

TEST REPORT

Report Number: 15982168-E5V2

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

Model : A3716 (Parent)
A3717, A3718 (Variants)

Brand : APPLE

FCC ID : BCG-E9195A (Parent)
BCG-E9196A, BCG-E9197A (Variants)

IC : 579C-E9195A (Parent)
579C-E9196A, 579C-E9197A (Variants)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2026-08-05

Prepared by:
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REPORT REVISION HISTORY

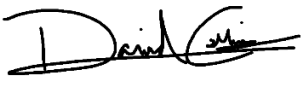
Rev.	Issue Date	Revisions	Revised By
V1	2026-07-21	Initial Issue	32186 JMK
V2	2026-08-05	Addressed TCB questions	Sahdev Badyal

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3716 (Parent) A3717, A3718 (Variants)
Brand	APPLE
FCC ID	BCG-E9195A (Parent) BCG-E9196A, BCG-E9197A (Variants)
IC	579C-E9195A (Parent) 579C-E9196A, 579C-E9197A (Variants)
EUT Description	SMARTPHONE
Serial Number	HVHHS40000M0001K2B, HVHHTU0000T0001K2S, WAITING on VARIANTS (Conducted) H9PQGVK9C7, FVW4RM94WG, GXCX60F5MV, HWFM67DFXL (Radiated)
Sample Receipt Date	2026-04-22
Date Tested	2026-05-04 to 2026-07-04
Applicable Standards	FCC 47 CFR Part 15 Subpart C ISED RSS-247 Issue 4 ISED RSS-GEN Issue 5 + A1 + A2
Test Results	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 is capable of demonstrating 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 ensure 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 taken into account 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 duly 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 By:	Prepared & Reviewed By:
	
Frank Ibrahim Staff Engineer UL Verification Services Inc.	David Collins Lab Supervisor UL Verification Services Inc.

2. TEST RESULTS SUMMARY

This report contains data provided by the customer, which can impact the validity of the 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)

Requirement Description	Requirement Clause Number (FCC)	Requirement Clause Number (ISED)	Result
Duty Cycle	-	-	Reporting purposes only
99% OBW	-	RSS-GEN 6.7	Complies
6dB BW	15.247 (a) (2)	RSS-247 6.3.1 (a)	Complies
Output Power	15.247 (b) (3)	RSS-247 6.3.2	Complies
PSD	15.247 (e)	RSS-247 6.3.1 (b)	Complies
Conducted Spurious Emissions	15.247 (d)	RSS-247 6.6	Complies
Radiated Emissions	15.209, 15.205	RSS-GEN 8.9, 8.10	Complies
AC Mains Conducted Emissions	15.207	RSS-Gen 8.8	Complies

3. TEST METHODOLOGY

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

- ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
- FCC 47 CFR Part 2
- FCC 47 CFR Part 15C
- KDB 558074 D01 15.247 Meas Guidance
- KDB 414788 D01 Radiated Test Site
- KDB 662911 D01 Multiple Transmitter Output
- KDB 484596 D01 Referencing Test Data
- RSS-GEN Issue 5 + A1 + A2
- RSS-247 Issue 4

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 regularly, with a maximum time between calibrations of one year or the manufacturer's 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 taken into account 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 a Power Meter	0.45 dB (Ave), 1.30 dB Peak)
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

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)

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.

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, 5G NR1, 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 RX only) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Antenna	Configuration	Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
ANT 3	High Power	2405 - 2475	802.15.4	18.09	64.42
	Low Power			7.5	5.62
ANT 4	High Power			16.96	49.66
	Low Power			9.14	8.20

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 (GHz)	Antenna Type	Antenna Peak Gain		Cable Loss	
		ANT 4 (dBi)	ANT 3 (dBi)	ANT 4 (dB)	ANT 3 (dB)
2.4	IFA	-0.50	-3.00	1.63	1.75

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 and software installed during testing were 24A343.

6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X, Y and Z on ANT 4, and ANT 3. It was determined that X (Flatbed) was the worst-case orientation for ANT 4 and ANT 3.

Radiated band edge, harmonic, and spurious emissions from 1GHz to 18GHz were performed with the EUT was set to transmit at highest power on Low/Middle/High channels.

Radiated emissions below 1GHz, 18-26GHz and power line conducted emissions were performed with the EUT transmits at the channel with the highest output power as worst-case scenario. There were no emissions found below 30MHz within 20dB of the limit.

For 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.

All simultaneous transmission combinations have been investigated, and no signal emissions were observed.

For AC line conducted emissions, radiated emissions below 1 GHz, and radiated emissions above 18 GHz, only the worst-case test results are included in this report.

If the Keysight PXA supports both AC and DC coupling, a warning message stating "DC coupled" will appear on the status line.

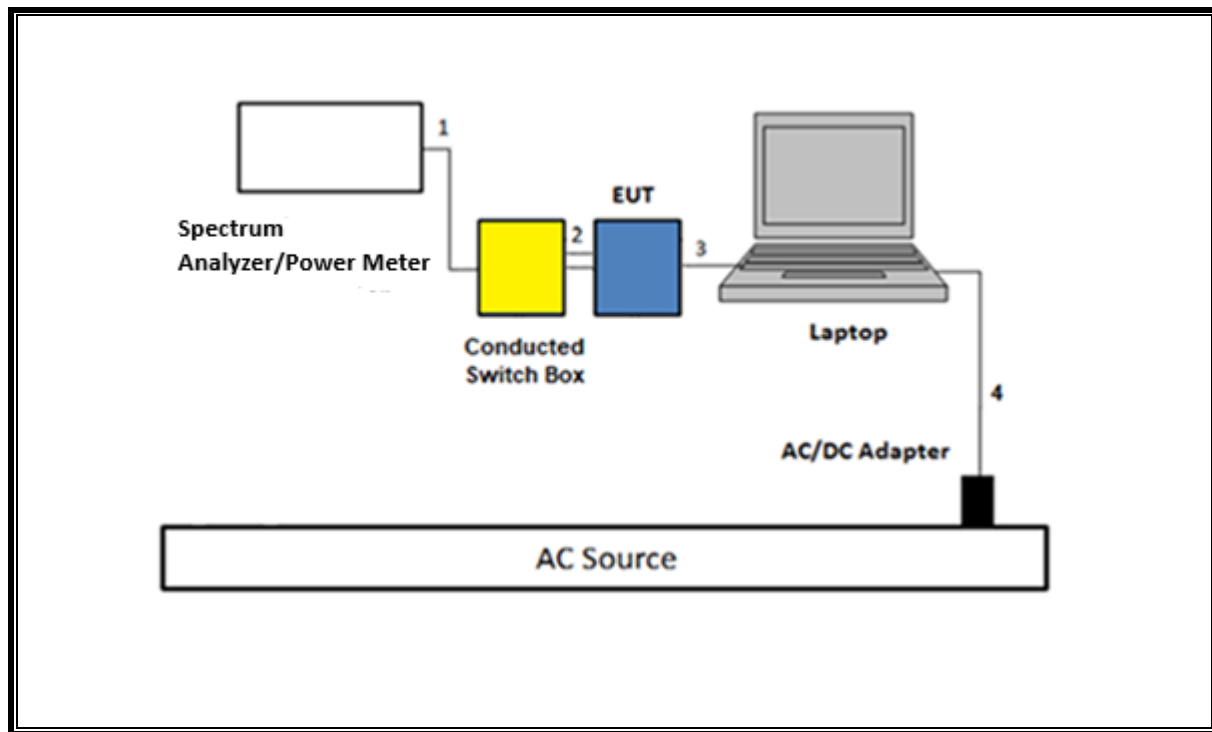
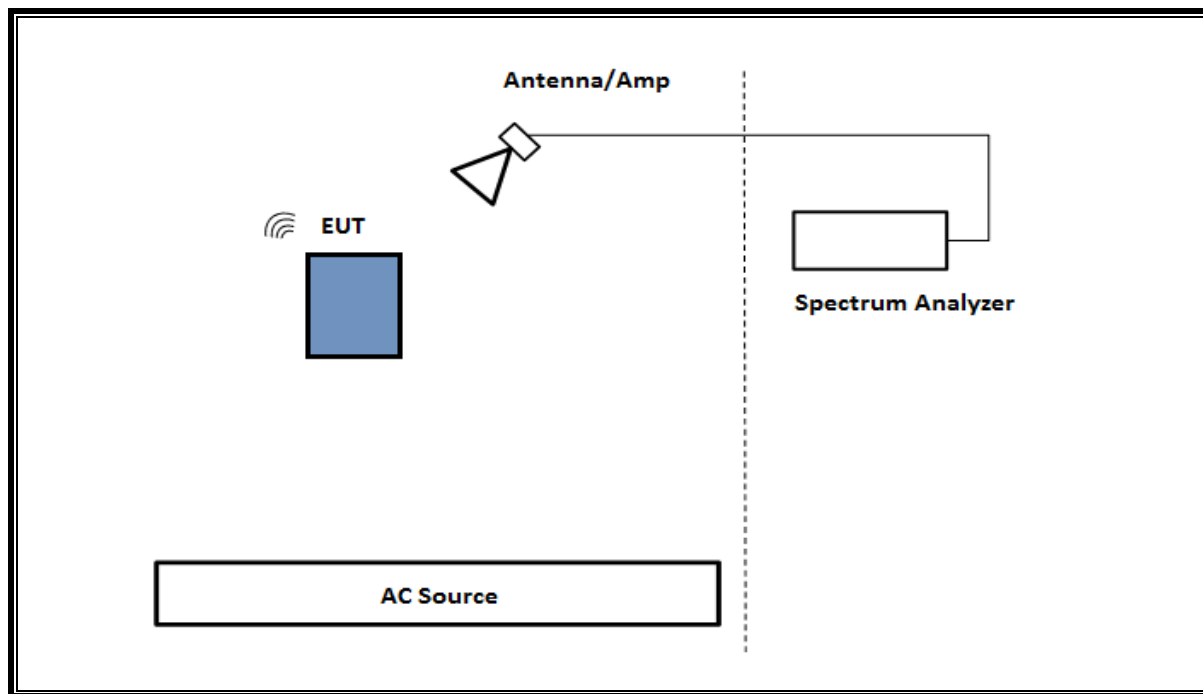
Plots included in the report are representative of the method and settings parameters used for the test

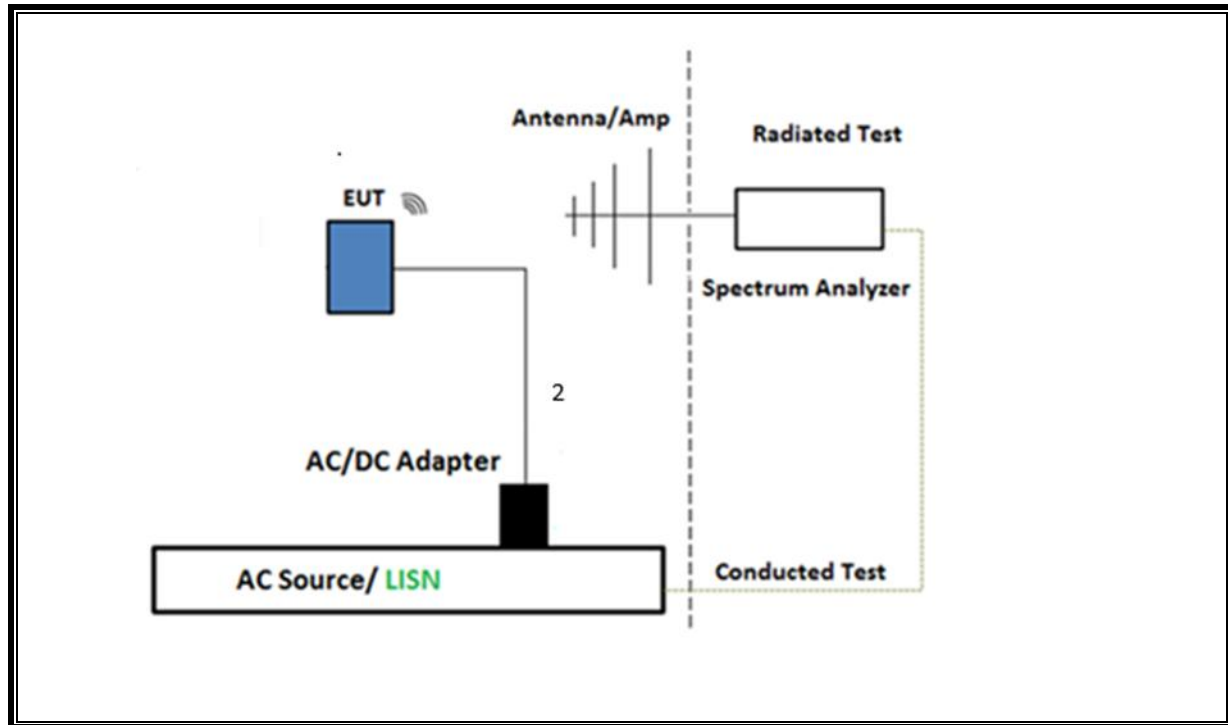
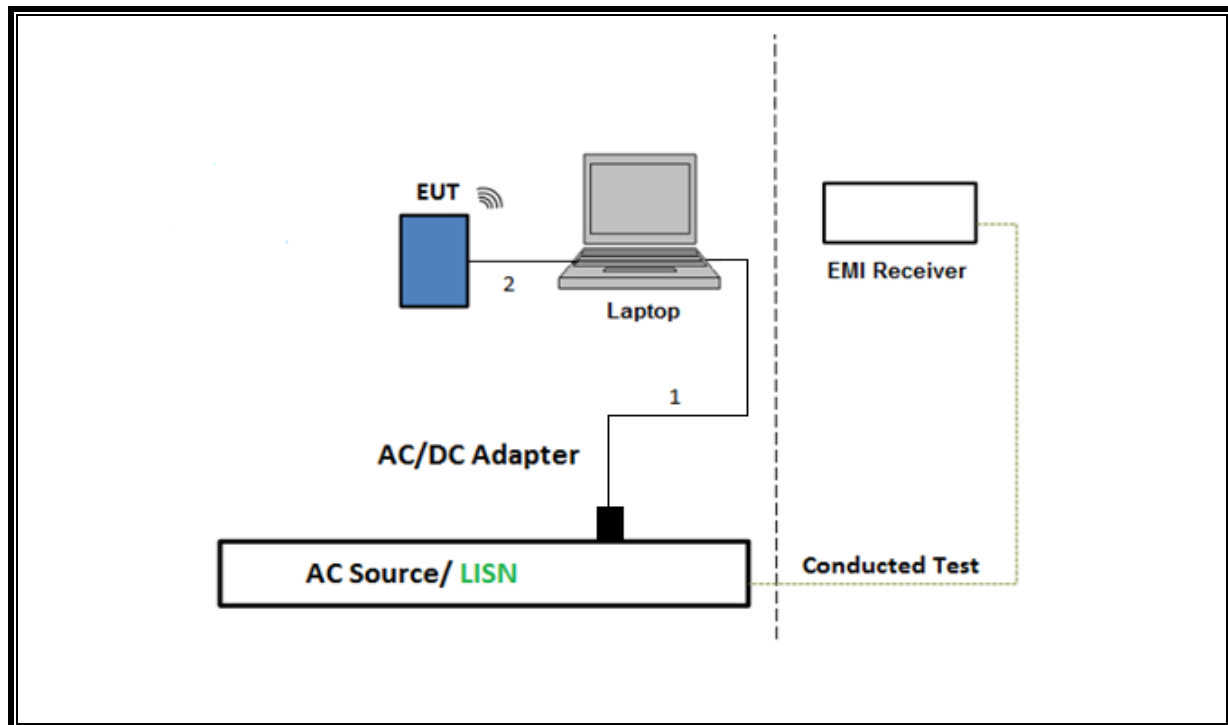
6.6. DESCRIPTION OF TEST SETUP

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
Conducted Switch Box		UL	n/a	208281		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 the 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 below. Test software exercised the radio card.

