



TEST REPORT

Report Number: 13571607-E3V2

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

Model : A2482 (Parent Model, Full Test)
A2635, A2631, A2633, A2634 (Variant Models)

FCC ID : BCG-E3997A (Parent Model)
BCG-E4032A, BCG-E3999A, BCG-E4031A (Variant Models)

IC : 579C-E3997A (Parent Model)
579C-E4032A, 579C-E3999A, 579C-E4031A (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 + A1 + A2

Date Of Issue:

July 16, 2021

Prepared by:

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	6/30/2021	Initial Issue	Frank Ibrahim
V2	7/16/2021	Address TCB's Question on page 66, 67, 78, 79	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: A2482 (Parent Model)
A2635, A2631, A2633, A2634(Variant Models)

BRAND: APPLE

FCC ID: BCG-E3997A (Parent Model)
BCG-E4032A, BCG-E3999A, BCG-E4031A (Variant Models)

IC ID: 579C-E3997A (Parent Model)
579C-E4032A, 579C-E3999A, 579C-E4031A (Variant Models)

SERIAL NUMBER: G6TDQ0AG0XGQ; F4TVFCF6KN; CQF9R4NQNJ

SAMPLE RECEIPT DATE: 01/28/2021, 04/16/2021

DATE TESTED: FEBRUARY 17, 2021 – JULY 16, 2021

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested 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 A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:



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

Prepared By:



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

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 A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	208313
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	208313
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	208313

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	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB

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

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 and NFC. 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 Model and FCC and IC ID covered by this report includes:

Parent Model: A2482; FCC ID: BCG-E3997A; IC ID: 579C-E3997A

Variant Models: A2635; FCC ID: BCG-E4032A; IC ID: 579C-E4032A
 A2631; FCC ID: BCG-E3999A; IC ID: 579C-E3999A
 A2633; FCC ID: BCG-E4031A; IC ID: 579C-E4031A
 A2634; FCC ID: BCG-E4032A; IC ID: 579C-E4032A

6.2. MAXIMUM PEAK 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	15.05	31.99
	Low Power			9.05	8.04
	High Power		HDR8	16.04	40.18
	Low Power			9.93	9.84
ANT 3	High Power	2404 - 2476	HDR4	14.98	31.48
	Low Power			9.12	8.17
	High Power		HDR8	16.03	40.09
	Low Power			10.08	10.19
BF, ANT 4 + ANT 3	High Power	2404 - 2476	HDR4	17.96	62.52
	Low Power			12.03	15.96
	High Power		HDR8	19.11	81.47
	Low Power			12.92	19.59

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	-2.9	0.3

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 Y (Landscape) orientation was the worst-case orientation for ANT 4 and X (Flatbed) was the worst case for 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 power line conducted emissions were performed with the EUT transmits at the channel with the highest output power as worst-case scenario. There were no emissions found below 30MHz within 20dB of the limit.

For below 1GHz tests were performed with EUT connected to AC power adapter as the worst case; and for above 1GHz, the worst-case configuration reported was tested with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop.

99%, 6dB and PSD on high power mode are tested to cover Low power mode since 99%, 6dB results are no different on low power mode and for PSD high power mode is the worst case.

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.

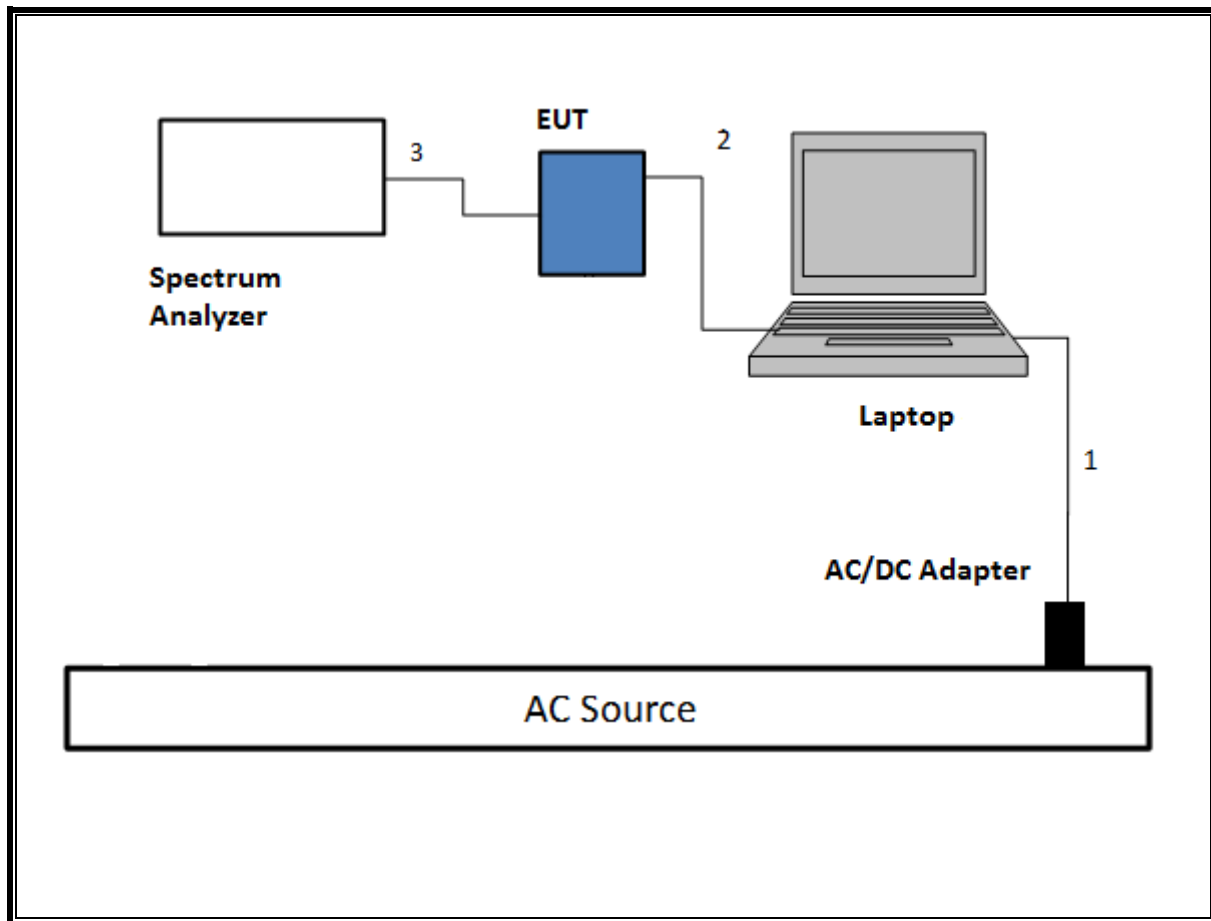
Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

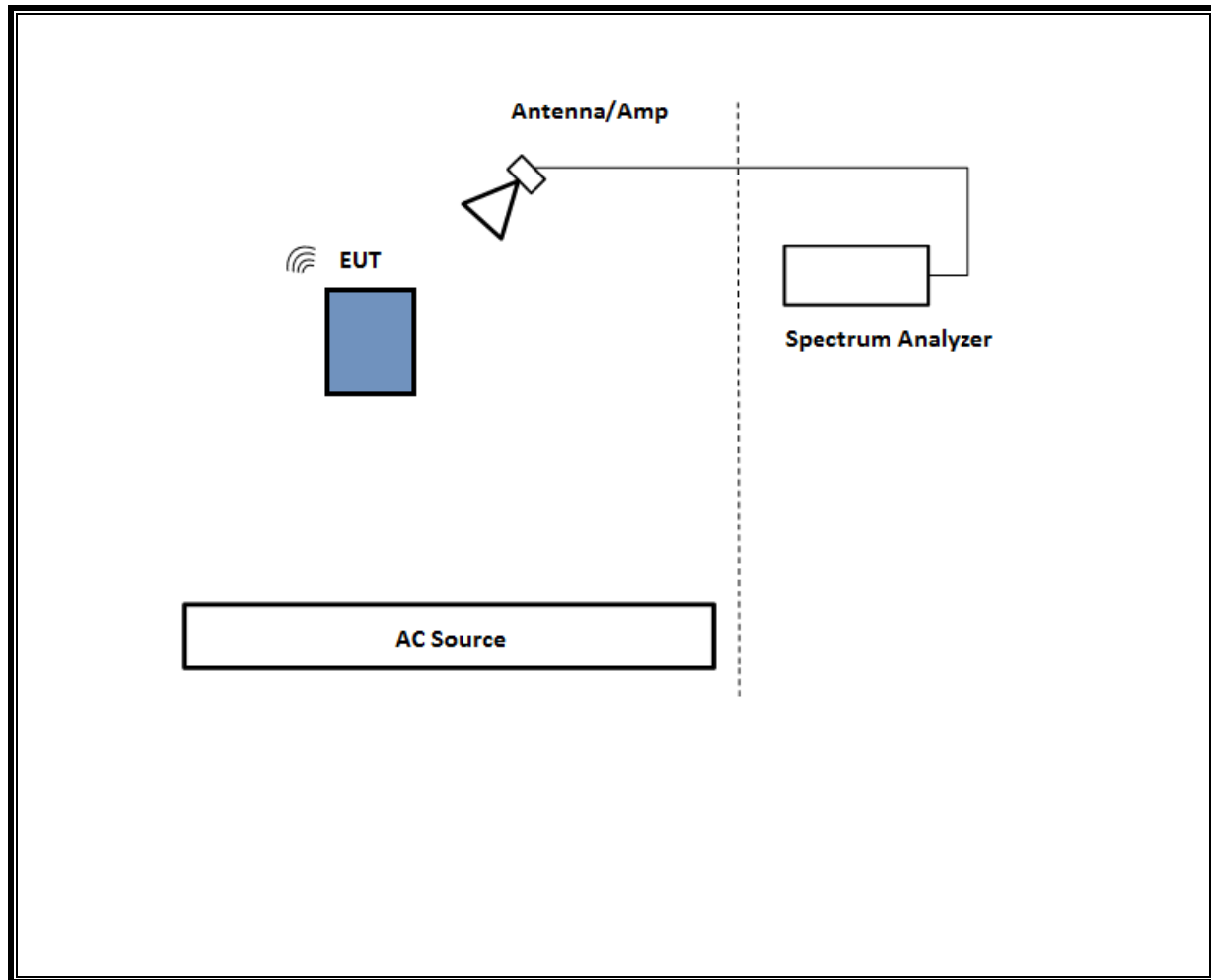
6.6. DESCRIPTION OF TEST SETUP

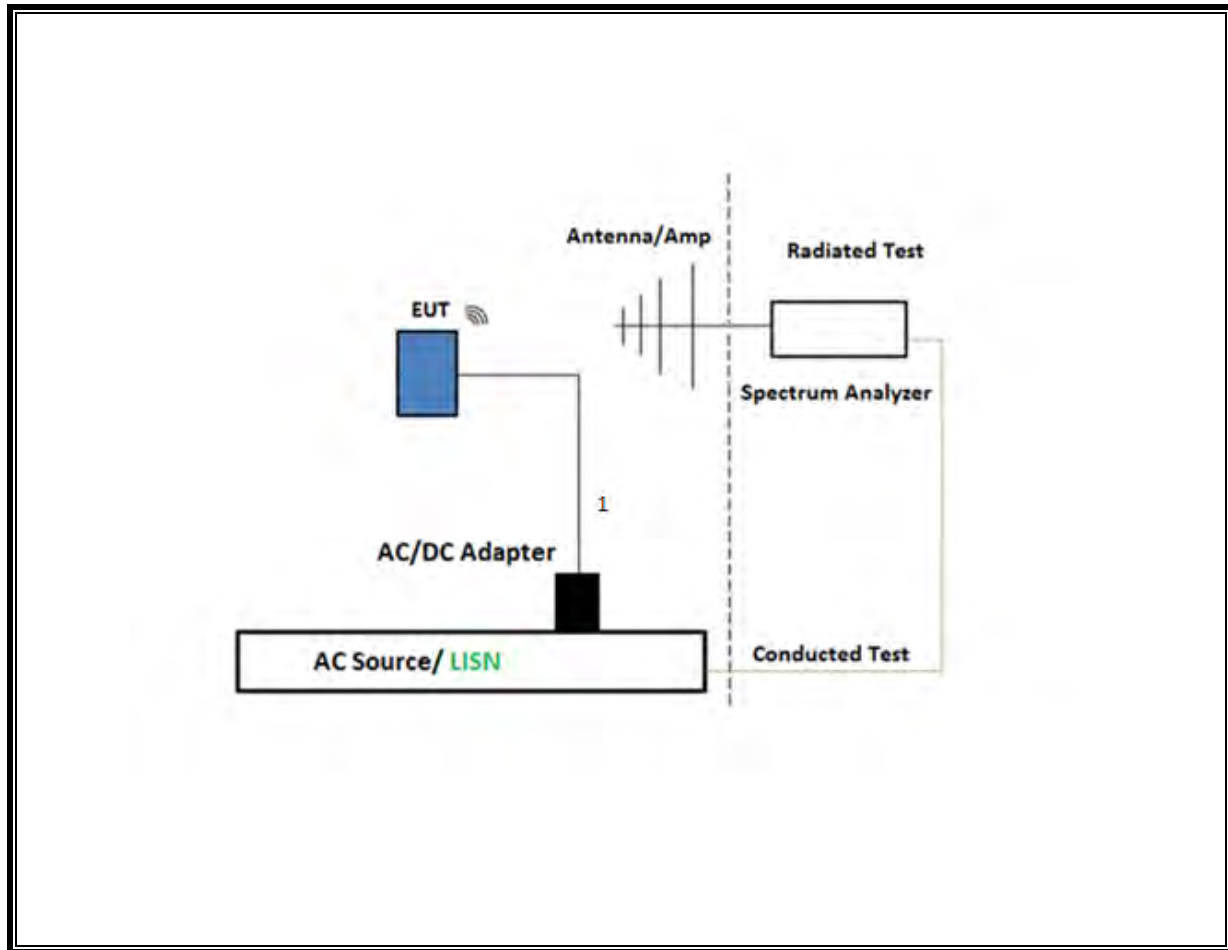
SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop		Apple	Macbook Pro	C02YL3ZMJHC8		BCGA1989
Laptop AC/DC adapter		Apple	A1424	NSW25679		DoC
EUT AC/DC adapter		Apple	A1720	C3D8417A7R93KVPA8		DoC
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical 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

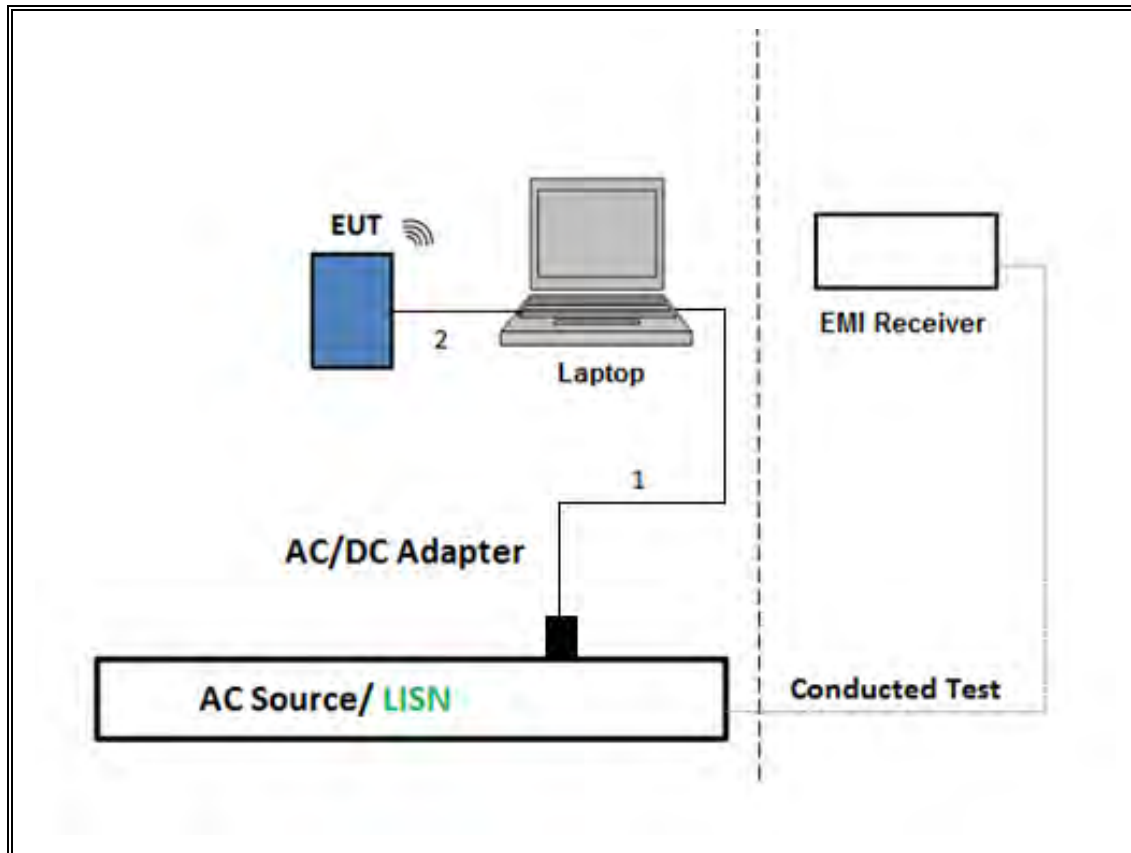
TEST SETUP

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

SETUP DIAGRAM FOR CONDUCTED TESTS

SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz

SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST

TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION

7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 558074 D01 v05r02, Section 6.

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

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

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

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

PSD: ANSI C63.10 Subclause -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.

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	01/28/2022
Power Meter, P-series single channel	Keysight	N1912A	T1244	01/25/2022	01/25/2021
Power Sensor	Keysight	N1921A	T1224	01/25/2022	01/25/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	EMC4294	09/15/2021	09/15/2020
RF Amplifier, 1-18GHz	AMPLICAL	AMP1G18-35	T1571	08/20/2021	09/20/2020
EMI Receiver	Rohde & Schwarz	ESW44	PRE0179522	02/19/2022	02/19/2021
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T711	03/01/2022	03/01/2021
Amplifier, 1 to 8GHz, 35dB	MITEQ	AMF-4D-01000800-30-29P	T1169	03/30/2022	03/30/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T1466	1/25/2022	1/25/2021
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	200785	09/25/2021	09/25/2020
Rf Amplifier 1-18GHz, 45dB Min	Amplical	AMP0.1G18-47-20	172124	12/09/2021	12/09/2020
Filter, HPF 3.0 GHz	MICRO-TRONICS	HPM17543	202845	12/09/2021	12/09/2020
EMI Test Receiver	Rohde & Schwarz	ESW44	201501	02/23/2022	02/23/2021
Antenna, BroadBand Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	202329	10/27/2021	10/27/2020
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
*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	04/08/2020
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.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

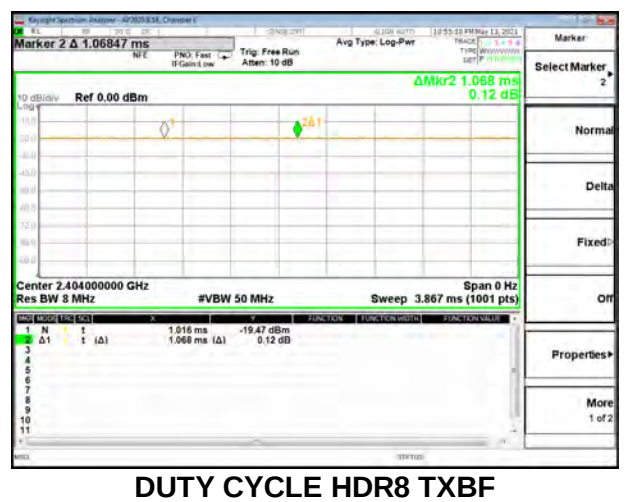
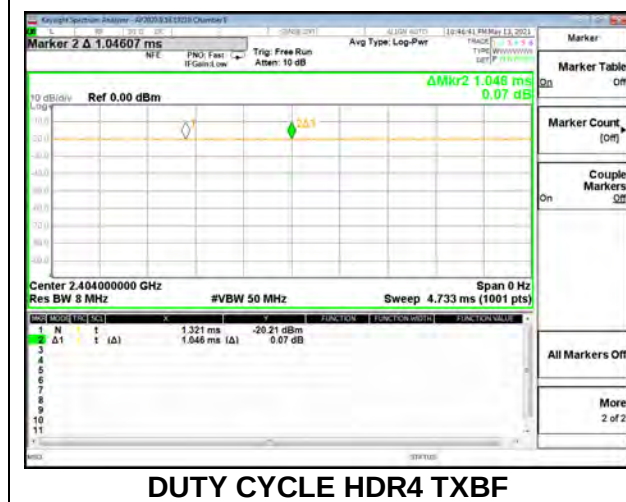
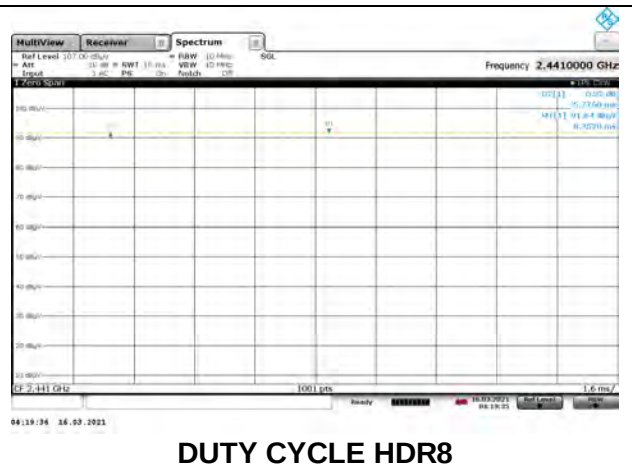
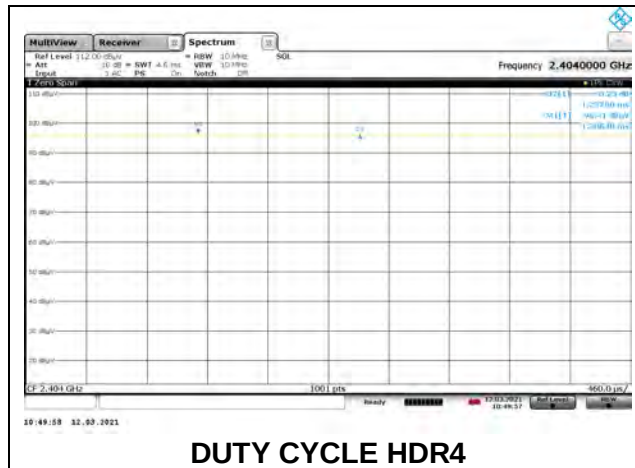
None; for reporting purposes only.

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

DUTY CYCLE PLOTS

9.2. 99% BANDWIDTH**LIMITS**

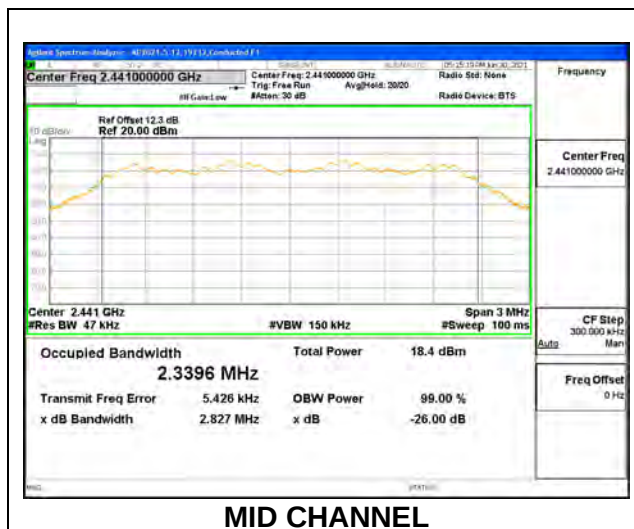
None; for reporting purposes only.

RESULTS

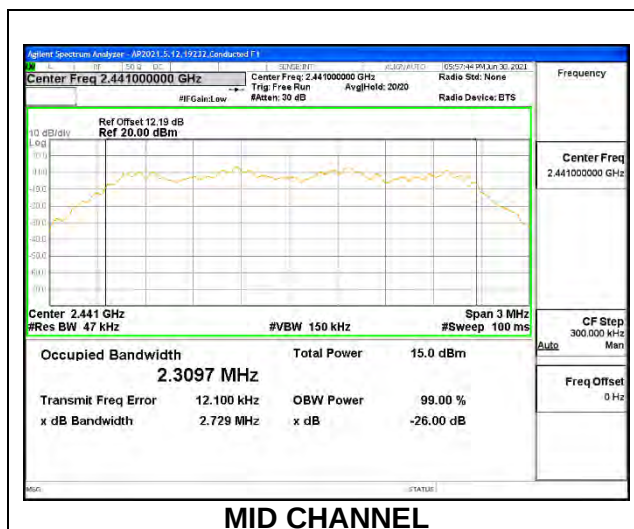
Only High-Power modes results are reported, they cover all Low Power modes. Only Mid channel plot is reported to show analyzer settings.

9.2.1. HIGH POWER HDR (HDR4)**ANT 4**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	2.3118
Middle	2441	2.3396
High	2476	2.3343

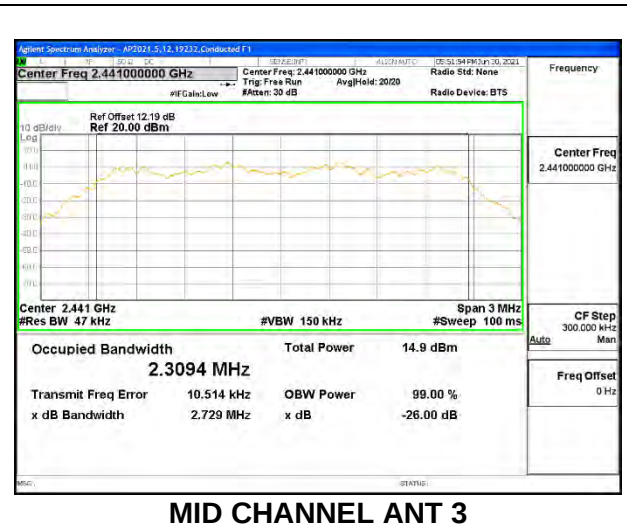
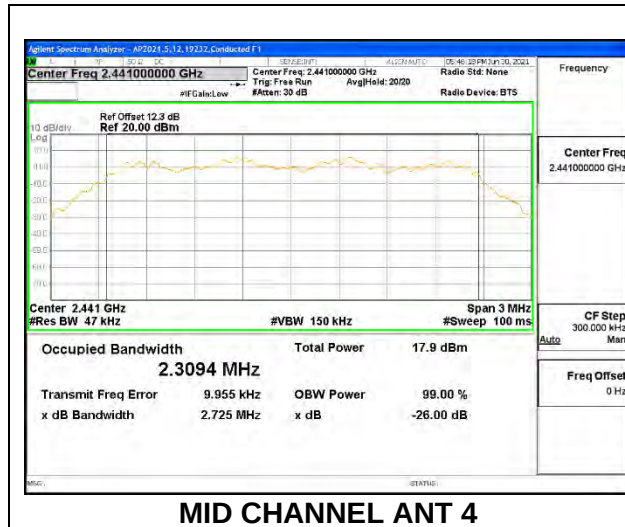
**ANT 3**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	2.3095
Middle	2441	2.3097
High	2476	2.3102



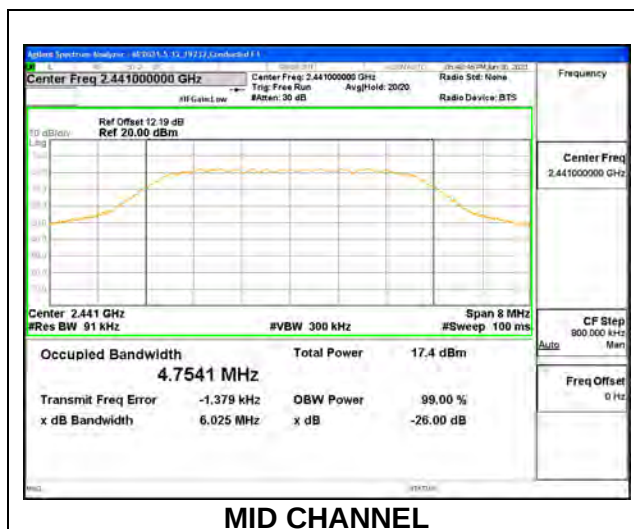
9.2.2. HIGH POWER HDR TXBF (HDR4)

Channel	Frequency (MHz)	99% Bandwidth ANT 4 (MHz)	99% Bandwidth ANT 3 (MHz)
Low	2404	2.3313	2.3101
Middle	2441	2.3094	2.3094
High	2476	2.3113	2.3103

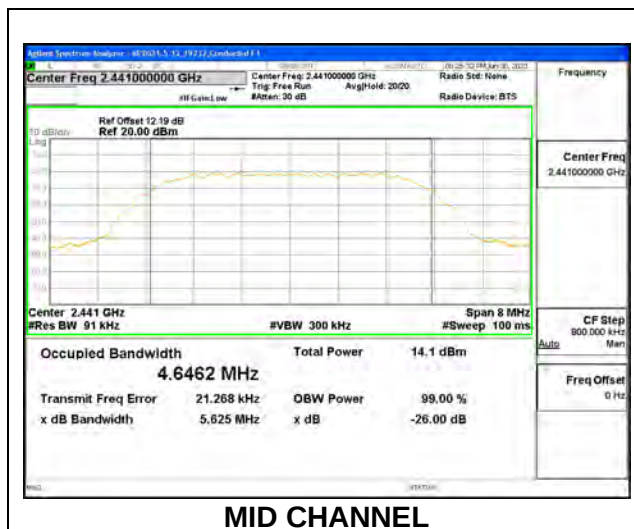


9.2.3. HIGH POWER HDR (HDR8)**ANT 4**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	4.6678
Middle	2441	4.7541
High	2476	4.7584

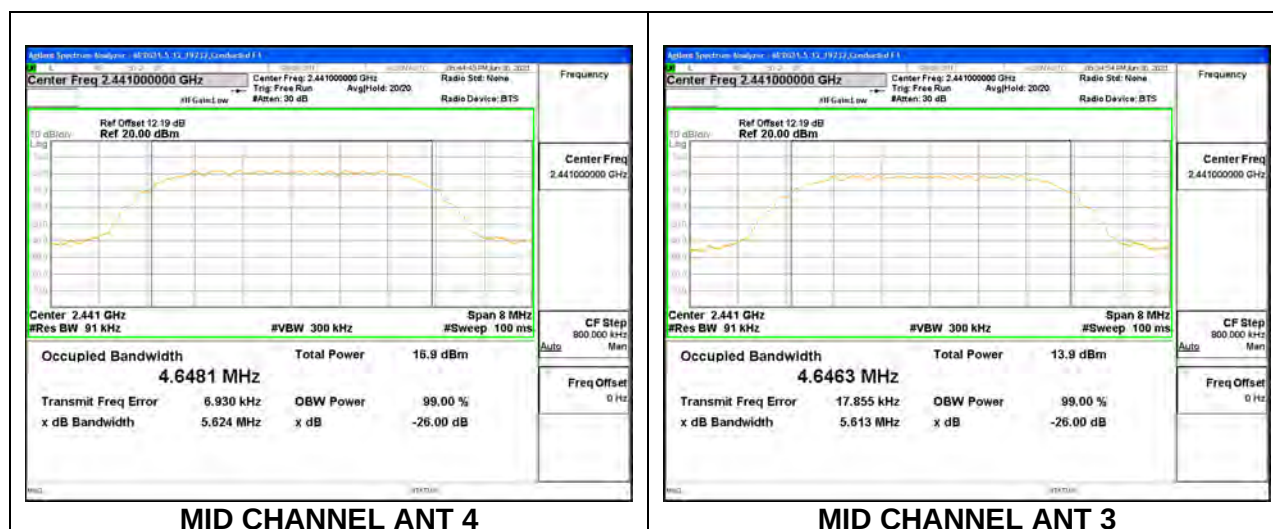
**ANT 3**

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2404	4.6551
Middle	2441	4.6462
High	2476	4.6591



9.2.4. HIGH POWER HDR TXBF (HDR8)

Channel	Frequency (MHz)	99% Bandwidth ANT 4 (MHz)	99% Bandwidth ANT 3 (MHz)
Low	2404	4.6657	4.6554
Middle	2441	4.6481	4.6463
High	2476	4.6496	4.6590



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.

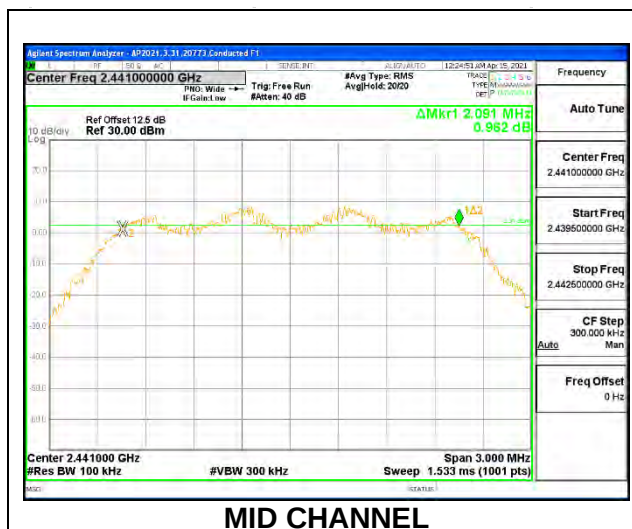
RESULTS

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.

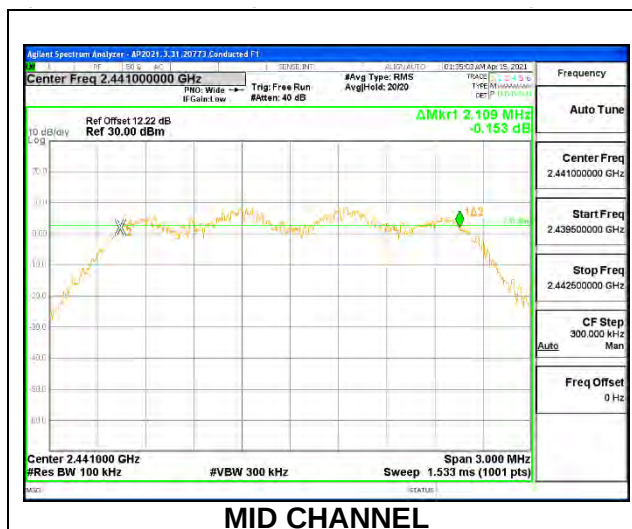
Only High-Power modes result are reported, they cover all Low Power modes. Only Mid channel plot is reported to show analyzer settings.

9.3.1. HIGH POWER HDR (HDR4)**ANT 4**

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2404	2.160	0.5
Middle	2441	2.091	0.5
High	2476	2.110	0.5

**ANT 3**

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2404	2.094	0.5
Middle	2441	2.109	0.5
High	2476	2.112	0.5



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	-2.90	0.30	-1.01	1.86

RESULTS

9.4.1. HIGH POWER HDR (HDR4)**ANT 4**

Tested By:	19232
Date:	6/3/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	14.98	30	-15.02
Middle	2441	14.91	30	-15.09
High	2476	15.05	30	-14.95

ANT 3

Tested By:	19232
Date:	6/3/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	14.98	30	-15.02
Middle	2441	14.82	30	-15.18
High	2476	14.87	30	-15.13

9.4.2. HIGH POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	6/17/2021

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	15.05	14.85	17.96	30.00	-12.04
Middle	2441	14.89	14.98	17.95	30.00	-12.05
High	2476	14.90	14.82	17.87	30.00	-12.13

9.4.3. HIGH POWER HDR (HDR8)**ANT 4**

Tested By:	19232
Date:	6/3/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	16.01	30	-13.99
Middle	2441	15.98	30	-14.02
High	2476	16.04	30	-13.96

ANT 3

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	16.03	30	-13.97
Middle	2441	15.78	30	-14.22
High	2476	15.99	30	-14.01

9.4.4. HIGH POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/17/2021

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	15.77	16.07	18.93	30.00	-11.07
Middle	2441	16.09	16.11	19.11	30.00	-10.89
High	2476	15.82	15.86	18.85	30.00	-11.15

9.4.5. LOW POWER HDR (HDR4)**ANT 4**

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.05	30	-20.95
Middle	2441	8.92	30	-21.08
High	2476	8.99	30	-21.01

ANT 3

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.01	30	-20.99
Middle	2441	9.12	30	-20.88
High	2476	8.95	30	-21.05

9.4.6. LOW POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	6/17/2021

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	8.89	8.96	11.94	30.00	-18.06
Middle	2441	9.15	8.89	12.03	30.00	-17.97
High	2476	9.03	8.66	11.86	30.00	-18.14

9.4.7. LOW POWER HDR (HDR8)**ANT 4**

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.85	30	-20.15
Middle	2441	9.91	30	-20.09
High	2476	9.93	30	-20.07

ANT 3

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2404	9.86	30	-20.14
Middle	2441	9.99	30	-20.01
High	2476	10.08	30	-19.92

9.4.8. LOW POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/17/2021

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	9.88	9.94	12.92	30.00	-17.08
Middle	2441	9.94	9.83	12.90	30.00	-17.10
High	2476	9.89	9.79	12.85	30.00	-17.15

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

9.5.1. HIGH POWER HDR (HDR4)**ANT 4**

Tested By:	19232
Date:	6/3/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	12.45
Middle	2441	12.44
High	2476	12.50

ANT 3

Tested By:	19232
Date:	6/3/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	12.39
Middle	2441	12.38
High	2476	12.36

9.5.2. HIGH POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	12.50	12.30	15.41
Middle	2441	12.32	12.44	15.39
High	2476	12.43	12.28	15.37

9.5.3. HIGH POWER HDR (HDR8)**ANT 4**

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	13.48
Middle	2441	13.49
High	2476	13.50

ANT 3

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	13.49
Middle	2441	13.10
High	2476	13.40

9.5.4. HIGH POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	13.22	13.49	16.37
Middle	2441	13.50	13.50	16.51
High	2476	13.27	13.24	16.27

9.5.5. LOW POWER HDR (HDR4)**ANT 4**

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	6.50
Middle	2441	6.42
High	2476	6.47

ANT 3

Tested By:	19232
Date:	9/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	6.47
Middle	2441	6.50
High	2476	6.36

9.5.6. LOW POWER HDR TXBF (HDR4)

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	6.38	6.45	9.43
Middle	2441	6.50	6.37	9.45
High	2476	6.47	6.13	9.31

9.5.7. LOW POWER HDR (HDR8)**ANT 4**

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	7.45
Middle	2441	7.47
High	2476	7.46

ANT 3

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	AV power (dBm)
Low	2404	7.36
Middle	2441	7.42
High	2476	7.50

9.5.8. LOW POWER HDR TXBF (HDR8)

Tested By:	19232
Date:	6/17/2021

Channel	Frequency (MHz)	Average Power ANT 4 (dBm)	Average Power ANT 3 (dBm)	Total Power (dBm)
Low	2404	7.35	7.36	10.37
Middle	2441	7.45	7.26	10.37
High	2476	7.32	7.37	10.36

9.6. POWER SPECTRAL DENSITY**LIMITS**

FCC §15.247 (e)

RSS-247 (5.2) (b)

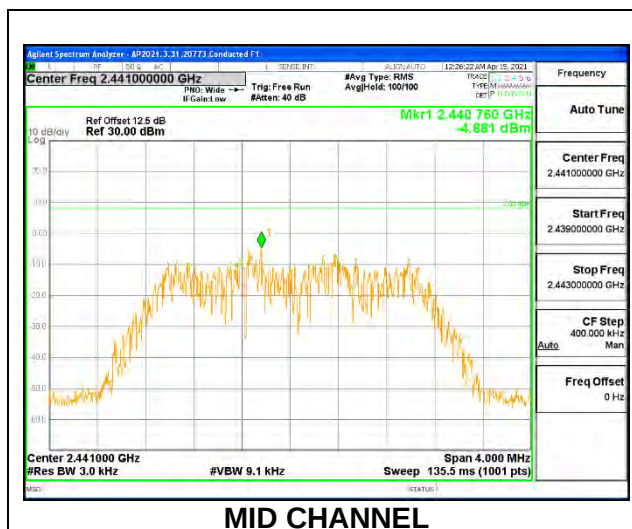
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

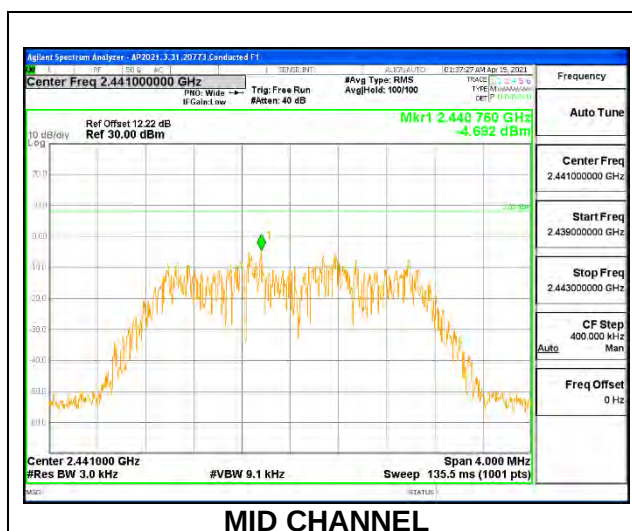
Only Mid channel plot is reported to show analyzer settings.

