FCC / ISED Test Report

FOR:
Garmin International, Inc.

Model Name:
GMN-02245

Product Description:
LTE/Wi-Fi Datalink and Data Storage System

FCC ID: IPH-03788
IC ID: 1792A-03788

Applied Rules and Standards:
47 CFR Part 15.247 (DTS)
RSS-247 Issue 2 (DTS) & RSS-Gen Issue 5

REPORT #: EMC_GARMI-103-22001_FCC_Spotcheck

DATE: 2022-03-22

A2LA Accredited

IC recognized #
3462B-1
CABID: US0187

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CETECOM Inc. is a Delaware Corporation with Corporation number: 2905571

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1 Assessment

The following device was evaluated against the applicable criteria specified in FCC rules Parts 15.247 of Title 47 of the Code of Federal Regulations and the relevant ISED Canada standard RSS-247.

No deviations were ascertained.

Company	Description	Model #
Garmin International, Inc.	LTE/Wi-Fi Datalink and Data Storage System	GMN-02245

Responsible for Testing Laboratory:

Date	Section	Name	Signature
2022-03-22	Compliance	Kevin Wang (EMC Lab Manager)	kevin.wang@cetecom.com Digitally signed by: kevin.wang@cetecom.com DN: CN = kevin.wang@cetecom.com Date: 2022.03.29 11:58:20 -07'00'

Responsible for the Report:

Date	Section	Name	Signature
2022-03-22	Compliance	Cheng Song (EMC Engineer)	cheng.song@cetecom.com Digitally signed by: cheng.song@cetecom.com DN: CN = cheng.song@cetecom.com Date: 2022.03.22 17:01:41 -07'00'

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
EMC Lab Manager:	Kevin Wang
Responsible Project Leader:	Sangeetha Sivaraman

2.2 Identification of the Client

Client's Name:	Garmin International, Inc.
Street Address:	1200 East 151st Street
City/Zip Code:	Olathe, KS 66062
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:	GMN-02245
HW Version :	Ver B
SW Version :	2.10
FCC-ID:	IPH-03788
IC-ID:	1792A-03788
HVIN:	GMN-02245
PMN:	GDL 60
Product Description:	LTE/Wi-Fi Datalink and Data Storage System
Radios included in device	**WiFi # 2:** • Module Name: Texas Instruments • Module Number: WiLink WL1837MOD • FCC ID: Z64-WL18DBMOD • IC ID: 451I-WL18DBMOD Nominal band: 2400 MHz – 2483.5 MHz; Center to center: 2412 MHz (ch 1) – 2462 MHz (ch 11), 11 channels **Bluetooth:** • Module Name: Texas Instruments • Module Number: WiLink WL1837MOD • FCC ID: Z64-WL18DBMOD • IC ID: 451I-WL18DBMOD Nominal band: 2400 MHz – 2483.5 MHz; Center to center: 2402 MHz (ch 0) – 2480 MHz (ch 78), 79 channels **Bluetooth LE:** • Module Name: Texas Instruments • Module Number: WiLink WL1837MOD • FCC ID: Z64-WL18DBMOD • IC ID: 451I-WL18DBMOD Nominal band: 2400 MHz – 2483.5 MHz; Center to center: 2402 MHz (ch 0) – 2480 MHz (ch 39), 40 channels
Power Supply/ Rated Operating Voltage Range:	Vmin: 9 VDC/ Vnom: 24 VDC / Vmax: 32 VDC

Operating Temperature Range:	-40ºC to 70 ºC
Other Radios included in the device:	**LTE:** • Manufacture: Quectel • Module name/number: EG25-G • FCC ID: XMR201903EG25G • IC ID: 10224A-201903EG25G **WiFi # 1:** • Manufacture: Texas Instruments • Module name/number: WiLink WL1807MOD • FCC ID: Z64-WL18DBMOD • IC ID: 451I-WL18DBMOD
Sample Revision:	☐Prototype Unit; ☐Production Unit; ■Pre-Production

3.2 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	67H001401	Ver B	2.10	Radiated Emissions

3.3 Test Sample Configuration

EUT Set-up #	Combination of AE used for test set up	Comments
1	EUT#1	Buttons on the EUT in test mode used to configure the WLAN # 2 radio to 802.11g mid channel provided by the client that will not be available to the end user. Special commands through command window used to configure the Bluetooth LE radio to mid channel. Special interface called "GDL 60 Engineering Tool" is used to configure the Bluetooth radio to mid channel LTE Band 2 mid Channel (1880 MHz) is co-transmitting simultaneously using command window to configure provided by client that is not available to the end user. LTE Band 5 mid Channel (836.5 MHz) is co-transmitting simultaneously using command window to configure provided by client that is not available to the end user. For radiated measurements, the external antenna was connected.

3.4 Mode of Operation

Mode of Operation	Description	Note
Op. 1	WiFi # 2 + LTE 2	WLAN and Cellular set to mid channel
Op. 2	WiFi # 2 + LTE 5	WLAN and Cellular set to mid channel
Op. 3	BT + LTE 2	Bluetooth and Cellular set to mid channel
Op. 4	BT + LTE 5	Bluetooth and Cellular set to mid channel
Op. 5	BLE + LTE 2	Bluetooth LE and Cellular set to mid channel
Op. 6	BLE + LTE 5	Bluetooth LE and Cellular set to mid channel

4 Subject of Investigation

The objective of the measurements done by CETECOM Inc. was to assess the performance of the EUT according to the relevant requirements specified in FCC rules Part 15.247 of Title 47 of the Code of Federal Regulations and Radio Standard Specification RSS-247 of ISED Canada.

Testing procedures are based on 558074 D01 DTS Meas Guidance v05r02 – "GUIDANCE FOR PERFORMING COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEMS (DTS) OPERATING UNDER SECTION 15.247" - April 2, 2019, by the Federal Communications Commission, Office of Engineering and Technology, Laboratory Division.

5 Measurement Results Summary

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	NA	NP	Result
§15.247(a)(1) RSS-247 5.2(1)	Emission Bandwidth	Nominal		☐	☐	■	Complies Note1
§15.247(e) RSS-247 5.2(2)	Power Spectral Density	Nominal		☐	☐	■	Complies Note1
§15.247(b)(1) RSS-247 5.4(4)	Maximum Conducted Output Power and EIRP	Nominal		☐	☐	■	Complies Note1
§15.247(d) RSS-247 5.5	Band edge compliance Unrestricted Band Edges	Nominal		☐	☐	■	Complies Note1
§15.247; 15.209; 15.205 RSS-Gen 8.9; 8.10	Band edge compliance Restricted Band Edges	Nominal		☐	☐	■	Complies Note1
§15.247(d); §15.209 RSS-Gen 6.13	TX Spurious emissions-Radiated	Nominal	Co-location	■	☐	☐	Complies
§15.207(a) RSS Gen 8.8	AC Conducted Emissions	Nominal		☐	☐	■	Complies Note1

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

Note1: Leveraged from module certification Texas Instruments WiLink WL1837MOD (FCC ID: Z64-WL18DBMOD, IC ID: 451I-WL18DBMOD and WiLink WL1807MOD (FCC ID: Z64-WL18DBMOD, IC ID: 451I-WL18DBMOD)

6 Measurements

6.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus, with 95% confidence interval (in dB delta to result), based on a coverage factor k=1.

