

TEST REPORT

Report Number: 15496224-E6V2

Applicant : APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S. A.

Model : A3256

Brand : APPLE

FCC ID : BCG-E8949A

IC : 579C-E8949A

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 3
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2025-07-05

Prepared by:
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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-07-03	Initial Issue	David Collins
V2	2025-07-05	Addressed TCB questions on cover page, sections 1, 6.5, 6.6, 8, 9.4, 10.1.4 and 12	Tony Li

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: SMARTPHONE

MODEL: A3256

BRAND: APPLE

SERIAL NUMBER: C07HC8000910000X9N (Conducted)
HC6YLC6QDY (Radiated)

SAMPLE RECEIPT DATE: 2025-01-16

DATE TESTED: 2025-02-07 to 2025-06-21

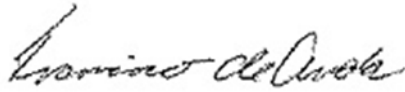
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Complies
ISED RSS-247 Issue 3	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not considered unless noted otherwise.

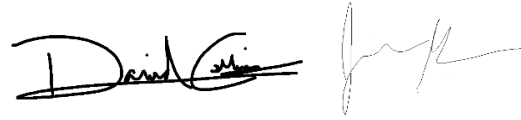
This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document.

Approved & Released For
UL Verification Services Inc. By:



Francisco de Anda
Staff Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



David Collins, Jasdeep Madar
Senior Test Engineer, Laboratory Engineer
Consumer Technology Division
UL Verification Services Inc.

2. TEST RESULT SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

Below is a list of the data provided by the customer:

1. Antenna gain and type (see section 6.3)
2. Cable loss (see section 6.3)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	RSS-GEN 6.7	26dB BW/99% OBW	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 6.2.4.2	6 dB BW	complies	None.
15.407 (a) (1-4), (h) (1)	RSS-247 6.2	Output Power	complies	None.
15.407 (a) (1-3, 5)	RSS-247 6.2	PSD	complies	None.
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 6.2	Radiated Emissions	complies	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	complies	None.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with:

- *ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024
- FCC 47 CFR Part 2
- FCC CFR 47 Part 15
- FCC KDB 414788 D01 Radiated Test Site
- FCC KDB 484596 D01 Referencing Test Data
- FCC KDB 662911 D01 Multiple Transmitter Output
- FCC KDB 789033 D02 General UNII Test Procedures New Rules
- RSS-GEN Issue 5 + A1 +A2
- RSS-247 Issue 3

*Note: The use of ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 does not deviate from the testing procedures of ANSI C63.10-2020

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☒	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
☒	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not considered when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{LAB}
Conducted Antenna Port Emission Measurement	1.94 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	1.3 dB (Pk), 0.45 dB (Ave)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

Example:

Field Strength = 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

Example:

Final Voltage = 36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5GNR1, 5GNR2, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positioning System (GPS), Near-Field Communication (NFC), Narrow-Band (NB) UNII, 802.15.4, 802.15.4ab-Narrow Band (NB), Wireless Power Transfer (WPT) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.8 GHz BAND

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8GHz Band 1TX, high power			
5728.75 – 5846.25	802.15.4ab	20.97	125.03
5.8GHz Band 1TX Low Power			
5728.75 – 5846.25	802.15.4ab	11.97	15.74

6.3. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

The antenna(s) gain and type (IFA), as provided by the manufacturer' are as follows:

Frequency Range	ANT 6	ANT 5
5728.75 – 5846.25	0.7	-6.4

Note: antenna C0 and antenna C1 indicated in power tune-up document pertain to Ant 6 and ANT 5 of this report respectively.

The SMA Cable Loss as provided by the manufacturer' are as follows:

Frequency Range	ANT 6	ANT 5
5728.75 – 5846.25	-3.2	-2.8

The cables were used for RF antenna port tests that had been offset to the test equipment during testing.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware is Luck23A256.

6.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z on ANT 6 (ANT 0) and ANT 5 (ANT 1). It was determined that Y (Landscape) orientation was the worst-case orientation for ANT 6 and ANT 5.

There are 3 index on this 802.15.4ab technology with data rate on index 1, 250Kbps, index 2, 500Kbps and index 3, 1000Kbps. All data rate was investigated, and the worst case was determined based on the highest power on PSD and Index 1, 250Kbps determined to be the worst case.

For radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-40GHz, and power line conducted emissions were performed with the EUT set at the worst-case scenario.

Below 1GHz tests were performed with EUT connected to AC power adapter as the worst case; and for above 1GHz, the worst-case configuration reported was tested with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop. There were no emissions found below 30MHz within 20dB of the limit.

Note: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using free space impedance of 377 Ohms. For example, the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y-51.5 = Z$ dBuA/m, which has the same margin, W dB to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

Simultaneous transmission with Bluetooth was investigated, and no noticeable emission was found.

For radiated bandedge and emissions spurious, 250Kbps is set as the worst-case data rates for final test

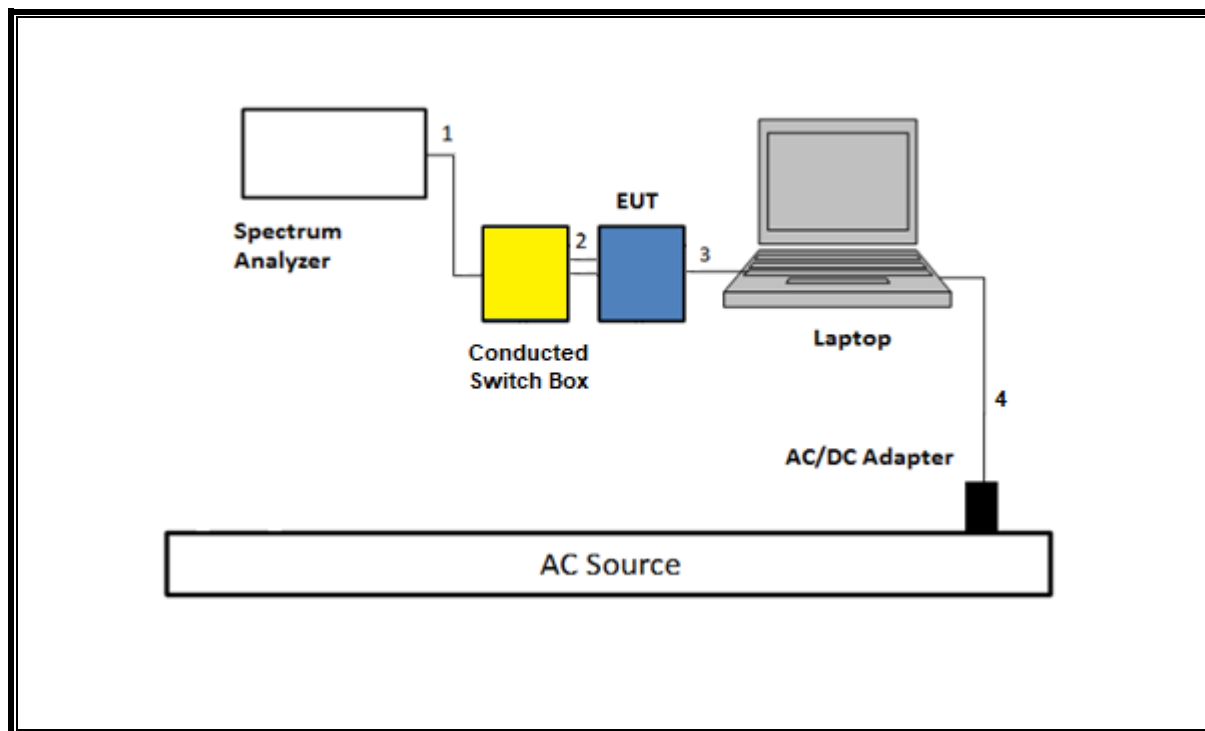
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop		Apple	Macbook Pro	C02VD7SAHV22		BCGA1708
Laptop AC/DC adapter		Liteon Technology	A1424	NSW25679		DoC
EUT AC/DC adapter		Apple	A1720	C3D8417A7R93KVPA8		DoC
RF Device, Switch (Conducted Switch Box)		UL	n/a	262287		N/A
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	SMA	1	SMA	Shielded	0.2	To spectrum Analyzer
2	Antenna	1	SMA	Shielded	0.2	EUT to Switchbox
3	USB	1	USB-C	Shield	1.0	N/A
4	DC	1	DC	Shield	2.0	N/A
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	DC	Shielded	2	N/A
2	USB	1	USB-C	Shielded	1	N/A

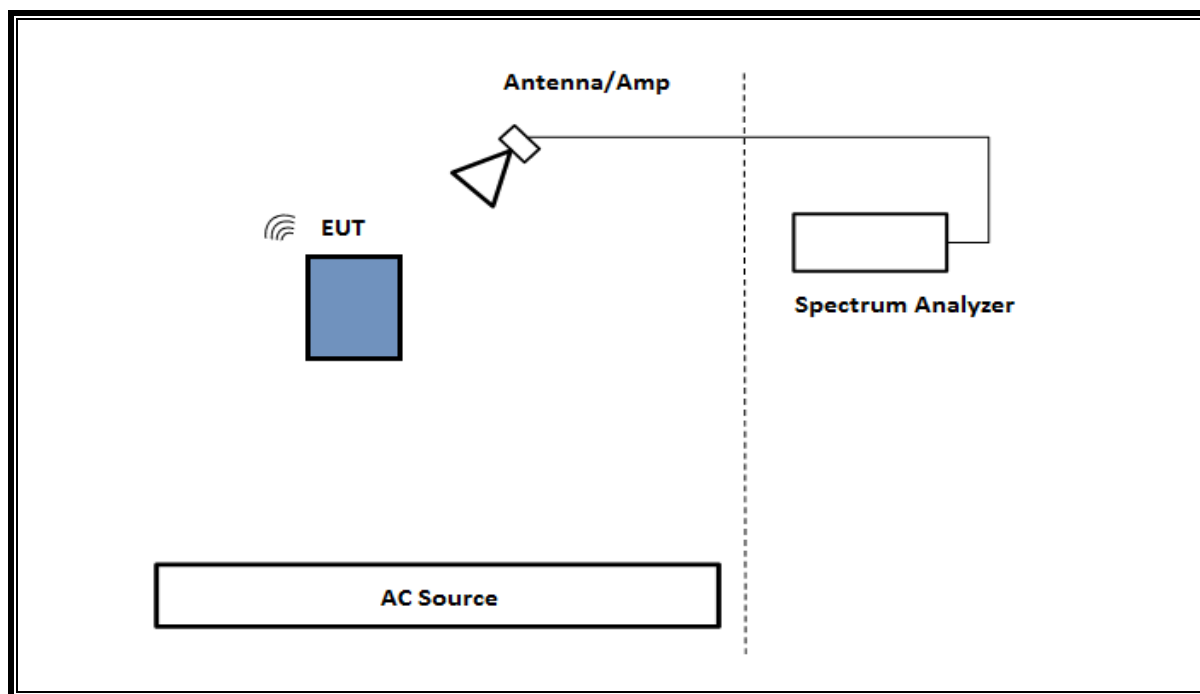
TEST SETUP

The EUT setup is shown as below. Test software exercised the radio card.

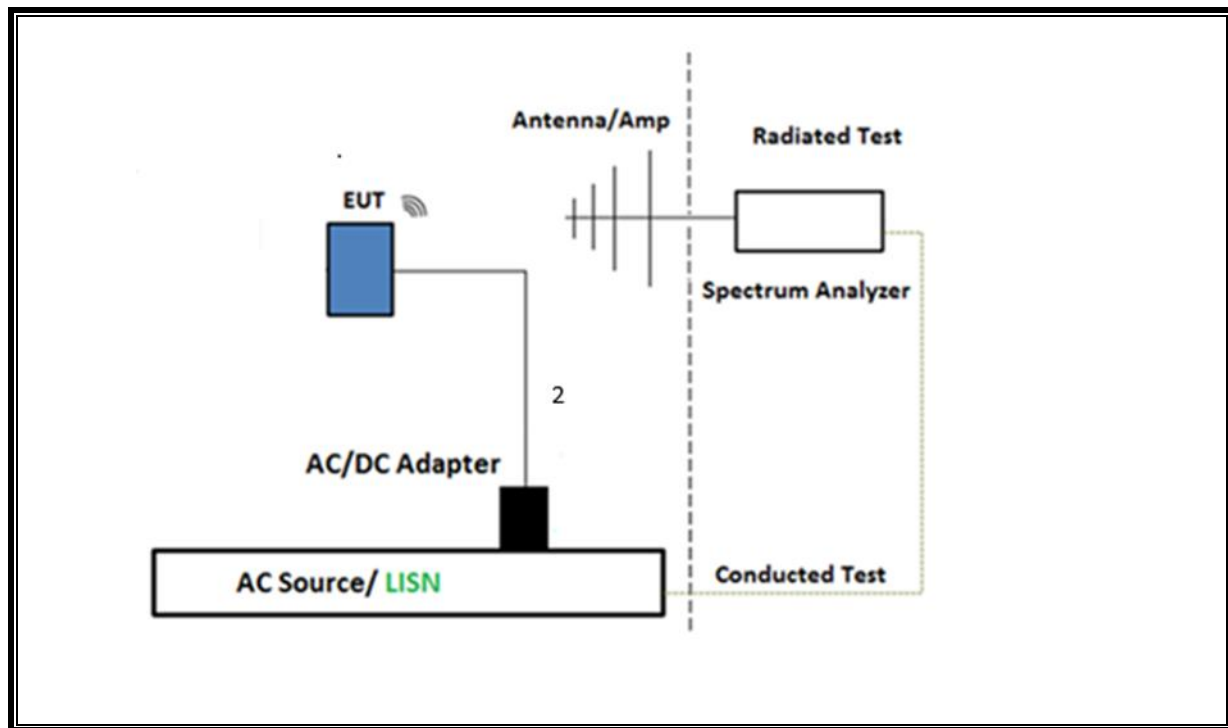
SETUP DIAGRAM FOR CONDUCTED TESTS



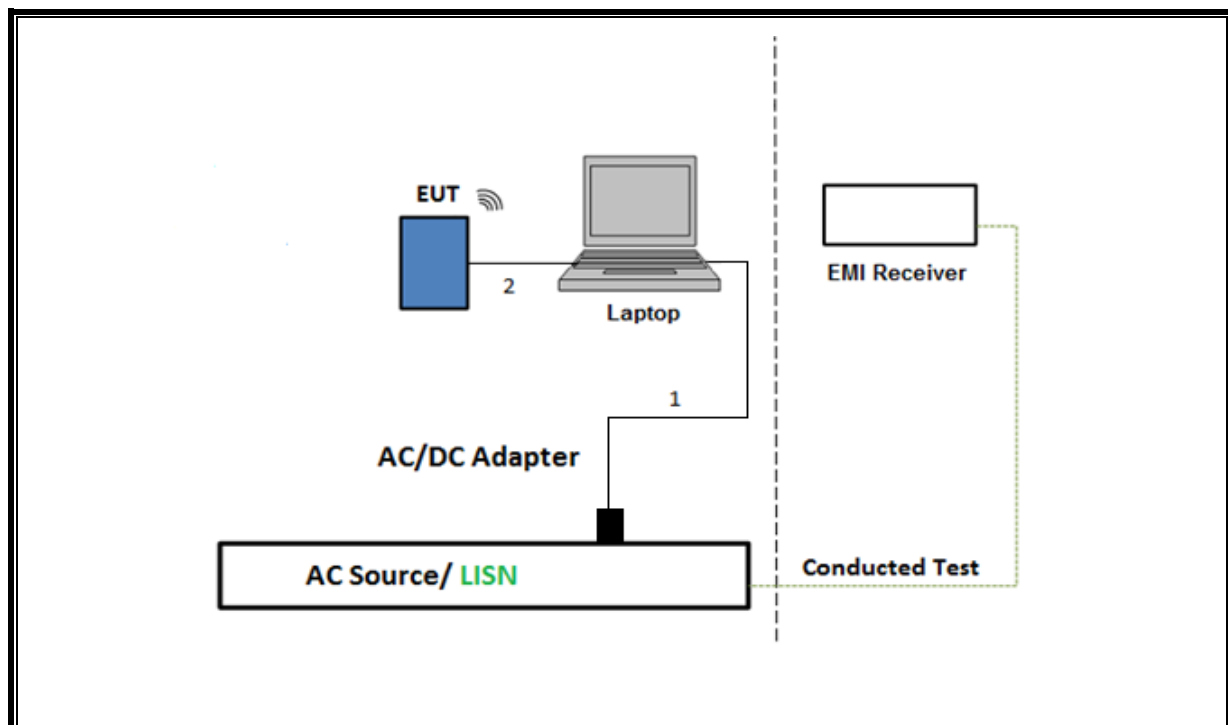
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02, Section B.

6 dB Emission BW: KDB 789033 D02, Section C.2

26 dB Emission BW: KDB 789033 D02, Section C.1

99% Occupied BW: KDB 789033 D02, Section D.

Conducted Output Power: KDB 789033 D02

Power Spectral Density: KDB 789033 D02, Section F

Unwanted emissions in restricted bands: KDB 789033 D02, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02, Sections G.3, G.4, and G.5.

AC Power Line Conducted Emissions: ANSI C63.10-2020, Section 6.2.

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2020 Section 6.4

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	ID Num	Cal Due
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84796	2026-10-31
RF Filter Box, 1-18GHz	UL-FR1		230878	2026-05-31
EMI Test Receiver	Rohde & Schwarz	ESW44	191428	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84797	2026-10-31
RF Filter Box, 1-18GHz	UL-FR1	Rats 2.0	225079	2025-05-31
EMI Test Receiver	Rohde & Schwarz	ESW44	235670	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80402	2025-07-31
RF Filter Box, 1-18GHz	UL-FR1	Frankenstein	216812	2026-01-31
EMI Test Receiver	Rohde & Schwarz	ESW44	230548	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80430	2026-09-30
RF Filter Box, 1-18GHz	UL-FR1	F2A	224478	2026-01-31
EMI Test Receiver	Rohde & Schwarz	ESW44	201499	2026-02-28
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	90238	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Keysight Technologies Inc	N9030A	80400	2026-01-31
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90718	2026-03-31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	257704	2026-03-31
RF Device, Switch (Conducted Switch Box)	UL	CSB	245262	2026-04-30
RF Device, Switch (Conducted Switch Box)	UL	CSB	262287	2026-04-30
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172353	2025-08-31
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	220194	2026-04-29
Antenna, Horn 26.5-40GHz	A.R.A.	MWH-2640/B	81105	2025-08-31
Link File, RF Amplifier Assembly, 26.5-40GHz, 65dB Gain	Amplical	AMP26G40-65	220193	2026-04-30
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170013	2025-07-31
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	2025-07-31
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	171863	2026-11-30
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	224490	2026-05-06

AC Line Conducted				
Description	Manufacturer	Model	ID Num	Cal Due
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	171646	2026-02-28
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175765	2026-01-31
Transient Limiter	TE	TBFL1	207996	2025-09-30
UL AUTOMATION SOFTWARE				

Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023
Conducted Software	UL	UL EMC	2020.8.16
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

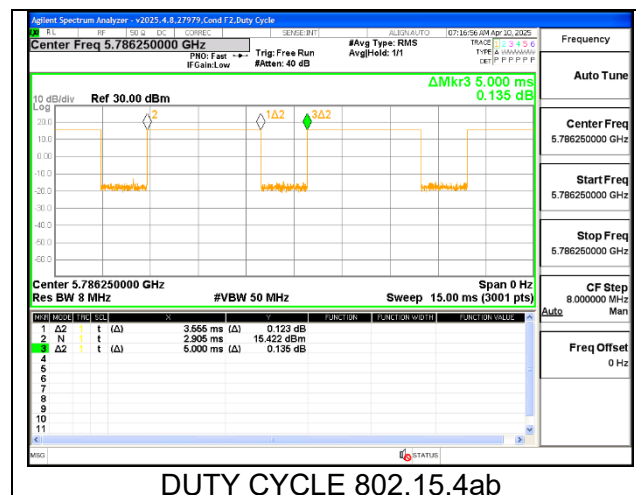
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time T (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.15.4ab						
5728.75MHz (UNII-3)	3.555	5.000	0.711	71.1	1.48	0.281

DUTY CYCLE PLOT



9.2. 99% AND 26 dB BANDWIDTH

LIMITS

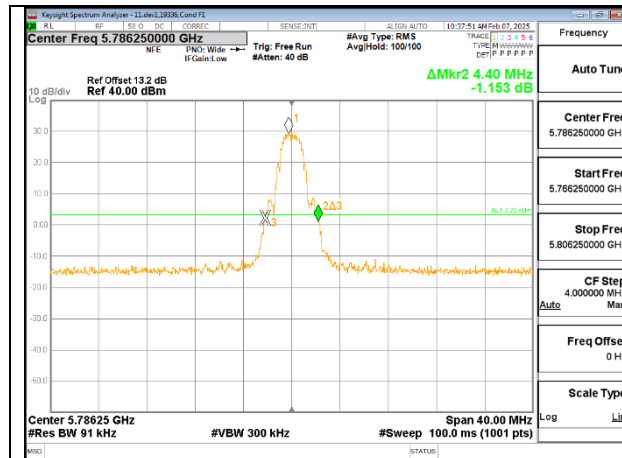
None; for reporting purposes only.

RESULTS

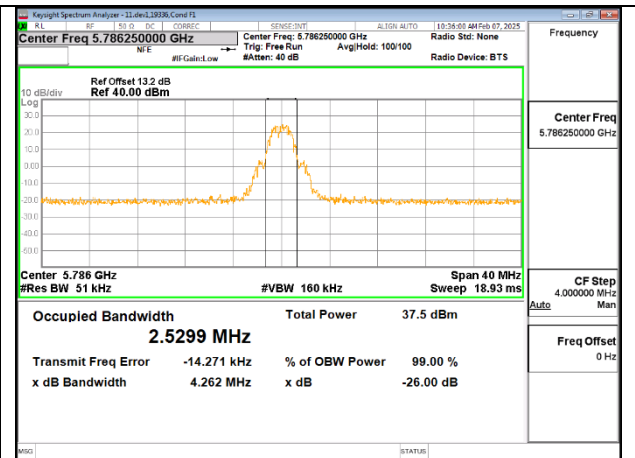
Only High Power modes result is reported, it covers all Low Power modes. Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

1TX Antenna 6 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5728.75	4.36	2.4939
Mid	5786.25	4.40	2.5299
High	5846.25	4.36	2.5652



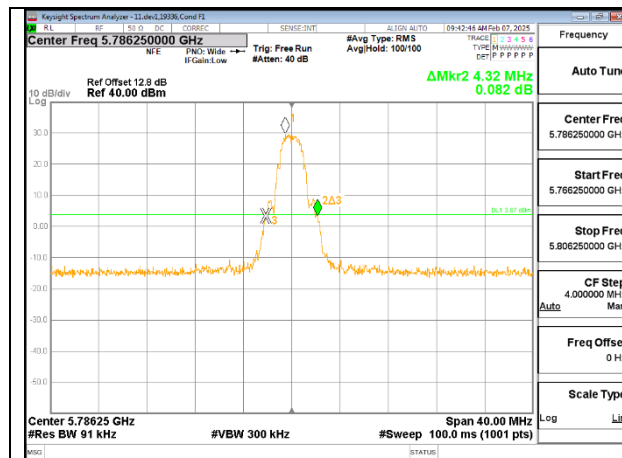
MID CHANNEL 26dB



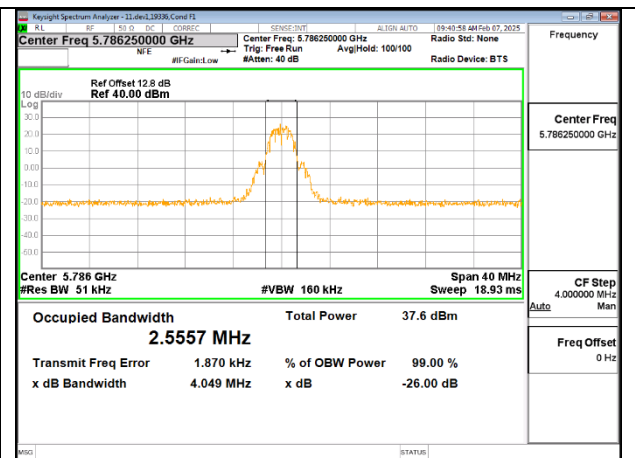
MID CHANNEL 99%

1TX Antenna 5 MODE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5728.75	4.36	2.5021
Mid	5786.25	4.32	2.5557
High	5846.25	4.36	2.5151



MID CHANNEL 26dB



MID CHANNEL 99%

9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 6.2.4.2

The minimum 6 dB bandwidth shall be at least 500 kHz.

