4.4 26dB Bandwidth and 99% Occupied Bandwidth

4.4.1 Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Limit:	No restriction limits
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth RBW = 1% EBW, VBW≥3RBW, In order to make an accurate measurement. 4. Measure and record the results in the test report.
Test Result:	N/A

4.4.2 Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 19, 2025	Feb. 18, 2026
RF cable	Times	1-40G	HKE-034	Feb. 19, 2025	Feb. 18, 2026
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 19, 2025	Feb. 18, 2026
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

4.4.3 Test Result

N/A

4.5 Power Spectral Density

4.5.1 Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F
Limit:	≤30.00dBm/500KHz for Band IV 5725MHz-5850MHz
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 2. Set RBW = 510 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. 3. Allow the sweeps to continue until the trace stabilizes. 4. Use the peak marker function to determine the maximum amplitude level. 5. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.
Test Result:	PASS

4.5.2 Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 19, 2025	Feb. 18, 2026
RF cable	Times	1-40G	HKE-034	Feb. 19, 2025	Feb. 18, 2026
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 19, 2025	Feb. 18, 2026
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

4.5.3 Test Data

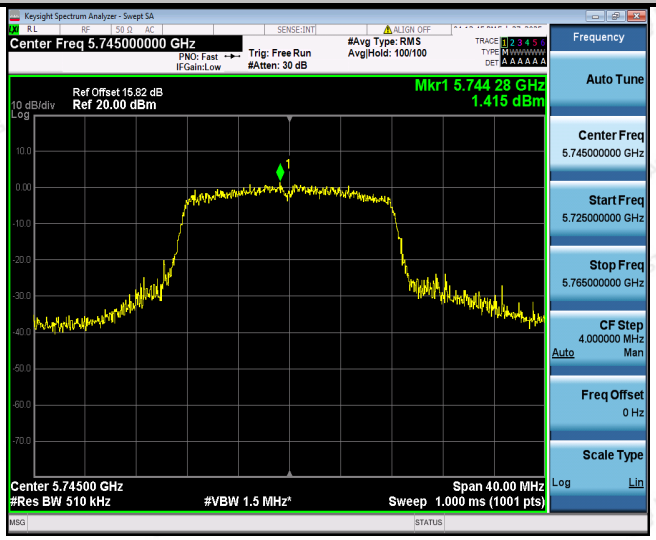
ANT. 1

Configuration Band IV (5725 - 5850 MHz)						
Mode	Test channel	Level [dBm/510kHz]	10log(500/510)	Power Spectral Density	Limit (dBm/500kHz)	Result
802.11a	CH149	1.42	-0.086	1.334	30	PASS
802.11a	CH157	2.29	-0.086	2.204	30	PASS
802.11a	CH165	1.39	-0.086	1.304	30	PASS
802.11n(HT20)	CH149	0.96	-0.086	0.874	30	PASS
802.11n(HT20)	CH157	1.13	-0.086	1.044	30	PASS
802.11n(HT20)	CH165	1.80	-0.086	1.714	30	PASS
802.11n(HT40)	CH151	-4.80	-0.086	-4.886	30	PASS
802.11n(HT40)	CH159	-4.24	-0.086	-4.326	30	PASS
802.11ac(HT20)	CH149	5.89	-0.086	5.804	30	PASS
802.11ac(HT20)	CH157	5.50	-0.086	5.414	30	PASS
802.11ac(HT20)	CH165	5.38	-0.086	5.294	30	PASS
802.11ac(HT40)	CH151	1.84	-0.086	1.754	30	PASS
802.11ac(HT40)	CH159	3.22	-0.086	3.134	30	PASS
802.11ac(HT80)	CH155	-0.42	-0.086	-0.506	30	PASS
802.11ax(HE20)	CH149	5.24	-0.086	5.154	30	PASS
802.11ax(HE20)	CH157	4.33	-0.086	4.244	30	PASS
802.11ax(HE20)	CH165	5.94	-0.086	5.854	30	PASS
802.11ax(HE40)	CH151	-1.62	-0.086	-1.706	30	PASS
802.11ax(HE40)	CH159	3.36	-0.086	3.274	30	PASS
802.11ax(HE80)	CH155	-6.02	-0.086	-6.106	30	PASS
802.11be(EHT20)	CH149	5.16	-0.086	5.074	30	PASS
802.11be(EHT20)	CH157	4.76	-0.086	4.674	30	PASS
802.11be(EHT20)	CH165	4.63	-0.086	4.544	30	PASS
802.11be(EHT40)	CH151	-3.31	-0.086	-3.396	30	PASS
802.11be(EHT40)	CH159	-1.86	-0.086	-1.946	30	PASS
802.11be(EHT80)	CH155	-4.57	-0.086	-4.656	30	PASS

