

TEST REPORT

Report Number: 14523771-E5V2

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

Model : A2849

Brand : APPLE

FCC ID : BCG-E8439A (Parent Model)

IC : 579C-E8439A (Parent Model)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
AUGUST 21, 2023

Prepared by:
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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	08/18/2023	Initial	Francisco Guarnero
V2	08/21/2023	Address TCB Feedback section 9	Francisco Guarnero

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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: A2849

BRAND: APPLE

SERIAL NUMBER: CV6NX2HP3H, FYFYYWKPF7 (Radiated)
GQT6F4G9C7 (Conducted)

SAMPLE RECEIPT DATE: 2023-02-09

DATE TESTED: MARCH 30, 2023 – August 18, 2023

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	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. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:



Chin Pang
Senior Lab Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:



Francisco Guarnero
Test Engineer
Consumer Technology Division
UL Verification Services Inc

2. TEST SUMMARY

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Complies	None.
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Complies	None.
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 5.2 (b)	PSD	Complies	None.
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Complies	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	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 the following standards/ rules/ KDBs:

FCC CFR 47 Part 2
FCC CFR 47 Part 15
ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 414788 D01 Radiated Test Site v01r01
KDB 662911 D01 Multiple Transmitter Output v02r01
RSS-GEN Issue 5 + A1:2019 + A2:2021
RSS-247 Issue 2.

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 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	1.940 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	0.450 dB (Peak) 1.300 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)

$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.

$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, IEEE 802.11a/b/g/n/ac/ax, Bluetooth Ultra-Wideband, GPS, NFC, NB UNII, 802.15.4, 802.11ab-NB and MSS technologies. The rechargeable battery is not user accessible.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Antenna	Configuration	Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
ANT 4	High Power	2405 - 2475	802.15.4	21.36	136.77
	Low Power			11.05	12.74
ANT 3	High Power	2405 - 2475		21.48	140.60
	Low Power			13.22	20.99

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna type is IFA.

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

Frequency Range (GHz)	ANT 4 (dBi)	ANT 3 (dBi)
2.4	-1.1	-0.9

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was FW version: 21.1.306.2344

6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X, Y, and Z on ANT 4, ANT 3. It was determined that X (Flatbed) was the worst-case orientation for both ANT 4 and ANT3.

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.

For simultaneous transmission of multiple channels in the 2.4GHz and 5GHz bands. No noticeable emission was found.

NOTE:

ANT 0 on radiated plots corresponds to ANT 4

ANT 1 on radiated plots corresponds to ANT 3

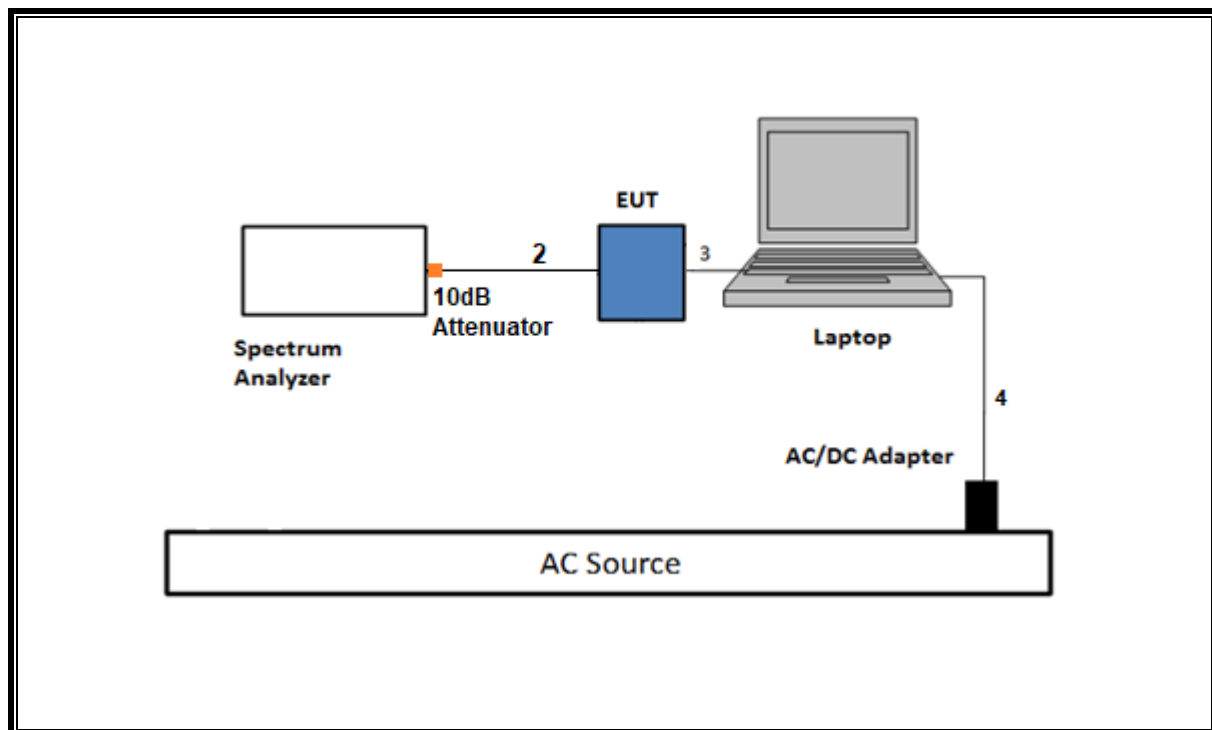
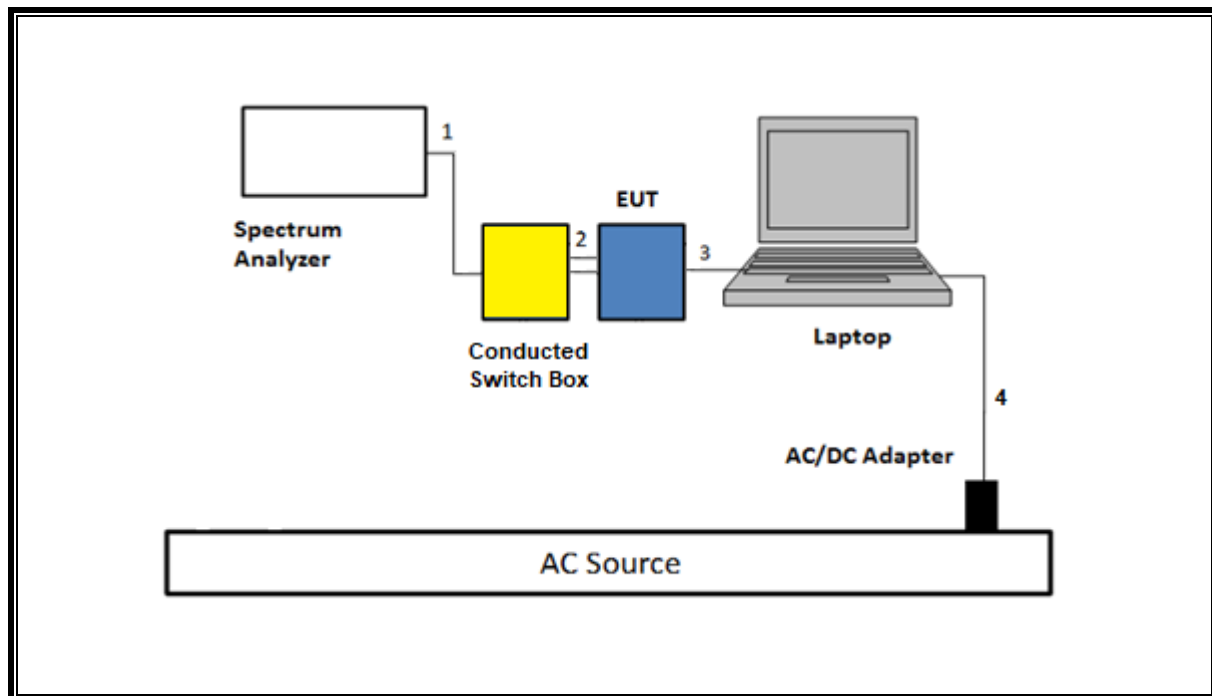
6.6. DESCRIPTION OF TEST SETUP

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
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz		Pasternack Enterprises	PE7024-10	236358		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	0.75	To spectrum Analyzer
2	Antenna	2	SMA	Un-shielded	0.2	To Conducted Switch Box
3	USB-C	1	USB-C	Shielded	1.0	N/A
4	AC	1	AC	Un-shielded	2	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	AC	1	AC	Un-shielded	2	N/A
2	USB	1	USB	Shielded	1	N/A

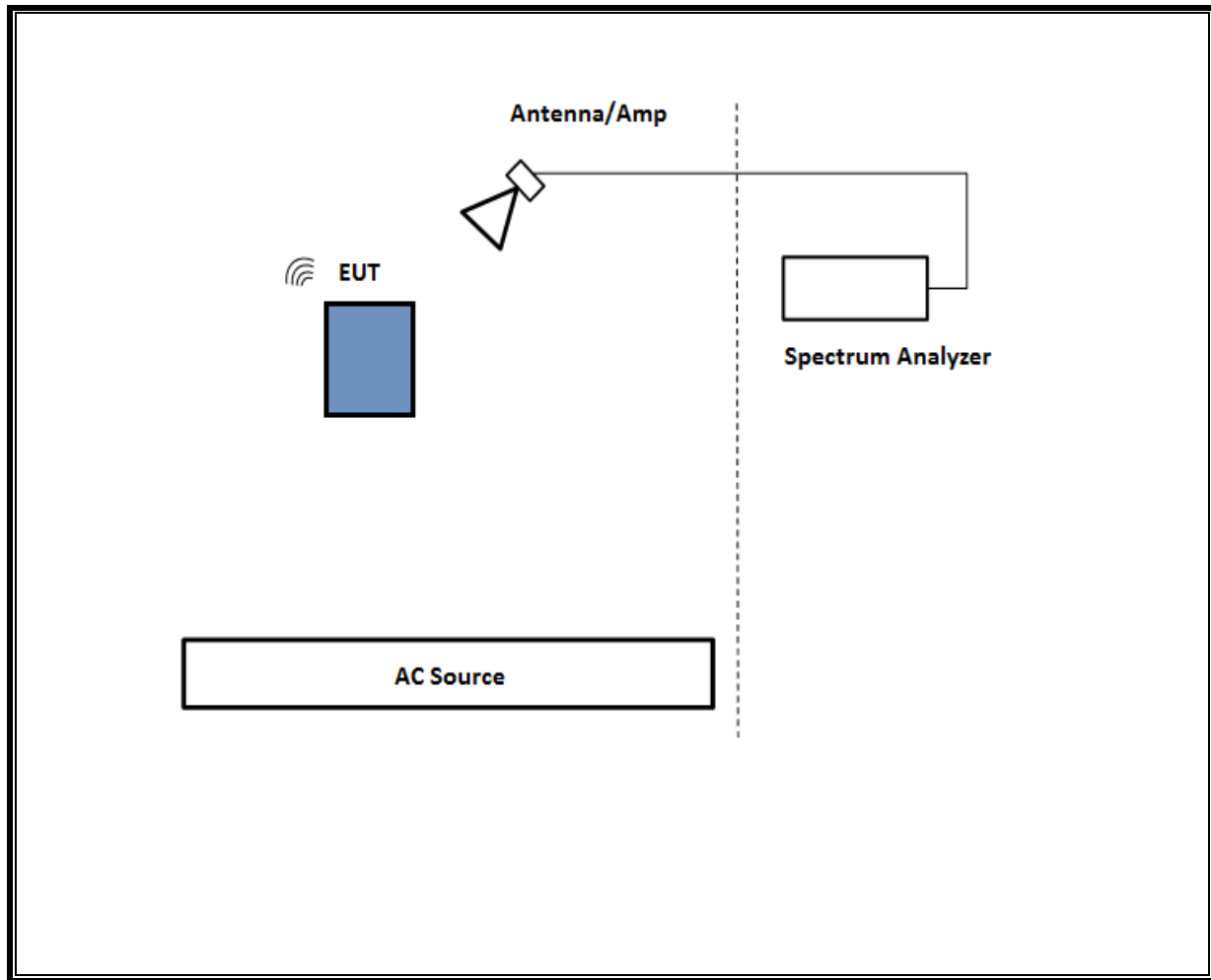
TEST SETUP

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

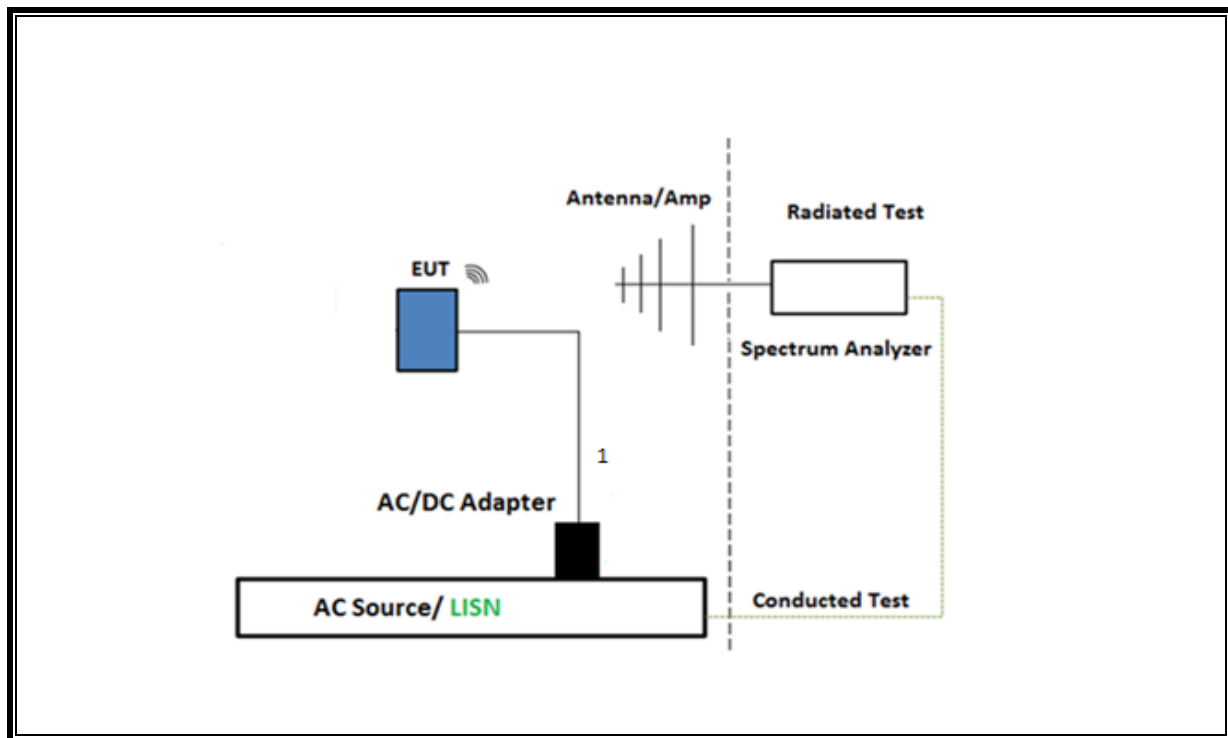
SETUP DIAGRAM FOR CONDUCTED TESTS



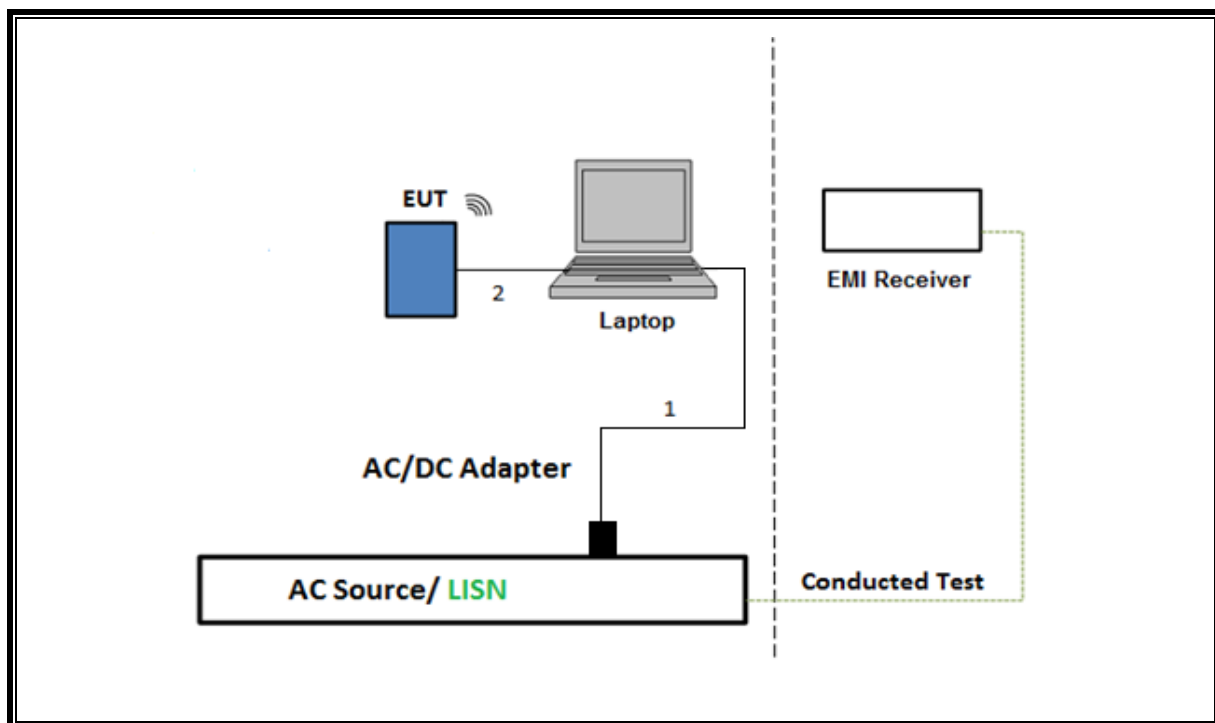
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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 558074 D01 v05r02, Section 6.

6 dB BW: ANSI C63.10 Subclause 11.8.1 $RBW \geq DTS\ BW$

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Output Power: ANSI C63.10 Subclause 11.9.1.3
Method PKPM1 Peak-reading power meter

Output Power: ANSI C63.10 Subclause 11.9.2.3.2
Measurement using gated average power meter.

PSD: ANSI C63.10 Subclause 1.10.2
Method PKPSD (peak PSD)

Radiated emissions restricted frequency bands:
ANSI C63.10 Subclause 1.12.1 & Clause 13

Conducted emissions in restricted frequency bands:
ANSI C63.10 Subclause 11.12.2

Band-edge: ANSI C63.10 Subclause -11.13.3.2 & Clause 13:
Integration method -Peak detection

Band-edge: ANSI C63.10 Subclause 11.13.3.3 & Clause 13:
Integration method -Trace averaging with continuous transmission at full power

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

Radiated emissions non-restricted frequency bands ANSI C63.10 Subclause 1.11 & Clause 13

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4 & 13

8. TEST AND MEASUREMENT EQUIPMENT

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

Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	230299	01/12/2024	01/12/2023
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231874	04/19/2024	04/19/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179372	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84797	09/20/2023	09/20/2022
RF Filter Box, 1-18GHz	UL-FR1	N/A	171389	05/31/2024	05/31/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201497	02/29/2024	02/16/2023
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	226672	01/09/2024	01/09/2023
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231249	02/29/2024	02/29/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	02/29/2024	02/29/2023
*Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80404	08/08/2023	08/08/2022
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	216812	09/17/2023	09/17/2022
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	02/29/2024	02/29/2023
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	80714	10/06/2023	10/06/2022
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	170648	03/31/2024	03/31/2023
Antenna, Passive Loop 30Hz to 1MHz	Electro-Metrics	EM-6871	170013	07/28/2023	07/28/2022
Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	07/28/2023	07/28/2022
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	199658	12/06/2023	12/06/2022
RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	171583	02/29/2024	02/29/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	226078	02/29/2024	02/29/2023
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90756	01/31/2024	01/31/2023
Power Sensor, P-series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90389	01/31/2024	01/31/2023
Conducted Switch Box	N/A	CSB	221008	06/21/2023	06/21/2022
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236358	Verified/Characterized before use	
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236355	Verified/Characterized before use	
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Keysight Technologies Inc	E4440A	81311	02/29/2024	02/29/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	02/28/2024	02/28/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85214	02/28/2024	02/28/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	87738	02/28/2024	02/28/2023

Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	230300	01/12/2024	01/12/2023
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231875	02/27/2024	02/27/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	170063	02/29/2024	02/29/2023
*Antenna, Horn 1- 18GHz	ETS-Lindgren	3117	200897	03/31/2024	03/31/2023
RF Filter Box, 1-18GHz	UL-FR1	NA	168535	02/01/2024	02/01/2023
EMI Test Receiver	Rohde & Schwarz	ESW44	191429	02/29/2024	02/29/2023

AC Line Conducted					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
EMI Test Receiver 9kHz- 7GHz	Rohde & Schwarz	ESR	93091	02/29/2024	02/29/2023
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN- 50/250-25-2-01- 480V	175764	01/31/2024	01/31/2023
Transient Limiter	TE	TBFL1	207996	07/15/2023	07/15/2022
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		

*Testing was completed before equipment calibration due date

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

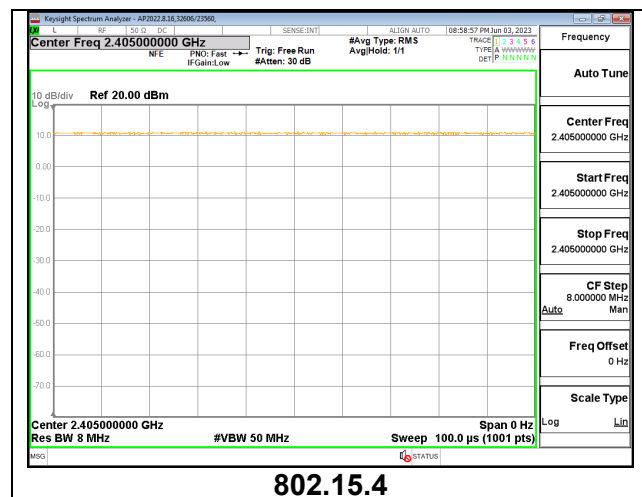
PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.15.4, 2405MHz	100.00	100.00	1.000	100.00%	0.00	0.010

DUTY CYCLE PLOTS



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

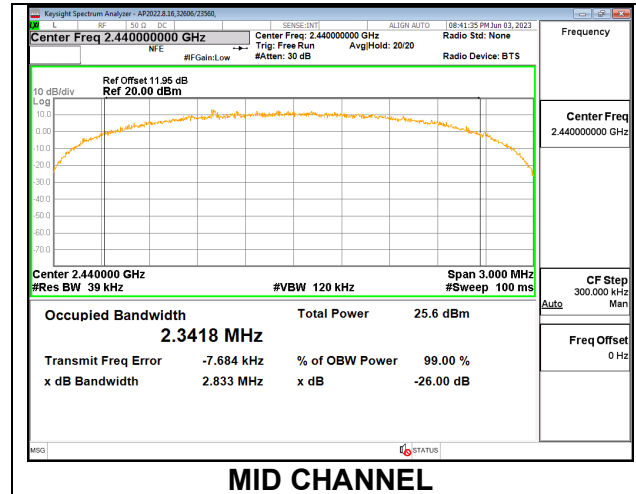
RESULTS

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.

9.2.1.
ANT 4

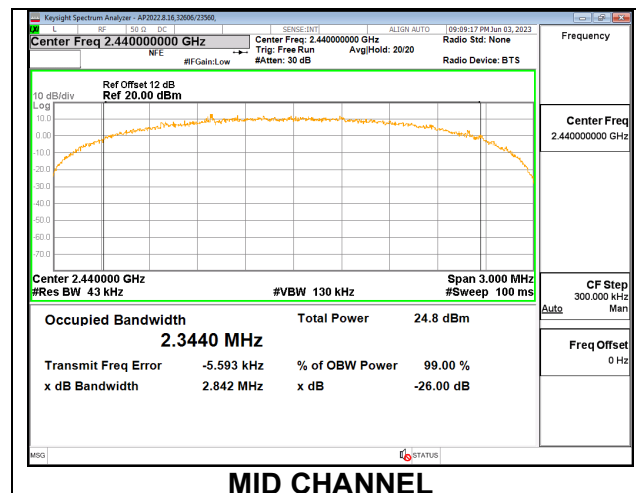
HIGH POWER

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2405	2.3222
Middle	2440	2.3418
High	2475	2.3460



ANT 3

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2405	2.3498
Middle	2440	2.3440
High	2475	2.3494



9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 5.2 (a)

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

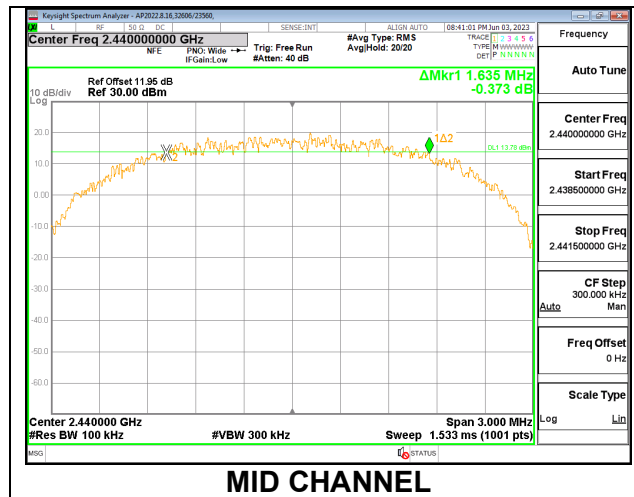
RESULTS

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.

9.3.1. HIGH POWER

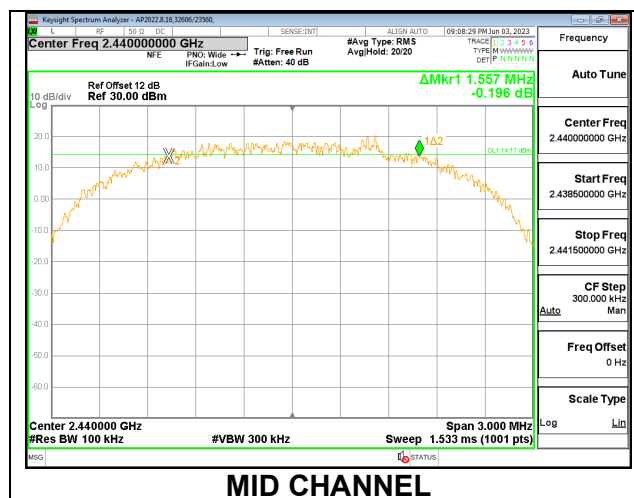
ANT 4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2405	1.737	0.5
Middle	2440	1.635	0.5
High	2475	1.611	0.5



ANT 3

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2405	1.509	0.5
Middle	2440	1.557	0.5
High	2475	1.605	0.5



9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

Measurements perform using a wideband RF power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband peak power sensor. Peak output power was read directly from the power meter.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

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

Band (GHz)	ANT 4 Antenna Gain (dBi)	ANT 3 Antenna Gain (dBi)
2.4	-1.1	-0.9

RESULTS

9.4.1. **HIGH POWER**

ANT 4

Tested By:	32181 / 23560
Date:	8/2/2023

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2405	21.36	30	-8.64
Middle	2440	21.32	30	-8.68
High	2475	21.36	30	-8.64

ANT 3

Tested By:	32181 / 23560
Date:	8/2/2023

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2405	21.15	30	-8.85
Middle	2440	21.48	30	-8.52
High	2475	21.16	30	-8.84

9.4.2. LOW POWER

ANT 4

Tested By:	32181 / 23560
Date:	8/2/2023

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2405	10.78	30	-19.22
Middle	2440	11.05	30	-18.95
High	2475	10.75	30	-19.25

ANT 3

Tested By:	32181 / 23560
Date:	8/2/2023

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2405	13.11	30	-16.89
Middle	2440	13.20	30	-16.80
High	2475	13.22	30	-16.78

9.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband RF power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband average power sensor. Gated average output power was read directly from power meter.

