

Test Report

For:

Continental Automotive Technologies GmbH

Brand:

AUMOVIO

Marketing Name:

PACCAR Connect Platform

Model Name:

SILVERBOX

Product Description:

Infotainment controller for truck

FCC ID: 2AJW5PCNPSLV

ISED: 21979-PCNPSLV

Applied Rules and Standards:

47 CFR Part 15.247 (FHSS)

RSS-247 Issue 4 (FHSS) & RSS-Gen Issue 5

REPORT #: EMC_CONTM_003_25001_FCC15247_BT_Rev3

DATE: 2026-04-08



IC recognized #
3462B

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1 Assessment

The following device was evaluated against the applicable criteria specified in

- FCC rule Part 15.247 of Title 47 of the Code of Federal Regulations
- RSS-247, Issue 4
- RSS-Gen, Issue 5

There were no additions, deviations, or exclusions made from the test method.

Company	Description	Model #
Continental Automotive Technologies GmbH	Infotainment controller for truck	SILVERBOX

Report Authorized by:

Responsible for testing Laboratory:

2026-04-08	Compliance	Alvin Ilarina (Director of EMC Services)	Alvin ILARINA Digitally signed by Alvin ILARINA Date: 2026.04.09 10:27:44 -07'00'
Date	Section	Name	Signature

Responsible for the Report:

2026-04-08	Compliance	Guangcheng Huang (Senior EMC Test Engineer)	Guangcheng Huang Digitally signed by: Guangcheng Huang DN: CN = Guangcheng Huang email = guangcheng. huang@cetecom.com C = US O = cetecom OU = EMC Date: 2026.04.08 19:08:03 - 07'00'
Date	Section	Name	Signature

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

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

2 **Administrative Data**

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

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

2.2 Identification of the Client

Client's Name:	Continental Automotive Technologies GmbH
Street Address:	Heinrich-Hertz-Straße 45
City/Zip Code	78052
Country	Germany

2.3 Identification of the Manufacturer

Manufacturer's Name:	Continental Automotive Guadalajara Mexico
Manufacturers Address:	Camino a la Tijera 3
City/Zip Code	45647
Country	Mexico

3 Equipment Under Test (EUT)

3.1 EUT Specifications

Model No:	SILVERBOX
Marketing Name:	PACCAR Connect Platform
HW Version:	AAA2425110200
SW Version:	EBS.A.C.2025-03-07
FCC ID:	2AJW5PCNPSLV
ISED:	21979-PCNPSLV
FWIN:	-
HVIN:	AAA26838
PMN:	-
Product Description:	Infotainment controller for truck
Power Supply / Rated operating Voltage Range:	9 V to 16 V
Operating Temperature Range	-40°C to 85°C
Sample Revision	production
EUT Dimensions	194 mm X 140 mm X 87.15 mm
Note: All information provided by the client.	

3.2 Radio Specifications

Embedded Radio Technologies	AM/FM, SDARS, WLAN, BT, GNSS
Frequency Range / number of channels:	WLAN 5GHz, UNII-1 (5150 - 5250 MHz), UNII-3 (5725 - 5850 MHz) / 36, 38, 40, 42, 44, 46, 48, 149, 151, 153 155, 157, 159, 161 BT CLASS 2 (2400-2483.5 MHz) BLE (2400-2483.5 MHz)
Antenna Type / Gain	See following table of antenna gain
Note: All information provided by the client.	

2.4 GHz band (dBi) (only use AT400/chain2)			
RF chain	AT400	AT401	
In-band Max.	2.8	1.9	
5 GHz band, U-NII-1 subband (dBi)			
RF chain	AT400	AT401	MIMO directional gain
In-band Max.	2.3	2.4	5.36
5 GHz band, U-NII-3 subband (dBi)			
RF chain	AT400	AT401	MIMO directional gain
In-band Max.	5.5	4.7	8.12

Note: MIMO directional gain calculated per formula (40) from ANSI C63.10-2020.

3.3 EUT Sample details

EUT #	Serial Number	HW Version	SW Version	Notes/Comments
1	25268017	AAA2425110200	EBS.A.C.2025-03-07	Conducted sample
2	-	AAA2425110200	EBS.A.C.2025-03-07	Radiated sample

3.4 Accessory Equipment (AE) details

AE #	Type	Model	Manufacturer	Serial Number
1	cable harness	-	-	-

3.5 Test Setup Configuration

EUT Set-up #	Combination of AE used for test set up	Comments
1	EUT#1 + AE#1	For conducted testing (test laptop used before testing to set up test mode)
2	EUT#2 + AE#1	For radiated testing (test laptop used before testing to set up test mode)

3.6 Mode of Operation and Justification for Worst Case

Mode of Operation	Comments
1	Continuous transmission at fixed channel. Data rate DH1. (for testing purposes only)
2	Frequency hopping. Data rate DH1 (for testing purposes only)

Data rate DH1 is the worst case with highest output power.

During the testing process, the EUT was tested with transmitter sets on low, mid and high channels and various data rates. 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 assess the performance of the EUT according to the relevant requirements specified in section 1.

Testing procedures are based on ANSI C63.10:2020 including section 7.8 for FHSS systems.

5 Measurement Results Summary

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

Note 1: not applicable for vehicular device.

6 Measurement

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

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:

2025-11-03 – 2025-11-28

6.4 Decision Rule:

Cetecom Inc. follows ILAC G8:09/2019 chapter 4.2.1 (Simple Acceptance Rule).

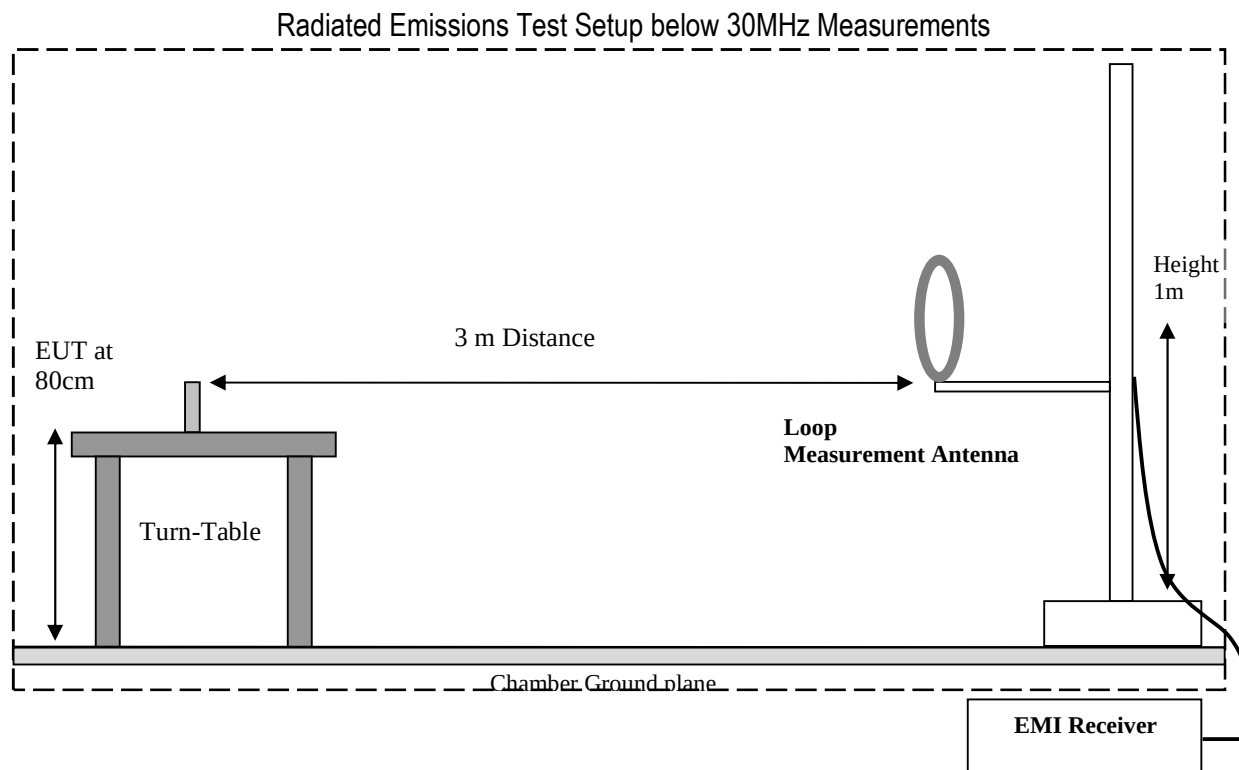
Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3. The measurement uncertainty is mentioned in this test report, See chapter 9, but is not taken into account – neither 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**

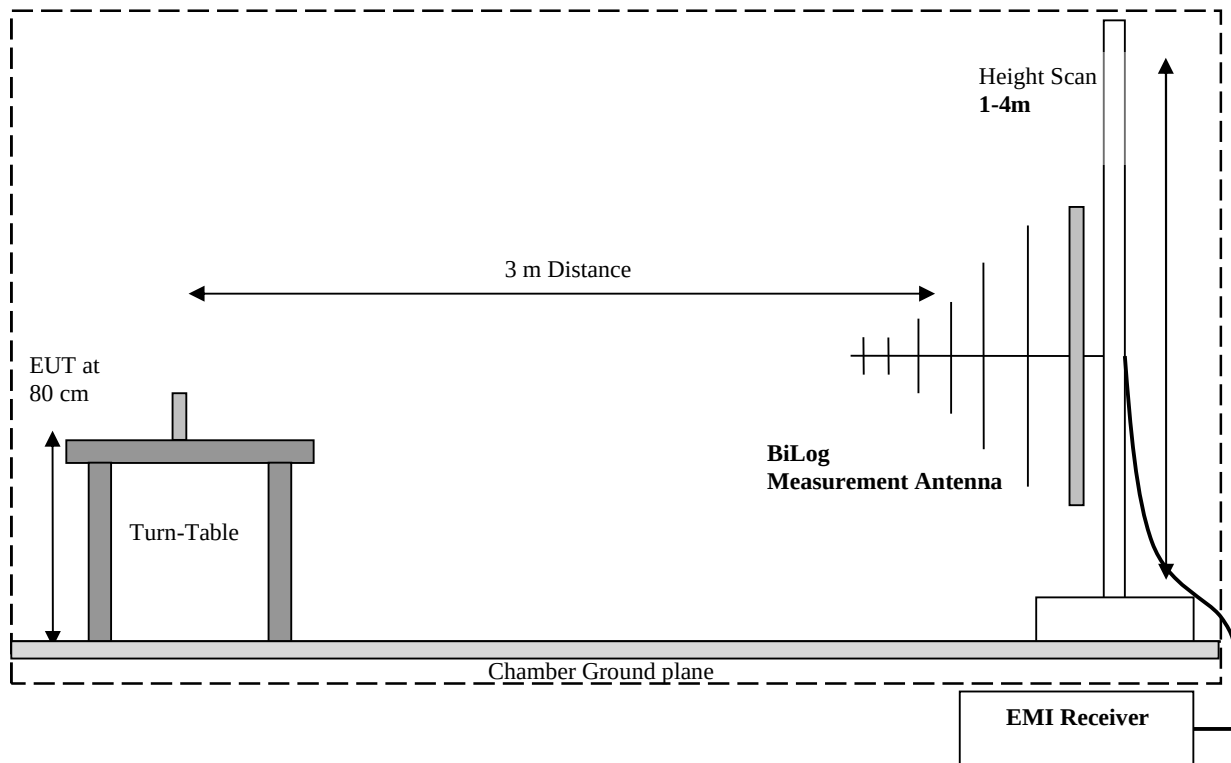
7.1 **Radiated Measurement**

The radiated measurement is performed according to ANSI C63.10 (2020)

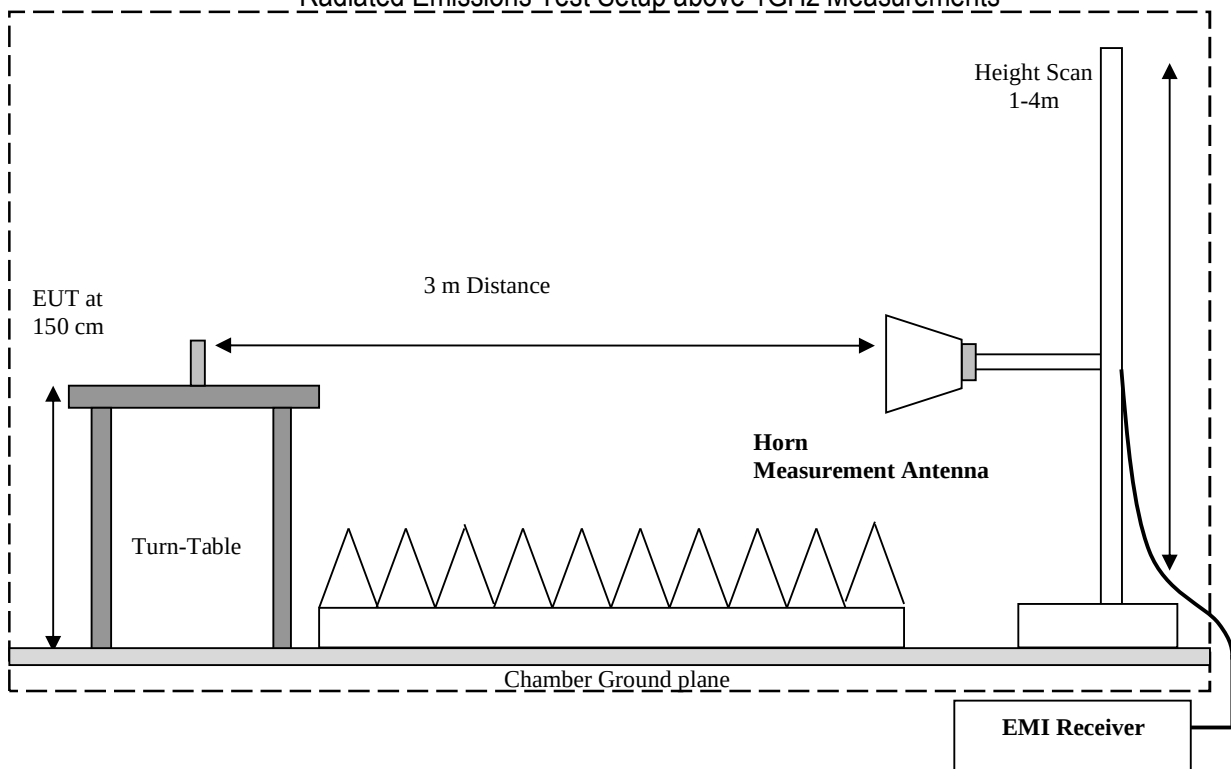
- The exploratory measurement is accomplished by running a matrix of 16 sweeps over the required frequency range with R&S Test-SW EMC32 for 4 positions of the turntable, two orthogonal positions of the EUT and both antenna polarizations. This procedure exceeds the requirement of the above standards to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

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

Example:

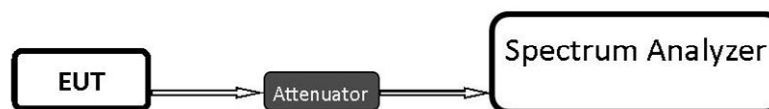
Frequency (MHz)	Measured SA (dBμV)	Cable Loss (dB)	Antenna Factor Correction (dB)	Field Strength Result (dBμV/m)
1000	80.5	3.5	14	98.0

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 Maximum Peak Conducted Output Power

8.1.1 Measurement according to ANSI C63.10 Section 7.8.5

Power meter applied.

