



FCC/ISED Test Report

For:
Xirgo Technologies, LLC
Model number:
XT4975A

Product Description:
Solar Energy Harvesting Smart Trailer Solution.

FCC ID: GKM-XT4975A
IC ID: 10281A-XT4975A

Per:
47 CFR: Part 22, Part 24, Part 27
RSS-130; RSS-132 Issue 3; RSS-133 Issue 6; RSS-139 Issue 3

REPORT #: EMC_XIRGO_122_17001_FCC_22_24_27_ISED

DATE: 04/26/2018



A2LA Accredited

IC recognized #
3462B-2

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1 Assessment

The following device as further described in section 3 of this report was evaluated for radiated spurious emissions in simultaneous transmission of cellular and unlicensed radios according to criteria specified in the Code of Federal Regulations Title 47 parts 22, 24, 27 and Industry Canada Radio Standard Specifications RSS: 130, 132 Issue 3, 133 Issue 6 and 139 Issue3.

No deficiencies were ascertained.

Responsible for Testing Laboratory:

04/26/2018	Compliance	James Donnellan (Lab Manager)	
Date	Section	Name	Signature

Responsible for the Report:

04/26/2018	Compliance	Issa Ghanma (EMC Engineer)	
Date	Section	Name	Signature

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

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
Lab Manager:	James Donnellan
Responsible Project Leader:	Sangeetha Sivaraman

2.2 Identification of the Client

Applicant's Name:	Xirgo Technologies, LLC
Street Address:	188 Camino Ruiz
City/Zip Code	Camarillo, CA 93012
Country	USA

2.3 Identification of the Manufacturer

Manufacturer's Name:	Same as applicant.
Manufacturers Address:	-----
City/Zip Code	-----
Country	-----
Contact	-----
Phone No.	-----
e-mail:	-----

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No:	XT4975A		
HW Version :	XT4975A-001		
SW Version :	XT4975A-01		
FCC-ID :	GKM-XT4975A		
IC-ID:	10281A-XT4975A		
PMN:	XT4975A		
Module Name and Number:	TOBY-R200		
FCC ID:	XPY1EHM44NN		
IC ID:	8595A-1EHM44NN		
Max. documented EIRP values:	Band	Frequency range (MHz)	EIRP (dBm)
	GPRS 850	824.2 – 848.8	31.50
	GPRS 1900	1850.2 – 1909.8	31.83
	UMTS 850	826.4 – 846.6	25.75
	UMTS 1900	1852.4 – 1907.6	28.22
	LTE 2	1851.6 – 1908.4	27.42
	LTE 4	1715.0 – 1750.0	27.96
	LTE 5	874.0 – 889.0	25.51
	LTE 12	699.97 – 715.03	28.86
Operating Voltage Range	Low 8 V / Nom 12 V / High 24 V		
Operating Temperature Range	Low -40 °C Nom 25 °C High 70°C		
Other Radios included in the	GPS, Bluetooth LE		
Sample Revision	☐ Prototype Unit; ☒ Production Unit; ☐ Pre-Production		
EUT Dimensions (cm)	12 X 21.5 X 2.7		
Weight (grams)	680		
EUT Diameter	☒ < 60 cm ☐ Other _____		

3.2 EUT Sample details

EUT #	Unit ID NO.	HW Version	SW Version	Comments
1	SN2	XT4975A-001	XT4975A-01	Radiated Measurements

3.3 Antenna Specification

Name	Taoglas antenna						
Frequency MHz	698~803	824~894	880~960	1710~1880	1850~1990	1920~2170	2500~2690
Peak Gain dBi	-0.21	0.77	0.61	3.05	2.92	3.17	3.72

3.4 Accessory Equipment

AE #	Type	Comments
1	8-pin bayonet connector	If an external power source is available

3.5 Test Sample Configuration

Set-up #	EUT / AE used for set-up	Comments
1	EUT #1	Radiated Measurements

3.6 Mode of Operation details

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	Cellular and BLE Co-Transmit	Cellular was tested on Low, Mid, High Channels Co-Transmission with Bluetooth LE Mid channel (worst case).

4 Subject of Investigation

The objective of the evaluation conducted by CETECOM Inc. is to support a request for new equipment authorization under FCC ID: GKM-XT4975A / IC ID: 10281A-XT4975A

The pre-certified module to be integrated (TOBY-R200) as described in Section 3, Radiated Spurious Emissions test was performed for simultaneous transmission case. Results have been checked to meet limits per Code of Federal Regulations Title 47 parts 22, 24, 27 and Industry Canada Radio Standard Specifications RSS: 130, 132 Issue 3, 133 Issue 6 and 139 Issue 3.

The conducted module test data that can be obtained under the FCC Filing ID: XPY1EHM44NN and IC ID: 8595A-1EHM44NN is applicable for the host described in section 3.

4.1 Dates of Testing:

03/23/2018 – 04/23/2018

4.2 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=1.

Radiated measurement

9 kHz to 30MHz	±2.5 dB (Magnetic Loop Antenna)
30 MHz to 1000 MHz	±2.0 dB (Biconilog Antenna)
1 GHz to 40 GHz	±2.3 dB (Horn Antenna)

4.3 Environmental Conditions during Testing:

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

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

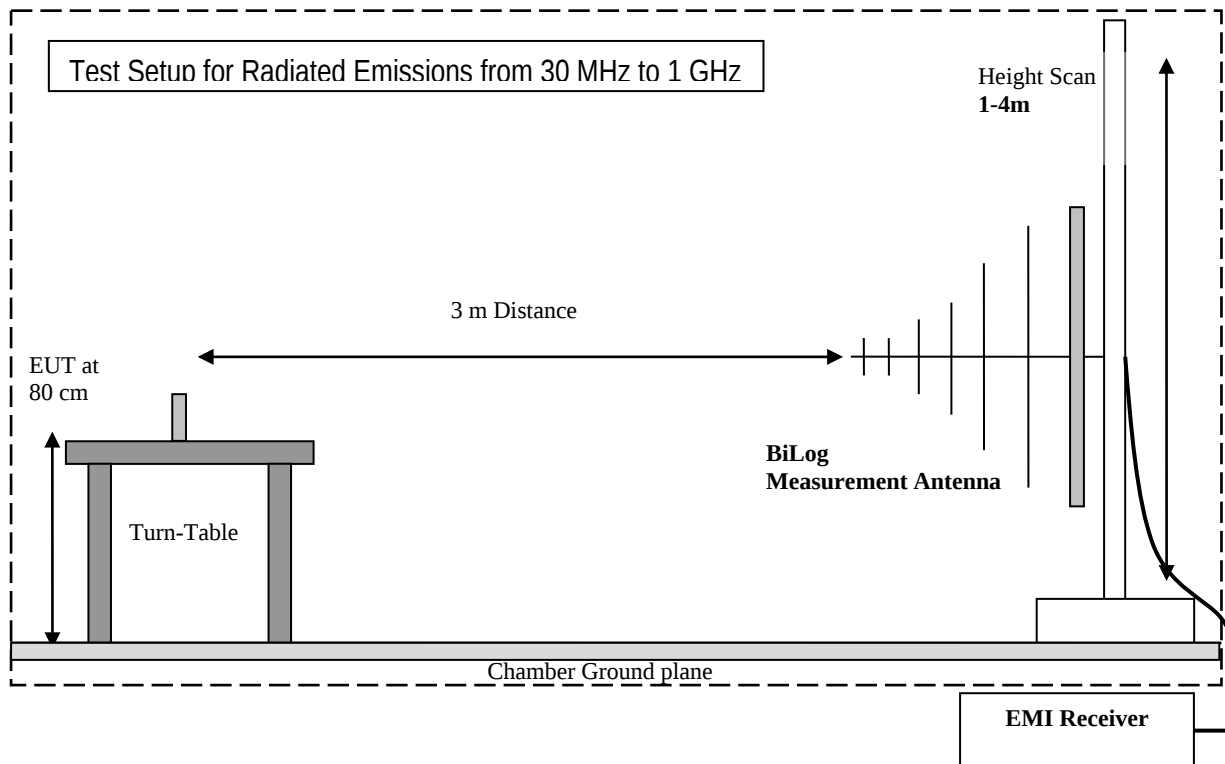
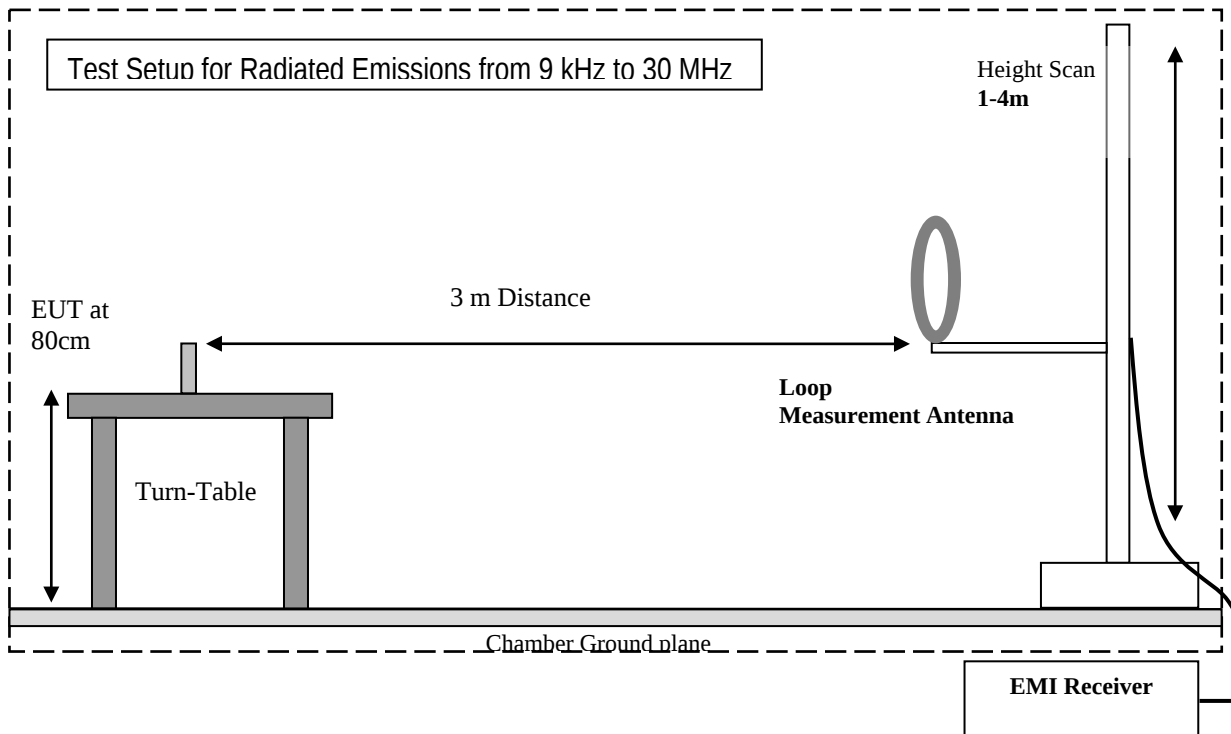
Deviating test conditions are indicated at individual test description where applicable.

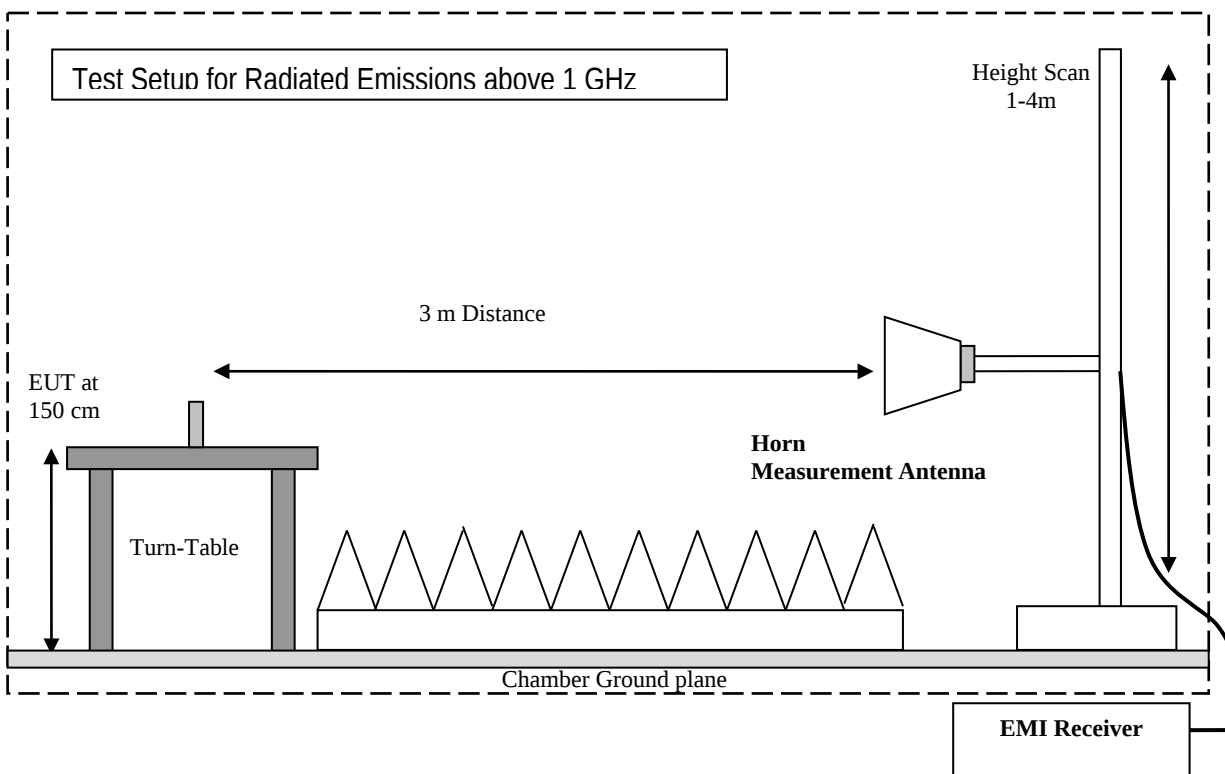
5 Measurement Procedures

Testing is performed according to the guidelines provided in FCC publication (KDB) 971168 D01 v03 – “Measurement Guidance for Certification of Licensed Digital Transmitters” and according to ANSI C63.26 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.





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 $\text{dB}\mu\text{V}$
- 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:

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

Example:

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



6 Measurement Results Summary

6.1 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	-	☐	☐	☐	☒	Complies Note 1 Note 2
§2.1055; §22.355	Frequency Stability	Nominal	-	☐	☐	☐	☒	Complies Note 1 Note 2
§2.1049; §22.917	Occupied Bandwidth	Nominal	-	☐	☐	☐	☒	Complies Note 1 Note 2
§2.1051; §22.917	Band Edge Compliance	Nominal	-	☐	☐	☐	☒	Complies Note 1 Note 2
§2.1051; §22.917	Conducted Spurious Emissions	Nominal	-	☐	☐	☐	☒	Complies Note 1 Note 2
§2.1053; §22.917(a); RSS-132 Issue 3-5.5	Radiated Spurious Emissions	Nominal	GSM UMTS LTE	☒	☐	☐	☐	Complies

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

Note 2: Leveraged from module certification TOBY-R200 FCC ID: XPY1EHM44NN/ IC ID: 8595A-1EHM44NN



6.2 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	-	☐	☐	☐	■	Complies Note 1 Note 2
§2.1055; §24.235	Frequency Stability	Nominal	-	☐	☐	☐	■	Complies Note 1 Note 2
§2.1049; §24.238	Occupied Bandwidth	Nominal	-	☐	☐	☐	■	Complies Note 1 Note 2
§2.1051; §24.238	Band Edge Compliance	Nominal	-	☐	☐	☐	■	Complies Note 1 Note 2
§2.1051; §24.238	Conducted Spurious Emissions	Nominal	-	☐	☐	☐	■	Complies Note 1 Note 2
§2.1053; §24.238(a); RSS-133 Issue 6-6.5.1	Radiated Spurious Emissions	Nominal	GSM UMTS LTE	■	☐	☐	☐	Complies

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

Note 2: Leveraged from module certification TOBY-R200 FCC ID: XPY1EHM44NN/ IC ID: 8595A-1EHM44NN



6.3 FCC 27, RSS-130, RSS-139:

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	Fail	NA	NP	Result
§2.1046; §27.50 (d)	RF Output Power	Nominal	UMTS LTE	☐	☐	☐	■	Complies Note 1 Note 2
§2.1055; §27.54	Frequency Stability	Nominal	UMTS LTE	☐	☐	☐	■	Complies Note 1 Note 2
§2.1049; §27.53	Occupied Bandwidth	Nominal	UMTS LTE	☐	☐	☐	■	Complies Note 1 Note 2
§2.1051; §27.53	Band Edge Compliance	Nominal	UMTS LTE	☐	☐	☐	■	Complies Note 1 Note 2
§2.1051; §27.53	Conducted Spurious Emissions	Nominal	UMTS LTE	☐	☐	☐	■	Complies Note 1 Note 2
§2.1053; §27.53(g); §27.53(h); RSS-130 Issue 1-4.6; RSS-139 Issue 3-6.6;	Radiated Spurious Emissions	Nominal	UMTS LTE	■	☐	☐	☐	Complies

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

Note 2: Leveraged from module certification TOBY-R200 FCC ID: XPY1EHM44NN/ IC ID: 8595A-1EHM44NN

7 Test Result Data

7.1 Radiated Spurious Emissions

7.1.1 Measurement according to FCC: CFR 47 Part 2.1053; CFR Part 22.917; CFR Part 24.238, Part 27.53 utilizing KDB 971168 D01 Power Meas License Digital Systems v03, and according to ANSI C63.26 2017

Spectrum Analyzer Settings for FCC 22

Frequency Range	30 MHz – 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

7.1.2 Limits:

- FCC Part 22.917(a) and Part 24.238(a), Part 27.53 (g), and Part 27.53 (h)
- RSS-130-4.6, RSS-132 Issue 3 5.5, RSS-133 Issue 6 6.5.1, RSS-139 Issue 3 6.6

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 = (-13dBm)

7.1.3 Test conditions and setup:

Ambient Temperature (C)	EUT Set-Up #	EUT operating mode	Power Input
22	1	Cellular and BLE Co Transmission	12 V



7.1.4 Measurement result:

Plot #	Cellular Channel	BLE Channel	EUT operating mode	Scan Frequency	Limit (dBm)	Highest emission in dB	Frequency of highest emission in MHz	Result
1 – 3	Low	19	GSM 850	30 MHz – 9 GHz	-13	-49.21	843.51	Pass
4 – 7	Mid	19	GSM 850	9 kHz – 9 GHz	-13	-17.57	0.070240	Pass
8 – 10	High	19	GSM 850	30 MHz – 9 GHz	-13	-49.40	868.79	Pass
11 – 13	Low	19	GSM 1900	30 MHz – 18 GHz	-13	-59.38	3700.45	Pass
14 – 18	Mid	19	GSM 1900	9 kHz – 26 GHz	-13	-33.31	0.10	Pass
19 – 21	High	19	GSM 1900	30 MHz – 18 GHz	-13	-58.01	7319.68	Pass
22 - 24	Low	19	UMTS II	30 MHz – 18 GHz	-13	-53.10	3702.59	Pass
25 - 29	Mid	19	UMTS II	9 kHz – 26 GHz	-13	-32.15	0.10	Pass
30 – 32	High	19	UMTS II	30 MHz – 18 GHz	-13	-54.00	3757.73	Pass
33 – 35	Low	19	UMTS V	30 MHz – 9 GHz	-13	-64.60	4595.63	Pass
36 – 39	Mid	19	UMTS V	9 kHz – 9 GHz	-13	-17.34	0.07	Pass
40 - 42	High	19	UMTS V	30 MHz – 9 GHz	-13	-64.52	4279.36	Pass
43 - 45	Low	19	LTE 2	30 MHz – 18 GHz	-13	-49.87	3711.17	Pass
46 - 50	Mid	19	LTE 2	9 kHz – 26 GHz	-13	-31.33	0.10	Pass
51 - 53	High	19	LTE 2	30 MHz – 18 GHz	-13	-53.02	3811.31	Pass
54 - 56	Low	19	LTE 4	30 MHz – 18 GHz	-13	-47.04	3429.52	Pass
57 - 60	Mid	19	LTE 4	9 kHz – 18 GHz	-13	-35.69	3464.84	Pass
61 - 63	High	19	LTE 4	30 MHz – 18 GHz	-13	-43.07	3499.64	Pass
64 - 66	Low	19	LTE 5	30 MHz – 18 GHz	-13	NF*	-	Pass
67 - 70	Mid	19	LTE 5	9 kHz – 18 GHz	-13	-17.88	0.07	Pass
71 - 73	High	19	LTE 5	30 MHz – 18 GHz	-13	NF*	-	Pass
74 - 76	Low	19	LTE 12	30 MHz – 9 GHz	-13	NF*	-	Pass
77 - 80	Mid	19	LTE 12	9 kHz – 9 GHz	-13	-17.69	0.07	Pass
81 - 83	High	19	LTE 12	30 MHz – 9 GHz	-13	NF*	-	Pass

NF*: Noise Floor



7.1.5 Measurement Plots:

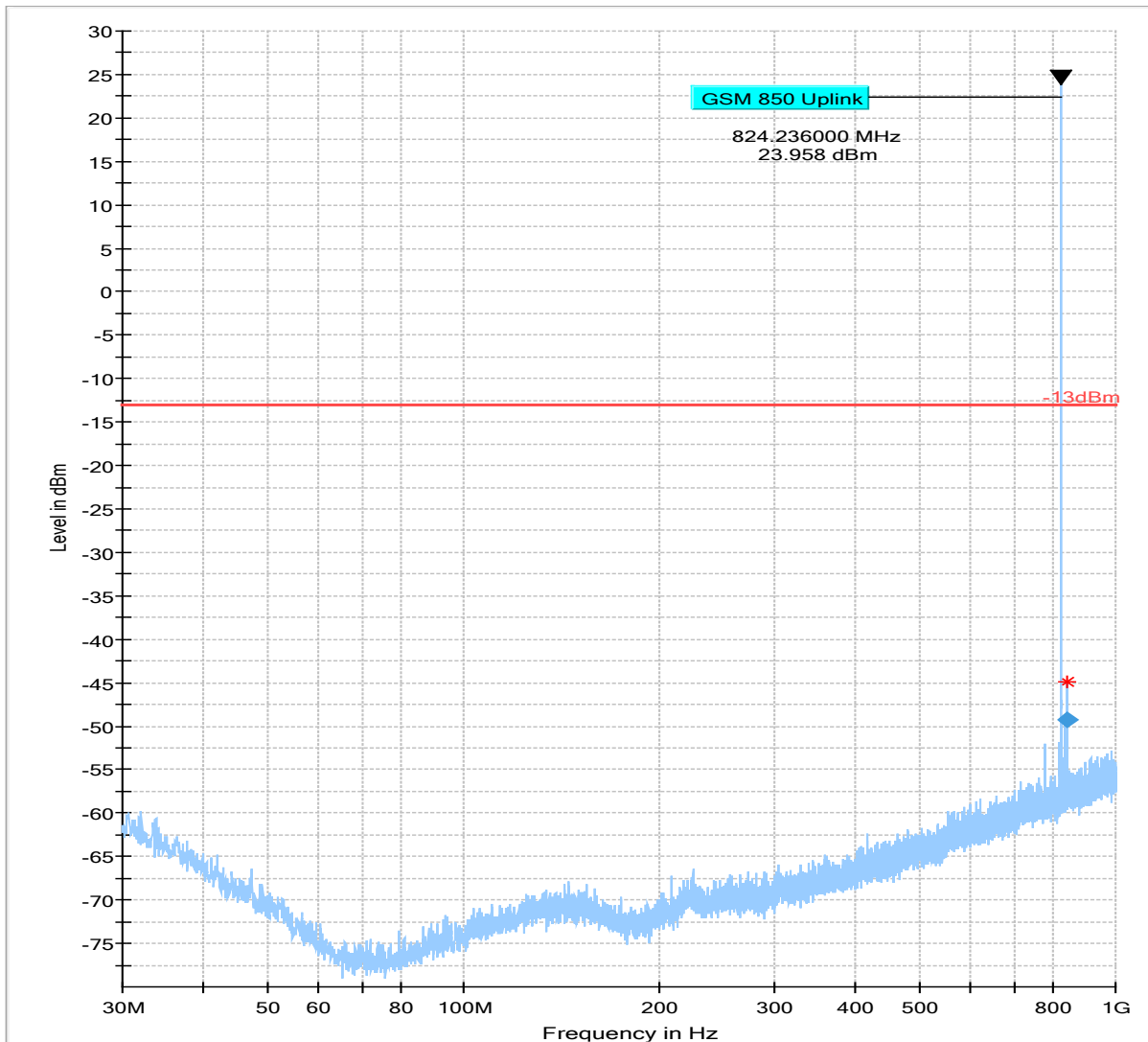
GSM 850

Plot # 1 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
843.51	-49.21	---	-13.00	36.21	500.0	100.000	165.0	H	328.0	-69.4



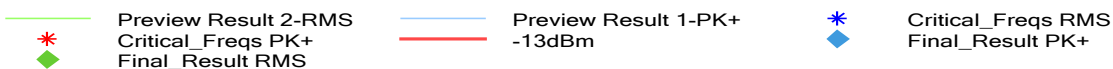
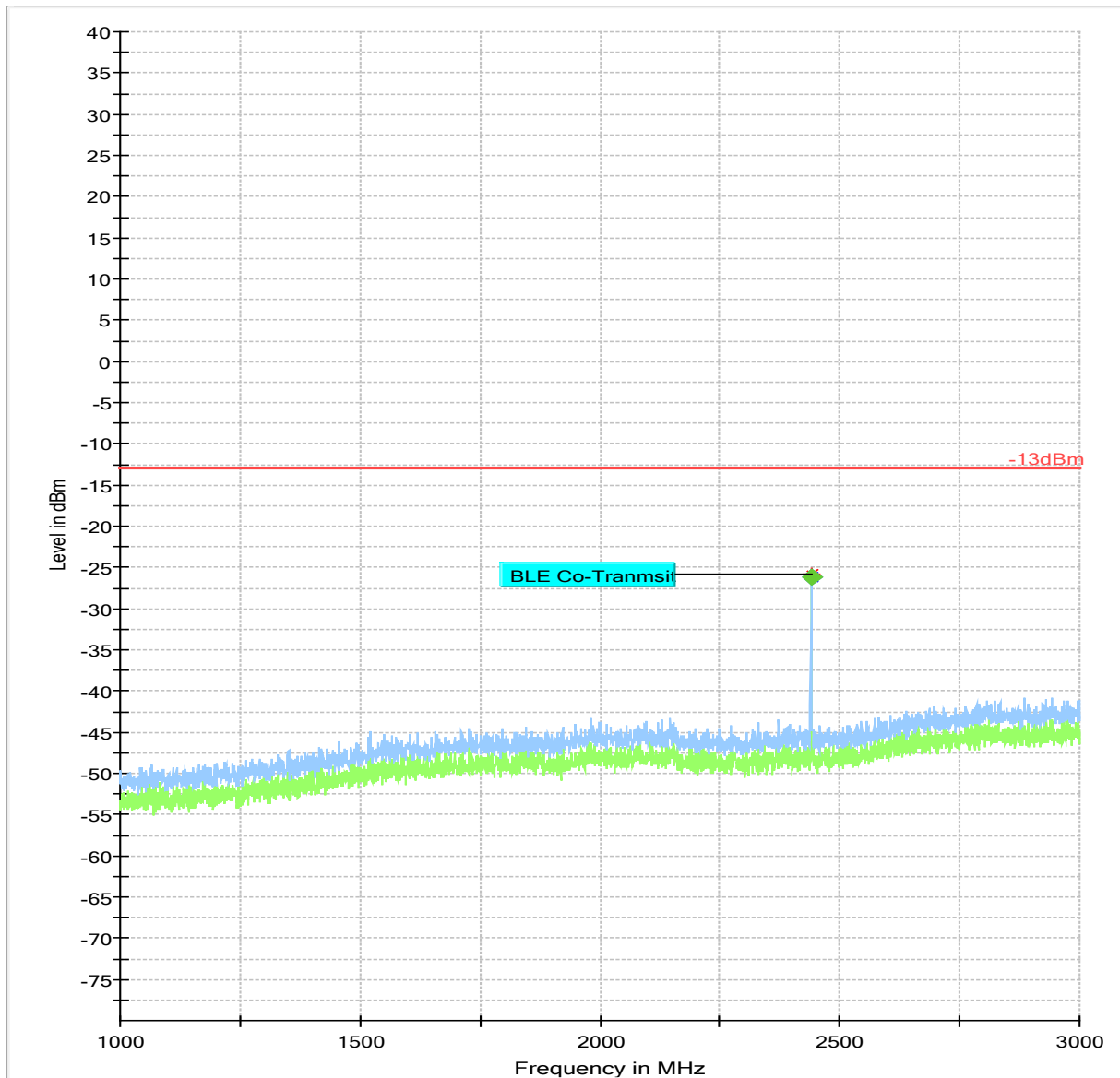
* Preview Result 2-RMS
◆ Critical_Freqs PK+ Final_Result RMS
 — Preview Result 1-PK+
— -13dBm
 ◆ Critical_Freqs RMS
◆ Final_Result PK+

Plot # 2 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

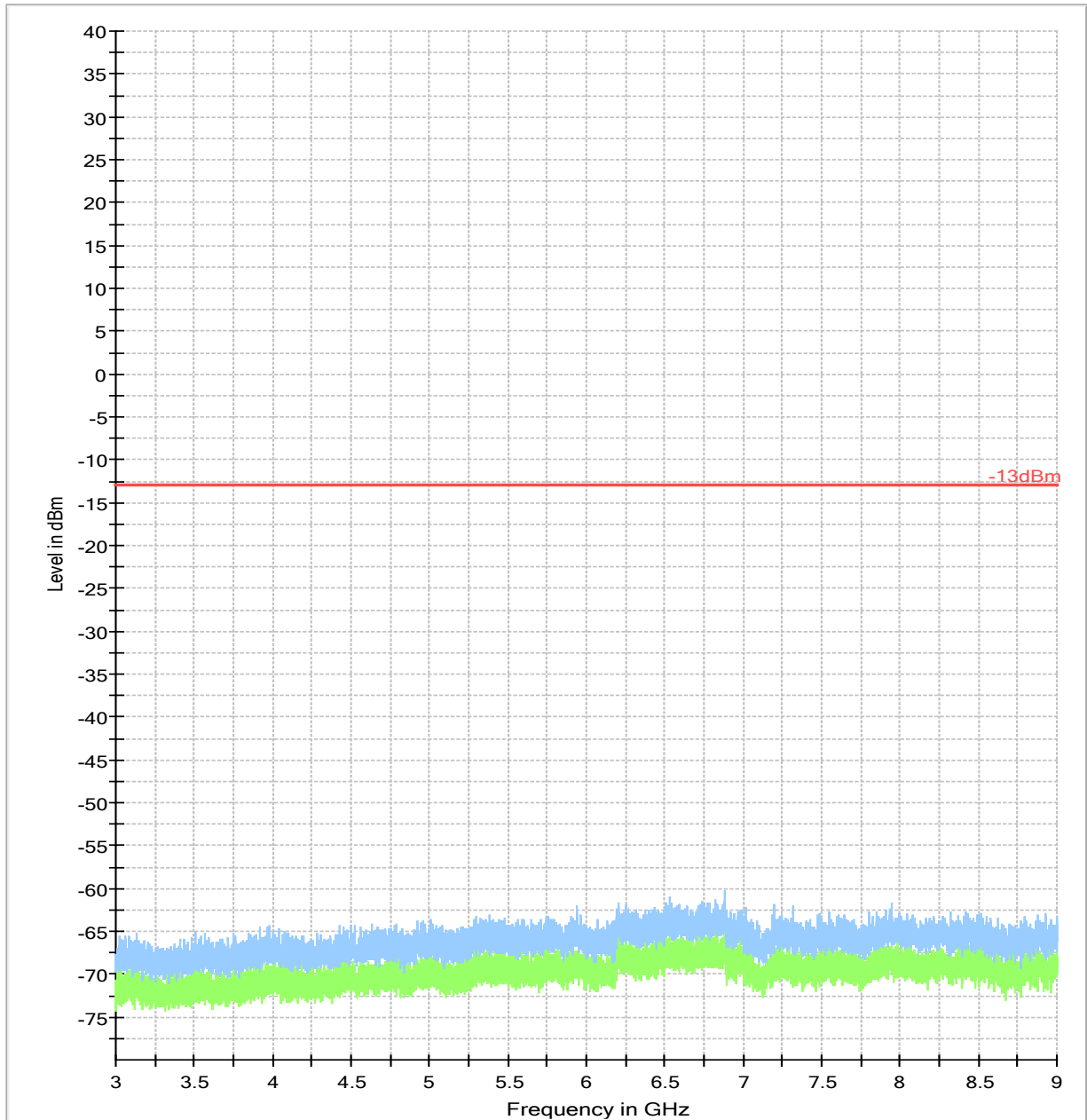
Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.995000	---	-26.14	---	---	500.0	1000.000	153.0	H	335.0	-86.9
2440.070000	-26.23	---	-13.00	13.23	500.0	1000.000	152.0	H	334.0	-86.9



Plot # 3 Radiated Emissions: 3 GHz - 9 GHz

Channel: Low



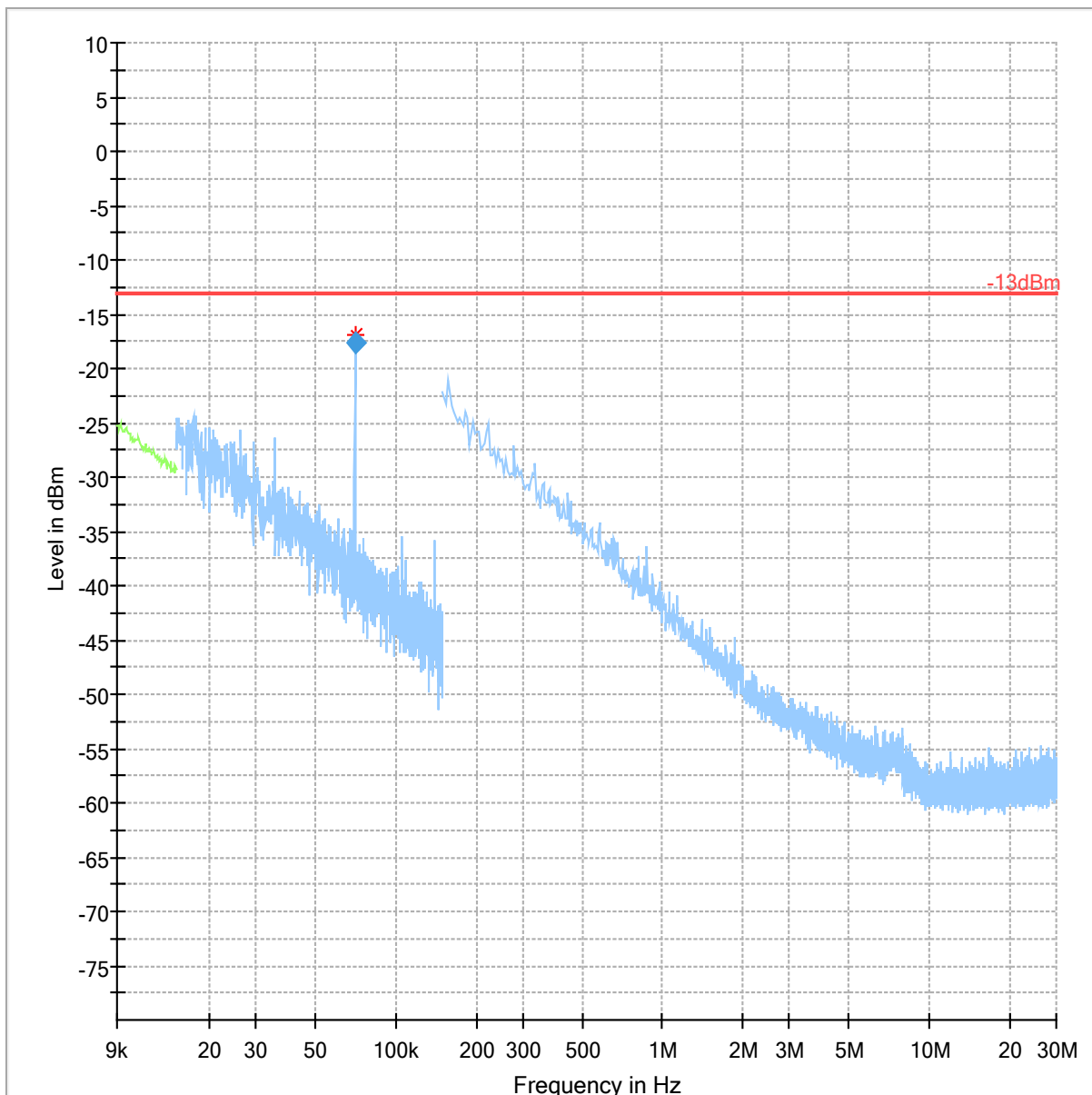
—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

Plot # 4 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.070240	-17.57	-13.00	4.57	50.0	0.200	247.0	H	-8.0	-18.5



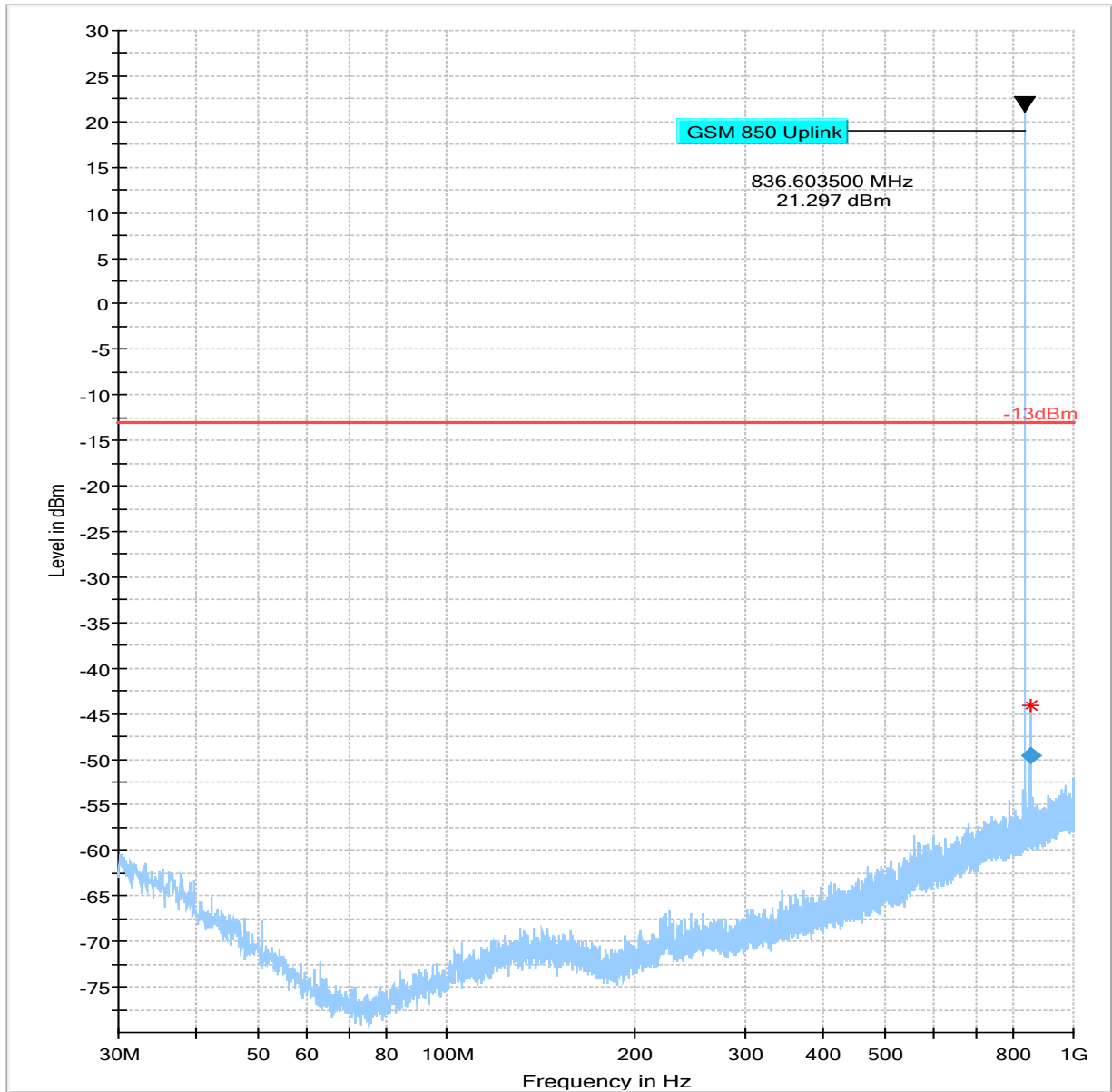
— Preview Result 2-QPK — Preview Result 1-PK+ * Critical_Freqs QPK
* Critical_Freqs PK+ — -13dBm ◆ Final_Result RMS

Plot # 5 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
854.839300	-49.63	---	-13.00	36.63	500.0	100.000	175.0	H	171.0	-69.2



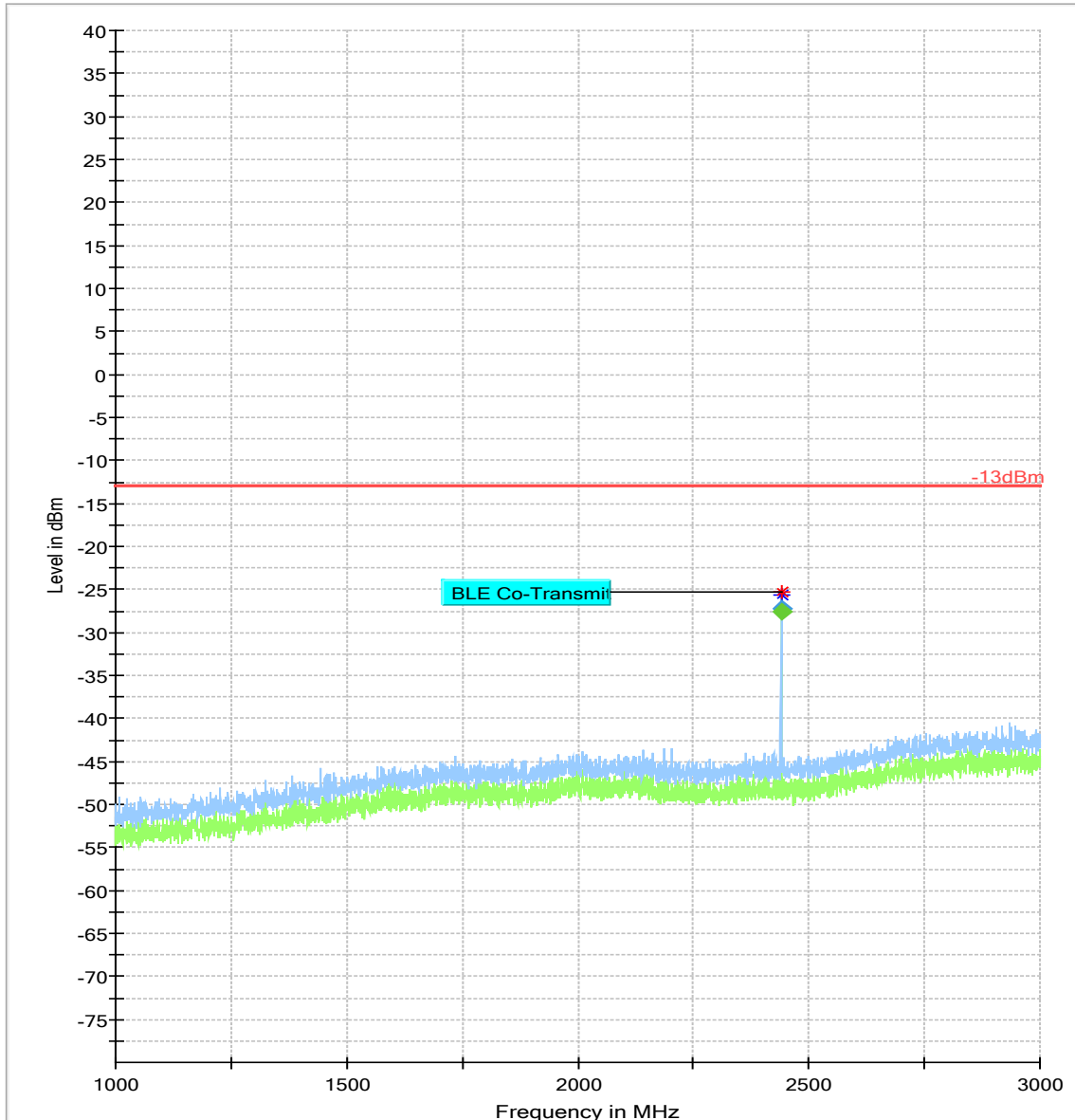
* Preview Result 2-RMS Critical_Freqs PK+ Final_Result RMS
◆ Preview Result 1-PK+ -13dBm Critical_Freqs RMS Final_Result PK+

