



# FCC / ISED & Test Report

**For:**  
Rivian Automotive

**Brand:** Rivian Automotive

**Marketing Name:** Autonomy Experience Module 2.0/ AXM 2.0

**Model Name:** AXM 2.0

**Product Description:** Autonomy Experience Module

**FCC ID:** 2AW3A-2NAT23AXM

**IC:** 26958-2NAT23AXM

## Applied Rules and Standards:

47 CFR Parts 22, 24, 27

RSS: 130 Issue 2, 132 Issue 4, 133 Issue 6, 139 Issue 4, 199 Issue 4

**REPORT #:** EMC\_RIVIA\_058\_23001\_FCC\_22\_24\_27\_Rev2

**DATE:** 4/5/2024



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3462B

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## 1 Assessment

The following device as further described in section 3 of this report was evaluated against the applicable criteria specified in the Code of Federal Regulations Title 47 parts 22, 24, 27 and Industry Canada Standards RSS-GEN issue 5, RSS-130 issue 2, RSS-132 issue 4, RSS-133 issue 6, RSS-139 issue 4 and RSS-199 issue 4.

No deficiencies were ascertained.

Company	Description	Model #
Rivian Automotive	Autonomy Experience Module	AXM 2.0

### Responsible for the Report:

Art Thammanavarat  
(Senior EMC Engineer)

2024-04-05 Compliance

Date	Section	Name	Signature
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The test results of this test report relate exclusively to the test item specified in Section3. CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

## 2 Administrative Data

### 2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

<b>Company Name:</b>	CETECOM Inc.
<b>Department:</b>	Compliance
<b>Street Address:</b>	411 Dixon Landing Road
<b>City/Zip Code</b>	Milpitas, CA 95035
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<b>EMC Lab Manager:</b>	Issa Ghama
<b>Responsible Project Leader:</b>	Rami Saman

### 2.2 Identification of the Client

<b>Client Firm/Name:</b>	Rivian Automotive, LLC
<b>Street Address:</b>	607 Hansen Way
<b>City/Zip Code</b>	Palo Alto, CA 94304
<b>Country</b>	USA

### 2.3 Identification of the Manufacturer

<b>Manufacturer's Name:</b>	Same as Client
<b>Manufacturers Address:</b>	
<b>City/Zip Code</b>	
<b>Country</b>	

### 3 Equipment Under Test (EUT)

#### 3.1 EUT Specifications

<b>Model No</b>	AXM 2.0
<b>HW Version</b>	D
<b>SW Version</b>	42
<b>FCC-ID</b>	2AW3A-2NAT23AXM
<b>IC:</b>	26958-2NAT23AXM
<b>HVIN:</b>	AXM 2.0
<b>PMN:</b>	AXM 2.0
<b>Product Description</b>	Autonomy Experience Module 2.0
<b>Transceiver Technology / Type(s) of Modulation</b>	Module: ALAS5-AM (FCC: QIPALAS5-AM); 4G: FDD LTE Bands 2, 4, 5, 7, 12,13,66 3G: UMTS FDD Bands II, IV, V GSM:850/1900
<b>Frequency Range</b>	GSM 850: 824 – 849 MHz GSM 1900: 1852.4 – 1907.6 MHz UMTS Band II: 1852.4 – 1907.6 MHz UMTS Band IV: 1712.4 – 1752.6 MHz UMTS Band V: 826.4 – 846.6 MHz LTE Band 2: 1850 – 1910 MHz LTE Band 4: 1710 – 1755 MHz LTE Band 5: 824 – 849 MHz LTE Band 12: 699 – 716 MHz LTE Band 13: 777 – 787 MHz LTE Band 66: 1710 – 1780 MHz
<b>Max. declared antenna gain</b>	PT00039249 Location: External Peak Gain: <ul style="list-style-type: none"> <li>• 824 – 849 Gain 1.79 dBi</li> <li>• 1710 - 1780 Gain 2.15 dBi</li> <li>• 1850 – 1910 Gain 2.29 dBi</li> <li>• 2500 – 2570 Gain 2.90 dBi</li> <li>• 699 – 716 Gain 1.43 dBi</li> <li>• 777 – 787 Gain 1.37 dBi</li> </ul>
<b>Other Radios included in the device:</b>	GPS; WiFi; BTLE;
<b>Power Supply/ Rated Operating Voltage Range</b>	9 VDC – 16 VDC
<b>Operating Temperature Range</b>	-30° to 45° C

<b>Sample Revision</b>	<input checked="" type="checkbox"/> Production <input type="checkbox"/> Pre-Production
Note: The information of the EUT specifications in the table above is provided by the client.	

### 3.2 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	LIP-55352 AXM2-D PEGA	D	42	Radiated and Conducted Measurements

### 3.3 Accessory Equipment (AE) details

AE #	Type	Part Number	Manufacturer	Serial Number
1	Camera	PT00463985 A	RIVIAN	22287A000000000017
2	Camera	PT00463985 A	RIVIAN	22287A000000000016
3	Camera	PT00463985 A	RIVIAN	22287A000000000078
4	Camera	PT00463984 A	RIVIAN	22329A000000000011
5	Camera	PT00463986 A	RIVIAN	22840A000000000028
6	Camera	PT00463986 A	RIVIAN	22840A000000000044
7	Display	PT00000503-F Rev 01	RIVIAN	22328A0010B1026427
8	Display	PT00055883-E Rev 02	RIVIAN	22213A0010B1001322
9	Display	CLUSTER DISPLAY	RIVIAN	CLUS-008
10	Internal Wi-Fi Antenna	PT00001507	RIVIAN	20268000135
11	Internal Wi-Fi Antenna	PT00001507	RIVIAN	20268000120
12	Internal Wi-Fi Antenna	PT00001507	RIVIAN	N/A
13	External Wi-Fi Antenna	PT00039250	RIVIAN	22342
14	CELL Antenna	PT00039248	RIVIAN	22223
15	Spoiler	5093407	RIVIAN	00051
16	Chiller	LM61GX1A110C	PolyScience	2108-02177
17	Laptop	20S1S97U00	ThinkPad	PF23ZGQM

### 3.4 Test Sample Configuration

Set-up #	EUT / AE used for set-up	Comments
1	EUT#1+AE#1~17	Radiated RF measurements were performed with EUT configured via customer provided GUE and instructions.  Powered by 12 VDC Car battery

### 3.5 Mode of Operation details

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	Cellular +Internal Wi-Fi 802.11ax HE20 MIMO + External Wi-Fi 802.11b MIMO and Bluetooth LE Co-Transmission	Cellular was tested on Mid Channels at maximum power in a co-transmission mode  Internal WiFi radio was configured to 802.11ax HE20 Low channel using special commands through command window provided by the client that will not be available to the end user  External WiFi radio was configured to 802.11b High channel using special commands through command window provided by the client that will not be available to the end user  Bluetooth LE radio was configured to a fixed channel transmission with highest possible duty cycle using confidential test software and scripts provided by the applicant.

### 3.6 Justification for Worst Case Mode of Operation

During the testing process the EUT was tested with transmitter sets on mid channels at the maximum power simultaneous transmission with Internal WiFi radio 802.11ax HE20 Low channel + External WiFi radio 802.11b High channel and Bluetooth LE, which is the worst case of the radios supported, based on the maximum average conducted output power from the reports.

For radiated measurements, all data in this report shows the worst case between horizontal and vertical antenna polarizations and for all orientations of the EUT.

#### 4 Subject of Investigation

The objective of the measurements done by CETECOM Inc. was to evaluate the compliance of the EUT against the relevant requirements specified in the Code of Federal Regulations Title 47 parts 22, 24, 27 and ISED Standards RSS-132 issue 3, RSS-133 issue 6, and RSS-139 issue 3.

##### 4.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus, with 95% confidence interval (in dB delta to result), based on a coverage factor k=2.

Radiated measurement

Measurement System	EMC 1	EMC 2
Conducted emissions (mains port)	1.12 dB	0.46 dB
Radiated emissions		
(< 30 MHz)	3.66 dB	3.88 dB
(30 MHz – 1GHz)	3.17 dB	3.34 dB
(1 GHz – 3 GHz)	5.01 dB	4.45 dB
(>3 GHz)	4.0 dB	4.79 dB

RF conducted measurement                      ±0.5 dB

According to TR 102 273 a multiplicative propagation of error is assumed for RF measurement systems. For this reason the RMS method is applied to dB values and not to linear values as appropriate for additive propagation of error. Also used: <http://physics.nist.gov/cuu/Uncertainty/typeb.html>. The above calculated uncertainties apply to direct application of the Substitution method. The Substitution method is always used when the EUT comes closer than 3dB to the limit.

##### 4.2 Environmental Conditions During Testing:

The following environmental conditions were maintained during the course of testing:

- Ambient Temperature: 20-25°C
- Relative humidity: 40-60%

##### 4.3 Dates of Testing:

12/11/2023 - 12/22/2023

##### 4.4 Decision Rule:

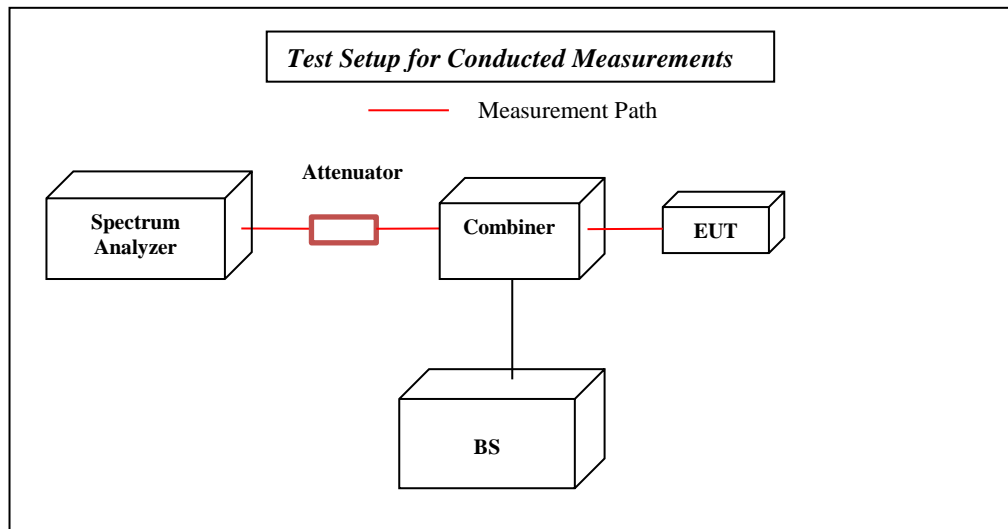
Cetecom advanced follows ILAC G8:2019 chapter 4.2.1 (Simple Acceptance Rule).

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3. The measurement uncertainty is mentioned in this test report, See chapter 9, but is not taken into account – neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong.



## 5 Measurement Procedures

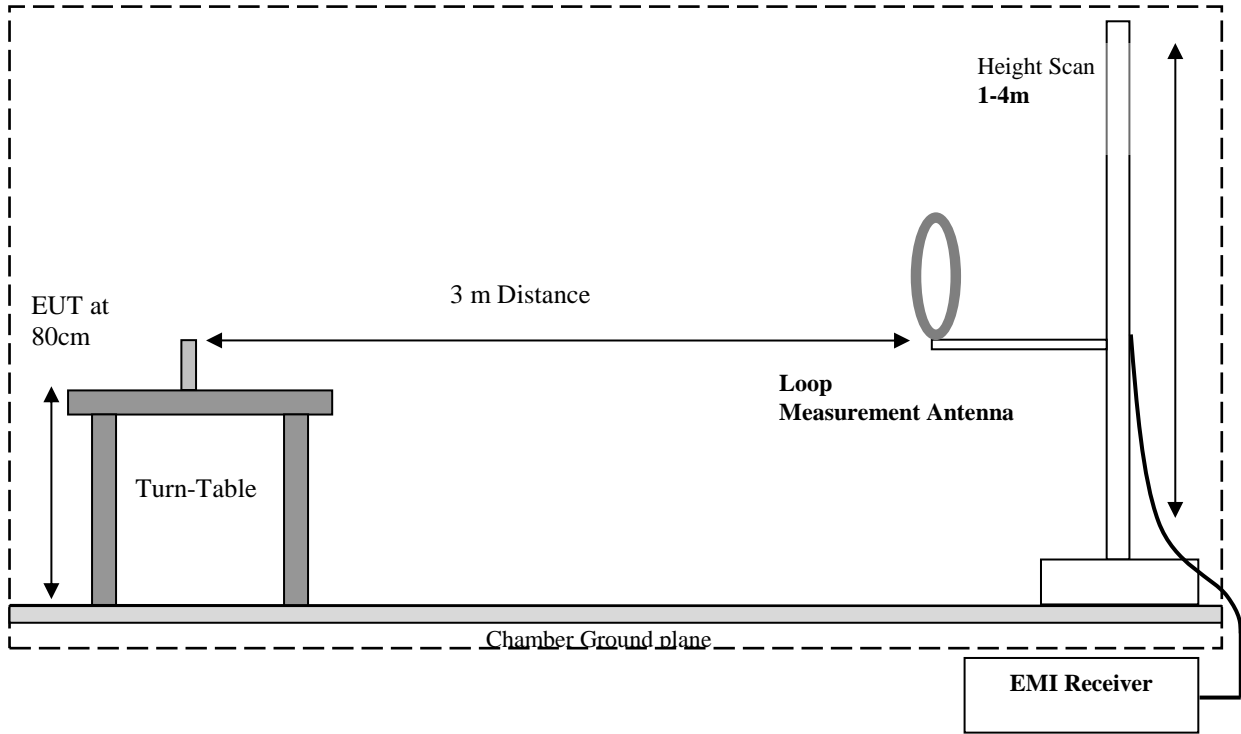
Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03r01 – “Measurement Guidance for Certification of Licensed Digital Transmitters” and according to relevant parts of ANSI/TIA-603-D-2010 as detailed below.



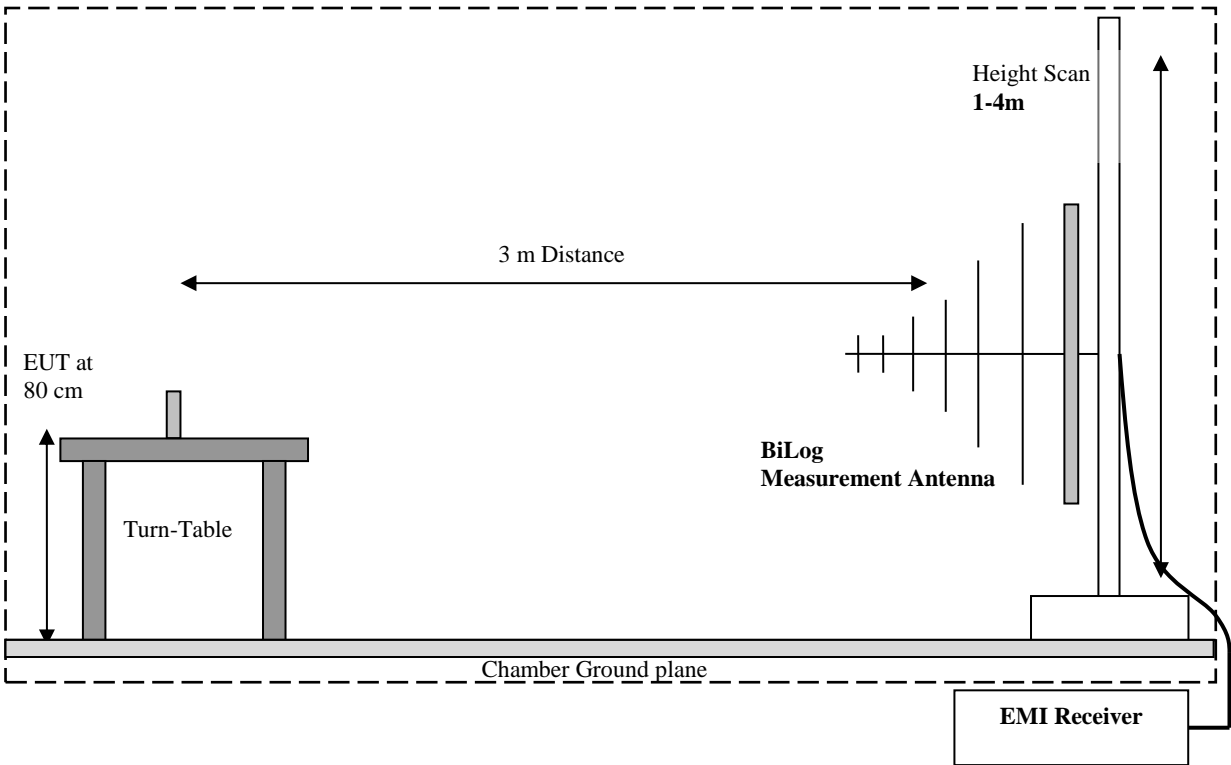
### 5.1 Radiated Measurement

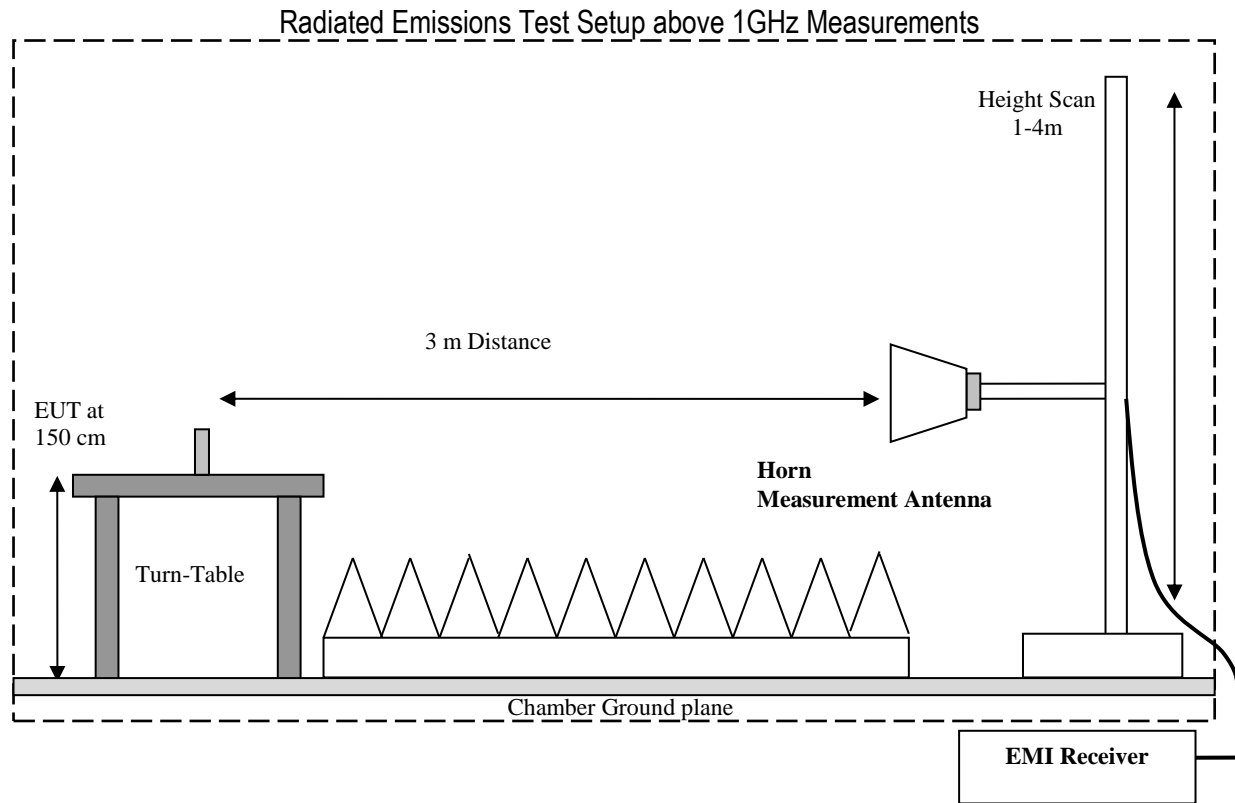
- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to cover the 3 orthogonal axis of the EUT. A max peak detector is utilized during the exploratory measurement. The Test-SW creates an overall maximum trace for all 12 sweeps and saves the settings for each point of this trace. The maximum trace is part of the test report.
- The 10 highest emissions are selected with an automatic algorithm of EMC32 searching for peaks in the noise floor and ensuring that broadband signals are not selected multiple times.
- The maxima are then put through the final measurement and again maximized in a 90deg range of the turntable, fine search in frequency domain and height scan between 1m and 4m.
- The above procedure is repeated for all possible ways of power supply to EUT and for all supported modulations.
- In case there are no emissions above noise floor level only the maximum trace is reported as described above.
- The results are split up into up to 4 frequency ranges due to antenna bandwidth restrictions. A magnetic loop is used from 9 kHz to 30 MHz, a Biconilog antenna is used from 30 MHz to 1 GHz, and two different horn antennas are used to cover frequencies up to 40 GHz.

### Radiated Emissions Test Setup below 30MHz Measurements



### Radiated Emissions Test Setup 30MHz-1GHz Measurements





## 5.2 Sample Calculations for Field Strength Measurements

Field Strength is calculated from the Spectrum Analyzer/ Receiver readings, taking into account the following parameters:

- Measured reading in dB $\mu$ V
- Cable Loss between the receiving antenna and SA in dB and
- Antenna Factor in dB/m

All radiated measurement plots in this report are taken from a test SW that calculates the Field Strength based on the following equation:

$$FS \text{ (dB}\mu\text{V/m)} = \text{Measured Value on SA (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$$

Example:

Frequency (MHz)	Measured SA (dB $\mu$ V)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dB $\mu$ V/m)
1000	80.5	3.5	14	98.0

## 6 Measurement Results Summary

### 6.1 Part 22 / RSS-132

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §22.913 (a) RSS-132 Clause 5.4	RF Output Power	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1047 §22.913 (a) RSS-132 Clause 5.2	Modulation Characteristics	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1055; §22.355 RSS-132 Clause 5.3	Frequency stability	Extreme Temperature and Voltage	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1049; §22.917 RSS-132 Clause 5.1	Occupied Bandwidth	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1051; §22.917 RSS-132 Clause 5.5	Band Edge Compliance	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1051; §22.917 RSS-132 Clause 5.5	Conducted Spurious Emissions	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1053; §22.917 RSS-132 Clause 5.5	Radiated Spurious Emissions	Nominal	Op. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Complies

Note 1: NA= Not Applicable; NP= Not Performed.

