

TEST REPORT

Report Number: 14982489-E28V2

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

Model : A3082

Brand : APPLE

FCC ID : BCG-E8692A

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2024/08/20

Prepared by:
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REPORT REVISION HISTORY

Rev.		Issue Date		Revisions		Revised By
V1		2024/08/16		Initial Review		--
V2		2024/08/20		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
EUT Description	SMARTPHONE
Serial Number	C7HH6B0001H0000HBS
Sample Receipt Date	2024/07/03
Date Tested	2024/08/02 – 2024/08/22
Applicable Standards	47 CFR Part 15 Subpart E
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 de Anda Staff Engineer UL Verification Services, Inc.	Chris Xiong Senior Test Engineer UL Verification Services, Inc.

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 6.3)
2. Cable loss (see section 6.3)

Requirement Description	Requirement Clause Number (FCC)	Result	Comment
Duty Cycle	---	Reporting purposes only	ANSI C63.10 Section 12.2
99% BW	§15.407 (a) (11) KDB 987594 D03 v02 Q18	Compliant	ANSI C63.10 Section 6.9.3
26dB BW			
Output Power EIRP	§15.407 (a) (9)	Compliant	Dual Client
PSD EIRP	§15.407 (a) (9)	Compliant	Dual Client
Emissions outside 5.925-7.125 GHz band	§15.407 (b) (6)	Compliant	None
Emissions within 5.925-7.125 GHz Band (Emissions Mask)	§15.407 (b) (7)	Compliant	None
Unwanted emissions in restricted bands	§15.205	Compliant	None

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 987594 D01 General Requirements v02r02
- FCC KDB 987594 D02 EMC Measurement v02r01
- ANSI C63.10-2013

4. FACILITIES AND ACCREDITATION

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

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

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

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

5.2. DECISION RULES

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

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Conducted Antenna Port Emission Measurement	1.94 dB
Power Spectral Density	2.47 dB
Time Domain Measurements Using SA	3.39%
RF Power Measurement Direct Method Using Power Meter	1.30 dB (Peak) 0.45 dB (Average)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

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

5.4. SAMPLE CALCULATION

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

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5G NR1, 5G NR2, 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 Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

This report covers 6E 802.11 ax/be Wifi radio.

6.1.1. EUT DEVICE CLASS

Class	U-NII Bands of Operation			
	5	6	7	8
Dual Client (6CD)	☒	☐	☒	☐
Very Low Power Client (6VL)	☒	☐	☒	☐

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum EIRP output power as follows:

6.2.1. VLP

UNII-5 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-5 Band, 1TX			
6115-6415	802.11be EHT20	4.50	2.82
6125-6405	802.11be EHT40	7.44	5.55
6145-6385	802.11be EHT80	10.48	11.17
6185-6345	802.11be EHT160	12.66	18.45
UNII-5 Band, 2TX			
6115-6415	802.11be EHT20 CDD	1.44	1.39
6115-6415	802.11be EHT20 SDM	4.51	2.82
6125-6405	802.11be EHT40 CDD	4.46	2.79
6125-6405	802.11be EHT40 SDM	7.58	5.73
6145-6385	802.11be EHT80 CDD	7.57	5.71
6145-6385	802.11be EHT80 SDM	10.56	11.38
6185-6345	802.11be EHT160 CDD	9.79	9.53
6185-6345	802.11be EHT160 SDM	12.64	18.37

UNII-7 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-7 Band 1TX			
6535-6855	802.11be EHT20	4.39	2.75
6565-6845	802.11be EHT40	7.40	5.50
6625-6785	802.11be EHT80	10.35	10.84
6665	802.11be EHT160	12.70	18.62
UNII-7 Band 2TX			
6535-6855	802.11be EHT20 CDD	1.80	1.51
6535-6855	802.11be EHT20 SDM	4.62	2.90
6565-6845	802.11be EHT40 CDD	4.83	3.04
6565-6845	802.11be EHT40 SDM	7.58	5.73
6625-6785	802.11be EHT80 CDD	7.84	6.08
6625-6785	802.11be EHT80 SDM	10.56	11.38
6665	802.11be EHT160 CDD	10.08	10.19
6665	802.11be EHT160 SDM	12.84	19.23

6.3. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

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

Antenna Type: IFA

Band	Sub-band Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
UNII-5	Sub-band 1 (5955 - 6095) [Disabled]	-1.10	-3.30	-2.06	0.88
	Sub-band 2 (6115 - 6255)	0.10	-2.70	-1.08	1.82
	Sub-band 3 (6275 - 6415)	-0.90	-3.80	-2.11	0.78
UNII-7	6535 - 6855	0.30	-3.90	-1.31	1.46

The cable loss and type, as provided by the manufacturer' are as follows:

Cable Type: SMA

Cable Loss		
Frequency Range (MHz)	Antenna 6 (dB)	Antenna 5 (dB)
5925-6425	2.90	3.40
6525-6875	3.00	3.60

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

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 27_20_111_38.

6.5. WORST-CASE CONFIGURATION AND MODE

This report is to document the very low power client mode only. The standard power client and indoor low power client mode are documented in a separate 6CD report.

For RF conducted tests, VLP has been tested with SISO, CDD MIMO, and SDM MIMO modes and was tested on all antenna ports after investigation.

The 802.11a mode 20MHz is covered by the 802.11be mode since both have the same power.

Radiated tests are covered by standard power and indoor low power client modes as they have the higher tune up.

For conducted testing - all tests perform on both SU (highest Output Power) and Partial RU tones (highest PSD reading).

Low data rate was used to test on antenna port conducted since it has the highest maximum power.

The modulation and bandwidth of 802.11ax and 802.11be modes are similar at 20 MHz, 40 MHz, 80 MHz and 160 MHz. The target power of 802.11ax mode is equal to or lower than that of 802.11be mode. Also, the data rate of 802.11be mode is higher than 802.11ax mode. Therefore, 802.11be mode was tested to represent worst-case reporting.

For mask and bandwidth measurements, partial RU allocations are tested with the RUs allocated at the lower and upper positions within the channel for the low mid and high channels in each band. Additionally, the center channel is also tested with the RU allocated in the center of the channel to verify that the low / high RU allocations are worst case.

After the investigation, it was found that the worst case for Power and PSD modes for full testing are as shown in the table below. In addition, we also spot-checked Full RU and the rest of Partial RU modes on radiated bandedge, conducted emissions mask, and radiated spurious emissions.

6.5.1. VLP

WIFI 7 - 802.11be							
BW (MHz)	Tone (T)	RU Index	RU Index from Chipset support	Worst Case Tone (UNII-5)		Worst Case Tone (UNII-7)	
				Power	PSD	Power	PSD
20	26	0 ~ 8	0 ~ 8				
	52	37 ~ 40	37 ~ 40				
	52 + 26	70 ~ 81	70, 71, 72				
	106	53 ~ 54	53 ~ 54				
	106 + 26	82 ~ 89	82, 83		X		X
	242	61	61				
	SU	--	--	X		X	
40	26	0 ~ 17	0 ~ 17				
	52	37 ~ 44	37 ~ 44				
	52 + 26	70 ~ 81	70, 72, 72, 73, 74, 75				
	106	53 ~ 56	53 ~ 56				
	106 + 26	82 ~ 89	82, 83, 84, 85		X		X
	242	61 ~ 61	61 ~ 62				
	484	65	65				
80	SU	--	--	X		X	
	26	0 ~ 36	0 ~ 36				
	52	37 ~ 52	37 ~ 52				
	52 + 26	70 ~ 81	71,72,73,74,77,78,79,80				
	106	53 ~ 60	53 ~ 60				
	106 + 26	82 ~ 89	82, 85, 86, 89				
	242	61 ~ 64	61 ~ 64				
160	484	65 ~ 66	65 ~ 66				
	484 + 242	90, 91, 92, 93	90, 91, 92, 93		X		X
	996	67	67				
	SU	--	--	X		X	
	26	0 ~ S36	0 ~ S36				
	52	37 ~ S52	37 ~ S52				
	52 + 26	70 ~ S81	sb0: 71,72,73,74,77,78,79,80 sb1:				
	106	53 ~ S60	53 ~ S60				
	106 + 26	82 ~ 89	82, 85, 86, 89				
	242	61 ~ S64	61 ~ S64				
	484	65 ~ S66	65 ~ S66				
	484 + 242	sb0: 90, 91, 92, 93 sb1: 90, 91, 92, 93	sb0: 90, 91, 92, 93 sb1: 90, 91, 92, 93		X		X
	996	67 ~ S67	67 ~ S67				
996 + 484	996 + 484	sb0: 94, 95 sb1: 94, 95	sb0: 94, 95 sb1: 94, 95				
	996 + 484 + 242	sb0: 96, 97, 98, 99 sb1: 96, 97, 98, 99	sb0: 96, 97, 98, 99 sb1: 96, 97, 98, 99				
	996x2	S68	S68				
	SU	--	--	X		X	

6.6. DESCRIPTION OF TEST SETUP

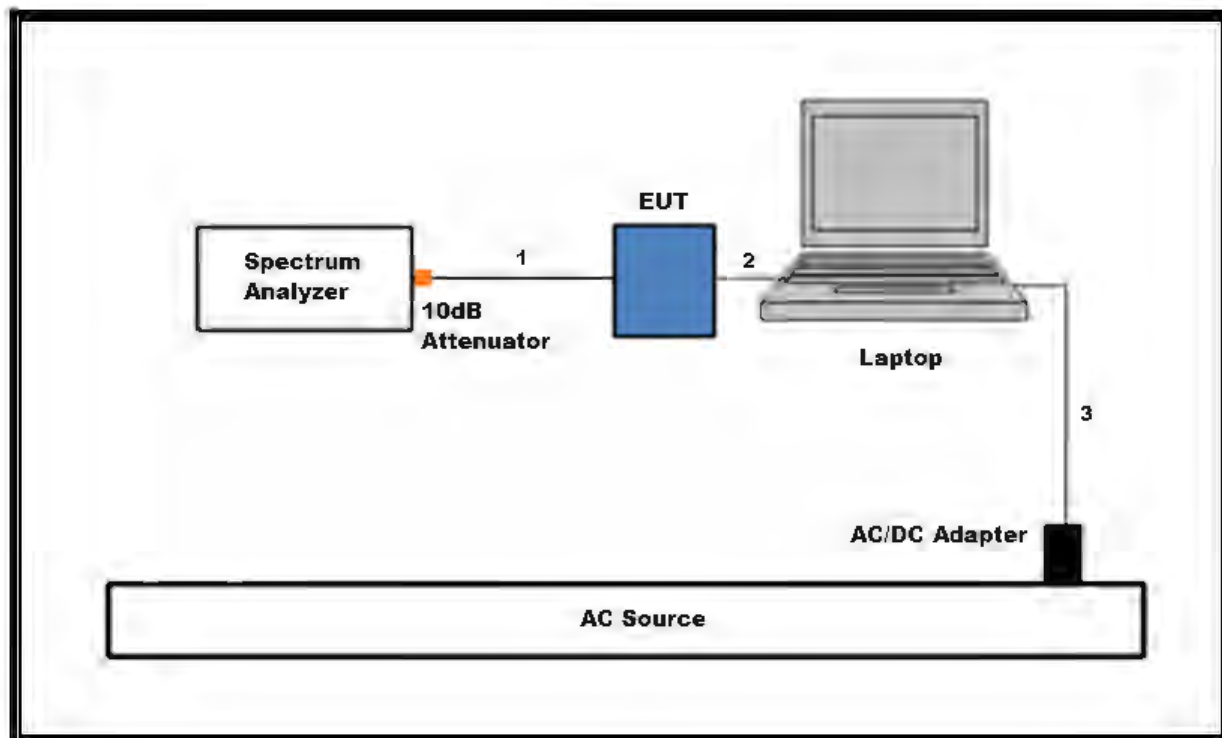
SUPPORT TEST EQUIPMENT				
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC
Laptop	Apple	MacBook Pro	C02CWHQ4ML7H	BCGA2251
Laptop AC/DC adapter	Apple	A1718	C4H021107C2PM0WAW	DoC
EUT AC/DC adapter	Apple	A2305	HHY23570SL11PW9A1	DoC

I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	2	SMA	Shielded	0.2	To spectrum Analyzer
2	USB-C	1	USB-C	Shielded	1.0	N/A
3	DC	1	DC	Shielded	2.0	From AC/DC adapter

TEST SETUP

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

SETUP DIAGRAM FOR CONDUCTED TESTS



7. MEASUREMENT METHOD

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

26 dB Emission Bandwidth: KDB 789033 D02 v02r01, Section C

99% Occupied Bandwidth: KDB 789033 D02 v02r01, Section II-D

Conducted Output Power: KDB 789033 D02 v02r01, Section II E.3.b (Method PM-G).

Power Spectral Density (PSD): KDB 789033 D02 v02r01, Section F

Spurious Emissions within 5.925-7.125 GHz Band (Emissions Mask): KDB 987594 D02 EMC Measurement v02r01, Section II-J

8. 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
PXA Signal Analyzer 2Hz to 44GHz	Keysight Technologies Inc	N9030B	231739	2025/01/31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85313	2025/02/28
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125178	2025/01/31
10dB Fixed Attenuator, Up to 6GHz	Pasternack Enterprises	PE7162-10	236284	2024/08/31
10dB Fixed Attenuator, 2 Watts Up to 26.5 GHz	Pasternack Enterprises	PE7024-10	238178	2024/08/31
10 dB Attenuator, Up to 18 GHz Rated to 2 Watts	Fairview Microwave	SA18H-10	236400	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
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90731	2025/01/31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	80120	2025/01/31

UL AUTOMATION SOFTWARE			
Conducted Software	UL	UL EMC	2023.2.23

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

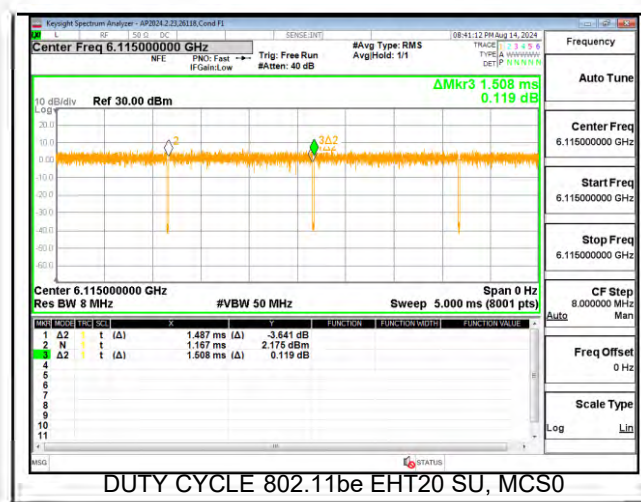
ON TIME AND DUTY CYCLE RESULTS

Mode	Tone (T)	Data Rate (Mbps)	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor	1/B Minimum VBW (kHz)
EHT20	SU	MCS0	1.487	1.508	0.9861	98.61%	0.00	0.010
	106+26	MCS0	3.540	3.560	0.9944	99.44%	0.00	0.010
EHT40	SU	MCS0	1.470	1.495	0.9833	98.33%	0.00	0.010
	106+26	MCS0	3.545	3.585	0.9888	98.88%	0.00	0.010
EHT80	SU	MCS0	1.404	1.424	0.9860	98.60%	0.00	0.010
	484+242	MCS0	2.700	2.720	0.9926	99.26%	0.00	0.010
EHT160	SU	MCS0	0.952	0.974	0.9774	97.74%	0.10	1.050
	484+242	MCS0	2.695	2.715	0.9926	99.26%	0.00	0.010

Mode	Tone (T)	Data Rate (Mbps)	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor	1/B Minimum VBW (kHz)
EHT20	SU	MCS0	0.780	0.801	0.9738	97.38%	0.12	1.282
SDM	106+26	MCS0	3.540	3.560	0.9944	99.44%	0.00	0.010
EHT40	SU	MCS0	0.771	0.792	0.9735	97.35%	0.12	1.297
SDM	106+26	MCS0	3.546	3.582	0.9899	98.99%	0.00	0.010
EHT80	SU	MCS0	0.738	0.762	0.9685	96.85%	0.14	1.355
SDM	484+242	MCS0	2.695	2.720	0.9908	99.08%	0.00	0.010
EHT160	SU	MCS0	0.515	0.537	0.9590	95.90%	0.18	1.942
SDM	484+242	MCS0	2.700	2.720	0.9926	99.26%	0.00	0.010

Note: Duty Cycle is the same for 1TX and 2TX. The plot in this section is for reference settings only.

DUTY CYCLE PLOT



9.2. VLP 26 dB AND 99% BANDWIDTH

LIMITS

§15.407 (a) (11)

The maximum bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 MHz. KDB 987594 D03 U-NII 6 GHz QA v02, modified by FCC TCB Workshop Presentation Review of TCB PAG Submissions - October 2023, allows the maximum bandwidths to be defined by either the 26dB bandwidth or the 99% bandwidth for a 320 MHz nominal channel bandwidth and by the 26dB bandwidth for all other nominal channel bandwidths. The KDB requires that the test report show the 99% and 26 dB bandwidth for all the nominal channel bandwidths used by the device.

PROCEDURE

ANSI C63.10: 2013 §6.9

Band	Tones	20 MHz	40 MHz	80 MHz	160 MHz
UNII-5	Partial RU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	1MHz/3MHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-7	Partial RU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	1MHz/3MHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz

RESULTS

ID:	33300 / 26118	Date:	2024/08/08 – 2024/08/14
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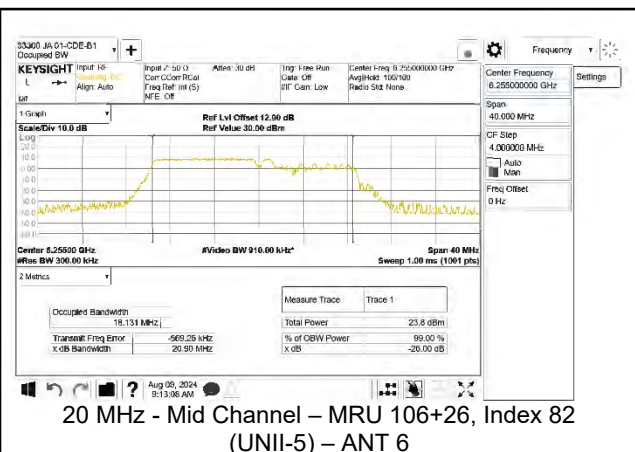
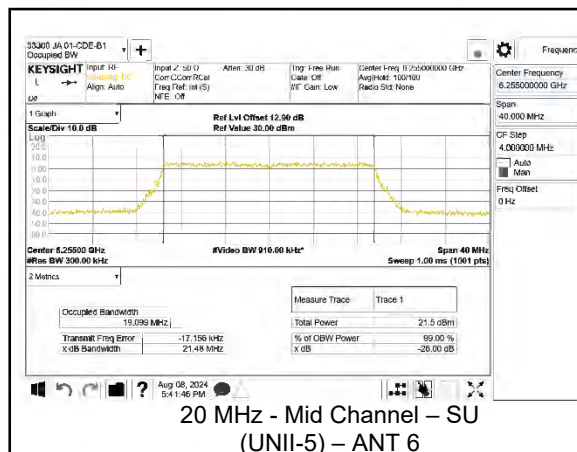
For mask and bandwidth measurements partial RU allocations are tested with the RUs allocated at the lower and upper positions within the channel for the low mid and high channels in each band. Additionally, the center channel is also tested with the RU allocated in the center of the channel to verify that the low / high RU allocations are worst case.

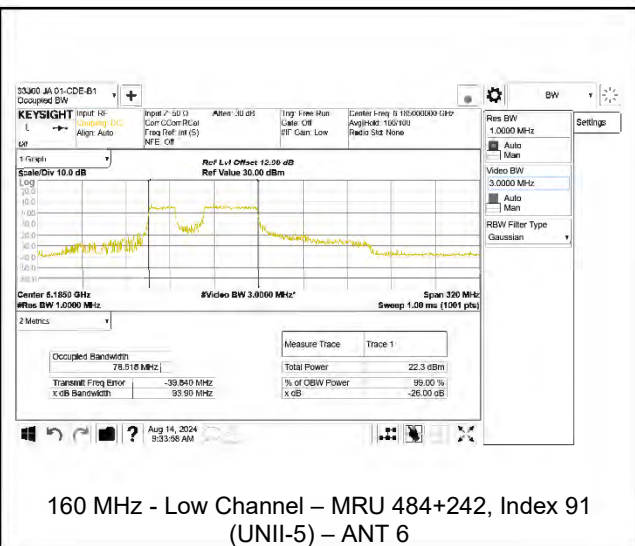
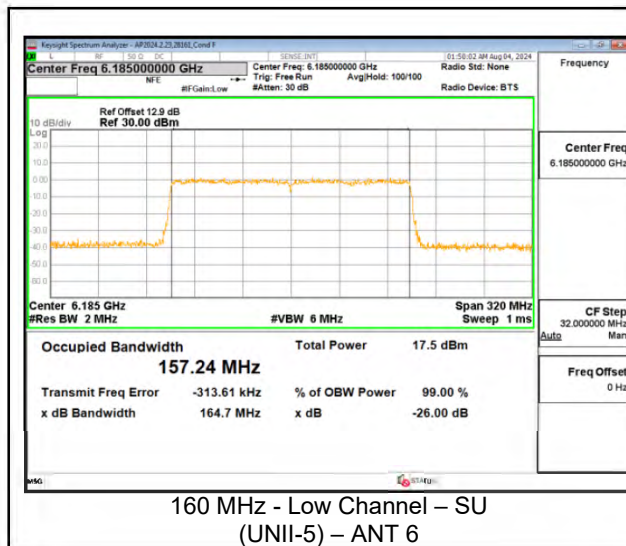
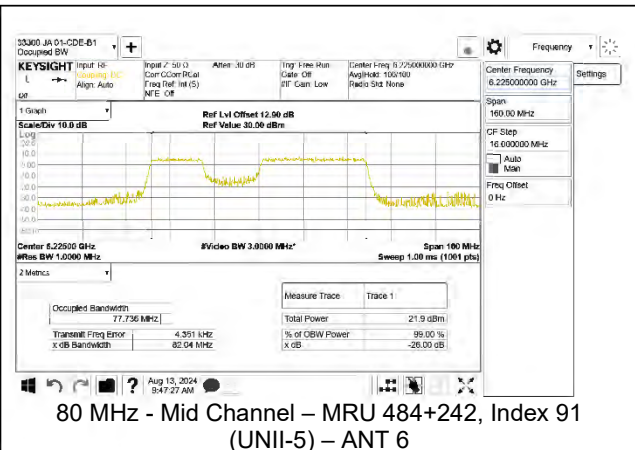
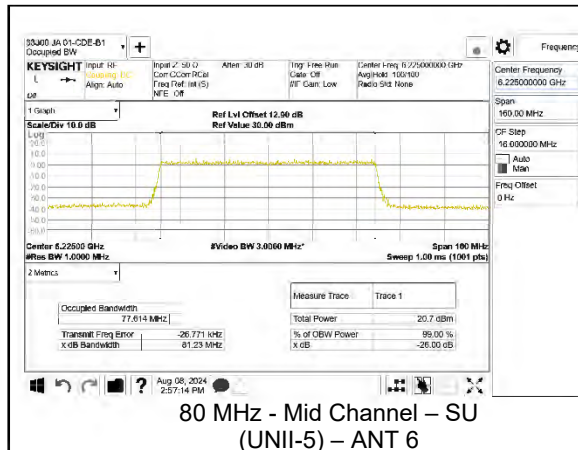
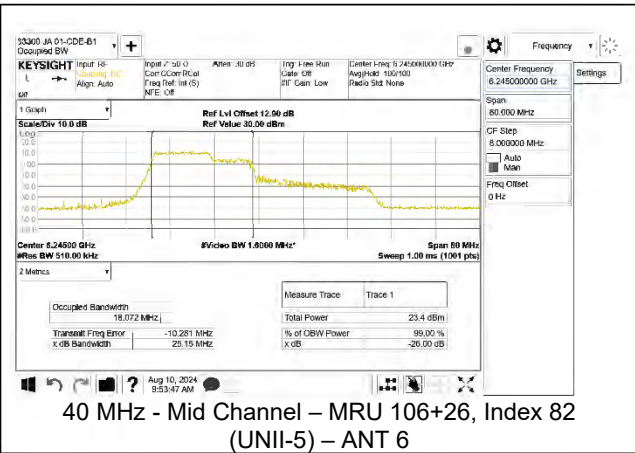
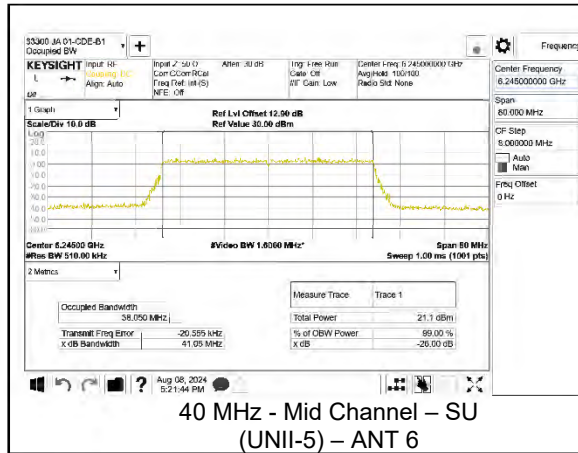
The plots in these sections are for reference settings only for different bandwidth and different antenna ports.

The tests performed on this device show that both 99% and 26dB bandwidths are less than 320 MHz. for all supported channel bandwidths.