8.1.2 Limits:

Maximum Peak Output Power:

FCC §15.247: (b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:

- (1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

IC RSS-247 5.4:

- (b) For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels.

8.1.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input	Antenna Gain
23 °C	1	1	Nominal	See sec.3.2

8.1.4 Measurement result:

Plot #	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)	EIRP (dBm)	Limit (dBm)	Result
-	2402	-1.40	1.40	30(Pk) / 36(EIRP)	Pass
-	2441	-1.60	1.20	30(Pk) / 36(EIRP)	Pass
-	2480	-2.10	0.70	30(Pk) / 36(EIRP)	Pass

8.2 Band Edge Compliance

8.2.1 Measurement according to ANSI C63.10 Section 6.10

Spectrum Analyzer settings for non-restricted band edge:

- Span: wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
- RBW = 100 kHz
- VBW $\geq$ RBW
- Sweep Time: Auto couple
- Detector = Peak
- Trace = Max hold
- Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge.
- Enable the marker-delta function, and then use the marker-to-peak function to move the marker to the peak of the in-band emission.
- Now, using the same instrument settings, enable the hopping function of the EUT.
- Allow the trace to stabilize. Follow the same procedure listed above to determine if any spurious emissions caused by the hopping function also comply with the specified limit.

Spectrum Analyzer settings for restricted band:

- Peak measurements are made using a peak detector and RBW=1 MHz

8.2.2 Limits: Restricted Band FCC 15.209 and RSS-Gen 8.10

- PEAK LIMIT= 74 dB μ V/m @3 m =-21.23 dBm
- AVG. LIMIT= 54 dB μ V/m @3 m =-41.23 dBm
- Start frequency & stop frequency according to frequency range specified in the restricted band table in FCC section 15.205

Restricted bands of operation:

- Except as shown in CFR 47 Part 15.205 paragraph (d), 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
10.495-0.505	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			

8.2.3 Limits: Non-restricted Band §15.247 and RSS-247 5.5

FCC15.247 (d)

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)).

RSS-247 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

8.2.4 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input	Antenna gain
22 °C	1 & 2	1	Nominal	See sec.3.2

8.2.5 Measurement result:

Test #	Frequency	Data Rate	Band Edge	In band Peak Level	Level	Margin	Limit	Result
	(MHz)			(dBm)	(dBm)	(dBm)	(dBm)	
1	2402	DH1	Lower, Non-restricted (conducted)	0.8	-53	33.8	-19.2	Pass
2	2480	DH1	Upper, Non-restricted (conducted)	0.0	-52.4	32.4	-20	Pass

Note 1: The test results and plots are generated by the R&S WMS32 software, which automatically performs the measurements.

Plot #	Frequency	Band Edge	Measured Peak Value	Limit	Result
	(MHz)		(dB μ V/m)	(dB μ V/m)	
3	2402	Lower Restricted Peak	54.92164015	74 Peak	Pass
		Lower Restricted AVG	37.68344283	54 AVG	Pass
4	2480	Upper Restricted Peak	56.80791442	74 Peak	Pass
		Upper Restricted AVG	40.81107299	54 AVG	Pass

8.2.6 Measurement Plots:

Plot 1: low channel, conducted (antenna gain included)

Result

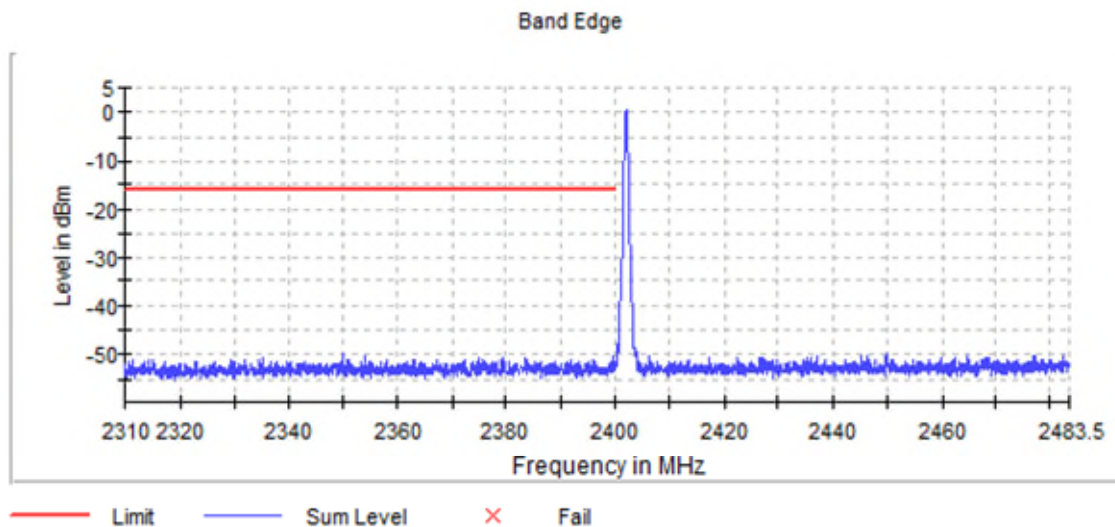
DUT Frequency (MHz)	Result
2402.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2401.817353	0.8

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2350.050000	-53	33.8	-19.2	PASS
2354.000000	-53.6	34.4	-19.2	PASS
2399.450000	-53.6	34.4	-19.2	PASS
2353.950000	-53.6	34.4	-19.2	PASS
2335.200000	-54	34.8	-19.2	PASS
2383.600000	-54	34.8	-19.2	PASS
2379.300000	-54	34.8	-19.2	PASS
2374.650000	-54	34.8	-19.2	PASS
2372.100000	-54.1	34.9	-19.2	PASS
2315.050000	-54.1	34.9	-19.2	PASS
2351.150000	-54.1	34.9	-19.2	PASS
2334.450000	-54.1	34.9	-19.2	PASS
2358.100000	-54.1	34.9	-19.2	PASS
2350.850000	-54.1	34.9	-19.2	PASS
2362.950000	-53	33.8	-19.2	PASS



Plot 2: high channel, conducted (antenna gain included)

Result

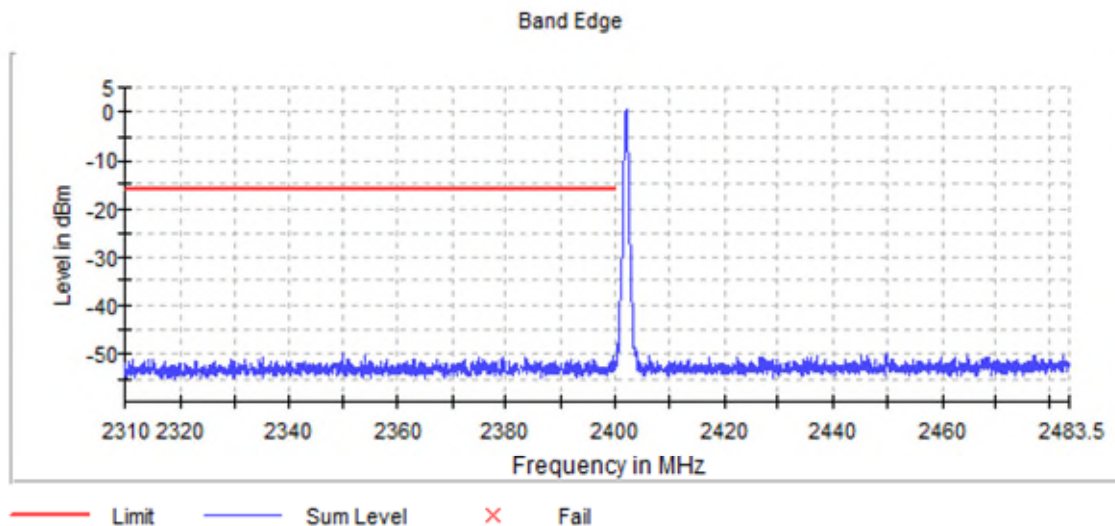
DUT Frequency (MHz)	Result
2480.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2480.012647	0.0

Measurements

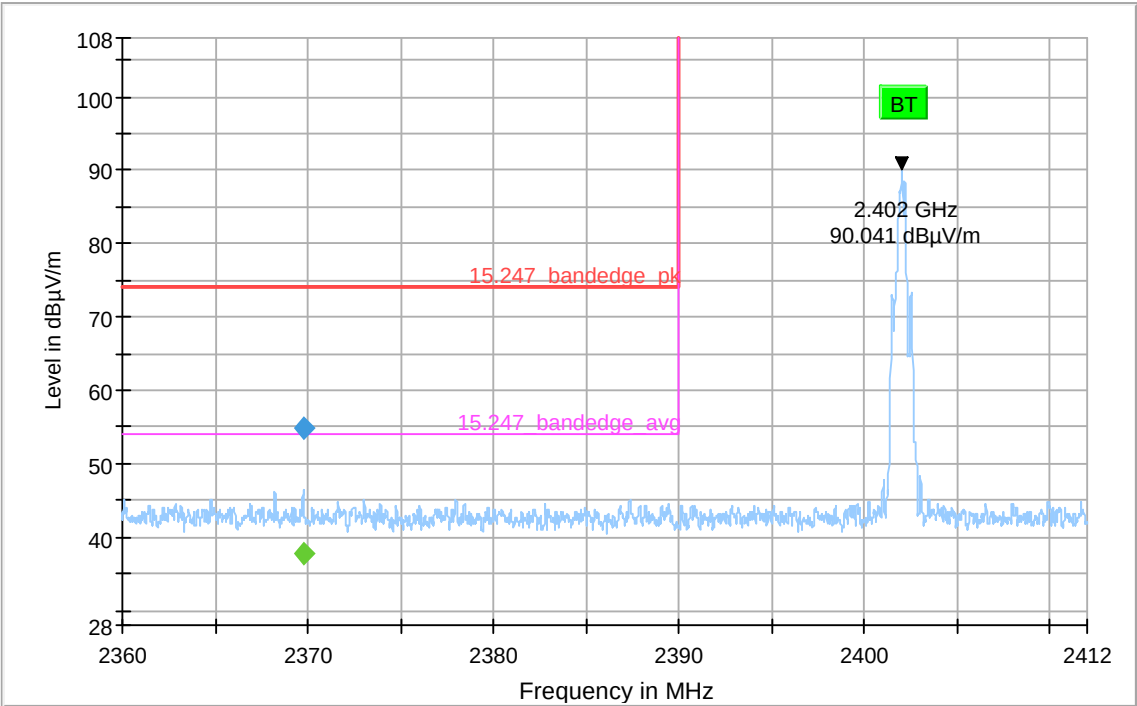
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2495.504808	-52.4	32.4	-20	PASS
2485.192308	-53.4	33.4	-20	PASS
2495.822115	-53.5	33.5	-20	PASS
2492.543269	-53.8	33.8	-20	PASS
2487.625000	-53.8	33.8	-20	PASS
2494.288462	-54	34	-20	PASS
2496.350962	-54	34	-20	PASS
2493.918269	-54.1	34.1	-20	PASS
2492.173077	-54.2	34.2	-20	PASS
2490.322115	-54.3	34.3	-20	PASS
2497.778846	-54.3	34.3	-20	PASS
2498.466346	-54.3	34.3	-20	PASS
2487.572115	-54.4	34.4	-20	PASS
2489.052885	-54.4	34.4	-20	PASS
2489.105769	-52.4	32.4	-20	PASS



Plot 3: low channel, radiated

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment
2369.75	---	37.68344283	54.00	16.32	500.0	1000.0	167.0	V	166.0	33.5	
2369.75	54.92164015	---	74.00	19.08	500.0	1000.0	167.0	V	166.0	33.5	



