

TEST REPORT

Report Number: 15941282-E10V2

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

Model : A3575 (Parent)
A3634, A3635 (Variants)

Brand : APPLE

FCC ID : BCG-E9145A (Parent)
BCG-E9147A, BCG-E9148A (Variants)

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

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-12-18	Initial Review	---
V2	2025-01-02	Addressed TCB Feedback in Sections 6, 7, 9, 11	Everardo Torres

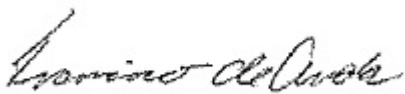
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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE INC. 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.
Model	A3575
Brand	APPLE
FCC ID	BCG-E9145A (Parent) BCG-E9147A, BCG-E9148A (Variants)
EUT Description	SMARTPHONE
Serial Number	NXDY1WRVFL, F9Q31HCXFF, JQ490H7GWL (Radiated) C07HJ70005100016LW, C07HM3000MH00016LV (Conducted)
Sample Receipt Date	2025-08-13
Date Tested	2025-08-25 to 2025-12-22
Applicable Standards	FCC 47 CFR Part 15 Subpart E
Test Results	COMPLIES
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document.	
Approved & Released By:	Prepared By:
	
Francisco de Anda Staff Engineer UL Verification Services Inc.	Everardo Torres Senior Test Engineer UL Verification Services Inc.

2. TEST RESULT SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

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

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

Requirement Description	Requirement Clause Number (FCC)	Result
Duty Cycle	See Comment	Reporting purposes only
26dB BW/99% OBW	See Comment	Reporting purposes only
6 dB BW	15.407 (e)	Complies
Output Power	15.407 (a) (1-3), (h) (1)	Complies
PSD	15.407 (a) (1-3)	Complies
Radiated Emissions	15.209, 15.205, 15.407 (b)	Complies
AC Mains Conducted Emissions	15.207	Complies

3. TEST METHODOLOGY

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

- ANSI C63.10-2020
- FCC 47 CFR Part 2
- FCC 47 CFR Part 15E
- FCC KDB 662911 D01 Multiple Transmitter Output
- FCC KDB 789033 D02 General UNII Test Procedures New Rules
- FCC KDB 484596 D01 Referencing Test Data
- FCC KDB 414788 D01 Radiated Test Site

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	FCC Registration
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	550739
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	
☒	Building 3: 843 Auburn Court, Fremont, CA 94538, USA	
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	
☒	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA	

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

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

5.2. DECISION RULES

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

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
Conducted Antenna Port Emission Measurement	1.940 dB
Power Spectral Density	2.466 dB
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	0.450 dB (Ave), 1.30 dB (PK)
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22 %
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

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

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with GSM, GPRS, EGPRS, WCDMA, LTE, 5G NR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Global Positioning System (GPS), Near-Field Communication (NFC) and Mobile Satellite Service (MSS) technologies. The rechargeable battery is not user accessible. This device is not user-serviceable and requires special tools to disassemble.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.2 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2 GHz band, 1TX			
5180 - 5240	802.11a	Covered by 802.11n HT20 1TX	
5180 - 5240	802.11n HT20	19.96	99.08
5190 - 5230	802.11n HT40	20.93	123.88
5180 - 5240	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5190 - 5230	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5210	802.11ac VHT80	17.19	52.36
5180 - 5240	802.11ax HE20 SU	19.92	98.17
5190 - 5230	802.11ax HE40 SU	20.85	121.62
5210	802.11ax HE80 SU	16.71	46.88
5.2 GHz band, 2TX			
5180 - 5240	802.11n HT20 CDD	19.94	98.63
5180 - 5240	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5190 - 5230	802.11n HT40 CDD	22.66	184.50
5190 - 5230	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5180 - 5240	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5190 - 5230	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5210	802.11ac VHT80 CDD	19.71	93.54
5210	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5180 - 5240	802.11ax HE20 SU CDD	19.93	98.40
5180 - 5240	802.11ax HE20 SDM	Covered by 802.11ax HE20 2TX CDD	
5190 - 5230	802.11ax HE40 SU CDD	22.88	194.09
5190 - 5230	802.11ax HE40 SDM	Covered by 802.11ax HE40 2TX CDD	
5210	802.11ax HE80 SU CDD	19.21	83.37
5210	802.11ax HE80 SDM	Covered by 802.11ax HE80 2TX CDD	

5.3 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.3 GHz band, 1TX			
5260 - 5320	802.11a	Covered by 802.11n HT20 1TX	
5260 - 5320	802.11n HT20	19.86	96.83
5270 - 5310	802.11n HT40	20.94	124.17
5260 - 5320	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5270 - 5310	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5290	802.11ac VHT80	15.71	37.24
5260 - 5320	802.11ax HE20 SU	19.95	98.86
5270 - 5310	802.11ax HE40 SU	20.88	122.46
5290	802.11ax HE80 SU	15.71	37.24
5.3 GHz band, 2TX			
5260 - 5320	802.11n HT20 CDD	19.95	98.86
5260 - 5320	802.11n HT20 SDM/STBC	Covered by 802.11n HT20 2TX CDD	
5270 - 5310	802.11n HT40 CDD	22.71	186.64
5270 - 5310	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5260 - 5320	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5270 - 5310	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5290	802.11ac VHT80 CDD	18.91	77.80
5290	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5260 - 5320	802.11ax HE20 SU CDD	19.94	98.63
5260 - 5320	802.11ax HE20 SDM	Covered by 802.11ax HE20 2TX CDD	
5270 - 5310	802.11ax HE40 SU CDD	22.93	196.34
5270 - 5310	802.11ax HE40 SDM	Covered by 802.11ax HE40 2TX CDD	
5290	802.11ax HE80 SU CDD	17.70	58.88
5290	802.11ax HE80 SDM	Covered by 802.11ax HE80 2TX CDD	

5.6 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 1TX			
5500 - 5720	802.11a	Covered by 802.11n HT20 1TX	
5500 - 5720	802.11n HT20	19.92	98.17
5510 - 5710	802.11n HT40	20.99	125.60
5500 - 5720	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5510 - 5710	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5530 - 5690	802.11ac VHT80	20.99	125.60
5500 - 5720	802.11ax HE20 SU	20.21	104.95
5510 - 5710	802.11ax HE40 SU	20.99	125.60
5530 - 5690	802.11ax HE80 SU	20.99	125.60
5.6 GHz band, 2TX			
5500 - 5720	802.11n HT20 CDD	20.00	100.00
5500 - 5720	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5510 - 5710	802.11n HT40 CDD	22.94	196.79
5510 - 5710	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5500 - 5720	802.11ac VHT20 SDM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5510 - 5710	802.11ac VHT40 SDM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5530 - 5690	802.11ac VHT80 CDD	22.99	199.07
5530 - 5690	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5500 - 5720	802.11ax HE20 SU CDD	20.18	104.23
5500 - 5720	802.11ax HE20 SDM	Covered by 802.11ax HE20 2TX CDD	
5510 - 5710	802.11ax HE40 SU CDD	23.00	199.53
5510 - 5710	802.11ax HE40 SDM	Covered by 802.11ax HE40 2TX CDD	
5530 - 5690	802.11ax HE80 SU CDD	22.99	199.07
5530 - 5690	802.11ax HE80 SDM	Covered by 802.11ax HE80 2TX CDD	

5.8 GHz BAND (FCC)

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 1TX			
5745 - 5825	802.11a	Covered by 802.11n HT20 1TX	
5745 - 5825	802.11n HT20	20.92	123.59
5755 - 5795	802.11n HT40	20.91	123.31
5745 - 5825	802.11ac VHT20	Covered by 802.11n HT20 1TX	
5755 - 5795	802.11ac VHT40	Covered by 802.11n HT40 1TX	
5775	802.11ac VHT80	20.89	122.74
5745 - 5825	802.11ax HE20 SU	20.91	123.31
5755 - 5795	802.11ax HE40 SU	20.90	123.03
5775	802.11ax HE80 SU	20.82	120.78
5.8 GHz band, 2TX			
5745 - 5825	802.11n HT20 CDD	23.92	246.60
5745 - 5825	802.11n HT20 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5755 - 5795	802.11n HT40 CDD	23.90	245.47
5755 - 5795	802.11n HT40 SDM/STBC	Covered by 802.11n HT40 2TX CDD	
5745 - 5825	802.11ac VHT20 STM/STBC/CDD	Covered by 802.11n HT20 2TX CDD	
5755 - 5795	802.11ac VHT40 STM/STBC/CDD	Covered by 802.11n HT40 2TX CDD	
5775	802.11ac VHT80 CDD	23.91	246.04
5775	802.11ac VHT80 SDM/STBC	Covered by 802.11ac VHT80 2TX CDD	
5745 - 5825	802.11ax HE20 SU CDD	23.90	245.47
5745 - 5825	802.11ax HE20 SDM	Covered by 802.11ax HE20 2TX CDD	
5755 - 5795	802.11ax HE40 SU CDD	23.90	245.47
5755 - 5795	802.11ax HE40 SDM	Covered by 802.11ax HE40 2TX CDD	
5775	802.11ax HE80 SU CDD	23.72	235.50
5775	802.11ax HE80 SDM	Covered by 802.11ax HE80 2TX CDD	

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna Type is IFA ANT 6, Microstrip ANT 5.

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

Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5150 - 5250 UNII - 1	-0.80	-3.30	-1.87	1.05
5250 - 5350 UNII - 2A	-0.10	-2.10	-0.99	1.97
5500 - 5700 UNII - 2C	-1.30	-1.90	-1.59	1.42
5725 - 5850 UNII 3	-4.00	-1.60	-2.64	0.29

Frequency Range (MHz)	Cable Loss	
	Antenna 6 (dB)	Antenna 5 (dB)
5150 - 5250 UNII - 1	2.20	2.40
5250 - 5350 UNII - 2A	2.20	2.40
5500 - 5700 UNII - 2C	2.40	2.50
5725 - 5825 UNII 3	2.40	2.60

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

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was LuckD23D90

6.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in three orthogonal orientations X, Y and Z. The following table exhibits the worst-case orientation. The full tests of the EUT have been made upon the orientations shown in the table below.

Band	ANT6	ANT5	ANT6+5
5GHz	Z-Portrait	Y-Landscape	Y-Landscape

802.11n 2TX and 802.11ax 2TX modes were used to perform on radiated harmonic spurious final test to cover all SISO modes. Max power was tuned to maximum among all the modes. For testing purposes, radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-40GHz, and power line conducted emissions were performed with the EUT set at the 2TX CDD mode among the CDD/SDM modes with power setting equal or higher than conducted 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 worst-case scenario.

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

Simultaneous transmission with Bluetooth was investigated, and no noticeable emission was found.

With same power on Full RU and SU higher data rate, investigation were performed on both band edge to determine the worst case, and SU mode was determined to be the worst case.

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

802.11n HT20 mode: MCS7
 802.11n HT40 mode: MCS7
 802.11ac VHT80 mode: MCS9
 802.11ax: HE20/ HE40/ HE80 RU, and SU mode: MCS11

802.11a and 802.11ac are covered by 802.11n because the modulation and bandwidth of 802.11a, 802.11ac, and 802.11n modes are similar, and the target power of 802.11a and 802.11ac modes are equal to or lower than that of 802.11n mode.

The target power of SDM mode is equal to or lower than that of CDD mode. CDD correlated antenna gain is also worst-case, so CDD mode tests were performed to represent worst-case reporting.

The partial RUs in the 40MHz/80MHz has equal or lower power than the partial RUs in the 20MHz band and is covered by 20MHz partial RUs, and same condition for 80MHz RU484T is covered by 40MHz SU/RU484T because they have the same tune up power.

After the investigation, the worst case of power and PSD modes selecting for test are as table shown below.

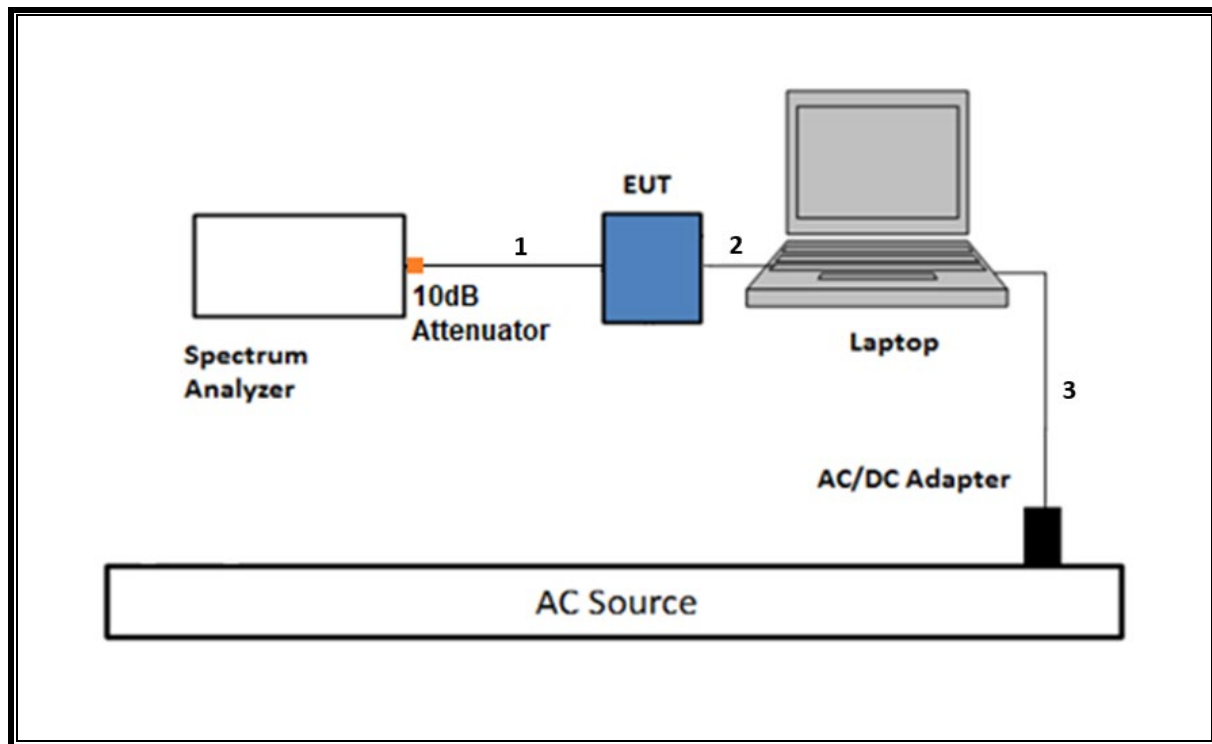
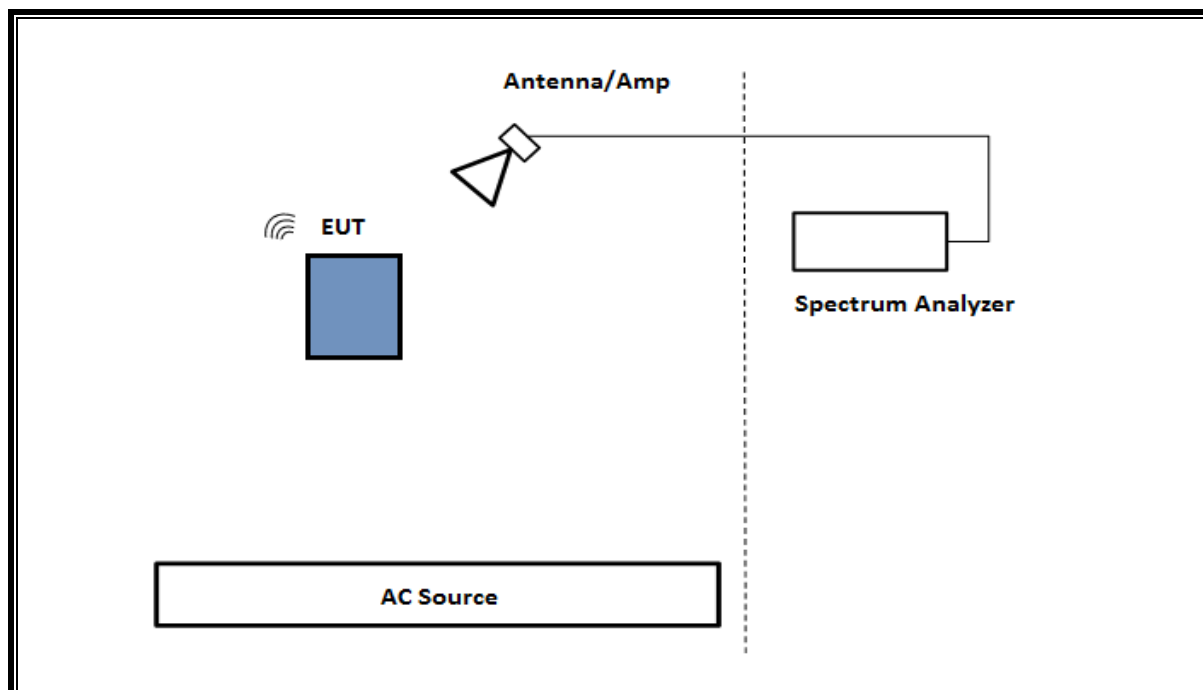
BW (MHz)	Tone (T)	RU Index	RU Index (Chipset Support only)	Worst Case Tone (UNII-1)		Worst Case Tone (UNII-2A)		Worst Case Tone (UNII-2C)		Worst Case Tone (UNII-3)	
				Highest Power	Highest PSD	Highest Power	Highest PSD	Highest Power	Highest PSD	Highest Power	Highest PSD
20	26	0 ~ 8	0 ~ 8								x
	52	37 ~ 40	37 ~ 40		x		x		x		
	106	53 ~ 54	53 ~ 54								
	242	61	61								
40	SU	--	--	x		x		x		x	
	484	65	65								
80	SU	--	--	x	x	x	x	x	x	x	x
	996	67	67								
	SU	--	--	x	x	x	x	x	x	x	x

