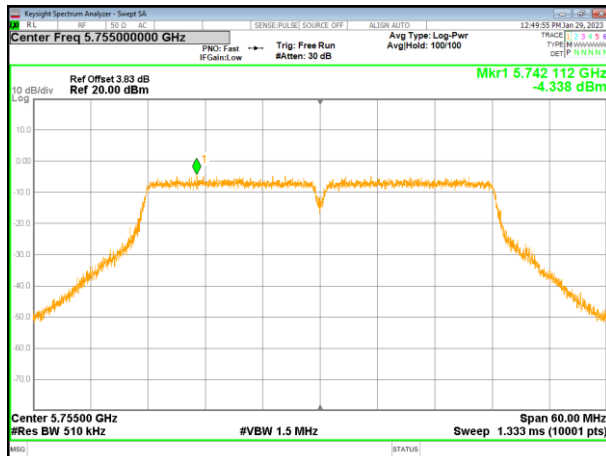
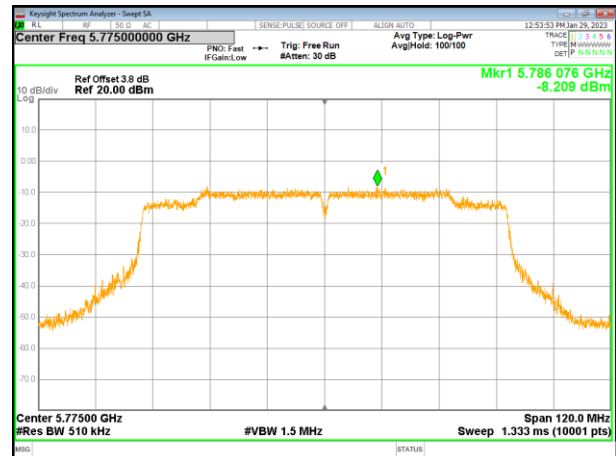


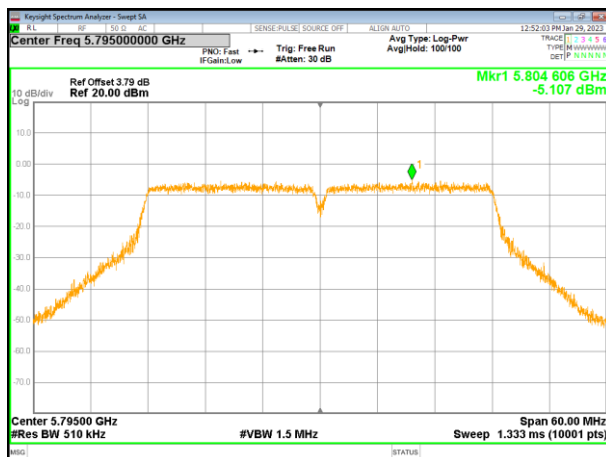
(802.11ac40) PSD plot on channel 151



(802.11ac80) PSD plot on channel 155

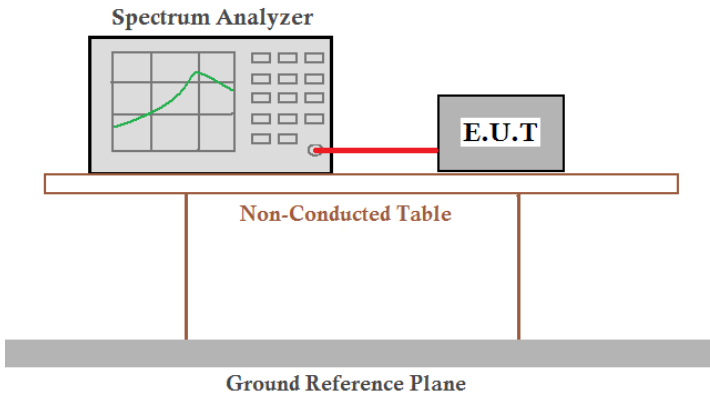


(802.11ac40) PSD plot on channel 159



4.6 Band edge

4.6.1 Conducted test Method

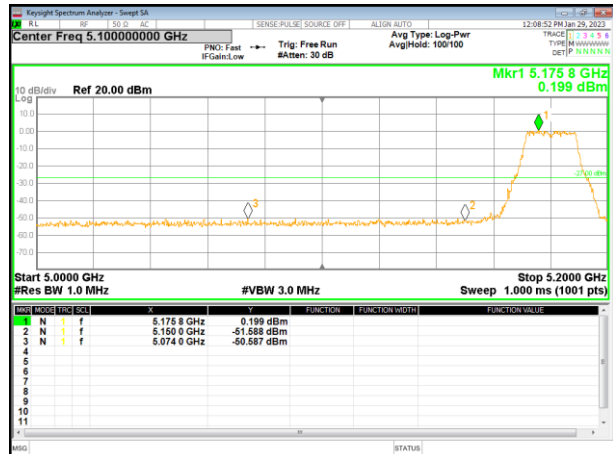
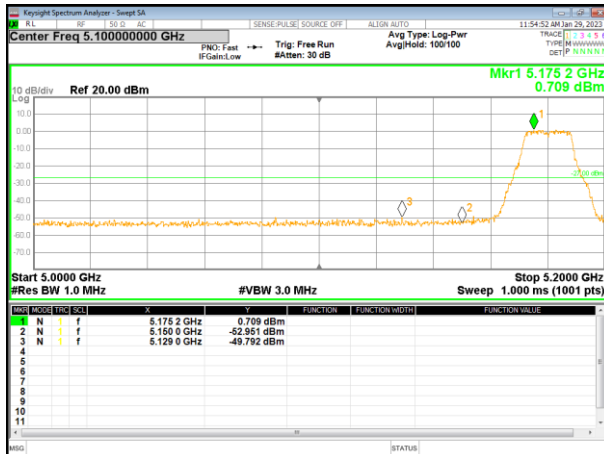
Test Requirement:	FCC Part15 C Section 15.209 and 15.205
Test Method:	ANSI C63.10: 2013
Limit:	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.
Test Procedure:	1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator. 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range. 3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span. 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency. 5. Repeat above procedures until all measured frequencies were complete..
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remarks:/

5.180~5.240 GHz

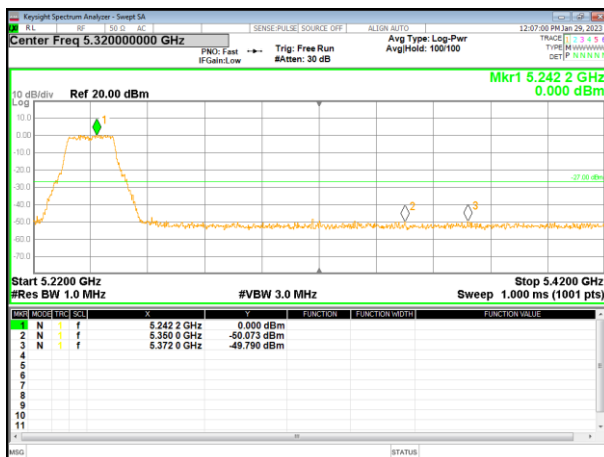
(802.11a) Band Edge, Left Side

(802.11n20) Band Edge, Left Side



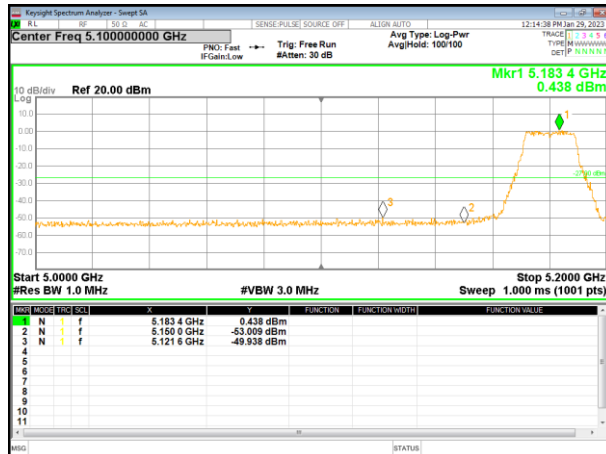
(802.11a) Band Edge, Right Side

(802.11n20) Band Edge, Right Side

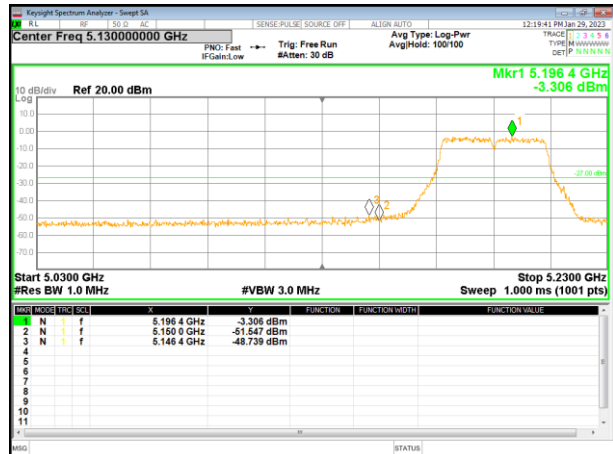


5.180~5.240 GHz

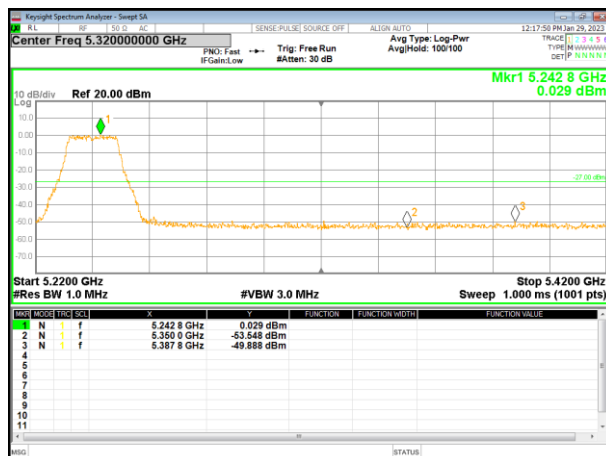
(802.11ac20) Band Edge, Left Side



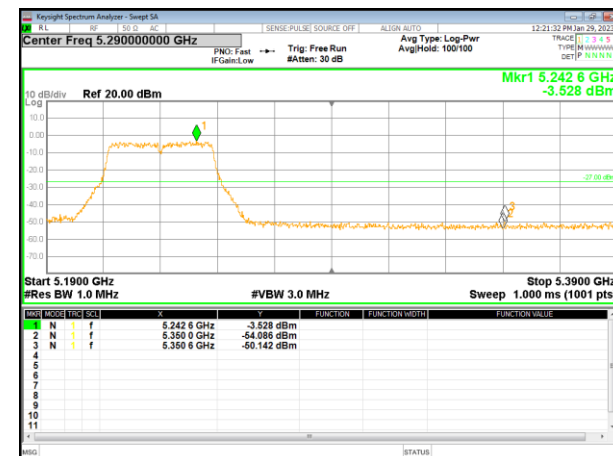
(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side