RESULTS

9.5.1. **HIGH POWER**

ANT 4

Tested By:	32181 / 23560
Date:	7/20/2023

Channel	Frequency (MHz)	AV power (dBm)
Low	2405	20.78
Middle	2440	20.74
High	2475	20.78

ANT 3

Tested By:	32181 / 23560
Date:	7/20/2023

Channel	Frequency (MHz)	AV power (dBm)
Low	2405	20.56
Middle	2440	20.90
High	2475	20.58

9.5.2. **LOW POWER**

ANT 4

Tested By:	32181 / 23560
Date:	7/20/2023

Channel	Frequency (MHz)	AV power (dBm)
Low	2405	10.23
Middle	2440	10.49
High	2475	10.18

ANT 3

Tested By:	32181 / 23560
Date:	7/20/2023

Channel	Frequency (MHz)	AV power (dBm)
Low	2405	12.36
Middle	2440	12.46
High	2475	12.49

9.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

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.

RESULTS

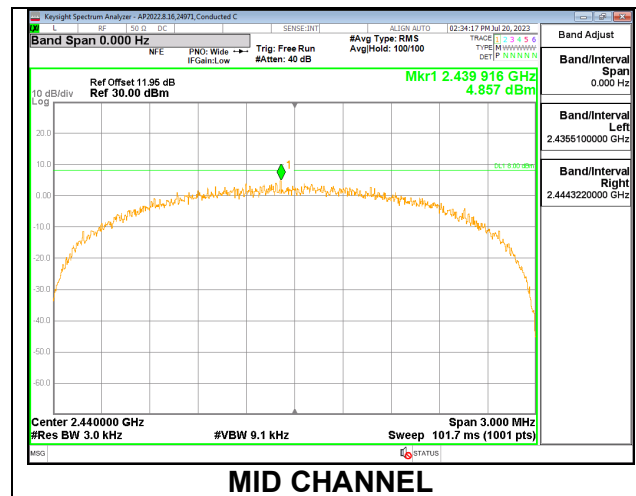
Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

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

9.6.1. HIGH POWER

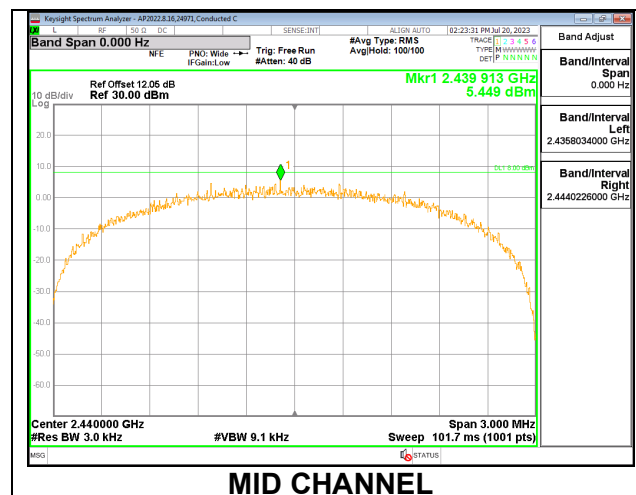
ANT 4

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2405	4.742	8	-3.26
Middle	2440	4.857	8	-3.14
High	2475	4.994	8	-3.01



ANT 3

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2405	4.311	8	-3.69
Middle	2440	5.449	8	-2.55
High	2475	4.822	8	-3.18



9.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

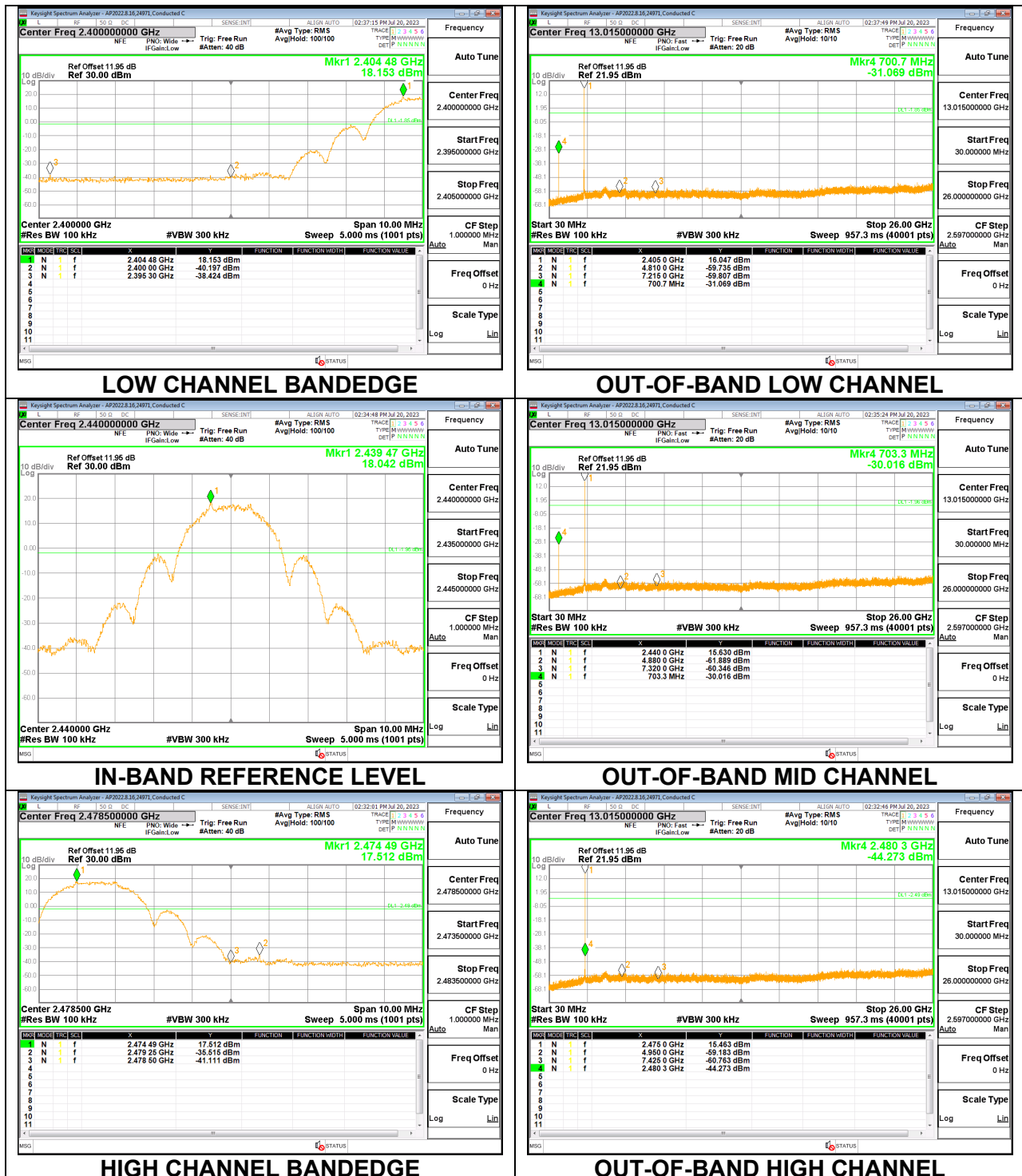
RSS-247 5.5

Output power was measured based on the use of a peak measurement; therefore, the required attenuation is 20 dBc.

RESULTS

9.7.1. HIGH POWER

ANT 4

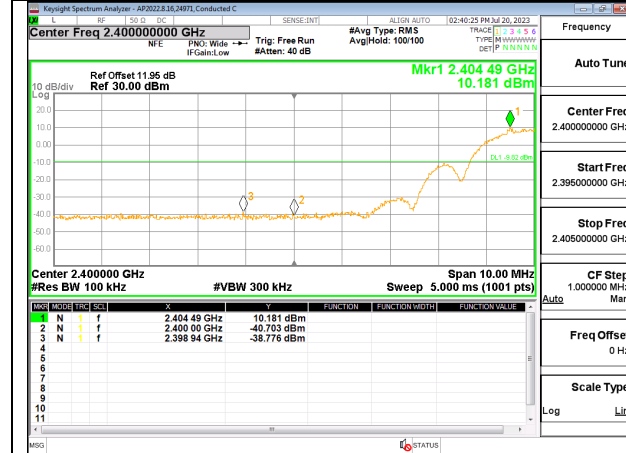


ANT 3

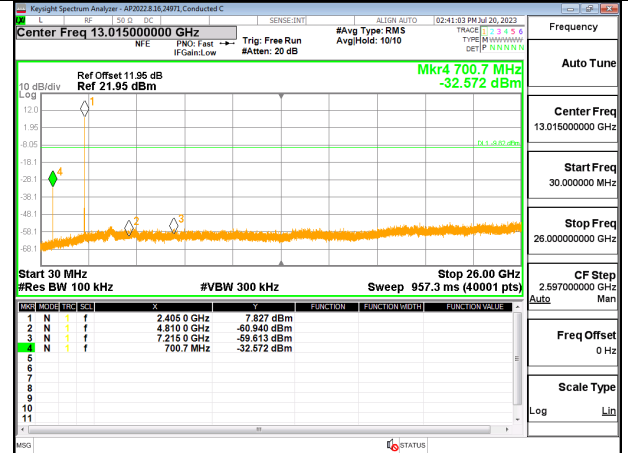


9.7.2. LOW POWER

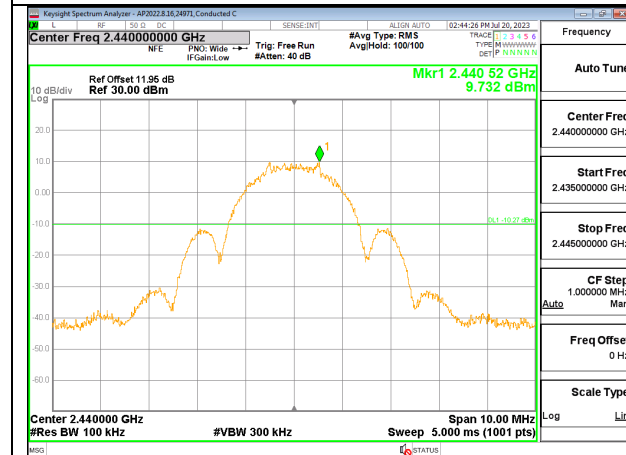
ANT 4



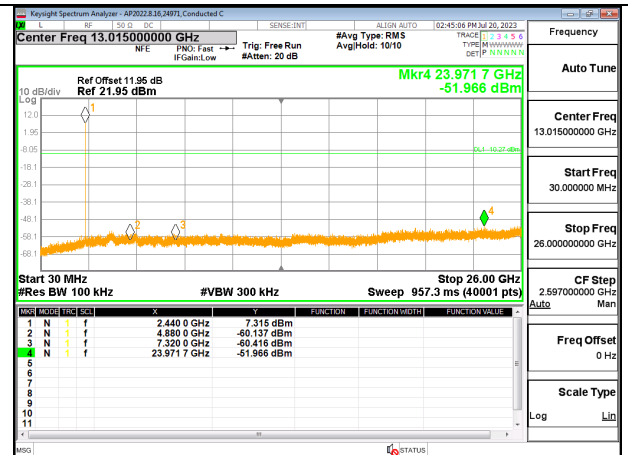
LOW CHANNEL BANDEDGE



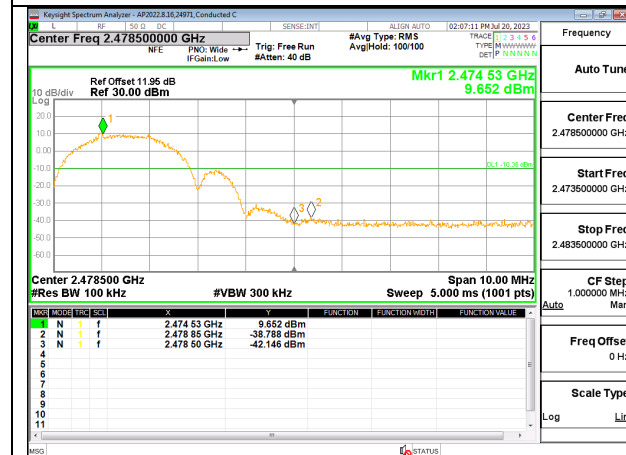
OUT-OF-BAND LOW CHANNEL



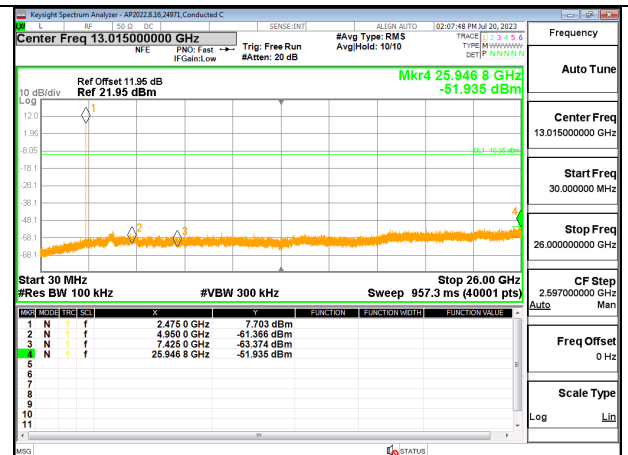
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

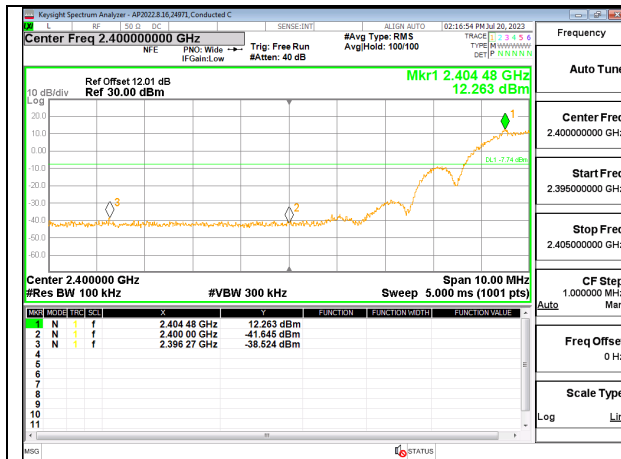


HIGH CHANNEL BANDEDGE

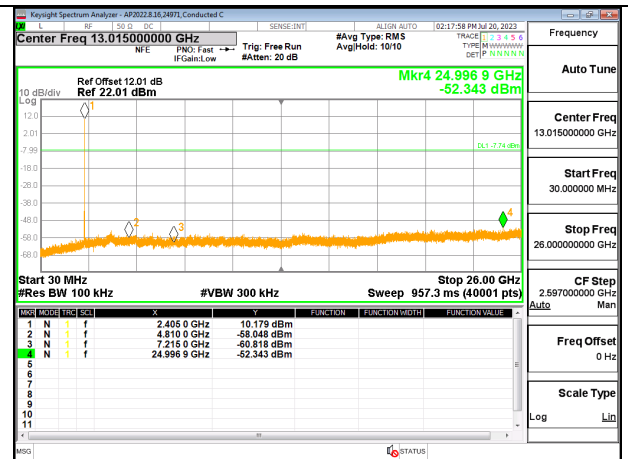


OUT-OF-BAND HIGH CHANNEL

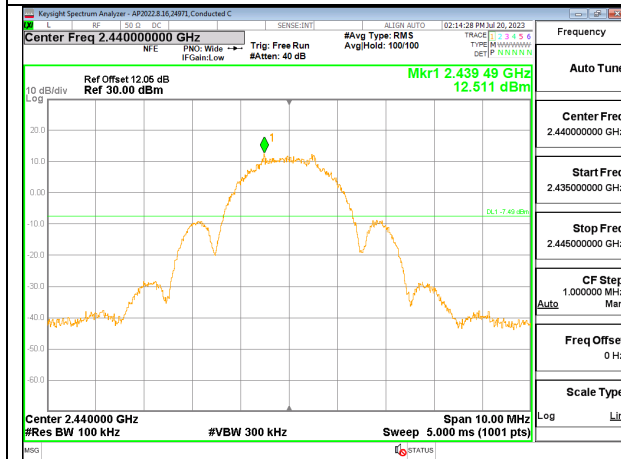
ANT 3



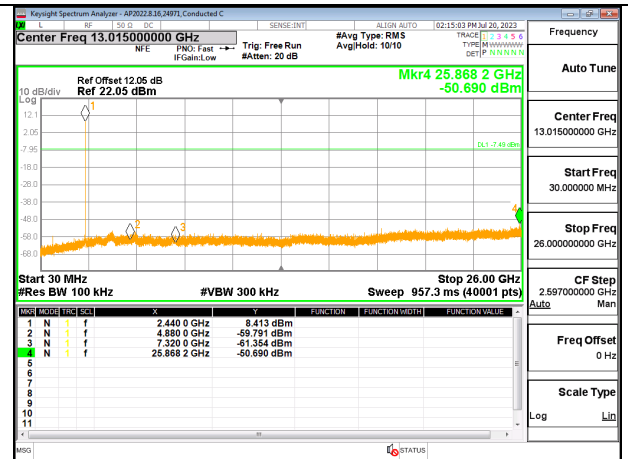
LOW CHANNEL BANDEDGE



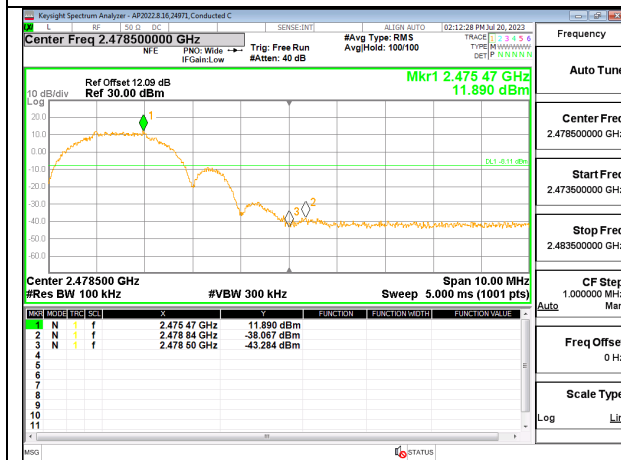
OUT-OF-BAND LOW CHANNEL



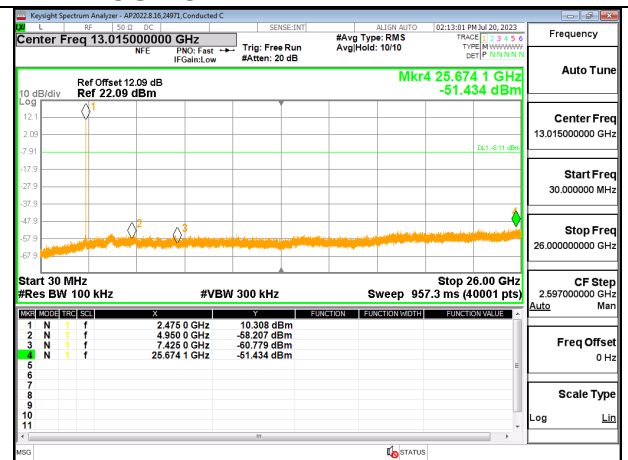
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

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

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.

For final scans above 1 GHz test, two methods are used: the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T (10 Hz) video bandwidth with peak detector for average measurements; and other method with 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 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 has to 15.209(a) limit.

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.

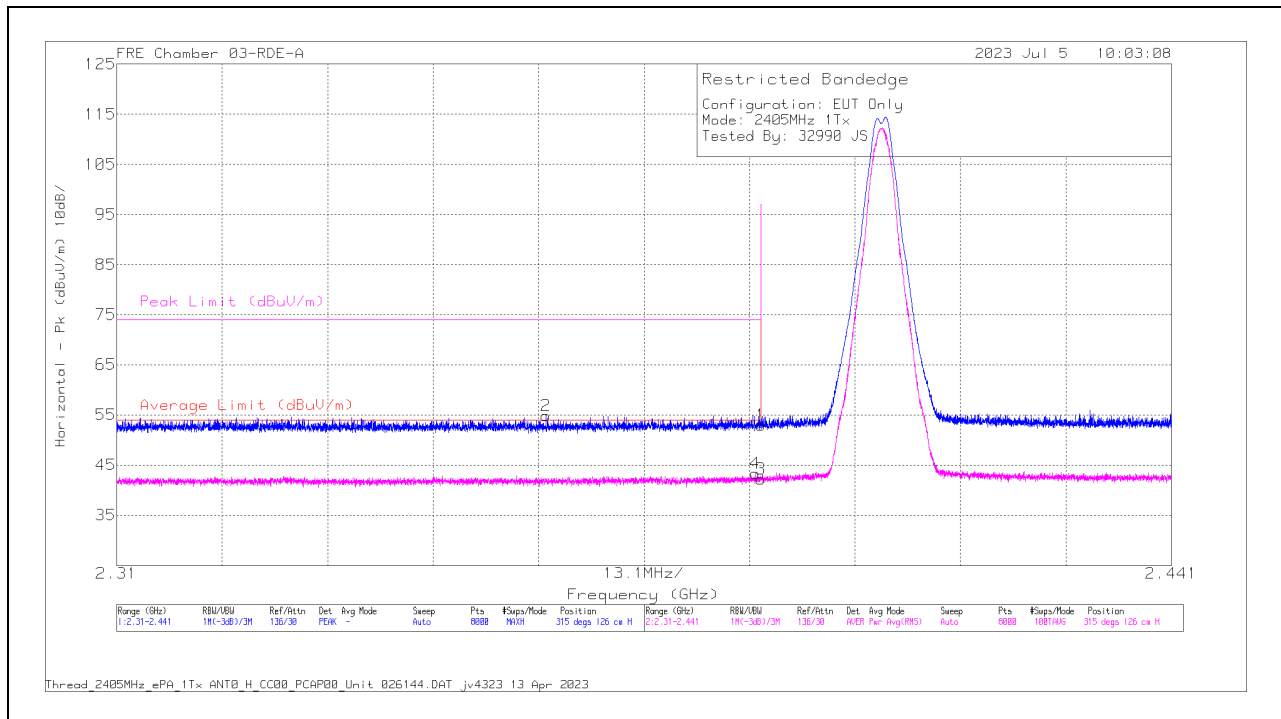
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. 802.15.4 HIGH POWER

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



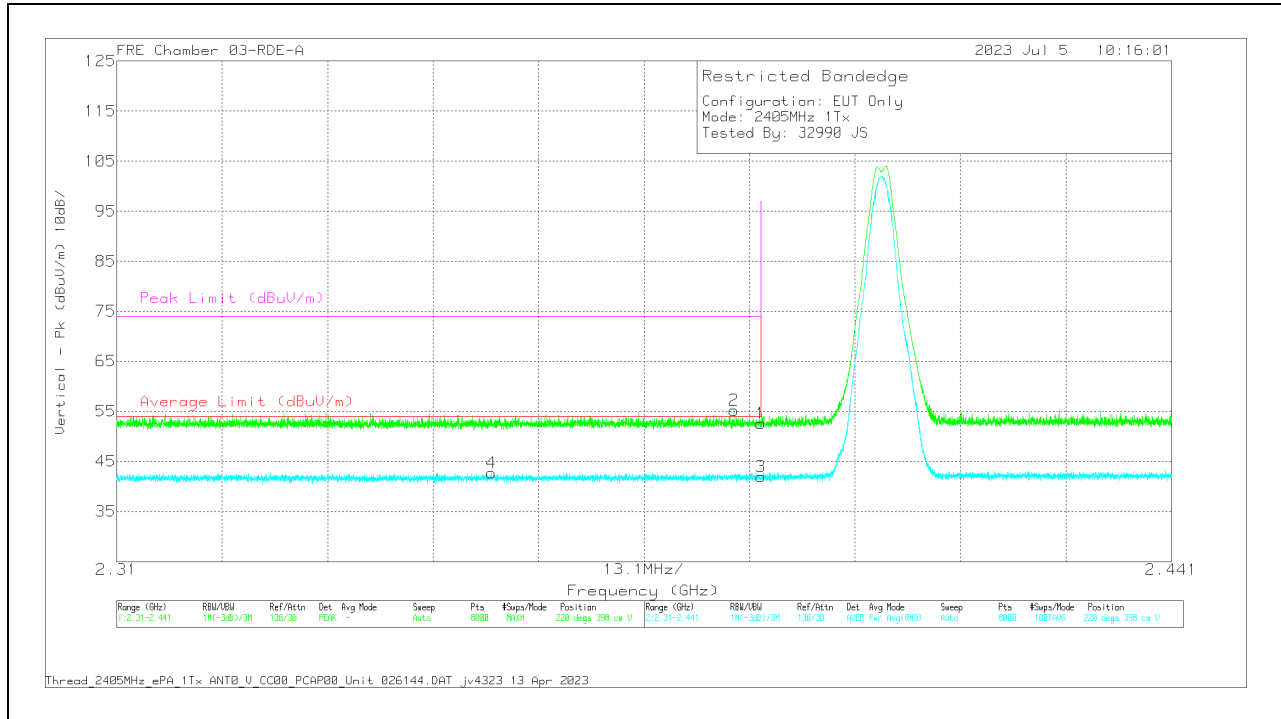
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	23029 9 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	61.23	Pk	32.2	0	-40.42	53.01	-	-	74	-20.99	315	126	H
2	* 2.363307	63.2	Pk	32.1	0	-40.46	54.84	-	-	74	-19.16	315	126	H
3	* 2.39	50.47	RMS	32.2	0	-40.42	42.25	54	-11.75	-	-	315	126	H
4	* 2.389297	51.56	RMS	32.2	0	-40.42	43.34	54	-10.66	-	-	315	126	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	23029 9 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	60.79	Pk	32.2	0	-40.42	52.57	-	-	74	-21.43	220	398	V
2	* 2.386644	63.57	Pk	32.1	0	-40.41	55.26	-	-	74	-18.74	220	398	V
3	* 2.39	50.17	RMS	32.2	0	-40.42	41.95	54	-12.05	-	-	220	398	V
4	* 2.35656	51.11	RMS	32.1	0	-40.46	42.75	54	-11.25	-	-	220	398	V