9.6.1. HIGH POWER HDR (HDR4)**ANT 4**

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-4.638	8	-12.64
Middle	2441	-4.881	8	-12.88
High	2476	-4.716	8	-12.72

**ANT 3**

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-4.985	8	-12.99
Middle	2441	-4.692	8	-12.69
High	2476	-4.804	8	-12.80

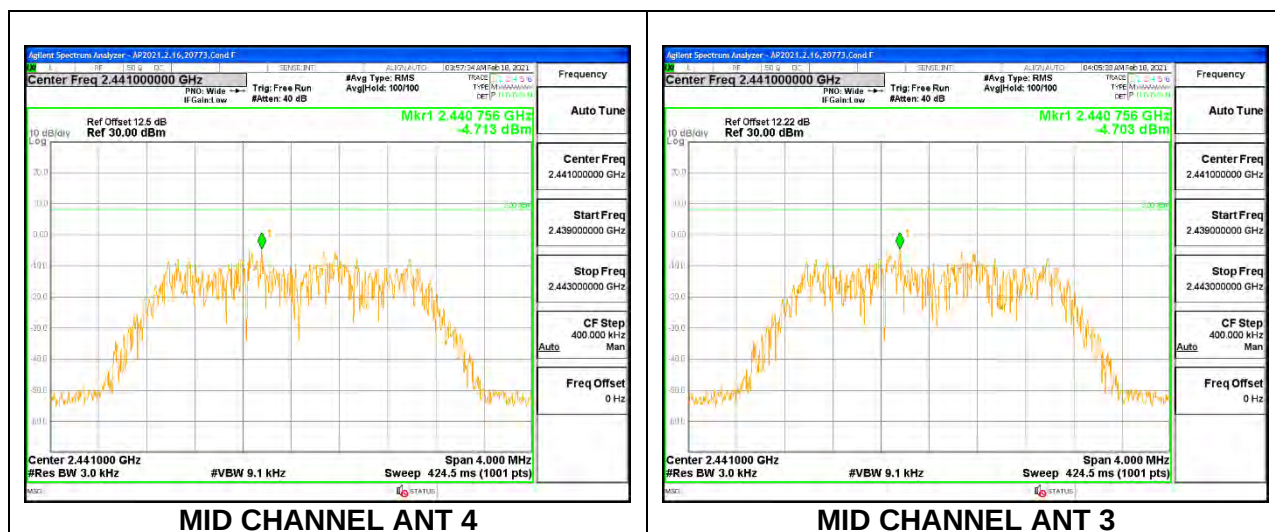


9.6.2. HIGH POWER HDR TXBF (HDR4)

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

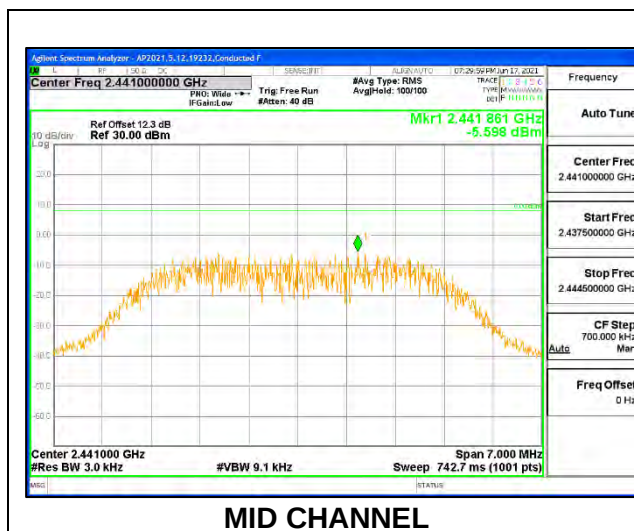
PSD Results

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	-4.843	-4.754	-1.79	8.0	-9.8
Mid	2441	-4.713	-4.703	-1.70	8.0	-9.7
High	2476	-4.684	-4.697	-1.68	8.0	-9.7

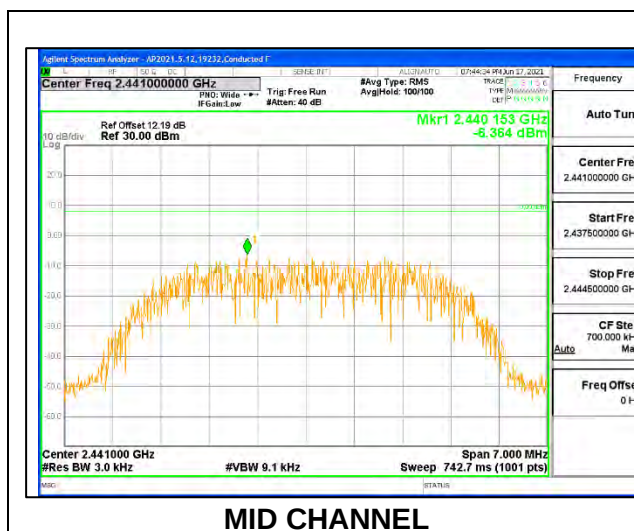


9.6.3. HIGH POWER HDR (HDR8)**ANT 4**

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-5.997	8	-14.00
Middle	2441	-5.598	8	-13.60
High	2476	-5.631	8	-13.63

**ANT 3**

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2404	-5.684	8	-13.68
Middle	2441	-6.364	8	-14.36
High	2476	-6.037	8	-14.04

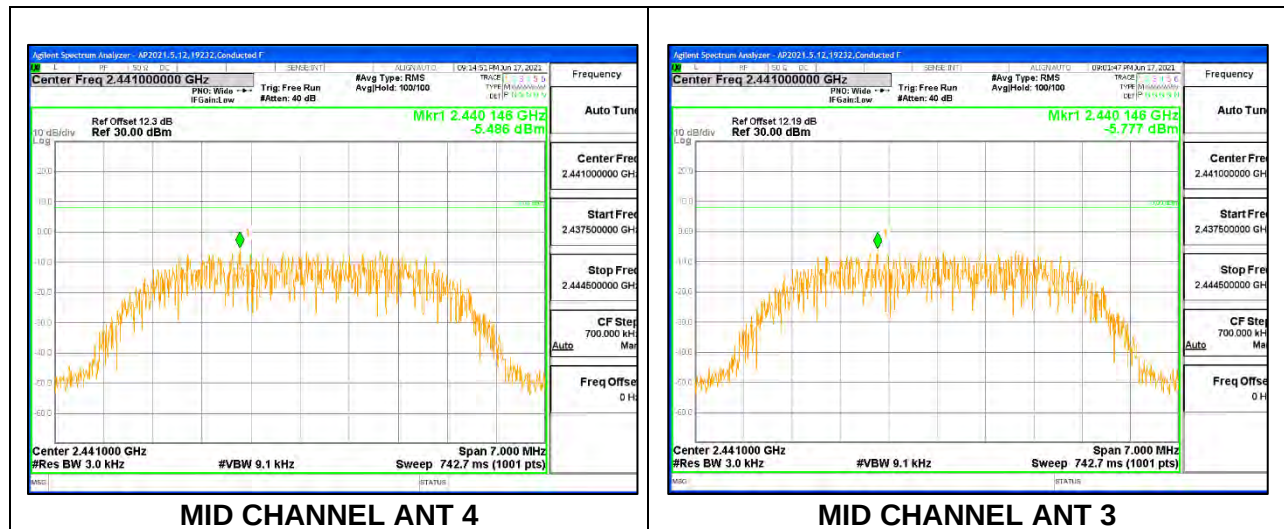


9.6.4. HIGH POWER HDR TXBF (HDR8)

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	-6.257	-5.909	-3.07	8.0	-11.1
Mid	2441	-5.486	-5.777	-2.62	8.0	-10.6
High	2476	-5.797	-6.258	-3.01	8.0	-11.0



9.7. CONDUCTED SPURIOUS EMISSIONS**LIMITS**

FCC §15.247 (d)

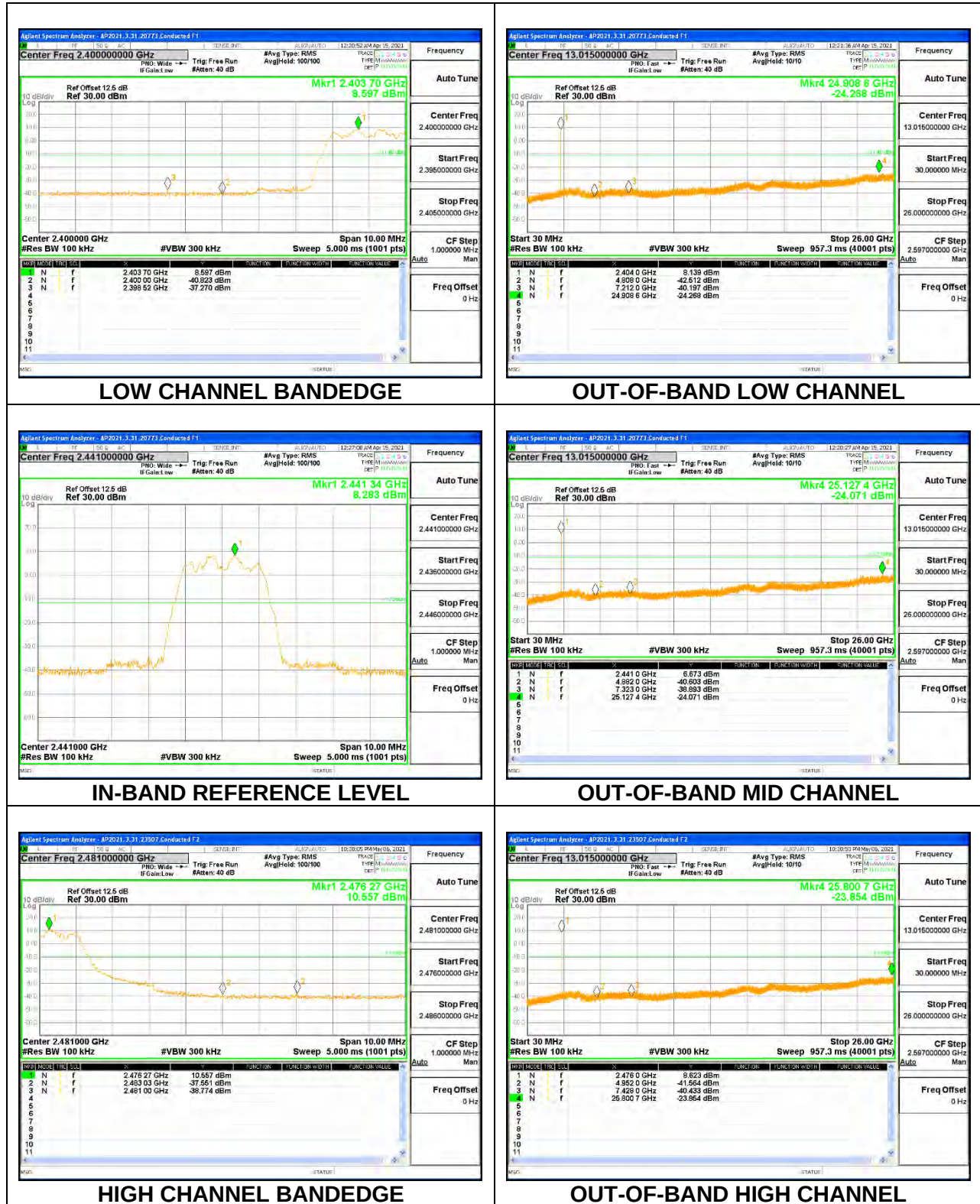
RSS-247 5.5

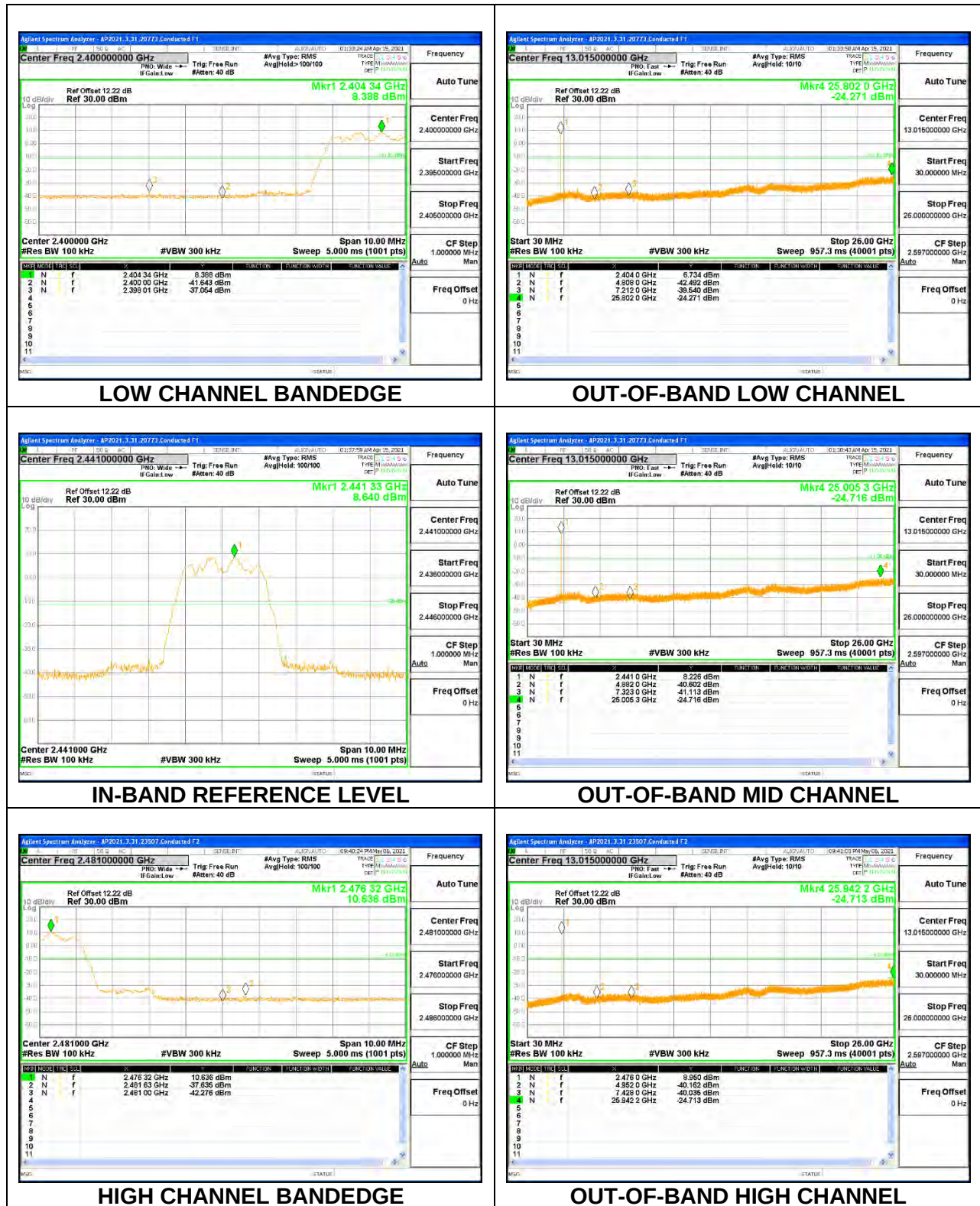
Output power was measured based on the use of a peak measurement; therefore, the required attenuation is 20 dB.

RESULTS

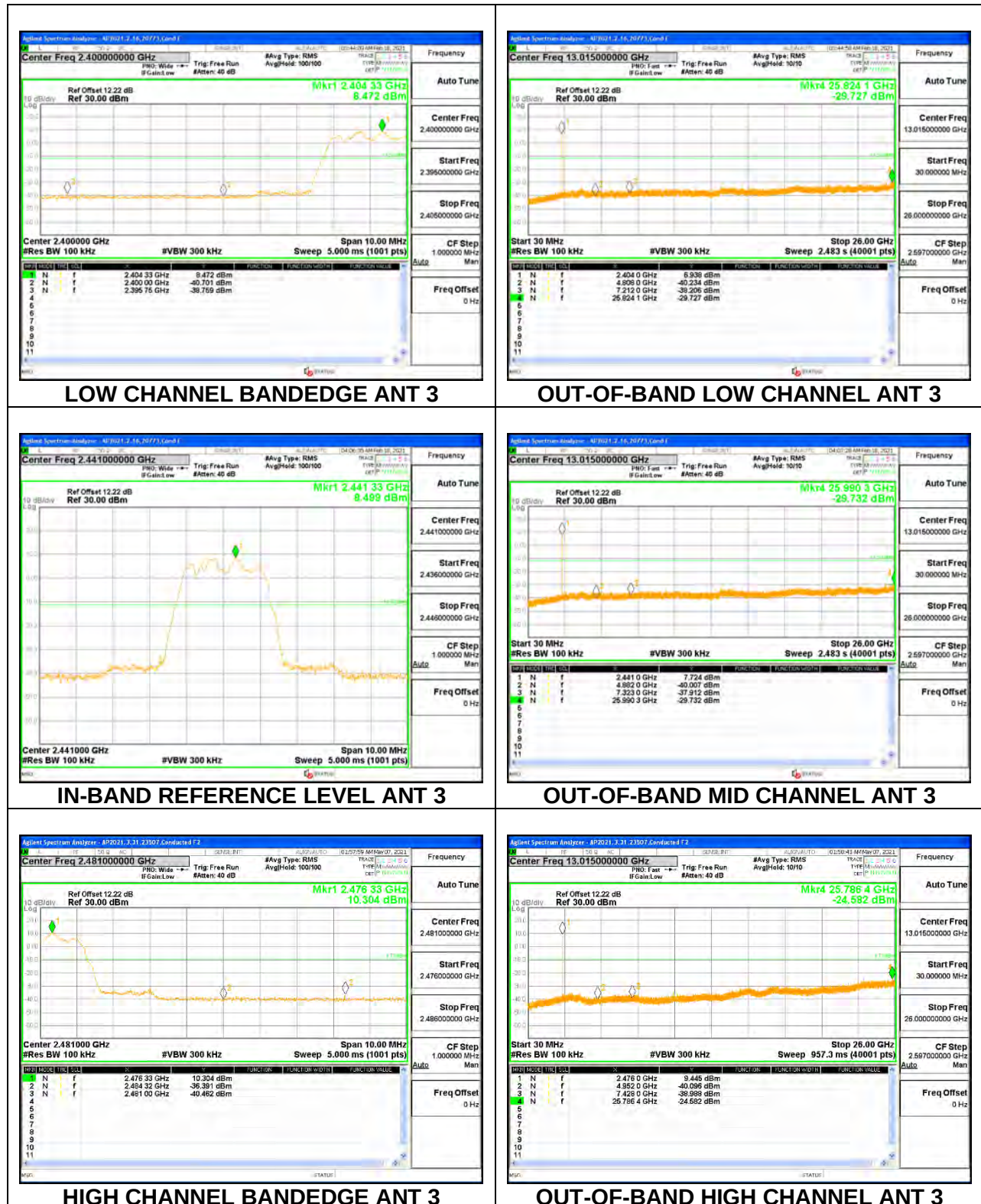
9.7.1. HIGH POWER HDR (HDR4)

ANT 4



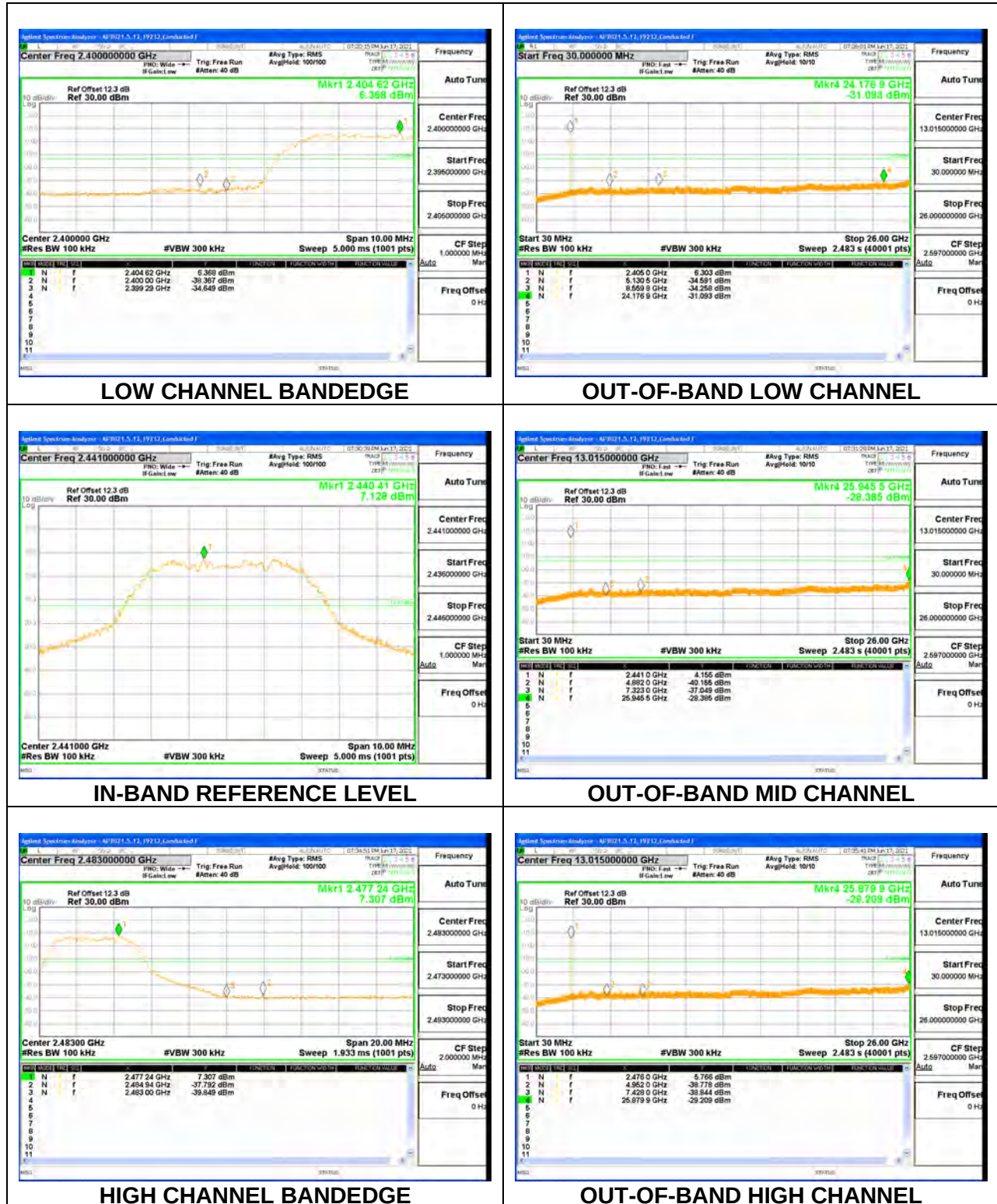
ANT 3

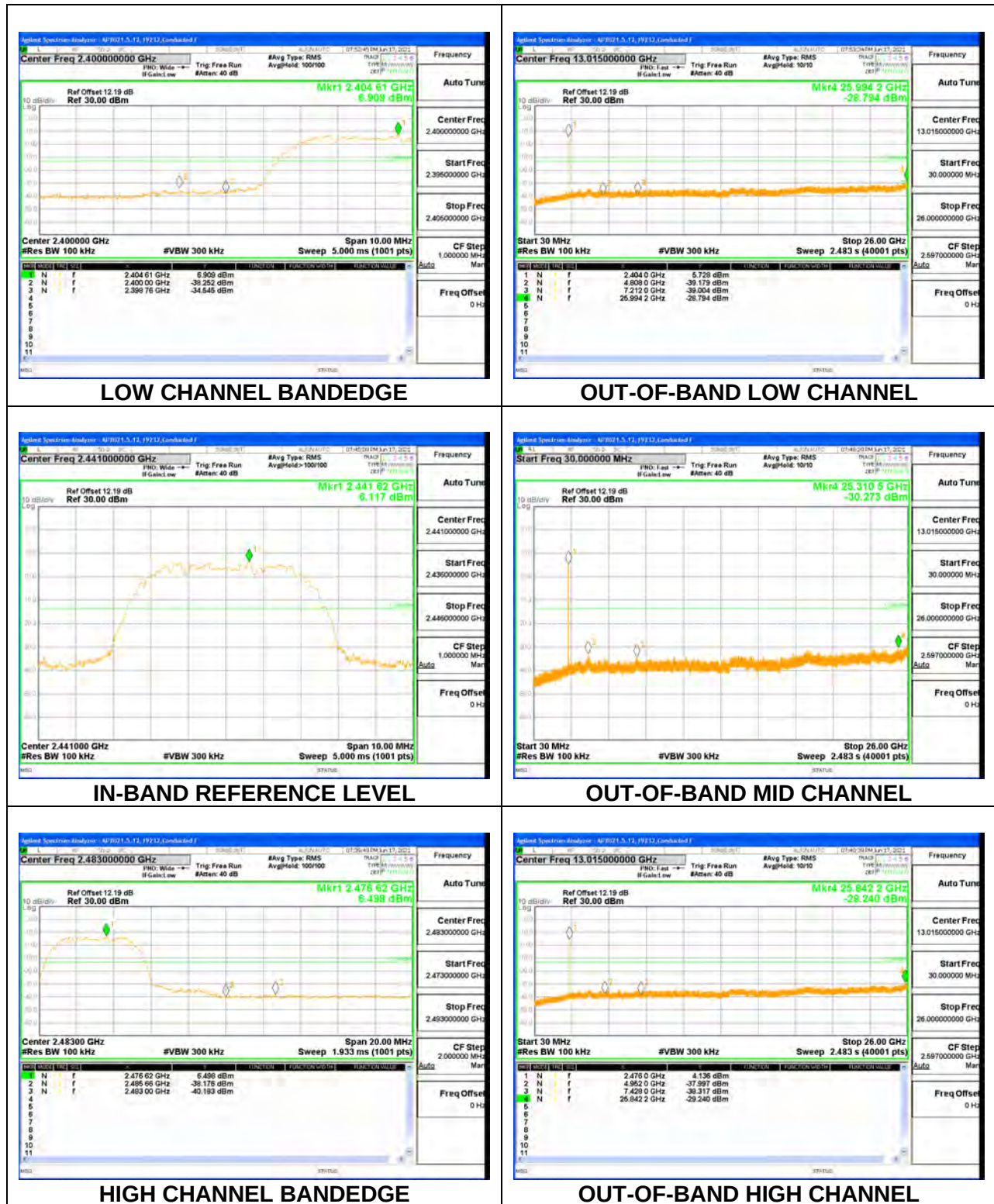
9.7.2. HIGH POWER HDR TXBF (HDR4)**ANT 4****LOW CHANNEL BANDEDGE ANT 4****OUT-OF-BAND LOW CHANNEL ANT 4****IN-BAND REFERENCE LEVEL ANT 4****OUT-OF-BAND MID CHANNEL ANT 4****HIGH CHANNEL BANDEDGE ANT 4****OUT-OF-BAND HIGH CHANNEL ANT 4**

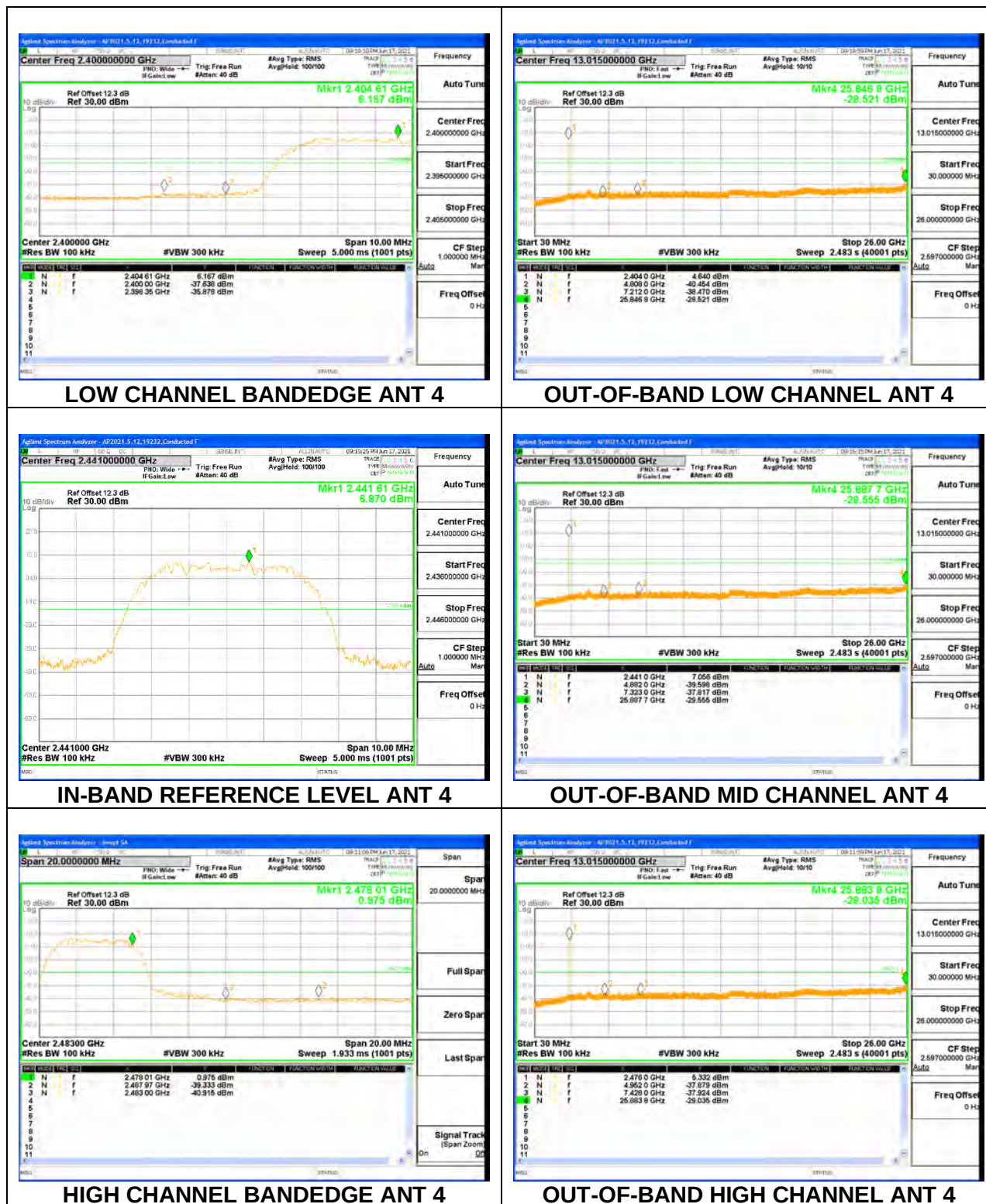
ANT 3

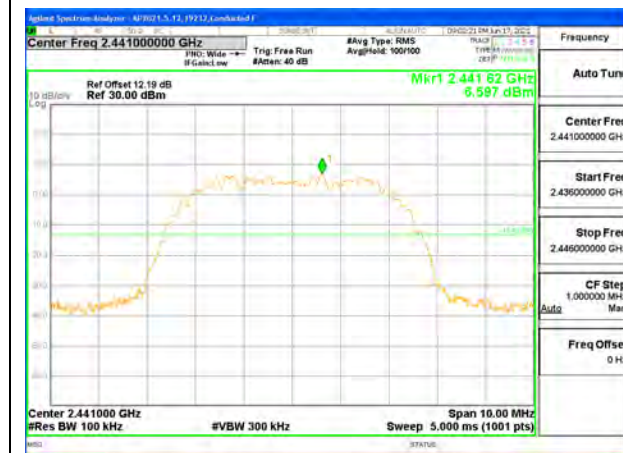
9.7.3. HIGH POWER HDR (HDR8)

ANT 4



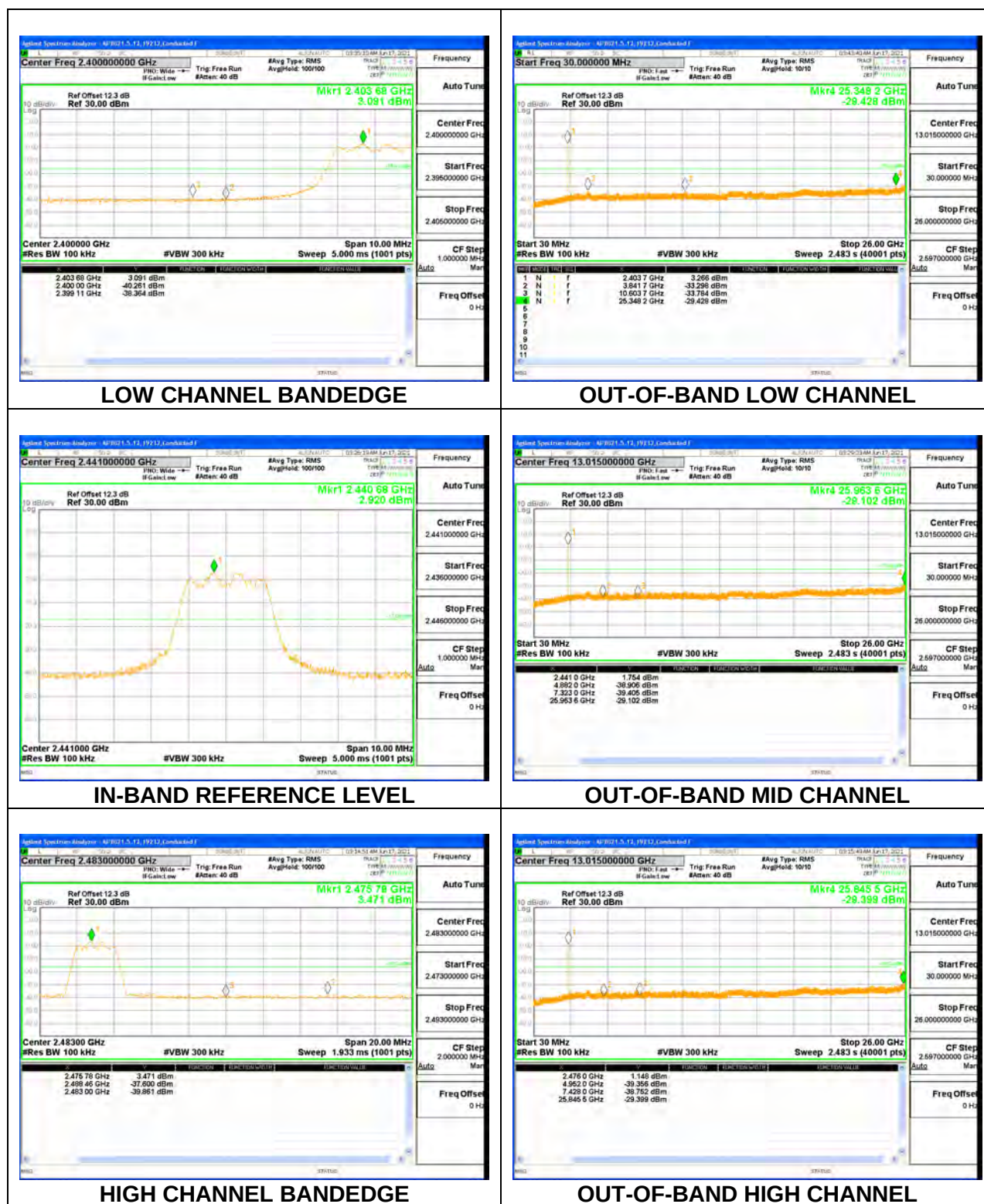
ANT 3

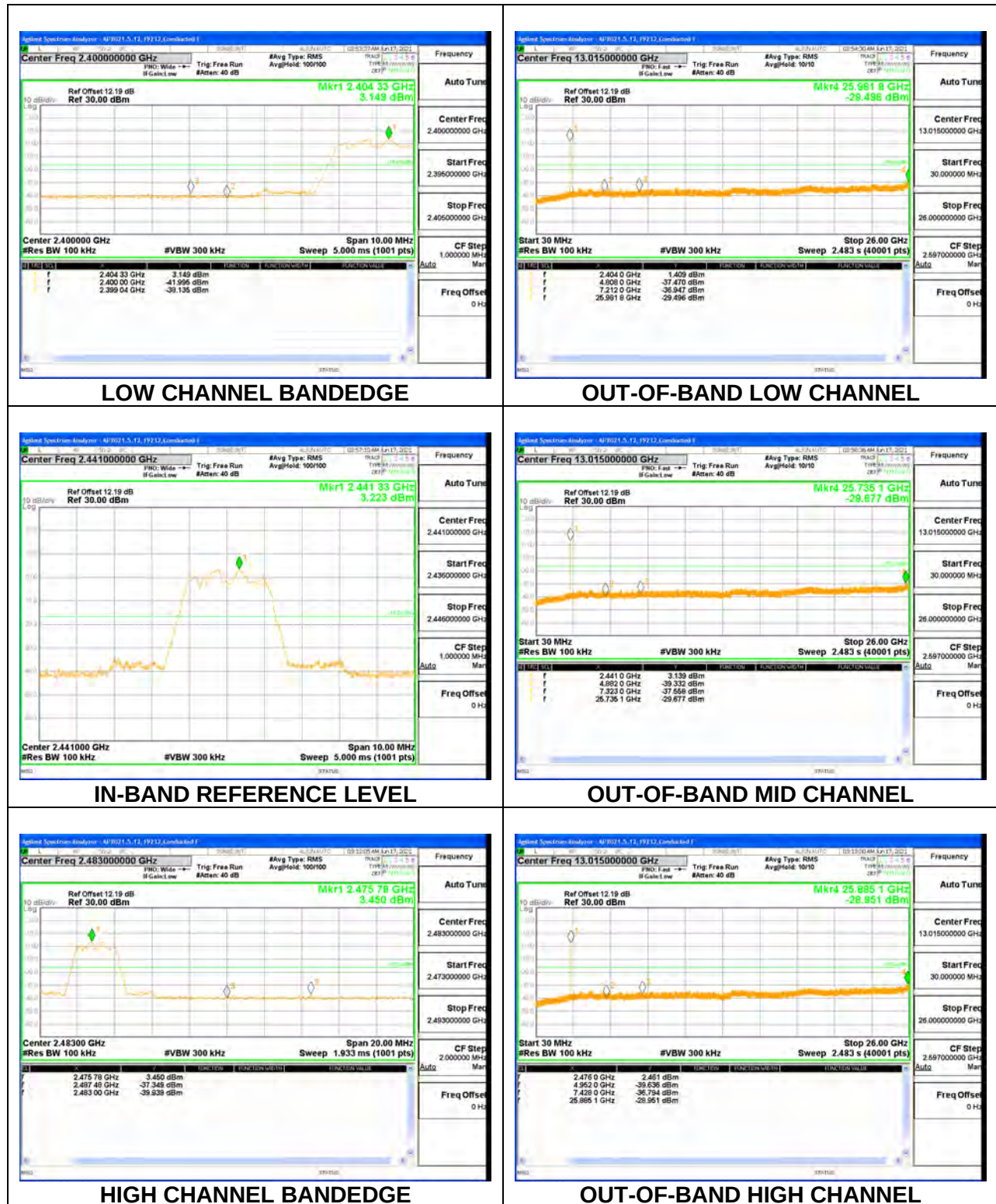
9.7.4. HIGH POWER HDR TXBF (HDR8)**ANT 4**