9.2.1. 802.11be SISO MODE IN THE UNII-5 BAND

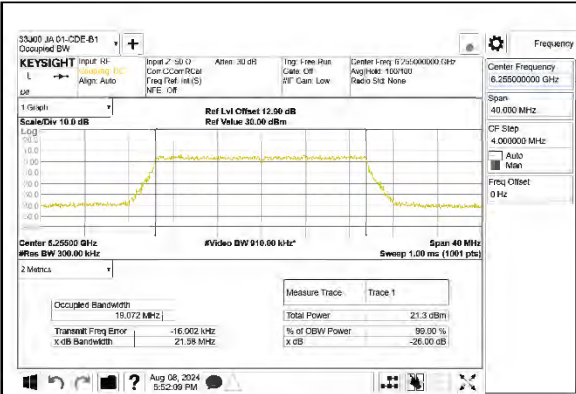
UNII-5 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20 MHz	6115	33	SU	--	21.33	21.25	19.075	19.071
			MRU 106+26	82	20.87	21.03	18.123	18.166
				83	21.09	21.15	18.261	18.283
	6255	61	SU	--	21.48	21.26	19.099	19.111
			MRU 106+26	82	20.90	20.92	18.131	18.114
				83	21.04	21.06	18.197	18.203
	6415	93	SU	--	21.14	21.22	19.104	19.072
			MRU 106+26	82	20.87	20.58	18.132	18.124
				83	21.06	20.86	18.321	18.214
40 MHz	6125	35	SU	--	41.38	41.23	38.012	37.990
			MRU 106+26	82	24.54	23.54	18.150	18.058
				83	29.11	27.83	19.876	20.076
				85	24.92	24.85	18.214	18.143
	6245	59	SU	--	41.05	41.51	38.050	37.995
			MRU 106+26	82	25.15	25.24	18.072	18.049
				83	27.02	27.81	19.797	19.822
				85	25.02	23.65	18.287	18.159
	6405	91	SU	--	41.38	41.47	38.063	38.047
			MRU 106+26	82	22.66	23.61	18.041	17.977
				83	26.06	27.51	19.474	19.839
				85	25.01	22.41	18.295	18.142
80 MHz	6145	39	SU	--	81.45	81.41	77.430	77.563
			MRU 484+242	91	81.24	81.33	77.760	77.810
				92	81.52	81.49	77.734	77.672
				93	76.07	74.28	58.761	58.662
	6225	55	SU	--	81.23	81.49	77.614	77.501
			MRU 484+242	91	82.04	81.53	77.736	77.742
				92	81.47	81.15	77.522	77.669
				93	73.14	76.53	58.643	58.682
	6385	87	SU	--	81.27	81.73	77.546	77.649
			MRU 484+242	91	81.90	81.87	77.730	77.711
				92	81.73	81.73	77.787	77.663
				93	71.15	74.84	58.760	58.674
160 MHz	6185	47	SU	--	164.70	164.40	157.240	157.160
			MRU 484+242	91	93.90	94.51	78.518	78.429
				92	96.27	92.07	78.449	78.319
				S92	96.48	93.45	78.253	78.365
	6345	79	SU	--	165.20	164.20	157.180	157.280
			MRU 484+242	91	91.25	94.68	78.385	78.524
				92	89.25	86.77	78.250	78.192
				S92	91.69	92.35	78.509	78.105



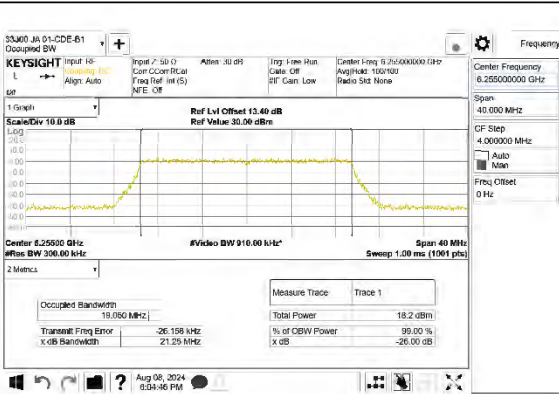


9.2.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND

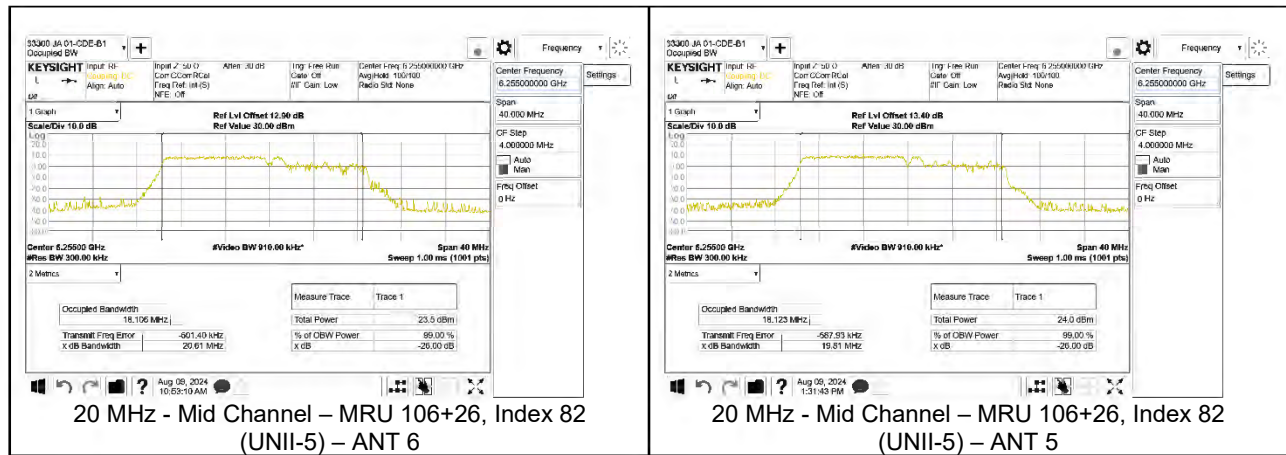
UNII-5 (MIMO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20 MHz	6115	33	SU	--	21.16	21.41	19.083	19.073
			MRU 106+26	82	20.92	19.84	18.156	18.107
				83	21.14	20.07	18.259	18.080
	6255	61	SU	--	21.58	21.25	19.072	19.060
			MRU 106+26	82	20.61	19.81	18.106	18.123
				83	20.42	20.11	18.193	18.147
	6415	93	SU	--	21.12	21.52	19.153	19.098
			MRU 106+26	82	20.91	19.80	18.140	17.988
				83	20.97	19.86	18.241	18.122
40 MHz	6125	35	SU	--	41.72	41.22	38.039	38.025
			MRU 106+26	82	24.49	20.10	18.089	17.809
				83	29.07	25.10	20.039	18.879
	6245	59	SU	--	23.82	20.14	18.195	17.918
			MRU 106+26	82	41.36	41.55	37.971	38.052
				83	24.34	19.99	18.081	17.843
	6405	91	SU	--	26.90	23.24	19.853	19.127
			MRU 106+26	82	25.09	20.46	18.213	17.903
				83	41.48	41.51	38.018	38.045
	6405	91	SU	--	24.38	20.86	18.052	17.844
			MRU 106+26	82	28.23	26.00	19.729	19.392
				83	24.78	20.82	18.224	17.967
80 MHz	6145	39	SU	--	80.86	81.53	77.482	77.522
			MRU 484+242	91	81.92	80.68	77.759	77.754
				92	81.47	81.47	77.788	77.781
	6225	55	SU	--	78.53	70.16	58.772	58.622
			MRU 484+242	91	81.10	81.66	77.495	77.487
				92	81.48	81.42	77.719	77.727
	6385	87	SU	--	81.91	80.97	77.799	77.639
			MRU 484+242	91	70.88	68.05	58.688	58.656
				92	81.04	81.29	77.525	77.587
	6385	87	SU	--	81.45	81.11	77.750	77.691
			MRU 484+242	91	81.62	81.07	77.779	77.760
				92	72.15	70.20	58.822	58.651
160 MHz	6185	47	SU	--	164.70	164.60	157.220	157.270
			MRU 484+242	91	96.73	94.25	78.449	78.050
				92	91.92	88.41	78.011	78.140
	6345	79	SU	--	94.19	89.84	78.246	78.282
			MRU 484+242	91	163.30	164.70	157.120	157.380
				92	96.52	86.39	78.170	78.223
	6345	79	SU	--	97.50	89.50	78.298	78.277
			MRU 484+242	91	90.87	94.60	78.423	78.025
				S92				



20 MHz - Mid Channel – SU
(UNII-5) – ANT 6



20 MHz - Mid Channel – SU
(UNII-5) – ANT 5



9.2.3. 802.11be MIMO SDM MODE IN THE UNII-5 BAND

UNII-5 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20 MHz	6115	33	SU	--	21.26	21.04	19.072	19.064
			MRU 106+26	82	20.71	19.80	18.181	18.074
				83	20.42	20.12	18.074	17.891
	6255	61	SU	--	21.08	21.40	19.079	19.077
			MRU 106+26	82	20.97	19.80	18.151	18.104
				83	21.09	20.23	18.298	18.050
	6415	93	SU	--	21.14	20.96	19.056	19.113
			MRU 106+26	82	20.83	19.84	18.165	18.104
				83	21.06	20.68	18.300	18.092
40 MHz	6125	35	SU	--	41.23	41.32	38.065	38.022
			MRU 106+26	82	22.99	19.87	17.997	17.805
				83	27.88	24.29	19.627	19.054
				85	24.19	20.75	18.167	17.936
	6245	59	SU	--	40.71	41.28	38.054	37.975
			MRU 106+26	82	23.11	19.98	18.037	17.944
				83	26.22	27.77	19.694	19.020
				85	24.25	20.66	18.129	17.920
	6405	91	SU	--	41.61	41.32	38.053	37.967
			MRU 106+26	82	24.53	20.02	18.073	17.917
				83	29.01	24.41	19.803	19.379
				85	24.38	20.18	18.159	17.888
80 MHz	6145	39	SU	--	81.36	81.69	77.358	77.450
			MRU 484+242	91	81.97	81.50	77.678	77.745
				92	81.48	80.83	77.787	77.614
				93	74.10	69.47	58.700	58.769
	6225	55	SU	--	81.47	81.13	77.516	77.445
			MRU 484+242	91	81.48	81.93	77.704	77.758
				92	81.16	81.51	77.728	77.804
				93	79.07	71.06	58.700	58.659
	6385	87	SU	--	82.31	81.26	77.375	77.516
			MRU 484+242	91	82.35	80.83	77.697	77.616
				92	81.42	81.07	77.689	77.721
				93	73.00	76.25	58.547	58.624
160 MHz	6185	47	SU	--	164.00	164.10	157.140	157.100
			MRU 484+242	91	93.99	88.55	78.276	78.115
				92	93.31	85.87	78.240	78.140
				S92	93.49	92.86	78.364	78.046
	6345	79	SU	--	164.70	163.90	157.190	157.180
			MRU 484+242	91	95.79	90.10	78.335	78.096
				92	91.16	90.22	78.290	78.262
				S92	103.50	88.58	78.174	78.180

9.2.4. 802.11be SISO MODE IN THE UNII-7 BAND

UNII-7 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20MHz	6535	117	SU	--	21.30	21.43	19.047	19.086
			MRU 106+26	82	20.93	20.93	18.190	18.033
				83	21.35	21.12	18.331	18.250
	6715	153	SU	--	21.22	21.47	19.024	19.037
			MRU 106+26	82	20.97	20.89	18.079	18.156
				83	21.12	20.93	18.271	18.245
	6855	181	SU	--	21.16	21.41	19.046	19.082
			MRU 106+26	82	20.79	20.94	18.143	18.159
				83	21.19	21.21	18.331	18.284
40MHz	6565	123	SU	--	41.30	41.06	38.036	38.074
			MRU 106+26	82	24.39	23.74	18.100	18.077
				83	27.57	27.39	19.881	20.175
				85	24.63	24.86	18.314	18.337
	6685	147	SU	--	41.63	41.57	37.991	38.079
			MRU 106+26	82	24.71	24.21	18.022	18.015
				83	25.66	29.14	19.623	19.901
				85	24.71	24.21	18.161	18.190
	6845	179	SU	--	41.27	41.50	37.966	37.982
			MRU 106+26	82	25.19	23.44	18.101	18.071
				83	27.73	28.91	19.685	19.838
				85	25.00	24.60	18.209	18.094
80MHz	6625	135	SU	--	81.50	80.87	77.462	77.450
			MRU 484+242	91	81.92	82.11	77.725	77.747
				92	81.30	82.13	77.753	77.776
				93	71.24	72.26	58.731	58.638
	6705	151	SU	--	82.07	81.58	77.668	77.592
			MRU 484+242	91	82.08	81.32	77.677	77.782
				92	81.27	81.44	77.659	77.658
				93	73.70	71.55	58.643	58.697
	6785	167	SU	--	82.14	82.12	77.557	77.593
			MRU 484+242	91	81.59	81.26	77.796	77.759
				92	81.14	81.30	77.621	77.682
				93	70.13	75.90	58.662	58.582
160MHz	6665	143	SU	--	164.30	164.60	156.980	157.340
			MRU 484+242	91	94.23	99.61	78.198	78.681
				92	93.71	93.94	78.222	78.096
				S92	94.43	94.63	78.039	78.280

9.2.5. 802.11be MIMO CDD MODE IN THE UNII-7 BAND

UNII-7 (MIMO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20MHz	6535	117	SU	--	21.16	21.08	19.130	19.018
			MRU 106+26	82	20.49	19.79	18.082	18.029
				83	21.17	20.17	18.305	18.090
	6715	153	SU	--	20.96	21.07	19.111	19.053
			MRU 106+26	82	20.80	19.71	18.134	18.040
				83	21.05	20.13	18.288	18.100
	6855	181	SU	--	21.34	21.14	19.070	19.069
			MRU 106+26	82	20.91	19.80	18.116	18.109
				83	21.10	20.17	18.298	18.133
40MHz	6565	123	SU	--	41.59	41.19	38.076	38.048
			MRU 106+26	82	24.13	20.13	18.016	18.892
				83	28.54	25.48	19.383	19.274
				85	25.10	20.76	18.670	17.891
	6685	147	SU	--	41.05	41.56	38.026	37.998
			MRU 106+26	82	24.59	19.90	18.096	17.865
				83	27.47	26.22	20.065	19.278
				85	24.84	20.70	18.195	17.899
	6845	179	SU	--	41.38	41.23	38.025	37.973
			MRU 106+26	82	23.85	20.04	18.058	17.925
				83	30.68	24.93	20.049	19.284
				85	25.00	20.86	18.173	17.945
80MHz	6625	135	SU	--	81.34	81.48	77.605	77.507
			MRU 484+242	91	81.58	81.48	77.709	77.731
				92	51.62	81.83	77.776	77.814
				93	71.05	71.95	58.708	58.717
	6705	151	SU	--	81.35	81.28	77.577	77.494
			MRU 484+242	91	81.36	82.05	77.678	77.747
				92	81.28	81.59	77.756	77.762
				93	74.72	69.67	58.752	58.600
	6785	167	SU	--	82.16	81.82	77.572	77.431
			MRU 484+242	91	81.12	81.80	77.700	77.670
				92	81.52	81.16	77.758	77.783
				93	73.54	69.70	58.705	58.793
160MHz	6665	143	SU	--	163.90	164.30	157.240	157.140
			MRU 484+242	91	86.91	97.89	77.995	77.971
				92	93.43	94.70	78.129	78.079
				S92	96.24	88.91	78.129	77.938

9.2.6. 802.11be MIMO SDM MODE IN THE UNII-7 BAND

UNII-7 (MIMO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					ANT 6	ANT 5	ANT 6	ANT 5
20MHz	6535	117	SU	--	21.26	21.14	19.119	19.048
			MRU 106+26	82	19.76	19.74	18.098	18.134
				83	21.16	20.07	18.295	18.087
	6715	153	SU	--	21.43	21.20	19.113	19.084
			MRU 106+26	82	20.62	19.80	18.152	18.102
				83	21.10	20.17	18.228	18.099
	6855	181	SU	--	21.15	21.20	19.053	19.103
			MRU 106+26	82	21.80	20.46	18.192	18.202
				83	23.00	21.12	18.325	18.189
40MHz	6565	123	SU	--	41.18	41.22	37.979	37.997
			MRU 106+26	82	23.89	20.04	17.992	17.878
				83	28.30	25.15	19.986	19.153
				85	24.30	20.35	18.224	17.850
	6685	147	SU	--	41.40	40.98	38.099	38.030
			MRU 106+26	82	24.98	19.88	18.074	17.824
				83	27.73	26.29	19.560	19.243
				85	23.26	20.86	18.263	17.918
	6845	179	SU	--	41.72	41.10	38.027	38.123
			MRU 106+26	82	25.44	20.02	18.031	17.873
				83	28.13	24.15	19.580	18.973
				85	25.16	20.09	18.233	17.897
80MHz	6625	135	SU	--	81.40	81.38	77.408	77.542
			MRU 484+242	91	81.50	81.15	77.646	77.769
				92	81.82	81.18	77.635	77.685
				93	72.71	68.50	58.759	58.578
	6705	151	SU	--	81.14	81.19	77.509	77.588
			MRU 484+242	91	81.28	82.05	77.859	77.745
				92	81.90	81.08	77.771	77.653
				93	75.52	70.33	58.806	58.673
	6785	167	SU	--	81.03	80.95	77.500	77.440
			MRU 484+242	91	81.77	81.28	77.730	77.703
				92	82.02	81.32	77.713	77.673
				93	73.39	74.57	58.662	58.724
160MHz	6665	143	SU	--	164.70	165.10	157.100	157.180
			MRU 484+242	91	95.88	89.46	78.310	78.125
				92	102.90	91.19	78.154	78.275
				S92	94.39	91.52	78.267	78.175

9.3. VLP OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Bands: 5.925–6.425 GHz and 6.525–6.875 GHz

(9) For very low power devices operating in the 5.925-6.425 GHz and 6.525-6.875 GHz bands, the maximum power spectral density must not exceed –5 dBm e.i.r.p in any 1-megahertz band and the maximum e.i.r.p must not exceed 14 dBm.

TEST PROCEDURE

Conducted Output Power: KDB 789033 D02 v02r01, Section II E.3.b (Method PM-G), because the gated power measurement is used the calculation of EIRP power does not include any corrections for duty factor.

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

RESULTS

The plots in these sections are for reference settings only for different bandwidth and different antenna ports.

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:

CDD MIMO Tx chains used uncorrelated gain for EIRP calculation and correlated gain for PSD EIRP calculation.

SDM MIMO Tx chains used uncorrelated for both EIRP and PSD EIRP calculation.

The directional gains are as follows:

Band	Sub-band Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
UNII-5	Sub-band 1 (5955 - 6095) [Disabled]	-1.10	-3.30	-2.06	0.88
	Sub-band 2 (6115 - 6255)	0.10	-2.70	-1.08	1.82
	Sub-band 3 (6275 - 6415)	-0.90	-3.80	-2.11	0.78
UNII-7	6535 - 6855	0.30	-3.90	-1.31	1.46

DIRECTIONAL GAIN CALCULATIONS:

ANSI C63.10-2013 section 14.4.3

$$\text{Uncorrelated Directional Gain} = 10 * \text{LOG} \left[\frac{10^{\frac{\text{ANT4}}{10}} + 10^{\frac{\text{ANT3}}{10}}}{2} \right]$$

$$\text{Correlated Directional Gain} = 10 * \text{LOG} \left[\frac{\left(10^{\frac{\text{ANT4}}{20}} + 10^{\frac{\text{ANT3}}{20}} \right)^2}{2} \right]$$

Sample Calculation at UNII-5 Band:

ANT 6 = 0.10 dB

ANT 5 = -2.70 dB

$$\text{Uncorrelated Directional Gain} = 10 * \text{LOG} \left[\frac{10^{\frac{0.10}{10}} + 10^{\frac{-2.70}{10}}}{2} \right] = -1.08 \text{ dBi}$$

$$\text{Correlated Directional Gain} = 10 * \text{LOG} \left[\frac{\left(10^{\frac{0.10}{20}} + 10^{\frac{-2.70}{20}} \right)^2}{2} \right] = 1.82 \text{ dBi}$$

EIRP CALCULATIONS:

1Tx

EIRP corr'd power = ANT 6 + Antenna Gain

Sample Calculation at UNII-5 Band:

ANT6 (20 MHz, low channel, MRU106+26T/RU82) Power = 2.15 dBm

EIRP corr'd power = 2.15 + 0.1 = 2.25 dBm

2Tx

EIRP corr'd power = 10*LOG(10^(ANT6/10)+10^(ANT5/10)) + uncorrelated directional gain

Sample Calculation at UNII-5 Band:

(20 MHz, MIMO CDD, SU channel 33)

ANT6 Power = -0.48 dBm

ANT5 Power = -0.50 dBm

EIRP corr'd power = 10*LOG(10^(-0.48/10)+10^(-0.50/10)) + (-1.08) = 1.44 dBm

EIRP PSD CALCULATIONS:

1Tx

EIRP corr'd PSD = DCCF + ANT6 + Antenna Gain

Sample Calculation at UNII-5 Band:

ANT6 (20 MHz, low channel MRU106+26T/RU82) PSD = -7.097 dBm/1MHz

EIRP corr'd PSD = 0 + (-7.097) + (0.10) = -6.997 dBm/1MHz

2Tx (OFDMA)

EIRP corr'd PSD = $(10 \cdot \log(10^{((DCCF + ANT6)/10)} + 10^{((DCCF + ANT5)/10)})) + \text{correlated directional gain}$

Sample Calculation at UNII-5 Band:

(20 MHz, low channel MRU106+26T/RU82)

ANT6 PSD = -11.795 dBm/1MHz

ANT5 PSD = -11.789 dBm/1MHz

$$\begin{aligned} \text{EIRP corr'd PSD} &= (10 \cdot \log(10^{((0 + (-11.795))/10)} + 10^{((0 + (-11.789))/10)})) + (1.82) \\ &= -6.962 \text{ dBm/1MHz} \end{aligned}$$

2Tx (SDM)

EIRP corr'd PSD = $(10 \cdot \log(10^{((DCCF + ANT6)/10)} + 10^{((DCCF + ANT5)/10)})) + \text{uncorrelated directional gain}$

Sample Calculation at UNII-5 Band:

(20 MHz, low channel MRU106+26T/RU82)

ANT6 PSD = -8.680 dBm/1MHz

ANT5 PSD = -8.765 dBm/1MHz

$$\begin{aligned} \text{EIRP corr'd PSD} &= (10 \cdot \log(10^{((0 + (-8.680))/10)} + 10^{((0 + (-8.765))/10)})) + (-1.08) \\ &= -6.792 \text{ dBm/1MHz} \end{aligned}$$

9.3.1. 802.11be SISO MODE IN THE UNII-5 BAND

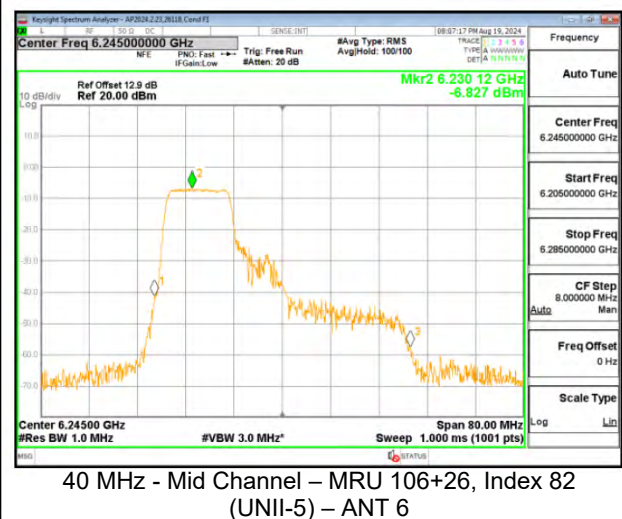
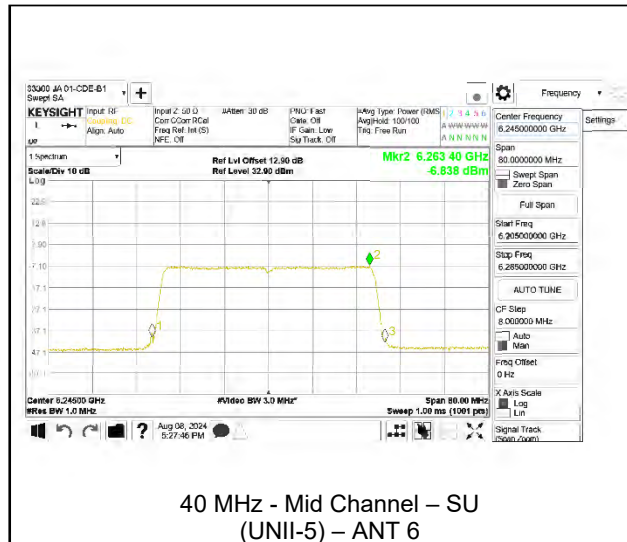
VLP UNII-5 (SISO)	Duty Factor (dB)		ANT 6 Gain (dBi)	ANT 5 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 14dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -5 dBm/MHz EIRP)	
	SU	Partial RU							ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5
20MHz	0	0	0.10	-2.70	6115	33	SU	—	4.40	4.21	4.50	1.51	-6.829	-6.702	-6.729	-9.402
							MRU 106+26	82	2.15	2.10	2.25	-0.60	-7.097	-7.246	-6.997	-9.946
							MRU 106+26	83	2.14	1.95	2.24	-0.75	-7.123	-7.333	-7.023	-10.033
			0.10	-2.70	6255	61	SU	—	4.36	4.23	4.46	1.53	-6.996	-6.735	-6.896	-9.435
							MRU 106+26	82	2.06	1.97	2.16	-0.73	-6.975	-7.113	-6.875	-9.813
							MRU 106+26	83	2.06	1.97	2.16	-0.73	-6.840	-7.212	-6.740	-9.912
			-0.90	-3.80	6415	93	SU	—	4.27	4.29	3.37	0.49	-7.084	-7.107	-7.984	-10.907
							MRU 106+26	82	2.03	2.04	1.13	-1.76	-7.017	-7.236	-7.917	-11.036
							MRU 106+26	83	1.96	1.97	1.06	-1.83	-7.128	-7.273	-8.028	-11.073
40MHz	0	0	0.10	-2.70	6125	35	SU	—	7.34	7.20	7.44	4.50	-6.819	-7.110	-6.719	-9.810
							MRU 106+26	82	1.99	1.93	2.09	-0.77	-7.087	-6.729	-6.987	-9.429
							MRU 106+26	83	1.98	1.97	2.08	-0.73	-6.901	-6.695	-6.801	-9.395
			0.10	-2.70	6245	59	SU	—	7.26	7.40	7.36	4.70	-6.838	-6.806	-6.738	-9.506
							MRU 106+26	82	2.11	2.17	2.21	-0.53	-6.827	-6.890	-6.727	-9.590
							MRU 106+26	83	2.02	1.94	2.12	-0.76	-6.846	-6.867	-6.746	-9.567
			-0.90	-3.80	6405	91	SU	—	7.36	7.28	6.46	3.48	-6.676	-6.836	-7.576	-10.636
							MRU 106+26	82	2.06	2.14	1.16	-1.66	-6.917	-6.924	-7.817	-10.724
							MRU 106+26	83	2.11	2.15	1.21	-1.65	-7.173	-6.901	-8.073	-10.701
			0.10	-2.70	6145	39	SU	—	10.38	10.37	10.48	7.67	-6.757	-6.731	-6.657	-9.431
							MRU 484+242	91	9.14	9.09	9.24	6.39	-6.991	-7.150	-6.891	-9.850
							MRU 484+242	92	9.09	9.10	9.19	6.40	-6.909	-7.226	-6.809	-9.926
80MHz	0	0	0.10	-2.70	6225	55	SU	—	10.29	10.37	10.39	7.67	-7.193	-6.871	-7.093	-9.571
							MRU 484+242	91	8.98	9.10	9.08	6.40	-7.142	-7.060	-7.042	-9.760
							MRU 484+242	92	8.97	9.12	9.07	6.42	-7.249	-7.078	-7.149	-9.778
			-0.90	-3.80	6385	87	SU	—	10.35	10.40	9.45	6.60	-6.882	-7.158	-7.782	-10.958
							MRU 484+242	91	9.12	8.94	8.22	5.14	-6.976	-7.241	-7.876	-11.041
							MRU 484+242	92	9.16	8.96	8.26	5.16	-6.895	-6.959	-7.795	-10.759
160MHz	0.1	0	0.10	-2.70	6185	47	SU	—	12.56	12.55	12.66	9.85	-7.295	-7.067	-7.095	-9.667
							MRU 484+242	91	9.15	9.16	9.25	6.46	-7.184	-7.345	-7.084	-10.045
							MRU 484+242	92	8.94	9.20	9.04	6.50	-7.219	-7.218	-7.119	-9.918
			-0.90	-3.80	6345	79	SU	—	12.65	12.62	11.75	8.82	-7.276	-7.308	-8.076	-11.008
							MRU 484+242	91	9.06	9.10	8.16	5.30	-7.203	-7.634	-8.103	-11.434
							MRU 484+242	92	8.98	9.08	8.08	5.28	-7.307	-7.588	-8.207	-11.388