Preview Result 1-PK+

Final_Result PK+

15.247_bandedge_pk

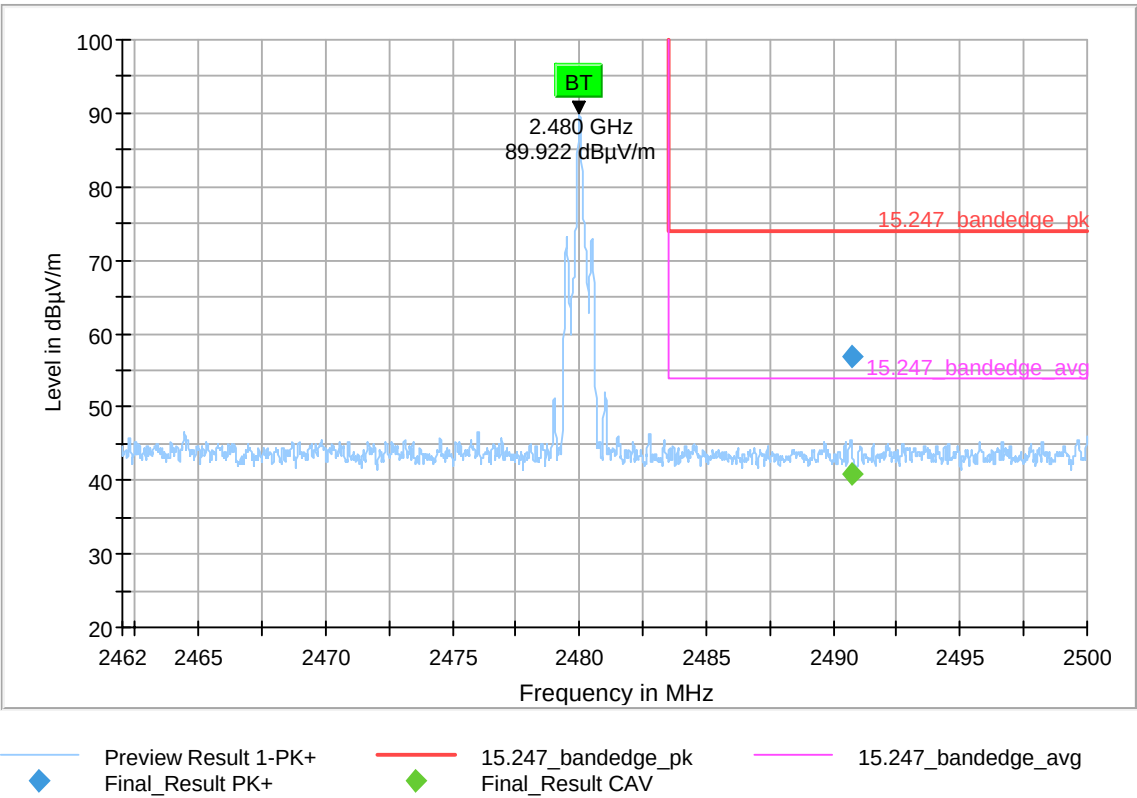
Final_Result CAV

15.247_bandedge_avg

Plot 4: high channel, radiated

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	CAverage (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Comment
2490.70	---	40.81107299	54.00	13.19	500.0	1000.0	272.0	H	184.0	34.0	
2490.70	56.80791442	---	74.00	17.19	500.0	1000.0	272.0	H	184.0	34.0	



8.3 20dB Bandwidth and 99% Occupied Bandwidth

8.3.1 Measurement according to ANSI C63.10 Section 6.9.2

Spectrum Analyzer settings:

20dB Bandwidth:

- Span: approximately 2 to 5 times the 20 dB bandwidth, centered on the hopping channel
- RBW = 1% to 5% of the 20 dB bandwidth
- VBW = 3 x RBW
- Sweep Time = Auto couple
- Detector = Peak
- Trace = Max hold

99% Occupied Bandwidth:

- Set frequency = nominal EUT channel center frequency
- Set Span = 1.5 x to 5.0 x OBW
- Set RBW = 1% to 5% of OBW
- Set the video bandwidth (VBW) $\approx 3 \times$ RBW
- Detector = Peak
- Trace mode = Max hold
- Sweep = Auto couple
- Allow the trace to stabilize
- Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth
- If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

8.3.2 Limits: FCC §15.247(a)(1), RSS-247 5.1(b)

FCC §15.247(a)(1):

Frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

RSS-247 5.1(b):

FHSs operating in the band 2400-2483.5 MHz may have hopping channel carrier frequencies that are separated by 25 kHz or two thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided that the systems operate with an output power no greater than 0.125 W

8.3.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
22 °C	1	1	Nominal

8.3.4 Measurement result:

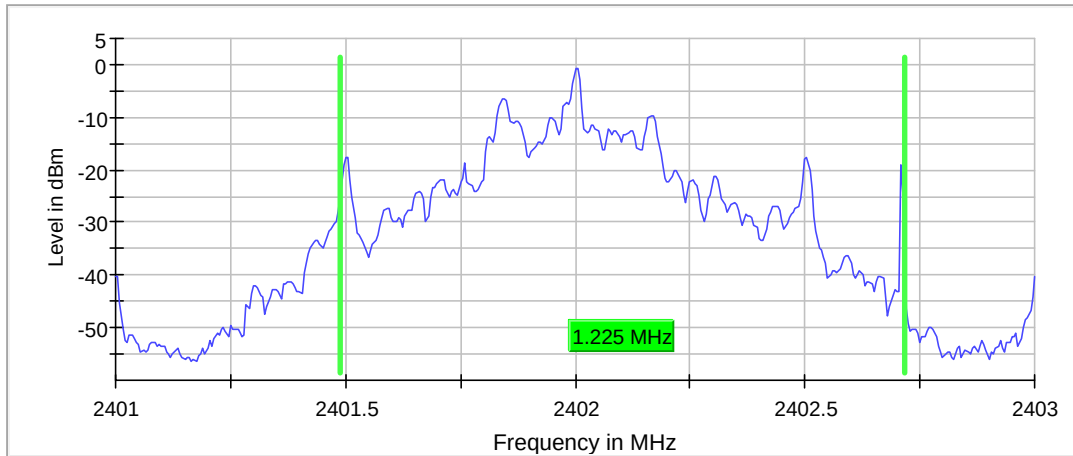
Plot #	Frequency	20dB Emissions Bandwidth	Limit	Result
	(MHz)	(MHz)	(MHz)	
1	2402	1.225000	N/A	Pass
2	2440	1.025000	N/A	Pass
3	2480	1.025000	N/A	Pass

Plot #	Frequency	99% Occupied Bandwidth	Limit	Result
	(MHz)	(MHz)	(MHz)	
4	2402	1.000000	N/A	Pass
5	2440	1.000000	N/A	Pass
6	2480	1.000000	N/A	Pass

8.3.5 Measurement Plots:

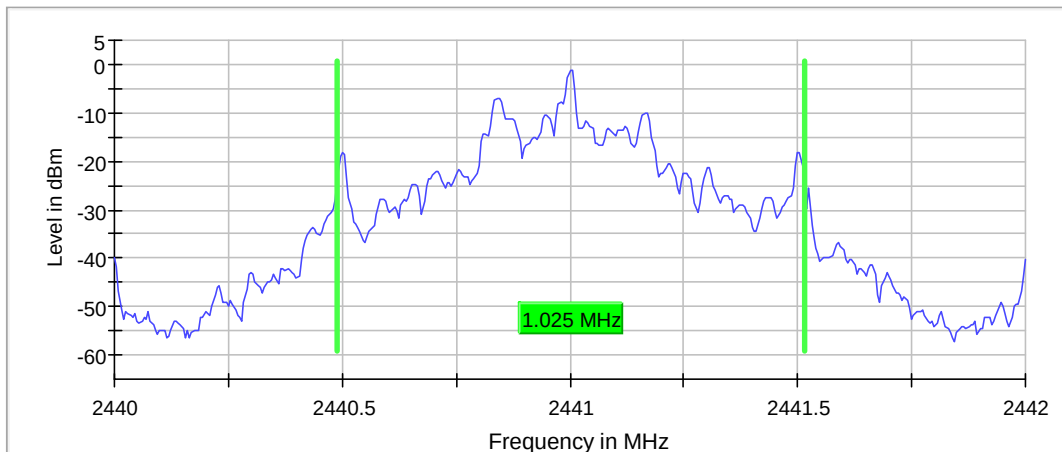
Plot 1: low channel, 20 dB BW

20 dB Bandwidth



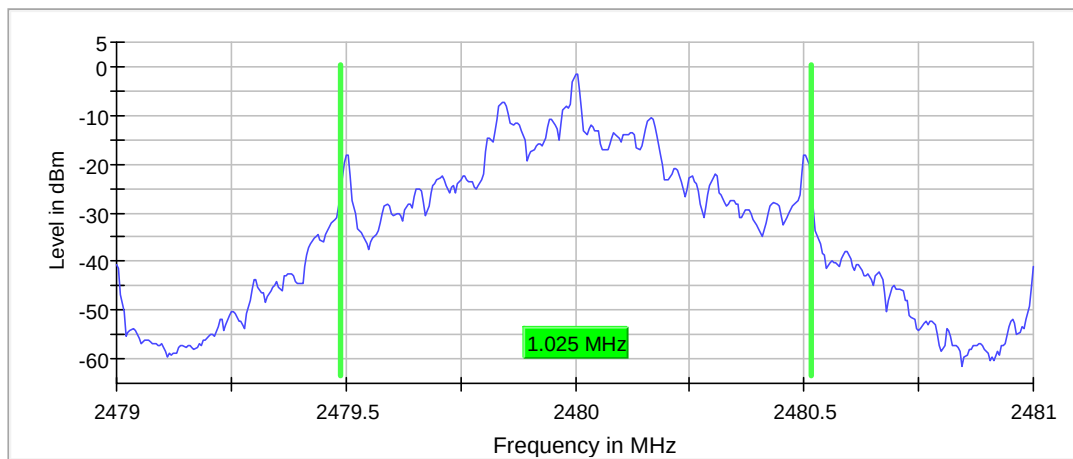
Plot 2: mid channel, 20 dB BW

20 dB Bandwidth



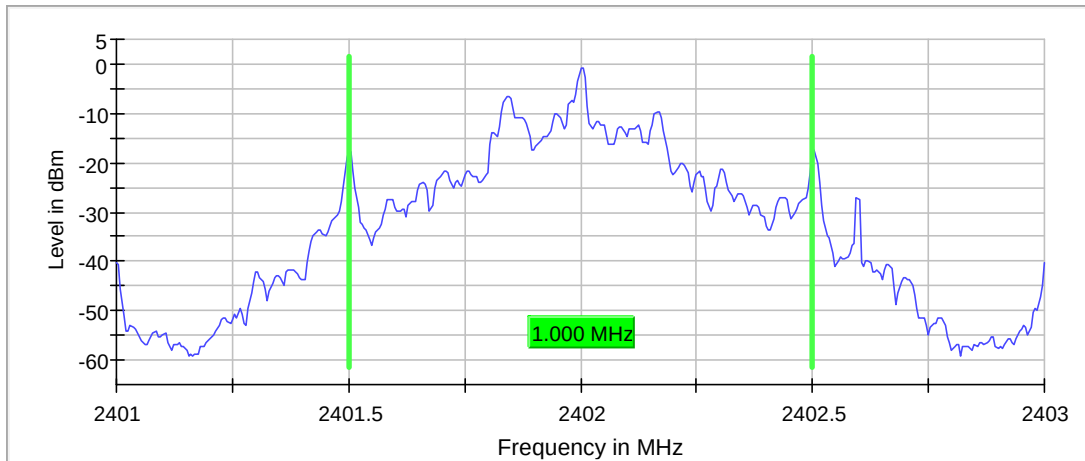
Plot 3: high channel, 20 dB BW

20 dB Bandwidth



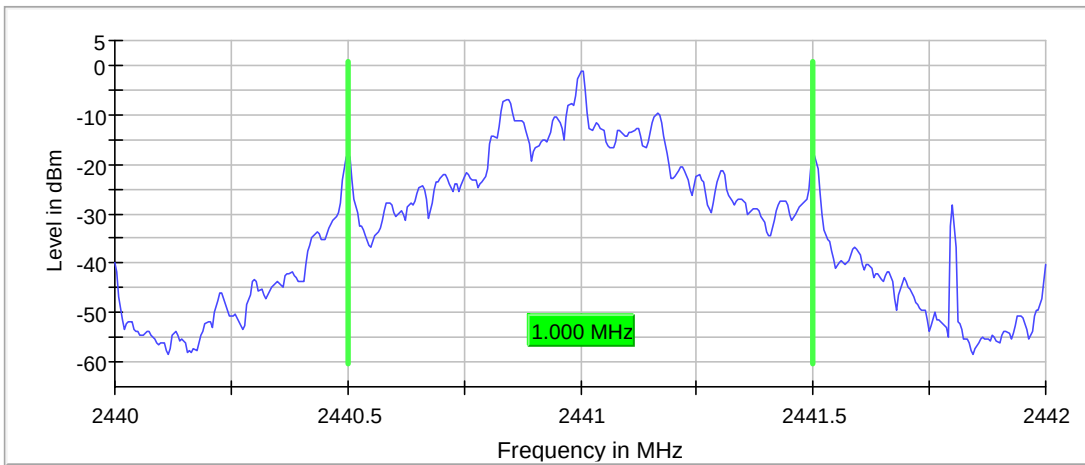
Plot 4: low channel, 99% OBW

99 % Bandwidth



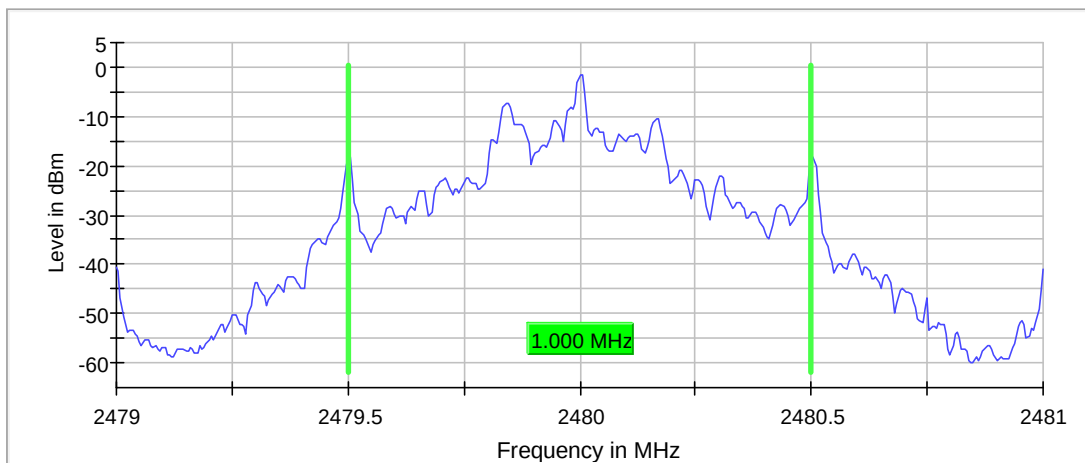
Plot 5: mid channel, 99% OBW

99 % Bandwidth



Plot 6: high channel, 99% OBW

99 % Bandwidth



8.4 Carrier Frequency Separation

8.4.1 Measurement according to ANSI C63.10 Section 7.8.2

Spectrum Analyzer settings:

- Span = Wide enough to capture the peaks of the two adjacent channels
- RBW $\geq$ 1% of the span
- VBW $\geq$ RBW or 3 x
- Sweep = Auto couple
- Detector function = Peak
- Trace = Max hold
- Use marker-delta function to determine the separation between the peaks of the two adjacent channels.