Plot # 6 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

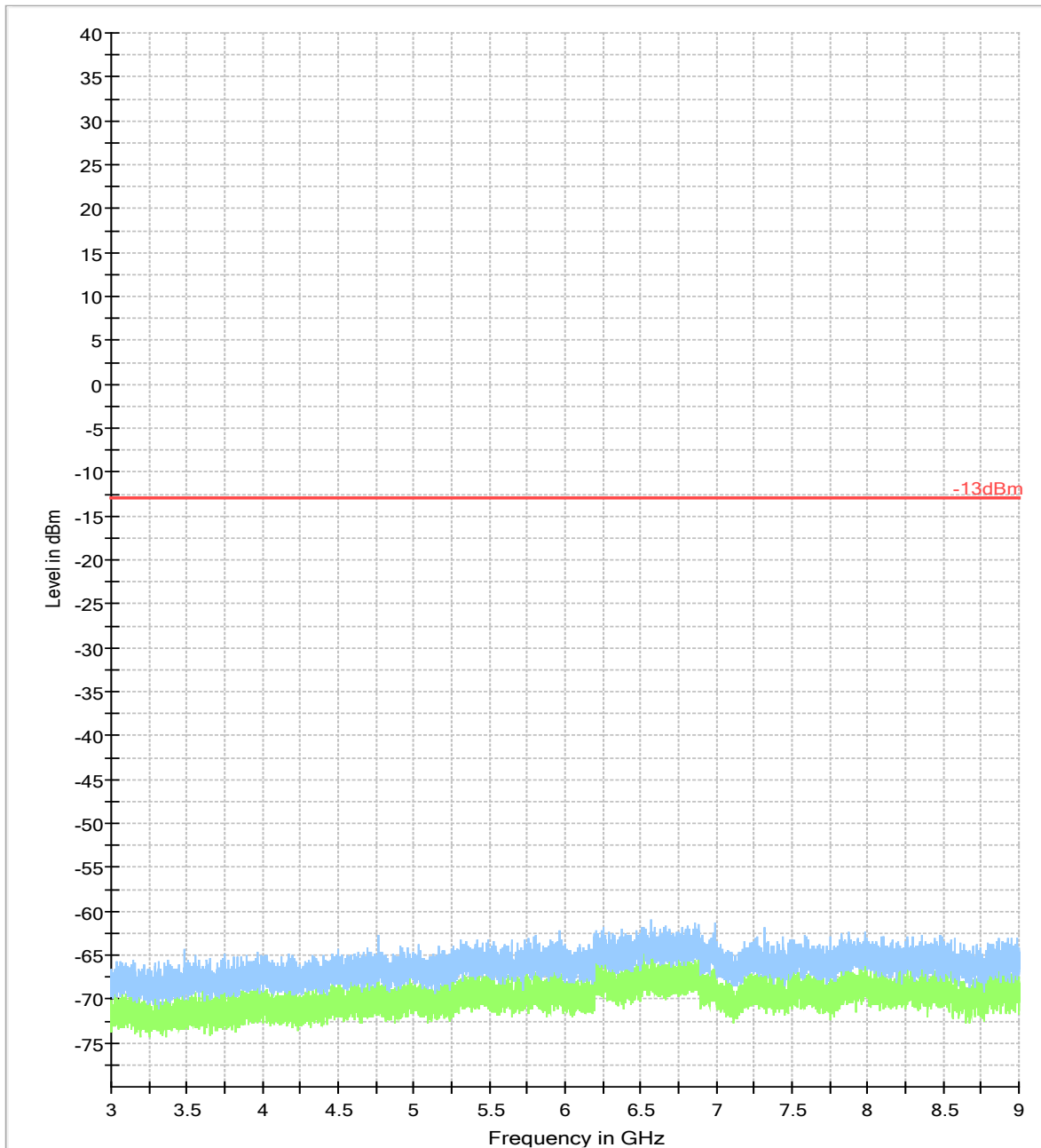
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.015000	---	-27.59	---	---	500.0	1000.000	141.0	H	335.0	-86.9
2440.115000	-27.18	---	-13.00	14.18	500.0	1000.000	142.0	H	336.0	-86.9



* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ Final_Result RMS — -13dBm ◆ Critical_Freqs RMS Final_Result PK+

Plot # 7 Radiated Emissions: 3 GHz – 9 GHz

Channel: Mid



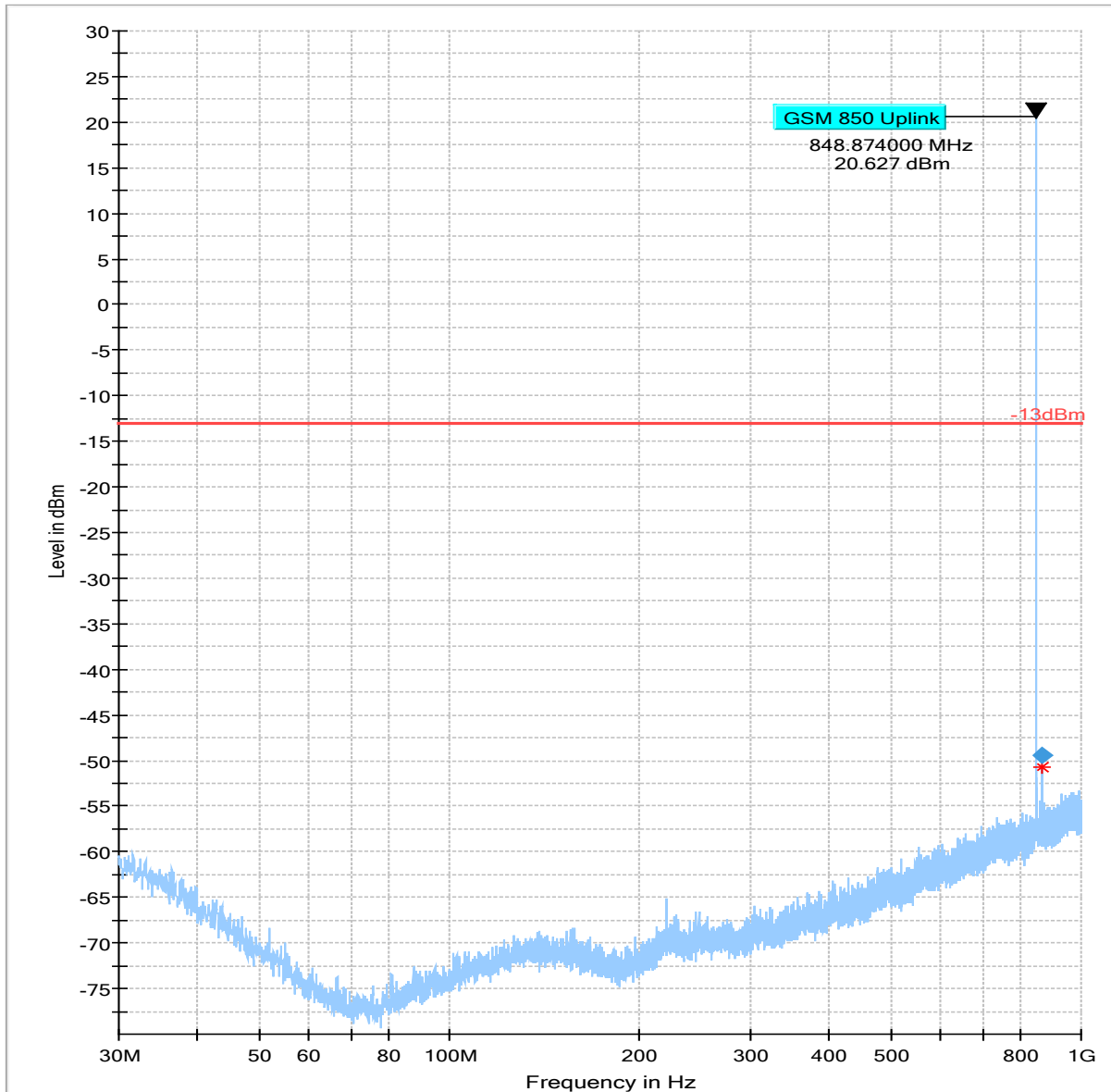
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	◆ Final_Result PK+
◆ Final_Result RMS		

Plot # 8 Radiated Emissions: 30 MHz - 1 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
868.79	-49.40	---	-13.00	36.40	500.0	100.000	246.0	H	112.0	-69.0



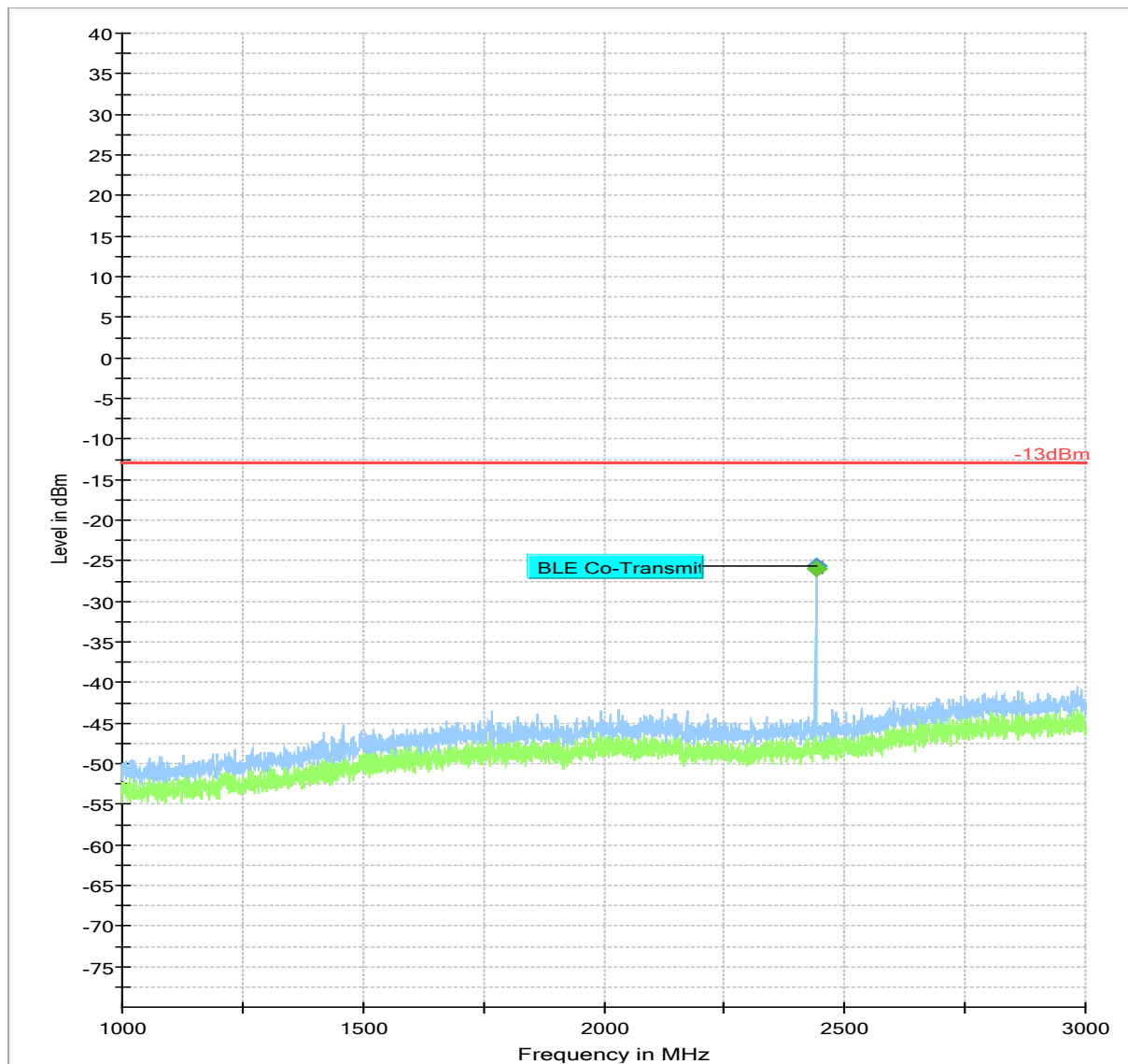
— Preview Result 2-RMS
* Critical_Freqs PK+
◆ Critical_Freqs RMS
◆ Final_Result PK+

Plot # 9 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

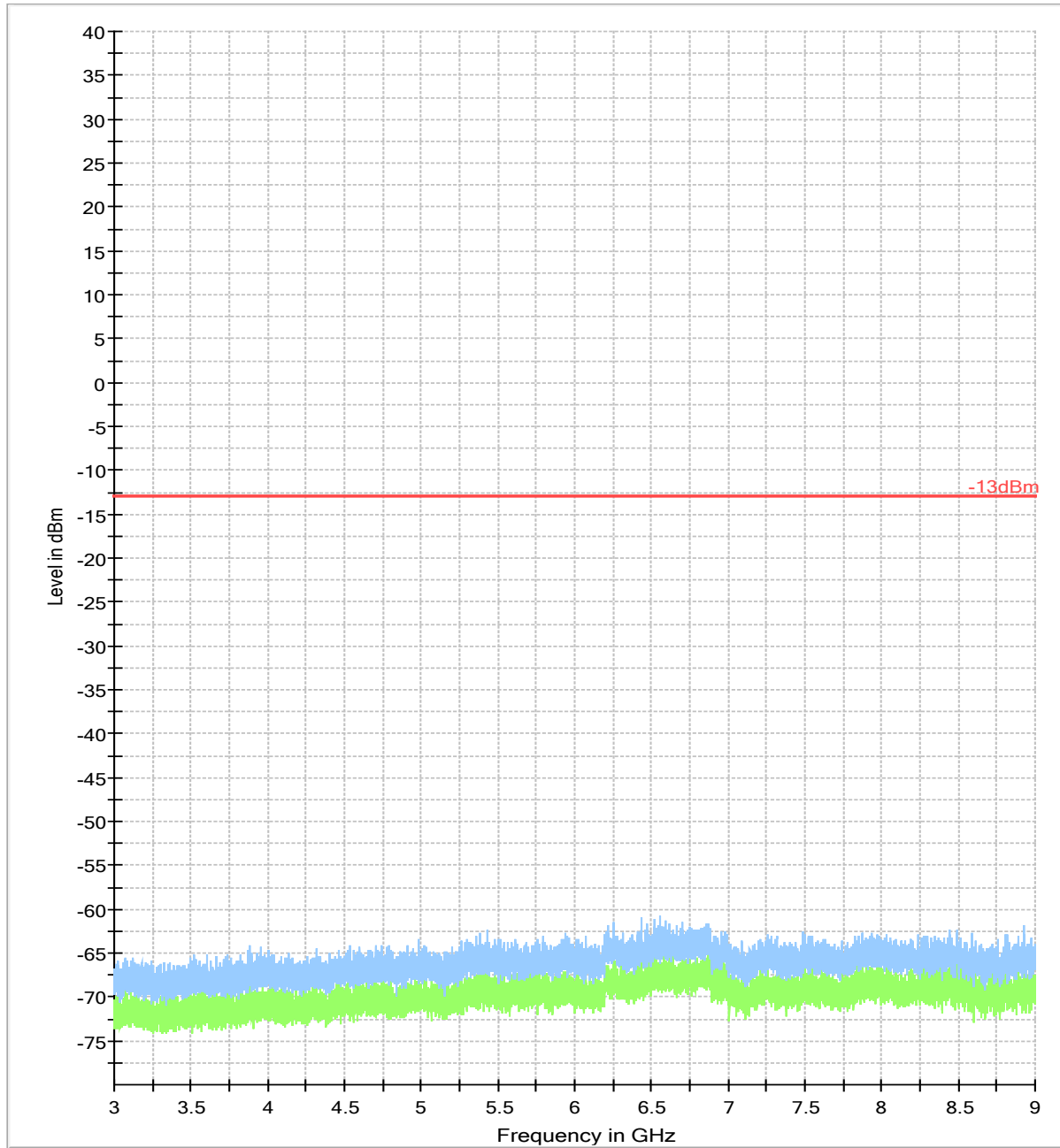
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.980000	-25.64	---	-13.00	12.64	500.0	1000.000	155.0	H	334.0	-86.9
2440.080000	---	-25.94	---	---	500.0	1000.000	154.0	H	335.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 10 Radiated Emissions: 3 GHz - 9 GHz

Channel: High



—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

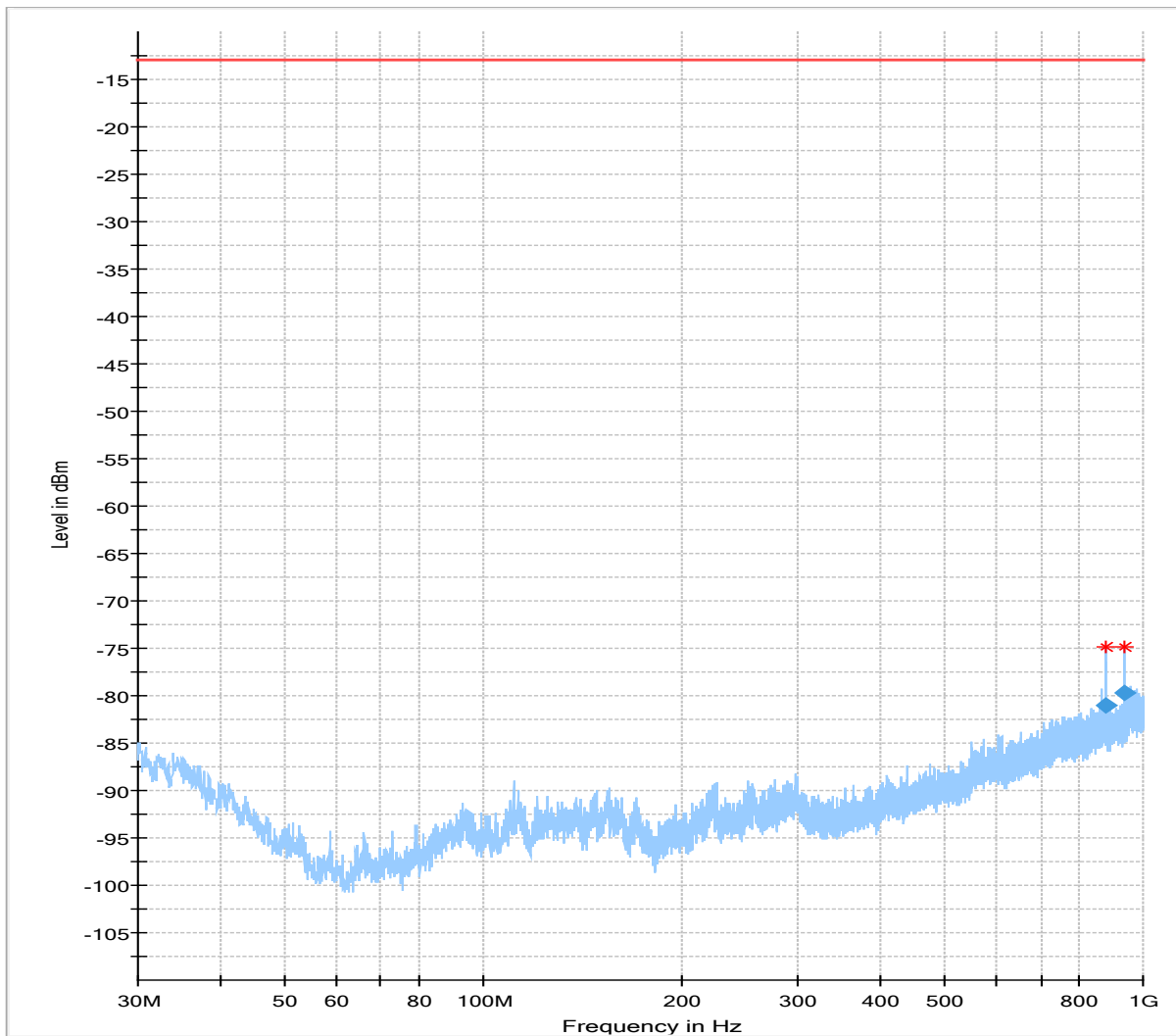
GSM 1900

Plot # 11 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
875.302400	-80.98	---	-13.00	67.98	200.0	100.000	212.0	V	5.0	-101.1
940.340600	-79.76	---	-13.00	66.76	200.0	100.000	278.0	V	-38.0	-100.1



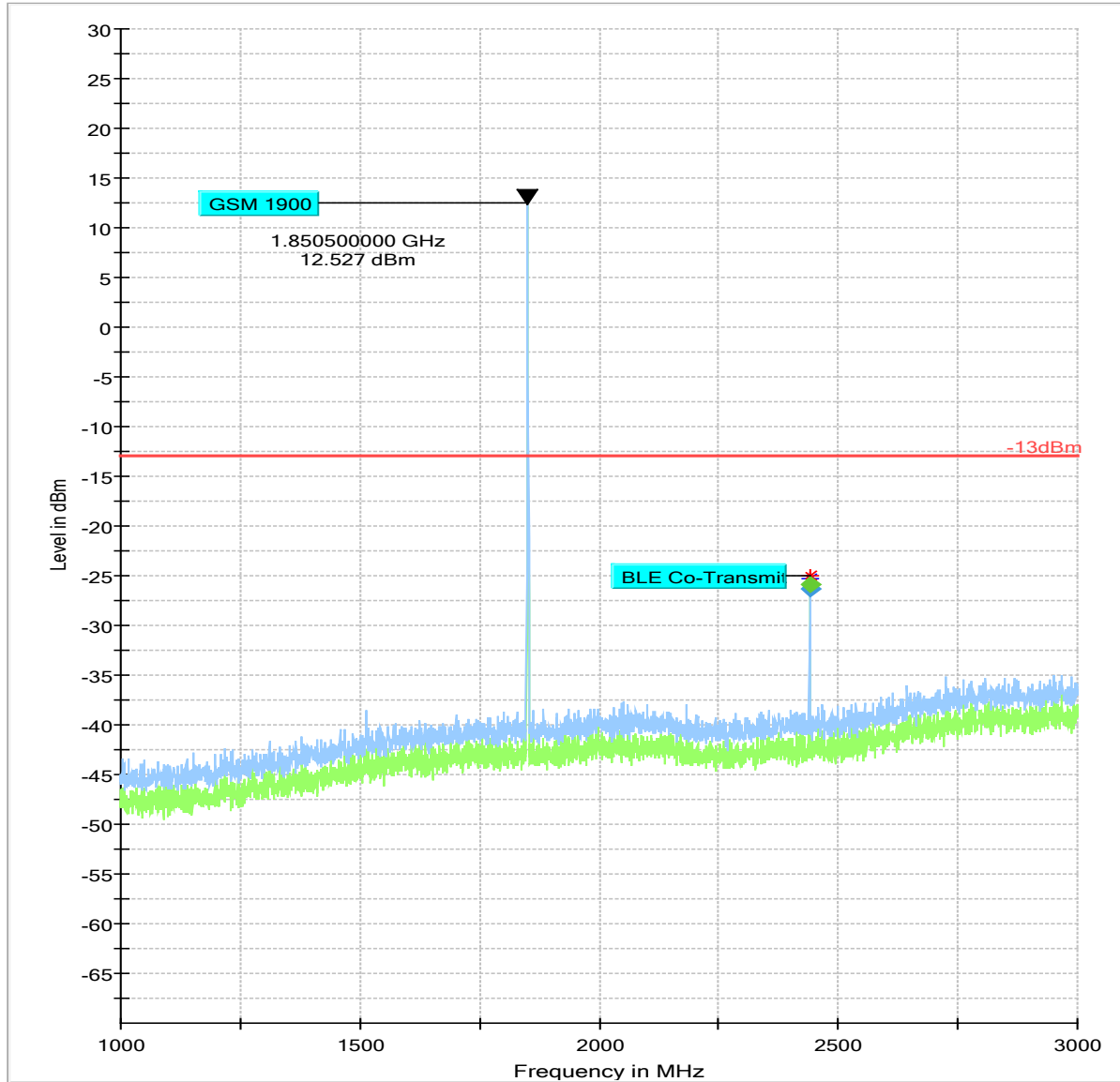
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 12 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.036000	-26.35	---	-13.00	13.35	200.0	1000.000	117.0	H	339.0	-86.9
2440.147000	---	-25.82	---	---	200.0	1000.000	163.0	H	337.0	-86.9



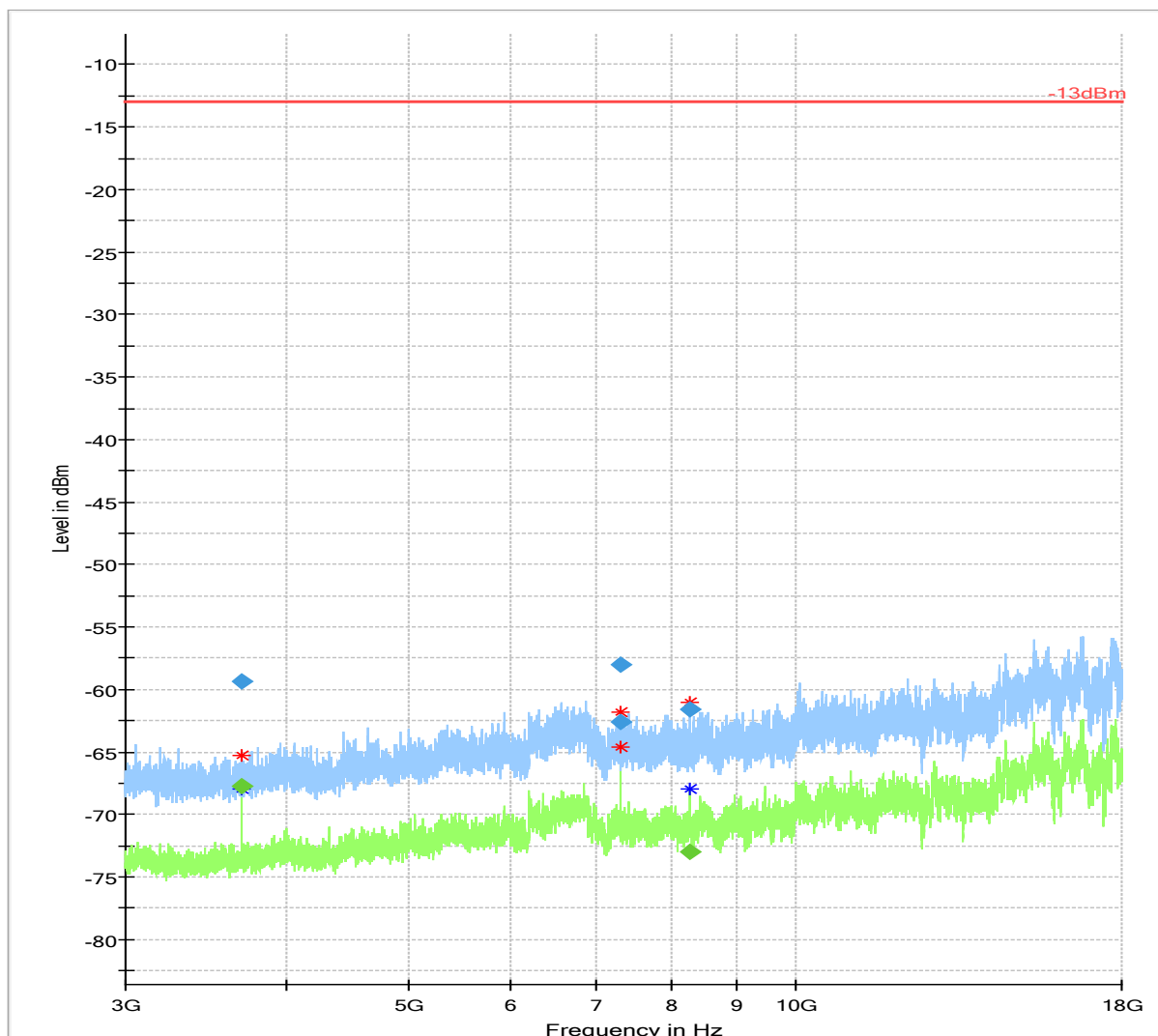
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 13 Radiated Emissions: 3 GHz - 18 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3700.300667	---	-67.69	---	---	200.0	1000.000	246.0	V	198.0	-130.7
3700.450667	-59.38	---	-13.00	46.38	200.0	1000.000	244.0	V	195.0	-130.7
7310.281333	-62.57	---	-13.00	49.57	200.0	1000.000	197.0	V	199.0	-125.2
7319.665333	-57.97	---	-13.00	44.97	200.0	1000.000	275.0	H	237.0	-125.2
8270.949333	-61.55	---	-13.00	48.55	200.0	1000.000	100.0	V	226.0	-122.6
8280.969333	---	-73.01	---	---	200.0	1000.000	252.0	V	345.0	-122.6



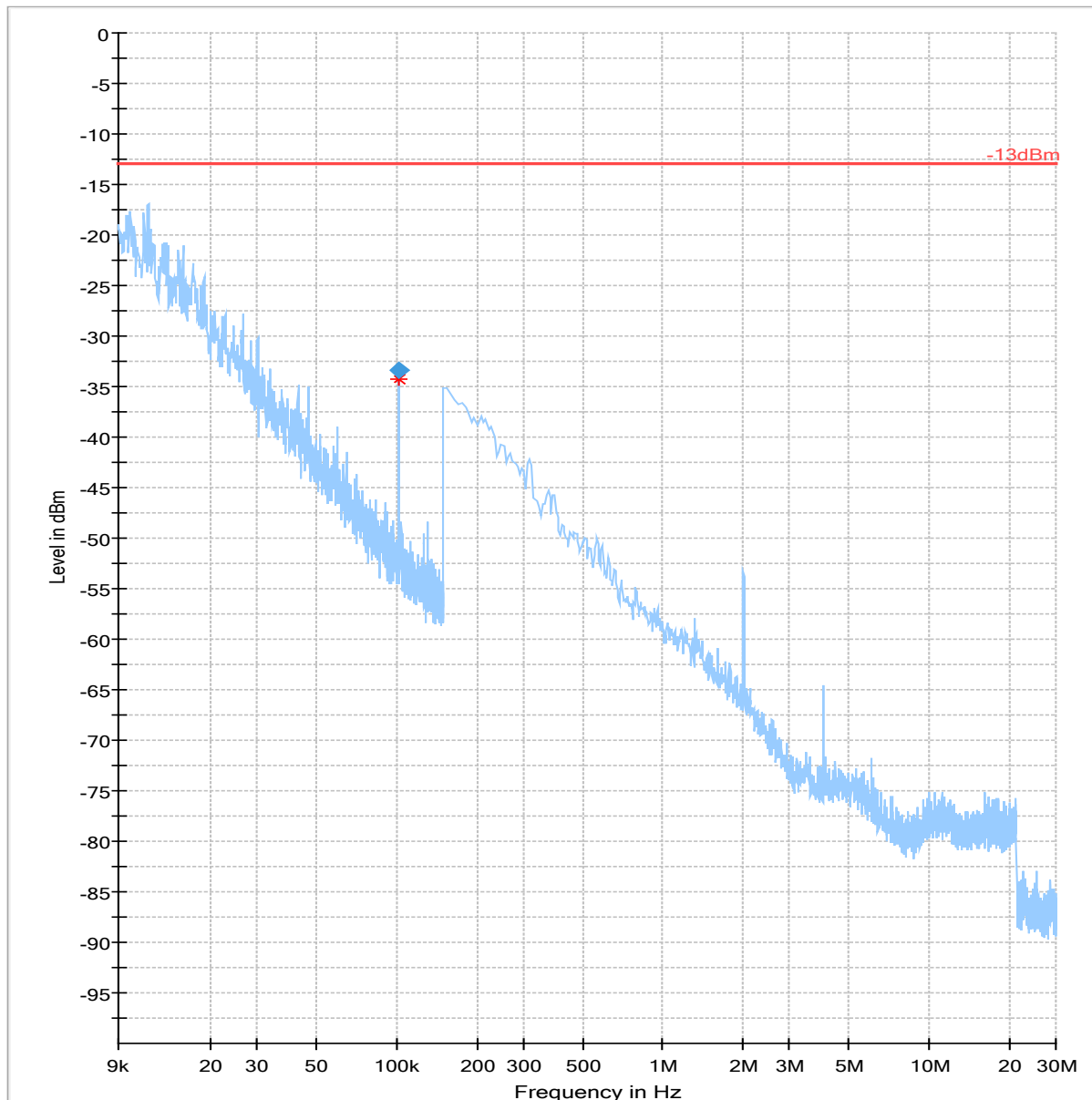
* Preview Result 2-RMS Critical_Freqs PK+ Final_Result RMS
◆ Preview Result 1-PK+ -13dBm Critical_Freqs RMS Final_Result PK+

Plot # 14 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.101440	-33.31	---	-13.00	20.31	500.0	0.200	100.0	H	125.0	-56.7



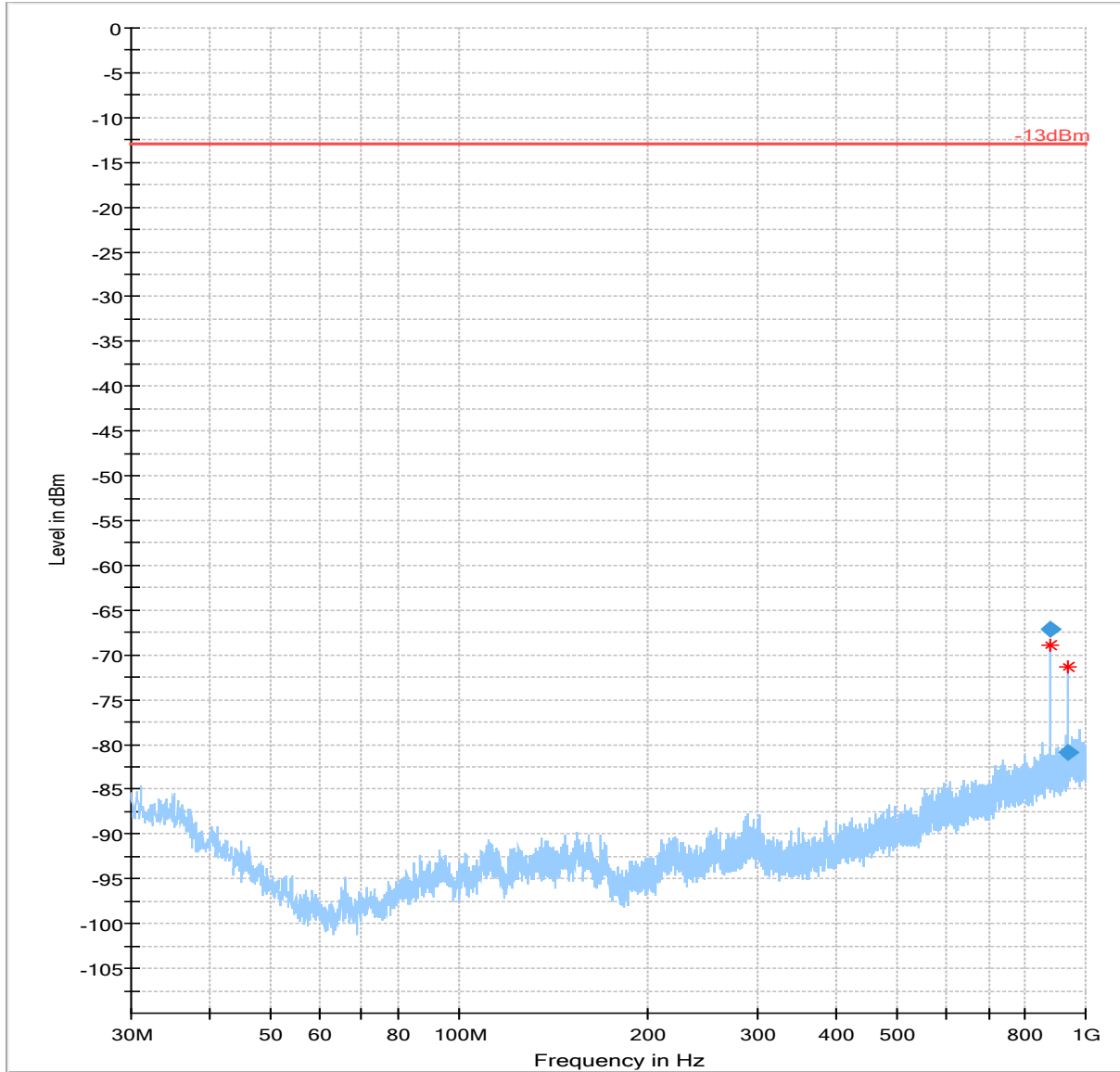
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
— Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 15 Radiated Emissions: 30 MHz – 1 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
875.996700	-67.19	---	-13.00	54.19	200.0	100.000	108.0	H	318.0	-100.9
939.401400	-80.88	---	-13.00	67.88	200.0	100.000	157.0	V	313.0	-100.2



* Preview Result 2-RMS
◆ Critical_Freqs PK+
◆ Final_Result RMS

— Preview Result 1-PK+
— -13dBm

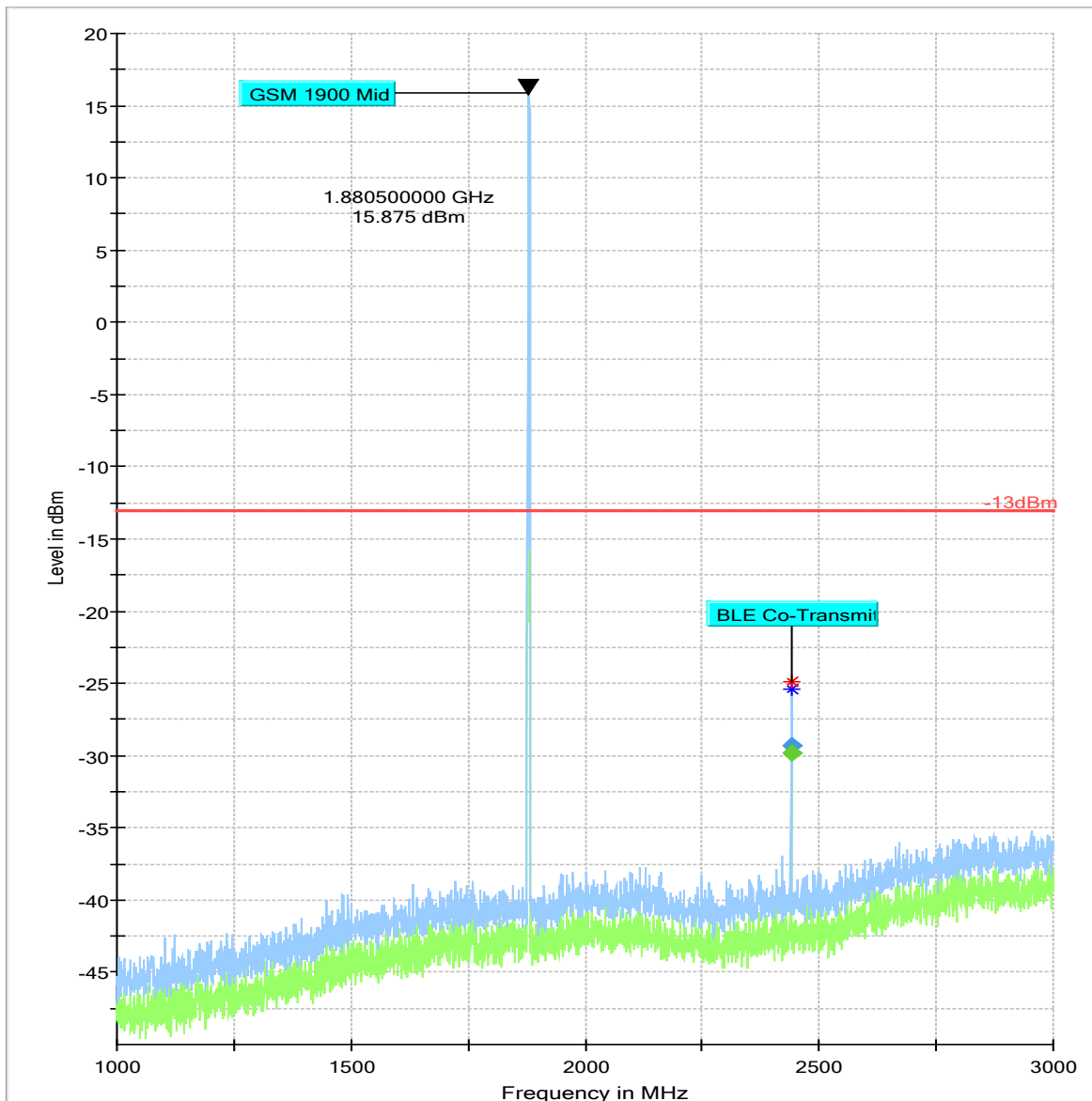
◆ Critical_Freqs RMS
◆ Final_Result PK+

Plot #16 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.105250	-29.33	---	-13.00	16.33	200.0	1000.000	148.0	H	27.0	-86.9
2440.110500	---	-29.81	---	---	200.0	1000.000	148.0	H	27.0	-86.9



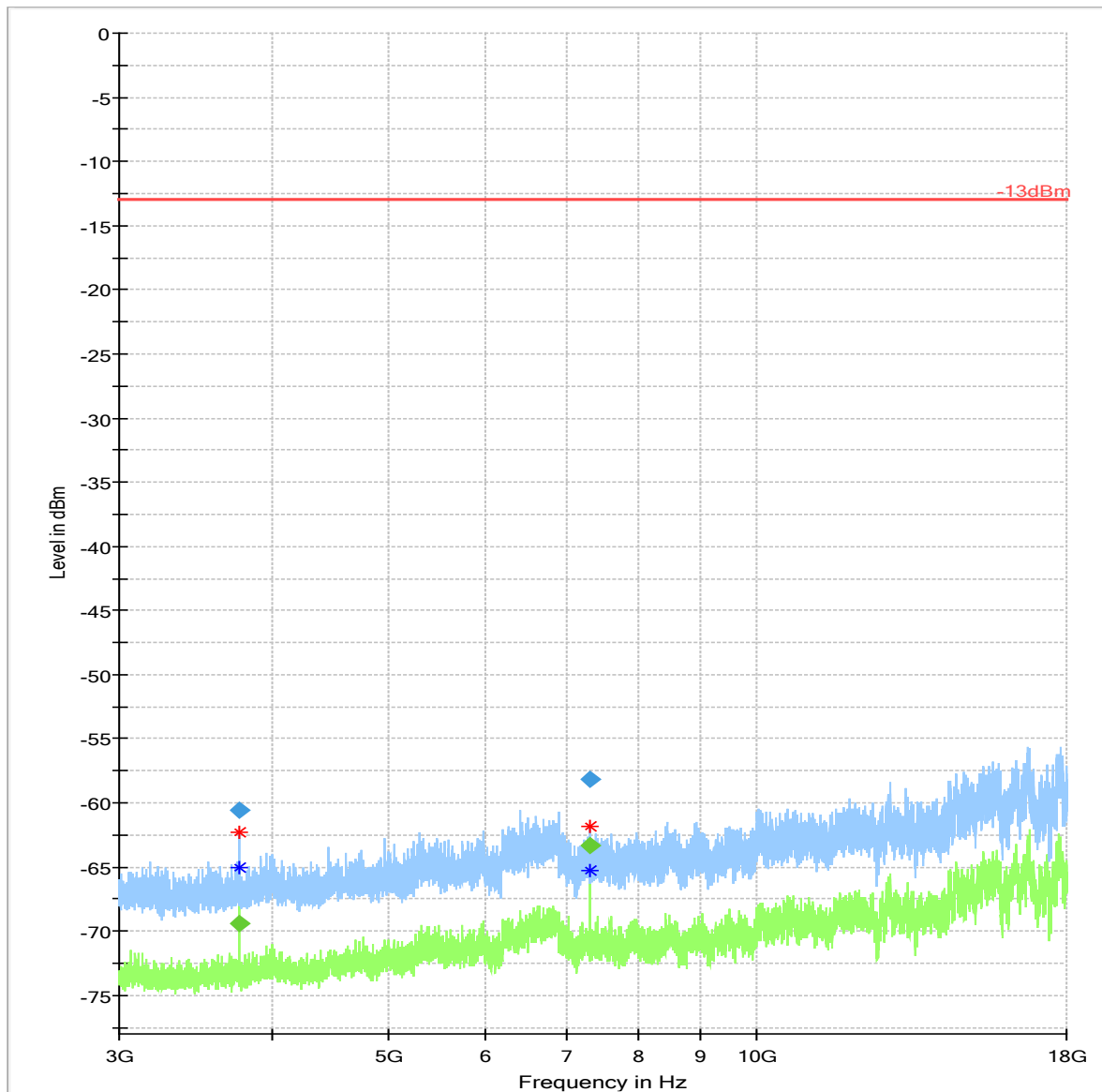
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
— Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 17 Radiated Emissions: 3 GHz – 18GHz