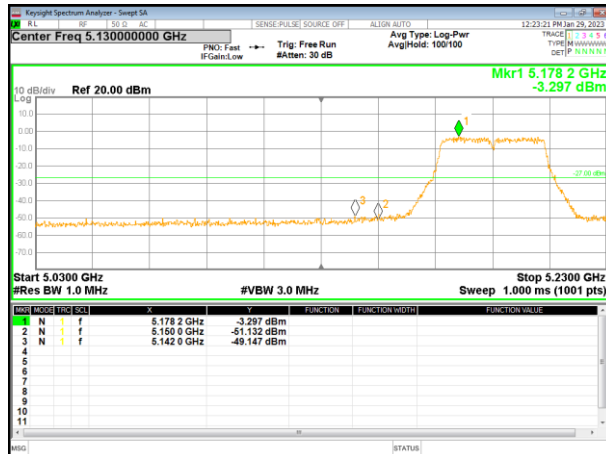
(802.11n40) Band Edge, Right Side



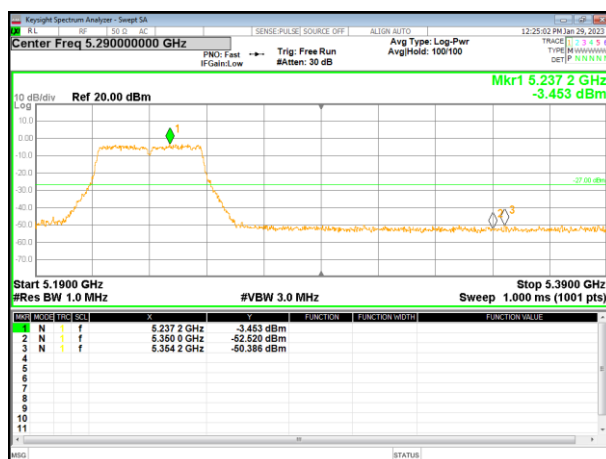
5.180~5.240 GHz

(802.11ac40) Band Edge, Left Side

(802.11ac80) Band Edge



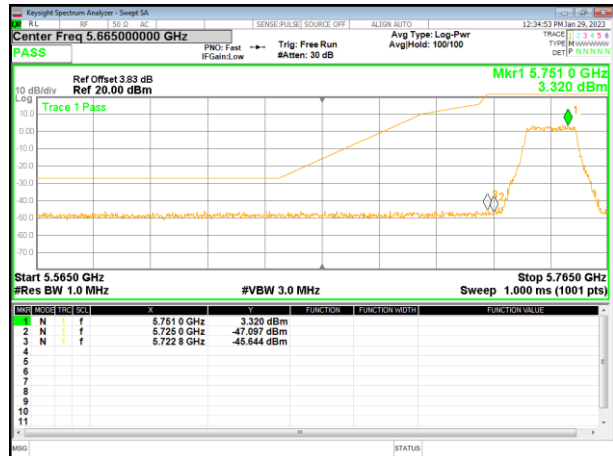
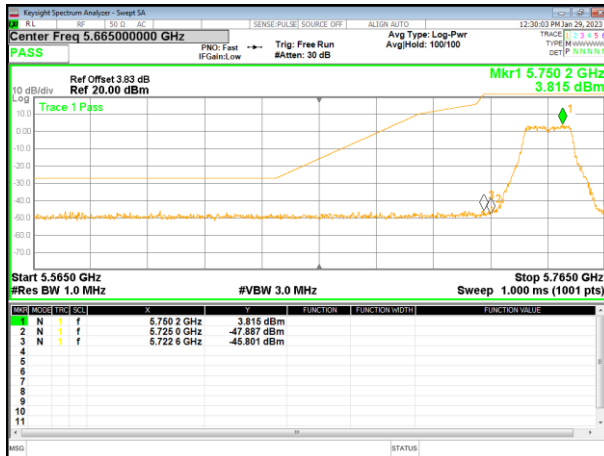
(802.11ac40) Band Edge, Right Side



5.745~5.825 GHz

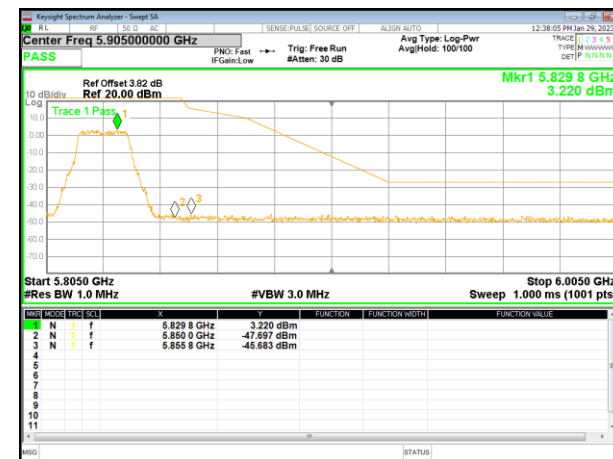
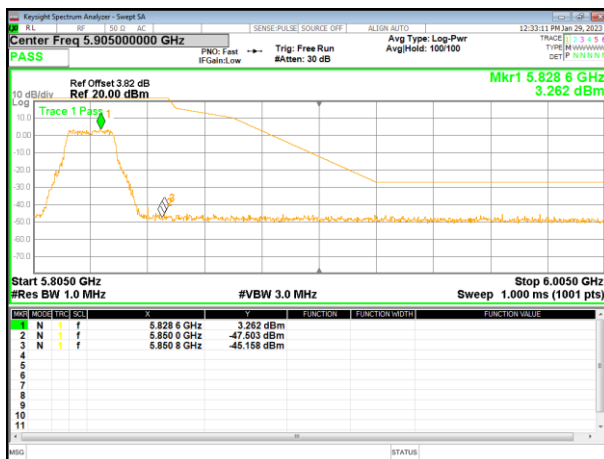
(802.11a) Band Edge, Left Side

(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

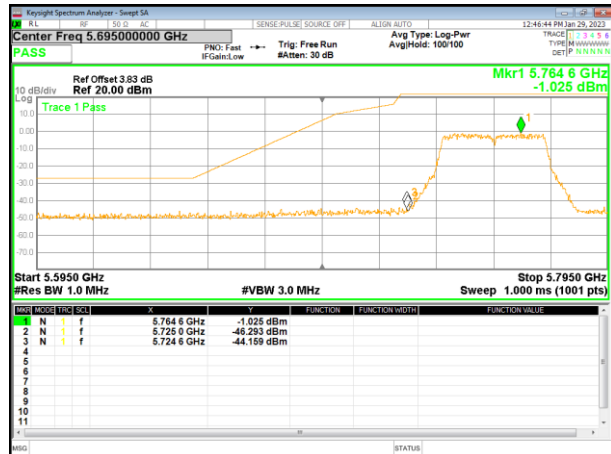
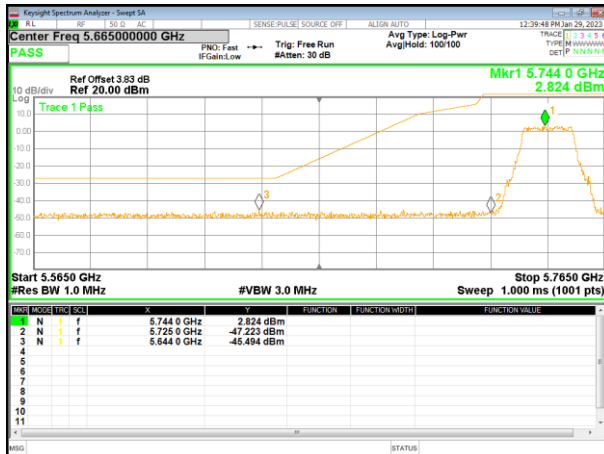
(802.11n20) Band Edge, Right Side



5.745~5.825 GHz

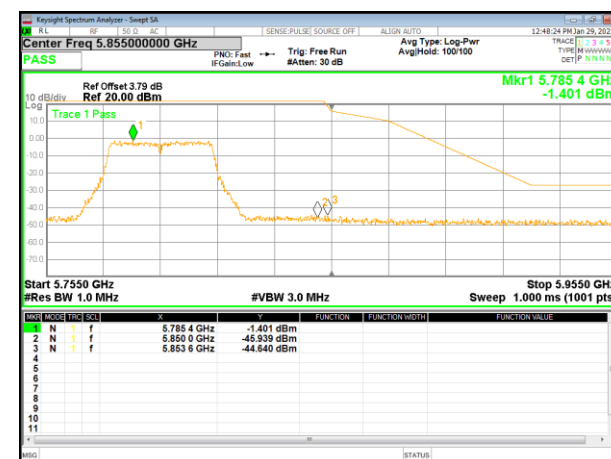
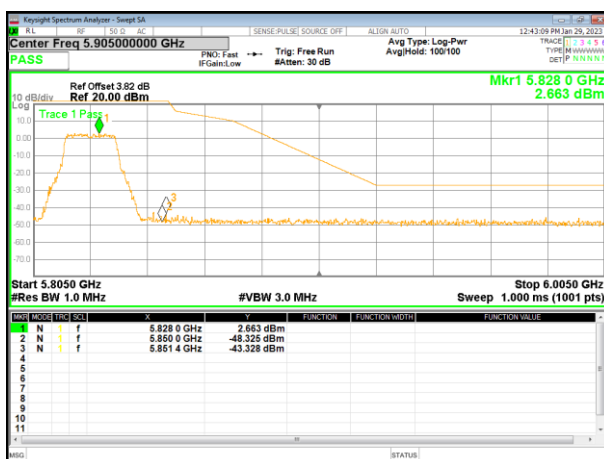
(802.11ac20) Band Edge, Left Side