SETUP DIAGRAM FOR CONDUCTED TESTS**SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz (1 to 26GHz)**

SETUP DIAGRAM FOR 30-1000MHz and AC LINE CONDUCTED TEST**TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION**

7. 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
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	2027-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80430	2027-09-30
Filter Box	UL-FR1	Frankenstein, 2 Amp, 12 Port	224478	2027-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201500	2027-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200785	2026-12-31
Filter Box	UL-FR1	Frankenstein, 2 Amp, 12 Port	235088	2027-05-31
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	20404	2026-07-31
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	226862	2027-01-31
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172363	2027-05-31
Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	171580	2027-06-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223459	2027-02-28
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	219908	2026-08-31
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	219910	2026-08-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	N9030A	Keysight Technologies Inc	85313	2027-01-31
Conducted Switch Box	UL-FR1	CSB	245775	2027-01-31
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90719	2027-01-31

AC Line Conducted				
Description	Manufacturer	Model	ID Num	Cal Due
EMI TEST RECEIVER	Rohde & Schwarz	ESCI7	82297	2027-02-28
LISN	Fischer Custom Communications	FCC-LISN-50/250-25-2-01-480V	175765	2027-01-31
Transient Limiter	TE	TBFL1	207996	2026-12-30
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Ver 9.5, Aug 15, 2025 Ver 9.5, Dec 15, 2025	
Conducted Software	UL	Station Tool	V2026.6.0	
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Aug 25, 2025	

*Testing is completed before equipment expiration date.

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

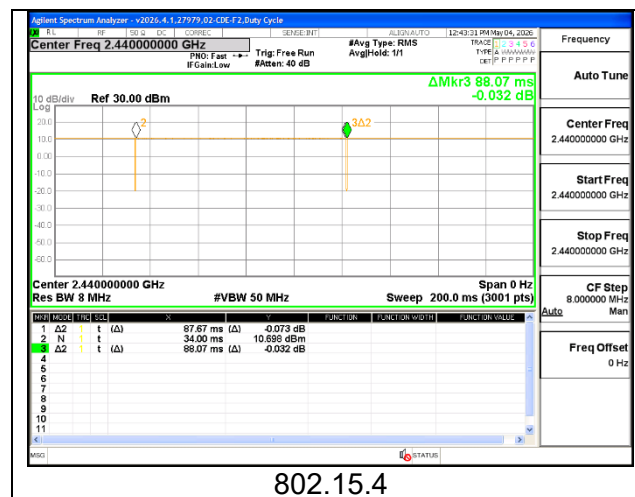
PROCEDURE

ANSI C63.10, Subclause 11.6.

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)
2.4GHz Band						
802.15.4, 2440MHz	87.670	88.070	0.995	99.55	0.00	0.010

DUTY CYCLE PLOT



8.2. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

TEST PROCEDURE

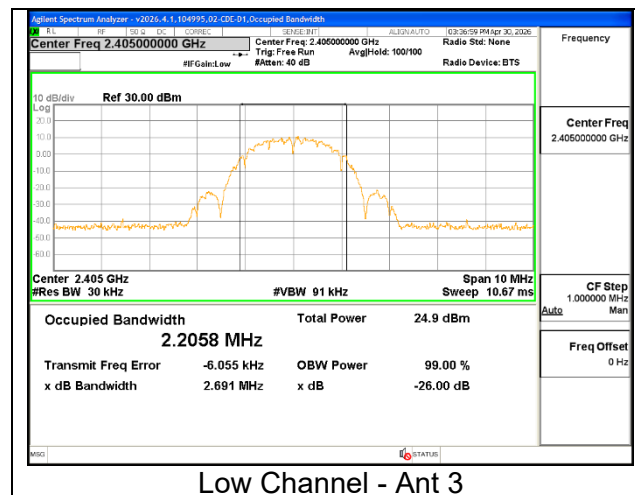
ANSI C63.10, Subclause - 6.9.3.

RESULTS

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

802.15.4	Frequency (MHz)	Channel Number	99% Bandwidth (MHz)	
			Ant 4	Ant 3
High Power	2405	Low	2.2010	2.2058
	2440	Mid	2.2002	2.2023
	2475	High	2.1991	2.2012

WORST MAXIMUM PLOTS



8.3. 6dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 6.3.1 (a)

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

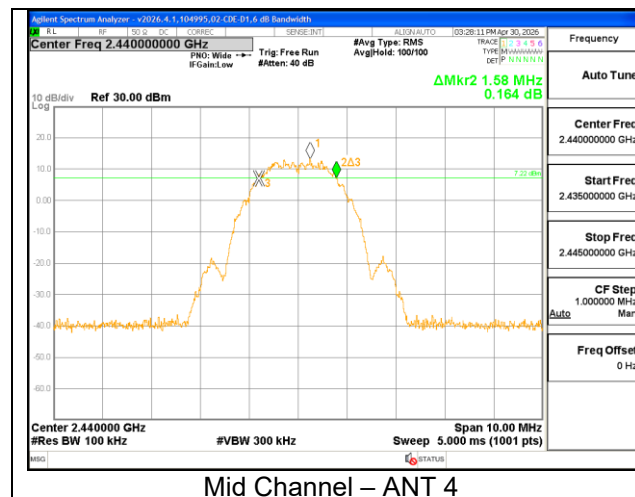
TEST PROCEDURE

ANSI C63.10 Subclause - 11.8.1 Option 1

RESULTS

802.15.4	Frequency (MHz)	Channel Number	6dB Bandwidth (MHz)	
			Ant 4	Ant 3
High Power	2405	Low	1.62	1.65
	2440	Mid	1.58	1.6
	2475	High	1.6	1.65

WORST MINIMUM PLOT



8.4. OUTPUT POWER AND POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (b) (3) & (e)

RSS-247 6.3.2 & 6.3.1 (b)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

Conducted Outout Power: ANSI C63.10 Subclause - 11.9.1.2 Method PKPM1 (Peak-reading power meter)

Power Spectral Density: ANSI C63.10 Subclause - 11.10.2 Method PKPSD (peak PSD)

DIRECTIONAL ANTENNA GAIN

For 1 TX:

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

RESULTS

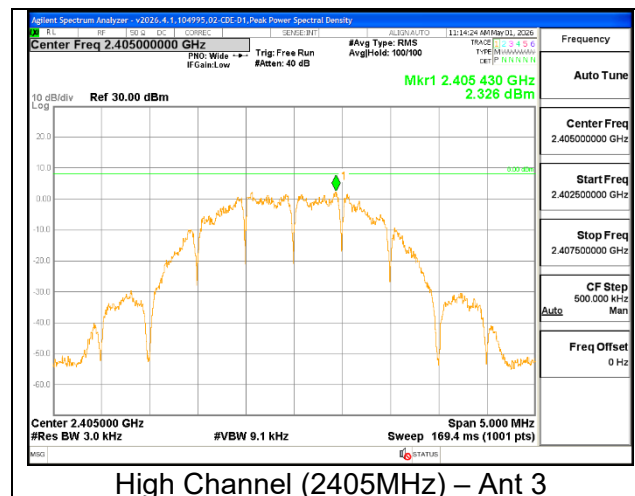
Only the worst-case plot is reported to show the analyzer's settings.

Note: RBW setting is used greater than or equal to 3kHz on PSD measurement

2.4G Thread	
Ant 4 (dBi)	-0.5
Ant 3 (dBi)	-3.0

2.4G	Power Config.	Freq (MHz)	Ch. #	Power Limit (dBm)		Output Power (dBm)		PSD Limit (dBm/3kHz)		PSD (dBm/kHz)	
				Ant4	Ant3	Ant4	Ant3	Ant4	Ant3	Ant4	Ant3
Thread	High	2405	Low	30	30	16.91	18.09	8	8	0.978	2.326
		2440	Mid			16.94	18.07			0.951	2.239
		2475	High			16.96	18.06			0.914	2.326
	Low	2405	Low			8.86	7.47			-6.995	-8.908
		2440	Mid			9.14	7.50			-7.129	-8.896
		2475	High			9.00	7.46			-7.007	-8.656

Worst-Case Plot:



8.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

ANSI C63.10 Subclause - 11.9.2.3.2 Method AVGPM G (Measurement using an RF average-reading power meter)

RESULTS

2.4G	Power Config.	Freq (MHz)	Ch. #	Average Power (Gated) (dBm)	
				Ant 4	Ant 3
Thread	High	2405	Low	16.39	17.43
		2440	Mid	16.37	17.41
		2475	High	16.43	17.42
	Low	2405	Low	8.47	6.97
		2440	Mid	8.44	6.99
		2475	High	8.47	6.96

8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

RSS-247 6.6

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)).

