



FCC / ISED & Test Report

For:
Life360, Inc.

Model Number:
TP401

Market Name:
Life360 PET GPS

Product Description:
Life360 PET GPS

Applied Rules and Standards:
47 CFR Parts 22, 24, 27
RSS-GEN Issue 5, RSS: 130 Issue 2, 132 Issue 4, 133 Issue 7, 139 Issue 4

FCC ID: 2AKLTP401
IC: 11858A-TP401

REPORT #: EMC_JIOBI_013_25001_FCC_22_24_27

DATE: 2025-06-26



A2LA Accredited

IC recognized #
3462B-1

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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, 132 Issue 4, 133 Issue 7, 139 Issue 4.

No deficiencies were ascertained.

Company Name	Product Description	Model #
Life360, Inc.	Life360 PET GPS	TP401

Responsible for Testing Laboratory:

2025-06-26	Compliance	Alvin Ilarina (Senior Manager Regulatory Services)	
Date	Section	Name	Signature

Responsible for the Report:

2025-06-26	Compliance	Cheng Song (EMC Engineer)	
Date	Section	Name	Signature

The test results of this test report relate exclusively to the test item specified in Section 3.

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

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing Road
City/Zip Code	Milpitas, CA 95035
Country	USA
Telephone:	+1 (408) 586 6200
Fax:	+1 (408) 586 6299
Senior Manager Regulatory Services:	Alvin Ilarina
Responsible Project Leader:	Ruby Hall

2.2 Identification of the Client

Client's Name:	Life360, Inc.
Street Address:	1900 S NORFOLK ST Suite 310
City/Zip Code	San Mateo CA 94403
Country	USA

2.3 Identification of the Manufacturer

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

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No	TP401
Marketing Name	Life360 PET GPS
HW Version	TP401
SW Version	BT 64.22.51.7 Rftest MCU FW, 01-006 Wifi FW, 51441 Cell Modem FW
FCC ID	2AKLITP401
IC	11858A-TP401
Product Description	Life360 PET GPS
Radio Information as declared	<u>Cellular Modules</u> • Model: LBAD0ZZ2GD • FCC ID: HSW-TY2GD • IC: 4492A-TY2GD <u>Bluetooth</u> • Model: nRF5340 • Bluetooth Low Energy v5.4 <u>WLAN</u> • Model: DA16200MOD-AAC4WA32 • 802.11b/g/n
Antenna Information as declared	• 2.4 GHz Antenna (Bluetooth/BLE/802.11b/g/n) - Model: 410-10152-00 • Cellular Antenna
Power Supply/ Rated Operating Voltage Range	Nominal 3.8 VDC
Operating Temperature Range	-10 °C to +60 °C
Sample Revision	☐ Prototype ☐ Production ☒ Pre-Production
EUT Dimensions	50.2mm x 35.7mm x 16.7mm
Weight	<1.0 lb
Note: Details about the Equipment Under Test (EUT) are provided by the client or applicant.	

3.2 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Comments
1	0002	TP401	BT 64.22.51.7 Rftest MCU FW, 01-006 Wifi FW, 51441 Cell Modem FW	-

3.3 Accessory Equipment (AE) details

AE #	Type	Model	Manufacturer	Serial Number
1	20W Wall Charger	A2348	Anker	ATC95L0F11403953

3.4 Test Sample Configuration

Set-up #	Combination of AE used for test set up	Comments
1	EUT#1 + AE#1	External antennas were connected to the EUT during testing.

3.5 Mode of Operation details

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	Cellular + BLE	The EUT was configured to operate in Bluetooth Low Energy (BLE) continuous transmission mode utilizing test software that is not accessible to the end user. A persistent connection was maintained between the EUT and a cellular base station simulator for the duration of the test. Concurrent transmission was enabled, with the CAT-M1 cellular radio and the BLE radio operating simultaneously throughout the evaluation.

3.6 Justification for Mode of Operation

During the testing process, the EUT was evaluated with the cellular transmitter set to low, mid, and high channel configurations, while simultaneously transmitting on the BLE radio at the mid channel. 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 section 1.

5 **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)	150 kHz – 30 MHz	2.47 dB	N/A
Radiated emissions	9 kHz – 30 MHz	2.68 dB	2.53 dB
	30 – 100 MHz	4.39 dB	3.85 dB
	100 MHz – 1 GHz	5.65 dB	5.24 dB
	1 – 6 GHz	5.0 dB	4.88 dB
	6 – 18 GHz	4.76 dB	4.58 dB
	18 – 40 GHz	4.65 dB	4.61 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.

5.1 **Environmental Conditions During Testing:**

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

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

5.2 **Dates of Testing:**

2025-05-22 – 2025-05-28

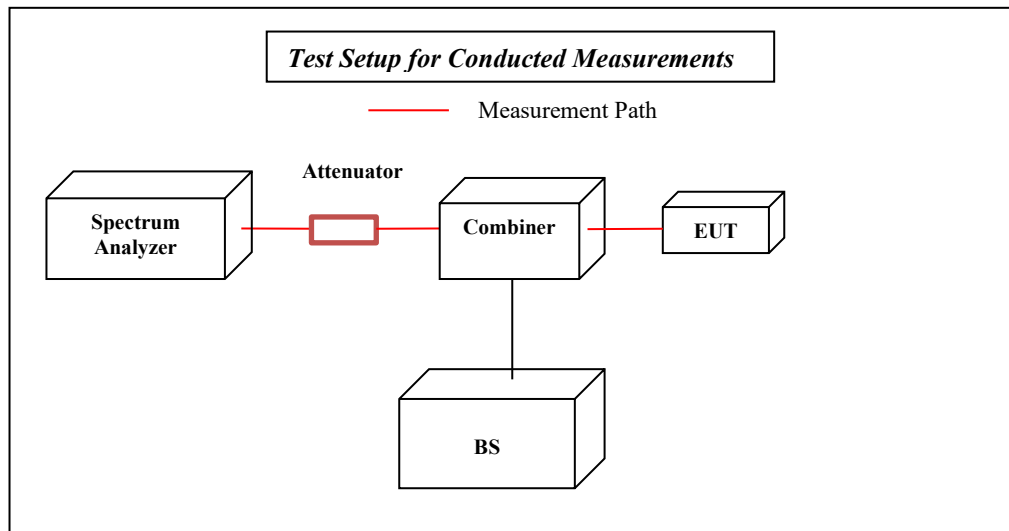
5.3 **Decision Rule:**

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.

6 Measurement Procedures

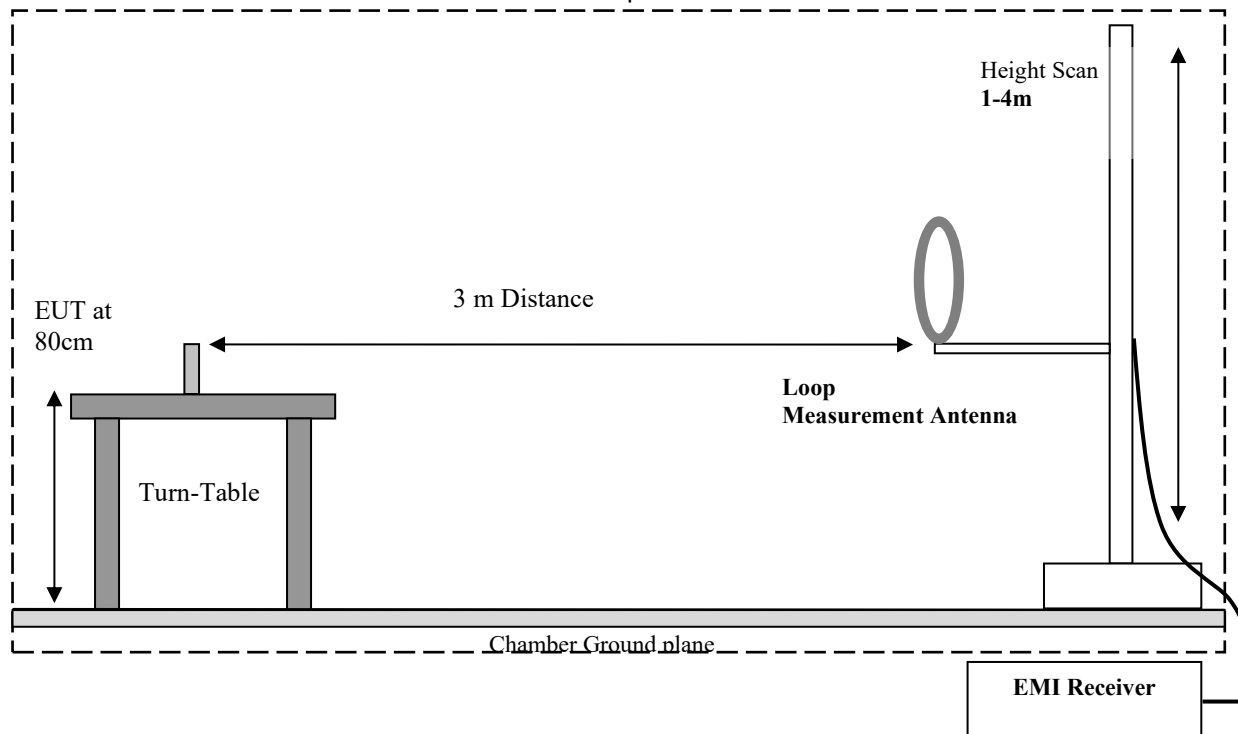
Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03r01 – “Measurement Guidance for Certification of Licensed Digital Transmitters” and according to relevant parts of ANSI/TIA-603-D-2010 as detailed below.



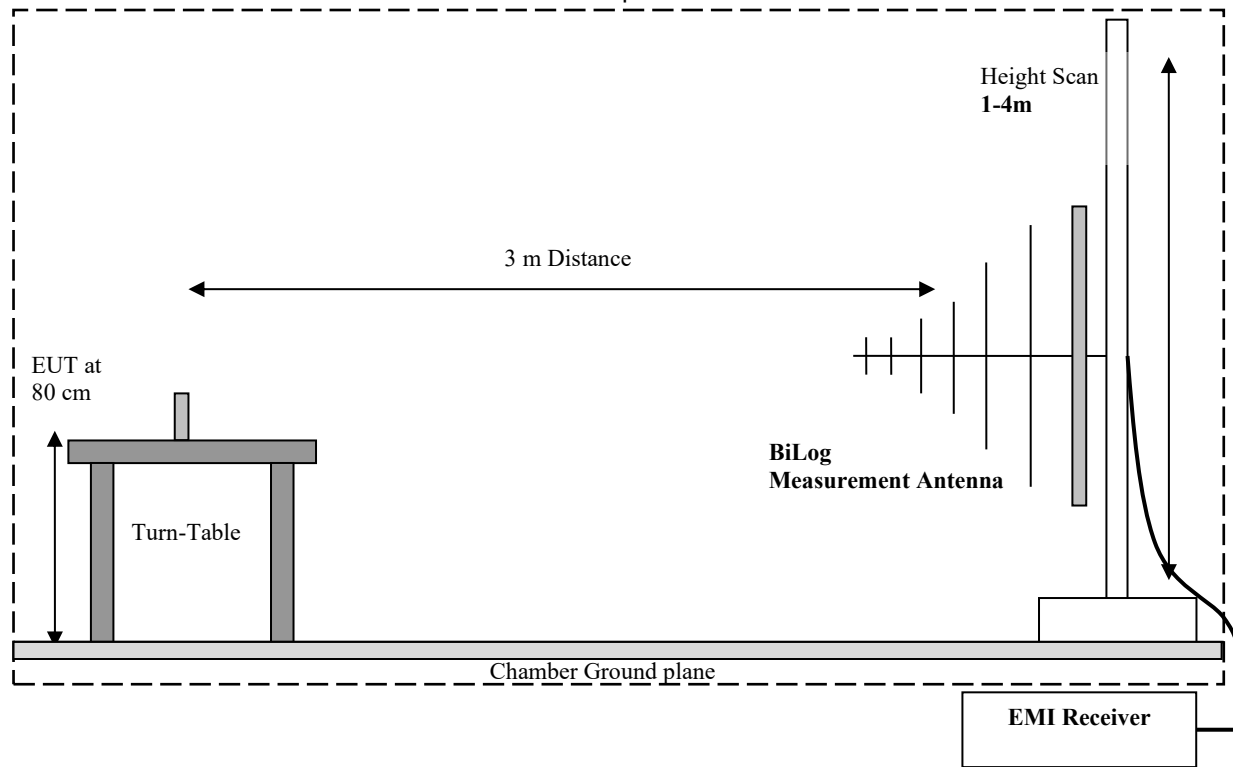
6.1 Radiated Measurement

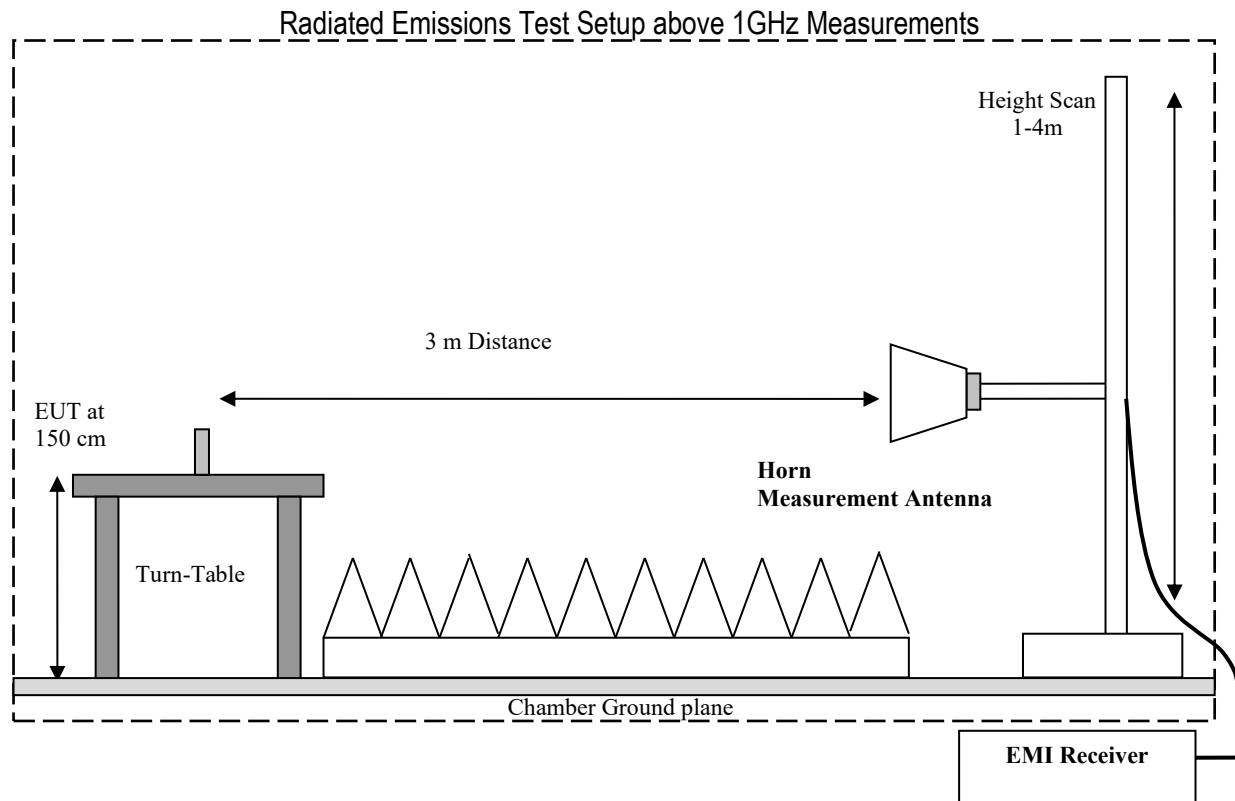
- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to 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





6.2 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 μ 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 μ V)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dB μ V/m)
1000	80.5	3.5	14	98.0

7 Measurement Results Summary

7.1 FCC 22 / RSS-132

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §22.913 (a)	RF Output Power	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1055; §22.355	Frequency Tolerance	Extreme Temperature and Voltage	-	☐	☐	☐	☒	Note 1 Note 2
§2.1049; §22.917	Occupied Bandwidth	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1051; §22.917	Band Edge Compliance	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1051; §22.917	Conducted Spurious Emissions	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1053; §22.917	Radiated Spurious Emissions	Nominal	Op. 1	☒	☐	☐	☐	Note 3

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

Note 2: The LTE Band 5 test results are leveraged from test report No. TERF2408002531ER, associated with FCC ID: HSW-TY2GD and IC: 4492A-TY2GD.

Note 3: The testing for LTE Band 5 was performed in accordance with the test specifications outlined in FCC Part 22, and RSS-132.

7.2 FCC 24 / RSS-133

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §24.232 (a)	RF Output Power	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1055; §24.235	Frequency Stability	Extreme Temperature and Voltage	-	☐	☐	☐	☒	Note 1 Note 2
§2.1049; §24.238	Occupied Bandwidth	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1051; §24.238	Band Edge Compliance	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1051; §24.238	Conducted Spurious Emissions	Nominal	-	☐	☐	☐	☒	Note 1 Note 2
§2.1053; §24.238	Radiated Spurious Emissions	Nominal	Op. 1	☒	☐	☐	☐	Note 3

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

Note 2: The LTE Band 2 test results are leveraged from test report No. TERF2408002531ER, associated with FCC ID: HSW-TY2GD and IC: 4492A-TY2GD.

Note 3: The testing for LTE Band 2 was performed in accordance with the test specifications outlined in FCC Part 24, and RSS-133.

7.3 FCC 27 / RSS-130, RSS-132, RSS 139

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §27.50	RF Output Power	Nominal	-	☐	☐	☐	■	Note 1 Note 2
§2.1055; §27.54	Frequency Stability	Extreme Temperature and Voltage	-	☐	☐	☐	■	Note 1 Note 2
§2.1049; §27.53	Occupied Bandwidth	Nominal	-	☐	☐	☐	■	Note 1 Note 2
§2.1051; §27.53	Band Edge Compliance	Nominal	-	☐	☐	☐	■	Note 1 Note 2
§2.1051; §27.53	Conducted Spurious Emissions	Nominal	-	☐	☐	☐	■	Note 1 Note 2
§2.1053; §27.53	Radiated Spurious Emissions	Nominal	Op. 1	■	☐	☐	☐	Note 3

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

Note 2: The LTE Band 4, LTE Band 12, and LTE Band 13 test results are leveraged from test report No. TERF2408002531ER, associated with FCC ID: HSW-TY2GD and IC: 4492A-TY2GD.

Note 3: The testing for LTE Band 4, LTE Band 12, and LTE Band 13 was performed in accordance with the test specifications outlined in FCC Part 27, RSS-130, and RSS-139.

8 Test Result Data

8.1 RF Output Power Verification ERP/EIRP

FCC Rule Parts	Band	Frequency Range	Verification Power Measurement Results	Original Power Measurement Results Note 1	Original Power Measurement Results Note 1	Gain	EIRP Note 2	ERP Note 2	Limit EIRP	Limit ERP
		(MHz)	(dBm)	(dBm)	(W)	(dBi)	(W)	(W)	(W)	(W)
22H	LTE 5	824 – 849	22.84	23.08	0.203	-8.00	0.032	0.020	-	7
24E	LTE 2	1850 – 1910	22.51	23.16	0.207	-0.25	0.195	0.119	2	-
27	LTE 4	1710 – 1755	22.30	23.38	0.218	-2.20	0.131	0.080	1	-
27	LTE 12	699 – 716	22.70	23.17	0.207	-4.60	0.072	0.044	-	3
27	LTE 13	777 – 787	22.72	23.13	0.206	-3.80	0.086	0.052	-	3

Note 1: The Power Conducted (dBm) leveraged from test report “TERF2408002531ER” prepared by SGS-Taiwan Ltd. of cellular module Murata - LBAD0ZZ2GD (FCC ID: HSW-TY2GD, IC: 4492A-TY2GD).

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.

8.2 Radiated Spurious Emissions

8.2.1 Measurement utilizing KDB 971168 D01 Power Meas License Digital Systems v03r01, and according to ANSI/TIA-603-E-2016

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, 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

8.2.2 Limits:

8.2.2.1 FCC Part 22.917 (a); FCC Part 24.238 (a); FCC Part 27.53 (c); FCC Part 27.53 (g); FCC Part 27.53 (h) 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.

8.2.2.2 RSS-130 Part 4.7, RSS-132 Part 5.5; RSS-133 Part 6.5; RSS-139 Part 6.6 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.