***Note*: 1.Power Spectral Density= Level [dBm/510kHz]+（10log(Limit RBW/Test RBW)）**
2. Instrument attenuation and cable loss See test diagram

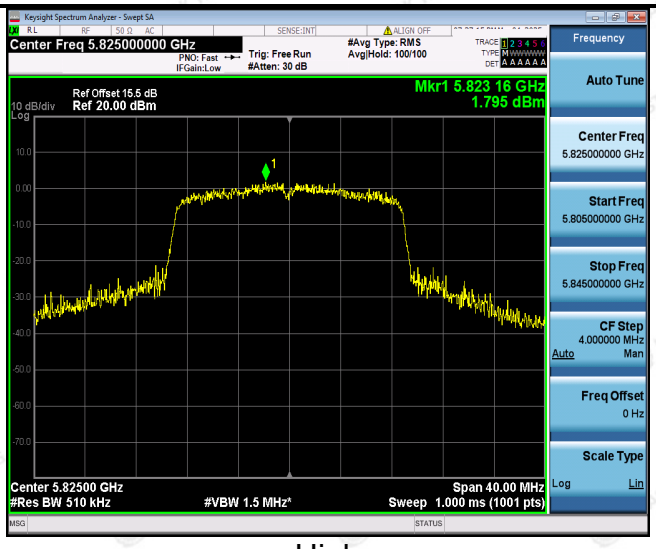
Test plots as follows:

Band IV (5725 – 5850 MHz)

