TEST REPORT

Report Number: 14523772-E7V2

Applicant	:	APPLE, INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3105 (Full Test Model) A3106, A3108 (Variant Model)
Brand	:	APPLE
FCC ID	:	BCG-E8440A (Full Test Model) BCG-E8441A, BCG-E8442A (Variant Model)
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
August 29, 2023

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
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ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.		Issue Date		Revisions		Revised By
V1		8/28/2023		Initial Issue		Chin Pang
V2		8/29/2023		Addressed TCB Comments in sections 6.5, 6.6, 9.2, 9.2 and 9.4.		Francisco Guarnero

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: SMARTPHONE

MODELs: A3105 (Full Test model)
A3106, A3108 (Variant Model)

BRAND: APPLE

SERIAL NUMBER: JKX4322779 (CONDUCTED)
CW34G74L6C, DWP17WGX91 (RADIATED)

SAMPLE RECEIPT DATE: MARCH 23, 2023

DATE TESTED: April 10, 2023 – August 29, 2023

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Complies

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

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

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

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2. TEST RESULT SUMMARY

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

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

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

FCC Clause	Requirement	Result	Comment
See Comment	Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	26dB BW/99% OBW	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	6 dB BW	Complies	None.
15.407 (a) (1 & 3)	Output Power	Complies	None.
15.407 (a) (1 & 3)	PSD	Complies	None.
15.209, 15.205, 15.407 (b)	Radiated Emissions	Complies	None.
15.207	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 15E
- FCC KDB 662911 D01 v02r01
- FCC KDB 789033 D02 v02r01
- FCC KDB 644545 D03 v01
- ANSI C63.10-2013
- KDB 414788 D01 Radiated Test Site v01r01

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4. FACILITIES AND ACCREDITATION

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

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

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

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

5.2. DECISION RULES

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

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5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U_{LAB}
Conducted Antenna Port Emission Measurement	1.94 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	0.450 dB (Peak), 1.3 dB (Ave)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, UMTS, LTE, 5GNR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Ultra-Wideband (UWB), GPS, NFC, NB UNII, 802.15.4, 802.15.4ab-NB and MSS technologies. The rechargeable battery is not user accessible.

The Model and FCC ID covered by this report includes:

Full Test Model: A3105, FCC ID: BCG-E8440A

Variant Model: A3106, FCC ID: BCG-E8441A
A3108, FCC ID: BCG-E8442A

6.2. MAXIMUM OUTPUT POWER

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

UNII-1 (FCC)

Frequency Range (MHz)	Mode	Antenna	Configuration	Output Power (dBm)	Output Power (mW)
5162 - 5245 (UNII-1)	BDR	ANT 6	High Power	9.93	9.84
			Low Power	7.48	5.60
		ANT 5	High Power	9.98	9.95
			Low Power	4.41	2.76
		BF, ANT 6 + ANT 5	High Power	9.98	9.95
			Low Power	8.84	7.66
	HDR 4	ANT 6	High Power	11.87	15.38
			Low Power	0.95	1.24
		ANT 5	High Power	11.94	15.63
			Low Power	-2.08	0.62
		BF, ANT 6 + ANT 5	High Power	11.96	15.70
			Low Power	2.7	1.86
	HDR 8	ANT 6	High Power	13.87	24.38
			Low Power	0.88	1.22
		ANT 5	High Power	13.85	24.27
			Low Power	-2.06	0.62
		BF, ANT 6 + ANT 5	High Power	13.89	24.49
			Low Power	2.73	1.87

UNII-3 (FCC+IC)

Frequency Range (MHz)	Mode	Antenna	Configuration	Output Power (dBm)	Output Power (mW)
5733 - 5844 (UNII-3)	BDR	ANT 6	High Power	19.95	98.86
			Low Power	7.90	6.17
		ANT 5	High Power	19.47	88.51
			Low Power	5.39	3.46
		BF, ANT 6 + ANT 5	High Power	22.70	186.21
			Low Power	9.90	9.77
	HDR 4	ANT 6	High Power	14.43	27.73
			Low Power	1.48	1.41
		ANT 5	High Power	14.44	27.80
			Low Power	-1.17	0.76
		BF, ANT 6 + ANT 5	High Power	17.46	55.72
			Low Power	3.40	2.19
	HDR 8	ANT 6	High Power	14.45	27.86
			Low Power	1.41	1.38
		ANT 5	High Power	14.47	27.99
			Low Power	-1.07	0.78
		BF, ANT 6 + ANT 5	High Power	17.46	55.72
			Low Power	3.42	2.20

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6.3. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

The antenna(s) gain and type, as provided by the manufacturer' are as follows:
Cable loss is 2.7dB.

Frequency Range (GHz)	ANT 6 (dBi)	ANT 5 (dBi)
5162-5245	-3.2	-4.5
5733-5844	-2.0	-4.0

The cables loss of 2.7dB were used for RF antenna port tests that had been offset to the test equipment during testing.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 21.1.306.2344

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6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X, Y and Z on ANT 6, ANT 5 and 2TX, it was determined that Y (Landscape) was the worst-case orientation for both ANT 6 and ANT 5. And Z (Portrait) orientation for 2TX.

2TX Beamforming modes were used to perform on radiated harmonic spurious final test to cover all SISO modes. Max power was tuned to maximum based on among all the modes. For testing purposes, radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-40GHz, and power line conducted emissions were performed with the EUT set at the 2TX Beamforming mode with power setting equal or higher than conducted SISO modes as worst-case scenario.

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

For simultaneous transmission of multiple channels in the 2.4GHz BT and NB UNII 5GHz bands, no noticeable emission was found.

NOTE: For radiated data, ANT0=ANT6, ANT1=ANT 5.

6.6 DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		**Manufacturer**	**Model**	**Serial Number**		**FCC ID/ DoC**
Laptop		Apple	Macbook Pro	C02VD7SAHV22		BCGA1708
Laptop AC/DC adapter		Liteon Technology	A1424	NSW25679		DoC
EUT AC/DC adapter		Apple	A1720	C3D8417A7R93KVPA8		DoC
Conducted Switch Box		UL	n/a	208281		N/A
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz		Pasternack Enterprises	PE7024-10	236358		N/A
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	SMA	1	SMA	Shielded	0.75	To spectrum Analyzer
2	Antenna	2	SMA	Un-shielded	0.2	To Conducted Switch Box
3	USB-C	1	USB-C	Shielded	1.0	N/A
4	AC	1	AC	Un-shielded	2	N/A
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	1	AC	Un-shielded	2	N/A
2	USB	1	USB	Shielded	1	N/A

TEST SETUP

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

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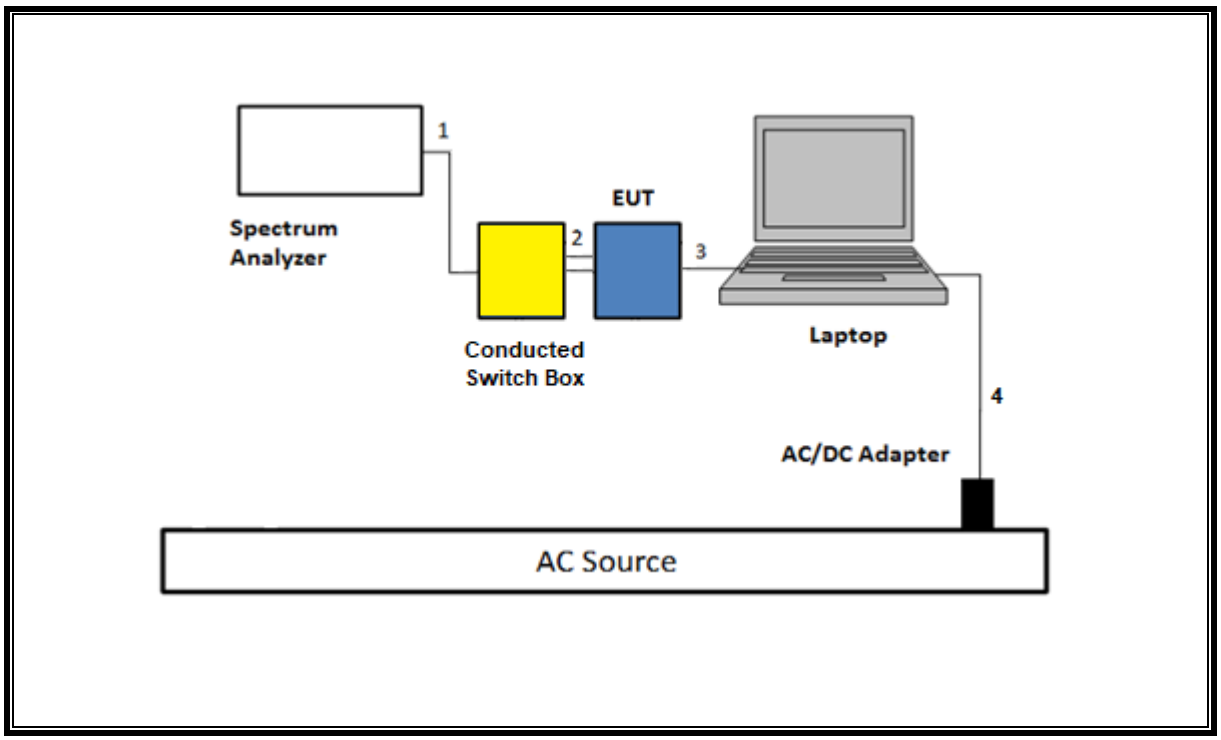
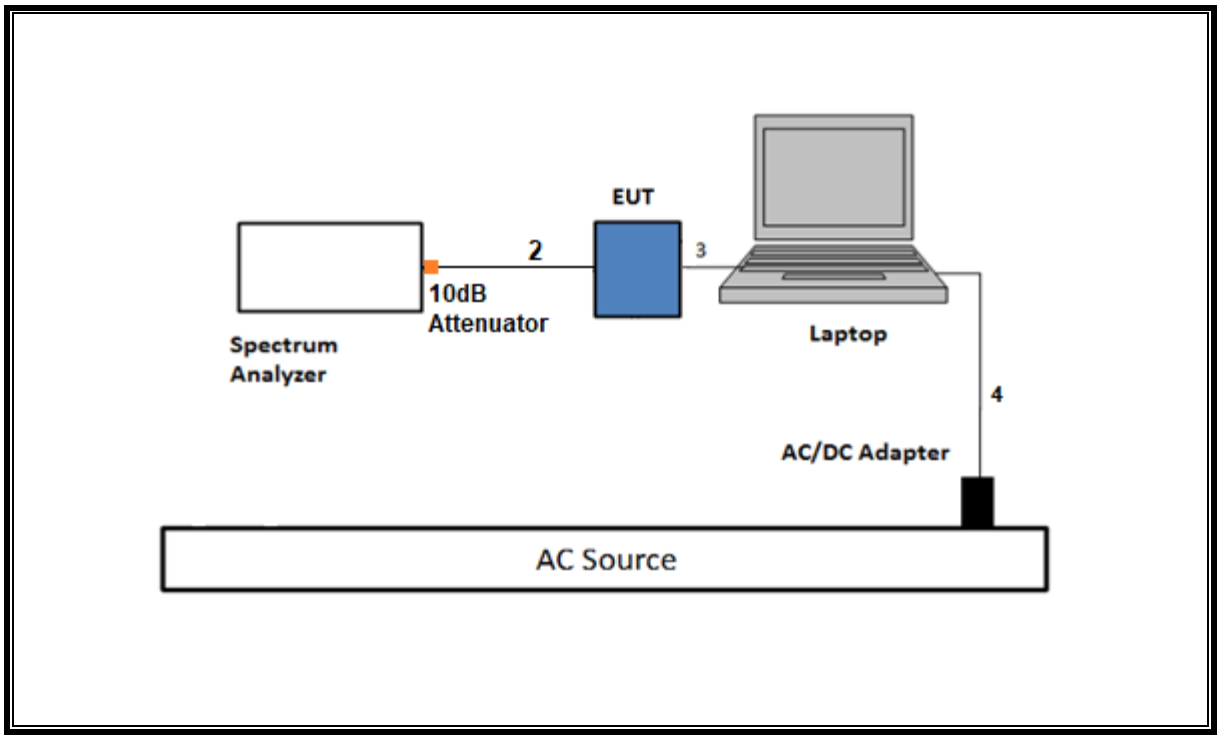
SETUP DIAGRAM FOR CONDUCTED TESTS





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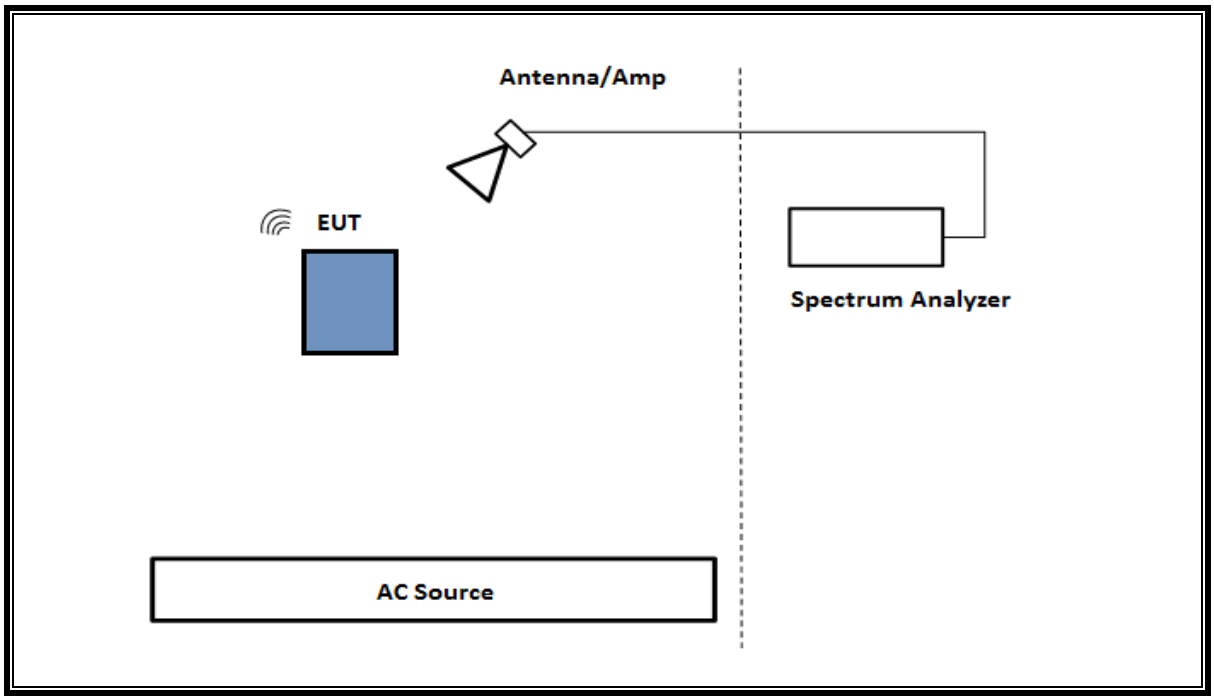
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



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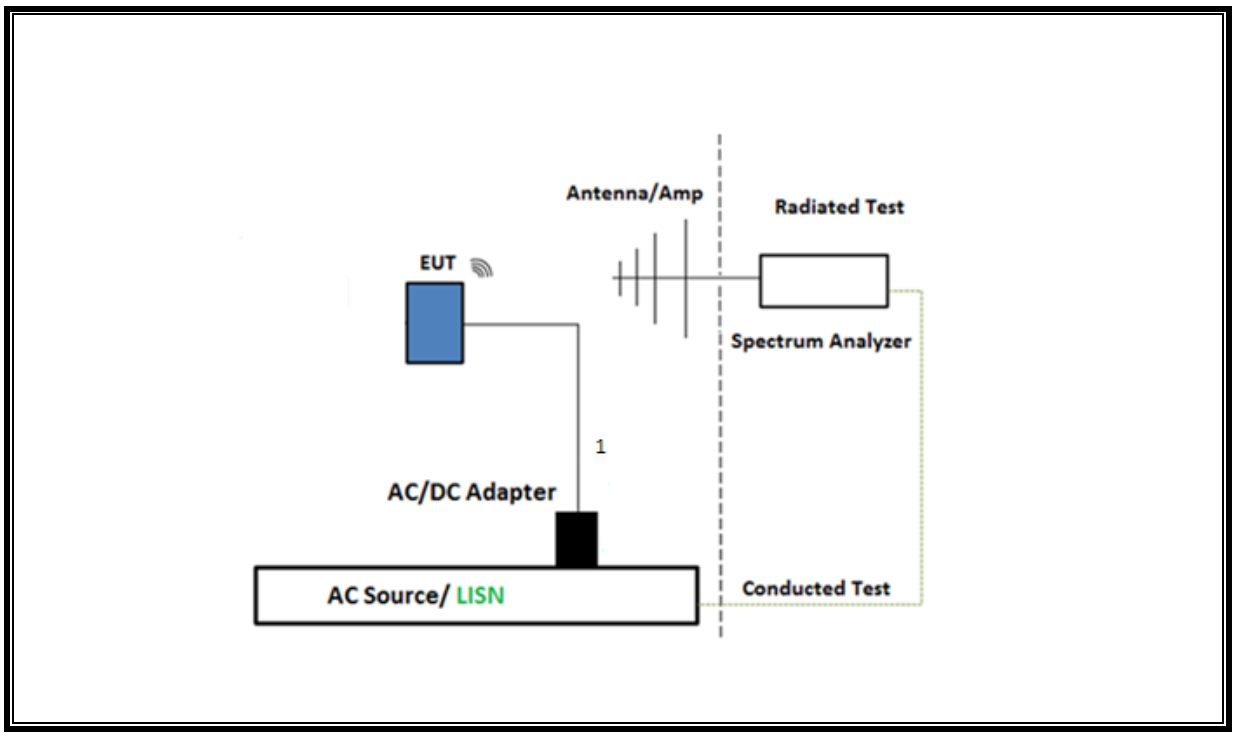
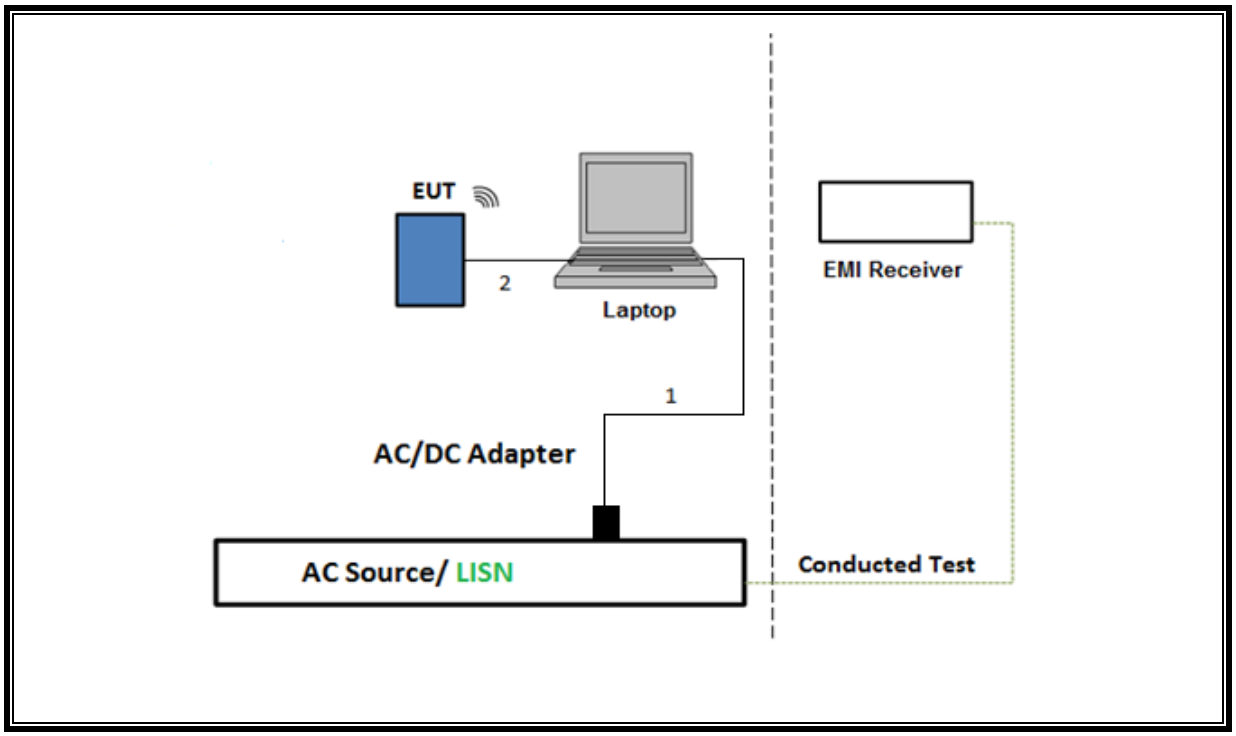
SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



7. TEST AND MEASUREMENT EQUIPMENT

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

Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
*Antenna, Horn 1-18GHz	ETS Lindgren	3117	80404	08/08/2023	08/08/2022
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	216812	09/17/2023	09/17/2022
EMI Receiver	Rohde & Schwarz	ESW44	235670	04/30/2024	04/30/2023
Antenna, Horn 1-18GHz	ETS Lindgren	3117	84796	09/19/2023	09/20/2022
*RF Filter Box, 1-18GHz	UL-FR1	NA	171389	05/13/2023	05/13/2022
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201497	02/29/2024	02/29/2023
*RF Filter Box, 8 ports, 1-18GHz	UL-FR1	SAC 8 Port rf Bo 1	197920	04/19/2023	04/19/2022
Antenna, Horn 1-18GHz	ETS Lindgren	3117	206807	02/28/2024	02/28/2023
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp	JB3	80714	10/06/2023	10/06/2022
Antenna, Horn 1-18GHz	ETS Lindgren	3117	226672	01/09/2024	01/09/2023
RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	226781	04/30/2024	04/30/2023
Antenna, Horn 1-18GHz	ETS Lindgren	3117	226673	01/09/2024	01/09/2023
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231874	04/19/2024	04/19/2023
EMI Test Receiver	Rohde & Schwarz	ESW44	201499	02/29/2024	02/29/2023
RF Filter Box 1-18GHz	UL-FR1	SAC 12 port rf box	217521	10/09/2023	10/09/2022
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	175953	02/08/2024	02/08/2023
*Antenna Horn, 26.5 to 40GHz	ARA	MWH-2640/B	172367	06/01/2023	06/01/2022
Power Meter, P-series single channel	Keysight	N1912A	90630	01/31/2024	01/31/2023
Power sensor	ETS-Lindgren	7002-006	86948	02/29/2024	02/29/2023
*Antenna, Passive Loop 100KHz to 30MHz	ETS-Lindgren	EM-6872	170015	07/28/2023	07/28/2022
*Antenna, Passive Loop 30Hz to 1MHz	Electro-Metrics	EM-6871	170013	07/28/2023	07/28/2022
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Keysight Technologies Inc	E4440A	81311	02/29/2024	02/29/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	02/28/2024	02/28/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85214	02/28/2024	02/28/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	87738	02/28/2024	02/28/2023
*Conducted Switch Box	N/A	CSB	221008	06/21/2023	06/21/2022
Conducted Switch Box	N/A	CSB	208281	04/30/2024	04/30/2023
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236358	Verified/Characterized before use	
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236358	Verified/Characterized before use	
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90756	01/31/2024	01/31/2023
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90389	01/31/2024	01/31/2023

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Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Antenna, Horn 1-18GHz	ETS Lindgren	3117	230300	01/12/2024	01/12/2023
RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	226780	03/29/2024	03/29/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169935	02/29/2024	02/29/2023
Antenna, Horn 1-18GHz	ETS Lindgren	3117	200897	01/31/2024	01/31/2023
RF Filter Box, 1-18GHz	UL-FR1	NA	173528	12/23/2023	12/23/2022
AMP26G40-65	AMPLICAL	AMP26G40-65	172346	02/29/2024	02/29/2023
*Antenna Horn, 18 to 26.5GHz	ARA	MWH-1826/B	172353	06/01/2023	06/01/2022
RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	171583	02/29/2024	02/29/2023
*Antenna, Horn 26.5 to 40GHz	ARA	MWH-2640/B	81105	07/11/2023	07/11/2022

AC Line Conducted					
Description	**Manufacturer**	**Model**	**ID Num**	**Cal Due**	**Last Cal**
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	93091	02/29/2024	02/29/2023
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175764	01/31/2024	01/31/2023
**Transient Limiter	TE	TBFL1	207996	08/15/2023	07/15/2023
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023		
Conducted Software	UL	UL EMC	2020.8.16		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023		

*Testing was completed before equipment calibration date
**Cal Due date should be 07/15/2023 and according to internal quality system, it was extended to 08/15/2023.

