TEST REPORT

Report Number: 13573777-E3V3

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

Model : A2481 (Parent Model, Full Test)
A2626, A2628, A2629, A2630 (Variant Models)

FCC ID : BCG-E3994A (Parent Model, Full Test)
BCG-E3996A, BCG-E4029A, BCG-E4030A (Variant Models)

IC : 579C-E3994A (Parent Model, Full Test)
579C-E3996A, 579C-E4029A, 579C-E4030A (Variant Models)

EUT Description : SMARTPHONE

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

Date of Issue:
August 06, 2021

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	7/29/2021	Initial Issue	Frank Ibrahim
V2	8/05/2021	Addressed TCB: updated section 6.5; Updated pg 28, HDR4 high power; Section 9.6 PSD Test procedure; and added new radiated BE data pg 75/76.	Francisco Guarnero
V3	8/6/2021	Address TCB's questions on section 9.4	Chin Pang

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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:	A2481 (Parent Model, Full Test) A2630, A2626, A2628, A2629 (Variant Models)
BRAND:	APPLE
FCC ID:	BCG-E3994A (Parent Model, Full Test) BCG-E3996A, BCG-E4029A, BCG-E4030A (Variant Models)
IC ID:	579C-E3994A (Parent Model, Full Test) 579C-E3996A, 579C-E4029A, 579C-E4030A (Variant Models)
SERIAL NUMBER:	US1H9; C7CF300D10Y2; G0HFYT6X7Q
SAMPLE RECEIPT DATE:	03/25/2021; 02/09/2021; 06/28/2021
DATE TESTED:	MARCH 16, 2021 – AUGUST 6, 2021

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	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 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 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. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

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Approved & Released For
UL Verification Services Inc. By:

Frank Ibrahim
Senior Engineer
Consumer Technology Division
UL Verification Services Inc.

Prepared By:

Francisco Guarnero
Test Engineer
Consumer Technology Division
UL Verification Services Inc.

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2. TEST SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

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:

- 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
- FCC KDB 662911 D01 v02r01
- RSS-GEN Issue 5 + A1 + A2
- RSS-247 Issue 2

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0, 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	US0104	2324A	208313
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538	US0104	22541	208313
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538	US0104	2324B	208313

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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}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB

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

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, NFC and MSS. All models support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

The Models and FCC and IC ID covered by this report include:

Parent Model: A2481; FCC ID: BCG-E3994A; IC ID: 579C-E3994A

Variant Models: A2626; FCC ID: BCG-E3996A; IC ID: 579C-E3996A
A2628; FCC ID: BCG-E4029A; IC ID: 579C-E4029A
A2629; FCC ID: BCG-E4030A; IC ID: 579C-E4030A
A2630; FCC ID: BCG-E4030A; IC ID: 579C-E4030A

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	2404 - 2476	HDR4	14.95	31.26
	Low Power			9.80	9.55
	High Power		HDR8	16.87	48.64
	Low Power			10.79	11.99
ANT 3	High Power	2404 - 2476	HDR4	14.80	30.20
	Low Power			9.72	9.38
	High Power		HDR8	17.00	50.12
	Low Power			10.90	12.30
BF, ANT 4 + ANT 3	High Power	2404 - 2476	HDR4	17.71	59.02
	Low Power			12.60	18.20
	High Power		HDR8	19.89	97.50
	Low Power			13.93	24.72

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6.3. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type is IFA.
The antennas' gains, as provided by the manufacturer, are as follows:

Frequency Range (GHz)	ANT 4 (dBi)	ANT 3 (dBi)
2.4	-3.00	-0.70

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 19.1.309.2612

6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X, Y and Z on ANT 4 (Core 0) and ANT 3 (Core 1). It was determined that X (Flatbed) was the worst-case orientation for ANT 4, ANT 3 and 2TX Beamforming.

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

High Power Beamforming HDR8 mode is set to maximum power per chain to cover both SISO and MIMO modes to complies with radiated spurious emissions limits in the restricted bands between 1GHz and 18GHz low/mid/high channel (except the band edge).

Radiated emissions below 1GHz, 18-26GHz and AC power line conducted emissions were performed with the EUT transmitting 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, tests were performed with EUT only. For AC power line conducted emission, tests were investigated with AC power adapter and with laptop.

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

There are two vendors of the WiFi/Bluetooth radio modules: variant 1 and variant 2. The Wi-Fi/Bluetooth radio modules have the same mechanical outline (e.g., the same package dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances.

Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID/ DoC**
Laptop	Apple	Macbook Pro	C02YL3ZMJHC8	BCGA1989
Laptop AC/DC adapter	Apple	A1424	NSW25679	DoC
EUT AC/DC adapter	Apple	A1720	C3D8417A7R93KVPA8	DoC

I/O CABLES (RF 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	1.0	N/A
3	Antenna	1	SMA	Un-shielded	0.2	To spectrum Analyzer

I/O CABLES (RF RADIATED 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	Un-shielded	1	N/A

TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card.

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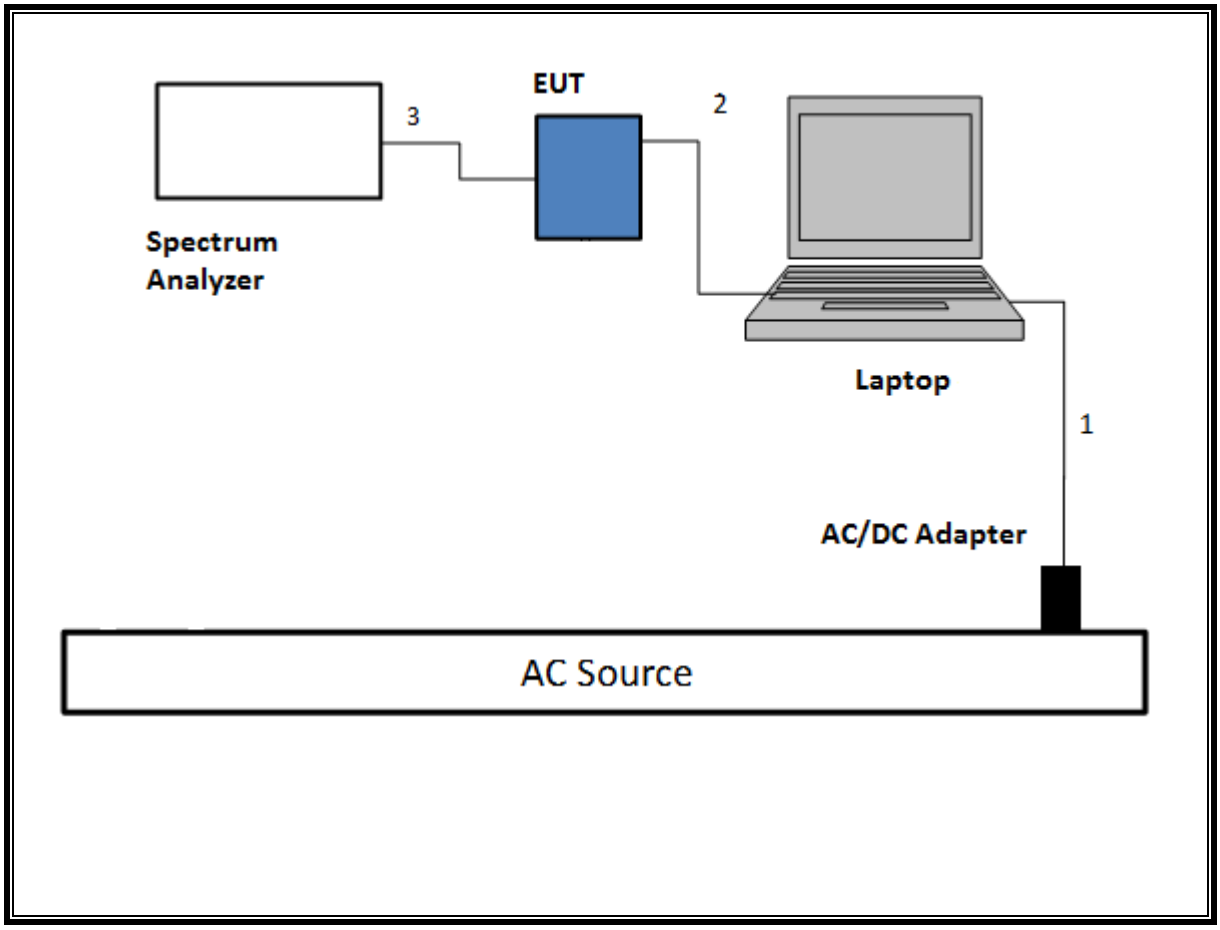
SETUP DIAGRAM FOR CONDUCTED TESTS



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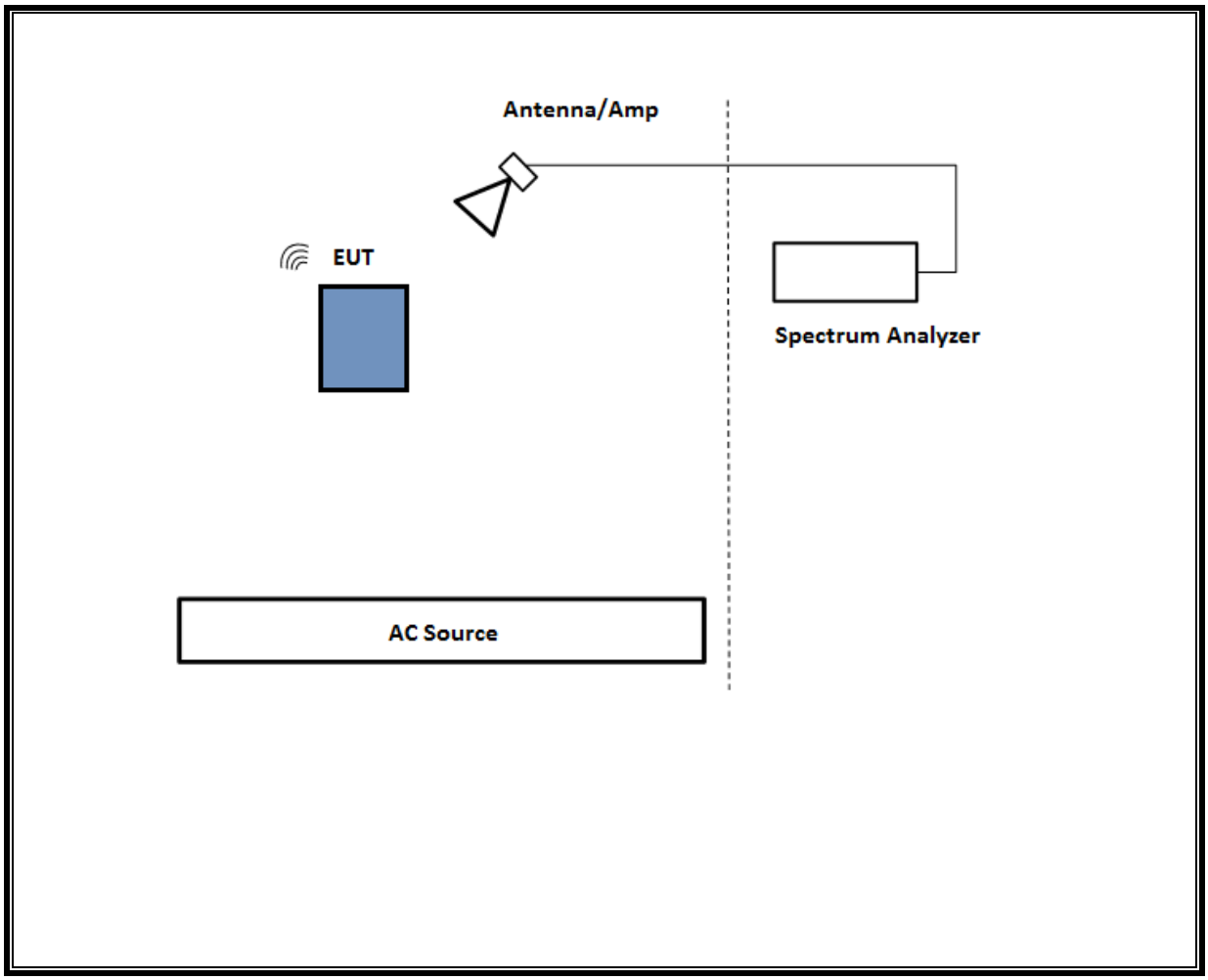
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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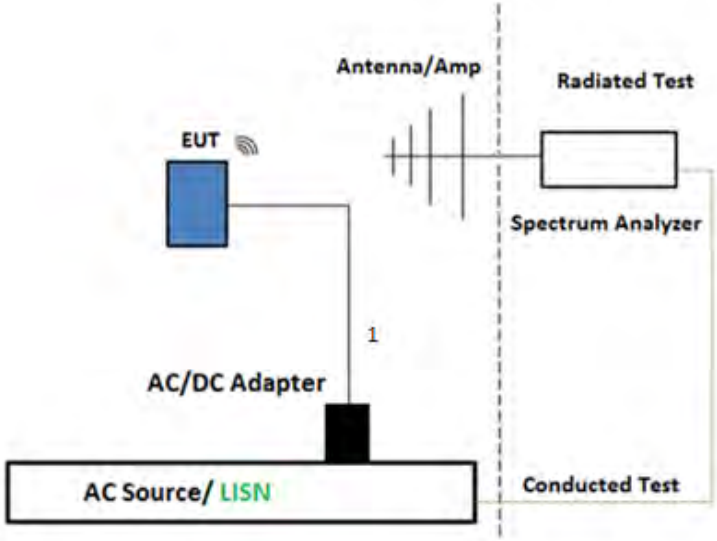
SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



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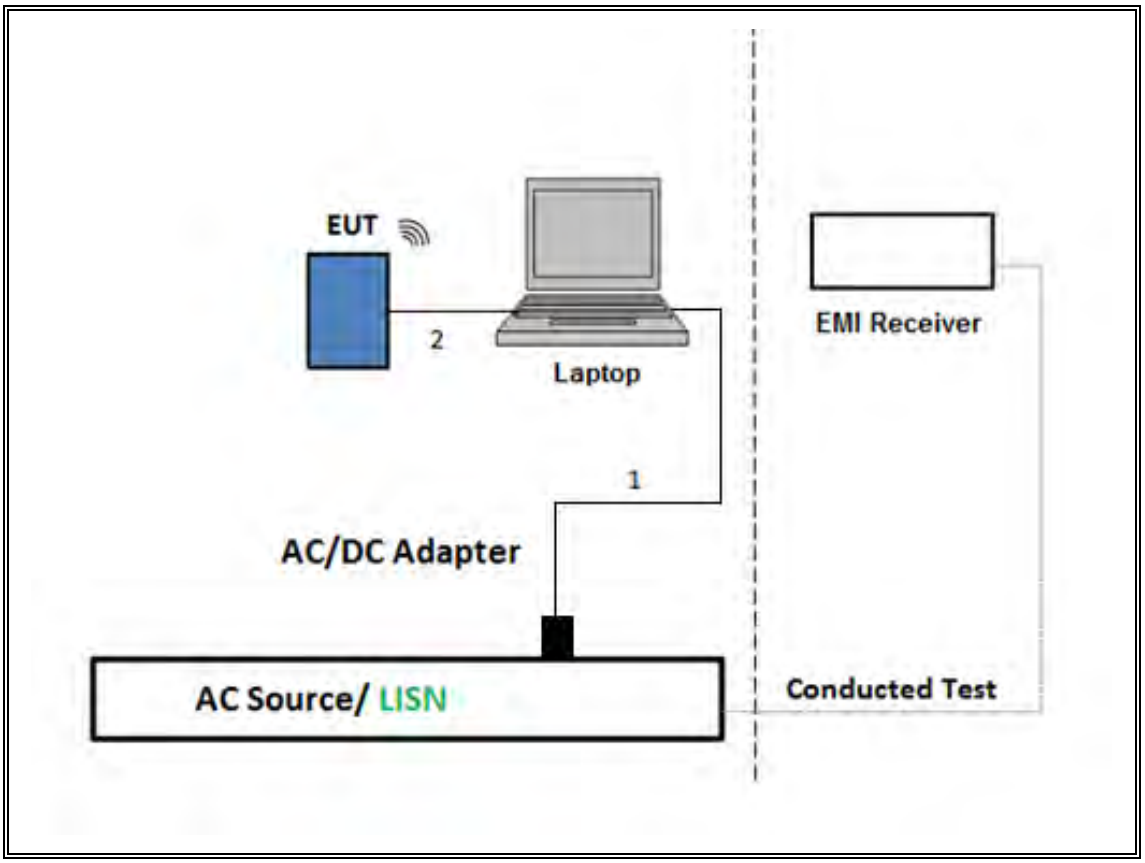
TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



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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 ≥ 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 -11.10.2 Method PKPSD (peak PSD)

Radiated emissions restricted frequency bands: ANSI C63.10 Subclause -11.12.1 & 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 – 11.11 & Clause 13

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

NOTE: All conducted antenna port tests for Beamforming applied the same test procedures as HDR normal modes.

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8. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T341	01/28/2022	01/28/2021
Power Meter, P-series single channel	Keysight	N1912A	T1244	01/25/2022	01/25/2021
Power Sensor	Keysight	N19**2**1A	T1224	01/25/2022	01/25/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213971	09/25/2021	09/25/2020
Amplifier, 100MHz to 18GHz	AMPLICAL	AMP0.1G18-47-20	190323	12/03/2021	12/03/2020
EMI Receiver	Rohde & Schwarz	ESW44	201502	02/24/2022	02/24/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213972	08/20/2021	08/20/2020
Amplifier 1-18GHz, 45dB Min	AMPLICAL	AMP0.1G18-47-20	172123	01/23/2022	01/23/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201497	02/25/2022	02/25/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T136	07/07/2021	07/07/2020
RF Amplifier, 1-18GHz	MITEQ	AFS42-00101800-25-S-42	T1165	06/12/2022	06/12/2021
Spectrum Analyzer	Keysight Technologies Inc	N9030A	SA0016	11/25/2021	11/25/2020
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213973	02/16/2022	02/16/2021
Amplifier, 100MHz -18GHz	AMPLICAL	AMP0.1G18-47-20	205876	03/14/2022	03/14/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	02/26/2022	02/26/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	PRE0213831	12/03/2021	12/03/2020
Rf Amplifier 1-18GHz, 45dB Min	AMPLICAL	AMP0.1G18-47-20	172122	12/21/2021	12/31/2020
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201498	02/25/2022	02/25/2021
Antenna, BroadBand Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	T900	02/24/2022	02/24/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	202992	11/22/2021	11/22/2020
Antenna, Active Loop 9KHz to 30MHz	EMCO	6502	T35	11/23/2021	11/23/2020
Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Keysight Technologies Inc	N9030A	T342	01/25/2022	02/25/2021
*Antenna Horn, 18 to 26GHz	ARA	SWH-28	T125	04/17/2021	04/17/2020
*Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	04/08/2021	04/19/2020
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/27/2022	01/27/2021

AC Line Conducted					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	T1436	02/19/2022	02/19/2021
Power Cable, Line Conducted Emissions	UL	PR1	T861	10/27/2021	10/27/2020
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01	PRE0186446	01/20/2022	01/20/2021
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, Mar 6, 2020		
Conducted Software	UL	UL EMC	2020.2.26		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, February 21, 2020		

*Testing is completed before equipment expiration date.

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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						
HDR4	5.000	5.000	1.000	100.00%	0.00	0.010
HDR8	5.000	5.000	1.000	100.00%	0.00	0.010
HDR4, TXBF	5.000	5.000	1.000	100.00%	0.00	0.010
HDR8, TXBF	5.000	5.000	1.000	100.00%	0.00	0.010

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DUTY CYCLE PLOTS

DUTY CYCLE HDR4

DUTY CYCLE HDR8

DUTY CYCLE HDR4 TXBF

DUTY CYCLE HDR8 TXBF

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9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Only High-Power modes results are reported, they cover all Low Power modes. Only Mid channel plot is reported to show analyzer settings.

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9.2.1. HIGH POWER HDR (HDR4)

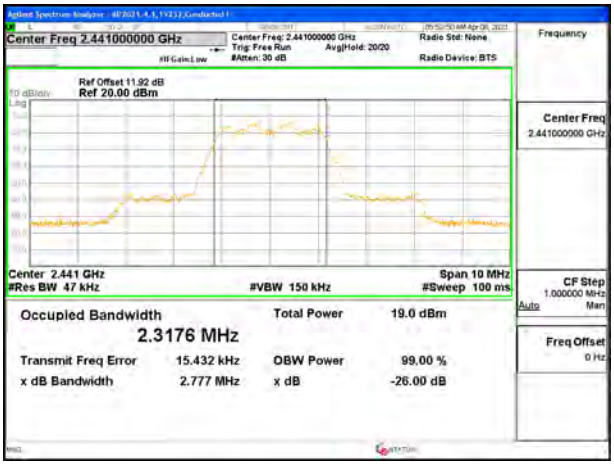
ANT 4

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	2.3208
Middle	2441	2.3278
High	2476	2.3228

MID CHANNEL

ANT 3

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	2.3183
Middle	2441	2.3176
High	2476	2.3191



MID CHANNEL

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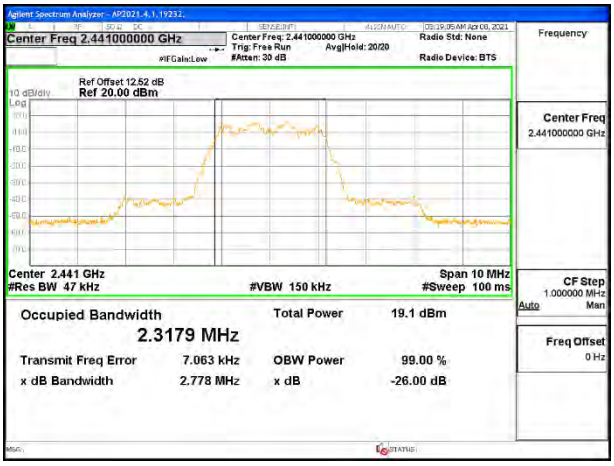
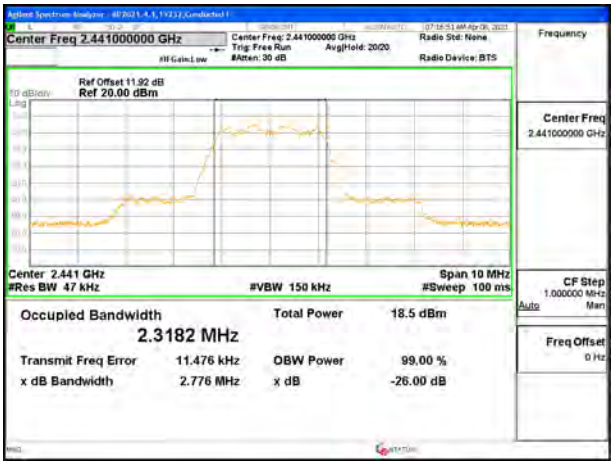
9.2.2. HIGH POWER HDR TXBF (HDR4)

Channel	Frequency (MHz)	99% Bandwidth ANT 4 (MHz)	99% Bandwidth ANT 3 (MHz)
Low	2404	2.3174	2.3173
Middle	2441	2.3179	2.3182
High	2476	2.3206	2.3186



MID CHANNEL ANT 4



MID CHANNEL ANT 3

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9.2.3. HIGH POWER HDR (HDR8)

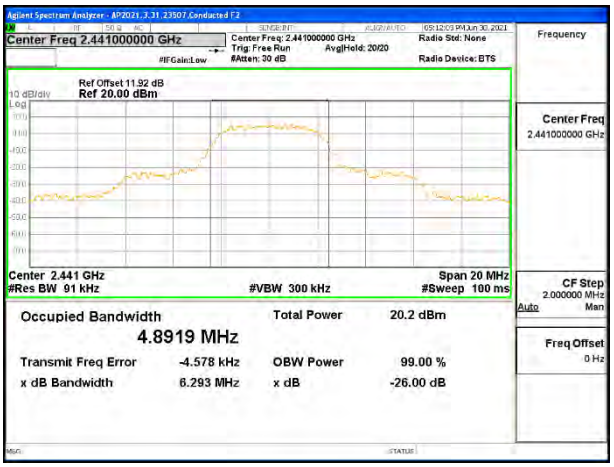
ANT 4

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	4.7710
Middle	2441	4.9206
High	2476	4.7553

MID CHANNEL

ANT 3

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	4.6533
Middle	2441	4.8919
High	2476	4.7607



MID CHANNEL

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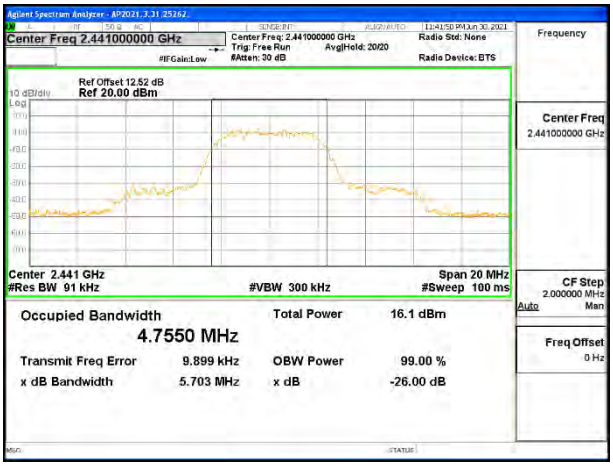
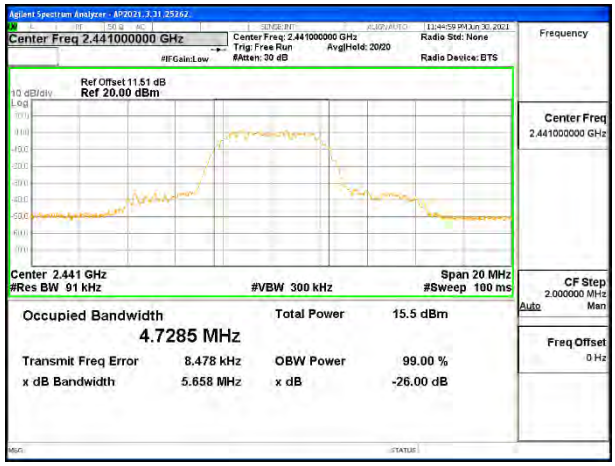
9.2.4. HIGH POWER HDR TXBF (HDR8)

Channel	Frequency (MHz)	99% Bandwidth ANT 4 (MHz)	99% Bandwidth ANT 3 (MHz)
Low	2404	4.9074	4.7286
Middle	2441	4.7550	4.7285
High	2476	4.7498	4.7260



MID CHANNEL ANT 4



MID CHANNEL ANT 3

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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

The 6dB bandwidth was measured for the HDR4 mode to demonstrate compliance with the minimum required bandwidth of 500 kHz. Other modes were not tested as their bandwidth is greater than the HDR4 mode, as demonstrated by the 99% bandwidth measurements performed on all modes.

Only High-Power modes result are reported, they cover all Low Power modes. Only Mid channel plot is reported to show analyzer settings

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9.3.1. HIGH POWER HDR (HDR4)

ANT 4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2404	2.091	0.5
Middle	2441	2.145	0.5
High	2476	2.118	0.5

MID CHANNEL

ANT 3

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2404	2.070	0.5
Middle	2441	2.097	0.5
High	2476	2.064	0.5

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9.4. CONDUCTED PEAK 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

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 power meter.

DIRECTIONAL ANTENNA GAIN

For 1 TX:
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:
Tx chains are correlated for power and PSD due to the device supporting Beamforming mode. The directional gains are as follows:

Band (GHz)	ANT 4 Antenna Gain (dBi)	ANT 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.4	-3.00	-0.70	-1.70	1.24

RESULTS

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9.4.1. HIGH POWER HDR (HDR4)

ANT 4

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	14.89	30	-15.11
Middle	2441	14.95	30	-15.05
High	2476	14.82	30	-15.18

ANT 3

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	14.80	30	-15.20
Middle	2441	14.70	30	-15.30
High	2476	14.55	30	-15.45

9.4.2. HIGH POWER HDR TXBF (HDR4)

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading ANT 4 (dBm)	Peak Power Reading ANT 3 (dBm)	Total Corr'd Power (dBm)	Limit (dBm)	Margin (dB)
Low	2404	14.39	14.48	17.45	30.00	-12.55
Middle	2441	14.48	14.51	17.51	30.00	-12.49
High	2476	14.72	14.67	17.71	30.00	-12.29

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9.4.3. HIGH POWER HDR (HDR8)

ANT 4

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	16.85	30	-13.15
Middle	2441	16.87	30	-13.13
High	2476	16.71	30	-13.29

ANT 3

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	16.99	30	-13.01
Middle	2441	17.00	30	-13.00
High	2476	16.61	30	-13.39

9.4.4. HIGH POWER HDR TXBF (HDR8)

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading ANT 4 (dBm)	Peak Power Reading ANT 3 (dBm)	Total Corr'd Power (dBm)	Limit (dBm)	Margin (dB)
Low	2404	16.92	16.84	19.89	30.00	-10.11
Middle	2441	16.85	16.74	19.81	30.00	-10.19
High	2476	16.71	16.96	19.85	30.00	-10.15

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9.4.5. LOW POWER HDR (HDR4)

ANT 4

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.80	30	-20.20
Middle	2441	9.77	30	-20.23
High	2476	9.76	30	-20.24

ANT 3

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.72	30	-20.28
Middle	2441	9.69	30	-20.31
High	2476	9.54	30	-20.46

9.4.6. LOW POWER HDR TXBF (HDR4)

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading ANT 4 (dBm)	Peak Power Reading ANT 3 (dBm)	Total Corr'd Power (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.67	9.46	12.58	30.00	-17.42
Middle	2441	9.68	9.47	12.59	30.00	-17.41
High	2476	9.68	9.5	12.60	30.00	-17.40

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9.4.7. LOW POWER HDR (HDR8)

ANT 4

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	10.63	30	-19.37
Middle	2441	10.76	30	-19.24
High	2476	10.79	30	-19.21

ANT 3

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	10.86	30	-19.14
Middle	2441	10.76	30	-19.24
High	2476	10.90	30	-19.10

9.4.8. LOW POWER HDR TXBF (HDR8)

Tested By:	44353
Date:	8/6/2021

Channel	Frequency (MHz)	Peak Power Reading ANT 4 (dBm)	Peak Power Reading ANT 3 (dBm)	Total Corr'd Power (dBm)	Limit (dBm)	Margin (dB)
Low	2404	10.8	10.79	13.81	30.00	-16.19
Middle	2441	10.92	10.92	13.93	30.00	-16.07
High	2476	10.79	10.91	13.86	30.00	-16.14

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9.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

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

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9.5.1. HIGH POWER HDR (HDR4)

ANT 4

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	11.90
Middle	2441	11.99
High	2476	11.81

ANT 3

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	11.99
Middle	2441	11.98
High	2476	11.56

9.5.2. HIGH POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	11.60	11.73	14.68
Middle	2441	11.73	11.79	14.77
High	2476	11.97	11.94	14.97

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9.5.3. HIGH POWER HDR (HDR8)

ANT 4

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	13.35
Middle	2441	13.37
High	2476	13.20

ANT 3

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	13.49
Middle	2441	13.50
High	2476	13.10

9.5.4. HIGH POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	13.45	13.38	16.43
Middle	2441	13.39	13.27	16.34
High	2476	13.22	13.49	16.37

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9.5.5. LOW POWER HDR (HDR4)

ANT 4

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	6.96
Middle	2441	6.93
High	2476	6.93

ANT 3

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	6.96
Middle	2441	6.94
High	2476	6.79

9.5.6. LOW POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	7/28/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	6.98	6.96	9.98
Middle	2441	6.99	6.97	9.99
High	2476	6.98	7.00	10.00

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9.5.7. LOW POWER HDR (HDR8)

ANT 4

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	7.33
Middle	2441	7.48
High	2476	7.49

ANT 3

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	7.41
Middle	2441	7.31
High	2476	7.47

9.5.8. LOW POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/30/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	7.36	7.35	10.37
Middle	2441	7.49	7.48	10.50
High	2476	7.36	7.47	10.43

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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

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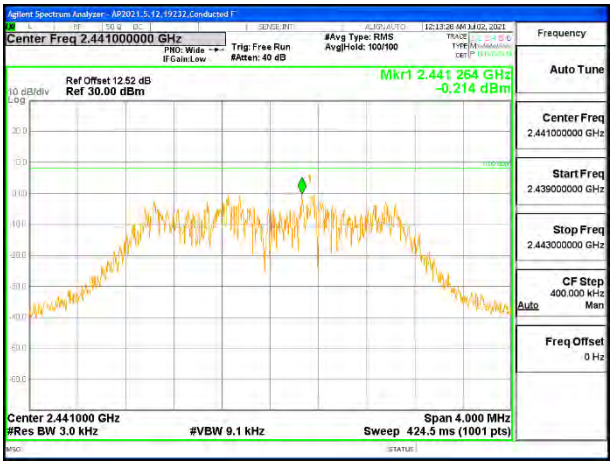
9.6.1. HIGH POWER HDR (HDR4)

ANT 4

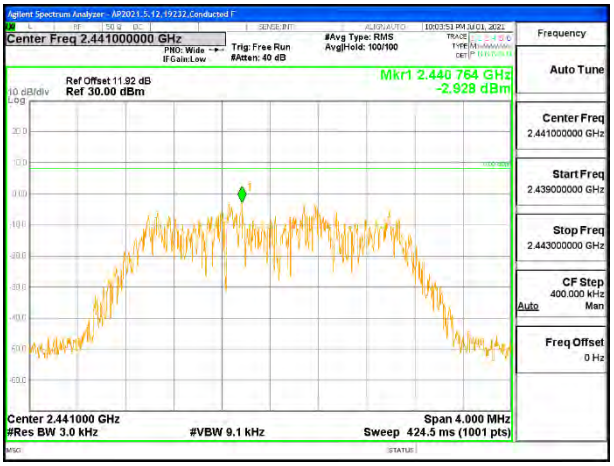
Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-0.890	8	-8.89
Middle	2441	-0.214	8	-8.21
High	2476	-0.548	8	-8.55



MID CHANNEL

ANT 3

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-2.768	8	-10.77
Middle	2441	-2.928	8	-10.93
High	2476	-3.060	8	-11.06



MID CHANNEL

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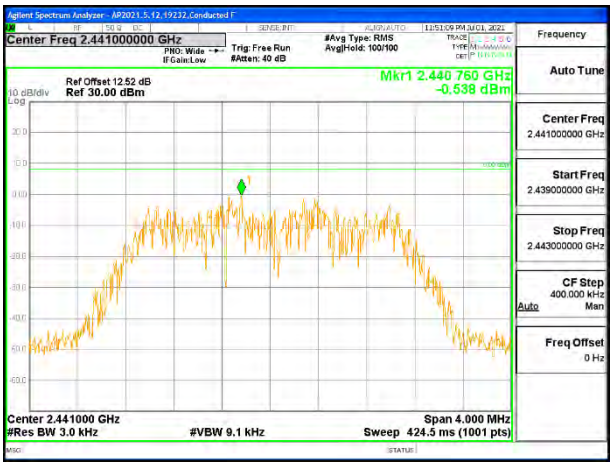
9.6.2. HIGH POWER HDR TXBF (HDR4)

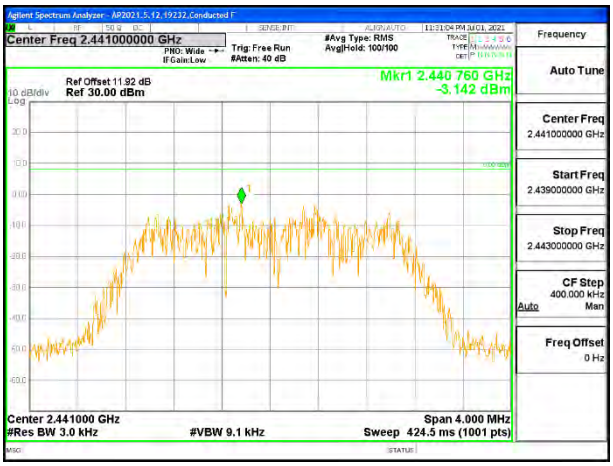
Note: Test procedures and setting are same as HDR normal mode.