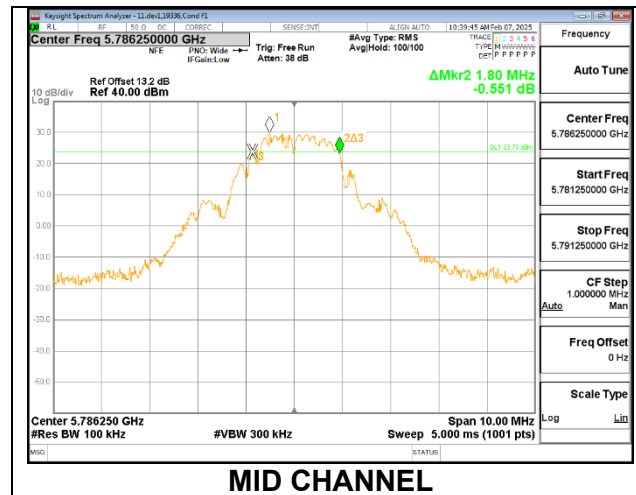
RESULTS

Only High-Power modes result is reported, it covers all Low Power modes

Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

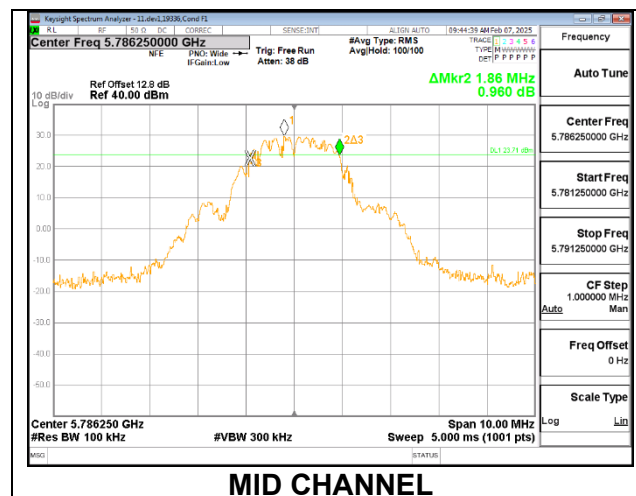
1TX Antenna 6 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5728.75	1.863	0.5
Mid	5786.25	1.800	0.5
High	5846.25	1.860	0.5



1TX Antenna 5 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5728.75	1.806	0.5
Mid	5786.25	1.860	0.5
High	5846.25	1.820	0.5



9.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

RSS-247

Band 5.725-5.85 GHz

The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02, Section E.3 b. Method PM-G.

The measurement method used for power spectral density is KDB 789033 D02, Section F.

Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

9.4.1. HIGH POWER

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	28161
Test Date:	2025/06/21

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5728.75	0.70	30.00	30.00
Mid	5786.25	0.70	30.00	30.00
High	5846.25	0.70	30.00	30.00

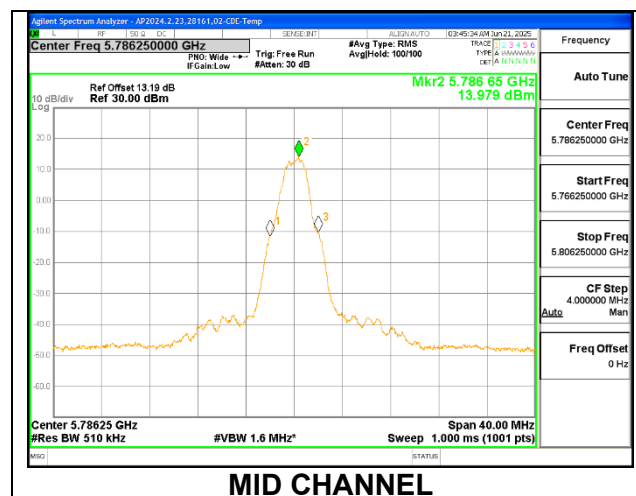
Duty Cycle CF (dB)	1.48	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5728.75	18.95	18.95	30.00	-11.05
Mid	5786.25	18.90	18.90	30.00	-11.10
High	5846.25	18.93	18.93	30.00	-11.07

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5728.75	13.636	15.116	30.00	-14.88
Mid	5786.25	13.979	15.459	30.00	-14.54
High	5846.25	13.620	15.100	30.00	-14.90



1TX Antenna 5 MODE (FCC+IC)

Test Engineer:	28161
Test Date:	2025/06/21

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5728.75	-6.40	30.00	30.00
Mid	5786.25	-6.40	30.00	30.00
High	5846.25	-6.40	30.00	30.00

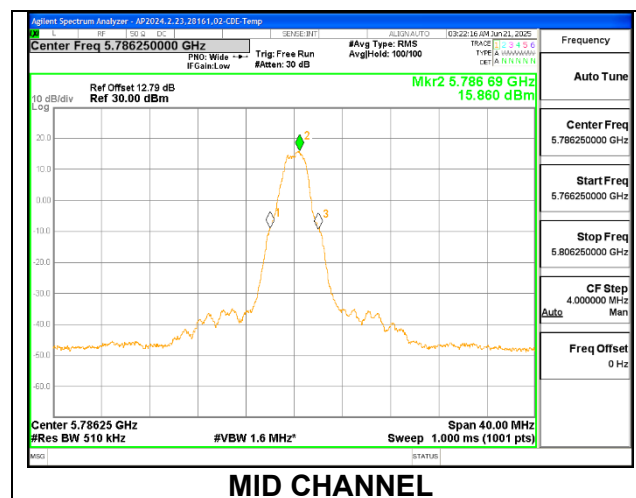
Duty Cycle CF (dB)	1.48	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5728.75	20.97	20.97	30.00	-9.03
Mid	5786.25	20.91	20.91	30.00	-9.09
High	5846.25	20.92	20.92	30.00	-9.08

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5728.75	15.766	17.246	30.00	-12.75
Mid	5786.25	15.860	17.340	30.00	-12.66
High	5846.25	15.760	17.240	30.00	-12.76



9.4.2. LOW POWER

1TX Antenna 6 MODE (FCC+IC)

Test Engineer:	28161
Test Date:	2025/06/21

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5728.75	0.70	30.00	30.00
Mid	5786.25	0.70	30.00	30.00
High	5846.25	0.70	30.00	30.00

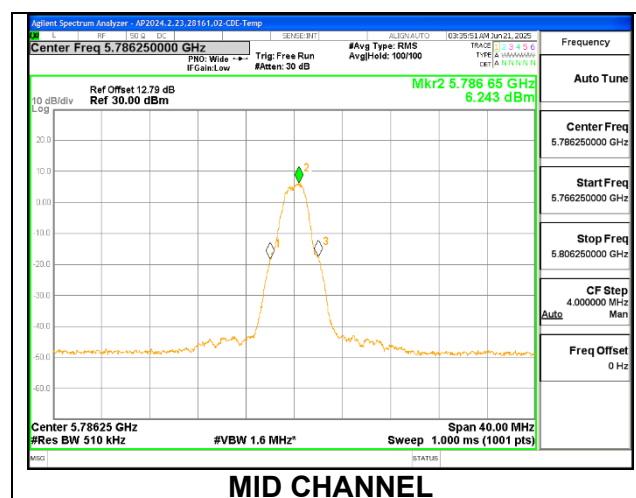
Duty Cycle CF (dB)	1.48	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5728.75	11.97	11.97	30.00	-18.03
Mid	5786.25	11.94	11.94	30.00	-18.06
High	5846.25	11.95	11.95	30.00	-18.05

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5728.75	6.446	7.926	30.00	-22.07
Mid	5786.25	6.243	7.723	30.00	-22.28
High	5846.25	6.059	7.539	30.00	-22.46



1TX Antenna 5 MODE (FCC+IC)

Test Engineer:	28161
Test Date:	2025/06/21

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5728.75	-6.40	30.00	30.00
Mid	5786.25	-6.40	30.00	30.00
High	5846.25	-6.40	30.00	30.00

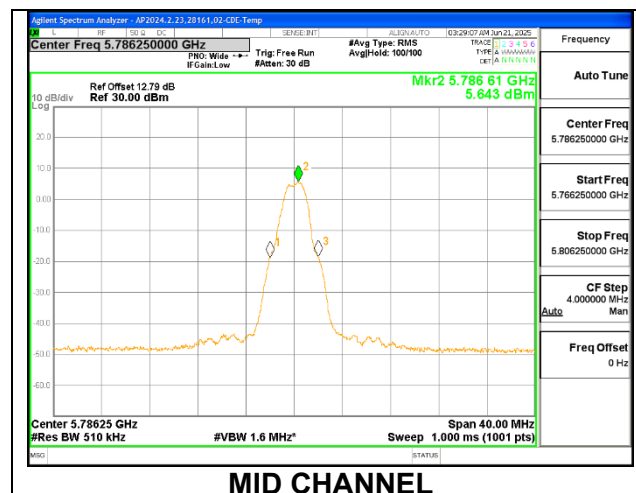
Duty Cycle CF (dB)	1.48	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5728.75	10.91	10.91	30.00	-19.09
Mid	5786.25	10.98	10.98	30.00	-19.02
High	5846.25	10.96	10.96	30.00	-19.04

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5728.75	5.847	7.327	30.00	-22.67
Mid	5786.25	5.643	7.123	30.00	-22.88
High	5846.25	5.488	6.968	30.00	-23.03



10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 -Restricted bands
FCC §15.407(b)(1-3) -Un-Restricted bands
RSS 247 Issue 3 Section
6.2.4.3 (for 5725-5850 MHz band)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 1GHz and 18GHz to 40 GHz is investigated with the transmitter set to transmit at the channel with highest output power as worst-case scenario. 1GHz to 18GHz was set to the lowest, middle, and highest channels in the 5 GHz bands.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only. Blue color trace on plots: Parallel orientation. Green color trace on plots: Perpendicular orientation.

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

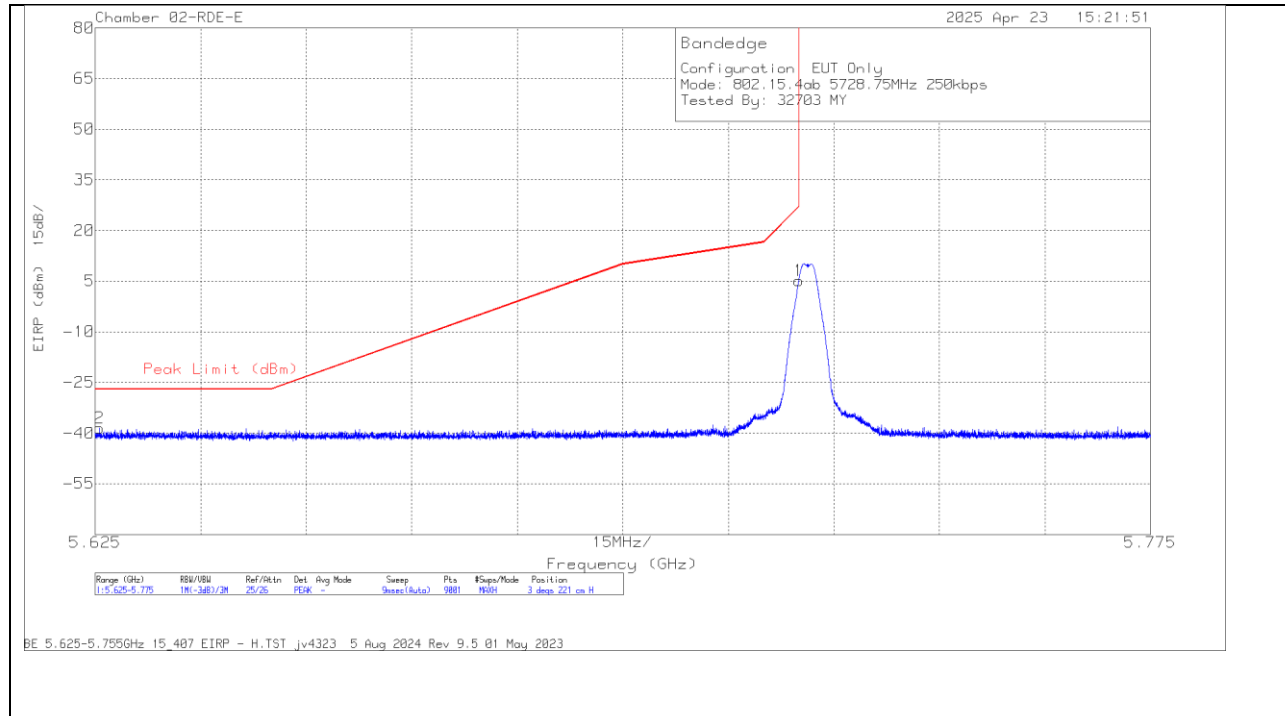
RESULTS

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. UNII-3, ANT 6, 250Kbps HIGH POWER BAND EDGE IN THE 5.8 GHz BAND

BANDEDGE (LOW CHANNEL)

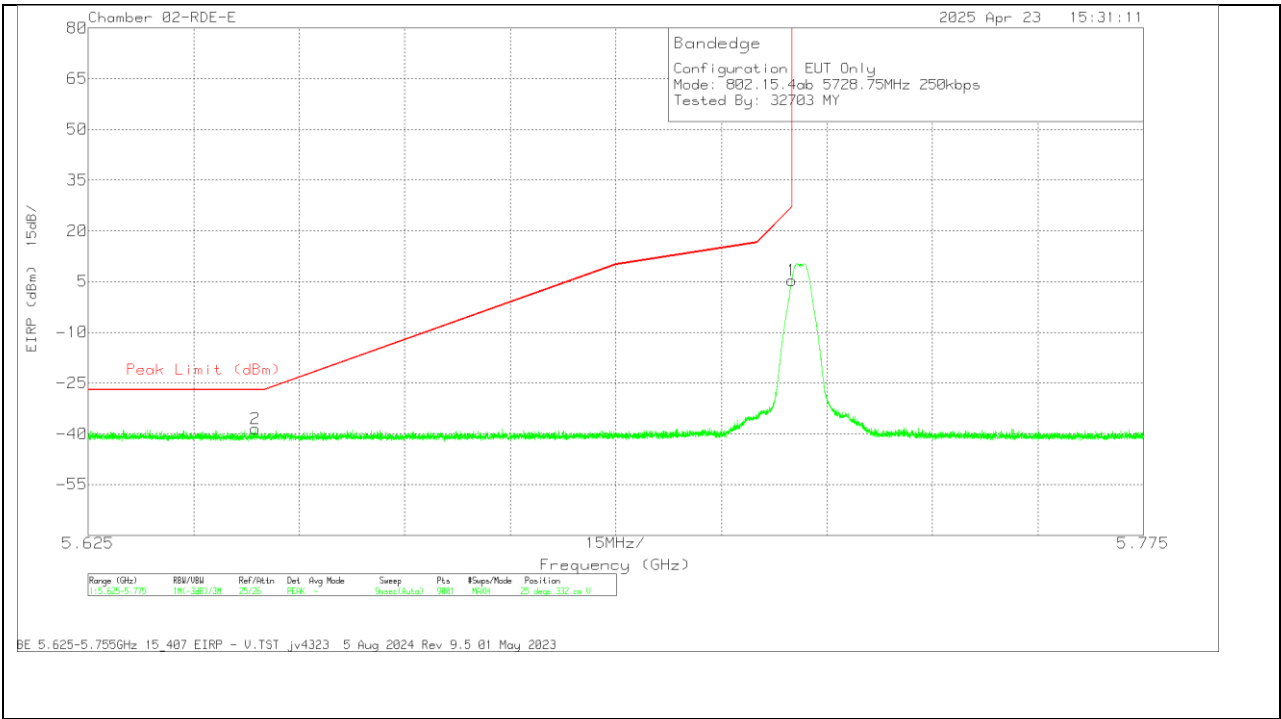
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.6256	-48.4	Pk	35.2	11.8	0	-37.05	-38.45	-27	-11.45	3	221	H
1	5.725	-4.81	Pk	35	11.8	0	-36.76	5.23	27	-21.77	3	221	H

Pk - Peak detector

VERTICAL RESULT

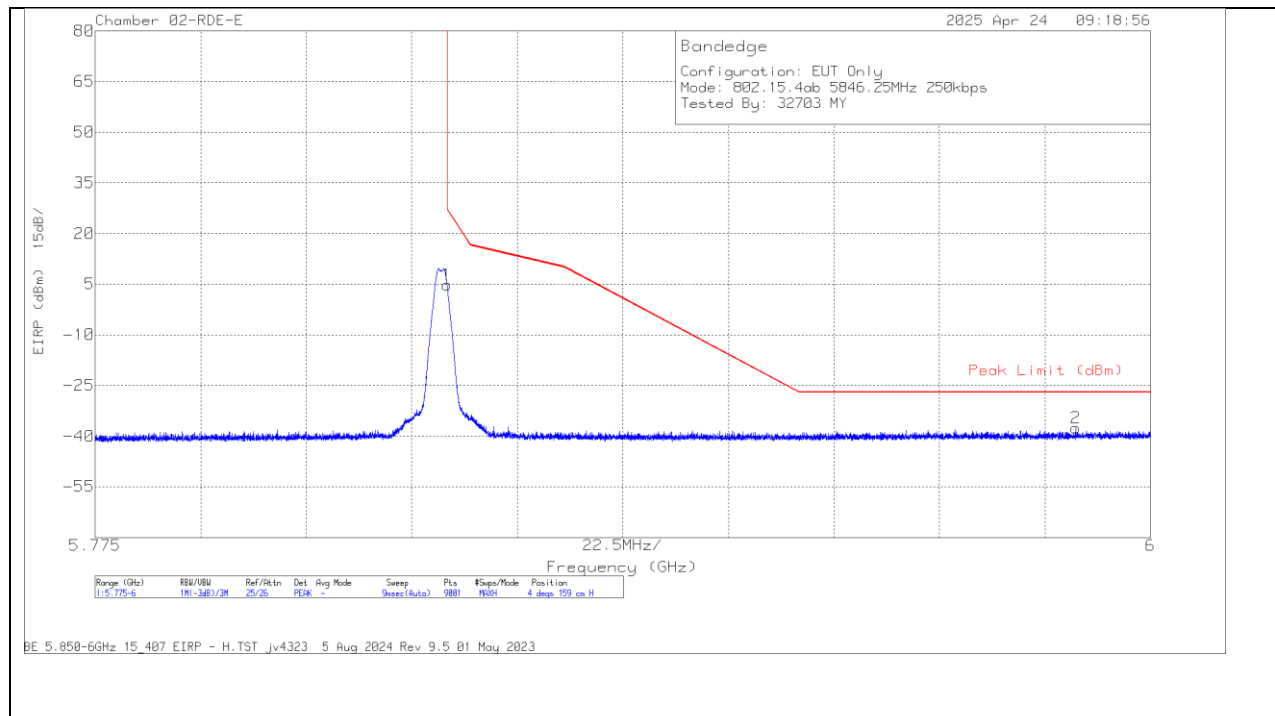


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.648767	-48.43	Pk	35.1	11.8	0	-37.03	-38.56	-27	-11.56	25	332	V
1	5.725	-4.62	Pk	35	11.8	0	-36.76	5.42	27	-21.58	25	332	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

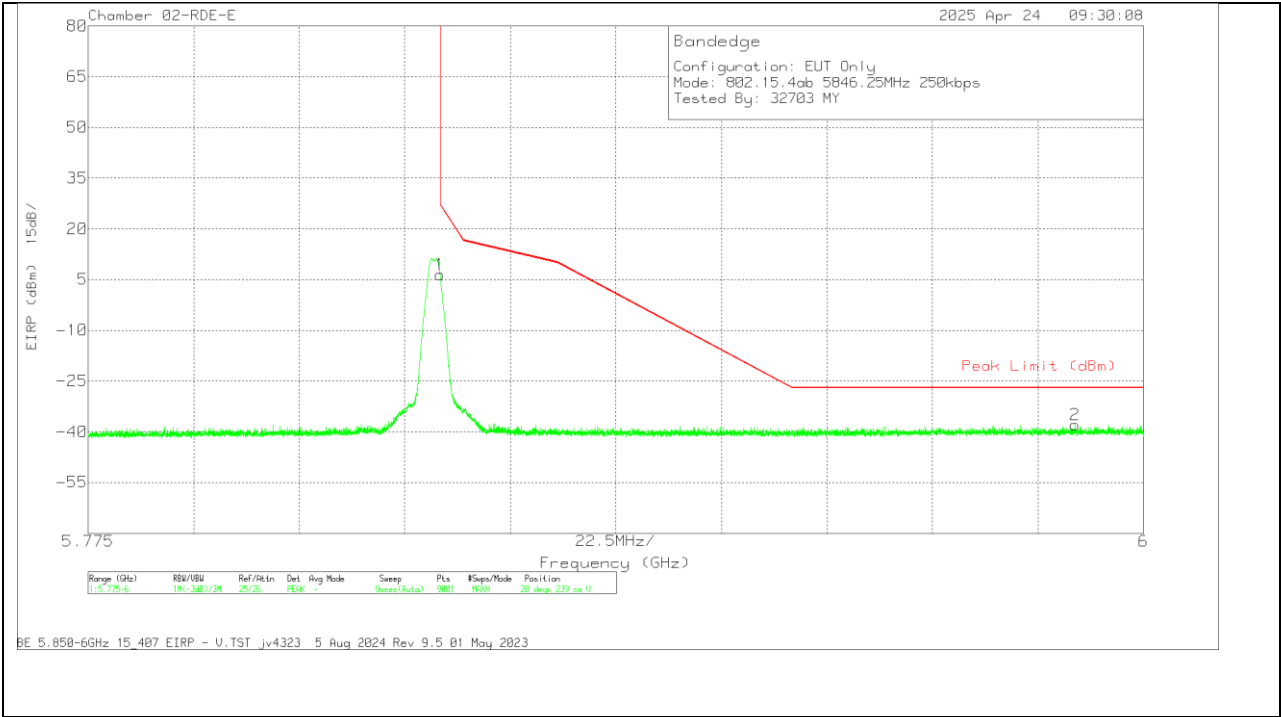
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-5.82	Pk	35.1	11.8	0	-36.3	4.78	27	-22.22	4	159	H
2	5.9841	-48.79	Pk	35.3	11.8	0	-35.86	-37.55	-27	-10.55	4	159	H

Pk - Peak detector

VERTICAL RESULT

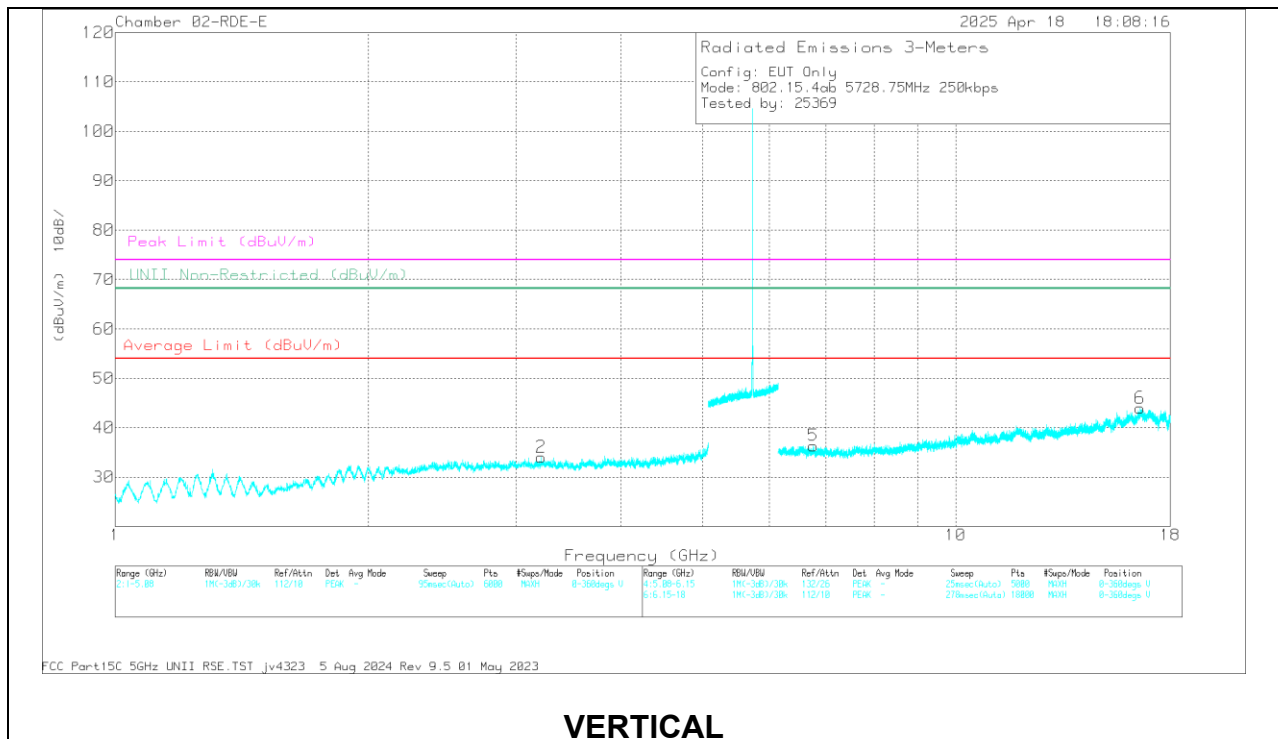
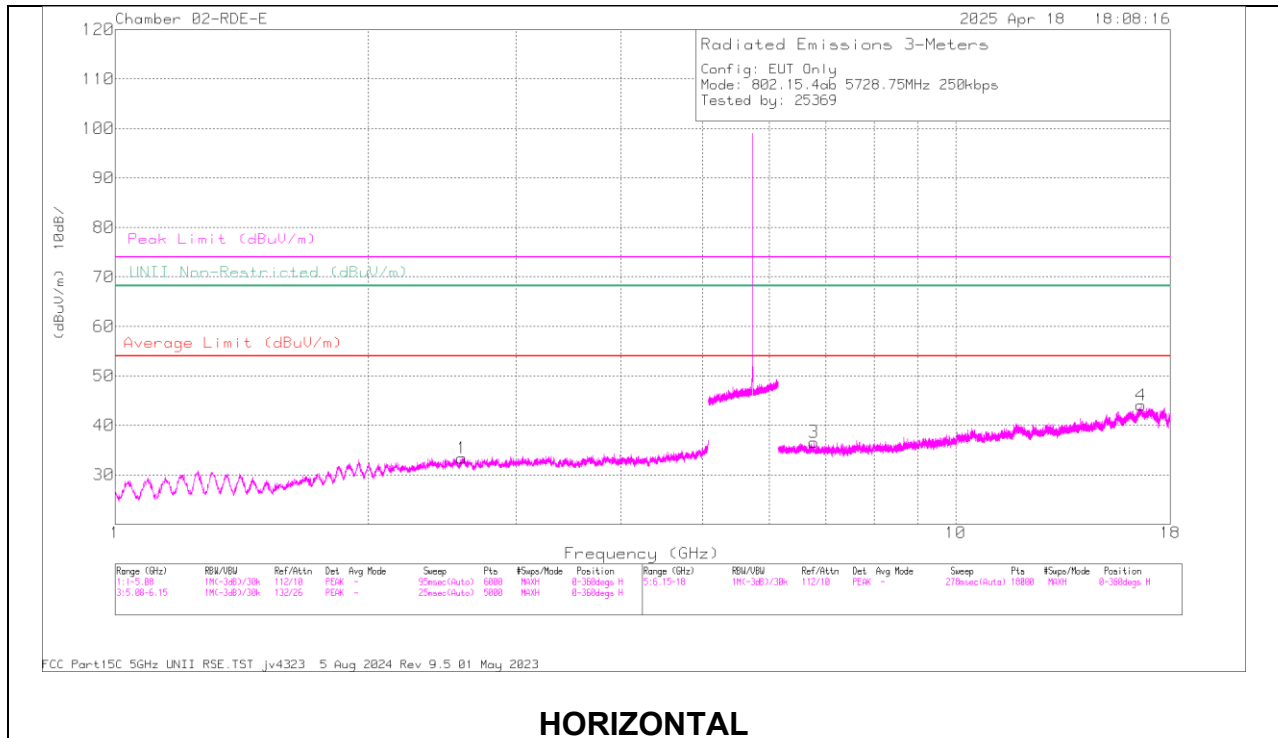