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8. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

6 dB Emission BW: KDB 789033 D02 v02r01, Section C.2

26 dB Emission BW: KDB 789033 D02 v02r01, Section C.1

99% Occupied BW: KDB 789033 D02 v02r01, Section D.

Conducted Output Power: KDB 789033 D02 v02r01

Power Spectral Density: KDB 789033 D02 v02r01, Section F

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, and G.5.

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

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

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

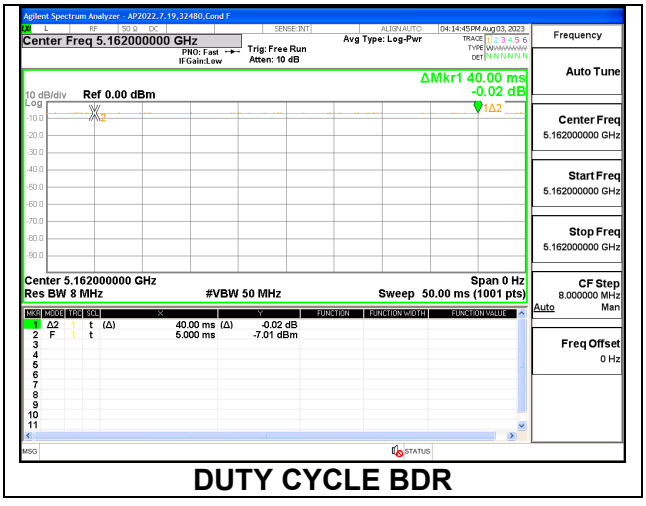
ANSI C63.10, Section 11.6: Zero-Span Spectrum Analyzer Method.

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/T Minimum VBW (kHz)
BDR	0.04	0.04	1.000	100.0%	0.00	0.010
HDR4	0.04	0.04	1.000	100.0%	0.00	0.010
HDR8	0.04	0.04	1.000	100.0%	0.00	0.010

Note: There are the same DCCF on 1TX and 2TX.

DUTY CYCLE PLOTS



DUTY CYCLE BDR

9.2. 26 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to ≥ 1% of the 20 dB bandwidth. The VBW is set to ≥ 3xRBW. The sweep time is coupled.

RESULTS

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

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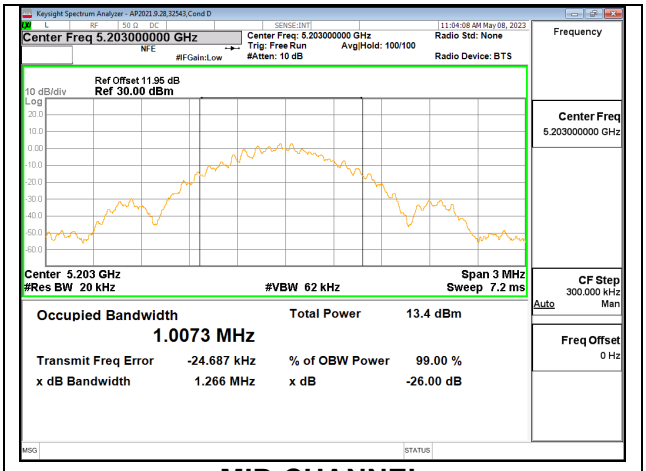
9.2.1. HIGH POWER BDR, UNII-1

ANT 6

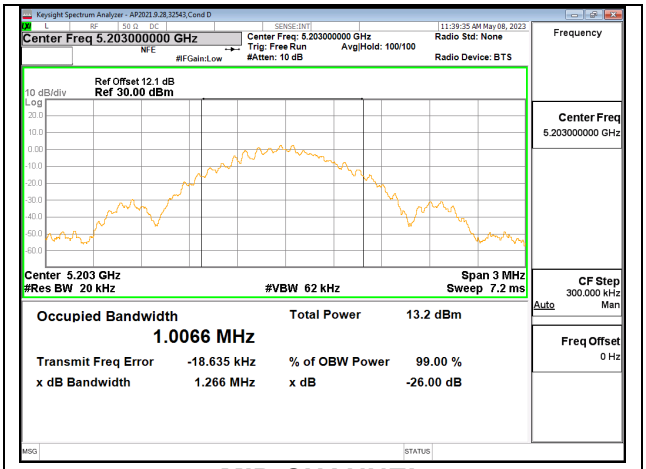
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	1.2680	1.0083
Mid	5203	1.2660	1.0073
High	5245	1.2690	1.0047



MID CHANNEL

ANT 5

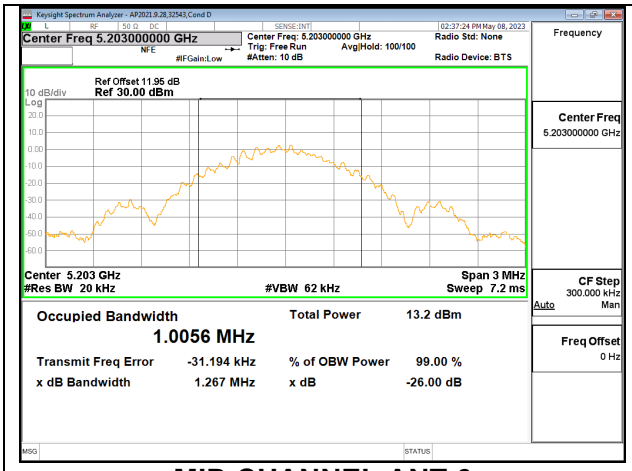
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	1.2670	1.0041
Mid	5203	1.2660	1.0066
High	5245	1.2700	1.0079



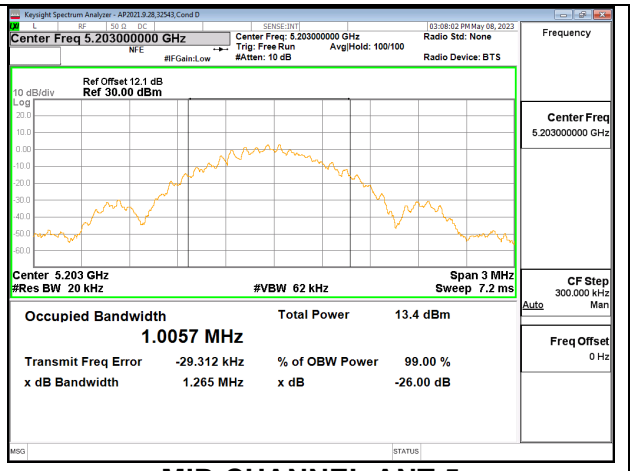
MID CHANNEL

9.2.2. HIGH POWER BDR TXBF UNII-1

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5162	1.2670	1.2680	1.0057	1.0057
Mid	5203	1.2670	1.2650	1.0056	1.0057
High	5245	1.2670	1.2700	1.0058	1.0082



MID CHANNEL ANT 6

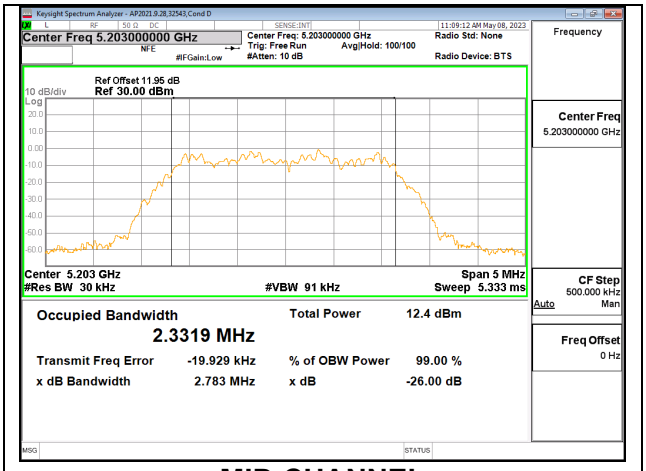


MID CHANNEL ANT 5

9.2.3. HIGH POWER HDR4, UNII-1

ANT 6

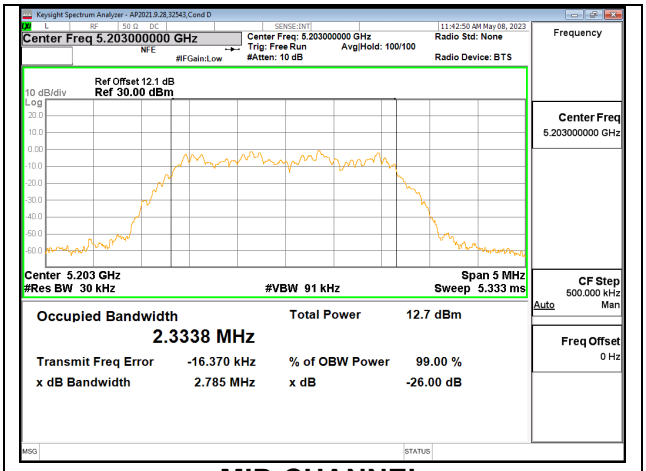
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	2.7810	2.3325
Mid	5203	2.7830	2.3319
High	5245	2.7840	2.3328



MID CHANNEL

ANT 5

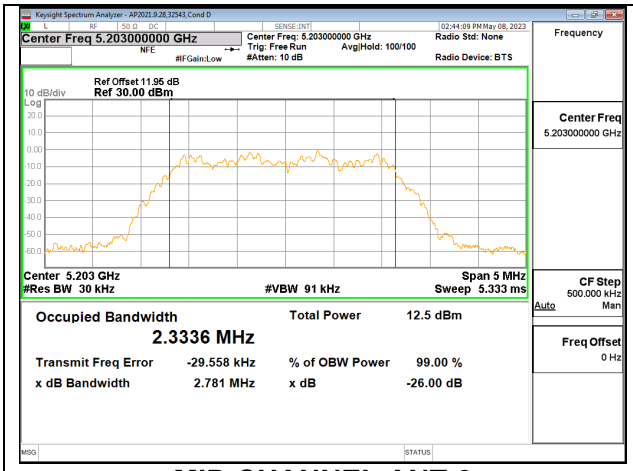
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	2.7850	2.3333
Mid	5203	2.7850	2.3338
High	5245	2.7840	2.3343



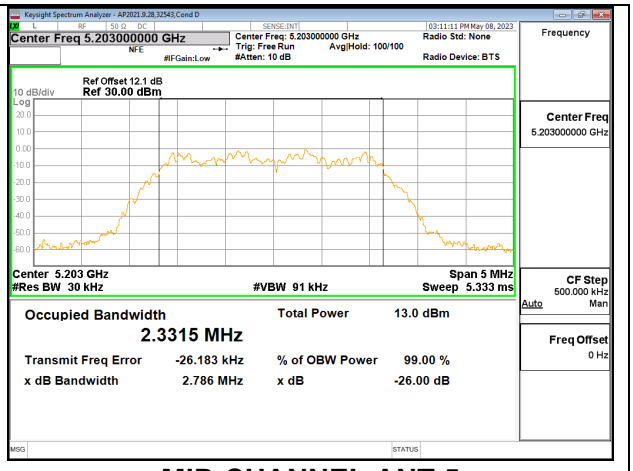
MID CHANNEL

9.2.4. HIGH POWER HDR4 TXBF UNII-1

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5162	2.7830	2.7830	2.3308	2.3347
Mid	5203	2.7810	2.7860	2.3336	2.3315
High	5245	2.7860	2.7840	2.3323	2.3317



MID CHANNEL ANT 6

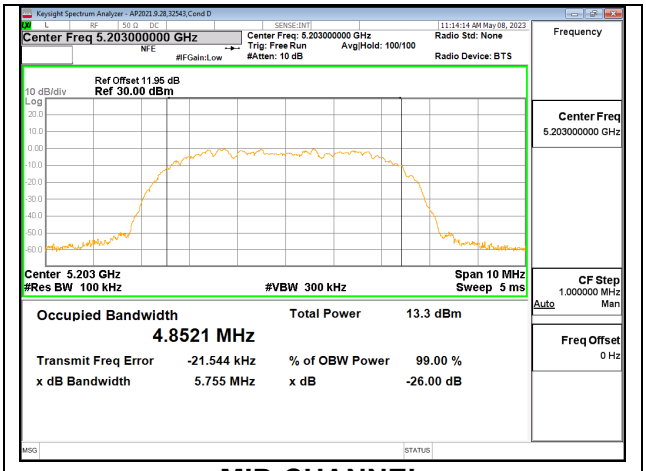


MID CHANNEL ANT 5

9.2.5. HIGH POWER HDR8, UNII-1

ANT 6

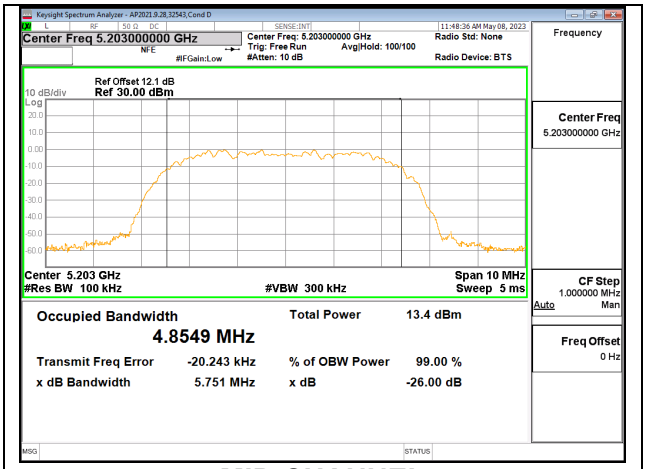
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	5.7490	4.8527
Mid	5203	5.7550	4.8521
High	5245	5.7490	4.8532



MID CHANNEL

ANT 5

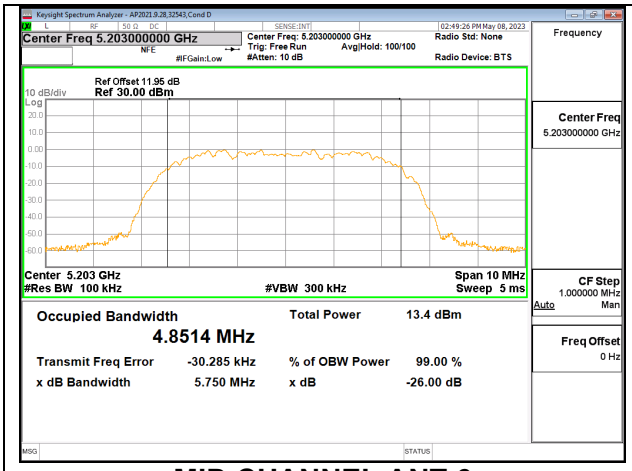
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5162	5.7520	4.8541
Mid	5203	5.7510	4.8549
High	5245	5.7520	4.8542



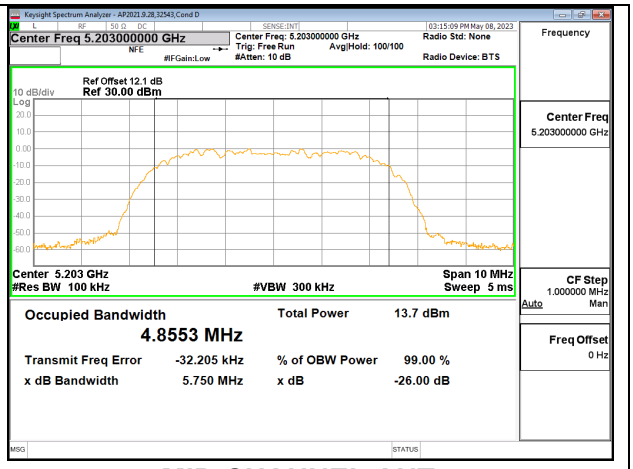
MID CHANNEL

9.2.6. HIGH POWER HDR8 TXBF UNII-1

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5162	5.7440	5.7450	4.8534	4.8545
Mid	5203	5.7500	5.7500	4.8514	4.8553
High	5245	5.7510	5.7500	4.8516	4.8563



MID CHANNEL ANT 6



MID CHANNEL ANT 5

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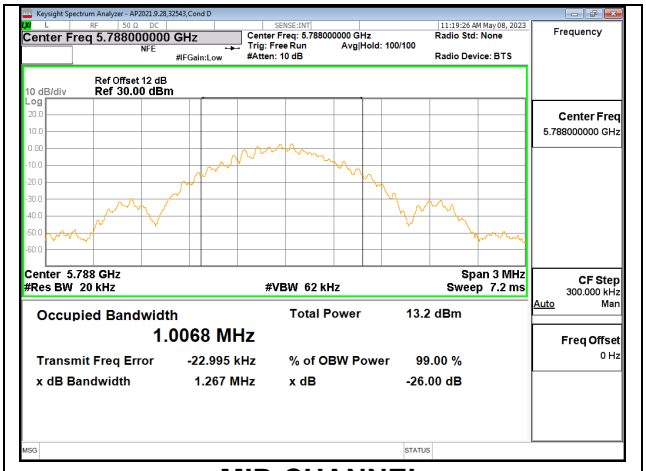
9.2.7. HIGH POWER BDR, UNII-3

ANT 6

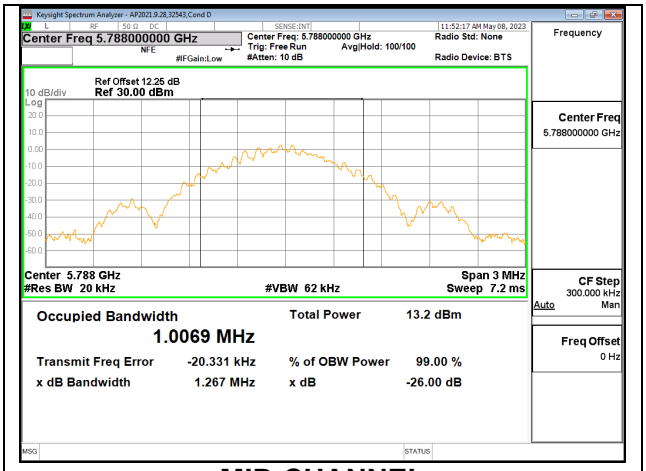
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	1.2690	1.0108
Mid	5788	1.2670	1.0068
High	5844	1.2670	1.0077



MID CHANNEL

ANT 5

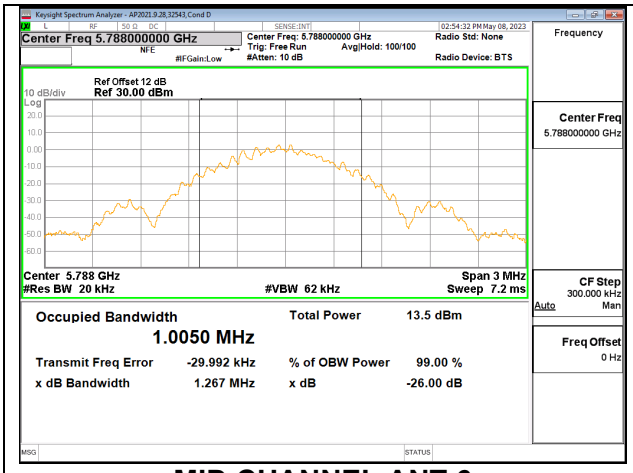
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	1.266	1.0037
Mid	5788	1.267	1.0069
High	5844	1.268	1.0052



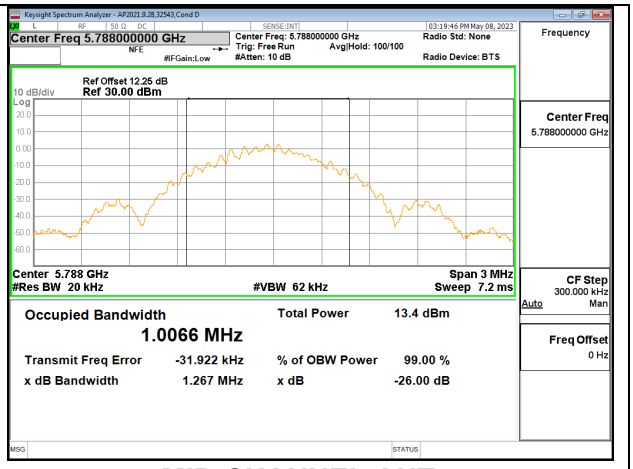
MID CHANNEL

9.2.8. HIGH POWER BDR TXBF UNII-3

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5733	1.268	1.267	1.0085	1.0059
Mid	5788	1.267	1.267	1.0050	1.0066
High	5844	1.268	1.268	1.0043	1.0059



MID CHANNEL ANT 6

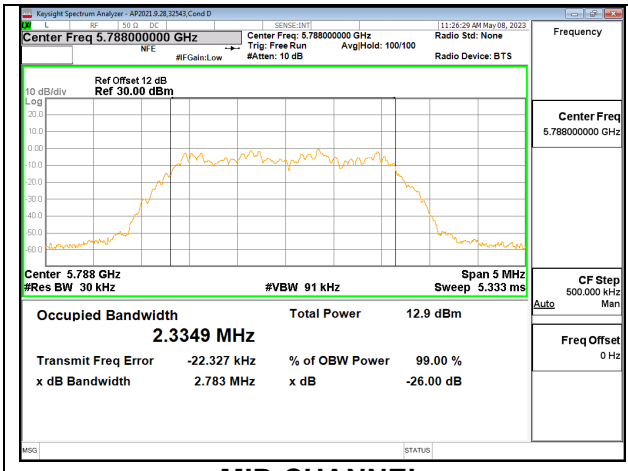


MID CHANNEL ANT 5

9.2.9. HIGH POWER HDR4, UNII-3

ANT 6

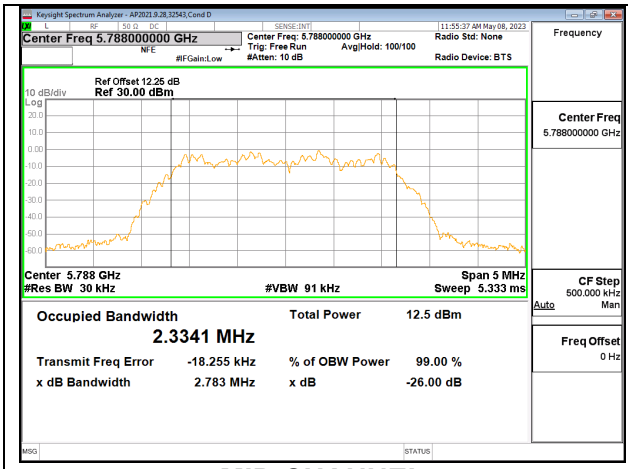
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	2.7840	2.3336
Mid	5788	2.7830	2.3349
High	5844	2.7860	2.3328



MID CHANNEL

ANT 5

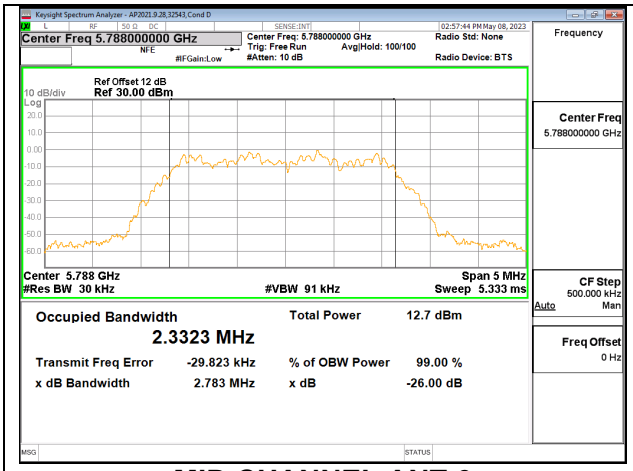
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	2.7830	2.3343
Mid	5788	2.7830	2.3341
High	5844	2.7830	2.3296



