LTE Band 2**

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3768.88889	43.06	82.25	39.19	410.0	V	314.0	8.2
5653.44444	44.77	82.25	37.48	410.0	V	232.0	11.0
7385.94444	46.26	82.25	35.99	410.0	V	22.0	13.5
7537.61111	45.96	82.25	36.29	410.0	V	323.0	13.6
9421.87500	45.64	82.25	36.61	410.0	V	0.0	16.7
14741.87500	47.15	82.25	35.10	100.0	H	0.0	22.1

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3768.88889	28.26	82.25	53.99	410.0	V	314.0	8.2
5653.44444	30.06	82.25	52.19	410.0	V	232.0	11.0
7385.94444	32.59	82.25	49.66	410.0	V	22.0	13.5
7537.61111	32.52	82.25	49.73	410.0	V	323.0	13.6
9421.87500	32.15	82.25	50.10	410.0	V	0.0	16.7
14741.87500	33.90	82.25	48.35	100.0	H	0.0	22.1



LTE Band 25



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3773.94444	42.16	82.25	40.09	152.0	V	260.0	8.2
5660.83333	61.45	82.25	20.80	322.0	H	200.0	11.0
7547.72222	45.71	82.25	36.54	410.0	V	160.0	13.7
9434.37500	44.88	82.25	37.37	410.0	V	278.0	16.7
11321.25000	46.58	82.25	35.67	410.0	V	330.0	19.1
13208.75000	52.90	82.25	29.35	410.0	V	160.0	21.3

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3773.94444	27.75	82.25	54.50	152.0	V	260.0	8.2
5660.83333	35.89	82.25	46.36	322.0	H	200.0	11.0
7547.72222	32.39	82.25	49.86	410.0	V	160.0	13.7
9434.37500	31.89	82.25	50.36	410.0	V	278.0	16.7
11321.25000	32.98	82.25	49.27	410.0	V	330.0	19.1
13208.75000	34.65	82.25	47.60	410.0	V	160.0	21.3

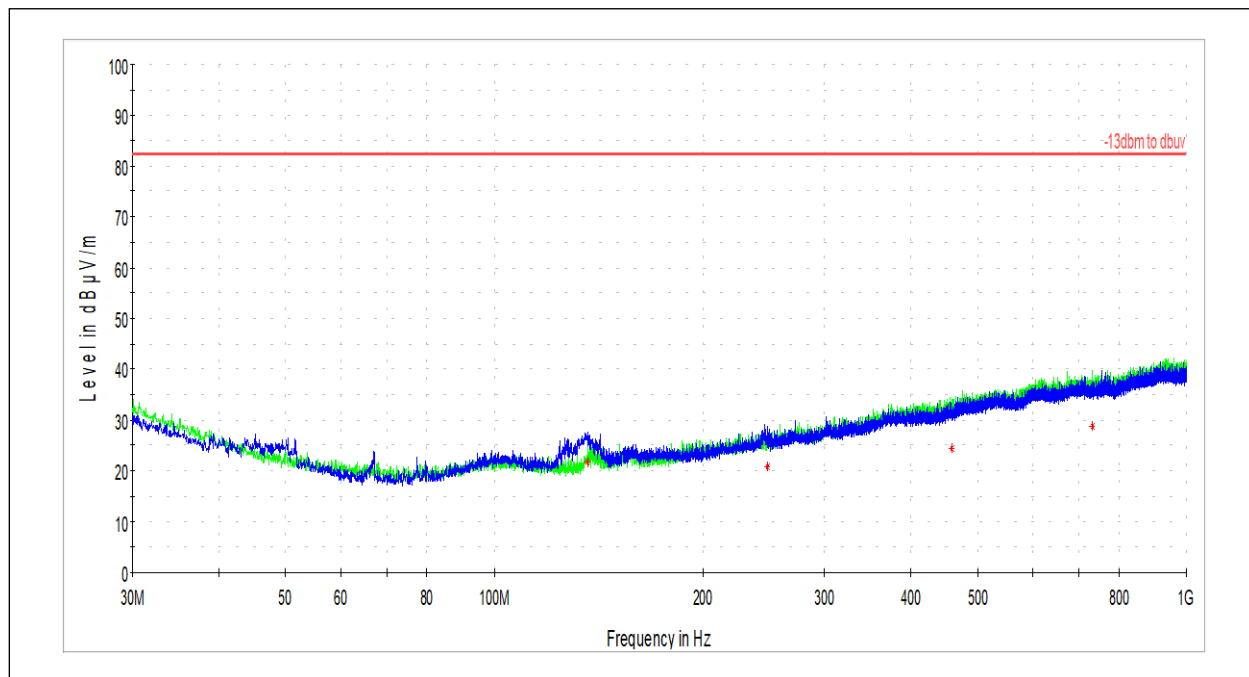
Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: N/A
(Where Applicable)
Product Standard: FCC Part 24, RSS-133
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/10/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.10 FCC Part 27 Radiated Spurious Emissions (LTE B4/B12/B13/B66)****6.10.1 Radiated Spurious Emissions, 30 MHz – 1 GHz**