8.2.3 Test conditions and setup:

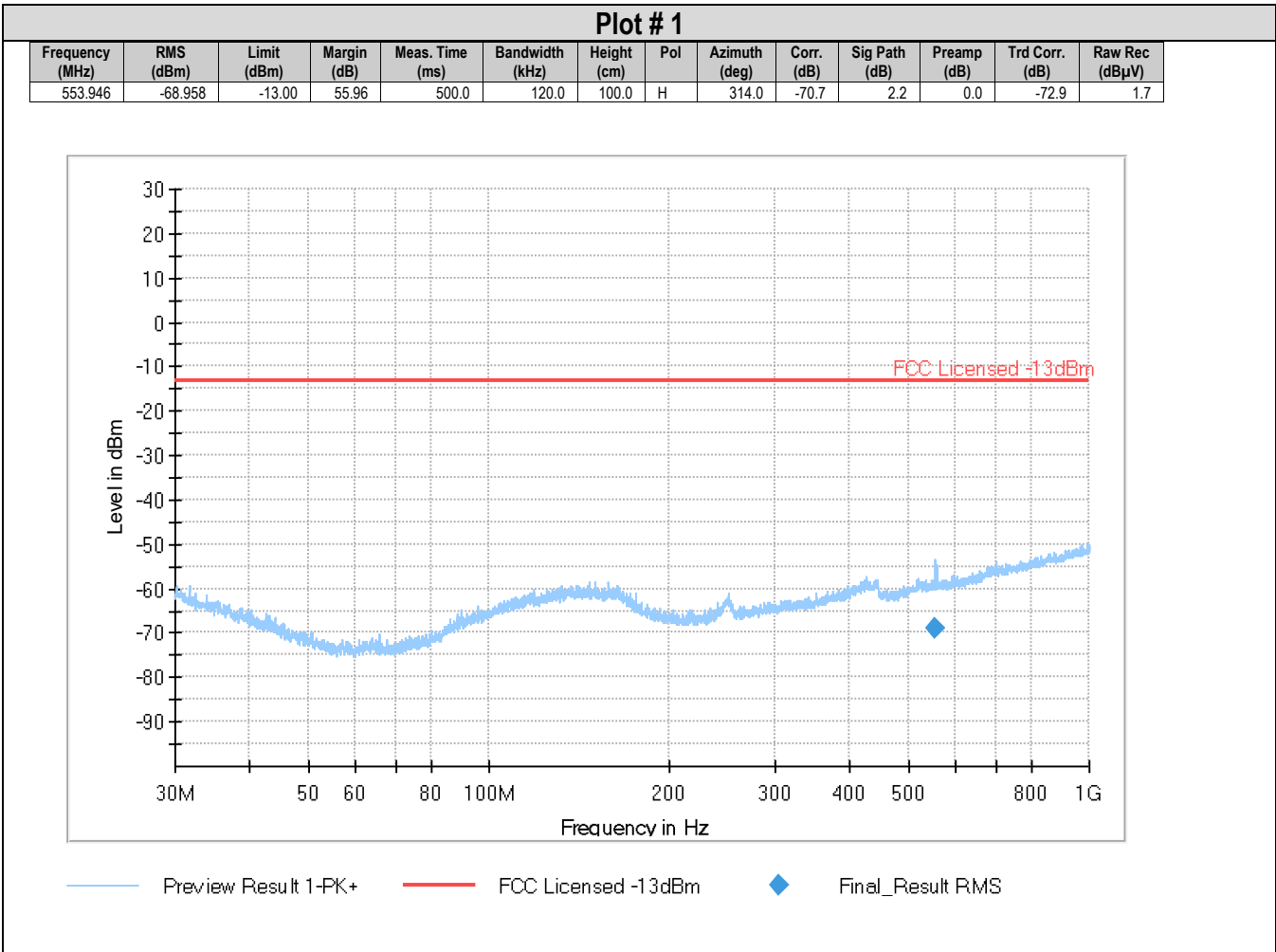
Ambient Temperature (C)	EUT Set-Up #	EUT operating mode	Power Input
22	1	Op. 1	120 VAC

8.2.4 Measurement result:

Plot #	Cellular Uplink Operating Channel	EUT Operating Mode	Scan Frequency	Lowest Margin Emission (dBm)	Limit (dBm)	Result
1-4	Low	LTE B2 + BLE	30 MHz – 22 GHz	-38.371	-13	Pass
5-8	Mid	LTE B2 + BLE	30 MHz – 22 GHz		-13	Pass
9-12	High	LTE B2 + BLE	30 MHz – 22 GHz		-13	Pass
13-15	Low	LTE B4 + BLE	30 MHz – 18 GHz	-49.927	-13	Pass
16-18	Mid	LTE B4 + BLE	30 MHz – 18 GHz		-13	Pass
19-21	High	LTE B4 + BLE	30 MHz – 18 GHz		-13	Pass
22-24	Low	LTE B5 + BLE	30 MHz – 9 GHz	-33.408	-13	Pass
25-27	Mid	LTE B5 + BLE	30 MHz – 9 GHz		-13	Pass
28-30	High	LTE B5 + BLE	30 MHz – 9 GHz		-13	Pass
31-33	Low	LTE B12 + BLE	30 MHz – 8 GHz	-54.221	-13	Pass
34-36	Mid	LTE B12 + BLE	30 MHz – 8 GHz		-13	Pass
37-39	High	LTE B12 + BLE	30 MHz – 8 GHz		-13	Pass
40-42	Low	LTE B13 + BLE	30 MHz – 8 GHz	-51.212	-13	Pass
43-45	Mid	LTE B13 + BLE	30 MHz – 8 GHz		-13	Pass
46-48	High	LTE B13 + BLE	30 MHz – 8 GHz		-13	Pass

8.2.5 Measurement Plots:

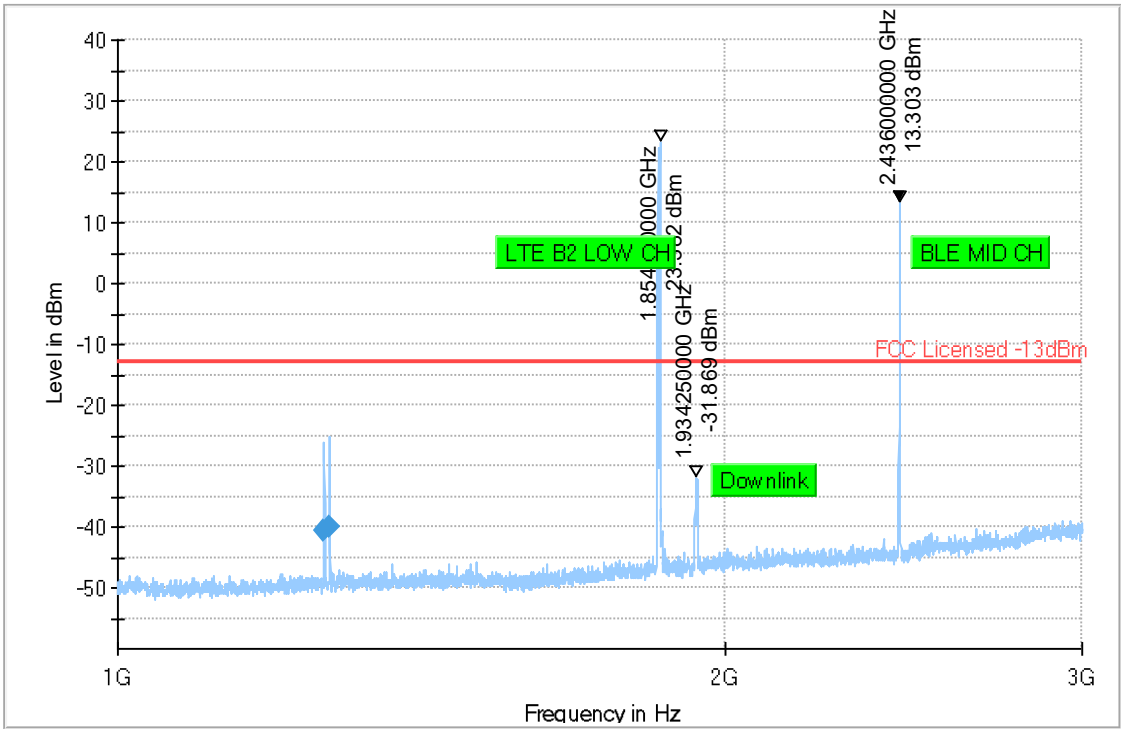
8.2.5.1 LTE Band 2





Plot # 2

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1264.817	-40.561	-13.00	27.56	500.0	1000.0	169.0	H	258.0	-66.6	3.5	0.0	-70.1	26.1
1273.500	-39.849	-13.00	26.85	500.0	1000.0	219.0	V	5.0	-66.6	3.5	0.0	-70.1	26.8

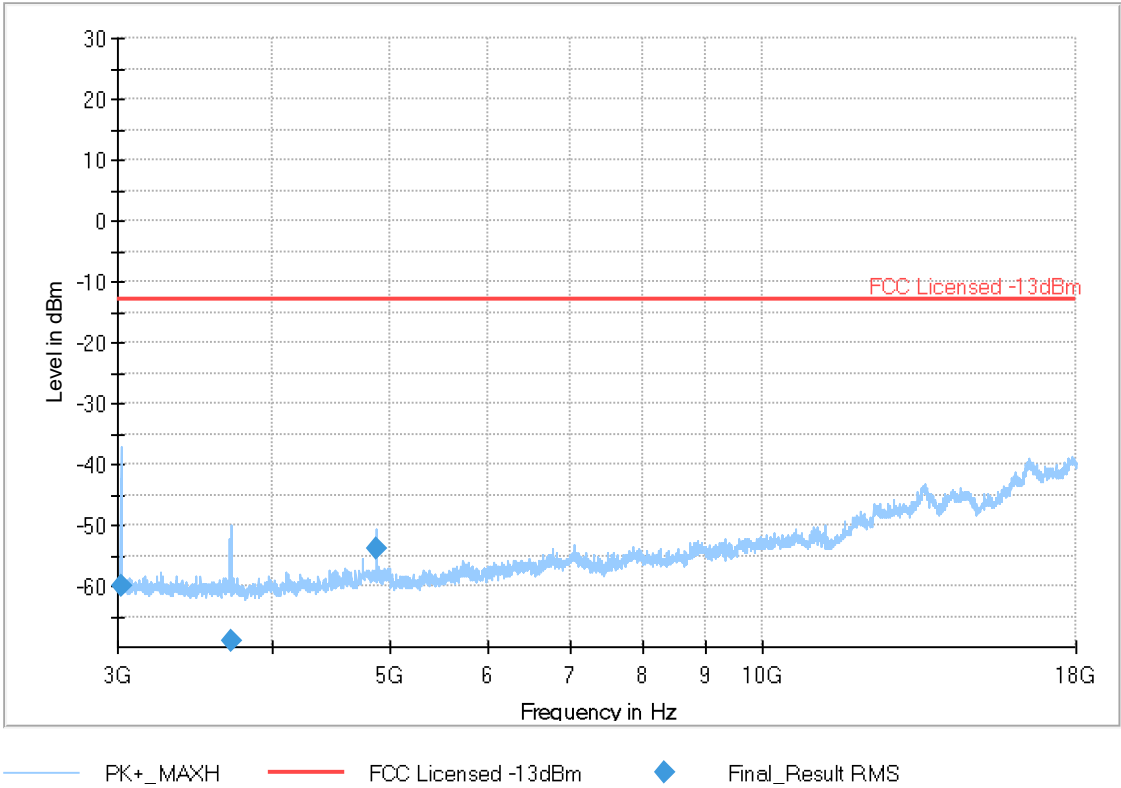


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

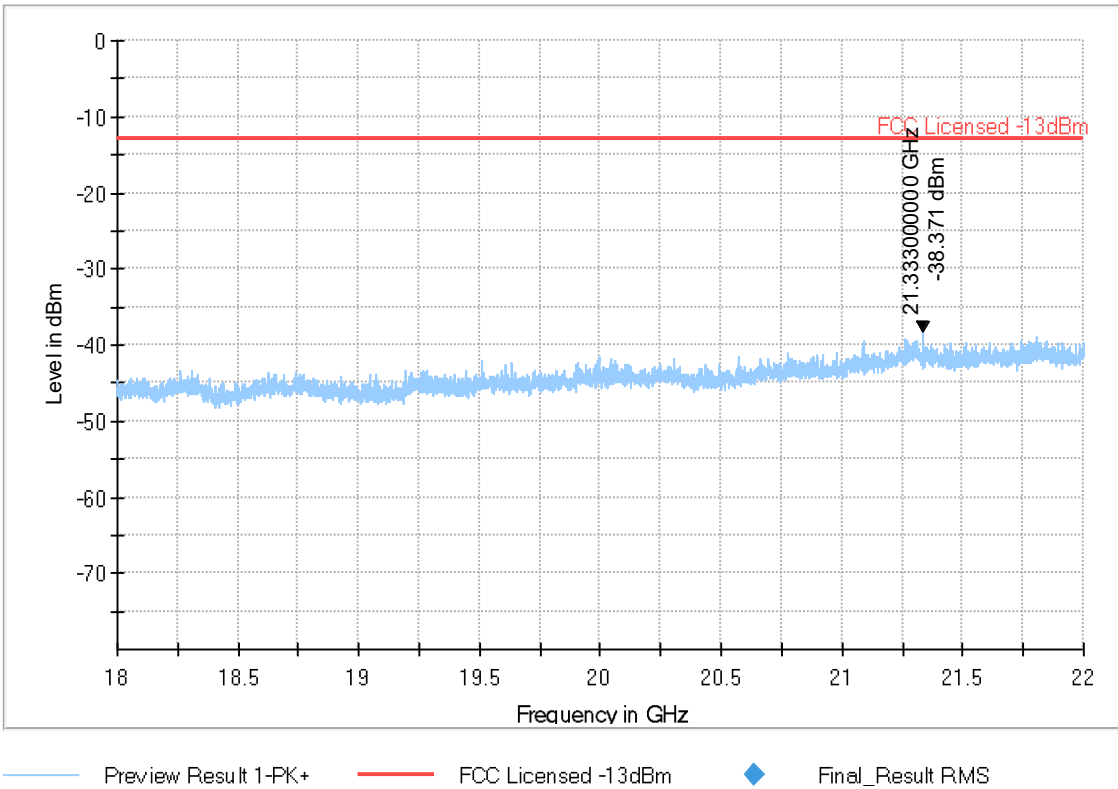


Plot # 3

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3016.738	-60.108	-13.00	47.11	500.0	1000.0	142.0	V	316.0	-	5.3	-45.9	-62.5	43.0
3708.500	-69.012	-13.00	56.01	500.0	1000.0	281.0	V	44.0	-	6.3	-45.5	-62.2	32.4
4871.967	-54.010	-13.00	41.01	500.0	1000.0	100.0	V	8.0	-	7.0	-45.9	-61.1	46.0

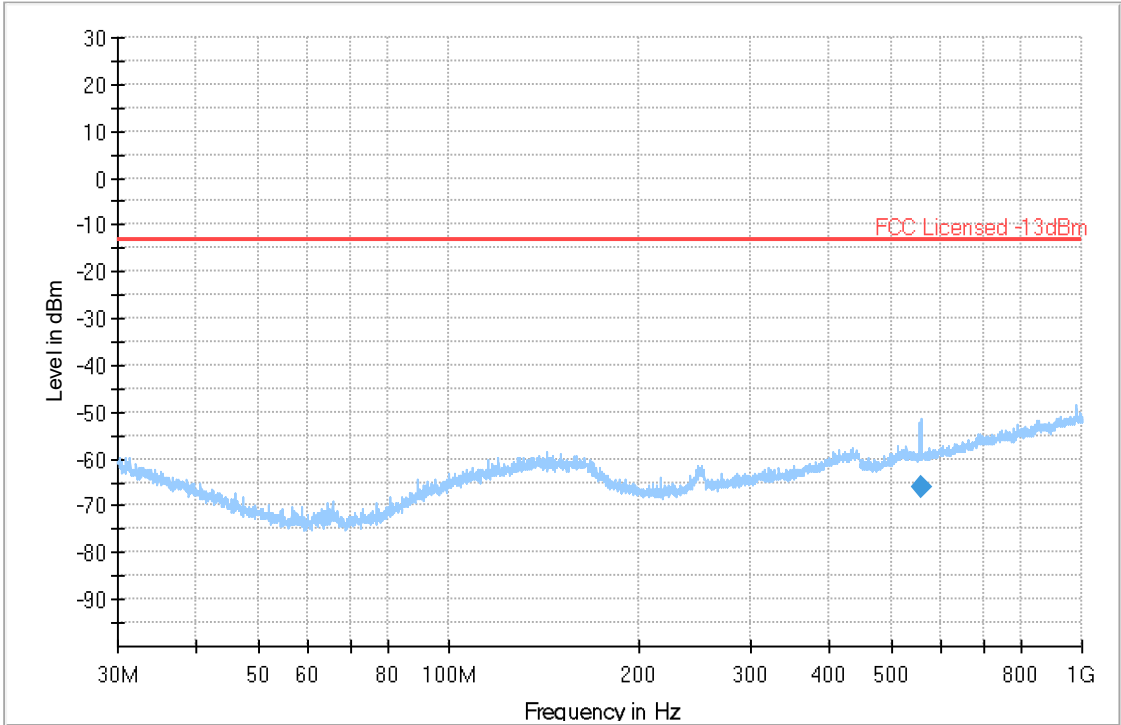


Plot # 4



Plot # 5

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
557.947	-65.936	-13.00	52.94	500.0	120.0	100.0	H	311.0	-70.6	2.2	0.0	-72.8	4.6