Note 2: Leveraged from report # 2456ERM, Model Number # ALAS5-AM (FCC ID: QIPALAS5-AM, IC: 7830A-ALAS5AM)

### 6.2 Part 24 / RSS-133

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §24.232 (a) RSS-133 Clause 6.4	RF Output Power	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1047, RSS-132 Clause 6.2	Modulation Characteristics	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1055; §24.235 RSS-133 Clause 6.3	Frequency Stability	Extreme Temperature and Voltage	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1049; §24.238 RSS-133 Clause 2.3	Occupied Bandwidth	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1051; §24.238 RSS-133 Clause 6.5	Band Edge Compliance	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2
§2.1051; §24.238 RSS-133 Clause 6.5	Conducted Spurious Emissions	Nominal	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complies Note 1 Note 2

§2.1053; §24.238 RSS-133 Clause 6.6	Radiated Spurious Emissions	Nominal	Op. 1	■	□	□	□	Complies
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Note 1: NA= Not Applicable; NP= Not Performed.

Note 2: Leveraged from report # 2456ERM, Model Number # ALAS5-AM (FCC ID: QIPALAS5-AM, IC: 7830A-ALAS5AM)

**6.3 FCC 27 / RSS-130/ RSS-139 / RSS-199**

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §27.50 RSS-199 Clause 4.4 /RSS-130 Clause 4.6/ RSS-139 Clause 6.5	RF Output Power	Nominal	-	□	□	□	■	Complies Note 1 Note 2
§2.1047; §27.50, RSS-199 Clause 4.1 /RSS-130 Clause 4.2/ RSS-Clause 6.2	Modulation Characteristics	Nominal	-	□	□	□	■	Complies Note 1 Note 2
§2.1055; §27.54 RSS-199 Clause 4.3 /RSS-130 Clause 4.5 /RSS-Clause 6.4	Frequency Stability	Extreme Temperature and Voltage	-	□	□	□	■	Complies Note 1 Note 2
§2.1049; §27.53 RSS-199 Clause 4.2	Occupied Bandwidth	Nominal	-	□	□	□	■	Complies Note 1 Note 2
§2.1051; §27.53 RSS-199 Clause 4.5 /RSS-130 Clause 4.7/ RSS-Clause 6.6	Band Edge Compliance	Nominal	-	□	□	□	■	Complies Note 1 Note 2
§2.1051; §27.53 RSS-199 Clause 4.5 /RSS-130 Clause 4.7/ RSS-Clause 6.6	Conducted Spurious Emissions	Nominal	-	□	□	□	■	Complies Note 1 Note 2
§2.1053; §27.53 RSS-199 Clause 4.5 /RSS-130 Clause 4.7/ RSS-Clause 6.6	Radiated Spurious Emissions	Nominal	Op. 1	■	□	□	□	Complies

Note 1: NA= Not Applicable; NP= Not Performed.

Note 2: Leveraged from report # 2456ERM, Model Number # ALAS5-AM (FCC ID: QIPALAS5-AM, IC: 7830A-ALAS5AM)

## 7 Test Result Data

### 7.1 ERP/EIRP

FCC Rule Parts	Band	Frequency Range	Power Conducted Note 1	Cable Loss Note 3	Gain	EIRP Note 2	ERP Note 2	Limit EIRP (W)	Limit ERP (W)
		(MHz)	(dBm)	(dBm)	(dBi)	(W)	(W)		
22H	LTE 5	824 – 849	23.19	2.30	2.52	-	0.134	-	7
22H	GSM850	824 – 849	32.38	2.30	2.52	-	1.109	-	7
22H	UMTS V	824 - 849	24.41	2.30	2.52	-	0.177	-	7
24E	LTE 2	1850 – 1910	23.22	3.56	3.59	0.211	-	2	-
24E	GSM1900	1850 – 1910	29.64	3.56	3.59	0.927	-	2	-
24E	UMTS II	1850 – 1910	24.45	3.56	3.59	0.281	-	2	-
27	LTE 4	1710 – 1755	23.07	3.47	3.33	0.196	-	1	-
27	UMTS IV	1710 – 1755	24.35	3.47	3.33	0.264	-	1	-
27	LTE 7	2500 – 2570	23.29	4.34	4.63	0.228	-	1	-
27	LTE 12	699 – 716	23.41	2.13	1.54	-	0.117	-	1
27	LTE 13	777 – 787	23.18	2.30	1.37	-	0.102	-	1
27	LTE 66	1710 – 1780	23.16	3.47	3.33	0.200	-	1	-

**Note 1:** Power Conducted (dBm) leveraged from test report “2456ERM.012” prepared by DEKRA Certification, Inc. The module Model # ALAS5-AM (FCC ID: QIPALAS5-AM, IC: 7830A-ALAS5AM).

**Note 2:** ERP/EIRP are based on calculations from Power Conducted by adding the declared maximum gain of the utilized cellular antenna per operational description.

**Note 3:** Cable loss values provided by the client.

## 7.2 Radiated Spurious Emissions

### 7.2.1 Measurement utilizing KDB 971168 D01 Power Meas License Digital Systems v03r01, and according to ANSI/TIA-603-D-2010

#### Spectrum Analyzer Settings for FCC 22

Frequency Range	30MHz – 1 GHz	1 – 1.58 GHz	1.58 – 9 GHz
Resolution Bandwidth	100 kHz	1 MHz	1 MHz
Video Bandwidth	100 kHz	1 MHz	1 MHz
Detector	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto

#### Spectrum Analyzer Settings for FCC 24 and 27

Frequency Range	30MHz – 1 GHz	1 – 2.7 GHz	2.7 – 18 GHz	18 – 19.1 GHz
Resolution Bandwidth	100 kHz	1 MHz	1 MHz	1 MHz
Video Bandwidth	100 kHz	1 MHz	1 MHz	1 MHz
Detector	Peak	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto	Auto

### 7.2.2 Limits:

#### 7.2.2.1 FCC Part 22.917 (a); FCC Part 24.238 (a); FCC Part 27.53 (h)(m)

Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

For Band 7 & 41, the minimum permissible attenuation level of any spurious emission is at least  $55 + \log_{10}(P)$  [Watts] on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

#### 7.2.2.2 RSS-132 Part 5.5; RSS-133 Part 6.5; RSS-139 Part 5.6; RSS-199 Part 5.6 Transmitter Unwanted Emissions

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

i. In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts).

ii. After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

Note: The limit calculation result is a constant of -13 dBm.

Note: For LTE Band 7 and 41, the limit calculation result is a constant of -25 dBm.

### 7.2.3 Test conditions and setup:

Ambient Temperature (°C)	EUT Set-Up #	EUT operating mode	Power Input
22.8	1	1	12 VDC

### 7.2.4 Measurement result:

Plot #	Channel	EUT operating mode	Scan Frequency	Lowest margin emission (dBm)	Limit (dBm)	Result
1-4	Mid	GSM 1900	9 kHz – 26 GHz	-33.50	-13	Pass
5-8	Mid	UMTS Band II	9 kHz – 22 GHz	-33.09	-13	Pass
9-12	Mid	LTE Band 2	9 kHz – 22 GHz	-31.92	-13	Pass
13-15	Mid	GSM 850	30 MHz – 9 GHz	-31.33	-13	Pass
16-18	Mid	UMTS Band V	30 MHz – 9 GHz	-33.86	-13	Pass
19-21	Mid	LTE Band 5	30 MHz – 9 GHz	-30.86	-13	Pass
22-24	Mid	UMTS Band IV	30 MHz – 18 GHz	-37.94	-13	Pass
25-27	Mid	LTE Band 4	30 MHz – 18 GHz	-34.15	-13	Pass
28-31	Mid	LTE Band 7	30 MHz – 30 GHz	-34.77	-25	Pass
32-34	Mid	LTE Band 12	30 MHz – 18 GHz	-31.95	-13	Pass
35-37	Mid	LTE Band 13	30 MHz – 18 GHz	-33.53	-13	Pass
38-40	Mid	LTE Band 66	30 MHz – 18 GHz	-37.77	-13	Pass

\*Note: Co-Transmission was determined by the worst case combination of the following:  
Cellular + BTLE+ Internal Wi-Fi 2.4GHz + External Wi-Fi 2.4GHz.



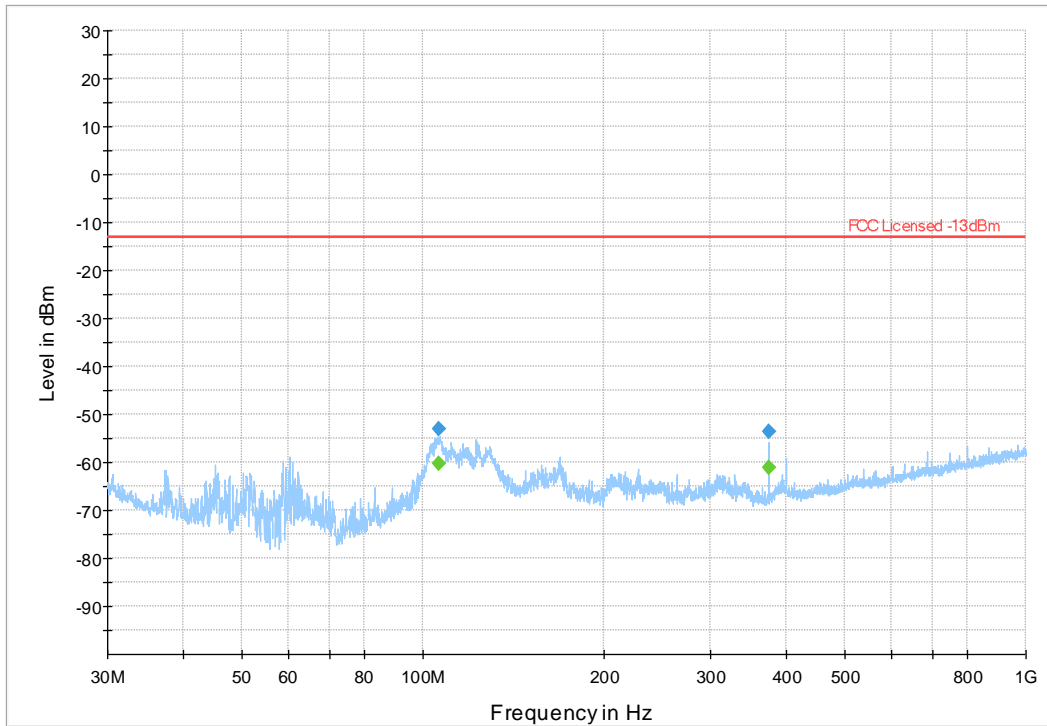
7.2.5 Measurement Plots:

**GSM1900 Plot # 1 Radiated Emissions: 30 MHz – 1GHz**

Channel: Mid

**Final\_Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
106.363	---	-60.26	---	---	500.0	120.000	100.0	V	41.0	-72.2	0.6	0.0	-72.8	12.0
106.363	-53.18	---	-13.00	40.18	500.0	120.000	100.0	V	41.0	-72.2	0.6	0.0	-72.8	19.1
374.981	---	-61.02	---	---	500.0	120.000	134.0	V	288.0	-72.4	1.5	0.0	-73.9	11.4
374.981	-53.69	---	-13.00	40.69	500.0	120.000	134.0	V	288.0	-72.4	1.5	0.0	-73.9	18.8



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

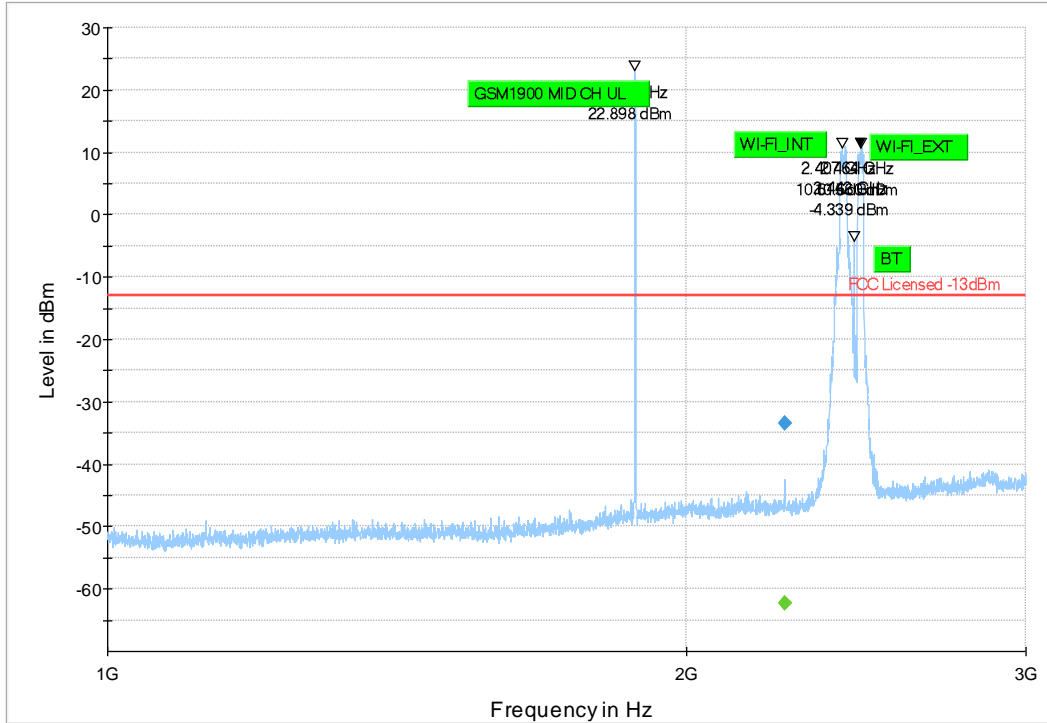
7.2.5.1

**GSM1900 Plot # 2 Radiated Emissions: 1 GHz - 3 GHz**

Channel: Mid

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2248.250	---	-62.34	---	---	500.0	1000.000	216.0	H	133.0	-63.2	4.4	0.0	-67.7	0.9
2248.250	-33.50	---	-13.00	20.50	500.0	1000.000	216.0	H	133.0	-63.2	4.4	0.0	-67.7	29.7



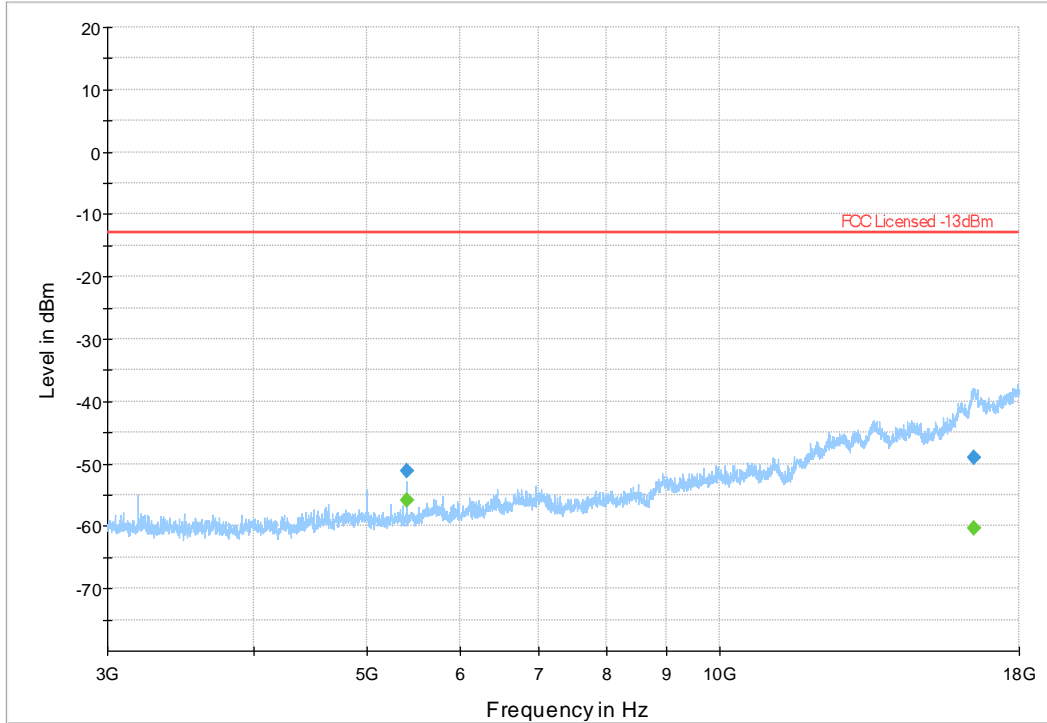
— Preview Result 1-PK+   
 — FCC Licensed -13dBm   
 ◆ Final\_Result PK+   
 ◆ Final\_Result RMS

**GSM1900 Plot # 3 Radiated Emissions: 3 GHz – 18 GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	-51.15	---	-13.00	38.15	500.0	1000.000	244.0	V	241.0	-98.0	8.2	-45.7	-60.5	46.8
5400.250	---	-55.79	---	---	500.0	1000.000	244.0	V	241.0	-98.0	8.2	-45.7	-60.5	42.2
16484.500	-48.93	---	-13.00	35.94	500.0	1000.000	275.0	H	63.0	-81.3	16.4	-43.6	-54.2	32.4
16484.500	---	-60.34	---	---	500.0	1000.000	275.0	H	63.0	-81.3	16.4	-43.6	-54.2	21.0



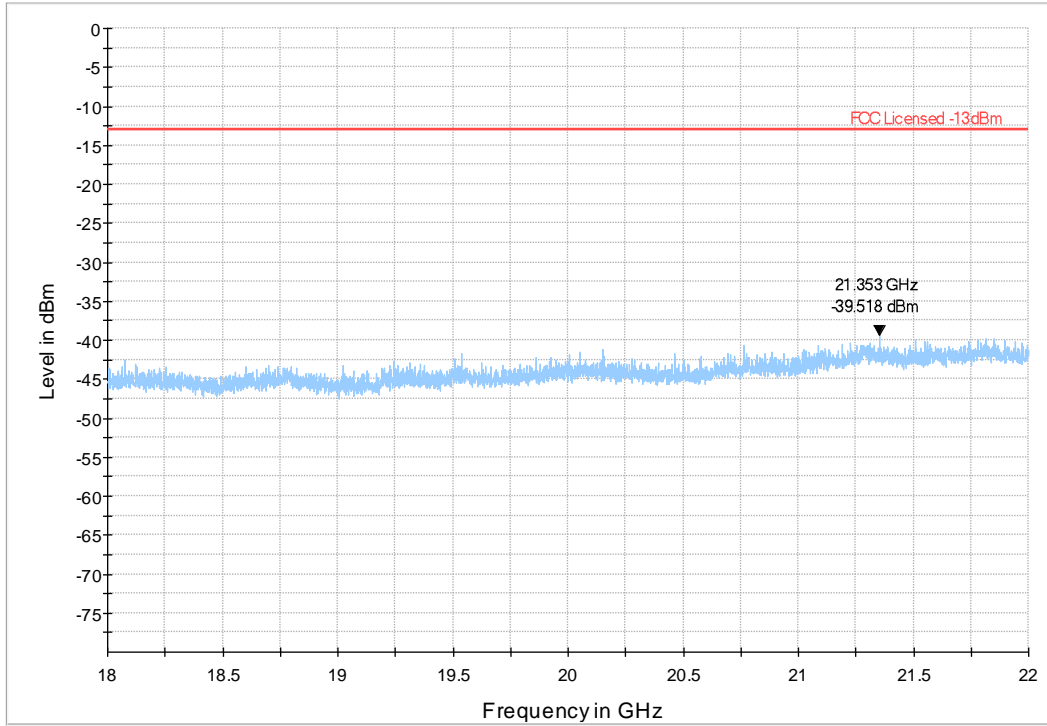
— PK+\_MAXH    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

**GSM1900 Plot # 4 Radiated Emissions: 18 GHz – 26 GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
---	---	---	---	---	---	---	---		---	---	---	---	---	---



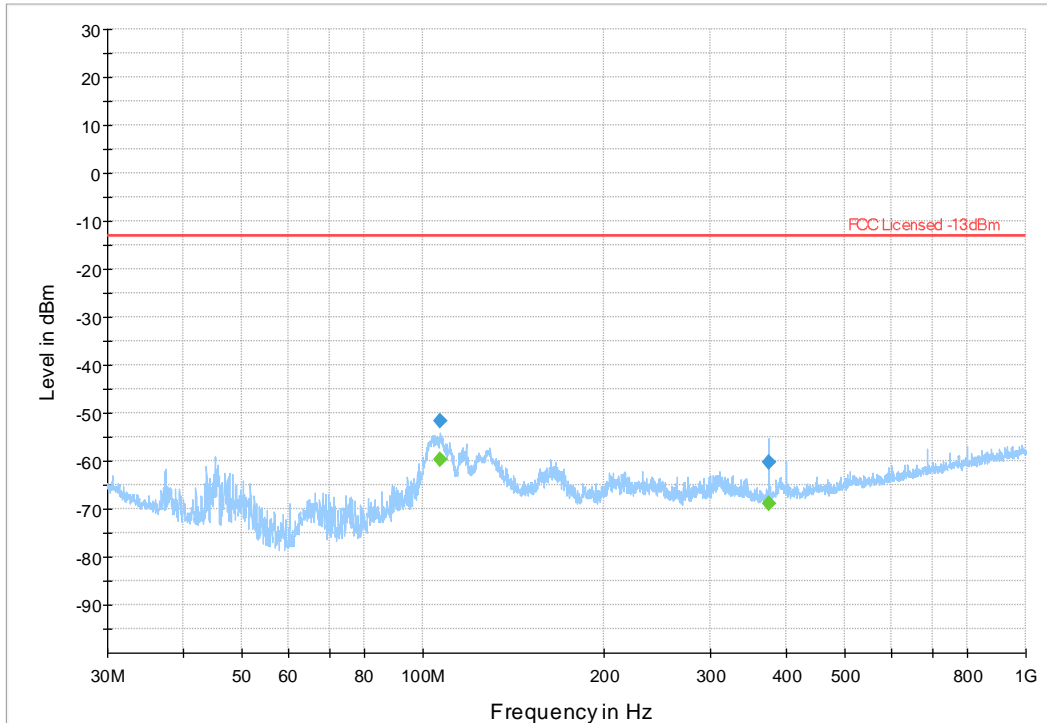
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

**UMTS II Plot # 5 Radiated Emissions: 30 MHz – 1GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
106.727	-51.53	---	-13.00	38.53	500.0	120.000	262.0	H	65.0	-72.9	0.6	0.0	-73.6	21.4
106.727	---	-59.62	---	---	500.0	120.000	262.0	H	65.0	-72.9	0.6	0.0	-73.6	13.3
374.956	-60.15	---	-13.00	47.15	500.0	120.000	116.0	V	183.0	-72.4	1.5	0.0	-73.9	12.3
374.956	---	-68.83	---	---	500.0	120.000	116.0	V	183.0	-72.4	1.5	0.0	-73.9	3.6