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**

9.7.5. LOW POWER HDR (HDR4)

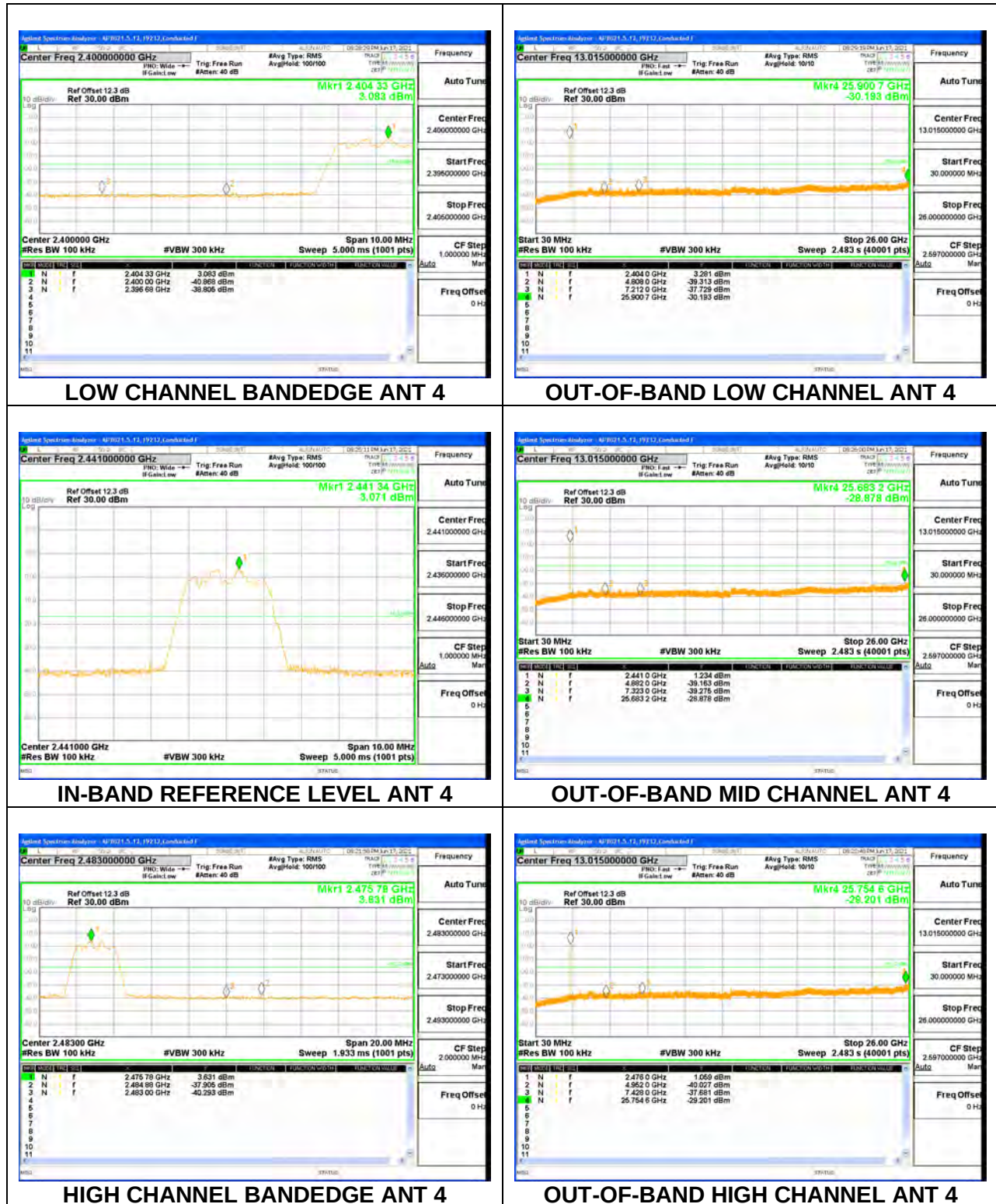
ANT 4



ANT 3

9.7.6. LOW POWER HDR TXBF (HDR4)

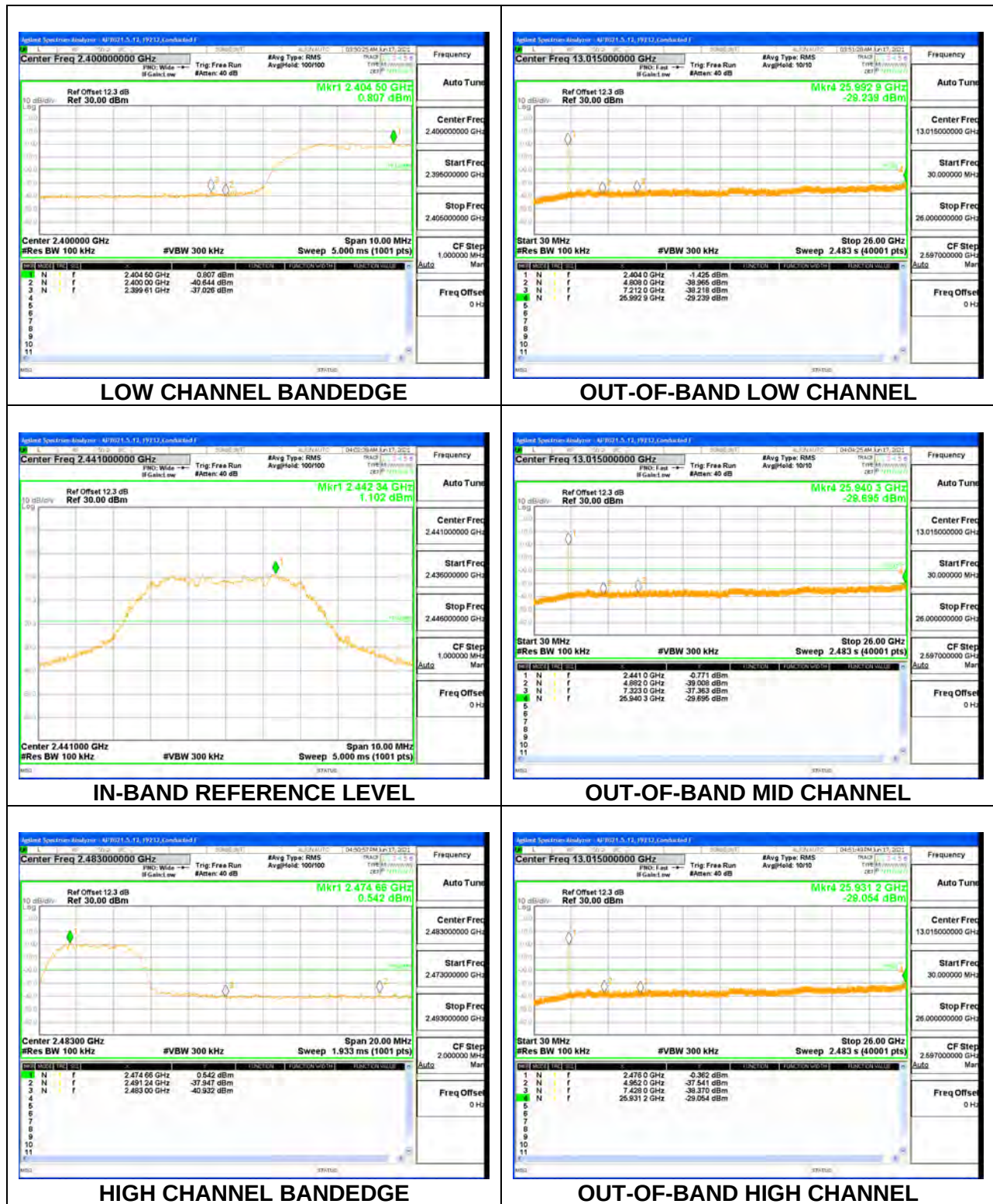
ANT 4

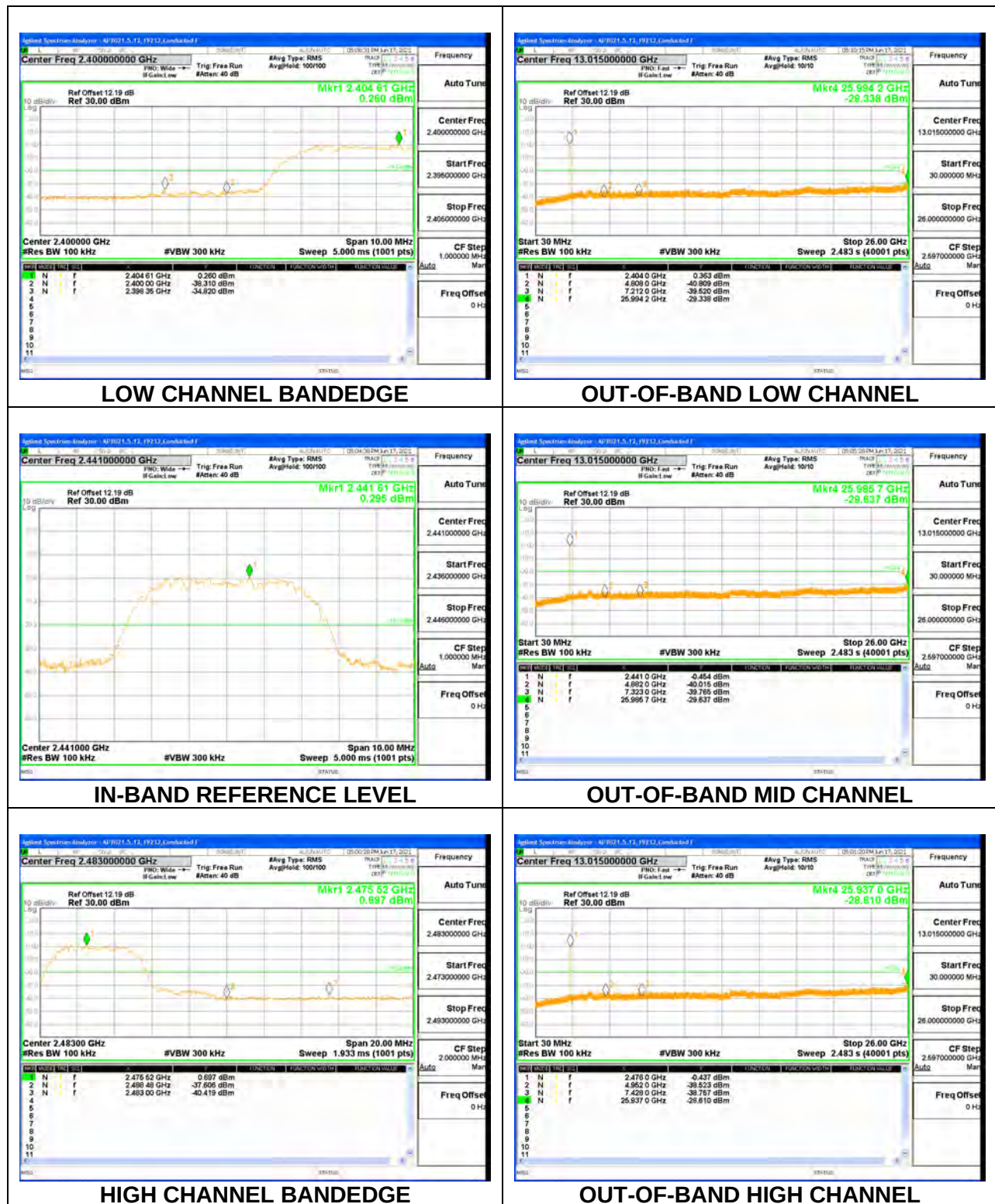


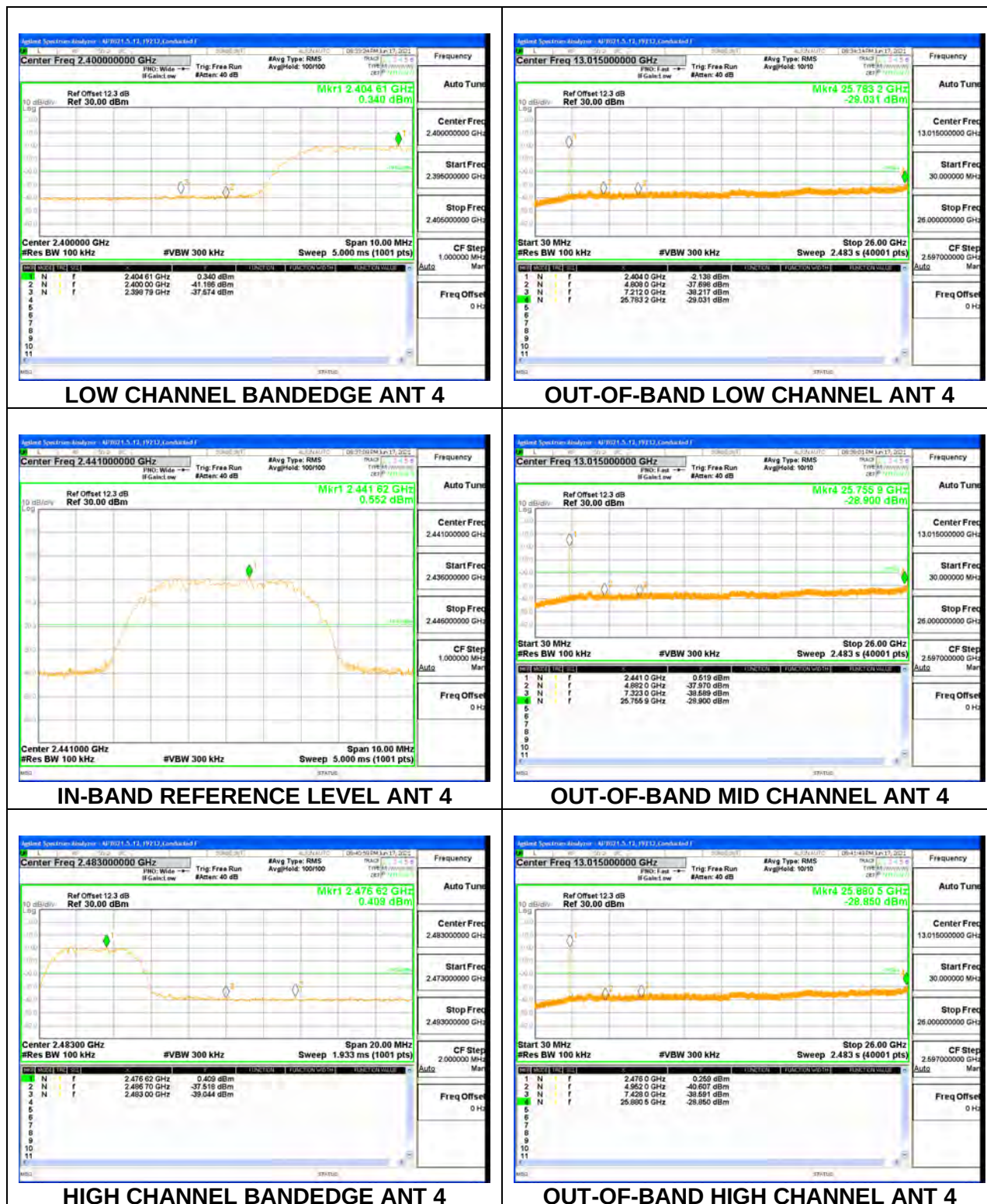
ANT 3**LOW CHANNEL BANDEDGE ANT 3****OUT-OF-BAND LOW CHANNEL ANT 3****IN-BAND REFERENCE LEVEL ANT 3****OUT-OF-BAND MID CHANNEL ANT 3****HIGH CHANNEL BANDEDGE ANT 3****OUT-OF-BAND HIGH CHANNEL ANT 3**

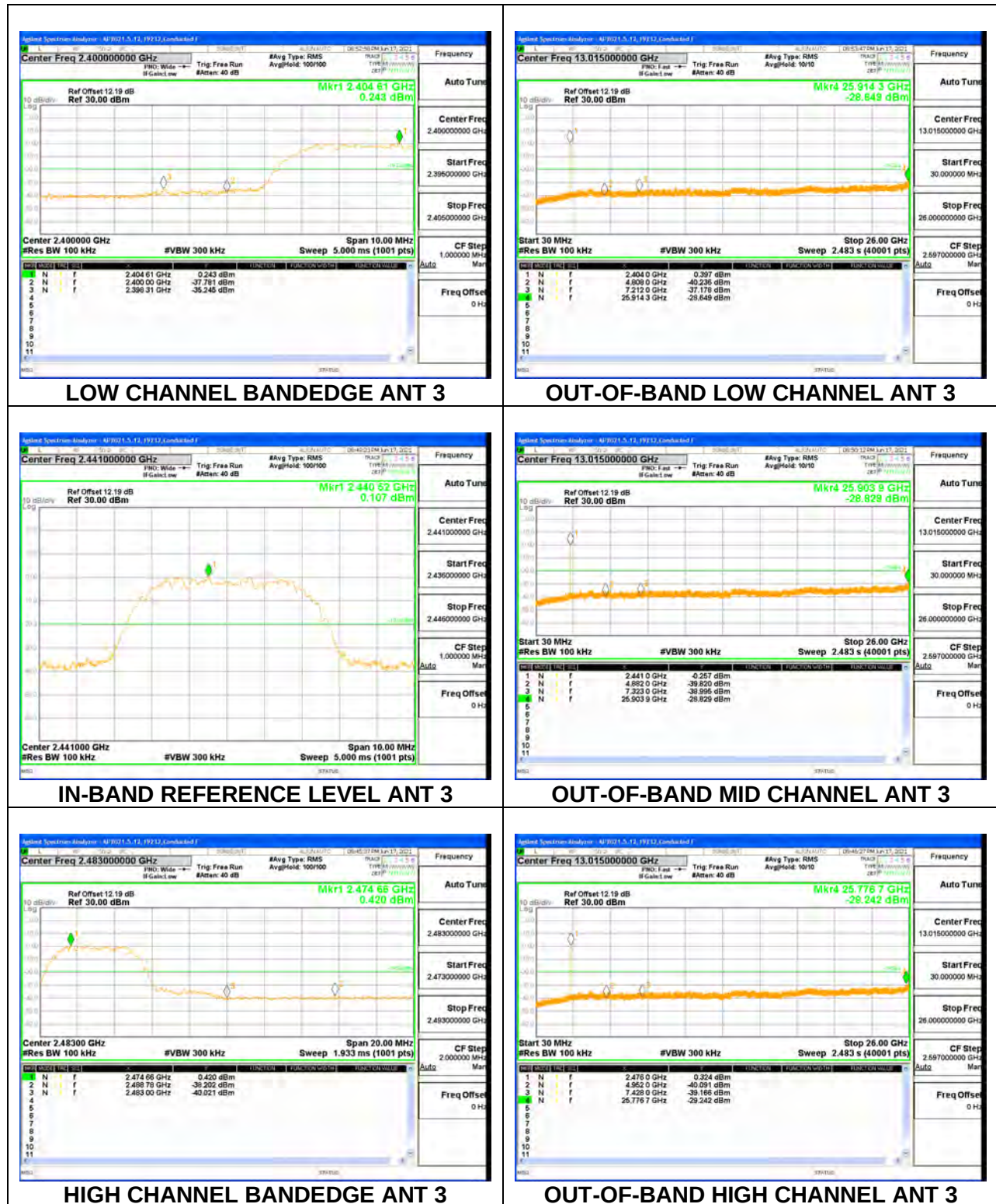
9.7.7. LOW POWER HDR (HDR8)

ANT 4



ANT 3

9.7.8. LOW POWER HDR TXBF (HDR8)**ANT 4**

ANT 3

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.

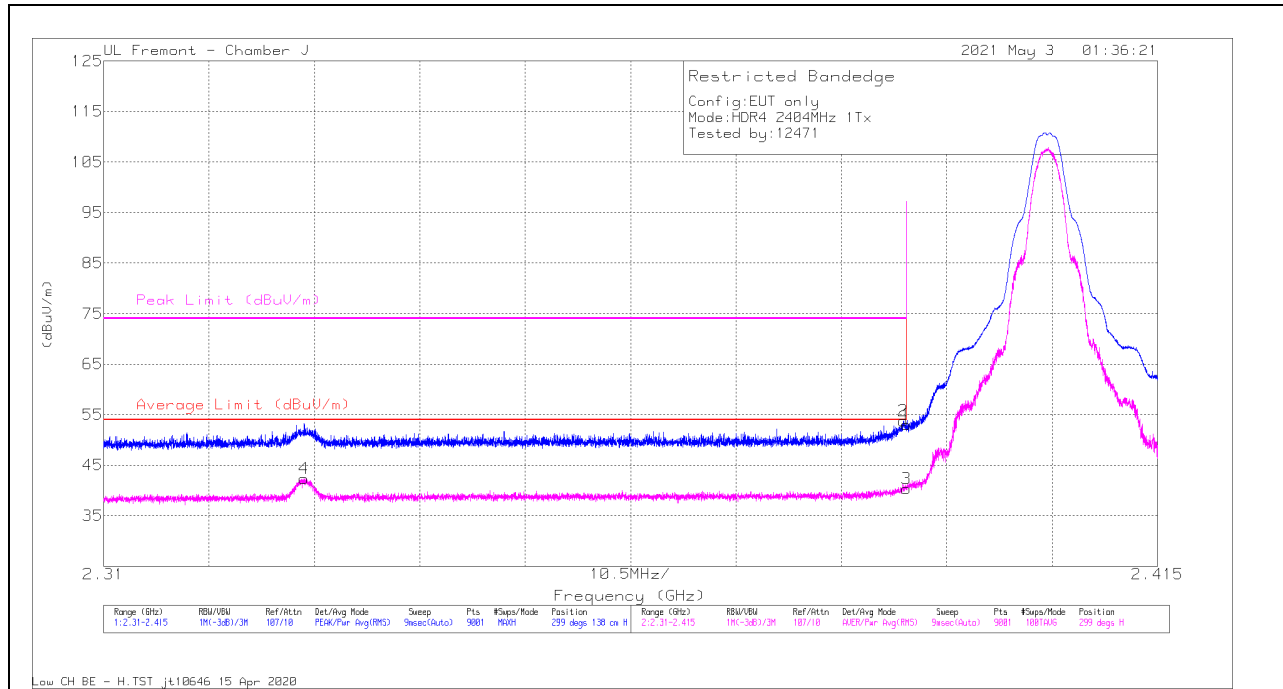
For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

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:

10.2. TRANSMITTER ABOVE 1 GHz**10.2.1. HIGH POWER HDR (HDR4)****ANT 4****BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

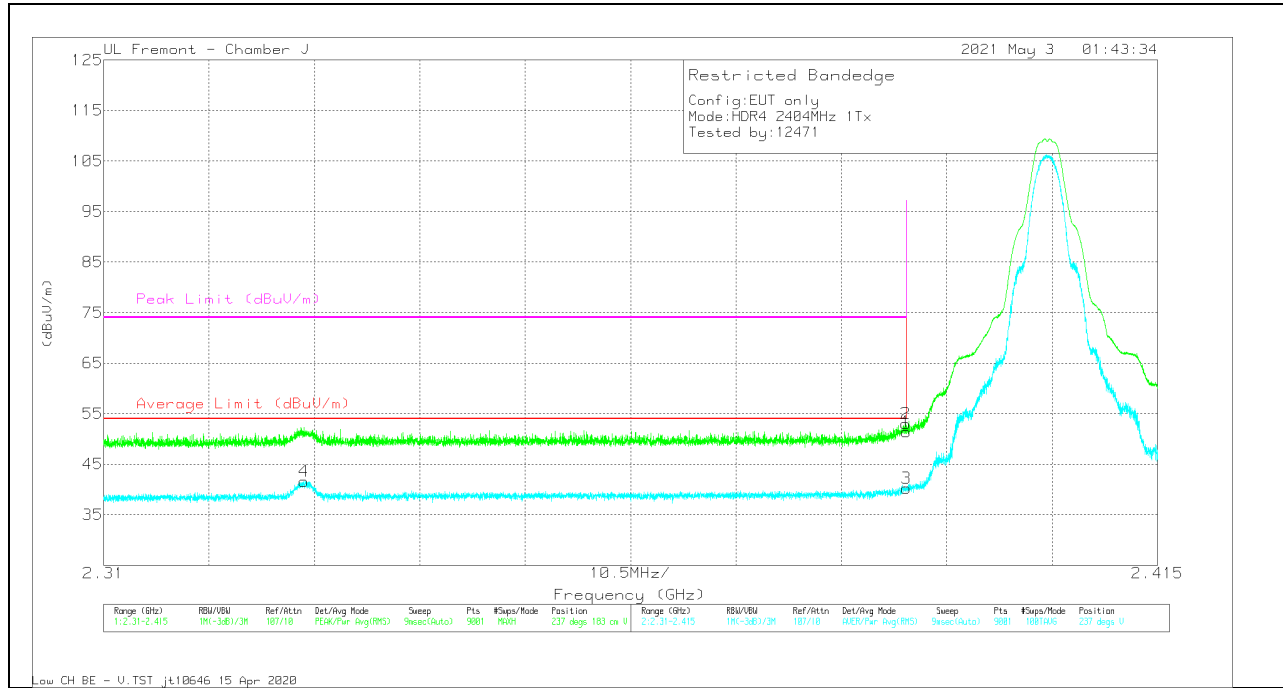
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	46.07	Pk	32.1	-25.2	52.97	-	-	74	-21.03	299	138	H
2	* 2.38964	46.85	Pk	32.1	-25.2	53.75	-	-	74	-20.25	299	138	H
3	* 2.38999	33.42	RMS	32.1	-25.2	40.32	54	-13.68	-	-	299	138	H
4	* 2.32996	35.87	RMS	31.8	-25.3	42.37	54	-11.63	-	-	299	138	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



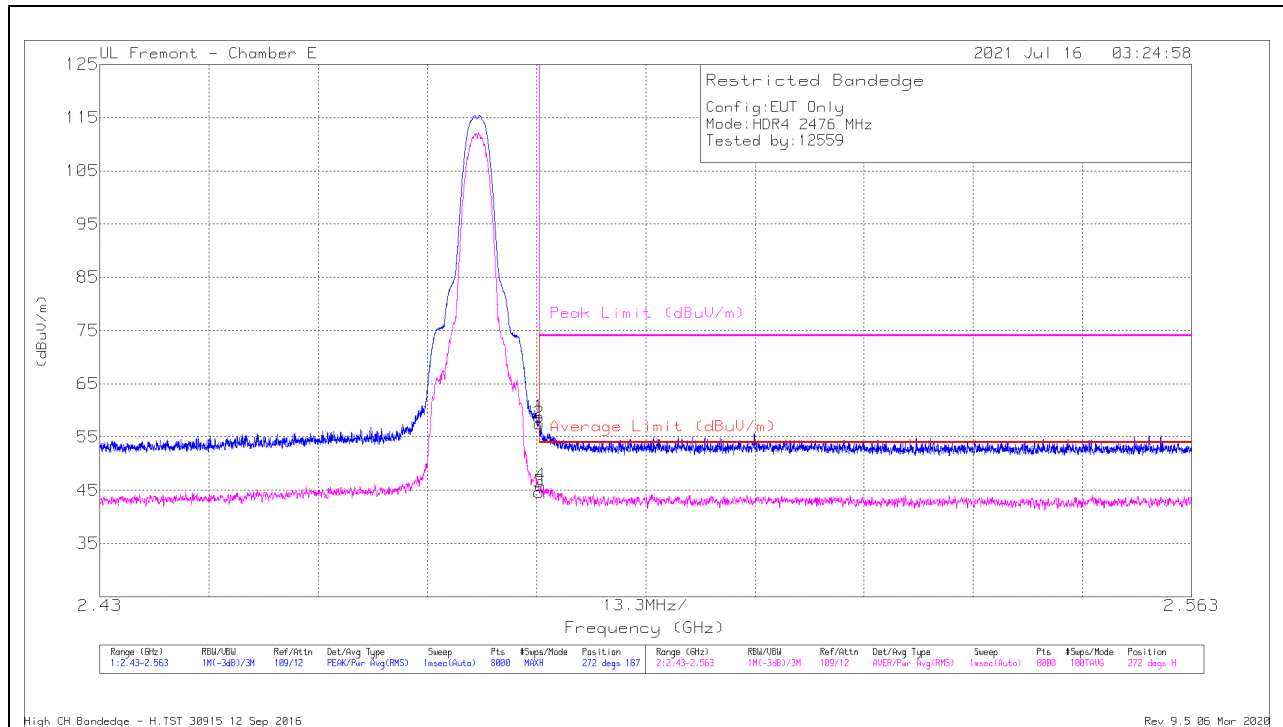
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	44.53	Pk	32.1	-25.2	51.43	-	-	74	-22.57	237	183	V
2	* 2.38994	46.14	Pk	32.1	-25.2	53.04	-	-	74	-20.96	237	183	V
3	* 2.38999	33.32	RMS	32.1	-25.2	40.22	54	-13.78	-	-	237	183	V
4	* 2.32996	35.15	RMS	31.8	-25.3	41.65	54	-12.35	-	-	237	183	V

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

Pk - Peak detector

RMS - RMS detection

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Ampl/Cbl/Filtr/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	43.93	Pk	32.6	-17.7	58.83	-	-	74	-15.17	272	187	H
2	* 2.48354	42.65	Pk	32.6	-17.7	57.55	-	-	74	-16.45	272	187	H
3	* 2.48351	29.79	RMS	32.6	-17.7	44.69	54	-9.31	-	-	272	187	H
4	* 2.48367	31.01	RMS	32.6	-17.7	45.91	54	-8.09	-	-	272	187	H

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

Pk - Peak detector

RMS - RMS detection

UL Fremont - Chamber E 2021 Jul 16 03:58:46

Restricted Bandedge
Config: EUT Only
Mode: HDR4 2476 MHz
Tested by: 12559

Peak Limit (dBuV/m)

Average Limit (dBuV/m)

13.3MHz/

Frequency (GHz)

2.43 2.563

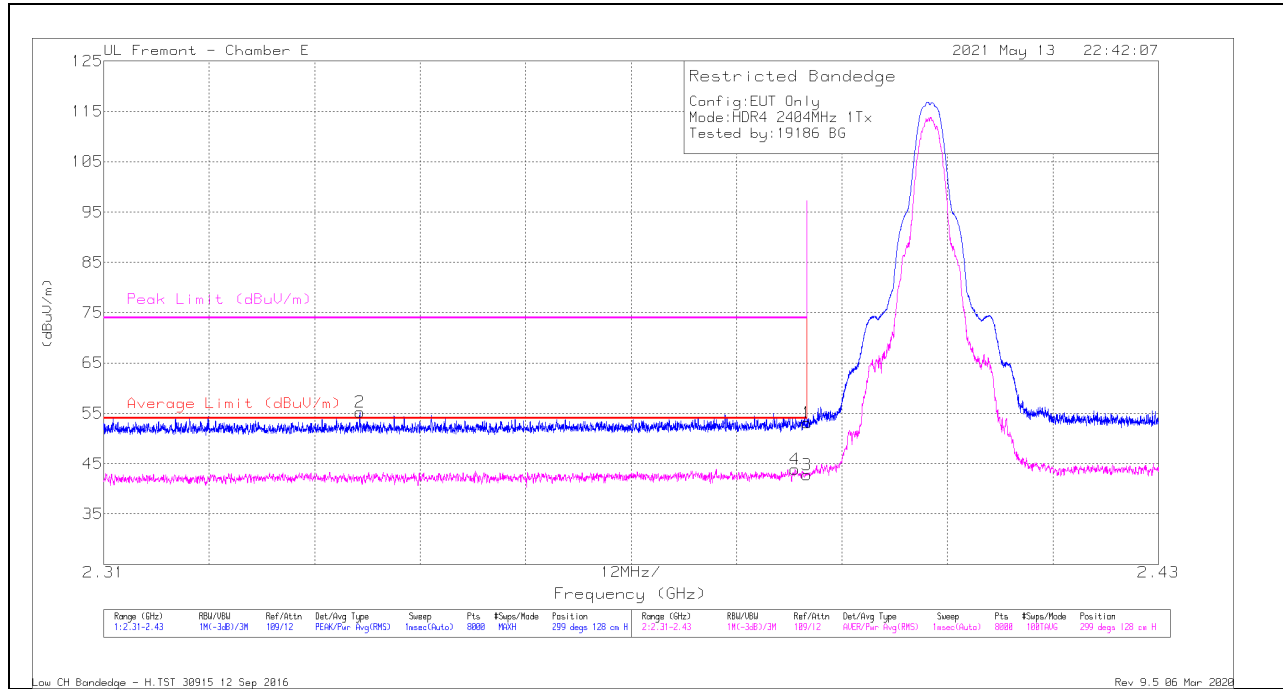
Range (GHz)	RBW/VBW	Ref/Attn	Det/Avg Type	Sweep	Pls	#Sps/Mode	Range (GHz)	RBW/VBW	Ref/Attn	Det/Avg Type	Sweep	Pls	#Sps/Mode	Position
1.243-2.563	1MHz/3dB	109/12	PEAK/Far Avg(RMS)	1/Sec(Auto)	8000	1600	2.43-2.563	1MHz/3dB	109/12	AVER/Far Avg(RMS)	1/Sec(Auto)	8000	1600	282 deg U

High CH Bandedge - U.TST 30915 12 Sep 2016

Rev 9.5 06 Mar 2020

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dBm)	Amp/Cbl/Filtr/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	39.55	Pk	32.6	-17.7	54.45	-	-	74	-19.55	202	370	V
2	2.51353	40.38	Pk	32.7	-17.6	55.48	-	-	74	-18.52	202	370	V
3	* 2.48351	29.16	RMS	32.6	-17.7	44.06	54	-9.94	-	-	202	370	V
4	* 2.48362	29.68	RMS	32.6	-17.7	44.58	54	-9.42	-	-	202	370	V

Pk - Peak detector
RMS - RMS detection

ANT 3**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

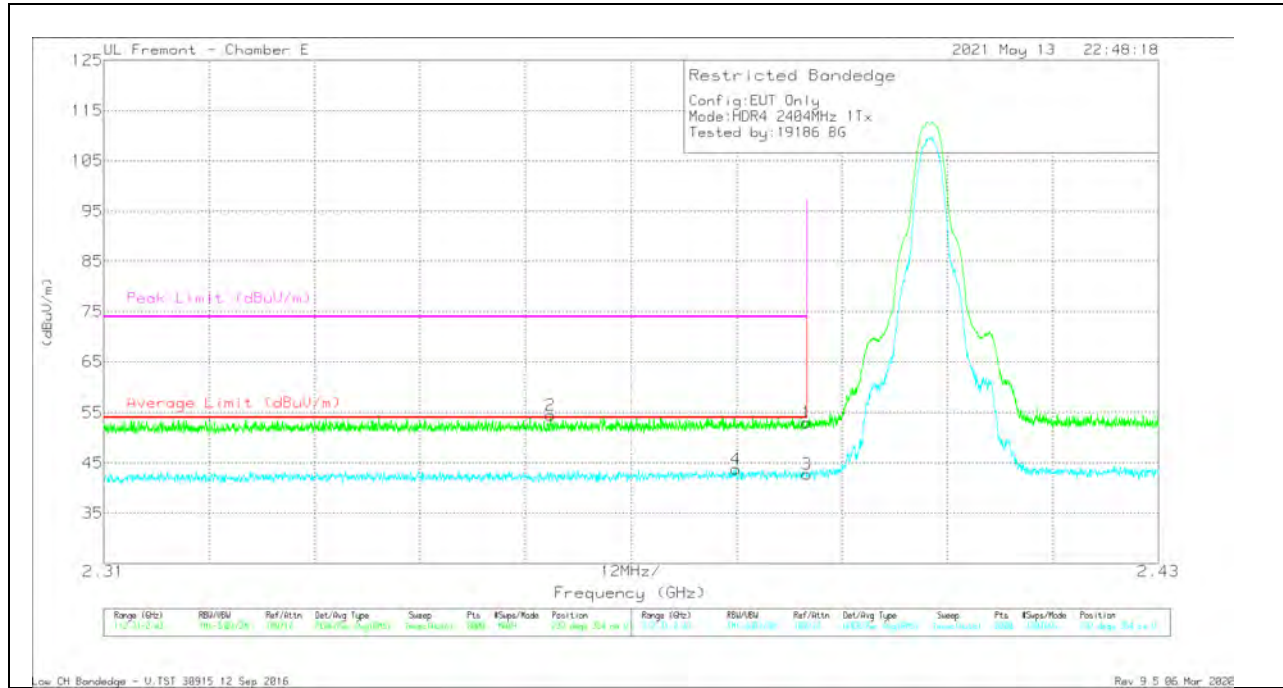
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dBm)	Amp/Ctrl/Filt/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	38.54	Pk	32.2	-17.6	53.14	-	-	74	-20.86	299	128	H
2	* 2.33915	40.8	Pk	32.1	-17.7	55.2	-	-	74	-18.8	299	128	H
3	* 2.38999	28.21	RMS	32.2	-17.6	42.81	54	-11.19	-	-	299	128	H
4	* 2.38867	29.27	RMS	32.2	-17.6	43.87	54	-10.13	-	-	299	128	H