Channel: Mid

Final Result

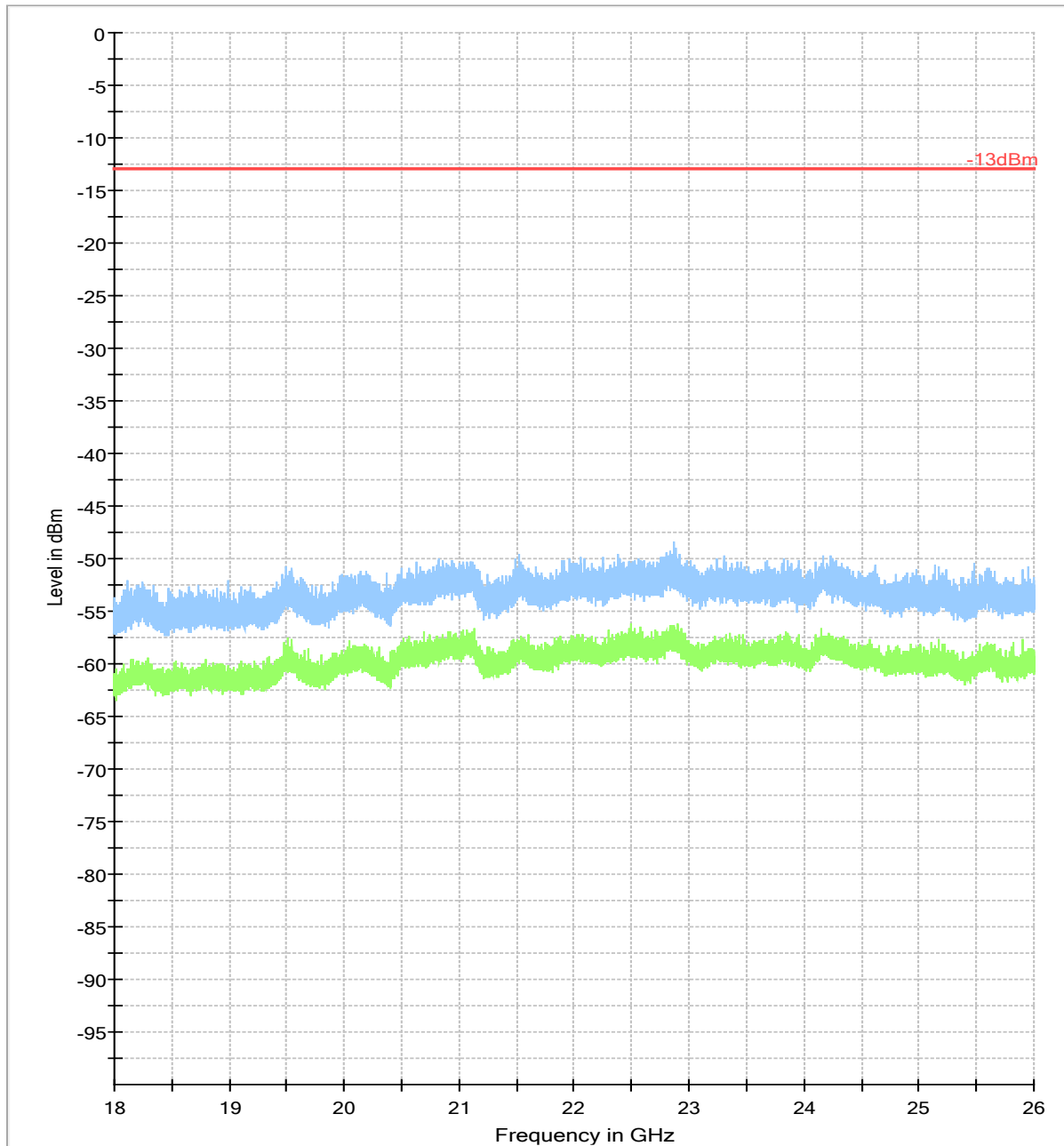
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3759.634000	-60.57	---	-13.00	47.57	200.0	1000.000	243.0	V	26.0	-130.4
3760.268000	---	-69.39	---	---	200.0	1000.000	246.0	V	27.0	-130.4
7320.000667	---	-63.28	---	---	200.0	1000.000	226.0	H	33.0	-125.2
7320.228667	-58.15	---	-13.00	45.16	200.0	1000.000	221.0	H	27.0	-125.2



* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 18 Radiated Emissions: 18 GHz – 26GHz

Channel: Mid



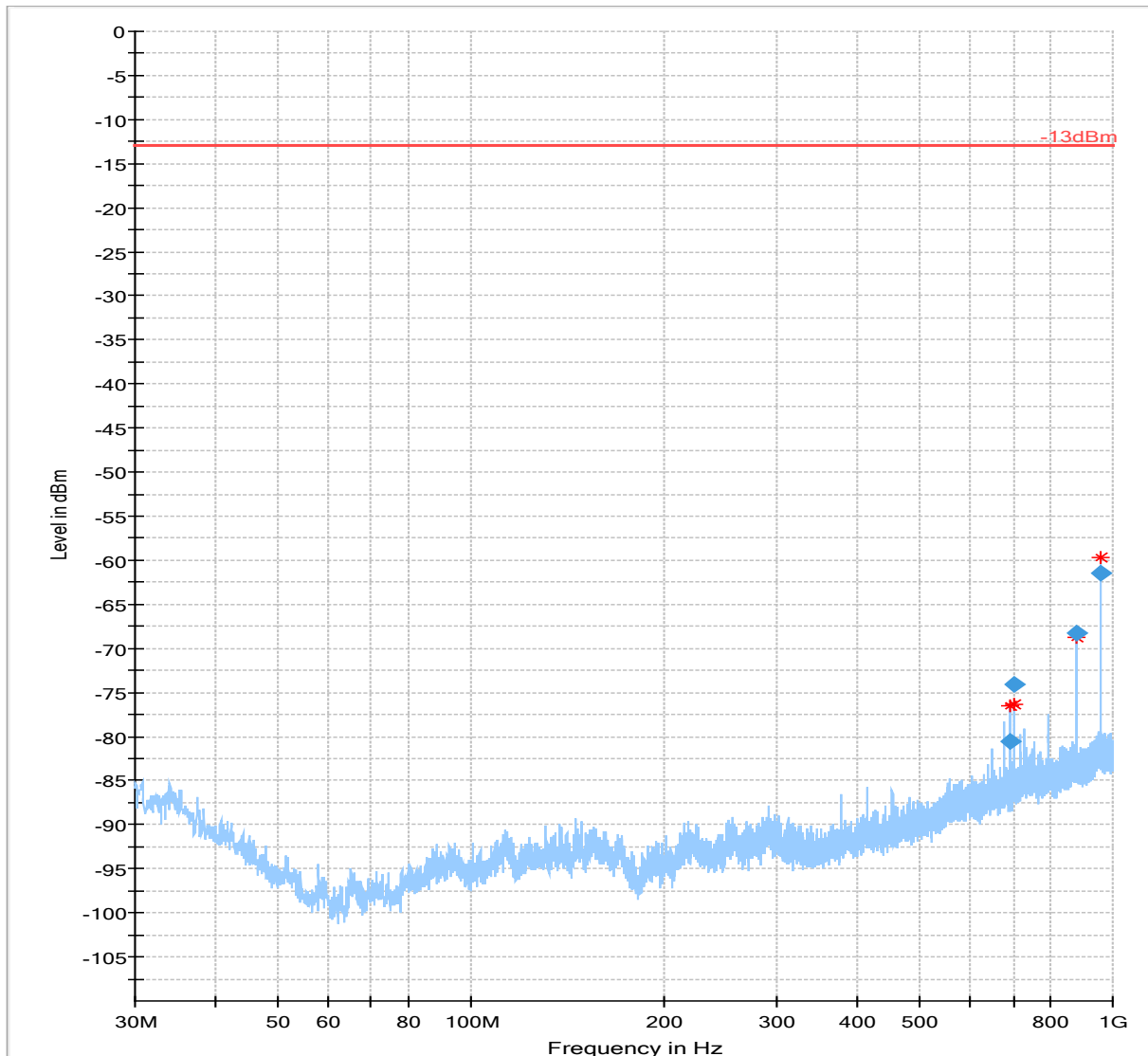
— Preview Result 2-RMS	— Preview Result 1-PK+	* Critical_Freqs RMS
* Critical_Freqs PK+	— -13dBm	◆ Final_Result PK+
◆ Final_Result RMS		

Plot # 19 Radiated Emissions: 30 MHz - 1 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
693.435100	-80.56	---	-13.00	67.56	200.0	100.000	100.0	H	175.0	-104.3
701.986700	-74.09	---	-13.00	61.09	200.0	100.000	108.0	H	172.0	-103.7
875.907200	-68.30	---	-13.00	55.30	200.0	100.000	117.0	H	312.0	-100.9
954.801000	-61.45	---	-13.00	48.45	200.0	100.000	126.0	H	183.0	-99.9



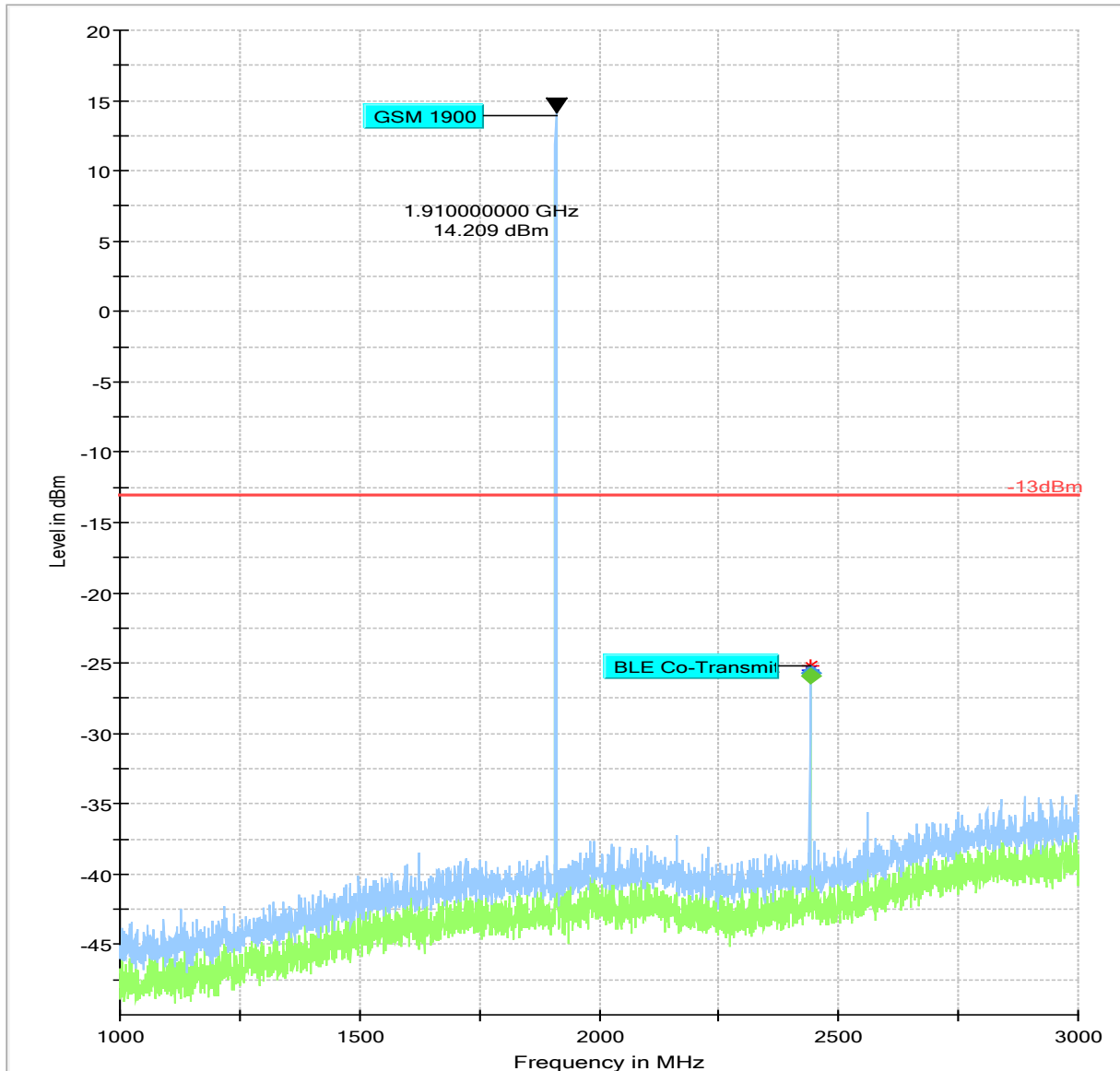
* Preview Result 2-RMS
◆ Critical_Freqs PK+
— Final_Result RMS
◆ Preview Result 1-PK+
— -13dBm
◆ Critical_Freqs RMS
◆ Final_Result PK+

Plot # 20 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.055000	---	-25.89	---	---	200.0	1000.000	226.0	H	336.0	-86.9
2440.063750	-25.75	---	-13.00	12.75	200.0	1000.000	226.0	H	337.0	-86.9



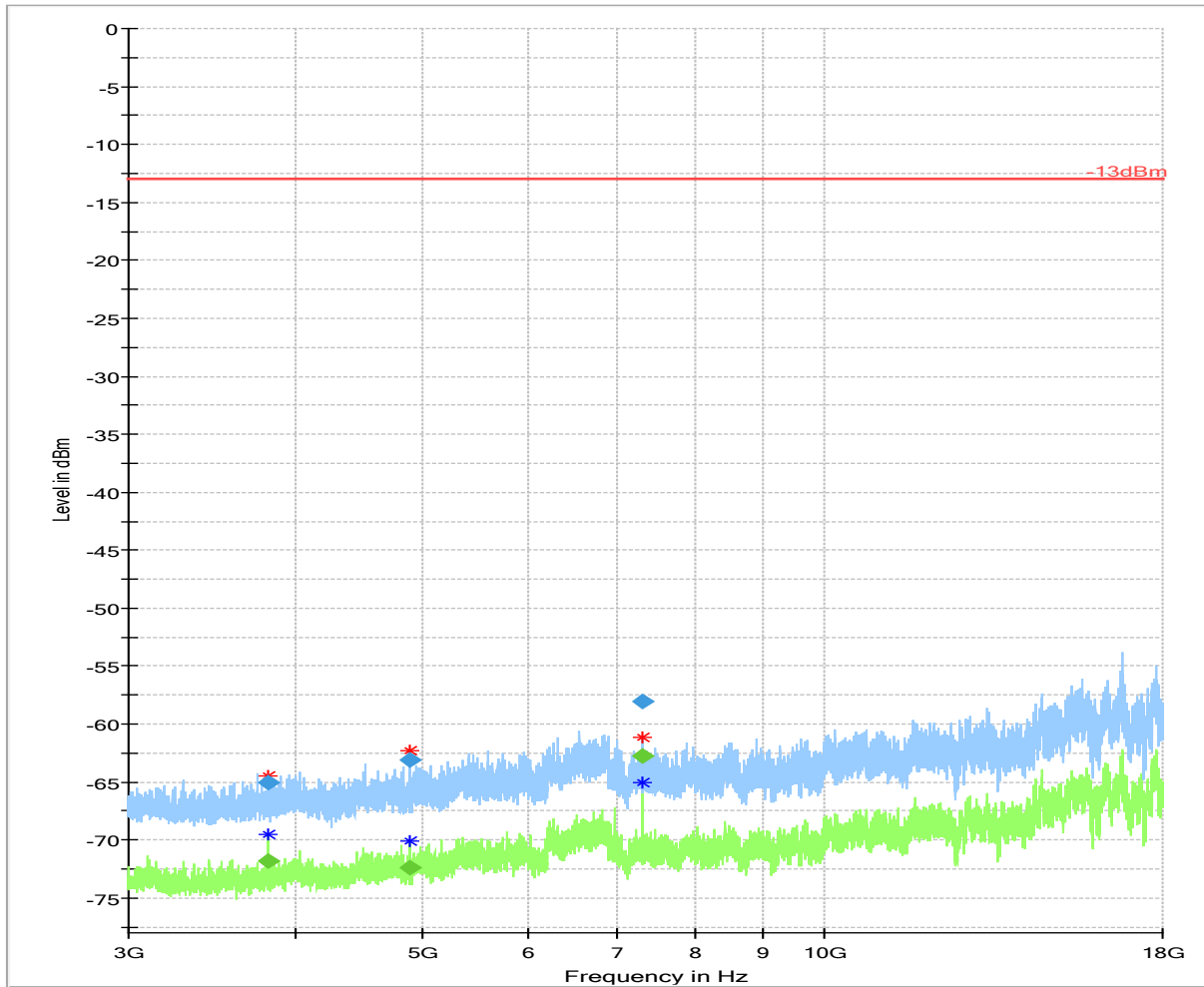
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
— Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 21 Radiated Emissions: 3 GHz - 18 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3819.506000	---	-71.84	---	---	200.0	1000.000	267.0	V	350.0	-130.3
3822.336000	-65.01	---	-13.00	52.01	200.0	1000.000	118.0	V	132.0	-130.3
4879.891333	---	-72.34	---	---	200.0	1000.000	190.0	V	256.0	-128.6
4880.050667	-63.13	---	-13.00	50.13	200.0	1000.000	181.0	V	287.0	-128.6
7319.680000	-58.01	---	-13.00	45.01	200.0	1000.000	275.0	H	235.0	-125.2
7320.043333	---	-62.75	---	---	200.0	1000.000	227.0	H	33.0	-125.2

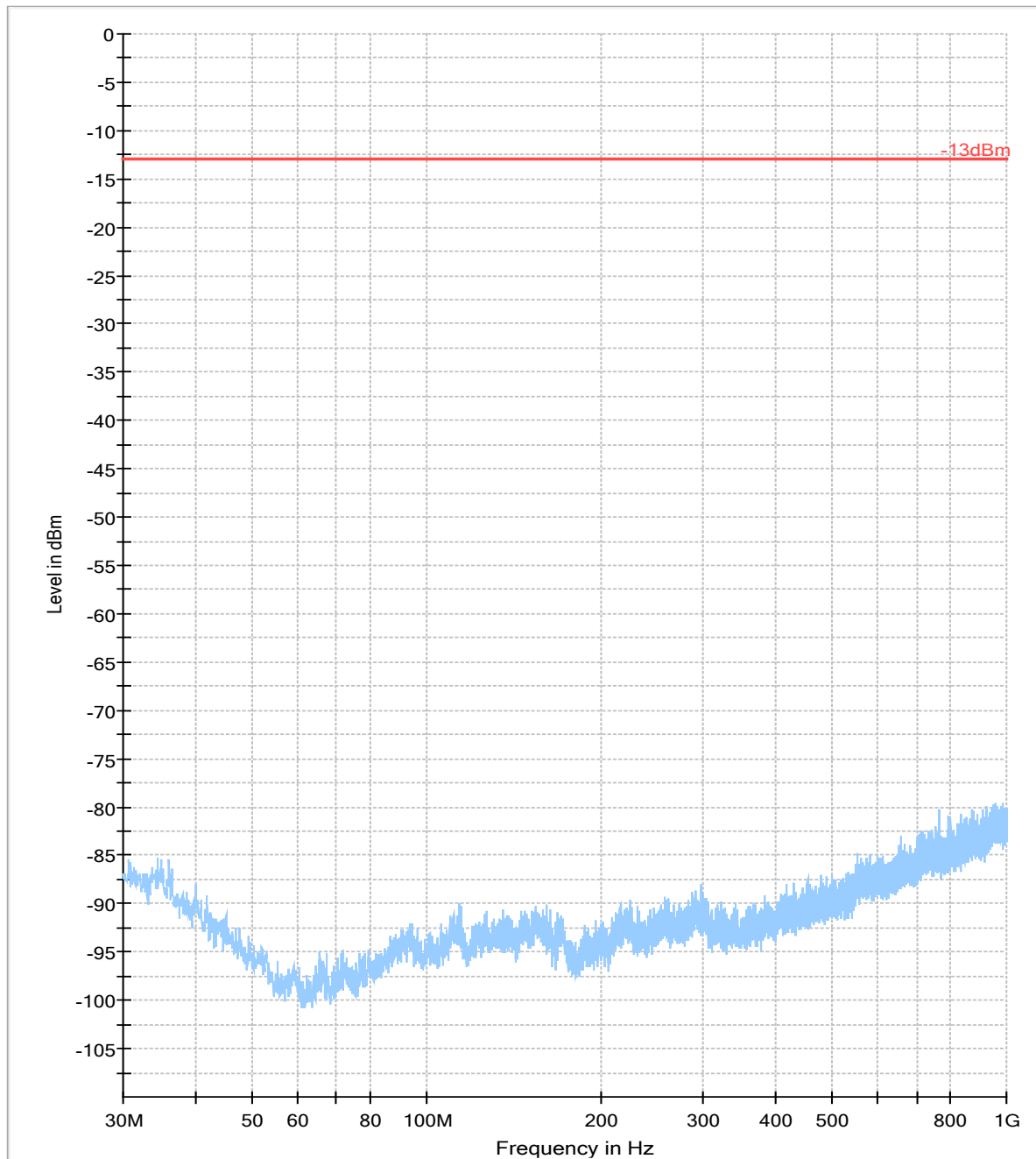


* Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

UMTS Band II

Plot # 22 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



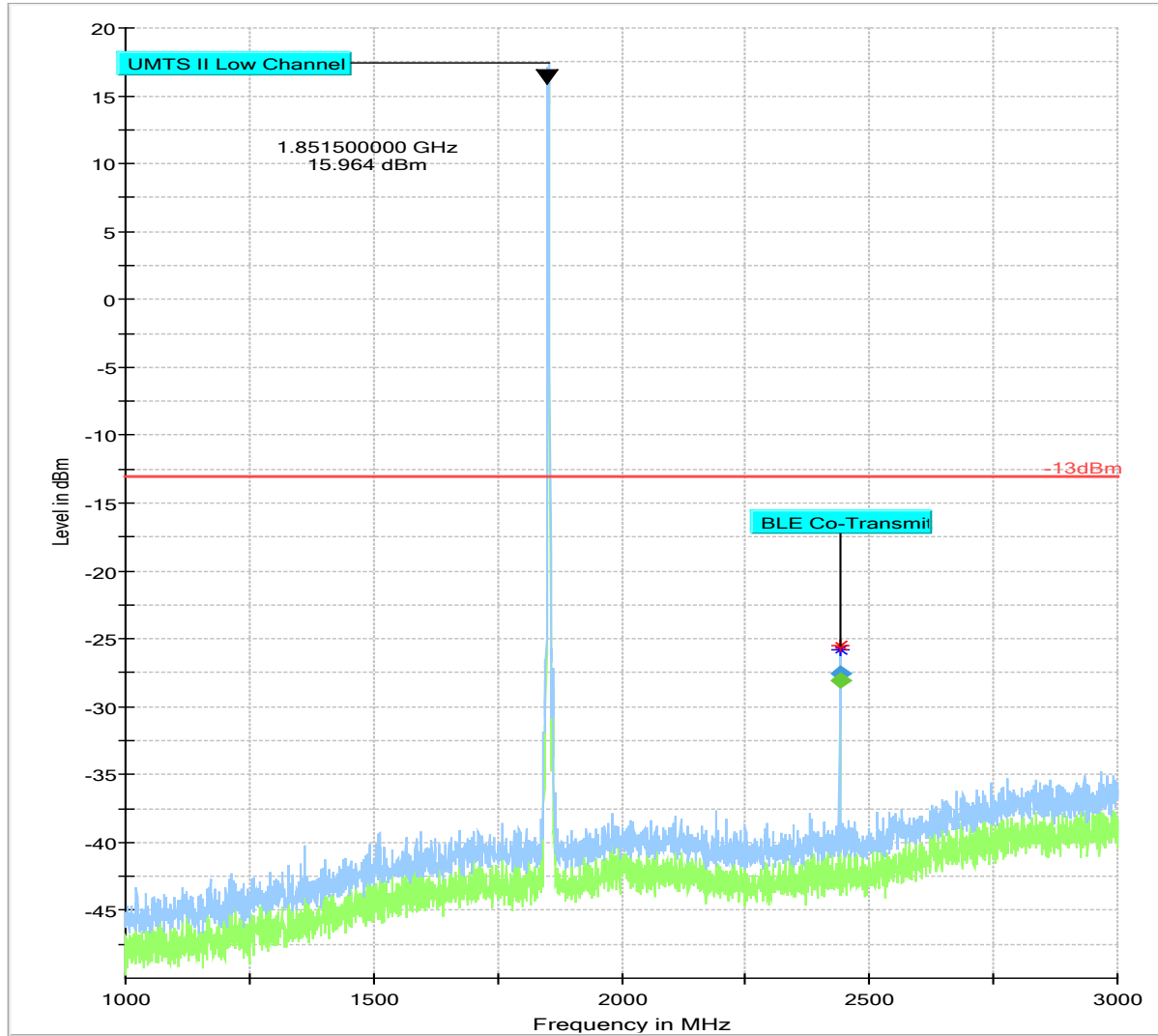
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

Plot # 23 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.057000	---	-28.08	---	---	200.0	1000.000	108.0	H	338.0	-86.9
2440.094500	-27.58	---	-13.00	14.58	200.0	1000.000	108.0	H	337.0	-86.9



* Preview Result 2-RMS
◆ Critical_Freqs PK+ Final_Result RMS

— Preview Result 1-PK+
— -13dBm

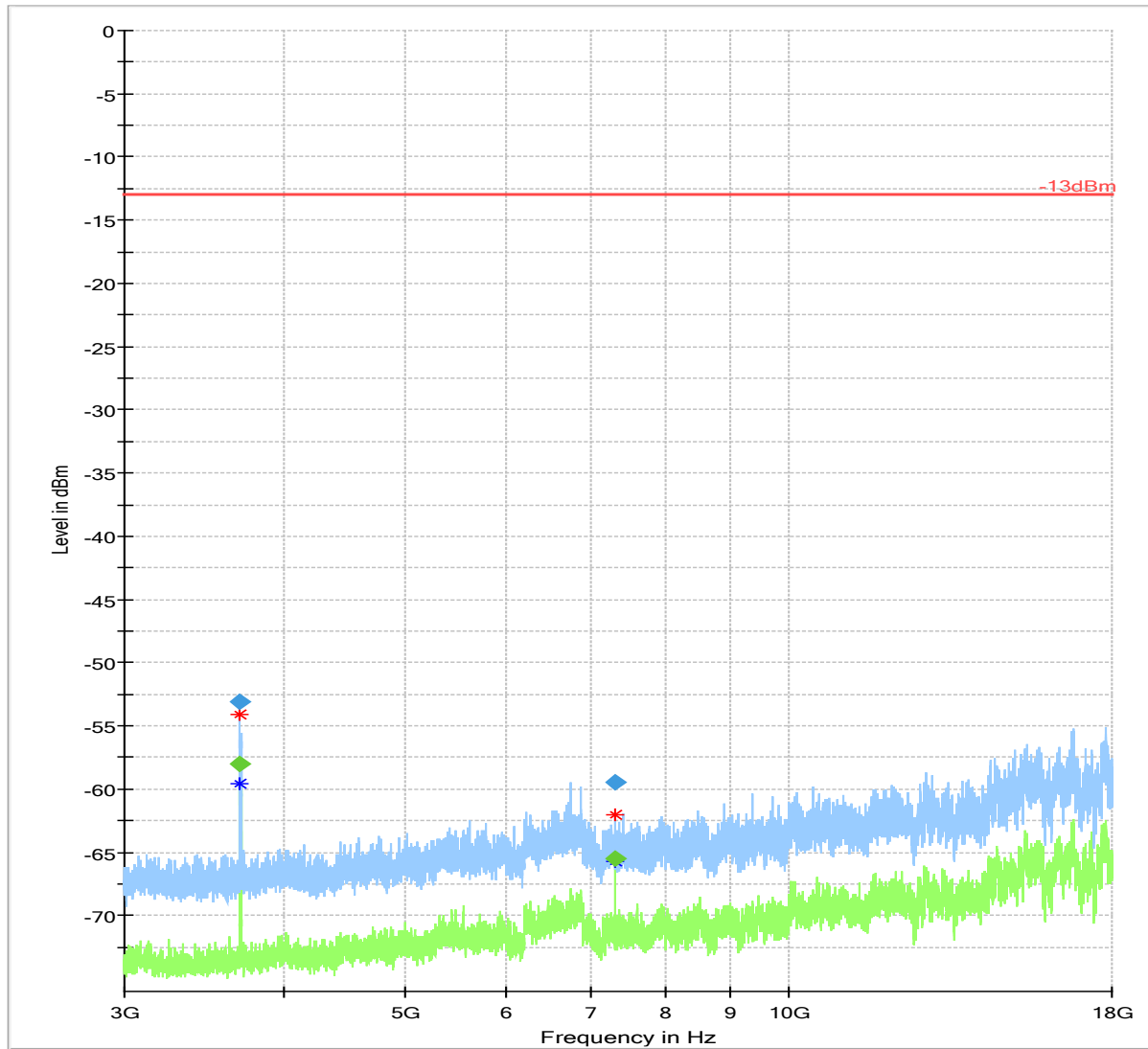
* Critical_Freqs RMS
◆ Final_Result PK+

Plot # 24 Radiated Emissions: 3 GHz - 18 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3702.595333	-53.10	---	-13.00	40.10	200.0	1000.000	141.0	H	194.0	-130.7
3702.909333	---	-57.95	---	---	200.0	1000.000	265.0	H	28.0	-130.7
7319.814667	-59.47	---	-13.00	46.47	200.0	1000.000	155.0	V	229.0	-125.2
7319.998667	---	-65.50	---	---	200.0	1000.000	220.0	V	230.0	-125.2



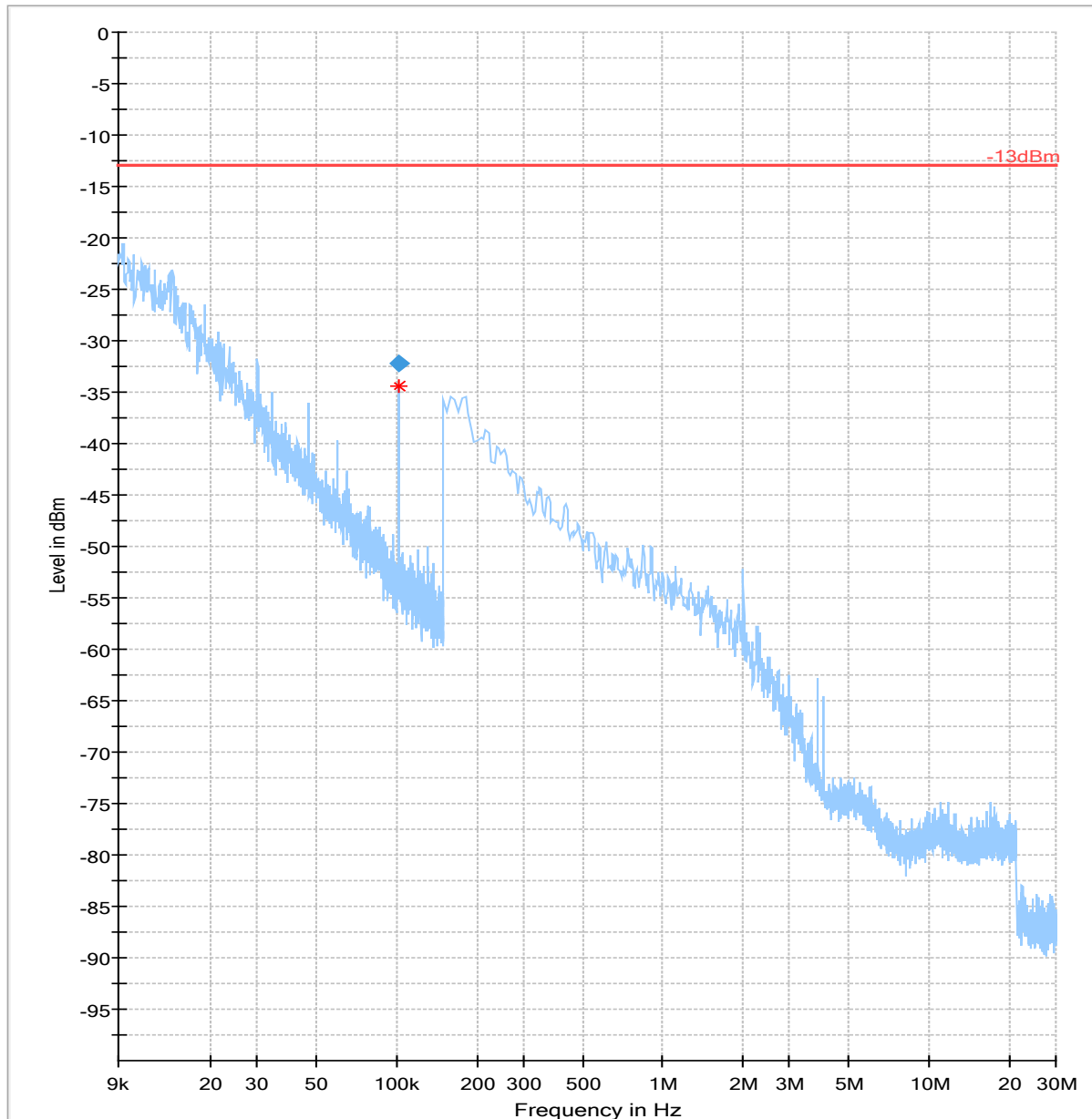
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
♦ Critical_Freqs PK+ — -13dBm ♦ Final_Result PK+
♦ Final_Result RMS

Plot # 25 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

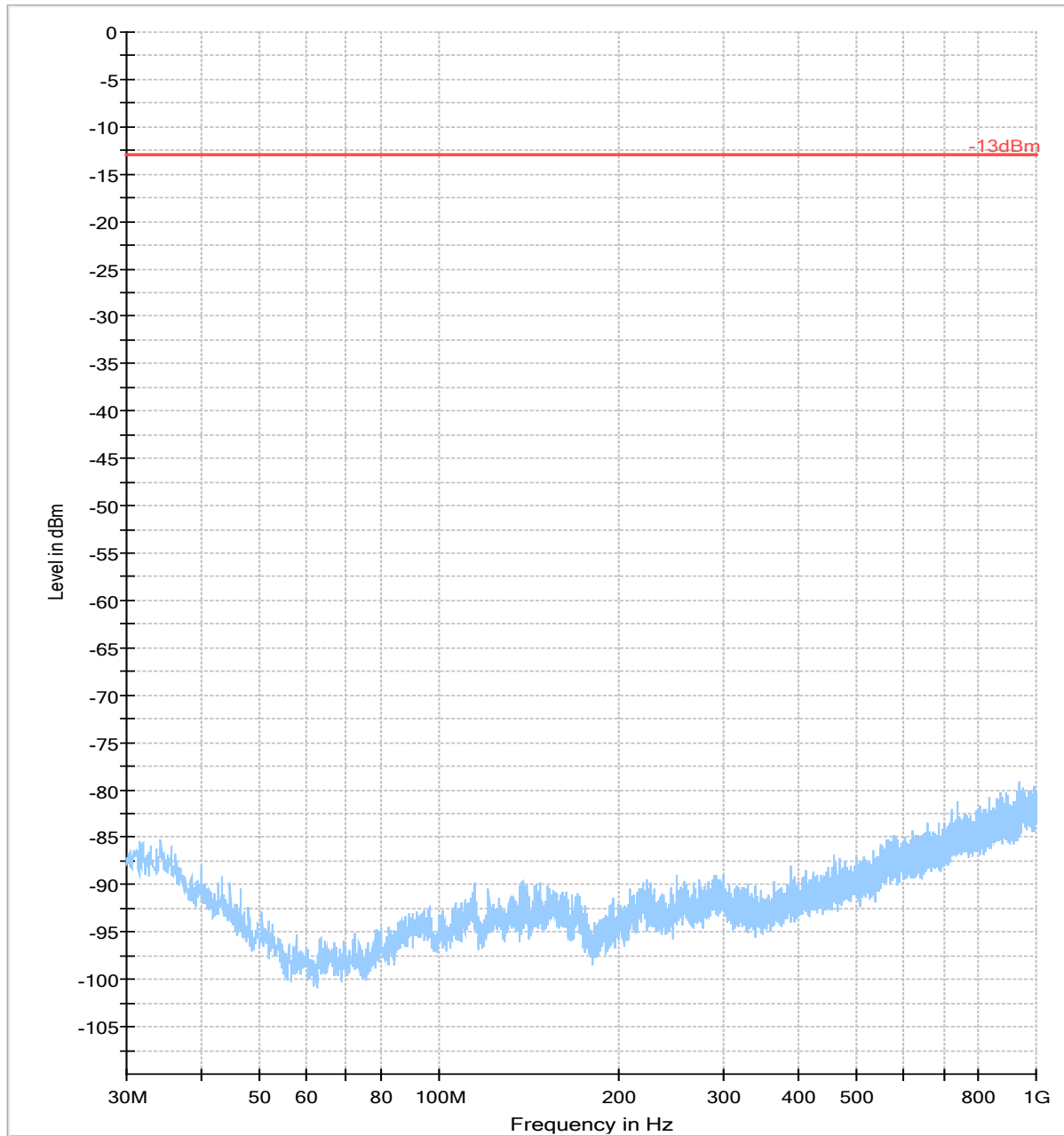
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.101454	-32.15	---	-13.00	19.15	500.0	0.200	100.0	H	-6.0	-56.7



* Preview Result 2-RMS Critical_Freqs PK+ Final_Result RMS
◆ Critical_Freqs RMS Final_Result PK+

Plot # 26 Radiated Emissions: 30 MHz – 1 GHz

Channel: Mid



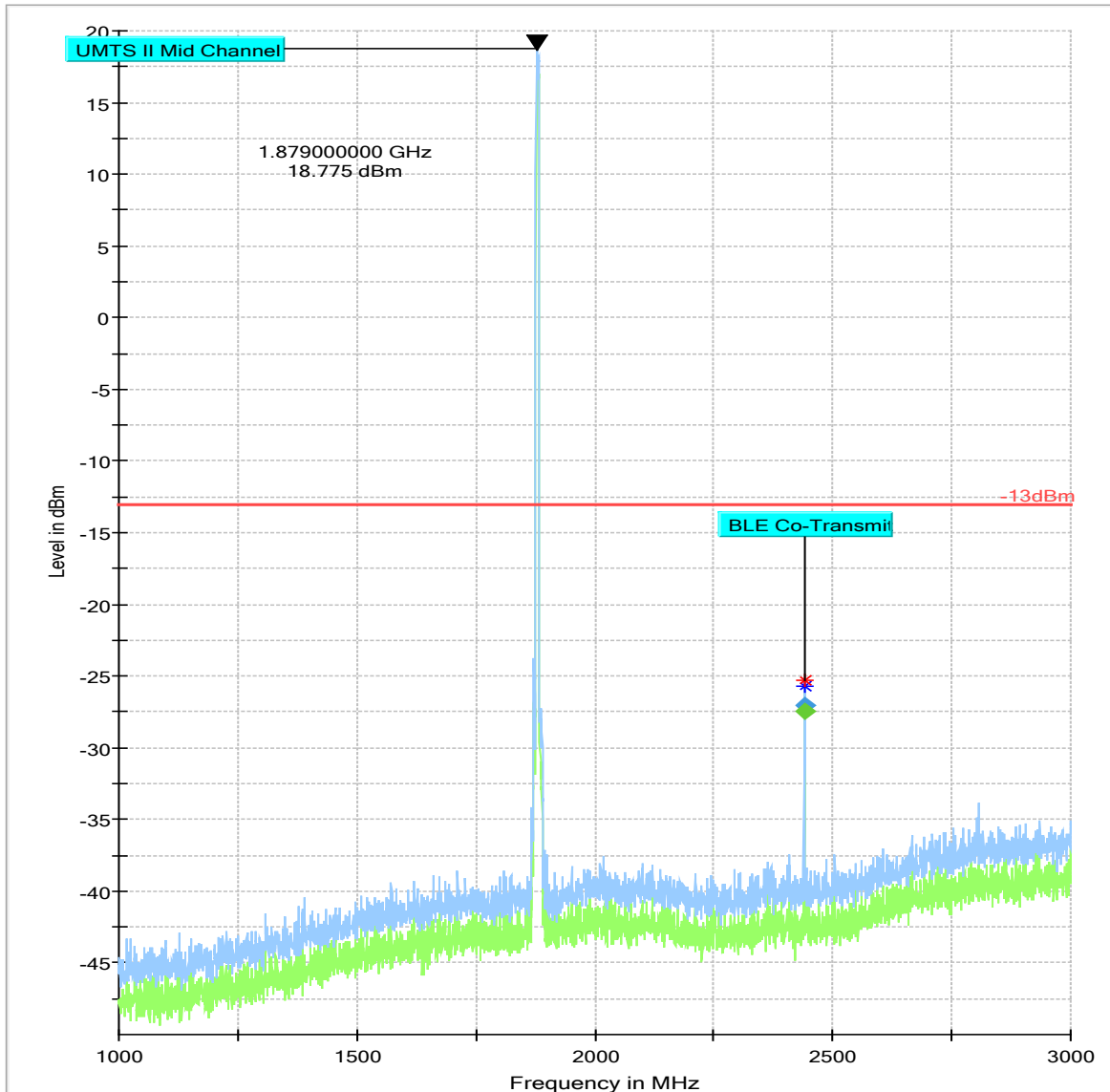
	Preview Result 2-RMS		Preview Result 1-PK+		Critical_Freqs RMS
	Critical_Freqs PK+		-13dBm		Final_Result PK+
	Final_Result RMS				

Plot # 27 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.010250	-27.05	---	-13.00	14.05	200.0	1000.000	100.0	H	336.0	-86.9
2440.090500	---	-27.45	---	---	200.0	1000.000	100.0	H	338.0	-86.9



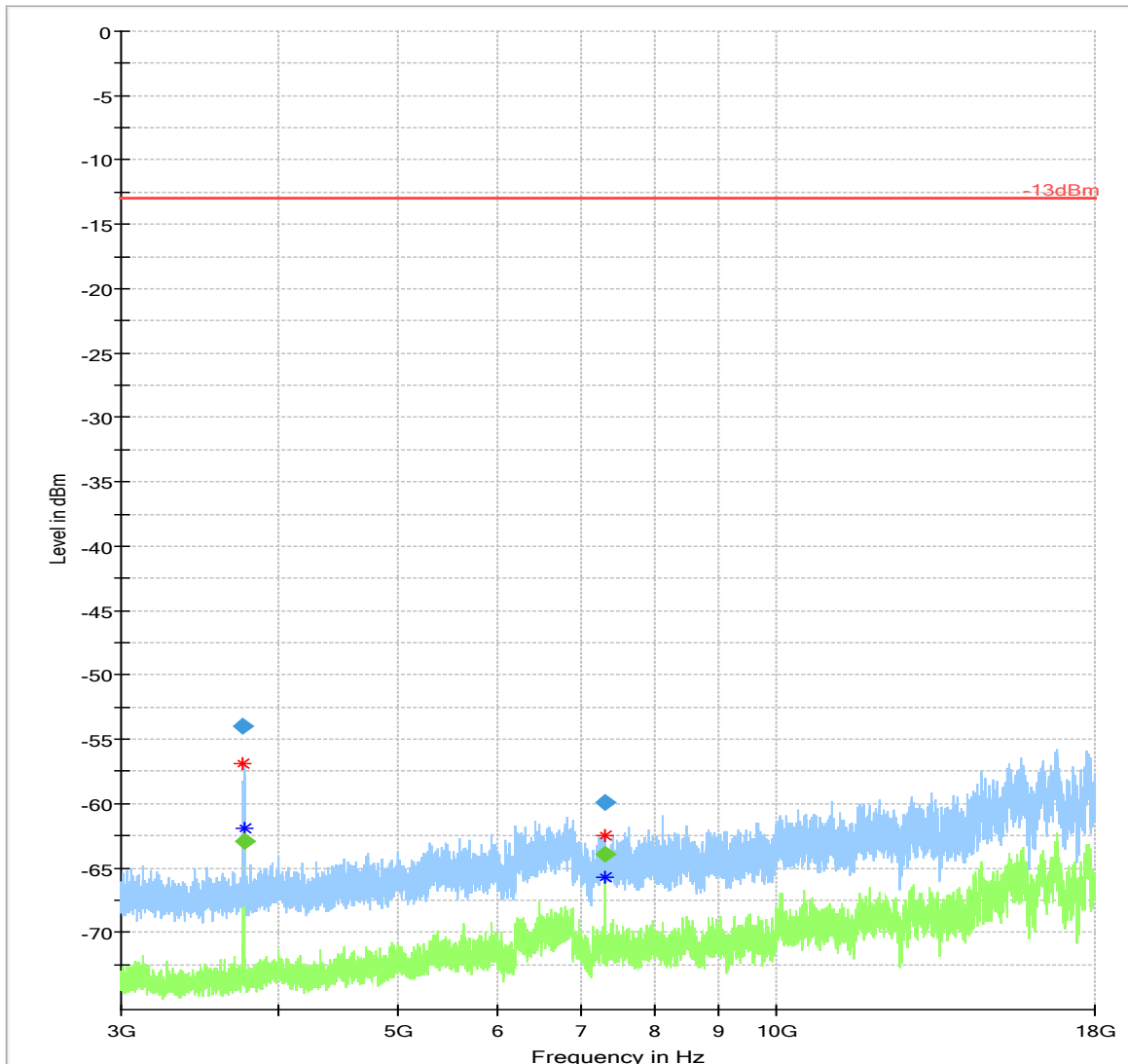
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 28 Radiated Emissions: 3 GHz – 18GHz