(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

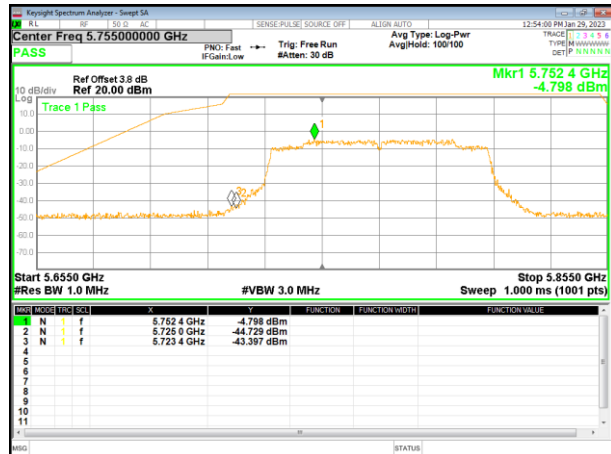
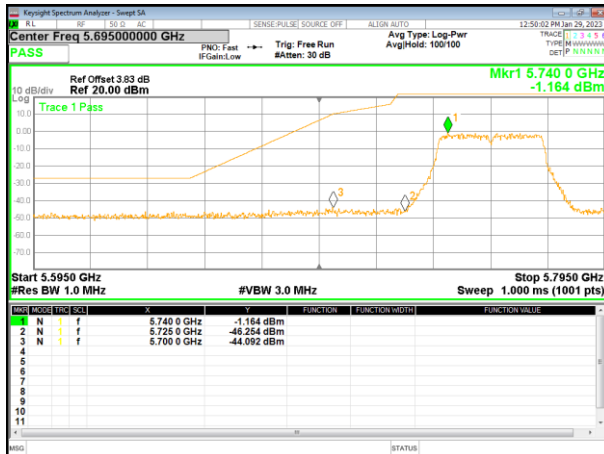
(802.11n40) Band Edge, Right Side



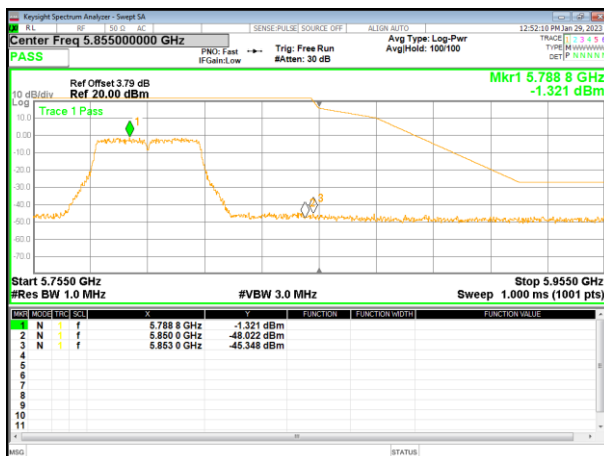
5.745~5.825 GHz

(802.11ac40) Band Edge, Left Side

(802.11ac80) Band Edge

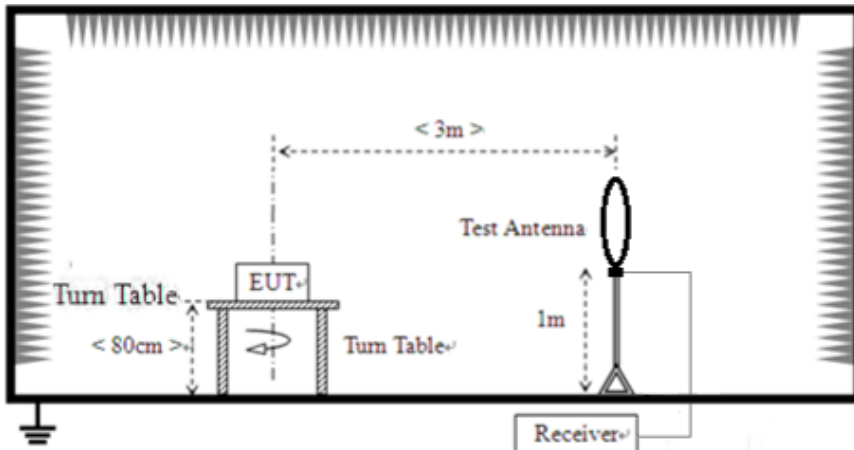


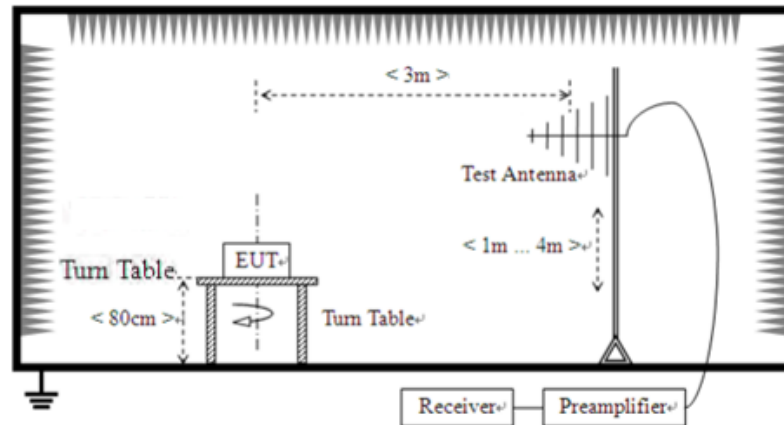
(802.11ac40) Band Edge, Right Side



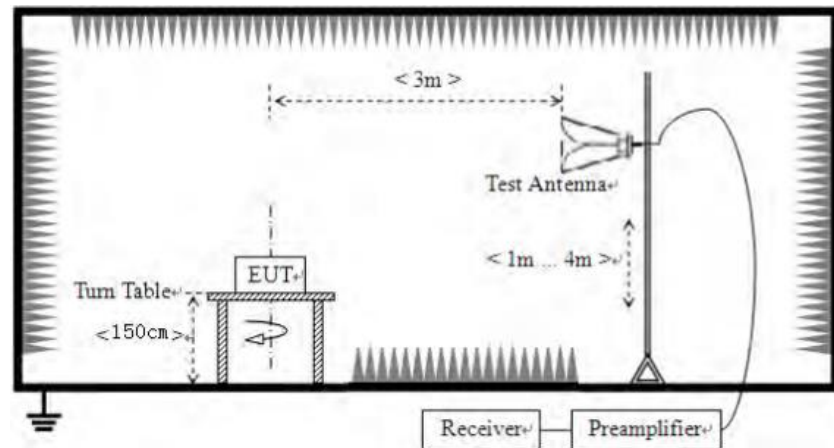
4.7 Spurious Emission

4.7.1 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	9kHz to 40GHz					
Test site:	Measurement Distance: 3m					
Receiver setup:	Frequency	Detector	RBW	VBW	Value	
	9kHz-150KHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value	
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value	
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
		AV	1MHz	3MHz	Average Value	
Limit:	Frequency		Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz		2400/F(KHz)	QP	300m	
	0.490MHz-1.705MHz		24000/F(KHz)	QP	300m	
	1.705MHz-30MHz		30	QP	30m	
	30MHz-88MHz		100	QP	3m	
	88MHz-216MHz		150	QP		
	216MHz-960MHz		200	QP		
	960MHz-1GHz		500	QP		
	Frequency		Limit (dBm/MHz)	Remark		
	Above 1GHz		-27.0	Peak Value		
	Test setup:	For radiated emissions from 9kHz to 30MHz				
						
	Test setup:	For radiated emissions from 30MHz to1GHz				



For radiated emissions above 1GHz



Test Procedure:

1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average

	method as specified and then reported in a data sheet.					
	7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.					
Test Instruments:	Refer to section 3.0 for details					
Test mode:	Refer to section 2.2 for details					
Test environment:	Temp.:	25.6°C	Humid.:	55%	Press.:	1012mbar
Test voltage:	DC 12V from adapter with AC 120V/60Hz					
Test results:	Pass					

Remarks:

1. All antennas was tested, only show the worst case 802.11n20 mode test data.
2. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

Measurement Data:

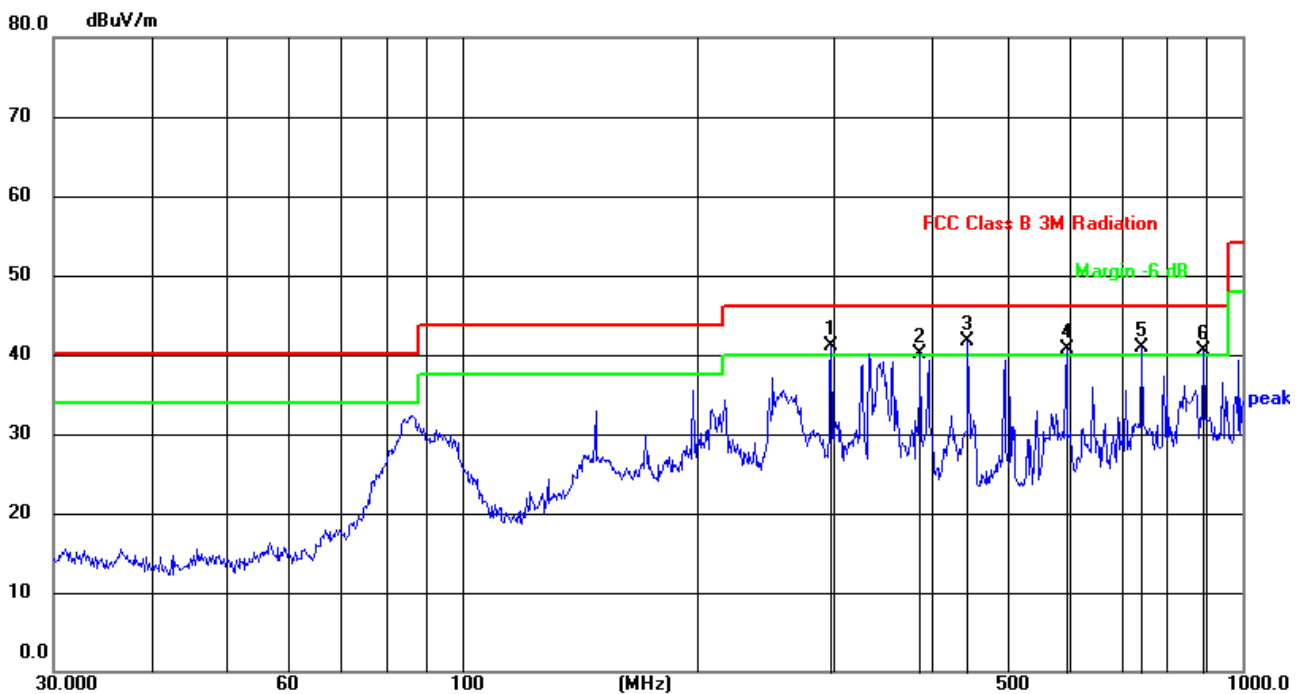
9 kHz ~ 30 MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Below 1GHz