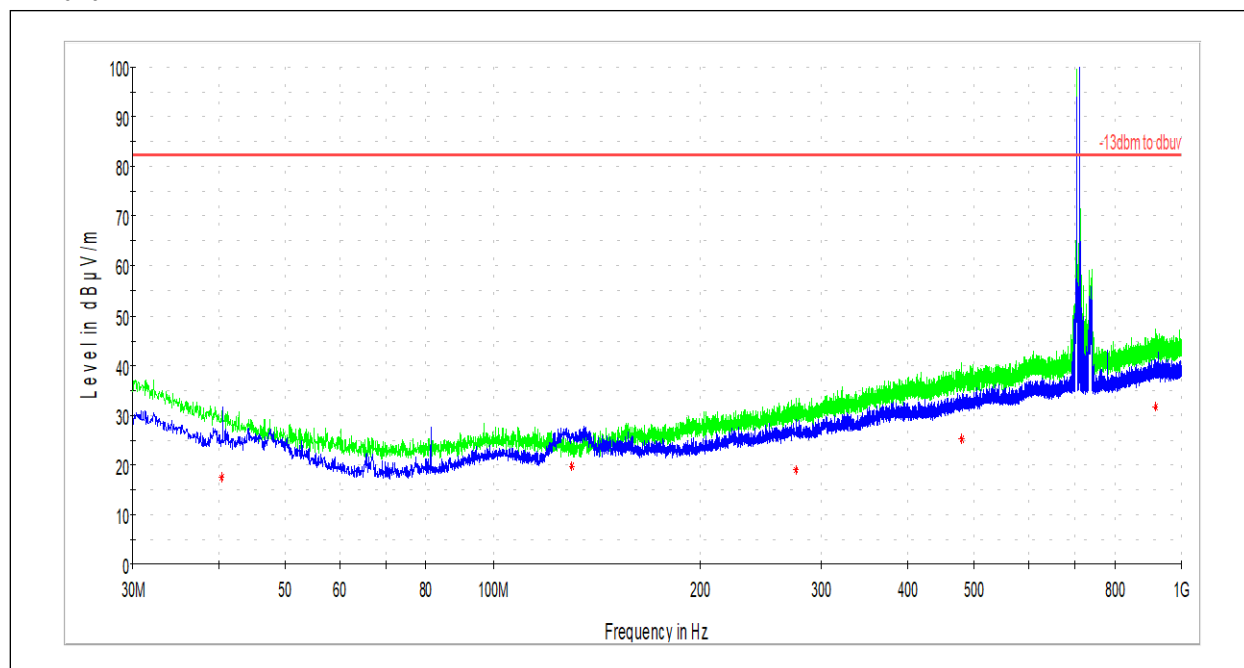
LTE Band 4



Frequency (MHz)	QuasiPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
136.376667	21.69	82.25	60.56	100.0	V	178.0	15.9
248.196111	20.69	82.25	61.56	100.0	V	0.0	19.9
458.578333	24.36	82.25	57.89	338.0	H	208.0	26.1
732.387778	28.78	82.25	53.47	275.0	H	-6.0	30.7