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

PK - Peak detector

RMS - RMS detection

VERTICAL RESULT

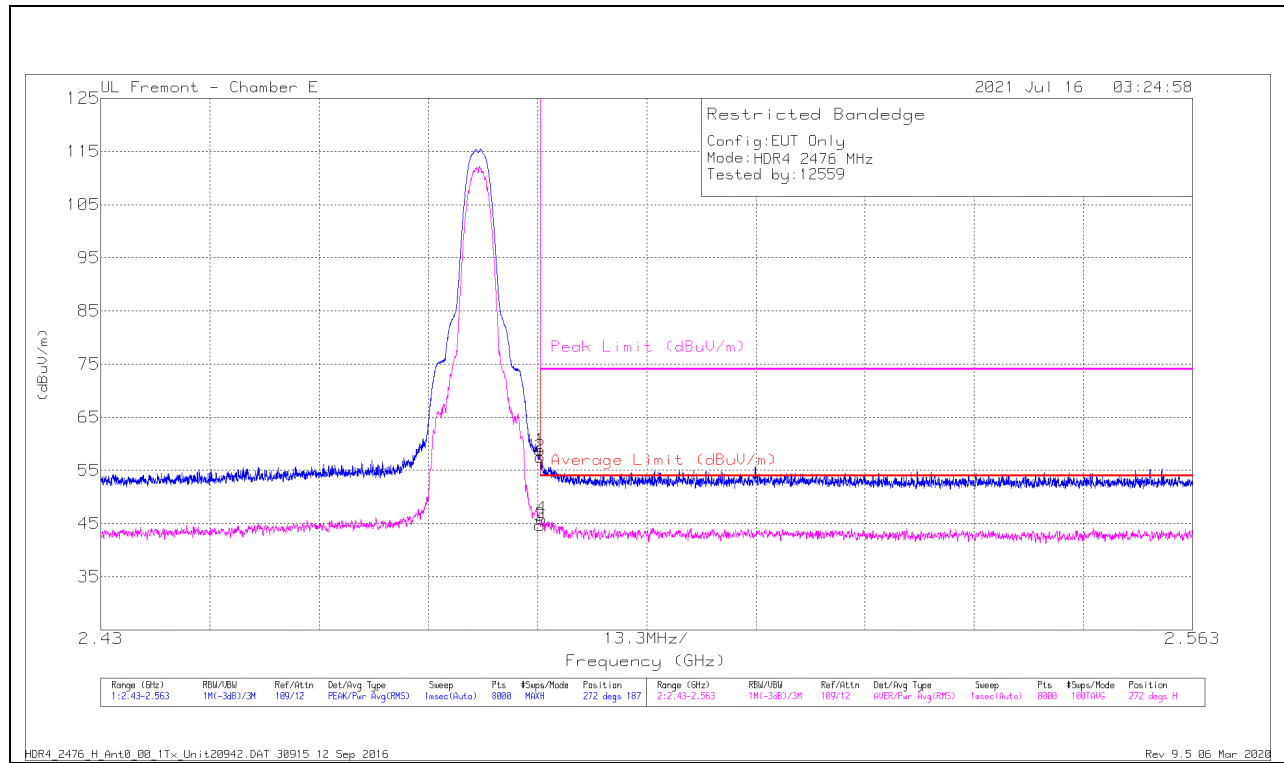


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	38.35	Pk	32.2	-17.6	52.95	-	-	74	-21.05	232	354	V
2	* 2.36086	40.21	Pk	32	-17.7	54.51	-	-	74	-19.49	232	354	V
3	* 2.38999	28.13	RMS	32.2	-17.6	42.73	54	-11.27	-	-	232	354	V
4	* 2.3819	29.15	RMS	32.2	-17.6	43.75	54	-10.25	-	-	232	354	V

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

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

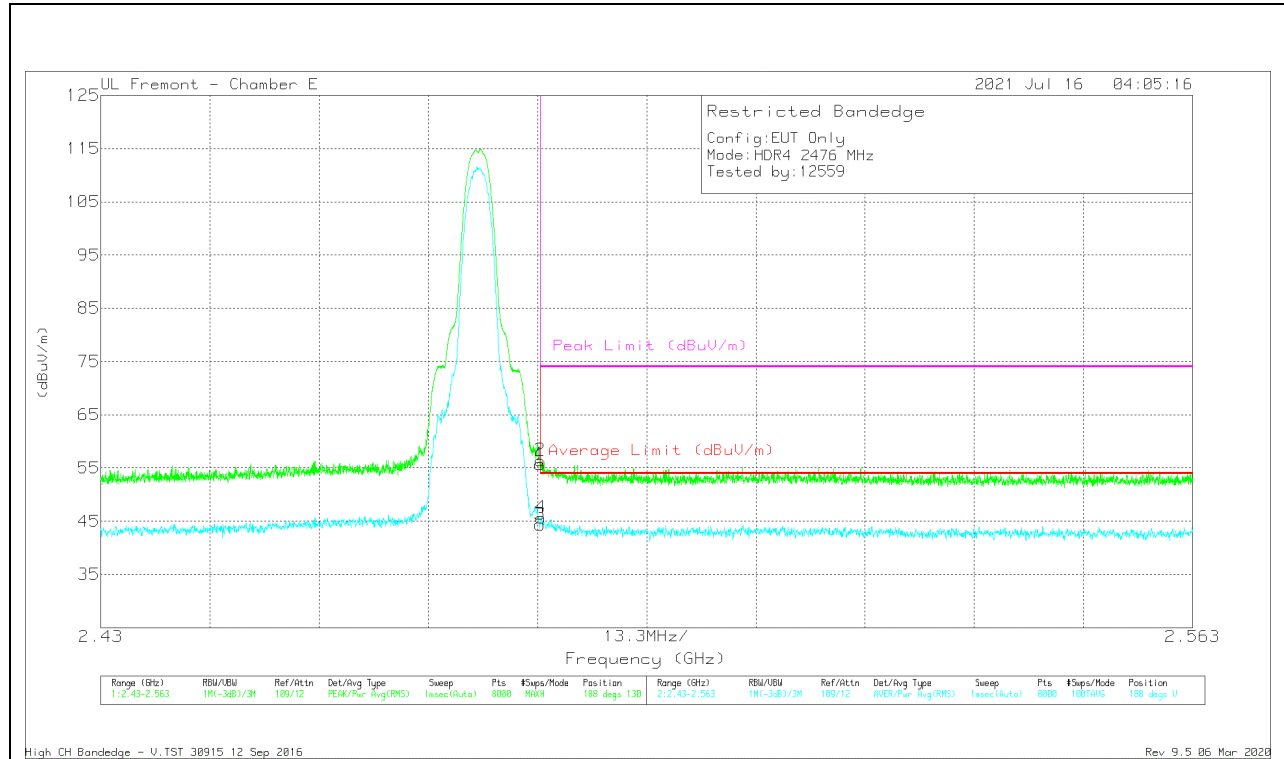
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Ampl/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	43.93	Pk	32.6	-17.7	58.83	-	-	74	-15.17	272	187	H
2	* 2.48354	42.65	Pk	32.6	-17.7	57.55	-	-	74	-16.45	272	187	H
3	* 2.48351	29.79	RMS	32.6	-17.7	44.69	54	-9.31	-	-	272	187	H
4	* 2.48367	31.01	RMS	32.6	-17.7	45.91	54	-8.09	-	-	272	187	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

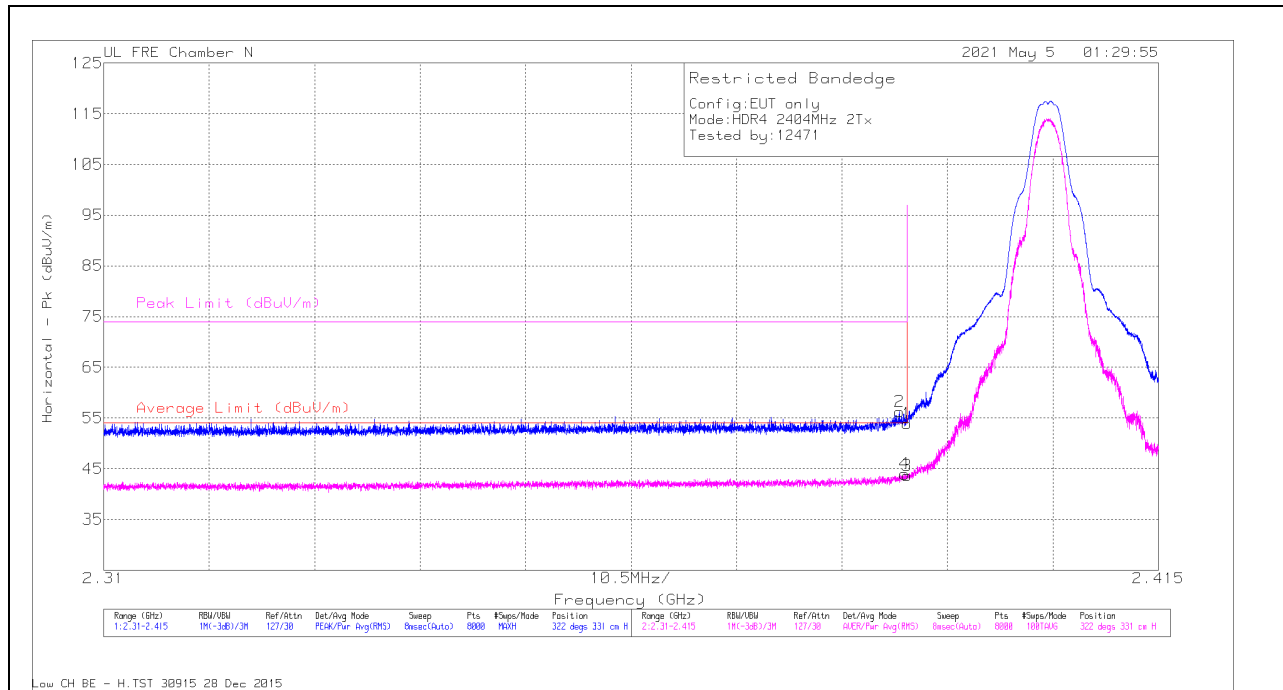


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	40.83	Pk	32.6	-17.7	55.73	-	-	74	-18.27	188	130	V
2	* 2.48356	41.54	Pk	32.6	-17.7	56.44	-	-	74	-17.56	188	130	V
3	* 2.48351	29.48	RMS	32.6	-17.7	44.38	54	-9.62	-	-	188	130	V
4	* 2.48364	30.78	RMS	32.6	-17.7	45.68	54	-8.32	-	-	188	130	V

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

PK - Peak detector

RMS - RMS detection

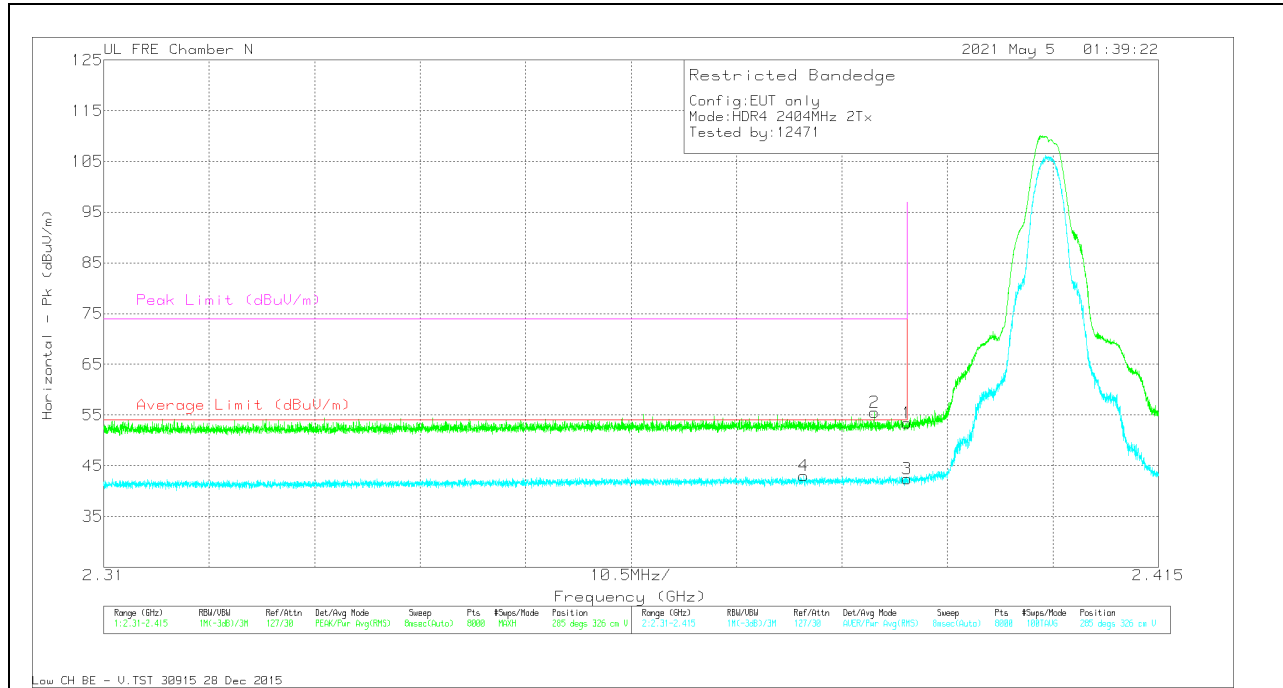
10.2.2. HIGH POWER HDR TXBF (HDR4)**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	57.69	Pk	32.4	-36.2	53.89	-	-	74	-20.11	322	331	H
2	2.38923	60.05	Pk	32.4	-36.2	56.25	-	-	74	-17.75	322	331	H
3	2.39	47.49	RMS	32.4	-36.2	43.69	54	-10.31	-	-	322	331	H
4	2.38975	47.76	RMS	32.4	-36.2	43.96	54	-10.04	-	-	322	331	H

Pk - Peak detector

RMS - RMS detection

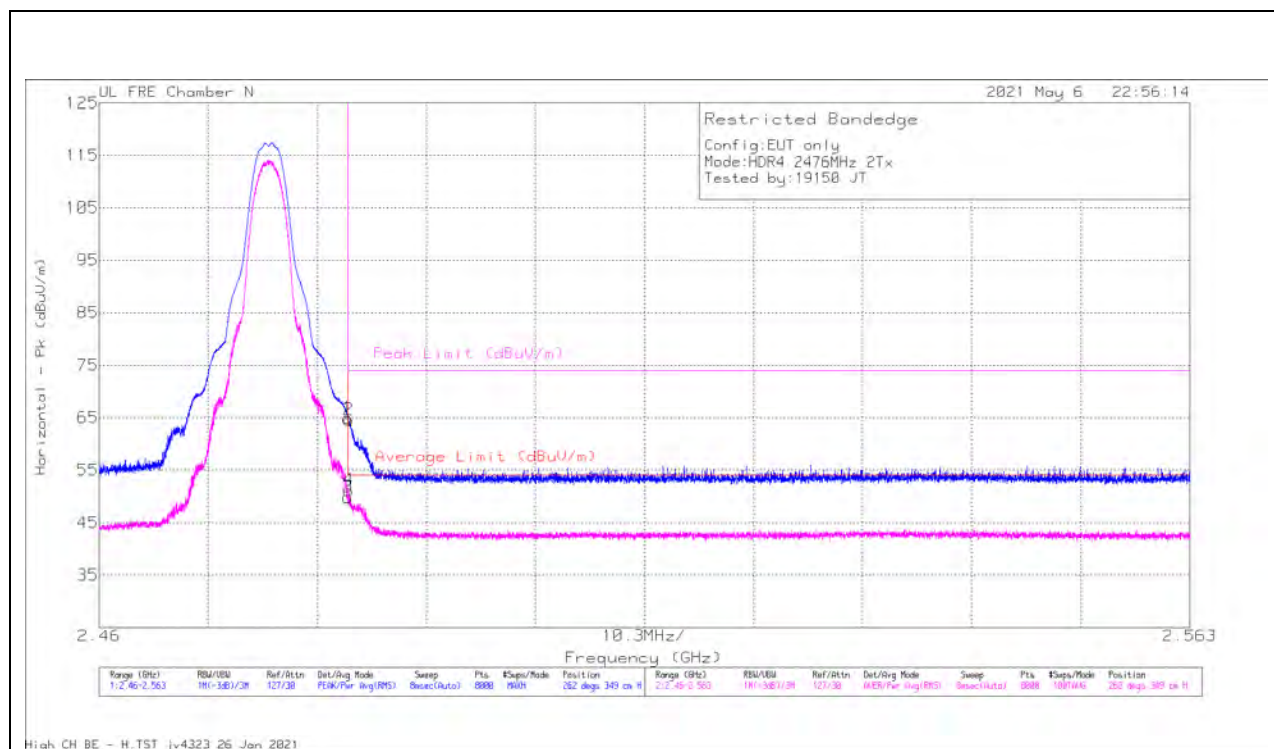
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filt/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	57.25	PK	32.4	-36.2	53.45	-	-	74	-20.55	285	326	V
2	2.38673	59.3	PK	32.4	-36.2	55.5	-	-	74	-18.5	285	326	V
3	2.39	46.26	RMS	32.4	-36.2	42.46	54	-11.54	-	-	285	326	V
4	2.37968	46.81	RMS	32.4	-36.2	43.01	54	-10.99	-	-	285	326	V

Pk - Peak detector

RMS - RMS detection

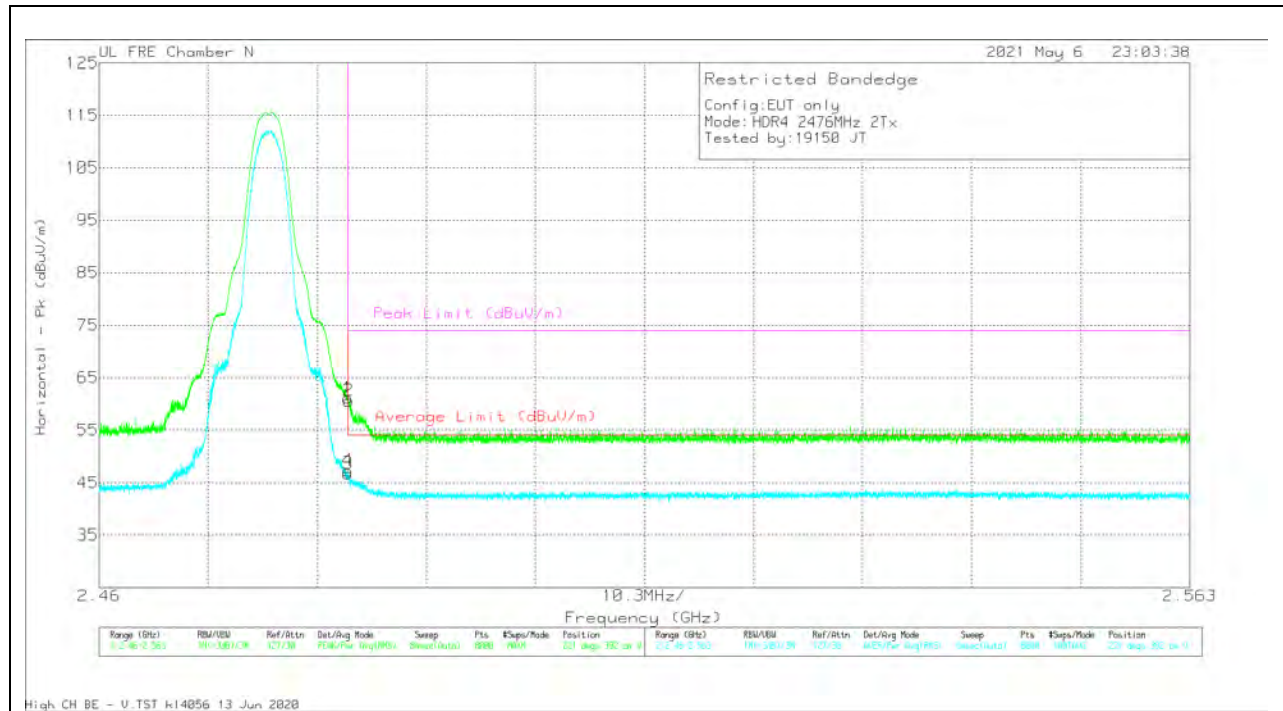
BANEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filt/P ad (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	68.42	Pk	32.5	-36	64.92	-	-	74	-9.08	262	349	H
2	2.48355	68.11	Pk	32.5	-36	64.61	-	-	74	-9.39	262	349	H
3	2.4835	53.38	RMS	32.5	-36	49.88	54	-4.12	-	-	262	349	H
4	2.48354	54.63	RMS	32.5	-36	51.13	54	-2.87	-	-	262	349	H

Pk - Peak detector

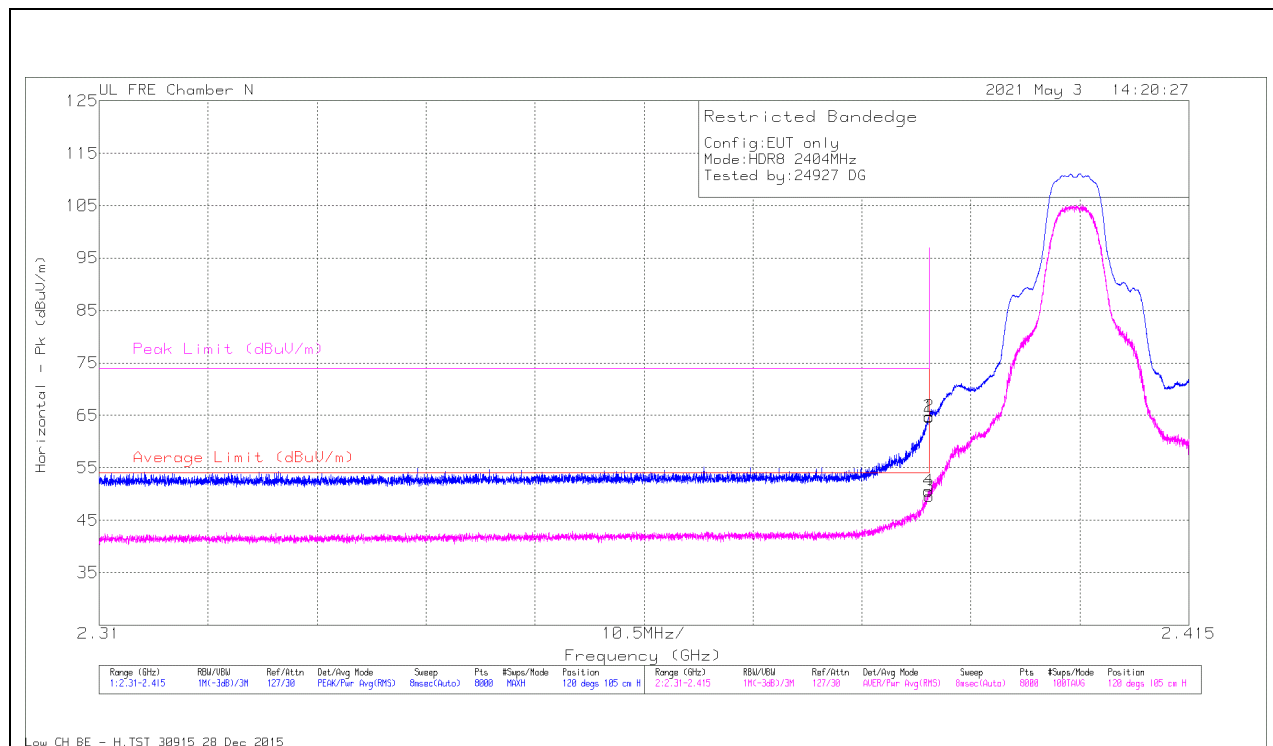
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/P ad (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	64.61	Pk	32.5	-36	61.11	-	-	74	-12.89	221	392	V
2	2.48358	64.06	PK	32.5	-36	60.56	-	-	74	-13.44	221	392	V
3	2.4835	50.29	RMS	32.5	-36	46.79	54	-7.21	-	-	221	392	V
4	2.48351	50.71	RMS	32.5	-36	47.21	54	-6.79	-	-	221	392	V

Pk - Peak detector
RMS - RMS detection

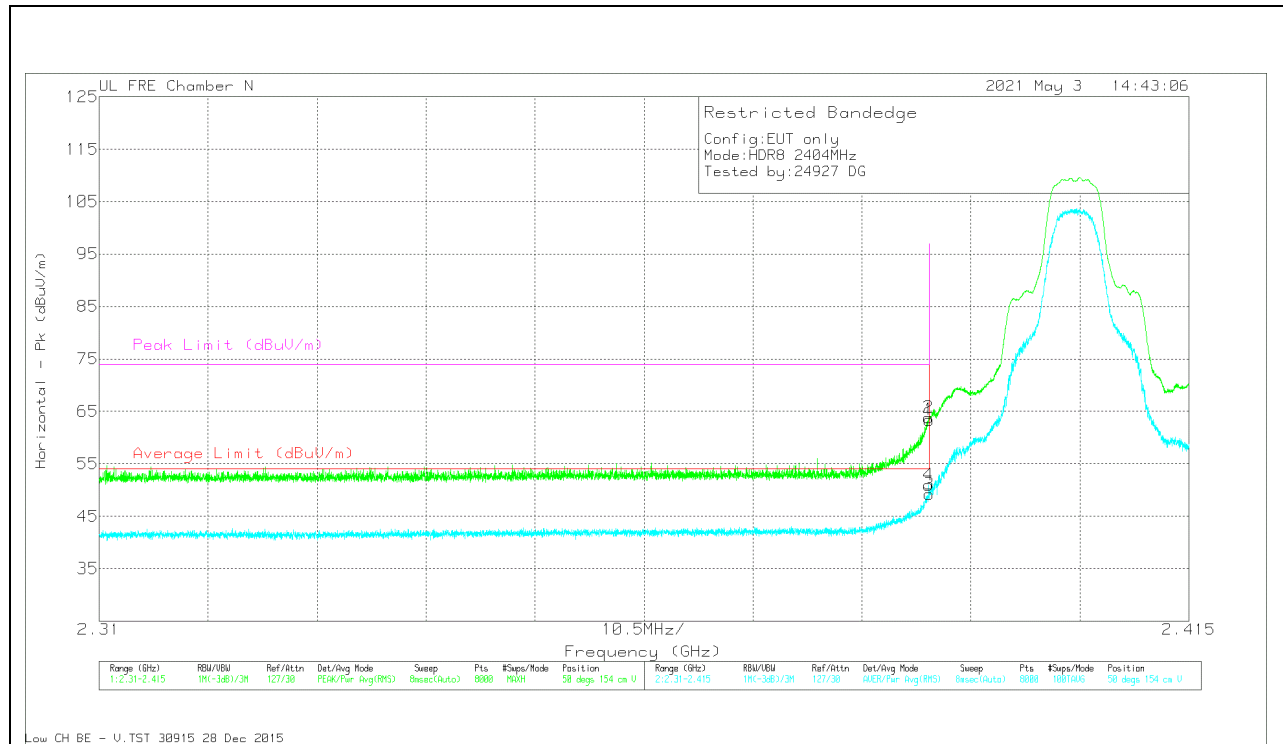
10.2.3. HIGH POWER HDR (HDR8)**ANT 4****BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filtr/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	68.45	Pk	32.4	-36.2	64.65	-	-	74	-9.35	120	105	H
2	2.38998	68.61	Pk	32.4	-36.2	64.81	-	-	74	-9.19	120	105	H
3	2.39	53.4	RMS	32.4	-36.2	49.6	54	-4.4	-	-	120	105	H
4	2.38992	54.37	RMS	32.4	-36.2	50.57	54	-3.43	-	-	120	105	H

Pk - Peak detector

RMS - RMS detection

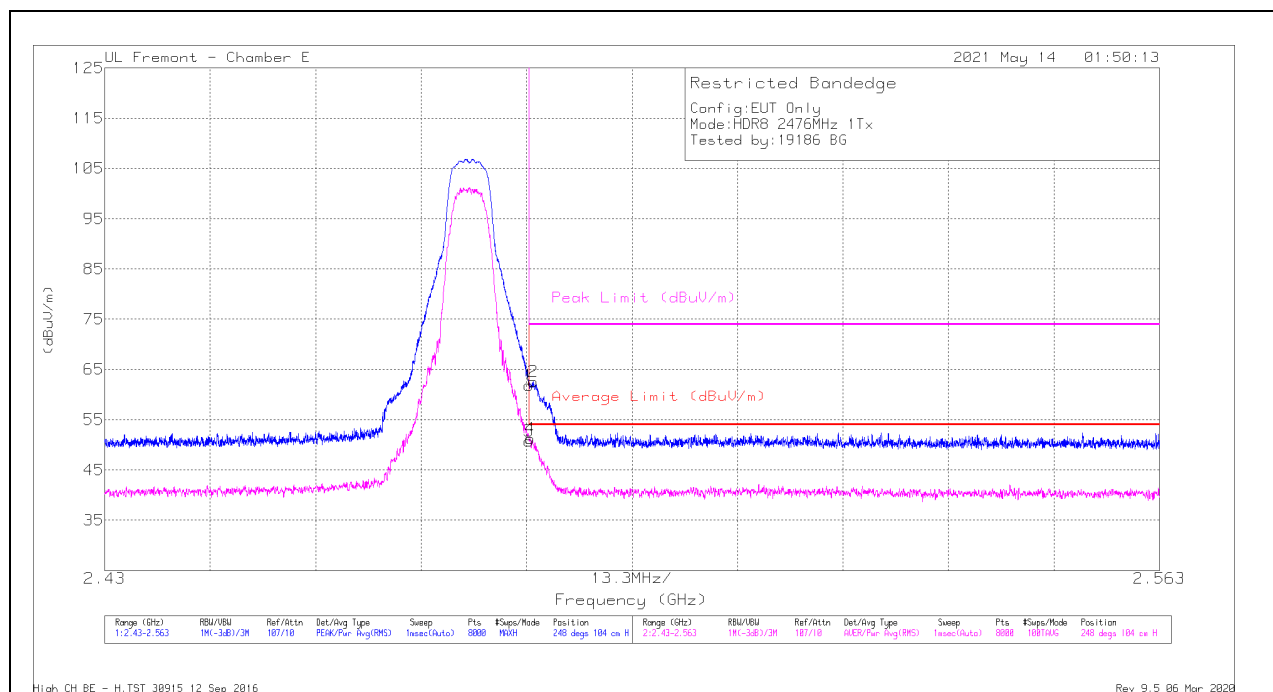
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/CbW/Filt/P ad (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	67.18	Pk	32.4	-36.2	63.38	-	-	74	-10.62	50	154	V
2	2.38994	67.58	Pk	32.4	-36.2	63.78	-	-	74	-10.22	50	154	V
3	2.39	52.98	RMS	32.4	-36.2	49.18	54	-4.82	-	-	50	154	V
4	2.38992	54.7	RMS	32.4	-36.2	50.9	54	-3.1	-	-	50	154	V

Pk - Peak detector
RMS - RMS detection

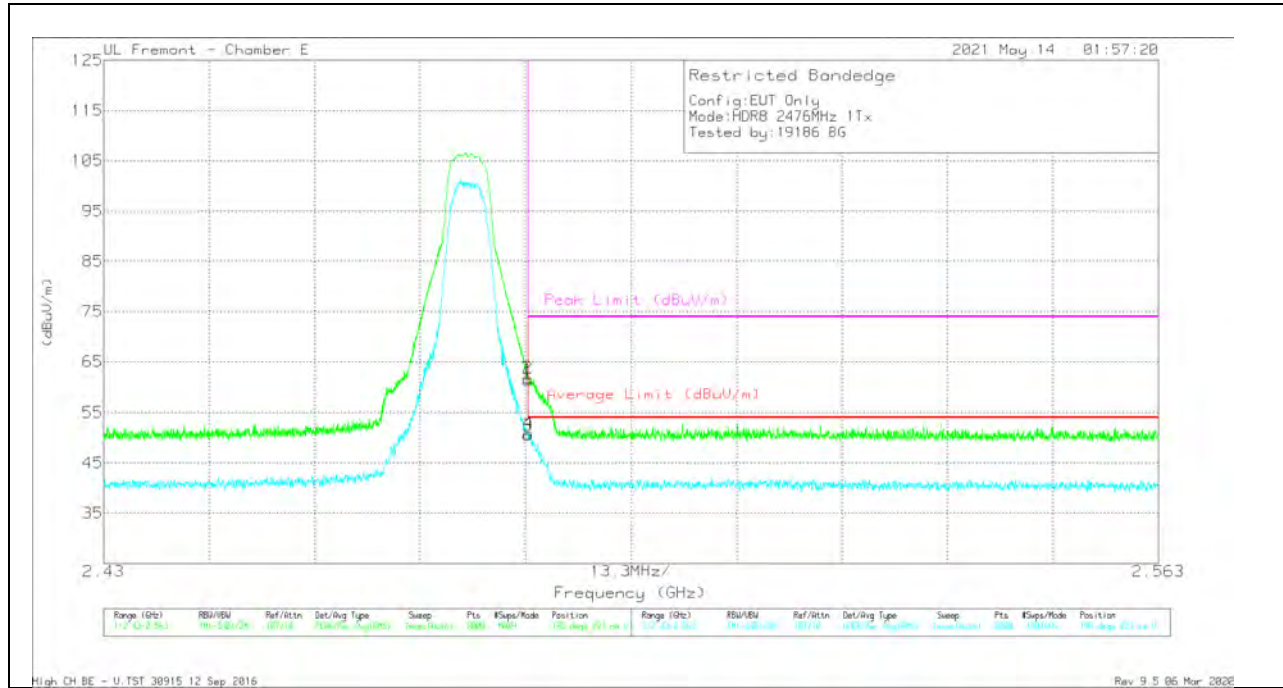
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AF PRE0078107 (dB/m)	Ampl/CbI/Fitr/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	54.7	Pk	32.6	-25.4	61.9	-	-	74	-12.1	248	104	H
2	* 2.48405	55.44	Pk	32.6	-25.4	62.64	-	-	74	-11.36	248	104	H
3	* 2.48351	43.61	RMS	32.6	-25.4	50.81	54	-3.19	-	-	248	104	H
4	* 2.48362	44.09	RMS	32.6	-25.4	51.29	54	-2.71	-	-	248	104	H

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

VERTICAL RESULT

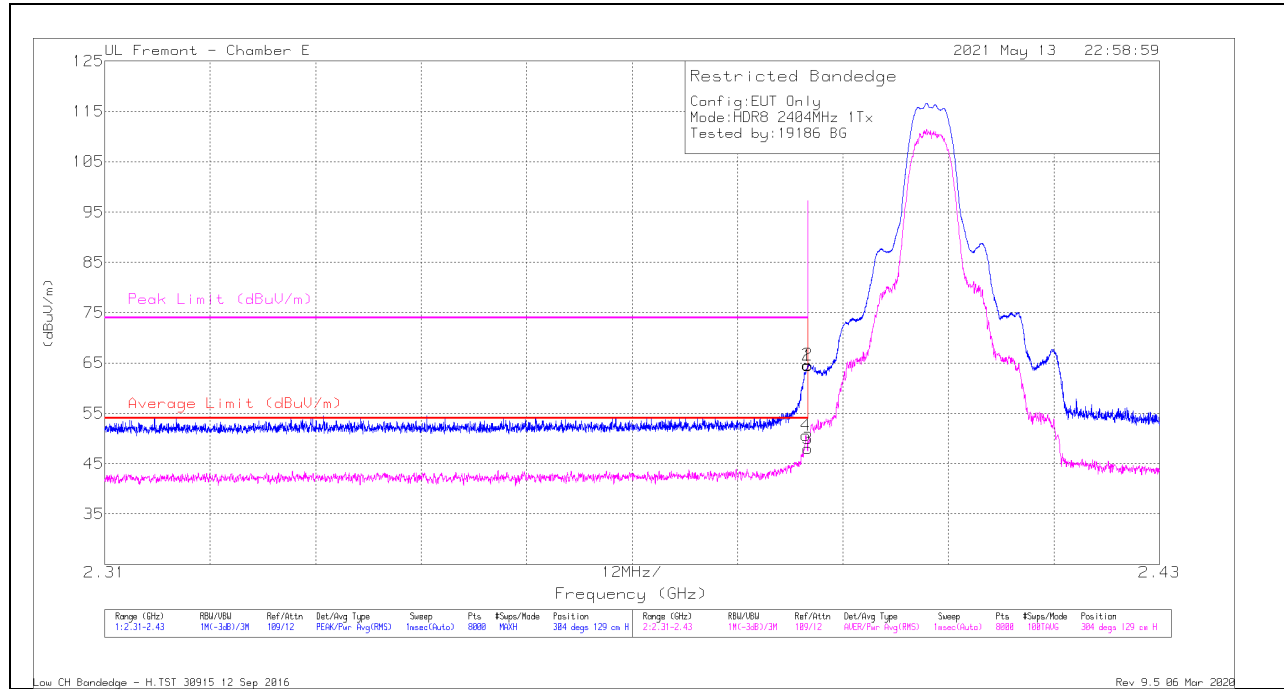


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Ampl/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	54.28	Pk	32.6	-25.4	61.48	-	-	74	-12.52	198	223	V
3	* 2.48351	43.33	RMS	32.6	-25.4	50.53	54	-3.47	-	-	198	223	V
2	* 2.48352	54.6	Pk	32.6	-25.4	61.8	-	-	74	-12.2	198	223	V
4	* 2.48354	43.68	RMS	32.6	-25.4	50.88	54	-3.12	-	-	198	223	V