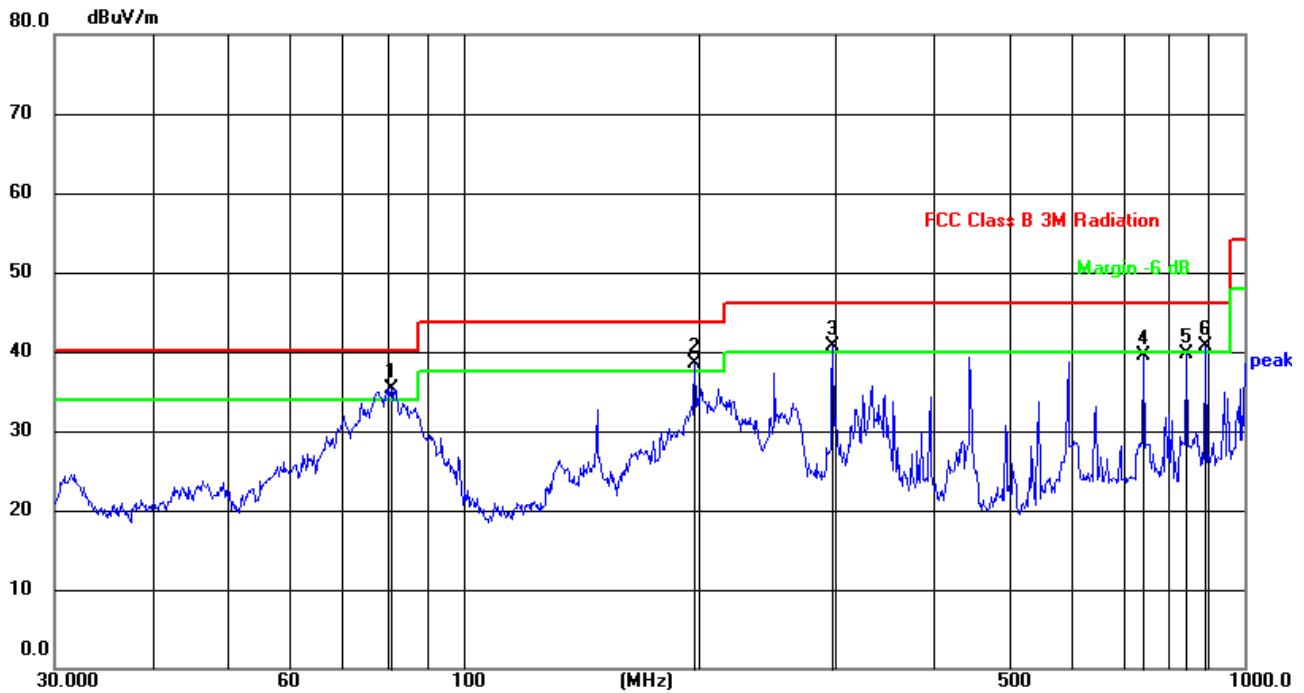
Temperature:	22.5℃	Relative Humidity:	49%
Pressure:	1010 hPa	Test Voltage :	DC 12V from adapter with AC 120V/60Hz
Test Mode :	5.2G TX- 802.11n20		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	297.2238	59.52	-18.50	41.02	46.00	-4.98	QP
2	386.6338	56.75	-16.74	40.01	46.00	-5.99	QP
3	444.8514	56.53	-14.91	41.62	46.00	-4.38	QP
4	595.1326	51.10	-10.41	40.69	46.00	-5.31	QP
5	742.2586	49.15	-8.32	40.83	46.00	-5.17	QP
6	890.7277	47.21	-6.68	40.53	46.00	-5.47	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	80.9274	55.54	-20.27	35.27	40.00	-4.73	QP
2	197.8925	57.35	-18.82	38.53	43.50	-4.97	QP
3	297.2238	58.77	-17.99	40.78	46.00	-5.22	QP
4	742.2586	47.76	-8.29	39.47	46.00	-6.53	QP
5	842.1295	46.53	-6.81	39.72	46.00	-6.28	QP
6	890.7277	46.72	-6.05	40.67	46.00	-5.33	QP

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. The test data shows only the worst case 802.11n20 mode

**Above 1GHz:**

Temperature:	25.6℃	Relative Humidity:	55%
Pressure:	1010 hPa	Test Voltage :	DC 12V from adapter with AC 120V/60Hz
Test Mode :	5.2G TX- 802.11n20		

802.11n20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
Low Channel:5180MHz									
V	10360.00	54.49	46.20	8.27	38.50	55.06	68.20	-13.14	PK
V	10360.00	43.80	46.20	8.27	38.50	44.37	54.00	-9.63	AV
V	15540.00	51.40	46.30	10.35	38.70	54.15	74.00	-19.85	PK
V	15540.00	40.64	46.30	10.35	38.70	43.39	54.00	-10.61	AV
V	20720.00	61.15	57.40	11.93	37.80	53.48	68.20	-14.72	PK
V	20720.00	50.40	57.40	11.93	37.80	42.73	54.00	-11.27	AV
V	25900.00	58.62	56.50	13.45	39.70	55.27	68.20	-12.93	PK
V	25900.00	47.44	56.50	13.45	39.70	44.09	54.00	-9.91	AV
H	10360.00	54.41	46.20	8.27	38.50	54.98	68.20	-13.22	PK
H	10360.00	42.33	46.20	8.27	38.50	42.90	54.00	-11.10	AV
H	15540.00	50.34	46.30	10.35	38.70	53.09	74.00	-20.91	PK
H	15540.00	38.03	46.30	10.35	38.70	40.78	54.00	-13.22	AV
H	20720.00	63.53	57.40	11.93	37.80	55.86	68.20	-12.34	PK
H	20720.00	51.36	57.40	11.93	37.80	43.69	54.00	-10.31	AV
H	25900.00	59.71	56.50	13.45	39.70	56.36	68.20	-11.84	PK
H	25900.00	47.48	56.50	13.45	39.70	44.13	54.00	-9.87	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
Middle Channel:5200MHz									
V	10400.00	52.17	46.20	8.27	38.50	52.74	68.20	-15.46	PK
V	10400.00	42.24	46.20	8.27	38.50	42.81	54.00	-11.19	AV
V	15600.00	50.44	46.30	10.35	38.40	52.89	74.00	-21.11	PK
V	15600.00	40.97	46.30	10.35	38.40	43.42	54.00	-10.58	AV
V	20800.00	61.14	57.40	11.93	37.80	53.47	68.20	-14.73	PK
V	20800.00	50.73	57.40	11.93	37.80	43.06	54.00	-10.94	AV
V	26000.00	55.92	56.50	13.45	39.80	52.67	68.20	-15.53	PK
V	26000.00	47.48	56.50	13.45	39.80	44.23	54.00	-9.77	AV
H	10400.00	52.83	46.20	8.27	38.50	53.40	68.20	-14.80	PK
H	10400.00	42.52	46.20	8.27	38.50	43.09	54.00	-10.91	AV
H	15600.00	50.42	46.30	10.35	38.40	52.87	74.00	-21.13	PK
H	15600.00	40.97	46.30	10.35	38.40	43.42	54.00	-10.58	AV
H	20800.00	60.01	57.40	11.93	37.80	52.34	68.20	-15.86	PK
H	20800.00	48.48	57.40	11.93	37.80	40.81	54.00	-13.19	AV
H	26000.00	55.61	56.50	13.45	39.80	52.36	68.20	-15.84	PK
H	26000.00	46.62	56.50	13.45	39.80	43.37	54.00	-10.63	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
High Channel:5240MHz									
V	10480.00	53.48	46.20	8.27	38.60	54.15	68.20	-14.05	PK
V	10480.00	42.75	46.20	8.27	38.60	43.42	54.00	-10.58	AV
V	15720.00	50.87	46.30	10.35	38.40	53.32	74.00	-20.68	PK
V	15720.00	40.31	46.30	10.35	38.40	42.76	54.00	-11.24	AV
V	20960.00	61.72	57.40	11.93	37.50	53.75	68.20	-14.45	PK
V	20960.00	52.52	57.40	11.93	37.50	44.55	54.00	-9.45	AV
V	26200.00	57.41	56.50	13.45	40.10	54.46	68.20	-13.74	PK
V	26200.00	47.30	56.50	13.45	40.10	44.35	54.00	-9.65	AV
H	10480.00	53.74	46.20	8.27	38.60	54.41	68.20	-13.79	PK
H	10480.00	42.75	46.20	8.27	38.60	43.42	54.00	-10.58	AV
H	15720.00	51.23	46.30	10.35	38.40	53.68	74.00	-20.32	PK
H	15720.00	40.42	46.30	10.35	38.40	42.87	54.00	-11.13	AV
H	20960.00	61.92	57.40	11.93	37.50	53.95	68.20	-14.25	PK
H	20960.00	52.41	57.40	11.93	37.50	44.44	54.00	-9.56	AV
H	26200.00	57.09	56.50	13.45	40.10	54.14	68.20	-14.06	PK
H	26200.00	46.63	56.50	13.45	40.10	43.68	54.00	-10.32	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst mode is 802.11n20, only the worst data is recorded.



Temperature:	25.3℃	Relative Humidity:	57%
Pressure:	1010 hPa	Test Voltage :	DC 12V from adapter with AC 120V/60Hz
Test Mode :	5.8G TX- 802.11n20		

802.11n20

Polar (H/V)	Frequency	Meter Readi g	Pre- amplifier	Cable Loss	Antenn Factor	Emission Level	Limits	Margin	Detect or Typ
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:5745MHz									
V	11490.00	50.09	46.10	8.77	39.10	51.86	74.00	-22.14	PK
V	11490.00	41.45	46.10	8.77	39.10	43.22	54.00	-10.78	AV
V	17235.00	47.52	47.60	11.10	38.70	49.72	68.20	-18.48	PK
V	17235.00	39.79	47.60	11.10	38.70	41.99	54.00	-12.01	AV
V	22980.00	56.76	56.90	12.73	37.70	50.29	74.00	-23.71	PK
V	22980.00	48.29	56.90	12.73	37.70	41.82	54.00	-12.18	AV
V	28725.00	53.38	55.60	14.25	40.30	52.33	68.20	-15.87	PK
V	28725.00	44.38	55.60	14.25	40.30	43.33	54.00	-10.67	AV
H	11490.00	50.59	46.10	8.77	39.10	52.36	74.00	-21.64	PK
H	11490.00	41.26	46.10	8.77	39.10	43.03	54.00	-10.97	AV
H	17235.00	48.60	47.60	11.10	38.70	50.80	68.20	-17.40	PK
H	17235.00	40.24	47.60	11.10	38.70	42.44	54.00	-11.56	AV
H	22980.00	59.10	56.90	12.73	37.70	52.63	74.00	-21.37	PK
H	22980.00	48.05	56.90	12.73	37.70	41.58	54.00	-12.42	AV
H	28725.00	55.47	55.60	14.25	40.30	54.42	68.20	-13.78	PK
H	28725.00	45.05	55.60	14.25	40.30	44.00	54.00	-10.00	AV