LTE Band 12

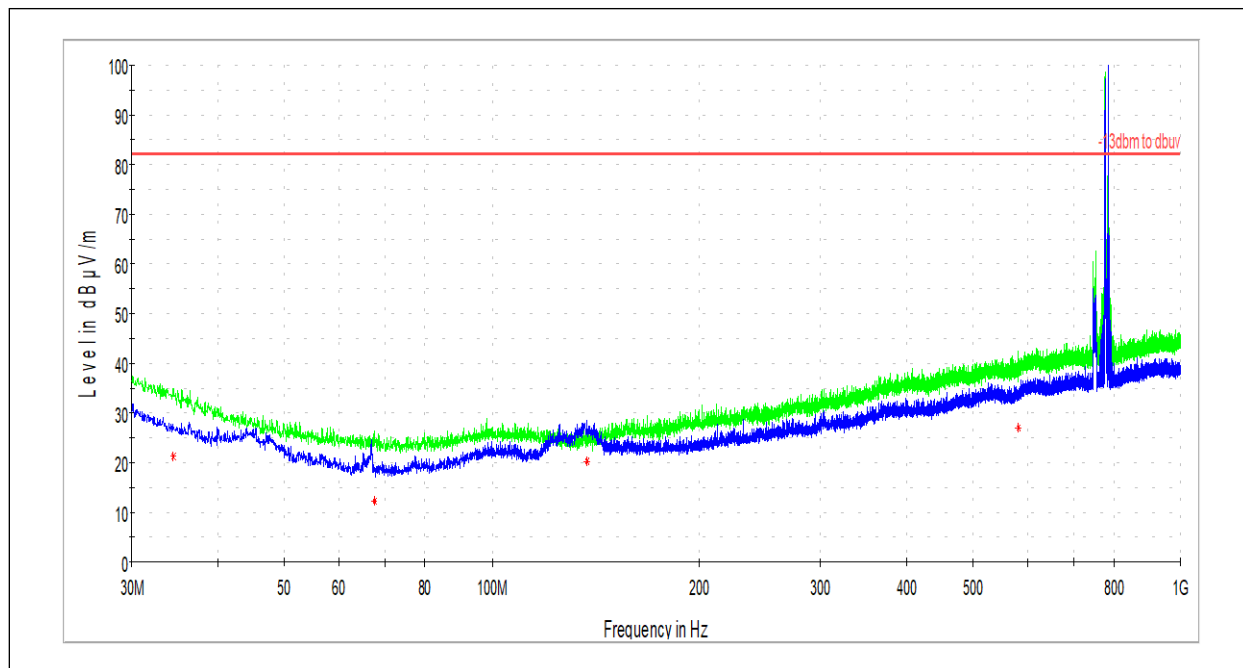


*The large peak shown is the fundamental frequency of the operating band.

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.400556	17.51	82.25	64.74	101.0	H	293.0	19.3
130.287222	19.73	82.25	62.52	100.0	V	94.0	15.2
275.787222	18.94	82.25	63.31	201.0	H	63.0	21.1
479.702778	25.23	82.25	57.02	250.0	H	69.0	26.9
916.741667	31.72	82.25	50.53	100.0	H	47.0	33.0



LTE Band 13

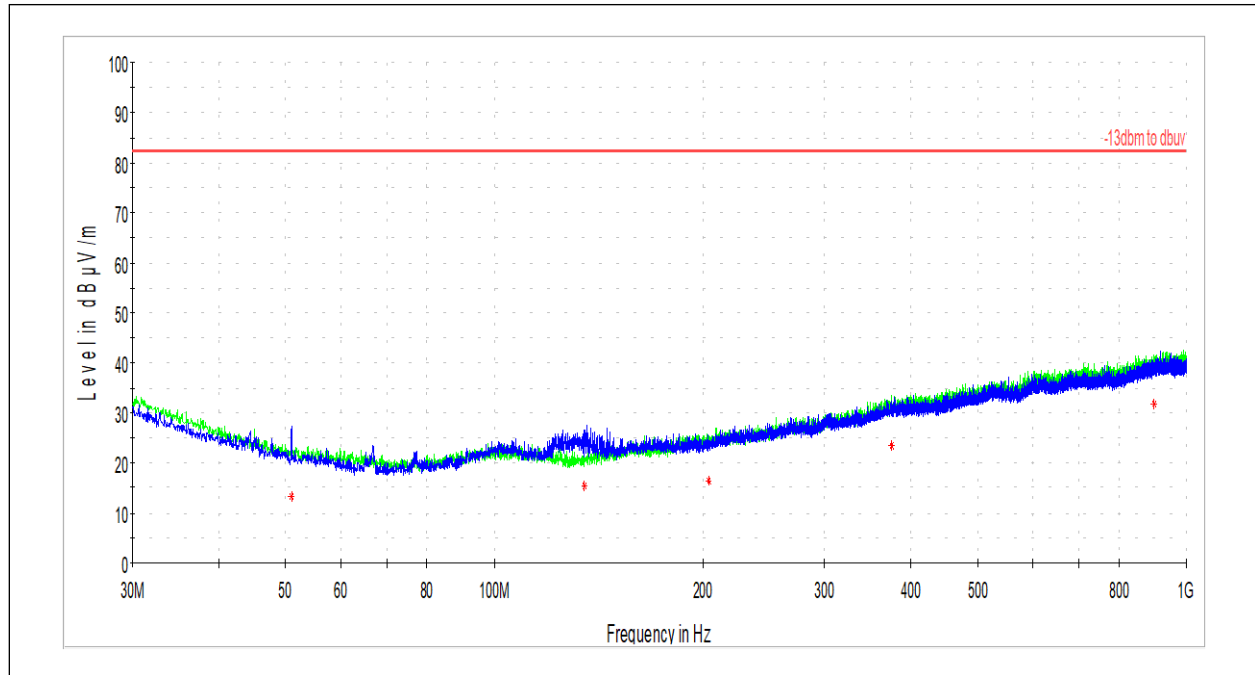


*The large peak shown is the fundamental frequency of the operating band.