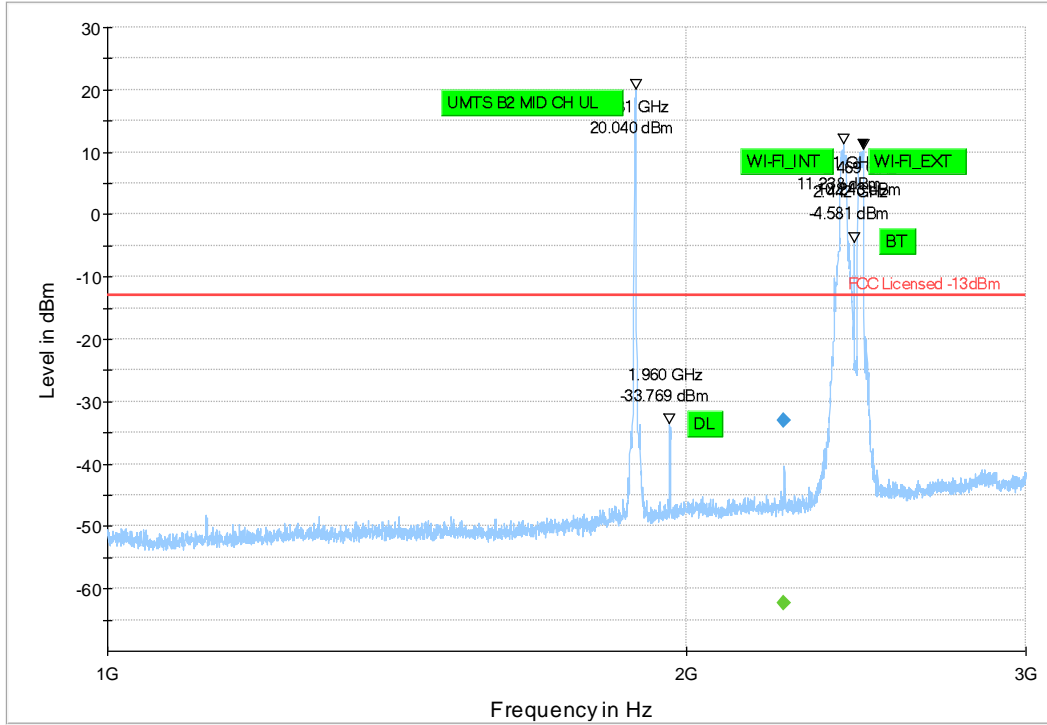
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

### UMTS II Plot # 6 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

#### Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2247.000	---	-62.30	---	---	500.0	1000.000	191.0	H	144.0	-63.2	4.4	0.0	-67.7	0.9
2247.000	-33.09	---	-13.00	20.09	500.0	1000.000	191.0	H	144.0	-63.2	4.4	0.0	-67.7	30.1



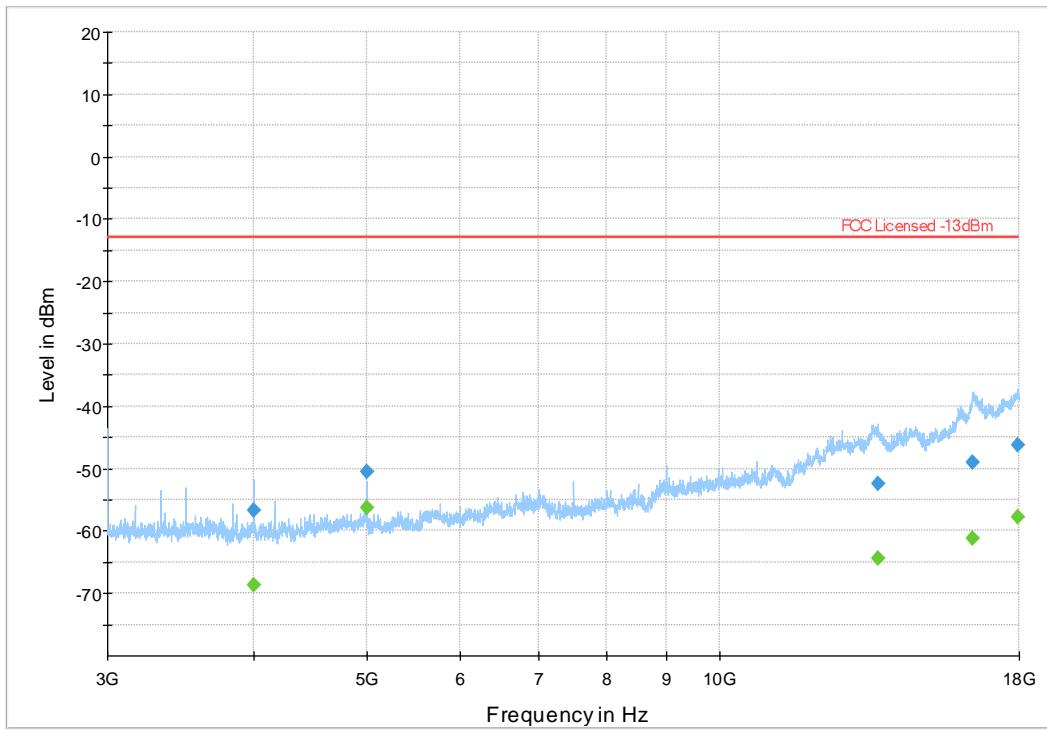
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

UMTS II Plot # 7 Radiated Emissions: 3 GHz – 18 GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
4000.000	---	-68.63	---	---	500.0	1000.000	393.0	V	-45.0	-99.7	8.0	-45.7	-62.0	31.1
4000.000	-56.81	---	-13.00	43.81	500.0	1000.000	393.0	V	-45.0	-99.7	8.0	-45.7	-62.0	42.9
4999.750	---	-56.28	---	---	500.0	1000.000	219.0	V	261.0	-98.9	8.0	-45.8	-61.1	42.6
4999.750	-50.60	---	-13.00	37.60	500.0	1000.000	219.0	V	261.0	-98.9	8.0	-45.8	-61.1	48.3
13631.000	---	-64.37	---	---	500.0	1000.000	237.0	V	193.0	-85.9	13.9	-43.7	-56.1	21.5
13631.000	-52.53	---	-13.00	39.53	500.0	1000.000	237.0	V	193.0	-85.9	13.9	-43.7	-56.1	33.4
16430.500	---	-61.22	---	---	500.0	1000.000	296.0	V	289.0	-81.5	16.6	-43.8	-54.2	20.3
16430.500	-48.96	---	-13.00	35.96	500.0	1000.000	296.0	V	289.0	-81.5	16.6	-43.8	-54.2	32.6
17940.500	---	-57.67	---	---	500.0	1000.000	289.0	V	54.0	-79.6	16.3	-42.3	-53.6	21.9
17940.500	-46.16	---	-13.00	33.16	500.0	1000.000	289.0	V	54.0	-79.6	16.3	-42.3	-53.6	33.4



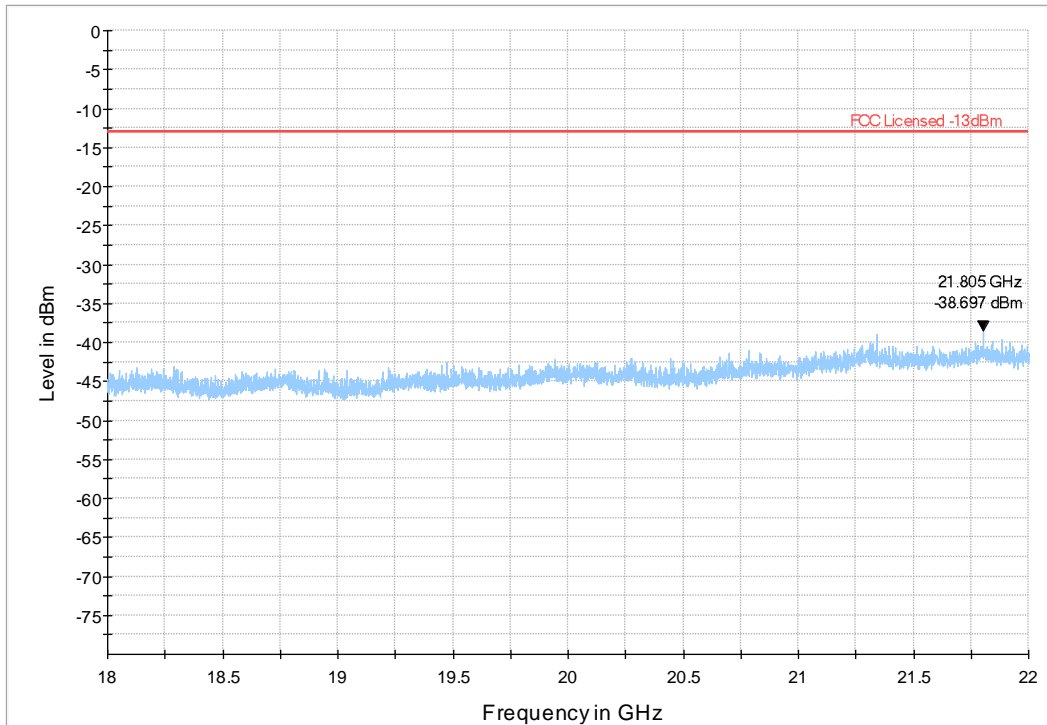
PK+\_MAXH    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

**UMTS II Plot # 8 Radiated Emissions: 18 GHz – 22 GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
---	---	---	---	---	---	---	---		---	---	---	---	---	---



— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

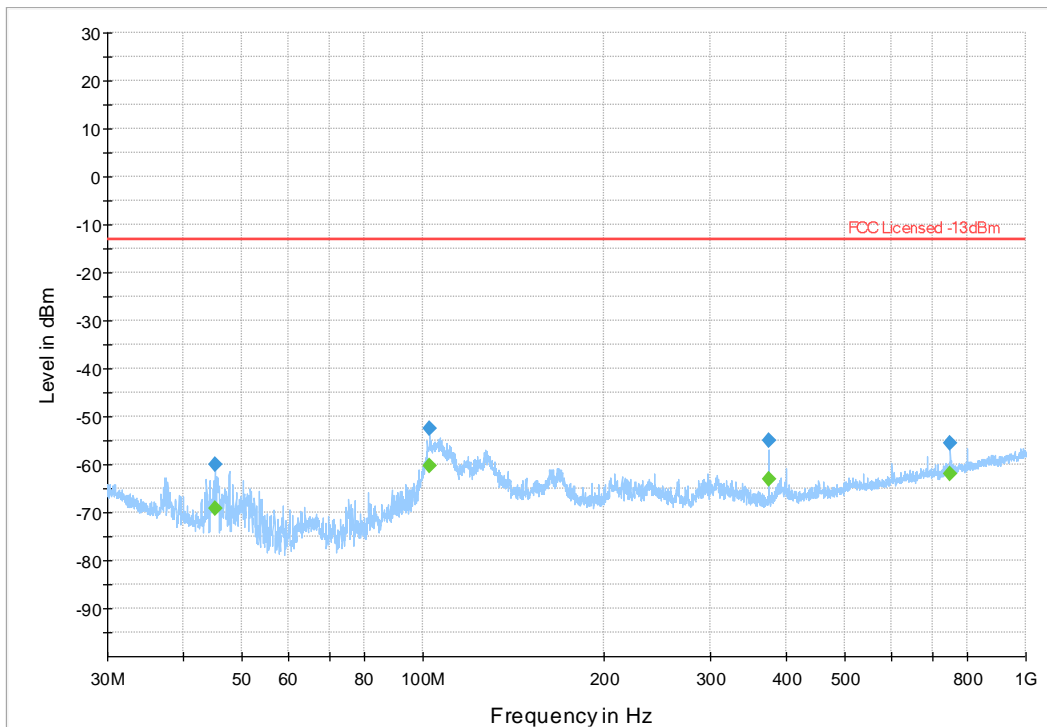


LTE B2 Plot # 9 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
45.229	-59.98	---	-13.00	46.98	500.0	120.000	100.0	V	198.0	-78.8	0.7	0.0	-79.5	18.9
45.229	---	-69.16	---	---	500.0	120.000	100.0	V	198.0	-78.8	0.7	0.0	-79.5	9.7
102.580	-52.37	---	-13.00	39.37	500.0	120.000	100.0	V	32.0	-73.4	0.6	0.0	-73.9	21.0
102.580	---	-60.39	---	---	500.0	120.000	100.0	V	32.0	-73.4	0.6	0.0	-73.9	13.0
374.981	-55.04	---	-13.00	42.04	500.0	120.000	209.0	V	41.0	-72.4	1.5	0.0	-73.9	17.4
374.981	---	-62.93	---	---	500.0	120.000	209.0	V	41.0	-72.4	1.5	0.0	-73.9	9.5
749.958	-55.67	---	-13.00	42.67	500.0	120.000	100.0	V	357.0	-65.5	2.3	0.0	-67.8	9.8
749.958	---	-61.93	---	---	500.0	120.000	100.0	V	357.0	-65.5	2.3	0.0	-67.8	3.6



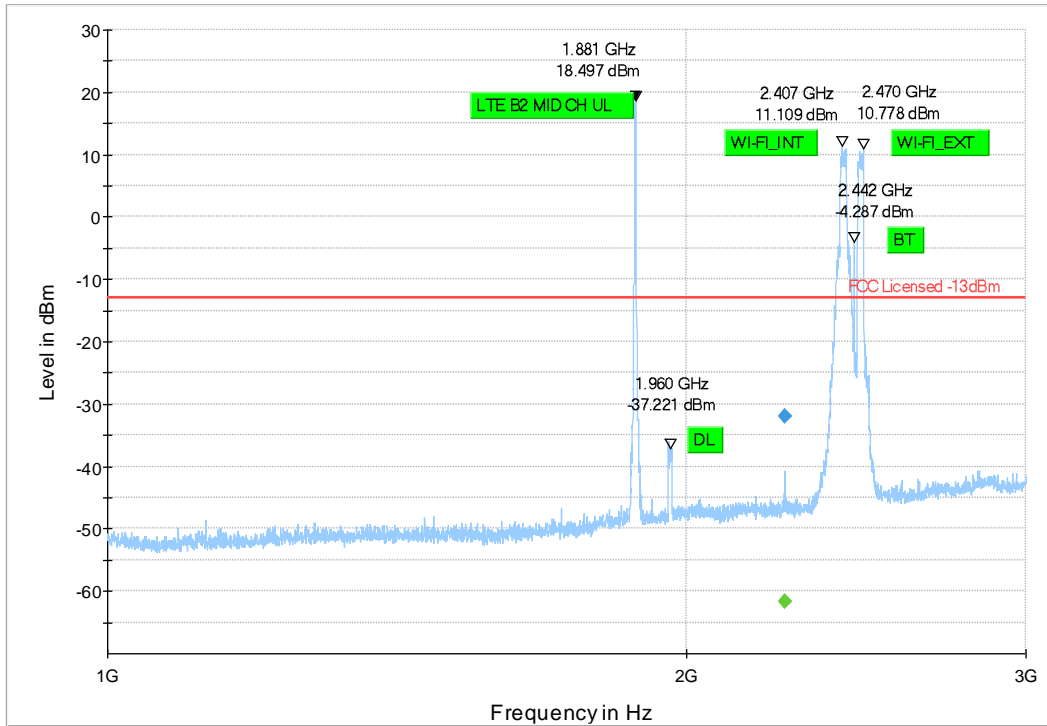
Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

### LTE B2 Plot # 10 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

#### Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2248.250	---	-61.57	---	---	500.0	1000.000	166.0	H	151.0	-63.2	4.4	0.0	-67.7	1.6
2248.250	-31.92	---	-13.00	18.92	500.0	1000.000	166.0	H	151.0	-63.2	4.4	0.0	-67.7	31.3



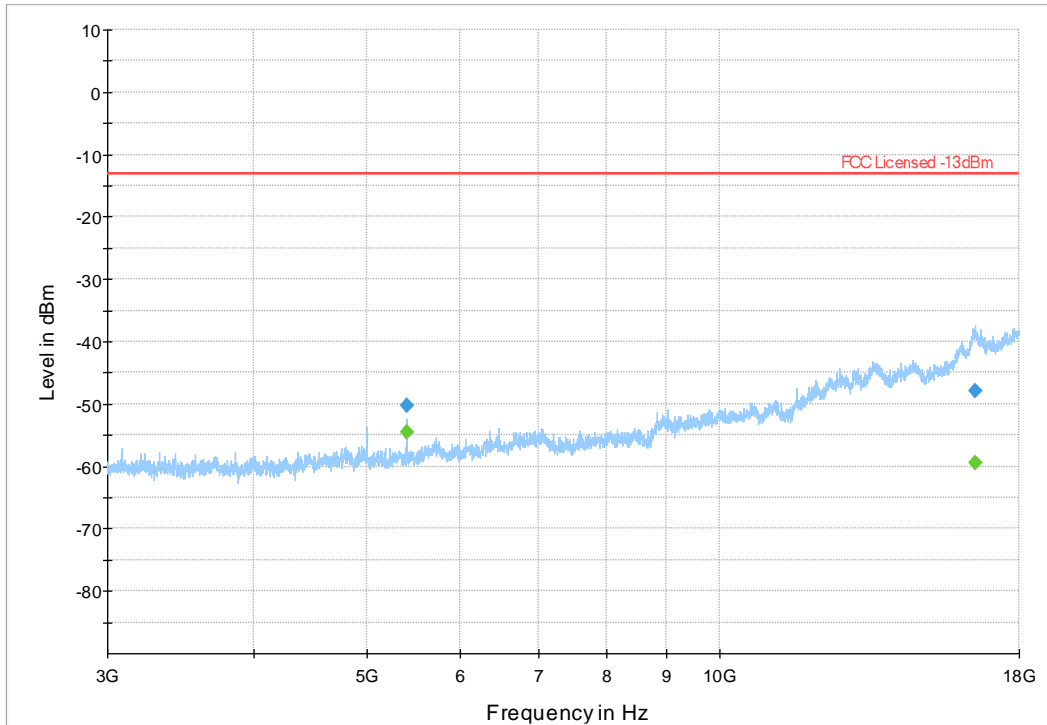
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

LTE B2 Plot # 11 Radiated Emissions: 3 GHz – 18 GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	---	-54.60	---	---	500.0	1000.000	225.0	V	295.0	-98.0	8.2	-45.7	-60.5	43.4
5400.250	-50.18	---	-13.00	37.18	500.0	1000.000	225.0	V	295.0	-98.0	8.2	-45.7	-60.5	47.8
16495.250	---	-59.45	---	---	500.0	1000.000	312.0	V	134.0	-81.3	16.4	-43.5	-54.1	21.9
16495.250	-47.99	---	-13.00	34.99	500.0	1000.000	312.0	V	134.0	-81.3	16.4	-43.5	-54.1	33.3



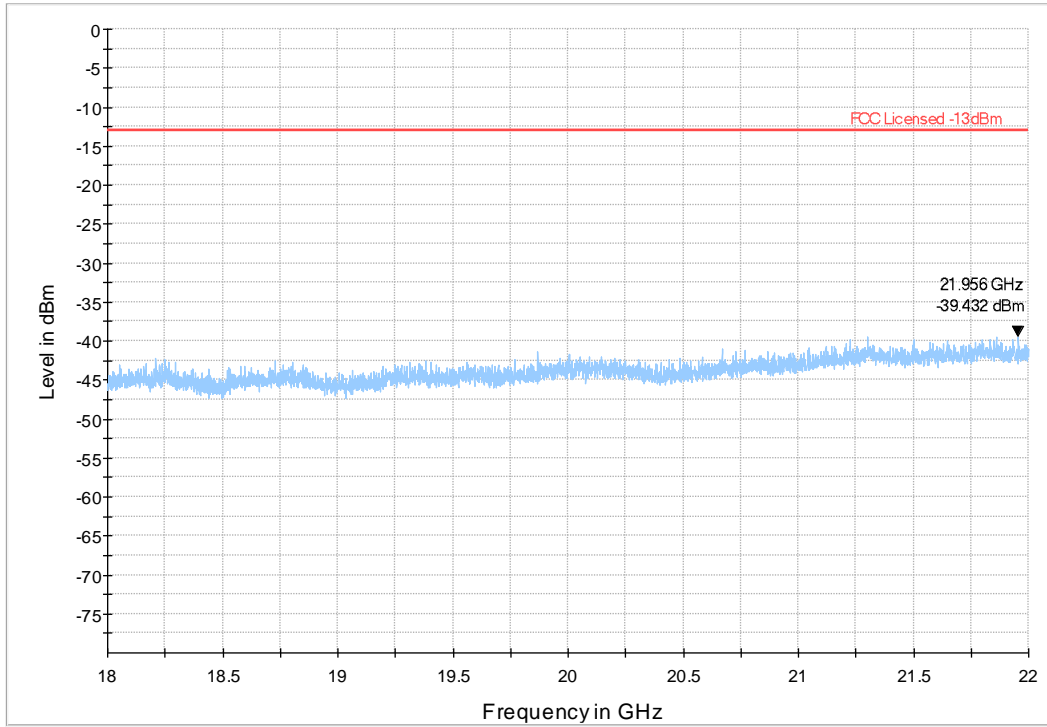
PK+\_MAXH    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

LTE B2 Plot # 12 Radiated Emissions: 18 GHz – 22 GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---



— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

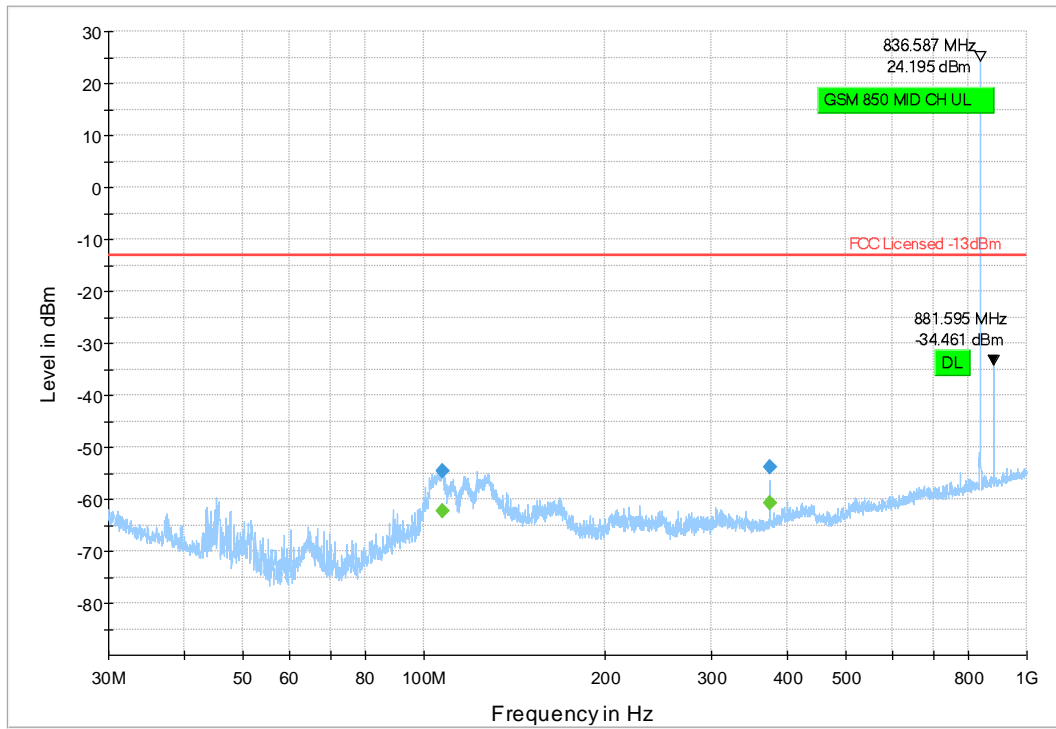
7.2.5.2

**GSM850 Plot # 13 Radiated Emissions: 30 MHz – 1GHz**

Channel: Mid

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
107.309	---	-62.40	---	---	500.0	100.000	100.0	V	11.0	-72.1	0.6	0.0	-72.7	9.7
107.309	-54.59	---	-13.00	41.59	500.0	100.000	100.0	V	11.0	-72.1	0.6	0.0	-72.7	17.5
374.964	---	-60.70	---	---	500.0	100.000	125.0	V	272.0	-72.4	1.5	0.0	-73.9	11.7
374.964	-53.81	---	-13.00	40.81	500.0	100.000	125.0	V	272.0	-72.4	1.5	0.0	-73.9	18.6