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

Pk - Peak detector

RMS - RMS detection

ANT 3**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

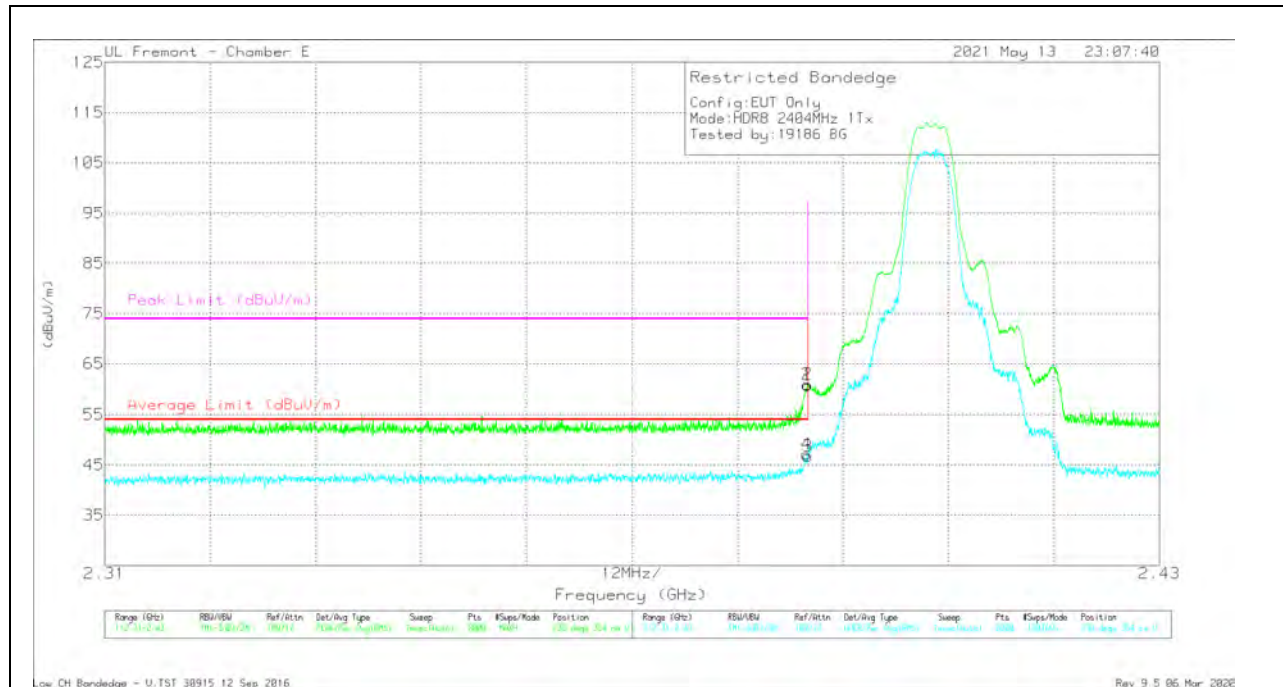
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dBm)	Ampl/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	49.92	Pk	32.2	-17.6	64.52	-	-	74	-9.48	304	129	H
2	* 2.38996	50.05	Pk	32.2	-17.6	64.65	-	-	74	-9.35	304	129	H
3	* 2.38999	33.46	RMS	32.2	-17.6	48.06	54	-5.94	-	-	304	129	H
4	* 2.38975	36.07	RMS	32.2	-17.6	50.67	54	-3.33	-	-	304	129	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

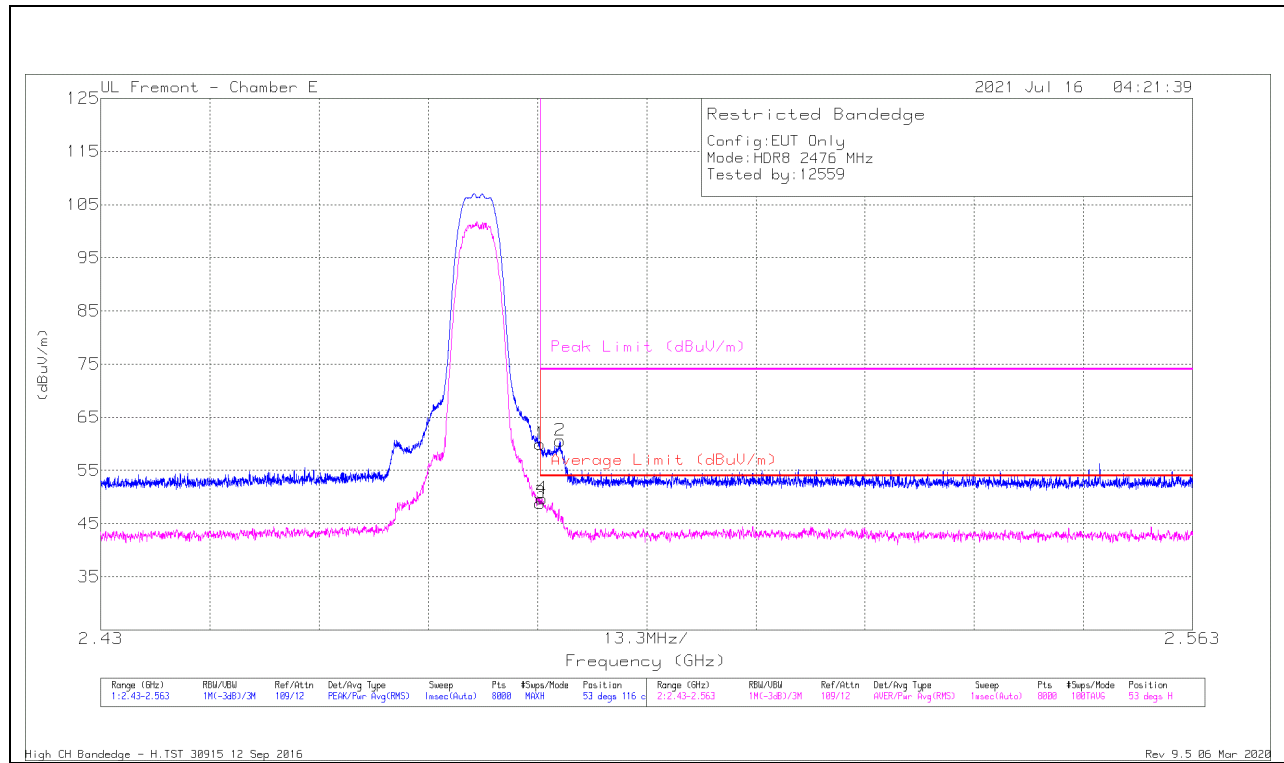


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dBm)	Ampl/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	46.23	Pk	32.2	-17.6	60.83	-	-	74	-13.17	238	354	V
2	* 2.38992	46.43	Pk	32.2	-17.6	61.03	-	-	74	-12.97	238	354	V
3	* 2.38999	32.17	RMS	32.2	-17.6	46.77	54	-7.23	-	-	238	354	V
4	* 2.38986	32.55	RMS	32.2	-17.6	47.15	54	-6.85	-	-	238	354	V

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

Pk - Peak detector

RMS - RMS detection

BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

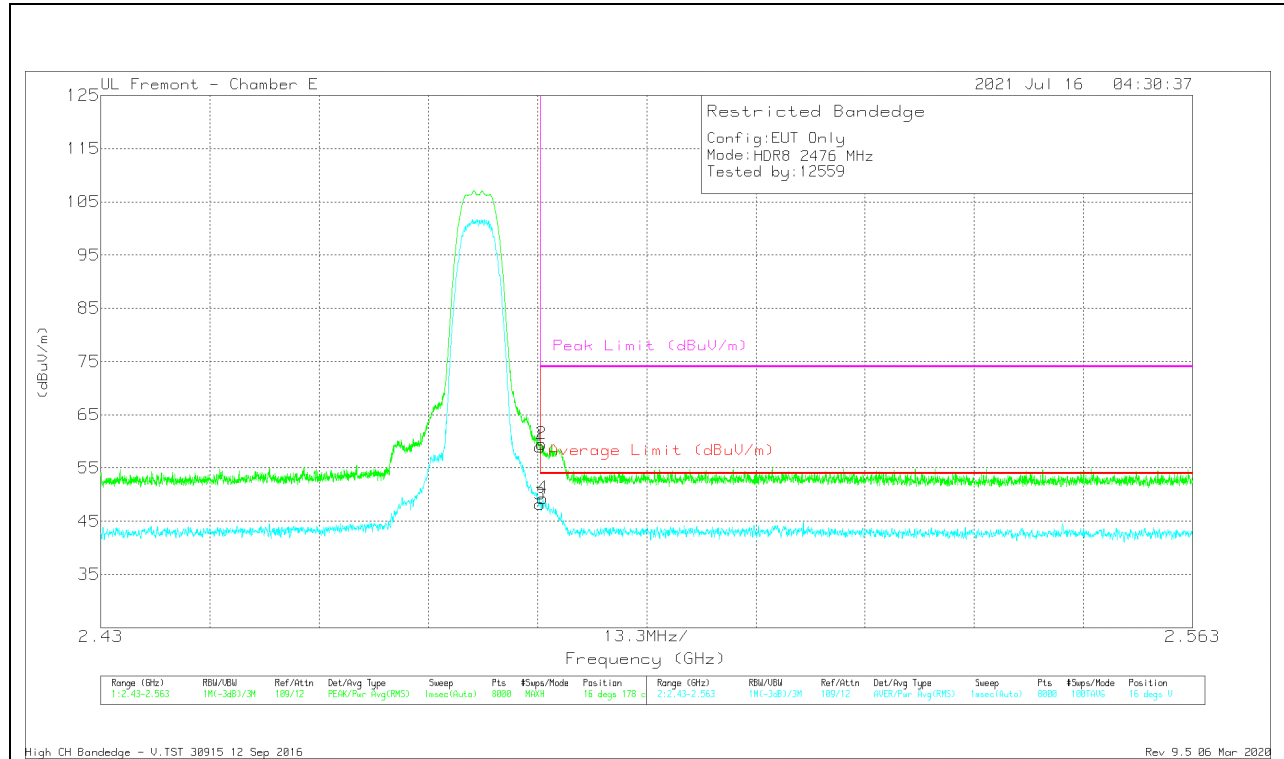
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Ampl/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	45.06	Pk	32.6	-17.7	59.96	-	-	74	-14.04	53	116	H
2	* 2.48595	45.72	Pk	32.6	-17.7	60.62	-	-	74	-13.38	53	116	H
3	* 2.48351	33.93	RMS	32.6	-17.7	48.83	54	-5.17	-	-	53	116	H
4	* 2.48374	34.8	RMS	32.6	-17.7	49.7	54	-4.3	-	-	53	116	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

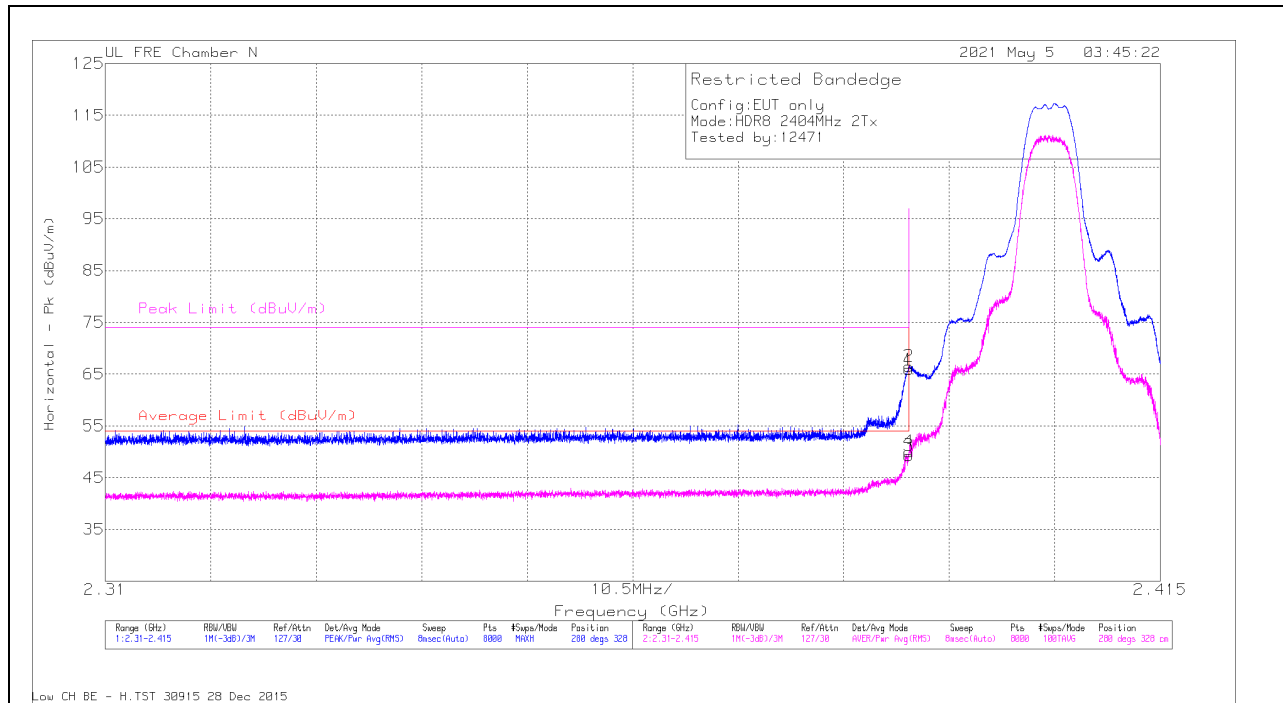


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	44.13	Pk	32.6	-17.7	59.03	-	-	74	-14.97	16	178	V
2	* 2.48371	44.62	Pk	32.6	-17.7	59.52	-	-	74	-14.48	16	178	V
3	* 2.48351	33.29	RMS	32.6	-17.7	48.19	54	-5.81	-	-	16	178	V
4	* 2.48384	34.42	RMS	32.6	-17.7	49.32	54	-4.68	-	-	16	178	V

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

Pk - Peak detector

RMS - RMS detection

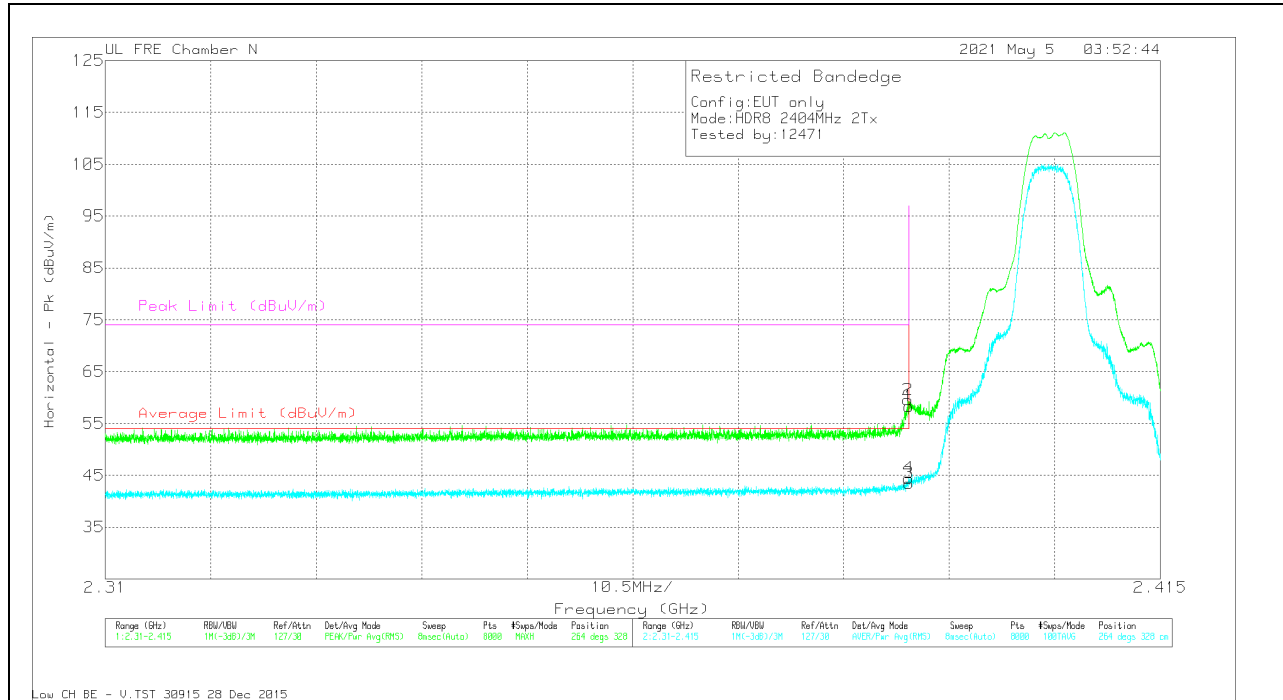
10.2.4. HIGH POWER HDR TXBF (HDR8)**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filtr/P ad (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	69.68	PK	32.4	-36.2	65.88	-	-	74	-8.12	280	328	H
2	2.38996	70.31	PK	32.4	-36.2	66.51	-	-	74	-7.49	280	328	H
3	2.39	53.09	RMS	32.4	-36.2	49.29	54	-4.71	-	-	280	328	H
4	2.38996	53.84	RMS	32.4	-36.2	50.04	54	-3.96	-	-	280	328	H

Pk - Peak detector

RMS - RMS detection

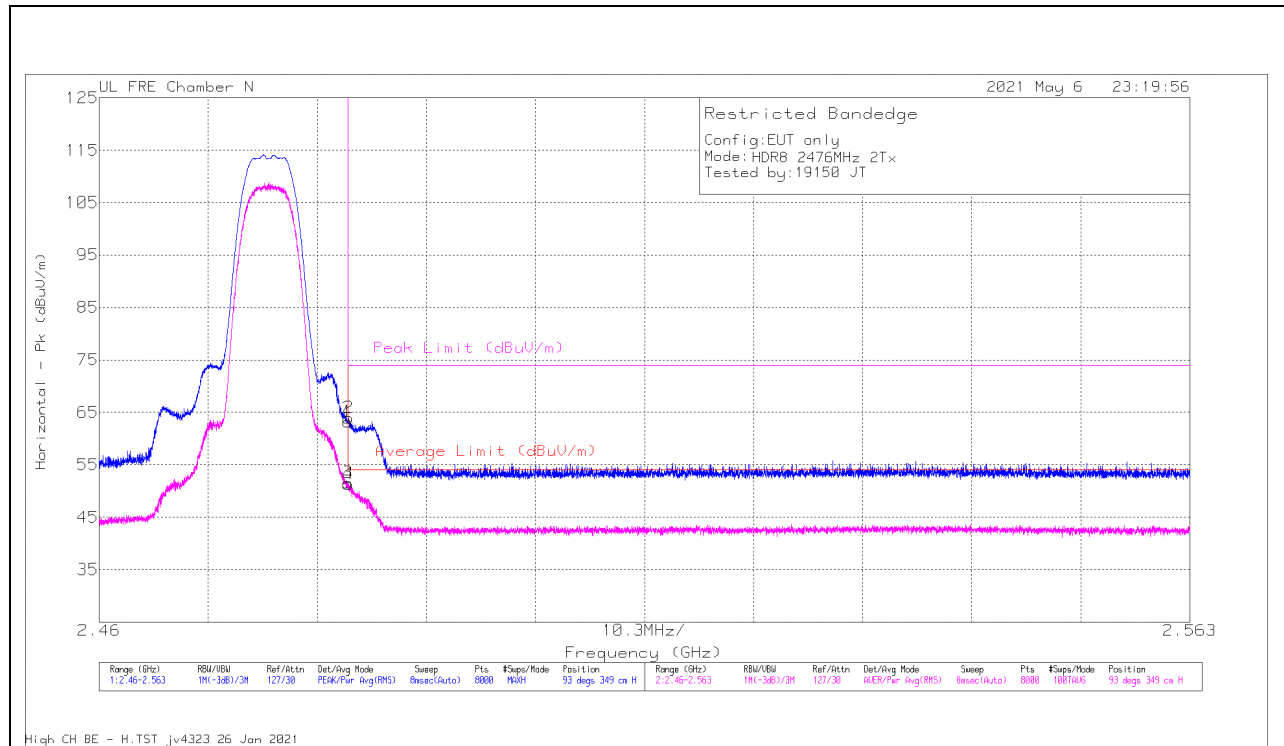
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/P ad (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	62.11	Pk	32.4	-36.2	58.31	-	-	74	-15.69	264	328	V
2	2.38988	63.35	Pk	32.4	-36.2	59.55	-	-	74	-14.45	264	328	V
3	2.39	47.3	RMS	32.4	-36.2	43.5	54	-10.5	-	-	264	328	V
4	2.38994	48.25	RMS	32.4	-36.2	44.45	54	-9.55	-	-	264	328	V

Pk - Peak detector

RMS - RMS detection

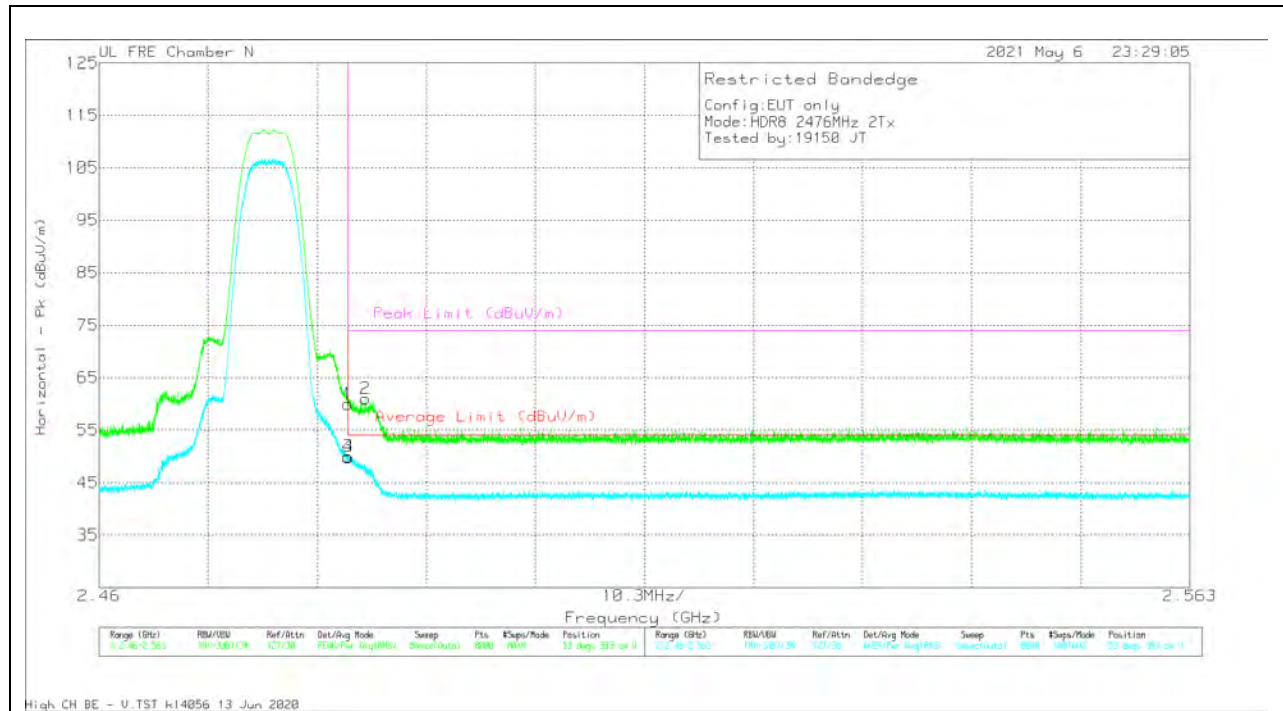
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filt/P ad (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	66.66	Pk	32.5	-36	63.16	-	-	74	-10.84	93	349	H
2	2.48353	67.39	Pk	32.5	-36	63.89	-	-	74	-10.11	93	349	H
3	2.4835	55.09	RMS	32.5	-36	51.59	54	-2.41	-	-	93	349	H
4	2.48353	54.81	RMS	32.5	-36	51.31	54	-2.69	-	-	93	349	H

Pk - Peak detector

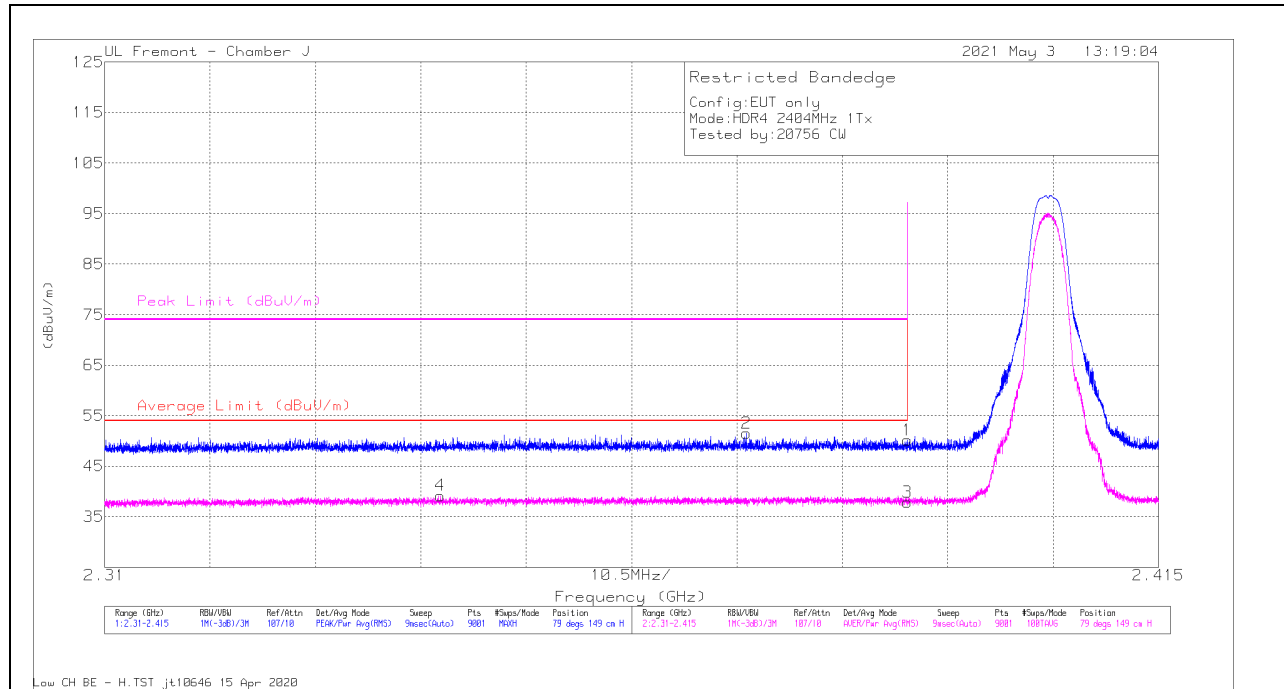
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Ftr/P ad (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	-36	60.01	-	-	74	-13.99	53	393	V
2	2.48516	64.41	Pk	32.5	-36	60.91	-	-	74	-13.09	53	393	V
3	2.4835	53.48	RMS	32.5	-36	49.98	54	-4.02	-	-	53	393	V
4	2.48353	53.39	RMS	32.5	-36	49.89	54	-4.11	-	-	53	393	V

Pk - Peak detector
RMS - RMS detection

10.2.5. LOW POWER HDR (HDR4)**ANT 4****BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

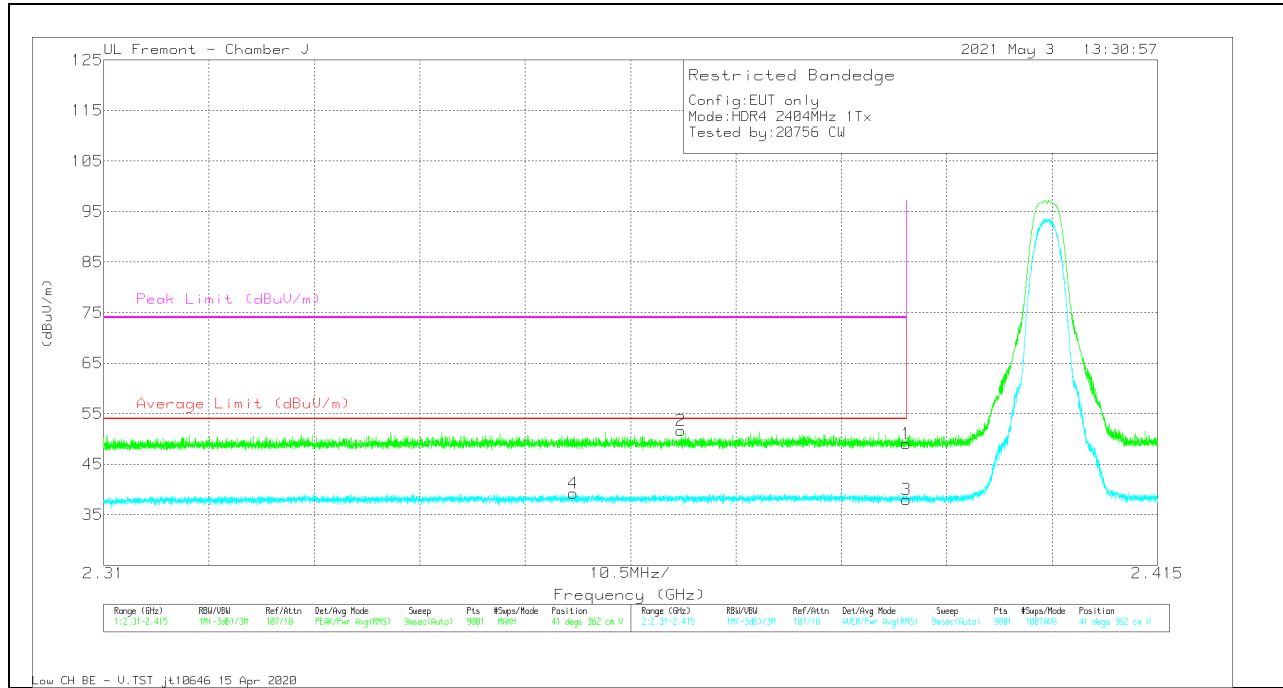
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	43.31	Pk	32.1	-25.2	50.21	-	-	74	-23.79	79	149	H
2	* 2.37395	44.64	Pk	32.1	-25.2	51.54	-	-	74	-22.46	79	149	H
3	* 2.38999	30.96	RMS	32.1	-25.2	37.86	54	-16.14	-	-	79	149	H
4	* 2.34343	32.48	RMS	32	-25.3	39.18	54	-14.82	-	-	79	149	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

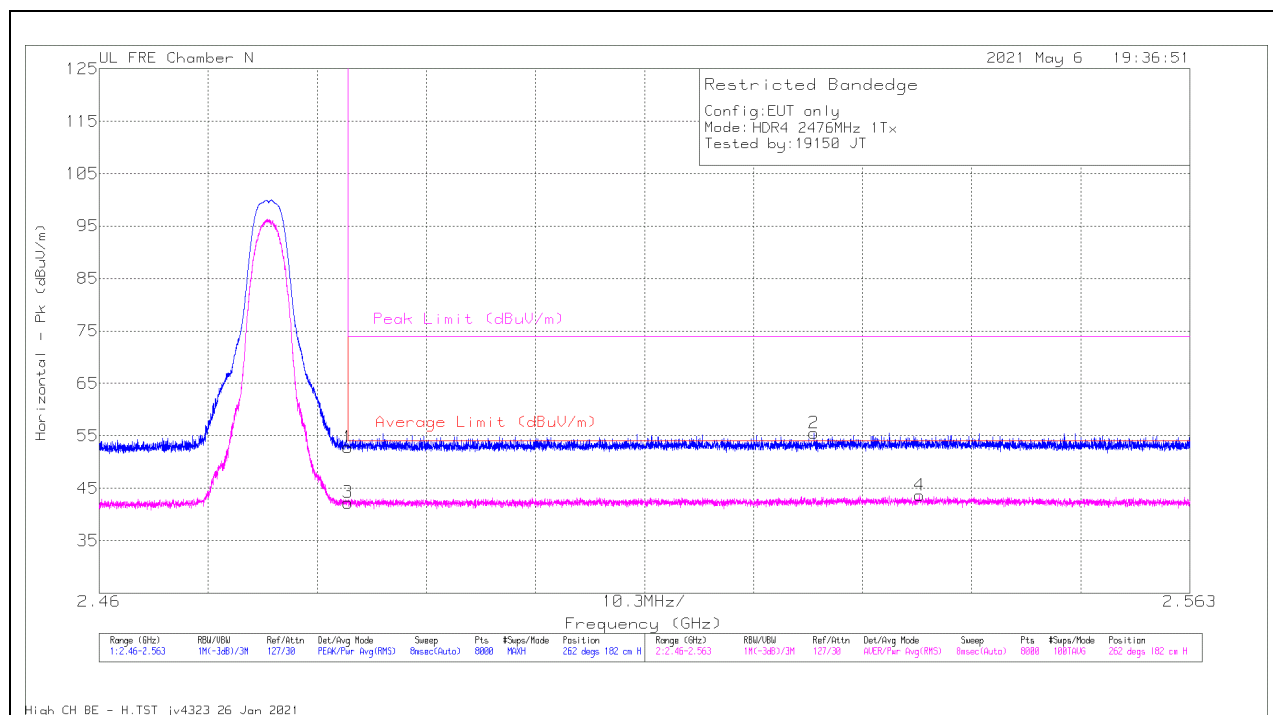


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dBm)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.1	Pk	32.1	-25.2	49	-	-	74	-25	41	362	V
2	* 2.36751	44.83	Pk	32.1	-25.3	51.63	-	-	74	-22.37	41	362	V
3	* 2.38999	31.1	RMS	32.1	-25.2	38	54	-16	-	-	41	362	V
4	* 2.35681	32.53	RMS	32	-25.3	39.23	54	-14.77	-	-	41	362	V

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

Pk - Peak detector

RMS - RMS detection

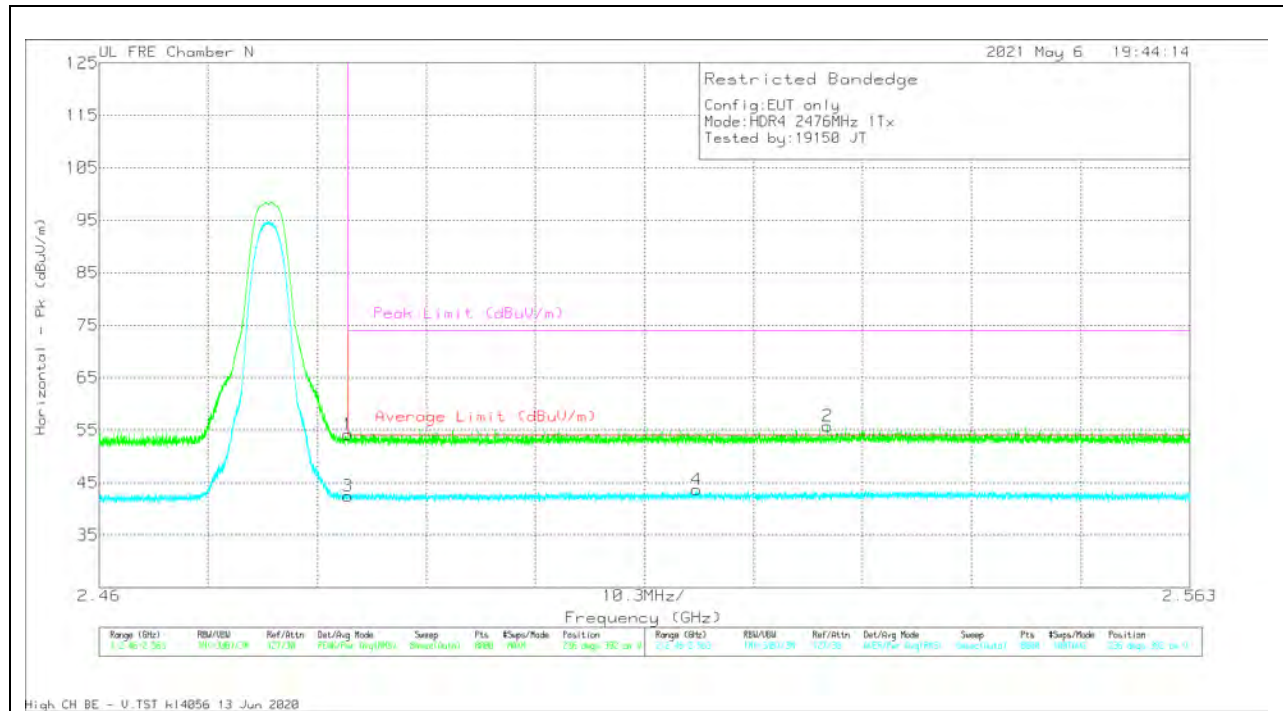
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	56.33	Pk	32.5	-36	52.83	-	-	74	-21.17	262	182	H
2	2.52751	58.74	Pk	32.7	-35.9	55.54	-	-	74	-18.46	262	182	H
3	2.4835	45.73	RMS	32.5	-36	42.23	54	-11.77	-	-	262	182	H
4	2.53749	46.78	RMS	32.6	-35.7	43.68	54	-10.32	-	-	262	182	H

Pk - Peak detector

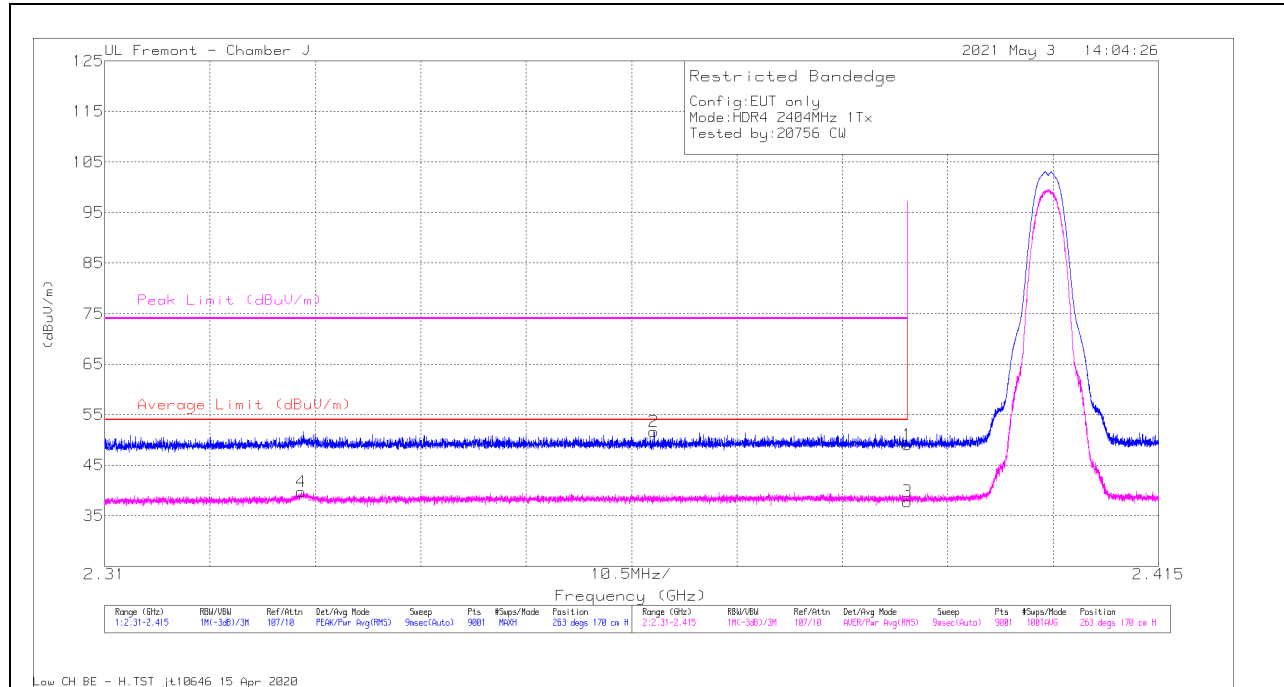
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	57.61	Pk	32.5	-36	54.11	-	-	74	-19.89	236	392	V
2	2.52879	58.94	PK	32.7	-35.9	55.74	-	-	74	-18.26	236	392	V
3	2.4835	45.87	RMS	32.5	-36	42.37	54	-11.63	-	-	236	392	V
4	2.5164	46.85	RMS	32.6	-35.8	43.65	54	-10.35	-	-	236	392	V