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.472778	21.17	82.25	61.08	95.0	H	139.0	22.3
67.506667	12.16	82.25	70.09	100.0	H	117.0	14.0
137.292778	20.15	82.25	62.10	100.0	V	154.0	15.3
581.768333	26.88	82.25	55.37	222.0	H	134.0	28.3



LTE Band 66

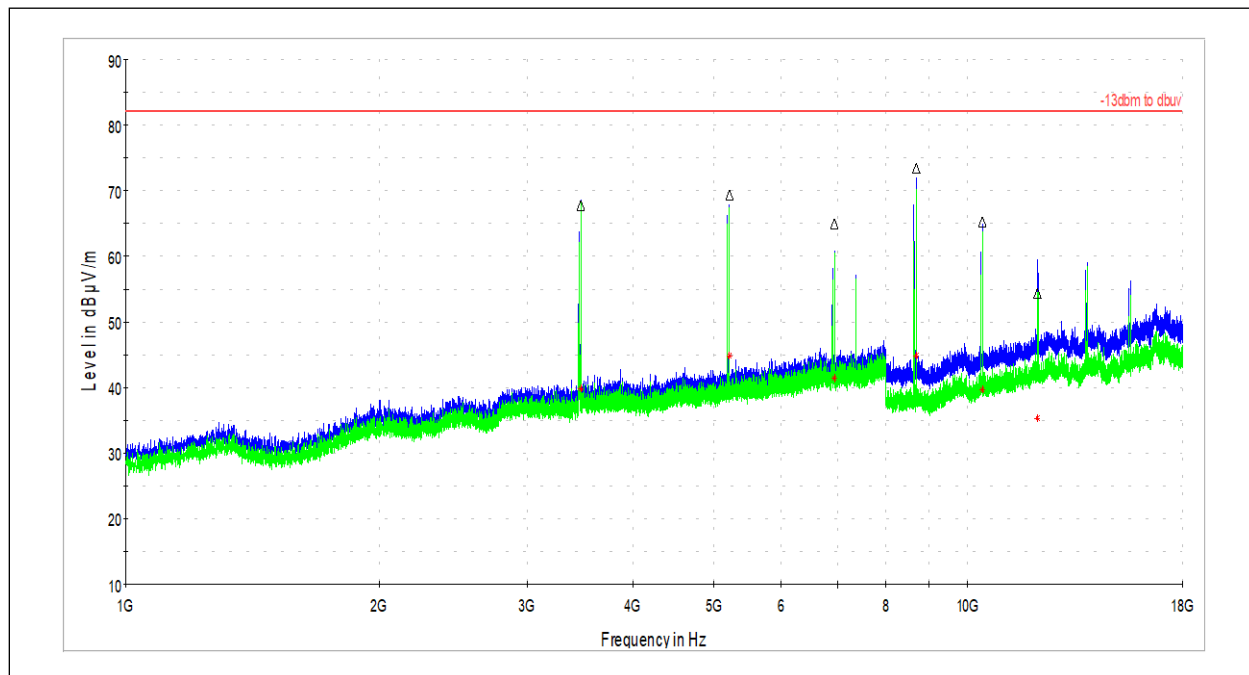


Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
50.908889	13.31	82.25	68.94	97.0	V	41.0	14.5
135.137222	15.42	82.25	66.83	100.0	V	248.0	15.6
203.953333	16.33	82.25	65.92	250.0	H	6.0	18.2
375.589444	23.54	82.25	58.71	235.0	H	170.0	24.1
898.203889	31.76	82.25	50.49	226.0	H	124.0	32.9

Test Personnel: Seth Parker
Supervising/Reviewing Engineer: N/A
(Where Applicable) FCC Part 27,
RSS-130 (B12/B13)
Product Standard: RSS-139 (B4/B66)
Input Voltage: 3.6VDC
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 7/9/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

