





Test Report for RSAE Labs, Inc.  
Report No. EY0476-3 Issue 2



## TEST REPORT

Applicant	RSAE Labs, Inc.		
Address	1002 Arthur Drive Suite 200 Lynn Haven, FL 32444		
FCC ID	2ASIM-TGU1		
ISED IC	33142-TGU1		
Product Marketing Name (PMN)	TGU-1 and MGU-1		
Hardware Version Identification Number (HVIN)	03-2004-01		
Additional HVINs	See Section 3.1 of this report for details		
Firmware Version Identification Number (FVIN)	3.12		
Date of tests	Oct 31 – Nov 04, 2024		
FCC Test Firm DN Canada CABID	US1028 US0106		
The tests have been carried out according to the requirements of the following standard:			
<input checked="" type="checkbox"/> FCC Parts 15.247, 24.238, 27.53 <input checked="" type="checkbox"/> ISED Canada RSS-247 Issue 3, RSS-133 Issue 7, RSS-139 Issue 4, RSS-130 Issue 2			
<b>CONCLUSION: The submitted sample was found to <u>COMPLY</u> with the test requirement</b>			
Prepared by Nisha Patel Wireless Engineer I		Approved by Yunus Faziloglu Wireless Manager	
			
Report Issue Date: Jan 15, 2025		Issue Number: 2	
<small>This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <a href="https://www.cps.bureauveritas.com/terms-conditions">https://www.cps.bureauveritas.com/terms-conditions</a> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.</small>			



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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED	PREPARED BY	APPROVED BY
1	Original release	Nov 27, 2024	NP	YF
2	Updated applicant address	Jan 15, 2025	NP	YF



## 1 SUMMARY OF TEST RESULTS

The EUT was tested against the following requirements:

STANDARD SECTION		TEST	APPLICABLE	RESULT
FCC	RSS			
15.247 24.238 27.53	RSS-247 RSS-133 RSS-130, RSS-139	Radiated Spurious Emissions	Y	Pass

**Note 1:** This test report includes data to demonstrate compliance with simultaneous transmission radiated spurious emissions limits for composite devices using a previously certified radio module, per FCC KDB 996369 D04 Module Integration Guide V02, Section 3.

**Note 2:** Per FCC guidance, the least stringent limit out of all the standards listed above was used in this report.

**Note 3:** The EUT incorporates a previously certified radio module as detailed in Section 3.1 of this report.

## 2 MEASUREMENT UNCERTAINTY

The listed uncertainties are the worst-case uncertainty for the entire range of measurements. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results. Values for measurement uncertainty are calculated per ETSI TR 100 028 (2001).

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radio frequency (@ 2.4GHz)	$3.23 \times 10^{-8}$	$1 \times 10^{-7}$
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	3.4% 0.3dB	5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .



### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Nominal Voltage	7.2 VDC (Battery)
Operating Frequency of EUT	802.15.4: 2405-2480MHz
Operating Frequency of Integrated Module	LTE Band 2: 1850-1910MHz LTE Band 4: 1710-1755MHz LTE Band 12: 699-716MHz
Antenna Type (Customer Supplied Information)	802.15.4: Planar Inverted F Antenna (PIFA) with 2.62dBi Peak Gain LTE: PCB Trace Antenna with 4.30dBi Peak Gain

#### Additional Versions and Differences:

Product Marketing Name	Hardware Version Identification Number	Tested
TGU-1	03-2001-05	No (See Note 1)
TGU-1	03-2001-06	No (See Note 1)
TGU-1	03-2001-07	No (See Note 1)
TGU-1	03-2001-08	No (See Note 1)
TGU-1	03-2001-09	No (See Note 1)
MGU-1	03-2004-01	Yes
MGU-1	03-2004-02	No (See Note 1)
MGU-1	03-2004-03	No (See Note 1)
MGU-1	03-2004-04	No (See Note 1)
MGU-1	03-2004-05	No (See Note 1)
MGU-1	03-2004-06	No (See Note 1)

**Note 1:** Version variant for marketing purposes only. Electrically identical to the tested version.

TGU device includes previously certified radio module.

Transmitter Module	FCC ID	ISED IC
Cellular	XPYUBX19KM01	8595A-UBX19KM01

EUT has no ports for power or I/O.

Lowest clock frequency in the device (used/generated): 0.032 MHz

Highest clock frequency in the device (used/generated): 2480 MHz

For a more detailed description of the EUT, please refer to the manufacturer's specifications or the user's manual.

For photos of the EUT, please refer to External and Internal Photos exhibits.

## 3.2 DESCRIPTION OF TEST MODES

### 3.2.1. TEST MODE CONFIGURATIONS OF SYSTEM

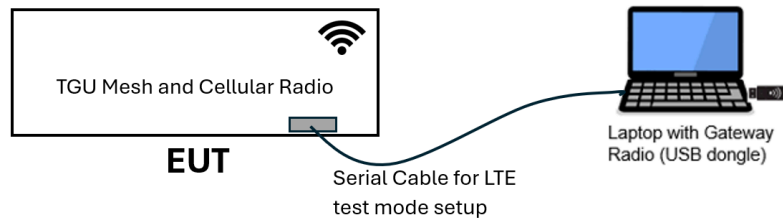
The product was set to operate in the following simultaneous transmission configurations:

Config.	802.15.4	LTE	Tested Frequency Range	Notes
1	CH26 - 2480MHz	Band 2 Ch18800 - 1880 MHz	9kHz – 25GHz	1
2	CH26 - 2480MHz	Band 4 Ch20175 – 1732.5 MHz	9kHz – 25GHz	1
3	CH26 - 2480MHz	Band 12 Ch23095 - 707.5 MHz	9kHz – 25GHz	1

Notes: For radiated emissions, worst-case orientation was found when the EUT was positioned on Y-Axis as shown in the Test Setup Photos exhibit. Worst-case orientation was determined based on pre-scans.

One sample was provided for testing. EUT is a battery powered device. Customer supplied the laptop with software tool and PRU4 (USB dongle) and serial cable for necessary test mode setup. EUT battery voltages were monitored to ensure fresh battery levels during testing.

#### EUT Setup Block Diagram:



Laptop and serial cable were removed from the chamber after the necessary test mode was set up. Gateway Radio (USB Dongle) was used for 2.4GHz radio test mode setup. Serial port connection (internal on EUT PCB) was used for LTE test mode setup.

#### Test Conditions:

Environmental Conditions	Input Power	Tested by	Date of Test
22.2°C, 54.6%, 1005mbar	7.2 VDC	Nisha Patel	10/31/2024
21.7°C, 58.3%, 996.6mbar			11/01/2024
22.0°C, 57.6%, 1000mbar			11/04/2024



### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

EUT has a built-in 2.4GHz radio with a previously certified cellular module integrated into it. All tests were performed in accordance with the following standards and procedures:

**FCC Parts 15.247, 24.238, 27.53**

**ISED Canada RSS-247 Issue 3, RSS-133 Issue 7, RSS-139 Issue 4, RSS-130 Issue 2**

**ANSI C63.10-2013, ANSI C63.26-2015**

### 3.4 DESCRIPTION OF SUPPORT UNITS

Support Equipment	Model #	Serial #	Comments
Laptop	Dell Latitude 5450	-	Supplied by the customer for necessary test mode setup
PRU-4 80-1024-01 (USB dongle)	BL654	1462400199	





## 4 TEST RESULTS

### 4.1 RADIATED EMISSIONS MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSIONS MEASUREMENT

- **Rule part 24.238(a)** specifies that, "On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB".

Limit	-13dBm
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- **Rule part 27.53(h)** specifies that, "For operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB."
- **Rule part 27.53(g)** specifies that, "For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed."



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**Notes:**

1. Lower limit applies at the transition frequencies.
2. As specified in 15.35(b), for frequencies above 1000MHz, field strength limits are based on the use of measurement instrumentation employing an average detector function. However, there is also a limit on the peak level of the emissions that is 20 dB above the maximum permitted average emission limit.
3. Measurements above 6GHz or 18GHz can be performed at distances less than 3m from the EUT due to increased noise floor of the measurement system. Since such measurements produce higher amplitudes than what they would be if they were measured at 3 meters, this would be considered worst-case and no compensation back to 3 meters is needed. Limit conversion above 30MHz is done by using inverse linear distance extrapolation factor (20dB/decade) as allowed in FCC 15.31(f)(1).  
$$\text{Limit}(1\text{m}) = \text{Limit}(3\text{m}) + 20 \cdot \log(3/1) = \text{Limit}(3\text{m}) + 9.5$$
$$\text{Limit}(0.1\text{m}) = \text{Limit}(3\text{m}) + 20 \cdot \log(3/0.1) = \text{Limit}(3\text{m}) + 29.5$$
4. Limit conversion below 30MHz is done by using the square of an inverse linear distance extrapolation factor (40 dB/decade) as allowed in FCC 15.31(f)(2).  
$$\text{Limit}(3\text{m}) = \text{Limit}(30\text{m}) + 40 \cdot \log(30/3) = \text{Limit}(30\text{m}) + 40$$
$$\text{Limit}(3\text{m}) = \text{Limit}(300\text{m}) + 40 \cdot \log(300/3) = \text{Limit}(300\text{m}) + 80$$
5. Adjusted Reading (dBuV/m) = Raw Reading (dBuV) + Transducer(Correction) Factor (dB/m)  
Transducer Factor (dB/m) = Antenna Factor (dB/m) – PreAmp Gain (dB) + Cable Loss (dB) + Filter Loss (dB)  
Note: Filter loss only applies if a notch filter is used during testing.
6. RSS-GEN Table 6 H-field limits are 51.5dB lower than FCC 15.209(a) E-field limits. Measurements are performed in terms of magnetic field and converted to electric field using the free space impedance of 377Ω (E-field = H-field + 51.5). Therefore resulting pass/fail margin would be the same if an E-field reading is compared to an E-field limit or an H-field reading is compared to an H-field limit.