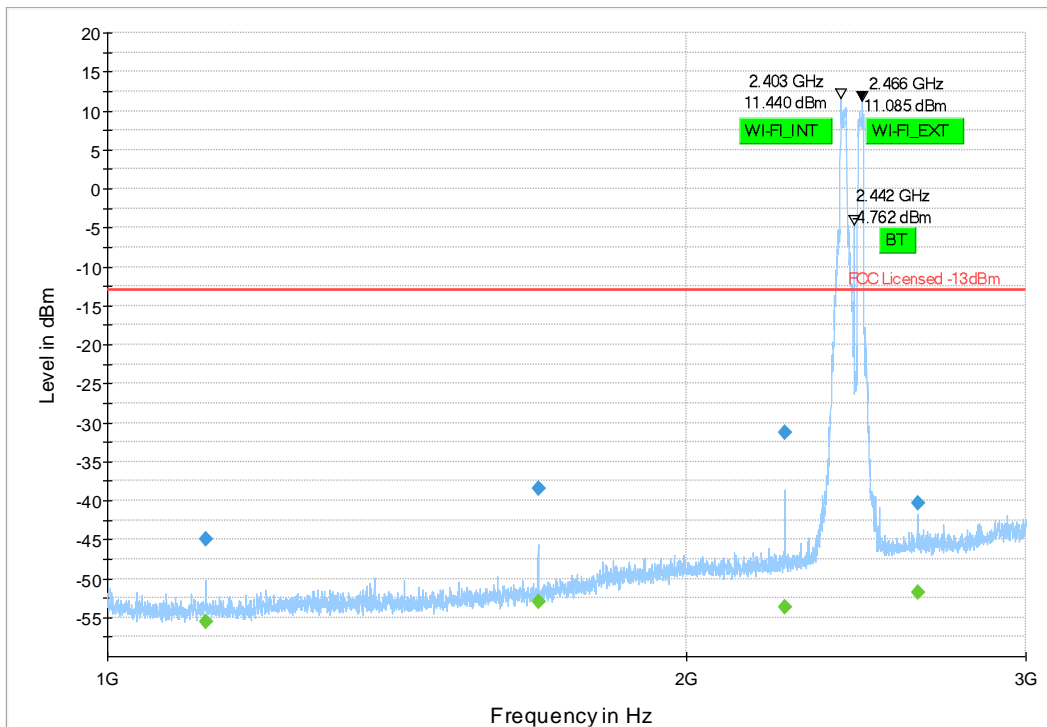
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

**GSM850 Plot # 14 Radiated Emissions: 1 GHz - 3 GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
1124.750	-44.91	---	-13.00	31.91	500.0	1000.000	251.0	V	94.0	-66.3	4.0	0.0	-70.4	21.4
1124.750	---	-55.56	---	---	500.0	1000.000	251.0	V	94.0	-66.3	4.0	0.0	-70.4	10.8
1674.000	---	-53.00	---	---	500.0	1000.000	134.0	V	43.0	-65.0	4.3	0.0	-69.3	12.0
1674.000	-38.46	---	-13.00	25.46	500.0	1000.000	134.0	V	43.0	-65.0	4.3	0.0	-69.3	26.6
2248.500	---	-53.74	---	---	500.0	1000.000	184.0	H	147.0	-62.6	5.0	0.0	-67.7	8.9
2248.500	-31.33	---	-13.00	18.33	500.0	1000.000	184.0	H	147.0	-62.6	5.0	0.0	-67.7	31.3
2635.000	-40.29	---	-13.00	27.29	500.0	1000.000	133.0	H	91.0	-60.9	5.7	0.0	-66.6	20.6
2635.000	---	-51.79	---	---	500.0	1000.000	133.0	H	91.0	-60.9	5.7	0.0	-66.6	9.1



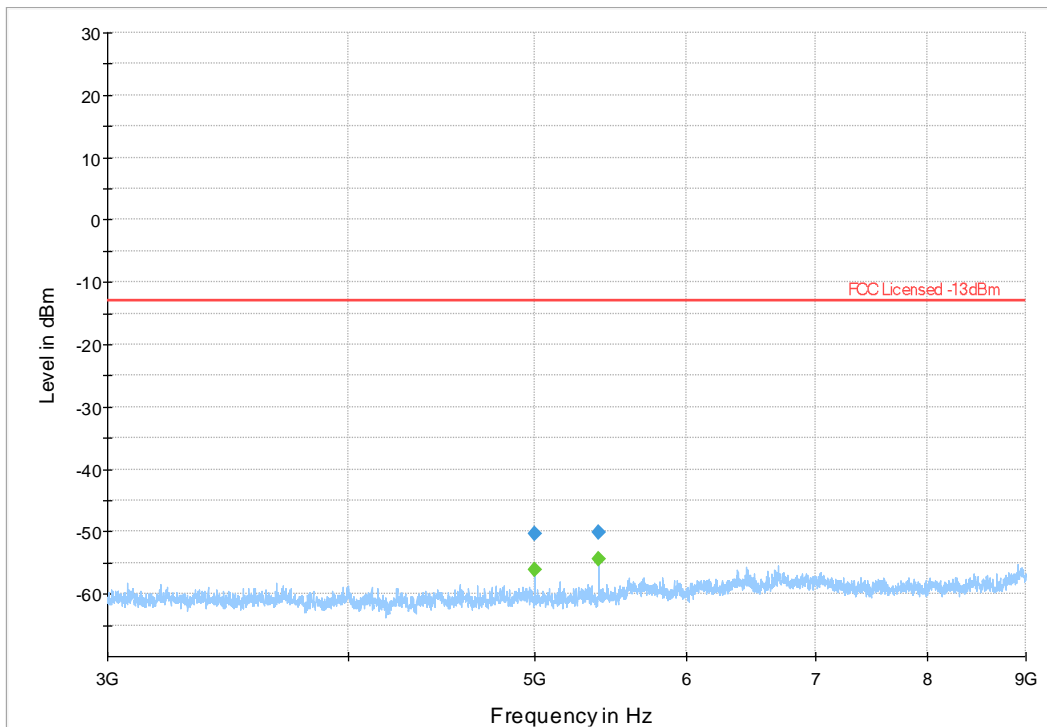
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

**GSM850 Plot # 15 Radiated Emissions: 3 GHz – 9 GHz**

**Channel: Mid**

**Final Result**

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
4999.750	-50.42	---	-13.00	37.42	500.0	1000.000	204.0	V	261.0	-98.9	8.0	-45.8	-61.1	48.5
4999.750	---	-56.14	---	---	500.0	1000.000	204.0	V	261.0	-98.9	8.0	-45.8	-61.1	42.8
5400.250	-50.13	---	-13.00	37.13	500.0	1000.000	140.0	V	289.0	-98.0	8.2	-45.7	-60.5	47.9
5400.250	---	-54.50	---	---	500.0	1000.000	140.0	V	289.0	-98.0	8.2	-45.7	-60.5	43.5



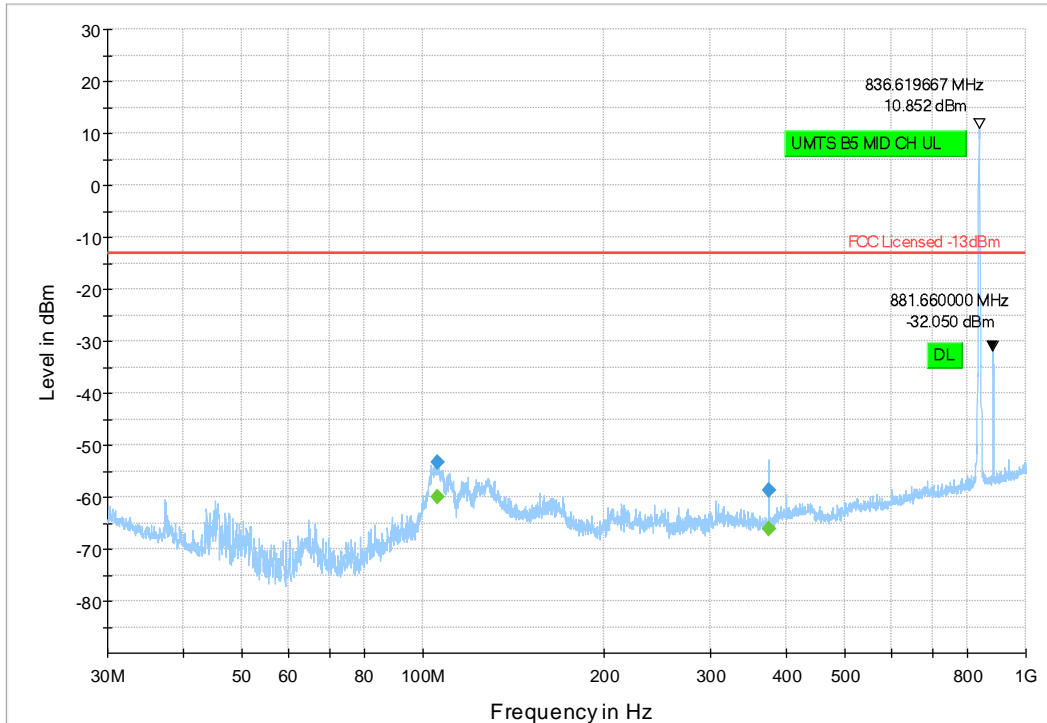
Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

UMTS V Plot # 16 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
105.595	-53.22	---	-13.00	40.22	500.0	100.000	193.0	H	89.0	-73.1	0.6	0.0	-73.7	19.9
105.595	---	-59.98	---	---	500.0	100.000	193.0	H	89.0	-73.1	0.6	0.0	-73.7	13.1
374.964	-58.61	---	-13.00	45.61	500.0	100.000	174.0	V	238.0	-72.4	1.5	0.0	-73.9	13.8
374.964	---	-66.27	---	---	500.0	100.000	174.0	V	238.0	-72.4	1.5	0.0	-73.9	6.2



— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

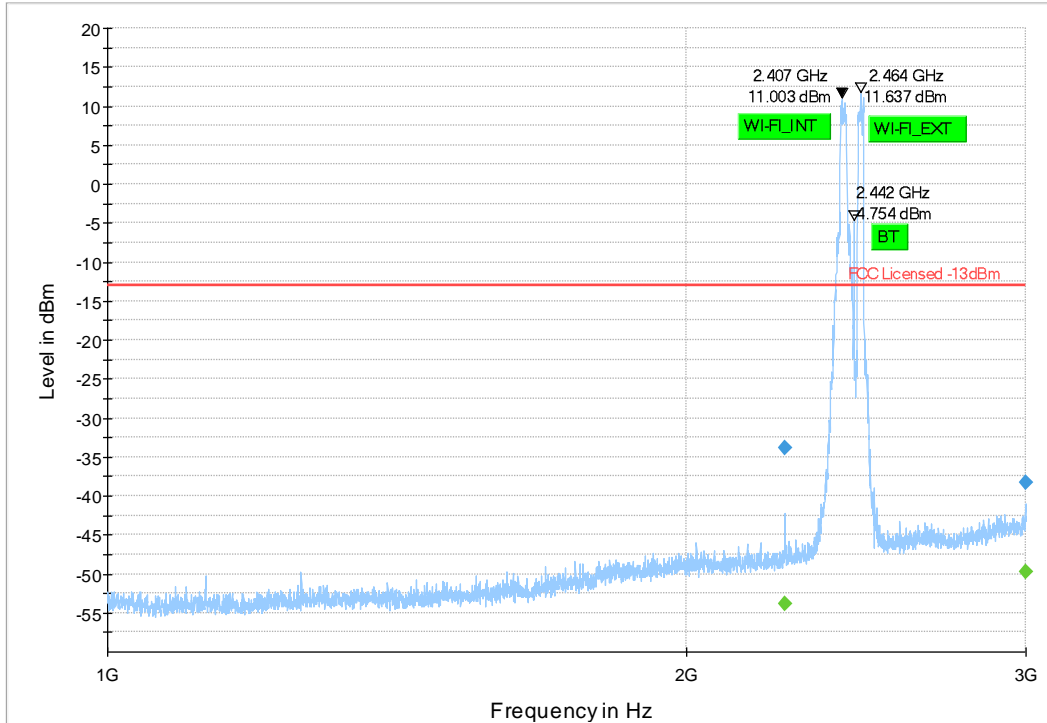


UMTS V Plot # 17 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2248.250	-33.86	---	-13.00	20.86	500.0	1000.000	107.0	V	191.0	-62.6	5.0	0.0	-67.7	28.8
2248.250	---	-53.92	---	---	500.0	1000.000	107.0	V	191.0	-62.6	5.0	0.0	-67.7	8.7
2998.000	-38.31	---	-13.00	25.31	500.0	1000.000	234.0	V	27.0	-59.0	6.4	0.0	-65.4	20.7
2998.000	---	-49.71	---	---	500.0	1000.000	234.0	V	27.0	-59.0	6.4	0.0	-65.4	9.3



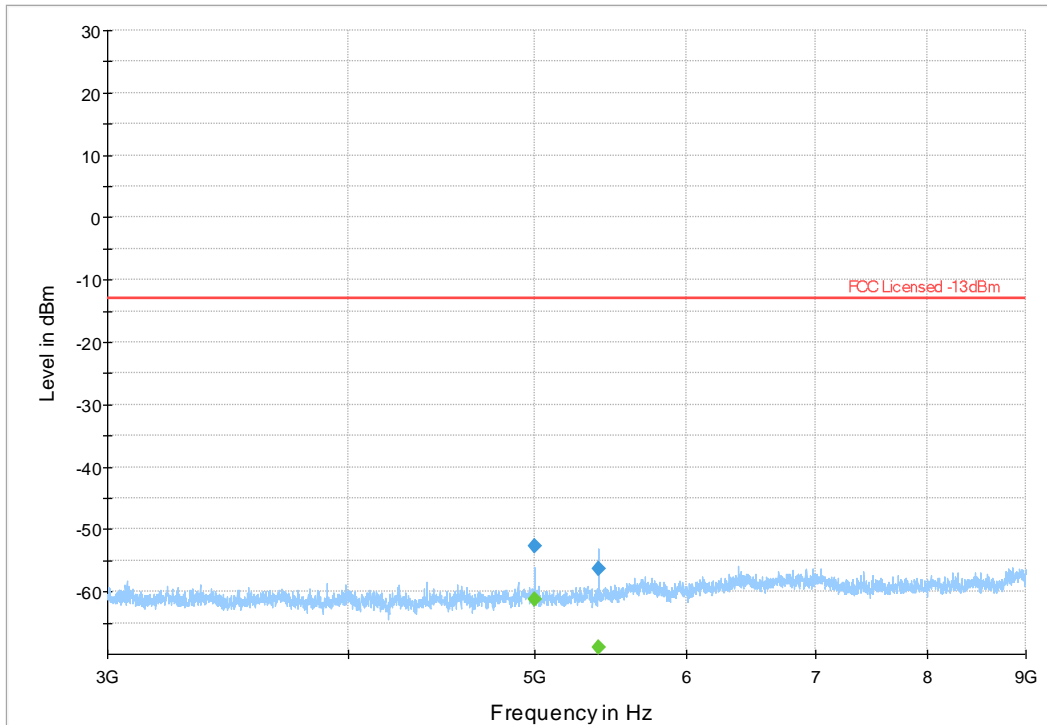
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

UMTS V Plot # 18 Radiated Emissions: 3 GHz - 9 GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
4999.500	---	-61.21	---	---	500.0	1000.000	201.0	V	249.0	-98.9	8.0	-45.8	-61.1	37.7
4999.500	-52.72	---	-13.00	39.72	500.0	1000.000	201.0	V	249.0	-98.9	8.0	-45.8	-61.1	46.2
5400.250	---	-68.92	---	---	500.0	1000.000	321.0	V	280.0	-98.0	8.2	-45.7	-60.5	29.1
5400.250	-56.23	---	-13.00	43.23	500.0	1000.000	321.0	V	280.0	-98.0	8.2	-45.7	-60.5	41.8



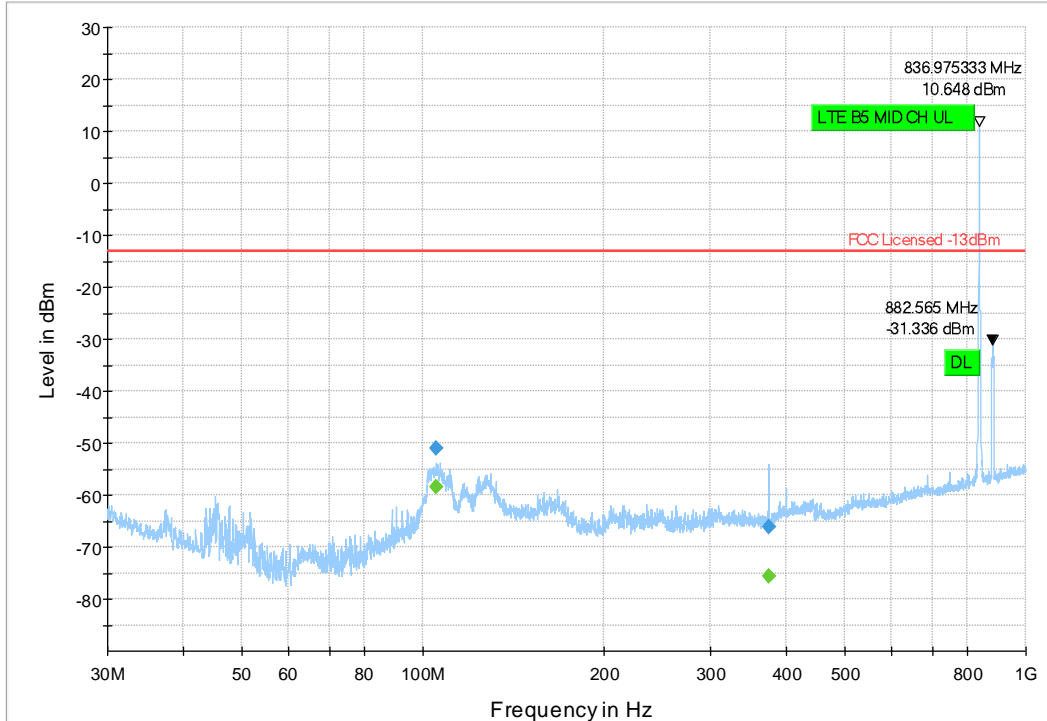
Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RMS

LTE B5 Plot # 19 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
105.272	-51.01	---	-13.00	38.01	500.0	100.000	226.0	H	86.0	-73.2	0.6	0.0	-73.8	22.2
105.272	---	-58.41	---	---	500.0	100.000	226.0	H	86.0	-73.2	0.6	0.0	-73.8	14.8
374.964	-66.03	---	-13.00	53.03	500.0	100.000	343.0	V	234.0	-72.4	1.5	0.0	-73.9	6.4
374.964	---	-75.69	---	---	500.0	100.000	343.0	V	234.0	-72.4	1.5	0.0	-73.9	-3.2



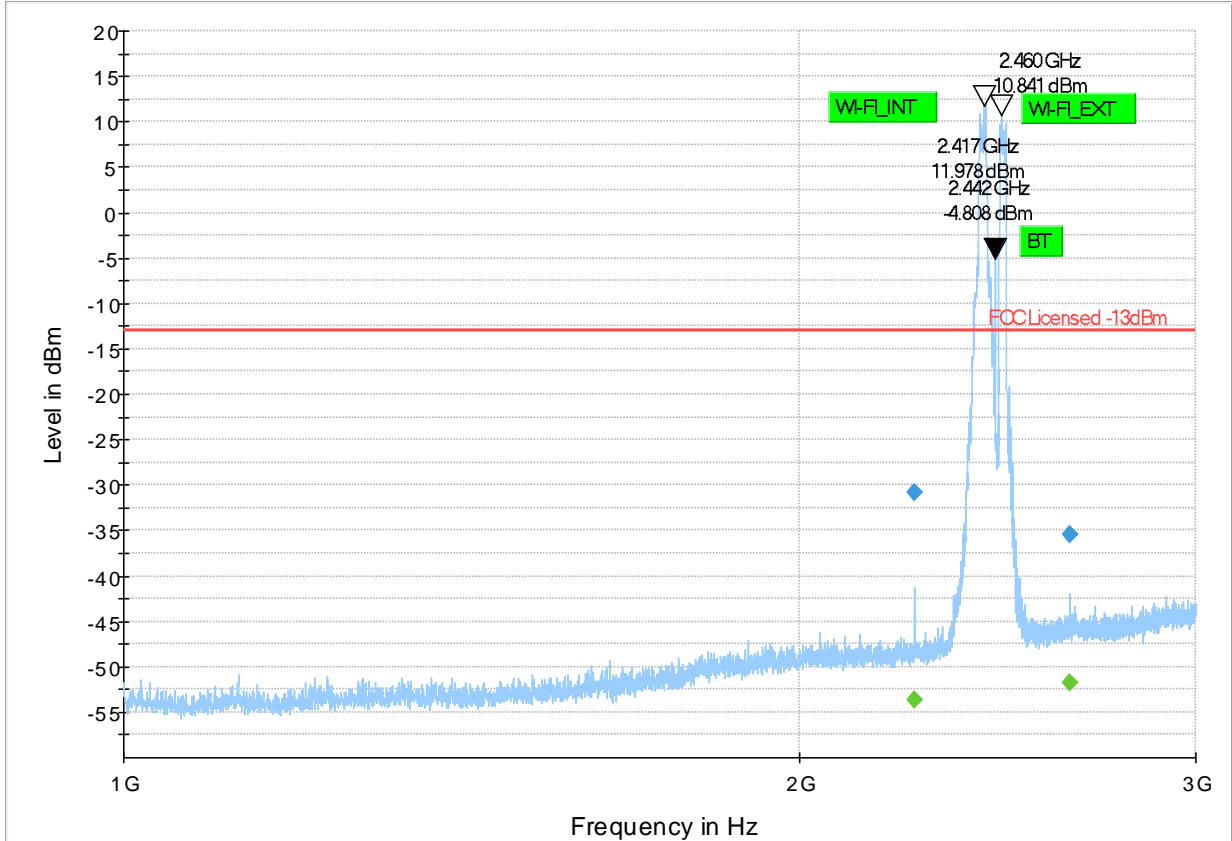
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