Channel: Mid

Final Result

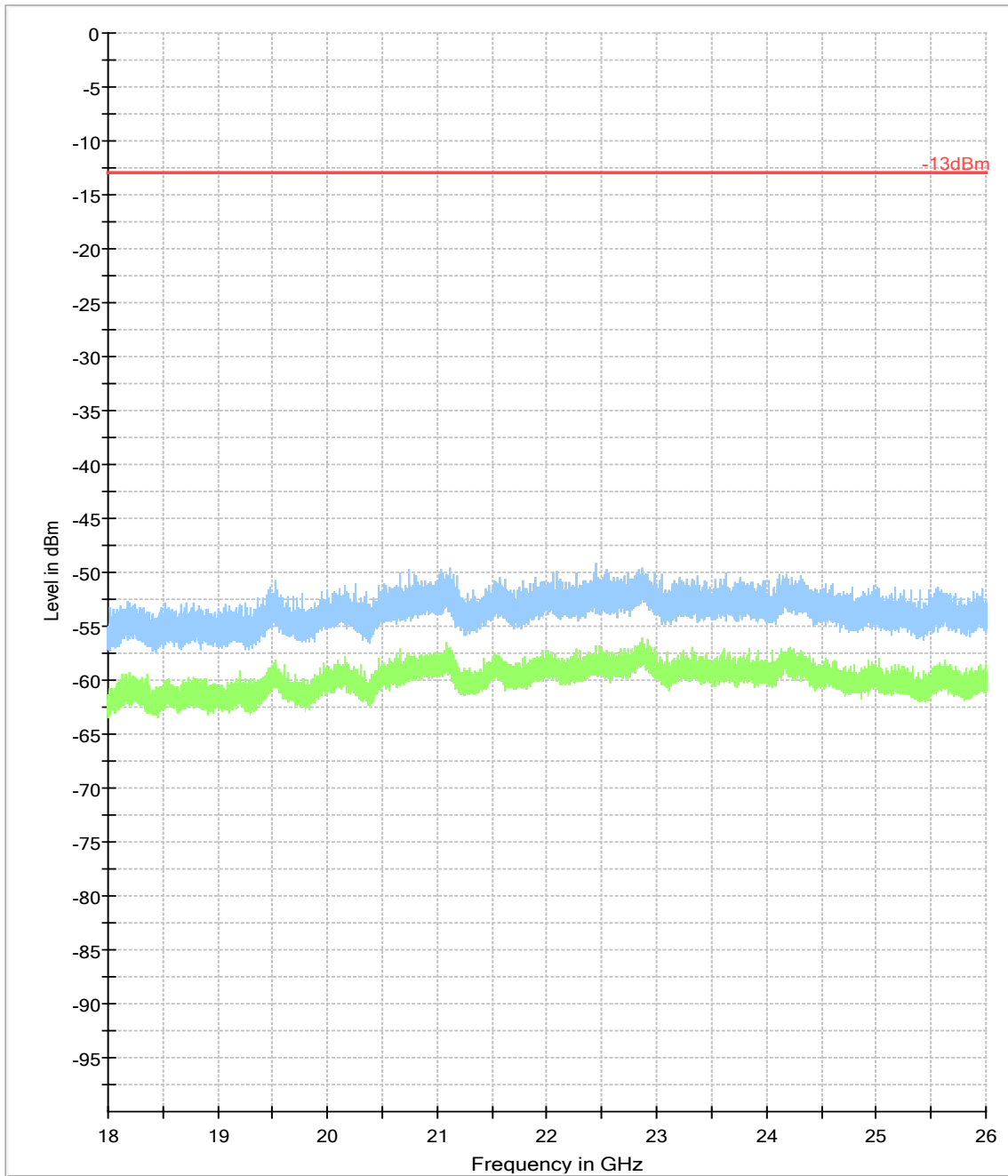
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3757.737333	-54.00	---	-13.00	41.00	200.0	1000.000	224.0	H	23.0	-130.4
3758.421333	---	-62.93	---	---	200.0	1000.000	126.0	H	52.0	-130.4
7319.914667	-59.90	---	-13.00	46.90	200.0	1000.000	252.0	H	172.0	-125.2
7320.024000	---	-63.90	---	---	200.0	1000.000	275.0	V	60.0	-125.2



— Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS Final_Result PK+
* Critical_Freqs PK+ — -13dBm

Plot # 29 Radiated Emissions: 18 GHz – 26GHz

Channel: Mid



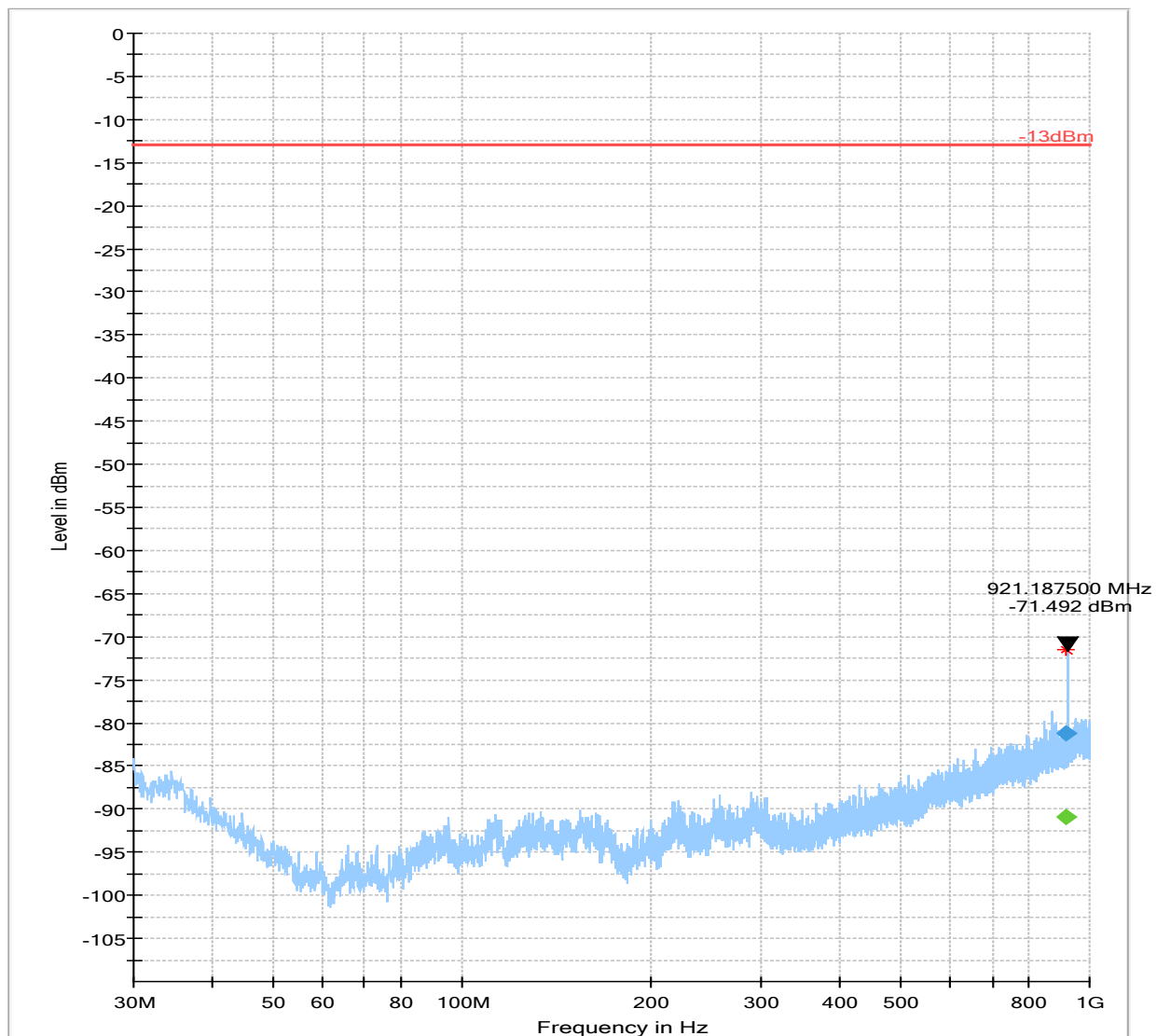
—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

Plot # 30 Radiated Emissions: 30 MHz - 1 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
920.189000	---	-90.91	-13.00	77.91	200.0	100.000	227.0	V	357.0	-100.9
920.189000	-81.26	---	-13.00	68.26	200.0	100.000	227.0	V	357.0	-100.9



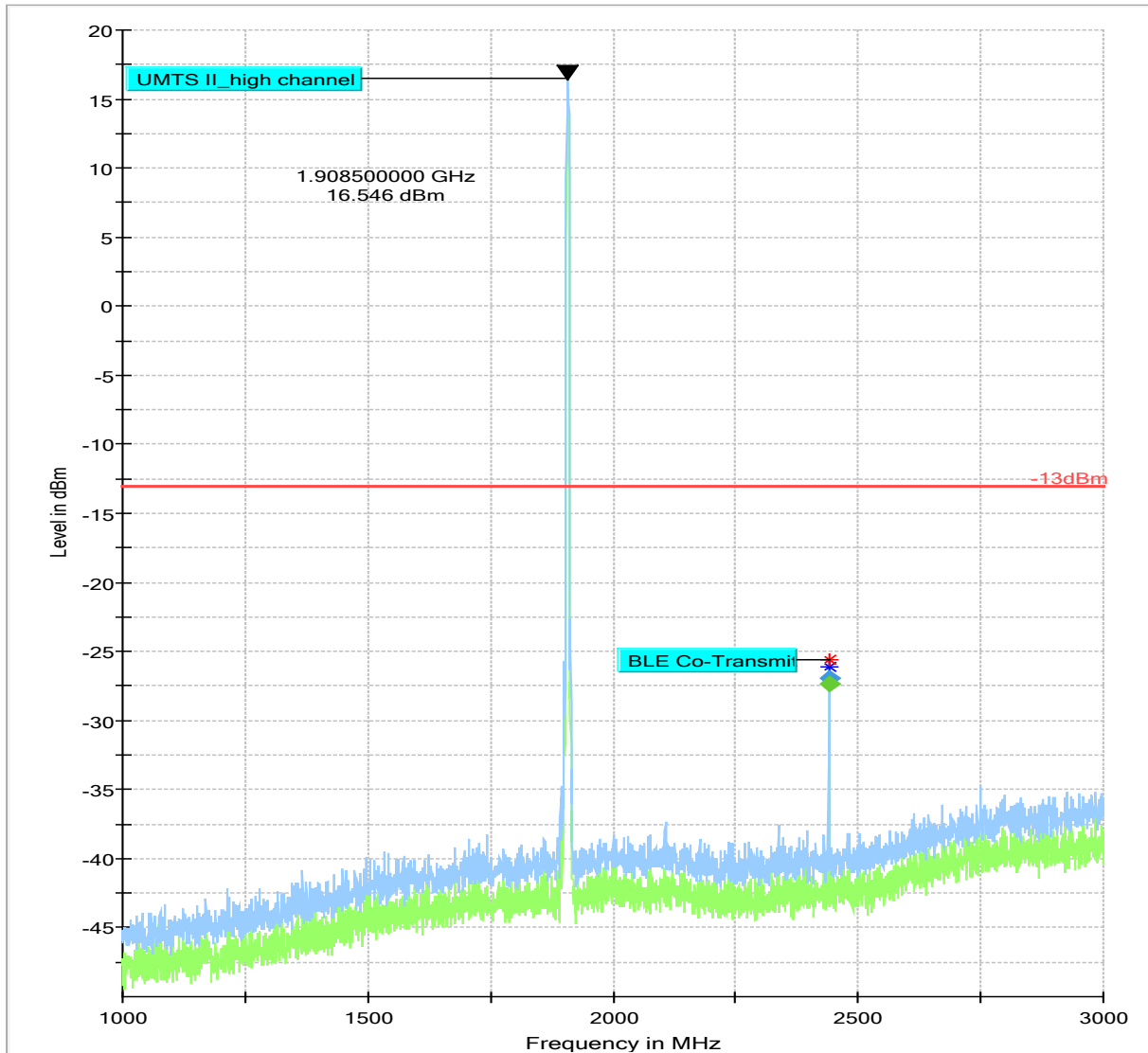
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
— Critical_Freqs PK+ ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 31 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.001750	-26.99	---	-13.00	13.99	200.0	1000.000	100.0	H	340.0	-86.9
2440.060500	---	-27.33	---	---	200.0	1000.000	100.0	H	338.0	-86.9

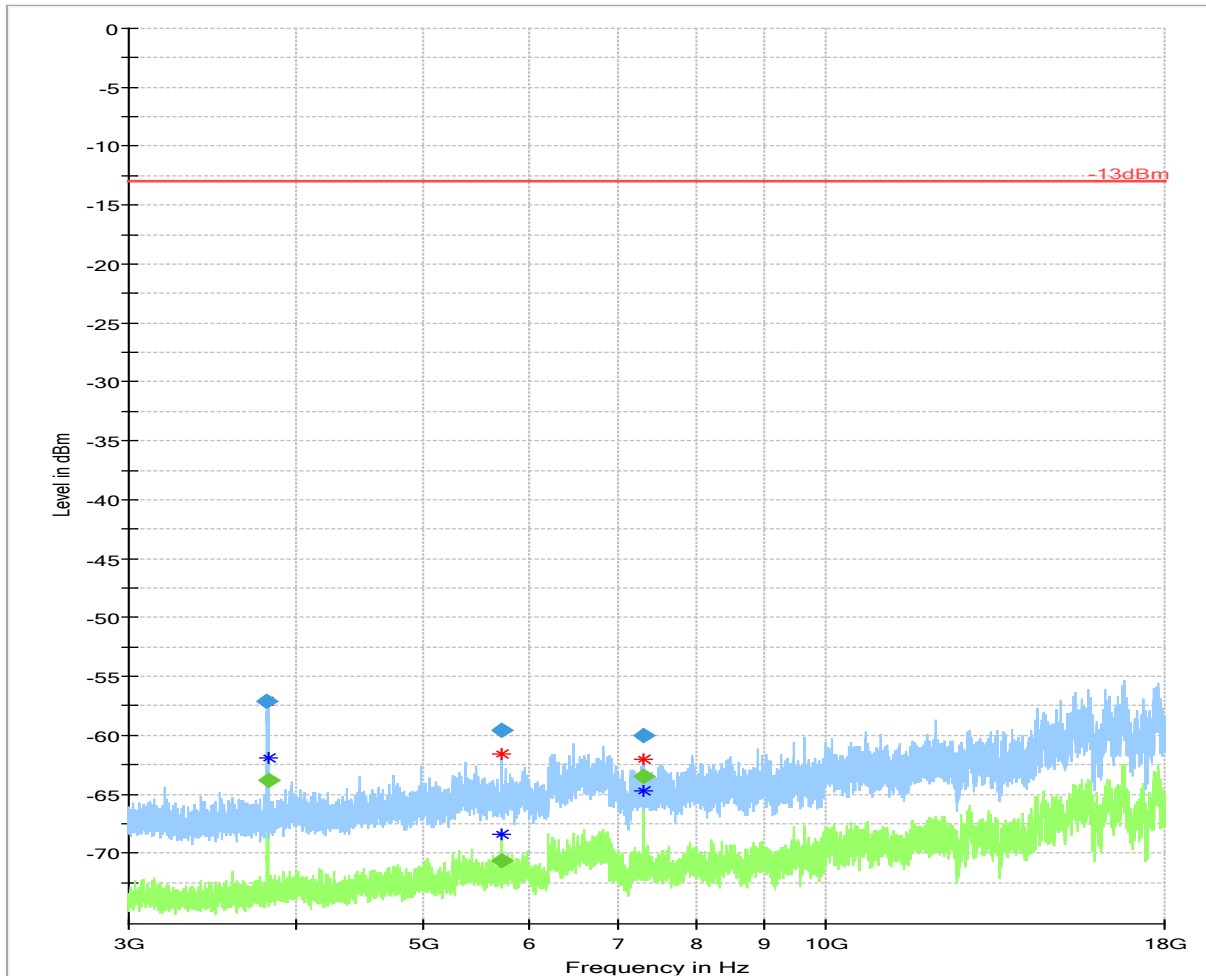


Plot # 32 Radiated Emissions: 3 GHz - 18 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3813.578667	-57.15	---	-13.00	44.15	200.0	1000.000	117.0	H	85.0	-130.3
3816.793333	---	-63.85	---	---	200.0	1000.000	147.0	H	87.0	-130.3
5725.090000	---	-70.64	---	---	200.0	1000.000	142.0	H	216.0	-126.2
5725.530667	-59.54	---	-13.00	46.54	200.0	1000.000	165.0	H	199.0	-126.2
7319.491333	-60.05	---	-13.00	47.05	200.0	1000.000	204.0	H	330.0	-125.2
7320.068667	---	-63.49	---	---	200.0	1000.000	268.0	V	28.0	-125.2

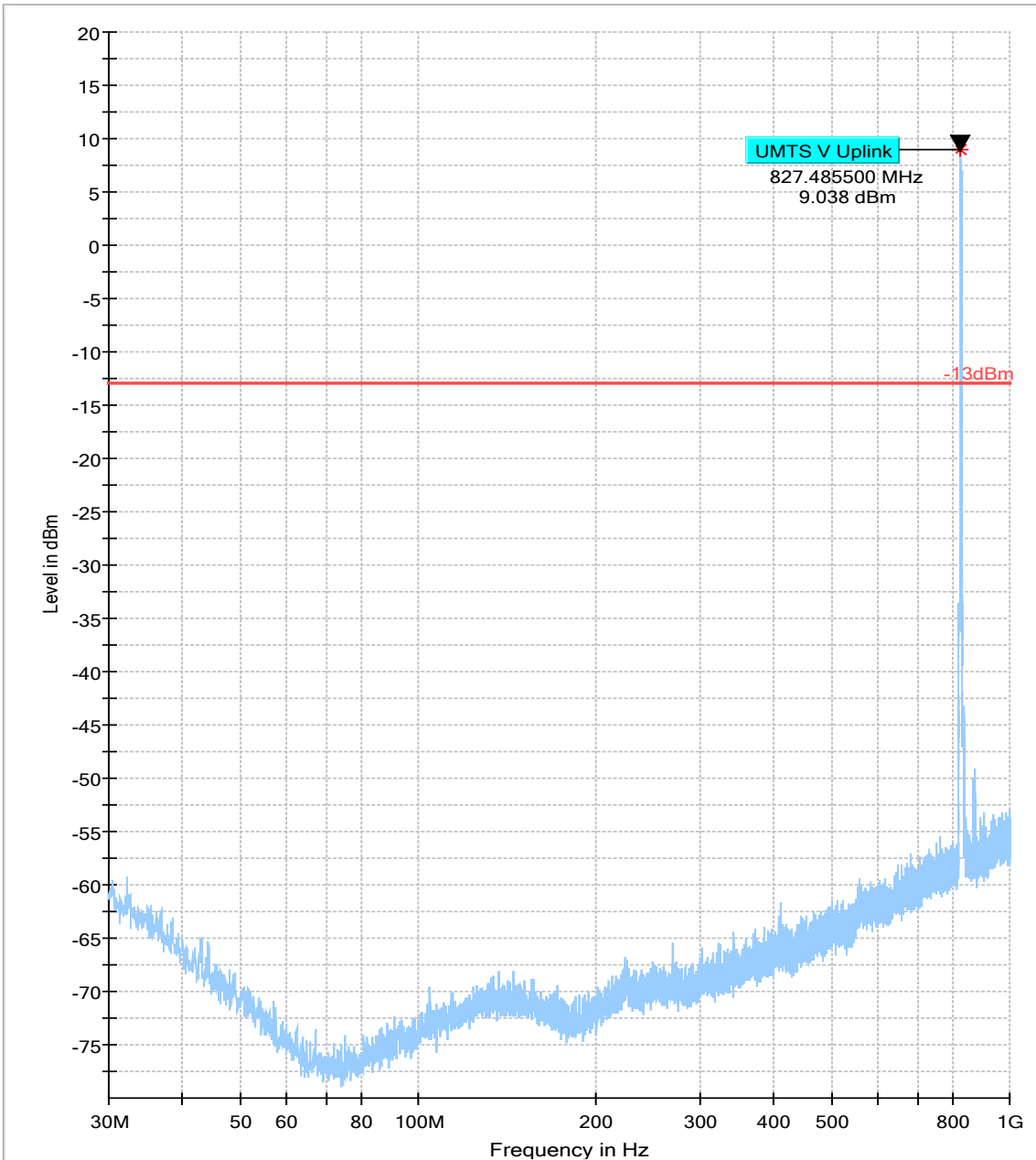


* Preview Result 2-RMS Critical_Freqs PK+
◆ Final_Result RMS
— Preview Result 1-PK+
— -13dBm
◆ Critical_Freqs RMS Final_Result PK+

UMTS Band V

Plot # 33 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



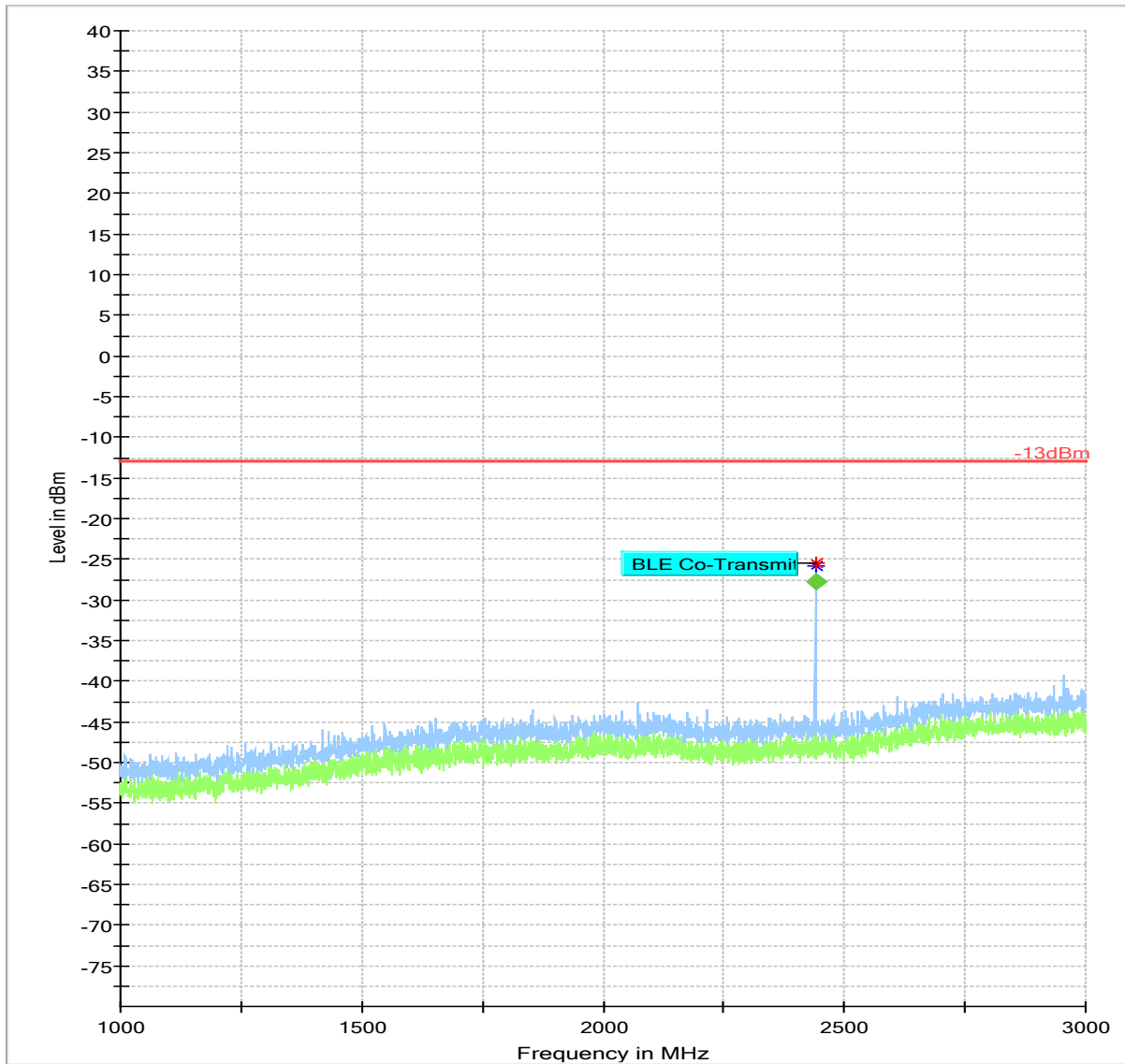
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	* Final_Result PK+
◆ Final_Result RMS		

Plot # 34 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

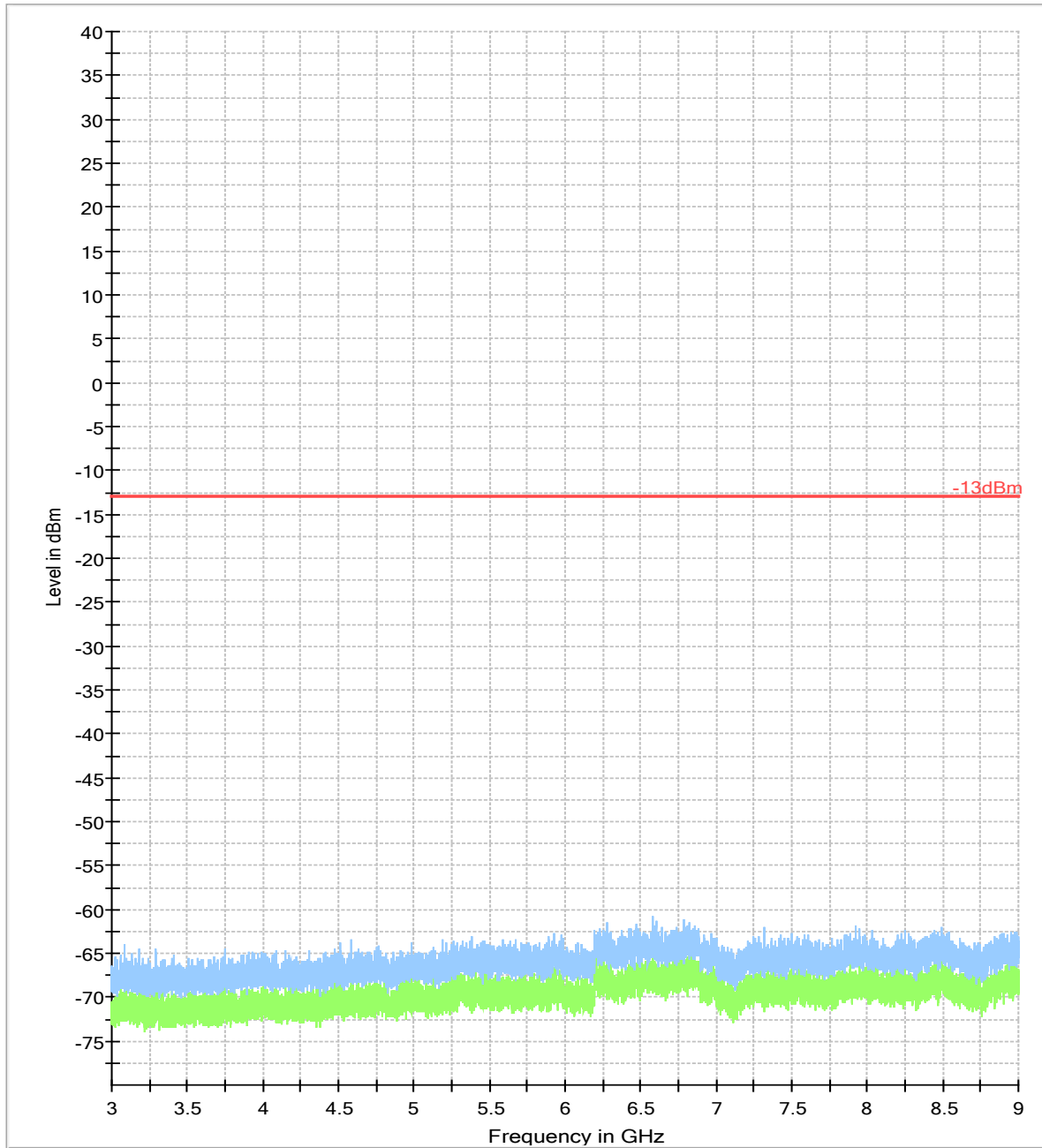
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.995000	---	-27.70	---	---	500.0	1000.000	142.0	H	333.0	-86.9
2440.025000	-27.75	---	-13.00	14.75	500.0	1000.000	141.0	H	333.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 35 Radiated Emissions: 3 GHz - 9 GHz

Channel: Low



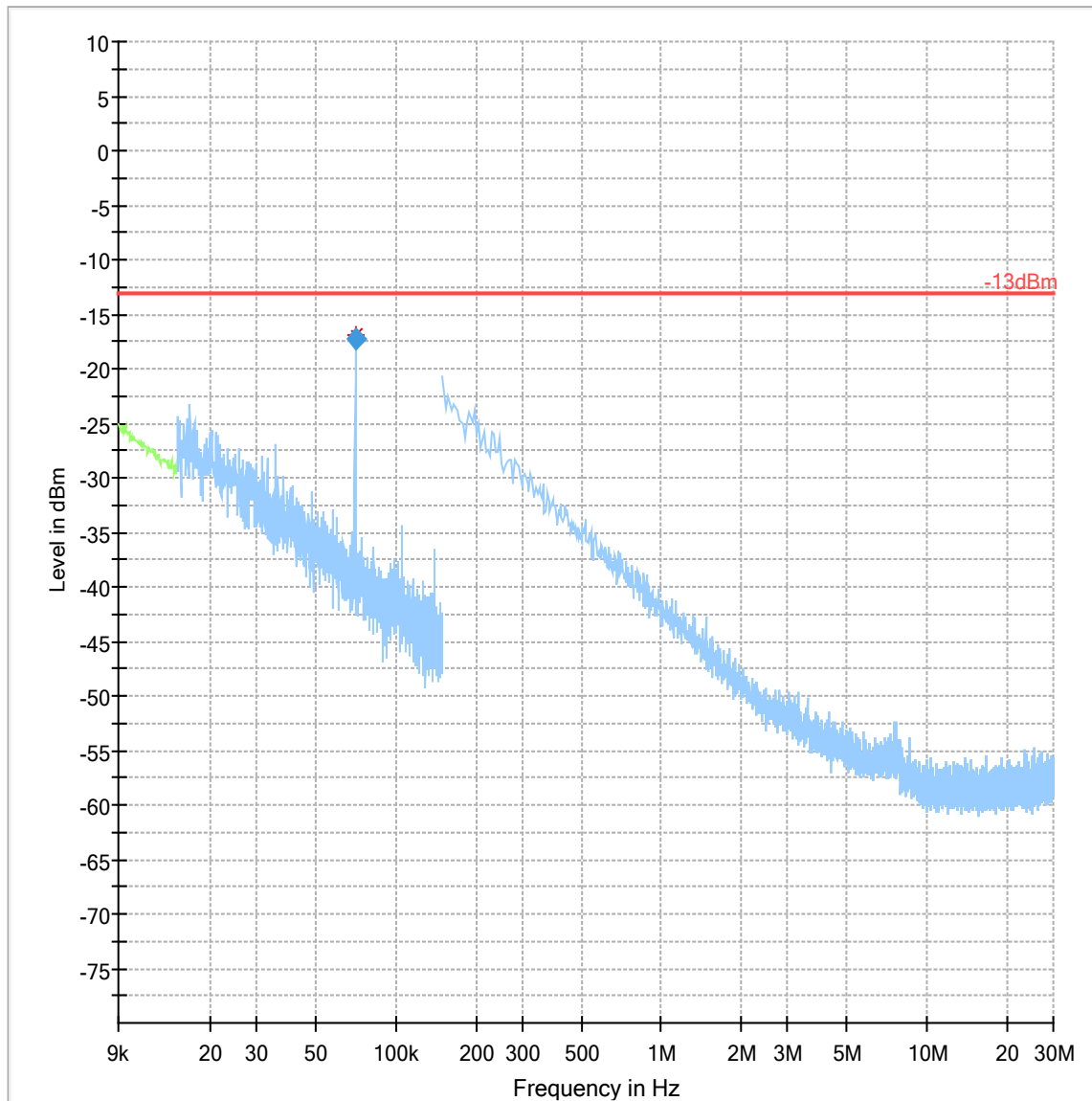
—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

Plot # 36 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

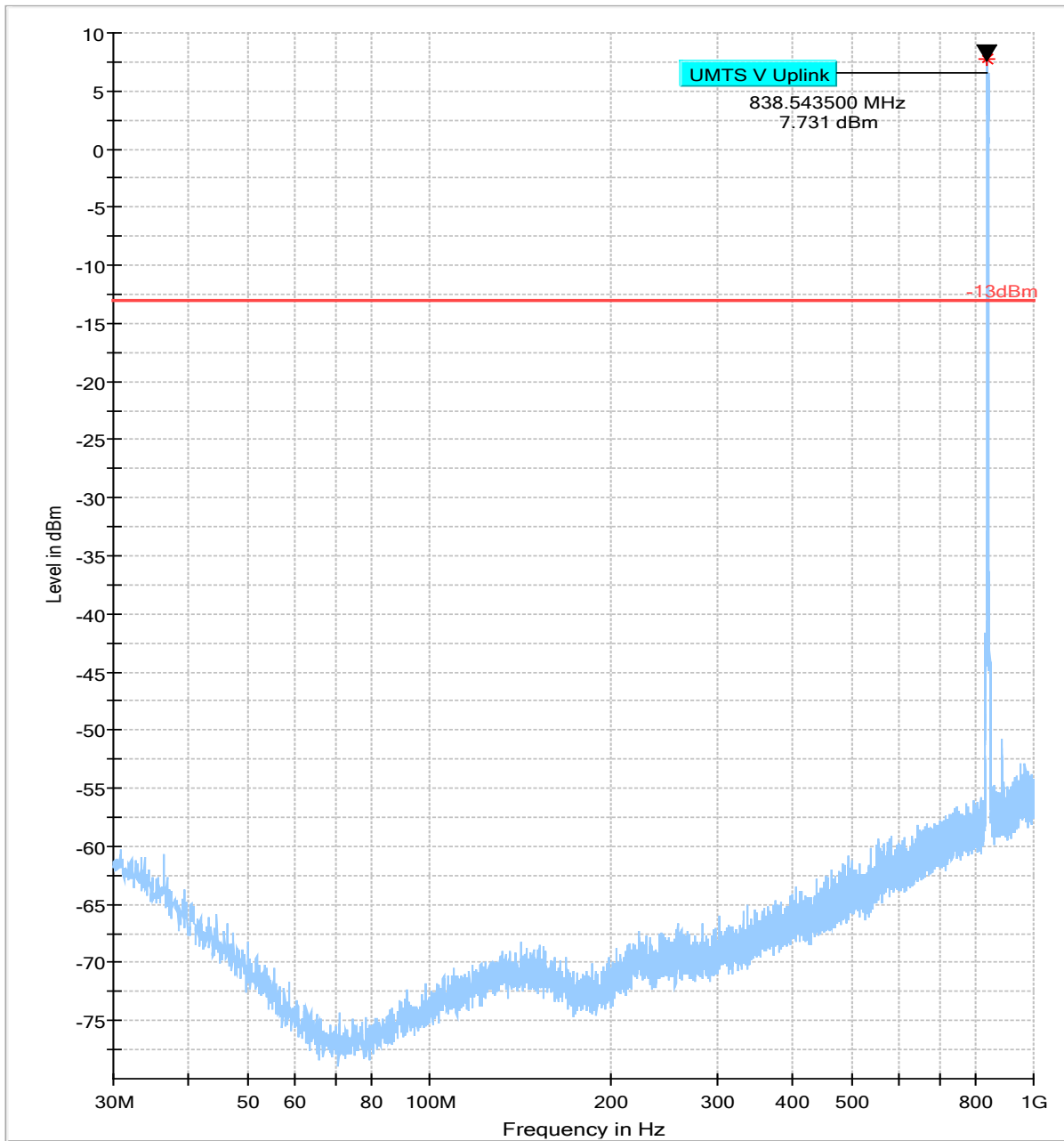
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.070240	-17.34	-13.00	4.34	50.0	0.200	343.0	H	166.0	-18.5



— Preview Result 2-QPK — Preview Result 1-PK+ * Critical_Freqs QPK
* Critical_Freqs PK+ — -13dBm ◆ Final_Result RMS

Plot # 37 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid



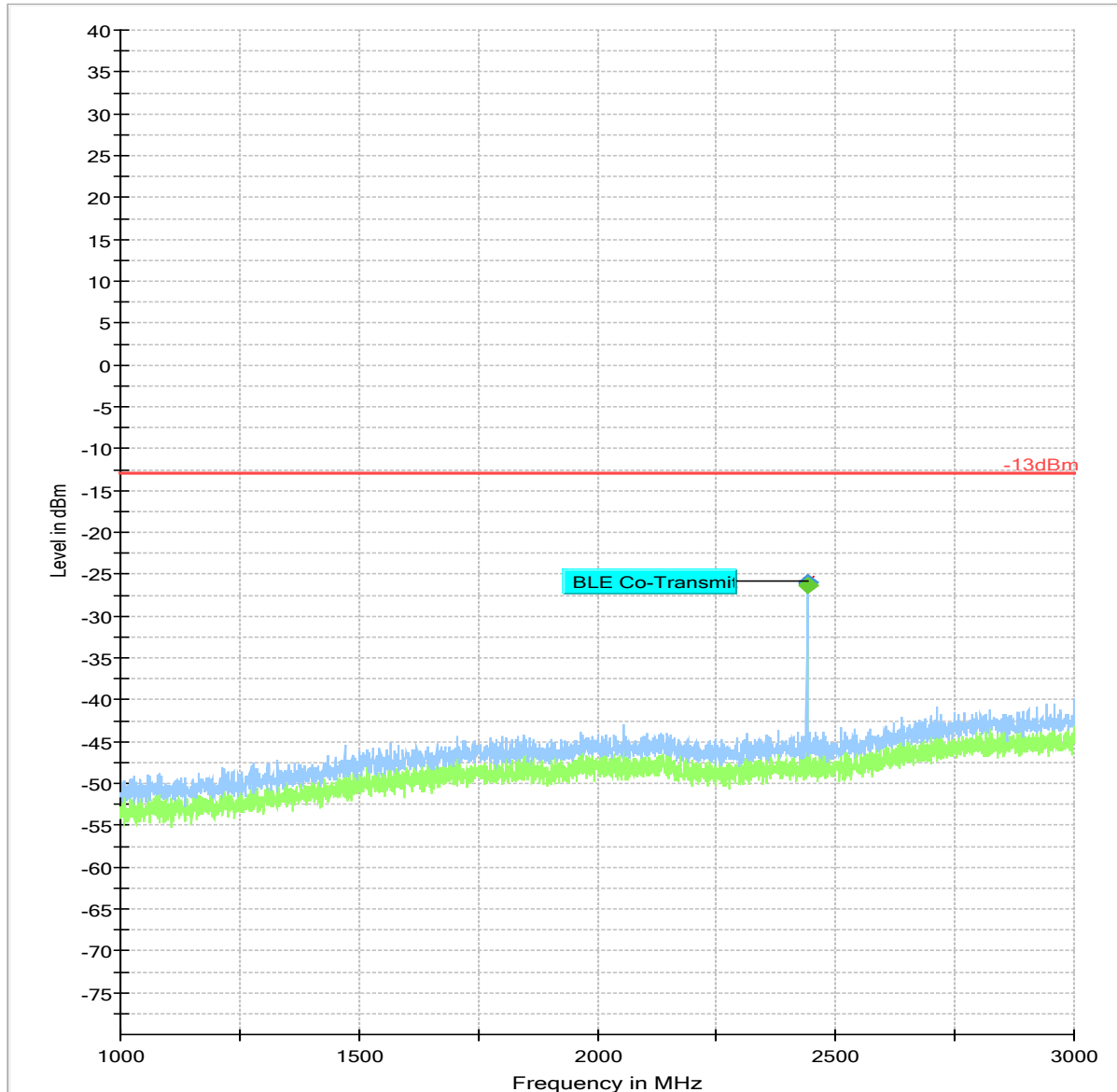
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

Plot # 38 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.080000	---	-26.44	---	---	500.0	1000.000	153.0	H	336.0	-86.9
2440.120000	-26.05	---	-13.00	13.05	500.0	1000.000	152.0	H	339.0	-86.9



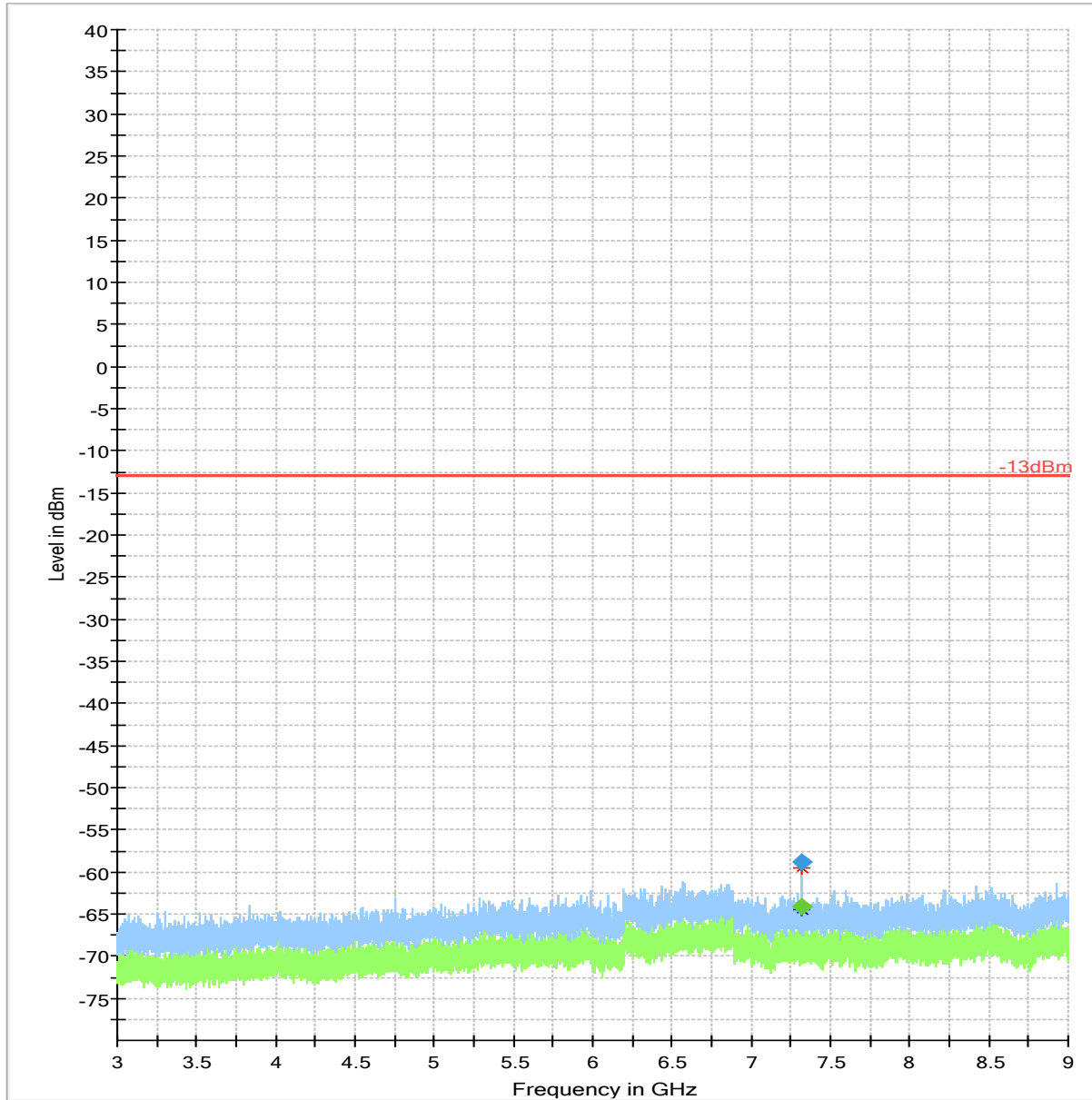
— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 39 Radiated Emissions: 3 GHz – 9 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
7319.967333	-58.85	---	-13.00	45.85	500.0	1000.000	323.0	V	227.0	-125.2
7320.167333	---	-64.05	-13.00	51.05	500.0	1000.000	267.0	V	27.0	-125.2