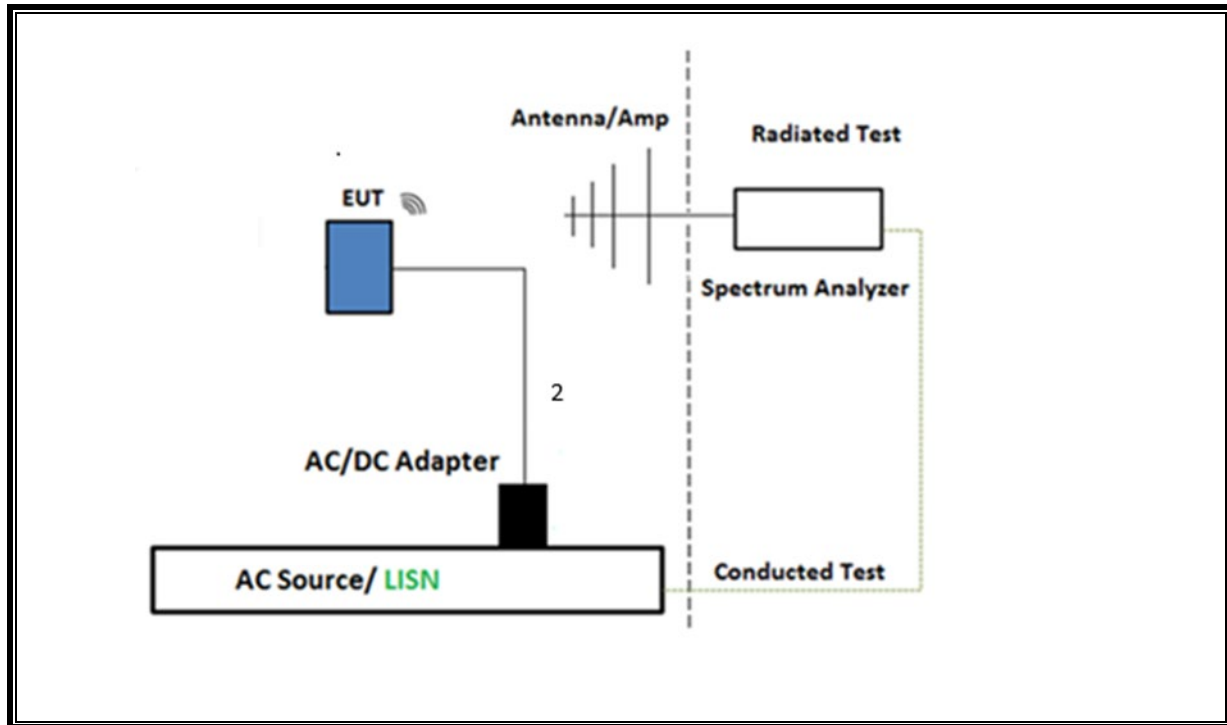
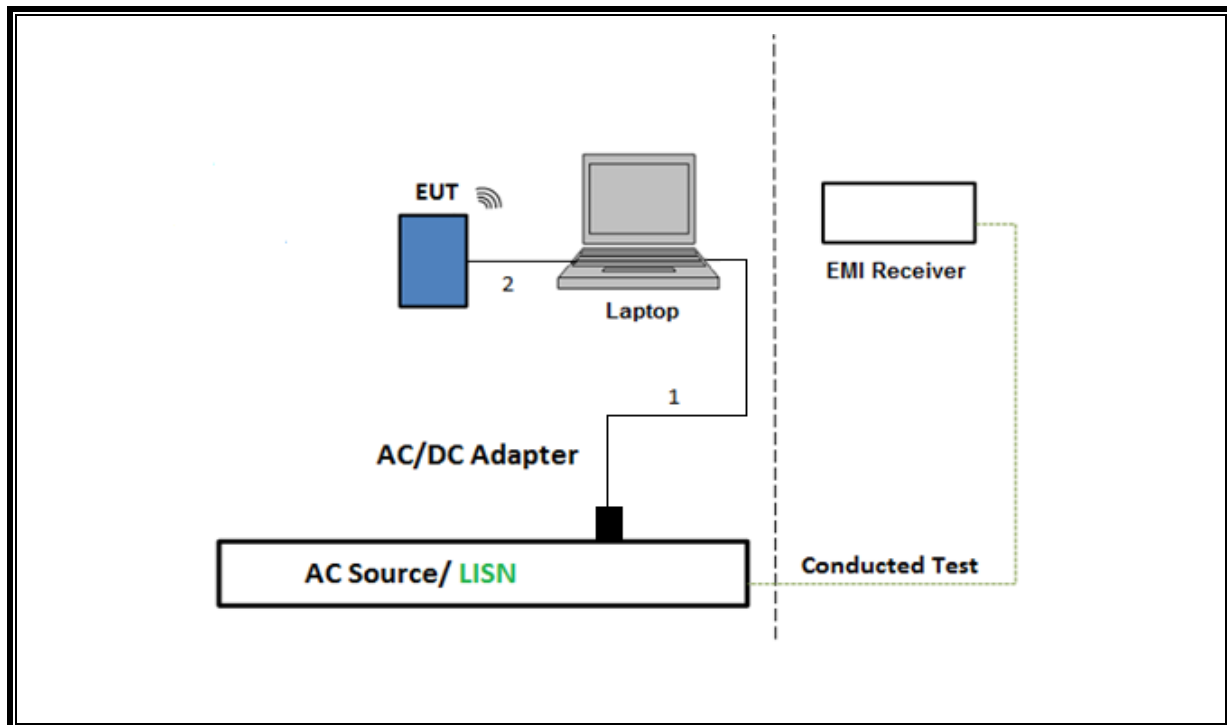
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop		Apple	A2338	FVFDRD40Q05F		BCGA2338
Laptop AC/DC adapter		Apple	A1718	C4H749207RMGN8RAT		DoC
EUT AC/DC adapter		Apple	A2305	F162163404UPM0685		DoC
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-shielded	0.2	To spectrum Analyzer
2	USB-C	1	USB-C	Shielded	1.0	N/A
3	DC	1	DC	Shielded	2	N/A
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	DC	Shielded	2	N/A
2	USB	1	USB-C	Shielded	1	N/A

TEST SETUP

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

SETUP DIAGRAM FOR CONDUCTED TESTS**SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz**

SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST**TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION**

7. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	ID Num	Cal Due
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	125179	2026-01-31
Power Sensor	MAURY MICROWAVE	RTP4018-S1	262748	2026-04-30
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80397	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85313	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 50GHz w/Ext. Mixer	Keysight Technologies Inc	N9030A	80400	2026-01-31
Power Sensor, Real-Time Peak, 50MHz to 8GHz	Boonton Electronics	RTP5008	213208	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	80398	2026-01-31
Power Sensor	MAURY MICROWAVE	RTP4018-S1	262749	2026-04-30
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A-544	90238	2026-01-31
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	85212	2026-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	225683	2026-02-28
10dB Fixed Attenuator	Pasternack Enterprises	PE7024-10	236358	Verified/Characterized before use
10dB Fixed Attenuator	Pasternack Enterprises	PE7024-10	236355	Verified/Characterized before use
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	226674	2027-03-31
Filter Box	UL-FR1	RATS 1.0, 2 Amp, 6 Port	250156	2026-10-30
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	203090	2027-04-30
*Amplifier, 10KHz to 1GHz, 32dB	Sonoma Instrument Co.	310N	89831	2025-10-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	191428	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84796	2027-10-31
Filter Box	UL-FR1	Frankenstein, 1 Amp, 12 Port	230878	2026-09-30
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	81140	2027-05-31
RF Device, Active, Amplifier	AMPLICAL	AMP18G26.5-60	236106	2026-07-31
Antenna, Horn 26.5 to 40GHz	A.R.A.	MWH-2640/B	230656	2027-05-31
RF Device, Active, Amplifier	AMPLICAL	AMP26G40-60	236107	2026-05-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	235266	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	206806	2027-03-31
Filter Box	UL-FR1	RATS 1.0, 1 Amp, 6 Port	173233	2026-04-29
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	235670	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	84797	2027-09-30
Filter Box	UL-FR1	RATS 2.0, 1 Amp, 17 Port	225079	2026-05-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201497	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	222740	2027-09-30
Filter Box	UL-FR1	RATS 1.0, 2 Amp, 6 Port	171389	2026-03-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	191430	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200897	2027-09-30
Filter Box	UL-FR1	Frankenstein, 1 Amp, 12 Port	217255	2026-01-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200896	2027-03-31
Filter Box	UL-FR1	Frankenstein, 1 Amp, 12 Port	216812	2026-01-31

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	ID Num	Cal Due
Antenna, Passive Loop, 30Hz - 1MHz	Electro-Metrics	EM-6871	219909	2026-08-31
Antenna, Passive Loop, 100kHz to 30MHz	Electro-Metrics	EM-6872	219911	2026-08-31
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	223461	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	222741	2027-09-30
Filter Box	UL-FR1	Frankenstein, 1 Amp, 12 Port	217521	2026-09-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	226079	2026-02-28
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	230299	2027-02-28
Filter Box	UL-FR1	RATS 2.0, 1 Amp, 17 Port	226780	2026-05-31

AC Line Conducted				
Description	Manufacturer	Model	ID Num	Cal Due
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	171646	2026-02-28
LISN for Conducted Emissions CISPR-16	Fischer Custom Communications	FCC-LISN-50/250-25-2-01-480V	175765	2026-01-31
*Transient Limiter	TE	TBFL1	207996	2025-09-30
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Ver 9.5, May 1, 2023	
Conducted Software	UL	UL EMC	2020.8.16	
Conducted Software	UL	Station Tool	Ver 7.0	
AC Line Conducted Software	UL	UL EMC	Ver 9.5, Mar 3, 2023	

*Testing was completed before calibration due date or after calibration was completed.

8. MEASUREMENT METHOD

TEST ITEM	TEST METHOD
On Time and Duty Cycle	ANSI C63.10 Subclause -12.2
6 dB Emission BW	ANSI C63.10 Subclause -12.5.1
26 dB Emission BW	ANSI C63.10 Subclause -12.5.2
99% Occupied BW	ANSI C63.10 Subclause - 6.9.3
Conducted Output Power	ANSI C63.10 Subclause -12.4.3.2
Power Spectral Density	ANSI C63.10 Subclause -12.6
Unwanted Emissions in Restricted Bands	ANSI C63.10 Subclause -12.7.2
Unwanted Emissions in Non-Restricted Bands	ANSI C63.10 Subclause -12.7.3
AC Power Line Conducted Emissions	ANSI C63.10, Section 6.2
Radiated Spurious Emissions Below 30MHz	ANSI C63.10, Section 6.4

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

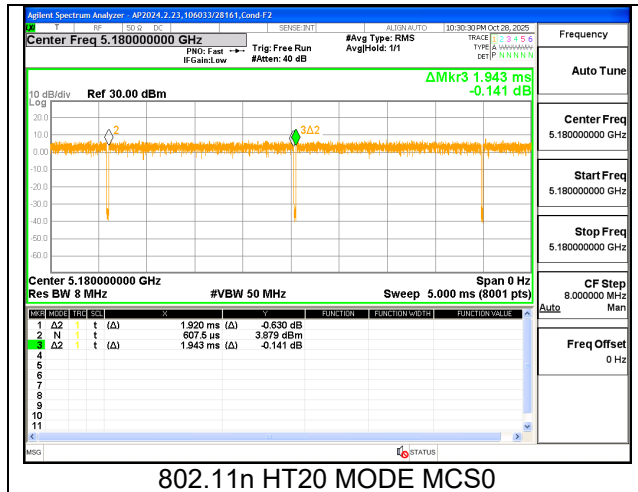
PROCEDURE

ANSI C63.10 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	Tone	Data Rate (Mbps)	ON Time T (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
HT20	—	MCS0	1.920	1.943	0.9882	98.82%	0.00	0.010
	—	MCS7	0.228	0.249	0.9144	91.44%	0.39	4.396
HT40	—	MCS0	1.832	1.854	0.9881	98.81%	0.00	0.010
	—	MCS7	0.216	0.236	0.9137	91.37%	0.39	4.630
VHT80	—	MCS0	1.691	1.716	0.9854	98.54%	0.00	0.010
	—	MCS9	0.2076	0.2297	0.9038	90.38%	0.44	4.817
HE20	SU	MCS0	1.571	1.596	0.9843	98.43%	0.00	0.010
		MCS11	0.1526	0.1739	0.8775	87.75%	0.57	6.553
	52T	MCS0	3.82	3.853	0.9914	99.14%	0.00	0.010
		MCS11	0.278	0.311	0.8939	89.39%	0.49	3.597
	26T	MCS0	3.993	4.026	0.9918	99.18%	0.00	0.010
		MCS11	0.2923	0.3258	0.8972	89.72%	0.47	3.421
HE40	SU	MCS0	4.015	4.039	0.9941	99.41%	0.00	0.010
		MCS11	0.297	0.32	0.9281	92.81%	0.32	3.367
	242T	MCS0	3.043	3.075	0.9896	98.96%	0.00	0.010
		MCS11	0.2338	0.2661	0.8786	87.86%	0.56	4.277
	52T	MCS0	3.787	3.852	0.9831	98.31%	0.00	0.010
		MCS11	0.2762	0.3099	0.8913	89.13%	0.50	3.621
	26T	MCS0	3.969	4.026	0.9858	98.58%	0.00	0.010
		MCS11	0.2901	0.3253	0.8918	89.18%	0.50	3.447
HE80	SU	MCS0	1.947	1.971	0.9878	98.78%	0.00	0.010
		MCS11	0.1749	0.1993	0.8776	87.76%	0.57	5.718
	242T	MCS0	3.043	3.077	0.9890	98.90%	0.00	0.010
		MCS11	0.2345	0.2684	0.8737	87.37%	0.59	4.264
	52T	MCS0	1.996	2.054	0.9718	97.18%	0.12	0.501
		MCS11	0.1772	0.2108	0.8406	84.06%	0.75	5.643
	26T	MCS0	3.969	4.027	0.9856	98.56%	0.00	0.010
		MCS11	0.2925	0.326	0.8972	89.72%	0.47	3.419

Note: There is the same duty cycle factor on 1TX and 2TX

DUTY CYCLE PLOTS

9.2. 26 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

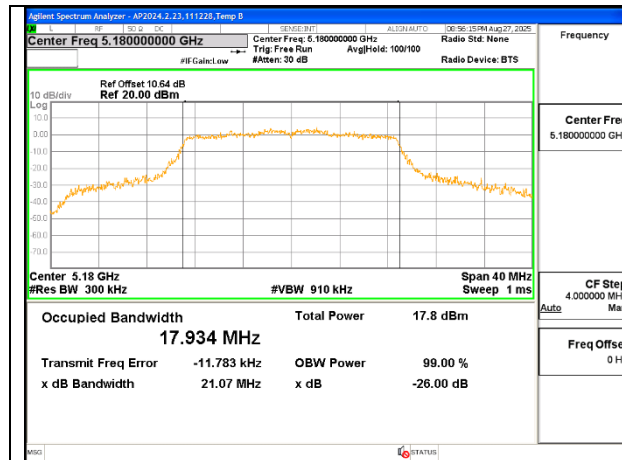
RESULTS

Plots included in the report are representative of the method and settings parameters used for the test.