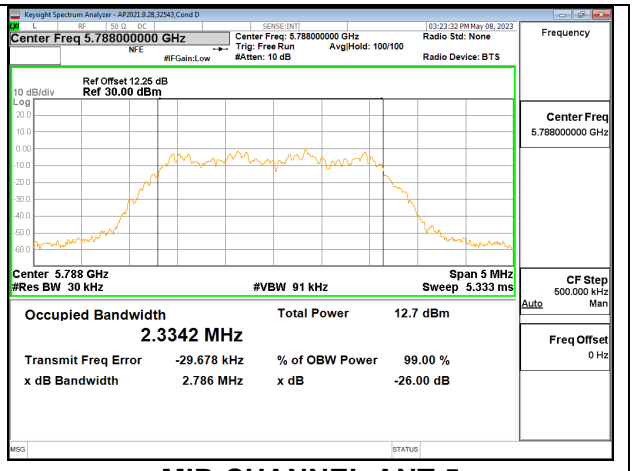
MID CHANNEL

9.2.10. HIGH POWER HDR4 TXBF UNII-3

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5733	2.7860	2.7860	2.3326	2.3347
Mid	5788	2.7830	2.7860	2.3323	2.3342
High	5844	2.7830	2.7860	2.3302	2.3344



MID CHANNEL ANT 6

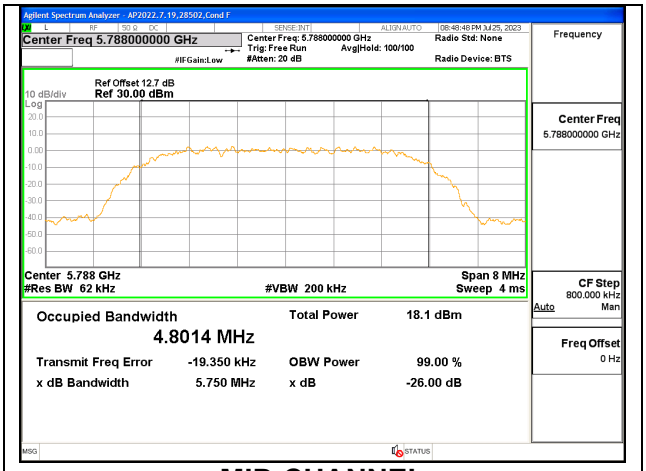


MID CHANNEL ANT 5

9.2.11. HIGH POWER HDR8, UNII-3

ANT 6

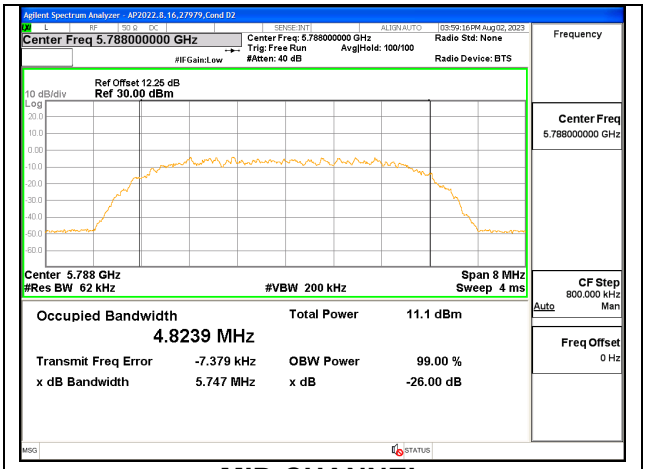
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	5.7380	4.7840
Mid	5788	5.7500	4.8014
High	5844	5.7340	4.8002



MID CHANNEL

ANT 5

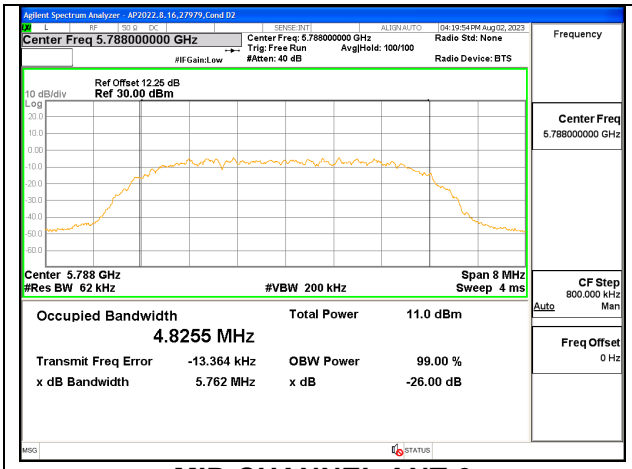
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	5733	5.7550	4.8307
Mid	5788	5.7470	4.8239
High	5844	5.7530	4.8329



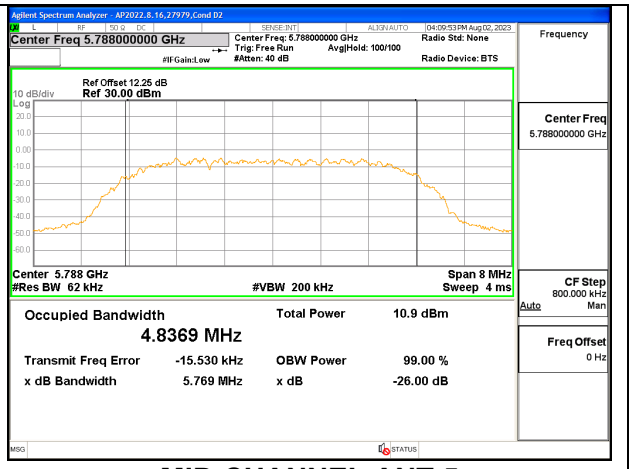
MID CHANNEL

9.2.12. HIGH POWER HDR8 TXBF UNII-3

Channel	Frequency (MHz)	26dB Bandwidth ANT 6 (MHz)	26dB Bandwidth ANT 5 (MHz)	99% Bandwidth ANT 6 (MHz)	99% Bandwidth ANT 5 (MHz)
Low	5733	5.7480	5.7570	4.8243	4.8290
Mid	5788	5.7620	5.7690	4.8255	4.8369
High	5844	5.7570	5.7640	4.8279	4.8328



MID CHANNEL ANT 6



MID CHANNEL ANT 5

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9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

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

RESULTS

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

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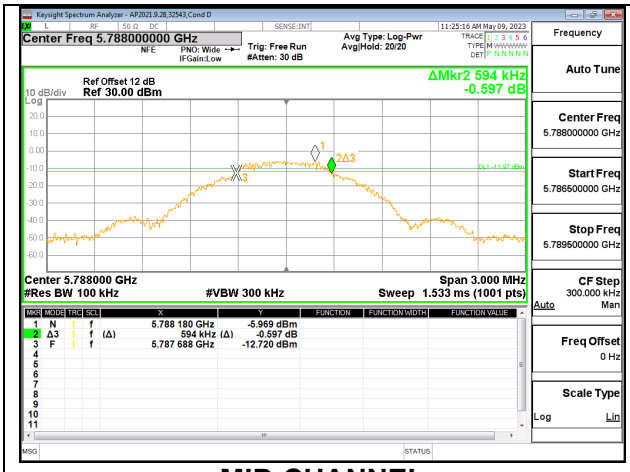
9.3.1. HIGH OUTPUT BDR MODE IN THE UNII-3 BAND

1TX Antenna 6

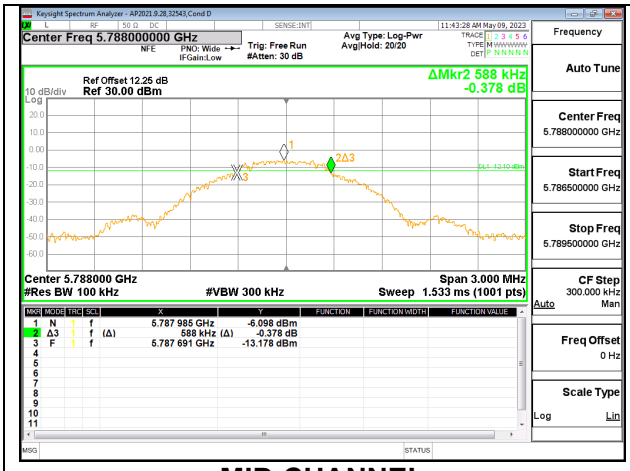
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	0.588	0.5
Mid	5788	0.594	0.5
High	5844	0.597	0.5



MID CHANNEL

1TX Antenna 5

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	0.603	0.5
Mid	5788	0.588	0.5
High	5844	0.585	0.5

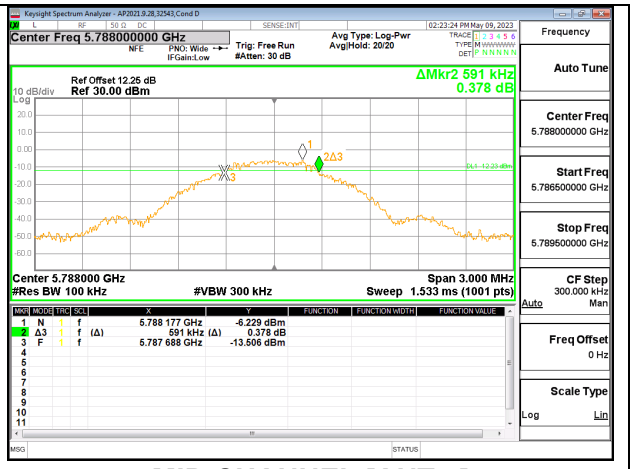


MID CHANNEL

2TX Antenna 6 + Antenna 5 TX BF MODE

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 6 (MHz)	6 dB Bandwidth Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5733	0.591	0.624	0.5
Mid	5788	0.564	0.591	0.5
High	5844	0.594	0.597	0.5

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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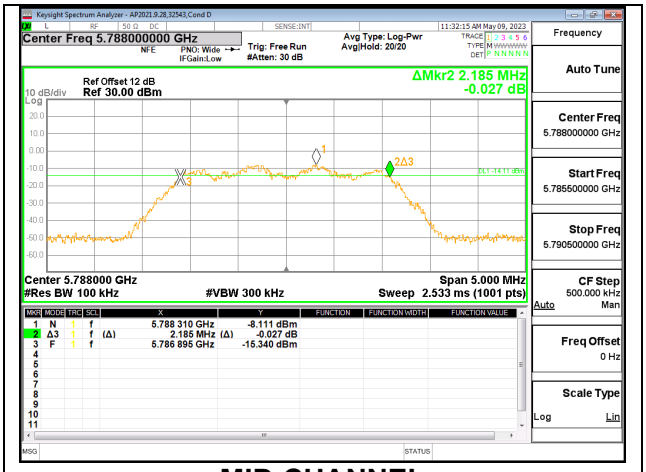
9.3.2. HIGH OUTPUT HDR4 MODE IN THE UNII-3 BAND

1TX Antenna 6

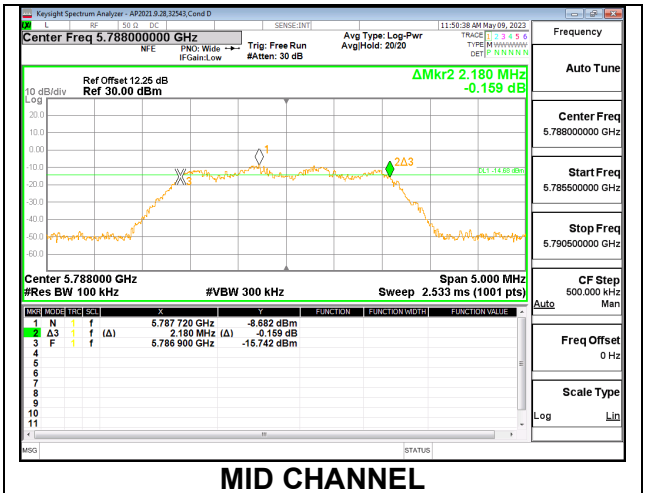
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	2.175	0.5
Mid	5788	2.185	0.5
High	5844	2.160	0.5



MID CHANNEL

1TX Antenna 5

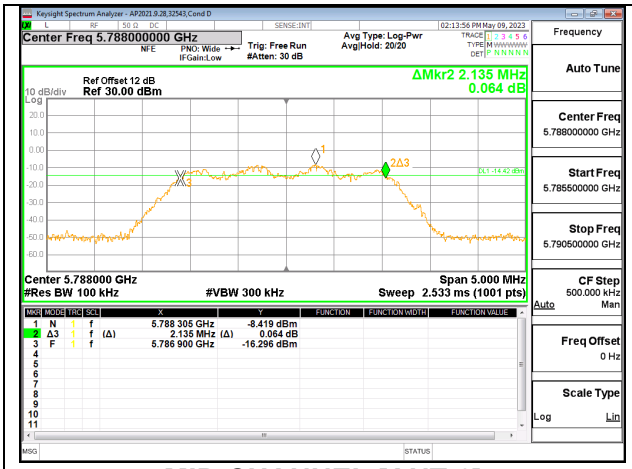
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	2.190	0.5
Mid	5788	2.180	0.5
High	5844	2.185	0.5



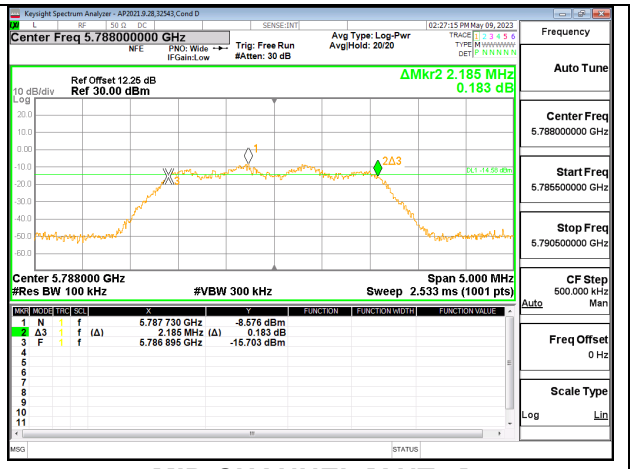
MID CHANNEL

2TX Antenna 6 + Antenna 5 TX BF MODE

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 6 (MHz)	6 dB Bandwidth Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5733	2.190	2.195	0.5
Mid	5788	2.135	2.185	0.5
High	5844	2.175	2.170	0.5



MID CHANNEL [ANT 6]

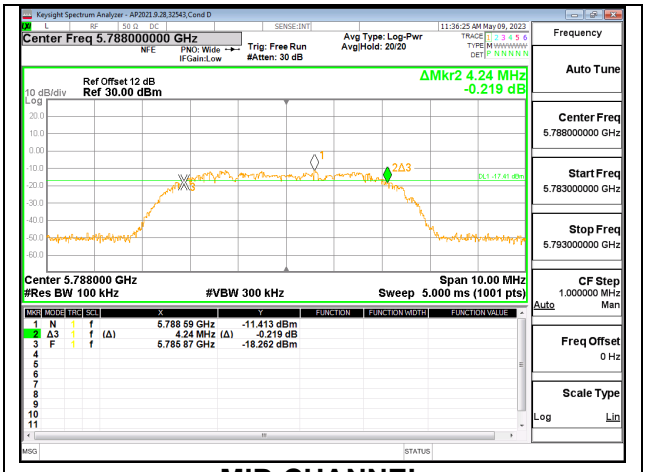


MID CHANNEL [ANT 5]

9.3.3. HIGH OUTPUT HDR8 MODE IN THE UNII-3 BAND

1TX Antenna 6

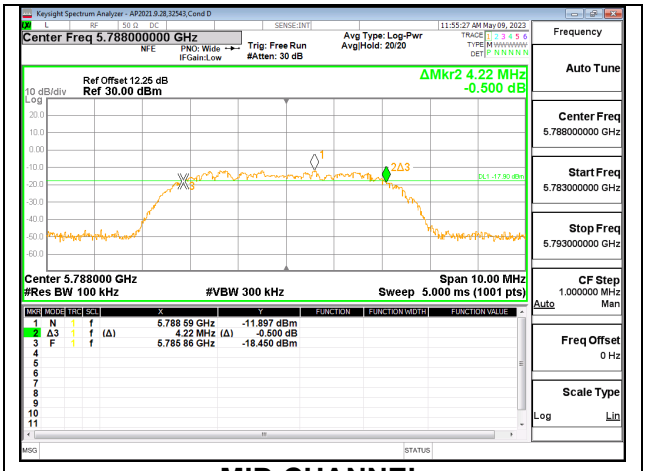
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	4.210	0.5
Mid	5788	4.240	0.5
High	5844	4.300	0.5



MID CHANNEL

1TX Antenna 5

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5733	4.280	0.5
Mid	5788	4.220	0.5
High	5844	4.210	0.5

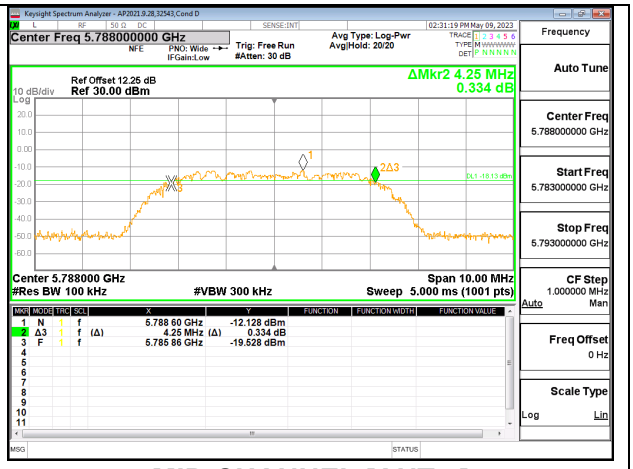


MID CHANNEL

2TX Antenna 6 + Antenna 5 TXBF MODE

Channel	Frequency (MHz)	6 dB Bandwidth Antenna 6 (MHz)	6 dB Bandwidth Antenna 5 (MHz)	Minimum Limit (MHz)
Low	5733	4.21	4.33	0.5
Mid	5788	4.3	4.25	0.5
High	5844	4.31	4.27	0.5

MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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9.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1-megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Band 5.725-5.85 GHz

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

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F.

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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 correlated for PSD due to the device supporting TX BF in all MIMO modes. The directional gains are as follows:

Band (GHz)	ANT 6 Gain (dBi)	ANT 5 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
UNII-1, 5.2GHz	-3.20	-4.50	-3.80	-0.82
UNII-3, 5.8GHz	-2.00	-4.00	-2.89	0.07

RESULTS:

DIRECTIONAL GAIN CALCULATION:

ANSI C63.10-2013 section 14.4.3

Uncorrelated directional gain=10*LOG((10^(Ant1/10)+10^(Ant2/10))/2)
Correlated directional Gain=10*LOG(((10^(Ant1/20)+10^(Ant2/20))^2)/2)

Sample Calculation:

Ant6=-3.2, Ant5=-4.5

Uncorrelated Antenna gain=10log[(10^(-3.2/10)+10^(-4.5/10))/2]=-3.8dBi

Correlated Antenna gain=10log[(10^(-3.2/20)+10^(-4.5/20))^2)/2]=-0.82dBi

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9.4.1. HIGH OUTPUT BDR MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

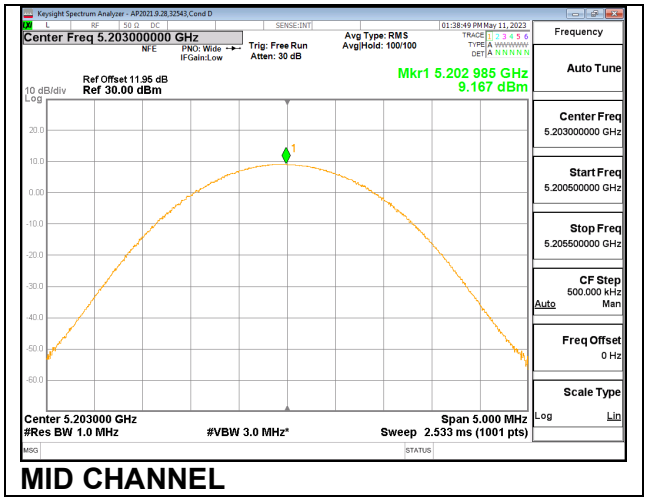
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	9.88	9.88	24.00	-14.12
Mid	5203	9.93	9.93	24.00	-14.07
High	5245	9.93	9.93	24.00	-14.07

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	8.662	8.662	11.00	-2.338
Mid	5203	9.167	9.167	11.00	-1.833
High	5245	9.187	9.187	11.00	-1.813



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

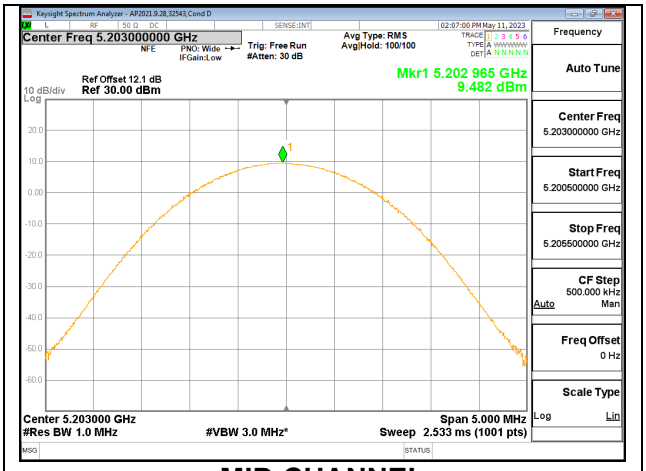
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	9.93	9.93	24.00	-14.07
Mid	5203	9.97	9.97	24.00	-14.03
High	5245	9.98	9.98	24.00	-14.02

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	9.135	9.135	11.00	-1.865
Mid	5203	9.482	9.482	11.00	-1.518
High	5245	9.517	9.517	11.00	-1.483



MID CHANNEL

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47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

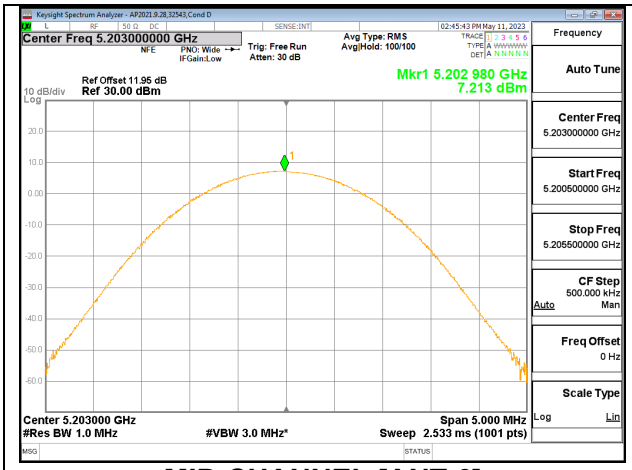
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

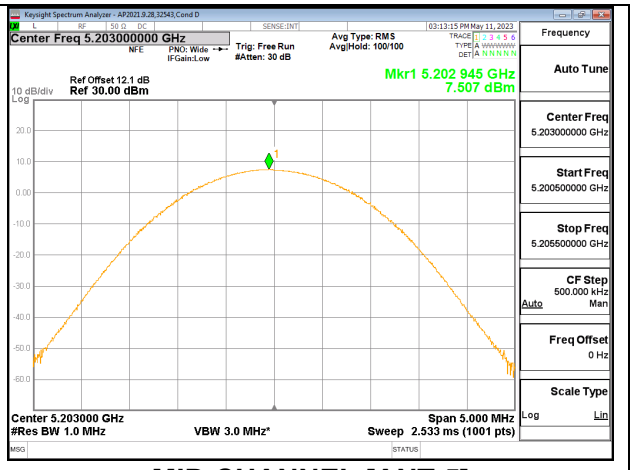
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	6.84	6.96	9.91	24.00	-14.09
Mid	5203	6.96	6.98	9.98	24.00	-14.02
High	5245	6.93	6.92	9.94	24.00	-14.06

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	6.659	7.216	9.957	11.00	-1.043
Mid	5203	7.213	7.507	10.373	11.00	-0.627
High	5245	7.028	6.968	10.008	11.00	-0.992



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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9.4.2. LOW OUTPUT BDR MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/25/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

