TEST REPORT

Report Number: 14982489-E7V2

Applicant	:	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3082
FCC ID	:	BCG-E8692A
IC	:	579C-E8692A
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E ISED RSS-247 ISSUE 3 ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
2024/08/12

Prepared by:
UL Verification Services Inc.
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CERT #0751.05

REPORT REVISION HISTORY

Rev.		Issue Date		Revisions		Revised By
V1		2024/07/30		Initial Review		Chris Xiong
V2		2024/08/12		Addressed TCB Questions		Chris Xiong

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3082
Brand	APPLE
FCC ID	BCG-E8692A
IC	579C-E8692A
EUT Description	Smartphone
Serial Number	C7HH230000G0000HC0, C7HH500000X0000HBX, FJWNV71QMD
Sample Receipt Date	2024/03/11
Date Tested	2023/04/03 to 2023/07/27
Applicable Standards	47 CFR Part 15 Subpart E ISED RSS-247 Issue 3 ISED RSS-GEN Issue 5 + A1 + A2
Test Results	COMPLIES

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

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

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

Approved & Released By:	Prepared & Reviewed By:
Francisco DeAnda Staff Engineer UL Verification Services, Inc.	Chris Xiong Senior Test Engineer UL Verification Services, Inc.

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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 correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

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

1. Antenna gain and type (see section 6.2)
2. Cable loss (see section 6.2)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment	See Comment	Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	RSS-GEN 6.7	26dB BW/99% OBW	Reporting purposes only	Per ANSI C63.10 Sections 6.9.2 and 6.9.3
15.407 (e)	RSS-247 6.2.4.2	6 dB BW	Complies	None.
15.407 (a) (1 & 3)	RSS-247 6.2	Output Power	Complies	None.
15.407 (a) (1 & 3)	RSS-247 6.2	PSD	Complies	None.
15.209, 15.205, 15.407 (b)	RSS-GEN 8.9, 8.10, RSS-247 6.2	Radiated Emissions	Complies	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Complies	None.

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3. TEST METHODOLOGY

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

- FCC 47 CFR Part 2
- FCC 47 CFR Part 15
- 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
- ANSI C63.10-2013
- RSS-GEN Issue 5 + A1 +A2
- RSS-247 Issue 3

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			

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5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

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

5.2. DECISION RULES

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

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U_{LAB}
Conducted Antenna Port Emission Measurement	1.94 dB
Power Spectral Density	2.47 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	1.30 (PK.), 0.45 (AV),
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.2%
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%.

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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, WCDMA, LTE, 5GNR1, 5GNR2, IEEE 802.11a/b/g/n/ac/ax/be, Bluetooth (BT), Ultra-Wideband (UWB), Global Positioning System (GPS), Near-Field Communication (NFC), Narrow-Band (NB) UNII, 802.15.4, 802.15.4ab-Narrow Band (NB), Wireless Power Transfer (WPT) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

6.2. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type is IFA.

The antennas' gains, as provided by the manufacturer, are as follows:

Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5150 - 5250 UNII-1	-3.50	-4.70	-4.06	-1.07
5725 - 5825 UNII-3	-0.90	-3.30	-1.94	0.99

Frequency Range (MHz)	Cable Loss	
	Antenna 6 (dB)	Antenna 5 (dB)
5150 - 5250 UNII-1	2.70	3.10
5725 - 5825 UNII-3	2.90	3.40

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

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 22.1.76.241.

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6.4. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Antenna	Configuration	Output Power (dBm)	Output Power (mW)
5162 - 5245 (UNII-1)	BDR	ANT 6	High Power	9.74	9.42
			Low Power	6.31	4.28
		ANT 5	High Power	9.83	9.62
			Low Power	4.86	3.06
		ANT 6 + ANT 5 TXBF	High Power	9.78	9.51
			Low Power	8.62	7.28
	HDR 4	ANT 6	High Power	11.32	13.55
			Low Power	-0.19	0.96
		ANT 5	High Power	11.30	13.49
			Low Power	-1.75	0.67
		ANT 6 + ANT 5 TXBF	High Power	11.31	13.52
			Low Power	2.14	1.64
	HDR 8	ANT 6	High Power	13.79	23.93
			Low Power	-0.19	0.96
		ANT 5	High Power	13.77	23.82
			Low Power	-1.73	0.67
		ANT 6 + ANT 5 TXBF	High Power	13.8	23.99
			Low Power	2.15	1.64

5.2 GHz BAND (ISED)

Frequency Range (MHz)	Mode	Antenna	Configuration	Output Power (dBm)	Antenna Gain (dBi)	Output Power EIRP(mW)
5162 - 5245 (UNII-1)	BDR	ANT 6	High Power	11.79	-3.50	6.75
			Low Power	6.31	-3.50	1.91
		ANT 5	High Power	13.32	-4.70	7.28
			Low Power	4.86	-4.70	1.04
		ANT 6 + ANT 5 TXBF	High Power	9.60	-4.06	3.58
			Low Power	8.35	-4.06	2.69
	HDR 4	ANT 6	High Power	13.76	-3.50	10.62
			Low Power	-0.19	-3.50	0.43
		ANT 5	High Power	14.29	-4.70	9.10
			Low Power	-1.75	-4.70	0.23
		ANT 6 + ANT 5 TXBF	High Power	11.33	-4.06	5.33
			Low Power	2.14	-4.06	0.64
	HDR 8	ANT 6	High Power	14.25	-3.50	11.89
			Low Power	-0.19	-3.50	0.43
		ANT 5	High Power	14.30	-4.70	9.12
			Low Power	-1.73	-4.70	0.23
		ANT 6 + ANT 5 TXBF	High Power	13.61	-4.06	9.02
			Low Power	2.15	-4.06	0.64

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5.8 GHz BAND

Frequency Range (MHz)	Mode	Antenna	Configuration	Output Power (dBm)	Output Power (mW)
5733 - 5844 (UNII-3)	BDR	ANT 6	High Power	14.31	26.98
			Low Power	6.81	4.80
		ANT 5	High Power	14.34	27.16
			Low Power	5.47	3.52
		ANT 6 + ANT 5 TXBF	High Power	17.33	54.08
			Low Power	9.14	8.20
	HDR 4	ANT 6	High Power	14.31	26.98
			Low Power	0.29	1.07
		ANT 5	High Power	14.33	27.10
			Low Power	-1.21	0.76
		ANT 6 + ANT 5 TXBF	High Power	17.27	53.33
			Low Power	2.63	1.83
	HDR 8	ANT 6	High Power	14.29	26.85
			Low Power	0.28	1.07
		ANT 5	High Power	14.25	26.61
			Low Power	-1.17	0.76
		ANT 6 + ANT 5 TXBF	High Power	17.28	53.46
			Low Power	2.59	1.82

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6.5. WORST-CASE CONFIGURATION AND MODE

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

2TX Beamforming modes was 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 to or higher than FCC/ISED 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, tests were 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 Wi-Fi 2.4GHz and NB UNII 5GHz bands, no noticeable emission was found.

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID/ DoC**
Laptop	Apple	MacBook Pro	C02CWHQ4ML7H	BCGA2251
Laptop AC/DC adapter	Apple	A1718	C4H021107C2PM0WAW	DoC
EUT AC/DC adapter	Apple	A2305	HHY23570SL11PW9A1	DoC

I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
2	Antenna	2	SMA	Shielded	0.2	To spectrum Analyzer
3	USB-C	1	USB-C	Shielded	1.0	DC/Data
4	DC	1	DC	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	USB	1	USB-C	Shielded	1	DC/Data

TEST SETUP

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

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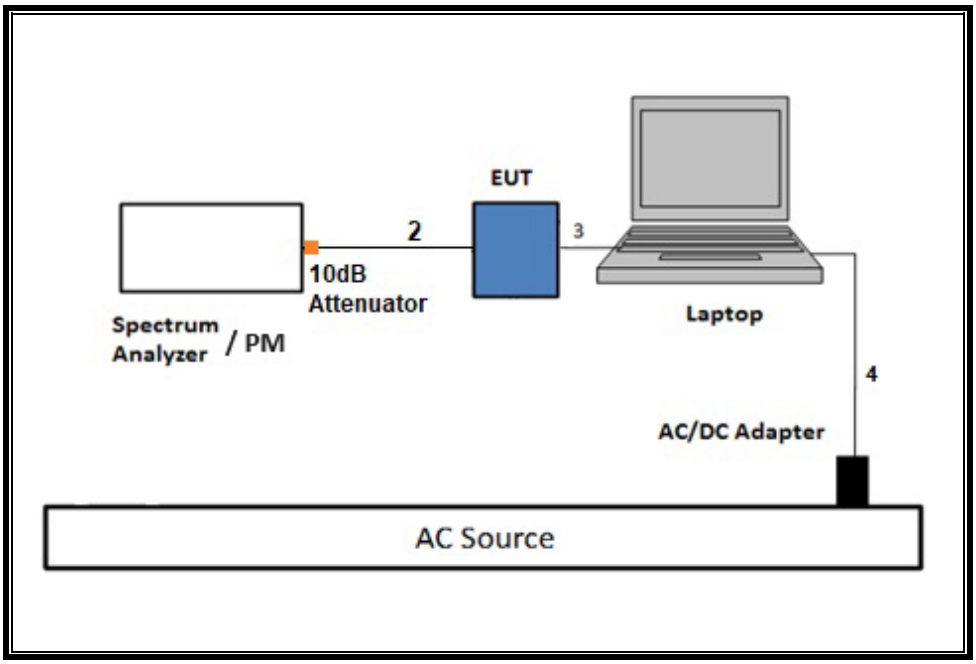
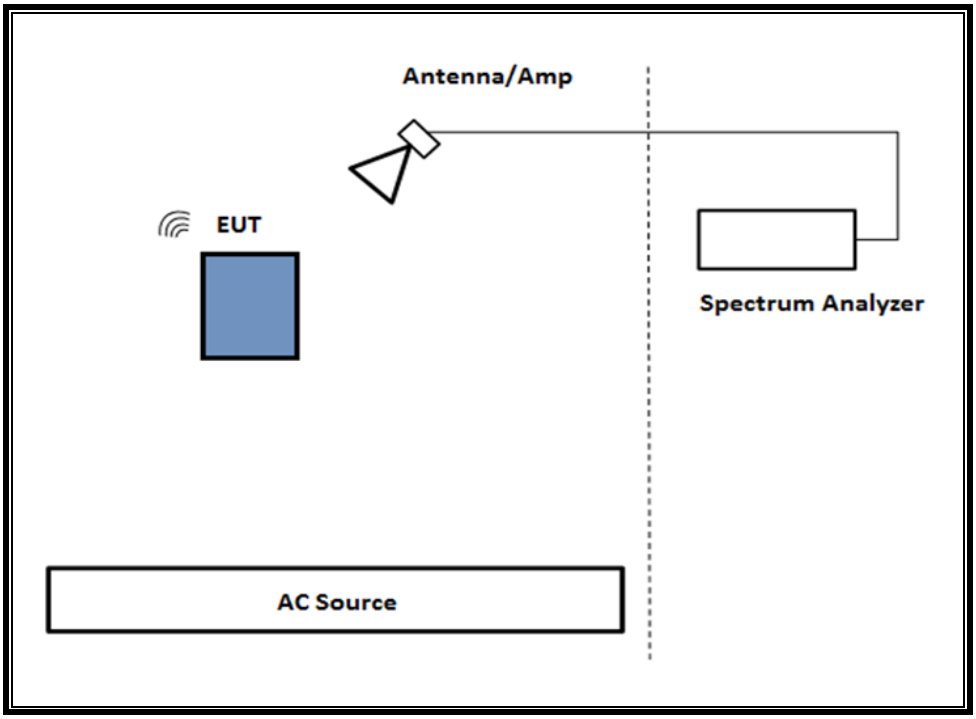
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS (1 GHz – 40 GHz)



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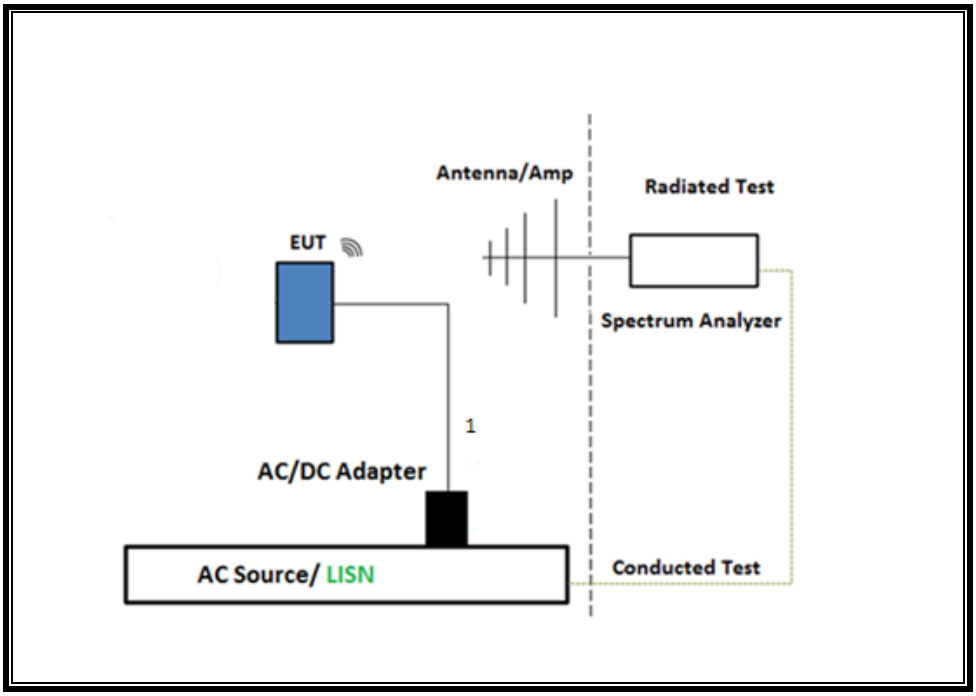
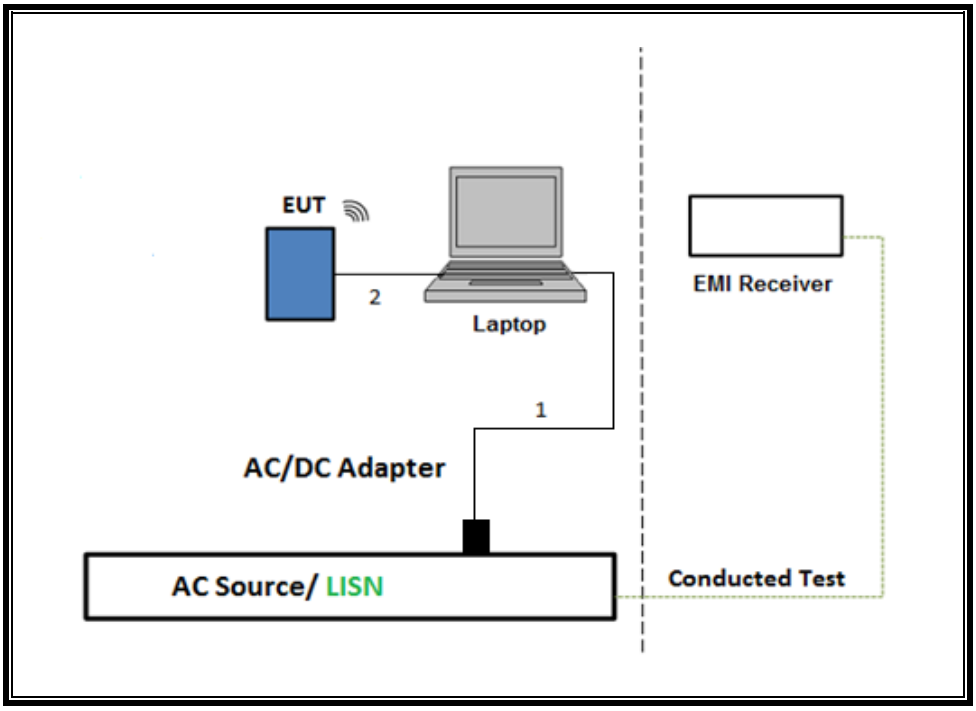
SETUP DIAGRAM FOR RADIATED TESTS (30-1000MHz) and AC LINE CONDUCTED TEST



SETUP DIAGRAM FOR AC LINE CONDUCTED TEST (LAPTOP CONFIGURATION)



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7. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**ID Number**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125178	2025/01/31
Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Keysight Technologies Inc	N9030A	80400	2025/02/28
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	222071	2024/11/30
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	236353	2024/08/31
10dB Fixed Attenuator, Up to 26GHz	Pasternack Enterprises	PE7087-10	236285	2024/08/31
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90719	2025/01/31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	90389	2025/01/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169937	2025/02/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200896	2025/04/24
RF Filter Box, 1-18GHz, 12 Ports	UL-FR1	Frankenstein	231874	2024/08/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179372	2025/02/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	226673	2025/02/28
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231874	2024/08/30
*Antenna, Passive Loop 100KHz - 30MHz	ELECTRO-METRICS	EM-6872	170015	2024/07/31
*Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170013	2024/07/31
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	230311	2025/05/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	235670	2025/02/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	230300	2025/01/31
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231875	2024/08/31
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	204045	2025/04/30
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	230307	2025/05/31
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	172354	2024/11/03
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	220194	2024/08/31
Antenna, Horn 26.5 to 40GHz	A.R.A.	MWH-2640/B	172369	2025/11/30
Link File, RF Amplifier Assembly, 26-40GHz, 65dB Gain	AMPLICAL	AMP26G40-65	221834	2025/03/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	235670	2025/02/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	223084	2024/10/31
RF Filter Box, 1-18GHz, 17 Ports	UL-FR1	RATS 2	225079	2025/04/30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	2025/02/28
*Antenna, Horn 1-18GHz	ETS-Lindgren	3117	80402	2024/07/31
RF Filter Box, 1-18GHz, 12 Port	UL-FR1	Frankenstein	216812	2025/01/30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201499	2025/02/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	41112	2024/10/31
RF Filter Box, 1-18GHz, F2A, 12 Ports	UL-FR1	F2A	224478	2025/01/31

AC LINE CONDUCTED				
Description	**Manufacturer**	**Model**	**ID Number**	**Cal Due**
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	93091	2025/02/28
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175765	2025/01/31
Transient Limiter	TE	TBFL1	207996	2024/08/31

UL AUTOMATION SOFTWARE			
Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023
Conducted Software	UL	UL EMC	2024.2.23
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023

*Testing is completed before equipment expiration date.

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8. MEASUREMENT METHODS

TEST ITEM	TEST METHOD
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, Section 6.2
Radiated Spurious Emissions Below 30MHz	ANSI C63.10 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

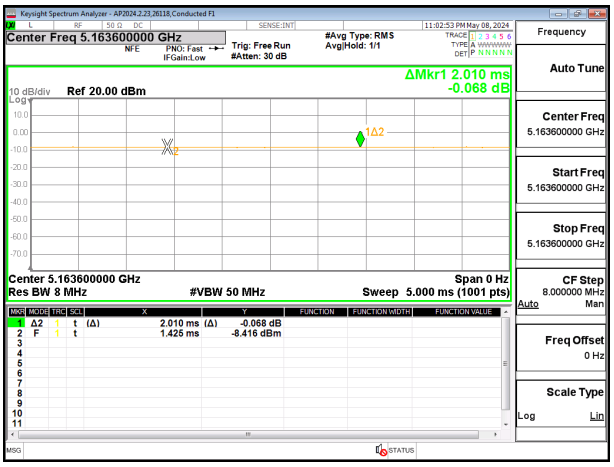
ANSI C63.10, Section 12.2: Zero-Span Spectrum Analyzer Method.

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	2.010	2.010	1.000	100.0%	0.00	0.010
HDR4	1.930	1.930	1.000	100.0%	0.00	0.010
HDR8	2.125	2.125	1.000	100.0%	0.00	0.010

Note: DCCF is the same for both SISO MODE and TXBF MODE

DUTY CYCLE PLOT



DUTY CYCLE, BDR

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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 SISO MODE

(SISO)	Frequency (MHz)	Channel	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			ANT 6	ANT 5	ANT 6	ANT 5
BDR (UNII-1)	5162	Low	1.281	1.287	1.0092	0.9988
	5203	Mid	1.294	1.276	1.0040	1.0033
	5245	High	1.275	1.285	0.9983	1.0010
HDR 4 (UNII-1)	5162	Low	2.734	2.751	2.3126	2.3204
	5203	Mid	2.733	2.743	2.3141	2.3207
	5245	High	2.733	2.748	2.3181	2.3182
HDR 8 (UNII-1)	5162	Low	5.749	5.750	4.8081	4.8083
	5203	Mid	5.751	5.762	4.8065	4.8238
	5245	High	5.750	5.752	4.8091	4.8117
BDR (UNII-3)	5733	Low	1.279	1.283	0.9964	0.9960
	5788	Mid	1.285	1.282	1.0065	0.9998
	5844	High	1.289	1.285	1.0022	0.9980
HDR 4 (UNII-3)	5733	Low	2.752	2.747	2.3272	2.3288
	5788	Mid	2.765	2.760	2.3274	2.3272
	5844	High	2.764	2.769	2.3239	2.3261
HDR 8 (UNII-3)	5733	Low	5.772	5.766	4.8249	4.8178
	5788	Mid	5.775	5.776	4.8256	4.8345
	5844	High	5.773	5.768	4.8381	4.8392

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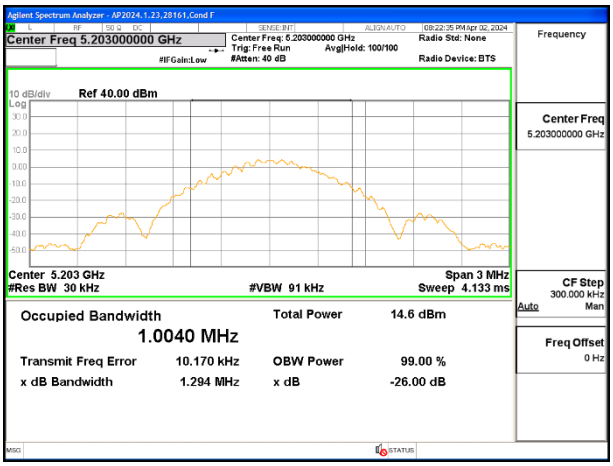
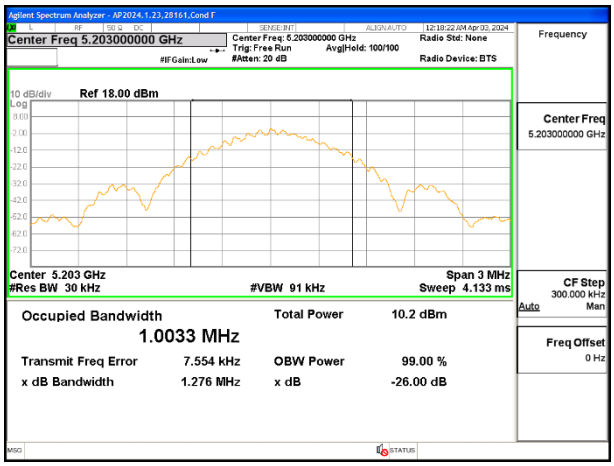
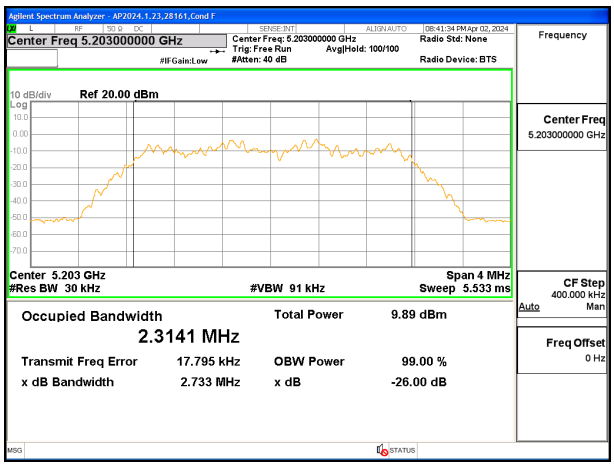


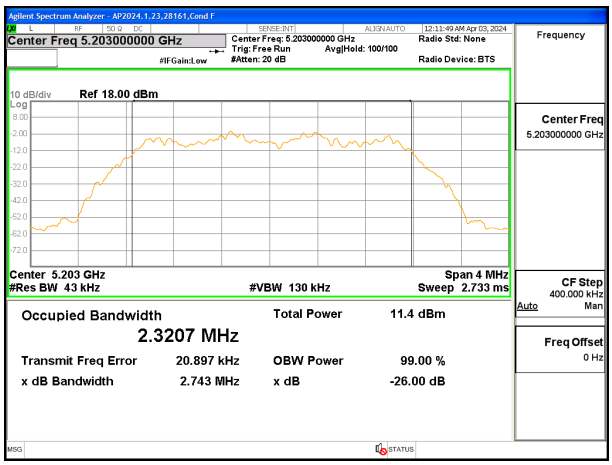
MID CHANNEL (UNII-1 BDR) – ANT 6



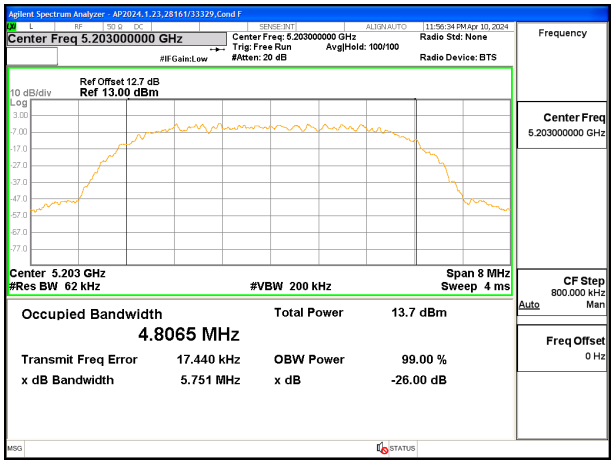
MID CHANNEL (UNII-1 BDR) – ANT 5



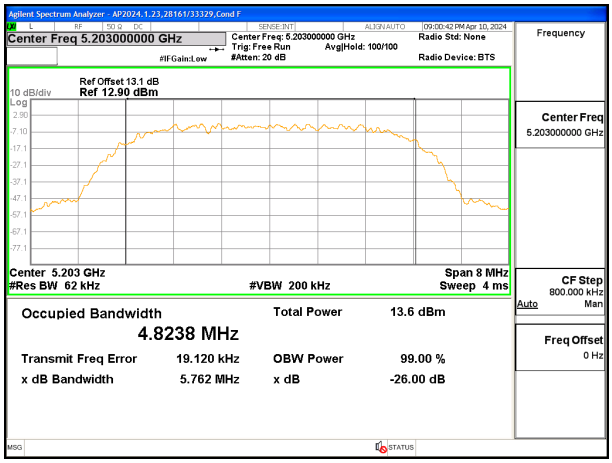
MID CHANNEL (UNII-1 HDR 4) – ANT 6



MID CHANNEL (UNII-1 HDR 4) – ANT 5



MID CHANNEL (UNII-1 HDR 8) – ANT 6



MID CHANNEL (UNII-1 HDR 8) – ANT 5

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9.2.2. HIGH POWER TXBF MODE

(MIMO BF)	Frequency (MHz)	Channel	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)		
			ANT 6	ANT 5	ANT 6	ANT 5	Min BW
BDR (UNII-1)	5162	Low	1.280	1.284	0.9994	1.0005	0.9994
	5203	Mid	1.281	1.285	0.9950	0.9980	0.9950
	5245	High	1.288	1.272	0.9995	0.9983	0.9983
HDR 4 (UNII-1)	5162	Low	2.743	2.743	2.3219	2.3200	2.3200
	5203	Mid	2.746	2.747	2.3182	2.3225	2.3182
	5245	High	2.748	2.739	2.3220	2.3179	2.3179
HDR 8 (UNII-1)	5162	Low	5.751	5.737	4.8036	4.7949	4.7949
	5203	Mid	5.756	5.741	4.8135	4.8066	4.8066
	5245	High	5.759	5.759	4.8163	4.8113	4.8113
BDR (UNII-3)	5733	Low	1.282	1.280	0.9990	1.0032	--
	5788	Mid	1.287	1.277	0.9996	0.9967	--
	5844	High	1.271	1.282	0.9952	1.0015	--
HDR 4 (UNII-3)	5733	Low	2.767	2.775	2.3267	2.3238	--
	5788	Mid	2.752	2.764	2.3281	2.3278	--
	5844	High	2.765	2.775	2.3278	2.3307	--
HDR 8 (UNII-3)	5733	Low	5.771	5.761	4.8324	4.8219	--
	5788	Mid	5.755	5.769	4.8200	4.8310	--
	5844	High	5.769	5.780	4.8139	4.8277	--

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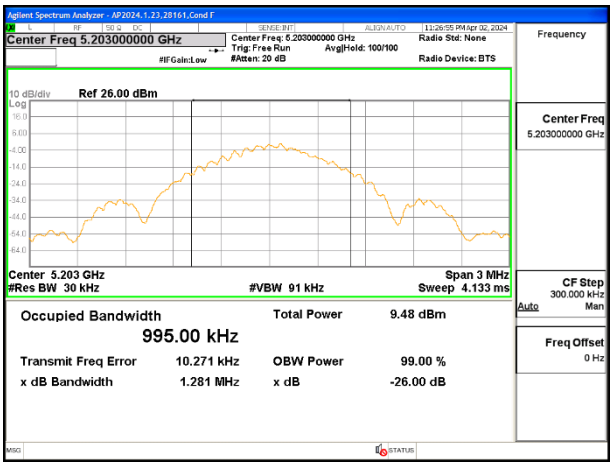
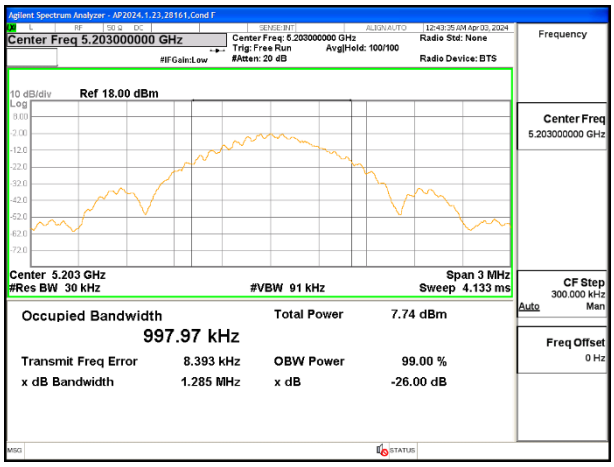
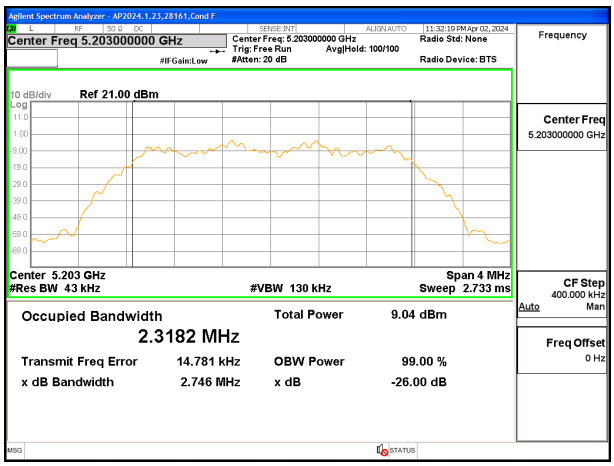


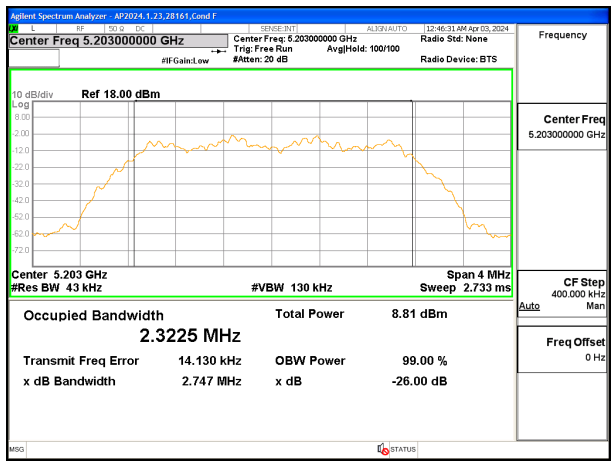
MID CHANNEL (UNII-1 BDR) – ANT 6



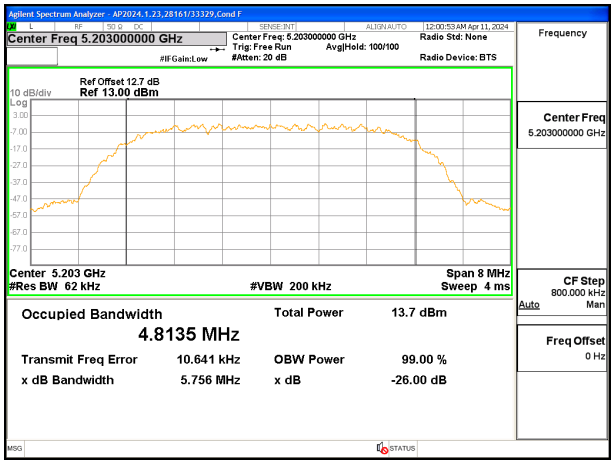
MID CHANNEL (UNII-1 BDR) – ANT 5



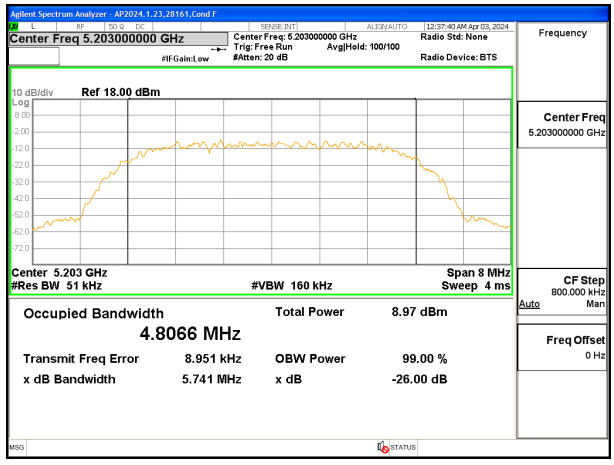
MID CHANNEL (UNII-1 HDR 4) – ANT 6



Mi MID CHANNEL (UNII-1 HDR 4) – ANT 5



MID CHANNEL (UNII-1 HDR 8) – ANT 6



MID CHANNEL (UNII-1 HDR 8) – 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 BDR mode result is reported. It covers all Low Power modes. Only Mid Channel plot is reported to show setting parameter compliance with testing method/procedure.

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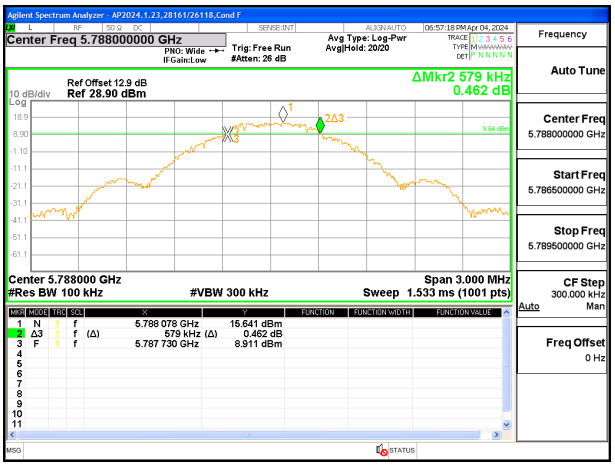
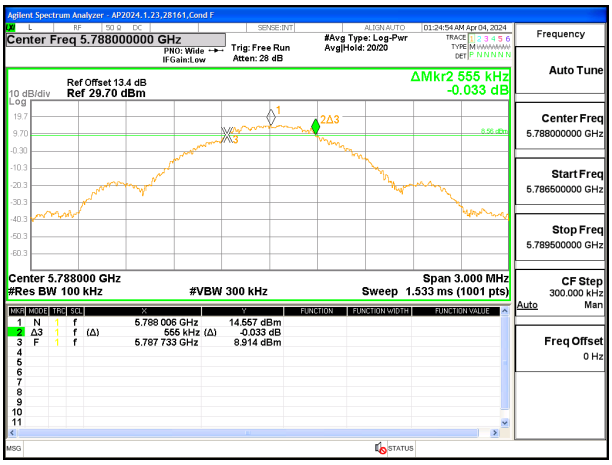
9.3.1. HIGH POWER BDR SISO MODE IN THE UNII-3 BAND

(SISO)	Frequency (MHz)	Channel	6 dB Bandwidth (MHz)	
			ANT 6	ANT 5
BDR (UNII-3)	5733	Low	.573	.561
	5788	Mid	.579	.555
	5844	High	.594	.714



MID CHANNEL – ANT 6



MID CHANNEL – ANT 5

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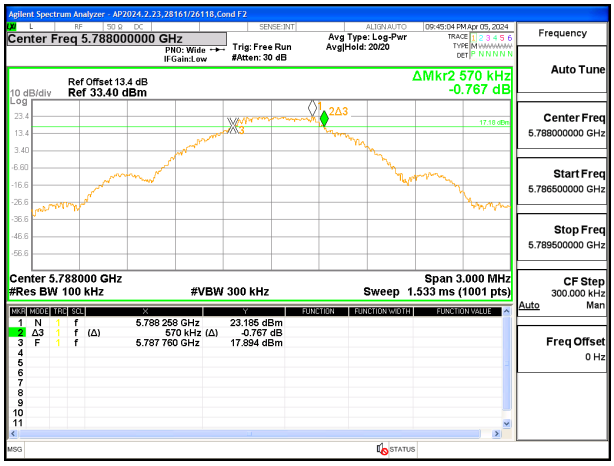
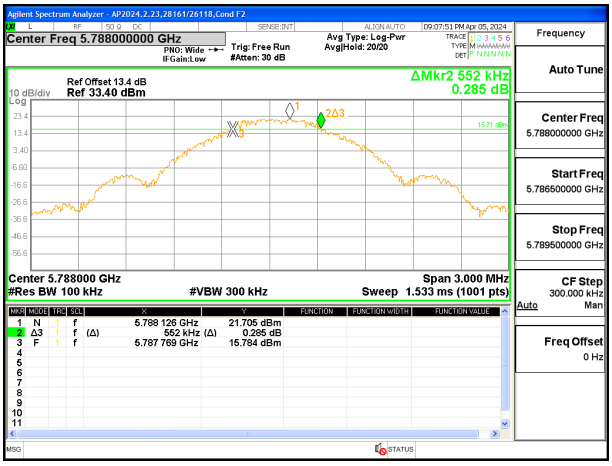
9.3.2. HIGH POWER BDR TXBF MODE IN THE UNII-3 BAND

(MIMO BF)	Frequency (MHz)	Channel	6 dB Bandwidth (MHz)	
			ANT 6	ANT 5
BDR (UNII-3)	5733	Low	.561	.630
	5788	Mid	.570	.552
	5844	High	.576	.576



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.