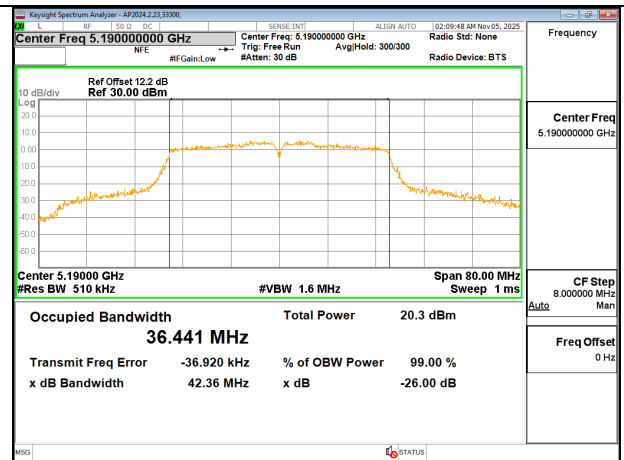
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9.2.1. 802.11n/ac SISO MODE IN THE UNII-1 BAND

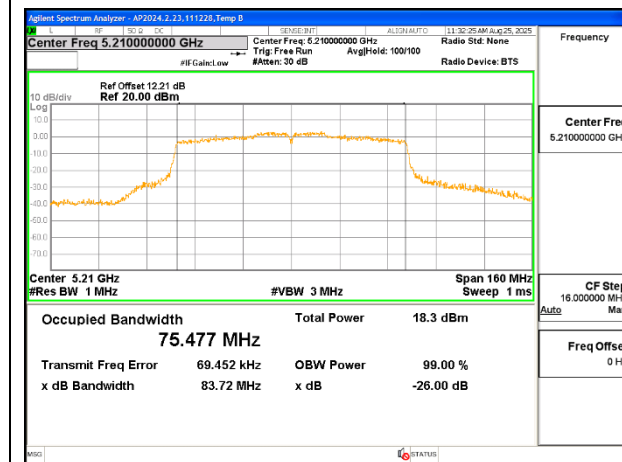
UNII-1 (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20 (FCC)	5180	36	21.07	21.41	17.9340	17.9090
	5200	40	20.91	21.21	17.8220	17.8210
	5240	48	21.03	20.93	17.8320	17.8220
HT40 (FCC)	5190	38	42.36	42.64	36.4410	36.4600
	5230	46	40.92	41.19	36.2960	36.2360
VHT80 (FCC)	5210	42	83.72	83.65	75.4770	75.5990



20MHz - Low Channel (UNII-1) - Ant 6



40MHz - Low Channel (UNII-1) - Ant 6



80MHz - Low Channel (UNII-1) - Ant 6

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9.2.2. 802.11n/ac MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20 (FCC)	5180	36	21.17	21.33	—	17.9470	17.8820	—
	5200	40	21.00	20.72	—	17.8290	17.7650	—
	5240	48	20.85	20.82	—	17.8400	17.7580	—
HT40 (FCC)	5190	38	43.85	41.09	—	36.4220	36.3140	—
	5230	46	41.10	40.64	—	36.2130	36.1750	—
VHT80 (FCC)	5210	42	82.55	80.84	—	75.4760	75.5710	—

9.2.3. 802.11n/ac SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5260	52	20.86	20.89	17.7690	17.8020
	5280	56	21.18	20.95	17.8360	17.8460
	5300	60	21.12	20.99	17.8310	17.8210
	5320	64	22.03	22.14	17.9340	17.8970
HT40	5270	54	41.12	41.17	36.2880	36.2840
	5310	62	42.10	42.50	36.4010	36.3750
VHT80	5290	58	82.62	82.71	75.4590	75.4790

9.2.4. 802.11n/ac MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20	5260	52	21.09	21.05	21.05	17.8410	17.7890	17.79
	5280	56	20.99	20.96	20.96	17.8250	17.8670	17.83
	5300	60	20.90	20.76	20.76	17.8240	17.7680	17.77
	5320	64	21.34	20.86	20.86	17.9360	17.8610	17.86
HT40	5270	54	41.04	40.29	40.29	36.2390	36.2110	36.2110
	5310	62	41.95	42.12	41.95	36.3690	36.2810	36.2810
VHT80	5290	58	82.80	81.83	81.83	75.5600	75.3670	75.3670

9.2.5. 802.11n/ac SISO MODE IN THE UNII-2C BAND

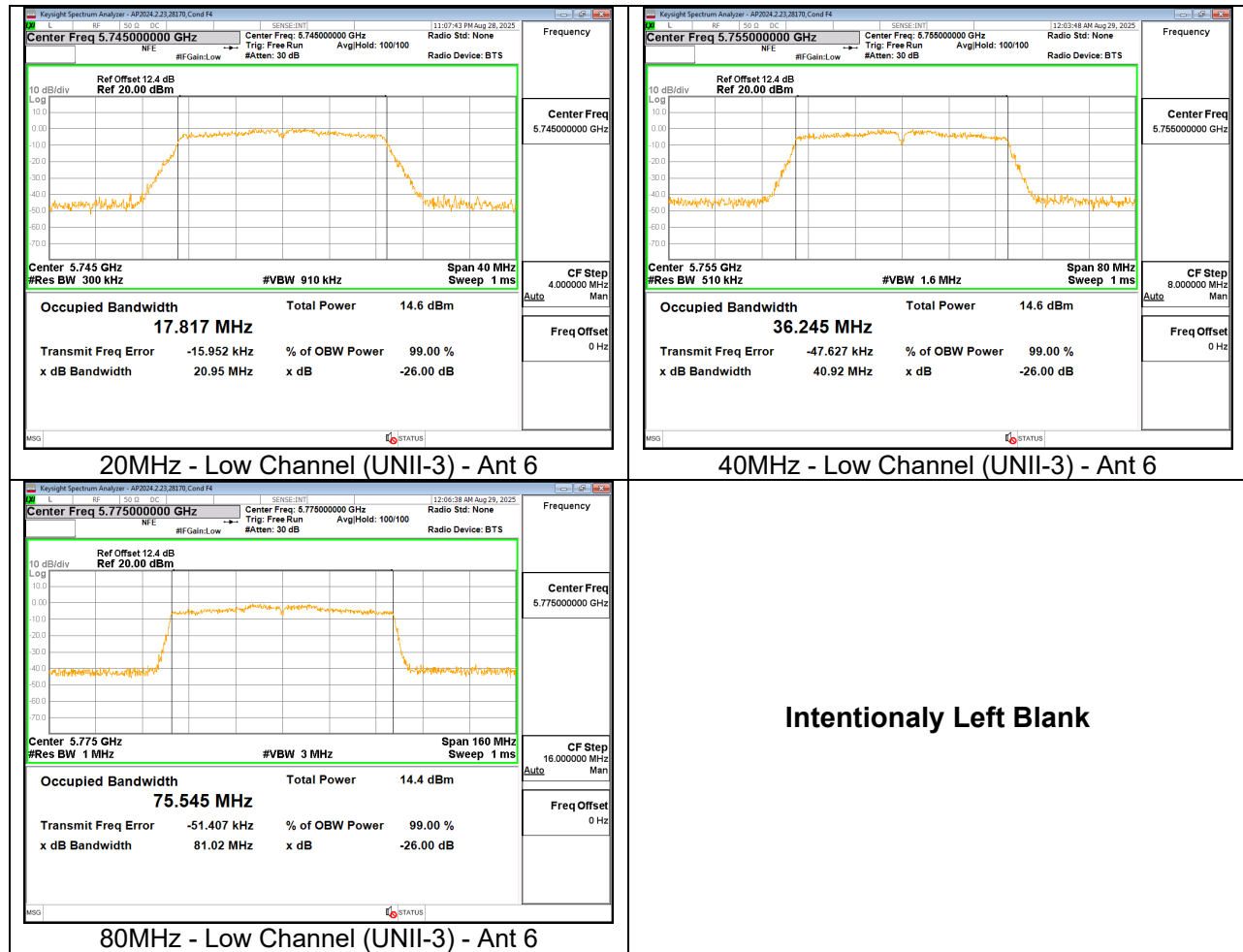
UNII-2C (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5500	100	20.97	21.52	17.8730	17.9330
	5580	116	21.34	21.04	17.9050	17.7990
	5620	124	20.96	20.93	17.8450	17.8220
	5700	140	20.98	21.72	17.8640	17.9330
	5720 (Straddle)	144	20.94	21.00	17.8510	17.8300
HT40	5510	102	42.05	43.15	36.3990	36.4120
	5550	110	40.86	41.20	36.3080	36.3250
	5670	134	42.35	42.57	36.3110	36.3290
	5710 (Straddle)	142	40.86	41.00	36.2750	36.3040
VHT80	5530	106	81.41	82.87	75.4980	75.5870
	5610	122	83.13	82.25	75.4960	75.4600
	5690 (Straddle)	138	81.17	81.47	75.4610	75.4850

9.2.6. 802.11n/ac MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
			Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HT20	5500	100	22.45	23.05	22.45	17.9140	17.8590	17.86
	5580	116	20.98	20.77	20.77	17.8700	17.7210	17.72
	5700	140	21.08	21.88	21.08	17.9010	17.8530	17.85
	5720 (Straddle)	144	20.88	20.63	20.63	17.8630	17.7700	17.77
HT40	5510	102	41.67	41.43	41.43	36.3900	36.3150	36.3150
	5550	110	41.21	40.45	40.45	36.2620	36.2490	36.2490
	5590	118	41.40	40.21	40.21	36.3160	36.2630	36.2630
	5670	134	42.77	41.82	41.82	36.4980	36.4240	36.4240
	5710 (Straddle)	142	40.89	40.35	40.35	36.2770	36.2680	36.2680
VHT80	5530	106	82.32	80.87	80.87	75.5190	75.4000	75.4000
	5610	122	82.25	82.56	82.25	75.5240	75.5260	75.5240
	5690 (Straddle)	138	80.86	81.05	80.86	75.4150	75.5400	75.4150

9.2.7. 802.11n/ac SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5745	149	20.95	21.12	17.8170	17.7780
	5785	157	21.01	20.86	17.7970	17.8330
	5825	165	21.00	21.34	17.7850	17.8700
HT40	5755	151	40.92	41.15	36.2450	36.2180
	5795	159	40.83	41.31	36.2730	36.2890
VHT80	5775	155	81.02	81.05	75.5450	75.5430

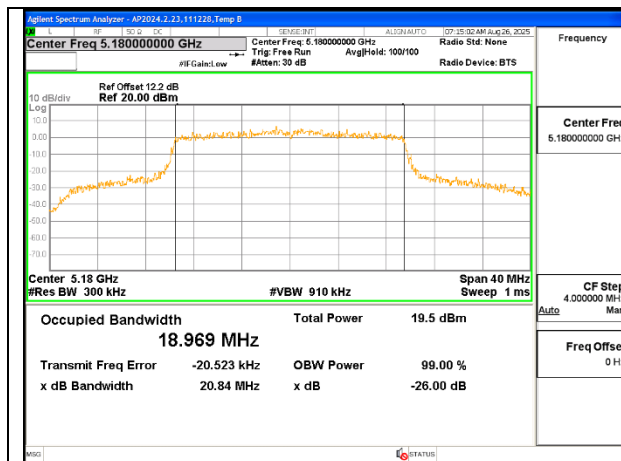


9.2.8. 802.11n/ac MIMO CDD MODE IN THE UNII-3 BAND

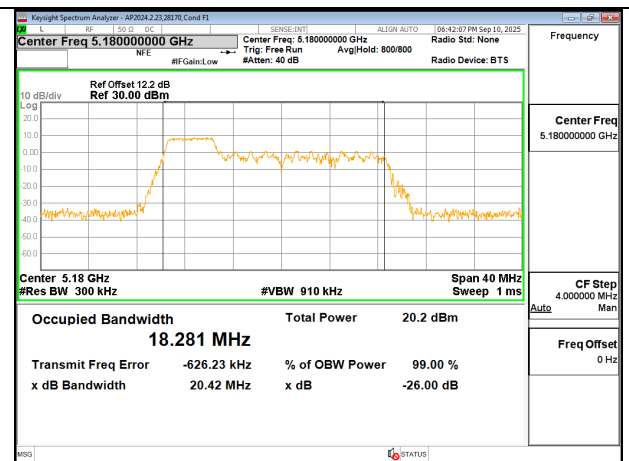
UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5
HT20	5745	149	20.79	21.11	17.7720	17.7910
	5785	157	20.83	20.86	17.8080	17.7650
	5825	165	21.06	20.90	17.8290	17.7690
HT40	5755	151	40.82	40.64	36.2830	36.2230
	5795	159	40.98	40.45	36.3260	36.2020
VHT80	5775	155	81.12	81.12	75.5600	75.4550

9.2.9. 802.11ax SISO MODE IN THE UNII-1 BAND

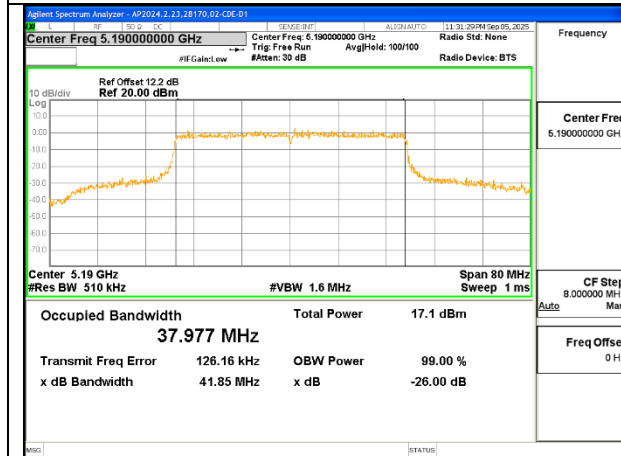
UNII-1 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
HE20 (FCC)	5180	36	SU	—	20.84	22.94	18.9690	18.9650
			52T	37	20.42	20.25	18.2810	18.2880
				38	19.75	19.93	17.2100	17.3480
				40	20.90	20.90	18.4300	18.4740
	5200	40	SU	—	20.92	21.15	18.9650	18.9540
			52T	37	20.15	20.31	18.1920	18.2320
				38	19.81	19.67	17.1080	17.1910
				40	20.70	20.86	18.3350	18.4540
	5240	48	SU	—	20.95	20.95	18.9290	18.9630
			52T	37	20.14	20.30	18.2590	18.2330
				38	19.56	19.29	17.3300	17.1330
				40	20.95	20.84	18.4970	18.4100
HE40 (FCC)	5190	38	SU	—	41.85	42.76	37.9770	37.9970
	5230	46	SU	—	41.20	41.20	38.0080	37.9930
HE80	5210	42	SU	—	81.88	82.34	77.2920	77.2690