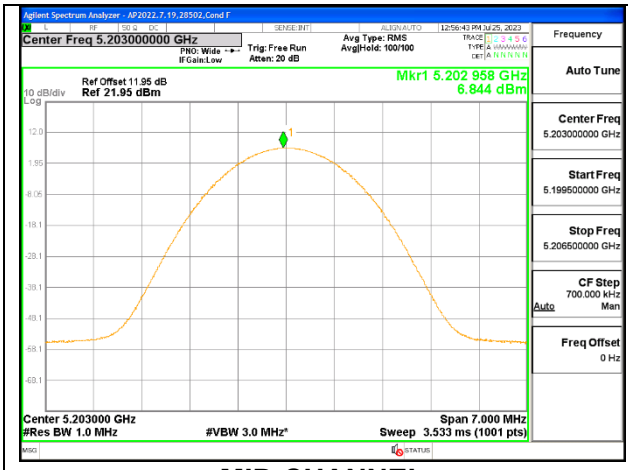
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	7.48	7.48	24.00	-16.52
Mid	5203	7.47	7.47	24.00	-16.53
High	5245	7.47	7.47	24.00	-16.53

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	7.046	7.046	11.00	-3.954
Mid	5203	6.844	6.844	11.00	-4.156
High	5245	6.915	6.915	11.00	-4.085



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

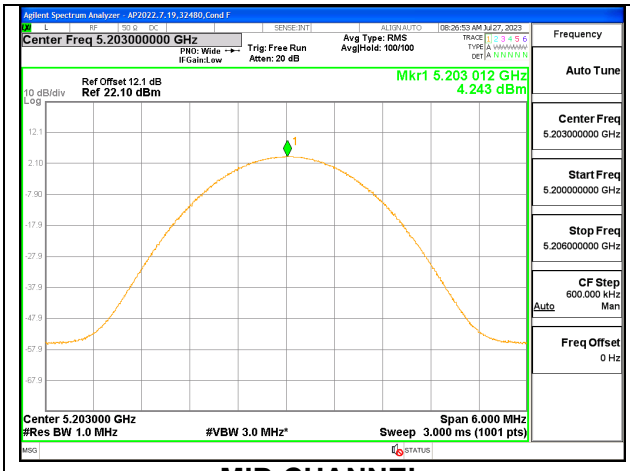
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	4.40	4.40	24.00	-19.60
Mid	5203	4.41	4.41	24.00	-19.59
High	5245	4.40	4.40	24.00	-19.60

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	4.051	4.051	11.00	-6.949
Mid	5203	4.243	4.243	11.00	-6.757
High	5245	3.990	3.990	11.00	-7.010



MID CHANNEL

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2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	28502
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

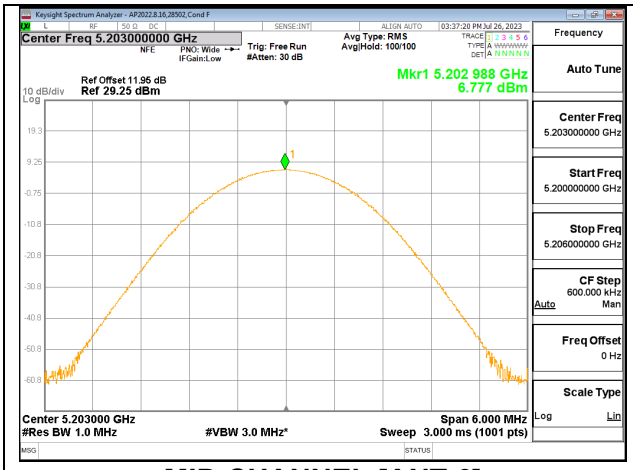
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

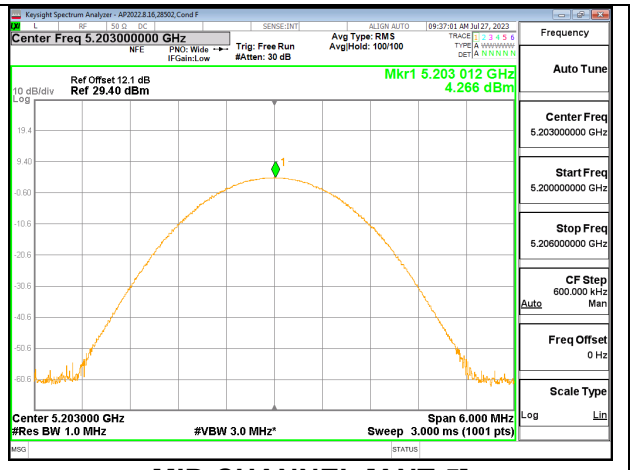
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	6.90	4.41	8.84	24.00	-15.16
Mid	5203	6.90	4.41	8.84	24.00	-15.16
High	5245	6.88	4.40	8.82	24.00	-15.18

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	6.734	4.259	8.681	11.00	-2.319
Mid	5203	6.777	4.266	8.711	11.00	-2.289
High	5245	6.522	4.137	8.502	11.00	-2.498



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.3. HIGH OUTPUT HDR4 MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

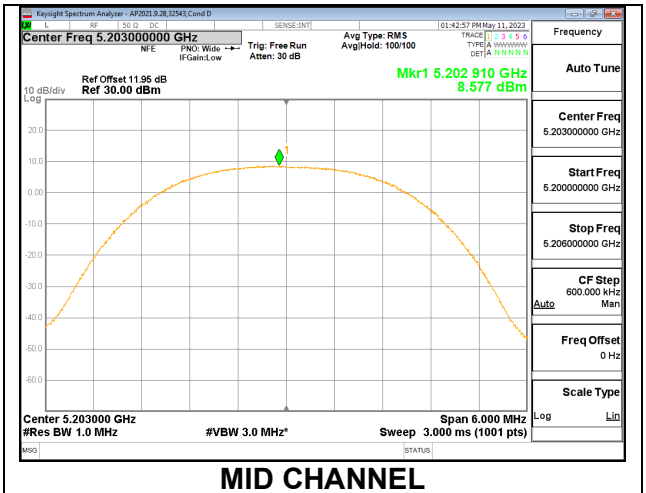
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	11.87	11.87	24.00	-12.13
Mid	5203	11.83	11.83	24.00	-12.17
High	5245	11.87	11.87	24.00	-12.13

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	8.747	8.747	11.00	-2.253
Mid	5203	8.577	8.577	11.00	-2.423
High	5245	8.783	8.783	11.00	-2.217



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

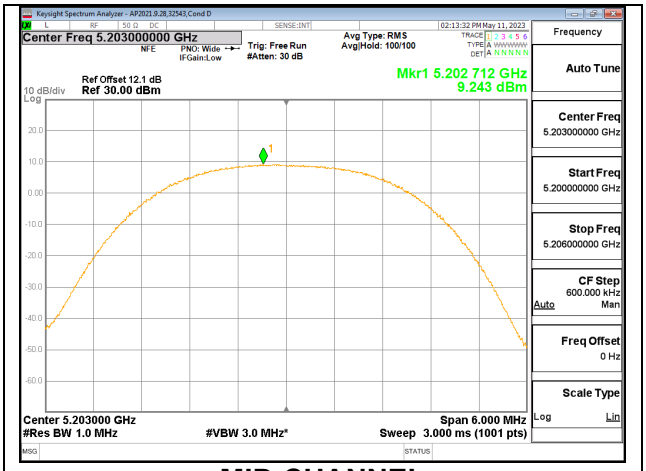
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	11.93	11.93	24.00	-12.07
Mid	5203	11.94	11.94	24.00	-12.06
High	5245	11.88	11.88	24.00	-12.12

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	9.170	9.170	11.00	-1.830
Mid	5203	9.243	9.243	11.00	-1.757
High	5245	8.852	8.852	11.00	-2.148



MID CHANNEL

2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	32543
Test Date:	5/11/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

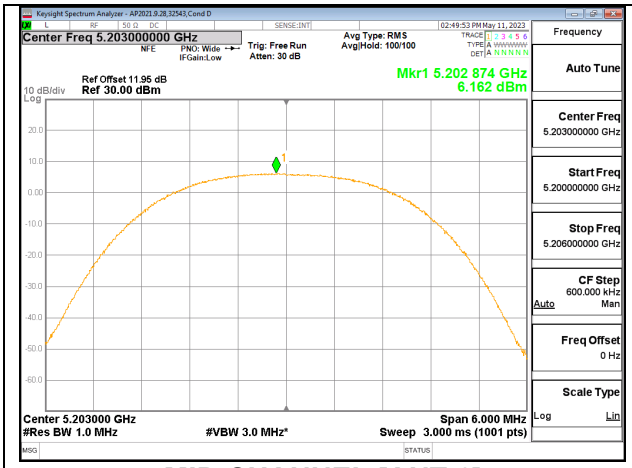
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

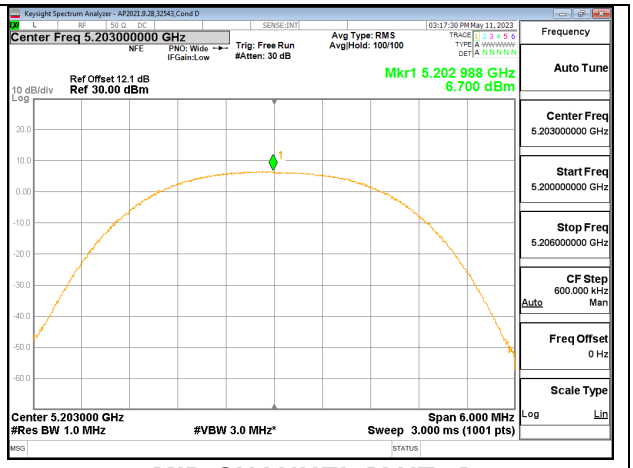
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	8.94	8.95	11.96	24.00	-12.04
Mid	5203	8.88	8.98	11.94	24.00	-12.06
High	5245	8.94	8.83	11.90	24.00	-12.10

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	6.397	6.509	9.464	11.00	-1.536
Mid	5203	6.162	6.700	9.450	11.00	-1.550
High	5245	6.425	6.097	9.274	11.00	-1.726



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.4. LOW OUTPUT HDR4 MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/25/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

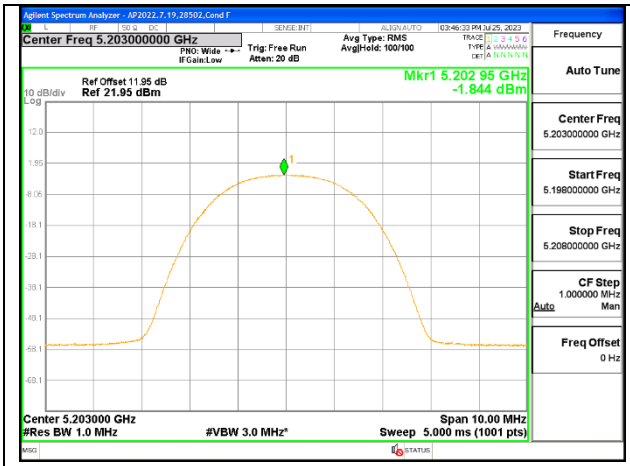
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	0.95	0.95	24.00	-23.05
Mid	5203	0.91	0.91	24.00	-23.09
High	5245	0.88	0.88	24.00	-23.12

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-1.553	-1.553	11.00	-12.553
Mid	5203	-1.844	-1.844	11.00	-12.844
High	5245	-2.018	-2.018	11.00	-13.018



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

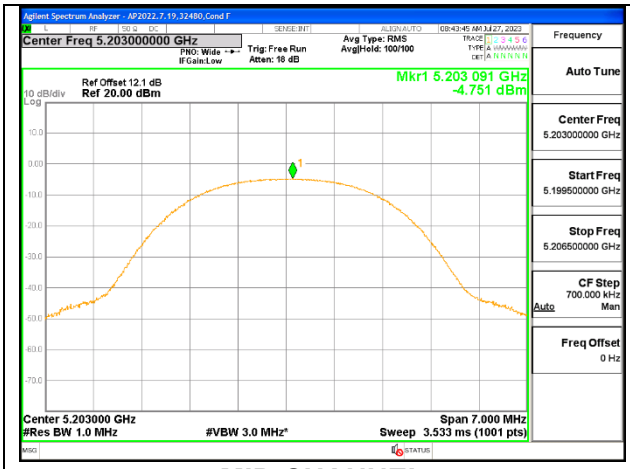
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	-2.12	-2.12	24.00	-26.12
Mid	5203	-2.08	-2.08	24.00	-26.08
High	5245	-2.08	-2.08	24.00	-26.08

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-5.119	-5.119	11.00	-16.119
Mid	5203	-4.751	-4.751	11.00	-15.751
High	5245	-4.771	-4.771	11.00	-15.771



MID CHANNEL

2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	28502
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

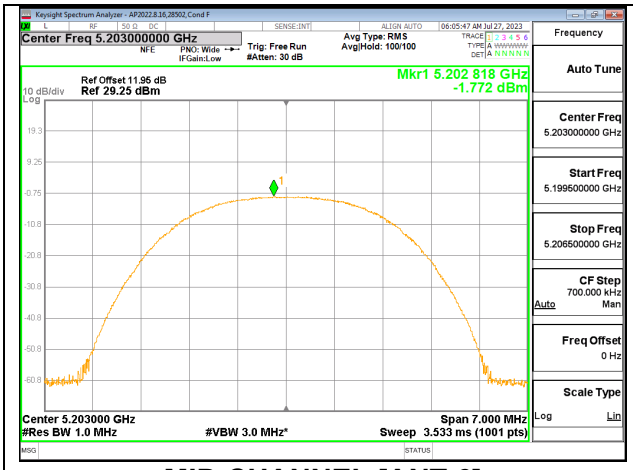
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

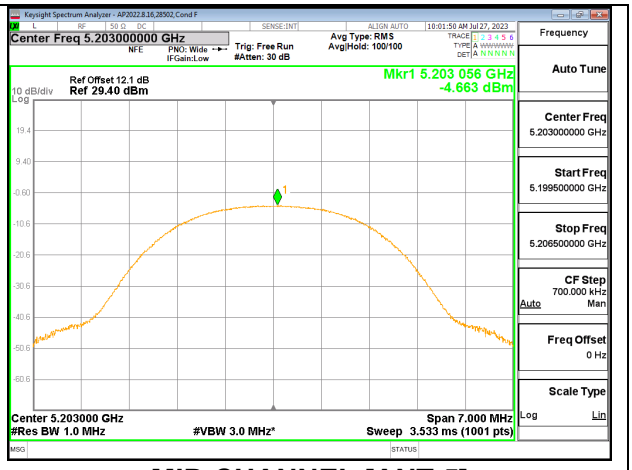
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	0.95	-2.10	2.70	24.00	-21.30
Mid	5203	0.91	-2.07	2.68	24.00	-21.32
High	5245	0.93	-2.07	2.69	24.00	-21.31

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-1.592	-4.937	0.060	11.00	-10.940
Mid	5203	-1.772	-4.663	0.029	11.00	-10.971
High	5245	-1.620	-4.616	0.146	11.00	-10.854



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.5. HIGH OUTPUT HDR8 MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	27979
Test Date:	7/31/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

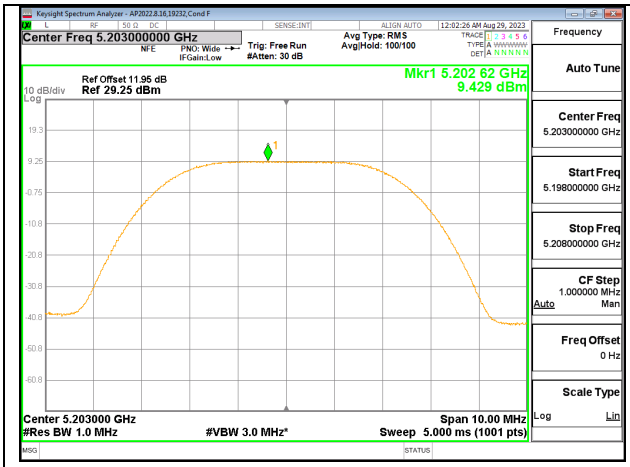
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	13.87	13.87	24.00	-10.13
Mid	5203	13.85	13.85	24.00	-10.15
High	5245	13.81	13.81	24.00	-10.19

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	9.857	9.857	11.00	-1.143
Mid	5203	9.429	9.429	11.00	-1.571
High	5245	9.632	9.632	11.00	-1.368



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	27979
Test Date:	7/31/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

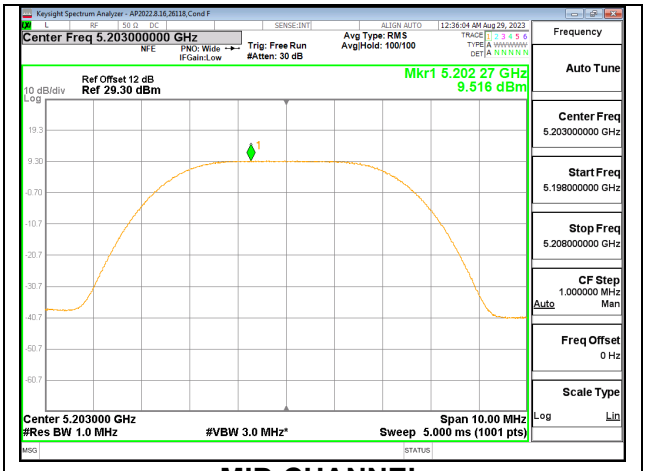
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	13.85	13.85	24.00	-10.15
Mid	5203	13.85	13.85	24.00	-10.15
High	5245	13.85	13.85	24.00	-10.15

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	9.599	9.599	11.00	-1.401
Mid	5203	9.516	9.516	11.00	-1.484
High	5245	9.530	9.530	11.00	-1.470



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TX BF MODE

Test Engineer:	27979
Test Date:	7/31/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

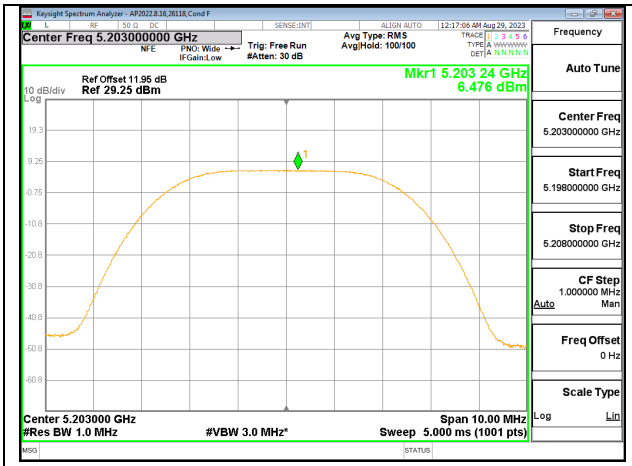
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

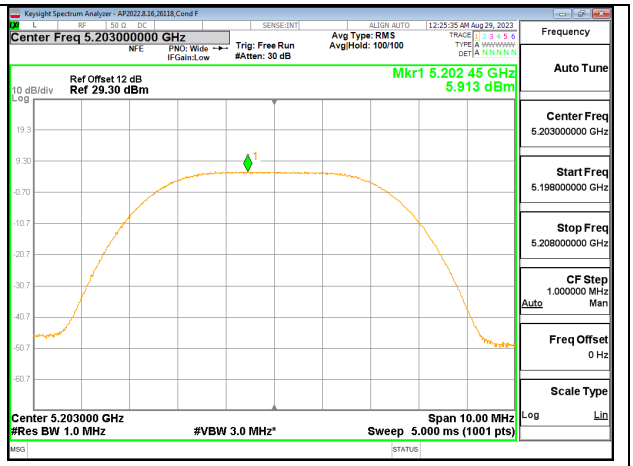
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	10.84	10.91	13.89	24.00	-10.11
Mid	5203	10.91	10.83	13.88	24.00	-10.12
High	5245	10.84	10.83	13.85	24.00	-10.15

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	5.844	5.723	8.794	11.00	-2.206
Mid	5203	6.476	5.913	9.214	11.00	-1.786
High	5245	6.255	5.847	9.066	11.00	-1.934



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.4.6. LOW OUTPUT HDR8 MODE IN UNII-1 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/25/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-3.20	24.00	11.00
Mid	5203	-3.20	24.00	11.00
High	5245	-3.20	24.00	11.00

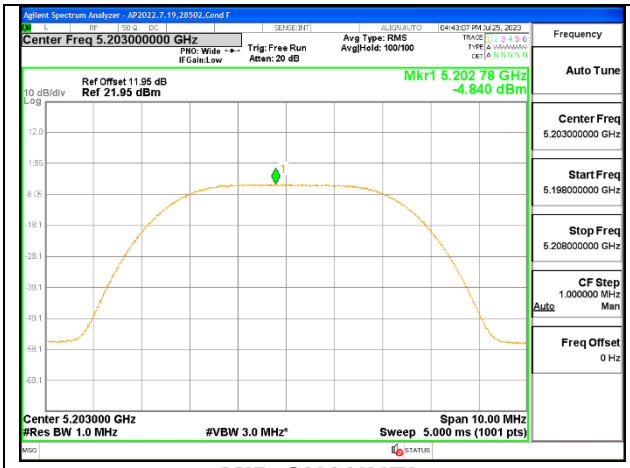
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	0.87	0.87	24.00	-23.13
Mid	5203	0.88	0.88	24.00	-23.12
High	5245	0.88	0.88	24.00	-23.12

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-4.954	-4.954	11.00	-15.954
Mid	5203	-4.840	-4.840	11.00	-15.840
High	5245	-4.850	-4.850	11.00	-15.850



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-4.50	24.00	11.00
Mid	5203	-4.50	24.00	11.00
High	5245	-4.50	24.00	11.00

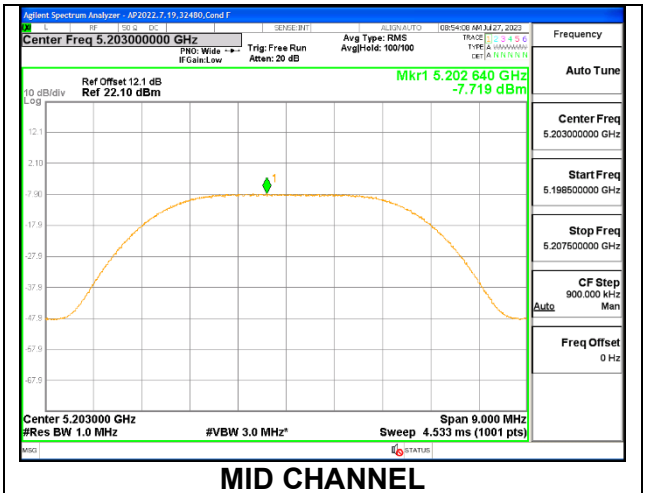
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	-2.06	-2.06	24.00	-26.06
Mid	5203	-2.06	-2.06	24.00	-26.06
High	5245	-2.08	-2.08	24.00	-26.08

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-7.621	-7.621	11.00	-18.621
Mid	5203	-7.719	-7.719	11.00	-18.719
High	5245	-7.907	-7.907	11.00	-18.907



MID CHANNEL

2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	28502
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5162	-0.82	-0.82	24.00	11.00
Mid	5203	-0.82	-0.82	24.00	11.00
High	5245	-0.82	-0.82	24.00	11.00

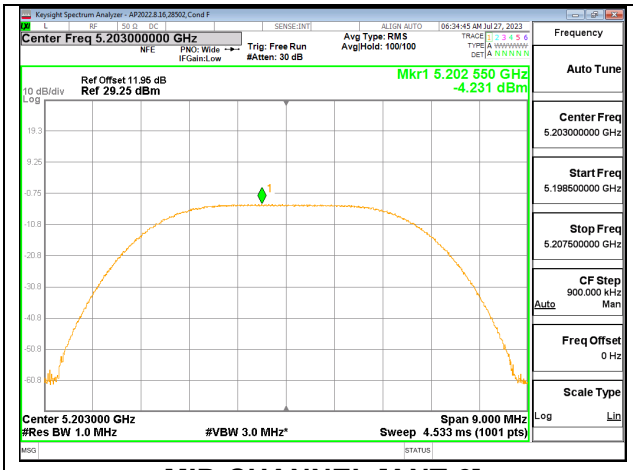
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