Note:

EIRP Output Power (dBm) = Measured Conducted Power (dBm) + Peak Antenna Gain (dBi)

EIRP PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) + Duty Factor (dB) + Peak Antenna Gain (dBi)





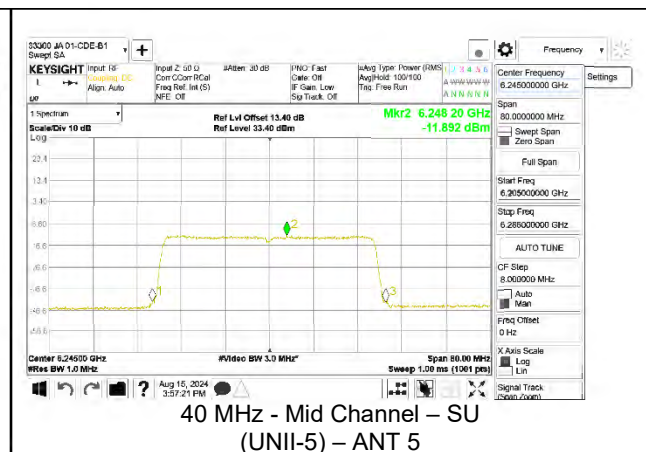
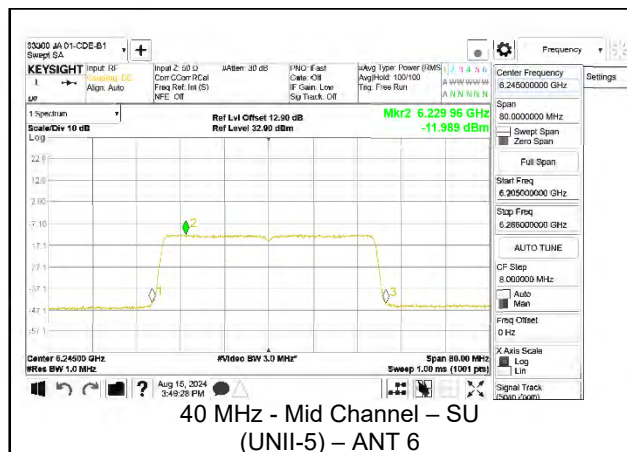
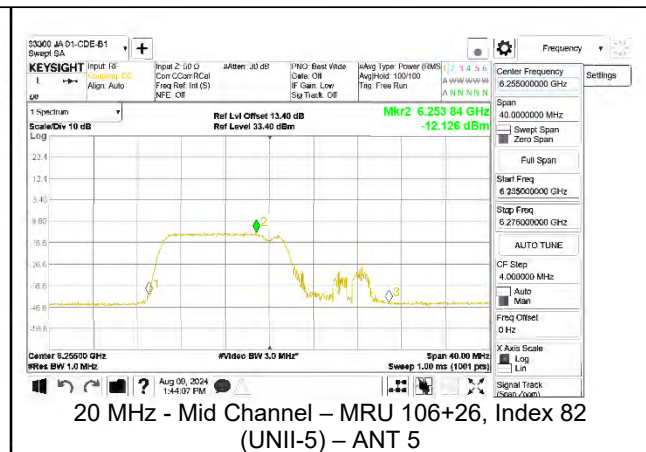
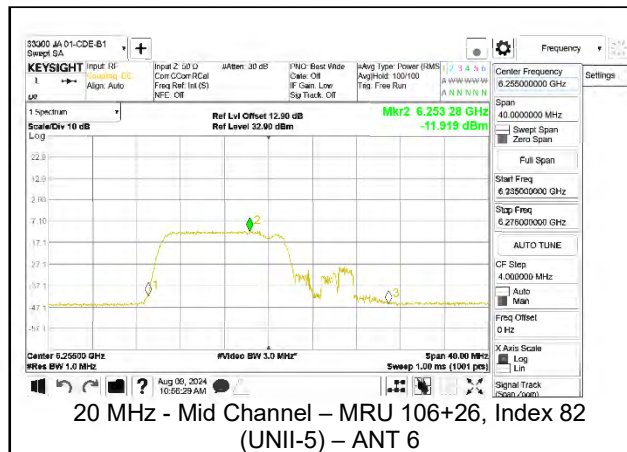
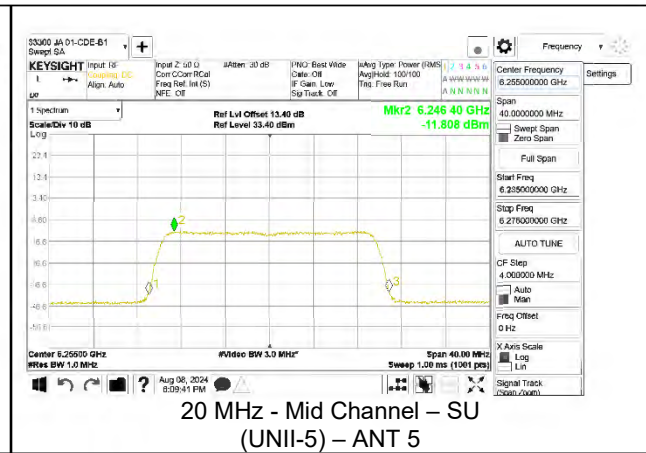
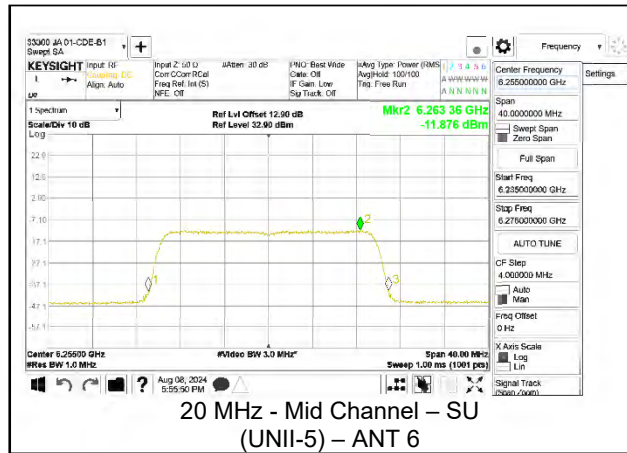
9.3.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND

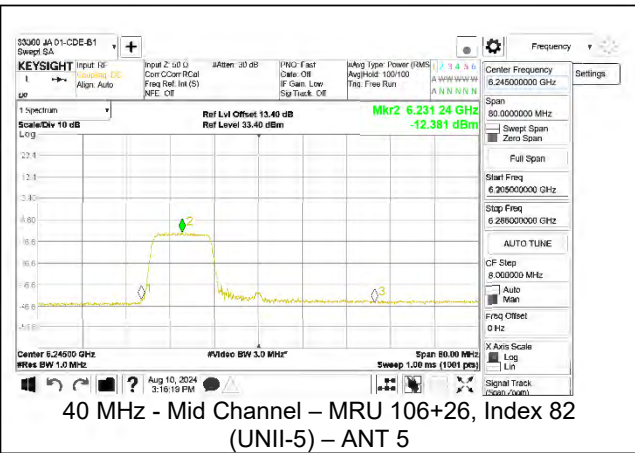
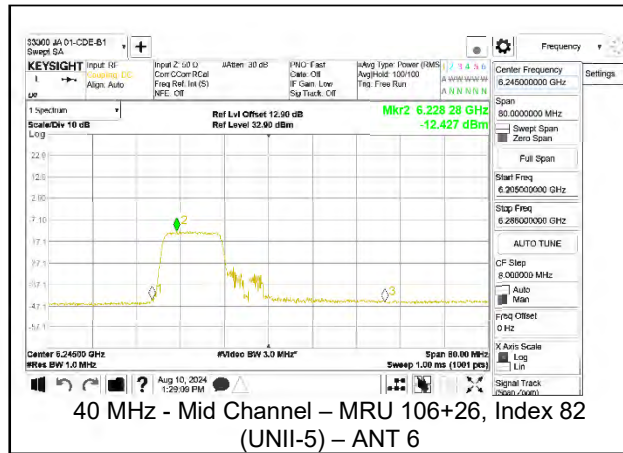
VLP CDD UNII-5 (MIMO)	Duty Factor (dB)		Un- Correlated Antenna Gain (dBi)	Correlated Antenna Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated)		EIRP MIMO Power (Limit = 14dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -5 dBm/MHz EIRP)				
	SU	Partial RU							ANT 6	ANT 5		ANT 6	ANT 5					
20MHz	0	0	-1.08	1.82	6115	33	SU	--	-0.48	-0.50	1.44	-11.618	-11.562	-6.760				
							MRU 106+26	82	-2.60	-2.61	-0.67	-11.795	-11.789	-6.962				
								83	-2.71	-2.77	-0.81	-11.657	-12.003	-6.996				
			-1.08	1.82	6255	61	SU	--	-0.56	-0.44	1.43	-11.876	-11.808	-7.012				
							MRU 106+26	82	-2.70	-2.78	-0.81	-11.919	-12.126	-7.191				
								83	-2.78	-2.65	-0.78	-12.007	-11.735	-7.039				
			-2.11	0.78	6415	93	SU	--	-0.24	-0.29	0.64	-11.784	-11.969	-8.085				
							MRU 106+26	82	-2.54	-2.48	-1.61	-12.099	-11.921	-8.219				
								83	-2.43	-2.37	-1.50	-11.914	-11.954	-8.144				
40MHz	0	0	-1.08	1.82	6125	35	SU	--	2.41	2.51	4.39	-11.772	-11.592	-6.851				
							MRU 106+26	82	-2.65	-2.66	-0.72	-12.407	-12.418	-7.582				
								83	-2.65	-2.74	-0.76	-12.244	-14.494	-8.395				
								85	-2.66	-2.67	-0.73	-12.260	-12.406	-7.502				
							SU	--	2.54	2.52	4.46	-11.989	-11.892	-7.110				
			-1.08	1.82	6245	59	MRU 106+26	82	-2.69	-2.74	-0.78	-12.427	-12.381	-7.574				
							83	-2.78	-2.70	-0.81	-12.175	-12.624	-7.563					
							85	-2.60	-2.68	-0.71	-12.217	-12.233	-7.395					
							SU	--	2.90	2.90	3.80	-11.335	-11.316	-7.535				
							-2.11	0.78	6405	91	MRU 106+26	82	-2.35	-2.35	-1.45	-12.001	-12.042	-8.231
			83	-2.38	-2.50	-1.54					-12.128	-12.006	-8.276					
			85	-2.52	-2.41	-1.56					-12.344	-12.252	-8.507					
			-1.08	1.82	6145	39					SU	--	5.63	5.59	7.54	-11.617	-11.863	-6.908
											MRU 484+242	91	4.26	4.38	6.25	-12.074	-12.088	-7.251
							92	4.33	4.28	6.24		-11.918	-12.241	-7.246				
93	4.24	4.27					6.19	-12.262	-12.221	-7.411								
-1.08	1.82	6225					55	SU	--	5.63	5.65	7.57	-11.969	-11.758	-7.032			
			MRU 484+242	91	4.31	4.22		6.20	-12.146	-12.292	-7.388							
				92	4.39	4.36		6.31	-11.962	-12.275	-7.285							
				93	4.40	4.33		6.30	-11.929	-11.944	-7.106							
			-2.11	0.78	6385	87		SU	--	5.89	5.89	6.79	-11.412	-11.694	-7.760			
MRU 484+242	91	4.50					4.62	5.46	-11.704	-11.868	-7.995							
	92	4.64					4.56	5.50	-11.856	-11.817	-8.046							
	93	4.51					4.45	5.38	-11.970	-11.863	-8.126							
160MHz	0.1	0					-1.08	1.82	6185	47	SU	--	7.90	7.81	9.79	-12.166	-12.090	-7.198
			MRU 484+242	91	4.27	4.28					6.21	-12.311	-12.521	-7.584				
				92	4.32	4.22					6.20	-12.332	-12.539	-7.604				
				S92	4.21	4.40					6.24	-12.575	-12.647	-7.781				
			SU	--	8.06	8.11					8.99	-12.179	-12.166	-8.282				
			-2.11	0.78	6345	79	MRU 484+242	91	4.51	4.47	5.39	-12.217	-12.117	-8.376				
							92	4.60	4.47	5.44	-11.812	-12.246	-8.233					
							S92	4.53	4.56	5.45	-12.469	-12.491	-8.690					

Note:

EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (ANT 6 + ANT 5) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (ANT 6 + ANT 5) + Duty Factor (dB) + Correlated Antenna Gain (dBi)





9.3.3. 802.11be MIMO SDM MODE IN THE UNII-5 BAND

VLP SDM UNII-5 (MIMO)	Duty Factor (dB)		Un- Correlated Antenna Gain (dBi)	Correlated Antenna Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated)		EIRP MIMO Power (Limit = 14dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -5 dBm/MHz EIRP)
	SU	Partial RU							ANT 6	ANT 5		ANT 6	ANT 5	
20 MHz	0.12	0	-1.08	1.82	6115	33	SU	--	2.60	2.56	4.51	-8.550	-8.777	-6.612
							MRU 106+26	82	0.27	0.40	2.27	-8.680	-8.765	-6.792
							MRU 106+26	83	0.35	0.38	2.30	-8.802	-8.726	-6.834
			-1.08	1.82	6255	61	SU	--	2.53	2.49	4.44	-8.732	-8.838	-6.734
							MRU 106+26	82	0.23	0.43	2.26	-8.707	-8.565	-6.705
							MRU 106+26	83	0.21	0.36	2.22	-8.673	-8.763	-6.787
			-2.11	0.78	6415	93	SU	--	2.89	2.91	3.80	-8.444	-8.572	-7.487
							MRU 106+26	82	0.44	0.42	1.33	-8.605	-8.835	-7.818
							MRU 106+26	83	0.47	0.60	1.44	-8.726	-8.684	-7.805
40 MHz	0.12	0	-1.08	1.82	6125	35	SU	--	5.47	5.45	7.39	-8.834	-8.848	-6.791
							MRU 106+26	82	0.38	0.28	2.26	-8.599	-9.009	-6.869
							MRU 106+26	83	0.38	0.31	2.28	-8.900	-9.248	-7.140
							MRU 106+26	85	0.22	0.27	2.18	-8.690	-8.904	-6.865
							MRU 106+26	--	5.64	5.65	7.58	-8.539	-8.693	-6.565
			-1.08	1.82	6245	59	SU	--	5.64	5.65	7.58	-8.539	-8.693	-6.565
							MRU 106+26	82	0.34	0.37	2.29	-8.627	-8.944	-6.852
							MRU 106+26	83	0.35	0.21	2.21	-8.718	-9.086	-6.968
							MRU 106+26	85	0.37	0.35	2.29	-8.818	-9.034	-6.994
							MRU 106+26	--	5.76	5.75	6.66	-8.441	-8.324	-7.362
			-2.11	0.78	6405	91	SU	--	5.76	5.75	6.66	-8.441	-8.324	-7.362
							MRU 106+26	82	0.55	0.60	1.48	-8.797	-8.811	-7.904
							MRU 106+26	83	0.65	0.57	1.51	-8.578	-8.632	-7.705
							MRU 106+26	85	0.52	0.54	1.43	-8.726	-8.798	-7.862
			-1.08	1.82	6145	39	SU	--	8.57	8.62	10.53	-8.832	-8.684	-6.687
							MRU 484+242	91	7.21	7.17	9.12	-8.956	-8.918	-7.007
							MRU 484+242	92	7.16	7.29	9.16	-8.924	-8.759	-6.910
							MRU 484+242	93	7.20	7.28	9.17	-8.989	-8.861	-6.994
							MRU 484+242	--	8.61	8.64	10.56	-8.834	-8.748	-6.720
80 MHz	0.14	0	-1.08	1.82	6225	55	SU	--	8.61	8.64	10.56	-8.834	-8.748	-6.720
							MRU 484+242	91	7.21	7.30	9.19	-8.997	-8.803	-6.969
							MRU 484+242	92	7.24	7.36	9.23	-8.776	-8.877	-6.896
							MRU 484+242	93	7.36	7.28	9.25	-8.870	-8.655	-6.831
							MRU 484+242	--	8.85	8.90	9.78	-8.566	-8.490	-7.488
			-2.11	0.78	6385	87	SU	--	8.85	8.90	9.78	-8.566	-8.490	-7.488
							MRU 484+242	91	7.63	7.63	8.53	-8.440	-8.377	-7.508
							MRU 484+242	92	7.51	7.48	8.40	-8.701	-8.370	-7.632
							MRU 484+242	93	7.65	7.46	8.46	-8.375	-8.498	-7.536
			-1.08	1.82	6185	47	SU	--	10.65	10.77	12.64	-9.767	-9.438	-7.489
							MRU 484+242	91	7.36	7.30	9.26	-8.745	-8.418	-6.648
							MRU 484+242	92	7.22	7.36	9.22	-8.903	-8.455	-6.743
							MRU 484+242	S92	7.17	7.26	9.15	-8.902	-8.799	-6.920
							MRU 484+242	--	11.15	11.05	12.00	-9.337	-9.144	-8.159
160 MHz	0.18	0	-2.11	0.78	6345	79	SU	--	11.15	11.05	12.00	-9.337	-9.144	-8.159
							MRU 484+242	91	7.55	7.61	8.48	-8.597	-8.281	-7.536
							MRU 484+242	92	7.50	7.56	8.43	-8.725	-8.138	-7.521
							MRU 484+242	S92	7.50	7.56	8.43	-8.795	-8.472	-7.730
							MRU 484+242	S92	7.50	7.56	8.43	-8.795	-8.472	-7.730

Note:

EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (ANT 6 + ANT 5) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (ANT 6 + ANT 5) + Duty Factor (dB) + Un-Correlated Antenna Gain (dBi)

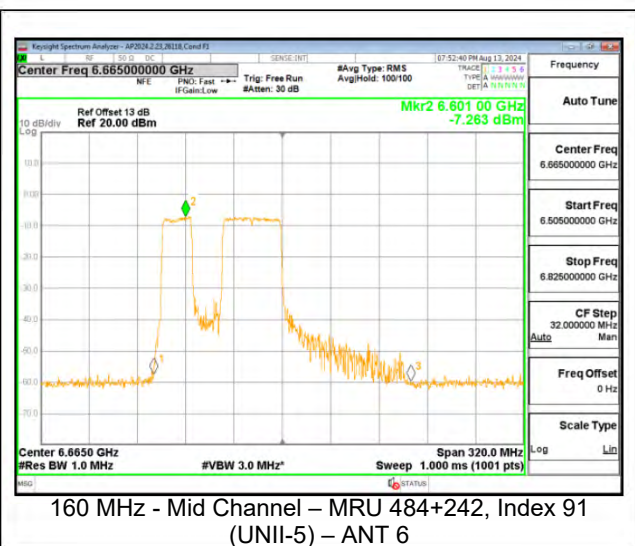
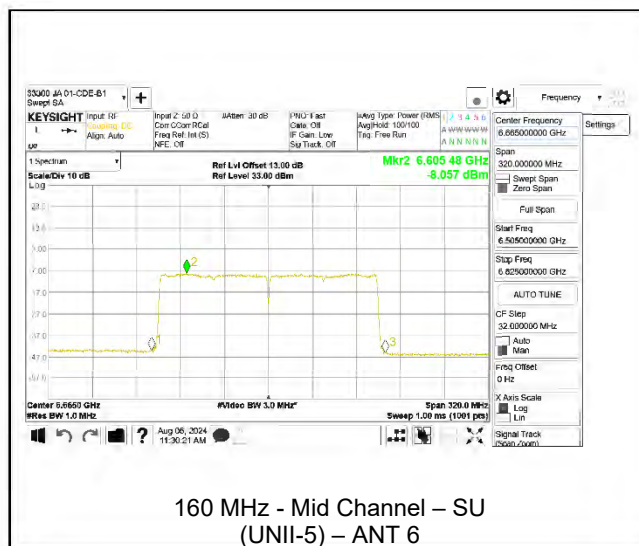
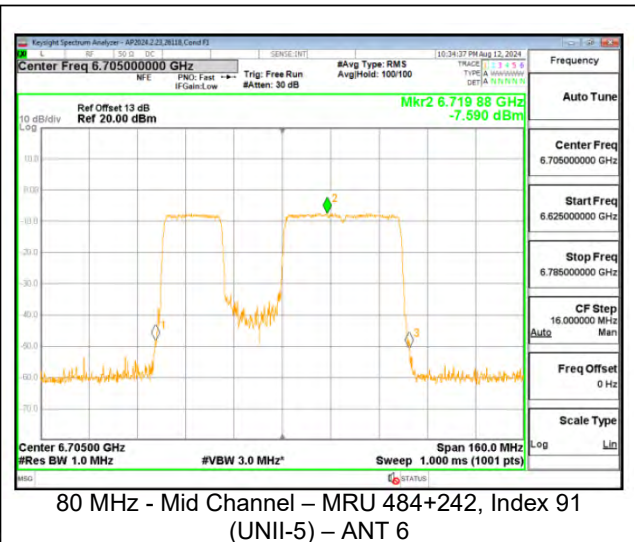
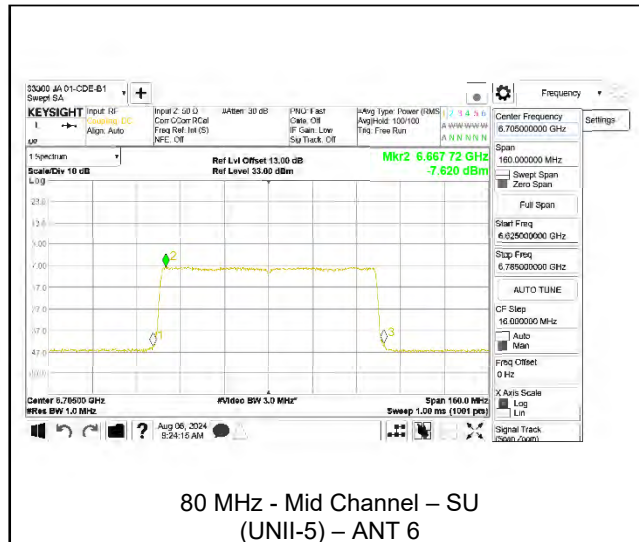
9.3.4. 802.11be SISO MODE IN THE UNII-7 BAND