RSS-247

Band 5.15-5.25 GHz

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Band 5.725-5.85 GHz

The maximum conducted output power shall not exceed 1 W. The 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 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 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 TXBF 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, 5.2 GHz	-3.50	-4.70	-4.06	-1.07
UNII-3, 5.8 GHz	-0.90	-3.30	-1.94	0.99

DIRECTIONAL GAIN CALCULATION:

ANSI C63.10-2013 section 14.4.3

Uncorrelated Directional Gain $= 10 * \mathrm{LOG}\left[\frac{10^{\frac{\mathrm{ANT6}}{10}} + 10^{\frac{\mathrm{ANT5}}{10}}}{2}\right]$

Correlated Directional Gain $= 10 * \mathrm{LOG}\left[\frac{\left(10^{\frac{\mathrm{ANT6}}{20}} + 10^{\frac{\mathrm{ANT5}}{20}}\right)^2}{2}\right]$

Sample Calculation:

ANT 6 = -3.50 dB
ANT 5 = -4.70 dB

Uncorrelated Directional Gain $= 10 * \mathrm{LOG}\left[\frac{10^{\frac{-3.50}{10}} + 10^{\frac{-4.70}{10}}}{2}\right] = -4.06\ \mathrm{dBi}$

Correlated Directional Gain $= 10 * \mathrm{LOG}\left[\frac{\left(10^{\frac{-3.50}{20}} + 10^{\frac{-4.70}{20}}\right)^2}{2}\right] = -1.07\ \mathrm{dBi}$

RESULTS:

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9.4.1. UNII-1 BAND SISO MODE

UNII-1 (SISO) (5162 - 5245MHz)	
DCCF (dB)	0.00
ANT 6 (dBi)	-3.50
ANT 5 (dBi)	-4.70

UNII-1 (SISO)	Power Config.	Freq (MHz)	Ch.	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
				ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5
BDR (FCC)	High	5162	Low	--		24	24	9.71	9.81	9.71	9.81	11	11	9.318	9.745	9.318	9.745
		5203	Mid					9.72	9.83	9.72	9.83			9.448	9.752	9.448	9.752
		5245	High					9.74	9.73	9.74	9.73			9.235	9.595	9.235	9.595
BDR (FCC)	Low	5162	Low					6.31	4.76	6.31	4.76			5.982	4.609	5.982	4.609
		5203	Mid					6.28	4.82	6.28	4.82			5.836	4.723	5.836	4.723
		5245	High					6.30	4.86	6.30	4.86			5.835	4.592	5.835	4.592
HDR 4 (FCC)	High	5162	Low					11.24	11.26	11.24	11.26			8.349	8.376	8.349	8.376
		5203	Mid					11.32	11.30	11.32	11.30			8.519	8.256	8.519	8.256
		5245	High					11.27	11.29	11.27	11.29			8.499	8.538	8.499	8.538
HDR 4 (FCC)	Low	5162	Low					-0.24	-1.79	-0.24	-1.79			-2.800	-4.970	-2.800	-4.970
		5203	Mid					-0.19	-1.75	-0.19	-1.75			-2.916	-4.806	-2.916	-4.806
		5245	High					-0.21	-1.75	-0.21	-1.75			-2.775	-4.457	-2.775	-4.457
HDR 8 (FCC)	High	5162	Low					13.79	13.76	13.79	13.76			8.484	8.352	8.484	8.352
		5203	Mid					13.71	13.69	13.71	13.69			8.446	8.073	8.446	8.073
		5245	High					13.78	13.77	13.78	13.77			8.247	8.425	8.247	8.425
HDR 8 (FCC)	Low	5162	Low					-0.21	-1.74	-0.21	-1.74			-5.492	-6.701	-5.492	-6.701
		5203	Mid					-0.19	-1.75	-0.19	-1.75			-5.428	-6.314	-5.428	-6.314
		5245	High					-0.20	-1.73	-0.20	-1.73			-5.370	-7.007	-5.370	-7.007
BDR (IC)	High	5162	Low	1.0092	0.9988	13.54	14.69	11.71	13.26	11.71	13.26	13.50	14.70	10.629	12.513	10.629	12.513
		5203	Mid	1.0040	1.0033	13.52	14.71	11.75	13.23	11.75	13.23			10.606	12.379	10.606	12.379
		5245	High	0.9983	1.0010	13.49	14.70	11.79	13.32	11.79	13.32			10.108	12.659	10.108	12.659
BDR (IC)	Low	5162	Low	0.9628	0.9677	13.34	14.56	6.31	4.76	6.31	4.76			5.982	4.609	5.982	4.609
		5203	Mid	0.9982	0.9601	13.49	14.52	6.28	4.82	6.28	4.82			5.836	4.723	5.836	4.723
		5245	High	0.9705	0.9748	13.37	14.59	6.30	4.86	6.30	4.86			5.835	4.592	5.835	4.592
HDR 4 (IC)	High	5162	Low	2.3126	2.3204	17.14	18.36	13.76	14.29	13.76	14.29			11.305	12.388	11.305	12.388
		5203	Mid	2.3141	2.3207	17.14	18.36	13.70	14.25	13.70	14.25			11.620	12.271	11.620	12.271
		5245	High	2.3181	2.3182	17.15	18.35	13.75	14.22	13.75	14.22			11.881	11.949	11.881	11.949
HDR 4 (IC)	Low	5162	Low	2.3127	2.3115	17.14	18.34	-0.24	-1.79	-0.24	-1.79			-2.800	-4.970	-2.800	-4.970
		5203	Mid	2.3157	2.3138	17.15	18.34	-0.19	-1.75	-0.19	-1.75			-2.916	-4.806	-2.916	-4.806
		5245	High	2.3153	2.3148	17.15	18.35	-0.21	-1.75	-0.21	-1.75			-2.775	-4.457	-2.775	-4.457
HDR 8 (IC)	High	5162	Low	4.8081	4.8083	20.32	21.52	14.25	14.20	14.25	14.20			9.469	9.193	9.469	9.193
		5203	Mid	4.8065	4.8238	20.32	21.53	14.18	14.30	14.18	14.30			9.355	9.518	9.355	9.518
		5245	High	4.8091	4.8117	20.32	21.52	14.21	14.23	14.21	14.23			9.266	9.299	9.266	9.299
HDR 8 (IC)	Low	5162	Low	4.7952	4.8018	20.31	21.51	-0.21	-1.74	-0.21	-1.74			-5.492	-6.701	-5.492	-6.701
		5203	Mid	4.8071	4.8121	20.32	21.52	-0.19	-1.75	-0.19	-1.75			-5.428	-6.314	-5.428	-6.314
		5245	High	4.8020	4.8134	20.31	21.52	-0.20	-1.73	-0.20	-1.73			-5.370	-7.007	-5.370	-7.007

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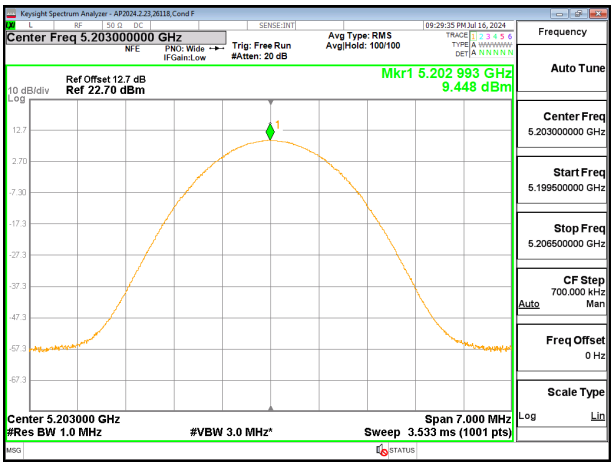
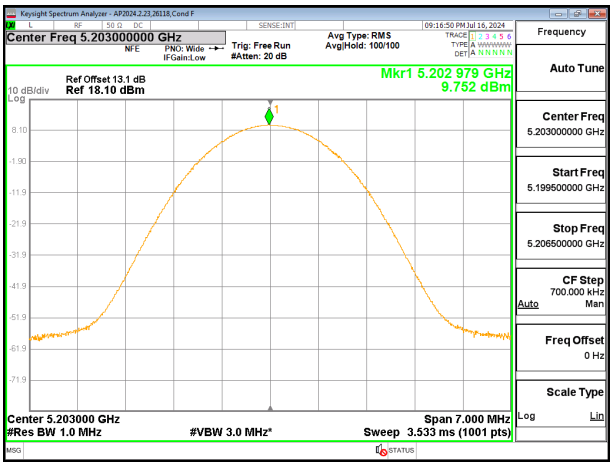
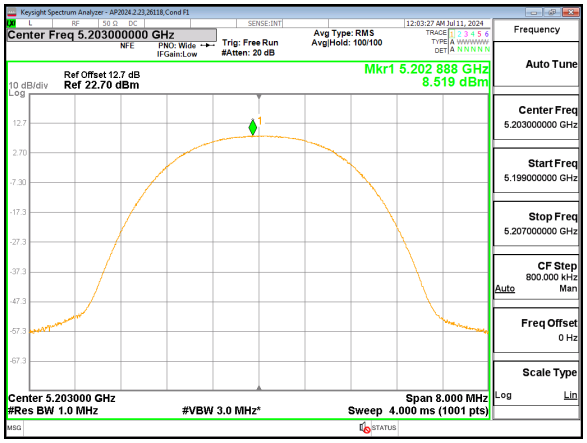


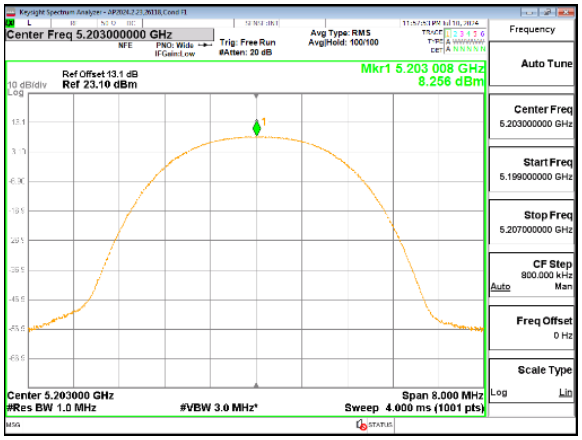
HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 6



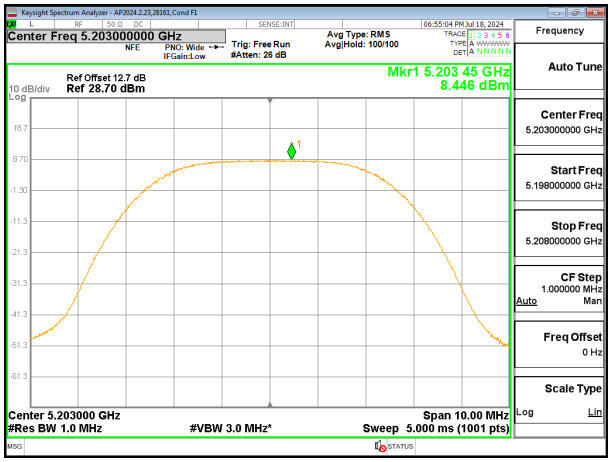
HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 5



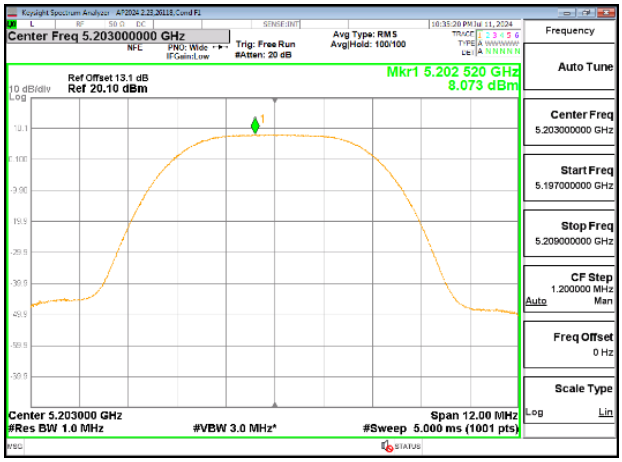
HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 5



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 6



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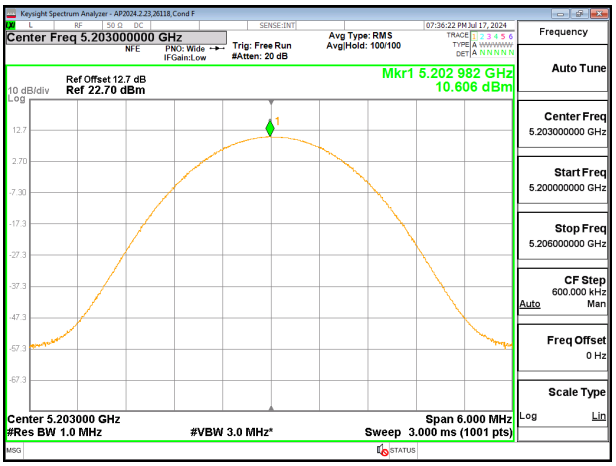
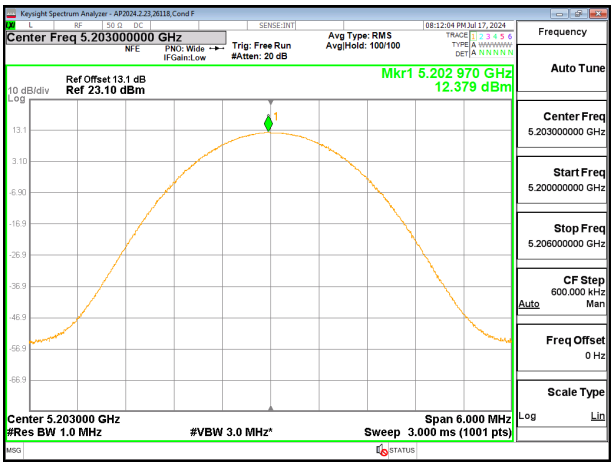
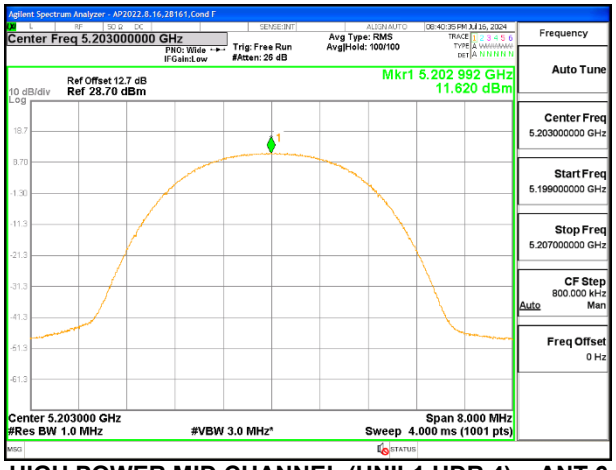


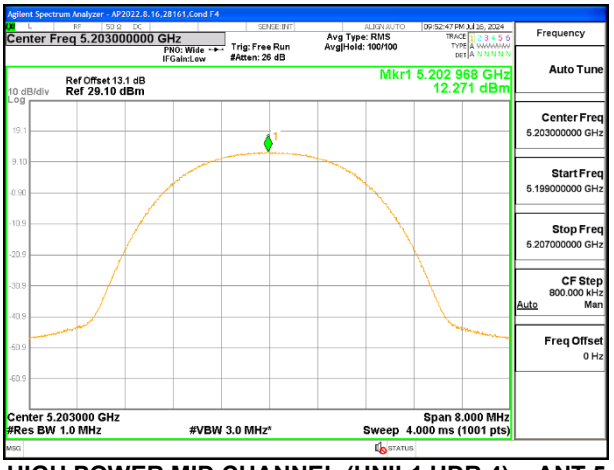
HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 5



HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 6



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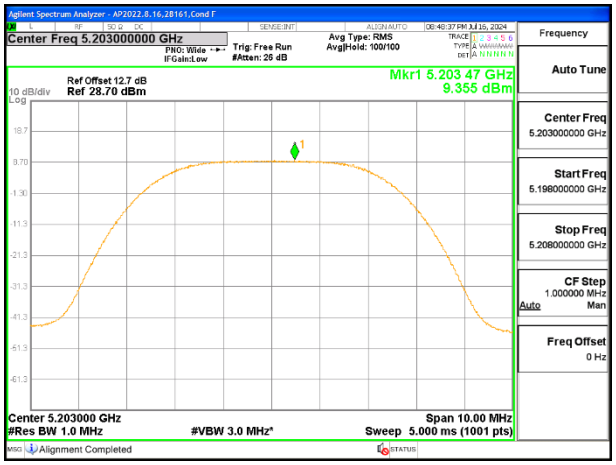
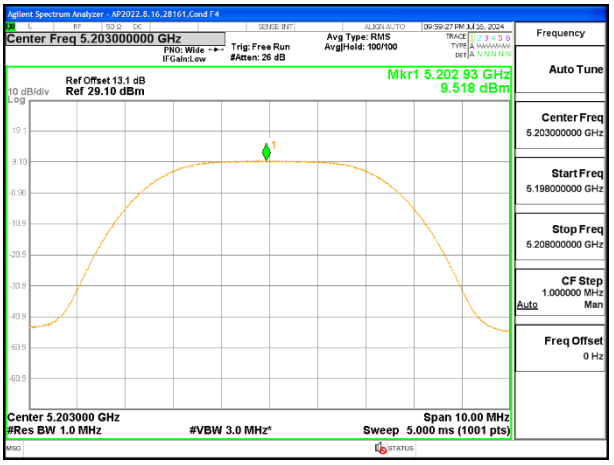


HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 5

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9.4.2. UNII-1 BAND MIMO TXBF MODE

UNII-1 (MIMO BF) (5162 - 5245MHz)	
DCCF (dB)	0.00
Un-Correlated Gain (dBi)	-4.06
Correlated Gain (dBi)	-1.07

UNII-1 (MIMO BF)	Power Config.	Freq (MHz)	Ch.	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
						ANT 6	ANT 5			ANT 6	ANT 5	
BDR (FCC)	High	5162	Low	--	24	6.82	6.71	9.78	11	6.478	6.131	9.318
		5203	Mid			6.76	6.73	9.76		6.357	6.200	9.290
		5245	High			6.74	6.75	9.76		6.348	6.323	9.346
BDR (FCC)	Low	5162	Low			6.26	4.76	8.58		5.648	3.919	7.879
		5203	Mid			6.24	4.87	8.62		5.543	4.198	7.933
		5245	High			6.31	4.77	8.62		5.959	3.939	8.076
HDR 4 (FCC)	High	5162	Low			8.29	8.31	11.31		5.606	5.632	8.629
		5203	Mid			8.31	8.27	11.30		5.554	5.224	8.402
		5245	High			8.27	8.28	11.29		5.246	5.561	8.417
HDR 4 (FCC)	Low	5162	Low			-0.16	-1.73	2.14		-2.515	-2.494	0.506
		5203	Mid			-0.17	-1.75	2.12		-2.663	-2.297	0.534
		5245	High			-0.22	-1.79	2.08		-2.466	-1.996	0.786
HDR 8 (FCC)	High	5162	Low			10.78	10.79	13.80		5.585	5.607	8.606
		5203	Mid			10.80	10.77	13.80		5.804	5.634	8.730
		5245	High			10.72	10.63	13.69		6.396	5.580	9.017
HDR 8 (FCC)	Low	5162	Low			-0.17	-1.68	2.15		-5.118	-5.838	-2.453
		5203	Mid			-0.20	-1.75	2.10		-5.173	-5.663	-2.401
		5245	High			-0.24	-1.70	2.10		-5.326	-5.586	-2.444
BDR (IC)	High	5162	Low	0.9994	11.07	5.81	7.25	9.60	11.07	4.650	6.392	8.618
		5203	Mid	0.9950	11.05	5.77	7.20	9.55		4.262	6.430	8.490
		5245	High	0.9983	11.06	5.73	7.29	9.59		4.337	6.530	8.581
BDR (IC)	Low	5162	Low	0.9613	10.90	5.81	4.76	8.33		4.650	3.919	7.310
		5203	Mid	0.9634	10.91	5.77	4.87	8.35		4.262	4.198	7.240
		5245	High	0.9744	10.96	5.73	4.77	8.29		4.337	3.939	7.153
HDR 4 (IC)	High	5162	Low	2.3200	14.72	7.73	8.75	11.28		6.430	6.625	9.539
		5203	Mid	2.3182	14.72	7.76	8.82	11.33		6.244	6.980	9.638
		5245	High	2.3179	14.72	7.71	8.80	11.30		6.211	6.965	9.615
HDR 4 (IC)	Low	5162	Low	2.3138	14.71	-0.16	-1.73	2.14		-2.515	-2.494	0.506
		5203	Mid	2.3126	14.71	-0.17	-1.75	2.12		-2.663	-2.297	0.534
		5245	High	2.3156	14.72	-0.22	-1.79	2.08		-2.466	-1.996	0.786
HDR 8 (IC)	High	5162	Low	4.7949	17.88	9.81	11.27	13.61		4.904	6.580	8.833
		5203	Mid	4.8066	17.89	9.77	11.25	13.58		4.476	6.216	8.443
		5245	High	4.8113	17.89	9.75	11.29	13.60		4.740	6.633	8.799
HDR 8 (IC)	Low	5162	Low	4.8098	17.89	-0.17	-1.68	2.15		-5.118	-5.838	-2.453
		5203	Mid	4.8040	17.89	-0.20	-1.75	2.10		-5.173	-5.663	-2.401
		5245	High	4.8135	17.89	-0.24	-1.70	2.10		-5.326	-5.586	-2.444

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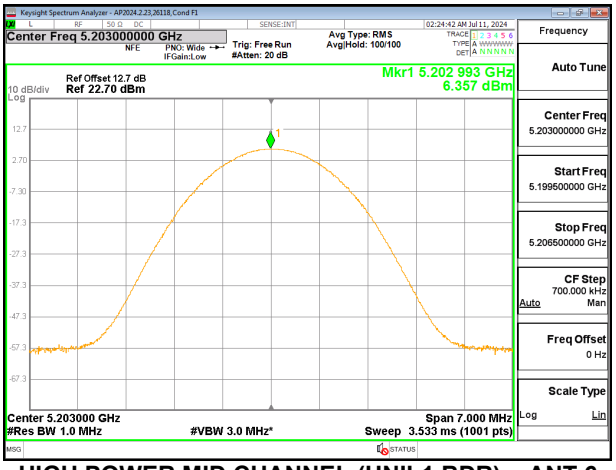
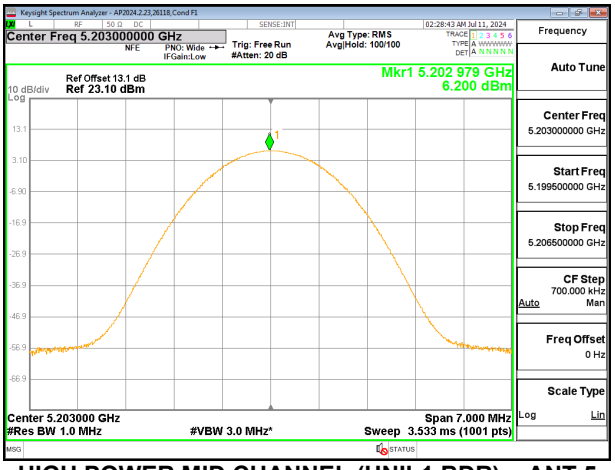
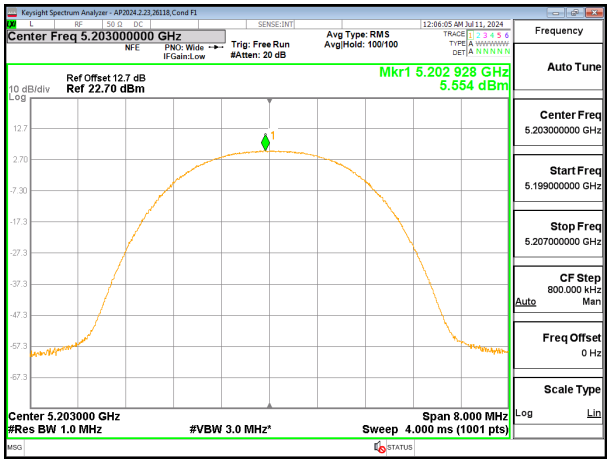


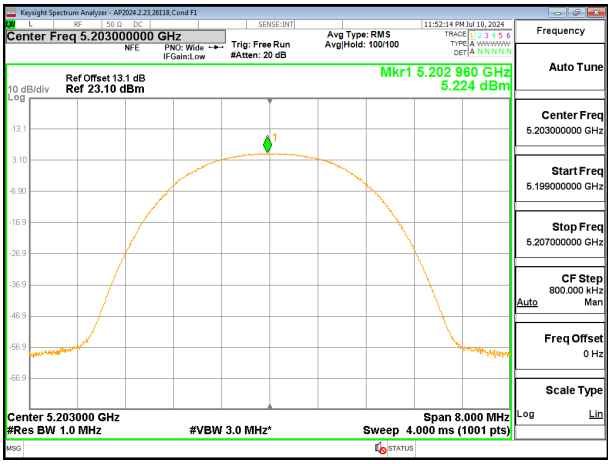
HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 6



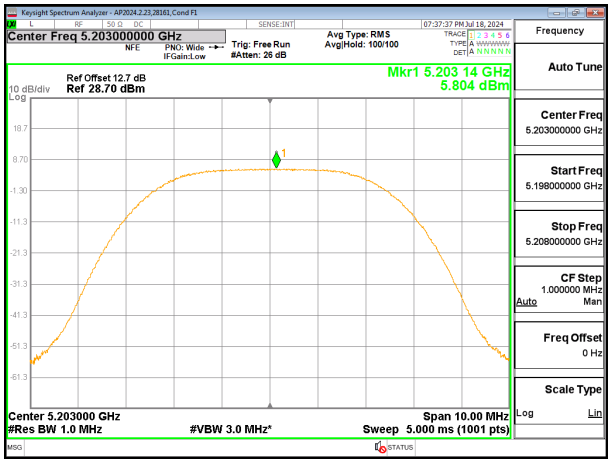
HIGH POWER MID CHANNEL (UNII-1 BDR) – ANT 5



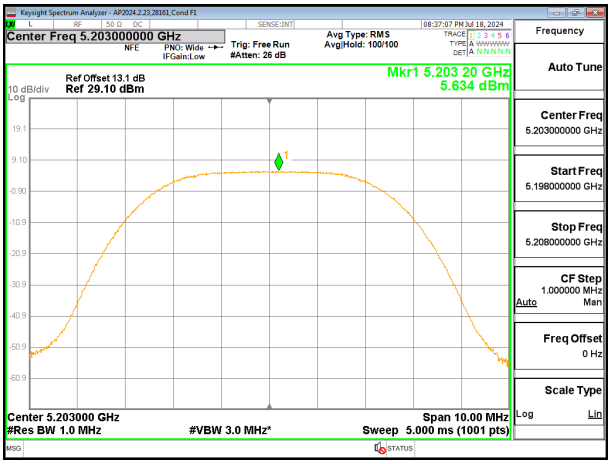
HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 5



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 5

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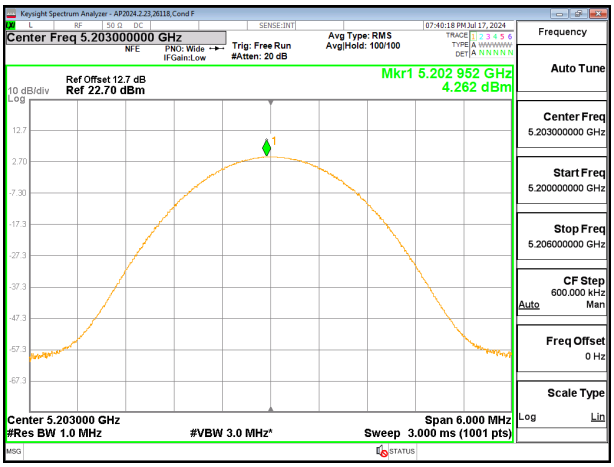

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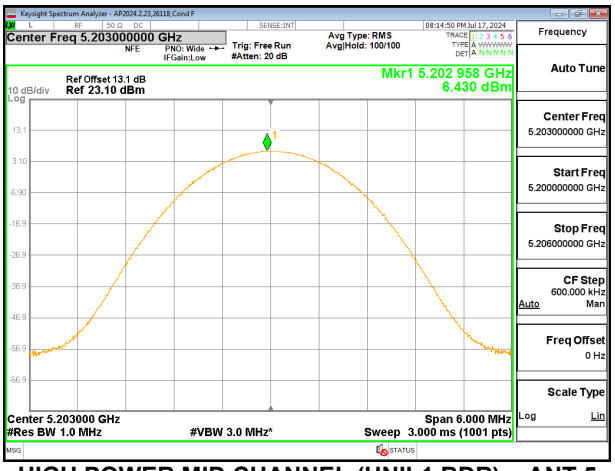

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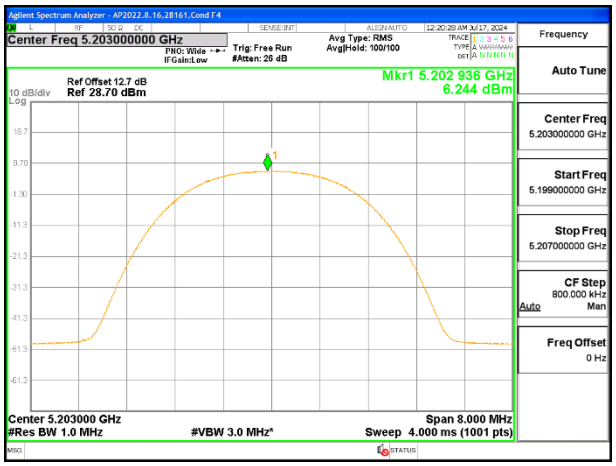

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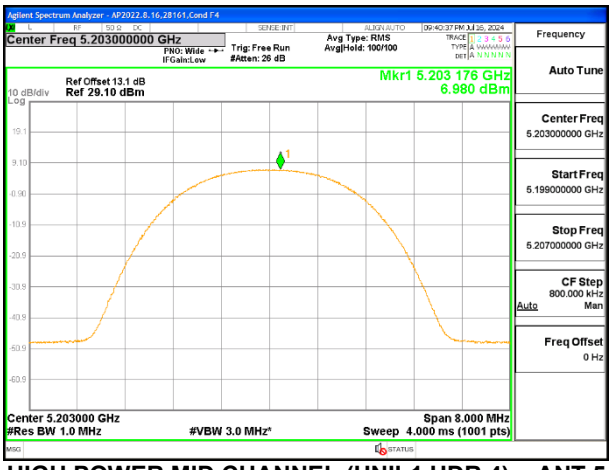
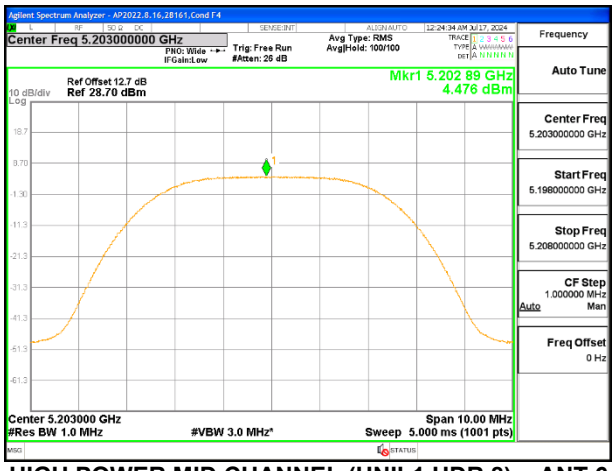
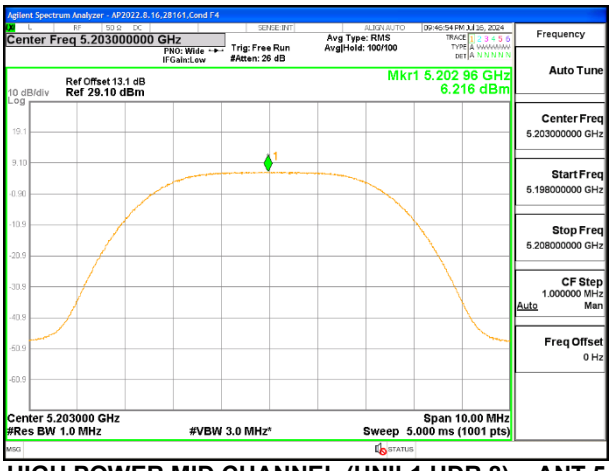


HIGH POWER MID CHANNEL (UNII-1 HDR 4) – ANT 5



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 6



HIGH POWER MID CHANNEL (UNII-1 HDR 8) – ANT 5

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9.4.3. UNII-3 BAND SISO MODE

UNII-3 (SISO) (5733- 5844MHz)	
DCCF (dB)	0.00
ANT 6 (dBi)	-0.90
ANT 5 (dBi)	-3.30

UNII-3 (SISO)	Power Config.	Freq (MHz)	Ch.	Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/500kHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/500kHz)	
				ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5
BDR	High	5733	Low	30	30	14.31	14.19	14.31	14.19	30	30	12.860	12.579	12.860	12.579
		5788	Mid			14.30	14.34	14.30	14.34			13.115	13.419	13.115	13.419
		5844	High			14.24	14.31	14.24	14.31			12.888	13.356	12.888	13.356
	Low	5733	Low			6.75	5.40	6.75	5.40			5.957	3.952	5.957	3.952
		5788	Mid			6.81	5.45	6.81	5.45			6.327	4.141	6.327	4.141
		5844	High			6.80	5.47	6.80	5.47			6.109	4.117	6.109	4.117
HDR 4	High	5733	Low			14.25	14.27	14.25	14.27			8.925	8.955	8.925	8.955
		5788	Mid			14.31	14.31	14.31	14.31			8.817	9.527	8.817	9.527
		5844	High			14.23	14.33	14.23	14.33			8.907	9.434	8.907	9.434
	Low	5733	Low			0.29	-1.21	0.29	-1.21			-3.661	-4.460	-3.661	-4.460
		5788	Mid			0.24	-1.31	0.24	-1.31			-3.517	-4.853	-3.517	-4.853
		5844	High			0.28	-1.28	0.28	-1.28			-3.265	-4.966	-3.265	-4.966
HDR 8	High	5733	Low			14.23	14.22	14.23	14.22			5.528	5.639	5.528	5.639
		5788	Mid			14.29	14.17	14.29	14.17			5.736	5.406	5.736	5.406
		5844	High			14.25	14.25	14.25	14.25			5.387	5.570	5.387	5.570
	Low	5733	Low			0.21	-1.24	0.21	-1.24			-6.930	-8.377	-6.930	-8.377
		5788	Mid			0.28	-1.17	0.28	-1.17			-6.835	-8.287	-6.835	-8.287
		5844	High			0.25	-1.22	0.25	-1.22			-6.543	-8.363	-6.543	-8.363

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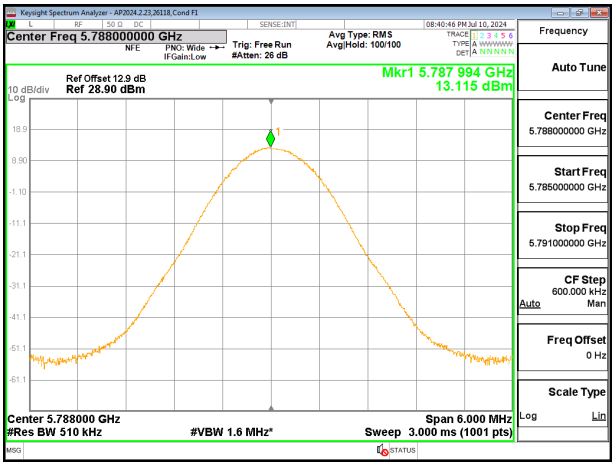
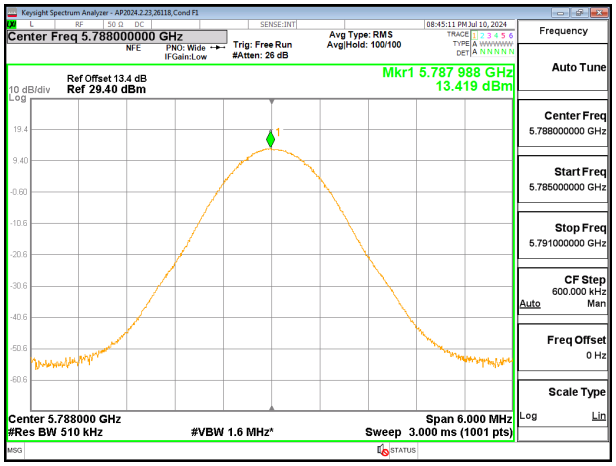
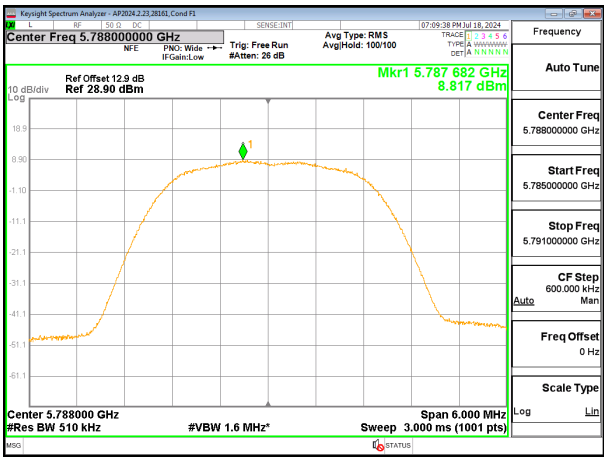


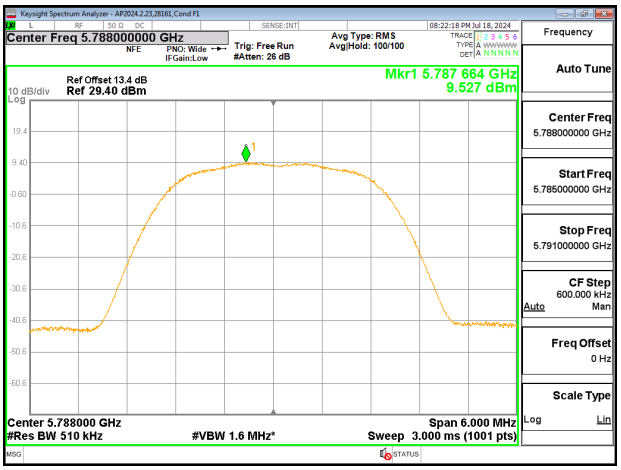
HIGH POWER MID CHANNEL (UNII-3 BDR) – ANT 6



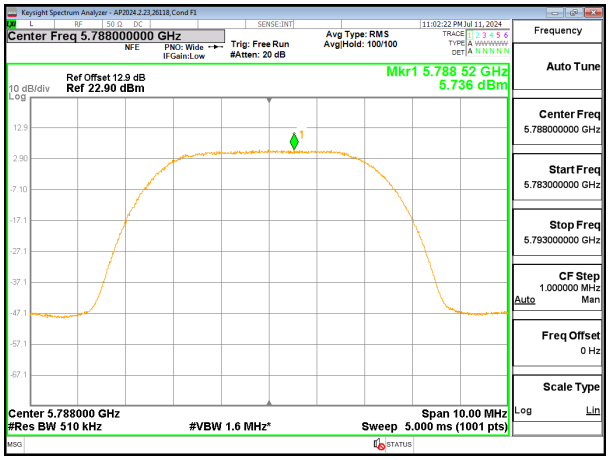
HIGH POWER MID CHANNEL (UNII-3 BDR) – ANT 5



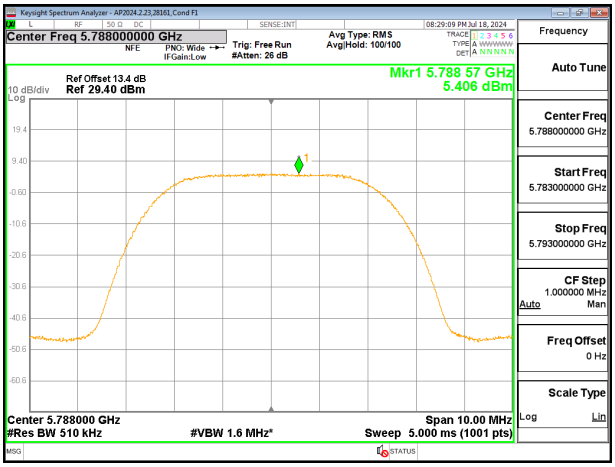
HIGH POWER MID CHANNEL (UNII-3 HDR 4) – ANT 6



HIGH POWER MID CHANNEL (UNII-3 HDR 4) – ANT 5



HIGH POWER MID CHANNEL (UNII-3 HDR 8) – ANT 6



HIGH POWER MID CHANNEL (UNII-3 HDR 8) – ANT 5

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9.4.4. UNII-3 BAND MIMO TXBF MODE

UNII-3 (MIMO BF) (5733- 5844MHz)	
DCCF (dB)	0.00
Un-Correlated Gain (dBi)	-1.94
Correlated Gain (dBi)	0.99