LTE B5 Plot # 20 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2247.750	-30.86	---	-13.0	17.86	500.0	1000.000	202.0	H	147.0	-62.6	5.0	0.0	-67.7	31.8
2247.750	---	-53.71	---	---	500.0	1000.000	202.0	H	147.0	-62.6	5.0	0.0	-67.7	8.9
2636.000	---	-51.75	---	---	500.0	1000.000	142.0	H	27.0	-60.9	5.7	0.0	-66.6	9.2
2636.000	-35.42	---	-13.0	22.42	500.0	1000.000	142.0	H	27.0	-60.9	5.7	0.0	-66.6	25.5

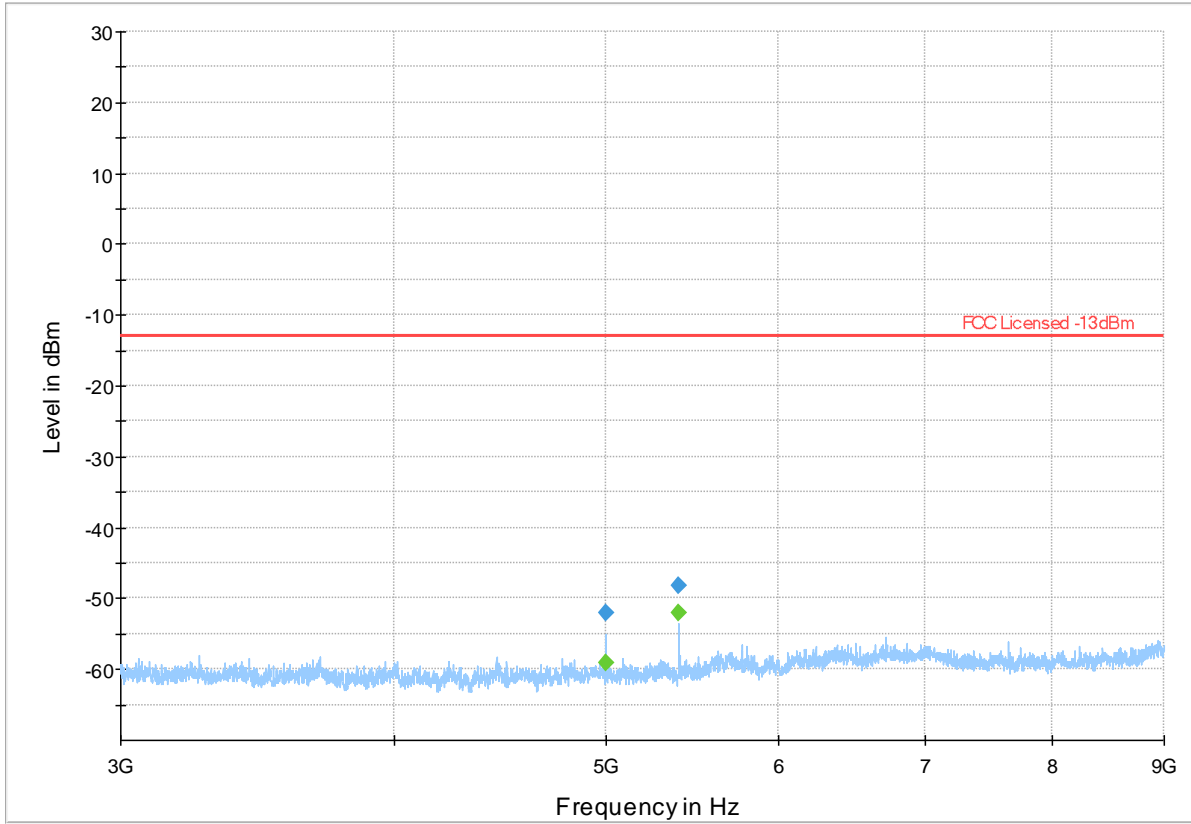


— PK+\_MAXH    — FCC Licensed -13dBm    ◆ Final\_Result PK+    ◆ Final\_Result RMS

LTE B5 Plot # 21 Radiated Emissions: 3 GHz - 9 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
4999.500	-52.15	---	-13.00	39.15	500.0	1000.000	243.0	V	260.0	-98.9	8.0	-45.8	-61.1	46.8
4999.500	---	-59.12	---	---	500.0	1000.000	243.0	V	260.0	-98.9	8.0	-45.8	-61.1	39.8
5400.250	-48.28	---	-13.00	35.28	500.0	1000.000	133.0	V	297.0	-98.0	8.2	-45.7	-60.5	49.7
5400.250	---	-52.10	---	---	500.0	1000.000	133.0	V	297.0	-98.0	8.2	-45.7	-60.5	45.9

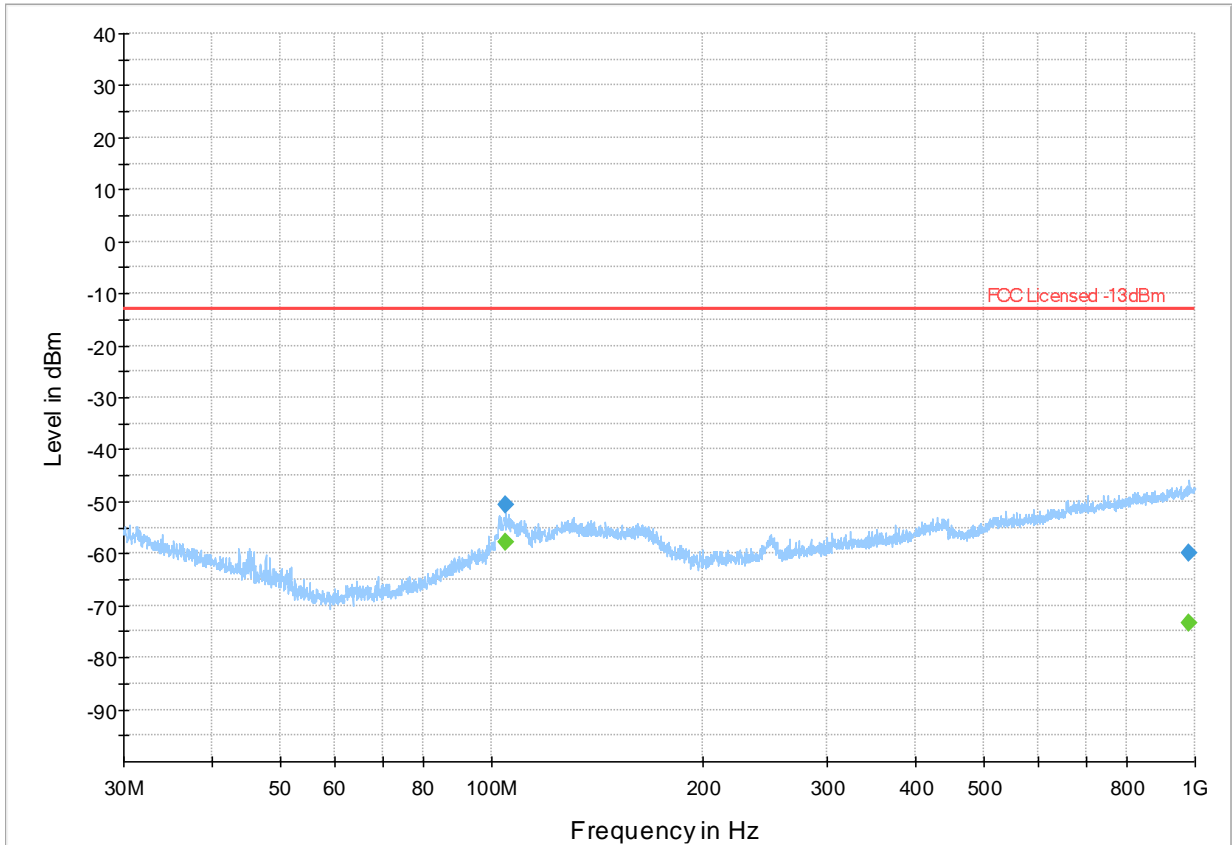


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS

UMTS IV Plot # 22 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
104.714	---	-57.93	-13.00	44.93	500.0	100.000	198.0	H	112.0	-73.3	0.6	0.0	-73.9	15.4
104.714	-50.53	---	-13.00	37.53	500.0	100.000	198.0	H	112.0	-73.3	0.6	0.0	-73.9	22.8
982.031	---	-73.49	-13.00	60.49	500.0	100.000	203.0	H	160.0	-62.7	2.7	0.0	-65.4	-10.8
982.031	-59.91	---	-13.00	46.91	500.0	100.000	203.0	H	160.0	-62.7	2.7	0.0	-65.4	2.8

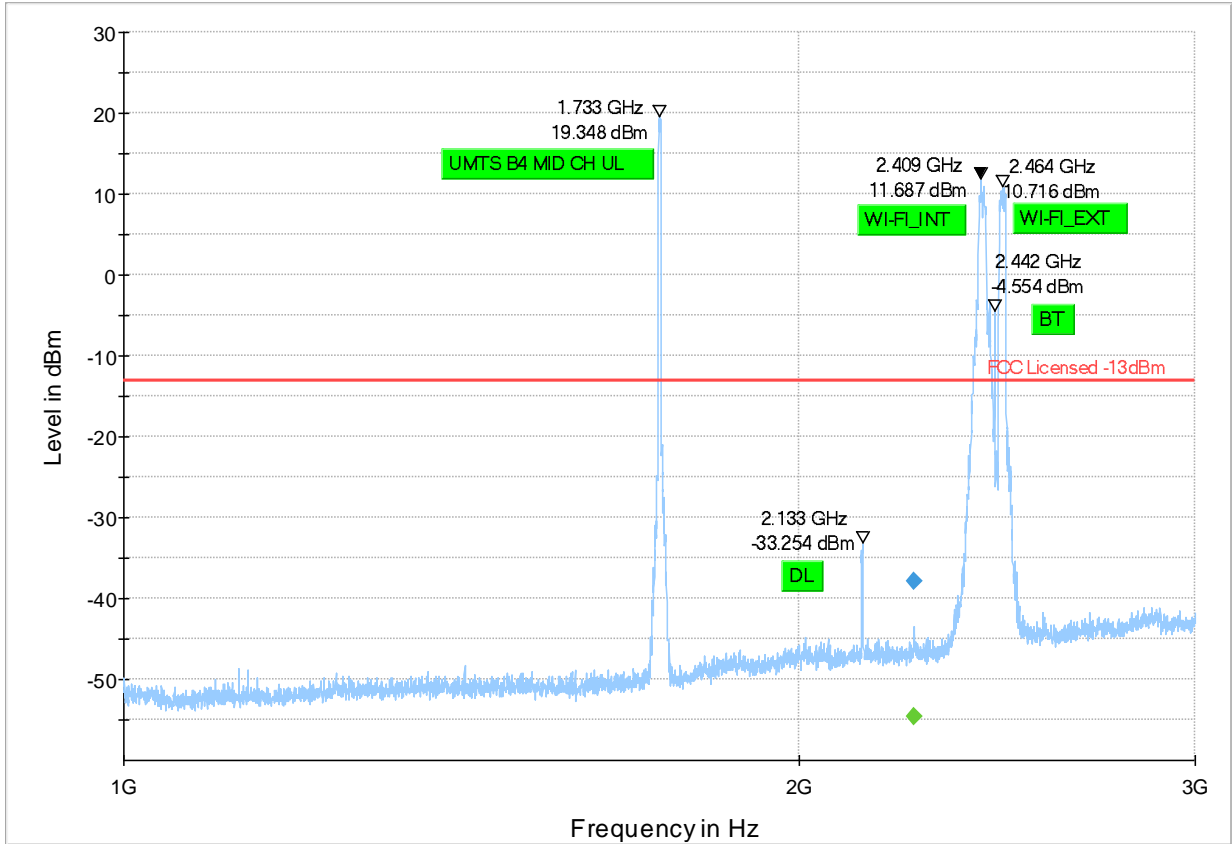


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM

### UMTS IV Plot # 23 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2248.250	---	-54.65	---	---	500.0	1000.000	260.0	H	281.0	-63.2	4.4	0.0	-67.7	8.6
2248.250	-37.94	---	-13.00	24.94	500.0	1000.000	260.0	H	281.0	-63.2	4.4	0.0	-67.7	25.3

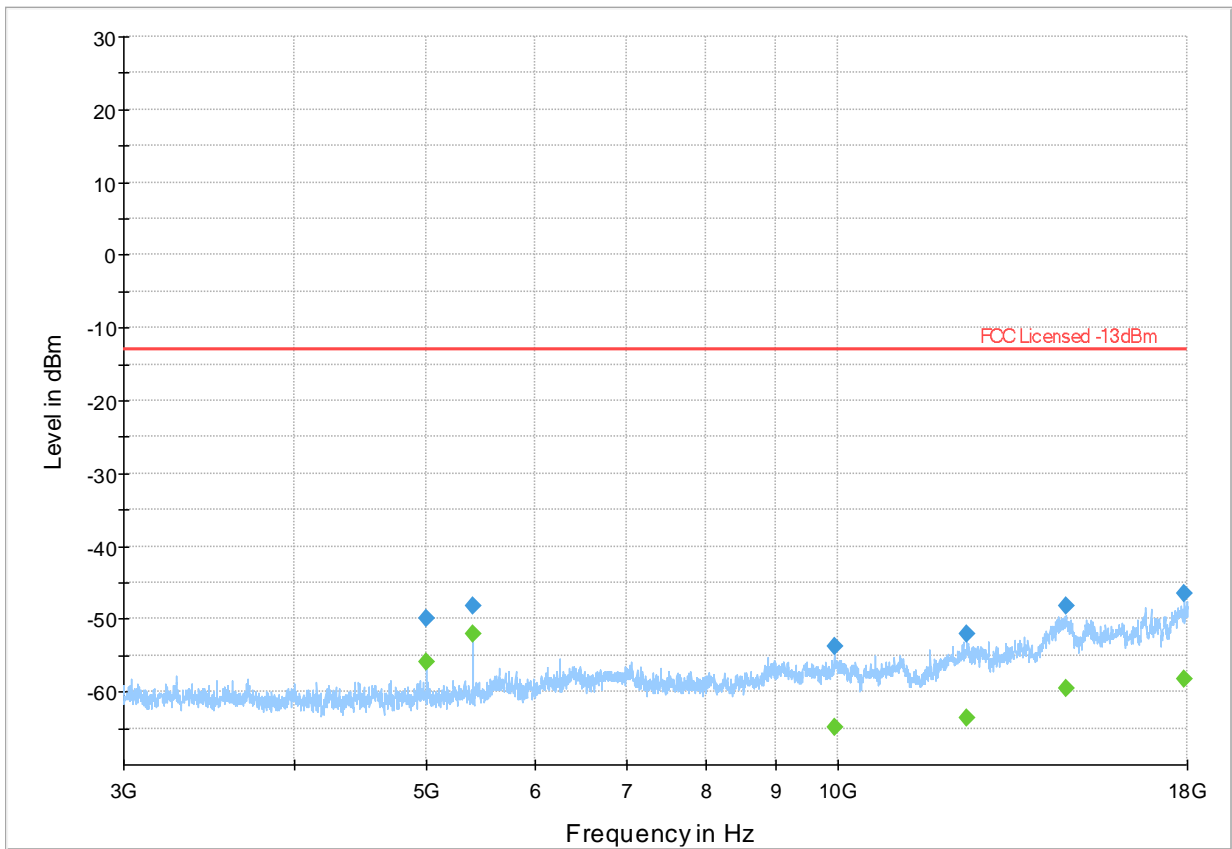


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Fina\_Result PK+    
 ◆ Fina\_Result RM

UMTS IV Plot # 24 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5000.000	-49.83	---	-13.00	36.83	500.0	1000.000	248.0	H	308.0	-98.9	8.0	-45.8	-61.1	49.1
5000.000	---	-55.79	-13.00	42.79	500.0	1000.000	248.0	H	308.0	-98.9	8.0	-45.8	-61.1	43.1
5400.250	-48.22	---	-13.00	35.22	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	49.8
5400.250	---	-51.98	-13.00	38.98	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	46.0
9930.750	---	-64.91	-13.00	51.91	500.0	1000.000	142.0	H	243.0	-92.2	11.8	-46.2	-57.9	27.3
9930.750	-53.75	---	-13.00	40.75	500.0	1000.000	142.0	H	243.0	-92.2	11.8	-46.2	-57.9	38.5
12414.750	-52.04	---	-13.00	39.04	500.0	1000.000	400.0	H	341.0	-87.6	13.1	-44.1	-56.6	35.6
12414.750	---	-63.66	-13.00	50.66	500.0	1000.000	400.0	H	341.0	-87.6	13.1	-44.1	-56.6	23.9
14667.250	---	-59.54	-13.00	46.54	500.0	1000.000	253.0	V	9.0	-84.5	14.5	-45.0	-54.0	25.0
14667.250	-48.14	---	-13.00	35.14	500.0	1000.000	253.0	V	9.0	-84.5	14.5	-45.0	-54.0	36.4
17916.750	-46.42	---	-13.00	33.42	500.0	1000.000	400.0	V	180.0	-79.7	16.2	-42.3	-53.6	33.3
17916.750	---	-58.27	-13.00	45.27	500.0	1000.000	400.0	V	180.0	-79.7	16.2	-42.3	-53.6	21.4



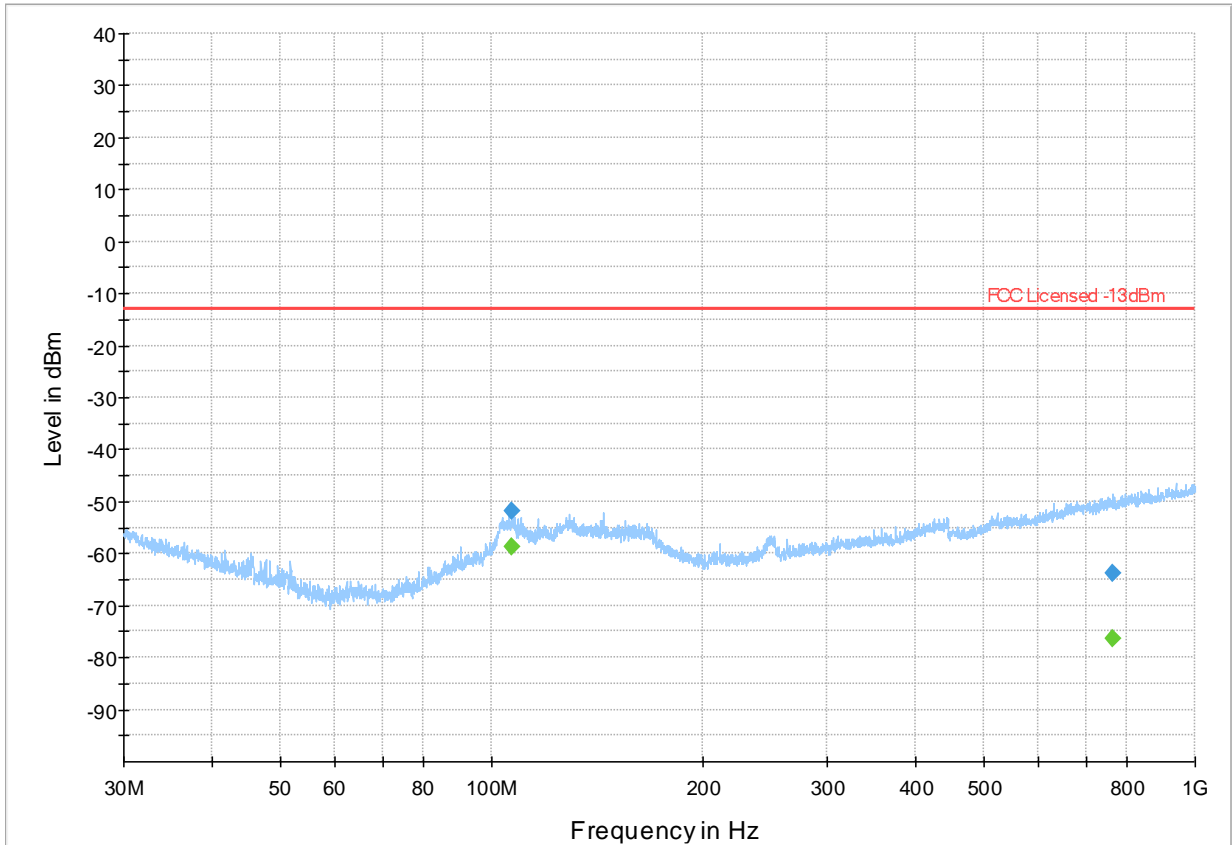
Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM



LTE Band 4 Plot # 25 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
107.139	-51.86	---	-13.00	38.86	500.0	100.000	218.0	H	82.0	-72.9	0.6	0.0	-73.5	21.0
107.139	---	-58.63	-13.00	45.63	500.0	100.000	218.0	H	82.0	-72.9	0.6	0.0	-73.5	14.3
764.169	-63.71	---	-13.00	50.71	500.0	100.000	327.0	H	-15.0	-65.5	2.3	0.0	-67.7	1.7
764.169	---	-76.30	-13.00	63.30	500.0	100.000	327.0	H	-15.0	-65.5	2.3	0.0	-67.7	-10.8