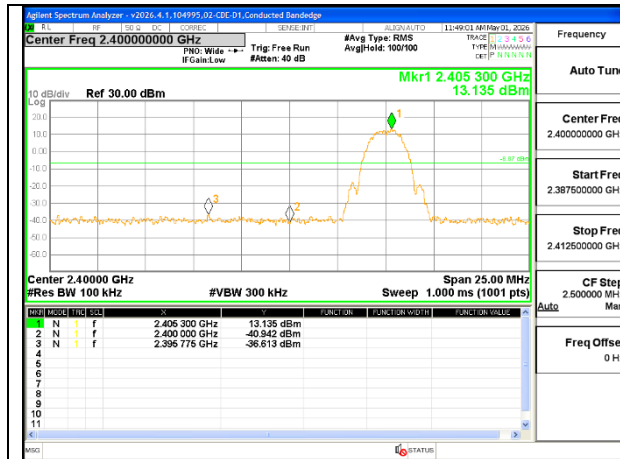
TEST PROCEDURE

ANSI C63.10 Subclause - 11.12.2

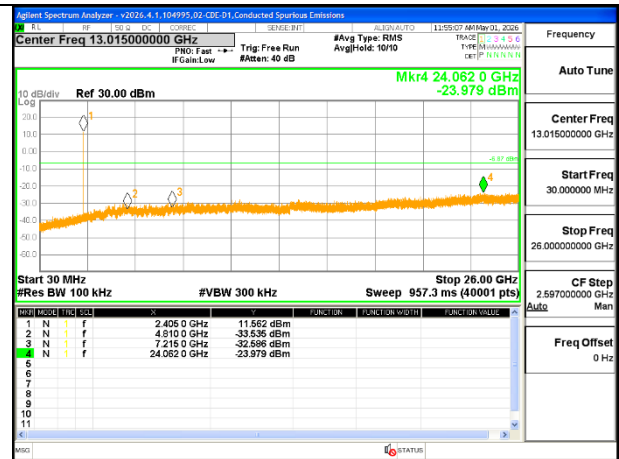
RESULTS

8.6.1. HIGH POWER

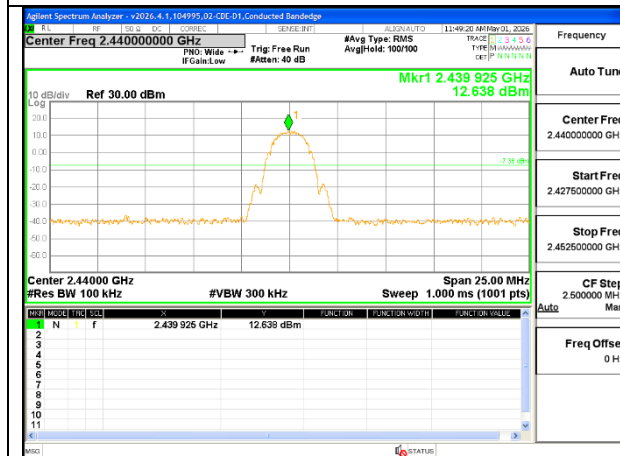
ANT 4



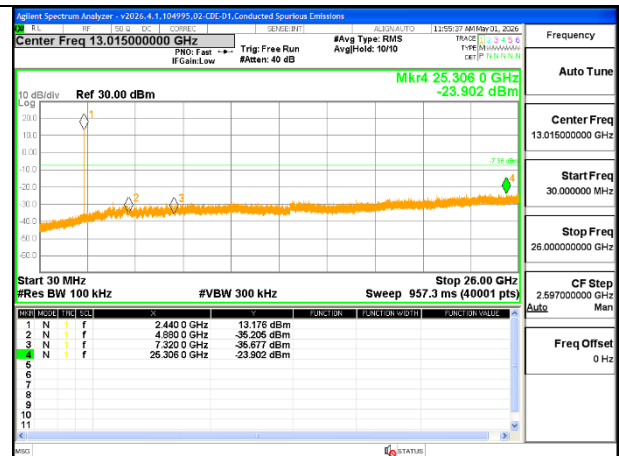
LOW CHANNEL BANDEDGE



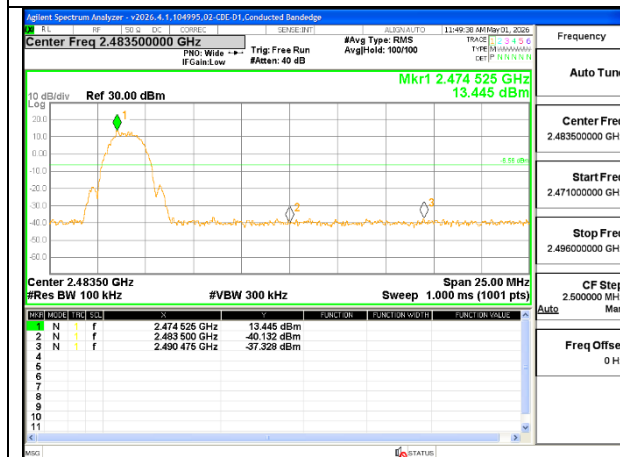
OUT-OF-BAND LOW CHANNEL



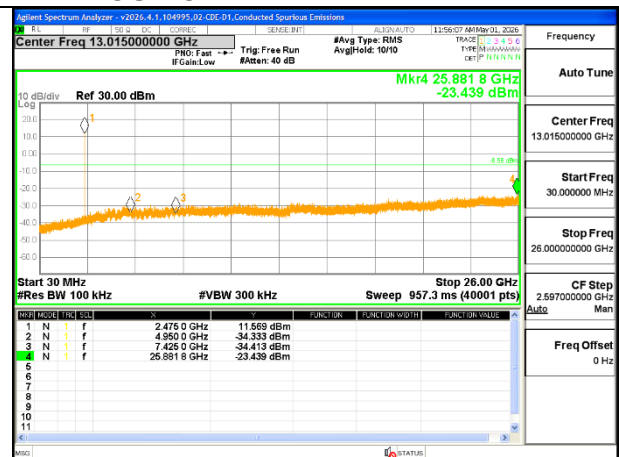
IN-BAND REFERENCE LEVEL



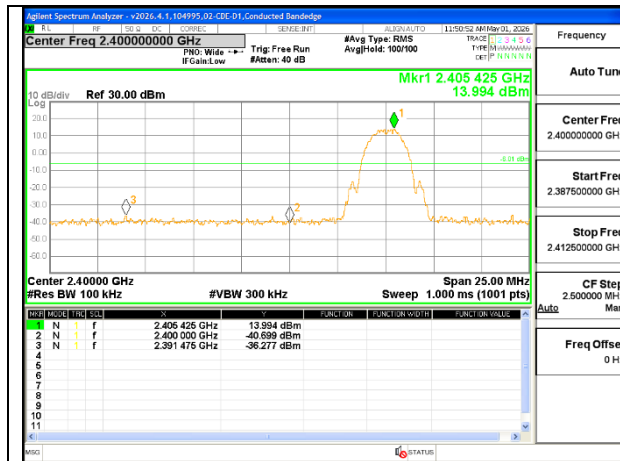
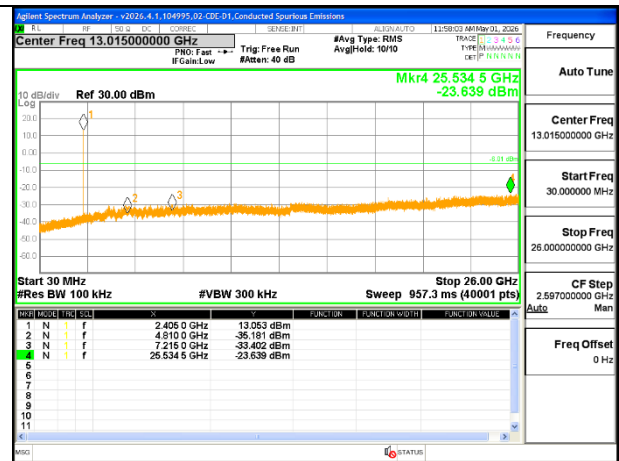
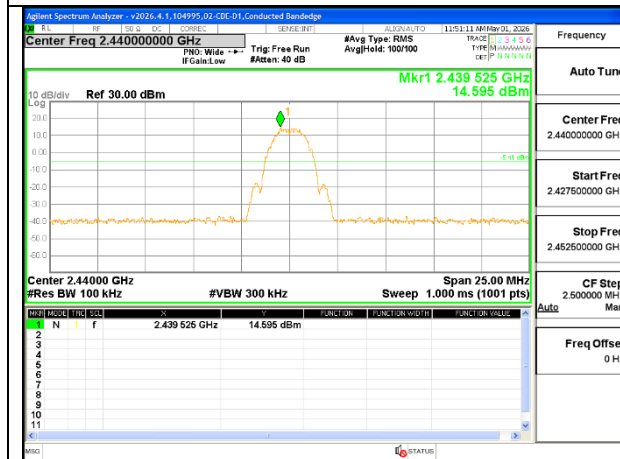
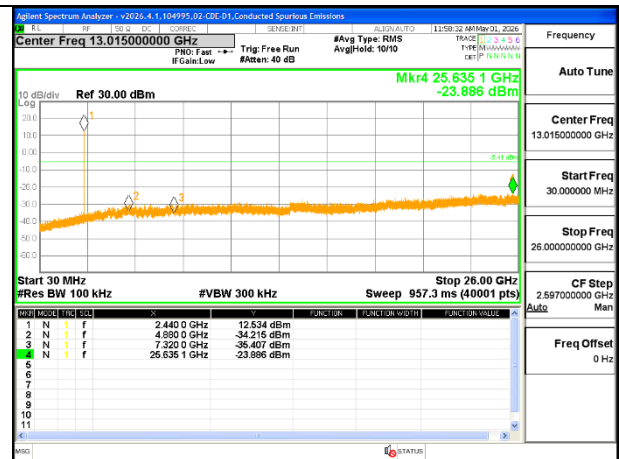
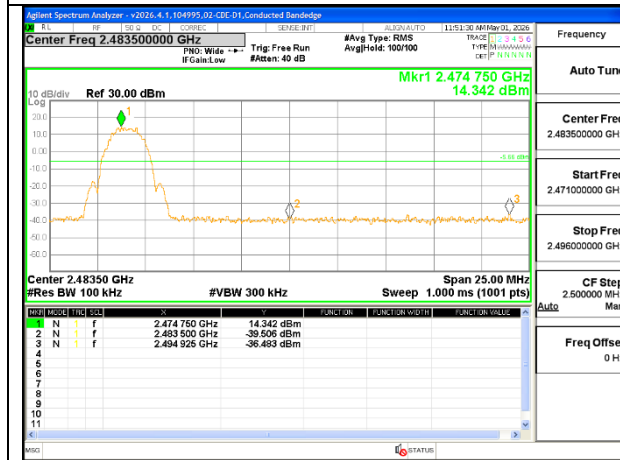
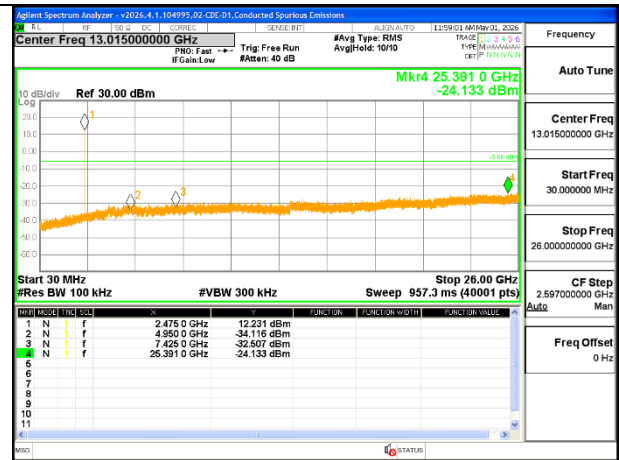
OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE

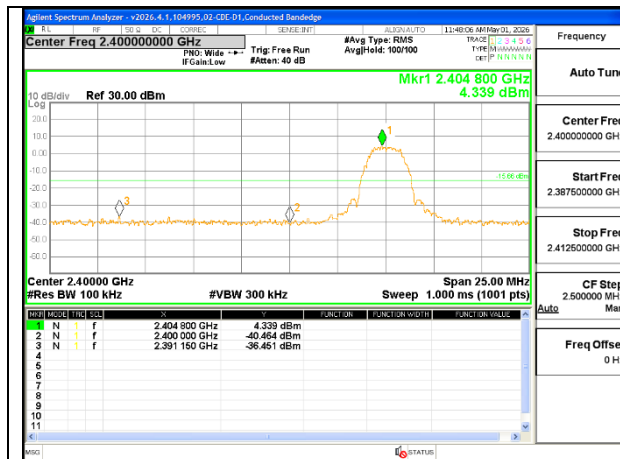


OUT-OF-BAND HIGH CHANNEL

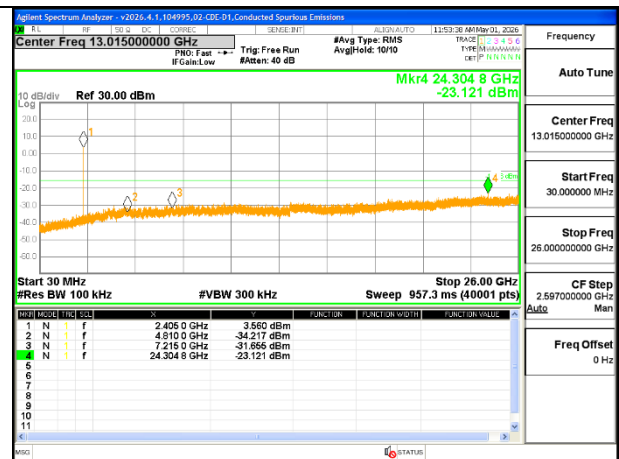
ANT 3**LOW CHANNEL BANDEDGE****OUT-OF-BAND LOW CHANNEL****IN-BAND REFERENCE LEVEL****OUT-OF-BAND MID CHANNEL****HIGH CHANNEL BANDEDGE****OUT-OF-BAND HIGH CHANNEL**

8.6.2. LOW POWER

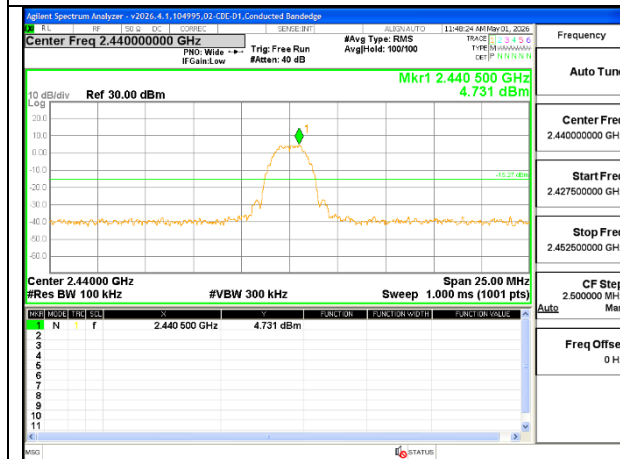
ANT 4



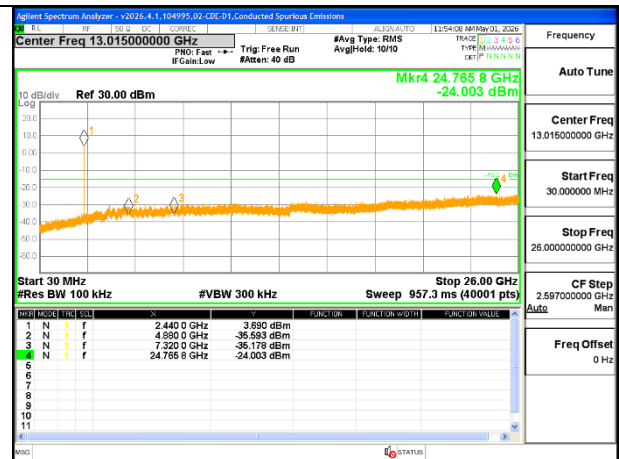
LOW CHANNEL BANDEDGE



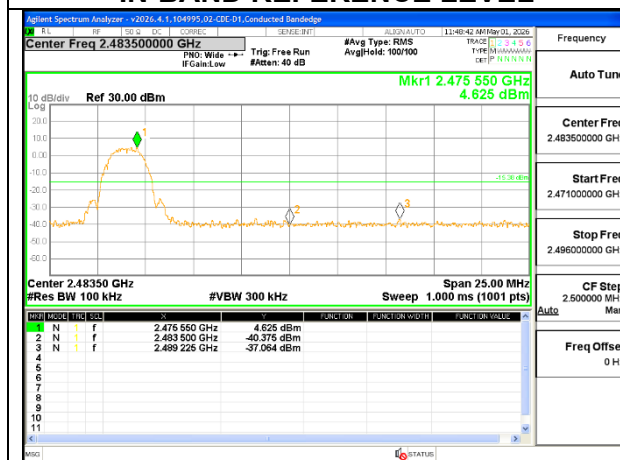
OUT-OF-BAND LOW CHANNEL



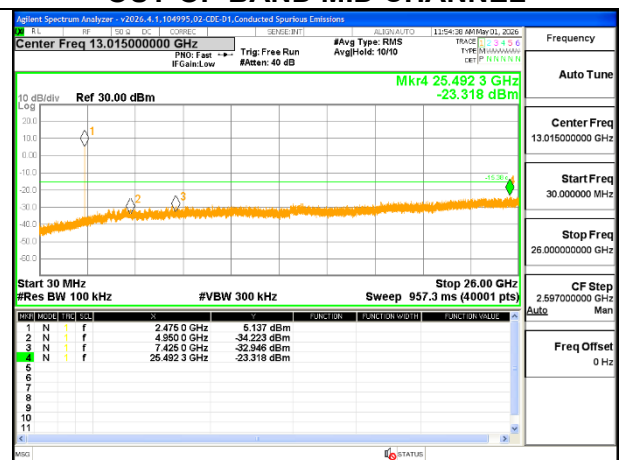
IN-BAND REFERENCE LEVEL



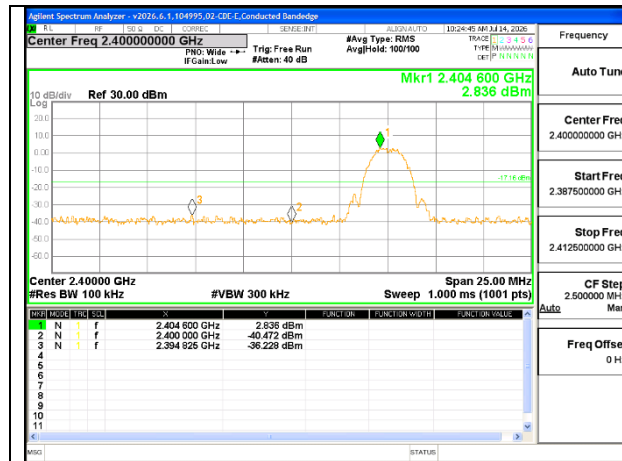
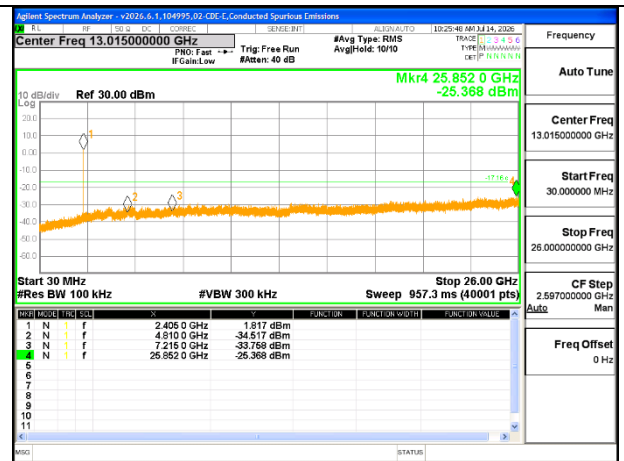
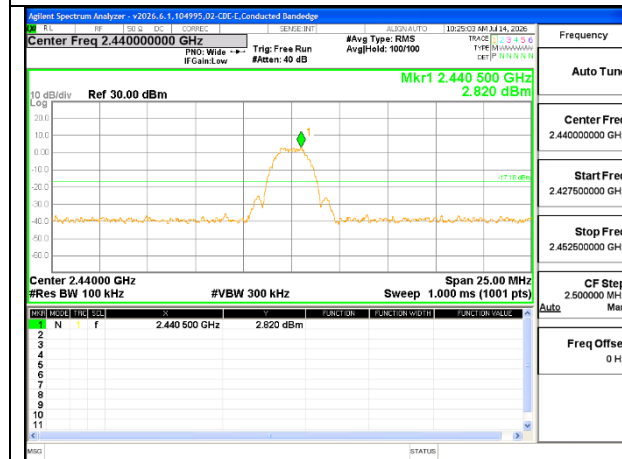
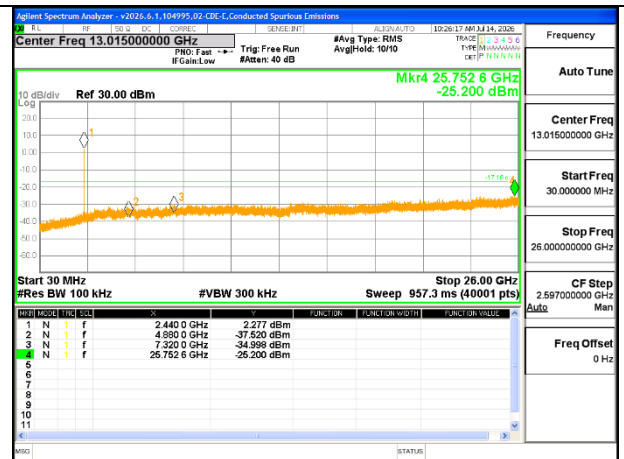
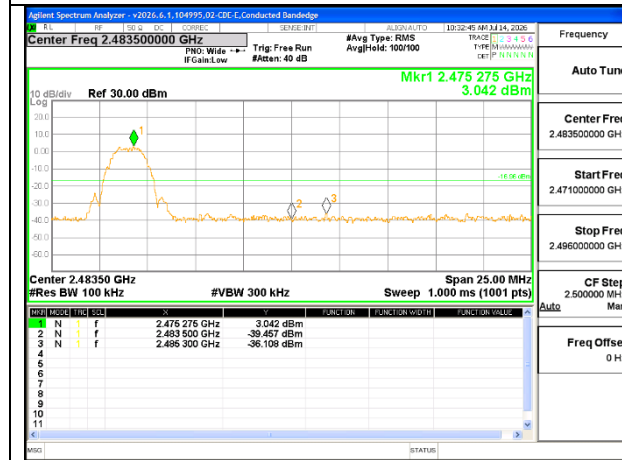
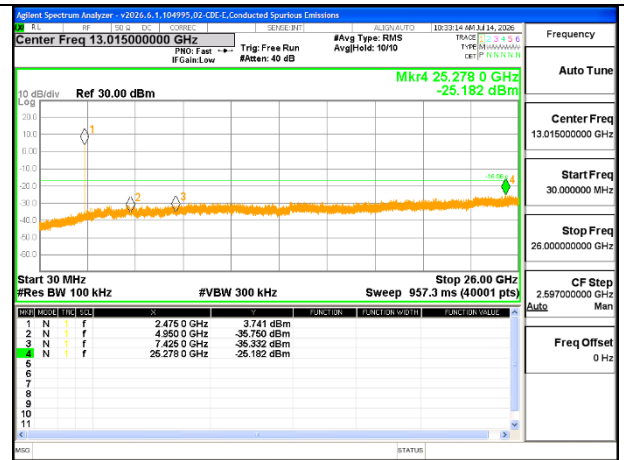
OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