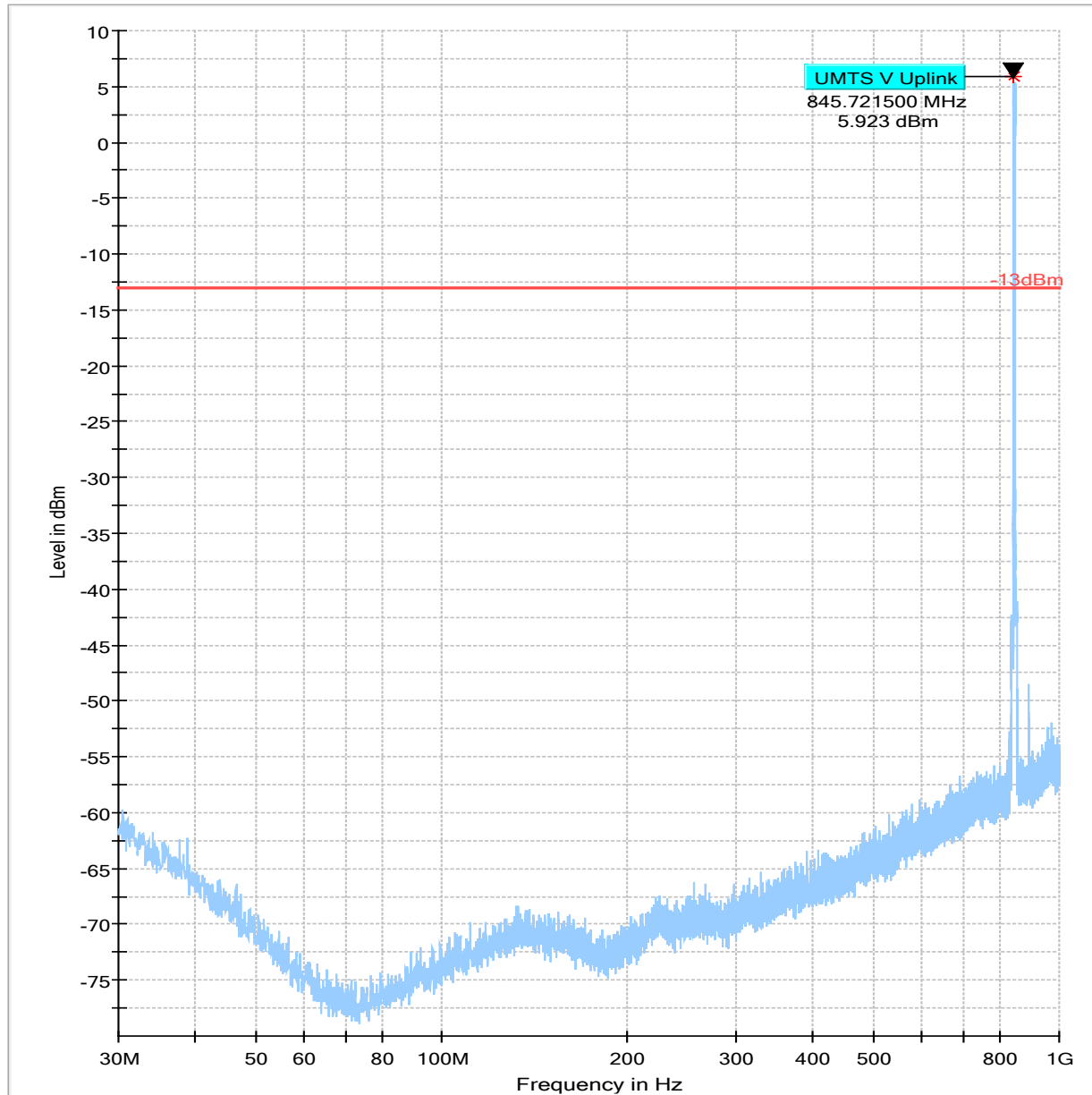
* Preview Result 2-RMS
* Critical_Freqs PK+
* Final_Result RMS

— Preview Result 1-PK+
— -13dBm

◆ Critical_Freqs RMS
◆ Final_Result PK+

Plot # 40 Radiated Emissions: 30 MHz - 1 GHz

Channel: High

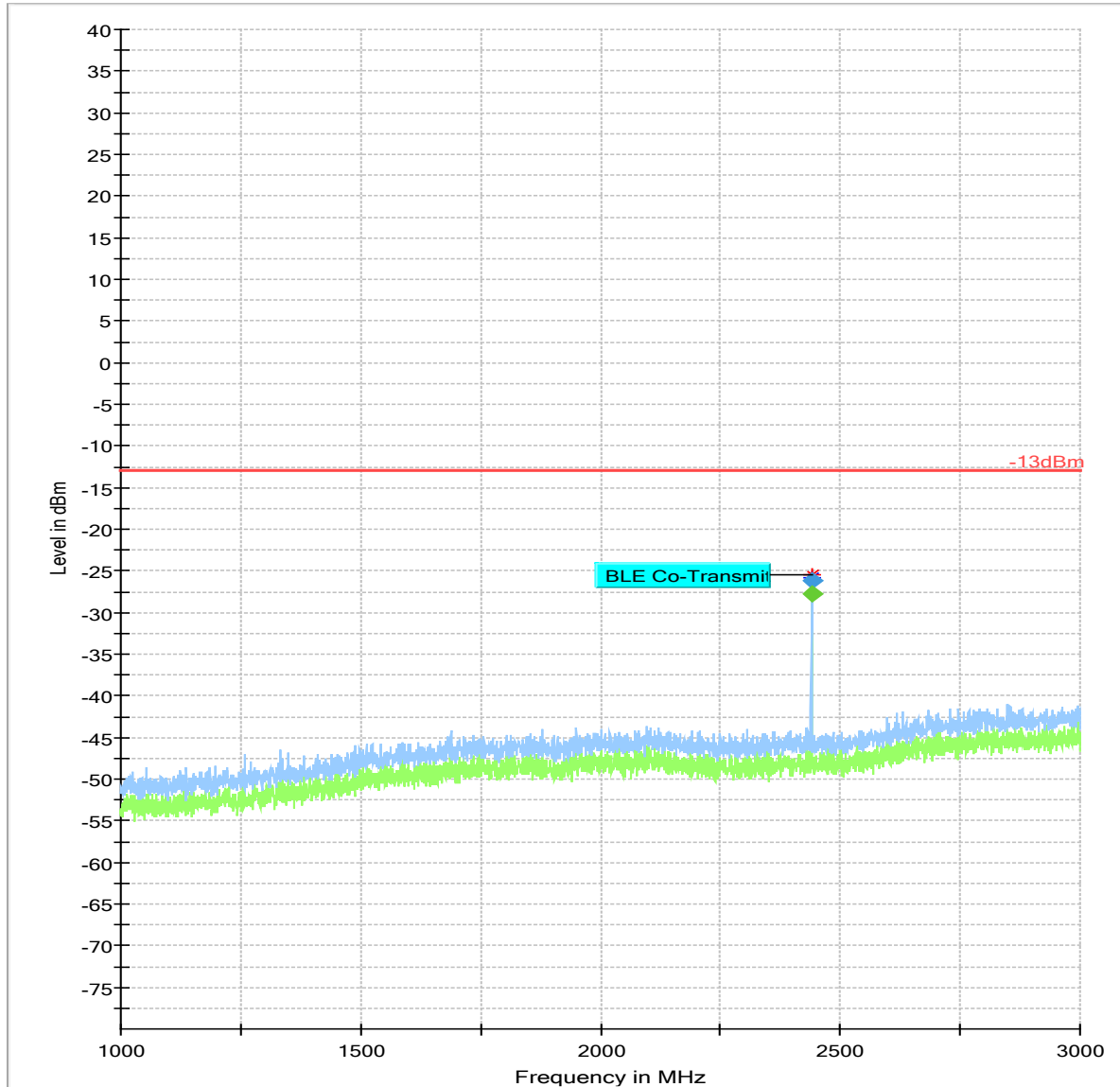


Plot # 41 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

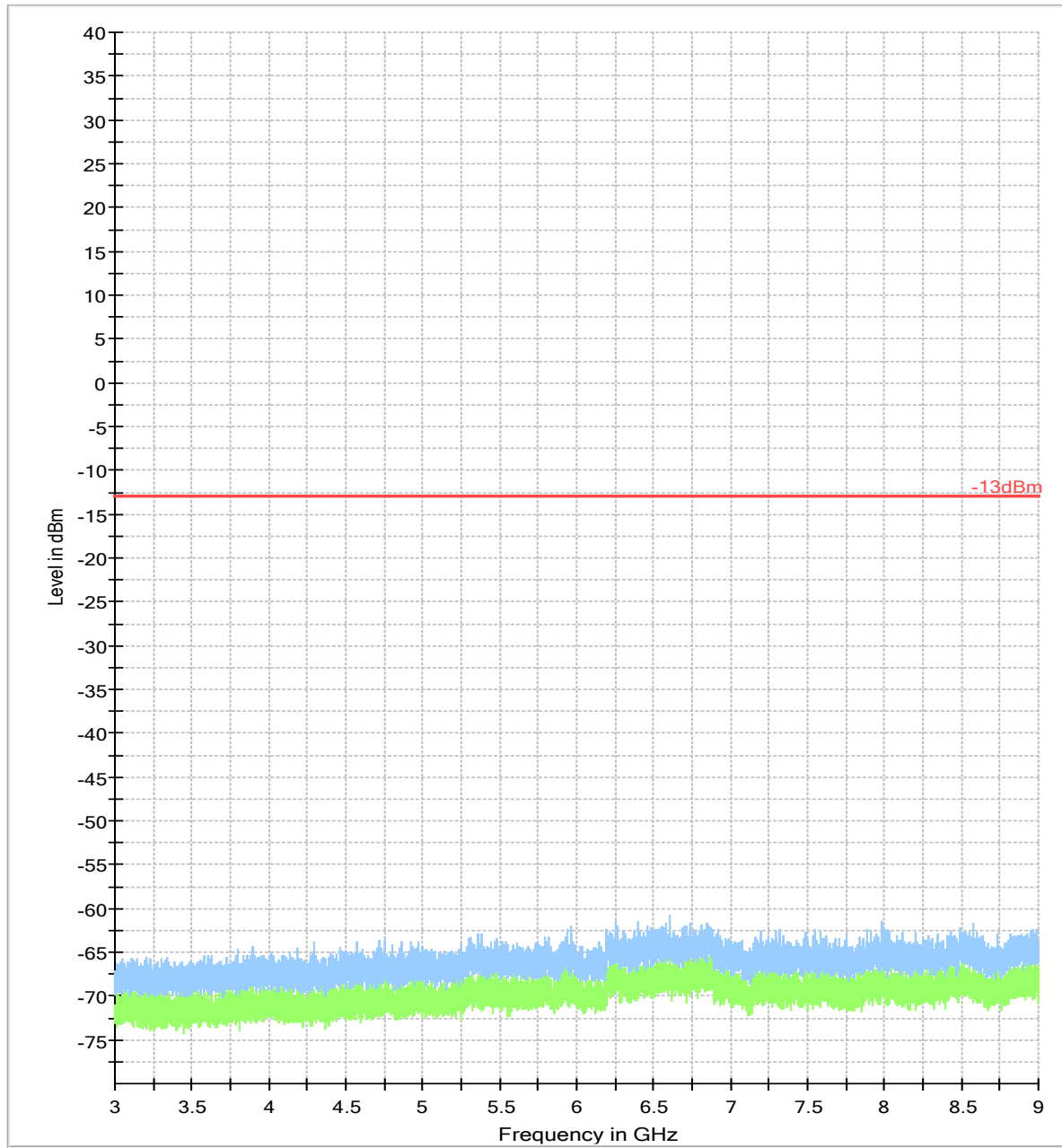
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.945000	---	-27.82	---	---	500.0	1000.000	142.0	H	331.0	-86.9
2440.045000	-26.15	---	-13.00	13.15	500.0	1000.000	153.0	H	336.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
— Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 42 Radiated Emissions: 3 GHz - 9 GHz

Channel: High

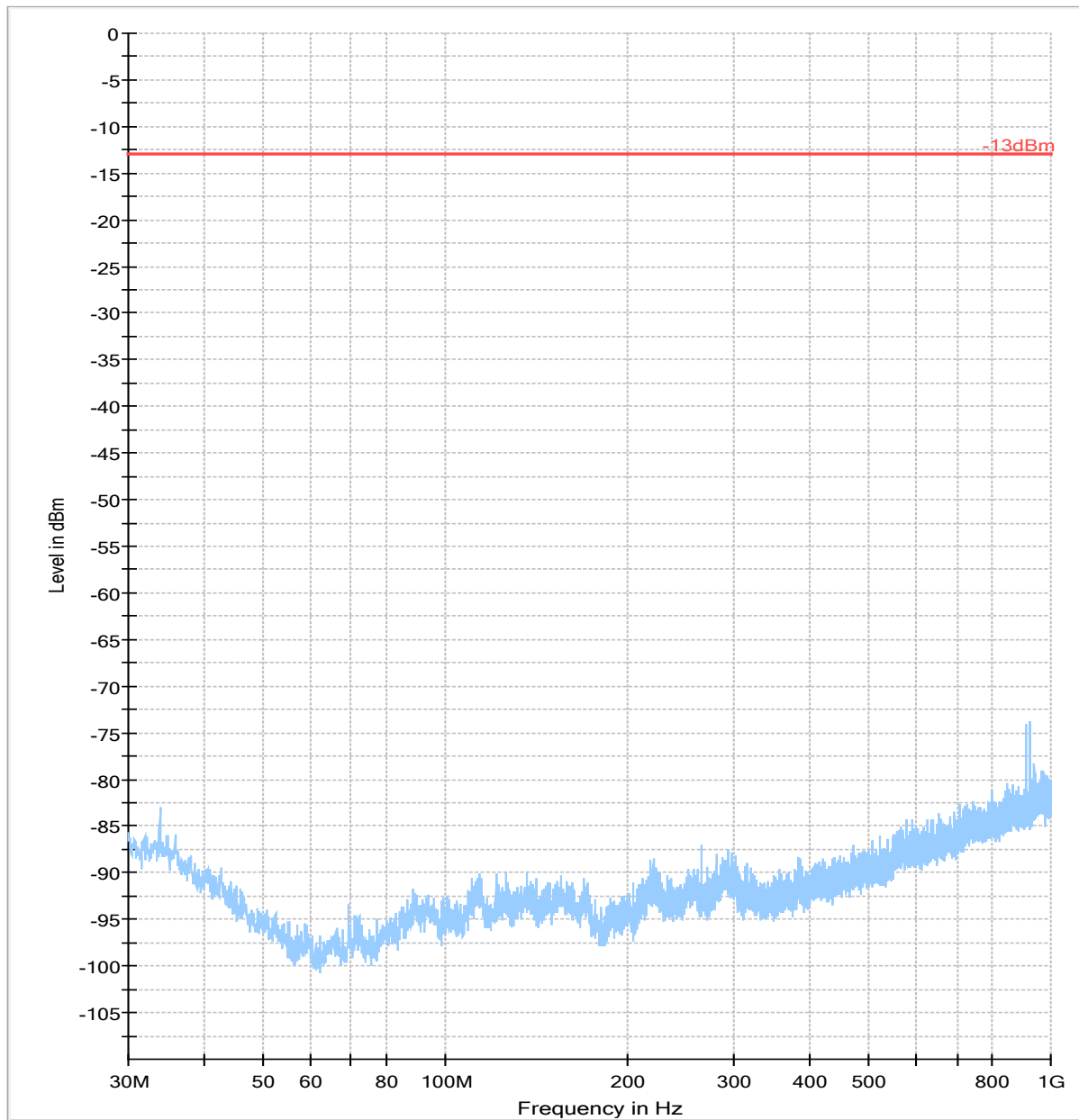


—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

LTE Band 2

Plot # 43 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



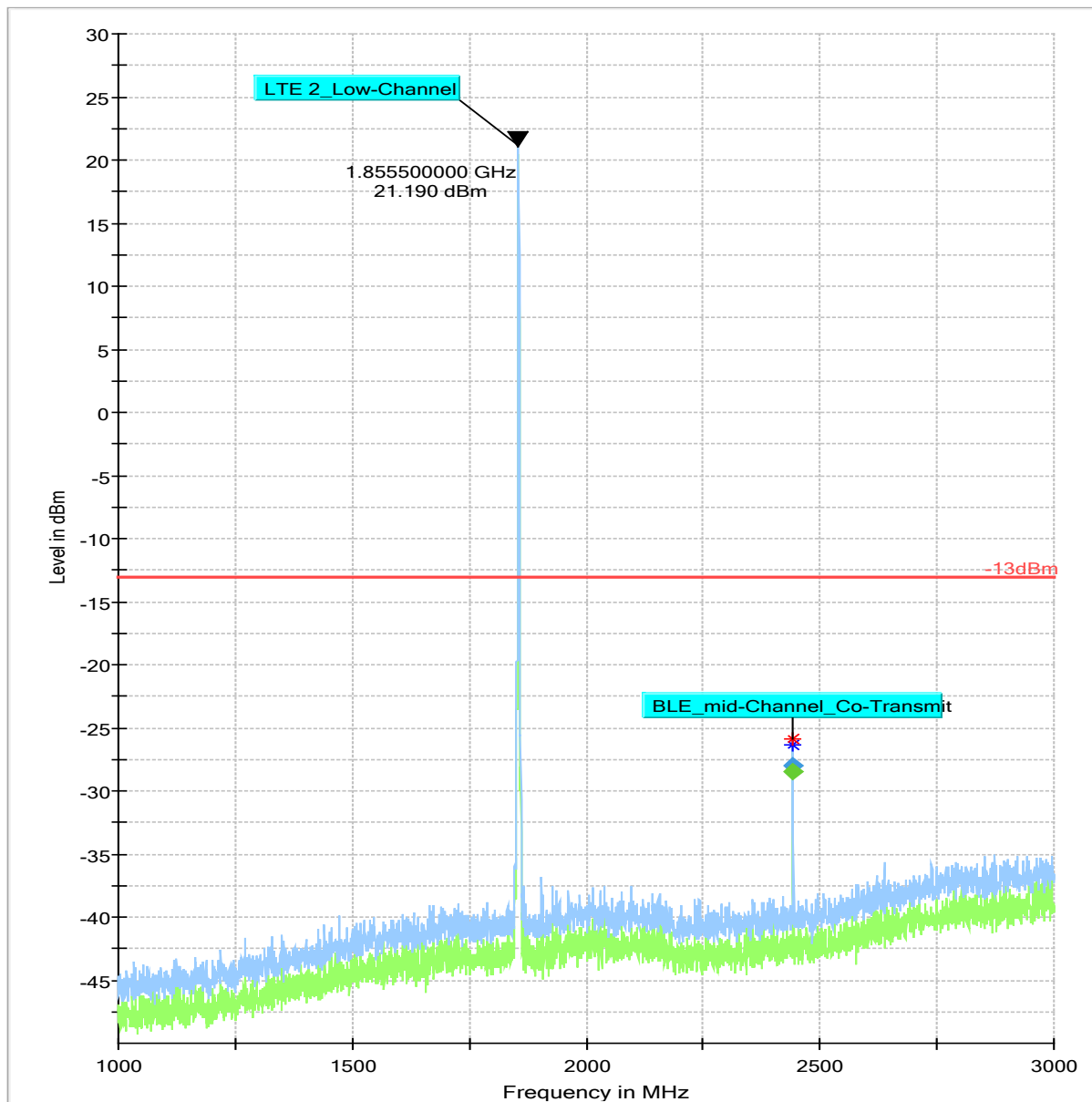
Preview Result 2-RMS Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ -13dBm ♦ Final_Result PK+
♦ Final_Result RMS

Plot # 44 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.030250	-28.02	---	-13.00	15.02	200.0	1000.000	100.0	H	63.0	-86.9
2442.044750	---	-28.50	---	---	200.0	1000.000	100.0	H	62.0	-86.9



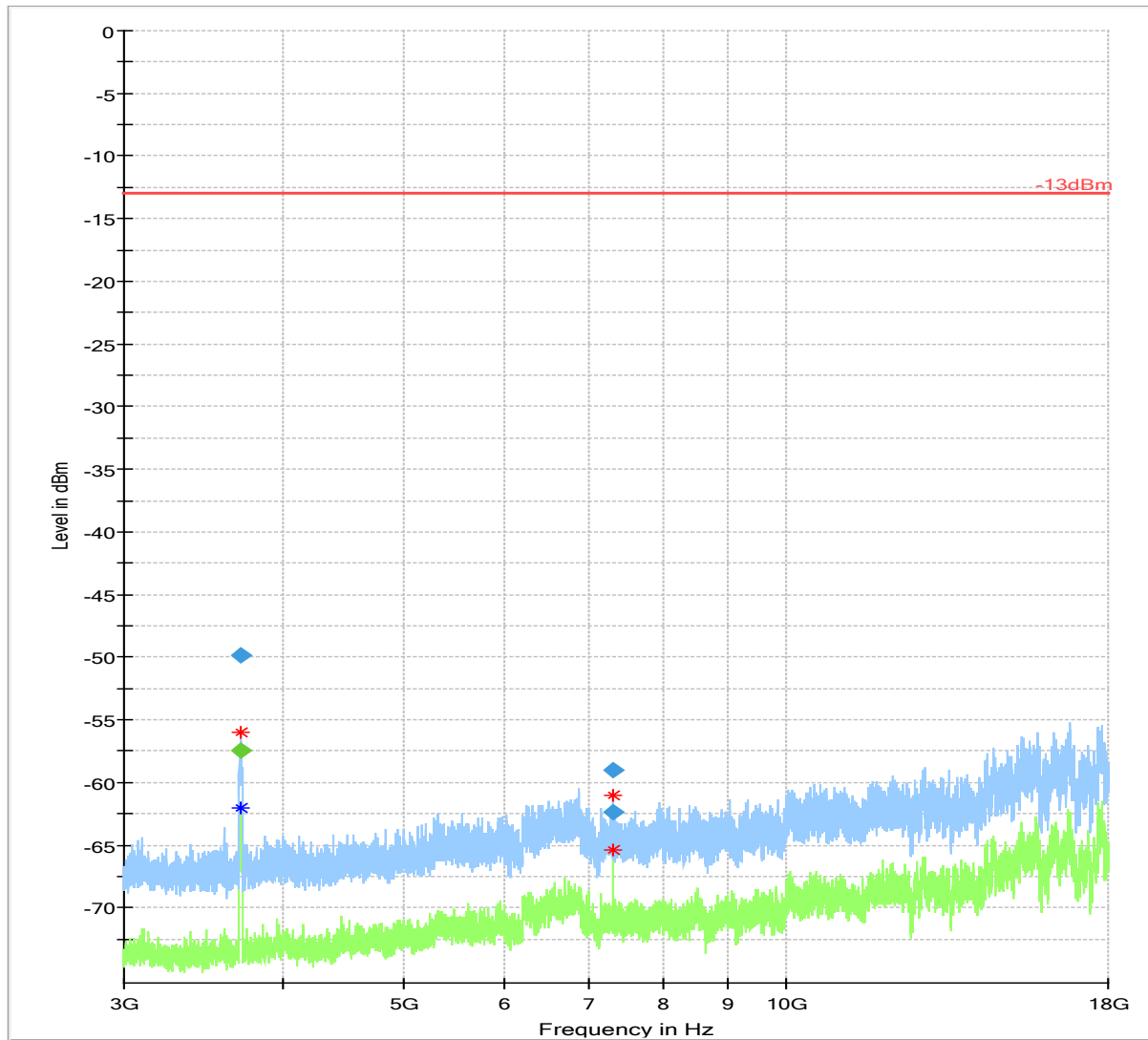
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 45 Radiated Emissions: 3 GHz - 18 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3710.972667	---	-57.46	---	---	200.0	1000.000	231.0	H	18.0	-130.7
3711.179333	-49.87	---	-13.00	36.87	200.0	1000.000	232.0	H	214.0	-130.7
7309.168000	-62.41	---	-13.00	49.41	200.0	1000.000	150.0	H	113.0	-125.2
7319.944667	-58.97	---	-13.00	45.97	200.0	1000.000	165.0	V	40.0	-125.2



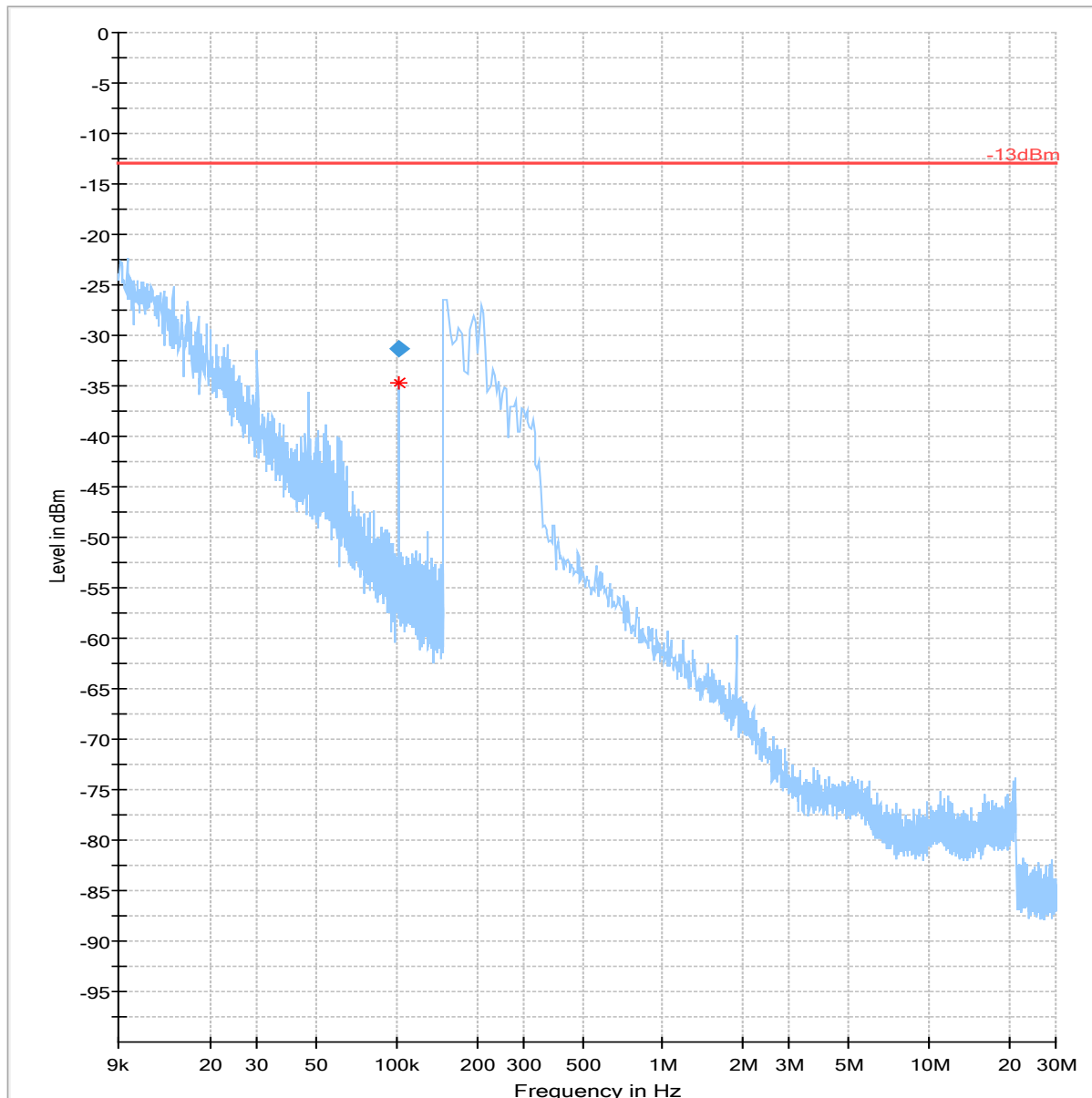
* Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS
◆ Critical_Freqs PK+ Final_Result RMS — -13dBm

Plot # 46 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

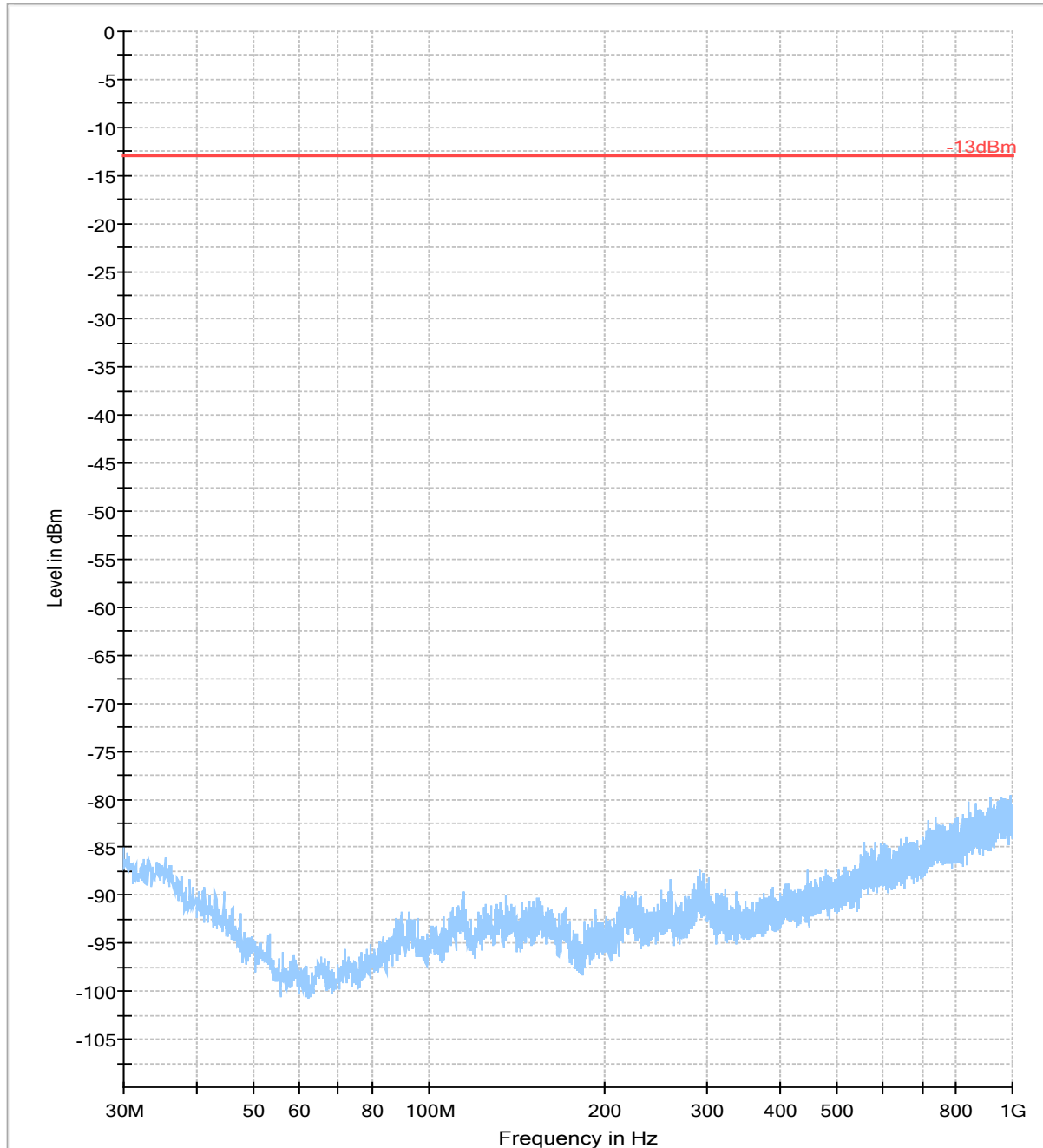
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.101493	-31.33	---	-13.00	18.33	500.0	0.200	100.0	H	306.0	-56.7



* Preview Result 2-RMS Critical_Freqs PK+
◆ Critical_Freqs RMS Final_Result PK+
— Preview Result 1-PK+ -13dBm

Plot # 47 Radiated Emissions: 30 MHz – 1 GHz

Channel: Mid



Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

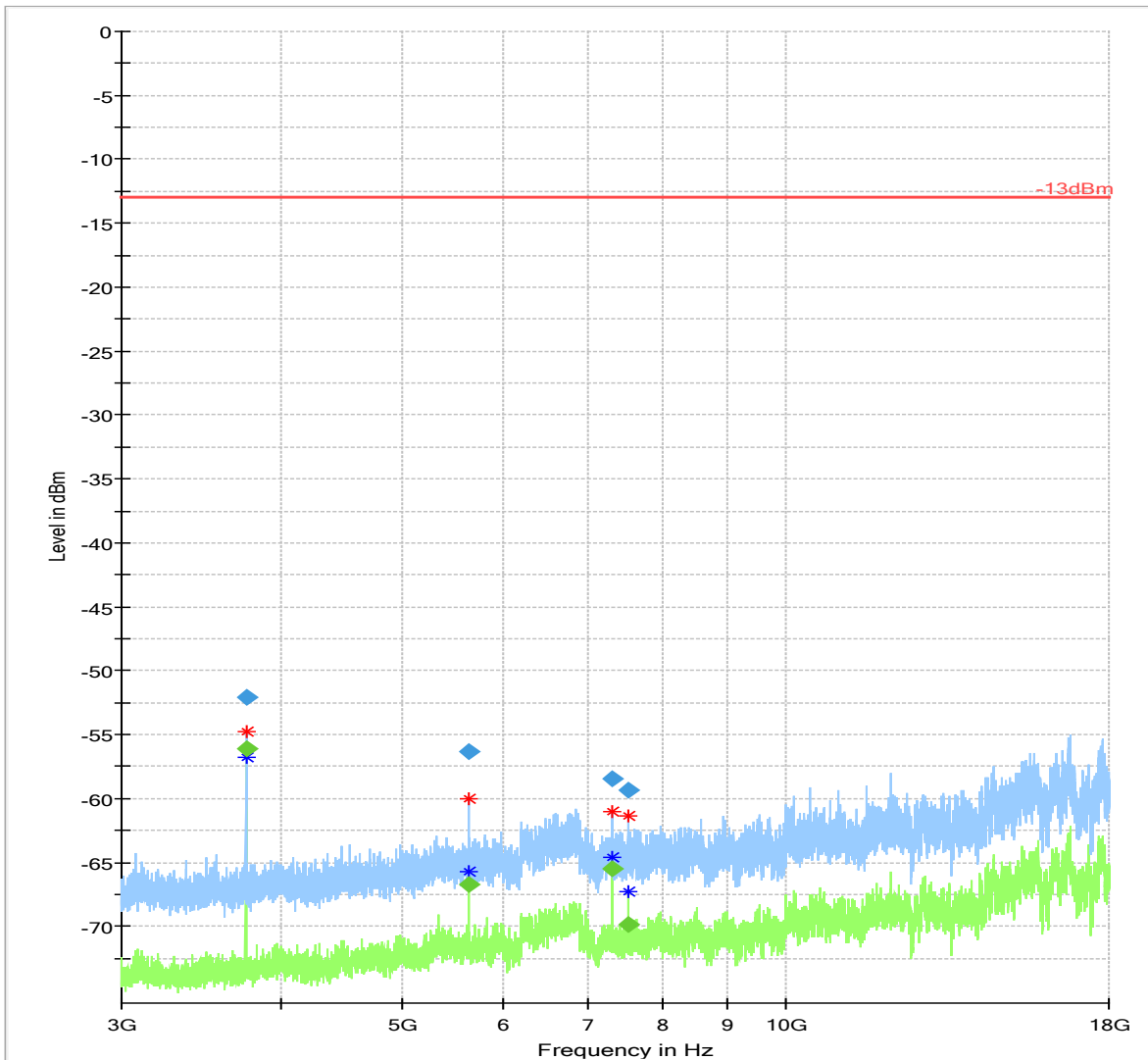


Plot # 49 Radiated Emissions: 3 GHz – 18GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3759.479333	---	-56.10	---	---	200.0	1000.000	238.0	H	229.0	-130.4
3759.768000	-52.05	---	-13.00	39.05	200.0	1000.000	240.0	H	227.0	-130.4
5639.236000	---	-66.71	---	---	200.0	1000.000	117.0	H	43.0	-126.5
5639.630667	-56.31	---	-13.00	43.31	200.0	1000.000	117.0	H	40.0	-126.5
7319.902000	-58.44	---	-13.00	45.44	200.0	1000.000	190.0	V	59.0	-125.2
7319.948667	---	-65.52	---	---	200.0	1000.000	165.0	V	58.0	-125.2
7518.819333	---	-69.89	---	---	200.0	1000.000	157.0	H	352.0	-124.4
7519.435333	-59.30	---	-13.00	46.30	200.0	1000.000	238.0	V	110.0	-124.4



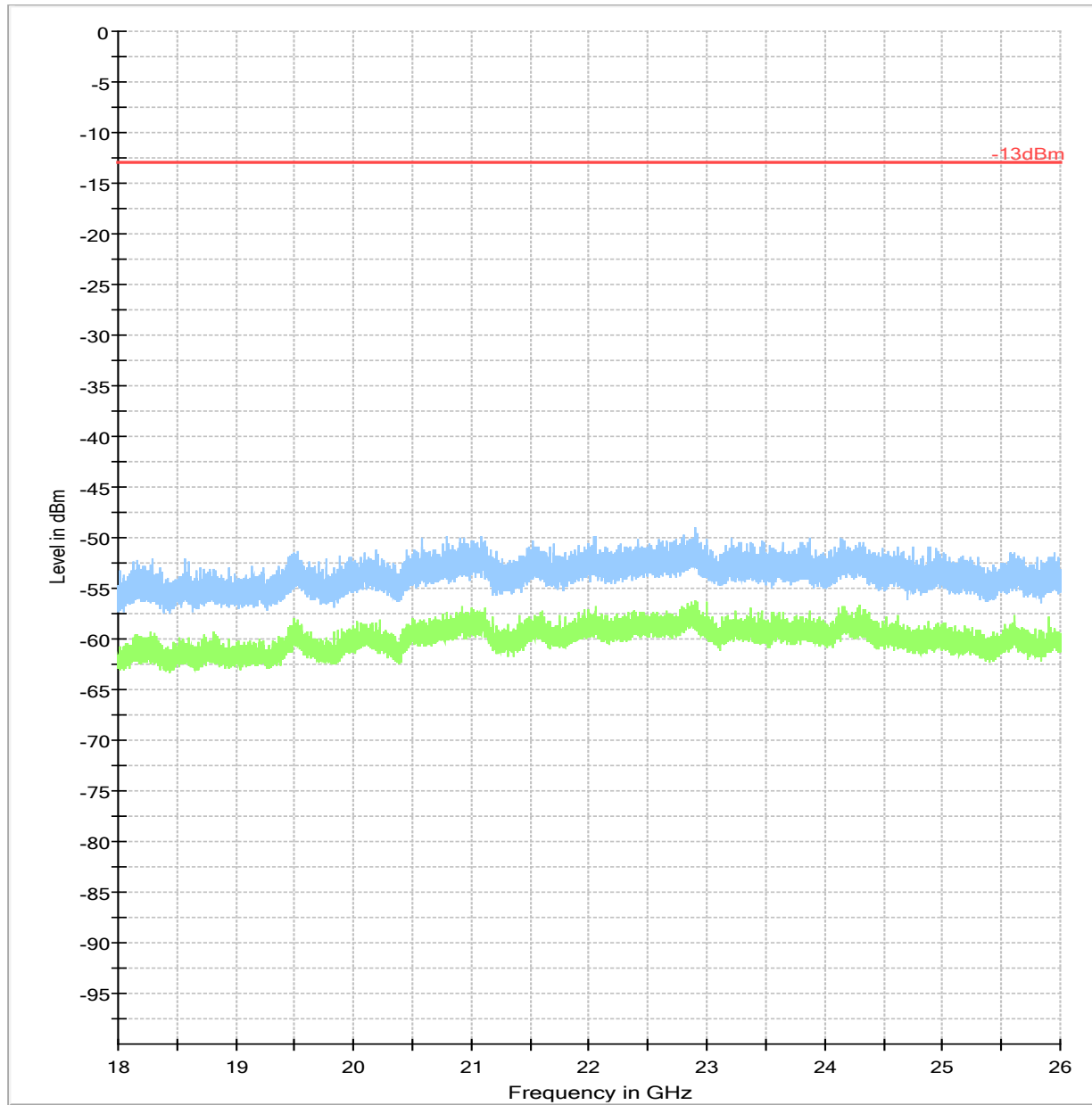
* Preview Result 2-RMS
◆ Critical_Freqs PK+ Final_Result RMS

* Preview Result 1-PK+
◆ Critical_Freqs RMS Final_Result PK+

--- -13dBm

Plot # 50 Radiated Emissions: 18 GHz – 26GHz

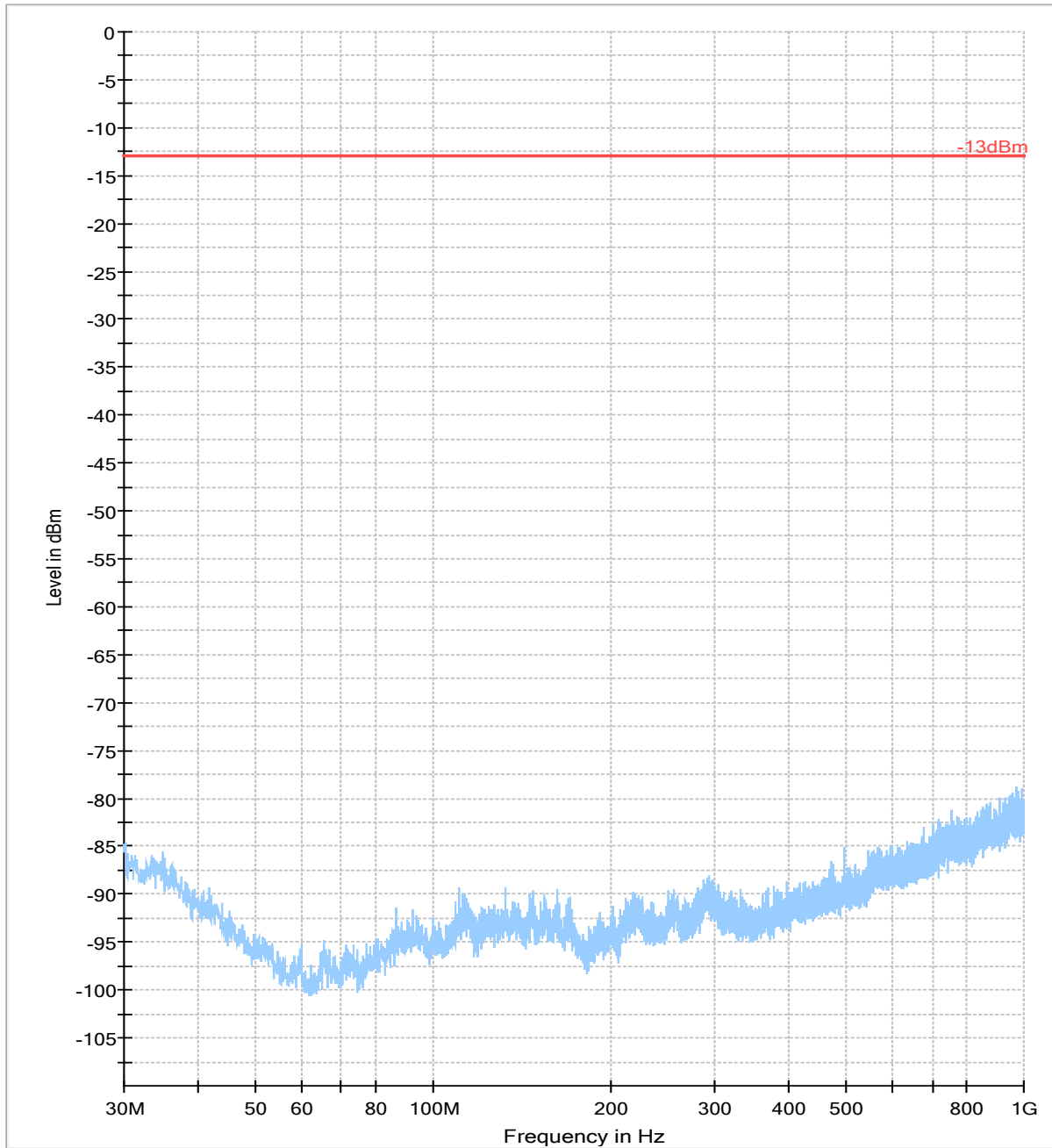
Channel: Mid



— Preview Result 2-RMS	— Preview Result 1-PK+	* Critical_Freqs RMS
* Critical_Freqs PK+	— -13dBm	◆ Final_Result PK+
◆ Final_Result RMS		