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-4.1	Pk	35.1	11.8	0	-36.3	6.5	27	-20.5	20	239	V
2	5.9854	-49.17	Pk	35.3	11.8	0	-35.83	-37.9	-27	-10.9	20	239	V

Pk - Peak detector

10.1.2. UNII-3, ANT 6, 250Kbps HIGH POWER HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



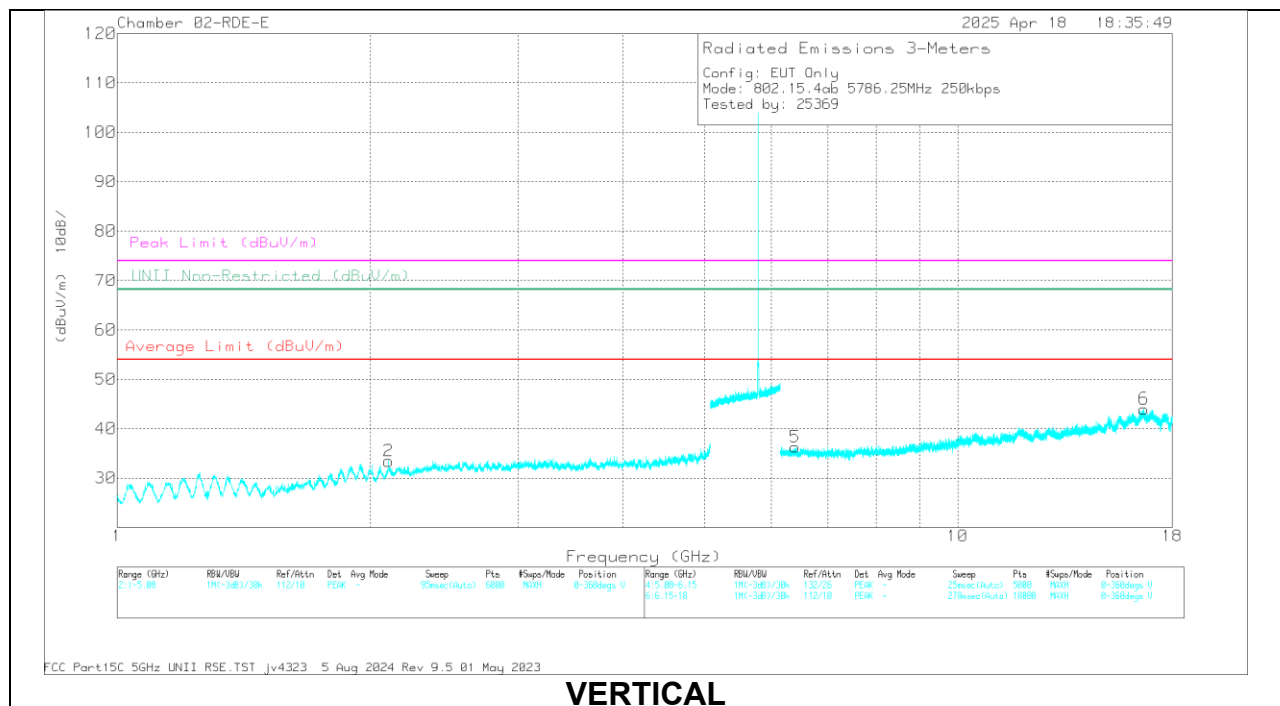
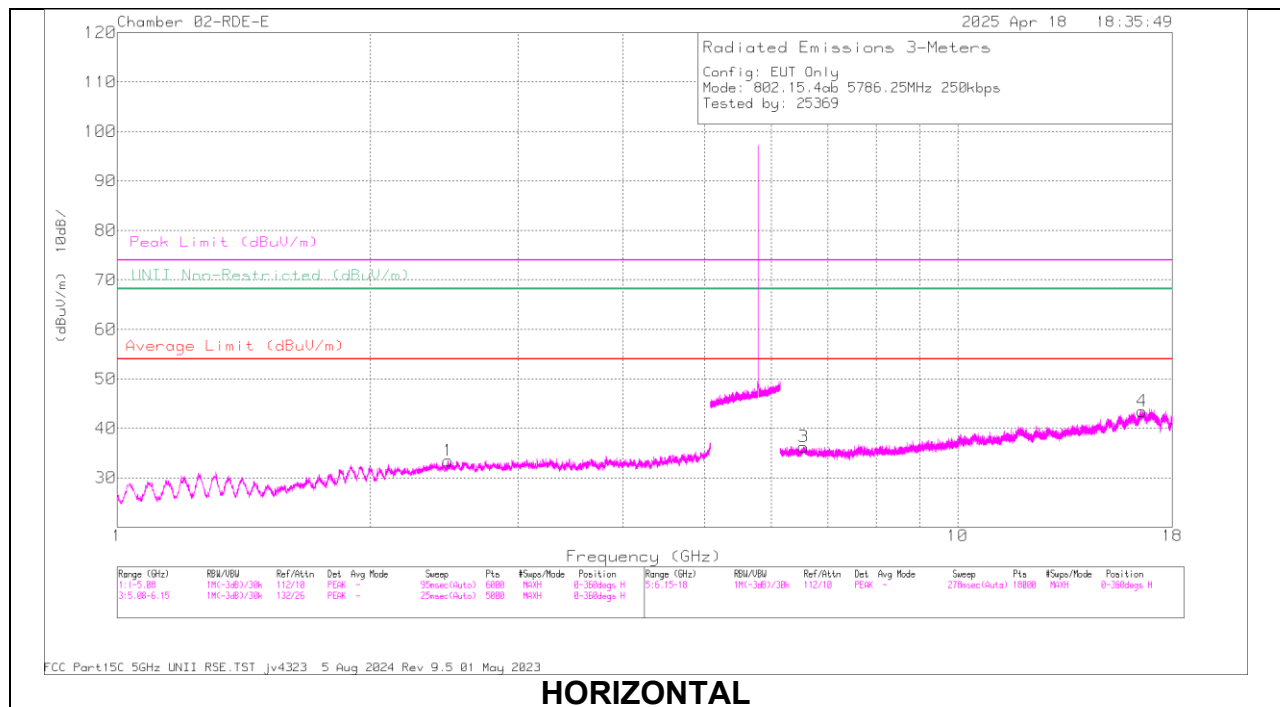
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.585175	59.15	PK-U	32.6	0	-48.88	42.87	68.2	-25.33	0	101	H
2	3.210871	57.35	PK-U	33	0	-47.09	43.26	68.2	-24.94	0	199	V
5	6.770006	53.68	PK-U	35.8	0	-44.18	45.3	68.2	-22.9	0	198	V
3	6.779833	53.97	PK-U	35.8	0	-44.16	45.61	68.2	-22.59	0	199	H
6	16.581497	51.74	PK-U	41.8	0	-41.06	52.48	68.2	-15.72	0	101	V
4	16.615009	50.99	PK-U	41.9	0	-41.03	51.86	68.2	-16.34	0	101	H

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS

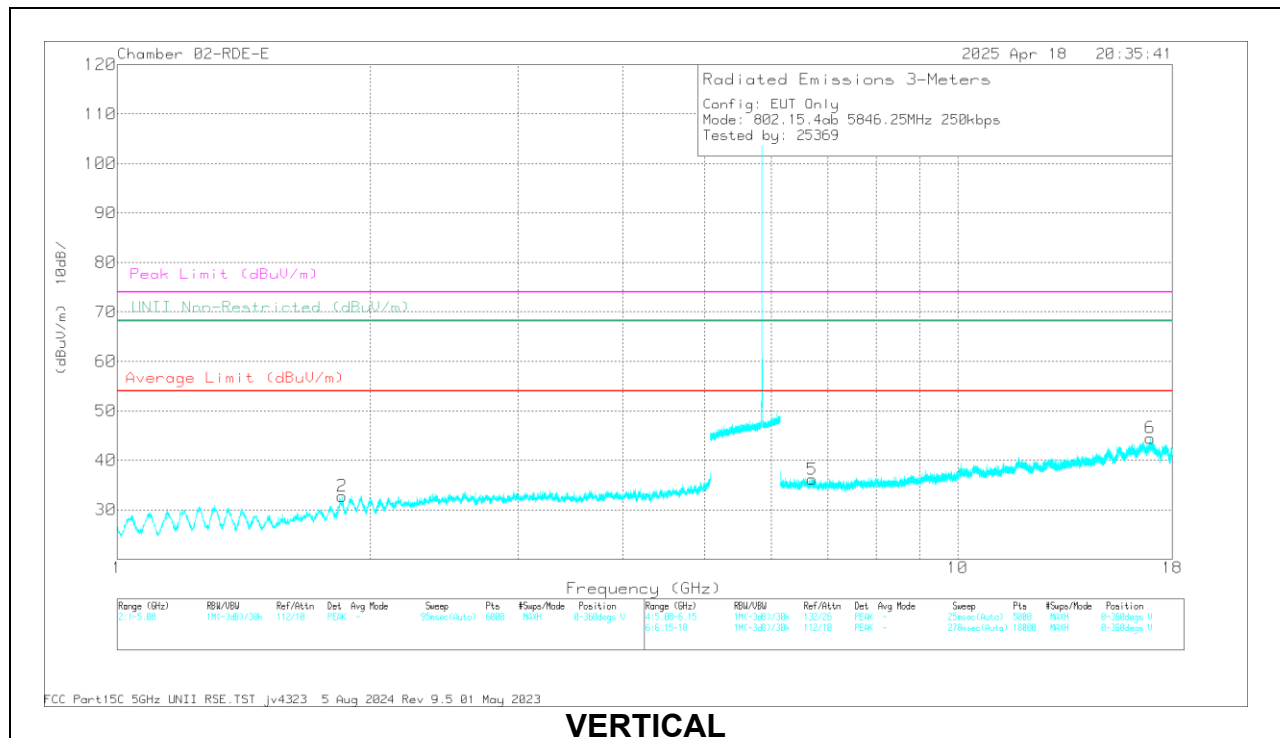
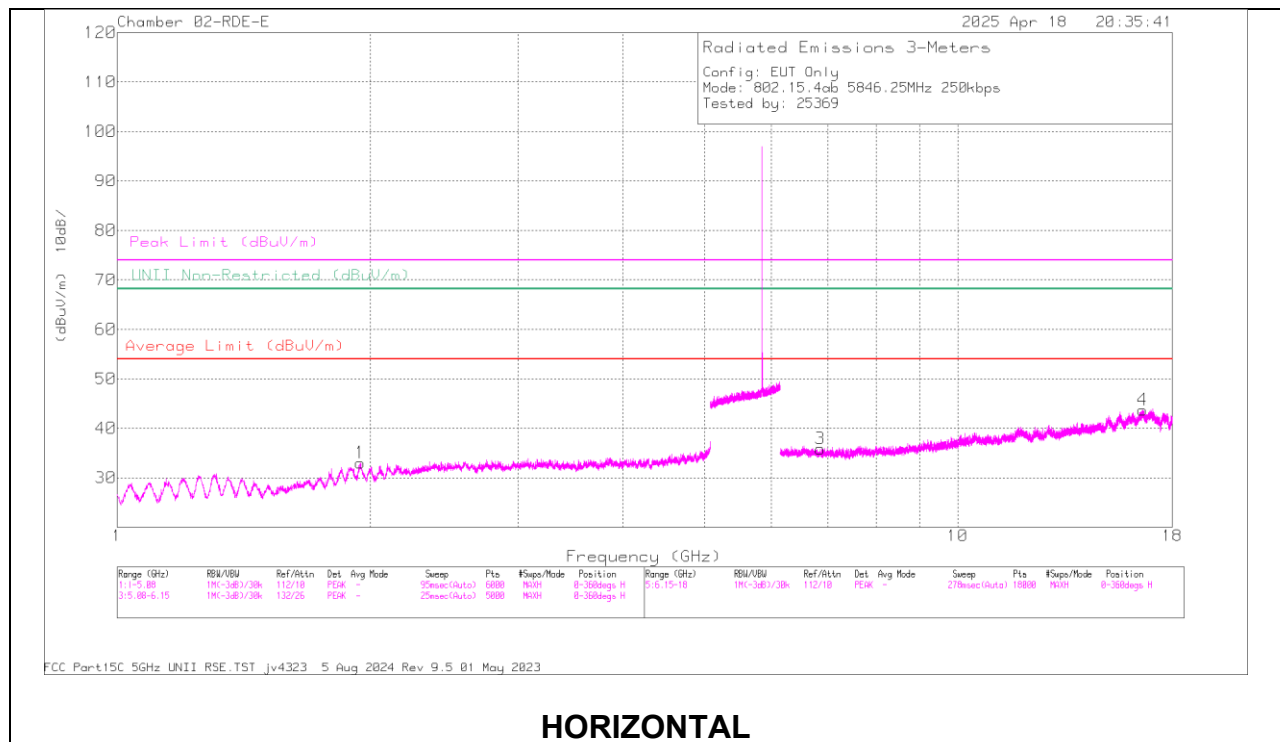


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.10295	60.01	PK-U	31.4	0	-49.21	42.2	68.2	-26	1	200	V
1	2.473677	59.44	PK-U	32.4	0	-49.1	42.74	68.2	-25.46	1	200	H
5	6.401491	54.48	PK-U	35.6	0	-43.97	46.11	68.2	-22.09	1	101	V
3	6.555813	54.37	PK-U	35.7	0	-43.71	46.36	68.2	-21.84	1	200	H
4	16.577696	50.99	PK-U	41.8	0	-40.98	51.81	68.2	-16.39	1	101	H
6	16.653038	51.8	PK-U	42	0	-41.29	52.51	68.2	-15.69	1	101	V

PK-U - U-NII: Maximum Peak

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

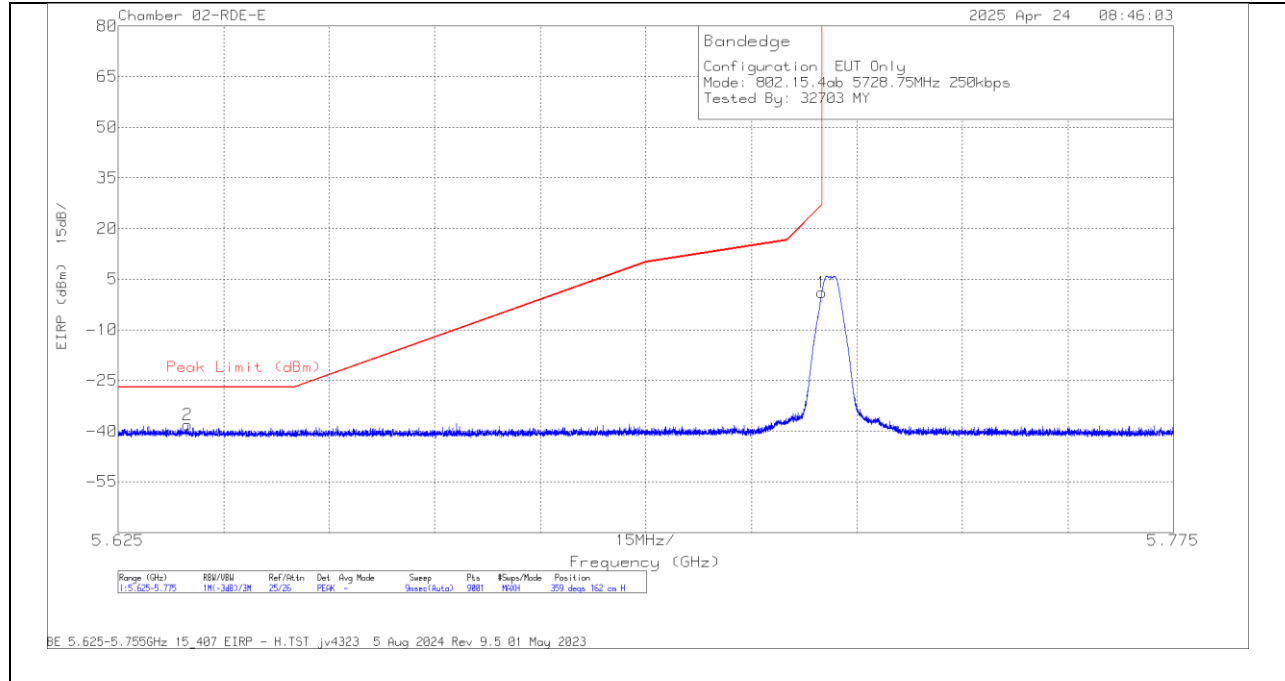
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	1.849429	61.31	PK-U	30.8	0	-49.42	42.69	68.2	-25.51	0	101	V
1	1.946074	60.39	PK-U	31.2	0	-48.96	42.63	68.2	-25.57	0	200	H
5	6.715423	53.88	PK-U	35.8	0	-44.08	45.6	68.2	-22.6	0	101	V
3	6.863754	54.07	PK-U	35.8	0	-44.38	45.49	68.2	-22.71	0	101	H
4	16.60131	51.45	PK-U	41.9	0	-40.82	52.53	68.2	-15.67	0	101	H
6	16.950577	51.75	PK-U	42	0	-41.29	52.46	68.2	-15.74	0	101	V

PK-U - U-NII: Maximum Peak

10.1.3. UNII-3, ANT 6, 250Kbps LOW POWER BAND EDGE IN THE 5.8 GHz BAND

BANDEDGE (LOW CHANNEL)

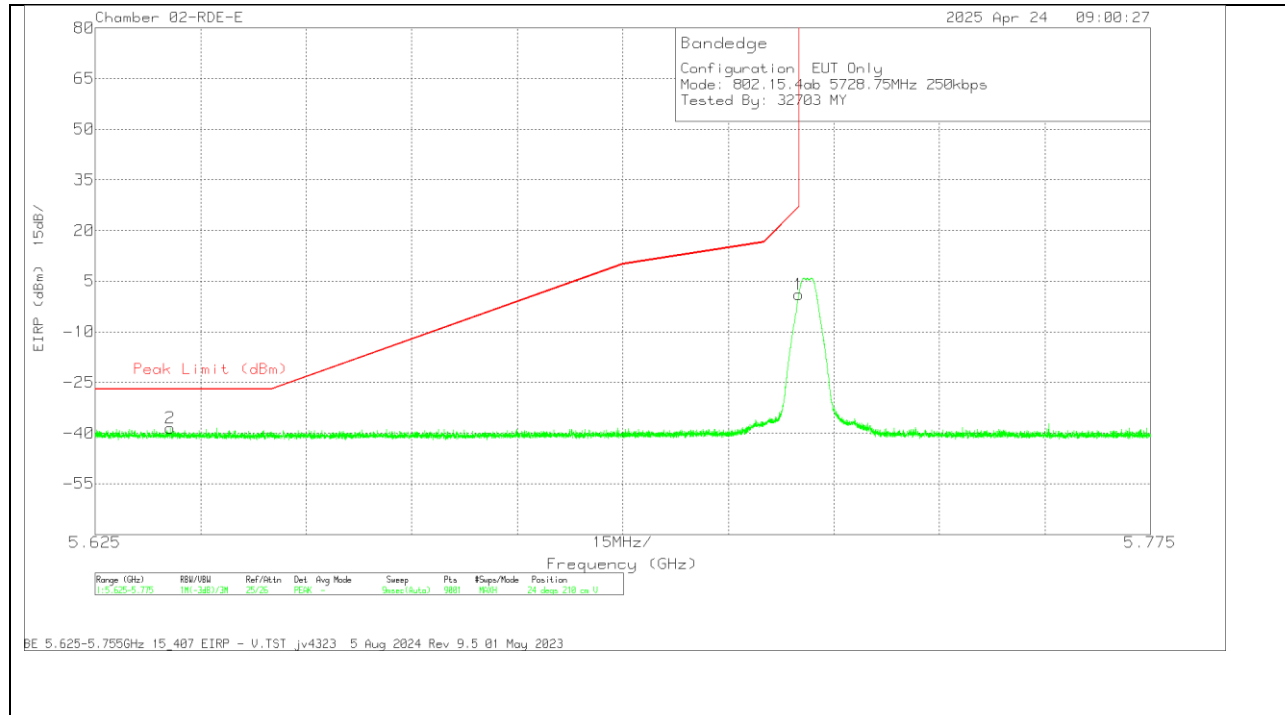
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.634834	-47.89	Pk	35.1	11.8	0	-37.05	-38.04	-27	-11.04	359	162	H
1	5.725	-9.01	Pk	35	11.8	0	-36.76	1.03	27	-25.97	359	162	H

Pk - Peak detector

VERTICAL RESULT

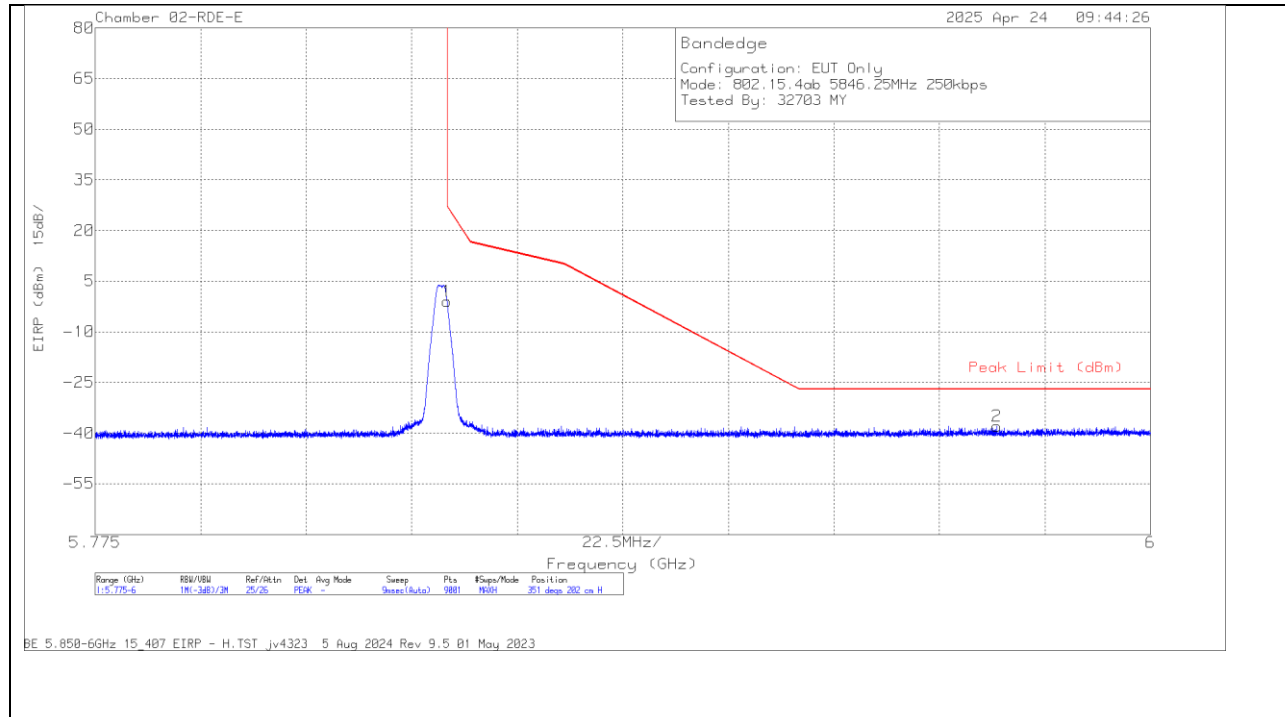


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.635634	-48.29	Pk	35.1	11.8	0	-37.04	-38.43	-27	-11.43	24	210	V
1	5.725	-8.89	Pk	35	11.8	0	-36.76	1.15	27	-25.85	24	210	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

