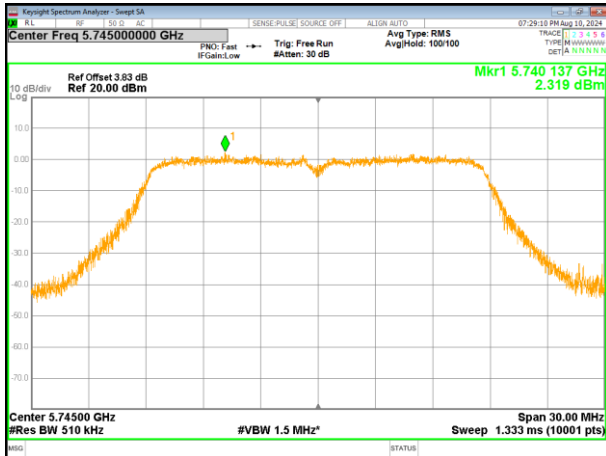
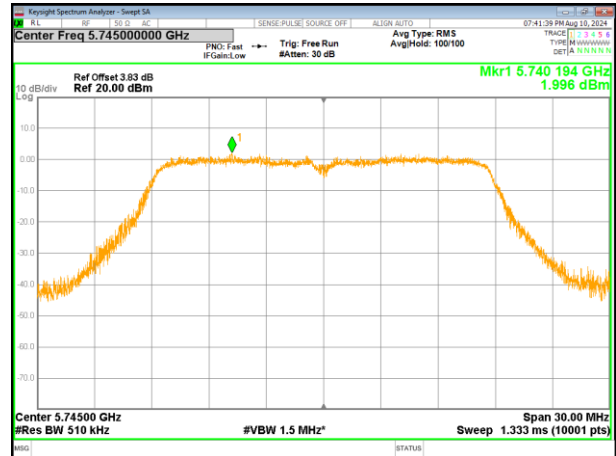