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

6.2 Environmental Conditions During Testing:

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

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

6.3 Dates of Testing:

2/21/2022– 2/25/2022

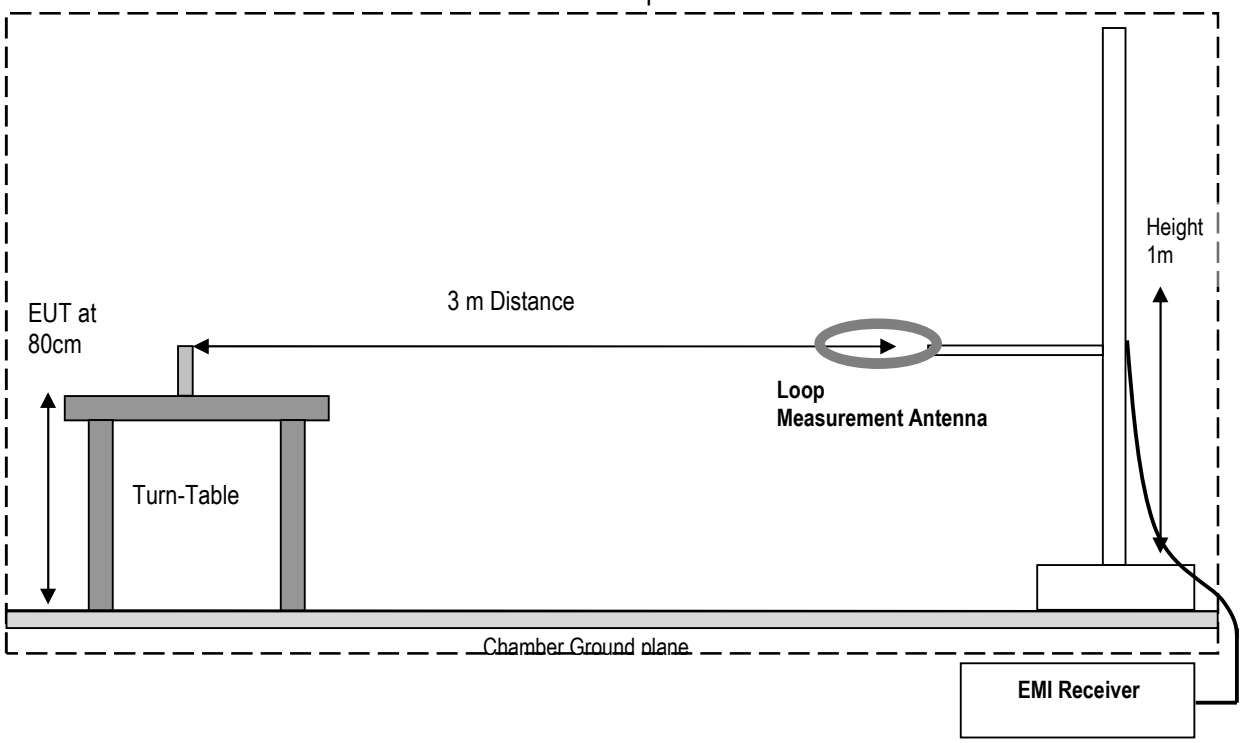
7 Measurement Procedures

7.1 Radiated Measurement

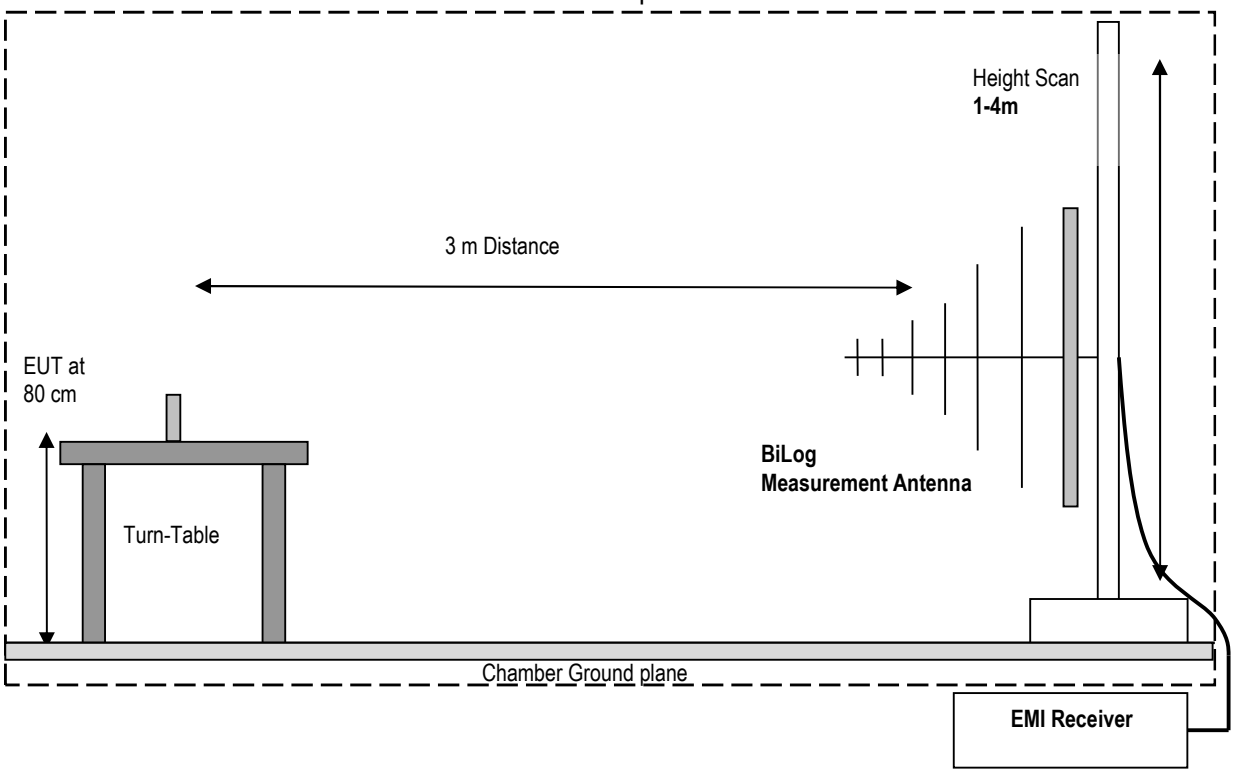
The radiated measurement is performed according to ANSI C63.10 (2013)

- 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.

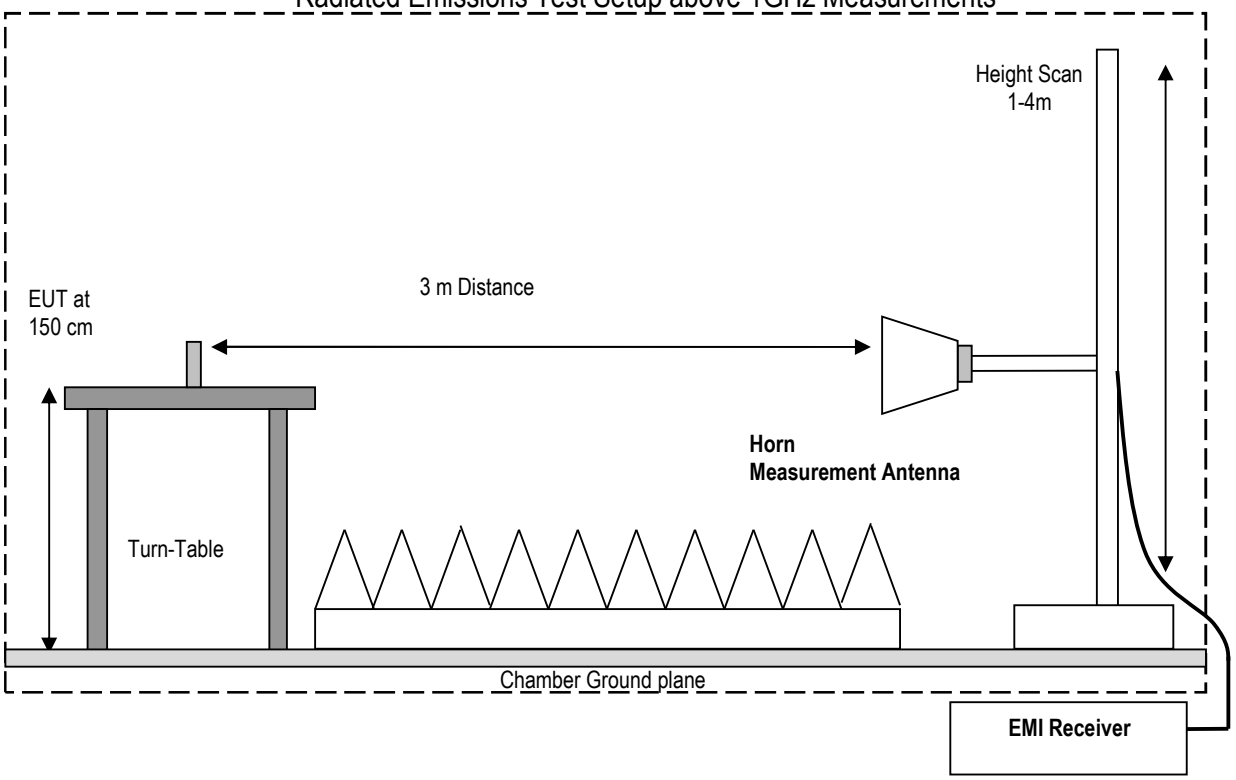
Radiated Emissions Test Setup below 30MHz Measurements



Radiated Emissions Test Setup 30MHz-1GHz Measurements



Radiated Emissions Test Setup above 1GHz Measurements



7.1.1 Sample Calculations for Field Strength Measurements

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

1. Measured reading in dBµV
2. Cable Loss between the receiving antenna and SA in dB and
3. 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 (dBµV/m) = Measured Value on SA (dBµV) + Cable Loss (dB) + Antenna Factor (dB/m)

Example:

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

8 Test Result Data

8.1 Radiated Transmitter Spurious Emissions and Restricted Bands

8.1.1 Measurement according to ANSI C63.10 (2013)

Spectrum Analyzer Settings:

- Frequency = 9 KHz – 30 MHz
- RBW = 9 KHz
- Detector: Peak

- Frequency = 30 MHz – 1 GHz
- Detector = Peak / Quasi-Peak
- RBW= 120 KHz (<1GHz)

- Frequency > 1 GHz
- Detector = Peak / Average
- RBW = 1 MHz

- Radiated spurious emissions shall be measured for the transmit frequencies, transmit power, and data rate for the lowest, middle and highest channel in each frequency band of operation and for the highest gain antenna for each antenna type, and using the appropriate parameters and test requirements.
- The highest (or worst-case) data rate shall be recorded for each measurement.
- For testing at distance other than the specified in the standard, the limit conversion is calculated by using 40 dB/decade extrapolation factor as follow: Conversion factor (CF) = 40 log (D/d) = 40 log (300m / 3m) = 80dB

8.1.2 Limits:

FCC §15.247

- In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

FCC §15.209 & RSS-Gen 8.9

- Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency of emission (MHz)	Field strength (µV/m)	Measurement Distance (m)	Field strength @ 3m (dBµV/m)
0.009–0.490	2400/F(kHz) / ---------	300	-
0.490–1.705	24000/F(kHz) / --------	30	-
1.705–30.0	30 / (29.5)	30	-
30–88	100	3	40 dBµV/m
88–216	150	3	43.5 dBµV/m
216–960	200	3	46 dBµV/m
Above 960	500	3	54 dBµV/m

FCC §15.205 & RSS-Gen 8.10

- Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

- Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
  *PEAK LIMIT= 74 dBµV/m
  *AVG. LIMIT= 54 dBµV/m

8.1.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23° C	1	Co-location	24 VDC