UNII-3 (MIMO BF)	Power Config.	Freq (MHz)	Ch. #	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/500kHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/500kHz)
					ANT 6	ANT 5			ANT 6	ANT 5	
BDR	High	5733	Low	30	14.29	14.35	17.33	30	12.724	13.317	16.041
		5788	Mid		14.32	14.29	17.32		13.012	13.303	16.170
		5844	High		14.19	14.26	17.24		12.501	13.162	15.854
	Low	5733	Low		6.74	5.25	9.07		5.875	4.700	8.337
		5788	Mid		6.77	5.30	9.11		5.907	4.781	8.391
		5844	High		6.82	5.32	9.14		6.089	4.988	8.584
HDR 4	High	5733	Low		14.27	14.24	17.27		9.235	9.328	12.292
		5788	Mid		14.22	14.28	17.26		8.951	9.313	12.146
		5844	High		14.20	14.25	17.24		8.890	9.103	12.008
	Low	5733	Low		0.26	-1.24	2.58		-3.627	-4.367	-0.971
		5788	Mid		0.23	-1.19	2.59		-3.314	-4.541	-0.874
		5844	High		0.29	-1.18	2.63		-3.456	-4.688	-1.018
HDR 8	High	5733	Low		14.25	14.28	17.28		5.442	5.535	8.499
		5788	Mid		14.22	14.24	17.24		5.461	5.469	8.475
		5844	High		14.27	14.26	17.28		5.453	5.705	8.591
	Low	5733	Low		0.25	-1.23	2.58		-5.566	-8.521	-3.787
		5788	Mid		0.29	-1.26	2.59		-5.659	-8.924	-3.981
		5844	High		0.27	-1.28	2.57		-5.605	-8.651	-3.856

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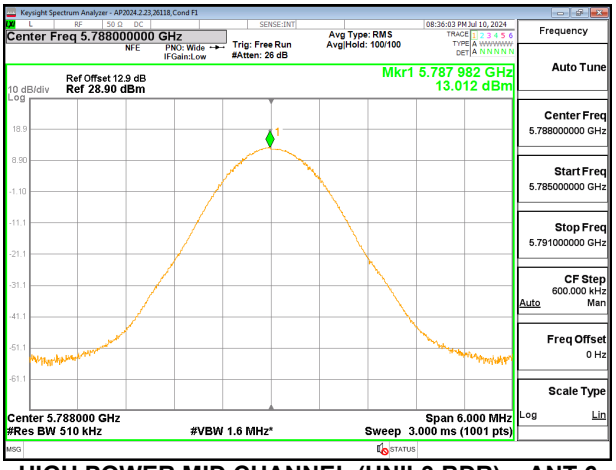
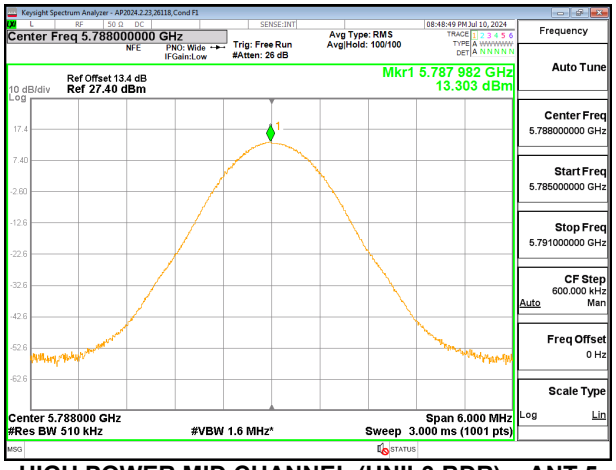
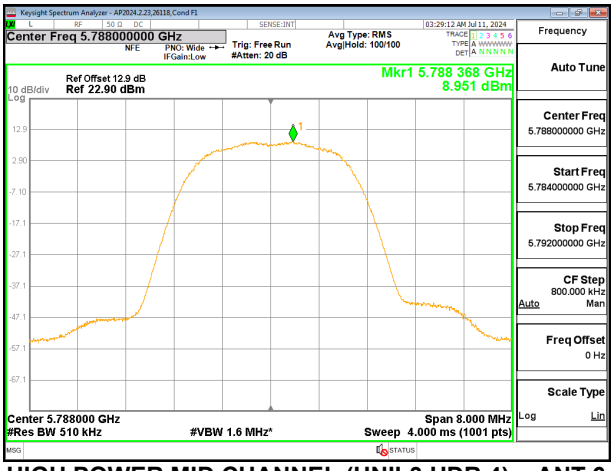


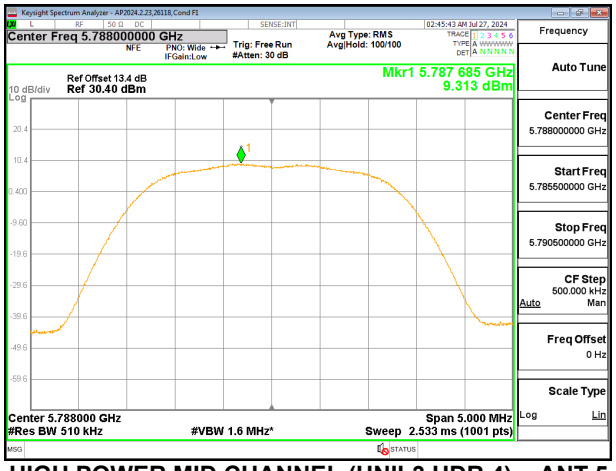
HIGH POWER MID CHANNEL (UNII-3 BDR) – ANT 6



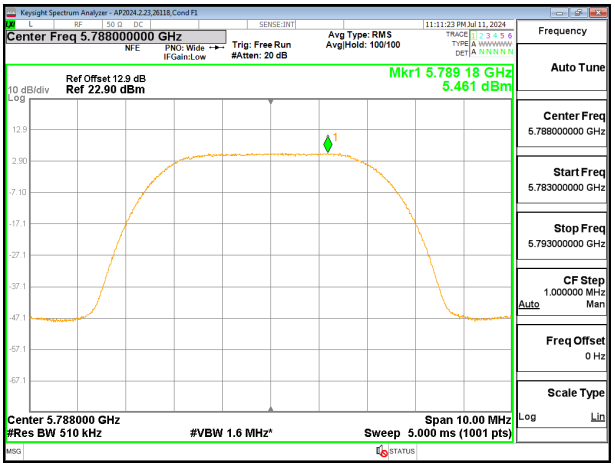
HIGH POWER MID CHANNEL (UNII-3 BDR) – ANT 5



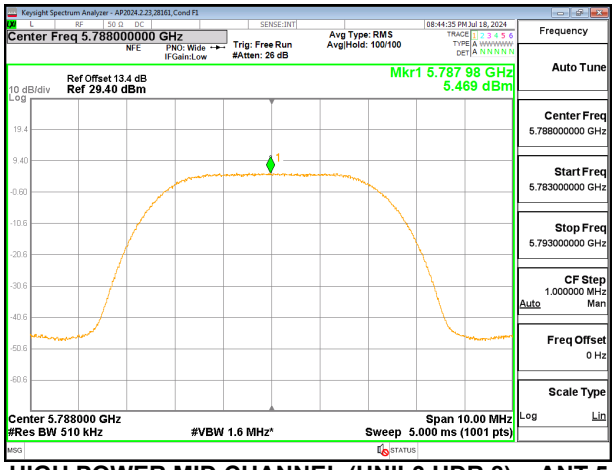
HIGH POWER MID CHANNEL (UNII-3 HDR 4) – ANT 6



HIGH POWER MID CHANNEL (UNII-3 HDR 4) – ANT 5



HIGH POWER MID CHANNEL (UNII-3 HDR 8) – ANT 6



HIGH POWER MID CHANNEL (UNII-3 HDR 8) – ANT 5

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10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 - Restricted Bands
FCC §15.407(b)(1-3) - Un-Restricted Bands

RSS 247 Issue 3 Sections:
6.2.1.2 (for 5150-5250 MHz band)
6.2.4.2 (for 5725-5850 MHz band)

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 47 CFR, 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

Based 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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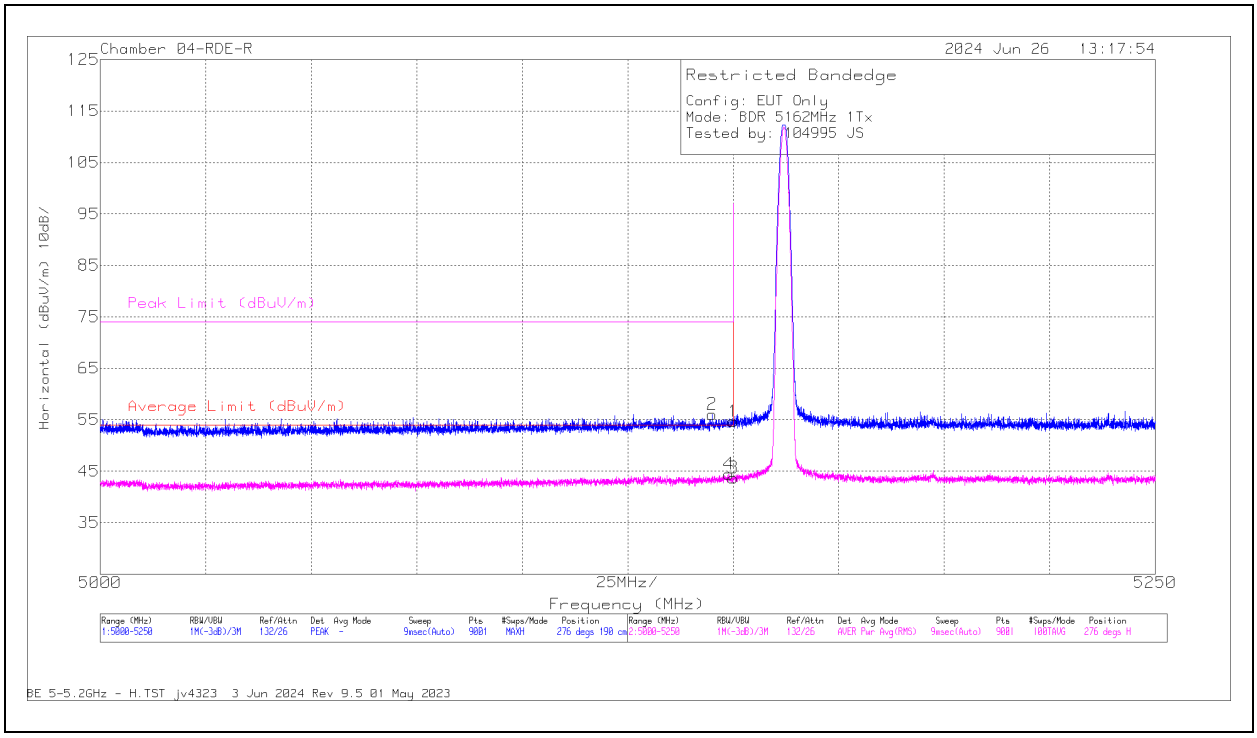
10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BDR HIGH POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5145.001	59.34	Pk	34.3	-37.57	56.07	-	-	74	-17.93	276	190	H
4	* 5148.946	47.73	RMS	34.3	-37.61	44.42	54	-9.58	-	-	276	190	H
1	* 5150	57.97	Pk	34.3	-37.6	54.67	-	-	74	-19.33	276	190	H
3	* 5150	47.01	RMS	34.3	-37.6	43.71	54	-10.29	-	-	276	190	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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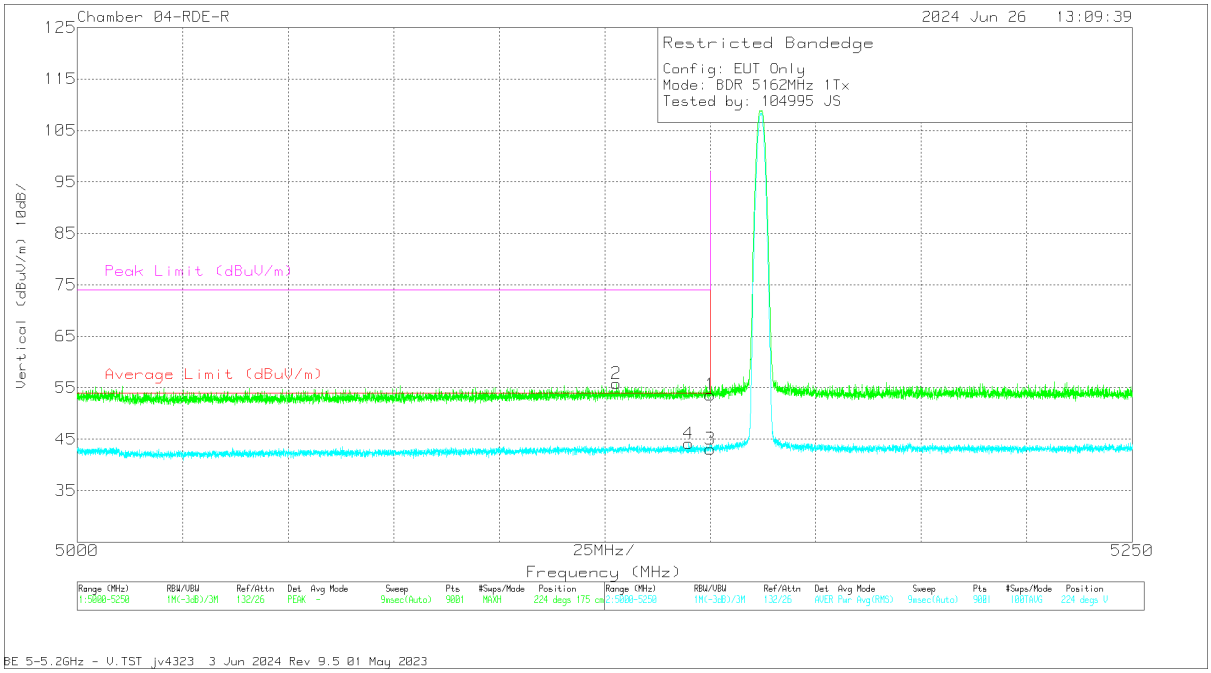
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5127.695	59	Pk	34.3	-37.5	55.8	-	-	74	-18.2	224	175	V
4	* 5144.834	47.43	RMS	34.3	-37.57	44.16	54	-9.84	-	-	224	175	V
1	* 5150	56.94	Pk	34.3	-37.6	53.64	-	-	74	-20.36	224	175	V
3	* 5150	46.4	RMS	34.3	-37.6	43.1	54	-10.9	-	-	224	175	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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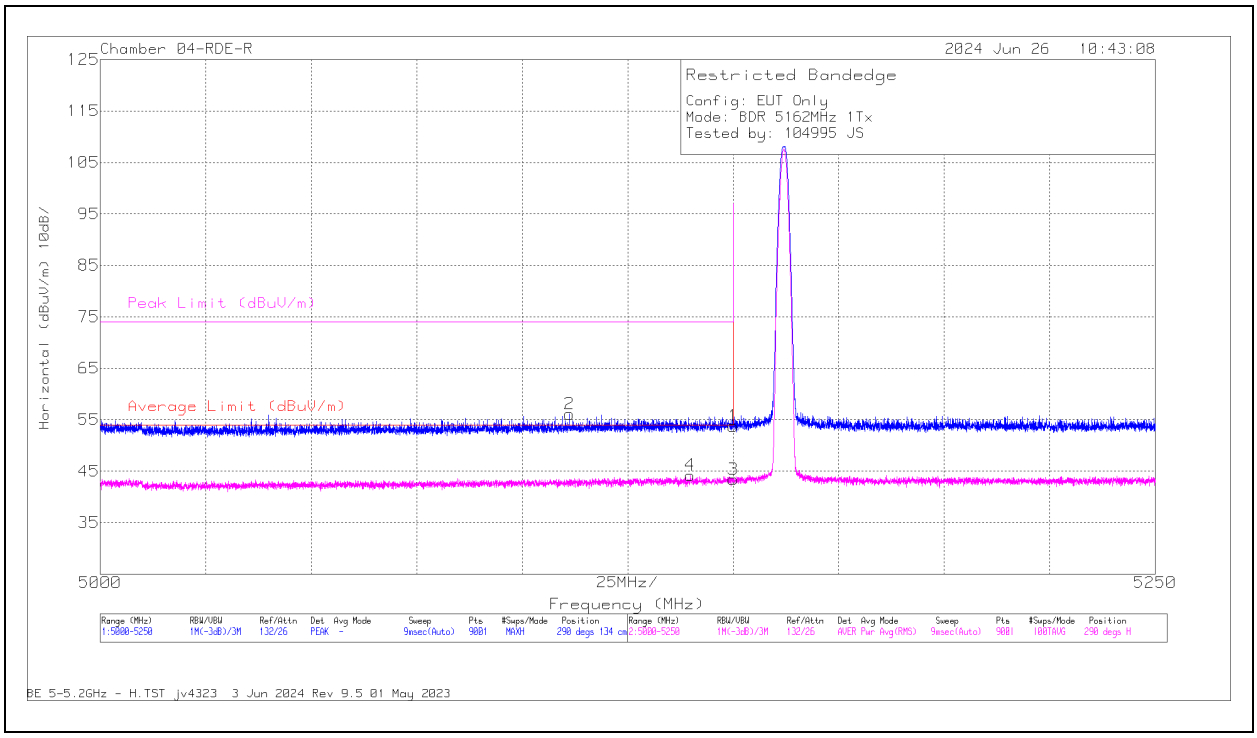
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5111.195	59.53	Pk	34.2	-37.62	56.11	-	-	74	-17.89	290	134	H
4	* 5139.779	47.48	RMS	34.3	-37.57	44.21	54	-9.79	-	-	290	134	H
1	* 5150	57.08	Pk	34.3	-37.6	53.78	-	-	74	-20.22	290	134	H
3	* 5150	46.72	RMS	34.3	-37.6	43.42	54	-10.58	-	-	290	134	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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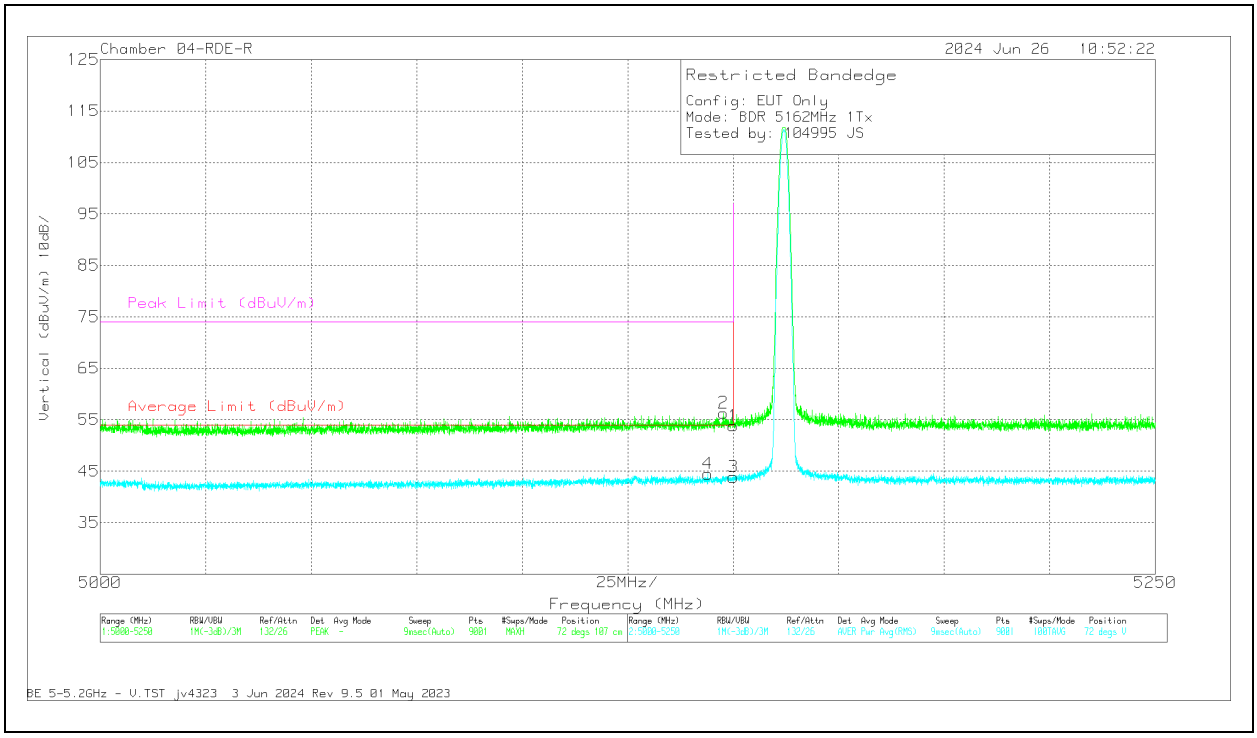
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5144.001	47.76	RMS	34.3	-37.57	44.49	54	-9.51	-	-	72	107	V
2	* 5147.723	59.59	Pk	34.3	-37.57	56.32	-	-	74	-17.68	72	107	V
1	* 5150	57.13	Pk	34.3	-37.6	53.83	-	-	74	-20.17	72	107	V
3	* 5150	47.19	RMS	34.3	-37.6	43.89	54	-10.11	-	-	72	107	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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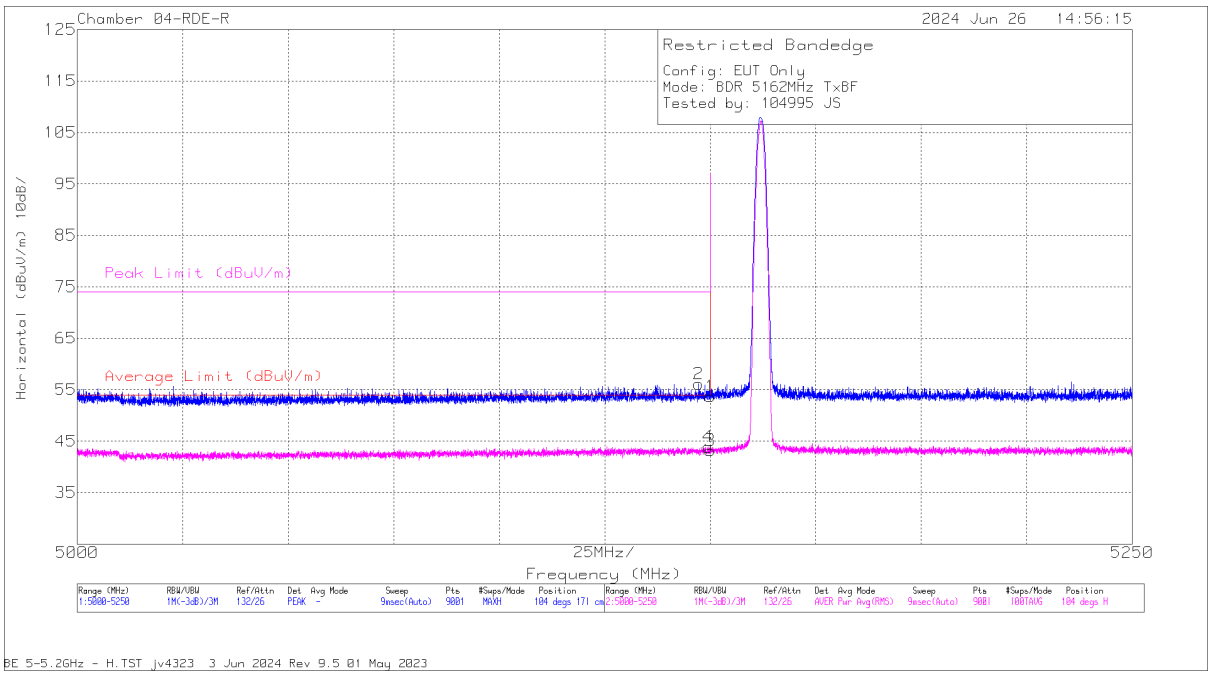
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5147.196	59.39	Pk	34.3	-37.57	56.12	-	-	74	-17.88	104	171	H
4	* 5149.529	47.18	RMS	34.3	-37.6	43.88	54	-10.12	-	-	104	171	H
1	* 5150	57.01	Pk	34.3	-37.6	53.71	-	-	74	-20.29	104	171	H
3	* 5150	46.5	RMS	34.3	-37.6	43.2	54	-10.8	-	-	104	171	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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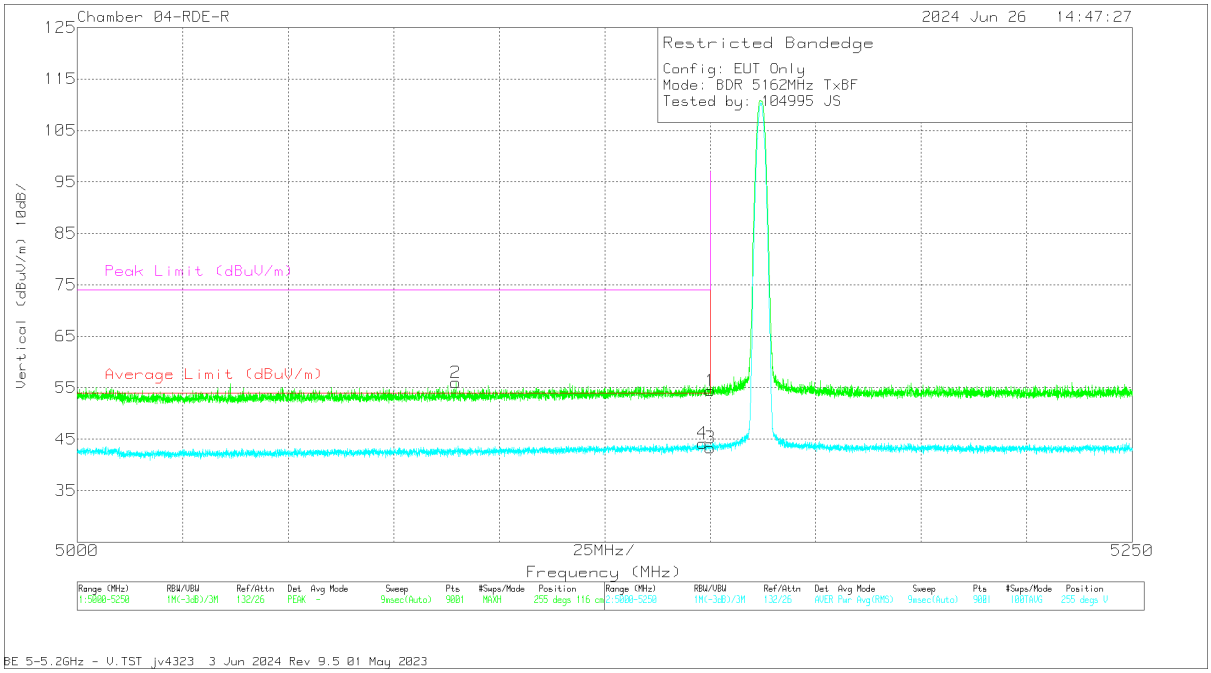
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5089.695	59.47	Pk	34.2	-37.65	56.02	-	-	74	-17.98	255	116	V
4	* 5148.14	47.49	RMS	34.3	-37.58	44.21	54	-9.79	-	-	255	116	V
1	* 5150	57.71	Pk	34.3	-37.6	54.41	-	-	74	-19.59	255	116	V
3	* 5150	46.63	RMS	34.3	-37.6	43.33	54	-10.67	-	-	255	116	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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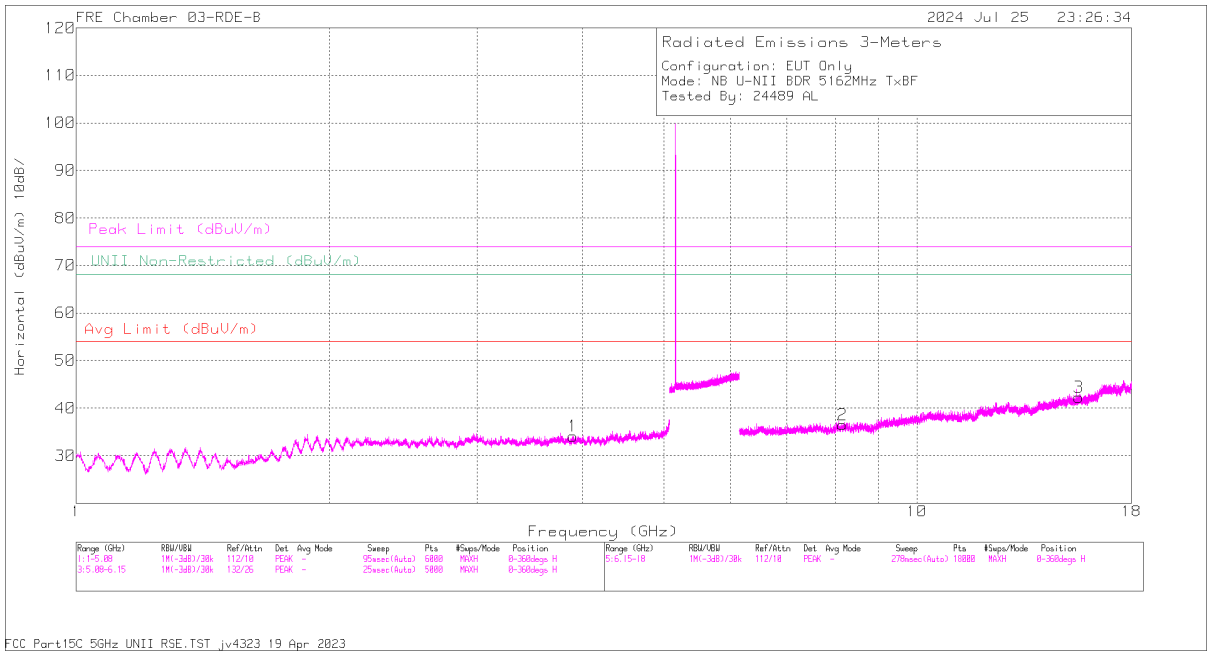
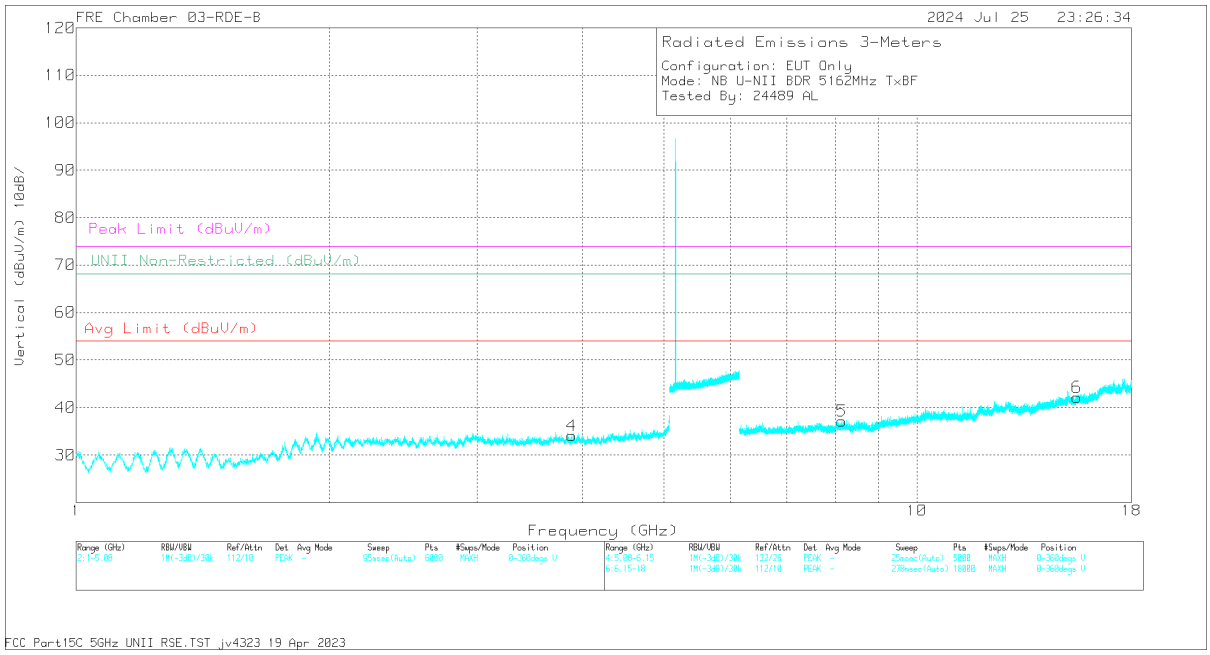
10.1.2. BDR HIGH POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.898227	58.29	PK-U	33.6	-48.2	43.69	-	-	74	-30.31	0	200	H
	* 3.898444	46.62	ADR	33.6	-48.2	32.02	54	-21.98	-	-	0	200	H
4	* 3.887413	58.21	PK-U	33.7	-48.2	43.71	-	-	74	-30.29	0	200	V
	* 3.887485	46.66	ADR	33.7	-48.2	32.16	54	-21.84	-	-	0	200	V
2	* 8.152814	57.42	PK-U	36.1	-46.9	46.62	-	-	74	-27.38	0	101	H
	* 8.151313	45.53	ADR	36.1	-46.9	34.73	54	-19.27	-	-	0	101	H
3	* 15.57292	57.82	PK-U	40.1	-46.4	51.52	-	-	74	-22.48	0	101	H
	* 15.57444	46.27	ADR	40.1	-46.5	39.87	54	-14.13	-	-	0	101	H
5	* 8.143828	57.26	PK-U	36.1	-46.9	46.46	-	-	74	-27.54	0	200	V
	* 8.142904	45.73	ADR	36.1	-46.9	34.93	54	-19.07	-	-	0	200	V
6	* 15.50467	58.2	PK-U	40	-47.1	51.1	-	-	74	-22.9	0	101	V
	* 15.50509	46.73	ADR	40	-47.09	39.64	54	-14.36	-	-	0	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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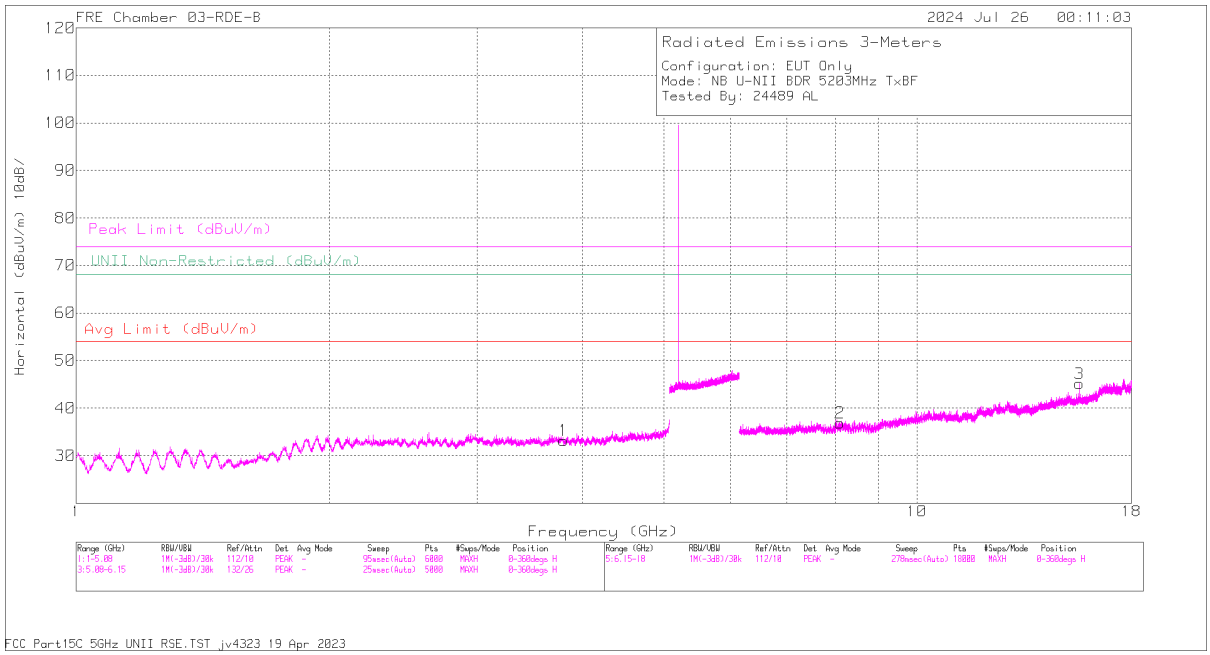
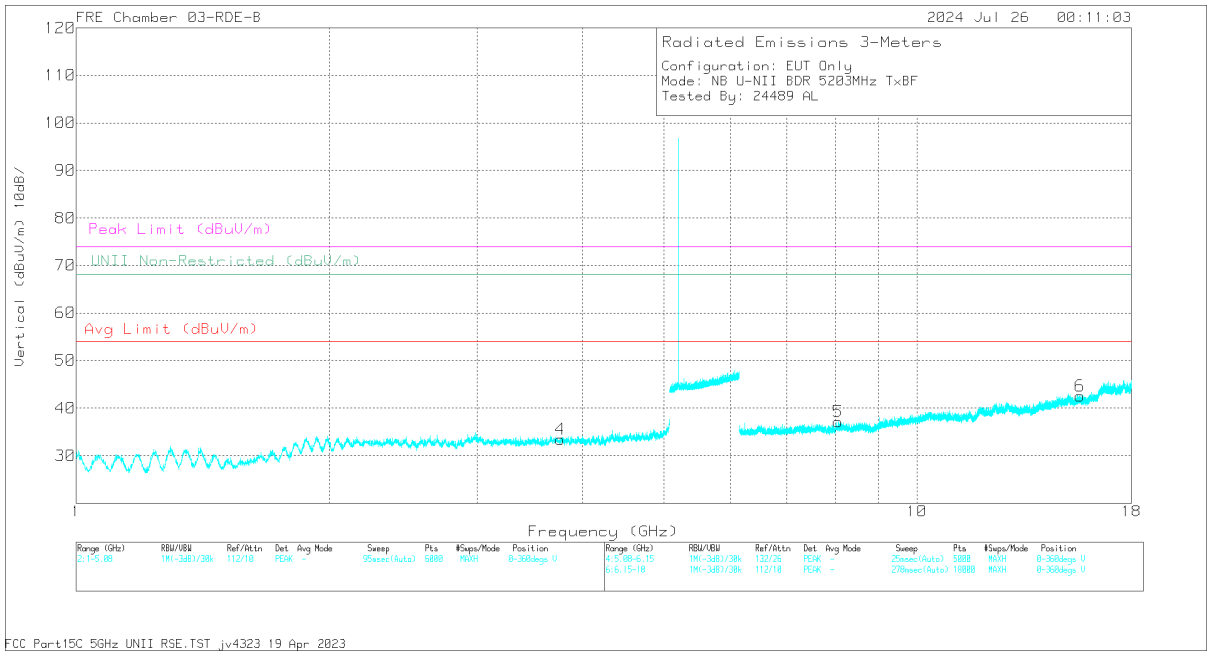
MID CHANNEL, 5203 MHz