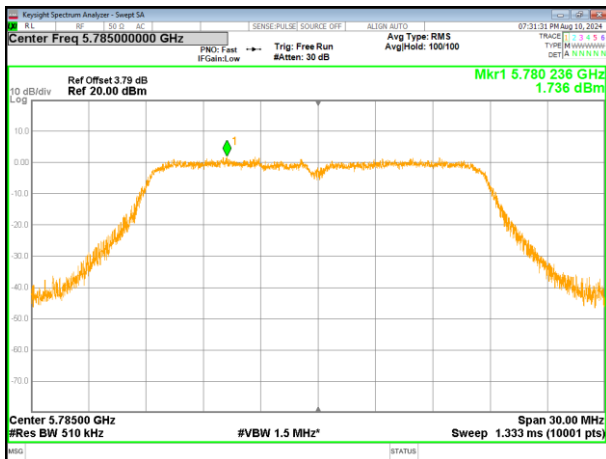
(802.11a) PSD plot on channel 149



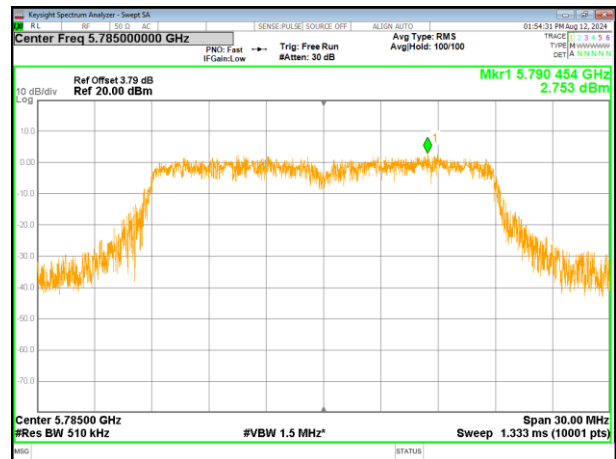
(802.11n20) PSD plot on channel 149



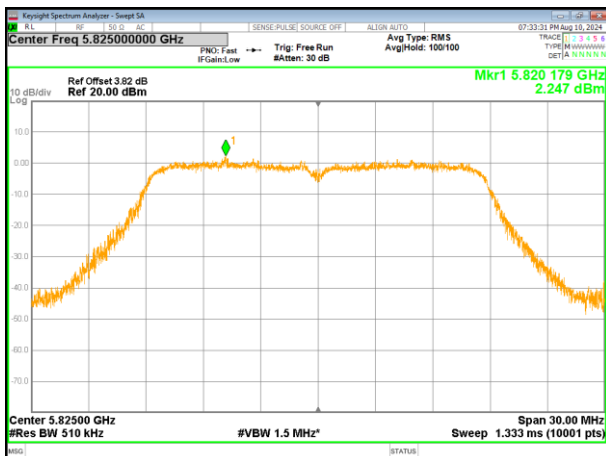
(802.11a) PSD plot on channel 157



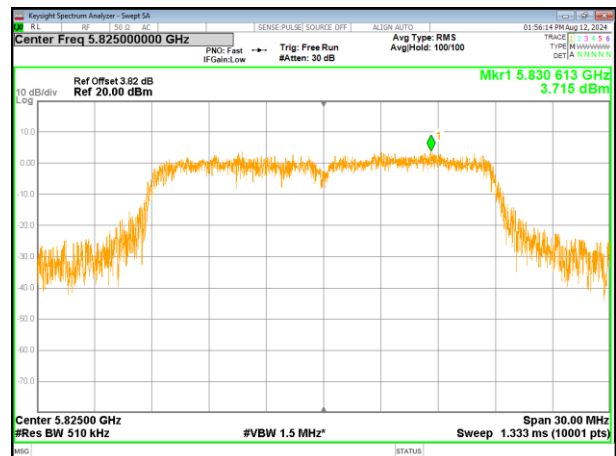
(802.11n20) PSD plot on channel 157



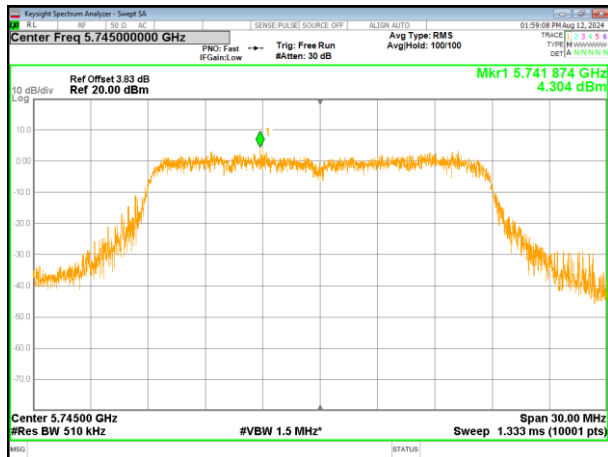
(802.11a) PSD plot on channel 165



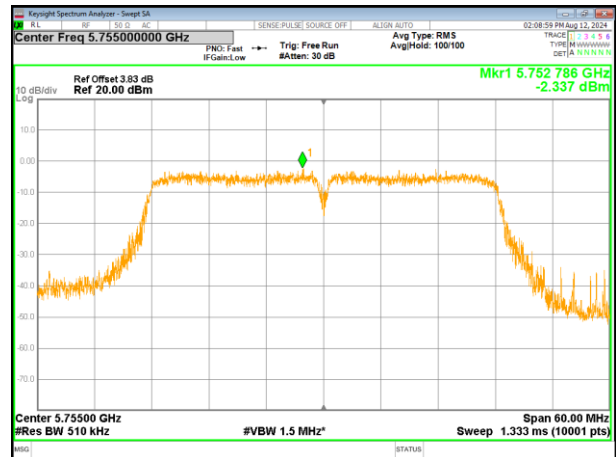
(802.11n20) PSD plot on channel 165



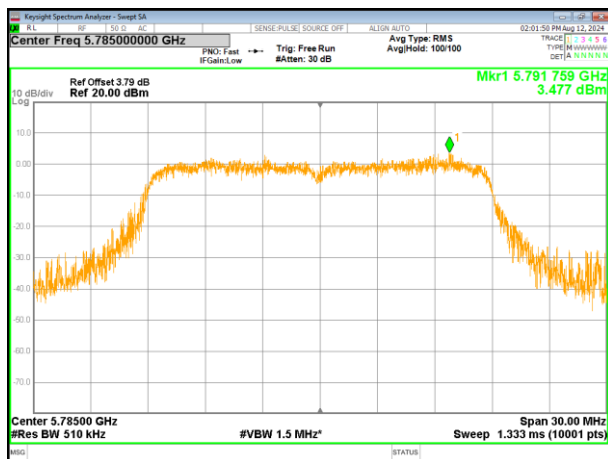