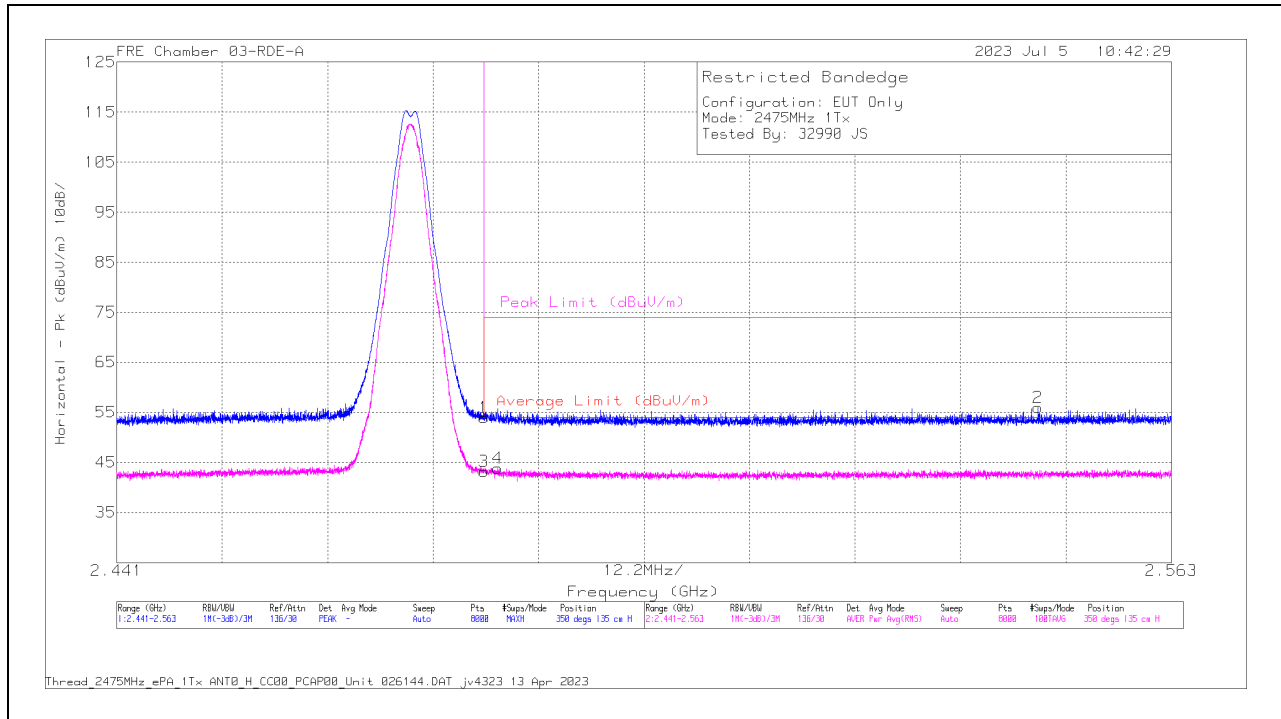
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



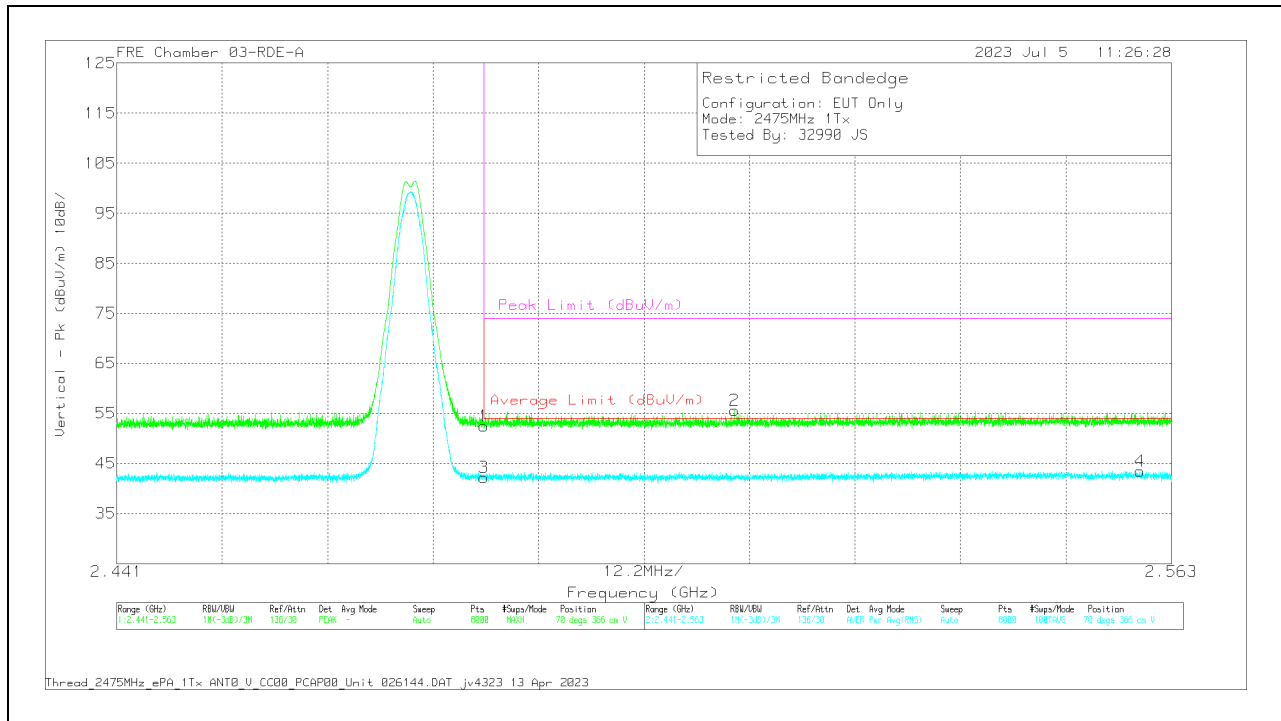
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230299 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	61.73	Pk	32.3	0	-40.11	53.92	-	-	74	-20.08	350	135	H
2	2.547581	63.41	Pk	32.5	0	-39.98	55.93	-	-	74	-18.07	350	135	H
3	* 2.4835	51.07	RMS	32.3	0	-40.11	43.26	54	-10.74	-	-	350	135	H
4	* 2.485033	51.7	RMS	32.3	0	-40.11	43.89	54	-10.11	-	-	350	135	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

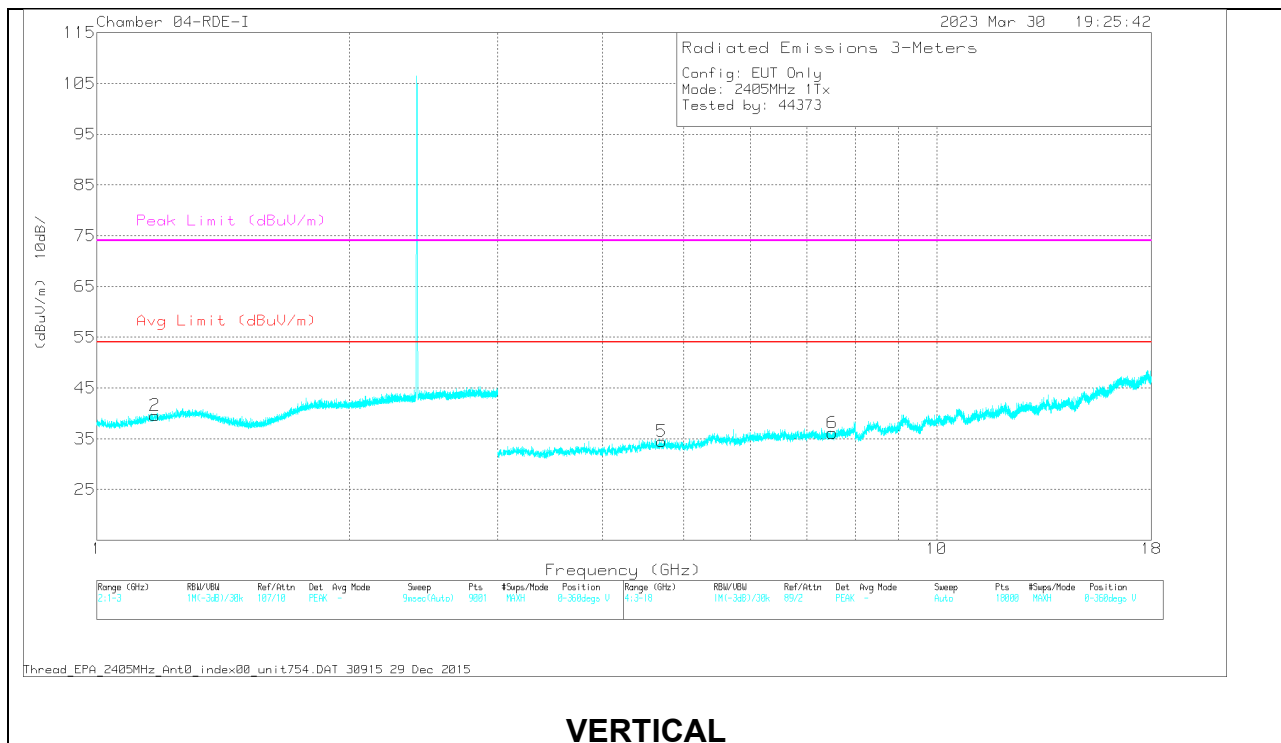
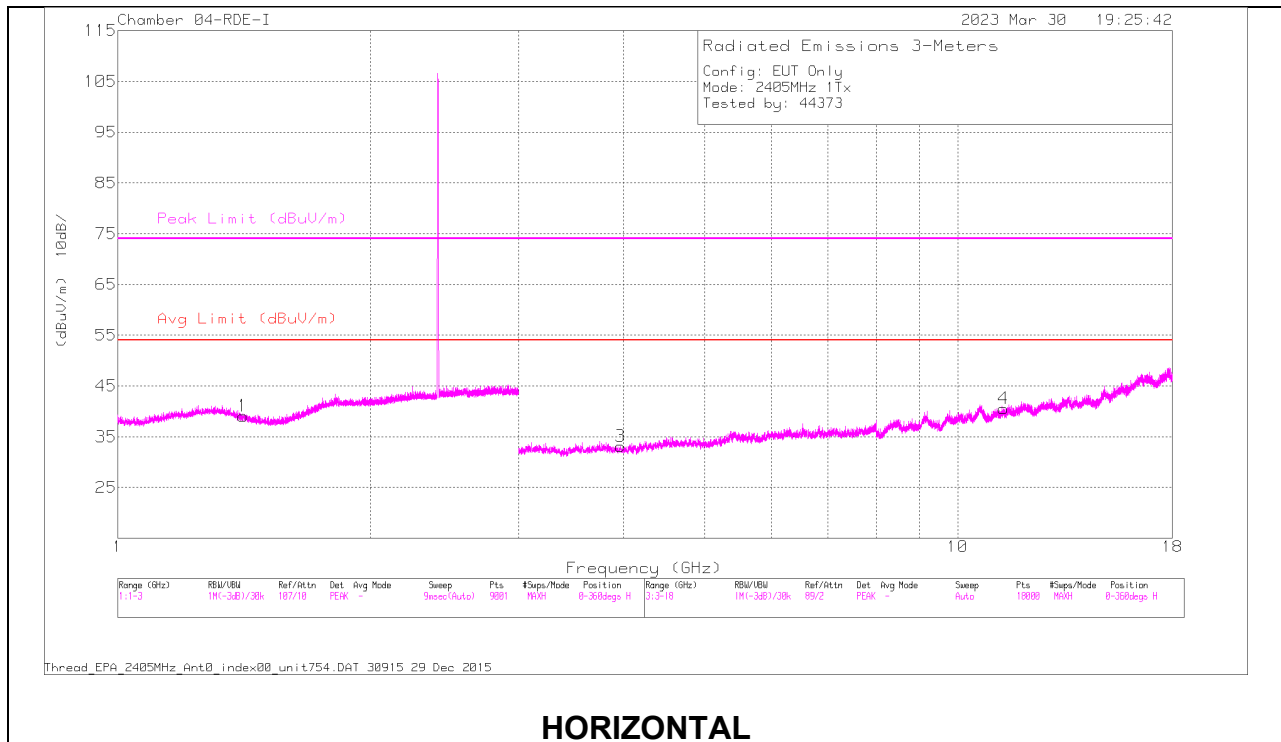


* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL RESULTS



RADIATED EMISSIONS

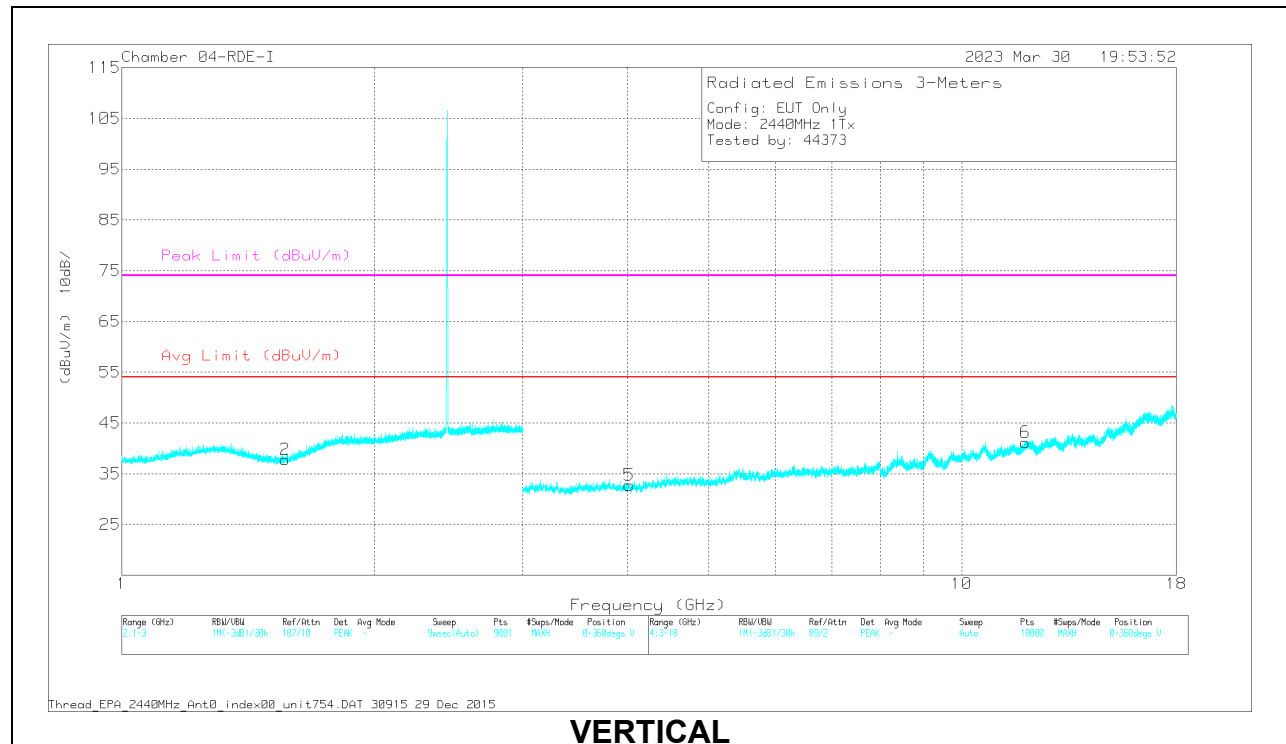
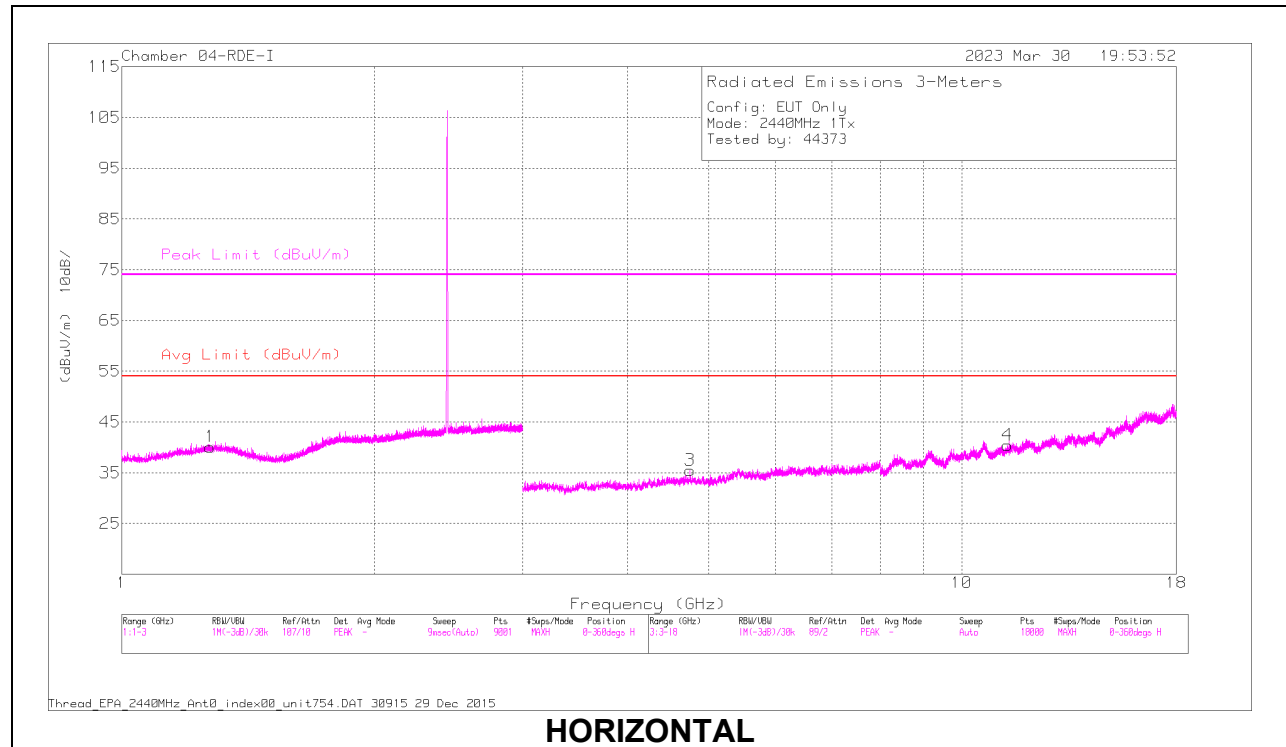
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB) - 3mH	Amp/Cbl/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.411084	43.05	PK2	28.2	-21.8	49.45	-	-	74	-24.55	0	200	H
1	* 1.410277	31.34	MAv1	28.2	-21.8	37.74	54	-16.26	-	-	0	200	H
2	* 1.173004	43.33	PK2	27.9	-21.6	49.63	-	-	74	-24.37	0	200	V
2	* 1.173704	31.69	MAv1	27.9	-21.6	37.99	54	-16.01	-	-	0	200	V
3	* 3.967123	27.82	MAv1	33.2	-29.5	31.52	54	-22.48	-	-	0	200	H
3	* 3.966699	39.9	PK2	33.2	-29.5	43.6	-	-	74	-30.4	0	200	H
4	* 11.333757	22.81	MAv1	37.8	-21.6	39.01	54	-14.99	-	-	0	200	H
4	* 11.33613	34.2	PK2	37.8	-21.6	50.4	-	-	74	-23.6	0	200	H
5	* 4.706084	26.63	MAv1	34.3	-28.5	32.43	54	-21.57	-	-	0	101	V
5	* 4.704991	38.45	PK2	34.3	-28.5	44.25	-	-	74	-29.75	0	101	V
6	* 7.5114	24	MAv1	35.6	-25.2	34.4	54	-19.6	-	-	0	200	V
6	* 7.512816	35.6	PK2	35.6	-25.3	45.9	-	-	74	-28.1	0	200	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL RESULTS



RADIATED EMISSIONS

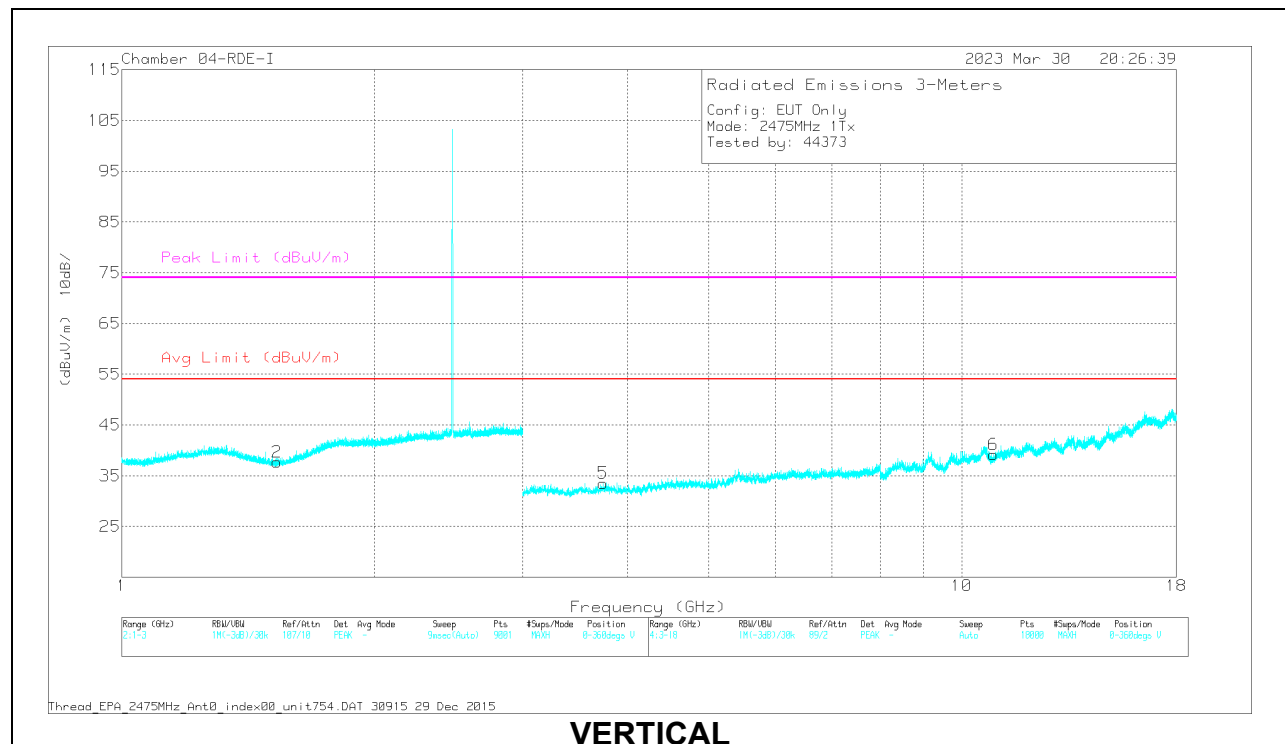
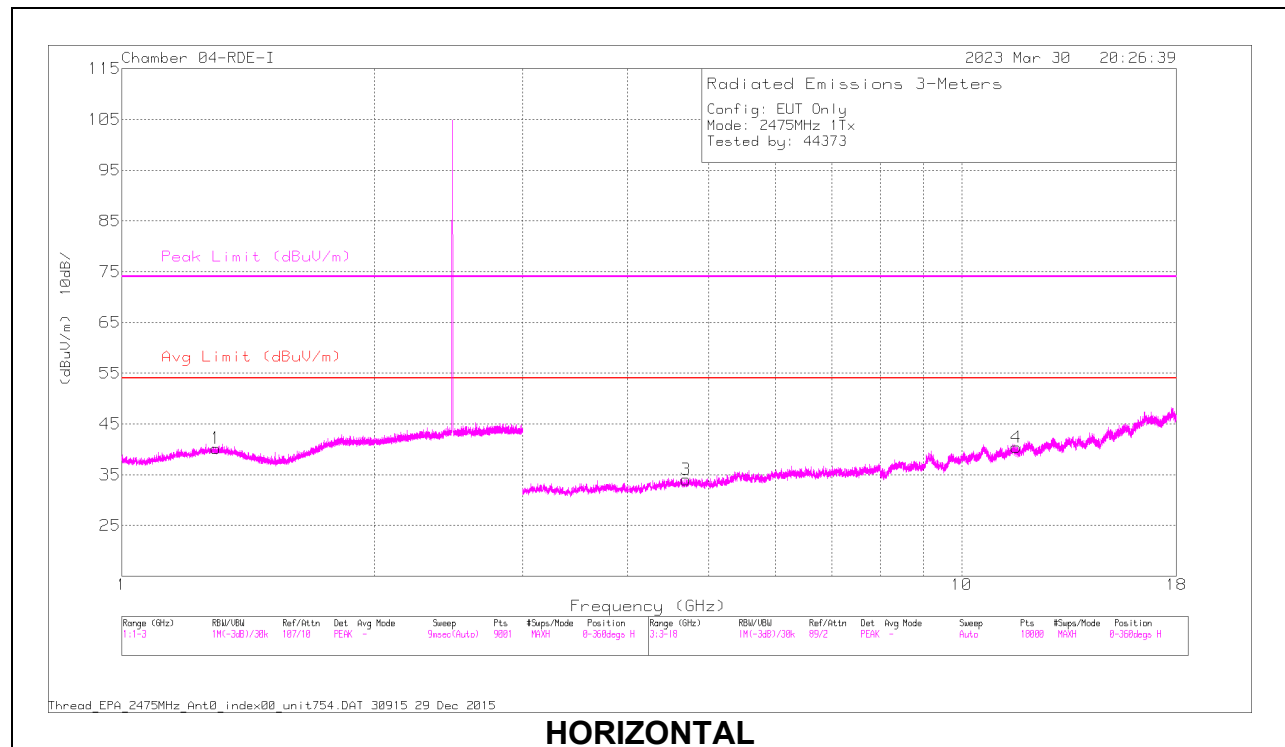
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB) - 3mH	Amp/Cbl/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.273653	42.62	PK2	28.6	-21.2	50.02	-	-	74	-23.98	0	101	H
1	* 1.272905	31.36	MAv1	28.6	-21.1	38.86	54	-15.14	-	-	0	101	H
2	* 1.564425	42.91	PK2	27.6	-22.2	48.31	-	-	74	-25.69	0	200	V
2	* 1.564625	31.48	MAv1	27.6	-22.2	36.88	54	-17.12	-	-	0	200	V
3	* 4.748557	26.48	MAv1	34.2	-27.9	32.78	54	-21.22	-	-	0	101	H
3	* 4.749232	37.79	PK2	34.2	-27.9	44.09	-	-	74	-29.91	0	101	H
4	* 11.331748	22.55	MAv1	37.8	-21.6	38.75	54	-15.25	-	-	0	200	H
4	* 11.331137	34.27	PK2	37.8	-21.5	50.57	-	-	74	-23.43	0	200	H
5	* 4.01784	27.45	MAv1	33.3	-29.2	31.55	54	-22.45	-	-	0	200	V
5	* 4.01878	38.8	PK2	33.3	-29.1	43	-	-	74	-31	0	200	V
6	* 11.901948	22.62	MAv1	38.5	-22.3	38.82	54	-15.18	-	-	0	101	V
6	* 11.902435	33.97	PK2	38.5	-22.3	50.17	-	-	74	-23.83	0	101	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	84797 ACF (dB) - 3mH	Amp/Cbl/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.297451	43.14	PK2	28.6	-21.2	50.54	-	-	74	-23.46	0	200	H
1	* 1.297637	31.32	MAV1	28.6	-21.2	38.72	54	-15.28	-	-	0	200	H
2	* 1.531295	42.84	PK2	27.6	-22.3	48.14	-	-	74	-25.86	0	200	V
2	* 1.530067	31.26	MAV1	27.6	-22.2	36.66	54	-17.34	-	-	0	200	V
3	* 4.695677	26.72	MAV1	34.3	-28.7	32.32	54	-21.68	-	-	0	101	H
3	* 4.699434	38.25	PK2	34.3	-28.7	43.85	-	-	74	-30.15	0	101	H
4	* 11.610899	22.49	MAV1	38.2	-22.1	38.59	54	-15.41	-	-	0	200	H
4	* 11.610779	34.04	PK2	38.2	-22.1	50.14	-	-	74	-23.86	0	200	H
5	* 3.742624	27.14	MAV1	33.2	-29	31.34	54	-22.66	-	-	0	200	V
5	* 3.743206	38.64	PK2	33.2	-29	42.84	-	-	74	-31.16	0	200	V
6	* 10.904395	21.1	MAV1	37.6	-21.3	37.4	54	-16.6	-	-	0	200	V
6	* 10.903558	32.46	PK2	37.6	-21.3	48.76	-	-	74	-25.24	0	200	V