PSD Results

Channel	Frequency (MHz)	ANT 4 Meas (dBm/ 3kHz)	ANT 3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low	2404	-1.041	-2.808	1.18	8.0	-6.8
Mid	2441	-0.538	-3.142	1.36	8.0	-6.6
High	2476	-0.828	-2.843	1.29	8.0	-6.7



MID CHANNEL ANT 4



MID CHANNEL ANT 3

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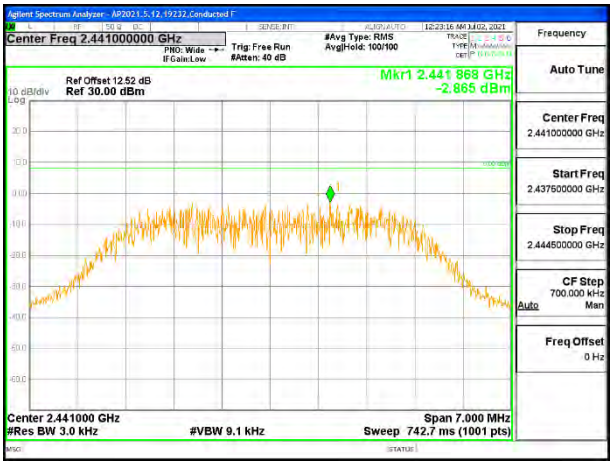
9.6.3. HIGH POWER HDR (HDR8)

ANT 4

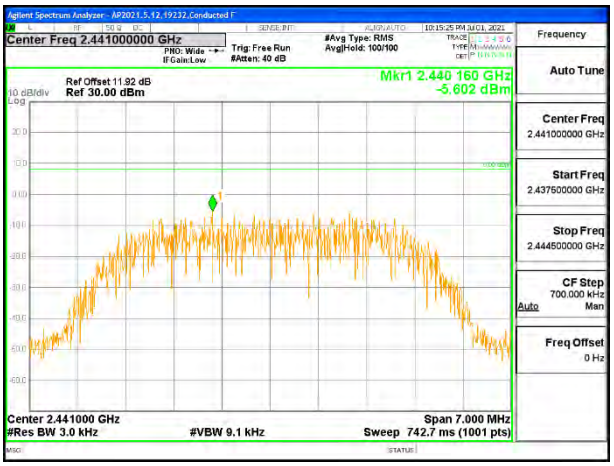
Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-3.011	8	-11.01
Middle	2441	-2.865	8	-10.87
High	2476	-2.816	8	-10.82



MID CHANNEL

ANT 3

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-5.405	8	-13.41
Middle	2441	-5.602	8	-13.60
High	2476	-5.616	8	-13.62



MID CHANNEL

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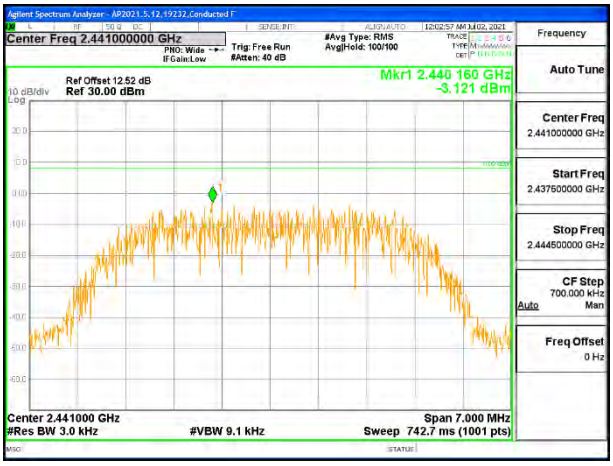
9.6.4. HIGH POWER HDR TXBF (HDR8)

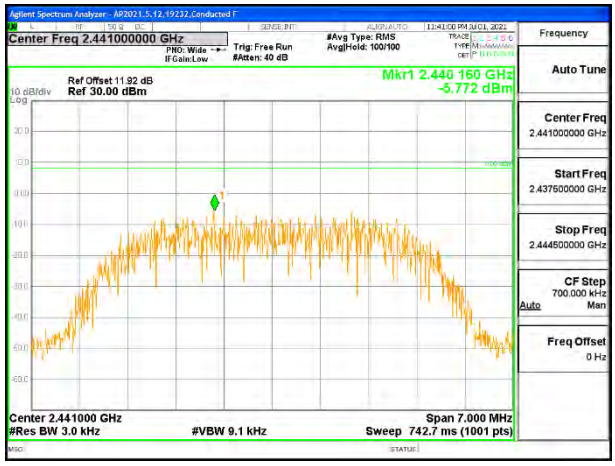
Note: Test procedures and setting are same as HDR normal mode.

PSD Results

Channel	Frequency (MHz)	ANT 4 Meas (dBm/ 3kHz)	ANT 3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low	2404	-3.583	-5.656	-1.49	8.0	-9.5
Mid	2441	-3.121	-5.772	-1.24	8.0	-9.2
High	2476	-3.346	-5.429	-1.25	8.0	-9.3



MID CHANNEL ANT 4



MID CHANNEL ANT 3

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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 dB.

RESULTS

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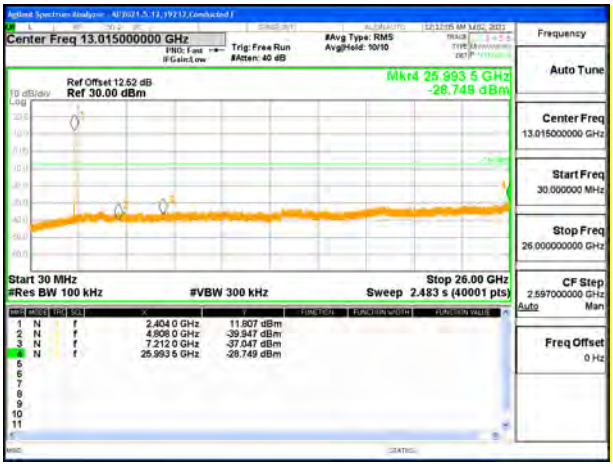
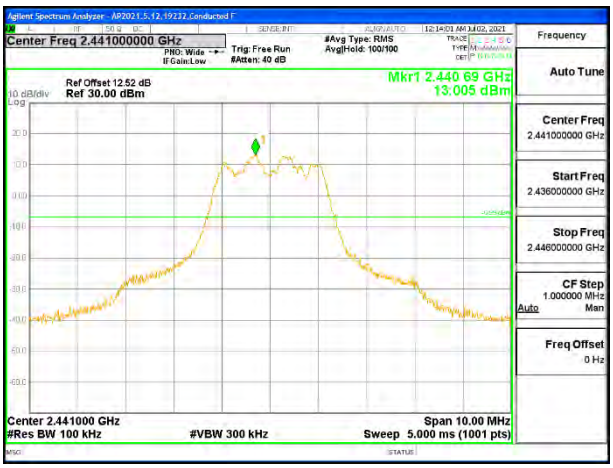
9.7.1. HIGH POWER HDR (HDR4)

ANT 4

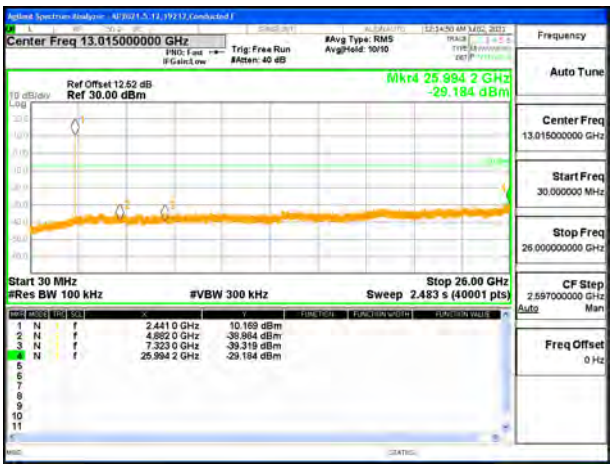
LOW CHANNEL BANDEDGE



OUT-OF-BAND LOW CHANNEL



IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

HIGH CHANNEL BANDEDGE

OUT-OF-BAND HIGH CHANNEL

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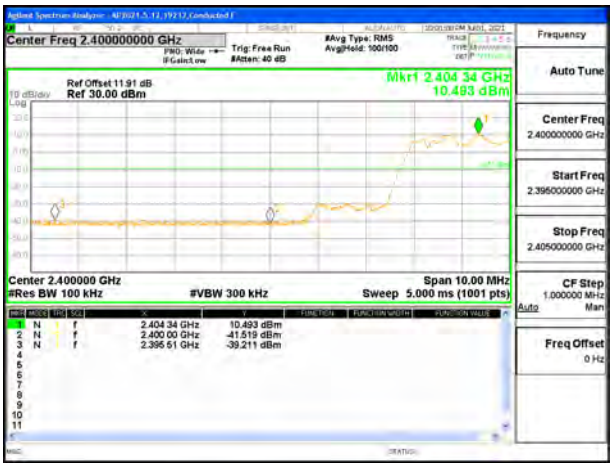
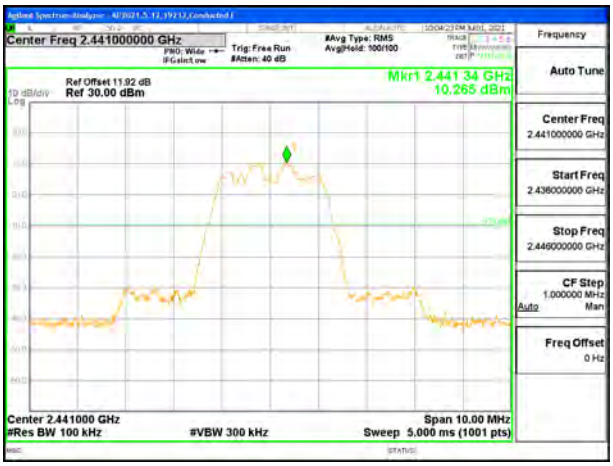
ANT 3



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

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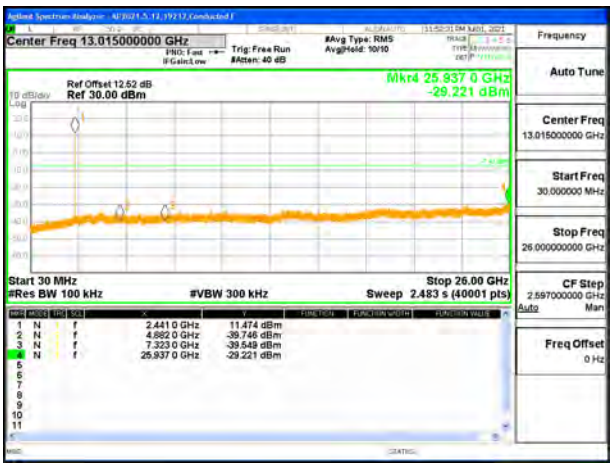
9.7.2. HIGH POWER HDR TXBF (HDR4)

ANT 4

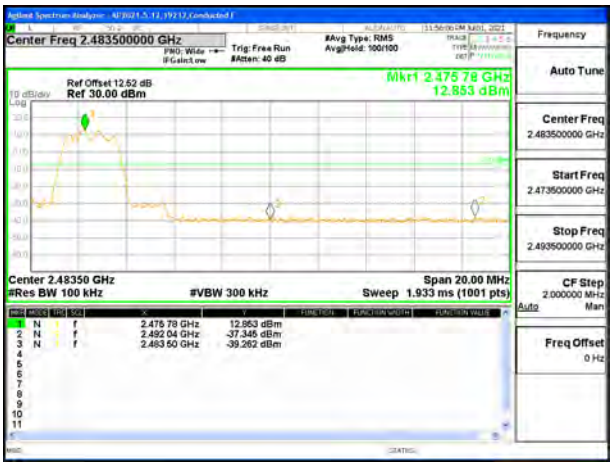
LOW CHANNEL BANDEDGE ANT 4

OUT-OF-BAND LOW CHANNEL ANT 4

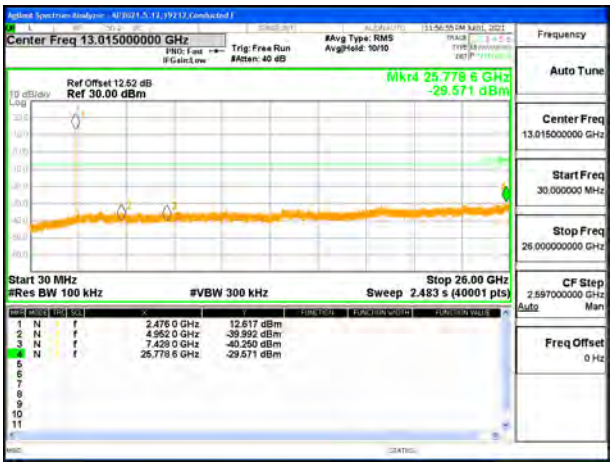
IN-BAND REFERENCE LEVEL ANT 4



OUT-OF-BAND MID CHANNEL ANT 4



HIGH CHANNEL BANDEDGE ANT 4



OUT-OF-BAND HIGH CHANNEL ANT 4

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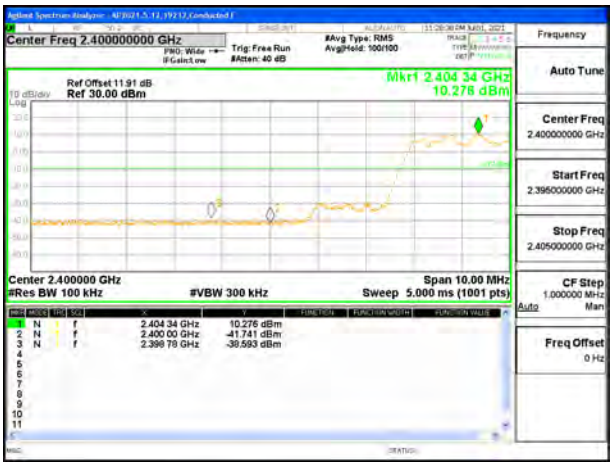
ANT 3

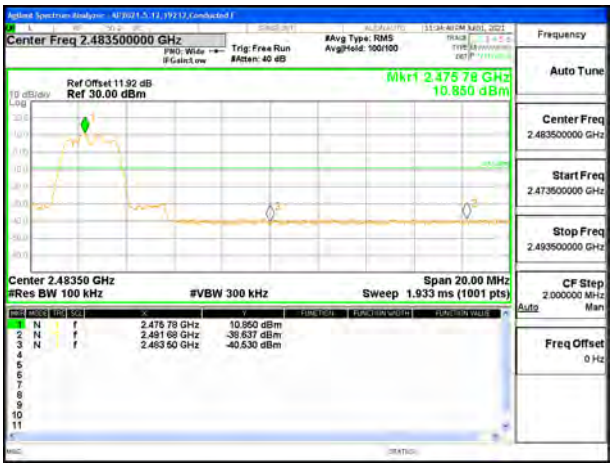


LOW CHANNEL BANDEDGE ANT 3

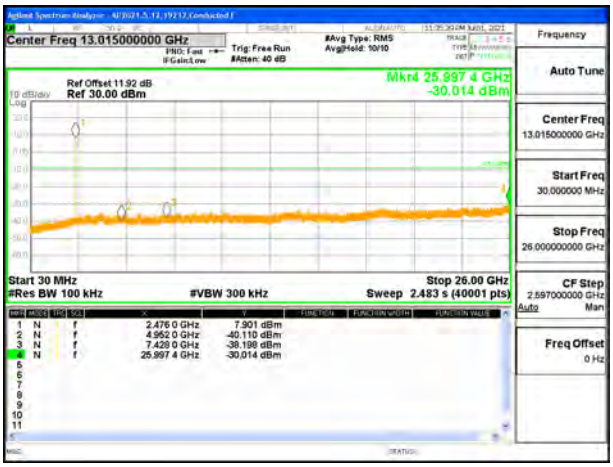
OUT-OF-BAND LOW CHANNEL ANT 3

IN-BAND REFERENCE LEVEL ANT 3

OUT-OF-BAND MID CHANNEL ANT 3



HIGH CHANNEL BANDEDGE ANT 3



OUT-OF-BAND HIGH CHANNEL ANT 3

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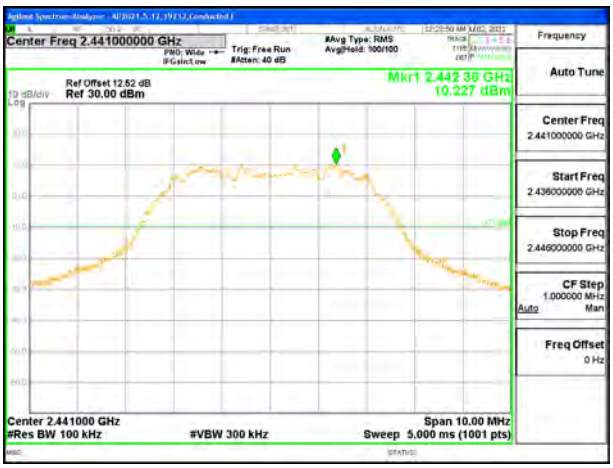
9.7.3. HIGH POWER HDR (HDR8)

ANT 4

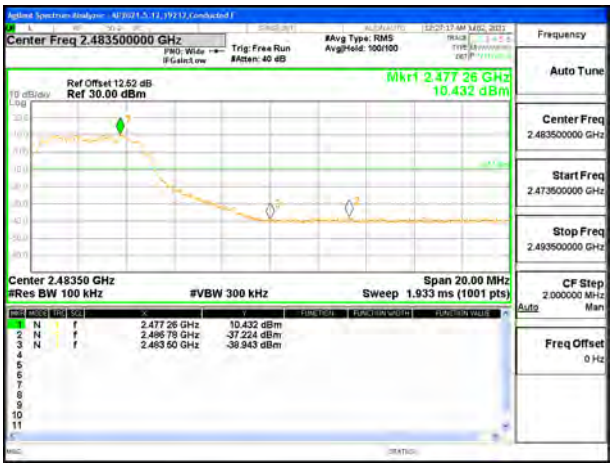
LOW CHANNEL BANDEDGE

OUT-OF-BAND LOW CHANNEL

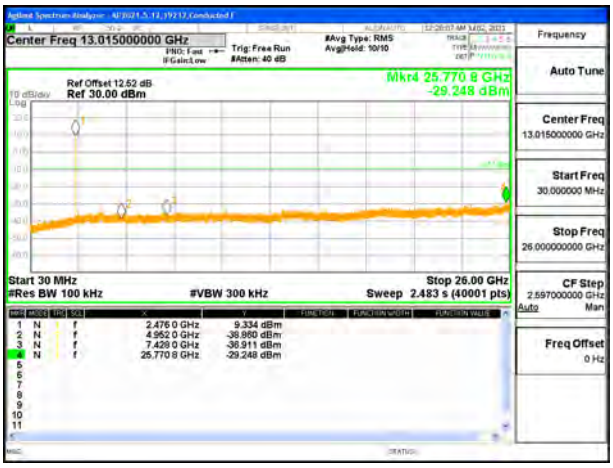


IN-BAND REFERENCE LEVEL

OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

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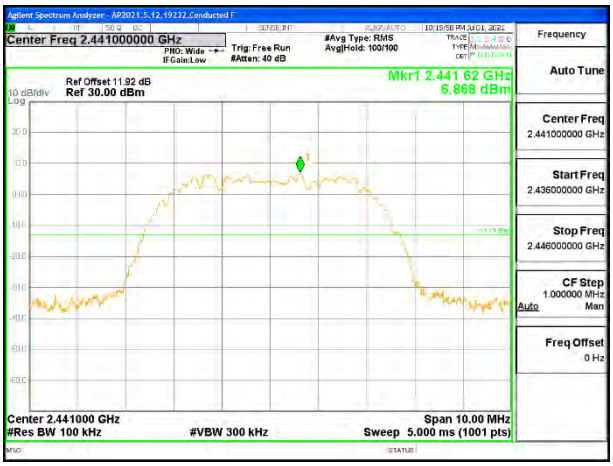
ANT 3

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

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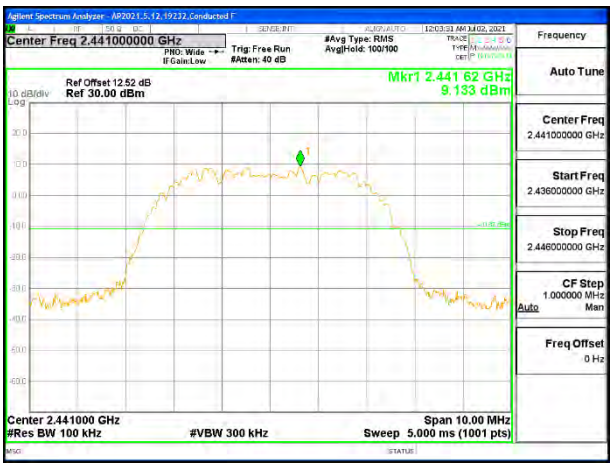
9.7.4. HIGH POWER HDR TXBF (HDR8)

ANT 4

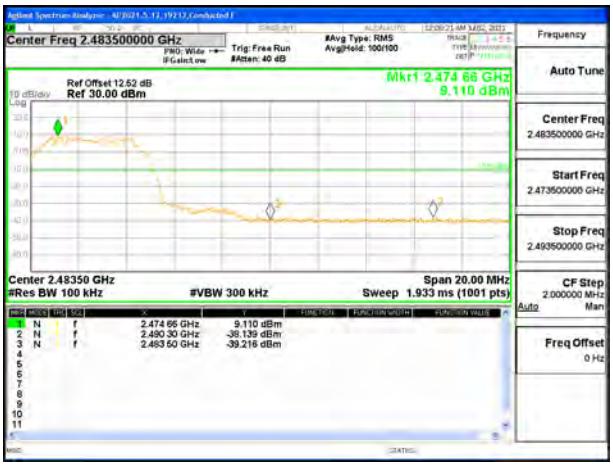
LOW CHANNEL BANDEDGE ANT 4

OUT-OF-BAND LOW CHANNEL ANT 4

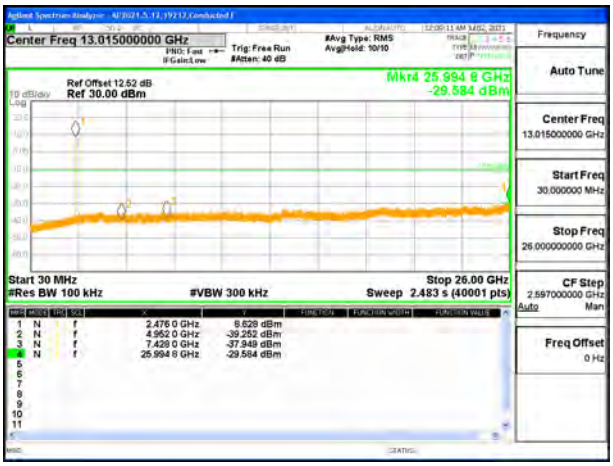


IN-BAND REFERENCE LEVEL ANT 4

OUT-OF-BAND MID CHANNEL ANT 4



HIGH CHANNEL BANDEDGE ANT 4



OUT-OF-BAND HIGH CHANNEL ANT 4

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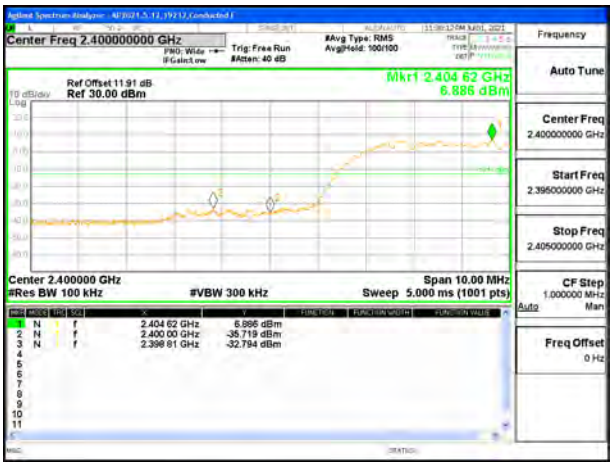
ANT 3

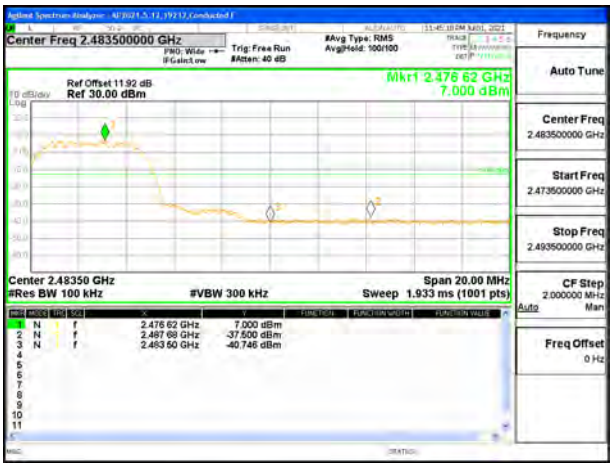


LOW CHANNEL BANDEDGE ANT 3

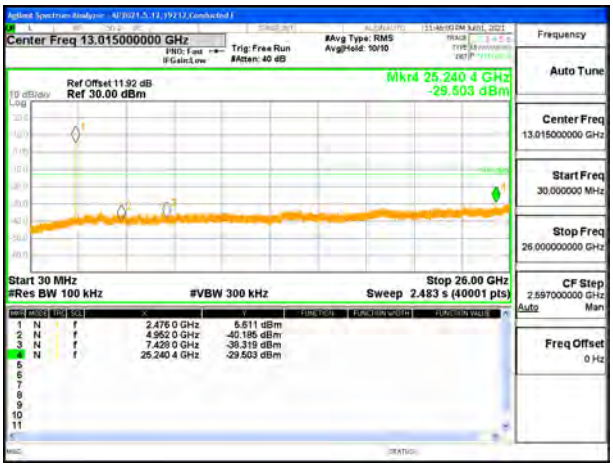
OUT-OF-BAND LOW CHANNEL ANT 3

IN-BAND REFERENCE LEVEL ANT 3

OUT-OF-BAND MID CHANNEL ANT 3



HIGH CHANNEL BANDEDGE ANT 3



OUT-OF-BAND HIGH CHANNEL ANT 3

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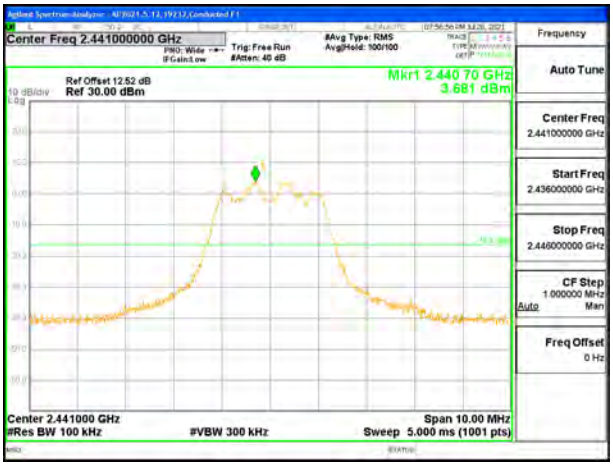
9.7.5. LOW POWER HDR (HDR4)

ANT 4

LOW CHANNEL BANDEDGE

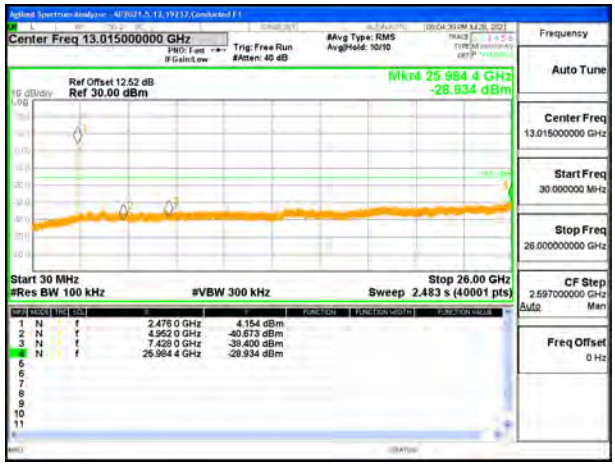
OUT-OF-BAND LOW CHANNEL



IN-BAND REFERENCE LEVEL

OUT-OF-BAND MID CHANNEL

HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

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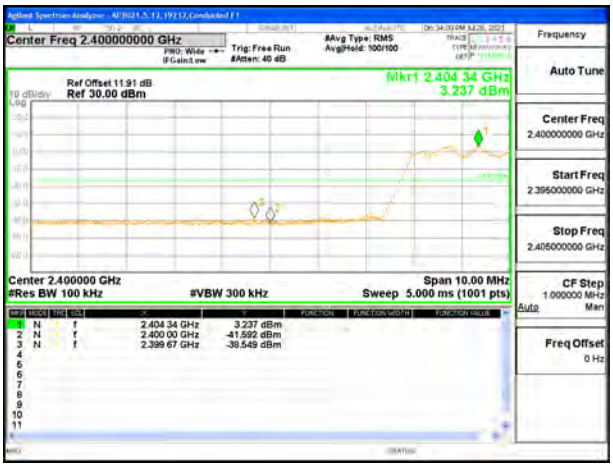
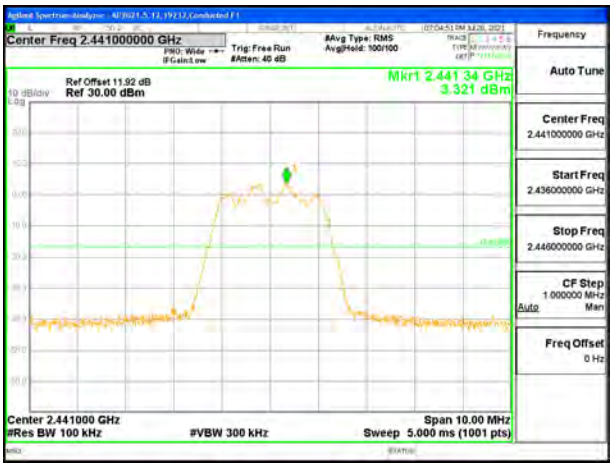
ANT 3

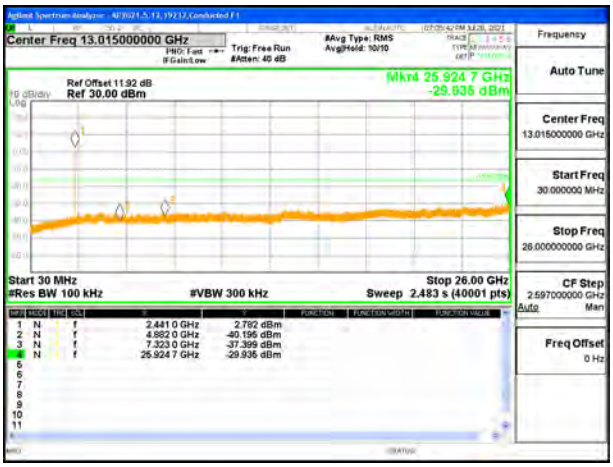


LOW CHANNEL BANDEDGE

OUT-OF-BAND LOW CHANNEL

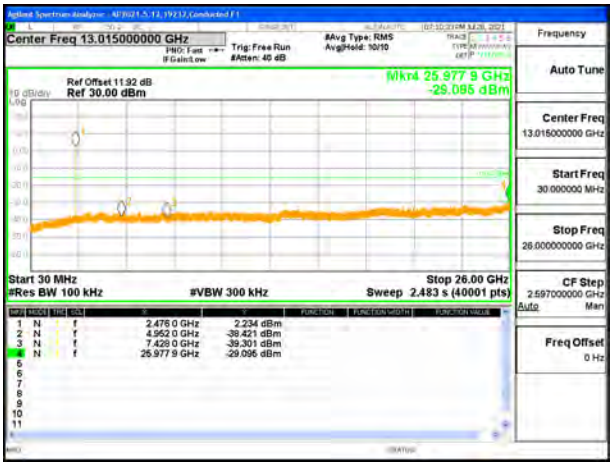


IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL

HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

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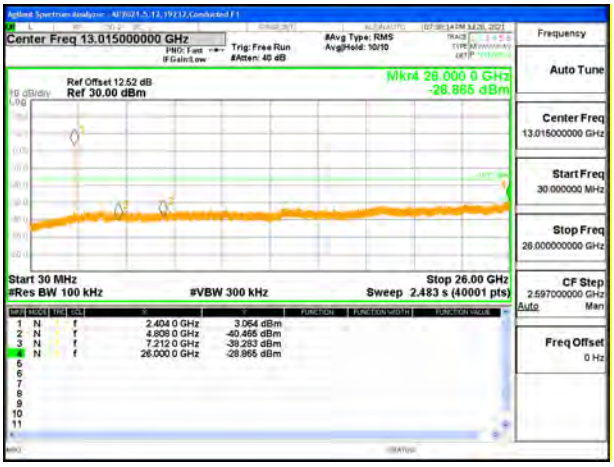
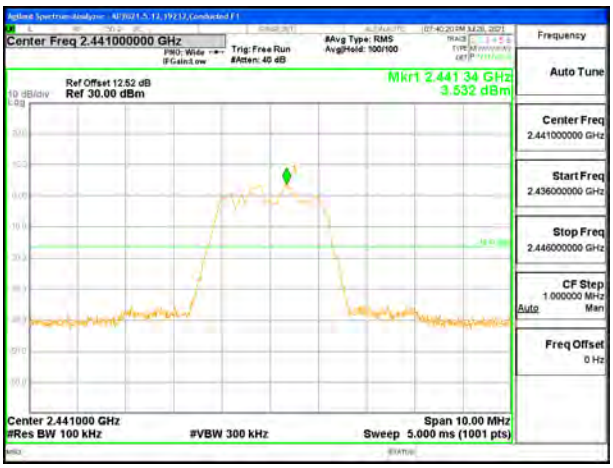
9.7.6. LOW POWER HDR TXBF (HDR4)

ANT 4

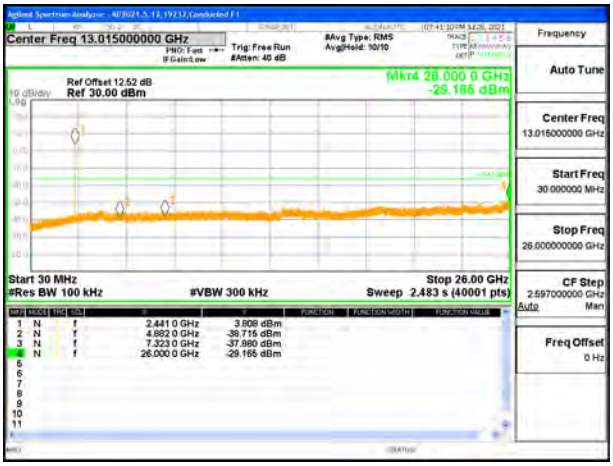
LOW CHANNEL BANDEDGE ANT 4



OUT-OF-BAND LOW CHANNEL ANT 4

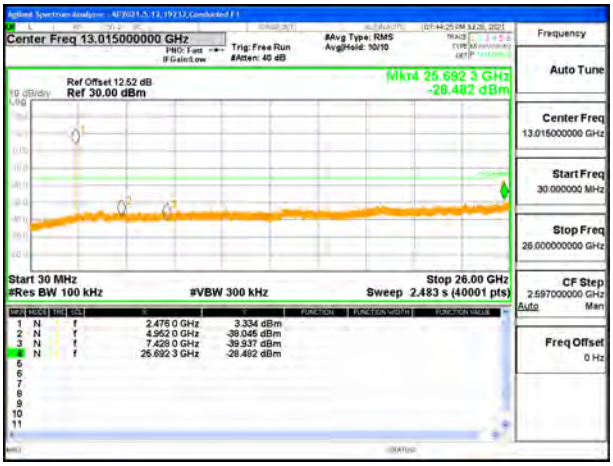


IN-BAND REFERENCE LEVEL ANT 4



OUT-OF-BAND MID CHANNEL ANT 4

HIGH CHANNEL BANDEDGE ANT 4



OUT-OF-BAND HIGH CHANNEL ANT 4

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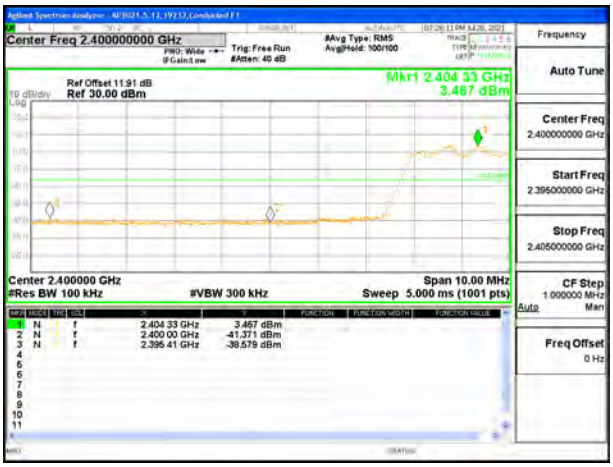
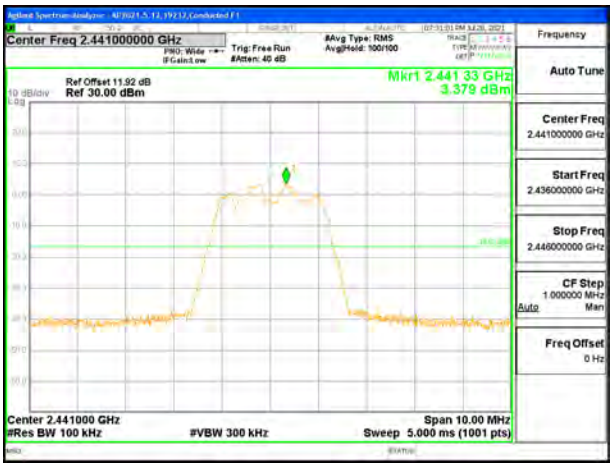
ANT 3