802.11a

Low

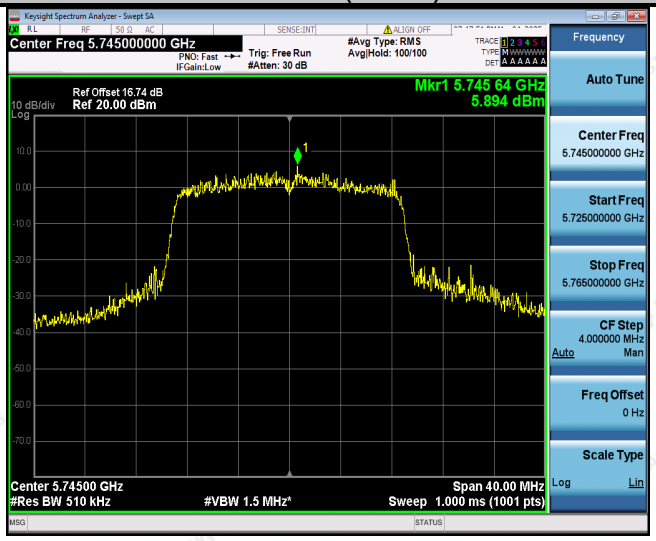
Mid

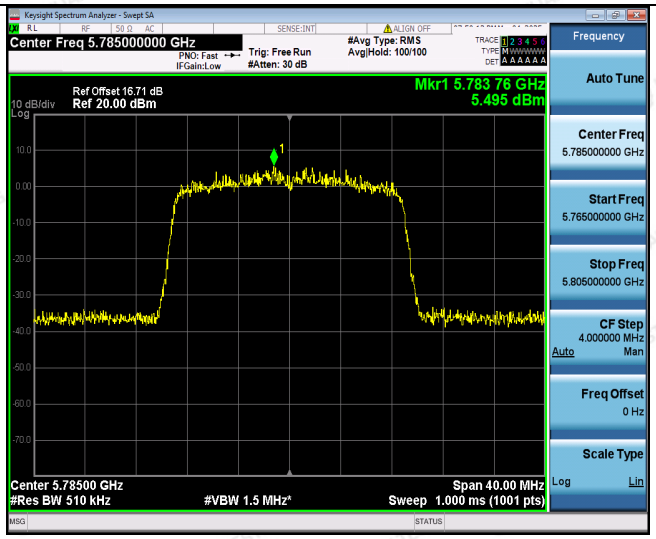
High

802.11n(HT20)
 Low
 Mid
 High

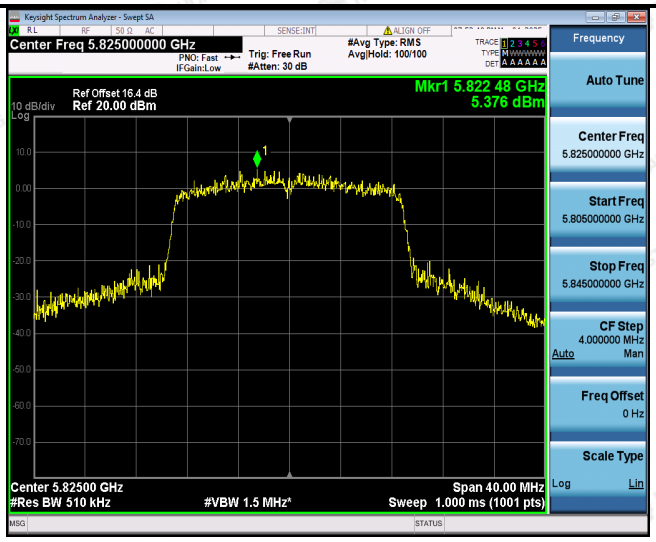
802.11n(HT40)

Low

High
802.11ac(HT20)

Low



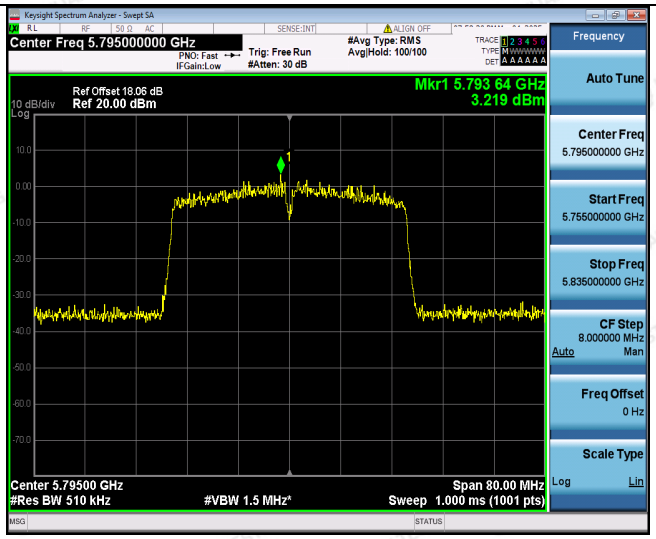
Mid



High

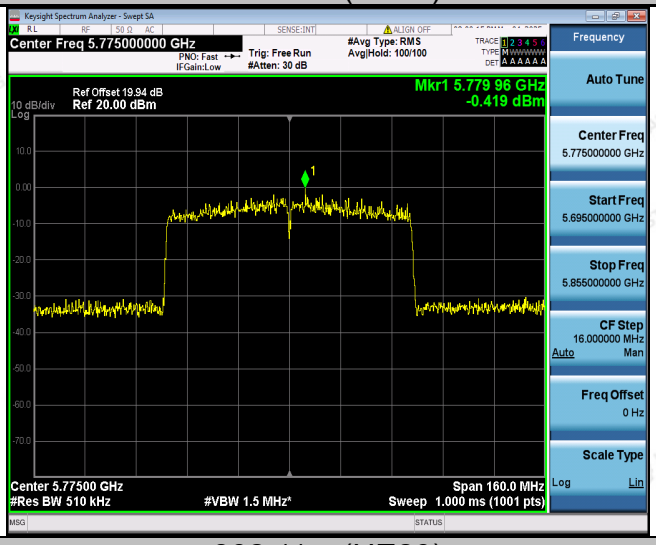
802.11ac(HT40)