(802.11ac20) PSD plot on channel 149



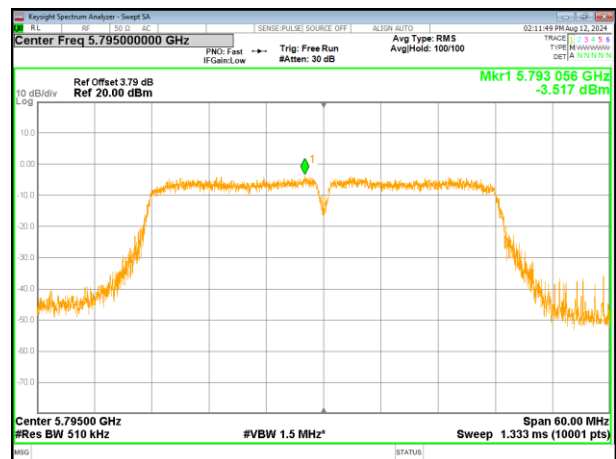
(802.11n40) PSD plot on channel 151



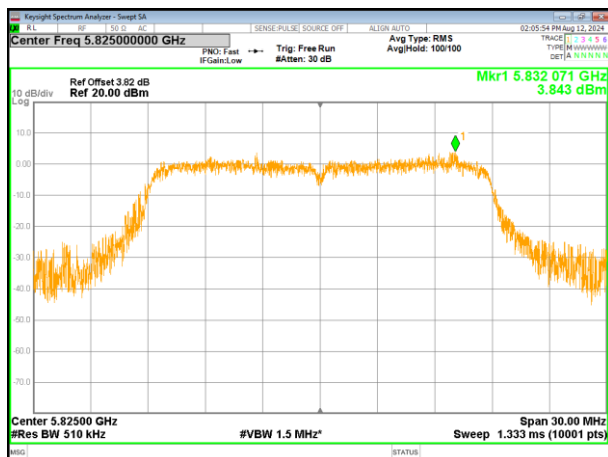
(802.11ac20) PSD plot on channel 157



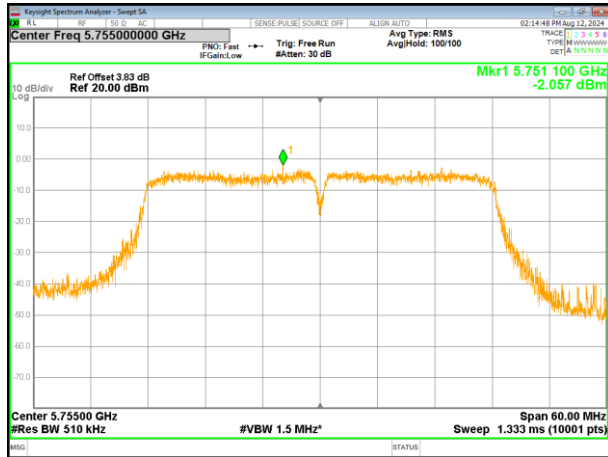
(802.11n40) PSD plot on channel 159



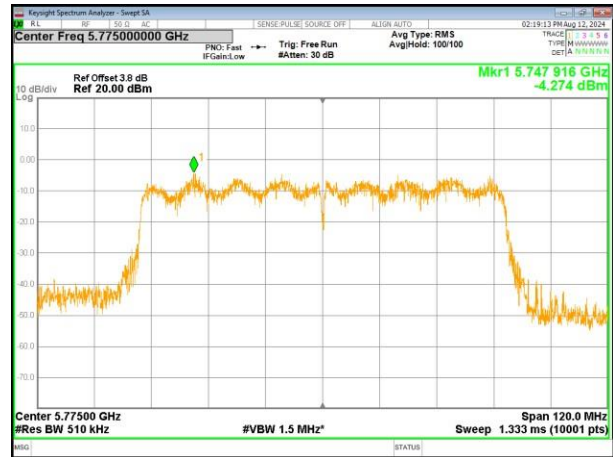
(802.11ac20) PSD plot on channel 165



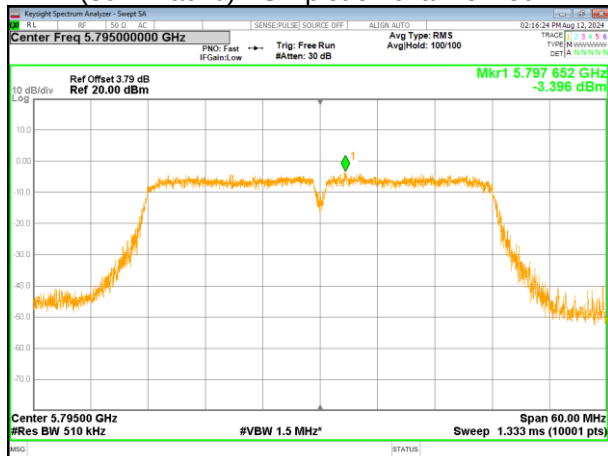
(802.11ac40) PSD plot on channel 151



(802.11ac80) PSD plot on channel 155