LOW CHANNEL BANDEDGE ANT 3

OUT-OF-BAND LOW CHANNEL ANT 3



IN-BAND REFERENCE LEVEL ANT 3

OUT-OF-BAND MID CHANNEL ANT 3

HIGH CHANNEL BANDEDGE ANT 3

OUT-OF-BAND HIGH CHANNEL ANT 3

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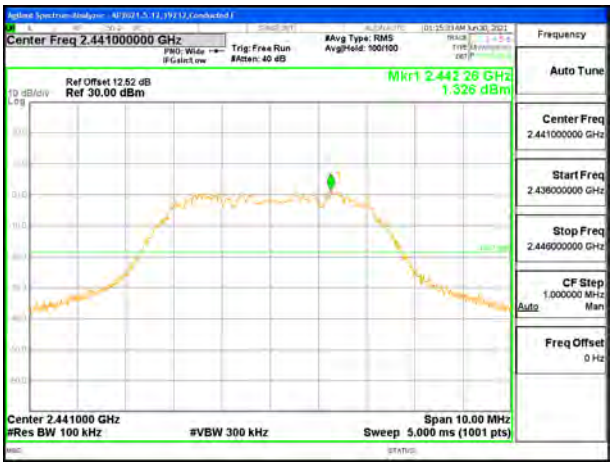
9.7.7. LOW POWER HDR (HDR8)

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

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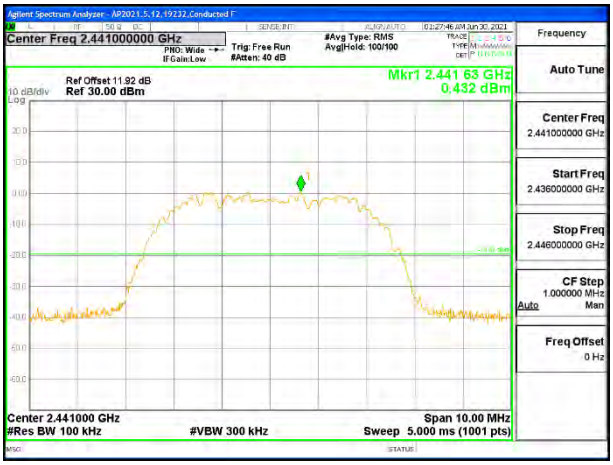
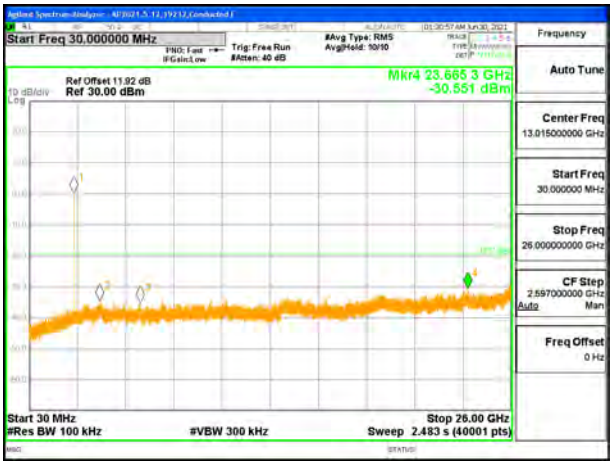
ANT 3

LOW CHANNEL BANDEDGE

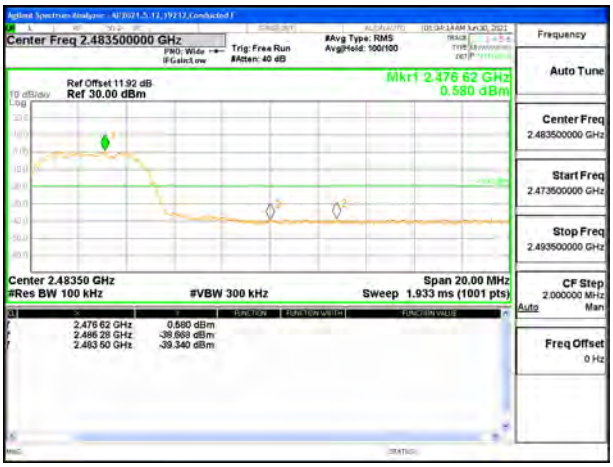
OUT-OF-BAND LOW CHANNEL



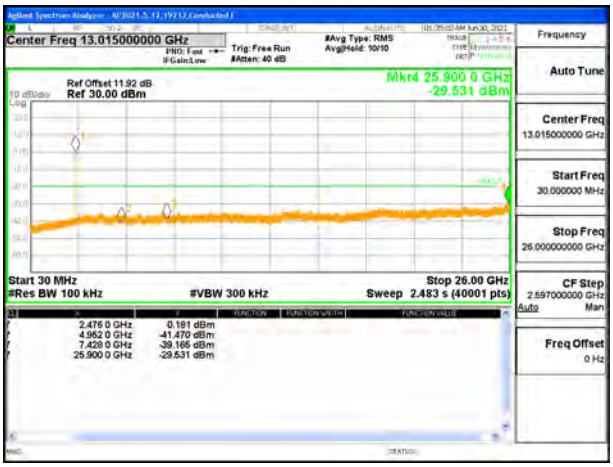
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

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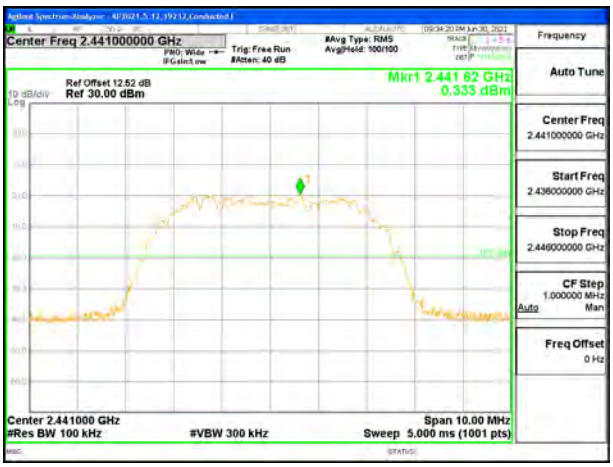
9.7.8. LOW POWER HDR TXBF (HDR8)

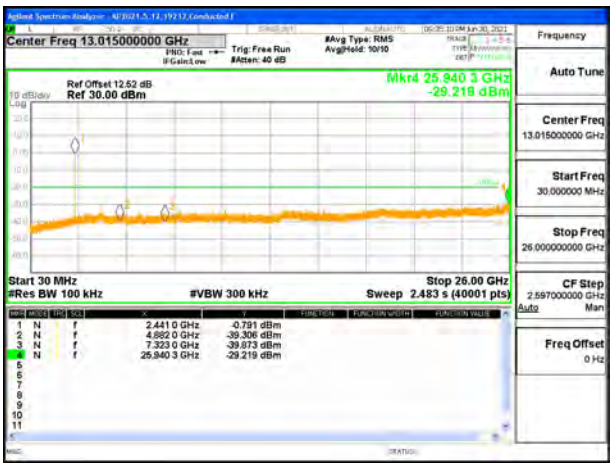
ANT 4

LOW CHANNEL BANDEDGE ANT 4

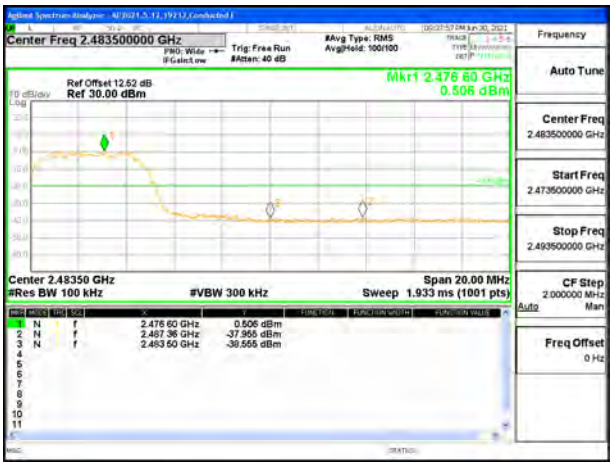
OUT-OF-BAND LOW CHANNEL ANT 4



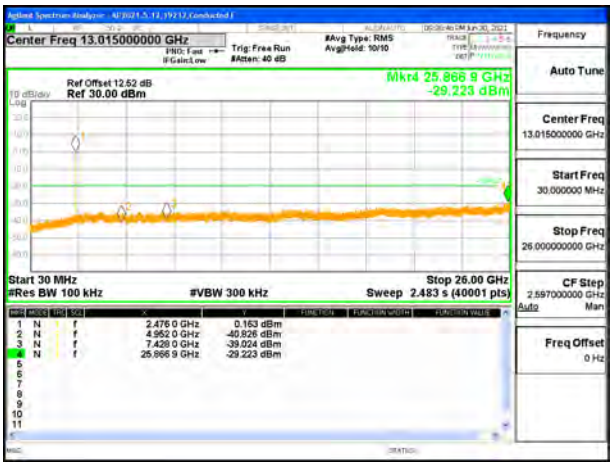
IN-BAND REFERENCE LEVEL ANT 4



OUT-OF-BAND MID CHANNEL ANT 4



HIGH CHANNEL BANDEDGE ANT 4



OUT-OF-BAND HIGH CHANNEL ANT 4

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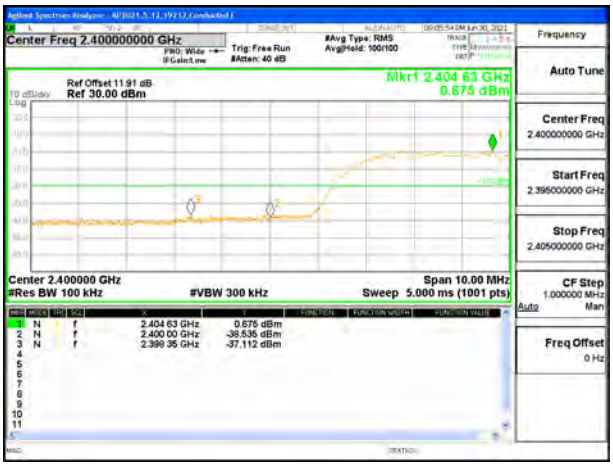
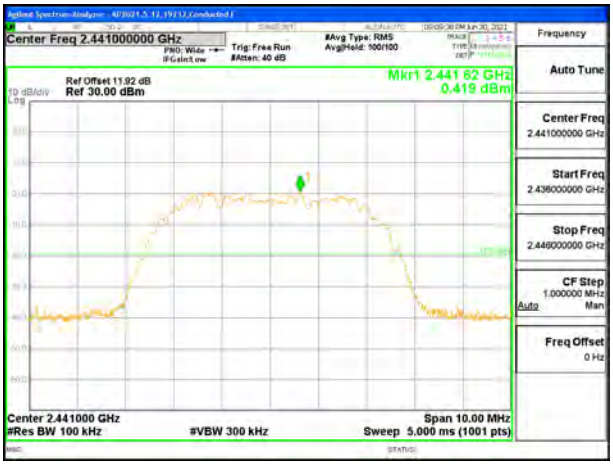
ANT 3



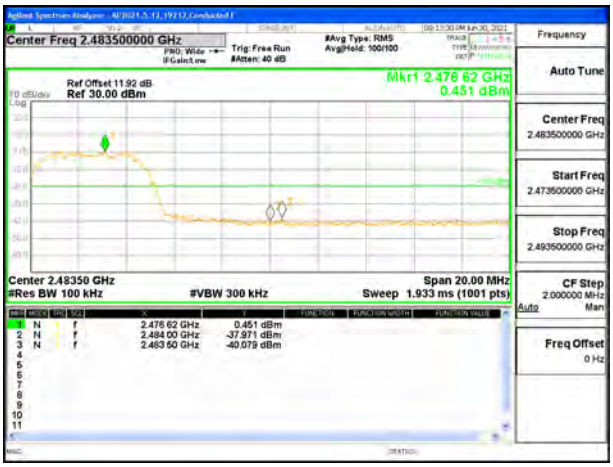
LOW CHANNEL BANDEDGE ANT 3

OUT-OF-BAND LOW CHANNEL ANT 3

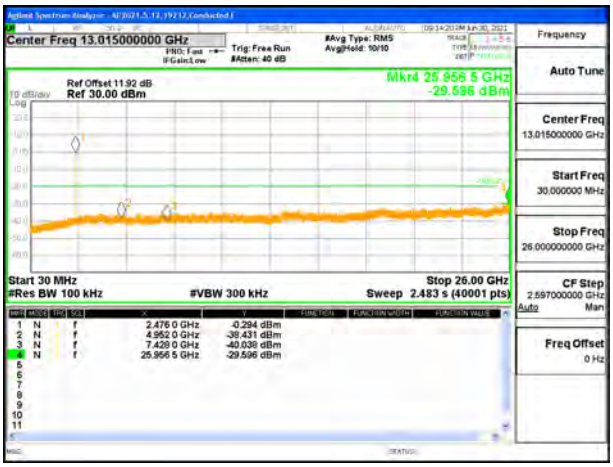


IN-BAND REFERENCE LEVEL ANT 3

OUT-OF-BAND MID CHANNEL ANT 3



HIGH CHANNEL BANDEDGE ANT 3



OUT-OF-BAND HIGH CHANNEL ANT 3

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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.

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.

RESULTS:

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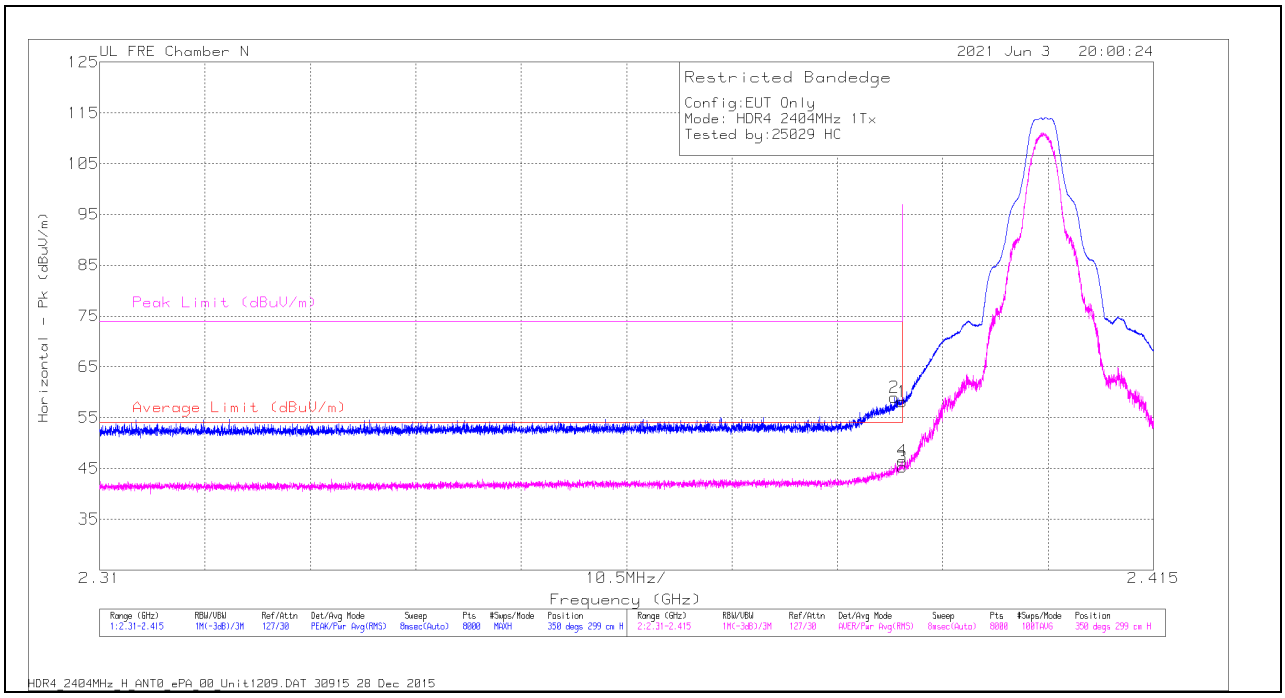
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. HIGH POWER HDR (HDR4)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	61.94	Pk	32.4	-36.2	58.14	-	-	74	-15.86	350	299	H
2	2.38917	62.79	Pk	32.4	-36.2	58.99	-	-	74	-15.01	350	299	H
3	2.39	49.04	RMS	32.4	-36.2	45.24	54	-8.76	-	-	350	299	H
4	2.38997	50.27	RMS	32.4	-36.2	46.47	54	-7.53	-	-	350	299	H

Pk - Peak detector
RMS - RMS detection

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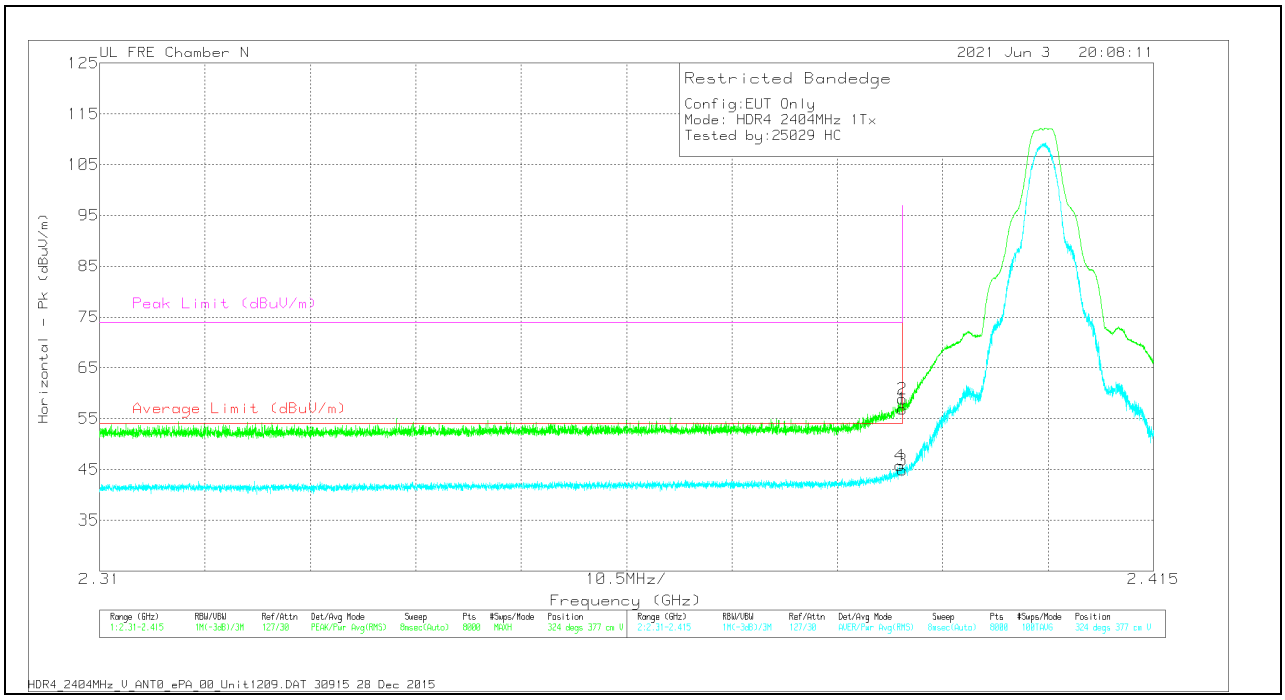
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	60.74	Pk	32.4	-36.2	56.94	-	-	74	-17.06	324	377	V
2	2.38997	62.68	Pk	32.4	-36.2	58.88	-	-	74	-15.12	324	377	V
3	2.39	48.73	RMS	32.4	-36.2	44.93	54	-9.07	-	-	324	377	V
4	2.38971	49.52	RMS	32.4	-36.2	45.72	54	-8.28	-	-	324	377	V

Pk - Peak detector
RMS - RMS detection

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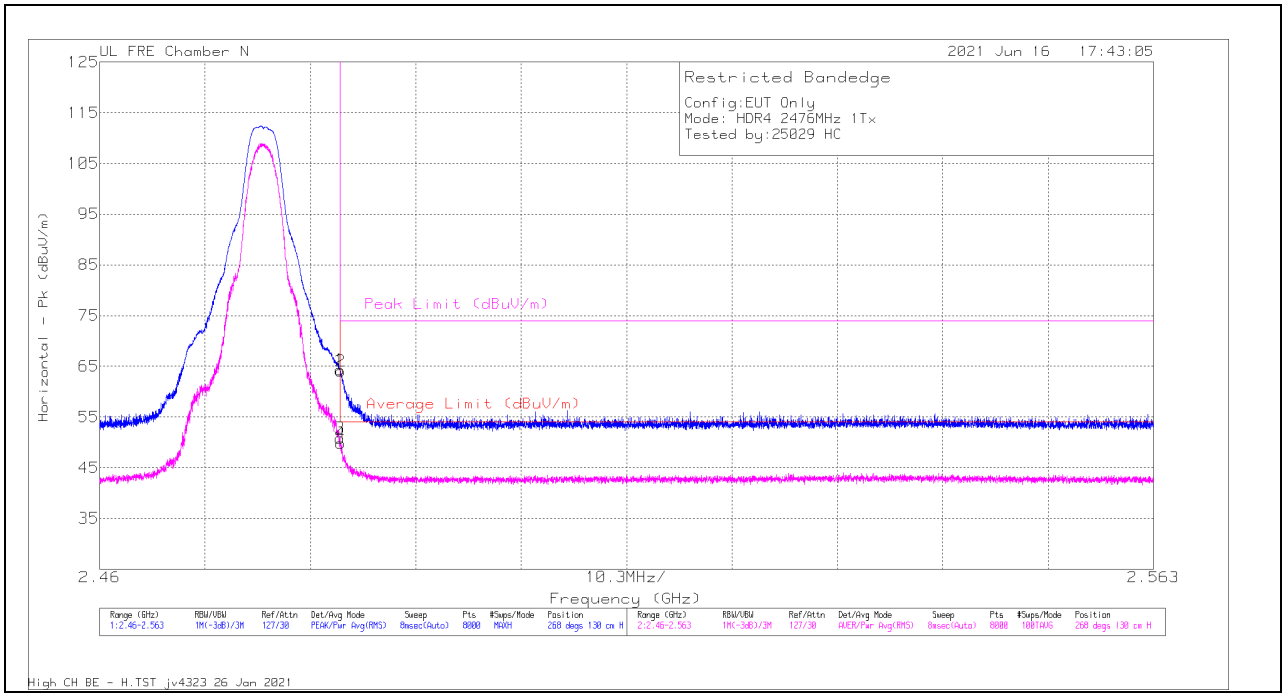
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	67.86	Pk	32.5	-36	0	64.36	-	-	74	-9.64	268	130	H
2	2.48354	67.58	Pk	32.5	-36	0	64.08	-	-	74	-9.92	268	130	H
3	2.4835	54.3	RMS	32.5	-36	0	50.8	54	-3.2	-	-	268	130	H
4	2.48358	53.33	RMS	32.5	-36	0	49.83	54	-4.17	-	-	268	130	H

Pk - Peak detector
RMS - RMS detection

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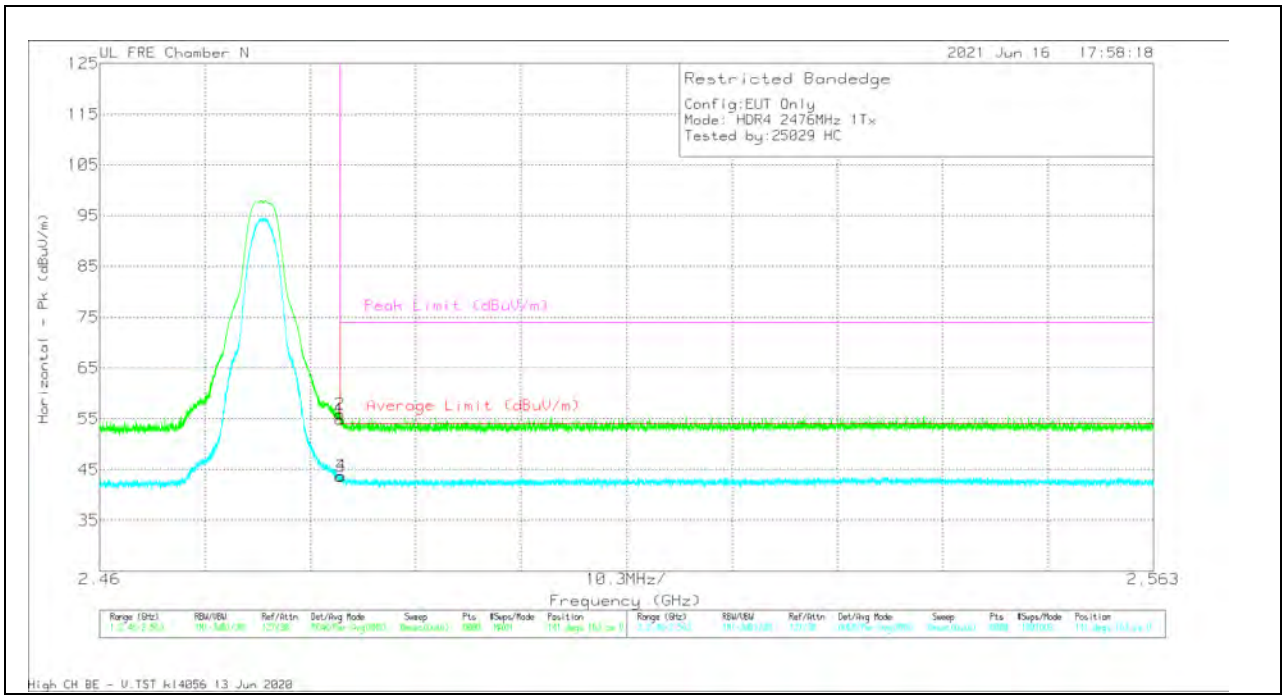
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	58.35	Pk	32.5	-36	0	54.85	-	-	74	-19.15	141	163	V
2	2.48351	59.42	Pk	32.5	-36	0	55.92	-	-	74	-18.08	141	163	V
3	2.4835	47.14	RMS	32.5	-36	0	43.64	54	-10.36	-	-	141	163	V
4	2.48359	47.23	RMS	32.5	-36	0	43.73	54	-10.27	-	-	141	163	V

Pk - Peak detector
RMS - RMS detection

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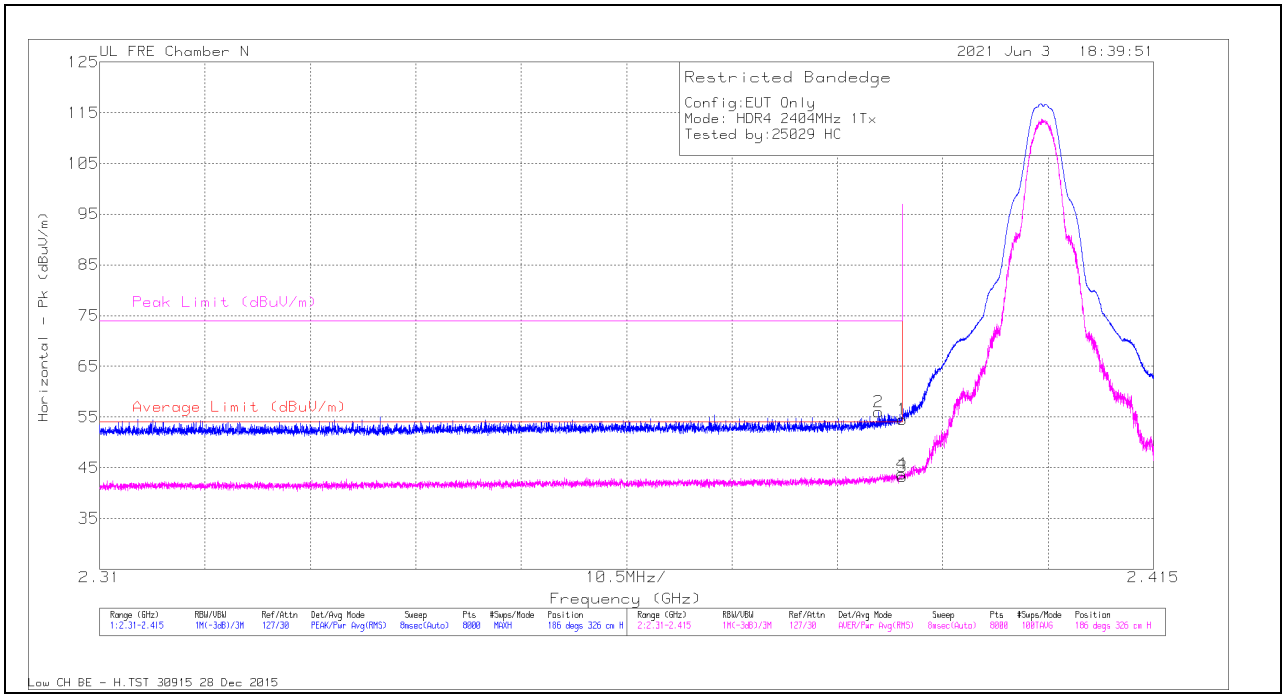
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	58.38	Pk	32.4	-36.2	54.58	-	-	74	-19.42	186	326	H
2	2.38759	59.76	Pk	32.4	-36.2	55.96	-	-	74	-18.04	186	326	H
3	2.39	47.09	RMS	32.4	-36.2	43.29	54	-10.71	-	-	186	326	H
4	2.38989	47.55	RMS	32.4	-36.2	43.75	54	-10.25	-	-	186	326	H

Pk - Peak detector
RMS - RMS detection

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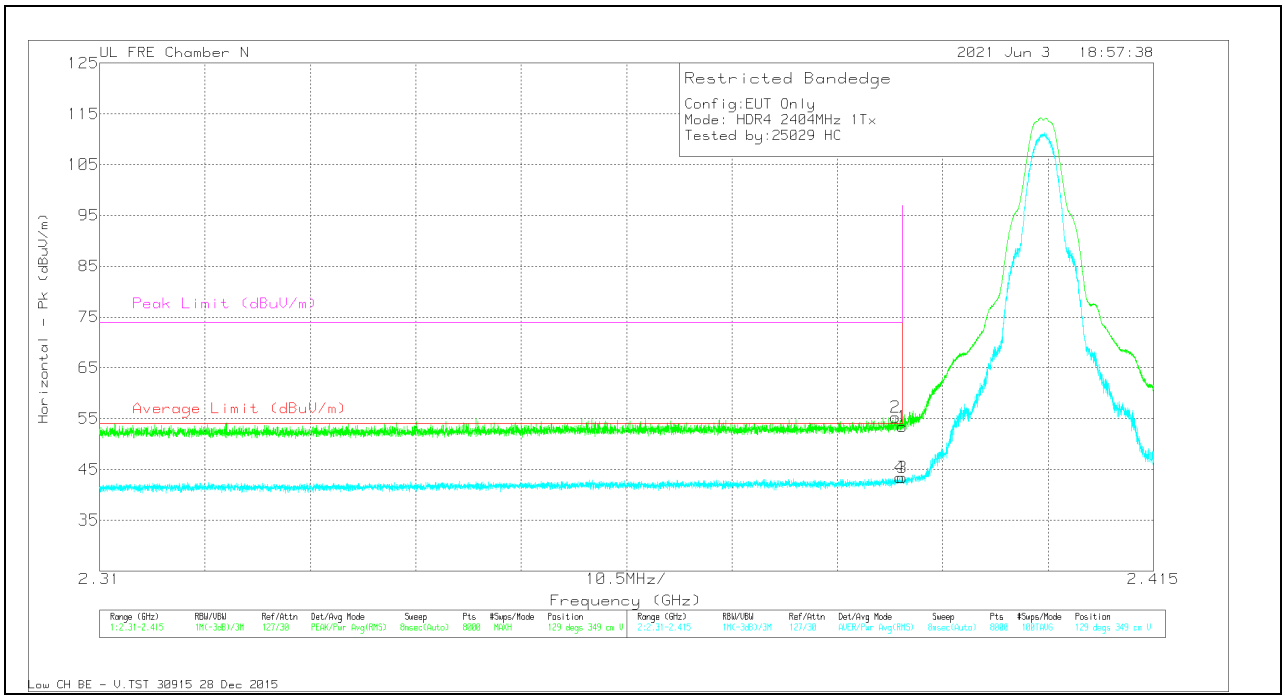
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.22	Pk	32.4	-36.2	53.42	-	-	74	-20.58	129	349	V
2	2.38929	59.03	Pk	32.4	-36.2	55.23	-	-	74	-18.77	129	349	V
3	2.39	47.21	RMS	32.4	-36.2	43.41	54	-10.59	-	-	129	349	V
4	2.38971	47.24	RMS	32.4	-36.2	43.44	54	-10.56	-	-	129	349	V

Pk - Peak detector
RMS - RMS detection

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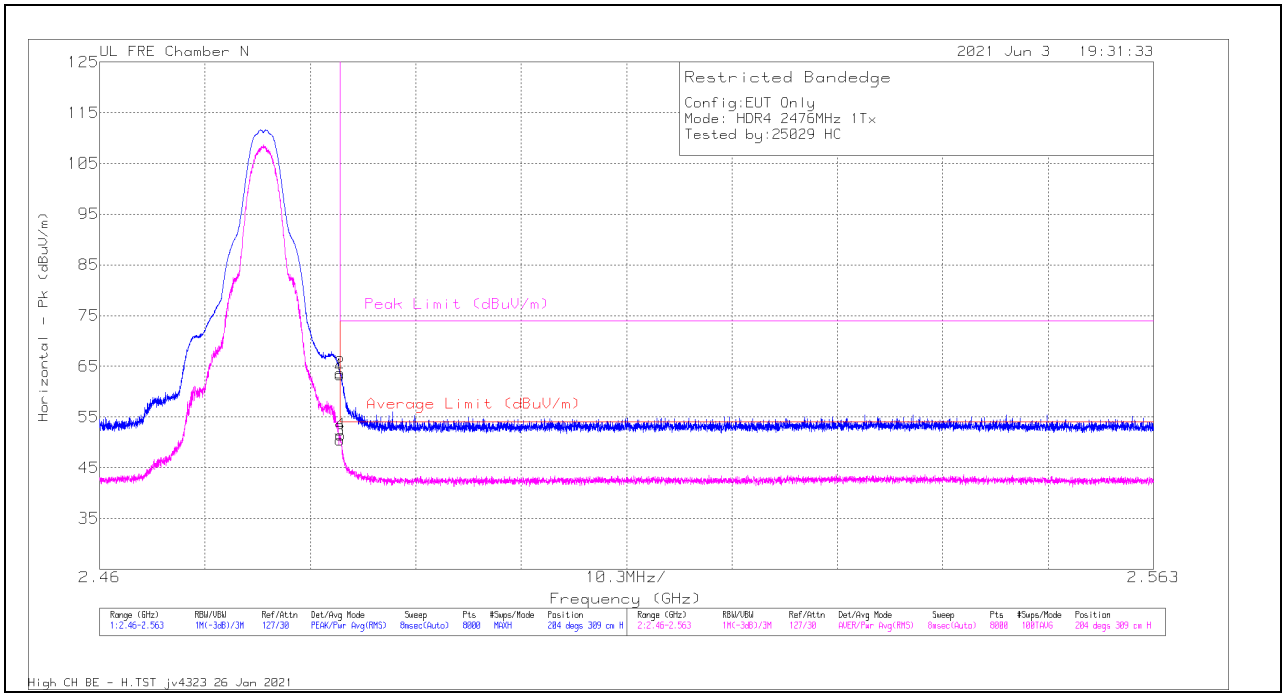
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	66.79	Pk	32.5	-36	63.29	-	-	74	-10.71	204	309	H
2	2.48351	67.24	Pk	32.5	-36	63.74	-	-	74	-10.26	204	309	H
3	2.4835	53.97	RMS	32.5	-36	50.47	54	-3.53	-	-	204	309	H
4	2.48355	55	RMS	32.5	-36	51.5	54	-2.5	-	-	204	309	H