VLP UNII-7 (SISO)	Duty Factor (dB)		ANT 6 Gain (dBi)	ANT 5 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 14dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -5 dBm/MHz EIRP)	
	SU	Partial RU							ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5	ANT 6	ANT 5
20MHz	0	0	0.30	-3.90	6535	117	SU	--	4.06	4.15	4.36	0.25	-7.126	-7.353	-6.826	-11.253
							MRU 106+26	82	1.89	1.90	2.19	-2.00	-7.383	-7.034	-7.083	-10.934
								83	1.81	1.63	2.11	-2.27	-6.945	-7.374	-6.645	-11.274
					6715	153	SU	--	4.09	4.00	4.39	0.10	-7.320	-7.325	-7.020	-11.225
							MRU 106+26	82	1.84	1.69	2.14	-2.21	-6.936	-6.974	-6.636	-10.874
								83	1.75	1.65	2.05	-2.25	-6.963	-7.125	-6.663	-11.025
					6855	181	SU	--	3.97	4.07	4.27	0.17	-7.540	-7.195	-7.240	-11.095
							MRU 106+26	82	1.80	1.74	2.10	-2.16	-7.188	-7.028	-6.888	-10.928
								83	1.75	1.70	2.05	-2.20	-6.909	-6.954	-6.609	-10.854
40MHz	0	0	0.30	-3.90	6565	123	SU	--	7.09	7.04	7.39	3.14	-7.215	-7.477	-6.915	-11.377
							MRU 106+26	82	1.65	1.80	1.95	-2.10	-7.274	-7.056	-6.974	-10.956
								83	1.70	1.76	2.00	-2.14	-7.143	-7.160	-6.843	-11.060
								85	1.90	1.78	2.20	-2.12	-6.934	-7.067	-6.634	-10.967
					6685	147	SU	--	7.10	7.15	7.40	3.25	-7.256	-7.193	-6.956	-11.093
							MRU 106+26	82	1.88	1.77	2.18	-2.13	-6.944	-6.940	-6.644	-10.840
								83	1.90	1.89	2.20	-2.01	-7.169	-6.878	-6.869	-10.778
								85	1.72	1.72	2.02	-2.18	-7.219	-6.954	-6.919	-10.854
					6845	179	SU	--	7.06	7.15	7.36	3.25	-7.203	-7.287	-6.903	-11.187
							MRU 106+26	82	1.91	1.76	2.21	-2.14	-6.922	-6.807	-6.622	-10.707
								83	1.83	1.81	2.13	-2.09	-7.119	-6.818	-6.819	-10.718
								85	1.88	1.66	2.18	-2.24	-6.878	-6.895	-6.578	-10.795
80MHz	0	0	0.30	-3.90	6625	135	SU	--	10.05	10.01	10.35	6.11	-7.481	-7.567	-7.181	-11.467
							MRU 484+242	91	8.70	8.76	9.00	4.86	-7.490	-7.353	-7.190	-11.253
								92	8.74	8.72	9.04	4.82	-7.253	-7.546	-6.953	-11.446
								93	8.78	8.76	9.08	4.86	-7.459	-7.446	-7.159	-11.346
					6705	151	SU	--	10.01	10.15	10.31	6.25	-7.620	-7.358	-7.620	-7.358
							MRU 484+242	91	8.78	8.90	9.08	5.00	-7.590	-7.256	-7.590	-7.256
								92	8.83	8.74	9.13	4.84	-7.185	-7.204	-7.185	-7.204
								93	8.74	8.79	9.04	4.89	-7.260	-7.341	-7.260	-7.341
					6785	167	SU	--	9.92	10.08	10.22	6.18	-7.624	-7.334	-7.624	-7.334
							MRU 484+242	91	8.83	8.87	9.13	4.97	-7.263	-7.148	-7.263	-7.148
								92	8.78	8.94	9.08	5.04	-7.154	-7.116	-7.154	-7.116
								93	8.79	8.84	9.09	4.94	-7.228	-7.147	-7.228	-7.147
160MHz	0.1	0	0.30	-3.90	6665	143	SU	--	12.40	12.25	12.70	8.35	-8.057	-8.382	-7.657	-12.182
							MRU 484+242	91	8.90	8.75	9.20	4.85	-7.263	-7.446	-6.963	-11.346
								92	8.74	8.71	9.04	4.81	-7.209	-7.193	-6.909	-11.093
							S92	8.71	8.76		9.01	4.86	-7.306	-7.351	-7.006	-11.251

Note:

EIRP Output Power (dBm) = Measured Conducted Power (dBm)+ Peak Antenna Gain (dBi)

EIRP PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) + Duty Factor (dB) + Peak Antenna Gain (dBi)



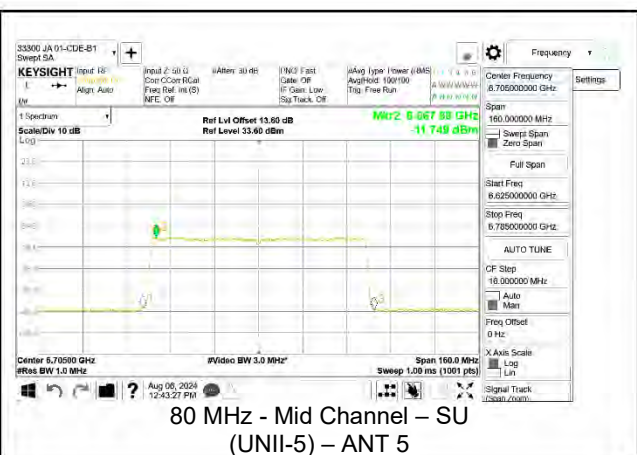
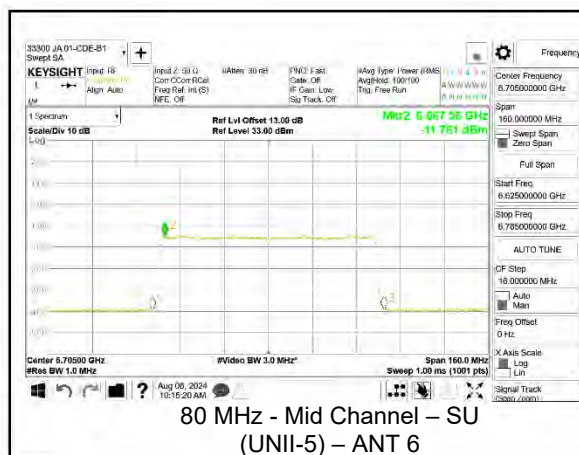
9.3.5. 802.11be MIMO CDD MODE IN THE UNII-7 BAND

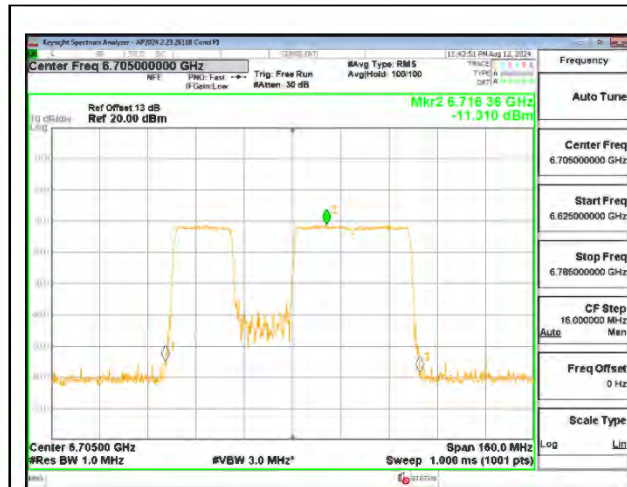
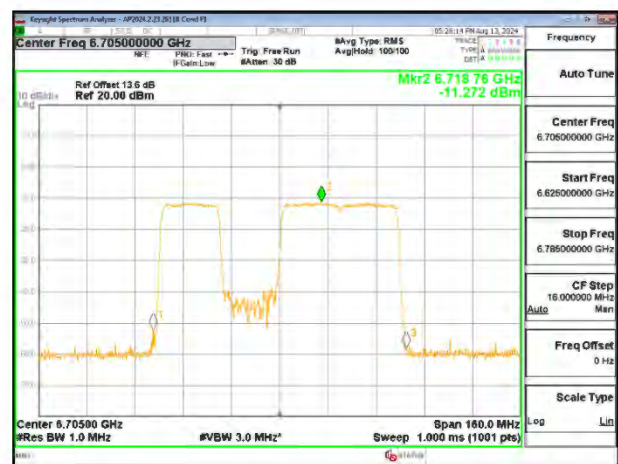
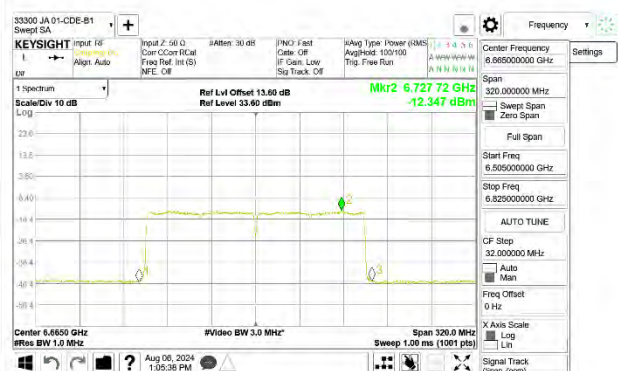
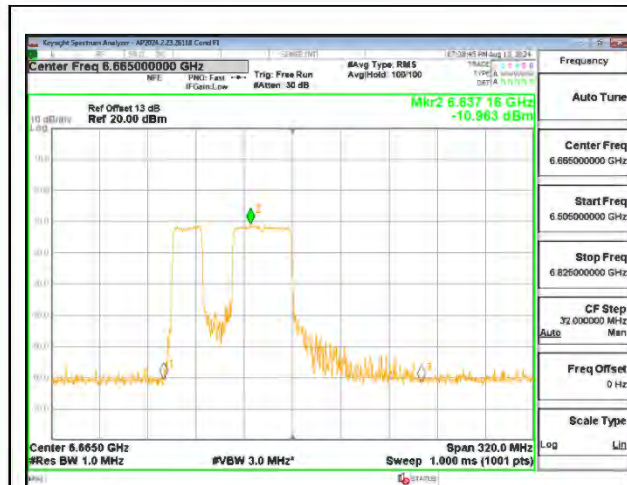
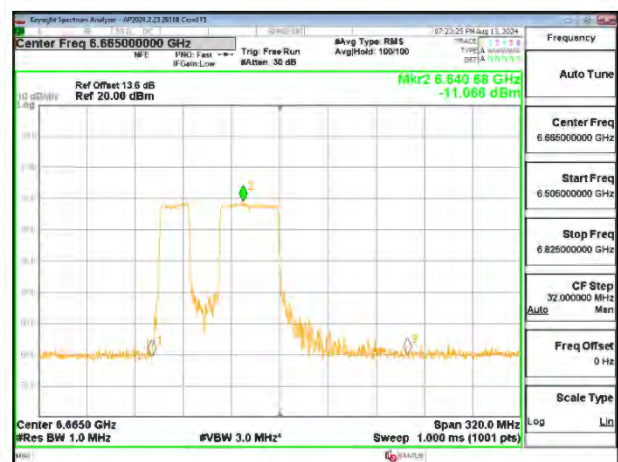
VLP CDD UNII-7 (MIMO)	Duty Factor (dB)		Un- Correlated Antenna Gain (dBi)	Correlated Antenna Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated)		EIRP MIMO Power (Limit = 14dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -5 dBm/MHz EIRP)
	SU	Partial RU							ANT 6	ANT 5		ANT 6	ANT 5	
20 MHz	0	0	-1.31	1.46	6535	117	SU	--	0.15	0.04	1.80	-11.337	-11.528	-6.961
							MRU 106+26	82	-2.15	-2.16	-0.45	-11.101	-11.083	-6.622
								83	-2.22	-2.09	-0.45	-10.890	-10.948	-6.449
					6695	149	SU	--	0.03	0.13	1.78	-11.484	-11.448	-6.996
							MRU 106+26	82	-2.10	-2.32	-0.51	-10.896	-11.351	-6.647
								83	-2.13	-2.29	-0.51	-10.790	-11.010	-6.428
					6855	181	SU	--	-0.01	0.09	1.74	-11.637	-11.436	-7.065
							MRU 106+26	82	-2.13	-2.25	-0.49	-10.819	-10.931	-6.404
								83	-2.22	-2.36	-0.59	-10.768	-10.971	-6.398
40 MHz	0	0	-1.31	1.46	6565	123	SU	--	3.03	3.00	4.72	-11.489	-11.491	-7.020
							MRU 106+26	82	-2.29	-2.33	-0.61	-11.290	-11.366	-6.858
								83	-2.10	-2.30	-0.50	-11.107	-11.240	-6.703
								85	-2.28	-2.26	-0.57	-11.159	-10.934	-6.575
					6685	147	SU	--	3.03	3.01	4.72	-11.486	-11.266	-6.904
							MRU 106+26	82	-2.30	-2.29	-0.59	-11.234	-11.344	-6.818
								83	-2.17	-2.32	-0.54	-11.158	-11.118	-6.668
								85	-2.25	-2.34	-0.59	-10.985	-11.020	-6.532
					6845	179	SU	--	3.15	3.10	4.83	-11.169	-11.242	-6.735
							MRU 106+26	82	-2.36	-2.14	-0.55	-10.860	-10.911	-6.415
								83	-2.23	-2.25	-0.54	-10.849	-10.864	-6.386
								85	-2.30	-2.22	-0.56	-10.940	-10.915	-6.457
80 MHz	0	0	-1.31	1.46	6625	135	SU	--	6.13	6.15	7.84	-11.520	-11.769	-7.172
							MRU 484+242	91	4.70	4.70	6.40	-11.161	-11.455	-6.835
								92	4.71	4.69	6.40	-11.284	-11.364	-6.854
								93	4.86	4.83	6.55	-11.342	-11.036	-6.716
					6705	151	SU	--	6.03	6.11	7.77	-11.761	-11.749	-7.285
							MRU 484+242	91	4.82	4.67	6.45	-11.310	-11.272	-6.821
								92	4.73	4.76	6.45	-11.042	-11.136	-6.618
								93	4.76	4.90	6.53	-11.068	-11.026	-6.577
					6785	167	SU	--	6.11	6.12	7.82	-11.583	-11.428	-7.035
							MRU 484+242	91	4.79	4.76	6.48	-11.155	-11.288	-6.751
								92	4.90	4.82	6.56	-10.907	-11.106	-6.535
								93	4.83	4.96	6.60	-11.136	-11.203	-6.699
160 MHz	0.1	0	-1.31	1.46	6665	143	SU	--	8.40	8.36	10.08	-12.528	-12.347	-7.866
							MRU 484+242	91	4.86	4.78	6.52	-10.963	-11.066	-6.544
								92	4.84	4.90	6.57	-11.212	-11.093	-6.682
								S92	4.82	4.70	6.46	-11.253	-11.375	-6.843

Note:

EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (ANT 6 + ANT 5) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (ANT 6 + ANT 5) + Duty Factor (dB) + Correlated Antenna Gain (dBi)



80 MHz - Mid Channel – MRU 484+242, Index 91
(UNII-5) – ANT 680 MHz - Mid Channel – MRU 484+242, Index 91
(UNII-5) – ANT 5160 MHz - Mid Channel – SU
(UNII-5) – ANT 6160 MHz - Mid Channel – SU
(UNII-5) – ANT 5160 MHz - Mid Channel – MRU 484+242, Index 91
(UNII-5) – ANT 6160 MHz - Mid Channel – MRU 484+242, Index 91
(UNII-5) – ANT 5

9.3.6. 802.11be MIMO SDM MODE IN THE UNII-7 BAND

VLP SDM UNII-7 (MIMO)	Duty Factor (dB)		Un- Correlated Antenna Gain (dBi)	Correlated Antenna Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated)		EIRP MIMO Power (Limit = 14dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -5 dBm/MHz EIRP)
	SU	Partial RU							ANT 6	ANT 5		ANT 6	ANT 5	
20 MHz	0.12	0	-1.31	1.46	6535	117	SU	—	2.90	2.85	4.58	-8.753	-8.535	-6.822
							MRU 106+26	82	0.62	0.56	2.29	-8.593	-8.496	-6.844
								83	0.65	0.56	2.31	-8.236	-8.463	-6.648
					6695	149	SU	—	2.75	2.76	4.46	-8.708	-8.576	-6.821
							MRU 106+26	82	0.57	0.65	2.31	-8.335	-8.188	-6.561
								83	0.45	0.61	2.23	-8.288	-8.137	-6.512
					6855	181	SU	—	2.91	2.92	4.62	-8.426	-8.587	-6.685
							MRU 106+26	82	0.59	0.42	2.21	-8.363	-8.397	-6.680
								83	0.63	0.40	2.22	-8.107	-8.306	-6.505
40 MHz	0.12	0	-1.31	1.46	6565	123	SU	—	5.72	5.65	7.39	-8.788	-8.755	-6.951
							MRU 106+26	82	0.55	0.62	2.29	-8.516	-8.473	-6.794
								83	0.52	0.65	2.29	-8.257	-8.057	-6.456
								85	0.42	0.61	2.22	-8.655	-8.263	-6.754
					6685	147	SU	—	5.85	5.90	7.58	-8.392	-8.480	-6.615
							MRU 106+26	82	0.55	0.59	2.27	-8.415	-8.544	-6.779
								83	0.42	0.61	2.22	-8.396	-8.484	-6.739
								85	0.68	0.64	2.36	-8.212	-8.392	-6.601
					6845	179	SU	—	5.67	5.71	7.39	-8.490	-8.598	-6.723
							MRU 106+26	82	0.45	0.64	2.25	-8.447	-8.322	-6.684
								83	0.58	0.48	2.23	-8.214	-8.159	-6.486
								85	0.45	0.39	2.12	-8.244	-8.437	-6.639
80 MHz	0.14	0	-1.31	1.46	6625	135	SU	—	8.90	8.81	10.56	-8.683	-8.442	-6.721
							MRU 484+242	91	7.46	7.65	9.26	-8.510	-8.103	-6.601
								92	7.55	7.46	9.21	-8.387	-8.336	-6.661
								93	7.65	7.42	9.24	-8.531	-8.515	-6.823
					6705	151	SU	—	8.90	8.77	10.54	-8.670	-8.687	-6.838
							MRU 484+242	91	7.56	7.63	9.30	-8.237	-8.455	-6.644
								92	7.58	7.50	9.24	-8.356	-8.456	-6.705
								93	7.64	7.61	9.33	-8.144	-8.463	-6.600
					6785	167	SU	—	8.71	8.73	10.42	-8.657	-8.804	-6.890
							MRU 484+242	91	7.44	7.67	9.26	-8.298	-8.421	-6.659
								92	7.46	7.62	9.24	-8.477	-8.289	-6.682
								93	7.53	7.56	9.25	-8.163	-8.169	-6.466
160 MHz	0.18	0	-1.31	1.46	6665	143	SU	—	11.15	11.13	12.84	-9.268	-9.427	-7.466
							MRU 484+242	91	7.47	7.52	9.20	-8.542	-8.313	-6.726
								92	7.49	7.43	9.16	-8.401	-8.239	-6.619
								S92	7.65	7.58	9.32	-8.553	-8.518	-6.835

Note:

EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (ANT 6 + ANT 5) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (ANT 6 + ANT 5) + Duty Factor (dB) + Un- Correlated Antenna Gain (dBi)

9.4. VLP SPURIOUS EMISSIONS IN-BAND– EMISSION MASK

LIMITS

FCC §15.407

(b)(7) For transmitters operating within the 5.925-7.125 GHz bands: power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

TEST PROCEDURE

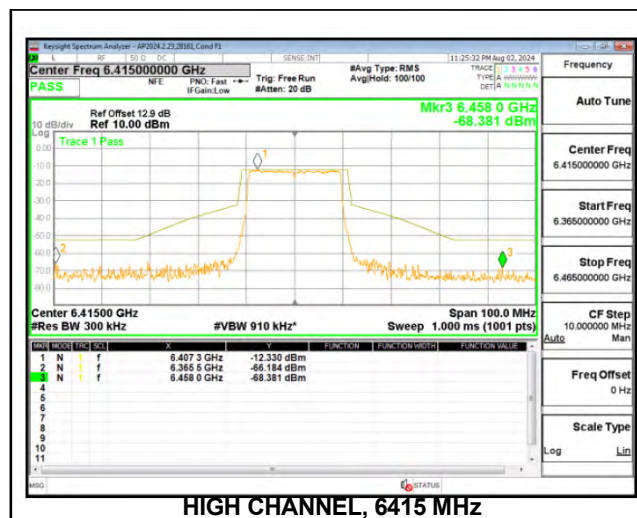
Follow KDB 987594 D02 v01r01, Section II-J, RBW & VBW settings were based on 26dB bandwidth test settings. Only Partial RU for all bandwidths, the RBW & VBW settings were used equal or greater than 26dB bandwidth test settings.

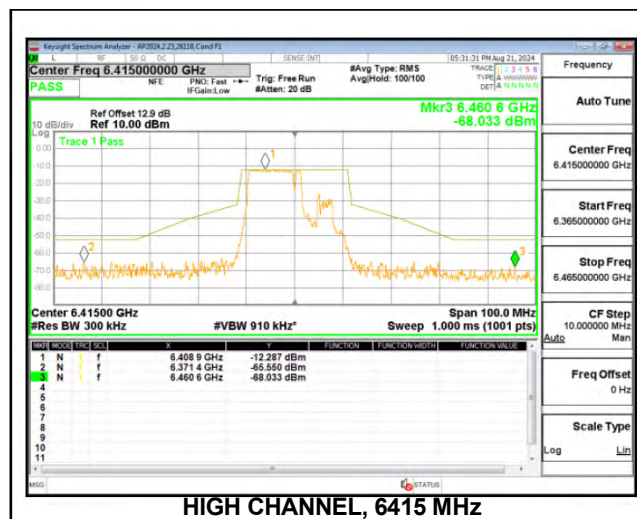
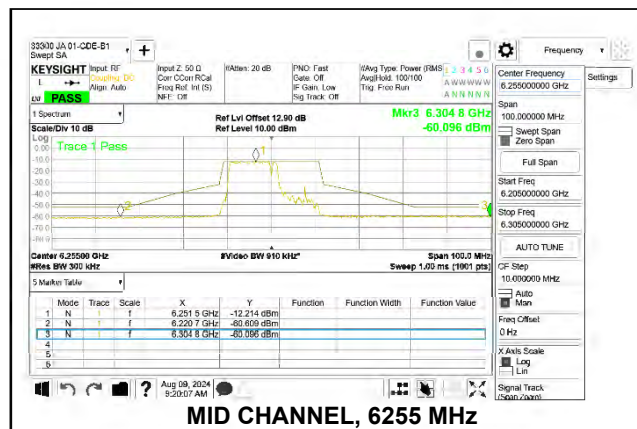
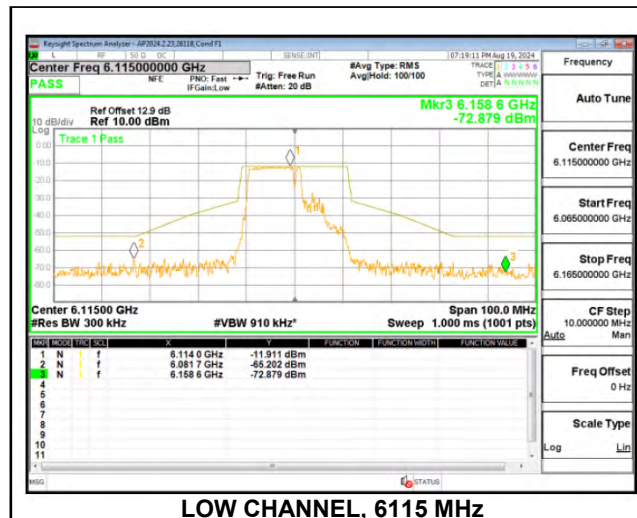
Band	Tones	20 MHz	40 MHz	80 MHz	160 MHz
UNII-5	Partial RU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	1MHz/3MHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-7	Partial RU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	1MHz/3MHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz

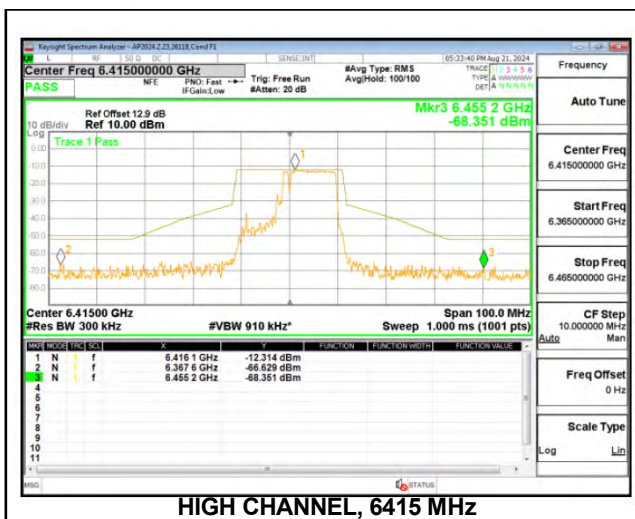
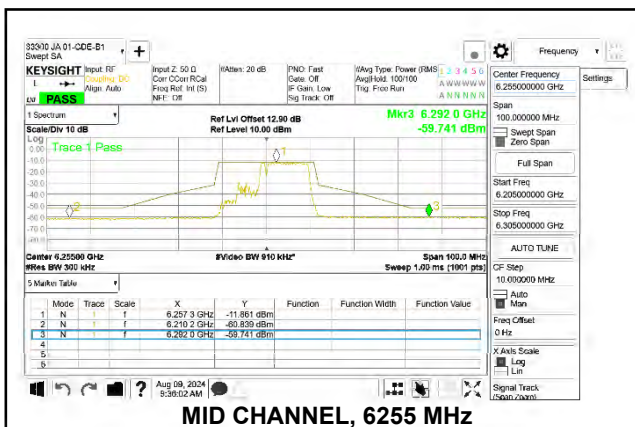
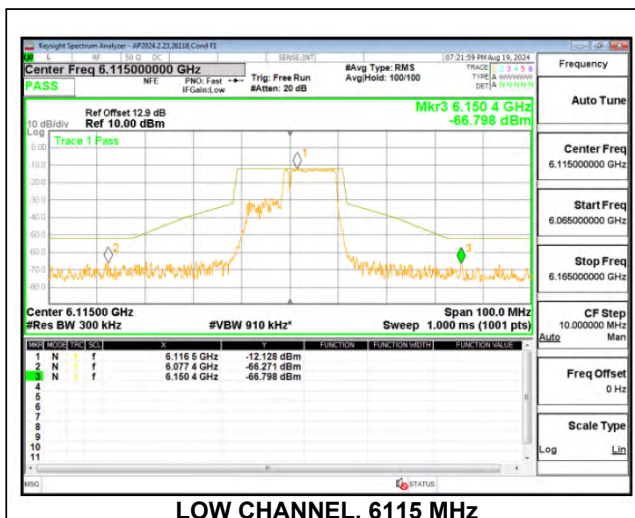
RESULTS