Low



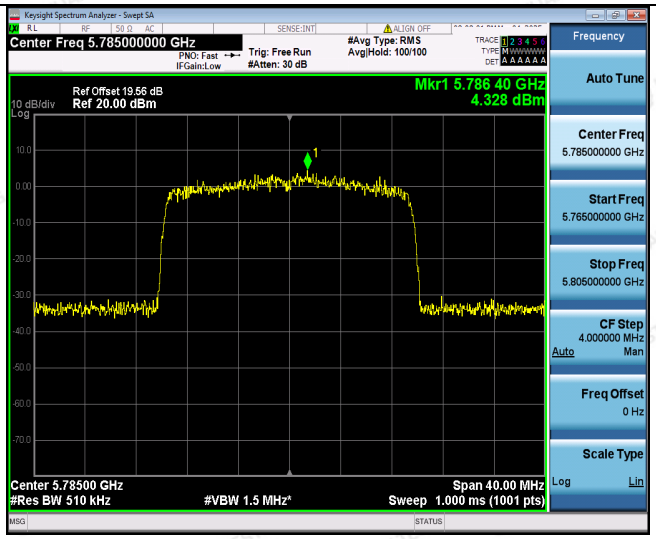
High

802.11ac(HT80)



802.11ax(HE20)

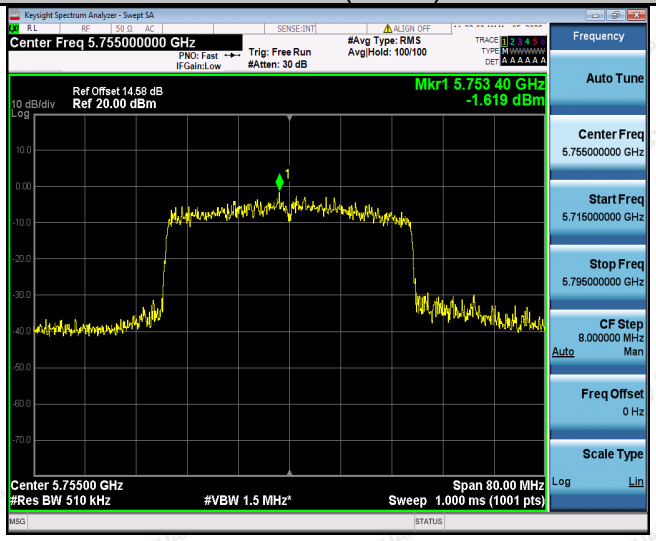
Low



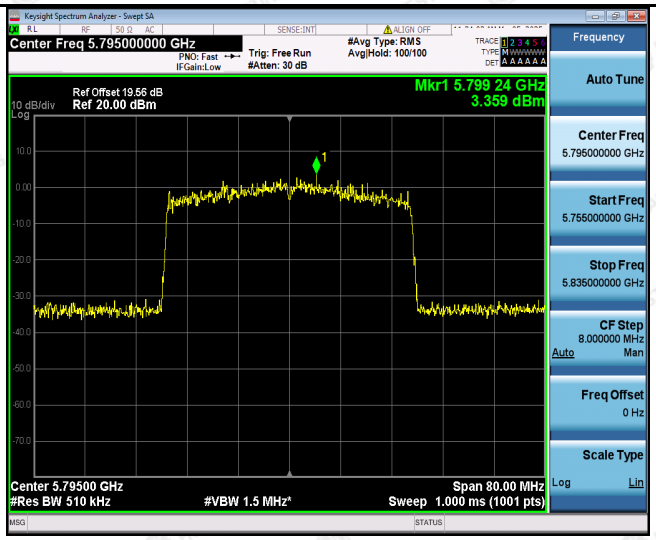
Mid

High

802.11ax(HE40)