Pk - Peak detector
RMS - RMS detection

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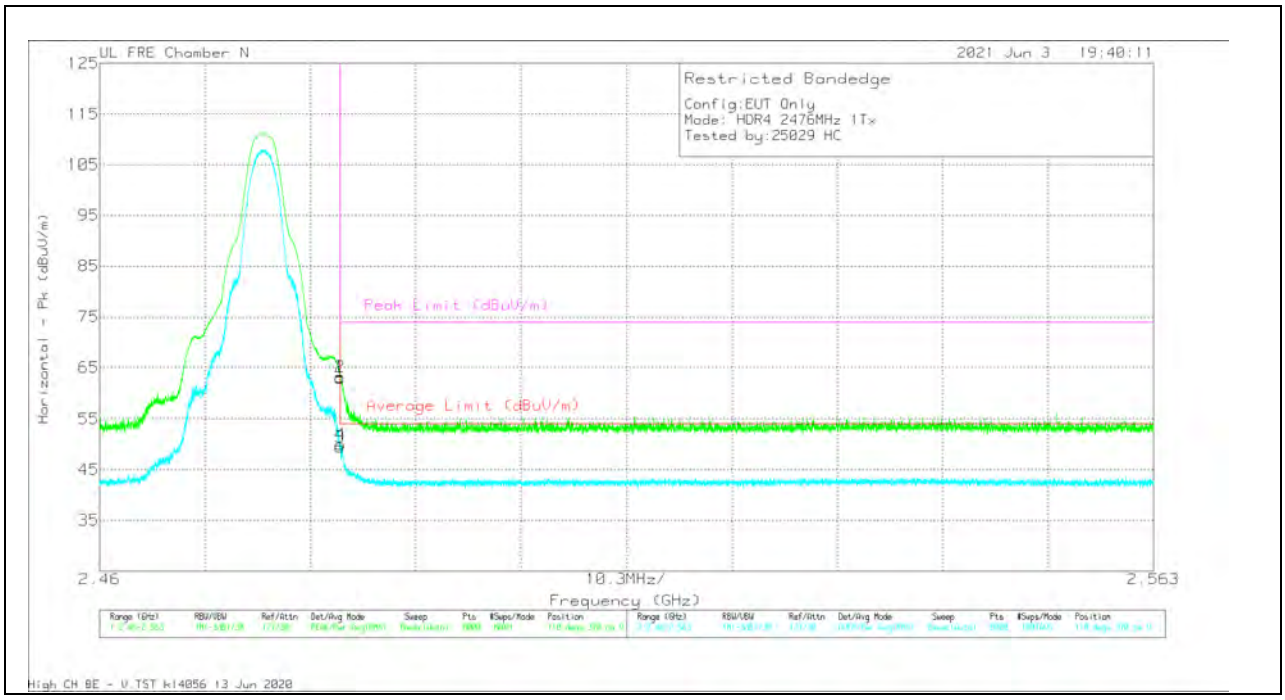
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	66.6	Pk	32.5	-36	63.1	-	-	74	-10.9	118	370	V
2	2.48351	66.74	Pk	32.5	-36	63.24	-	-	74	-10.76	118	370	V
3	2.4835	52.94	RMS	32.5	-36	49.44	54	-4.56	-	-	118	370	V
4	2.48353	53.51	RMS	32.5	-36	50.01	54	-3.99	-	-	118	370	V

Pk - Peak detector
RMS - RMS detection

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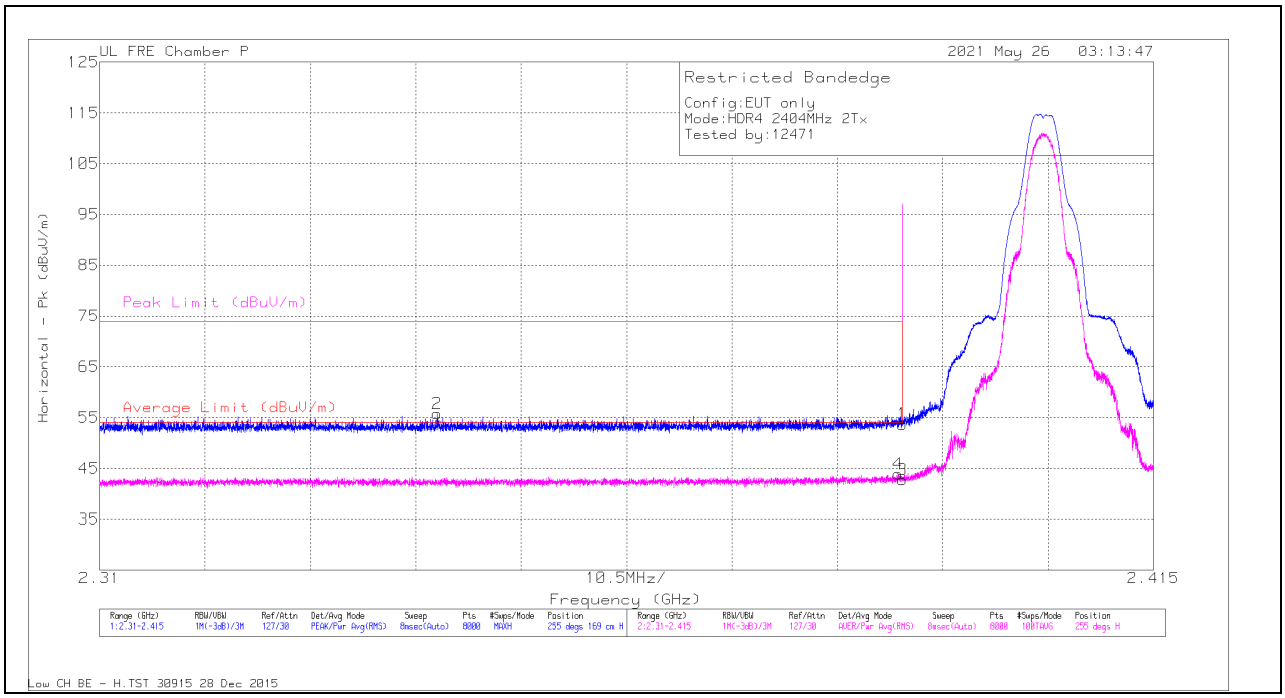
10.2.2. HIGH POWER HDR TXBF (HDR4)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/ Pad (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	55.93	Pk	31.9	-34.1	53.73	-	-	74	-20.27	255	169	H
2	2.34364	58.07	Pk	31.8	-34.1	55.77	-	-	74	-18.23	255	169	H
3	2.39	45.03	RMS	31.9	-34.1	42.83	54	-11.17	-	-	255	169	H
4	2.38956	46.04	RMS	31.9	-34.1	43.84	54	-10.16	-	-	255	169	H

Pk - Peak detector
RMS - RMS detection

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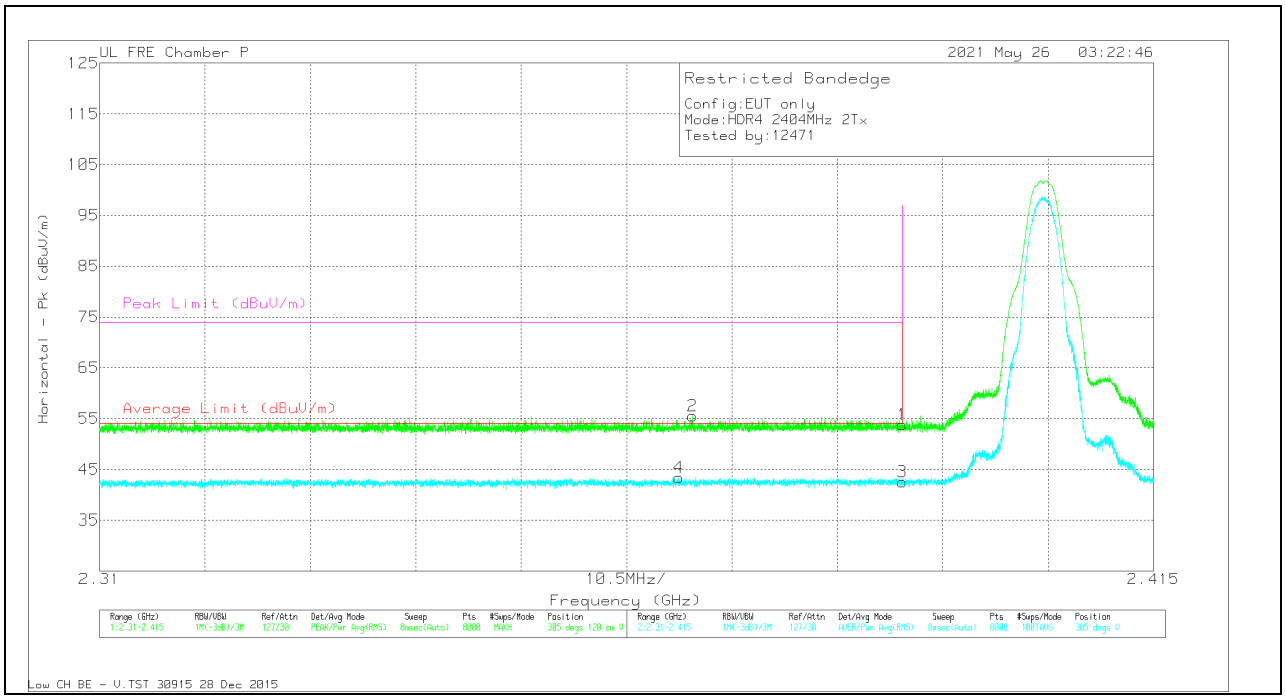
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	55.99	Pk	31.9	-34.1	53.79	-	-	74	-20.21	305	120	V
2	2.36906	57.86	Pk	31.8	-34.1	55.56	-	-	74	-18.44	305	120	V
3	2.39	44.71	RMS	31.9	-34.1	42.51	54	-11.49	-	-	305	120	V
4	2.36768	45.7	RMS	31.8	-34.1	43.4	54	-10.6	-	-	305	120	V

Pk - Peak detector
RMS - RMS detection

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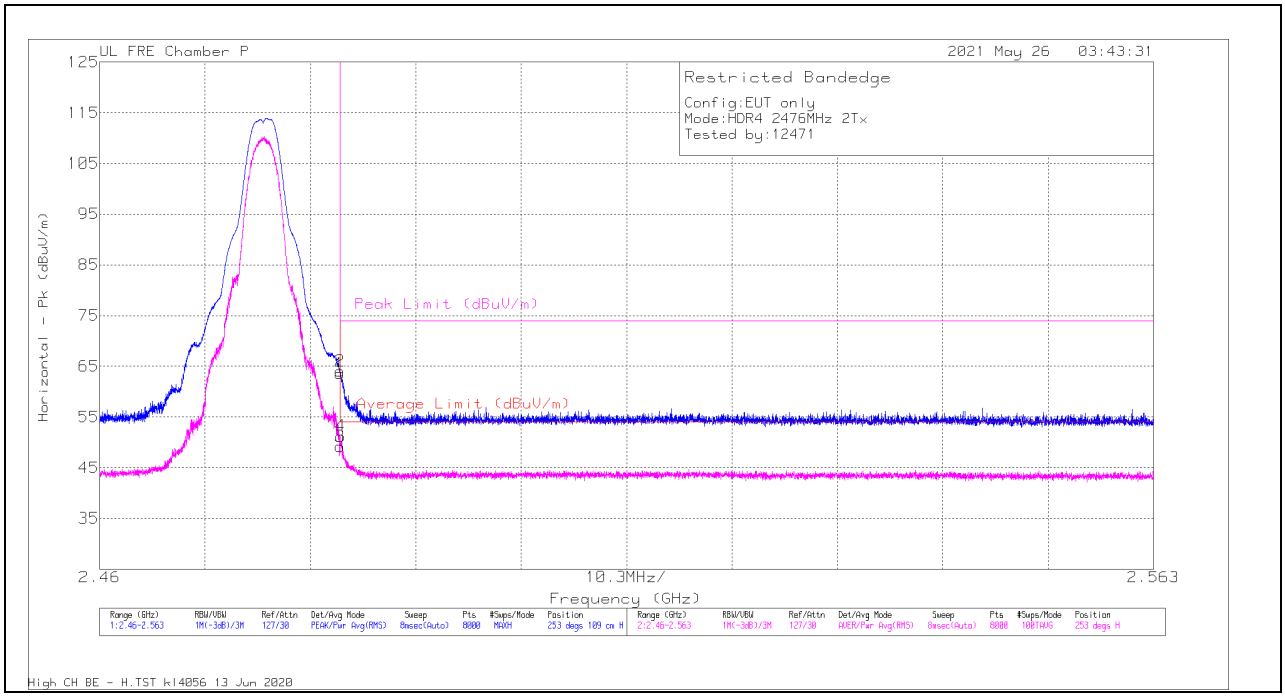
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	65.01	Pk	32.5	-34	63.51	-	-	74	-10.49	253	109	H
2	2.48351	65.6	Pk	32.5	-34	64.1	-	-	74	-9.9	253	109	H
3	2.4835	50.66	RMS	32.5	-34	49.16	54	-4.84	-	-	253	109	H
4	2.48355	52.75	RMS	32.5	-34	51.25	54	-2.75	-	-	253	109	H

Pk - Peak detector
RMS - RMS detection

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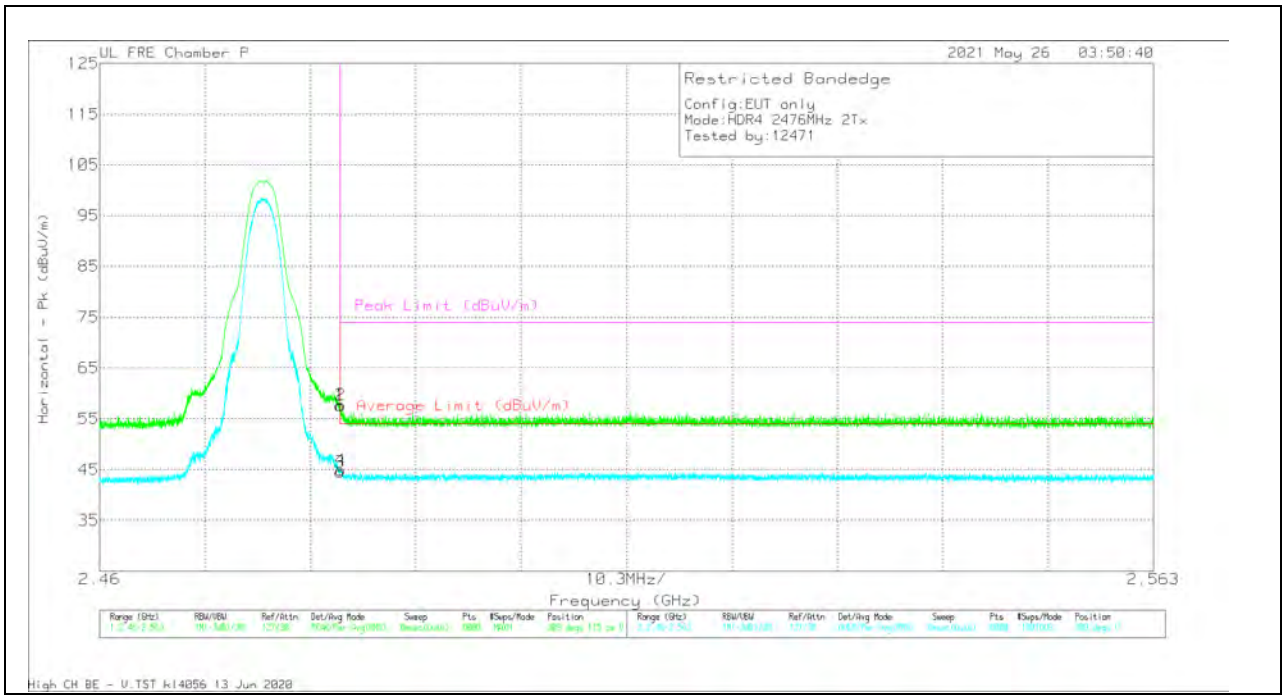
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	59.18	Pk	32.5	-34	57.68	-	-	74	-16.32	309	115	V
2	2.48354	59.19	Pk	32.5	-34	57.69	-	-	74	-16.31	309	115	V
3	2.4835	46.07	RMS	32.5	-34	44.57	54	-9.43	-	-	309	115	V
4	2.48358	46.34	RMS	32.5	-34	44.84	54	-9.16	-	-	309	115	V

Pk - Peak detector
RMS - RMS detection

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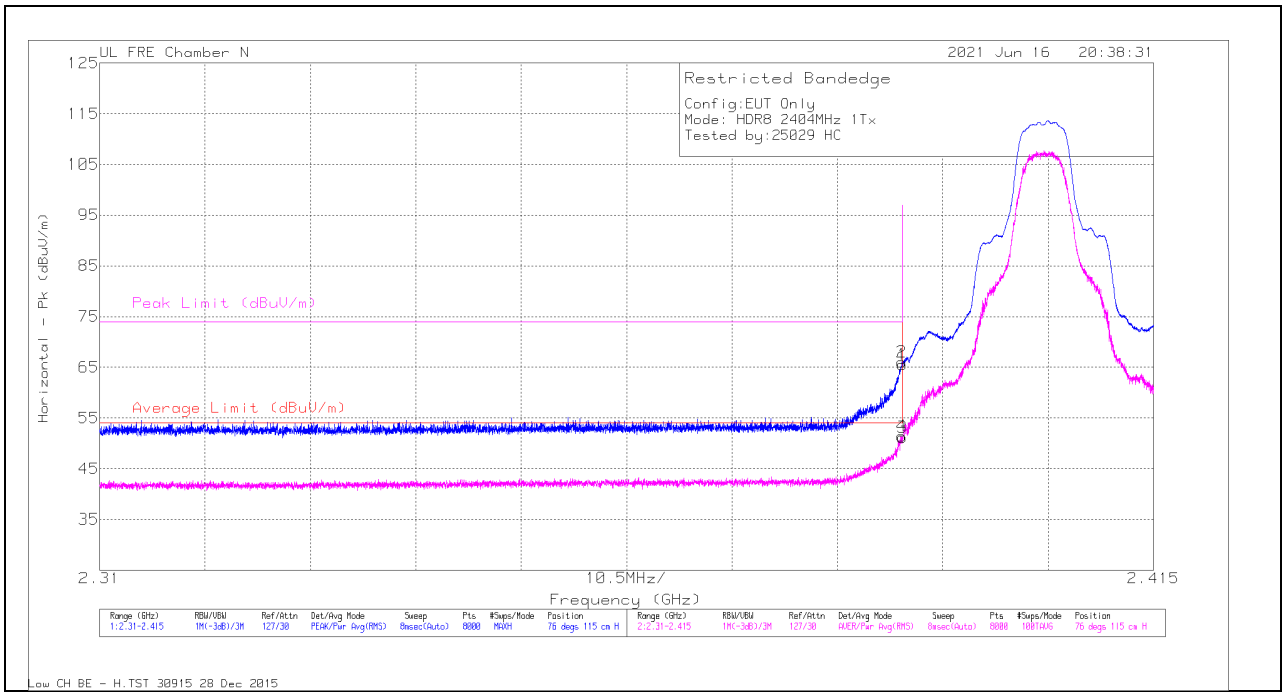
10.2.3. HIGH POWER HDR (HDR8)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	69.36	Pk	32.4	-36.2	0	65.56	-	-	74	-8.44	76	115	H
2	2.38993	69.88	Pk	32.4	-36.2	0	66.08	-	-	74	-7.92	76	115	H
3	2.39	54.95	RMS	32.4	-36.2	0	51.15	54	-2.85	-	-	76	115	H
4	2.38993	55.27	RMS	32.4	-36.2	0	51.47	54	-2.53	-	-	76	115	H

Pk - Peak detector
RMS - RMS detection

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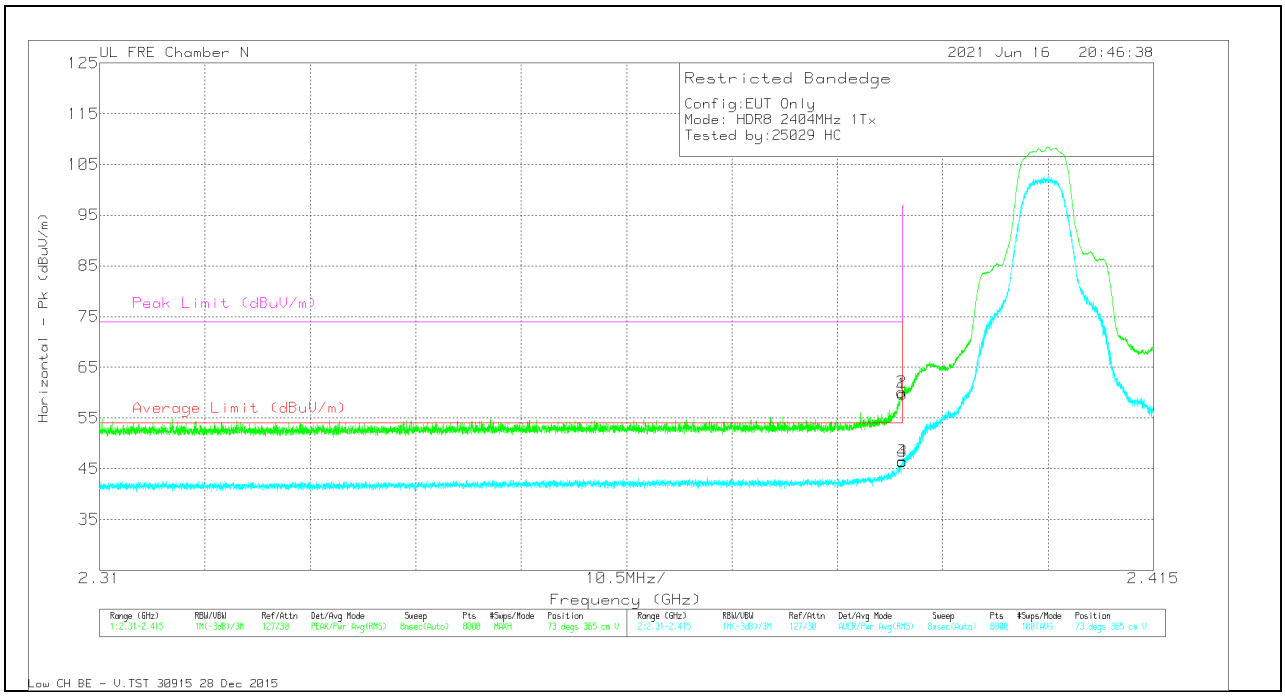
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	63.52	Pk	32.4	-36.2	0	59.72	-	-	74	-14.28	73	365	V
2	2.38992	63.89	Pk	32.4	-36.2	0	60.09	-	-	74	-13.91	73	365	V
3	2.39	50.33	RMS	32.4	-36.2	0	46.53	54	-7.47	-	-	73	365	V
4	2.38997	50.18	RMS	32.4	-36.2	0	46.38	54	-7.62	-	-	73	365	V

Pk - Peak detector
RMS - RMS detection

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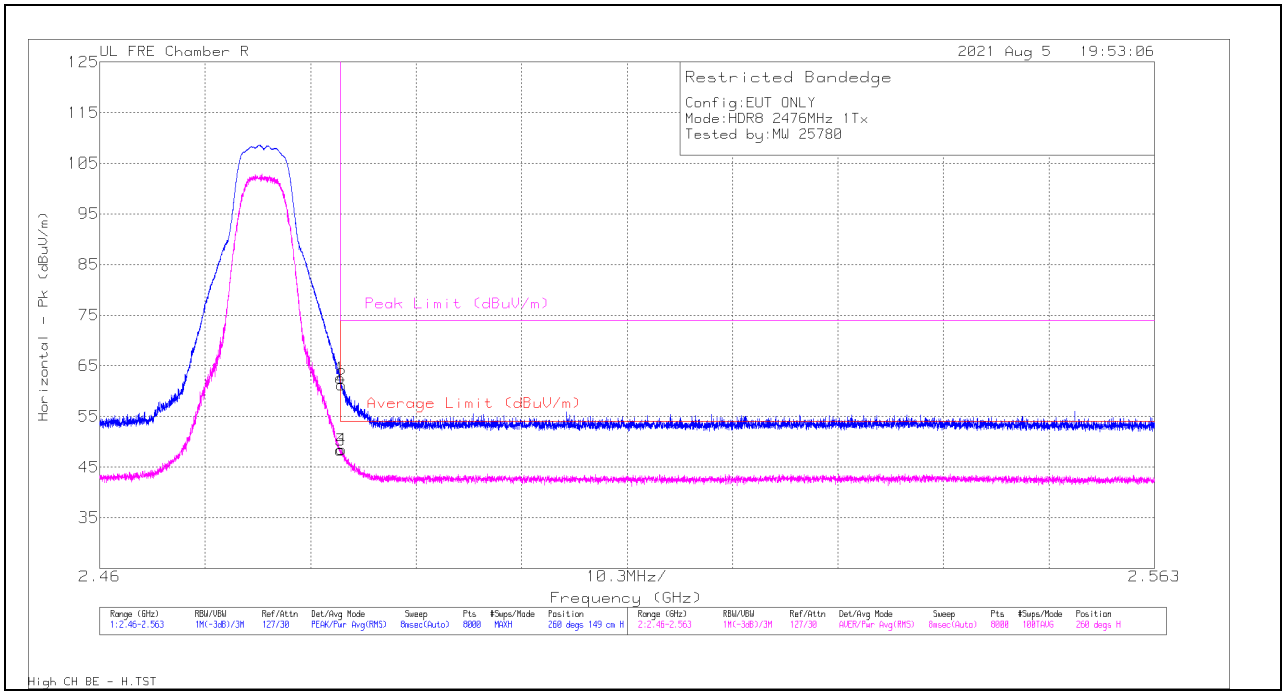
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213973 (dB/m)	Amp/Cbl/Fltr/Pad (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	65.34	Pk	32.5	-35.3	62.54	-	-	74	-11.46	260	149	H
2	* 2.4836	63.96	Pk	32.5	-35.3	61.16	-	-	74	-12.84	260	149	H
3	* 2.4835	51.16	RMS	32.5	-35.3	48.36	54	-5.64	-	-	260	149	H
4	* 2.48363	51.24	RMS	32.5	-35.3	48.44	54	-5.56	-	-	260	149	H

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

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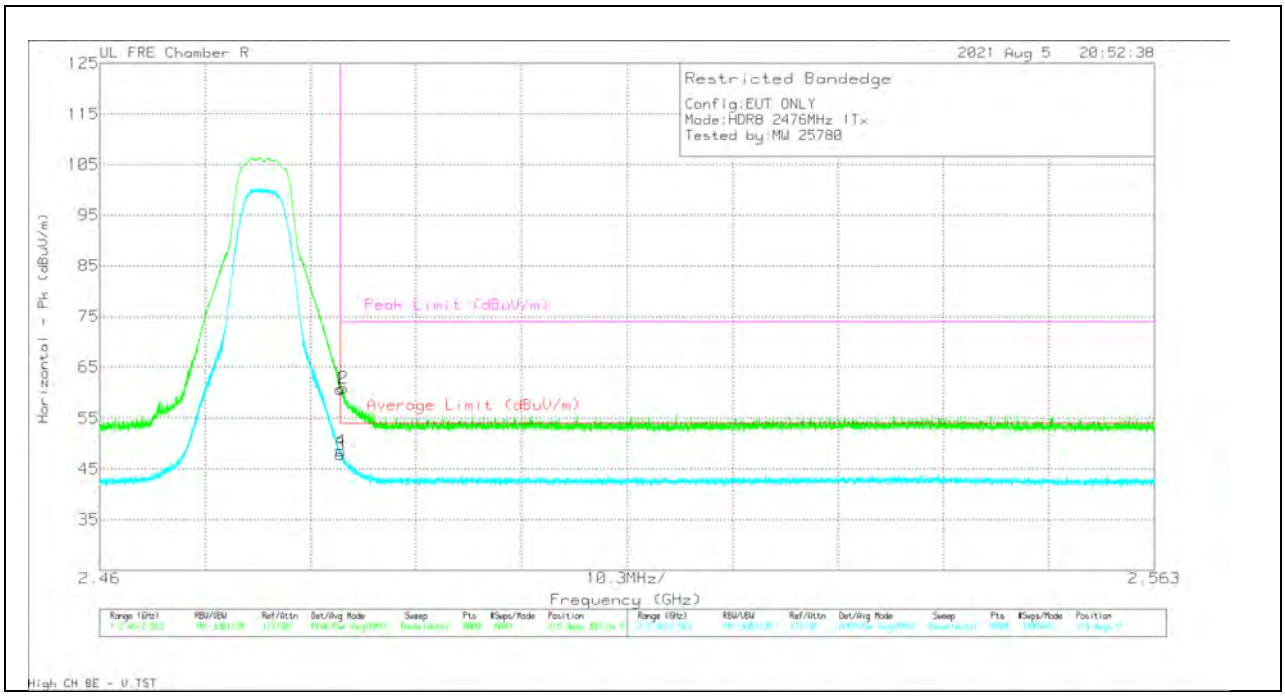
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213973 (dB/m)	Amp/Cbl/Fltr/Pad (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	63.51	Pk	32.5	-35.3	60.71	-	-	74	-13.29	215	387	V
2	* 2.48377	63.77	Pk	32.5	-35.3	60.97	-	-	74	-13.03	215	387	V
3	* 2.4835	50.71	RMS	32.5	-35.3	47.91	54	-6.09	-	-	215	387	V
4	* 2.48358	51.38	RMS	32.5	-35.3	48.58	54	-5.42	-	-	215	387	V

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

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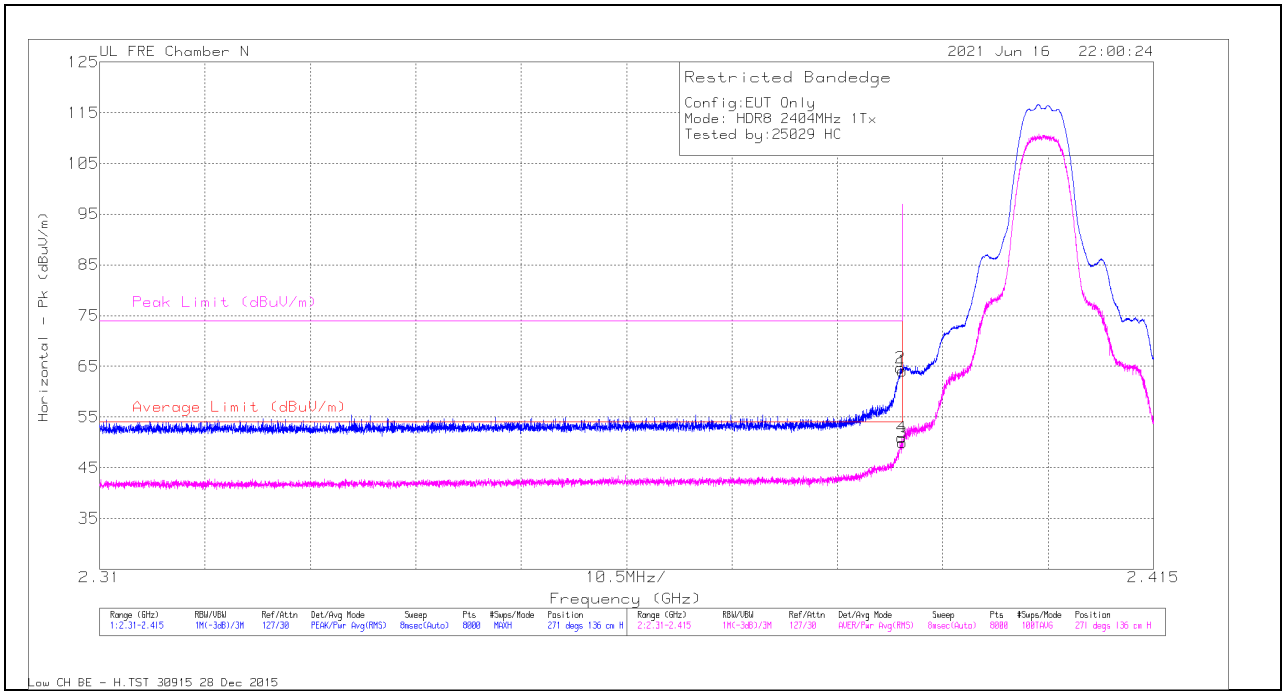
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	67.83	Pk	32.4	-36.2	0	64.03	-	-	74	-9.97	271	136	H
2	2.38981	68.43	Pk	32.4	-36.2	0	64.63	-	-	74	-9.37	271	136	H
3	2.39	53.76	RMS	32.4	-36.2	0	49.96	54	-4.04	-	-	271	136	H
4	2.38993	54.78	RMS	32.4	-36.2	0	50.98	54	-3.02	-	-	271	136	H

Pk - Peak detector
RMS - RMS detection

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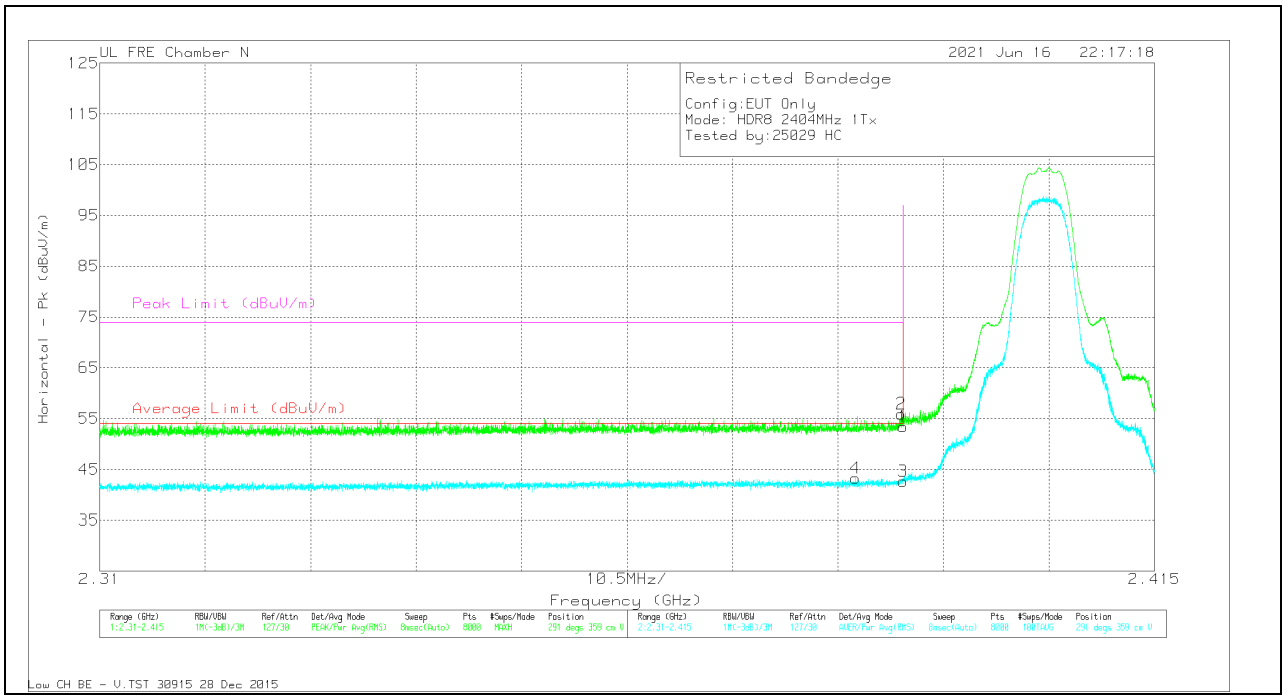
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	2.38524	47.04	RMS	32.4	-36.2	0	43.24	54	-10.76	-	-	291	359	V
2	2.3898	59.75	Pk	32.4	-36.2	0	55.95	-	-	74	-18.05	291	359	V
1	2.39	57.2	Pk	32.4	-36.2	0	53.4	-	-	74	-20.6	291	359	V
3	2.39	46.41	RMS	32.4	-36.2	0	42.61	54	-11.39	-	-	291	359	V