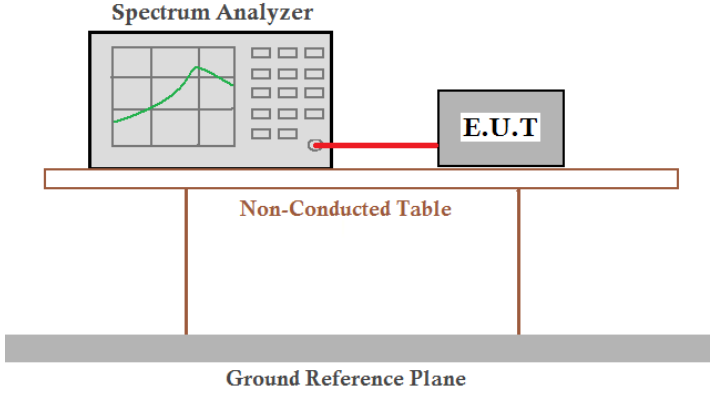


(802.11ac40) PSD plot on channel 159



4.7 Band edge

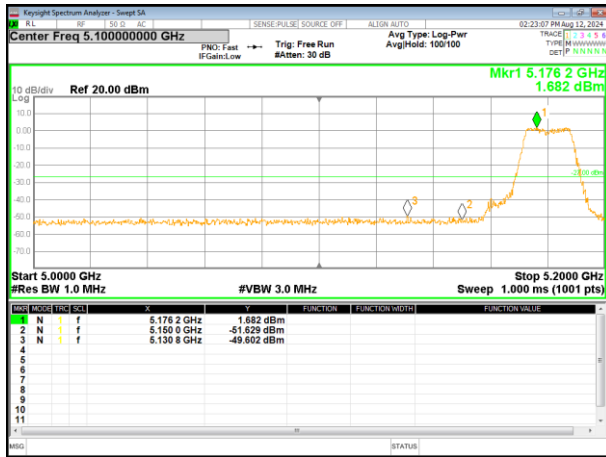
4.7.1 Conducted test Method

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. The table is supported by two vertical legs and sits on a Ground Reference Plane, which is represented by a thick grey bar at the bottom.	
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 environment:	Temp.: 23.4°C	Humid.: 51%RH
Test voltage:	AC 120V	
Test results:	Pass	