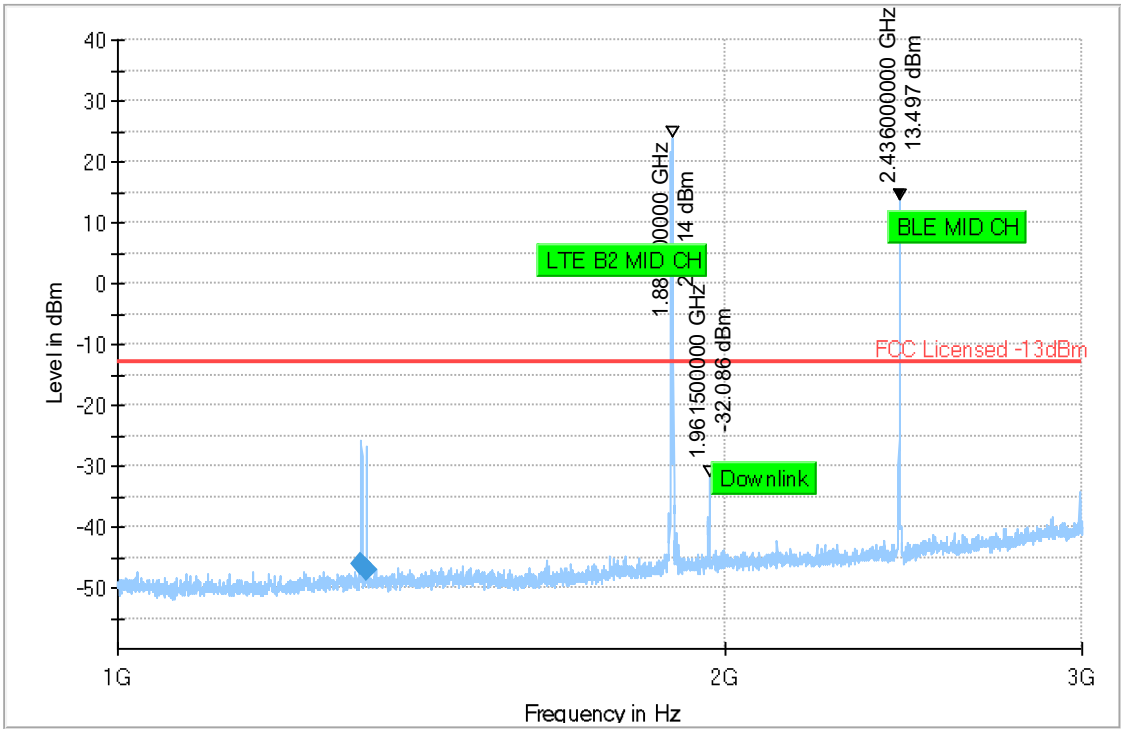


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

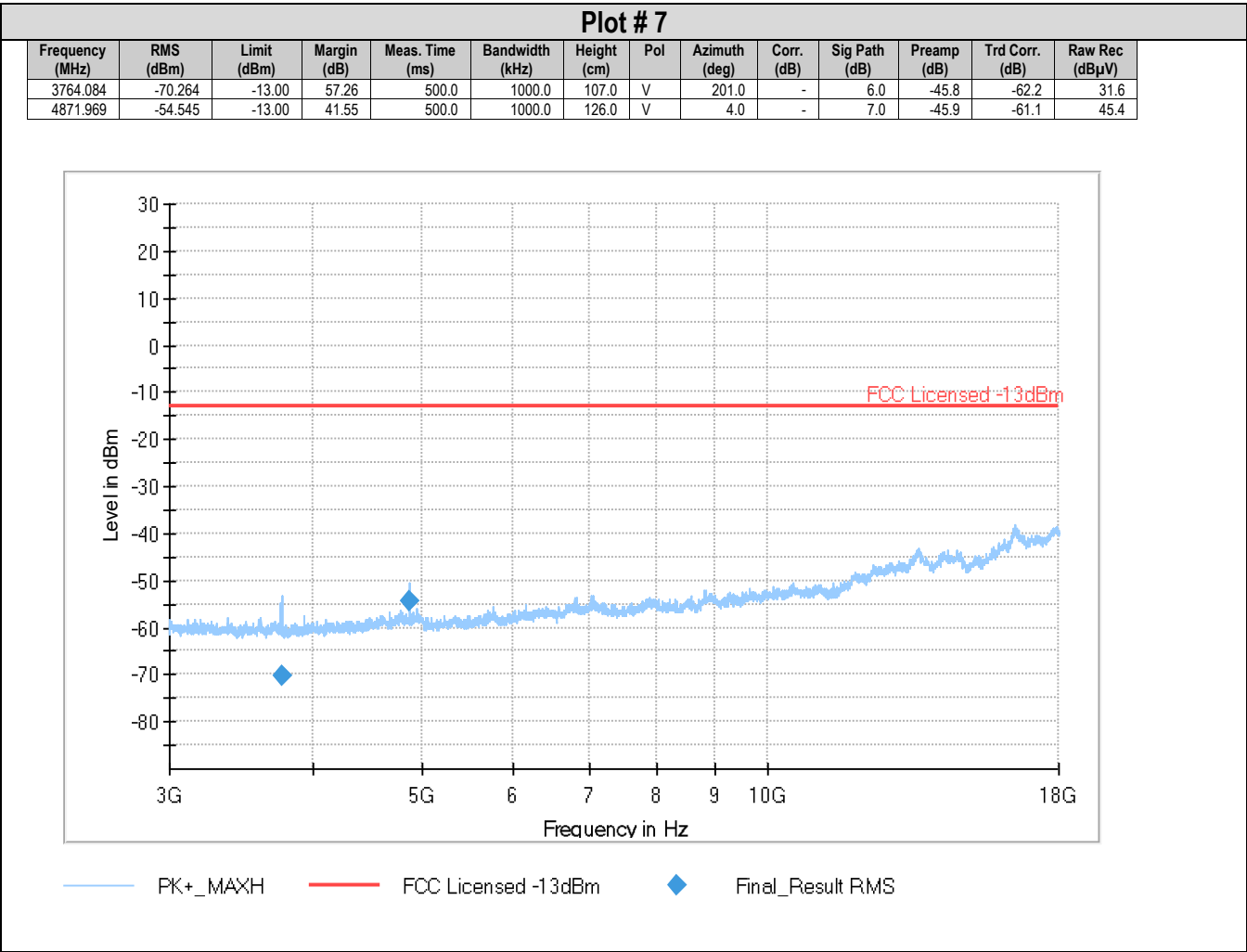


Plot # 6

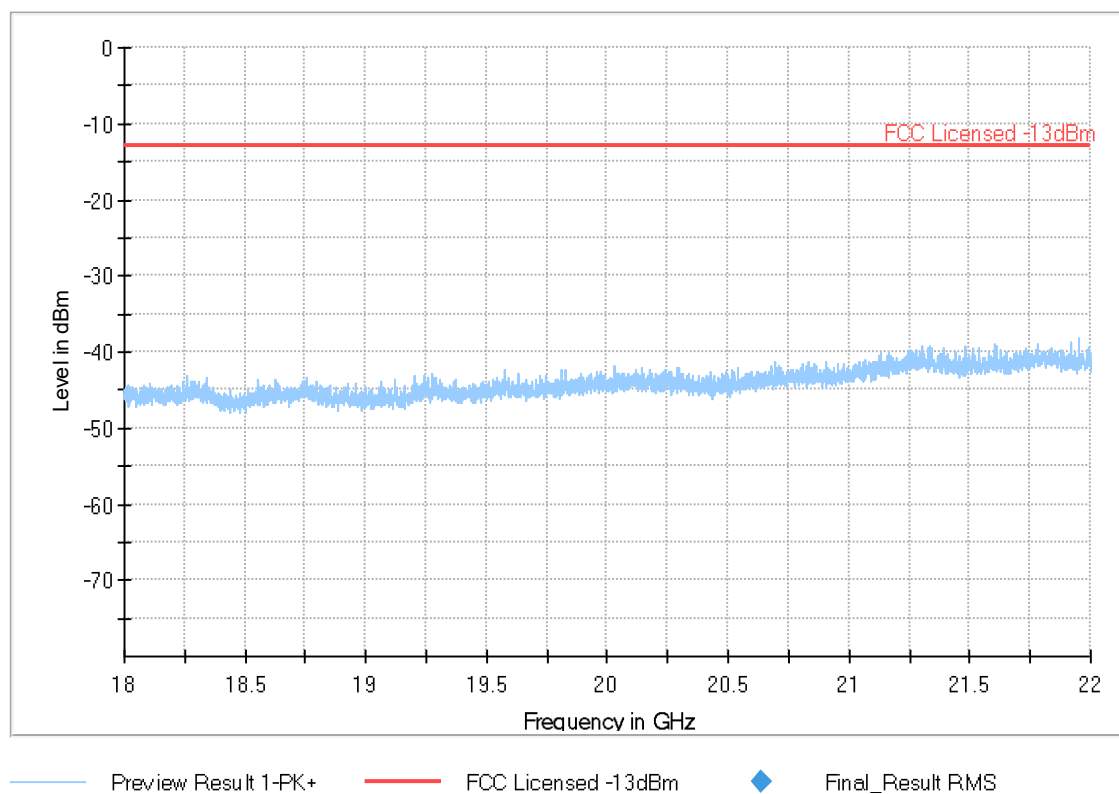
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1319.500	-46.152	-13.00	33.15	500.0	1000.0	159.0	V	0.0	-66.7	3.5	0.0	-70.1	20.5
1327.750	-47.171	-13.00	34.17	500.0	1000.0	159.0	V	5.0	-66.6	3.5	0.0	-70.2	19.5



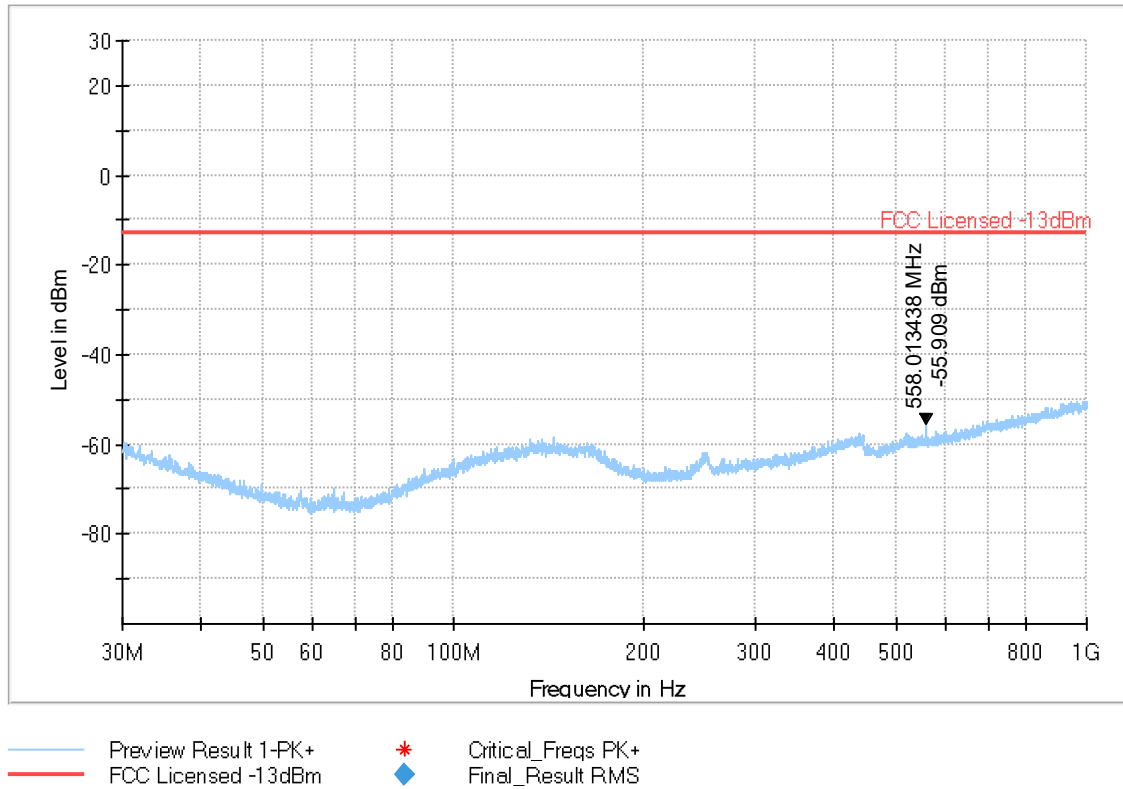
Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS



Plot # 8



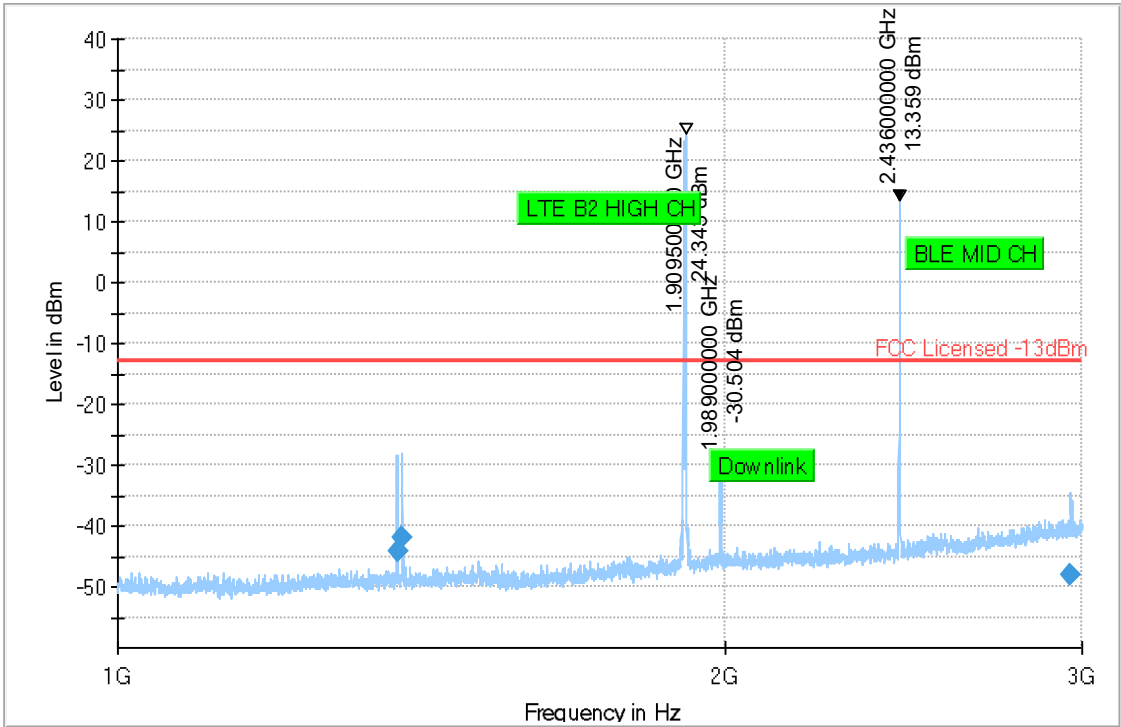
Plot # 9





Plot # 10

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1374.750	-44.110	-13.00	31.11	500.0	1000.0	218.0	H	348.0	-66.4	3.6	0.0	-70.0	22.3
1383.311	-41.821	-13.00	28.82	500.0	1000.0	169.0	H	359.0	-66.4	3.6	0.0	-70.0	24.6
2962.000	-48.074	-13.00	35.07	500.0	1000.0	143.0	V	306.0	-60.2	5.4	0.0	-65.5	12.1

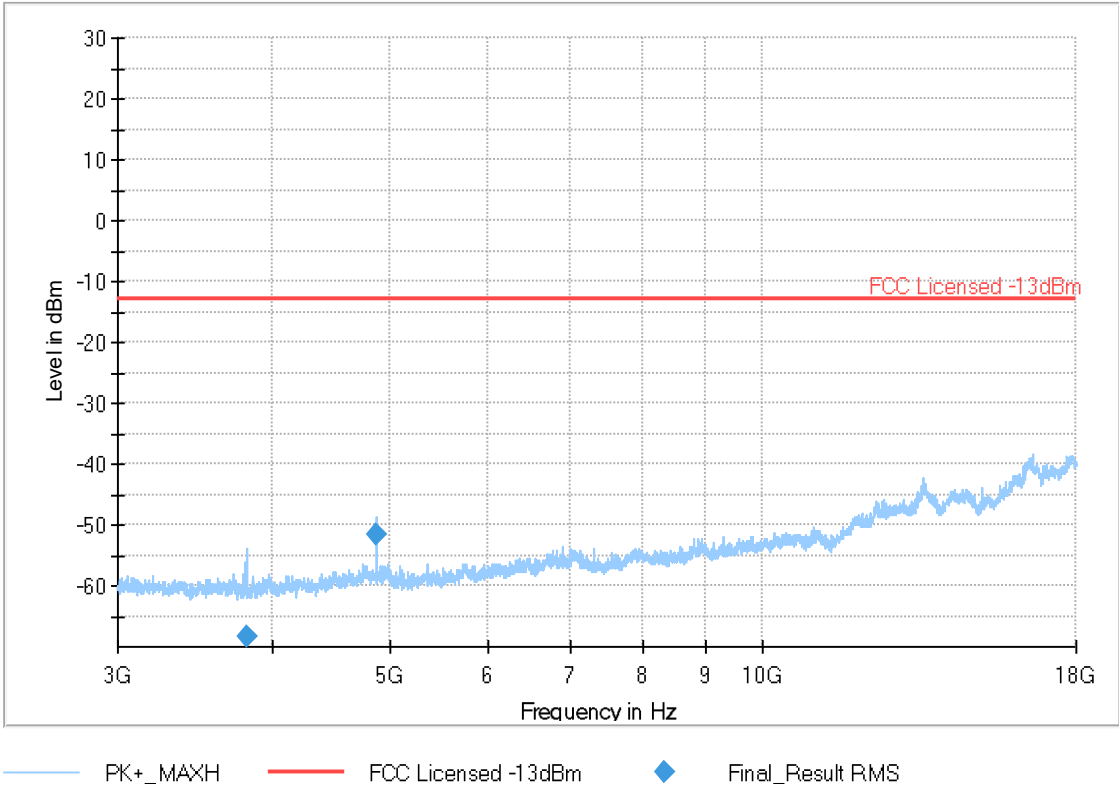


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

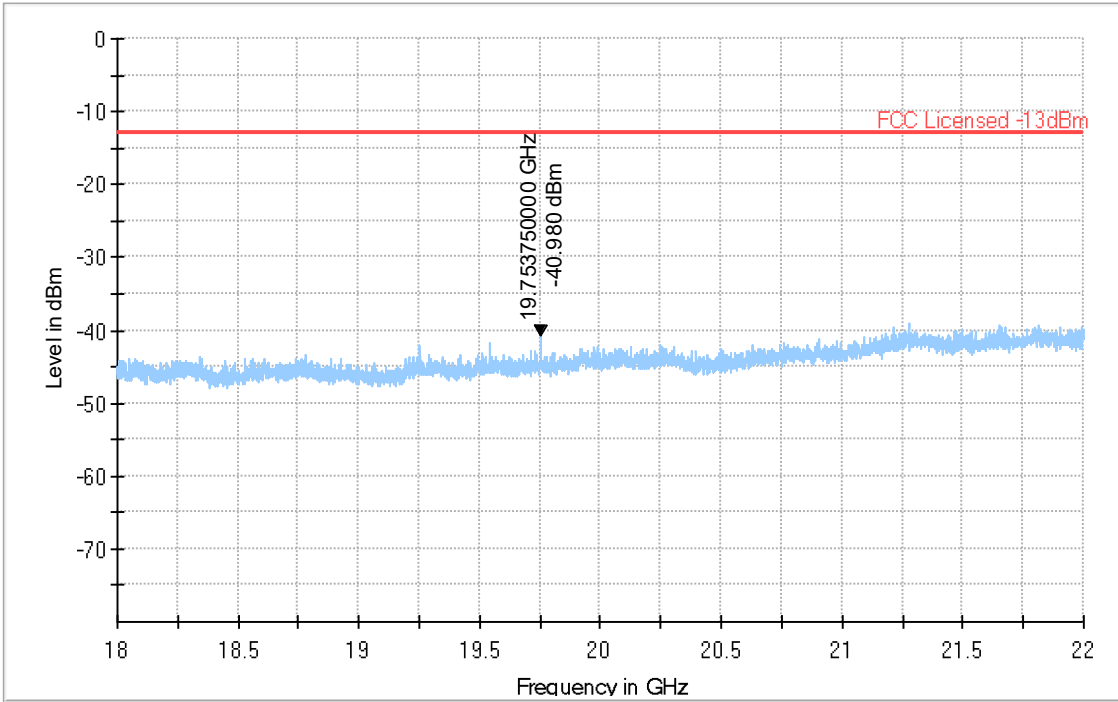


Plot # 11

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3819.137	-68.304	-13.00	55.30	500.0	1000.0	391.0	H	167.0	-	6.1	-46.0	-62.1	33.7
4871.969	-51.543	-13.00	38.54	500.0	1000.0	100.0	V	8.0	-	7.0	-45.9	-61.1	48.4