ANT 3**LOW CHANNEL BANDEDGE****OUT-OF-BAND LOW CHANNEL****IN-BAND REFERENCE LEVEL****OUT-OF-BAND MID CHANNEL****HIGH CHANNEL BANDEDGE****OUT-OF-BAND HIGH CHANNEL**

9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209
RSS-GEN, Section 8.9 and 8.10

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

Radiated emissions non-restricted frequency bands	ANSI C63.10 Subclause -11.11 and 13
Radiated emissions restricted frequency bands	ANSI C63.10 Subclause -11.12.1 and 13
Band-edge	ANSI C63.10 Subclause -11.12.2.4 and 13: Peak Measurement
Band-edge	ANSI C63.10 Subclause -11.12.2.5 and 13: Average Measurement
Radiated Spurious Emissions Below 30MHz	ANSI C63.10 Subclause 6.4 and 13

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 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

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.

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 report 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 must 15.209(a) limit.

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

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.

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

RESULTS

The plots in these sections are worst-case plots to show the analyzer's settings.

9.1. TRANSMITTER ABOVE 1 GHz

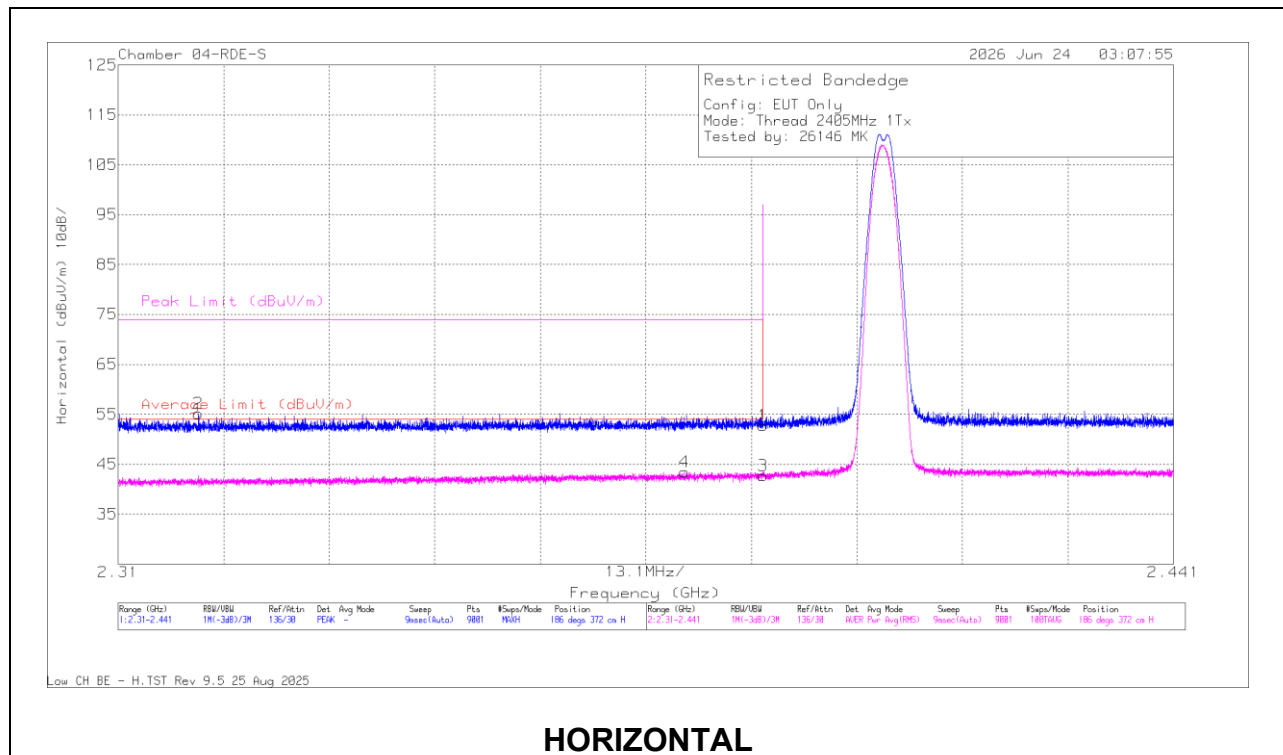
9.1.1. LOW BANDEGE

2.4GHz (Thread)	Channel Frequency (MHz)	Ant. #	Frequency (GHz)	Meter Reading (dBuV)	Det	ACF (dB/m)	Amp/Cbl /Fitr/Pad (dB)	DCCF (dB)	Correct Reading (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)	Pk Limit (dBuV/m)	Pk Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
High Power	2405	4	*2.39	60.45	Pk	32.2	-40.31	0	52.34	-	-	74	-21.66	105	368	H
			*2.353435	63.55	Pk	32	-40.37	0	55.18	-	-	74	-18.82	105	368	H
			*2.39	50.33	RMS	32.2	-40.31	0	42.22	54	-11.78	-	-	105	368	H
			*2.38968	51.4	RMS	32.2	-40.31	0	43.29	54	-10.71	-	-	105	368	H
			*2.39	60.93	Pk	32.2	-40.31	0	52.82	-	-	74	-21.18	26	364	V
			*2.379592	63.39	Pk	32.1	-40.33	0	55.16	-	-	74	-18.84	26	364	V
		3	*2.39	50.22	RMS	32.2	-40.31	0	42.11	54	-11.89	-	-	26	364	V
			*2.387831	51.34	RMS	32.2	-40.32	0	43.22	54	-10.78	-	-	26	364	V
			*2.39	60.84	Pk	32.2	-40.31	0	52.73	-	-	74	-21.27	186	372	H
			*2.319971	63.72	Pk	31.9	-40.44	0	55.18	-	-	74	-18.82	186	372	H
			*2.39	50.8	RMS	32.2	-40.31	0	42.69	54	-11.31	-	-	186	372	H
			*2.380335	51.63	RMS	32.1	-40.32	0	43.41	54	-10.59	-	-	186	372	H
			*2.39	61	Pk	32.2	-40.31	0	52.89	-	-	74	-21.11	230	365	V
			*2.370204	63.3	Pk	32.1	-40.36	0	55.04	-	-	74	-18.96	230	365	V
			*2.39	50.73	RMS	32.2	-40.31	0	42.62	54	-11.38	-	-	230	365	V
			*2.389694	51.93	RMS	32.2	-40.31	0	43.82	54	-10.18	-	-	230	365	V
Low Power	2405	4	*2.39	61.17	Pk	32.2	-40.31	0	53.06	-	-	74	-20.94	107	368	H
			*2.383057	63.79	Pk	32.2	-40.32	0	55.67	-	-	74	-18.33	107	368	H
			*2.39	50.64	RMS	32.2	-40.31	0	42.53	54	-11.47	-	-	107	368	H
			*2.389607	51.71	RMS	32.2	-40.31	0	43.6	54	-10.4	-	-	107	368	H
			*2.39	61.99	Pk	32.2	-40.31	0	53.88	-	-	74	-20.12	47	363	V
			*2.348311	64.34	Pk	32	-40.4	0	55.94	-	-	74	-18.06	47	363	V
			*2.39	50.19	RMS	32.2	-40.31	0	42.08	54	-11.92	-	-	47	363	V
			*2.389534	51.48	RMS	32.2	-40.31	0	43.37	54	-10.63	-	-	47	363	V
		3	*2.39	61.02	Pk	32.2	-40.31	0	52.91	-	-	74	-21.09	251	370	H
			*2.312547	64.16	Pk	31.9	-40.47	0	55.59	-	-	74	-18.41	251	370	H
			*2.39	50.66	RMS	32.2	-40.31	0	42.55	54	-11.45	-	-	251	370	H
			*2.379811	51.4	RMS	32.1	-40.32	0	43.18	54	-10.82	-	-	251	370	H
			*2.39	62.23	Pk	32.2	-40.31	0	54.12	-	-	74	-19.88	197	371	V
			*2.388763	63.39	Pk	32.2	-40.32	0	55.27	-	-	74	-18.73	197	371	V
			*2.39	50.31	RMS	32.2	-40.31	0	42.2	54	-11.8	-	-	197	371	V
			*2.362853	51.5	RMS	32.1	-40.36	0	43.24	54	-10.76	-	-	197	371	V

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

Pk - Peak detector

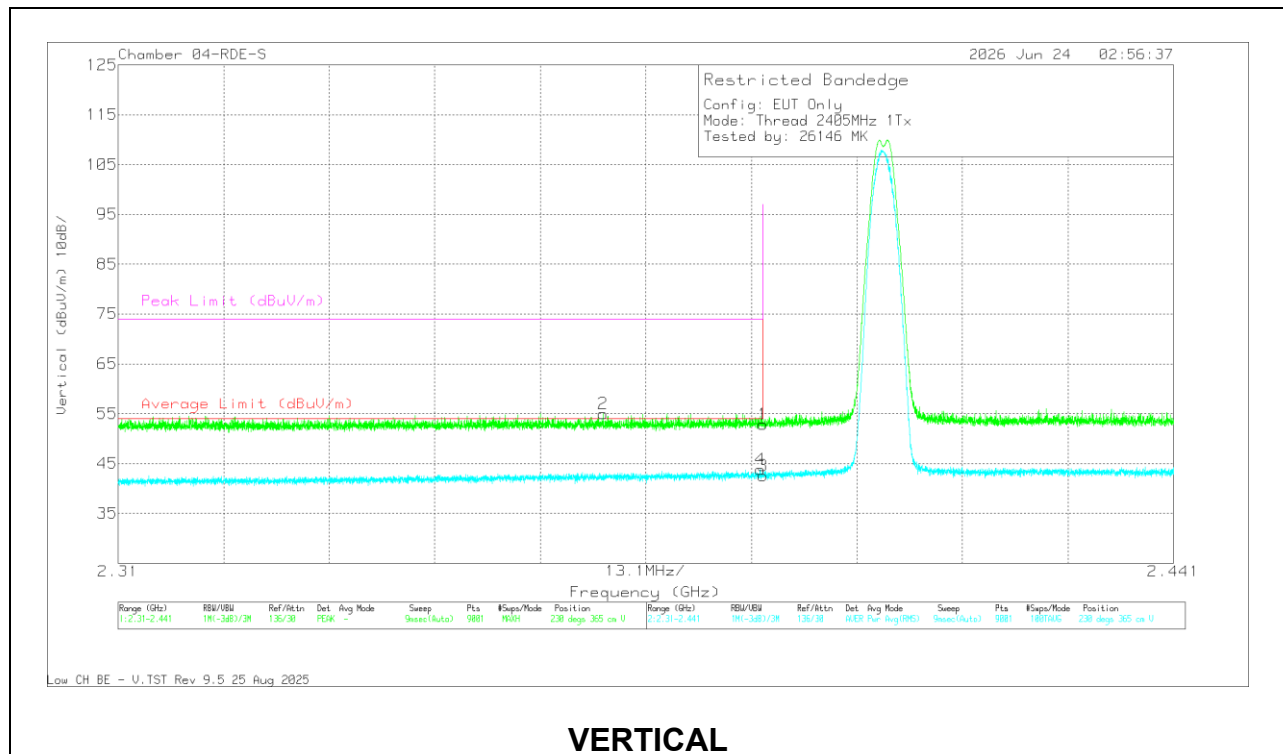
RMS - RMS detection

**WORST-CASE LOW BANDEDGE
HIGH POWER / ANT 3:**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20dB/55 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	2.39	60.84	Pk	32.2	0	-40.31	52.73	-	-	74	-21.27	186	372	H
2	2.319971	63.72	Pk	31.9	0	-40.44	55.18	-	-	74	-18.82	186	372	H
3	2.39	50.8	RMS	32.2	0	-40.31	42.69	54	-11.31	-	-	186	372	H
4	2.380335	51.63	RMS	32.1	0	-40.32	43.41	54	-10.59	-	-	186	372	H

Pk - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200765 ACF (dBm)	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	*2.39	61	Pk	32.2	0	-40.31	52.89	-	-	74	-21.11	230	365	V
2	*2.370204	63.3	Pk	32.1	0	-40.36	55.04	-	-	74	-18.96	230	365	V
3	*2.39	50.73	RMS	32.2	0	-40.31	42.62	54	-11.38	-	-	230	365	V
4	*2.389694	51.93	RMS	32.2	0	-40.31	43.82	54	-10.18	-	-	230	365	V