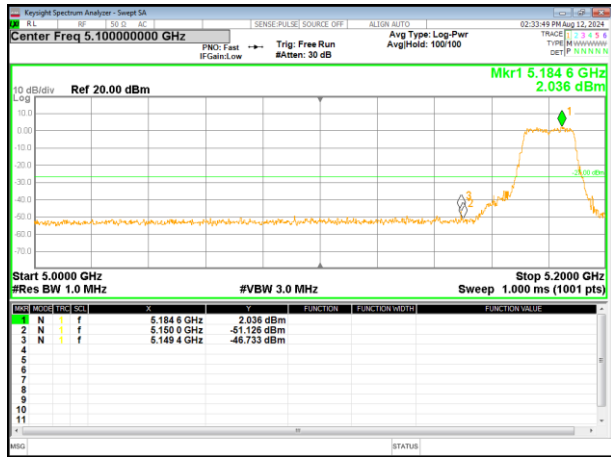
Remark: Due to the margin value of the sideband test being greater than the antenna gain value, the test meets the requirements

5.180~5.240 GHz

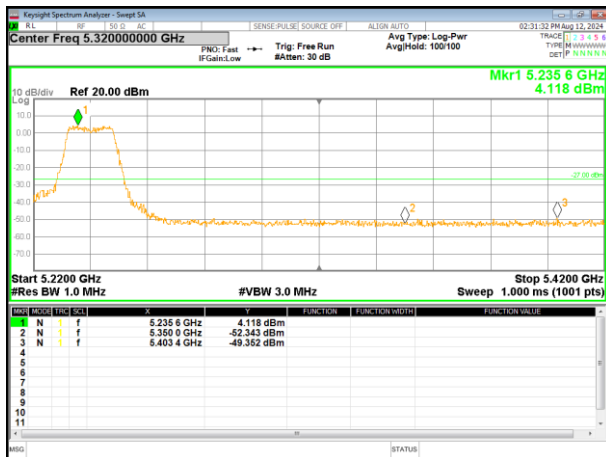
(802.11a) Band Edge, Left Side



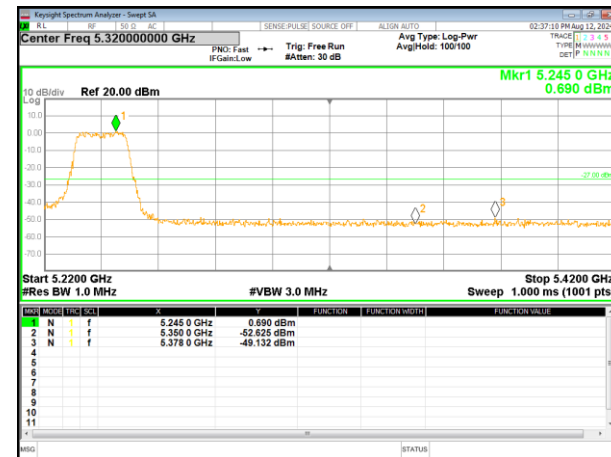
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