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.80319	57.51	PK-U	33.6	-48	43.11	-	-	74	-30.89	0	101	H
	* 3.80187	46.15	ADR	33.6	-47.99	31.76	54	-22.24	-	-	0	101	H
4	* 3.76585	58.06	PK-U	33.6	-47.9	43.76	-	-	74	-30.24	0	101	V
	* 3.76619	46.53	ADR	33.6	-47.9	32.23	54	-21.77	-	-	0	101	V
2	* 8.10515	56.69	PK-U	36.1	-47	45.79	-	-	74	-28.21	0	200	H
	* 8.10648	45.24	ADR	36.1	-47	34.34	54	-19.66	-	-	0	200	H
3	* 15.6088	59.74	PK-U	40.1	-46.41	53.43	-	-	74	-20.57	83	234	H
	* 15.6090	49.65	ADR	40.1	-46.4	43.35	54	-10.65	-	-	83	234	H
5	* 8.06582	57.47	PK-U	36.1	-47.22	46.35	-	-	74	-27.65	83	200	V
	* 8.06514	45.88	ADR	36.1	-47.29	34.69	54	-19.31	-	-	83	200	V
6	* 15.6396	57.87	PK-U	40.2	-46.3	51.77	-	-	74	-22.23	83	200	V
	* 15.6386	46.05	ADR	40.2	-46.3	39.95	54	-14.05	-	-	83	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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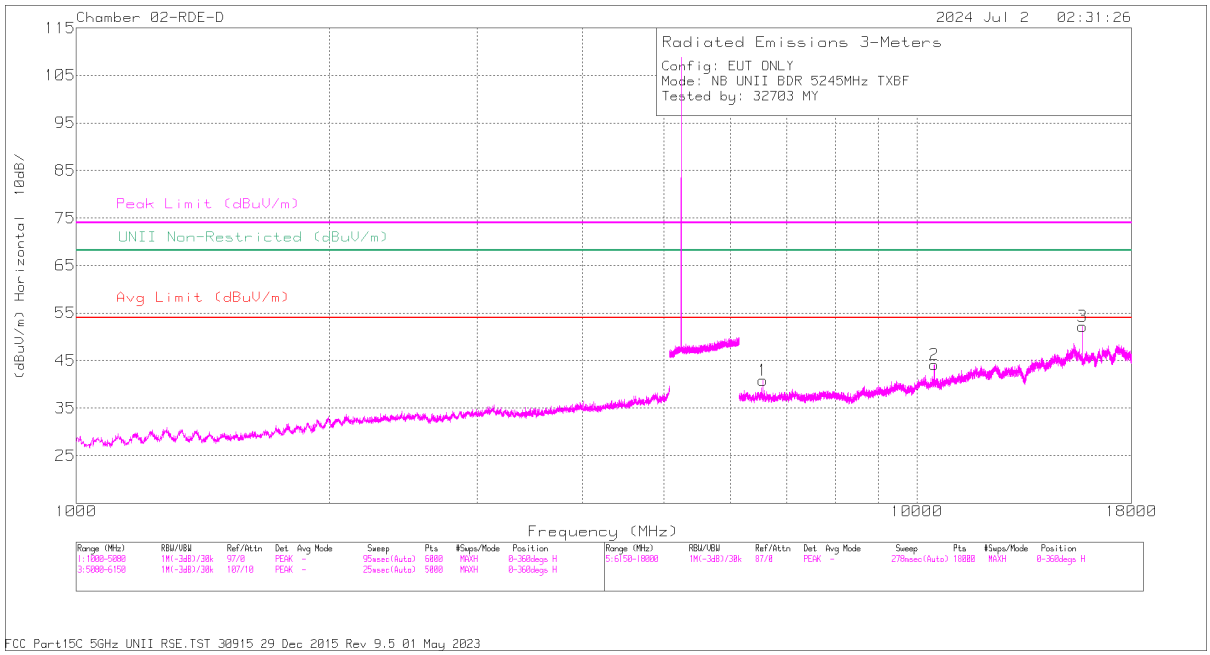
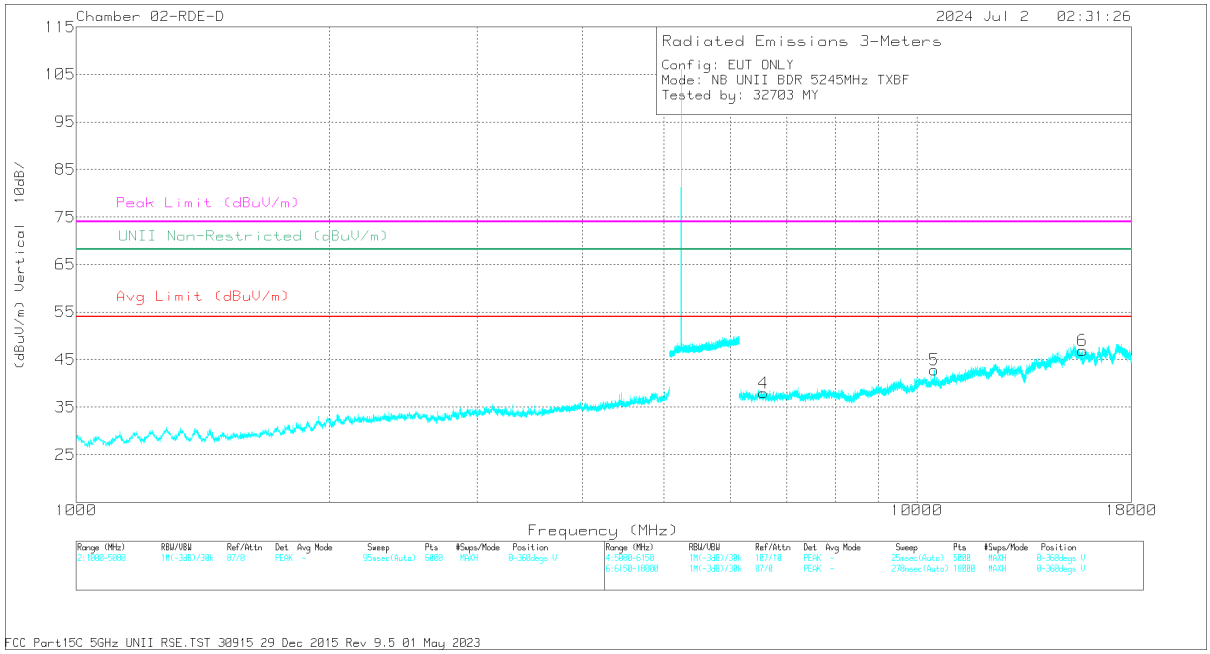
HIGH CHANNEL, 5245 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200896 ACF (dB/m)	Amp/Cbl (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	* 15735.161	34.1	PK-U	40	-16.9	57.2	-	-	74	-16.8	-	-	0	200	H
	* 15734.988	24.84	ADR	40	-16.9	47.94	54	-6.06	-	-	-	-	0	200	H
6	* 15734.047	32.41	PK-U	40	-16.9	55.51	-	-	74	-18.49	-	-	70	200	V
	* 15734.972	21.64	ADR	40	-16.9	44.74	54	-9.26	-	-	-	-	70	200	V
1	6556.123	36.12	PK-U	35.6	-24.2	47.52	-	-	-	-	68.2	-20.68	0	101	H
4	6556.325	37.59	PK-U	35.6	-24.2	48.99	-	-	-	-	68.2	-19.21	69	110	H
2	10489.655	35.41	PK-U	37.4	-20.2	52.61	-	-	-	-	68.2	-15.59	80	110	H
5	10489.411	33.27	PKFH	37.4	-20.2	50.47	-	-	-	-	68.2	-17.73	70	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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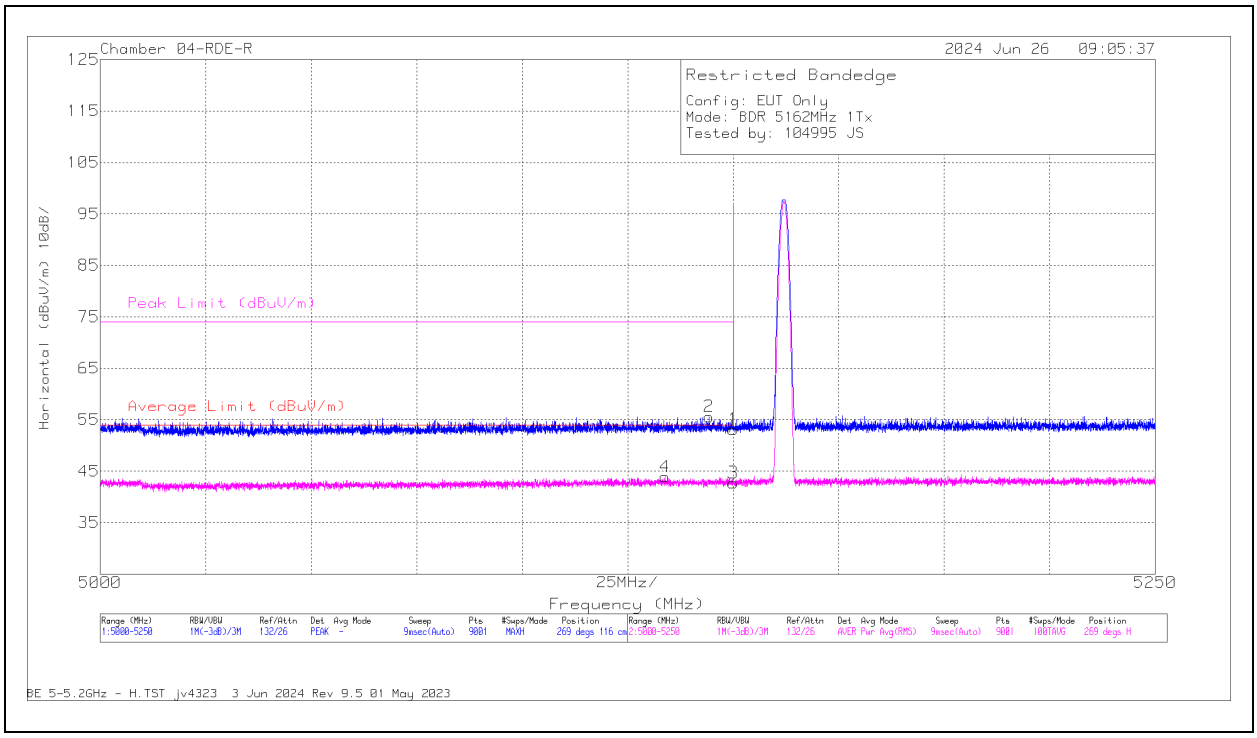
10.1.3. BDR LOW POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5133.862	47.06	RMS	34.3	-37.46	43.9	54	-10.1	-	-	269	116	H
2	* 5144.223	58.87	Pk	34.3	-37.57	55.6	-	-	74	-18.4	269	116	H
1	* 5150	56.43	Pk	34.3	-37.6	53.13	-	-	74	-20.87	269	116	H
3	* 5150	46.02	RMS	34.3	-37.6	42.72	54	-11.28	-	-	269	116	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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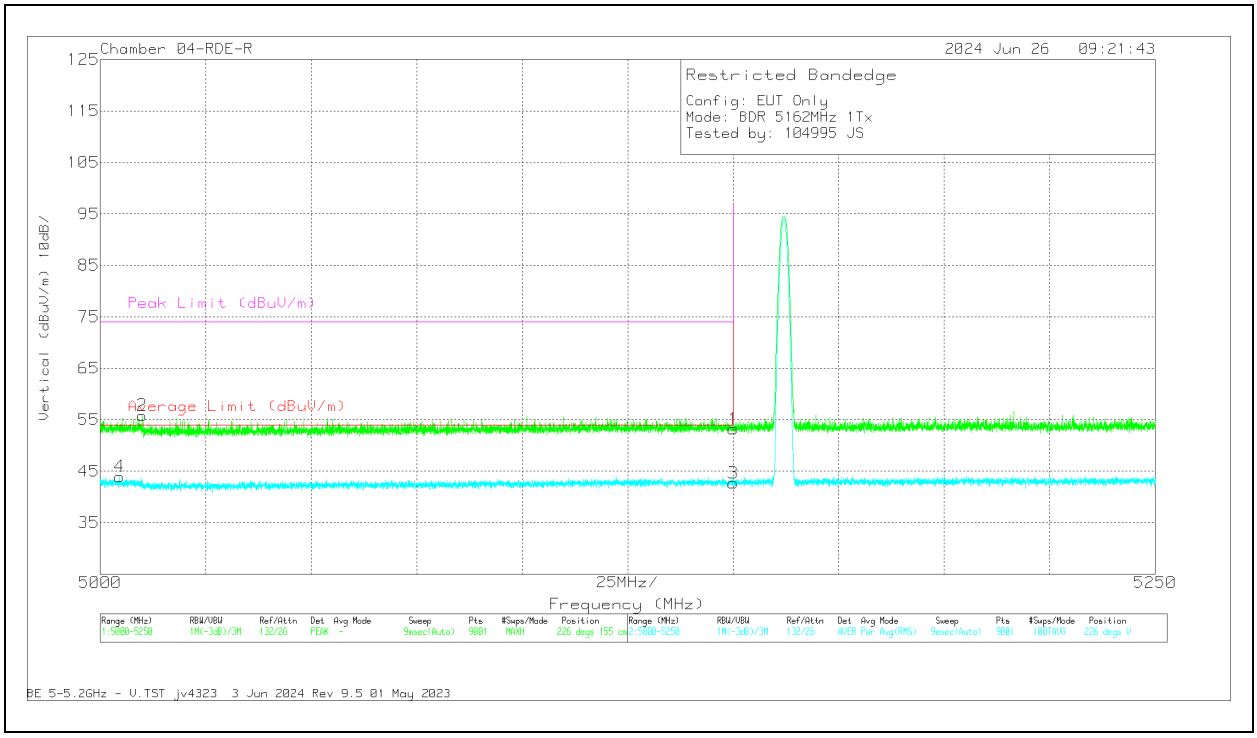
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5004.611	47.64	RMS	34.2	-37.89	43.95	54	-10.05	-	-	226	155	V
2	* 5009.972	59.52	Pk	34.2	-37.91	55.81	-	-	74	-18.19	226	155	V
1	* 5150	56.5	Pk	34.3	-37.6	53.2	-	-	74	-20.8	226	155	V
3	* 5150	46.01	RMS	34.3	-37.6	42.71	54	-11.29	-	-	226	155	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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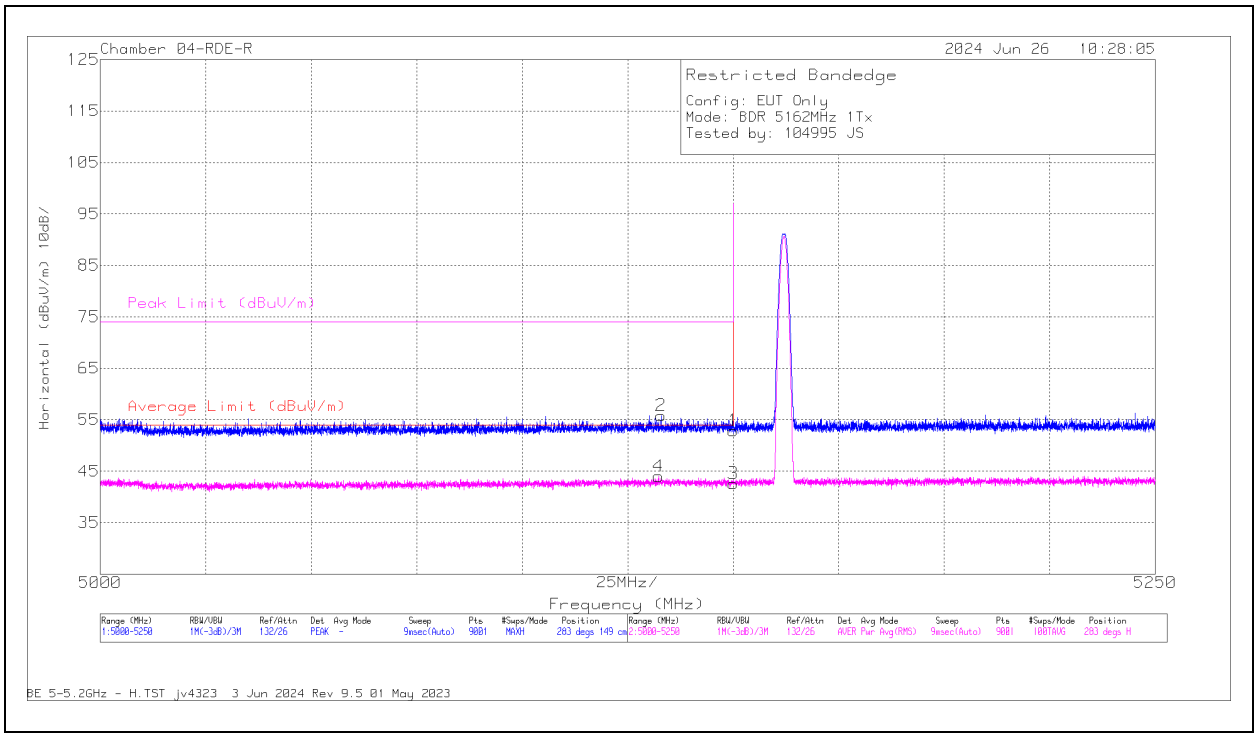
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5132.279	47.14	RMS	34.3	-37.43	44.01	54	-9.99	-	-	283	149	H
2	* 5132.89	58.96	Pk	34.3	-37.44	55.82	-	-	74	-18.18	283	149	H
1	* 5150	56.2	Pk	34.3	-37.6	52.9	-	-	74	-21.1	283	149	H
3	* 5150	45.89	RMS	34.3	-37.6	42.59	54	-11.41	-	-	283	149	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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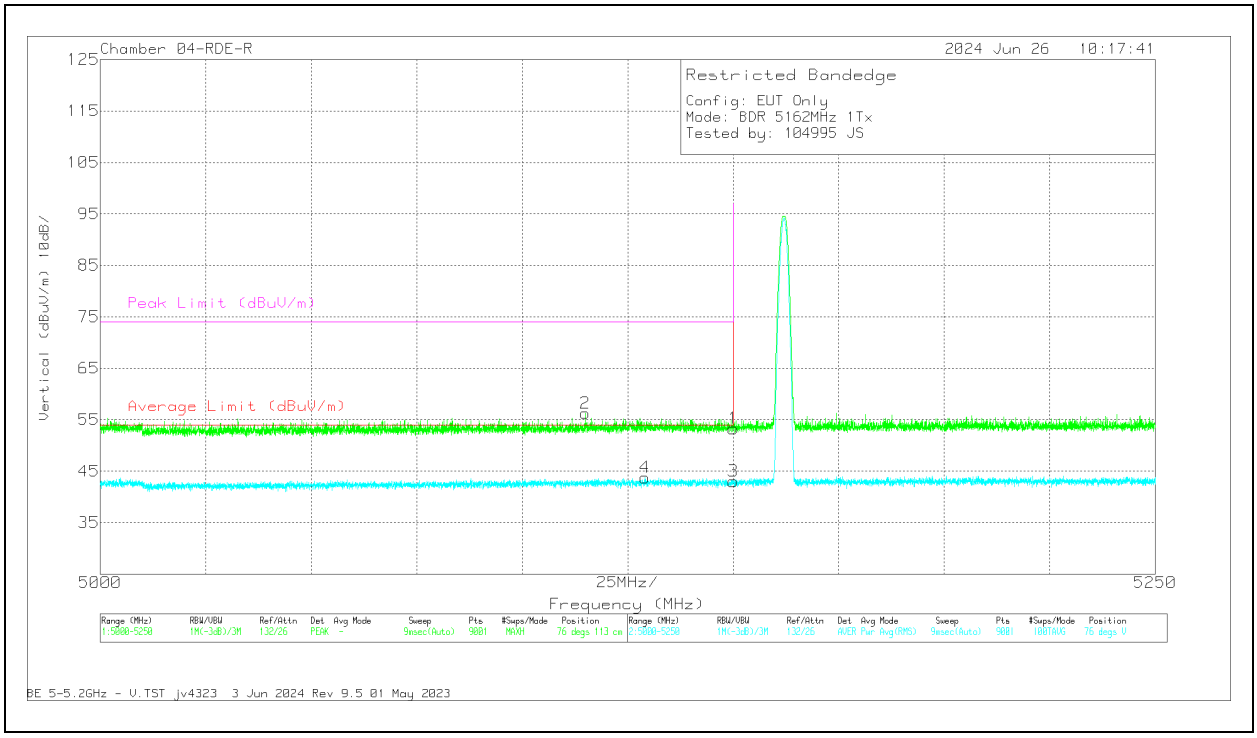
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5114.973	59.57	Pk	34.2	-37.52	56.25	-	-	74	-17.75	76	113	V
4	* 5129.084	46.93	RMS	34.3	-37.47	43.76	54	-10.24	-	-	76	113	V
1	* 5150	56.6	Pk	34.3	-37.6	53.3	-	-	74	-20.7	76	113	V
3	* 5150	46.33	RMS	34.3	-37.6	43.03	54	-10.97	-	-	76	113	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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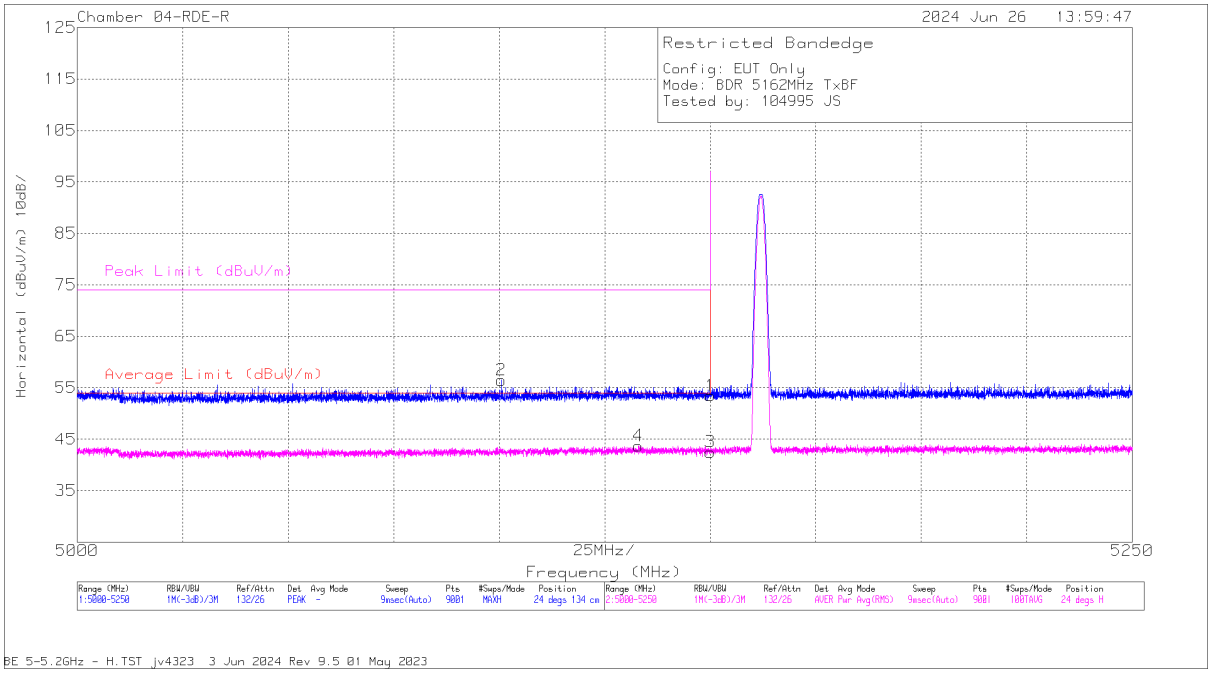
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5100.445	59.92	Pk	34.2	-37.65	56.47	-	-	74	-17.53	24	134	H
4	* 5132.973	46.83	RMS	34.3	-37.44	43.69	54	-10.31	-	-	24	134	H
1	* 5150	56.76	Pk	34.3	-37.6	53.46	-	-	74	-20.54	24	134	H
3	* 5150	45.81	RMS	34.3	-37.6	42.51	54	-11.49	-	-	24	134	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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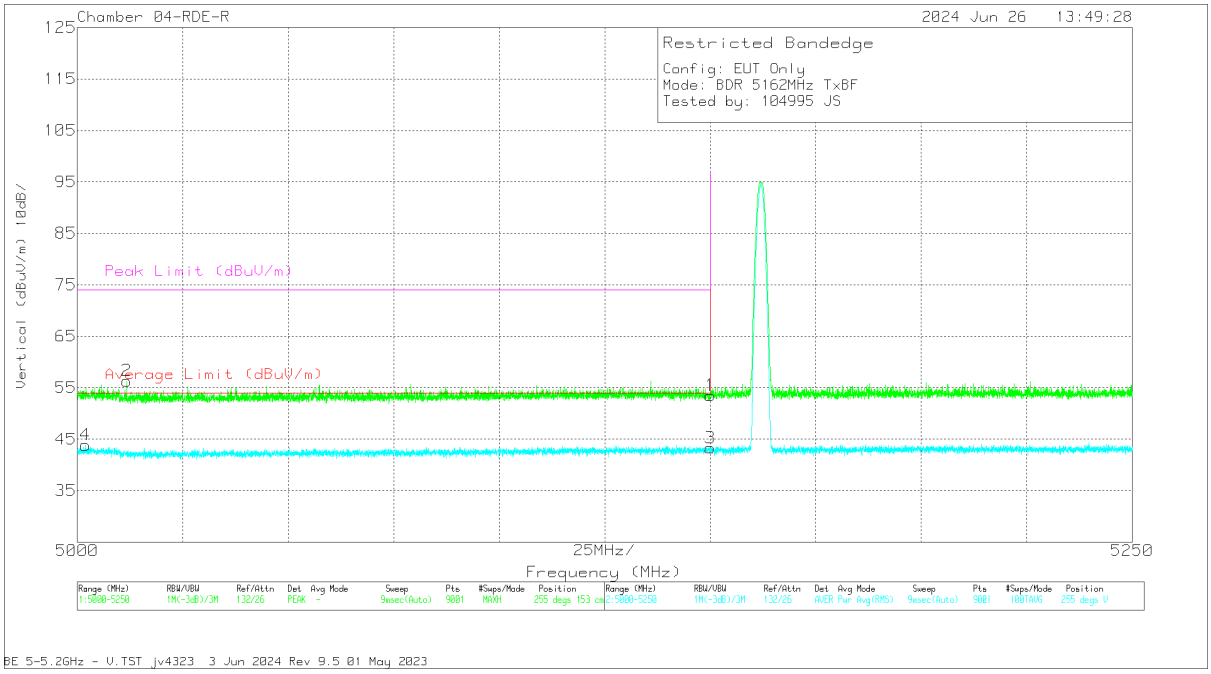
VERTICAL RESULT