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

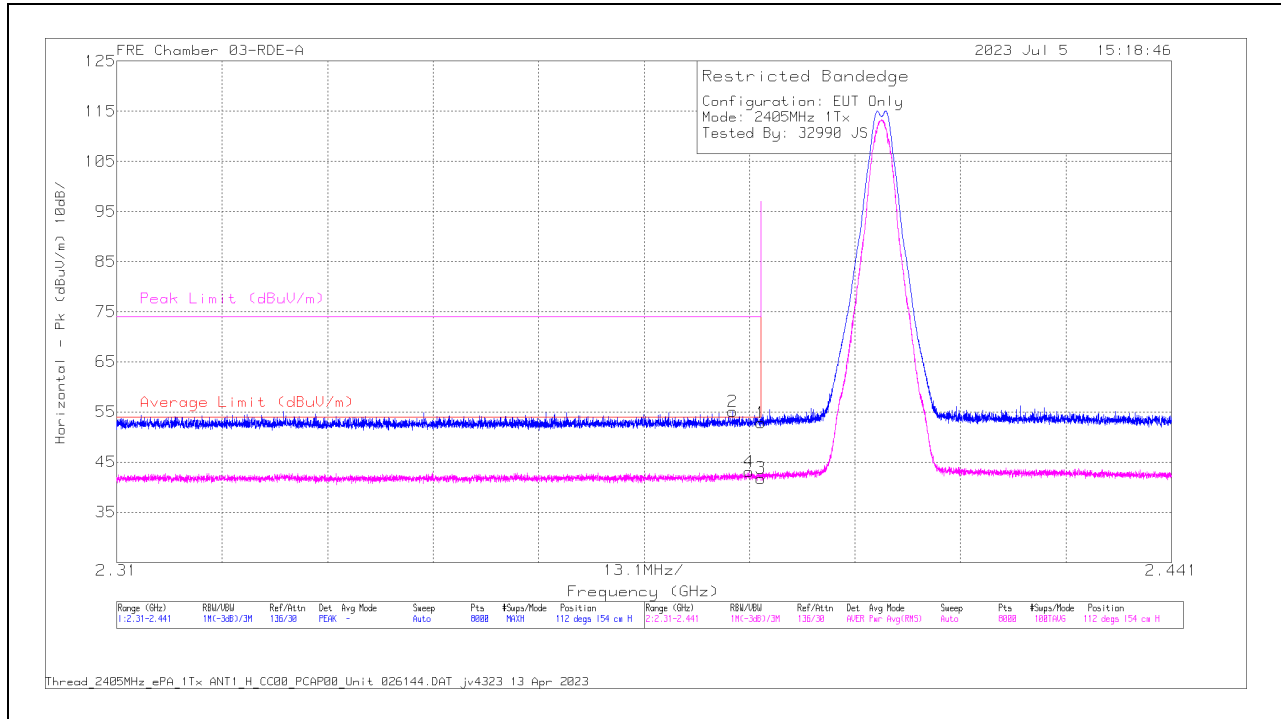
PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



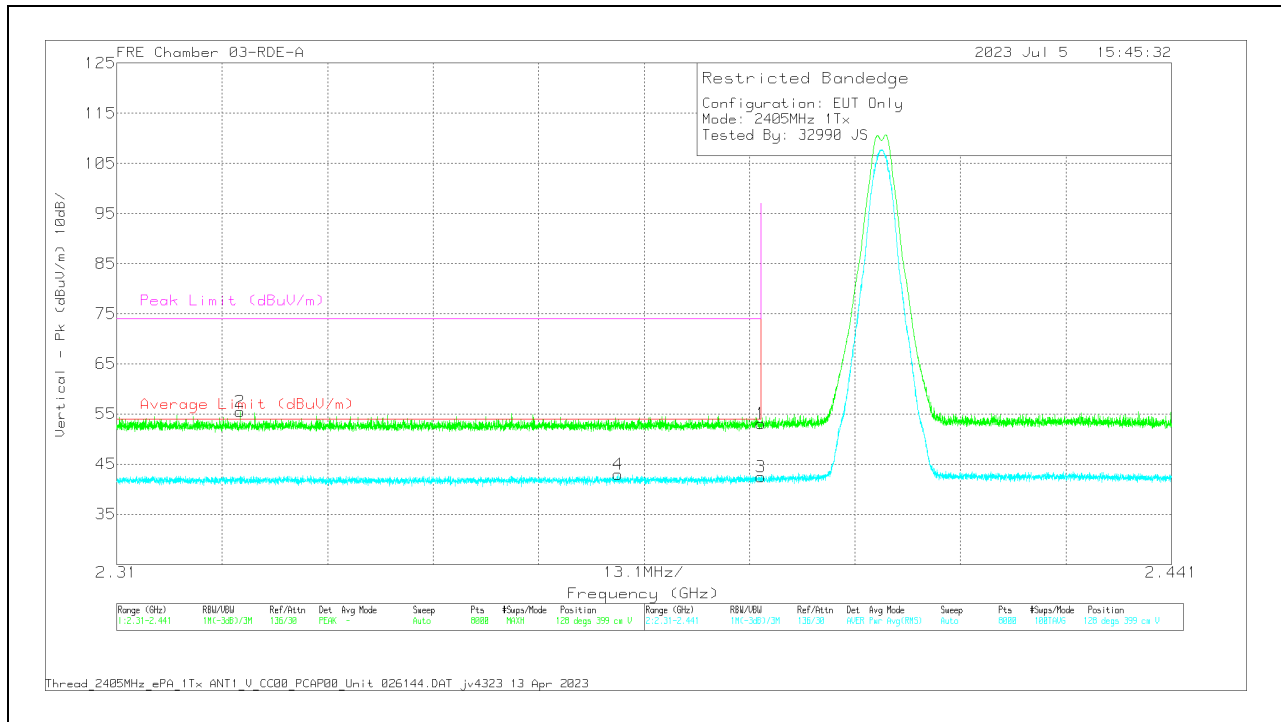
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230299 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	61.12	Pk	32.2	0	-40.42	52.9	-	-	74	-21.1	112	154	H
2	* 2.38653	63.4	Pk	32.1	0	-40.41	55.09	-	-	74	-18.91	112	154	H
3	* 2.39	50	RMS	32.2	0	-40.42	41.78	54	-12.22	-	-	112	154	H
4	* 2.388495	51.39	RMS	32.1	0	-40.43	43.06	54	-10.94	-	-	112	154	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230299 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	61.33	Pk	32.2	0	-40.42	53.11	-	-	74	-20.89	128	399	V
2	* 2.325329	63.81	Pk	32.1	0	-40.48	55.43	-	-	74	-18.57	128	399	V
3	* 2.39	50.65	RMS	32.2	0	-40.42	42.43	54	-11.57	-	-	128	399	V
4	* 2.372233	51.29	RMS	32.1	0	-40.44	42.95	54	-11.05	-	-	128	399	V

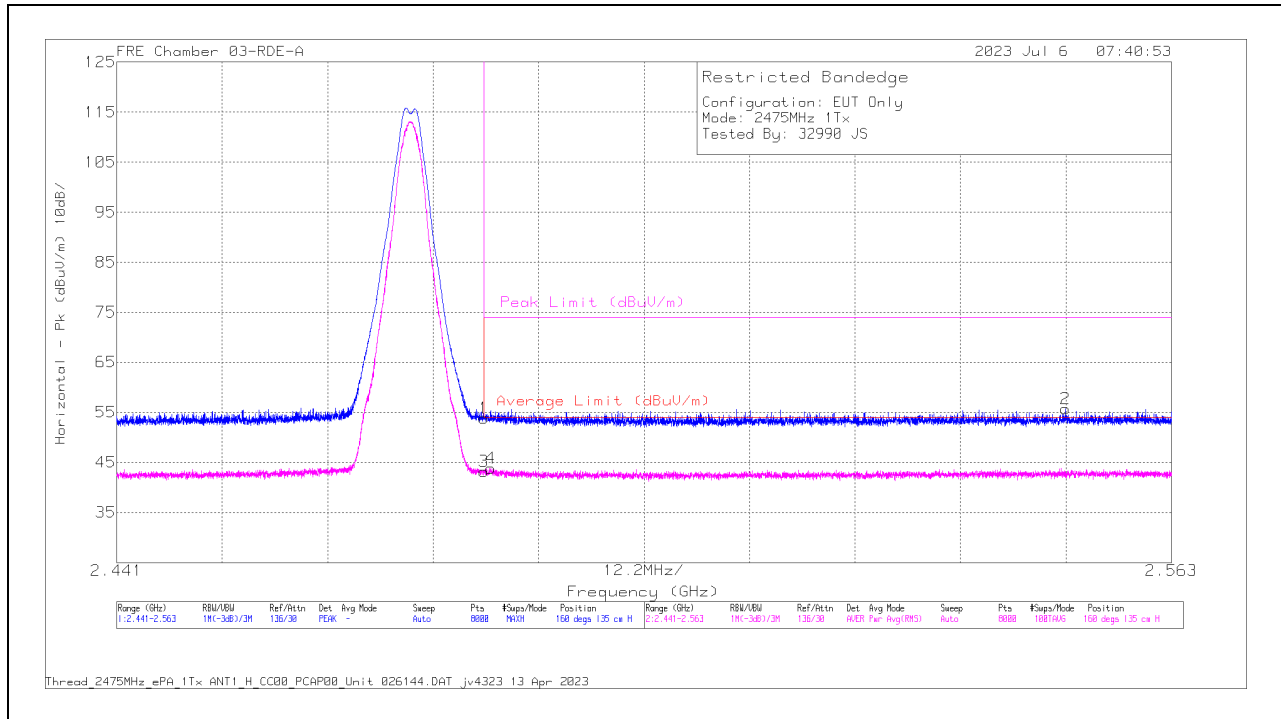
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



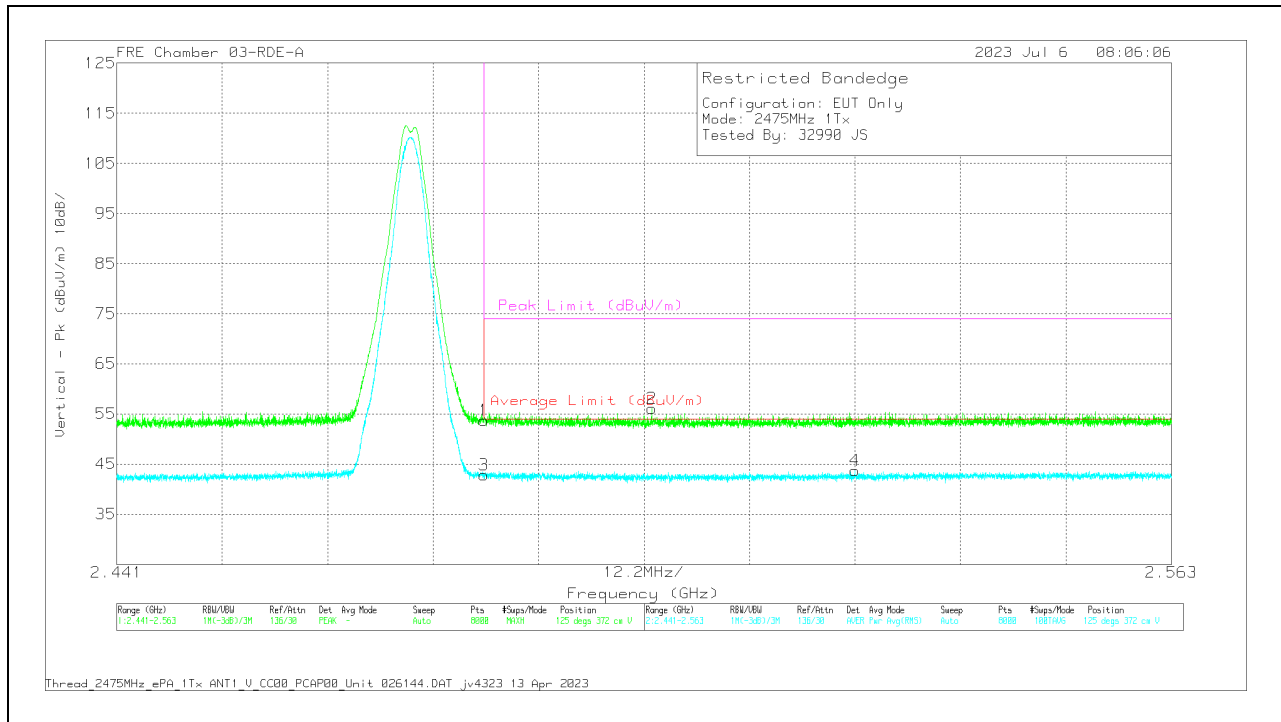
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230299 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	61.68	Pk	32.3	0	-40.11	53.87	-	-	74	-20.13	160	135	H
2	2.550753	63.11	Pk	32.5	0	-39.93	55.68	-	-	74	-18.32	160	135	H
3	* 2.4835	51.05	RMS	32.3	0	-40.11	43.24	54	-10.76	-	-	160	135	H
4	* 2.484239	51.69	RMS	32.3	0	-40.11	43.88	54	-10.12	-	-	160	135	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230299 ACF (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	61.54	Pk	32.3	0	-40.11	53.73	-	-	74	-20.27	125	372	V
2	2.502893	63.78	Pk	32.4	0	-40.08	56.1	-	-	74	-17.9	125	372	V
3	* 2.4835	50.67	RMS	32.3	0	-40.11	42.86	54	-11.14	-	-	125	372	V
4	2.526365	51.29	RMS	32.4	0	-40.03	43.66	54	-10.34	-	-	125	372	V

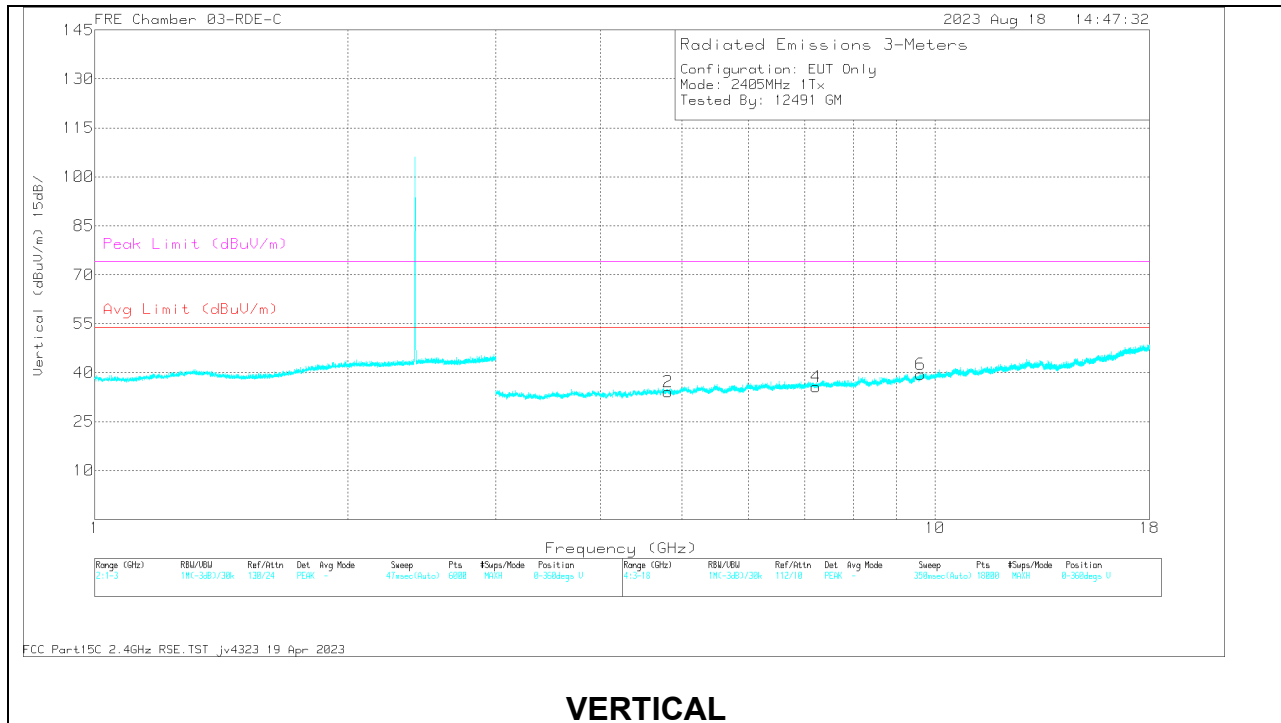
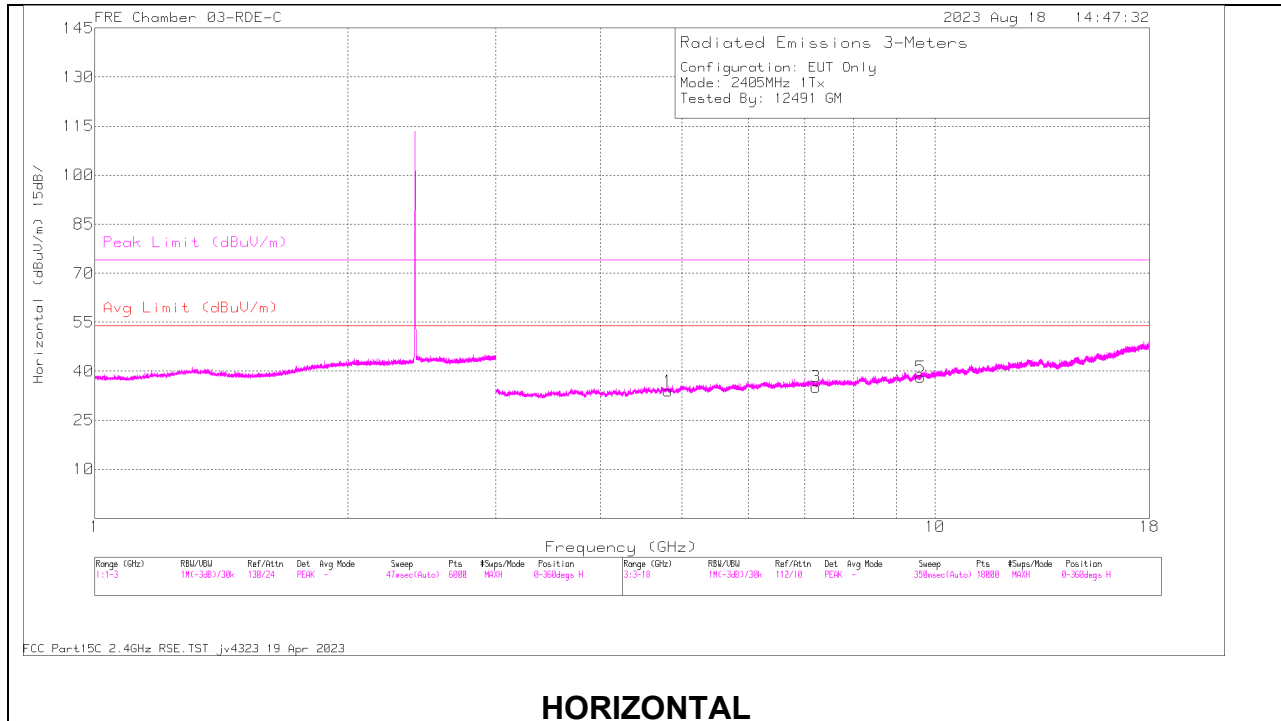
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS

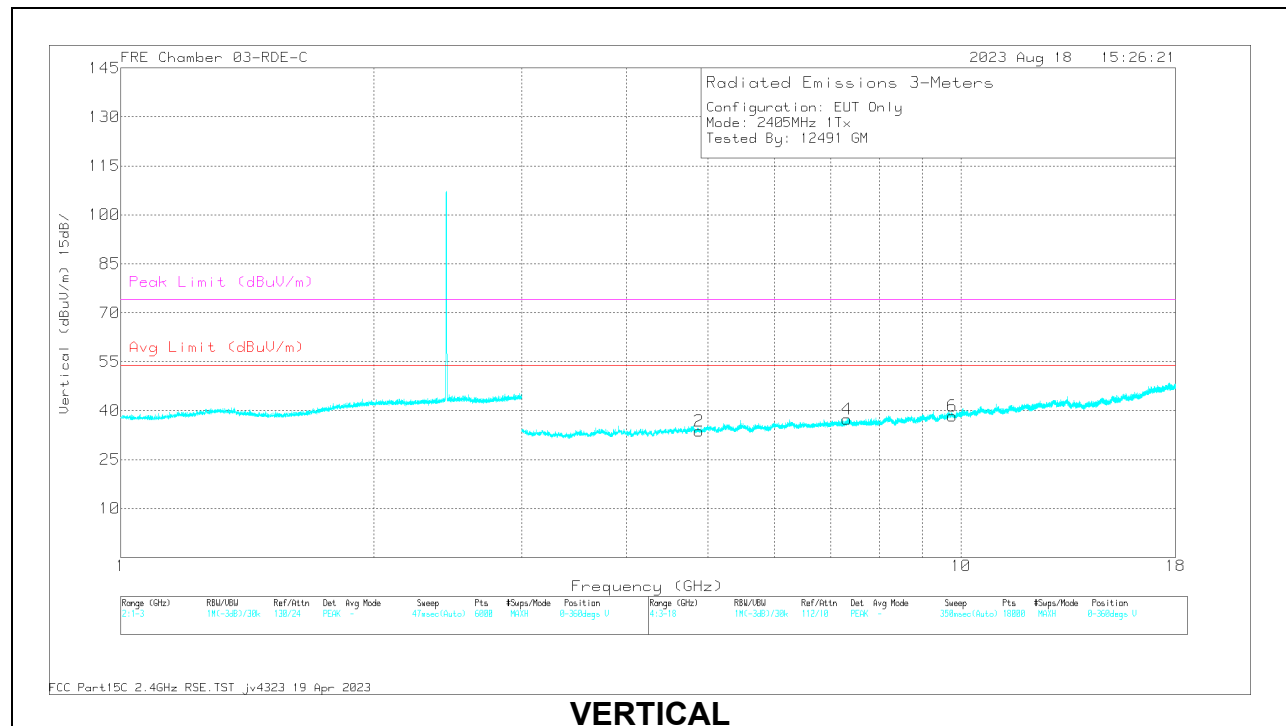
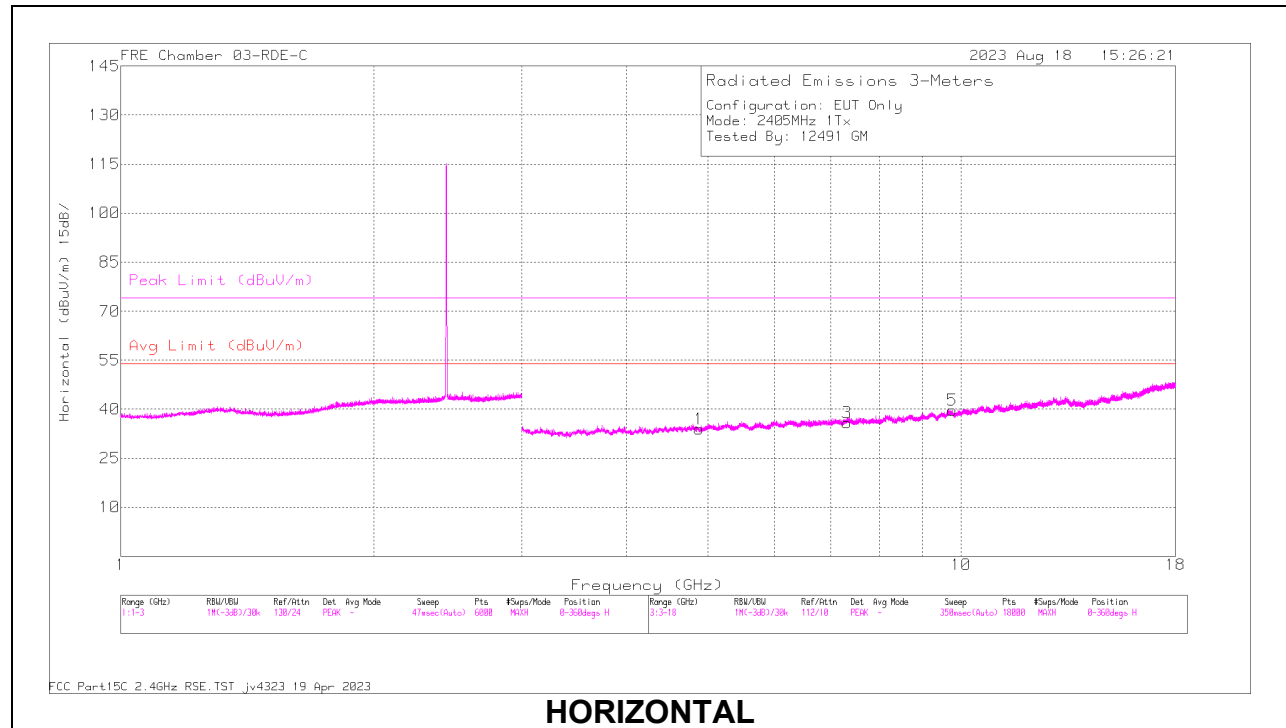