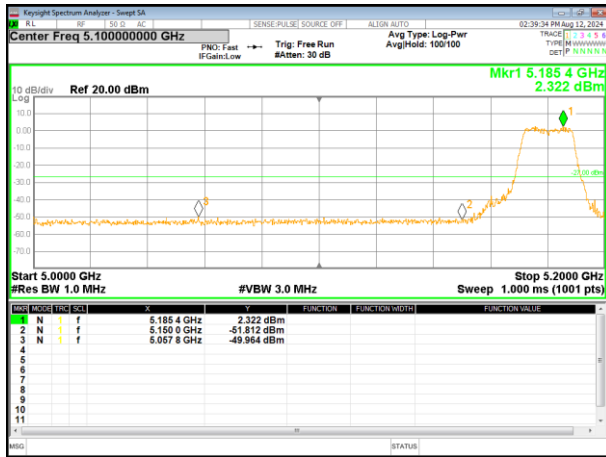


(802.11n20) Band Edge, Right Side

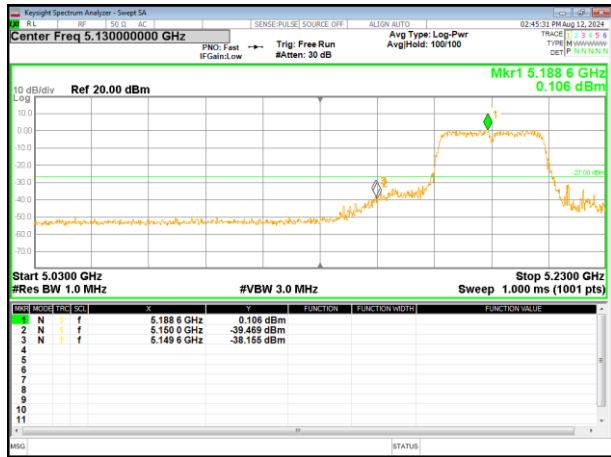


5.180~5.240 GHz

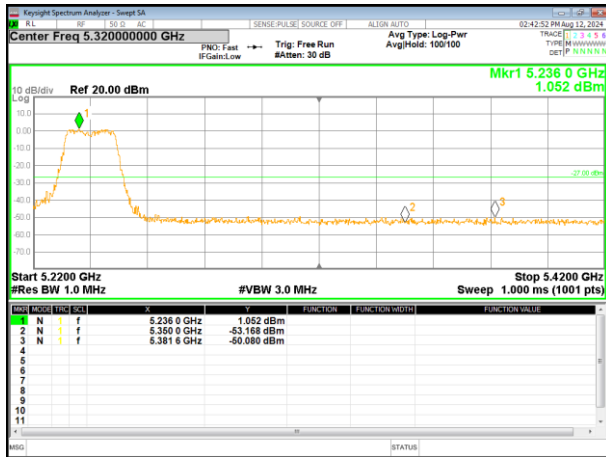
(802.11ac20) Band Edge, Left Side



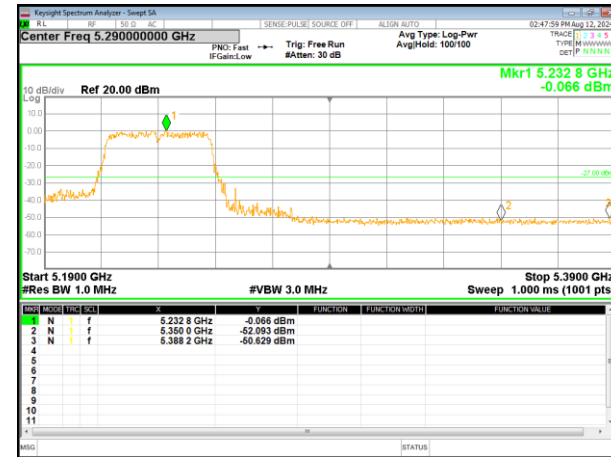
(802.11n40) Band Edge, Left Side



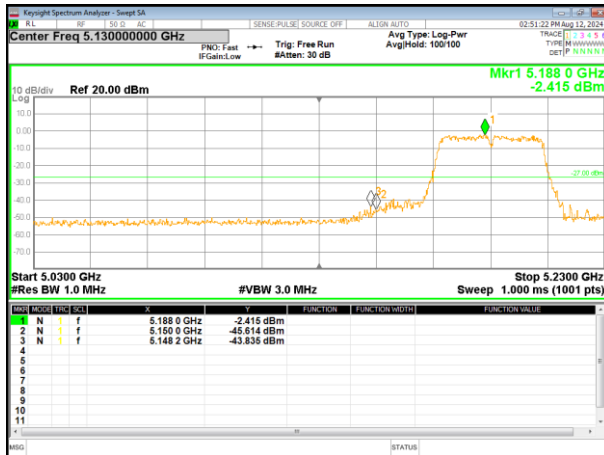