Pk - Peak detector
RMS - RMS detection

ANT 3**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

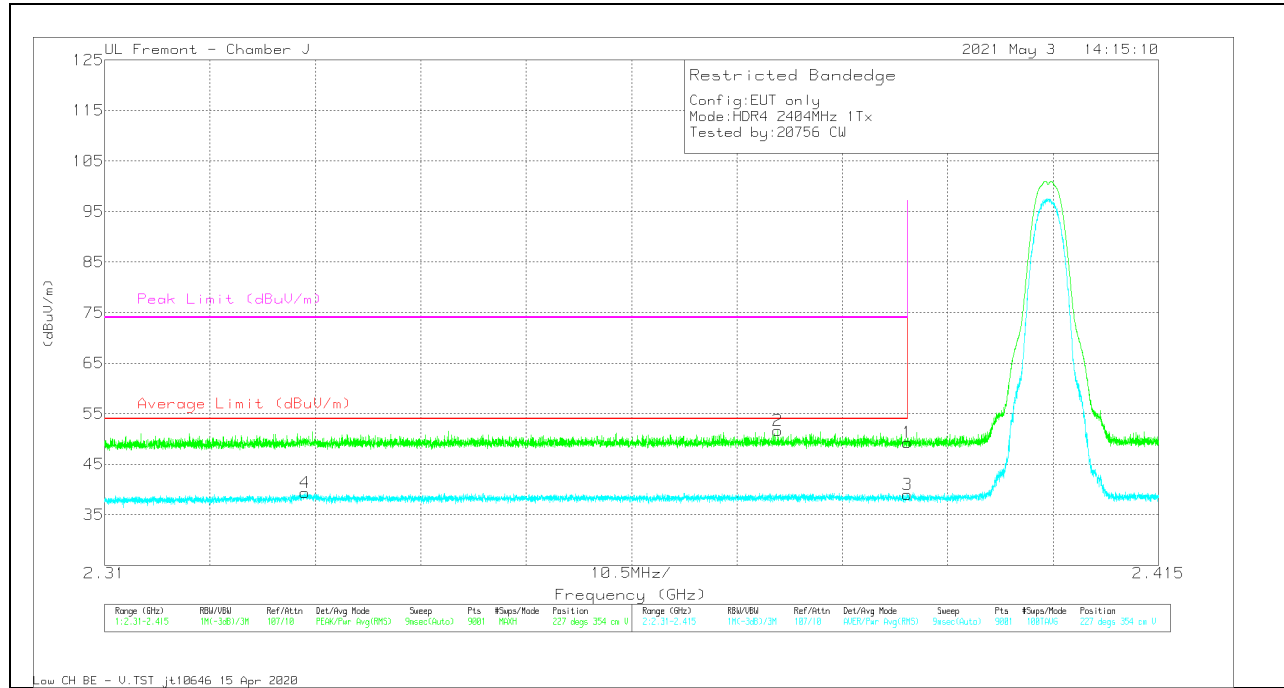
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/CbI/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.15	Pk	32.1	-25.2	49.05	-	-	74	-24.95	263	170	H
2	* 2.36473	44.91	Pk	32.1	-25.3	51.71	-	-	74	-22.29	263	170	H
3	* 2.38999	30.91	RMS	32.1	-25.2	37.81	54	-16.19	-	-	263	170	H
4	* 2.32961	33.23	RMS	31.8	-25.3	39.73	54	-14.27	-	-	263	170	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

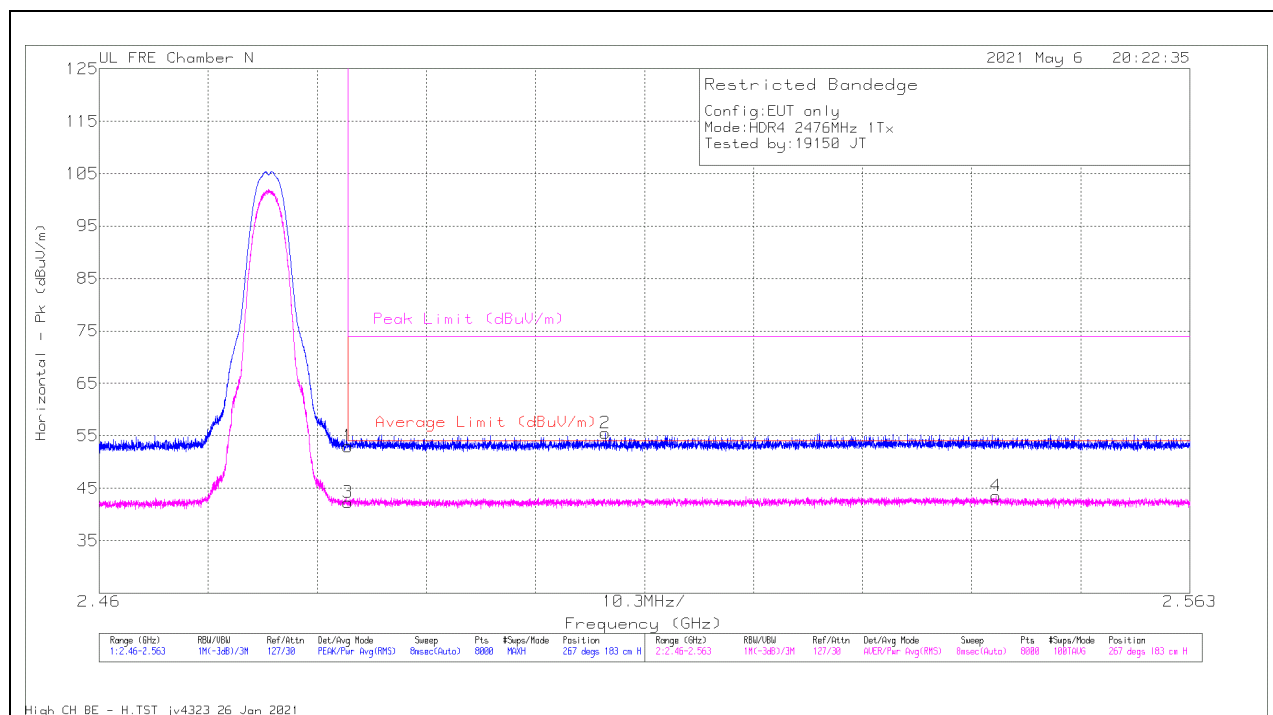


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.4	Pk	32.1	-25.2	49.3	-	-	74	-24.7	227	354	V
2	* 2.37709	44.72	Pk	32.1	-25.2	51.62	-	-	74	-22.38	227	354	V
3	* 2.38999	32.13	RMS	32.1	-25.2	39.03	54	-14.97	-	-	227	354	V
4	* 2.32999	32.85	RMS	31.8	-25.3	39.35	54	-14.65	-	-	227	354	V

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

Pk - Peak detector

RMS - RMS detection

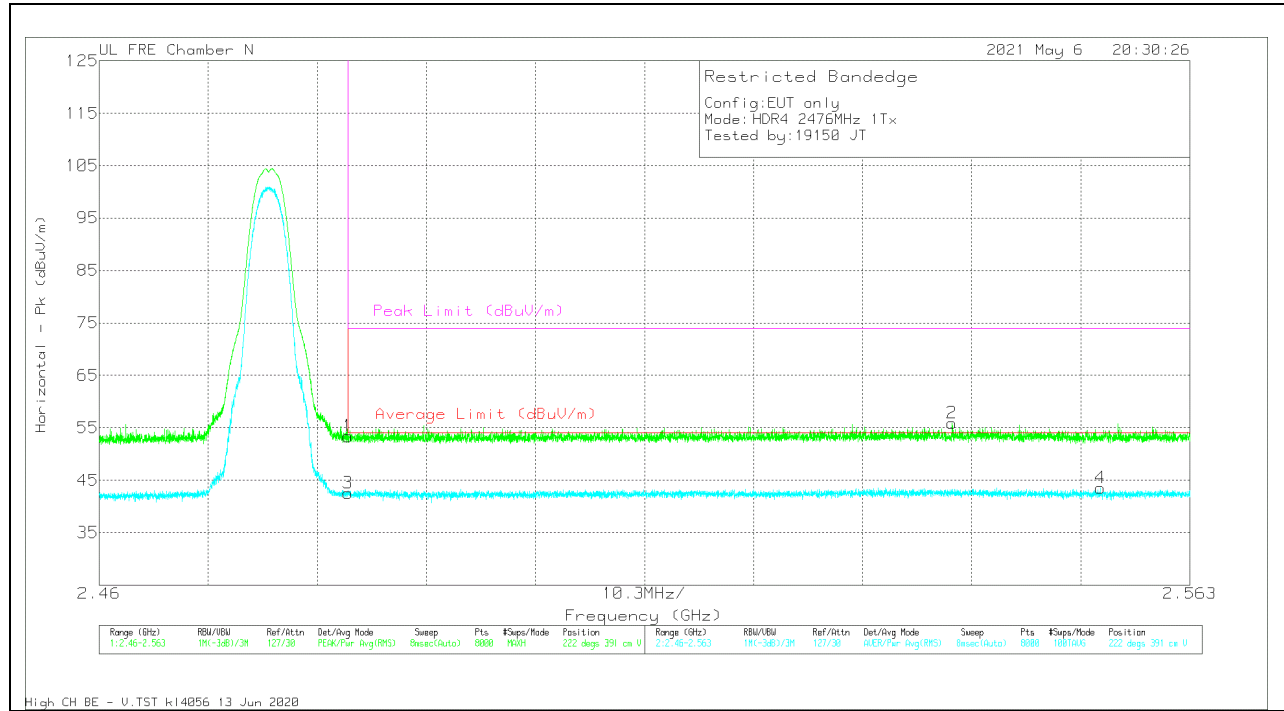
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	56.49	Pk	32.5	-36	52.99	-	-	74	-21.01	267	183	H
2	2.5078	58.87	Pk	32.6	-35.9	55.57	-	-	74	-18.43	267	183	H
3	2.4835	45.74	RMS	32.5	-36	42.24	54	-11.76	-	-	267	183	H
4	2.54468	46.67	RMS	32.5	-35.7	43.47	54	-10.53	-	-	267	183	H

Pk - Peak detector

RMS - RMS detection

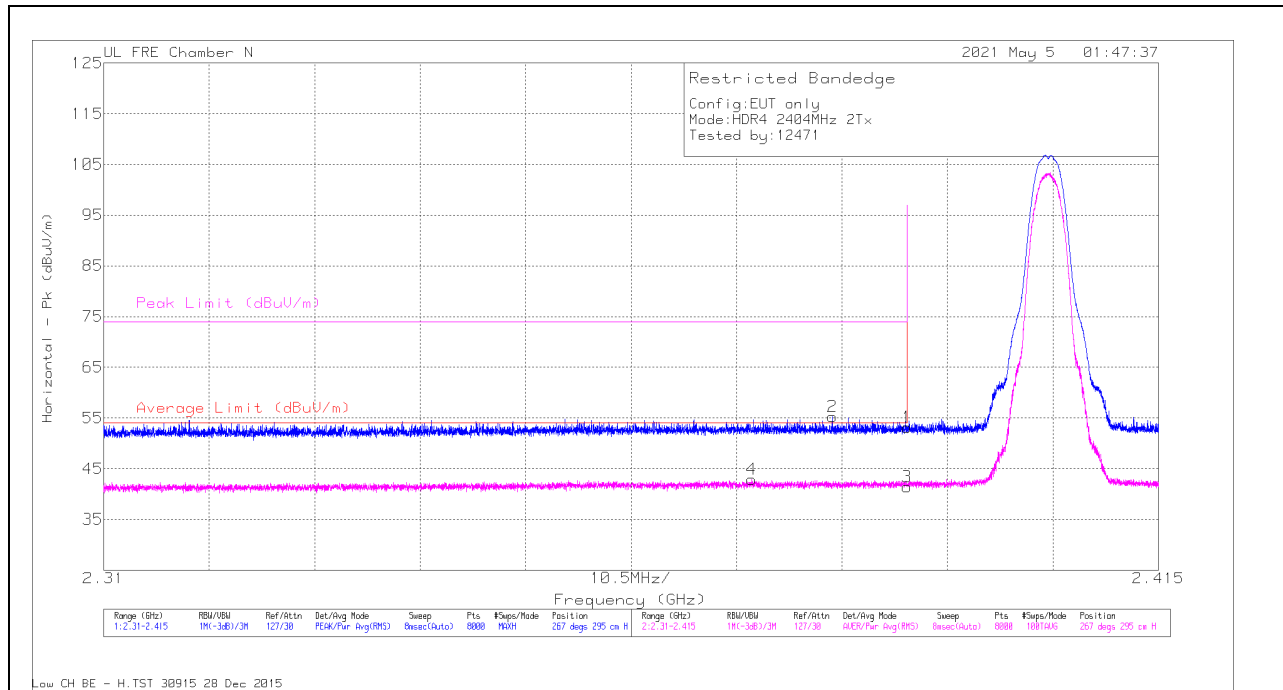
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	56.86	Pk	32.5	-36	53.36	-	-	74	-20.64	222	391	V
2	2.54056	58.94	Pk	32.6	-35.7	55.84	-	-	74	-18.16	222	391	V
3	2.4835	46.09	RMS	32.5	-36	42.59	54	-11.41	-	-	222	391	V
4	2.55454	46.85	RMS	32.4	-35.7	43.55	54	-10.45	-	-	222	391	V

Pk - Peak detector

RMS - RMS detection

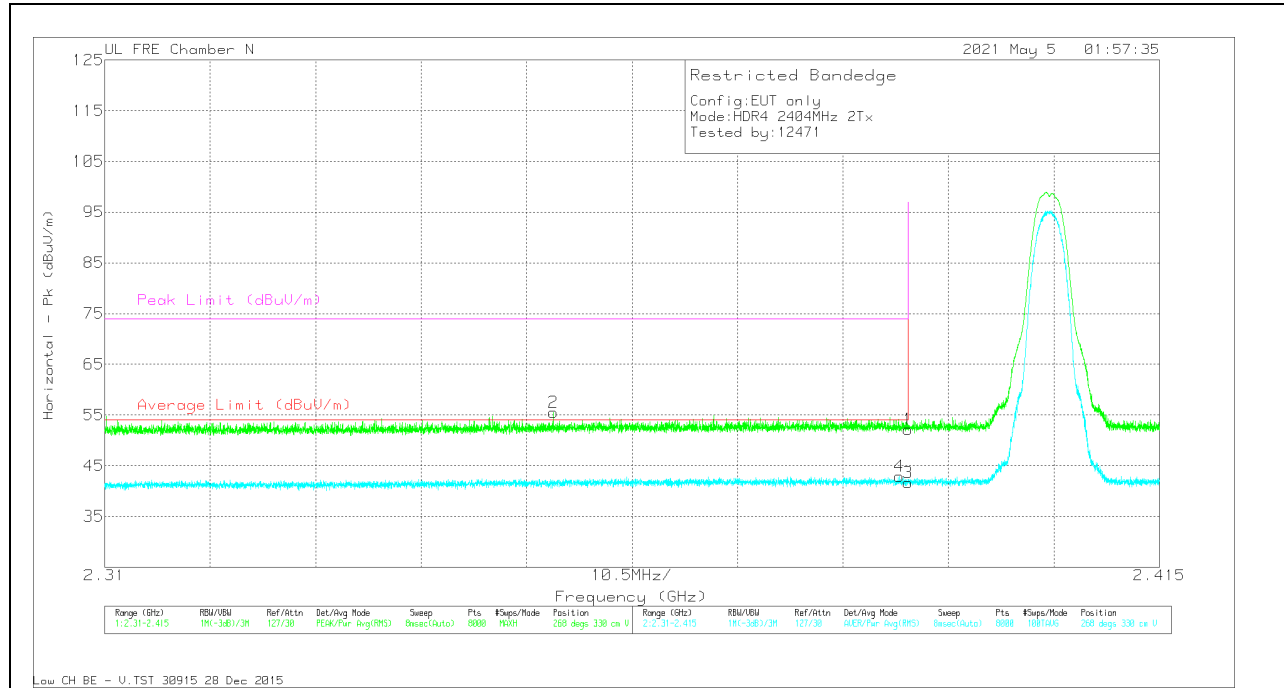
10.2.6. LOW POWER HDR TXBF (HDR4)**BANDEDGE (LOW CHANNEL)****HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/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	56.98	Pk	32.4	-36.2	53.18	-	-	74	-20.82	267	295	H
2	2.38253	59.11	Pk	32.4	-36.2	55.31	-	-	74	-18.69	267	295	H
3	2.39	45.25	RMS	32.4	-36.2	41.45	54	-12.55	-	-	267	295	H
4	2.37453	46.85	RMS	32.4	-36.3	42.95	54	-11.05	-	-	267	295	H

Pk - Peak detector

RMS - RMS detection

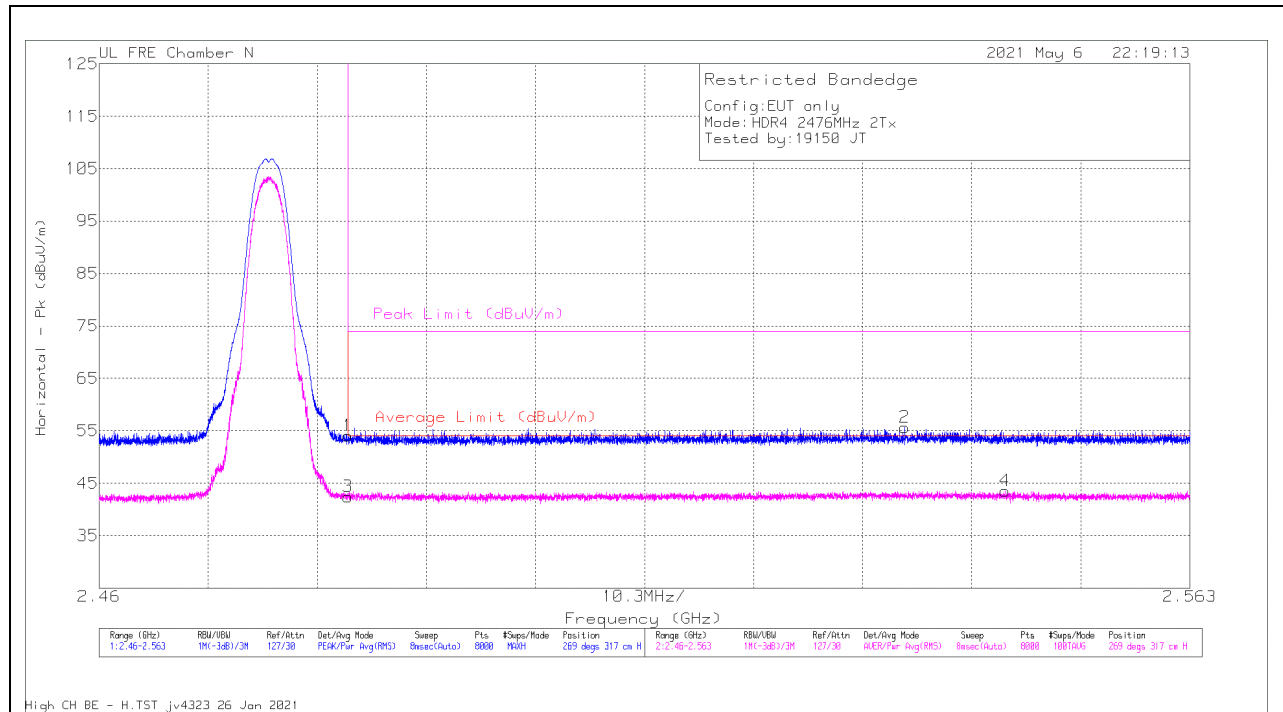
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filtr/ 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	55.95	PK	32.4	-36.2	52.15	-	-	74	-21.85	268	330	V
2	2.35464	59.59	PK	32.2	-36.3	55.49	-	-	74	-18.51	268	330	V
3	2.39	45.52	RMS	32.4	-36.2	41.72	54	-12.28	-	-	268	330	V
4	2.38912	46.73	RMS	32.4	-36.2	42.93	54	-11.07	-	-	268	330	V

Pk - Peak detector

RMS - RMS detection

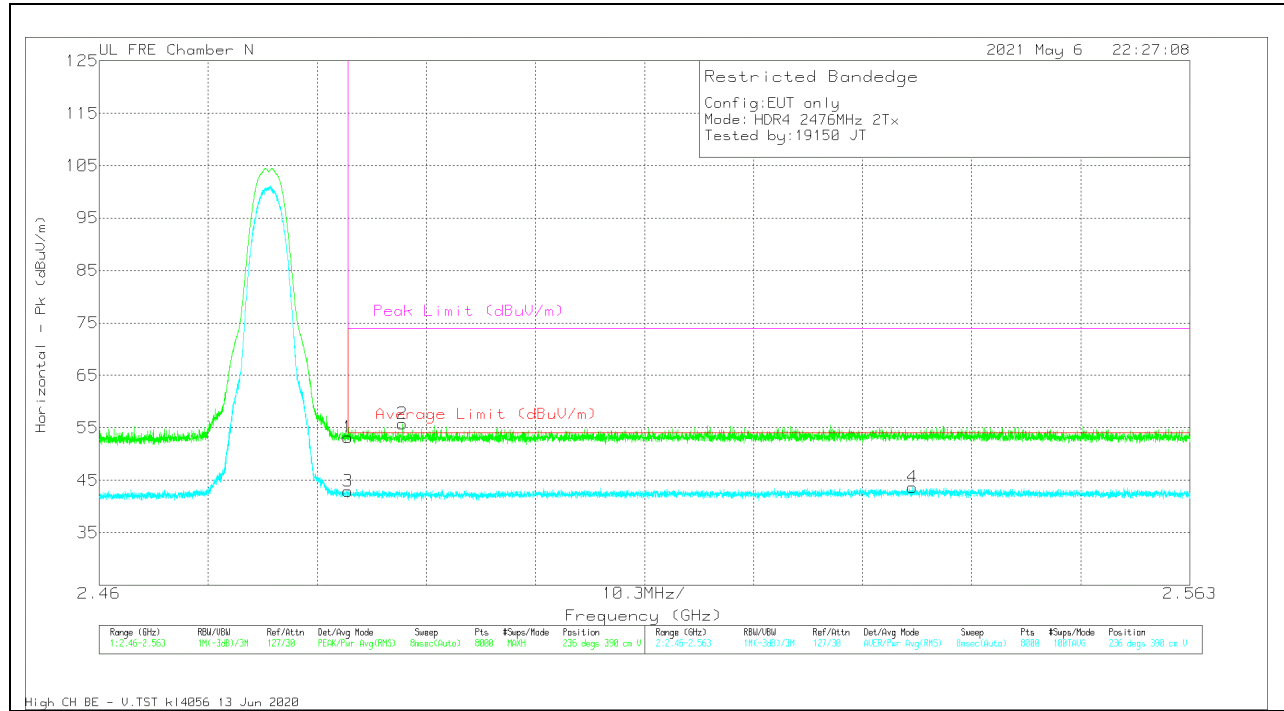
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filr/ 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	57.52	Pk	32.5	-36	54.02	-	-	74	-19.98	269	317	H
2	2.53606	58.79	Pk	32.6	-35.7	55.69	-	-	74	-18.31	269	317	H
3	2.4835	45.89	RMS	32.5	-36	42.39	54	-11.61	-	-	269	317	H
4	2.54557	46.78	RMS	32.5	-35.7	43.58	54	-10.42	-	-	269	317	H

Pk - Peak detector

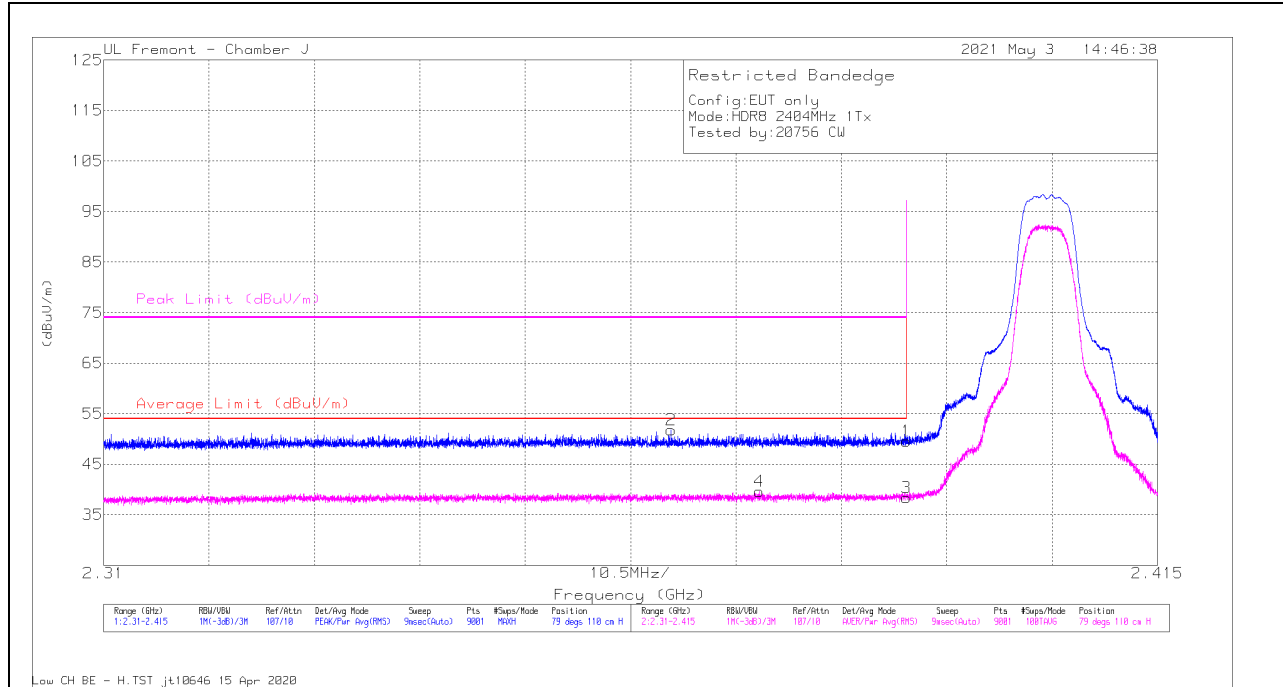
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/P ad (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	56.66	Pk	32.5	-36	53.16	-	-	74	-20.84	236	390	V
2	2.48863	59.25	PK	32.5	-36	55.75	-	-	74	-18.25	236	390	V
3	2.4835	46.4	RMS	32.5	-36	42.9	54	-11.1	-	-	236	390	V
4	2.53681	46.8	RMS	32.6	-35.7	43.7	54	-10.3	-	-	236	390	V

Pk - Peak detector
RMS - RMS detection

10.2.7. LOW POWER HDR (HDR8)**ANT 4****BANDEGE (LOW CHANNEL)****HORIZONTAL RESULT**

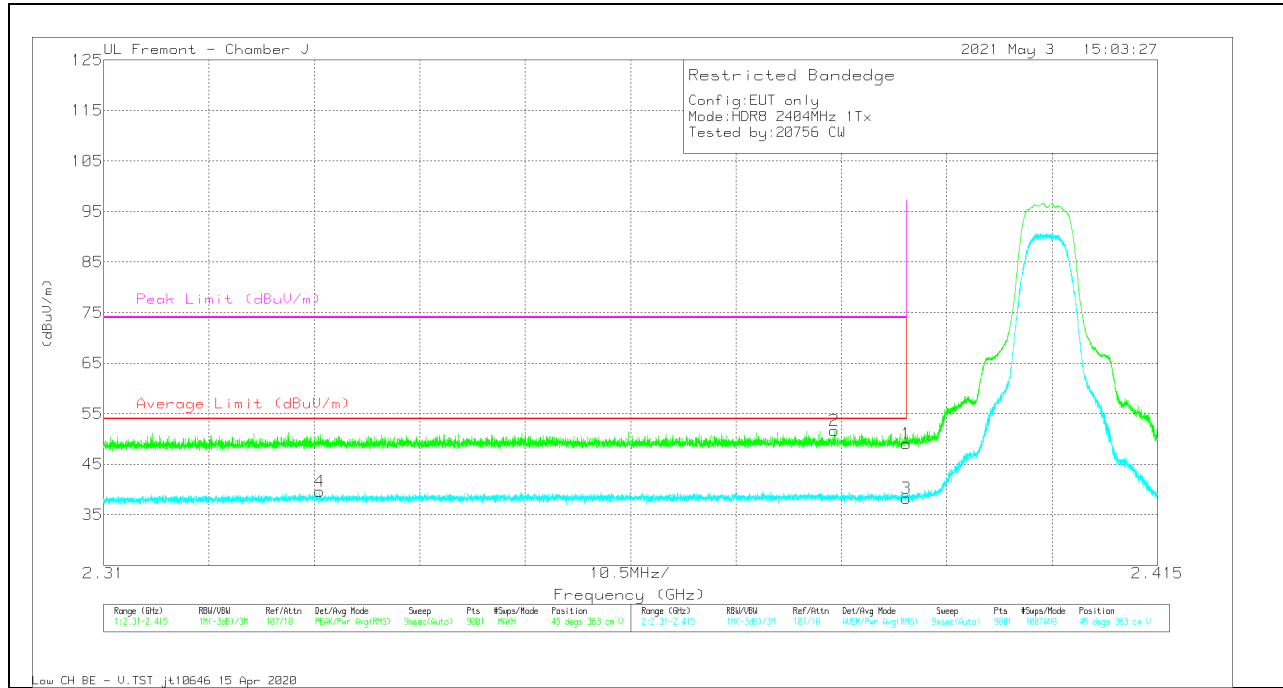
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.64	Pk	32.1	-25.2	49.54	-	-	74	-24.46	79	110	H
2	* 2.36655	44.95	Pk	32.1	-25.3	51.75	-	-	74	-22.25	79	110	H
3	* 2.38999	31.45	RMS	32.1	-25.2	38.35	54	-15.65	-	-	79	110	H
4	* 2.37529	32.73	RMS	32.1	-25.2	39.63	54	-14.37	-	-	79	110	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

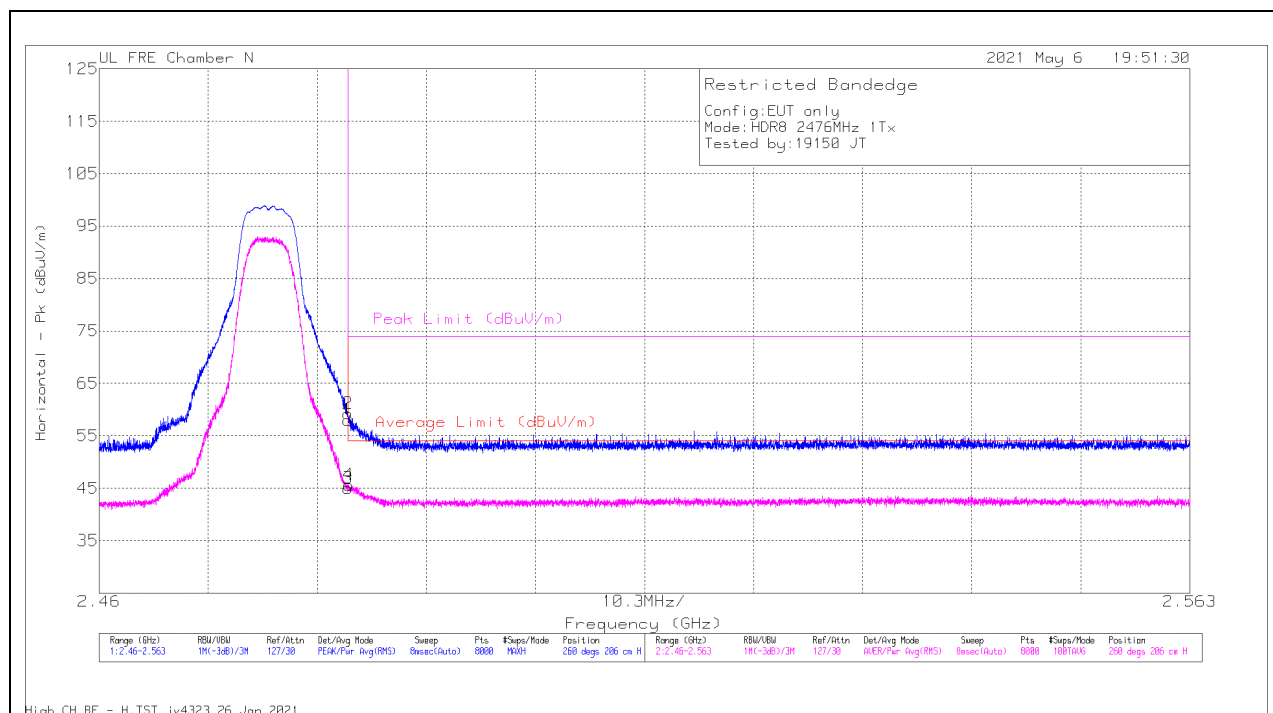


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	42.19	Pk	32.1	-25.2	49.09	-	-	74	-24.91	45	363	V
2	* 2.38283	44.77	Pk	32.1	-25.2	51.67	-	-	74	-22.33	45	363	V
3	* 2.38999	31.33	RMS	32.1	-25.2	38.23	54	-15.77	-	-	45	363	V
4	* 2.33154	33.09	RMS	31.8	-25.3	39.59	54	-14.41	-	-	45	363	V

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

Pk - Peak detector

RMS - RMS detection

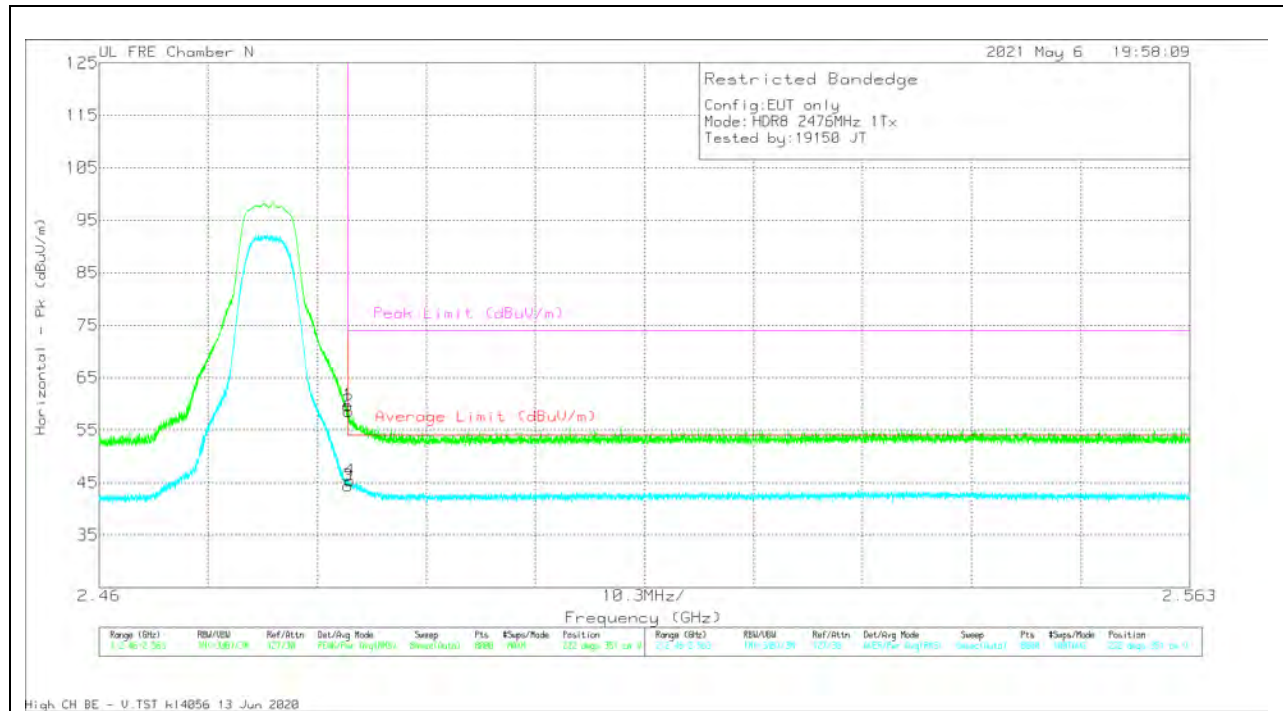
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filtr/P ad (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	61.47	Pk	32.5	-36	57.97	-	-	74	-16.03	260	206	H
2	2.48351	62.75	Pk	32.5	-36	59.25	-	-	74	-14.75	260	206	H
3	2.4835	48.47	RMS	32.5	-36	44.97	54	-9.03	-	-	260	206	H
4	2.48354	49.08	RMS	32.5	-36	45.58	54	-8.42	-	-	260	206	H