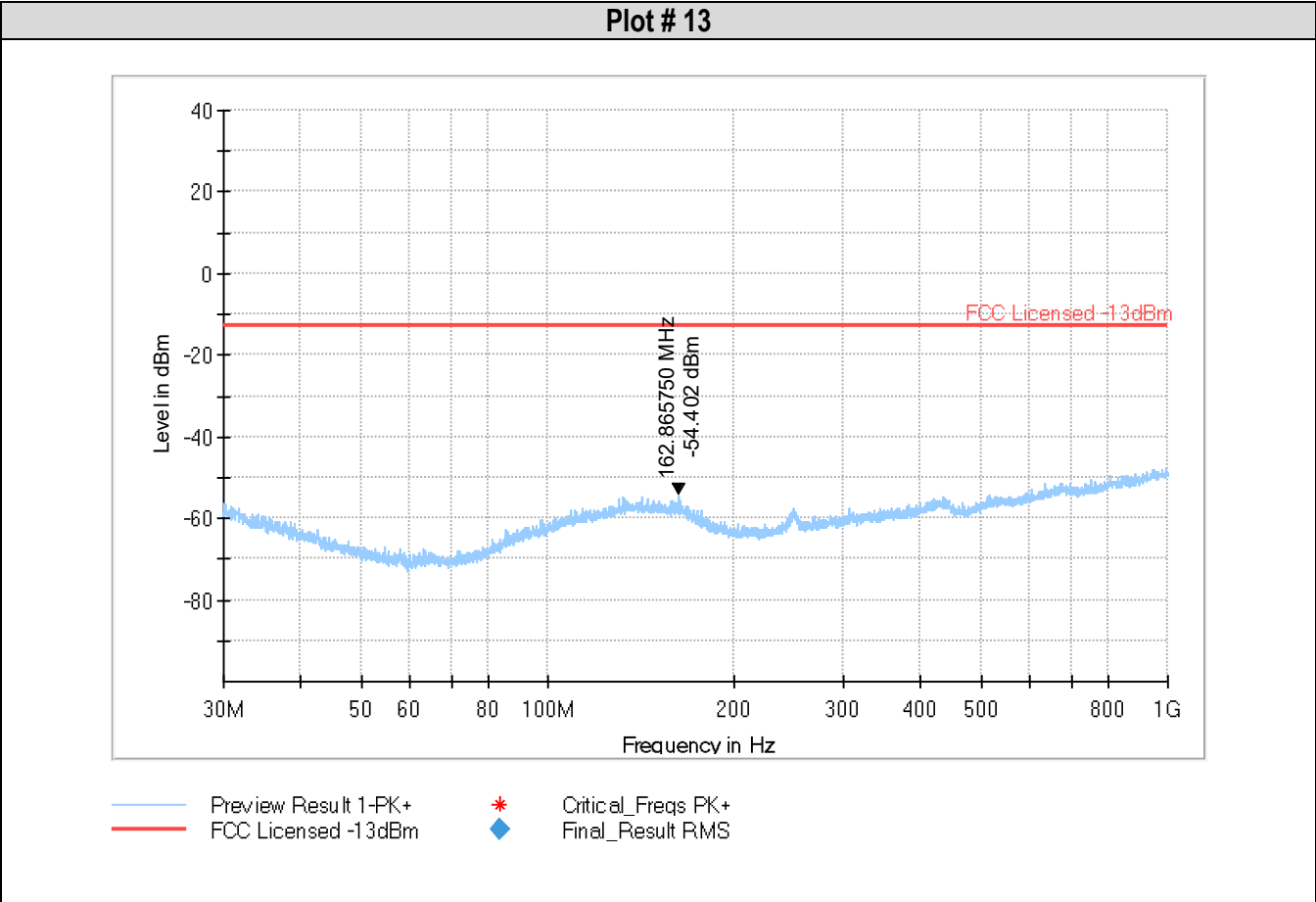


Plot # 12

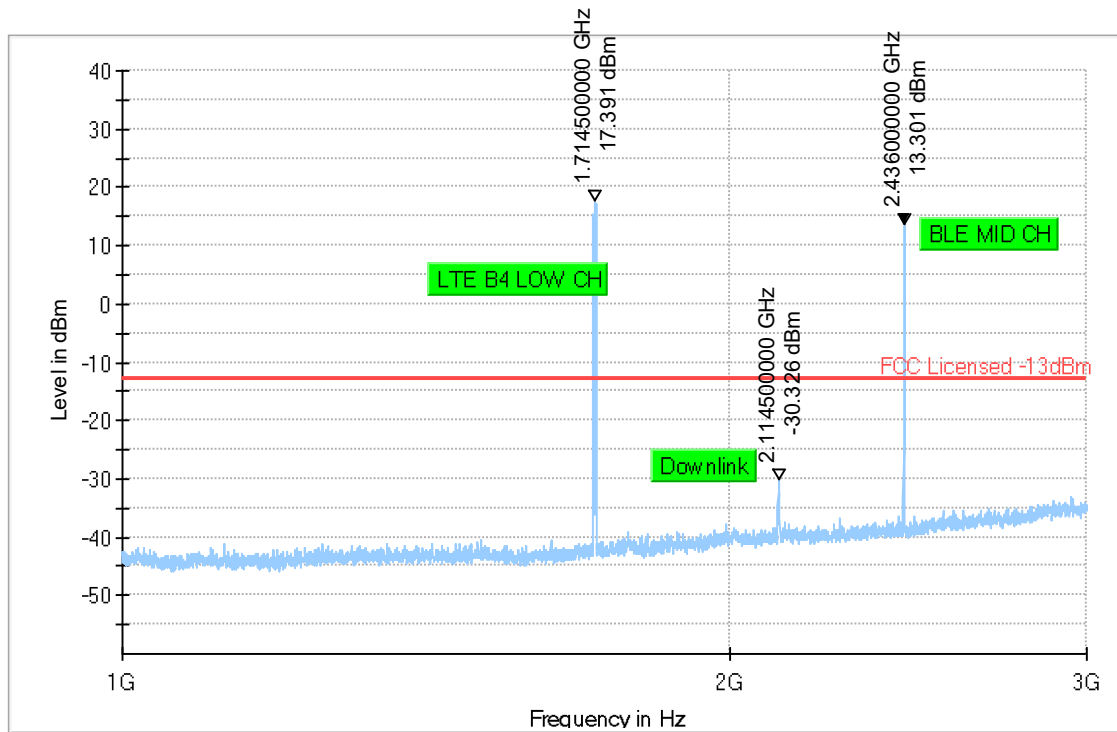


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

8.2.5.2 LTE Band 4



Plot # 14



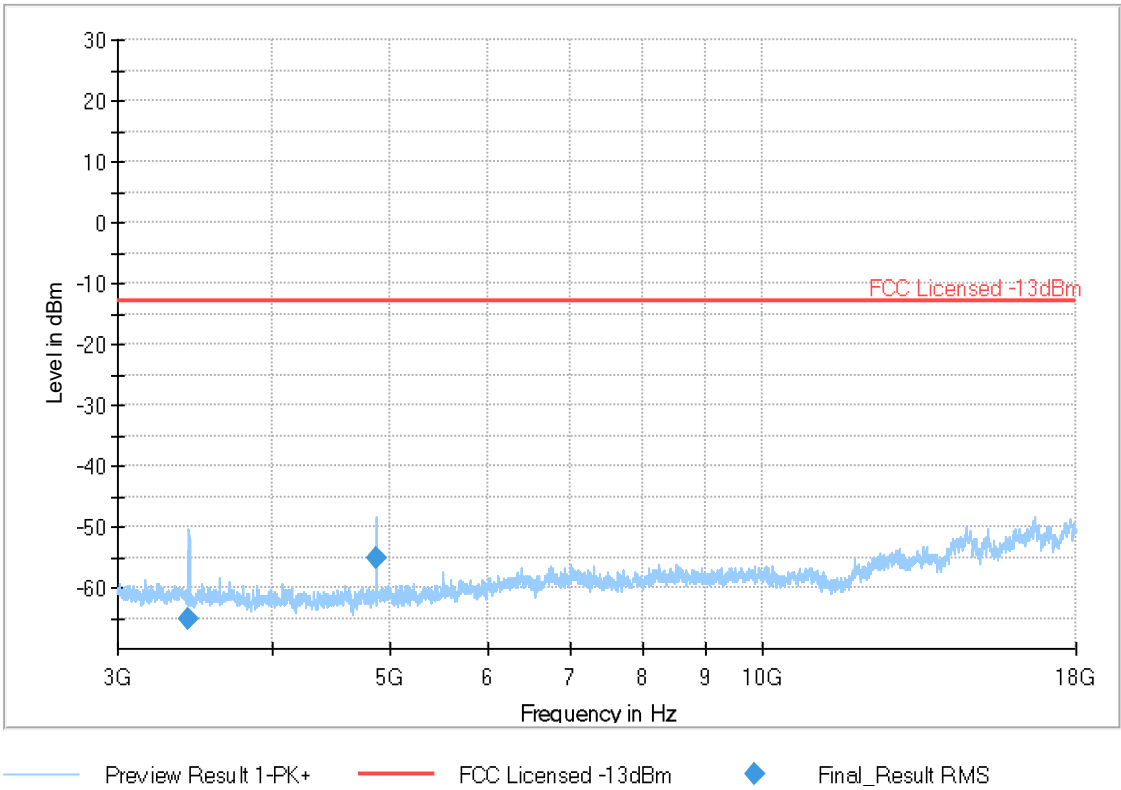
Preview Result 1-PK+
FCC Licensed -13dBm

* Critical_Freqs PK+
◆ Final_Result RMS

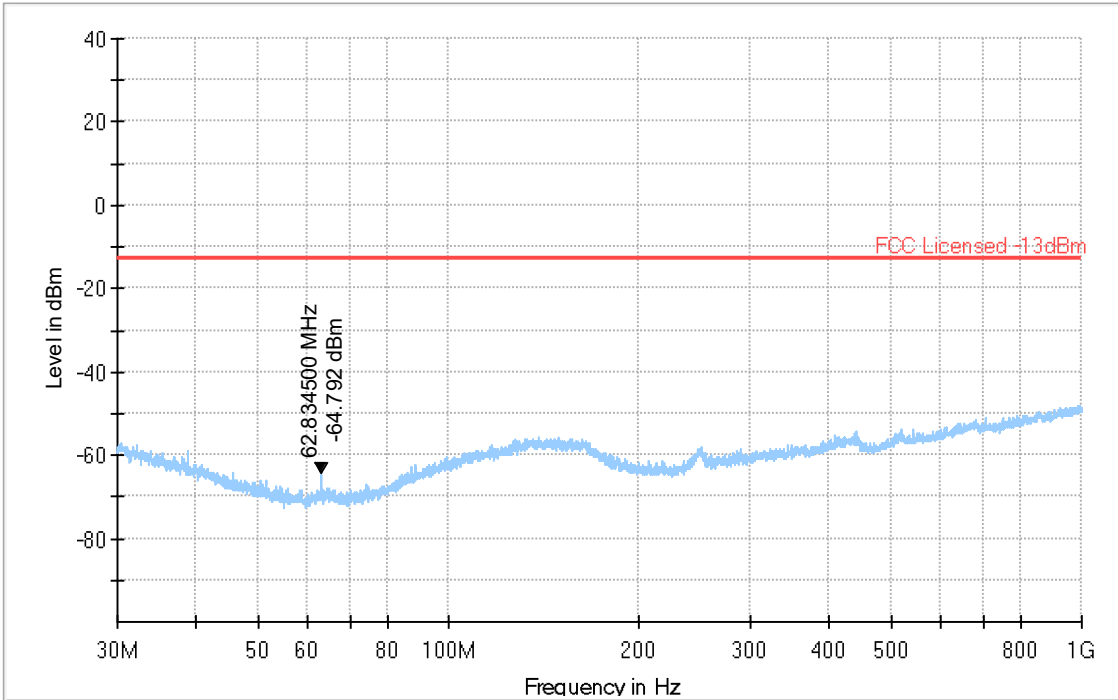


Plot # 15

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3429.061	-65.042	-13.00	52.04	500.0	1000.0	100.0	V	12.0	-	5.8	-46.0	-62.5	37.7
4871.969	-55.082	-13.00	42.08	500.0	1000.0	100.0	V	15.0	-	7.0	-45.9	-61.1	44.9



Plot # 16

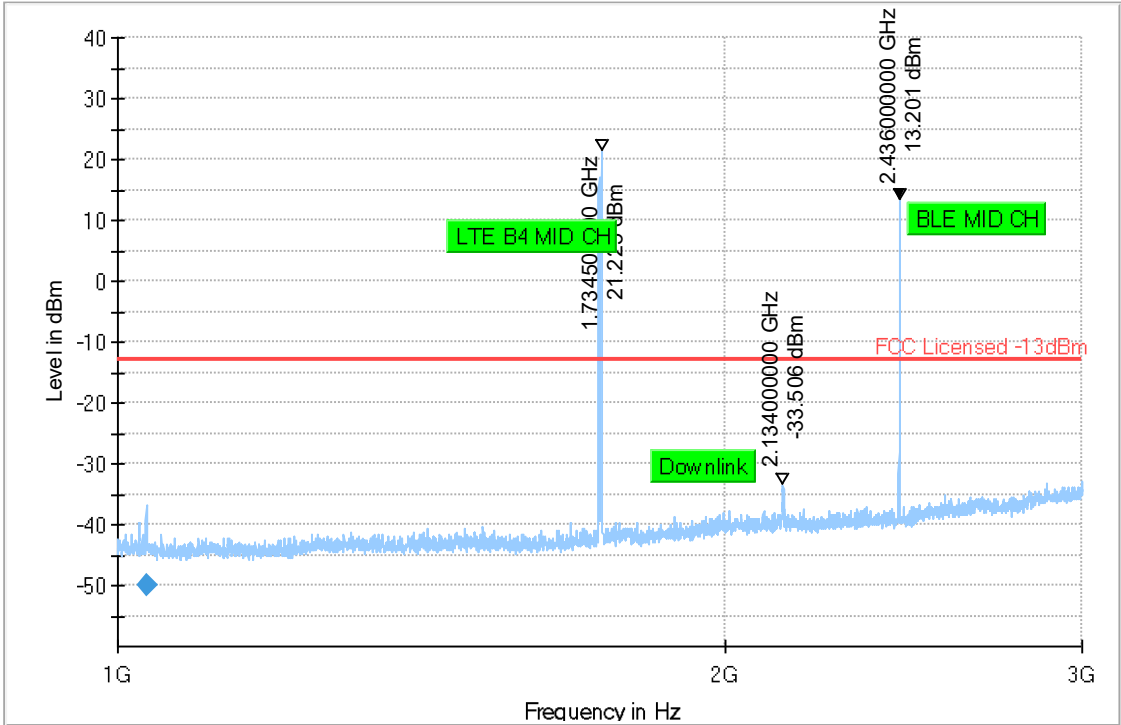


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS



Plot # 17

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1033.250	-49.927	-13.00	36.93	500.0	1000.0	134.0	H	318.0	-66.7	4.2	0.0	-70.9	16.8

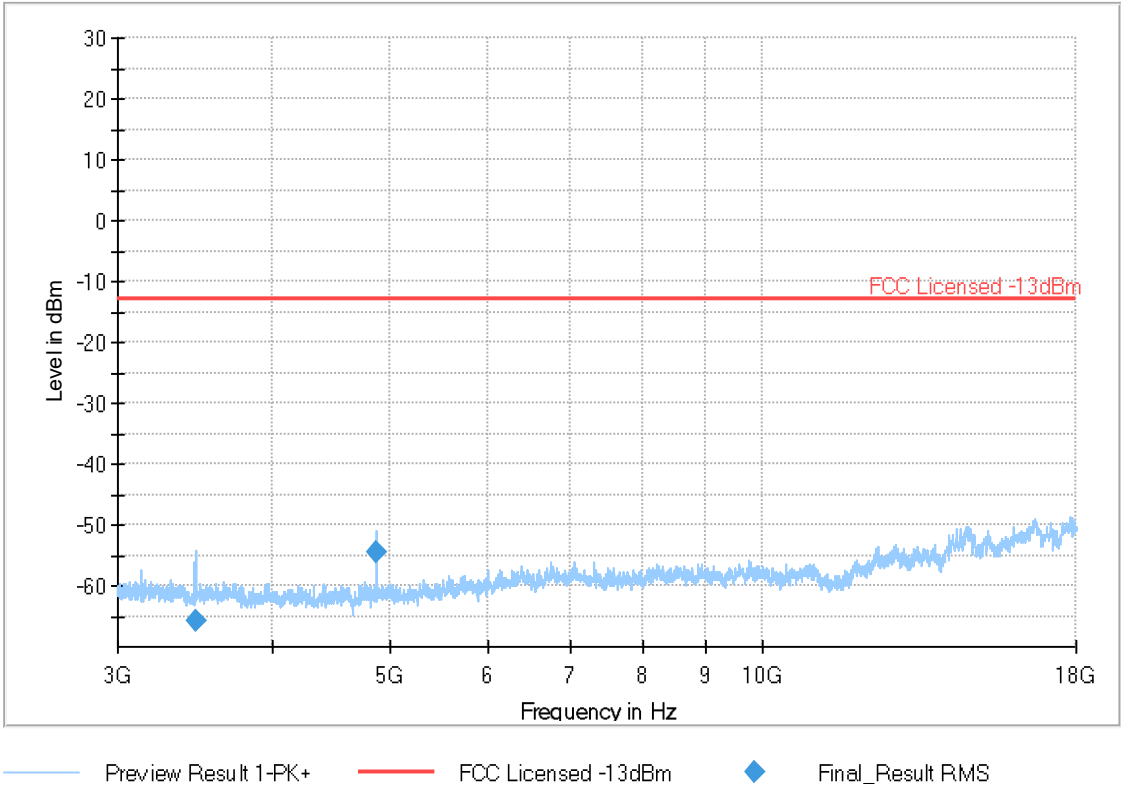


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

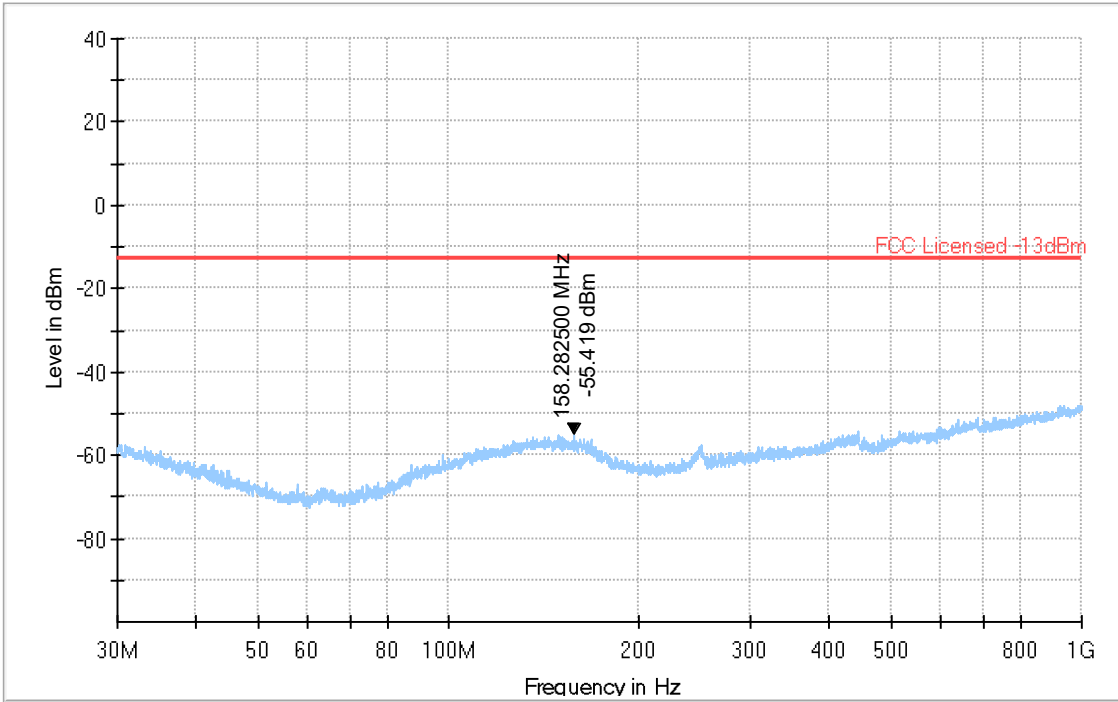


Plot # 18

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3469.244	-65.861	-13.00	52.86	500.0	1000.0	100.0	V	292.0	-	5.8	-46.1	-62.5	37.0
4871.969	-54.584	-13.00	41.58	500.0	1000.0	134.0	V	19.0	-	7.0	-45.9	-61.1	45.4



Plot # 19

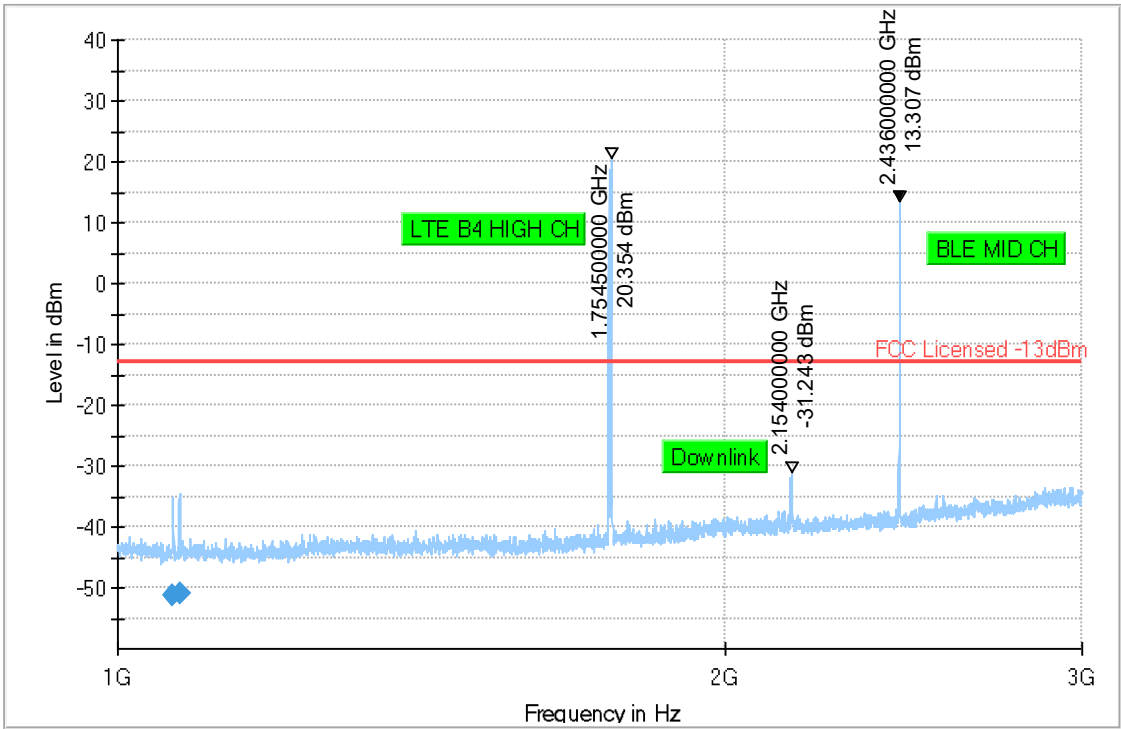


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS



Plot # 20

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1065.250	-51.241	-13.00	38.24	500.0	1000.0	209.0	V	4.0	-66.6	4.1	0.0	-70.7	15.3
1073.000	-51.000	-13.00	38.00	500.0	1000.0	142.0	H	287.0	-66.7	4.1	0.0	-70.8	15.7