8.4.2 Limits: FCC §15.247(a)(1) & RSS-247 5.1(b)

FCC §15.247(a)(1):

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

RSS-247 5.1(b):

FHSs shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, FHSs operating in the band 2400-2483.5 MHz may have hopping channel carrier frequencies that are separated by 25 kHz or two thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided that the systems operate with an output power no greater than 0.125 W.

8.4.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23 °C	1	2	Nominal

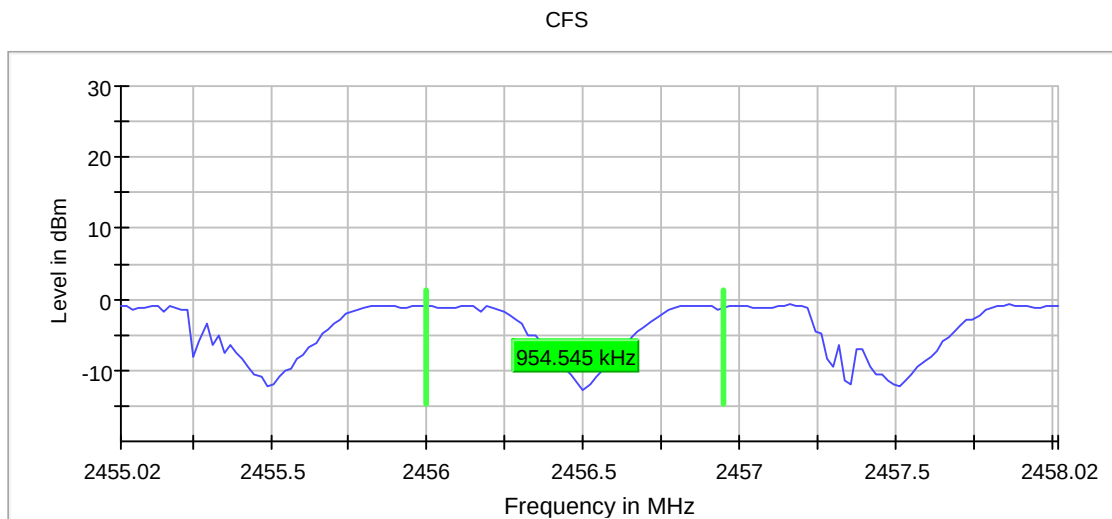
8.4.4 Measurement result:

Plot #	Carrier Frequency Separation (MHz)	Limit (MHz)	Result
1	0.954545	0.817	Pass

Note 1: output power is -1.4 dBm, which is no greater than 20.97 dBm (125 mW).

Note 2: 20 dB emission bandwidth is 1.225 MHz, making 2/3 of it 0.817 MHz.

8.4.5 Measurement Plots:



8.5 Number of hopping channels

8.5.1 Measurement according to ANSI C63.10 Section 7.8.3

Spectrum Analyzer settings:

- Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- VBW $\geq$ RBW
- Sweep = Auto couple
- Detector function = Peak
- Trace = Max hold
- Allow the trace to stabilize

8.5.2 Limits: FCC §15.247(a)(1)(ii)(iii) & RSS-247 5.1(d)

At least 15 non-overlapping channels

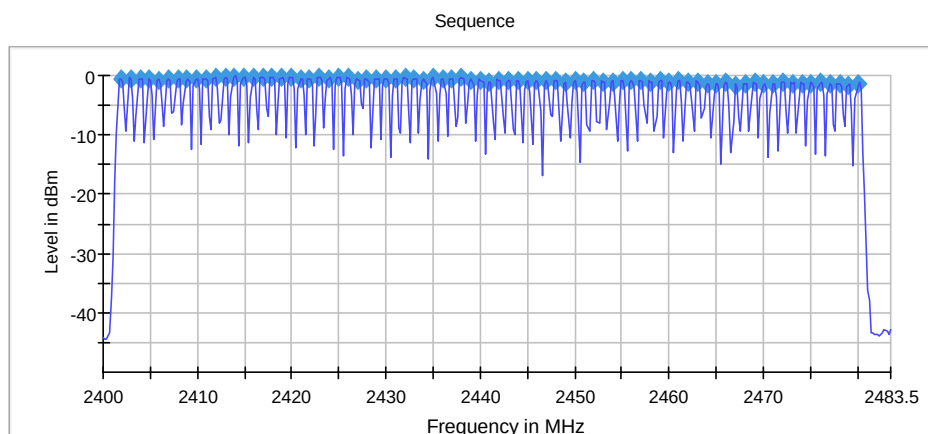
8.5.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23 °C	1	2	Nominal

8.5.4 Measurement result:

Plot #	Number of Hopping Frequencies	Limit	Result
1	79	15 non-overlapping channels	Pass

8.5.5 Measurement Plots:



8.6 Time of Occupancy (Dwell Time)

8.6.1 Measurement according to ANSI C63.10 Section 7.8.4

Spectrum Analyzer settings:

Duration of Pulse Measurement

- RBW = 1 MHz
- VBW = 3 MHz
- Span = Zero Span
- Sweep Time = 10 ms
- Sweep Mode = Single
- Detector = Peak
- Trigger = Video

Observation Period

- RBW = 1 MHz
- VBW = 3 MHz
- Span = Zero Span
- Sweep Time = 31.6 s
- Sweep Mode = Single
- Detector = Peak
- Trigger = Free Run

Observation Period = 0.4s x No. of hopping channels = 0.4 x 79 = 31.6 s

8.6.2 Limits: FCC §15.247(a)(1)(iii) & RSS-247 5.1(d)

FCC §15.247(a)(1)(iii):

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

RSS-247 5.1(d):

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that at least 15 hopping channels are used.

8.6.3 Test conditions and setup:

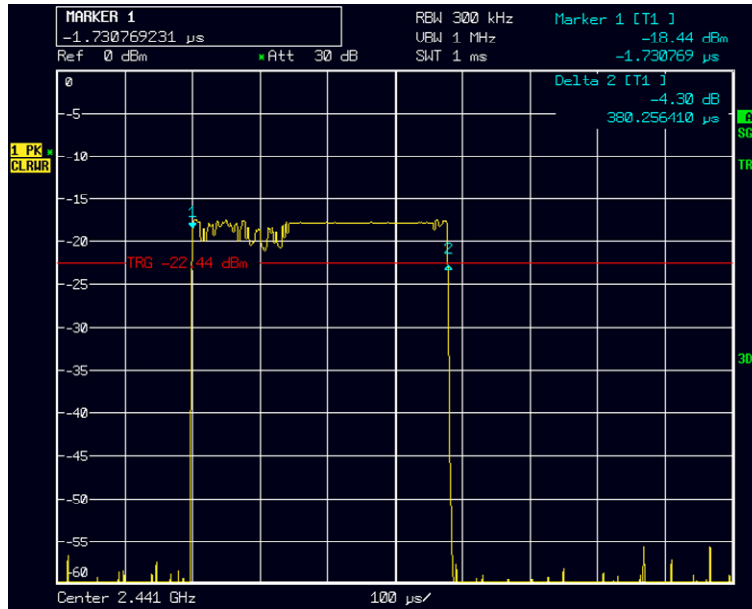
Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23 °C	1	2	Nominal

8.6.4 Measurement result:

Plot #	Data rate	Channel frequency (MHz)	Pulse Width (s)	RBW (MHz)	Total Dwell Time in 31.6s (s)	Limit (s)	Result
1-2	DH1	2441	0.00038	0.30	0.120	Max. 0.4	Pass
3-4	DH5	2441	0.00288	0.30	0.146	Max. 0.4	Pass
5-6	2DH5	2441	0.0029	0.30	0.118	Max. 0.4	Pass
7-8	3DH5	2441	0.0029	0.30	0.201	Max. 0.4	Pass

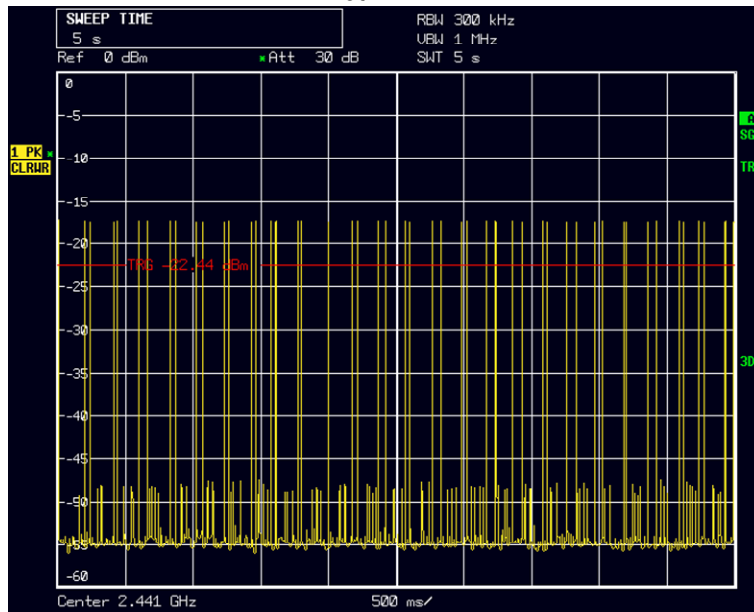
8.6.5 Measurement Plots:

Plot 1: DH1



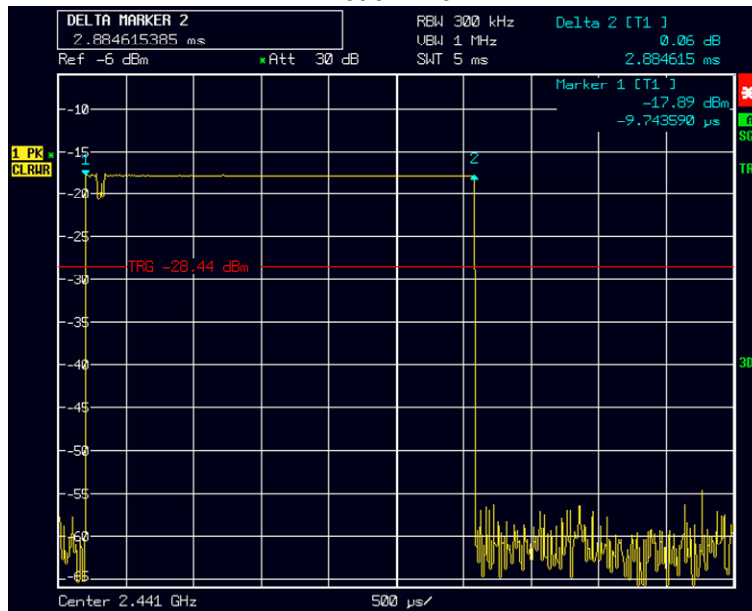
Note: single pulse width 380 μs

Plot 2: DH1



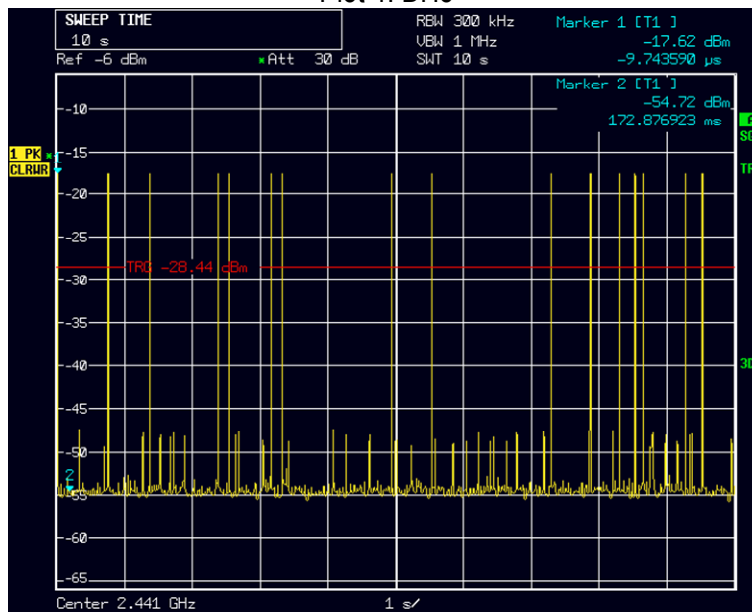
Note: 50 pulses counted within 5 s, makes 316 pulses within 31.6 s, totaling dwell time $380 \mu s * 316 = 0.12 s$