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	41112 ACF (dB/m)	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	* 5001.972	47.55	RMS	34.2	-37.88	43.87	54	-10.13	-	-	255	153	V
2	* 5011.778	60.04	Pk	34.2	-37.9	56.34	-	-	74	-17.66	255	153	V
1	* 5150	56.8	Pk	34.3	-37.6	53.5	-	-	74	-20.5	255	153	V
3	* 5150	46.59	RMS	34.3	-37.6	43.29	54	-10.71	-	-	255	153	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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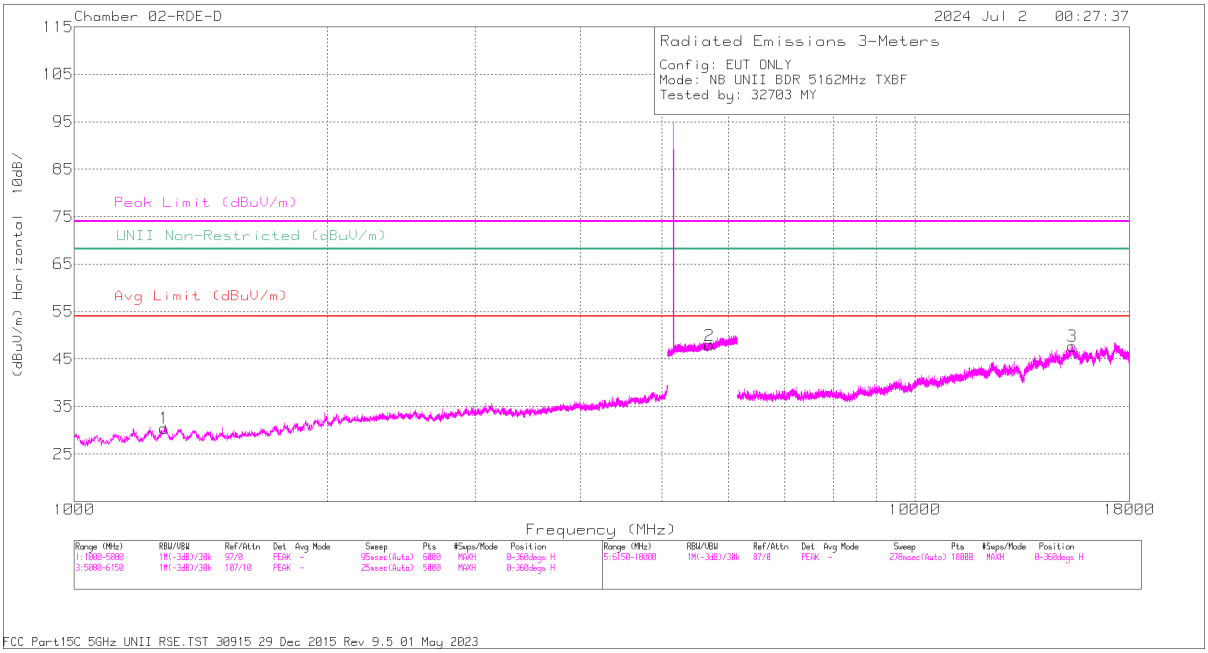
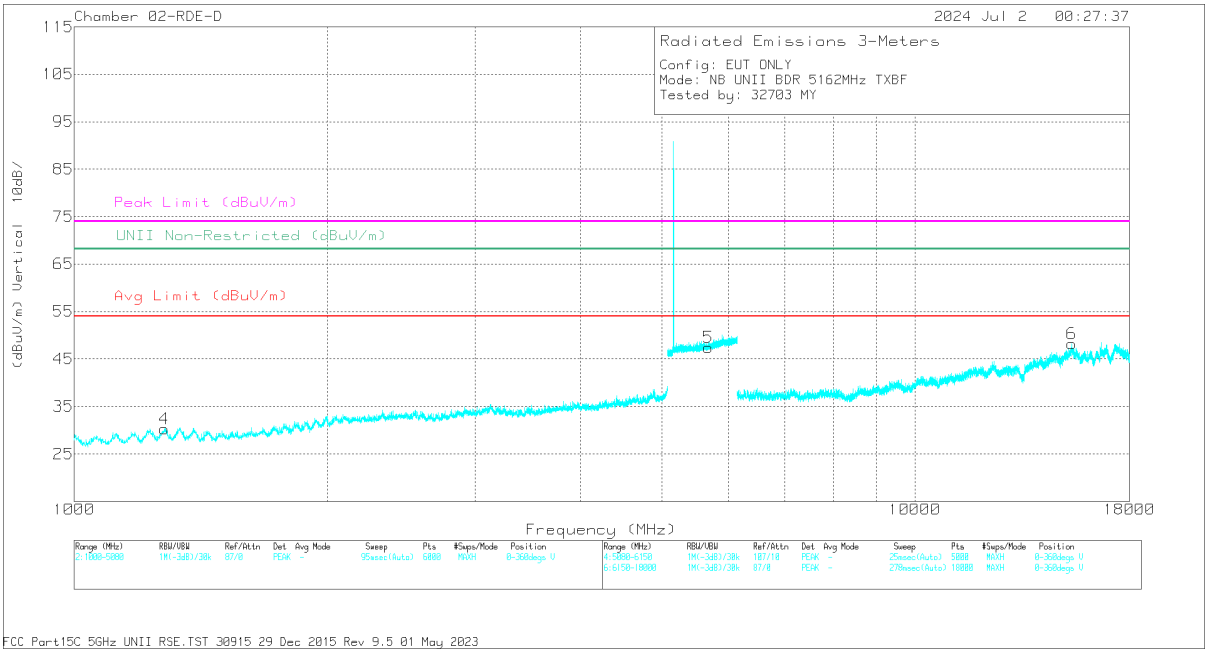
10.1.4. BDR LOW POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200896 ACF (dB/m)	Amp/Cbl (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	* 1280.861	41.77	PK-U	28.9	-30.2	40.47	-	-	74	-33.53	-	-	360	200	H
	* 1278.821	30.22	ADR	28.9	-30.2	28.92	54	-25.08	-	-	-	-	360	200	H
4	* 1280.594	41.71	PK-U	28.9	-30.2	40.41	-	-	74	-33.59	-	-	360	200	V
	* 1279.392	30.07	ADR	28.9	-30.2	28.77	54	-25.23	-	-	-	-	360	200	V
3	* 15392.37	33.79	PK-U	39.6	-17.1	56.29	-	-	74	-17.71	-	-	360	101	H
	* 15393.78	22.29	ADR	39.6	-17.2	44.69	54	-9.31	-	-	-	-	360	101	H
6	* 15367.65	33.83	PK-U	39.6	-15.7	57.73	-	-	74	-16.27	-	-	360	101	V
	* 15367.73	22.22	ADR	39.6	-15.7	46.12	54	-7.88	-	-	-	-	360	101	V
5	5679.005	39.04	PK-U	34.4	-15.7	57.74	-	-	-	-	68.2	-10.46	360	199	V
2	5700.503	39.16	PK-U	34.5	-15.8	57.86	-	-	-	-	68.2	-10.34	360	101	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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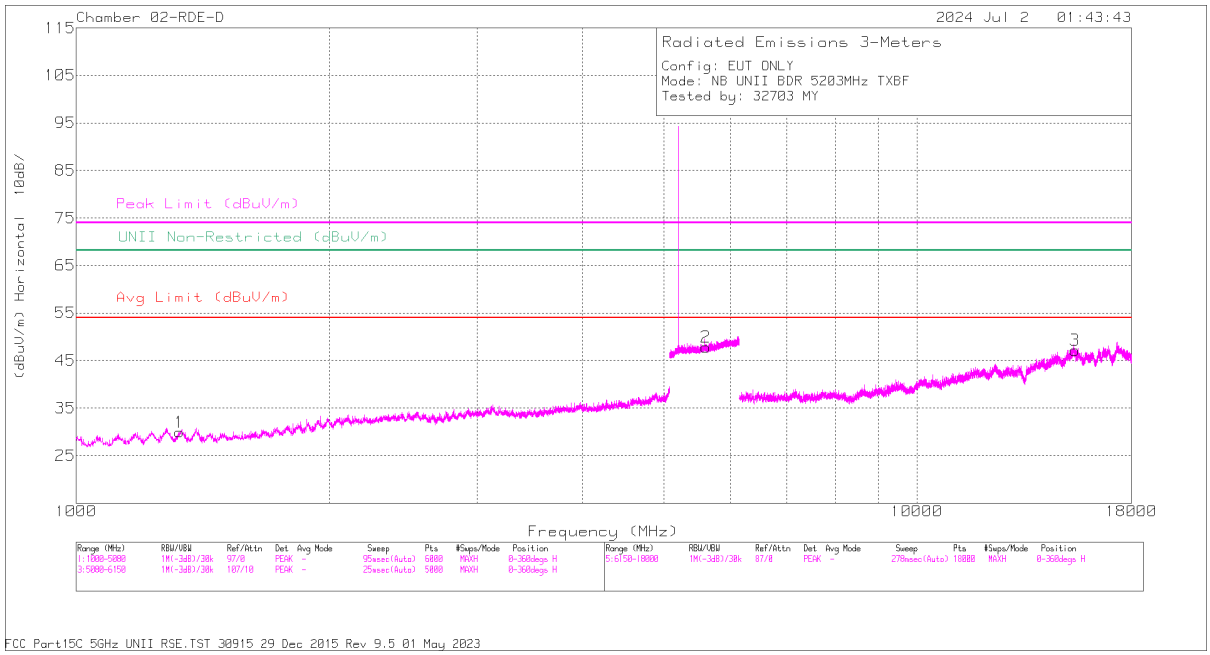
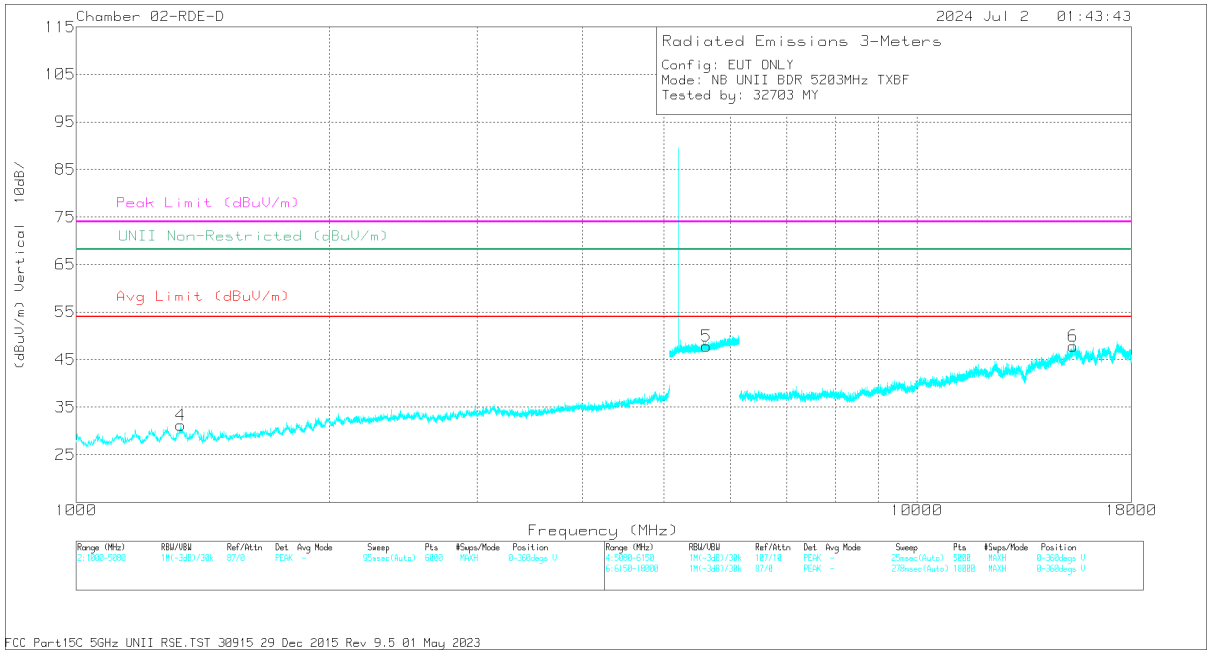
MID CHANNEL, 5203 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200896 ACF (dB/m)	Amp/Cbl (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	* 1329.075	41.27	PK-U	28.7	-29.6	40.37	-	-	74	-33.63	-	-	360	199	H
	* 1327.781	29.6	ADR	28.7	-29.7	28.6	54	-25.4	-	-	-	-	360	199	H
4	* 1331.311	41.64	PK-U	28.7	-29.7	40.64	-	-	74	-33.36	-	-	360	199	V
	* 1331.402	30	ADR	28.7	-29.7	29	54	-25	-	-	-	-	360	199	V
3	* 15422.69	33.62	PK-U	39.6	-16.8	56.42	-	-	74	-17.58	-	-	360	101	H
	* 15421.64	21.99	ADR	39.6	-16.7	44.89	54	-9.11	-	-	-	-	360	101	H
2	5612.35	39.56	PK-U	34.4	-15.6	58.36	-	-	-	-	68.2	-9.84	360	199	H
5	5620.626	38.86	PK-U	34.4	-15.6	57.66	-	-	-	-	68.2	-10.54	360	101	V
6	15349.196	33.89	PK-U	39.6	-16.7	56.79	-	-	-	-	68.2	-11.41	360	199	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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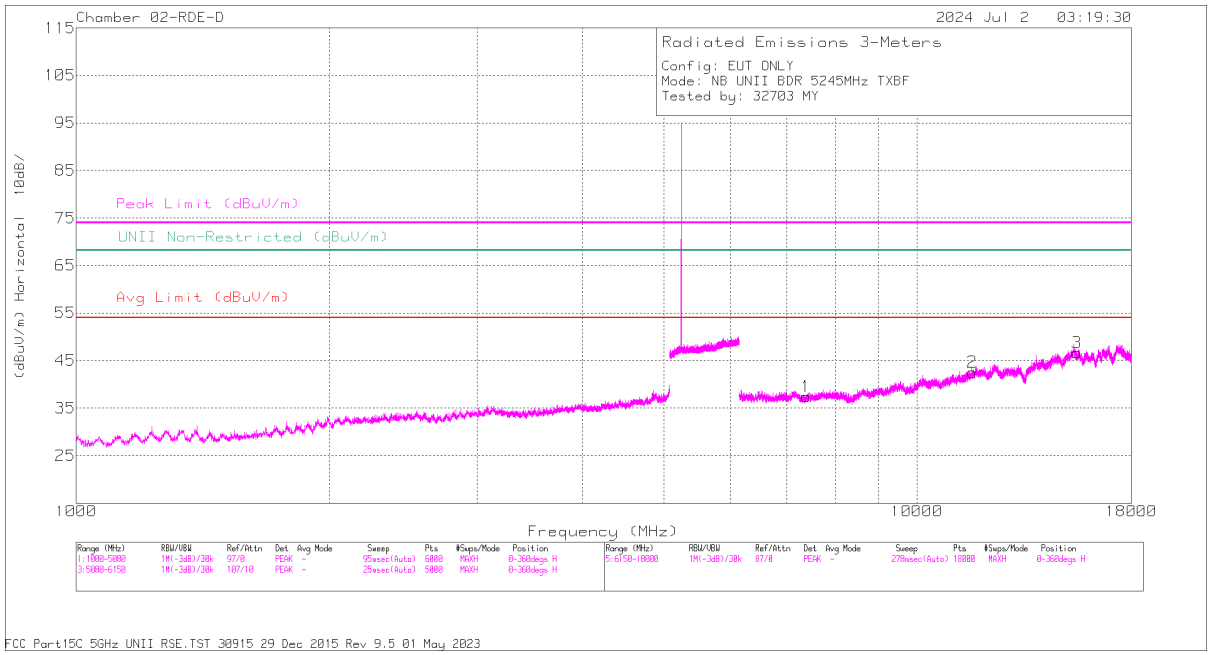
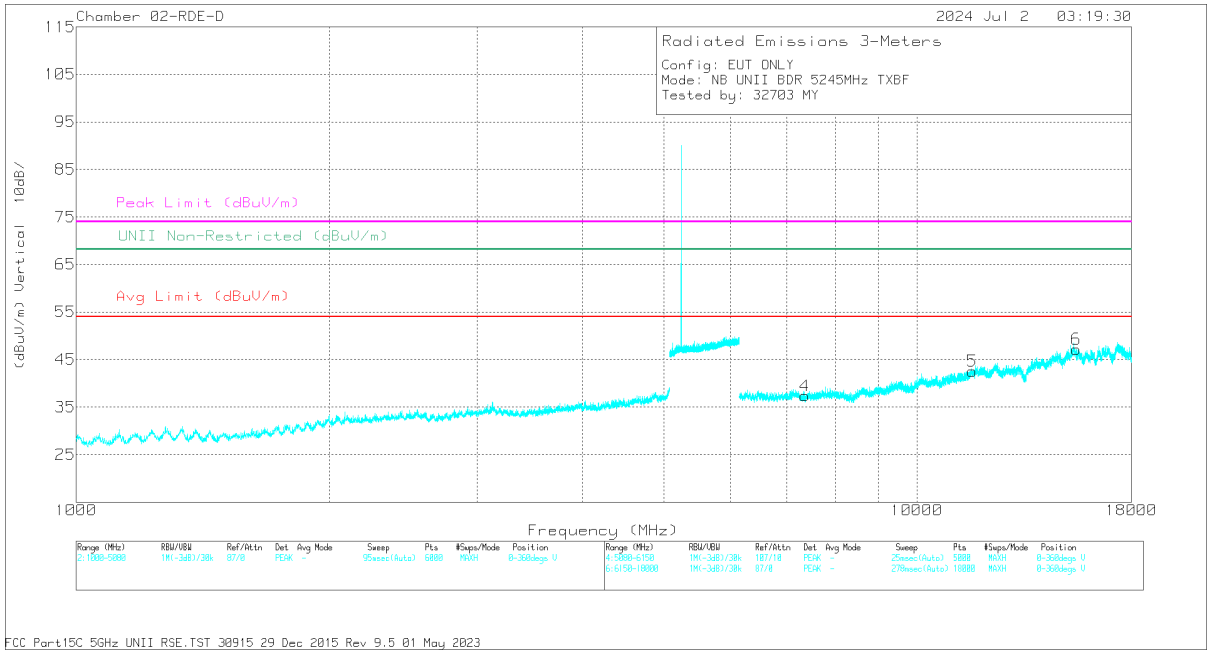
HIGH CHANNEL, 5245 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	200896 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7382.592	36.1	PK-U	35.5	-23.8	47.8	-	-	74	-26.2	360	101	H
	* 7381.499	24.37	ADR	35.5	-23.9	35.97	54	-18.03	-	-	360	101	H
2	* 11635.791	33.22	PK-U	38.5	-19.5	52.22	-	-	74	-21.78	360	101	H
	* 11636.56	21.73	ADR	38.5	-19.5	40.73	54	-13.27	-	-	360	101	H
3	* 15499.049	32.24	PK-U	39.8	-16.8	55.24	-	-	74	-18.76	360	200	H
	* 15496.594	21.1	ADR	39.8	-16.7	44.2	54	-9.8	-	-	360	200	H
4	* 7365.267	35.66	PK-U	35.5	-24.1	47.06	-	-	74	-26.94	360	101	V
	* 7365.068	24.2	ADR	35.5	-24.1	35.6	54	-18.4	-	-	360	101	V
5	* 11630.685	33.86	PK-U	38.5	-19.3	53.06	-	-	74	-20.94	360	200	V
	* 11630.268	21.67	ADR	38.5	-19.2	40.97	54	-13.03	-	-	360	200	V
6	* 15481.093	32.91	PK-U	39.7	-16.8	55.81	-	-	74	-18.19	360	101	V
	* 15477.794	21.24	ADR	39.7	-17	43.94	54	-10.06	-	-	360	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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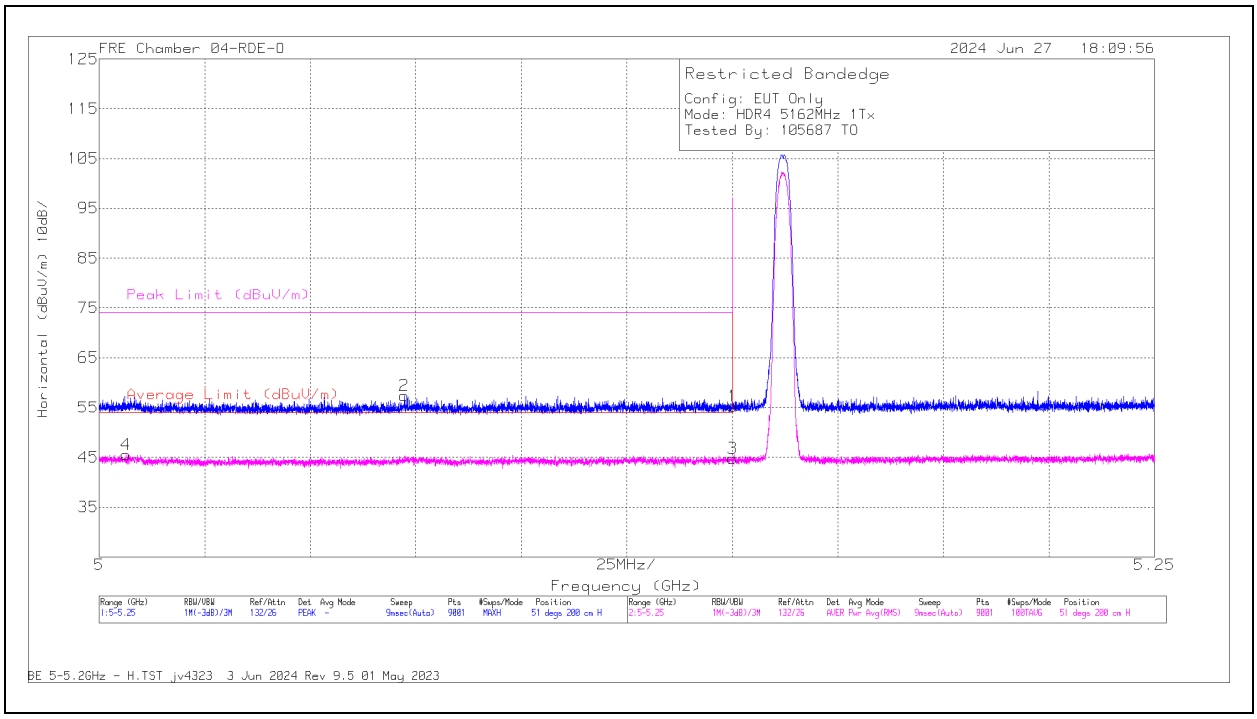
10.1.5. HDR 4 HIGH POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.00636	46.74	RMS	34.6	-35.8	45.54	54	-8.46	-	-	51	200	H
2	* 5.07233	58.08	Pk	34.6	-35.27	57.41	-	-	74	-16.59	51	200	H
1	* 5.15	55.92	Pk	34.7	-35.4	55.22	-	-	74	-18.78	51	200	H
3	* 5.15	45.52	RMS	34.7	-35.4	44.82	54	-9.18	-	-	51	200	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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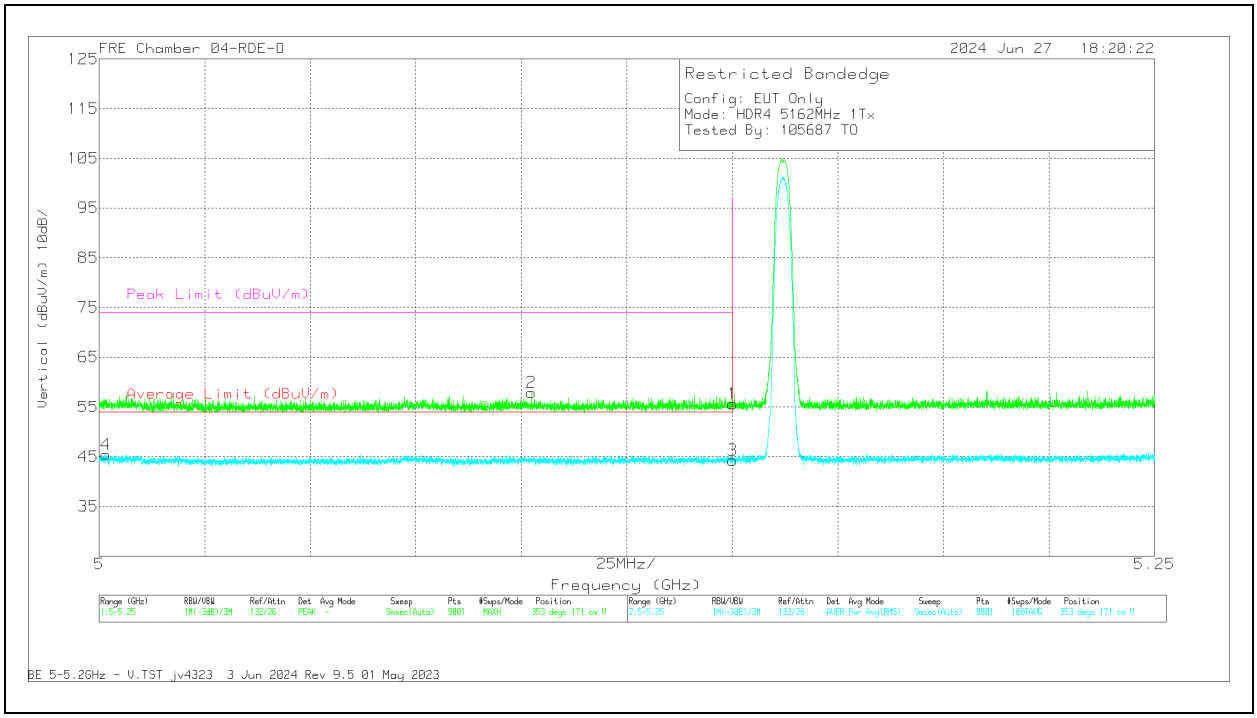
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.001583	46.67	RMS	34.6	-35.8	45.47	54	-8.53	-	-	353	171	V
2	* 5.10239	58.8	Pk	34.7	-35.56	57.94	-	-	74	-16.06	353	171	V
1	* 5.15	56.37	Pk	34.7	-35.4	55.67	-	-	74	-18.33	353	171	V
3	* 5.15	44.99	RMS	34.7	-35.4	44.29	54	-9.71	-	-	353	171	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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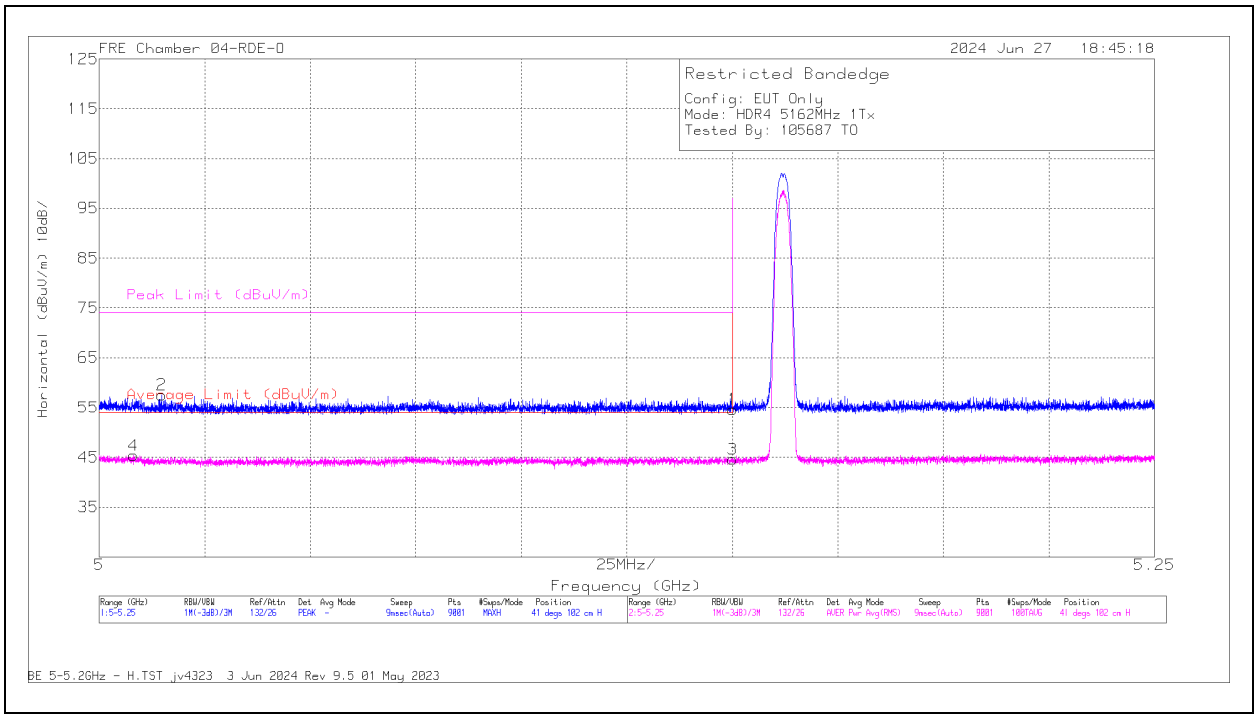
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.008139	46.55	RMS	34.6	-35.8	45.35	54	-8.65	-	-	41	102	H
2	* 5.01475	58.53	Pk	34.6	-35.62	57.51	-	-	74	-16.49	41	102	H
1	* 5.15	55.31	Pk	34.7	-35.4	54.61	-	-	74	-19.39	41	102	H
3	* 5.15	45.3	RMS	34.7	-35.4	44.6	54	-9.4	-	-	41	102	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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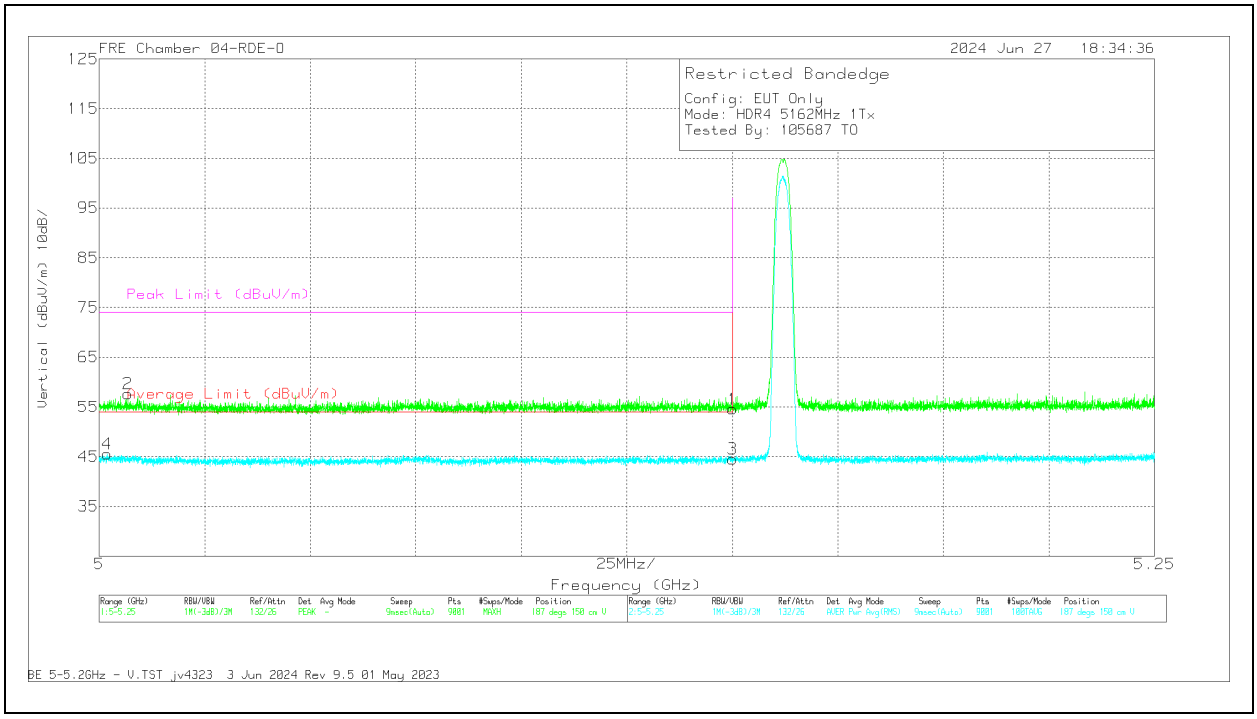
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.001833	46.69	RMS	34.6	-35.8	45.49	54	-8.51	-	-	187	150	V
2	* 5.006806	58.86	Pk	34.6	-35.8	57.66	-	-	74	-16.34	187	150	V
1	* 5.15	55.26	Pk	34.7	-35.4	54.56	-	-	74	-19.44	187	150	V
3	* 5.15	45.19	RMS	34.7	-35.4	44.49	54	-9.51	-	-	187	150	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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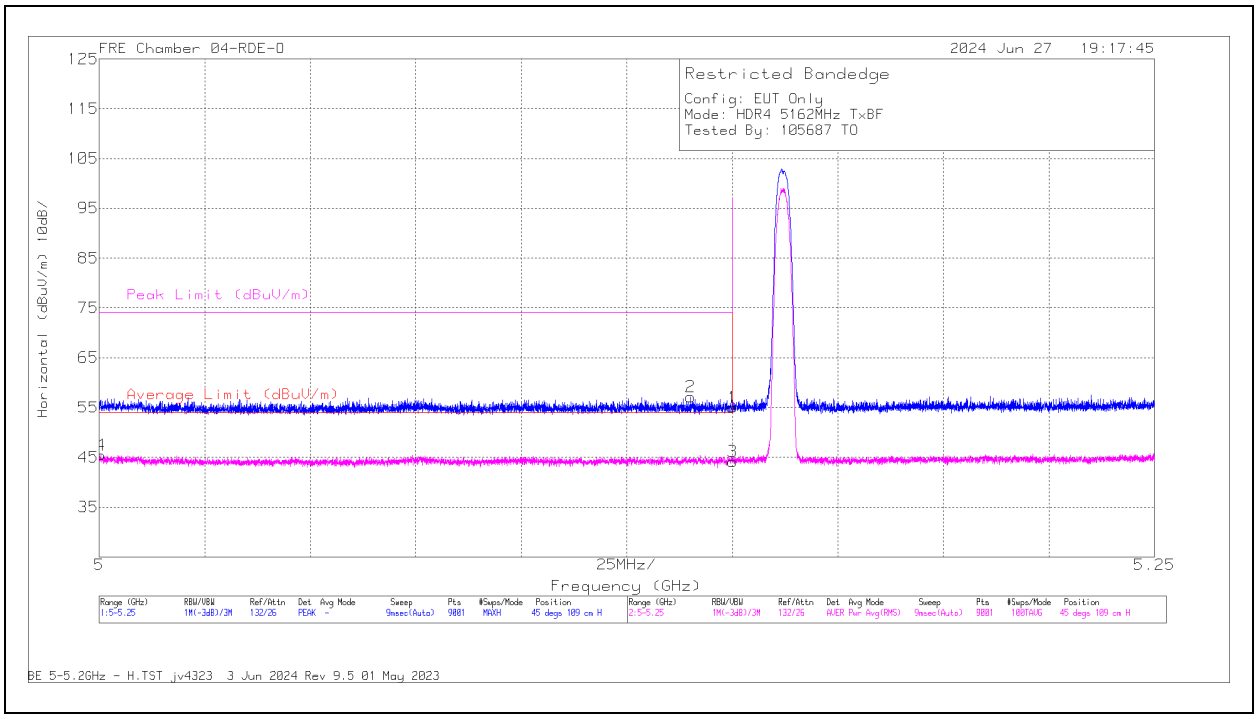
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.000389	46.67	RMS	34.6	-35.8	45.47	54	-8.53	-	-	45	109	H
2	* 5.140084	57.93	Pk	34.7	-35.5	57.13	-	-	74	-16.87	45	109	H
1	* 5.15	55.75	Pk	34.7	-35.4	55.05	-	-	74	-18.95	45	109	H
3	* 5.15	44.81	RMS	34.7	-35.4	44.11	54	-9.89	-	-	45	109	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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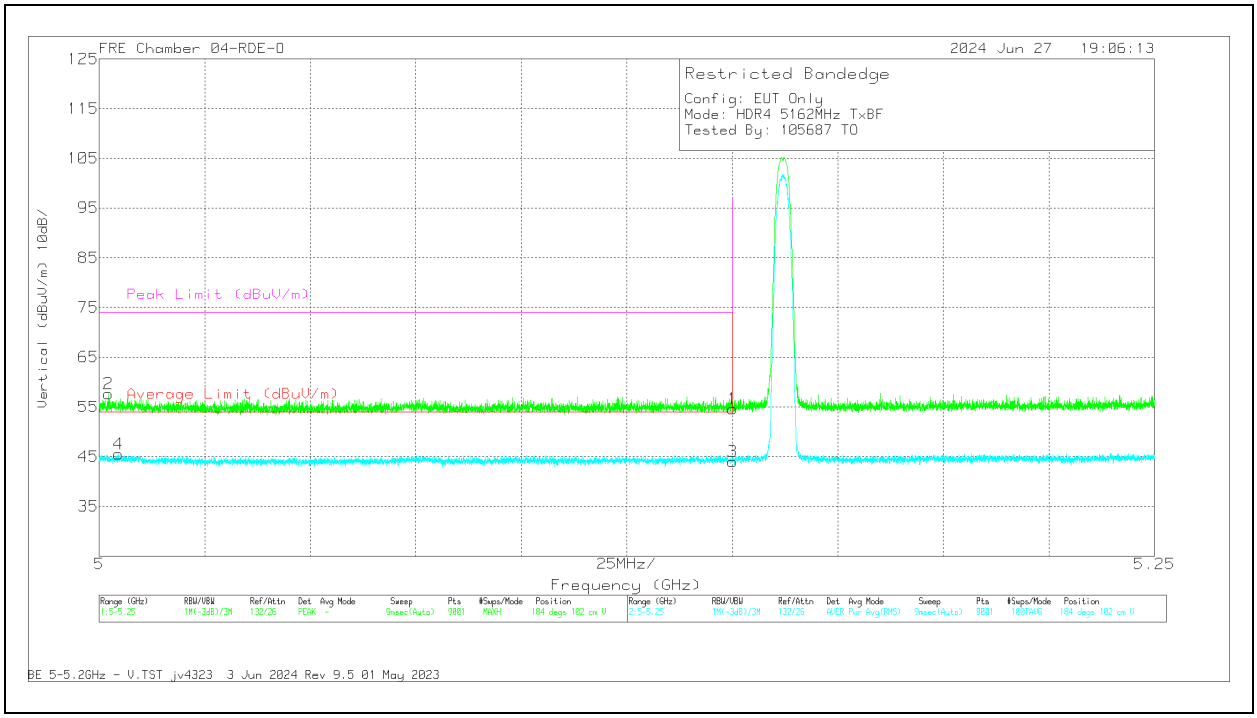
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.002139	58.86	Pk	34.6	-35.8	57.66	-	-	74	-16.34	184	102	V
4	* 5.004556	46.7	RMS	34.6	-35.8	45.5	54	-8.5	-	-	184	102	V
1	* 5.15	55.29	Pk	34.7	-35.4	54.59	-	-	74	-19.41	184	102	V
3	* 5.15	44.7	RMS	34.7	-35.4	44	54	-10	-	-	184	102	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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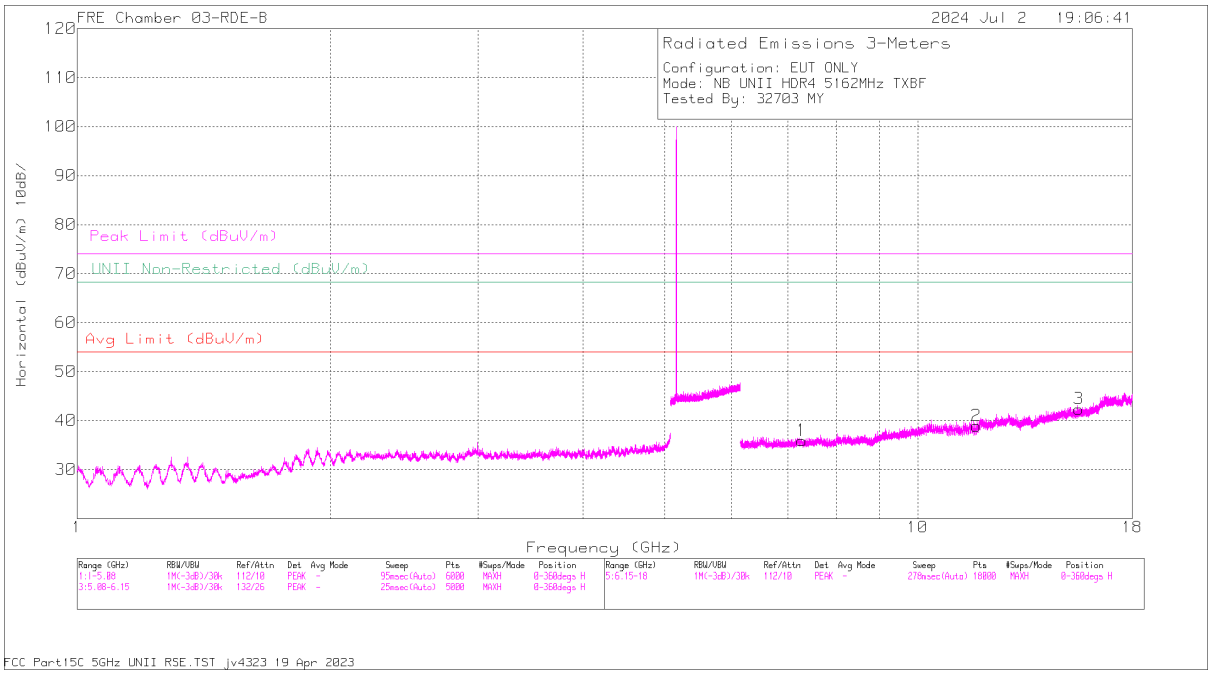
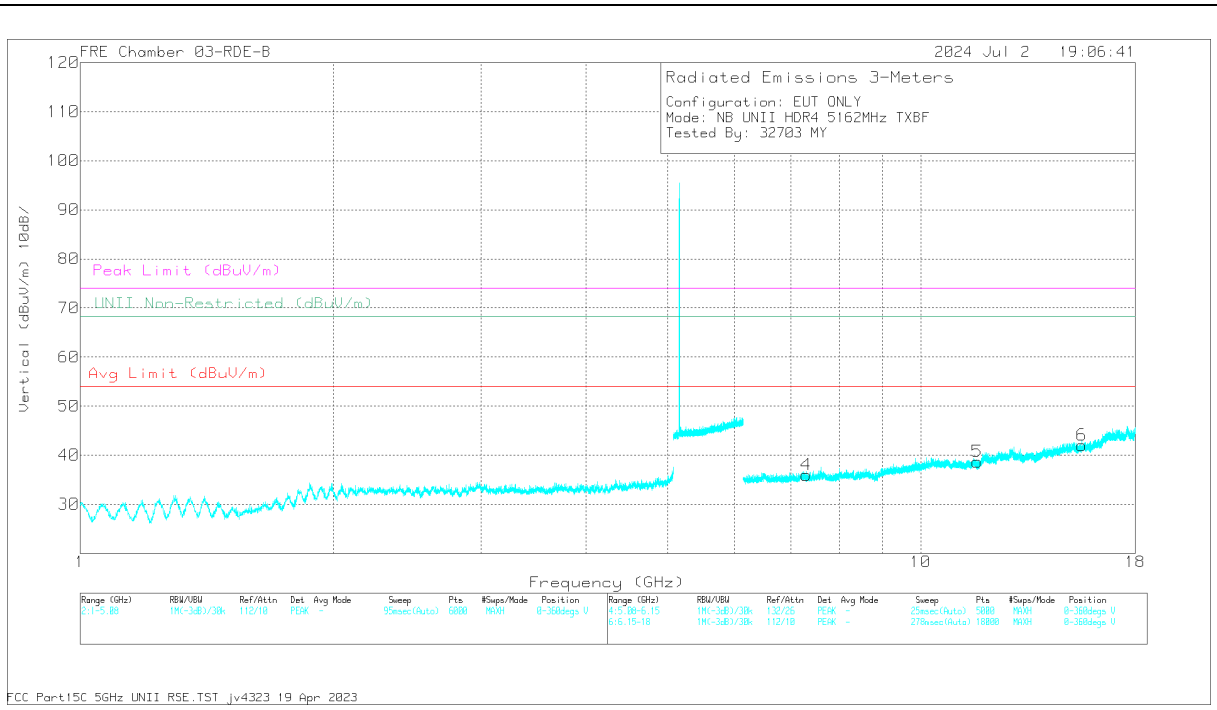
10.1.6. HDR 4 HIGH POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.281015	58.05	PK-U	35.8	-47.5	46.35	-	-	74	-27.65	0	200	H
	* 7.282788	46.06	ADR	35.8	-47.5	34.36	54	-19.64	-	-	0	200	H
2	* 11.742154	57.45	PK-U	38.4	-46.8	49.05	-	-	74	-24.95	0	101	H
	* 11.74267	46	ADR	38.4	-46.8	37.6	54	-16.4	-	-	0	101	H
3	* 15.557211	57.88	PK-U	40.1	-46.4	51.58	-	-	74	-22.42	0	200	H
	* 15.55549	46.26	ADR	40.1	-46.45	39.91	54	-14.09	-	-	0	200	H
4	* 7.307025	57.91	PK-U	35.8	-48	45.71	-	-	74	-28.29	0	101	V
	* 7.30969	46.48	ADR	35.8	-48	34.28	54	-19.72	-	-	0	101	V
5	* 11.673767	57.03	PK-U	38.3	-46.4	48.93	-	-	74	-25.07	0	200	V
	* 11.672431	45.66	ADR	38.3	-46.46	37.5	54	-16.5	-	-	0	200	V
6	* 15.544602	57.79	PK-U	40.1	-46.7	51.19	-	-	74	-22.81	0	101	V
	* 15.545041	46.34	ADR	40.1	-46.7	39.74	54	-14.26	-	-	0	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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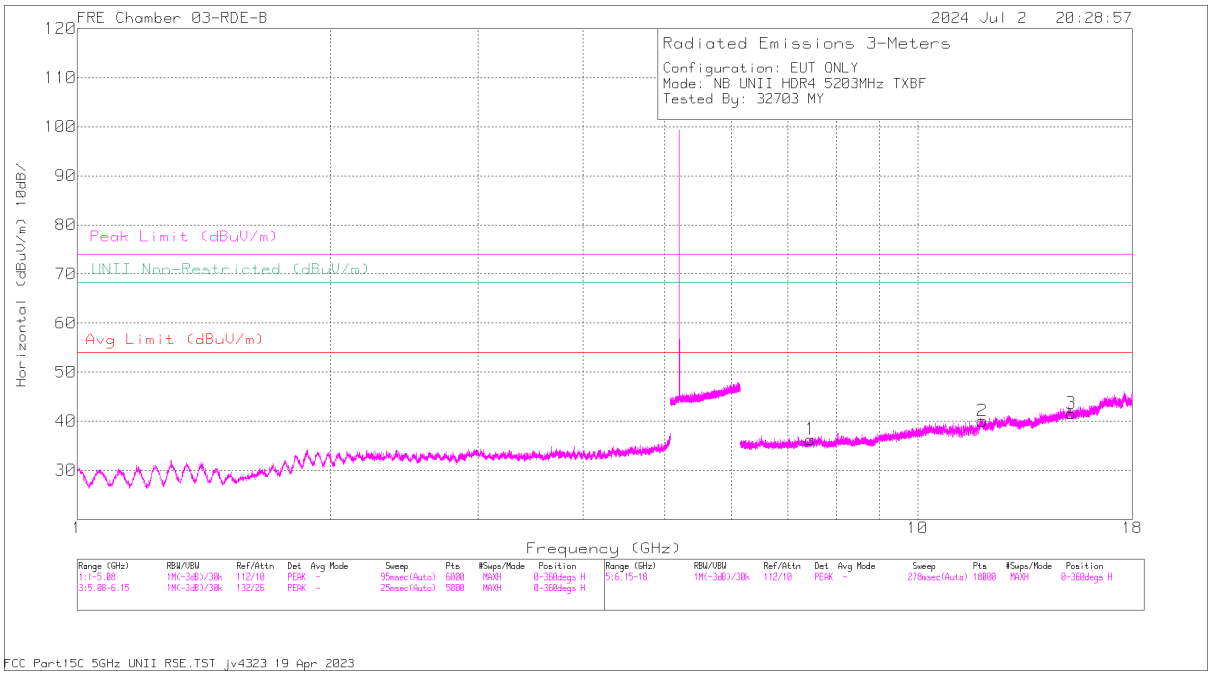
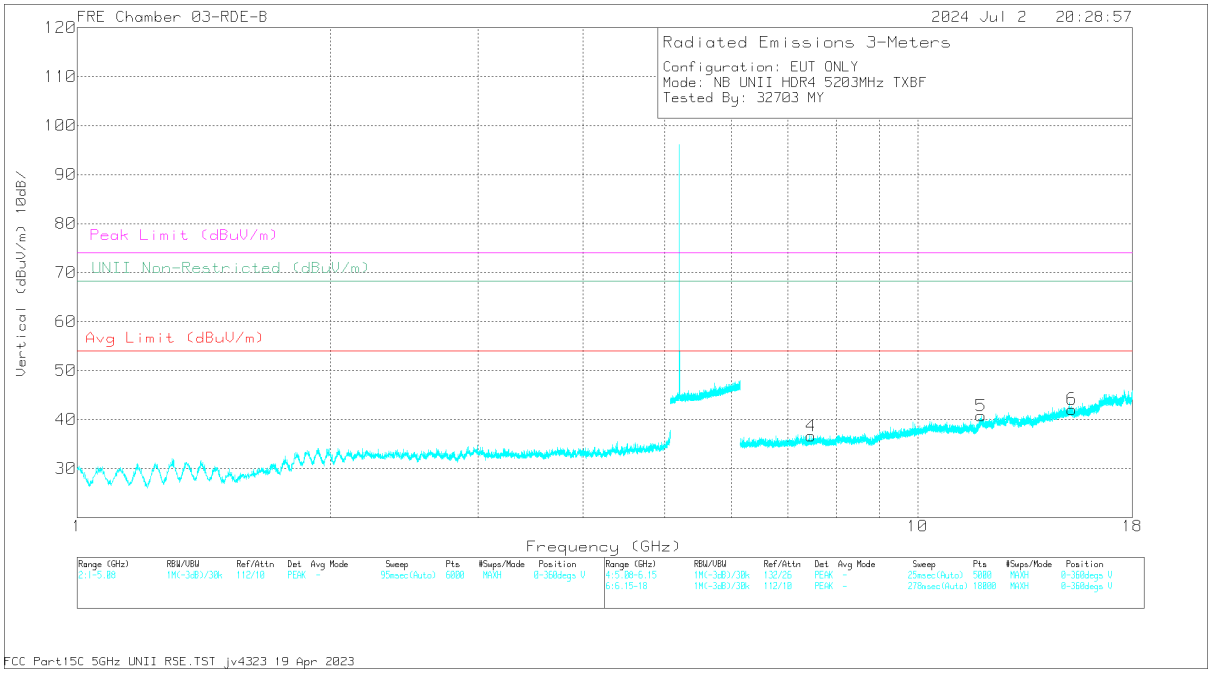
MID CHANNEL, 5203 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.450231	57.82	PK-U	35.9	-47.82	45.9	-	-	74	-28.1	-	-	0	200	H
	* 7.448748	46.39	ADR	35.9	-47.8	34.49	54	-19.51	-	-	-	-	0	200	H
2	* 11.936543	57.35	PK-U	38.6	-46.25	49.7	-	-	74	-24.3	-	-	0	101	H
	* 11.935348	45.78	ADR	38.6	-46.2	38.18	54	-15.82	-	-	-	-	0	101	H
4	* 7.466467	58.24	PK-U	35.9	-48	46.14	-	-	74	-27.86	-	-	0	101	V
	* 7.463596	46.43	ADR	35.9	-47.9	34.43	54	-19.57	-	-	-	-	0	101	V
5	* 11.895581	57.11	PK-U	38.6	-46.4	49.31	-	-	74	-24.69	-	-	0	200	V
	* 11.896359	45.49	ADR	38.6	-46.4	37.69	54	-16.31	-	-	-	-	0	200	V
3	15.232156	58.63	PK-U	39.8	-47	51.43	-	-	-	-	68.2	-16.77	0	200	H
6	15.252798	58.94	PK-U	39.8	-47.1	51.64	-	-	-	-	68.2	-16.56	0	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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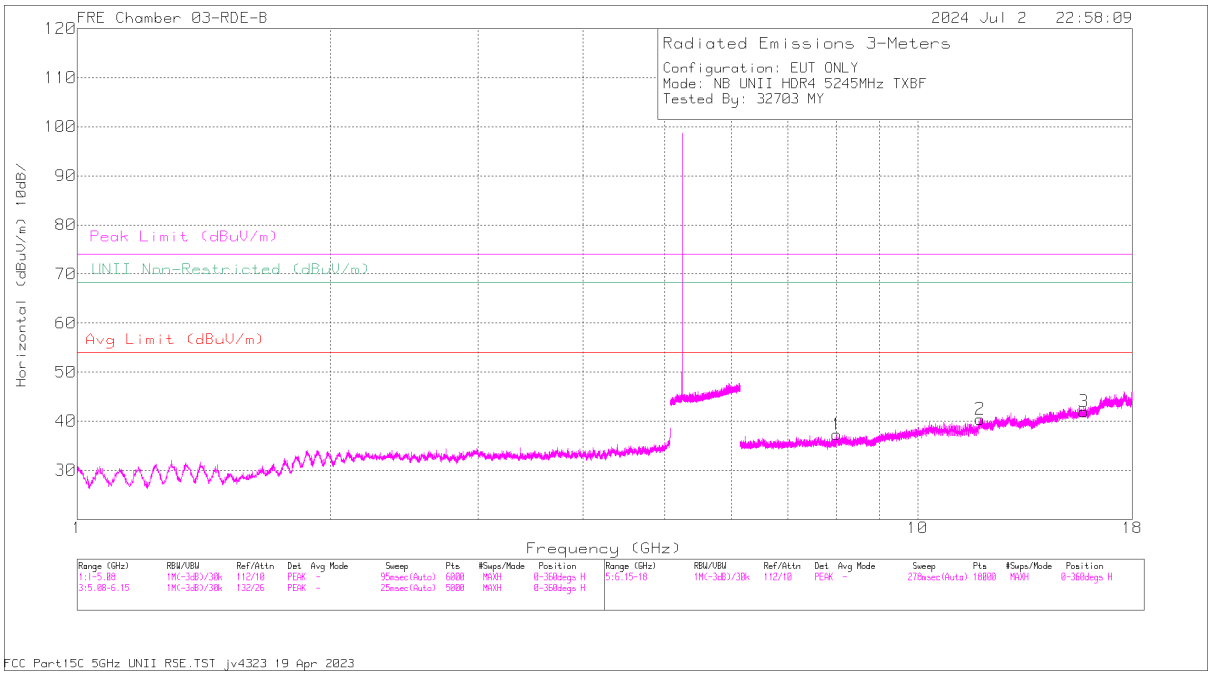
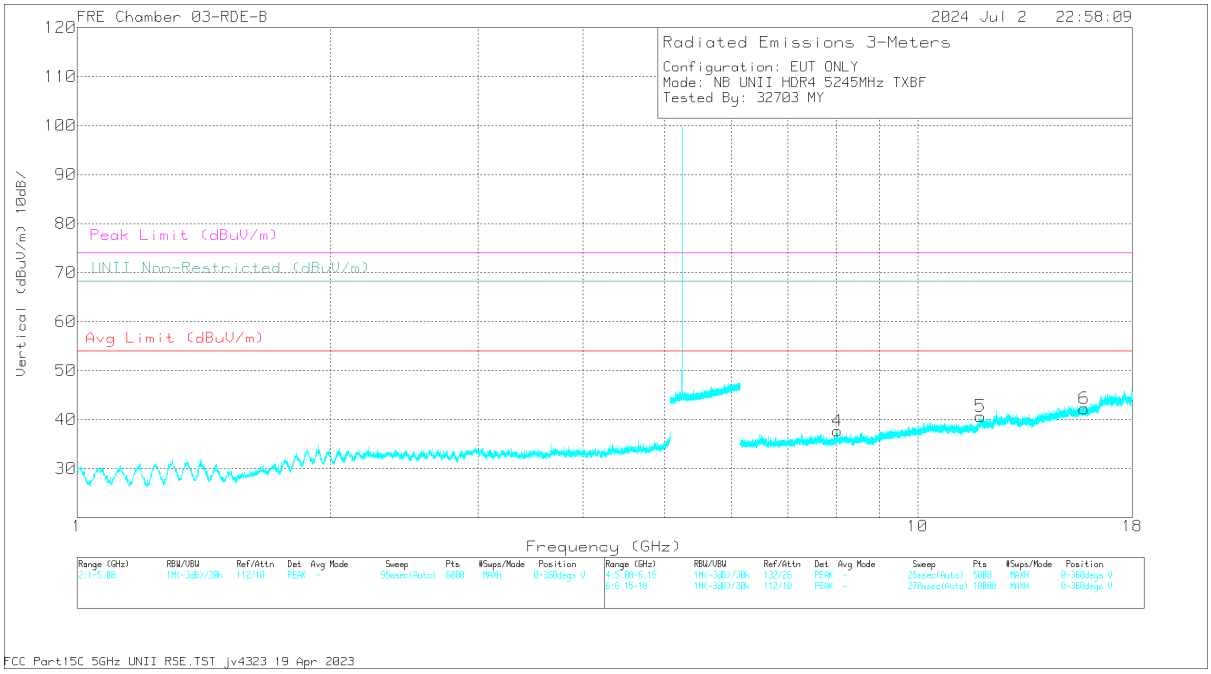
HIGH CHANNEL, 5245 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.870568	56.88	PK-U	38.5	-46.6	48.78	-	-	74	-25.22	-	-	0	200	H
	* 11.869518	45.72	ADR	38.5	-46.6	37.62	54	-16.38	-	-	-	-	0	200	H
3	* 15.764718	57.84	PK-U	40.3	-46.77	51.37	-	-	74	-22.63	-	-	0	200	H
	* 15.765174	46.64	ADR	40.3	-46.78	40.16	54	-13.84	-	-	-	-	0	200	H
4	* 8.028808	57.61	PK-U	36.1	-47.4	46.31	-	-	74	-27.69	-	-	0	200	V
	* 8.03031	46	ADR	36.1	-47.4	34.7	54	-19.3	-	-	-	-	0	200	V
5	* 11.875756	56.84	PK-U	38.5	-46.5	48.84	-	-	74	-25.16	-	-	0	101	V
	* 11.875203	45.66	ADR	38.5	-46.5	37.66	54	-16.34	-	-	-	-	0	101	V
6	* 15.779252	58.6	PK-U	40.3	-46.6	52.3	-	-	74	-21.7	-	-	0	101	V
	* 15.780191	46.8	ADR	40.3	-46.6	40.5	54	-13.5	-	-	-	-	0	101	V
1	8.008505	58.06	PK-U	36.1	-47.5	46.66	-	-	-	-	68.2	-21.54	0	101	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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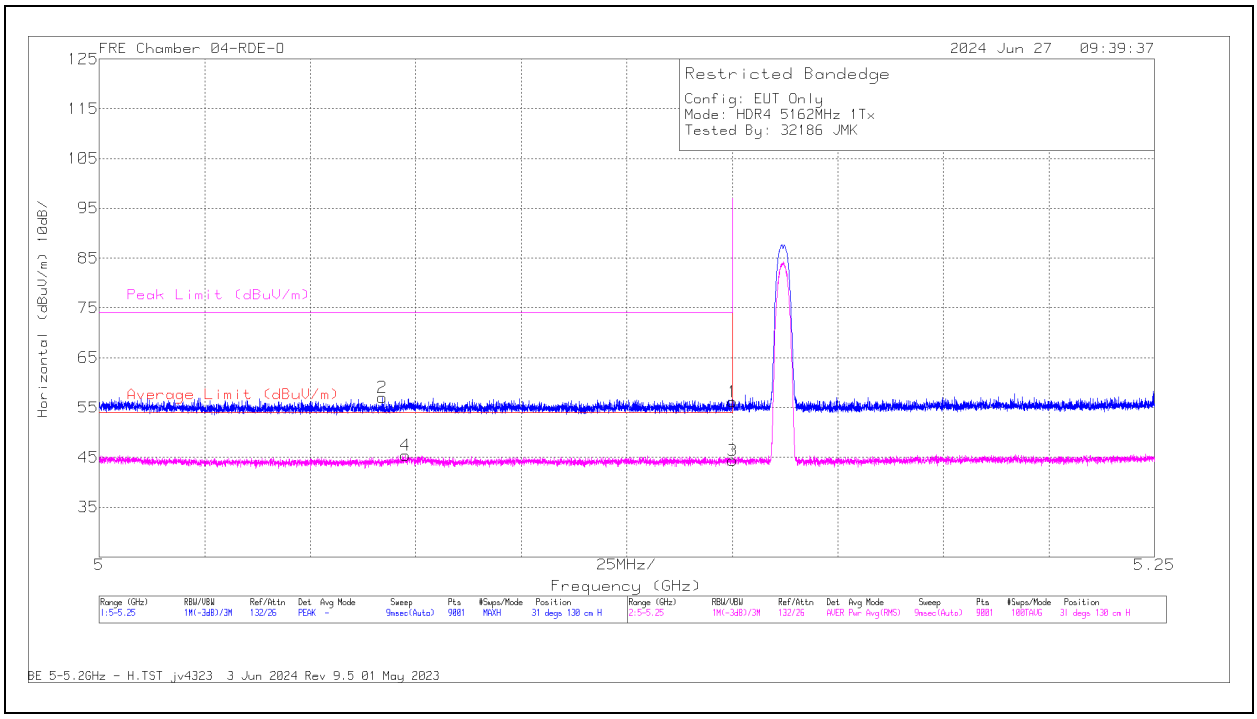
10.1.7. HDR 4 LOW POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.067084	58.16	Pk	34.6	-35.7	57.06	-	-	74	-16.94	31	130	H
4	* 5.072556	46.04	RMS	34.6	-35.24	45.4	54	-8.6	-	-	31	130	H
1	* 5.15	56.89	Pk	34.7	-35.4	56.19	-	-	74	-17.81	31	130	H
3	* 5.15	45.05	RMS	34.7	-35.4	44.35	54	-9.65	-	-	31	130	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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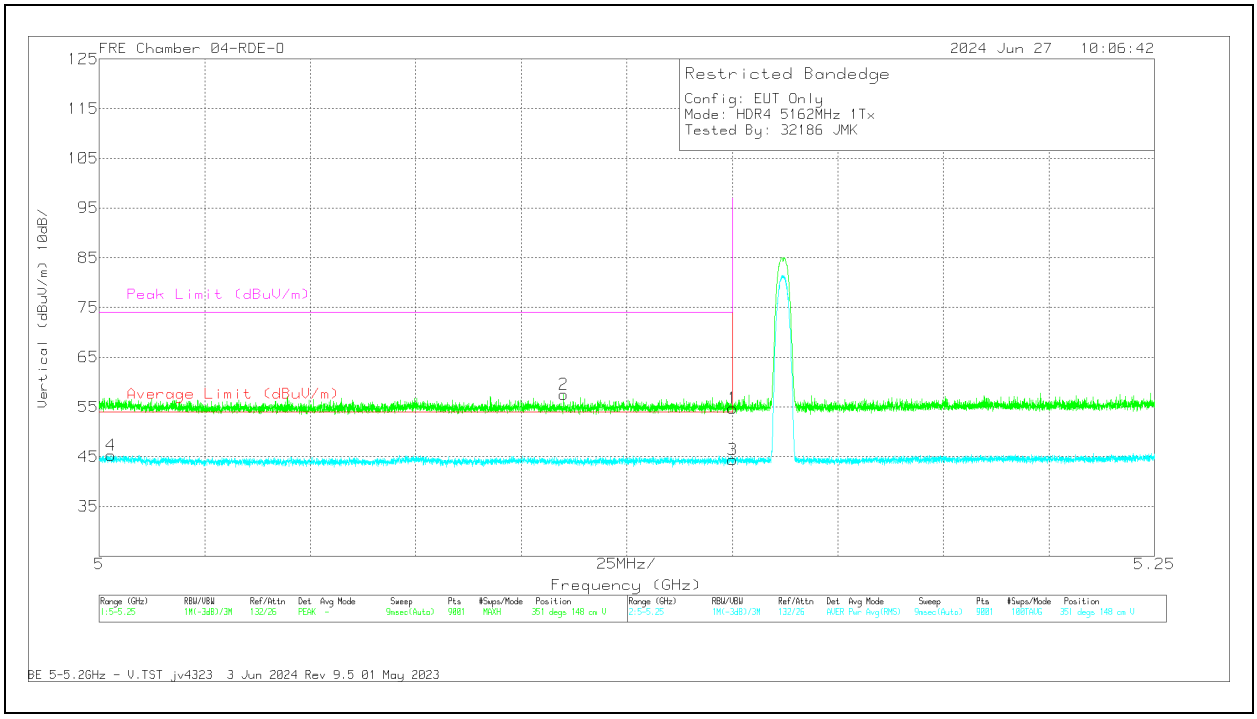
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.002806	46.48	RMS	34.6	-35.8	45.28	54	-8.72	-	-	351	148	V
2	* 5.110056	58.48	Pk	34.6	-35.6	57.48	-	-	74	-16.52	351	148	V
1	* 5.15	55.45	Pk	34.7	-35.4	54.75	-	-	74	-19.25	351	148	V
3	* 5.15	45.09	RMS	34.7	-35.4	44.39	54	-9.61	-	-	351	148	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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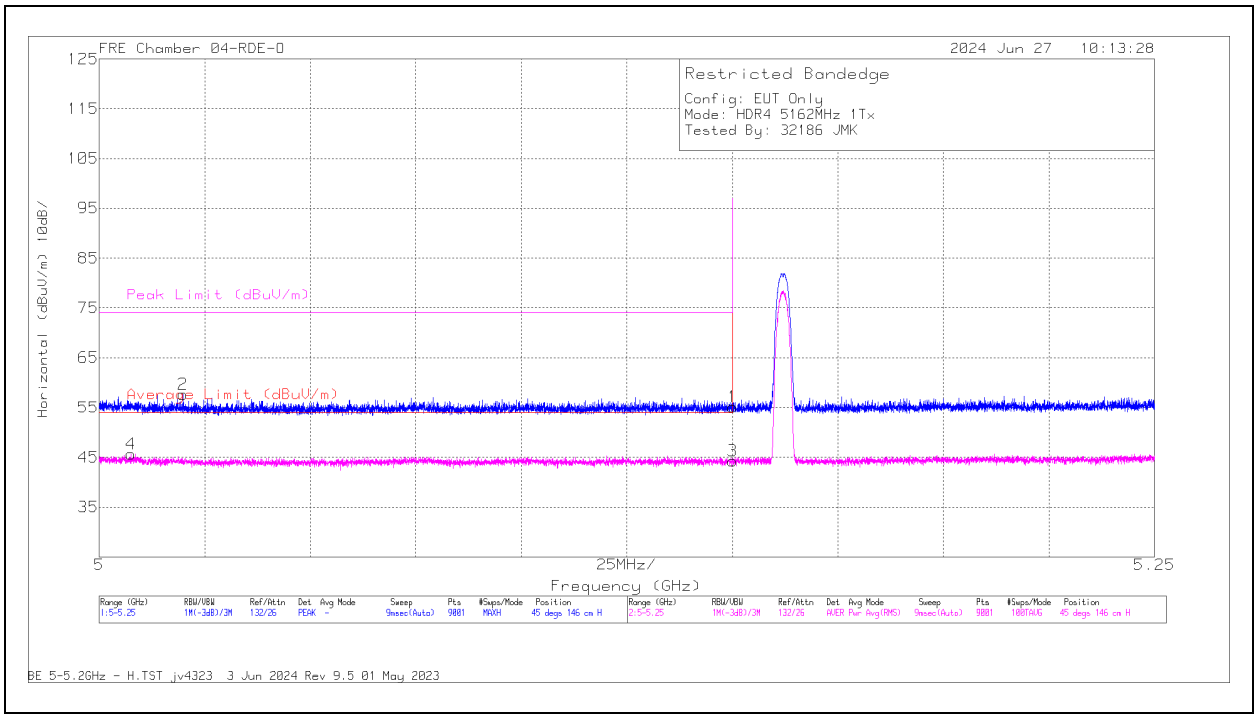
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.007472	46.87	RMS	34.6	-35.8	45.67	54	-8.33	-	-	45	146	H
2	* 5.019806	58.61	Pk	34.6	-35.58	57.63	-	-	74	-16.37	45	146	H
1	* 5.15	55.84	Pk	34.7	-35.4	55.14	-	-	74	-18.86	45	146	H
3	* 5.15	44.98	RMS	34.7	-35.4	44.28	54	-9.72	-	-	45	146	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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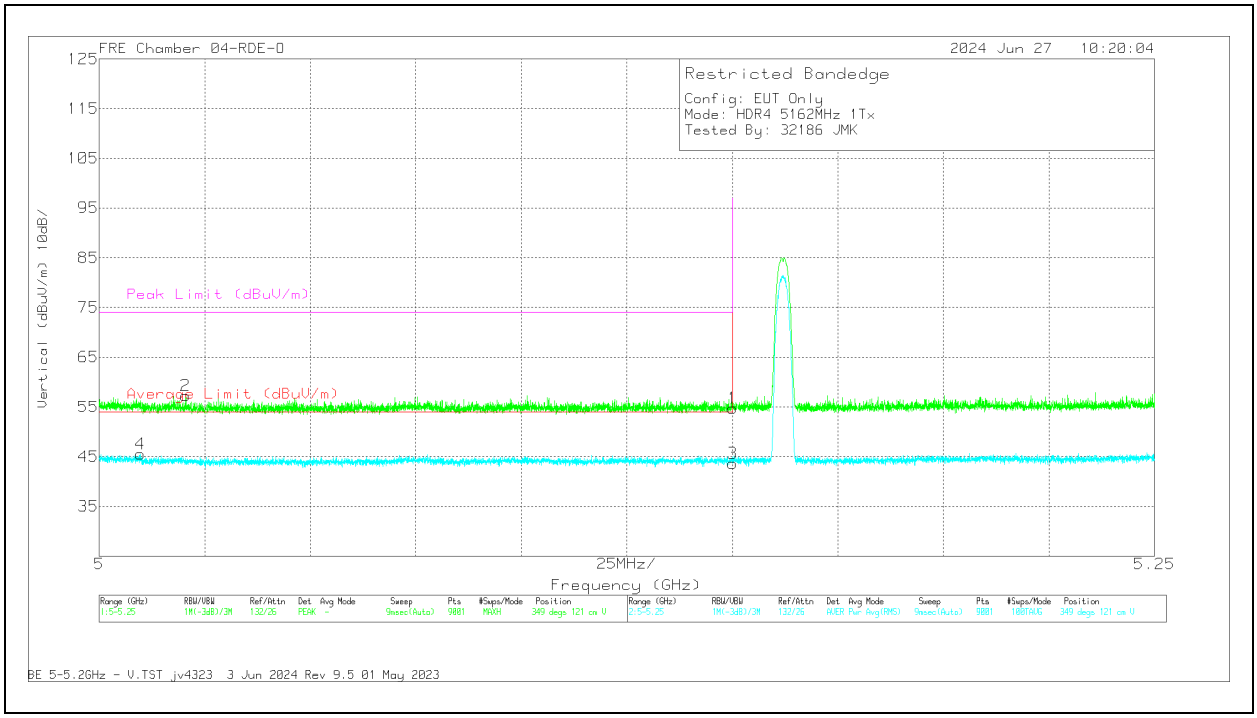
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.009695	46.62	RMS	34.6	-35.73	45.49	54	-8.51	-	-	349	121	V
2	* 5.020389	58.27	Pk	34.6	-35.6	57.27	-	-	74	-16.73	349	121	V
1	* 5.15	55.5	Pk	34.7	-35.4	54.8	-	-	74	-19.2	349	121	V
3	* 5.15	44.31	RMS	34.7	-35.4	43.61	54	-10.39	-	-	349	121	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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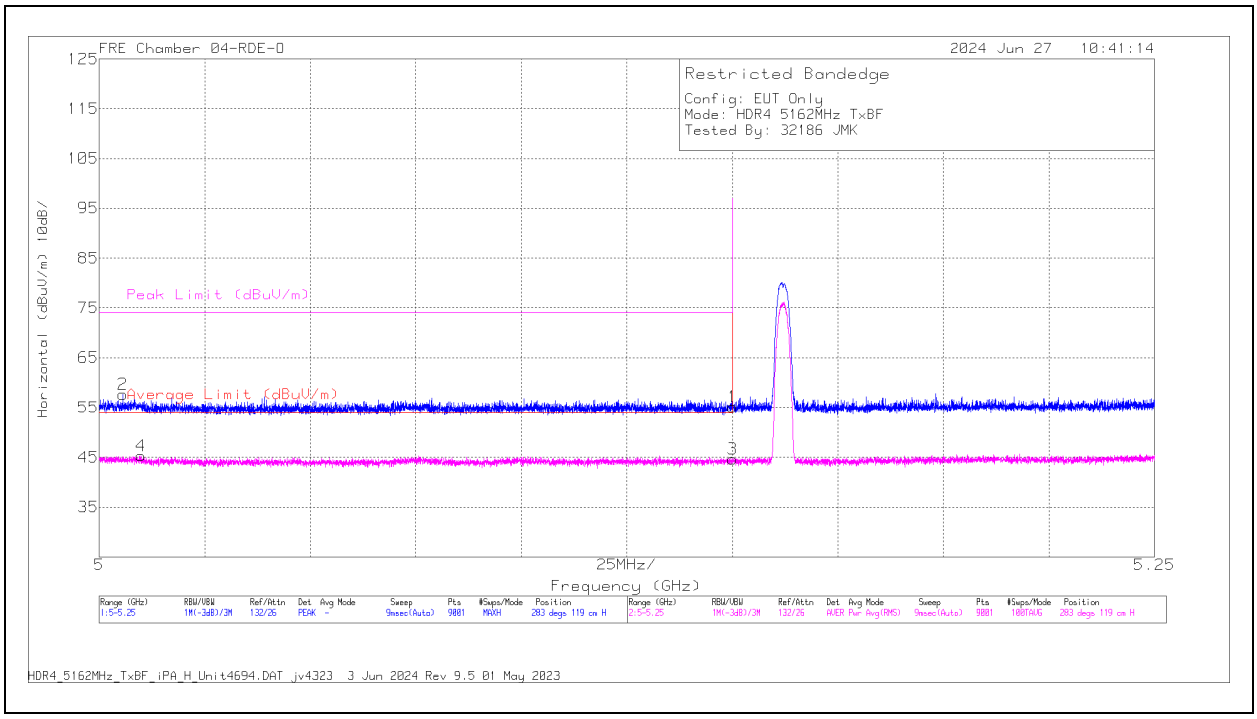
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.005611	58.82	Pk	34.6	-35.8	57.62	-	-	74	-16.38	283	119	H
4	* 5.009861	46.45	RMS	34.6	-35.71	45.34	54	-8.66	-	-	283	119	H
1	* 5.15	55.78	Pk	34.7	-35.4	55.08	-	-	74	-18.92	283	119	H
3	* 5.15	45.31	RMS	34.7	-35.4	44.61	54	-9.39	-	-	283	119	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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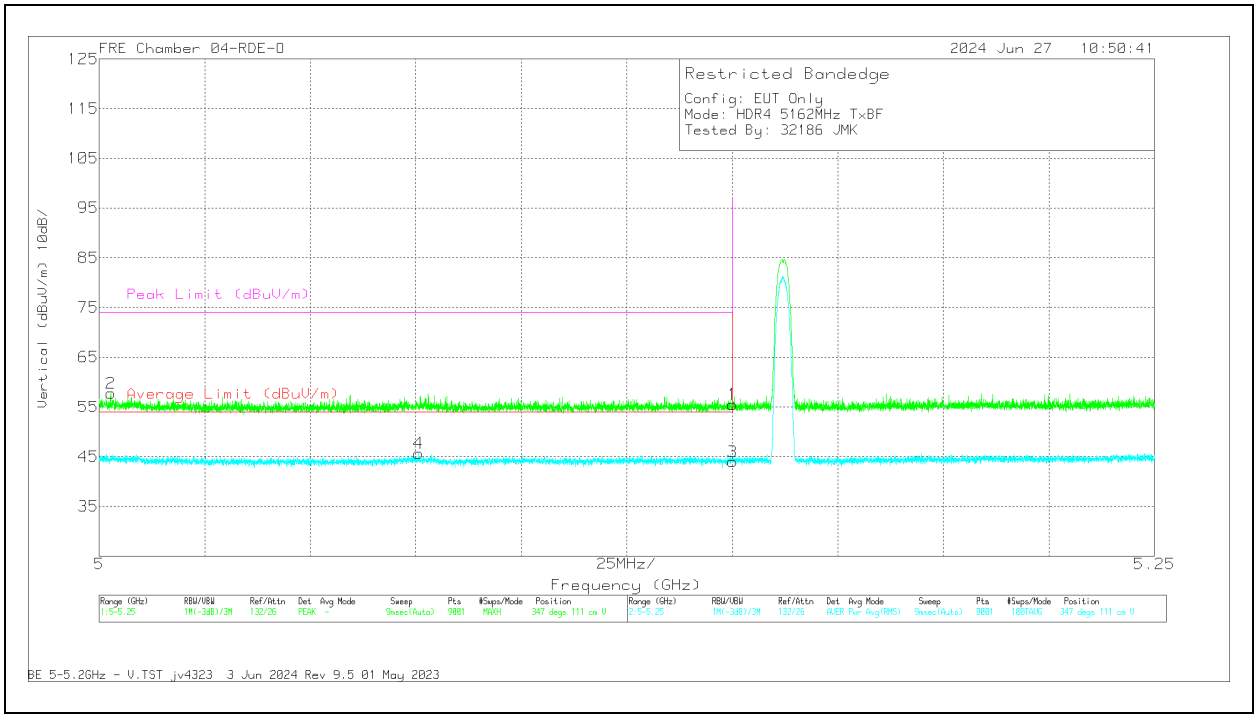
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.002722	58.92	Pk	34.6	-35.8	57.72	-	-	74	-16.28	347	111	V
4	* 5.075751	46.15	RMS	34.6	-35.12	45.63	54	-8.37	-	-	347	111	V
1	* 5.15	56.25	Pk	34.7	-35.4	55.55	-	-	74	-18.45	347	111	V
3	* 5.15	44.67	RMS	34.7	-35.4	43.97	54	-10.03	-	-	347	111	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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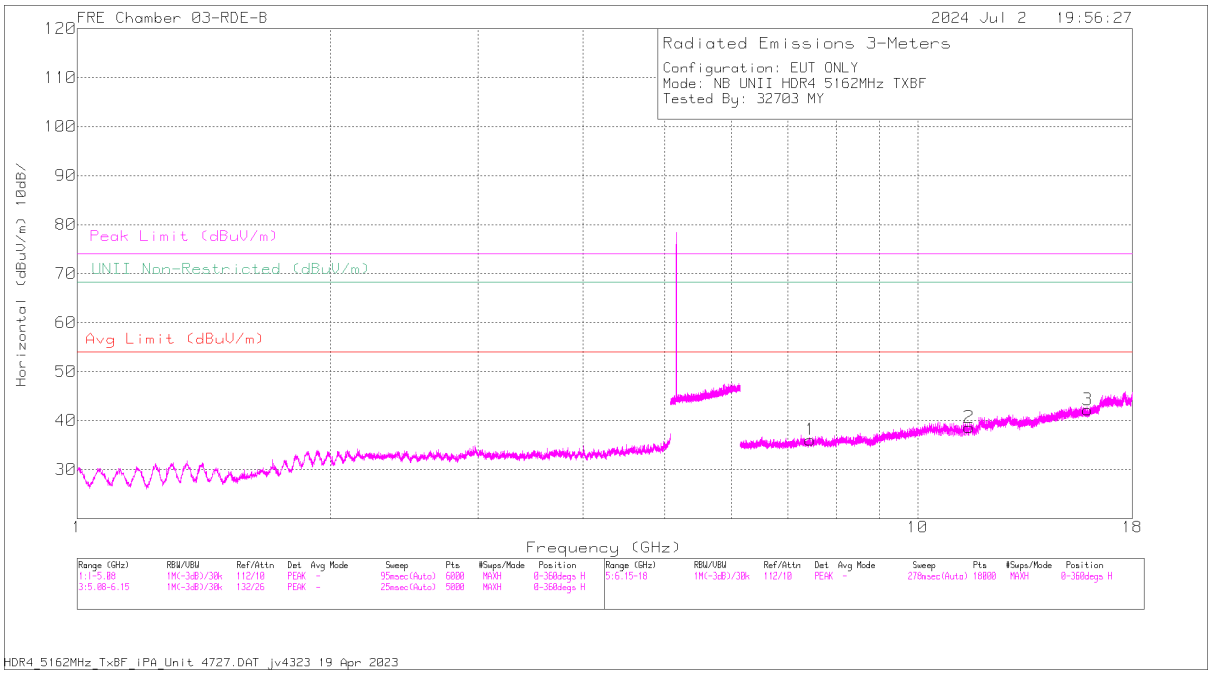
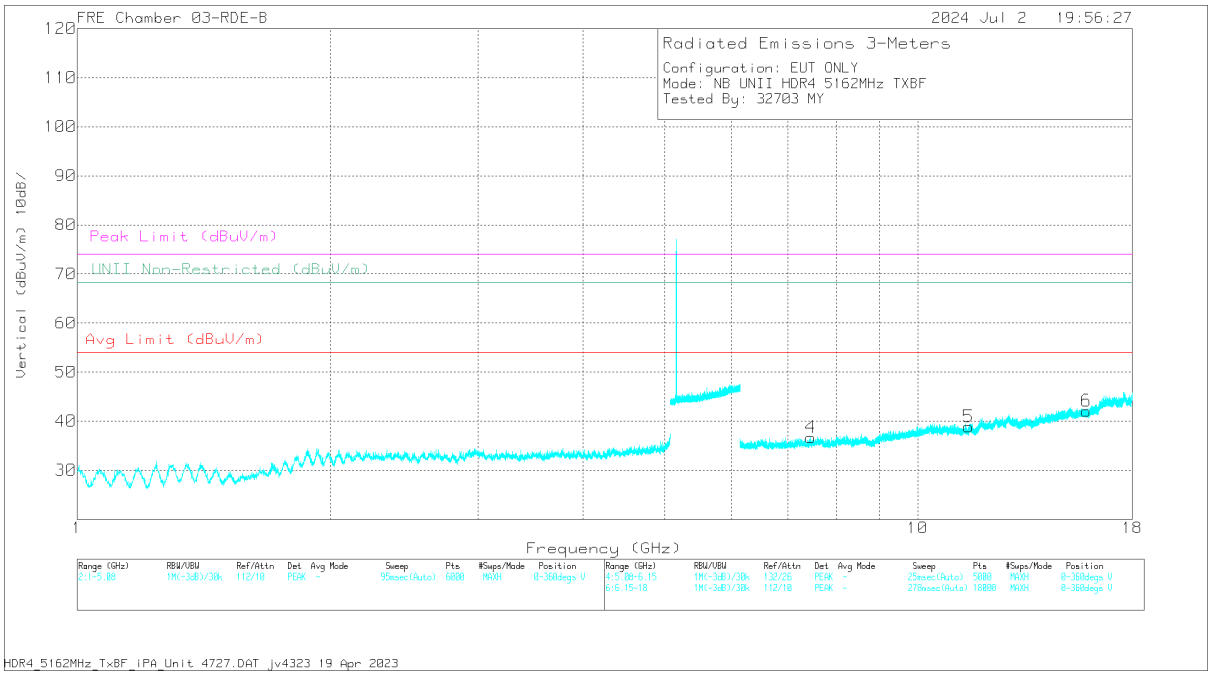
10.1.8. HDR 4 LOW POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.449509	58.52	PK-U	35.9	-47.8	46.62	-	-	74	-27.38	360	200	H
	* 7.447416	46.4	ADR	35.9	-47.8	34.5	54	-19.5	-	-	360	200	H
2	* 11.512385	58.04	PK-U	38.2	-46.8	49.44	-	-	74	-24.56	360	200	H
	* 11.509442	46.32	ADR	38.2	-46.8	37.72	54	-16.28	-	-	360	200	H
3	* 15.935871	58.18	PK-U	40.4	-46.5	52.08	-	-	74	-21.92	360	101	H
	* 15.93498	46.41	ADR	40.4	-46.5	40.31	54	-13.69	-	-	360	101	H
4	* 7.45829	58.24	PK-U	35.9	-47.83	46.31	-	-	74	-27.69	360	200	V
	* 7.459555	46.42	ADR	35.9	-47.9	34.42	54	-19.58	-	-	360	200	V
5	* 11.495144	57.72	PK-U	38.2	-46.9	49.02	-	-	74	-24.98	360	200	V
	* 11.493812	45.68	ADR	38.2	-46.8	37.08	54	-16.92	-	-	360	200	V
6	* 15.864236	58.65	PK-U	40.3	-46.58	52.37	-	-	74	-21.63	360	101	V
	* 15.861805	47.12	ADR	40.3	-46.52	40.9	54	-13.1	-	-	360	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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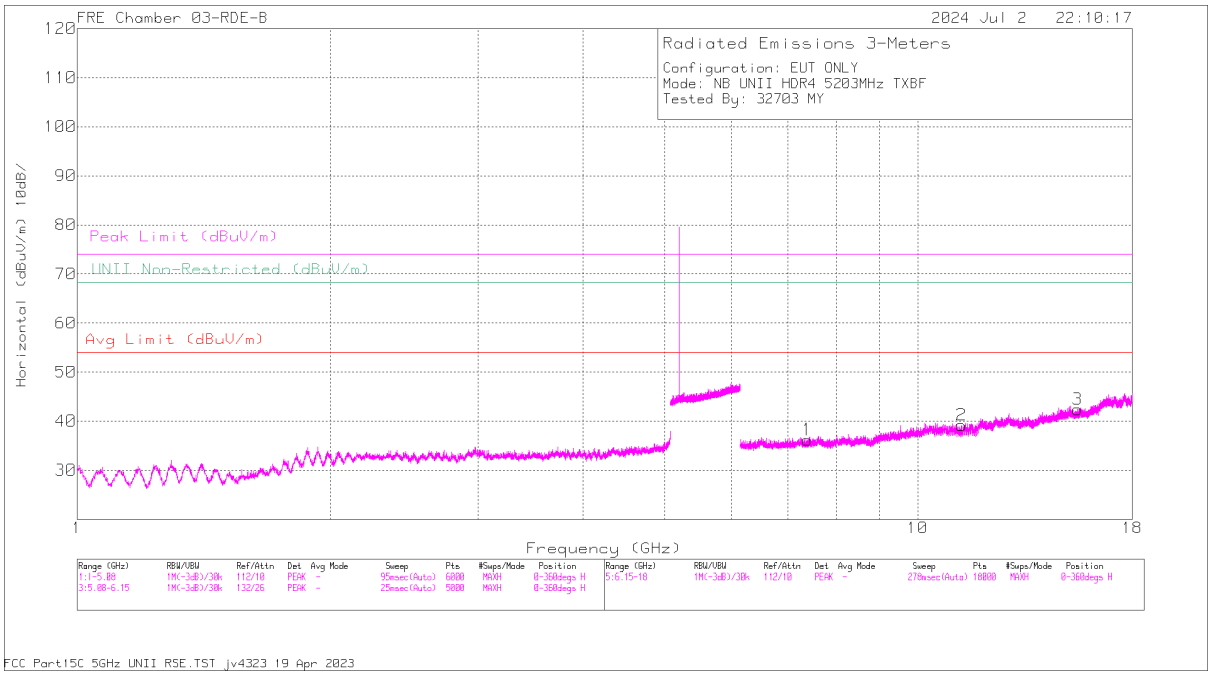
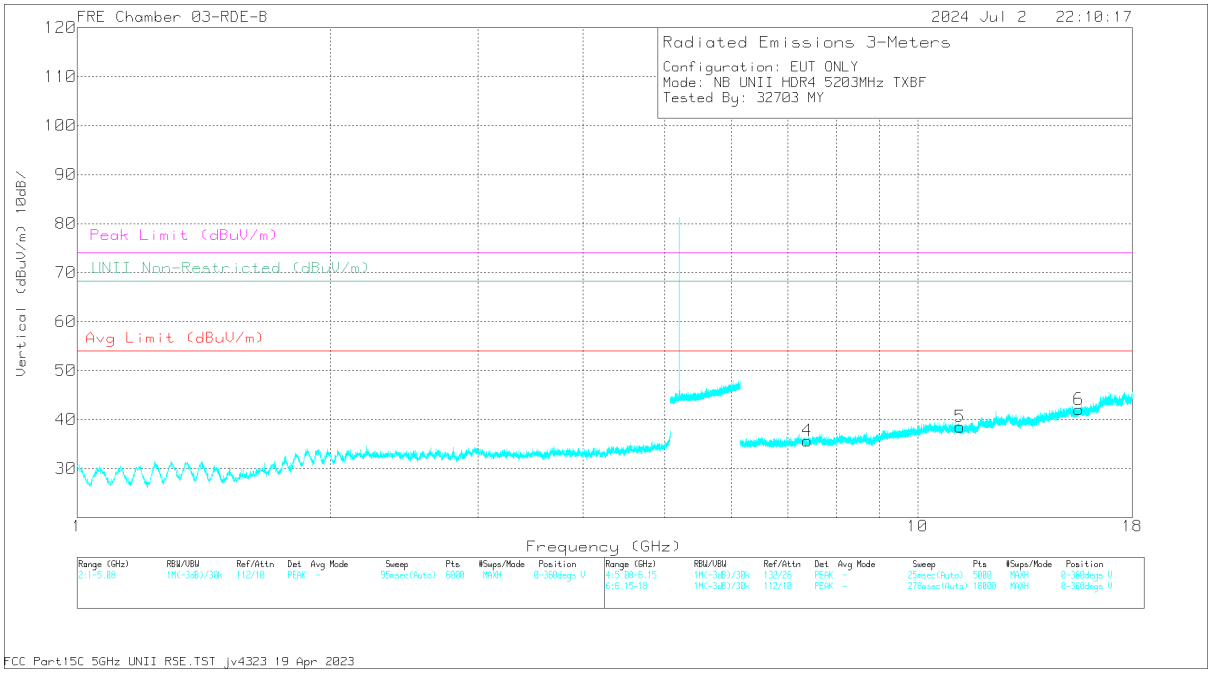
MID CHANNEL, 5203 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.392412	58.46	PK-U	35.8	-48.16	46.1	-	-	74	-27.9	0	200	H
	* 7.39229	46.49	ADR	35.8	-48.17	34.12	54	-19.88	-	-	0	200	H
2	* 11.276276	57.25	PK-U	38	-46.83	48.42	-	-	74	-25.58	0	101	H
	* 11.275895	45.98	ADR	38	-46.8	37.18	54	-16.82	-	-	0	101	H
3	* 15.486068	58.9	PK-U	40	-47.1	51.8	-	-	74	-22.2	0	200	H
	* 15.485936	47.18	ADR	40	-47.1	40.08	54	-13.92	-	-	0	200	H
4	* 7.395739	58.71	PK-U	35.8	-48.2	46.31	-	-	74	-27.69	0	200	V
	* 7.396741	46.56	ADR	35.8	-48.13	34.23	54	-19.77	-	-	0	200	V
5	* 11.223804	57.51	PK-U	38.1	-46.68	48.93	-	-	74	-25.07	0	200	V
	* 11.226657	45.82	ADR	38.1	-46.63	37.29	54	-16.71	-	-	0	200	V
6	* 15.544942	58.13	PK-U	40.1	-46.7	51.53	-	-	74	-22.47	0	200	V
	* 15.544008	46.44	ADR	40.1	-46.7	39.84	54	-14.16	-	-	0	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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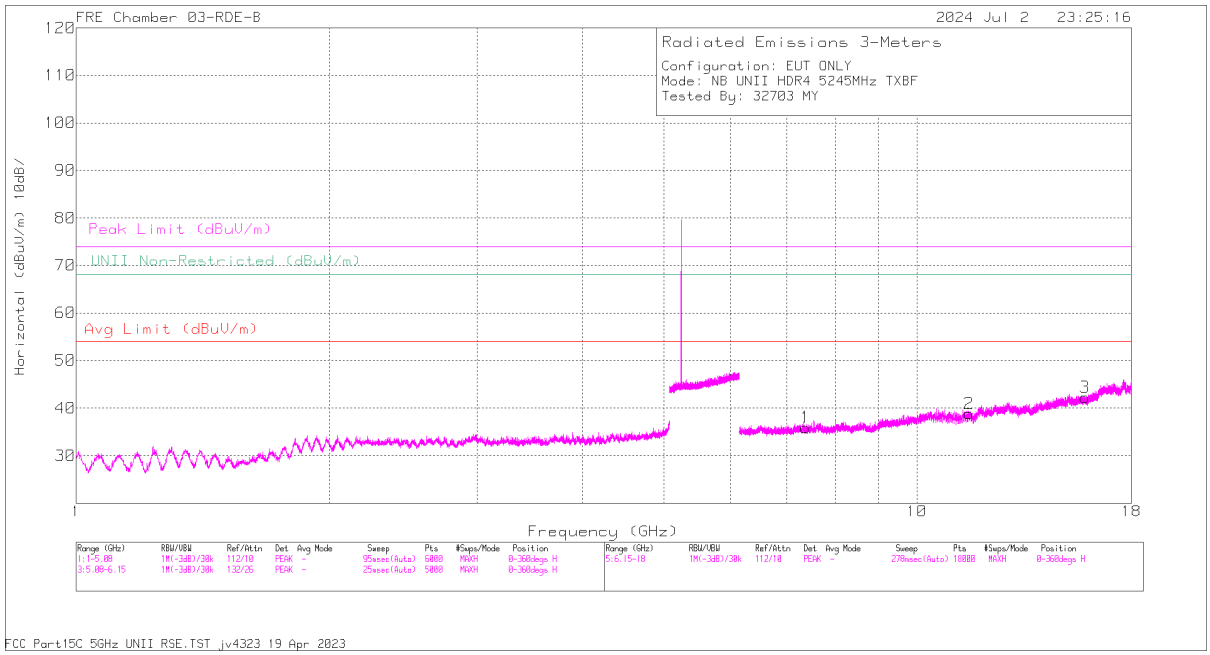
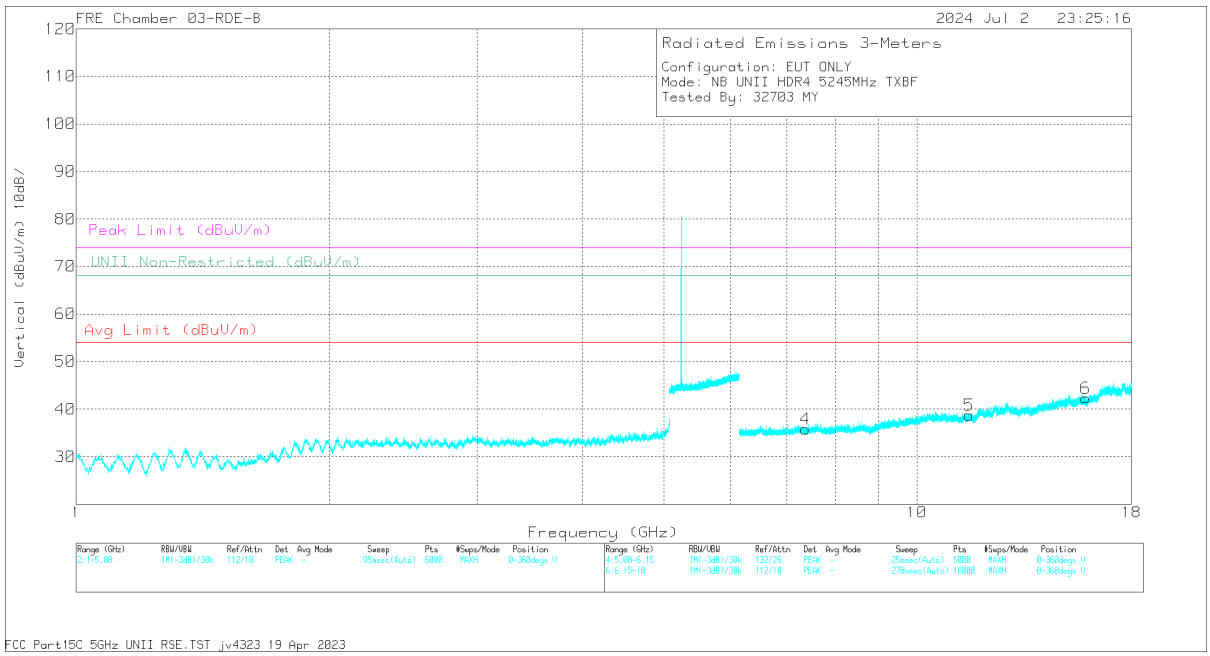
HIGH CHANNEL, 5245 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.371398	58.11	PK-U	35.8	-48.4	45.51	-	-	74	-28.49	2	200	H
	* 7.373309	46.83	ADR	35.8	-48.3	34.33	54	-19.67	-	-	2	200	H
2	* 11.531052	58.02	PK-U	38.2	-46.7	49.52	-	-	74	-24.48	2	200	H
	* 11.531045	46.11	ADR	38.2	-46.7	37.61	54	-16.39	-	-	2	200	H
3	* 15.847732	58.78	PK-U	40.3	-46.6	52.48	-	-	74	-21.52	2	200	H
	* 15.846411	46.94	ADR	40.3	-46.6	40.64	54	-13.36	-	-	2	200	H
4	* 7.375873	58.5	PK-U	35.8	-48.3	46	-	-	74	-28	2	200	V
	* 7.37711	46.73	ADR	35.8	-48.3	34.23	54	-19.77	-	-	2	200	V
5	* 11.536534	57.31	PK-U	38.2	-46.6	48.91	-	-	74	-25.09	2	200	V
	* 11.536514	46	ADR	38.2	-46.6	37.6	54	-16.4	-	-	2	200	V
6	* 15.888405	57.99	PK-U	40.4	-46.6	51.79	-	-	74	-22.21	2	200	V
	* 15.889752	47.02	ADR	40.4	-46.6	40.82	54	-13.18	-	-	2	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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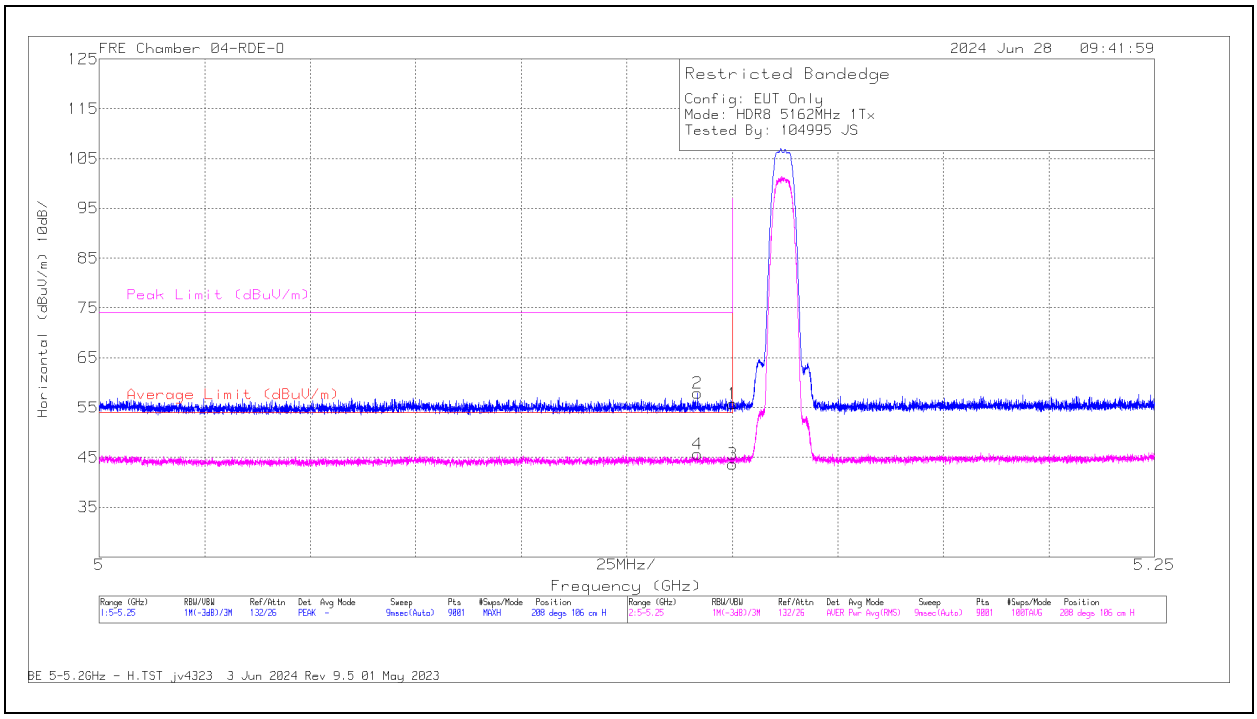
10.1.9. HDR 8 HIGH POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.141696	46.51	RMS	34.7	-35.5	45.71	54	-8.29	-	-	208	106	H
2	* 5.141807	58.67	Pk	34.7	-35.5	57.87	-	-	74	-16.13	208	106	H
1	* 5.15	56.48	Pk	34.7	-35.4	55.78	-	-	74	-18.22	208	106	H
3	* 5.15	44.34	RMS	34.7	-35.4	43.64	54	-10.36	-	-	208	106	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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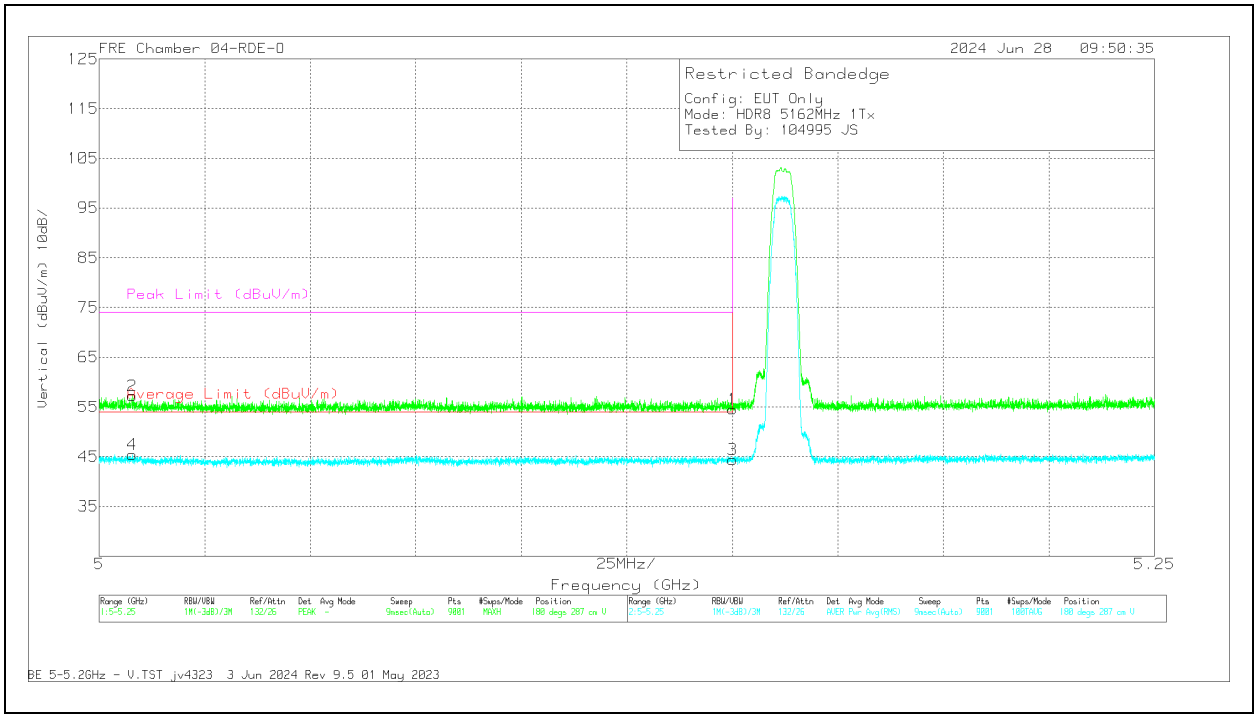
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.007778	46.6	RMS	34.6	-35.8	45.4	54	-8.6	-	-	180	287	V
2	* 5.007861	58.41	Pk	34.6	-35.8	57.21	-	-	74	-16.79	180	287	V
1	* 5.15	55.25	Pk	34.7	-35.4	54.55	-	-	74	-19.45	180	287	V
3	* 5.15	45.1	RMS	34.7	-35.4	44.4	54	-9.6	-	-	180	287	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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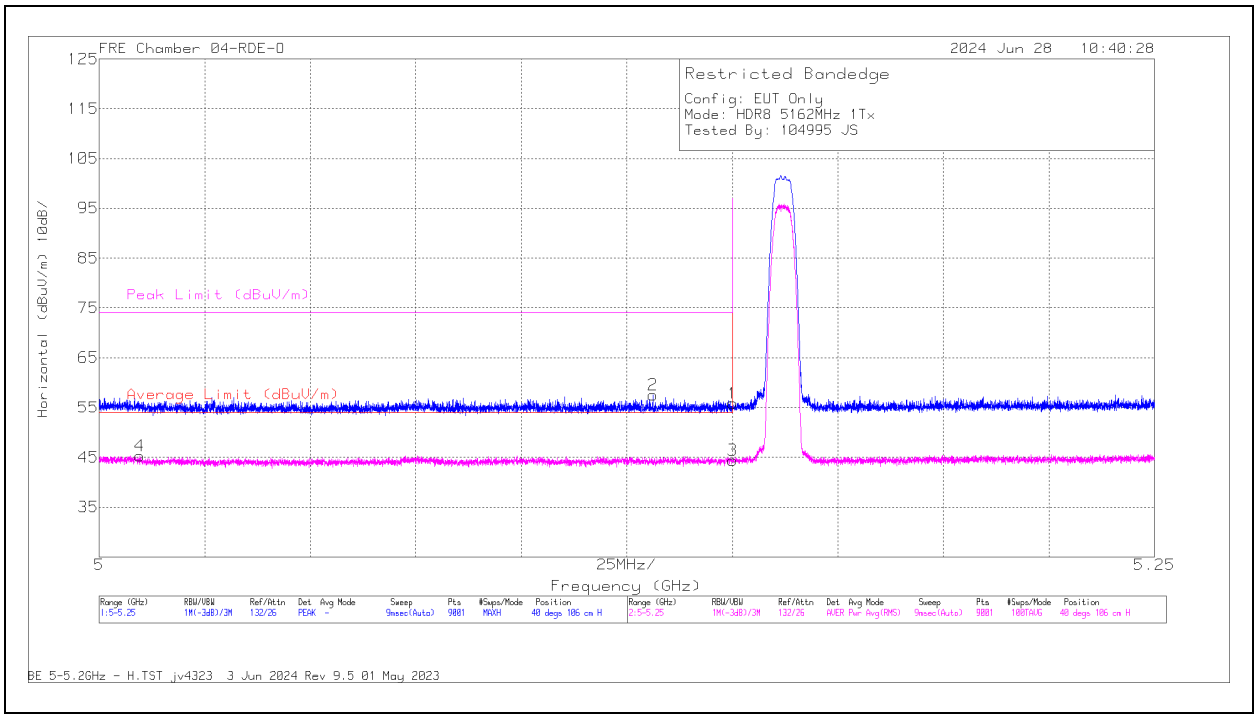
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.009583	46.44	RMS	34.6	-35.74	45.3	54	-8.7	-	-	40	106	H
2	* 5.131223	58.48	Pk	34.7	-35.62	57.56	-	-	74	-16.44	40	106	H
1	* 5.15	56.53	Pk	34.7	-35.4	55.83	-	-	74	-18.17	40	106	H
3	* 5.15	45.1	RMS	34.7	-35.4	44.4	54	-9.6	-	-	40	106	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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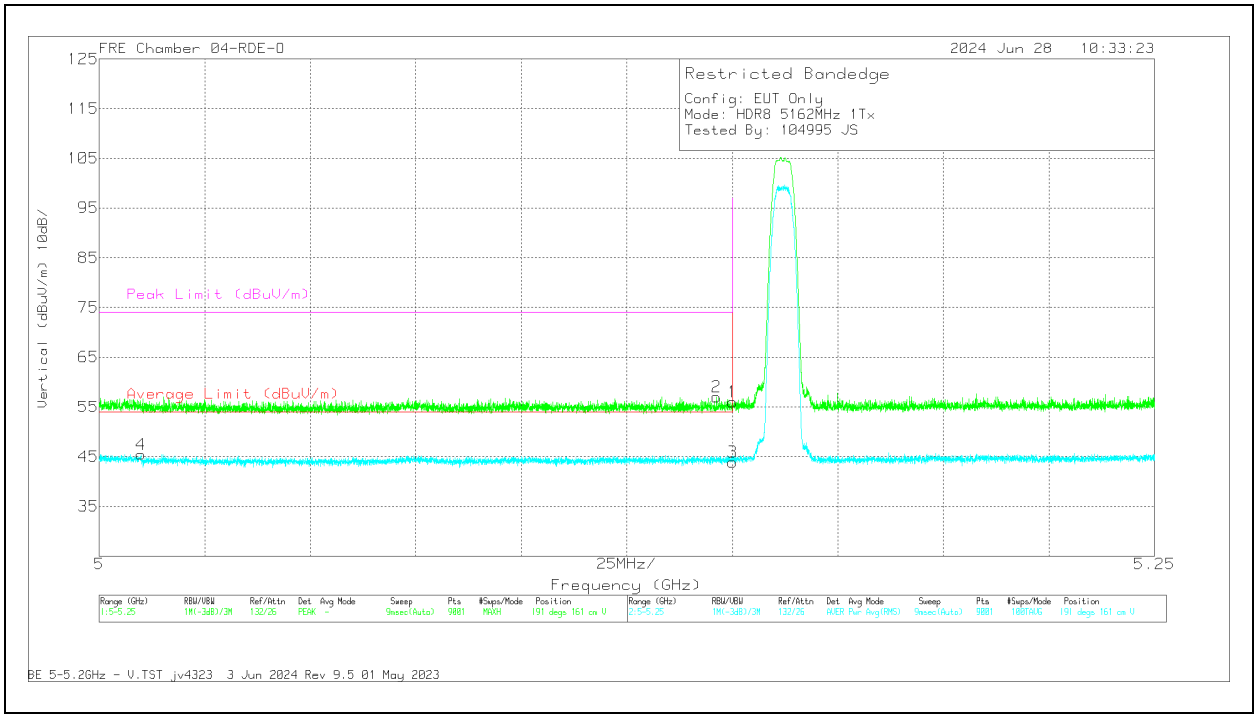
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.009945	46.58	RMS	34.6	-35.71	45.47	54	-8.53	-	-	191	161	V
2	* 5.146279	57.87	Pk	34.7	-35.54	57.03	-	-	74	-16.97	191	161	V
1	* 5.15	56.71	Pk	34.7	-35.4	56.01	-	-	74	-17.99	191	161	V
3	* 5.15	44.57	RMS	34.7	-35.4	43.87	54	-10.13	-	-	191	161	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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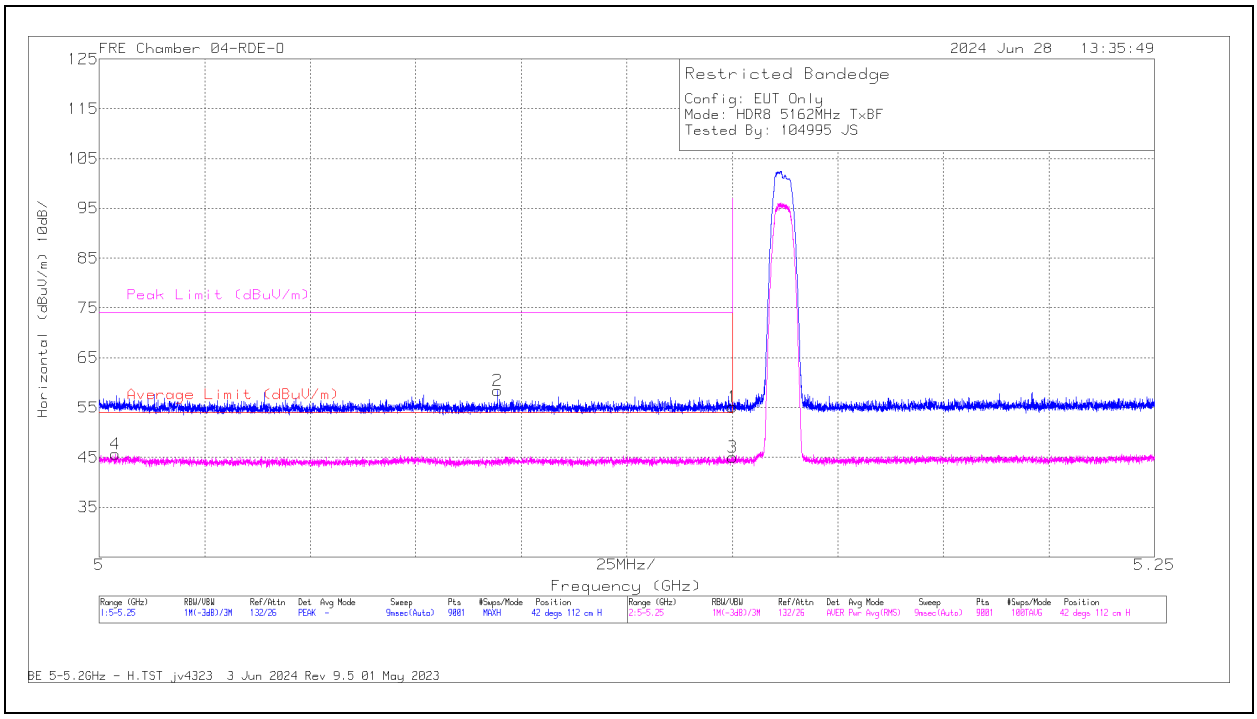
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.003778	46.84	RMS	34.6	-35.8	45.64	54	-8.36	-	-	42	112	H
2	* 5.09439	59.34	Pk	34.6	-35.5	58.44	-	-	74	-15.56	42	112	H
1	* 5.15	55.87	Pk	34.7	-35.4	55.17	-	-	74	-18.83	42	112	H
3	* 5.15	45.69	RMS	34.7	-35.4	44.99	54	-9.01	-	-	42	112	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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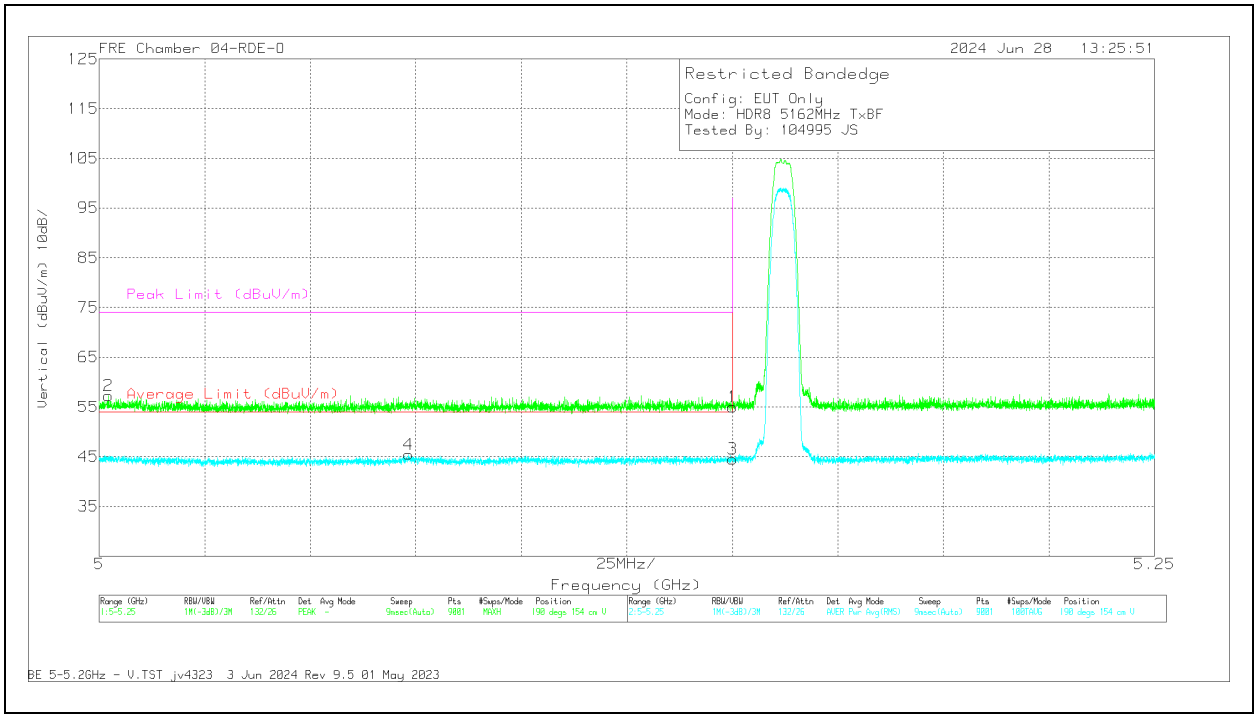
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.002194	58.51	Pk	34.6	-35.8	57.31	-	-	74	-16.69	190	154	V
4	* 5.073334	46.07	RMS	34.6	-35.2	45.47	54	-8.53	-	-	190	154	V
1	* 5.15	55.65	Pk	34.7	-35.4	54.95	-	-	74	-19.05	190	154	V
3	* 5.15	45.2	RMS	34.7	-35.4	44.5	54	-9.5	-	-	190	154	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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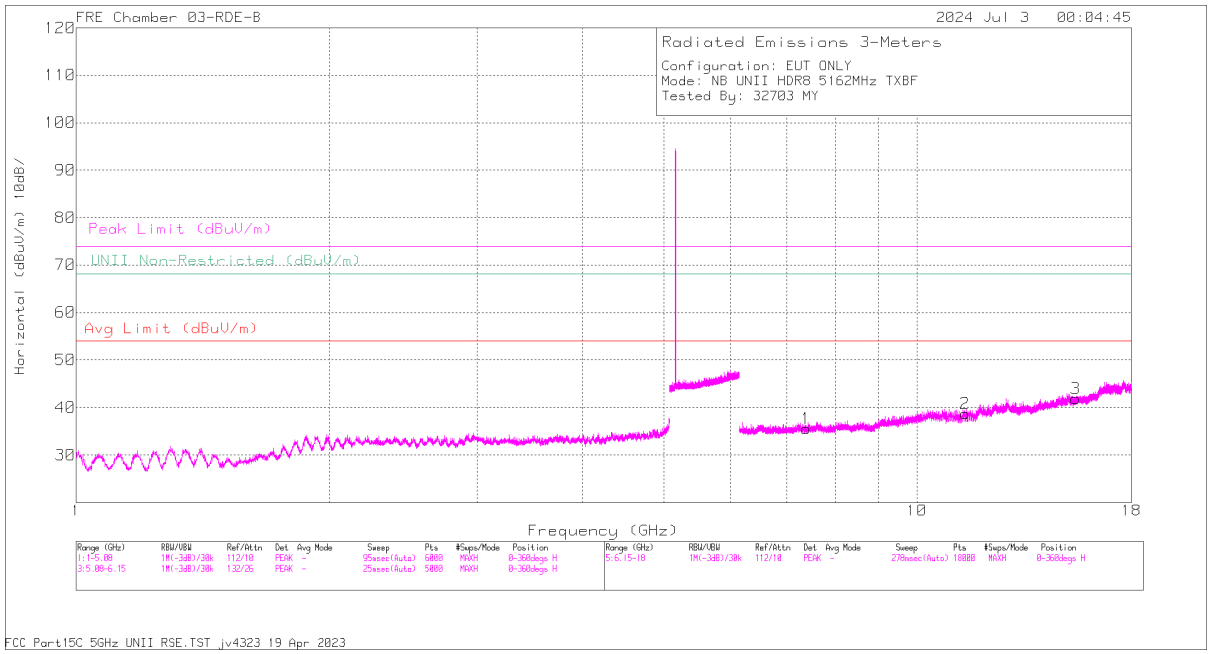
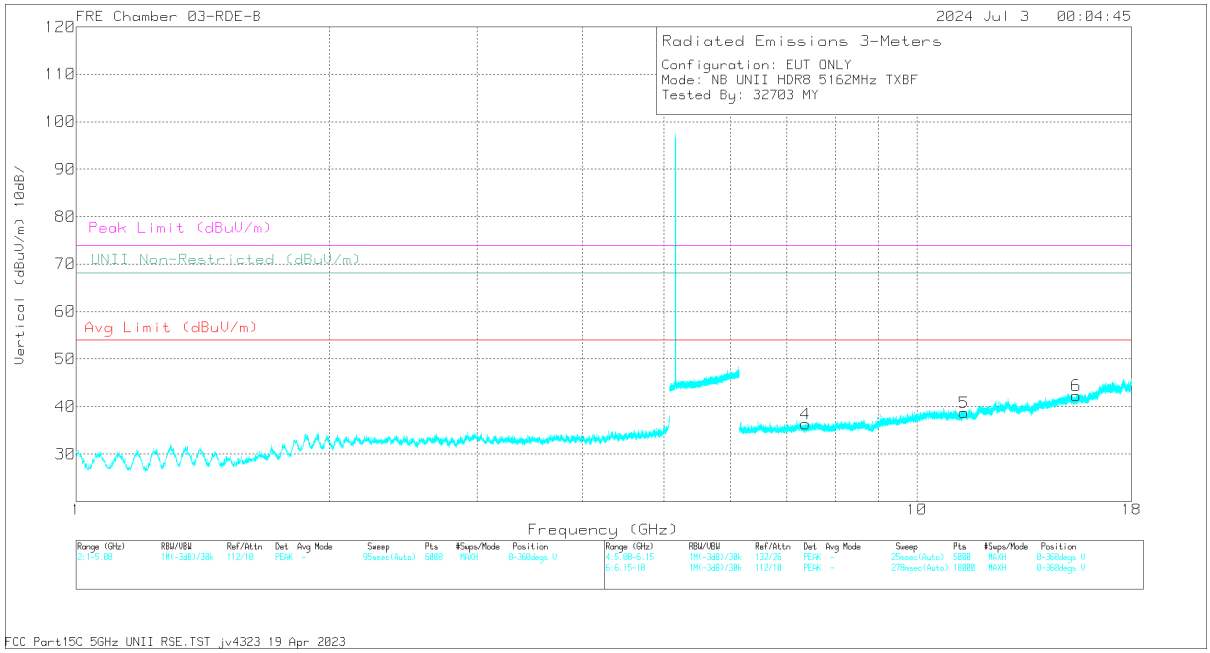
10.1.10. HDR 8 HIGH POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.391434	58.06	PK-U	35.8	-48.2	45.66	-	-	74	-28.34	1	101	H
	* 7.390078	46.68	ADR	35.8	-48.2	34.28	54	-19.72	-	-	1	101	H
2	* 11.411359	57.77	PK-U	38.1	-46.7	49.17	-	-	74	-24.83	1	101	H
	* 11.40894	45.86	ADR	38.1	-46.7	37.26	54	-16.74	-	-	1	101	H
3	* 15.441542	58.03	PK-U	40	-46.8	51.23	-	-	74	-22.77	1	101	H
	* 15.441026	46.96	ADR	40	-46.8	40.16	54	-13.84	-	-	1	101	H
4	* 7.367171	58.33	PK-U	35.8	-48.4	45.73	-	-	74	-28.27	1	200	V
	* 7.365513	46.86	ADR	35.8	-48.4	34.26	54	-19.74	-	-	1	200	V
5	* 11.379593	57.28	PK-U	38.1	-46.8	48.58	-	-	74	-25.42	1	101	V
	* 11.379861	46.12	ADR	38.1	-46.8	37.42	54	-16.58	-	-	1	101	V
6	* 15.481347	58.69	PK-U	40	-47.1	51.59	-	-	74	-22.41	1	200	V
	* 15.481486	47.24	ADR	40	-47.1	40.14	54	-13.86	-	-	1	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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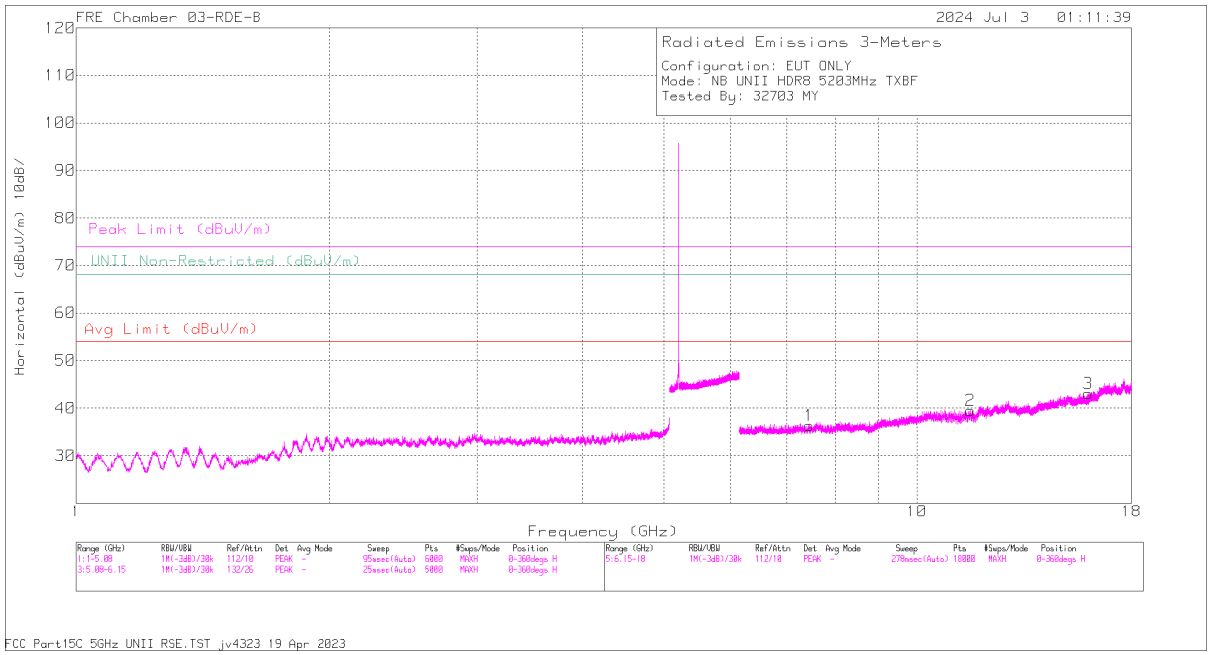
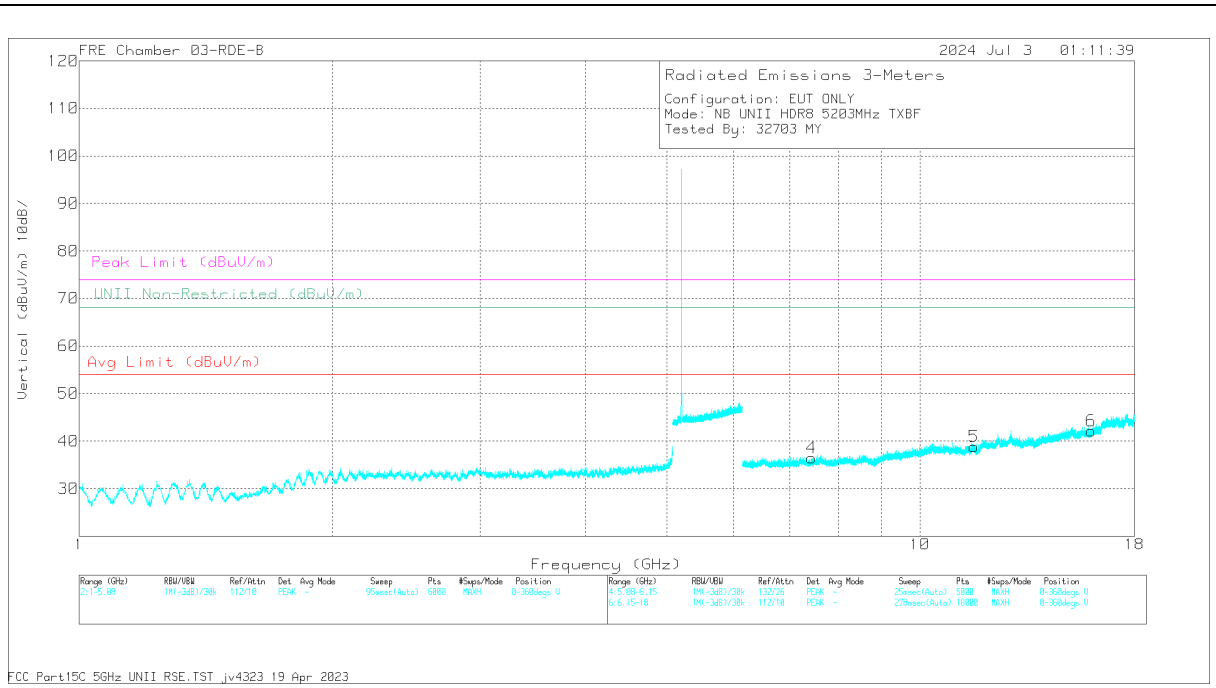
MID CHANNEL, 5203 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.448194	58.15	PK-U	35.9	-47.8	46.25	-	-	74	-27.75	0	200	H
	* 7.44586	46.62	ADR	35.9	-47.8	34.72	54	-19.28	-	-	0	200	H
2	* 11.574992	56.95	PK-U	38.3	-46.6	48.65	-	-	74	-25.35	0	101	H
	* 11.573092	45.73	ADR	38.3	-46.51	37.52	54	-16.48	-	-	0	101	H
3	* 15.995803	57.41	PK-U	40.5	-46.3	51.61	-	-	74	-22.39	0	200	H
	* 15.997025	45.82	ADR	40.5	-46.3	40.02	54	-13.98	-	-	0	200	H
4	* 7.434753	58.1	PK-U	35.9	-47.7	46.3	-	-	74	-27.7	0	200	V
	* 7.43381	46.59	ADR	35.9	-47.7	34.79	54	-19.21	-	-	0	200	V
5	* 11.599388	57.36	PK-U	38.3	-46.3	49.36	-	-	74	-24.64	0	101	V
	* 11.600909	45.37	ADR	38.3	-46.3	37.37	54	-16.63	-	-	0	101	V
6	* 15.98105	57.28	PK-U	40.5	-46.5	51.28	-	-	74	-22.72	0	101	V
	* 15.980906	45.91	ADR	40.5	-46.5	39.91	54	-14.09	-	-	0	101	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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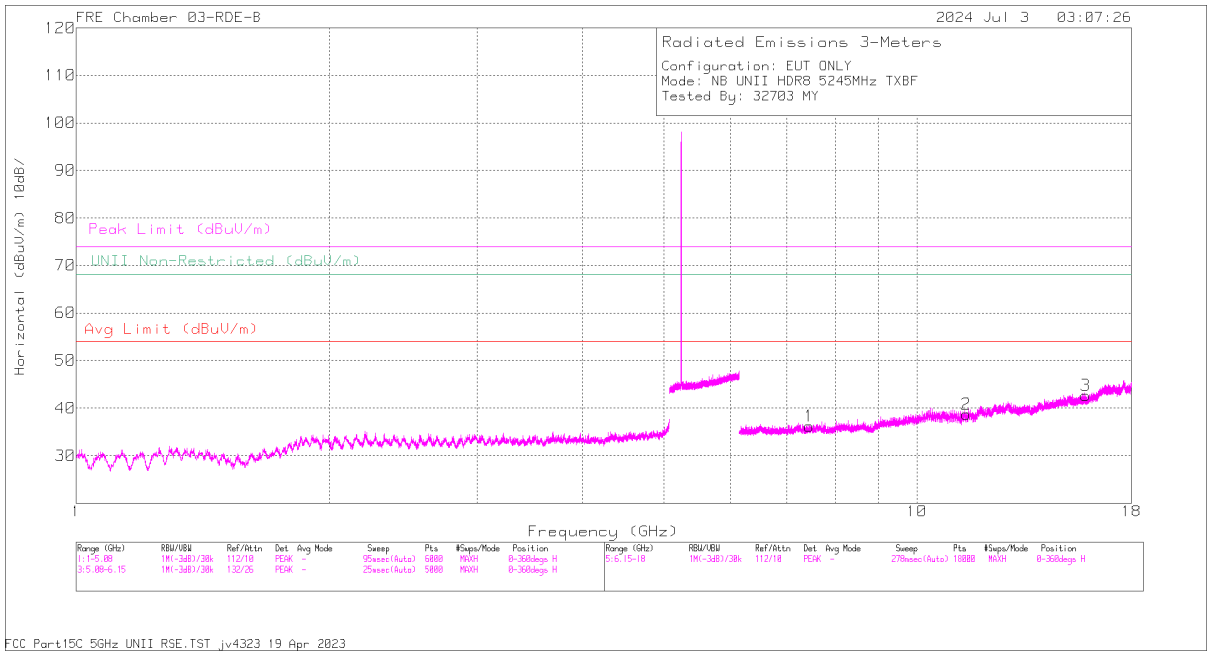
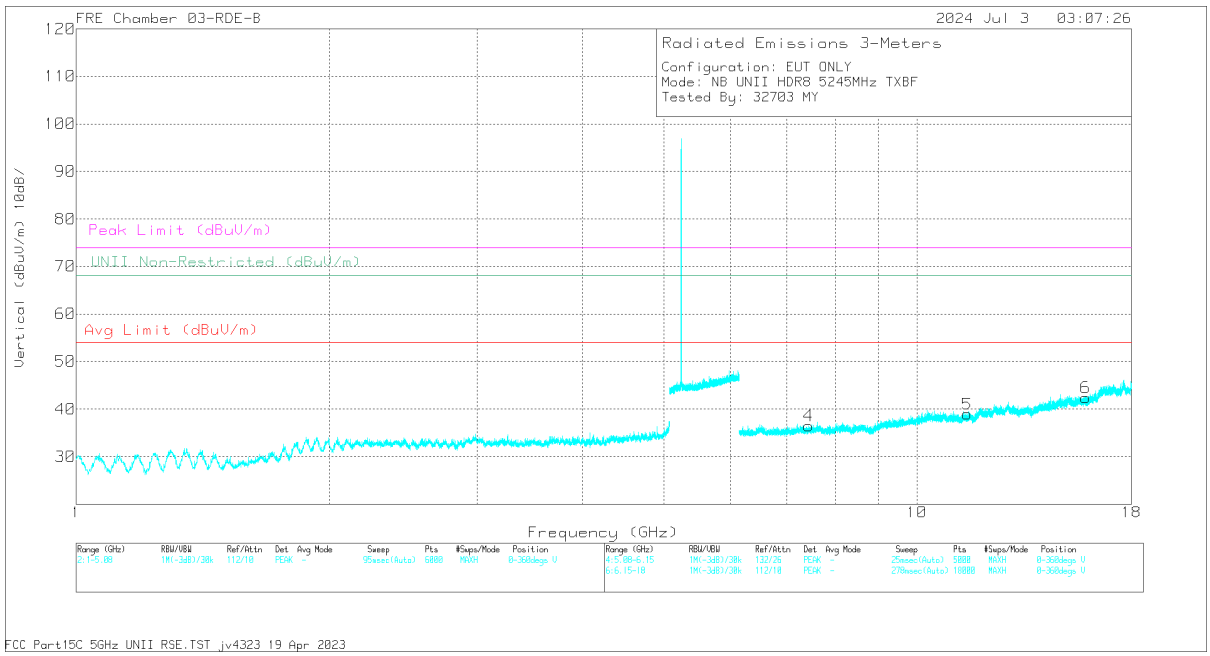
HIGH CHANNEL, 5245 MHz