Pk - Peak detector
RMS - RMS detection

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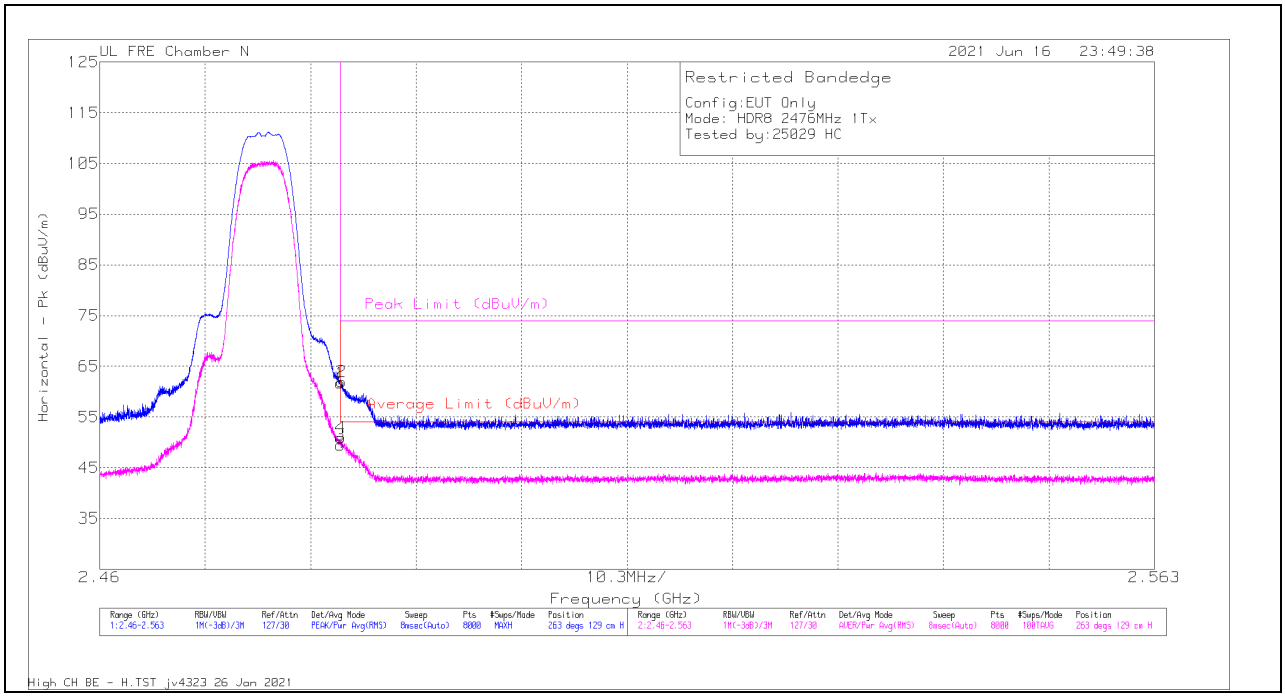
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (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	65.24	Pk	32.5	-36	0	61.74	-	-	74	-12.26	263	129	H
2	2.48362	65.49	Pk	32.5	-36	0	61.99	-	-	74	-12.01	263	129	H
3	2.4835	53.01	RMS	32.5	-36	0	49.51	54	-4.49	-	-	263	129	H
4	2.48353	54.47	RMS	32.5	-36	0	50.97	54	-3.03	-	-	263	129	H

Pk - Peak detector
RMS - RMS detection

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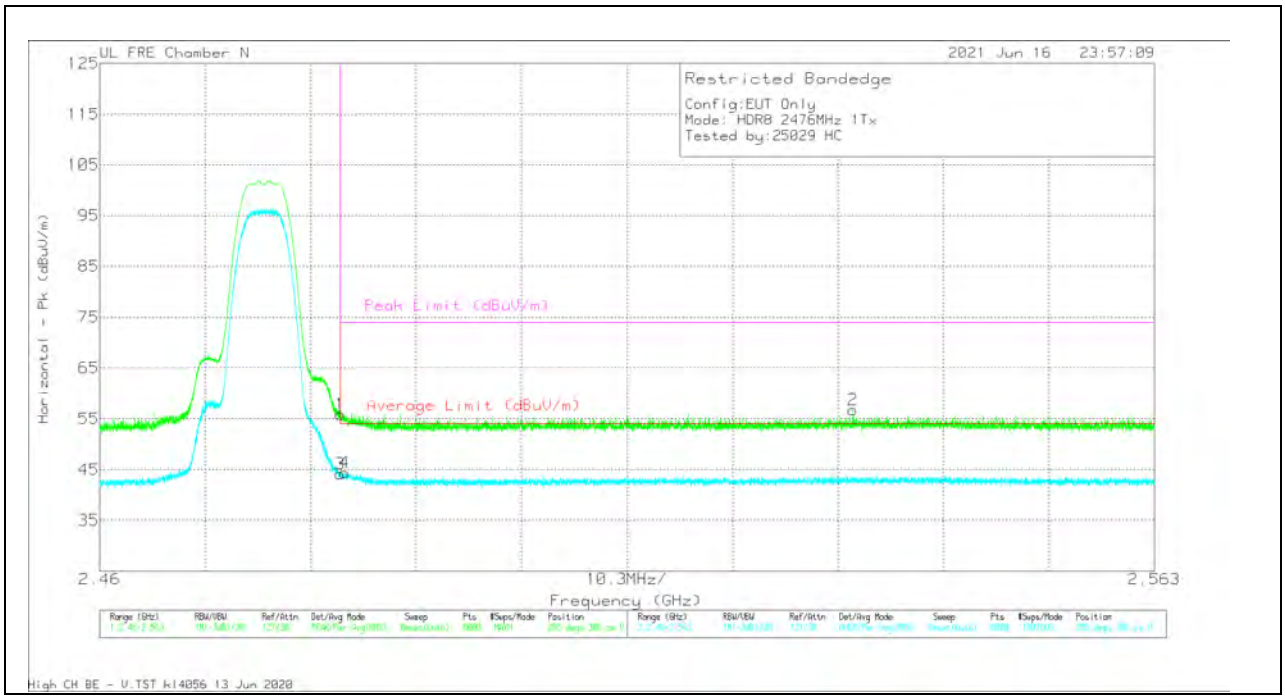
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	59.43	Pk	32.5	-36	55.93	-	-	74	-18.07	285	386	V
2	2.53358	59.84	Pk	32.6	-35.7	56.74	-	-	74	-17.26	285	386	V
3	2.4835	47.61	RMS	32.5	-36	44.11	54	-9.89	-	-	285	386	V
4	2.48393	47.88	RMS	32.5	-36	44.38	54	-9.62	-	-	285	386	V

Pk - Peak detector
RMS - RMS detection

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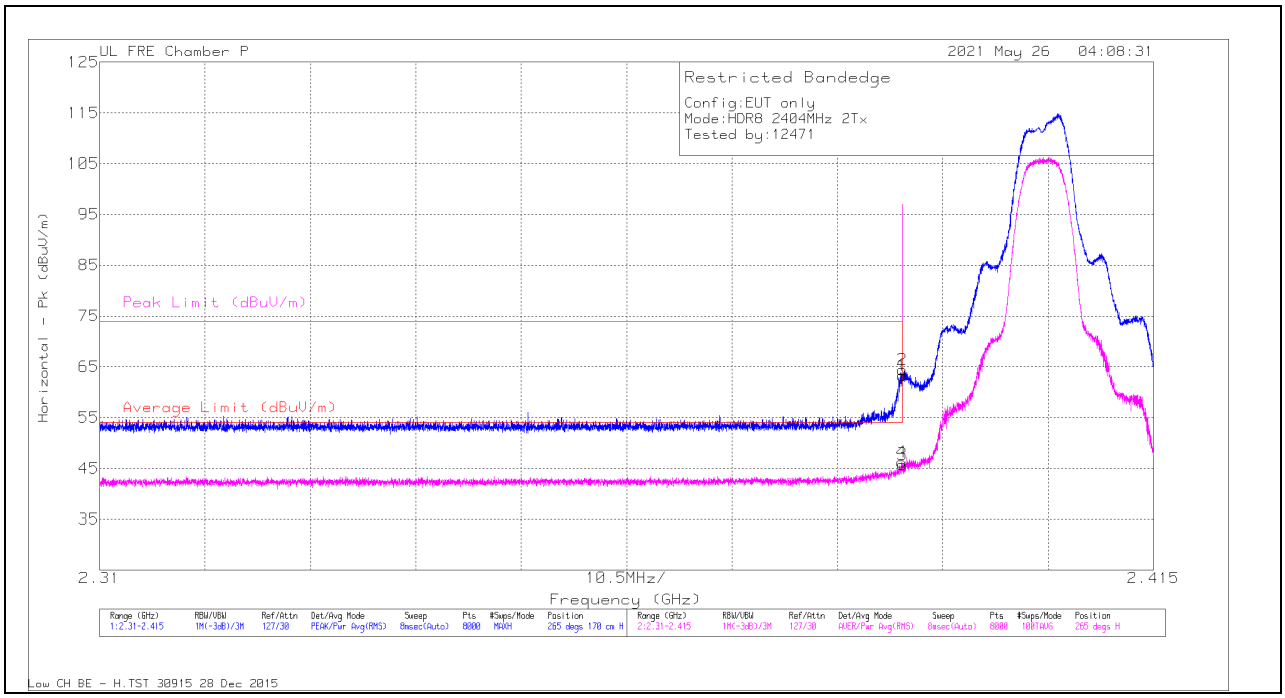
10.2.4. HIGH POWER HDR TXBF (HDR8)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	65.49	Pk	31.9	-34.1	63.29	-	-	74	-10.71	265	170	H
2	2.38997	66.66	Pk	31.9	-34.1	64.46	-	-	74	-9.54	265	170	H
3	2.39	48.01	RMS	31.9	-34.1	45.81	54	-8.19	-	-	265	170	H
4	2.38989	48.42	RMS	31.9	-34.1	46.22	54	-7.78	-	-	265	170	H

Pk - Peak detector
RMS - RMS detection

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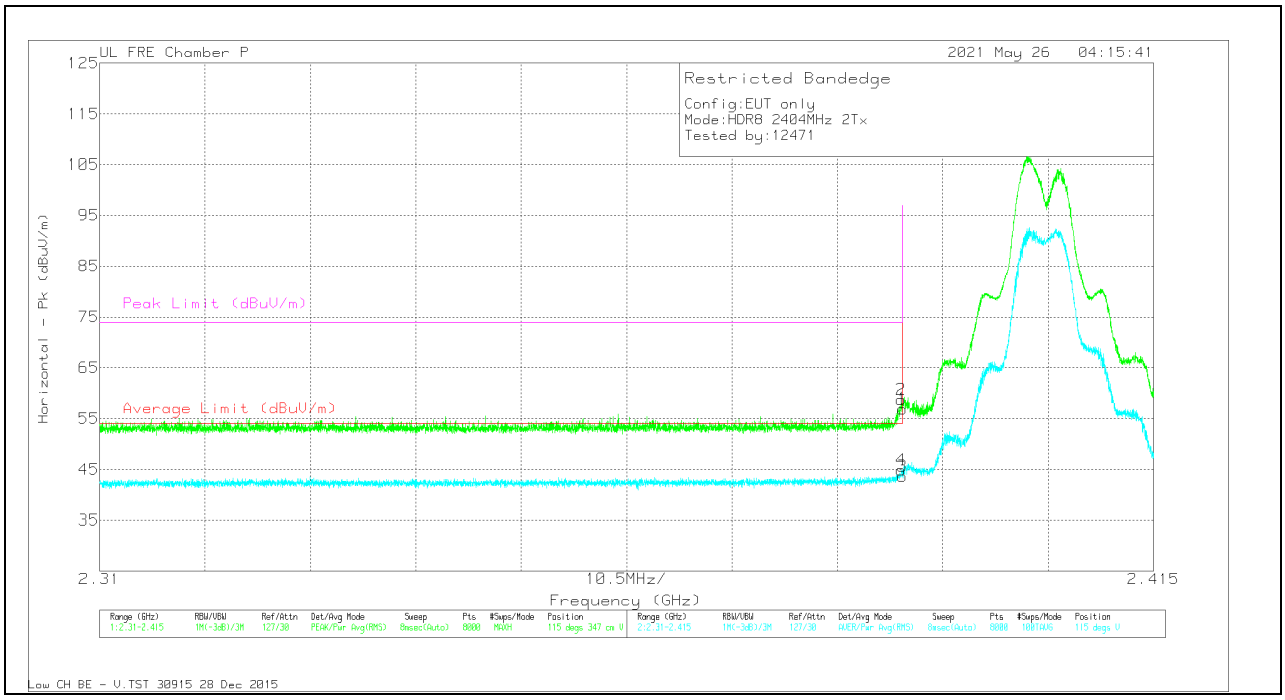
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/ Pad (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	59.14	Pk	31.9	-34.1	56.94	-	-	74	-17.06	115	347	V
2	2.38986	60.97	Pk	31.9	-34.1	58.77	-	-	74	-15.23	115	347	V
3	2.39	45.88	RMS	31.9	-34.1	43.68	54	-10.32	-	-	115	347	V
4	2.38986	47.11	RMS	31.9	-34.1	44.91	54	-9.09	-	-	115	347	V

Pk - Peak detector
RMS - RMS detection

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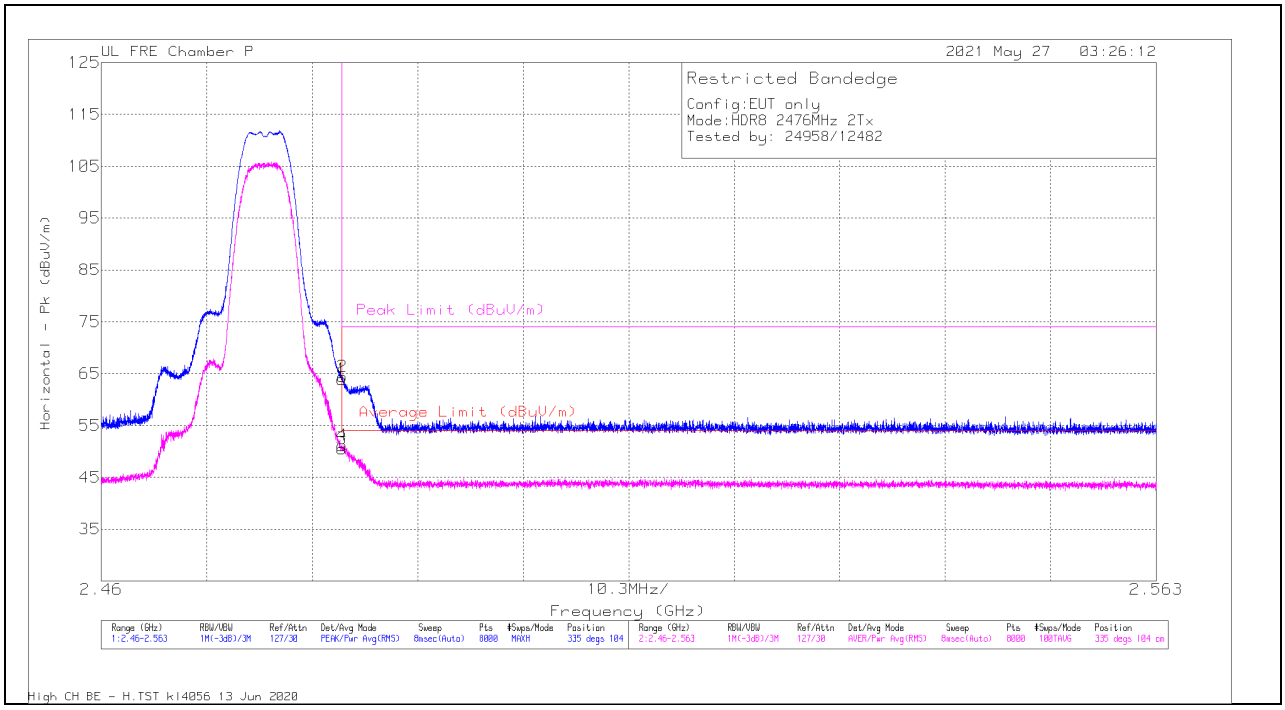
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	65.41	Pk	32.5	-34	63.91	-	-	74	-10.09	335	104	H
2	2.48356	65.91	Pk	32.5	-34	64.41	-	-	74	-9.59	335	104	H
3	2.4835	52.01	RMS	32.5	-34	50.51	54	-3.49	-	-	335	104	H
4	2.48351	52.65	RMS	32.5	-34	51.15	54	-2.85	-	-	335	104	H

Pk - Peak detector
RMS - RMS detection

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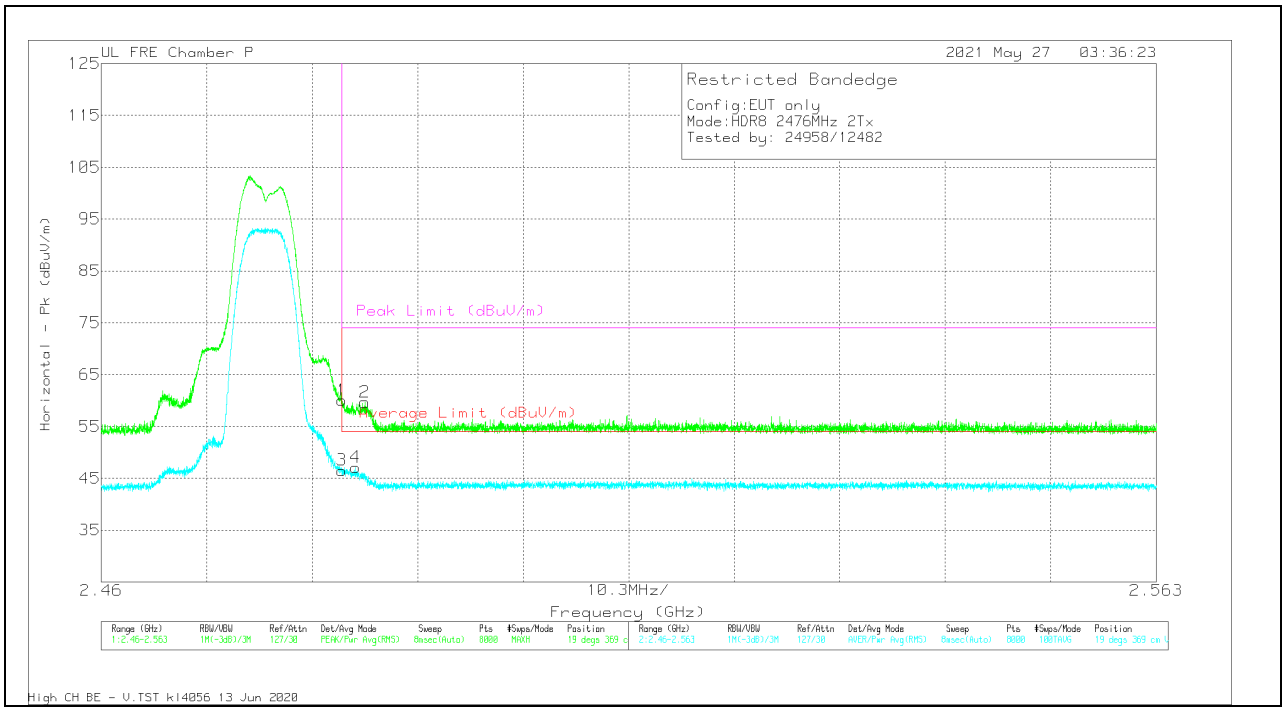
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200896 (dB/m)	Amp/Cbl/Fltr/Pad (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	32.5	-34	60.04	-	-	74	-13.96	19	369	V
2	2.48573	61.16	Pk	32.5	-34	59.66	-	-	74	-14.34	19	369	V
3	2.4835	48.02	RMS	32.5	-34	46.52	54	-7.48	-	-	19	369	V
4	2.48485	48.61	RMS	32.5	-34	47.11	54	-6.89	-	-	19	369	V

Pk - Peak detector
RMS - RMS detection

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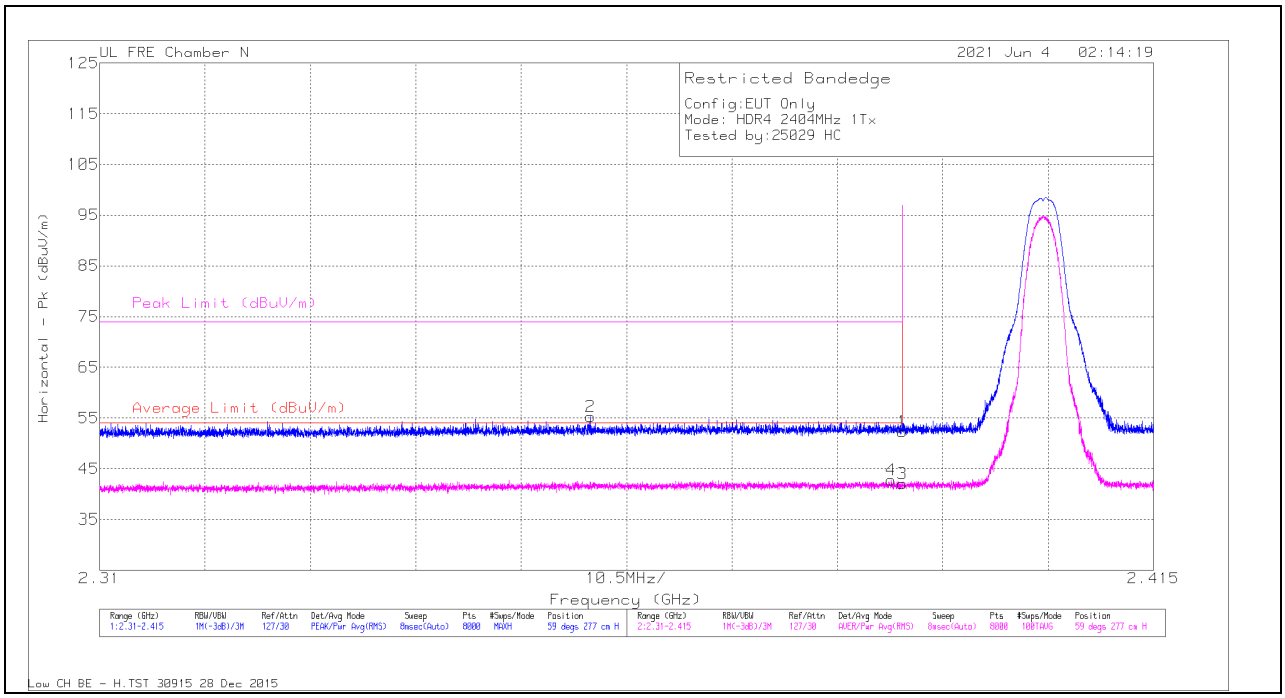
10.2.5. LOW POWER HDR (HDR4)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.09	Pk	32.4	-36.2	52.29	-	-	74	-21.71	59	277	H
2	2.35892	59.33	Pk	32.3	-36.3	55.33	-	-	74	-18.67	59	277	H
3	2.39	45.88	RMS	32.4	-36.2	42.08	54	-11.92	-	-	59	277	H
4	2.38887	46.59	RMS	32.4	-36.2	42.79	54	-11.21	-	-	59	277	H

Pk - Peak detector
RMS - RMS detection

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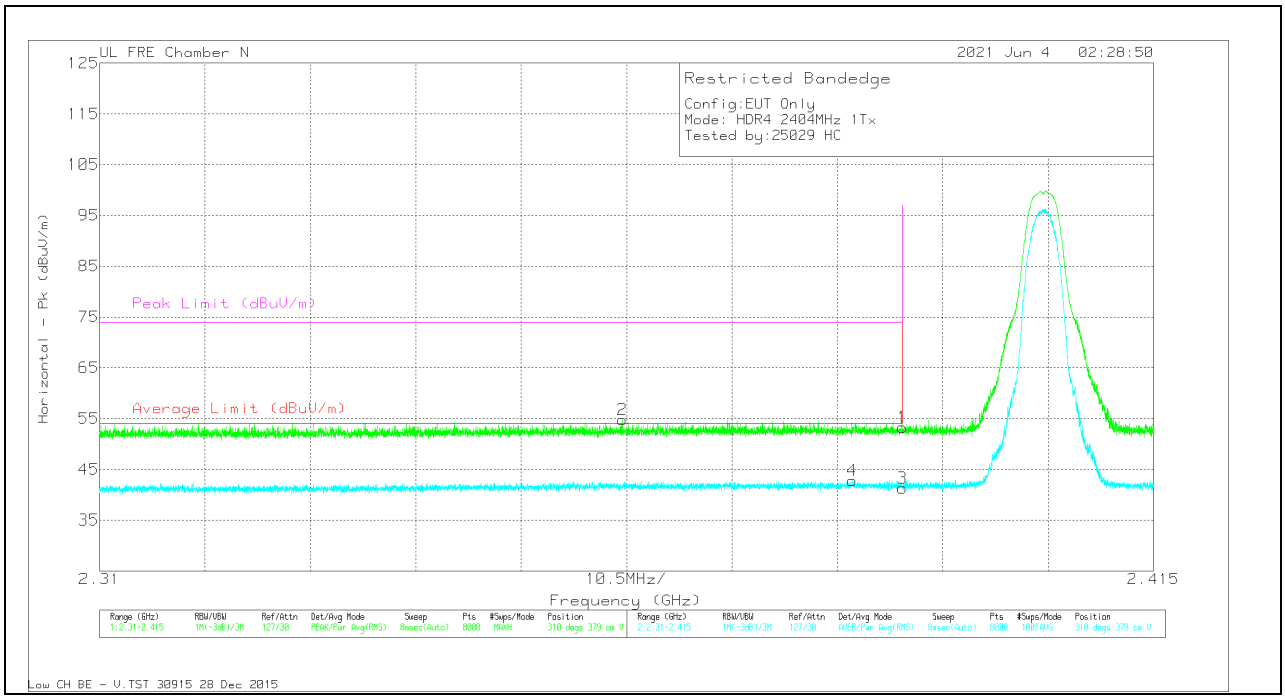
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.1	Pk	32.4	-36.2	53.3	-	-	74	-20.7	310	379	V
2	2.36207	58.83	Pk	32.3	-36.3	54.83	-	-	74	-19.17	310	379	V
3	2.39	45.09	RMS	32.4	-36.2	41.29	54	-12.71	-	-	310	379	V
4	2.38497	46.55	RMS	32.4	-36.2	42.75	54	-11.25	-	-	310	379	V

Pk - Peak detector
RMS - RMS detection

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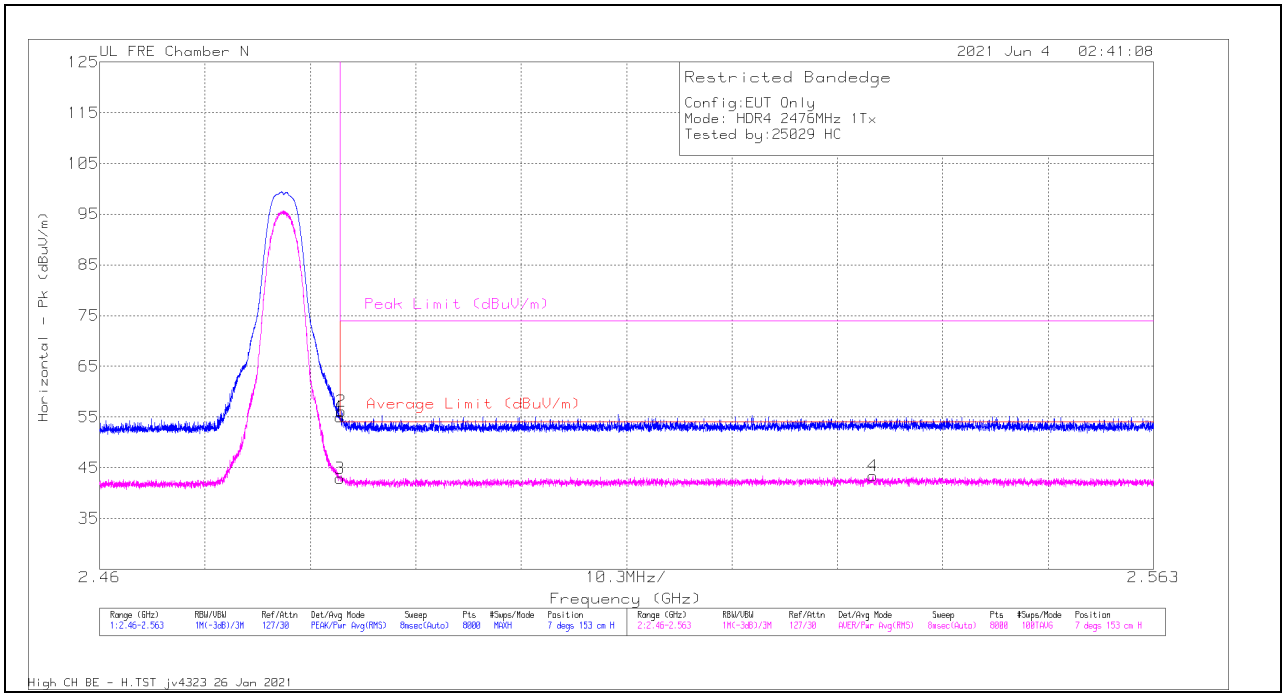
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	58.56	Pk	32.5	-36	55.06	-	-	74	-18.94	7	153	H
2	2.4836	59.6	Pk	32.5	-36	56.1	-	-	74	-17.9	7	153	H
3	2.4835	46.35	RMS	32.5	-36	42.85	54	-11.15	-	-	7	153	H
4	2.53559	46.49	RMS	32.6	-35.7	43.39	54	-10.61	-	-	7	153	H

Pk - Peak detector
RMS - RMS detection

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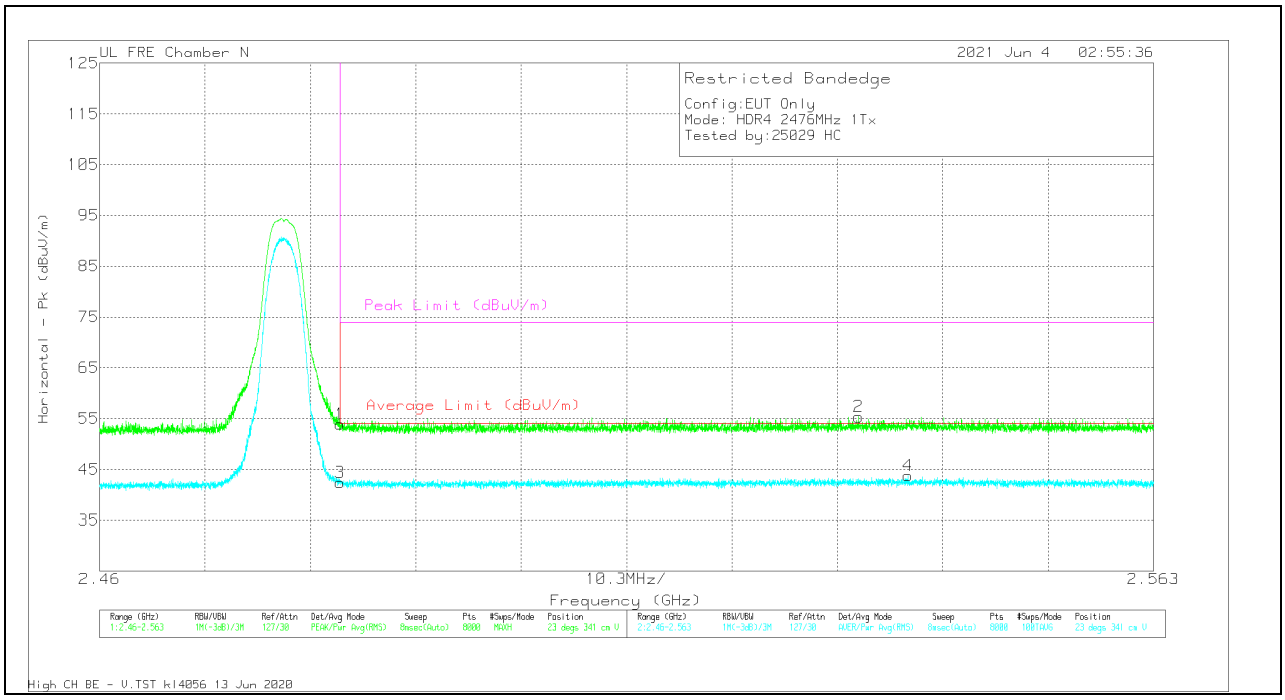
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.43	Pk	32.5	-36	53.93	-	-	74	-20.07	23	341	V
2	2.53416	58.44	Pk	32.6	-35.7	55.34	-	-	74	-18.66	23	341	V
3	2.4835	45.96	RMS	32.5	-36	42.46	54	-11.54	-	-	23	341	V
4	2.539	46.82	RMS	32.6	-35.7	43.72	54	-10.28	-	-	23	341	V

Pk - Peak detector
RMS - RMS detection

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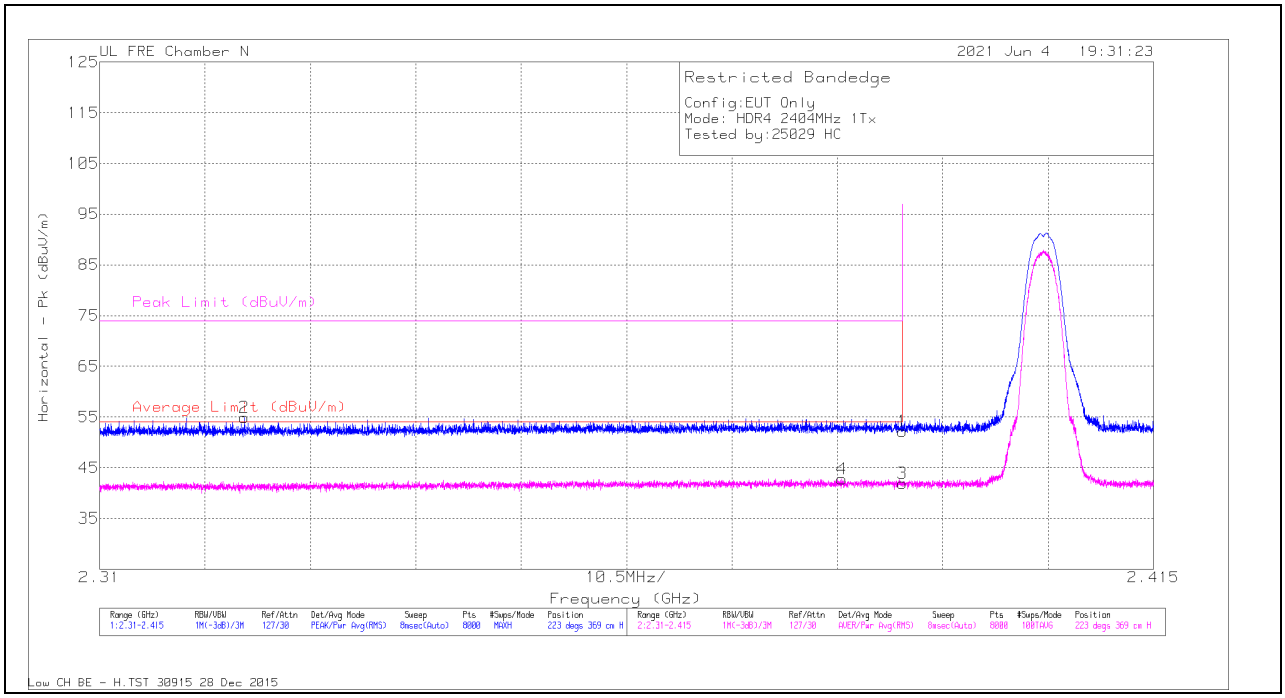
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.01	Pk	32.4	-36.2	52.21	-	-	74	-21.79	223	369	H
2	2.32441	59.35	Pk	31.9	-36.4	54.85	-	-	74	-19.15	223	369	H
3	2.39	45.68	RMS	32.4	-36.2	41.88	54	-12.12	-	-	223	369	H
4	2.38396	46.55	RMS	32.4	-36.2	42.75	54	-11.25	-	-	223	369	H

