TEST REPORT

Report Number: 14982490-E11V3

Applicant	:	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	:	A3289 (Parent Model) A3290, A3291 (Variant Models)
FCC ID	:	BCG-E8693A (Parent Model) BCG-E8694A, BCG-E8695A (Variant Models)
EUT Description	:	SMARTPHONE
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2024/08/30

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

ACCREDITED
CERT #0751.05

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2024/08/19	Initial Review	---
V2	2024/08/28	Addressed TCB Questions	Gabe Nunez
V3	2024/08/30	Addressed TCB Questions	Chris Xiong

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

TABLE OF CONTENTS

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

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

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

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

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

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

1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3289 (Parent Model), A3290, A3291 (Variant Models)
Brand	APPLE
FCC ID	BCG-E8693A (Parent Model) BCG-E8694A, BCG-E8695A (Variant Models)
EUT Description	SMARTPHONE
Serial Number	CP4DJL2P7M (Radiated) LXVHFW1J42 (Radiated) C7HH28000150000HBU, C7HH6B0002X0000HBT, C7HH230000G0000HC0, C7HH6M0006P0000HBS (Conducted)
Sample Receipt Date	2024/02/22
Date Tested	2024/04/26 to 2024/08/30
Applicable Standards	CFR 47 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.	Francisco Guarnero Senior Test Engineer UL Verification Services, Inc.

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

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.

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	See Comment		ANSI C63.10 Section 6.9.3
Output Power EIRP	§15.407 (a) (7), (8)	Compliant	Dual Client
PSD EIRP	§15.407 (a) (7), (8)	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
Radiated Spurious Emissions	§15.209	Compliant	None
AC Mains Conducted Emissions	§15.207	Compliant	None

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

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with:
- FCC CFR 47 Part 2
- FCC CFR 47 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
- KDB 414788 D01 Radiated Test Site v01r01
- 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			

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

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	1.940 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	1.300 dB (Peak) .450 dB (Ave)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 db
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 db
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 db
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 db
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 db
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 db
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 db

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

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

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

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

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, WCDMA, LTE, 5GNR1, 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), 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.

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

6.1.1. EUT DEVICE CLASS

Dual Client (6CD)	U-NII Bands of Operation			
	5	6	7	8
Indoor Client	☒	☒	☒	☒
Standard Client	☒	☐	☒	☐

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

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum EIRP output power as follows:

6.2.1. LP

UNII-5 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-5 Band, 1TX			
5955-6415	802.11be EHT20	8.57	7.19
5965-6405	802.11be EHT40	11.63	14.55
5985-6385	802.11be EHT80	14.58	28.71
6025-6345	802.11be EHT160	16.80	47.86
UNII-5 Band, 2TX			
5955-6415	802.11be EHT20 CDD	6.11	4.08
5955-6415	802.11be EHT20 SDM	9.06	8.05
5965-6405	802.11be EHT40 CDD	9.21	8.34
5965-6405	802.11be EHT40 SDM	12.08	16.14
5985-6385	802.11be EHT80 CDD	12.20	16.60
5985-6385	802.11be EHT80 SDM	15.11	32.43
6025-6345	802.11be EHT160 CDD	14.38	27.42
6025-6345	802.11be EHT160 SDM	17.28	53.46

UNII-6 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-6 Band, 1TX			
6435 - 6515	802.11be EHT20	8.79	7.57
6445 - 6525	802.11be EHT40	11.77	15.03
6465	802.11be ETH80	14.71	29.58
6505	802.11be ETH160, Straddle Channel	16.77	47.53
UNII-6 band, 2TX			
6435 - 6515	802.11be EHT20 CDD	5.97	3.95
6435 - 6515	802.11be EHT20 SDM	8.90	7.76
6445 - 6525	802.11be EHT40 CDD	9.56	9.04
6445 - 6525	802.11be EHT40 SDM	12.25	16.79
6465	802.11be EHT80 CDD	11.96	15.70
6465	802.11be EHT80 SDM	14.94	31.19
6505	802.11be EHT160 CDD Straddle	14.86	30.62
6505	802.11be EHT160 SDM Straddle	17.47	55.85

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

UNII-7 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-7 Band 1TX			
6535 - 6875	802.11be EHT20	8.52	7.11
6565 - 6845	802.11be EHT40	11.66	14.66
6545 - 6865	802.11be ETH80	14.52	28.31
6665 - 6825	802.11be ETH160	16.73	47.10
UNII-7 Band 2TX			
6535-6875	802.11be ETH20 CDD	6.74	4.72
6535-6875	802.11be EHT20 SDM	9.30	8.51
6565-6845	802.11be EHT40 CDD	9.55	9.02
6565-6845	802.11be EHT40 SDM	12.18	16.52
6545-6865	802.11be EHT80 CDD	12.67	18.49
6545-6865	802.11be EHT80 SDM	15.40	34.67
6665-6825	802.11be EHT160 CDD	15.03	31.84
6665-6825	802.11be EHT160 SDM	17.63	57.94

UNII-8 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-8 Band 1TX			
6895-7115	802.11be EHT20	8.62	7.28
6885-7085	802.11be EHT40	11.61	14.49
6945-7025	802.11be EHT80	14.58	28.71
6985	802.11be EHT160	16.82	48.08
UNII-8 Band 2TX			
6895-7115	802.11be EHT20 CDD	5.97	3.95
6895-7115	802.11be EHT20 SDM	9.01	7.96
6885-7085	802.11be EHT40 CDD	9.75	9.44
6885-7085	802.11be EHT40 SDM	12.40	17.38
6945-7025	802.11be EHT80 CDD	11.95	15.67
6945-7025	802.11be EHT80 SDM	15.01	31.70
6985	802.11be EHT160 CDD	14.28	26.79
6985	802.11be EHT160 SDM	17.27	53.33

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

6.2.2. SP

UNII-5 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-5 Band, 1TX			
5955-6415	802.11be EHT20	19.84	96.38
5965-6405	802.11be EHT40	19.89	97.50
5985-6385	802.11be EHT80	19.88	97.27
6025-6345	802.11be EHT160	19.82	95.94
UNII-5 Band, 2TX			
5955-6415	802.11be EHT20 CDD	21.61	144.88
5955-6415	802.11be EHT20 SDM	Covered by 802.11be EHT20 CDD	
5965-6405	802.11be EHT40 CDD	21.55	142.89
5955-6405	802.11be EHT40 SDM	Covered by 802.11be EHT40 CDD	
5985-6385	802.11be EHT80 CDD	21.57	143.55
5985-6385	802.11be EHT80 SDM	Covered by 802.11be EHT80 CDD	
6025-6345	802.11be EHT160 CDD	21.55	142.89
6025-6345	802.11be EHT160 SDM	Covered by 802.11be EHT160 CDD	

UNII-7 BAND

Frequency Range (MHz)	Mode	Output Power EIRP (dBm)	Output Power EIRP (mW)
UNII-7 Band 1TX			
6535-6855	802.11be EHT20	20.76	119.12
6565-6845	802.11be EHT40	20.76	119.12
6625-6785	802.11be EHT80	20.78	119.67
6665	802.11be EHT160	20.76	119.12
UNII-7 Band 2TX			
6535-6855	802.11be EHT20 CDD	21.79	151.01
6535-6855	802.11be EHT20 SDM	Covered by 802.11be EHT20 CDD	
6565-6845	802.11be EHT40 CDD	21.81	151.71
6565-6845	802.11be EHT40 SDM	Covered by 802.11be EHT40 CDD	
6625-6785	802.11be EHT80 CDD	21.79	151.01
6625-6785	802.11be EHT80 SDM	Covered by 802.11be EHT80 CDD	
6665	802.11be EHT160 CDD	21.78	150.66
6665	802.11be EHT160 SDM	Covered by 802.11be EHT160 CDD	

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

6.3. DESCRIPTION OF AVAILABLE ANTENNAS AND CABLE LOSS

The antenna(s) gain and type, cable loss as provided by the manufacturer' are as follows:
Antenna Type: IFA

Frequency Range (MHz)	Sub-band (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5925 - 6425 UNII-5	Sub-band 1 (5955 - 6095)	0.30	-3.30	-1.14	1.70
	Sub-band 2 (6115 - 6255)	0.40	-2.70	-0.88	2.00
	Sub-band 3 (6275 - 6415)	-0.20	-3.80	-1.64	1.20
6425 - 6525 UNII-6	N/A	0.30	-3.50	-1.20	1.62
UNII-6/7 (Straddle Channel)	N/A	1.80	-3.50	-0.09	2.56
6525 - 6875 UNII-7	N/A	1.80	-3.90	-0.18	2.42
UNII-7/8 (Straddle Channel)	N/A	1.80	-3.00	0.03	2.74
6875 - 7125 UNII-8	N/A	-0.10	-3.00	-1.31	1.58

Cable Loss		
Frequency Range (MHz)	Antenna 6 (dB)	Antenna 5 (dB)
5925-6105	0.28	-3.27
6105-6265	0.36	-2.83
6265-6425	0.25	-3.46
6425-6525	0.25	-3.46
6525-6875	1.84	-3.98
6875-7125	-0.09	-2.97

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.

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

6.5. WORST-CASE CONFIGURATION AND MODE

This device is classified as dual client and programmed with two output power levels: indoor client mode (LP) & standard client mode (SP) and only indoor client mode supports straddle channels.

For RF conducted tests, indoor client mode has been tested with SISO and 2TX CDD and SDM MIMO modes; Standard client mode was done with SISO and 2TX CDD modes as it has same output power levels in 2TX CDD and SDM modes and 2TX CDD mode was set for all antenna port tests after investigation.

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

Radiated was performed at the higher of the LP and SP power levels. The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Z (Portrait) orientation was worst-case orientation for ANT6 and ANT5 and Y (Landscape) was the worst-case orientation for 2TX.

With same power on Full RU and SU higher data rate, investigations were performed on both for band edge to determine the worst case, and SU mode was determined to be the worst case. Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. There were no emissions found below 30MHz within 20dB of the limit.

For radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-26GHz, 26-40GHz and power line conducted emissions were performed with the EUT set at the 2TX CDD mode among the CDD/SDM modes and 2TX EHT mode with power setting equal or higher than SISO modes as worst-case scenario.

For radiated band edge test, all test modes have been investigated with power setting equal or higher than conducted SISO modes as the worst-case scenario.

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

For conducted testing - all tests perform on both SU (highest output power) and lowest tones (highest PSD reading).

Low data rate was used to test on antenna port conducted tests and radiated spurious emissions since it has the highest maximum power. For the radiated band edge on UNII-5 (low channel) & UNII-8 (high channel), following are the worst-case data rates set for test:

802.11be EHT20/EHT40/EHT80/EHT160 Partial RU Tones and SU modes: MCS0 & MCS11 (report MCS11 only as worst-case mode).
802.11be EHT20 Channel 233: supports SU Mode only per Client.

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

The modulation and bandwidth of 802.11ax and 802.11be modes are similar at 20 MHz (40 MHz, 80 MHz, 160 MHz), and the target power of 802.11ax mode is equal to or lower than that of 802.11be mode, and the data rate of 802.11be mode is higher than 802.11ax mode, so 802.11be mode is performed in the test 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, we found that the worst case of power and PSD modes for full testing as table shown below, in addition we were also spot-check for Full RU and the rest of Partial RU modes on radiated bandedge, conducted emissions mask, and radiated spurious emissions.

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

6.5.1. LP

WIFI 7 - 802.11be										
BW (MHz)	Tone (T)	RU Index	Worst Case Tone (UNII-5)		Worst Case Tone (UNII-6)		Worst Case Tone (UNII-7)		Worst Case Tone (UNII-8)	
			Power	PSD	Power	PSD	Power	PSD	Power	PSD
20	26	0 ~ 8								
	52	37 ~ 40								
	52 + 26	70 ~ 81								
	106	53 ~ 54								
	106 + 26	82 ~ 89		x		x		x		x
	242	61								
	SU	--	x		x		x		x	
40	26	0 ~ 17								
	52	37 ~ 44		x						
	52 + 26	70 ~ 81								
	106	53 ~ 56				x		x		
	106 + 26	82 ~ 89								x
	242	61 ~ 61								
	484	65								
	SU	--	x		x		x		x	
80	26	0 ~ 36								
	52	37 ~ 52								
	52 + 26	70 ~ 81								
	106	53 ~ 60								
	106 + 26	82 ~ 89								x
	242	61 ~ 64		x		x		x		
	484	65 ~ 66								
	484 + 242	90 ~ 93								
	996	67								
	SU	--	x		x		x		x	
160	26	0 ~ S36								
	52	37 ~ S52								
	52 + 26	70 ~ 81								
	106	53 ~ S60		x						
	106 + 26	82 ~ 89				x		x		x
	242	61 ~ S64								
	484	65 ~ S66								
	484 + 242	90 ~ 93								
	996	67 ~ S67								
	996 + 484	94+sb0=0 95+sb0=0 94+sb0=1 95+sb0=1								
	996 + 484 + 242	96+sb0-0 97+sb0-0 98+sb0-0 99+sb0-0 96+sb0-1 97+sb0-1 98+sb0-1 99+sb0-1								
	996x2	S68								
	SU	--	x		x		x		x	

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

6.5.2. SP

BW (MHz)	Tone (T)	RU Index	RU Index (Chipset Support only)	Worst Case Tone (UNII-5)		Worst Case Tone (UNII-6)		Worst Case Tone (UNII-7)		Worst Case Tone (UNII-8)	
				Highest Power	Highest PSD	Highest Power	Highest PSD	Highest Power	Highest PSD	Highest Power	Highest PSD
20	26	0 ~ 8	0 ~ 8								
	52	37 ~ 40	37 ~ 40								
	52 + 26	70 ~ 81	70, 71, 72								
	106	53 ~ 54	53 ~ 54		X				X		
	106 + 26	82 ~ 89	82, 83								
	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								
	242	61 ~ 61	61 ~ 62		X				X		
	484	65	65								
	SU	--	--	X				X			
80	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		X				X		
	484	65 ~ 66	65 ~ 66								
	484 + 242	90 ~ 93	90, 91, 92, 93								
	996	67	67								
	SU	--	--	X				X			
160	26	0 ~ S36	0 ~ S36								
	52	37 ~ S52	37 ~ S52								
	52 + 26	70 ~ S81	sb0: 71,72,73,74,77,78,79,80 sb1: 71,72,73,74,77,78,79,80								
	106	53 ~ S60	53 ~ S60								
	106 + 26	82 ~ 89	82, 85, 86, 89								
	242	61 ~ S64	61 ~ S64		X				X		
	484	65 ~ S66	65 ~ S66								
	484 + 242	90 ~ S93	sb0: 90, 91, 92, 93 sb1: 90, 91, 92, 93								
	996	67 ~ S67	67 ~ S67								
	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			

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

6.5.3. RE-USE STATEMENT AND COMPARISON TABLE

The maximum output power for A3082 (FCC ID: BCG-E8692A), A3289 (FCC ID: BCG-E8693A), A3290 (FCC ID: BCG-E8694A) and A3291 (FCC ID: BCG-E8695A) are identical across all power tables for ANT5 and ANT6 except on A3286/ A3287/ A3288 on LP mode for ANT6 for the following bands/mode:

BANDS	MAXIMUM OUTPUT POWER DIFFERENCE		
	SISO a/ HE/EHT20 All Rates	**2Tx CDD HE/EHT20 All Rates**	**2Tx SDM HE/EHT20 All Rates**
UNII-5	LOWER (CH1-CH61 5955-6255MHz), HIGHER (CH65-CH93, 6275-6415MHz)	LOWER (CH1-CH29 5955-6095MHz), SAME (CH33-61, 6115-6255MHz, *CH93 6415MHz),* HIGHER (CH65-CH85, 6275-6375MHz)	LOWER (CH1-CH61 5955-6255MHz), HIGHER (CH65-CH93, 6275-6415MHz)
UNII-6	LOWER	LOWER	LOWER
UNII-7	LOWER	LOWER	LOWER
UNII-8	LOWER (except CH233 same power)		

BANDS	MAXIMUM OUTPUT POWER DIFFERENCE		
	SISO HE/EHT40 All Rates	**2Tx CDD HE/EHT40 All Rates**	**2Tx SDM HE/EHT40 All Rates**
UNII-5	LOWER (CH3-CH59 5965-6245MHz), HIGHER (CH67-CH91, 6285-6405MHz)	LOWER (CH3-CH27 5965-6085MHz), SAME (CH35-59, 6125-6245MHz), HIGHER (CH67-CH91, 6285-6405MHz)	LOWER (CH3-CH59 5965-6245MHz), HIGHER (CH67-CH91, 6285-6405MHz)
UNII-6	LOWER	LOWER	LOWER
UNII-7	LOWER	LOWER	LOWER
UNII-8	LOWER	LOWER	LOWER

BANDS	MAXIMUM OUTPUT POWER DIFFERENCE		
	SISO HE/EHT80 All Rates	**2Tx CDD HE/EHT80 All Rates**	**2Tx SDM HE/EHT80 All Rates**
UNII-5	LOWER (CH7-CH55 5985-6225MHz), HIGHER (CH71-CH87, 6305-6385MHz)	LOWER (CH7-CH23 5985-6065MHz), SAME (CH39-55, 6145-6225MHz), HIGHER (CH71-CH87, 6305-6385MHz)	LOWER (CH7-CH55 5985-6225MHz), HIGHER (CH71-CH87, 6305-6385MHz)
UNII-6	LOWER	LOWER	LOWER
UNII-7	LOWER	LOWER	LOWER
UNII-8	LOWER	LOWER	LOWER

BANDS	MAXIMUM OUTPUT POWER DIFFERENCE		
	SISO HE/EHT160 All Rates	**2Tx CDD HE/EHT160 All Rates**	**2Tx SDM HE/EHT160 All Rates**
UNII-5	LOWER (*except CH 79, 6345MHz-HIGHER*)	LOWER, CH15, 6025MHz; SAME, CH47, 6185MHz; HIGHER, CH79, 6345MHz	LOWER (*except CH 79, 6345MHz SU mode HIGHER*)
UNII-6	LOWER	LOWER	LOWER (except Partial RU HIGHER)
UNII-7	LOWER	LOWER	LOWER
UNII-8	LOWER	LOWER	LOWER

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

According to the LP mode output power changed mentioned on above table and antenna gain increased on UNII-5 to UNII-8 as documented in section 6.3, model A3289 ANT6 port was retested on Output power, PSD and Emission mask and radiated tests to cover model A3290/A3291.
And ANT5 rf conducted test results and SISO mode radiated band edge test results are reused from the reference model, A3082. The data reuse plan has been approved by FCC manufacturer inquiry.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT					
Description	**Manufacturer**	**Model**	**Serial Number**		**FCC ID/ DoC**
Laptop	Apple	Macbook Pro	C02VD7SAHV22		BCGA1708
Laptop AC/DC adapter	Liteon Technology	A1424	NSW25679		DoC
EUT AC/DC adapter	Apple	A1720	C3D8417A7R93KVPA8		DoC

I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	SMA	1	SMA	Shielded	0.75	To spectrum Analyzer
2	Antenna	2	SMA	Shielded	0.2	To Conducted Switch Box
3	USB-C	1	USB-C	Shielded	1.0	N/A
4	DC	1	DC	Shielded	2	AC/DC adapter

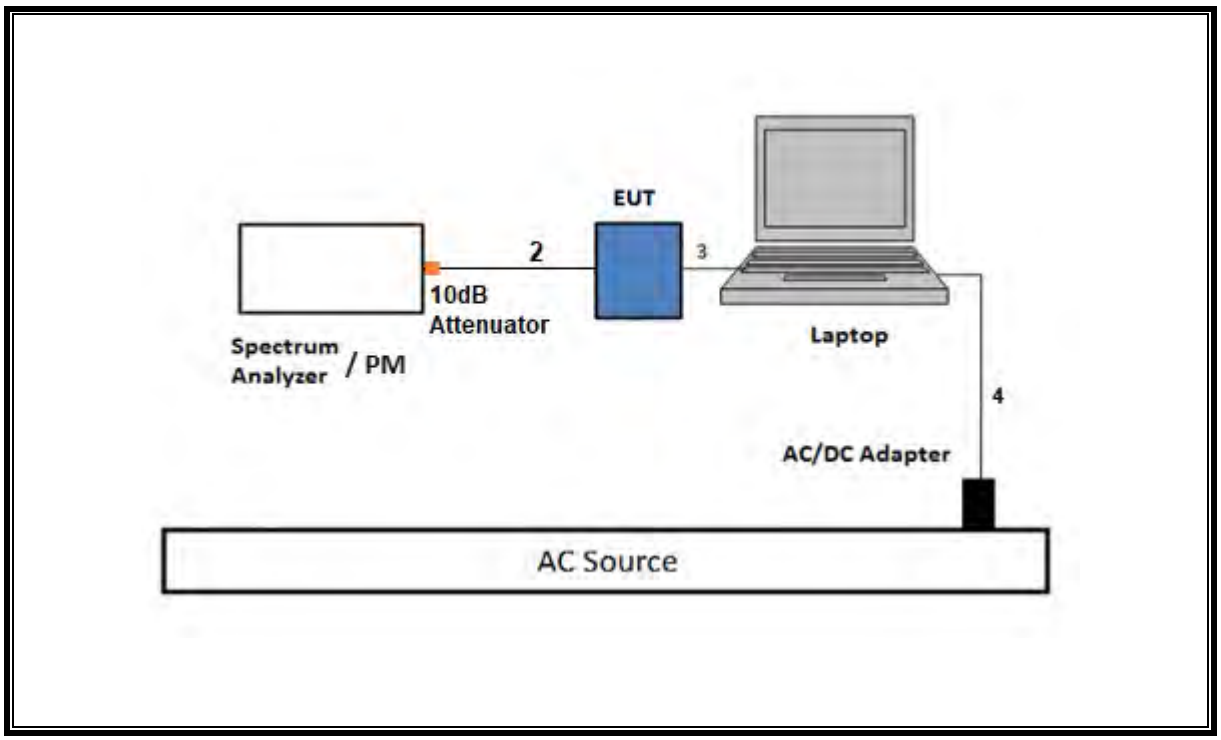
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC	1	DC	Shielded	2	AC/DC adapter
2	USB	1	USB-C	Shielded	1	N/A

TEST SETUP

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

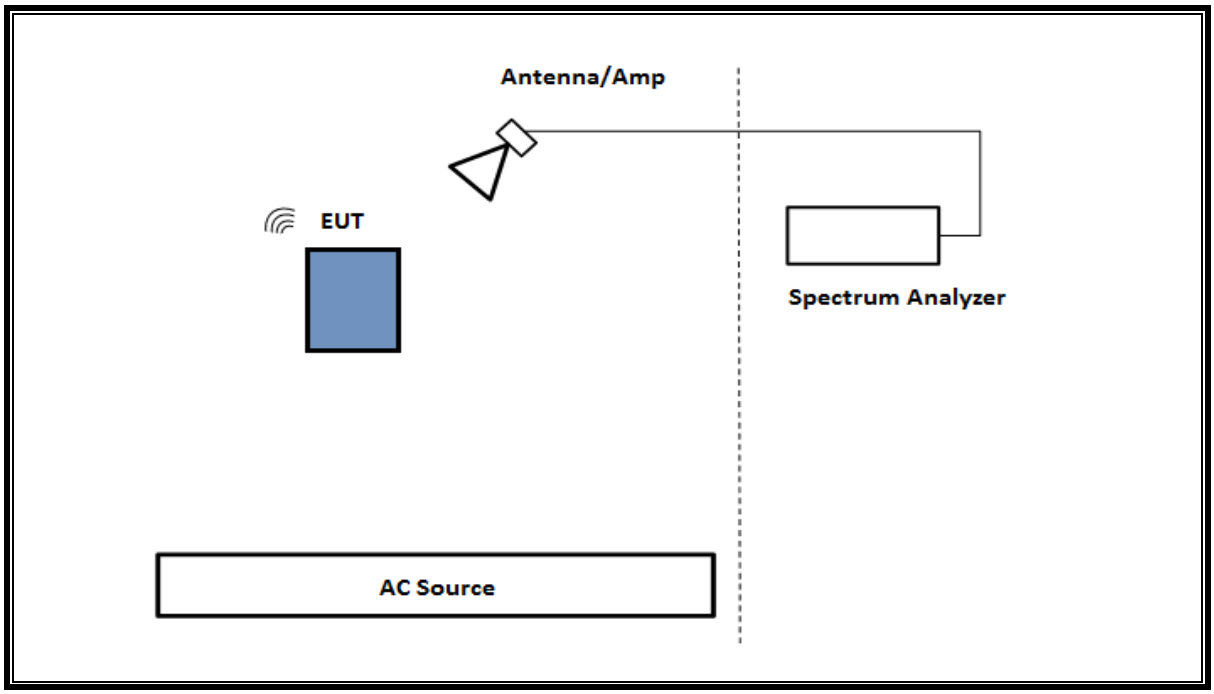
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

SETUP DIAGRAM FOR CONDUCTED TESTS

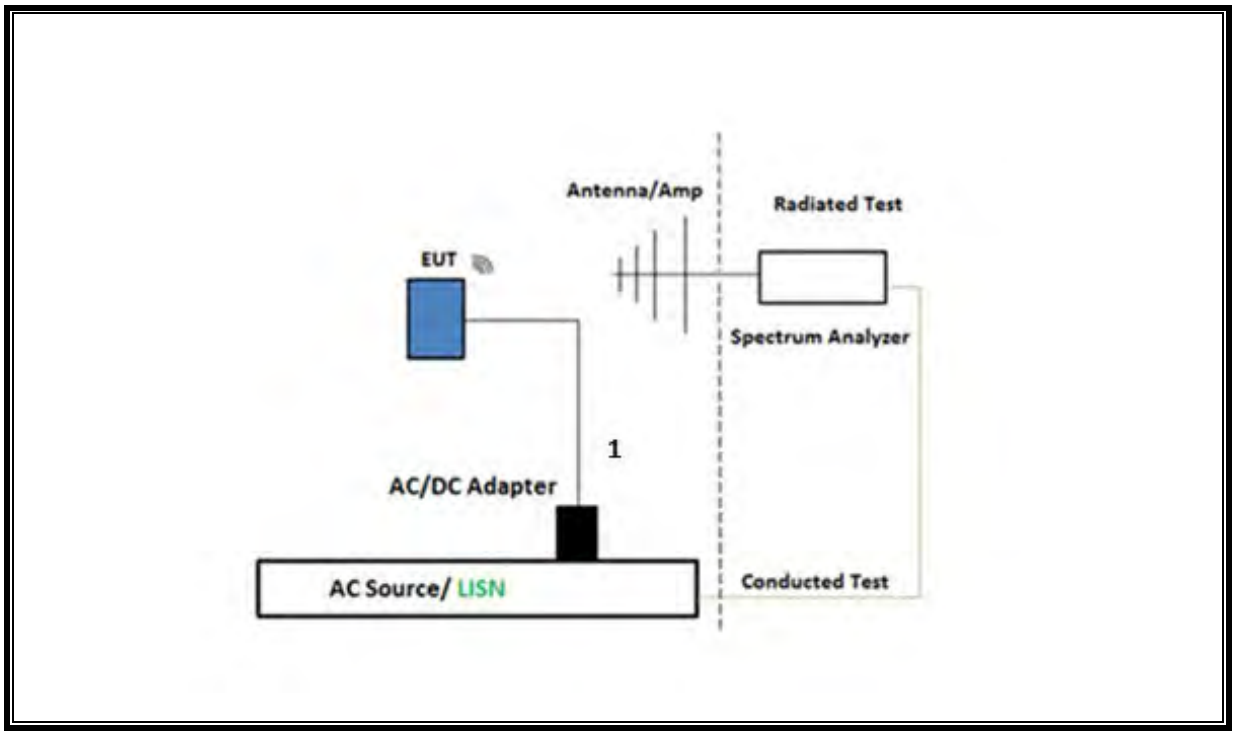


UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz (1 to 40GHz)

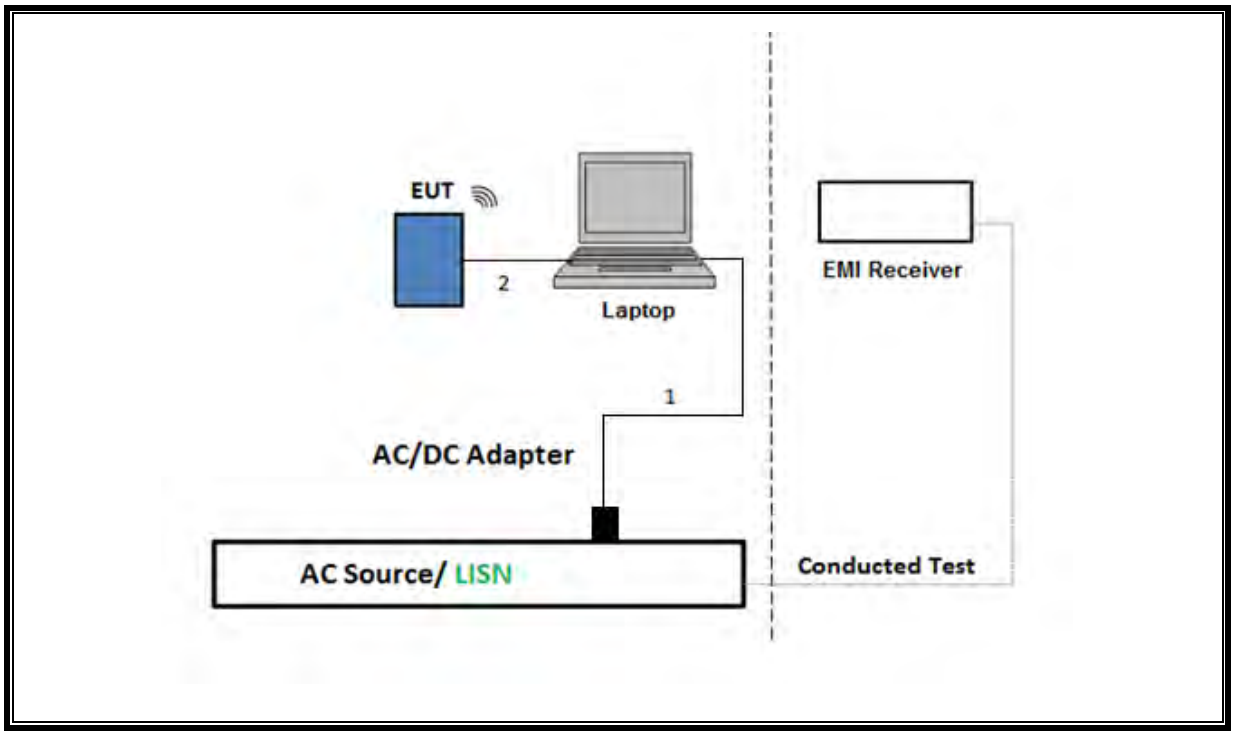


SETUP DIAGRAM FOR RADIATED TESTS 30-1000MHz AND AC LINE CONDUCTED TEST



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

TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



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

7. MEASUREMENT METHOD

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

26 dB Emission BW: 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 Section II-J