Plot 3: DH5



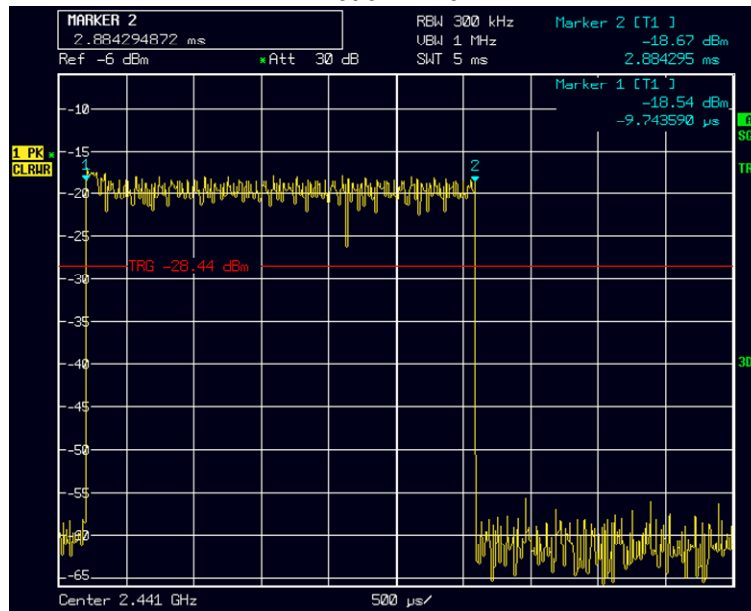
Note: single pulse width 2.88 ms

Plot 4: DH5



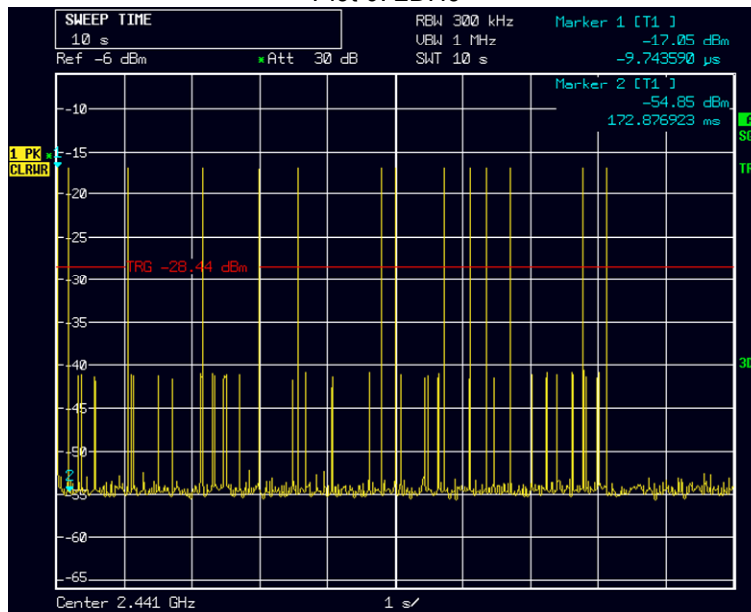
Note: 16 pulses counted within 10 s, makes 50.6 pulses within 31.6 s, totaling dwell time $2.88 \text{ ms} * 50.6 = 0.146 \text{ s}$

Plot 5: 2DH5



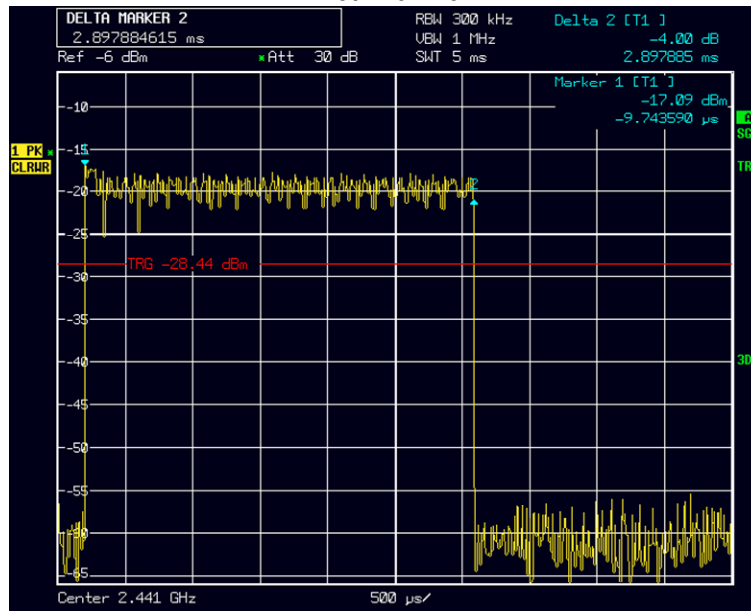
Note: single pulse width 2.89 ms

Plot 6: 2DH5



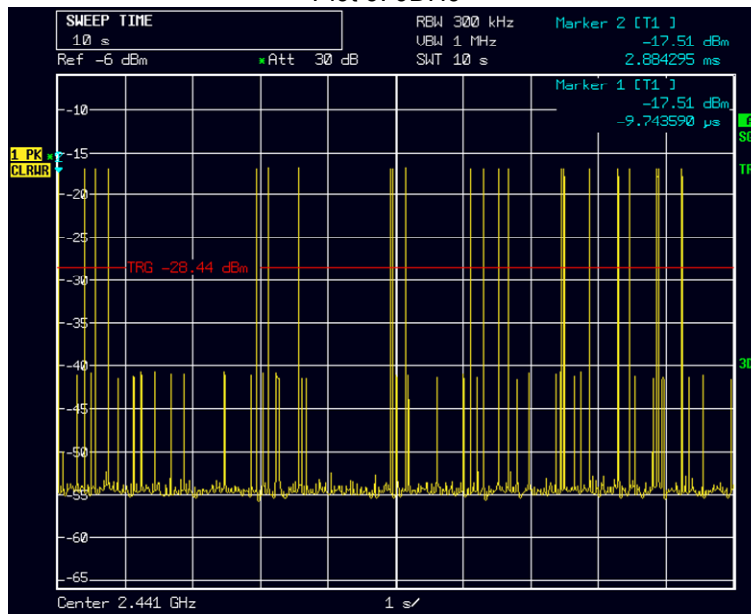
Note: 13 pulses counted within 10 s, makes 41 pulses within 31.6 s, totaling dwell time $2.89 \text{ ms} \times 41 = 0.118 \text{ s}$

Plot 7: 3DH5



Note: single pulse width 2.90 ms

Plot 8: 3DH5



Note: 22 pulses counted within 10 s, makes 69.5 pulses within 31.6 s, totaling dwell time $2.9 \text{ ms} \times 69.5 = 0.201 \text{ s}$

8.7 Transmitter Spurious Emissions and Restricted Bands

8.7.1 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.

8.7.2 Limits: FCC 15.247(d)/15.209(a) /RSS-Gen 6.13

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	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 μ V/m
- AVG. LIMIT= 54dB μ V/m
- Except as shown in CFR 47 Part 15.205 paragraph (d), only spurious emissions are permitted in any of the frequency bands listed below

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

8.7.3 Test conditions and setup:

Ambient Temperature	EUT Set-Up #	EUT operating mode	Power Input
23 °C	2	1	Nominal

8.7.4 Measurement result:

Plot #	Channel #	Scan Frequency	Lowest Margin Emission (dB μ V/m)	Limit	Result
1-5	Low	9 kHz – 26 GHz	35.862 (QP)	See section 8.7.2	Pass
6-10	Mid	9 kHz – 26 GHz	36.195 (QP)	See section 8.7.2	Pass
11-15	High	9 kHz – 26 GHz	35.426 (QP)	See section 8.7.2	Pass

8.7.5 Measurement Plots: channel low

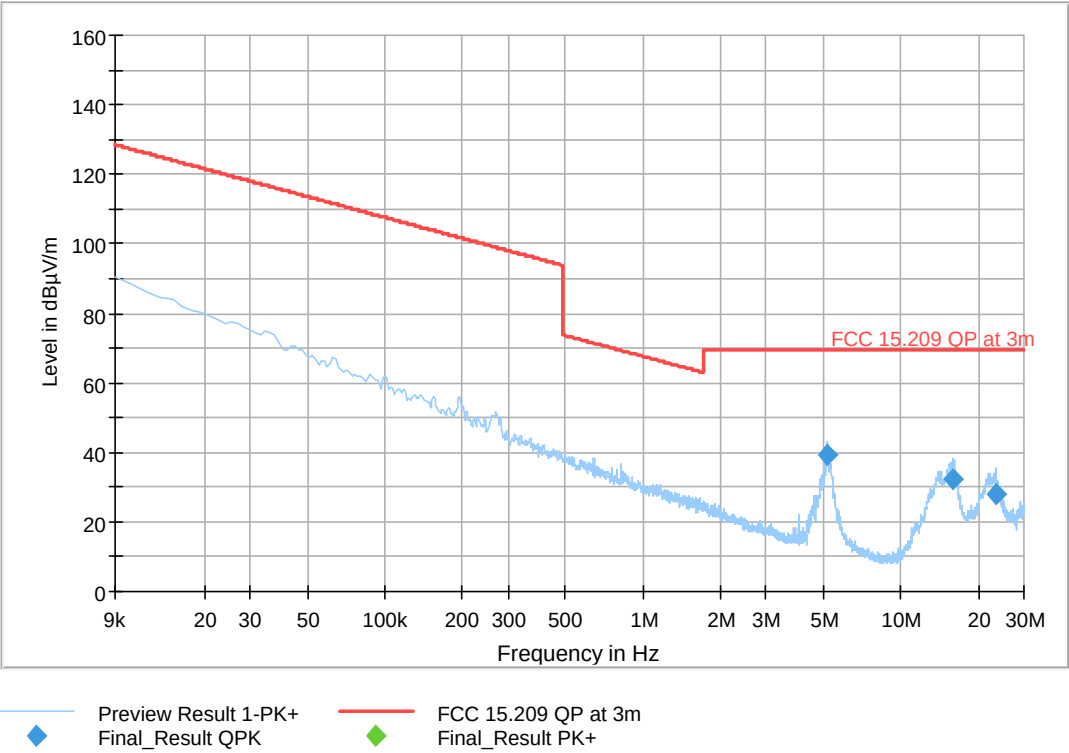
Plot 1: 9 kHz – 30 MHz

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
5.210	39.250	---	69.50	30.25	500.0	9.0	100.0	H	176.0	7.2	0.4	-28.7	35.6
15.921	32.528	---	69.50	36.97	500.0	9.0	100.0	H	262.0	5.2	0.5	-28.9	33.6
23.251	28.226	---	69.50	41.27	500.0	9.0	100.0	H	79.0	4.7	0.5	-28.9	33.1

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
5.210	32.0
15.921	27.4
23.251	23.5



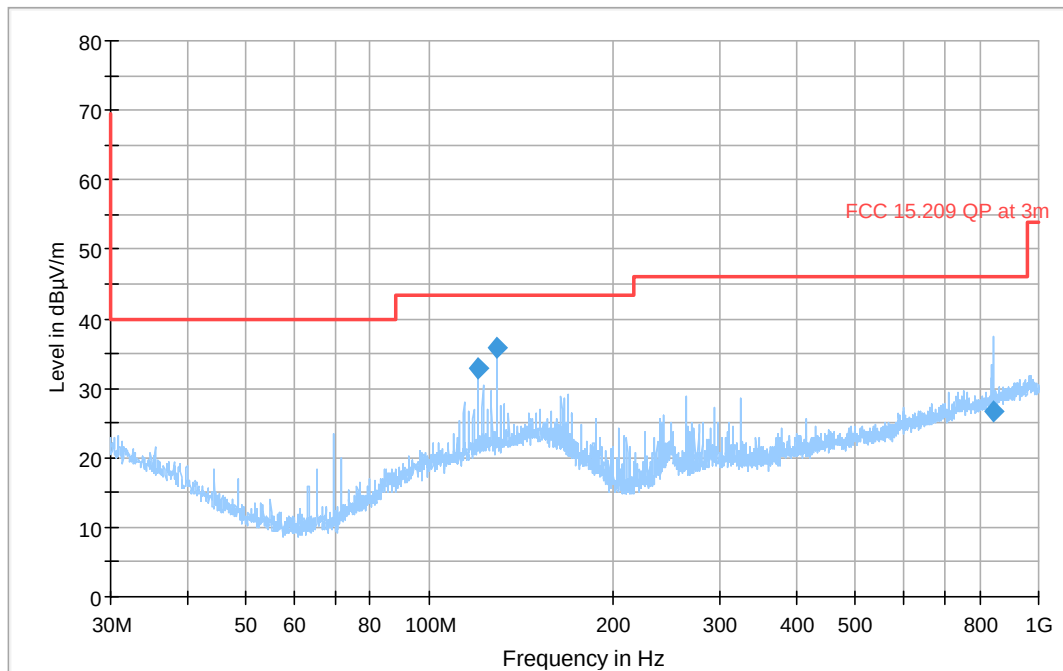
Plot 2: 30 MHz – 1 GHz

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
120.375	32.843	---	43.50	10.66	500.0	120.0	100.0	V	120.0	-10.9	-34.6	0.0	23.7
128.853	35.862	---	43.50	7.64	500.0	120.0	100.0	V	141.0	-10.5	-34.5	0.0	24.0
844.286	26.612	---	46.02	19.41	500.0	120.0	215.0	H	174.0	-3.4	-32.0	0.0	28.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
120.375	43.7
128.853	46.4
844.286	30.0