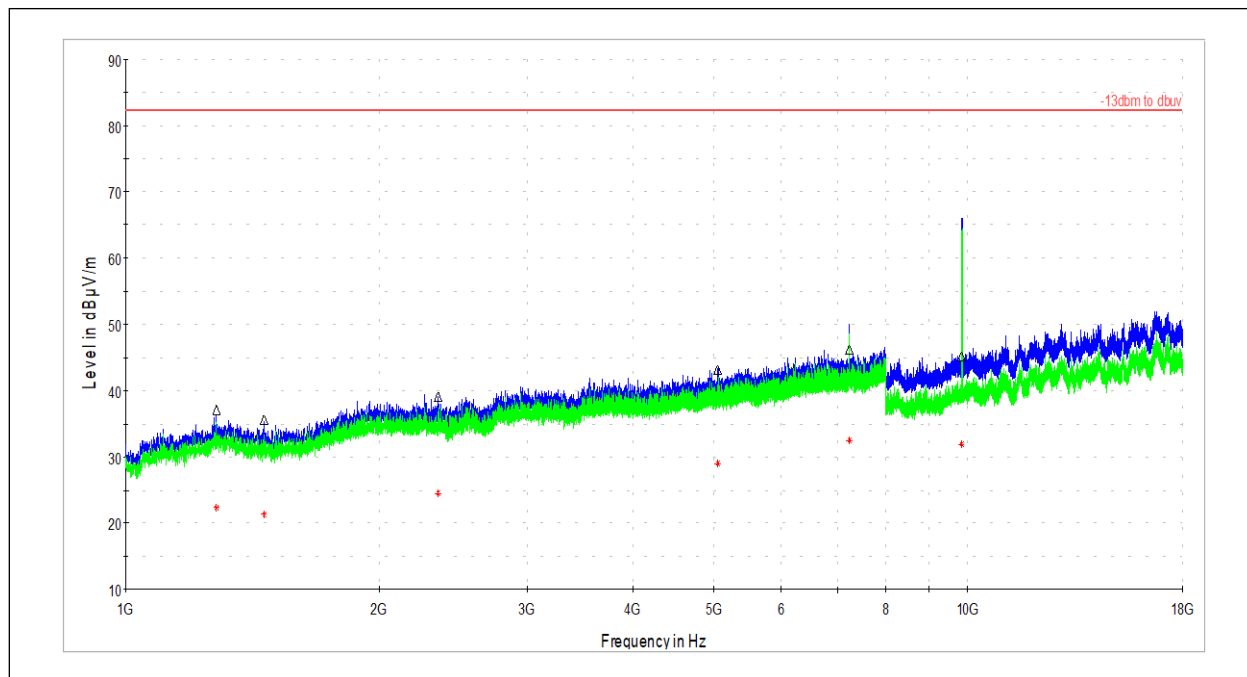
**6.10.2 Radiated Spurious Emissions, 1 GHz – 18 GHz****LTE Band 4**

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3473.72222	67.77	82.25	14.48	187.0	V	256.0	7.4
5210.88889	69.39	82.25	12.86	160.0	V	160.0	10.4
6947.66667	65.01	82.25	17.24	170.0	V	162.0	13.1
8684.37500	73.42	82.25	8.83	132.0	V	212.0	15.5
10421.87500	65.27	82.25	16.98	302.0	V	128.0	18.2
12102.50000	54.44	82.25	27.81	179.0	V	11.0	20.2

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3473.72222	39.82	82.25	42.43	187.0	V	256.0	7.4
5210.88889	44.77	82.25	37.48	160.0	V	160.0	10.4
6947.66667	41.35	82.25	40.90	170.0	V	162.0	13.1
8684.37500	44.87	82.25	37.38	132.0	V	212.0	15.5
10421.87500	39.76	82.25	42.49	302.0	V	128.0	18.2
12102.50000	35.33	82.25	46.92	179.0	V	11.0	20.2