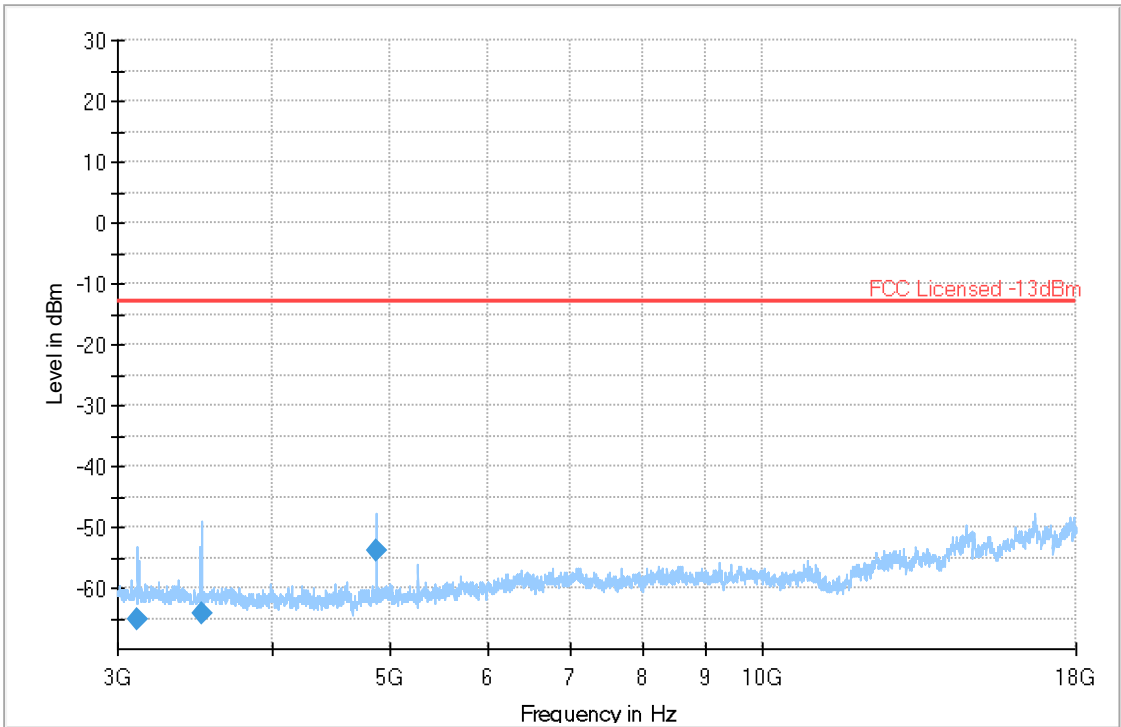


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS



Plot # 21

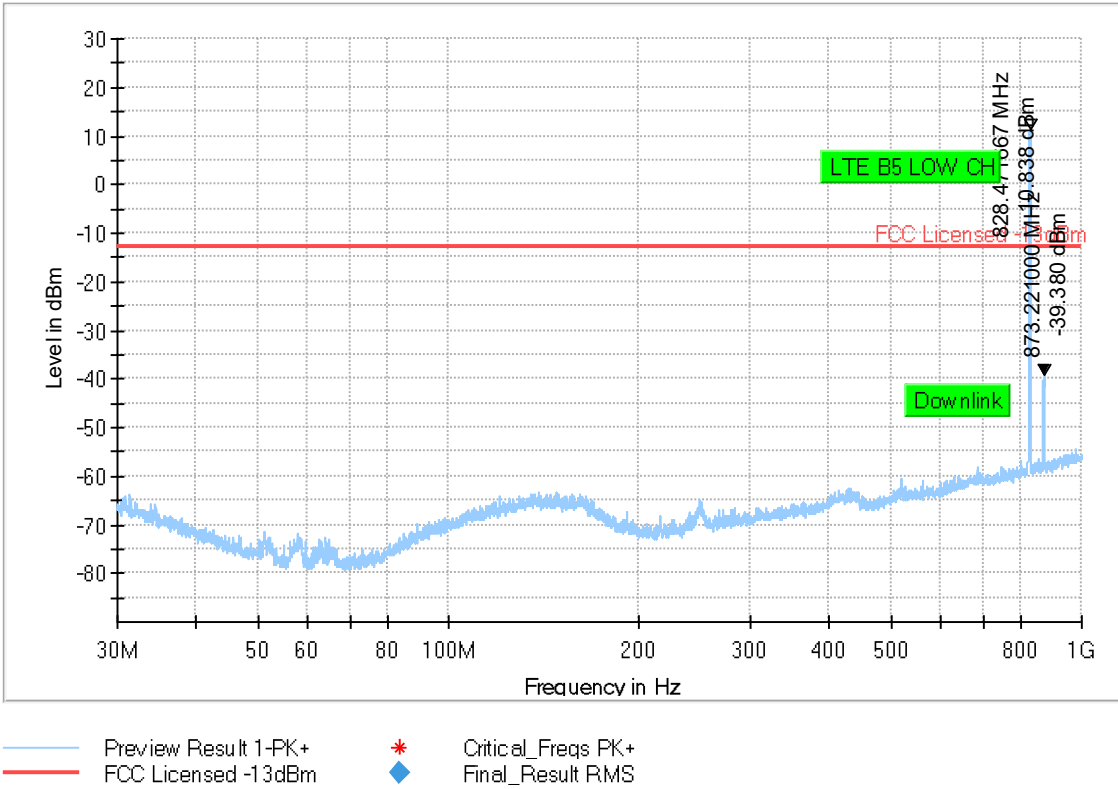
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3117.437	-65.168	-13.00	52.17	500.0	1000.0	178.0	V	311.0	-	5.5	-45.9	-62.5	37.8
3509.312	-64.276	-13.00	51.28	500.0	1000.0	107.0	V	-2.0	-	6.0	-46.0	-62.4	38.1
4871.969	-54.013	-13.00	41.01	500.0	1000.0	134.0	V	5.0	-	7.0	-45.9	-61.1	46.0

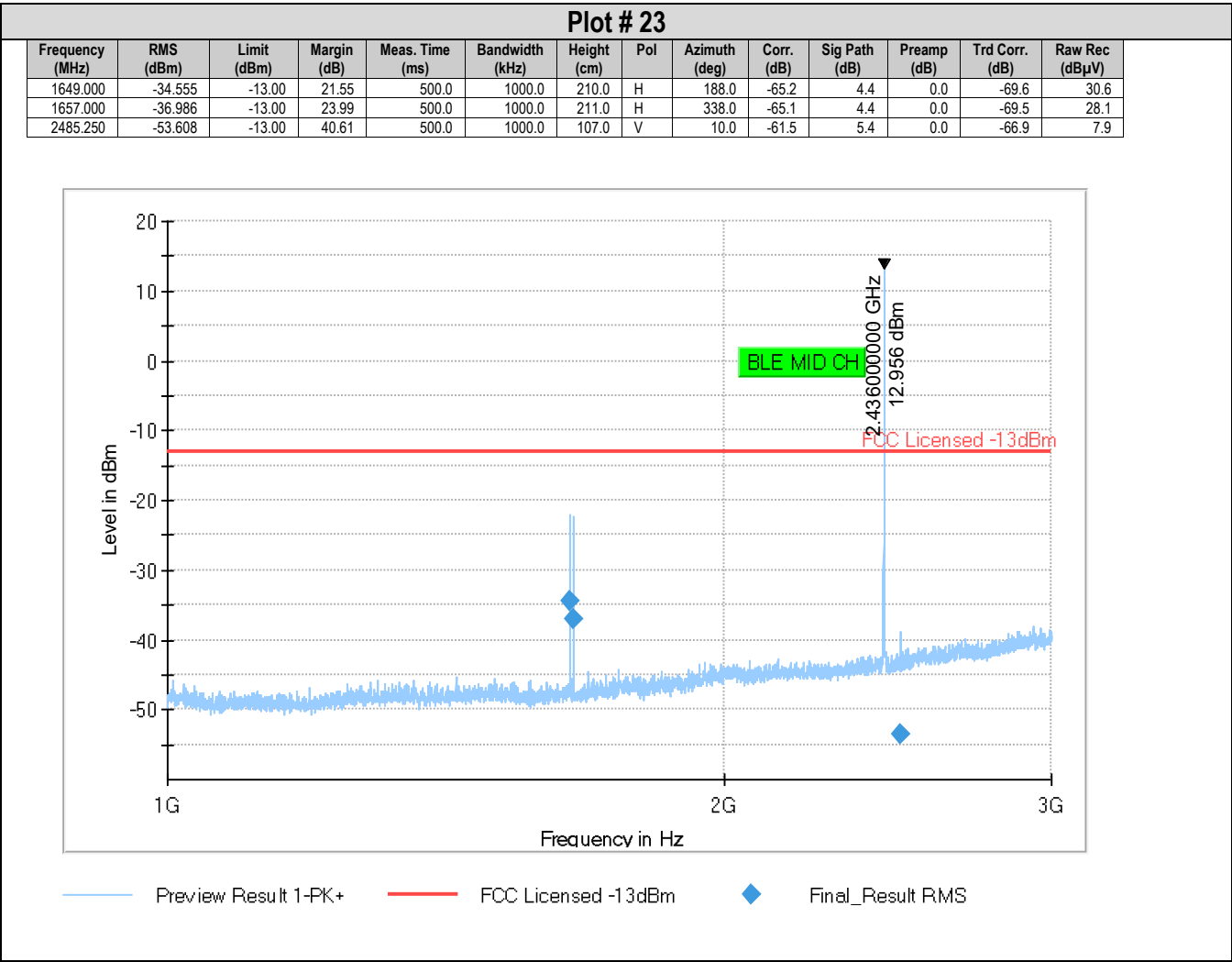


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

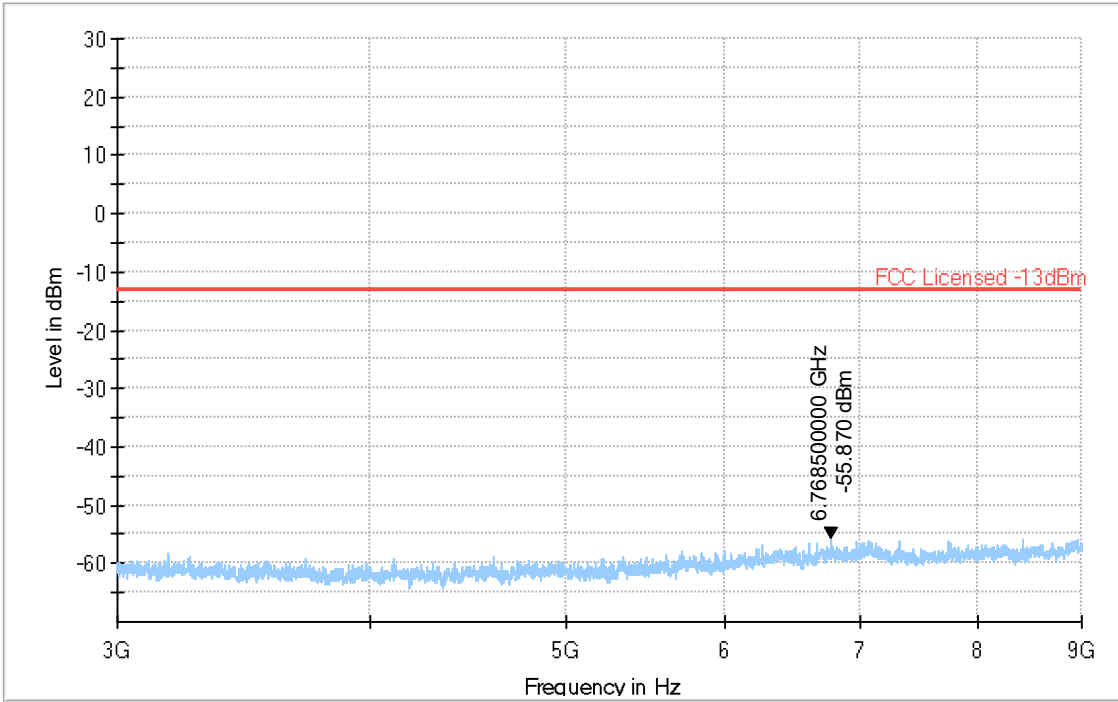
8.2.5.3 LTE Band 5

Plot # 22



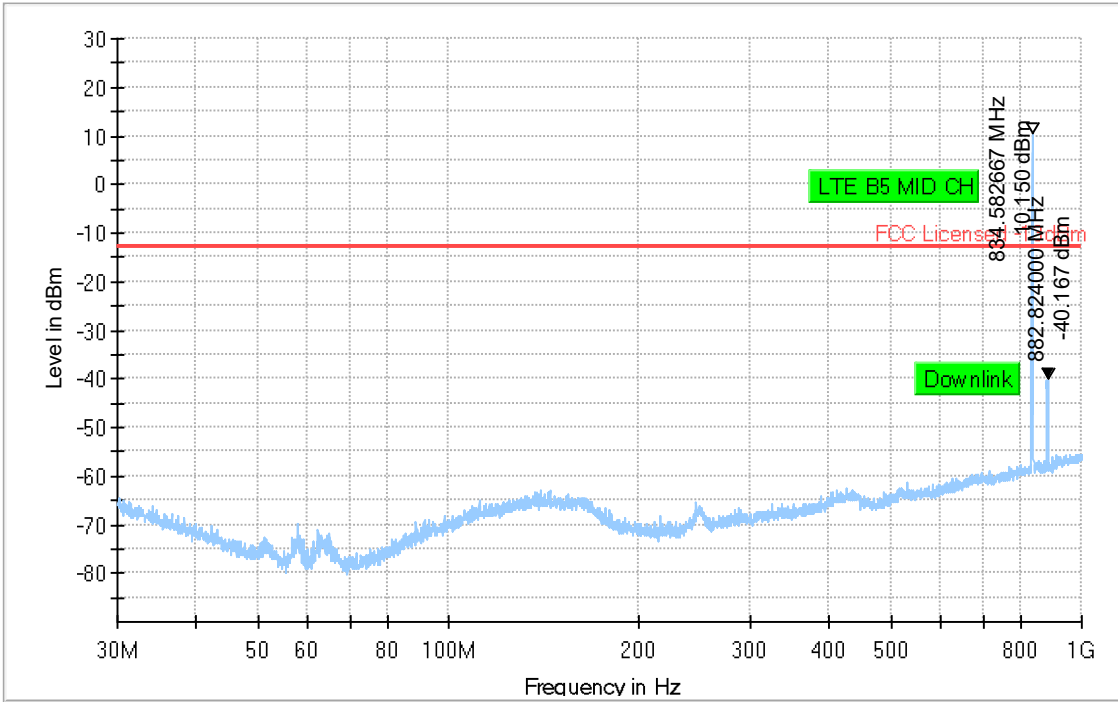


Plot # 24



Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

Plot # 25

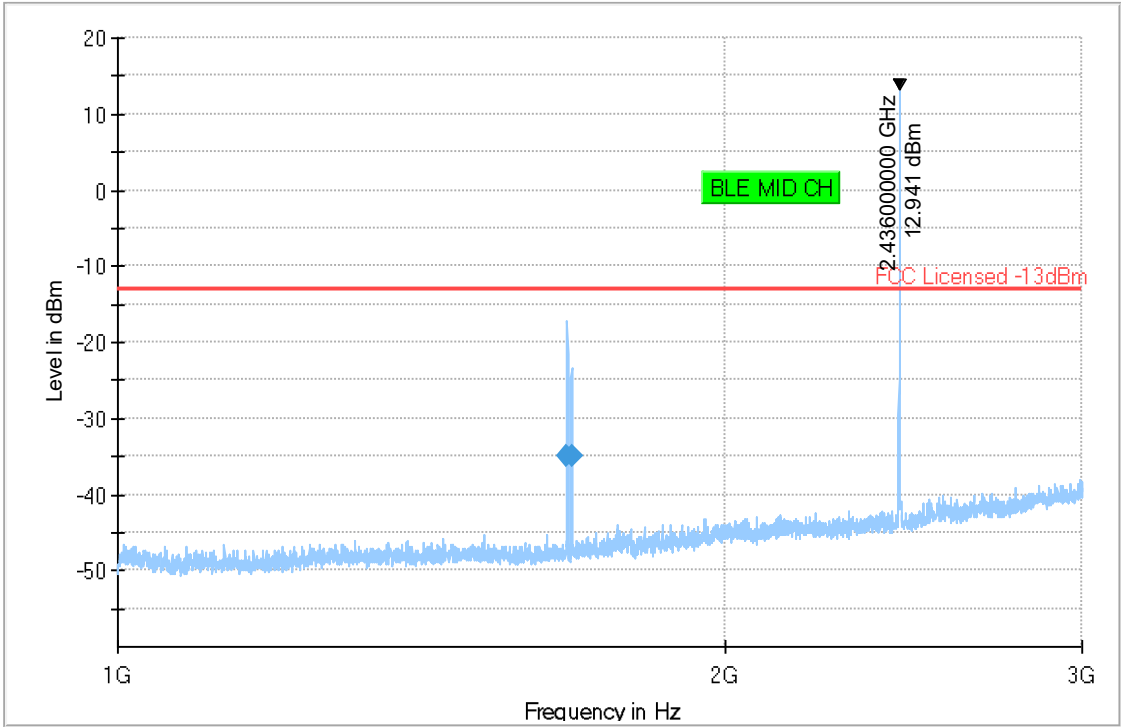


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS



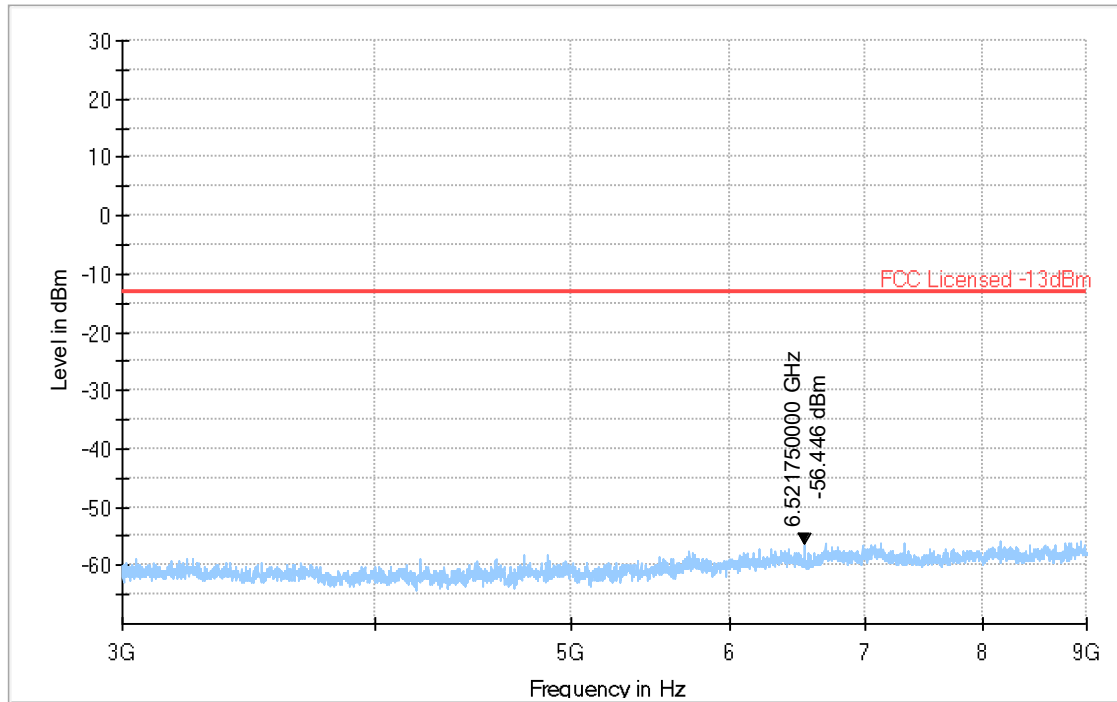
Plot # 26

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1668.860	-35.092	-13.00	22.09	500.0	1000.0	195.0	H	200.0	-65.0	4.5	0.0	-69.5	29.9
1676.930	-34.945	-13.00	21.94	500.0	1000.0	116.0	H	336.0	-64.9	4.5	0.0	-69.4	30.0