Pk - Peak detector
RMS - RMS detection

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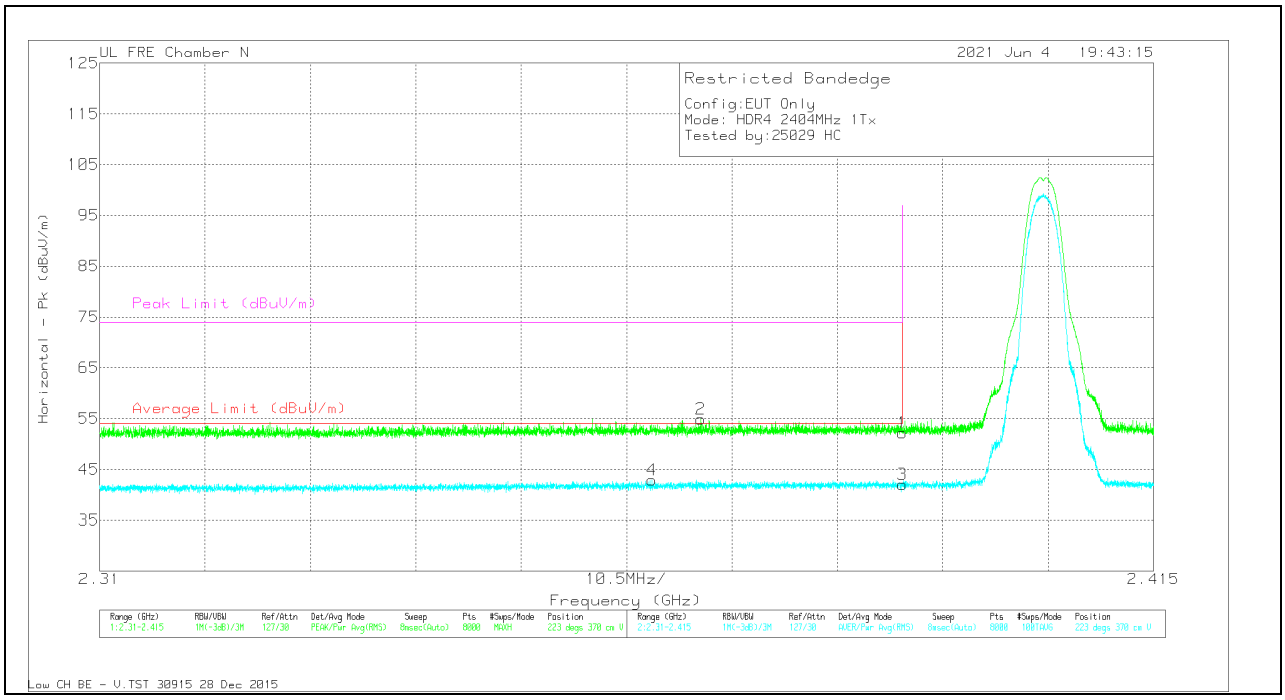
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.03	Pk	32.4	-36.2	52.23	-	-	74	-21.77	223	370	V
2	2.36991	58.82	Pk	32.4	-36.3	54.92	-	-	74	-19.08	223	370	V
3	2.39	45.85	RMS	32.4	-36.2	42.05	54	-11.95	-	-	223	370	V
4	2.36503	46.94	RMS	32.3	-36.3	42.94	54	-11.06	-	-	223	370	V

Pk - Peak detector
RMS - RMS detection

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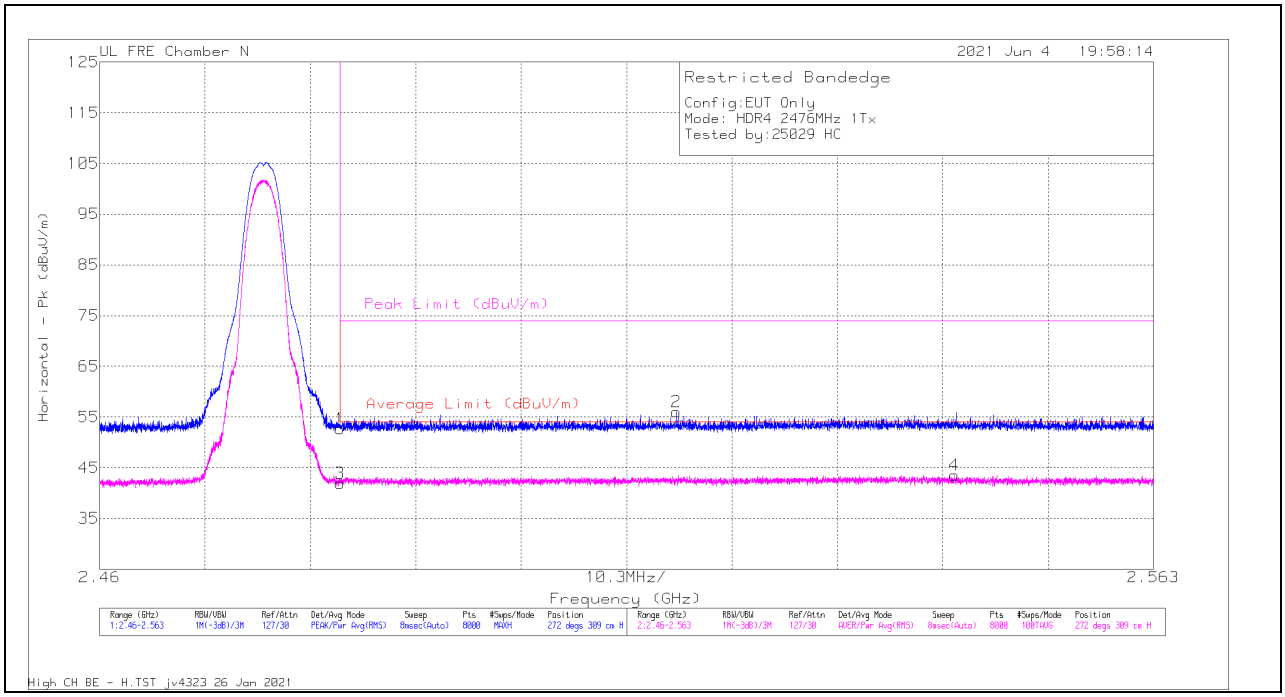
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.16	Pk	32.5	-36	52.66	-	-	74	-21.34	272	309	H
2	2.51635	59.26	Pk	32.6	-35.8	56.06	-	-	74	-17.94	272	309	H
3	2.4835	45.43	RMS	32.5	-36	41.93	54	-12.07	-	-	272	309	H
4	2.54353	46.65	RMS	32.6	-35.7	43.55	54	-10.45	-	-	272	309	H

Pk - Peak detector
RMS - RMS detection

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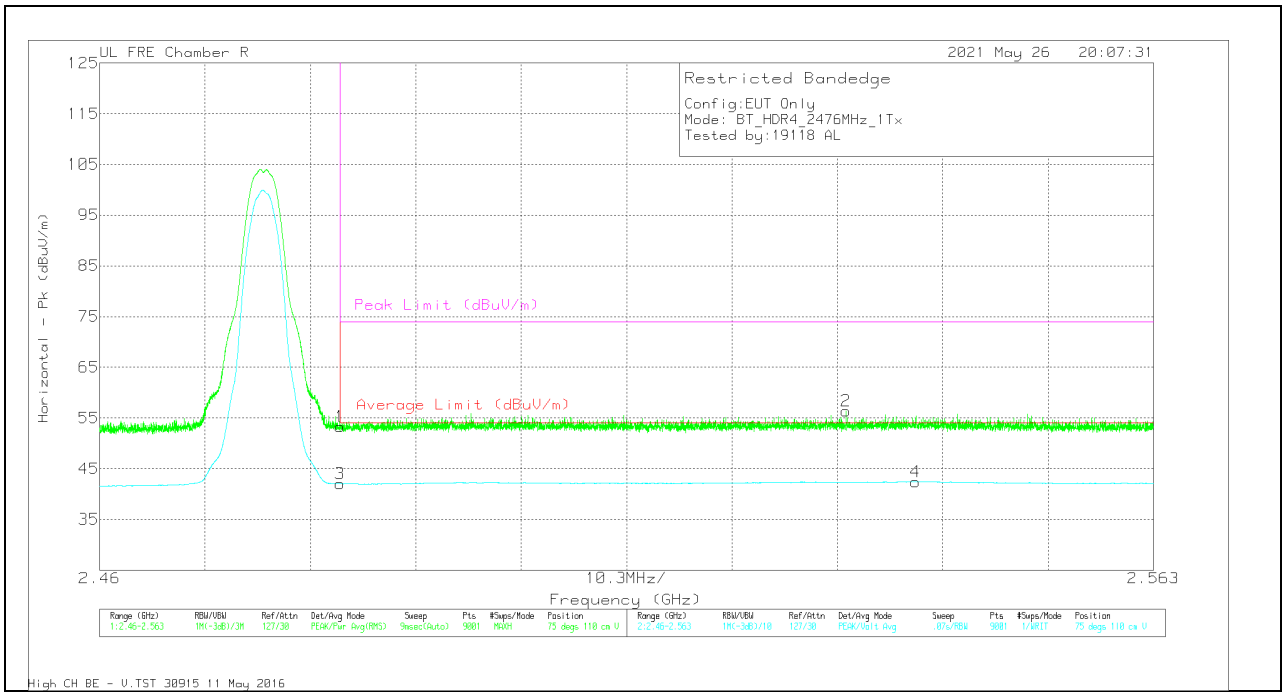
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213973 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.48351	56.11	Pk	32.5	-35.3	53.31	-	-	74	-20.69	75	110	V
2	2.53294	58.81	Pk	32.6	-35	56.41	-	-	74	-17.59	75	110	V
3	2.48351	44.84	VA1T	32.5	-35.3	42.04	54	-11.96	-	-	75	110	V
4	2.53972	44.86	VA1T	32.6	-35	42.46	54	-11.54	-	-	75	110	V

Pk - Peak detector

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

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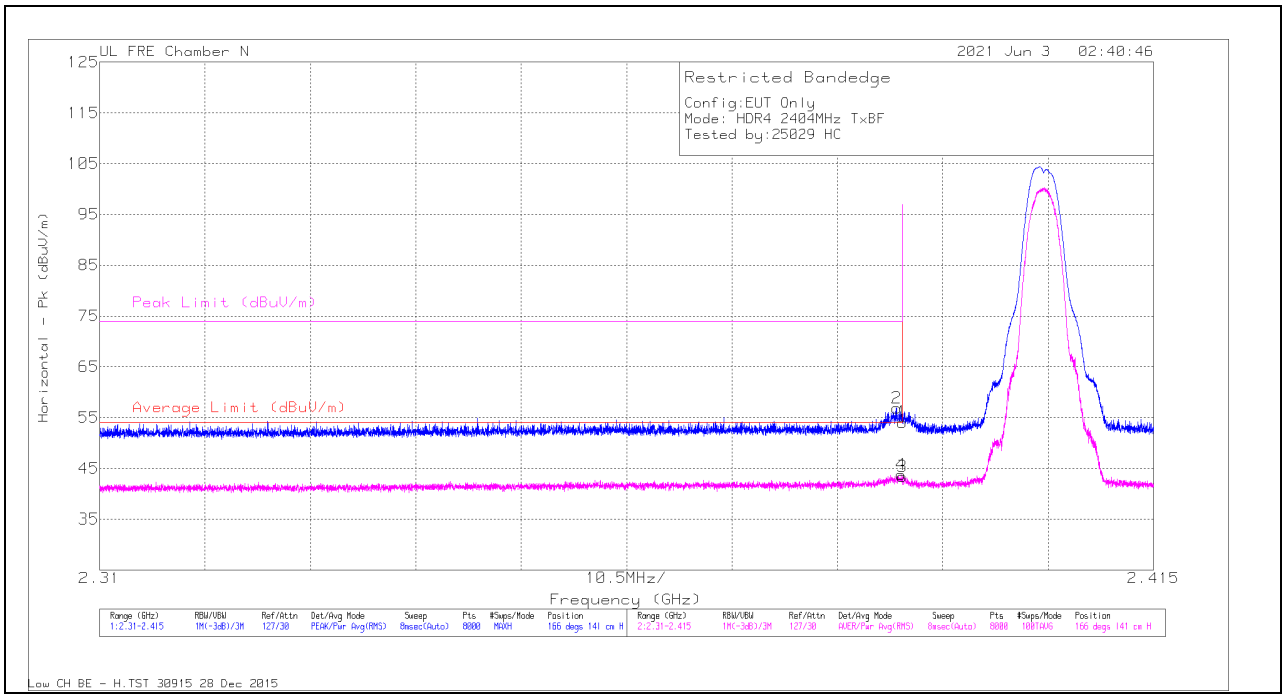
10.2.6. LOW POWER HDR TXBF (HDR4)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.9	Pk	32.4	-36.2	54.1	-	-	74	-19.9	166	141	H
2	2.38942	60.73	Pk	32.4	-36.2	56.93	-	-	74	-17.07	166	141	H
3	2.39	47.17	RMS	32.4	-36.2	43.37	54	-10.63	-	-	166	141	H
4	2.38985	47.55	RMS	32.4	-36.2	43.75	54	-10.25	-	-	166	141	H

Pk - Peak detector
RMS - RMS detection

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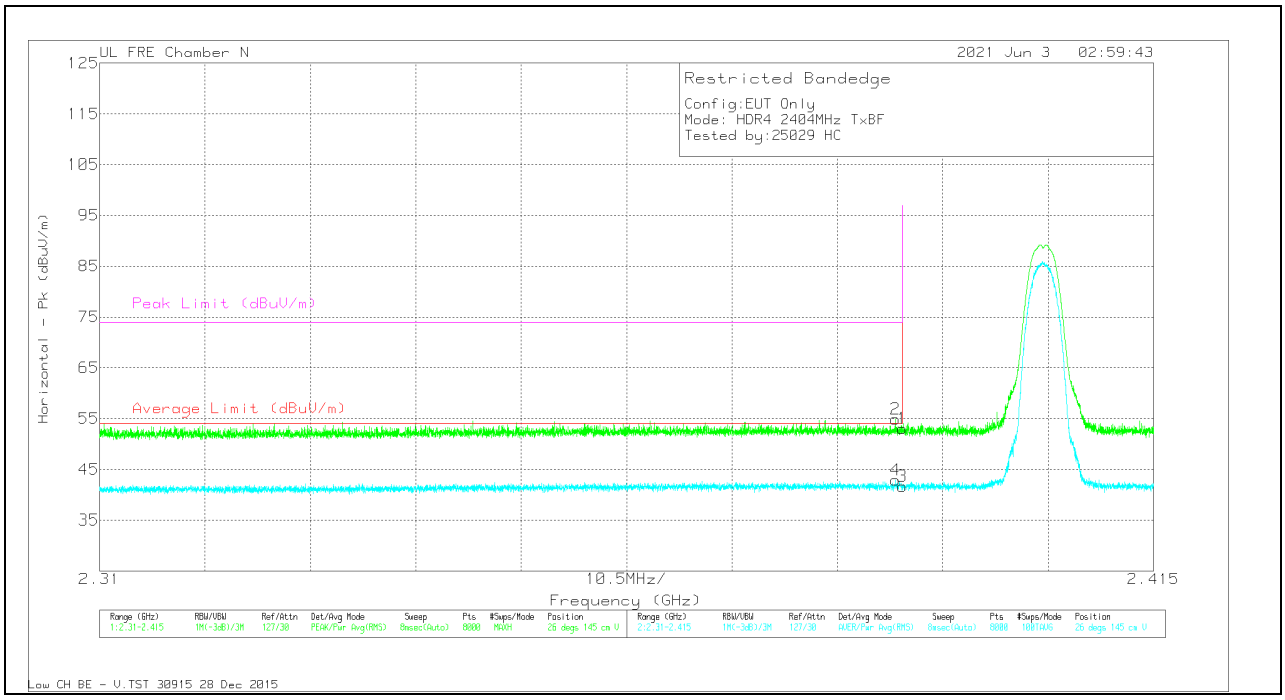
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.89	Pk	32.4	-36.2	53.09	-	-	74	-20.91	26	145	V
2	2.3893	58.72	Pk	32.4	-36.2	54.92	-	-	74	-19.08	26	145	V
3	2.39	45.49	RMS	32.4	-36.2	41.69	54	-12.31	-	-	26	145	V
4	2.38931	46.68	RMS	32.4	-36.2	42.88	54	-11.12	-	-	26	145	V

Pk - Peak detector
RMS - RMS detection

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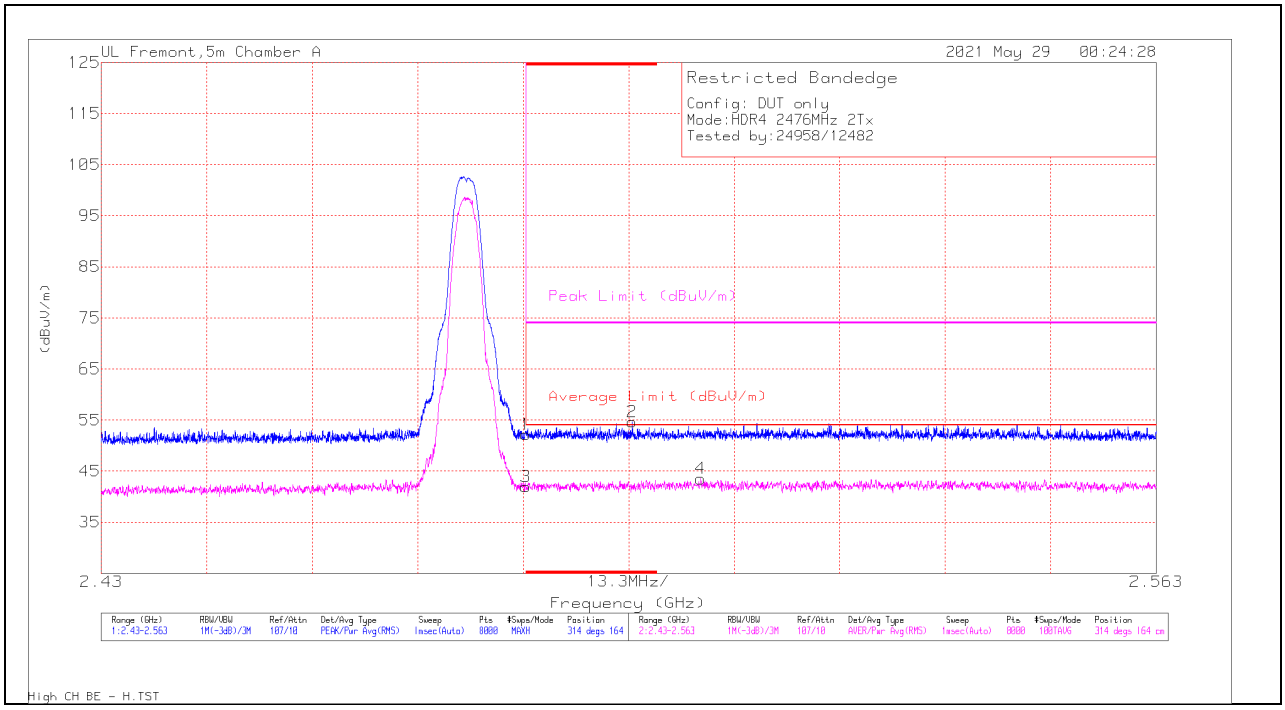
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	39.57	Pk	33.4	-20.8	52.17	-	-	74	-21.83	314	164	H
2	* 2.49694	41.95	Pk	33.5	-20.8	54.65	-	-	74	-19.35	314	164	H
3	* 2.48351	29.33	RMS	33.4	-20.8	41.93	54	-12.07	-	-	314	164	H
4	2.50557	30.72	RMS	33.5	-20.7	43.52	54	-10.48	-	-	314	164	H

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

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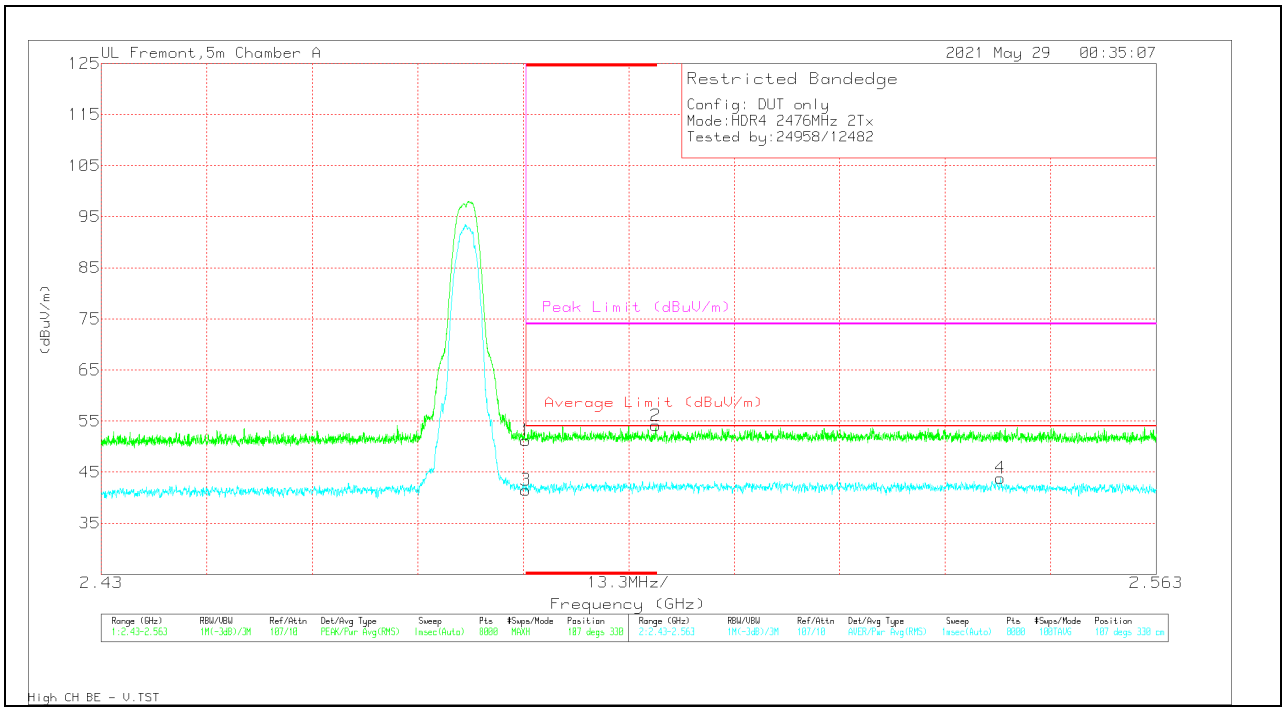
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	38.61	Pk	33.4	-20.8	51.21	-	-	74	-22.79	107	330	V
2	* 2.4999	41.45	Pk	33.5	-20.8	54.15	-	-	74	-19.85	107	330	V
3	* 2.48351	28.9	RMS	33.4	-20.8	41.5	54	-12.5	-	-	107	330	V
4	2.54336	31.15	RMS	33.3	-20.6	43.85	54	-10.15	-	-	107	330	V

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

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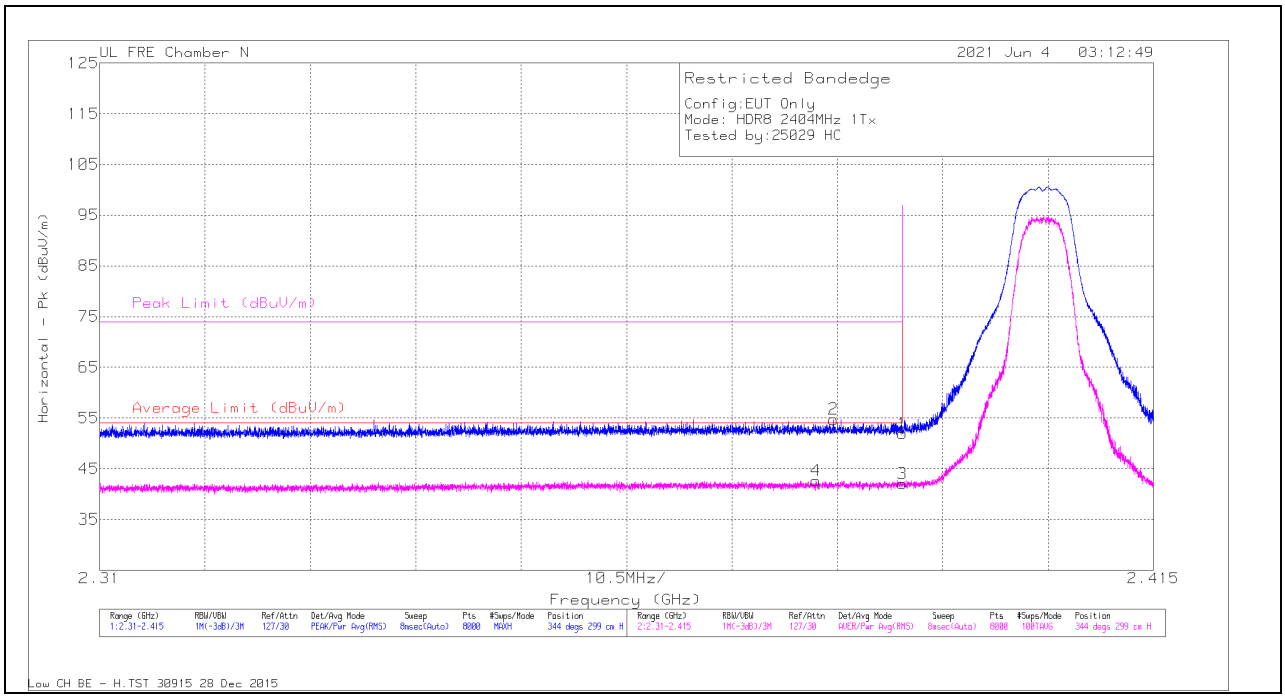
10.2.7. LOW POWER HDR (HDR8)

ANT 4

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	55.71	Pk	32.4	-36.2	51.91	-	-	74	-22.09	344	299	H
2	2.38314	58.52	Pk	32.4	-36.2	54.72	-	-	74	-19.28	344	299	H
3	2.39	45.85	RMS	32.4	-36.2	42.05	54	-11.95	-	-	344	299	H
4	2.38138	46.46	RMS	32.4	-36.2	42.66	54	-11.34	-	-	344	299	H

Pk - Peak detector
RMS - RMS detection

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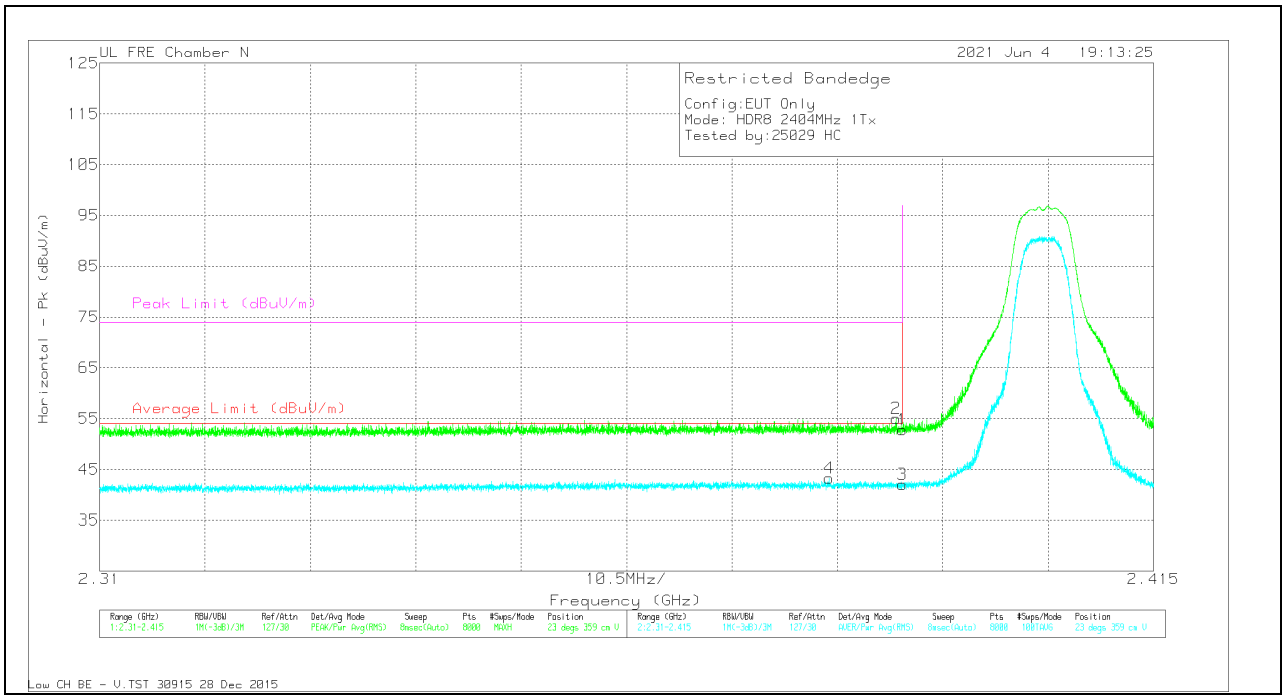
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.59	Pk	32.4	-36.2	52.79	-	-	74	-21.21	23	359	V
2	2.38938	58.81	Pk	32.4	-36.2	55.01	-	-	74	-18.99	23	359	V
3	2.39	45.83	RMS	32.4	-36.2	42.03	54	-11.97	-	-	23	359	V
4	2.38266	47.03	RMS	32.4	-36.2	43.23	54	-10.77	-	-	23	359	V

Pk - Peak detector
RMS - RMS detection

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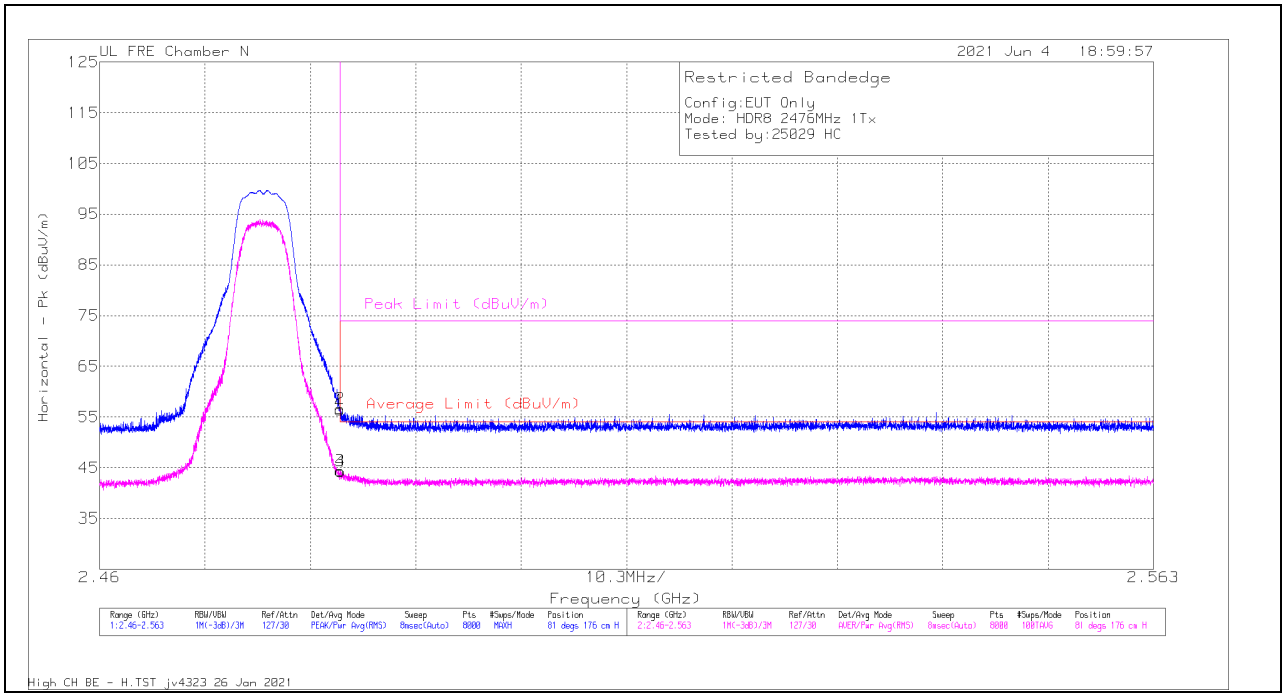
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	59.87	Pk	32.5	-36	56.37	-	-	74	-17.63	81	176	H
2	2.48351	60.13	Pk	32.5	-36	56.63	-	-	74	-17.37	81	176	H
3	2.4835	47.9	RMS	32.5	-36	44.4	54	-9.6	-	-	81	176	H
4	2.48358	47.71	RMS	32.5	-36	44.21	54	-9.79	-	-	81	176	H

Pk - Peak detector
RMS - RMS detection

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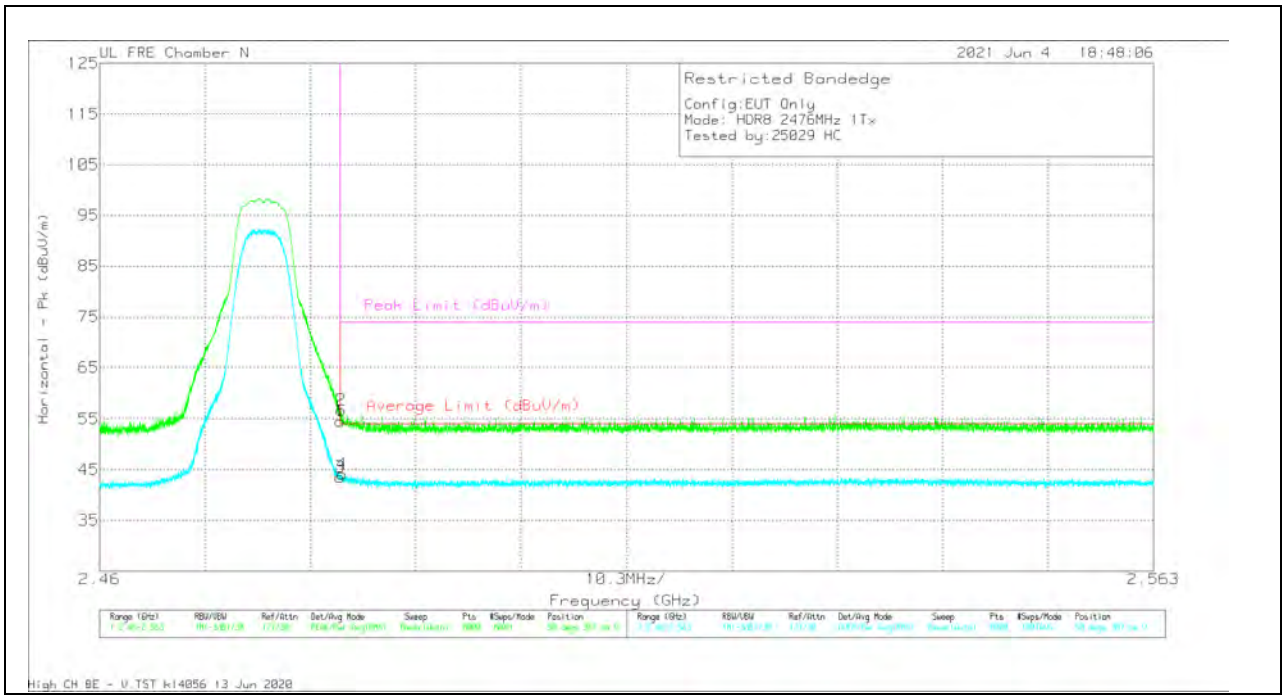
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	58.03	Pk	32.5	-36	54.53	-	-	74	-19.47	50	387	V
3	2.4835	46.97	RMS	32.5	-36	43.47	54	-10.53	-	-	50	387	V
2	2.4836	60.27	Pk	32.5	-36	56.77	-	-	74	-17.23	50	387	V
4	2.48369	47.62	RMS	32.5	-36	44.12	54	-9.88	-	-	50	387	V

Pk - Peak detector
RMS - RMS detection

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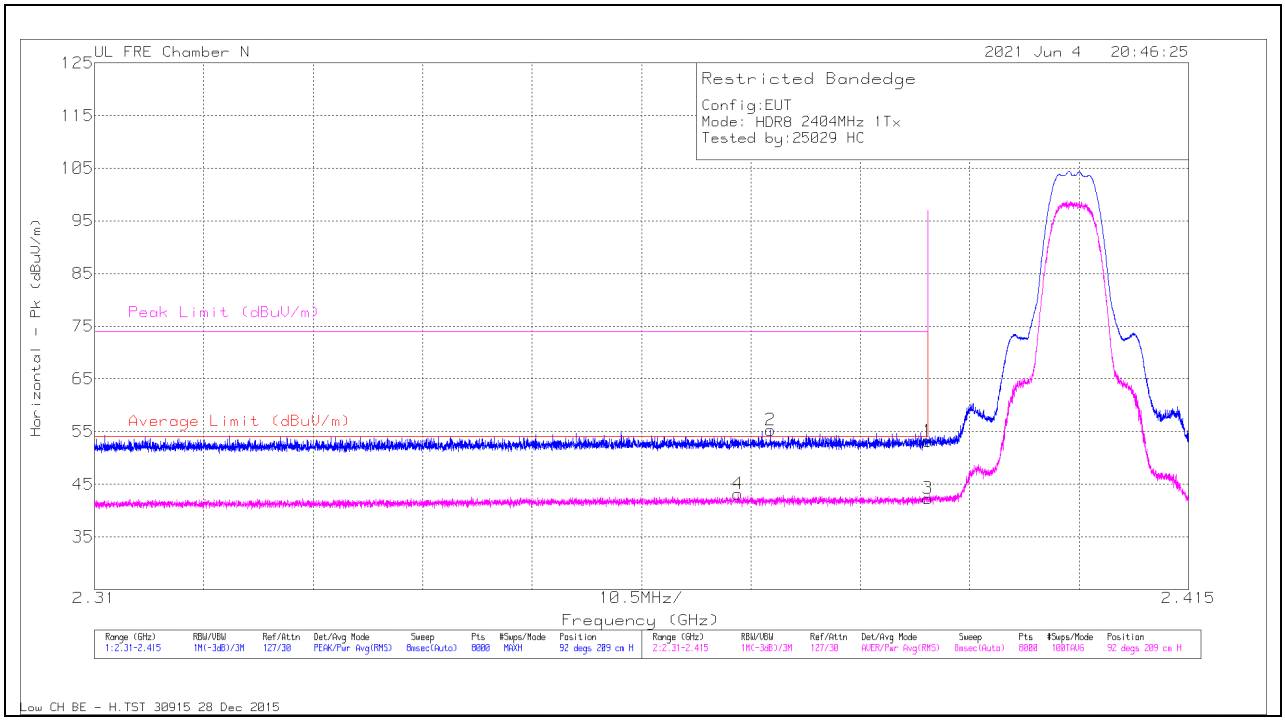
ANT 3