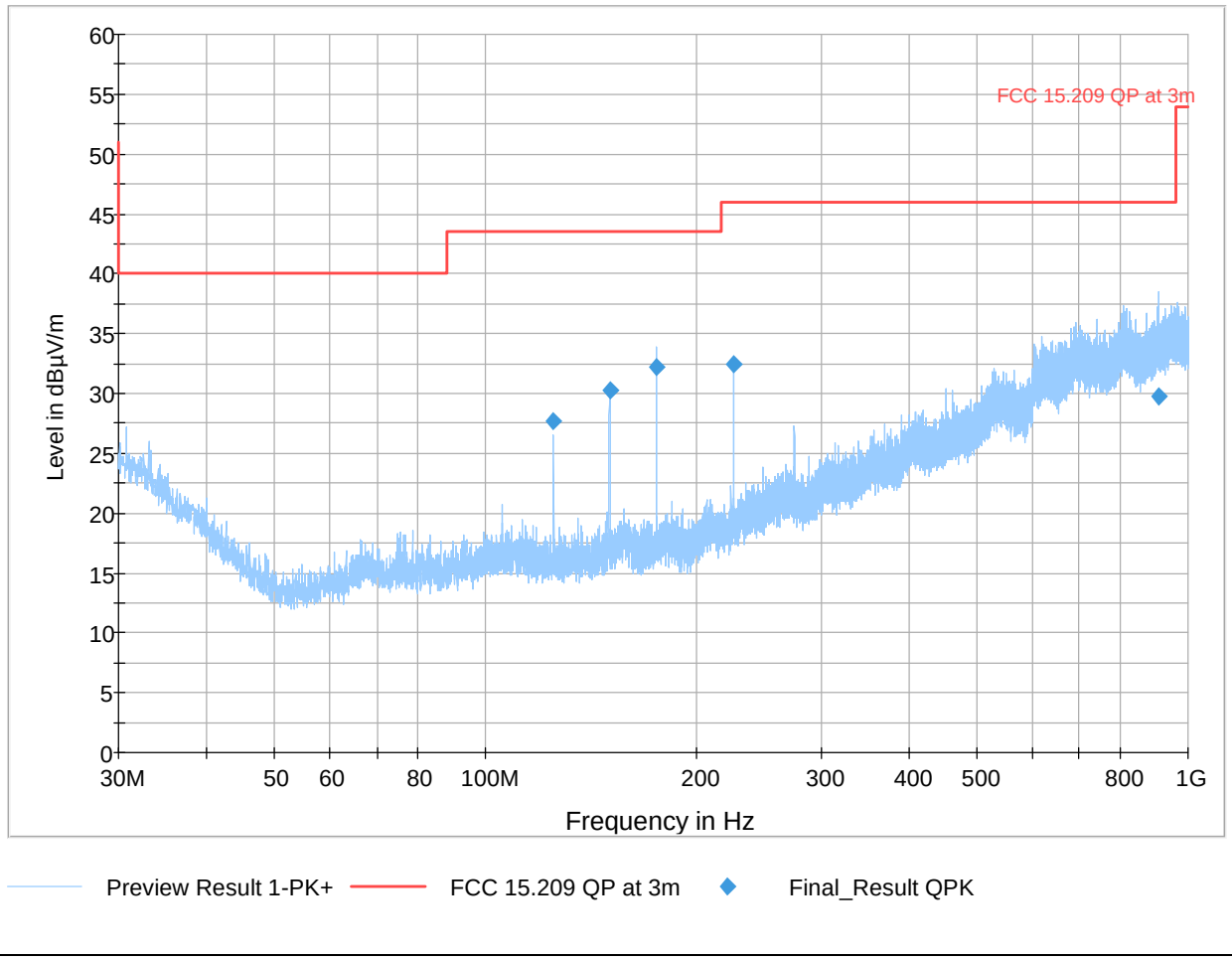
8.1.4 Measurement result:

Plot #	Mode of Operation	Scan Frequency	Limit	Result
1-3	Op. 1	30 MHz – 18 GHz	See section 8.1.2	Pass
4-6	Op. 2	30 MHz – 18 GHz	See section 8.1.2	Pass
7-9	Op. 3	30 MHz – 18 GHz	See section 8.1.2	Pass
10-12	Op. 4	30 MHz – 18 GHz	See section 8.1.2	Pass
13-15	Op. 5	30 MHz – 18 GHz	See section 8.1.2	Pass
16-18	Op. 6	30 MHz – 18 GHz	See section 8.1.2	Pass

8.1.5 Measurement Plots:

Plot # 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment
124.995	27.67	43.50	15.83	500.0	120.000	312.0	H	259.0	12.8	
149.989	30.30	43.50	13.20	500.0	120.000	213.0	H	114.0	13.7	
174.983	32.12	43.50	11.38	500.0	120.000	244.0	H	167.0	14.3	
225.002	32.40	46.02	13.62	500.0	120.000	150.0	H	323.0	15.9	
909.014	29.72	46.02	16.31	500.0	120.000	233.0	H	281.0	30.1	



Plot # 2

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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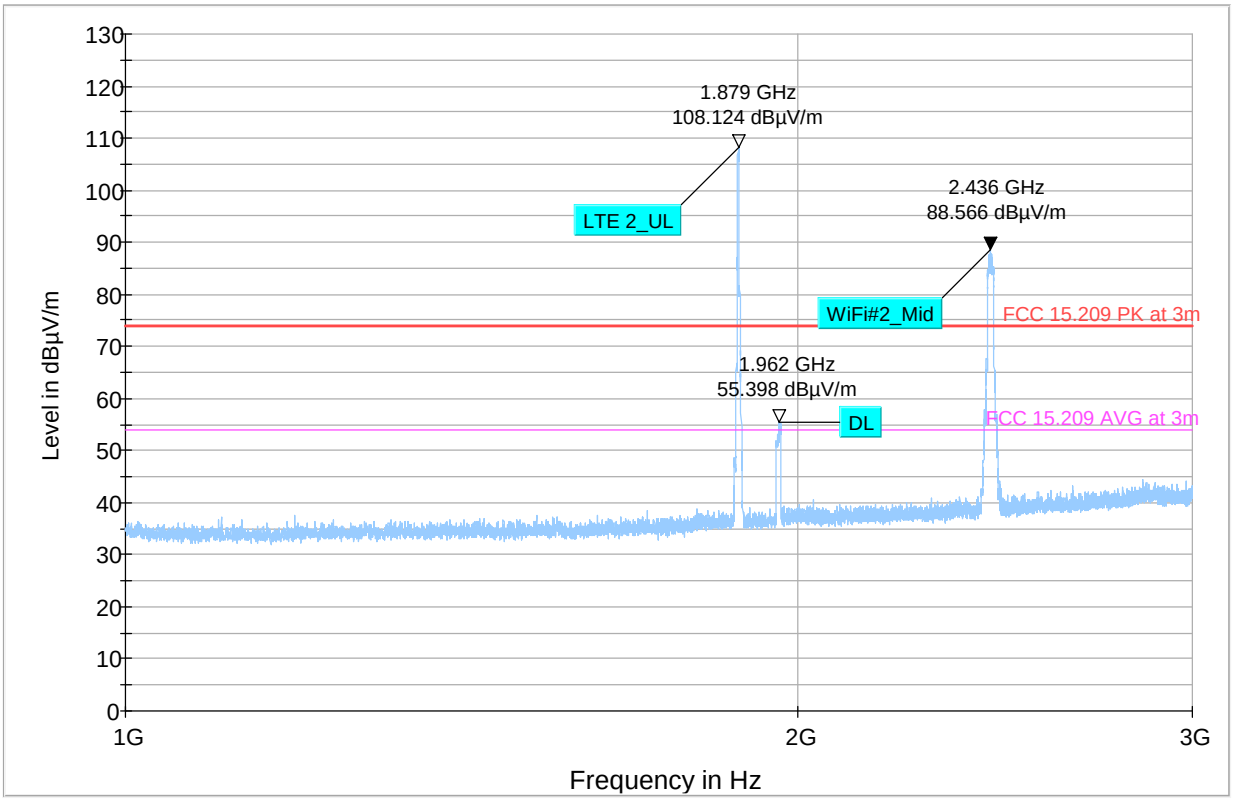

Plot # 3

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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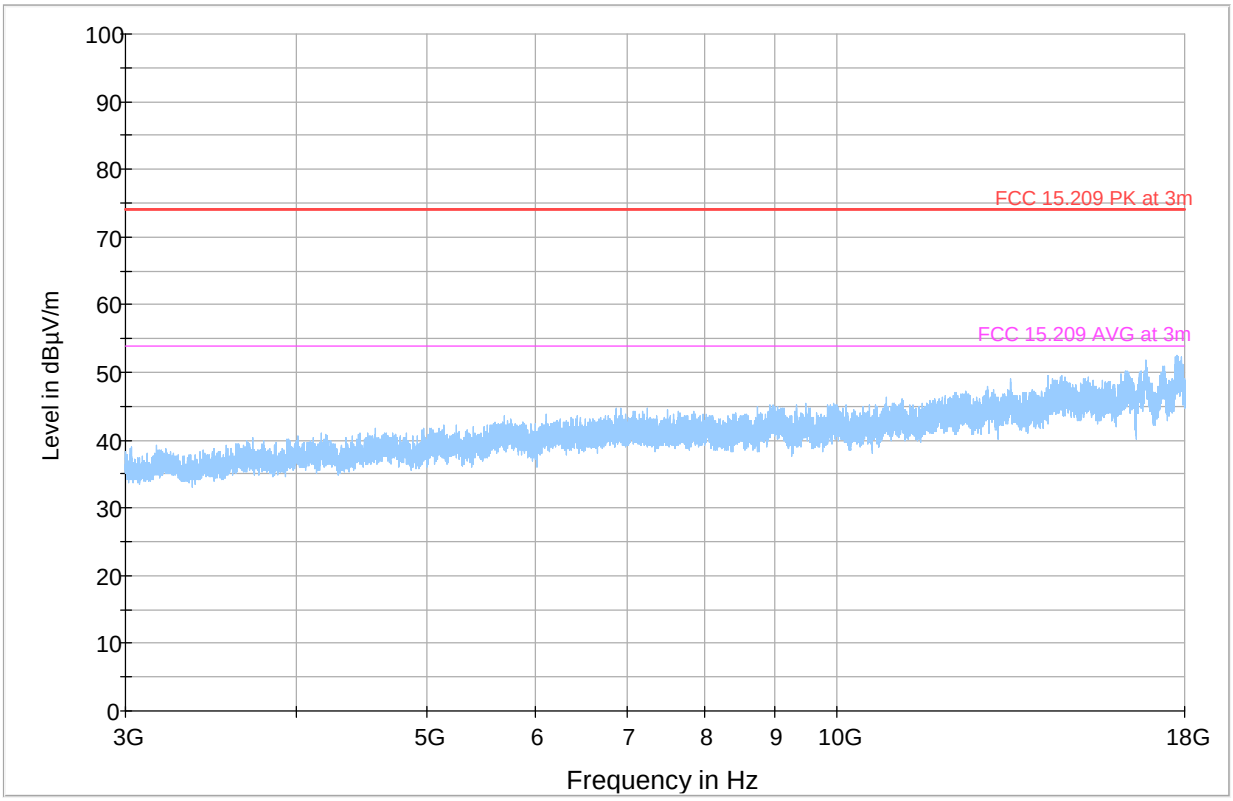
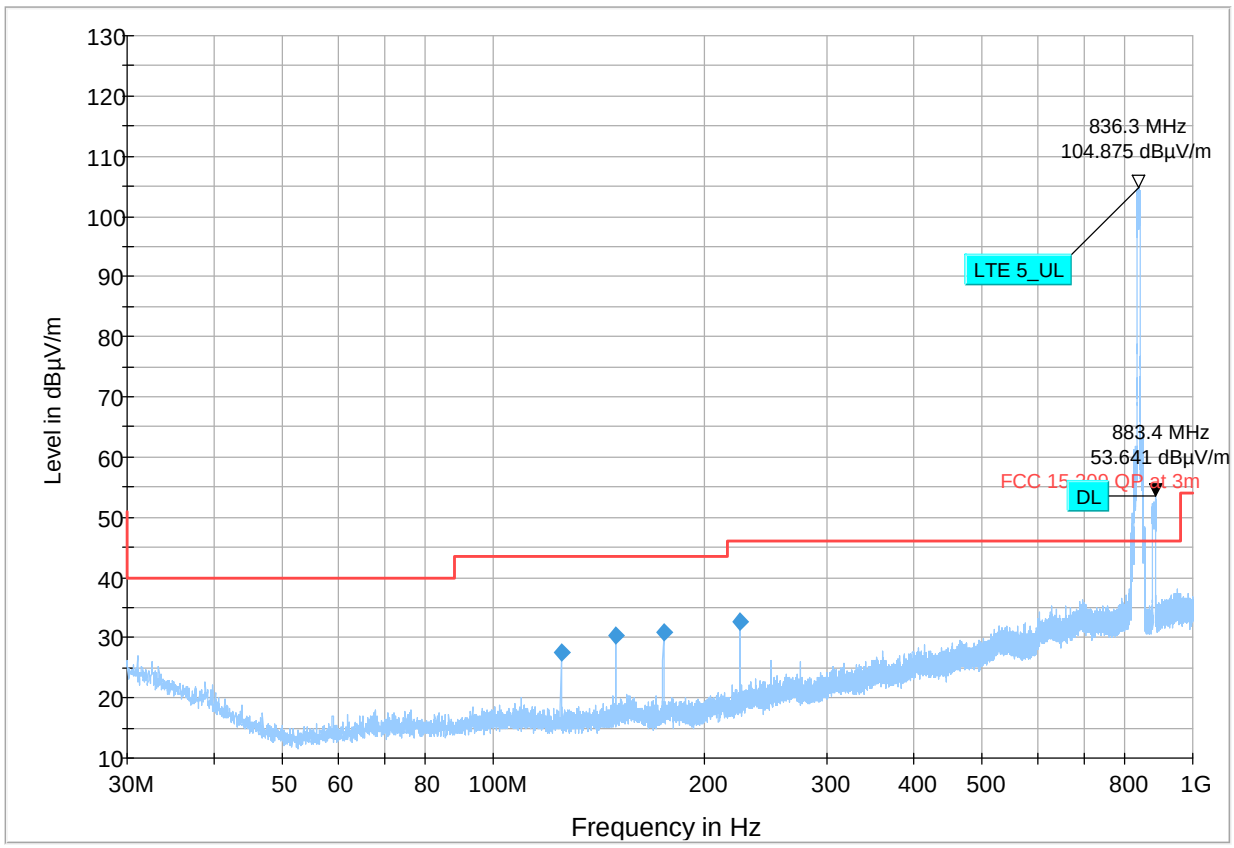