LTE Band 12

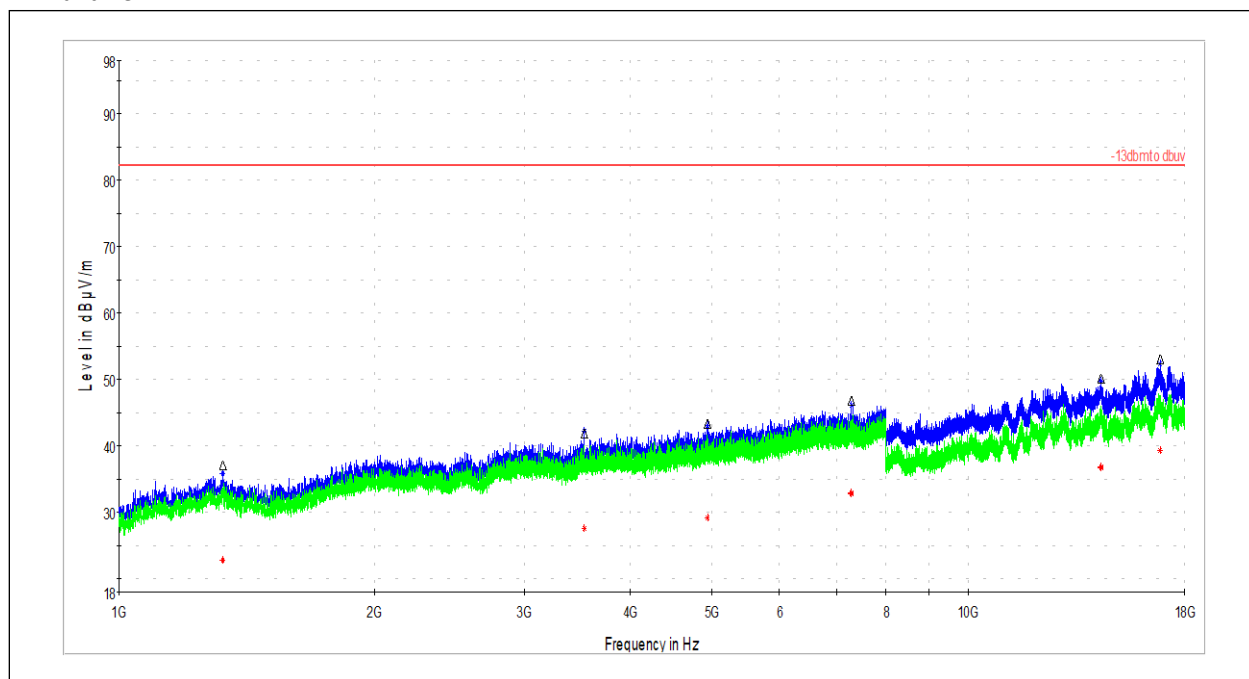


Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1282.333333	37.06	82.25	45.19	410.0	V	44.0	0.8
1458.888889	35.64	82.25	46.61	410.0	H	104.0	0.0
2351.777778	39.12	82.25	43.13	410.0	H	174.0	4.8
5044.055556	43.25	82.25	39.00	410.0	V	286.0	10.0
7235.833333	46.24	82.25	36.01	410.0	V	200.0	13.4
9847.500000	45.15	82.25	37.10	410.0	H	279.0	17.8

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1282.333333	22.27	82.25	59.98	410.0	V	44.0	0.8
1458.888889	21.31	82.25	60.94	410.0	H	104.0	0.0
2351.777778	24.54	82.25	57.71	410.0	H	174.0	4.8
5044.055556	29.02	82.25	53.23	410.0	V	286.0	10.0
7235.833333	32.43	82.25	49.82	410.0	V	200.0	13.4
9847.500000	31.87	82.25	50.38	410.0	H	279.0	17.8



LTE Band 13

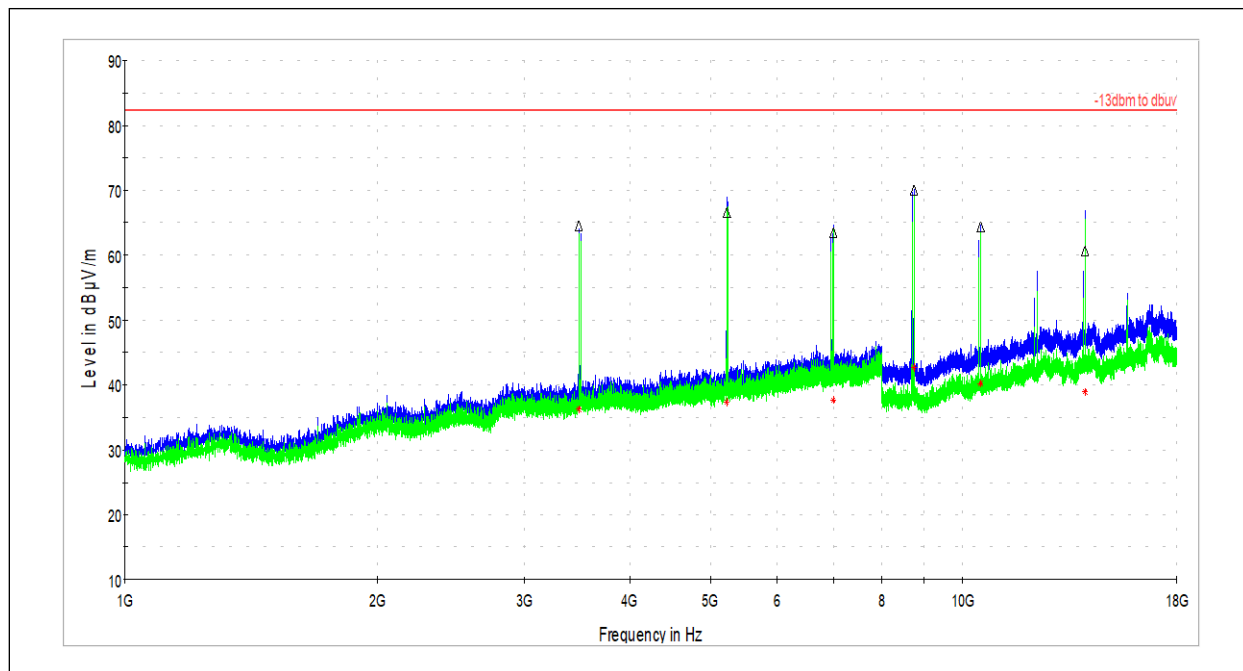


Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1324.33333	37.12	82.25	45.13	410.0	V	114.0	0.9
3534.00000	41.91	82.25	40.34	410.0	H	268.0	7.7
4930.11111	43.32	82.25	38.93	410.0	V	268.0	9.8
7288.72222	46.88	82.25	35.37	410.0	V	262.0	13.5
14340.00000	50.22	82.25	32.03	410.0	V	44.0	21.7
16841.87500	53.10	82.25	29.15	410.0	V	232.0	26.4