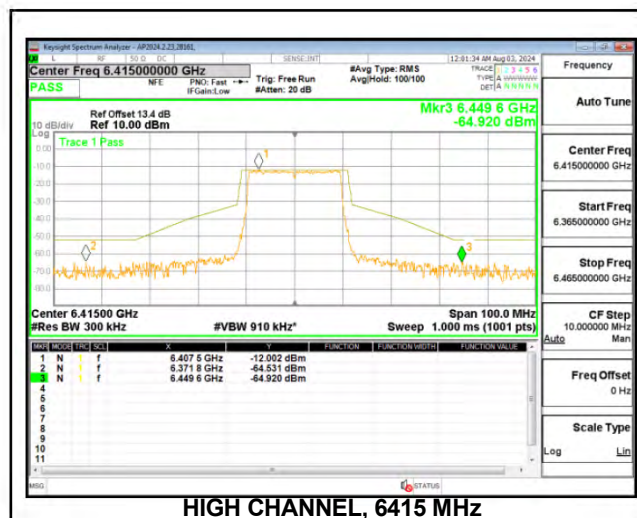
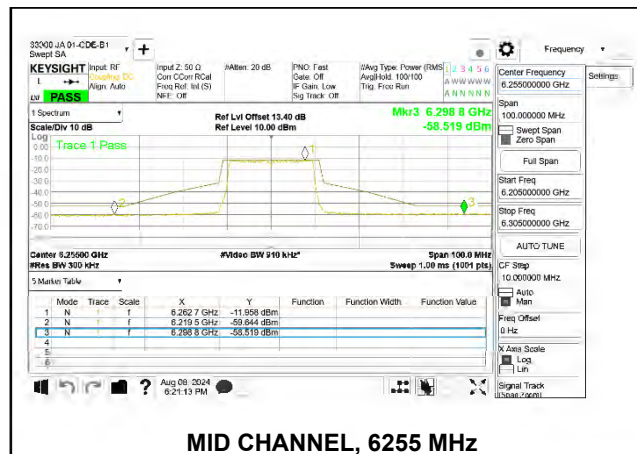
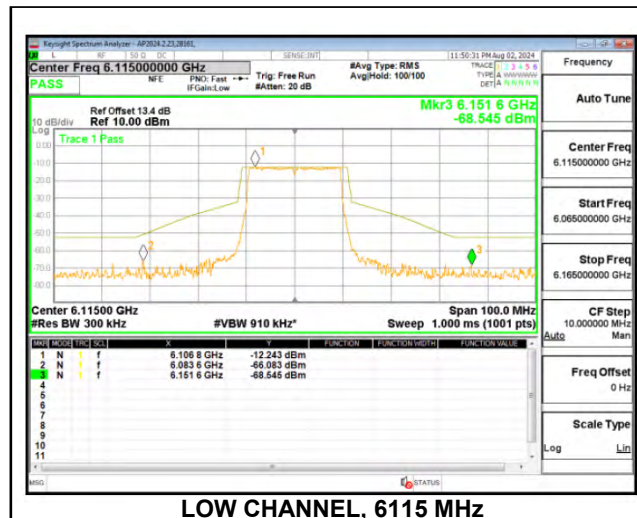
For mask and bandwidth measurements partial RU allocations are tested with the RUs allocated at the lower and upper positions within the channel for the low mid and high channels in each band. Additionally, the center channel is also tested with the RU allocated in the center of the channel to verify that the low / high RU allocations are worst case.

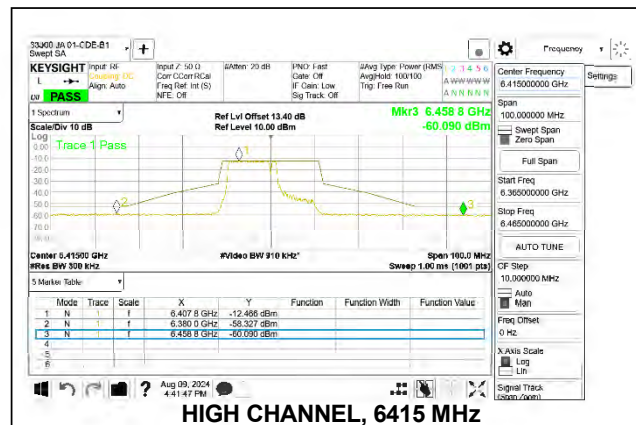
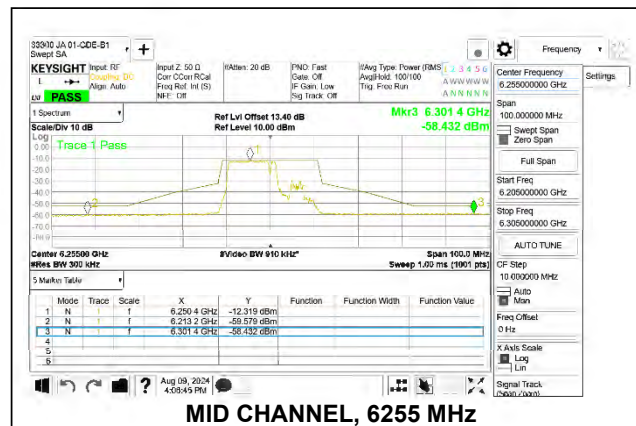
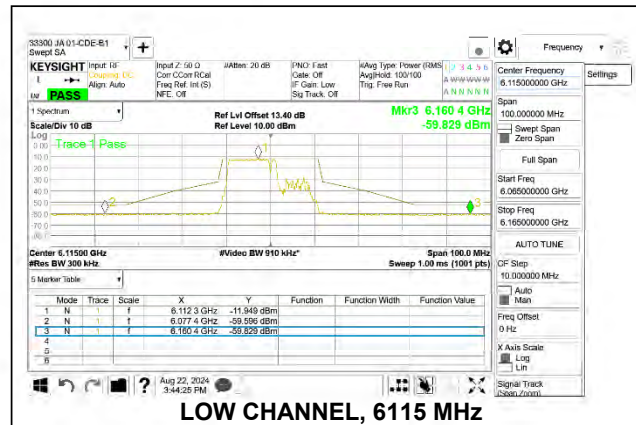
1TX Antenna 6 MODE – SU

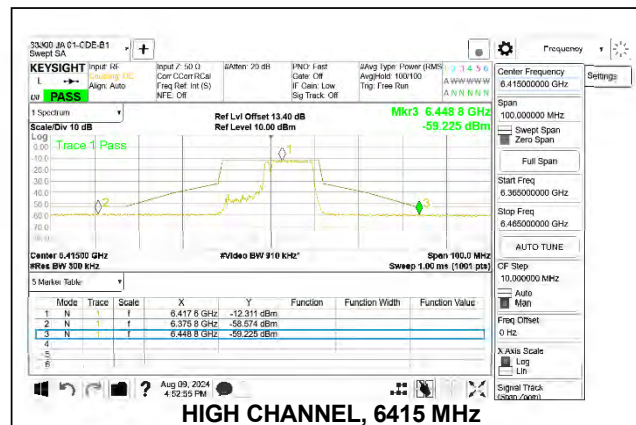
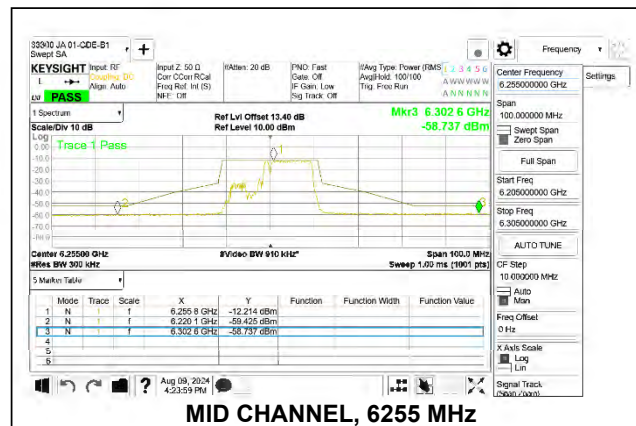
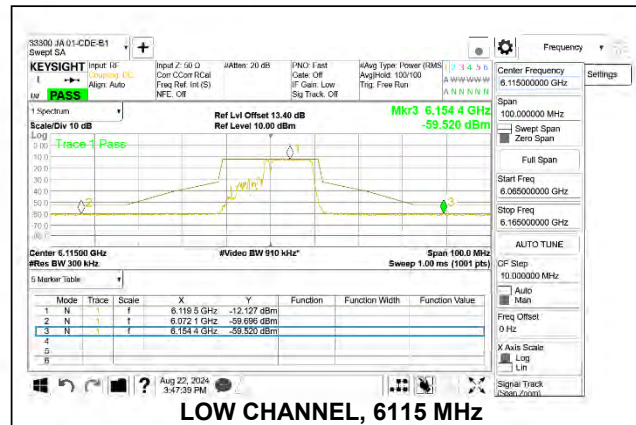


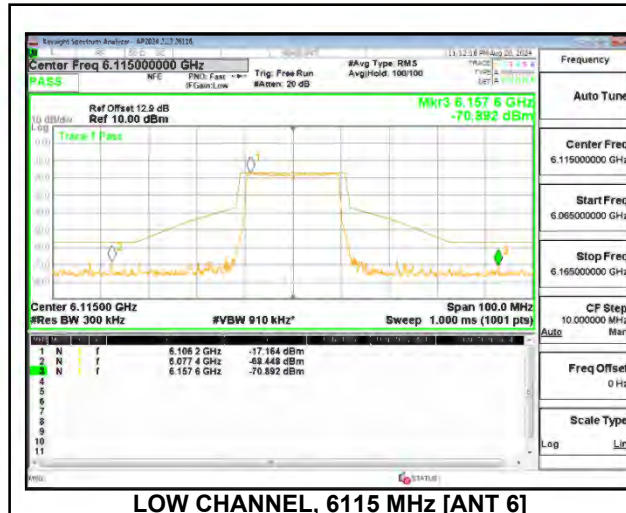
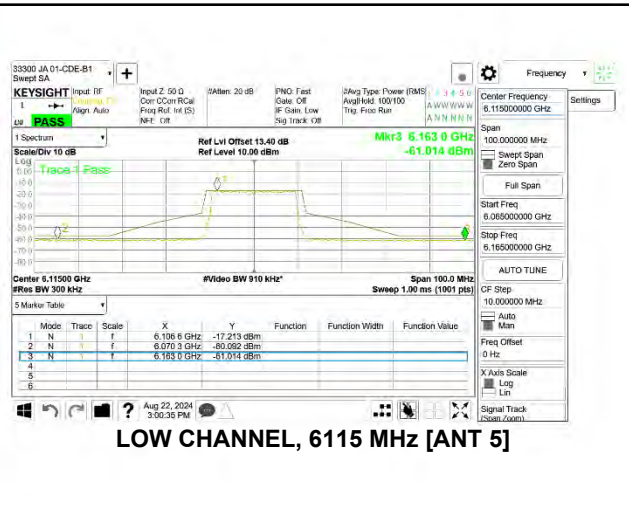
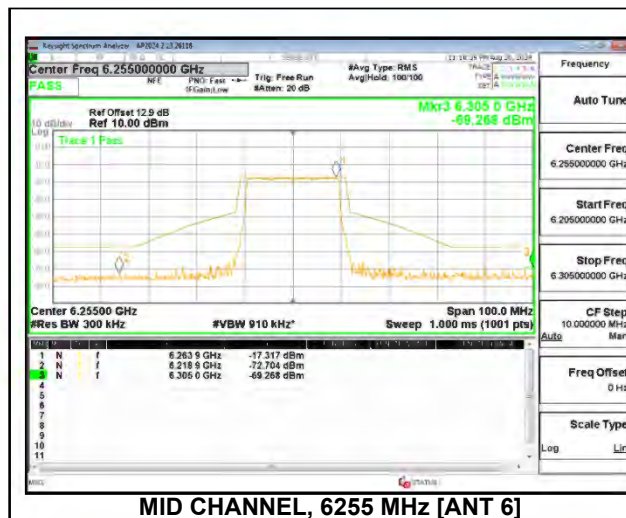
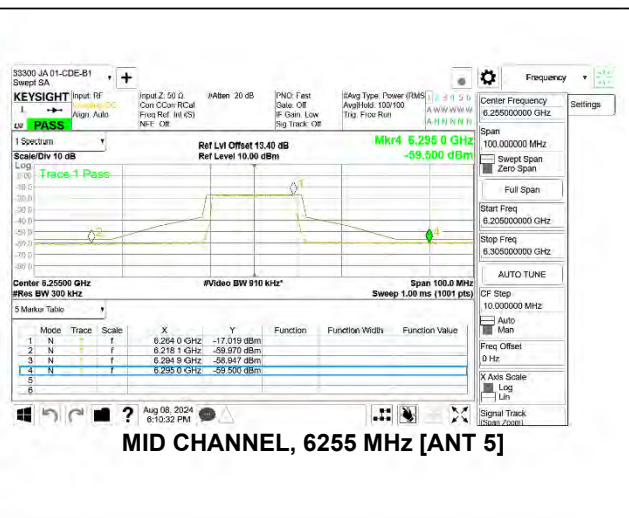
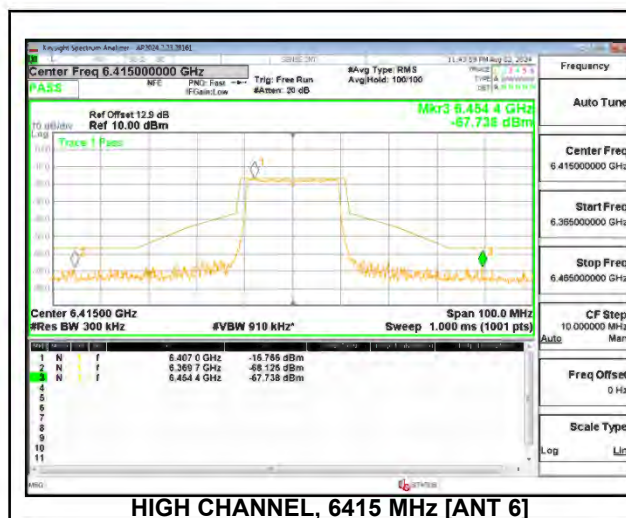
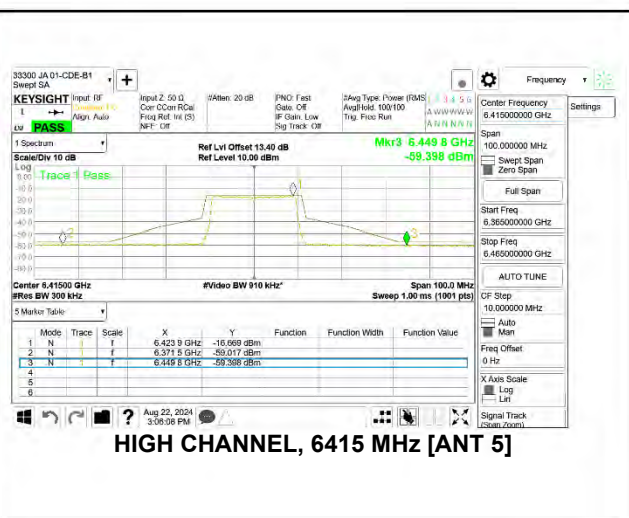
1TX Antenna 6 MODE – MRU 106+26, Index 82

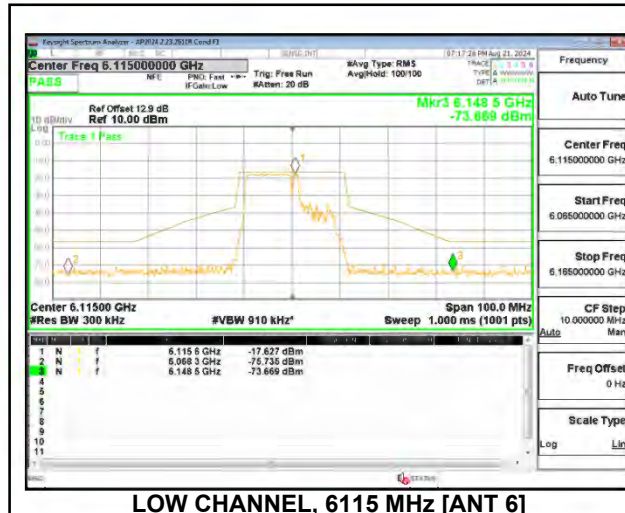
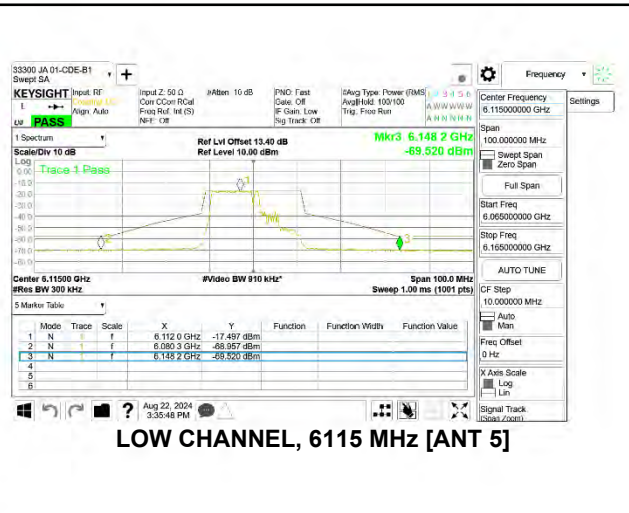
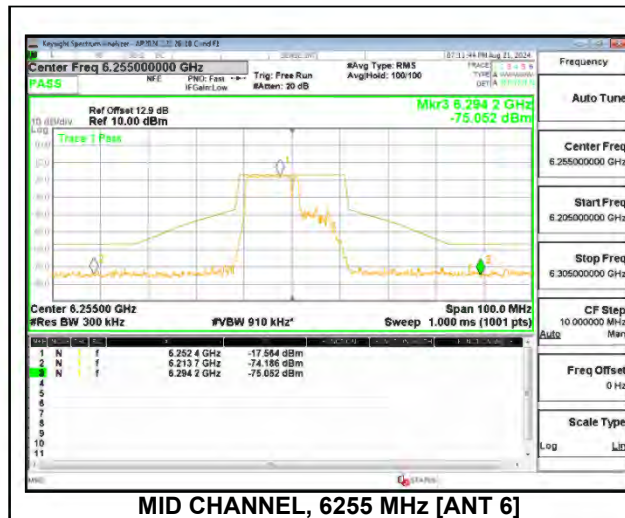
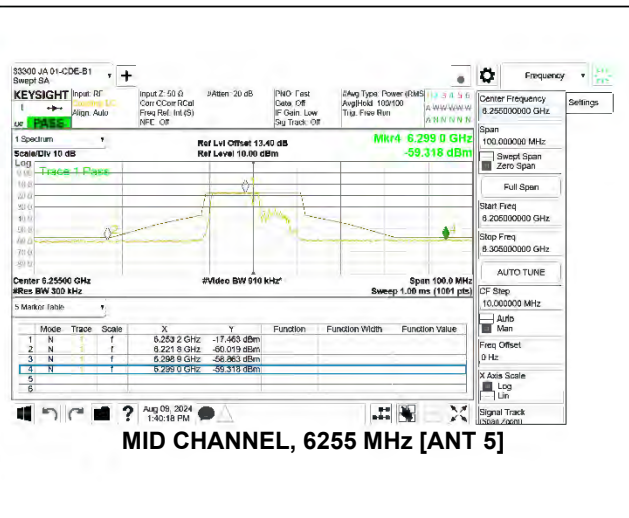
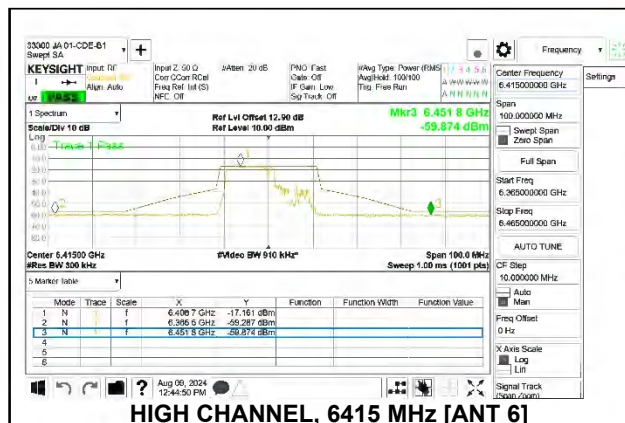
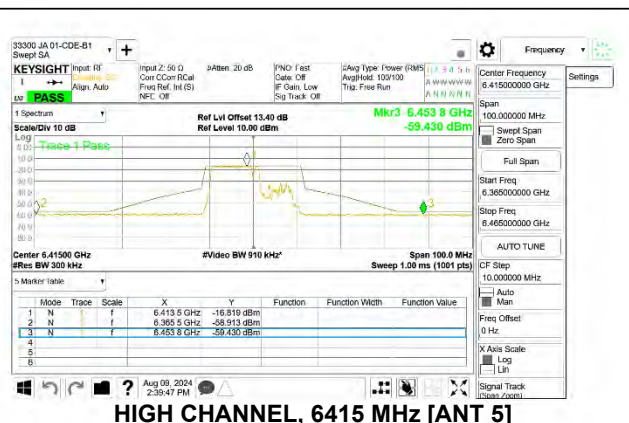
1TX Antenna 6 MODE – MRU 106+26, Index 83

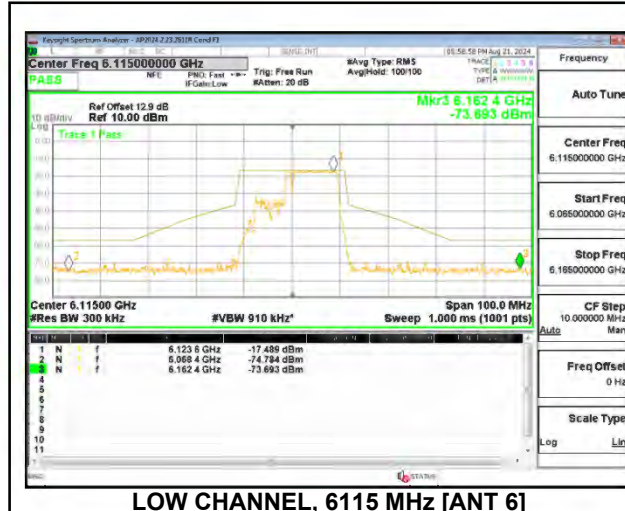
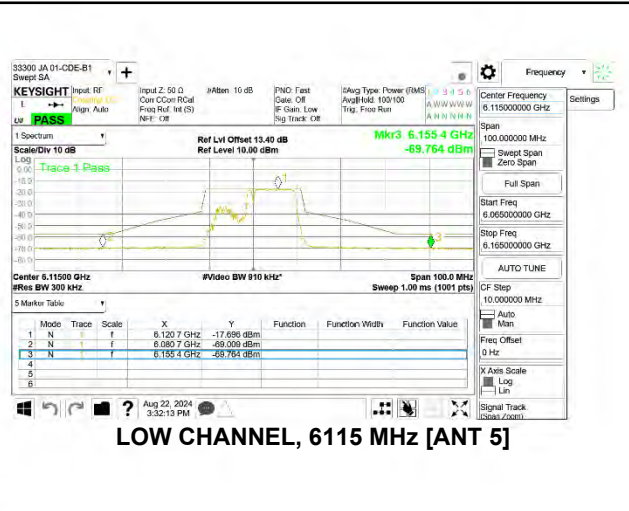
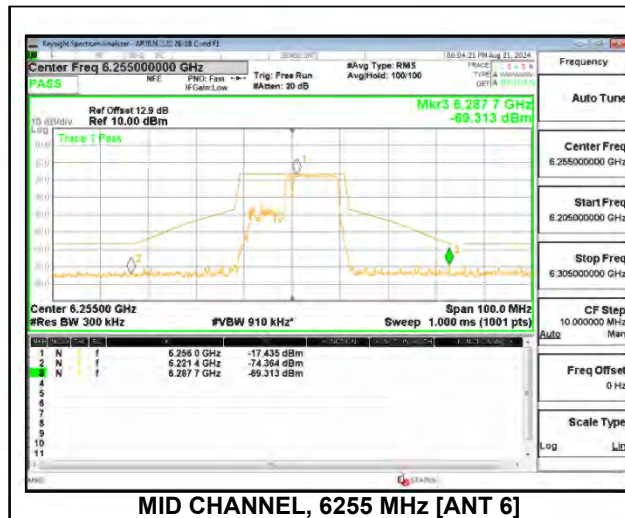
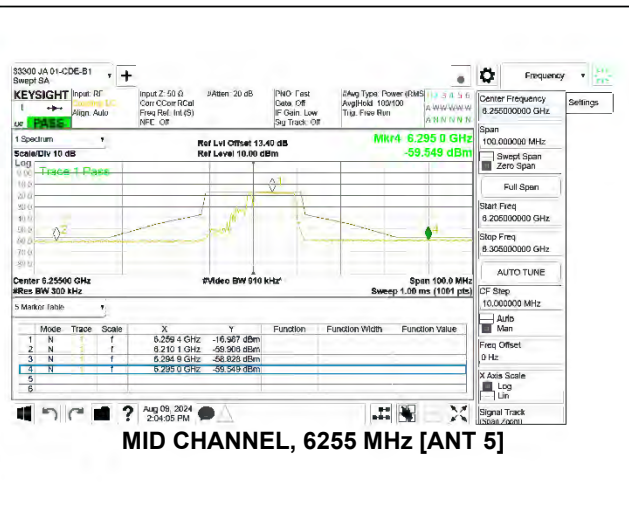
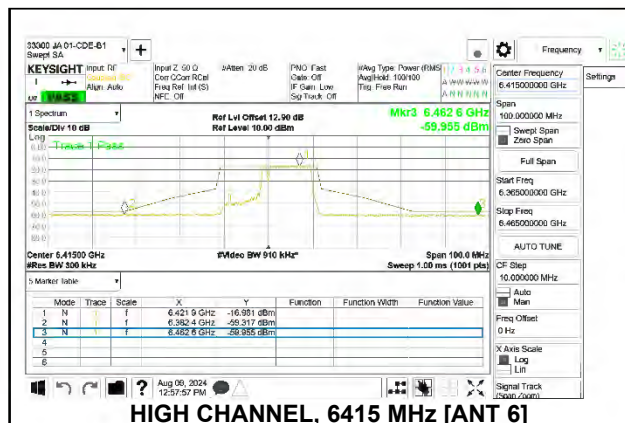
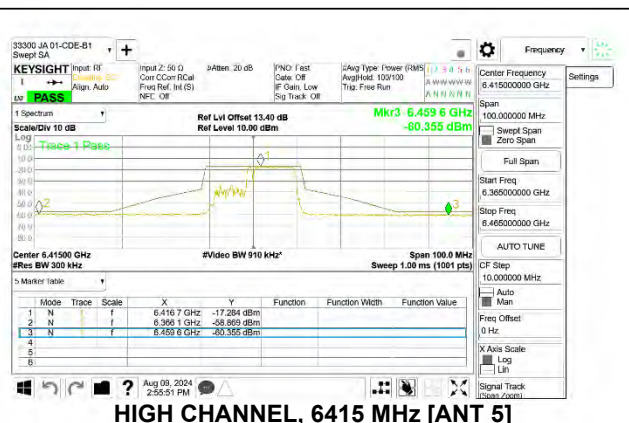
1TX Antenna 5 MODE – SU