Plot # 4

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment
124.995	27.43	43.50	16.07	500.0	120.000	299.0	H	272.0	12.8	
149.989	30.33	43.50	13.17	500.0	120.000	186.0	H	109.0	13.7	
174.983	30.94	43.50	12.56	500.0	120.000	264.0	H	173.0	14.3	
225.002	32.58	46.02	13.44	500.0	120.000	163.0	H	321.0	15.9	



Plot # 5

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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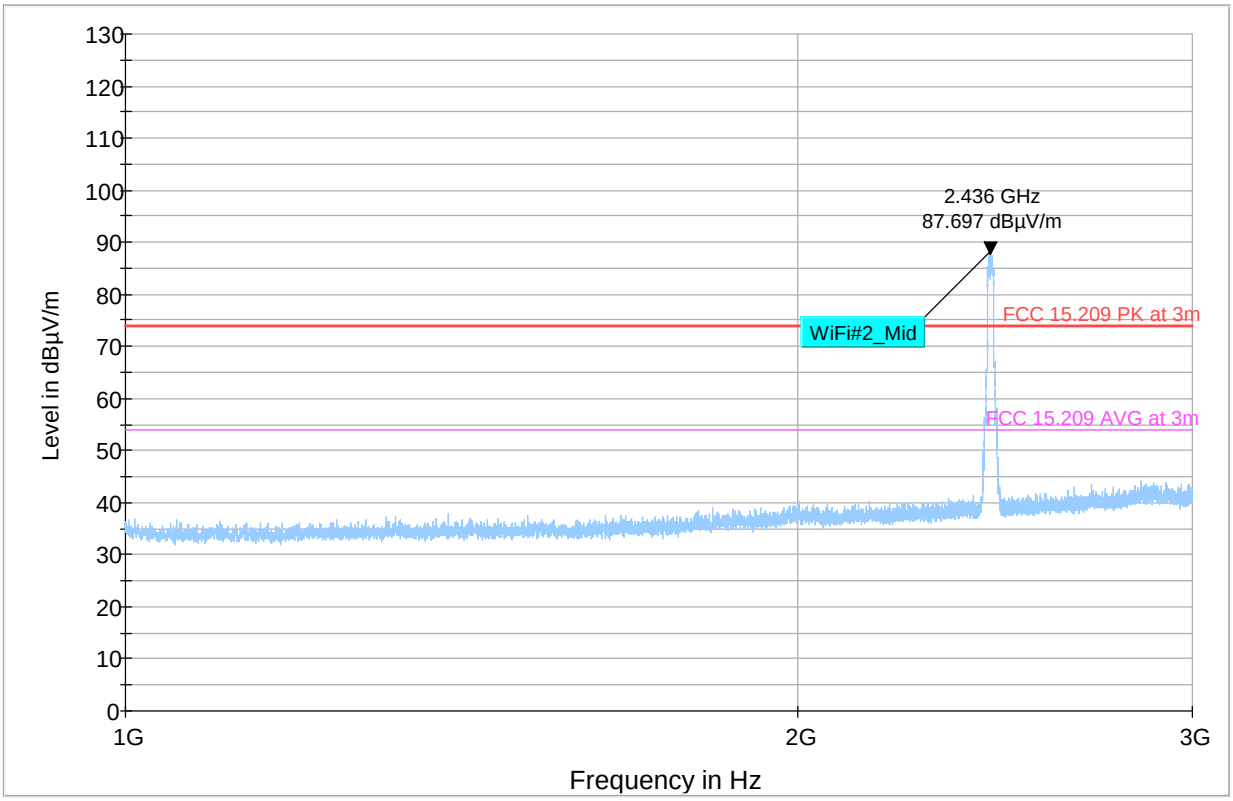

Plot # 6

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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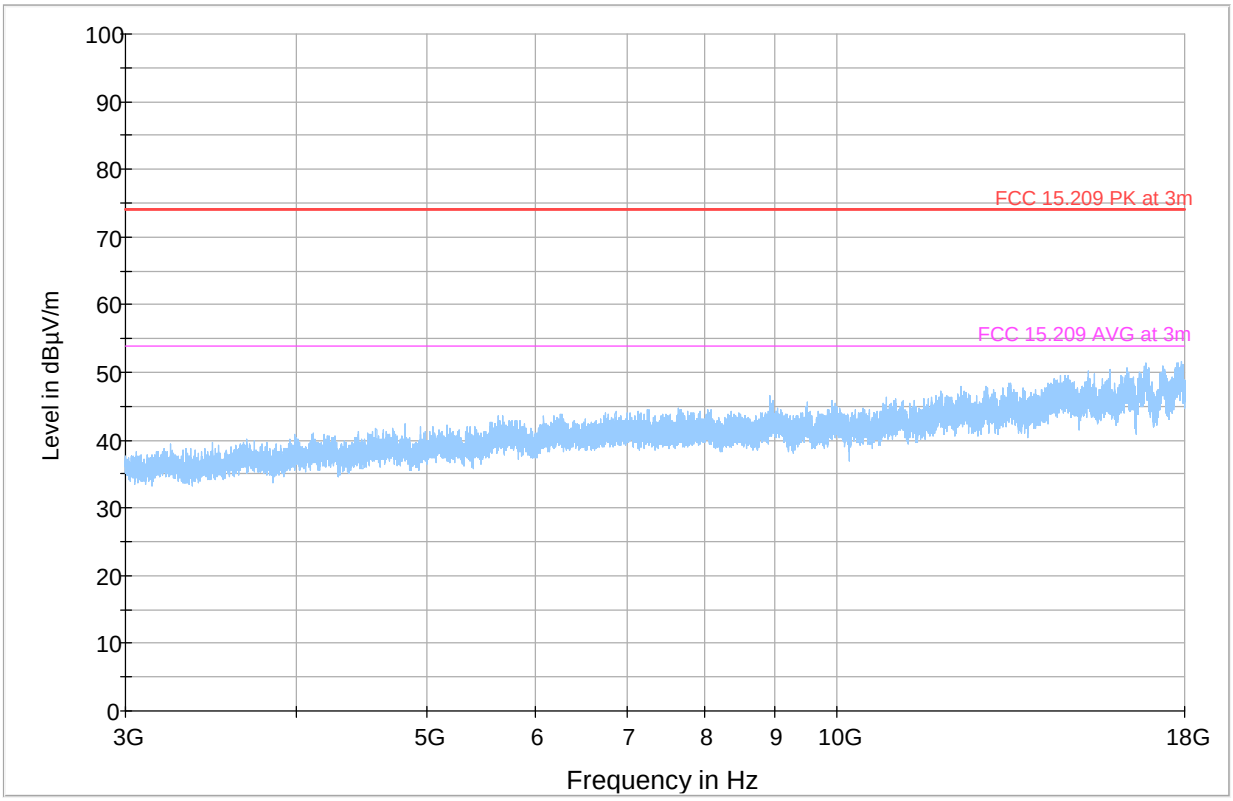
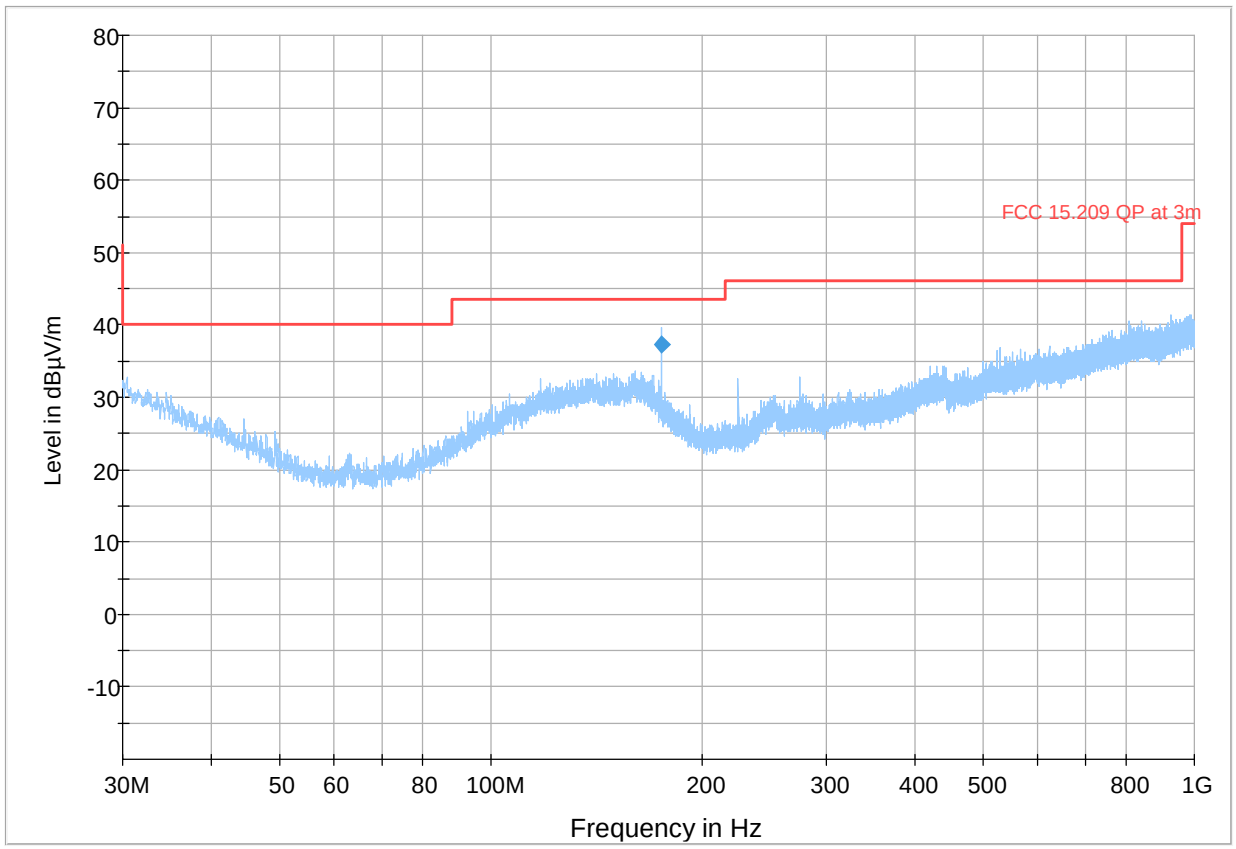