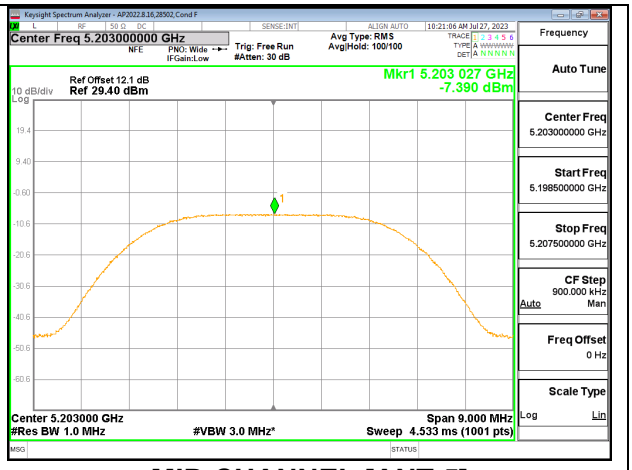
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5162	0.95	-2.02	2.72	24.00	-21.28
Mid	5203	0.96	-2.03	2.73	24.00	-21.27
High	5245	0.90	-2.02	2.69	24.00	-21.31

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/1MHz)	Antenna 5 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5162	-4.356	-7.209	-2.542	11.00	-13.542
Mid	5203	-4.231	-7.390	-2.519	11.00	-13.519
High	5245	-4.628	-7.216	-2.722	11.00	-13.722



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.4.7. HIGH OUTPUT BDR MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

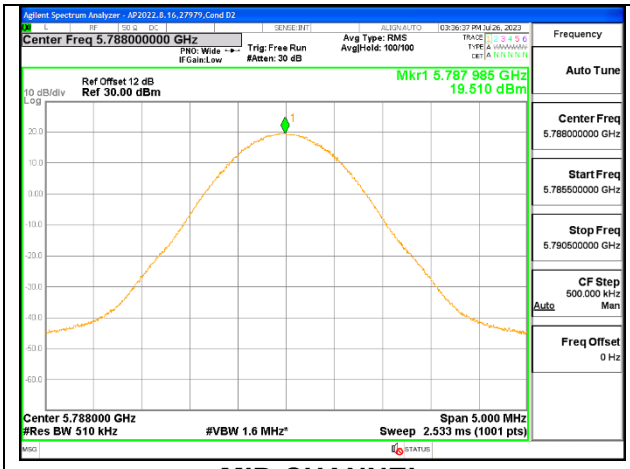
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	19.94	19.94	30.00	-10.06
Mid	5788	19.95	19.95	30.00	-10.05
High	5844	19.93	19.93	30.00	-10.07

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	19.473	19.473	30.00	-10.527
Mid	5788	19.510	19.510	30.00	-10.490
High	5844	19.336	19.336	30.00	-10.664



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

1TX Antenna 5 MODE

Test Engineer:	27979
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

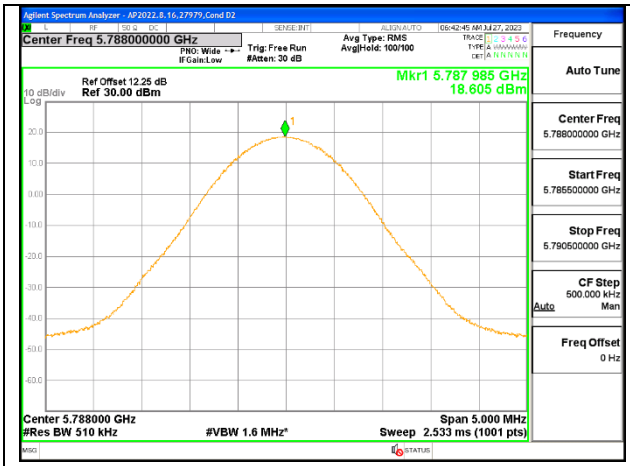
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	19.46	19.46	30.00	-10.54
Mid	5788	19.45	19.45	30.00	-10.55
High	5844	19.47	19.47	30.00	-10.53

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	18.732	18.732	30.00	-11.268
Mid	5788	18.605	18.605	30.00	-11.395
High	5844	18.882	18.882	30.00	-11.118



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TXBF MODE (FCC)

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

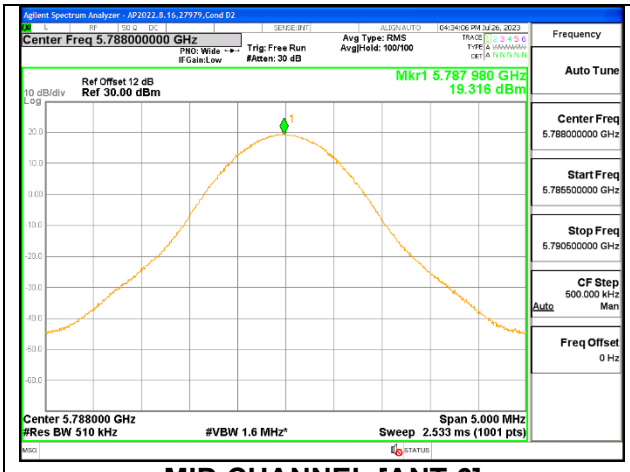
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

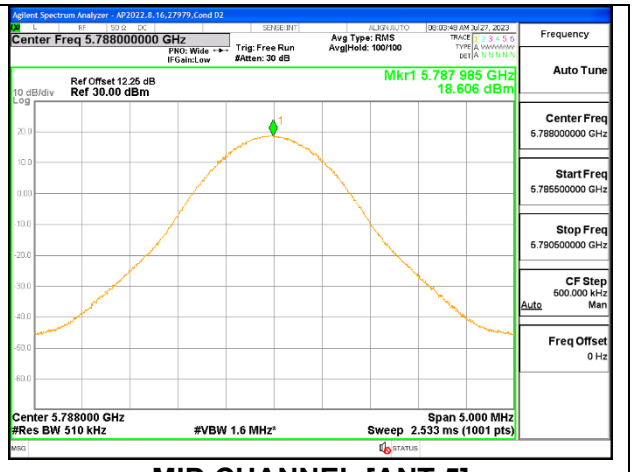
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	19.87	19.45	22.68	30.00	-7.32
Mid	5788	19.90	19.47	22.70	30.00	-7.30
High	5844	19.89	19.46	22.69	30.00	-7.31

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	19.073	18.472	21.793	30.00	-8.207
Mid	5788	19.316	18.606	21.986	30.00	-8.014
High	5844	19.267	18.548	21.933	30.00	-8.067



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.4.8. LOW OUTPUT BDR MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

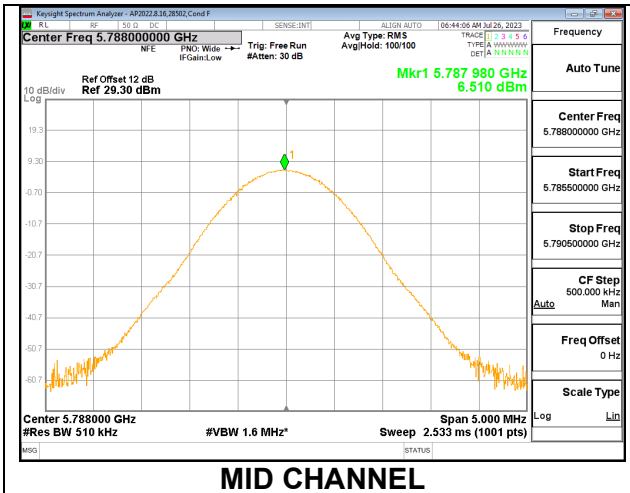
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	7.89	7.89	30.00	-22.11
Mid	5788	7.89	7.89	30.00	-22.11
High	5844	7.90	7.90	30.00	-22.10

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	6.552	6.552	30.00	-23.448
Mid	5788	6.510	6.510	30.00	-23.490
High	5844	6.665	6.665	30.00	-23.335



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

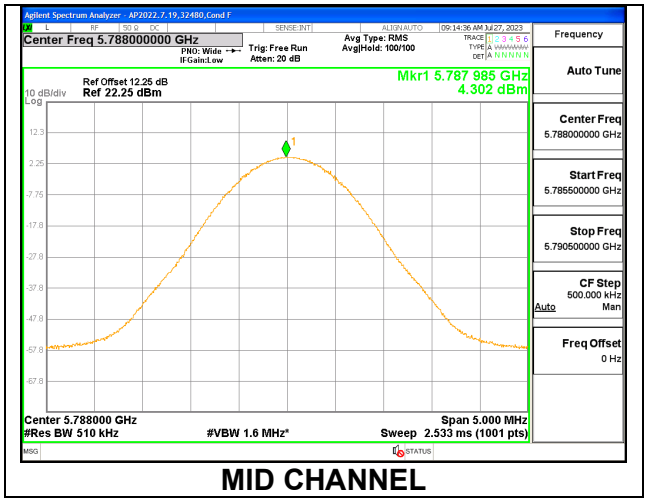
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	5.39	5.39	30.00	-24.61
Mid	5788	5.39	5.39	30.00	-24.61
High	5844	5.39	5.39	30.00	-24.61

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	4.359	4.359	30.00	-25.641
Mid	5788	4.302	4.302	30.00	-25.698
High	5844	4.368	4.368	30.00	-25.632



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TXBF MODE (FCC)

Test Engineer:	28502
Test Date:	7/27/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

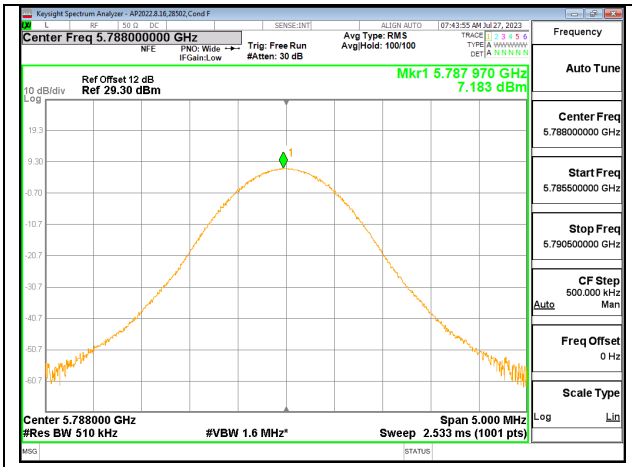
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

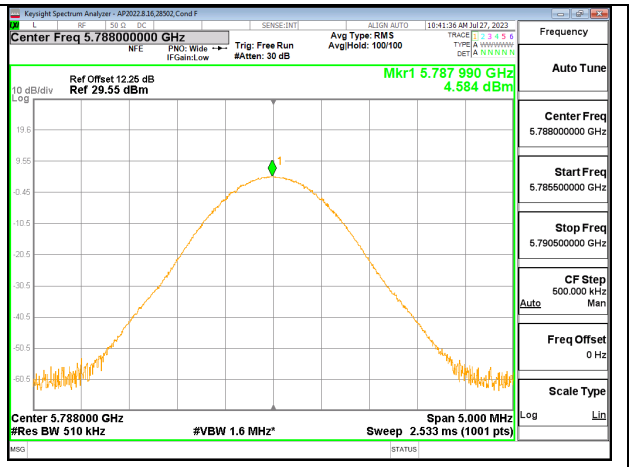
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	7.96	5.46	9.90	30.00	-20.10
Mid	5788	7.96	5.46	9.90	30.00	-20.10
High	5844	7.94	5.47	9.89	30.00	-20.11

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	7.191	4.508	9.064	30.00	-20.936
Mid	5788	7.183	4.584	9.085	30.00	-20.915
High	5844	6.950	4.604	8.944	30.00	-21.056



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.9. HIGH OUTPUT HDR4 MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

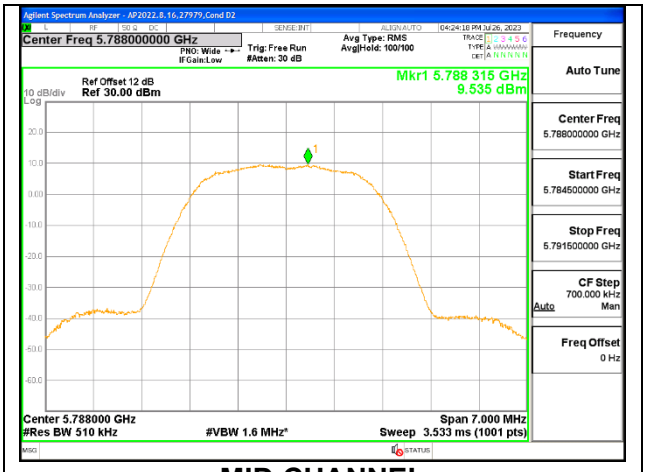
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.43	14.43	30.00	-15.57
Mid	5788	14.43	14.43	30.00	-15.57
High	5844	14.42	14.42	30.00	-15.58

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	9.608	9.608	30.00	-20.392
Mid	5788	9.535	9.535	30.00	-20.465
High	5844	9.449	9.449	30.00	-20.551



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	27979
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

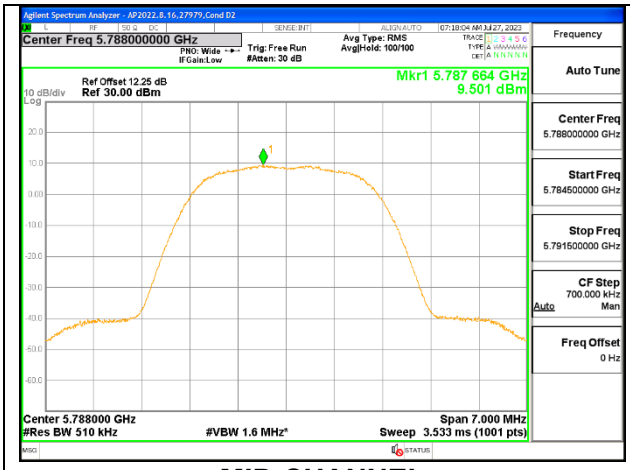
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.44	14.44	30.00	-15.56
Mid	5788	14.43	14.43	30.00	-15.57
High	5844	14.43	14.43	30.00	-15.57

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	9.747	9.747	30.00	-20.253
Mid	5788	9.501	9.501	30.00	-20.499
High	5844	9.550	9.550	30.00	-20.450



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TXBF MODE (FCC)

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

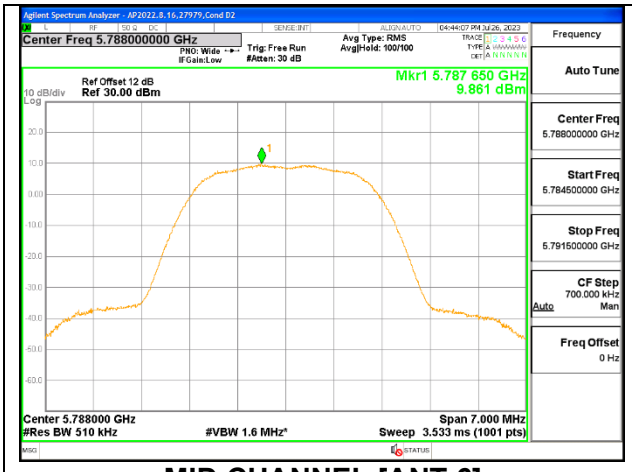
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

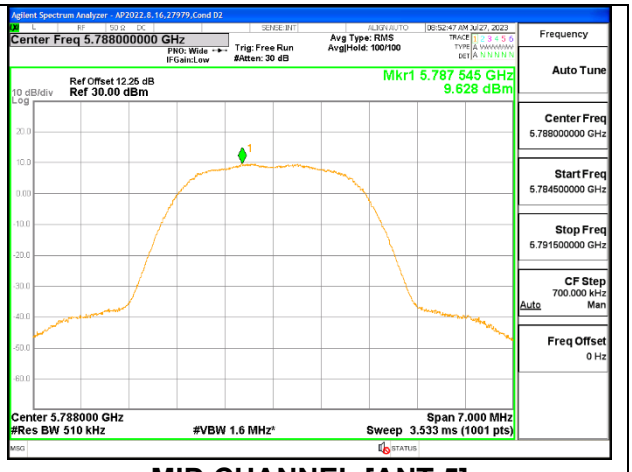
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.44	14.44	17.45	30.00	-12.55
Mid	5788	14.46	14.44	17.46	30.00	-12.54
High	5844	14.42	14.43	17.44	30.00	-12.56

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	9.771	9.753	12.772	30.00	-17.228
Mid	5788	9.861	9.628	12.756	30.00	-17.244
High	5844	9.436	9.557	12.507	30.00	-17.493



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.10. LOW OUTPUT HDR4 MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

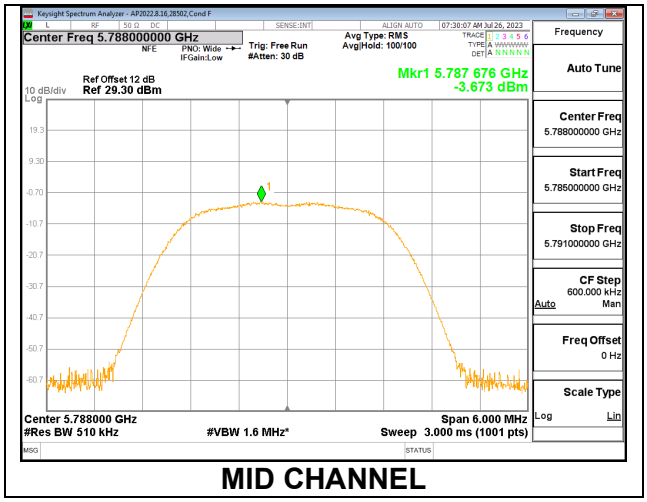
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	1.39	1.39	30.00	-28.61
Mid	5788	1.37	1.37	30.00	-28.63
High	5844	1.48	1.48	30.00	-28.52

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-3.535	-3.535	30.00	-33.535
Mid	5788	-3.673	-3.673	30.00	-33.673
High	5844	-3.051	-3.051	30.00	-33.051



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

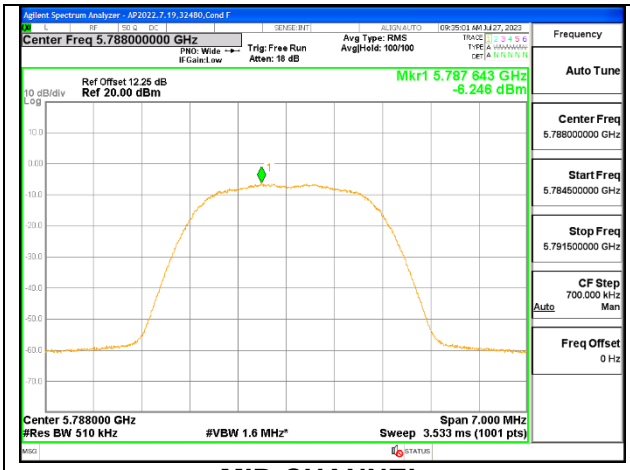
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	-1.17	-1.17	30.00	-31.17
Mid	5788	-1.17	-1.17	30.00	-31.17
High	5844	-1.17	-1.17	30.00	-31.17

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-6.247	-6.247	30.00	-36.247
Mid	5788	-6.246	-6.246	30.00	-36.246
High	5844	-6.264	-6.264	30.00	-36.264



MID CHANNEL

2TX Antenna 6 + Antenna 5 TXBF MODE (FCC)

Test Engineer:	28502
Test Date:	7/27/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

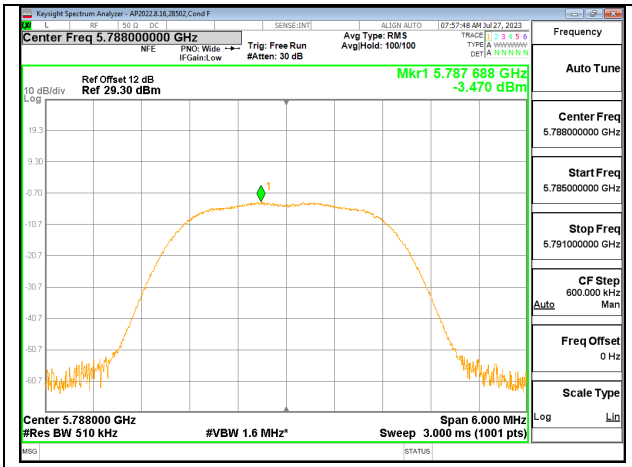
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

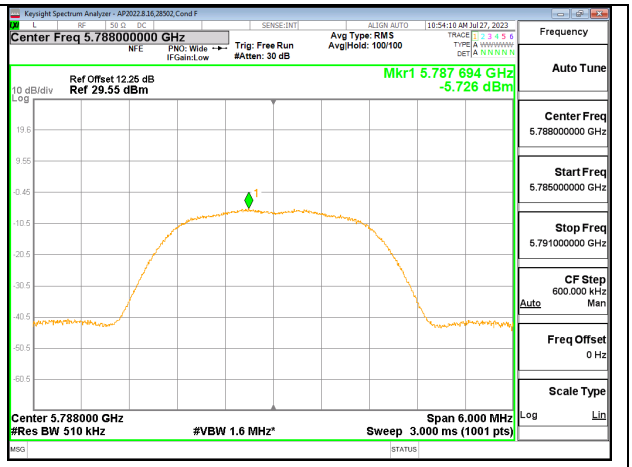
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	1.48	-1.08	3.40	30.00	-26.60
Mid	5788	1.48	-1.09	3.39	30.00	-26.61
High	5844	1.48	-1.09	3.39	30.00	-26.61

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-3.418	-5.627	-1.373	30.00	-31.373
Mid	5788	-3.470	-5.726	-1.443	30.00	-31.443
High	5844	-3.498	-5.758	-1.472	30.00	-31.472



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

9.4.11. HIGH OUTPUT HDR8 MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

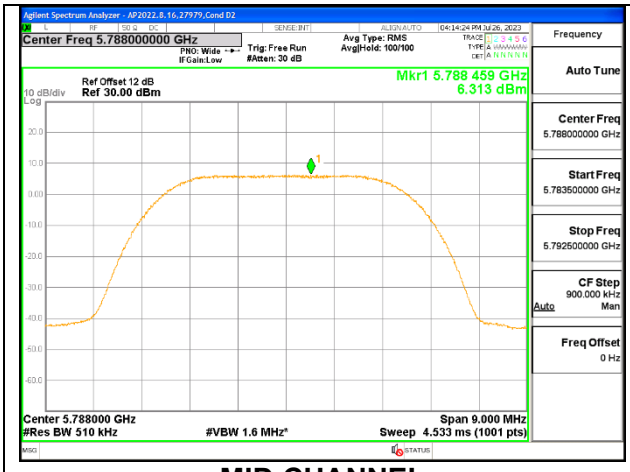
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.42	14.42	30.00	-15.58
Mid	5788	14.44	14.44	30.00	-15.56
High	5844	14.45	14.45	30.00	-15.55

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	6.154	6.154	30.00	-23.846
Mid	5788	6.313	6.313	30.00	-23.687
High	5844	6.412	6.412	30.00	-23.588



MID CHANNEL

1TX Antenna 5 MODE

Test Engineer:	27979
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

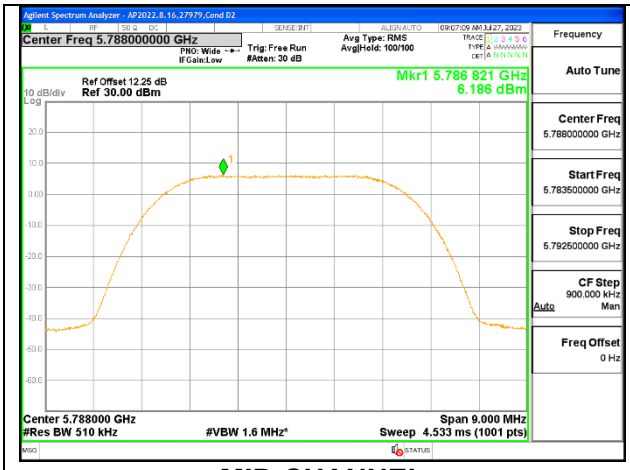
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.45	14.45	30.00	-15.55
Mid	5788	14.42	14.42	30.00	-15.58
High	5844	14.47	14.47	30.00	-15.53