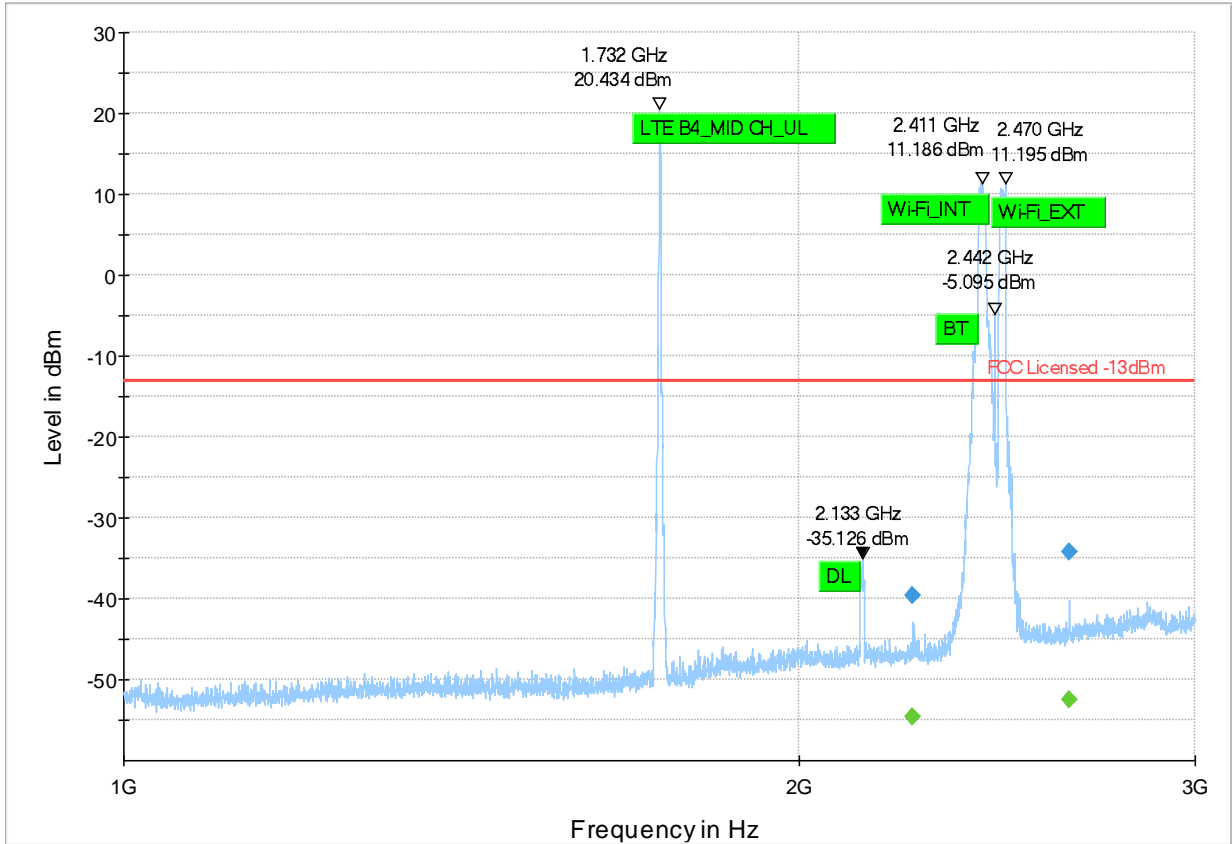


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM

### LTE Band 4 Plot # 26 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2246.750	---	-54.67	---	---	500.0	1000.000	208.0	H	89.0	-63.2	4.4	0.0	-67.7	8.6
2246.750	-39.54	---	-13.00	26.54	500.0	1000.000	208.0	H	89.0	-63.2	4.4	0.0	-67.7	23.7
2636.250	---	-52.50	---	---	500.0	1000.000	100.0	H	144.0	-61.8	4.8	0.0	-66.6	9.3
2636.250	-34.15	---	-13.00	21.15	500.0	1000.000	100.0	H	144.0	-61.8	4.8	0.0	-66.6	27.6



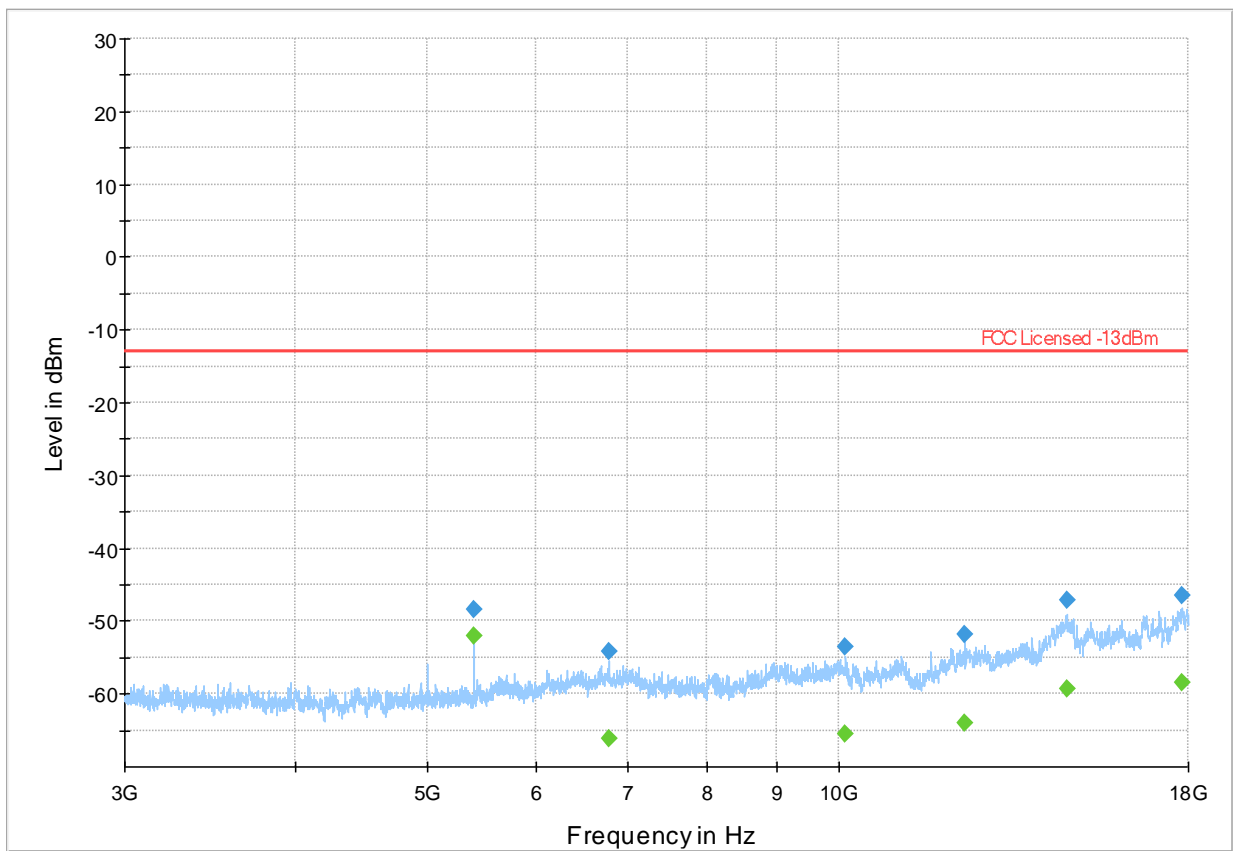
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM



LTE Band 4 Plot # 27 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	---	-52.09	-13.00	39.09	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	45.9
5400.250	-48.41	---	-13.00	35.41	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	49.6
6782.000	---	-66.10	-13.00	53.10	500.0	1000.000	169.0	V	100.0	-96.3	9.4	-46.5	-59.1	30.2
6782.000	-54.15	---	-13.00	41.15	500.0	1000.000	169.0	V	100.0	-96.3	9.4	-46.5	-59.1	42.1
10108.000	---	-65.60	-13.00	52.60	500.0	1000.000	313.0	V	74.0	-92.7	11.3	-46.4	-57.5	27.1
10108.000	-53.47	---	-13.00	40.47	500.0	1000.000	313.0	V	74.0	-92.7	11.3	-46.4	-57.5	39.2
12343.750	-51.88	---	-13.00	38.88	500.0	1000.000	116.0	V	22.0	-87.8	13.5	-44.6	-56.6	35.9
12343.750	---	-64.09	-13.00	51.09	500.0	1000.000	116.0	V	22.0	-87.8	13.5	-44.6	-56.6	23.7
14661.000	---	-59.39	-13.00	46.39	500.0	1000.000	235.0	V	-36.0	-84.5	14.5	-45.0	-54.1	25.1
14661.000	-47.22	---	-13.00	34.22	500.0	1000.000	235.0	V	-36.0	-84.5	14.5	-45.0	-54.1	37.3
17796.000	-46.45	---	-13.00	33.45	500.0	1000.000	192.0	H	-45.0	-80.2	16.1	-42.6	-53.7	33.7
17796.000	---	-58.48	-13.00	45.48	500.0	1000.000	192.0	H	-45.0	-80.2	16.1	-42.6	-53.7	21.7

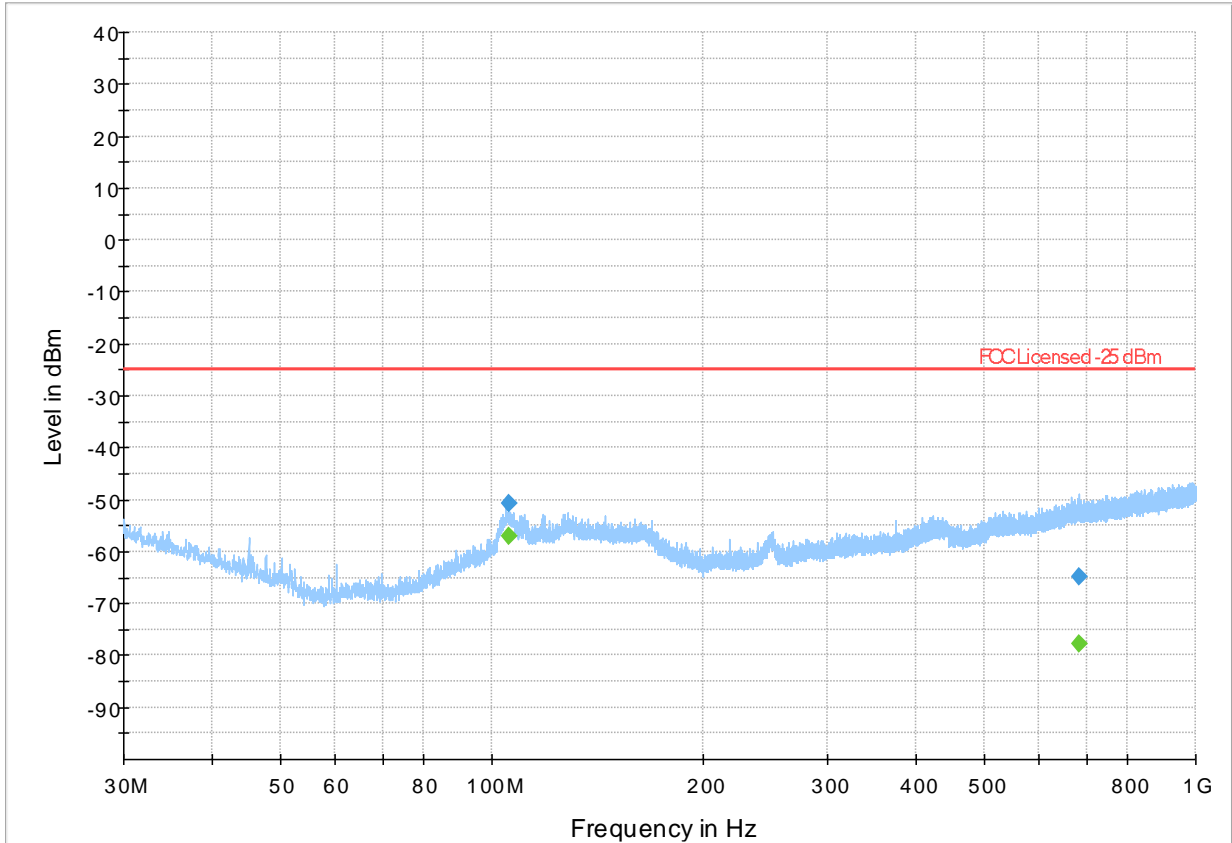


Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM

LTE Band 7 Plot # 28 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
105.612	---	-57.17	-25.00	32.17	500.0	100.000	116.0	V	55.0	-72.5	0.6	0.0	-73.1	15.3
105.612	-50.86	---	-25.00	25.86	500.0	100.000	116.0	V	55.0	-72.5	0.6	0.0	-73.1	21.6
681.743	---	-77.67	-25.00	52.67	500.0	100.000	319.0	V	106.0	-66.5	2.3	0.0	-68.8	-11.2
681.743	-64.81	---	-25.00	39.81	500.0	100.000	319.0	V	106.0	-66.5	2.3	0.0	-68.8	1.7

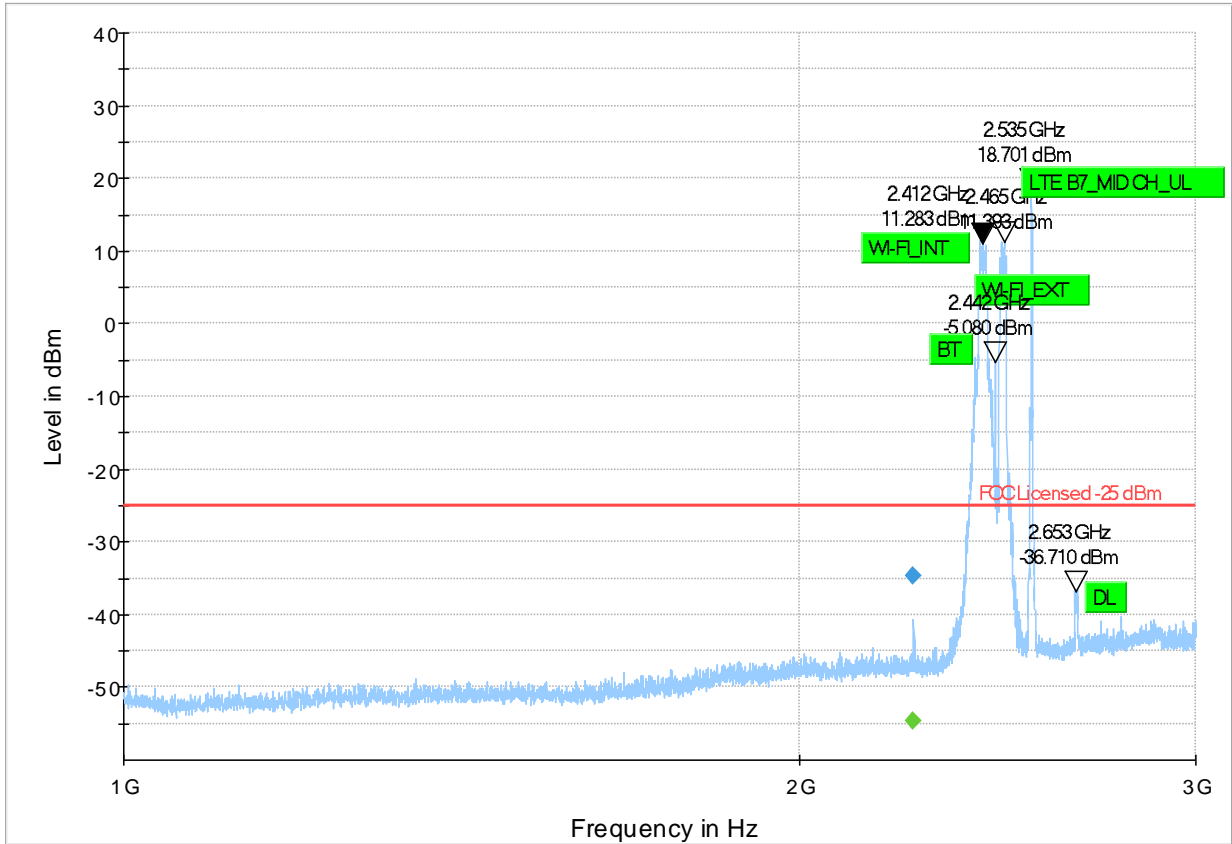


— PK+\_MAX H    — -25 dBm    ◆ Final\_Result PK+    ◆ Final\_Result RMS

### LTE Band 7 Plot # 29 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2246.750	---	-54.55	---	---	500.0	1000.000	233.0	H	110.0	-63.2	4.4	0.0	-67.7	8.7
2246.750	-34.77	---	-25.00	9.77	500.0	1000.000	233.0	H	110.0	-63.2	4.4	0.0	-67.7	28.4

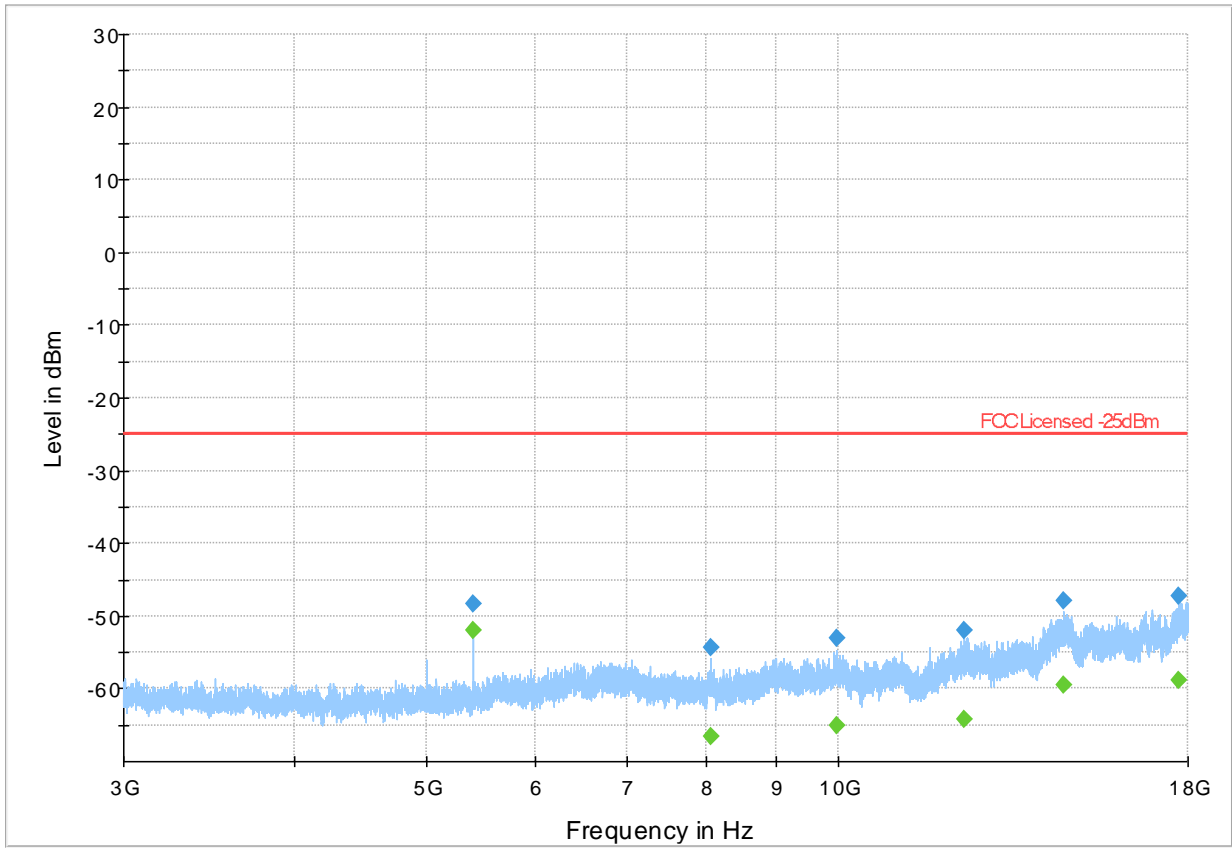


— PK+\_MAXH    — -25 dBm    ◆ Final\_Result PK+    ◆ Final\_Result RMS

LTE Band 7 Plot # 30 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	-48.23	---	-25.00	23.23	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	49.8
5400.250	---	-52.06	-25.00	27.06	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	45.9
8057.250	-54.27	---	-25.00	29.27	500.0	1000.000	209.0	V	297.0	-95.5	10.2	-46.6	-59.1	41.2
8057.250	---	-66.64	-25.00	41.64	500.0	1000.000	209.0	V	297.0	-95.5	10.2	-46.6	-59.1	28.9
9960.750	-53.12	---	-25.00	28.12	500.0	1000.000	143.0	V	-5.0	-91.8	11.9	-46.0	-57.8	38.7
9960.750	---	-64.96	-25.00	39.96	500.0	1000.000	143.0	V	-5.0	-91.8	11.9	-46.0	-57.8	26.9
12337.500	-52.05	---	-25.00	27.05	500.0	1000.000	116.0	V	300.0	-87.8	13.5	-44.7	-56.6	35.7
12337.500	---	-64.14	-25.00	39.14	500.0	1000.000	116.0	V	300.0	-87.8	13.5	-44.7	-56.6	23.7
14584.750	---	-59.54	-25.00	34.54	500.0	1000.000	162.0	V	198.0	-84.5	14.6	-44.9	-54.3	25.0
14584.750	-47.95	---	-25.00	22.95	500.0	1000.000	162.0	V	198.0	-84.5	14.6	-44.9	-54.3	36.6
17705.000	---	-58.77	-25.00	33.77	500.0	1000.000	217.0	V	262.0	-80.2	16.4	-42.7	-53.8	21.4
17705.000	-47.33	---	-25.00	22.33	500.0	1000.000	217.0	V	262.0	-80.2	16.4	-42.7	-53.8	32.8

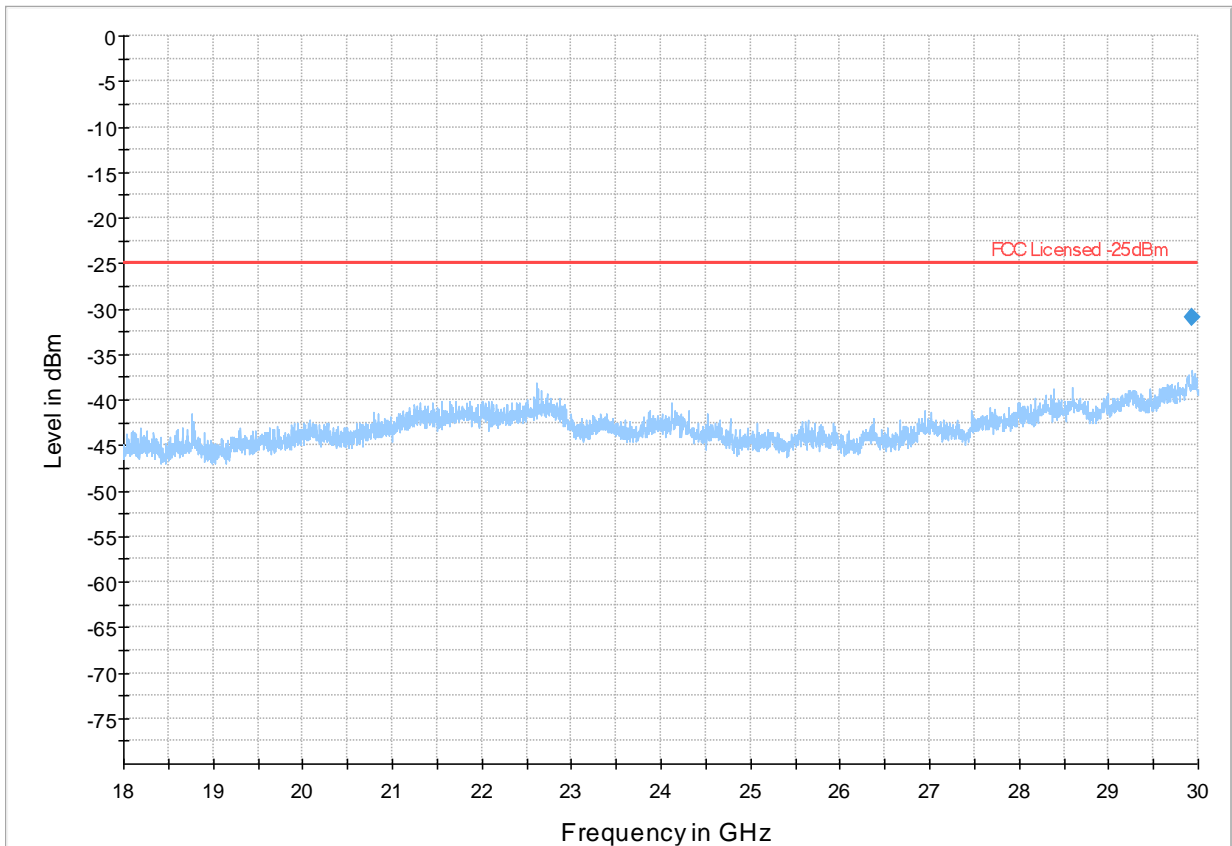


PK+\_MAX H    FCC Licensed -25dBm    Final\_Result PK+    Final\_Result RMS

LTE Band 7 Plot # 31 Radiated Emissions: 18 GHz - 30 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
29938.500	-30.95	---	-25.00	5.95	500.0	1000.000	100.0	V	276.0	-72.0	10.4	0.0	-82.4	41.0