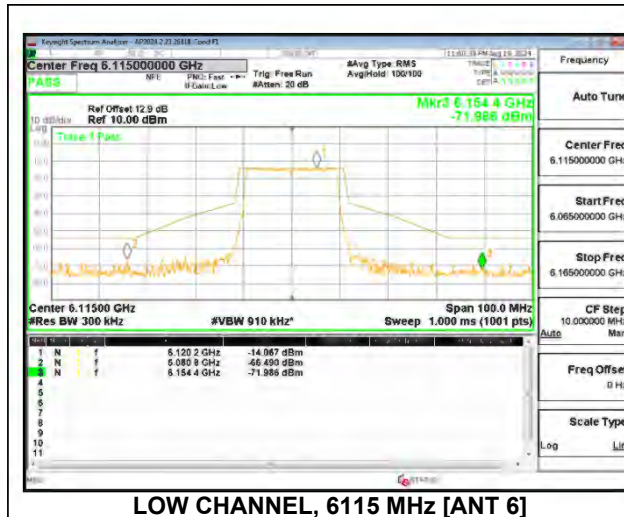
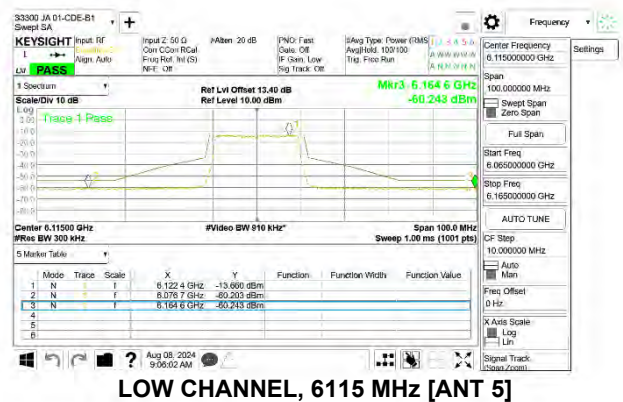
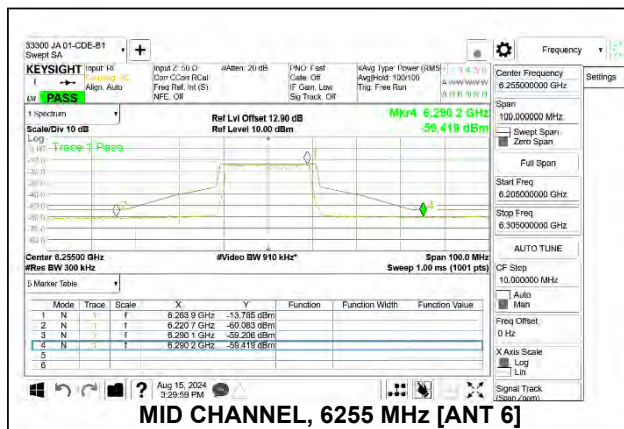
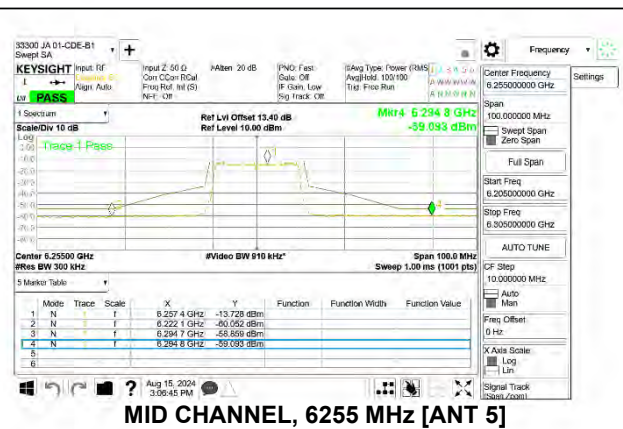
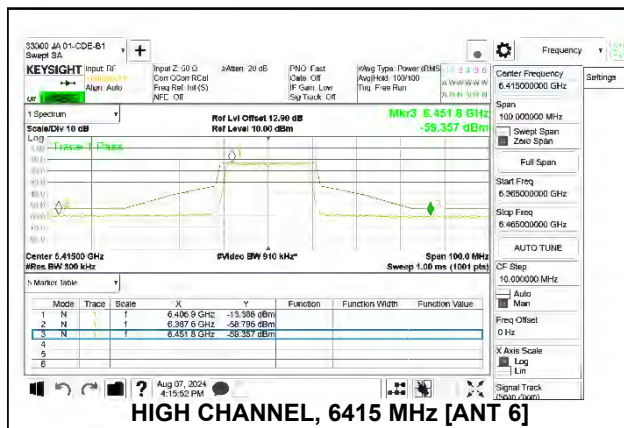
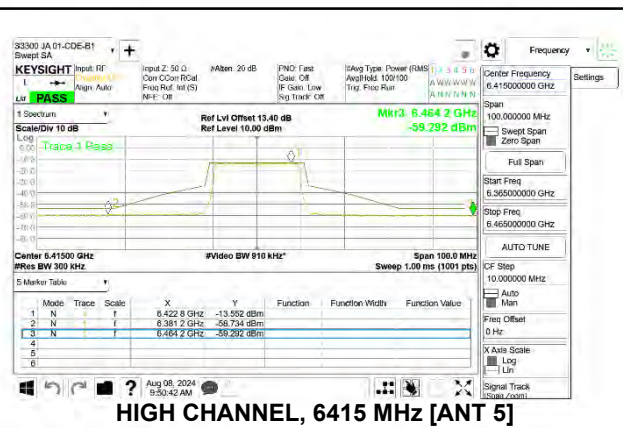
1TX Antenna 5 MODE – MRU 106+26, Index 82

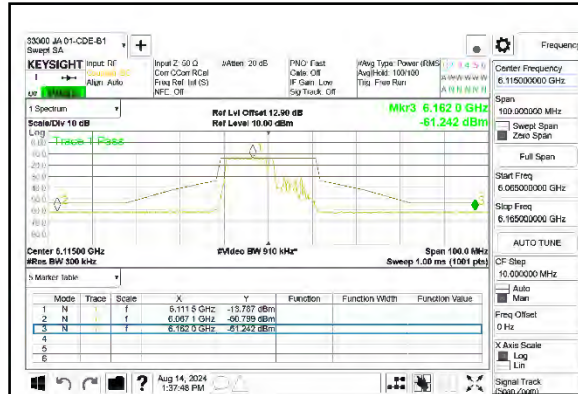
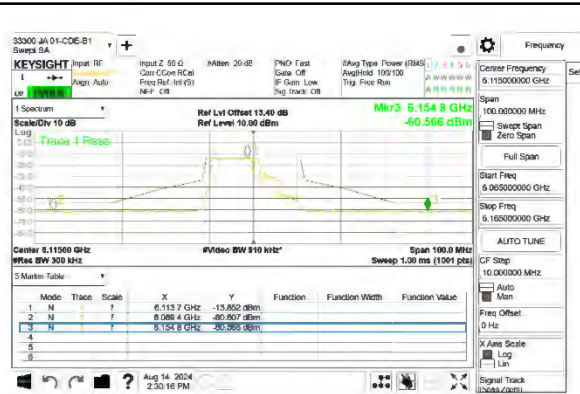
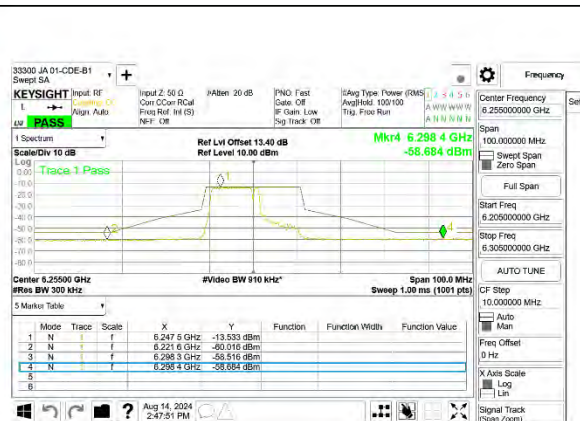
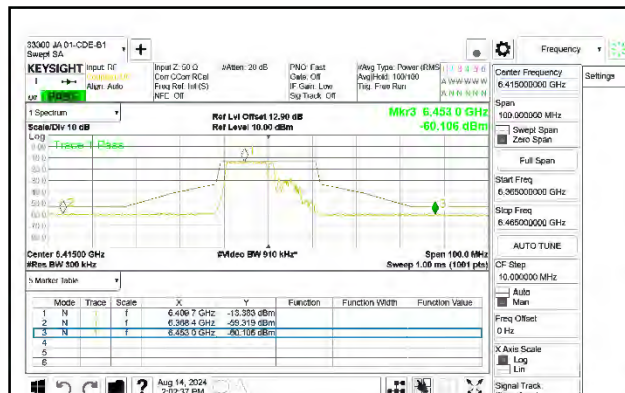
1TX Antenna 5 MODE – MRU 106+26, Index 83

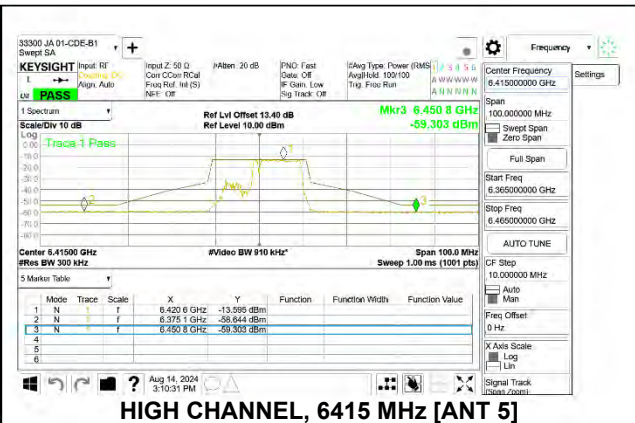
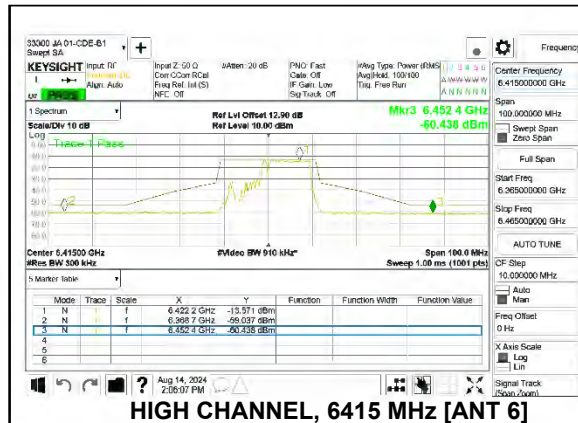
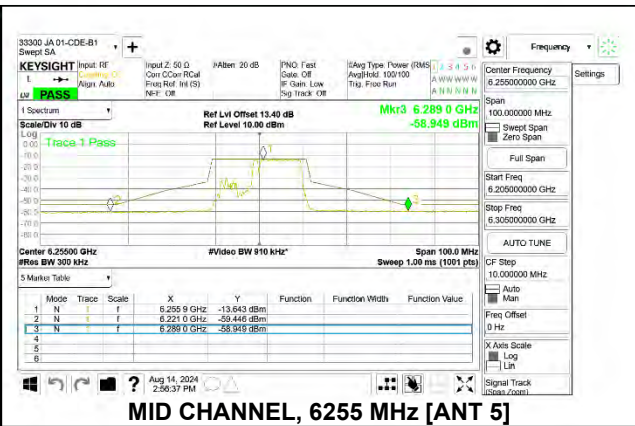
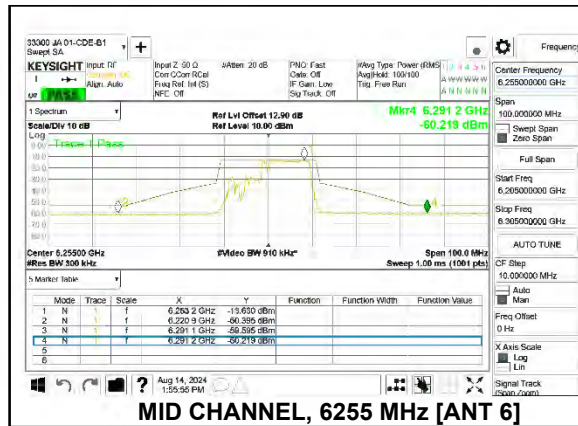
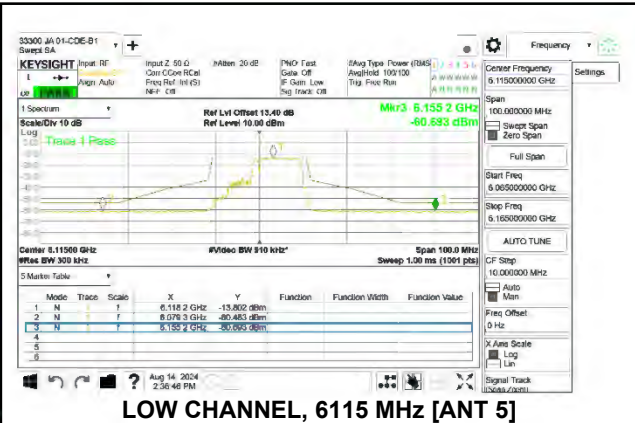
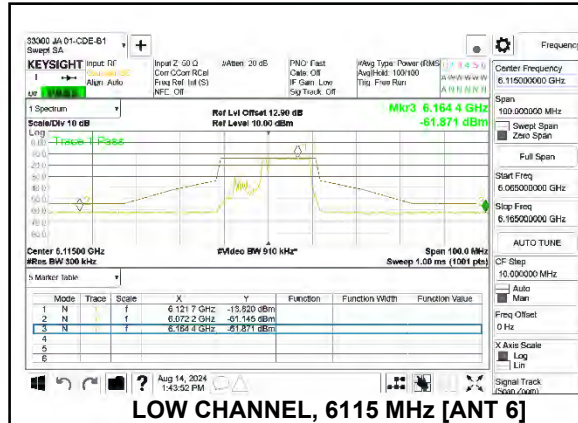
2TX Antenna 6 + Antenna 5 CDD MODE – SU**LOW CHANNEL, 6115 MHz [ANT 6]****LOW CHANNEL, 6115 MHz [ANT 5]****MID CHANNEL, 6255 MHz [ANT 6]****MID CHANNEL, 6255 MHz [ANT 5]****HIGH CHANNEL, 6415 MHz [ANT 6]****HIGH CHANNEL, 6415 MHz [ANT 5]**

2TX Antenna 6 + Antenna 5 CDD MODE – MRU 106+26, Index 82**LOW CHANNEL, 6115 MHz [ANT 6]****LOW CHANNEL, 6115 MHz [ANT 5]****MID CHANNEL, 6255 MHz [ANT 6]****MID CHANNEL, 6255 MHz [ANT 5]****HIGH CHANNEL, 6415 MHz [ANT 6]****HIGH CHANNEL, 6415 MHz [ANT 5]**

2TX Antenna 6 + Antenna 5 CDD MODE – MRU 106+26, Index 83**LOW CHANNEL, 6115 MHz [ANT 6]****LOW CHANNEL, 6115 MHz [ANT 5]****MID CHANNEL, 6255 MHz [ANT 6]****MID CHANNEL, 6255 MHz [ANT 5]****HIGH CHANNEL, 6415 MHz [ANT 6]****HIGH CHANNEL, 6415 MHz [ANT 5]**

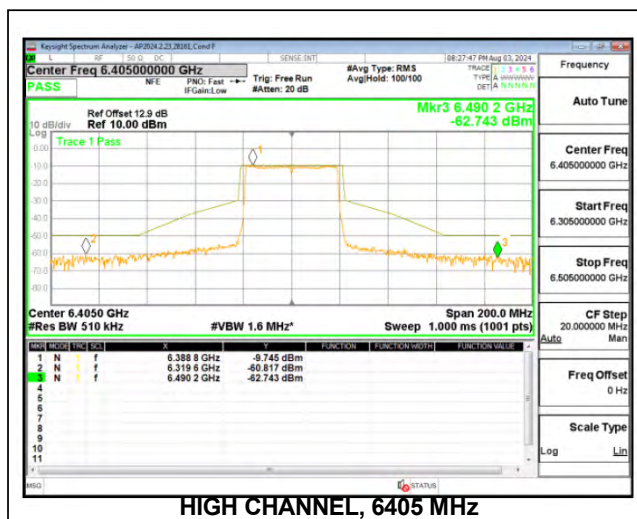
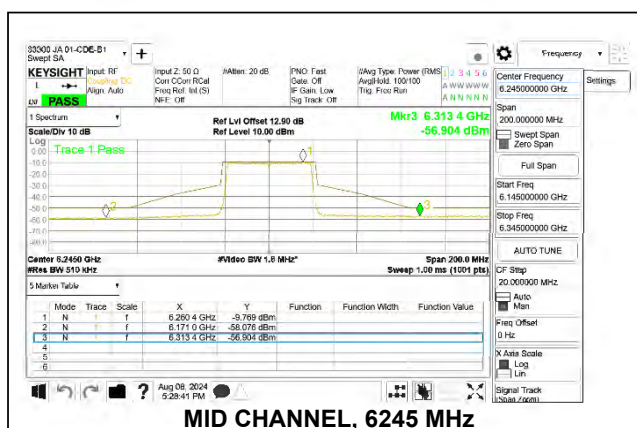
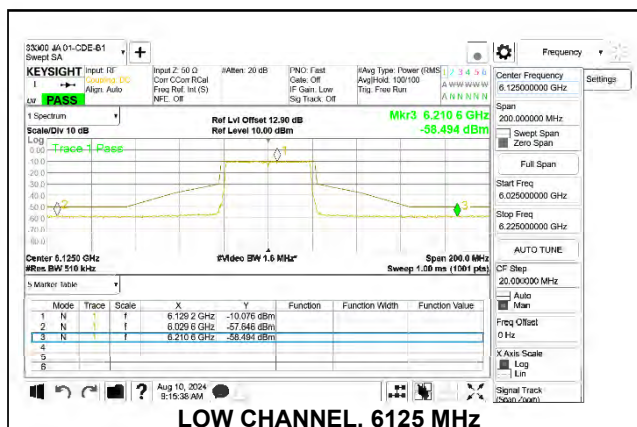
2TX Antenna 6 + Antenna 5 SDM MODE – SU**LOW CHANNEL, 6115 MHz [ANT 6]****LOW CHANNEL, 6115 MHz [ANT 5]****MID CHANNEL, 6255 MHz [ANT 6]****MID CHANNEL, 6255 MHz [ANT 5]****HIGH CHANNEL, 6415 MHz [ANT 6]****HIGH CHANNEL, 6415 MHz [ANT 5]**

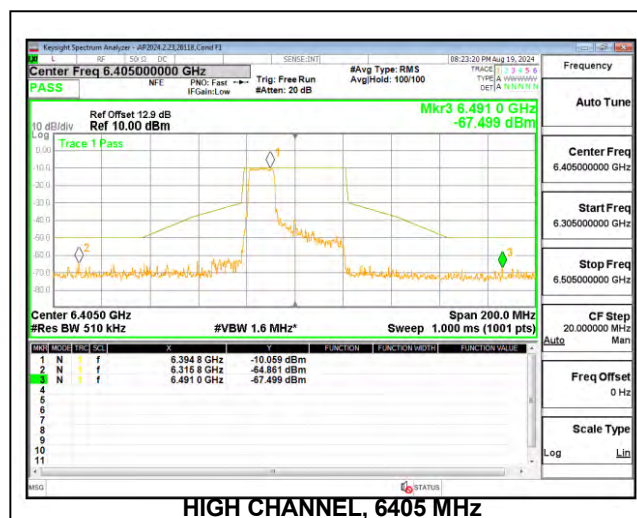
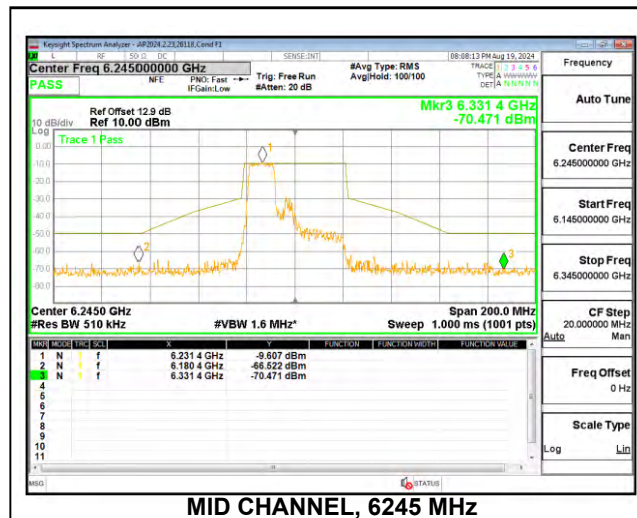
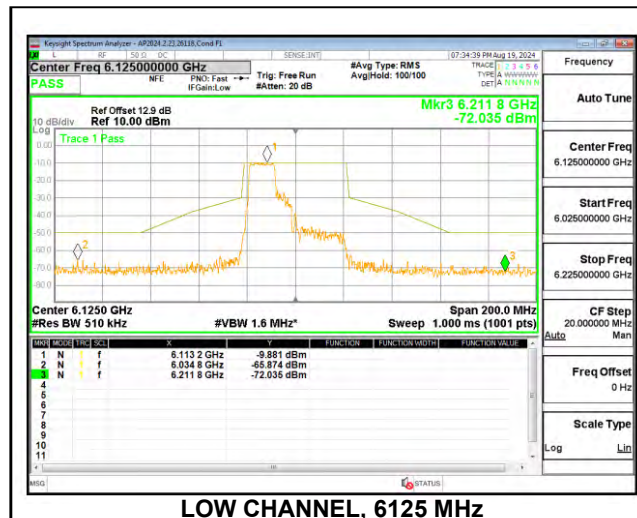
2TX Antenna 6 + Antenna 5 SDM MODE – MRU 106+26, Index 82**LOW CHANNEL, 6115 MHz [ANT 6]****LOW CHANNEL, 6115 MHz [ANT 5]****MID CHANNEL, 6255 MHz [ANT 6]****MID CHANNEL, 6255 MHz [ANT 5]****HIGH CHANNEL, 6415 MHz [ANT 6]****HIGH CHANNEL, 6415 MHz [ANT 5]**