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.811682	58.44	PK2	34	-47.5	44.94	-	-	74	-29.06	6	197	H
	* 4.811115	46.85	MAv1	34	-47.5	33.35	54	-20.65	-	-	6	197	H
2	* 4.811457	58.21	PK2	34	-47.5	44.71	-	-	74	-29.29	10	192	V
	* 4.811334	46.91	MAv1	34	-47.5	33.41	54	-20.59	-	-	10	192	V
4	7.215103	45.47	MAv1	35.7	-46.39	34.78	-	-	-	-	139	214	V
	7.21518	71.67	PK2	35.7	-46.38	60.99	-	-	74	-13.01	139	214	V
3	7.215601	63.57	PK2	35.7	-46.34	52.93	-	-	74	-21.07	267	143	H
6	9.618989	57.4	PK2	36.7	-45.8	48.3	-	-	74	-25.7	184	201	V
5	9.620922	58.29	PK2	36.7	-45.8	49.19	-	-	74	-24.81	319	156	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL RESULTS



RADIATED EMISSIONS

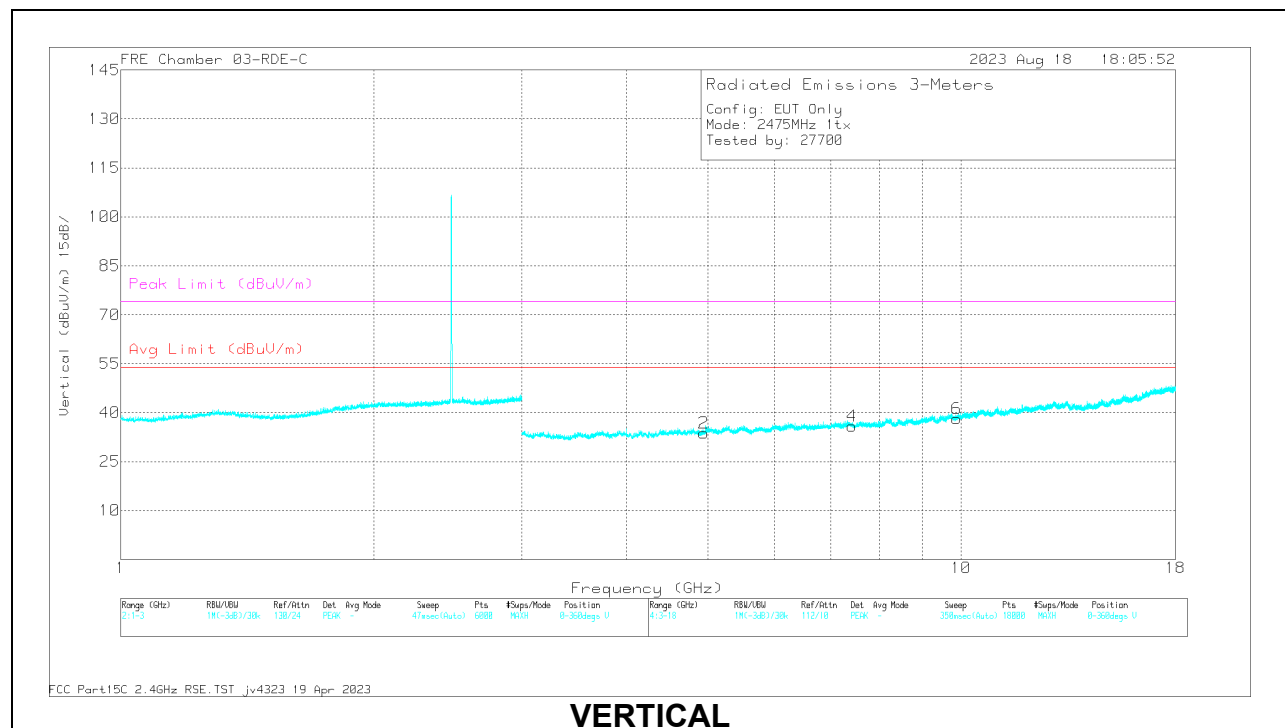
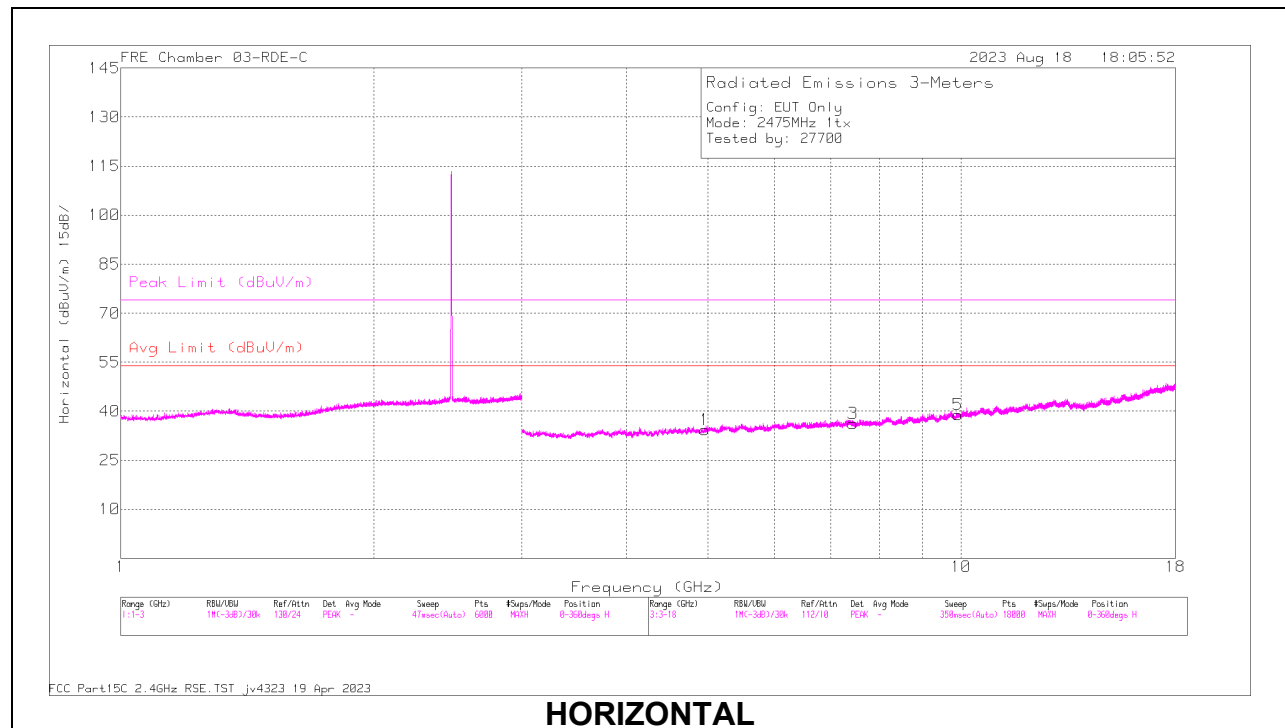
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881136	58.38	PK2	34	-47.59	44.79	-	-	74	-29.21	182	162	H
	* 4.880312	46.34	MAv1	34	-47.6	32.74	54	-21.26	-	-	182	162	H
3	* 7.320191	71.47	PK2	35.7	-45.7	61.47	-	-	74	-12.53	230	180	H
	* 7.318706	45.31	MAv1	35.7	-45.8	35.21	54	-18.79	-	-	230	180	H
2	* 4.879529	58.06	PK2	34	-47.55	44.51	-	-	74	-29.49	249	136	V
	* 4.877828	46.29	MAv1	34	-47.58	32.71	54	-21.29	-	-	249	136	V
4	* 7.32165	69.58	PK2	35.7	-45.7	59.58	-	-	74	-14.42	286	150	V
	* 7.321951	45.44	MAv1	35.7	-45.7	35.44	54	-18.56	-	-	286	150	V
5	9.760657	57.6	PK2	36.9	-44.83	49.67	-	-	74	-24.33	6	214	H
6	9.760918	57.34	PK2	36.9	-44.81	49.43	-	-	74	-24.57	113	374	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.958443	58.65	PK2	34.1	-47.5	45.25			74	-39.75	0-360	101	H
	* 4.958443	47.4	MAv1	34.1	-47.5	34	54	-20					
3	* 7.438582	57.87	PK2	35.7	-46.24	47.33			74	-37.67	0-360	101	H
	* 7.438582	46.62	MAv1	35.7	-46.24	36.08	54	-17.92					
2	* 4.942609	58.11	PK2	34	-47.4	44.71			74	-40.29	0-360	200	V
	* 4.942609	46.88	MAv1	34	-47.4	33.48	54	-20.52					
4	* 7.422748	57.24	PK2	35.7	-46.1	46.84			74	-38.16	0-360	200	V
	* 7.422748	46.02	MAv1	35.7	-46.1	35.62	54	-18.38					
6	9.884552	57.62	PK2	37	-45.5	49.12			74	-24.88	0-360	101	V
5	9.915387	58.19	PK2	37	-45.2	49.99			74	-24.01	0-360	101	H

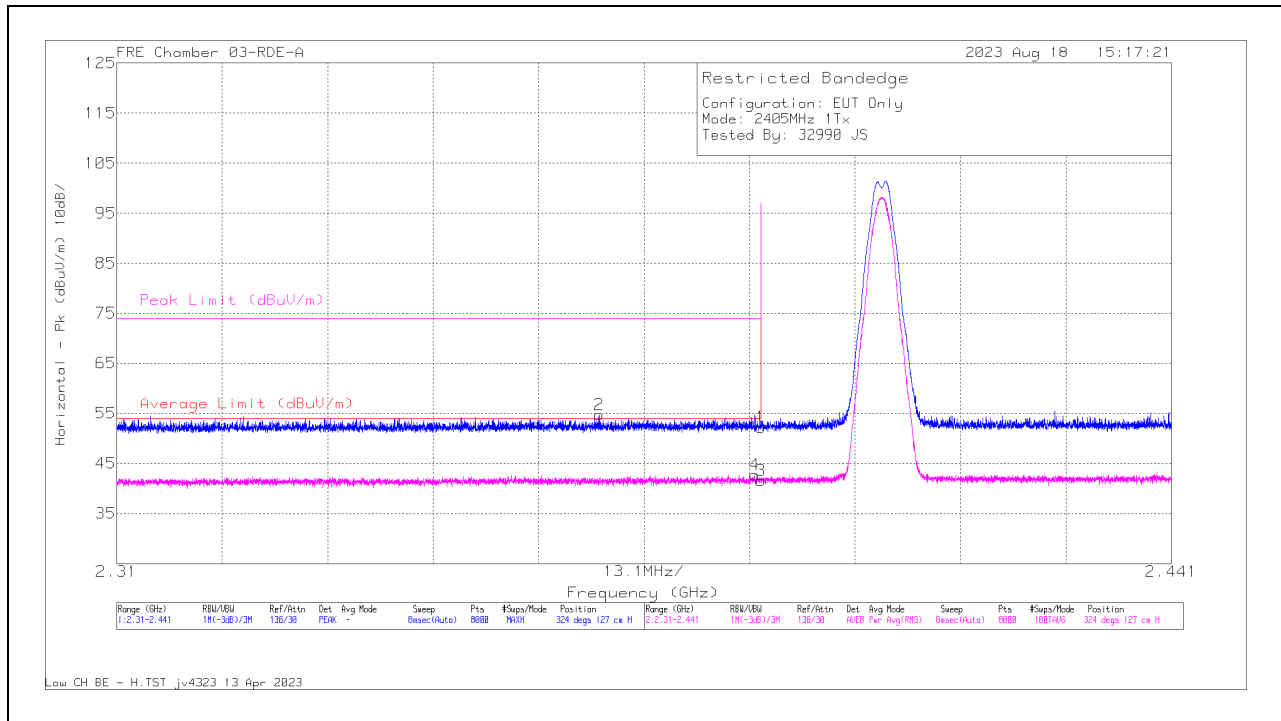
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2.2. 802.15.4 LOW POWER

ANT 4

BANDEDGE (LOW CHANNEL)

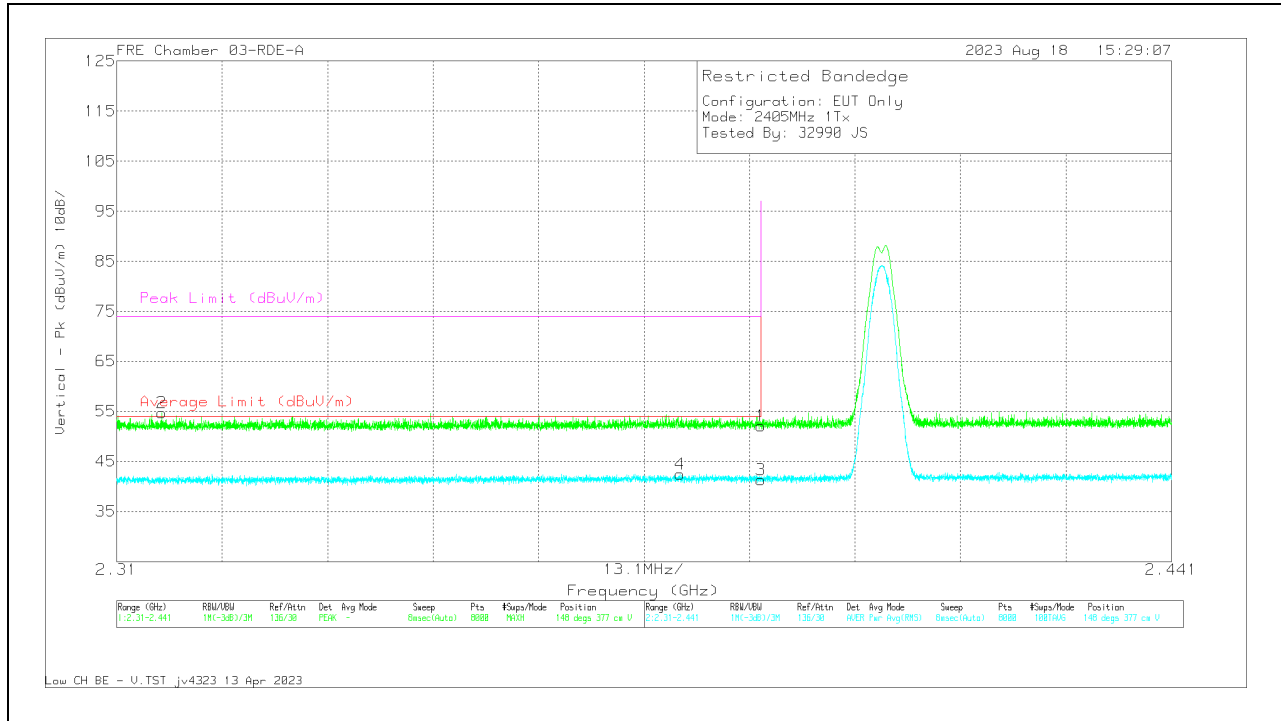
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	60.72	Pk	31.9	0	-40.42	52.2	-	-	74	-21.8	324	127	H
2	* 2.36994	63.4	Pk	31.8	0	-40.43	54.77	-	-	74	-19.23	324	127	H
3	* 2.39	50.12	RMS	31.9	0	-40.42	41.6	54	-12.4	-	-	324	127	H
4	* 2.389199	51.22	RMS	31.9	0	-40.42	42.7	54	-11.3	-	-	324	127	H

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

VERTICAL RESULT

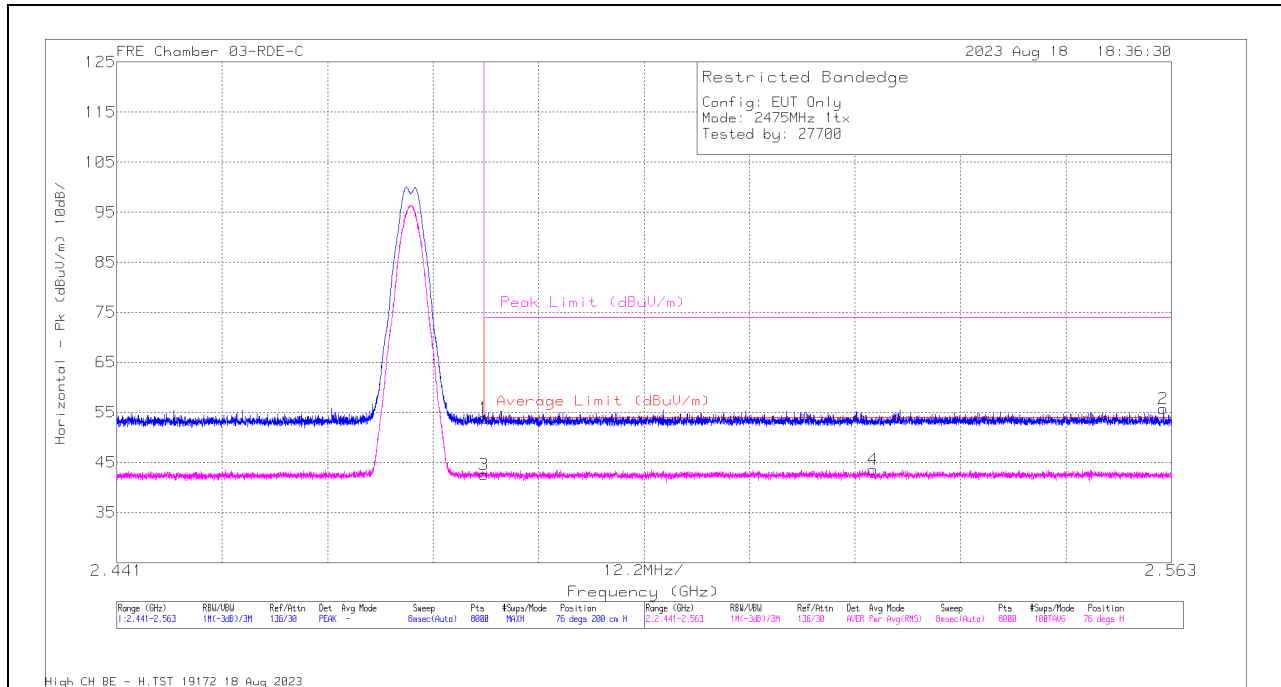


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	60.62	Pk	31.9	0	-40.42	52.1	-	-	74	-21.9	148	377	V
2	* 2.315585	63.6	Pk	31.6	0	-40.49	54.71	-	-	74	-19.29	148	377	V
3	* 2.39	49.88	RMS	31.9	0	-40.42	41.36	54	-12.64	-	-	148	377	V
4	* 2.379946	51.03	RMS	31.9	0	-40.43	42.5	54	-11.5	-	-	148	377	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

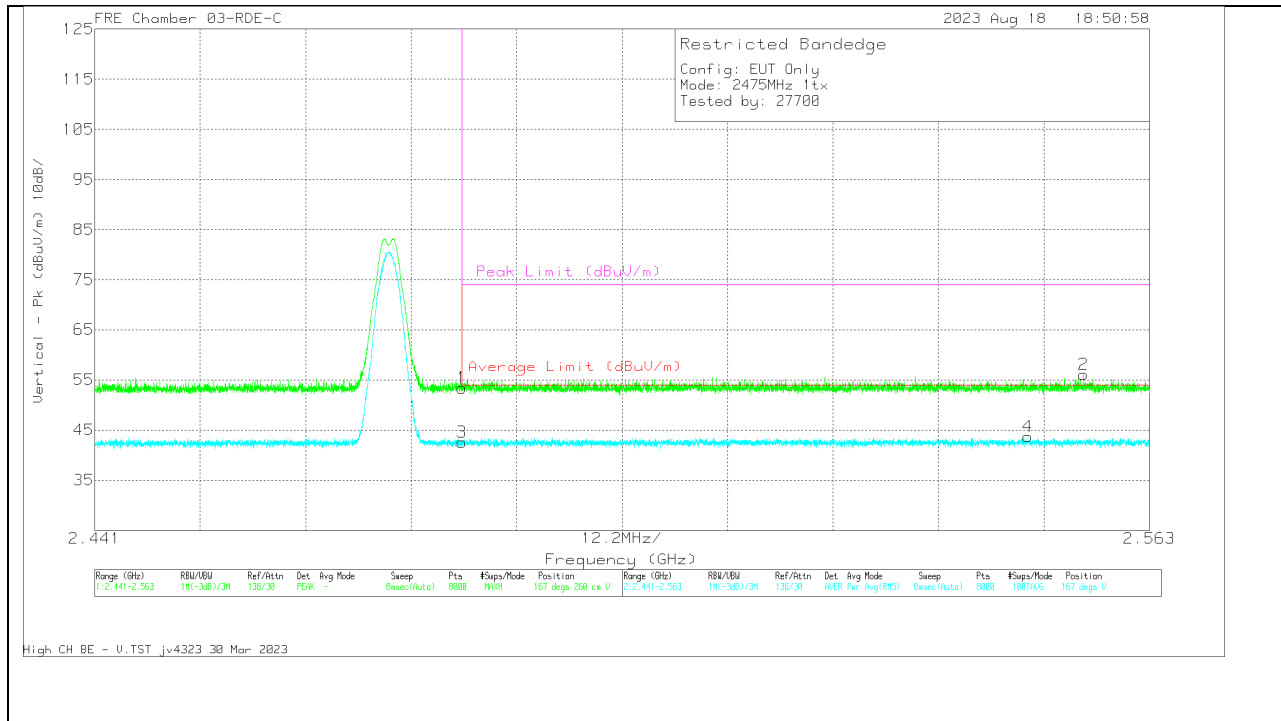
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	61.3	Pk	32.2	0	-39.6	53.9	-	-	74	-20.1	76	200	H
3	* 2.4835	50.01	RMS	32.2	0	-39.6	42.61	54	-11.39	-	-	76	200	H
4	2.528516	50.95	RMS	32.3	0	-39.65	43.6	54	-10.4	-	-	76	200	H
2	2.562086	62.87	Pk	32.3	0	-39.5	55.67	-	-	74	-18.33	76	200	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT



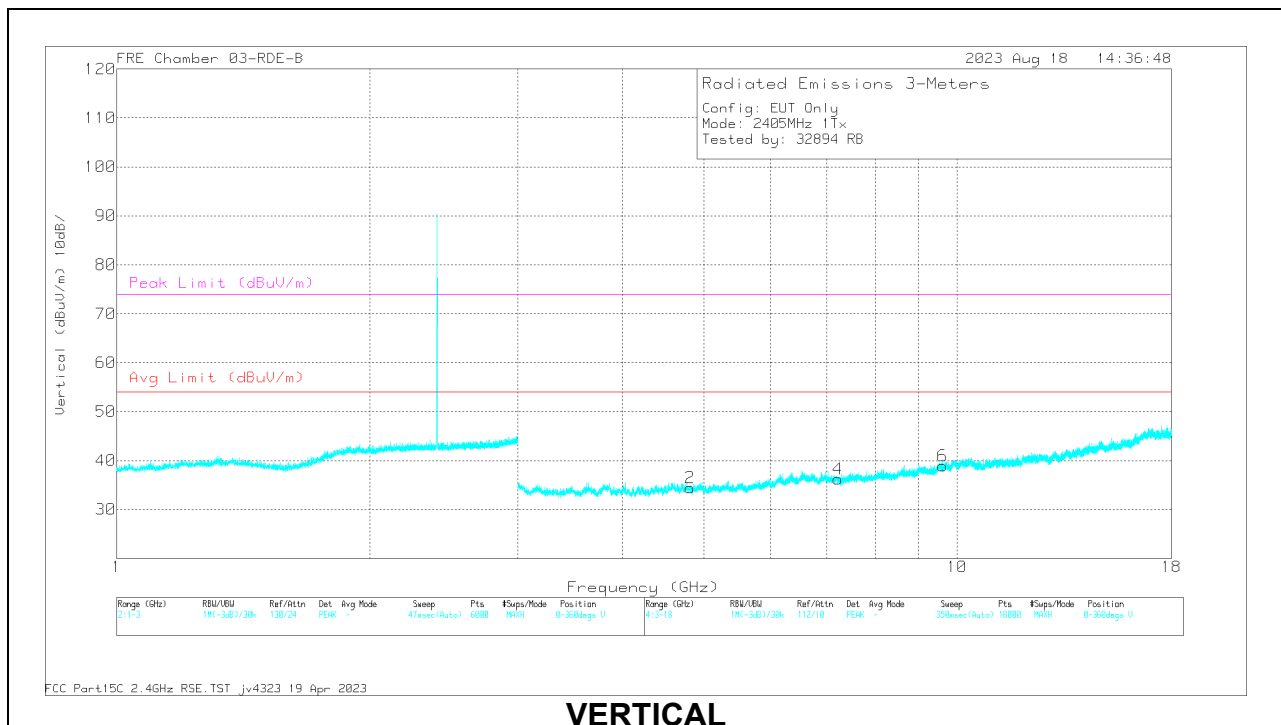
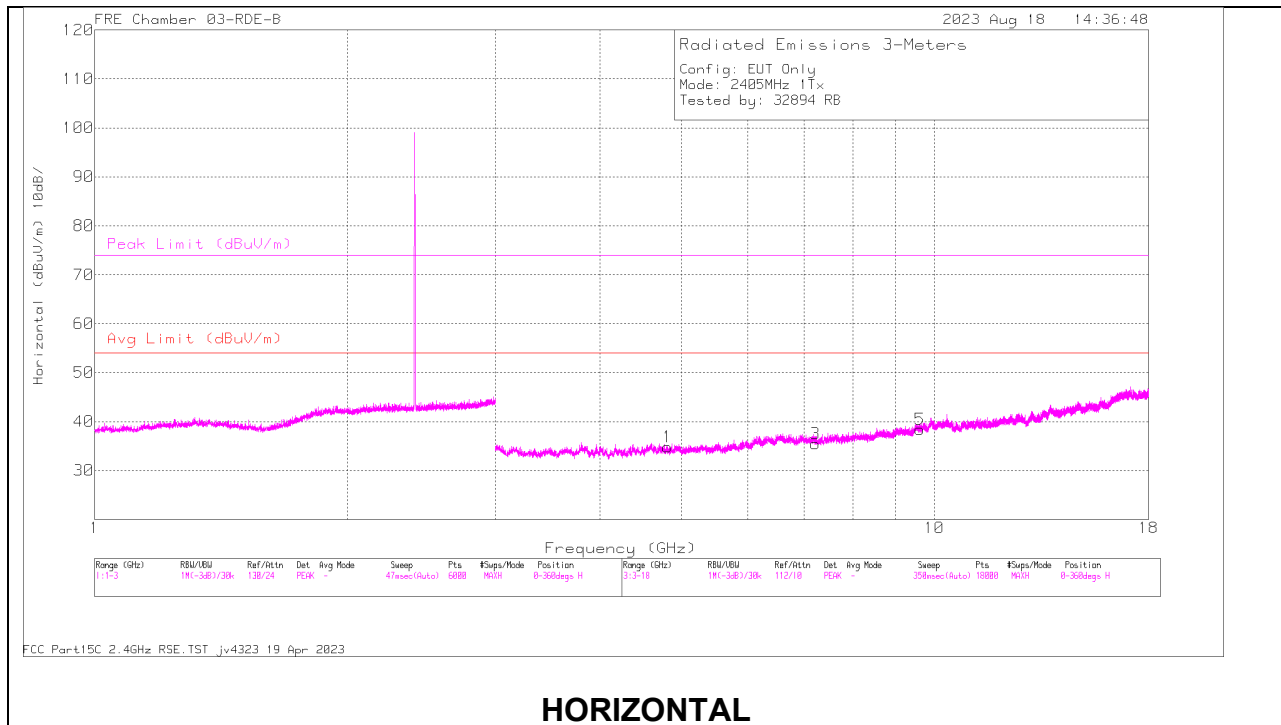
Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB 3mH	Gain/Los s (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	60.82	Pk	32.2	-39.6	53.42	-	-	74	-20.58	167	260	V
3	* 2.4835	49.98	RMS	32.2	-39.6	42.58	54	-11.42	-	-	167	260	V
4	2.548923	50.92	RMS	32.3	-39.5	43.72	54	-10.28	-	-	167	260	V
2	2.555405	63.23	Pk	32.3	-39.4	56.13	-	-	74	-17.87	167	260	V