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

Pk - Peak detector

RMS - RMS detection

9.1.2. HIGH BANDEDGE

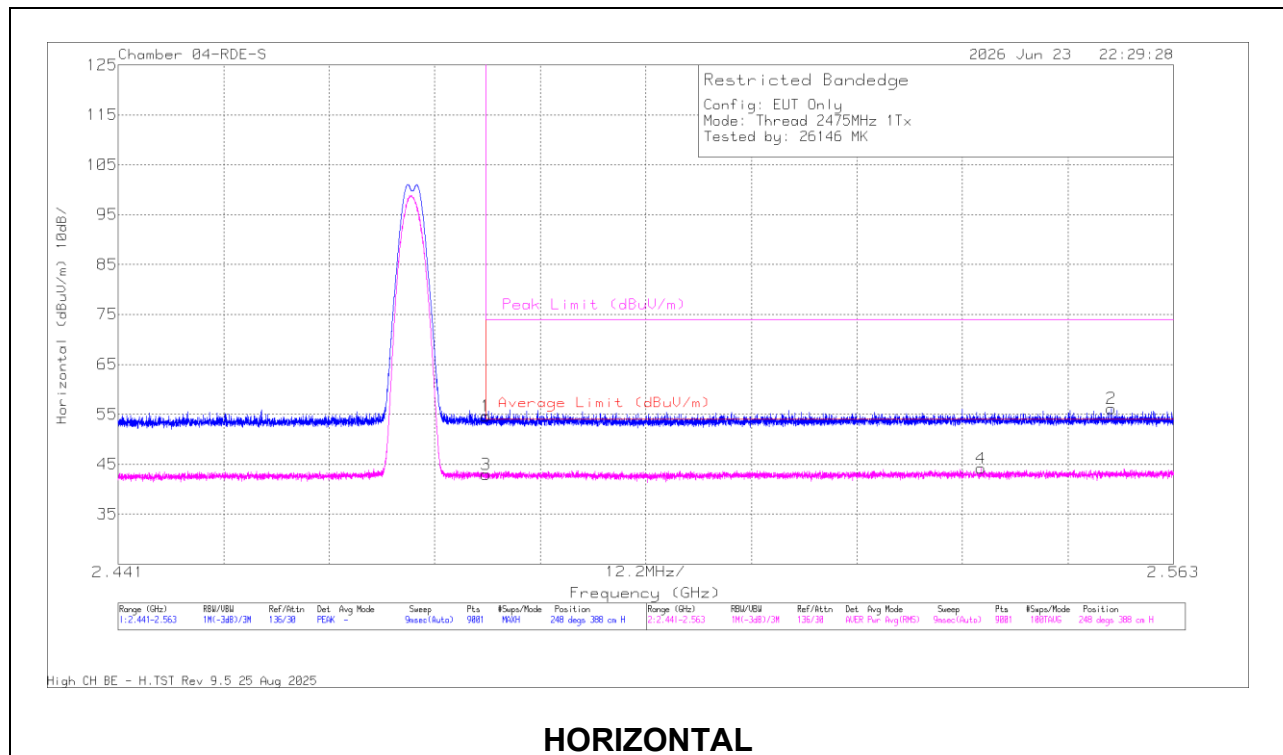
2.4GHz (Thread)	Channel Frequency (MHz)	Ant. #	Frequency (GHz)	Meter Reading (dBuV)	Det	ACF (dB/m)	Amp/Cbl /Fitr/Pad (dB)	DCCF (dB)	Correct Reading (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)	Pk Limit (dBuV/m)	Pk Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
High Power	2475	4	*2.4835	62.04	Pk	32.5	-40.12	0	54.42	-	-	74	-19.58	72	340	H
			2.533059	63.51	Pk	32.5	-40.02	0	55.99	-	-	74	-18.01	72	340	H
			*2.4835	50.18	RMS	32.5	-40.12	0	42.56	54	-11.44	-	-	72	340	H
			2.559547	51.36	RMS	32.6	-39.93	0	44.03	54	-9.97	-	-	72	340	H
			*2.4835	61.45	Pk	32.5	-40.12	0	53.83	-	-	74	-20.17	32	380	V
			2.515951	63.68	Pk	32.5	-40.03	0	56.15	-	-	74	-17.85	32	380	V
			*2.4835	50.8	RMS	32.5	-40.12	0	43.18	54	-10.82	-	-	32	380	V
		3	2.501216	51.6	RMS	32.4	-40.04	0	43.96	54	-10.04	-	-	32	380	V
			*2.4835	61.54	Pk	32.5	-40.12	0	53.92	-	-	74	-20.08	253	148	H
			2.540826	63.97	Pk	32.6	-40.02	0	56.55	-	-	74	-17.45	253	148	H
			*2.4835	50.79	RMS	32.5	-40.12	0	43.17	54	-10.83	-	-	253	148	H
			2.524925	51.47	RMS	32.5	-40.03	0	43.94	54	-10.06	-	-	253	148	H
			*2.4835	62.08	Pk	32.5	-40.12	0	54.46	-	-	74	-19.54	221	388	V
			2.533886	63.78	Pk	32.6	-40.02	0	56.36	-	-	74	-17.64	221	388	V
Low Power	2475	4	*2.4835	50.45	RMS	32.5	-40.12	0	42.83	54	-11.17	-	-	221	388	V
			2.537681	51.53	RMS	32.6	-40.02	0	44.11	54	-9.89	-	-	221	388	V
		3	**2.4835	60.75	Pk	32.5	-40.12	0	53.13	-	-	74	-20.87	73	340	H
			2.560157	63.65	Pk	32.6	-39.93	0	56.32	-	-	74	-17.68	73	340	H
			**2.4835	49.8	RMS	32.5	-40.12	0	42.18	54	-11.82	-	-	73	340	H
			2.557622	51.4	RMS	32.6	-39.93	0	44.07	54	-9.93	-	-	73	340	H
			**2.4835	60.86	Pk	32.5	-40.12	0	53.24	-	-	74	-20.76	32	380	V
			2.555602	63.4	Pk	32.6	-39.94	0	56.06	-	-	74	-17.94	32	380	V
			**2.4835	50.47	RMS	32.5	-40.12	0	42.85	54	-11.15	-	-	32	380	V
			2.501894	51.66	RMS	32.4	-40.05	0	44.01	54	-9.99	-	-	32	380	V
			**2.4835	62.21	Pk	32.5	-40.12	0	54.59	-	-	74	-19.41	248	388	H
			2.555833	63.51	Pk	32.6	-39.94	0	56.17	-	-	74	-17.83	248	388	H
			**2.4835	50.59	RMS	32.5	-40.12	0	42.97	54	-11.03	-	-	248	388	H
			2.540745	51.57	RMS	32.6	-40.01	0	44.16	54	-9.84	-	-	248	388	H
			**2.4835	60.99	Pk	32.5	-40.12	0	53.37	-	-	74	-20.63	205	393	V
			2.494668	63.41	Pk	32.5	-40.06	0	55.85	-	-	74	-18.15	205	393	V
			**2.4835	50.83	RMS	32.5	-40.12	0	43.21	54	-10.79	-	-	205	393	V
			2.547062	51.49	RMS	32.6	-39.98	0	44.11	54	-9.89	-	-	205	393	V

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

Pk - Peak detector

RMS - RMS detection

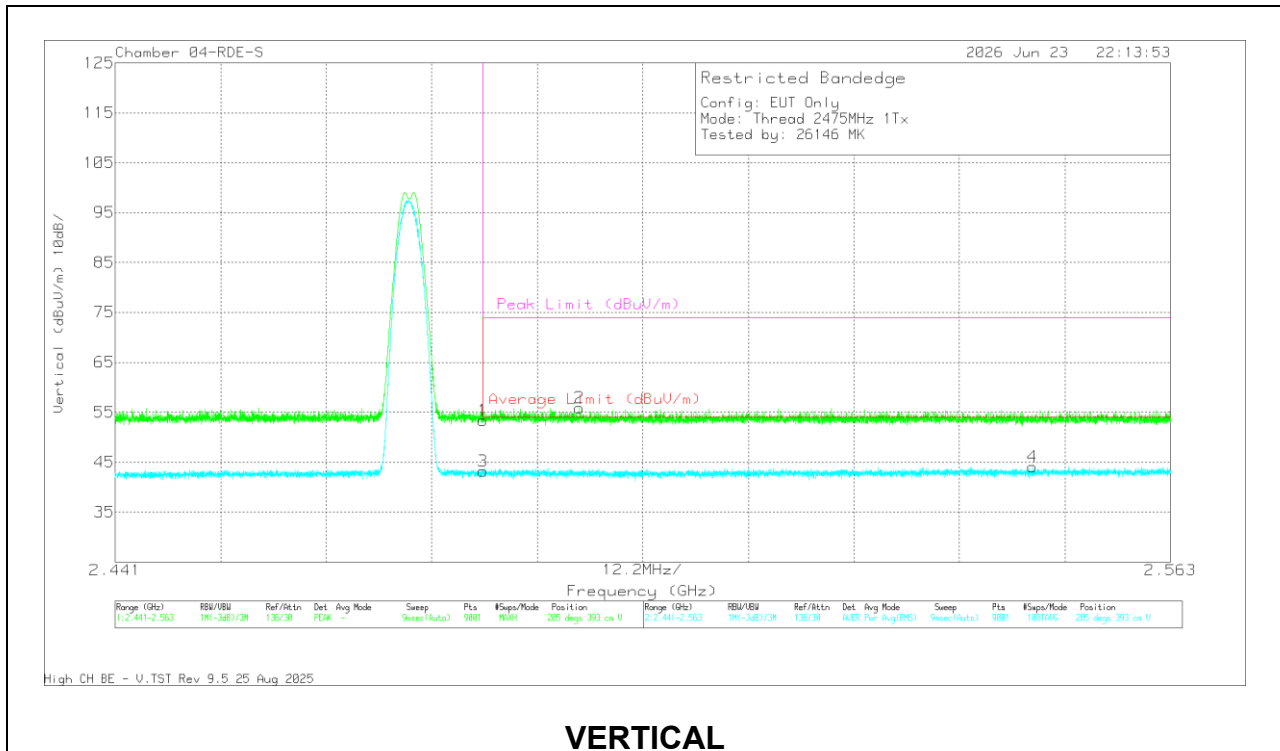
WORST-CASE HIGH BANDEDGE LOW POWER / ANT 3:



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	20dB/55 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	2.4835	62.21	Pk	32.5	0	-40.12	54.59	-	-	74	-19.41	248	388	H
2	2.55833	63.51	Pk	32.6	0	-39.94	56.17	-	-	74	-17.83	248	388	H
3	2.4835	50.59	RMS	32.5	0	-40.12	42.97	54	-11.03	-	-	248	388	H
4	2.540745	51.57	RMS	32.6	0	-40.01	44.16	54	-9.84	-	-	248	388	H

Pk - Peak detector

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200785 ACF (dBm)	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	2.4835	60.99	Pk	32.5	0	-40.12	53.37	-	-	74	-20.63	205	393	V
2	2.494668	63.41	Pk	32.5	0	-40.06	55.85	-	-	74	-18.15	205	393	V
3	2.4835	50.83	RMS	32.5	0	-40.12	43.21	54	-10.79	-	-	205	393	V
4	2.547062	51.49	RMS	32.6	0	-39.98	44.11	54	-9.89	-	-	205	393	V

Pk - Peak detector

RMS - RMS detection

9.1.3. SPURIOUS EMISSIONS

2.4 GHz (Thread)	Channel Frequency (MHz)	Ant. #	Frequency (GHz)	Meter Reading (dBuV)	Det	ACF (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DCCF (dB)	Correct Reading (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)	Pk Limit (dBuV/m)	Pk Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
High Power	2405	4	* 4803.633	53.72	PK2	34.2	-44	0	43.92	-	-	74	-30.08	81	124	H
			* 4800.961	42.11	MAV1	34.2	-44	0	32.31	54	-21.69	-	-	81	124	H
			7232.701	52.66	PK2	35.6	-41.9	0	46.36	-	-	-	-	340	369	H
			7230.088	40.8	MAV1	35.6	-41.9	0	34.5	-	-	-	-	340	369	H
			9626.365	53.37	PK2	36.9	-40.6	0	49.67	-	-	-	-	13	278	H
			9638.681	41.41	MAV1	37	-40.7	0	37.71	-	-	-	-	13	278	H
			* 4804.966	54.13	PK2	34.2	-44	0	44.33	-	-	74	-29.67	131	257	V
			* 4811.09	42.6	MAV1	34.3	-44	0	32.9	54	-21.1	-	-	131	257	V
			7197.293	52.44	PK2	35.7	-41.9	0	46.24	-	-	-	-	78	189	V
			7219.511	40.64	MAV1	35.6	-41.9	0	34.34	-	-	-	-	78	189	V
			9634.479	53.26	PK2	37	-40.8	0	49.46	-	-	-	-	36	106	V
			9620.448	41.46	MAV1	36.9	-40.6	0	37.76	-	-	-	-	36	106	V
		3	* 11.517664	43.5	MAV1	38.4	-43.33	0	38.57	54	-15.43	-	-	0	200	V
			* 11.519033	55.02	PK2	38.4	-43.3	0	50.12	-	-	74	-23.88	0	200	V
			* 11.627759	43.26	MAV1	38.8	-42.9	0	39.16	54	-14.84	-	-	0	100	H
			* 11.63339	55.08	PK2	38.8	-42.98	0	50.9	-	-	74	-23.1	0	100	H
			* 4.056715	46.38	MAV1	33.4	-47.73	0	32.05	54	-21.95	-	-	0	100	H
			* 4.060021	46.59	MAV1	33.4	-47.74	0	32.25	54	-21.75	-	-	0	201	V
			* 4.061163	58.47	PK2	33.4	-47.7	0	44.17	-	-	74	-29.83	0	201	V
			* 4.065546	58.22	PK2	33.3	-47.56	0	43.96	-	-	74	-30.04	0	100	H
			* 7.395002	55.7	PK2	35.4	-44.93	0	46.17	-	-	74	-27.83	0	100	H
			* 7.422184	43.82	MAV1	35.4	-44.84	0	34.38	54	-19.62	-	-	0	100	H
			* 8.072006	55.09	PK2	36	-43.82	0	47.27	-	-	74	-26.73	0	200	V
			* 8.089877	43.45	MAV1	36	-43.91	0	35.54	54	-18.46	-	-	0	200	V
	2440	4	* 4888.892	53.98	PK2	34.3	-44	0	44.28	-	-	74	-29.72	0	117	H
			* 4870.394	41.93	MAV1	34.3	-43.9	0	32.33	54	-21.67	-	-	0	117	H
			* 7303.21	52.61	PK2	35.6	-42	0	46.21	-	-	74	-27.79	341	303	H
			* 7303.752	40.58	MAV1	35.6	-42	0	34.18	54	-19.82	-	-	341	303	H
			9778.452	53.48	PK2	37.2	-41	0	49.68	-	-	-	-	256	251	H
			9743.105	41.75	MAV1	37.2	-40.9	0	38.05	-	-	-	-	256	251	H
			* 4883.959	42.02	MAV1	34.3	-44	0	32.32	54	-21.68	-	-	296	118	V
			* 4866.319	53.78	PK2	34.3	-43.9	0	44.18	-	-	74	-29.82	296	118	V
			* 7306.06	52.59	PK2	35.6	-42	0	46.19	-	-	74	-27.81	20	254	V
			* 7300.98	40.61	MAV1	35.6	-42	0	34.21	54	-19.79	-	-	20	254	V
			9770.748	54.24	PK2	37.2	-41	0	50.44	-	-	-	-	307	386	V
			9744.522	42.26	MAV1	37.2	-41	0	38.46	-	-	-	-	307	386	V
		3	* 12.064785	54.8	PK2	39.2	-42.91	0	51.09	-	-	74	-22.91	360	200	V
			* 12.075612	43.22	MAV1	39.3	-42.72	0	39.8	54	-14.2	-	-	360	200	V
			* 12.138216	55.55	PK2	39.3	-43.08	0	51.77	-	-	74	-22.23	360	100	H
			* 12.155758	43.43	MAV1	39.2	-43.08	0	39.55	54	-14.45	-	-	360	100	H
			* 4.688479	47.19	MAV1	34.2	-48.09	0	33.3	54	-20.7	-	-	360	100	H
			* 4.694679	58.76	PK2	34.2	-48.15	0	44.81	-	-	74	-29.19	360	100	H
			* 4.811224	58.17	PK2	34.1	-47.73	0	44.54	-	-	74	-29.46	360	201	V
			* 4.815508	46.04	MAV1	34.1	-47.73	0	32.41	54	-21.59	-	-	360	201	V
			* 7.548044	43.71	MAV1	35.5	-44.79	0	34.42	54	-19.58	-	-	360	200	V
			* 7.54808	55.22	PK2	35.5	-44.79	0	45.93	-	-	74	-28.07	360	200	V
			* 8.199053	43.21	MAV1	36	-44.44	0	34.77	54	-19.23	-	-	360	100	H
			* 8.199746	55.07	PK2	36	-44.44	0	46.63	-	-	74	-27.37	360	100	H