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.95	Pk	32.4	-36.2	53.15	-	-	74	-20.85	92	209	H
2	2.37489	59.17	Pk	32.4	-36.3	55.27	-	-	74	-18.73	92	209	H
3	2.39	46.07	RMS	32.4	-36.2	42.27	54	-11.73	-	-	92	209	H
4	2.37179	47.05	RMS	32.4	-36.3	43.15	54	-10.85	-	-	92	209	H

Pk - Peak detector
RMS - RMS detection

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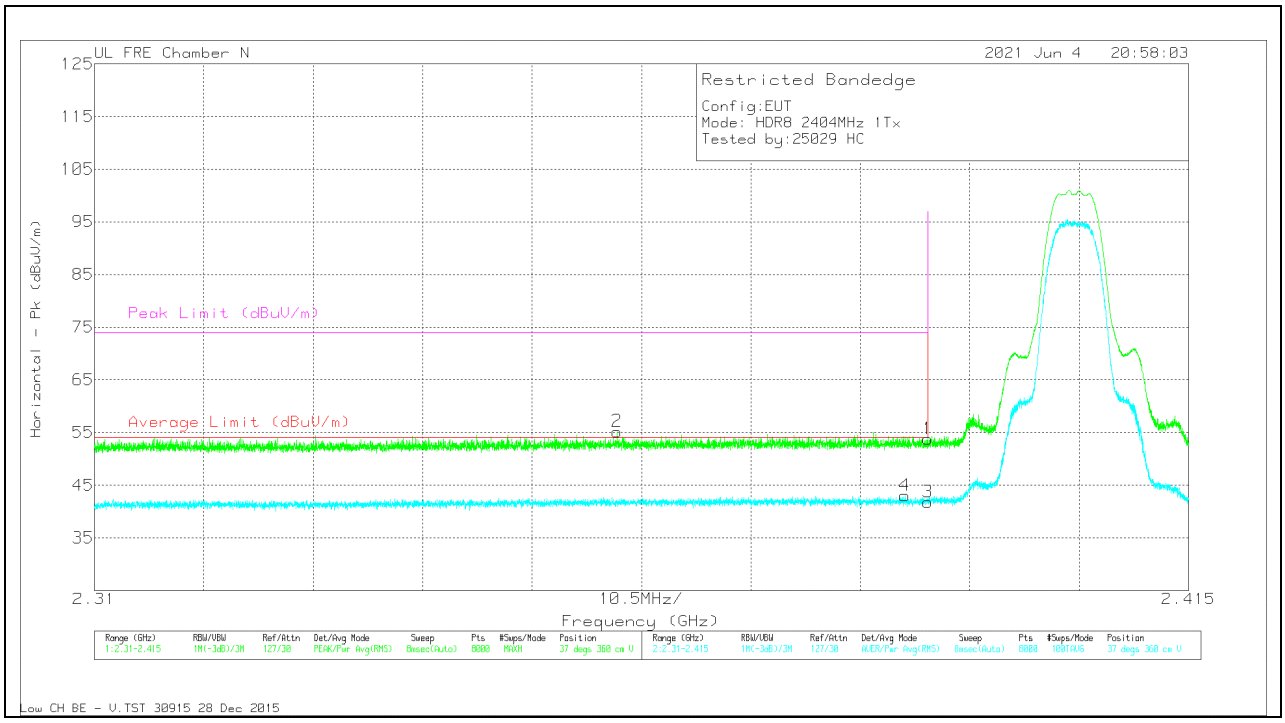
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.62	Pk	32.4	-36.2	53.82	-	-	74	-20.18	37	360	V
2	2.36017	59.21	Pk	32.3	-36.3	55.21	-	-	74	-18.79	37	360	V
3	2.39	45.57	RMS	32.4	-36.2	41.77	54	-12.23	-	-	37	360	V
4	2.38776	46.78	RMS	32.4	-36.2	42.98	54	-11.02	-	-	37	360	V

Pk - Peak detector
RMS - RMS detection

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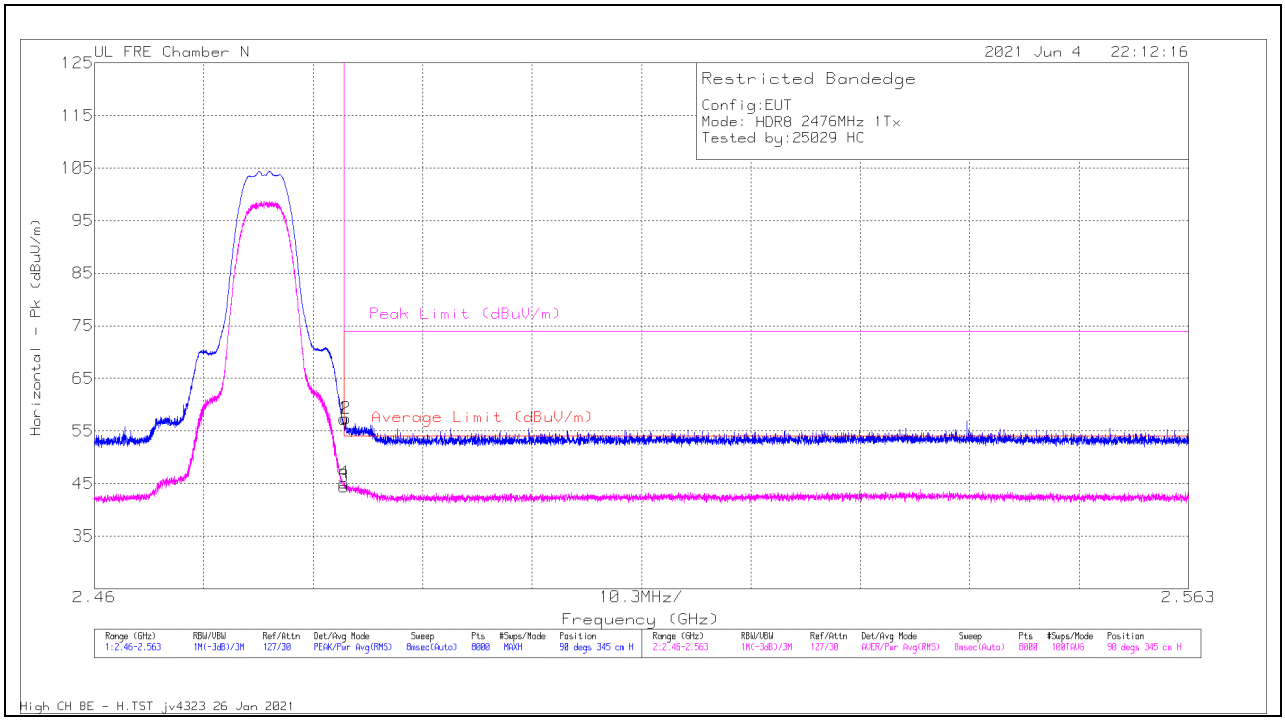
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	60.82	Pk	32.5	-36	57.32	-	-	74	-16.68	90	345	H
2	2.48368	60.84	Pk	32.5	-36	57.34	-	-	74	-16.66	90	345	H
3	2.4835	47.95	RMS	32.5	-36	44.45	54	-9.55	-	-	90	345	H
4	2.48351	48.6	RMS	32.5	-36	45.1	54	-8.9	-	-	90	345	H

Pk - Peak detector
RMS - RMS detection

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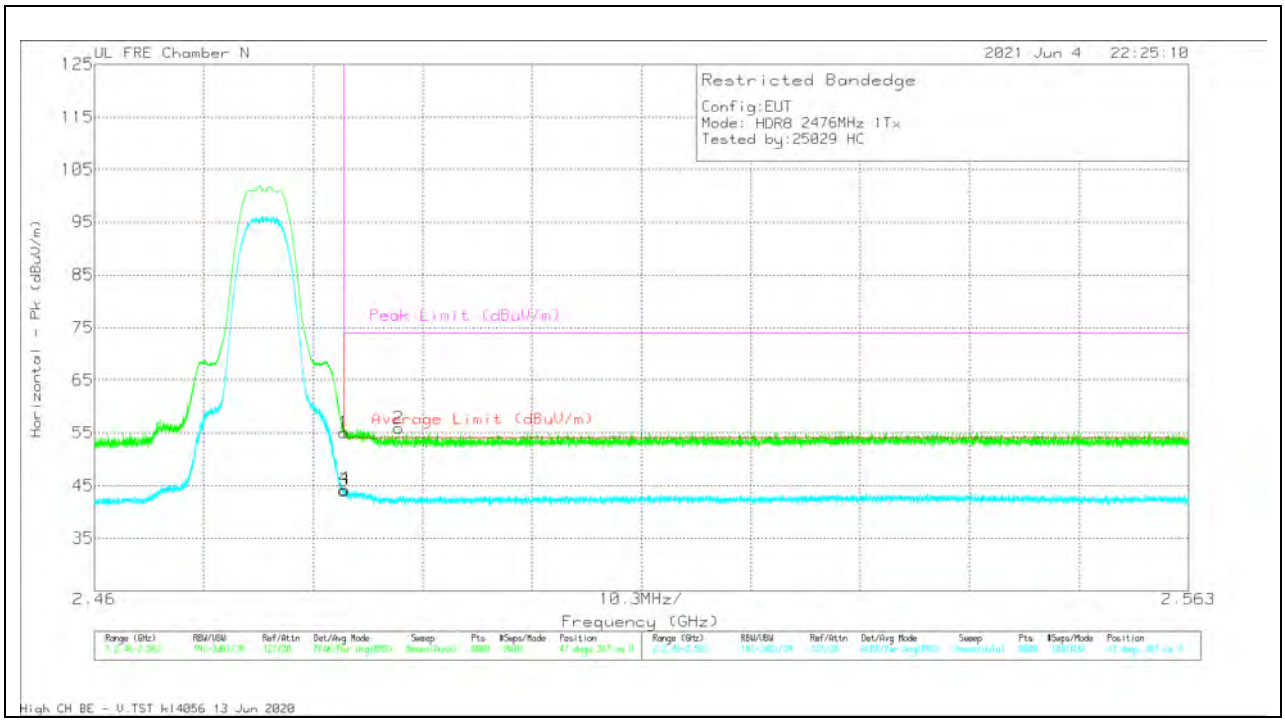
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/Pad (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	58.57	Pk	32.5	-36	55.07	-	-	74	-18.93	47	387	V
2	2.48865	59.38	Pk	32.5	-36	55.88	-	-	74	-18.12	47	387	V
3	2.4835	47.56	RMS	32.5	-36	44.06	54	-9.94	-	-	47	387	V
4	2.48358	47.83	RMS	32.5	-36	44.33	54	-9.67	-	-	47	387	V

Pk - Peak detector
RMS - RMS detection

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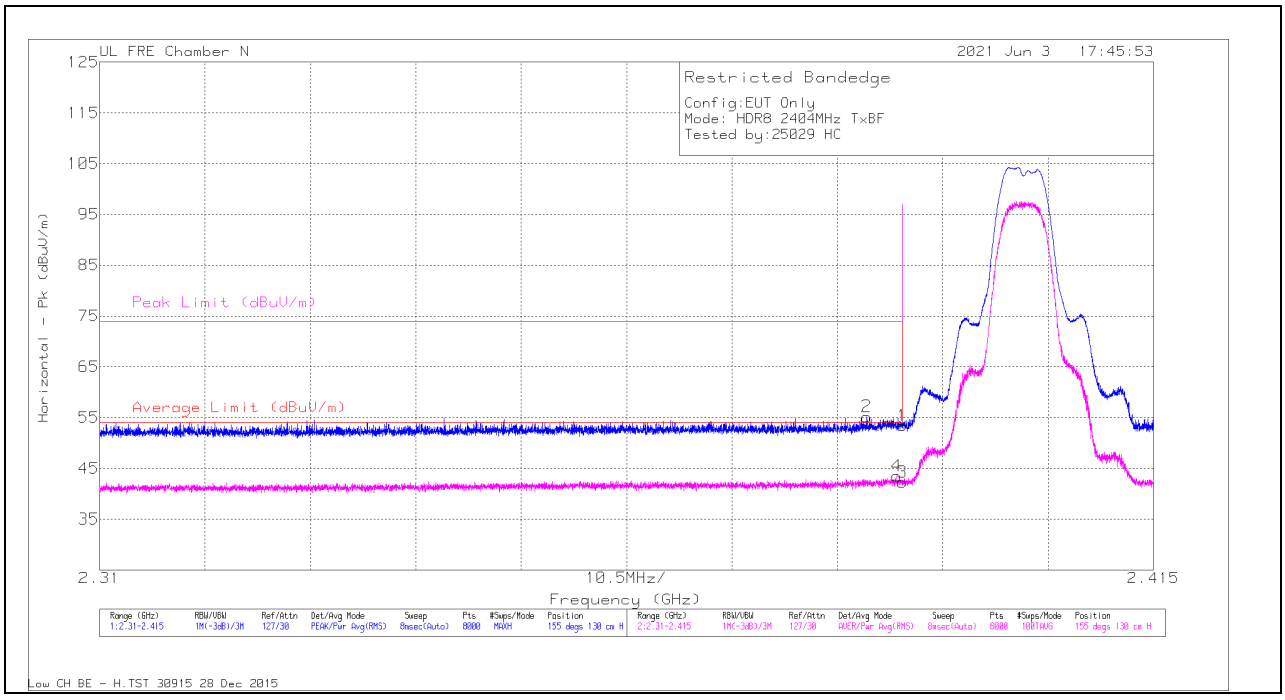
10.2.8. LOW POWER HDR TXBF (HDR8)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.23	Pk	32.4	-36.2	53.43	-	-	74	-20.57	155	130	H
2	2.38641	59.01	Pk	32.4	-36.2	55.21	-	-	74	-18.79	155	130	H
3	2.39	46.14	RMS	32.4	-36.2	42.34	54	-11.66	-	-	155	130	H
4	2.38943	47.27	RMS	32.4	-36.2	43.47	54	-10.53	-	-	155	130	H

Pk - Peak detector
RMS - RMS detection

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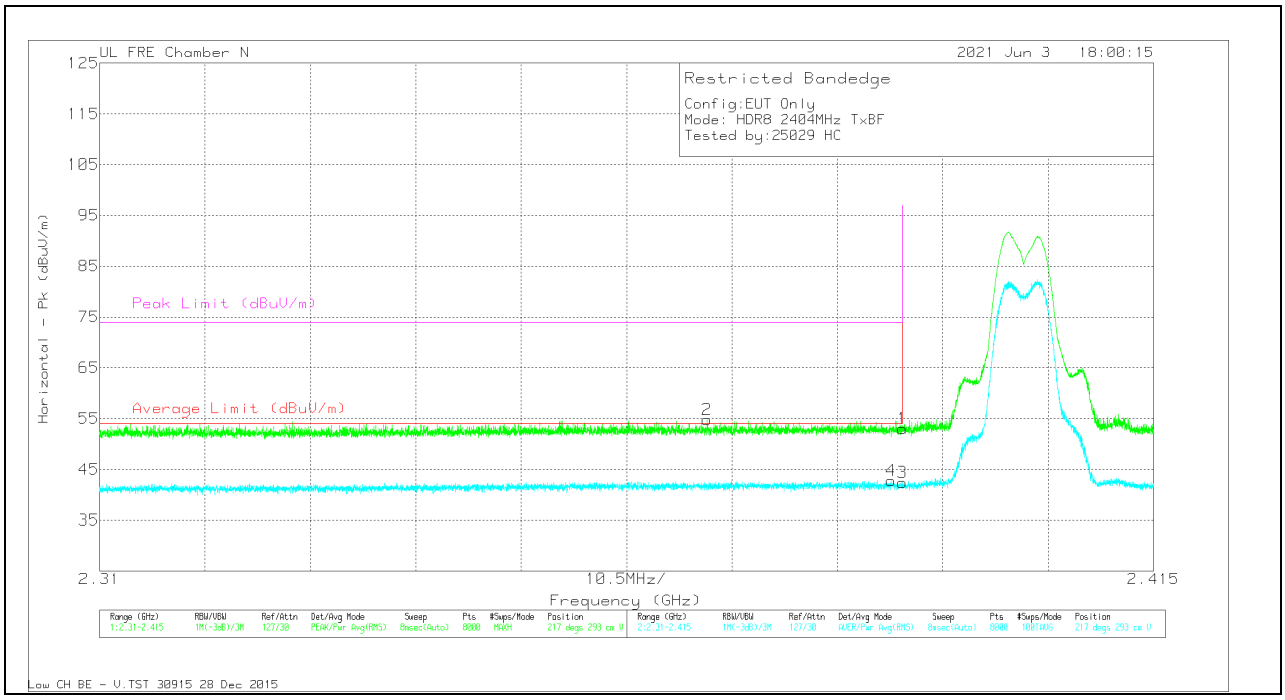
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	56.85	Pk	32.4	-36.2	53.05	-	-	74	-20.95	217	293	V
2	2.37053	58.67	Pk	32.4	-36.3	54.77	-	-	74	-19.23	217	293	V
3	2.39	46.26	RMS	32.4	-36.2	42.46	54	-11.54	-	-	217	293	V
4	2.38885	46.57	RMS	32.4	-36.2	42.77	54	-11.23	-	-	217	293	V

Pk - Peak detector
RMS - RMS detection

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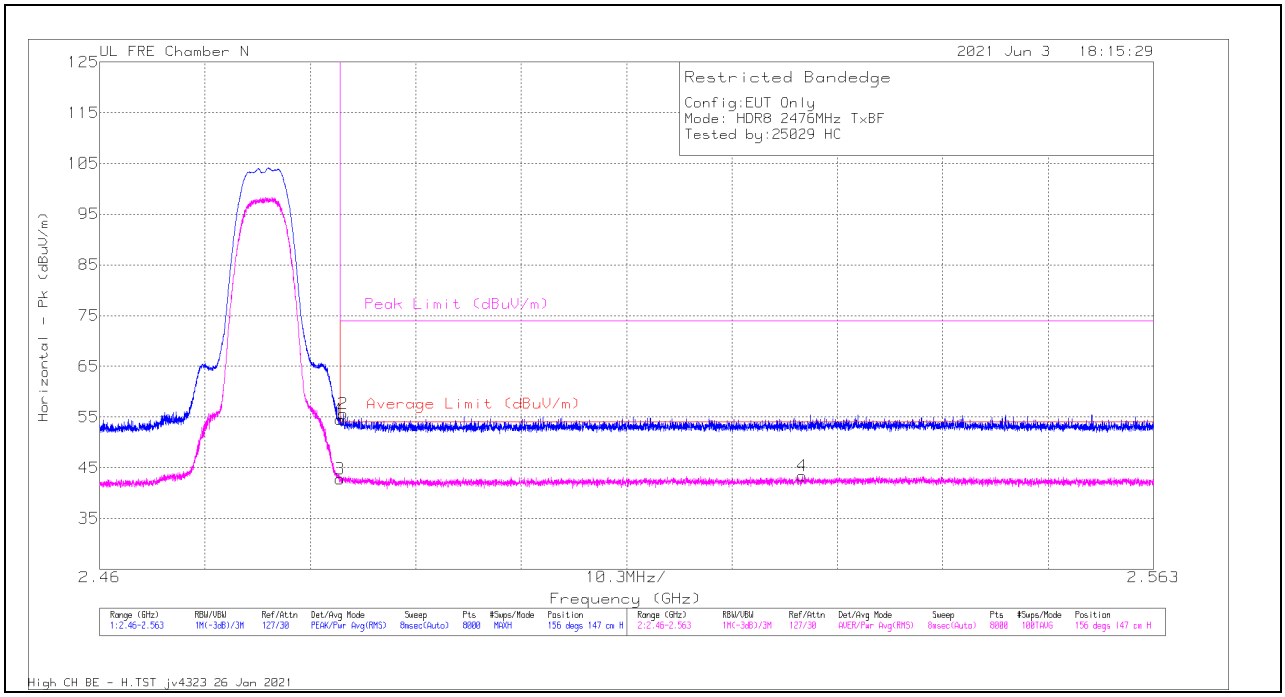
BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.99	Pk	32.5	-36	54.49	-	-	74	-19.51	156	147	H
2	2.48381	59.16	Pk	32.5	-36	55.66	-	-	74	-18.34	156	147	H
3	2.4835	46.32	RMS	32.5	-36	42.82	54	-11.18	-	-	156	147	H
4	2.52867	46.57	RMS	32.7	-35.9	43.37	54	-10.63	-	-	156	147	H

Pk - Peak detector
RMS - RMS detection

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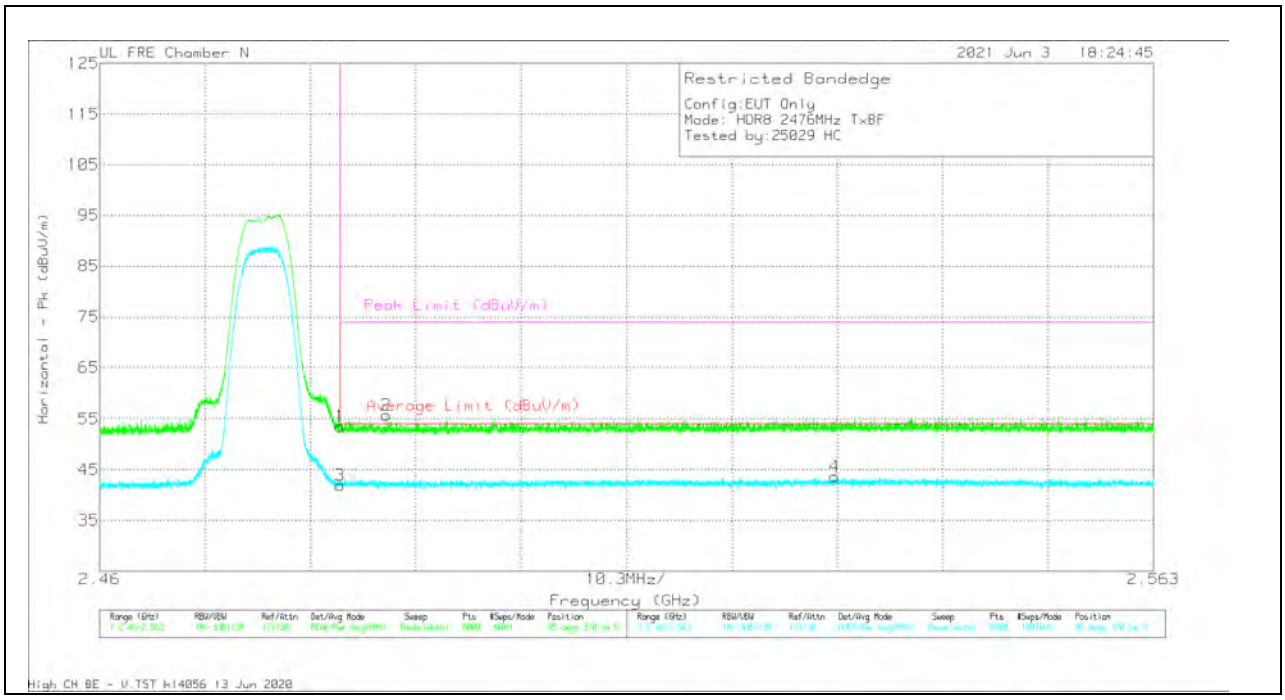
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Fltr/ Pad (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	57.05	Pk	32.5	-36	53.55	-	-	74	-20.45	85	370	V
2	2.48802	59.22	Pk	32.5	-36	55.72	-	-	74	-18.28	85	370	V
3	2.4835	45.4	RMS	32.5	-36	41.9	54	-12.1	-	-	85	370	V
4	2.53183	46.73	RMS	32.7	-35.8	43.63	54	-10.37	-	-	85	370	V

Pk - Peak detector
RMS - RMS detection

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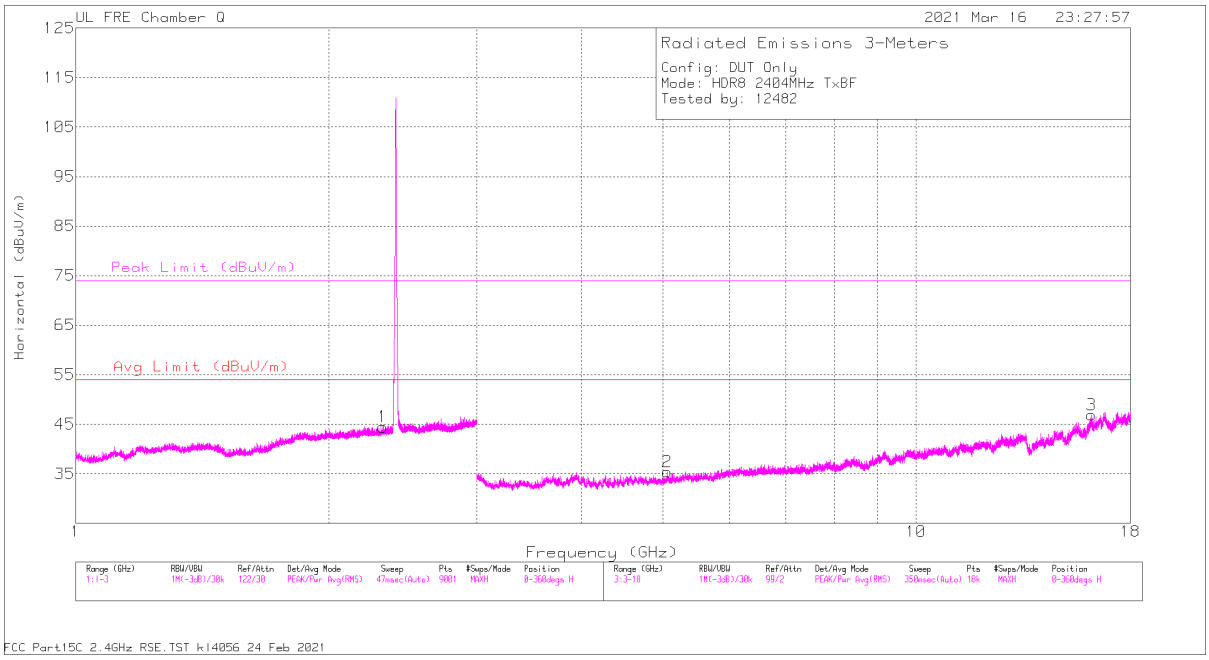
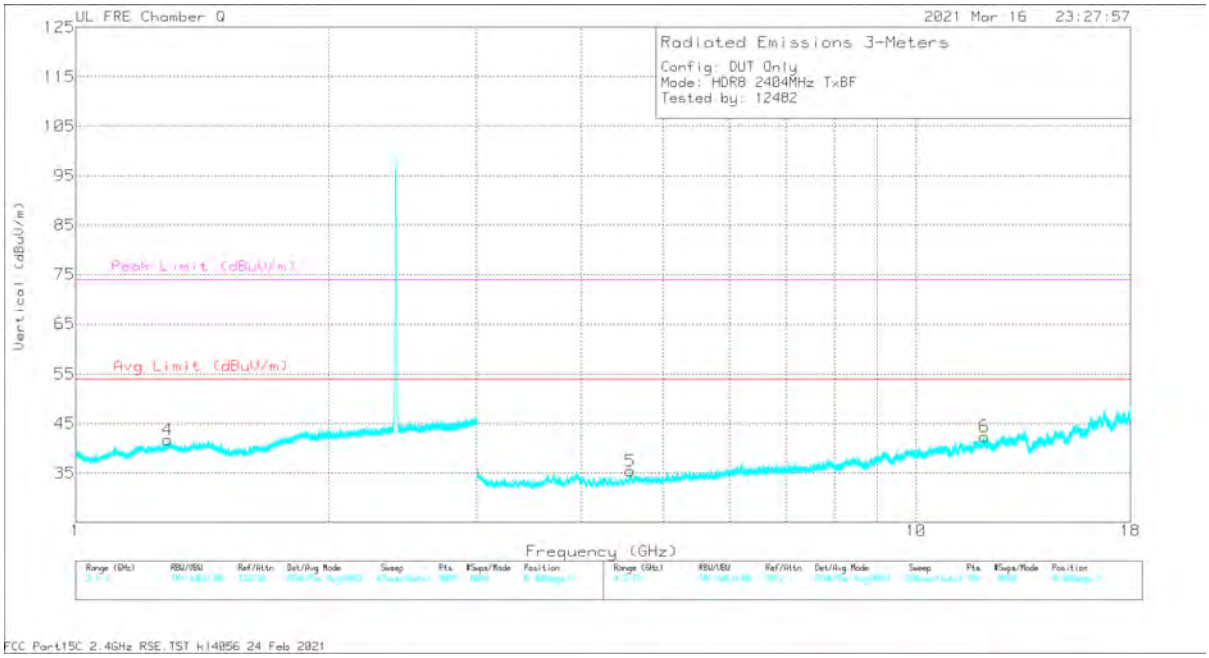
10.2.9. HIGH POWER TXBF HARMONICS & SPURIOUS EMISSIONS (HDR8)

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Range 1: Horizontal 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/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	* 2.31705	56.96	PK2	31.8	-34.6	54.16	-	-	74	-19.84	64	378	H
	* 2.31793	45.07	MAv1	31.8	-34.6	42.27	54	-11.73	-	-	64	378	H

Range 2: Vertical 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.28483	57.9	PK2	29.1	-35.6	51.4	-	-	74	-22.6	71	374	V
	* 1.28566	46.05	MAv1	29.1	-35.6	39.55	54	-14.45	-	-	71	374	V

Range 3: Horizontal 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.05981	51.83	PK2	34	-40.7	45.13	-	-	74	-28.87	68	358	H
	* 5.06049	39.67	MAv1	34	-40.7	32.97	54	-21.03	-	-	68	358	H
3	* 16.18021	48.68	PK2	40.7	-33.6	55.78	-	-	74	-18.22	276	110	H
	* 16.17698	37.09	MAv1	40.7	-33.7	44.09	54	-9.91	-	-	276	110	H

Range 4: Vertical 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.57189	51.98	PK2	34	-41.6	44.38	-	-	74	-29.62	125	235	V
	* 4.57321	40.47	MAv1	34	-41.6	32.87	54	-21.13	-	-	125	235	V
6	* 12.06463	47.78	PK2	38.7	-35.1	51.38	-	-	74	-22.62	357	204	V
	* 12.06394	35.86	MAv1	38.7	-35.1	39.46	54	-14.54	-	-	357	204	V

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

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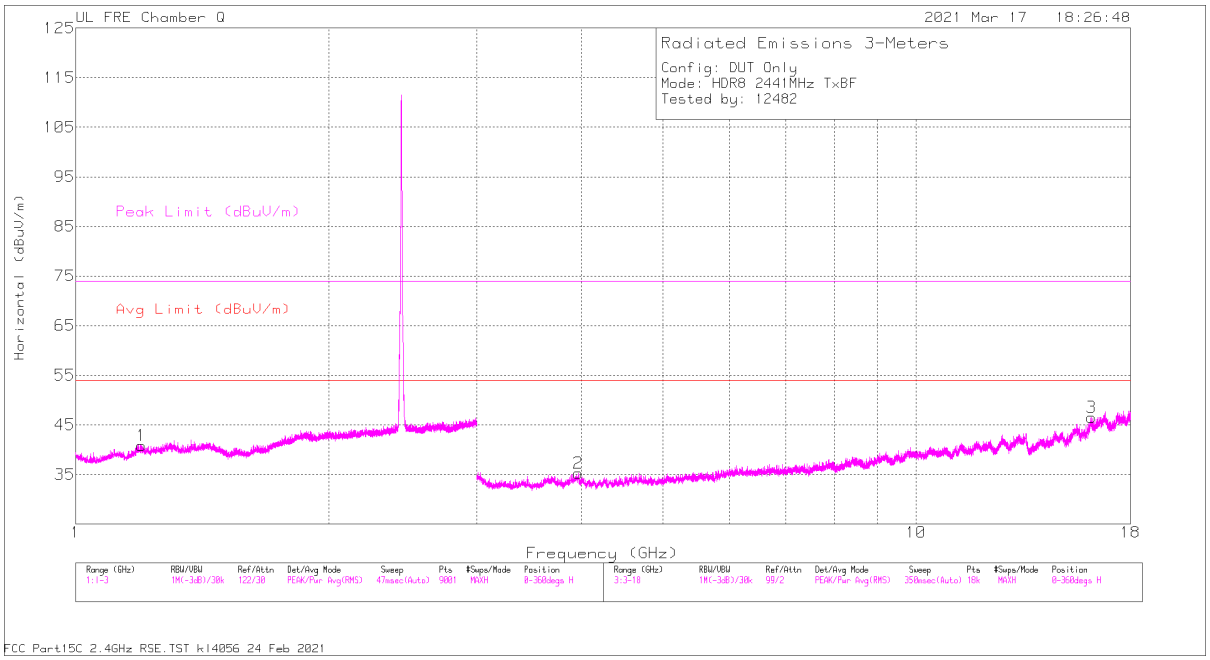
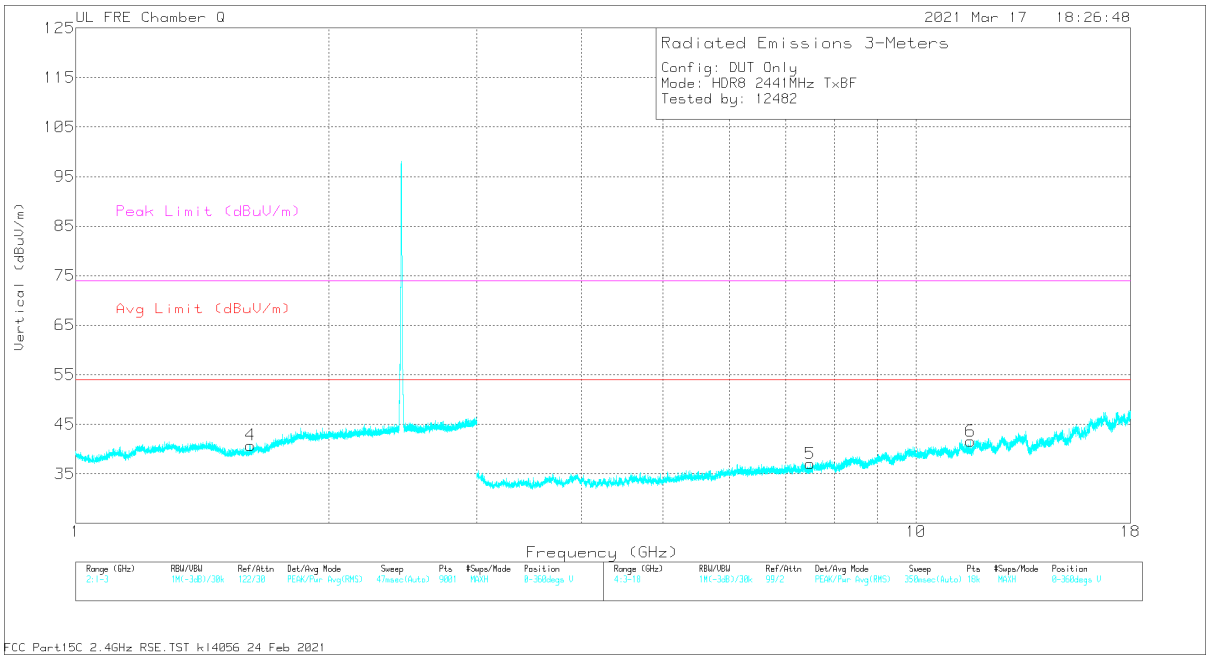
MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Range 1: Horizontal 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/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	* 1.19704	57.51	PK2	28.5	-35.8	50.21	-	-	74	-23.79	85	271	H
	* 1.1946	46.12	MAv1	28.5	-35.8	38.82	54	-15.18	-	-	85	271	H