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

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL RESULTS



RADIATED EMISSIONS

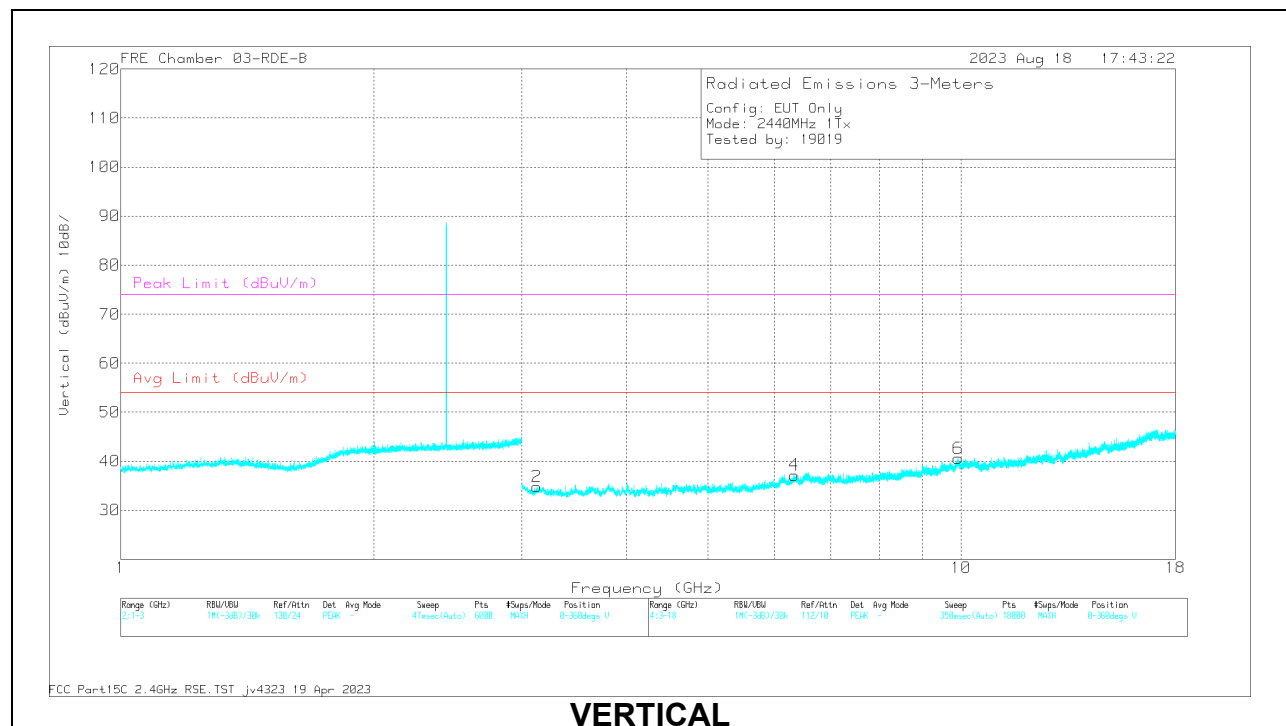
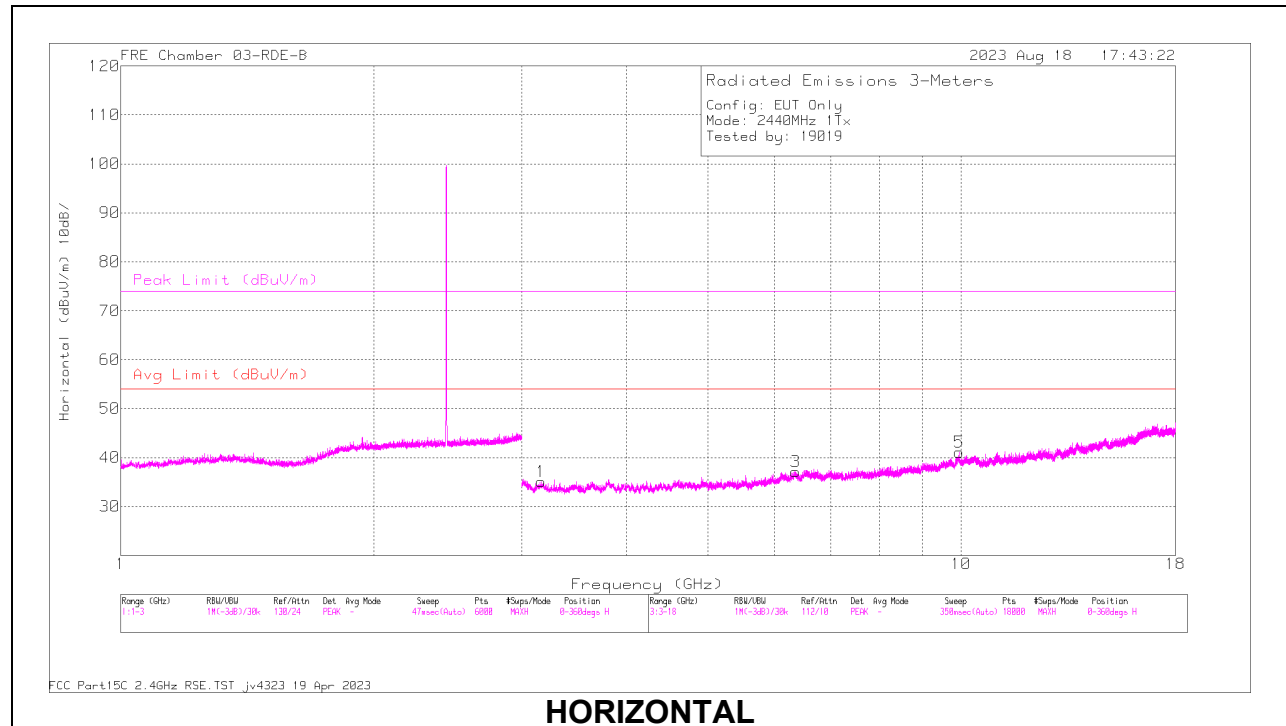
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.805811	44.56	VA1T	34.2	-49.08	29.68	54	-24.32	-	-	21	108	H
	* 4.807876	57.69	PKFH	34.2	-49	42.89	-	-	74	-31.11	21	108	H
2	* 4.808974	57.55	PKFH	34.2	-49	42.75	-	-	74	-31.25	193	307	V
	* 4.809619	44.5	VA1T	34.2	-49	29.7	54	-24.3	-	-	193	307	V
3	7.214321	42.75	VA1T	35.8	-47.27	31.28	-	-	-	-	354	188	H
	7.214438	56.07	PKFH	35.8	-47.26	44.61	-	-	74	-29.39	354	188	H
4	7.214518	42.77	VA1T	35.8	-47.25	31.32	-	-	-	-	4	316	V
	7.217035	55.78	PKFH	35.8	-47.3	44.28	-	-	74	-29.72	4	316	V
6	9.61944	56.28	PKFH	37.1	-46.74	46.64	-	-	74	-27.36	294	108	V
	9.620811	43.27	VA1T	37.1	-46.8	33.57	-	-	-	-	294	108	V
5	9.620818	56.61	PKFH	37.1	-46.8	46.91	-	-	74	-27.09	316	186	H
	9.621291	43.34	VA1T	37.1	-46.83	33.61	-	-	-	-	316	186	H

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

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

MID CHANNEL RESULTS

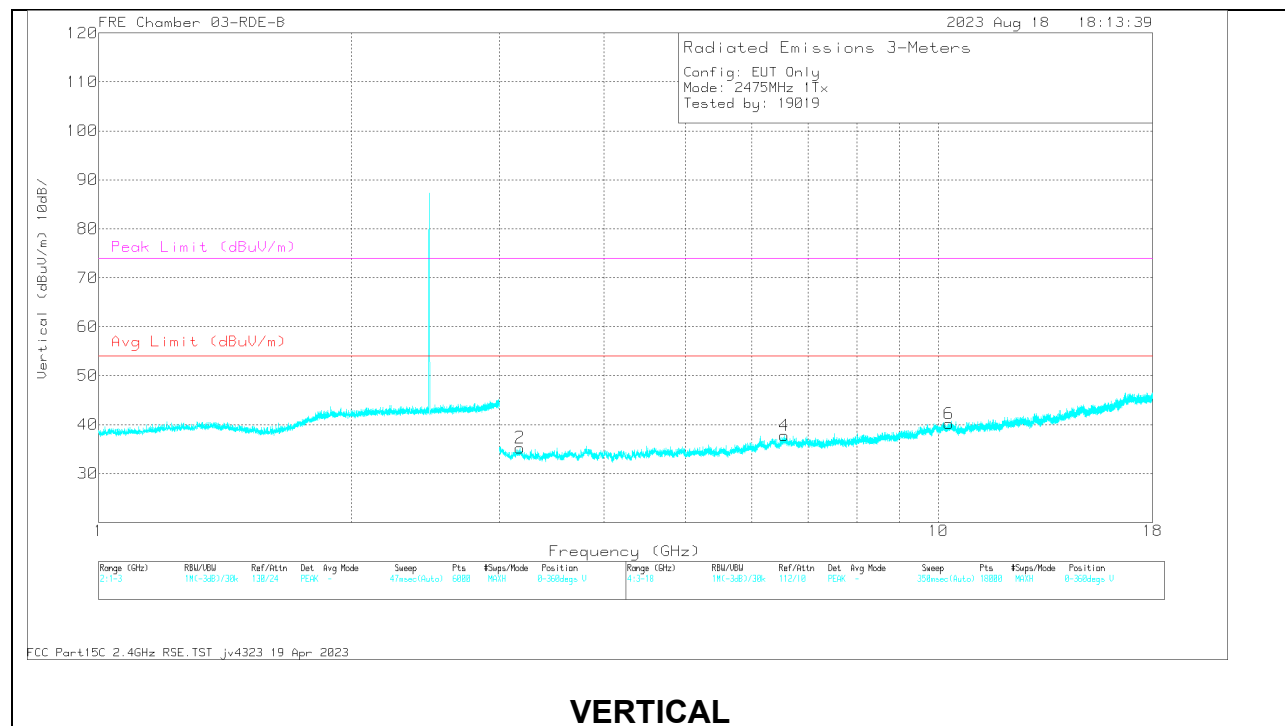
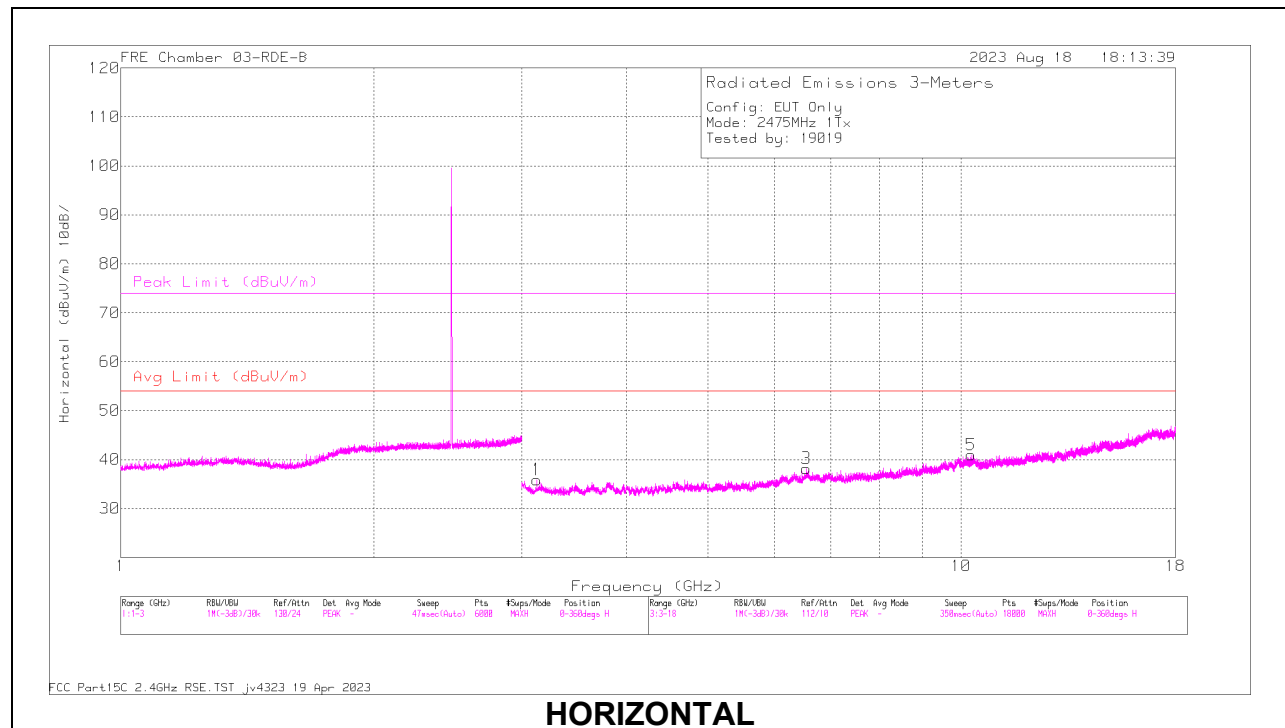


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	3.129944	59.47	PK2	33.1	-47.9	44.67	74	-29.33	69	135	V
1	3.165339	59.48	PK2	33.1	-47.83	44.75	74	-29.25	141	188	H
4	6.331592	58.21	PK2	35.4	-45.9	47.71	74	-26.29	171	161	V
3	6.357651	57.44	PK2	35.4	-45.9	46.94	74	-27.06	67	155	H
6	9.925855	60.09	PK2	37.5	-47.51	50.08	74	-23.92	53	180	V
5	9.944867	59.86	PK2	37.5	-47.3	50.06	74	-23.94	179	142	H

PK2 - KDB558074 Method: Maximum Peak

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

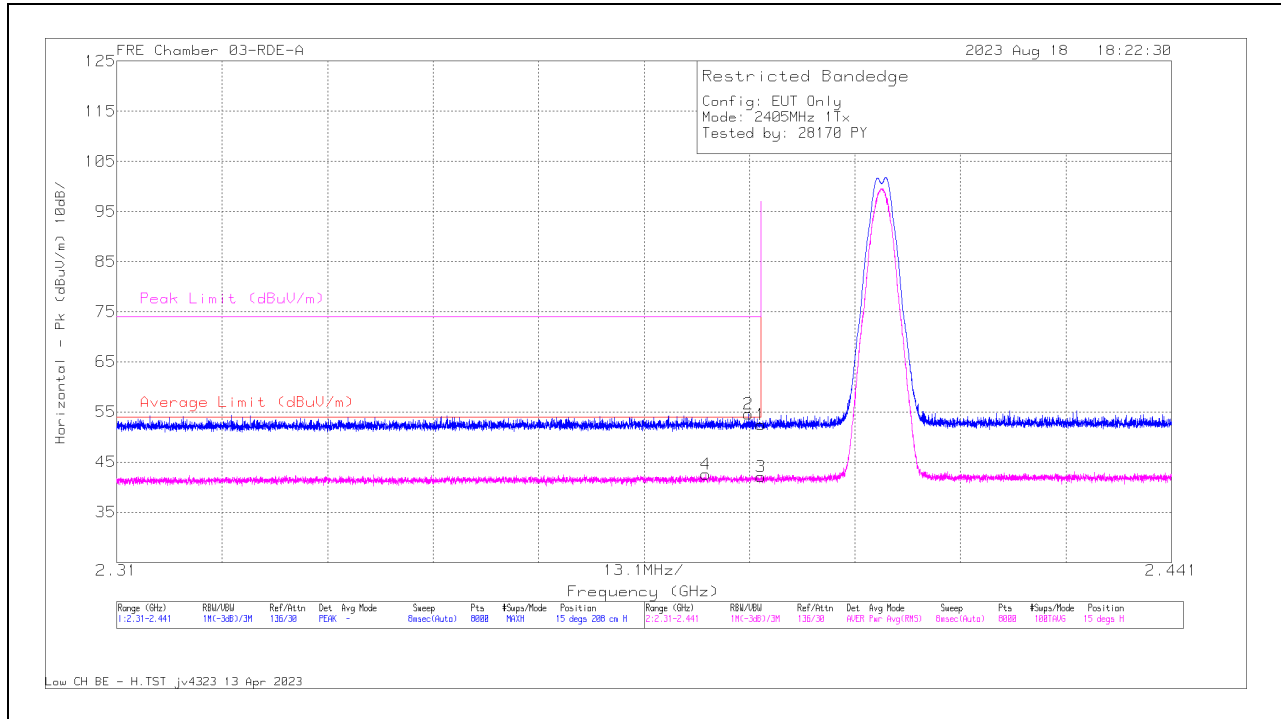
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.128091	59.75	PK2	33.1	-47.9	44.95	74	-29.05	7	175	H
2	3.175509	59.04	PK2	33.1	-47.7	44.44	74	-29.56	66	136	V
3	6.542477	58	PK2	35.6	-45.75	47.85	74	-26.15	129	118	H
4	6.55284	57.16	PK2	35.6	-45.8	46.96	74	-27.04	165	151	V
5	10.285571	59.49	PK2	37.7	-47.7	49.49	74	-24.51	183	183	H
6	10.298242	59.53	PK2	37.8	-47.6	49.73	74	-24.27	77	107	V

PK2 - KDB558074 Method: Maximum Peak

ANT 3

BANDEDGE (LOW CHANNEL)

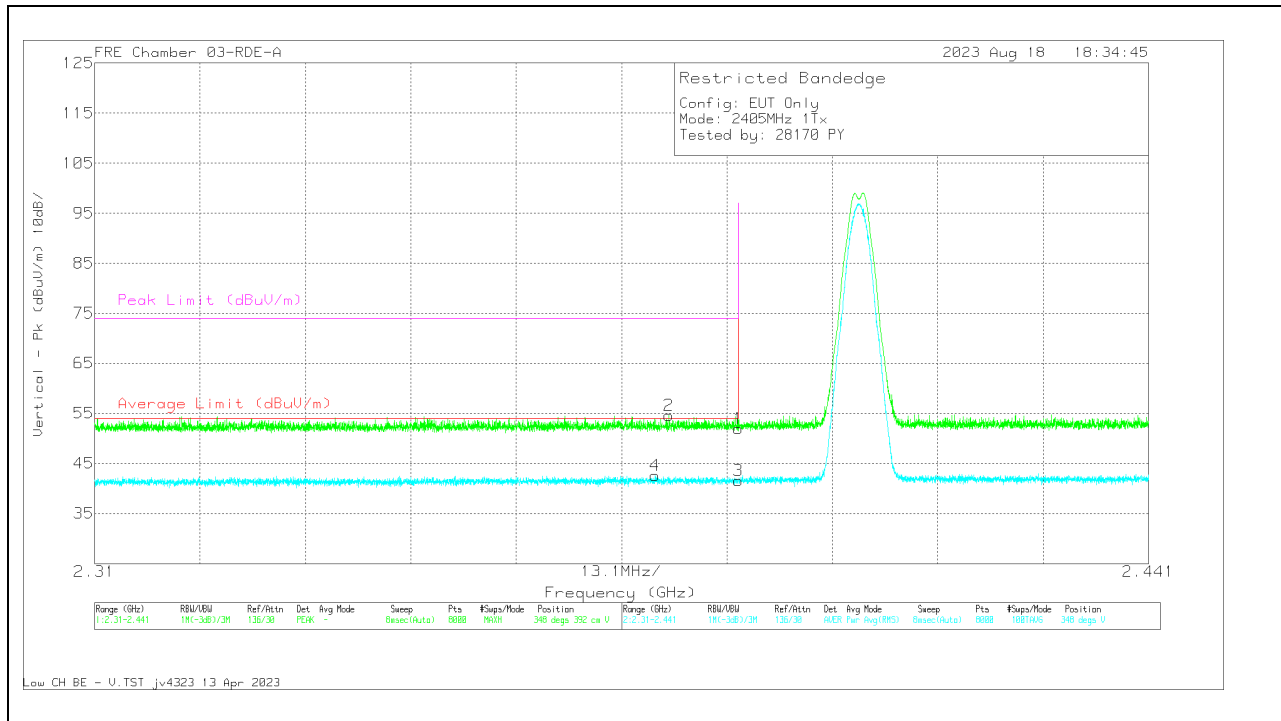
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	60.98	Pk	31.9	-40.42	52.46	-	-	74	-21.54	15	208	H
2	* 2.388446	63.12	Pk	31.9	-40.43	54.59	-	-	74	-19.41	15	208	H
3	* 2.39	50.62	RMS	31.9	-40.42	42.1	54	-11.9	-	-	15	208	H
4	* 2.383172	51.13	RMS	31.9	-40.4	42.63	54	-11.37	-	-	15	208	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	60.45	Pk	31.9	-40.42	51.93	-	-	74	-22.07	348	392	V
2	* 2.381355	63.07	Pk	31.9	-40.42	54.55	-	-	74	-19.45	348	392	V
3	* 2.39	50.08	RMS	31.9	-40.42	41.56	54	-12.44	-	-	348	392	V
4	* 2.379684	51.11	RMS	31.9	-40.43	42.58	54	-11.42	-	-	348	392	V

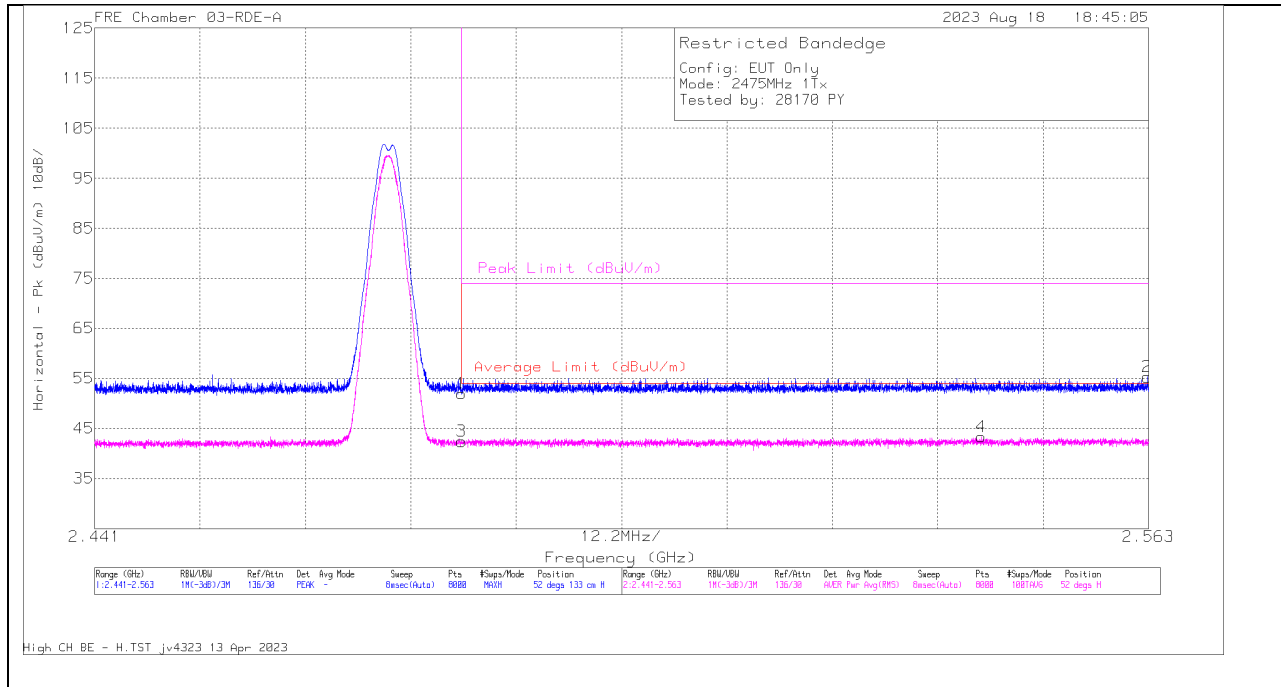
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



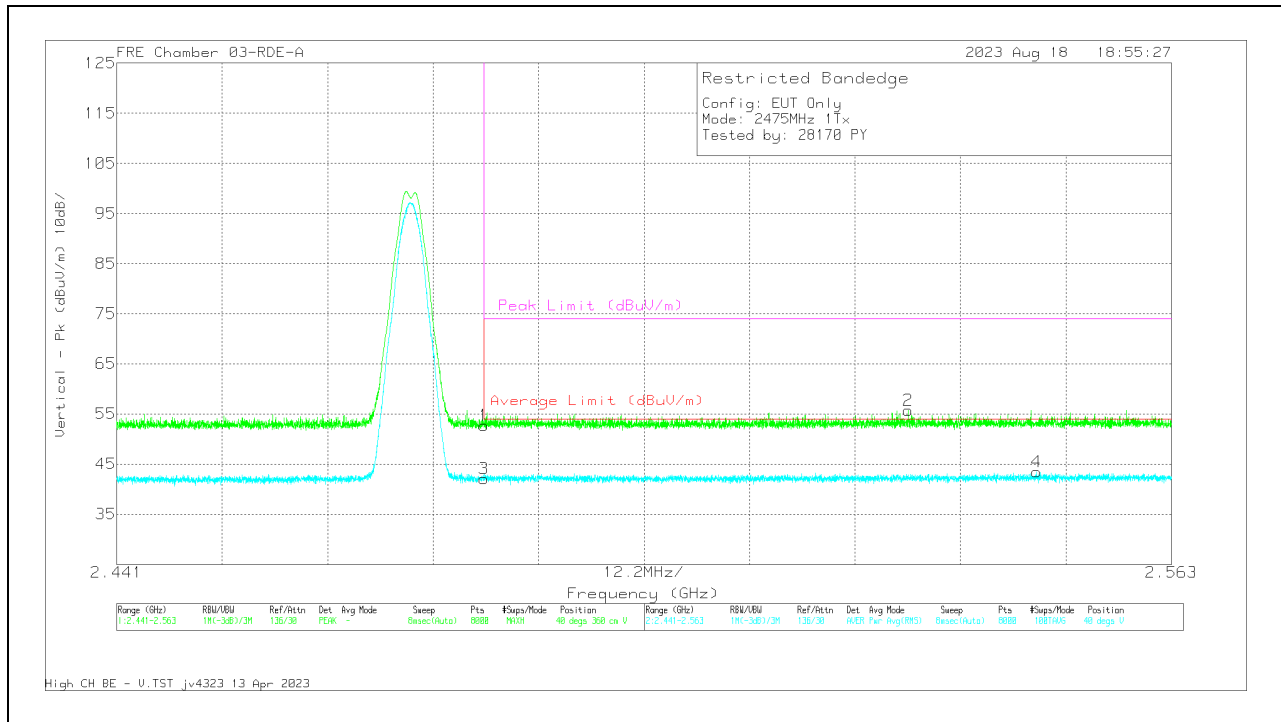
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.4835	59.9	Pk	32.2	-40.11	51.99	-	-	74	-22.01	52	133	H
3	* 2.4835	50.31	RMS	32.2	-40.11	42.4	54	-11.6	-	-	52	133	H
4	2.543646	51.06	RMS	32.2	-39.97	43.29	54	-10.71	-	-	52	133	H
2	2.562848	63.06	Pk	32.2	-39.97	55.29	-	-	74	-18.71	52	133	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	200897 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarization
1	* 2.4835	60.65	Pk	32.2	-40.11	52.74	-	-	74	-21.26	40	360	V
3	* 2.4835	49.97	RMS	32.2	-40.11	42.06	54	-11.94	-	-	40	360	V
2	2.532543	63.53	Pk	32.2	-39.97	55.76	-	-	74	-18.24	40	360	V
4	2.547444	51.27	RMS	32.2	-39.98	43.49	54	-10.51	-	-	40	360	V