Plot # 7

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
174.98	37.37	43.50	6.13	500.0	120.0	100.0	V	-29.0	23.2



Plot # 8

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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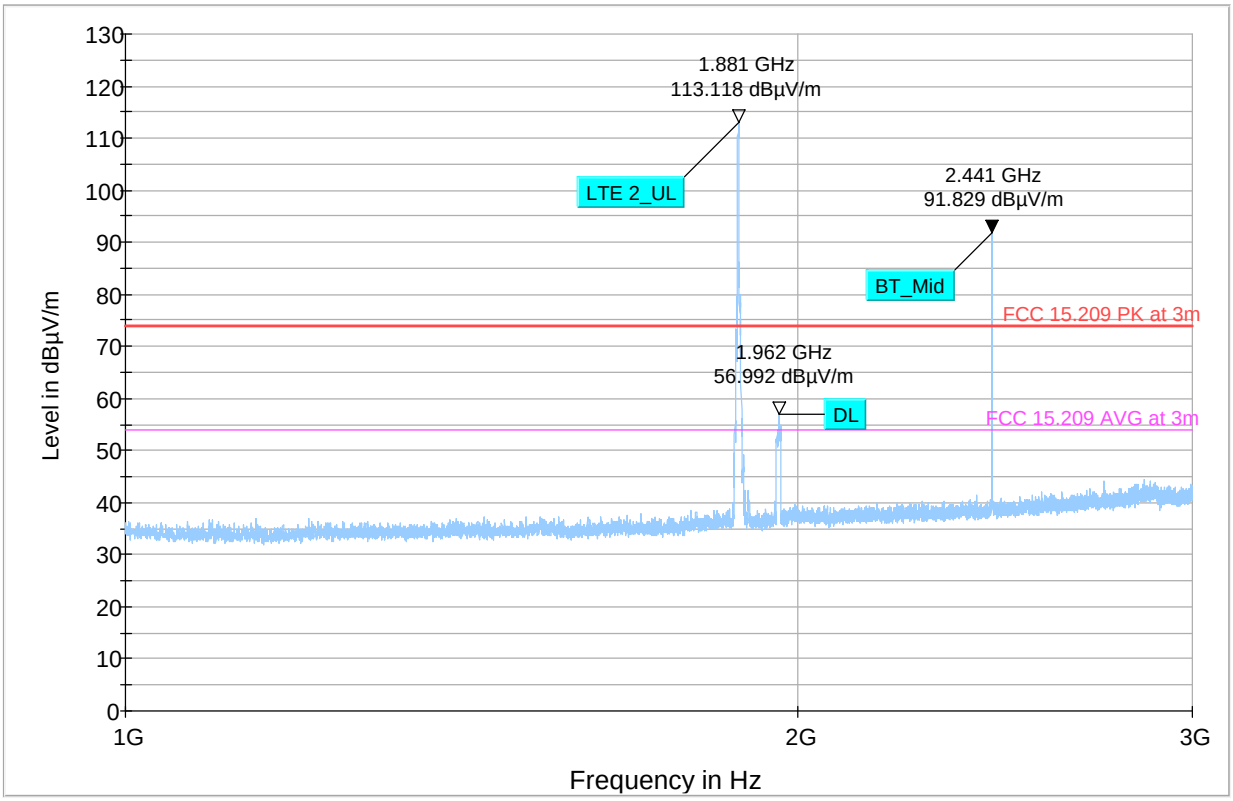

Plot # 9

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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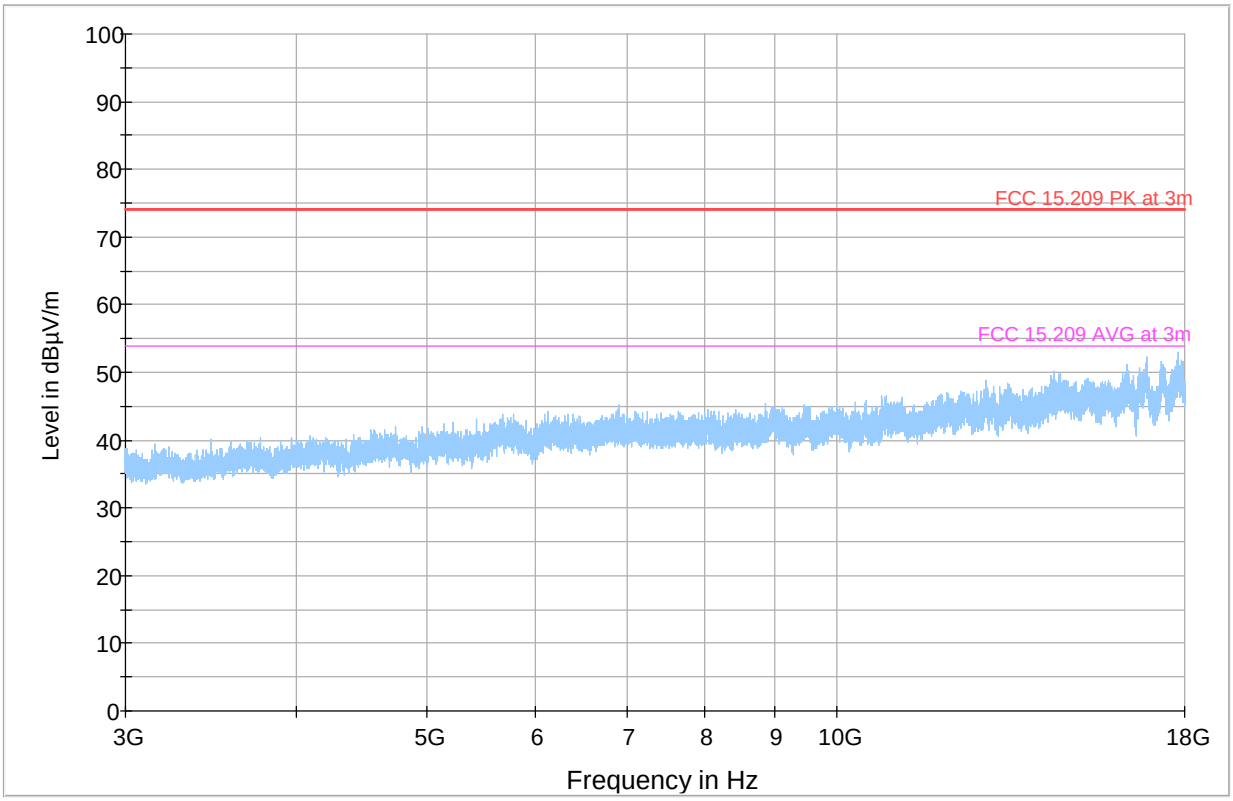
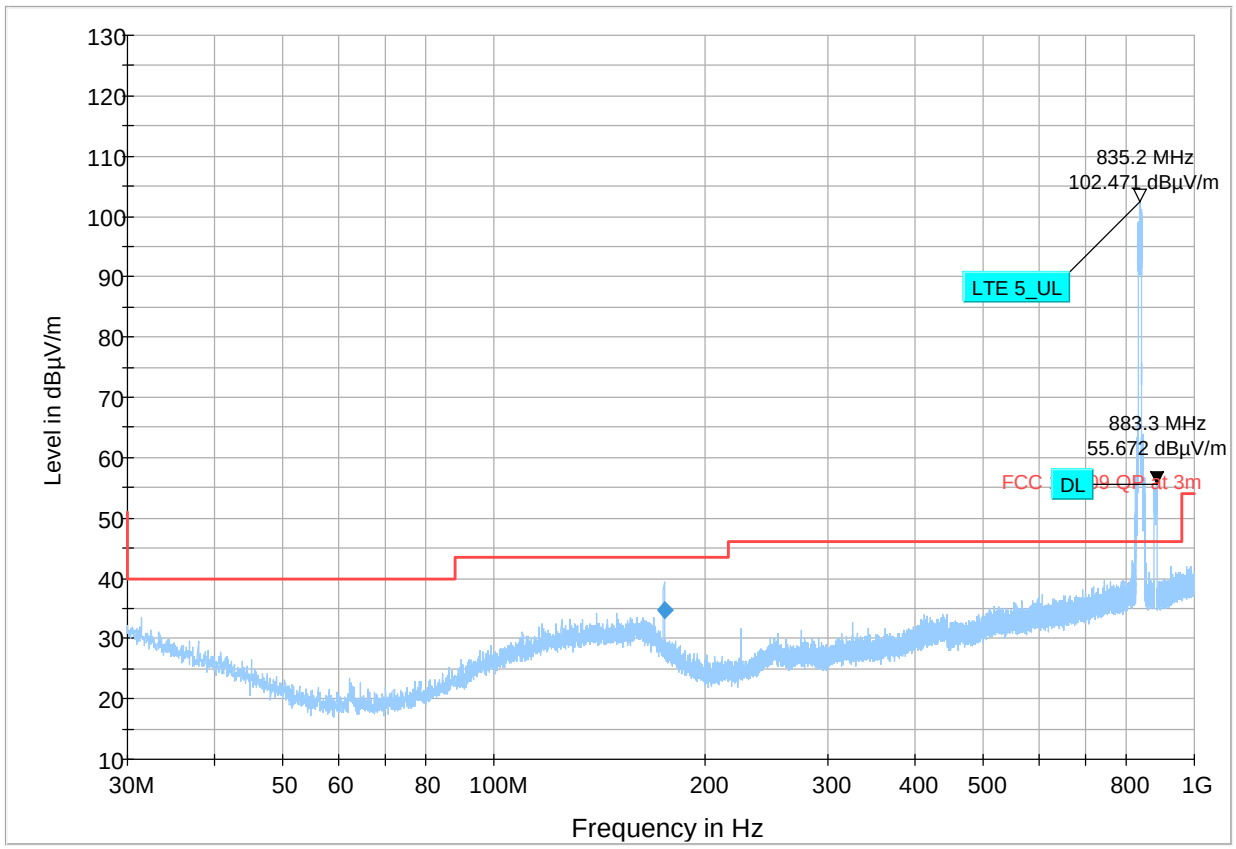