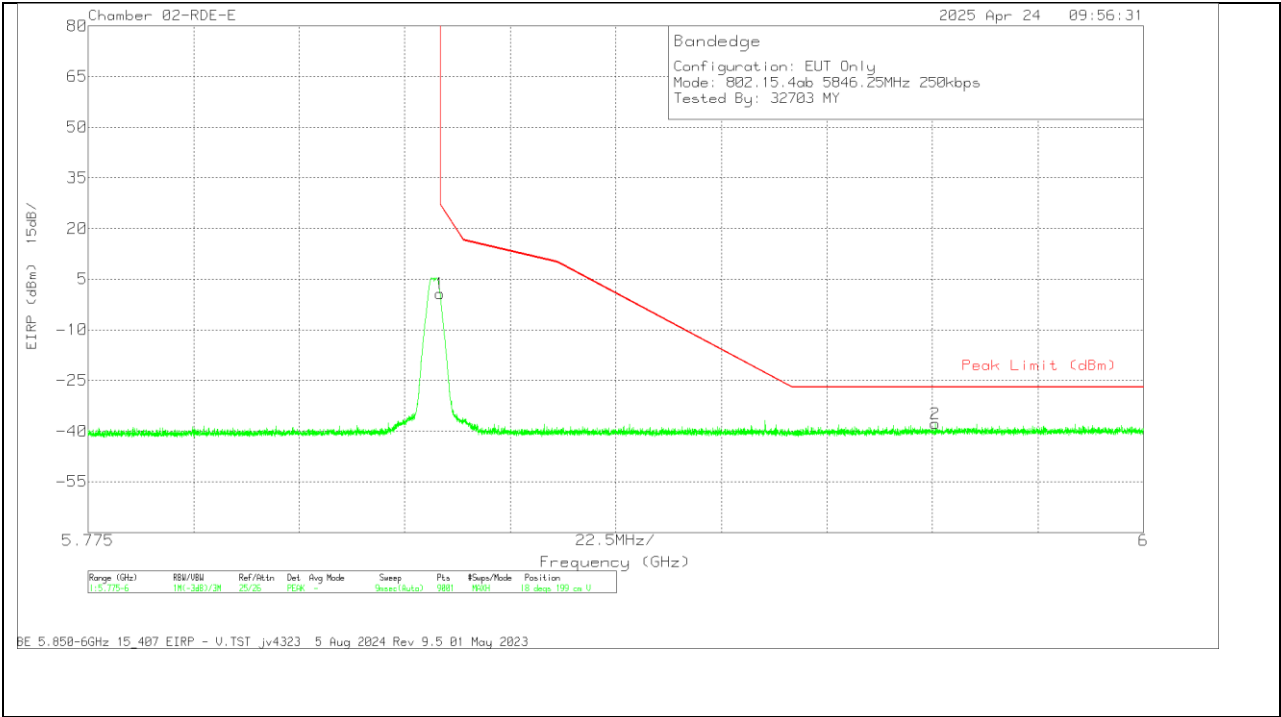
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-11.54	PK	35.1	11.8	0	-36.3	-94	27	-27.94	351	202	H
2	5.967275	-49.18	PK	35.3	11.8	0	-35.92	-38	-27	-11	351	202	H

Pk - Peak detector

VERTICAL RESULT

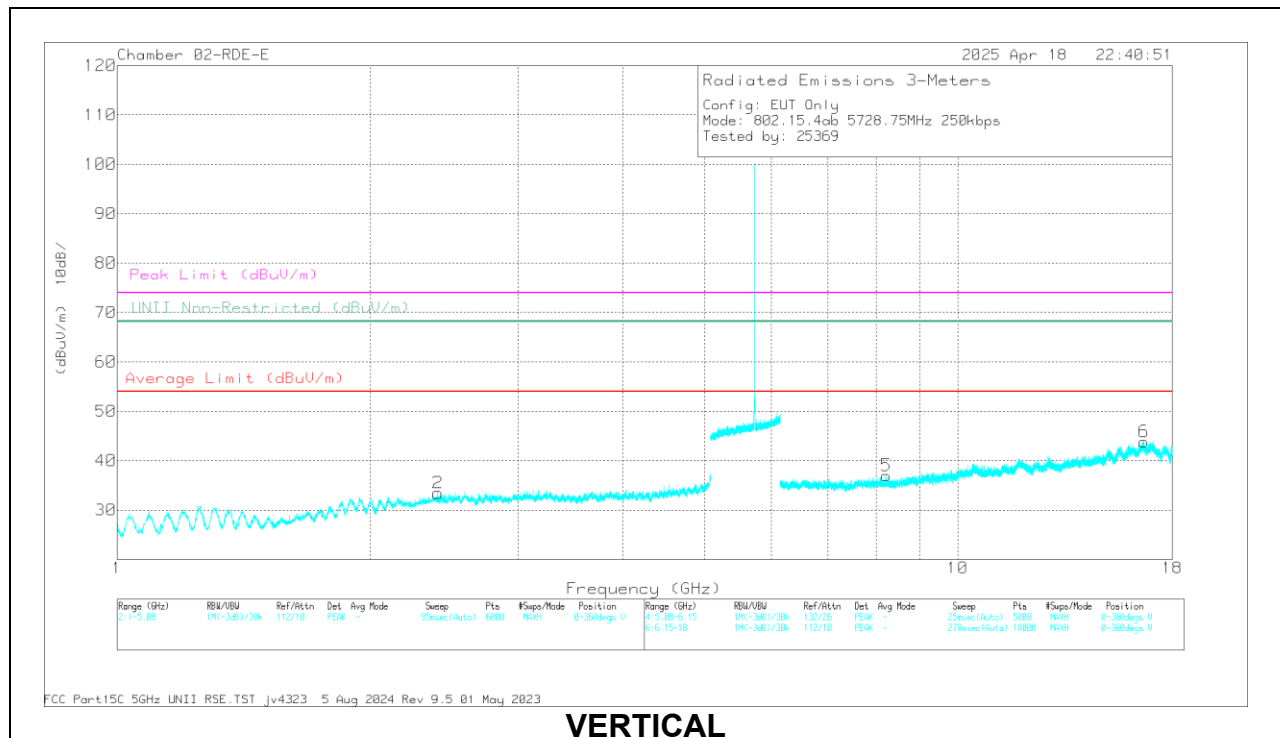
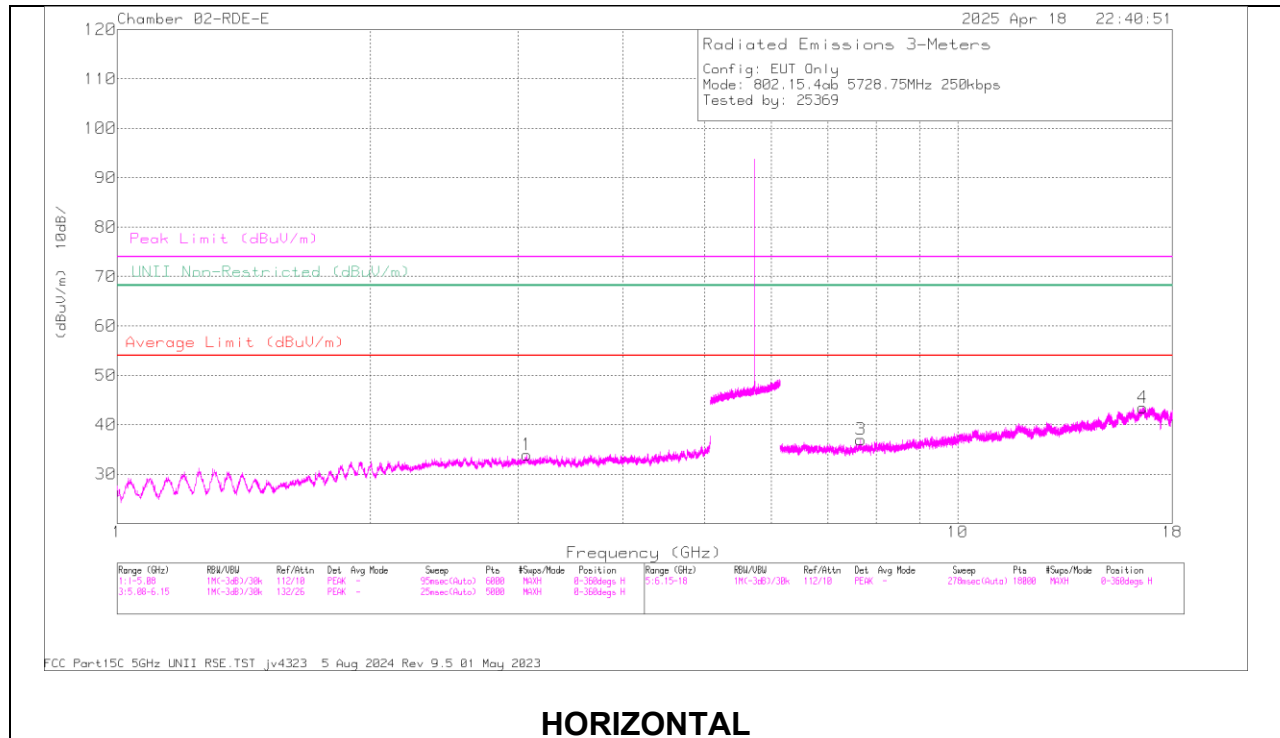


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-9.96	Pk	35.1	11.8	0	-36.3	-64	27	-26.36	18	199	V
2	5.95565	-48.96	Pk	35.3	11.8	0	-35.96	-37.82	-27	-10.82	18	199	V

Pk - Peak detector

10.1.4. UNII-3, ANT 6, 250Kbps LOW POWER HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

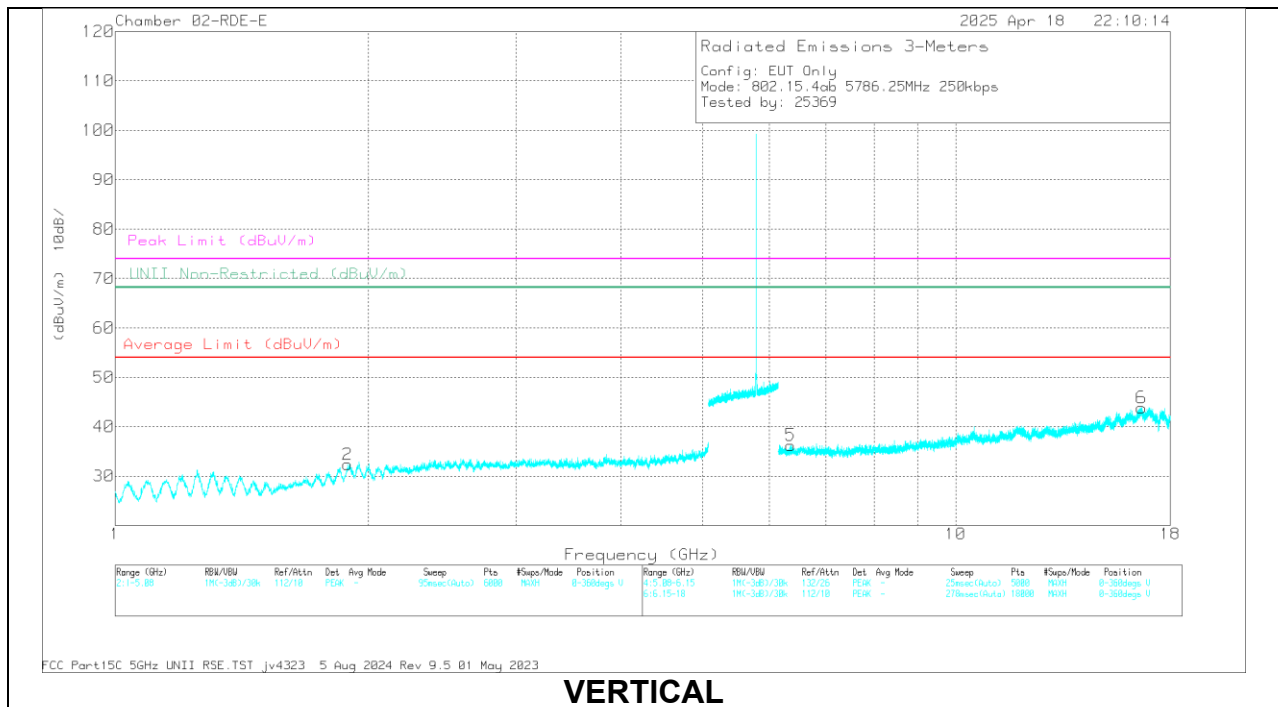
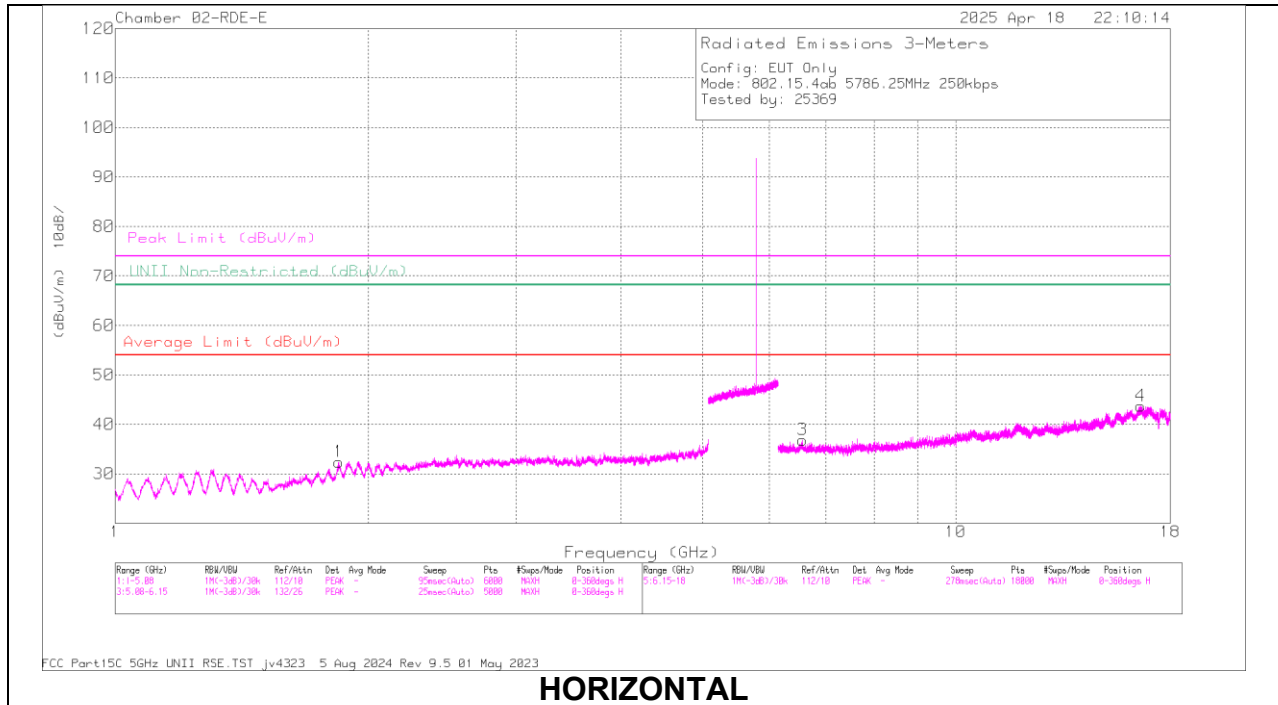
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	Gain/Loss (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.668256	55.35	PK-U	36	-45.33	0	46.02	-	-	74	-27.98	-	-	360	199	H
	* 7.667995	43.7	ADR	36	-45.32	1.48	35.86	54	-18.14	-	-	-	-	360	199	H
5	* 8.22216	54.73	PK-U	35.9	-44.42	0	46.21	-	-	74	-27.79	-	-	360	199	V
	* 8.222371	42.88	ADR	35.9	-44.42	1.48	35.84	54	-18.16	-	-	-	-	360	199	V
2	2.408899	59.53	PK-U	32.2	-49.05	0	42.68	-	-	-	-	68.2	-25.52	360	199	V
1	3.073305	58.44	PK-U	33	-47.38	0	44.06	-	-	-	-	68.2	-24.14	360	101	H
4	16.598808	51.94	PK-U	41.9	-40.84	0	53	-	-	-	-	68.2	-15.2	360	199	H
6	16.647822	52.35	PK-U	42	-41.25	0	53.1	-	-	-	-	68.2	-15.1	360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS

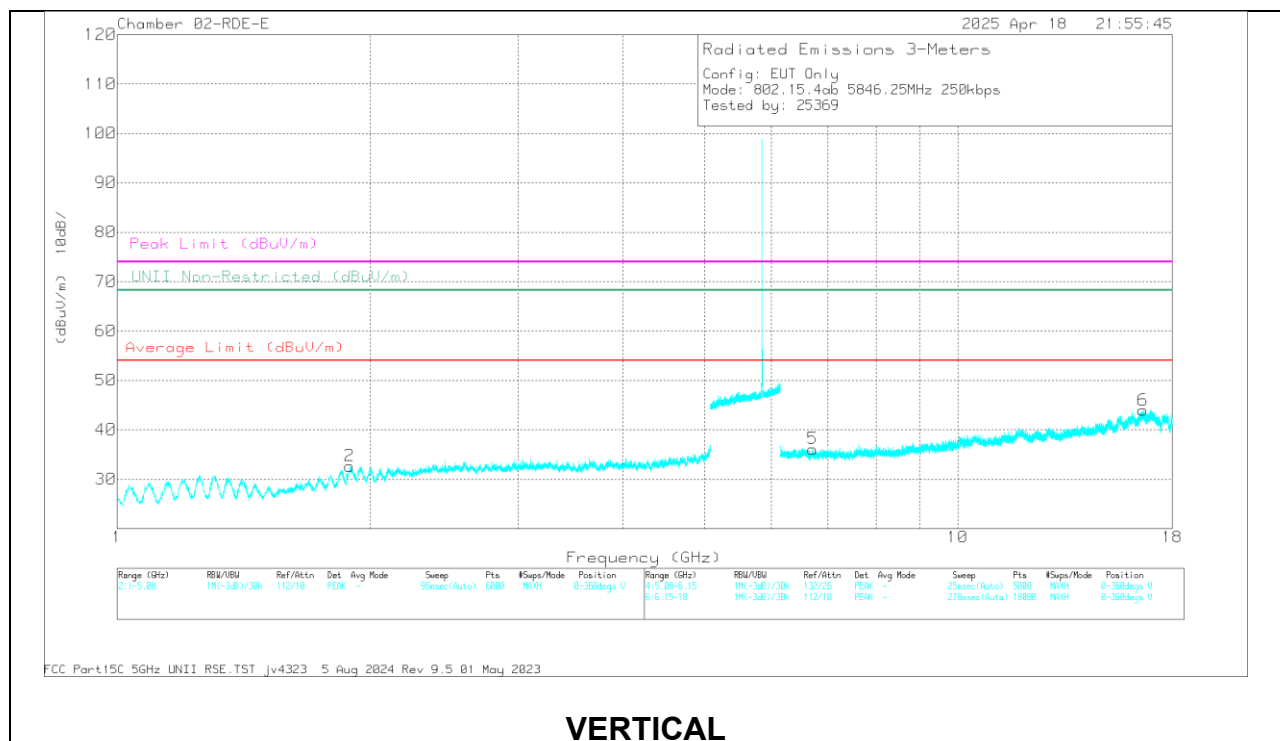
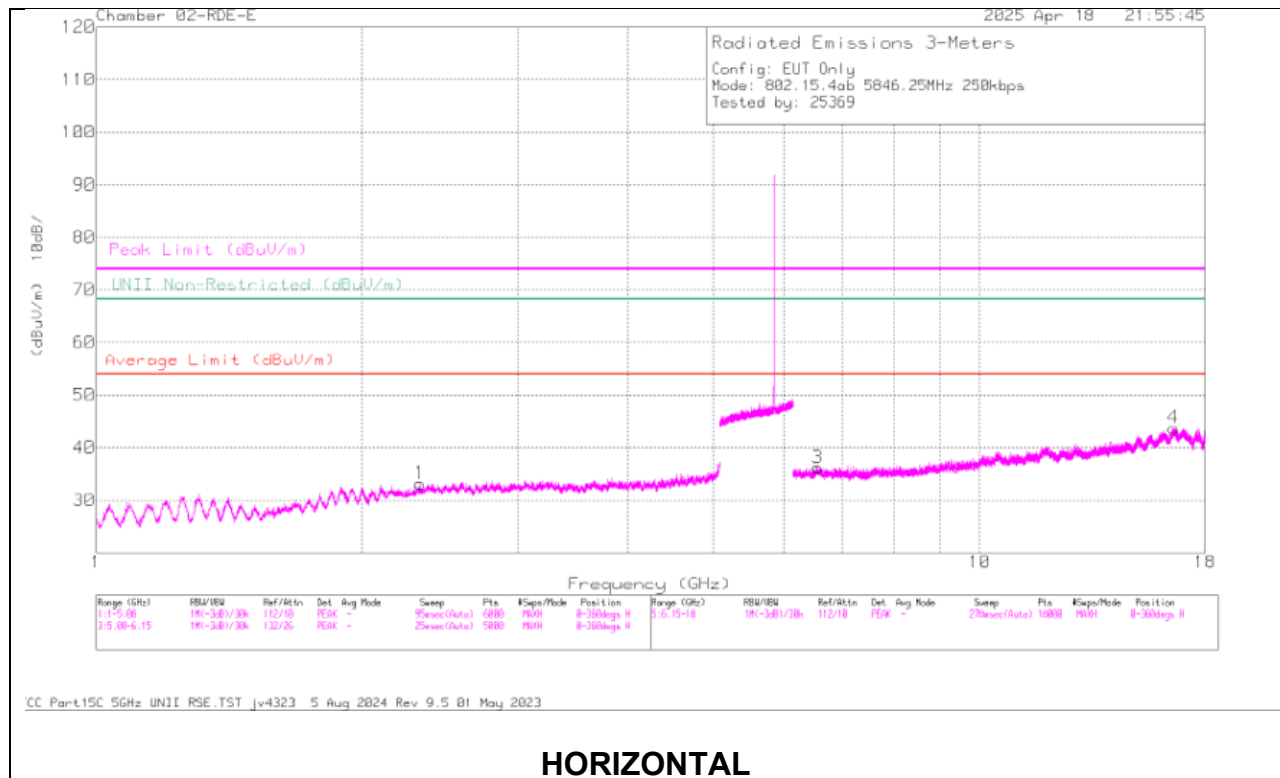


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.845326	60.38	PK-U	30.7	-49.36	41.72	68.2	-26.48	360	101	H
2	1.888387	60.47	PK-U	31	-49.29	42.18	68.2	-26.02	360	200	V
5	6.361684	54.56	PK-U	35.6	-44.05	46.11	68.2	-22.09	360	200	V
3	6.56946	54.04	PK-U	35.7	-43.77	45.97	68.2	-22.23	360	101	H
4	16.608696	51.66	PK-U	41.9	-40.92	52.64	68.2	-15.56	360	200	H
6	16.637708	51.61	PK-U	42	-41.13	52.48	68.2	-15.72	360	200	V

PK-U - U-NII: Maximum Peak

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.322393	59.83	PK-U	31.8	0	-49.37	42.26	-	-	74	-31.74	-	-	0	200	H
	* 2.323555	48.12	ADR	31.8	1.48	-49.38	32.02	54	-21.98	-	-	-	-	0	200	H
2	1.889572	60.51	PK-U	31	0	-49.3	42.21	-	-	-	-	68.2	-25.99	0	200	V
3	6.558068	54.23	PK-U	35.7	0	-43.74	46.19	-	-	-	-	68.2	-22.01	0	200	H
5	6.721899	54.17	PK-U	35.8	0	-44.02	45.95	-	-	-	-	68.2	-22.25	0	101	V
4	16.578621	51.73	PK-U	41.8	0	-41.01	52.52	-	-	-	-	68.2	-15.68	0	200	H
6	16.616265	51.43	PK-U	41.9	0	-41.04	52.29	-	-	-	-	68.2	-15.91	0	200	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

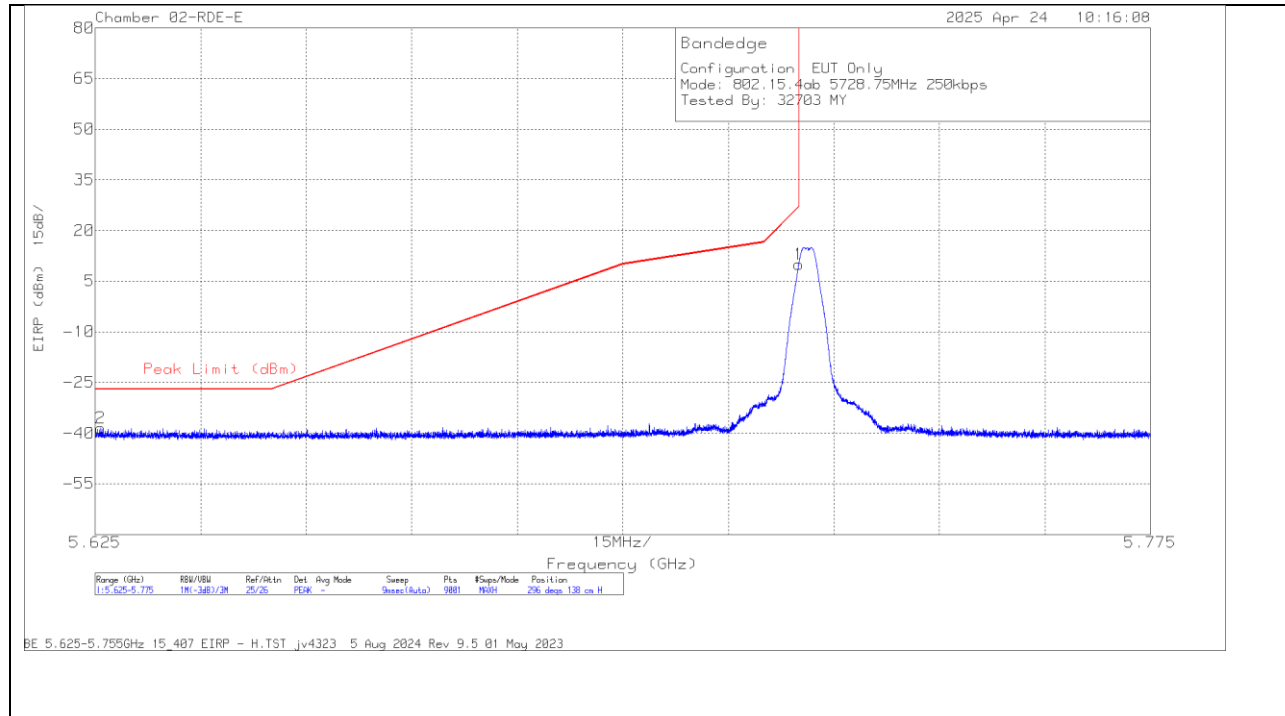
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.1.5. UNII-3, ANT 5, 250Kbps, HIGH POWER BAND EDGE IN THE 5.8 GHz BAND