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

Pk - Peak detector

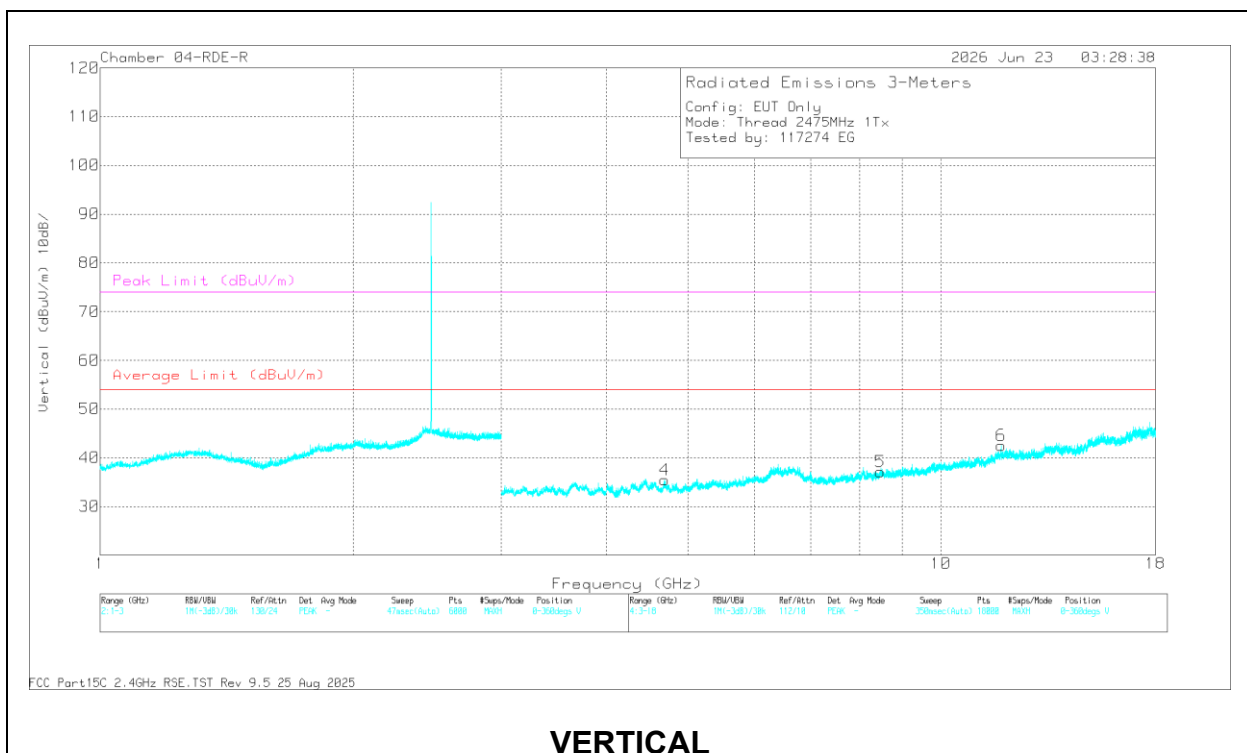
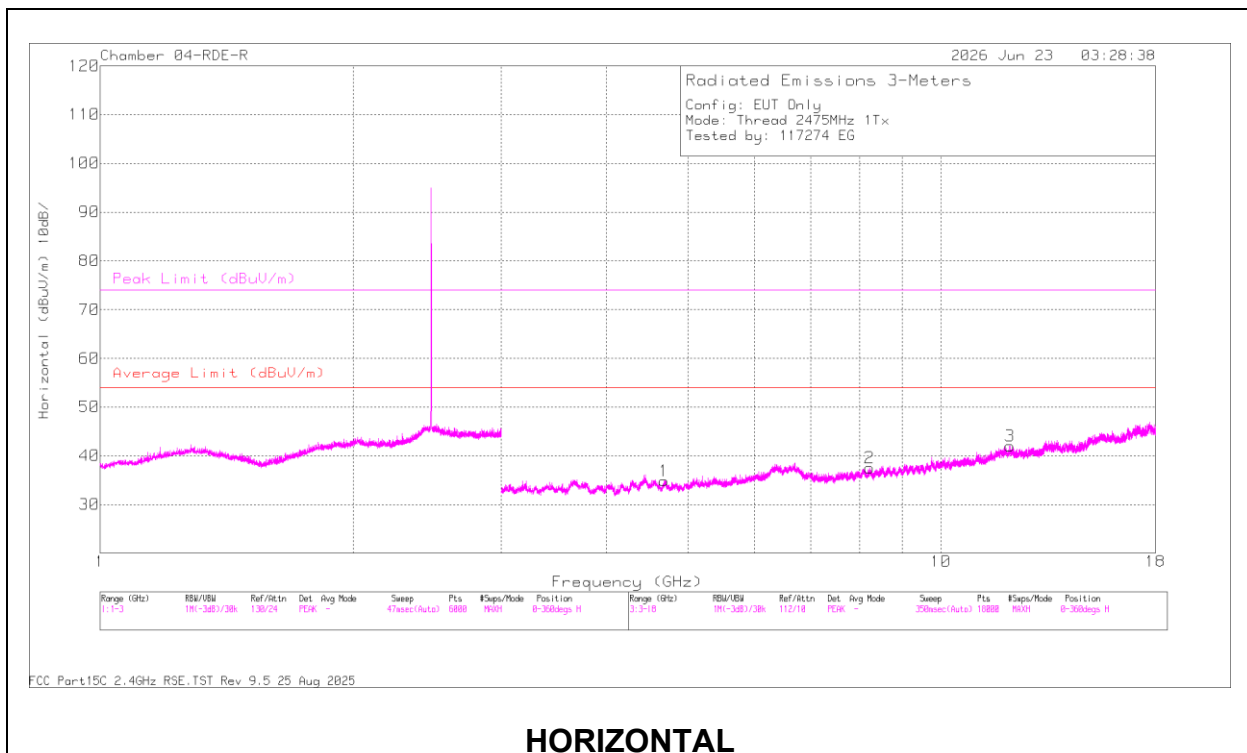
RMS - RMS detection

2.4 GHz (Thread)	Channel Frequency (MHz)	Ant. #	Frequency (GHz)	Meter Reading (dBuV)	Det	ACF (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DCCF (dB)	Correct Reading (dBuV/m)	Avg Limit (dBuV/m)	Avg Margin (dB)	Pk Limit (dBuV/m)	Pk Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
High Power	2475	4	* 4937.008	54.3	PK2	34.2	-44	0	44.5	-	-	74	-29.5	205	142	H
			* 4964.066	42.14	MAv1	34.3	-44	0	32.44	54	-21.56	-	-	205	142	H
			* 7427.862	52.54	PK2	35.7	-42	0	46.24	-	-	74	-27.76	19	391	H
			* 7409.866	40.71	MAv1	35.7	-42.1	0	34.31	54	-19.69	-	-	19	391	H
			9895.541	52.37	PK2	37.5	-40.7	0	49.17	-	-	-	-	17	211	H
			9901.55	40.93	MAv1	37.5	-40.8	0	37.63	-	-	-	-	17	211	H
			* 4969.809	42.22	MAv1	34.3	-44	0	32.52	54	-21.48	-	-	35	291	V
			* 7410.494	40.7	MAv1	35.7	-42.1	0	34.3	54	-19.7	-	-	254	395	V
			9915.611	40.7	MAv1	37.6	-40.9	0	37.4	-	-	-	-	19	210	V
			* 4961.56	53.6	PK2	34.3	-44	0	43.9	-	-	74	-30.1	35	291	V
			* 7420.423	52.61	PK2	35.7	-42	0	46.31	-	-	74	-27.69	254	395	V
			9902.362	52.19	PK2	37.5	-40.8	0	48.89	-	-	-	-	19	210	V
		3	* 11.7929	55.32	PK2	39	-42.84	0	51.48	-	-	74	-22.52	360	200	V
			* 11.795788	43.19	MAv1	39	-42.91	0	39.28	54	-14.72	-	-	360	200	V
			* 12.079978	43.2	MAv1	39.3	-42.66	0	39.84	54	-14.16	-	-	360	100	H
			* 12.092911	55.03	PK2	39.3	-42.83	0	51.5	-	-	74	-22.5	360	100	H
			* 4.687757	58.97	PK2	34.2	-48.07	0	45.1	-	-	74	-28.9	360	100	H
			* 4.691319	47.11	MAv1	34.2	-48.13	0	33.18	54	-20.82	-	-	360	201	V
			* 4.694671	58.67	PK2	34.2	-48.15	0	44.72	-	-	74	-29.28	360	201	V
			* 4.700526	46.95	MAv1	34.2	-48.18	0	32.97	54	-21.03	-	-	360	100	H
			* 8.238006	56.52	PK2	35.9	-44.37	0	48.05	-	-	74	-25.95	360	100	H
			* 8.251113	43.84	MAv1	36	-44.46	0	35.38	54	-18.62	-	-	360	100	H
			* 8.464522	54.76	PK2	36	-43.91	0	46.85	-	-	74	-27.15	360	200	V
			* 8.481091	43.23	MAv1	36	-43.93	0	35.3	54	-18.7	-	-	360	200	V

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

Pk - Peak detector

RMS - RMS detection

**WORST-CASE HARMONICS AND SPURIOUS EMISSIONS
HIGH POWER / ANT 3:**

Marker	Frequency (GHz)	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
6	* 11.7929	55.32	PK2	39	0	-42.84	51.48	-	-	74	-22.52	360	200	V
6	* 11.795788	43.19	MAv1	39	0	-42.91	39.28	54	-14.72	-	-	360	200	V
3	* 12.079978	43.2	MAv1	39.3	0	-42.66	39.84	54	-14.16	-	-	360	100	H
3	* 12.092911	55.03	PK2	39.3	0	-42.83	51.5	-	-	74	-22.5	360	100	H
1	* 4.687757	58.97	PK2	34.2	0	-48.07	45.1	-	-	74	-28.9	360	100	H
1	* 4.691319	47.11	MAv1	34.2	0	-48.13	33.18	54	-20.82	-	-	360	201	V
4	* 4.694671	58.67	PK2	34.2	0	-48.15	44.72	-	-	74	-29.28	360	201	V
4	* 4.700526	46.95	MAv1	34.2	0	-48.18	32.97	54	-21.03	-	-	360	100	H
2	* 8.238006	56.52	PK2	35.9	0	-44.37	48.05	-	-	74	-25.95	360	100	H
2	* 8.251113	43.84	MAv1	36	0	-44.46	35.38	54	-18.62	-	-	360	100	H
5	* 8.464522	54.76	PK2	36	0	-43.91	46.85	-	-	74	-27.15	360	200	V
5	* 8.481091	43.23	MAv1	36	0	-43.93	35.3	54	-18.7	-	-	360	200	V

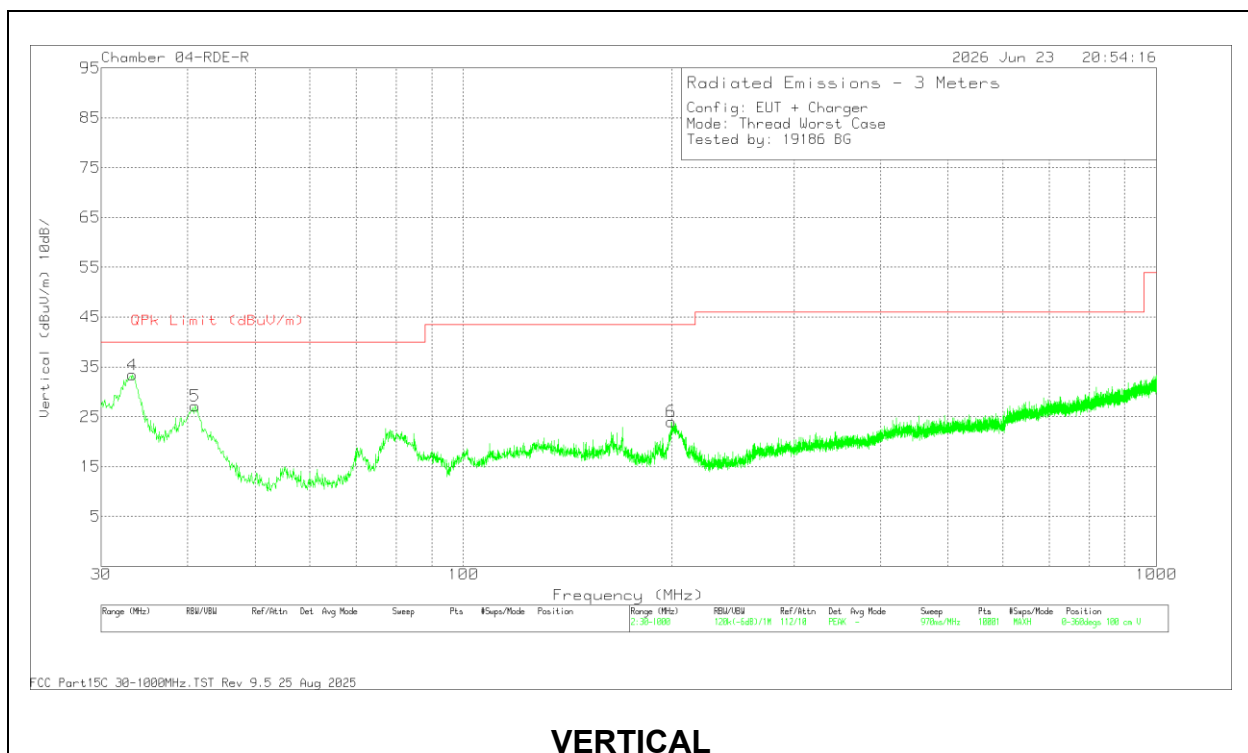
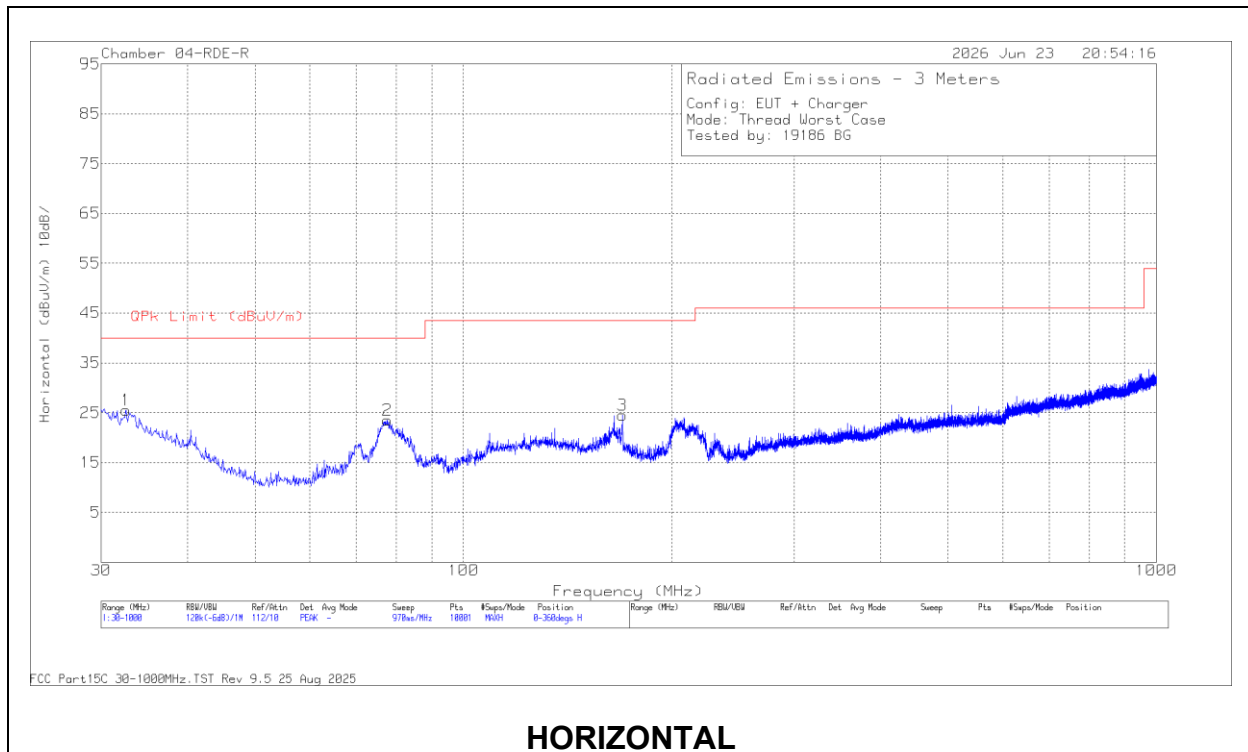
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