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## 4.1.2 TEST EQUIPMENT USED

Rev. 11/7/2024								
<b>Radiated Emissions Sites</b>	<b>FCC Code</b>	<b>IC Code</b>	<b>VCCI Code</b>	<b>Range</b>	<b>Asset</b>	<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
EMI Chamber 1	719150	2762A-6	A-0015	30-1000MHz	1685	I	9/19/2025	9/19/2024
EMI Chamber 1	719150	2762A-6	A-0015	1-18GHz	1685	I	9/19/2025	9/19/2024
<b>Spectrum Analyzers / Receivers /Preselectors</b>	<b>Range</b>	<b>MN</b>	<b>Mfr</b>	<b>SN</b>	<b>Asset</b>	<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
Gauss TDEMI Ultra 40	9kHz-40GHz	TDEMI Ultra 40	Gauss	2305001	2712	1	7/23/2025	7/23/2024
<b>Antennas</b>	<b>Range</b>	<b>MN</b>	<b>Mfr</b>	<b>SN</b>	<b>Asset</b>	<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
Red-Black Bilog	30-2000MHz	JB1	Sunol	A091604-2	1106	I	10/2/2025	10/2/2023
Blue Horn	1-18GHz	3117	ETS	157647	1861	I	3/27/2025	3/27/2023
3116C Horn / PA	18-40GHz	3116C	ETS	258845	2852	I	3/21/2026	3/21/2024
2615 Active Loop Antenna	9KHz-30MHz	6502	EMCO	2049	2615	I	1/18/2025	1/18/2023
<b>Preamps /Couplers Attenuators / Filters</b>	<b>Range</b>	<b>MN</b>	<b>Mfr</b>	<b>SN</b>	<b>Asset</b>	<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
2862 PA	9KHz-1GHz	310	NOMA INSTRUME	185927		II	2/17/2025	2/17/2024
<b>Cables</b>	<b>Range</b>		<b>Mfr</b>			<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
Asset #2466	9KHz-18GHz		MegaPhase			II	11/4/2025	11/4/2024
Asset #2608	9KHz-18GHz		Pasternack			II	10/29/2025	10/29/2024
Asset #2595	9KHz-40GHz		Carlisle			II	2/17/2025	2/17/2024
Asset #2596	9KHz-40GHz		Carlisle			II	4/22/2025	4/22/2024
Asset #2861	9KHz-18GHz						2/16/2025	2/16/2024
<b>Meteorological Meters/Chambers</b>		<b>MN</b>	<b>Mfr</b>	<b>SN</b>	<b>Asset</b>	<b>Cat</b>	<b>Calibration Due</b>	<b>Calibrated on</b>
Asset 2848		SD700	EXTECH	A. 115171	2848	I	1/13/2025	1/13/2023
Asset #2847		1235C97	Control Company	200435382	2847	I	8/18/2025	8/18/2022
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.								

#### 4.1.3 TEST PROCEDURES

- 1 The EUT was placed on the top of a rotating table 1.5 meters (above 1GHz) and 0.8 meters (below 1GHz) above the ground at a 3 meters semi-anechoic chamber.
- 2 For below 30MHz, a loop antenna with its lowest point 1m above the ground was placed 3m away from the EUT and it was rotated 0 and 90 degrees around its vertical axis.
- 3 In 30MHz-1GHz range, a biconilog antenna was mounted on a variable-height antenna tower and placed 3m away from the EUT. Antenna height was varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were investigated. The table was rotated 360 degrees to determine the position of the highest radiation.
- 4 In 1GHz-18GHz range, a horn antenna was mounted on a variable-height antenna tower and placed 3m away from the EUT. Antenna height was varied from 1 meter to 4 meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were investigated. The table was rotated to 360 degrees to determine the position of the highest radiation.
- 5 In 18-25GHz a smaller horn antenna was used to make measurements 1m away from the EUT.

- 6 Following bandwidths were used during emissions testing:

Freq. (MHz)	RBW	VBW	Pre-scan	Final
0.009-0.15	200Hz	1kHz	Peak	Was not required based on Pre-scan results
0.15-30	9kHz	30kHz	Peak	Was not required based on Pre-scan results
30-1000	120kHz	300kHz	Peak	Was not required based on Pre-scan results
>1000	1MHz	3MHz	Peak	Peak Max Hold and RMS Power Avg (Max Hold)

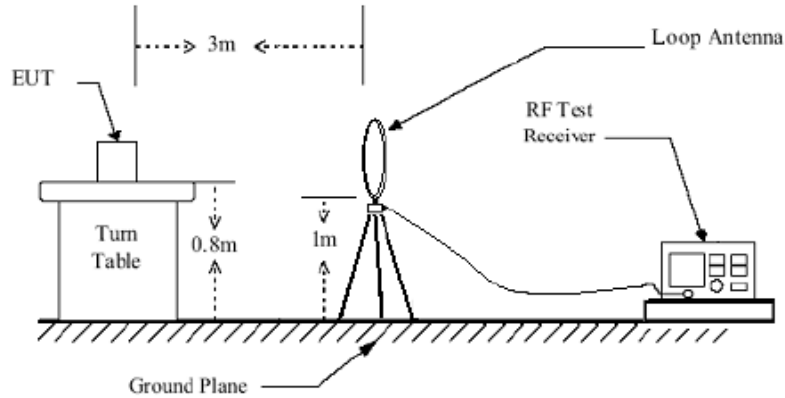
Per FCC §15.209(d), limits §15.209(a) are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. If peak measurements in these frequency bands were below the applicable limits, QPk and RMS measurements were not performed.

#### 4.1.4 DEVIATION

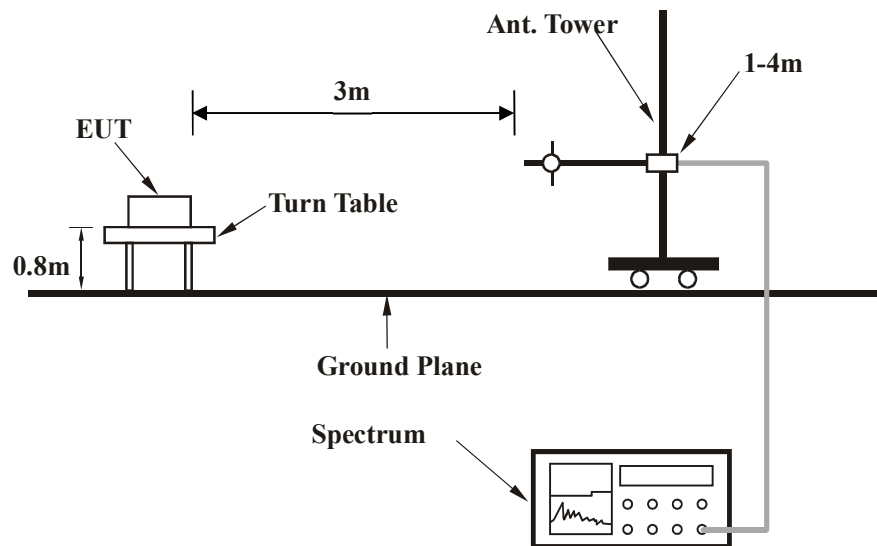
No deviations from the standard.