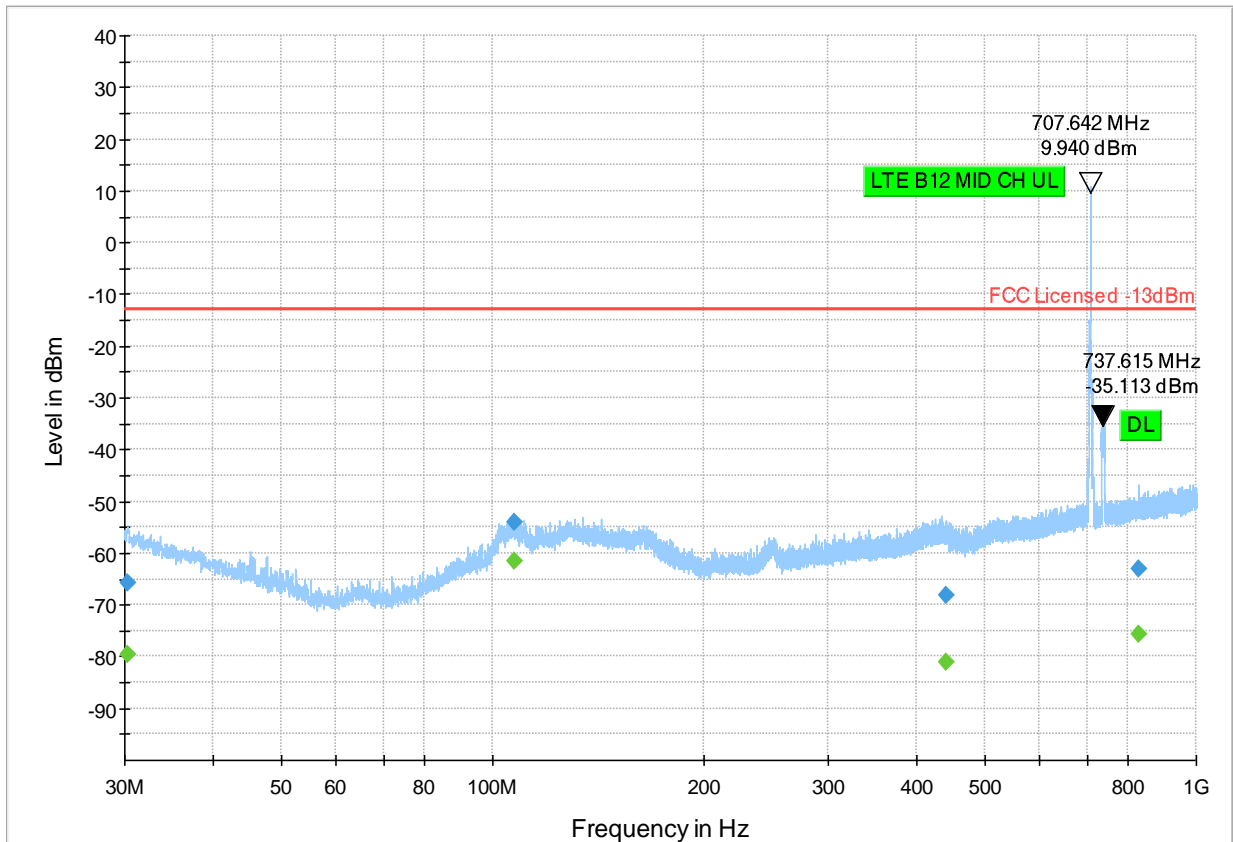
— Preview Result 1-PK+    
 — FCC Licensed -25dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM



### LTE Band 12 Plot # 32 Radiated Emissions: 30 MHz – 1GHz

#### Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
30.291	---	-79.46	-13.0	66.46	500.0	100.000	144.0	H	230.0	-70.2	0.2	0.0	-70.4	-9.3
30.291	-65.69	---	-13.0	52.69	500.0	100.000	144.0	H	230.0	-70.2	0.2	0.0	-70.4	4.5
107.285	---	-61.53	-13.0	48.53	500.0	100.000	100.0	V	107.0	-72.1	0.6	0.0	-72.7	10.6
107.285	-53.99	---	-13.0	40.99	500.0	100.000	100.0	V	107.0	-72.1	0.6	0.0	-72.7	18.1
440.941	-68.20	---	-13.0	55.20	500.0	100.000	194.0	H	-3.0	-70.6	1.6	0.0	-72.2	2.4
440.941	---	-81.13	-13.0	68.13	500.0	100.000	194.0	H	-3.0	-70.6	1.6	0.0	-72.2	-10.6
828.844	-63.15	---	-13.0	50.15	500.0	100.000	290.0	H	-45.0	-64.6	2.4	0.0	-67.0	1.5
828.844	---	-75.55	-13.0	62.55	500.0	100.000	290.0	H	-45.0	-64.6	2.4	0.0	-67.0	-10.9



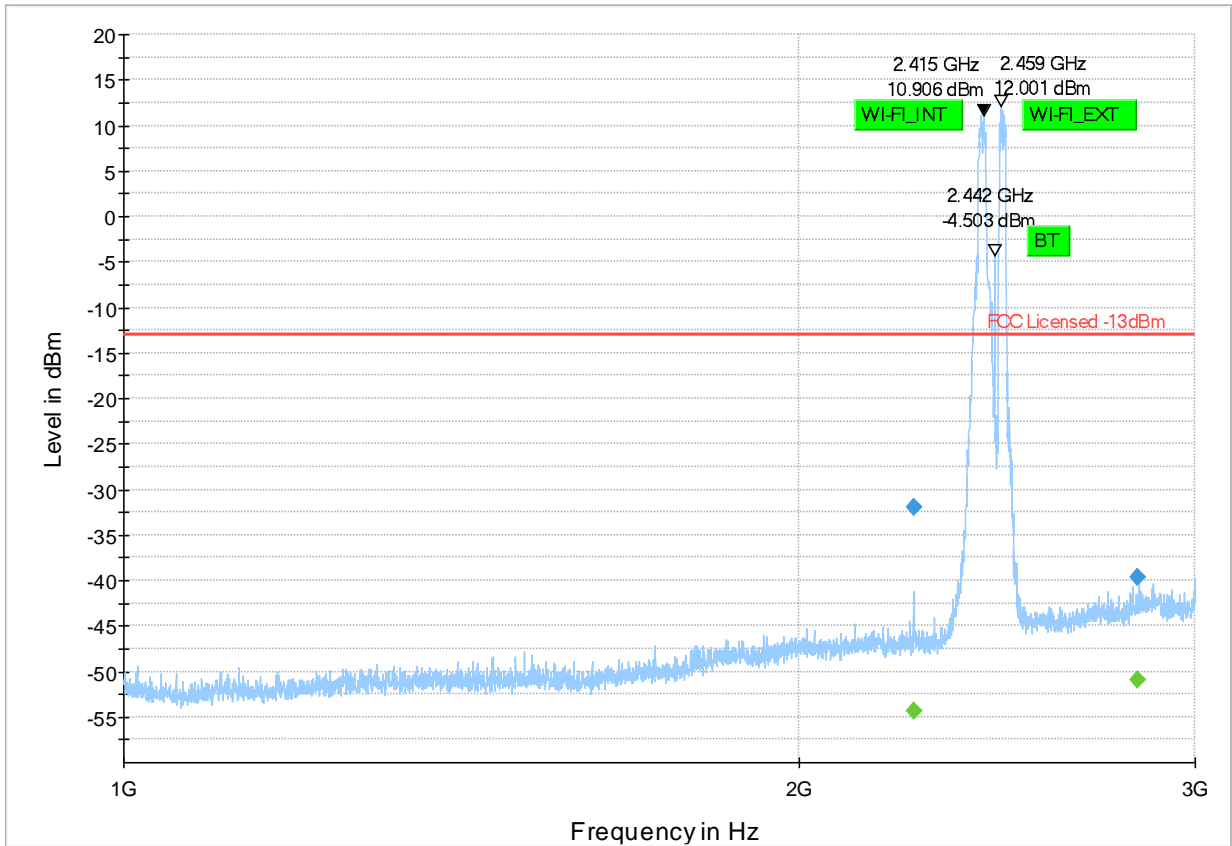
— PK+\_MAXH    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS



LTE Band 12 Plot # 33 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2247.250	---	-54.36	---	---	500.0	1000.000	162.0	H	146.0	-63.2	4.4	0.0	-67.7	8.9
2247.250	-31.95	---	-13.00	18.95	500.0	1000.000	162.0	H	146.0	-63.2	4.4	0.0	-67.7	31.3
2830.500	---	-50.91	---	---	500.0	1000.000	279.0	H	88.0	-61.1	5.1	0.0	-66.2	10.2
2830.500	-39.59	---	-13.00	26.59	500.0	1000.000	279.0	H	88.0	-61.1	5.1	0.0	-66.2	21.5



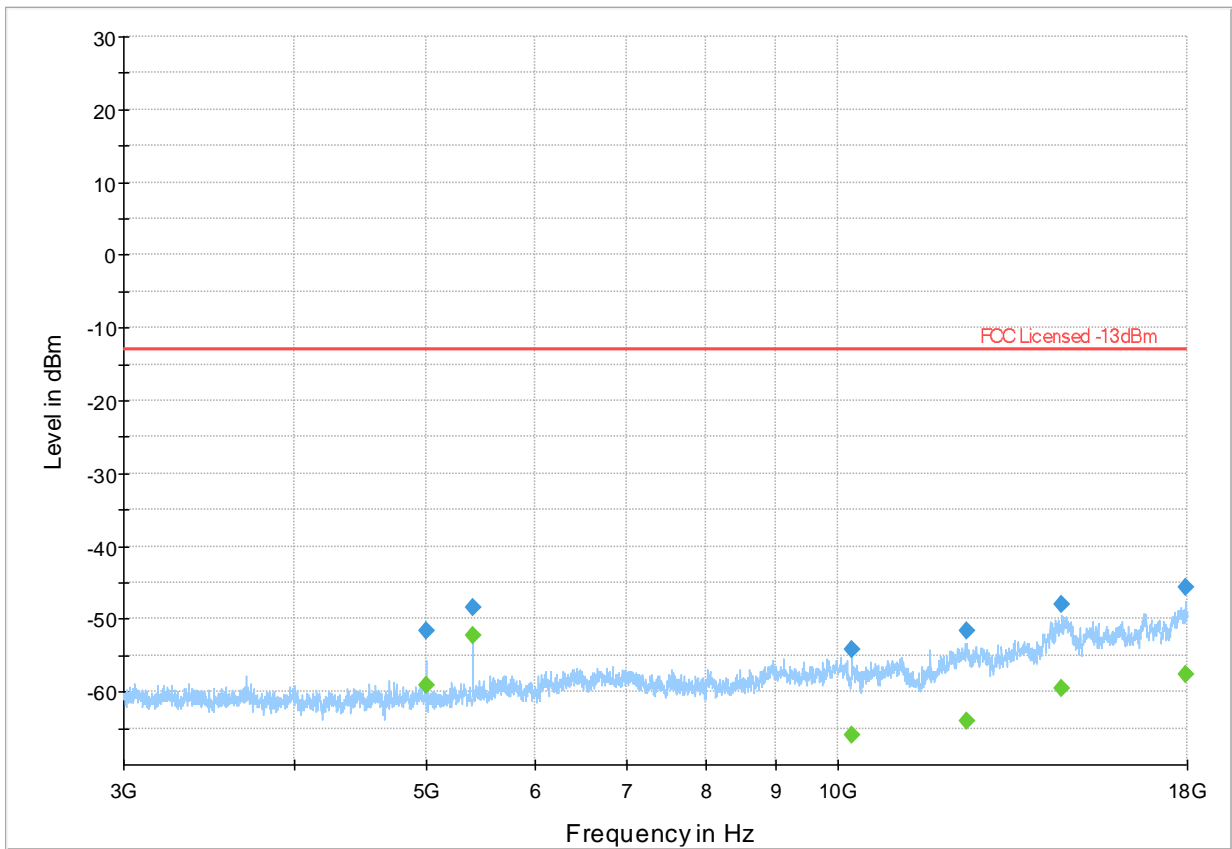
— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM



LTE Band 12 Plot # 34 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5000.000	-51.66	---	-13.00	38.66	500.0	1000.000	211.0	V	263.0	-98.9	8.0	-45.8	-61.1	47.3
5000.000	---	-59.11	-13.00	46.11	500.0	1000.000	211.0	V	263.0	-98.9	8.0	-45.8	-61.1	39.8
5400.250	-48.37	---	-13.00	35.37	500.0	1000.000	138.0	V	234.0	-98.0	8.2	-45.7	-60.5	49.6
5400.250	---	-52.30	-13.00	39.30	500.0	1000.000	138.0	V	234.0	-98.0	8.2	-45.7	-60.5	45.7
10237.750	-54.12	---	-13.00	41.12	500.0	1000.000	252.0	H	49.0	-92.6	11.6	-46.8	-57.4	38.5
10237.750	---	-65.89	-13.00	52.89	500.0	1000.000	252.0	H	49.0	-92.6	11.6	-46.8	-57.4	26.8
12417.750	-51.54	---	-13.00	38.54	500.0	1000.000	252.0	V	83.0	-87.6	13.1	-44.1	-56.6	36.1
12417.750	---	-64.00	-13.00	51.00	500.0	1000.000	252.0	V	83.0	-87.6	13.1	-44.1	-56.6	23.6
14572.250	---	-59.58	-13.00	46.58	500.0	1000.000	372.0	V	295.0	-84.6	14.6	-44.9	-54.3	25.0
14572.250	-47.93	---	-13.00	34.93	500.0	1000.000	372.0	V	295.0	-84.6	14.6	-44.9	-54.3	36.6
17936.750	---	-57.69	-13.00	44.69	500.0	1000.000	356.0	H	329.0	-79.6	16.3	-42.3	-53.6	21.9
17936.750	-45.63	---	-13.00	32.63	500.0	1000.000	356.0	H	329.0	-79.6	16.3	-42.3	-53.6	34.0

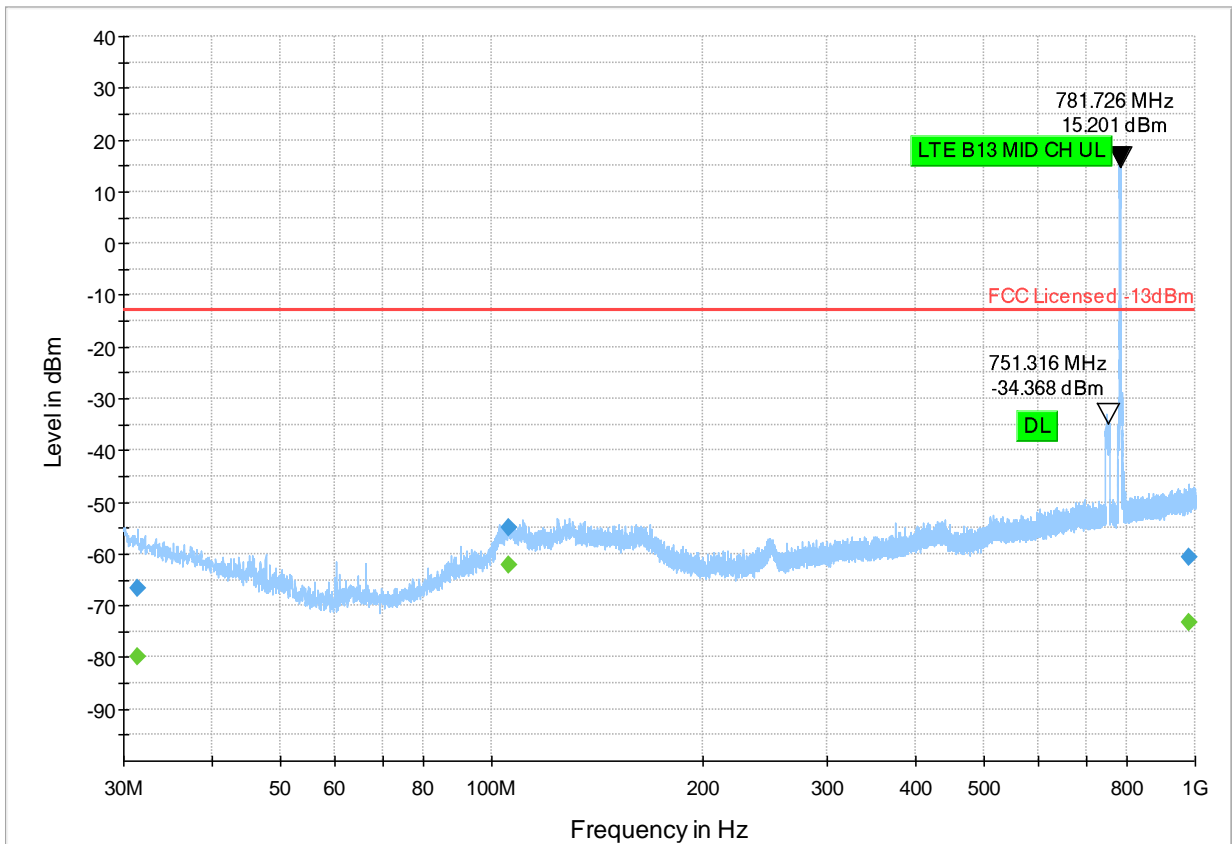


Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM

LTE Band 13 Plot # 35 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
31.382	---	-79.93	-13.0	66.93	500.0	100.000	266.0	H	-6.0	-70.8	0.2	0.0	-71.0	-9.1
31.382	-66.52	---	-13.0	53.52	500.0	100.000	266.0	H	-6.0	-70.8	0.2	0.0	-71.0	4.3
105.927	-55.01	---	-13.0	42.01	500.0	100.000	100.0	V	-45.0	-72.3	0.6	0.0	-72.9	17.3
105.927	---	-62.07	-13.0	49.07	500.0	100.000	100.0	V	-45.0	-72.3	0.6	0.0	-72.9	10.3
981.158	-60.70	---	-13.0	47.70	500.0	100.000	219.0	H	341.0	-62.7	2.7	0.0	-65.4	2.0
981.158	---	-73.38	-13.0	60.38	500.0	100.000	219.0	H	341.0	-62.7	2.7	0.0	-65.4	-10.7



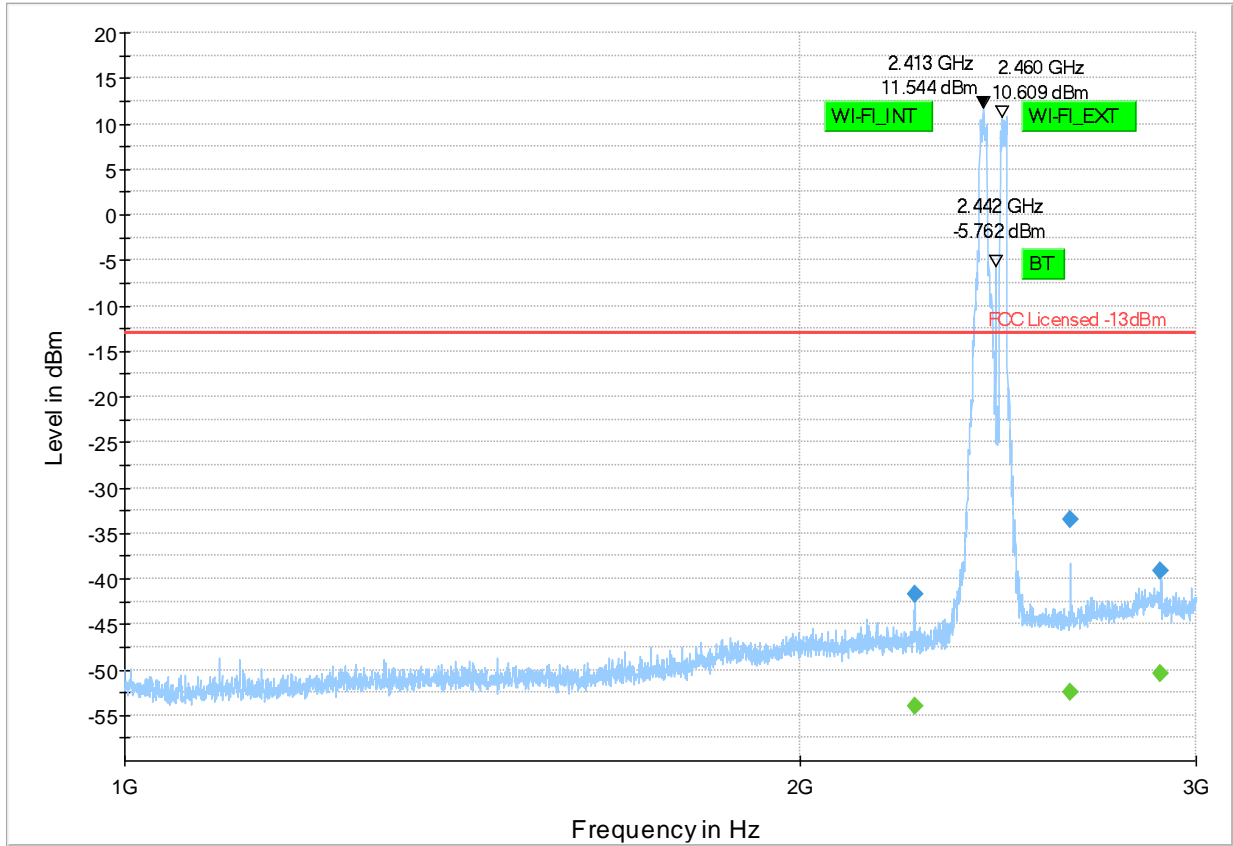
— PK+\_MAXH    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RMS