BANDEDGE (LOW CHANNEL)

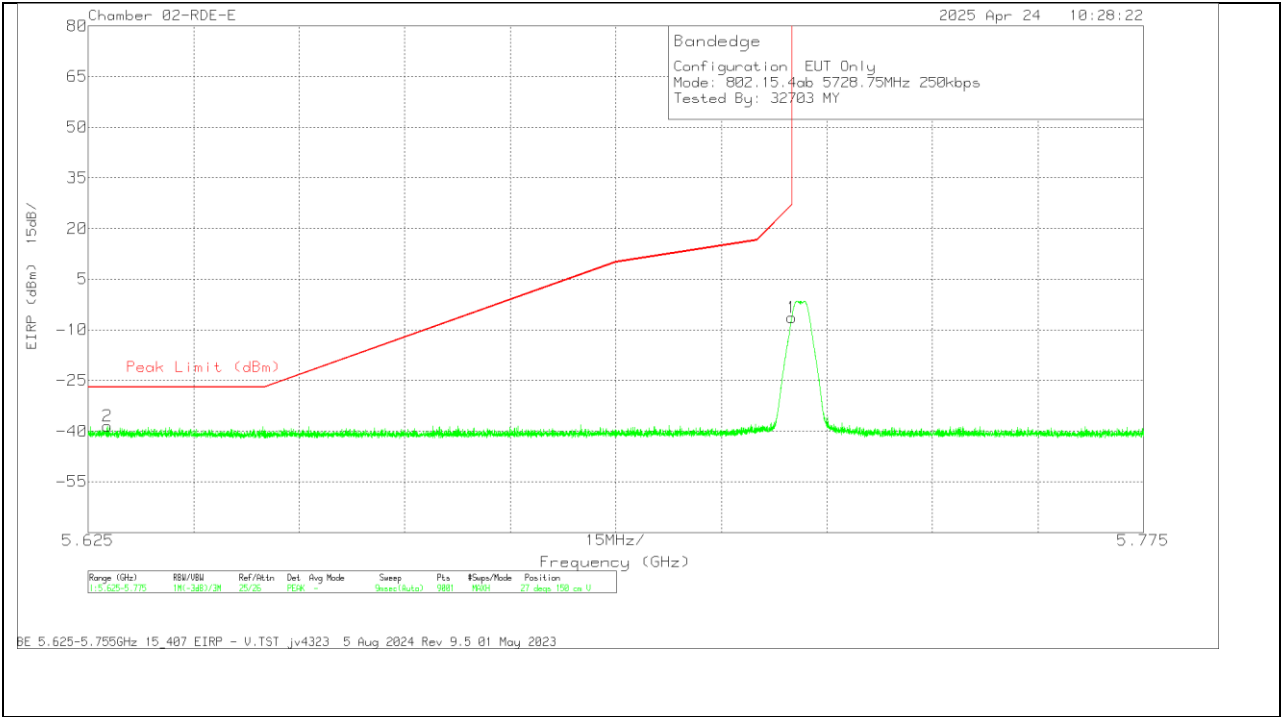
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.62575	-48.47	Pk	35.2	11.8	0	-37.05	-38.52	-27	-11.52	296	138	H
1	5.725	.01	Pk	35	11.8	0	-36.76	10.05	27	-16.95	296	138	H

Pk - Peak detector

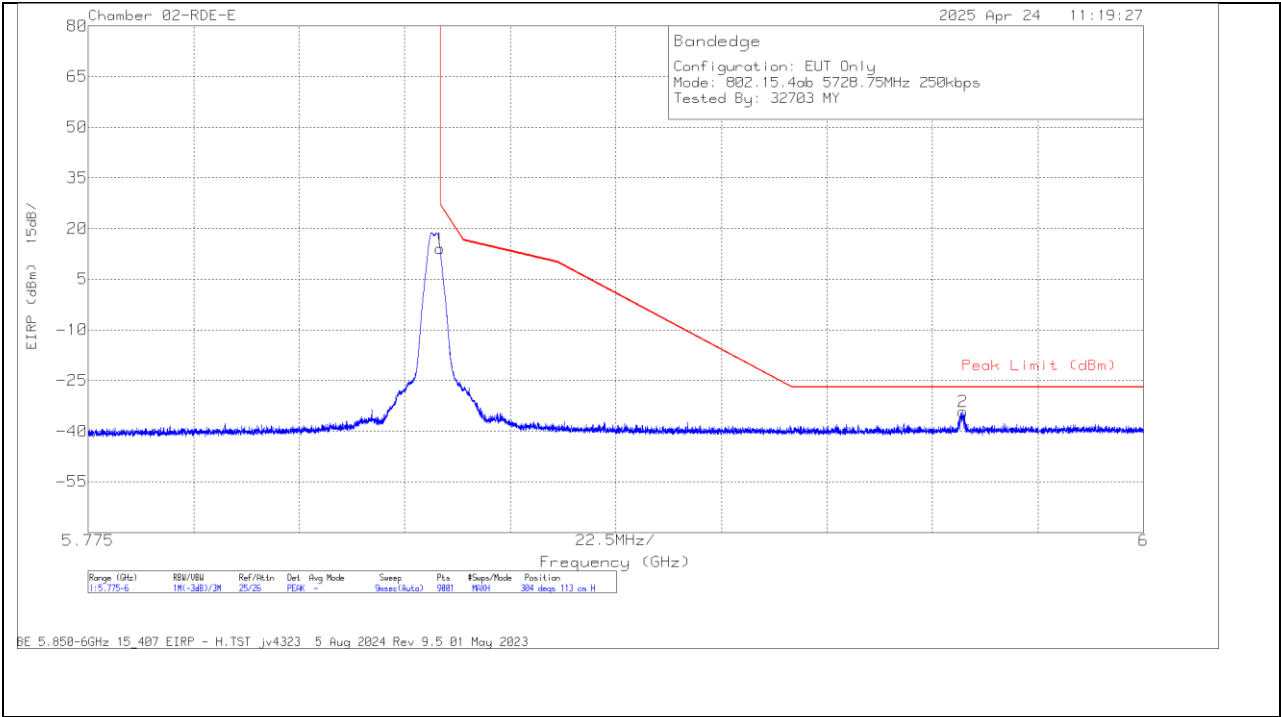
VERTICAL RESULT



Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

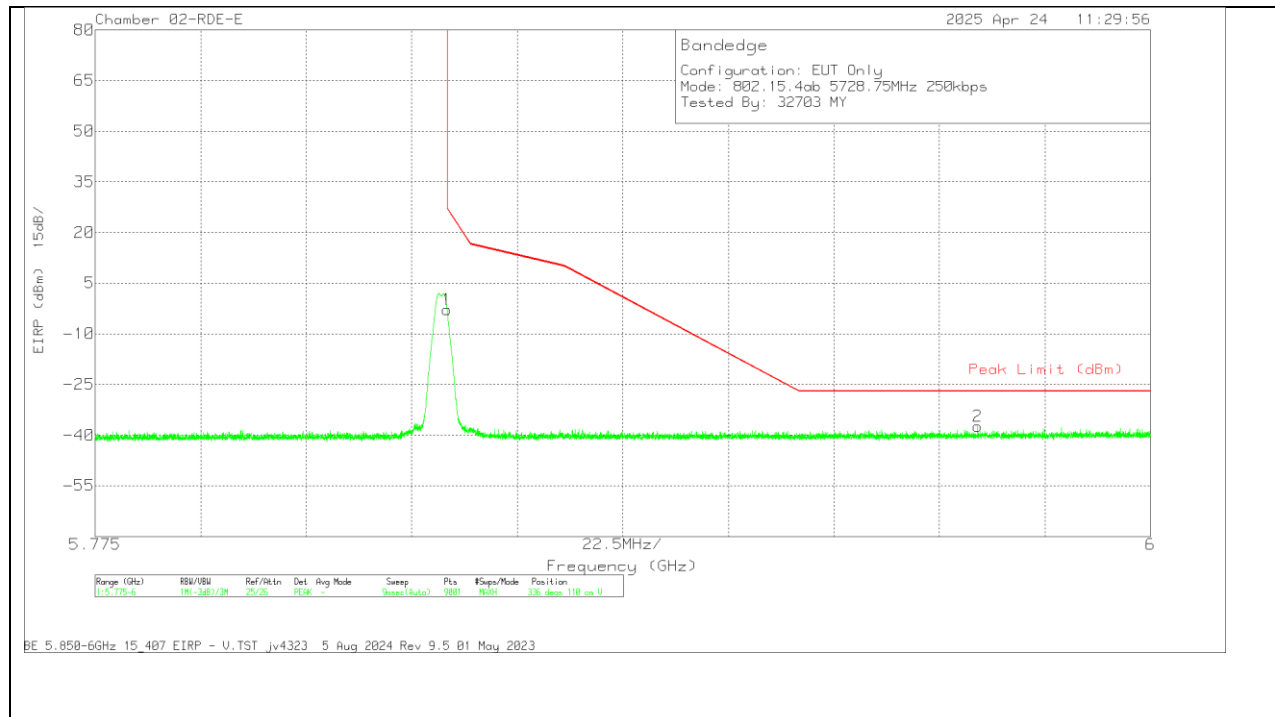
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	3.38	Pk	35.1	11.8	0	-36.3	13.98	27	-13.02	304	113	H
2	5.96155	-45.45	Pk	35.3	11.8	0	-35.89	-34.24	-27	-7.24	304	113	H

Pk - Peak detector

VERTICAL RESULT



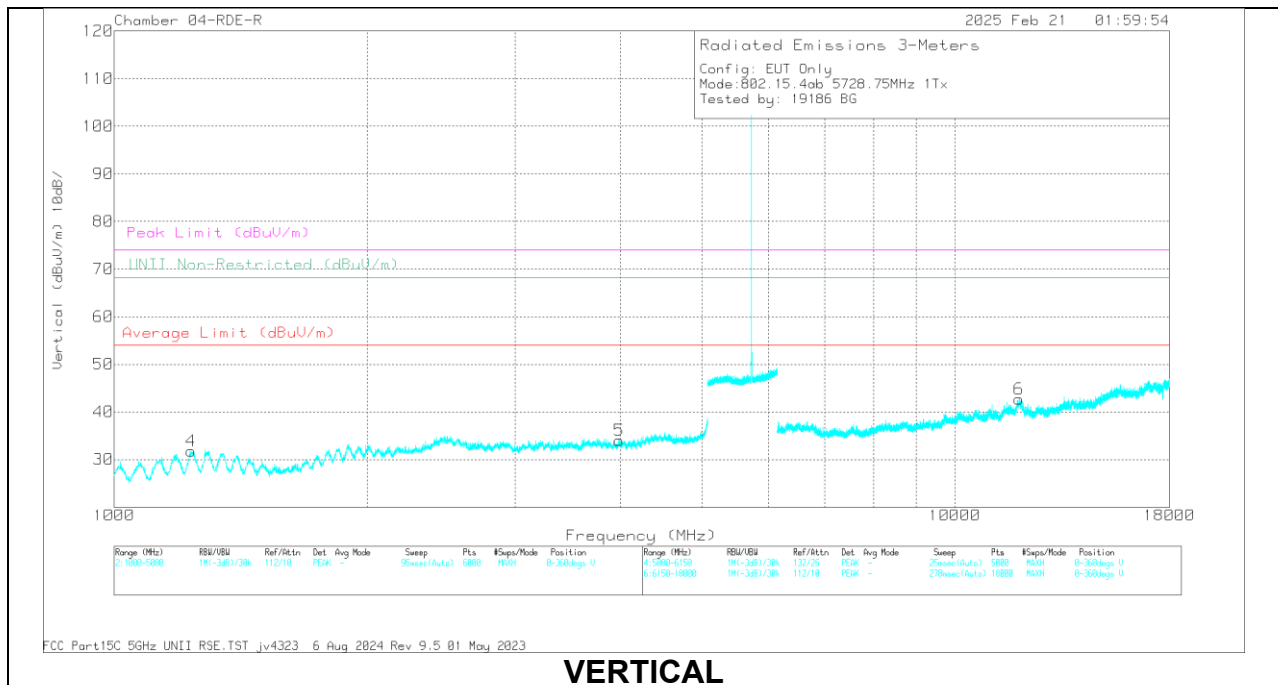
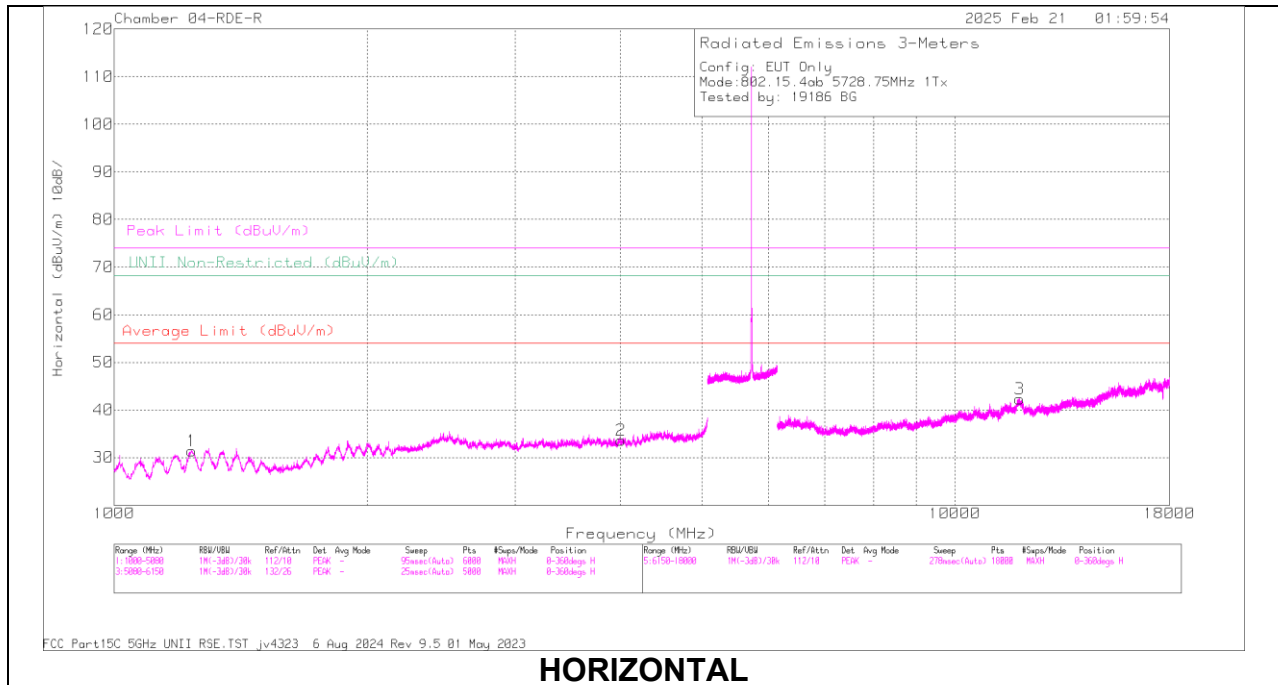
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-13.48	PK	35.1	11.8	0	-36.3	-2.88	27	-29.88	336	110	V
2	5.963175	-48.57	PK	35.3	11.8	0	-35.89	-37.36	-27	-10.36	336	110	V

Pk - Peak detector

10.1.6. UNII-3, ANT 5, 250Kbps HIGH POWER HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

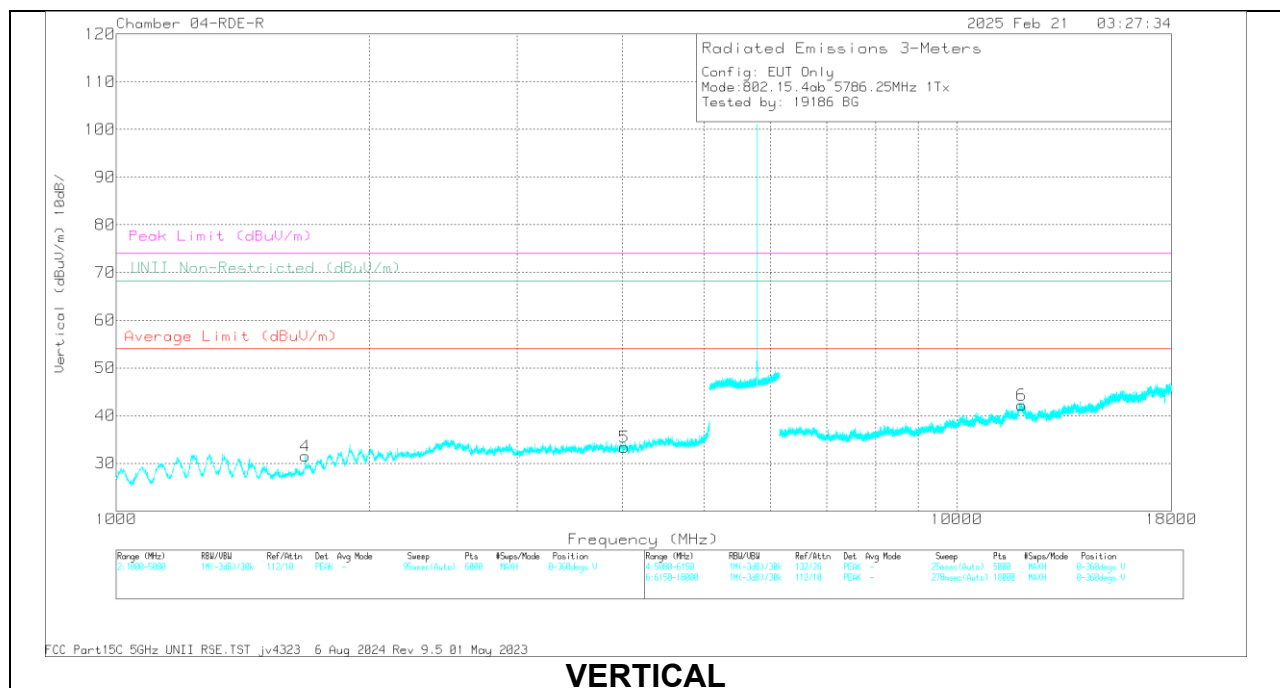
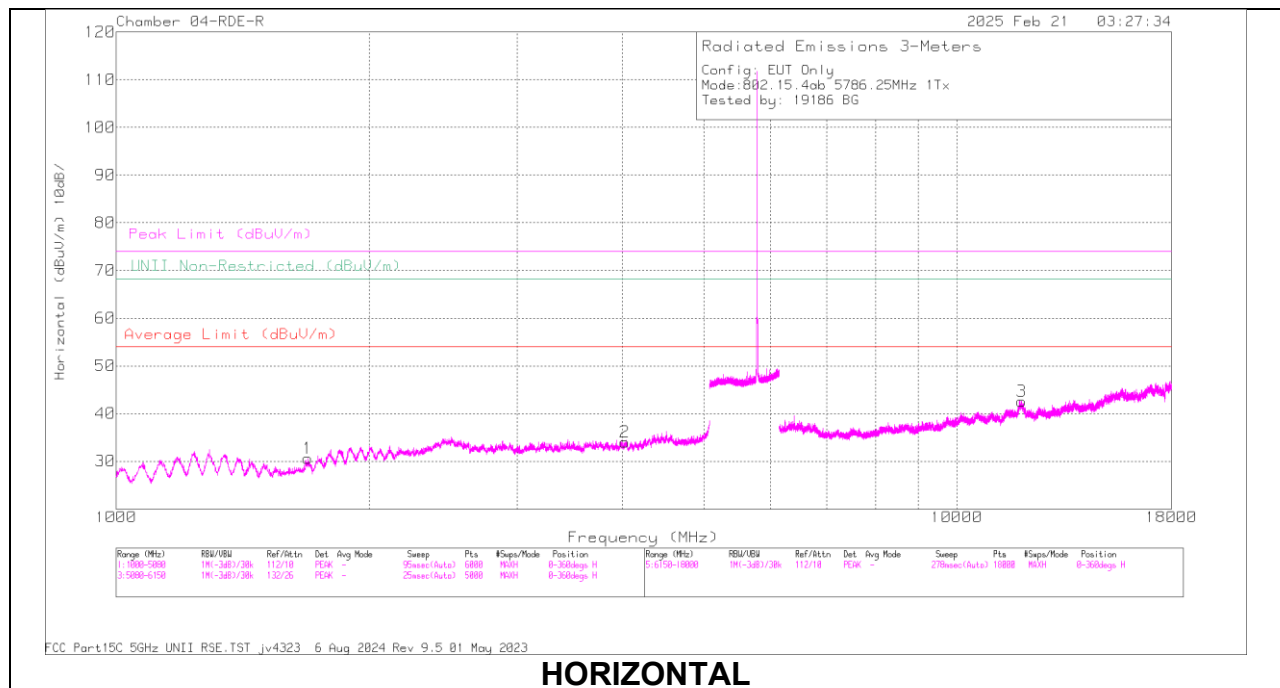
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80430 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1238.268	61.96	PK-U	30	0	-49.92	42.04	-	-	74	-31.96	201	103	H
	* 1235.912	50.13	ADR	29.9	1.48	-49.91	31.6	54	-22.4	-	-	201	103	H
2	* 4004.625	58.47	PK-U	33.4	0	-47.46	44.41	-	-	74	-29.59	333	210	H
	* 4006.84	45.97	ADR	33.4	1.48	-47.49	33.36	54	-20.64	-	-	333	210	H
5	* 3989.571	58.38	PK-U	33.3	0	-47.4	44.28	-	-	74	-29.72	179	340	V
	* 3988.979	46.34	ADR	33.3	1.48	-47.4	33.72	54	-20.28	-	-	179	340	V
4	* 1234.588	61.99	PK-U	29.9	0	-49.9	41.99	-	-	74	-32.01	6	116	V
	* 1235.676	50.04	ADR	29.9	1.48	-49.91	31.51	54	-22.49	-	-	6	116	V
3	* 11933.737	53.32	PK-U	39.2	0	-41.63	50.89	-	-	74	-23.11	242	345	H
	* 11932.312	40.55	ADR	39.2	1.48	-41.63	39.6	54	-14.4	-	-	242	345	H
6	* 11926.665	52.21	PK-U	39.2	0	-41.58	49.83	-	-	74	-24.17	88	171	V
	* 11924.181	40.68	ADR	39.2	1.48	-41.59	39.77	54	-14.23	-	-	88	171	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