#### 4.1.5 TEST SETUP

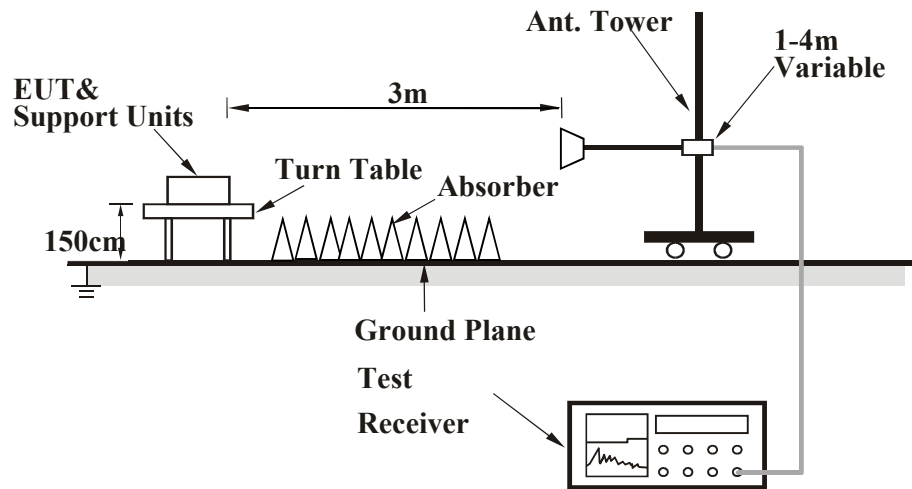
##### Below 30MHz Test Setup



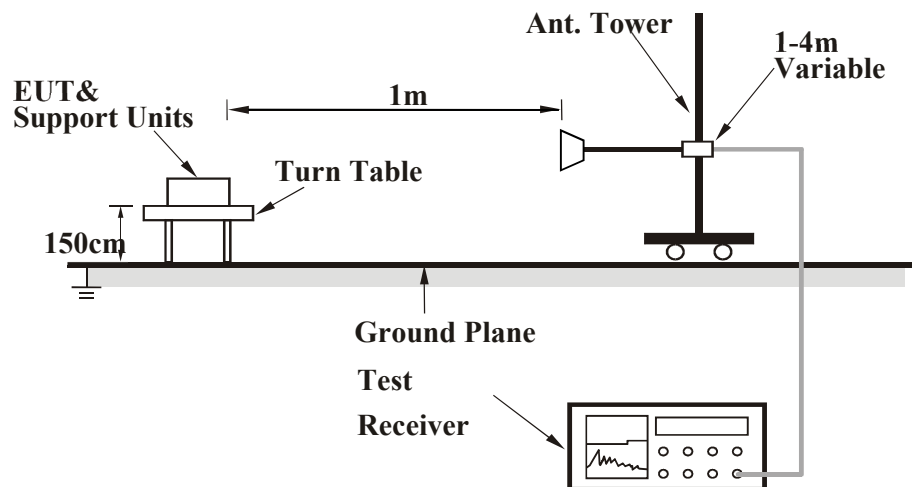
##### 30MHz - 1GHz Test Setup



## 1GHz – 18GHz Test Setup



## 18GHz – 25GHz Test Setup



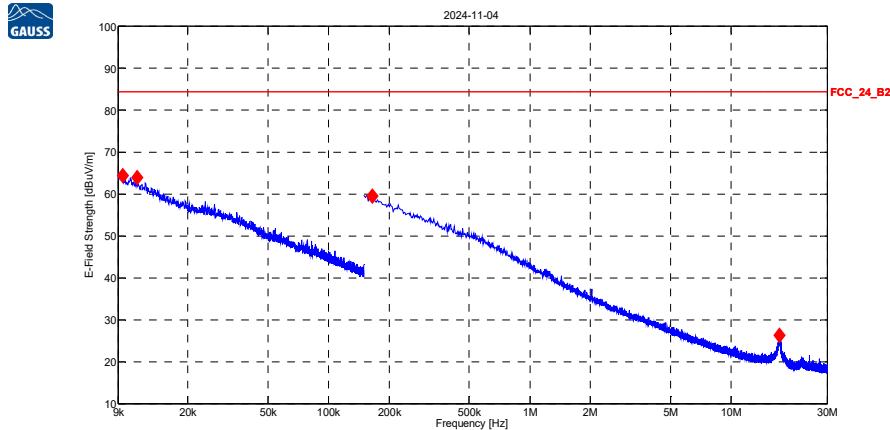
### 4.1.6 EUT OPERATING CONDITIONS

EUT was operated according to the manufacturer's specifications.

## 4.1.7 TEST RESULTS

### 4.1.7.1 Configuration 1

#### Below 30MHz



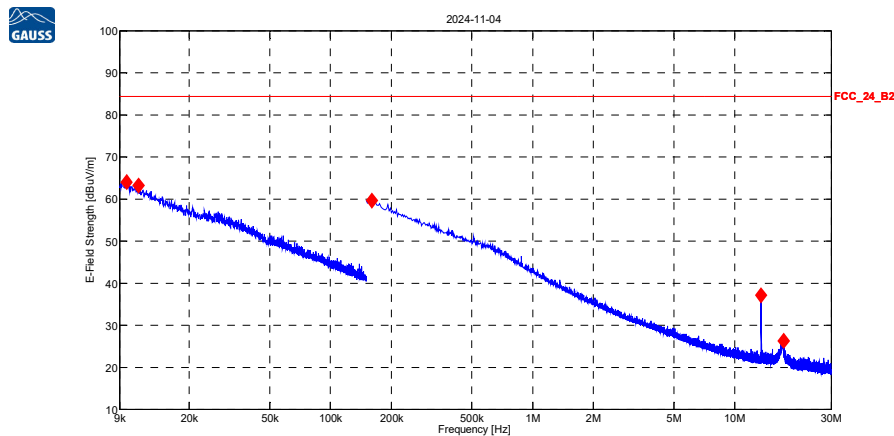
Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
9.5 kHz	64.36	84.38	20.02	Parallel	100	163.25	18.92	FCC_24_B2
11.2 kHz	63.92	84.38	20.46	Parallel	100	75.25	17.91	FCC_24_B2

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 0dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
165 kHz	59.50	84.38	24.88	Parallel	100	120.387	10.00	FCC_24_B2
17.38 MHz	26.26	84.38	58.12	Parallel	100	38.656	10.72	FCC_24_B2

#### 9k-30MHz Parallel Plot and Data Table



Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

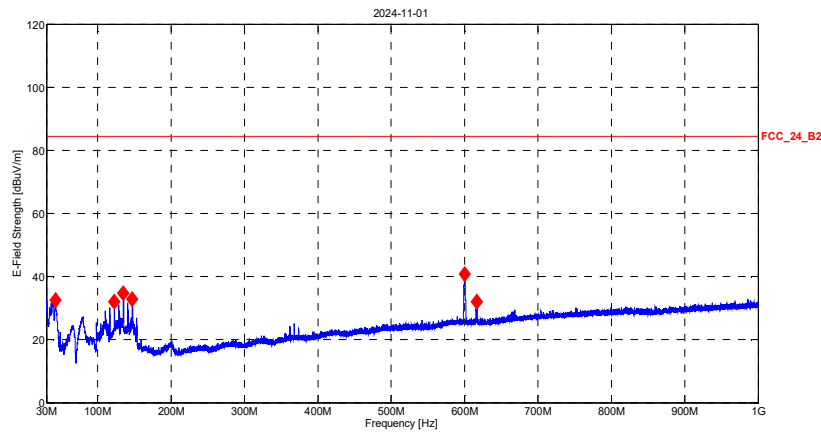
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
9.8 kHz	63.96	84.38	20.42	Perpendicular	100	241.69	18.77	FCC_24_B2
11.2 kHz	63.14	84.38	21.24	Perpendicular	100	16.27	17.91	FCC_24_B2

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
160 kHz	59.63	84.38	24.75	Perpendicular	100	61.527	10.00	FCC_24_B2
13.5625 MHz	37.05	84.38	47.33	Perpendicular	100	143.124	10.86	FCC_24_B2
17.4525 MHz	26.24	84.38	58.14	Perpendicular	100	310.021	10.71	FCC_24_B2

#### 9k-30MHz Perpendicular Plot and Data Table

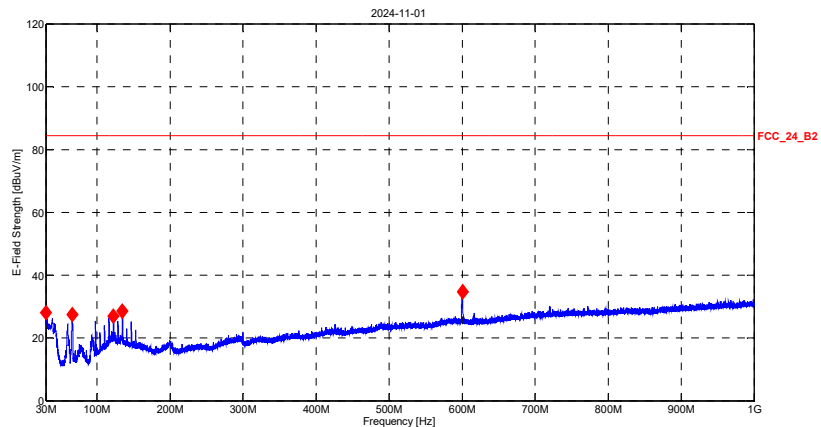
## 30-1000MHz



Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
42.825 MHz	32.51	84.38	51.87	V	100	344.323	-12.22	FCC 24 B2
122.8 MHz	31.98	84.38	52.40	V	100	294.36	-10.28	FCC 24 B2
134.975 MHz	34.76	84.38	49.62	V	100	336.893	-10.34	FCC 24 B2
147.325 MHz	32.85	84.38	51.53	V	100	290.882	-11.09	FCC 24 B2
600.55 MHz	40.69	84.38	43.69	V	100	251.854	-3.94	FCC 24 B2
616.475 MHz	32.04	84.38	52.34	V	100	8.503	-4.17	FCC 24 B2

30-1000MHz Vertical Plot and Data Table



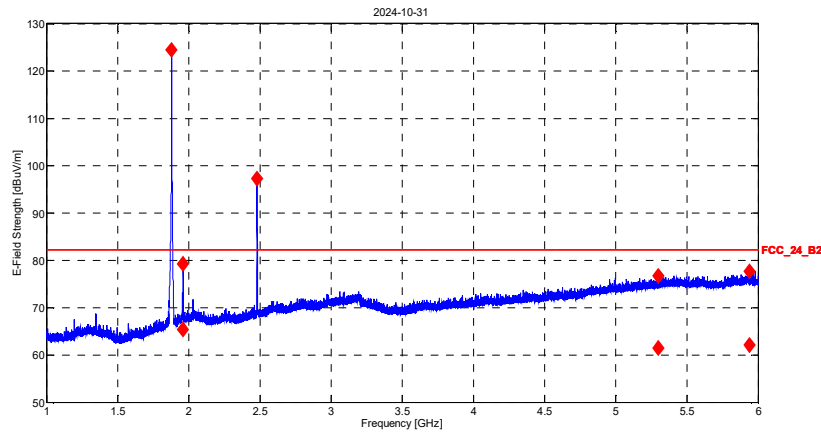
Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
30.25 MHz	27.99	84.38	56.39	H	200	204.792	-3.07	FCC 24 B2
66.475 MHz	27.39	84.38	56.99	H	200	287.376	-16.50	FCC 24 B2
122.7 MHz	26.83	84.38	57.55	H	300	276.251	-10.28	FCC 24 B2
134.8 MHz	28.54	84.38	55.84	H	300	41.9	-10.35	FCC 24 B2
600.725 MHz	34.76	84.38	49.62	H	100	283.431	-3.92	FCC 24 B2