LTE Band 13 Plot # 36 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
2249.750	---	-53.93	---	---	500.0	1000.000	149.0	H	92.0	-63.2	4.4	0.0	-67.7	9.3
2249.750	-41.75	---	-13.00	28.75	500.0	1000.000	149.0	H	92.0	-63.2	4.4	0.0	-67.7	21.5
2636.750	---	-52.48	---	---	500.0	1000.000	141.0	H	138.0	-61.8	4.8	0.0	-66.6	9.3
2636.750	-33.53	---	-13.00	20.53	500.0	1000.000	141.0	H	138.0	-61.8	4.8	0.0	-66.6	28.2
2894.250	---	-50.38	---	---	500.0	1000.000	100.0	H	85.0	-60.8	5.1	0.0	-65.9	10.4
2894.250	-39.11	---	-13.00	26.11	500.0	1000.000	100.0	H	85.0	-60.8	5.1	0.0	-65.9	21.7

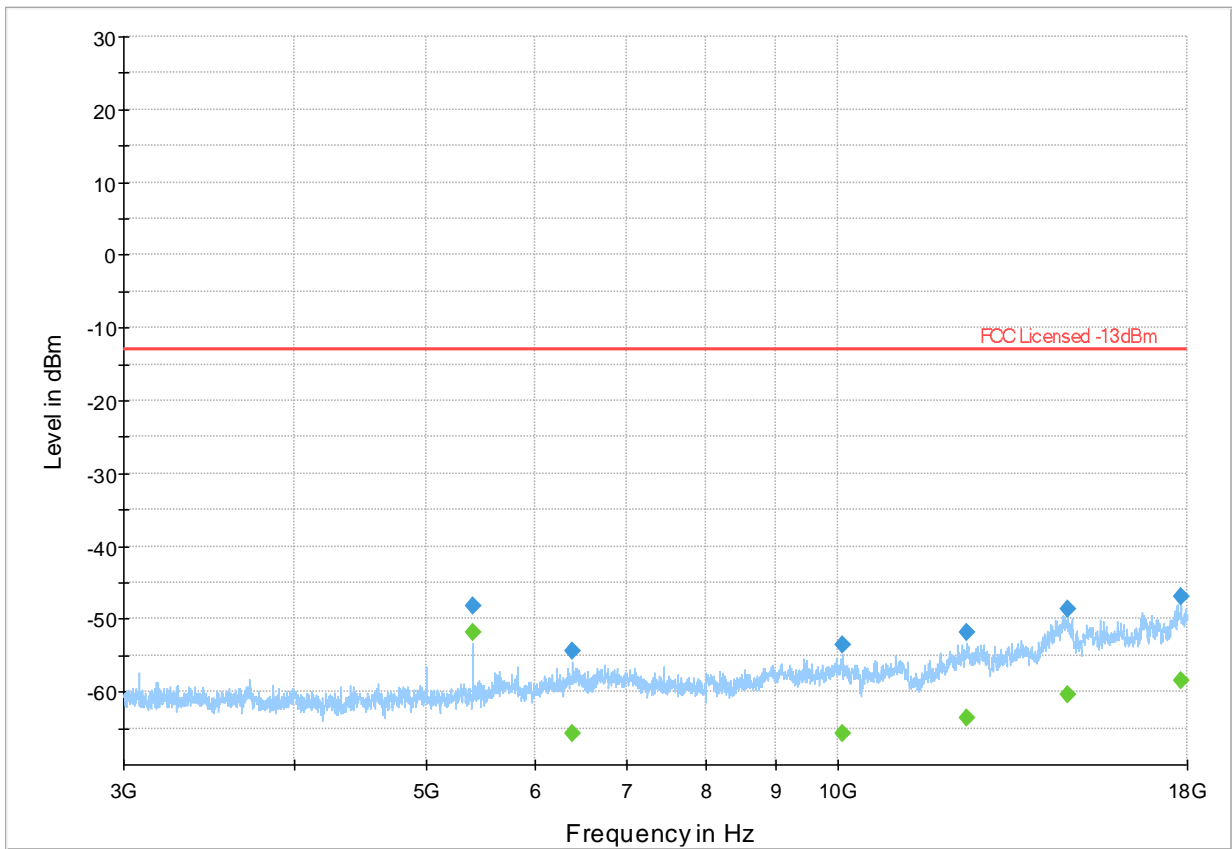


Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM

LTE Band 13 Plot # 37 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	-48.17	---	-13.00	35.17	500.0	1000.000	142.0	V	233.0	-98.0	8.2	-45.7	-60.5	49.8
5400.250	---	-51.91	-13.00	38.91	500.0	1000.000	142.0	V	233.0	-98.0	8.2	-45.7	-60.5	46.1
6388.500	---	-65.82	-13.00	52.82	500.0	1000.000	331.0	V	10.0	-95.6	10.1	-46.2	-59.6	29.8
6388.500	-54.36	---	-13.00	41.36	500.0	1000.000	331.0	V	10.0	-95.6	10.1	-46.2	-59.6	41.3
10072.250	---	-65.77	-13.00	52.77	500.0	1000.000	363.0	V	241.0	-92.1	11.5	-46.0	-57.6	26.4
10072.250	-53.57	---	-13.00	40.57	500.0	1000.000	363.0	V	241.0	-92.1	11.5	-46.0	-57.6	38.5
12418.250	-51.81	---	-13.00	38.81	500.0	1000.000	229.0	H	-3.0	-87.6	13.1	-44.1	-56.6	35.8
12418.250	---	-63.67	-13.00	50.67	500.0	1000.000	229.0	H	-3.0	-87.6	13.1	-44.1	-56.6	24.0
14720.000	---	-60.41	-13.00	47.41	500.0	1000.000	363.0	H	229.0	-84.8	14.4	-45.3	-54.0	24.4
14720.000	-48.71	---	-13.00	35.71	500.0	1000.000	363.0	H	229.0	-84.8	14.4	-45.3	-54.0	36.1
17808.250	---	-58.38	-13.00	45.38	500.0	1000.000	235.0	H	322.0	-80.2	16.1	-42.6	-53.7	21.8
17808.250	-46.91	---	-13.00	33.91	500.0	1000.000	235.0	H	322.0	-80.2	16.1	-42.6	-53.7	33.3

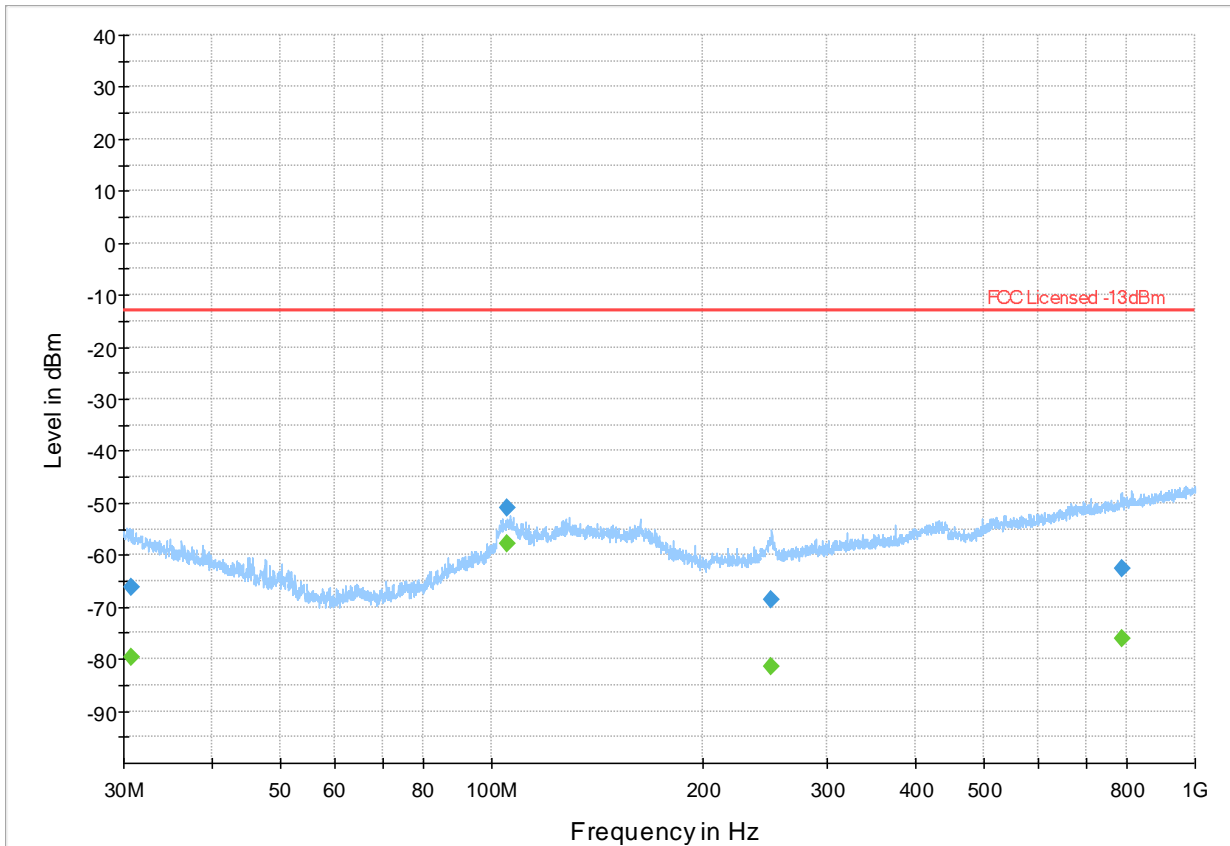


Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM

LTE Band 66 Plot # 38 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
30.752	---	-79.54	-13.00	66.54	500.0	100.000	193.0	H	311.0	-70.5	0.1	0.0	-70.6	-9.1
30.752	-66.25	---	-13.00	53.25	500.0	100.000	193.0	H	311.0	-70.5	0.1	0.0	-70.6	4.2
105.490	-51.04	---	-13.00	38.04	500.0	100.000	228.0	H	92.0	-73.1	0.6	0.0	-73.7	22.1
105.490	---	-57.77	-13.00	44.77	500.0	100.000	228.0	H	92.0	-73.1	0.6	0.0	-73.7	15.4
250.311	---	-81.38	-13.00	68.38	500.0	100.000	225.0	H	-41.0	-71.4	1.1	0.0	-72.6	-9.9
250.311	-68.53	---	-13.00	55.53	500.0	100.000	225.0	H	-41.0	-71.4	1.1	0.0	-72.6	2.9
787.206	-62.49	---	-13.00	49.49	500.0	100.000	365.0	V	-6.0	-65.0	2.5	0.0	-67.5	2.5
787.206	---	-76.13	-13.00	63.13	500.0	100.000	365.0	V	-6.0	-65.0	2.5	0.0	-67.5	-11.1

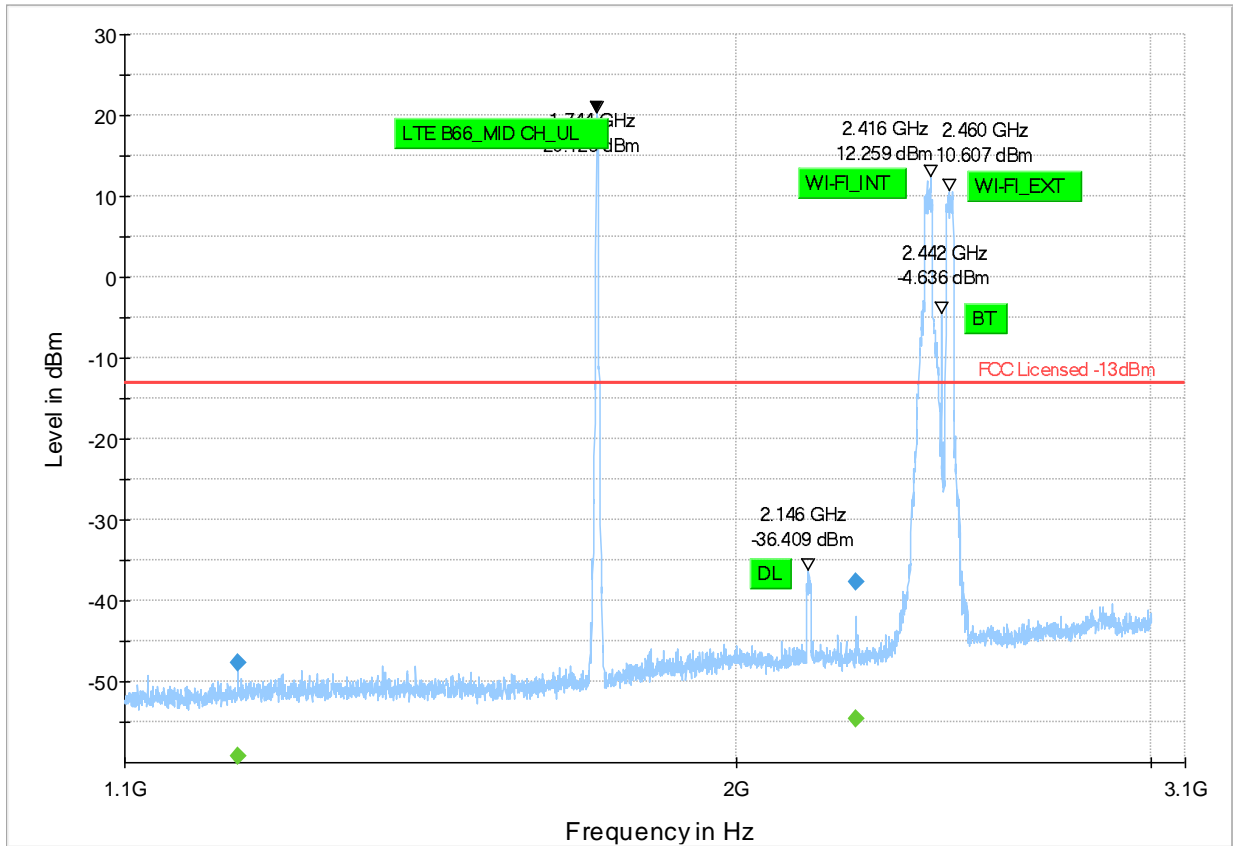


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM

### LTE Band 66 Plot # 39 Radiated Emissions: 1 GHz – 3GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
1229.000	---	-59.20	---	---	500.0	1000.000	297.0	H	-41.0	-66.9	3.3	0.0	-70.2	7.7
1229.000	-47.69	---	-13.00	34.70	500.0	1000.000	297.0	H	-41.0	-66.9	3.3	0.0	-70.2	19.2
2247.750	---	-54.57	---	---	500.0	1000.000	225.0	V	245.0	-63.2	4.4	0.0	-67.7	8.6
2247.750	-37.77	---	-13.00	24.77	500.0	1000.000	225.0	V	245.0	-63.2	4.4	0.0	-67.7	25.4

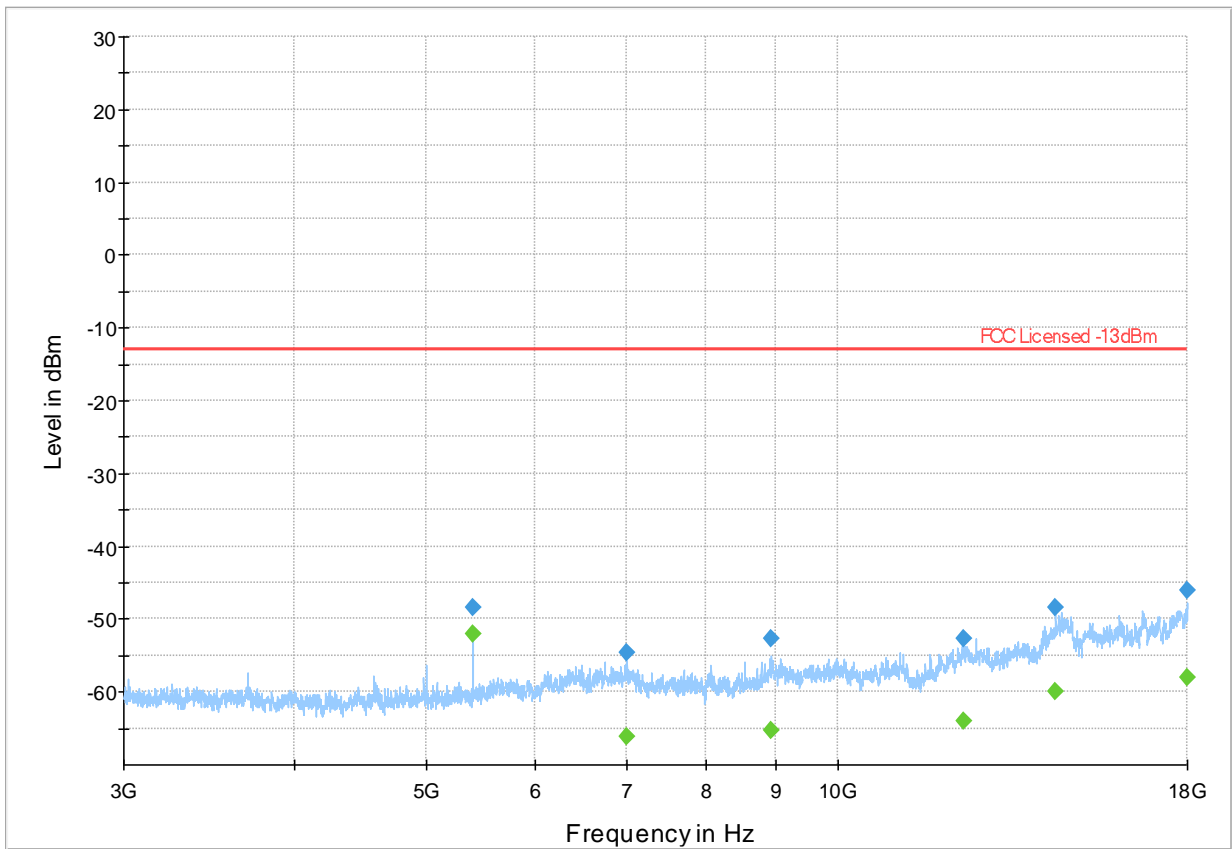


— Preview Result 1-PK+    
 — FCC Licensed -13dBm    
 ◆ Final\_Result PK+    
 ◆ Final\_Result RM

LTE Band 66 Plot # 40 Radiated Emissions: 3 GHz - 18 GHz

Channel: Mid

Frequency (MHz)	MaxPeak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path	Preamp (dB)	Trd Corr.	Raw Rec
5400.250	---	-51.98	-13.00	38.98	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	46.0
5400.250	-48.35	---	-13.00	35.35	500.0	1000.000	142.0	V	235.0	-98.0	8.2	-45.7	-60.5	49.6
7010.250	---	-66.21	-13.00	53.21	500.0	1000.000	330.0	V	45.0	-95.3	10.0	-46.4	-59.0	29.1
7010.250	-54.56	---	-13.00	41.56	500.0	1000.000	330.0	V	45.0	-95.3	10.0	-46.4	-59.0	40.8
8937.500	---	-65.35	-13.00	52.35	500.0	1000.000	255.0	V	27.0	-94.6	11.8	-47.3	-59.2	29.3
8937.500	-52.69	---	-13.00	39.69	500.0	1000.000	255.0	V	27.0	-94.6	11.8	-47.3	-59.2	42.0
12337.000	---	-64.12	-13.00	51.12	500.0	1000.000	116.0	V	36.0	-87.8	13.5	-44.7	-56.6	23.7
12337.000	-52.65	---	-13.00	39.65	500.0	1000.000	116.0	V	36.0	-87.8	13.5	-44.7	-56.6	35.2
14420.750	-48.49	---	-13.00	35.49	500.0	1000.000	100.0	H	19.0	-85.3	14.5	-44.9	-54.9	36.8
14420.750	---	-59.95	-13.00	46.95	500.0	1000.000	100.0	H	19.0	-85.3	14.5	-44.9	-54.9	25.3
17990.000	-46.05	---	-13.00	33.05	500.0	1000.000	137.0	H	148.0	-79.5	16.3	-42.2	-53.6	33.4
17990.000	---	-57.97	-13.00	44.97	500.0	1000.000	137.0	H	148.0	-79.5	16.3	-42.2	-53.6	21.5



Preview Result 1-PK+    FCC Licensed -13dBm    Final\_Result PK+    Final\_Result RM



**8 Test setup photos**

Setup photos are included in supporting file name: "EMC\_RIVIA\_058\_23001\_FCC\_Setup\_photos.pdf"

**9 Test Equipment And Ancillaries Used For Testing**

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
BILOG ANTENNA	A.H. SYSTEMS	BiLA2G	569	3 YEARS	10/30/2023
HORN ANTENNA	EMCO	3115	00035111	3 YEARS	10/26/2023
HORN ANTENNA	ETS LINDGREN	3117-PA	00167061	3 YEARS	9/25/2023
HORN ANTENNA	ETS LINDGREN	3116C-PA	00166821	3 YEARS	10/26/2023
ESW.EMI TEST RECEIVER	ROHDE & SCHWARZ	ESW44	101715	3 YEARS	10/24/2023
DIGITAL THRMOMETER	Control Company	4410,90080-03	230712972	3 YEARS	10/18/2023
Software	EMC32	Version 10.50.40	-	-	-

**Note:** Equipment used meets the measurement uncertainty requirements as required per applicable standards for 95% confidence levels. Calibration due dates, unless defined specifically, falls on the last day of the month. Items indicated "N/A" for cal status either do not specifically require calibration or is internally characterized before use.



## 10 Revision History

Date	Template Revision	Changes to report	Prepared by
2/23/2024	EMC_RIVIA_058_23001_FCC_22_24_27	Initial Version	Art Thammanavarat
2024-04-03	EMC_RIVIA_058_23001_FCC_22_24_27_Rev1	<u>Report Revised base on TCB's review.</u> 1. Sections 1: Corrected typo. And Removed report reviewer 2. Title Page, Secs 1 & 3.1: Updated Product Description. 3. Section 7.1: Updated Table.	Art Thammanavarat
2024-04-05	EMC_RIVIA_058_23001_FCC_22_24_27_Rev2	<u>Report Revised base on TCB's review.</u> 1. Tile Page ,section 1 & 4: Removed part 90 2. Section 1: Updated standard. 3. Section 7.1: Updated table and Added note 4. Section 6.1, 6.2 & 6.3: Added RSS standard.	Art Thammanavarat

<<< The End >>>

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