Pk - Peak detector

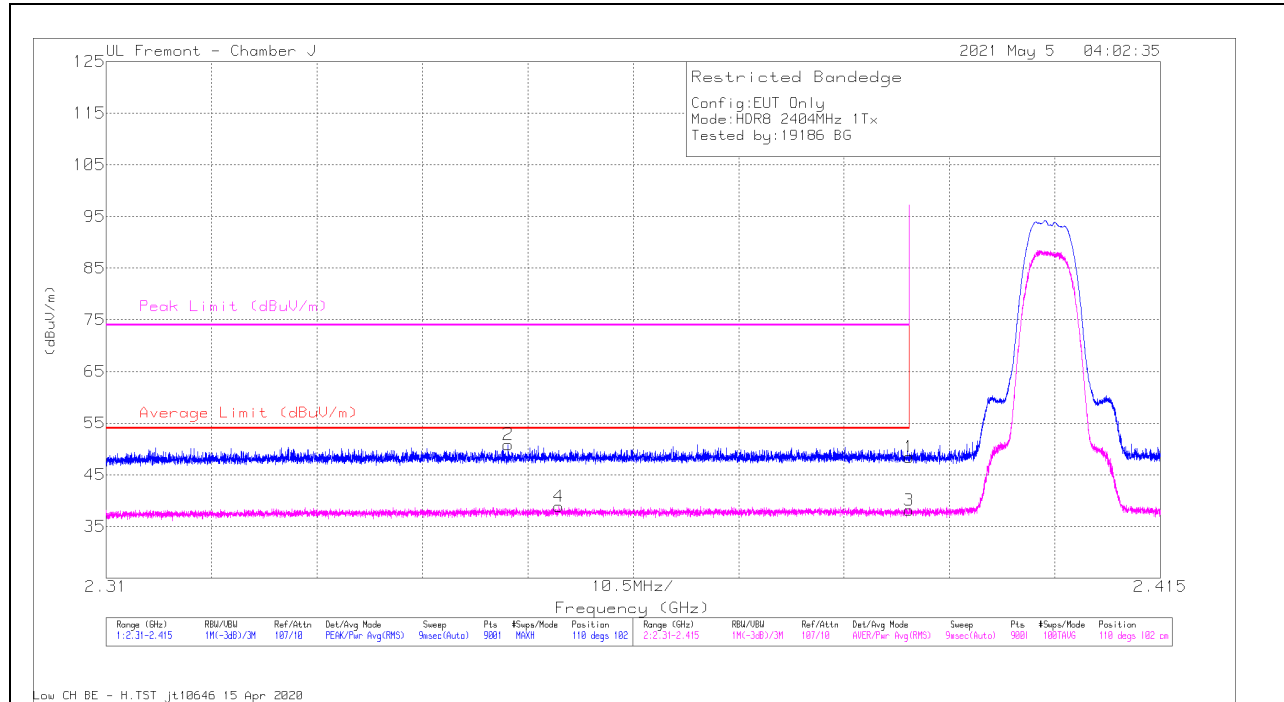
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/P ad (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	63.23	Pk	32.5	-36	59.73	-	-	74	-14.27	222	351	V
2	2.48355	62.06	PK	32.5	-36	58.56	-	-	74	-15.44	222	351	V
3	2.4835	47.92	RMS	32.5	-36	44.42	54	-9.58	-	-	222	351	V
4	2.48366	48.84	RMS	32.5	-36	45.34	54	-8.66	-	-	222	351	V

Pk - Peak detector
RMS - RMS detection

ANT 3**BANDEGE (LOW CHANNEL)****HORIZONTAL RESULT**

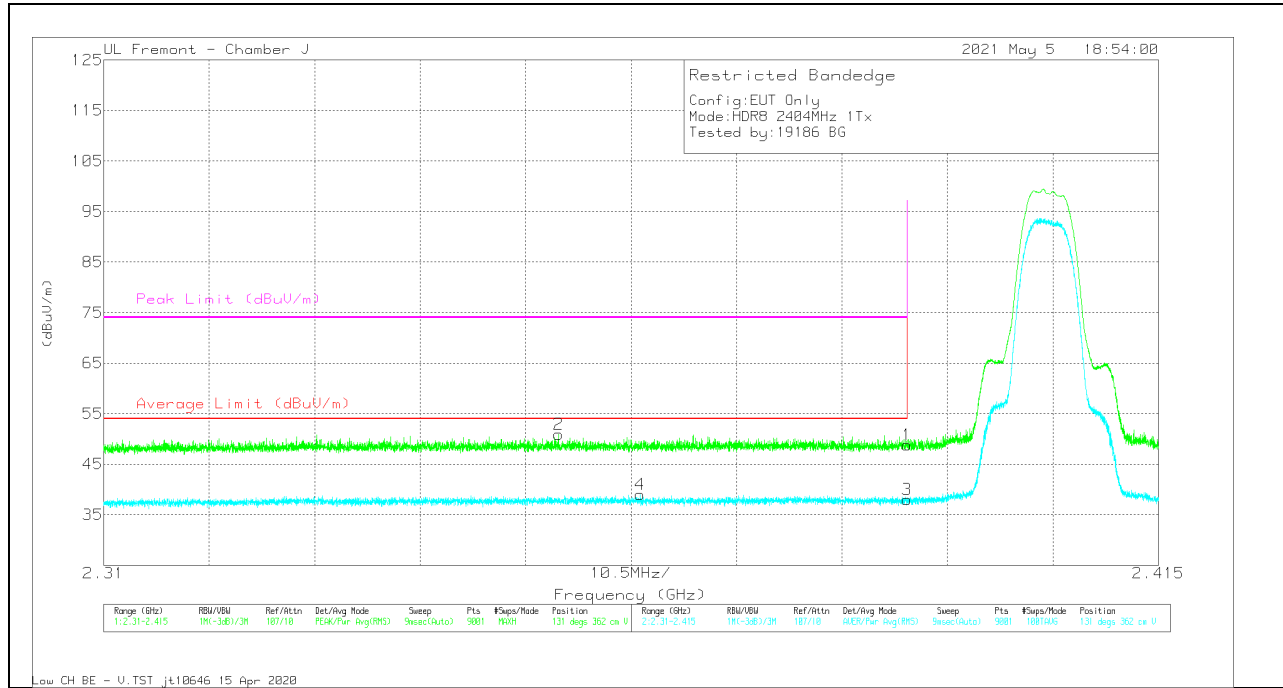
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0100034 (dB/m)	Amp/Cbll/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	41.54	Pk	32.1	-25.2	48.44	-	-	74	-25.56	110	102	H
2	* 2.35004	44.04	Pk	32	-25.2	50.84	-	-	74	-23.16	110	102	H
3	* 2.38999	31.22	RMS	32.1	-25.2	38.12	54	-15.88	-	-	110	102	H
4	* 2.35508	32.16	RMS	32	-25.3	38.86	54	-15.14	-	-	110	102	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



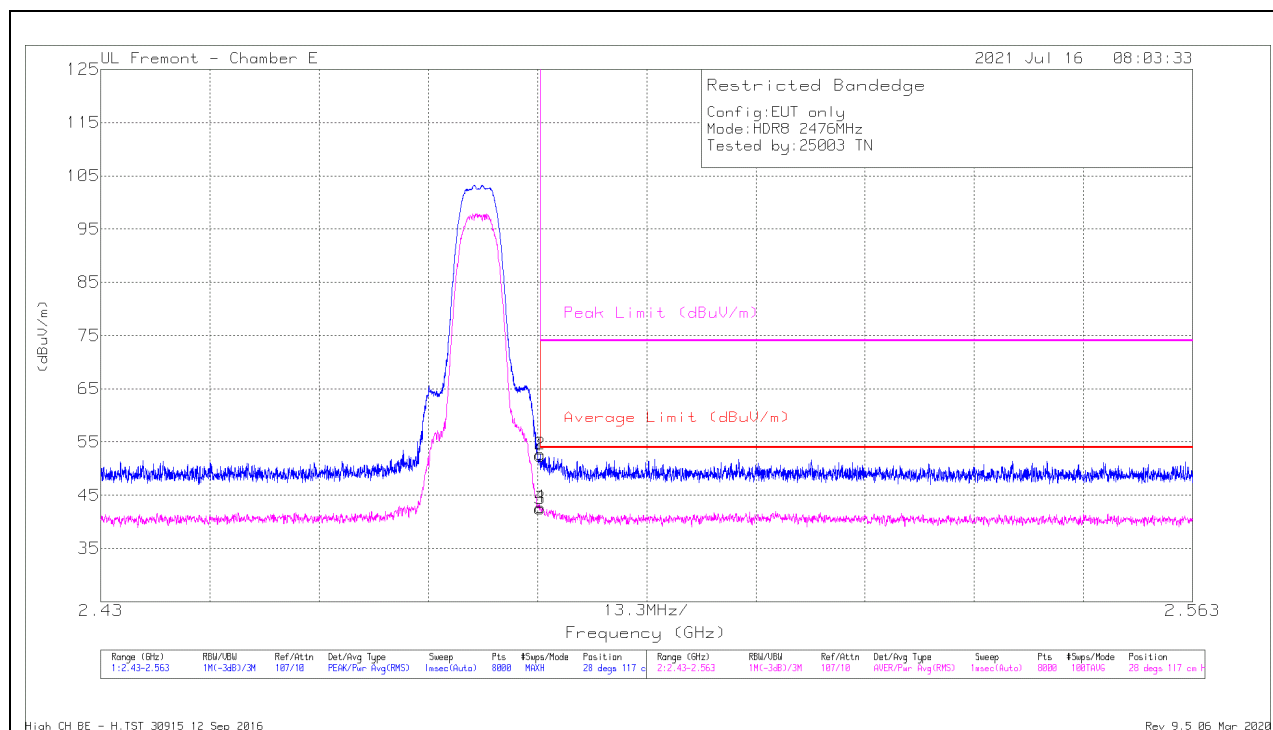
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1	* 2.38999	41.91	Pk	32.1	-25.2	48.81	-	-	74	-25.19	131	362	V
2	* 2.35527	44.24	Pk	32	-25.3	50.94	-	-	74	-23.06	131	362	V
3	* 2.38999	31.07	RMS	32.1	-25.2	37.97	54	-16.03	-	-	131	362	V
4	* 2.3634	32.24	RMS	32	-25.2	39.04	54	-14.96	-	-	131	362	V

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

Pk - Peak detector

RMS - RMS detection

HORIZONTAL RESULT



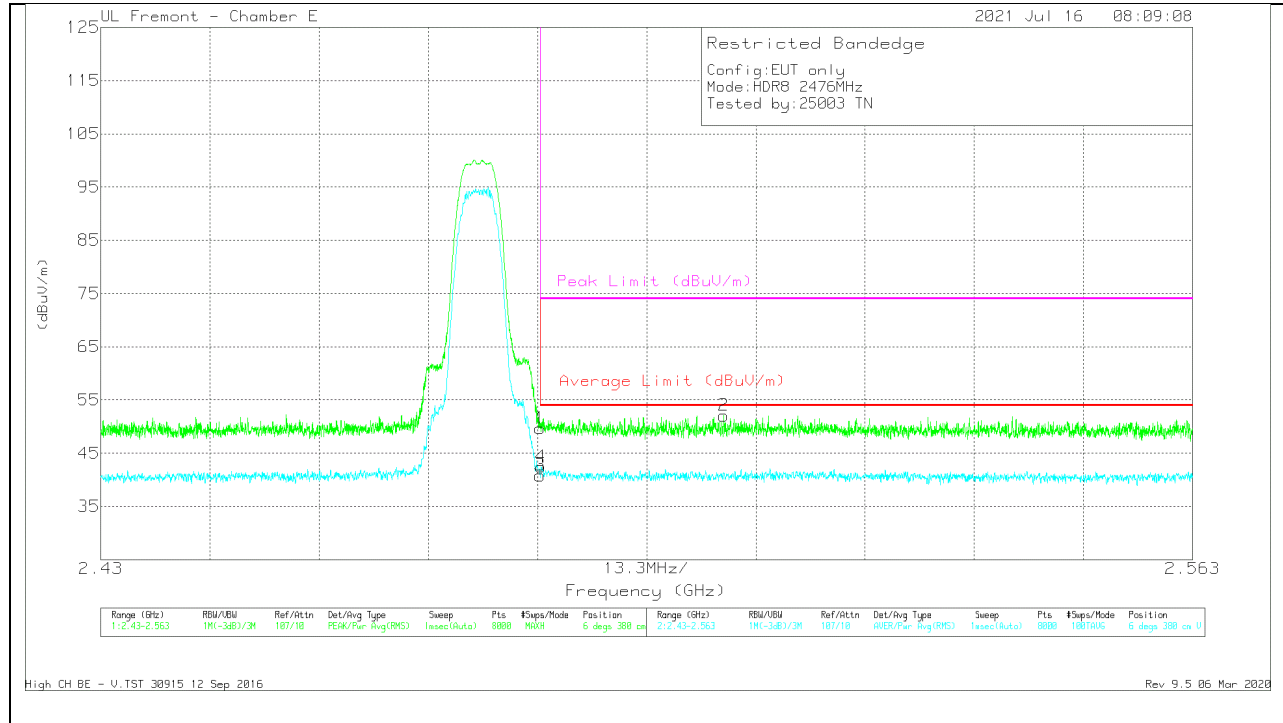
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dBm)	Amp/Chl/Filt/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	45.25	Pk	32.6	-25.4	52.45	-	-	74	-21.55	28	117	H
2	* 2.48352	45.51	Pk	32.6	-25.4	52.71	-	-	74	-21.29	28	117	H
3	* 2.48351	35.3	RMS	32.6	-25.4	42.5	54	-11.5	-	-	28	117	H
4	* 2.48354	35.55	RMS	32.6	-25.4	42.75	54	-11.25	-	-	28	117	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT

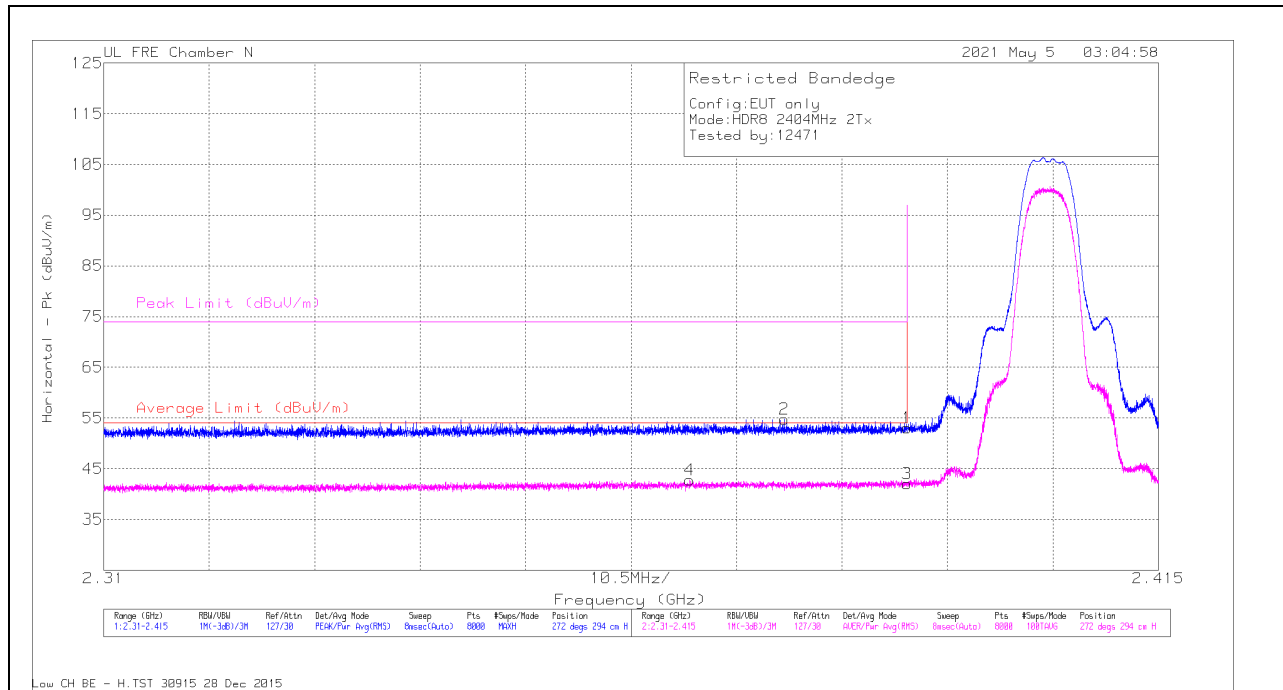


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0078107 (dB/m)	Amp/Cbl/Ftr/Pa d (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	42.47	Pk	32.6	-25.4	49.67	-	-	74	-24.33	6	380	V
3	* 2.48351	33.62	RMS	32.6	-25.4	40.82	54	-13.18	-	-	6	380	V
4	* 2.48364	35.24	RMS	32.6	-25.4	42.44	54	-11.56	-	-	6	380	V
2	2.50589	44.77	Pk	32.7	-25.4	52.07	-	-	74	-21.93	6	380	V

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

Pk - Peak detector

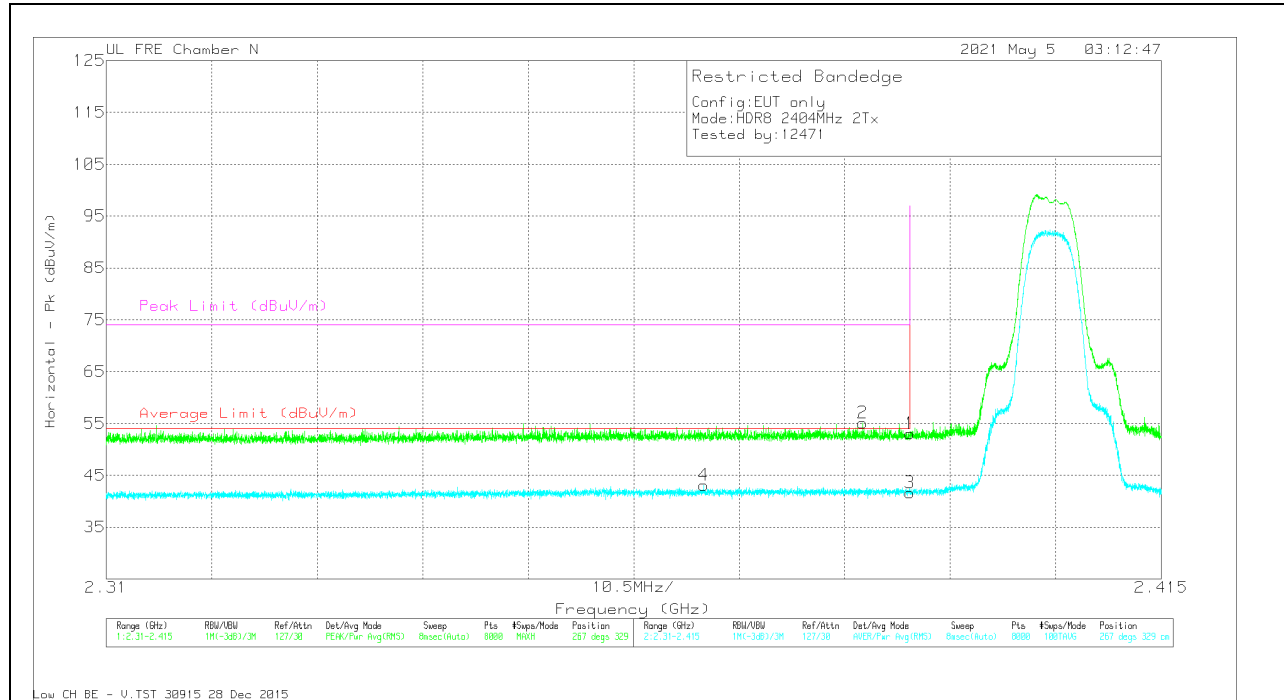
RMS - RMS detection

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/Cb/Filt/ 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	56.83	Pk	32.4	-36.2	53.03	-	-	74	-20.97	272	294	H
2	2.37776	58.58	Pk	32.4	-36.2	54.78	-	-	74	-19.22	272	294	H
3	2.39	45.86	RMS	32.4	-36.2	42.06	54	-11.94	-	-	272	294	H
4	2.36834	46.63	RMS	32.4	-36.3	42.73	54	-11.27	-	-	272	294	H

Pk - Peak detector
RMS - RMS detection

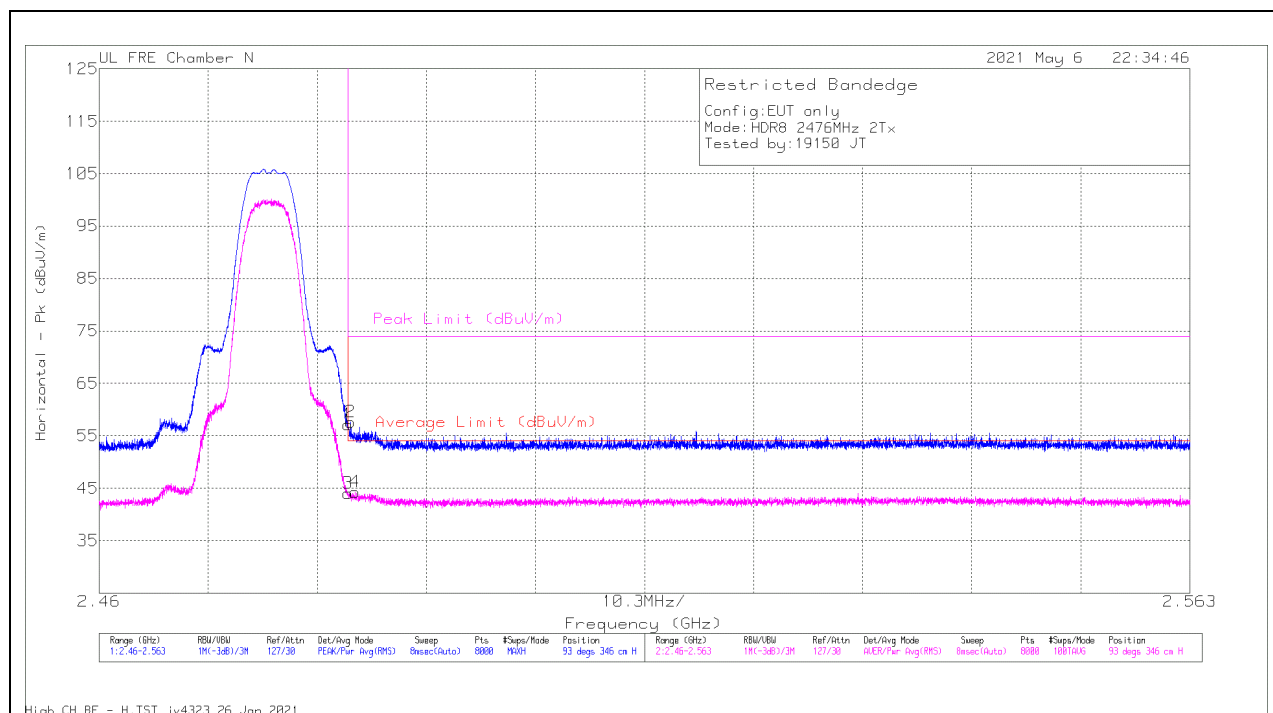
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	56.87	Pk	32.4	-36.2	53.07	-	-	74	-20.93	267	329	V
2	2.38528	58.93	Pk	32.4	-36.2	55.13	-	-	74	-18.87	267	329	V
3	2.39	45.43	RMS	32.4	-36.2	41.63	54	-12.37	-	-	267	329	V
4	2.36948	47	RMS	32.4	-36.3	43.1	54	-10.9	-	-	267	329	V

Pk - Peak detector

RMS - RMS detection

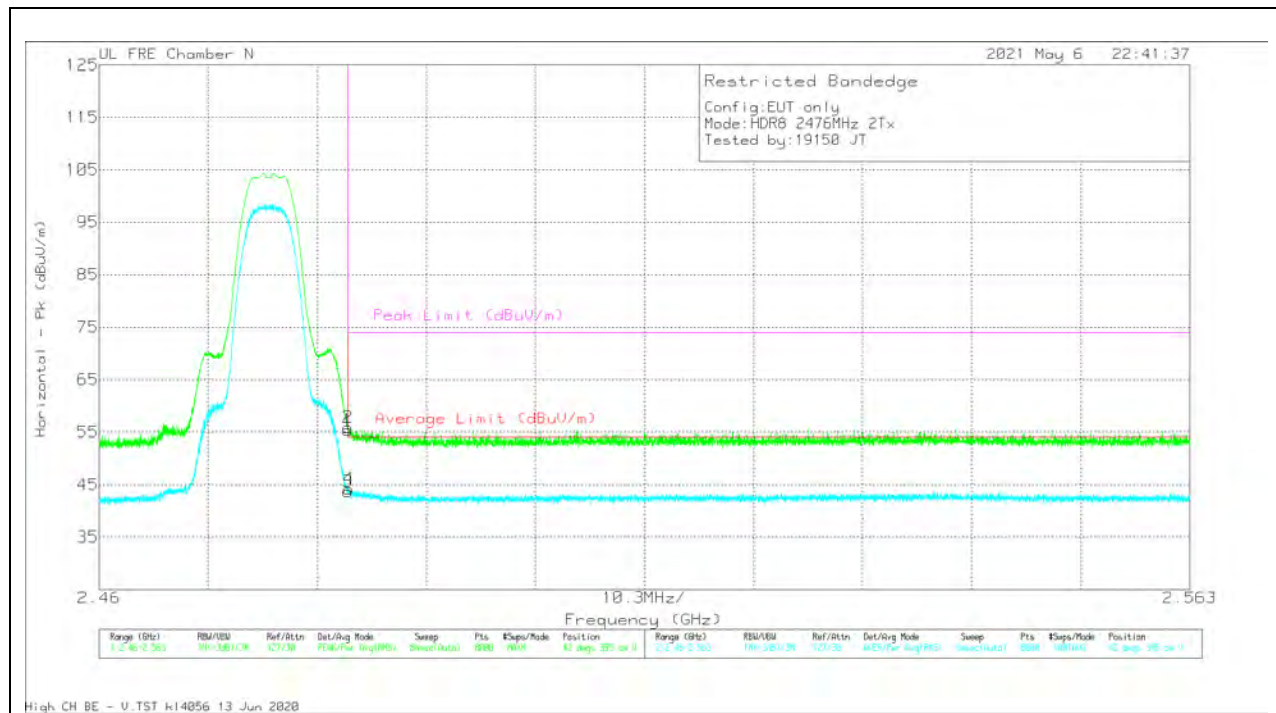
BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULT**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Filtr/P ad (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	60.65	Pk	32.5	-36	57.15	-	-	74	-16.85	93	346	H
2	2.48373	61.07	Pk	32.5	-36	57.57	-	-	74	-16.43	93	346	H
3	2.4835	47.56	RMS	32.5	-36	44.06	54	-9.94	-	-	93	346	H
4	2.48418	47.77	RMS	32.5	-36	44.27	54	-9.73	-	-	93	346	H

Pk - Peak detector

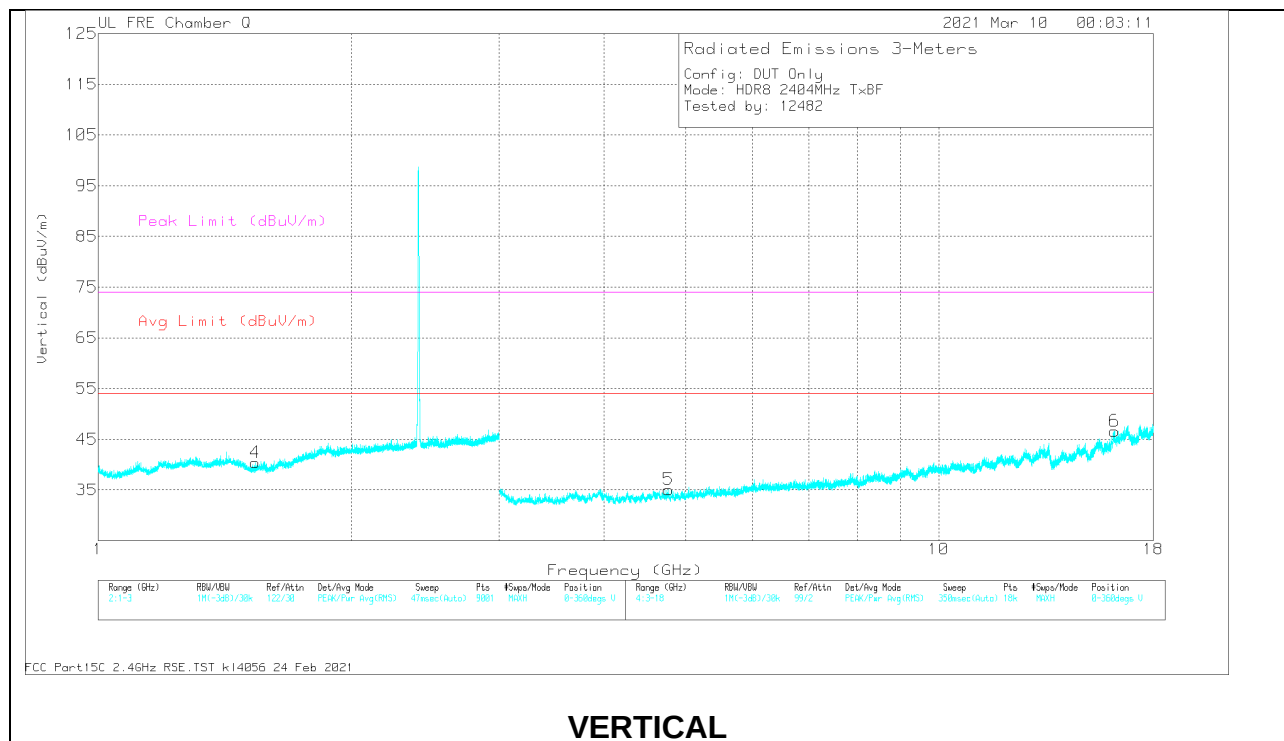
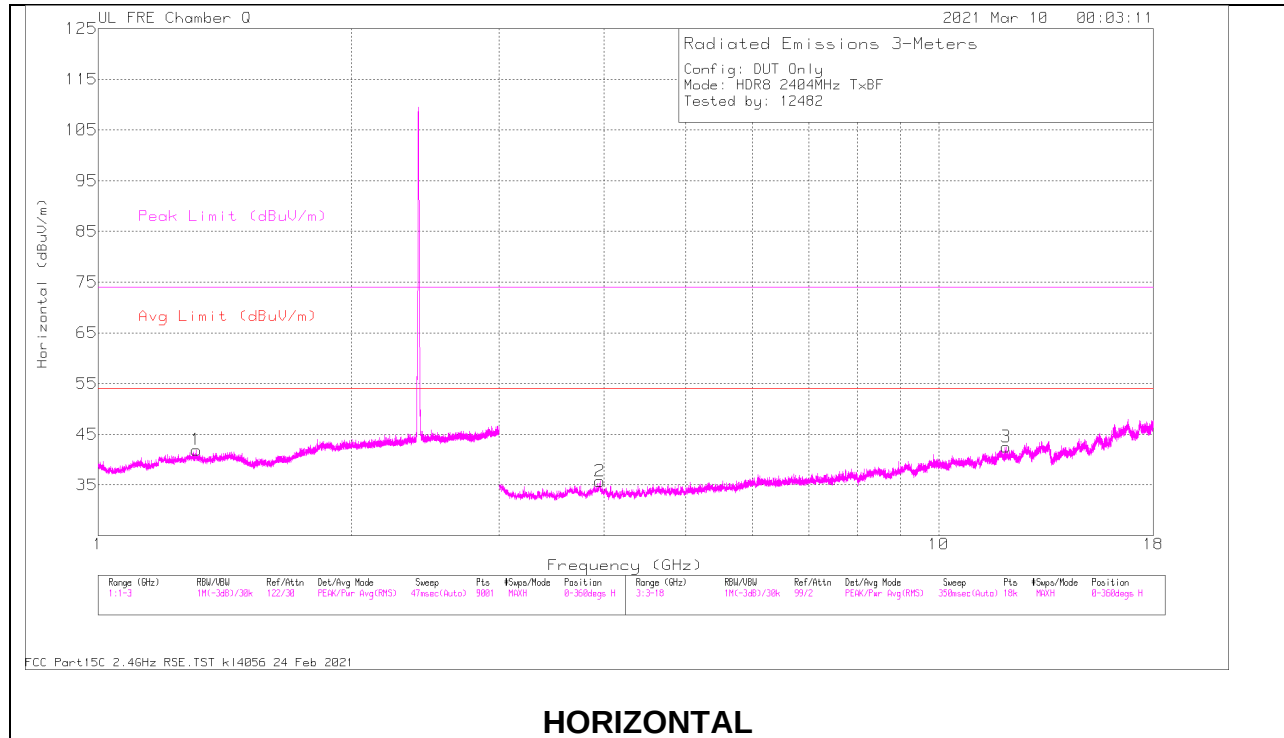
RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cb/Filt/ 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	58.93	Pk	32.5	-36	55.43	-	-	74	-18.57	42	395	V
2	2.48351	59.4	PK	32.5	-36	55.9	-	-	74	-18.1	42	395	V
3	2.4835	47.13	RMS	32.5	-36	43.63	54	-10.37	-	-	42	395	V
4	2.48355	47.69	RMS	32.5	-36	44.19	54	-9.81	-	-	42	395	V

Pk - Peak detector
RMS - RMS detection

**10.2.9. HIGH POWER TXBF HARMONICS & SPURIOUS EMISSIONS
(HDR8)****LOW CHANNEL RESULTS**

RADIATED EMISSIONS**Range 1: Horizontal 1000 - 3000MHz**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filtr/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	* 1.30738	57.51	PK2	29.1	-35.5	51.11	-	-	74	-22.89	335	146	H
	* 1.30966	46.14	MAV1	29.1	-35.6	39.64	54	-14.36	-	-	335	146	H

Range 2: Vertical 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filtr/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	* 1.53706	57.17	PK2	27.4	-35.2	49.37	-	-	74	-24.63	291	188	V
	* 1.53628	45.91	MAV1	27.4	-35.2	38.11	54	-15.89	-	-	291	188	V

Range 3: Horizontal 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filtr/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	* 3.95447	53.09	PK2	33.3	-40.6	45.79	-	-	74	-28.21	354	292	H
	* 3.95072	40.53	MAV1	33.4	-40.6	33.33	54	-20.67	-	-	354	292	H
3	* 12.03572	47.56	PK2	38.7	-35.3	50.96	-	-	74	-23.04	317	163	H
	* 12.03309	35.74	MAV1	38.7	-35.3	39.14	54	-14.86	-	-	317	163	H

Range 4: Vertical 3000 - 18000MHz

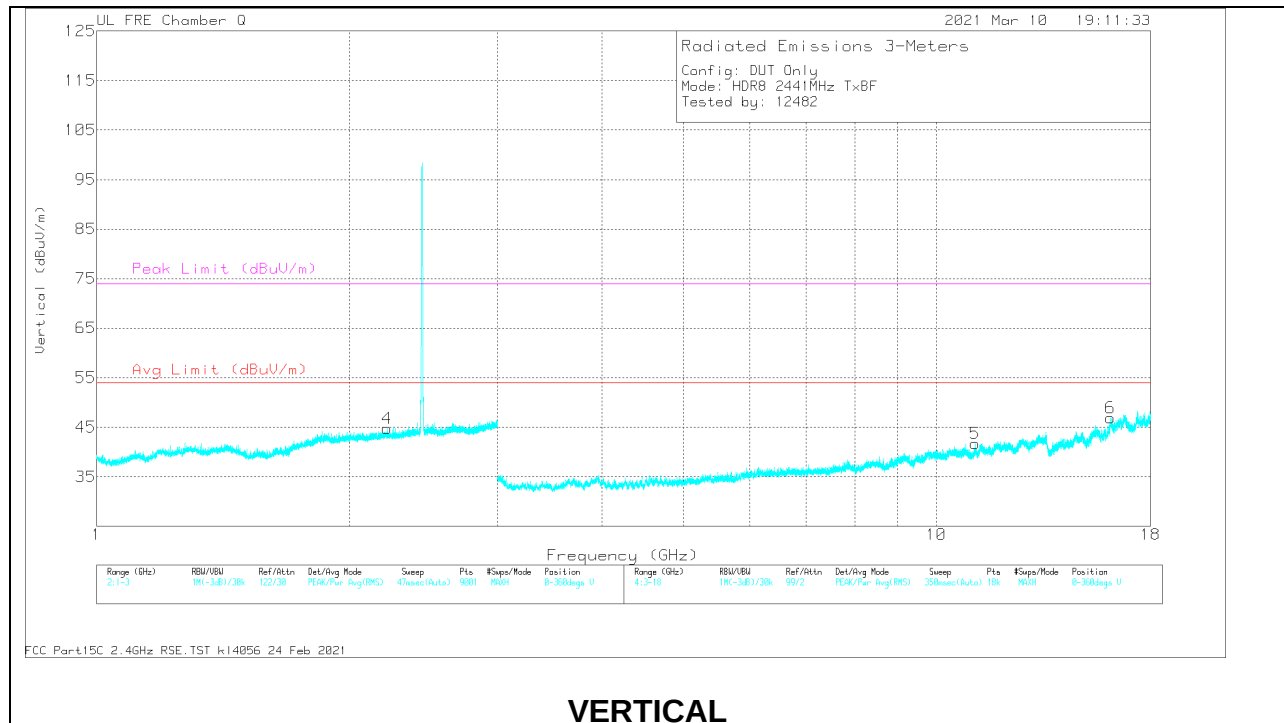
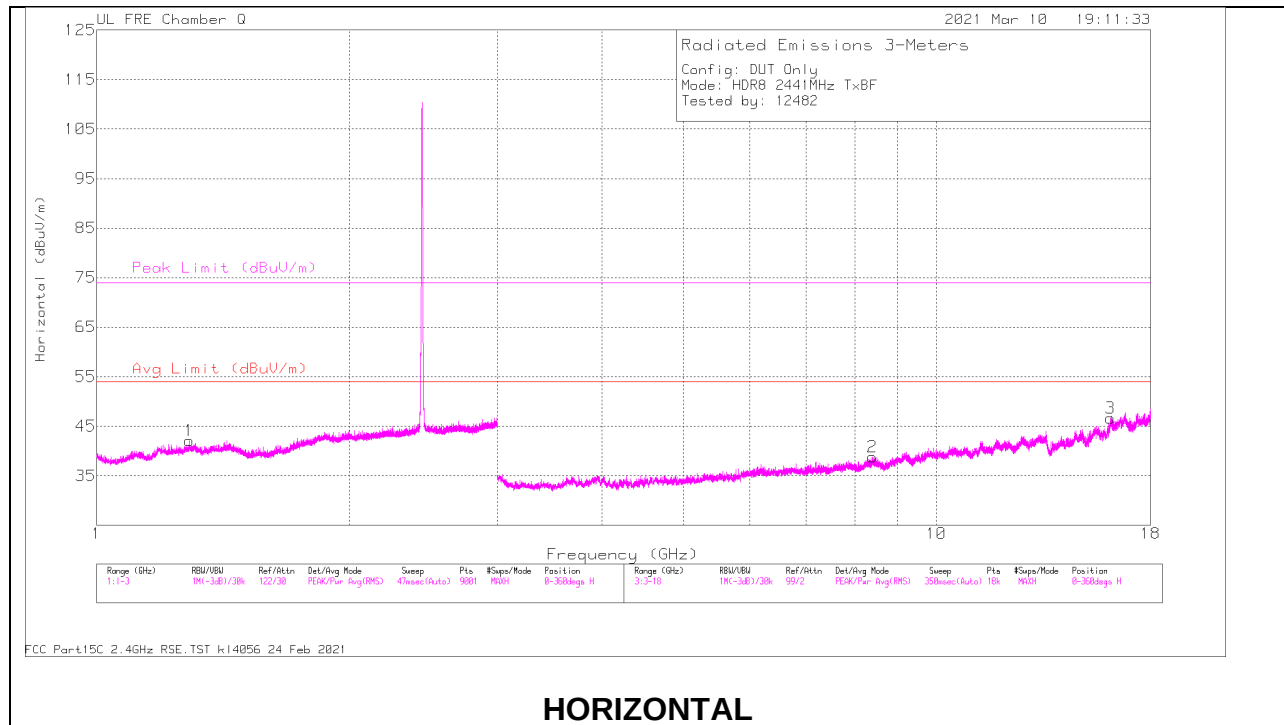
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.76828	51.87	PK2	33.9	-41.2	44.57	-	-	74	-29.43	154	198	V
	* 4.76775	40.04	MAV1	33.9	-41.2	32.74	54	-21.26	-	-	154	198	V
6	* 16.1873	47.87	PK2	40.7	-33.4	55.17	-	-	74	-18.83	176	225	V
	* 16.18476	36.66	MAV1	40.7	-33.5	43.86	54	-10.14	-	-	176	225	V