9.2. WORST CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



Below 1GHz Data

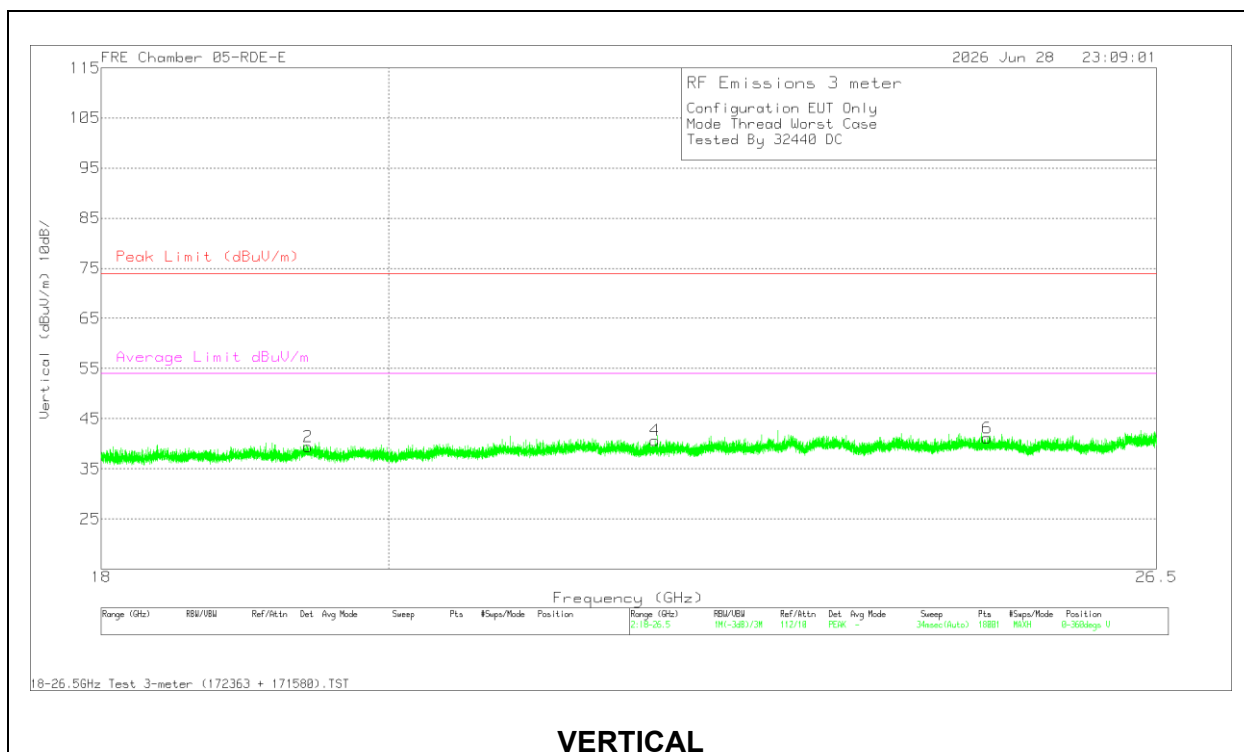
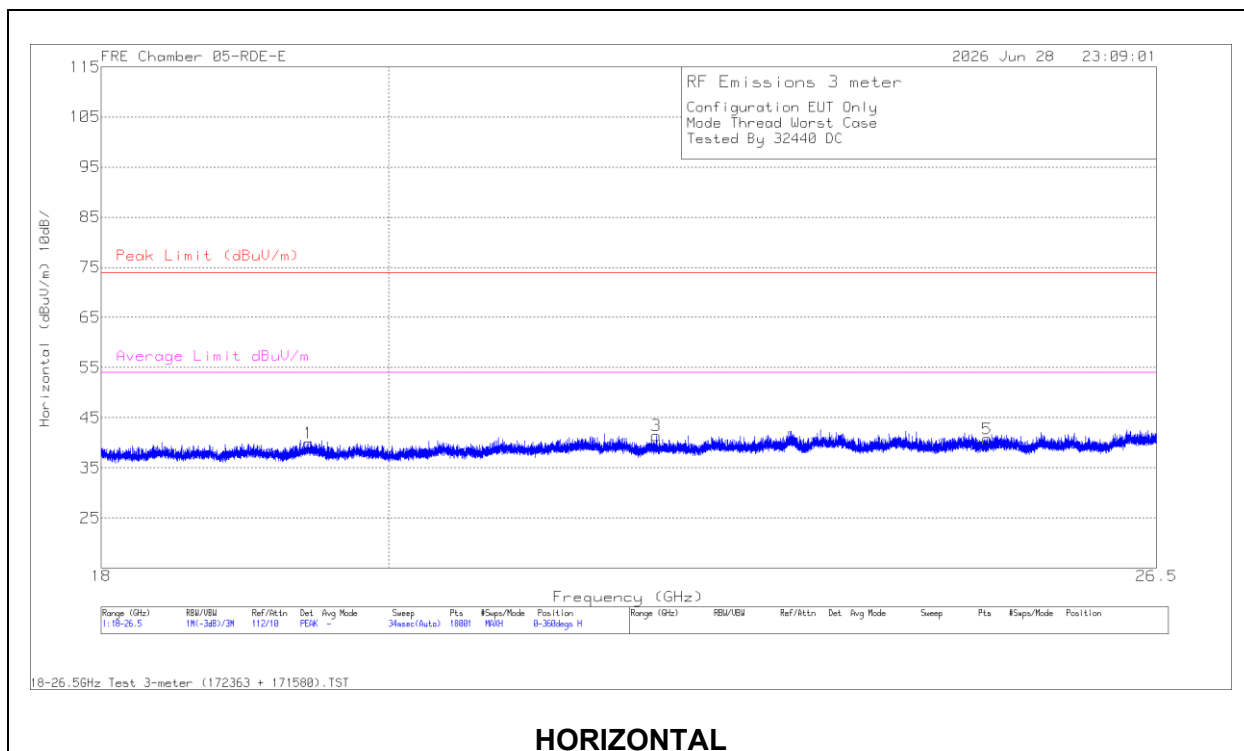
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	204044 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.619	32.79	Pk	24.9	-32.2	25.49	40	-14.51	0-360	99	H
2	77.627	41.53	Pk	13.7	-31.7	23.53	40	-16.47	0-360	99	H
3	* 169.583	38.03	Pk	17.7	-31.2	24.53	43.52	-18.99	0-360	99	H
4	33.298	41.18	Pk	24.4	-32.2	33.38	40	-6.62	0-360	100	V
5	40.961	40.37	Pk	18.9	-32.1	27.17	40	-12.83	0-360	100	V
6	199.653	36.54	Pk	18.5	-31	24.04	43.52	-19.48	0-360	100	V

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

Qp - Quasi-Peak detector

9.3. WORST CASE 18-26 GHz

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



18 – 26GHz Data

Marker	Frequency (GHz)	Motor Reading (dBm)	Det	112382 ACP (dBm)	CCELAMP (dB)	CBL (dB)	Corrected Reading (dBm)	Peak Limit (dBm)	PK Margin (dB)	Average Limit (dBm)	Margin (dB)	Admish (Cnps)	Height (cm)	Polarity
1	* 19.421368	57.09	Pk	32.4	-62.8	13.2	39.89	74	-34.11	54	-14.11	0-360	200	H
2	* 19.418555	56.6	Pk	32.4	-62.8	13.2	39.4	74	-34.6	54	-14.6	0-360	101	V
3	* 22.059593	57.49	Pk	33	-63.1	14	41.59	74	-32.61	54	-12.61	0-360	101	H
4	* 22.05072	56.75	Pk	33	-63.1	14	40.65	74	-33.35	54	-13.35	0-360	199	V
5	24.903886	54.32	Pk	33.8	-62.5	15.1	40.72	74	-33.28	54	-13.28	0-360	200	H
6	24.905775	54.7	Pk	33.8	-62.5	15.1	41.1	74	-32.9	54	-12.9	0-360	101	V

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

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
	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

ANSI C63.10, Subclause - 6.2

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.

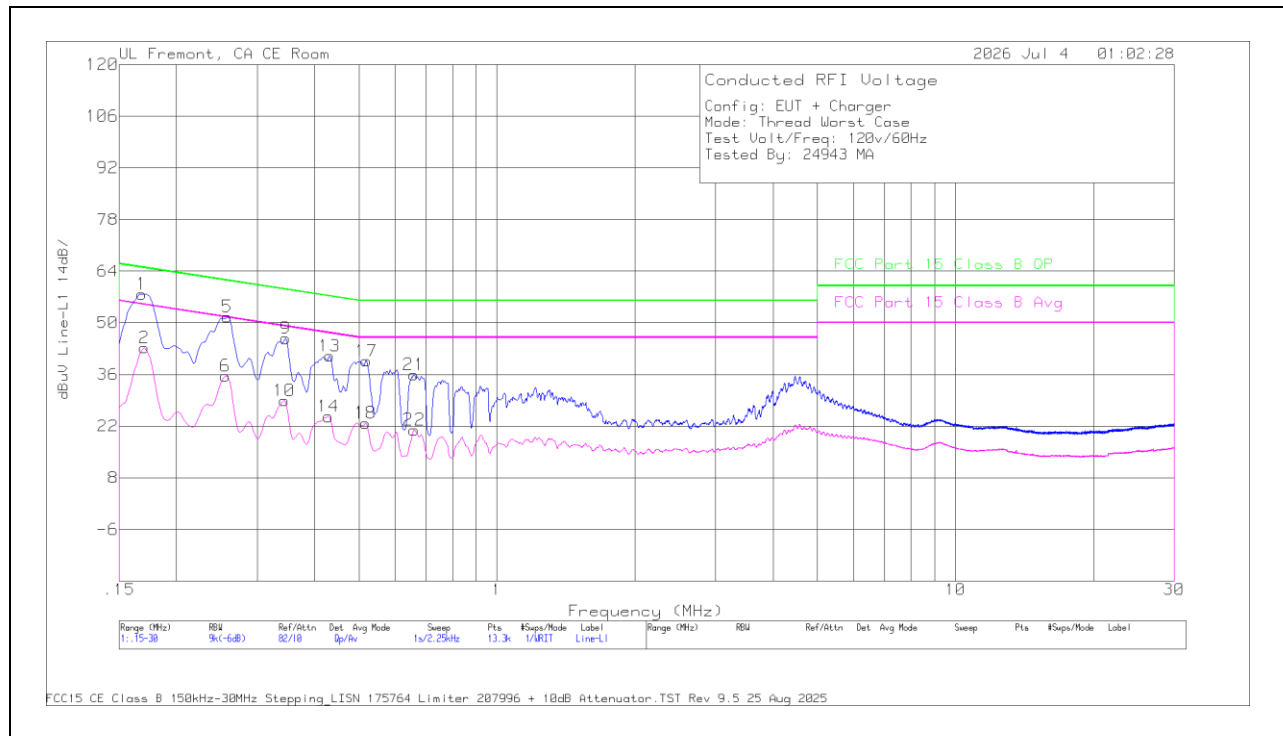
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

10.1. AC POWER LINE WITH AC/DC ADAPTER

LINE 1 RESULTS

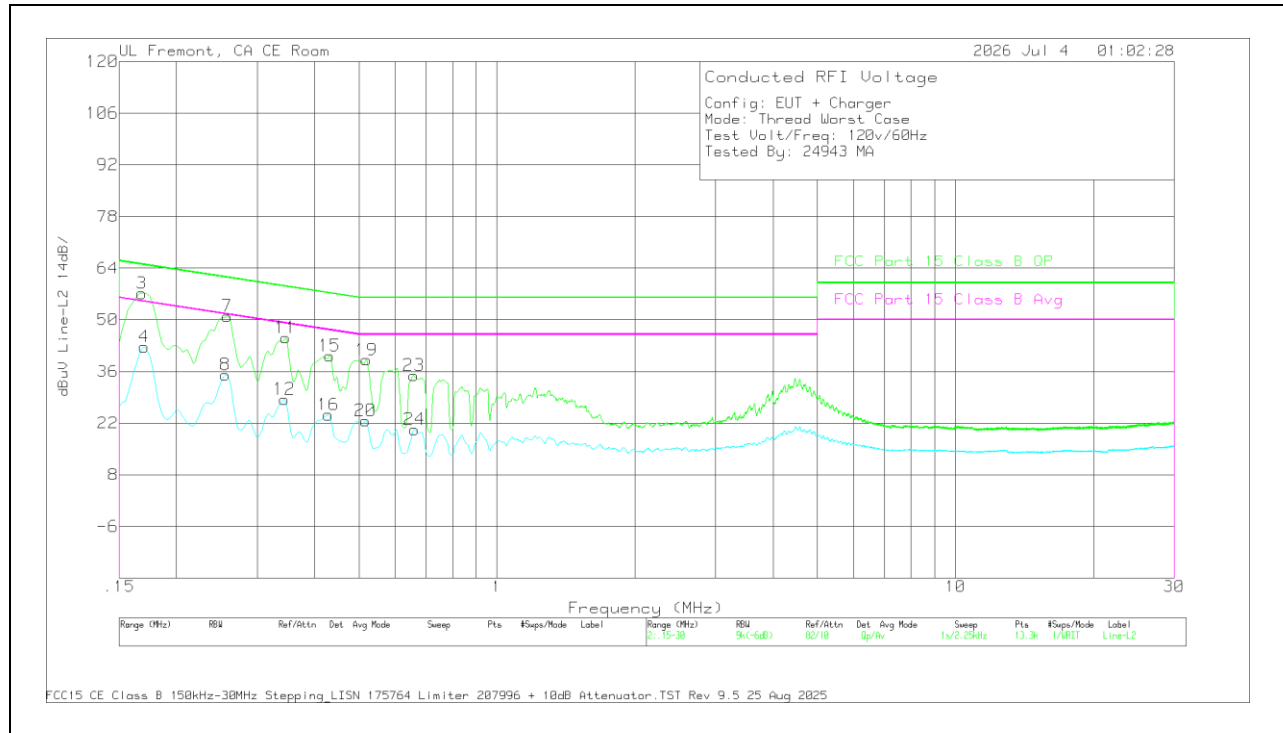


Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175764 LISN L1 (dB)	Line 1 C3_C1_plus Limiter (dB)	Attenuator (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP (dB)	QP Margin (dB)	FCC Part 15 Class B Avg	Av Margin (dB)
2	.1703	23.8	Av	.1	9.4	9.9	43.2	-	-	54.95	-11.75
6	.2558	16.28	Av	0	9.4	9.9	35.58	-	-	51.57	-15.99
10	.3435	9.6	Av	0	9.4	9.9	28.9	-	-	49.12	-20.22
14	.429	5.41	Av	0	9.3	9.9	24.61	-	-	47.27	-22.66
18	.5168	3.6	Av	0	9.3	9.9	22.8	-	-	46	-23.2
22	.6596	1.63	Av	0	9.3	10	20.93	-	-	46	-25.07
1	.168	38.37	Qp	.1	9.4	9.9	57.77	65.06	-7.29	-	-
5	.258	32.32	Qp	0	9.4	9.9	51.62	61.5	-9.88	-	-
9	.3458	26.55	Qp	0	9.3	9.9	45.75	59.06	-13.31	-	-
13	.4313	21.81	Qp	0	9.3	9.9	41.01	57.23	-16.22	-	-
17	.519	20.44	Qp	0	9.3	9.9	39.64	56	-16.36	-	-
21	.6585	16.62	Qp	0	9.3	10	35.92	56	-20.08	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