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

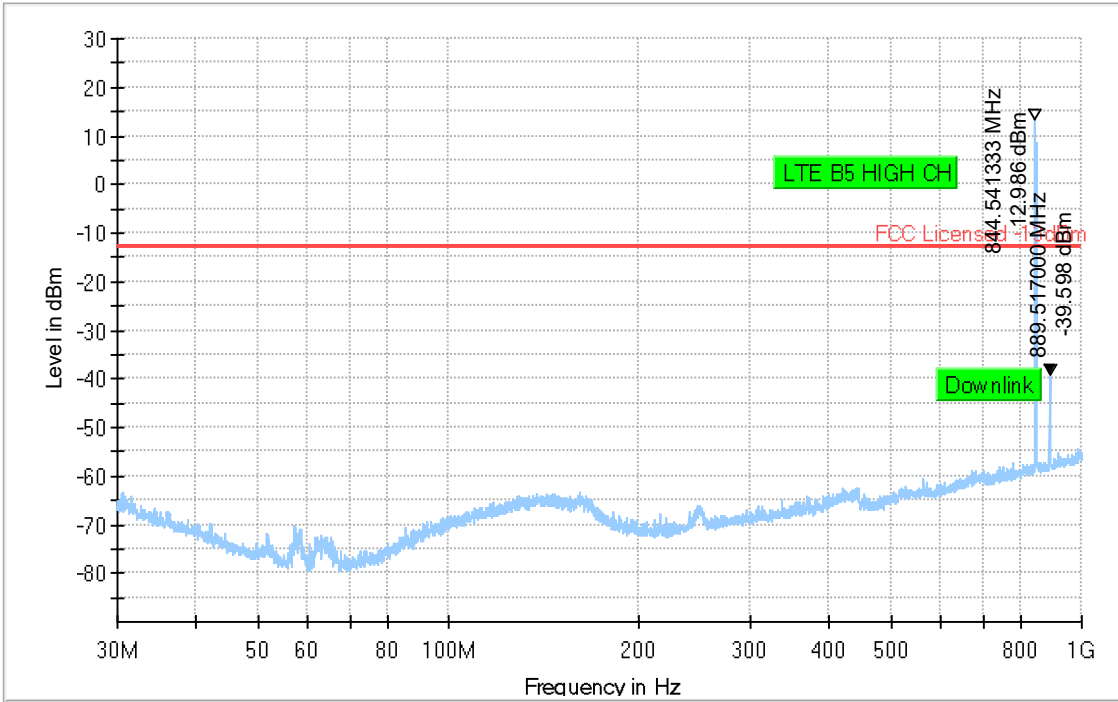
Plot # 27



Preview Result 1-PK+
FCC Licensed -13dBm

* Critical_Freqs PK+
◆ Final_Result RMS

Plot # 28

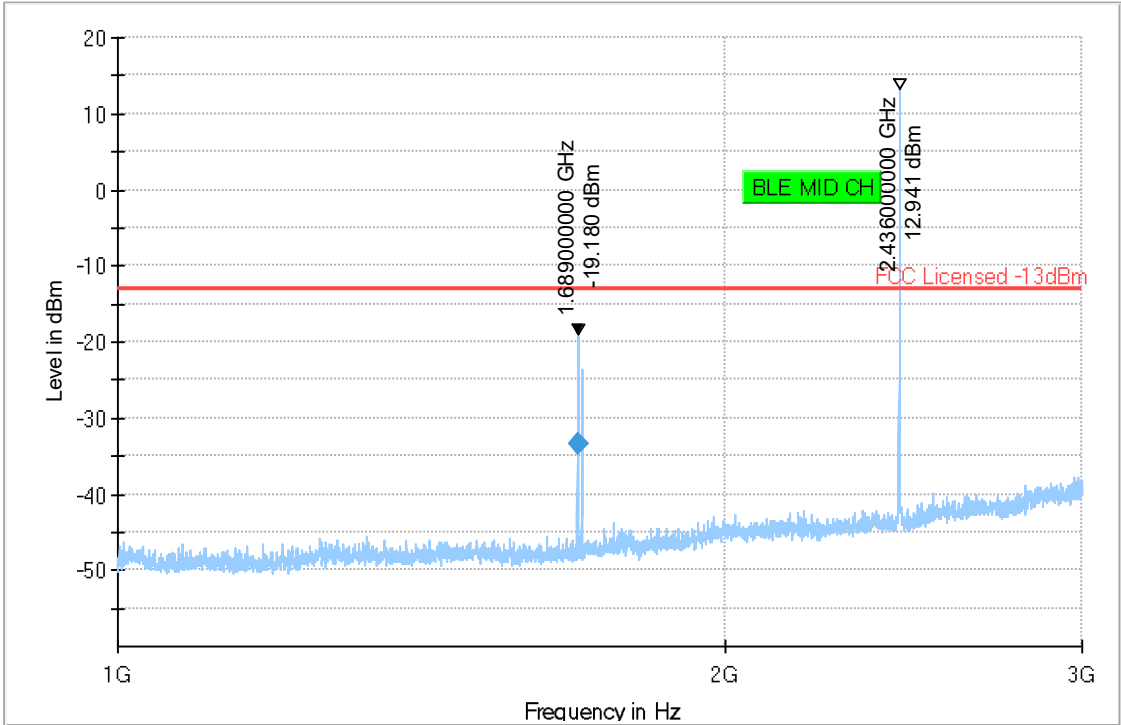


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS



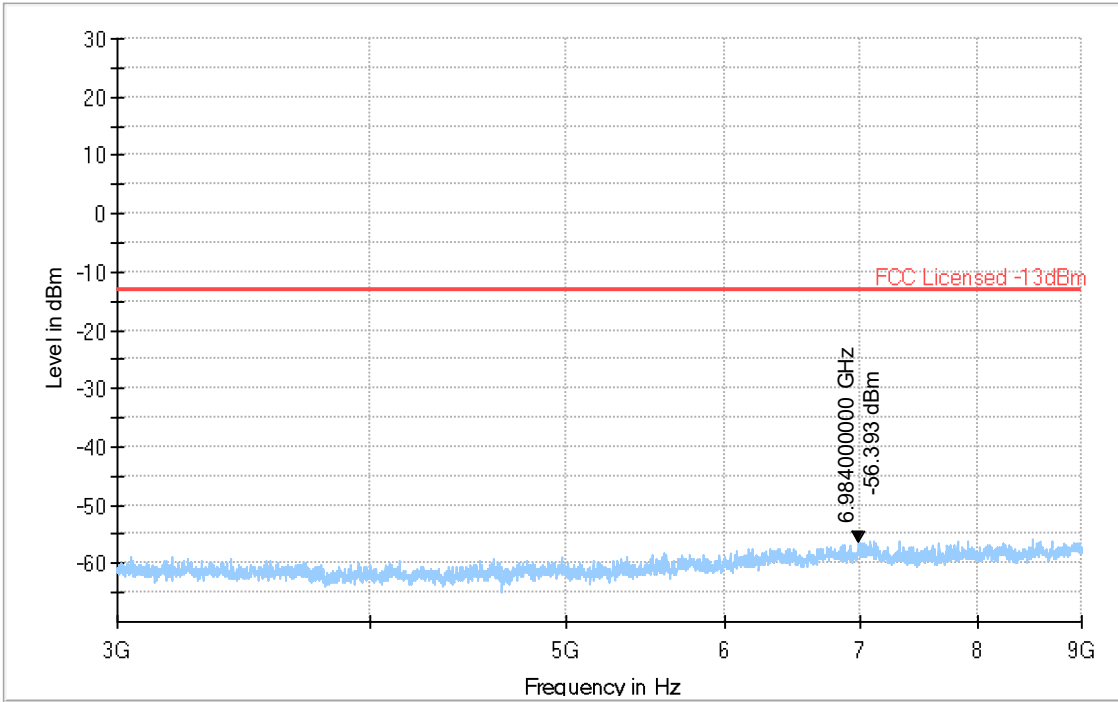
Plot # 29

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1688.891	-33.408	-13.00	20.41	500.0	1000.0	117.0	H	336.0	-64.8	4.6	0.0	-69.4	31.4



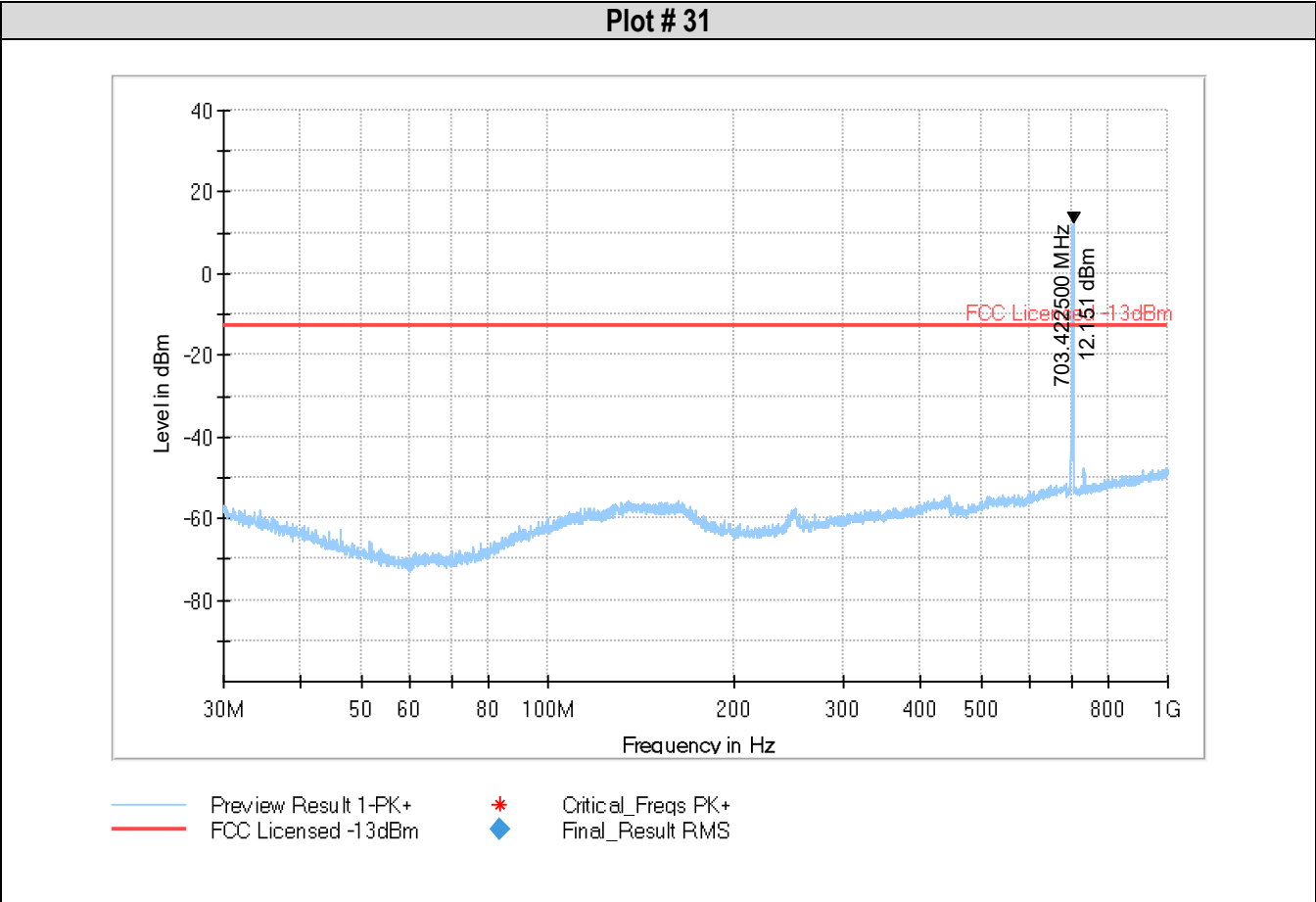
Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

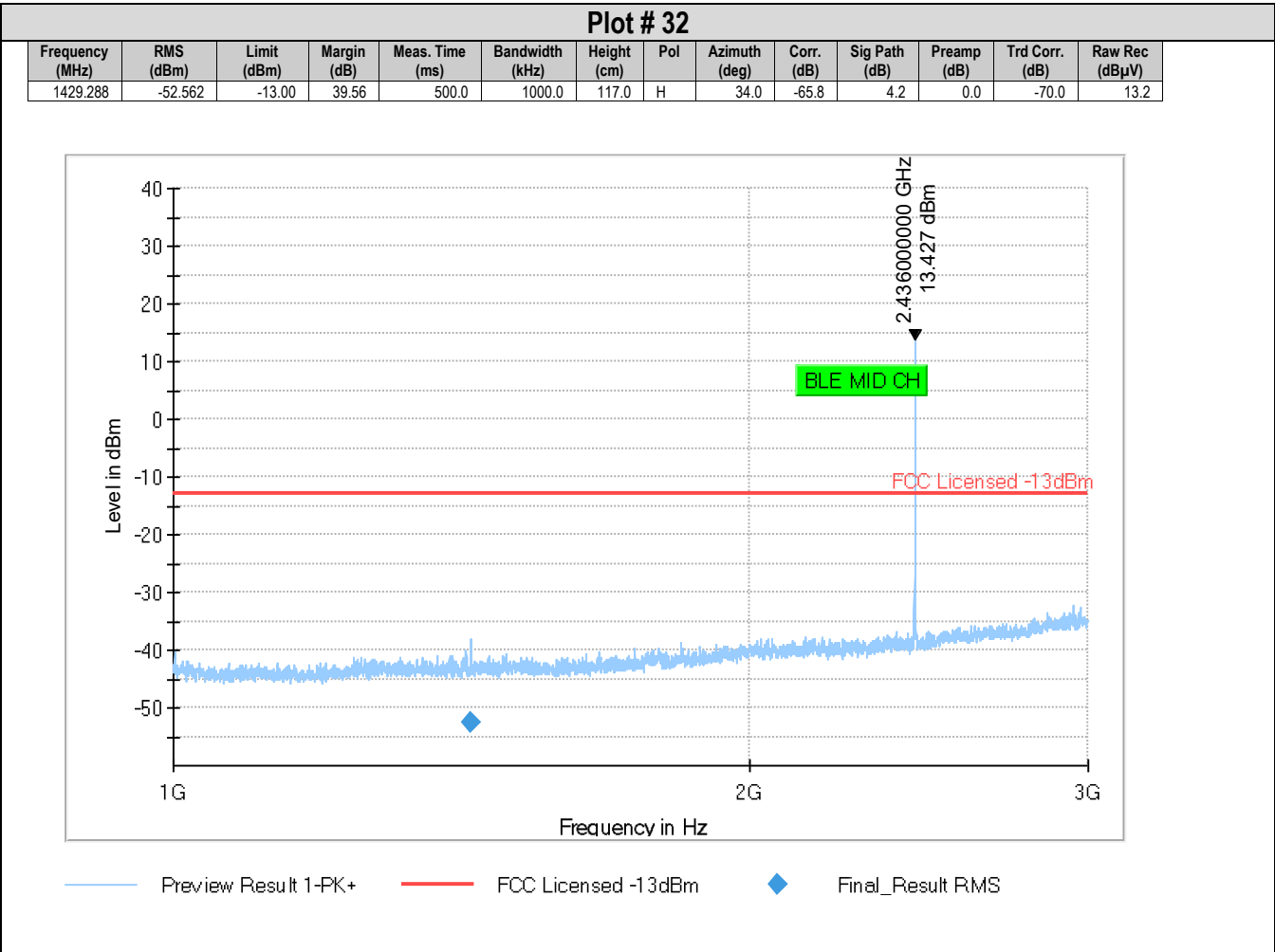
Plot # 30



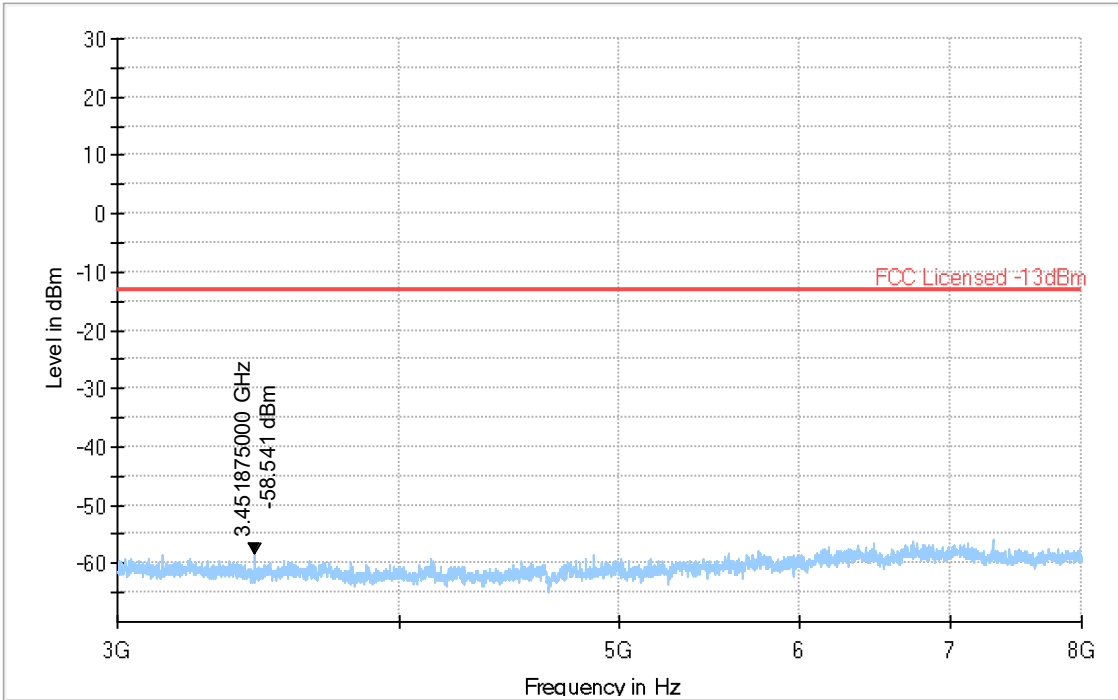
Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