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.441941	57.92	PK-U	35.9	-47.8	46.02	-	-	74	-27.98	360	101	H
	* 7.442886	46.4	ADR	35.9	-47.8	34.5	54	-19.5	-	-	360	101	H
2	* 11.450013	57.78	PK-U	38.1	-46.9	48.98	-	-	74	-25.02	360	101	H
	* 11.449631	46.16	ADR	38.1	-46.9	37.36	54	-16.64	-	-	360	101	H
3	* 15.884798	58.29	PK-U	40.3	-46.5	52.09	-	-	74	-21.91	360	200	H
	* 15.887684	46.82	ADR	40.4	-46.57	40.65	54	-13.35	-	-	360	200	H
4	* 7.435358	58.07	PK-U	35.9	-47.74	46.23	-	-	74	-27.77	360	101	V
	* 7.437467	46.35	ADR	35.9	-47.8	34.45	54	-19.55	-	-	360	101	V
5	* 11.483682	57.66	PK-U	38.2	-46.8	49.06	-	-	74	-24.94	360	101	V
	* 11.485212	45.65	ADR	38.2	-46.8	37.05	54	-16.95	-	-	360	101	V
6	* 15.885534	58.65	PK-U	40.3	-46.5	52.45	-	-	74	-21.55	360	200	V
	* 15.886415	46.72	ADR	40.4	-46.5	40.62	54	-13.38	-	-	360	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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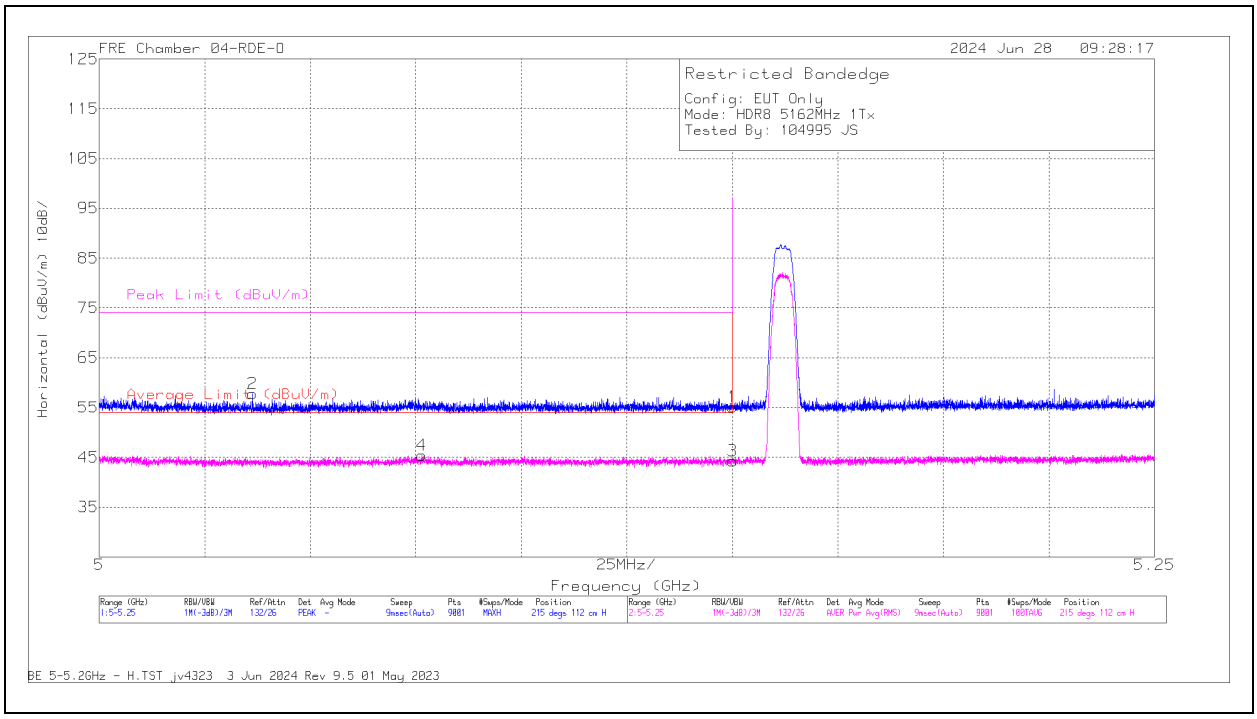
10.1.11. HDR 8 LOW POWER, UNII-1 BAND, BANDEDGE