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

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

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

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

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

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 Num**	**Cal Due**
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	191428	2025/2/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200785	2024/10/31
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	230878	2025/05/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169927	2025/2/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	206805	2024/7/31
RF Filter Box, 1-18GHz, 7 port Simplified	UL-FR1	F3A, 3Amplifier, Rats3 simplified version	243707	2025/2/22
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169927	2025/2/28
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	206805	2024/7/31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223459	2025/2/28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	226672	2026/2/28
RF Filter Box, 1-18GHz, 12 Port.	UL-FR1	Frankenstein	231876	2025/4/30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201502	2025/2/28
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	224378	2024/10/31
Amplifier 9 KHz - 1 GHz	SONOMA INSTRUMENT	310N	224490	2024/12/3
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201498	2025/2/28
RF Filter Box, 1-18GHz, 17 Ports	RF Filter Box, 1-18GHz, 17 Ports	RATS 2	225575	2025/4/27/
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	81139	2024/8/31
Link File, RF Amplifier Assembly, 18-26.5GHz, 60dB Gain	AMPLICAL	AMP18G26.5-60	220194	2024/8/31
Antenna, Horn 26.5 to 40GHz	A.R.A.	MWH-2640/B	81105	2024/8/31
RF Amplifier Assembly, 26-40GHz, 65dB Gain	AMPLICAL	AMP26G40-65	221834	2025/3/31
Antenna, Passive Loop 30Hz - 1MHz	ELECTRO-METRICS	EM-6871	170014	2024/08/31
Antenna, Passive Loop 100kHz to 30MHz	ELECTRO-METRICS	EM-6872	170016	2024/08/31

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

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
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
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	178557	Verified Before Use
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	178558	Verified Before Use
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	2025/01/31
Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Keysight Technologies Inc	N9030A	80400	2025/02/02
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125178	2025/01/31
PXA Signal Analyzer	Keysight Technologies Inc	N9030B	222071	2024/11/30
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80396	2025/2/28
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	81188	2025/1/31

AC Line Conducted				
Description	**Manufacturer**	**Model**	**ID Num**	**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	2023.2.23	
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023	

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

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 (dB)	1/B Minimum VBW (kHz)
EHT20	SU	MCS0	1.582	1.602	0.9873	98.73%	0.00	0.010
		MCS11	0.159	0.181	0.8785	87.85%	0.56	6.287
	(106+26)T	MCS0	3.556	3.574	0.9949	99.49%	0.00	0.010
		MCS11	0.264	0.285	0.9268	92.68%	0.33	3.781
	106T	MCS0	3.500	3.537	0.9895	98.95%	0.00	0.010
		MCS11	0.264	0.285	0.9263	92.63%	0.33	3.788
EHT40	SU	MCS0	1.563	1.584	0.9872	98.72%	0.00	0.010
		MCS11	0.153	0.177	0.8690	86.90%	0.61	6.518
	52T	MCS0	3.821	3.858	0.9904	99.04%	0.00	0.010
		MSC11	0.278	0.316	0.8782	87.82%	0.56	3.602
	106T	MSC0	3.519	3.556	0.9896	98.96%	0.00	0.010
		MCS11	0.264	0.303	0.8715	87.15%	0.60	3.789
	(106+26)T	MSC0	3.528	3.592	0.9822	98.22%	0.00	0.010
		MCS11	0.264	0.302	0.8742	87.42%	0.58	3.788
	242T	MSC0	3.043	3.065	0.9928	99.28%	0.00	0.010
		MCS11	0.235	0.258	0.9116	91.16%	0.40	4.255
EHT80	SU	MCS0	1.487	1.512	0.9836	98.36%	0.00	0.010
		MCS11	0.153	0.175	0.8746	87.46%	0.58	6.518
	242T	MCS0	3.042	3.081	0.9873	98.73%	0.00	0.010
		MCS11	0.235	0.273	0.8598	85.98%	0.66	4.254
	(106+26)T	MSC0	3.546	3.585	0.9891	98.91%	0.00	0.010
		MSC11	0.264	0.303	0.8717	87.17%	0.60	3.787
EHT160	SU	MCS0	1.014	1.036	0.9782	97.82%	0.10	0.986
		MCS11	0.125	0.146	0.8571	85.71%	0.67	7.986
	106T	MCS0	3.519	3.557	0.9893	98.93%	0.00	0.010
		MCS11	0.265	0.303	0.8742	87.42%	0.58	3.779
	(106+26)T	MCS0	3.547	3.585	0.9894	98.94%	0.00	0.010
		MCS11	0.263	0.304	0.8654	86.54%	0.63	3.798
	242T	MCS0	3.041	3.080	0.9873	98.73%	0.00	0.010
		MCS11	0.235	0.274	0.8600	86.00%	0.66	4.252

Mode	Tone (T)	Data Rate (Mbps)	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
EHT20 SDM	SU	MCS0	0.779	0.799	0.9750	97.50%	0.11	1.284
	(106+26)T	MCS0	3.547	3.567	0.9944	99.44%	0.00	0.010
EHT40 SDM	SU	MCS0	0.774	0.794	0.9748	97.48%	0.11	1.292
	52T	MCS0	3.820	3.859	0.9899	98.99%	0.00	0.010
	106T	MCS0	3.519	3.556	0.9896	98.96%	0.00	0.010
	(106+26)T	MCS0	3.547	3.585	0.9894	98.94%	0.00	0.010
EHT80 SDM	SU	MCS0	0.738	0.759	0.9723	97.23%	0.12	1.355
	242T	MCS0	3.042	3.081	0.9873	98.73%	0.00	0.010
	(106+26)T	MCS0	3.546	3.593	0.9869	98.69%	0.00	0.010
EHT160 SDM	SU	MCS0	0.515	0.536	0.9608	96.08%	0.17	1.942
	106	MCS0	3.518	3.556	0.9893	98.93%	0.00	0.010
	(106+26)T	MCS0	3.547	3.585	0.9894	98.94%	0.00	0.010

Note: Duty cycle factors are the same for 1TX and 2TX.

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

DUTY CYCLE PLOTS

DUTY CYCLE 802.11be EHT20 106T, MCS11

Intentionally Blank

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

9.2. LP 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: 2020 §6.9

Band	Tones	20MHz	40MHz	80MHz	160MHz
UNII-5	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-6	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-7	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-8	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz

RESULTS

ID:	32181 / 23560	Date:	05/16/24

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.

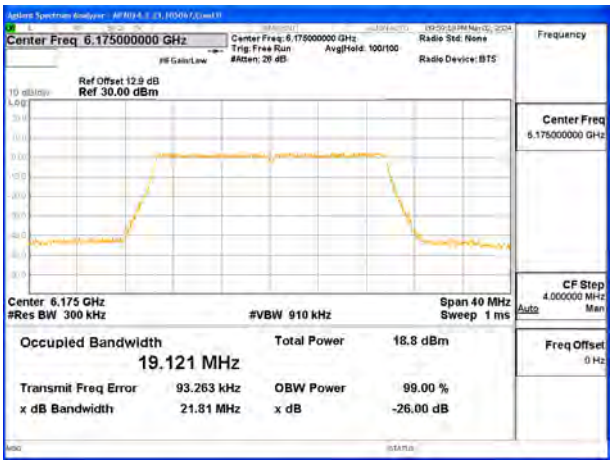
The tests performed on this device show that both 99% and 26dB bandwidths are less than 320 MHz. for all supported channel bandwidths.

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

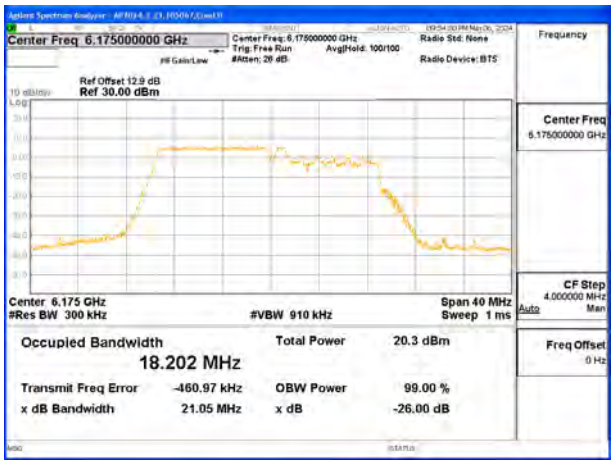
9.2.1. 802.11be SISO MODE IN THE UNII-5 BAND

UNII-5 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20 MHz	5955	1	SU	--	21.59	21.66	19.114	19.15
			106+26	82	20.92	20.99	18.206	18.204
				83	21.02	20.96	18.324	18.281
	6175	45	SU	--	21.81	21.49	19.121	19.133
			106+26	82	21.05	20.98	18.202	18.203
				83	21.17	21.11	18.272	18.326
	6415	93	SU	--	21.41	21.71	19.074	19.106
			106+26	82	20.77	20.96	18.207	18.19
				83	21.26	21.23	18.327	18.335
40 MHz	5965	3	SU	--	41.68	41.68	38.044	38.022
			52	37	20.95	20.64	18.375	18.459
				41	23.26	25.84	20.939	19.8966
				44	22.19	22.2	18.751	18.83
	6165	43	SU	--	41.41	41.73	38.046	38.034
			52	37	20.84	20.24	18.322	18.3374
				41	24.92	26.8	21.12	20.8298
				44	21.82	21.84	18.663	18.3214
	6405	91	SU	--	41.8	41.77	38.079	38.061
			52	37	20.05	20.16	18.338	18.2096
				41	28.38	25.76	20.771	20.7195
				44	20.1	21.92	18.557	18.3523
80MHz	5985	7	SU	--	82.44	81.7	77.526	77.585
			242	61	27.03	28.72	19.696	20.3618
				62	39.34	38.21	20.662	19.9403
				64	40.7	36.48	20.699	20.3658
	6145	39	SU	--	82.44	82.3	77.545	77.662
			242	61	33.79	36.96	20.474	20.1252
				62	30.13	29.86	19.593	19.531
				64	29.43	28.37	20.629	19.6116
	6385	87	SU	--	82.43	82.11	77.638	77.542
			242	61	40.62	34.56	21.681	19.8886
				62	37.72	37.04	20.786	19.9645
				64	31.2	34.61	20.782	19.671
160MHz	6025	15	SU	--	169.6	165.7	157.0884	157.04
			106	53	20.43	30.08	17.8396	18.044
				S60	30.08	25.28	17.9968	17.8585
	6185	47	SU	--	169.6	166.8	157.2406	157.21
			106	53	25.28	27.52	17.539	18.0377
				S60	30.4	32.32	18.2672	18.28
	6345	79	SU	--	168.32	166.6	157.2359	157.4
			106	53	27.2	27.52	18.0119	17.978
				S60	29.44	29.44	18.2698	18.1383

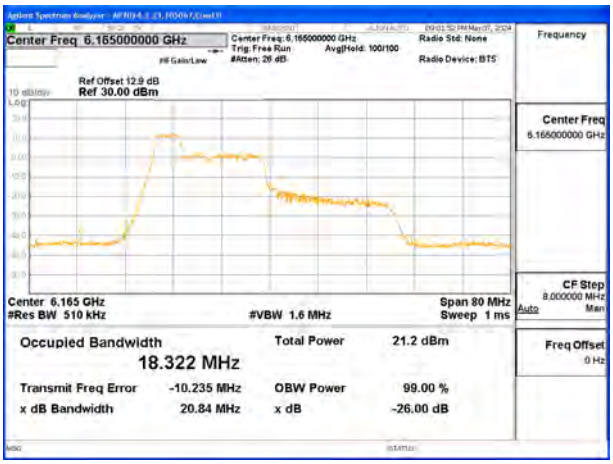
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



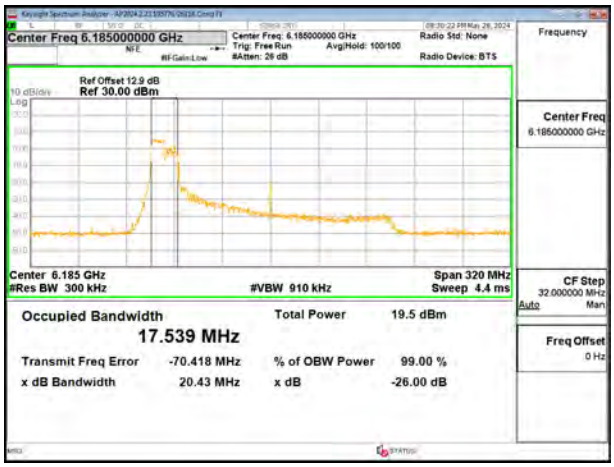
20MHz - Mid Channel – SU (UNII-5) – Ant 6



20MHz - Mid Channel - MRU106+26T-RU82 – (UNII-5) Ant 6



40MHz - Mid Channel – MRU52T-RU37 (UNII-5) – Ant 6



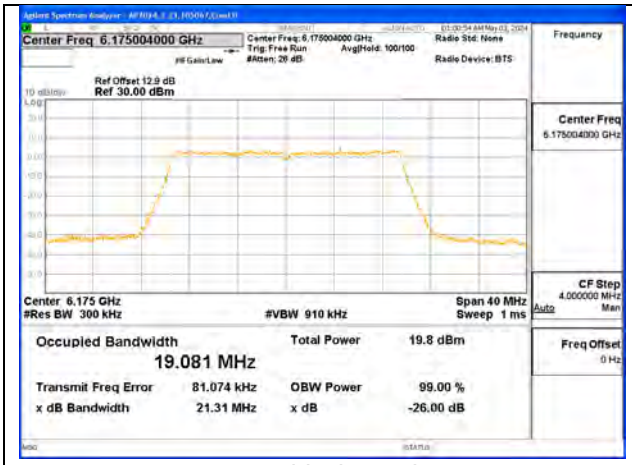
160MHz - Mid Channel - MRU106T-RU53 – (UNII-5) Ant 6

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

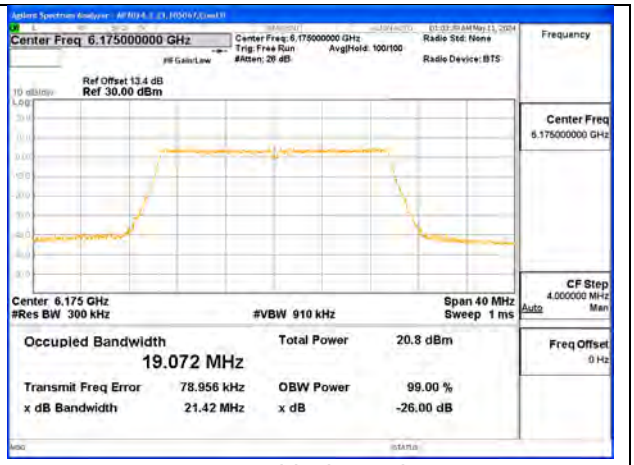
9.2.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND

UNII-5 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20 MHz	5955	1	SU	--	21.3	21.31	19.114	19.076
			106+26	82	20.92	19.83	18.184	18.127
				83	21.08	20.09	18.341	18.074
	6175	45	SU	--	21.31	21.42	19.081	19.072
			106+26	82	20.84	19.79	18.215	18.118
				83	21.07	20.92	18.314	18.095
	6415	93	SU	--	21.47	21.39	19.104	19.066
			106+26	82	20.94	20.36	18.173	18.1914
				83	21.06	20.84	18.258	18.079
40 MHz	5965	3	SU	--	41.79	41.54	38.041	38.004
			52	37	20.89	19.68	18.359	18.082
				41	24.11	27.6	21.333	20.0821
				44	22.13	17.82	18.778	17.822
	6165	43	SU	--	41.73	41.37	38.042	38.009
			52	37	20.82	19.89	18.347	18.064
				41	25.25	24.48	21.453	20.3001
				44	21.95	19.68	18.905	18.0487
	6405	91	SU	--	41.81	41.35	38.051	38.022
			52	37	21.16	19.52	18.42	18.031
				41	25.06	24.96	21.154	20.2308
				44	21.93	19.84	18.917	17.996
80MHz	5985	7	SU	--	82.43	82.17	77.47	77.572
			242	61	41.92	37.28	20.8727	19.5418
				62	56.96	54.56	19.68	19.6828
				64	41.76	41.12	20.5686	19.5964
	6145	39	SU	--	84	82.59	77.4731	77.524
			242	61	32.48	31.2	20.4477	19.5797
				62	57.92	54.08	19.566	19.8721
				64	36.48	30.4	20.1246	19.3838
	6385	87	SU	--	83.84	82.29	77.428	77.521
			242	61	41.76	35.2	20.0771	19.7392
				62	34.33	29.91	19.646	19.7941
				64	40.93	40.61	20.6031	19.6974
160MHz	6025	15	SU	--	169.28	164.8	157.0334	157.08
			106	53	25.6	21.76	17.951	18.0137
				S60	28.16	22.08	18.1262	17.8919
	6185	47	SU	--	168.96	165.3	157.0485	157.36
			106	53	20.42	20.39	18.0012	17.892
				S60	26.24	22.72	18.184	18.0596
	6345	79	SU	--	168	165.4	157.1938	157.47
			106	53	25.28	21.76	17.8999	17.9223
				S60	28.8	22.4	18.194	17.9181

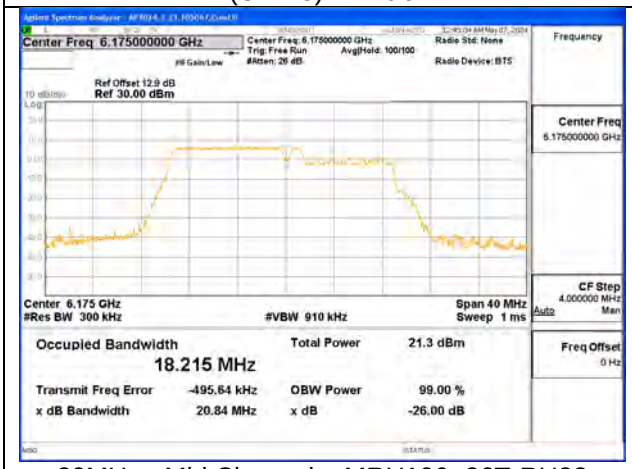
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



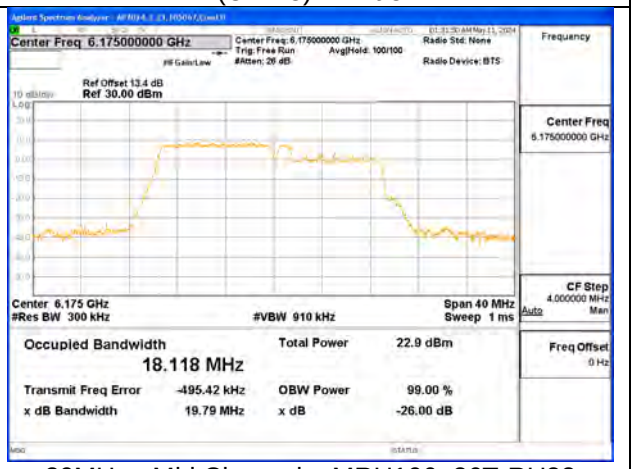
20MHz - Mid Channel – SU (UNII-5) – Ant 6



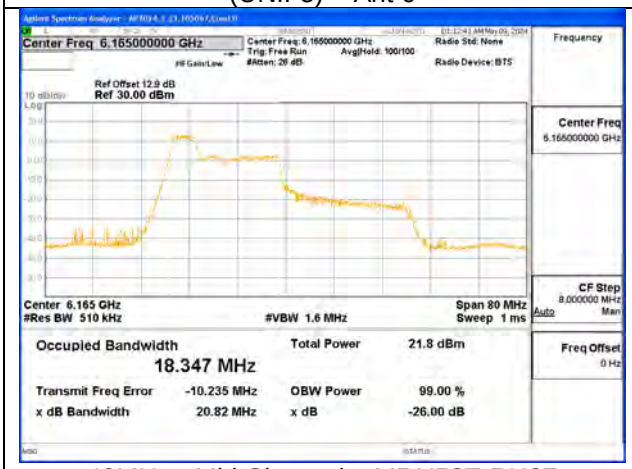
20MHz - Mid Channel – SU (UNII-5) – Ant 5



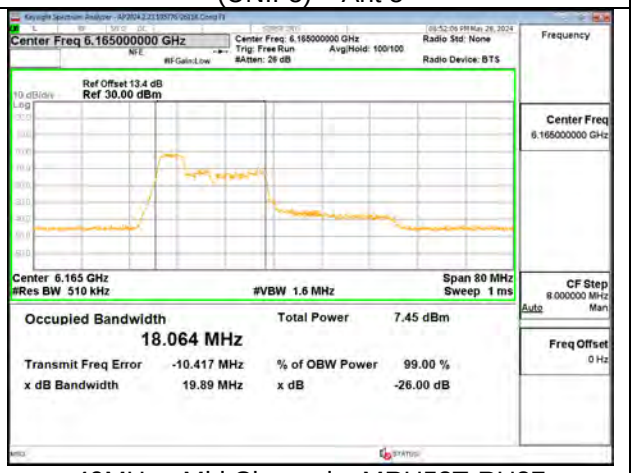
20MHz - Mid Channel – MRU106+26T-RU82 (UNII-5) – Ant 6



20MHz - Mid Channel – MRU106+26T-RU82 (UNII-5) – Ant 5

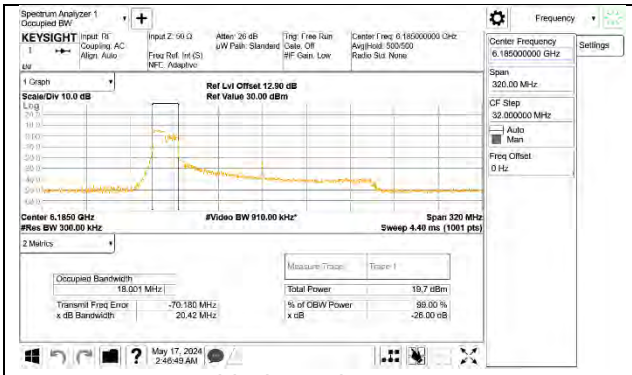


40MHz - Mid Channel – MRU52T-RU37 (UNII-5) – Ant 6

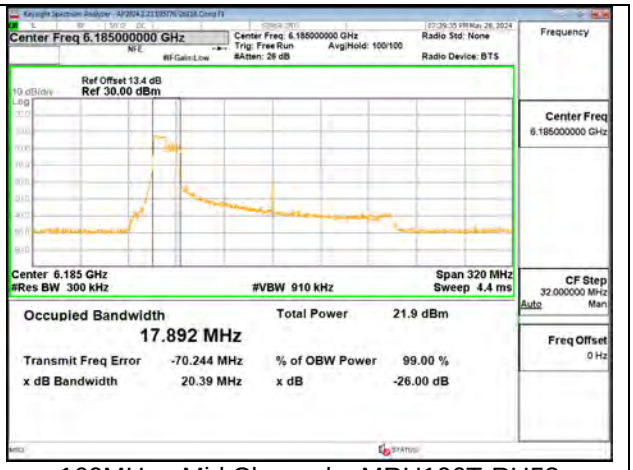


40MHz - Mid Channel – MRU52T-RU37 (UNII-5) – Ant 5

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



160MHz - Mid Channel – MRU106T-RU53 (UNII-5) – Ant 6



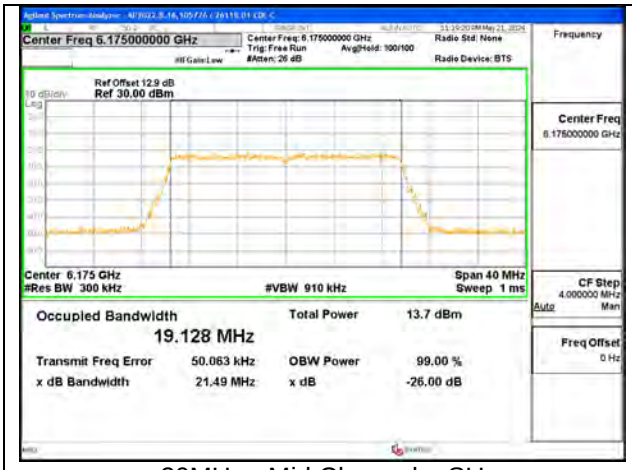
160MHz - Mid Channel – MRU106T-RU53 (UNII-5) – Ant 5

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

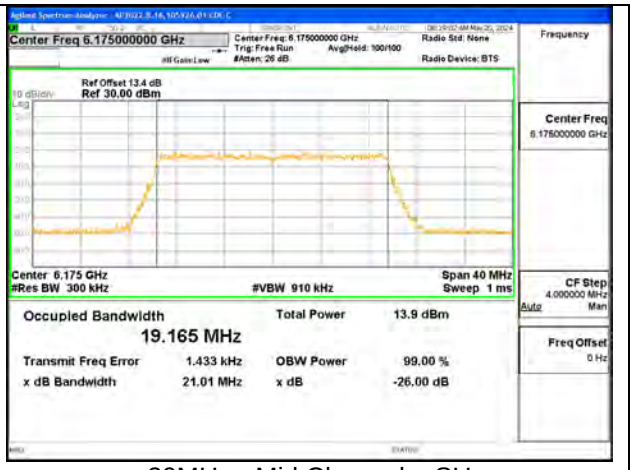
9.2.3. 802.11be MIMO SDM MODE IN THE UNII-5 BAND

UNII-5 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20 MHz	5955	1	SU	--	21.21	21.72	19.1470	19.0891
			106+26	82	20.74	20.08	18.1000	18.0772
				83	20.94	20.60	18.2720	18.1101
	6175	45	SU	--	21.49	21.01	19.1280	19.1650
			106+26	82	21.02	19.64	18.1000	18.0770
				83	21.25	19.96	18.3000	18.0922
	6415	93	SU	--	21.43	21.80	19.0580	19.1169
			106+26	82	20.83	19.84	18.1650	18.1024
				83	21.06	20.68	18.3000	18.0922
40 MHz	5965	3	SU	--	41.45	38.05	38.04	38.05
			52	37	19.99	19.77	18.185	18.018
				41	25.8	23.9	20.509	20.298
				44	21.74	20.09	18.421	18.053
	6165	43	SU	--	41.01	40.88	38.031	38.017
			52	37	20.54	19.97	18.125	18.043
				41	26.21	24.01	20.857	19.938
				44	21.99	19.87	18.41	18.053
	6405	91	SU	--	40.96	41.07	37.98	37.965
			52	37	20.62	19.69	18.127	17.914
				41	25.33	23.51	20.714	19.986
				44	22.28	20.08	18.388	18.0369
80MHz	5985	7	SU	--	82.05	83.52	77.48	77.6155
			242	61	41.44	41.12	20.2779	19.4191
				62	38.78	41.76	20.448	19.6416
				64	29.77	29.65	20.5359	19.618
	6145	39	SU	--	83.52	83.68	77.6254	77.5659
			242	61	25.59	27.55	19.655	19.7158
				62	30.89	33.66	19.773	19.6845
				64	36.48	31.68	20.7044	19.549
	6385	87	SU	--	80.84	83.68	77.566	77.511
			242	61	30.32	29.35	19.4	13.359
				62	37.74	29.42	19.605	19.623
				64	27.19	28	20.4008	19.5843
160MHz	6025	15	SU	--	169.92	168.64	157.2151	157.001
			106	53	20.21	24	18.072	17.6701
				S60	23.63	23.04	18.188	17.8574
	6185	47	SU	--	169.6	168.32	157.331	157.1451
			106	53	20.41	21.12	18.032	17.7759
				S60	23.03	23.04	18.103	17.6546
	6345	79	SU	--	169.6	168.96	157.254	157.4311
			106	53	20.02	21.44	18.008	17.9752
				S60	24.98	21.44	18.2	17.8103

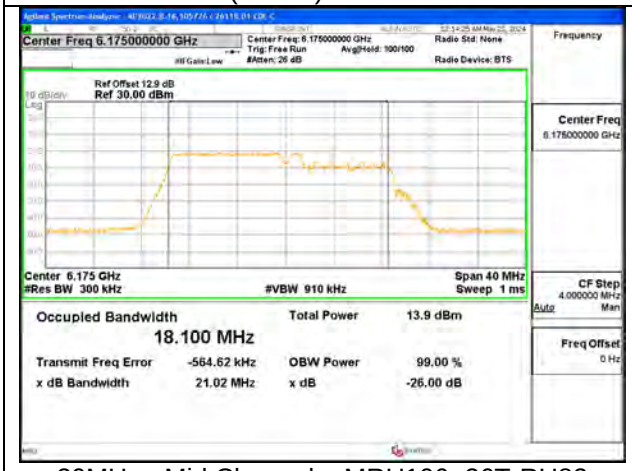
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



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



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



20MHz - Mid Channel – MRU106+26T-RU82
(UNII-5) – Ant 6

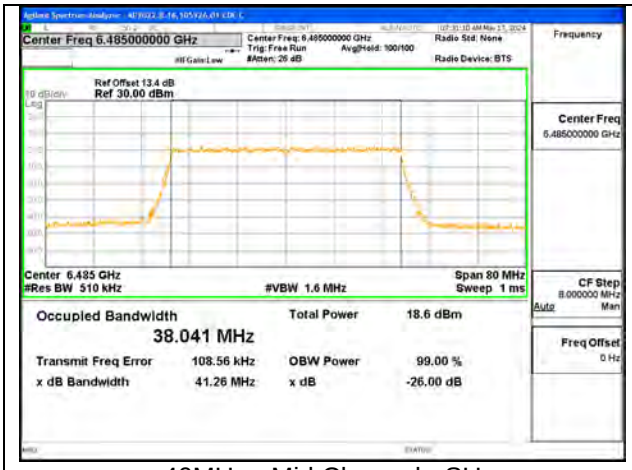
20MHz - Mid Channel – MRU106+26T-RU82
(UNII-5) – Ant 5

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

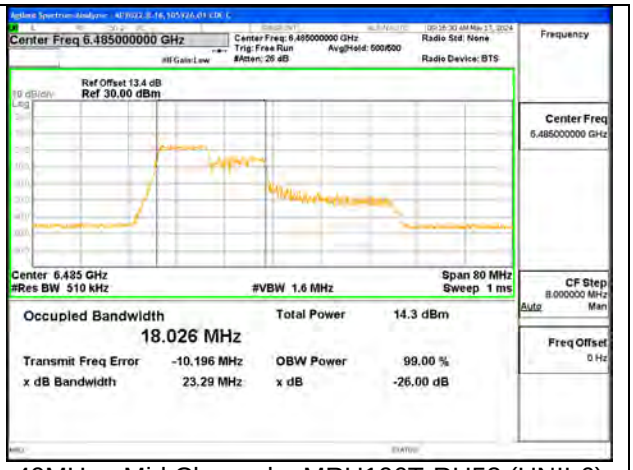
9.2.4. 802.11be SISO MODE IN THE UNII-6 BAND