8.2.5.4 LTE Band 12

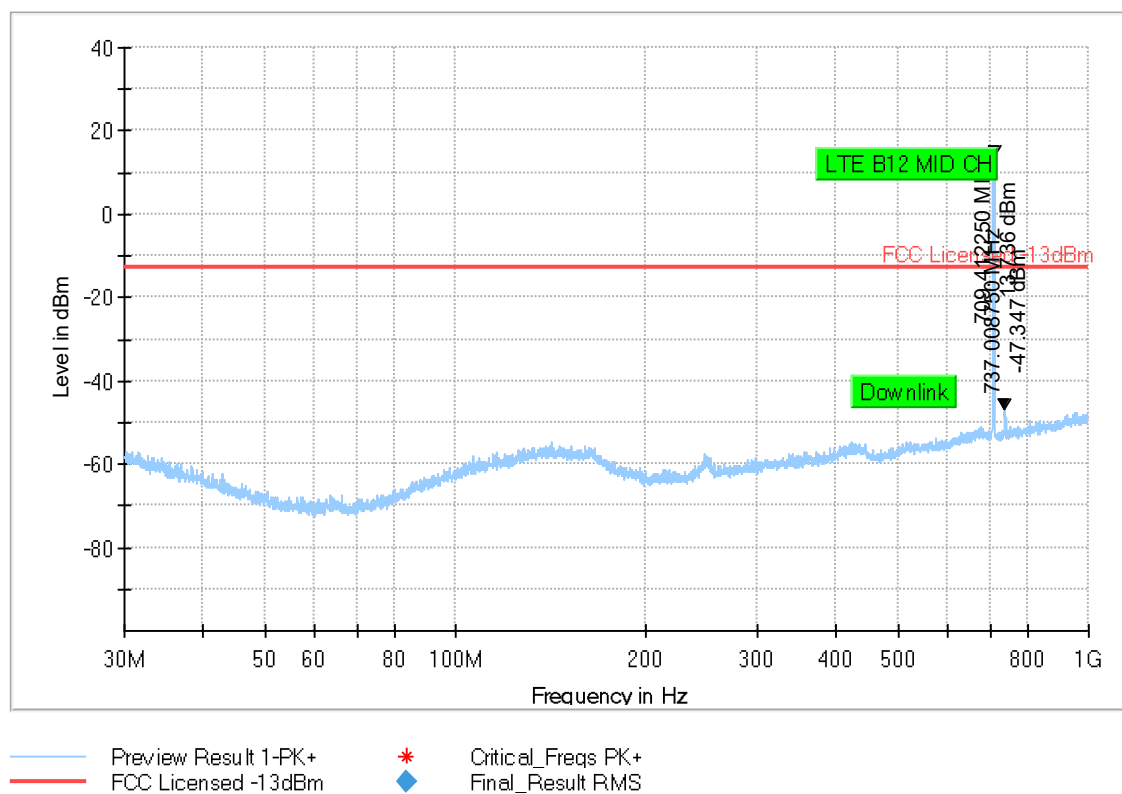




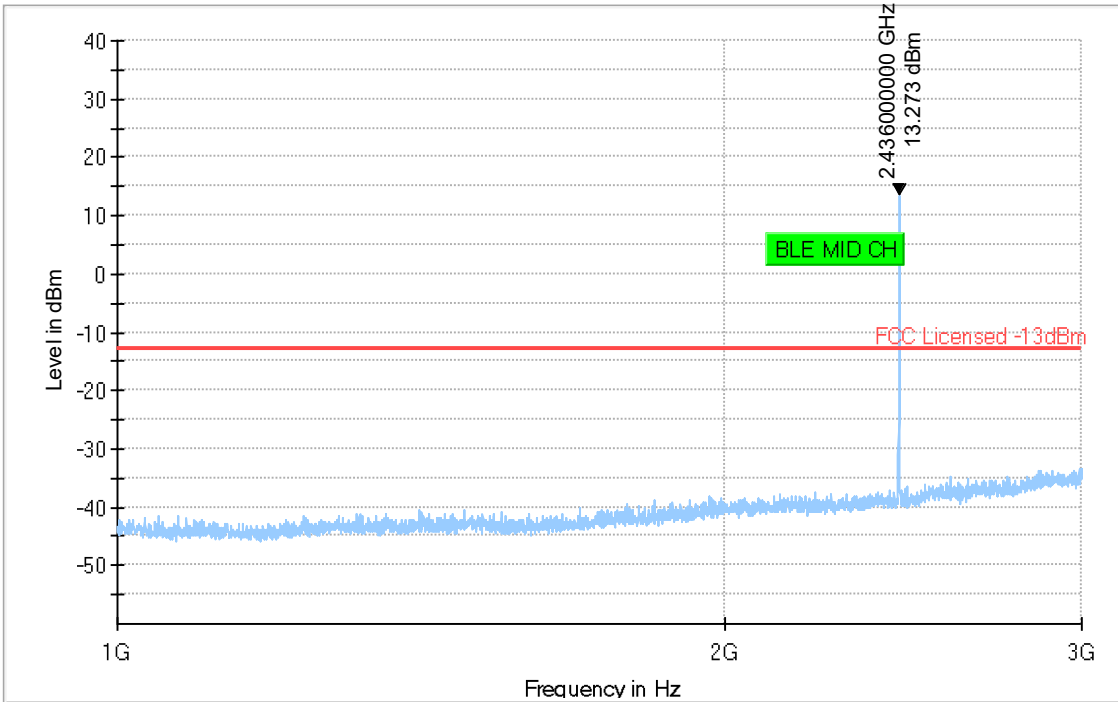
Plot # 33



Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

Plot # 34

Plot # 35

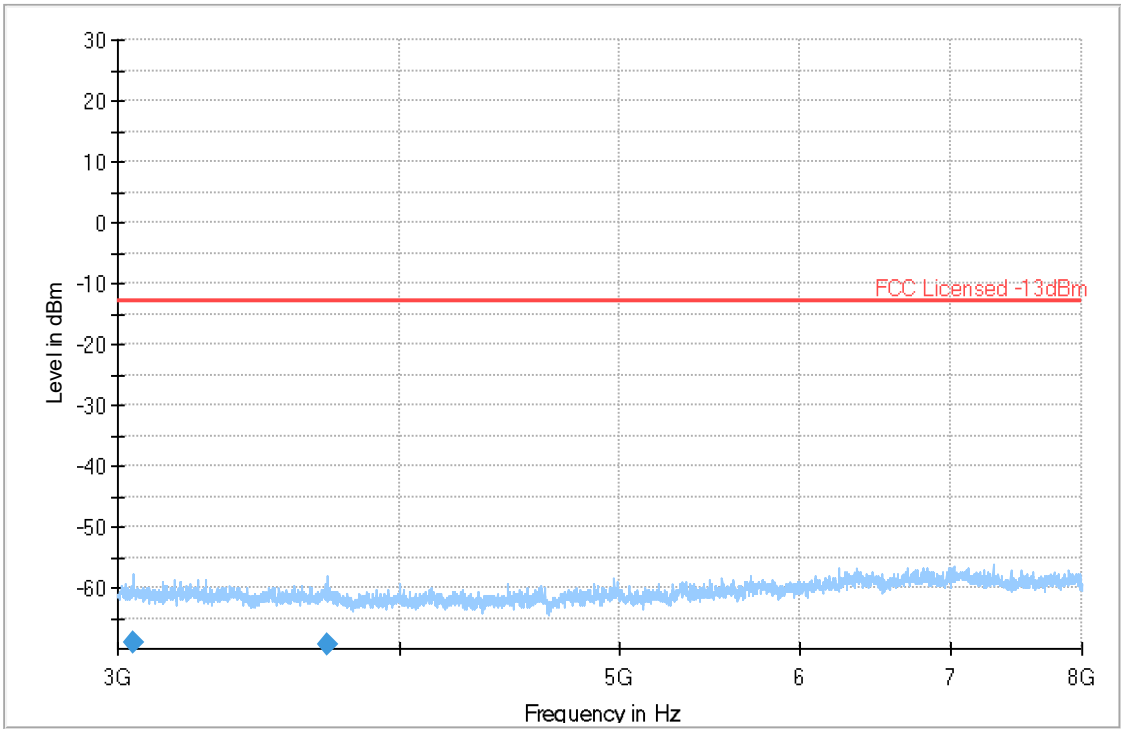


Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

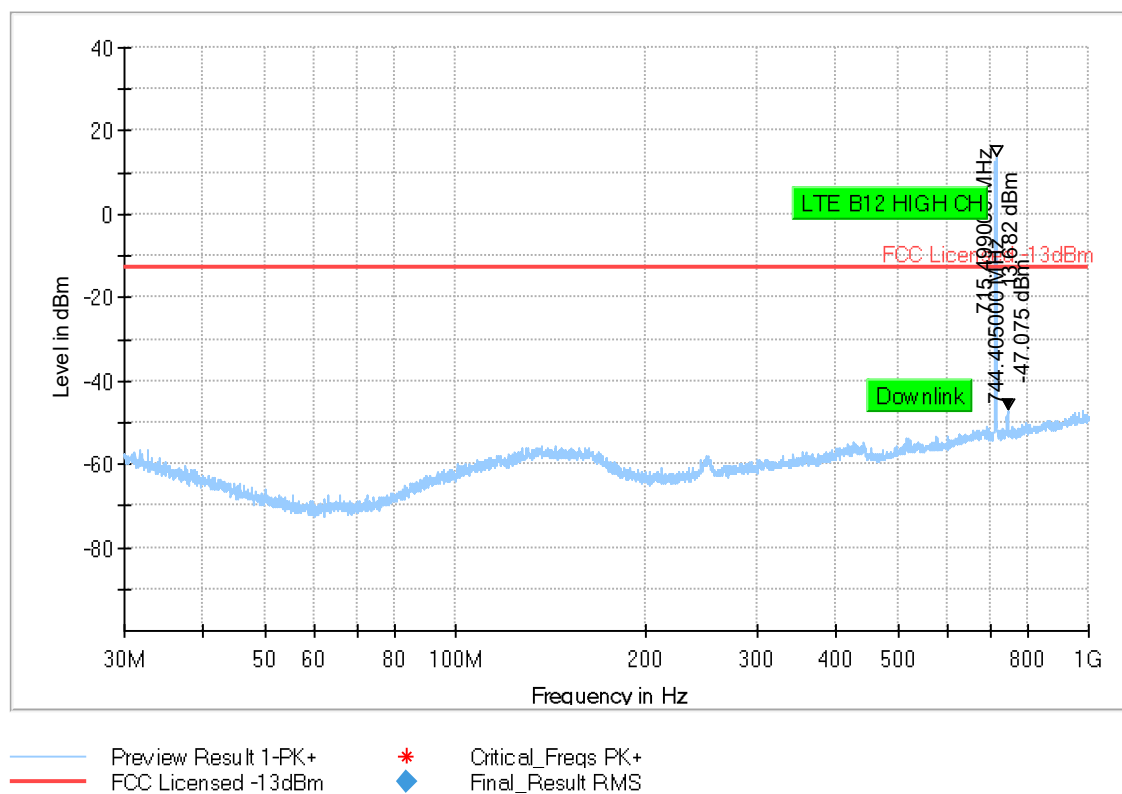


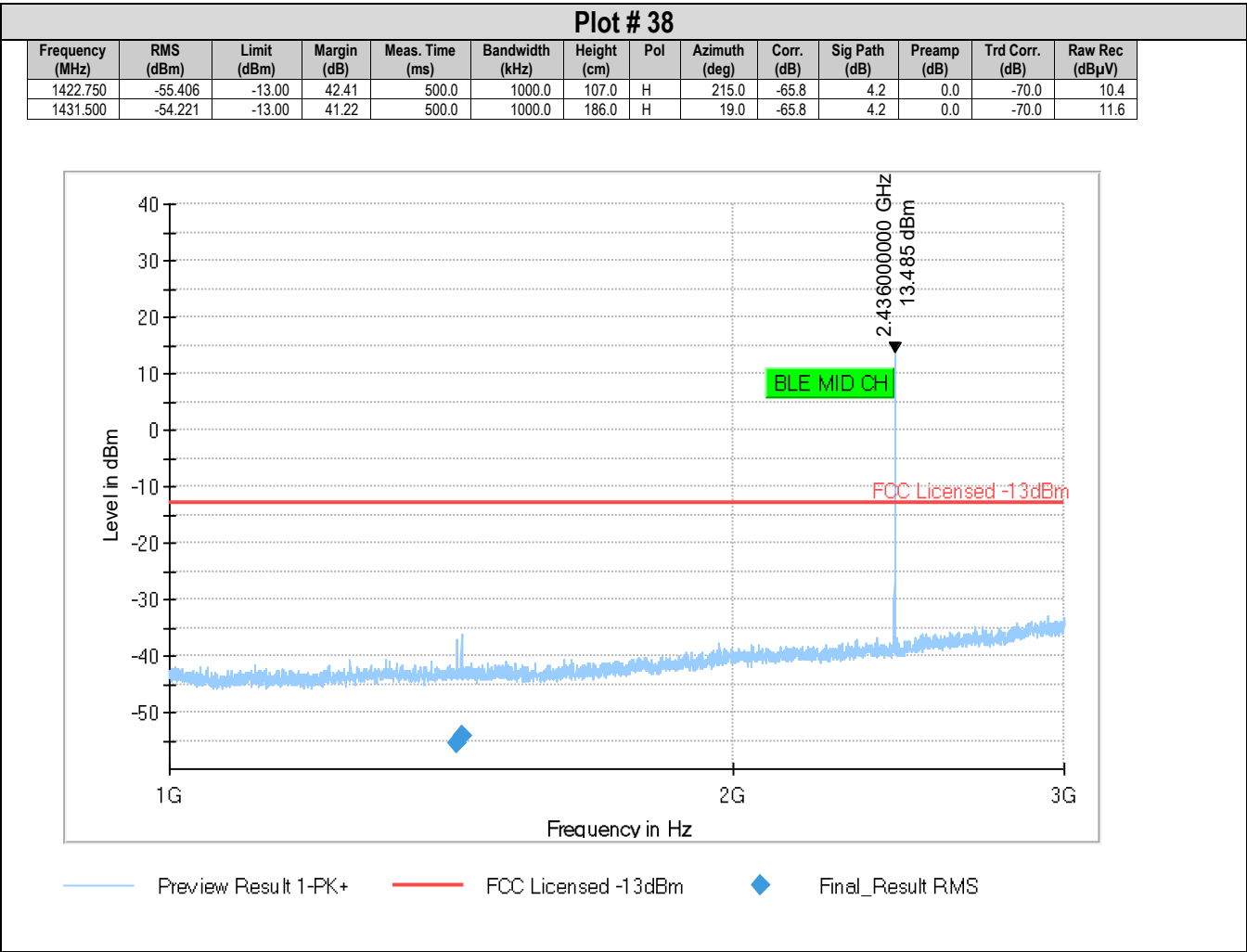
Plot # 36

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3048.246	-68.882	-13.00	55.88	500.0	1000.0	273.0	H	320.0	-	5.3	-45.9	-62.5	34.2
3711.782	-69.512	-13.00	56.51	500.0	1000.0	202.0	H	357.0	-	6.3	-45.5	-62.2	31.9

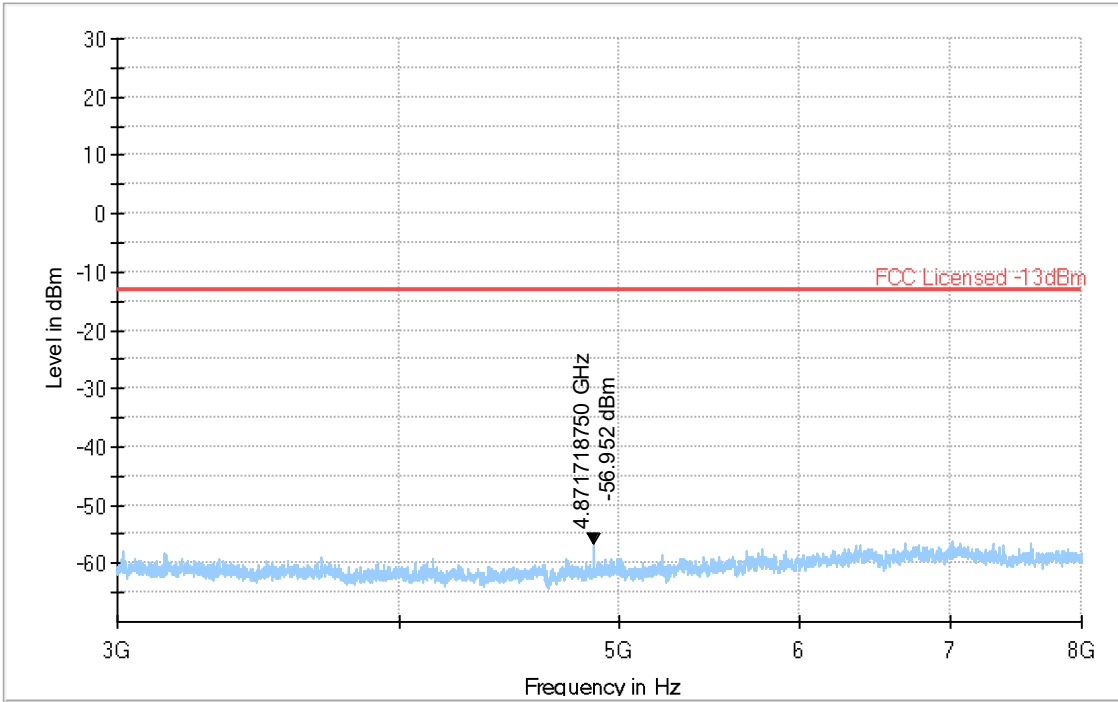


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

Plot # 37

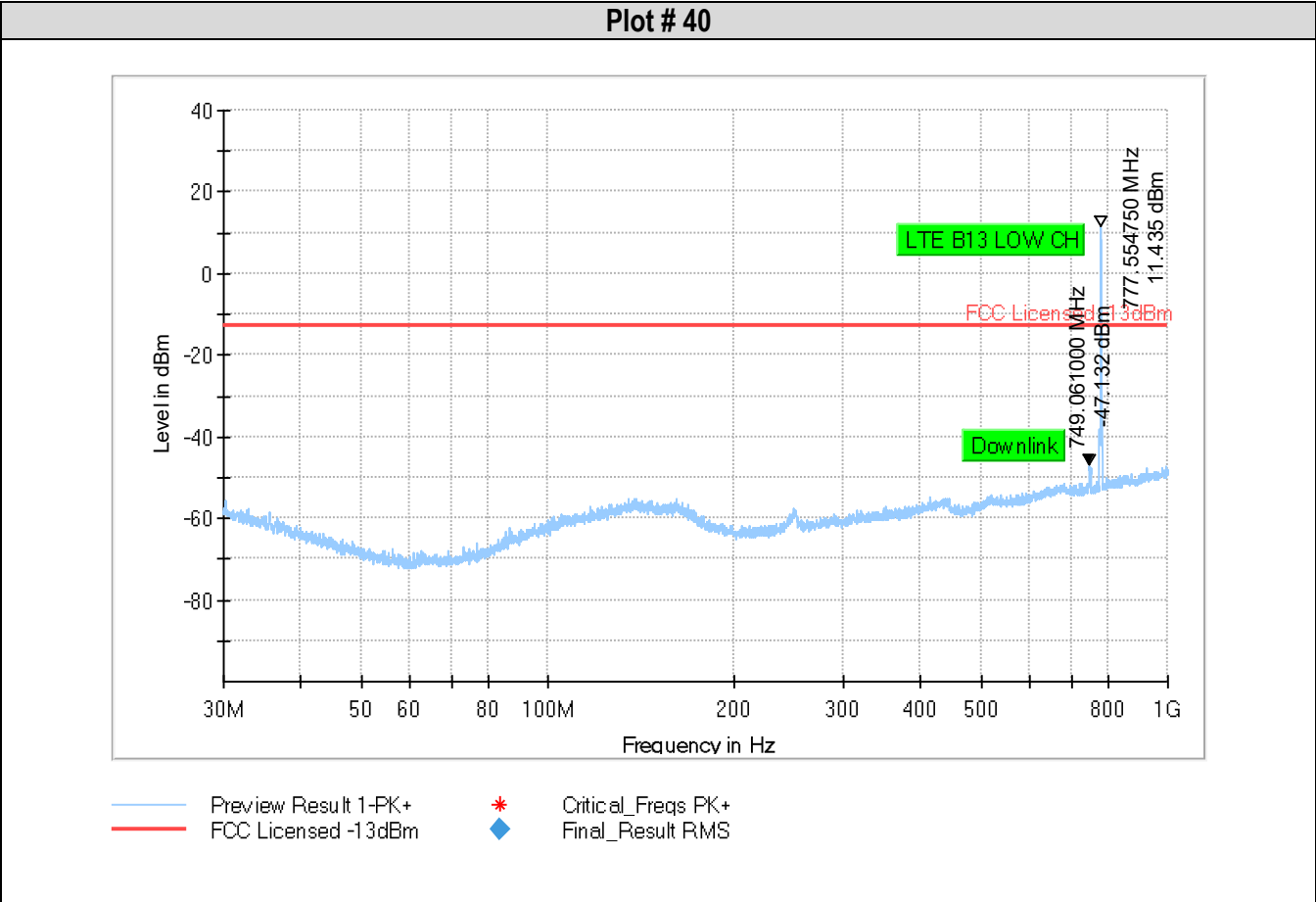


Plot # 39



Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

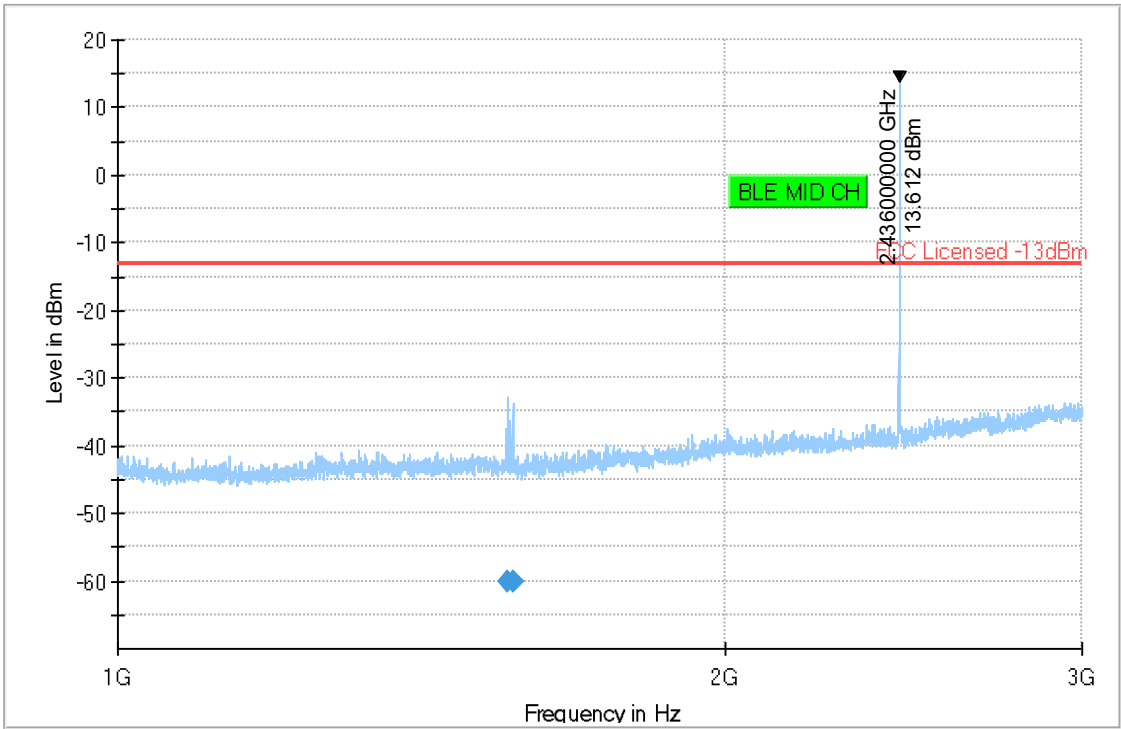
8.2.5.5 LTE Band 13





Plot # 41

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1560.250	-60.036	-13.00	47.04	500.0	1000.0	330.0	H	250.0	-65.5	4.5	0.0	-70.0	5.4
1568.380	-60.132	-13.00	47.13	500.0	1000.0	338.0	H	350.0	-65.4	4.5	0.0	-69.9	5.3