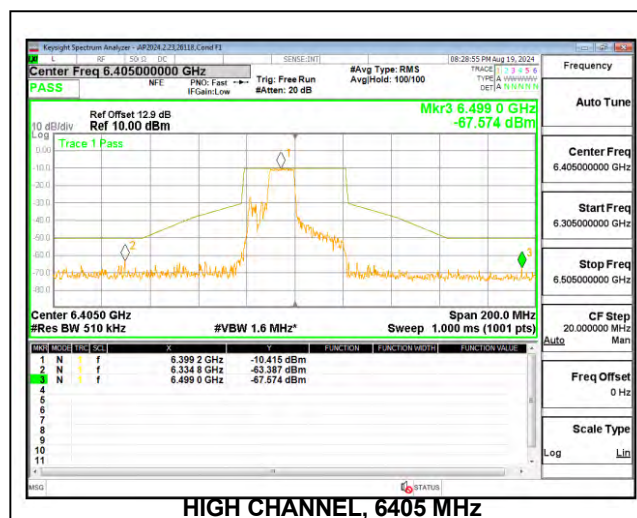
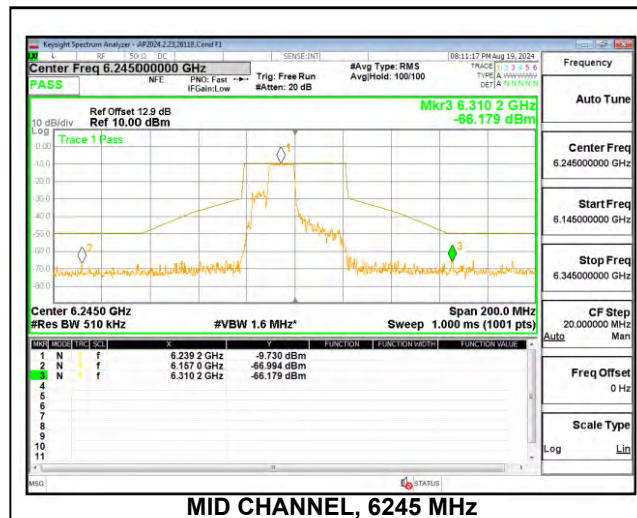
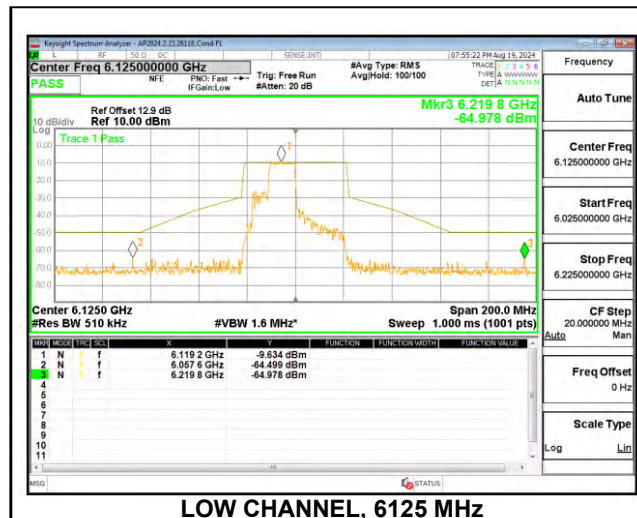
2TX Antenna 6 + Antenna 5 SDM MODE – MRU 106+26, Index 83

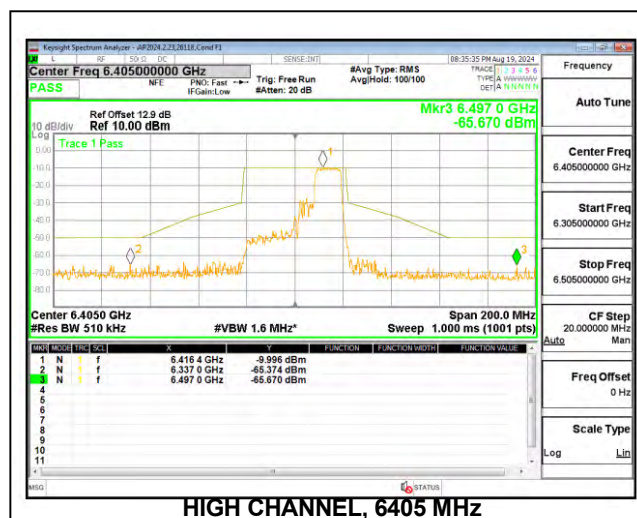
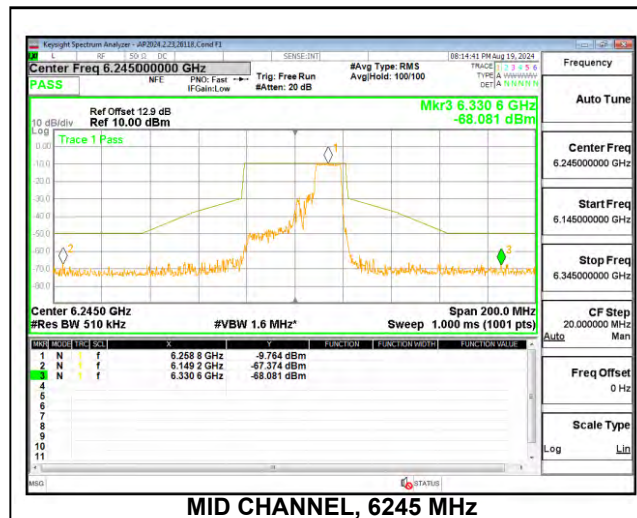
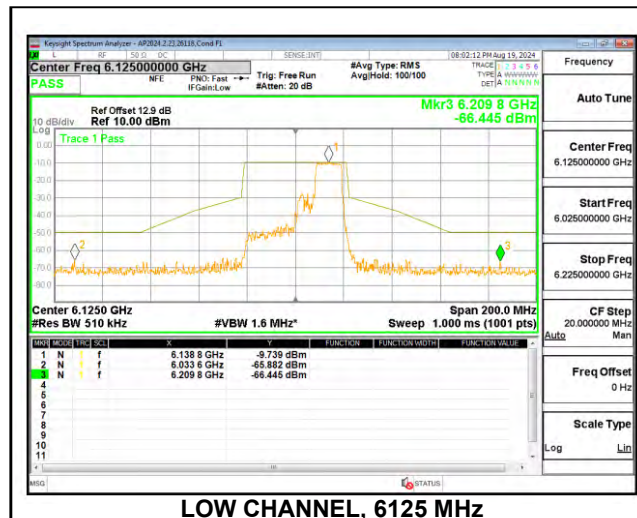
9.4.2. 802.11be EHT40 MODE IN THE UNII-5 BAND

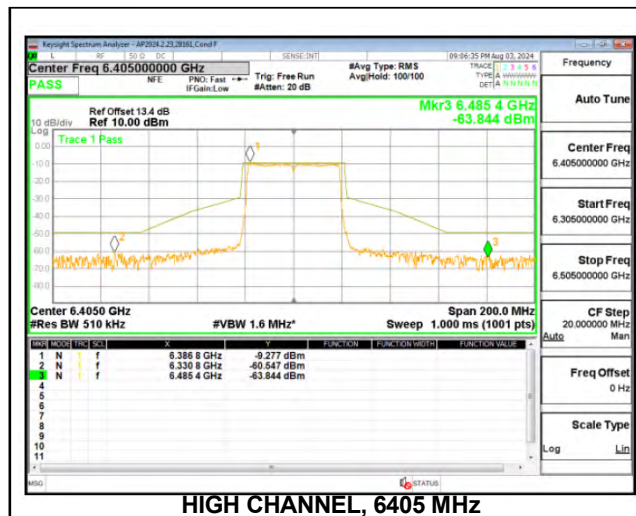
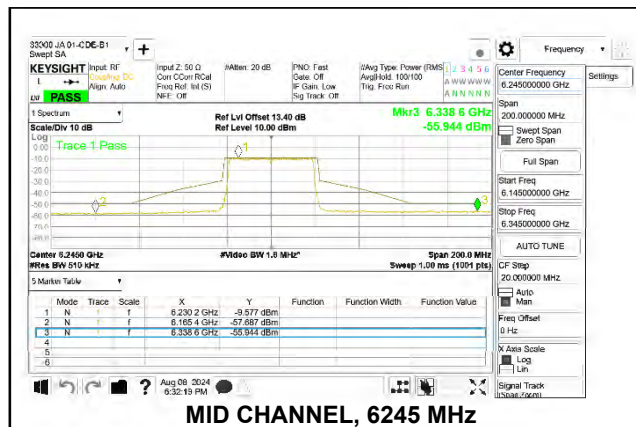
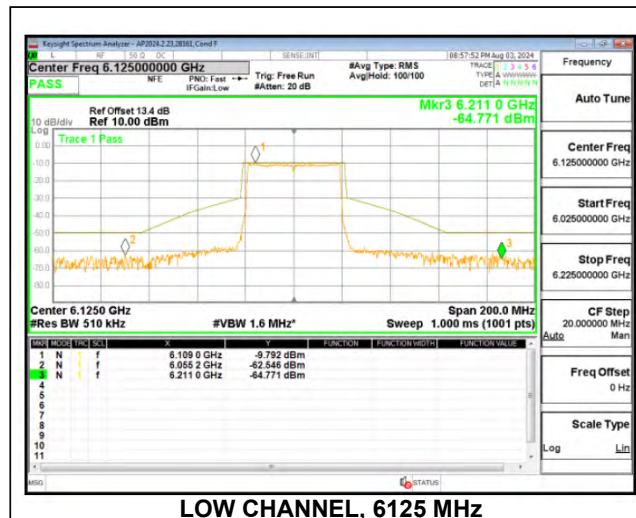
1TX Antenna 6 MODE – SU

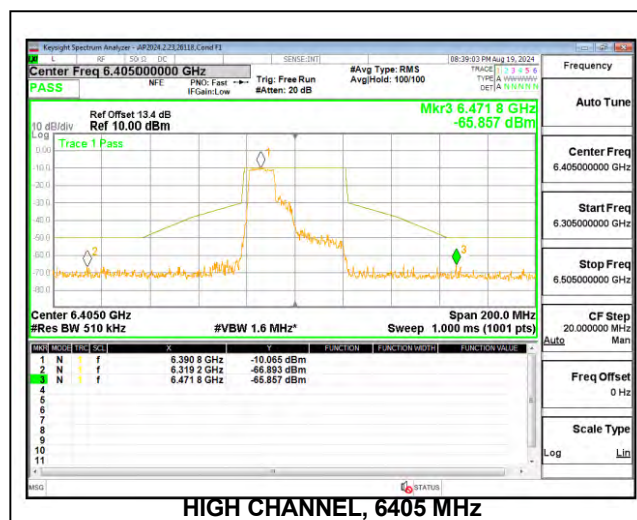
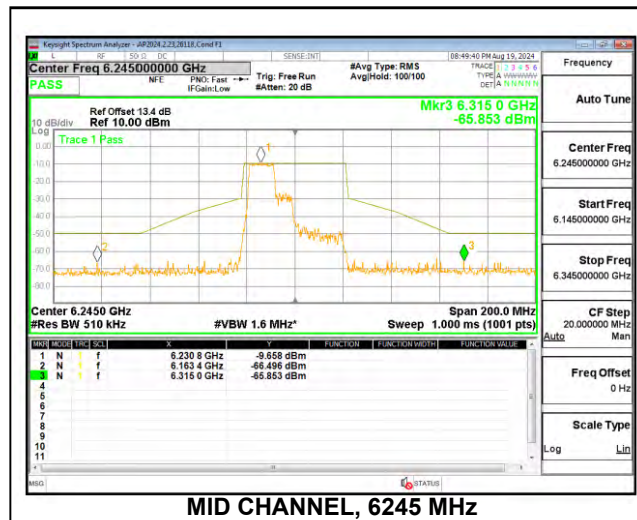
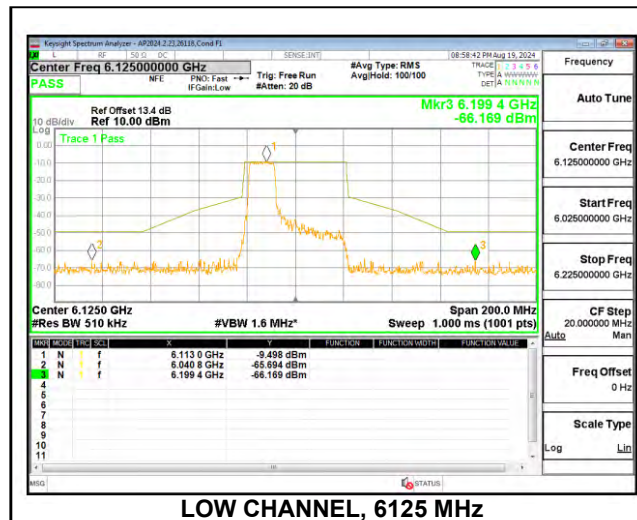


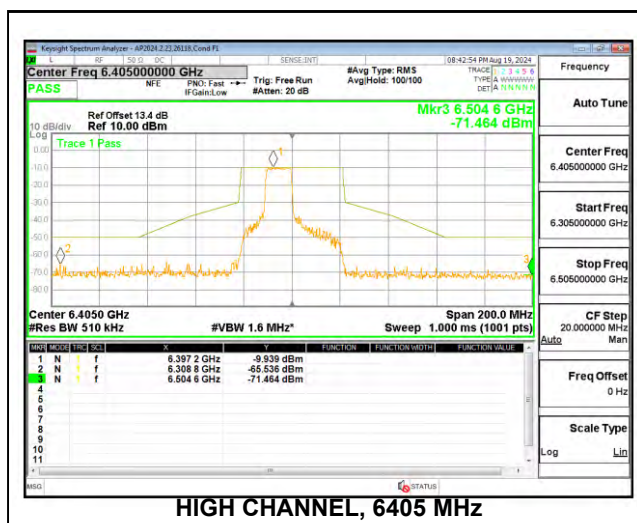
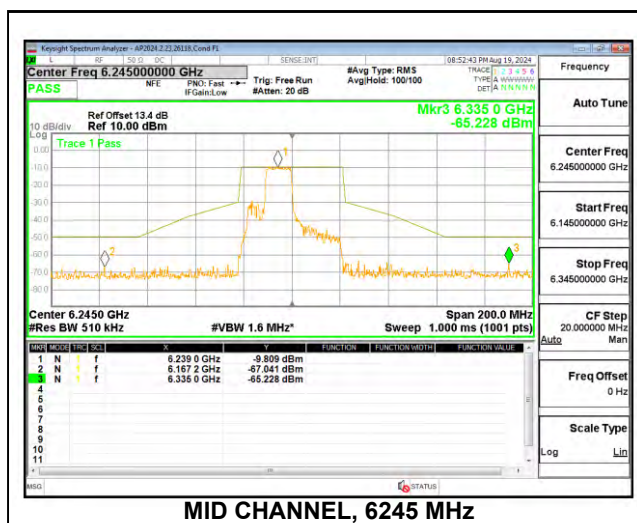
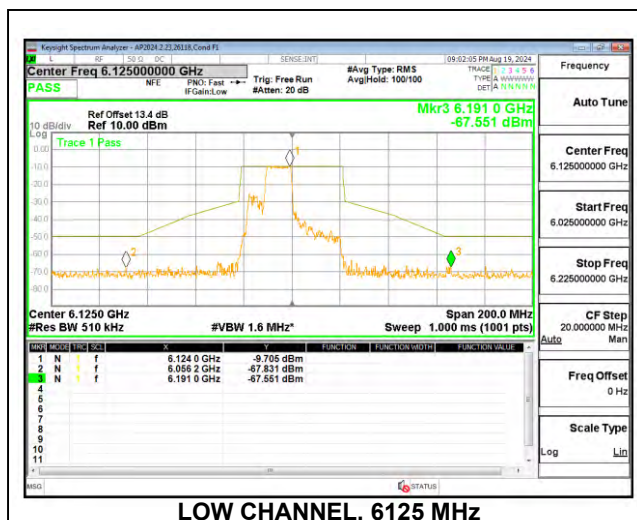
1TX Antenna 6 MODE – MRU 106+26, Index 82

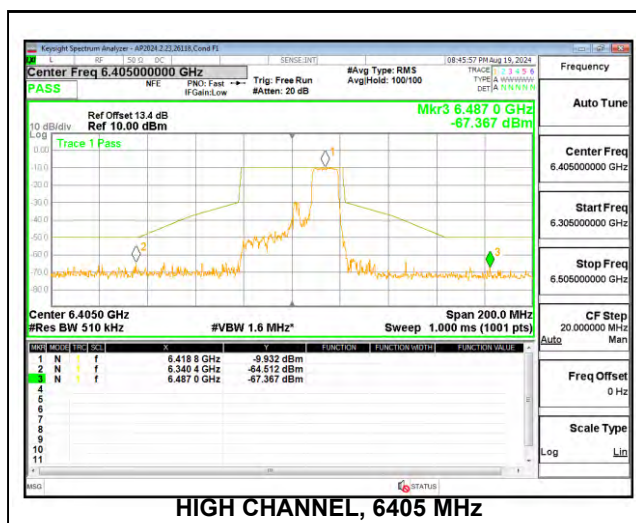
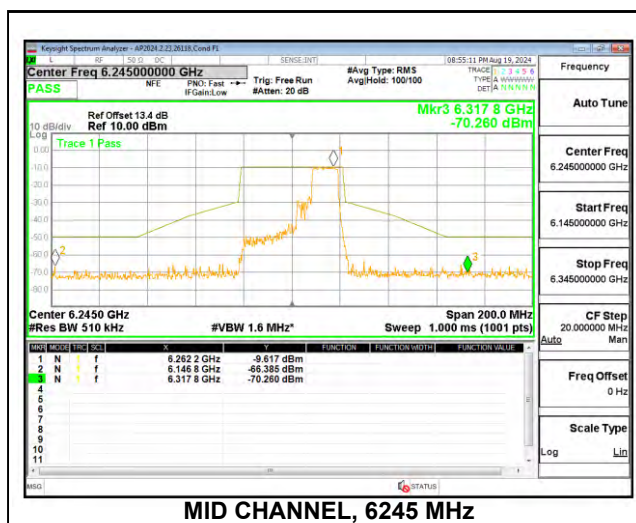
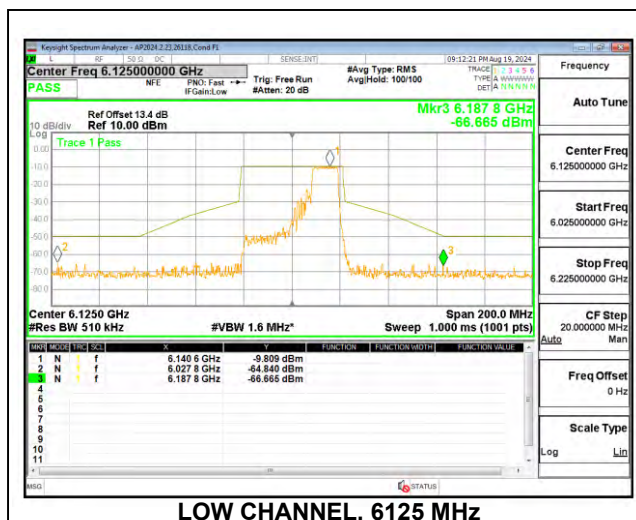
1TX Antenna 6 MODE – MRU 106+26, Index 83

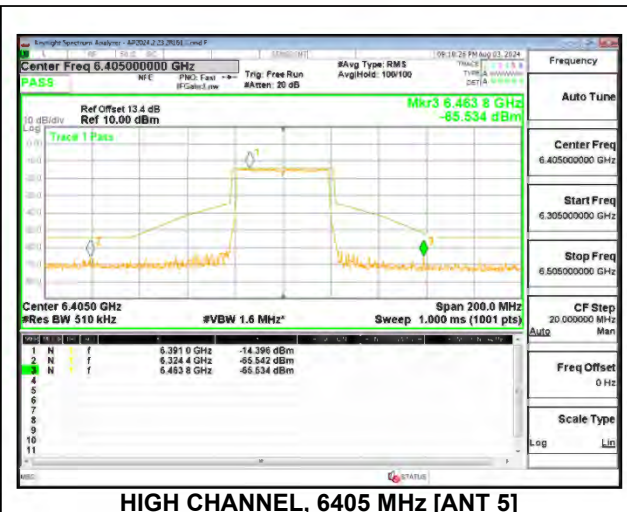
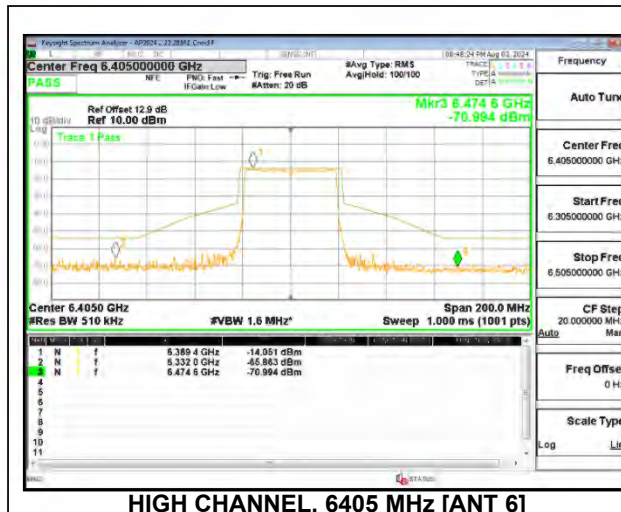
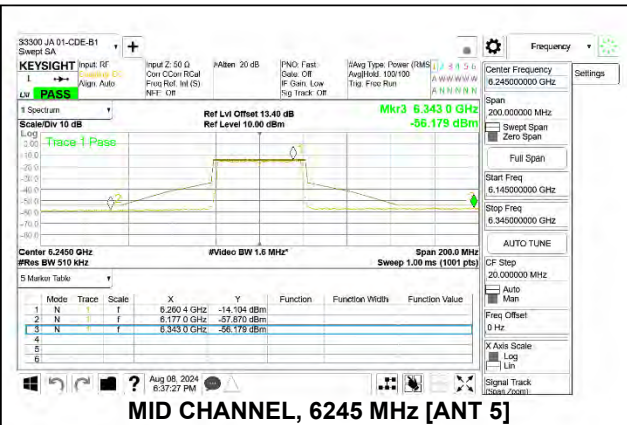
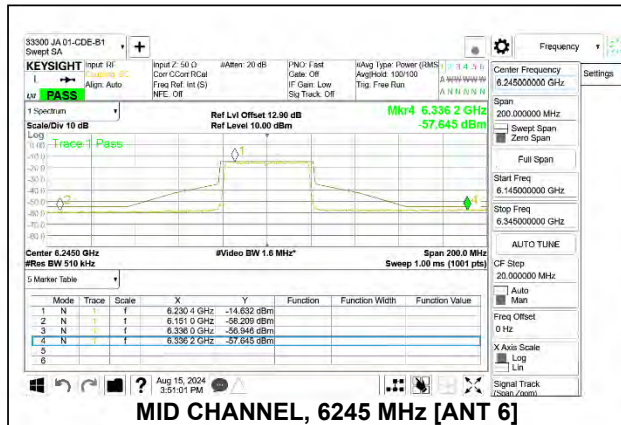
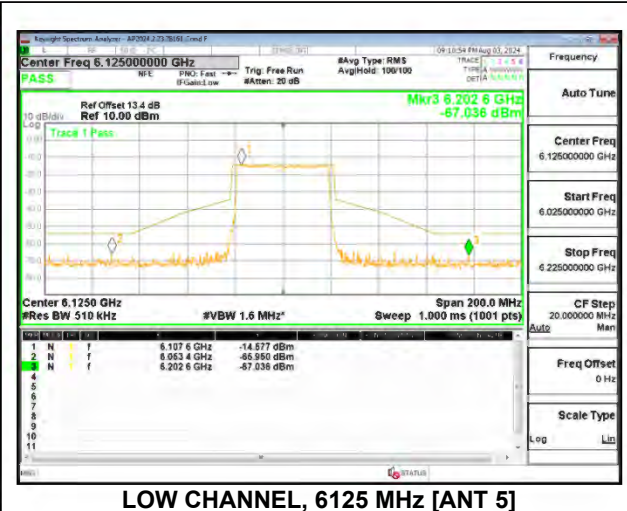
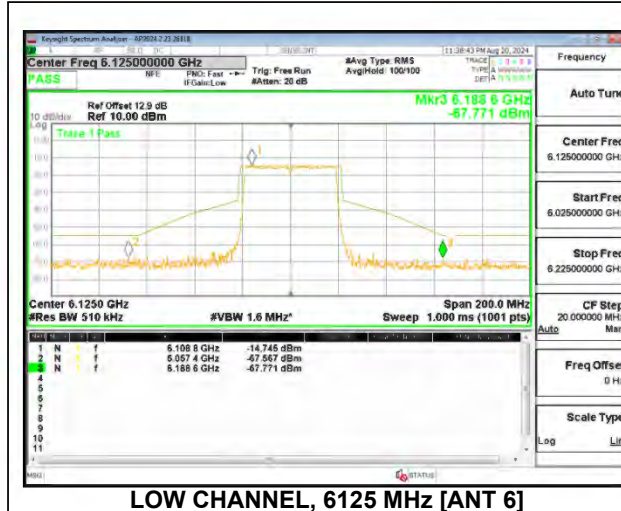
1TX Antenna 6 MODE – MRU 106+26, Index 85