30-1000MHz Horizontal Plot and Data Table



## 1-6GHz



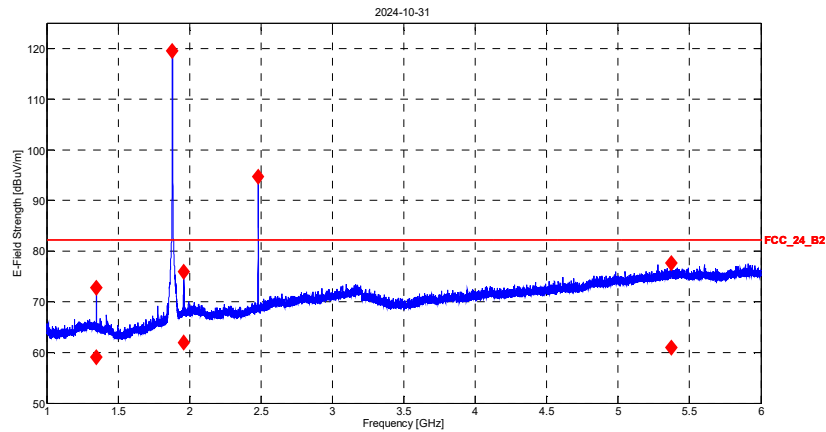
Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
1.87925 GHz	124.45	-	-	V	200	268.492	34.18	LTE band 2 Fundamental
1.96 GHz	79.25	-	-	V	100	119.946	35.17	See Final 1 data table for average
2.47925 GHz	97.26	-	-	V	200	250.069	35.48	802.15.4 Fundamental
5.298 GHz	76.75	-	-	V	100	235.508	39.54	See Final 1 data table for average
5.93875 GHz	77.68	-	-	V	100	178.362	40.52	See Final 1 data table for average

Final 1: 2.0 GHz, 50.0 kHz, 5.9 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
1.96 GHz	65.36	82.23	16.87	V	119.946	112.629	35.13	FCC_24_B2
5.29725 GHz	61.53	82.23	20.70	V	235.508	116.722	39.53	FCC_24_B2
5.93825 GHz	62.16	82.23	20.07	V	178.362	101.487	40.52	FCC_24_B2

### 1-6GHz Vertical Plot and Data Table



Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

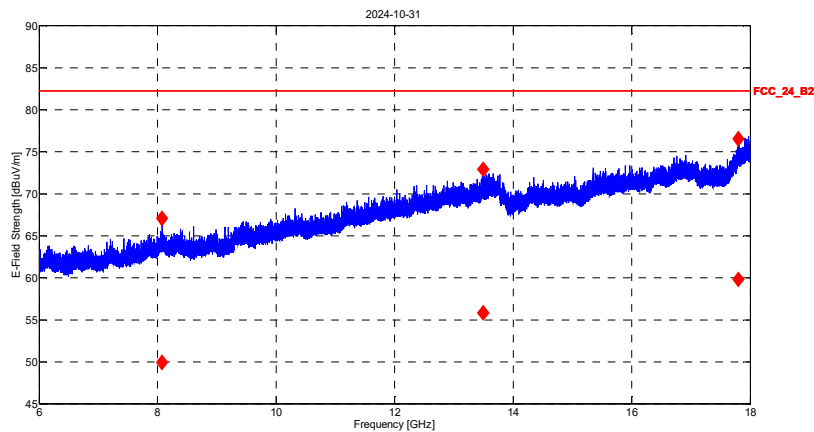
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
1.34775 GHz	72.75	-	-	H	400	207.702	31.53	See Final 1 data table for average
1.87925 GHz	119.45	-	-	H	100	298.86	34.18	LTE band 2 Fundamental
1.96 GHz	75.93	-	-	H	400	159.383	35.17	See Final 1 data table for average
2.4805 GHz	94.65	-	-	H	100	207.702	35.49	802.15.4 Fundamental
5.3715 GHz	77.66	-	-	H	300	204.317	39.94	See Final 1 data table for average

Final 1: 1.3 GHz, 50.0 kHz, 5.4 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name	Comment
1.34775 GHz	59.07	82.23	23.16	H	207.702	350	31.54	FCC 24 B2	
1.96 GHz	61.94	82.23	20.29	H	159.383	372.92	35.13	FCC 24 B2	
5.3735 GHz	60.97	82.23	21.26	H	204.317	250.092	39.93	FCC 24 B2	

### 1-6GHz Horizontal Plot and Data Table

## 6-18GHz



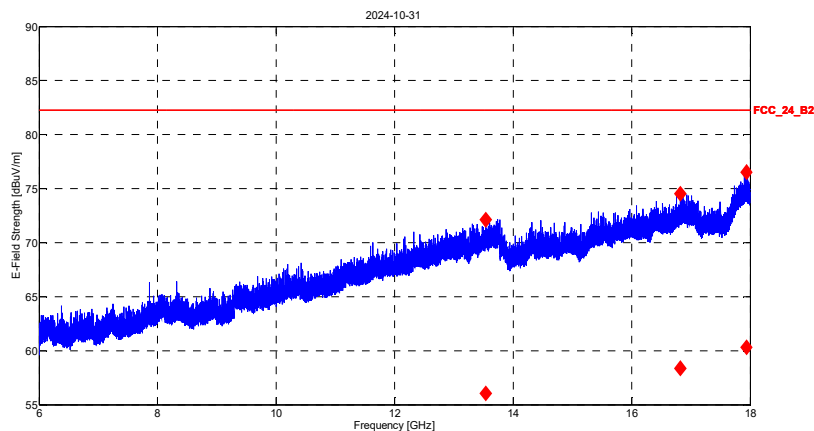
Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
8.07725 GHz	67.05	-	-	V	100	323.326	42.62	See Final 1 data table for average
13.498 GHz	72.87	-	-	V	400	0	48.32	See Final 1 data table for average
17.8035 GHz	76.54	-	-	V	100	150.178	52.50	See Final 1 data table for average

Final 1: 8.1 GHz, 50.0 kHz, 17.8 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
8.076 GHz	49.93	82.23	32.30	V	323.326	150	42.62	FCC 24 B2
13.496 GHz	55.80	82.23	26.43	V	0	350	48.32	FCC 24 B2
17.8055 GHz	59.80	82.23	22.43	V	150.178	150	52.47	FCC 24 B2

### 6-18GHz Vertical Plot and Data Table



Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

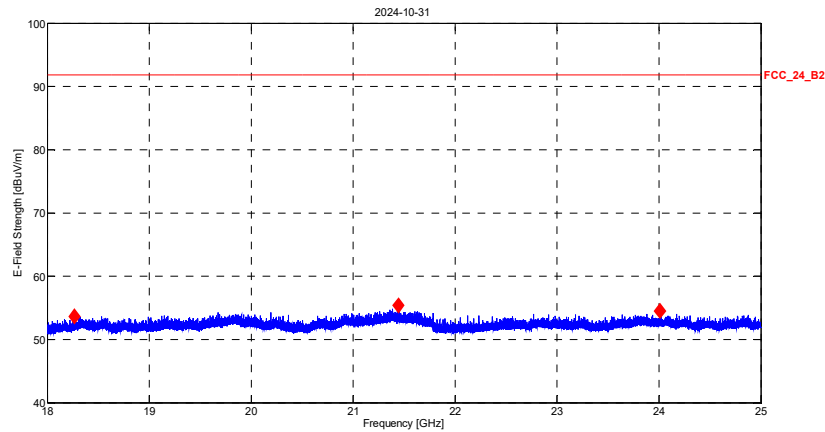
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
13.5355 GHz	72.12	-	-	H	100	344.982	48.14	See Final 1 data table for average
16.825 GHz	74.51	-	-	H	100	80.307	51.50	See Final 1 data table for average
17.935 GHz	76.50	-	-	H	100	45.178	53.27	See Final 1 data table for average

Final 1: 13.5 GHz, 50.0 kHz, 17.9 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
13.5355 GHz	56.04	82.23	26.19	H	344.982	122.057	48.15	FCC 24 B2
16.825 GHz	58.34	82.23	23.89	H	80.307	100	51.49	FCC 24 B2
17.937 GHz	60.32	82.23	21.91	H	45.178	150	53.27	FCC 24 B2

### 6-18GHz Horizontal Plot and Data Table

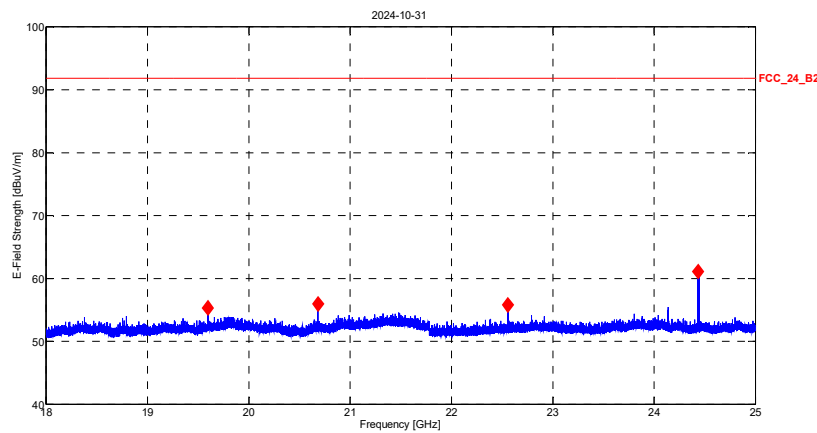
## 18-25GHz



Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
18.267 GHz	53.62	91.77	38.15	V	100	215.927	12.35	FCC_24_B2
21.445 GHz	55.37	91.77	36.40	V	100	69.469	12.79	FCC_24_B2
24.0135 GHz	54.49	91.77	37.28	V	100	45.45	12.60	FCC_24_B2