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	6.400	6.400	30.00	-23.600
Mid	5788	6.186	6.186	30.00	-23.814
High	5844	6.580	6.580	30.00	-23.420



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 TXBF MODE (FCC)

Test Engineer:	27979
Test Date:	7/26/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

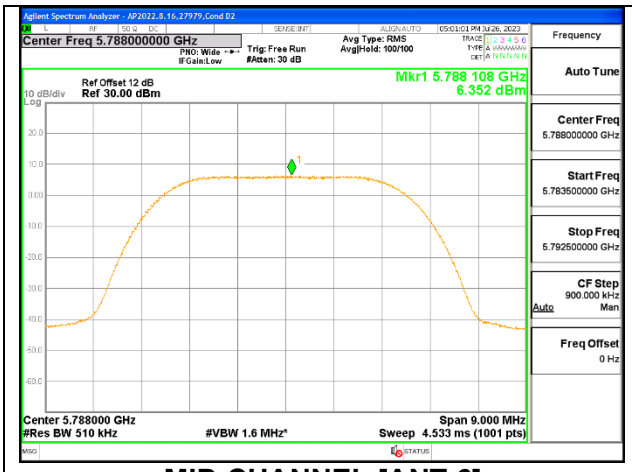
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

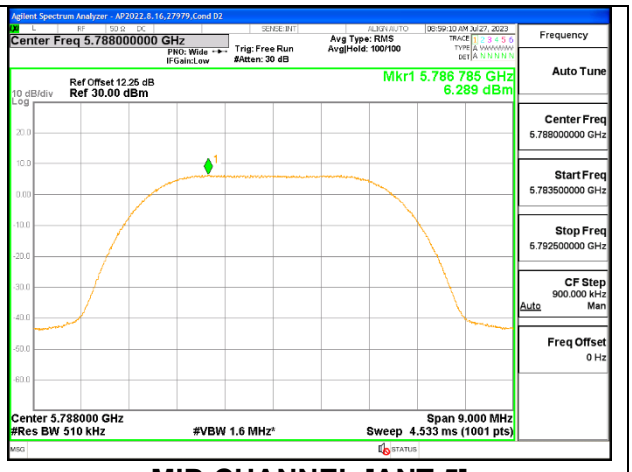
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	14.44	14.46	17.46	30.00	-12.54
Mid	5788	14.44	14.43	17.45	30.00	-12.55
High	5844	14.45	14.42	17.45	30.00	-12.55

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	6.343	6.593	9.480	30.00	-20.520
Mid	5788	6.352	6.289	9.331	30.00	-20.669
High	5844	6.469	6.128	9.312	30.00	-20.688



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.4.12. LOW OUTPUT HDR8 MODE IN UNII-3 BAND

1TX Antenna 6 MODE

Test Engineer:	28502
Test Date:	7/26/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-2.00	30.00	30.00
Mid	5788	-2.00	30.00	30.00
High	5844	-2.00	30.00	30.00

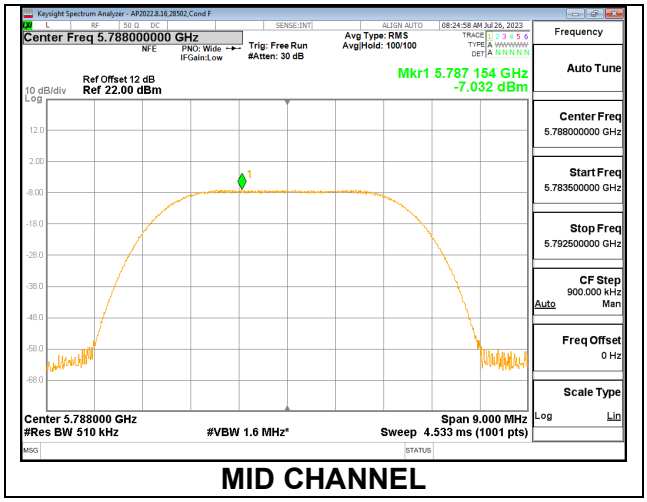
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	1.41	1.41	30.00	-28.59
Mid	5788	1.35	1.35	30.00	-28.65
High	5844	1.35	1.35	30.00	-28.65

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-6.790	-6.790	30.00	-36.790
Mid	5788	-7.032	-7.032	30.00	-37.032
High	5844	-6.913	-6.913	30.00	-36.913



MID CHANNEL

UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

1TX Antenna 5 MODE

Test Engineer:	32480
Test Date:	7/27/2023

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 500KHz)
Low	5733	-4.00	30.00	30.00
Mid	5788	-4.00	30.00	30.00
High	5844	-4.00	30.00	30.00

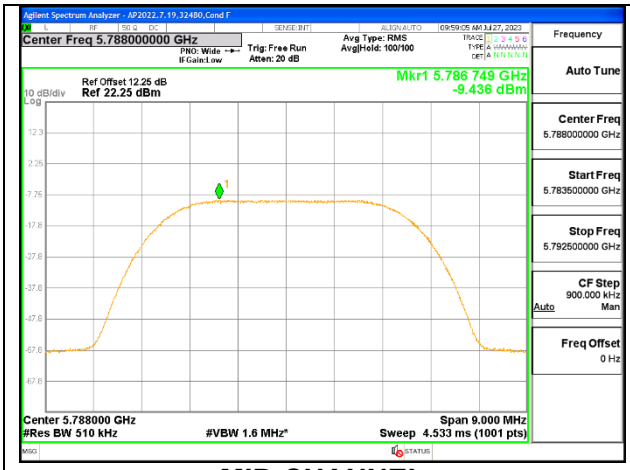
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	-1.07	-1.07	30.00	-31.07
Mid	5788	-1.07	-1.07	30.00	-31.07
High	5844	-1.07	-1.07	30.00	-31.07

PSD Results

Channel	Frequency (MHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-9.445	-9.445	30.00	-39.445
Mid	5788	-9.436	-9.436	30.00	-39.436
High	5844	-9.499	-9.499	30.00	-39.499



MID CHANNEL

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2TX Antenna 6 + Antenna 5 TXBF MODE

Test Engineer:	28502
Test Date:	7/27/2023

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/500KHz)
Low	5733	0.07	0.07	30.00	30.00
Mid	5788	0.07	0.07	30.00	30.00
High	5844	0.07	0.07	30.00	30.00

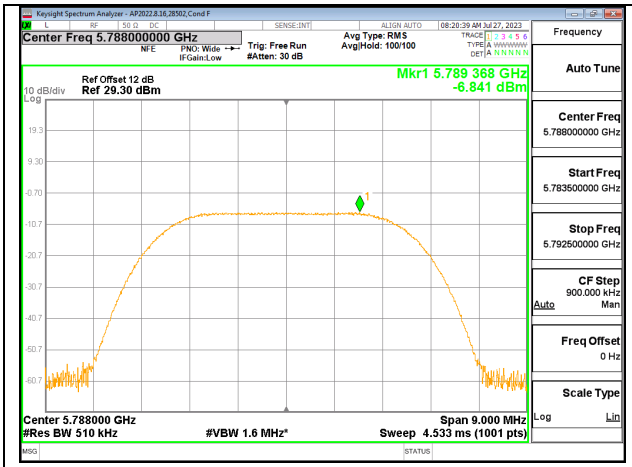
Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

Output Power Results

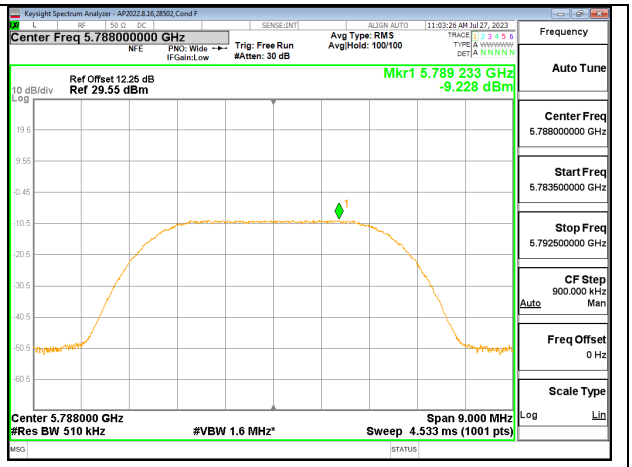
Channel	Frequency (MHz)	Antenna 6 Meas Power (dBm)	Antenna 5 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5733	1.47	-1.05	3.40	30.00	-26.60
Mid	5788	1.41	-1.05	3.36	30.00	-26.64
High	5844	1.48	-1.02	3.42	30.00	-26.58

PSD Results

Channel	Frequency (MHz)	Antenna 6 Meas PSD (dBm/500KHz)	Antenna 5 Meas PSD (dBm/500KHz)	Total Corr'd PSD (dBm/500KHz)	PSD Limit (dBm/500KHz)	PSD Margin (dB)
Low	5733	-6.500	-9.213	-4.638	30.00	-34.638
Mid	5788	-6.841	-9.228	-4.862	30.00	-34.862
High	5844	-6.260	-8.909	-4.375	30.00	-34.375



MID CHANNEL [ANT 6]



MID CHANNEL [ANT 5]

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10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 -Restriced bands
FCC §15.407(b)(1-3) -Un-Restriced bands

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz and 1.5 meters 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 in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

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

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

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

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

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

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

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

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

RESULTS

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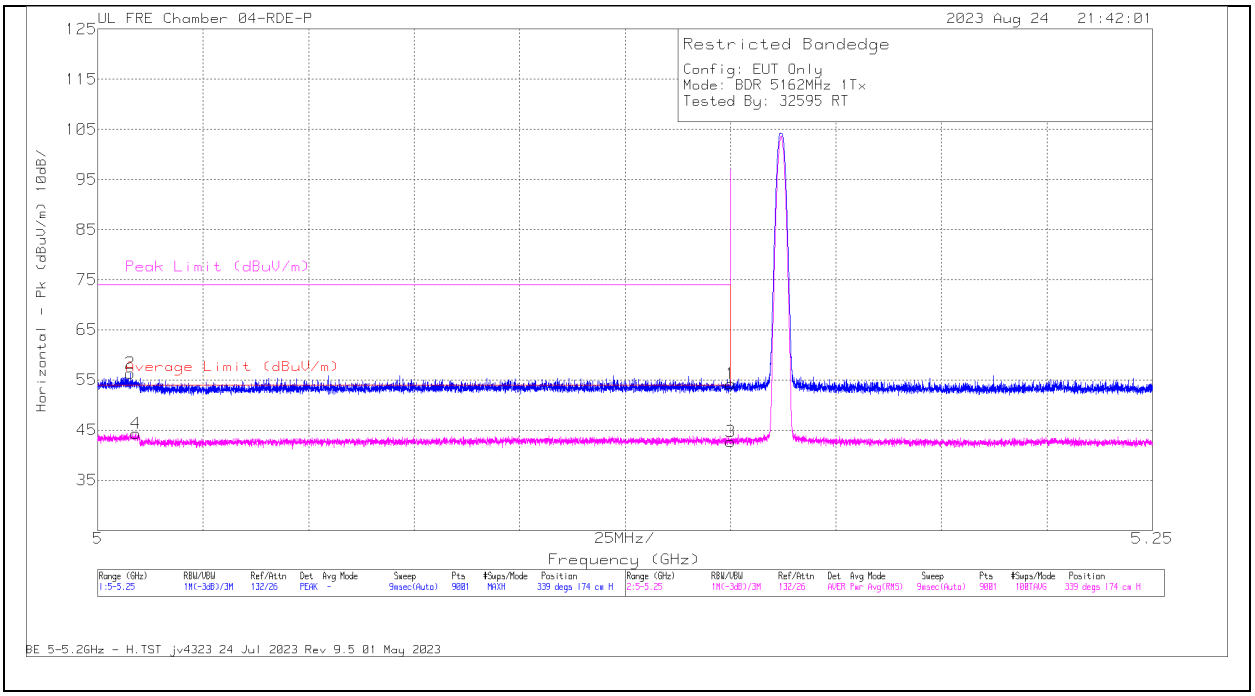
10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BDR, HIGH POWER UNII-1 BANDEDGE

ANT 6

BANDEDGE (LOW CHANNEL)

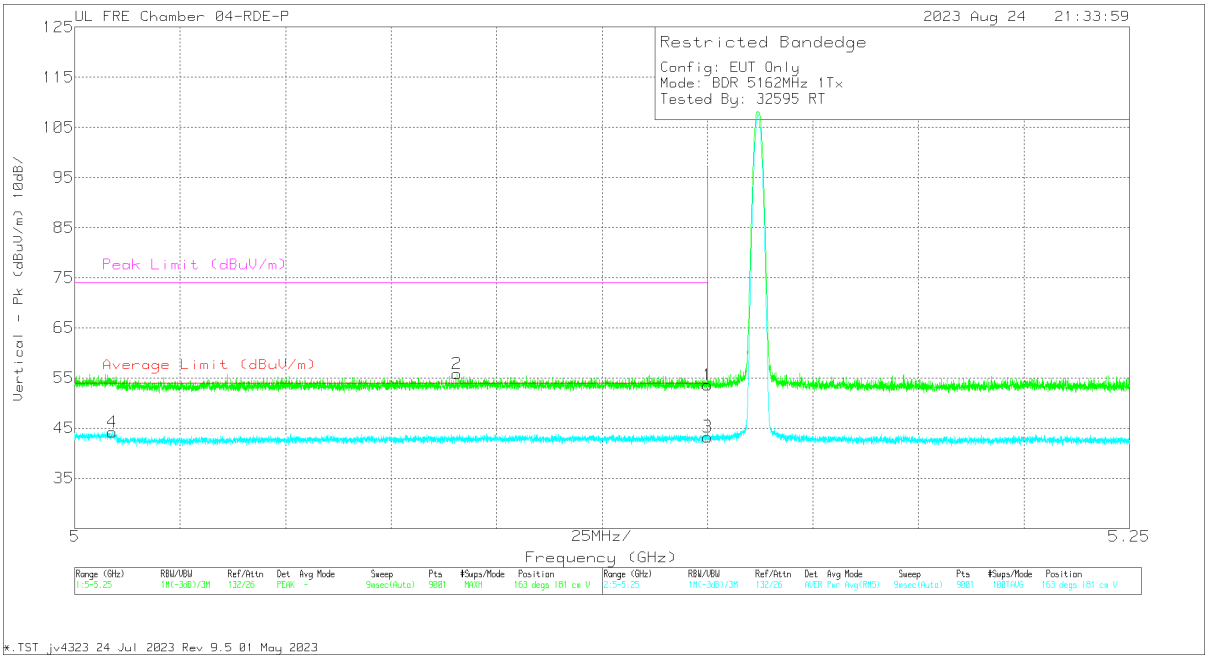
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 84796 (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.007695	60.51	Pk	34.4	0	-38.55	56.36	-	-	74	-17.64	339	174	H
4	5.009083	48.56	RMS	34.4	0	-38.57	44.39	54	-9.61	-	-	339	174	H
1	5.15	58.21	Pk	34.5	0	-38.51	54.2	-	-	74	-19.8	339	174	H
3	5.15	46.71	RMS	34.5	0	-38.51	42.7	54	-11.3	-	-	339	174	H

Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT



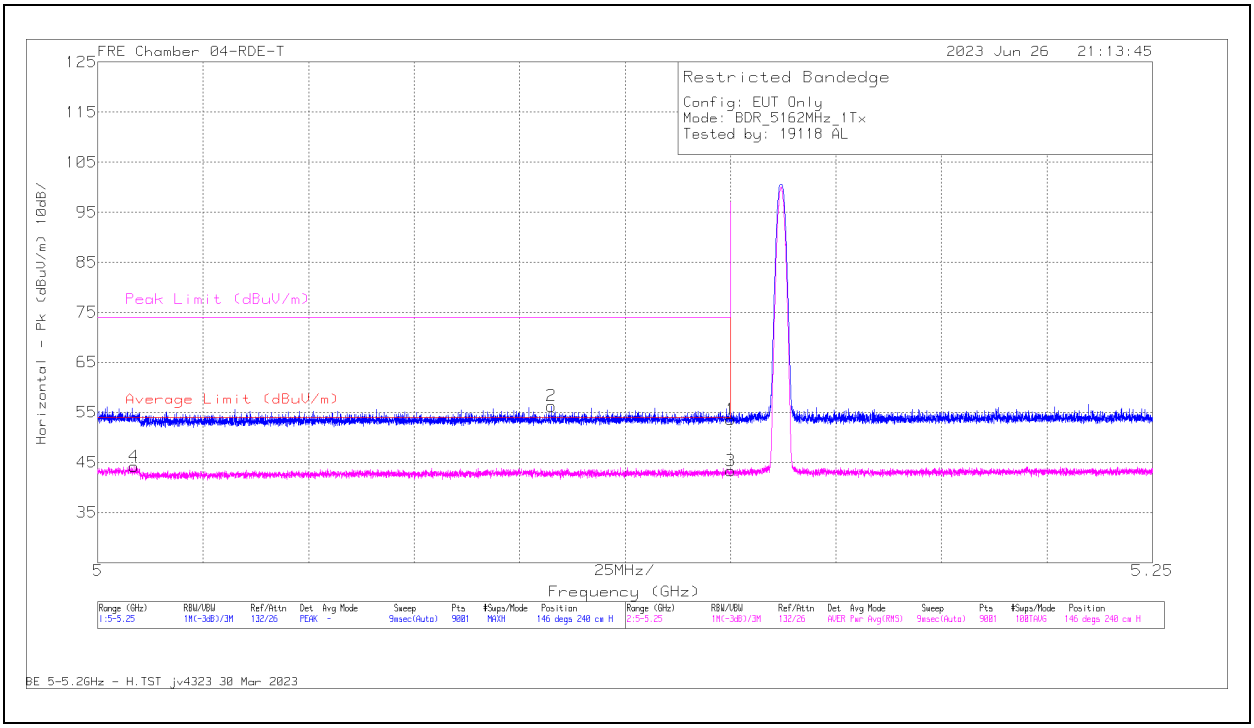
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 84796 (dB/m)	DCCF (dB)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	5.008861	48.43	RMS	34.4	0	-38.56	44.27	54	-9.73	-	-	163	181	V
2	5.090612	59.97	Pk	34.5	0	-38.58	55.89	-	-	74	-18.11	163	181	V
1	5.15	57.64	Pk	34.5	0	-38.51	53.63	-	-	74	-20.37	163	181	V
3	5.15	47.28	RMS	34.5	0	-38.51	43.27	54	-10.73	-	-	163	181	V

Pk - Peak detector
RMS - RMS detection

ANT 5

BANDEDGE (LOW CHANNEL)

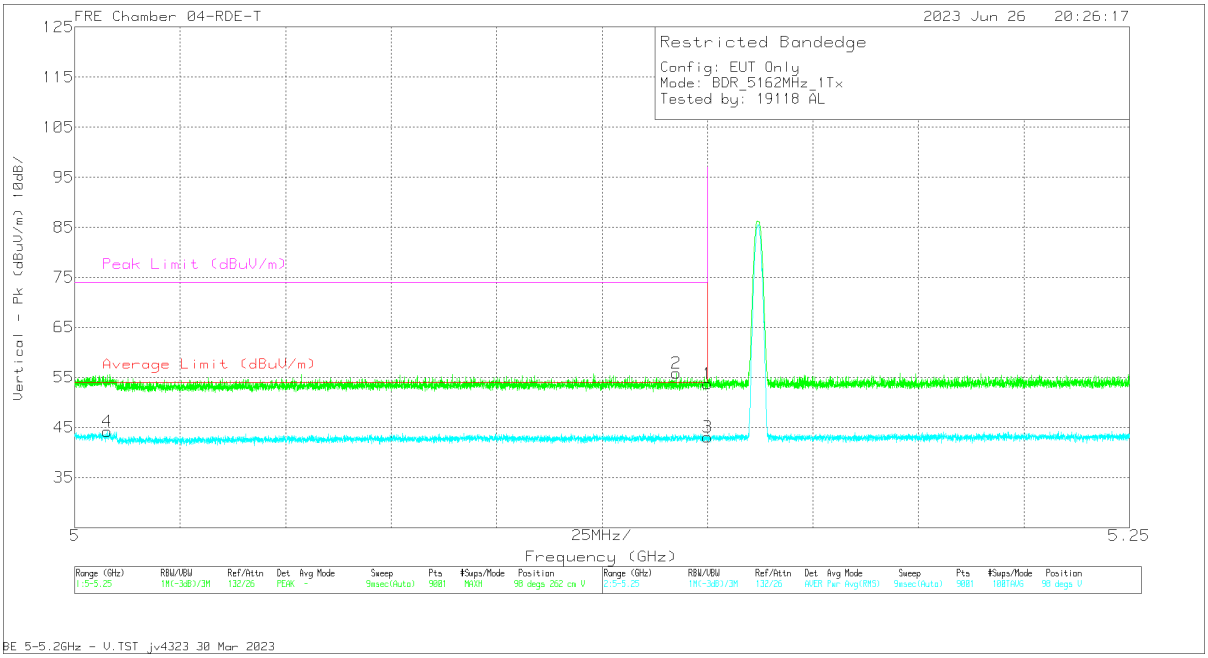
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	55.29	Pk	34.2	-35.9	53.59	-	-	74	-20.41	146	240	H
2	* 5.107501	58.28	Pk	34.1	-36.09	56.29	-	-	74	-17.71	146	240	H
3	* 5.15	45	RMS	34.2	-35.9	43.3	54	-10.7	-	-	146	240	H
4	* 5.008611	46.62	RMS	34	-36.38	44.24	54	-9.76	-	-	146	240	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	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	55.43	Pk	34.2	-35.9	53.73	-	-	74	-20.27	98	262	V
2	* 5.142584	57.53	Pk	34.2	-35.92	55.81	-	-	74	-18.19	98	262	V
3	* 5.15	44.78	RMS	34.2	-35.9	43.08	54	-10.92	-	-	98	262	V
4	* 5.007667	46.57	RMS	34	-36.37	44.2	54	-9.8	-	-	98	262	V

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

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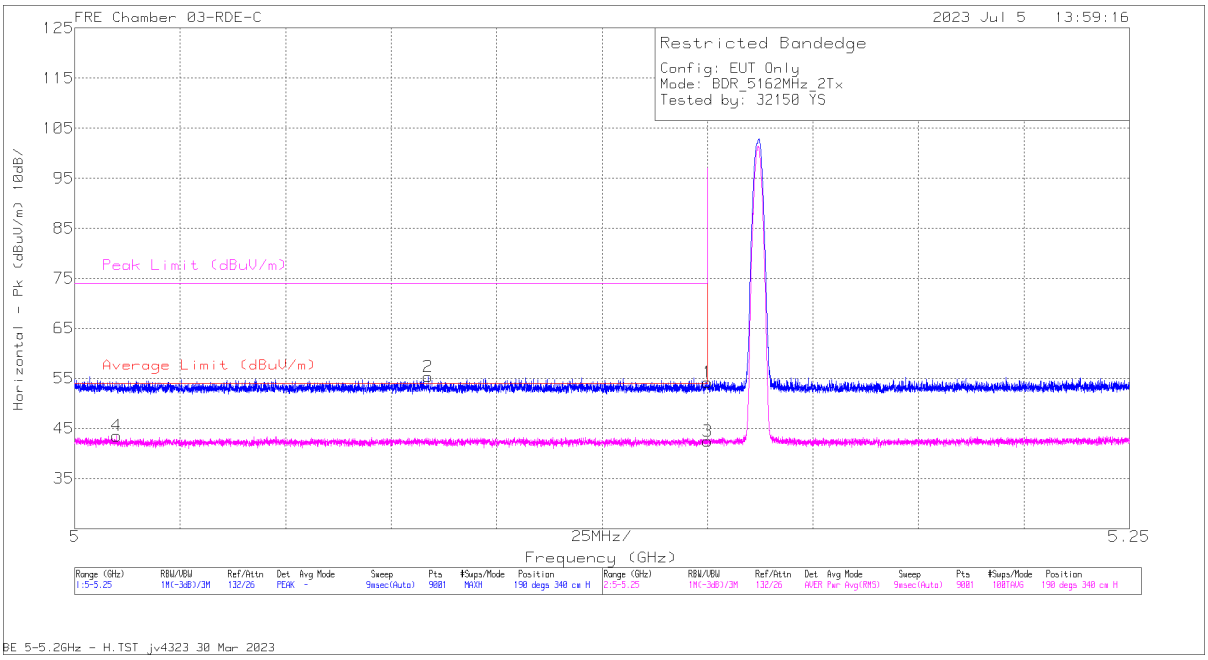
2TX Antenna 6 + Antenna 5 TX BF MODE