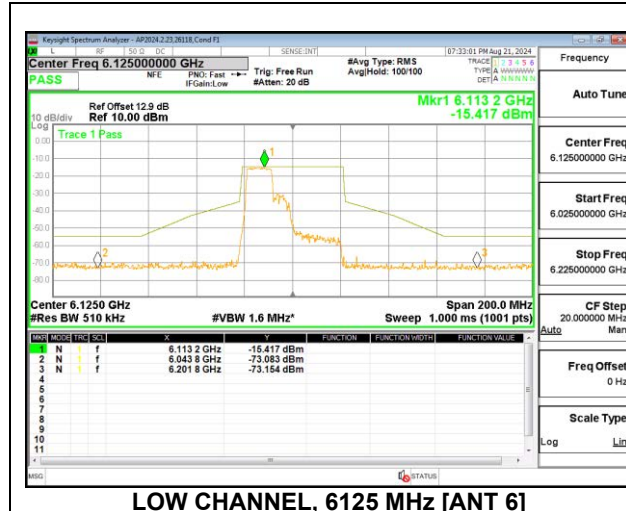
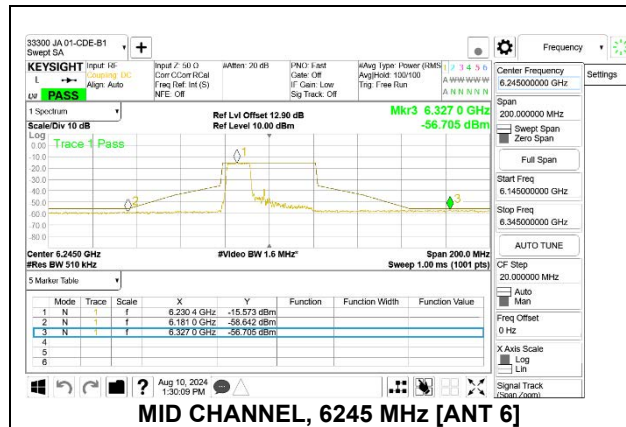
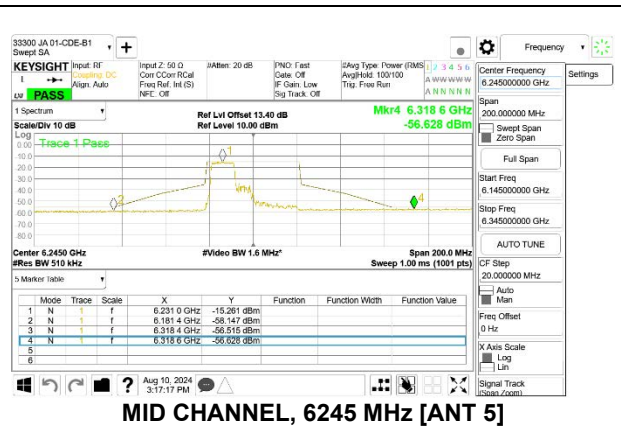
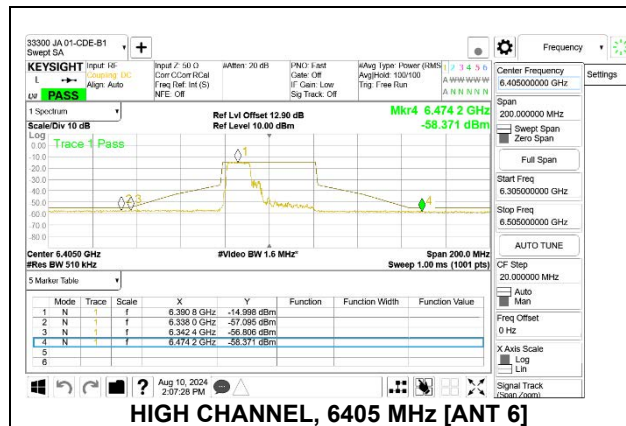
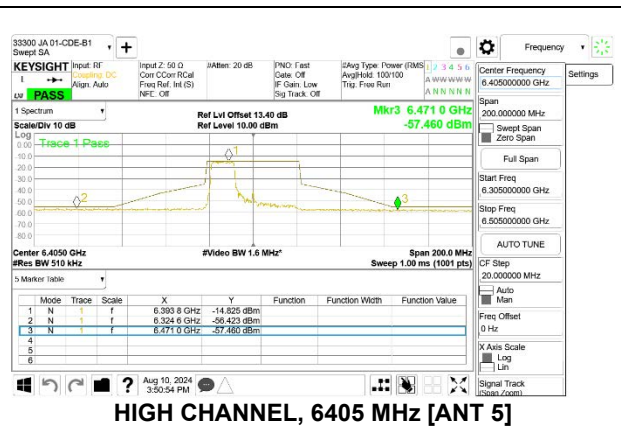
1TX Antenna 5 MODE – SU

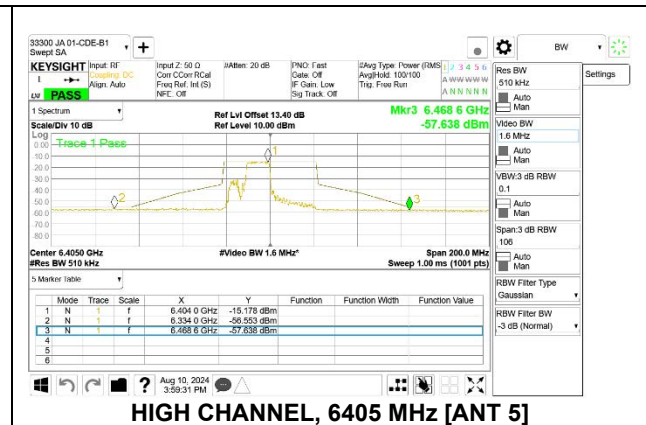
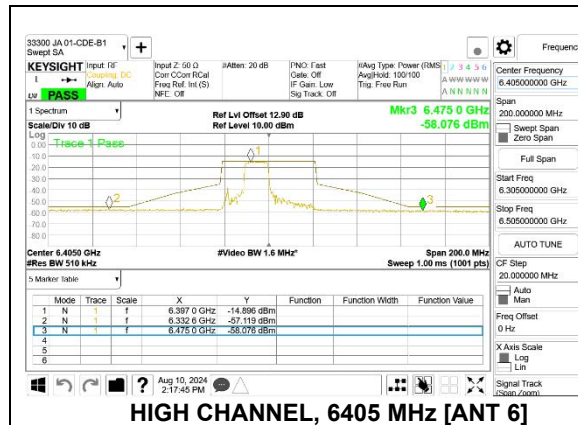
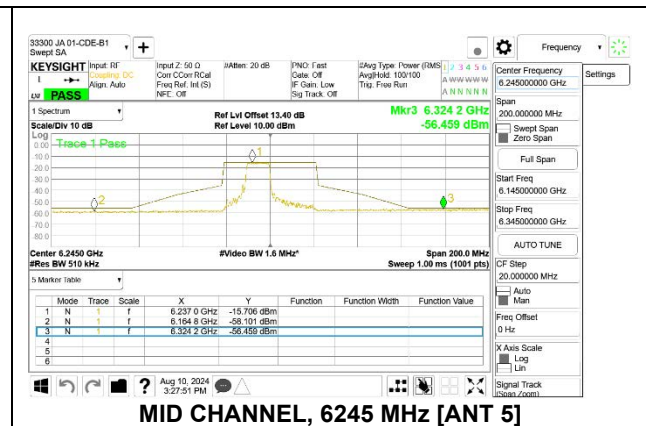
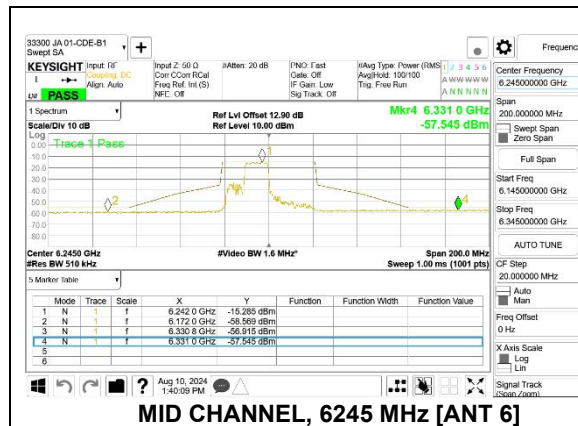
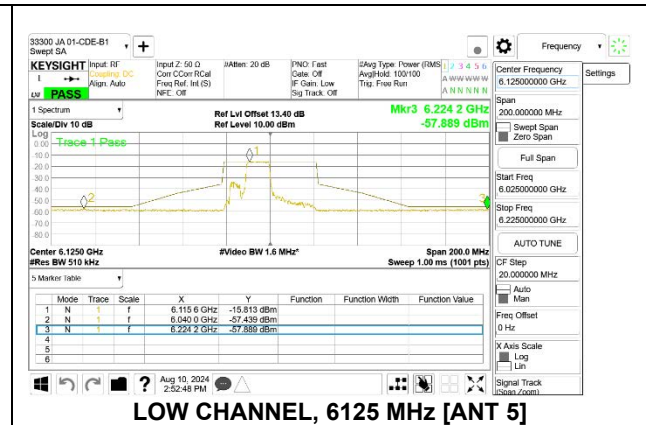
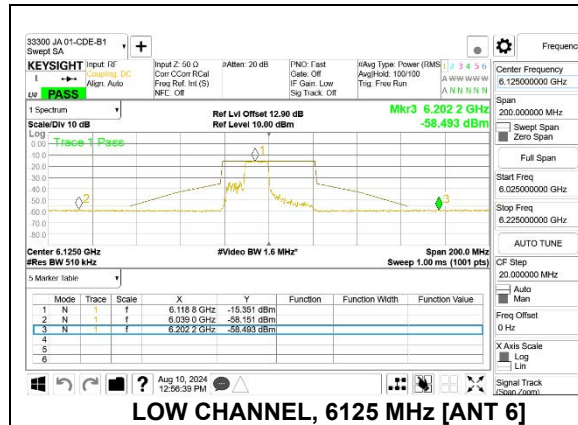
1TX Antenna 5 MODE – MRU 106+26, Index 82

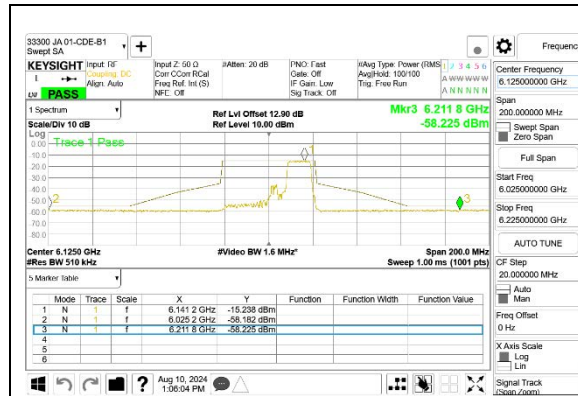
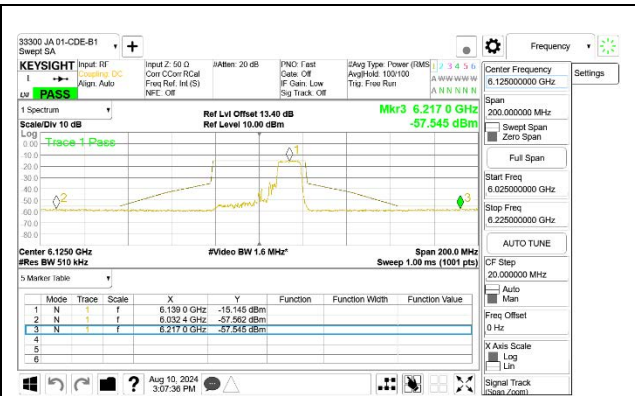
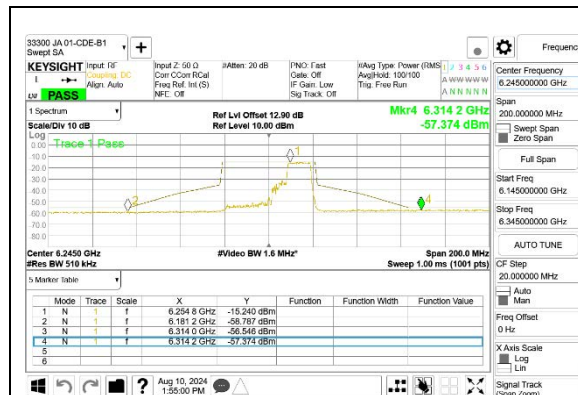
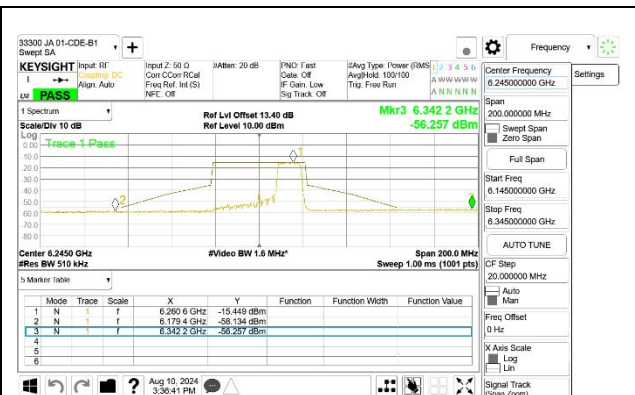
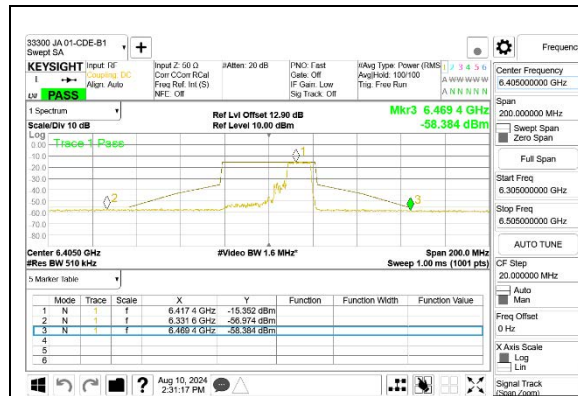
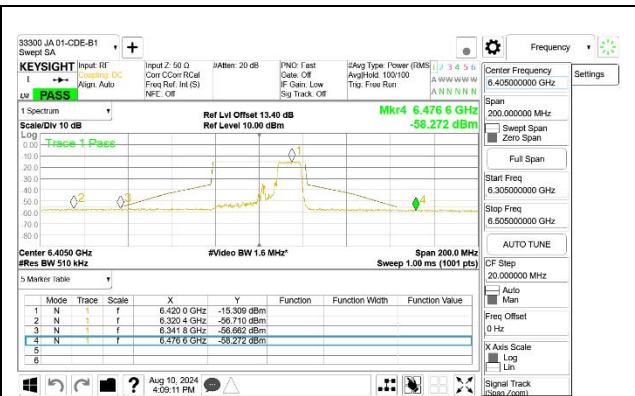
1TX Antenna 5 MODE – MRU 106+26, Index 83

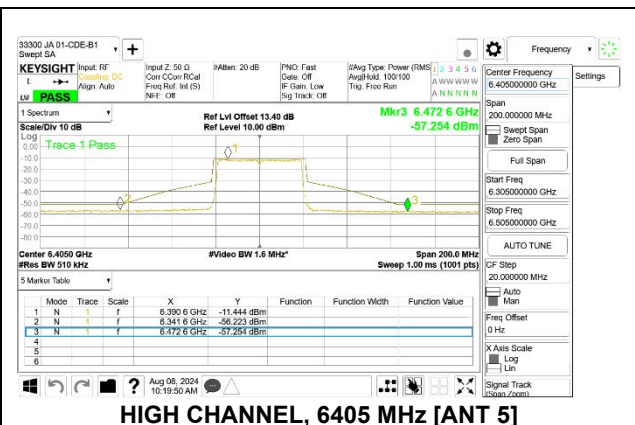
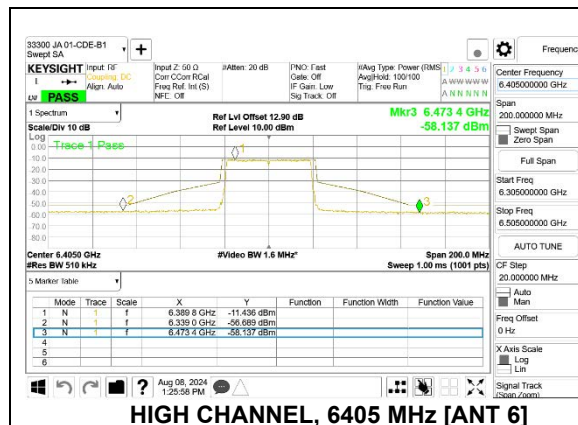
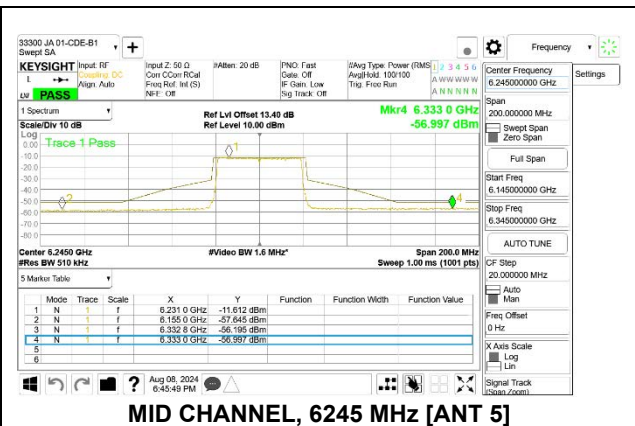
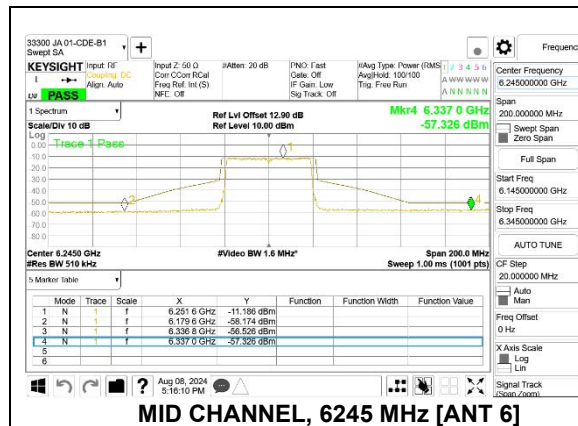
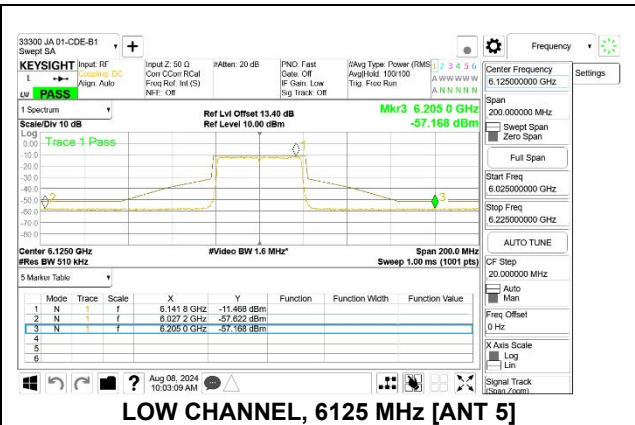
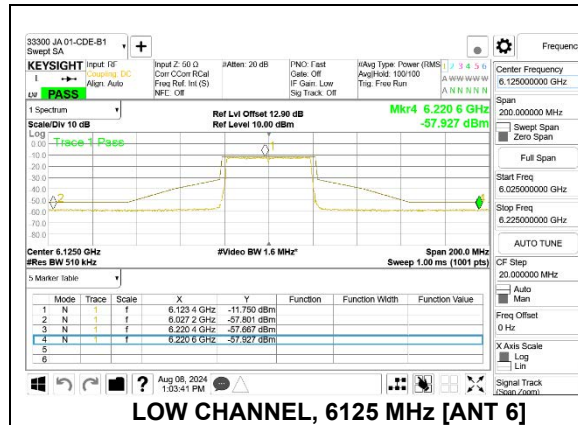
1TX Antenna 5 MODE – MRU 106+26, Index 85

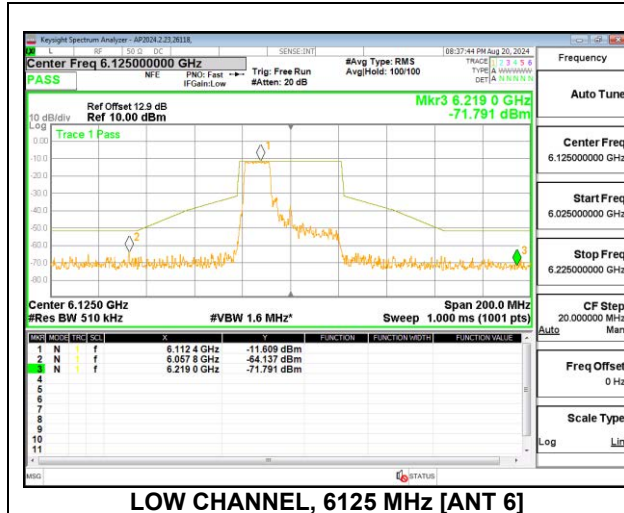
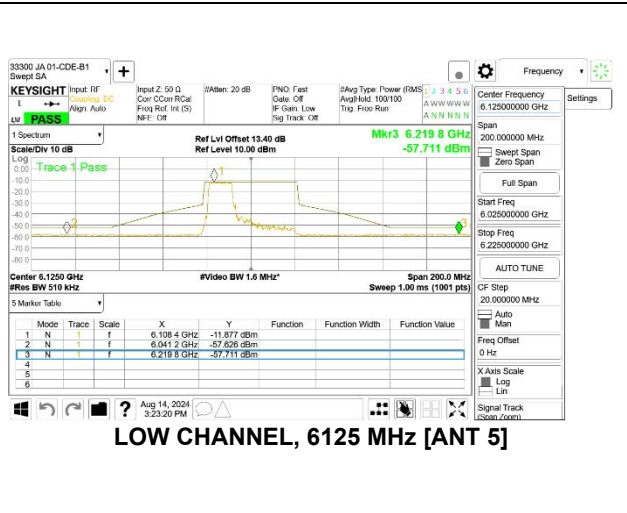
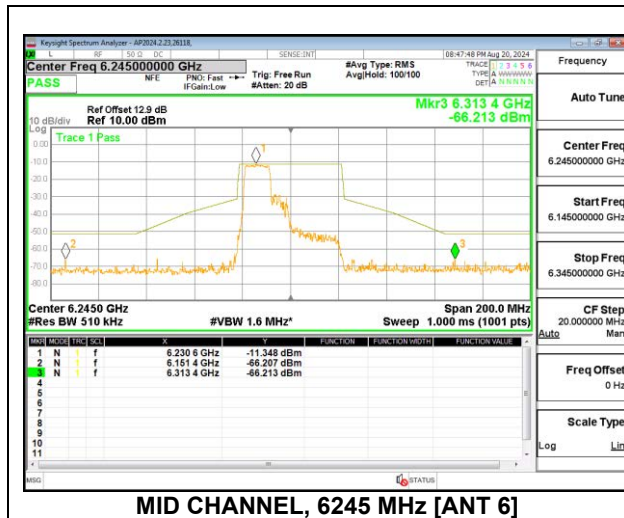
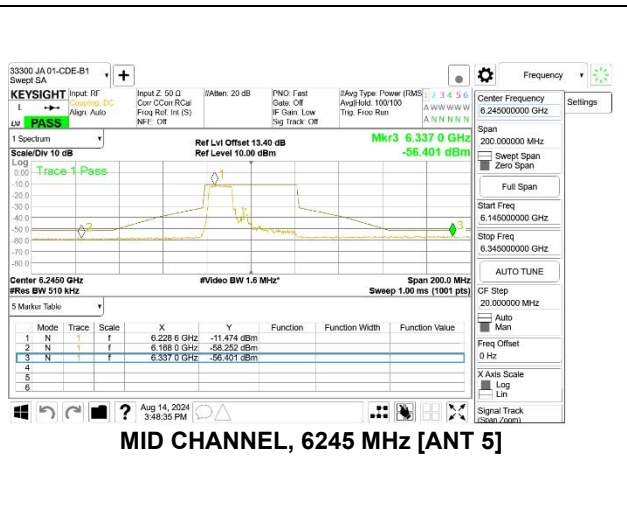
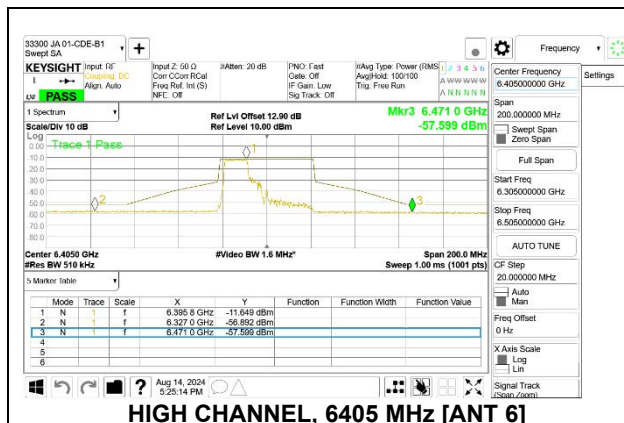
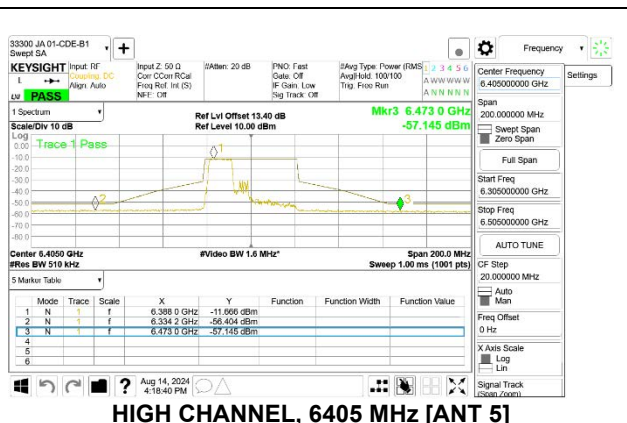
2TX Antenna 6 + Antenna 5 CDD MODE – SU

2TX Antenna 6 + Antenna 5 CDD MODE – MRU 106+26, Index 82**LOW CHANNEL, 6125 MHz [ANT 6]****LOW CHANNEL, 6125 MHz [ANT 5]****MID CHANNEL, 6245 MHz [ANT 6]****MID CHANNEL, 6245 MHz [ANT 5]****HIGH CHANNEL, 6405 MHz [ANT 6]****HIGH CHANNEL, 6405 MHz [ANT 5]**

2TX Antenna 6 + Antenna 5 CDD MODE – MRU 106+26, Index 83

2TX Antenna 6 + Antenna 5 CDD MODE – MRU 106+26, Index 85**LOW CHANNEL, 6125 MHz [ANT 6]****LOW CHANNEL, 6125 MHz [ANT 5]****MID CHANNEL, 6245 MHz [ANT 6]****MID CHANNEL, 6245 MHz [ANT 5]****HIGH CHANNEL, 6405 MHz [ANT 6]****HIGH CHANNEL, 6405 MHz [ANT 5]**

2TX Antenna 6 + Antenna 5 SDM MODE – SU

2TX Antenna 6 + Antenna 5 SDM MODE – MRU 106+26, Index 82**LOW CHANNEL, 6125 MHz [ANT 6]****LOW CHANNEL, 6125 MHz [ANT 5]****MID CHANNEL, 6245 MHz [ANT 6]****MID CHANNEL, 6245 MHz [ANT 5]****HIGH CHANNEL, 6405 MHz [ANT 6]****HIGH CHANNEL, 6405 MHz [ANT 5]**