Range 2: Vertical 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.61445	56.96	PK2	27.8	-35.2	49.56	-	-	74	-24.44	357	316	V
	* 1.61304	45.43	MAv1	27.7	-35.2	37.93	54	-16.07	-	-	357	316	V

Range 3: Horizontal 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.96208	51.98	PK2	33.3	-40.7	44.58	-	-	74	-29.42	238	306	H
	* 3.96277	40.19	MAv1	33.4	-40.7	32.89	54	-21.11	-	-	238	306	H
3	* 16.18187	48.25	PK2	40.7	-33.6	55.35	-	-	74	-18.65	337	250	H
	* 16.18081	36.08	MAv1	40.7	-33.6	43.18	54	-10.82	-	-	337	250	H

Range 4: Vertical 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 7.48762	48.56	PK2	35.6	-37.9	46.26	-	-	74	-27.74	247	376	V
	* 7.48851	37.36	MAv1	35.6	-37.9	35.06	54	-18.94	-	-	247	376	V
6	* 11.60886	45.35	PK2	38.2	-34.1	49.45	-	-	74	-24.55	22	204	V
	* 11.61015	34.25	MAv1	38.2	-34.1	38.35	54	-15.65	-	-	22	204	V

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

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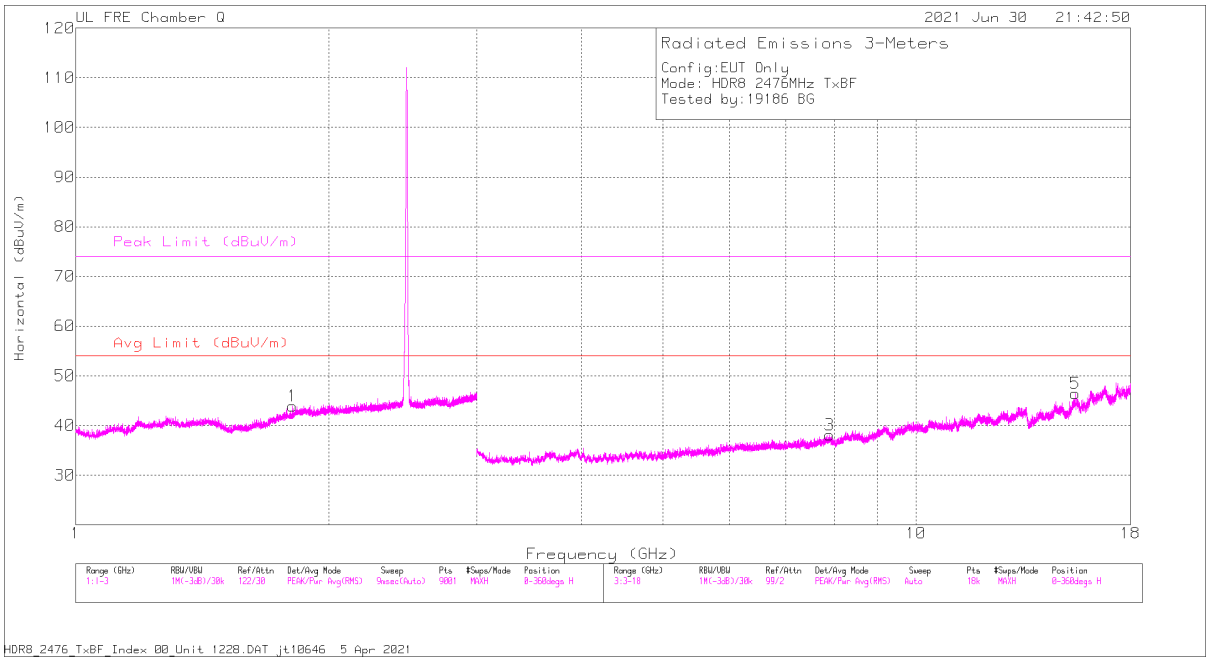
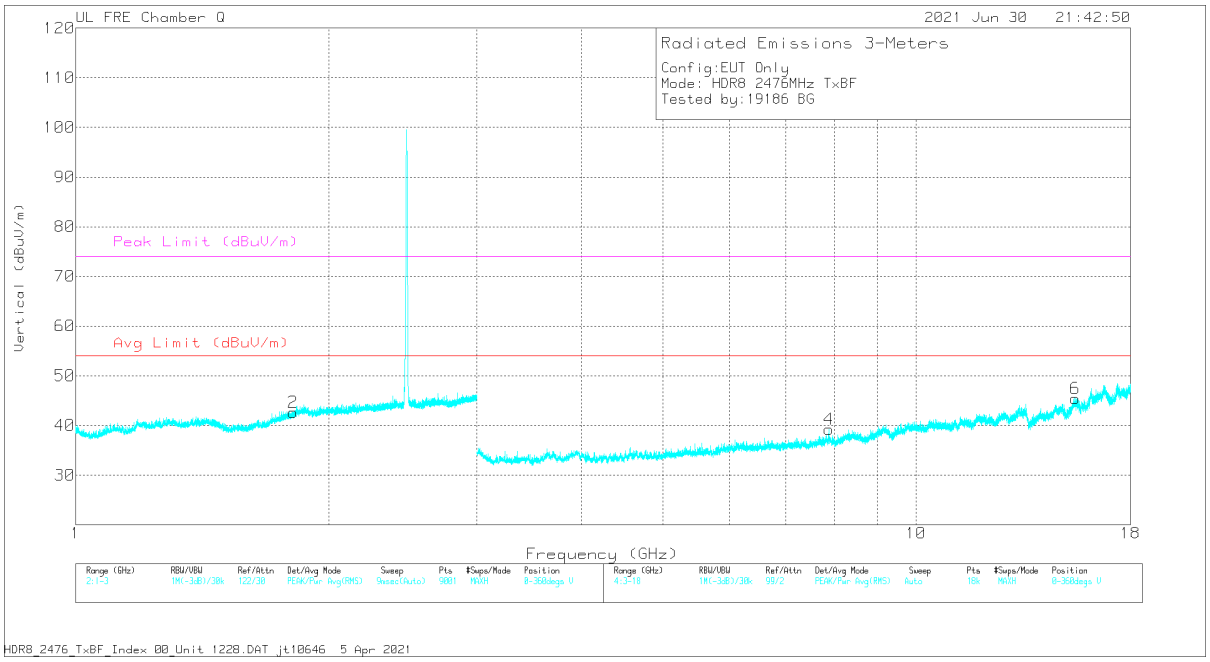
HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl/Fltr/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	1.81145	57.71	PK2	30.3	-35	53.01	-	-	-	-	0	100	H
2	1.81276	57.87	PK2	30.3	-35	53.17	-	-	-	-	0	201	V
3	7.89514	49.1	PK2	35.7	-37.1	47.7	-	-	-	-	0	100	H
4	7.8727	50.29	PK2	35.7	-37.1	48.89	-	-	-	-	0	201	V
5	* 15.46994	47.65	PK2	40.2	-33.2	54.65	-	-	74	-19.35	0	100	H
	* 15.47127	36.13	MAv1	40.2	-33.2	43.13	54	-10.87	-	-	0	100	H
6	* 15.47495	48.29	PK2	40.2	-33.2	55.29	-	-	74	-18.71	0	200	V
	* 15.47302	36.06	MAv1	40.2	-33.2	43.06	54	-10.94	-	-	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

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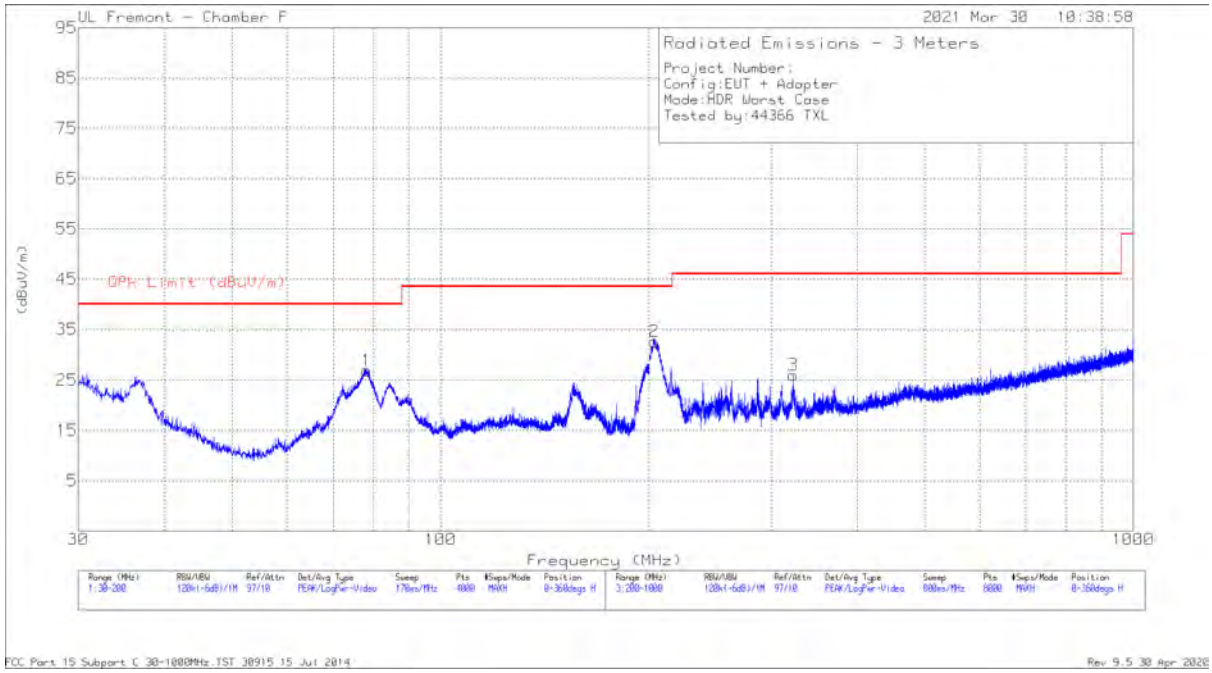
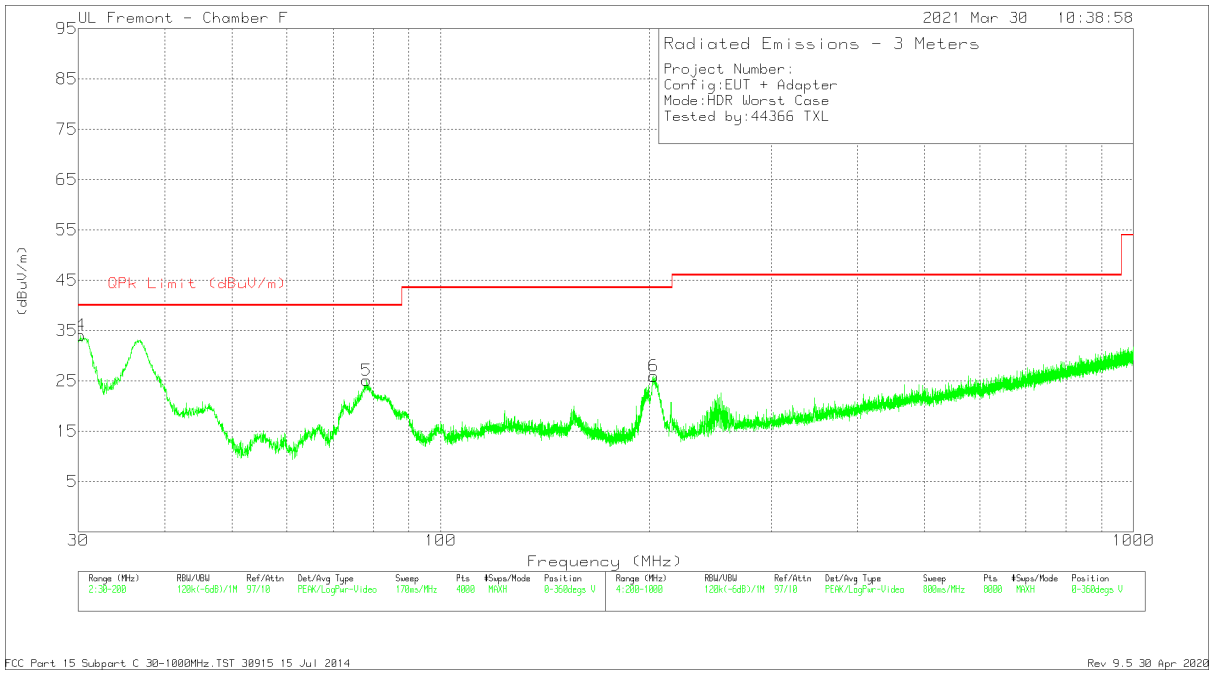
10.3. WORST CASE BELOW 1 GHz

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



HORIZONTAL



VERTICAL

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Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	78.2075	44.34	Pk	14	-31.4	26.94	40	-13.06	0-360	301	H
2	203.5005	44.66	Pk	18.3	-30.4	32.56	43.52	-10.96	0-360	99	H
3	* 323.016	35.42	Pk	20.4	-29.8	26.02	46.02	-20	0-360	99	H
4	30.4608	32.11	Qp	27.8	-31.9	28.01	40	-11.99	110	155	V
5	78.25	42.51	Pk	14	-31.4	25.11	40	-14.89	0-360	100	V
6	203.1004	37.83	Pk	18.5	-30.4	25.93	43.52	-17.59	0-360	99	V

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

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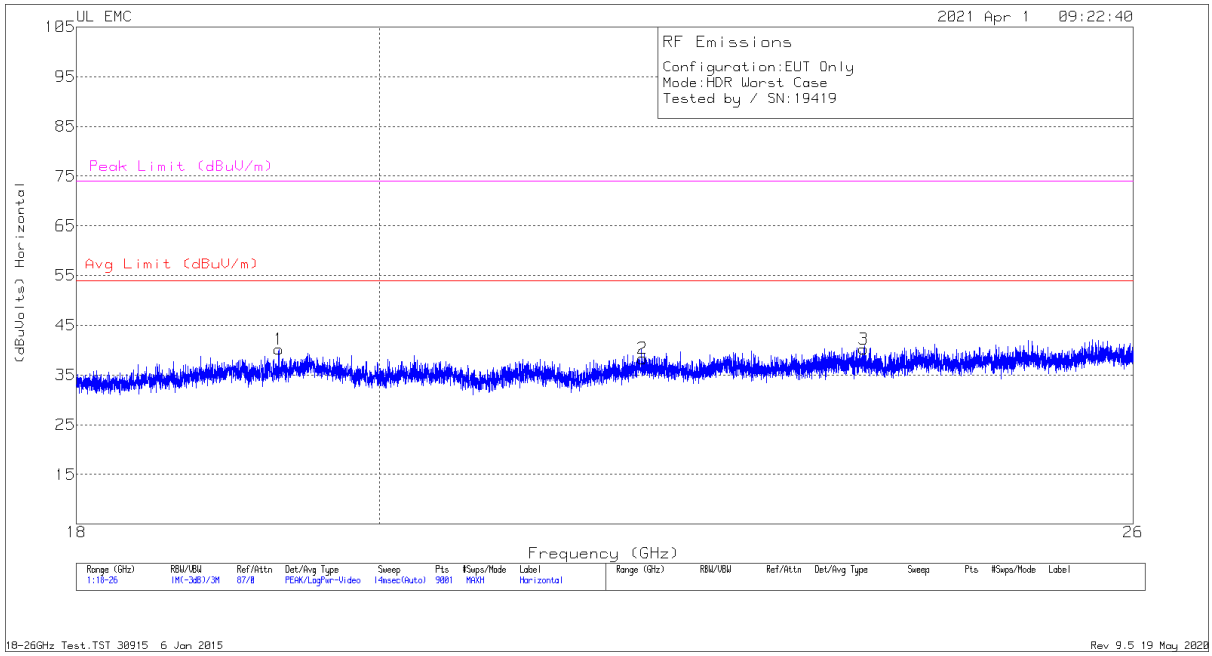
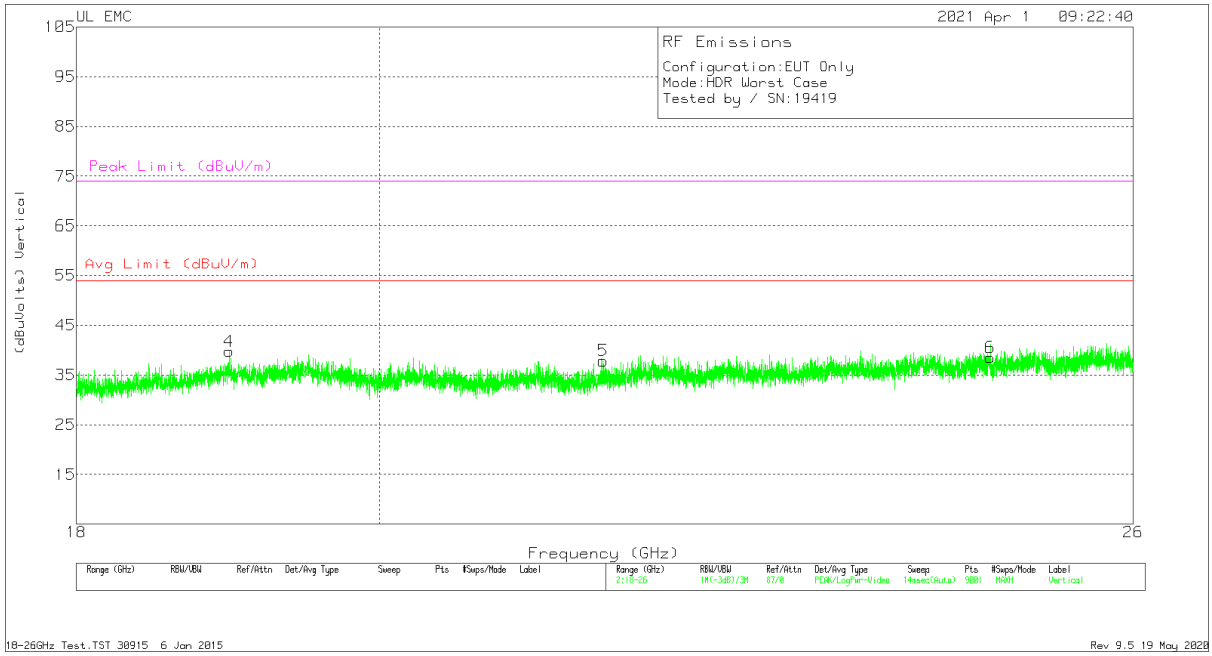
10.4. WORST CASE 18-26 GHz

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



HORIZONTAL



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18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T125 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.31289	35.97	Pk	32.7	-19	-9.5	40.17	54	-13.83	74	-33.83
2	21.92	35.1	Pk	33.4	-20.7	-9.5	38.3	54	-15.7	74	-35.7
3	23.67289	36.05	Pk	33.8	-20.1	-9.5	40.25	54	-13.75	74	-33.75
4	18.98133	36.27	Pk	32.7	-19.7	-9.5	39.77	54	-14.23	74	-34.23
5	21.61867	34.86	Pk	33.2	-20.7	-9.5	37.86	54	-16.14	74	-36.14
6	24.73511	32.71	Pk	34.1	-18.8	-9.5	38.51	54	-15.49	74	-35.49

Pk - Peak detector

Note: measurement distance was 1m.

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11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	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

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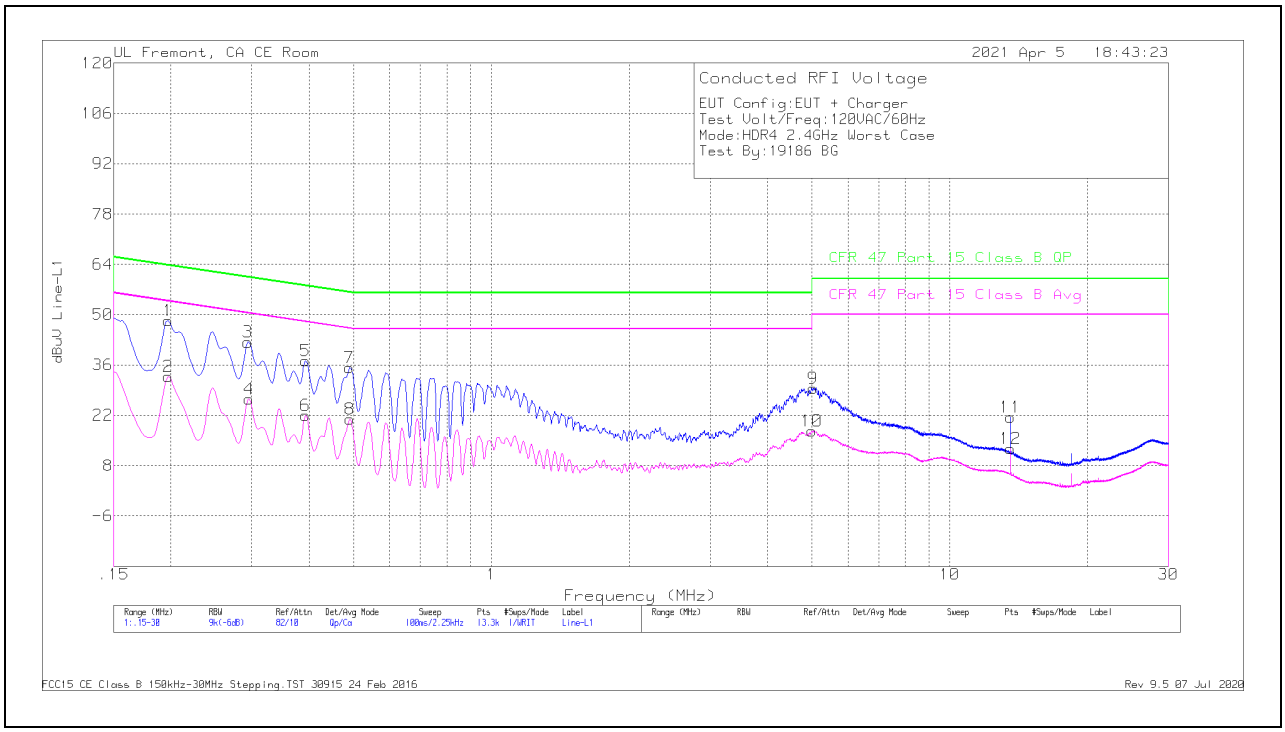
11.1. AC Power Line with Charger

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L1	LC Cables C1&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
1	.19725	38.22	Qp	0	0	10.1	48.32	63.73	-15.41	-	-
2	.19725	22.69	Ca	0	0	10.1	32.79	-	-	53.73	-20.94
3	.294	32.22	Qp	0	0	10.1	42.32	60.41	-18.09	-	-
4	.29625	16.49	Ca	0	0	10.1	26.59	-	-	50.35	-23.76
5	.393	26.99	Qp	0	0	10.1	37.09	58	-20.91	-	-
6	.393	11.84	Ca	0	0	10.1	21.94	-	-	48	-26.06
7	.48975	25.15	Qp	0	0	10.1	35.25	56.17	-20.92	-	-
8	.492	10.9	Ca	0	0	10.1	21	-	-	46.13	-25.13
9	5.037	19.25	Qp	0	.1	10.2	29.55	60	-30.45	-	-
10	4.9965	7.3	Ca	0	.1	10.2	17.6	-	-	46	-28.4
11	13.56	10.95	Qp	.1	.2	10.2	21.45	60	-38.55	-	-
12	13.56	2.19	Ca	.1	.2	10.2	12.69	-	-	50	-37.31

Qp - Quasi-Peak detector
Ca - CISPR average detection

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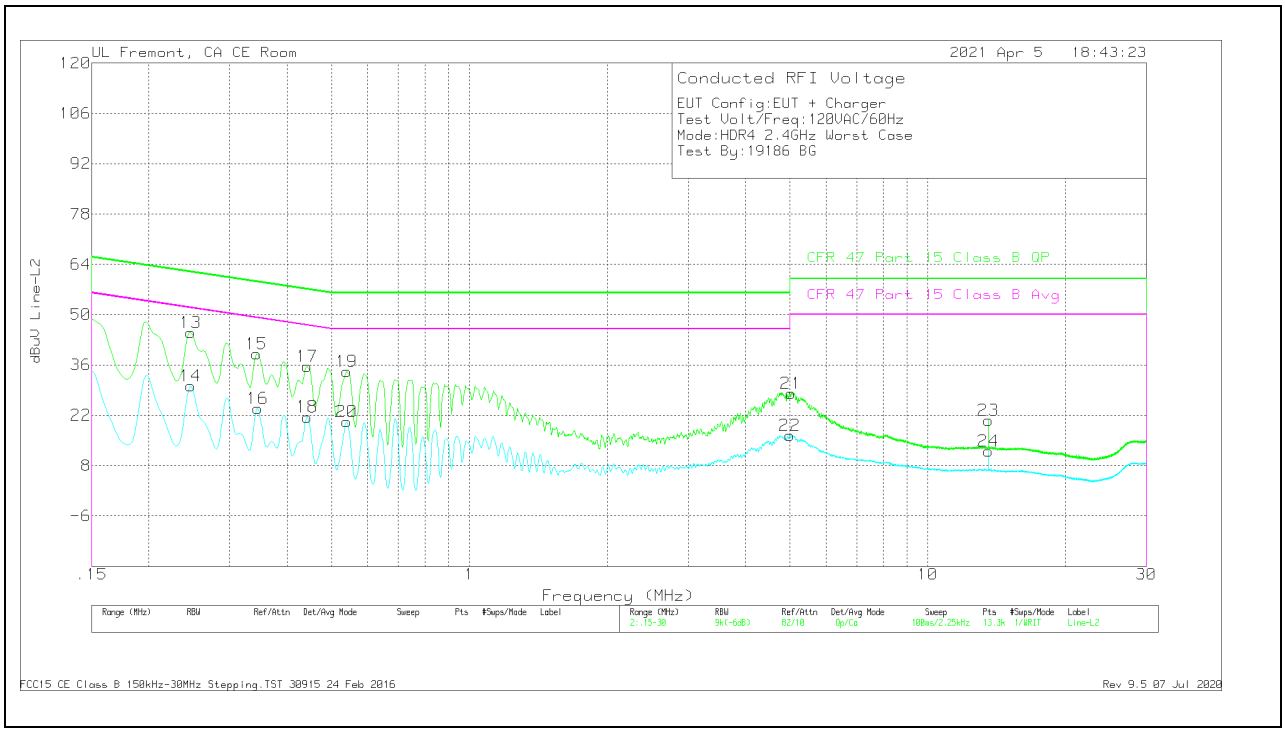
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L2	LC Cables C2&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.24675	34.97	Qp	0	0	10.1	45.07	61.87	-16.8	-	-
14	.24675	20.04	Ca	0	0	10.1	30.14	-	-	51.87	-21.73
15	.3435	29.03	Qp	0	0	10.1	39.13	59.12	-19.99	-	-
16	.34575	13.81	Ca	0	0	10.1	23.91	-	-	49.06	-25.15
17	.4425	25.54	Qp	0	0	10.1	35.64	57.01	-21.37	-	-
18	.4425	11.45	Ca	0	0	10.1	21.55	-	-	47.01	-25.46
19	.53925	24.11	Qp	0	0	10.1	34.21	56	-21.79	-	-
20	.53925	10.1	Ca	0	0	10.1	20.2	-	-	46	-25.8
21	5.03925	17.83	Qp	0	.1	10.2	28.13	60	-31.87	-	-
22	4.99538	6.09	Ca	0	.1	10.2	16.39	-	-	46	-29.61
23	13.56	10.02	Qp	.1	.2	10.2	20.52	60	-39.48	-	-
24	13.56	1.59	Ca	.1	.2	10.2	12.09	-	-	50	-37.91

Qp - Quasi-Peak detector
Ca - CISPR average detection

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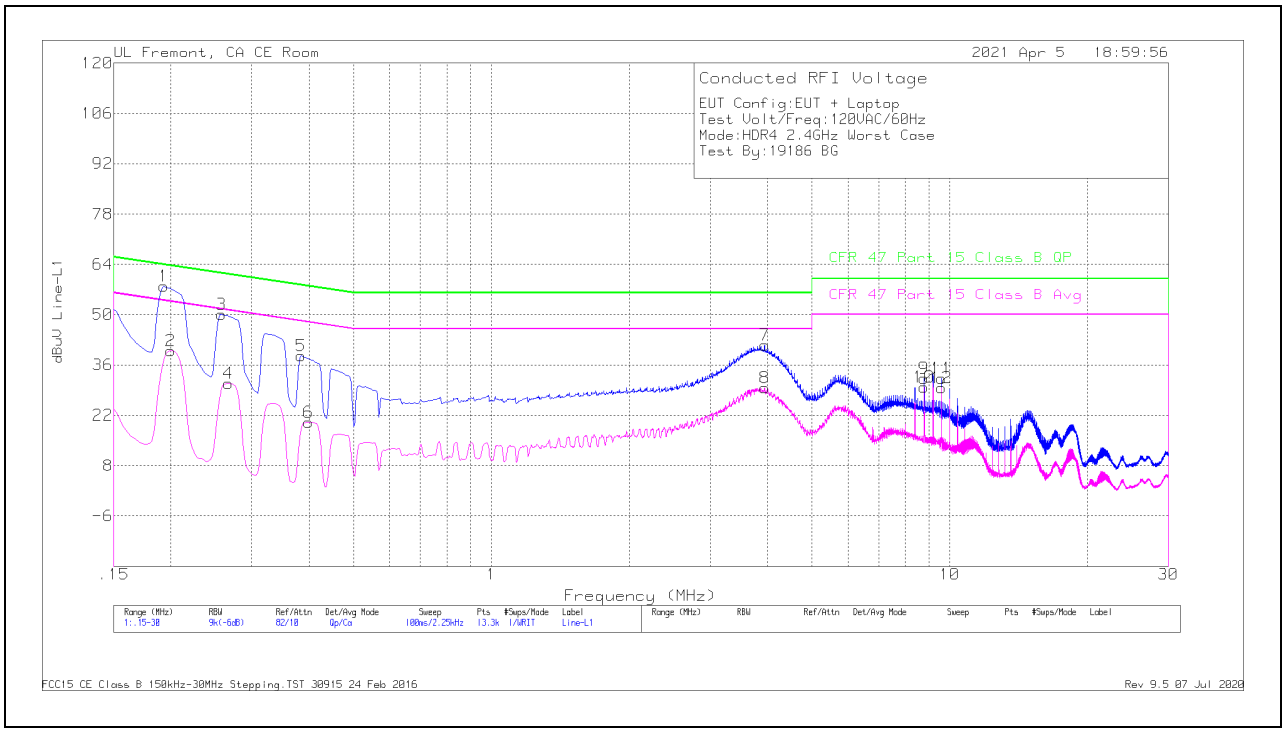
11.2. AC Power Line with Laptop

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L1	LC Cables C1&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
1	.19275	47.81	Qp	0	0	10.1	57.91	63.92	-6.01	-	-
2	.1995	29.87	Ca	0	0	10.1	39.97	-	-	53.63	-13.66
3	.258	39.96	Qp	0	0	10.1	50.06	61.5	-11.44	-	-
4	.267	20.81	Ca	0	0	10.1	30.91	-	-	51.21	-20.3
5	.384	28.51	Qp	0	0	10.1	38.61	58.19	-19.58	-	-
6	.39975	10.03	Ca	0	0	10.1	20.13	-	-	47.86	-27.73
7	3.9435	31.23	Qp	0	.1	10.2	41.53	56	-14.47	-	-
8	3.9435	19.35	Ca	0	.1	10.2	29.65	-	-	46	-16.35
9	8.7945	21.86	Qp	0	.2	10.2	32.26	60	-27.74	-	-
10	8.7945	19.41	Ca	0	.2	10.2	29.81	-	-	50	-20.19
11	9.59325	21.83	Qp	0	.2	10.2	32.23	60	-27.77	-	-
12	9.59325	19.19	Ca	0	.2	10.2	29.59	-	-	50	-20.41

Qp - Quasi-Peak detector
Ca - CISPR average detection

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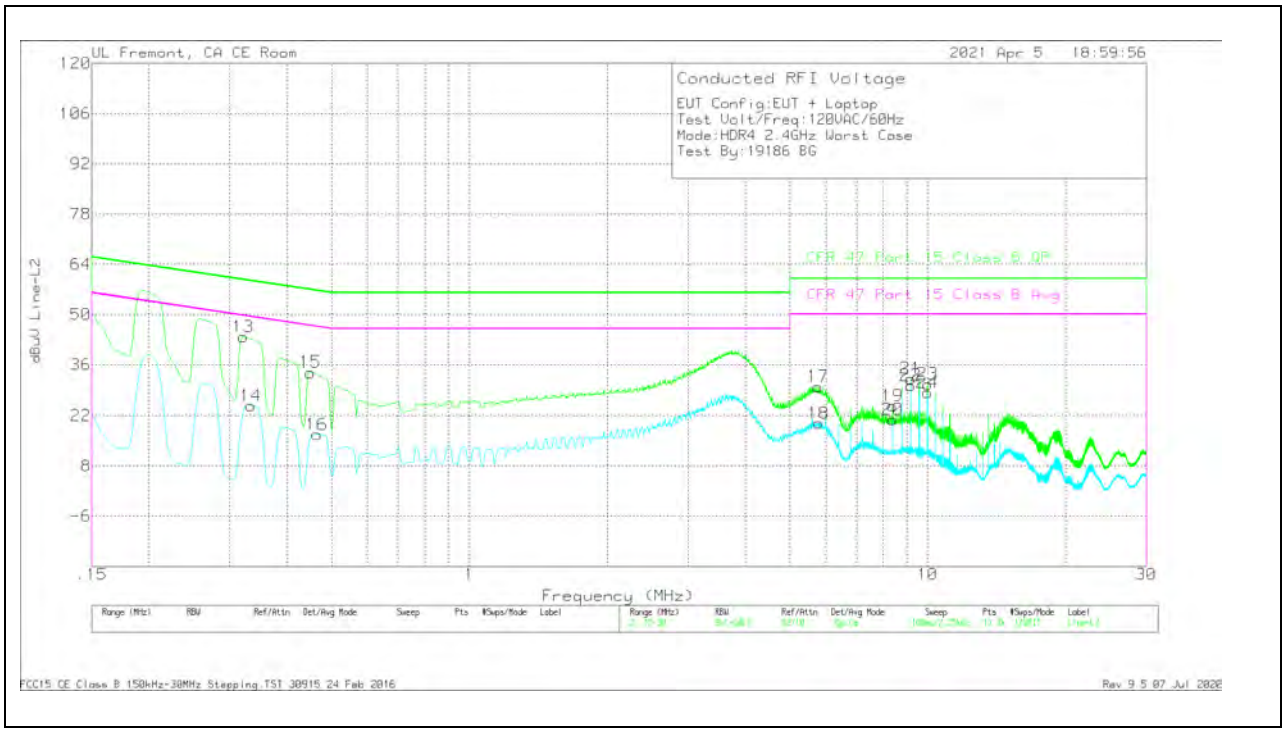
LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L2	LC Cables C2&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
13	.321	33.62	Qp	0	0	10.1	43.72	59.68	-15.96	-	-
14	.33338	14.66	Ca	0	0	10.1	24.76	-	-	49.37	-24.61
15	.44925	23.84	Qp	0	0	10.1	33.94	56.89	-22.95	-	-
16	.465	6.73	Ca	0	0	10.1	16.83	-	-	46.6	-29.77
17	5.766	19.69	Qp	0	.1	10.2	29.99	60	-30.01	-	-
18	5.77725	9.54	Ca	0	.1	10.2	19.84	-	-	50	-30.16
19	8.38725	14.45	Qp	0	.2	10.2	24.85	60	-35.15	-	-
20	8.38725	10.58	Ca	0	.2	10.2	20.98	-	-	50	-29.02
21	9.186	21.85	Qp	0	.2	10.2	32.25	60	-27.75	-	-
22	9.18375	19.94	Ca	0	.2	10.2	30.34	-	-	50	-19.66
23	9.9825	20.3	Qp	0	.2	10.2	30.7	60	-29.3	-	-
24	9.9825	17.98	Ca	0	.2	10.2	28.38	-	-	50	-21.62

Qp - Quasi-Peak detector
Ca - CISPR average detection

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12. SETUP PHOTOS

Please refer to 13573777-EP1 for setup photos

END OF TEST REPORT

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