UNII-6 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6435	97	SU	--	21.76	21.96	19.1018	19.06
			106+26	82	20.86	19.33	18.169	18.143
				83	21.01	21.12	18.222	18.319
	6475	105	SU	--	21.92	21.88	19.0468	19.1003
			106+26	82	20.81	20.74	18.163	18.139
				83	21.07	21.11	18.265	18.197
	6515	113	SU	--	21.8	22	19.0973	19.0247
			106+26	82	20.91	20.9	18.179	18.156
				83	20.98	21.08	18.28	18.232
40MHz	6445	99	SU	--	41.58	41.41	38.074	38.021
			106	53	25.52	25.36	18.3005	17.1567
				54	28.64	31.12	19.397	20.0292
				56	23.04	23.99	18.1	17.863
	6485	107	SU	--	42.32	41.26	38.0976	38.041
			106	53	27.28	23.29	18.2388	18.026
				54	30.08	29.36	19.4484	19.7156
				56	23.6	24.41	18.0678	17.838
	6525 (Straddle)	115	SU	--	42.64	42.4	38.0784	38.0237
			106	53	21.33	22.56	18.034	18.0686
				54	27.18	30.8	19.91	19.8429
				56	24.18	24.3	18.339	18.297
80MHz	6465	103	SU	--	84	84.16	77.3926	77.4997
			242	61	27.23	30.93	19.387	20.3211
				62	31.15	29.04	19.302	19.471
				64	33.35	29.91	19.456	19.251
160MHz	6505 (Straddle)	111	SU	--	169.92	163.5	157.5129	156.96
			106 + 26	82	21.37	20.67	17.974	17.964
				89	27.96	25.88	18.725	18.452
				S89	25.92	25.92	18.0176	18.1353

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



40MHz - Mid Channel - SU (UNII-6) – Ant 5



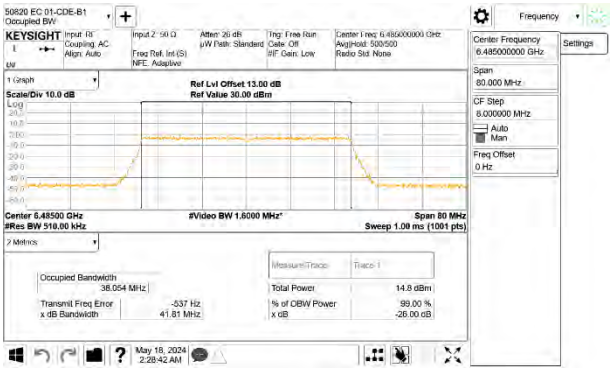
40MHz - Mid Channel – MRU106T-RU53 (UNII-6) – Ant 5

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

9.2.5. 802.11be MIMO CDD MODE IN THE UNII-6 BAND

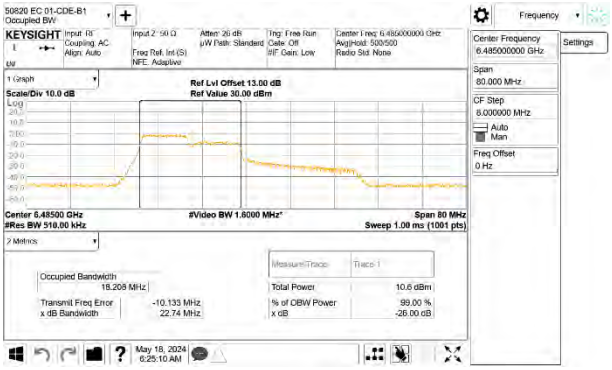
UNII-6 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6435	97	SU	--	21.76	21.96	19.09	19.0276
			106+26	82	20.86	19.33	18.112	18.124
				83	21.01	21.12	18.273	18.19
	6475	105	SU	--	21.92	21.88	19.081	19.0655
			106+26	82	20.81	20.74	18.168	18.133
				83	21.07	21.11	18.19	18.086
	6515	113	SU	--	21.8	22	19.088	19.0714
			106+26	82	20.91	20.9	18.114	18.114
				83	20.98	21.08	18.157	18.131
40MHz	6445	99	SU	--	42.8	41.53	38.054	38.003
			106	53	29.84	20.91	18.2187	17.912
				54	29.04	26.13	19.123	19.441
				56	23.98	20.65	18.176	17.973
	6485	107	SU	--	41.81	41.66	38.054	38.015
			106	53	22.74	19.89	18.208	17.906
				54	30.16	28.4	19.524	19.507
				56	24.59	20.7	18.259	17.943
	6525 (Straddle)	115	SU	--	42.48	42.48	38.0262	37.9755
			106	53	21.86	20.88	17.995	17.8802
				54	26.92	29.84	20.099	19.369
				56	25	20.13	18.31	17.873
80MHz	6465	103	SU	--	84.16	84.96	77.5308	77.5256
			242	61	26.46	33.44	19.225	19.9417
				62	34.41	34.64	19.634	19.7482
				64	27.01	25.24	18.966	19.279
160MHz	6505 (Straddle)	111	SU	--	163.9	168.96	157.16	157.3773
			106 + 26	82	20.57	19.76	17.885	17.831
				89	27.37	22.79	18.258	18.16
				S89	32.95	30.08	18.325	17.8437

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



40MHz - Mid Channel - SU (UNII-6) – Ant 6

40MHz - Mid Channel - SU (UNII-6) – Ant 5



40MHz - Mid Channel - MRU106T-RU53 (UNII-6) – Ant 6

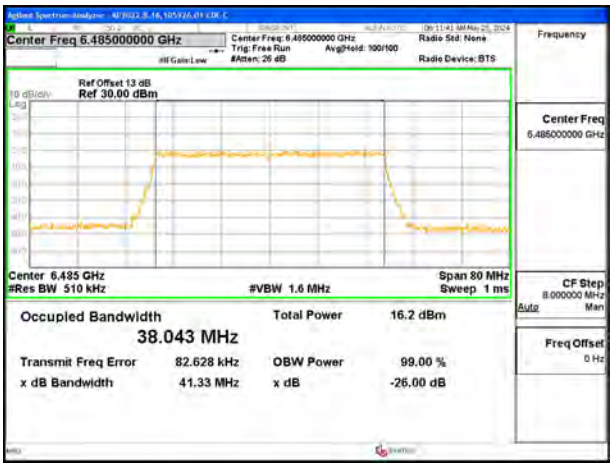
40MHz - Mid Channel - MRU106T-RU53 (UNII-6) – Ant 5

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

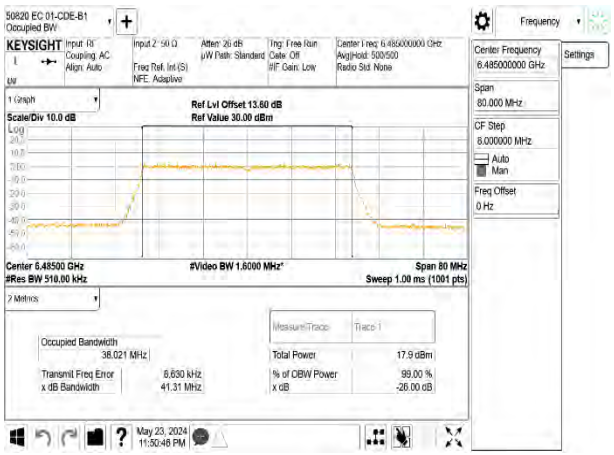
9.2.6. 802.11be MIMO SDM MODE IN THE UNII-6 BAND

UNII-6 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6435	97	SU	--	21.8	21.68	19.1214	19.069
			106+26	82	20.83	19.96	18.126	18.1198
				83	21.16	20	18.219	18.069
	6475	105	SU	--	21.96	21.76	19.1135	19.1173
			106+26	82	20.67	19.88	18.148	18.035
				83	21.16	19.97	18.313	18.143
	6515	113	SU	--	21.92	21.72	19.1127	19.0702
			106+26	82	20.87	20.03	18.108	17.985
				83	21.03	20.36	18.298	18.0831
40MHz	6445	99	SU	--	41.19	41.47	38.094	38.91
			106	53	22.96	20	17.9523	17.935
				54	26.6	22.66	20.41	19.254
				56	22.8	20.91	17.771	17.861
	6485	107	SU	--	41.33	41.31	38.043	38.021
			106	53	21	20.76	17.824	17.8488
				54	27.73	26	20.31	19.1164
				56	24.05	20.72	18.09	17.7928
	6525 (Straddle)	115	SU	--	41.51	42.16	37.9516	38.0793
			106	53	21.41	20.72	18.066	17.8035
				54	30.24	27.52	19.9056	19.4084
				56	24.34	20.16	18.261	18.01
80MHz	6465	103	SU	--	83.52	83.36	77.4975	77.4975
			242	61	26.23	29.76	19.2498	19.6191
				62	32.26	30.97	19.8099	19.7051
				64	31.62	28.23	20.5269	19.6818
160MHz	6505 (Straddle)	111	SU	--	168.64	168.64	157.0143	157.4081
			106 + 26	82	21.18	19.8	18.0356	17.8036
				89	27.7	21.43	18.6125	18.2078
				S89	23.25	20.38	18.2024	17.9828

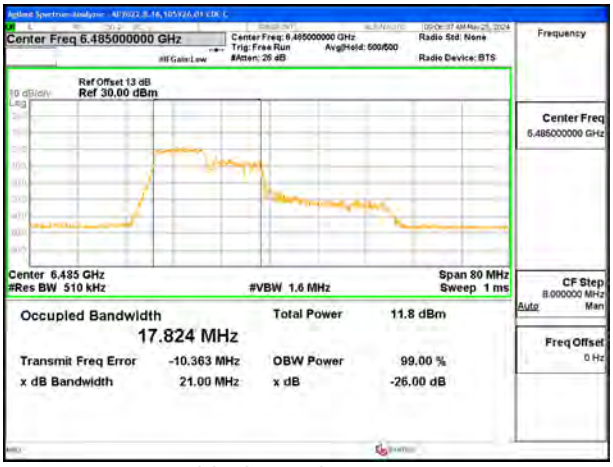
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



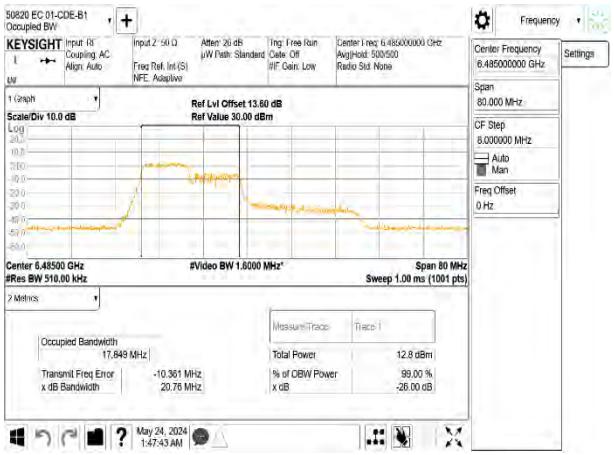
40MHz - Mid Channel - SU (UNII-6) – Ant 6



40MHz - Mid Channel - SU (UNII-6) – Ant 5



40MHz - Mid Channel - MRU106T-RU53 (UNII-6) – Ant 6



40MHz - Mid Channel - MRU106T-RU53 (UNII-6) – Ant 5

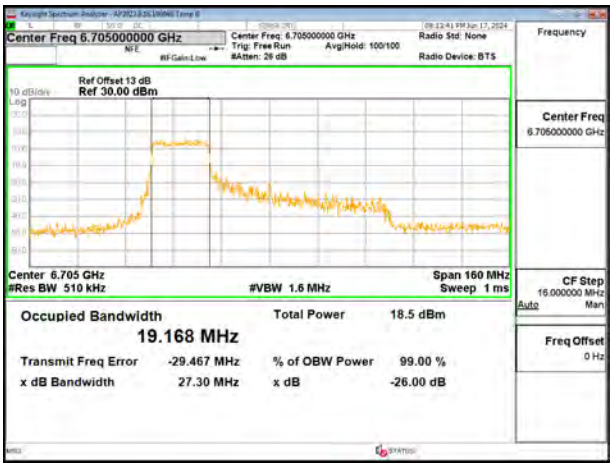
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.2.7. 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	--	21.52	21.28	19.054	19.072
			106 + 26	82	20.99	20.95	18.004	18.11
				83	21.07	21.08	18.286	18.284
	6715	153	SU	--	21.21	21.06	19.117	19.082
			106 + 26	82	20.94	20.83	17.821	18.106
				83	20.9	21.14	18.211	18.275
	6875 (Straddle)	185	SU	--	21.14	21.28	19.036	19.053
			106 + 26	82	21.01	20.59	18.14	18.075
				83	20.97	21.15	18.191	18.253
40MHz	6565	123	SU	--	40.96	41.16	38.067	38.058
			106T	53	20.82	21.27	17.994	17.977
				54	27.3	28.14	20.167	20.131
				56	21.48	22.39	18.048	18.21
	6685	147	SU	--	40.82	41.31	38.029	38.031
			106T	53	21.68	21.23	18.102	18.091
				54	26.15	28.4	19.402	20.369
				56	22.6	21.7	18.214	18.168
	6845	179	SU	--	41.47	40.95	37.989	38.101
			106T	53	21.45	21.19	18.11	18.03
				54	27.75	27.34	20.115	20.166
				56	22.09	22.21	18.121	18.135
80MHz	6545 (Straddle)	119	SU	--	81.39	81.89	77.44	77.491
			242	61	26.22	25.47	19.115	19.369
				62	35.56	31.95	20.293	19.69
				64	25.22	27.08	19.34	19.521
	6705	151	SU	--	81.59	81.96	77.609	77.616
			242	61	27.3	27.84	19.168	19.494
				62	33.62	30.02	19.654	19.377
				64	27.43	27.33	19.193	19.464
	6865 (Straddle)	183	SU	--	82.17	81.68	77.457	77.631
			242	61	28.17	28.64	19.268	19.133
				62	28.35	31.66	19.424	19.643
				64	30.09	27.93	19.758	19.372
160MHz	6665	143	SU	--	163.9	166.3	157.26	157.15
			106 + 26	82	20.62	20.22	17.884	17.977
				89	26.39	25.7	18.682	18.539
				S89	23.82	24.28	18.03	18.097
	6825 (Straddle)	175	SU	--	164.3	166.4	157.2	157.15
			106 + 26	82	19.83	23.5	17.865	17.985
				89	27.08	26.11	18.87	18.348
				S89	23.04	23.3	18.043	18.101

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

80MHz - Mid Channel - SU (UNII-7) – Ant 6



80MHz -Mid Channel– 242T-RU61 (UNII-7) – Ant 6

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

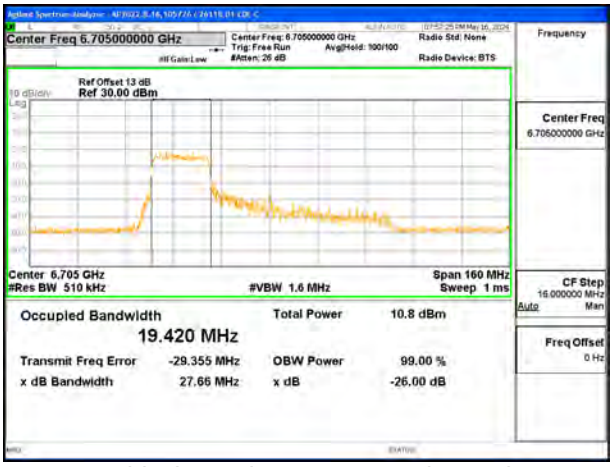
9.2.8. 802.11be MIMO CDD MODE IN THE UNII-7 BAND

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	--	21.17	21.5	19.04	19.082
			106 + 26	82	21.13	19.76	18.115	18.117
				83	21.02	20.07	18.243	18.109
	6715	153	SU	--	21.27	21.05	19.065	19.081
			106 + 26	82	20.83	19.7	18.141	18.126
				83	21.05	20.07	18.278	18.067
	6875 (Straddle)	185	SU	--	21.28	20.9	19.076	19.061
			106 + 26	82	20.57	19.82	18.14	18.066
				83	21.02	20.06	18.255	18.057
40MHz	6565	123	SU	--	41.54	40.73	37.948	37.981
			106T	53	21.19	20.37	17.943	17.978
				54	27.02	25.94	20.299	19.414
				56	21.76	20.86	18.055	17.954
	6685	147	SU	--	41.08	41.51	38.023	38.074
			106T	53	21.1	20.85	18.029	18.003
				54	28.89	25.47	20.173	19.539
				56	21.97	21.2	18.181	18.059
	6845	179	SU	--	41.38	41.12	38.026	38.073
			106T	53	21.26	21.16	17.979	17.878
				54	26.89	25.07	20.278	19.563
				56	22.27	21.21	18.233	18.008
80MHz	6545 (Straddle)	119	SU	--	81.89	80.94	77.564	77.57
			242	61	26.8	27.14	19.633	19.263
				62	27.97	27.21	19.396	19.361
				64	24.07	26.58	19.322	19.236
	6705	151	SU	--	81.54	81.08	77.551	77.614
			242	61	27.66	25.31	19.42	19.31
				62	26.96	26.72	19.615	19.283
				64	28.97	25.61	19.46	19.214
	6865 (Straddle)	183	SU	--	84.00	81.77	77.496	77.464
			242	61	26.34	26.92	19.659	19.248
				62	28.65	28.19	19.545	19.552
				64	28.46	24.01	19.549	19.363
160MHz	6665	143	SU	--	165.2	163.9	157.2	157.23
			106 + 26	82	21	22.63	18.016	18.172
				89	26.05	23.05	18.921	18.042
				S89	23.78	20.04	18.112	17.867
	6825 (Straddle)	175	SU	--	164.9	165.1	157.25	157.46
			106 + 26	82	20.36	19.84	17.835	17.77
				89	27.86	21.51	18.281	18.099
				S89	23.53	20.54	18.034	17.859

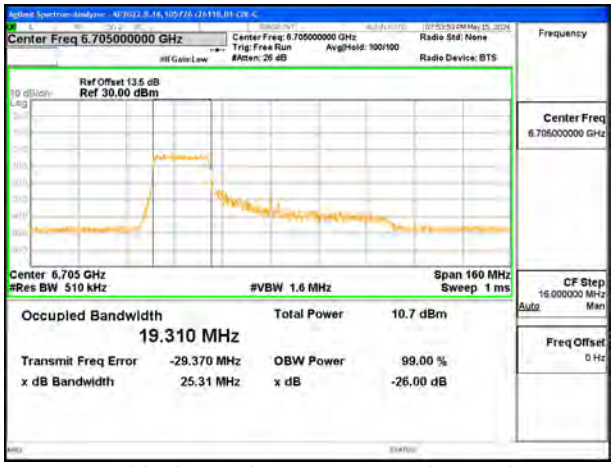
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

80MHz - Mid Channel - SU (UNII-7) – Ant 6

80MHz - Mid Channel - SU (UNII-7) – Ant 5



80MHz -Mid Channel– 242T-RU61 (UNII-7) – Ant 6



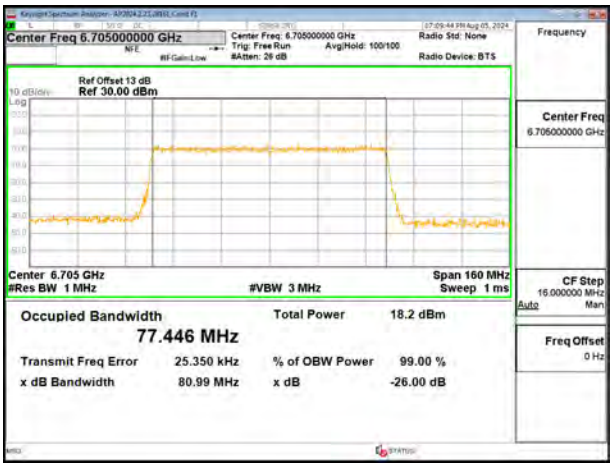
80MHz -Mid Channel– 242T-RU61 (UNII-7) – Ant 5

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

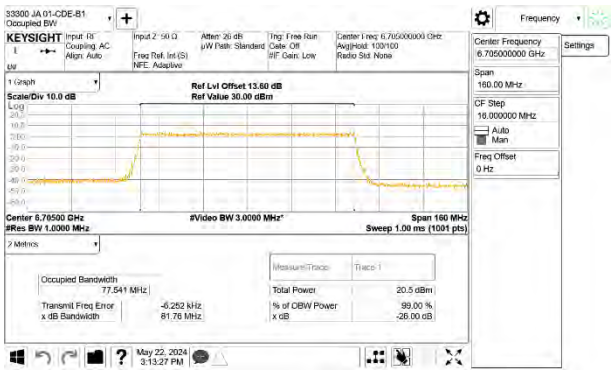
9.2.9. 802.11be MIMO SDM MODE IN THE UNII-7 BAND

UNII-7 (MIMO CDD)	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	--	20.96	21.06	19.054	19.082
			106T + 26	82	19.76	19.74	18.098	18.134
				83	21.13	20.07	18.295	18.087
	6715	153	SU	--	21.2	21.23	19.046	19.067
			106T + 26	82	21.02	19.8	18.152	18.102
				83	21.09	20.17	18.228	18.099
	6875	185	SU	--	21.15	20.97	19.085	19.079
			106T + 26	82	20.98	19.79	18.185	18.085
				83	21.17	20.17	18.281	18.085
40MHz	6565	123	SU	--	41.38	41.26	38.031	38.067
			106T	53	22.06	20.29	18.104	17.885
				54	26.8	26.36	19.327	19.796
				56	23.26	20.24	18.285	17.96
	6685	147	SU	--	40.9	41.08	38.0212	38.078
			106T	53	22.1	20.07	18.085	17.89
				54	27.08	26.36	19.461	19.519
				56	24.67	20.17	18.322	17.945
	6845	179	SU	--	41.06	41.26	38.0891	38.054
			106T	53	22.44	20.07	18.043	17.896
				54	26.52	26.35	20.194	19.515
				56	24.63	20.78	18.357	17.944
80MHz	6545 (Straddle)	119	SU	--	81.1	81.26	77.195	77.558
			242	61	27.38	30.58	19.798	19.793
				62	36.93	33.34	20.406	20.138
				64	30.1	30.03	19.449	20.03
	6705	151	SU	--	80.99	81.76	77.446	77.541
			242	61	28.35	28.79	19.536	19.892
				62	37.3	36.77	19.62	20.172
				64	27.45	27.94	19.768	19.734
	6865 (Straddle)	183	SU	--	81.64	81.46	77.24	77.327
			242	61	25.05	29.59	19.418	19.852
				62	34.62	35.71	19.809	20.038
				64	29.76	28.85	19.392	20.069
160MHz	6665	143	SU	--	164.1	163.6	157.11	157.2
			106 + 26	82	21.28	20.11	17.888	17.828
				89	27.54	24.01	18.598	18.163
				S89	23.33	21.21	18.142	17.956
	6825 (Straddle)	175	SU	--	164.8	163.6	157.28	157.16
			106 + 26	82	20.92	20.31	17.899	17.813
				89	27.68	22.31	18.78	17.992
				S89	24.68	20.83	18.105	17.929

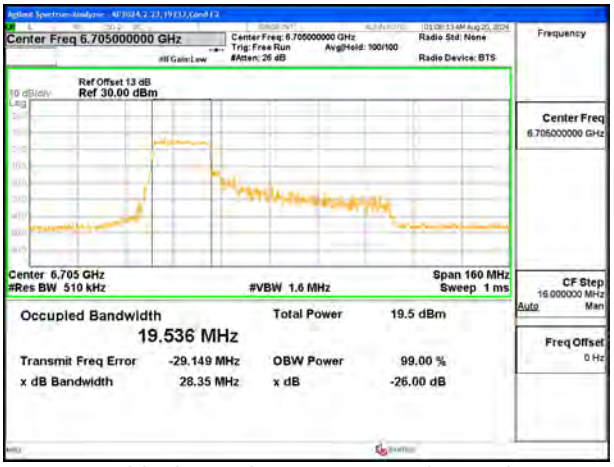
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



80MHz - Mid Channel - SU (UNII-7) – Ant 6



80MHz - Mid Channel - SU (UNII-7) – Ant 5



80MHz -Mid Channel– 242T-RU61 (UNII-7) – Ant 6

80MHz -Mid Channel– 242T-RU61 (UNII-7) – Ant 5

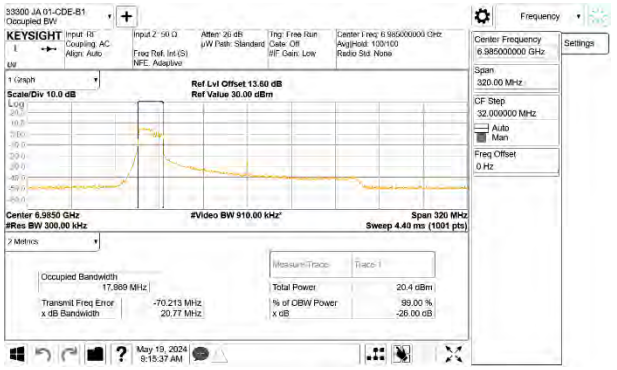
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.2.10. 802.11be SISO MODE IN THE UNII-8 BAND

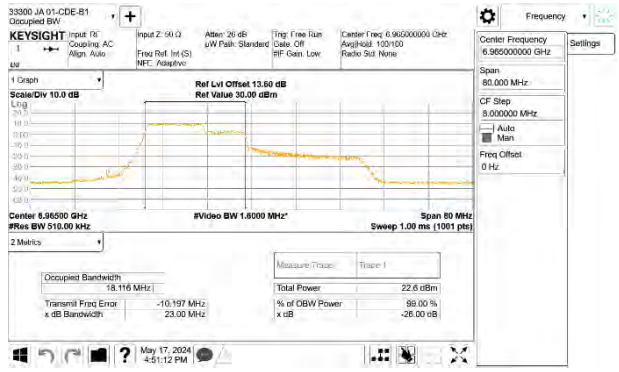
UNII-8 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6895	189	SU	--	21.29	21.45	19.0267	19.089
			106 + 26	82	20.34	20.93	18.134	18.129
				83	21.23	21.02	18.304	18.328
	6995	209	SU	--	21.38	21.34	19.0491	19.073
			106 + 26	82	20.58	21.1	18.073	18.15
				83	20.99	21.27	18.271	18.289
	7095	229	SU	--	21.2	21.47	19.0565	19.08
			106 + 26	82	20.98	20.88	18.154	18.177
				83	20.96	21.03	18.245	18.299
	7115	233	SU	--	21.09	21.24	19.059	19.037
40MHz	6885 (Straddle)	187	SU	--	41.59	42.48	38.027	38.0566
			106 + 26	82	24.76	25.01	18.058	18.033
				84	32.97	27.63	20.276	20.087
				85	24.65	24.79	18.327	18.385
	6965	203	SU	--	41.52	42.32	38.068	37.9659
			106 + 26	82	24.72	23	18.039	18.116
				84	30.11	29.65	20.095	20.082
				85	25.22	24.82	18.399	18.274
	7085	227	SU	--	41.57	42.48	38.059	37.9345
			106 + 26	82	25.08	24.74	18.196	18.144
				84	31.31	27.69	19.852	20.137
				85	24.48	24.59	18.343	18.332
80MHz	6945	199	SU	--	82.43	81.17	77.508	77.492
			106 + 26	82	21.33	21.65	18.089	18.136
				85	32.04	35.52	20.35	20.516
				89	24.5	26.2	18.411	18.834
	7025	215	SU	--	81.31	81.11	77.434	77.412
			106 + 26	82	21.51	21.38	18.068	18.001
				85	30	29.61	20.4	20.312
				89	25.64	25.4	18.945	18.567
160MHz	6985	207	SU	--	163.7	166.3	157.33	157.39
			106 + 26	82	21.23	20.77	17.943	17.969
				89	27.06	26.88	18.587	18.709
				S89	23.56	24.09	18.15	18.272

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

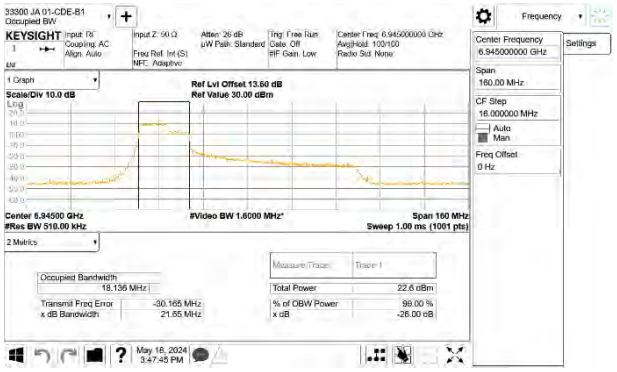
160MHz - Mid Channel - SU (UNII-8) – Ant 5



160MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5



40MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5



80MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5

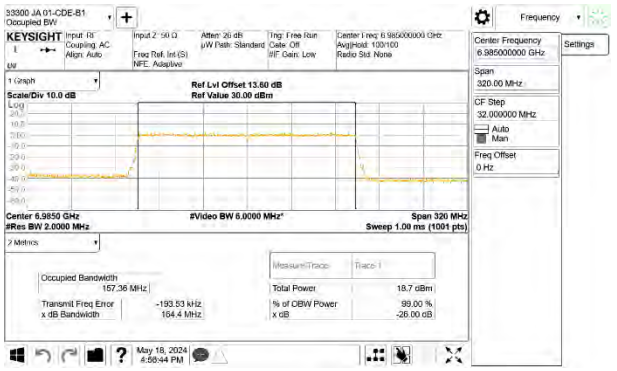
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.2.11. 802.11be MIMO CDD MODE IN THE UNII-8 BAND

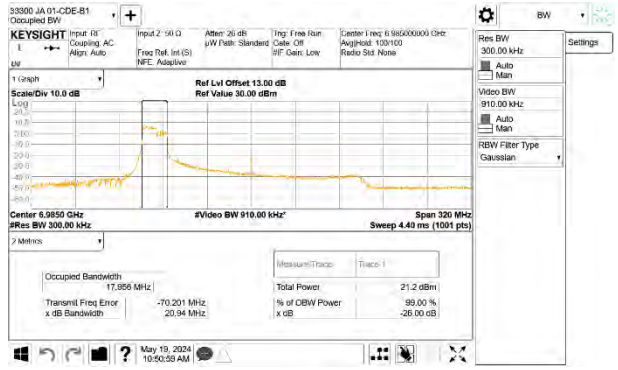
UNII-8 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6895	189	SU	--	21.2	21.07	19.109	19.045
			106 + 26	82	20.81	19.76	18.156	18.079
				83	20.89	19.99	18.296	18.093
	6995	209	SU	--	21.1	21.19	19.048	19.073
			106 + 26	82	20.83	19.75	18.19	18.106
				83	21.27	20.04	18.286	18.005
	7095	229	SU	--	21.27	20.96	19.039	19.032
			106 + 26	82	21.04	19.82	18.189	18.117
				83	21.14	20.04	18.354	18.111
	7115	233	SU	--	21.44	21.13	19.083	19.052
40MHz	6885 (Straddle)	187	SU	--	41.34	42.64	38.083	37.9298
			106 + 26	82	24.46	20.95	18.038	17.923
				84	28.07	26.13	20.175	19.521
				85	25.31	21.02	18.19	17.921
	6965	203	SU	--	41.17	42.48	37.956	37.9216
			106 + 26	82	24.25	20.87	18.107	17.917
				84	27.63	25.65	20.336	19.365
				85	24.86	20.86	18.418	17.958
	7085	227	SU	--	41.34	42.72	38.051	38.0238
			106 + 26	82	24.49	20.71	18.048	17.879
				84	28.79	27.59	20.088	19.456
				85	24.04	20.96	18.349	17.904
80MHz	6945	199	SU	--	82.11	81.07	77.57	77.489
			106 + 26	82	21.65	20.18	18.032	17.866
				85	31.61	26.02	19.893	18.961
				89	25.61	20.4	18.71	17.836
	7025	215	SU	--	81.95	81.41	77.441	77.462
			106 + 26	82	21.59	20.1	18.012	17.852
				85	24.71	23.66	18.534	18.839
				89	25.47	20.5	19.004	17.876
160MHz	6985	207	SU	--	164.3	164.4	157.15	157.36
			106 + 26	82	20.94	20.07	17.956	17.868
				89	26.97	22.3	18.687	18.049
				S89	24.41	20.5	18.161	17.835

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

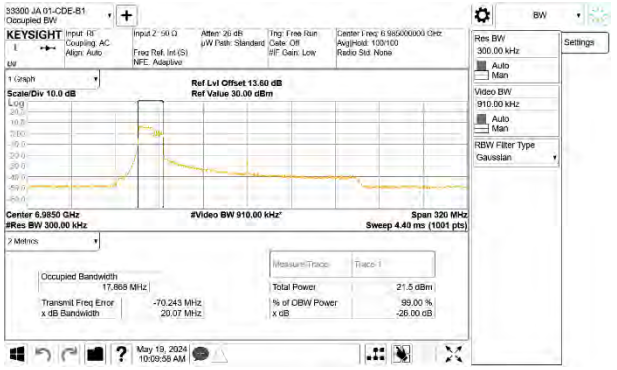
160MHz - Mid Channel - SU (UNII-8) – Ant 6



160MHz - Mid Channel - SU (UNII-8) – Ant 5

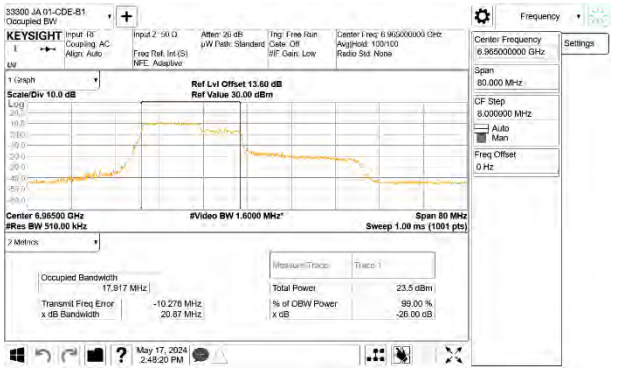


160MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 6



160MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5

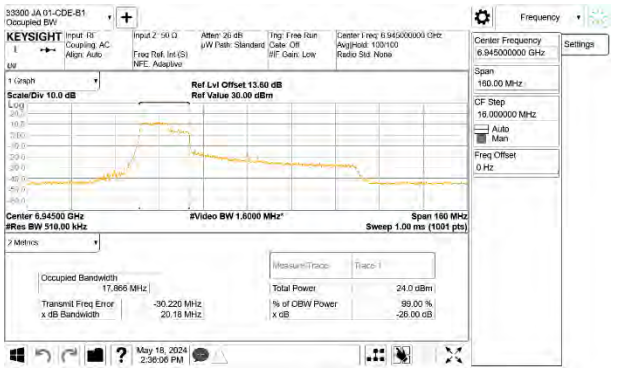
40MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 6



40MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5

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

80MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 6



80MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5

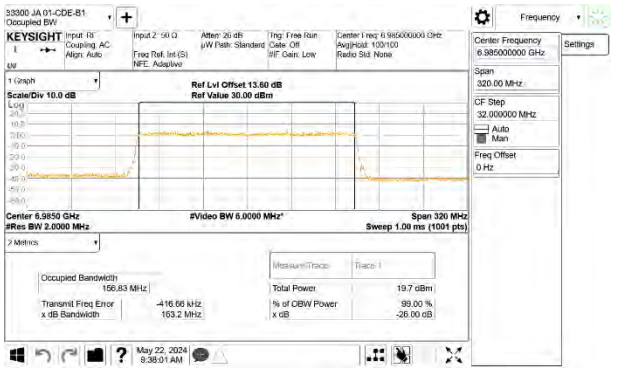
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

9.2.12. 802.11be MIMO SDM MODE IN THE UNII-8 BAND

UNII-8 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
					Ant 6	Ant 5	Ant 6	Ant 5
20MHz	6895	189	SU	--	21.08	21.08	19.08	19.152
			106 + 26	82	20.91	19.79	18.217	18.121
				83	21.05	20.28	18.347	18.077
	6995	209	SU	--	20.99	21.26	19.07	19.11
			106 + 26	82	20.58	19.76	18.187	18.097
				83	20.98	20.15	18.264	18.097
	7095	229	SU	--	21.1	21.63	19.057	19.231
			106 + 26	82	20.85	19.74	18.12	18.105
				83	21.06	20	18.363	18.089
	7115	233	SU	--	21	21.3	19.049	19.116
40MHz	6885 (Straddle)	187	SU	--	41.23	40.99	38.075	38.001
			106 + 26	82	24.47	20.04	18.106	17.942
				84	29.65	27.03	20.182	19.452
				85	24.68	20.88	18.351	17.937
	6965	203	SU	--	41.18	41.43	38.062	38.071
			106 + 26	82	24.13	20.97	18.122	17.926
				84	28.4	27.51	20.426	19.567
				85	24.97	20.81	18.58	17.901
	7085	227	SU	--	41.43	40.88	38.052	38.051
			106 + 26	82	23.78	20.71	18.128	17.942
				84	28.27	25.3	20.171	19.504
				85	24.42	20.32	18.29	17.945
80MHz	6945	199	SU	--	82.15	81.14	77.483	77.394
			106 + 26	82	21.22	20.71	18.044	17.876
				85	29.04	24.72	19.852	18.775
				89	23.94	20.38	18.709	17.891
	7025	215	SU	--	81.94	81.4	77.479	77.671
			106 + 26	82	21.47	19.88	18.007	17.856
				85	32.36	26.23	19.612	18.774
				89	25.1	20.24	18.5	17.853
160MHz	6985	207	SU	--	164.6	163.2	157.4	156.83
			106 + 26	82	20.64	20.07	17.933	17.829
				89	24.09	22.11	18.444	17.96
				S89	24.38	20.59	18.147	17.926

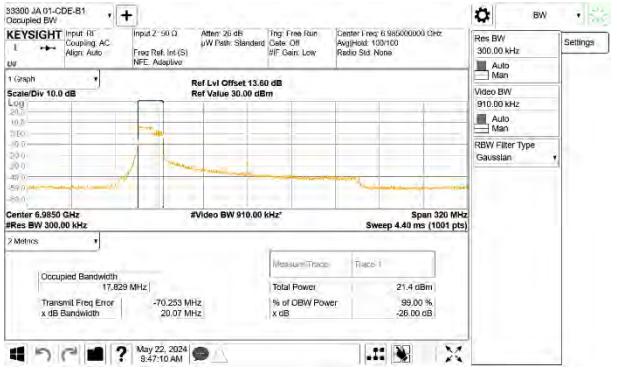
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

160MHz - Mid Channel - SU (UNII-8) – Ant 6



160MHz - Mid Channel - SU (UNII-8) – Ant 5

160MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 6



160MHz - Mid Channel – 106 + 26 RU82 (UNII-8) – Ant 5

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

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

RESULTS

ID:	32543	Date:	5/16/2024

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.

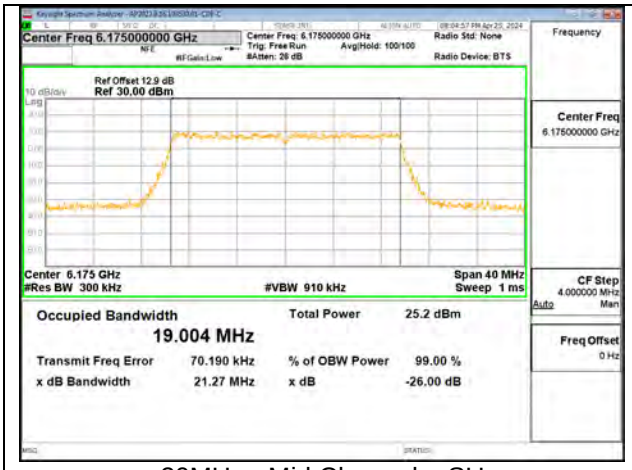
The tests performed on this device show that both 99% and 26dB bandwidths are less than 320 MHz. for all supported channel bandwidths.

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

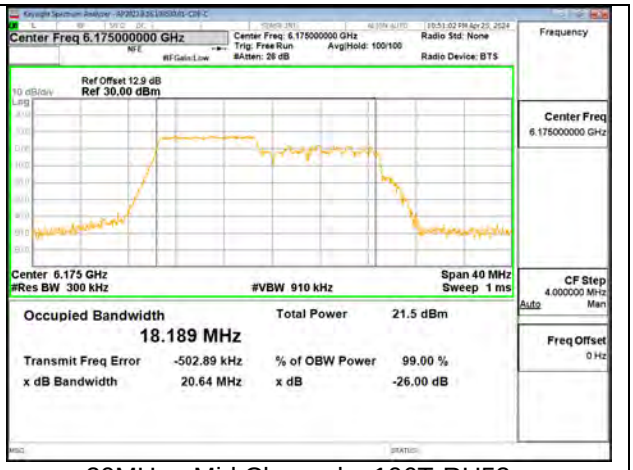
9.3.1. 802.11be SISO MODE IN THE UNII-5 BAND

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	5955	1	SU	--	21.54	21.43	19.1170	19.0450
			106	53	20.59	20.46	18.2100	18.2160
				54	21.03	21.01	18.1060	18.3120
	6175	45	SU	--	21.27	21.21	19.0040	19.0630
			106	53	20.64	20.55	18.1890	18.2430
				54	20.69	20.82	17.8550	18.2680
	6415	93	SU	--	21.47	21.41	19.0610	19.0740
			106	53	20.80	20.61	18.2150	18.0760
				54	21.00	20.80	18.2650	18.2850
40 MHz	5965	3	SU	--	41.41	41.61	38.0150	38.0210
			242T	61	28.62	28.73	19.8700	19.2870
				62	29.77	28.57	19.8820	19.2840
	6165	43	SU	--	41.81	41.18	38.0920	37.9580
			242T	61	30.86	29.59	19.8700	19.3670
				62	34.44	27.59	19.7020	19.3670
	6405	91	SU	--	41.80	40.95	38.1000	38.0220
			242T	61	30.73	35.60	19.8530	19.3650
				62	31.08	28.92	19.9100	19.2450
80MHz	5985	7	SU	--	82.48	82.39	77.4990	77.5400
			242T	61	28.91	25.87	19.3860	18.1360
				62	38.84	35.13	20.3630	19.5420
				64	29.25	28.59	20.4250	19.3780
	6145	39	SU	--	82.06	81.41	77.5770	77.5640
			242T	61	28.03	27.64	19.5700	19.4480
				62	36.30	36.20	20.3790	19.5620
				64	31.27	28.27	19.5170	19.5250
	6385	87	SU	--	82.49	81.96	77.5400	77.4820
			242T	61	29.02	25.97	20.4970	19.3670
				62	30.27	31.37	19.4030	19.5130
				64	29.85	30.23	20.6660	19.4750
160MHz	6025	15	SU	--	166.00	164.40	157.2100	157.0900
			242T	61	31.36	24.61	22.0800	19.5680
				62	35.99	29.97	21.3940	19.5750
				S64	31.24	27.96	20.2770	19.7310
	6185	47	SU	--	165.40	163.70	157.4200	157.0300
			242T	61	31.14	29.42	22.3130	19.6230
				62	34.40	36.36	19.4520	19.6890
				S64	31.49	28.73	22.8780	19.7100
	6345	79	SU	--	165.40	165.20	157.1700	157.3500
			242T	61	31.53	31.33	21.6450	19.6400
				62	33.69	30.98	21.4370	19.8680
				S64	31.00	26.74	22.8960	19.4160

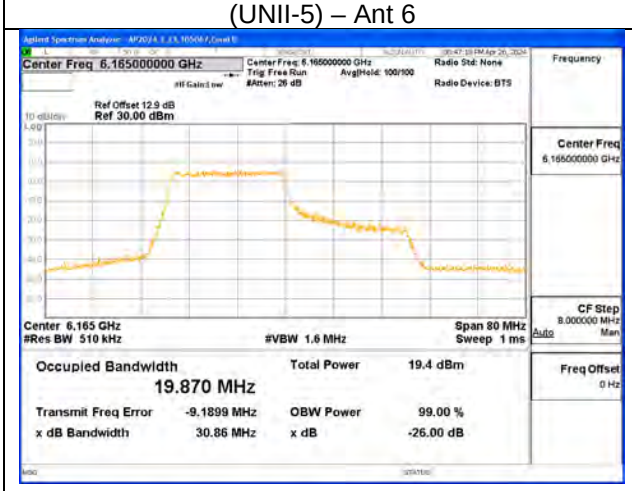
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



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



20MHz - Mid Channel – 106T-RU53 –
(UNII-5) – Ant 6



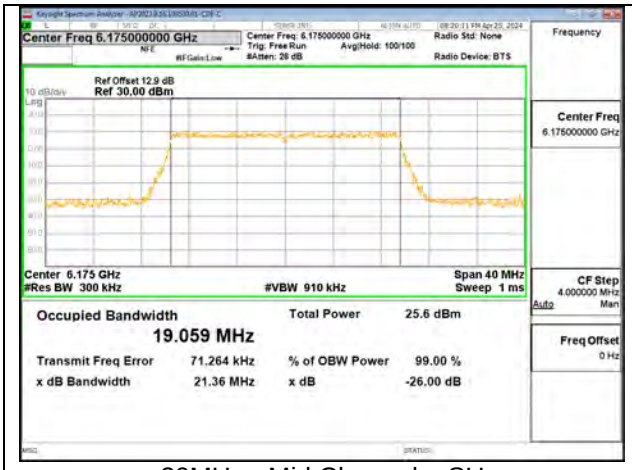
40MHz - Mid Channel – 242T-RU61 –
(UNII-5) – Ant 6

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

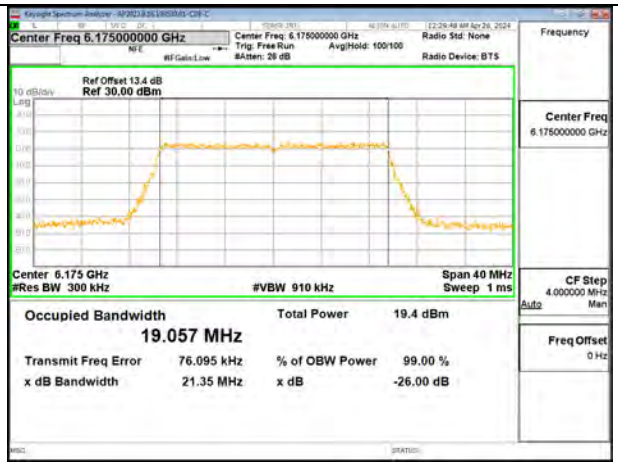
9.3.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND

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	5955	1	SU	--	21.12	21.11	19.0750	19.0370
			106	53	20.52	19.90	18.1620	18.0800
				54	20.81	20.09	18.3300	18.0950
	6175	45	SU	--	21.36	21.35	19.0590	19.0570
			106	53	20.58	20.03	18.2280	18.0810
				54	20.92	20.14	18.2460	18.0600
	6415	93	SU	--	21.17	21.08	19.0790	19.0420
			106	53	20.53	19.88	17.9120	18.0690
				54	20.84	19.99	18.2910	18.0760
40 MHz	5965	3	SU	--	41.66	41.52	38.0730	37.9880
			242T	61	30.13	28.52	19.5770	19.1720
				62	29.05	27.87	19.5780	19.2770
	6165	43	SU	--	41.82	41.83	38.0230	38.0630
			242T	61	30.56	26.62	19.8506	19.2010
				62	31.35	27.90	19.8460	19.2060
	6405	91	SU	--	41.70	41.54	38.0540	37.9850
			242T	61	28.19	25.51	19.3490	19.2380
				62	28.37	25.97	19.7290	19.1900
80MHz	5985	7	SU	--	82.00	81.10	77.5650	77.4270
			242T	61	28.42	26.07	20.7010	19.3480
				62	36.03	30.40	20.4180	19.4550
				64	30.58	31.90	20.0780	19.1290
	6145	39	SU	--	82.27	81.34	77.6130	77.5890
			242T	61	28.28	27.50	20.3150	19.3960
				62	39.06	33.19	20.3890	19.4400
				64	31.57	26.36	20.6800	19.2100
	6385	87	SU	--	82.43	81.68	77.6090	77.4510
			242T	61	32.01	27.20	20.7650	19.2000
				62	38.35	31.91	20.2610	19.5720
				64	30.22	25.57	20.7050	19.3070
160MHz	6025	15	SU	--	164.90	164.40	156.8700	157.1800
			242T	61	29.56	24.89	20.7400	19.5170
				62	31.12	32.56	19.5540	19.5630
				S64	29.00	26.18	19.5210	19.4800
	6185	47	SU	--	164.70	164.10	157.1300	157.2500
			242T	61	29.06	27.50	21.1250	19.4440
				62	27.06	29.69	19.3900	19.5830
				S64	29.18	26.12	21.8910	19.2490
	6345	79	SU	--	165.90	163.60	157.2000	156.9800
			242T	61	30.11	26.28	20.7740	19.3160
				62	35.65	32.10	21.0090	19.5320
				S64	27.46	27.51	19.5080	19.2580

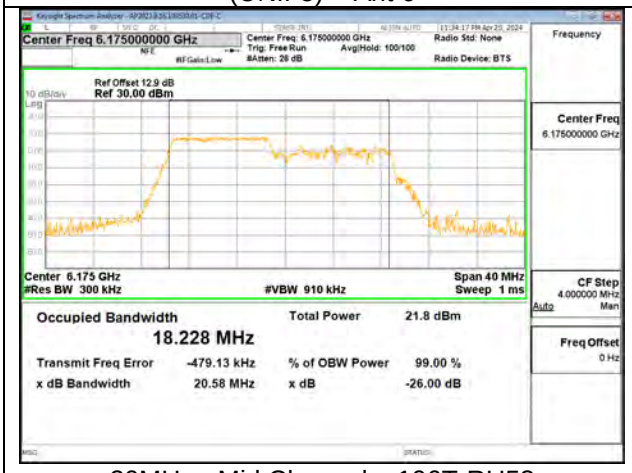
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



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

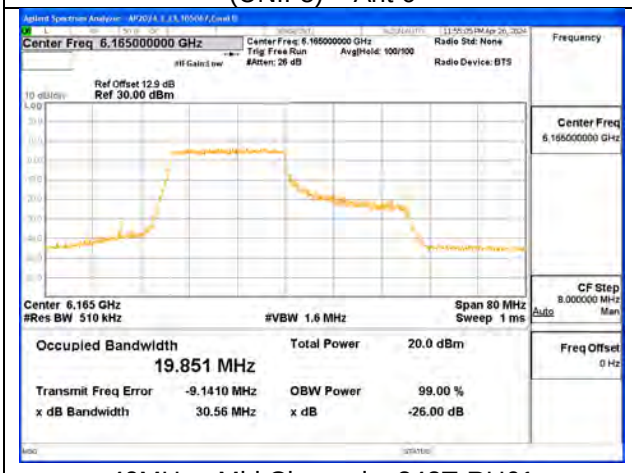


20MHz - Mid Channel – SU (UNII-5) – Ant 5

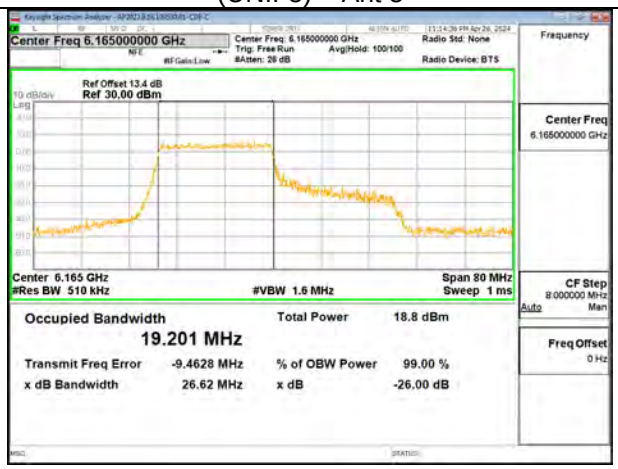


20MHz - Mid Channel – 106T-RU53 (UNII-5) – Ant 6

20MHz - Mid Channel – 106T-RU53 (UNII-5) – Ant 5



40MHz - Mid Channel – 242T-RU61 (UNII-5) – Ant 6



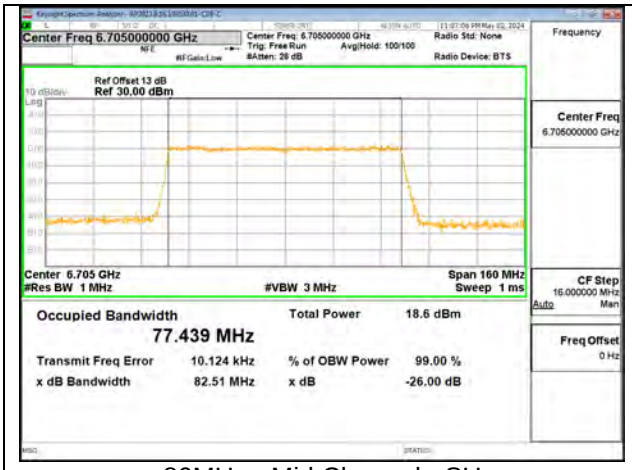
40MHz - Mid Channel – 242T-RU61 (UNII-5) – Ant 5

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

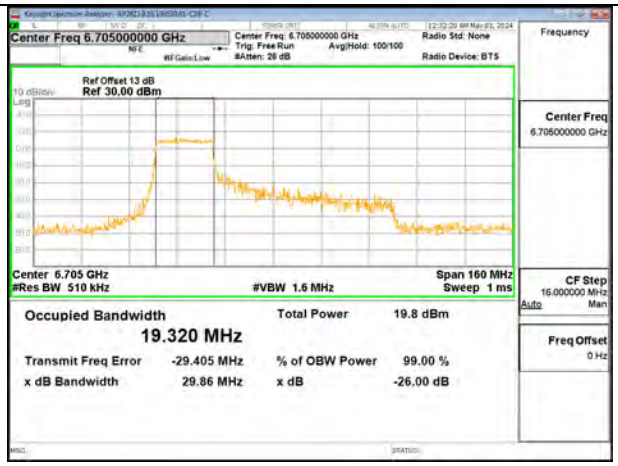
9.3.3. 802.11be SISO MODE IN THE UNII-7 BAND

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	21.15	19.1380	19.1190
			106	53	20.69	20.57	18.2360	18.1830
				54	20.98	20.90	18.3600	18.2910
	6715	149	SU	--	21.09	21.18	19.0680	19.1160
			106	53	20.76	20.68	18.2490	18.1990
				54	21.02	20.94	18.3670	18.2280
	6855	181	SU	--	21.99	21.44	19.2100	19.0870
			106	53	20.79	20.49	18.2210	18.1820
				54	20.72	20.74	18.3130	18.2740
40MHz	6565	123	SU	--	41.37	41.45	38.0170	38.0050
			242T	61	31.54	27.24	19.4100	19.3480
				62	29.20	31.46	19.2730	19.3150
	6685	147	SU	--	41.24	41.50	38.0170	38.0210
			242T	61	33.56	35.81	19.9540	19.2430
				62	30.38	30.00	19.8880	19.2910
	6845	179	SU	--	43.56	41.40	38.1650	38.0670
			242T	61	30.80	29.02	19.6560	19.4410
				62	29.94	32.43	20.1980	19.3700
80MHz (FCC)	6625	135	SU	--	82.16	82.09	77.7070	77.5060
			242T	61	29.78	30.56	19.5980	19.4700
				62	29.35	34.06	19.6660	19.4580
				64	30.33	24.67	19.2960	19.5310
80MHz	6705	151	SU	--	82.51	82.24	77.4390	77.4420
			242T	61	29.86	26.97	19.3200	19.6910
				62	33.27	30.82	19.6770	19.4160
				64	26.82	29.87	19.4190	19.5500
	6785	167	SU	--	82.25	81.83	77.5610	77.4520
			242T	61	27.95	25.68	19.5260	19.0490
				62	32.88	33.34	19.5760	19.5110
				64	32.75	28.25	19.3120	19.8500
160MHz	6665	143	SU	--	165.70	165.80	156.8800	157.0700
			242T	61	28.10	30.37	19.3860	19.7530
				62	33.18	29.08	19.9340	19.5710
				S64	27.75	27.47	19.8060	19.6280

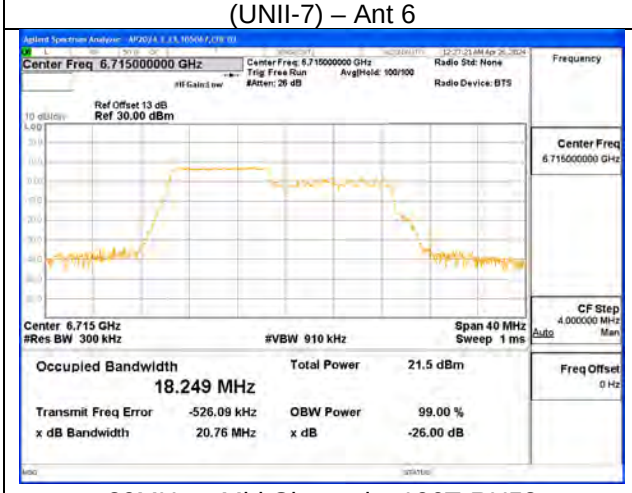
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



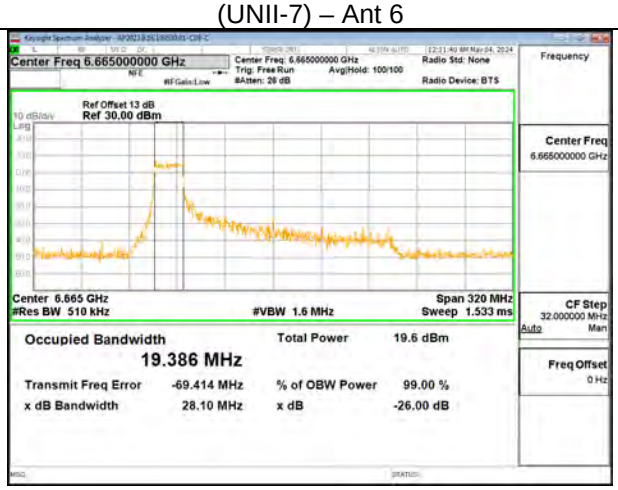
80MHz - Mid Channel - SU
(UNII-7) – Ant 6



80MHz - Mid Channel – 242T-RU61
(UNII-7) – Ant 6



20MHz – Mid Channel – 106T-RU53
(UNII-7) – Ant 6



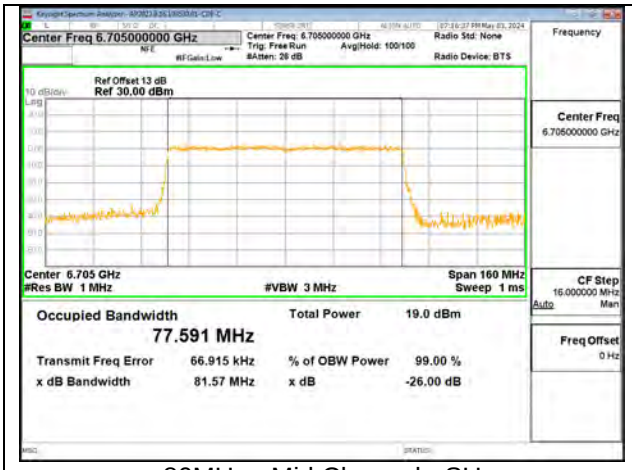
160MHz - Mid Channel – 242T-RU61
(UNII-7) – Ant 6

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

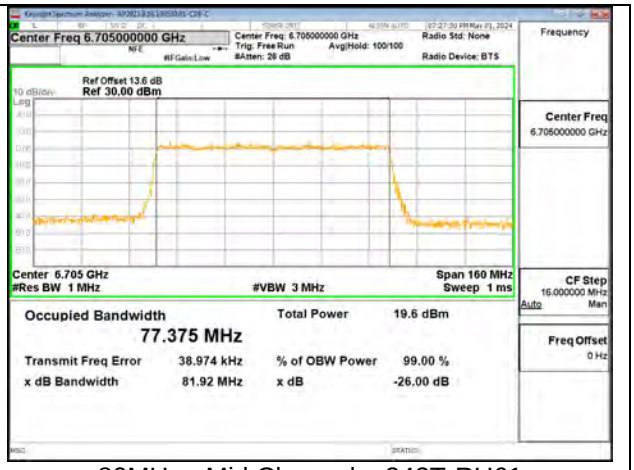
9.3.4. 802.11be MIMO CDD MODE IN THE UNII-7 BAND

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	--	21.42	21.34	19.1570	19.1550
			106	53	20.53	19.74	18.2240	18.1010
				54	20.85	20.09	18.3220	18.0180
	6715	149	SU	--	32.14	20.85	19.2330	19.0530
			106	53	23.68	19.84	18.3250	18.1210
				54	21.02	20.18	18.2950	18.0700
	6855	181	SU	--	28.29	21.15	19.2130	19.0720
			106	53	20.64	19.98	18.2070	18.0920
				54	20.90	20.40	18.3660	18.1240
40MHz	6565	123	SU	--	41.42	41.44	38.0310	38.0250
			242T	61	28.37	27.26	19.2780	19.2630
				62	26.44	27.04	19.3140	19.2250
	6685	147	SU	--	41.33	41.28	38.2210	38.0170
			242T	61	32.53	25.28	19.9530	19.2730
				62	28.34	26.27	19.6740	19.2790
	6845	179	SU	--	41.85	41.13	38.1720	37.9990
			242T	61	37.21	33.63	19.7430	19.2840
				62	34.37	26.14	19.9860	19.2580
80MHz (FCC)	6625	135	SU	--	81.50	81.33	77.3530	77.3900
			242T	61	30.52	27.48	19.3290	19.2180
				62	31.67	33.03	19.5510	19.3170
				64	27.05	26.54	19.5400	19.2860
80MHz	6705	151	SU	--	81.57	81.92	77.5910	77.3750
			242T	61	31.04	27.07	19.5380	19.1660
				62	36.08	31.79	19.5430	19.3220
				64	27.89	25.04	19.4020	19.1770
	6785	167	SU	--	81.21	82.28	77.3790	77.4980
			242T	61	30.00	27.16	19.4090	19.2360
				62	31.93	28.14	19.4780	19.4670
				64	29.11	29.46	19.3750	19.2790
160MHz	6665	143	SU	--	164.50	165.50	157.2800	157.3800
			242T	61	29.01	25.53	19.8000	19.3900
				62	36.30	30.09	19.7010	19.4830
				S64	26.00	26.04	19.4730	19.4430

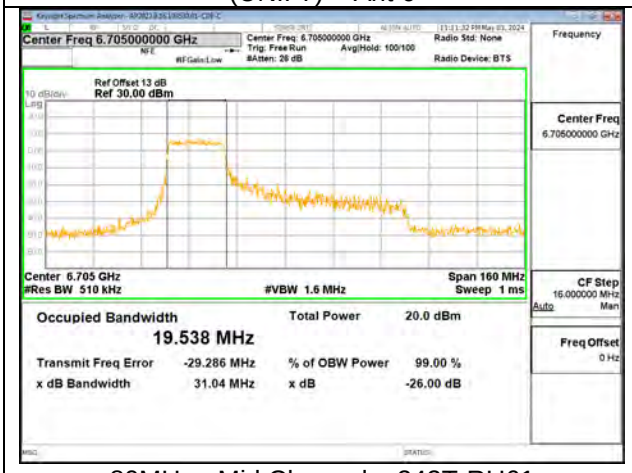
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



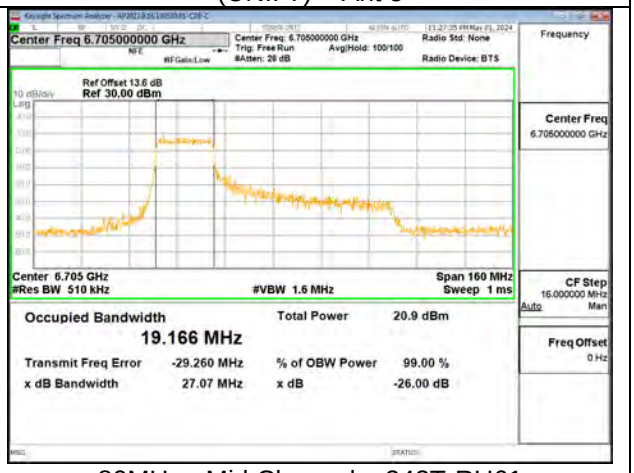
80MHz - Mid Channel - SU
(UNII-7) – Ant 6



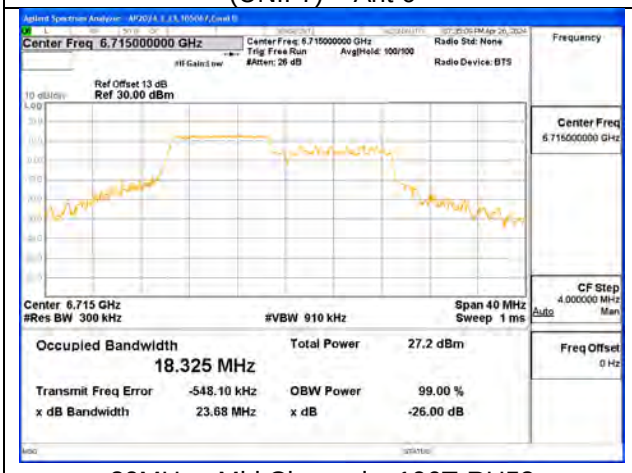
80MHz - Mid Channel – 242T-RU61
(UNII-7) – Ant 5



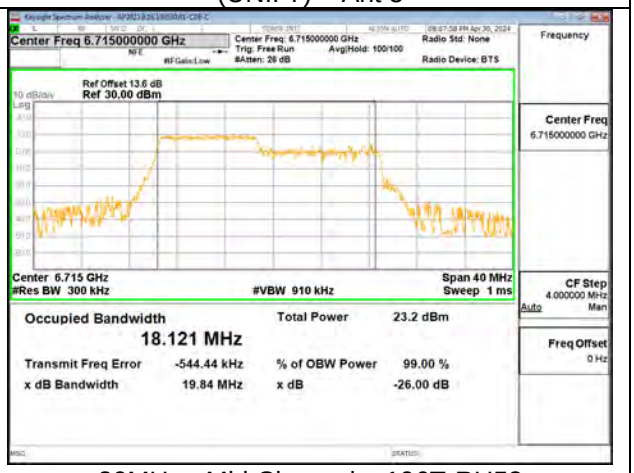
80MHz - Mid Channel – 242T-RU61
(UNII-7) – Ant 6



80MHz - Mid Channel – 242T-RU61
(UNII-7) – Ant 5

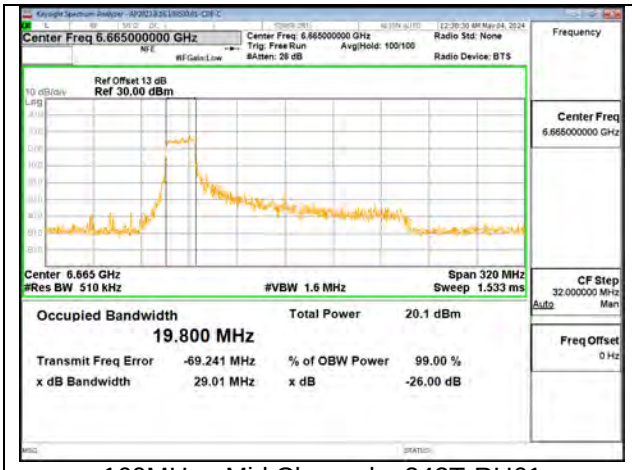


20MHz - Mid Channel – 106T-RU53
(UNII-7) – Ant 6

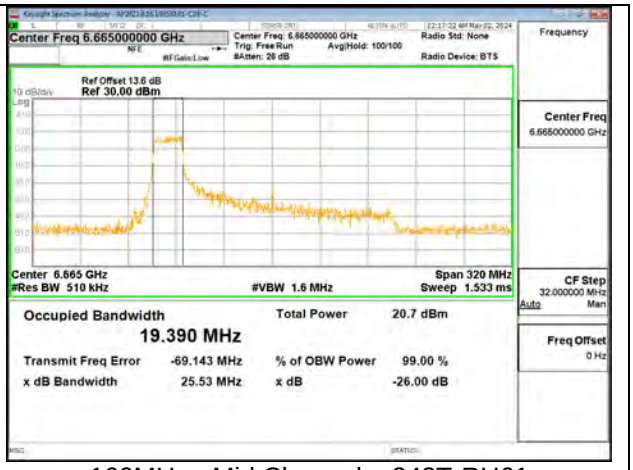


20MHz - Mid Channel – 106T-RU53
(UNII-7) – Ant 5

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



160MHz - Mid Channel – 242T-RU61 (UNII-7) – Ant 6



160MHz - Mid Channel – 242T-RU61 (UNII-7) – Ant 5

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

9.4. LP OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.925-7.125 GHz

(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 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

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

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 caculation. For the straddle channels, the higher antenna gains were chosen between two bands where straddle channels are located. The directional gains are as follows:

Frequency Range (MHz)	Sub-band (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5925 - 6425 UNII-5	Sub-band 1 (5955 - 6095)	0.30	-3.30	-1.14	1.70
	Sub-band 2 (6115 - 6255)	0.40	-2.70	-0.88	2.00
	Sub-band 3 (6275 - 6415)	-0.20	-3.80	-1.64	1.20
6425 - 6525 UNII-6	N/A	0.30	-3.50	-1.20	1.62
UNII-6/7 (Straddle Channel)	N/A	1.80	-3.50	-0.09	2.56
6525 - 6875 UNII-7	N/A	1.80	-3.90	-0.18	2.42
UNII-7/8 (Straddle Channel)	N/A	1.80	-3.00	0.03	2.74
6875 - 7125 UNII-8	N/A	-0.10	-3.00	-1.31	1.58

Directional Gain Calculation:

ANSI C63.10-2013 section 14.4.3

Uncorrelated directional gain=10*LOG((10^(Ant6/10)+10^(Ant5/10))/2)
Correlated directional Gain=10*LOG(((10^(Ant6/20)+10^(Ant5/20))^2)/2)

Sample Calculation at UNII-5 Band:

Ant6=.3, Ant5=-3.30

Uncorrelated Antenna gain=10log[(10^(.3/10)+10^(-3.3/10))/2]=-1.14 dBi

Correlated Antenna gain=10log[(10^(.3/20)+10^(-3.3/20))^2)/2]=1.7dBi

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

EIRP Calculation:

1Tx

EIRP corr'd power =Ant6 + Antenna Gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 82) Power=5.91 dBm

EIRP corr'd power = 5.91 + (.3) = 6.21 dBm

2Tx

EIRP corr'd power = 10*LOG(10^(Ant6/10)+10^(Ant5/10)) + correlated directional gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 82) Power=1.68 dBm, Ant5 Power=2.25

EIRP corr'd power =10*LOG(10^(1.68/10)+10^(2.25/10)) + (1.70) = 3.84 dBm

EIRP PSD Calculation:

1Tx

EIRP corr'd PSD = DCCF + Ant6 + Antenna Gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 82) PSD= -3.006 dBm/1MHz

EIRP corr'd PSD = 0 + (-3.006) + (.3) = -2.706 dBm/1MHz

2Tx (OFDMA)

EIRP corr'd PSD = (10*LOG(10^((DCCF +Ant6)/10)+10^((DCCF+Ant5)/10)))+correlated directional gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 82) PSD=-7.454 dBm/1MHz, Ant5 PSD=-6.755 dBm/1MHz

EIRP corr'd PSD = =(10*LOG(10^((0+(-6.761))/10)+10^((0+(-6.755))/10)))+(1.70) = -2.380 dBm/1MHz

2Tx (SDM)

EIRP corr'd PSD = =(10*LOG(10^((DCCF+Ant6)/10)+10^((DCCF +Ant5)/10)))+uncorrelated directional gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 82) PSD=-4.370 dBm/1MHz, Ant5 PSD=-2.412 dBm/1MHz

EIRP corr'd PSD = =(10*LOG(10^((0+(-4.370))/10)+10^((0+(-2.412))/10)))+(-1.14) = -1.411 dBm/1MHz

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

9.4.1. 802.11be SISO MODE IN THE UNII-5 BAND – LOW POWER

LP UNII-5 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 24dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -1 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	-3.30	5955	1	SU	--	8.23	9.74	8.53	6.44	-3.072	-1.707	-2.772	-5.007
							106 + 26	82	5.91	7.43	6.21	4.13	-3.006	-1.631	-2.706	-4.931
								83	5.97	7.47	6.27	4.17	-3.122	-1.57	-2.822	-4.870
			0.40	-2.70	6175	45	SU	--	8.17	8.46	**8.57**	5.76	-3.616	-3.371	-3.216	-6.071
							106 + 26	82	5.95	6.19	6.35	3.49	-3.554	-3.048	-3.154	-5.748
								83	5.96	6.23	6.36	3.53	-3.449	-3.102	-3.049	-5.802
			-0.20	-3.80	6415	93	SU	--	8.65	8.42	8.45	4.62	-3.112	-3.042	-3.312	-6.842
							106 + 26	82	6.45	6.15	6.25	2.35	-3.675	-3.069	-3.875	-6.869
								83	6.41	6.24	6.21	2.44	-3.247	-2.824	-3.447	-6.624
40MHz	0	0	0.30	-3.30	5965	3	SU	--	11.20	12.69	11.50	9.39	-3.487	-0.89	-3.187	-4.190
							52	37	1.89	3.49	2.19	0.19	-3.94	-1.057	-3.640	-4.357
								41	1.95	3.44	2.25	0.14	-3.56	-1.188	-3.260	-4.488
								44	1.95	3.49	2.25	0.19	-3.655	-1.146	-3.355	-4.446
			0.40	-2.70	6165	43	SU	--	11.23	11.42	**11.63**	8.72	-3.646	-3.015	-3.246	-5.715
							52	37	1.96	2.21	2.36	-0.49	-3.955	-3.217	-3.555	-5.917
								41	1.89	2.13	2.29	-0.57	-3.897	-2.599	-3.497	-5.299
								44	1.92	2.24	2.32	-0.46	-4.049	-2.808	-3.649	-5.508
			-0.20	-3.80	6405	91	SU	--	11.70	11.43	11.50	7.63	-3.144	-3.617	-3.344	-7.417
							52	37	2.44	2.19	2.24	-1.61	-3.865	-4.064	-4.065	-7.864
								41	2.47	2.23	2.27	-1.57	-3.561	-3.13	-3.761	-6.930
								44	2.45	2.22	2.25	-1.58	-3.358	-3.487	-3.558	-7.287
80MHz	0	0	0.30	-3.30	5985	7	SU	--	14.23	15.67	14.53	12.37	-3.185	-0.933	-2.885	-4.233
							242	61	8.21	9.72	8.51	6.42	-4.042	-1.371	-3.742	-4.671
								62	8.18	9.60	8.48	6.30	-3.402	-1.129	-3.102	-4.429
								64	8.19	9.74	8.49	6.44	-3.321	-0.961	-3.021	-4.261
			0.40	-2.70	6145	39	SU	--	14.18	14.41	**14.58**	11.71	-3.78	-2.38	-3.380	-5.080
							242	61	8.18	8.49	8.58	5.79	-3.678	-2.46	-3.278	-5.160
								62	8.20	8.34	8.60	5.64	-3.784	-2.755	-3.384	-5.455
								64	8.18	8.47	8.58	5.77	-3.645	-3.015	-3.245	-5.715
			-0.20	-3.80	6385	87	SU	--	14.67	14.47	14.47	10.67	-2.937	-3.804	-3.137	-7.604
							242	61	8.68	8.35	8.48	4.55	-3.315	-3.932	-3.515	-7.732
								62	8.69	8.42	8.49	4.62	-3.321	-3.855	-3.521	-7.655
								64	8.68	8.47	8.48	4.67	-3.048	-3.604	-3.248	-7.404
160MHz	0.1	0	0.30	-3.30	6025	15	SU	--	16.42	17.98	16.72	14.68	-3.334	-2.129	-2.934	-5.329
							106	53	5.23	6.72	5.53	3.42	-2.918	-1.263	-2.618	-4.563
								S60	5.20	6.61	5.50	3.31	-2.505	-1.59	-2.205	-4.890
			0.40	-2.70	6185	47	SU	--	16.40	16.71	**16.80**	14.01	-4.082	-3.255	-3.582	-5.855
							106	53	5.23	5.42	5.63	2.72	-3.006	-2.235	-2.606	-4.935
								S60	5.20	5.47	5.60	2.77	-2.926	-2.678	-2.526	-5.378
			-0.20	-3.80	6345	79	SU	--	16.97	16.62	16.77	12.82	-3.383	-3.602	-3.483	-7.302
							106	53	5.68	5.47	5.48	1.67	-2.478	-2.469	-2.678	-6.269
								S60	5.73	5.43	5.53	1.63	-2.461	-2.62	-2.661	-6.420

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

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

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

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

20MHz-Mid Channel-106+26T-RU82 (UNII-5) –Ant 6

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

9.4.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND – LOW POWER

LP 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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-1.14	1.7	5955	1	SU	--	3.91	4.54	**6.11**	-7.516	-6.874	-2.473
							106 + 26	82	1.68	2.25	3.84	-7.454	-6.755	-2.380
								83	1.71	2.36	3.92	-7.519	-6.563	-2.304
			-0.88	2	6175	45	SU	--	3.70	3.66	5.81	-7.906	-7.748	-2.816
							106 + 26	82	1.43	1.30	3.50	-7.684	-7.463	-2.562
								83	1.41	1.48	3.58	-7.716	-7.436	-2.563
			-1.64	1.2	6415	93	SU	--	4.45	3.87	5.54	-6.929	-7.573	-3.029
							106 + 26	82	2.17	1.65	3.29	-6.972	-7.455	-2.996
								83	2.22	1.70	3.34	-7.234	-7.229	-3.021
40MHz	0	0	-1.14	1.7	5965	3	SU	--	6.98	7.67	**9.21**	-7.453	-6.317	-2.138
							52	37	-2.29	-1.56	-0.04	-8.295	-6.085	-2.341
								41	-2.35	-1.64	-0.11	-7.854	-6.549	-2.442
								44	-2.30	-1.59	-0.06	-7.700	-6.521	-2.360
			-0.88	2	6165	43	SU	--	6.71	6.61	8.79	-8.207	-7.661	-2.915
							52	37	-2.55	-2.70	-0.49	-8.721	-7.592	-3.110
								41	-2.56	-2.63	-0.46	-8.454	-7.549	-2.968
								44	-2.55	-2.63	-0.46	-8.605	-7.658	-3.095
			-1.64	1.2	6405	91	SU	--	7.41	6.86	8.51	-7.513	-8.387	-3.718
							52	37	-1.78	-2.36	-0.69	-7.904	-8.648	-4.050
								41	-1.80	-2.39	-0.71	-7.502	-8.385	-3.711
								44	-1.85	-2.50	-0.79	-7.142	-8.343	-3.491
80MHz	0	0	-1.14	1.7	5985	7	SU	--	9.98	10.66	**12.20**	-7.427	-5.935	-1.907
							242	61	3.95	4.55	6.13	-7.602	-6.323	-2.205
								62	3.96	4.65	6.19	-7.357	-6.163	-2.009
								64	3.95	4.68	6.20	-7.316	-6.183	-2.002
			-0.88	2	6145	39	SU	--	9.67	9.69	11.81	-8.036	-7.483	-2.740
							242	61	3.73	3.56	5.78	-7.892	-7.491	-2.677
								62	3.68	3.66	5.80	-8.166	-7.494	-2.807
								64	3.72	3.52	5.75	-8.036	-7.454	-2.725
			-1.64	1.2	6385	87	SU	--	10.45	9.82	11.52	-7.295	-8.231	-3.528
							242	61	4.44	3.86	5.53	-7.78	-8.526	-3.927
								62	4.45	3.87	5.54	-7.426	-8.46	-3.702
								64	4.44	3.83	5.52	-7.172	-8.433	-3.547
160MHz	0.1	0	-1.14	1.7	6025	15	SU	--	12.20	12.80	**14.38**	-7.722	-5.929	-1.923
							106	53	0.91	1.71	3.20	-7.398	-6.658	-2.302
								S60	0.96	1.74	3.24	-7.651	-6.632	-2.401
			-0.88	2	6185	47	SU	--	11.92	11.84	14.01	-8.606	-8.106	-3.239
							106	53	0.65	0.67	2.79	-7.106	-7.172	-2.129
								S60	0.74	0.56	2.78	-7.794	-7.578	-2.674
			-1.64	1.2	6345	79	SU	--	12.68	12.20	13.82	-7.583	-7.852	-3.405
							106	53	1.45	0.85	2.53	-7.393	-8.06	-3.503
								S60	1.45	0.91	2.56	-7.419	-7.66	-3.328

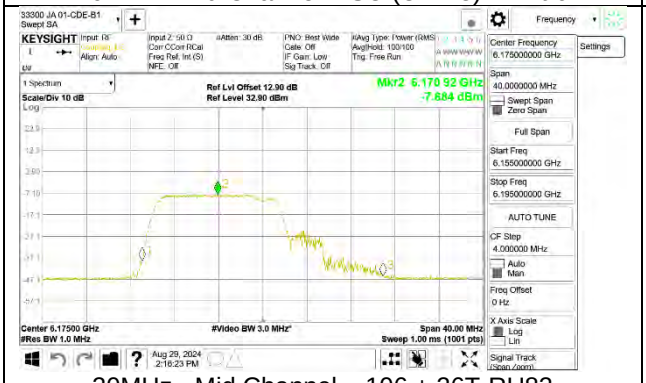
Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Correlated Antenna Gain (dBi)

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

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

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



20MHz - Mid Channel – 106 + 26T-RU82 (UNII-5) – Ant 6

20MHz - Mid Channel – 106 + 26T-RU82 (UNII-5) – Ant 5

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

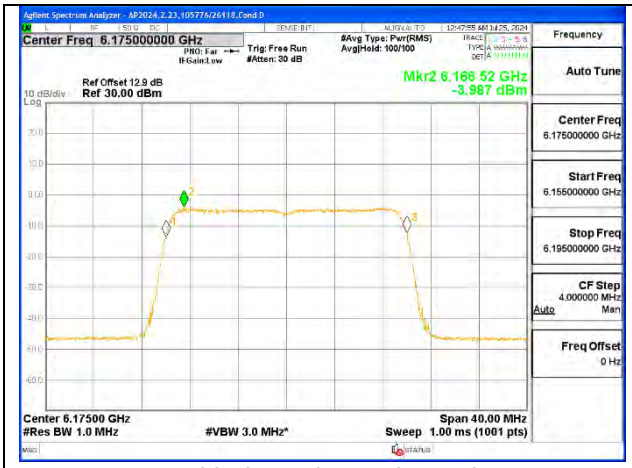
9.4.3. 802.11be MIMO SDM MODE IN THE UNII-5 BAND – LOW POWER

LP 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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0.11	0	-1.14	1.7	5955	1	SU	--	6.71	7.63	**9.06**	-3.394	-2.910	-1.165
							106 + 26	82	4.43	5.43	6.83	-4.370	-2.412	-1.411
								83	4.46	5.41	6.83	-3.222	-2.814	-1.143
			-0.88	2	6175	45	SU	--	6.45	6.60	8.66	-3.987	-4.711	-2.094
							106 + 26	82	4.24	4.37	6.44	-4.027	-4.524	-2.138
								83	4.17	4.40	6.42	-3.844	-4.403	-1.984
			-1.64	1.2	6415	93	SU	--	7.13	6.96	8.42	-3.184	-4.570	-2.342
							106 + 26	82	4.94	4.63	6.16	-2.768	-3.969	-1.957
								83	4.87	4.66	6.14	-2.708	-4.202	-2.021
40MHz	0.11	0	-1.14	1.7	5965	3	SU	--	9.72	10.65	**12.08**	-5.048	-2.940	-1.887
							52	37	0.45	1.42	2.83	-5.351	-3.310	-2.341
								41	0.43	1.37	2.80	-5.097	-3.304	-2.238
								44	0.39	1.36	2.77	-5.362	-3.334	-2.360
			-0.88	2	6165	43	SU	--	9.40	9.68	11.67	-4.164	-4.977	-2.311
							52	37	0.21	0.37	2.42	-4.364	-4.318	-2.211
								41	0.19	0.46	2.46	-4.207	-5.042	-2.474
								44	0.18	0.45	2.45	-3.919	-4.873	-2.240
			-1.64	1.2	6405	91	SU	--	10.11	9.92	11.39	-3.089	-4.684	-2.333
							52	37	0.89	0.63	2.13	-3.390	-5.106	-2.793
								41	0.88	0.69	2.16	-3.191	-5.478	-2.815
								44	0.82	0.63	2.10	-3.513	-5.031	-2.836
80MHz	0.12	0	-1.14	1.7	5985	7	SU	--	12.68	13.73	**15.11**	-4.630	-3.587	-2.087
							242	61	6.72	7.67	9.09	-5.046	-3.509	-2.340
								62	6.67	7.65	9.06	-4.854	-3.891	-2.476
								64	6.68	7.69	9.08	-4.830	-3.635	-2.321
			-0.88	2	6145	39	SU	--	12.46	12.51	14.62	-4.645	-4.886	-2.514
							242	61	6.43	6.55	8.62	-5.010	-5.163	-2.956
								62	6.46	6.60	8.66	-5.439	-4.886	-3.023
								64	6.45	6.72	8.72	-5.350	-4.922	-3.000
			-1.64	1.2	6385	87	SU	--	13.23	12.78	14.38	-4.187	-4.567	-2.883
							242	61	7.23	6.72	8.35	-4.474	-4.502	-3.118
								62	7.20	6.75	8.35	-4.536	-4.827	-3.309
								64	7.18	6.81	8.37	-4.512	-4.855	-3.310
160MHz	0.17	0	-1.14	1.7	6025	15	SU	--	14.91	15.85	**17.28**	-5.347	-4.321	-2.763
							106	53	3.71	4.64	6.07	-4.724	-3.887	-2.415
								S60	3.72	4.61	6.06	-4.665	-3.686	-2.278
			-0.88	2	6185	47	SU	--	14.68	14.94	16.94	-5.480	-5.038	-2.953
							106	53	3.44	3.73	5.72	-4.800	-4.512	-2.523
								S60	3.46	3.74	5.73	-4.767	-4.874	-2.690
			-1.64	1.2	6345	79	SU	--	15.41	15.08	16.62	-5.088	-5.189	-3.598
							106	53	4.21	3.90	5.43	-4.065	-4.909	-3.096
								S60	4.17	3.98	5.45	-3.852	-4.946	-2.994

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

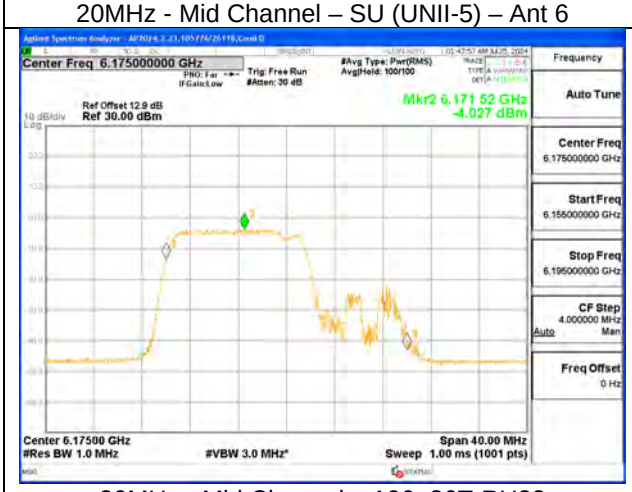
EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Un-Correlated Antenna Gain (dBi)

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

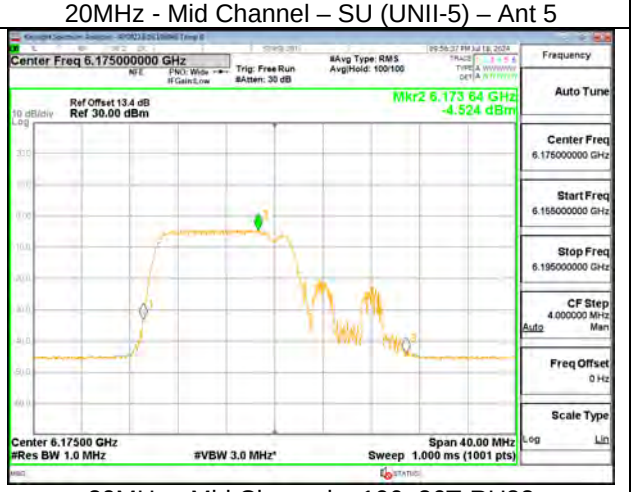


20MHz - Mid Channel – SU (UNII-5) – Ant 6

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



20MHz - Mid Channel – 106+26T-RU82 (UNII-5) – Ant 6



20MHz - Mid Channel – 106+26T-RU82 (UNII-5) – Ant 5

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

9.4.4. 802.11be SISO MODE IN THE UNII-6 BAND – LOW POWER

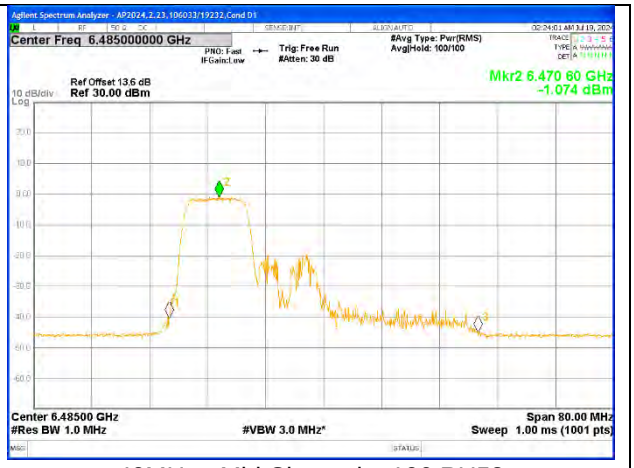
LP UNII-6 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 24dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -1 dBm/MHz EIRP)	
	SU	Partial RU							Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
20MHz	0	0	0.30	-3.50	6435	97	SU	--	8.49	9.07	**8.79**	5.57	-3.529	-1.095	-3.229	-4.595
							106 + 26	82	6.19	6.94	6.49	3.44	-3.016	-1.029	-2.716	-4.529
								83	6.20	6.86	6.50	3.36	-3.070	-1.202	-2.770	-4.702
					6475	105	SU	--	8.46	9.20	8.76	5.70	-3.620	-1.282	-3.320	-4.782
							106 + 26	82	6.24	6.96	6.54	3.46	-2.903	-1.006	-2.603	-4.506
								83	6.18	6.92	6.48	3.42	-2.895	-1.047	-2.595	-4.547
					6515	113	SU	--	8.45	9.03	8.75	5.53	-3.377	-1.685	-3.077	-5.185
							106 + 26	82	6.19	6.90	6.49	3.40	-2.711	-1.087	-2.411	-4.587
								83	6.23	6.97	6.53	3.47	-2.803	-1.162	-2.503	-4.662
40MHz	0	0	0.30	-3.50	6445	99	SU	--	11.46	12.17	11.76	8.67	-2.572	-1.111	-2.272	-4.611
							106	53	5.45	6.14	5.75	2.64	-2.540	-1.207	-2.240	-4.707
								54	5.45	6.11	5.75	2.61	-2.566	-1.103	-2.266	-4.603
								56	5.39	6.04	5.69	2.54	-2.863	-1.012	-2.563	-4.512
					6485	107	SU	--	11.47	12.06	**11.77**	8.56	-2.706	-1.199	-2.406	-4.699
							106	53	5.45	6.08	5.75	2.58	-2.420	-1.074	-2.120	-4.574
								54	5.45	6.15	5.75	2.65	-2.374	-1.028	-2.074	-4.528
								56	5.44	6.16	5.74	2.66	-2.688	-1.197	-2.388	-4.697
			1.80	-3.50	6525 (Straddle)	115	SU	--	9.72	11.04	11.52	7.54	-4.556	-2.827	-2.756	-6.327
							106	53	3.68	5.18	5.48	1.68	-4.348	-2.968	-2.548	-6.468
								54	3.69	5.13	5.49	1.63	-4.024	-2.928	-2.224	-6.428
								56	3.72	5.21	5.52	1.71	-4.392	-2.731	-2.592	-6.231
80MHz	0	0	0.30	-3.50	6465	103	SU	--	14.41	15.04	**14.71**	11.54	-3.141	-2.349	-2.841	-5.849
							242	61	8.46	9.19	8.76	5.69	-3.669	-2.489	-3.369	-5.989
								62	8.41	9.12	8.71	5.62	-3.647	-2.538	-3.347	-6.038
								64	8.46	9.18	8.76	5.68	-3.397	-2.645	-3.097	-6.145
160MHz	0.1	0	1.80	-3.50	6505 (Straddle)	111	SU	--	14.97	16.44	**16.77**	12.94	-5.625	-3.267	-3.725	-6.667
							106 + 26	82	4.41	5.93	6.21	2.43	-4.808	-2.465	-3.008	-5.965
								89	4.45	5.99	6.25	2.49	-5.158	-3.058	-3.358	-6.558
								S89	4.46	5.89	6.26	2.39	-5.253	-3.320	-3.453	-6.820

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

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

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

40MHz - Mid Channel – SU (UNII-6) – Ant 5



40MHz - Mid Channel – 106 RU53 (UNII-6) – Ant 5

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

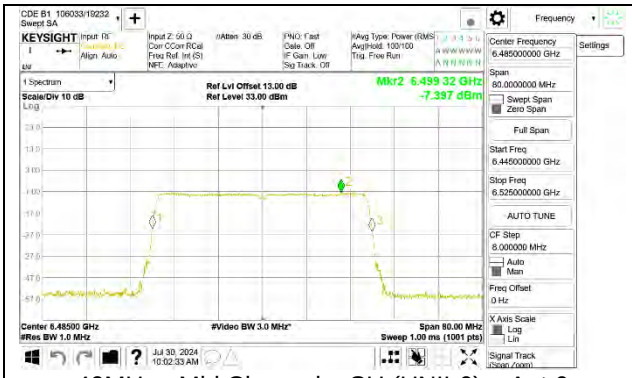
9.4.5. 802.11be MIMO CDD MODE IN THE UNII-6 BAND – LOW POWER

LP CDD UNII-6 (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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-1.2	1.62	6435	97	SU	--	3.96	4.34	5.96	-7.893	-5.439	-1.865
							106 + 26	82	1.69	2.10	3.71	-7.320	-5.796	-1.861
								83	1.74	2.04	3.70	-7.461	-5.706	-1.865
					6475	105	SU	--	3.98	4.30	5.95	-7.602	-5.697	-1.916
							106 + 26	82	1.69	2.07	3.69	-7.180	-5.850	-1.834
								83	1.73	2.18	3.77	-7.394	-5.871	-1.936
					6515	113	SU	--	3.92	4.38	**5.97**	-7.499	-6.018	-2.065
							106 + 26	82	1.68	2.12	3.72	-7.111	-5.825	-1.790
								83	1.69	2.11	3.72	-7.382	-5.963	-1.985
40MHz	0	0	-1.2	1.62	6445	99	SU	--	6.92	7.33	8.94	-7.430	-5.443	-1.694
							106	53	0.92	1.47	3.01	-7.343	-6.086	-2.039
								54	0.97	1.42	3.01	-7.258	-6.035	-1.973
								56	0.92	1.39	2.97	-7.052	-6.406	-2.087
					6485	107	SU	--	6.97	7.37	8.98	-7.397	-5.813	-1.903
							106	53	0.99	1.46	3.04	-6.924	-6.592	-2.125
								54	0.91	1.37	2.96	-7.009	-6.213	-1.962
								56	0.91	1.33	2.94	-7.211	-6.872	-2.408
			-0.09	2.56	6525 (Straddle)	115	SU	--	6.19	7.04	**9.56**	-7.998	-6.584	-1.663
							106	53	0.19	1.06	3.57	-8.055	-6.543	-1.663
								54	0.21	1.16	3.63	-7.807	-6.379	-1.464
								56	0.23	1.11	3.61	-7.831	-6.794	-1.711
80MHz	0	0	-1.2	1.62	6465	103	SU	--	9.95	10.34	**11.96**	-7.435	-7.196	-2.684
							242	61	3.94	4.30	5.93	-7.695	-7.375	-2.902
								62	3.95	4.29	5.93	-7.696	-7.570	-3.002
								64	3.92	4.38	5.97	-7.455	-7.581	-2.887
160MHz	0.1	0	-0.09	2.56	6505 (Straddle)	111	SU	--	11.48	12.35	**14.86**	-8.790	-7.576	-2.470
							106 + 26	82	0.95	1.91	4.38	-7.907	-6.150	-1.370
								89	0.97	1.93	4.40	-8.151	-6.741	-1.819
								S89	0.91	1.94	4.38	-8.077	-6.993	-1.931

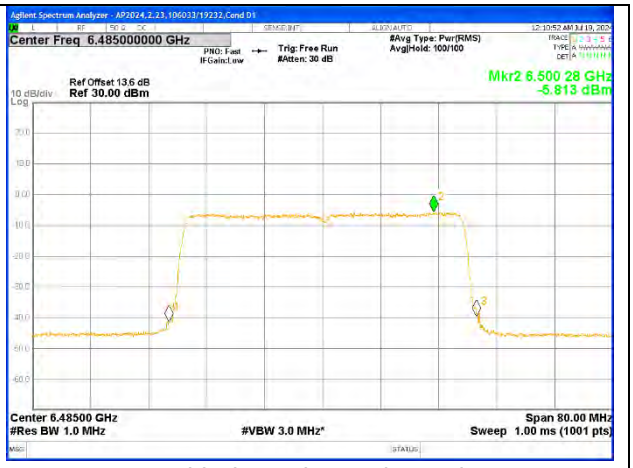
Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Correlated Antenna Gain (dBi)

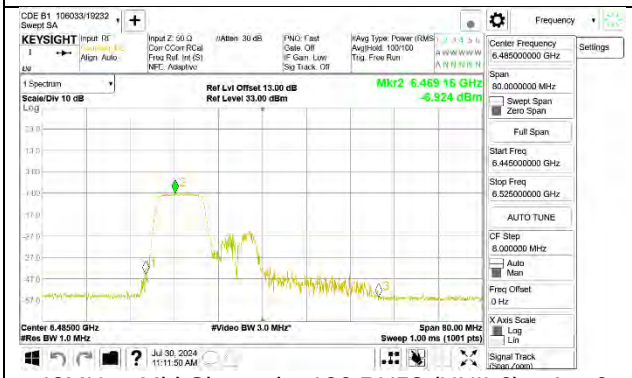
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888



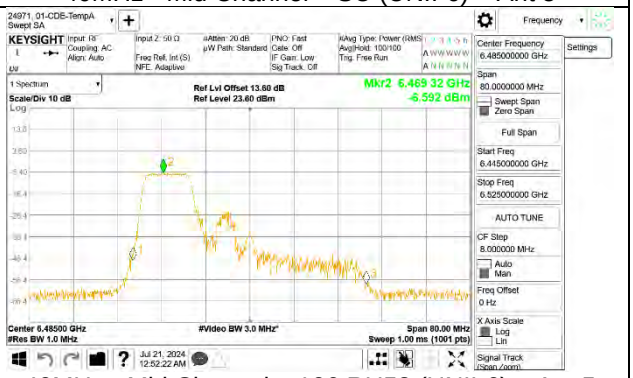
40MHz - Mid Channel – SU (UNII-6) – Ant 6



40MHz - Mid Channel – SU (UNII-6) – Ant 5



40MHz - Mid Channel – 106 RU53 (UNII-6) – Ant 6



40MHz - Mid Channel – 106 RU53 (UNII-6) – Ant 5

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

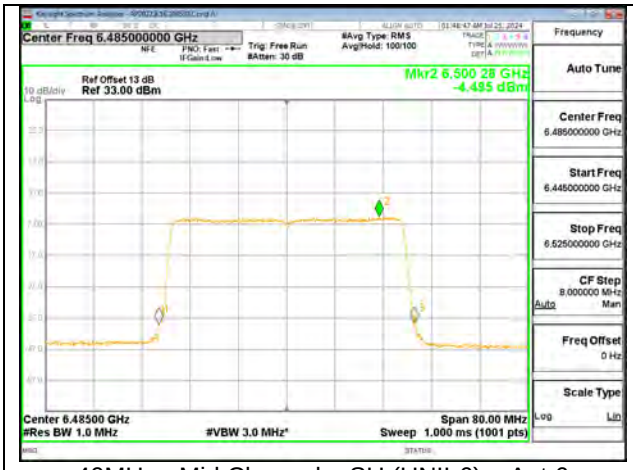
9.4.6. 802.11be MIMO SDM MODE IN THE UNII-6 BAND – LOW POWER

LP SDM UNII-6 (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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0.11	0	-1.2	1.62	6435	97	SU	--	6.73	7.43	**8.90**	-4.236	-4.365	-2.380
							106 + 26	82	4.46	5.21	6.66	-4.297	-4.482	-2.578
								83	4.44	5.10	6.59	-3.936	-4.394	-2.349
					6475	105	SU	--	6.69	7.35	8.84	-4.579	-4.176	-2.453
							106 + 26	82	4.45	5.18	6.64	-4.400	-4.347	-2.563
								83	4.42	5.18	6.63	-4.689	-3.900	-2.466
					6515	113	SU	--	6.69	7.43	8.89	-4.473	-4.520	-2.576
							106 + 26	82	4.45	5.20	6.65	-4.365	-2.775	-1.687
								83	4.41	5.12	6.59	-4.348	-2.912	-1.761
40MHz	0.11	0	-1.2	1.62	6445	99	SU	--	9.68	10.48	11.91	-4.798	-4.627	-2.791
							106	53	3.72	4.36	5.86	-4.812	-4.430	-2.807
								54	3.74	4.44	5.91	-4.510	-4.333	-2.610
								56	3.71	4.42	5.89	-4.505	-4.430	-2.657
					6485	107	SU	--	9.68	10.36	11.84	-4.485	-4.406	-2.525
							106	53	3.72	4.42	5.89	-4.494	-4.760	-2.815
								54	3.68	4.36	5.84	-4.732	-4.363	-2.733
								56	3.73	4.46	5.92	-4.394	-4.174	-2.472
			-0.09	2.56	6525 (Straddle)	115	SU	--	8.74	9.85	**12.25**	-5.888	-4.892	-2.331
							106	53	2.68	3.93	6.27	-6.033	-4.864	-2.489
								54	2.73	3.95	6.30	-5.803	-4.683	-2.287
								56	2.71	3.95	6.29	-5.564	-4.696	-2.188
80MHz	0.12	0	-1.2	1.62	6465	103	SU	--	12.74	13.48	**14.94**	-4.516	-4.268	-2.460
							242	61	6.68	7.36	8.84	-4.551	-4.775	-2.851
								62	6.72	7.39	8.88	-5.054	-4.860	-3.146
								64	6.71	7.48	8.92	-4.786	-4.234	-2.691
160MHz	0.17	0	-0.09	2.56	6505 (Straddle)	111	SU	--	13.93	15.10	**17.47**	-6.120	-5.346	-2.625
							106 + 26	82	4.95	4.63	7.71	-4.570	-4.240	-1.482
								89	4.92	4.61	7.69	-4.681	-4.809	-1.824
								S89	4.93	4.68	7.73	-4.123	-4.691	-1.477

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

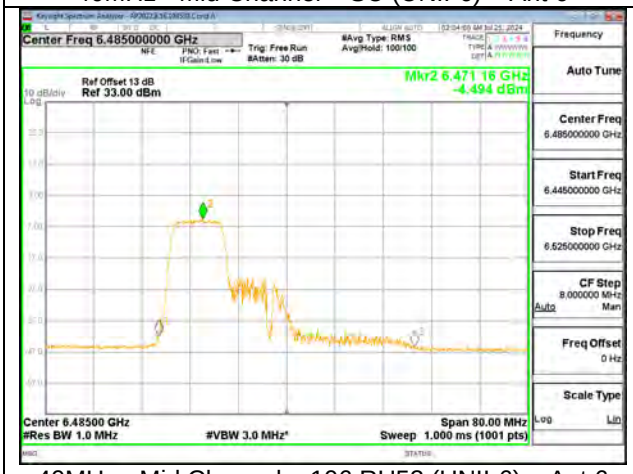
EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Un-Correlated Antenna Gain (dBi)

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



40MHz - Mid Channel – SU (UNII-6) – Ant 6

40MHz - Mid Channel – SU (UNII-6) – Ant 5



40MHz - Mid Channel – 106 RU53 (UNII-6) – Ant 6

40MHz - Mid Channel – 106 RU53 (UNII-6) – Ant 5

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

9.4.7. 802.11be SISO MODE IN THE UNII-7 BAND – LOW POWER

LP UNII-7 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 24dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -1 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	1.80	-3.90	6535	117	SU	--	6.71	8.24	8.51	4.34	-5.056	-3.269	-3.256	-7.169
							106 + 26	82	4.45	5.92	6.25	2.02	-5.194	-3.325	-3.394	-7.225
								83	4.41	5.91	6.21	2.01	-4.993	-3.353	-3.193	-7.253
					6715	153	SU	--	6.72	8.16	**8.52**	4.26	-5.465	-3.418	-3.665	-7.318
							106 + 26	82	4.49	5.98	6.29	2.08	-4.992	-3.04	-3.192	-6.940
								83	4.46	5.99	6.26	2.09	-5.209	-2.948	-3.409	-6.848
			1.80	-3.00	6875 (Straddle)	185	SU	--	6.68	8.13	8.48	5.13	-5.643	-3.371	-3.843	-6.371
							106 + 26	82	4.46	5.93	6.26	2.93	-5.312	-2.943	-3.512	-5.943
								83	4.45	5.99	6.25	2.99	-5.138	-2.963	-3.338	-5.963
40MHz	0	0	1.80	-3.90	6565	123	SU	--	9.70	11.16	11.50	7.26	-5.891	-3.052	-4.091	-6.952
							106	53	3.66	5.19	5.46	1.29	-5.089	-3.276	-3.289	-7.176
								54	3.71	5.19	5.51	1.29	-5.105	-3.262	-3.305	-7.162
								56	3.72	5.16	5.52	1.26	-5.056	-3.159	-3.256	-7.059
					6685	147	SU	--	9.86	11.21	**11.66**	7.31	-5.842	-3.316	-4.042	-7.216
							106	53	3.87	5.22	5.67	1.32	-5.036	-3.694	-3.236	-7.594
								54	3.85	5.24	5.65	1.34	-4.981	-3.637	-3.181	-7.537
								56	3.87	5.09	5.67	1.19	-5.264	-3.846	-3.464	-7.746
					6845	179	SU	--	9.67	11.09	11.47	7.19	-6.667	-3.523	-4.867	-7.423
							106	53	3.78	5.09	5.58	1.19	-6.103	-3.47	-4.303	-7.370
								54	3.84	5.17	5.64	1.27	-6.21	-3.358	-4.410	-7.258
								56	3.73	5.19	5.53	1.29	-6.338	-3.684	-4.538	-7.584
80MHz	0	0	1.80	-3.50	6545 (Straddle)	119	SU	--	12.70	14.09	14.50	10.59	-5.501	-3.132	-3.701	-6.632
							242	61	6.72	8.05	8.52	4.55	-5.042	-3.406	-3.242	-6.906
								62	6.68	8.06	8.48	4.56	-5.067	-2.905	-3.267	-6.405
								64	6.68	8.04	8.48	4.54	-5.099	-2.947	-3.299	-6.447
			1.80	-3.90	6705	151	SU	--	12.69	14.09	14.49	10.19	-5.243	-2.808	-3.443	-6.708
							242	61	6.69	8.08	8.49	4.18	-5.310	-2.673	-3.510	-6.573
								62	6.65	8.05	8.45	4.15	-5.054	-3.003	-3.254	-6.903
								64	6.69	8.06	8.49	4.16	-5.627	-3.223	-3.827	-7.123
			1.80	-3.00	6865 (Straddle)	183	SU	--	12.72	14.04	**14.52**	11.04	-5.681	-3.482	-3.881	-6.482
							242	61	6.66	8.1	8.46	5.10	-5.970	-3.387	-4.170	-6.387
								62	6.67	8.19	8.47	5.19	-5.630	-3.488	-3.830	-6.488
								64	6.69	8.06	8.49	5.06	-5.489	-3.422	-3.689	-6.422
160MHz	0.1	0	1.80	-3.90	6665	143	SU	--	14.93	16.44	**16.73**	12.54	-5.405	-3.483	-3.505	-7.283
							106 + 26	82	4.49	5.93	6.29	2.03	-4.533	-2.643	-2.733	-6.543
								89	4.46	5.89	6.26	1.99	-4.580	-2.934	-2.780	-6.834
								S89	4.41	5.85	6.21	5.85	-4.658	-2.601	-2.858	-6.501
			1.80	-3.00	6825 (Straddle)	175	SU	--	14.91	16.39	16.71	16.39	-5.844	-3.353	-3.944	-6.253
							106 + 26	82	4.45	5.93	6.25	2.93	-4.856	-3.046	-3.056	-6.046
								89	4.48	5.79	6.28	2.79	-4.625	-3.532	-2.825	-6.532
								S89	4.48	5.89	6.28	2.89	-4.651	-3.427	-2.851	-6.427

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

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

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

80MHz - Mid Channel – SU (UNII-7) – Ant 6

80MHz - Mid Channel 242T RU 61 (UNII-7) – Ant 6

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

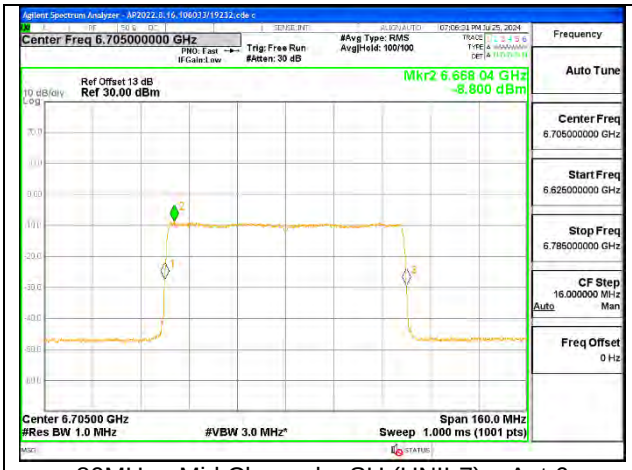
9.4.8. 802.11be MIMO CDD MODE IN THE UNII-7 BAND – LOW POWER

LP 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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-0.18	2.42	6535	117	SU	--	3.16	4.17	6.52	-8.326	-7.18	-2.285
							106 + 26	82	0.89	1.9	4.25	-8.939	-6.663	-2.223
								83	0.86	1.83	4.20	-8.788	-6.986	-2.364
					6715	153	SU	--	3.12	4.23	6.54	-8.729	-7.362	-2.562
							106 + 26	82	0.94	1.89	4.27	-8.478	-7.064	-2.283
								83	0.91	1.94	4.29	-8.848	-7.221	-2.528
			0.03	2.74	6875 (Straddle)	185	SU	--	3.13	4.2	**6.74**	-8.693	-7.142	-2.098
							106 + 26	82	0.94	1.89	4.48	-8.754	-6.508	-1.737
								83	0.93	1.87	4.47	-8.806	-6.32	-1.637
40MHz	0	0	-0.18	2.42	6565	123	SU	--	6.15	7.22	**9.55**	-9.623	-7.822	-3.200
							106	53	0.21	1.11	3.51	-8.645	-7.333	-2.509
								54	0.22	1.22	3.58	-8.596	-7.069	-2.335
								56	0.13	1.24	3.55	-8.642	-7.053	-2.345
					6685	147	SU	--	6.12	7.17	9.51	-9.239	-7.484	-2.843
							106	53	0.19	1.09	3.49	-8.763	-6.943	-2.328
								54	0.15	1.1	3.48	-8.948	-7.014	-2.444
								56	0.09	1.04	3.42	-8.971	-6.968	-2.425
					6845	179	SU	--	6.2	7.18	9.55	-9.786	-7.468	-3.044
							106	53	0.23	1.08	3.51	-9.787	-7.491	-3.059
								54	0.14	1.03	3.44	-9.451	-7.149	-2.719
								56	0.18	1.11	3.50	-9.668	-7.47	-3.001
80MHz	0	0	-0.09	2.56	6545 (Straddle)	119	SU	--	9.06	10.09	12.53	-8.808	-7.014	-2.249
							242	61	3.19	4.09	6.58	-8.82	-7.122	-2.318
								62	3.17	4.21	6.64	-8.985	-7.249	-2.461
								64	3.06	4.1	6.53	-8.588	-7.041	-2.176
			-0.18	2.42	6705	151	SU	--	9.22	10.07	12.50	-8.8	-7.01	-2.383
							242	61	3.06	4.18	6.49	-9.079	-7.013	-2.494
								62	3.14	4.06	6.45	-9.127	-7.033	-2.525
								64	3.09	4.15	6.48	-9.506	-7.035	-2.667
			0.03	2.74	6865 (Straddle)	183	SU	--	9.12	10.09	**12.67**	-9.794	-7.382	-2.672
							242	61	3.11	4.23	6.75	-9.77	-7.485	-2.729
								62	3.06	4.06	6.63	-9.221	-7.265	-2.383
								64	3.23	4.06	6.71	-8.992	-7.225	-2.269
160MHz	0.1	0	-0.18	2.42	6665	143	SU	--	11.43	12.38	14.76	-8.229	-6.72	-1.879
							106 + 26	82	0.91	1.96	4.30	-8.574	-6.298	-1.858
								89	0.94	1.84	4.24	-8.633	-6.756	-2.164
								S89	0.86	1.84	4.21	-8.922	-6.811	-2.309
			0.03	2.74	6825 (Straddle)	175	SU	--	11.48	12.45	**15.03**	-8.348	-6.915	-1.722
							106 + 26	82	0.93	1.89	4.48	-8.466	-6.923	-1.876
								89	0.86	1.91	4.46	-8.47	-7.325	-2.110
								S89	0.95	1.81	4.44	-8.638	-7.102	-2.052

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Correlated Antenna Gain (dBi)

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



80MHz - Mid Channel – SU (UNII-7) – Ant 6

80MHz - Mid Channel – SU (UNII-7) – Ant 5

80MHz - Mid Channel –242T RU 61 (UNII-7) – Ant 6

80MHz - Mid Channel - 242T RU 61 (UNII-7) – Ant 5

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

9.4.9. 802.11be MIMO SDM MODE IN THE UNII-7 BAND – LOW POWER

LP 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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0.11	0	-0.18	2.42	6535	117	SU	--	5.69	6.94	9.19	-5.443	-4.755	-2.145
							106 + 26	82	3.41	4.6	6.88	-5.368	-4.664	-2.171
								83	3.44	4.61	6.89	-5.256	-4.631	-2.102
					6715	153	SU	--	5.71	6.92	9.19	-5.609	-4.881	-2.289
							106 + 26	82	3.45	4.57	6.88	-5.135	-4.816	-2.142
								83	3.46	4.56	6.88	-5.522	-4.963	-2.403
			0.03	2.74	6875 (Straddle)	185	SU	--	5.68	6.77	**9.30**	-5.965	-5.276	-2.457
							106 + 26	82	3.43	4.58	7.08	-5.575	-4.644	-2.044
								83	3.42	4.52	7.05	-5.158	-4.689	-1.877
40MHz	0.11	0	-0.18	2.42	6565	123	SU	--	8.67	9.94	**12.18**	-5.897	-4.937	-2.450
							106	53	2.71	3.97	6.22	-5.893	-4.613	-2.376
								54	2.72	3.99	6.23	-5.637	-4.494	-2.198
								56	2.74	3.85	6.16	-5.756	-4.663	-2.345
					6685	147	SU	--	8.69	9.85	12.14	-6.055	-5.258	-2.698
							106	53	2.69	3.93	6.22	-6.013	-4.494	-2.357
								54	2.66	3.99	6.37	-5.775	-4.59	-2.312
								56	2.72	3.97	6.22	-5.981	-4.769	-2.503
					6845	179	SU	--	8.71	9.85	12.15	-6.456	-4.951	-2.698
							106	53	2.66	3.96	6.19	-6.239	-4.808	-2.635
								54	2.68	3.98	6.21	-6.264	-4.557	-2.497
								56	2.65	3.95	6.18	-6.161	-5.218	-2.834
80MHz	0.12	0	-0.09	2.56	6545 (Straddle)	119	SU	--	11.71	12.95	15.29	-5.282	-4.58	-1.877
							242	61	5.68	6.91	9.26	-5.776	-4.7	-2.284
								62	5.71	6.82	9.22	-5.633	-4.806	-2.280
								64	5.65	6.85	9.21	-5.835	-4.852	-2.395
			-0.18	2.42	6705	151	SU	--	11.69	12.85	15.14	-5.647	-4.748	-2.224
							242	61	5.68	6.94	9.19	-5.852	-4.752	-2.437
								62	5.71	6.82	9.13	-5.725	-5.012	-2.524
								64	5.71	6.87	9.16	-5.852	-4.799	-2.463
			0.03	2.74	6865 (Straddle)	183	SU	--	11.68	12.95	**15.40**	-5.981	-4.548	-2.045
							242	61	5.73	6.98	9.44	-5.897	-4.748	-2.244
								62	5.72	6.89	9.38	-6.046	-4.619	-2.234
								64	5.66	6.92	9.38	-5.817	-4.659	-2.159
160MHz	0.17	0	-0.18	2.42	6665	143	SU	--	13.89	15.07	17.35	-6.426	-5.439	-2.904
							106 + 26	82	3.45	4.7	6.95	-5.676	-5.082	-2.539
								89	3.46	4.71	6.96	-5.555	-4.838	-2.351
								S89	3.46	4.52	6.85	-5.616	-5.152	-2.548
			0.03	2.74	6825 (Straddle)	175	SU	--	13.93	15.16	**17.63**	-6.253	-5.191	-2.479
							106 + 26	82	3.45	4.61	7.11	-5.234	-4.761	-1.951
								89	3.42	4.59	7.08	-5.909	-5.087	-2.468
								S89	3.46	4.61	7.11	-5.360	-4.942	-2.106

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

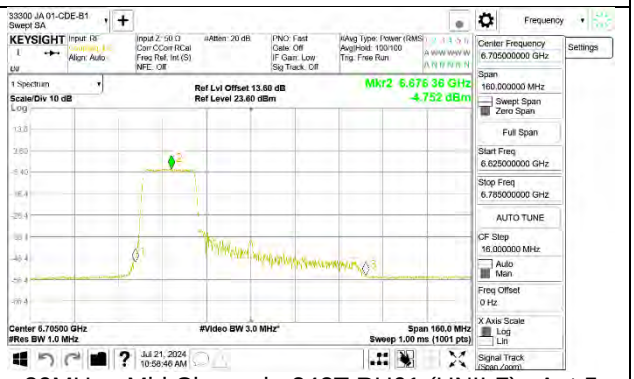
EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Un-Correlated Antenna Gain (dBi)

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

80MHz - Mid Channel – SU (UNII-7) – Ant 6

80MHz - Mid Channel – SU (UNII-7) – Ant 5

80MHz - Mid Channel – 242T RU 61 (UNII-7) – Ant 6



80MHz - Mid Channel - 242T RU61 (UNII-7)– Ant 5

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

9.4.10. 802.11be SISO MODE IN THE UNII-8 BAND – LOW POWER

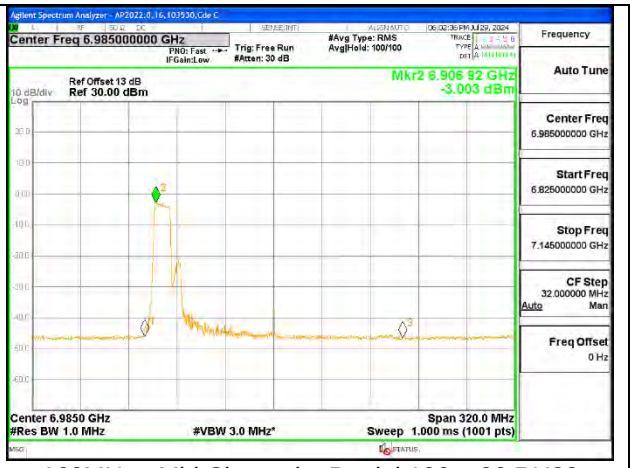
LP UNII-8 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 24dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = -1 dBm/MHz EIRP)	
	SU	Partial RU							Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
20MHz	0	0	-0.10	-3.00	6895	189	SU	--	8.72	9.83	**8.62**	6.83	-2.609	-1.277	-2.709	-4.277
							106 + 26	82	6.42	7.67	6.32	4.67	-2.404	-1.25	-2.504	-4.250
								83	6.46	7.73	6.36	4.73	-2.669	-1.161	-2.769	-4.161
					6995	209	SU	--	8.68	9.86	8.58	6.86	-2.763	-1.529	-2.863	-4.529
							106 + 26	82	6.44	7.58	6.34	4.58	-2.391	-1.328	-2.491	-4.328
								83	6.46	7.54	6.36	4.54	-2.279	-1.262	-2.379	-4.262
					7095	229	SU	--	8.67	9.82	8.57	6.82	-2.644	-1.839	-2.744	-4.839
							106 + 26	82	6.42	7.65	6.32	4.65	-2.616	-1.48	-2.716	-4.480
								83	6.41	7.63	6.31	4.63	-2.541	-1.368	-2.641	-4.368
					7115	233	SU	--	-4.57	-4.65	-4.67	-7.65	-16.489	-16.44	-16.589	-19.440
40MHz	0	0	1.80	-3.00	6885 (Straddle)	187	SU	--	9.68	11.04	11.48	8.04	-6.312	-3.822	-4.512	-6.822
							106 + 26	82	4.45	5.88	6.25	2.88	-5.965	-3.886	-4.165	-6.886
								84	4.48	5.97	6.28	2.97	-5.76	-3.521	-3.960	-6.521
								85	4.45	5.76	6.25	2.76	-6.105	-3.581	-4.305	-6.581
			-0.10	-3.00	6965	203	SU	--	11.69	12.97	11.59	9.97	-3.846	-2.339	-3.946	-5.339
							106 + 26	82	6.41	7.61	6.31	4.61	-3.516	-1.674	-3.616	-4.674
								84	6.46	7.53	6.36	4.53	-3.236	-1.416	-3.336	-4.416
								85	6.41	7.63	6.31	4.63	-3.566	-1.624	-3.666	-4.624
					7085	227	SU	--	11.71	12.85	**11.61**	9.85	-3.085	-2.221	-3.185	-5.221
							106 + 26	82	6.45	7.53	6.35	4.53	-3.422	-1.913	-3.522	-4.913
								84	6.46	7.59	6.36	4.59	-2.907	-1.947	-3.007	-4.947
								85	6.44	7.58	6.34	4.58	-3.04	-1.888	-3.140	-4.888
80MHz	0	0	-0.10	-3.00	6945	187	SU	--	14.68	15.9	**14.58**	12.90	-3.178	-2.161	-3.278	-5.161
							106 + 26	82	6.44	7.61	6.34	4.61	-3.825	-2.489	-3.925	-5.489
								85	6.42	7.69	6.32	4.69	-3.718	-2.205	-3.818	-5.205
								89	6.46	7.67	6.36	4.67	-3.363	-2.19	-3.463	-5.190
			-0.10	-3.00	7025	203	SU	--	14.68	15.98	**14.58**	12.98	-3.113	-1.982	-3.213	-4.982
							106 + 26	82	6.46	7.62	6.36	4.62	-3.356	-2.483	-3.456	-5.483
								85	6.45	7.65	6.35	4.65	-3.138	-2.555	-3.238	-5.555
								89	6.44	7.65	6.34	4.65	-3.228	-2.017	-3.328	-5.017
160MHz	0.1	0	-0.10	-3.00	6985	207	SU	--	16.92	18.15	**16.82**	15.15	-3.043	-2.337	-3.043	-5.237
							106 + 26	82	6.44	7.7	6.34	4.70	-3.003	-1.973	-3.103	-4.973
								89	6.43	7.71	6.33	4.71	-2.915	-2.143	-3.015	-5.143
								S89	6.44	7.71	6.34	4.71	-2.660	-2.029	-2.760	-5.029

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

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

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

160MHz - Mid Channel – SU (UNII-8) – Ant 6



160MHz - Mid Channel – Partial 106 + 26 RU82 (UNII-8) – Ant 6

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

9.4.11. 802.11be MIMO CDD MODE IN THE UNII-8 BAND – LOW POWER

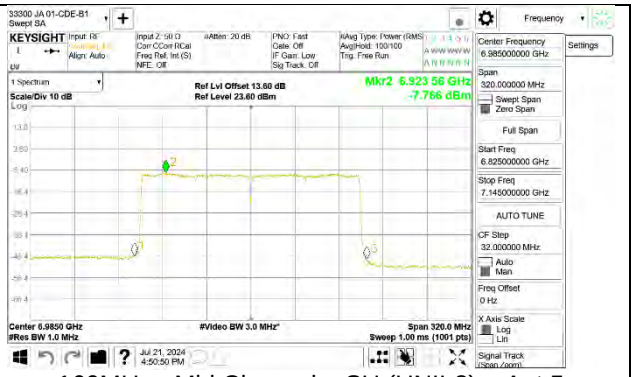
LP CDD UNII-8 (MIMO)	Duty Factor (dB)		Un-Correlated Antenna Gain (dBi)	Correlated Antenna Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated)		EIRP MIMO Power (Limit = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-1.31	1.58	6895	189	SU	--	3.79	4.68	5.96	-7.398	-6.644	-2.414
							106 + 26	82	1.69	2.46	3.79	-7.338	-7.516	-2.836
								83	1.61	2.47	3.76	-7.419	-7.28	-2.759
					6995	209	SU	--	3.75	4.74	**5.97**	-7.483	-6.911	-2.597
							106 + 26	82	1.53	2.43	3.70	-7.531	-6.99	-2.662
								83	1.61	2.44	3.75	-7.199	-6.928	-2.471
					7095	229	SU	--	3.86	4.58	5.94	-7.528	-7.382	-2.864
							106 + 26	82	1.72	2.47	3.81	-8.01	-6.757	-2.748
								83	1.67	2.43	3.77	-8.064	-6.684	-2.729
					7115	233	SU	--	-5.12	-5.21	-3.46	-17.944	-17.199	-12.965
40MHz	0	0	0.03	2.74	6885 (Straddle)	187	SU	--	6.14	7.21	**9.75**	-9.378	-7.706	-2.712
							106 + 26	82	0.94	1.94	4.51	-9.962	-7.904	-3.062
								84	0.92	1.93	4.49	-9.256	-8.073	-2.874
								85	0.9	1.91	4.47	-9.782	-8.196	-3.167
			-1.31	1.58	6965	203	SU	--	6.88	7.65	8.98	-8.354	-7.952	-3.558
							106 + 26	82	1.67	2.43	3.77	-8.669	-7.561	-3.489
								84	1.64	2.46	3.77	-8.506	-7.074	-3.141
								85	1.68	2.47	3.79	-8.34	-7.431	-3.271
					7085	227	SU	--	6.84	7.71	9.00	-8.335	-7.507	-3.311
							106 + 26	82	1.64	2.44	3.76	-8.458	-7.677	-3.460
								84	1.66	2.41	3.75	-8.237	-7.602	-3.318
								85	1.67	2.43	3.77	-8.156	-7.177	-3.049
80MHz	0	0	-1.31	1.58	6945	199	SU	--	9.83	10.63	**11.95**	-8.228	-7.403	-3.206
							106 + 26	82	1.56	2.44	3.72	-8.701	-7.528	-3.485
								85	1.53	2.49	3.74	-8.782	-7.443	-3.471
								89	1.59	2.44	3.74	-8.189	-7.094	-3.017
			-1.31	1.58	7025	215	SU	--	9.78	10.62	11.92	-7.985	-7.618	-3.207
							106 + 26	82	1.65	2.47	3.78	-8.868	-7.054	-3.277
								85	1.63	2.43	3.75	-8.287	-7.173	-3.104
								89	1.61	2.42	3.73	-8.387	-6.999	-3.047
160MHz	0.1	0	-1.31	1.58	6985	207	SU	--	12.17	12.95	**14.28**	-7.757	-7.766	-3.071
							106 + 26	82	1.61	2.36	3.70	-7.805	-8.297	-3.454
								89	1.64	2.45	3.76	-8.055	-8.268	-3.570
								S89	1.67	2.35	3.72	-8.077	-8.42	-3.655

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

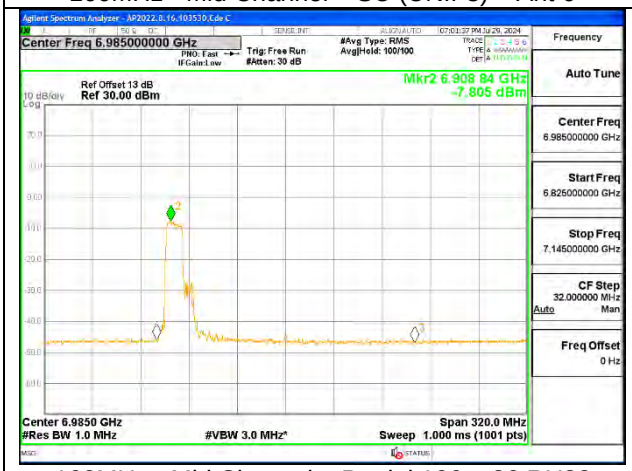
EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Correlated Antenna Gain (dBi)

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

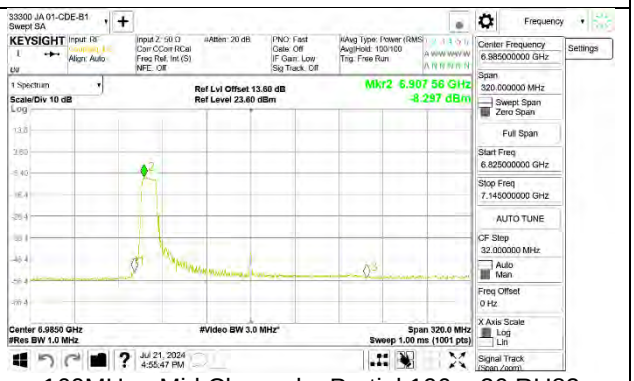
160MHz - Mid Channel – SU (UNII-8) – Ant 6



160MHz - Mid Channel – SU (UNII-8) – Ant 5



160MHz - Mid Channel – Partial 106 + 26 RU82 (UNII-8) – Ant 6



160MHz - Mid Channel – Partial 106 + 26 RU82 (UNII-8) – Ant 5

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

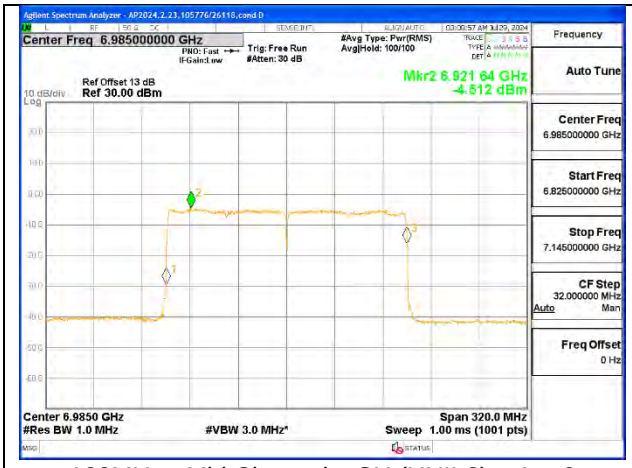
9.4.12. 802.11be MIMO SDM MODE IN THE UNII-8 BAND – LOW POWER

LP SDM UNII-8 (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 = 24dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = -1 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0.11	0	-1.31	1.58	6895	189	SU	--	6.88	7.64	8.98	-3.805	-4.128	-2.153
							106 + 26	82	4.62	5.46	6.76	-3.694	-3.775	-2.034
								83	4.61	5.45	6.75	-3.285	-3.589	-1.734
					6995	209	SU	--	6.92	7.67	**9.01**	-3.646	-3.805	-1.914
							106 + 26	82	4.73	5.38	6.77	-3.596	-3.432	-1.813
								83	4.7	5.39	6.76	-3.608	-3.665	-1.936
					7095	229	SU	--	6.91	7.66	9.00	-3.792	-4.126	-2.145
							106 + 26	82	4.68	5.37	6.74	-3.559	-3.752	-1.954
								83	4.66	5.42	6.76	-3.592	-3.968	-2.076
					7115	233	SU	--	-5.05	-5.03	-3.34	-16.894	-16.794	-15.033
40MHz	0.11	0	0.03	2.74	6885 (Straddle)	187	SU	--	8.63	9.99	**12.40**	-3.841	-4.814	-1.150
							106 + 26	82	3.37	4.62	7.08	-3.955	-5.192	-1.489
								84	3.31	4.69	7.09	-3.847	-4.854	-1.281
								85	3.38	4.64	7.10	-3.615	-4.996	-1.211
			-1.31	1.58	6965	203	SU	--	9.70	10.65	11.90	-2.561	-3.775	-1.315
							106 + 26	82	4.63	5.47	6.77	-2.936	-3.862	-1.674
								84	4.65	5.49	6.79	-2.629	-3.836	-1.490
								85	4.67	5.37	6.73	-2.656	-3.823	-1.500
					7085	227	SU	--	9.71	10.73	11.95	-2.957	-4.142	-1.699
							106 + 26	82	4.64	5.4	6.74	-3.047	-3.956	-1.777
								84	4.66	5.42	6.76	-2.743	-4.313	-1.757
								85	4.62	5.35	6.70	-2.856	-4.098	-1.732
80MHz	0.12	0	-1.31	1.58	6945	187	SU	--	12.89	13.61	14.97	-3.994	-3.793	-2.072
							106 + 26	82	4.68	5.46	6.79	-3.812	-3.798	-2.105
								85	4.65	5.38	6.73	-3.746	-4.186	-2.260
								89	4.63	5.48	6.78	-3.849	-3.665	-2.056
			-1.31	1.58	7025	203	SU	--	12.83	13.74	**15.01**	-3.747	-3.739	-1.923
							106 + 26	82	4.73	5.45	6.81	-3.664	-3.677	-1.970
								85	4.66	5.49	6.80	-3.992	-3.724	-2.156
								89	4.69	5.42	6.77	-4.1	-3.746	-2.219
160MHz	0.17	0	-1.31	1.58	6985	207	SU	--	15.24	15.87	**17.27**	-4.512	-4.065	-2.412
							106 + 26	82	4.69	5.47	6.80	-3.447	-3.265	-1.655
								89	4.61	5.42	6.73	-4.505	-3.898	-2.491
								S89	4.67	5.37	6.73	-4.25	-3.837	-2.338

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

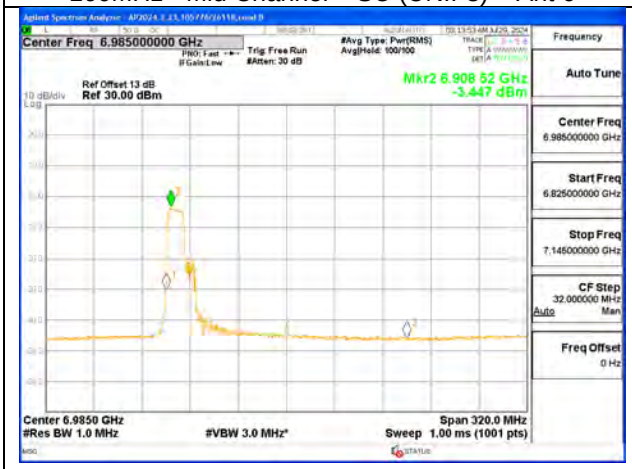
EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Un-Correlated Antenna Gain (dBi)

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

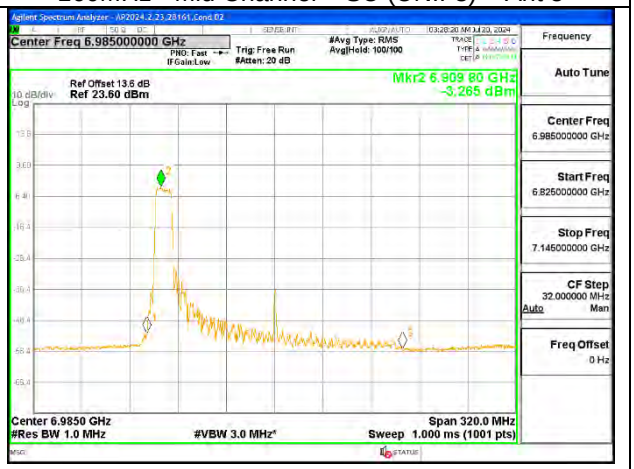


160MHz - Mid Channel – SU (UNII-8) – Ant 6

160MHz - Mid Channel – SU (UNII-8) – Ant 5



160MHz - Mid Channel – Partial 106 + 26 RU82 (UNII-8) – Ant 6



160MHz - Mid Channel – Partial 106 + 26 RU82 (UNII-8) – Ant 5

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

9.5. SP OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Bands: 5.925–6.425 GHz and 6.525–6.875 GHz

(7)For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

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

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

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 caculation. For the straddle channels, the higher antenna gains were chosen between two bands where straddle channels are located. The directional gains are as follows:

Frequency Range (MHz)	Sub-band (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5925 - 6425 UNII-5	Sub-band 1 (5955 - 6095)	0.30	-3.30	-1.14	1.70
	Sub-band 2 (6115 - 6255)	0.40	-2.70	-0.88	2.00
	Sub-band 3 (6275 - 6415)	-0.20	-3.80	-1.64	1.20
6425 - 6525 UNII-6	N/A	0.30	-3.50	-1.20	1.62
UNII-6/7 (Straddle Channel)	N/A	1.80	-3.50	-0.09	2.56
6525 - 6875 UNII-7	N/A	1.80	-3.90	-0.18	2.42
UNII-7/8 (Straddle Channel)	N/A	1.80	-3.00	0.03	2.74
6875 - 7125 UNII-8	N/A	-0.10	-3.00	-1.31	1.58

Directional Gain Calculation:

ANSI C63.10-2013 section 14.4.3

Uncorrelated directional gain=10*LOG((10^(Ant6/10)+10^(Ant5/10))/2)
Correlated directional Gain=10*LOG(((10^(Ant6/20)+10^(Ant5/20))^2)/2)

Sample Calculation at UNII-5 Band:

Ant6=.3, Ant5=-3.30

Uncorrelated Antenna gain=10log[(10^(.3/10)+10^(-3.30/10))/2]=-1.14 dBi

Correlated Antenna gain=10log[(10^(.3/20)+10^(-3.30/20))^2)/2]=1.7dBi

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

EIRP Calculation:

1Tx

EIRP corr'd power =Ant6 + Antenna Gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 53) Power=16.58 dBm

EIRP corr'd power = 16.58 + (.3) = 16.88 dBm

2Tx

EIRP corr'd power = 10*LOG(10^(Ant6/10)+10^(Ant5/10)) + uncorrelated directional gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 53) Power=16.53 dBm, Ant5 Power=16.53

EIRP corr'd power =10*LOG(10^(16.53/10)+10^(16.53/10)) + (-1.14) = 18.4 dBm

EIRP PSD Calculation:

1Tx

EIRP corr'd PSD = DCCF + Ant6 + Antenna Gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 53) PSD= 8.618 dBm/1MHz

EIRP corr'd PSD = 0 + 8.618 + (.3) = 8.918 dBm/1MHz

2Tx (OFDMA)

EIRP corr'd PSD = (10*LOG(10^((DCCF +Ant6)/10)+10^((DCCF+Ant5)/10)))+correlated directional gain

Sample Calculation at UNII-5 Band:
Ant6(low channel RU 53) PSD=8.443 dBm/1MHz, Ant5 PSD=8.602 dBm/1MHz

EIRP corr'd PSD = =(10*LOG(10^((0+(8.443))/10)+10^((0+(8.602))/10)))+(1.7) = 13.234 dBm/1MHz

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

9.5.1. 802.11be SISO MODE IN THE UNII-5 BAND – STANDARD POWER

SP UNII-5 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 30dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = 17 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	-3.30	5955	1	SU	--	19.41	19.44	19.71	16.14	8.239	8.646	8.539	5.346
							106	53	16.58	16.68	16.88	13.38	8.618	8.416	8.918	5.116
								54	16.68	16.57	16.98	13.27	8.402	8.471	8.702	5.171
			0.40	-2.70	6175	45	SU	--	19.44	19.47	**19.84**	16.77	7.695	7.625	8.095	4.925
							106	53	16.72	16.57	17.12	13.87	8.415	8.619	8.815	5.919
								54	16.62	16.68	17.02	13.98	8.815	8.835	9.215	6.135
			-0.20	-3.80	6415	93	SU	--	19.48	19.38	19.28	15.58	8.186	8.169	7.986	4.369
							106	53	16.59	16.68	16.39	12.88	8.501	8.716	8.301	4.916
								54	16.65	16.62	16.45	12.82	8.698	8.467	8.498	4.667
40MHz	0	0	0.30	-3.30	5965	3	SU	--	19.42	19.47	19.72	16.17	5.209	5.164	5.509	1.864
							242	61	19.45	19.48	19.75	16.18	7.99	7.761	8.290	4.461
								62	19.44	19.41	19.74	16.11	8.135	7.899	8.435	4.599
			0.40	-2.70	6165	43	SU	--	19.42	19.33	19.82	16.63	5.297	5.304	5.697	2.604
							242	61	19.49	19.48	**19.89**	16.78	8.186	7.105	8.586	4.405
								62	19.47	19.35	19.87	16.65	8.15	8.012	8.550	5.312
			-0.20	-3.80	6405	91	SU	--	19.32	19.29	19.12	15.49	4.822	5.09	4.622	1.290
							242	61	19.27	19.34	19.07	15.54	7.916	7.861	7.716	4.061
								62	19.3	19.46	19.10	15.66	7.818	8.092	7.618	4.292
80MHz	0	0	0.30	-3.30	5985	7	SU	--	19.4	19.38	19.70	16.08	2.228	2.121	2.528	-1.179
							242	61	19.32	19.32	19.62	16.02	7.899	7.916	8.199	4.616
								62	19.27	19.37	19.57	16.07	7.953	7.658	8.253	4.358
								64	19.3	19.32	19.60	16.02	8.028	8.013	8.328	4.713
			0.40	-2.70	6145	39	SU	--	19.32	19.33	19.72	16.63	2.133	2.368	2.533	-0.332
							242	61	19.48	19.33	**19.88**	16.63	8.159	8.137	8.559	5.437
								62	19.47	19.42	19.87	16.72	8.071	7.793	8.471	5.093
								64	19.35	19.35	19.75	16.65	8.047	7.848	8.447	5.148
			-0.20	-3.80	6385	87	SU	--	19.35	19.4	19.15	15.60	1.949	2.016	1.749	-1.784
							242	61	19.44	19.39	19.24	15.59	8.15	7.859	7.950	4.059
								62	19.42	19.42	19.22	15.62	8.046	7.883	7.846	4.083
								64	19.48	19.39	19.28	15.59	8.082	7.715	7.882	3.915
160MHz	0.1	0	0.30	-3.30	6025	15	SU	--	19.45	19.32	19.75	16.02	-0.525	-0.898	-0.125	-4.098
							242	61	19.38	19.38	19.68	16.08	7.81	7.787	8.110	4.487
								62	19.42	19.45	19.72	16.15	7.96	7.719	8.260	4.419
								S64	19.41	19.38	19.71	16.08	8.366	8.192	8.666	4.892
			0.40	-2.70	6185	47	SU	--	19.32	19.33	19.72	16.63	-0.84	-0.706	-0.340	-3.306
							242	61	19.38	19.49	19.78	16.79	8.192	8	8.592	5.300
								62	19.39	19.32	19.79	16.62	8.299	8.032	8.699	5.332
								S64	19.42	19.48	**19.82**	16.78	8.118	8.104	8.518	5.404
			-0.20	-3.80	6345	79	SU	--	19.45	19.49	19.25	15.69	-0.835	-0.721	-0.935	-4.421
							242	61	19.49	19.4	19.29	15.60	8.278	8.027	8.078	4.227
								62	19.42	19.42	19.22	15.62	8.155	7.828	7.955	4.028
								S64	19.38	19.47	19.18	15.67	7.734	7.968	7.534	4.168

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)

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

9.5.2. 802.11be MIMO CDD MODE IN THE UNII-5 BAND – STANDARD POWER

SP 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 = 30dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = 17 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-1.14	1.7	5955	1	SU	--	19.34	19.49	21.29	8.503	8.695	13.310
							106	53	16.53	16.53	18.40	8.443	8.602	13.234
								54	16.63	16.69	18.53	8.642	8.726	13.395
			-0.88	2	6175	45	SU	--	19.49	19.47	**21.61**	7.923	7.793	12.869
							106	53	16.6	16.61	18.74	8.765	8.627	13.707
								54	16.64	16.63	18.77	8.737	8.737	13.747
			-1.64	1.2	6415	93	SU	--	19.36	19.33	20.72	8.469	8.224	12.559
							106	53	16.57	16.5	17.91	8.489	8.607	12.759
								54	16.52	16.54	17.90	8.511	8.688	12.811
40MHz	0	0	-1.14	1.7	5965	3	SU	--	19.42	19.34	21.25	4.973	4.869	9.632
							242	61	19.4	19.39	21.27	7.889	7.727	12.519
								62	19.41	19.31	21.23	7.999	7.88	12.650
			-0.88	2	6165	43	SU	--	19.28	19.44	21.49	5.351	5.146	10.260
							242	61	19.37	19.34	21.49	8.154	8.127	13.151
								62	19.45	19.39	**21.55**	8.382	8.072	13.240
			-1.64	1.2	6405	91	SU	--	19.33	19.23	20.65	4.904	4.897	9.111
							242	61	19.34	19.27	20.68	7.885	7.912	12.109
								62	19.32	19.4	20.73	7.895	7.841	12.078
80MHz	0	0	-1.14	1.7	5985	7	SU	--	19.45	19.29	21.24	2.026	1.99	6.718
							242	61	19.3	19.3	21.17	7.877	7.533	12.419
								62	19.43	19.42	21.30	8.104	7.807	12.668
								64	19.41	19.23	21.19	7.926	8.031	12.689
			-0.88	2	6145	39	SU	--	19.43	19.44	**21.57**	2.232	2.285	7.269
							242	61	19.35	19.28	21.45	8.287	8.129	13.219
								62	19.32	19.3	21.44	8.059	8.058	13.069
								64	19.34	19.38	21.49	8.082	8.258	13.181
			-1.64	1.2	6385	87	SU	--	19.33	19.33	20.70	2.124	2.012	6.279
							242	61	19.35	19.44	20.77	7.693	7.902	12.009
								62	19.35	19.34	20.72	7.799	7.827	12.023
								64	19.33	19.27	20.67	7.504	7.889	11.911
160MHz	0.1	0	-1.14	1.7	6025	15	SU	--	19.34	19.48	21.28	-0.416	-0.702	4.254
							242	61	19.37	19.45	21.28	8.262	8.272	12.977
								62	19.34	19.45	21.27	8.165	7.931	12.760
								S64	19.36	19.36	21.23	8.329	8.151	12.951
			-0.88	2	6185	47	SU	--	19.43	19.32	21.51	-0.435	-0.621	4.583
							242	61	19.44	19.35	21.53	7.969	8.045	13.017
								62	19.25	19.31	21.41	8.045	8.004	13.035
								S64	19.35	19.48	**21.55**	7.994	8.208	13.113
			-1.64	1.2	6345	79	SU	--	19.34	19.43	20.76	-0.909	-0.977	3.367
							242	61	19.29	19.34	20.69	7.959	7.991	12.185
								62	19.35	19.45	20.77	7.755	7.823	11.999
								S64	19.25	19.46	20.73	7.484	7.818	11.865

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Duty Factor (dB) + Correlated Antenna Gain (dBi)

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

9.5.3. 802.11be SISO MODE IN THE UNII-7 BAND – STANDARD POWER

SP UNII-7 (SISO)	Duty Factor (dB)		Ant 1 Gain (dBi)	Ant 2 Gain (dBi)	Frequency (MHz)	Channel Number	Tone	RU Index	Conducted Power (Gated) (dBm)		EIRP Power (Limit = 30dBm EIRP)		Conducted PSD (dBm/MHz)		EIRP PSD (Limit = 17 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	1.80	-3.90	6535	117	SU	--	18.96	18.93	**20.76**	15.03	8.268	8.35	10.068	4.450
							106	53	16.06	16.07	17.86	12.17	7.804	7.885	9.604	3.985
								54	16.1	16.16	17.90	12.26	8.002	8.029	9.802	4.129
					6695	149	SU	--	18.95	18.92	20.75	15.02	8.025	8.078	9.825	4.178
							106	53	16.08	16.09	17.88	12.19	8.068	8.156	9.868	4.256
								54	16.11	16.11	17.91	12.21	8.021	8.065	9.821	4.165
					6855	181	SU	--	18.89	18.95	20.69	15.05	7.602	7.954	9.402	4.054
							106	53	16.06	16.07	17.86	12.17	8.094	8.197	9.894	4.297
								54	16.01	16.13	17.81	12.23	8.196	8.236	9.996	4.336
40MHz	0	0	1.80	-3.90	6565	123	SU	--	18.94	18.93	20.74	15.03	5.223	4.995	7.023	1.095
							242	61	18.96	18.97	**20.76**	15.07	7.88	8.166	9.680	4.266
								62	18.89	18.99	20.69	15.09	7.445	7.589	9.245	3.689
					6685	147	SU	--	18.94	18.87	20.74	14.97	4.989	5.134	6.789	1.234
							242	61	18.86	18.87	20.66	14.97	8.088	8.126	9.888	4.226
								62	18.87	18.82	20.67	14.92	8.014	8.363	9.814	4.463
					6845	179	SU	--	18.9	18.95	20.70	15.05	4.464	4.377	6.264	0.477
							242	61	18.92	18.91	20.72	15.01	7.257	7.519	9.057	3.619
								62	18.94	18.96	20.74	15.06	7.178	7.476	8.978	3.576
80MHz (FCC)	0	0	1.80	-3.90	6625	135	SU	--	18.91	18.9	20.71	15.00	1.512	0.907	3.312	-2.993
							242	61	18.93	18.87	20.73	14.97	7.401	7.311	9.201	3.411
								62	18.98	18.94	**20.78**	15.04	7.407	7.166	9.207	3.266
								64	18.96	18.91	20.76	15.01	7.612	7.254	9.412	3.354
80MHz	0	0	1.80	-3.90	6705	151	SU	--	18.92	18.94	20.72	15.04	1.204	0.852	3.004	-3.048
							242	61	18.96	18.87	**20.76**	14.97	7.039	6.732	8.839	2.832
								62	18.94	18.96	20.74	15.06	7.103	7.036	8.903	3.136
								64	18.9	18.91	20.70	15.01	7.145	7.055	8.945	3.155
					6785	167	SU	--	18.93	18.88	20.73	14.98	0.924	0.778	2.724	-3.122
							242	61	18.88	18.97	20.68	15.07	6.927	6.901	8.727	3.001
								62	18.93	18.84	20.73	14.94	6.845	6.908	8.645	3.008
								64	18.88	18.89	20.68	14.99	6.989	6.798	8.789	2.898
160MHz	0.1	0	1.80	-3.90	6665	143	SU	--	18.95	18.96	20.75	15.06	-1.445	-1.78	0.455	-5.580
							242	61	18.96	18.97	**20.76**	15.07	7.246	7.312	9.046	3.412
								62	18.88	18.87	20.68	14.97	7.095	6.971	8.895	3.071
								S64	18.96	18.88	**20.76**	14.98	6.887	6.848	8.687	2.948

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

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

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

9.5.4. 802.11be MIMO CDD MODE IN THE UNII-7 BAND – STANDARD POWER

SP 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 = 30dBm EIRP)	Conducted PSD (dBm/MHz)		EIRP MIMO PSD (Limit = 17 dBm/MHz EIRP)
	SU	Partial Rus							Ant 6	Ant 5		Ant 6	Ant 5	
20MHz	0	0	-0.18	2.42	6535	117	SU	--	18.92	18.88	21.73	8.339	8.172	13.687
							106	53	16.1	16.16	18.96	7.921	7.938	13.360
								54	16.07	16.13	18.93	7.928	7.839	13.314
					6695	149	SU	--	18.92	18.95	21.77	7.939	7.84	13.320
							106	53	16.05	16.13	18.92	8.018	8.218	13.549
								54	16.09	16.13	18.94	8.089	8.195	13.573
					6855	181	SU	--	18.95	18.96	**21.79**	7.638	7.565	13.032
							106	53	16.08	16.18	18.96	8.169	8.114	13.572
								54	16.09	16.09	18.92	8.236	8.163	13.630
40MHz	0	0	-0.18	2.42	6565	123	SU	--	18.89	18.89	21.72	4.875	4.606	10.173
							242	61	18.92	18.94	21.76	7.376	7.511	12.874
								62	18.91	18.92	21.75	7.696	7.684	13.120
					6685	147	SU	--	18.99	18.96	**21.81**	5.188	4.848	10.452
							242	61	18.91	18.84	21.71	7.985	7.913	13.379
								62	18.84	18.92	21.71	7.821	7.623	13.153
					6845	179	SU	--	18.98	18.94	21.79	4.545	4.375	9.891
							242	61	18.99	18.88	21.77	7.587	7.314	12.883
								62	18.87	18.95	21.74	7.221	7.267	12.674
80MHz (FCC)	0	0	-0.18	2.42	6625	135	SU	--	18.85	18.95	21.73	1.35	1.07	6.643
							242	61	18.89	18.99	21.77	8.096	7.997	13.477
								62	18.92	18.95	21.77	7.953	8.07	13.442
								64	18.88	18.94	21.74	7.767	7.74	13.184
80MHz	0	0	-0.18	2.42	6705	151	SU	--	18.92	18.93	21.76	0.962	0.926	6.374
							242	61	18.84	18.95	21.73	6.642	6.546	12.025
								62	18.94	18.97	**21.79**	6.729	6.677	12.133
								64	18.87	18.98	21.76	6	6.556	11.717
					6785	167	SU	--	18.96	18.92	21.77	1.092	0.617	6.291
							242	61	18.91	18.93	21.75	7.412	7.345	12.809
								62	18.89	18.88	21.72	7.344	7.398	12.801
								64	18.98	18.88	21.76	6.862	6.496	12.113
160MHz	0.1	0	-0.18	2.42	6665	143	SU	--	18.92	18.9	21.74	-1.244	-1.616	4.104
							242	61	18.91	18.96	21.77	7.544	7.273	12.841
								62	18.95	18.94	**21.78**	7.042	6.979	12.441
								S64	18.96	18.88	21.75	7.001	6.586	12.229

Note:
EIRP MIMO Output Power (dBm) = Measured Conducted Power (dBm) (Ant 1 + Ant 2) + Un-Correlated Antenna Gain (dBi)

EIRP MIMO PSD (dBm/MHz) = Measured Conducted PSD (dBm/MHz) (Ant 1 + Ant 2) + Ducy Factor (dB) + Correlated Antenna Gain (dBi)

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

9.6. LP SPURIOUS EMMISSIONS 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.

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

TEST PROCEDURE

Follow KCB 987594 D02 v01r01, Section II-J, RBW & VBW settings were based on 26dB bandwidth test settings. Only RU26 tone for all bandwidths, the RBW & VBW settings were used equal or greater than 26dB bandwidth test settings.