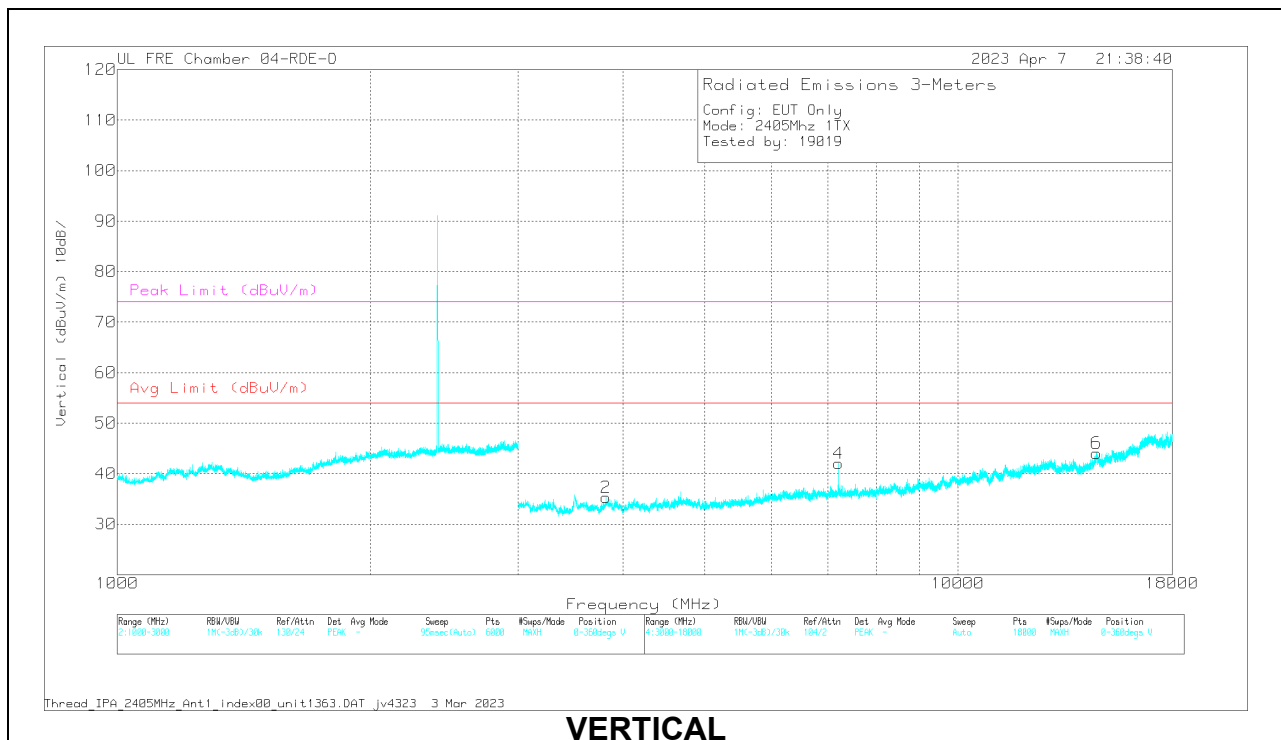
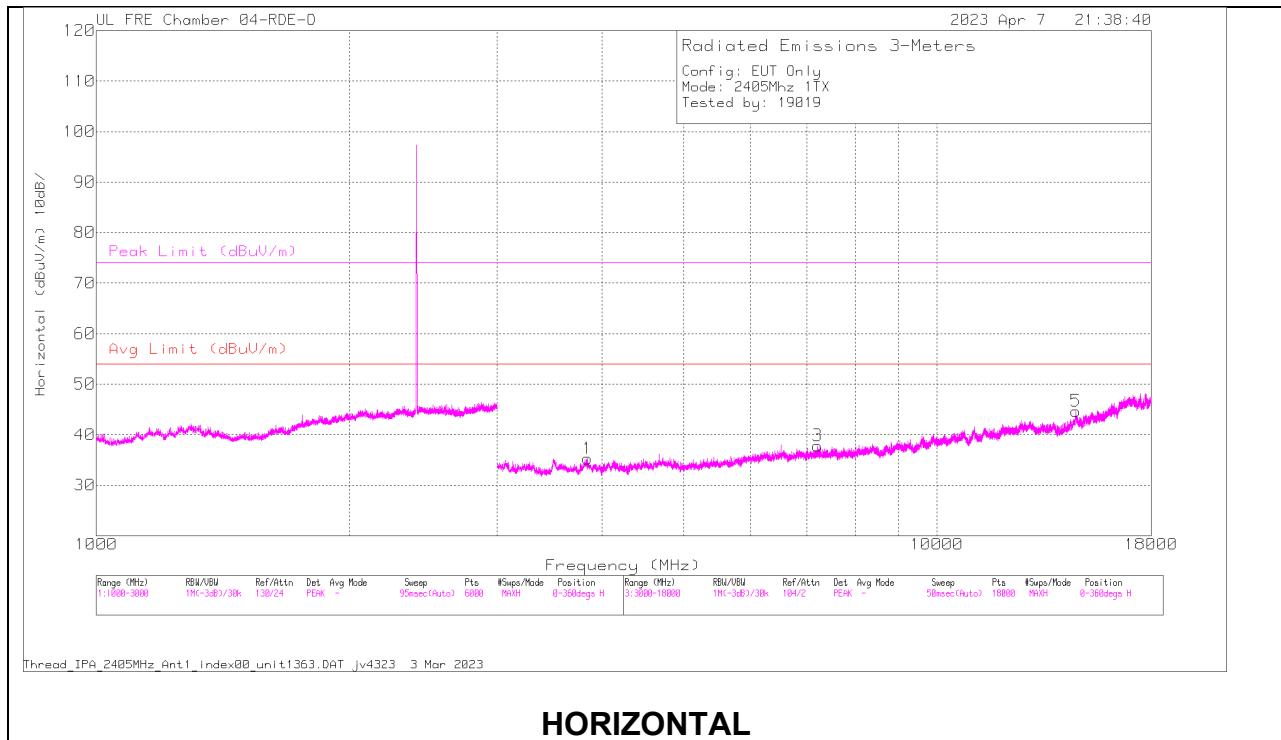
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

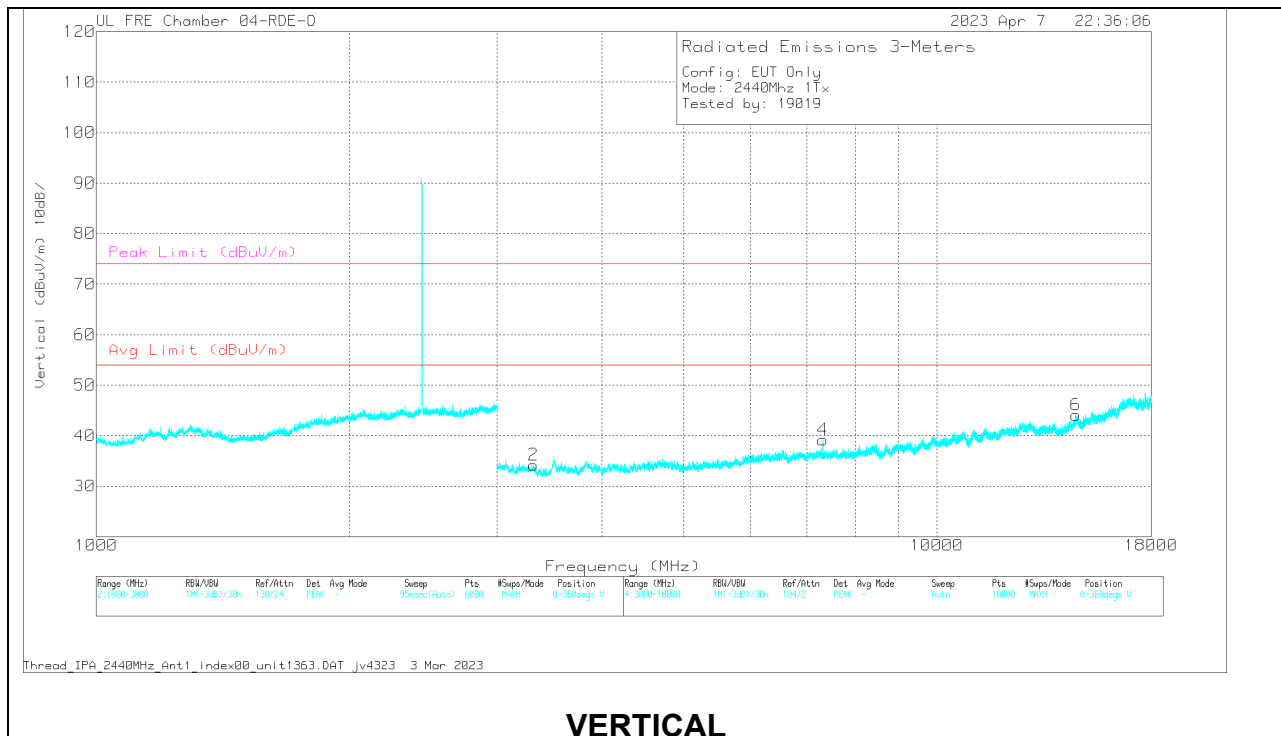
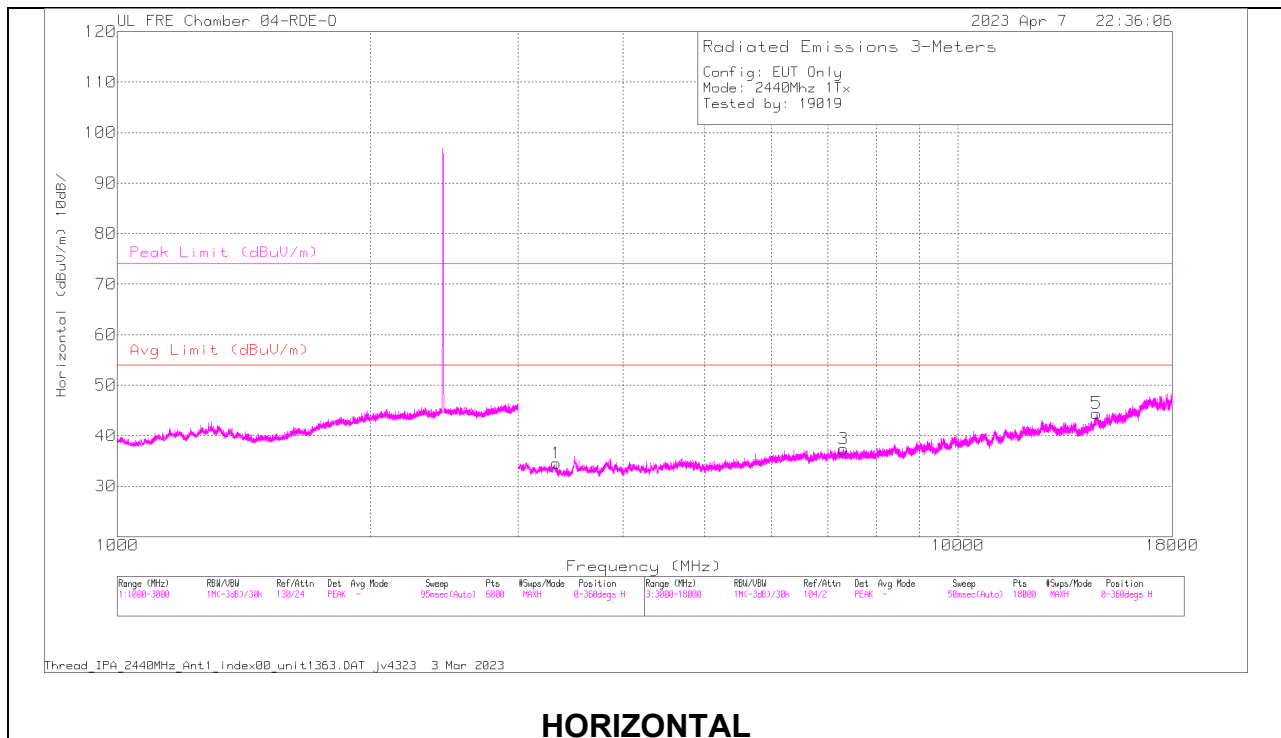
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3842.696	54.42	PKFH	33.8	-44.99	43.23	-	-	74	-30.77	175	159	H
1	* 3841.059	40.66	VA1T	33.9	-45.01	29.55	54	-24.45	-	-	175	159	H
2	* 3814.563	55.96	PKFH	33.8	-45.13	44.63	-	-	74	-29.37	129	149	V
2	* 3815.895	40.89	VA1T	33.8	-45.1	29.59	54	-24.41	-	-	129	149	V
4	7208.05	57.85	PKFH	36.1	-42.67	51.28	-	-	-	-	79	105	V
3	7211.536	51.35	PKFH	36	-42.58	44.77	-	-	-	-	136	164	H
6	14628.452	51.26	PKFH	39.7	-39.21	51.75	-	-	-	-	139	164	V
5	14635.889	51.6	PKFH	39.7	-39.16	52.14	-	-	-	-	202	141	H

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

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

MID CHANNEL RESULTS



RADIATED EMISSIONS

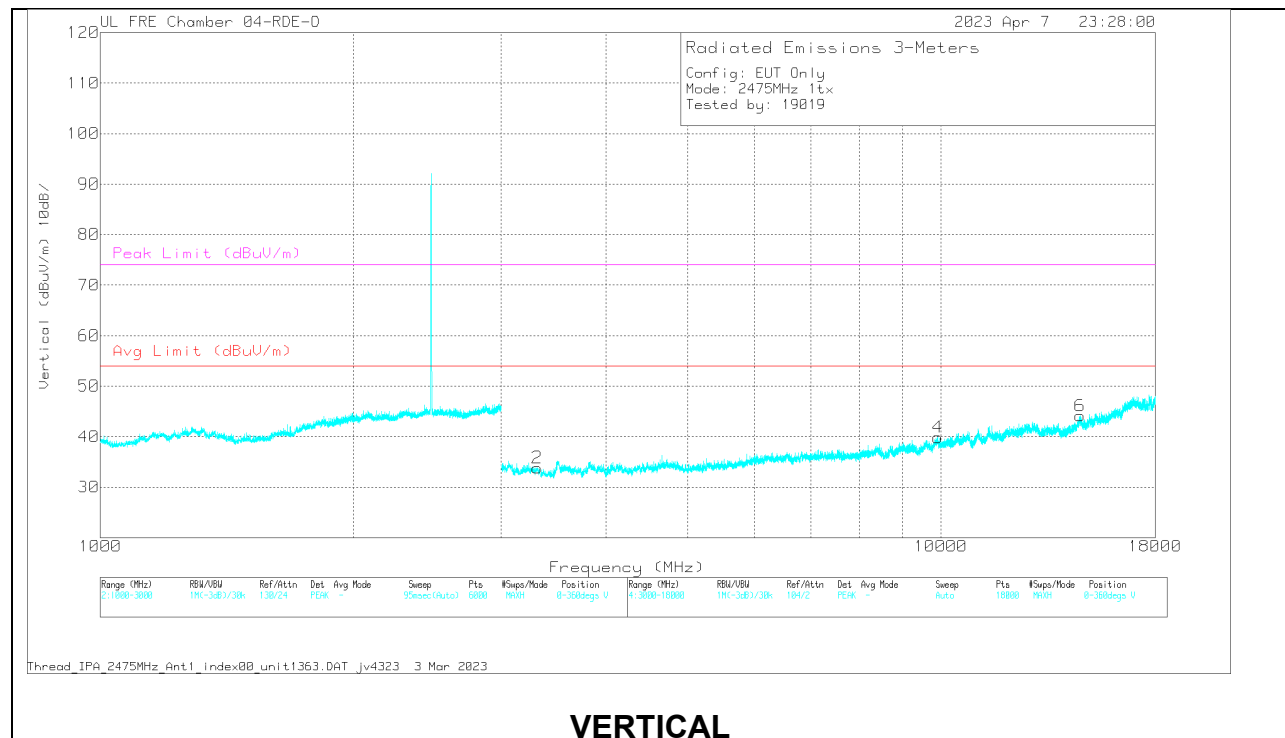
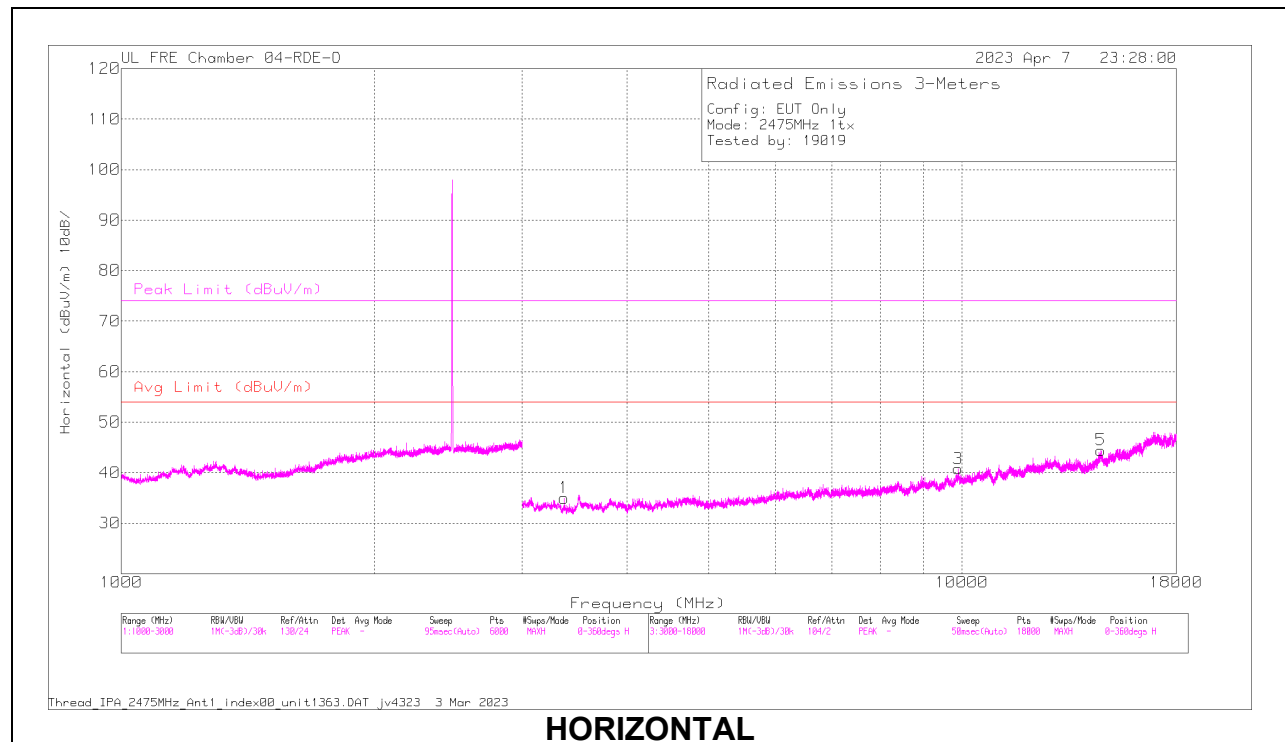
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3332.736	53.61	PKFH	32.9	-44.52	41.99	-	-	74	-32.01	131	165	H
1	* 3334.131	40.16	VA1T	32.9	-44.59	28.47	54	-25.53	-	-	131	165	H
2	3314.006	53.8	PKFH	33	-44.26	42.54	-	-	-	-	211	134	V
3	* 7319.307	51.28	PKFH	36	-42.31	44.97	-	-	74	-29.03	177	172	H
3	* 7317.706	38.57	VA1T	36.1	-42.29	32.38	54	-21.62	-	-	177	172	H
4	* 7319.423	52.94	PKFH	36	-42.31	46.63	-	-	74	-27.37	250	103	V
4	* 7319.445	40.61	VA1T	36	-42.31	34.3	54	-19.7	-	-	250	103	V
5	14626.341	51.8	PKFH	39.7	-39.32	52.18	-	-	-	-	141	139	H
6	14635.464	50.76	PKFH	39.7	-39.14	51.32	-	-	-	-	192	181	V

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

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404 ACF(dB) - 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3365.437	53.34	PKFH	33	-44.61	41.73	74	-32.27	120	180	H
2	3310.77	53.87	PKFH	33	-44.33	42.54	74	-31.46	223	138	V
3	9896.779	51.8	PKFH	37.2	-41.32	47.68	74	-26.32	194	149	H
4	9924.763	52.44	PKFH	37.1	-40.95	48.59	74	-25.41	138	139	V
5	14646.131	51.28	PKFH	39.7	-39.3	51.68	74	-22.32	149	155	H
6	14649.089	51.33	PKFH	39.7	-39.34	51.69	74	-22.31	169	144	V

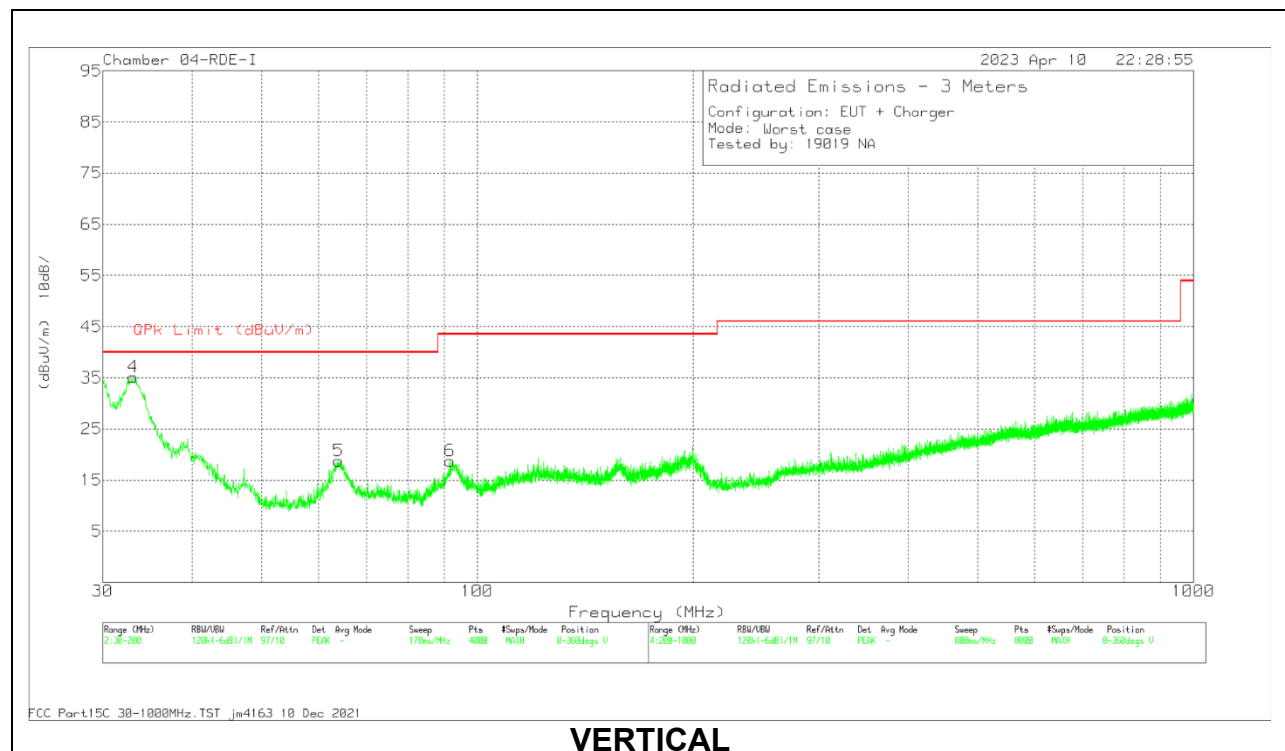
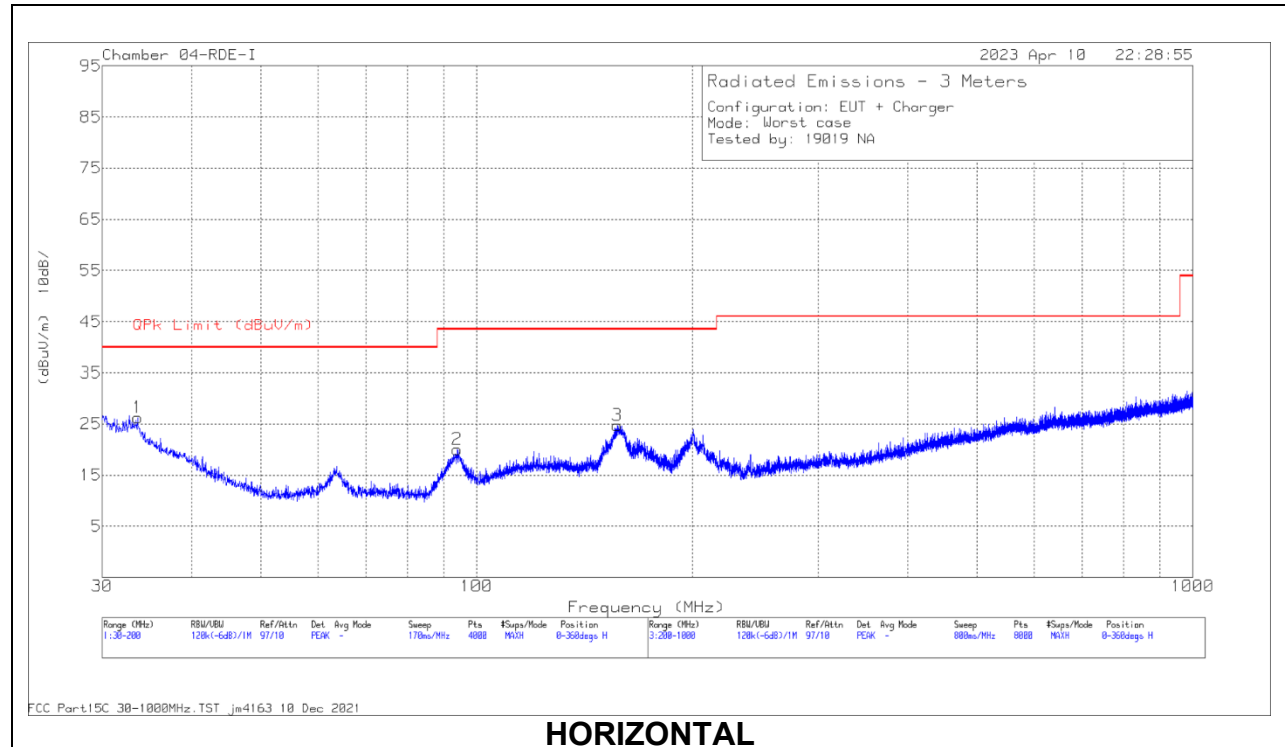
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