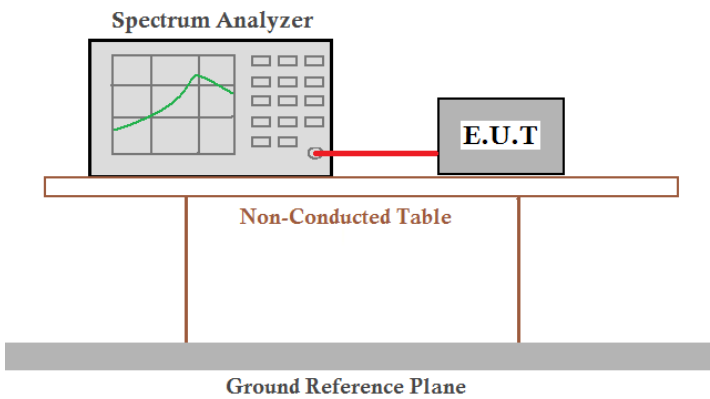
Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5785MHz									
V	11570.00	49.89	46.10	8.77	39.10	51.66	74.00	-22.34	PK
V	11570.00	41.25	46.10	8.77	39.10	43.02	54.00	-10.98	AV
V	17355.00	47.32	47.60	11.10	38.70	49.52	68.20	-18.68	PK
V	17355.00	39.59	47.60	11.10	38.70	41.79	54.00	-12.21	AV
V	23140.00	56.56	56.90	12.73	37.70	50.09	74.00	-23.91	PK
V	23140.00	48.09	56.90	12.73	37.70	41.62	54.00	-12.38	AV
V	28925.00	53.18	55.60	14.25	40.30	52.13	68.20	-16.07	PK
V	28925.00	44.18	55.60	14.25	40.30	43.13	54.00	-10.87	AV
H	11570.00	50.39	46.10	8.77	39.10	52.16	74.00	-21.84	PK
H	11570.00	41.06	46.10	8.77	39.10	42.83	54.00	-11.17	AV
H	17355.00	48.40	47.60	11.10	38.70	50.60	68.20	-17.60	PK
H	17355.00	40.04	47.60	11.10	38.70	42.24	54.00	-11.76	AV
H	23140.00	58.90	56.90	12.73	37.70	52.43	74.00	-21.57	PK
H	23140.00	47.85	56.90	12.73	37.70	41.38	54.00	-12.62	AV
H	28925.00	55.27	55.60	14.25	40.30	54.22	68.20	-13.98	PK
H	28925.00	44.85	55.60	14.25	40.30	43.80	54.00	-10.20	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
High Channel:5825MHz									
V	11650.00	51.04	46.10	8.77	39.10	52.81	74.00	-21.19	PK
V	11650.00	41.44	46.10	8.77	39.10	43.21	54.00	-10.79	AV
V	17475.00	48.79	47.90	11.23	38.90	51.02	68.20	-17.18	PK
V	17475.00	40.68	47.90	11.23	38.90	42.91	54.00	-11.09	AV
V	23300.00	59.02	57.10	12.73	37.80	52.45	68.20	-15.75	PK
V	23300.00	49.08	57.10	12.73	37.80	42.51	54.00	-11.49	AV
V	29125.00	55.56	55.80	14.25	40.50	54.51	68.20	-13.69	PK
V	29125.00	46.17	55.80	14.25	40.50	45.12	54.00	-8.88	AV
H	11650.00	53.16	46.10	8.77	39.10	54.93	74.00	-19.07	PK
H	11650.00	43.97	46.10	8.77	39.10	45.74	54.00	-8.26	AV
H	17475.00	50.07	47.90	11.23	38.90	52.30	68.20	-15.90	PK
H	17475.00	42.03	47.90	11.23	38.90	44.26	54.00	-9.74	AV
H	23300.00	60.51	57.10	12.73	37.80	53.94	68.20	-14.26	PK
H	23300.00	50.61	57.10	12.73	37.80	44.04	54.00	-9.96	AV
H	29125.00	56.68	55.80	14.25	40.50	55.63	68.20	-12.57	PK
H	29125.00	46.95	55.80	14.25	40.50	45.90	54.00	-8.10	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. The worst mode is 802.11n20, only the worst data is recorded.

4.7.2 Conducted Emission Method

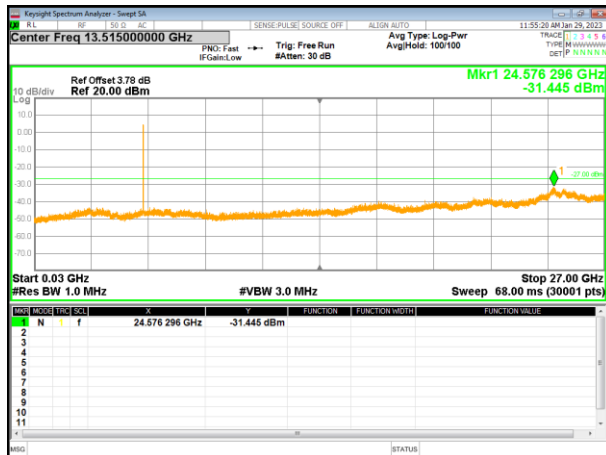
Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)
Test Method:	ANSI C63.10:2013
Limit:	-27dBm/MHz
Test setup:	 The diagram illustrates the test setup for conducted emissions. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass



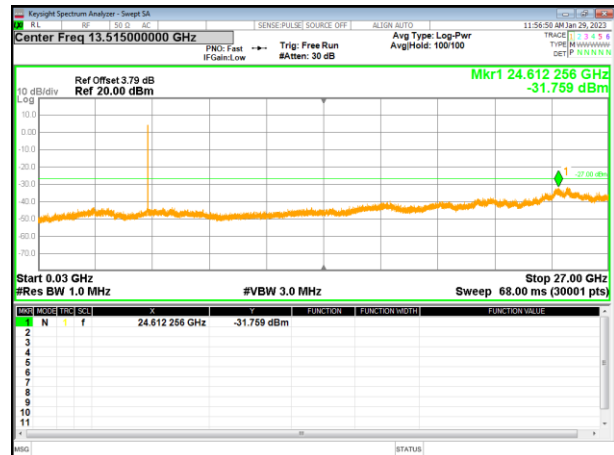
5180-5240MHz

Test Plot

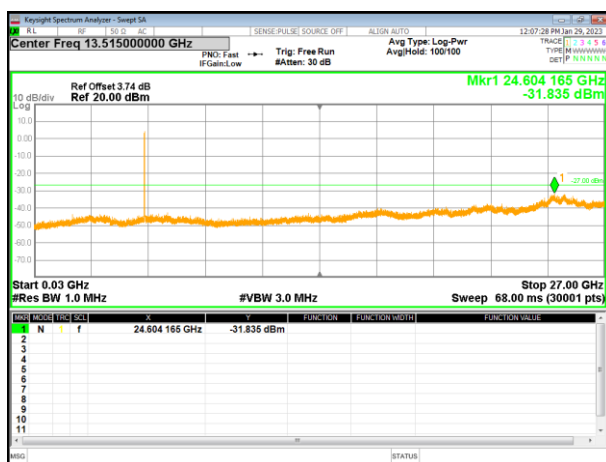
802.11a on channel 36



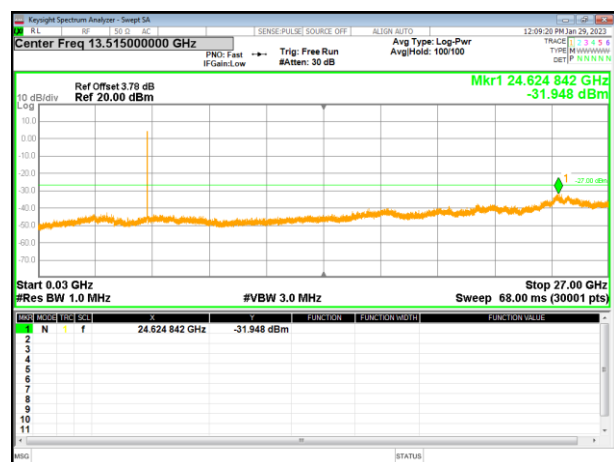
802.11a on channel 40



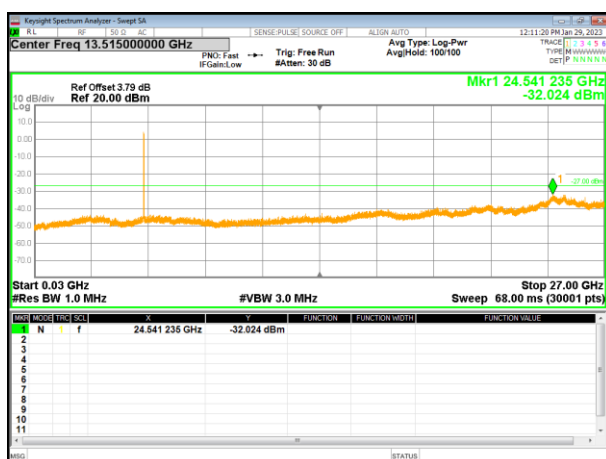
802.11a on channel 48



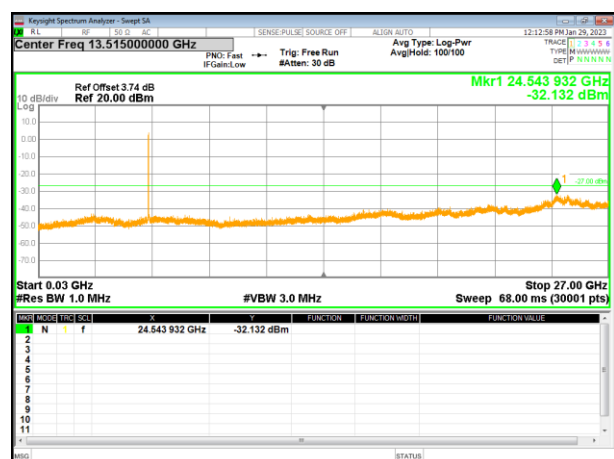
802.11n20 on channel 36



802.11n20 on channel 40

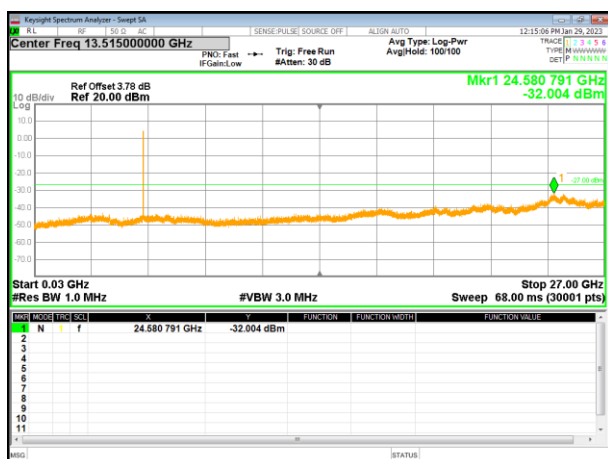


802.11n20 on channel 48

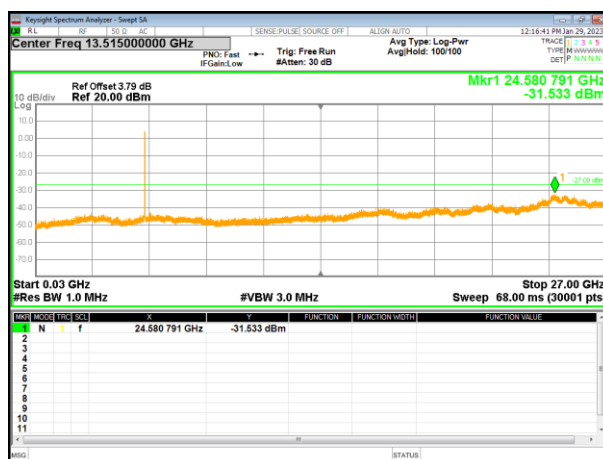


Test Plot

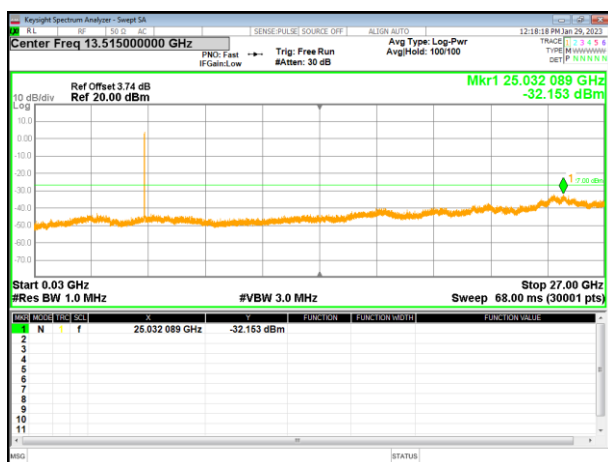
802.11ac20 on channel 36



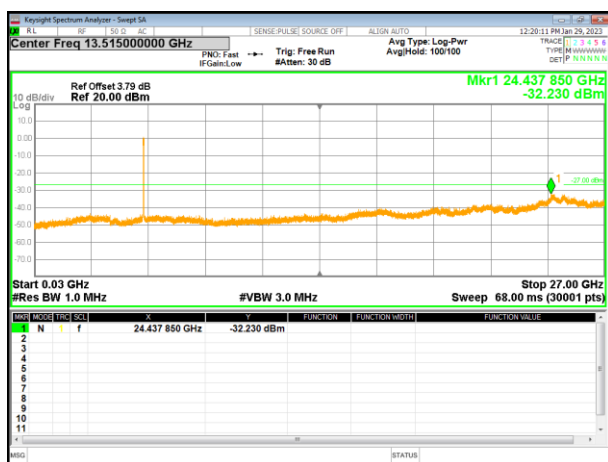
802.11ac20 on channel 40



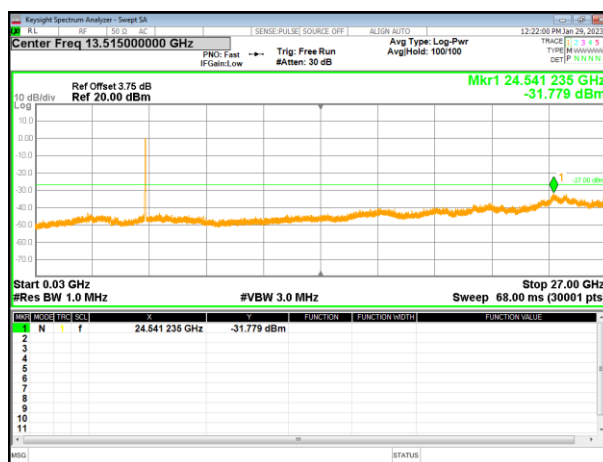
802.11ac20 on channel 48



802.11n40 on channel 38

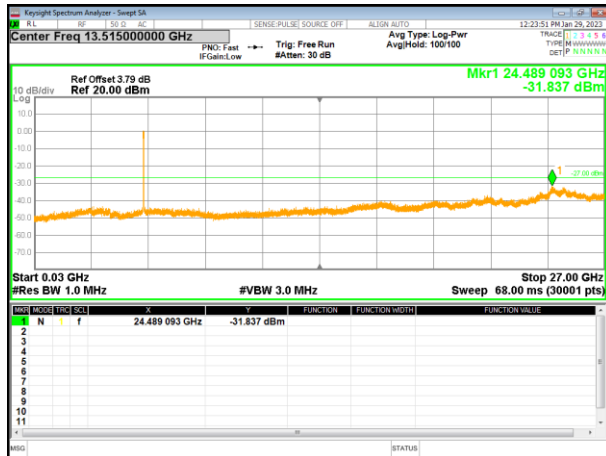


802.11n40 on channel 46

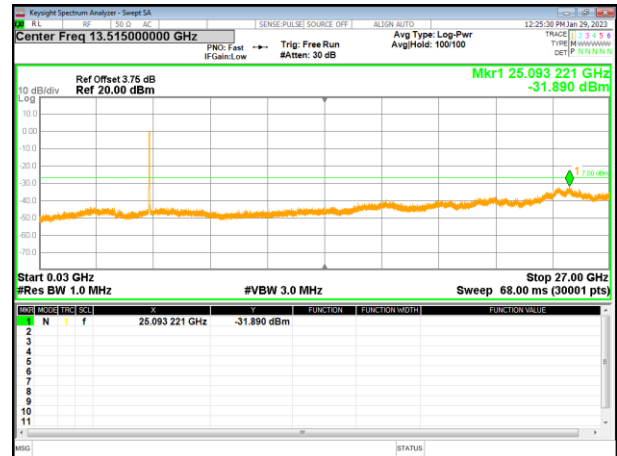


Test Plot

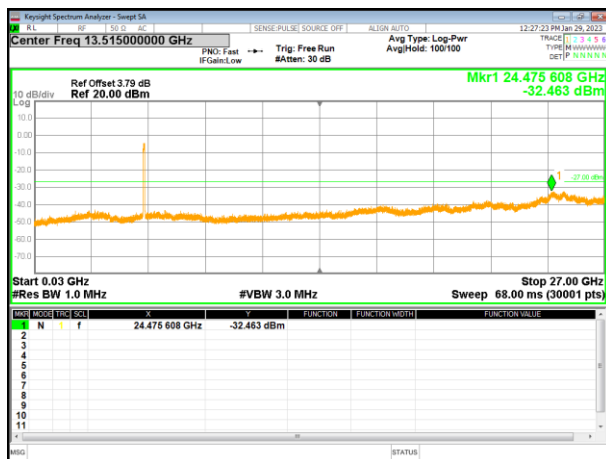
802.11ac40 on channel 38



802.11ac40 on channel 46



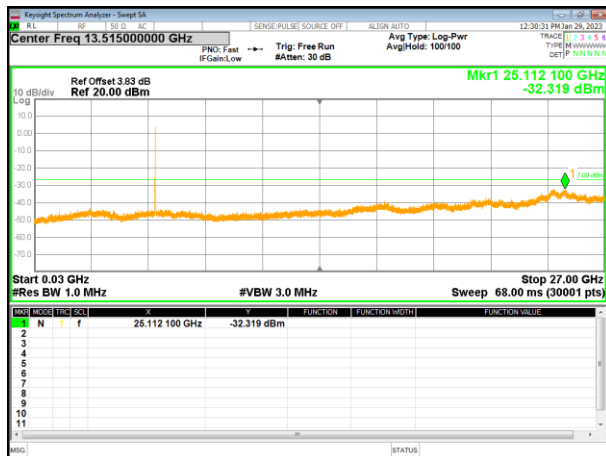
802.11ac80 on channel 42



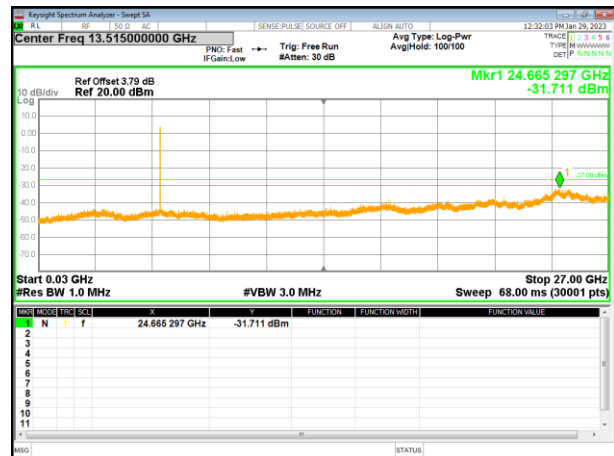
5745-5825MHz

Test Plot

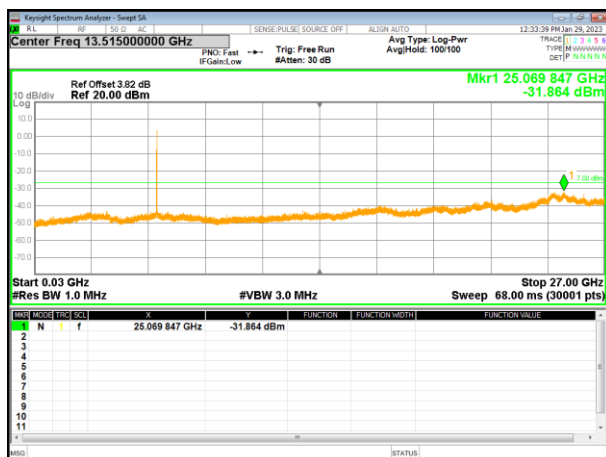
802.11a on channel 149



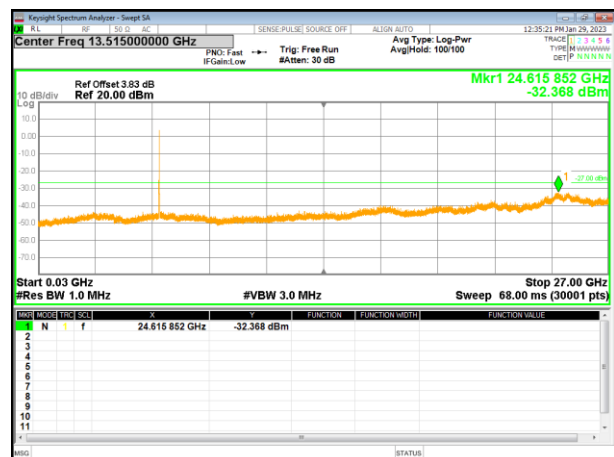
802.11a on channel 157



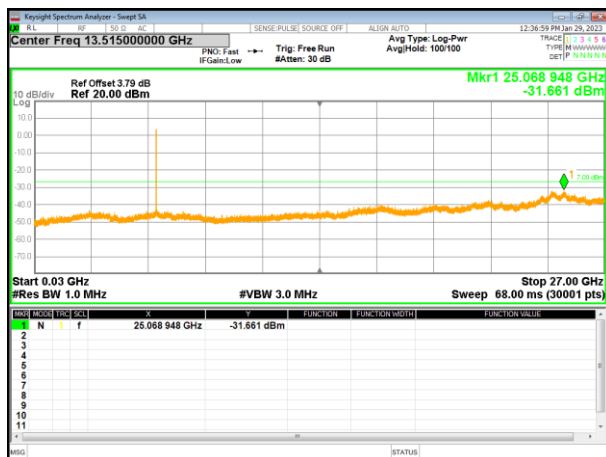