Plot # 51 Radiated Emissions: 30 MHz - 1 GHz

Channel: High



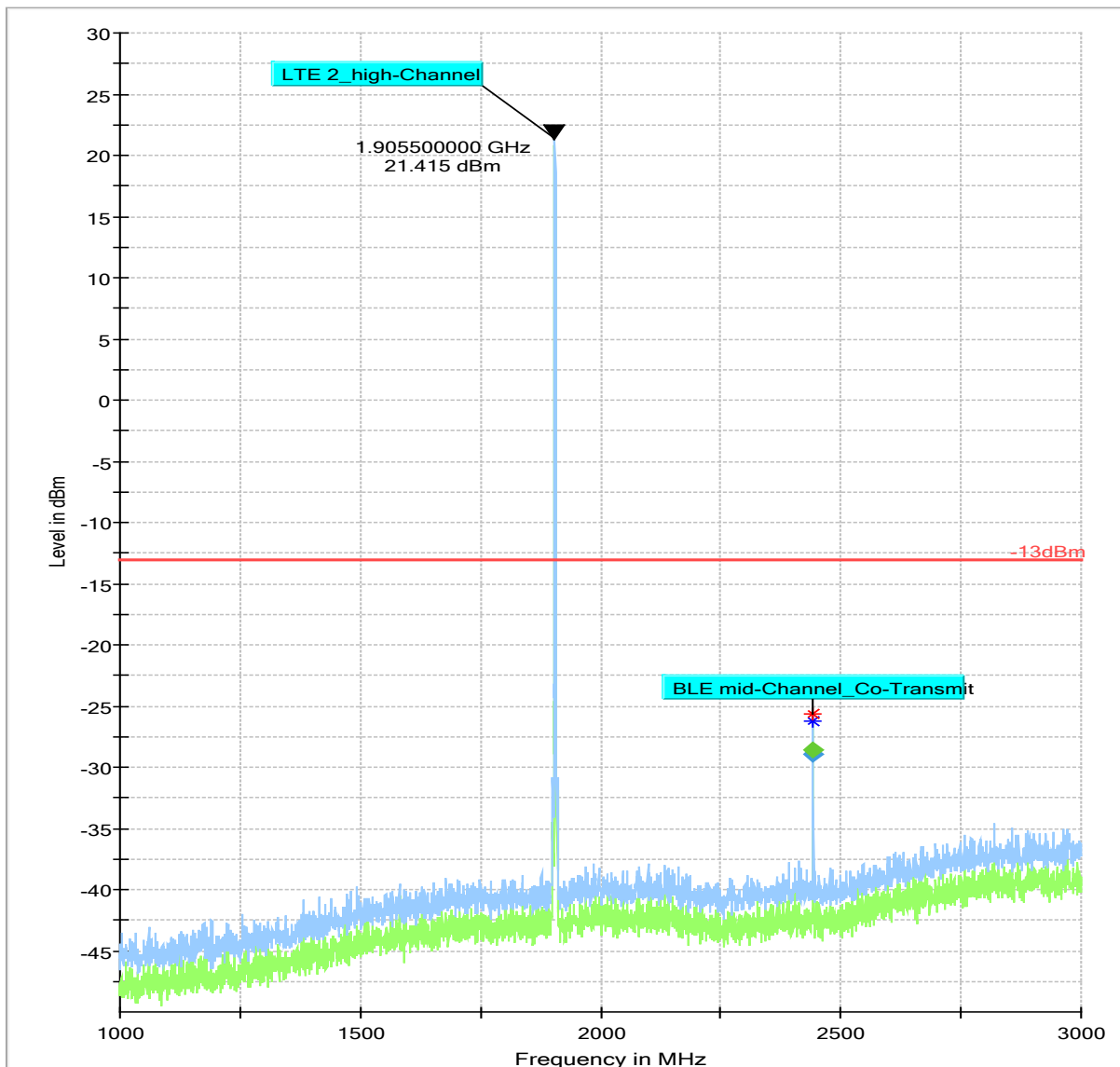
—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

Plot # 52 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.005250	-28.92	---	-13.00	15.92	200.0	1000.000	100.0	H	0.0	-86.9
2442.112750	---	-28.56	---	---	200.0	1000.000	100.0	H	62.0	-86.9



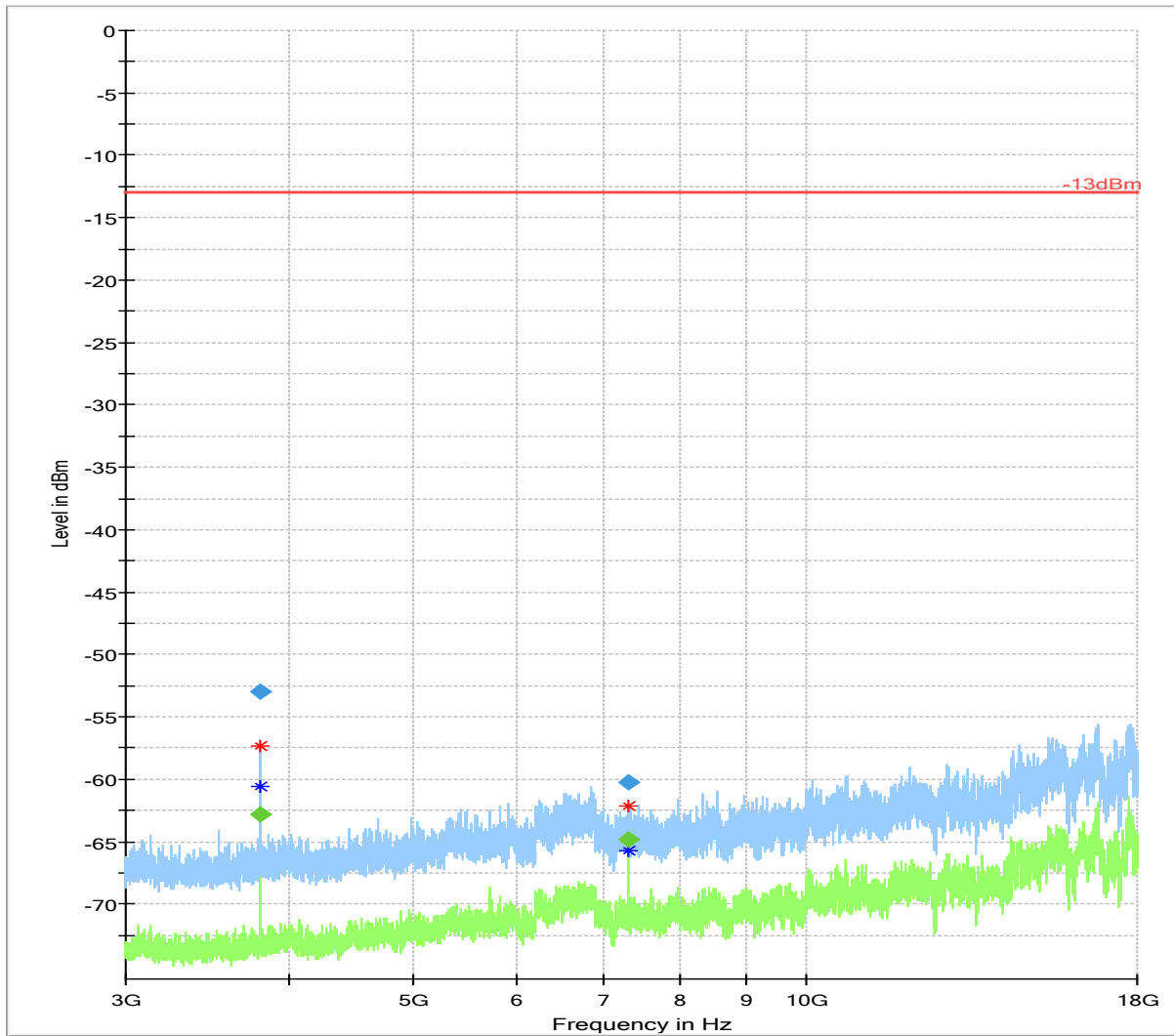
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 53 Radiated Emissions: 3 GHz - 18 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3811.214667	---	-62.80	---	---	200.0	1000.000	126.0	H	87.0	-130.3
3811.311333	-53.02	---	-13.00	40.02	200.0	1000.000	275.0	H	23.0	-130.3
7319.838000	---	-64.84	---	---	200.0	1000.000	275.0	V	248.0	-125.2
7319.924667	-60.27	---	-13.00	47.27	200.0	1000.000	219.0	H	171.0	-125.2

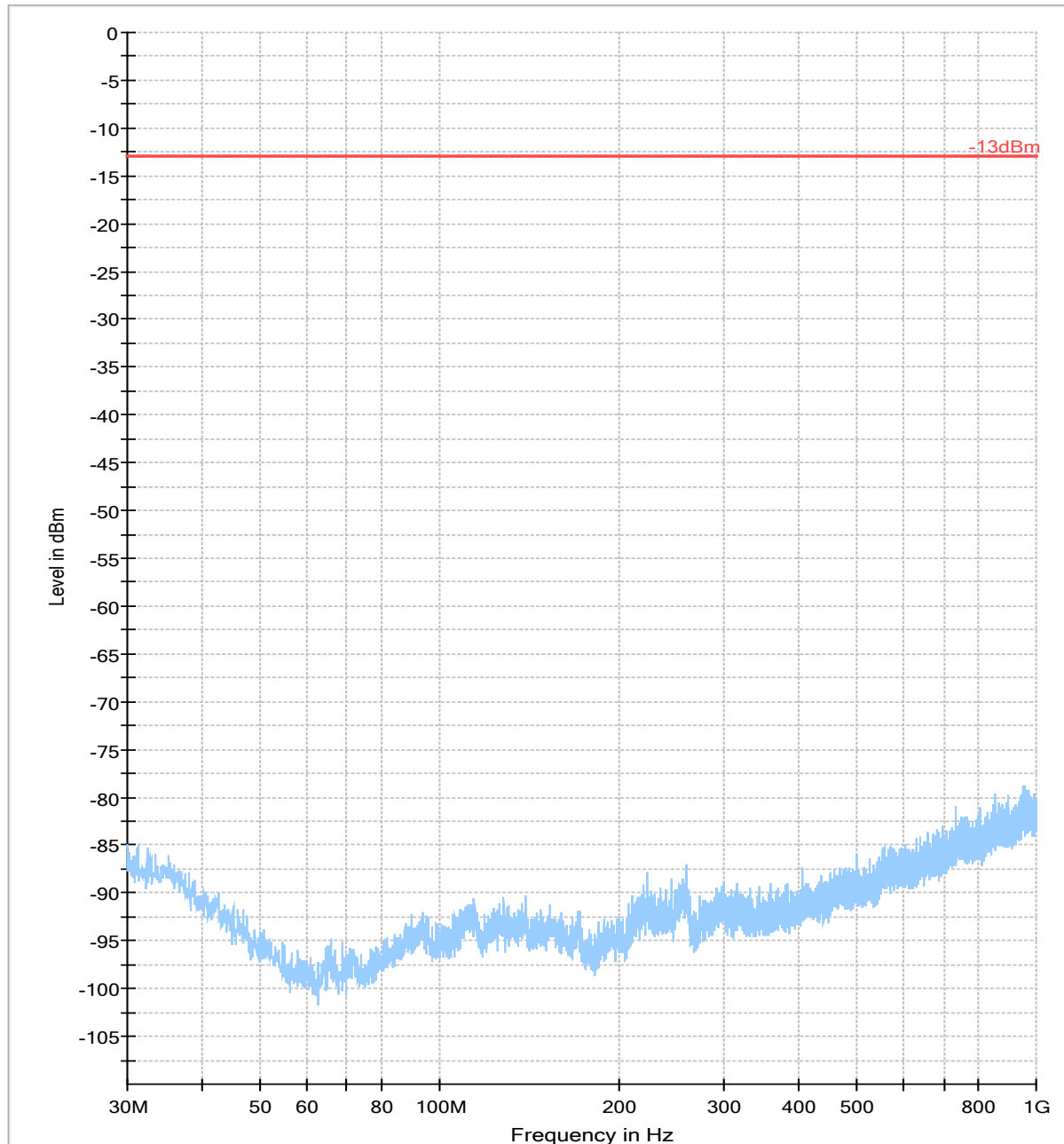


— Preview Result 2-RMS — Preview Result 1-PK+ ◆ Critical_Freqs RMS Final_Result PK+
* Critical_Freqs PK+ — -13dBm

LTE Band 4

Plot # 54 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



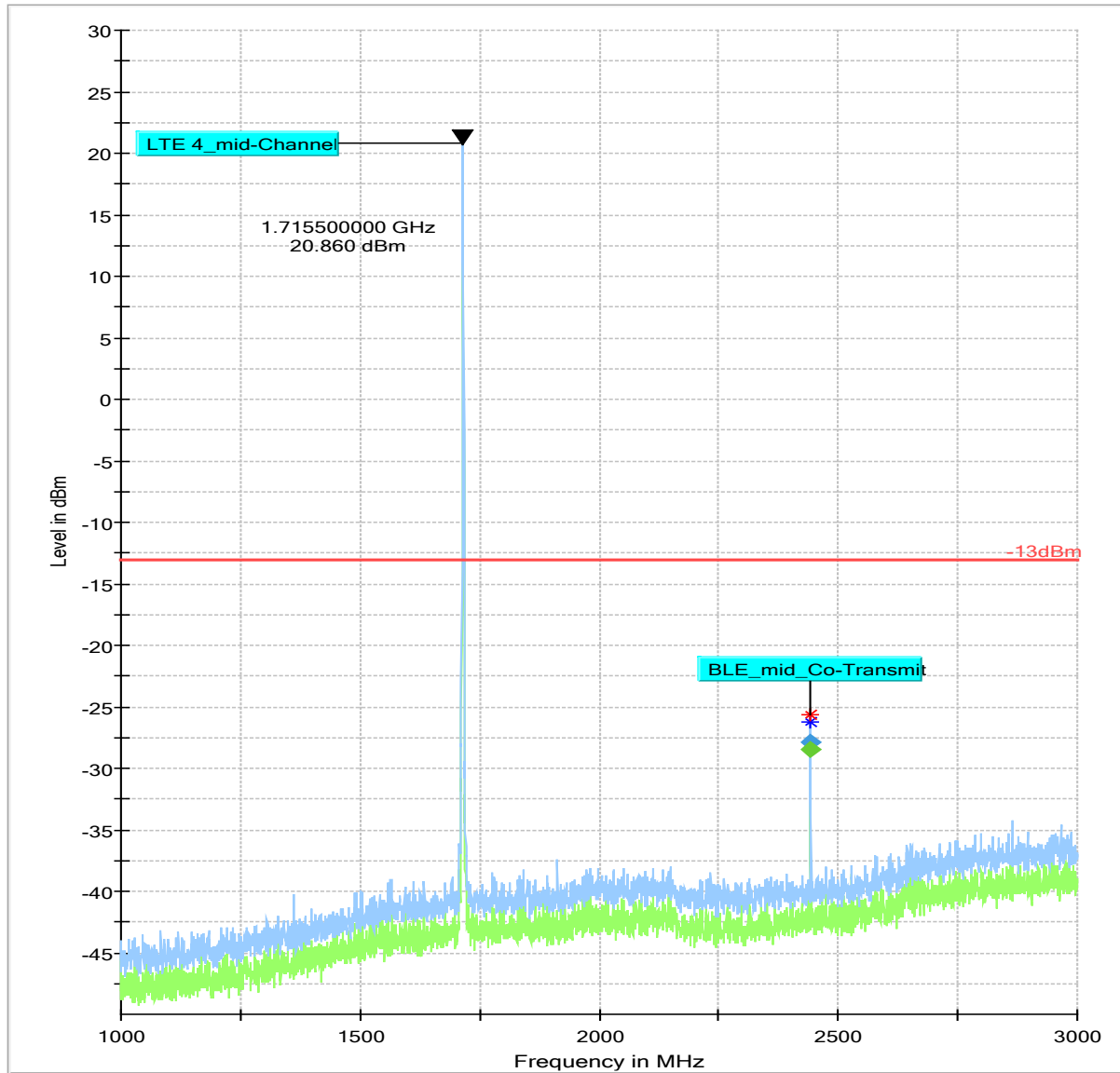
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	Final_Result PK+
◆ Final_Result RMS		

Plot # 55 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.009000	-27.88	---	-13.00	14.88	200.0	1000.000	100.0	H	64.0	-86.9
2442.058000	---	-28.45	---	---	200.0	1000.000	100.0	H	62.0	-86.9



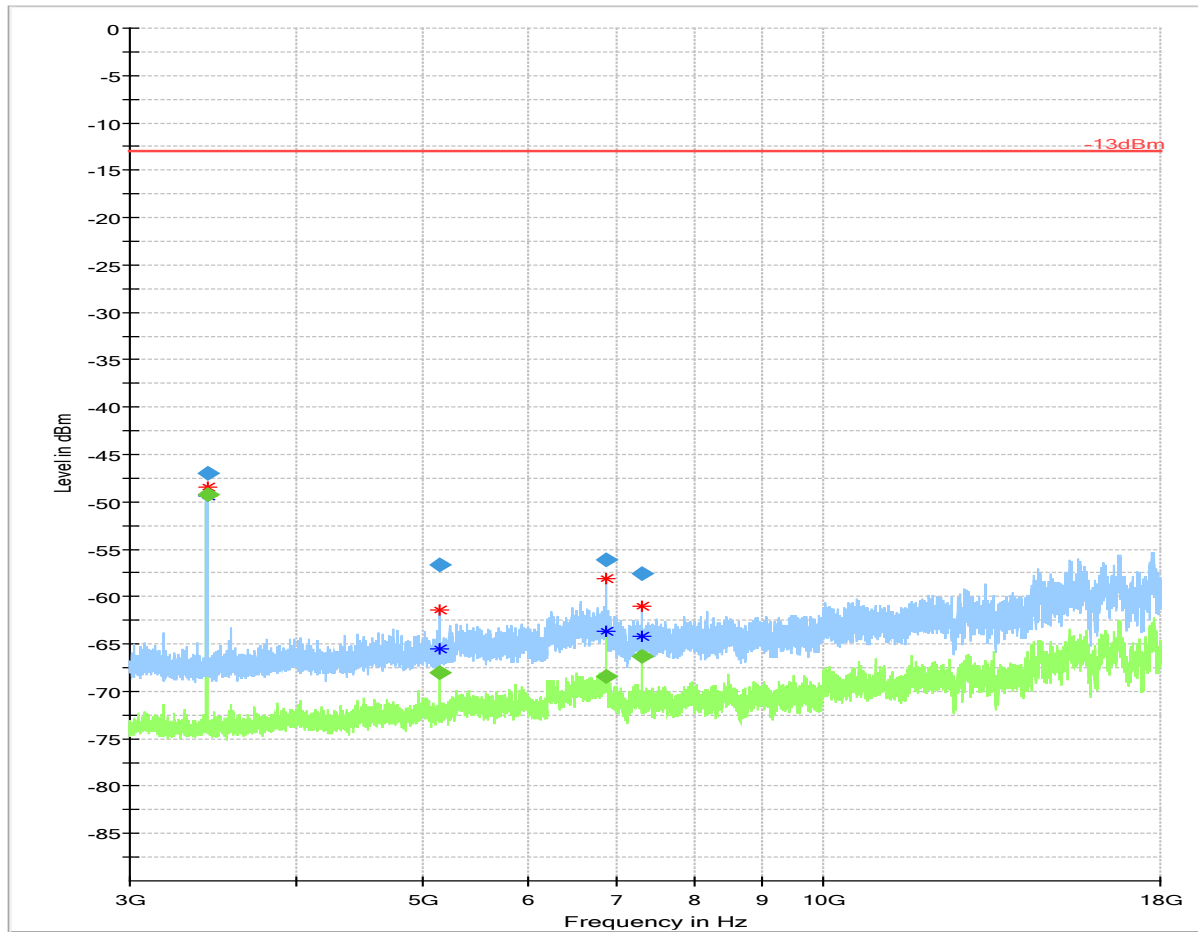
* Preview Result 2-RMS — Preview Result 1-PK+ ♦ Critical_Freqs RMS
♦ Critical_Freqs PK+ — -13dBm ♦ Final_Result PK+
♦ Final_Result RMS

Plot # 56 Radiated Emissions: 3 GHz - 18 GHz

Channel: Low

Final Result

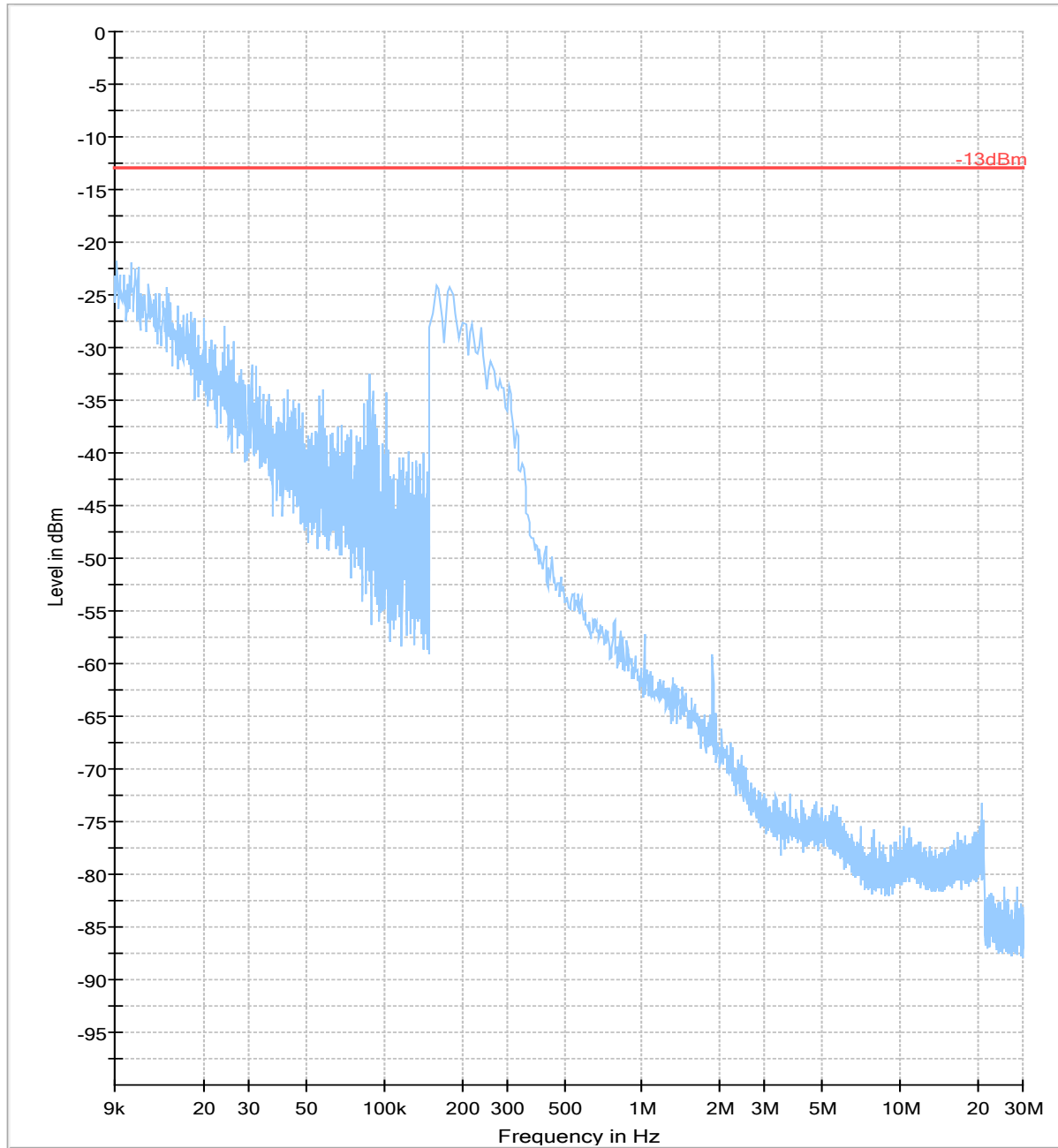
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3429.524000	-47.04	---	-13.00	34.04	200.0	1000.000	211.0	H	14.0	-131.7
3429.540000	---	-49.29	---	---	200.0	1000.000	213.0	H	15.0	-131.7
5144.371333	-56.64	---	-13.00	43.64	200.0	1000.000	151.0	H	262.0	-128.1
5144.714000	---	-68.08	---	---	200.0	1000.000	240.0	H	260.0	-128.1
6859.160000	---	-68.48	---	---	200.0	1000.000	141.0	H	-5.0	-125.0
6859.394000	-56.07	---	-13.00	43.07	200.0	1000.000	235.0	H	-8.0	-125.0
7319.892667	-57.52	---	-13.00	44.52	200.0	1000.000	252.0	V	59.0	-125.2
7319.930000	---	-66.32	---	---	200.0	1000.000	255.0	V	57.0	-125.2



* Preview Result 2-RMS Critical_Freqs PK+ Final_Result RMS
◆ Preview Result 1-PK+ -13dBm Critical_Freqs RMS Final_Result PK+

Plot # 57 Radiated Emissions: 9 kHz - 30 MHz

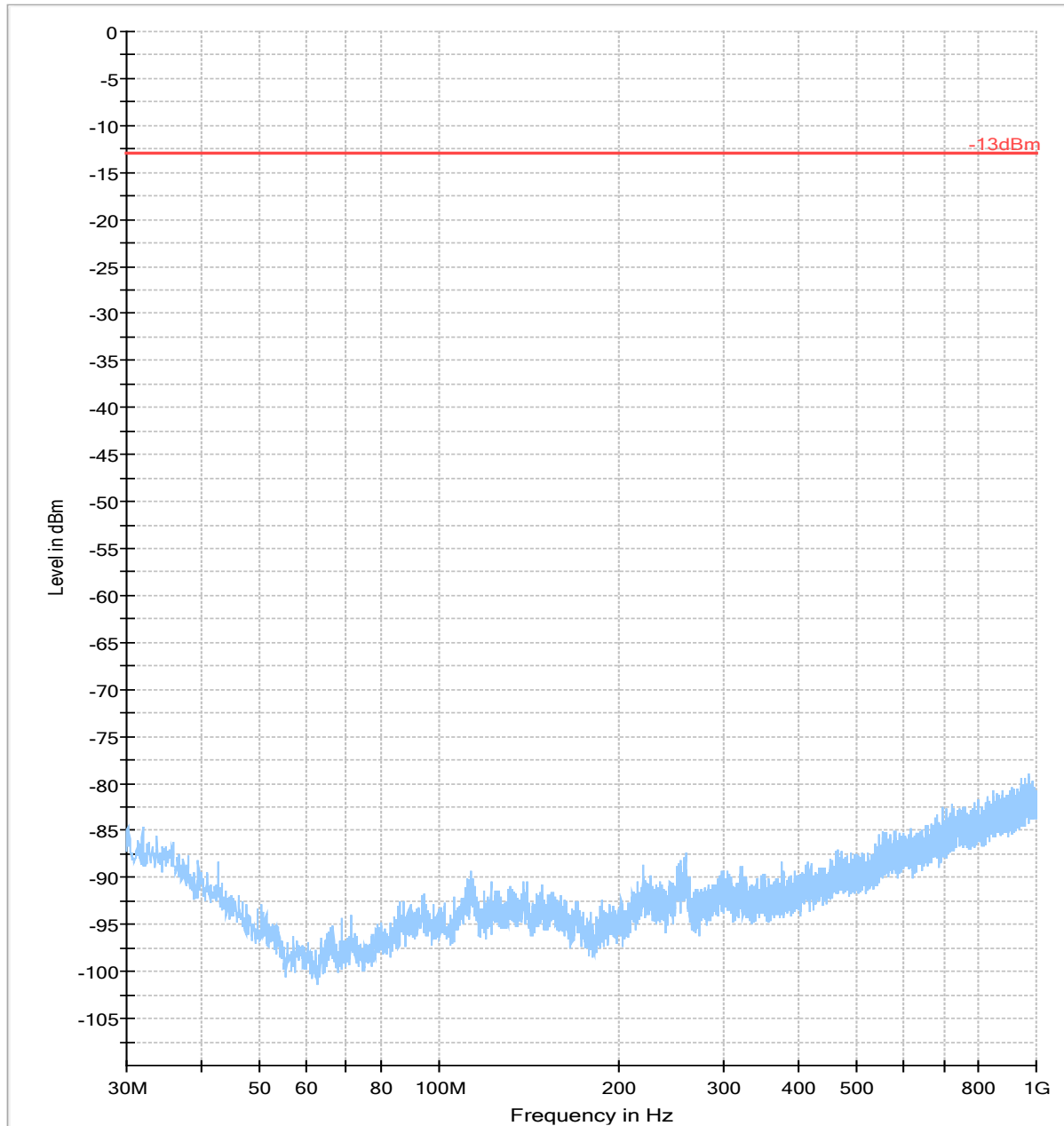
Channel: Mid



Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

Plot # 58 Radiated Emissions: 30 MHz – 1 GHz

Channel: Mid



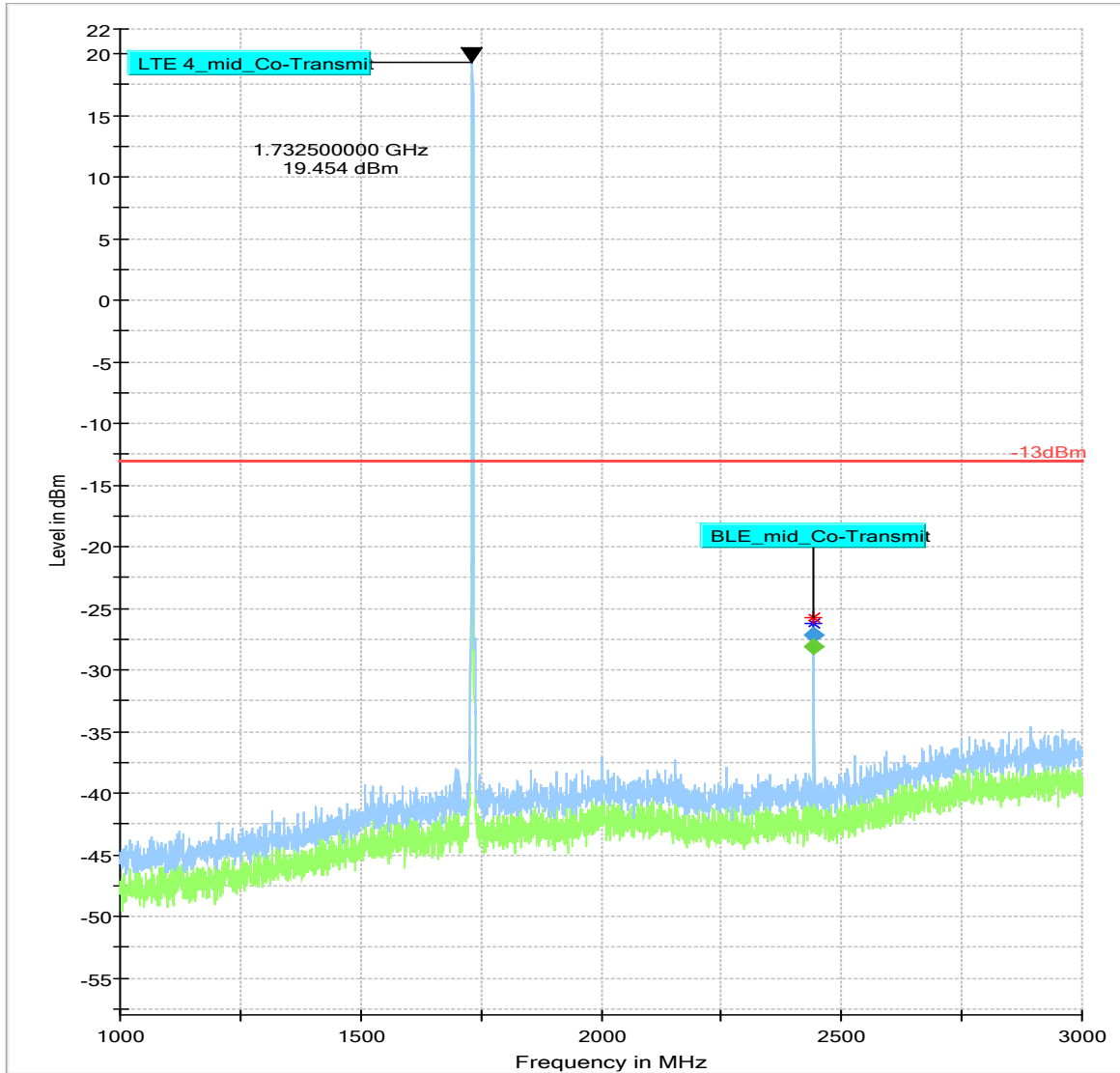
Preview Result 2-RMS	Preview Result 1-PK+	* Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	◆ Final_Result PK+
◆ Final_Result RMS		

Plot # 59 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.071500	---	-28.07	---	---	200.0	1000.000	108.0	H	69.0	-86.9
2442.089250	-27.17	---	-13.00	14.17	200.0	1000.000	117.0	H	59.0	-86.9



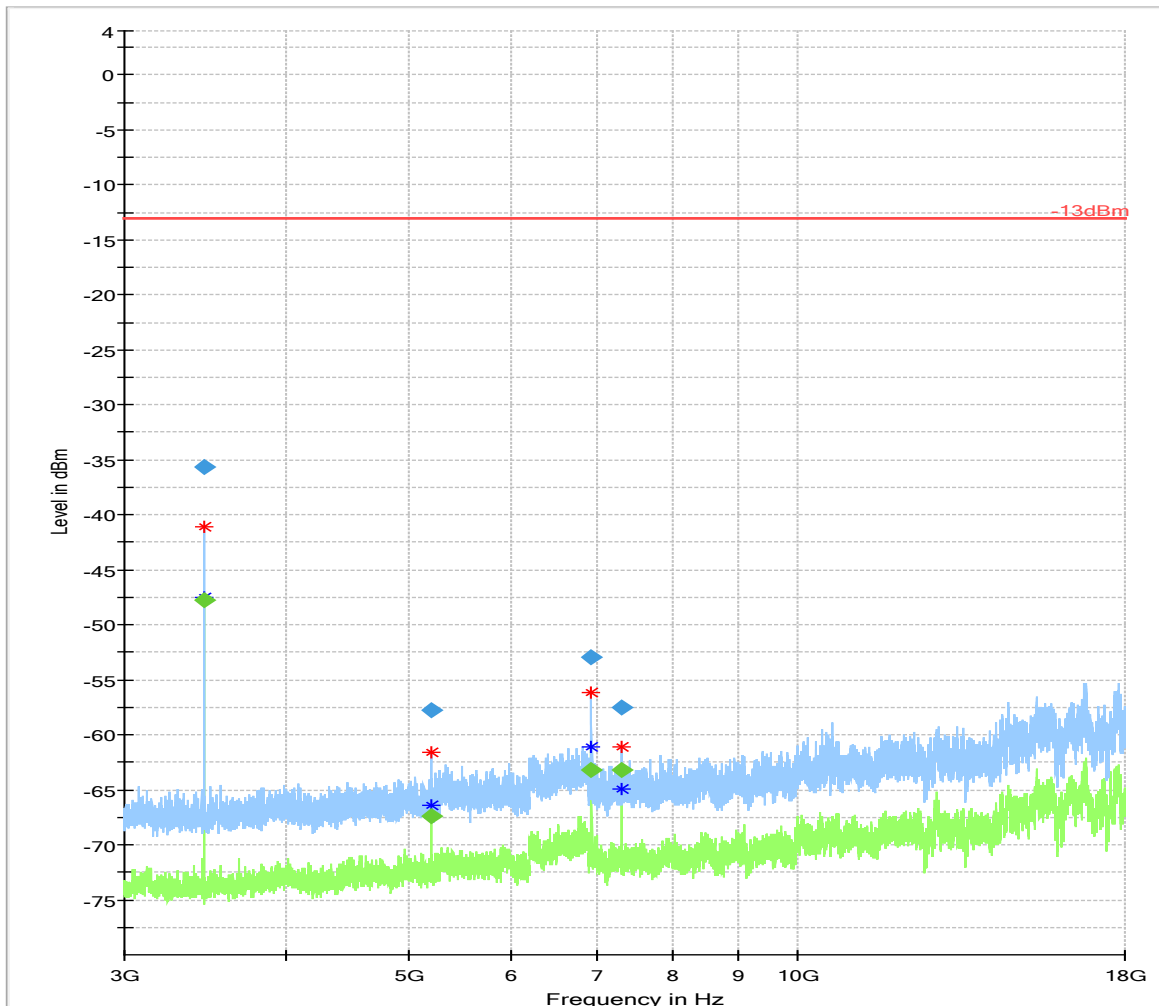
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 60 Radiated Emissions: 3 GHz – 18GHz

Channel: Mid

Final Result

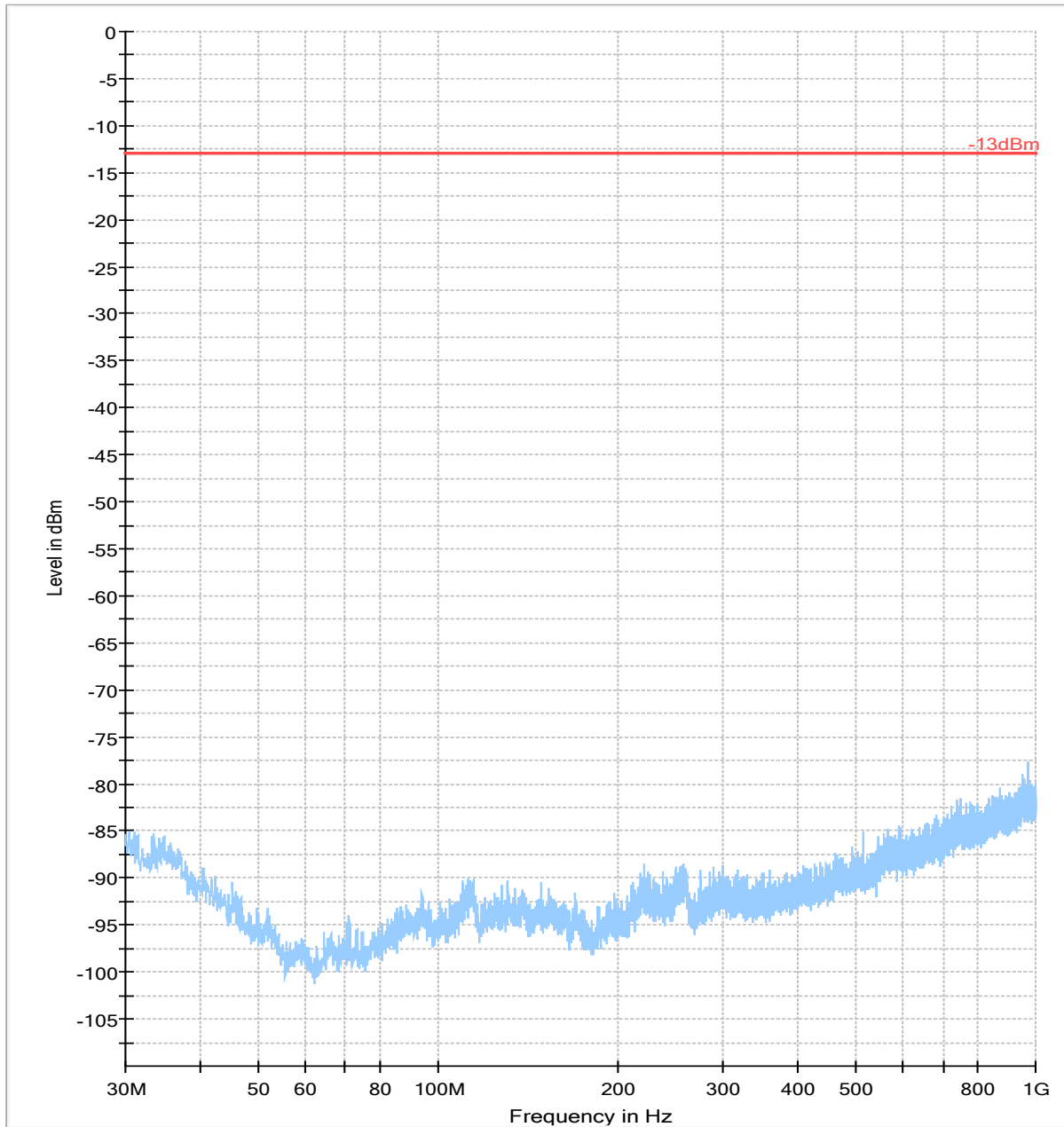
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3464.605333	---	-47.79	---	---	200.0	1000.000	197.0	H	22.0	-131.6
3464.841333	-35.69	---	-13.00	22.69	200.0	1000.000	197.0	H	22.0	-131.6
5196.912667	-57.74	---	-13.00	44.74	200.0	1000.000	204.0	H	60.0	-127.7
5197.105333	---	-67.37	---	---	200.0	1000.000	126.0	H	28.0	-127.7
6929.231333	-52.95	---	-13.00	39.95	200.0	1000.000	164.0	H	-2.0	-124.8
6929.603333	---	-63.25	---	---	200.0	1000.000	148.0	H	-3.0	-124.8
7319.874667	-57.48	---	-13.00	44.48	200.0	1000.000	249.0	V	260.0	-125.2
7320.011333	---	-63.25	---	---	200.0	1000.000	250.0	V	245.0	-125.2



* Preview Result 2-RMS
◆ Critical_Freqs PK+ Final_Result RMS
— Preview Result 1-PK+
— -13dBm
◆ Critical_Freqs RMS Final_Result PK+