BANDEDGE (LOW CHANNEL)

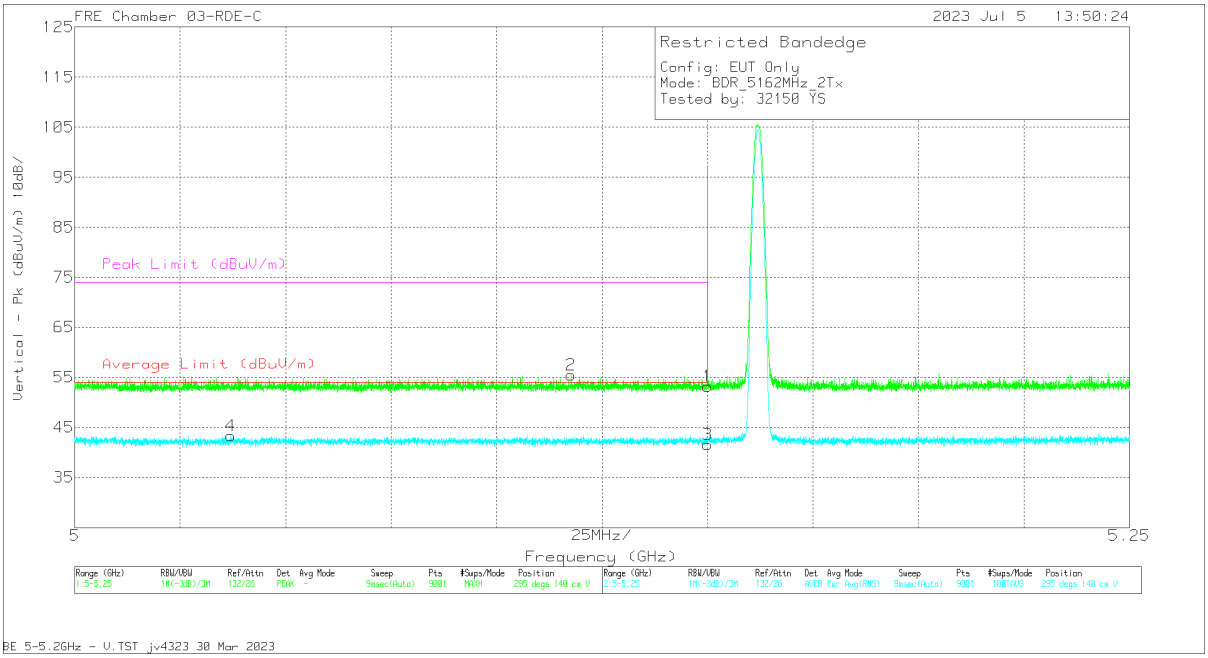
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	58.19	Pk	34.4	-38.4	54.19	-	-	74	-19.81	190	340	H
2	* 5.083778	59.6	Pk	34.2	-38.48	55.32	-	-	74	-18.68	190	340	H
3	* 5.15	46.49	RMS	34.4	-38.4	42.49	54	-11.51	-	-	190	340	H
4	* 5.009945	48.02	RMS	34.1	-38.59	43.53	54	-10.47	-	-	190	340	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	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	57.21	Pk	34.4	-38.4	53.21	-	-	74	-20.79	295	140	V
2	* 5.117668	59.66	Pk	34.3	-38.43	55.53	-	-	74	-18.47	295	140	V
3	* 5.15	45.6	RMS	34.4	-38.4	41.6	54	-12.4	-	-	295	140	V
4	* 5.036973	47.68	RMS	34.2	-38.5	43.38	54	-10.62	-	-	295	140	V

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

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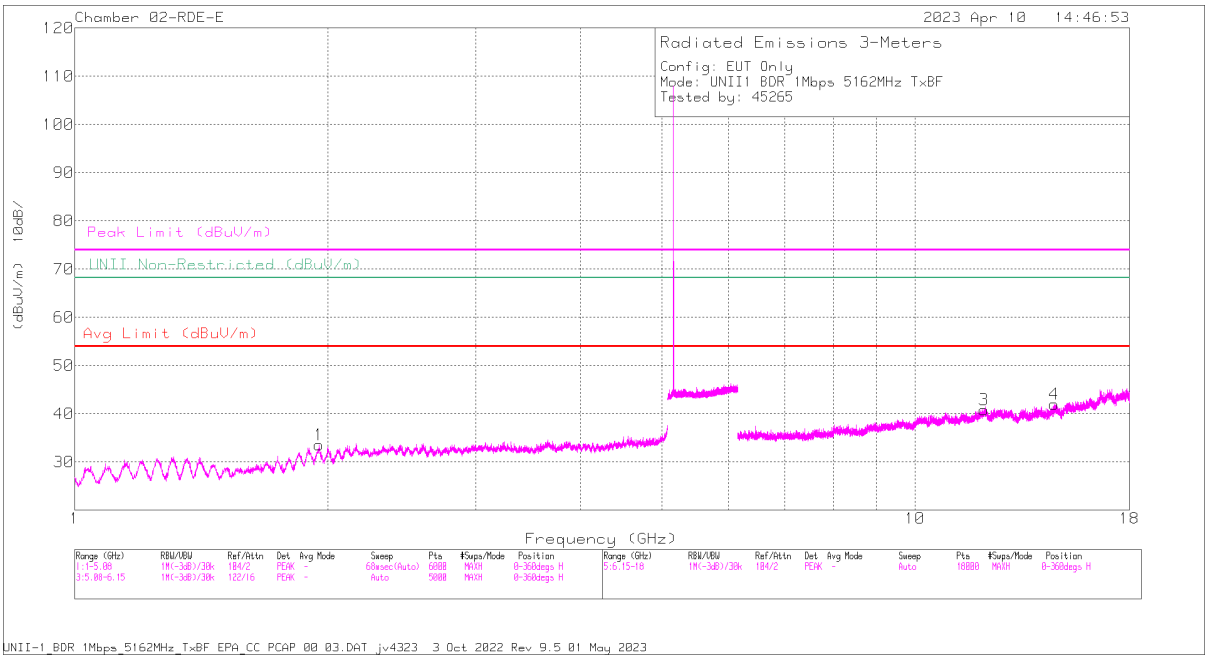
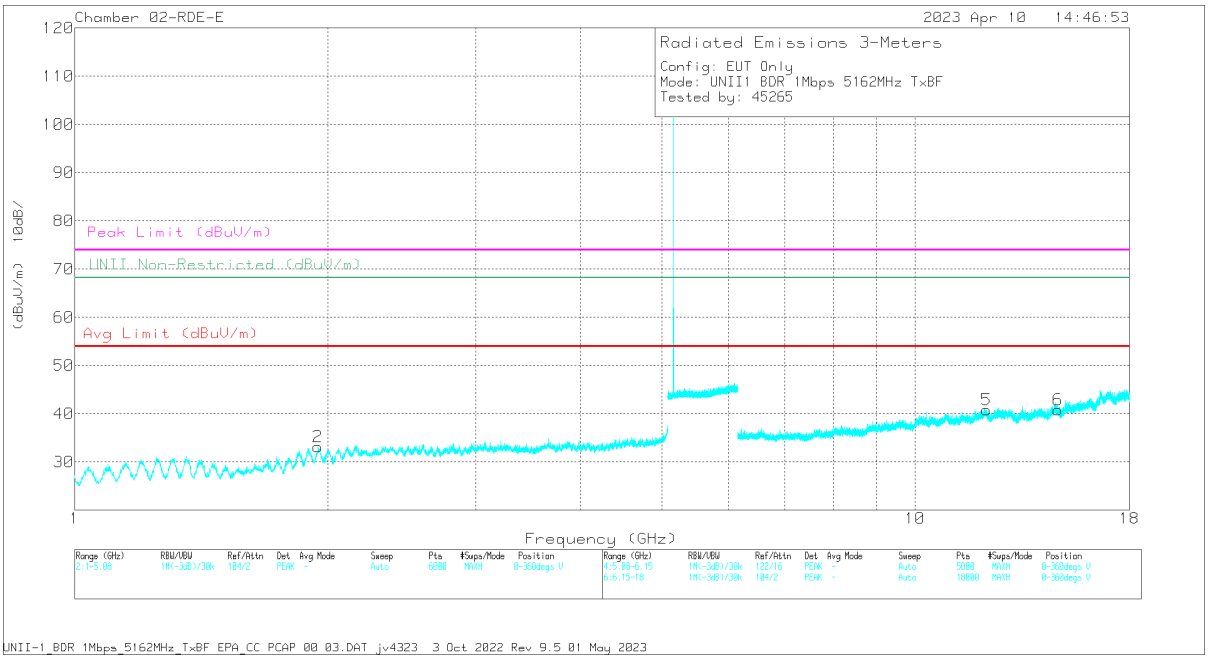
10.1.2. BDR, HIGH POWER, UNII-1, HARMONIC AND SPURIOUS IN THE 5.2 GHz BAND

LOW CHANNEL 5162MHz



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206807 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 12.081467	54.33	PK-U	38.9	-42.98	50.25	-	-	74	-23.75	-	-	360	199	H
	* 12.082488	43.26	ADR	38.9	-42.98	39.18	54	-14.82	-	-	-	-	360	199	H
5	* 12.16126	54.55	PK-U	39	-43	50.55	-	-	74	-23.45	-	-	360	101	V
	* 12.164829	43.04	ADR	39	-42.99	39.05	54	-14.95	-	-	-	-	360	101	V
2	1.946545	61.41	PK-U	30.9	-48.93	43.38	-	-	-	-	68.2	-24.82	360	199	V
1	1.954314	60.85	PK-U	31	-48.78	43.07	-	-	-	-	68.2	-25.13	360	101	H
4	14.642417	54.54	PK-U	39.6	-43	51.14	-	-	-	-	68.2	-17.06	360	199	H
6	14.805667	54.34	PK-U	39.7	-43.03	51.01	-	-	-	-	68.2	-17.19	360	200	V

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

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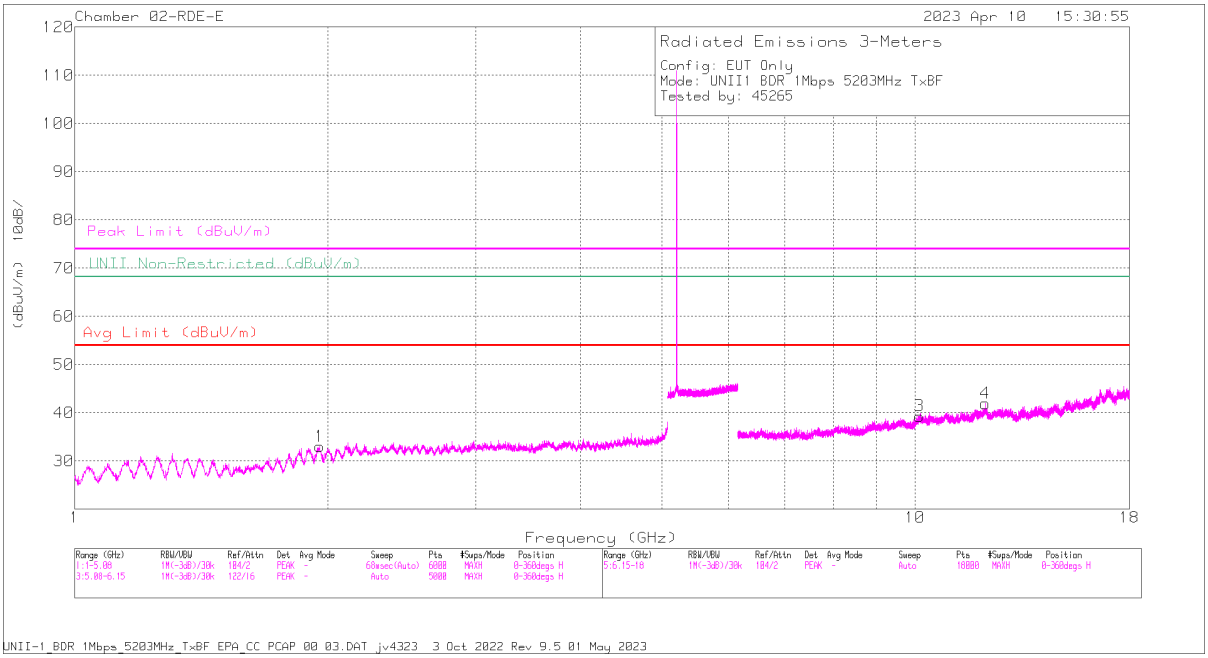
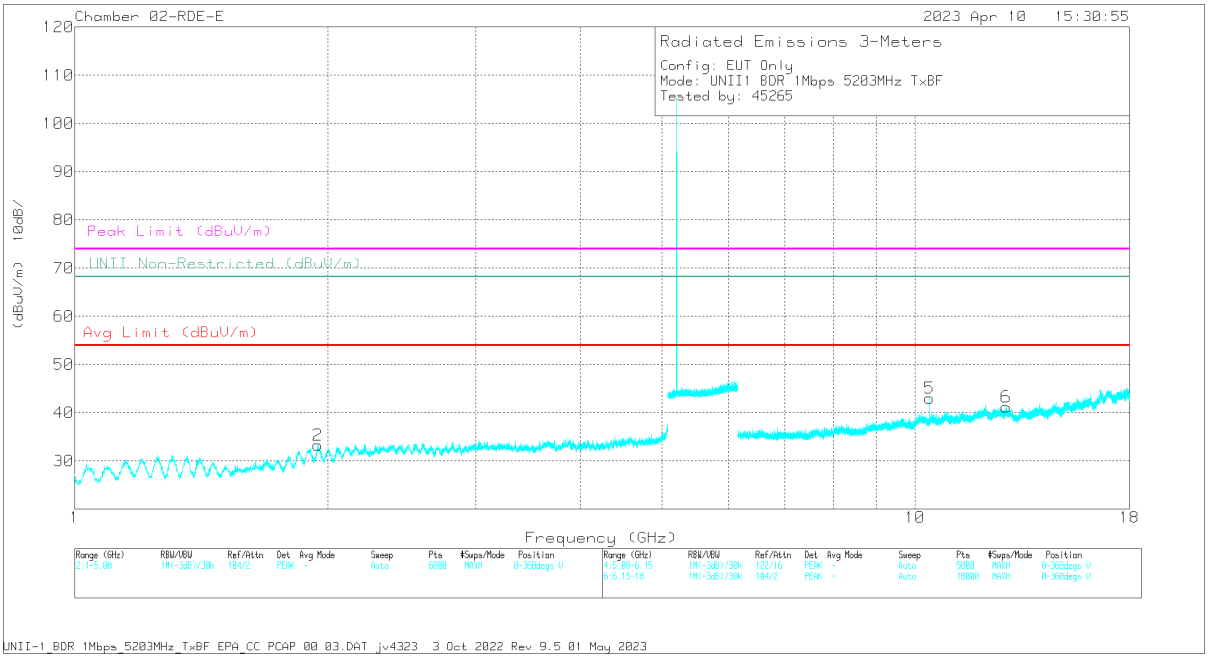
MID CHANNEL, 5203MHz



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206807 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 12.131635	55.16	PK-U	38.9	-43.03	51.03	-	-	74	-22.97	-	-	360	199	H
	* 12.131155	43.35	ADR	38.9	-43.04	39.21	54	-14.79	-	-	-	-	360	199	H
2	1.947822	61.43	PK-U	30.9	-48.89	43.44	-	-	-	-	68.2	-24.76	360	101	V
1	1.956936	61.55	PK-U	31	-48.79	43.76	-	-	-	-	68.2	-24.44	360	200	H
3	10.127262	56.84	PK-U	37.5	-45.37	48.97	-	-	-	-	68.2	-19.23	360	199	H
	10.406116	55.57	PK-U	37.6	-44.31	48.86	-	-	-	-	68.2	-19.34	360	101	V
6	12.844415	53.1	PK-U	39	-42.05	50.05	-	-	-	-	68.2	-18.15	360	199	V

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

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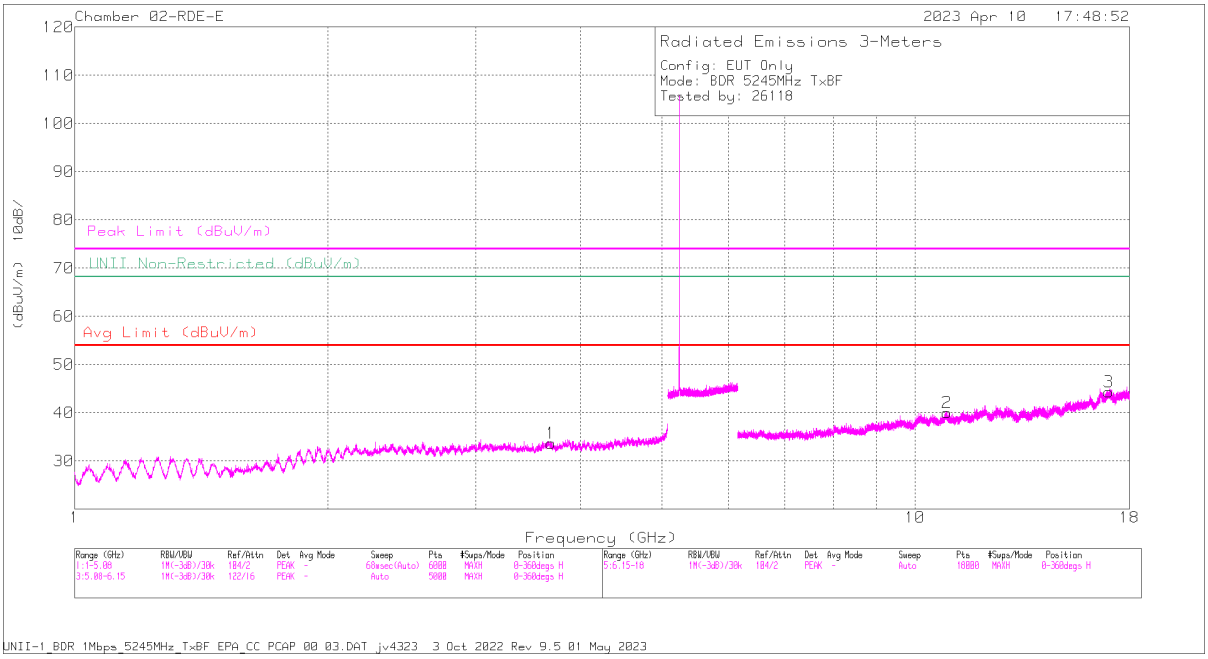
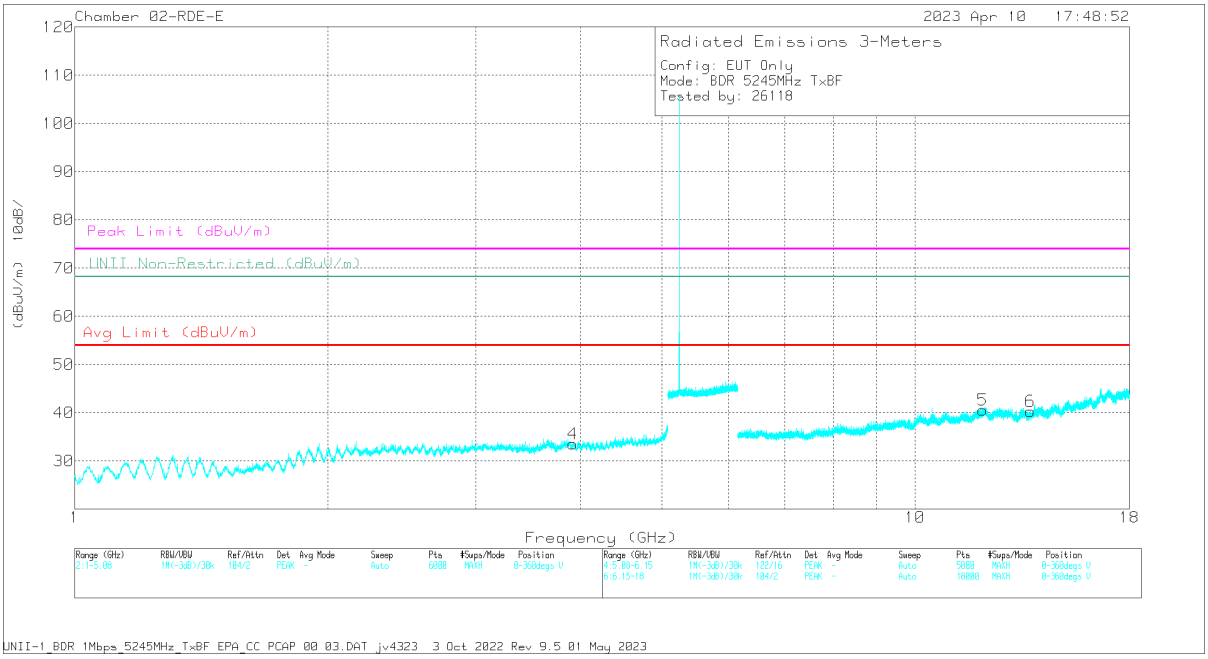
HIGH CHANNEL 5245MHz



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206807 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.686552	55.98	PK-U	33.5	-45.86	43.62	-	-	74	-30.38	-	-	360	198	H
	* 3.685375	44.54	ADR	33.5	-45.89	32.15	54	-21.85	-	-	-	-	360	198	H
4	* 3.915421	55.61	PK-U	33.5	-45.55	43.56	-	-	74	-30.44	-	-	360	101	V
	* 3.918338	44.26	ADR	33.5	-45.64	32.12	54	-21.88	-	-	-	-	360	101	V
1	* 10.914441	54.47	PK-U	37.8	-42.62	49.65	-	-	74	-24.35	-	-	360	199	H
	* 10.916228	42.55	ADR	37.8	-42.63	37.72	54	-16.28	-	-	-	-	360	199	H
5	* 12.043601	54.63	PK-U	38.9	-42.85	50.68	-	-	74	-23.32	-	-	360	199	V
	* 12.04285	42.98	ADR	38.9	-42.87	39.01	54	-14.99	-	-	-	-	360	199	V
6	13.72672	53.64	PK-U	38.8	-42.43	50.01	-	-	-	-	68.2	-18.19	360	199	V
3	17.007138	52.66	PK-U	41.7	-41.1	53.26	-	-	-	-	68.2	-14.94	360	199	H

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

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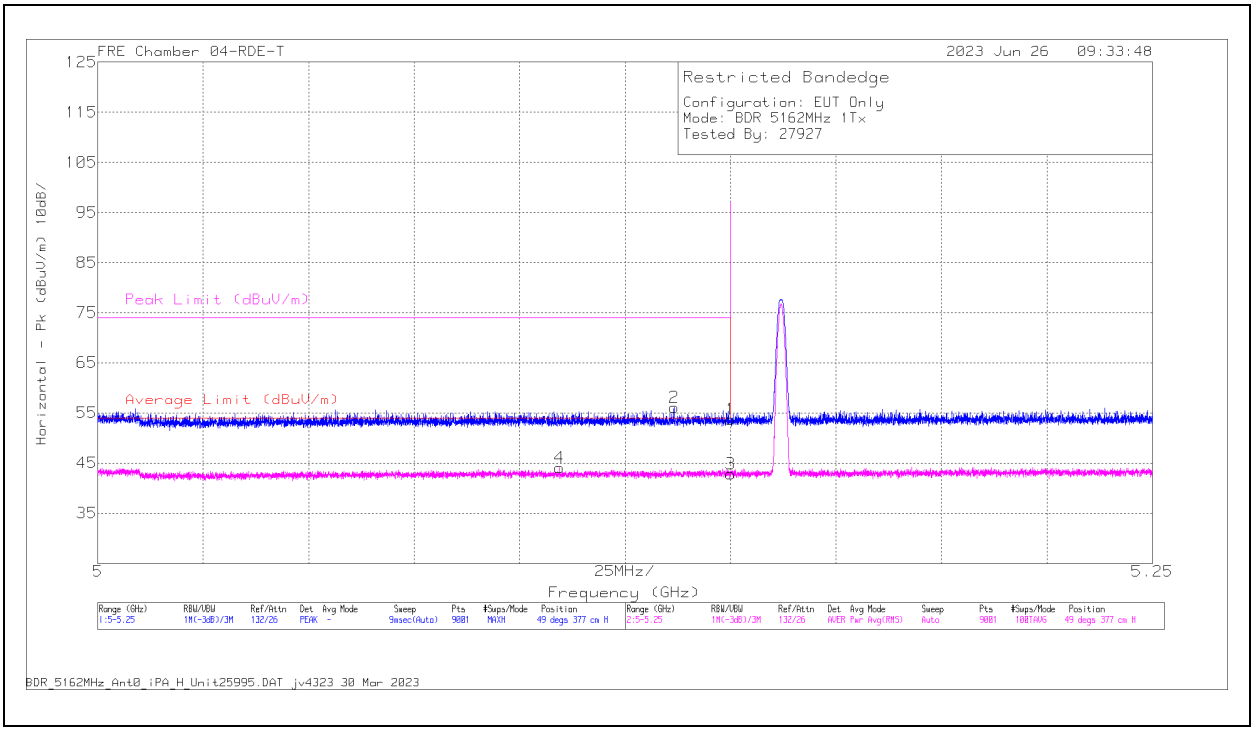
10.1.3. BDR, LOW POWER UNII-1 BANDEDGE