802.11a on channel 165



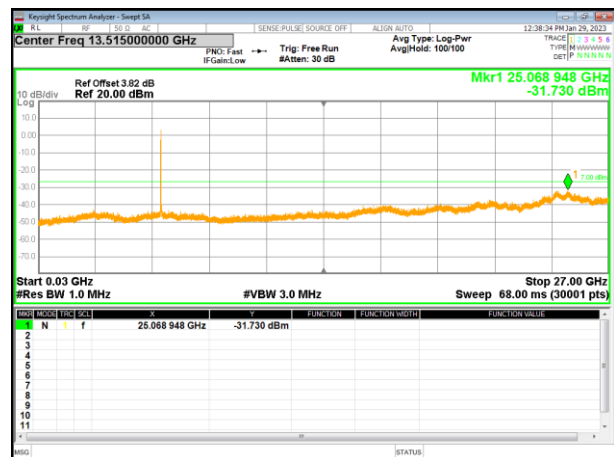
802.11n20 on channel 149



802.11n20 on channel 157

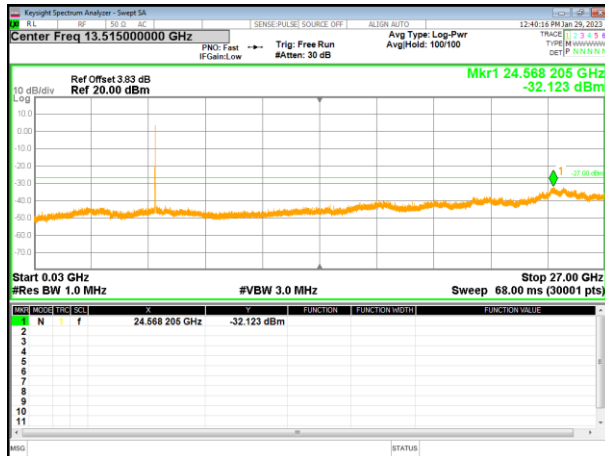


802.11n20 on channel 165

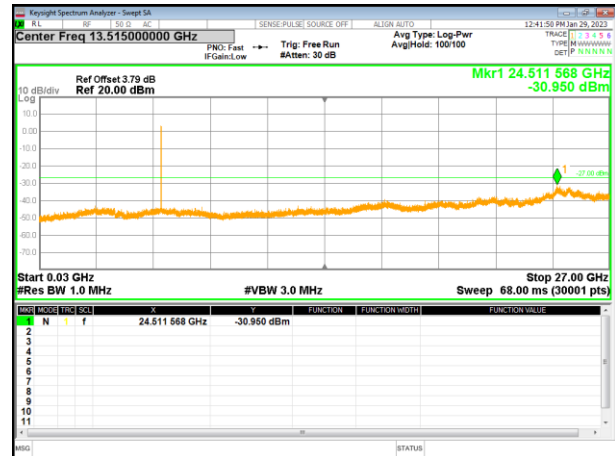


Test Plot

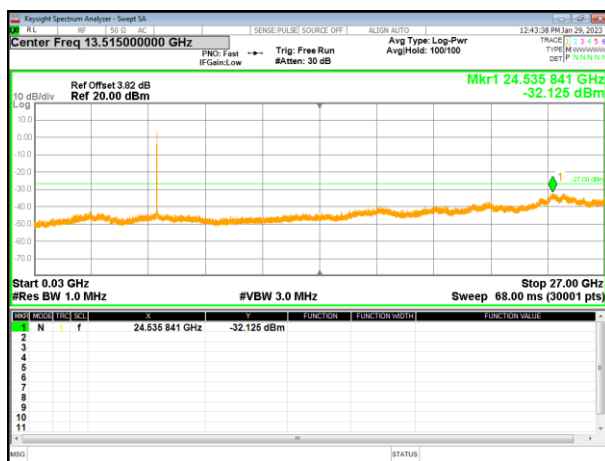
802.11ac20 on channel 149



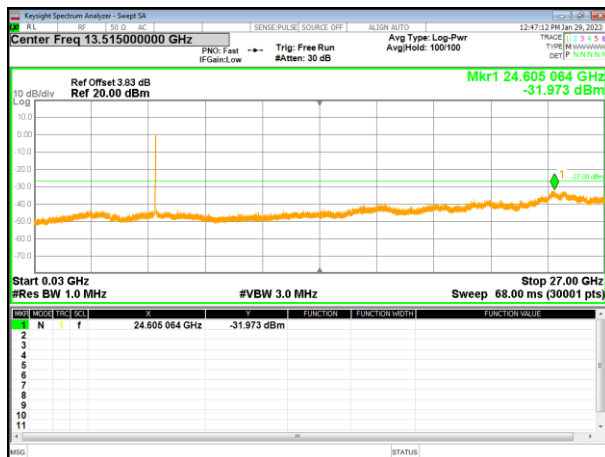
802.11ac20 on channel 157



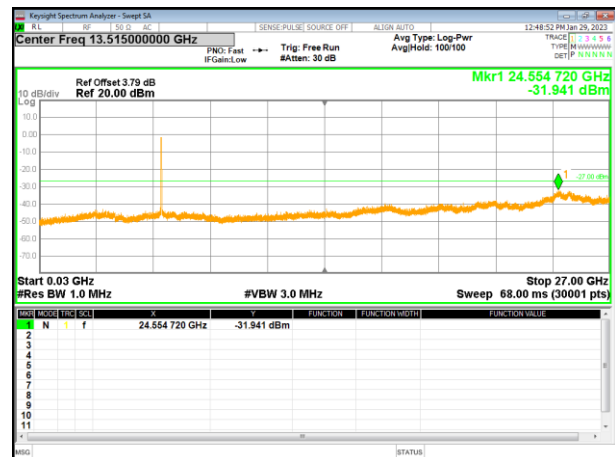
802.11ac20 on channel 165



802.11n40 on channel 151

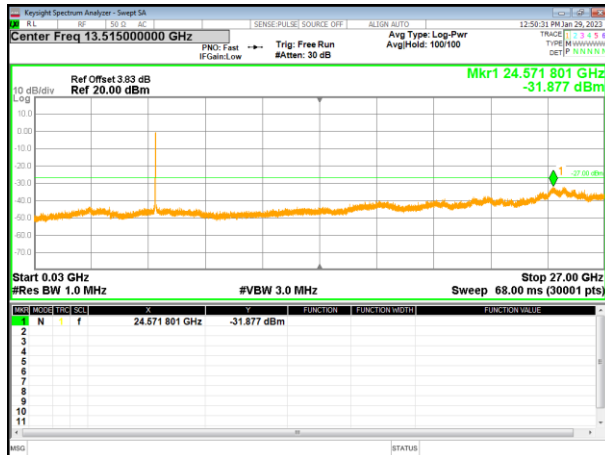


802.11n40 on channel 159

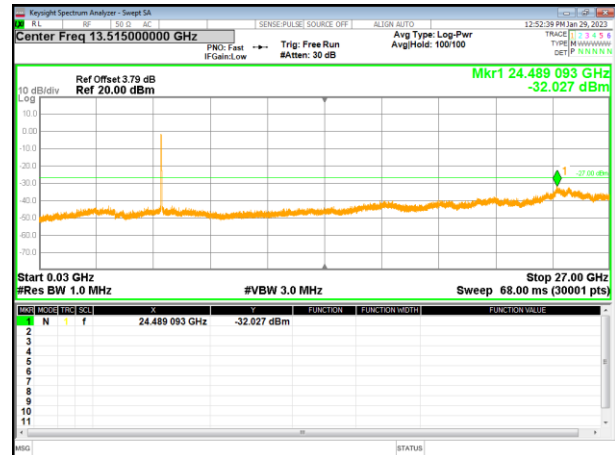


Test Plot

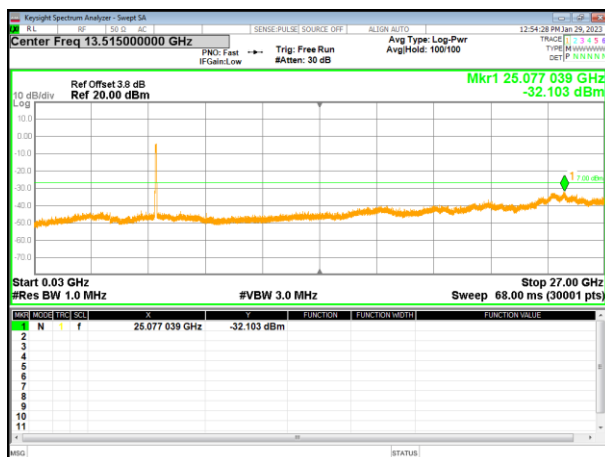
802.11ac40 on channel 151



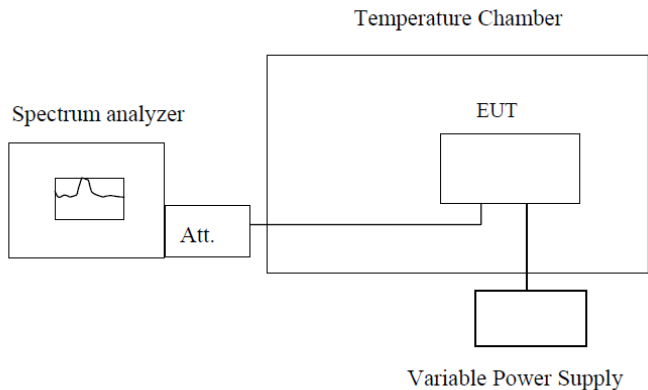
802.11ac40 on channel 159



802.11ac80 on channel 155



4.8 Frequency stability

Test Requirement:	FCC Part15 C Section 15.407(g)
Test Method:	ANSI C63.10:2013, FCC Part 2.1055
Limit:	Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified
Test Procedure:	a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minute s. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test setup:	 Note : Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remark: Set the EUT transmits at un-modulation mode to test frequency stability.