ANT 6, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.036306	58.95	Pk	34.6	-35.8	57.75	-	-	74	-16.25	215	112	H
4	* 5.076362	45.92	RMS	34.6	-35.1	45.42	54	-8.58	-	-	215	112	H
1	* 5.15	55.86	Pk	34.7	-35.4	55.16	-	-	74	-18.84	215	112	H
3	* 5.15	45	RMS	34.7	-35.4	44.3	54	-9.7	-	-	215	112	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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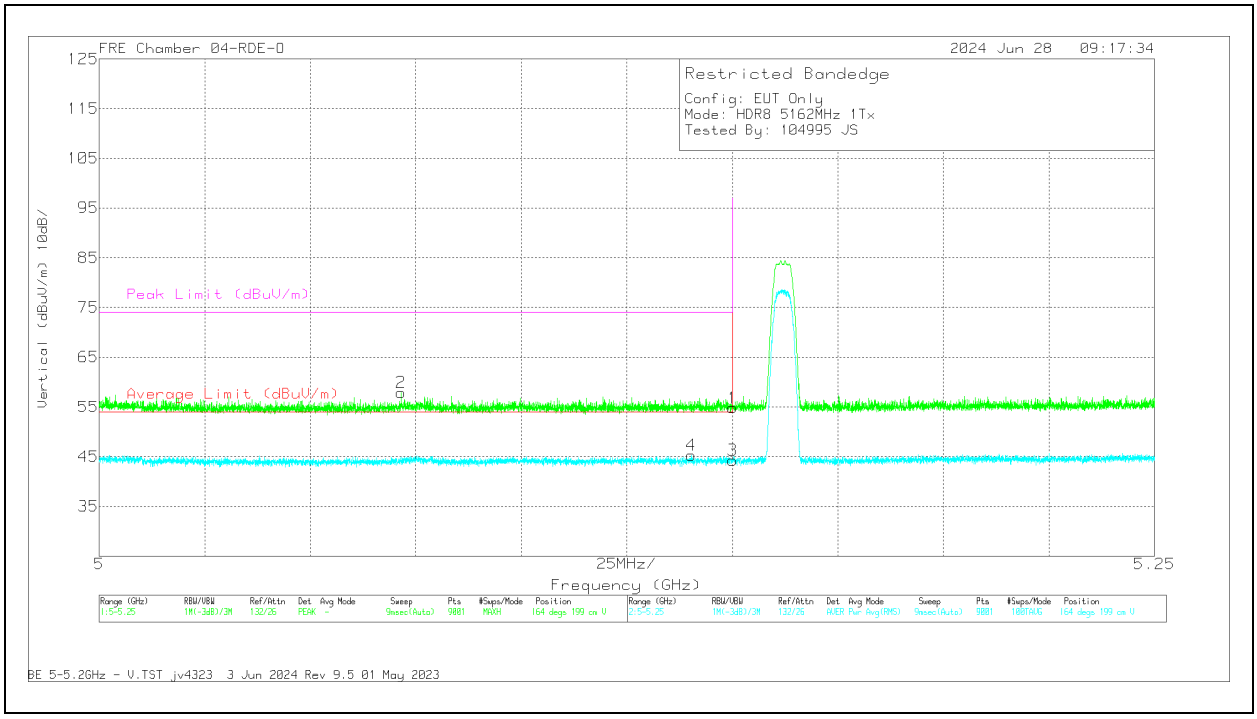
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.071528	58.68	Pk	34.6	-35.39	57.89	-	-	74	-16.11	164	199	V
4	* 5.140279	46.1	RMS	34.7	-35.5	45.3	54	-8.7	-	-	164	199	V
1	* 5.15	55.51	Pk	34.7	-35.4	54.81	-	-	74	-19.19	164	199	V
3	* 5.15	45	RMS	34.7	-35.4	44.3	54	-9.7	-	-	164	199	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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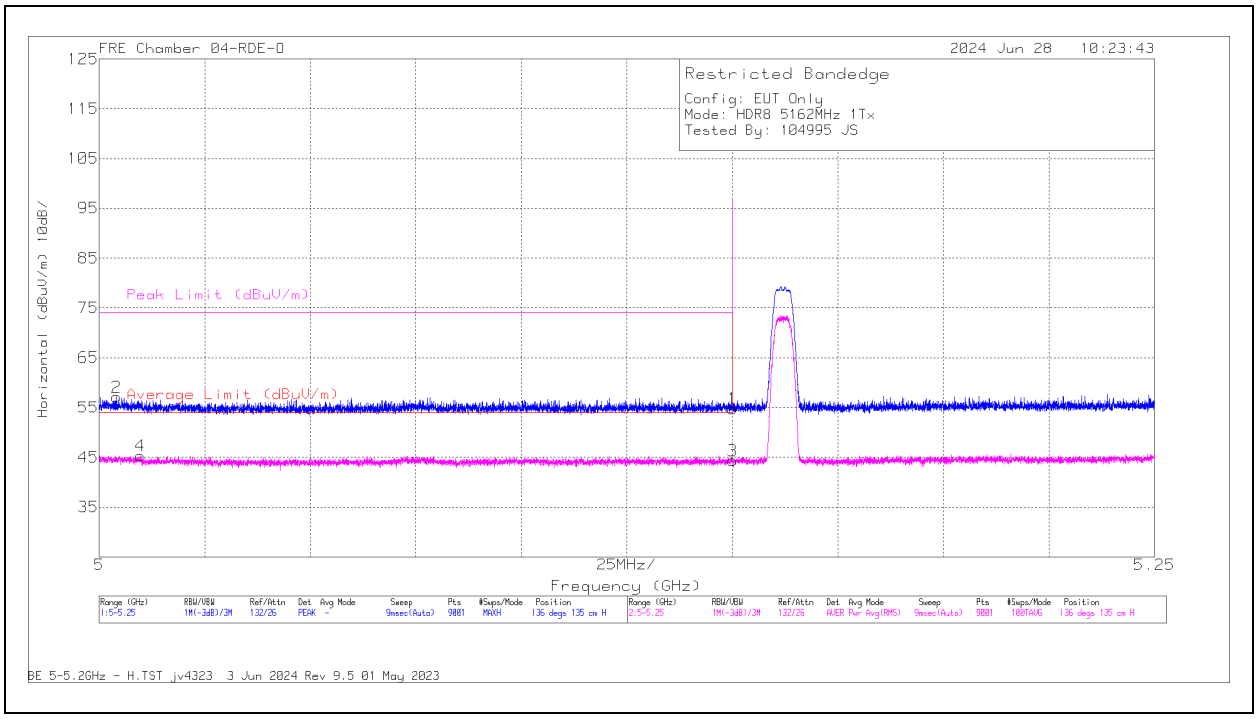
ANT 5, SISO MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.004056	58.28	Pk	34.6	-35.8	57.08	-	-	74	-16.92	136	135	H
4	* 5.00975	46.43	RMS	34.6	-35.72	45.31	54	-8.69	-	-	136	135	H
1	* 5.15	55.44	Pk	34.7	-35.4	54.74	-	-	74	-19.26	136	135	H
3	* 5.15	45.04	RMS	34.7	-35.4	44.34	54	-9.66	-	-	136	135	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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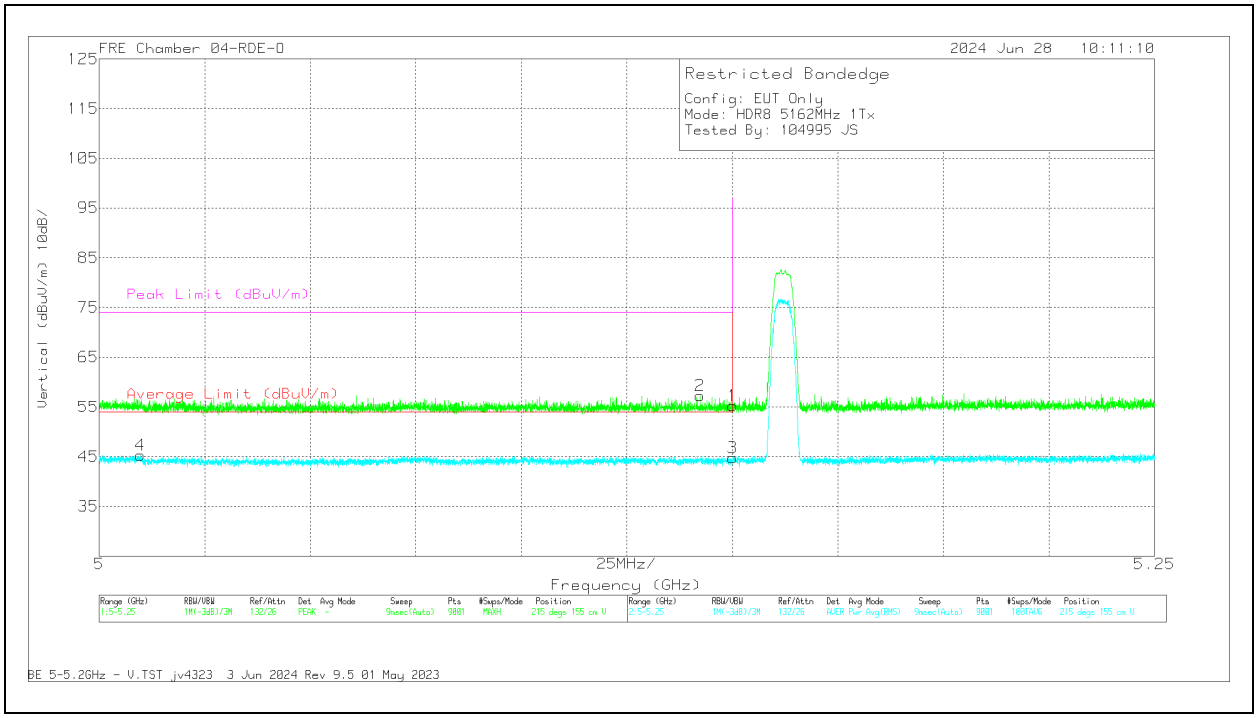
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.00975	46.42	RMS	34.6	-35.72	45.3	54	-8.7	-	-	215	155	V
2	* 5.142362	58.15	Pk	34.7	-35.54	57.31	-	-	74	-16.69	215	155	V
1	* 5.15	55.98	Pk	34.7	-35.4	55.28	-	-	74	-18.72	215	155	V
3	* 5.15	45.5	RMS	34.7	-35.4	44.8	54	-9.2	-	-	215	155	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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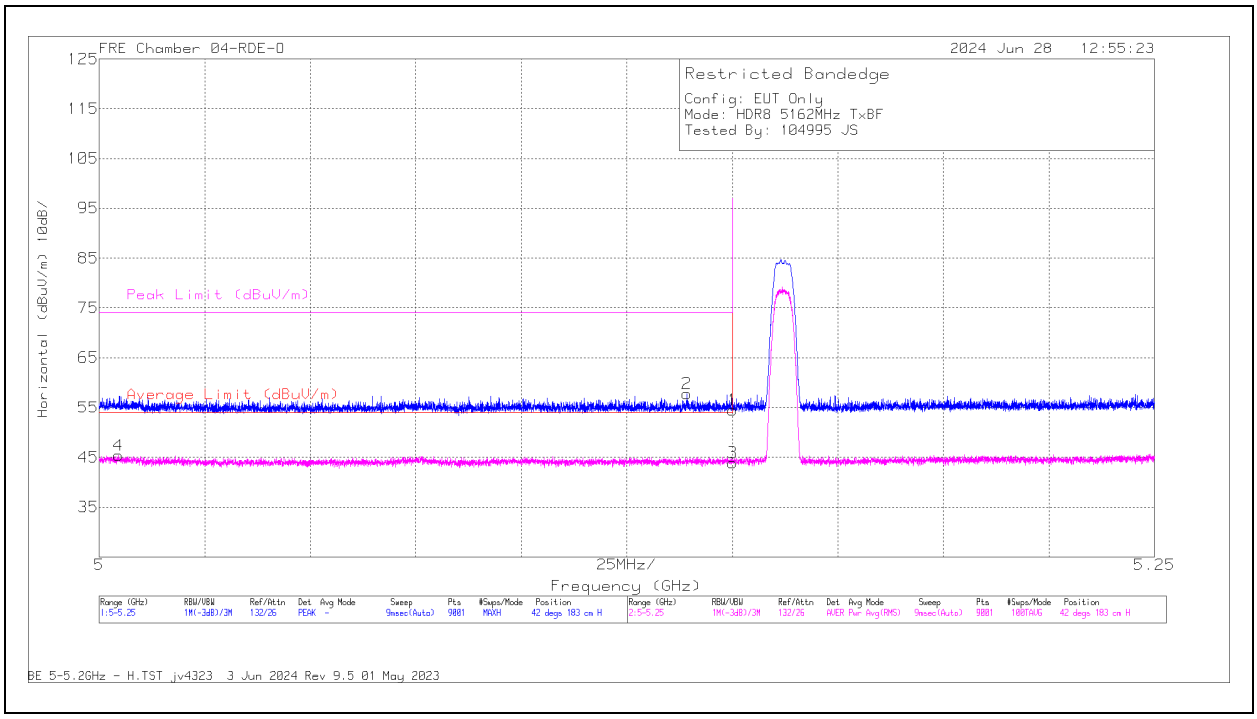
ANT 6 + ANT 5, MIMO TXBF MODE