10.3. WORST CASE BELOW 1 GHz

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



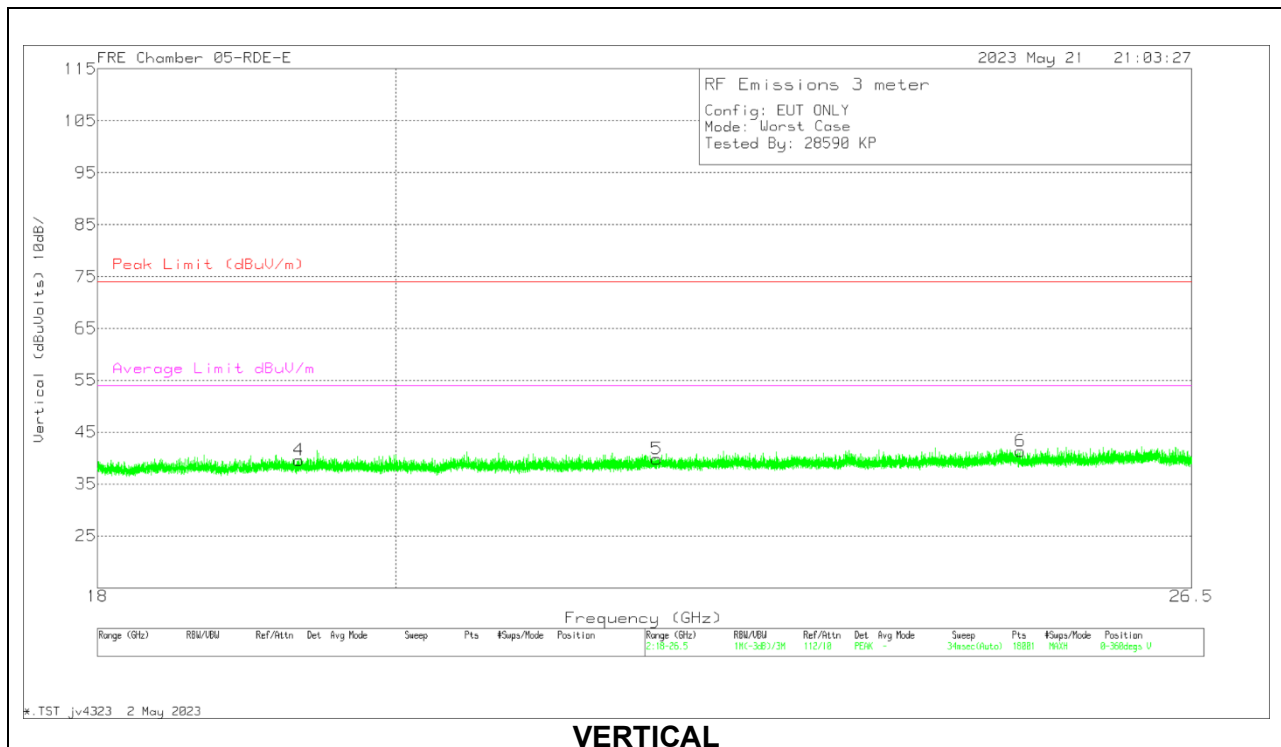
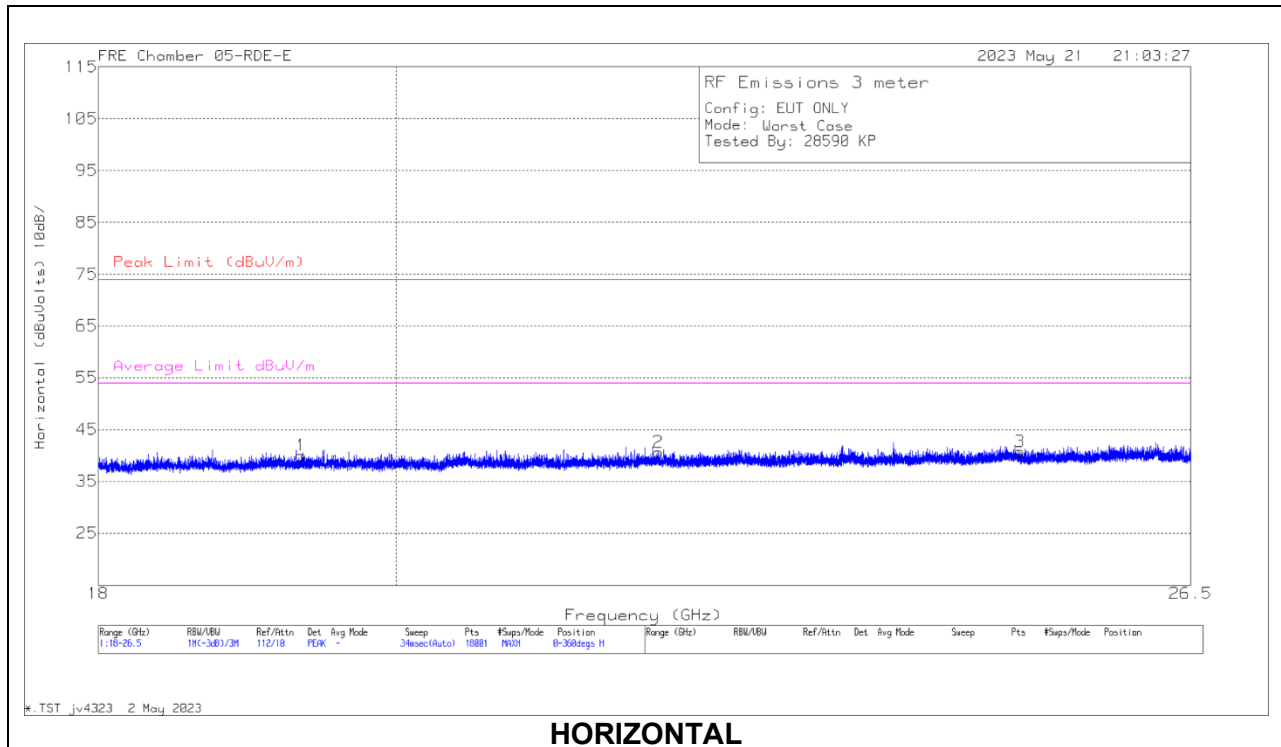
DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80714 ACF (dB) - 10mH	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.6134	32.09	Pk	25.2	-31.1	26.19	40	-13.81	0-360	199	H
2	93.9365	35.27	Pk	15.2	-30.5	19.97	43.52	-23.55	0-360	299	H
3	157.278	36.87	Pk	18	-30.2	24.67	43.52	-18.85	0-360	199	H
4	33.0608	40.68	Pk	25.6	-31.2	35.08	40	-4.92	0-360	100	V
	32.8212	37.11	Qp	25.7	-31.2	31.61	40	-8.39	351	107	V
5	64.0513	35.2	Pk	14.4	-30.9	18.7	40	-21.3	0-360	100	V
6	91.6835	34.69	Pk	14.6	-30.6	18.69	43.52	-24.83	0-360	100	V

Pk - Peak detector
Qp - Quasi-Peak detector

10.4. WORST CASE 18-26 GHz

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



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	Horn ACF (dB/m)	amp/cbl (dB)	CBL/SWITCH	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	19.342527	56.34	Pk	32.3	-61.9	13.2	39.94	74	-34.06	54	-14.06	0-360	200	H
2	21.94872	56.02	Pk	32.9	-62.4	14.1	40.62	74	-33.38	54	-13.38	0-360	101	H
3	24.944969	53.48	Pk	33.6	-61.5	15.1	40.68	74	-33.32	54	-13.32	0-360	200	H
4	19.326944	56.14	Pk	32.3	-62	13.2	39.64	74	-34.36	54	-14.36	0-360	200	V
5	21.935498	55.19	Pk	32.9	-62.4	14.1	39.79	74	-34.21	54	-14.21	0-360	101	V
6	24.94733	54.12	Pk	33.6	-61.5	15.1	41.32	74	-32.68	54	-12.68	0-360	101	V

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.

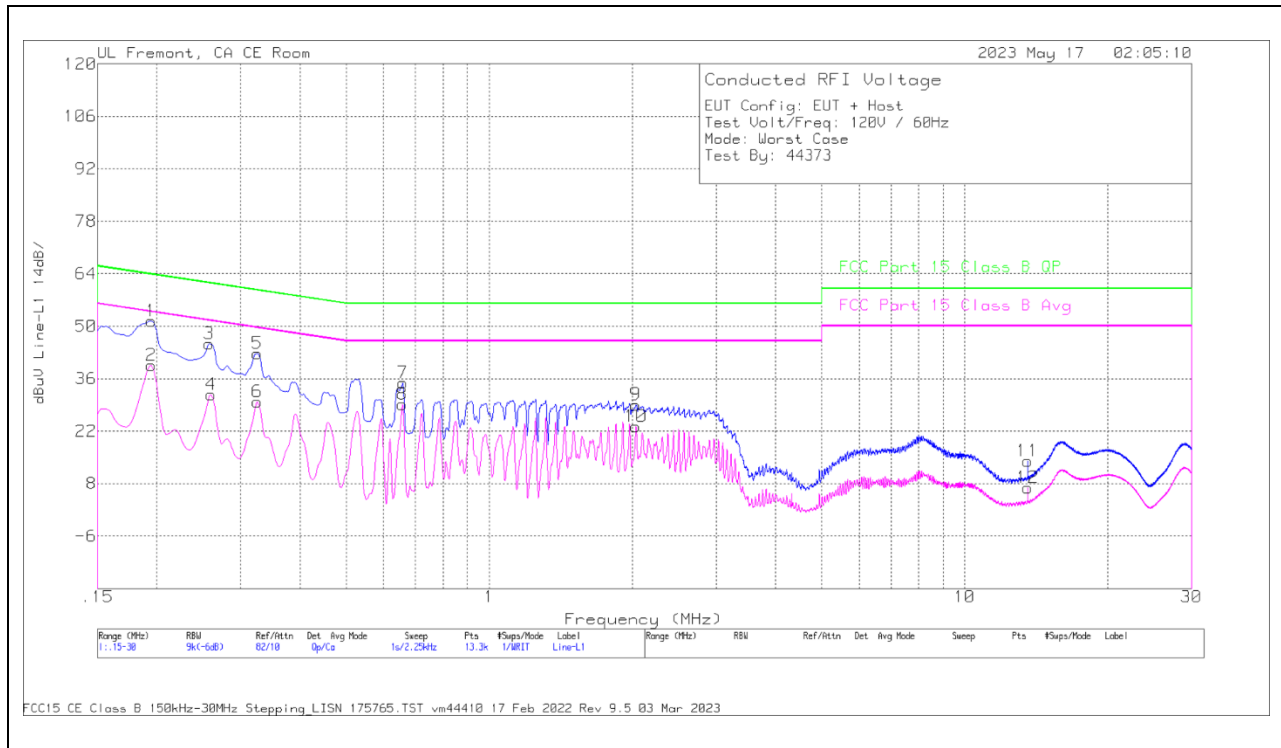
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

11.1. AC Power Line WITH LAPTOP

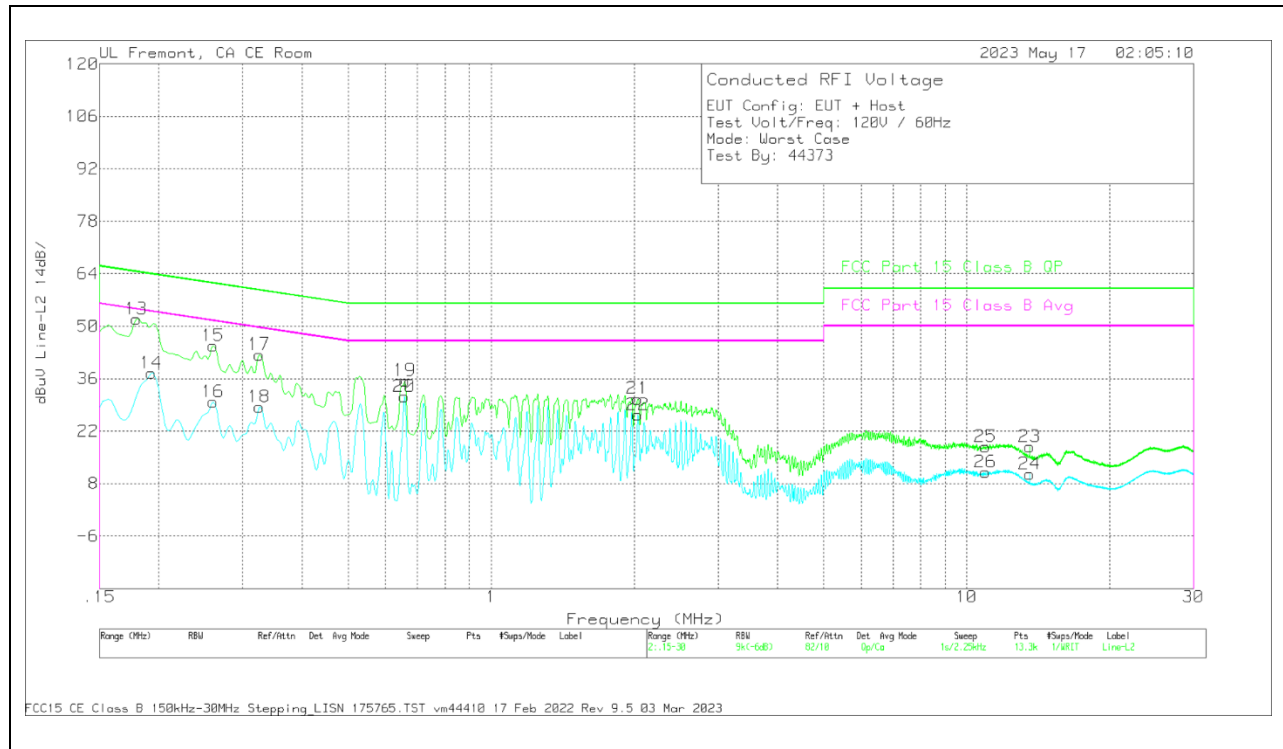
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L1_LISN.csv (dB)	C1&C3 cable path loss (dB)	207996 Limiter with short cable (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
1	.195	41.94	Qp	0	0	9.4	51.34	63.82	-12.48	-	-
2	.195	30.2	Ca	0	0	9.4	39.6	-	-	53.82	-14.22
3	.258	35.94	Qp	0	0	9.3	45.24	61.5	-16.26	-	-
4	.2603	22.48	Ca	0	0	9.3	31.78	-	-	51.42	-19.64
5	.3255	33.4	Qp	0	0	9.3	42.7	59.57	-16.87	-	-
6	.3255	20.56	Ca	0	0	9.3	29.86	-	-	49.57	-19.71
7	.6585	25.52	Qp	0	.1	9.3	34.92	56	-21.08	-	-
8	.6563	19.81	Ca	0	.1	9.3	29.21	-	-	46	-16.79
9	2.0355	19.65	Qp	0	.1	9.3	29.05	56	-26.95	-	-
10	2.0355	13.76	Ca	0	.1	9.3	23.16	-	-	46	-22.84
11	13.56	4.4	Qp	.1	.2	9.3	14	60	-46	-	-
12	13.56	-2.63	Ca	.1	.2	9.3	6.97	-	-	50	-43.03

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS

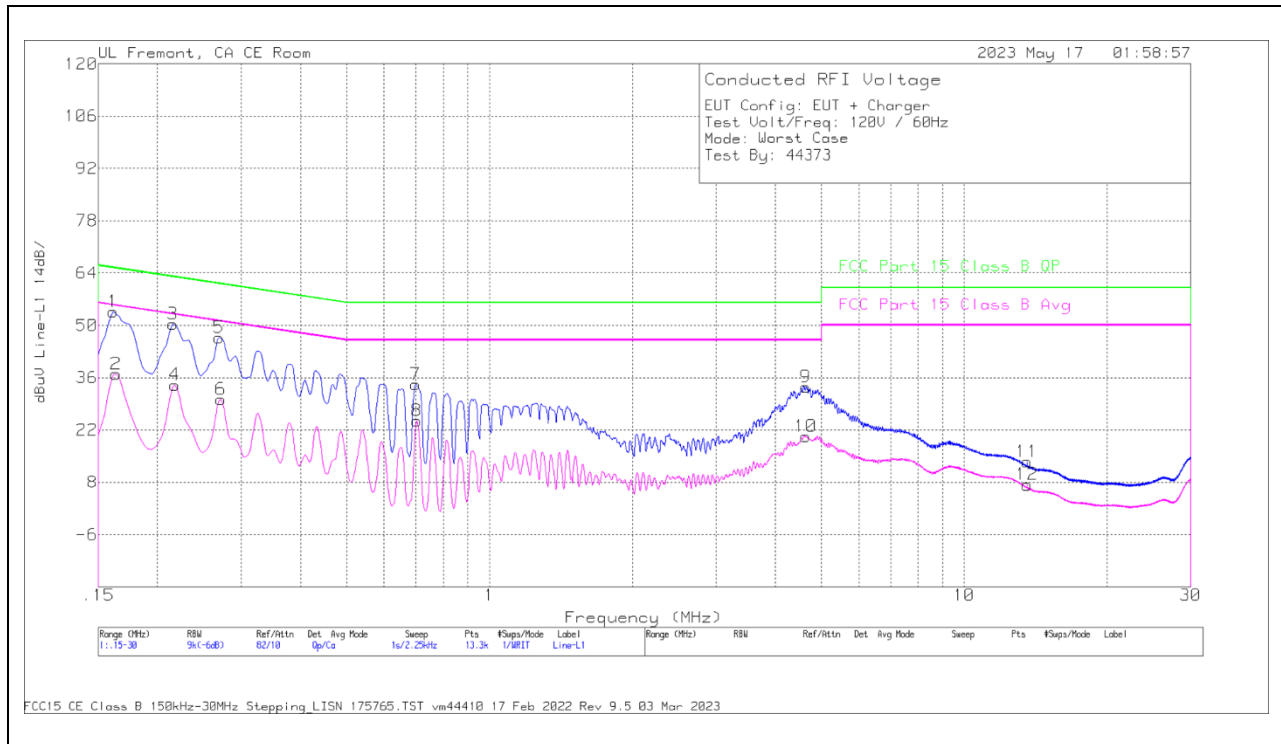


Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L2_LISN (dB)	C2&C3 cable path loss (dB)	207996 Limiter with short cable (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
13	.1793	42.52	Qp	0	0	9.4	51.92	64.52	-12.6	-	-
14	.1928	28.09	Ca	0	0	9.4	37.49	-	-	53.92	-16.43
15	.2603	35.41	Qp	0	0	9.3	44.71	61.42	-16.71	-	-
16	.2603	20.46	Ca	0	0	9.3	29.76	-	-	51.42	-21.66
17	.3255	33.13	Qp	0	0	9.3	42.43	59.57	-17.14	-	-
18	.3255	19.16	Ca	0	0	9.3	28.46	-	-	49.57	-21.11
19	.6585	26.08	Qp	0	.1	9.3	35.48	56	-20.52	-	-
20	.6563	21.76	Ca	0	.1	9.3	31.16	-	-	46	-14.84
21	2.0355	21.22	Qp	0	.1	9.3	30.62	56	-25.38	-	-
22	2.0355	16.97	Ca	0	.1	9.3	26.37	-	-	46	-19.63
23	13.56	8.21	Qp	.1	.2	9.3	17.81	60	-42.19	-	-
24	13.56	.89	Ca	.1	.2	9.3	10.49	-	-	50	-39.51
25	10.9613	8.26	Qp	.1	.2	9.3	17.86	60	-42.14	-	-
26	10.9613	1.45	Ca	.1	.2	9.3	11.05	-	-	50	-38.95

Qp - Quasi-Peak detector
Ca - CISPR average detection

11.2. AC Power Line WITH AC/DC ADAPTER

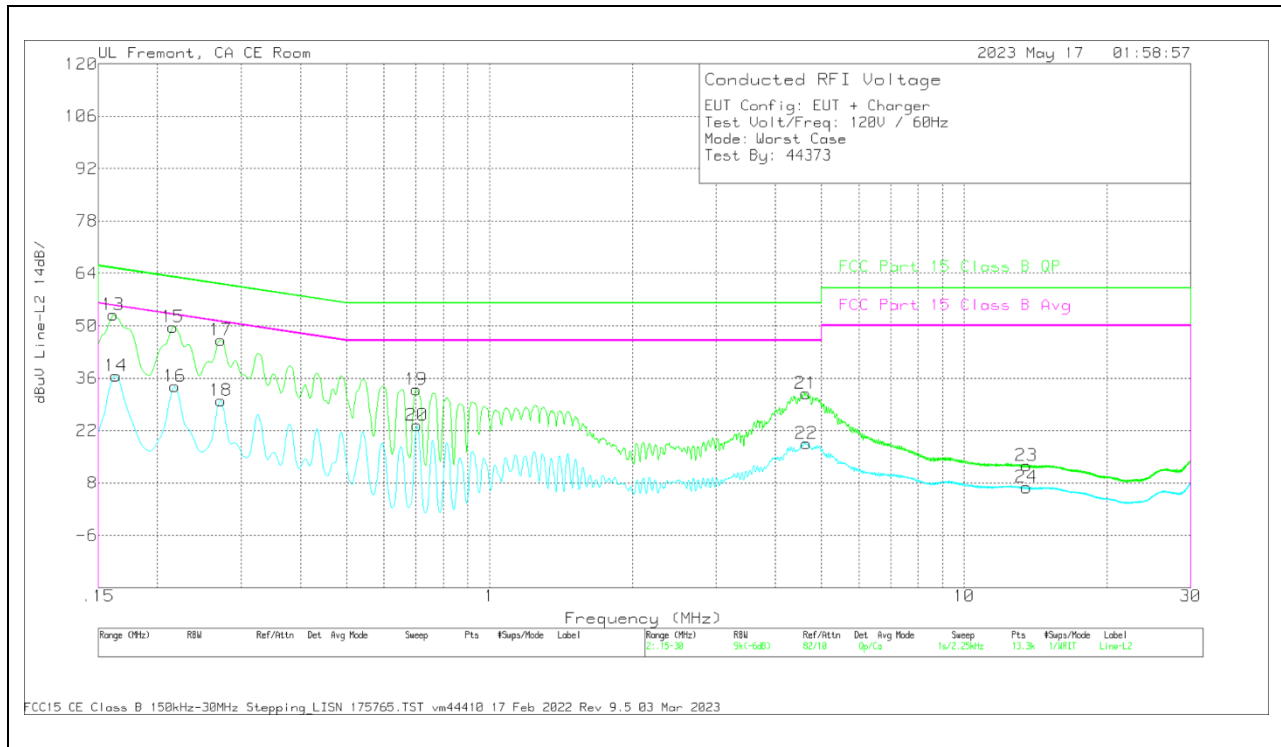
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L1_LISN.csv (dB)	C1&C3 cable path loss (dB)	207996 Limiter with short cable (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
1	.1613	44.17	Qp	0	0	9.4	53.57	65.4	-11.83	-	-
2	.1635	27.62	Ca	0	0	9.4	37.02	-	-	55.28	-18.26
3	.2153	41.09	Qp	0	0	9.3	50.39	63	-12.61	-	-
4	.2175	24.79	Ca	0	0	9.3	34.09	-	-	52.91	-18.82
5	.2693	37.37	Qp	0	0	9.3	46.67	61.14	-14.47	-	-
6	.2715	20.95	Ca	0	0	9.3	30.25	-	-	51.07	-20.82
7	.7001	24.75	Qp	0	.1	9.3	34.15	56	-21.85	-	-
8	.7035	14.99	Ca	0	.1	9.3	24.39	-	-	46	-21.61
9	4.6433	24.16	Qp	0	.1	9.3	33.56	56	-22.44	-	-
10	4.6388	10.94	Ca	0	.1	9.3	20.34	-	-	46	-25.66
11	13.56	3.97	Qp	.1	.2	9.3	13.57	60	-46.43	-	-
12	13.56	-2.27	Ca	.1	.2	9.3	7.33	-	-	50	-42.67

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	L2 LISN (dB)	C2&C3 cable path loss (dB)	207996 Limiter with short cable (dB)	Corrected Reading dBuV	FCC Part 15 Class B QP dBuV	QP Margin (dB)	FCC Part 15 Class B Avg dBuV	Av(CISPR) Margin (dB)
13	.1613	43.48	Qp	0	0	9.4	52.88	65.4	-12.52	-	-
14	.1635	27.15	Ca	0	0	9.4	36.55	-	-	55.28	-18.73
15	.2153	40.42	Qp	0	0	9.3	49.72	63	-13.28	-	-
16	.2175	24.48	Ca	0	0	9.3	33.78	-	-	52.91	-19.13
17	.2715	36.81	Qp	0	0	9.3	46.11	61.07	-14.96	-	-
18	.2715	20.66	Ca	0	0	9.3	29.96	-	-	51.07	-21.11
19	.7013	23.52	Qp	0	.1	9.3	32.92	56	-23.08	-	-
20	.7035	13.94	Ca	0	.1	9.3	23.34	-	-	46	-22.66
21	4.6388	22.53	Qp	0	.1	9.3	31.93	56	-24.07	-	-
22	4.6466	9.19	Ca	0	.1	9.3	18.59	-	-	46	-27.41
23	13.5443	3.06	Qp	.1	.2	9.3	12.66	60	-47.34	-	-
24	13.5083	-2.79	Ca	.1	.2	9.3	6.81	-	-	50	-43.19

Qp - Quasi-Peak detector
Ca - CISPR average detection

12. SETUP PHOTOS

Please refer to 14523771-EPV1 for setup photos