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1324.33333	22.72	82.25	59.53	410.0	V	114.0	0.9
3534.00000	27.58	82.25	54.67	410.0	H	268.0	7.7
4930.11111	29.17	82.25	53.08	410.0	V	268.0	9.8
7288.72222	32.84	82.25	49.41	410.0	V	262.0	13.5
14340.00000	36.77	82.25	45.48	410.0	V	44.0	21.7
16841.87500	39.25	82.25	43.00	410.0	V	232.0	26.4



LTE Band 66



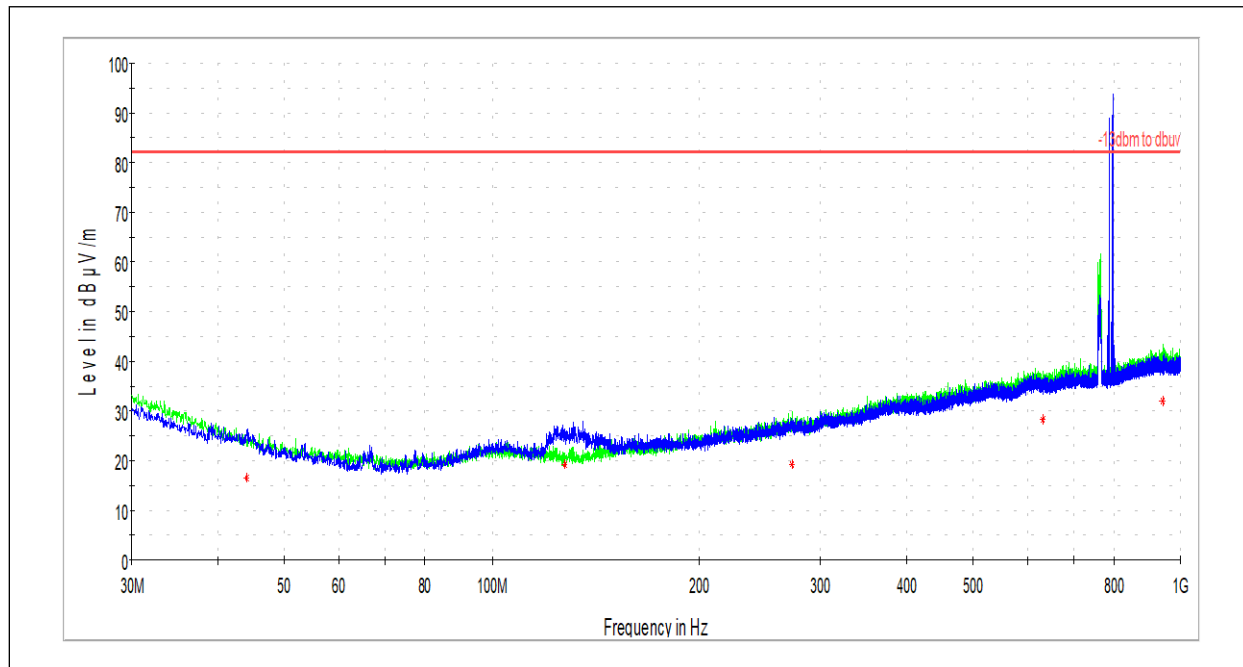
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3482.66667	64.47	82.25	17.78	197.0	H	244.0	7.7
5222.94444	66.55	82.25	15.70	175.0	H	208.0	10.5
6998.22222	63.49	82.25	18.76	261.0	V	152.0	13.1
8746.87500	70.11	82.25	12.14	277.0	V	116.0	15.5
10496.25000	64.39	82.25	17.86	152.0	V	254.0	18.3
13995.62500	60.67	82.25	21.58	225.0	V	162.0	21.3

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3482.66667	36.30	82.25	45.95	197.0	H	244.0	7.7
5222.94444	37.42	82.25	44.83	175.0	H	208.0	10.5
6998.22222	37.72	82.25	44.53	261.0	V	152.0	13.1
8746.87500	42.77	82.25	39.48	277.0	V	116.0	15.5
10496.25000	40.24	82.25	42.01	152.0	V	254.0	18.3
13995.62500	38.89	82.25	43.36	225.0	V	162.0	21.3

Test Personnel: Jeremiah Andrade
Supervising/Reviewing Engineer: N/A
(Where Applicable) FCC Part 27,
RSS-130 (B12/B13)
Product Standard: RSS-139 (B4/B66)
Input Voltage: 3.6VDC
Pretest Verification w / Ambient
Signals or BB Source: Yes

Test Date: 7/10/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.11 FCC Part 90 Radiated Spurious Emissions (LTE B14)****6.11.1 Radiated Spurious Emissions, 30 MHz – 1 GHz****Band 14**

*The large peak shown is the fundamental frequency of the operating band.