18-25GHz Vertical Plot and Data Table



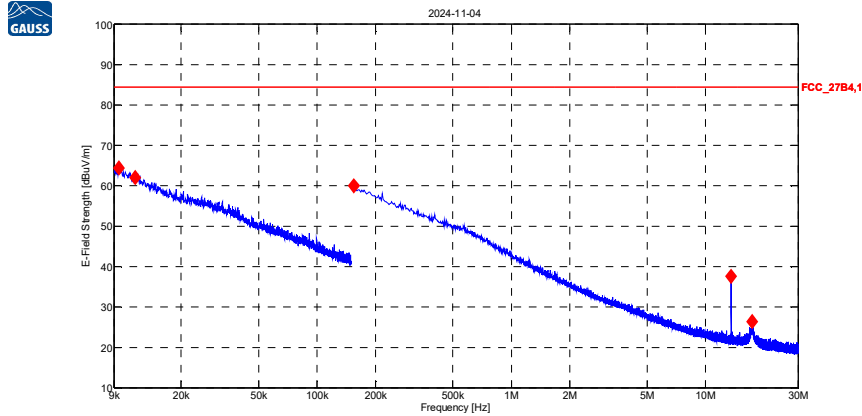
Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
19.6 GHz	55.30	91.77	36.47	H	175	33.677	12.51	FCC_24_B2
20.68475 GHz	55.91	91.77	35.86	H	150	18.988	12.42	FCC_24_B2
22.55975 GHz	55.72	91.77	36.05	H	175	346.804	12.50	FCC_24_B2
24.4335 GHz	61.06	91.77	30.71	H	175	360	12.50	FCC_24_B2

18-25GHz Horizontal Plot and Data Table

#### 4.1.7.2 Configuration 2

##### Below 30MHz



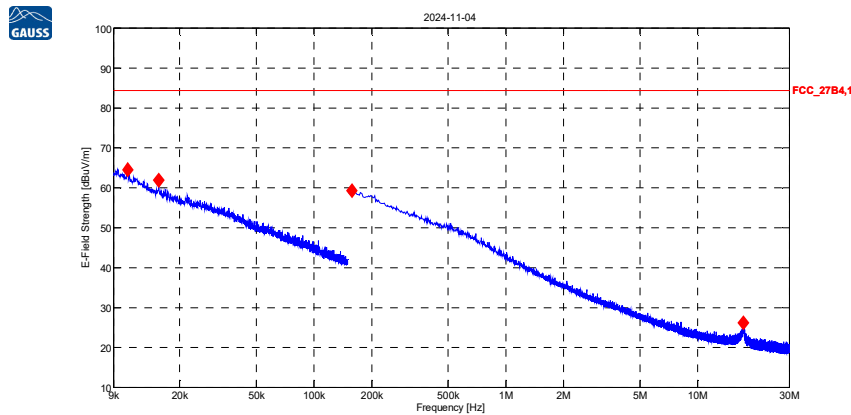
Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
9.55 kHz	64.32	84.38	20.06	Parallel	100	102	18.90	FCC_27B4,12
11.6 kHz	61.97	84.38	22.41	Parallel	100	8.875	17.64	FCC_27B4,12

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
155 kHz	59.93	84.38	24.45	Parallel	100	311.312	10.01	FCC_27B4,12
13.5575 MHz	37.61	84.38	46.77	Parallel	100	305.757	10.86	FCC_27B4,12
17.38 MHz	26.42	84.38	57.96	Parallel	100	360	10.72	FCC_27B4,12

##### 9k-30MHz Parallel Plot and Data Table



Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
10.7 kHz	64.44	84.38	19.94	Perpendicular	100	2.648	18.24	FCC_27B4,12
15.55 kHz	61.81	84.38	22.57	Perpendicular	100	0	15.15	FCC_27B4,12

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
157.5 kHz	59.26	84.38	25.12	Perpendicular	100	239.595	10.01	FCC_27B4,12
17.26 MHz	26.07	84.38	58.31	Perpendicular	100	120.29	10.73	FCC_27B4,12

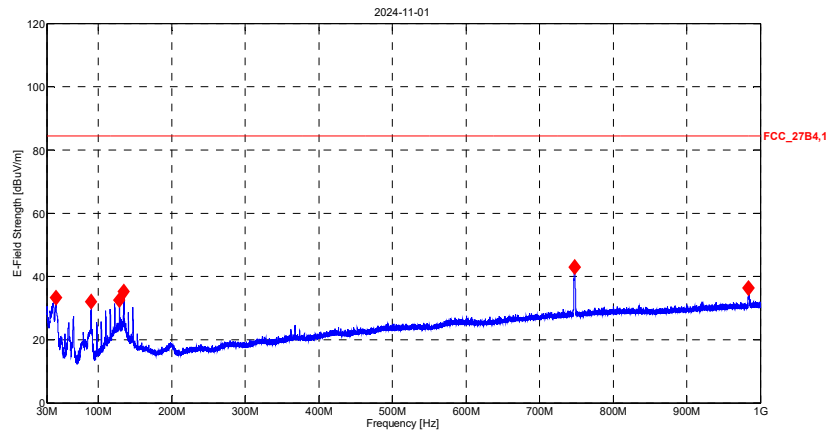
##### 9k-30MHz Perpendicular Plot and Data Table

Bureau Veritas Consumer Product  
Services Inc.

One Distribution Center Circle, #1  
Littleton, MA

Tel.: (978) 486-8880  
Fax: (978) 486-8828

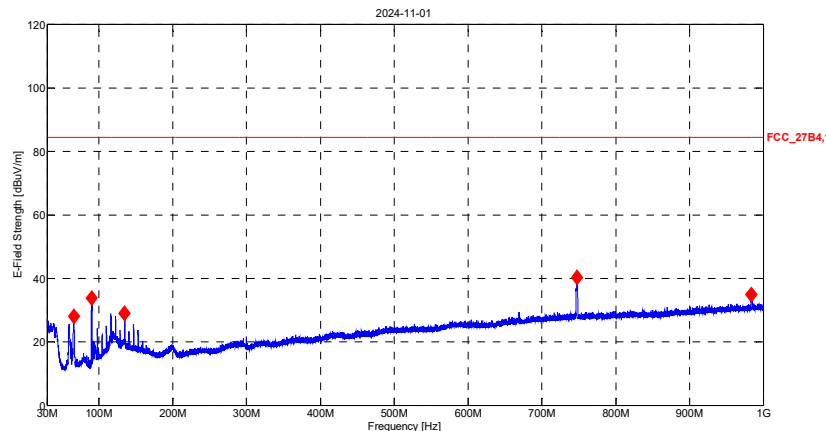
### 30-1000MHz



Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
42.85 MHz	33.32	84.38	51.06	V	100	216.187	-12.24	FCC 27B4,12
90.725 MHz	32.02	84.38	52.36	V	100	297.991	-16.70	FCC 27B4,12
128.625 MHz	32.45	84.38	51.93	V	100	64.083	-10.16	FCC 27B4,12
135.05 MHz	35.19	84.38	49.19	V	100	25.908	-10.34	FCC 27B4,12
747.9 MHz	42.88	84.38	41.50	V	100	253.645	-1.79	FCC 27B4,12
983.95 MHz	36.24	84.38	48.14	V	100	105.116	1.99	FCC 27B4,12

30-1000MHz Vertical Plot and Data Table



Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
66.3 MHz	28.02	84.38	56.36	H	100	56.48	-16.52	FCC 27B4,12
90.725 MHz	33.67	84.38	50.71	H	100	165.769	-16.70	FCC 27B4,12
135.05 MHz	28.95	84.38	55.43	H	200	36.204	-10.34	FCC 27B4,12
748.05 MHz	40.18	84.38	44.20	H	100	165.769	-1.79	FCC 27B4,12
983.85 MHz	34.85	84.38	49.53	H	100	168.5	1.98	FCC 27B4,12

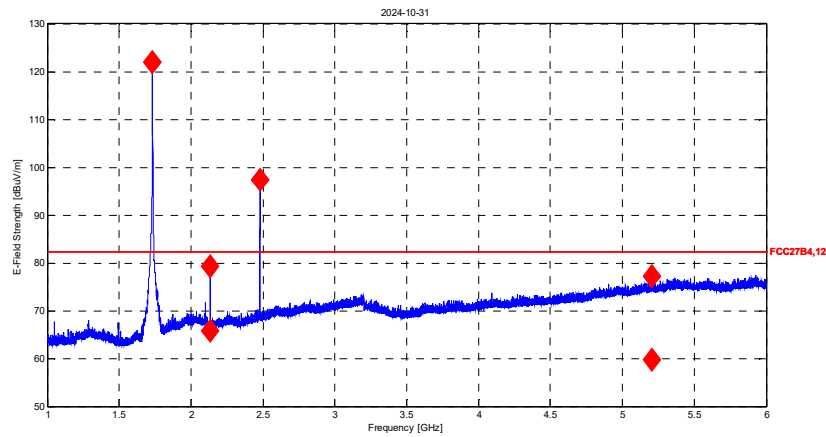
30-1000MHz Horizontal Plot and Data Table



Test Report for RSAE Labs, Inc.  
Report No. EY0476-3 Issue 2



## 1-6GHz



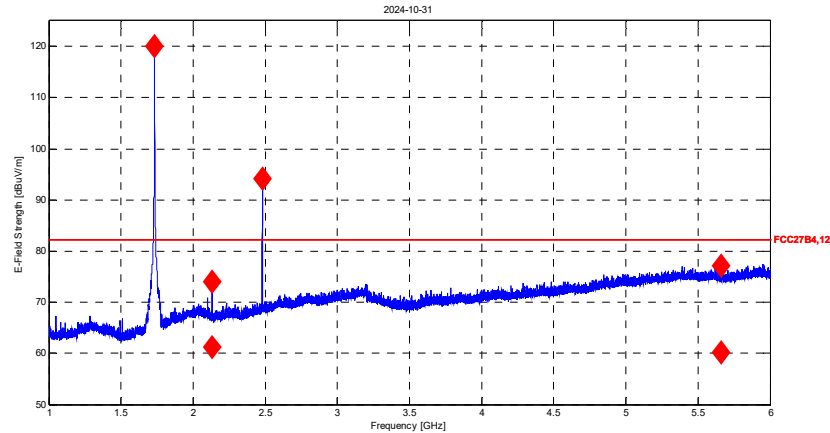
Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
1.73175 GHz	121.99	-	-	V	200	247.955	32.02	LTE band 4 Fundamental
2.13275 GHz	79.30	-	-	V	100	269.383	34.64	See Final 1 data table for average
2.47925 GHz	97.41	-	-	V	200	254.895	35.48	802.15.4 Fundamental
5.204 GHz	77.25	-	-	V	200	0	39.32	See Final 1 data table for average