LOW CHANNEL, 5162 MHz

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.004556	46.56	RMS	34.6	-35.8	45.36	54	-8.64	-	-	42	183	H
2	* 5.139279	58.61	Pk	34.7	-35.5	57.81	-	-	74	-16.19	42	183	H
1	* 5.15	55.2	Pk	34.7	-35.4	54.5	-	-	74	-19.5	42	183	H
3	* 5.15	44.58	RMS	34.7	-35.4	43.88	54	-10.12	-	-	42	183	H

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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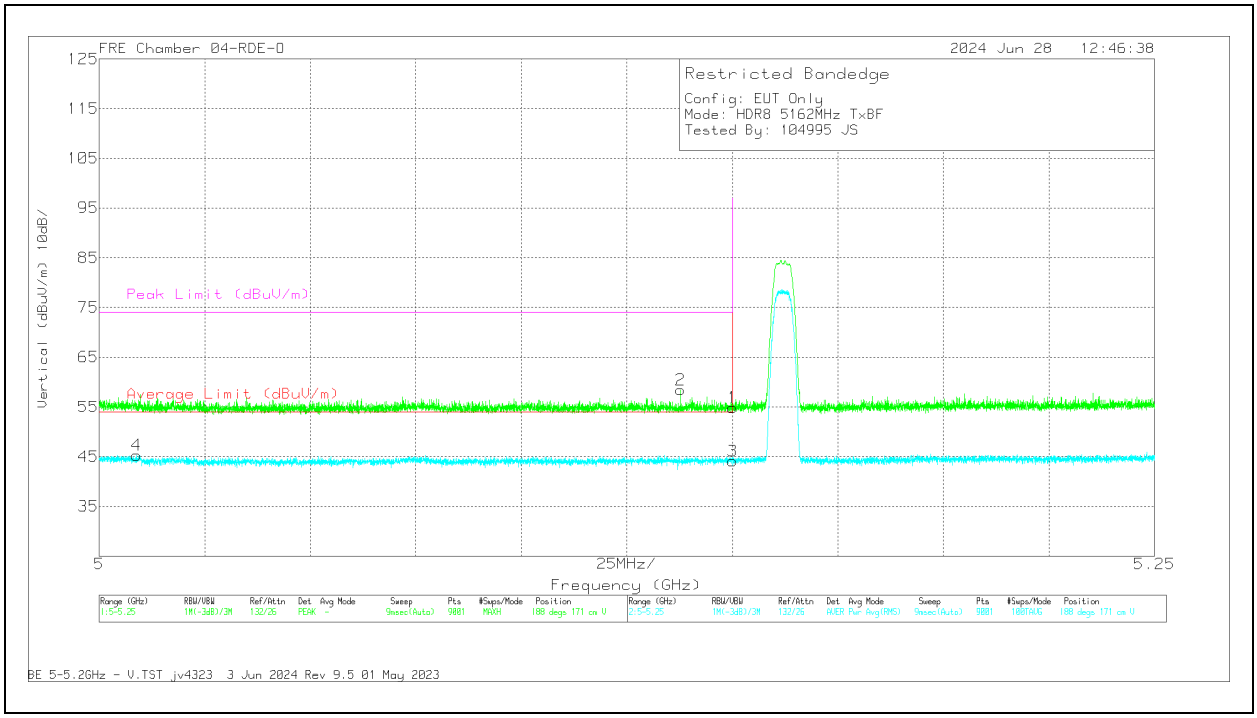
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	80402 ACF (dB/m)	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	* 5.008917	46.53	RMS	34.6	-35.8	45.33	54	-8.67	-	-	188	171	V
2	* 5.137751	59.36	Pk	34.7	-35.6	58.46	-	-	74	-15.54	188	171	V
1	* 5.15	55.56	Pk	34.7	-35.4	54.86	-	-	74	-19.14	188	171	V
3	* 5.15	44.8	RMS	34.7	-35.4	44.1	54	-9.9	-	-	188	171	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
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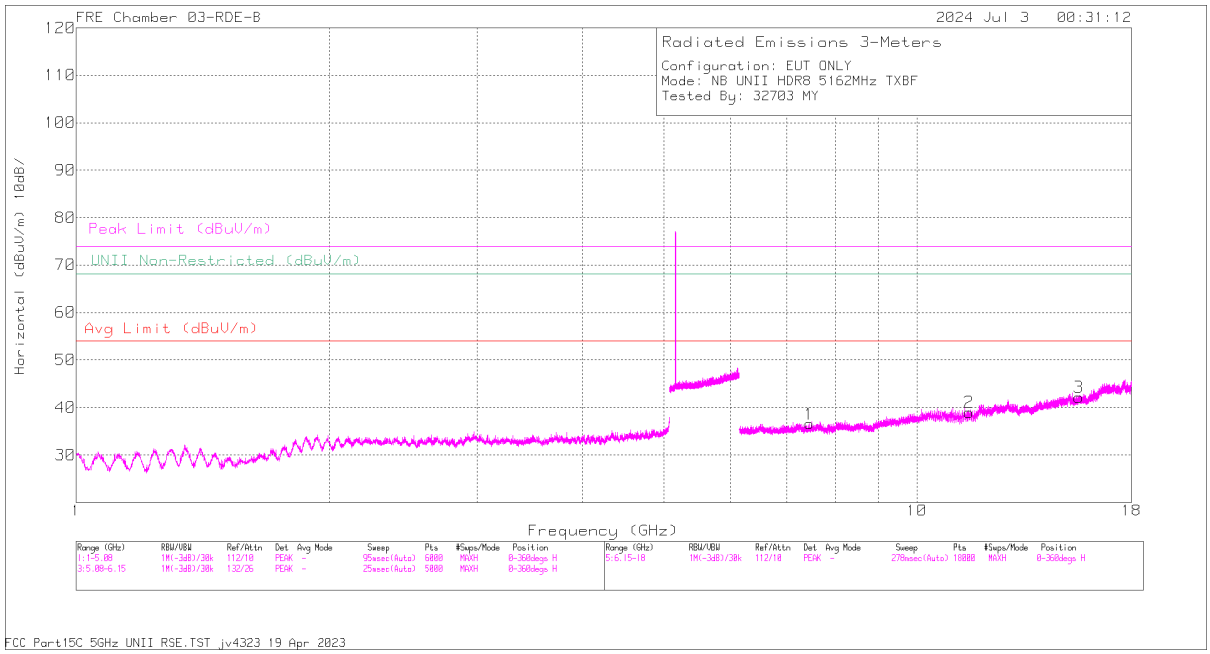
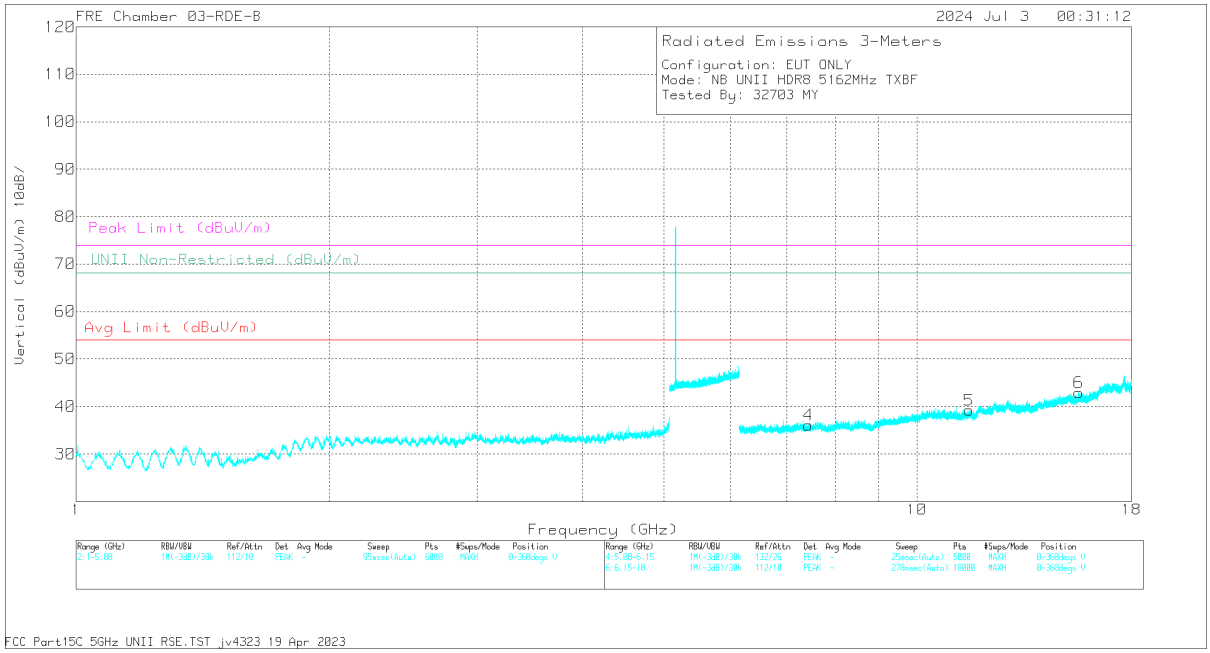
10.1.12. HDR 8 LOW POWER, UNII-1 BAND, HARMONIC AND SPURIOUS

LOW CHANNEL, 5162 MHz



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.453189	57.76	PK-U	35.9	-47.9	45.76	-	-	74	-28.24	0	200	H
	* 7.454291	46.36	ADR	35.9	-47.9	34.36	54	-19.64	-	-	0	200	H
2	* 11.53476	57.02	PK-U	38.2	-46.62	48.6	-	-	74	-25.4	0	101	H
	* 11.531792	45.7	ADR	38.2	-46.7	37.2	54	-16.8	-	-	0	101	H
3	* 15.577844	57.05	PK-U	40.1	-46.5	50.65	-	-	74	-23.35	0	101	H
	* 15.579739	46.05	ADR	40.1	-46.5	39.65	54	-14.35	-	-	0	101	H
4	* 7.429486	58.11	PK-U	35.9	-47.75	46.26	-	-	74	-27.74	0	101	V
	* 7.430873	46.51	ADR	35.9	-47.7	34.71	54	-19.29	-	-	0	101	V
5	* 11.53799	57.26	PK-U	38.2	-46.6	48.86	-	-	74	-25.14	0	200	V
	* 11.538016	45.95	ADR	38.2	-46.6	37.55	54	-16.45	-	-	0	200	V
6	* 15.582404	57.64	PK-U	40.1	-46.5	51.24	-	-	74	-22.76	0	200	V
	* 15.583969	46.16	ADR	40.1	-46.5	39.76	54	-14.24	-	-	0	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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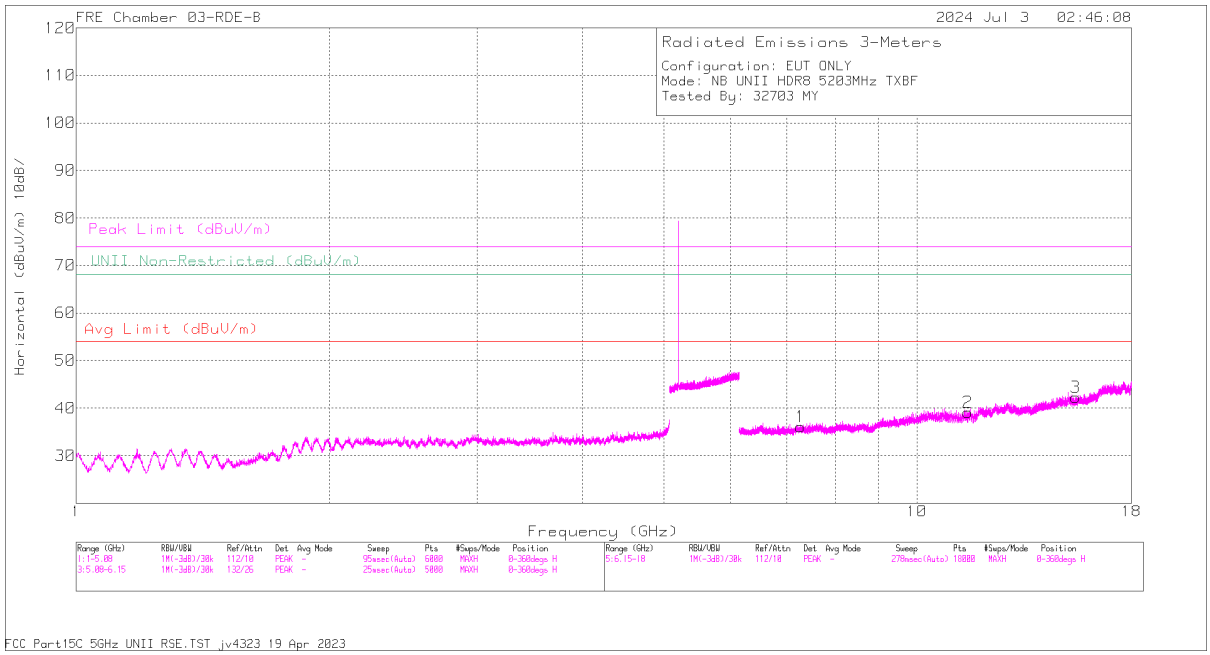
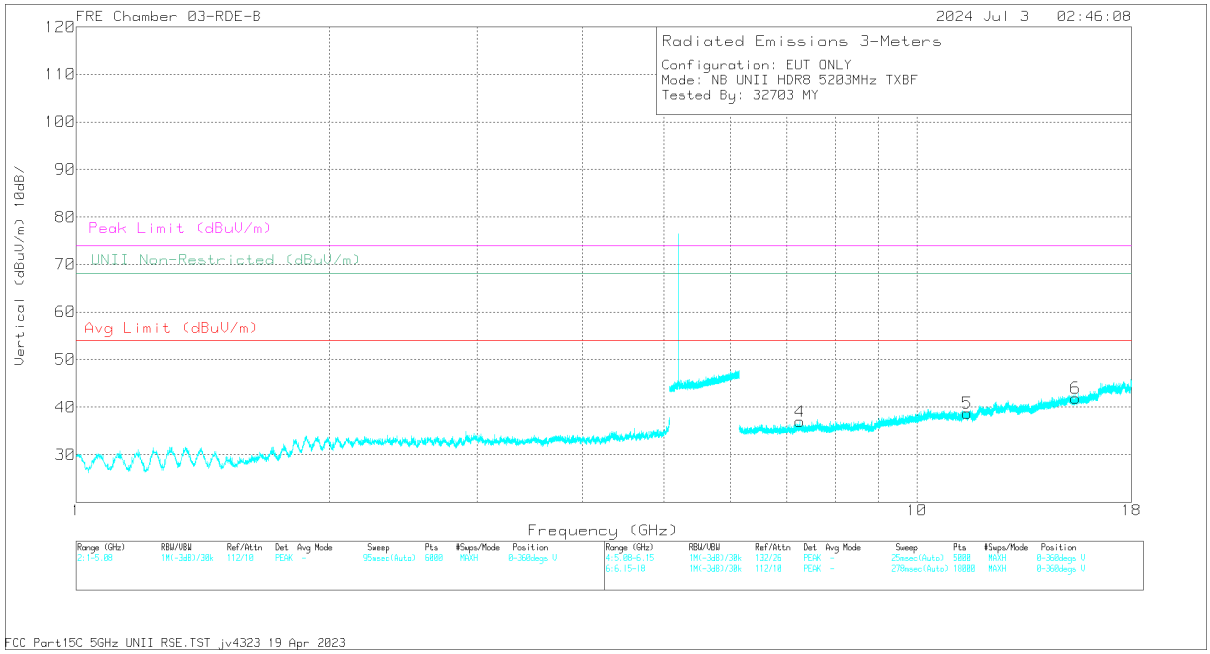
MID CHANNEL, 5203 MHz



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.272653	57.46	PK-U	35.8	-47.27	45.99	-	-	74	-28.01	1	101	H
	* 7.273778	46.08	ADR	35.8	-47.3	34.58	54	-19.42	-	-	1	101	H
2	* 11.50434	57.94	PK-U	38.2	-46.87	49.27	-	-	74	-24.73	1	101	H
	* 11.503495	46.26	ADR	38.2	-46.9	37.56	54	-16.44	-	-	1	101	H
3	* 15.442259	59.04	PK-U	40	-46.8	52.24	-	-	74	-21.76	1	101	H
	* 15.445228	46.82	ADR	40	-46.8	40.02	54	-13.98	-	-	1	101	H
4	* 7.256635	57.65	PK-U	35.7	-47.2	46.15	-	-	74	-27.85	1	200	V
	* 7.25886	45.99	ADR	35.7	-47.2	34.49	54	-19.51	-	-	1	200	V
5	* 11.468744	57.47	PK-U	38.2	-46.9	48.77	-	-	74	-25.23	1	101	V
	* 11.468531	45.85	ADR	38.2	-46.9	37.15	54	-16.85	-	-	1	101	V
6	* 15.457257	58.37	PK-U	40	-46.9	51.47	-	-	74	-22.53	1	200	V
	* 15.458961	46.7	ADR	40	-46.9	39.8	54	-14.2	-	-	1	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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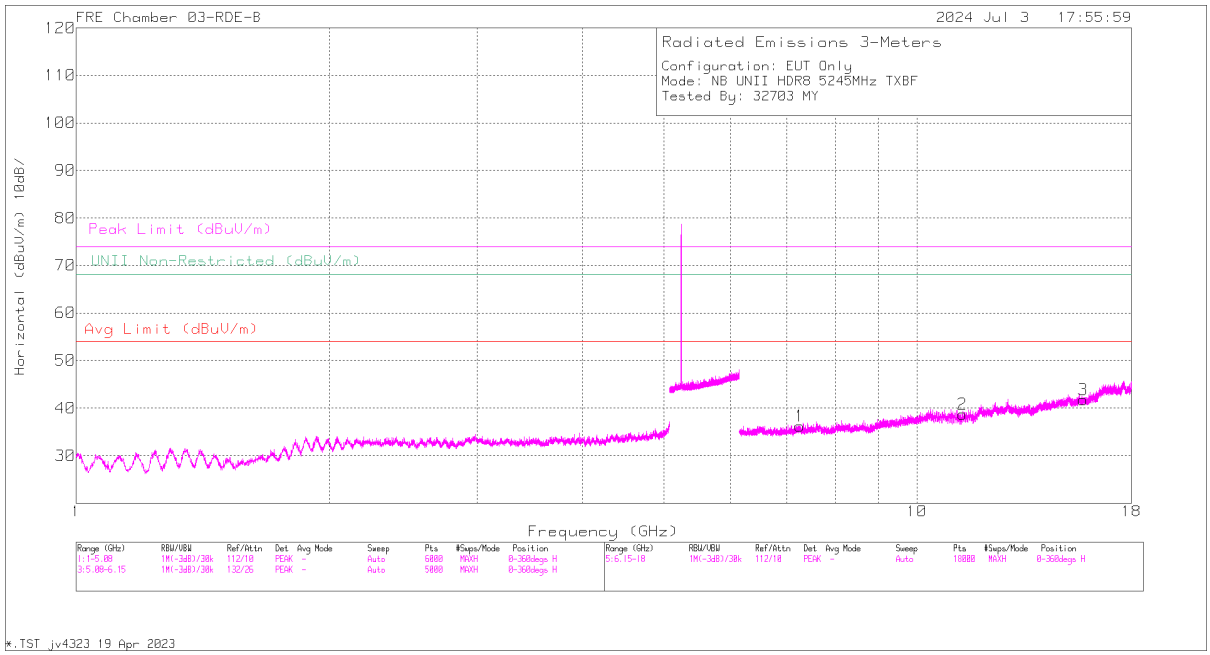
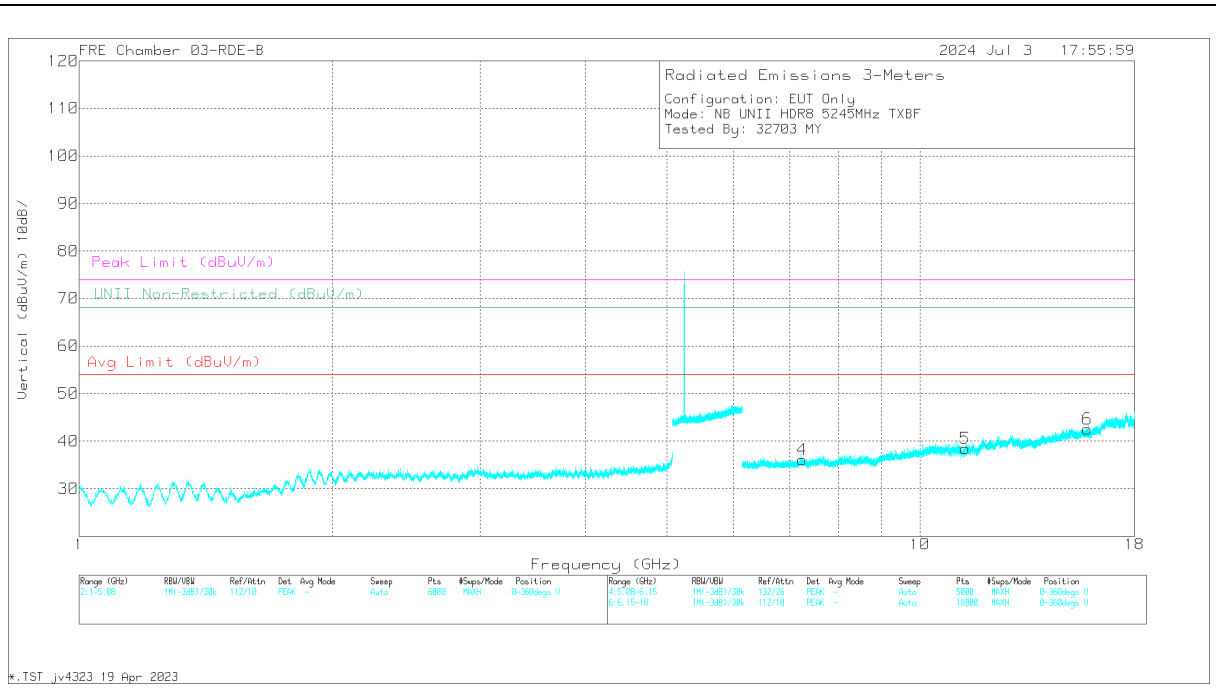
HIGH CHANNEL, 5245 MHz



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	230300 ACF (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 7.259602	57.28	PK-U	35.7	-47.2	45.78	-	-	74	-28.22	-	-	0	101	H
	* 7.259245	45.8	ADR	35.7	-47.2	34.3	54	-19.7	-	-	-	-	0	101	H
2	* 11.330497	57.95	PK-U	38	-47	48.95	-	-	74	-25.05	-	-	0	101	H
	* 11.330295	46.18	ADR	38	-47	37.18	54	-16.82	-	-	-	-	0	101	H
3	* 15.758952	58.08	PK-U	40.3	-46.7	51.68	-	-	74	-22.32	-	-	0	200	H
	* 15.76065	46.52	ADR	40.3	-46.7	40.12	54	-13.88	-	-	-	-	0	200	H
5	* 11.324461	58.17	PK-U	38	-46.9	49.27	-	-	74	-24.73	-	-	0	200	V
	* 11.326625	46.23	ADR	38	-46.9	37.33	54	-16.67	-	-	-	-	0	200	V
6	* 15.817071	58.07	PK-U	40.3	-46.4	51.97	-	-	74	-22.03	-	-	0	200	V
	* 15.817542	46.68	ADR	40.3	-46.4	40.58	54	-13.42	-	-	-	-	0	200	V
4	7.249917	57.64	PK-U	35.7	-47.29	46.05	-	-	-	-	68.2	-22.15	0	200	V

* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
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