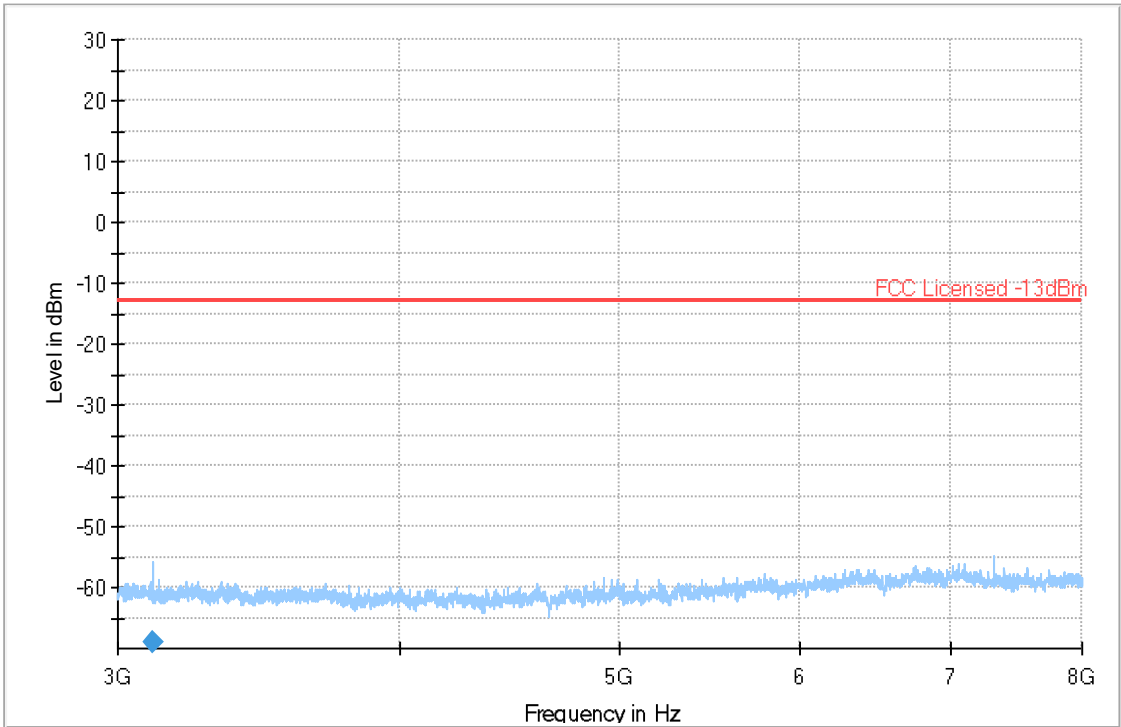


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS



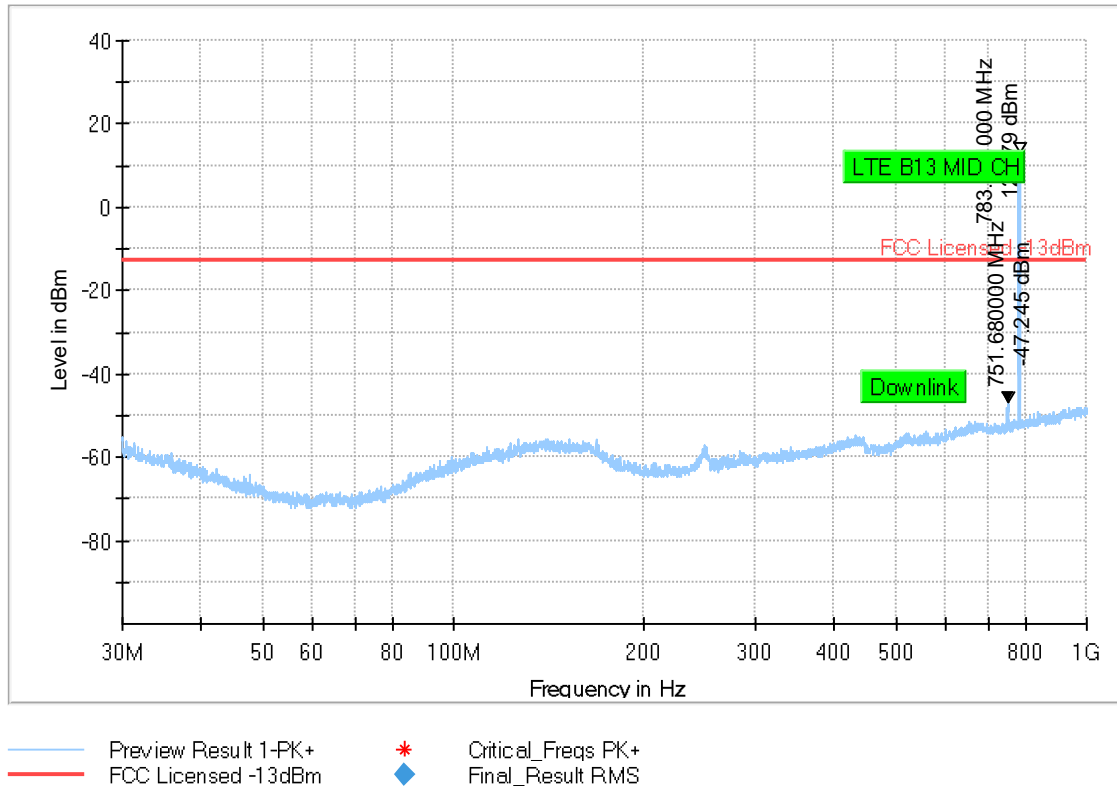
Plot # 42

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3110.250	-69.028	-13.00	56.03	500.0	1000.0	150.0	H	205.0	-	5.4	-45.9	-62.5	33.9



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

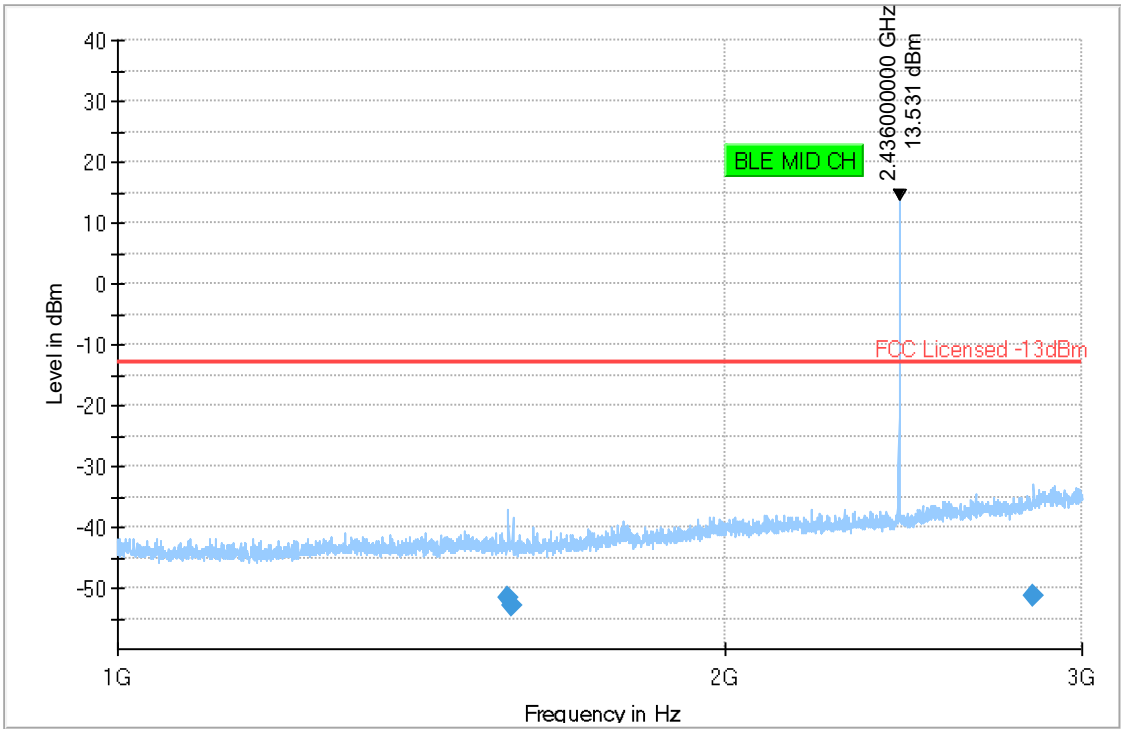
Plot # 43





Plot # 44

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1560.052	-51.756	-13.00	38.76	500.0	1000.0	116.0	H	345.0	-65.5	4.5	0.0	-70.0	13.7
1568.000	-52.991	-13.00	39.99	500.0	1000.0	143.0	H	31.0	-65.4	4.5	0.0	-69.9	12.5
2839.500	-51.395	-13.00	38.39	500.0	1000.0	228.0	H	171.0	-60.3	5.9	0.0	-66.2	8.9

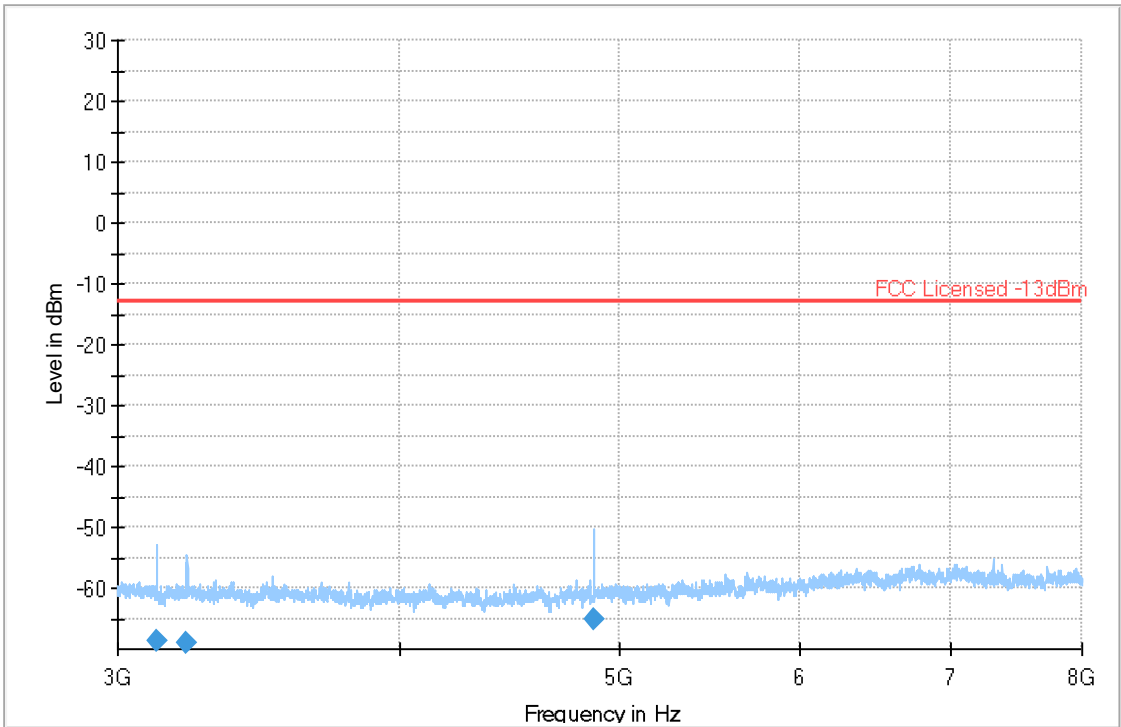


Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS



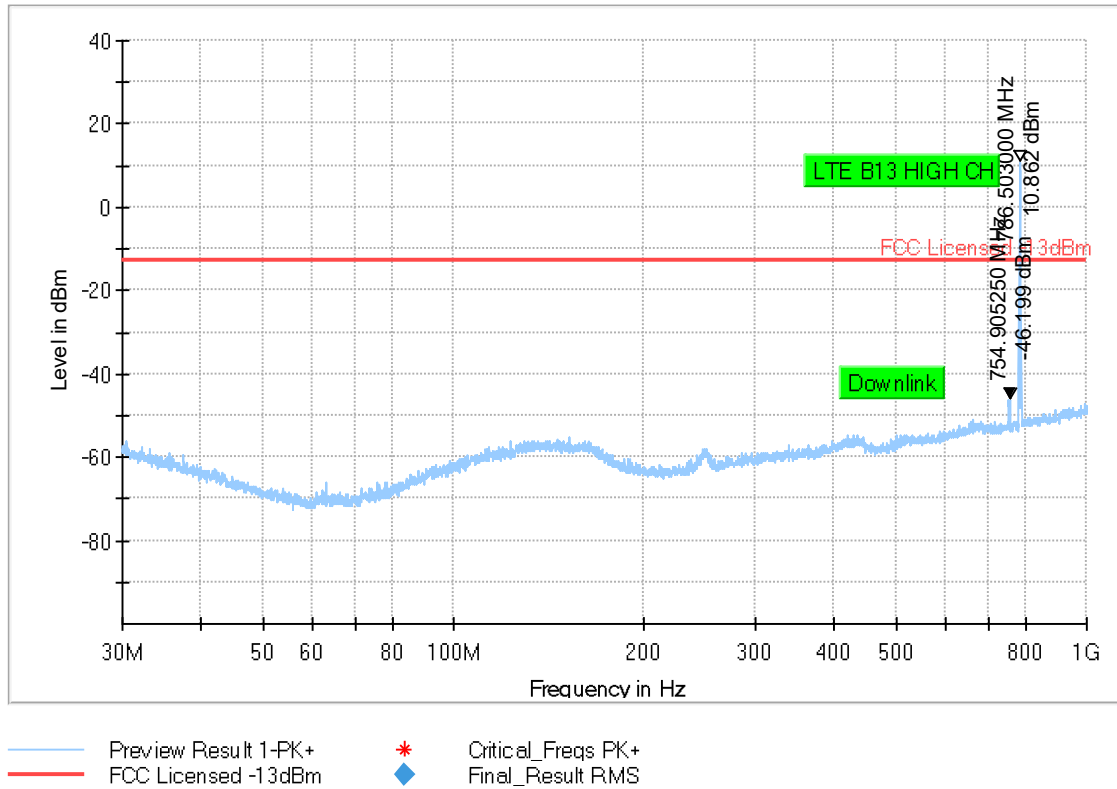
Plot # 45

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
3120.065	-68.868	-13.00	55.87	500.0	1000.0	161.0	V	-28.0	-	5.5	-45.9	-62.5	34.1
3219.750	-69.110	-13.00	56.11	500.0	1000.0	142.0	H	48.0	-	5.5	-45.9	-62.6	33.8
4871.625	-65.287	-13.00	52.29	500.0	1000.0	143.0	V	246.0	-	7.0	-45.9	-61.1	34.7



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS

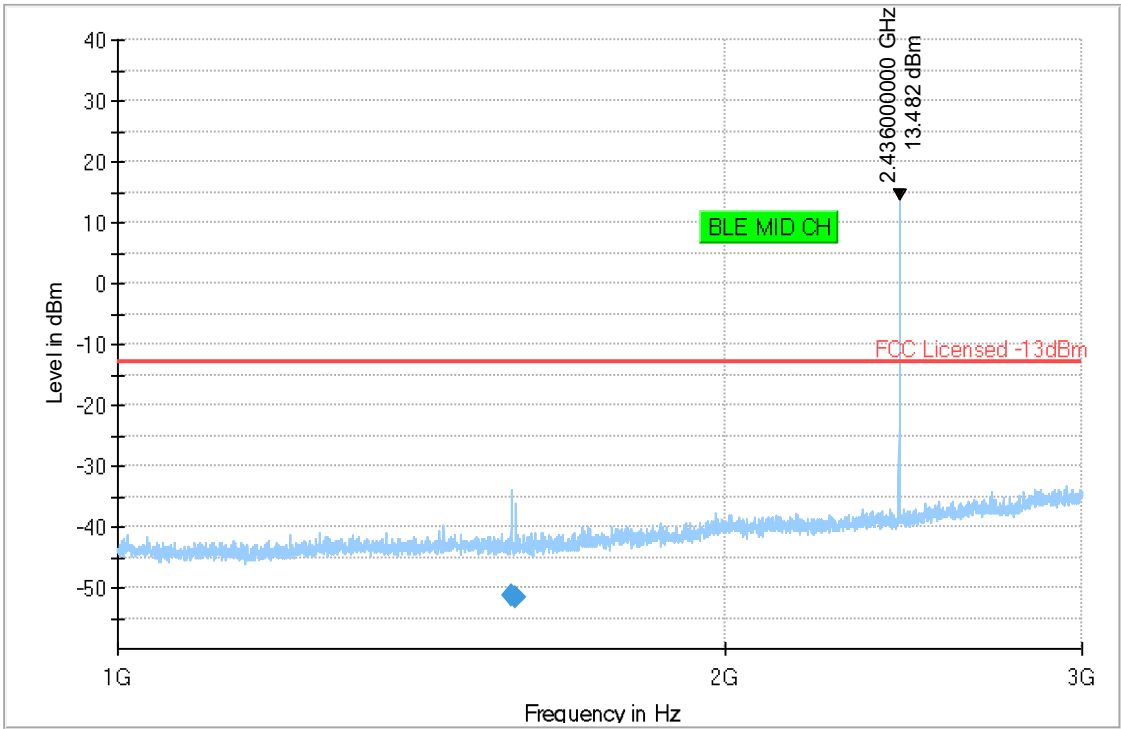
Plot # 46





Plot # 47

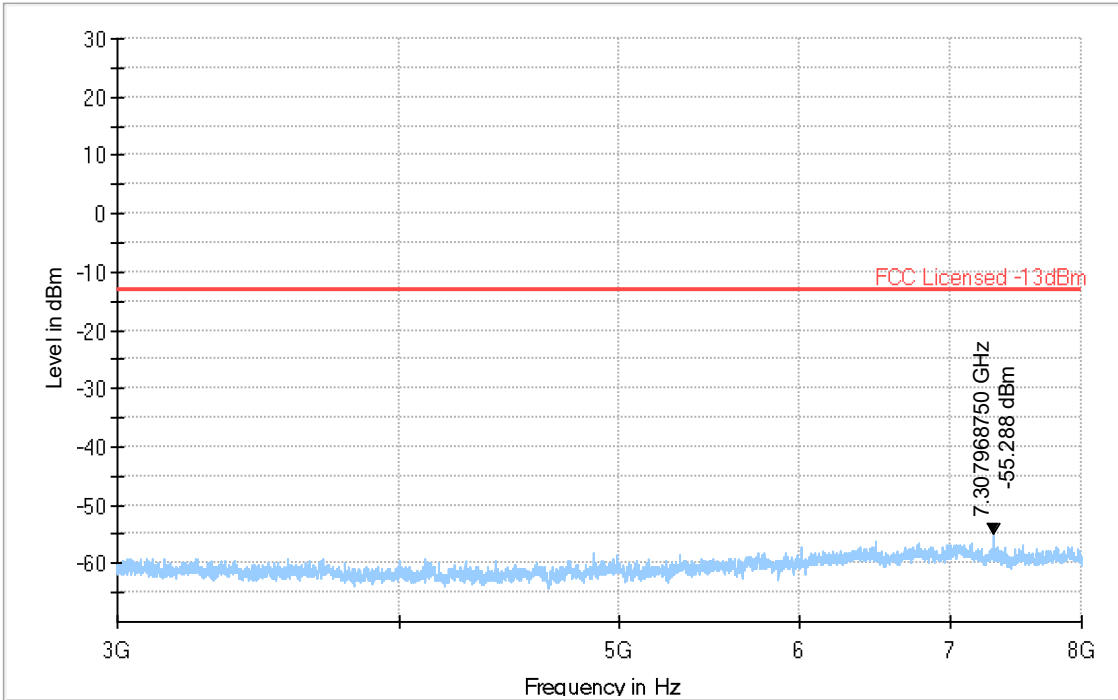
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB)	Raw Rec (dBμV)
1565.121	-51.212	-13.00	38.21	500.0	1000.0	100.0	H	349.0	-65.5	4.5	0.0	-69.9	14.2
1572.976	-51.493	-13.00	38.49	500.0	1000.0	100.0	H	-10.0	-65.4	4.5	0.0	-69.9	13.9



Preview Result 1-PK+ FCC Licensed -13dBm Final_Result RMS



Plot # 48



Preview Result 1-PK+ * Critical_Freqs PK+
FCC Licensed -13dBm ◆ Final_Result RMS

9 Test setup photos

Setup photos are included in supporting file name: "EMC_JIOBI_013_25001_FCC_22_24_27_Setup_Photos"

10 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 THERMOMETER	Control Company	4410,90080-03	230712972	3 Years	10/18/2023
Signal Analyzer	R&S	FSV40	101022	3 Years	09/25/2023
Multimeter	Fluke	115	56090717MV	3 Years	09/26/2023
Software	EMC32	Version 10.50.40	-	-	-
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	1201.002K50-127068-mX	3 Years	10/2/2024

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.

11 Revision History

Date	Report Name	Changes to report	Prepared by
2025-06-26	EMC_JIOBI_013_25001_FCC_22_24_27	Initial Version	Cheng Song

<<< The End >>>