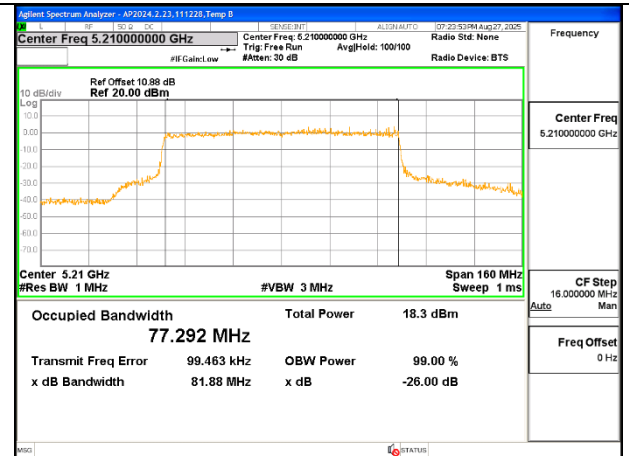
20MHz - Low Channel – SU – Ant 6



20MHz - Low Channel – 52T RU37 – Ant 6



40MHz - Low Channel – SU – Ant 6



80MHz - Low Channel – SU – Ant 6

9.2.10. 802.11ax MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HE20 (FCC)	5180	36	SU	—	21.55	21.64	—	18.9760	19.0200	—
			52T	37	20.02	19.75	—	18.2610	18.1890	—
				38	18.98	18.30	—	16.9980	16.9150	—
				40	20.80	19.79	—	18.3840	18.1390	—
	5200	40	SU	—	21.06	21.25	—	18.9300	18.9220	—
			52T	37	20.25	19.80	—	18.2900	18.0960	—
				38	19.56	18.36	—	17.2740	16.9410	—
				40	20.97	19.90	—	18.4130	18.1200	—
	5240	48	SU	—	21.07	20.84	—	18.9730	18.9290	—
			52T	37	20.53	19.75	—	18.2880	18.1500	—
				38	19.70	18.37	—	17.1820	16.9960	—
				40	20.52	19.85	—	18.4180	18.2320	—
HE40 (FCC)	5190	38	SU	—	41.16	43.19	—	37.9450	38.0340	—
	5230	46	SU	—	41.16	41.12	—	38.0720	38.0010	—
HE80	5210	42	SU	—	81.51	81.61	—	77.4880	77.2440	—

9.2.11. 802.11ax SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
HE20	5260	52	SU	—	20.69	21.05	18.9460	18.9560
			52T	37	20.09	20.50	18.3130	18.3050
				38	19.58	19.89	17.1750	17.1190
				40	20.86	20.82	18.4830	18.0730
	5300	60	SU	—	20.75	20.87	18.9380	18.9370
			52T	37	19.92	20.48	18.2700	18.2890
				38	19.80	19.91	17.1070	17.1470
				40	20.78	20.88	18.4510	18.5140
	5320	64	SU	—	21.69	21.73	18.9580	18.9960
			52T	37	20.16	20.48	18.2830	18.3330
				38	19.79	19.65	17.2150	17.2910
				40	20.97	20.96	18.4510	18.1720
HE40	5270	54	SU	—	41.07	41.18	37.9890	37.9760
	5310	62	SU	—	41.71	42.27	38.0210	37.9450
HE80	5290	58	SU	—	81.83	81.48	77.3500	77.3750

9.2.12. 802.11ax MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HE20	5260	52	SU	—	21.29	20.88	20.88	18.97	18.97	18.97
			S2T	37	20.35	19.73	19.73	18.27	18.19	18.19
				38	19.58	18.26	18.26	17.29	16.97	16.97
				40	21.00	19.84	19.84	18.46	18.24	18.24
	5300	60	SU	—	20.79	20.95	20.79	18.94	18.94	18.94
			S2T	37	20.28	19.77	19.77	18.10	18.22	18.10
				38	19.86	18.44	18.44	17.23	17.01	17.01
				40	20.75	19.90	19.90	18.45	18.22	18.22
	5320	64	SU	—	21.67	20.84	20.84	18.97	18.97	18.97
			S2T	37	20.33	19.77	19.77	18.23	18.13	18.13
				38	19.80	18.48	18.48	17.25	17.01	17.01
				40	20.80	19.85	19.85	18.49	18.22	18.22
HE40	5270	54	SU	—	41.25	40.58	40.58	37.93	37.96	37.93
	5310	62	SU	—	42.54	40.86	40.86	37.97	36.06	36.06
HE80	5290	58	SU	—	81.49	81.22	81.22	77.34	77.41	77.34

9.2.13. 802.11ax SISO MODE IN THE UNII-2C BAND

UNII-2C (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
HE20	5500	100	SU	—	21.49	21.63	18.9980	18.9940
			52T	37	20.16	20.43	18.2580	18.2320
				38	19.84	19.41	17.1850	17.2070
				40	20.63	20.76	18.2930	18.3730
	5580	116	SU	—	20.68	21.08	18.9270	19.0110
			52T	37	20.26	20.46	18.3140	18.0830
				38	18.94	19.93	17.0990	17.0350
				40	20.93	20.90	18.3200	18.3670
	5600	120	SU	—	21.08	20.91	17.8410	17.8650
			SU	—	20.96	22.18	18.9960	18.9480
	5700	140	52T	37	19.90	20.05	18.2530	18.2150
				38	19.62	19.50	17.2140	16.9710
				40	20.91	20.67	18.4320	18.4240
			SU	—	20.70	21.01	18.9440	18.9310
	5720 (Straddle)	144	52T	37	20.17	20.06	18.3150	18.2070
				38	19.71	19.61	17.4450	17.0600
				40	20.67	20.64	18.3680	18.3940
			SU	—	44.26	44.16	38.0260	38.0020
HE40	5510	102	52T	37	21.07	21.96	18.0580	18.1880
	5550	110	SU	—	41.45	41.44	38.0280	37.9870
	5670	134	SU	—	42.53	42.88	37.9230	38.0390
	5710 (Straddle)	142	SU	—	41.45	41.13	37.9810	37.9350
HE80	5530	106	SU	—	83.36	82.19	77.3900	77.2940
	5610	122	SU	—	82.39	81.59	77.4980	77.3220
	5690 (Straddle)	138	SU	—	81.10	81.23	77.2950	77.2860

9.2.14. 802.11ax MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
					Ant 6	Ant 5	Min BW	Ant 6	Ant 5	Min BW
HE20	5500	100	SU	—	20.99	22.20	20.99	18.9680	18.9950	18.9680
			52T	37	20.28	19.78	19.78	18.2740	18.2210	18.2210
				38	19.17	18.24	18.24	17.1980	16.4750	16.4750
				40	20.77	20.03	20.03	18.1710	18.1240	18.1240
	5580	116	SU	—	21.12	20.97	20.97	18.9410	18.9660	18.9410
			52T	37	20.40	19.83	19.83	18.2380	18.2090	18.2090
				38	19.25	18.30	18.30	17.1030	16.9310	16.9310
				40	20.83	19.79	19.79	18.2950	18.2450	18.2450
	5600	120	SU	—	21.17	20.75	20.75	17.8580	17.7520	17.7520
	5700	140	SU	—	23.07	20.78	20.78	18.9310	18.9650	18.9310
			52T	37	20.11	19.16	19.16	17.7030	17.6720	17.6720
				38	19.62	18.55	18.55	16.9680	16.0940	16.0940
				40	20.97	19.93	19.93	18.3890	18.1900	18.1900
	5720 (Straddle)	144	SU	—	20.81	20.85	20.81	18.9190	18.9700	18.9190
			52T	37	20.17	19.67	19.67	18.1410	18.1010	18.1010
				38	19.68	18.40	18.40	17.1620	16.9420	16.9420
				40	20.91	19.93	19.93	18.4520	18.2470	18.2470
HE40	5510	102	SU	—	46.19	43.43	43.43	38.0050	38.0900	38.0050
	5550	110	SU	—	41.05	40.52	40.52	37.9890	37.9670	37.9670
	5670	134	SU	—	46.80	43.22	43.22	38.0380	38.0640	38.0380
	5710 (Straddle)	142	SU	—	41.27	41.12	41.12	37.9300	37.9660	37.9300
HE80	5530	106	SU	—	82.95	82.62	82.62	77.4590	77.3220	77.3220
	5610	122	SU	—	82.96	84.17	82.96	77.267	77.197	77.197
	5690	138	SU	—	81.63	81.02	81.02	77.449	77.26	77.26
	5690 (Straddle)	138	SU	—	81.63	81.02	81.02	77.449	77.26	77.26

9.2.15. 802.11ax SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
HE20	5745	149	SU	—	21.26	21.04	18.9550	18.9910
			26T	0	19.84	19.90	18.3760	18.4030
				4	19.29	19.04	17.0120	17.2410
				8	20.42	20.48	18.6770	18.5380
	5785	157	SU	—	21.30	20.99	18.9560	18.9390
			26T	0	19.88	20.02	18.4040	18.3640
				4	19.30	19.28	17.1440	17.3940
				8	20.46	20.55	18.5340	18.5660
	5825	165	SU	—	21.09	20.96	18.9870	18.9280
			26T	0	19.63	19.82	18.1430	18.3980
				4	19.29	19.10	17.1180	17.1380
				8	20.50	20.41	18.5230	18.5400
HE40	5755	151	SU	—	41.76	40.81	37.9430	37.9100
	5795	159	SU	—	41.22	41.19	38.0370	38.0010
HE80	5775	155	SU	—	81.71	81.67	77.2320	77.2220



9.2.16. 802.11ax MIMO CDD MODE IN THE UNII-3 BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	26 dB Bandwidth (MHz)		99% Bandwidth (MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5
HE20	5745	149	SU	—	20.76	20.82	18.9790	18.9490
			26T	0	19.97	19.59	18.3900	18.2290
				4	19.14	18.12	17.2370	16.3870
				8	20.65	19.71	18.5970	18.4350
	5785	157	SU	—	21.07	21.09	18.9920	18.9760
			26T	0	20.13	19.61	18.3900	18.2870
				4	19.19	18.31	17.2850	16.8900
				8	20.50	19.76	18.6000	18.3840
	5825	165	SU	—	20.88	20.85	18.9490	18.9200
			26T	0	19.76	19.59	18.3090	18.0230
				4	18.93	18.18	17.0990	16.2390
				8	20.59	19.76	18.6250	18.2880
HE40	5755	151	SU	—	41.52	41.06	38.1050	37.9540
	5795	159	SU	—	40.92	40.57	37.9360	37.9090
HE80	5775	155	SU	—	81.61	81.18	77.3210	77.4220

9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

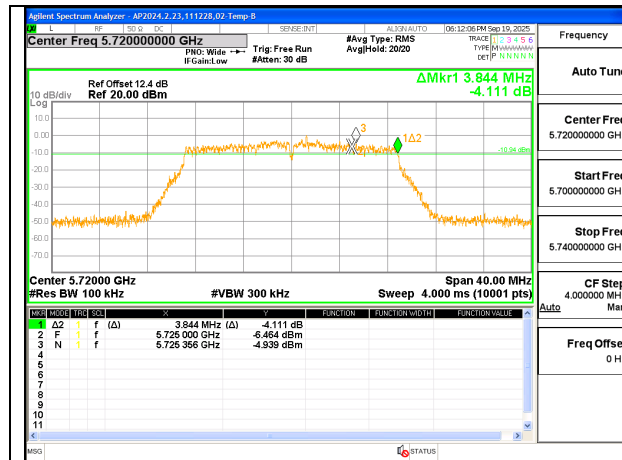
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

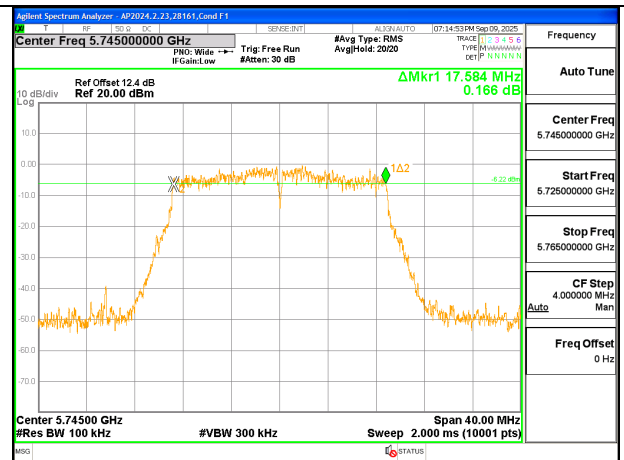
For 6dB bandwidth measurements, the 802.11ax HE20 was tested at 26T as a worst-case scenario. For straddle channels, 52T was tested as the worst case as 26T is not supported.

9.3.1. 802.11n/ac SISO MODE IN THE 5.8 GHz BAND

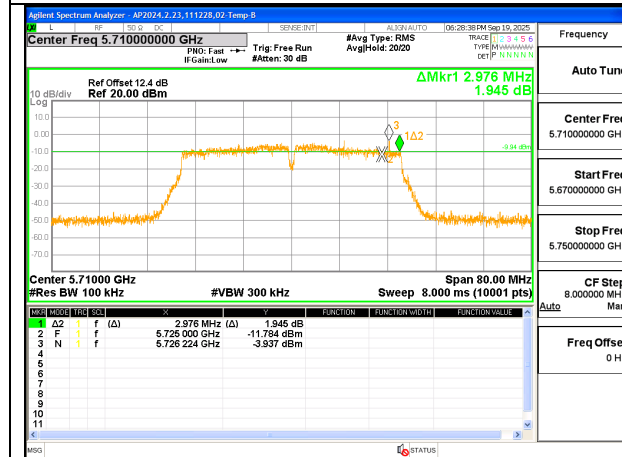
UNII-3 (SISO)	Frequency (MHz)	Channel Number	6 dB BW (MHz)	
			Ant 6	Ant 5
HT20	5720 (Straddle)	144	3.844	3.78
	5745	149	17.584	17.38
	5785	157	17.6	17.58
	5825	165	17.62	17.324
HT40	5710 (Straddle)	142	2.976	3.256
	5755	151	36.328	36.328
	5795	159	35.44	36.352
VHT80	5690 (Straddle)	138	3.272	3.272
	5775	155	75.136	75.088