Final 1: 2.1 GHz, 50.0 kHz, 5.2 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
2.13225 GHz	65.74	82.23	16.49	V	269.383	137.022	34.65	FCC27B4,12
5.206 GHz	59.78	82.23	22.45	V	0	231.587	39.32	FCC27B4,12

### 1-6GHz Vertical Plot and Data Table



Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
1.73175 GHz	120.04	-	-	H	100	182.822	32.02	LTE band 4 Fundamental
2.13275 GHz	74.07	-	-	H	300	236.601	34.64	See Final 1 data table for average
2.4805 GHz	94.15	-	-	H	100	205.998	35.49	802.15.4 Fundamental
5.65925 GHz	77.09	-	-	H	100	356.823	40.43	See Final 1 data table for average

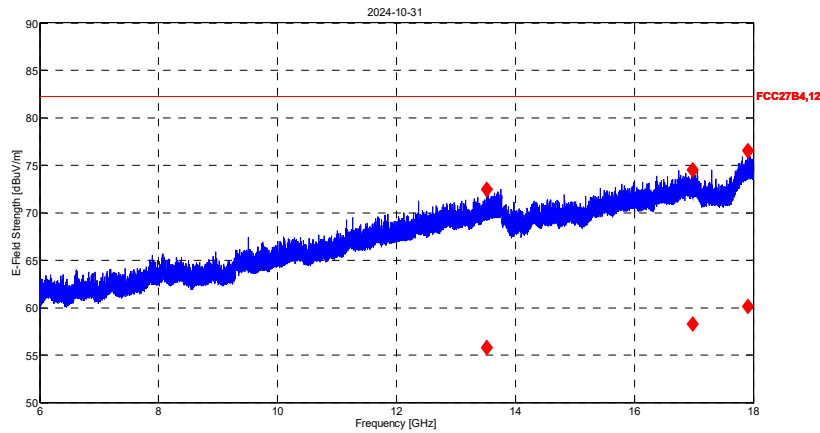
Final 1: 2.1 GHz, 50.0 kHz, 5.7 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
2.13225 GHz	61.20	82.23	21.03	H	236.601	275.662	34.65	FCC27B4,12
5.66125 GHz	60.16	82.23	22.07	H	356.823	100.767	40.44	FCC27B4,12

### 1-6GHz Horizontal Plot and Data Table



## 6-18GHz



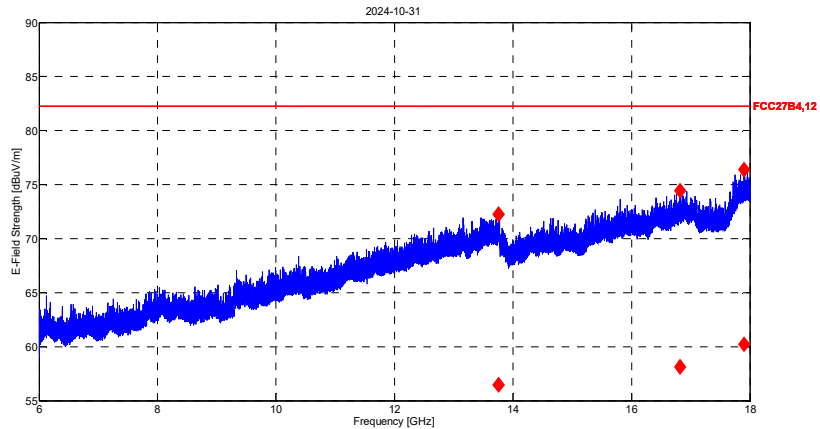
Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
13.52075 GHz	72.46	-	-	V	100	227.428	48.23	See Final 1 data table for average
16.98175 GHz	74.53	-	-	V	400	0	51.18	See Final 1 data table for average
17.91175 GHz	76.56	-	-	V	100	187.55	53.24	See Final 1 data table for average

Final 1: 13.5 GHz, 50.0 kHz, 17.9 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
13.52225 GHz	55.79	82.23	26.44	V	227.428	140.553	48.24	FCC27B4,12
16.97975 GHz	58.26	82.23	23.97	V	0	350	51.18	FCC27B4,12
17.91025 GHz	60.13	82.23	22.10	V	187.55	150	53.24	FCC27B4,12

### 6-18GHz Vertical Plot and Data Table



Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

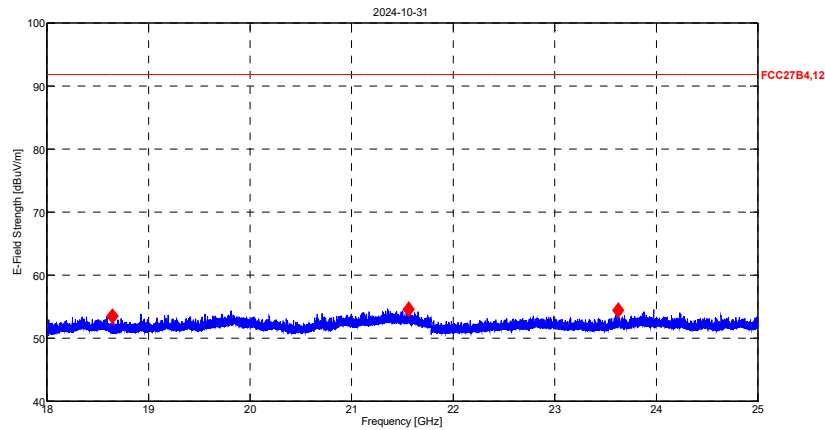
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
13.7585 GHz	72.22	-	-	H	100	21.633	47.87	See Final 1 data table for average
16.81825 GHz	74.42	-	-	H	300	55.878	51.49	See Final 1 data table for average
17.90425 GHz	76.37	-	-	H	100	340.056	53.23	See Final 1 data table for average

Final 2: 13.8 GHz, 50.0 kHz, 17.9 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
13.7605 GHz	56.48	82.23	25.75	H	21.633	136.148	47.87	FCC27B4,12
16.8195 GHz	58.13	82.23	24.10	H	55.878	250	51.49	FCC27B4,12
17.905 GHz	60.19	82.23	22.04	H	340.056	124.271	53.22	FCC27B4,12

### 6-18GHz Horizontal Plot and Data Table

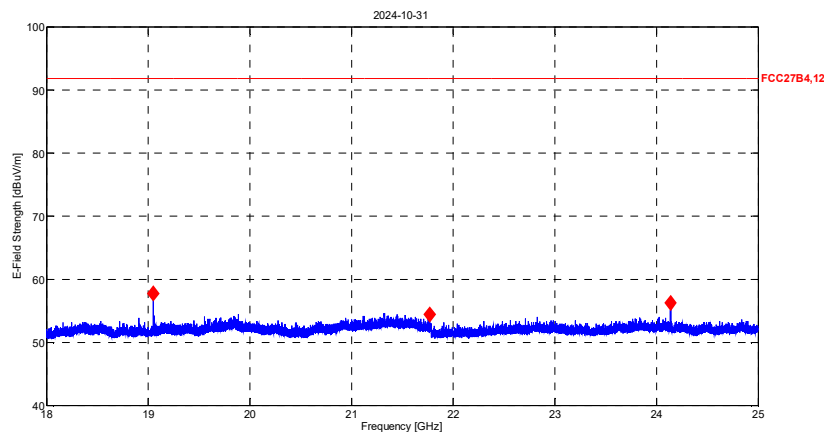
## 18-25GHz



Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
18.6455 GHz	53.45	91.77	38.32	V	100	170.765	12.16	FCC27B4,12
21.5645 GHz	54.56	91.77	37.21	V	100	347.119	12.62	FCC27B4,12
23.62575 GHz	54.40	91.77	37.37	V	150	65.95	12.24	FCC27B4,12

18-25GHz Vertical Plot and Data Table



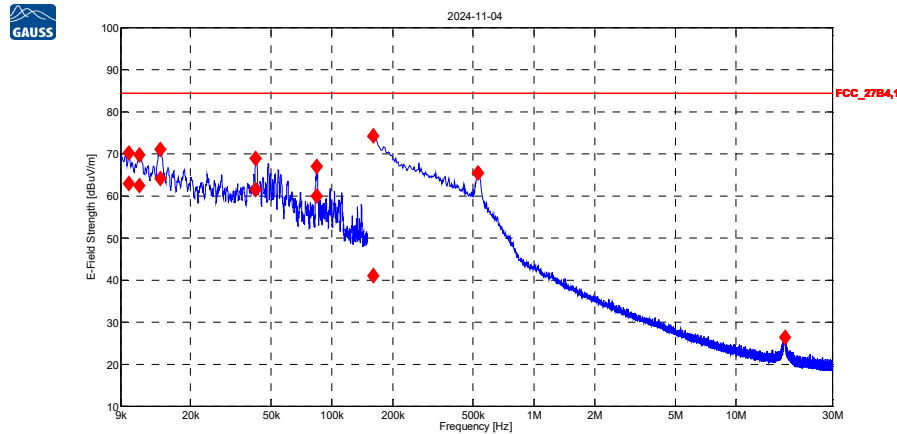
Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
19.052 GHz	57.71	91.77	34.06	H	175	70.533	11.67	FCC27B4,12
21.77075 GHz	54.37	91.77	37.40	H	100	258.6	11.98	FCC27B4,12
24.13825 GHz	56.22	91.77	35.55	H	100	315.6	12.68	FCC27B4,12