Plot # 10

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
174.98	34.75	43.50	8.75	500.0	120.0	100.0	V	314.0	23.2



Plot # 11

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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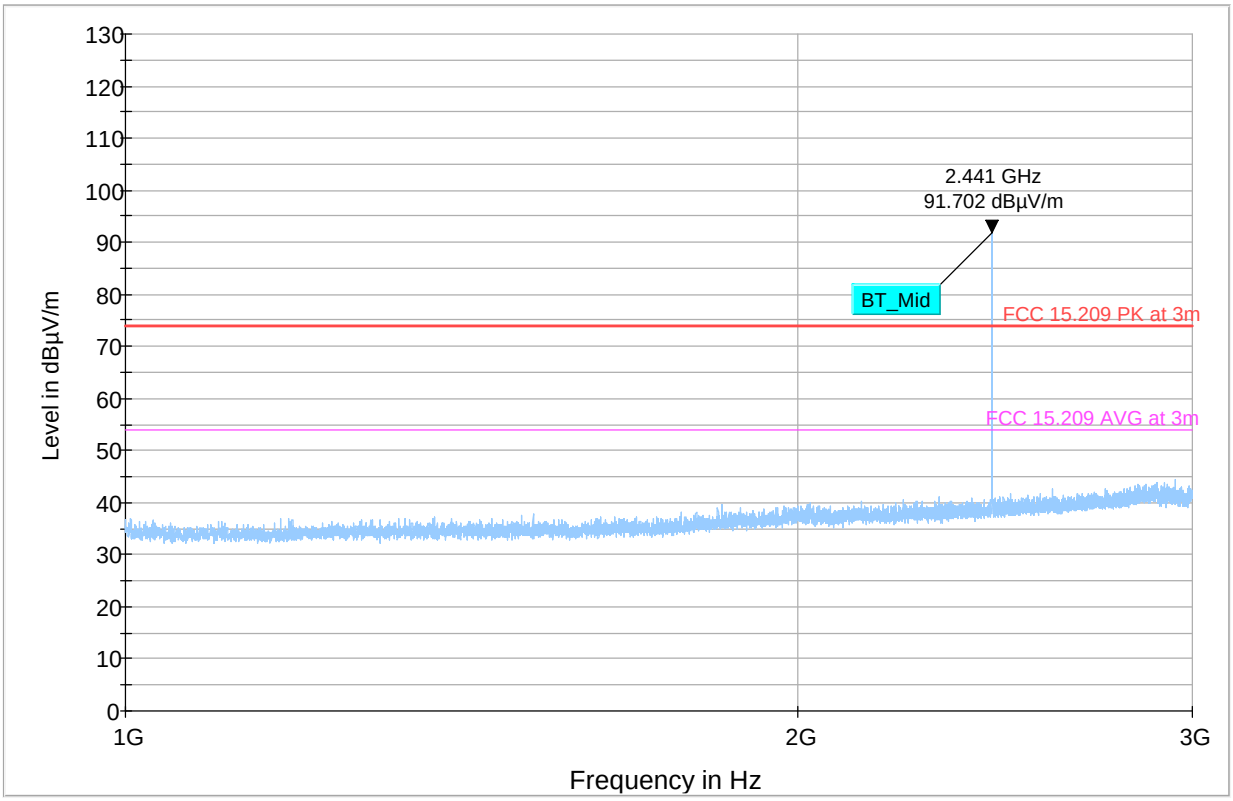

Plot # 12

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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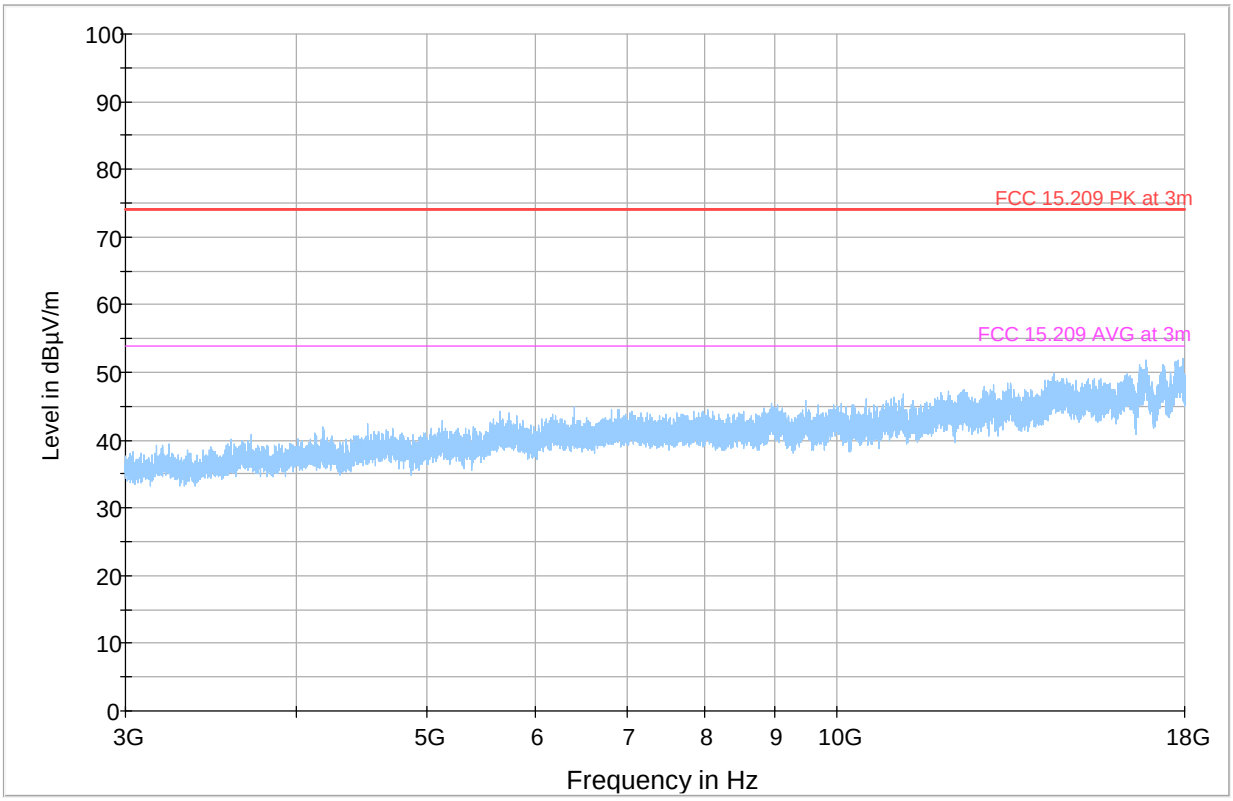
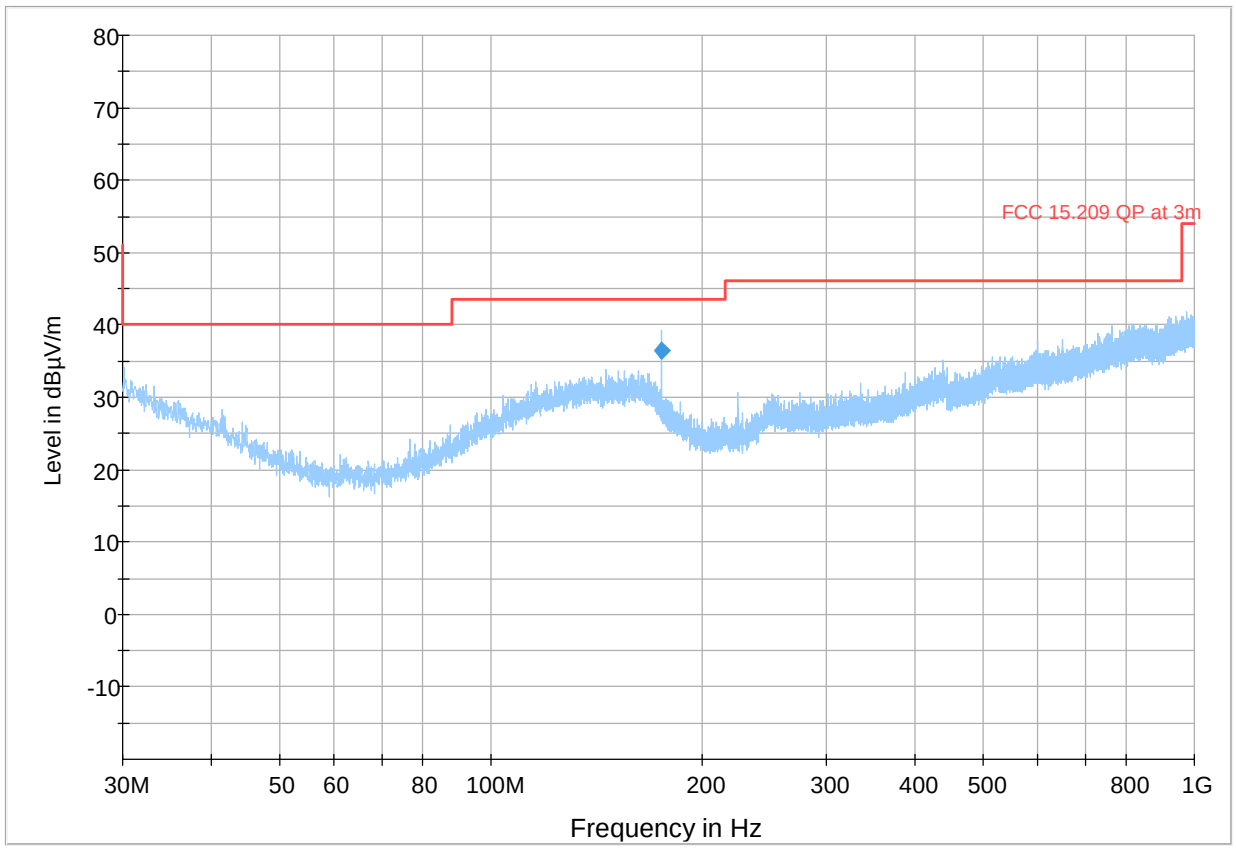


Plot # 13

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
174.98	36.43	43.50	7.07	500.0	120.0	100.0	V	-41.0	23.2



Plot # 14

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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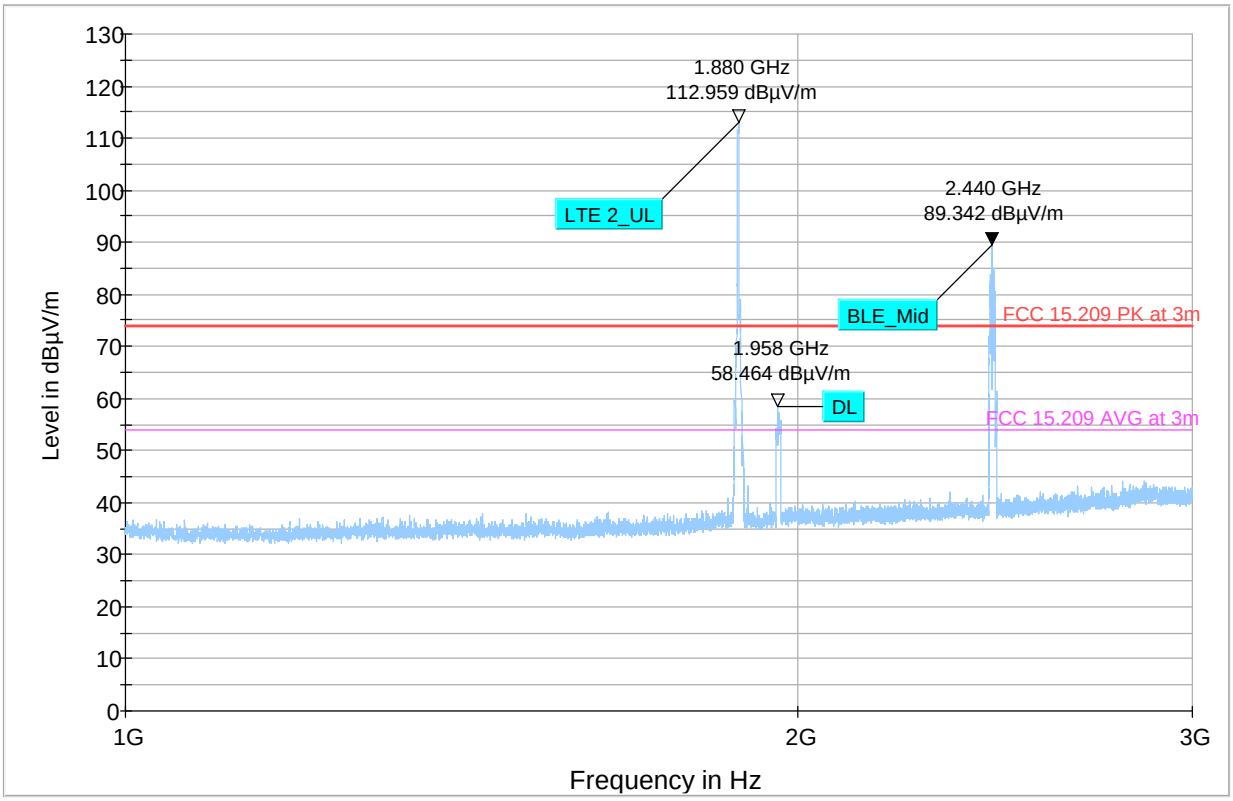

Plot # 15

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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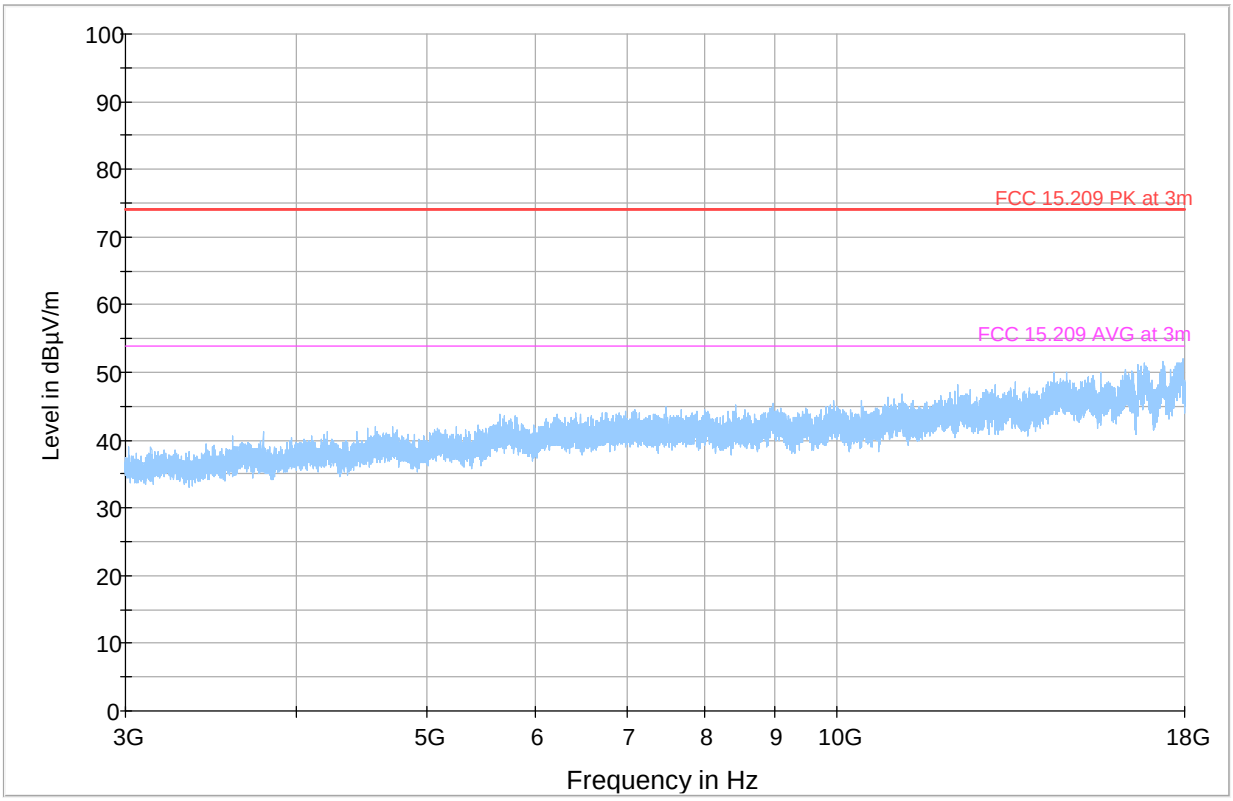
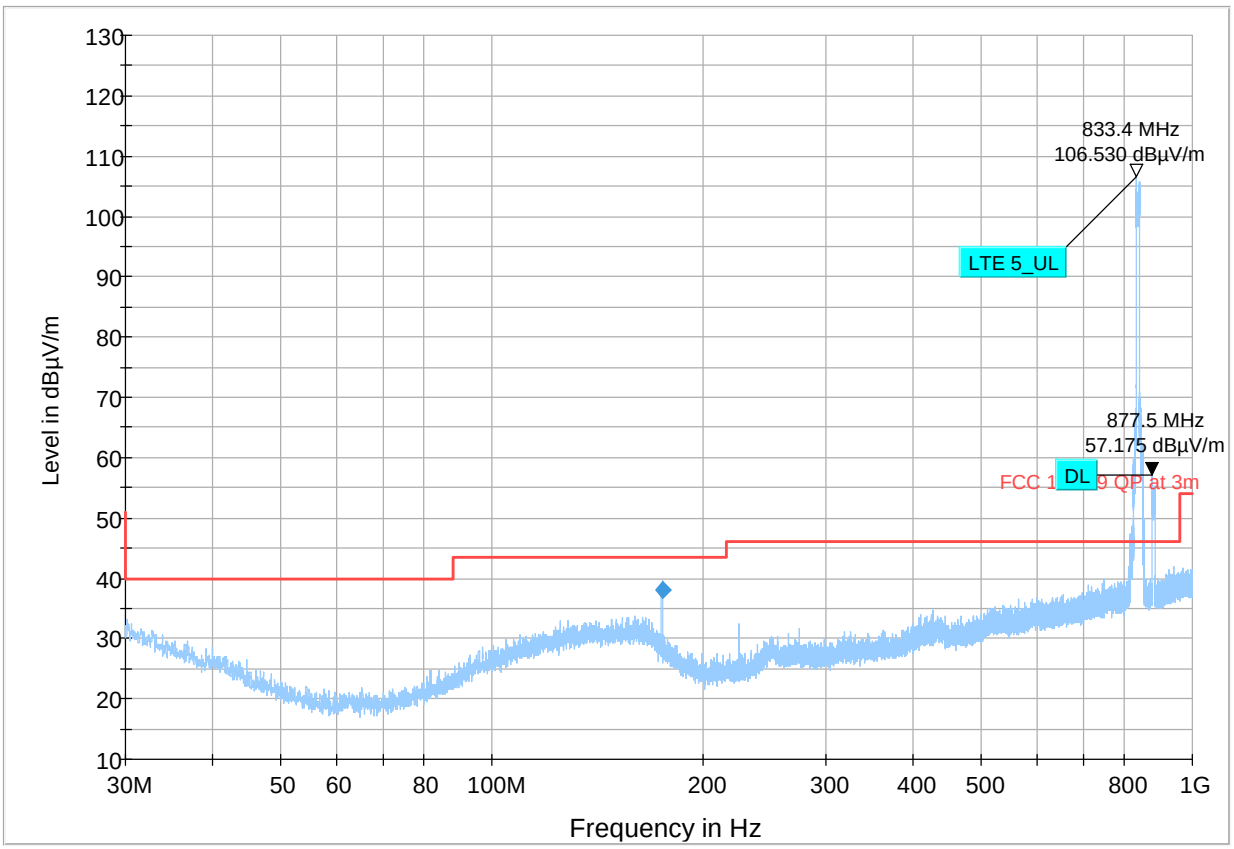


Plot # 16

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
174.98	38.02	43.50	5.48	500.0	120.0	100.0	V	-19.0	23.2



Plot # 17

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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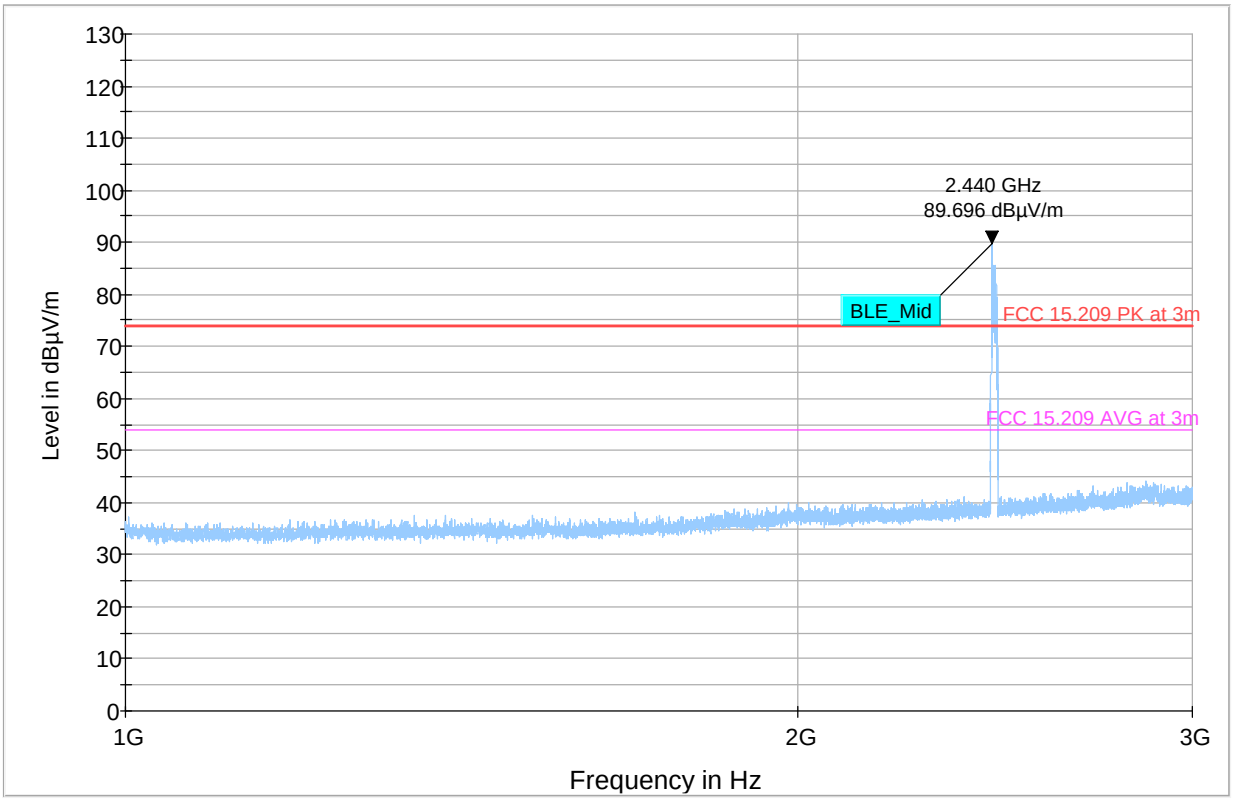

Plot # 18

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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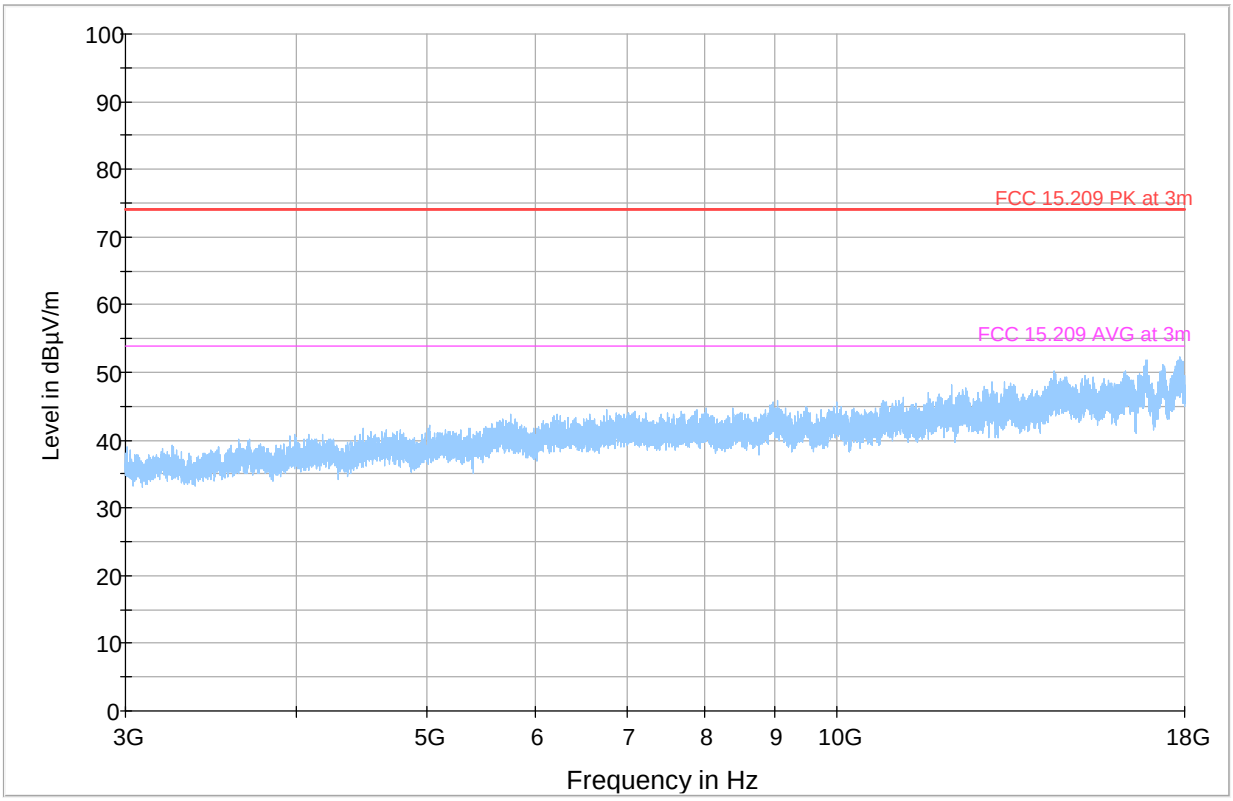

9 Test setup photos

Setup photos are included in supporting file name: “EMC_GARMI-103-22001_FCC_Setup_Photos.pdf”

10 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
ACTIVE LOOP ANTENNA	ETS LINDGREN	6507	00161344	2 YEARS	10/30/2020
BILOG ANTENNA	ETS.LINDGREN	3142E	00166067	2 YEARS	03/12/2020
HORN ANTENNA	EMCO	3115	00035114	2 YEARS	08/10/2020
HORN ANTENNA	ETS.LINDGREN	3117	00215984	2 YEARS	01/31/2021
HORN ANTENNA	ETS.LINDGREN	3116	00070497	2 YEARS	11/23/2020
TEST RECEIVER	R&S	ESU40	100251	2 YEARS	09/13/2021
WIDEBAND COMM. TESTER	R&S	CMW 500	109825	2 YEARS	09/23/2020
COMPACT DIGITAL BAROMETER	CONTROL COMPANY	10510-922	200236891	2 YEARS	04/13/2020
DIGITAL THRMOMETER	CONTROL COMPANY	36934-164	181230565	3 YEARS	01/10/2019

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	Report prepared by
2022-03-22	EMC_GARMI-103-22001_FCC_Spotcheck	Initial Version	Cheng Song

<<The End>>