Measurement data:

Frequency stability versus Temp.					
Power Supply: DC 12V					
Temp. (°C)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
-30	5180	5179.977	5180.055	5179.963	5179.910
	5190	5189.973	5199.929	5199.838	5189.921
	5200	5199.968	5199.954	5199.863	5199.911
	5210	5209.974	5209.932	5209.841	5209.912
	5220	5219.969	5219.947	5219.856	5219.919
	5230	5229.967	5229.940	5229.848	5229.936
	5240	5239.940	5239.948	5239.856	5239.921
-20	5180	5179.968	5179.931	5179.848	5179.931
	5190	5189.959	5189.921	5189.847	5189.927
	5200	5199.967	5199.929	5199.841	5199.921
	5210	5209.959	5209.921	5209.831	5209.927
	5220	5219.980	5219.942	5219.841	5219.922
	5230	5229.958	5229.920	5229.837	5229.919
	5240	5239.976	5239.938	5239.842	5239.892
-10	5180	5179.977	5179.940	5179.827	5179.910
	5190	5189.973	5189.935	5189.838	5189.921
	5200	5199.968	5199.930	5199.829	5199.911
	5210	5209.974	5209.936	5209.830	5209.912
	5220	5219.969	5219.931	5219.837	5219.919
	5230	5229.967	5229.929	5229.854	5229.936
	5240	5239.940	5239.902	5239.826	5239.908
0	5180	5179.754	5179.919	5179.839	5179.921
	5190	5199.926	5189.929	5189.830	5189.922
	5200	5199.924	5199.920	5199.838	5199.912
	5210	5209.979	5209.921	5209.830	5209.917
	5220	5219.968	5219.928	5219.851	5219.912
	5230	5229.955	5229.946	5229.828	5229.932
	5240	5239.972	5239.918	5239.846	5239.910
10	5180	5179.956	5179.931	5179.848	5179.922
	5190	5189.967	5189.921	5189.844	5189.913
	5200	5199.958	5199.929	5199.839	5199.920
	5210	5209.959	5209.921	5209.845	5209.912
	5220	5219.966	5219.942	5219.840	5219.933
	5230	5229.984	5229.920	5229.837	5229.910
	5240	5239.969	5239.938	5239.810	5239.928

20	5180	5179.977	5179.930	5179.839	5179.883
	5190	5189.973	5189.930	5189.830	5189.913
	5200	5199.968	5199.921	5199.838	5199.937
	5210	5209.974	5299.929	5209.830	5209.921
	5220	5219.969	5219.921	5219.851	5219.912
	5230	5229.967	5229.942	5229.828	5229.939
	5240	5239.940	5239.920	5239.846	5239.927
30	5180	5179.956	5179.931	5179.839	5179.931
	5190	5189.967	5189.921	5189.830	5179.931
	5200	5199.958	5199.929	5199.838	5189.927
	5210	5209.959	5209.921	5209.830	5199.921
	5220	5219.966	5219.942	5219.851	5209.927
	5230	5229.984	5229.920	5229.828	5219.922
	5240	5239.956	5239.938	5239.846	5229.919
40	5180	5179.968	5179.930	5179.625	5179.910
	5190	5189.959	5189.930	5199.797	5189.921
	5200	5199.967	5199.921	5199.795	5199.911
	5210	5209.959	5299.929	5209.850	5209.912
	5220	5219.980	5219.921	5219.839	5219.919
	5230	5229.958	5229.942	5229.825	5229.936
	5240	5239.976	5239.920	5239.842	5239.908
50	5180	5179.968	5179.931	5179.839	5179.883
	5190	5189.959	5189.921	5189.830	5189.913
	5200	5199.967	5199.929	5199.838	5199.937
	5210	5209.959	5209.921	5209.830	5209.921
	5220	5219.980	5219.942	5219.851	5219.912
	5230	5229.958	5229.920	5229.828	5229.939
	5240	5239.976	5239.938	5239.846	5239.927

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
10.20	5180	5179.977	5180.055	5179.839	5180.046
	5190	5189.973	5199.929	5189.830	5199.920
	5200	5199.968	5199.954	5199.838	5199.945
	5210	5209.974	5209.932	5209.830	5209.923
	5220	5219.969	5219.947	5219.851	5219.938
	5230	5229.967	5229.940	5229.828	5229.930
	5240	5239.940	5239.948	5239.846	5239.938
12.00	5180	5179.968	5179.949	5179.838	5179.931
	5190	5189.959	5180.055	5189.839	5189.930
	5200	5199.967	5199.929	5199.830	5199.923
	5210	5209.959	5209.954	5299.836	5209.913
	5220	5219.980	5219.932	5219.830	5219.923
	5230	5229.958	5229.947	5229.850	5299.918
	5240	5239.976	5239.940	5239.828	5239.924
13.80	5180	5179.977	5179.940	5179.827	5179.910
	5190	5189.973	5189.935	5189.838	5189.921
	5200	5199.968	5199.930	5199.829	5199.911
	5210	5209.974	5209.936	5209.830	5209.912
	5220	5219.969	5219.931	5219.837	5219.919
	5230	5229.967	5229.929	5229.854	5229.936
	5240	5239.940	5239.902	5239.826	5239.908

Frequency stability versus Temp.					
Power Supply: DC 12V					
Temp. (°C)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
-30	5745	5744.960	5744.917	5744.817	5744.892
	5755	5754.967	5754.924	5754.824	5754.880
	5775	5774.983	5774.916	5774.840	5774.891
	5785	5784.959	5784.908	5784.815	5784.897
	5795	5794.955	5794.915	5794.811	5794.915
	5825	5824.958	5824.843	5824.814	5824.906
-20	5745	5744.949	5744.928	5744.811	5744.903
	5755	5754.965	5754.930	5754.836	5754.916
	5775	5774.963	5774.933	5774.816	5774.901
	5785	5784.966	5784.925	5784.824	5784.887
	5795	5794.977	5794.916	5794.822	5794.881
	5825	5824.958	5824.924	5824.832	5824.914
-10	5745	5744.960	5744.918	5744.827	5744.523
	5755	5754.986	5754.925	5754.829	5754.905
	5775	5774.981	5774.942	5774.831	5774.906
	5785	5784.965	5784.918	5784.822	5784.908
	5795	5794.954	5794.914	5794.813	5794.891
	5825	5824.889	5824.916	5824.822	5824.886
0	5745	5744.954	5744.907	5744.827	5742.928
	5755	5754.979	5754.923	5754.829	5754.918
	5775	5774.959	5774.922	5774.831	5774.914
	5785	5784.968	5784.925	5784.822	5784.897
	5795	5794.966	5794.936	5794.813	5794.886
	5825	5824.976	5824.916	5824.822	5824.820
10	5745	5744.954	5744.917	5744.816	5744.893
	5755	5754.979	5754.934	5754.823	5754.899
	5775	5774.959	5774.935	5774.814	5774.916
	5785	5784.968	5784.917	5784.805	5784.891
	5795	5794.966	5794.934	5794.812	5794.887
	5825	5824.976	5824.931	5824.741	5824.889
20	5745	5744.970	5744.942	5744.827	5744.892
	5755	5754.984	5754.914	5754.841	5754.910
	5775	5774.968	5774.937	5774.825	5774.890
	5785	5784.955	5784.937	5784.811	5784.916
	5795	5794.949	5794.928	5794.805	5794.908
	5825	5824.983	5824.942	5824.839	5824.916
30	5745	5744.960	5744.928	5744.816	5744.917
	5755	5754.967	5754.930	5754.833	5754.888
	5775	5774.983	5774.933	5774.833	5774.911
	5785	5784.959	5784.925	5784.814	5784.910
	5795	5794.955	5794.916	5794.831	5794.901
	5825	5824.958	5824.924	5824.829	5824.915
40	5745	5744.970	5744.912	5744.827	5742.928
	5755	5754.984	5754.937	5754.829	5754.918
	5775	5774.968	5774.918	5774.831	5774.914
	5785	5784.955	5784.927	5784.822	5784.897

50	5795	5794.949	5794.925	5794.813	5794.886
	5825	5824.983	5824.934	5824.822	5824.820
	5745	5744.970	5744.942	5744.827	5744.892
	5755	5754.984	5754.914	5754.841	5754.910
	5775	5774.968	5774.937	5774.825	5774.890
	5785	5784.955	5784.937	5784.811	5784.916
	5795	5794.949	5794.928	5794.805	5794.908
	5825	5824.983	5824.942	5824.839	5824.916

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VAC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
10.2	5745	5744.949	5744.917	5744.816	5744.887
	5755	5754.965	5754.924	5754.833	5754.911
	5775	5774.963	5774.916	5774.833	5774.892
	5785	5784.966	5784.908	5784.814	5784.900
	5795	5794.977	5794.915	5794.831	5794.898
	5825	5824.958	5824.843	5824.829	5824.907
12.00	5745	5744.949	5744.928	5744.811	5744.903
	5755	5754.965	5754.930	5754.836	5754.916
	5775	5774.963	5774.933	5774.816	5774.901
	5785	5784.966	5784.925	5784.824	5784.887
	5795	5794.977	5794.916	5794.822	5794.881
	5825	5824.958	5824.924	5824.832	5824.914
13.80	5745	5744.970	5744.942	5744.827	5744.892
	5755	5754.984	5754.914	5754.841	5754.910
	5775	5774.968	5774.937	5774.825	5774.890
	5785	5784.955	5784.937	5784.811	5784.916
	5795	5794.949	5794.928	5794.805	5794.908
	5825	5824.983	5824.942	5824.839	5824.916



5 Test Setup Photo

Reference to the **appendix I** for details.

6 EUT Constructional Details

Reference to the **appendix II** for details.

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