18-25GHz Horizontal Plot and Data Table

### 4.1.7.3 Configuration 3

#### Below 30MHz



Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
9.9 kHz	70.12	-	-	Perpendicular	100	80.123	18.71	See Final 1 data table for average
11.15 kHz	69.75	-	-	Perpendicular	100	105.769	17.95	See Final 1 data table for average
14.2 kHz	71.06	-	-	Perpendicular	100	38.817	15.91	See Final 1 data table for average
42 kHz	68.89	-	-	Perpendicular	100	83.972	11.73	See Final 1 data table for average
84.05 kHz	67.02	-	-	Perpendicular	100	70.653	10.45	See Final 1 data table for average

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans
160 kHz	74.23	84.38	10.15	Perpendicular	100	50.895	10.00
527.5 kHz	65.47	84.38	18.91	Perpendicular	100	90.856	10.15
17.475 MHz	26.39	84.38	57.99	Perpendicular	100	158.631	10.71

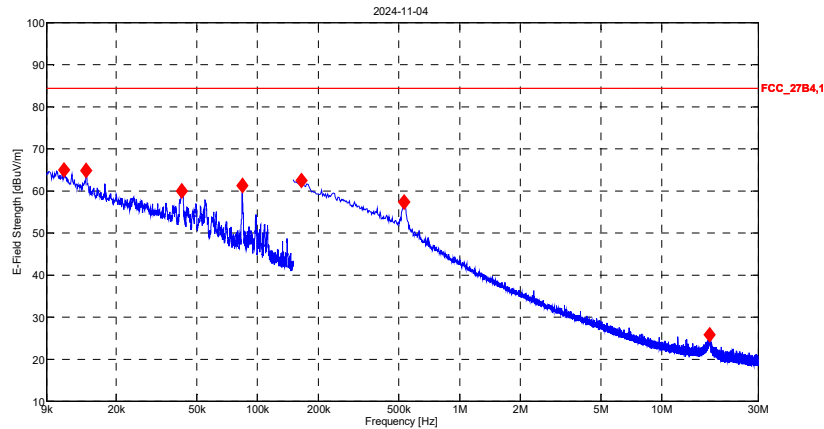
Final 1: 9.9 kHz, 100.0 Hz, 160.0 kHz; IF:200Hz, 200.0 ms QP, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
9.9 kHz	62.95	84.38	21.43	Perpendicular	100	80.123	18.71	FCC_27B4,12
11.15 kHz	62.45	84.38	21.93	Perpendicular	100	105.769	17.95	FCC_27B4,12
14.2 kHz	64.14	84.38	20.24	Perpendicular	100	38.817	15.91	FCC_27B4,12
42 kHz	61.44	84.38	22.94	Perpendicular	100	83.972	11.73	FCC_27B4,12
84.05 kHz	59.96	84.38	24.42	Perpendicular	100	70.653	10.45	FCC_27B4,12
160 kHz	41.03	84.38	43.35	Perpendicular	100	50.895	10.00	FCC_27B4,12

#### 9k-30MHz Perpendicular Plot and Data Table



Test Report for RSAE Labs, Inc.  
Report No. EY0476-3 Issue 2



Scan1: 9.0 kHz, 100.0 Hz, 150.0 kHz; IF:200Hz, 100.0 ms MaxPeak, Att 10dB

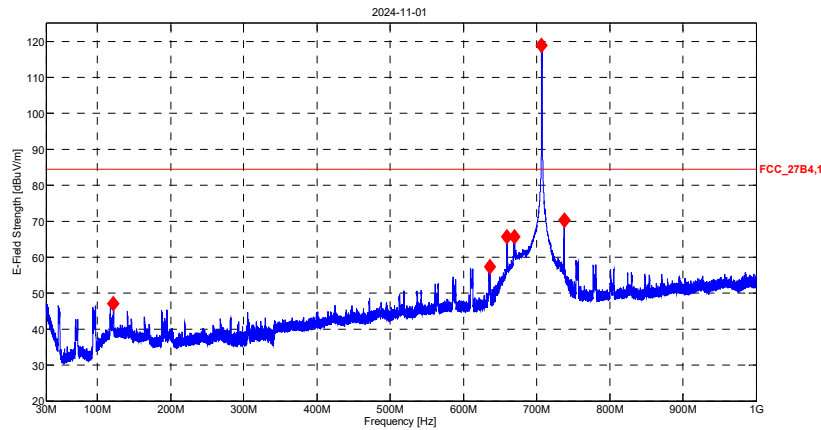
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
11.05 kHz	64.89	84.38	19.49	Parallel	100	234.035	18.01	FCC_27B4,12
14.2 kHz	64.81	84.38	19.57	Parallel	100	208.461	15.91	FCC_27B4,12
42.05 kHz	59.93	84.38	24.45	Parallel	100	223.541	11.72	FCC_27B4,12
84 kHz	61.25	84.38	23.13	Parallel	100	232.745	10.45	FCC_27B4,12

Scan2: 150.0 kHz, 5.0 kHz, 30.0 MHz; IF:9kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
165 kHz	62.48	84.38	21.90	Parallel	100	212.132	10.00	FCC_27B4,12
532.5 kHz	57.27	84.38	27.11	Parallel	100	213.883	10.16	FCC_27B4,12
17.3225 MHz	25.78	84.38	58.60	Parallel	100	172.441	10.73	FCC_27B4,12

9k-30MHz Parallel Plot and Data Table

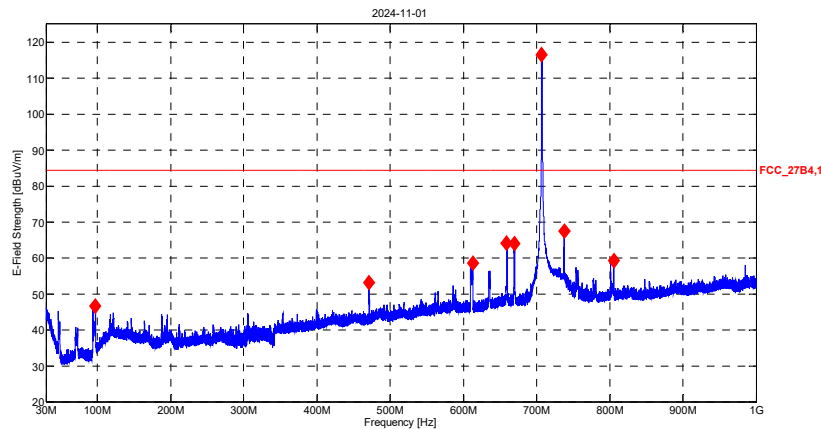
## 30-1000MHz



Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
122.125 MHz	47.00	84.38	37.38	V	100	348.95	20.89	FCC_27B4,12
636.35 MHz	57.24	84.38	27.14	V	100	257.729	27.56	FCC_27B4,12
659.975 MHz	65.64	84.38	18.74	V	100	158.81	27.98	FCC_27B4,12
670.225 MHz	65.57	84.38	18.81	V	100	174.05	27.93	FCC_27B4,12
707 MHz	118.77	-	-	V	100	181.74	28.23	LTE Band 12 Fundamental
737.9 MHz	70.28	84.38	14.10	V	100	57.37	28.70	FCC_27B4,12

30-1000MHz Vertical Plot and Data Table

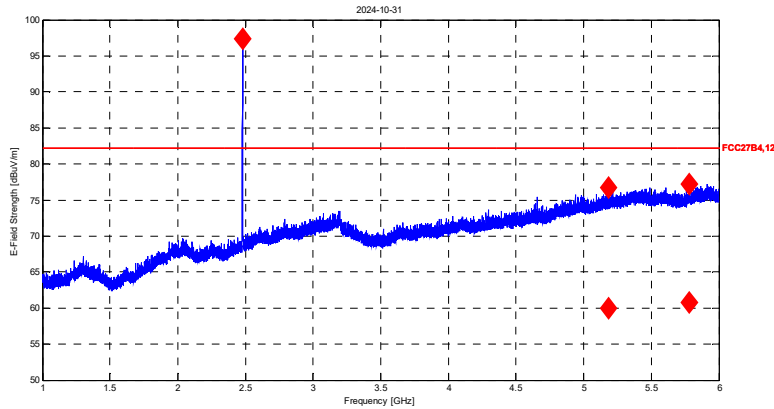


Scan1: 30.0 MHz, 50.0 kHz, 1.0 GHz; IF:120kHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
97.5 MHz	46.60	84.38	37.78	H	300	33.988	16.30	FCC_27B4,12
471.3 MHz	53.17	84.38	31.21	H	200	181.628	24.90	FCC_27B4,12
613 MHz	58.50	84.38	25.88	H	200	309.84	26.89	FCC_27B4,12
659.05 MHz	64.17	84.38	20.21	H	200	220.976	27.97	FCC_27B4,12
670.175 MHz	64.02	84.38	20.36	H	200	37.376	27.93	FCC_27B4,12
707 MHz	116.51	-	-	H	100	323.911	28.23	LTE Band 12 Fundamental
737.875 MHz	67.41	84.38	16.97	H	100	246.276	28.70	FCC_27B4,12
805.475 MHz	59.25	84.38	25.13	H	200	33.988	29.59	FCC_27B4,12

30-1000MHz Horizontal Plot and Data Table

## 1-6GHz



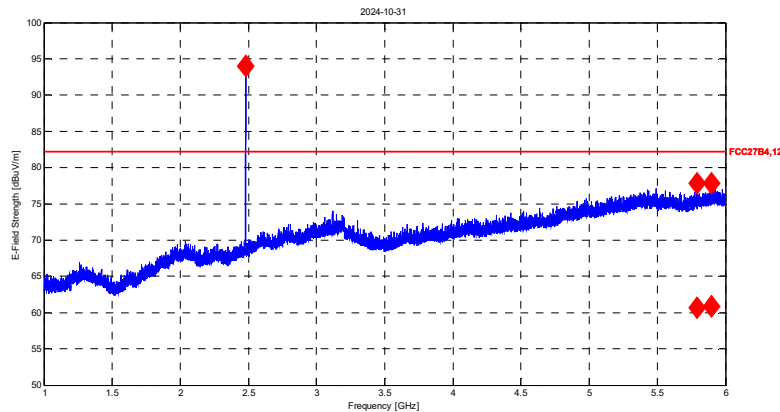
Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
2.47925 GHz	97.35	-	-	V	200	249.245	35.48	802.15.4 Fundamental
5.18325 GHz	76.76	-	-	V	100	223.121	39.28	See Final 1 data table for average
5.77925 GHz	77.21	-	-	V	300	109.783	40.20	See Final 1 data table for average