◆ Preview Result 1-PK+ Final_Result QPK
 ◆ FCC 15.209 QP at 3m Final_Result PK+

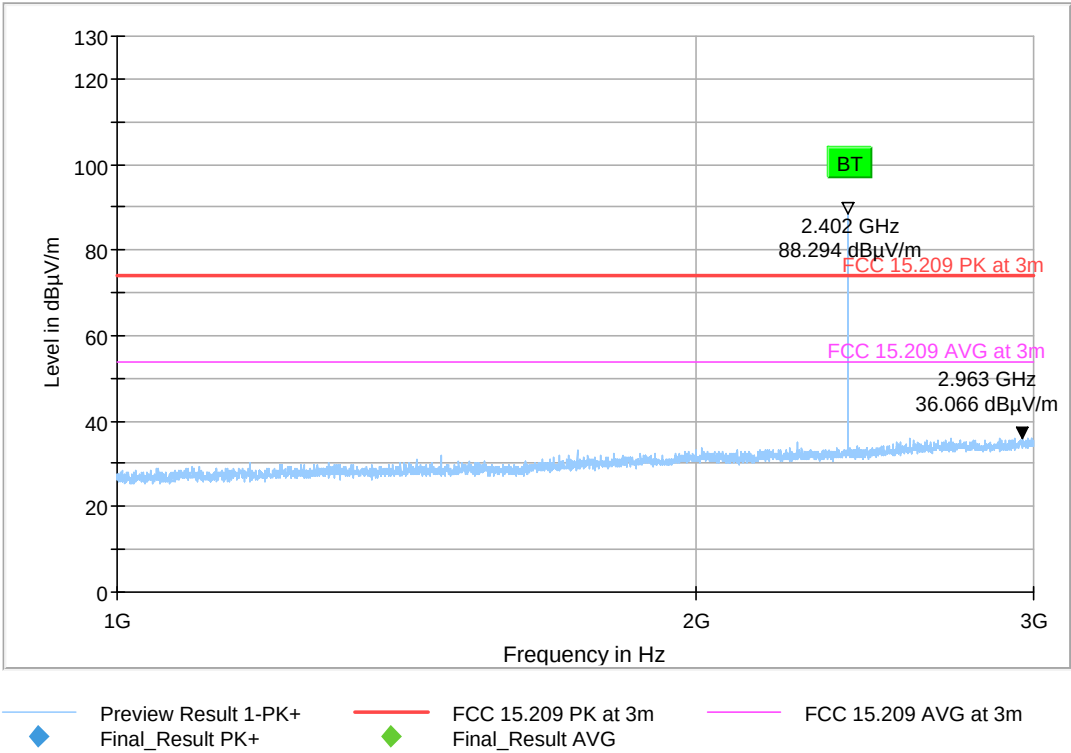
Plot 3: 1-3 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
---	---	---	---	---	---	---	---		---	---	---	---	---

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
---	---



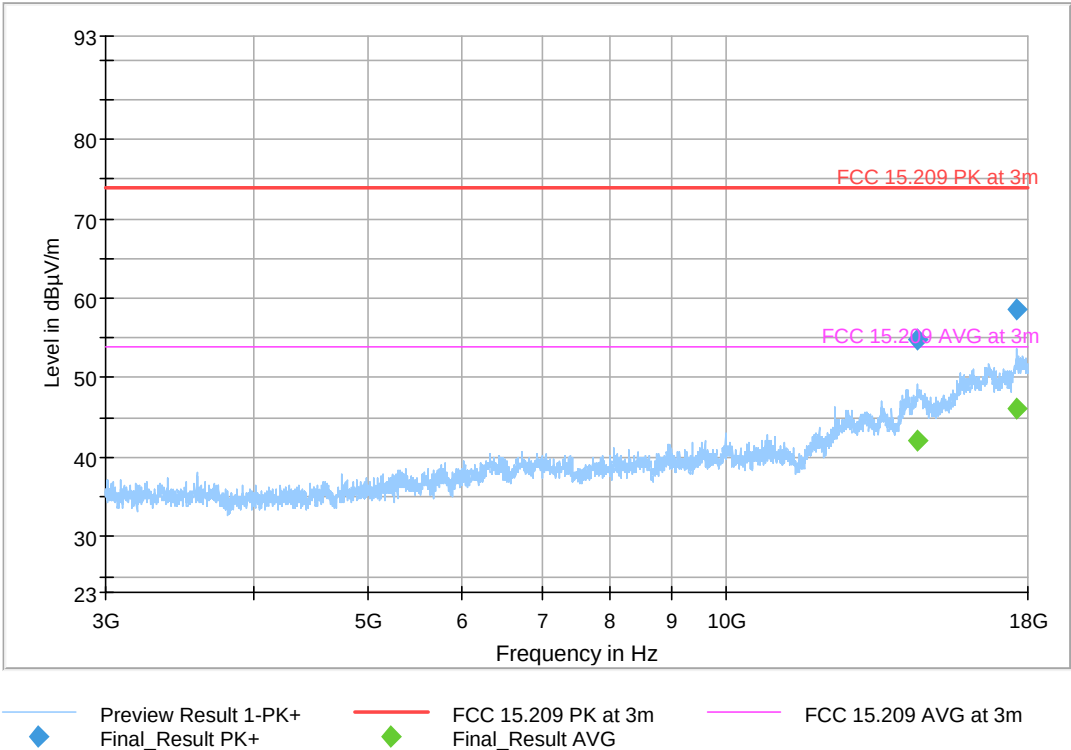
Plot 4: 3-18 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
14530.093	---	42.093	53.98	11.89	500.0	1000.0	358.0	H	320.0	9.4	13.4	-44.8	40.9
14530.093	54.814	---	73.98	19.17	500.0	1000.0	358.0	H	320.0	9.4	13.4	-44.8	40.9
17609.495	---	46.031	53.98	7.95	500.0	1000.0	176.0	V	196.0	14.0	15.2	-42.8	41.6
17609.495	58.524	---	73.98	15.46	500.0	1000.0	176.0	V	196.0	14.0	15.2	-42.8	41.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
14530.093	32.7
14530.093	45.4
17609.495	32.0
17609.495	44.5



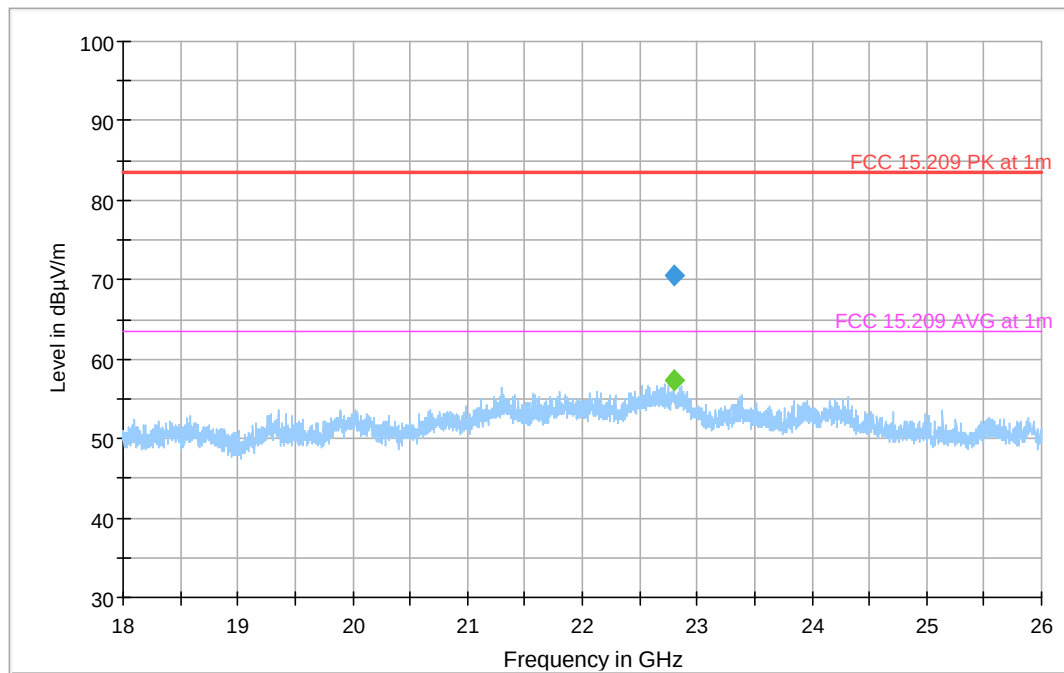
Plot 5: 18-26 GHz

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
22800.119	---	57.352	63.50	6.15	500.0	1000.0	150.0	V	96.0	21.0	9.7	0.0	11.3
22800.119	70.500	---	83.50	13.00	500.0	1000.0	150.0	V	96.0	21.0	9.7	0.0	11.3

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
22800.119	36.3
22800.119	49.5



AVG_MAXH	PK+_MAXH	FCC 15.209 PK at 1m
FCC 15.209 AVG at 1m	Final_Result PK+	Final_Result AVG

8.7.6 Measurement Plots: channel mid

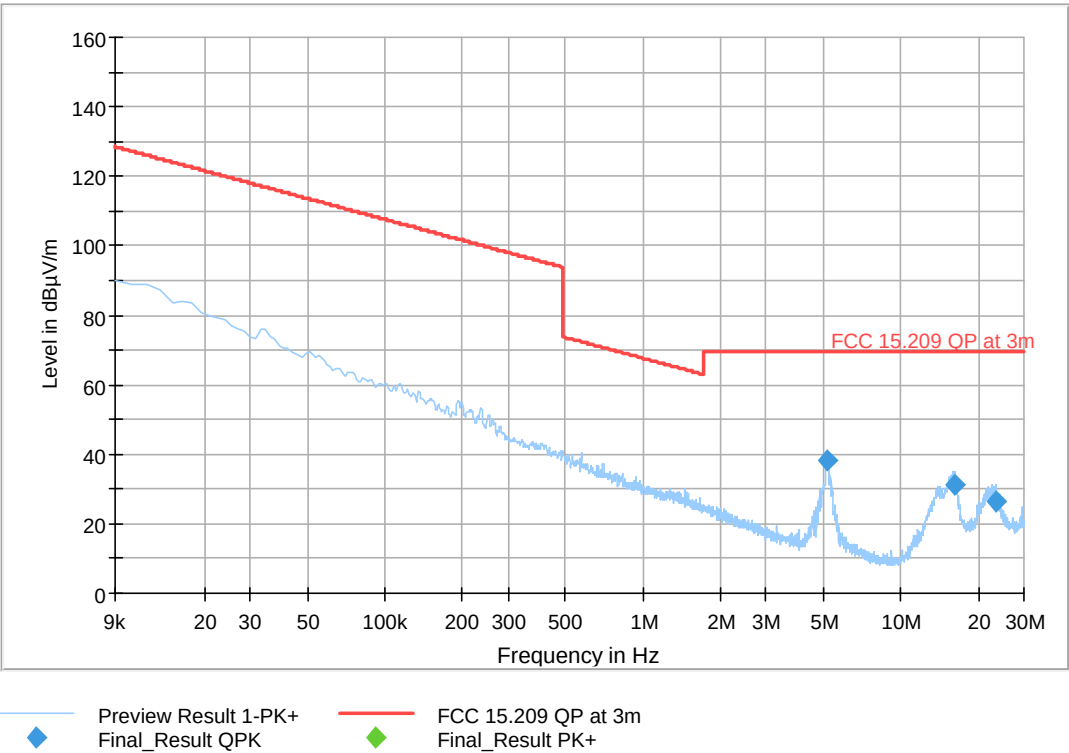
Plot 6: 9 kHz – 30 MHz

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
5.180	38.270	---	69.50	31.23	500.0	9.0	100.0	H	279.0	7.3	0.3	-28.7	35.6
16.095	31.226	---	69.50	38.27	500.0	9.0	100.0	V	142.0	5.1	0.5	-28.9	33.6
23.399	26.473	---	69.50	43.03	500.0	9.0	100.0	H	166.0	4.7	0.5	-28.9	33.1

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
5.180	31.0
16.095	26.1
23.399	21.8



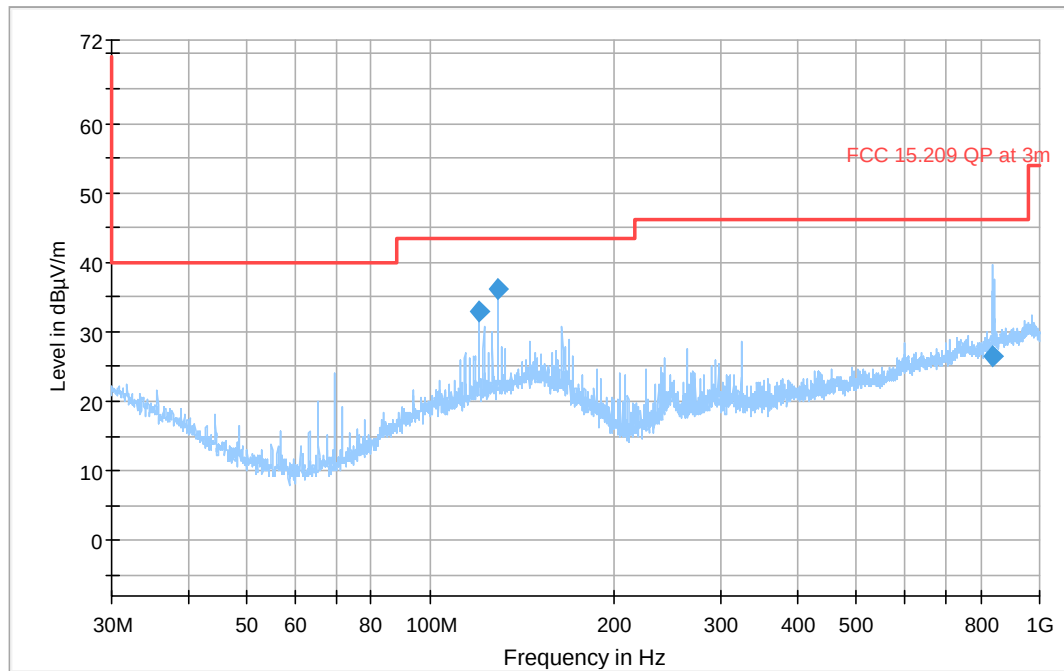
Plot 7: 30 MHz – 1 GHz

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
120.387	32.884	---	43.50	10.62	500.0	120.0	100.0	V	126.0	-10.9	-34.6	0.0	23.7
128.821	36.195	---	43.50	7.30	500.0	120.0	100.0	V	137.0	-10.5	-34.5	0.0	24.0
836.183	26.604	---	46.02	19.42	500.0	120.0	185.0	H	110.0	-3.4	-32.1	0.0	28.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
120.387	43.8
128.821	46.7
836.183	30.0