RADIATED EMISSIONS

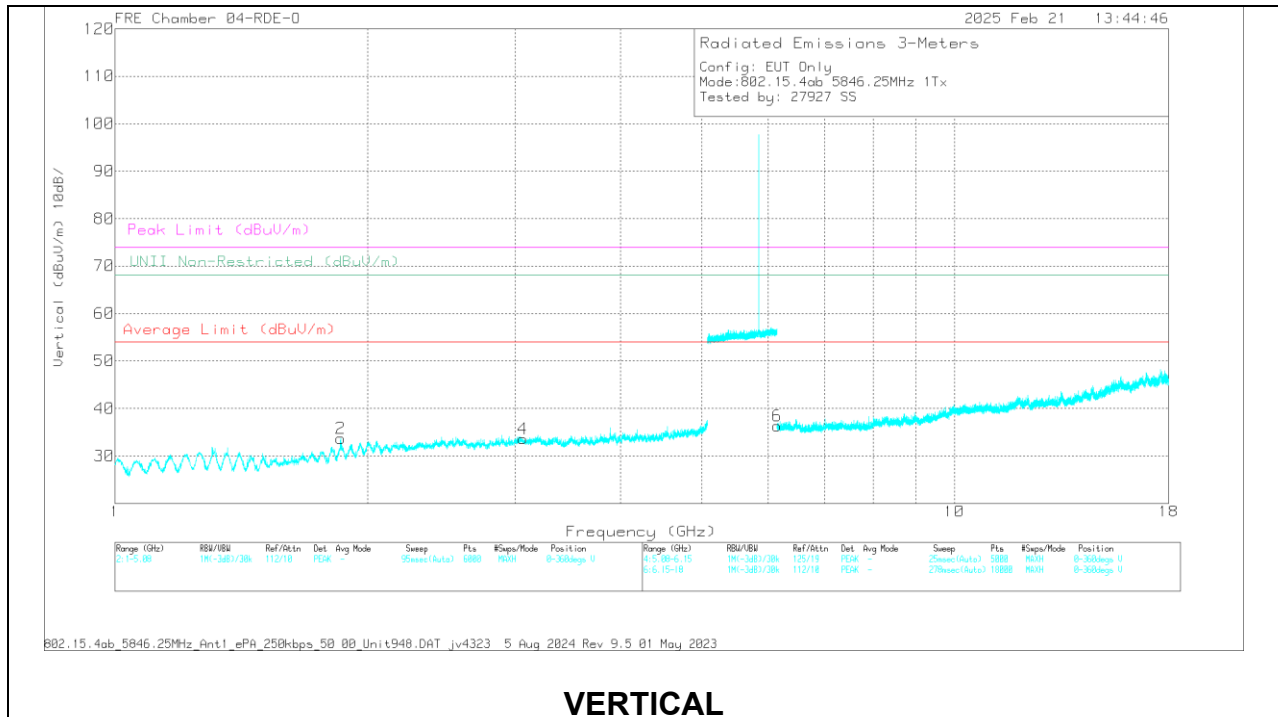
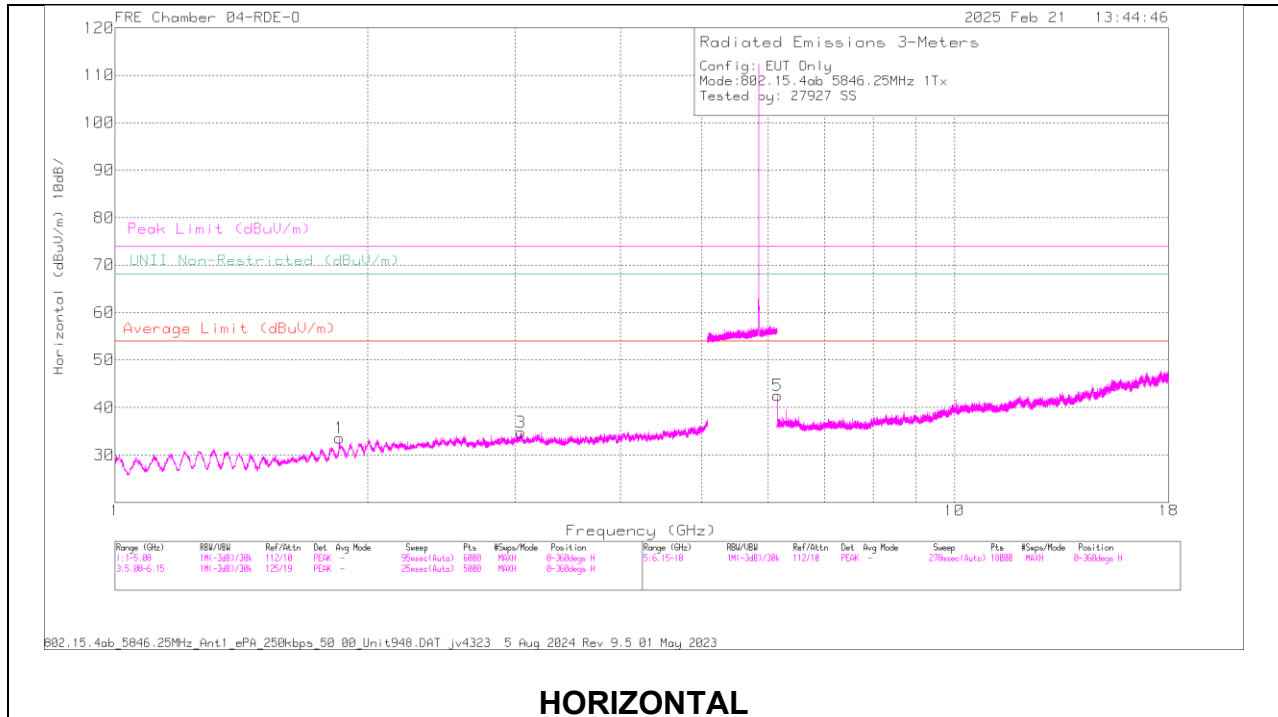
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80430 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1689.1	60.22	PK-U	29.1	0	-49.76	39.56	-	-	74	-34.44	278	364	H
	* 1688.584	48.96	ADR	29.1	1.48	-49.76	29.78	54	-24.22	-	-	278	364	H
2	* 4029.845	57.75	PK-U	33.5	0	-47.33	43.92	-	-	74	-30.08	356	130	H
	* 4029.636	46.15	ADR	33.5	1.48	-47.33	33.8	54	-20.2	-	-	356	130	H
4	* 1680.059	61.78	PK-U	29	0	-49.71	41.07	-	-	74	-32.93	154	375	V
	* 1680.045	50.7	ADR	29	1.48	-49.71	31.47	54	-22.53	-	-	154	375	V
5	* 4018.502	58.08	PK-U	33.4	0	-47.25	44.23	-	-	74	-29.77	54	227	V
	* 4018.983	45.83	ADR	33.4	1.48	-47.25	33.46	54	-20.54	-	-	54	227	V
3	* 11933.079	52.21	PK-U	39.2	0	-41.65	49.76	-	-	74	-24.24	165	157	H
	* 11932.733	40.55	ADR	39.2	1.48	-41.64	39.59	54	-14.41	-	-	165	157	H
6	* 11939.48	52.55	PK-U	39.2	0	-41.63	50.12	-	-	74	-23.88	140	330	V
	* 11938.508	40.78	ADR	39.2	1.48	-41.62	39.84	54	-14.16	-	-	140	330	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

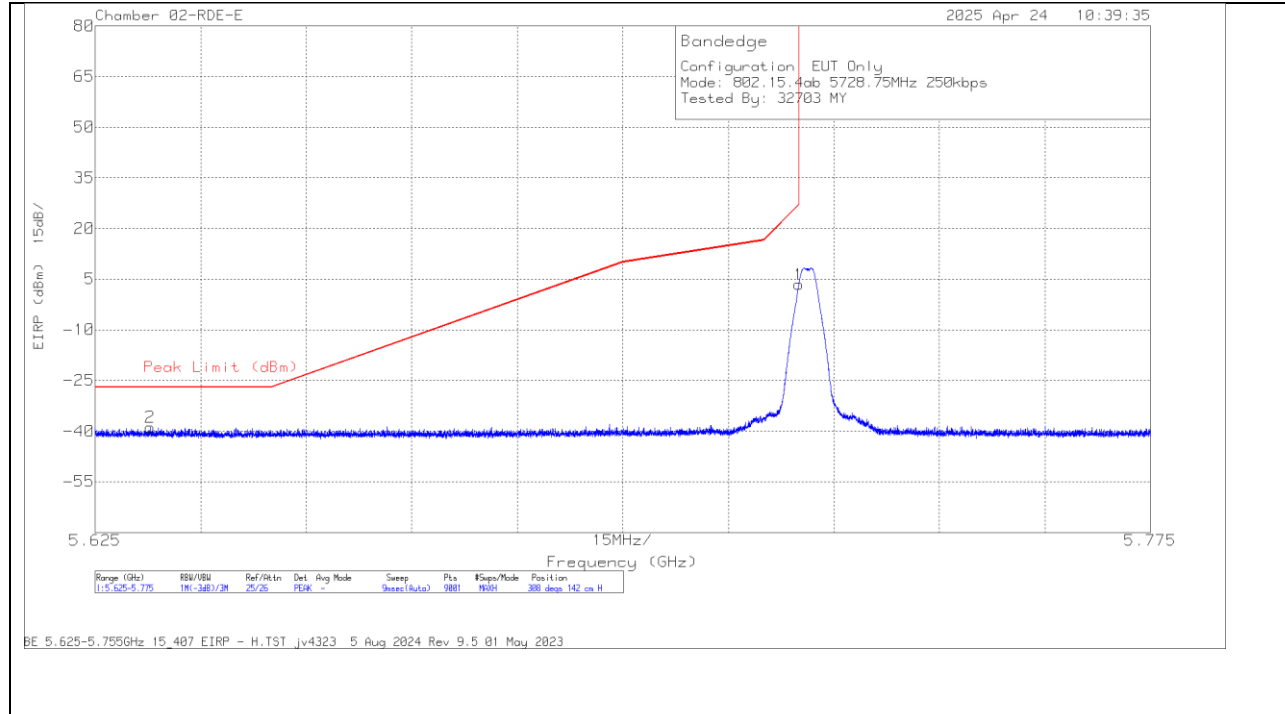
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 80402 (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.852809	58.39	PK-U	30.3	0	-46.61	42.08	68.2	-26.12	355	180	H
2	1.854163	62.98	PK-U	30.3	0	-46.59	46.69	68.2	-21.51	328	384	V
3	3.049755	56.13	PK-U	33	0	-45.43	43.7	68.2	-24.5	357	375	H
4	3.06141	55.98	PK-U	33	0	-45.35	43.63	68.2	-24.57	358	295	V
6	6.15017	54.35	PK-U	35.5	0	-42.18	47.67	68.2	-20.53	250	151	V
5	6.153951	57.06	PK-U	35.5	0	-42.09	50.47	68.2	-17.73	211	112	H

PK-U - U-NII: Maximum Peak

10.1.7. UNII-3, ANT 5, 250Kbps, LOW POWER BAND EDGE IN THE 5.8 GHz BAND

BANDEDGE (LOW CHANNEL)

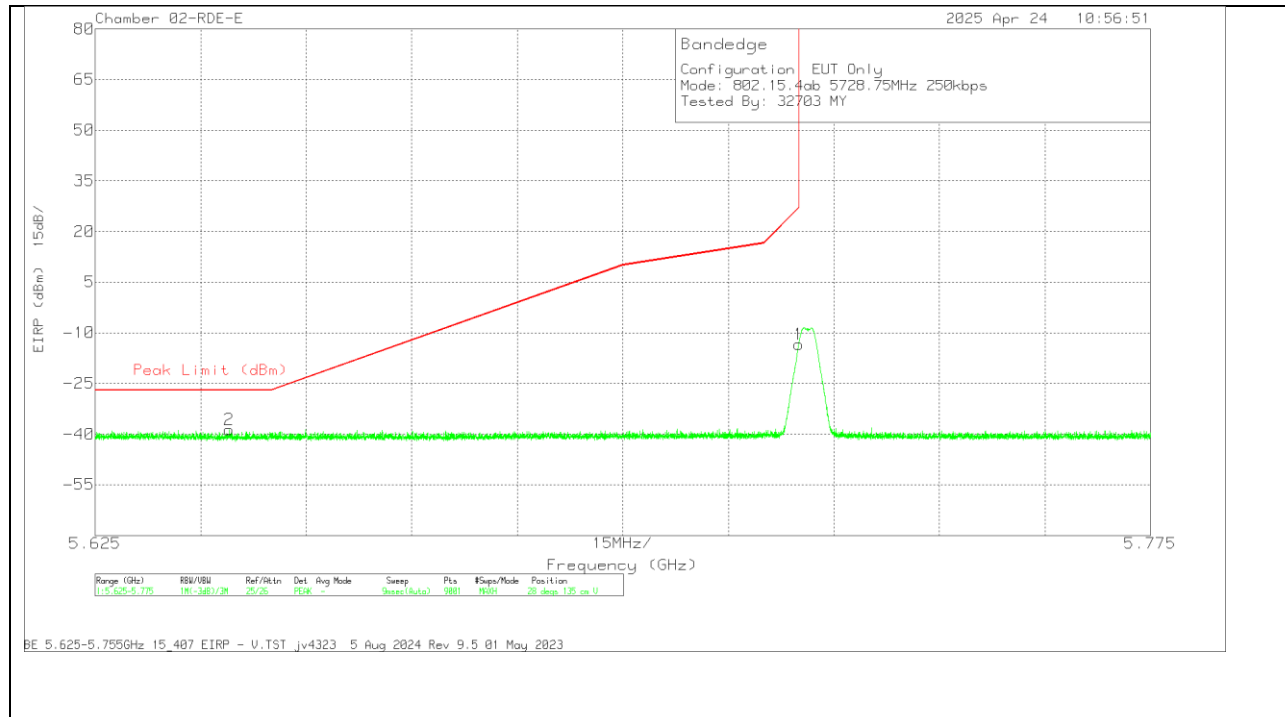
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.63285	-48.76	Pk	35.2	11.8	0	-37.08	-38.84	-27	-11.84	308	142	H
1	5.725	-6.63	Pk	35	11.8	0	-36.76	3.41	27	-23.59	308	142	H

Pk - Peak detector

VERTICAL RESULT

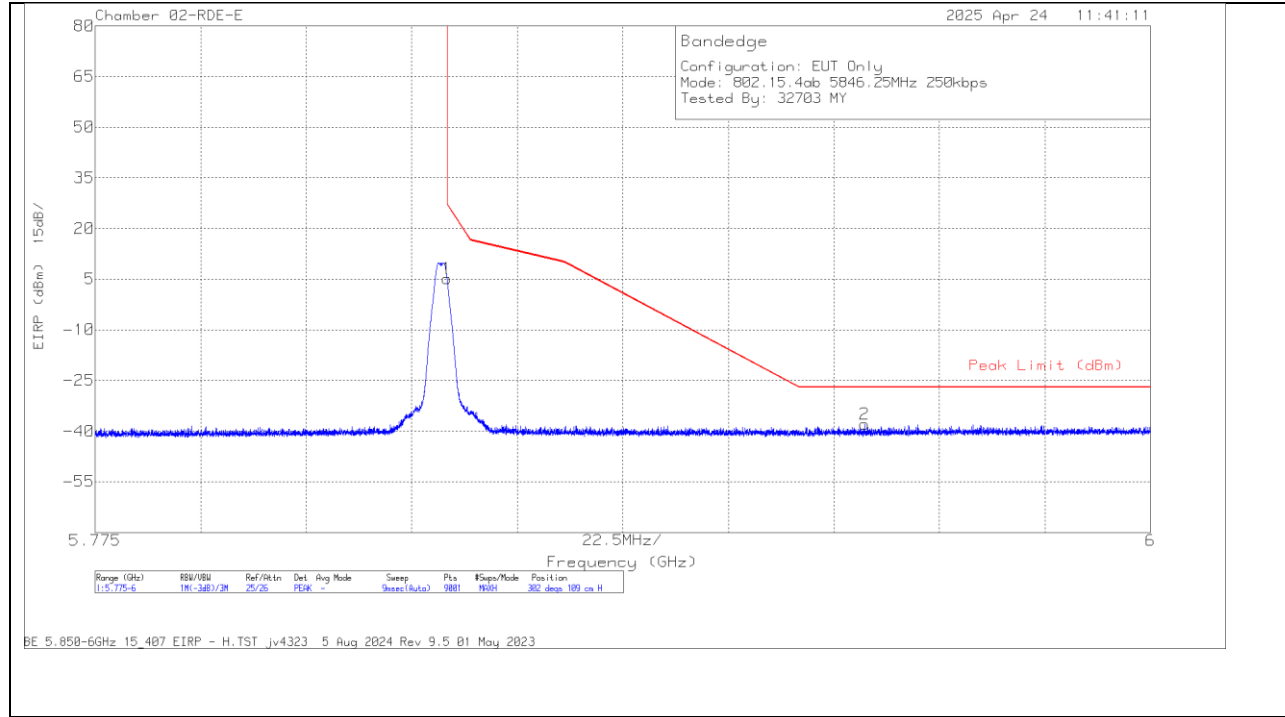


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.64405	-48.44	Pk	35.1	11.8	0	-37.06	-38.6	-27	-11.6	28	135	V
1	5.725	-23.38	Pk	35	11.8	0	-36.76	-13.34	27	-40.34	28	135	V

Pk - Peak detector

BANDEDGE (HIGH CHANNEL)

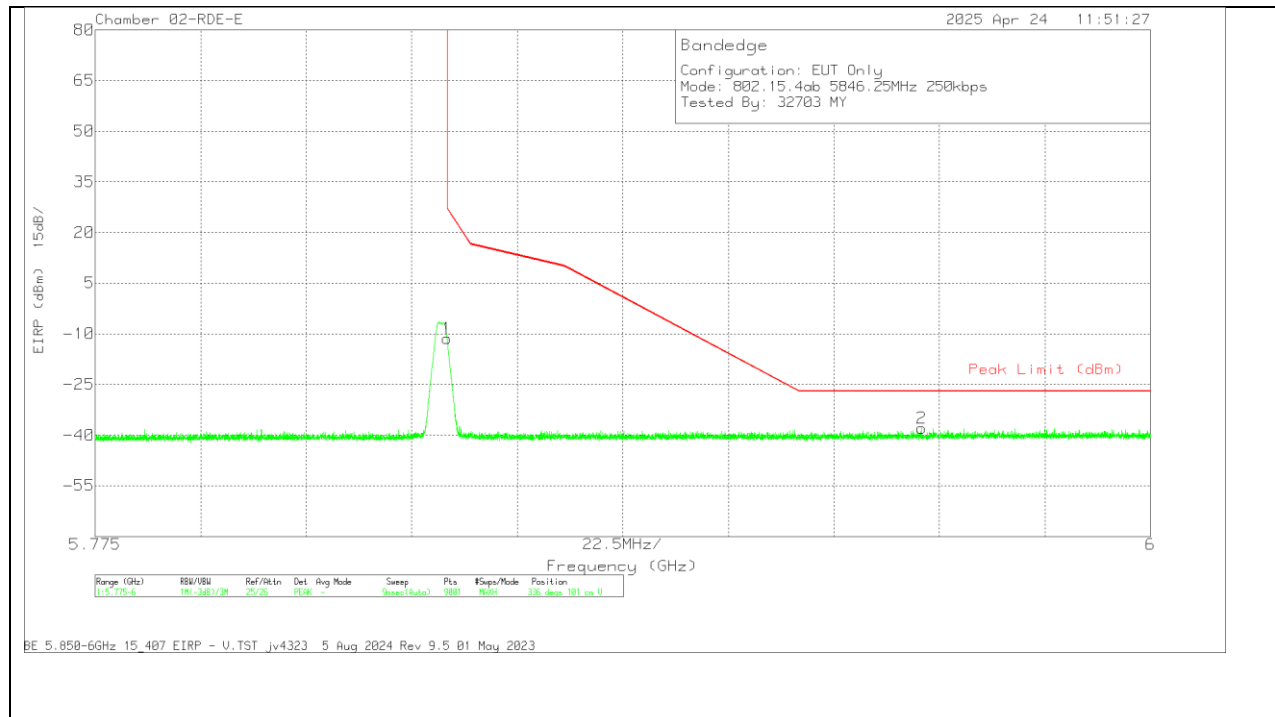
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-5.45	Pk	35.1	11.8	0	-36.3	5.15	27	-21.85	302	109	H
2	5.939025	-48.93	Pk	35.2	11.8	0	-36	-37.93	-27	-10.93	302	109	H

Pk - Peak detector

VERTICAL RESULT

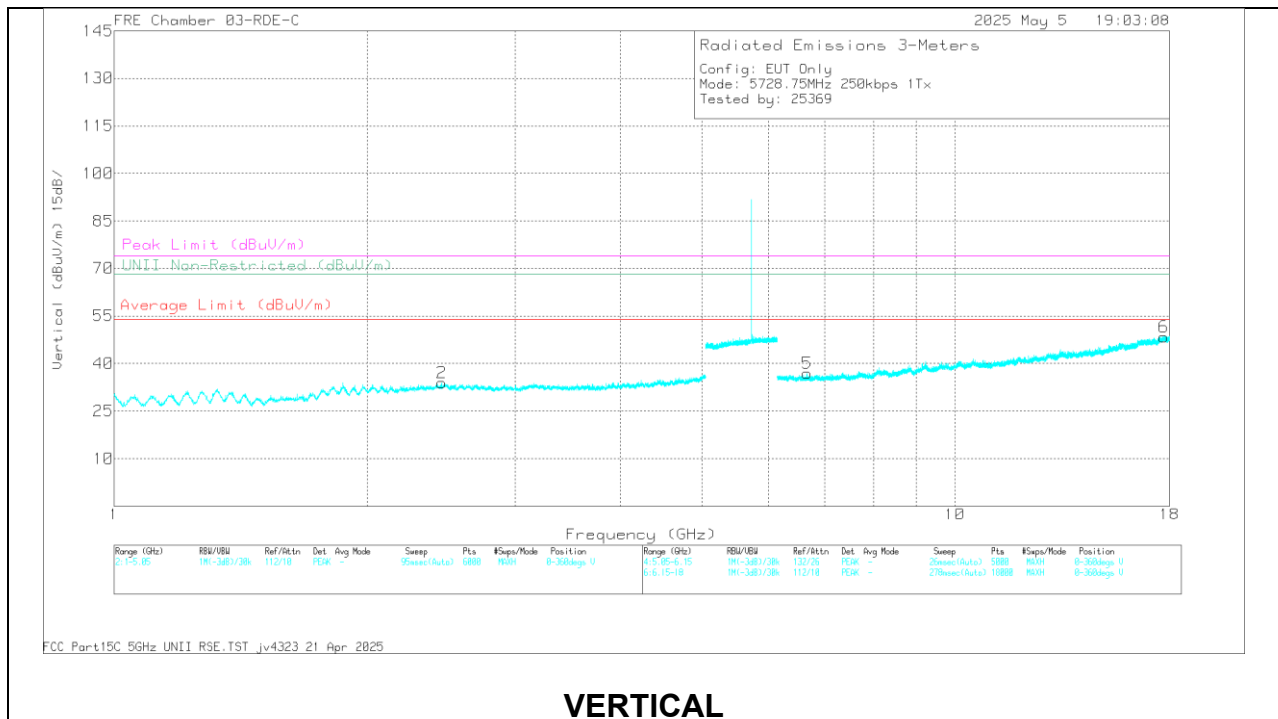
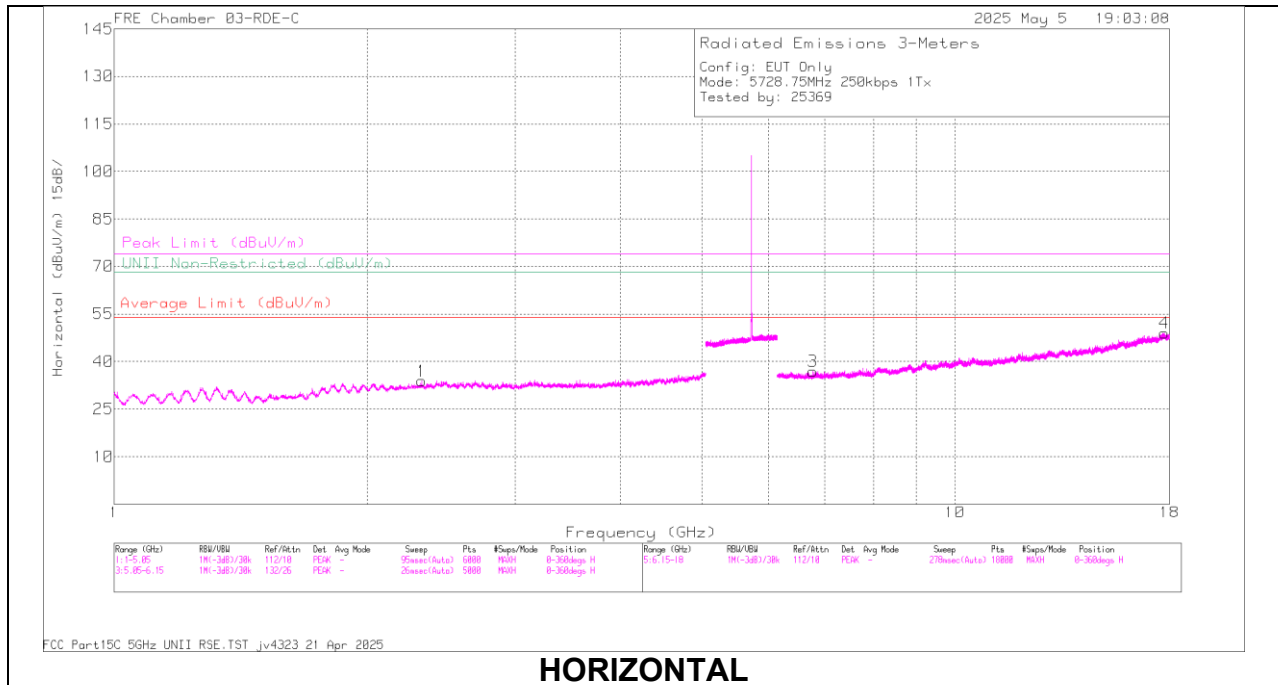


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	84796 ACF (dB/m)	Conversion Factor (dB)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading EIRP (dBm)	Peak Limit (dBm)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-21.96	Pk	35.1	11.8	0	-36.3	-11.36	27	-38.36	336	101	V
2	5.951225	-49.05	Pk	35.3	11.8	0	-35.95	-37.9	-27	-10.9	336	101	V