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
44.065000	16.44	82.25	65.81	100.0	V	50.0	16.1
127.592778	19.23	82.25	63.02	100.0	V	145.0	15.6
272.769444	19.14	82.25	63.11	250.0	H	312.0	21.0
630.968889	28.33	82.25	53.92	130.0	H	173.0	29.6
941.315000	32.06	82.25	50.19	400.0	H	357.0	33.0

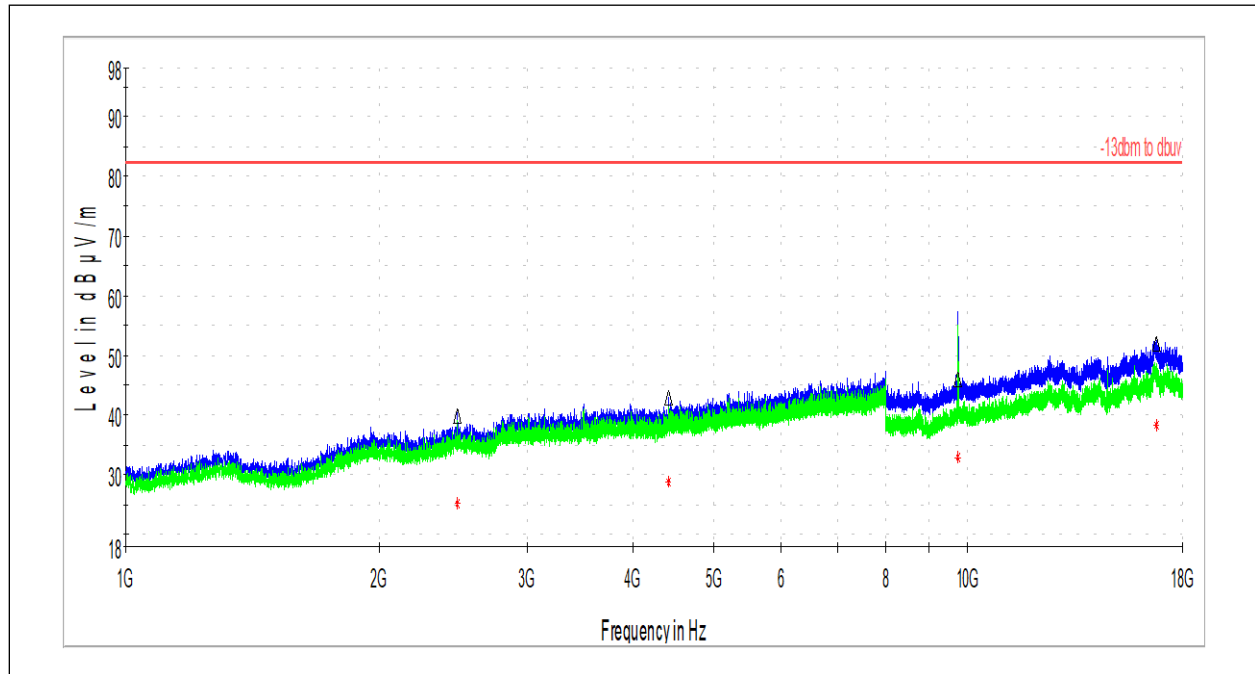
Test Personnel: Seth Parker
Supervising/Reviewing Engineer: _____
(Where Applicable) N/A
Product Standard: FCC Part 90, RSS-140
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/9/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**6.11.2 Radiated Spurious Emissions, 1 GHz – 18 GHz**

Band 14



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2478.94444	39.94	82.25	42.31	161.0	H	11.0	5.6
4416.00000	42.97	82.25	39.28	410.0	V	60.0	9.2
9748.12500	46.13	82.25	36.12	100.0	H	347.0	17.6
16756.25000	51.90	82.25	30.35	410.0	H	166.0	26.3

Frequency (MHz)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2478.94444	25.33	82.25	56.92	161.0	H	11.0	5.6
4416.00000	28.75	82.25	53.50	410.0	V	60.0	9.2
9748.12500	32.95	82.25	49.30	100.0	H	347.0	17.6
16756.25000	38.35	82.25	43.90	410.0	H	166.0	26.3

Test Personnel: Seth Parker
Supervising/Reviewing Engineer: N/A
(Where Applicable)
Product Standard: FCC Part 27, RSS-140
Input Voltage: 3.6VDC
Pretest Verification w / Ambient Signals or BB Source: Yes

Test Date: 7/10/2024
Limit Applied: -13dBm converted to field strength
Ambient Temperature: 25.9°C
Relative Humidity: 45.7%
Atmospheric Pressure: 982.0mbar

Deviations, Additions, or Exclusions: None

**7 Revision History**

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	8/13/2024	105373087LEX-028	JJA	MC	Original Issue
1	9/24/2024	105373087LEX-028.1	BZ	MC	Added Wi-Fi RSE Data
2	10/21/2024	105373087LEX-028.2	BZ	MC	Updated FCCID and ICID on page 6