ANT 6

Low Channel

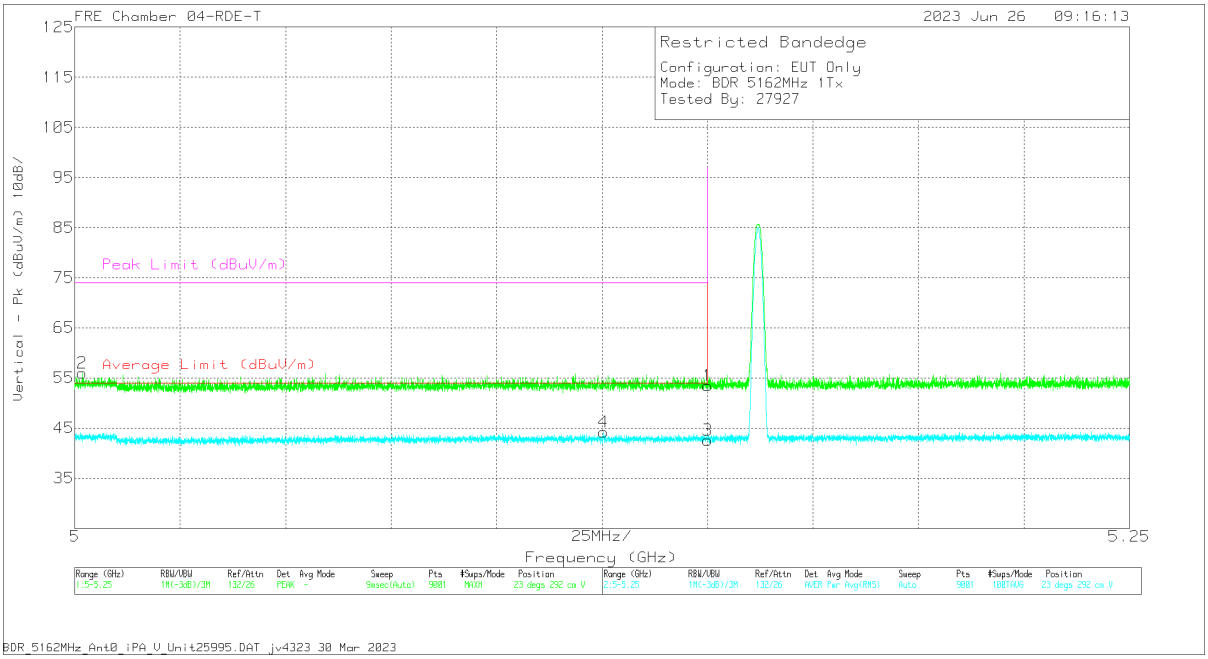
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	55.45	Pk	34.2	-35.9	53.75	-	-	74	-20.25	49	377	H
2	* 5.136584	57.82	Pk	34.2	-35.97	56.05	-	-	74	-17.95	49	377	H
3	* 5.15	44.58	RMS	34.2	-35.9	42.88	54	-11.12	-	-	49	377	H
4	* 5.109473	46.01	RMS	34.1	-36.07	44.04	54	-9.96	-	-	49	377	H

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

VERTICAL RESULT



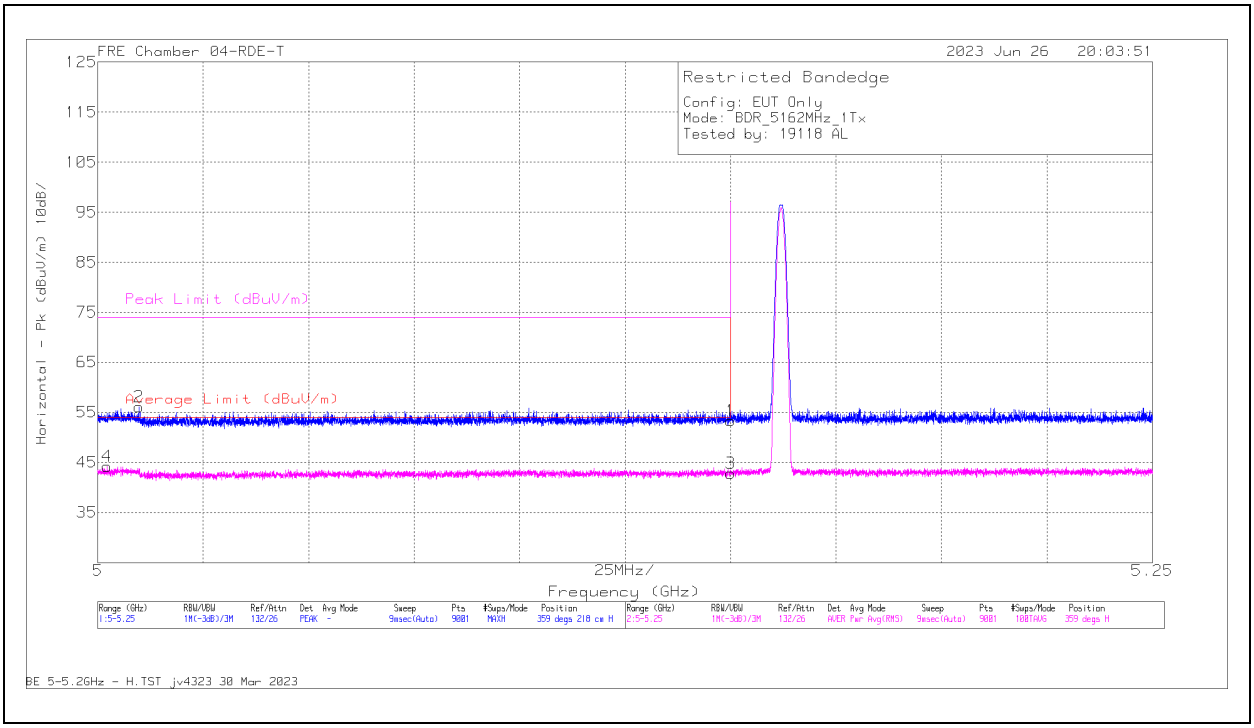
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	55.17	Pk	34.2	-35.9	53.47	-	-	74	-20.53	23	292	V
2	* 5.001778	58.43	Pk	34	-36.43	56	-	-	74	-18	23	292	V
3	* 5.15	44.29	RMS	34.2	-35.9	42.59	54	-11.41	-	-	23	292	V
4	* 5.125334	46.04	RMS	34.2	-36.01	44.23	54	-9.77	-	-	23	292	V

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

ANT 5

Low Channel

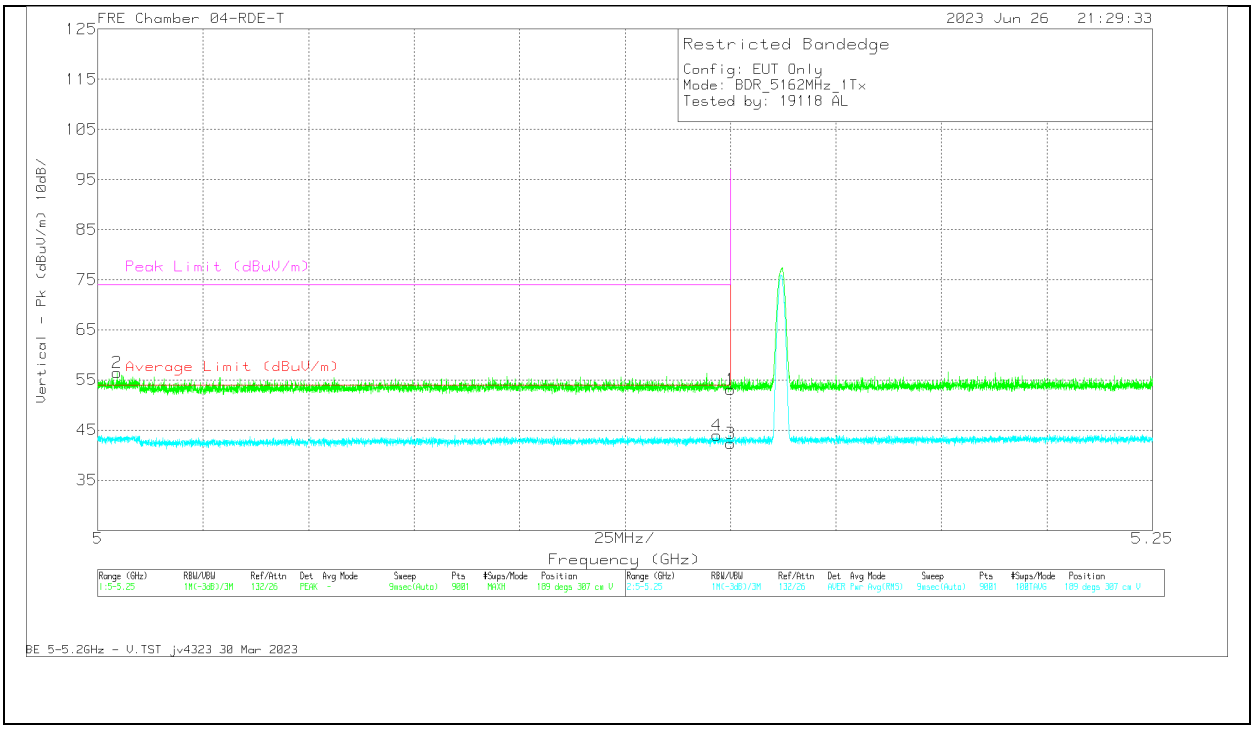
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	55	Pk	34.2	-35.9	53.3	-	-	74	-20.7	359	218	H
2	* 5.009778	58.51	Pk	34	-36.4	56.11	-	-	74	-17.89	359	218	H
3	* 5.15	44.49	RMS	34.2	-35.9	42.79	54	-11.21	-	-	359	218	H
4	* 5.00225	46.68	RMS	34	-36.43	44.25	54	-9.75	-	-	359	218	H

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

VERTICAL RESULT



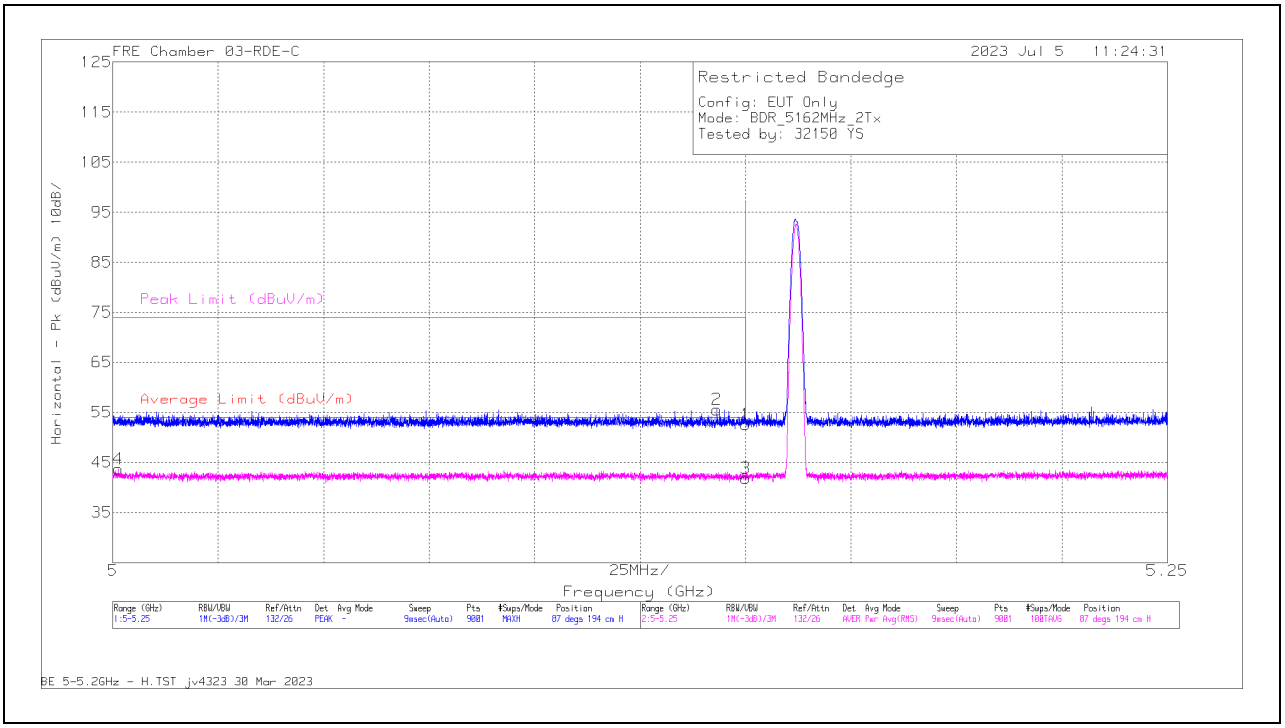
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	54.76	Pk	34.2	-35.9	53.06	-	-	74	-20.94	189	307	V
2	* 5.004639	58.82	Pk	34	-36.39	56.43	-	-	74	-17.57	189	307	V
3	* 5.15	44.05	RMS	34.2	-35.9	42.35	54	-11.65	-	-	189	307	V
4	* 5.146723	45.69	RMS	34.2	-35.93	43.96	54	-10.04	-	-	189	307	V

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

2TX Antenna 6 + Antenna 5 TX BF MODE

BANDEDGE (LOW CHANNEL)

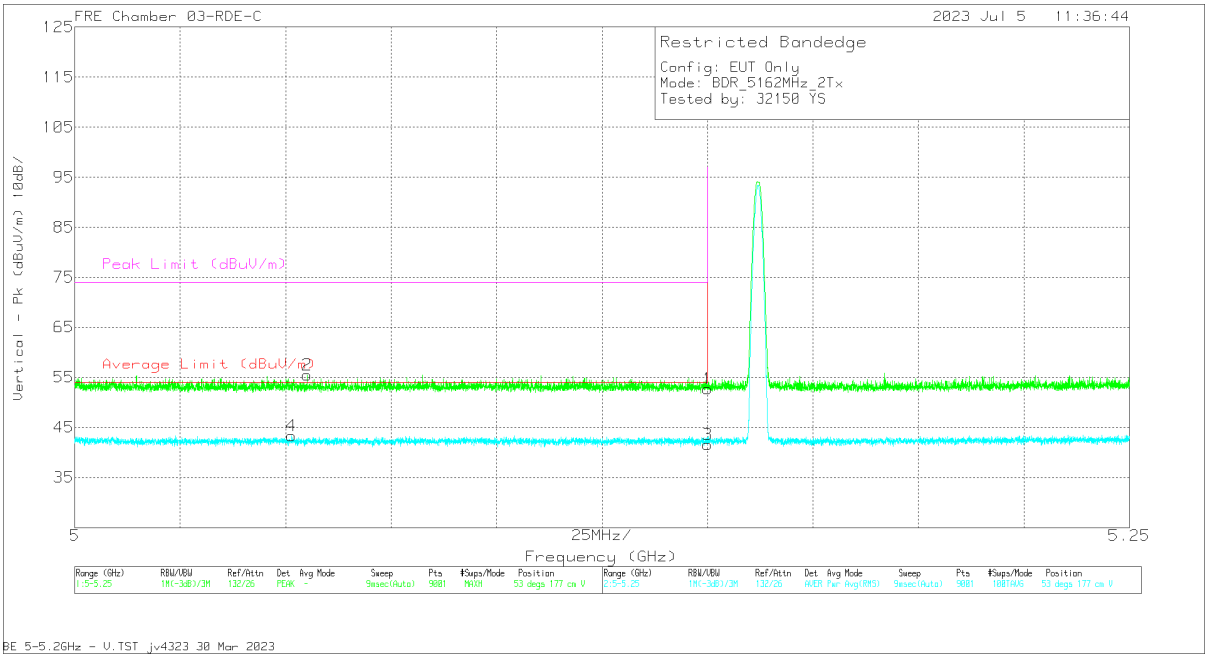
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	56.55	Pk	34.4	-38.4	52.55	-	-	74	-21.45	87	194	H
2	* 5.14314	59.64	Pk	34.3	-38.4	55.54	-	-	74	-18.46	87	194	H
3	* 5.15	45.89	RMS	34.4	-38.4	41.89	54	-12.11	-	-	87	194	H
4	* 5.001361	48.06	RMS	34.1	-38.5	43.66	54	-10.34	-	-	87	194	H

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

VERTICAL RESULT

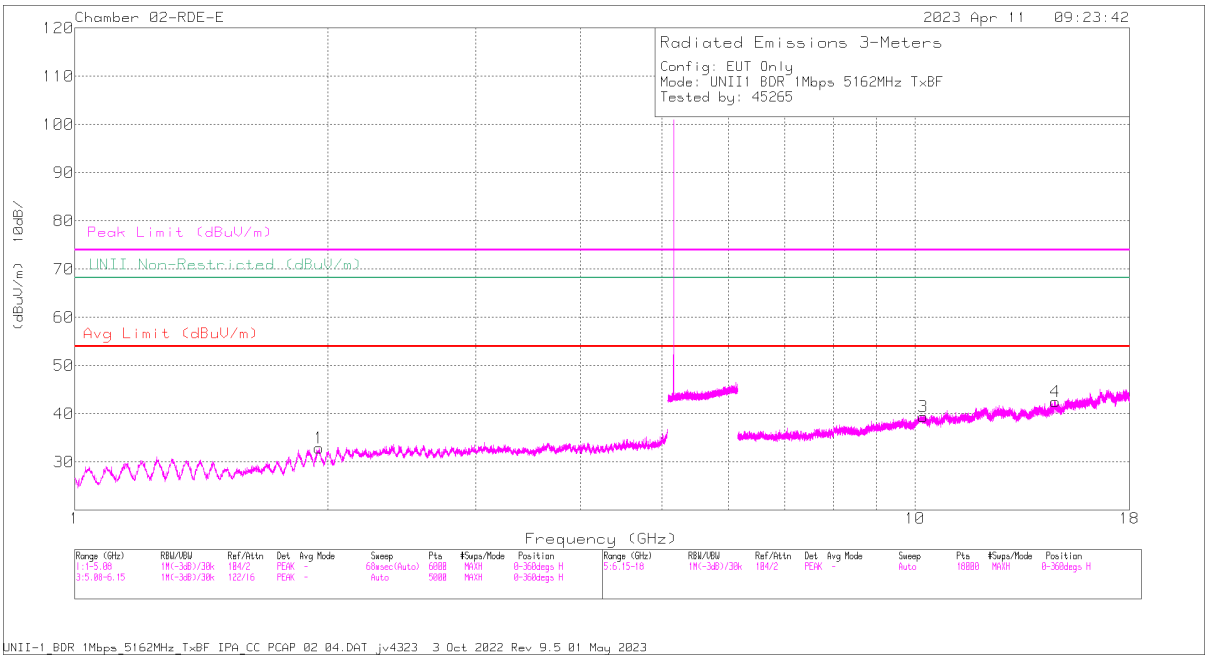


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	226672 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.051445	47.63	RMS	34.2	-38.5	43.33	54	-10.67	-	-	53	177	V
2	* 5.055084	59.78	Pk	34.2	-38.5	55.48	-	-	74	-18.52	53	177	V
1	* 5.15	56.72	Pk	34.4	-38.4	52.72	-	-	74	-21.28	53	177	V
3	* 5.15	45.63	RMS	34.4	-38.4	41.63	54	-12.37	-	-	53	177	V

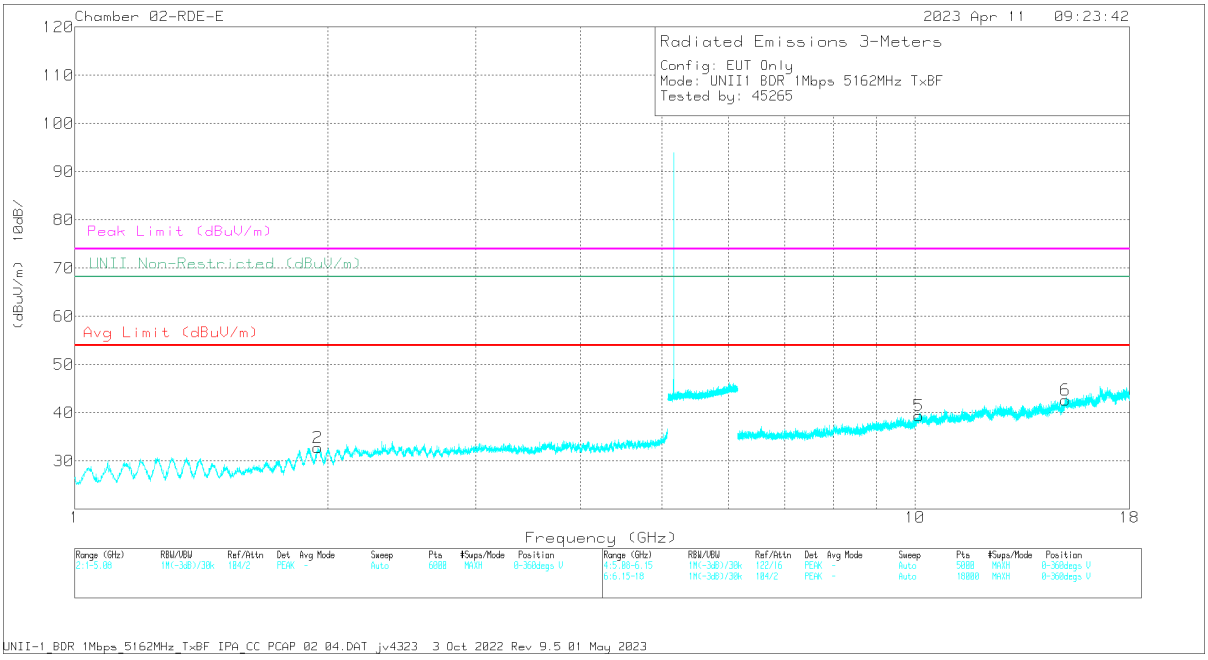
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

10.1.4. BDR, LOW POWER, UNII-1, HARMONIC AND SPURIOUS TX ABOVE 1 GHz IN THE 5.2 GHz BAND

LOW CHANNEL 5162MHz



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	206807 ACF (dB) 3mH	Gain/Loss (dB)	Corrected Reading (dBuV/m)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	1.94559	61.29	PK-U	30.9	-48.97	43.22	68.2	-24.98	1	101	V
1	1.953544	60.31	PK-U	31	-48.81	42.5	68.2	-25.7	1	101	H
5	10.102405	57.19	PK-U	37.5	-45.75	48.94	68.2	-19.26	1	101	V
3	10.227269	57.79	PK-U	37.5	-45.82	49.47	68.2	-18.73	1	200	H
4	14.698296	54.95	PK-U	39.6	-42.83	51.72	68.2	-16.48	1	101	H
6	15.103057	53.94	PK-U	39.8	-41.95	51.79	68.2	-16.41	1	200	V

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

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