Low

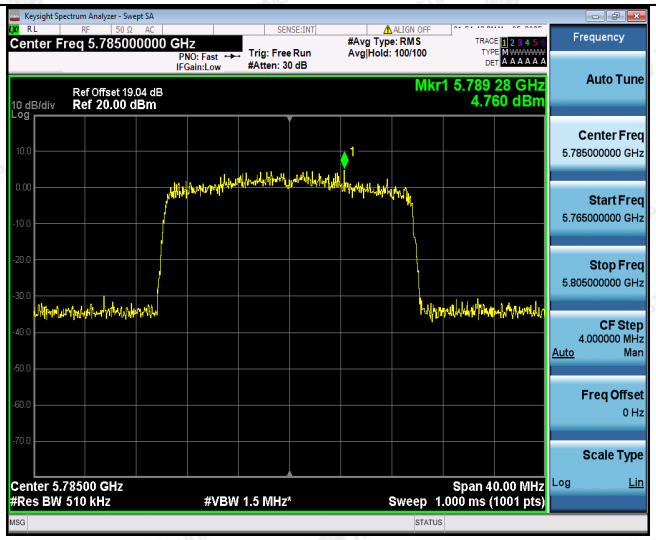


High

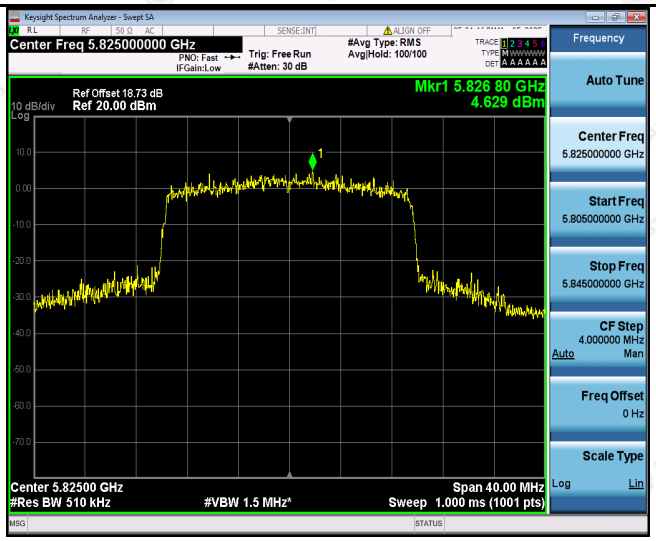
802.11ax(HE80)

802.11be(EHT20)