Plot # 61 Radiated Emissions: 30 MHz - 1 GHz

Channel: High



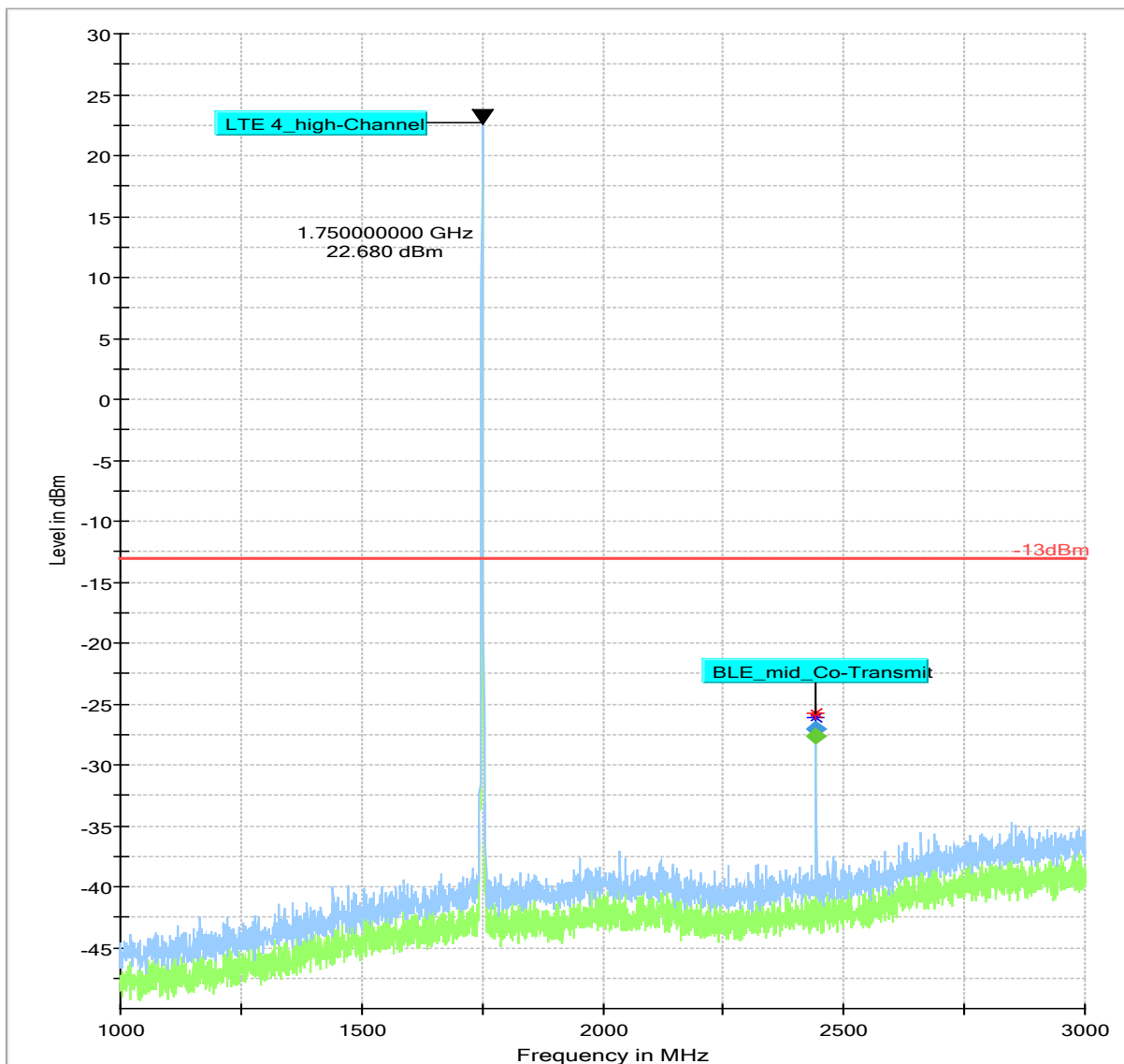
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

Plot # 62 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.128500	---	-27.61	---	---	200.0	1000.000	157.0	H	60.0	-86.9
2442.217250	-27.04	---	-13.00	14.04	200.0	1000.000	124.0	H	60.0	-86.9



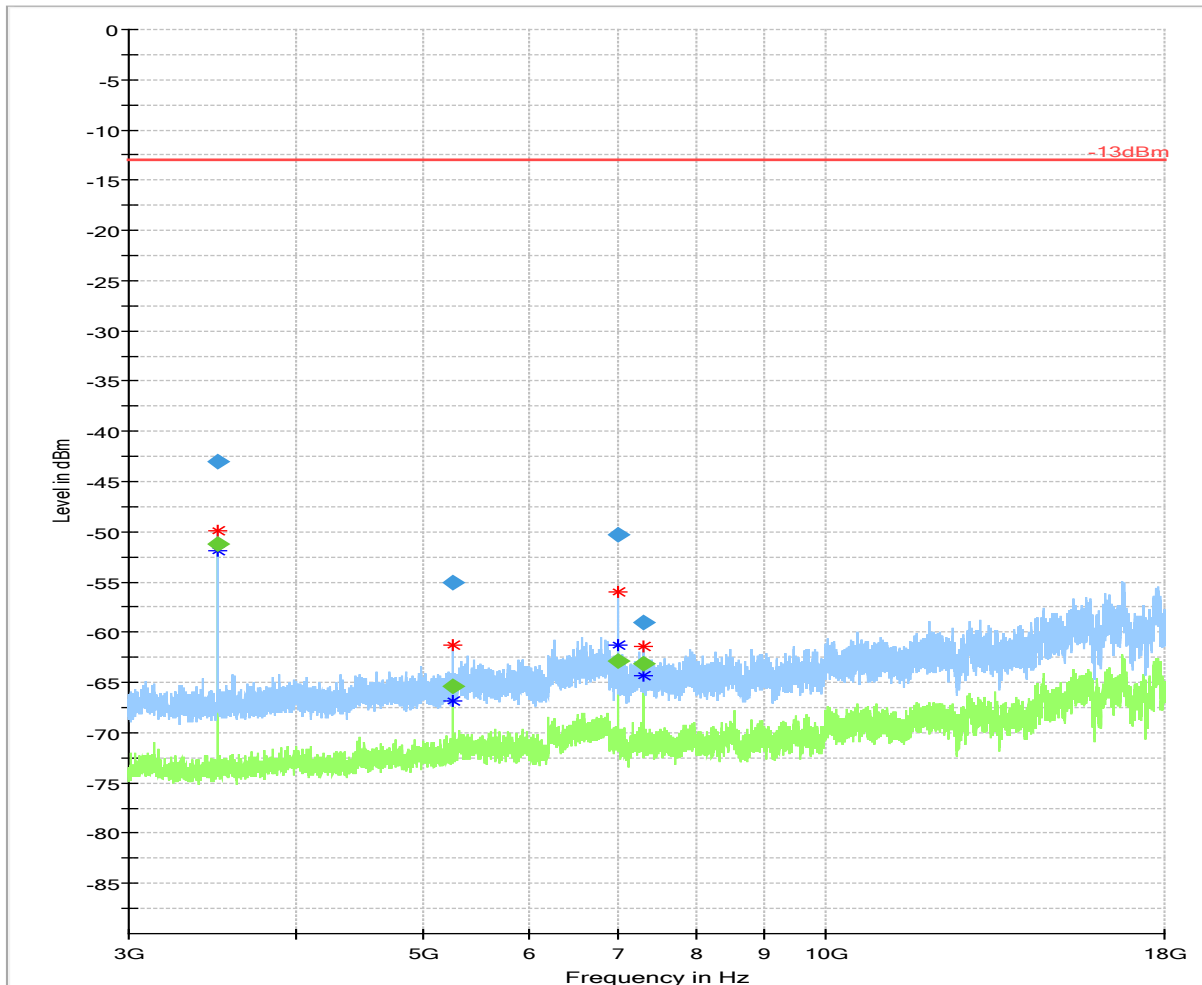
* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 63 Radiated Emissions: 3 GHz - 18 GHz

Channel: High

Final Result

Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
3499.472667	---	-51.27	---	---	200.0	1000.000	213.0	H	18.0	-131.3
3499.644667	-43.07	---	-13.00	30.07	200.0	1000.000	211.0	H	19.0	-131.3
5249.457333	-55.06	---	-13.00	42.06	200.0	1000.000	125.0	H	26.0	-127.1
5249.508667	---	-65.40	---	---	200.0	1000.000	126.0	H	27.0	-127.1
6999.289333	---	-62.83	---	---	200.0	1000.000	200.0	H	-4.0	-124.3
6999.447333	-50.23	---	-13.00	37.23	200.0	1000.000	201.0	H	-3.0	-124.3
7320.043333	---	-63.16	---	---	200.0	1000.000	255.0	V	244.0	-125.2
7320.059333	-59.06	---	-13.00	46.06	200.0	1000.000	253.0	V	257.0	-125.2

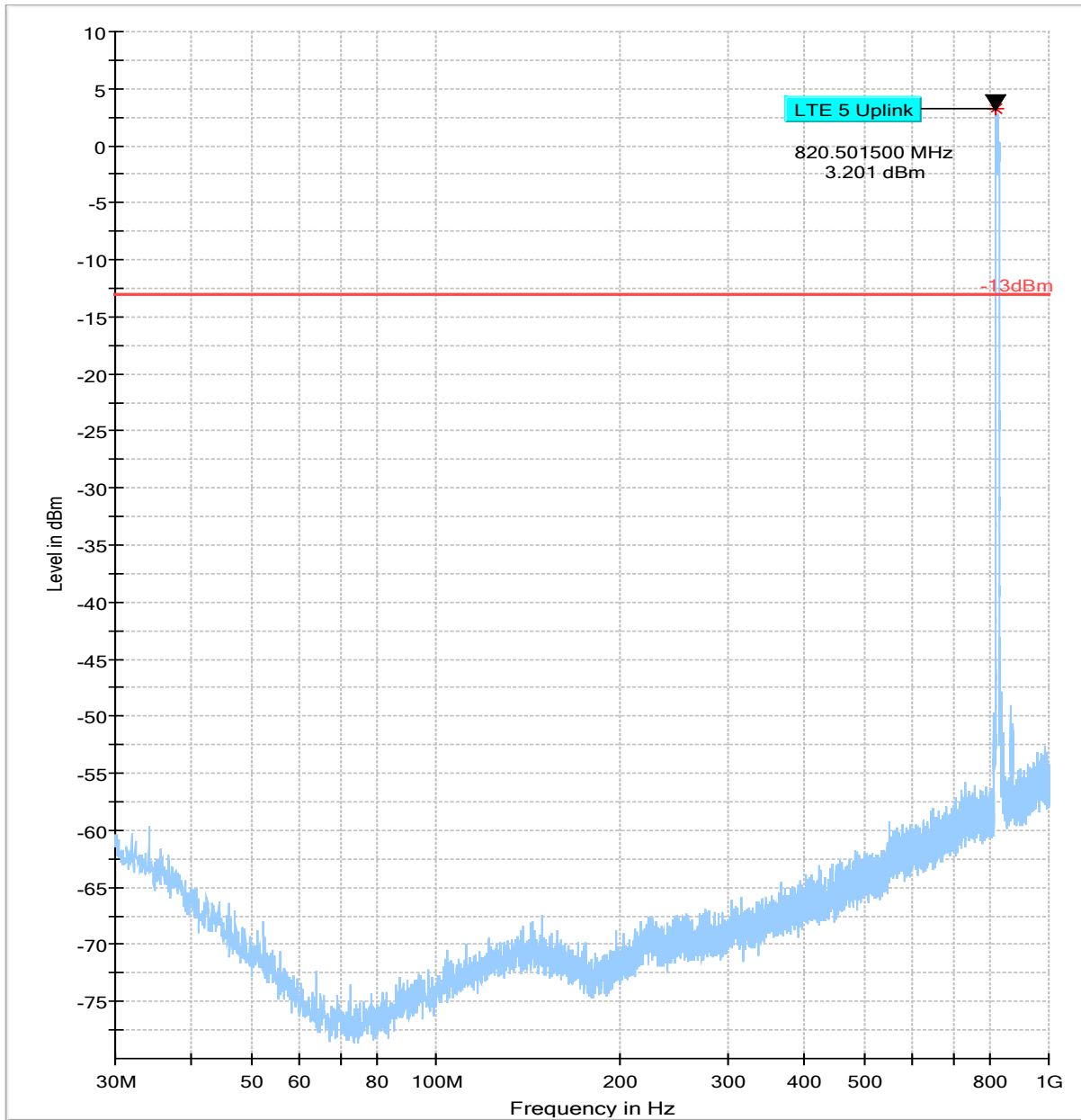


* Preview Result 2-RMS
◆ Critical_Freqs PK+ Final_Result RMS
— Preview Result 1-PK+
— -13dBm
◆ Critical_Freqs RMS Final_Result PK+

LTE Band 5

Plot # 64 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



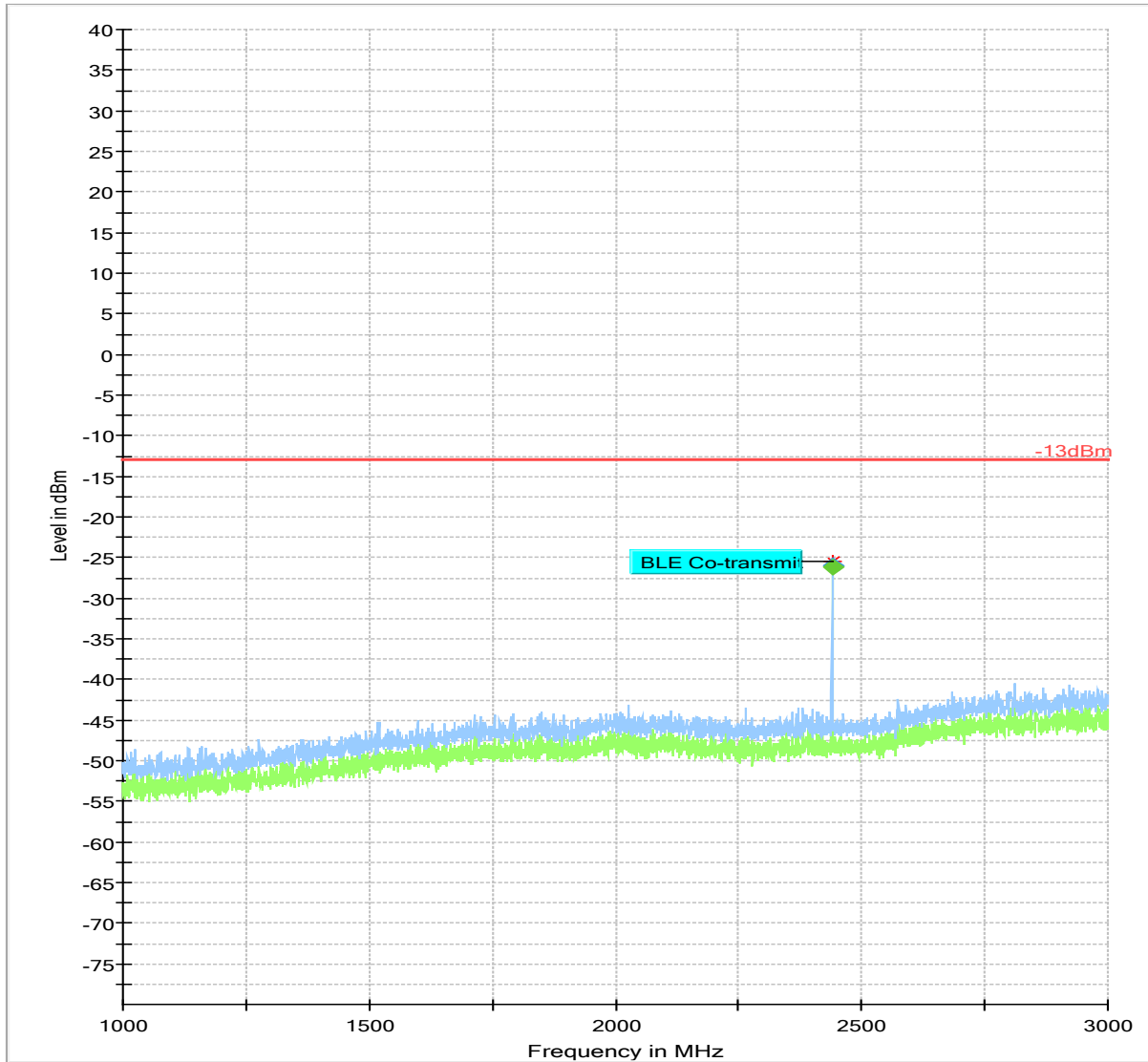
	Preview Result 2-RMS		Preview Result 1-PK+		Critical_Freqs RMS
	Critical_Freqs PK+		-13dBm		Final_Result PK+
	Final_Result RMS				

Plot # 65 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

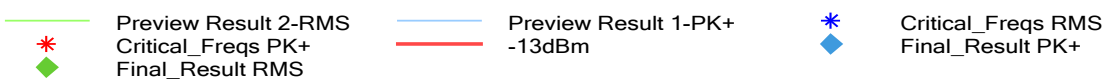
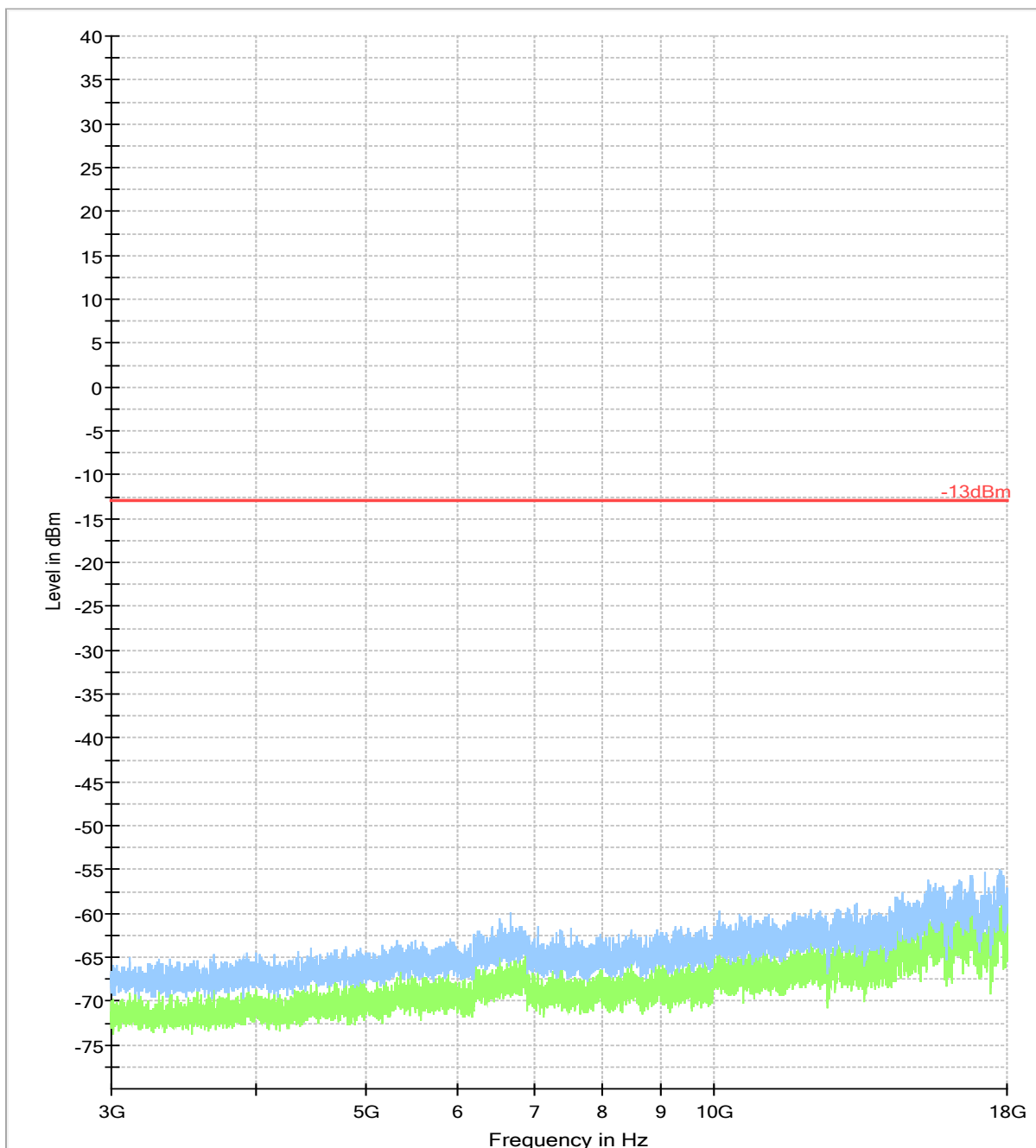
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.915000	-25.98	---	-13.00	12.98	500.0	1000.000	152.0	H	338.0	-86.9
2439.935000	---	-26.19	---	---	500.0	1000.000	151.0	H	337.0	-86.9



* Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+

Plot # 66 Radiated Emissions: 3 GHz - 18 GHz

Channel: Low

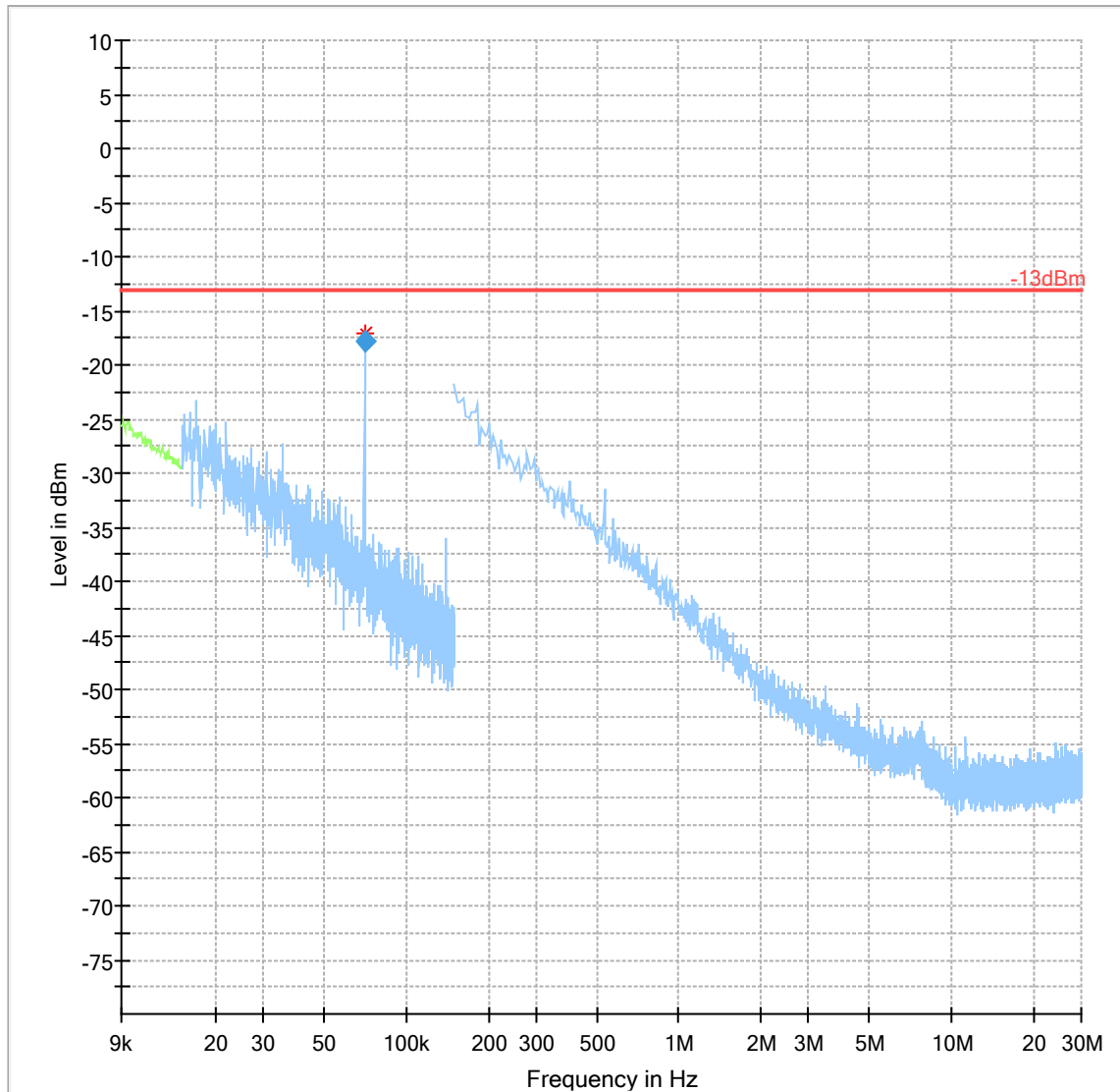


Plot # 67 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

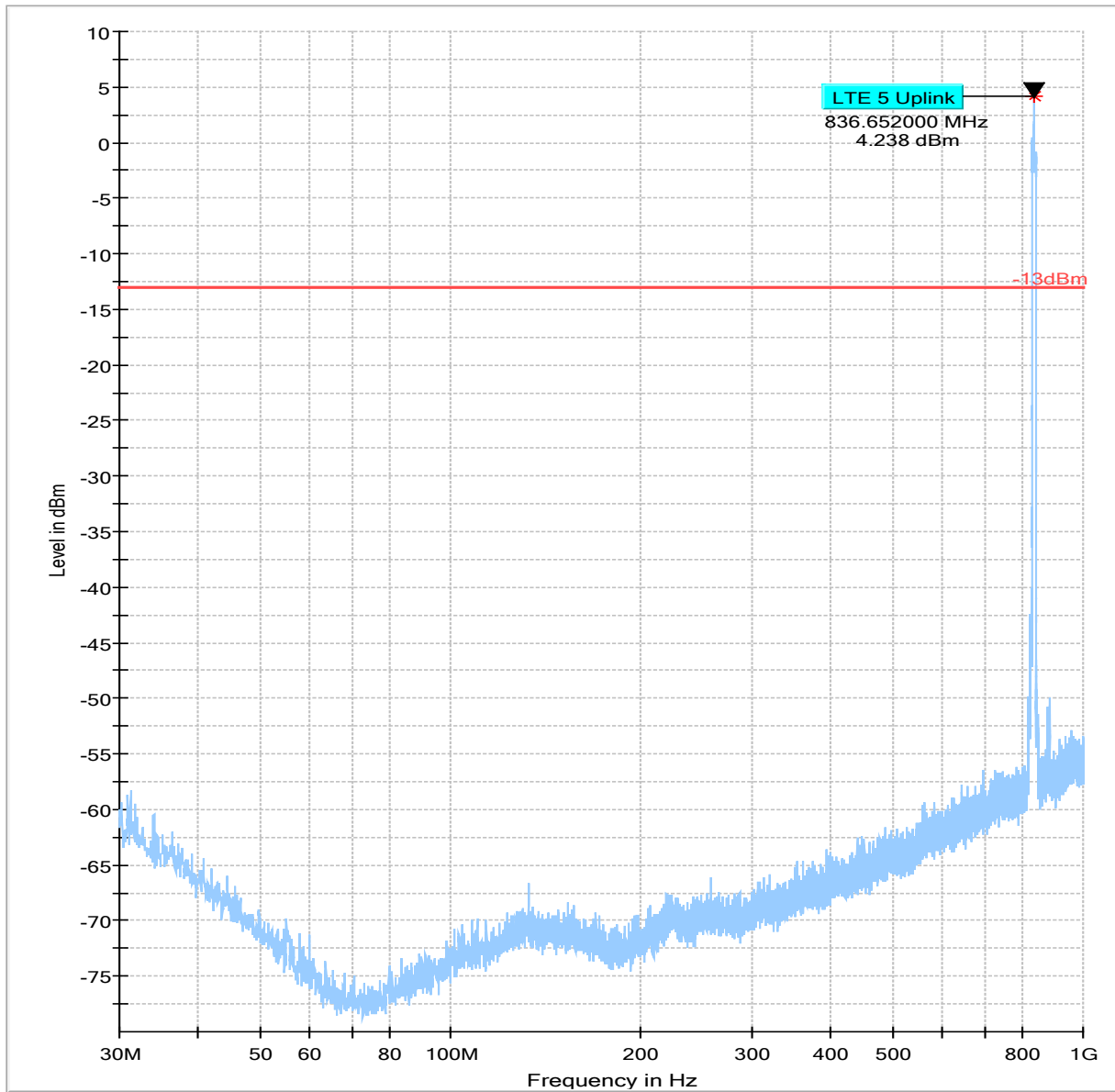
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.070240	-17.88	-13.00	4.88	50.0	0.200	320.0	V	209.0	-18.5



— Preview Result 2-QPK — Preview Result 1-PK+ * Critical_Freqs QPK
* Critical_Freqs PK+ — -13dBm ◆ Final_Result RMS

Plot # 68 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid



Preview Result 2-RMS
Critical_Freqs PK+
Final_Result RMS

Preview Result 1-PK+
-13dBm

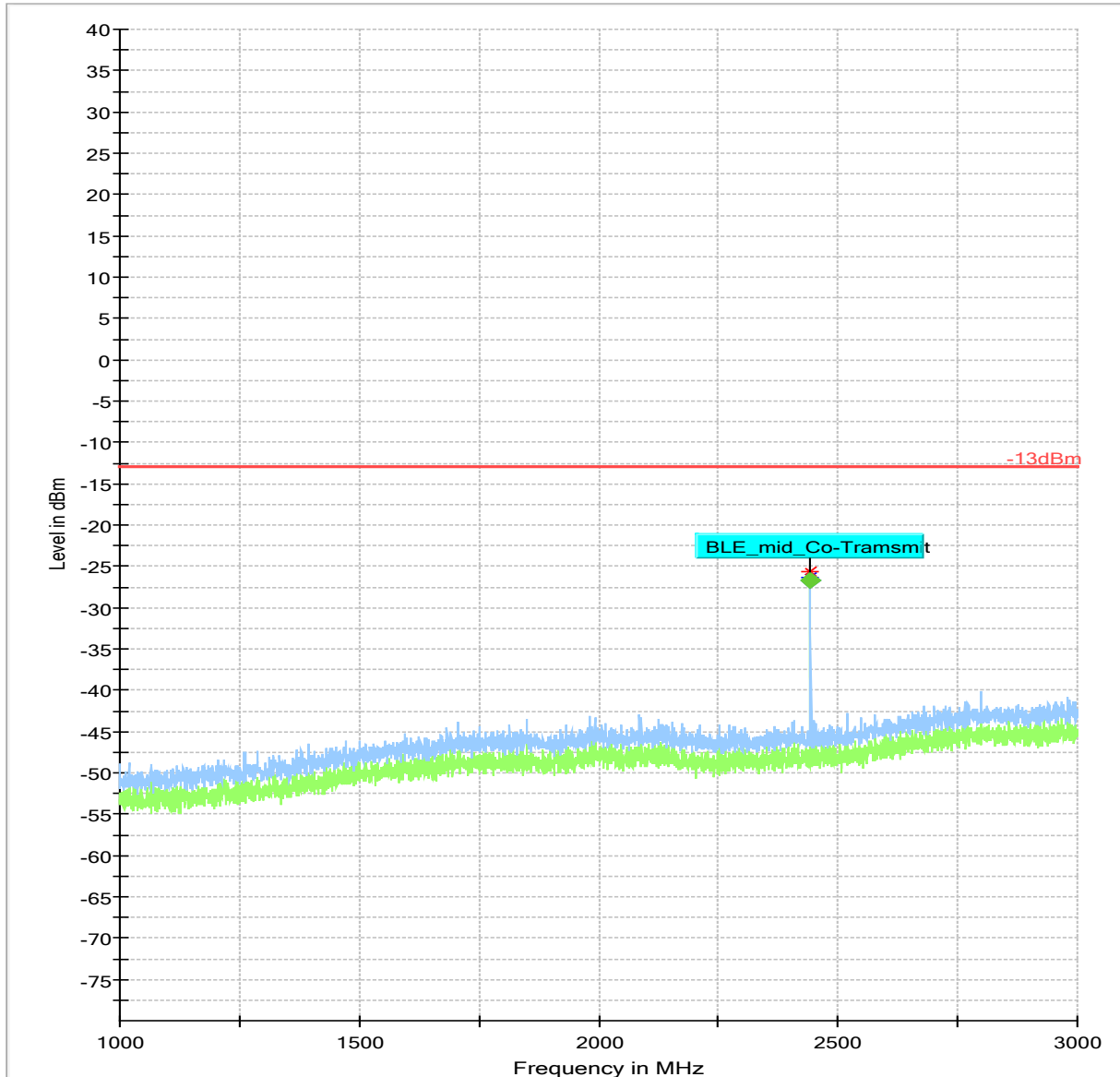
Critical_Freqs RMS
Final_Result PK+

Plot # 69 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

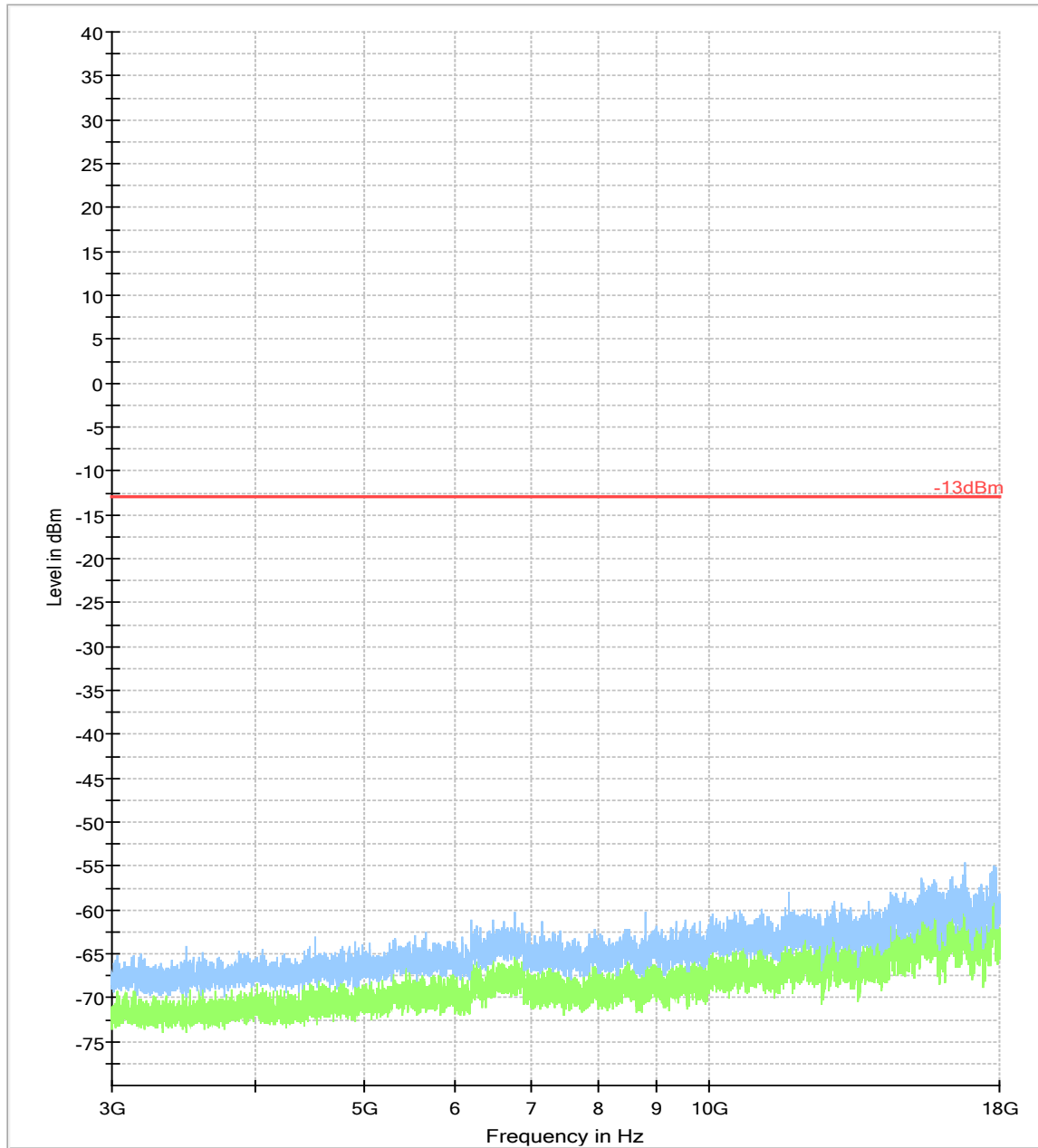
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2442.005000	-26.74	---	-13.00	13.74	500.0	1000.000	244.0	H	56.0	-86.9
2442.075000	---	-26.68	---	---	500.0	1000.000	245.0	H	58.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 70 Radiated Emissions: 3 GHz – 18 GHz

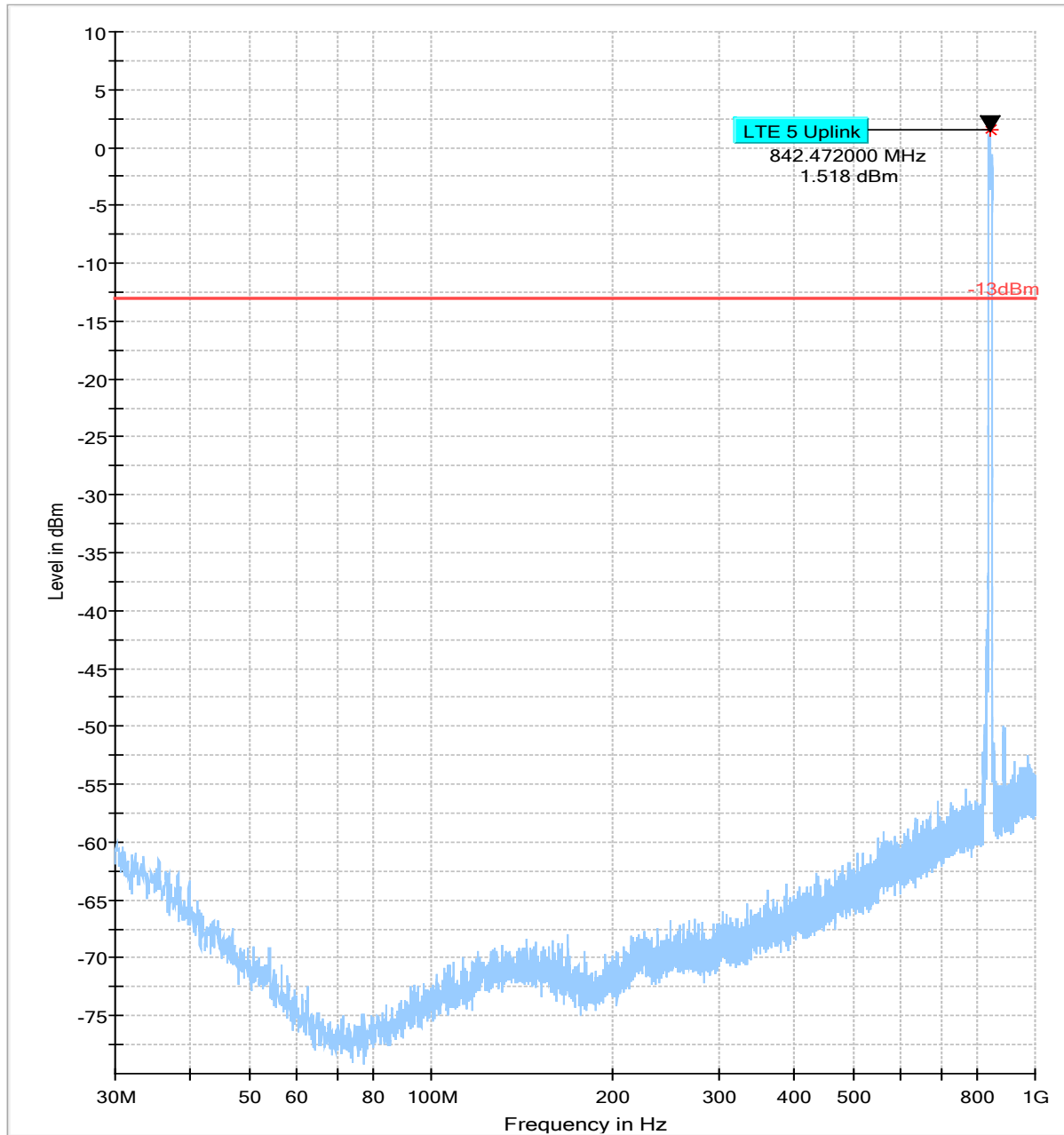
Channel: Mid



Preview Result 2-RMS Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ -13dBm ◆ Final_Result PK+

Plot # 71 Radiated Emissions: 30 MHz - 1 GHz

Channel: High



Preview Result 2-RMS
Critical_Freqs PK+
Final_Result RMS

Preview Result 1-PK+
-13dBm

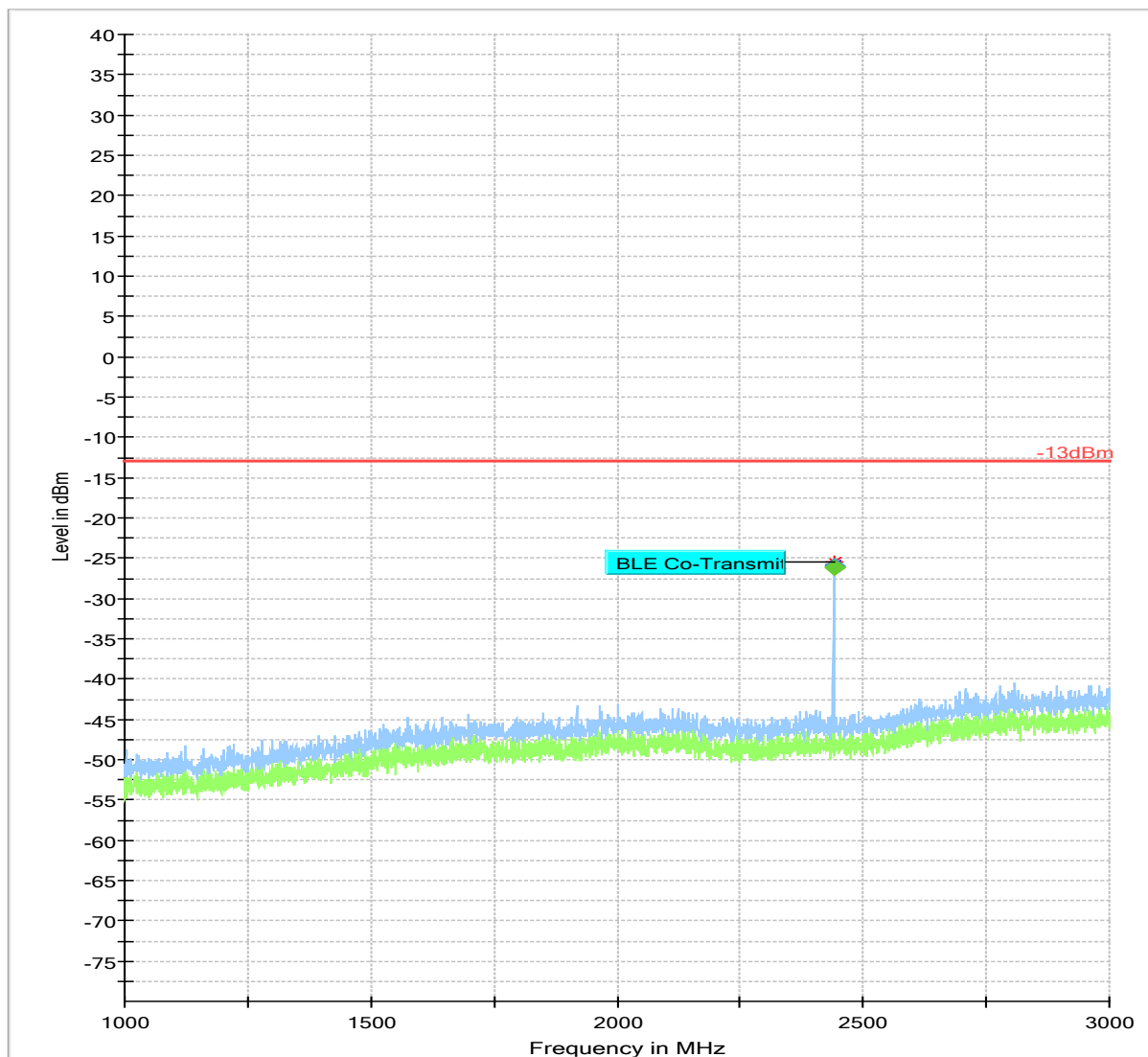
* Critical_Freqs RMS
◆ Final_Result PK+

Plot # 72 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

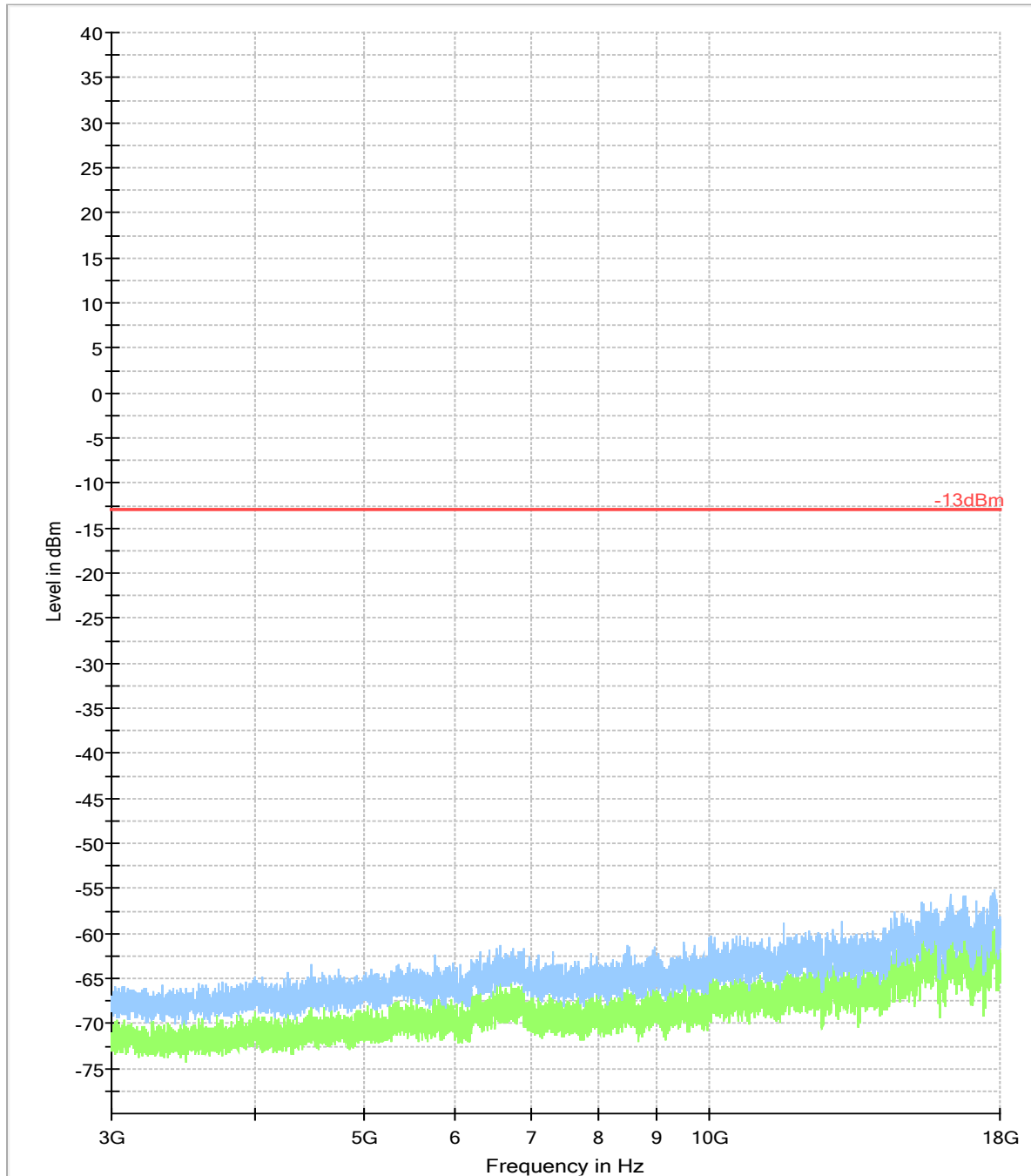
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2439.930000	-25.98	---	-13.00	12.98	500.0	1000.000	152.0	H	337.0	-86.9
2440.035000	---	-26.26	---	---	500.0	1000.000	218.0	H	335.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
◆ Final_Result RMS — -13dBm ◆ Final_Result PK+