Pk - Peak detector

10.1.8. UNII-3, ANT 5, 250Kbps LOW POWER HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS

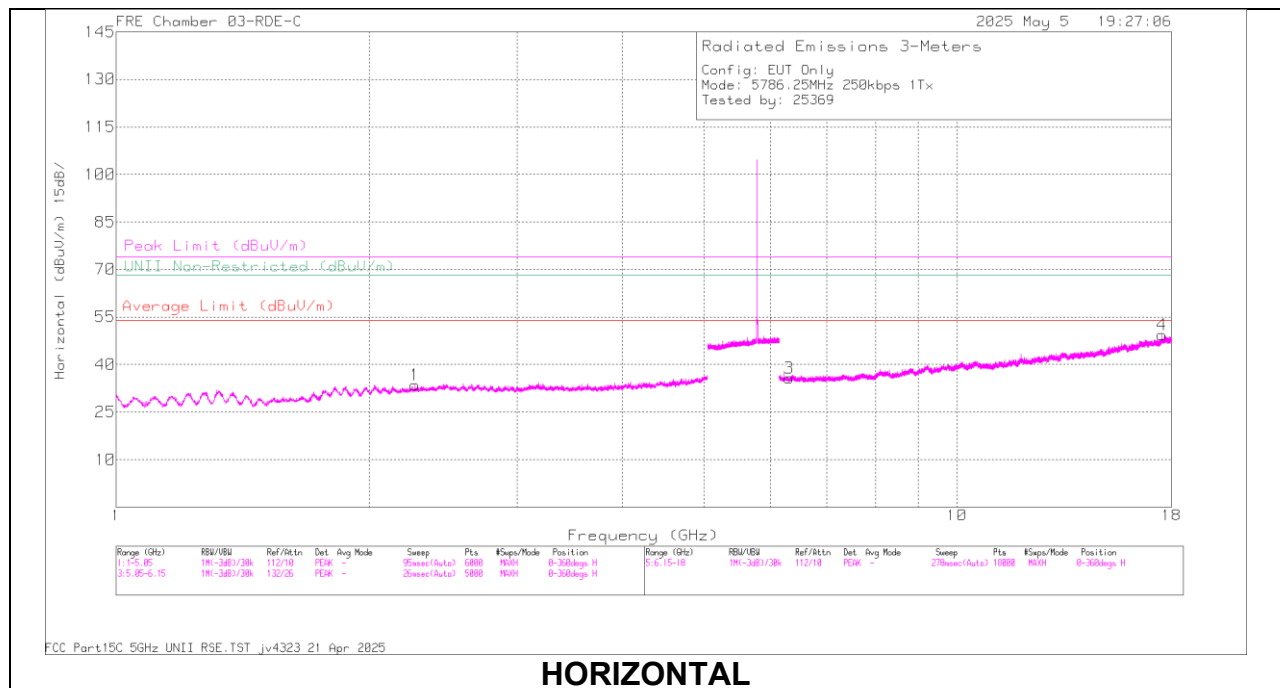


RADIATED EMISSIONS

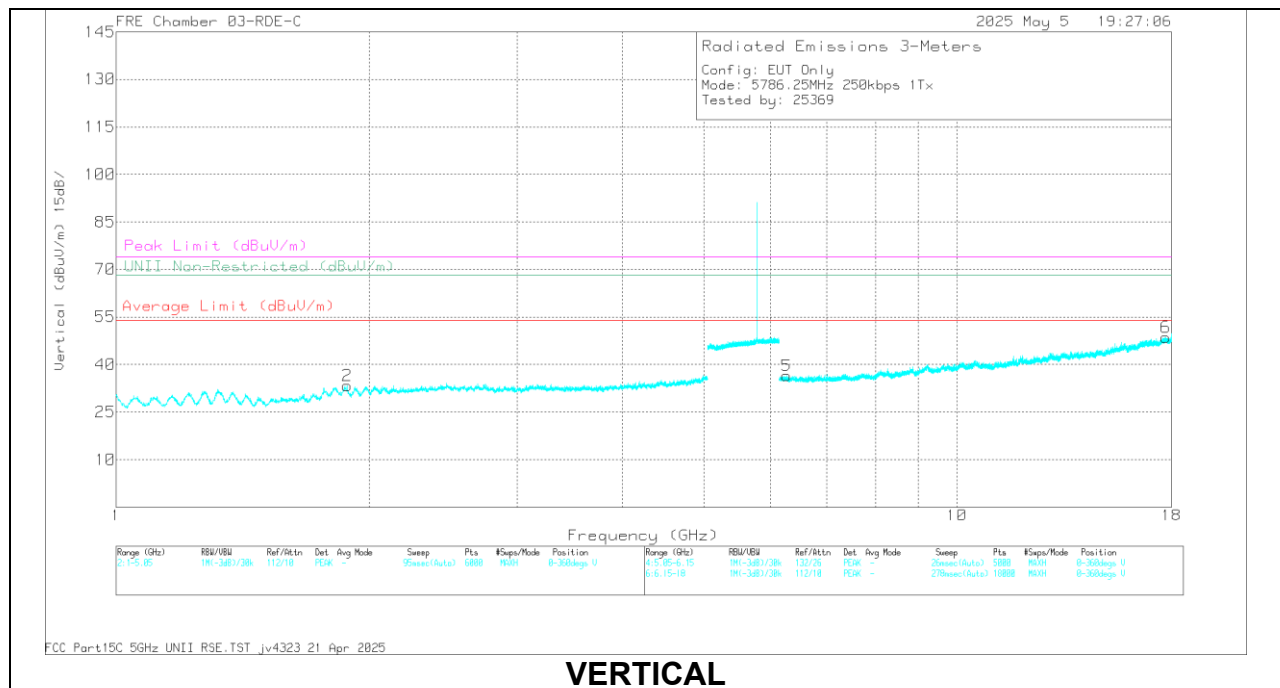
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.324149	59.22	PK-U	31.8	0	-48.21	42.81	-	-	74	-31.19	-	-	0	200	H
	* 2.322188	47.6	ADR	31.8	1.48	-48.3	32.58	54	-21.42	-	-	-	-	0	200	H
4	* 17.740459	58.49	PK-U	41.6	0	-42.55	57.54	-	-	74	-16.46	-	-	0	200	H
	* 17.737883	47.2	ADR	41.6	1.48	-42.6	47.68	54	-6.32	-	-	-	-	0	200	H
6	* 17.73384	59.39	PK-U	41.6	0	-42.7	58.29	-	-	74	-15.71	-	-	0	101	V
	* 17.733274	47.3	ADR	41.6	1.48	-42.7	47.68	54	-6.32	-	-	-	-	0	101	V
2	2.452953	59.39	PK-U	32.3	0	-48.3	43.39	-	-	-	-	68.2	-24.81	0	101	V
5	6.674359	55.7	PK-U	35.6	0	-45.24	46.06	-	-	-	-	68.2	-22.14	0	101	V
3	6.77833	55.93	PK-U	35.6	0	-45.4	46.13	-	-	-	-	68.2	-22.07	0	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZONTAL



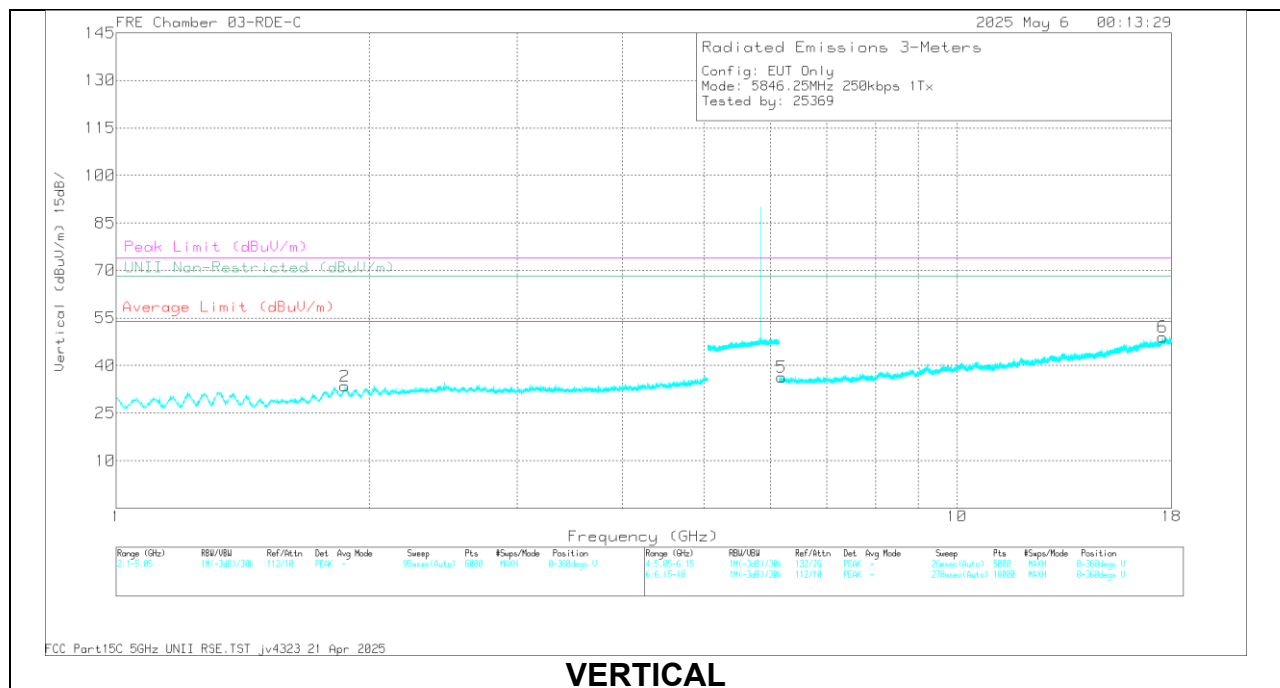
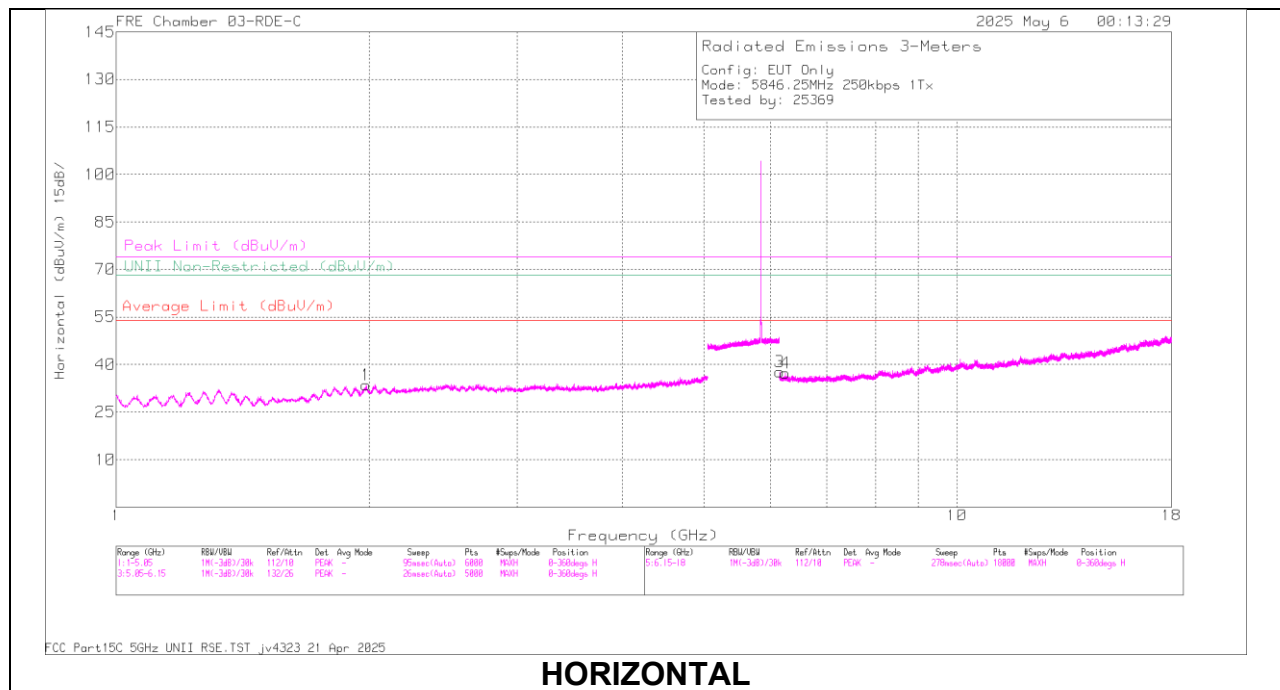
VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.265795	59.78	PK-U	31.5	0	-48.3	42.98	-	-	74	-31.02	-	-	360	200	H
	* 2.269181	47.88	ADR	31.6	1.48	-48.4	32.56	54	-21.44	-	-	-	-	360	200	H
6	* 17.726849	59.01	PK-U	41.6	0	-42.7	57.91	-	-	74	-16.09	-	-	360	101	V
	* 17.727459	47.29	ADR	41.6	1.48	-42.7	47.67	54	-6.33	-	-	-	-	360	101	V
2	1.883801	58.88	PK-U	30.9	0	-47.58	42.2	-	-	-	-	68.2	-26	360	101	V
5	6.271255	55.23	PK-U	35.4	0	-44.7	45.93	-	-	-	-	68.2	-22.27	360	101	V
3	6.314229	56.05	PK-U	35.4	0	-44.9	46.55	-	-	-	-	68.2	-21.65	360	198	H
4	17.538525	58.63	PK-U	41.5	0	-42.95	57.18	-	-	-	-	68.2	-11.02	360	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



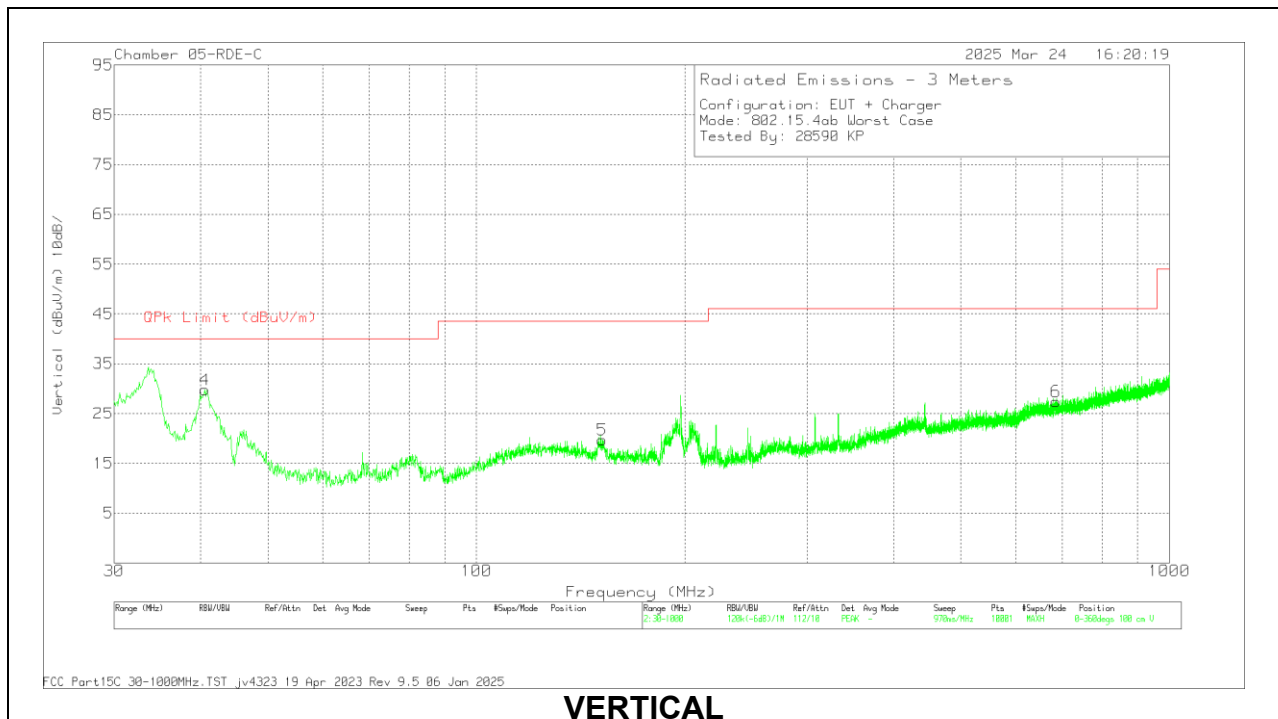
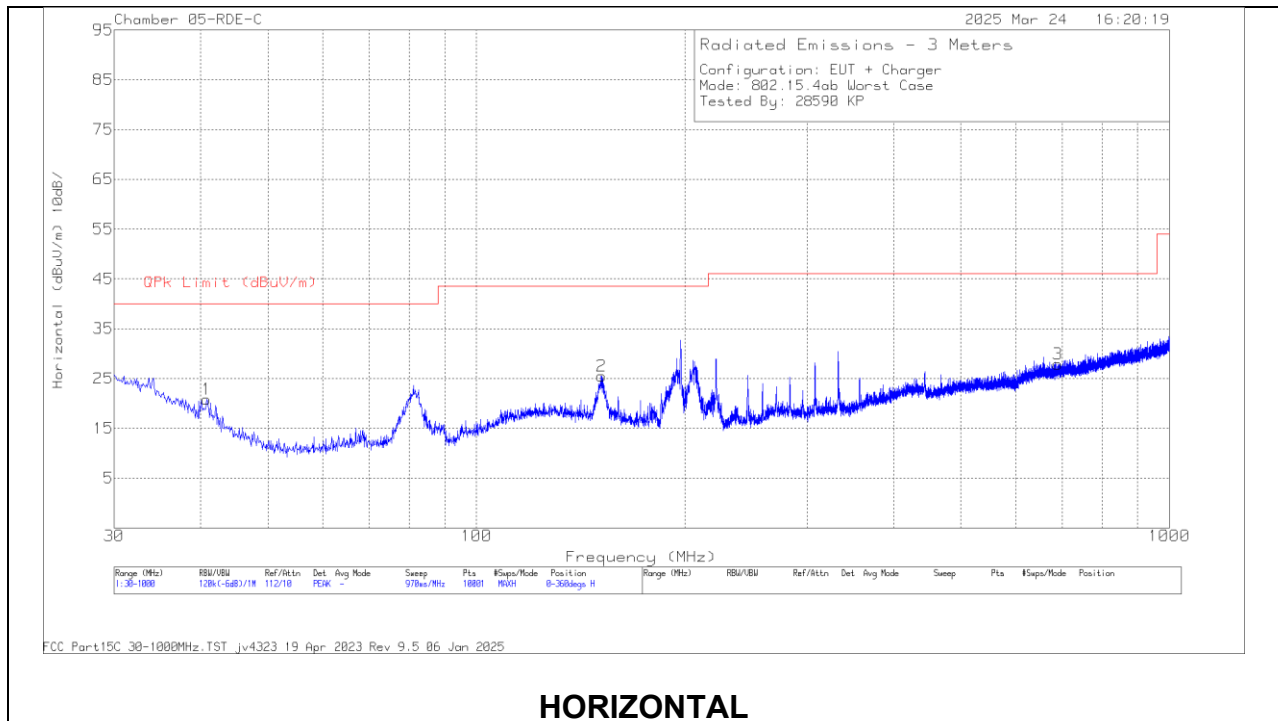
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	1.871717	59.73	PK-U	30.9	-47.5	43.13	68.2	-25.07	194	199	V
1	1.979926	60.43	PK-U	31	-47.91	43.52	68.2	-24.68	194	199	H
3	6.153179	56.41	PK-U	35.4	-44.62	47.19	68.2	-21.01	103	113	H
5	6.18385	55.49	PK-U	35.4	-44.79	46.1	68.2	-22.1	194	101	V
4	6.255538	56.01	PK-U	35.4	-44.7	46.71	68.2	-21.49	194	320	H
6	17.564361	58.46	PK-U	41.5	-42.94	57.02	68.2	-11.18	194	101	V

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.2. WORST CASE BELOW 1 GHz

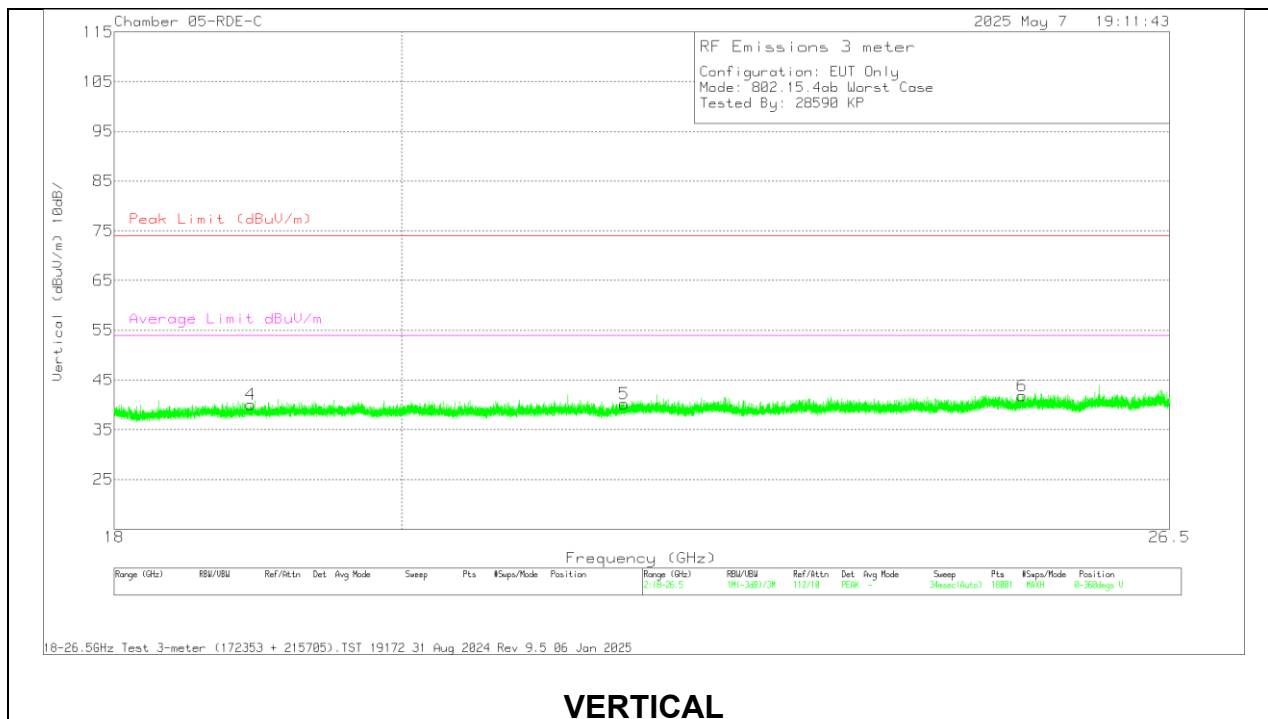
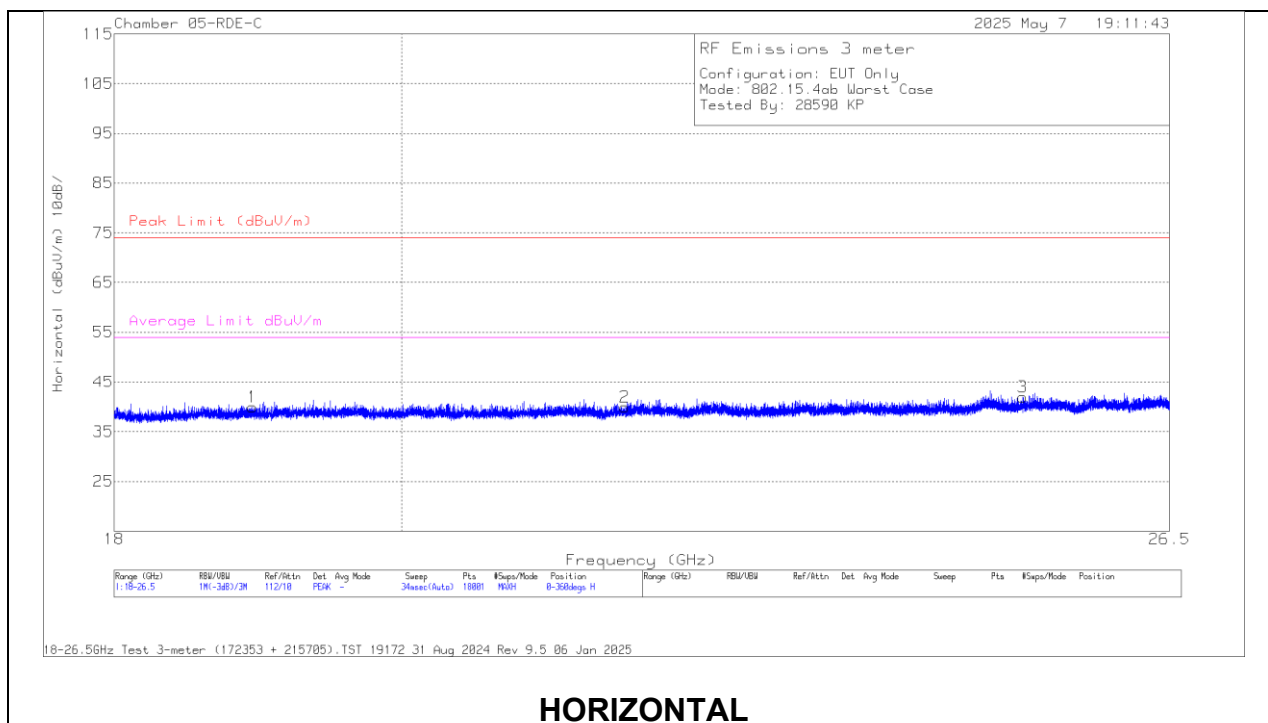


Below 1GHz DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	171863 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	40.4282	38.31	Qp	19.2	-31	26.51	40	-13.49	320	101	V
1	40.5937	27.14	Qp	19.1	-31	15.24	40	-24.76	87	289	H
2	151.658	34.02	Qp	18.3	-30.3	22.02	43.52	-21.5	226	171	H
5	151.807	27.06	Qp	18.3	-30.3	15.06	43.52	-28.46	15	184	V
6	685.825	21.01	Qp	25.8	-28.7	18.11	46.02	-27.91	132	134	V
3	690.595	21.05	Qp	25.9	-28.7	18.25	46.02	-27.77	209	248	H