Final 1: 5.2 GHz, 50.0 kHz, 5.8 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
5.18525 GHz	59.99	82.23	22.24	V	223.121	150	39.27	FCC27B4,12
5.78125 GHz	60.74	82.23	21.49	V	109.783	250	40.19	FCC27B4,12

### 1-6GHz Vertical Plot and Data Table



Scan1: 1.0 GHz, 50.0 kHz, 6.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
2.4805 GHz	93.96	-	-	H	100	188.567	35.49	802.15.4 Fundamental
5.792 GHz	77.84	-	-	H	100	142.323	40.22	See Final 1 data table for average
5.89875 GHz	77.78	-	-	H	100	65.361	40.45	See Final 1 data table for average

Final 1: 5.8 GHz, 50.0 kHz, 5.9 GHz; IF:1MHz, 100.0 ms RMS, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
5.794 GHz	60.63	82.23	21.60	H	142.323	100.048	40.21	FCC27B4,12
5.89925 GHz	60.88	82.23	21.35	H	65.361	146.374	40.44	FCC27B4,12

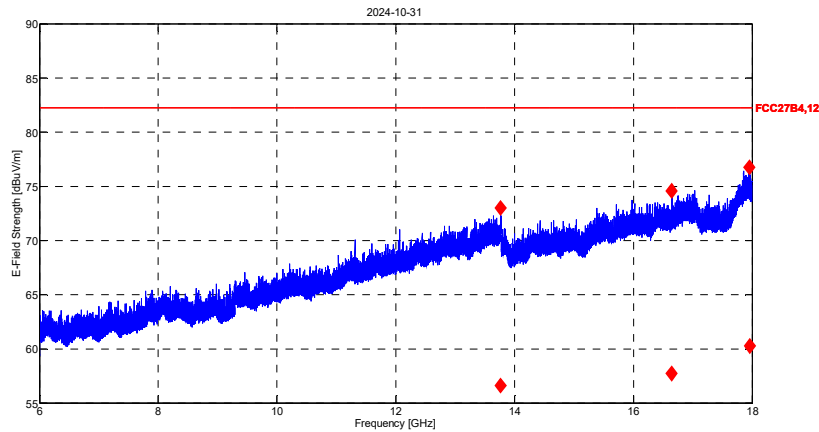
### 1-6GHz Horizontal Plot and Data Table

Bureau Veritas Consumer Product  
Services Inc.

One Distribution Center Circle, #1  
Littleton, MA

Tel.: (978) 486-8880  
Fax: (978) 486-8828

## 6-18GHz



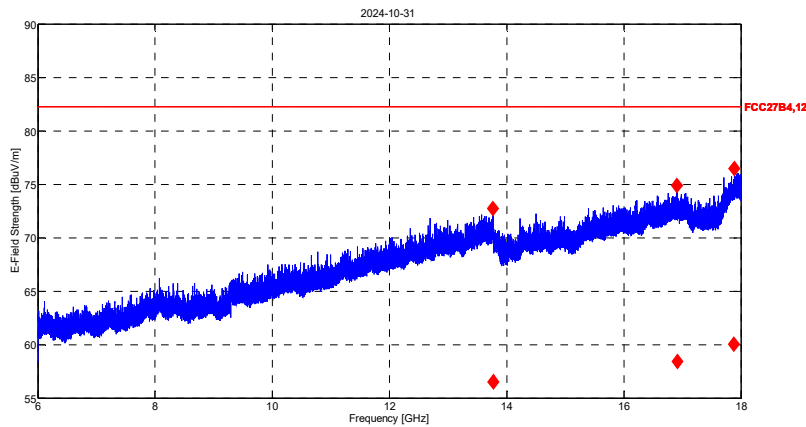
Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
13.76375 GHz	72.99	-	-	V	200	359	47.87	See Final 1 data table for average
16.64275 GHz	74.55	-	-	V	100	251.522	50.95	See Final 1 data table for average
17.957 GHz	76.72	-	-	V	100	206.767	53.23	See Final 1 data table for average

Final 1: 13.8 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
13.76375 GHz	56.58	82.23	25.65	V	359	241.097	47.87	FCC27B4,12
16.64075 GHz	57.70	82.23	24.53	V	251.522	107.417	50.94	FCC27B4,12
17.959 GHz	60.23	82.23	22.00	V	206.767	100	53.24	FCC27B4,12

### 6-18GHz Vertical Plot and Data Table



Scan1: 6.0 GHz, 50.0 kHz, 18.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 10dB

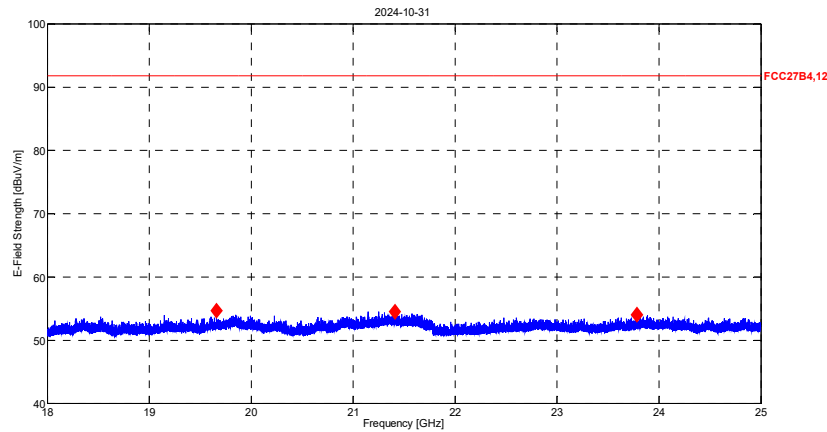
f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Comment
13.76775 GHz	72.70	-	-	H	200	299.878	47.87	See Final 1 data table for average
16.91025 GHz	74.87	-	-	H	100	153.737	51.49	See Final 1 data table for average
17.88225 GHz	76.45	-	-	H	100	124.933	53.15	See Final 1 data table for average

Final 1: 13.8 GHz, 50.0 kHz, 17.9 GHz; IF:1MHz, 100.0 ms RMS, Att 10dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Angle [°]	Height [cm]	Trans	Name
13.76975 GHz	56.51	82.23	25.72	H	299.878	225.385	47.87	FCC27B4,12
16.91225 GHz	58.42	82.23	23.81	H	153.737	100.304	51.50	FCC27B4,12
17.88025 GHz	60.04	82.23	22.19	H	124.933	108.13	53.14	FCC27B4,12

### 6-18GHz Horizontal Plot and Data Table

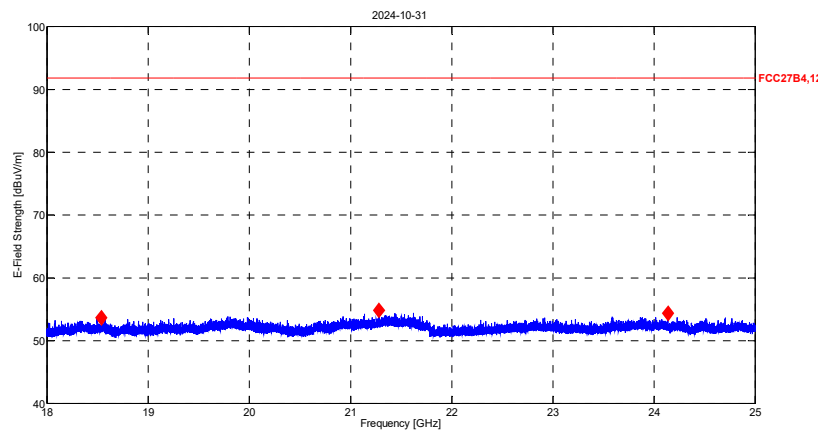
## 18-25GHz



Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
19.66075 GHz	54.63	91.77	37.14	V	100	133.428	12.75	FCC27B4, 12
21.41225 GHz	54.45	91.77	37.32	V	150	360	12.82	FCC27B4, 12
23.78525 GHz	54.00	91.77	37.77	V	100	208.931	12.57	FCC27B4, 12

18-25GHz Vertical Plot and Data Table



Scan1: 18.0 GHz, 50.0 kHz, 25.0 GHz; IF:1MHz, 100.0 ms MaxPeak, Att 20dB

f	Mag [dBuV/m]	Limit	Diff	Polarization	Height [cm]	Angle [°]	Trans	Name
18.54 GHz	53.58	91.77	38.19	H	150	45.535	12.51	FCC27B4, 12
21.2815 GHz	54.81	91.77	36.96	H	100	120.228	12.79	FCC27B4, 12
24.13875 GHz	54.35	91.77	37.42	H	100	323.128	12.68	FCC27B4, 12

18-25GHz Horizontal Plot and Data Table





Test Report for RSAE Labs, Inc.  
Report No. EY0476-3 Issue 2



## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the Test Setup Photos exhibit.



## 6 APPENDIX A – MODIFICATIONS

802.15.4 PCB antenna required “tuning” via modification to its trace during pre-compliance testing to meet the radiated band-edge requirements. This modification was present on the PCB during all final compliance tests. Please refer to Test Setup Photos exhibit for details of this modification.

---END OF REPORT---