Low

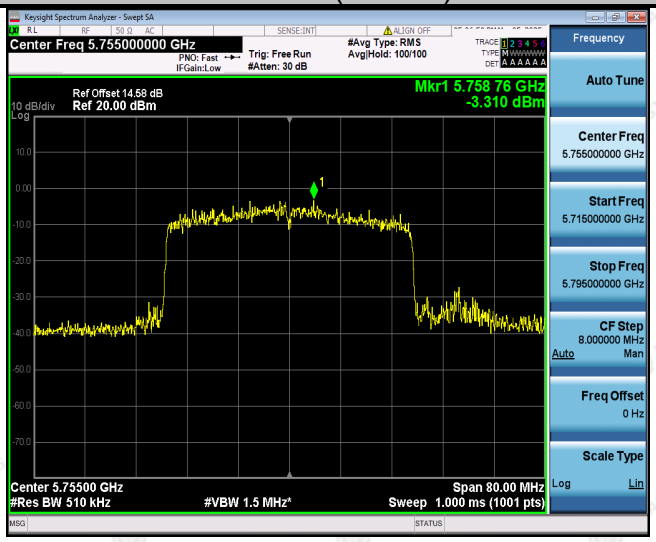


Mid

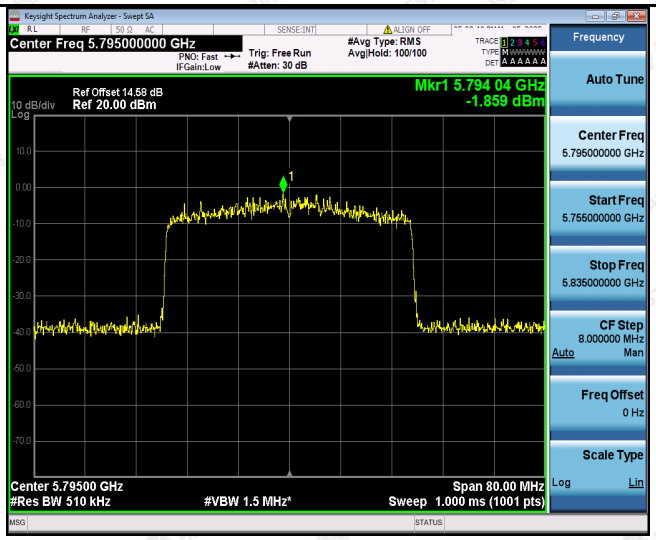


High

802.11be(EHT40)



Low



High

802.11be(EHT80)

ANT. 2

Configuration Band IV (5725 - 5850 MHz)						
Mode	Test channel	Level [dBm/510kHz]	10log(500/510)	Power Spectral Density	Limit (dBm/500kHz)	Result
802.11a	CH149	3.05	-0.086	2.964	30	PASS
802.11a	CH157	4.30	-0.086	4.214	30	PASS
802.11a	CH161	3.13	-0.086	3.044	30	PASS
802.11n(HT20)	CH149	2.81	-0.086	2.724	30	PASS
802.11n(HT20)	CH157	1.57	-0.086	1.484	30	PASS
802.11n(HT20)	CH161	1.37	-0.086	1.284	30	PASS
802.11n(HT40)	CH151	-4.70	-0.086	-4.786	30	PASS
802.11n(HT40)	CH159	-2.20	-0.086	-2.286	30	PASS
802.11ac(HT20)	CH149	1.61	-0.086	1.524	30	PASS
802.11ac(HT20)	CH157	2.39	-0.086	2.304	30	PASS
802.11ac(HT20)	CH161	1.71	-0.086	1.624	30	PASS
802.11ac(HT40)	CH151	-4.34	-0.086	-4.426	30	PASS
802.11ac(HT40)	CH159	-0.02	-0.086	-0.106	30	PASS
802.11ac(HT80)	CH155	-4.74	-0.086	-4.826	30	PASS
802.11ax(HE20)	CH149	4.65	-0.086	4.564	30	PASS
802.11ax(HE20)	CH157	4.53	-0.086	4.444	30	PASS
802.11ax(HE20)	CH161	5.54	-0.086	5.454	30	PASS
802.11ax(HE40)	CH151	-0.44	-0.086	-0.526	30	PASS
802.11ax(HE40)	CH159	4.89	-0.086	4.804	30	PASS
802.11ax(HE80)	CH155	-3.23	-0.086	-3.316	30	PASS
802.11be(EHT20)	CH149	5.40	-0.086	5.314	30	PASS
802.11be(EHT20)	CH157	4.60	-0.086	4.514	30	PASS
802.11be(EHT20)	CH165	4.74	-0.086	4.654	30	PASS
802.11be(EHT40)	CH151	-3.03	-0.086	-3.116	30	PASS
802.11be(EHT40)	CH159	2.65	-0.086	2.564	30	PASS
802.11be(EHT80)	CH155	-5.53	-0.086	-5.616	30	PASS

***Note*: 1.Power Spectral Density= Level [dBm/510kHz]+（10log(Limit RBW/Test RBW)）**
2. Instrument attenuation and cable loss See test diagram

Test plots as follows: