FCC / ISED Test Report

For:
Elster Solutions, Inc.

Model:
NXCMR300

Marketing Name:
NXCMR300

Product Description:
900MHz ISM radio, LTE Cat-M1 MODEM, gas & water metering metrology

FCC ID: QZC-NXCMR300
IC: 4577A-NXCMR300

Applied Rules and Standards:
47 CFR Part 15.247 (DSS)
RSS-247 Issue 3 (FHSs) & RSS-Gen Issue 5

REPORT #: EMC_HONEY_235_24001_FCC_15_247

DATE: 2024-05-30

A2LA Accredited

IC recognized # 3462B

***CETECOM* Inc.**
411 Dixon Landing Road ◆ Milpitas, CA 95035 ◆ U.S.A.
Phone: + 1 (408) 586 6200 ◆ Fax: + 1 (408) 586 6299 ◆ E-mail: contact@cetecom.com ◆ http://www.cetecom.com
CETECOM Inc. is a Delaware Corporation with Corporation number: 2905571

TABLE OF CONTENTS

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 #
Elster Solutions, Inc.	900MHz ISM radio, LTE Cat-M1 MODEM, gas & water metering metrology	NXCMR300

Responsible for the Report:

Date	Section	Name	Signature
2024-05-30	Compliance	Cheng Song (EMC Engineer)	cheng.song@cetecom.com Digitally signed by: cheng.song@cetecom.com DN: CN = cheng.song@cetecom.com Date: 2024.05.30 17:26:22 -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 Engineer:	Cheng Song
Responsible Project Leader:	Akanksha Baskaran

2.2 Identification of the Client

Client's Name:	Elster Solutions, Inc.
Street Address:	208 South Rogers Lane
City/Zip Code	Raleigh, NC 27610
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 (1)

Model No:	NXCMR300
HW Version :	1.1
SW Version :	1.1
FCC-ID :	QZC-NXCMR300
IC:	4577A-NXCMR300
PMN:	NXCMR300
Product Description:	Provides metrology for gas and water meters, communicates metering data over LTE Cat-M1. 900MHz ISM radio used for initial setup/configuration, or walk-by metering in areas of poor cellular coverage.
Frequency Range / number of channels:	902 – 928 MHz, 25 channels frequency hopping Data rate: 35.5 kbps or 142.2 kbps
Radios included in device	**ISM:** • SiLabs EFR32FG28 SoC • FSK modulation • 25 channels frequency hopping
Other Radios included in the device:	Sequans GM02S
Antenna Information as declared:	Max Gain 1.5 dBi
Max. declared output Powers:	6.05 dBm
Power Supply/ Rated Operating Voltage Range:	3.2 VDC – 3.8 VDC
Operating Temperature Range	-40º to 85º C
Sample Revision	■Production Unit; ☐Pre-Production
EUT Dimensions	17.78 x 11.43 x 7.62 cm
Weight	544.31 grams
Note: Details about the Equipment Under Test (EUT) are provided by the client or applicant.	

3.2 EUT Sample details (1)

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	DUT # 043	1.1	1.1	-

3.3 Accessory Equipment (AE) details

AE #	Type	Model	Manufacturer	Serial Number
N/A	-	-	-	-

3.4 Test Sample Configuration

EUT Set-up #	Combination of AE used for test set up	Comments
1	EUT # 1	-

3.5 Mode of Operation details

Mode of Operation	Description of Operating modes	Additional Information
Op. 1	ISM	ISM testing was conducted on Low, Mid, and High Channels at maximum power using the EALAN1_PN9 data pattern. ❖ The client supplies a USB cable that enables communication with the device and the sending of commands to configure the ISM radio into a specific test mode. This configuration, designed to simulate worst-case scenarios, should not be used in end-user applications. ❖ Operation: continuous modulated transmission at the maximum output power settings, highest duty cycle, and Low, Mid and High Channels.

3.6 Justification for Worst Case Mode of Operation

During the testing process the ISM radio was tested with transmitter sets to low, mid and high channels at the maximum power, as it is described in section 3.5 of this document; representing the worst case mode of operation.

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 Results Summary

Test Specification	Test Case	Temperature and Voltage Conditions	Mode	Pass	NA	NP	Result
§15.247(b)(2) RSS-247 5.4(a)	Maximum Peak Conducted Output Power	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(d) RSS-247 5.5 RSS-Gen 8.10	Band Edge Compliance	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(a)(1) RSS-247 5.1(c)	Spectrum Bandwidth	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(a)(1) RSS-247 5.1(c)	Carrier Frequency Separation	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(a)(1) RSS-247 5.1(c)	Number of Hopping Channels	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(a)(1) RSS-247 5.1(c)	Time of occupancy	Nominal	-	☐	☐	■	Note 1 Note 2
§15.247(d) §15.209 (a) RSS-Gen 6.13	TX Spurious emissions-Radiated	Nominal	Op. 1	■	☐	☐	Complies
§15.207(a) RSS-Gen 8.8	AC Conducted Emissions	Nominal	-	☐	■	☐	Note 1 Note 3

Note 1: NA= Not Applicable; NP= Not Performed.
Note 2: The test results are leveraged from Report # EMC_HONEY_229_23001_FCC_15_247_Rev2, corresponding to FCC ID: QZC-NXCMR300; IC: 4577A-NXCMR300.
Note 3 The EUT does not draw power from AC public mains, therefore, the testing is not applicable.

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=2.

Radiated measurement

Measurement System		EMC 1	EMC 2
Conducted emissions (mains port)	150 kHz – 30 MHz	1.12 dB	N/A
Radiated emissions	(< 30 MHz)	3.28 dB	2.98 dB
	(30 MHz – 1 GHz)	3.16 dB	2.81 dB
	(1 – 3 GHz)	4.71 dB	4.51 dB
	(3 – 18 GHz)	4.23 dB	4.16 dB
	(18 – 40 GHz)	2.42 dB	2.42 dB

RF conducted measurement ±0.5 dB

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

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:

2024-04-02 – 2024-04-10

6.4 Decision Rule:

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

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

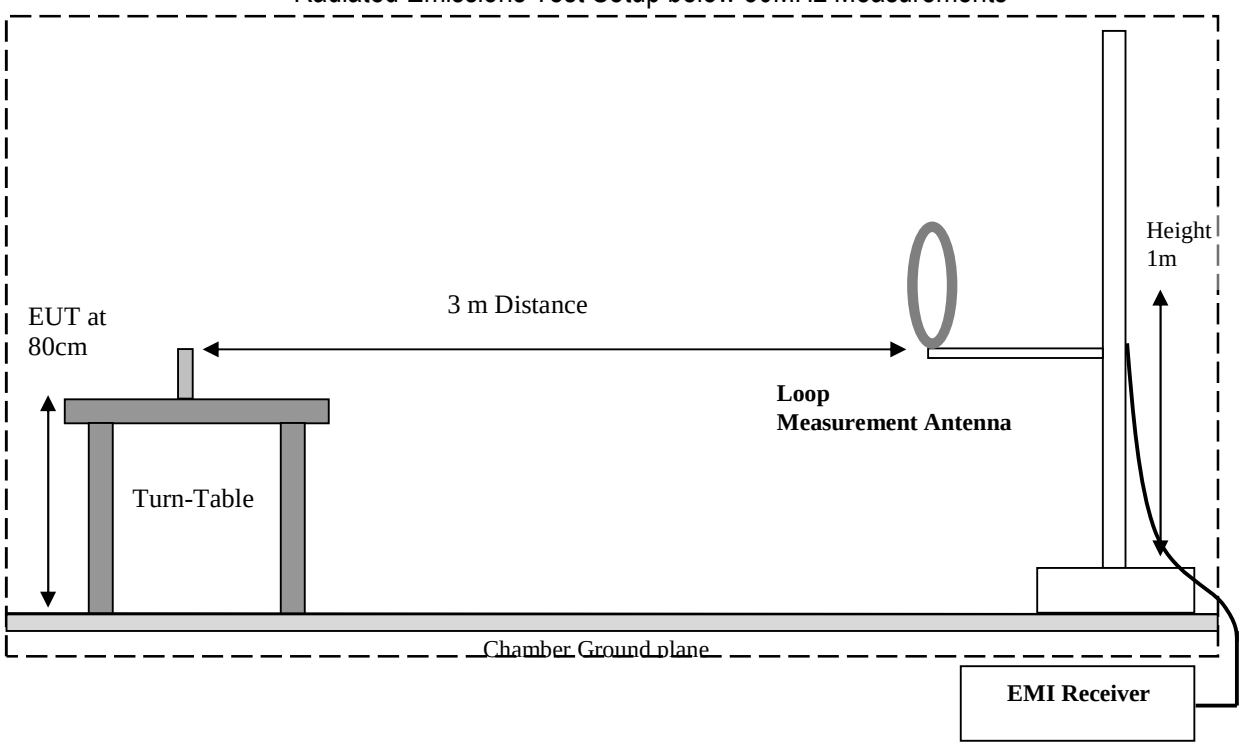
7 Measurement Procedures

7.1 Radiated Measurement

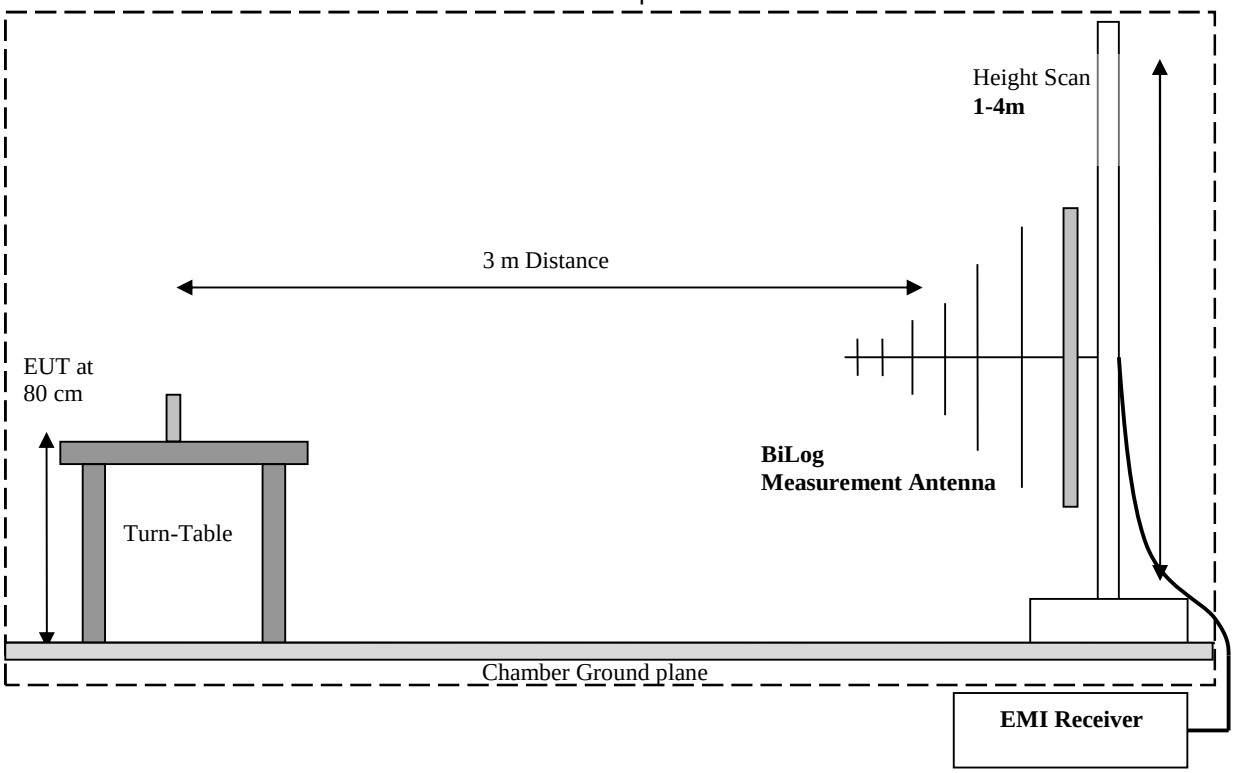
The radiated measurement is performed according to ANSI C63.10 (2013)

- 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.

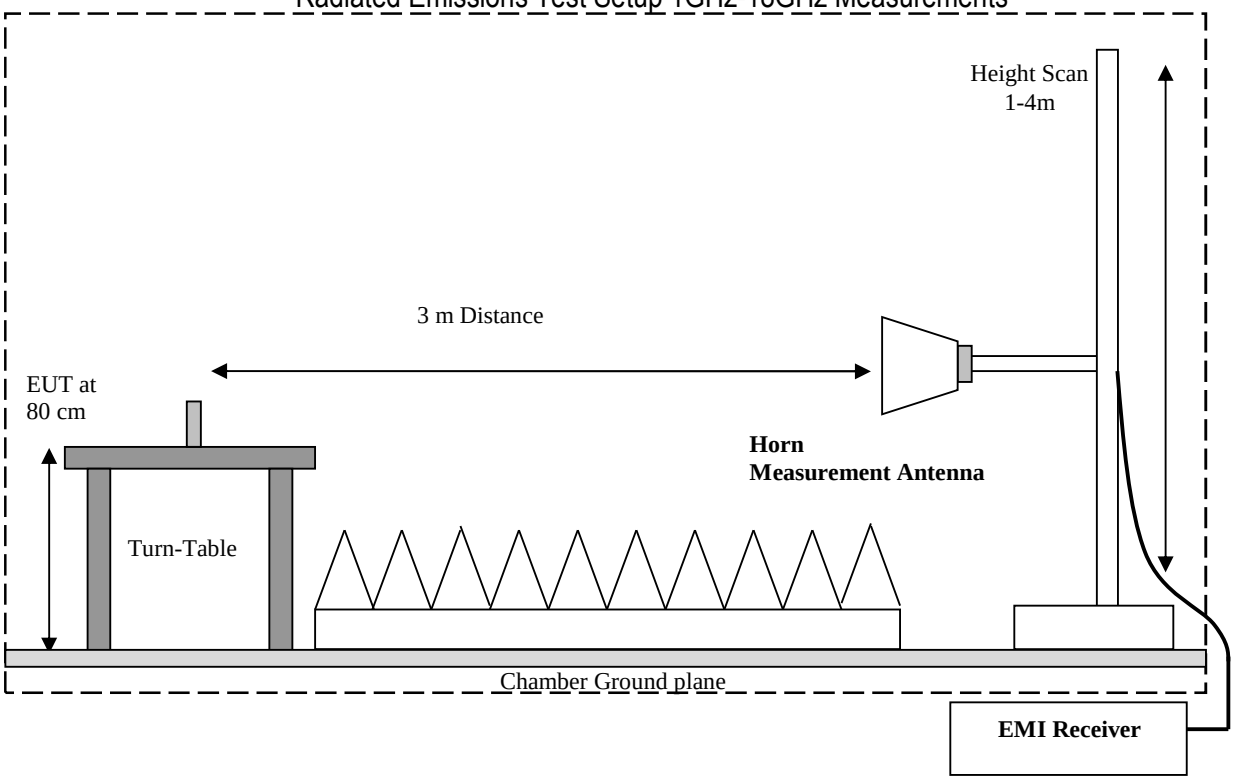
Radiated Emissions Test Setup below 30MHz Measurements



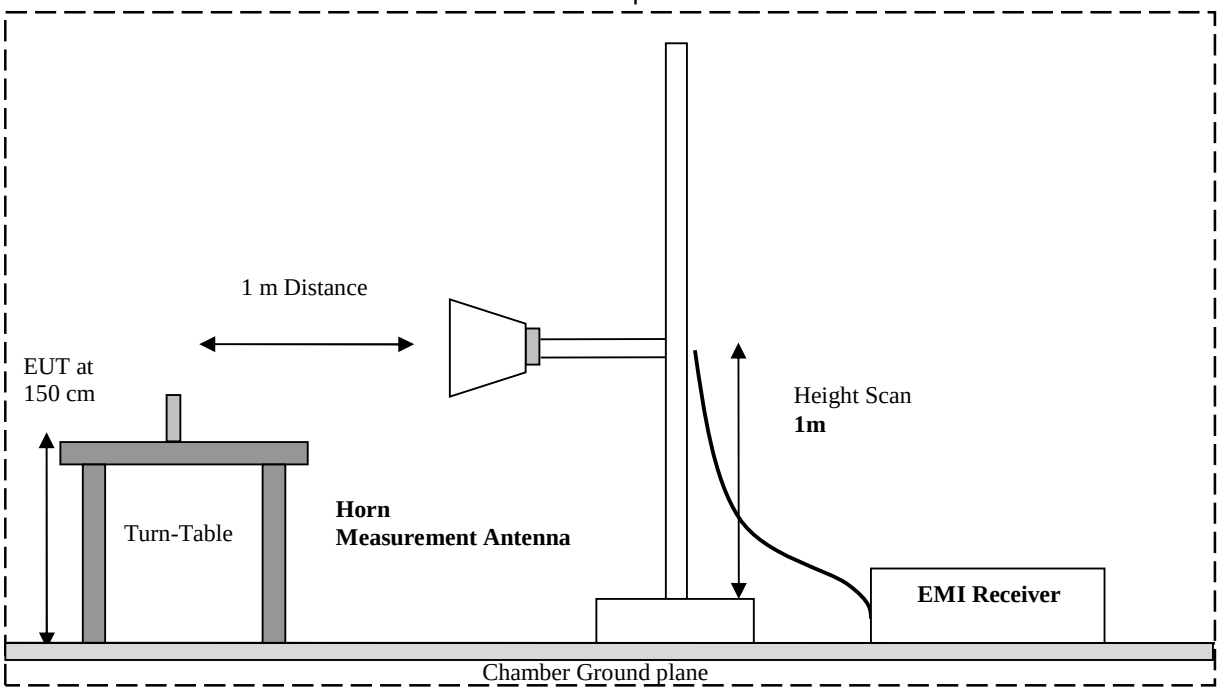
Radiated Emissions Test Setup 30MHz-1GHz Measurements



Radiated Emissions Test Setup 1GHz-18GHz Measurements



Radiated Emissions Test Setup 18GHz-40GHz 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:

- Measured reading in dBµV
- 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 (dBµV/m) = Measured Value on SA (dBµV) + Cable Loss (dB) + Antenna Factor (dB/m)

Example:

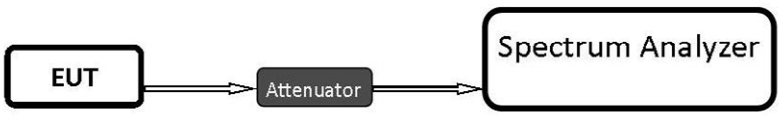
Frequency (MHz)	Measured SA (dBµV)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dBµV/m)
1000	80.5	3.5	14	98.0

7.2 Power Line Conducted Measurement Procedure

AC Power Line conducted emissions measurements performed according to: ANSI C63.4 (2014)

7.3 RF Conducted Measurement Procedure

Testing procedures are based on 558074 D01 15.247 Meas Guidance v05r02 – "GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES" - April 2, 2019, by the Federal Communications Commission, Office of Engineering and Technology, Laboratory Division.



- Connect the equipment as shown in the above diagram.
- Adjust the settings of the SA (Rohde-Schwarz Spectrum Analyzer) to connect the EUT at the required mode of test.
- Measurements are to be performed with the EUT set to the low, middle and high channels and for worst case modulation schemes.

8 Test Result Data

8.1 Transmitter Spurious Emissions and Restricted Bands

8.1.1 Measurement according to ANSI C63.10

Analyzer Settings:

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

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

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

- 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 frequencies below 30 MHz at distance other than the specified in the standard, the limit conversion is calculated by using the FCC materials for the ANSI 63 committee issued on January, 27 1991.

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= 74dB µV/m
- AVG. LIMIT= 54dB µV/m

8.1.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23.8° C	1	Op. 1	3.7 VDC

8.1.4 Measurement result:

Plot #	Channel #	Scan Frequency	Limit	Result
1-3	Low	30 MHz – 18 GHz	See section 8.1.2	Pass
4-8	Mid	9 kHz – 26 GHz	See section 8.1.2	Pass
9-11	High	30 MHz – 18 GHz	See section 8.1.2	Pass

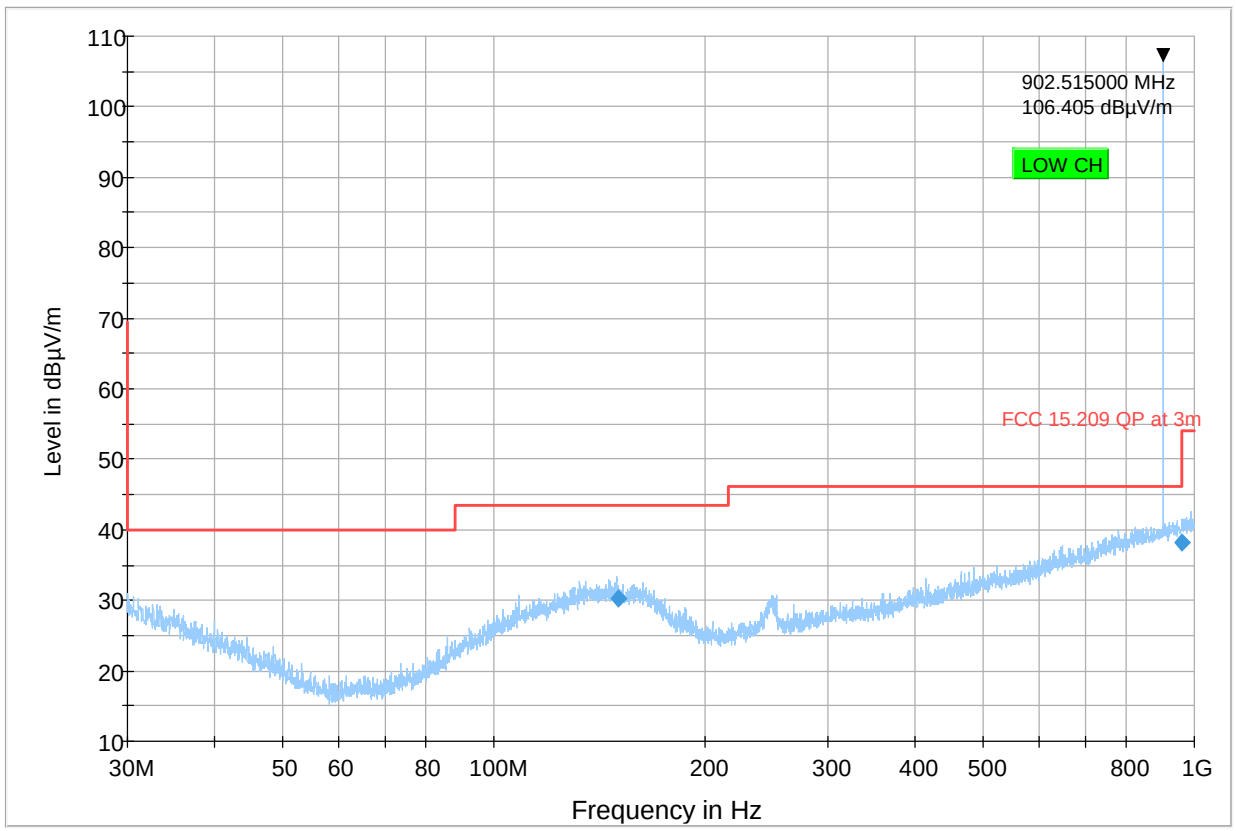
8.1.5 Measurement Plots:

Plot # 1

Channel: Low | 30 – 1000MHz

Final_Result

Frequency	QuasiPeak	MaxPeak	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
150.683	30.160	---	43.50	13.34	500.0	120.000	199.0	H	6.0	-9.7	-	0.0	25.0	39.9
957.700	38.272	---	46.02	7.75	500.0	120.000	191.0	V	-32.0	-2.7	-	0.0	29.4	40.9

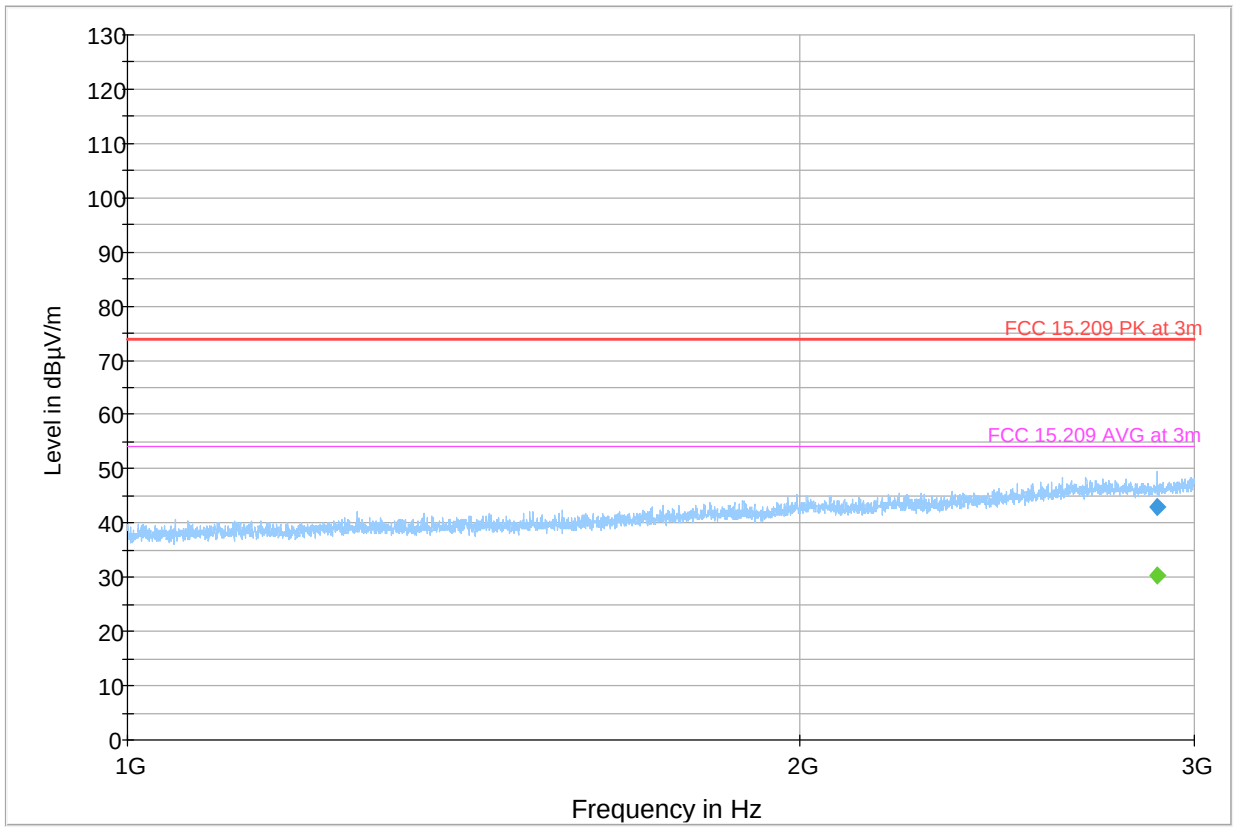


Plot # 2

Channel: Low | 1 – 3GHz

Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
2885.026	---	30.312	53.98	23.67	500.0	1000.000	254.0	H	20.0	7.1	-	0.0	29.3	23.2
2885.026	43.005	---	73.98	30.97	500.0	1000.000	254.0	H	20.0	7.1	-	0.0	29.3	35.9

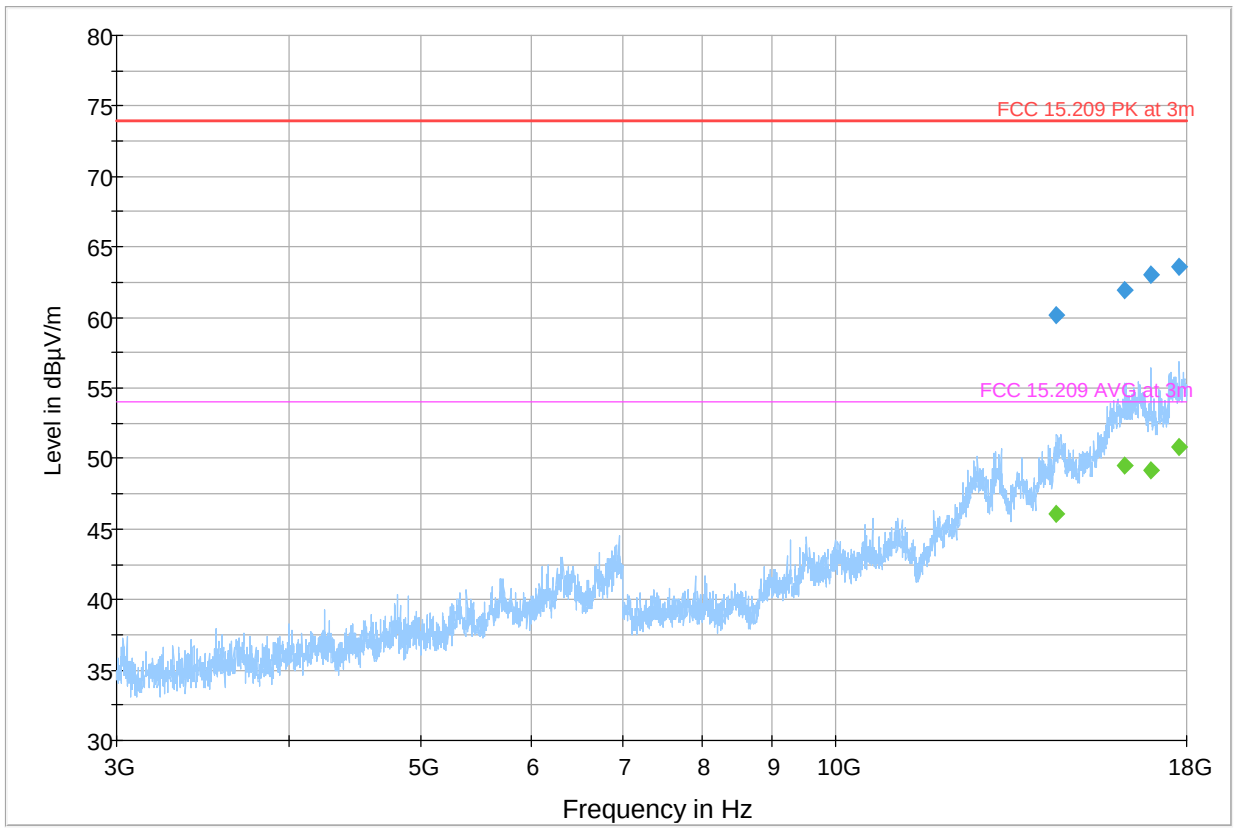


Plot # 3

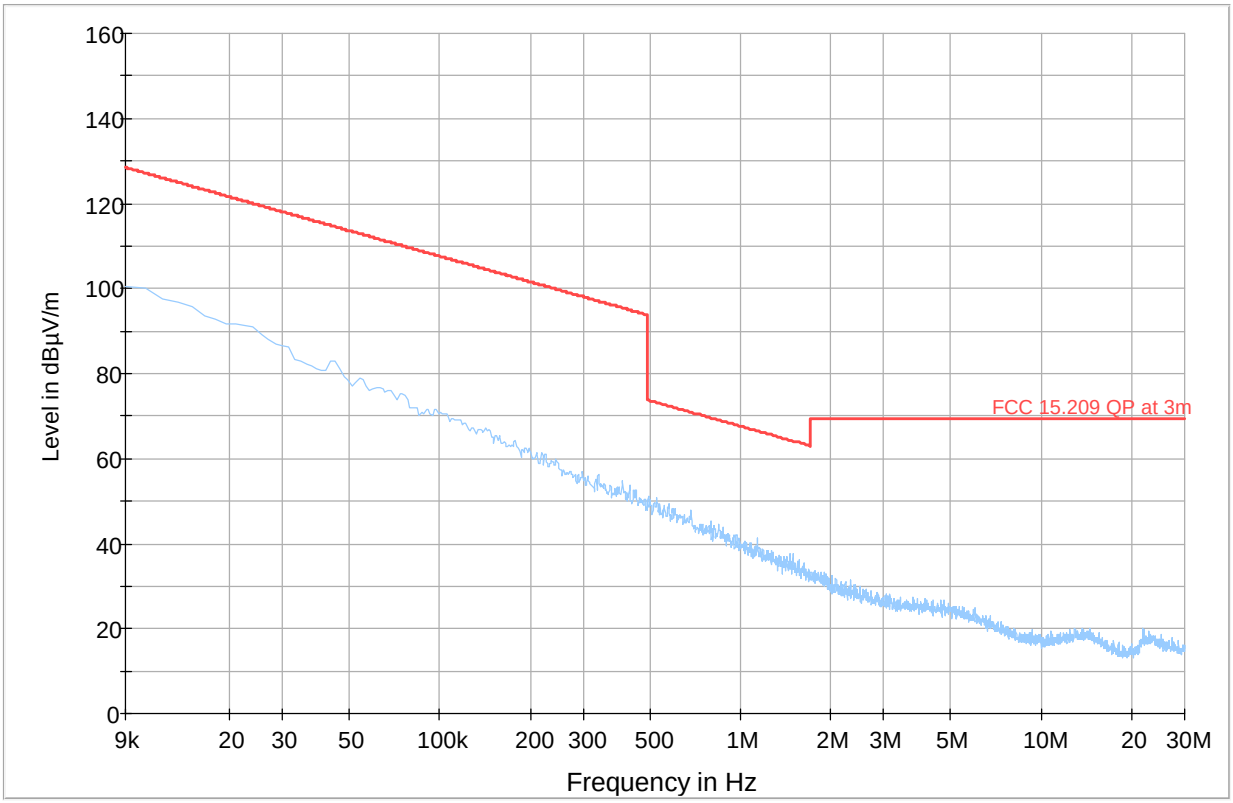
Channel: Low | 3 – 18GHz

Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
14486.646	60.231	---	73.98	13.75	500.0	1000.000	320.0	V	0.0	10.3	14.6	-44.9	40.6	49.9
14486.646	---	46.097	53.98	7.88	500.0	1000.000	320.0	V	0.0	10.3	14.6	-44.9	40.6	35.8
16206.317	61.967	---	73.98	12.01	500.0	1000.000	320.0	V	246.0	13.1	15.9	-43.6	40.8	48.8
16206.317	---	49.490	53.98	4.49	500.0	1000.000	320.0	V	246.0	13.1	15.9	-43.6	40.8	36.3
16942.722	63.030	---	73.98	10.95	500.0	1000.000	217.0	H	162.0	13.2	16.5	-44.5	41.2	49.9
16942.722	---	49.165	53.98	4.81	500.0	1000.000	217.0	H	162.0	13.2	16.5	-44.5	41.2	36.0
17785.188	63.584	---	73.98	10.40	500.0	1000.000	400.0	H	173.0	15.0	16.1	-42.6	41.5	48.5
17785.188	---	50.856	53.98	3.12	500.0	1000.000	400.0	H	173.0	15.0	16.1	-42.6	41.5	35.8



Plot # 4	
Channel: Mid	9kHz – 30MHz

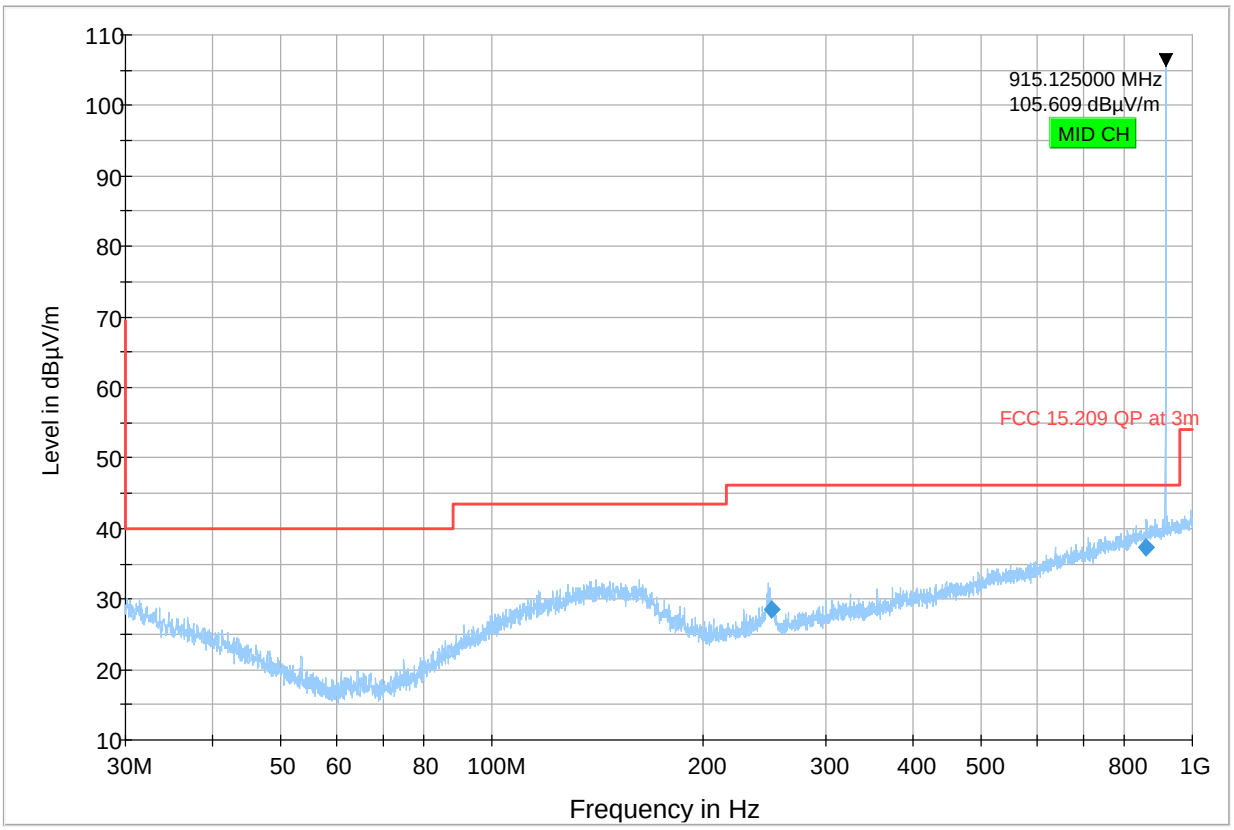


Plot # 5

Channel: Mid | 30 – 1000MHz

Final_Result

Frequency	QuasiPeak	MaxPeak	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
250.370	28.526	---	46.02	17.49	500.0	120.000	342.0	H	89.0	-11.7	-	0.0	22.7	40.2
857.050	37.225	---	46.02	8.80	500.0	120.000	294.0	H	48.0	-3.7	-	0.0	28.6	40.9

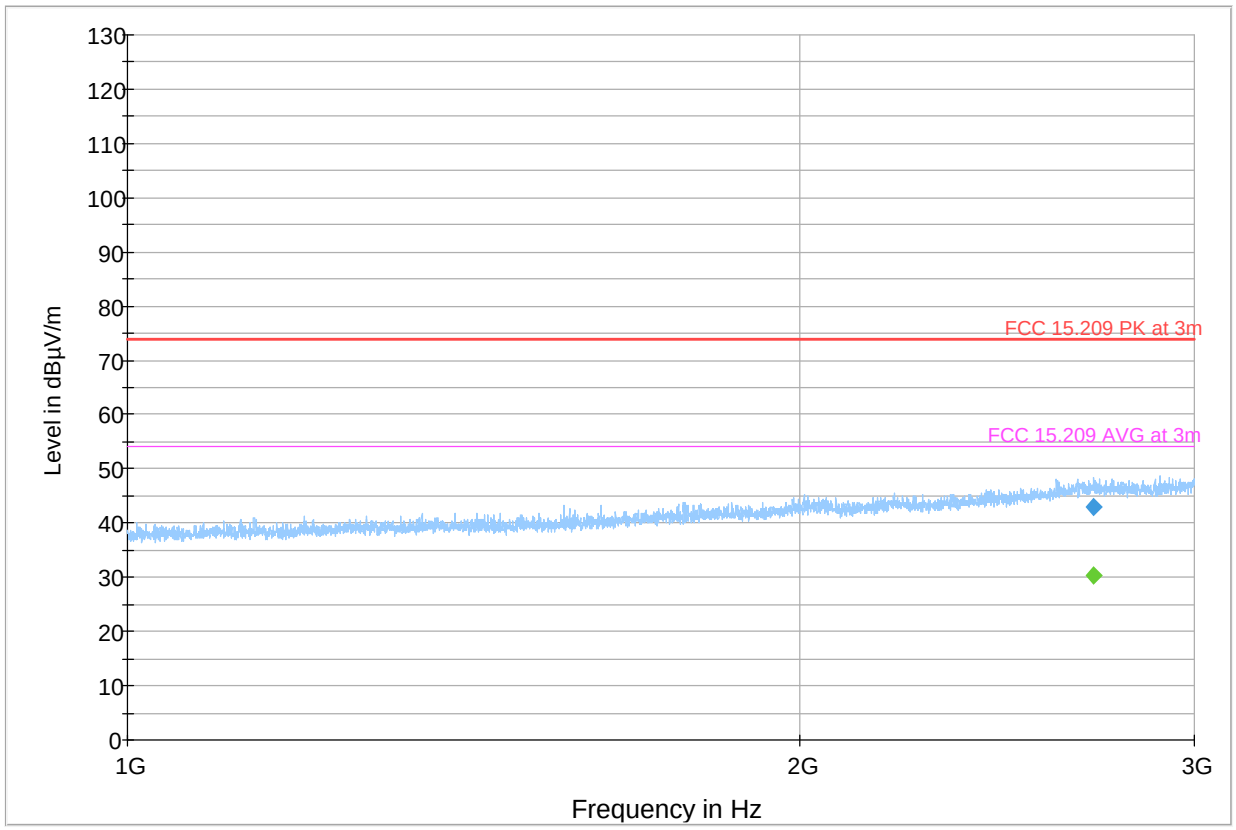


Plot # 6

Channel: Mid | 1 – 3GHz

Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
2705.776	---	30.326	53.98	23.65	500.0	1000.000	338.0	H	-21.0	6.5	-	0.0	28.7	23.8
2705.776	43.053	---	73.98	30.93	500.0	1000.000	338.0	H	-21.0	6.5	-	0.0	28.7	36.5

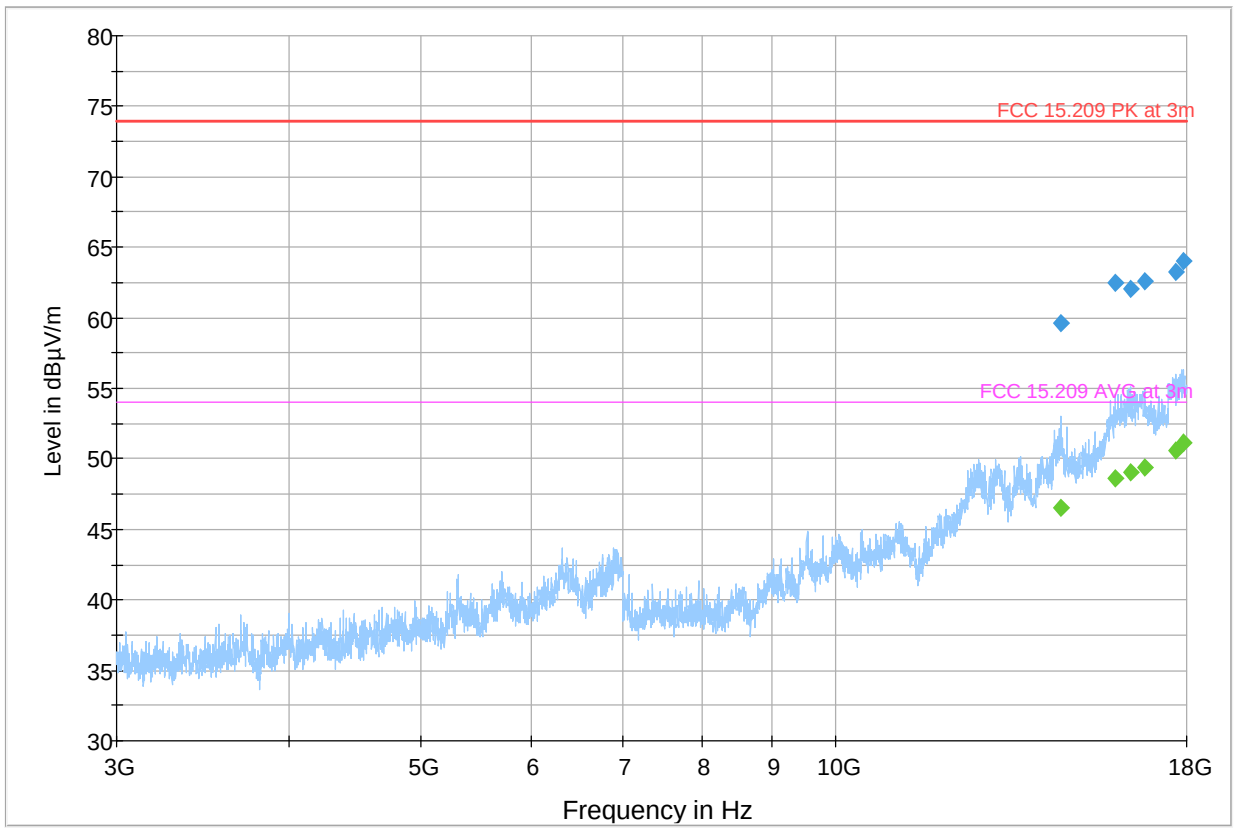


Plot # 7

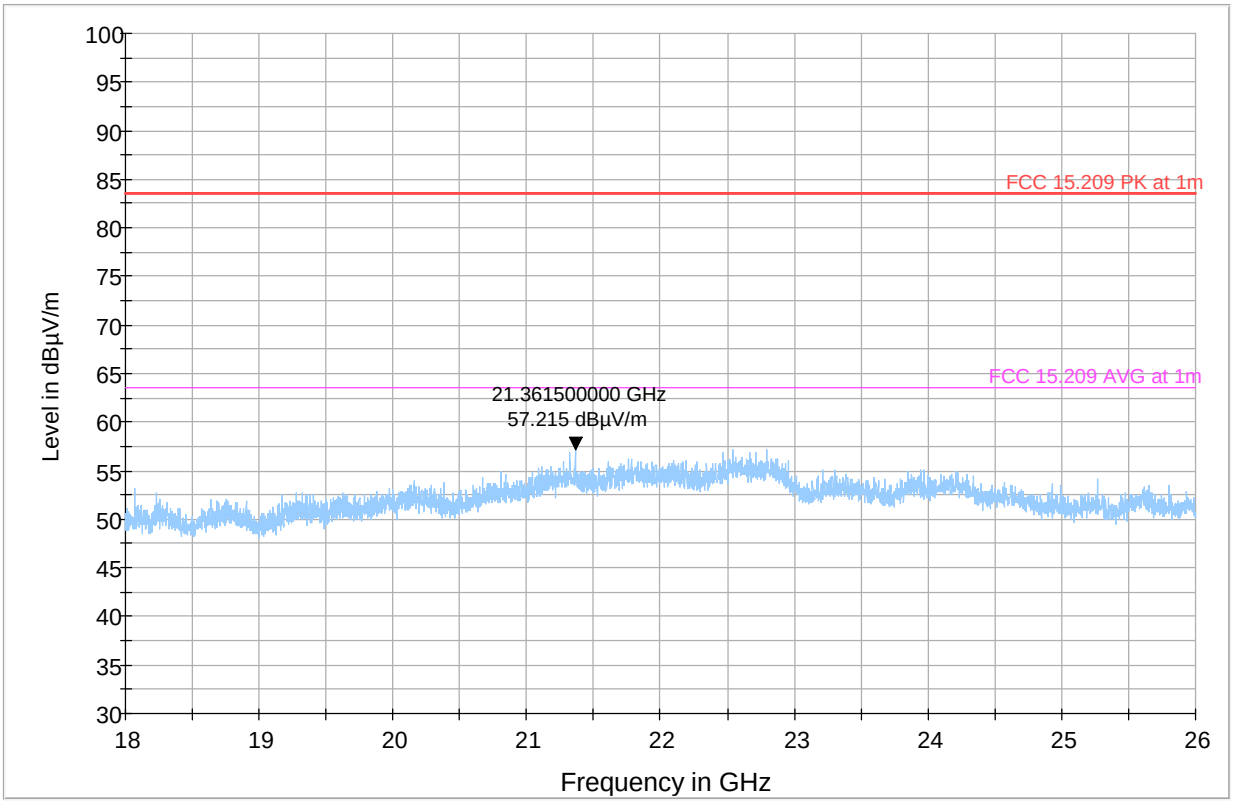
Channel: Mid | 3 – 18GHz

Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
14587.805	---	46.470	53.98	7.51	500.0	1000.000	107.0	H	77.0	10.7	14.6	-44.9	41.0	35.7
14587.805	59.663	---	73.98	14.32	500.0	1000.000	107.0	H	77.0	10.7	14.6	-44.9	41.0	48.9
15973.765	62.480	---	73.98	11.50	500.0	1000.000	350.0	V	224.0	13.2	15.4	-43.1	40.9	49.3
15973.765	---	48.663	53.98	5.32	500.0	1000.000	350.0	V	224.0	13.2	15.4	-43.1	40.9	35.5
16370.591	62.038	---	73.98	11.94	500.0	1000.000	366.0	V	153.0	13.1	16.3	-44.1	40.9	48.9
16370.591	---	49.061	53.98	4.92	500.0	1000.000	366.0	V	153.0	13.1	16.3	-44.1	40.9	35.9
16790.724	---	49.422	53.98	4.56	500.0	1000.000	201.0	H	343.0	13.4	15.6	-43.5	41.3	36.1
16790.724	62.610	---	73.98	11.37	500.0	1000.000	201.0	H	343.0	13.4	15.6	-43.5	41.3	49.3
17678.880	---	50.606	53.98	3.37	500.0	1000.000	292.0	H	122.0	15.1	16.4	-42.8	41.4	35.5
17678.880	63.306	---	73.98	10.67	500.0	1000.000	292.0	H	122.0	15.1	16.4	-42.8	41.4	48.2
17914.245	---	51.184	53.98	2.80	500.0	1000.000	278.0	H	146.0	15.6	16.2	-42.3	41.6	35.6
17914.245	63.993	---	73.98	9.99	500.0	1000.000	278.0	H	146.0	15.6	16.2	-42.3	41.6	48.4



Plot # 8	
Channel: Mid	18 – 26GHz

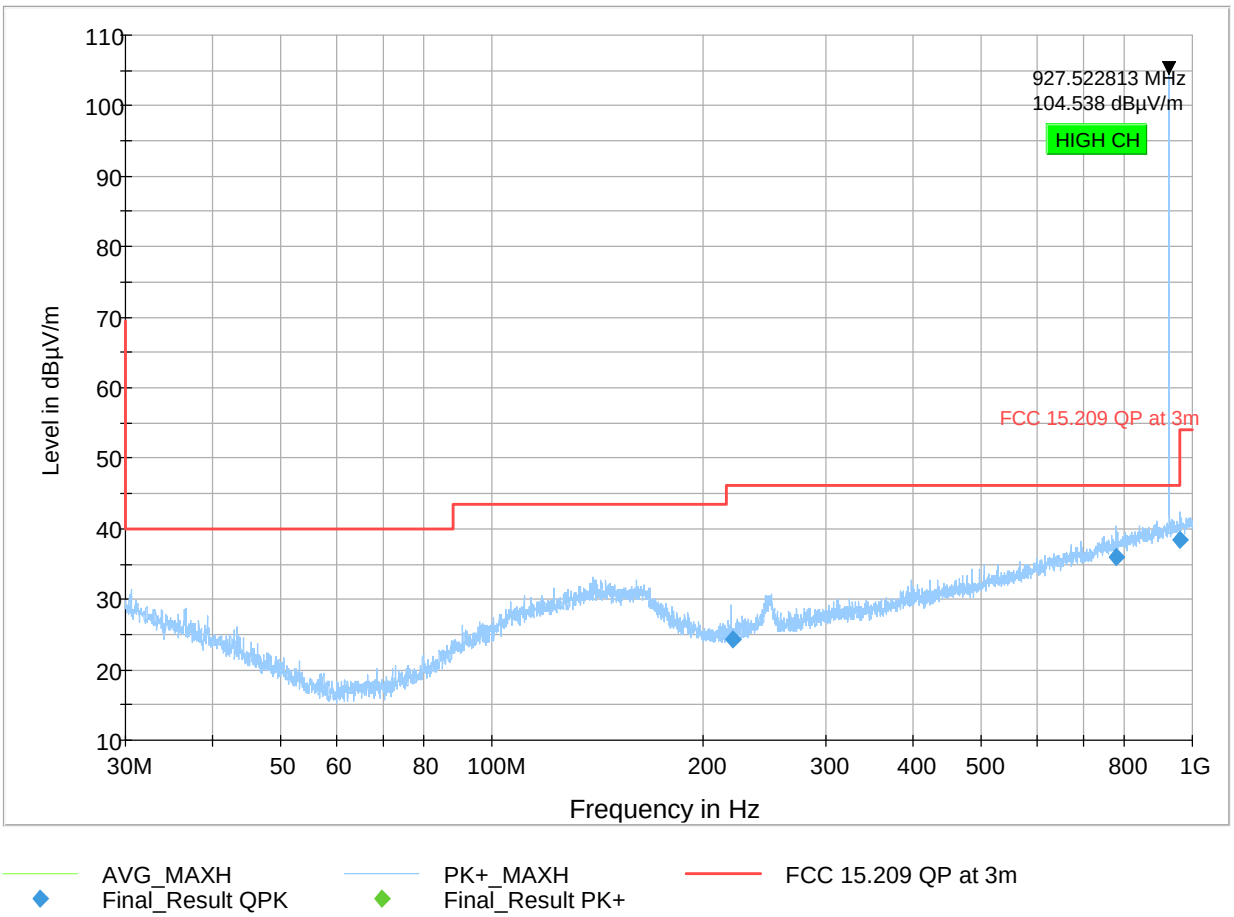


Plot # 9

Channel: High | 30 – 1000MHz

Final_Result

Frequency	QuasiPeak	MaxPeak	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
220.800	24.299	---	46.02	21.72	500.0	120.000	182.0	V	15.0	-16.0	-	0.0	18.4	40.3
778.783	35.903	---	46.02	10.12	500.0	120.000	242.0	V	-1.0	-4.9	-	0.0	27.6	40.8
959.553	38.368	---	46.02	7.65	500.0	120.000	317.0	V	62.0	-2.7	-	0.0	29.5	41.0

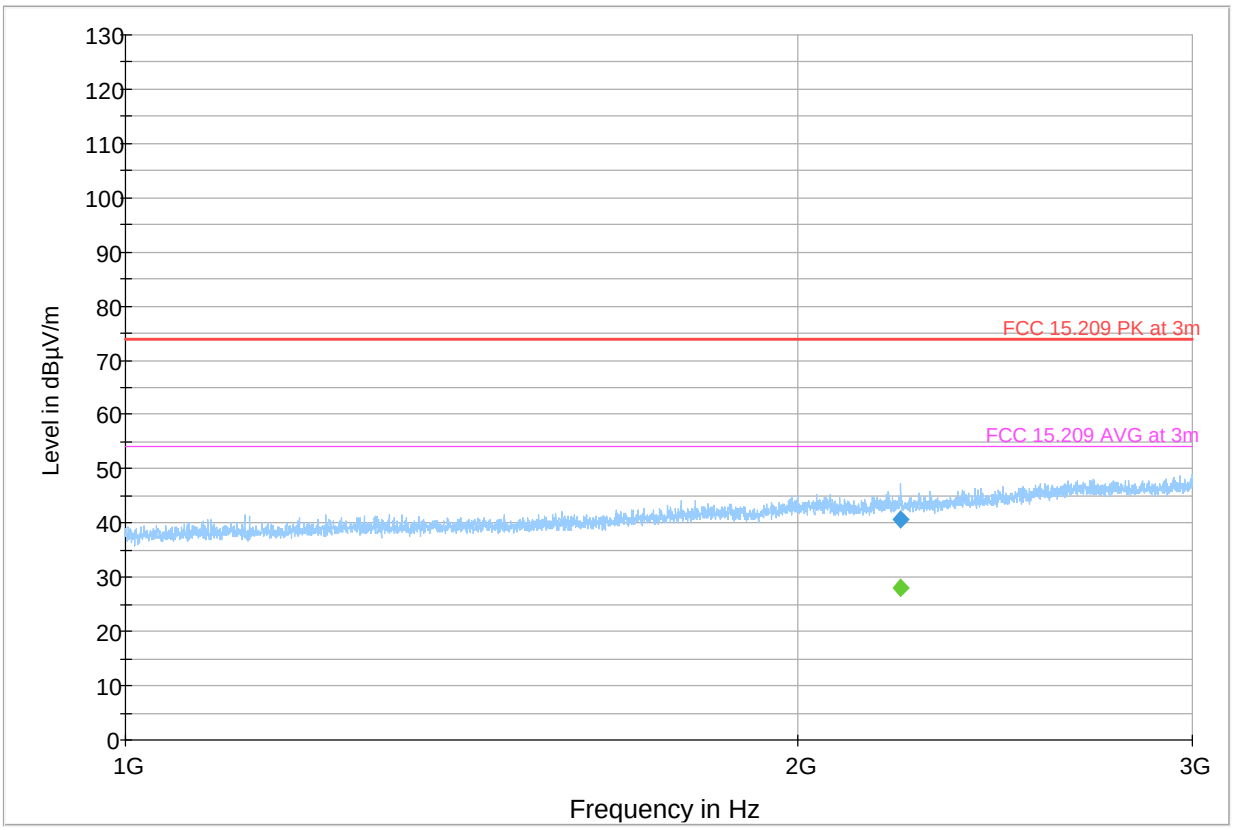


Plot # 10

Channel: High | 1 – 3GHz

Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
2221.976	---	27.944	53.98	26.04	500.0	1000.000	283.0	V	203.0	5.0	-	0.0	27.6	23.0
2221.976	40.530	---	73.98	33.45	500.0	1000.000	283.0	V	203.0	5.0	-	0.0	27.6	35.6

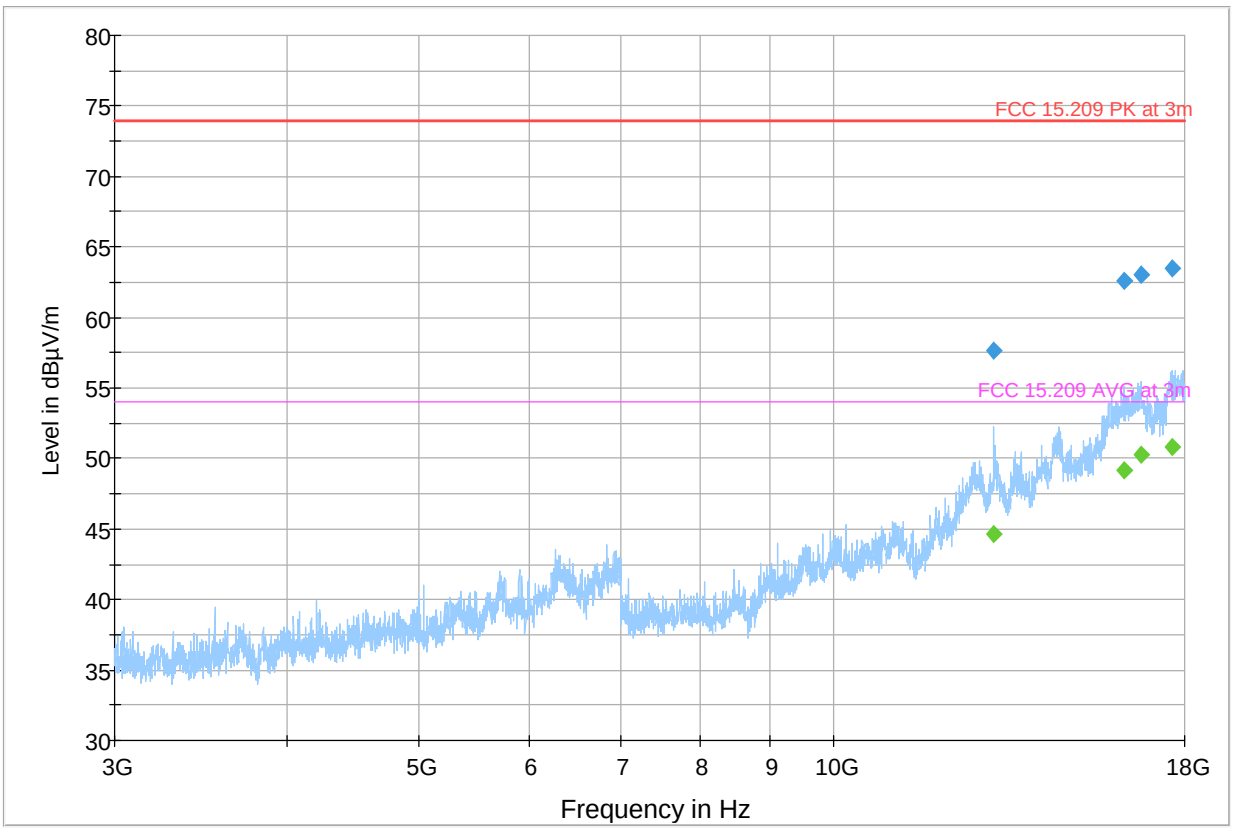


Plot # 11

Channel: High | 3 – 18GHz

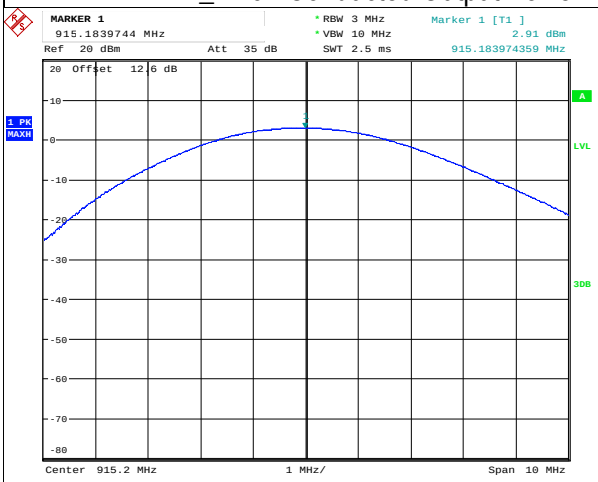
Final_Result

Frequency	MaxPeak (dBµV/m	CAverage	Limit (dBµV/m	Margin	Meas.	Bandwidth	Height	Pol	Azimuth	Corr. (dB/m	Sig Pat	Preamp	Trd Corr.	Raw Rec
13082.692	57.697	---	73.98	16.28	500.0	1000.000	335.0	V	112.0	9.6	13.9	-43.2	38.9	48.1
13082.692	---	44.602	53.98	9.38	500.0	1000.000	335.0	V	112.0	9.6	13.9	-43.2	38.9	35.0
16272.362	---	49.147	53.98	4.83	500.0	1000.000	299.0	H	282.0	12.9	15.9	-43.8	40.8	36.3
16272.362	62.578	---	73.98	11.40	500.0	1000.000	299.0	H	282.0	12.9	15.9	-43.8	40.8	49.7
16733.866	---	50.242	53.98	3.74	500.0	1000.000	380.0	H	180.0	14.4	15.6	-42.5	41.3	35.8
16733.866	63.043	---	73.98	10.94	500.0	1000.000	380.0	H	180.0	14.4	15.6	-42.5	41.3	48.6
17622.578	63.494	---	73.98	10.49	500.0	1000.000	125.0	V	22.0	15.1	16.5	-42.8	41.4	48.4
17622.578	---	50.849	53.98	3.13	500.0	1000.000	125.0	V	22.0	15.1	16.5	-42.8	41.4	35.8

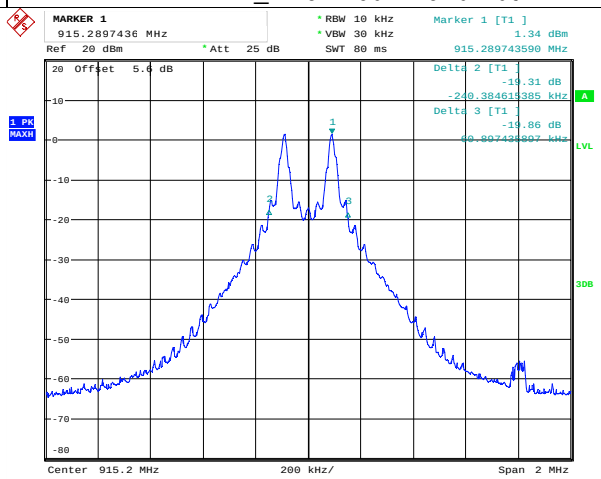


8.2 Module Verification

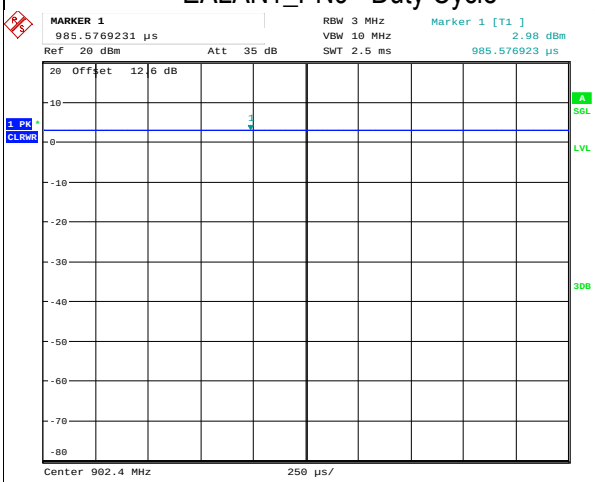
EALAN1_PN9 Conducted Output Power



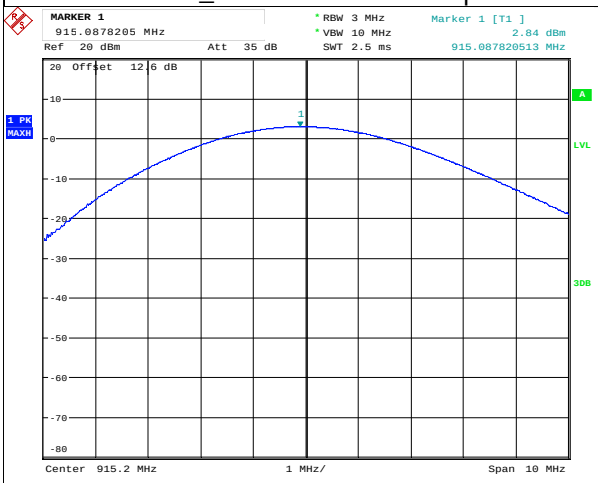
EALAN1_PN9 20dB Bandwidth



EALAN1_PN9 Duty Cycle

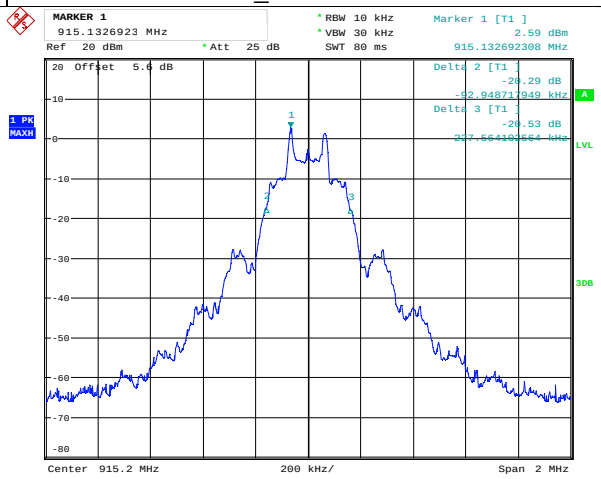


EALAN2_PN9 Conducted Output Power



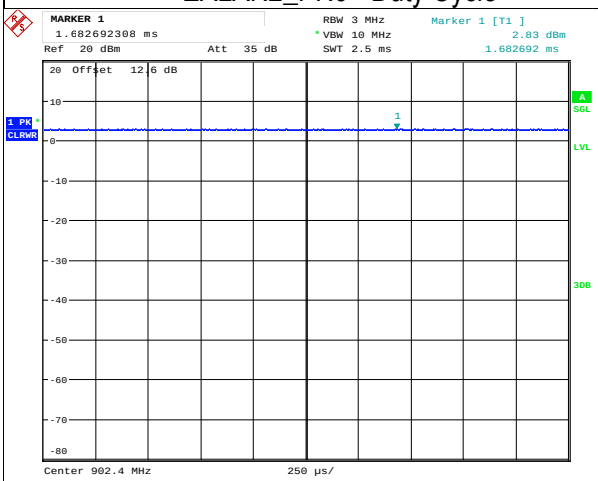
Date: 26.MAR.2024 13:28:17

EALAN2_PN9 20dB Bandwidth



Date: 10.APR.2024 14:37:23

EALAN2_PN9 Duty Cycle



Date: 26.MAR.2024 13:29:34

9 Test setup photos

Setup photos are included in supporting file name: "EMC_HONEY_235_24001_FCC_15_247_Setup_Photos"

10 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
Passive Loop Antenna	EMCO	6512	00164698	3 YEARS	09-06-2023
BILOG ANTENNA	A.H. SYSTEMS	BiLA2G	569	3 YEARS	10/30/2023
HORN ANTENNA	EMCO	3115	00035111	3 YEARS	10/26/2023
HORN ANTENNA	ETS LINDGREN	3117-PA	00167061	3 YEARS	9/25/2023
HORN ANTENNA	ETS LINDGREN	3116C-PA	00166821	3 YEARS	10/26/2023
ESW.EMI TEST RECEIVER	ROHDE & SCHWARZ	ESW44	101715	3 YEARS	10/24/2023
DIGITAL THRMOMETER	Control Company	4410,90080-03	230712972	3 YEARS	10/18/2023

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
2024-05-30	EMC_HONEY_235_24001_FCC_15_247	Initial Version	Cheng Song

<<< The End >>>