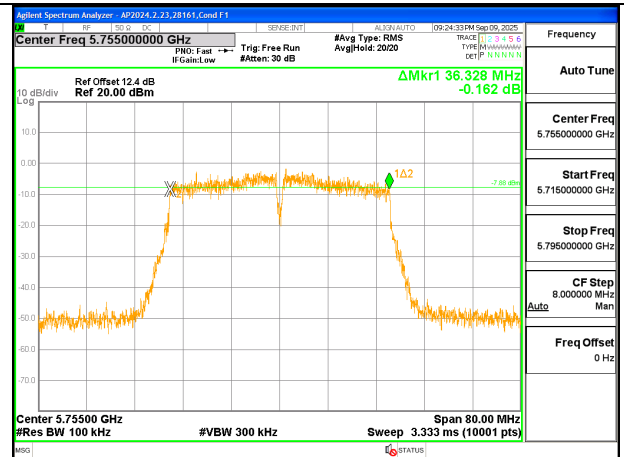
20MHz - STRADDLE CHANNEL - ANT 6



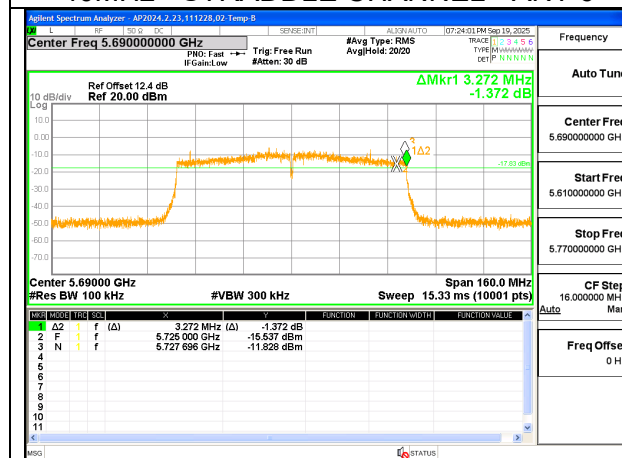
20MHz - Low CHANNEL - ANT 6



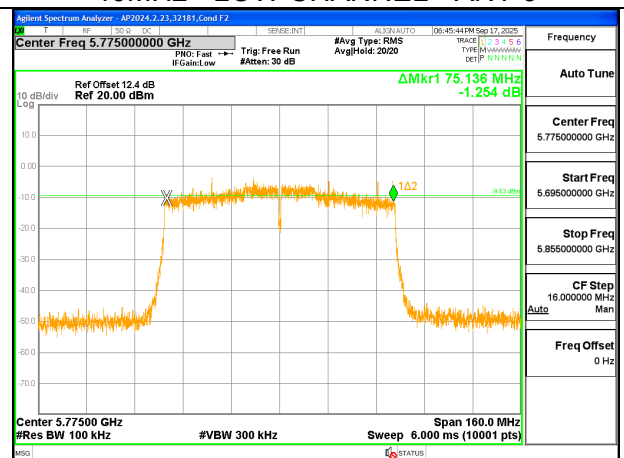
40MHz - STRADDLE CHANNEL - ANT 6



40MHz - LOW CHANNEL - ANT 6



80MHz - STRADDLE CHANNEL - ANT 6



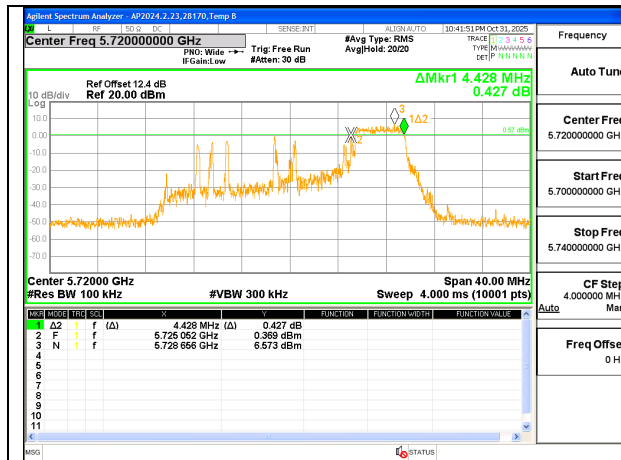
80MHz - LOW CHANNEL - ANT 6

9.3.2. 802.11n/ac MIMO CDD MODE IN THE 5.8 GHz BAND

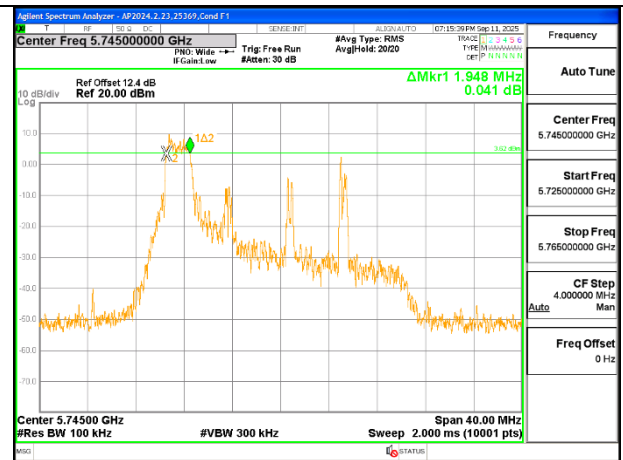
UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	6 dB BW (MHz)	
			Ant 6	Ant 5
HT20	5720 (Straddle)	144	3.888	3.884
	5745	149	17.608	17.600
	5785	157	17.612	17.588
	5825	165	17.608	17.588
HT40	5710 (Straddle)	142	3.288	3.112
	5755	151	36.056	36.304
	5795	159	36.328	36.328
VHT80	5690 (Straddle)	138	3.128	3.112
	5775	155	73.840	75.936

9.3.3. 802.11ax SISO MODE IN THE 5.8 GHz BAND

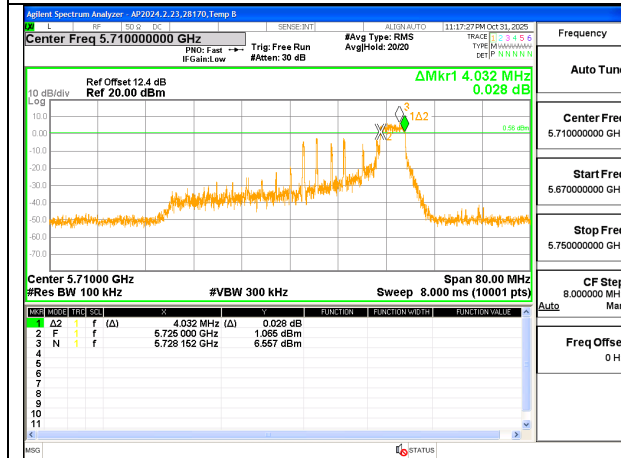
UNII-3 (SISO)	Frequency (MHz)	Channel Number	Tone	RU Index	6 dB BW (MHz)	
					Ant 6	Ant 5
HE20	5720 (Straddle)	144	SU	—	4.476	4.296
			52T	40	4.428	4.020
	5745	149	SU	—	18.564	18.056
			26T	0	1.948	2.052
				4	2.640	2.584
				8	2.032	1.972
	5785	157	SU	—	18.480	18.784
			26T	0	2.032	2.000
				4	2.564	2.628
				8	1.992	2.020
	5825	165	SU	—	18.156	18.648
			26T	0	2.040	2.040
				4	2.532	2.572
				8	2.048	1.980
HE40	5710 (Straddle)	142	SU	—	4.024	4.096
			52T	44	4.032	4.024
	5755	151	SU	—	37.560	38.120
			26T	0	2.016	2.080
				9	1.952	2.056
				17	2.112	2.024
	5795	159	SU	—	38.000	38.048
			26T	0	2.096	2.072
				9	2.016	2.016
				17	2.016	1.968
HE80	5690 (Straddle)	138	SU	—	4.056	4.040
			52T	52	4.008	3.880
	5775	155	SU	—	77.872	77.760
			26T	0	2.048	2.032
				18	2.624	2.576
				36	2.080	1.984



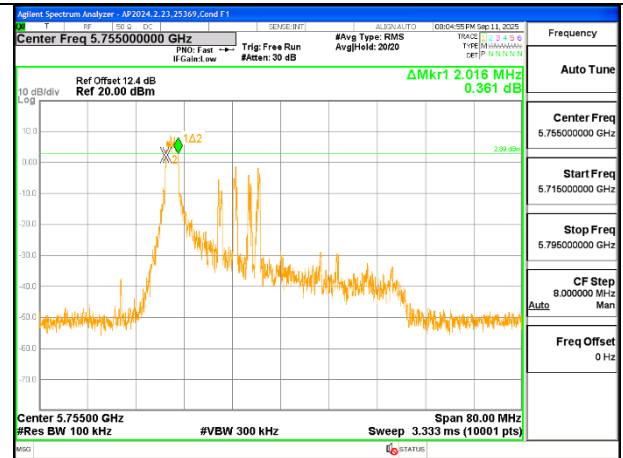
20MHz – Straddle Channel – 52T RU40 – ANT 6



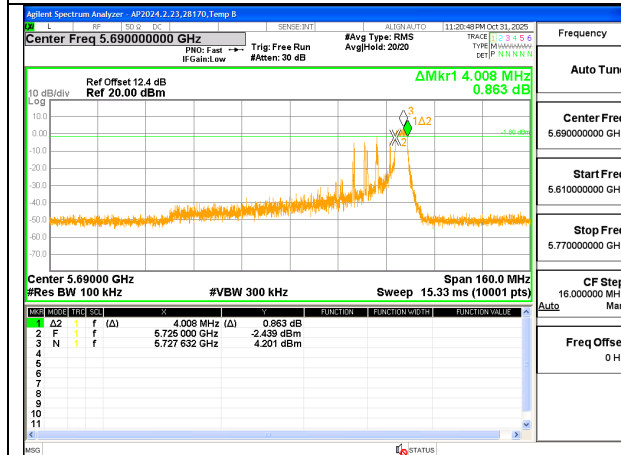
20MHz – Mid Channel – 26T RU0 – ANT 6



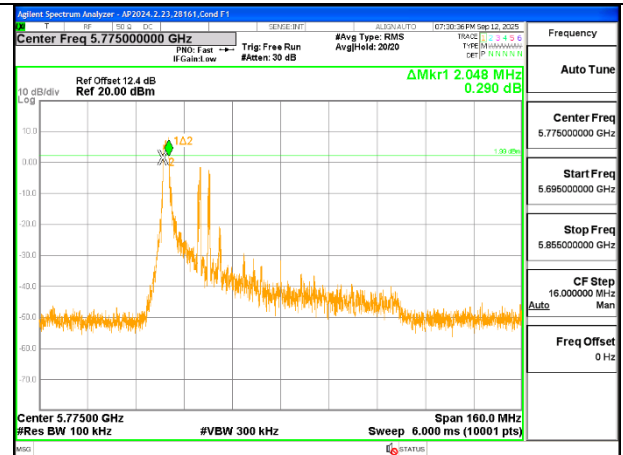
40MHz – Straddle Channel – 52T RU44 – Ant 6



40MHz – Low Channel – 26T RU0 – Ant 6



80MHz – Straddle Channel – 52T RU52 – Ant 6



80MHz – Low Channel – 26T RU0 – Ant 6

9.3.4. 802.11ax MIMO CDD MODE IN THE 5.8 GHz BAND

UNII-3 (MIMO CDD)	Frequency (MHz)	Channel Number	Tone	RU Index	6 dB BW (MHz)	
					Ant 6	Ant 5
HE20	5720 (Straddle)	144	SU	—	4.088	4.552
			52T	40	3.984	4.048
	5745	149	SU	—	18.784	18.864
			26T	0	1.972	2.120
				4	2.552	2.588
				8	2.000	1.996
	5785	157	SU	—	18.760	18.672
			26T	0	1.996	1.972
				4	2.552	2.556
				8	1.980	2.096
	5825	165	SU	—	18.788	18.932
			26T	0	1.992	1.992
				4	2.572	2.548
				8	2.044	2.072
HE40	5710 (Straddle)	142	SU	—	4.088	4.080
			52T	44	3.992	4.048
	5755	151	SU	—	38.184	37.800
			26T	0	2.080	2.048
				9	1.992	2.096
				17	2.000	2.024
	5795	159	SU	—	38.104	37.752
			26T	0	2.088	2.024
				9	2.104	2.048
				17	2.048	2.072
HE80	5690 (Straddle)	138	SU	—	3.944	3.816
			52T	52	3.992	4.040
	5775	155	SU	—	77.344	76.864
			26T	0	2.064	2.032
				18	2.656	2.608
				36	2.048	2.016

9.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

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

Bands 5.25-5.35 GHz and 5.47-5.725 GHz

The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Band 5.725-5.85 GHz

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

TEST PROCEDURE

The measurement method used for output power is ANSI C63.10 Subclause -12.4.3.2 (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F. For all straddle channels, full bandwidth power and PSD/MHz are reported in the 5.6GHz section because the combined 5.6GHz and 5.8GHz power and PSD/MHz already passed the worst-case 5.6GHz power and 5.8 GHz PSD/500kHz limits.

11n HT20 and 11ax HE20 straddle channel 26dB bandwidth= $(26\text{dB BW}/2)+5$

11n HT20 and 11ax HE20 straddle channel 99% bandwidth= $(99\% \text{ BW}/2)+5$

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Frequency Range (MHz)	Antenna 6 (dBi)	Antenna 5 (dBi)	Uncorrelated Chains (dBi)	Correlated Chains (dBi)
5150 - 5250 UNII - 1	-0.80	-3.30	-1.87	1.05
5250 - 5350 UNII - 2A	-0.10	-2.10	-0.99	1.97
5500 - 5700 UNII - 2C	-1.30	-1.90	-1.59	1.42
5725 - 5850 UNII 3	-4.00	-1.60	-2.64	0.29

Directional Gain Calculation:

ANSI C63.10 section 14.6.3

$$\text{Uncorrelated Directional Gain} = 10 * \text{LOG} \left[\frac{10^{\frac{\text{ANT}_6}{10}} + 10^{\frac{\text{ANT}_5}{10}}}{2} \right]$$

$$\text{Correlated Directional Gain} = 10 * \text{LOG} \left[\frac{\left(10^{\frac{\text{ANT}_6}{20}} + 10^{\frac{\text{ANT}_5}{20}} \right)^2}{2} \right]$$

Sample Calculation:

ANT 6 = -0.80 dBi

ANT 5 = -3.30 dBi

$$\text{Uncorrelated Directional Gain} = 10 * \text{LOG} \left[\frac{10^{\frac{-0.80}{10}} + 10^{\frac{-3.30}{10}}}{2} \right] = -1.87 \text{ dBi}$$

$$\text{Correlated Directional Gain} = 10 * \text{LOG} \left[\frac{\left(10^{\frac{-0.80}{20}} + 10^{\frac{-3.30}{20}} \right)^2}{2} \right] = 1.05 \text{ dBi}$$

Output Power Calculation:**1Tx**

Total corr'd power = Ant 6

Sample Calculation at 5.2GHz Band (Low Channel SU):

ANT 6 Power = 18.92 dBm (Gated Power)

Total corr'd power = 18.92 dBm

2Tx

$$\text{Total corr'd power} = 10 * \text{LOG} \left[10^{\frac{\text{ANT6}}{10}} + 10^{\frac{\text{ANT5}}{10}} \right]$$

Sample Calculation at 5.2GHz Band CDD (Low Channel SU):

Ant 6 Power = 16.94 dBm, Ant 5 Power = 16.89

$$\text{Total corr'd power} = 10 * \text{LOG} \left[10^{\frac{16.94}{10}} + 10^{\frac{16.89}{10}} \right] = 19.93$$

PSD Calculation:**1Tx**

$$\text{Total corr'd PSD} = \text{DCCF} + \text{Ant 6}$$

Total corr'd PSD = DCCF + Ant 6

Sample Calculation at 5.2GHz Band (Low Channel SU):

Ant6 DCCF = 0, Ant6 PSD= 9.274 dBm/MHz

$$\text{Total corr'd PSD} = 0.00 + 9.274 = 9.274 \frac{\text{dBm}}{\text{MHz}}$$

2Tx

$$\text{Total corr'd PSD} = 10 * \text{LOG} \left[10^{\frac{\text{DCCF}+\text{ANT6}}{10}} + 10^{\frac{\text{DCCF}+\text{ANT5}}{10}} \right]$$

Sample Calculation at 5.2GHz Band CDD (Low Channel SU):

Ant6 PSD = 7.326 dBm/MHz, Ant5 PSD = 7.277 dBm/MHz

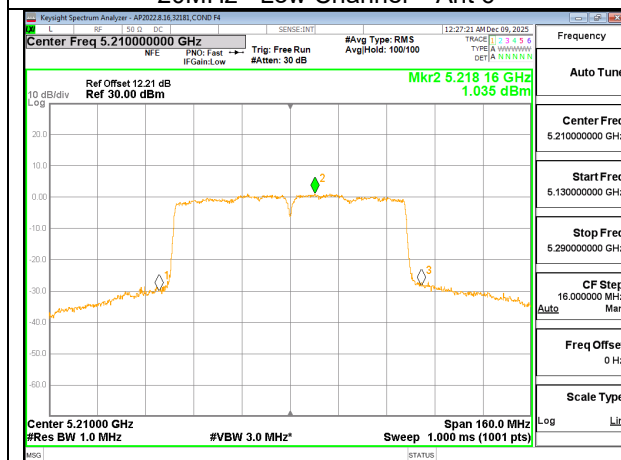
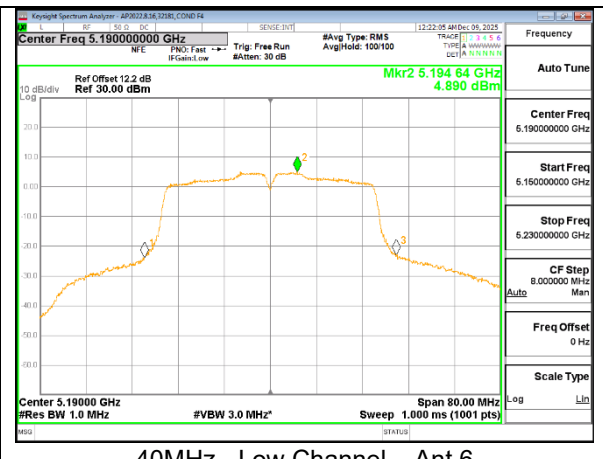
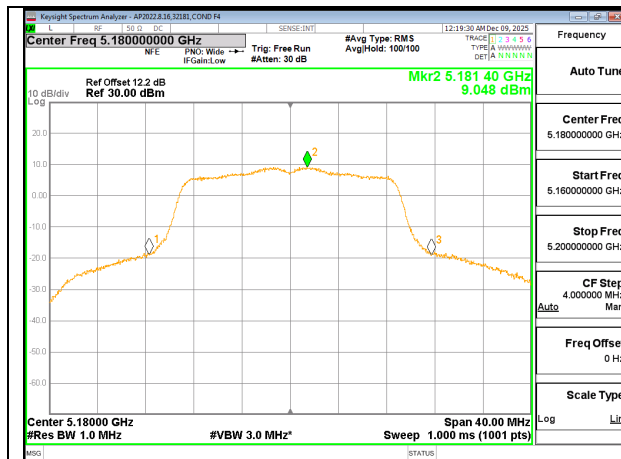
Ant6 DCCF = 0, Ant5 DCCF = 0

$$\text{Total corr'd PSD} = 10 * \text{LOG} \left[10^{\frac{0+7.326}{10}} + 10^{\frac{0+7.277}{10}} \right] = 10.312 \frac{\text{dBm}}{\text{MHz}}$$

9.4.1. 802.11n/ac SISO MODE IN THE UNII-1 BAND

UNII-1 (SISO)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Ant 6 (dBi)	-0.80		
Ant 5 (dBi)	-3.30		

UNII-1 (SISO)	Freq (MHz)	Ch. #	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HT20 (FCC)	5180	36	—	—	24	24	18.68	18.73	18.68	18.73	11	11	9.048	9.363	9.048	9.363
	5200	40					19.71	19.66	19.71	19.66			9.937	9.859	9.937	9.859
	5240	48					19.95	19.96	19.95	19.96			10.301	10.311	10.301	10.311
HT40 (FCC)	5190	38	—	—	24	24	17.22	17.19	17.22	17.19	11	11	4.890	4.706	4.890	4.706
	5230	46					20.87	20.93	20.87	20.93			8.270	8.520	8.270	8.520
VHT80 (FCC)	5210	42	—	—	24	24	17.13	17.19	17.13	17.19	11	11	1.035	1.051	1.035	1.051



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9.4.2. 802.11n/ac MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Un-Correlated Gain (dBi)	-1.87		
Correlated Gain (dBi)	1.05		

UNII-1 (MIMO CDD)	Freq (MHz)	Ch. #	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
					Ant 6	Ant 5			Ant 6	Ant 5	
HT20 (FCC)	5180	36	—	24	16.65	16.68	19.68	11	7.077	7.084	10.091
	5200	40			16.61	16.71	19.67		6.892	7.233	10.076
	5240	48			16.91	16.94	19.94		7.215	7.364	10.300
HT40 (FCC)	5190	38	—	24	16.20	16.23	19.23	11	3.659	3.816	6.749
	5230	46			19.67	19.63	22.66		7.062	7.033	10.058
VHT80 (FCC)	5210	42	—	24	16.69	16.71	19.71	11	0.402	0.475	3.449

9.4.3. 802.11n/ac SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Ant 6 (dBi)	-0.10		
Ant 5 (dBi)	-2.10		

UNII-2A (SISO)	Freq (MHz)	Ch. #	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HT20	5260	52	20.86	20.89	24.00	24.00	19.64	19.67	19.64	19.67	11.00	11.00	9.496	9.577	9.496	9.577
	5280	56	21.18	20.95	24.00	24.00	19.82	19.86	19.82	19.86			9.879	9.972	9.879	9.972
	5300	60	21.12	20.99	24.00	24.00	19.66	19.71	19.66	19.71			9.568	9.744	9.568	9.744
	5320	64	22.03	22.14	24.00	24.00	18.86	18.91	18.86	18.91			8.948	9.033	8.948	9.033
HT40	5270	54	41.12	41.17	24.00	24.00	20.94	20.85	20.94	20.85	11.00	11.00	8.884	8.753	8.884	8.753
	5310	62	42.10	42.50	24.00	24.00	16.88	16.93	16.88	16.93			4.392	4.425	4.392	4.425
VHT80	5290	58	82.62	82.71	24.00	24.00	15.71	15.66	15.71	15.66	11.00	11.00	-0.553	-0.716	-0.553	-0.716

9.4.4. 802.11n/ac MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO CDD)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Un-Correlated Gain (dBi)	-0.99		
Correlated Gain (dBi)	1.97		

UNII-2A (MIMO CDD)	Freq (MHz)	Ch. #	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
					Ant 6	Ant 5			Ant 6	Ant 5	
HT20	5260	52	21.05	24.00	16.72	16.69	19.72	11.00	7.694	7.652	10.683
	5280	56	20.96	24.00	16.96	16.91	19.95		8.033	7.910	10.982
	5300	60	20.76	24.00	16.61	16.59	19.61		7.469	7.405	10.447
	5320	64	20.86	24.00	16.65	16.58	19.63		7.479	7.234	10.369
HT40	5270	54	40.29	24.00	19.68	19.71	22.71	11.00	7.660	7.718	10.699
	5310	62	41.95	24.00	16.19	16.22	19.22		3.553	3.679	6.627
VHT80	5290	58	75.56	24.00	15.87	15.92	18.91	11.00	0.332	0.393	3.373

9.4.5. 802.11n/ac SISO MODE IN THE UNII-2C BAND

UNII-2C (SISO)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Ant 6 (dBi)	-1.30		
Ant 5 (dBi)	-1.90		

UNII-3 (SISO)	
Straddle Channel	
Ant 6 (dBi)	-4.00
Ant 5 (dBi)	-1.60

UNII-2C (SISO)	Freq (MHz)	Ch. #	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
			Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HT20	5500	100	20.97	21.52	24.00	24.00	18.72	18.73	18.72	18.73	11.00	11.00	9.158	9.173	9.158	9.173
	5580	116	21.34	21.04	24.00	24.00	19.71	19.62	19.71	19.62			9.231	9.148	9.231	9.148
	5620	124	20.96	20.93	24.00	24.00	19.92	19.83	19.92	19.83			10.201	9.916	10.201	9.916
	5700	140	20.98	21.72	24.00	24.00	18.21	18.17	18.21	18.17			8.652	8.351	8.652	8.351
	5720 (Straddle)	144	15.47	15.50	22.89	22.90	19.70	19.74	19.70	19.74	11.00	11.00	9.277	9.295	9.277	9.295
HT40	5510	102	42.05	43.15	24.00	24.00	16.22	16.16	16.22	16.16	11.00	11.00	3.130	2.952	3.130	2.952
	5550	110	40.86	41.20	24.00	24.00	20.81	20.80	20.81	20.80			7.702	7.636	7.702	7.636
	5670	134	42.35	42.57	24.00	24.00	20.13	20.21	20.13	20.21			6.758	6.969	6.758	6.969
	5710 (Straddle)	142	25.43	25.50	24.00	24.00	20.99	20.98	20.99	20.98	11.00	11.00	8.286	8.218	8.286	8.218
VHT80	5530	106	81.41	82.87	24.00	24.00	16.16	16.23	16.16	16.23	11.00	11.00	0.129	0.516	0.129	0.516
	5610	122	83.13	82.25	24.00	24.00	20.93	20.90	20.93	20.90			5.093	5.012	5.093	5.012
	5690 (Straddle)	138	45.59	45.74	24.00	24.00	20.92	20.99	20.92	20.99	11.00	11.00	5.074	5.251	5.074	5.251

9.4.6. 802.11n/ac MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO CDD)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Un-Correlated Gain (dBi)	-1.59		
Correlated Gain (dBi)	1.42		

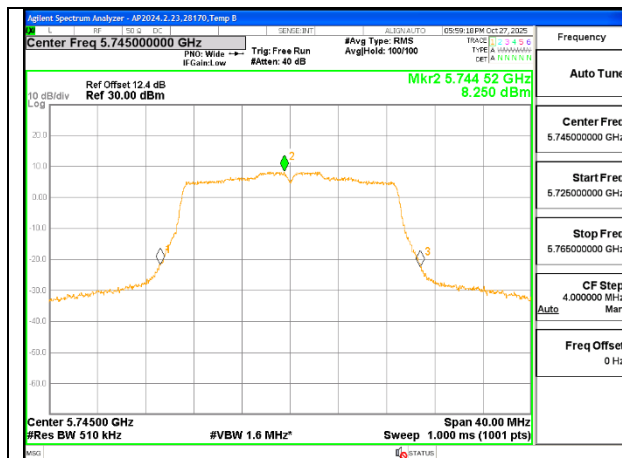
UNII-3 (MIMO CDD)	
Straddle Channel	
Un-Correlated Gain (dBi)	-2.64
Correlated Gain (dBi)	0.29

UNII-2C (MIMO CDD)	Freq (MHz)	Ch. #	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
					Ant 6	Ant 5			Ant 6	Ant 5	
HT20	5500	100	22.45	24.00	16.99	16.98	20.00	11.00	6.821	6.780	9.811
	5580	116	20.77	24.00	16.59	16.73	19.67		6.545	6.728	9.648
	5700	140	21.08	24.00	16.53	16.56	19.56		6.463	6.538	9.511
	5720 (Straddle)	144	15.32	22.85	16.72	16.74	19.74		6.713	6.747	9.740
HT40	5510	102	41.43	24.00	16.48	16.49	19.50	11.00	3.413	3.439	6.436
	5550	110	40.45	24.00	19.73	19.68	22.72		6.464	6.317	9.401
	5590	118	40.21	24.00	19.88	19.97	22.94		6.670	6.855	9.774
	5670	134	41.82	24.00	19.46	19.49	22.49		6.152	6.276	9.225
	5710 (Straddle)	142	25.18	24.00	19.72	19.68	22.71	11.00	6.441	6.319	9.391
VHT80	5530	106	80.87	24.00	16.38	16.45	19.43	11.00	0.349	0.670	3.523
	5610	122	82.25	24.00	19.96	19.99	22.99		4.144	4.409	7.289
	5690 (Straddle)	138	45.43	24.00	19.98	19.97	22.99		4.367	4.260	7.324

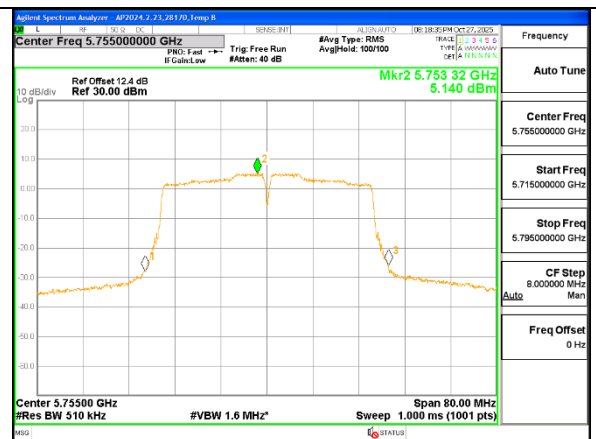
9.4.7. 802.11n/ac SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Ant 6 (dBi)	-4.00		
Ant 5 (dBi)	-1.60		

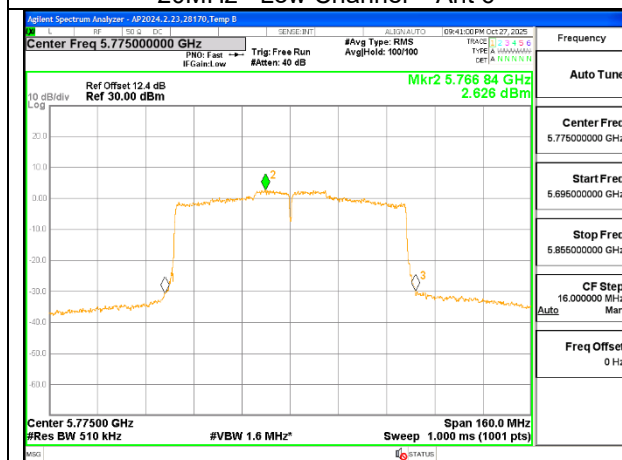
UNII-3 (SISO)	Freq (MHz)	Ch. #	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/500kHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/500kHz)	
			Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HT20	5745	149	—		30	30	20.91	20.88	20.91	20.88	30	30	8.250	8.366	8.250	8.366
	5785	157					20.89	20.92	20.89	20.92			8.444	8.547	8.444	8.547
	5825	165					20.86	20.90	20.86	20.90			8.044	8.501	8.044	8.501
HT40	5755	151	—		30	30	20.85	20.91	20.85	20.91	30	30	5.140	5.238	5.140	5.238
	5795	159					20.86	20.88	20.86	20.88			5.573	5.534	5.573	5.534
VHT80	5775	155	—		30	30	20.87	20.89	20.87	20.89	30	30	2.626	2.723	2.626	2.723



20MHz - Low Channel – Ant 6



40MHz - Low Channel – Ant 6



80MHz - Mid Channel – Ant 6

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9.4.8. 802.11n/ac MIMO CDD MODE IN THE UNII-3 BAND

UNII-3 (MIMO CDD)	20MHz	40MHz	80MHz
DCCF (MCS0) (dB)	0.00	0.00	0.00
Un-Correlated Gain (dBi)	-2.64		
Correlated Gain (dBi)	0.29		

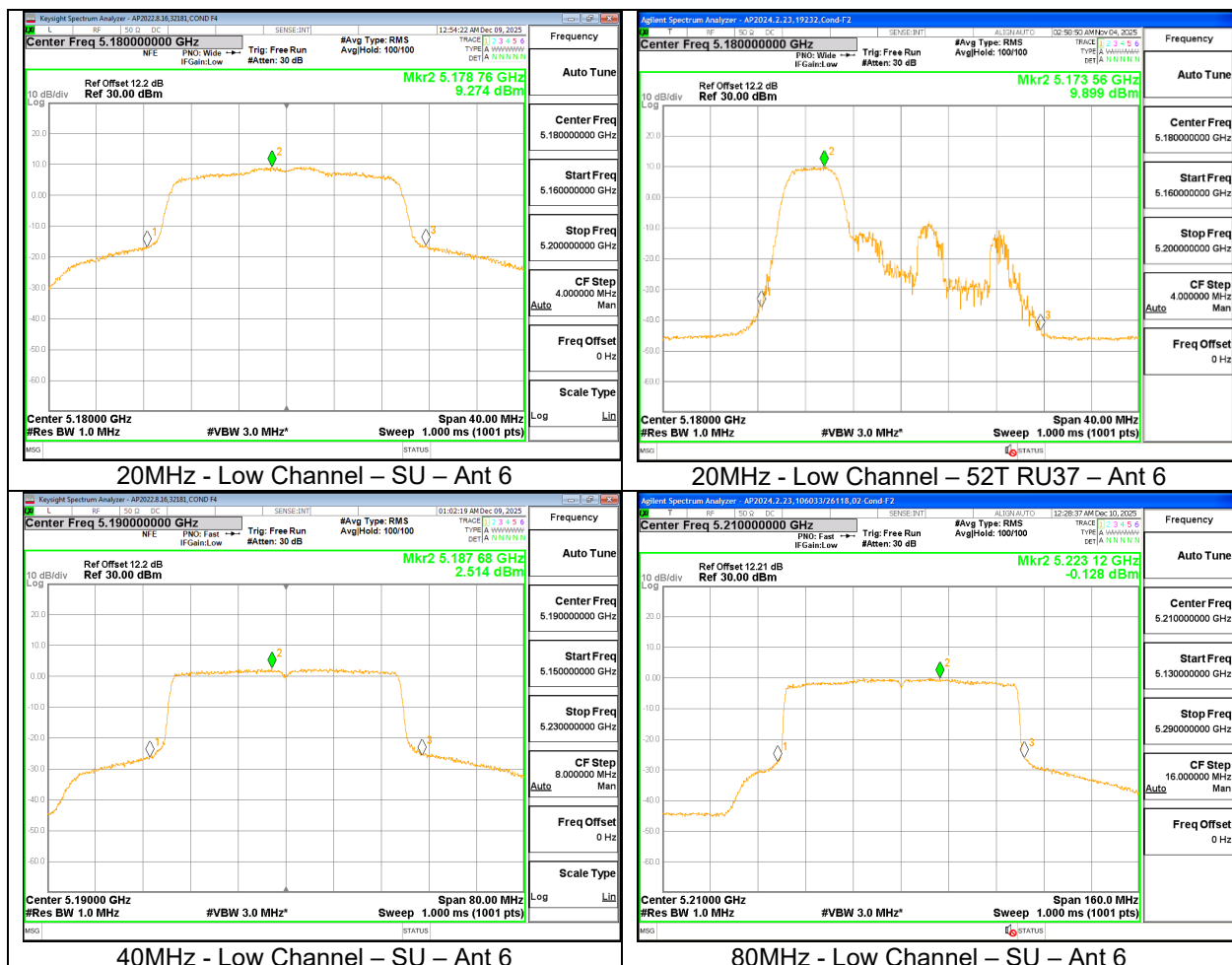
UNII-3 (MIMO CDD)	Freq (MHz)	Ch. #	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/500kHz)	PSD (dBm/500kHz)		Total MIMO Corrected PSD (dBm/500kHz)
					Ant 6	Ant 5			Ant 6	Ant 5	
HT20	5745	149	—	30	20.89	20.93	23.92	30	8.287	8.545	11.428
	5785	157			20.81	20.85	23.84		8.526	8.542	11.544
	5825	165			20.84	20.86	23.86		8.538	8.480	11.519
HT40	5755	151	—	30	20.89	20.81	23.86	30	5.195	5.111	8.164
	5795	159			20.91	20.87	23.90		5.728	5.517	8.634
VHT80	5775	155	—	30	20.92	20.88	23.91	30	2.640	2.541	5.601

9.4.9. 802.11ax SISO MODE IN THE UNII-1 BAND

UNII-1 (SISO)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Ant 6 (dBi)	-0.80							
Ant 5 (dBi)	-3.30							

UNII-1 (SISO)	Freq (MHz)	Ch. #	Tone	RU Index	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HE20 (FCC)	5180	36	SU	—	—	—	24.00	24.00	18.92	18.96	18.92	18.96	11.00	11.00	9.274	9.591	9.274	9.591
			52T	37					14.59	14.69	14.59	14.69			9.899	10.084	9.899	10.084
			52T	38					14.61	14.64	14.61	14.64			9.911	9.951	9.911	9.951
			52T	40					14.55	14.58	14.55	14.58			9.880	9.889	9.880	9.889
	5200	40	SU	—					19.92	19.81	19.92	19.81			9.969	9.789	9.969	9.789
			52T	37					14.86	14.81	14.86	14.81			10.365	10.263	10.365	10.263
			52T	38					14.89	14.84	14.89	14.84			10.380	10.362	10.380	10.362
			52T	40					14.83	14.91	14.83	14.91			10.326	10.547	10.326	10.547
	5240	48	SU	—					19.91	19.87	19.91	19.87			9.967	9.877	9.967	9.877
			52T	37					14.53	14.70	14.53	14.70			9.851	10.009	9.851	10.009
			52T	38					14.51	14.67	14.51	14.67			9.824	9.958	9.824	9.958
			52T	40					14.55	14.73	14.55	14.73			9.854	10.027	9.854	10.027
HE40 (FCC)	5190	38	SU	—	—	—	24.00	24.00	15.96	15.91	15.96	15.91	11.00	11.00	2.514	2.329	2.514	2.329
	5230	46	SU	—	—	—	20.85	20.83	20.85	20.83					6.706	6.648	6.706	6.648
HE80	5210	42	SU	—	—	—	24.00	24.00	16.66	16.71	16.66	16.71	11.00	11.00	-0.128	-0.037	-0.128	-0.037

FCC



9.4.10. 802.11ax MIMO CDD MODE IN THE UNII-1 BAND

UNII-1 (MIMO CDD)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Un-Correlated Gain (dBi)	-1.87							
Correlated Gain (dBi)	1.05							

UNII-2A (MIMO CDD)	Freq (MHz)	Ch. #	Tone	RU Index	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
							Ant 6	Ant 5			Ant 6	Ant 5	
HE20 (FCC)	5180	36	SU	—	—	24	16.94	16.89	19.93	11	7.326	7.277	10.312
			37				11.64	11.56	14.61		7.172	7.098	10.145
			38				11.65	11.67	14.67		7.183	7.219	10.211
			40				11.74	11.52	14.64		7.258	6.989	10.136
	5200	40	SU	—			16.87	16.85	19.87		7.244	7.077	10.172
			37				11.78	11.81	14.81		7.305	7.372	10.349
			38				11.84	11.89	14.88		7.540	7.589	10.575
			40				11.87	11.91	14.90		7.556	7.664	10.621
	5240	48	SU	—			16.81	16.91	19.87		7.038	7.287	10.175
			37				11.55	11.59	14.58		7.102	7.160	10.141
			38				11.52	11.69	14.62		7.090	7.237	10.174
			40				11.58	11.67	14.64		7.117	7.233	10.186
HE40 (FCC)	5190	38	SU	—	—	24	15.96	15.91	18.95	11	2.450	2.329	5.400
	5230	46	SU	—	—	24	19.89	19.85	22.88	11	5.775	5.677	8.737
HE80	5210	42	SU	—	—	24	16.17	16.23	19.21	11	-0.448	-0.425	2.574

9.4.11. 802.11ax SISO MODE IN THE UNII-2A BAND

UNII-2A (SISO)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Ant 6 (dBi)	-0.10							
Ant 5 (dBi)	-2.10							

UNII-2A (SISO)	Freq (MHz)	Ch. #	Tone	RU Index	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HE20	5260	52	SU	—	20.69	21.05	24.00	24.00	19.90	19.92	19.90	19.92	11.00	11.00	10.580	10.617	10.580	10.617
				37	20.09	20.50	24.00	24.00	14.77	14.79	14.77	14.79			10.572	10.675	10.572	10.675
			52T	38	19.58	19.89	23.92	23.99	14.78	14.80	14.78	14.80			10.505	10.578	10.505	10.578
				40	20.86	20.82	24.00	24.00	14.75	14.82	14.75	14.82			10.393	10.547	10.393	10.547
	5300	60	SU	—	20.75	20.87	24.00	24.00	19.95	19.85	19.95	19.85			10.780	10.567	10.780	10.567
				37	19.92	20.48	23.99	24.00	14.77	14.82	14.77	14.82			10.299	10.473	10.299	10.473
			52T	38	19.80	19.91	23.97	23.99	14.81	14.84	14.81	14.84			10.553	10.751	10.553	10.751
				40	20.78	20.88	24.00	24.00	14.82	14.85	14.82	14.85			10.432	10.347	10.432	10.347
	5320	64	SU	—	21.69	21.73	24.00	24.00	18.92	18.97	18.92	18.97			9.292	9.577	9.292	9.577
				37	20.16	20.48	24.00	24.00	14.79	14.77	14.79	14.77			10.564	10.433	10.564	10.433
			52T	38	19.79	19.65	23.96	23.93	14.77	14.82	14.77	14.82			10.519	10.586	10.519	10.586
				40	20.97	20.96	24.00	24.00	14.81	14.85	14.81	14.85			10.493	10.605	10.493	10.605
HE40	5270	54	SU	—	41.07	41.18	24.00	24.00	20.85	20.88	20.85	20.88	11.00	11.00	7.748	7.804	7.748	7.804
	5310	62	SU	—	41.71	42.27	24.00	24.00	15.96	15.90	15.96	15.90			2.548	2.359	2.548	2.359
HE80	5290	58	SU	—	81.83	81.48	24.00	24.00	15.71	15.66	15.71	15.66	11.00	11.00	-0.264	-0.279	-0.264	-0.279

9.4.12. 802.11ax MIMO CDD MODE IN THE UNII-2A BAND

UNII-2A (MIMO CDD)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Un-Correlated Gain (dBi)	-0.99							
Correlated Gain (dBi)	1.97							

UNII-2A (MIMO CDD)	Freq (MHz)	Ch. #	Tone	RU Index	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
							Ant 6	Ant 5			Ant 6	Ant 5	
HE20	5260	52	SU	—	20.88	24.00	16.90	16.77	19.85	11.00	7.679	7.634	10.667
			52T	37	19.73	23.95	11.88	11.76	14.83		8.013	7.930	10.982
				38	18.26	23.62	11.92	11.72	14.83		8.071	7.709	10.904
				40	19.84	23.98	11.89	11.71	14.81		8.062	7.789	10.938
	5300	60	SU	—	20.95	24.00	16.91	16.95	19.94		7.758	8.010	10.896
			52T	37	19.77	23.96	11.79	11.75	14.78		8.101	7.862	10.993
				38	18.44	23.66	11.72	11.78	14.76		7.862	7.980	10.932
				40	19.90	23.99	11.77	11.81	14.80		7.961	7.829	10.906
	5320	64	SU	—	20.84	24.00	16.82	16.83	19.84		7.636	7.661	10.659
			52T	37	19.77	23.96	11.69	11.71	14.71		7.600	7.621	10.621
				38	18.48	23.67	11.74	11.73	14.75		7.858	7.854	10.866
				40	19.85	23.98	11.71	11.69	14.71		7.773	7.688	10.741
HE40	5270	54	SU	—	40.58	24.00	19.89	19.94	22.93	11.00	6.266	6.355	9.321
	5310	62	SU	—	40.86	24.00	15.41	15.48	18.46		2.087	2.107	5.107
HE80	5290	58	SU	—	81.22	24.00	14.67	14.71	17.70	11.00	-1.734	-1.717	1.285

9.4.13. 802.11ax SISO MODE IN THE UNII-2C BAND

UNII-2C (SISO)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Ant 6 (dBi)	-1.30							
Ant 5 (dBi)	-1.90							

UNII-3 (SISO)	
Straddle Channel	
Ant 6 (dBi)	-4.00
Ant 5 (dBi)	-1.60

UNII-2C (SISO)	Freq (MHz)	Ch. #	Tone	RU Index	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/MHz)		PSD (dBm/MHz)		Total Corrected PSD (dBm/MHz)	
					Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HE20	5500	100	SU	—	21.49	21.63	24.00	24.00	18.68	18.72	18.68	18.72	11.00	11.00	8.593	8.397	8.593	8.397
				37	20.16	20.43	24.00	24.00	14.98	14.98	14.98	14.98			10.026	10.006	10.026	10.006
			52T	38	19.84	19.41	23.98	23.88	14.91	14.95	14.91	14.95			9.798	9.845	9.798	9.845
				40	20.63	20.76	24.00	24.00	14.95	14.97	14.95	14.97			9.843	9.985	9.843	9.985
	5580	116	SU	—	20.68	21.08	24.00	24.00	19.96	19.96	19.96	19.96			9.552	9.549	9.552	9.549
				37	20.26	20.46	24.00	24.00	14.89	14.99	14.89	14.99			9.764	10.114	9.764	10.114
			52T	38	18.94	19.93	23.77	24.00	14.85	14.88	14.85	14.88			9.608	9.718	9.608	9.718
				40	20.93	20.90	24.00	24.00	14.96	14.95	14.96	14.95			9.901	9.896	9.901	9.896
	5600	120	SU	—	21.08	20.91	24.00	24.00	20.21	20.17	20.21	20.17	11.00	11.00	9.996	9.995	9.996	9.995
				—	20.96	22.18	24.00	24.00	16.89	16.95	16.89	16.95			6.890	6.934	6.890	6.934
			52T	37	19.90	20.05	23.99	24.00	14.71	14.67	14.71	14.67			9.135	8.965	9.135	8.965
				38	19.62	19.50	23.93	23.90	14.73	14.72	14.73	14.72			9.181	9.167	9.181	9.167
	5700	140	SU	—	20.91	20.67	24.00	24.00	14.74	14.68	14.74	14.68			9.209	8.997	9.209	8.997
				—	15.35	15.51	22.86	22.90	19.99	19.97	19.99	19.97			9.626	9.589	9.626	9.589
			52T	37	15.09	15.03	22.79	22.77	14.98	14.97	14.98	14.97	11.00	11.00	10.036	9.986	10.036	9.986
				38	14.86	14.81	22.72	22.70	14.97	14.97	14.97	14.97			9.956	9.913	9.956	9.913
HE40	5720 (Straddle)	144	SU	—	15.34	15.32	22.86	22.85	14.99	14.95	14.99	14.95			10.182	9.835	10.182	9.835
				40	15.34	15.32	22.86	22.85	14.99	14.95	14.99	14.95			9.956	9.913	9.956	9.913
			52T	37	15.09	15.03	22.79	22.77	14.98	14.97	14.98	14.97			10.036	9.986	10.036	9.986
				38	14.86	14.81	22.72	22.70	14.97	14.97	14.97	14.97			9.956	9.913	9.956	9.913
	5510	102	SU	—	44.26	44.16	24.00	24.00	16.15	16.23	16.15	16.23	11.00	11.00	1.604	1.915	1.604	1.915
				—	41.45	41.44	24.00	24.00	20.77	20.76	20.77	20.76			6.342	6.245	6.342	6.245
HE80	5570	134	SU	—	42.53	42.88	24.00	24.00	18.39	18.44	18.39	18.44			4.076	4.356	4.076	4.356
				—	25.73	25.57	24.00	24.00	20.99	20.97	20.99	20.97			6.973	6.827	6.973	6.827
	5710 (Straddle)	142	SU	—	25.73	25.57	24.00	24.00	20.99	20.97	20.99	20.97			6.973	6.827	6.973	6.827
				—	25.73	25.57	24.00	24.00	20.99	20.97	20.99	20.97			6.973	6.827	6.973	6.827
HE80	5530	106	SU	—	83.36	82.19	24.00	24.00	15.92	15.96	15.92	15.96	11.00	11.00	-1.036	-1.032	-1.036	-1.032
				—	82.39	81.59	24.00	24.00	20.76	20.82	20.76	20.82			3.577	3.849	3.577	3.849
	5610	122	SU	—	82.39	81.59	24.00	24.00	20.76	20.82	20.76	20.82			3.577	3.849	3.577	3.849
HE80	5690	138	SU	—	45.55	45.62	24.00	24.00	20.98	20.99	20.98	20.99	11.00	11.00	4.005	4.041	4.005	4.041
				—	45.55	45.62	24.00	24.00	20.98	20.99	20.98	20.99			4.005	4.041	4.005	4.041

9.4.14. 802.11ax MIMO CDD MODE IN THE UNII-2C BAND

UNII-2C (MIMO CDD)	20MHz		40MHz			80MHz		
	SU	52T	SU	52T	242T	SU	52T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Un-Correlated Gain (dBi)	-1.59							
Correlated Gain (dBi)	1.42							

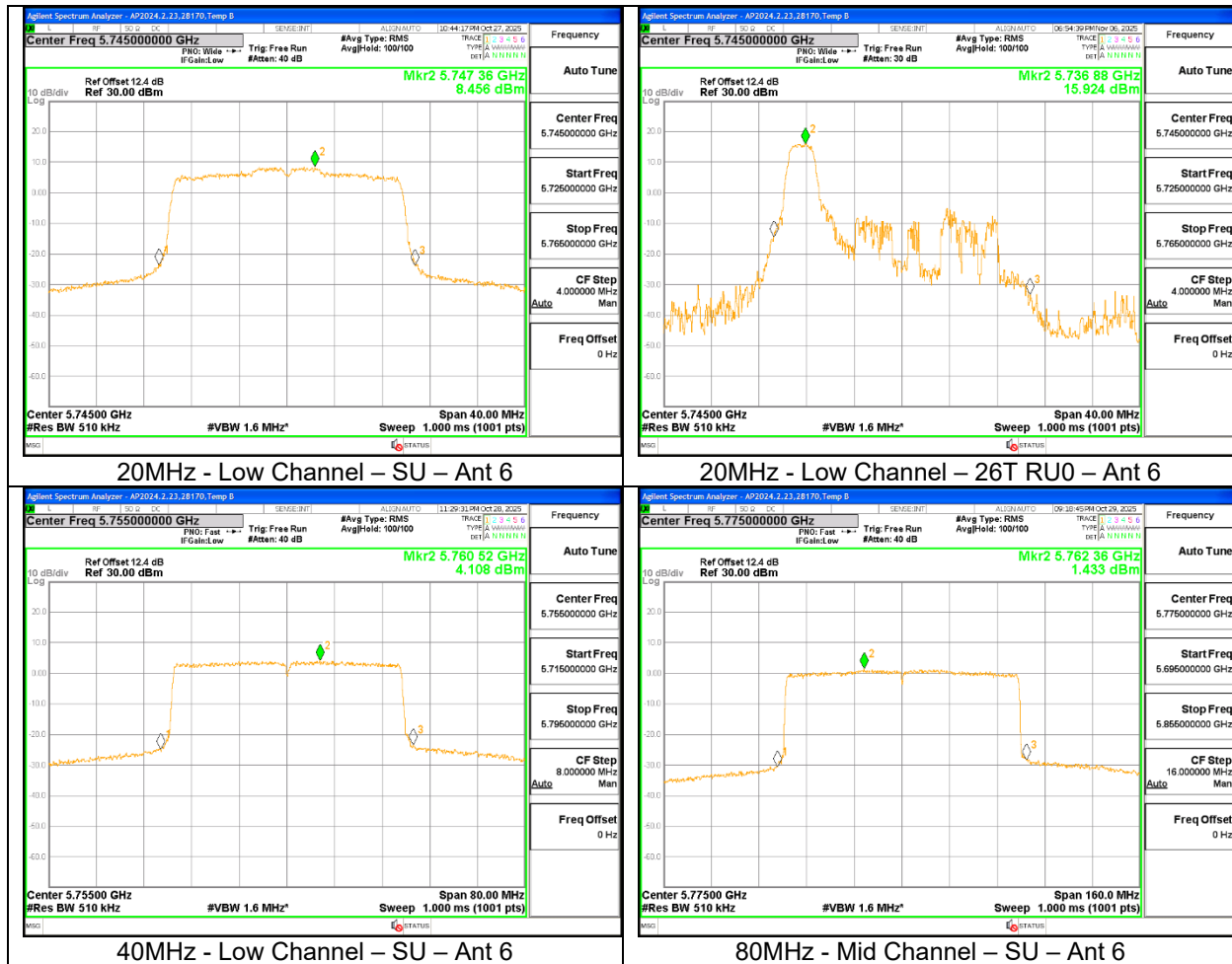
UNII-3 (MIMO CDD)	
Straddle Channel	
Un-Corr. Gain (dBi)	-2.64
Corr. Gain (dBi)	0.29

UNII-2c (MIMO CDD)	Freq (MHz)	Ch. #	Tone	RU Index	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/MHz)	PSD (dBm/MHz)		Total MIMO Corrected PSD (dBm/MHz)
							Ant 6	Ant 5			Ant 6	Ant 5	
HE20	5500	100	SU	—	20.99	24.00	16.95	16.95	19.96	11.00	6.712	6.719	9.726
					37	19.78	23.96	11.89	11.87		6.317	6.221	9.280
			52T	—	38	18.24	23.61	11.87	11.86		6.215	6.142	9.189
					40	20.03	24.00	11.86	11.90		6.209	6.434	9.333
	5580	116	SU	—	20.97	24.00	16.88	16.85	19.88		6.548	6.402	9.486
					37	19.83	23.97	11.90	11.91		6.408	6.497	9.463
			52T	—	38	18.30	23.62	11.88	11.92		6.298	6.579	9.451
					40	19.79	23.96	11.93	11.96		6.631	6.804	9.729
	5600	120	SU	—	20.75	24.00	17.23	17.11	20.18		7.264	7.255	10.270
					37	19.16	23.82	11.69	11.74		6.790	6.622	9.717
			52T	—	38	18.55	23.68	11.72	11.73		6.109	6.195	9.163
					40	19.93	24.00	11.70	11.71		6.158	6.188	9.183
	5700	140	SU	—	15.41	22.88	16.71	16.66	19.70		6.124	6.127	9.136
					37	14.84	22.71	11.94	11.95		6.892	6.785	9.849
			52T	—	38	14.20	22.52	11.96	11.97		6.630	6.754	9.703
					40	14.97	22.75	11.98	11.99		6.798	6.812	9.815
	5720 (Straddle)	144	SU	—	15.41	22.88	16.71	16.66	19.70	11.00	6.851	7.046	9.960
					37	14.84	22.71	11.94	11.95		6.892	6.785	9.849
			52T	—	38	14.20	22.52	11.96	11.97		6.630	6.754	9.703
					40	14.97	22.75	11.98	11.99		6.798	6.812	9.815
HE40	5510	102	SU	—	43.43	24.00	15.44	15.48	18.47	11.00	0.924	1.104	4.025
	5550	110	SU	—	40.52	24.00	19.89	19.87	22.89		5.499	5.420	8.470
	5670	134	SU	—	43.22	24.00	17.88	17.93	20.92		3.517	3.679	6.609
	5710	142	SU	—	25.56	24.00	19.98	19.99	23.00		5.749	5.790	8.780
HE80	5530	106	SU	—	82.62	24.00	16.38	16.44	19.42	11.00	-0.759	-0.582	2.341
	5610	122	SU	—	82.96	24.00	19.69	19.68	22.70		2.589	2.688	5.649
	5690	138	SU	—	45.51	24.00	19.96	19.99	22.99		2.905	3.150	6.040

9.4.15. 802.11ax SISO MODE IN THE UNII-3 BAND

UNII-3 (SISO)	20MHz		40MHz			80MHz		
	SU	26T	SU	26T	242T	SU	26T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ant 6 (dBi)	-4.00							
Ant 5 (dBi)	-1.60							

UNII-3 (SISO)	Freq (MHz)	Ch. #	Tone	RU Index	Minimum Bandwidth (MHz)		Power Limit (dBm)		Output Power (Gated) (dBm)		Total Corrected Power (dBm)		PSD Limit (dBm/500kHz)		PSD (dBm/500kHz)		Total Corrected PSD (dBm/500kHz)	
					Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5	Ant 6	Ant 5
HE20	5745	149	SU	—	—	—	30	30	20.91	20.90	20.91	20.90	30	30	8.456	8.462	8.456	8.462
			0	—					20.84	20.85	20.84	20.85			15.924	16.056	15.924	16.056
			4	—					20.81	20.83	20.81	20.83			16.012	15.979	16.012	15.979
			8	—					20.86	20.78	20.86	20.78			16.249	16.030	16.249	16.030
	5785	157	SU	—					20.90	20.88	20.90	20.88			8.553	8.243	8.553	8.243
			0	—					20.79	20.82	20.79	20.82			15.999	16.378	15.999	16.378
			4	—					20.80	20.82	20.80	20.82			16.071	16.009	16.071	16.009
			8	—					20.86	20.83	20.86	20.83			16.444	16.226	16.444	16.226
	5825	165	SU	—					20.87	20.85	20.87	20.85			8.193	8.149	8.193	8.149
			0	—					20.82	20.82	20.82	20.82			16.342	16.378	16.342	16.378
			4	—					20.81	20.85	20.81	20.85			16.378	16.158	16.378	16.158
			8	—					20.80	20.84	20.80	20.84			16.261	16.373	16.261	16.373
HE40	5755	151	SU	—			30	30	20.89	20.90	20.89	20.90	30	30	4.108	4.248	4.108	4.248
	5795	159	SU	—			30	30	20.87	20.88	20.87	20.88	30	30	4.332	4.343	4.332	4.343
HE80	5775	155	SU	—	—	—	30	30	20.82	20.80	20.82	20.80	30	30	1.433	1.214	1.433	1.214



9.4.16. 802.11ax MIMO CDD MODE IN THE UNII-3 BAND

UNII-3 (MIMO CDD)	20MHz		40MHz			80MHz		
	SU	26T	SU	26T	242T	SU	26T	242T
DCCF (MCS0) (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Un-Correlated Gain (dBi)	-2.64							
Correlated Gain (dBi)	0.29							

UNII-3 (MIMO CDD)	Freq (MHz)	Ch. #	Tone	RU Index	Min BW (MHz)	Power Limit (dBm)	Output Power (Gated) (dBm)		Total MIMO Corrected Power (dBm)	PSD Limit (dBm/500kHz)	PSD (dBm/500kHz)		Total MIMO Corrected PSD (dBm/500kHz)
							Ant 6	Ant 5			Ant 6	Ant 5	
HE20	5745	149	SU	—	—	30	20.85	20.87	23.87	30	7.937	8.226	11.094
			0	—			20.79	20.80	23.81		16.261	16.210	19.246
			26T	4			20.81	20.83	23.83		15.760	15.811	18.796
			8	—			20.82	20.80	23.82		16.142	15.918	19.042
	5785	157	SU	—			20.81	20.83	23.83		8.508	8.445	11.487
			0	—			20.78	20.80	23.80		16.380	16.548	19.475
			26T	4			20.79	20.82	23.82		16.250	16.485	19.379
			8	—			20.76	20.78	23.78		16.155	16.257	19.217
	5825	165	SU	—			20.87	20.90	23.90		8.323	8.321	11.332
			0	—			20.81	20.83	23.83		16.500	16.377	19.449
			26T	4			20.81	20.80	23.82		16.111	16.099	19.115
			8	—			20.84	20.81	23.84		16.273	16.193	19.243
	5755	151	SU	—			20.88	20.89	23.90		4.125	3.968	7.058
	5795	159	SU	—			20.79	20.81	23.81		4.526	4.504	7.525
	5775	155	SU	—			20.73	20.68	23.72		1.015	0.920	3.978

10. SETUP PHOTOS

Refer to 15941282-EP1V1 FCC Setup Photos.

11. APPENDIX A – SPOT CHECK EVALUATION

11.1.MODEL DIFFERENCES

The manufacturer hereby declares the following for models A3575, A3634, A3635.

A3575, A3634, and A3635 are highly similar, with the only difference being the following.

Model	FCC ID	Feature Difference	Sim Support	Reference Model
A3575	BCG-E9145A	No B11/21	eSIM only	-
A3634	BCG-E9147A	No B11/21/14/29/71	eSIM + pSIM	A3575
A3635	BCG-E9148A	No B11/21/14/29/71/53/MSS		

Note:

All models use the same system, Cellular and Connectivity radio electrical schematics.
 Removal of LTE/NR (B14/29/53/71) and MSS bands is done by de-population of directly related components. Electrically there is no difference among models.
 All models use the same Applications Processor and PMU.
 All models use the same UICC hardware/software interface.
 All models use the same UICC Baseband firmware and iOS software.

The spot check plan allows for data reuse from the reference model where the variant model data meets the limits and has not changed by more than the criteria from KDB 484596 D01 v03 equation (4).

$$d_{dB} = |V_{dB} - R_{dB}| \quad (1)$$

$$d_{dB} \leq d_{dBmax} \quad (2)$$

$$d_{dBmax}(M_{dB}) = \begin{cases} (3 + M_{dB}/20) \text{ dB} & , \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \\ 6 \text{ dB} & , \text{ for } M_{dB} > 60 \text{ dB} \end{cases} \quad (4)$$

Where d_{dB} is deviation between the variant and the reference model, V_{dB} is variant spot check level, R_{dB} is the corresponding reference measurement level, d_{dBmax} is the maximum deviation d_{dB} allowed, and M_{dB} is the margin in dB.

11.2. SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3634

A3634 SPOT CHECK RESULTS											
Equipment Class / Technology	Frequency (GHz)	Mode	Data Rate / Tone / RU	Test Item	Channel	Measured Frequency (GHz)	Original Model: A3675	Sub Model: A3634	Delta (dB)	Margin	Remarks
							FCC ID : BCG-E9145A	FCC ID : BCG-E9147A			
NII / UNII-1	5.2G	HE40 (MIMO CDD)	SU MCS 0	Avg Power (dBm)	46	5230	22.88	22.92	0.04	-1.12	Note 1
		HT40 SISO ANT 6	MCS7	Radiated Bandedge (dBuV/m)	38	5.149863	52.56	50.03	-2.53	-1.44	Note 1
		VHT80 MIMO	MCS 0	RSE (dBuV/m)	42	15.632336	42.49	41.36	-1.13	-11.51	Note 1
NII / UNII-2A	5.3G	HE40 (MIMO CDD)	SU MCS 0	Avg Power (dBm)	54	5270	22.93	22.89	-0.04	-1.07	Note 1
		HE80 MIMO	SU MCS 11	Radiated Bandedge (dBuV/m)	58	5.359029	51.36	48.46	-2.90	-2.64	Note 1
		VHT80 MIMO	MCS 0	RSE (dBuV/m)	58	15.870862	44.11	42.04	-2.07	-9.89	Note 1
NII / UNII-2C	5.6G	HE40 (MIMO CDD)	SU MCS 0	Avg Power (dBm)	142	5710	23.00	22.98	-0.02	-1.00	Note 1
		HE20 SISO ANT 5	SU MCS 11	Radiated Bandedge (dBuV/m)	140	5.72542	66.55	66.80	0.25	-1.65	Note 1
		HE80 MIMO	SU MCS 0	RSE (dBuV/m)	106	17.972324	47.12	45.34	-1.78	-6.88	Note 1
NII / UNII-3	5.8G	HT20 (MIMO CDD)	MCS 0	Avg Power (dBm)	149	5745	23.92	23.86	-0.06	-6.08	Note 1
		HE80 MIMO	SU MCS 11	Radiated Bandedge (dBuV/m)	155 (Upper)	5.9331	-31.75	-34.09	-2.34	-4.75	Note 1
		HE20 MIMO	SU MCS 0	RSE (dBuV/m)	165	17.971719	46.84	45.12	-1.72	-7.16	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.

Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests performed on second channel.

11.3. SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3635

A3635 SPOT CHECK RESULTS											
Equipment Class / Technology	Frequency (GHz)	Mode	Data Rate / Tone / RU	Test Item	Channel	Measured Frequency (GHz)	Original Model: A3575	Sub Model: A3635	Delta (dB)	Margin	Remarks
							FCC ID : BCG-E9145A	FCC ID : BCG-E9148A			
NII / UNII-1	5.2G	HE40 (MIMO CDD)	SU MCS0	Avg Power (dBm)	46	5230	22.88	22.86	-0.02	-1.12	Note 1
		HT40 SISO ANT 6	MCS7	Radiated Bandedge (dBuV/m)	38	5.149863	52.56	52.23	-0.33	-1.44	Note 1
		VHT80 MIMO	MCS 0	RSE (dBuV/m)	42	15.632336	42.49	43.14	0.65	-11.51	Note 1
NII / UNII-2A	5.3G	HE40 (MIMO CDD)	SU MCS0	Avg Power (dBm)	54	5270.000000	22.93	22.87	-0.06	-1.07	Note 1
		HE80 MIMO	SU MCS 11	Radiated Bandedge (dBuV/m)	58	5.359029	51.36	48.50	-2.86	-2.64	Note 1
		VHT80 MIMO	MCS 0	RSE (dBuV/m)	58	15.870862	44.11	43.50	-0.61	-9.89	Note 1
NII / UNII-2C	5.6G	HE40 (MIMO CDD)	SU MCS0	Avg Power (dBm)	142	5710.000000	23.00	22.91	-0.09	-1.00	Note 1
		HE20 SISO ANT 5	SU MCS 11	Radiated Bandedge (dBuV/m)	140	5.72542	66.55	66.62	0.07	12.55	Note 1
		HE80 MIMO	SU MCS0	RSE (dBuV/m)	106	17.972324	47.12	45.99	-1.13	-21.08	Note 1
NII / UNII-3	5.8G	HT20 (MIMO CDD)	MCS 0	Avg Power (dBm)	149	5745.000000	23.92	23.88	-0.04	-6.08	Note 1
		HE80 MIMO	SU MCS 11	Radiated Bandedge (dBuV/m)	155 (Upper)	5.933100	-31.75	-33.33	-1.58	-5.61	Note 1
		HE20 MIMO	SU MCS 0	RSE (dBuV/m)	165	17.971719	46.84	43.84	-3.00	-7.16	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.

Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests performed on second channel.