Qp - Quasi-Peak detector

10.3. WORST CASE 18-26 GHz

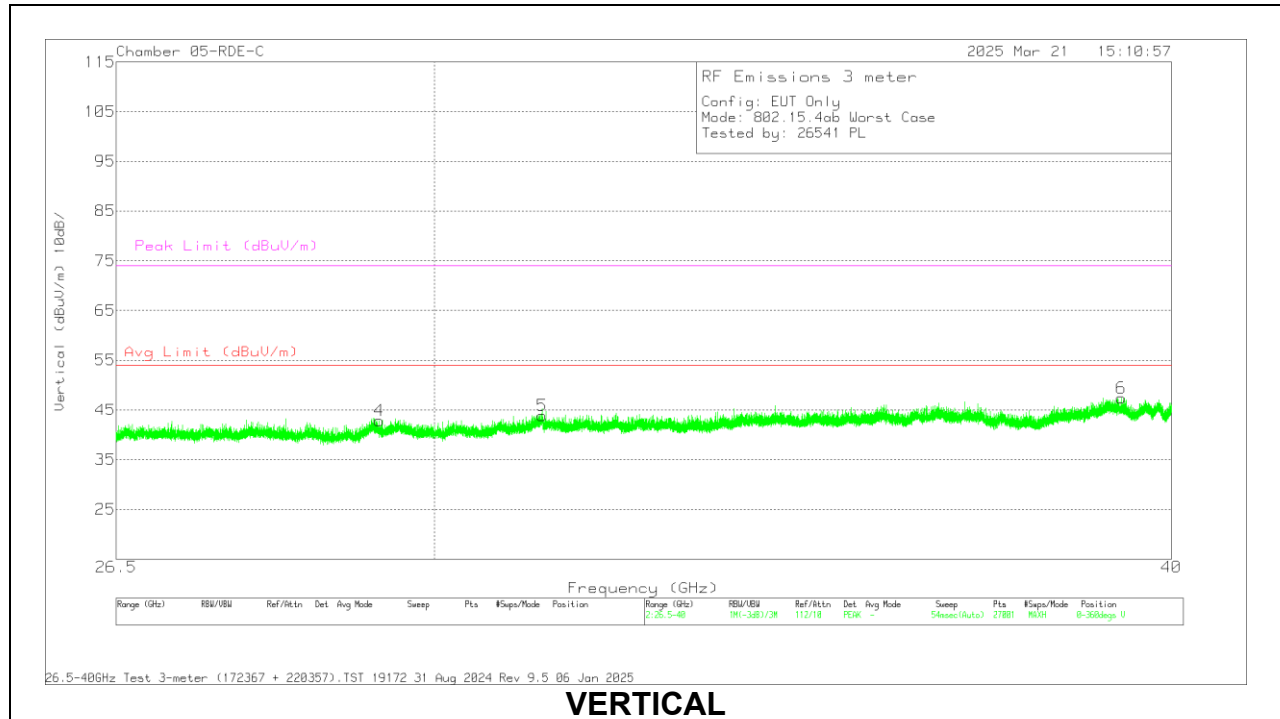
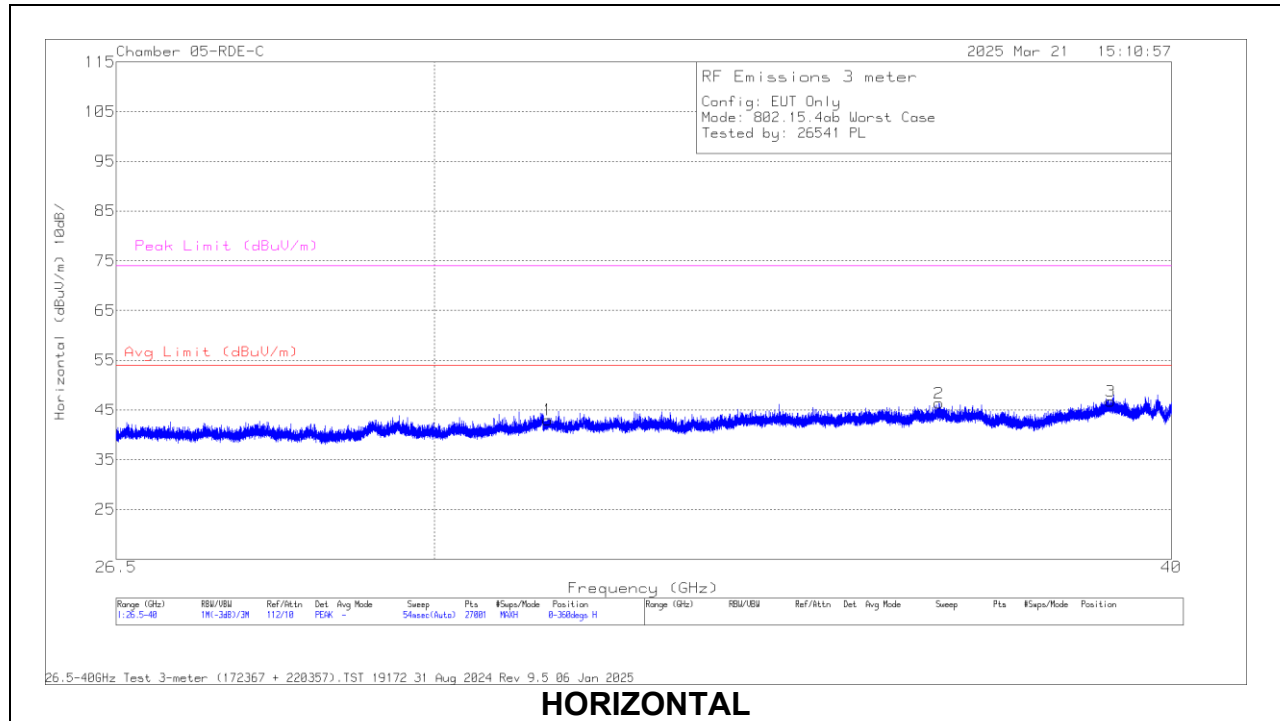


18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	172353 ACF (dB/m)	CBL AMP (dB)	CBL AMP (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 18.935472	55.15	Pk	32.3	-61.2	13.7	39.95	74	-34.05	54	-14.05	0-360	199	H
4	* 18.921305	55.32	Pk	32.3	-61.2	13.7	40.12	74	-33.88	54	-13.88	0-360	101	V
5	21.698915	53.57	Pk	32.9	-60.8	14.5	40.17	74	-33.83	54	-13.83	0-360	199	V
2	21.704109	53.31	Pk	32.9	-60.8	14.5	39.91	74	-34.09	54	-14.09	0-360	101	H
6	25.10883	53.79	Pk	33.7	-61.8	16.1	41.79	74	-32.21	54	-12.21	0-360	199	V
3	25.110719	53.93	Pk	33.7	-61.8	16.1	41.93	74	-32.07	54	-12.07	0-360	101	H

PK- Peak Detector

10.4. WORST CASE 26-40 GHz



26 – 40GHz DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	172367 ACF (dB/m)	CBL AMP (dB)	Cables (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Avg Limit (dBuV/m)	Avg Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
33.240357	53.46	PK	36.6	-62.3	18.1	45.86	74	-28.14	54	-8.14	260	120	H
29.364352	54.54	PK	36.9	-64.2	16.5	43.74	74	-30.26	54	-10.26	89	200	V
36.531979	53.1	PK	37.3	-62.8	19.2	46.8	74	-27.2	54	27.2	150	186	H
* 31.297389	53.75	PK	36.5	-60.5	17.3	47.05	74	-26.95	54	-6.95	349	234	V
* 39.059593	52.54	PK	38.1	-62	19.8	48.44	74	-25.56	54	-5.56	89	245	H
* 39.22373	52.51	PK	38	-62.3	19.8	48.01	74	-25.99	54	-5.99	312	133	V

PK—Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

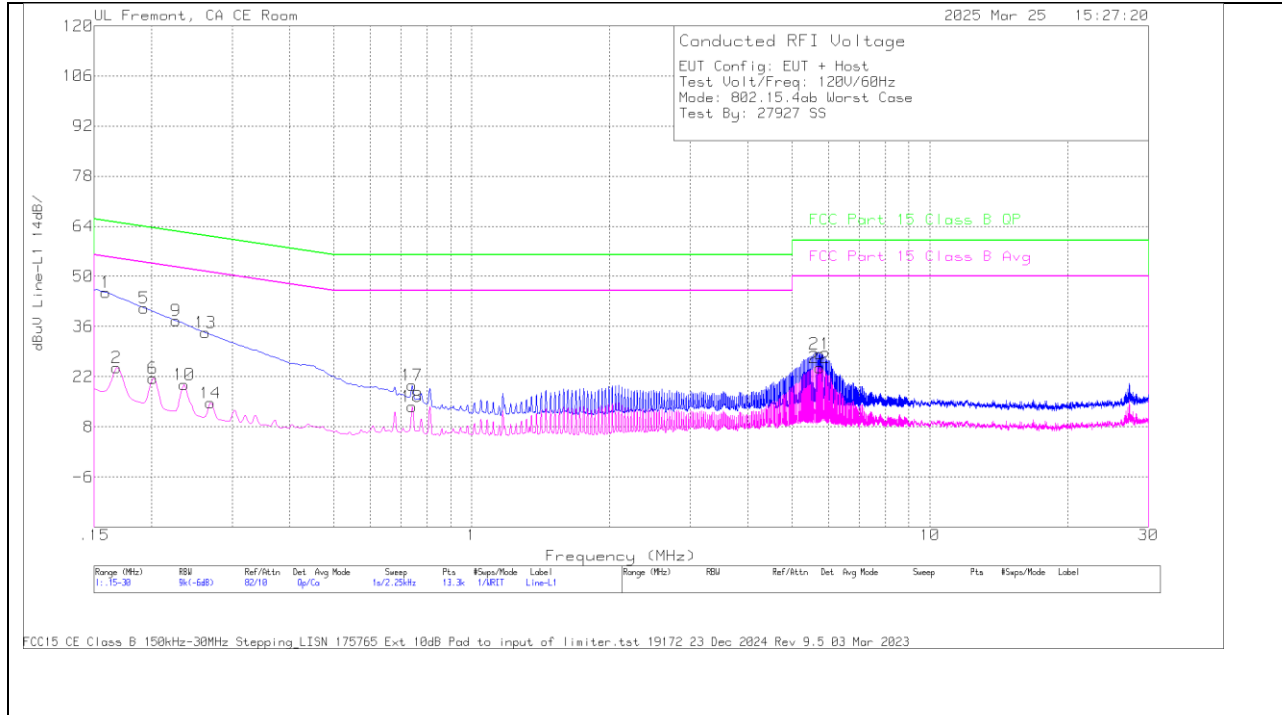
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

11.1. AC Power Line WITH LAPTOP

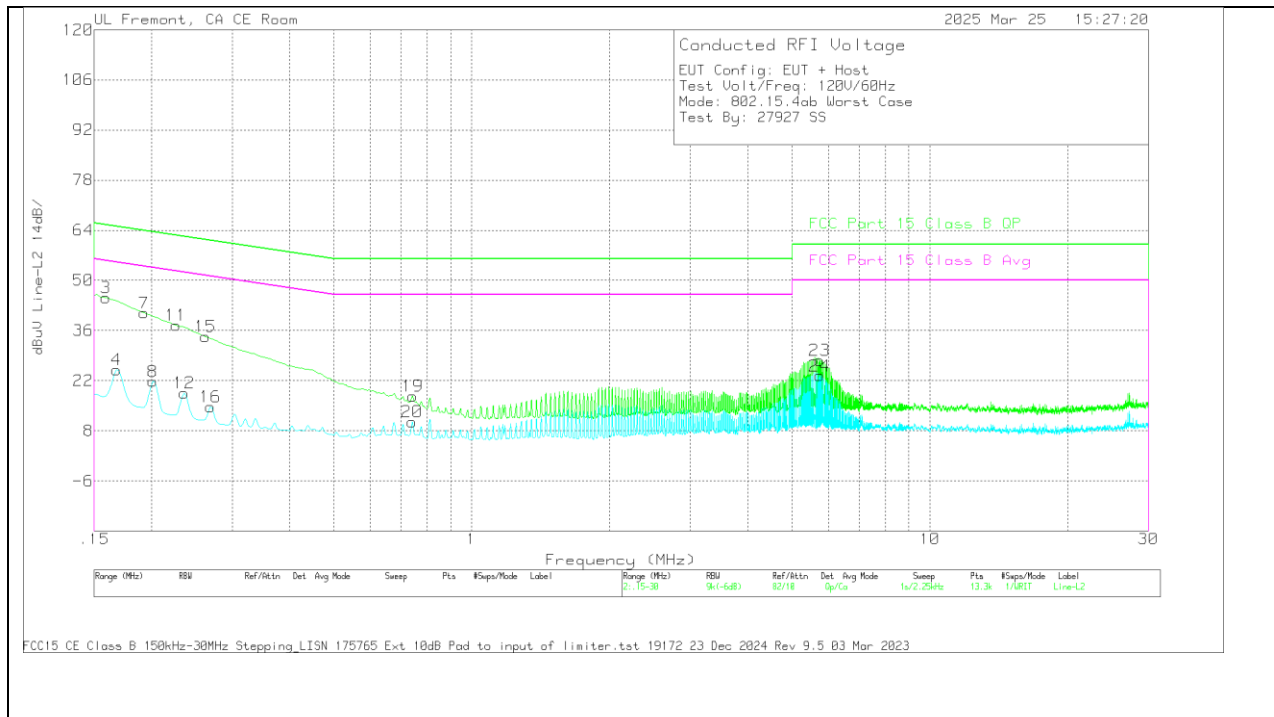
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	LISN (dB)	CBL(dB)	CBL(dB)	10dB Atten (dB)	Corrected Reading dBUV	FCC Part 15C Avg dBUV	Margin (dB)	FCC Part 15C QP dBUV	Av(CISPR)Margin (dB)
2	.168	5.54	Ca	.1	.4	8.5	10	24.54	-	-	55.06	-30.52
6	.2018	3.09	Ca	0	.1	8.4	10	21.59	-	-	53.54	-31.95
10	.2355	1.5	Ca	0	0	8.3	10	19.8	-	-	52.25	-32.45
14	.2693	-3.39	Ca	0	-.1	8.1	10	14.61	-	-	51.14	-36.53
18	.7418	-5	Ca	0	.1	8.5	10	13.6	-	-	46	-32.4
22	5.7413	6.46	Ca	0	0	8.1	10	24.56	-	-	50	-25.44
1	.159	26.5	Qp	.1	.4	8.5	10	45.5	65.52	-20.02	-	-
5	.1928	22.46	Qp	.1	.2	8.4	10	41.16	63.92	-22.76	-	-
9	.2265	19.28	Qp	0	0	8.3	10	37.58	62.58	-25	-	-
13	.2625	16.17	Qp	0	-.1	8.2	10	34.27	61.35	-27.08	-	-
17	.7418	1.05	Qp	0	.1	8.5	10	19.65	56	-36.35	-	-
21	5.7413	10.32	Qp	0	0	8.1	10	28.42	60	-31.58	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS

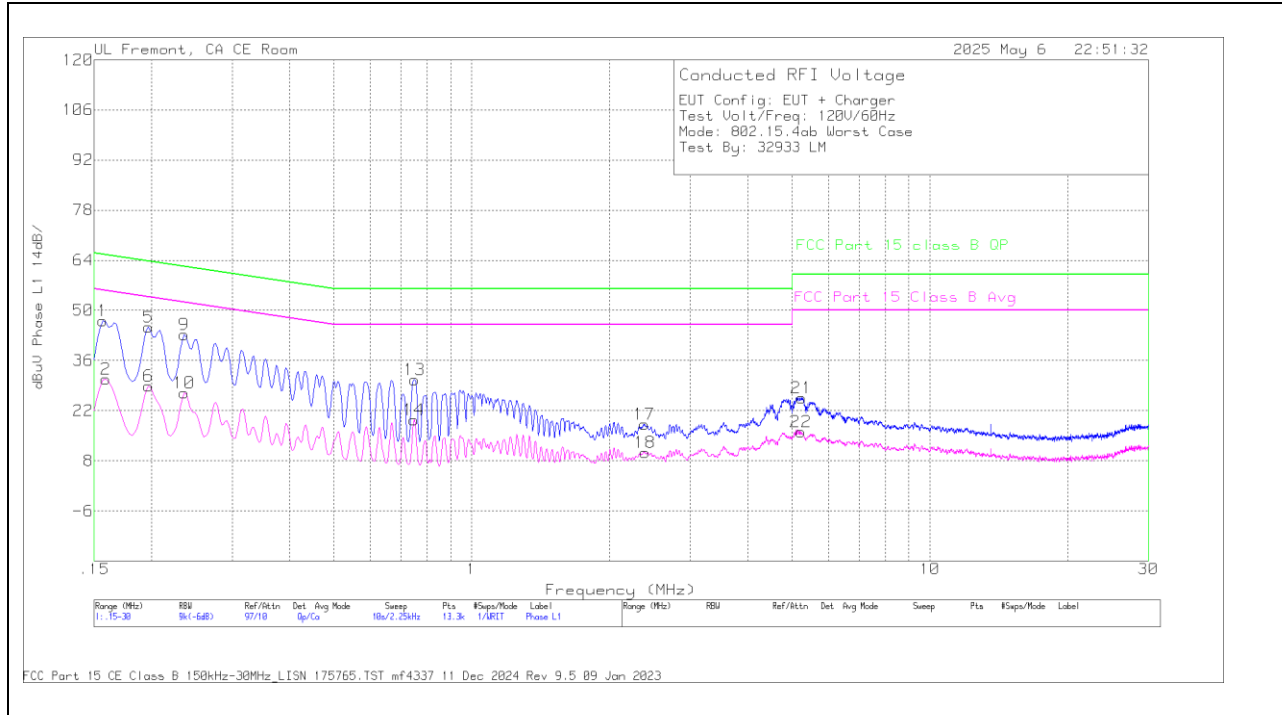


Range 2: Line-L2 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN (dB)	CBL(dB)	CBL(dB)	10dB Atten (dB)	Corrected Reading dBuV	FCC Part 15C Avg dBuV	Margin (dB)	FCC Part 15C QP dBuV	Av(CISPR)Margin (dB)
4	.168	6.25	Ca	.1	.2	8.5	10	25.05	-	-	55.06	-30.01
8	.2018	3.38	Ca	0	0	8.4	10	21.78	-	-	53.54	-31.76
12	.2355	.17	Ca	0	.1	8.3	10	18.57	-	-	52.25	-33.68
16	.2693	-3.52	Ca	0	.1	8.1	10	14.68	-	-	51.14	-36.46
20	.7418	-8.21	Ca	0	.2	8.5	10	10.49	-	-	46	-35.51
24	5.7413	5.46	Ca	0	-.2	8.1	10	23.36	-	-	50	-26.64
3	.159	26.34	Qp	.1	.2	8.5	10	45.14	65.52	-20.38	-	-
7	.1928	22.5	Qp	0	0	8.4	10	40.9	63.92	-23.02	-	-
11	.2265	19.02	Qp	0	.1	8.3	10	37.42	62.58	-25.16	-	-
15	.2625	15.85	Qp	0	.2	8.2	10	34.25	61.35	-27.1	-	-
19	.7429	-1.1	Qp	0	.2	8.5	10	17.6	56	-38.4	-	-
23	5.7413	9.72	Qp	0	-.2	8.1	10	27.62	60	-32.38	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

11.2. AC Power Line WITH AC/DC Adapter

LINE 1 RESULTS

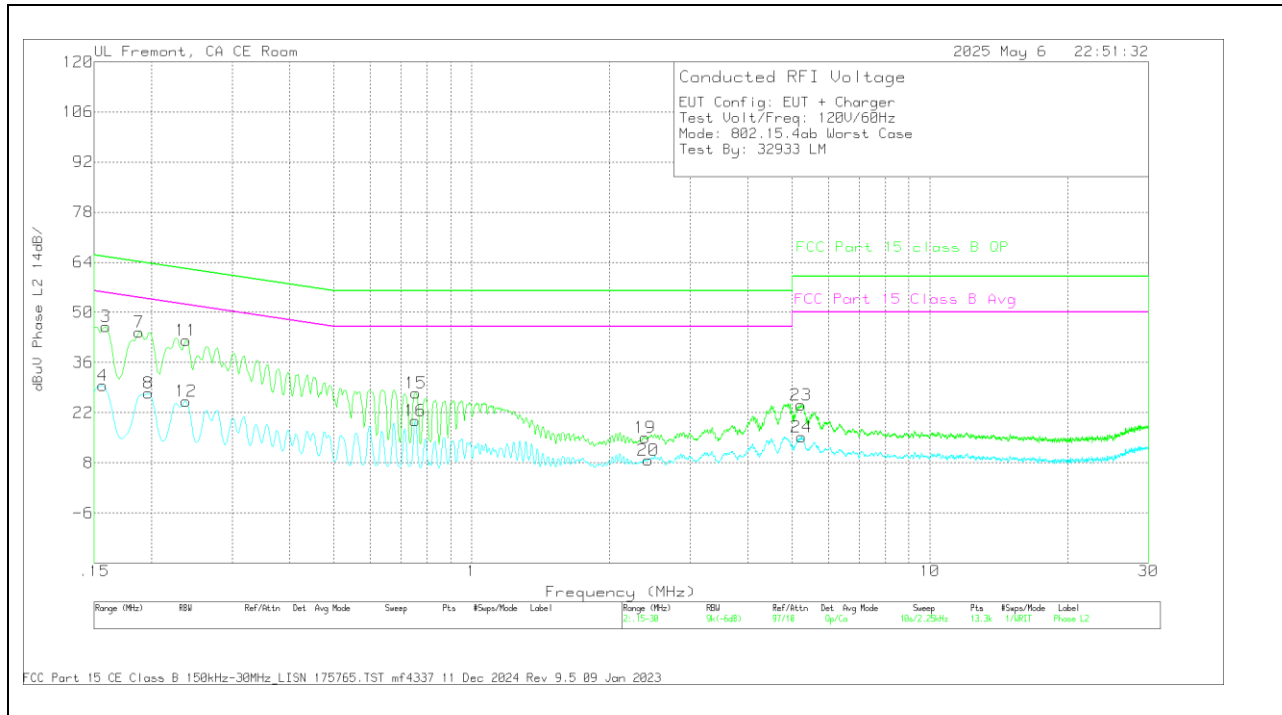


Range 1: Phase L1 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	CBL(dB)	LISN (dB)	CBL(dB)	10dB Atten (dB)	Corrected Reading dBuV	FCC Part 15C Avg dBuV	Margin (dB)	FCC Part 15C QP dBuV	Margin (dB)
2	.159	11.88	Ca	.4	.1	8.5	10	30.88	55.52	-24.64	-	-
6	.1973	10.26	Ca	.1	.1	8.4	10	28.86	53.73	-24.87	-	-
10	.2355	8.61	Ca	0	0	8.3	10	26.91	52.25	-25.34	-	-
14	.7485	.76	Ca	.1	0	8.6	10	19.46	46	-26.54	-	-
18	2.3865	-7.85	Ca	-.1	0	8.3	10	10.35	46	-35.65	-	-
22	5.235	-2.45	Ca	.2	0	8.3	10	16.05	50	-33.95	-	-
1	.1568	28.06	Qp	.4	.1	8.5	10	47.06	-	-	65.63	-18.57
5	.1973	26.68	Qp	.1	.1	8.4	10	45.28	-	-	63.73	-18.45
9	.2355	24.92	Qp	0	0	8.3	10	43.22	-	-	62.25	-19.03
13	.7508	11.92	Qp	.1	0	8.6	10	30.62	-	-	56	-25.38
17	2.382	-.06	Qp	-.1	0	8.3	10	18.14	-	-	56	-37.86
21	5.2418	6.9	Qp	.3	0	8.4	10	25.6	-	-	60	-34.4

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Phase L2 .15 - 30MHz												
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	CBL(dB)	LISN (dB)	CBL(dB)	10dB Atten (dB)	Corrected Reading dBuV	FCC Part 15C Avg dBuV	Margin (dB)	FCC Part 15C QP dBuV	Margin (dB)
4	.1568	10.53	Ca	.4	.1	8.5	10	29.53	55.63	-26.1	-	-
8	.1973	8.98	Ca	.1	0	8.4	10	27.48	53.73	-26.25	-	-
12	.2378	7.12	Ca	-.1	0	8.2	10	25.22	52.17	-26.95	-	-
16	.753	1.07	Ca	.1	0	8.6	10	19.77	46	-26.23	-	-
20	2.427	-9.44	Ca	-.1	0	8.3	10	8.76	46	-37.24	-	-
24	5.2508	-3.51	Ca	.3	0	8.4	10	15.19	50	-34.81	-	-
3	.159	27.11	Qp	.4	.1	8.5	10	46.11	-	-	65.52	-19.41
7	.1883	25.94	Qp	.2	0	8.4	10	44.54	-	-	64.11	-19.57
11	.2378	24.16	Qp	-.1	0	8.2	10	42.26	-	-	62.17	-19.91
15	.7553	8.94	Qp	.1	0	8.5	10	27.54	-	-	56	-28.46
19	2.3865	-3.09	Qp	-.1	0	8.3	10	15.11	-	-	56	-40.89
23	5.226	5.67	Qp	.2	0	8.3	10	24.17	-	-	60	-35.83

Qp - Quasi-Peak detector
Ca - CISPR average detection

12. SETUP PHOTOS

Please refer to 15496224-EP1V1 FCC IC for setup photos

END OF TEST REPORT