Plot # 73 Radiated Emissions: 3 GHz - 18 GHz

Channel: High

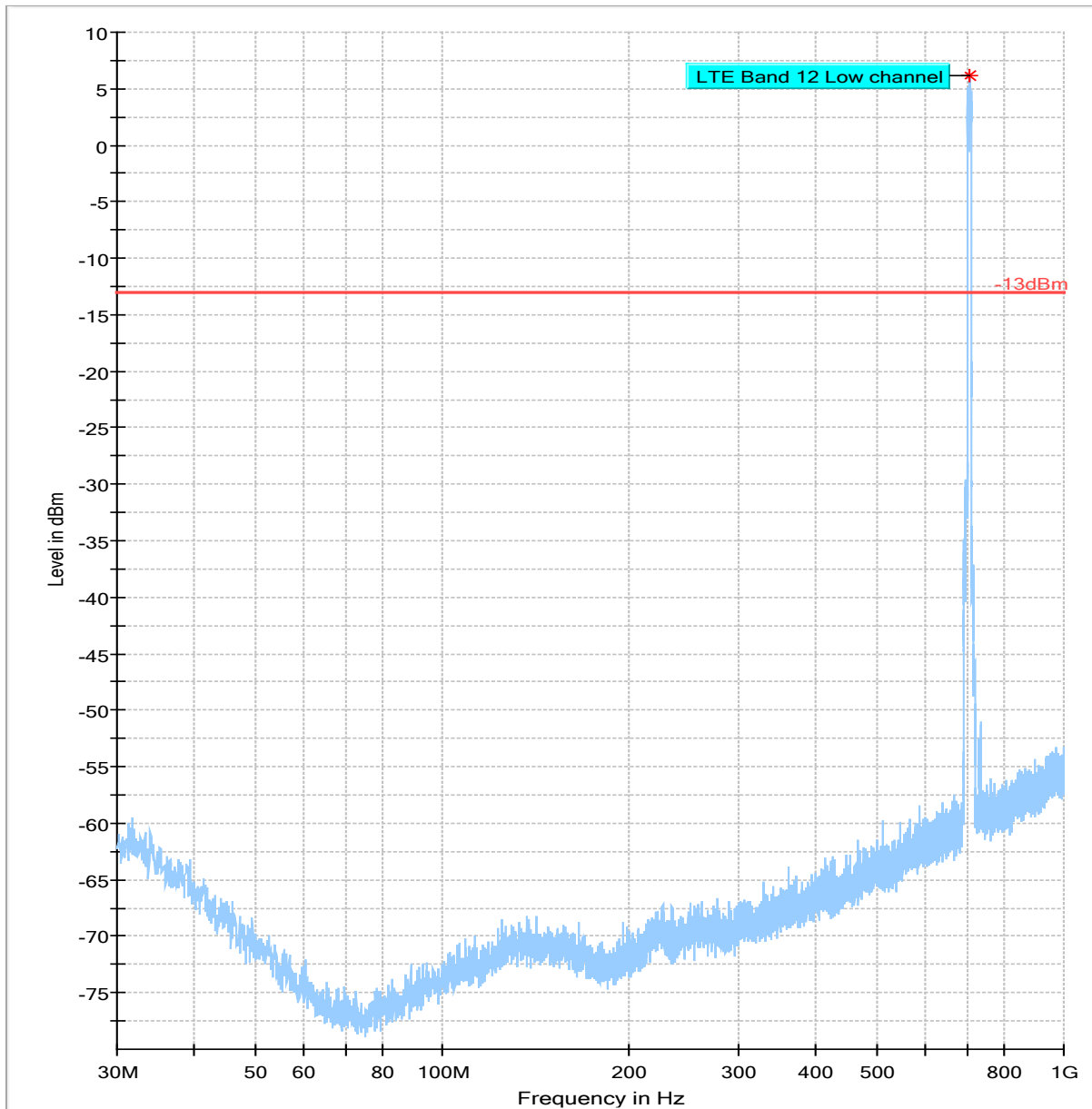


Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

LTE Band 12

Plot # 74 Radiated Emissions: 30 MHz - 1 GHz

Channel: Low



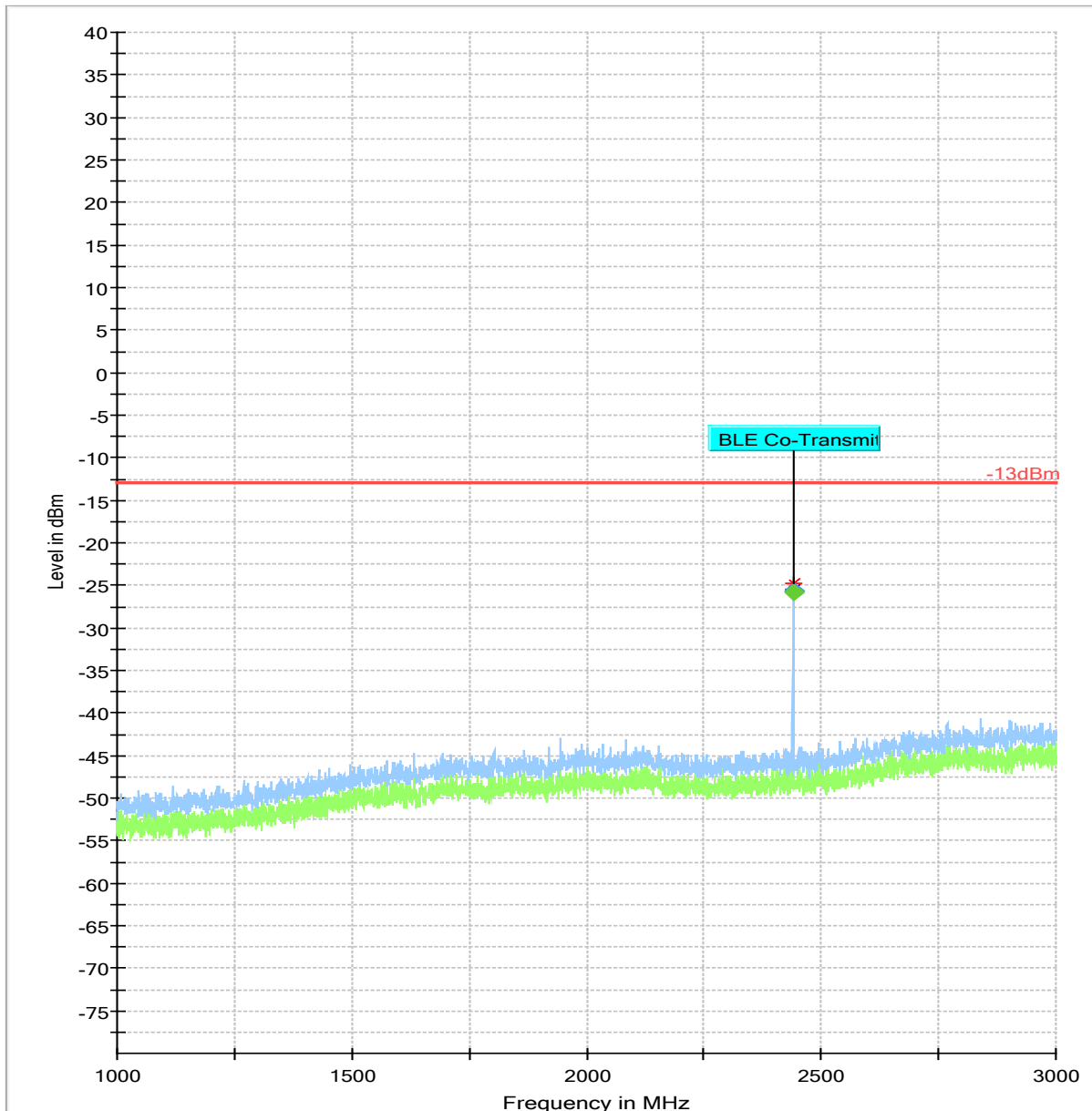
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	* Critical_Freqs RMS
◆ Final_Result RMS		◆ Final_Result PK+

Plot # 75 Radiated Emissions: 1 GHz - 3 GHz

Channel: Low

Final Result

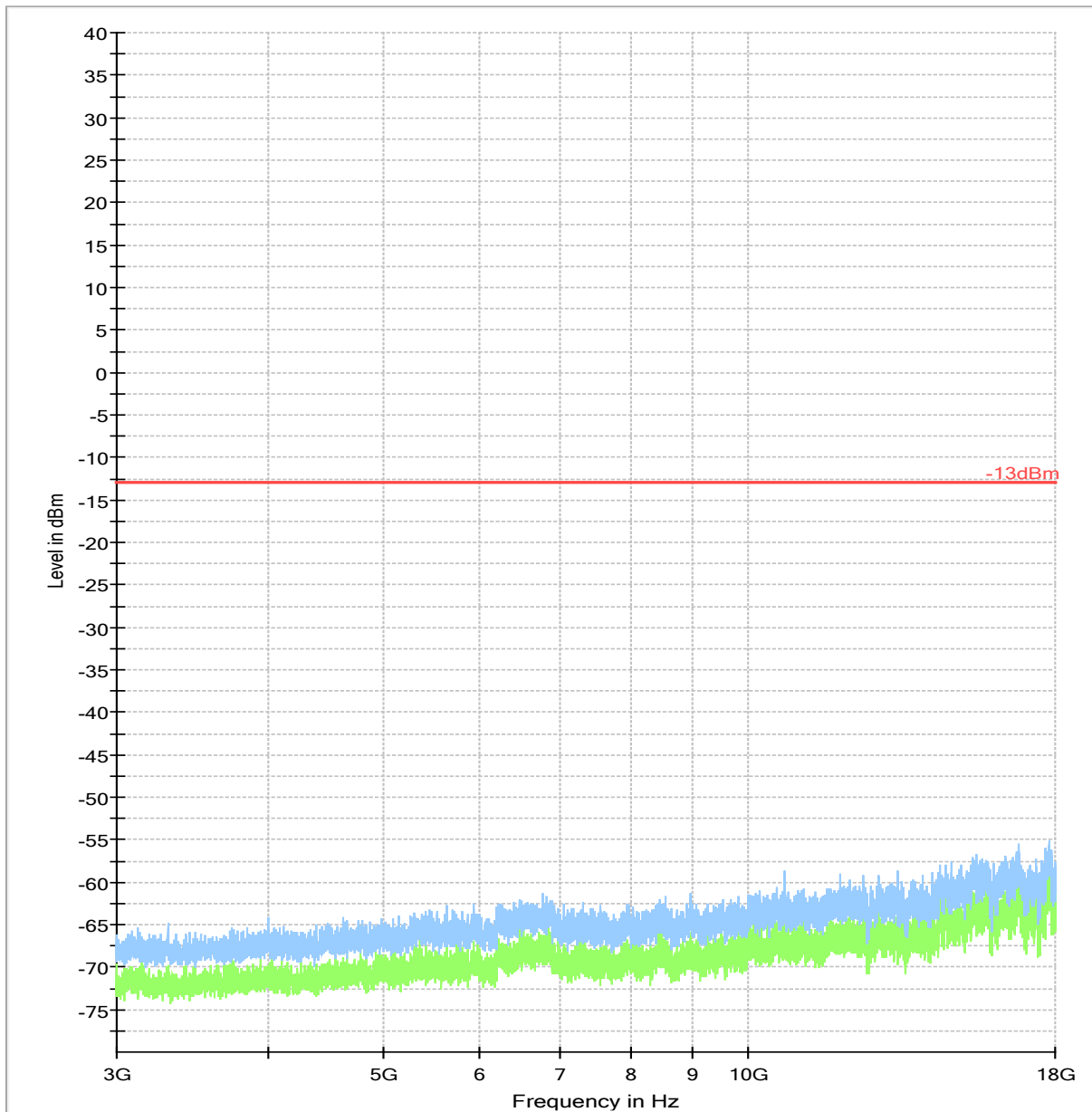
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.005000	---	-25.75	---	---	500.0	1000.000	217.0	H	338.0	-86.9
2440.055000	-25.63	---	-13.00	12.63	500.0	1000.000	152.0	H	337.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 76 Radiated Emissions: 3 GHz - 9 GHz

Channel: Low



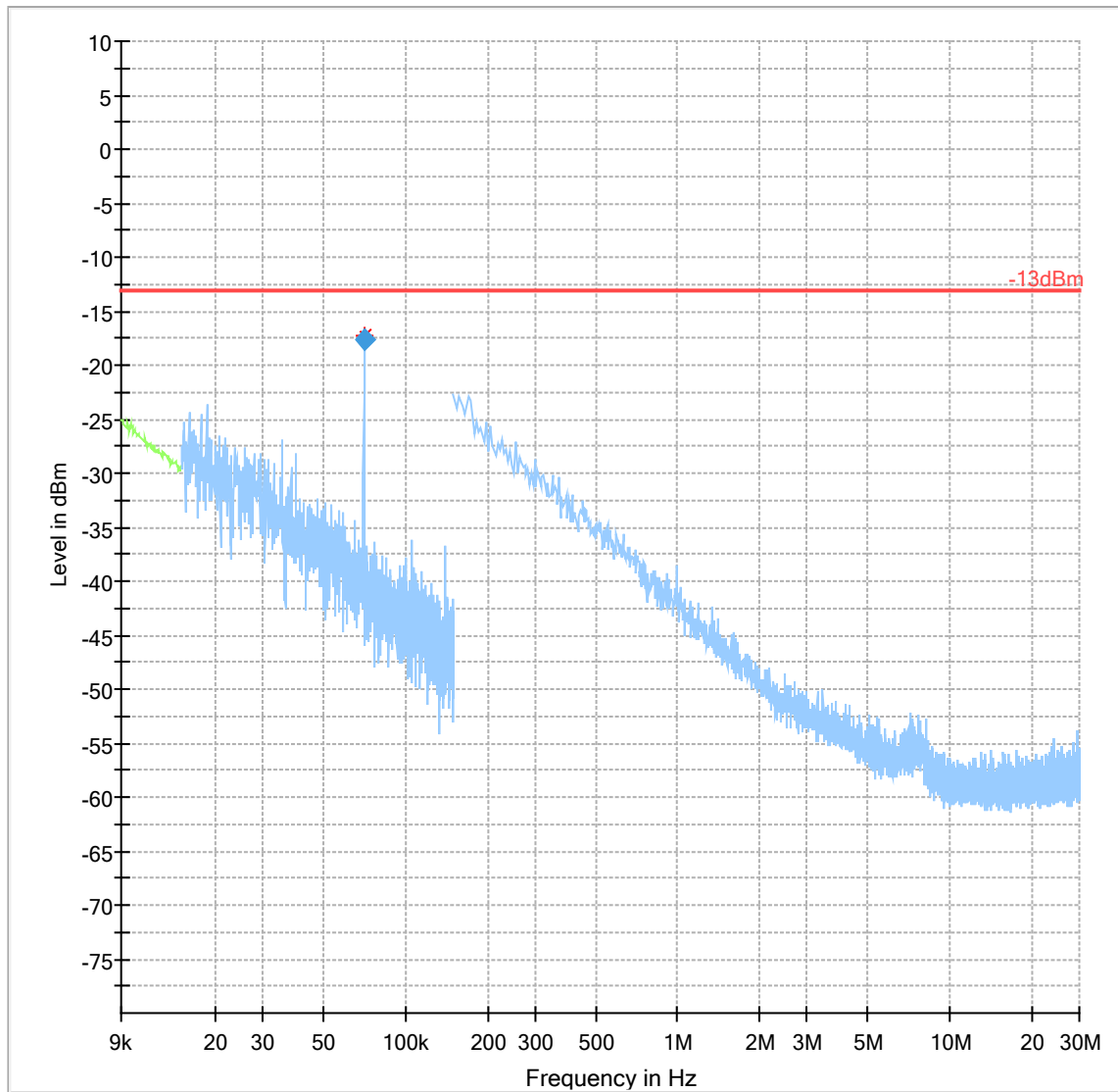
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	* Final_Result PK+
◆ Final_Result RMS		

Plot # 77 Radiated Emissions: 9 kHz - 30 MHz

Channel: Mid

Final Result

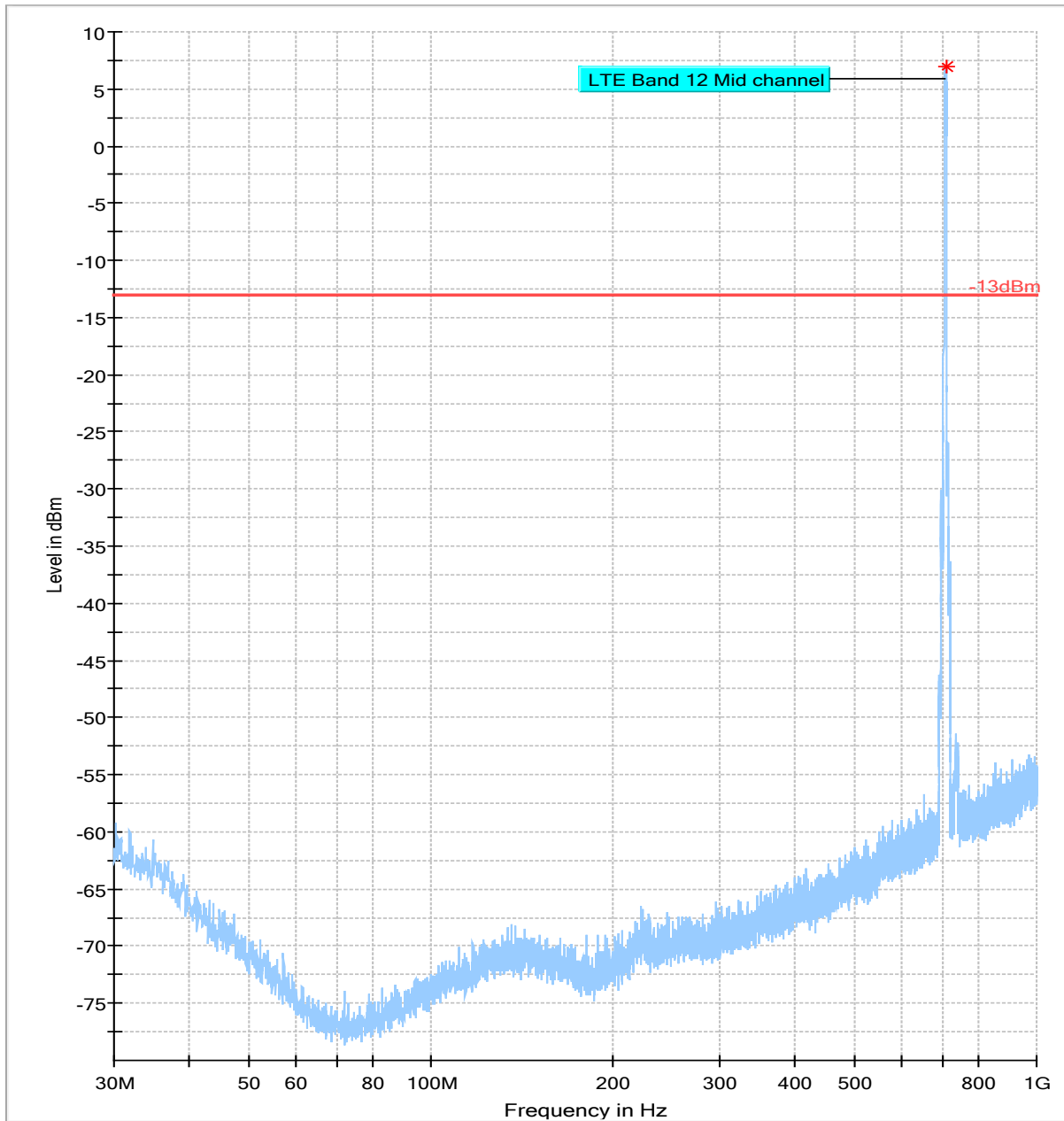
Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
0.070240	-17.69	-13.00	4.69	50.0	0.200	176.0	H	5.0	-18.5



— Preview Result 2-QPK — Preview Result 1-PK+ * Critical_Freqs QPK
* Critical_Freqs PK+ — -13dBm ◆ Final_Result RMS

Plot # 78 Radiated Emissions: 30 MHz – 1GHz

Channel: Mid



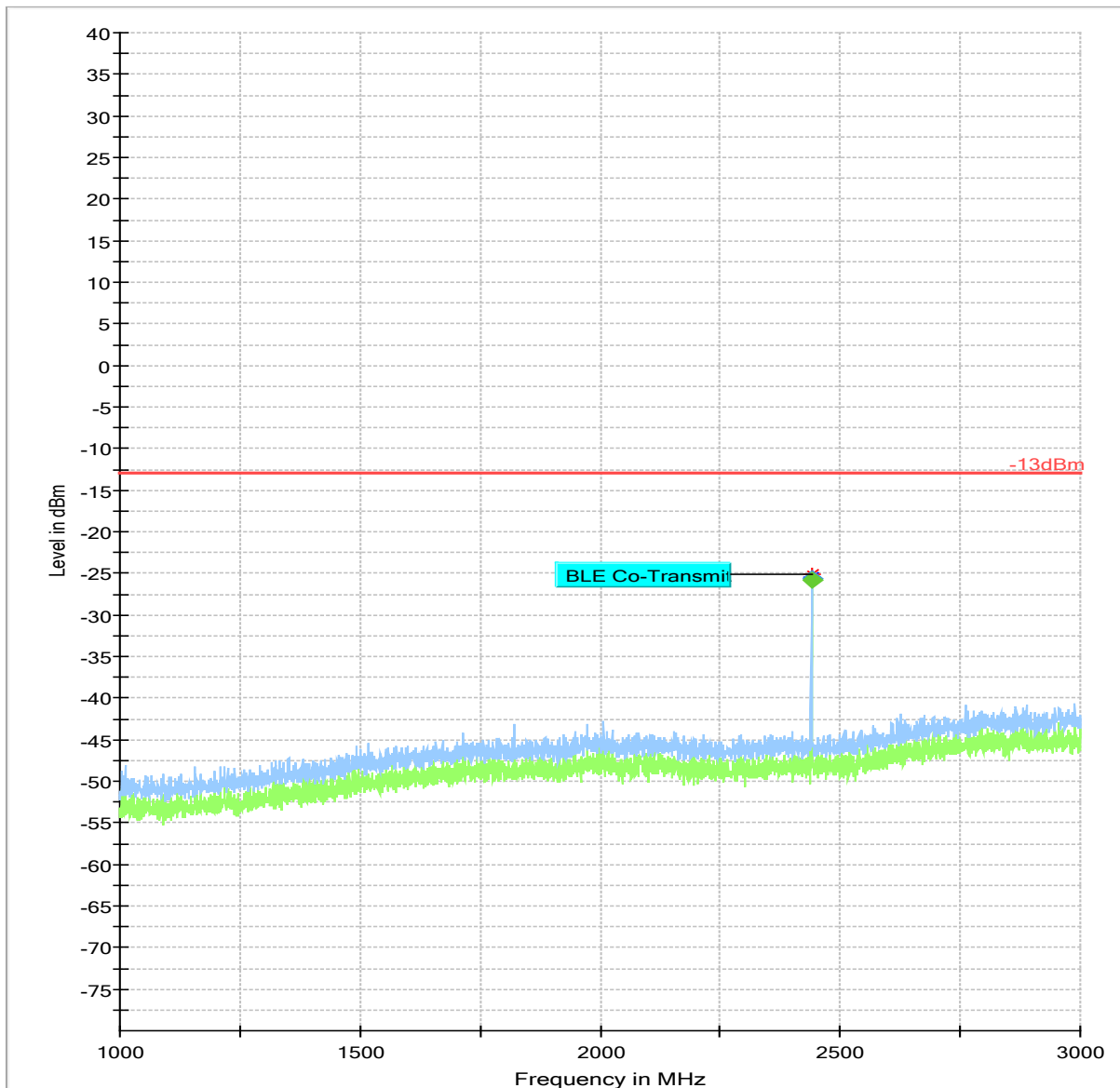
Preview Result 2-RMS	Preview Result 1-PK+	Critical_Freqs RMS
* Critical_Freqs PK+	-13dBm	Final_Result PK+
Final_Result RMS		

Plot # 79 Radiated Emissions: 1 GHz - 3 GHz

Channel: Mid

Final Result

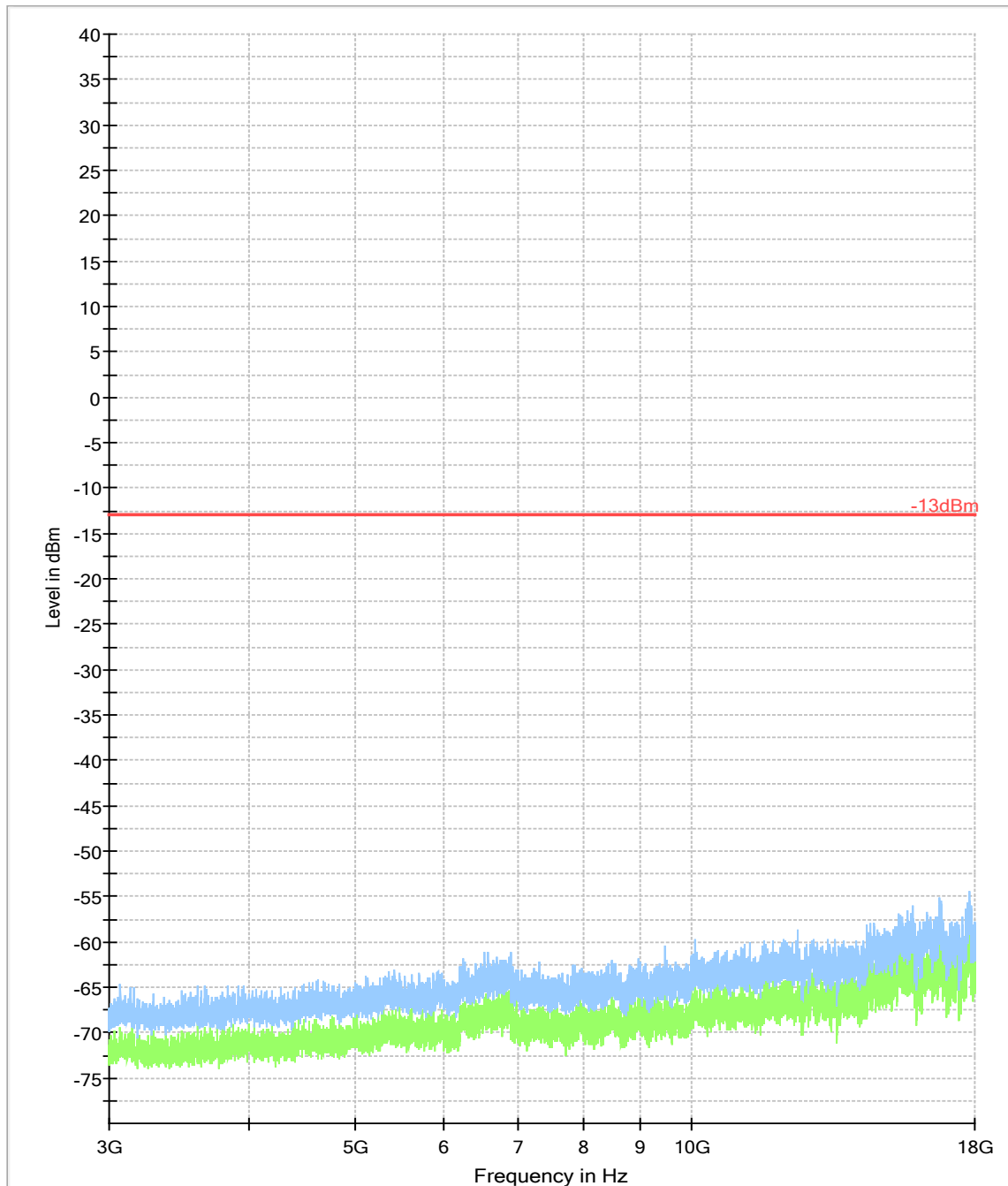
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.050000	---	-25.76	---	---	500.0	1000.000	153.0	H	337.0	-86.9
2440.055000	-25.64	---	-13.00	12.64	500.0	1000.000	152.0	H	337.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ◆ Final_Result PK+
◆ Final_Result RMS

Plot # 80 Radiated Emissions: 3 GHz – 9 GHz

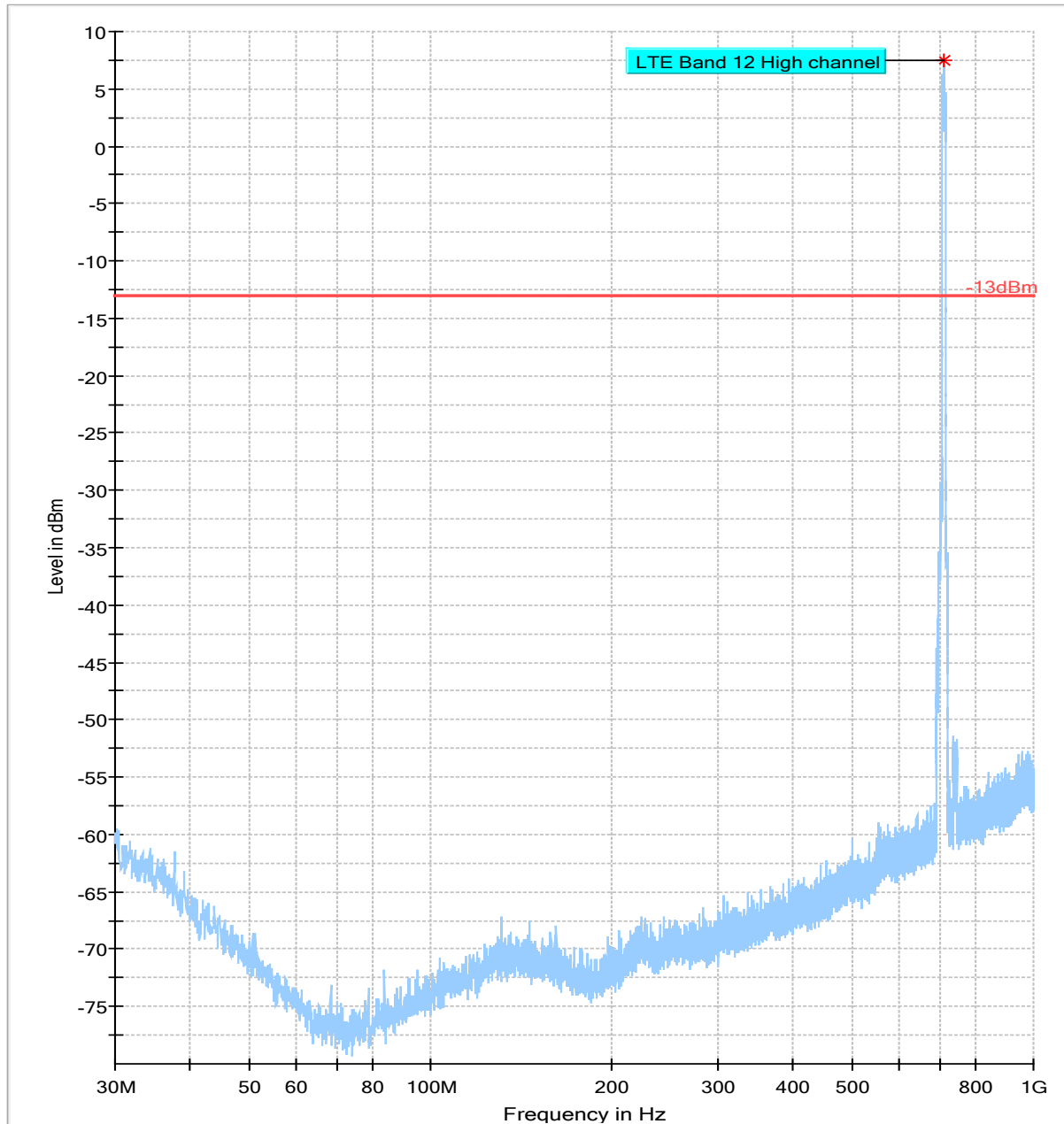
Channel: Mid



 Preview Result 2-RMS	 Preview Result 1-PK+	 Critical_Freqs RMS
 Critical_Freqs PK+	 -13dBm	 Final_Result PK+
 Final_Result RMS		

Plot # 81 Radiated Emissions: 30 MHz - 1 GHz

Channel: High



Preview Result 2-RMS
Critical_Freqs PK+
Final_Result RMS

Preview Result 1-PK+
-13dBm

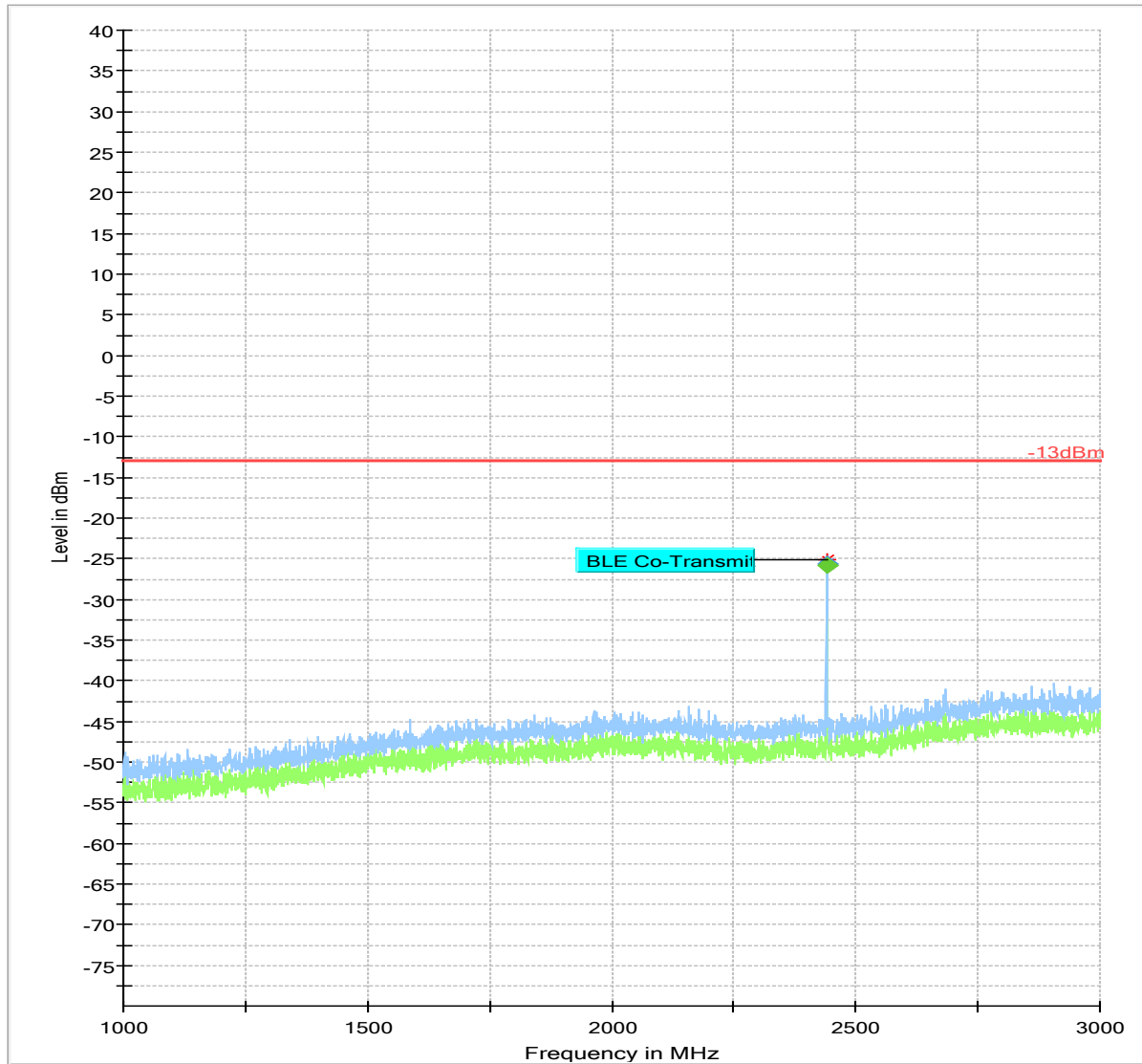
Critical_Freqs RMS
Final_Result PK+

Plot # 82 Radiated Emissions: 1 GHz - 3 GHz

Channel: High

Final Result

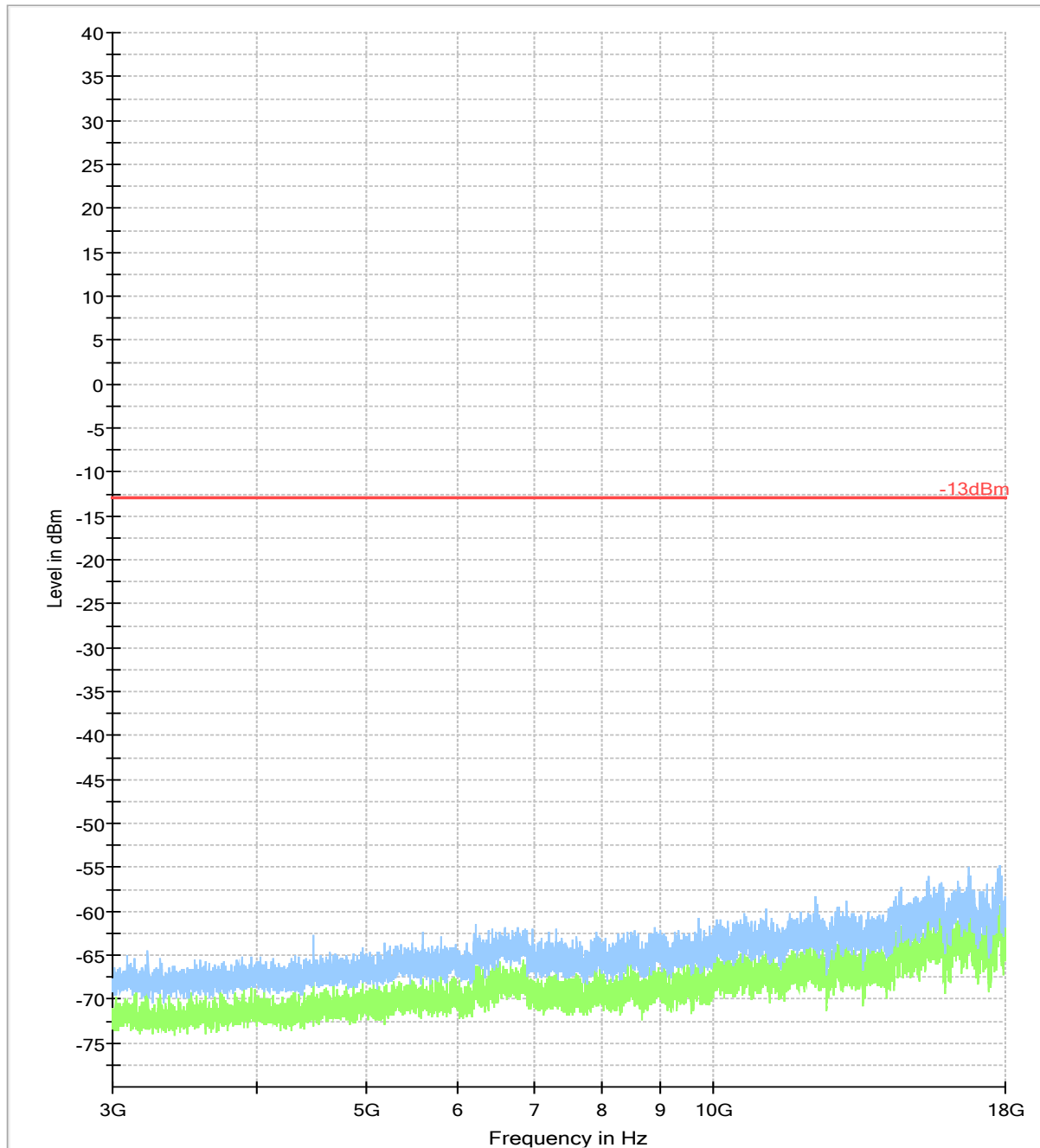
Frequency (MHz)	Max Peak (dBm)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg.)	Corr. (dB)
2440.030000	---	-25.80	---	---	500.0	1000.000	151.0	H	338.0	-86.9
2440.045000	-25.59	---	-13.00	12.59	500.0	1000.000	152.0	H	340.0	-86.9



— Preview Result 2-RMS — Preview Result 1-PK+ * Critical_Freqs RMS
* Critical_Freqs PK+ — -13dBm ♦ Final_Result PK+
♦ Final_Result RMS

Plot # 83 Radiated Emissions: 3 GHz - 9 GHz

Channel: High



—	Preview Result 2-RMS	—	Preview Result 1-PK+	*	Critical_Freqs RMS
*	Critical_Freqs PK+	—	-13dBm	◆	Final_Result PK+
◆	Final_Result RMS				

Setup photos are included in supporting file name: "EMC_XIRGO_122_17001_FCC_ISED_Setup_Photos.pdf"

9 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
PASSIVE LOOP ANTENNA	ETS LINDGREN	6512	00164698	3 YEARS	08/08/2017
PASSIVE LOOP ANTENNA	ETS LINDGREN	6512	00049838	3 YEARS	07/28/2017
BILOG ANTENNA	TESEO	CBL 6141B	41106	3 YEARS	11/01/2017
HORN ANTENNA	EMCO	3115	00035111	3 YEARS	11/17/2015
HORN ANTENNA	ETS LINDGREN	3117	00167061	3 YEARS	08/08/2017
HORN ANTENNA	ETS LINDGREN	3116C	00166821	3 YEARS	09/24/2017
SPECTRUM ANALYZER	R&S	FSU26	200065	2 YEARS	03/07/2017
UNIVERSAL RADIO COMMUNICATION TESTER	R&S	CMU 200	101821	2 YEARS	07/06/2017
WIDEBAND RADIO COMMUNICATION	R&S	CMW500	127068	2 YEARS	07/01/2017
SIGNAL ANALYZER	R&S	FSV 40	101022	2 YEARS	07/05/2017
TEST RECEIVER	R&S	ESU.EMI	100256	3YEARS	01/31/2018
COMPACT DIGITAL BAROMETER	CONTROL COMPANY	35519-055	91119547	1 YEARS	06/05/2017
THRMOMETER HUMIDIY	DICKSON	TM320	16253639	1 YEARS	11/02/2017

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	Report Name	Changes to report	Report prepared by
04/26/2018	EMC_XIRGO_122_17001_FCC_22_24_27_ISED	Initial Version	Issa Ghanma