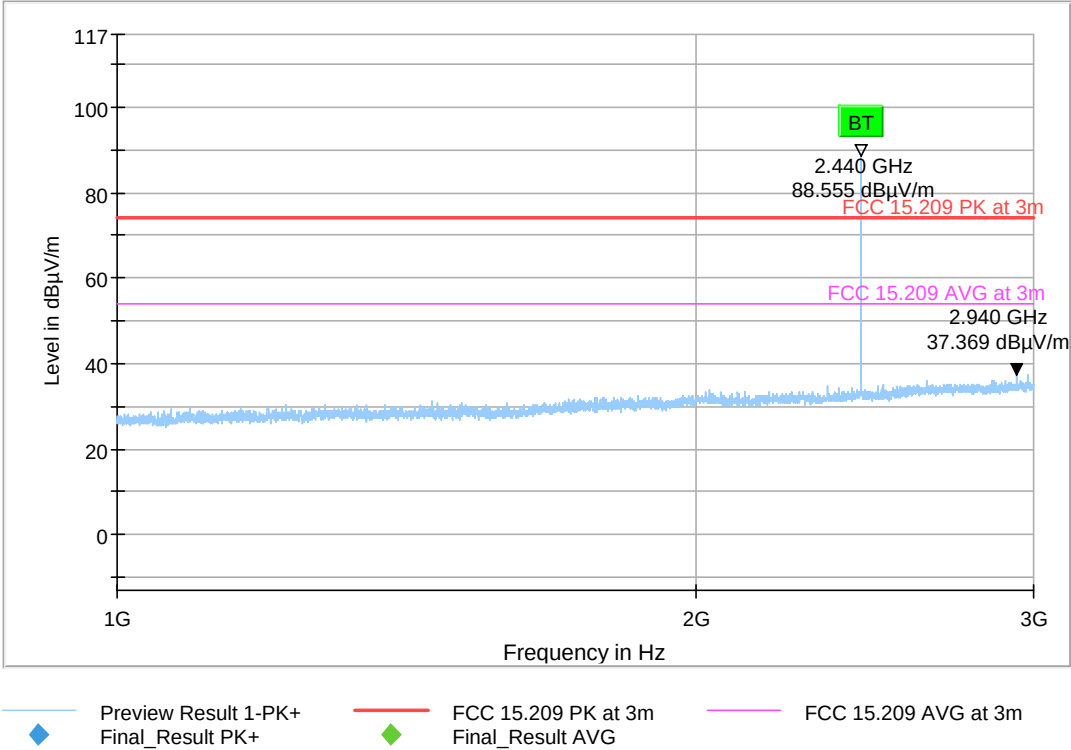
Plot 8: 1-3 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
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(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
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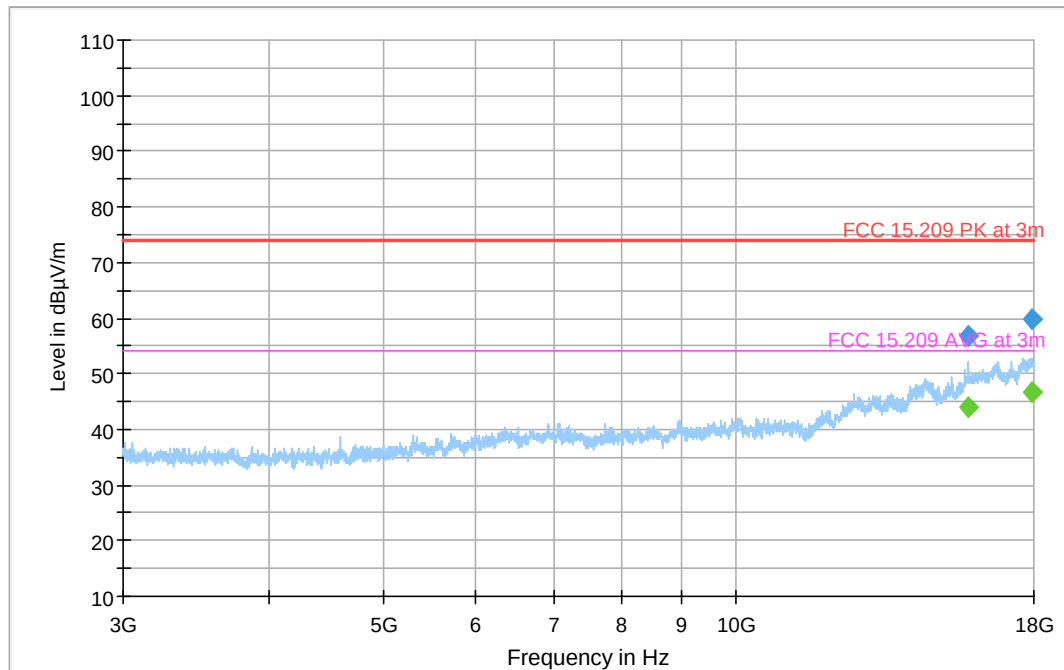
Plot 9: 3-18 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
15801.629	56.802	---	73.98	17.18	500.0	1000.0	109.0	V	144.0	11.0	13.4	-43.6	41.3
15801.629	---	44.005	53.98	9.97	500.0	1000.0	109.0	V	144.0	11.0	13.4	-43.6	41.3
17919.678	59.733	---	73.98	14.25	500.0	1000.0	359.0	H	241.0	14.8	15.5	-42.3	41.6
17919.678	---	46.676	53.98	7.30	500.0	1000.0	359.0	H	241.0	14.8	15.5	-42.3	41.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
15801.629	45.8
15801.629	33.0
17919.678	44.9
17919.678	31.9



◆ Preview Result 1-PK+ ◆ FCC 15.209 PK at 3m ◆ FCC 15.209 AVG at 3m
◆ Final_Result PK+ ◆ Final_Result AVG

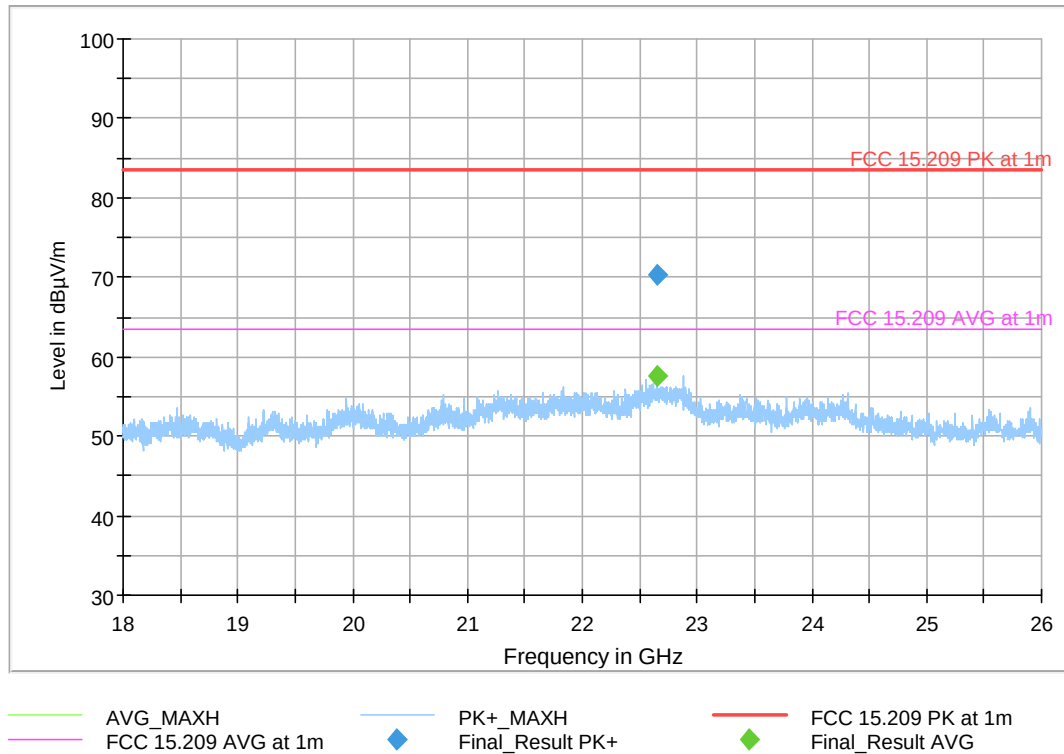
Plot 10: 18-26 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
22656.888	---	57.615	63.50	5.88	500.0	1000.0	150.0	H	291.0	21.1	9.8	0.0	11.3
22656.888	70.278	---	83.50	13.22	500.0	1000.0	150.0	H	291.0	21.1	9.8	0.0	11.3

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
22656.888	36.5
22656.888	49.2



8.7.7 Measurement Plots: channel high

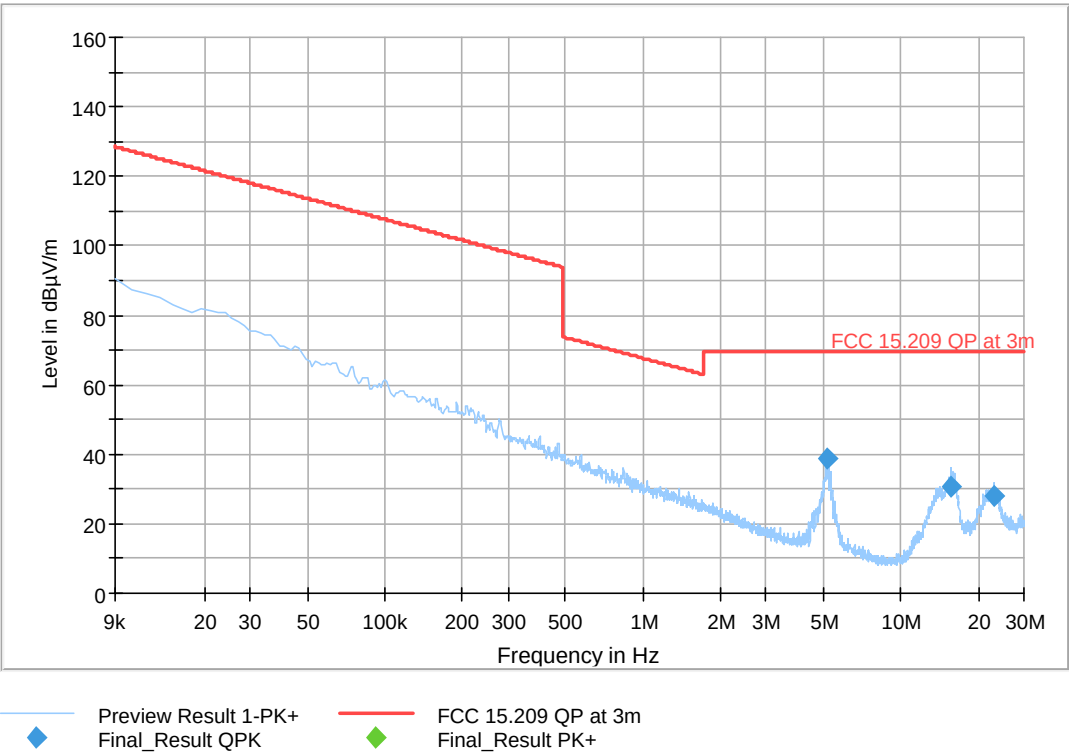
Plot 11: 9 kHz – 30 MHz

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
5.175	39.052	---	69.50	30.45	500.0	9.0	100.0	V	168.0	7.3	0.3	-28.7	35.6
15.709	30.694	---	69.50	38.81	500.0	9.0	100.0	H	-23.0	5.2	0.5	-28.9	33.7
23.126	27.849	---	69.50	41.65	500.0	9.0	100.0	H	305.0	4.7	0.5	-28.9	33.1

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
5.175	31.8
15.709	25.5
23.126	23.2