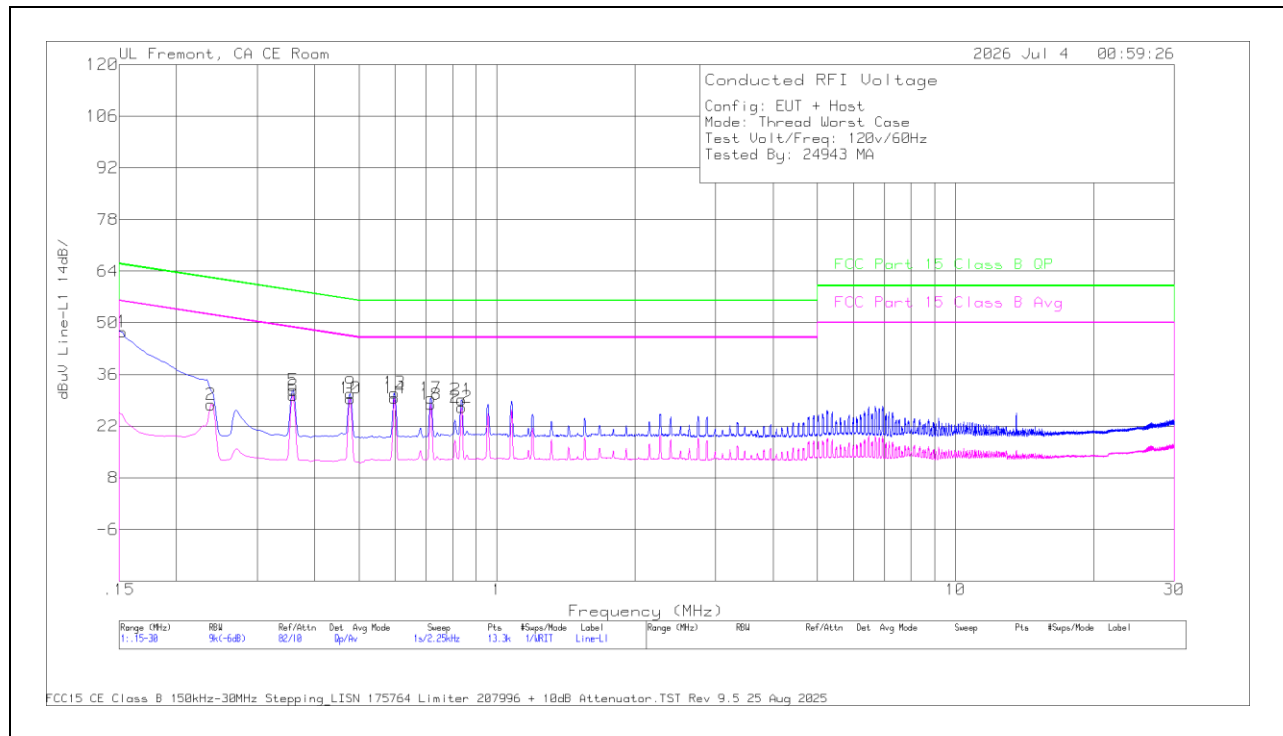
Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175764 LISN L2 (dB)	Line 2 C3_C2_plus Limiter (dB)	Attenuator (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP	QP Margin (dB)	FCC Part 15 Class B Avg	Av Margin (dB)
4	.1703	23.28	Av	.1	9.4	9.9	42.68	-	-	54.95	-12.27
8	.2558	15.8	Av	0	9.4	9.9	35.1	-	-	51.57	-16.47
12	.3435	9.13	Av	0	9.4	9.9	28.43	-	-	49.12	-20.69
16	.429	5.06	Av	0	9.3	9.9	24.26	-	-	47.27	-23.01
20	.5168	3.47	Av	0	9.3	9.9	22.67	-	-	46	-23.33
24	.6608	.87	Av	0	9.4	10	20.27	-	-	46	-25.73
3	.168	37.77	Qp	.1	9.4	9.9	57.17	65.06	-7.89	-	-
7	.258	31.67	Qp	0	9.4	9.9	50.97	61.5	-10.53	-	-
11	.3458	25.93	Qp	0	9.3	9.9	45.13	59.06	-13.93	-	-
15	.4313	21.02	Qp	0	9.3	9.9	40.22	57.23	-17.01	-	-
19	.519	19.93	Qp	0	9.3	9.9	39.13	56	-16.87	-	-
23	.6585	15.51	Qp	0	9.4	10	34.91	56	-21.09	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

10.2. AC POWER LINE WITH LAPTOP

LINE 1 RESULTS

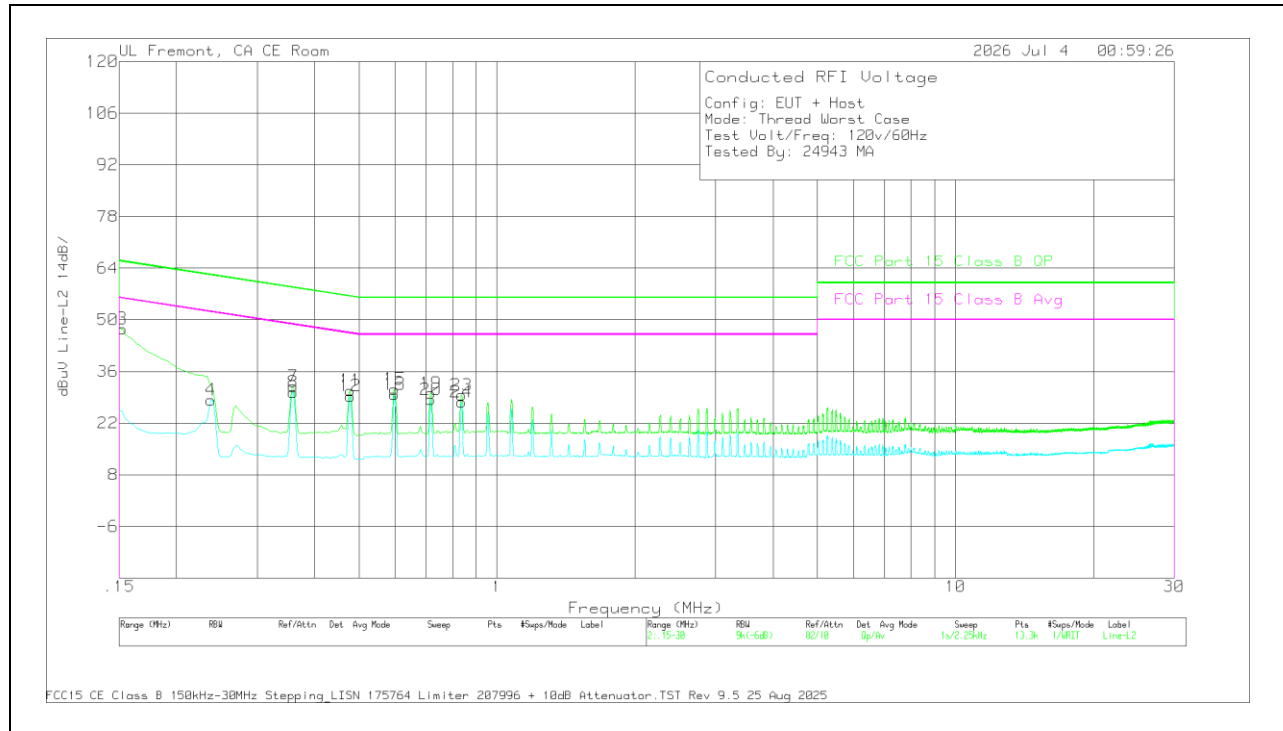


Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175764 LISN L1 (dB)	Line 1 C3, C1, plus Limiter (dB)	Attenuator (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP	QP Margin (dB)	FCC Part 15 Class B Avg	Av Margin (dB)
2	.2378	8.55	Av	0	9.4	9.9	27.85	-	-	52.17	-24.32
6	.3593	11.04	Av	0	9.3	9.9	30.24	-	-	48.75	-18.51
10	.4785	10.3	Av	0	9.3	9.9	29.5	-	-	46.37	-16.87
14	.5978	10.43	Av	0	9.3	9.9	29.63	-	-	46	-16.37
18	.717	8.69	Av	0	9.3	9.9	27.89	-	-	46	-18.11
22	.8363	7.8	Av	0	9.4	9.9	27.1	-	-	46	-18.9
1	.1523	28.15	Qp	.1	9.4	9.9	47.55	65.88	-18.33	-	-
5	.3593	12.55	Qp	0	9.3	9.9	31.75	58.75	-27	-	-
9	.4785	11.68	Qp	0	9.3	9.9	30.88	56.37	-25.49	-	-
13	.5978	11.84	Qp	0	9.3	9.9	31.04	56	-24.96	-	-
17	.717	10.37	Qp	0	9.3	9.9	29.57	56	-26.43	-	-
21	.8363	9.88	Qp	0	9.4	9.9	29.18	56	-26.82	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175764 LISN L2 (dB)	Line 2 C3_C2_plus Limiter (dB)	Attenuator (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP	QP Margin (dB)	FCC Part 15 Class B Avg	Av Margin (dB)
4	.2378	8.88	Av	.1	9.4	9.9	28.28	-	-	52.17	-23.89
8	.3593	11.1	Av	0	9.4	9.9	30.4	-	-	48.75	-18.35
12	.4785	10.14	Av	0	9.3	9.9	29.34	-	-	46.37	-17.03
16	.5978	10.64	Av	0	9.3	9.9	29.84	-	-	46	-16.16
20	.717	9.11	Av	0	9.4	9.9	28.41	-	-	46	-17.59
24	.8363	8.38	Av	0	9.4	9.9	27.68	-	-	46	-18.32
3	.1523	28.14	Qp	.1	9.4	9.9	47.54	65.88	-18.34	-	-
7	.3593	12.63	Qp	0	9.4	9.9	31.93	58.75	-26.82	-	-
11	.4785	11.62	Qp	0	9.3	9.9	30.82	56.37	-25.55	-	-
15	.5978	12	Qp	0	9.3	9.9	31.2	56	-24.8	-	-
19	.717	10.81	Qp	0	9.4	9.9	30.11	56	-25.89	-	-
23	.8363	10.29	Qp	0	9.4	9.9	29.59	56	-26.41	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

11. SETUP PHOTOS

Please refer to 15982168-E5 FCC IC Setup Photos for setup photos.

12. APPENDIX A – SPOT CHECK EVALUATION

12.1. MODEL DIFFERENCES

The manufacturer hereby declares the following for models A3716, A3717 and A3718. These models are very similar, with only the following differences.

Model	FCC ID	IC ID	Feature Difference	Sim Support	Reference Model
A3716	BCG-E9195A	579C-E9195A	-Without FR2 -Added LTE B11, B21	eSIM	-
A3717	BCG-E9196A	579C-E9196A	-Without FR2 -No LTE/5GNR B14, B29, B71 -No LTE B11, B21	eSIM	A3716
A3718	BCG-E9197A	579C-E9197A	-Without FR2 -No LTE/5GNR B14, B29, B71, B53 -No LTE B11, B21, MSS	eSIM + pSIM	

Note:

- All Models use the same System, Cellular and Connectivity radio electrical schematics.
- Removal of LTE/ 5GNR bands on models either done by software or de-population of related components. Please refer to data reuse test plan for details.
- All Models use the same Applications Processor and PMU.
- All Models use the same UICC hardware/software interface.
- All Models run the same Baseband firmware and iOS software.

The spot check plan allows for data reuse from the reference model where the variant model data meets the limits and has not changed by more than the criteria from KDB 484596 D01 v03 equation (4).

$$d_{dBmax}(M_{dB}) = \begin{cases} (3 + M_{dB}/20) \text{ dB} & , \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \\ 6 \text{ dB} & , \text{ for } M_{dB} > 60 \text{ dB} \end{cases} \quad (4)$$

Where: d_{dB} deviation from Reference data, V_{dB} variant spot check level, and R_{dB} measurement level

12.2. SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3717

Equipment Class / Technology	Frequency (GHz)	Mode	Test Item	Channel	Measured Frequency (GHz)	Original Model: A3716	Sub Model: A3717	Delta (dB)	Margin	Remarks
						FCC ID : BCG-E9195A IC : 579C-E9195A	FCC ID : BCG-E9196A IC : 579C-E9196A			
DTS/Thread	2.4	Thread Ant 3	Output Power (dBm)	Low	2.405	18.09	18.05	-0.04	-11.91	Note 1
		Thread Ant 3 Low Power	Radiated Band-Edge (dBuV/m)	High	2.540745 (Avg) Horizontal	44.16	44.45	0.29	-9.84	Note 1
		Worst Case	RSE (dBuV/m)	Mid	33.298 (QP) Vertical	33.38	36.31	2.93	-6.62	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.

Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests were performed on second channel.

12.3. SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3718

Equipment Class / Technology	Frequency (GHz)	Mode	Test Item	Channel	Measured Frequency (GHz)	Original Model: A3716	Sub Model: A3718	Delta (dB)	Margin	Remarks
						FCC ID : BCG-E9195A IC : 579C-E9195A	FCC ID : BCG-E9197A IC : 579C-E9197A			
DTS/Thread	2.4	Thread Ant 3	Output Power (dBm)	Low	2.405	18.09	18.08	-0.01	-11.91	Note 1
		Thread Ant 3 Low Power	Radiated Band-Edge (dBuV/m)	High	2.540745 (Avg) Horizontal	44.16	44.11	-0.05	-9.84	Note 1
		Worst Case	RSE (dBuV/m)	Mid	33.298 (QP) Vertical	33.38	36.63	3.25	-6.62	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.

Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests were performed on second channel.