Band	Tones	20MHz	40MHz	80MHz	160MHz
UNII-5	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-6	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-7	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz
UNII-8	Partial RU	300kHz/910kHz	510kHz/1.6MHz	510kHz/1.6MHz	300kHz/910kHz
	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.

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

9.6.1. 802.11be EHT20 MODE IN THE UNII-5 BAND

1TX Antenna 6 MODE (FCC+IC) MOBILE – 106 + 26-Tones, RU Index 82

LOW CHANNEL 5955

MID CHANNEL 6175

HIGH CHANNEL 6415

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

1TX Antenna 6 MODE (FCC+IC) MOBILE – 106 + 26-Tones, RU Index 83

LOW CHANNEL 5955

MID CHANNEL 6175

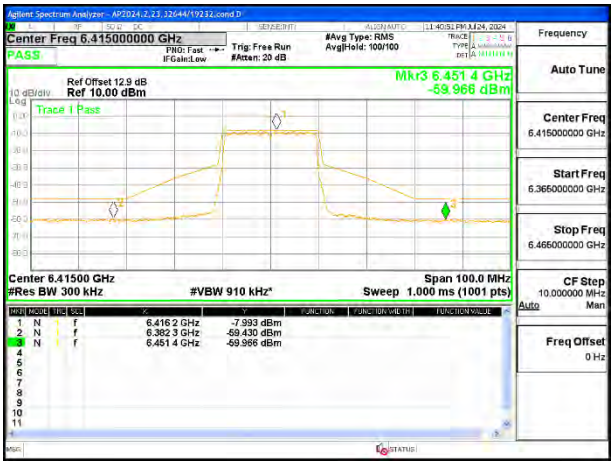
HIGH CHANNEL 6415

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

1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE

LOW CHANNEL 5955

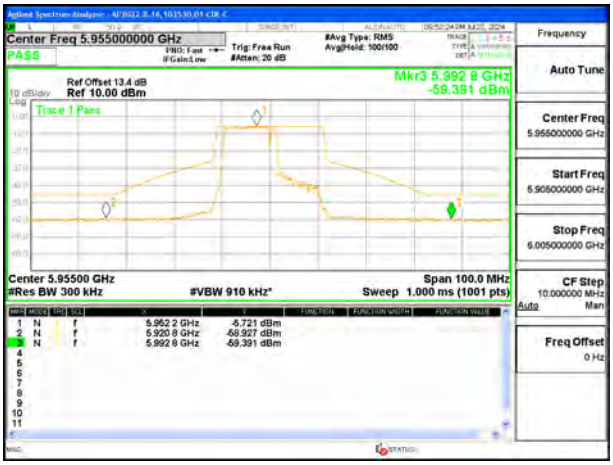
MID CHANNEL 6175



HIGH CHANNEL 6415

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – 106 + 26-Tones, RU Index 82



LOW CHANNEL 5955

MID CHANNEL 6175

HIGH CHANNEL 6415

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – 106 + 26-Tones, RU Index 83

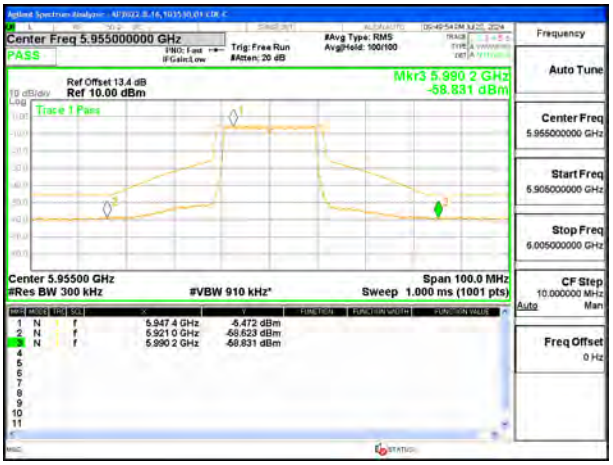
LOW CHANNEL 5955

MID CHANNEL 6175

HIGH CHANNEL 6415

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE



LOW CHANNEL 5955

MID CHANNEL 6175

HIGH CHANNEL 6415

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

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – 106 +26-Tones, RU Index 82

LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955

MID CHANNEL ANT 6 6175

MID CHANNEL ANT 5 6175

HIGH CHANNEL ANT 6 6415

HIGH CHANNEL ANT 5 6415

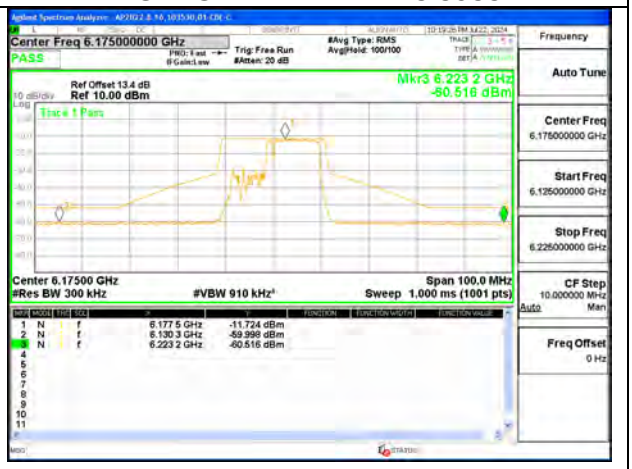
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – 106 +26-Tones, RU Index 83

LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955

MID CHANNEL ANT 6 6175



MID CHANNEL ANT 5 6175

HIGH CHANNEL ANT 6 6415

HIGH CHANNEL ANT 5 6415

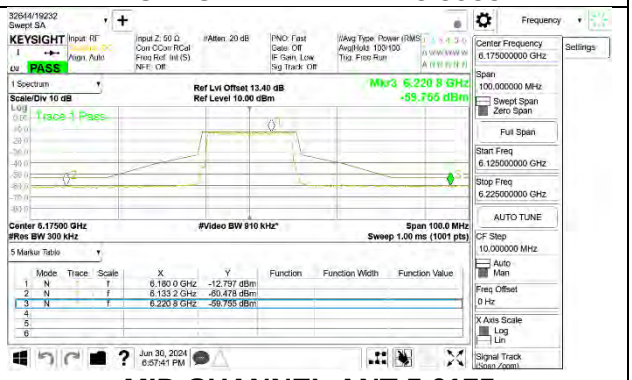
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – SU MODE

LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955

MID CHANNEL ANT 6 6175



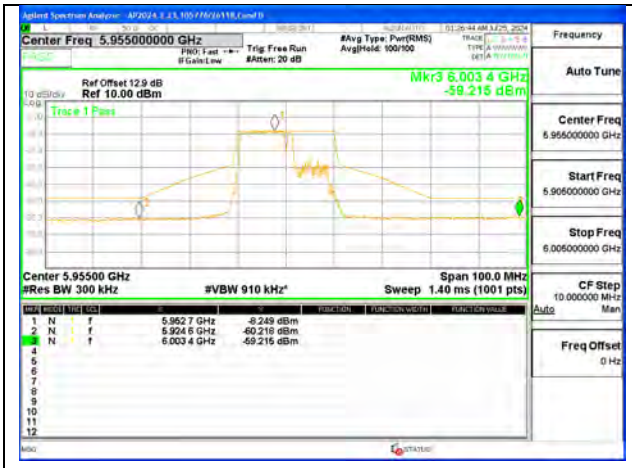
MID CHANNEL ANT 5 6175

HIGH CHANNEL ANT 6 6415

HIGH CHANNEL ANT 5 6415

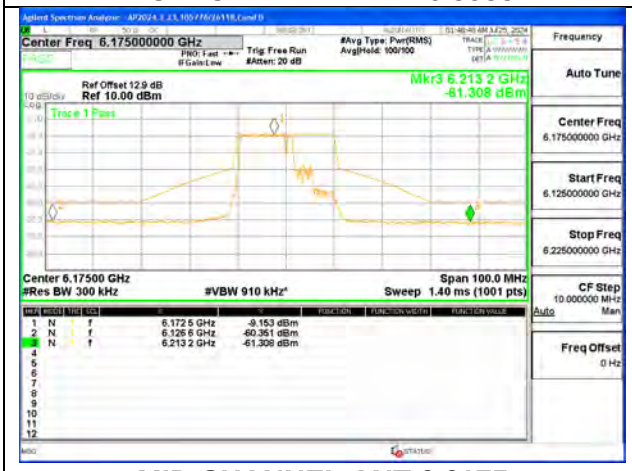
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 106-Tones, RU Index 82



LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955



MID CHANNEL ANT 6 6175

MID CHANNEL ANT 5 6175

HIGH CHANNEL ANT 6 6415

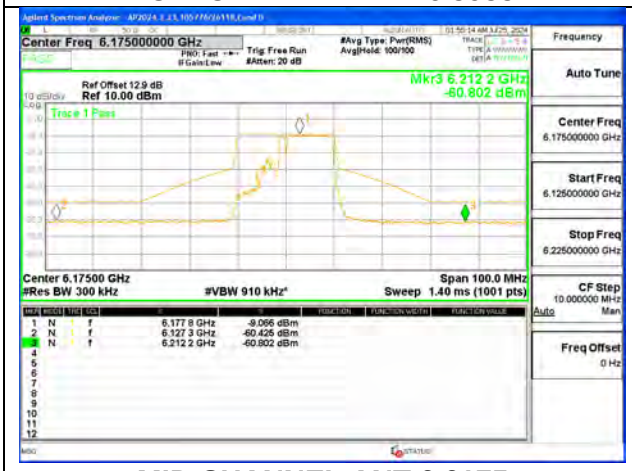
HIGH CHANNEL ANT 5 6415

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

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 106 + 26-Tones, RU Index 83

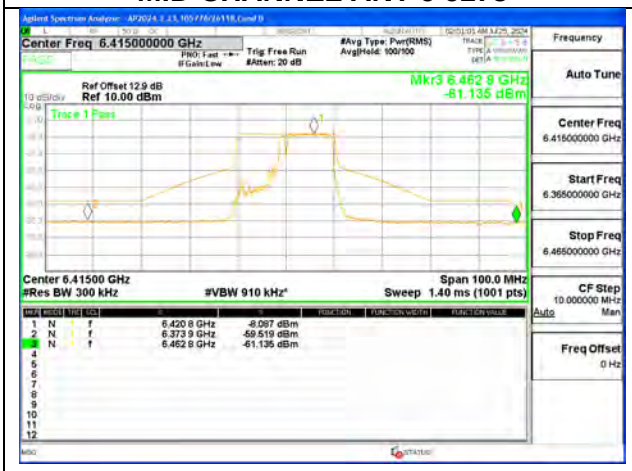
LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955



MID CHANNEL ANT 6 6175

MID CHANNEL ANT 5 6175



HIGH CHANNEL ANT 6 6415

HIGH CHANNEL ANT 5 6415

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

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – SU Mode

LOW CHANNEL ANT 6 5955

LOW CHANNEL ANT 5 5955

MID CHANNEL ANT 6 6175

MID CHANNEL ANT 5 6175

HIGH CHANNEL ANT 6 6415

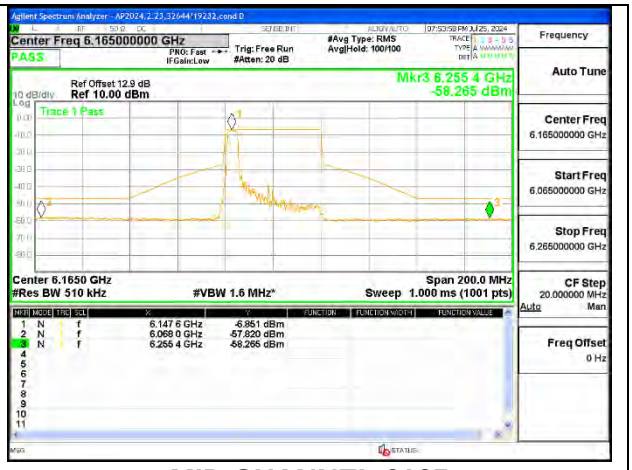
HIGH CHANNEL ANT 5 6415

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

9.6.2. 802.11be EHT40 MODE IN THE UNII-5 BAND

1TX Antenna 6 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 37

LOW CHANNEL 5965



MID CHANNEL 6165

HIGH CHANNEL 6405

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

1TX Antenna 6 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 41

LOW CHANNEL 5965

MID CHANNEL 6165

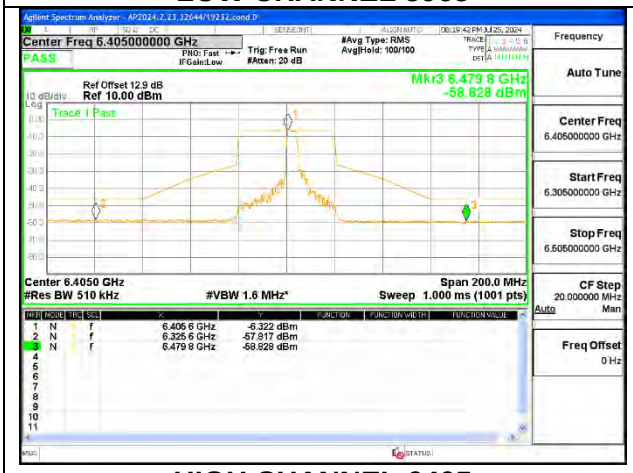
HIGH CHANNEL 6405

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

1TX Antenna 6 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 44

LOW CHANNEL 5965

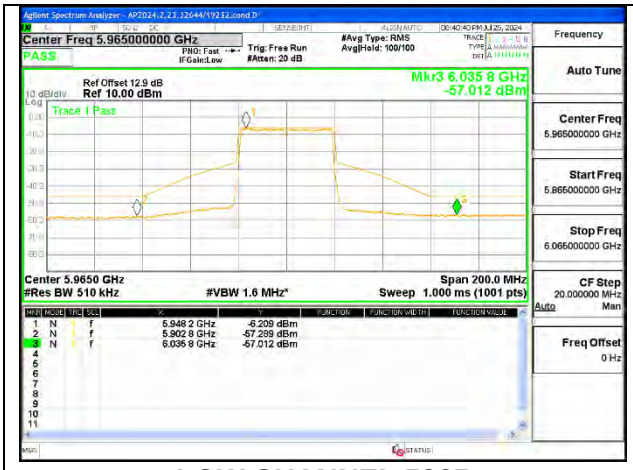
MID CHANNEL 6165



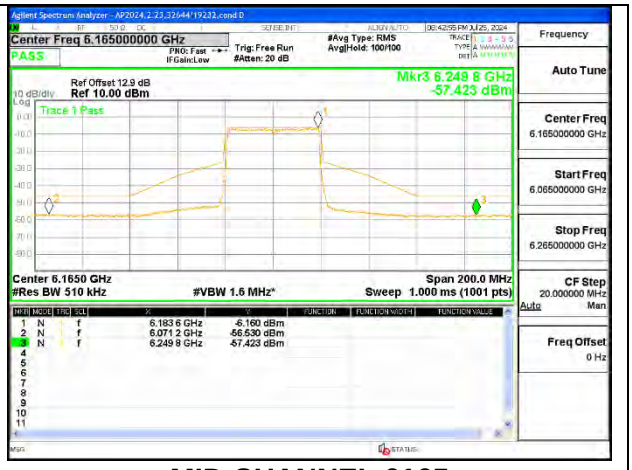
HIGH CHANNEL 6405

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

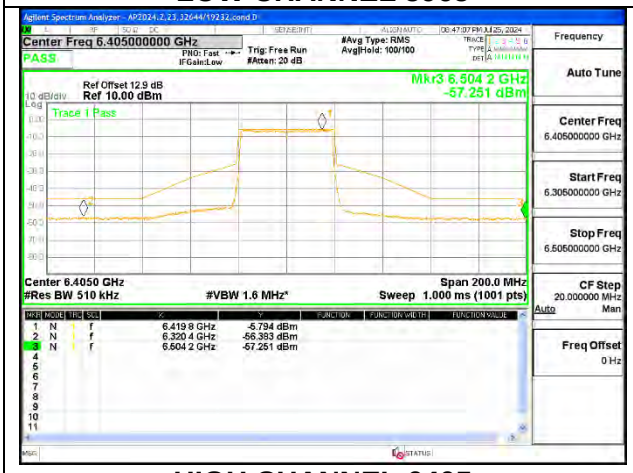
1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE



LOW CHANNEL 5965



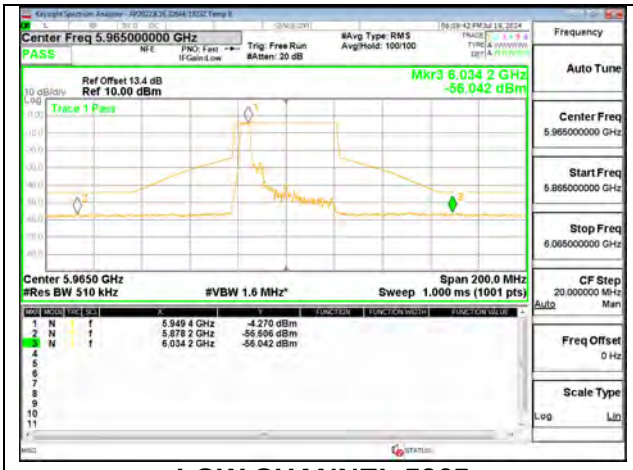
MID CHANNEL 6165



HIGH CHANNEL 6405

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 37



LOW CHANNEL 5965

MID CHANNEL 6165

HIGH CHANNEL 6405

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 41

LOW CHANNEL 5965

MID CHANNEL 6165

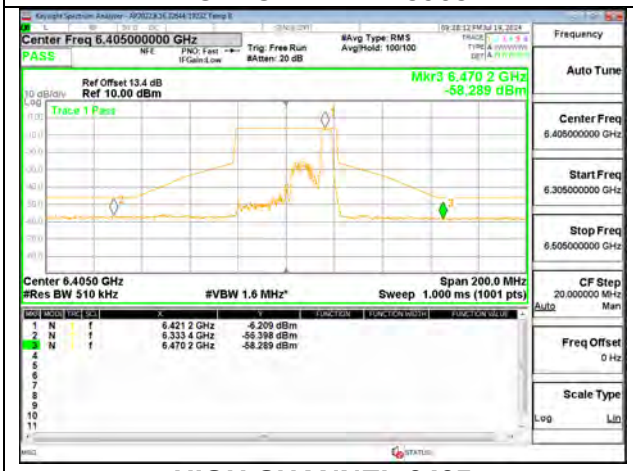
HIGH CHANNEL 6405

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – 52-Tones, RU Index 44

LOW CHANNEL 5965

MID CHANNEL 6165



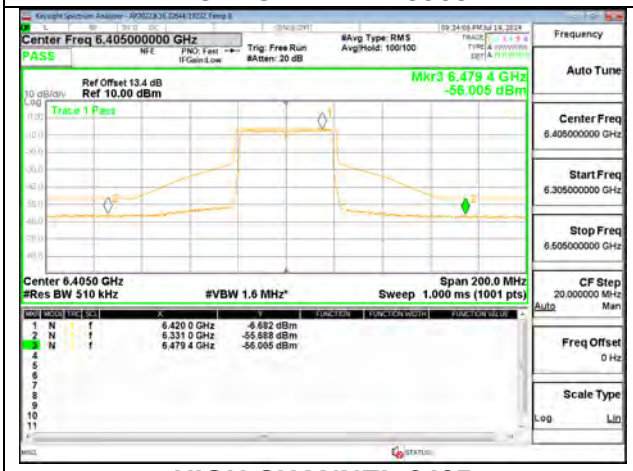
HIGH CHANNEL 6405

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

1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE

LOW CHANNEL 5965

MID CHANNEL 6165



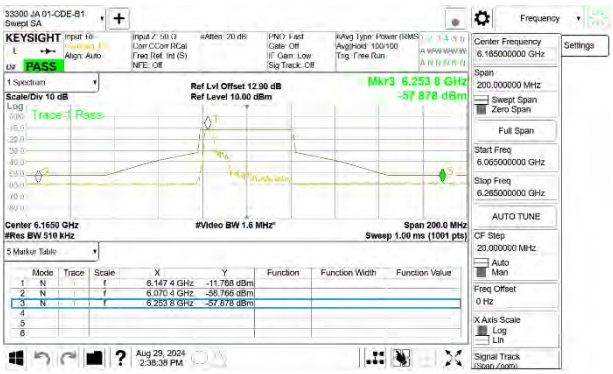
HIGH CHANNEL 6405

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

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – 52-Tones, RU Index 37

LOW CHANNEL ANT 6 5965

LOW CHANNEL ANT 5 5965



MID CHANNEL ANT 6 6165

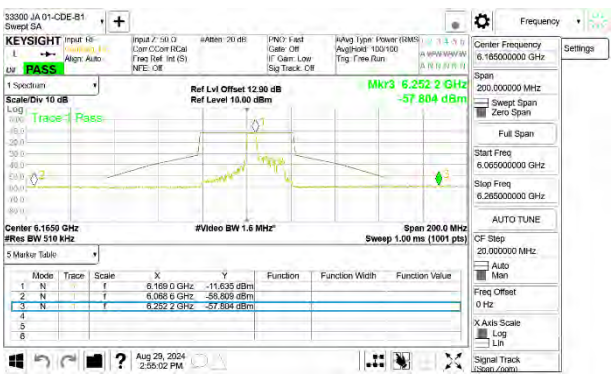
MID CHANNEL ANT 5 6165

HIGH CHANNEL ANT 6 6405

HIGH CHANNEL ANT 5 6405

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

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – 52-Tones, RU Index 41



MID CHANNEL ANT 6 6165

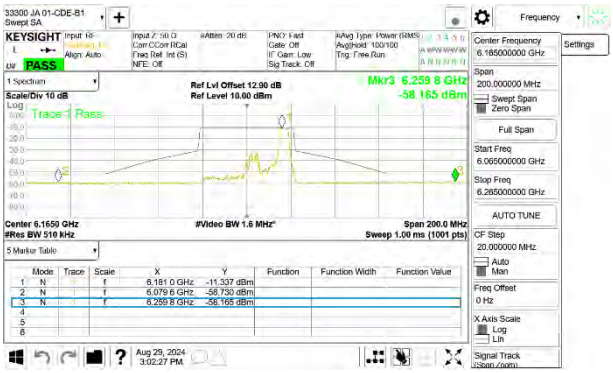
MID CHANNEL ANT 5 6165

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

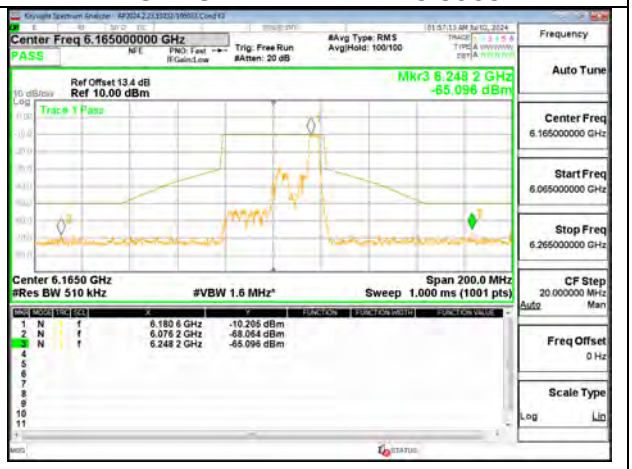
2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – 26-Tones, RU Index 44

LOW CHANNEL ANT 6 5965

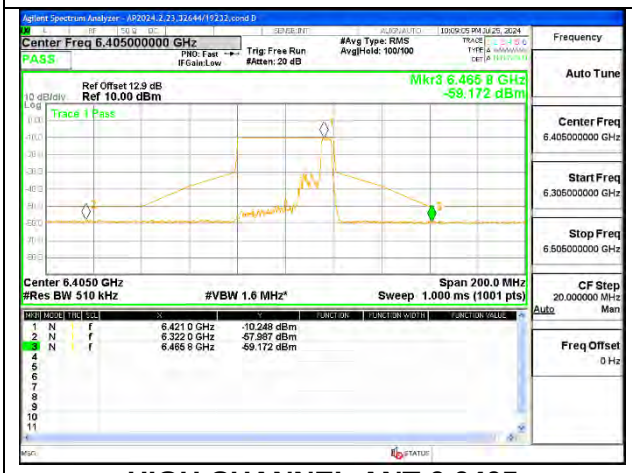
LOW CHANNEL ANT 5 5965



MID CHANNEL ANT 6 6165



MID CHANNEL ANT 5 6165



HIGH CHANNEL ANT 6 6405

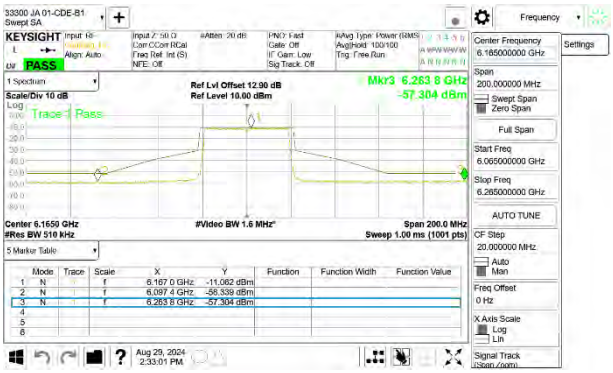
HIGH CHANNEL ANT 5 6405

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

2TX Antenna 6 + Antenna 5 OFDMA MODE (FCC + IC) – SU MODE

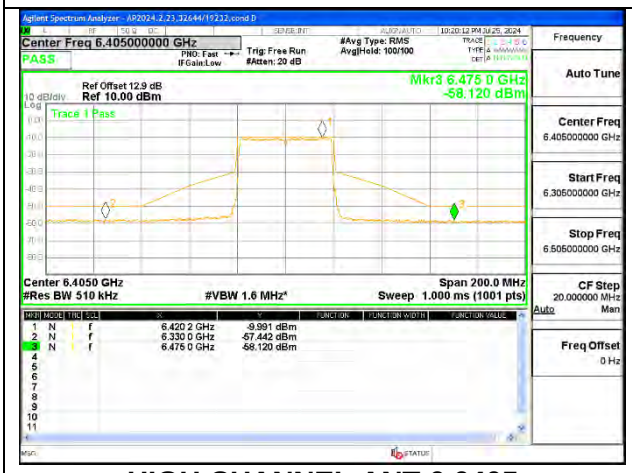
LOW CHANNEL ANT 6 5965

LOW CHANNEL ANT 5 5965



MID CHANNEL ANT 6 6165

MID CHANNEL ANT 5 6165



HIGH CHANNEL ANT 6 6405

HIGH CHANNEL ANT 5 6405

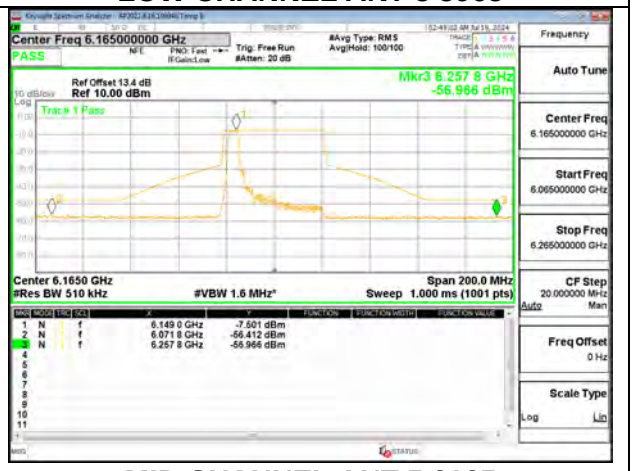
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 52-Tones, RU Index 37

LOW CHANNEL ANT 6 5965

LOW CHANNEL ANT 5 5965

MID CHANNEL ANT 6 6165



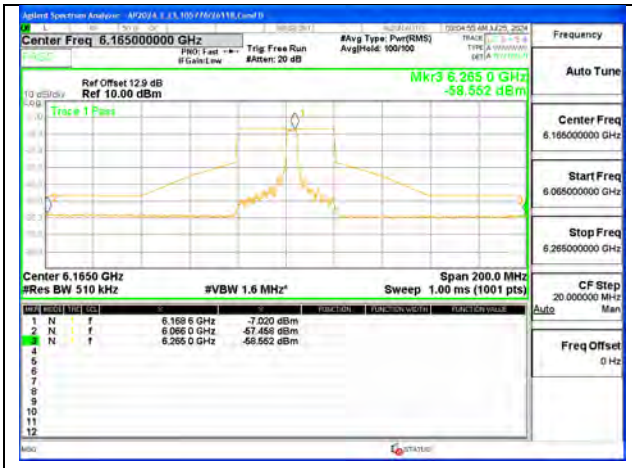
MID CHANNEL ANT 5 6165

HIGH CHANNEL ANT 6 6405

HIGH CHANNEL ANT 5 6405

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

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 52-Tones, RU Index 41



MID CHANNEL ANT 6 6165

MID CHANNEL ANT 5 6165

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

2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 52-Tones, RU Index 44

LOW CHANNEL ANT 6 5965

LOW CHANNEL ANT 5 5965

MID CHANNEL ANT 6 6165

MID CHANNEL ANT 5 6165

HIGH CHANNEL ANT 6 6405

HIGH CHANNEL ANT 5 6405

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