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

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL RESULTS



RADIATED EMISSIONS**Range 1: Horizontal 1000 - 3000MHz**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filt/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	* 1.2917	58.13	PK2	29.3	-35.6	51.83	-	-	74	-22.17	305	202	H
	* 1.29044	46.13	MAv1	29.3	-35.6	39.83	54	-14.17	-	-	305	202	H

Range 2: Vertical 1000 - 3000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filt/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	* 2.21712	57.34	PK2	31.6	-34.6	54.34	-	-	74	-19.66	271	322	V
	* 2.2175	45.37	MAv1	31.6	-34.6	42.37	54	-11.63	-	-	271	322	V

Range 3: Horizontal 3000 - 18000MHz

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filt/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	* 8.39243	48.02	PK2	35.7	-36.1	47.62	-	-	74	-26.38	72	228	H
	* 8.39474	36.48	MAv1	35.8	-36.2	36.08	54	-17.92	-	-	72	228	H
3	* 16.12799	47.81	PK2	40.7	-33.1	55.41	-	-	74	-18.59	251	191	H
	* 16.12834	35.98	MAv1	40.7	-33.1	43.58	54	-10.42	-	-	251	191	H

Range 4: Vertical 3000 - 18000MHz

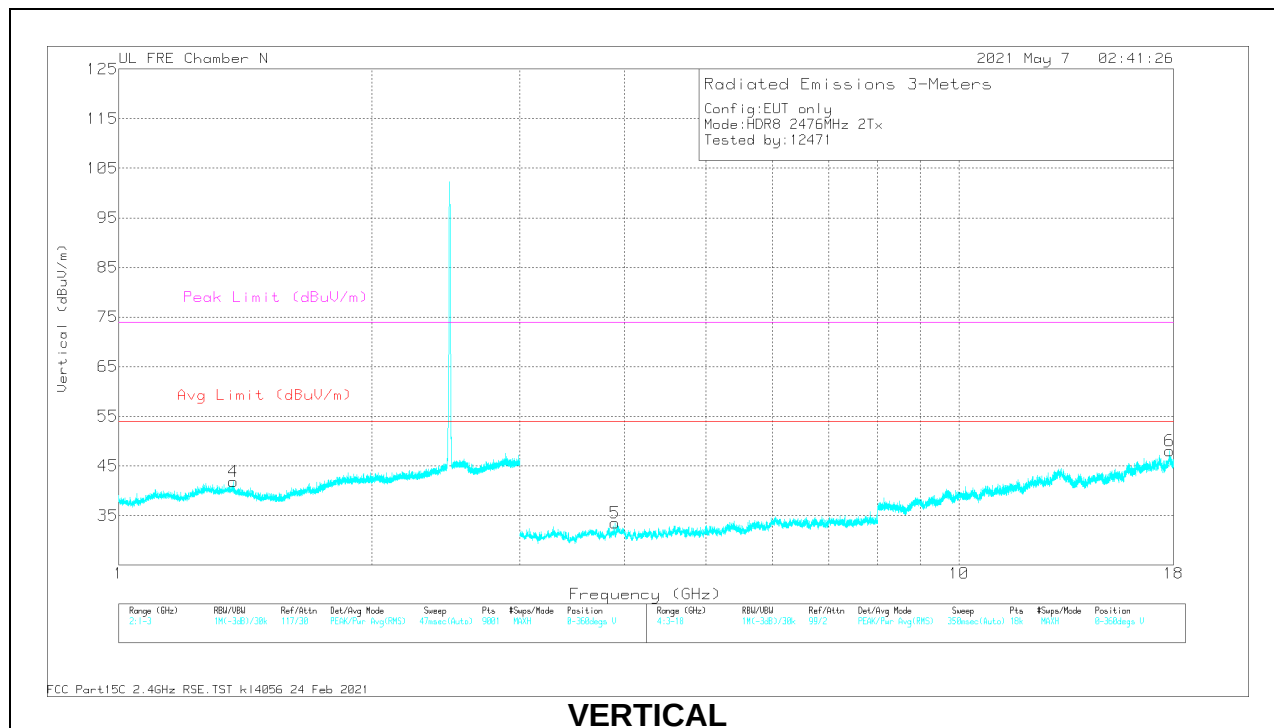
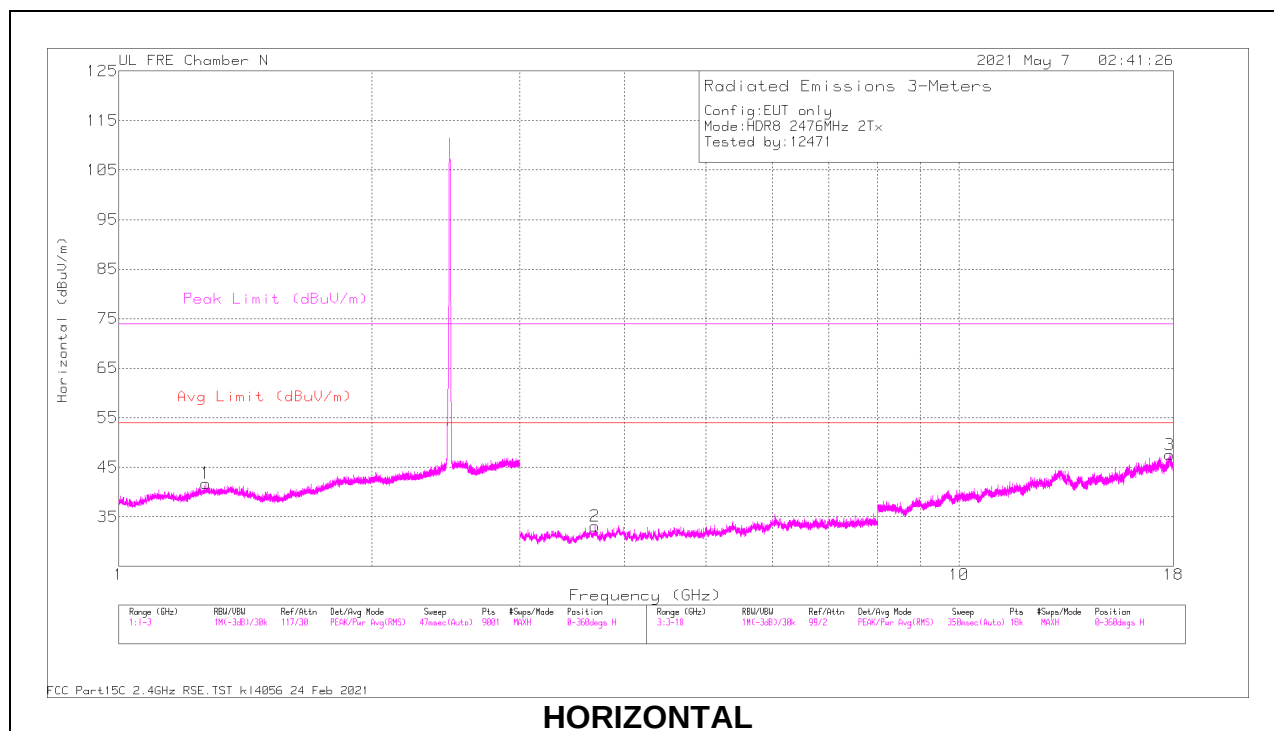
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021 3831 (dB/m)	Amp/Cbl /Filt/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 11.13026	46.24	PK2	37.9	-34	50.14	-	-	74	-23.86	12	358	V
	* 11.12825	34.85	MAv1	38	-34	38.85	54	-15.15	-	-	12	358	V
6	* 16.13784	47.49	PK2	40.6	-33.3	54.79	-	-	74	-19.21	239	203	V
	* 16.13533	35.8	MAv1	40.7	-33.2	43.3	54	-10.7	-	-	239	203	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL RESULTS



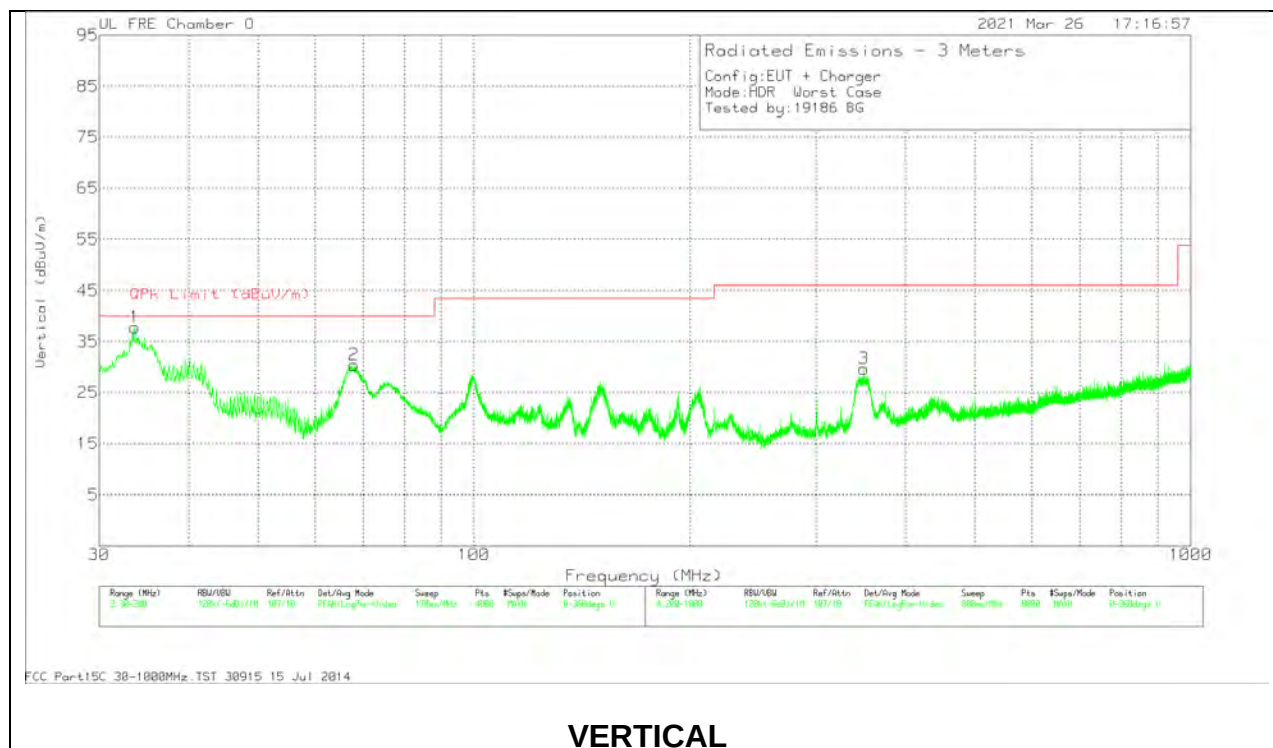
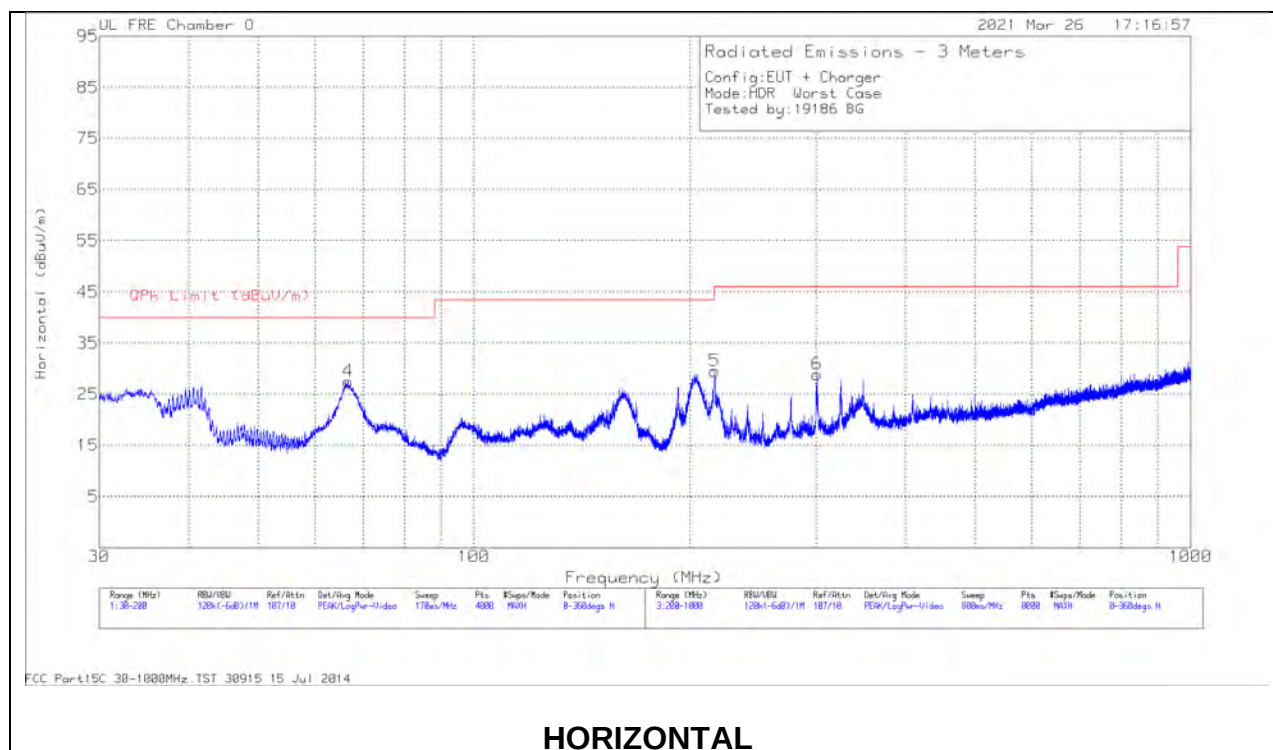
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213971 (dB/m)	Amp/Cbl/Ftr/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	* 1.27073	59.03	PK2	29.1	-37.4	50.73	-	-	74	-23.27	355	201	H
	* 1.2691	47.28	MAv1	29.1	-37.4	38.98	54	-15.02	-	-	355	201	H
2	* 3.68518	53.69	PK2	33.5	-43.1	44.09	-	-	74	-29.91	355	201	H
	* 3.68776	42	MAv1	33.5	-43.1	32.4	54	-21.6	-	-	355	201	H
3	* 17.81858	47.49	PK2	41.5	-32.8	56.19	-	-	74	-17.81	360	201	H
	* 17.81607	35.83	MAv1	41.5	-32.8	44.53	54	-9.47	-	-	360	201	H
4	* 1.36673	58.42	PK2	29.3	-37.1	50.62	-	-	74	-23.38	360	201	V
	* 1.36718	46.54	MAv1	29.3	-37.1	38.74	54	-15.26	-	-	360	201	V
5	* 3.89723	53.59	PK2	33.6	-43.4	43.79	-	-	74	-30.21	355	201	V
	* 3.89805	42.07	MAv1	33.6	-43.4	32.27	54	-21.73	-	-	355	201	V
6	* 17.81556	47.31	PK2	41.5	-32.8	56.01	-	-	74	-17.99	360	201	V
	* 17.81468	35.85	MAv1	41.5	-32.8	44.55	54	-9.45	-	-	360	201	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.3. WORST CASE BELOW 1 GHz**SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)**

Below 1GHz Data**Range 1: Horizontal 30 - 200MHz**

Frequency (MHz)	Meter Reading (dBuV)	Det	AF 202329 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
66.862	42.23	Qp	13.8	-32.2	23.83	40	-16.17	268	256	H

Range 2: Vertical 30 - 200MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	AF 202329 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
33.8328	39.92	Qp	24.4	-32.5	31.82	40	-8.18	260	107	V
67.8891	45.98	Qp	13.9	-32.2	27.68	40	-12.32	348	118	V

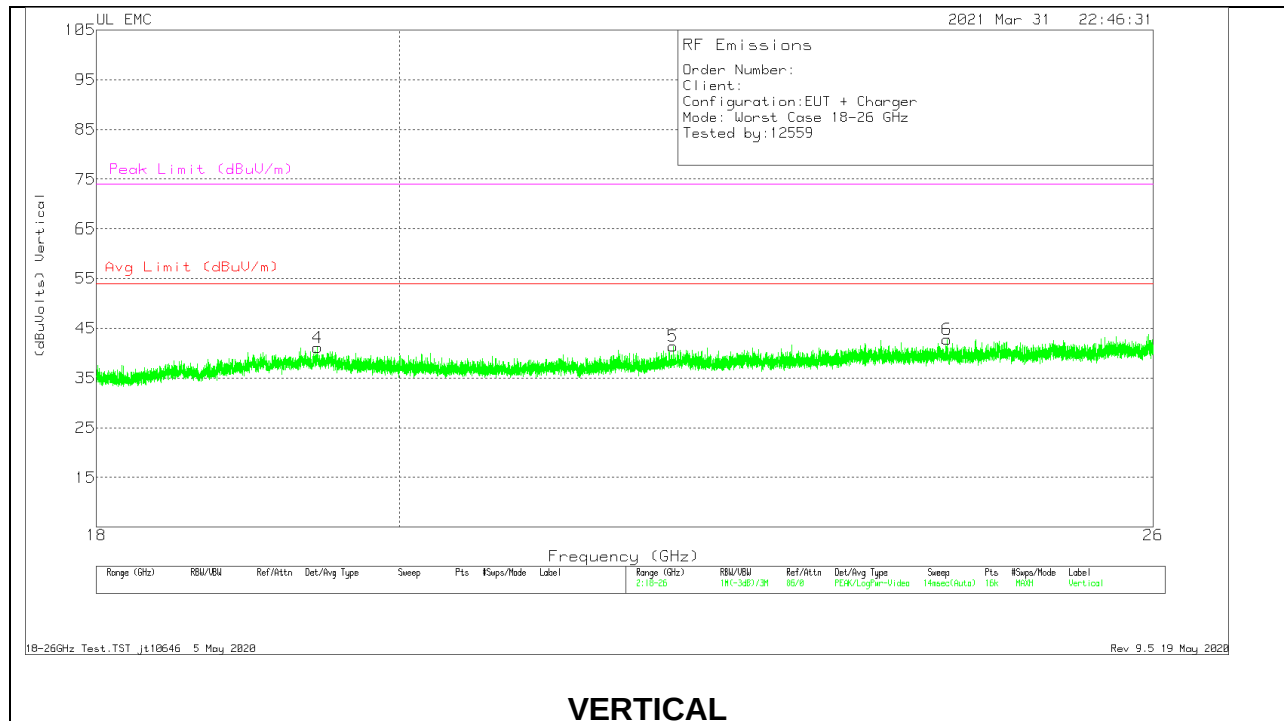
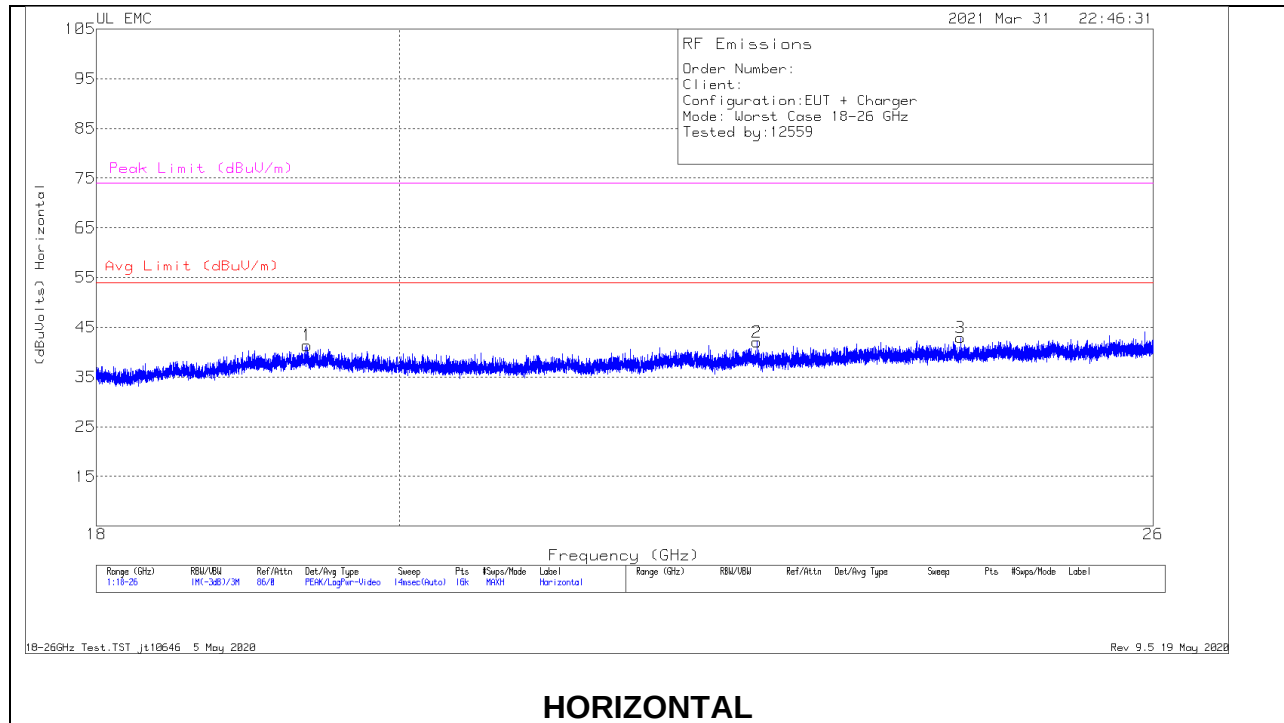
Range 3: Horizontal 200 - 1000MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	AF 202329 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
216.7245	43.64	Qp	16.4	-31.4	28.64	46.02	-17.38	40	124	H
301.0481	38.98	Qp	19.2	-31	27.18	46.02	-18.84	88	121	H

Range 4: Vertical 200 - 1000MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	AF 202329 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
350.0219	38.82	Qp	20.1	-30.9	28.02	46.02	-18	249	233	V

Qp - Quasi-Peak detector

10.4. WORST CASE 18-26 GHz**SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)**

18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T125 AF (dB/m)	Ampl/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.36742	37.05	Pk	32.6	-18.8	-9.5	41.35	54	-12.65	74	-32.65
2	22.65171	38.13	Pk	33.4	-20	-9.5	42.03	54	-11.97	74	-31.97
3	24.31361	38.28	Pk	33.8	-19.7	-9.5	42.88	54	-11.12	74	-31.12
4	19.43891	36.83	Pk	32.7	-18.9	-9.5	41.13	54	-12.87	74	-32.87
5	21.99975	37.77	Pk	33.4	-20.3	-9.5	41.37	54	-12.63	74	-32.63
6	24.19912	37.86	Pk	33.8	-19.4	-9.5	42.76	54	-11.24	74	-31.24

Pk - Peak detector

Note: measurement distance was 1m.

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

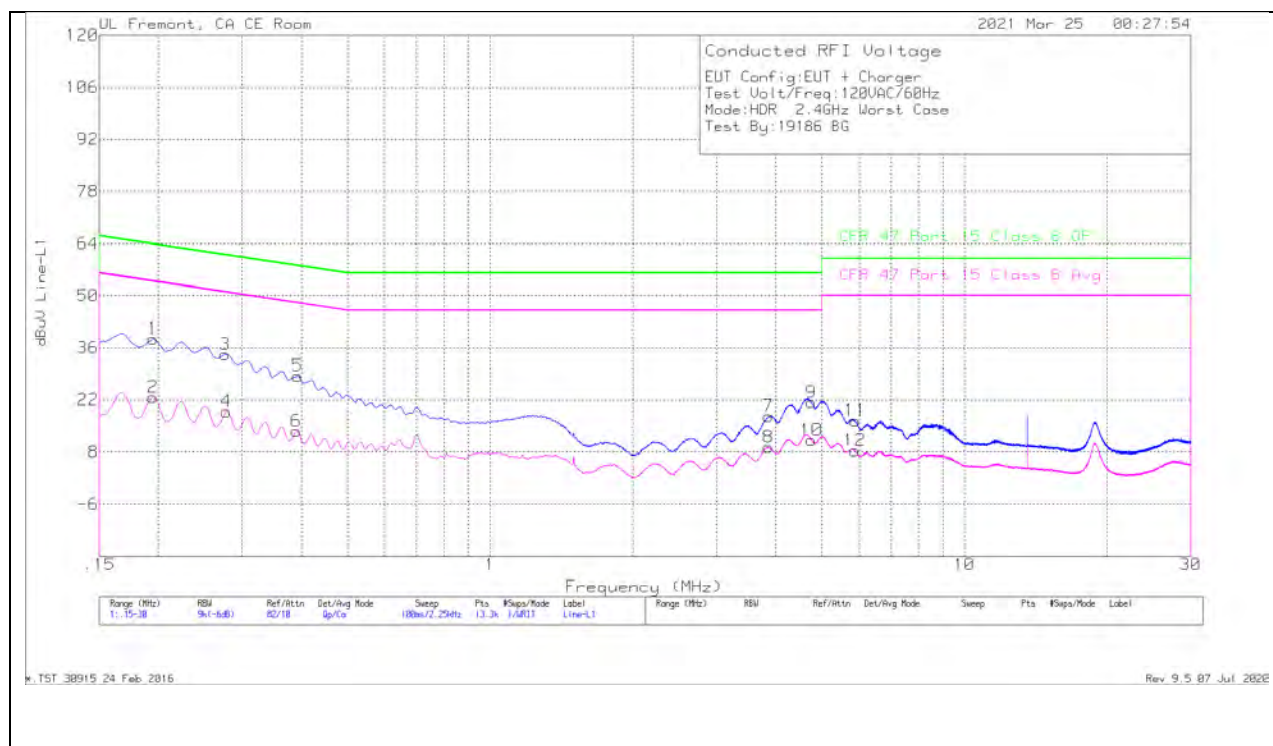
^{*} Decreases with the logarithm of the frequency.**TEST PROCEDURE**

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

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	.195	28.31	Qp	0	0	10.1	38.41	63.82	-25.41	-	-
2	.195	12.65	Ca	0	0	10.1	22.75	-	-	53.82	-31.07
3	.276	24.07	Qp	0	0	10.1	34.17	60.94	-26.77	-	-
4	.27825	8.67	Ca	0	0	10.1	18.77	-	-	50.87	-32.1
5	.393	18.41	Qp	0	0	10.1	28.51	58	-29.49	-	-
6	.39075	3.53	Ca	0	0	10.1	13.63	-	-	48.05	-34.42
7	3.8625	7.29	Qp	0	.1	10.2	17.59	56	-38.41	-	-
8	3.86138	-1.09	Ca	0	.1	10.2	9.21	-	-	46	-36.79
9	4.7625	11.02	Qp	0	.1	10.2	21.32	56	-34.68	-	-
10	4.7625	.88	Ca	0	.1	10.2	11.18	-	-	46	-34.82
11	5.892	6.15	Qp	0	.1	10.2	16.45	60	-43.55	-	-
12	5.87175	-1.89	Ca	0	.1	10.2	8.41	-	-	50	-41.59

Qp - Quasi-Peak detector

Ca - CISPR average detection

UL Fremont, CA CE Room

2021 Mar 25 00:27:54

Conducted RFI Voltage

EUT Config: EUT + Charger

Test Volt/Freq: 120VAC/60Hz

Mode: HDR 2.4GHz Worst Case

Test By: 19186 BG

dBu Line-L2

Frequency (MHz)

CFR 47 Part 15 Class B OF

CFR 47 Part 15 Class B Avg

Test By: 19186 BG

Range (MHz)	RBW	Ref/Att'n	Det/Avg Mode	Sweep	Pls	#Saps/Mode	Label
0.15-30	9K	92/10	pk-A	100%	13	100	Line-L2

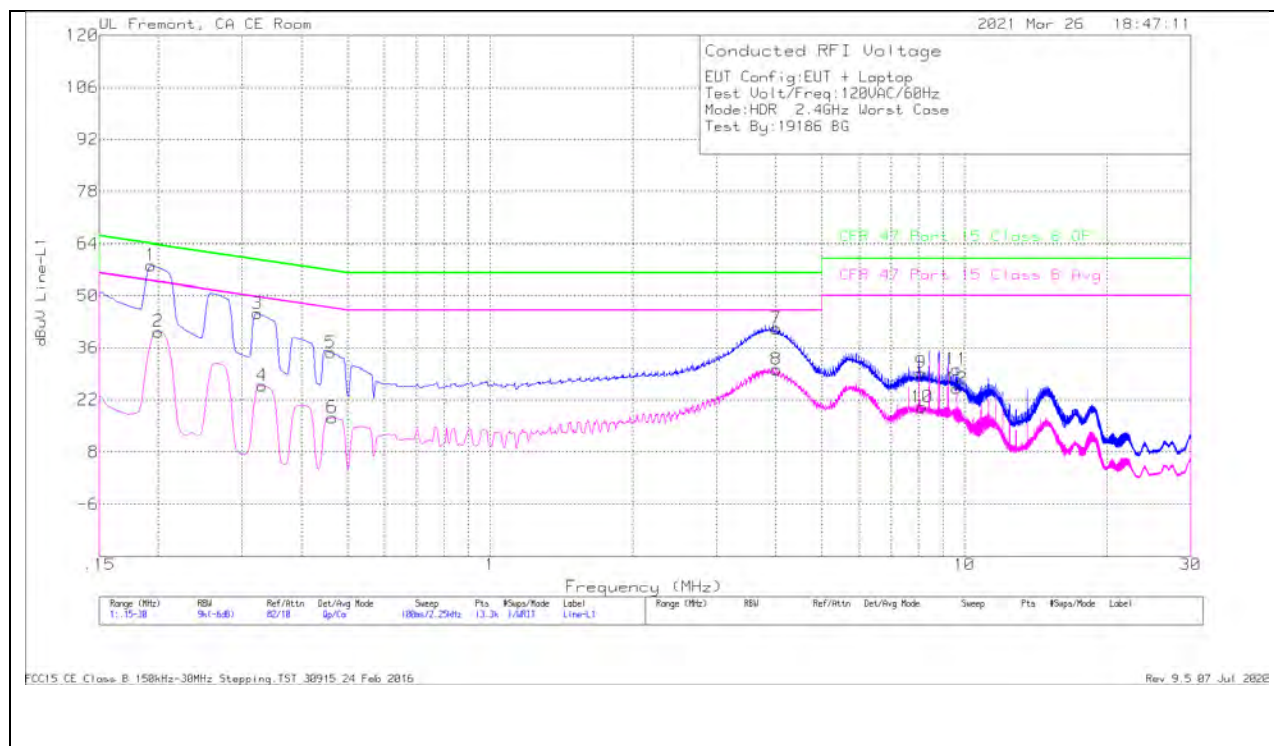
Range (MHz)	RBW	Ref/Att'n	Det/Avg Mode	Sweep	Pls	#Saps/Mode	Label
0.15-30	9K	92/10	pk-A	100%	13	100	Line-L2

UL TST 38915 24 Feb 2016

Rev 9.5 07 Jul 2020

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	.168	28.28	Qp	0	0	10.1	38.38	65.06	-26.68	-	-
14	.168	13.14	Ca	0	0	10.1	23.24	-	-	55.06	-31.82
15	.222	25.46	Qp	0	0	10.1	35.56	62.74	-27.18	-	-
16	.222	10.79	Ca	0	0	10.1	20.89	-	-	52.74	-31.85
17	.3345	19.98	Qp	0	0	10.1	30.08	59.34	-29.26	-	-
18	.3345	5.77	Ca	0	0	10.1	15.87	-	-	49.34	-33.47
19	.474	13.09	Qp	0	0	10.1	23.19	56.44	-33.25	-	-
20	.5055	.98	Ca	0	0	10.1	11.08	-	-	46	-34.92
21	4.25175	10.89	Qp	0	.1	10.2	21.19	56	-34.81	-	-
22	4.24613	2.16	Ca	0	.1	10.2	12.46	-	-	46	-33.54
23	5.40375	11.12	Qp	0	.1	10.2	21.42	60	-38.58	-	-
24	5.406	2.27	Ca	0	.1	10.2	12.57	-	-	50	-37.43

Ca - CISPR average detection

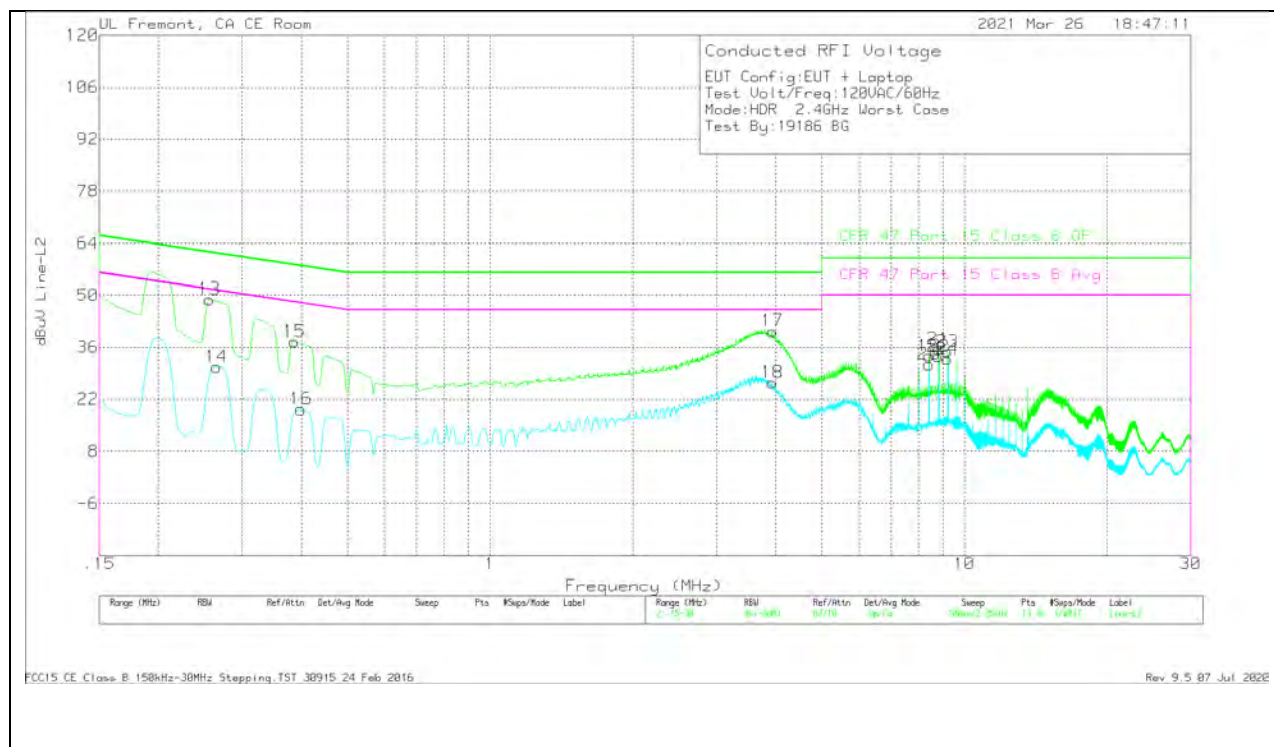
11.2. AC Power Line with Laptop**LINE 1 RESULTS****Range 1: Line-L1 .15 - 30MHz**

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	48.09	Qp	0	0	10.1	58.19	63.92	-5.73	-	-
2	.1995	30.29	Ca	0	0	10.1	40.39	-	-	53.63	-13.24
3	.32325	35.1	Qp	0	0	10.1	45.2	59.62	-14.42	-	-
4	.33	15.69	Ca	0	0	10.1	25.79	-	-	49.45	-23.66
5	.46163	24.58	Qp	0	0	10.1	34.68	56.66	-21.98	-	-
6	.465	7.12	Ca	0	0	10.1	17.22	-	-	46.6	-29.38
7	4.00875	30.87	Qp	0	.1	10.2	41.17	56	-14.83	-	-
8	4.00875	19.83	Ca	0	.1	10.2	30.13	-	-	46	-15.87
9	8.10375	18.84	Qp	0	.2	10.2	29.24	60	-30.76	-	-
10	8.14425	9.65	Ca	0	.2	10.2	20.05	-	-	50	-29.95
11	9.6315	19.79	Qp	0	.2	10.2	30.19	60	-29.81	-	-
12	9.6315	14.8	Ca	0	.2	10.2	25.2	-	-	50	-24.8

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBμV)	Det	PRE018644 6 L2	LC Cables C2&C3 dB	Limiter (dB)	Corrected Reading dBμV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
13	.25575	38.84	Qp	0	0	10.1	48.94	61.57	-12.63	-	-
14	.26475	20.67	Ca	0	0	10.1	30.77	-	-	51.28	-20.51
15	.38625	27.45	Qp	0	0	10.1	37.55	58.14	-20.59	-	-
16	.39975	9.19	Ca	0	0	10.1	19.29	-	-	47.86	-28.57
17	3.93225	30.09	Qp	0	.1	10.2	40.39	56	-15.61	-	-
18	3.9345	16.17	Ca	0	.1	10.2	26.47	-	-	46	-19.53
19	8.421	23.23	Qp	0	.2	10.2	33.63	60	-26.37	-	-
20	8.421	20.94	Ca	0	.2	10.2	31.34	-	-	50	-18.66
21	8.8215	25.25	Qp	0	.2	10.2	35.65	60	-24.35	-	-
22	8.8215	23.05	Ca	0	.2	10.2	33.45	-	-	50	-16.55
23	9.222	24.45	Qp	0	.2	10.2	34.85	60	-25.15	-	-
24	9.222	22.35	Ca	0	.2	10.2	32.75	-	-	50	-17.25

Qp - Quasi-Peak detector

Ca - CISPR average detection

12. SETUP PHOTOS

Please refer to 13571607-EP1V1 for setup photos

END OF TEST REPORT