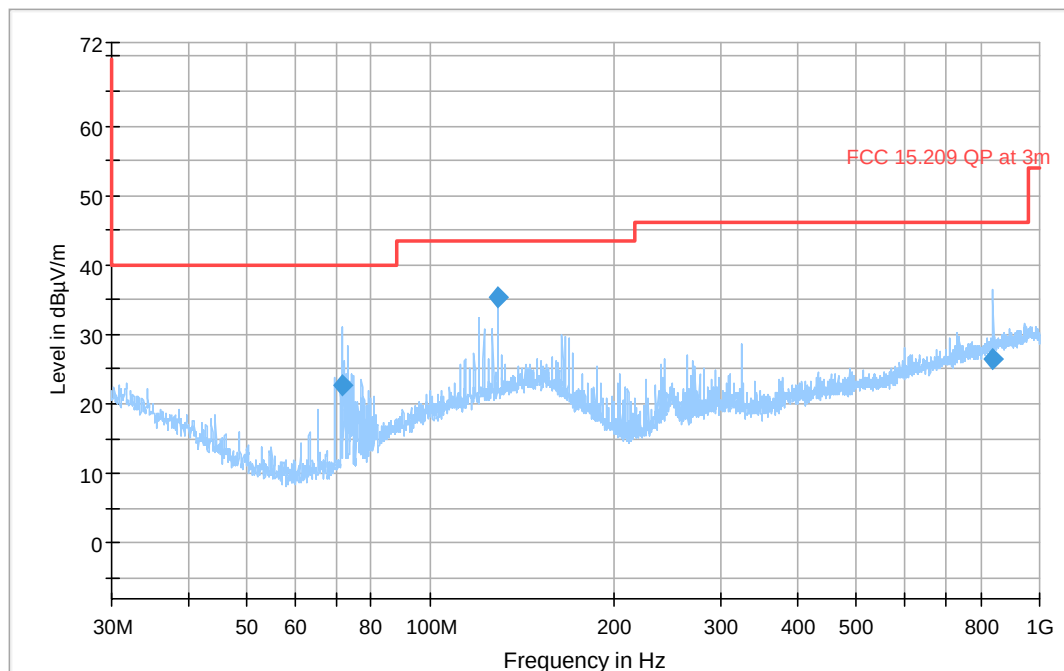
Plot 12: 30 MHz – 1 GHz

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
71.757	22.802	---	40.00	17.20	500.0	120.0	132.0	V	266.0	-21.3	-34.8	0.0	13.4
128.842	35.426	---	43.50	8.07	500.0	120.0	100.0	V	170.0	-10.5	-34.5	0.0	24.0
839.697	26.546	---	46.02	19.47	500.0	120.0	354.0	H	121.0	-3.4	-32.0	0.0	28.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBµV)
71.757	44.1
128.842	46.0
839.697	30.0



◆ Preview Result 1-PK+ Final_Result QPK
 ◆ FCC 15.209 QP at 3m Final_Result PK+

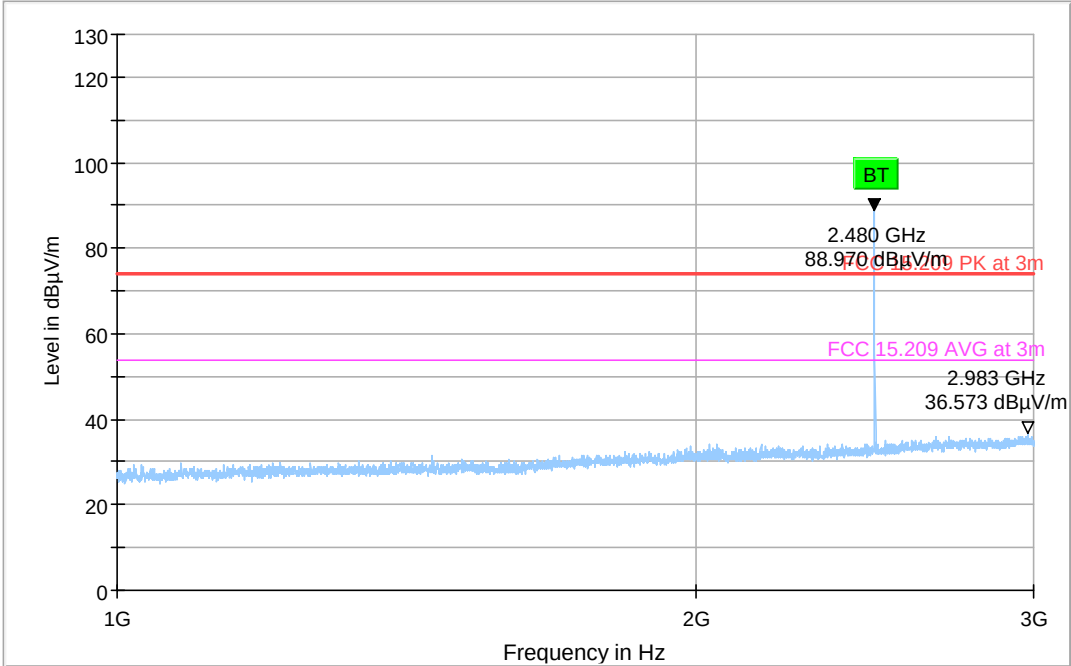
Plot 13: 1-3 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
---	---	---	---	---	---	---	---		---	---	---	---	---

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
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- ◆

Preview Result 1-PK+
Final_Result PK+
- ◆

FCC 15.209 PK at 3m
Final_Result AVG
- FCC 15.209 AVG at 3m

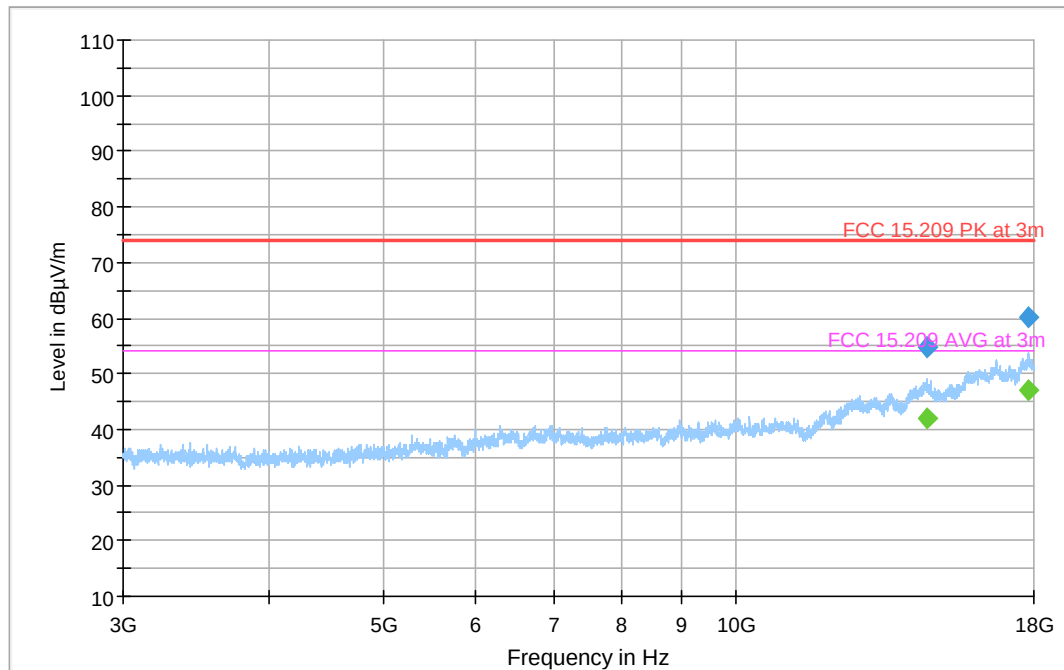
Plot 14: 3-18 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
14593.226	---	41.945	53.98	12.03	500.0	1000.0	100.0	H	253.0	9.7	13.4	-44.9	41.1
14593.226	54.924	---	73.98	19.06	500.0	1000.0	100.0	H	253.0	9.7	13.4	-44.9	41.1
17833.300	---	47.103	53.98	6.88	500.0	1000.0	279.0	V	32.0	14.6	15.5	-42.5	41.6
17833.300	60.287	---	73.98	13.69	500.0	1000.0	279.0	V	32.0	14.6	15.5	-42.5	41.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
14593.226	32.3
14593.226	45.2
17833.300	32.5
17833.300	45.7



◆ Preview Result 1-PK+	◆ FCC 15.209 PK at 3m	— FCC 15.209 AVG at 3m
◆ Final_Result PK+	◆ Final_Result AVG	

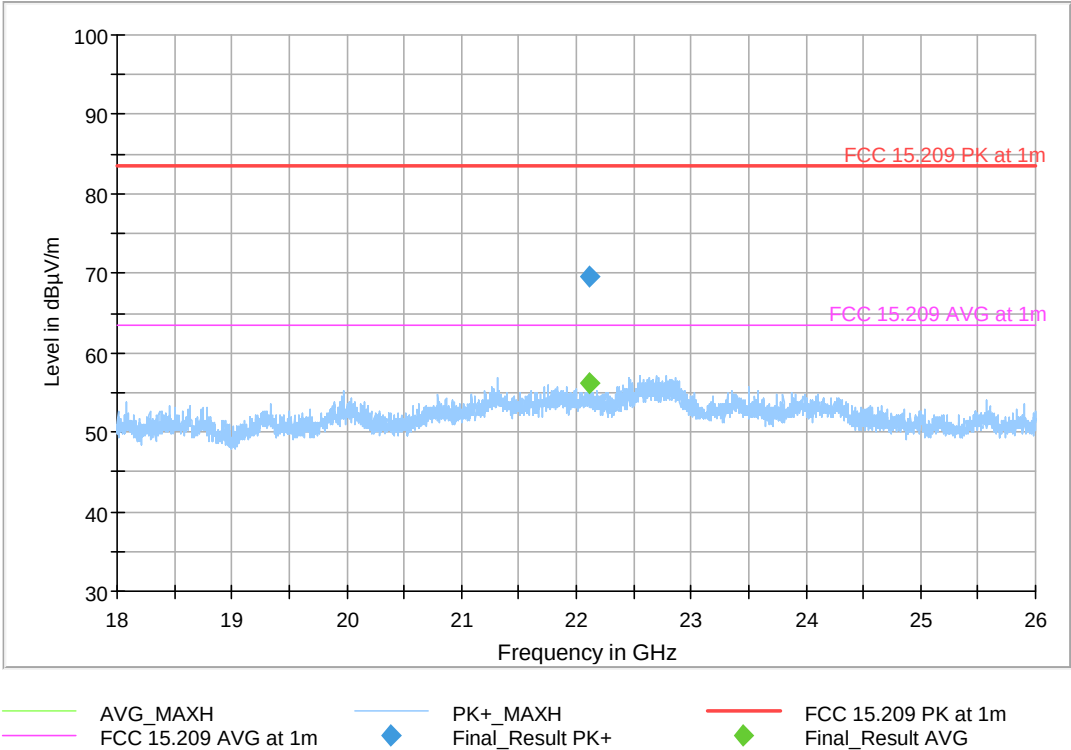
Plot 15: 18-26 GHz

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/)	Sig Path (dB)	Preamp (dB)	Trd Corr. (dB/m)
22109.734	---	56.248	63.50	7.25	500.0	1000.0	150.0	V	214.0	19.5	9.9	0.0	9.6
22109.734	69.516	---	83.50	13.98	500.0	1000.0	150.0	V	214.0	19.5	9.9	0.0	9.6

(continuation of the "Final_Result" table from column 19 ...)

Frequency (MHz)	Raw Rec (dBμV)
22109.734	36.7
22109.734	50.0



9 Test Equipment And Ancillaries Used For Testing

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
PASSIVE LOOP ANTENNA	ETS LINDGREN	6512	000164698	3 Years	09/05/2025
BILOG ANTENNA	A.H. SYSTEMS	BiLA2G	569	3 Years	09/08/2025
HORN ANTENNA	EMCO	3115	00035111	3 Years	09/04/2025
HORN ANTENNA	ETS LINDGREN	3117-PA	00167061	3 Years	09/04/2025
HORN ANTENNA	ETS LINDGREN	3116C-PA	00166821	3 Years	09/04/2025
DIGITAL THERMOMETER	Control Company	4410.90080-03	230712972	3 Years	10/18/2023
Signal Analyzer	R&S	FSV40	101022	3 Years	09/30/2025
Multimeter	Fluke	115	56090717MV	3 Years	09/25/2025
Software	EMC32	Version 10.50.40	-	-	-
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	1201.002K50-127068-mX	3 Years	10/02/2024
Notch Filter	MICRO-TRONICS	BRC50722	G051	-	-

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.

Equipment Type	Manufacturer	Model	Serial #	Calibration Cycle	Last Calibration Date
Vector Signal Generator	ROHDE & SCHWARZ	SMW 200A	14120000K02-111326-gW	-	N/A
Signal Generator	ROHDE & SCHWARZ	SMF 100A	1167.0000K02-101833-NX	3 Years	09/27/2023
Spectrum Analyzer	ROHDE & SCHWARZ	FSU	200302	3 Years	01/25/2024
Switch	ROHDE & SCHWARZ	OSP 120	100083	3 Years	12/14/2023
Vector Signal Generator	ROHDE & SCHWARZ	SMJ 100A	101173	-	N/A
Spectrum Analyzer	ROHDE & SCHWARZ	FSU	100189	3 Years	10/21/2024
RF Step Attenuator	ROHDE & SCHWARZ	RSP	100062	-	N/A
Temperature Chamber	TESTEQUITY	123H	230159	-	N/A
Digital Thermometer	Traceable	-	230713047	3 Years	10/18/2023
Software	WMS32	12.00.01	-	-	N/A

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 Test setup photos

Setup photos are included in supporting file name:
"EMC_CONTM_003_25001_FCC15247_Setup_Photos.pdf"

11 Revision History

Date	Report name	Changes to report	Prepared by
2026-01-02	EMC_CONTM_003_25001_FCC15247_BT	Initial version	Guangcheng Huang
2026-02-19	EMC_CONTM_003_25001_FCC15247_BT_Rev1	Update measurement results summary Update EUT antenna gain Update note in sec.8.2.5 Update note in sec.8.3.4 Update note in sec.8.4.4 Update limit in sec.8.6.4 Add explanation to plots in sec.8.6.5	Guangcheng Huang
2026-03-24	EMC_CONTM_003_25001_FCC15247_BT_Rev2	Update EUT trace loss and antenna gain, Compensating test results accordingly	Guangcheng Huang
2026-04-08	EMC_CONTM_003_25001_FCC15247_BT_Rev3	Align output power in note 1 in sec.8.4.4 Update 5 GHz antenna gain	Guangcheng Huang

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