(802.11ac20) Band Edge, Right Side



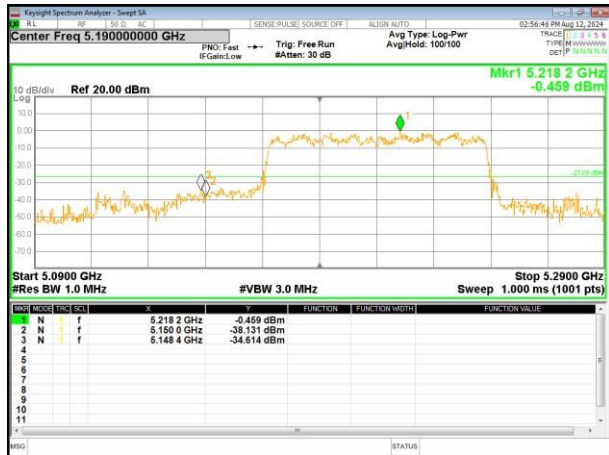
(802.11n40) Band Edge, Right Side



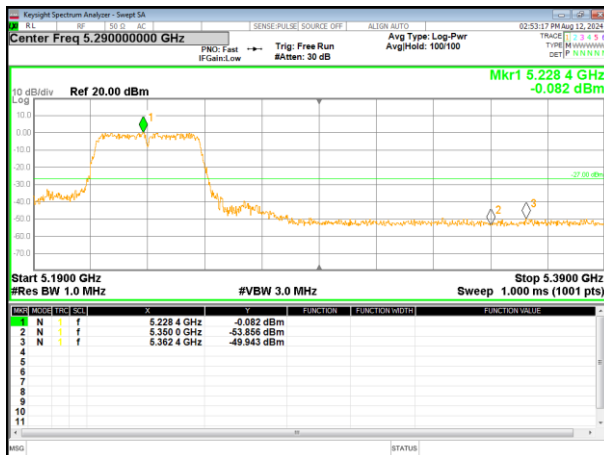
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge

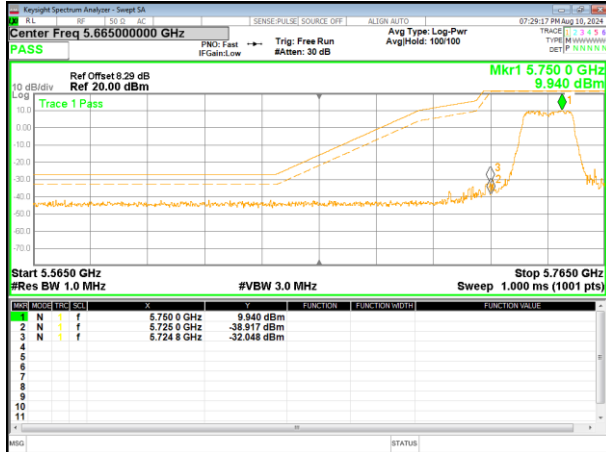


(802.11ac40) Band Edge, Right Side

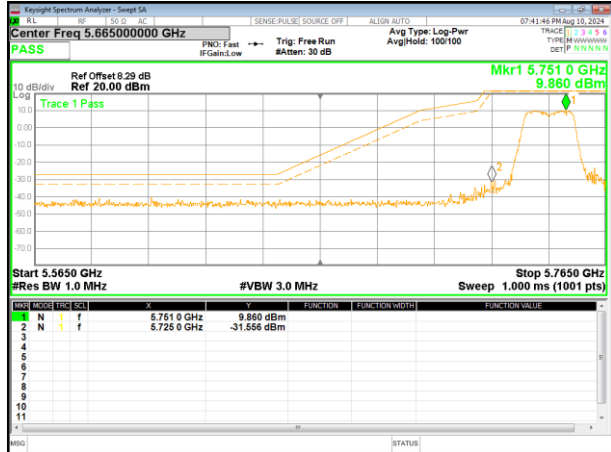


5.745~5.825 GHz

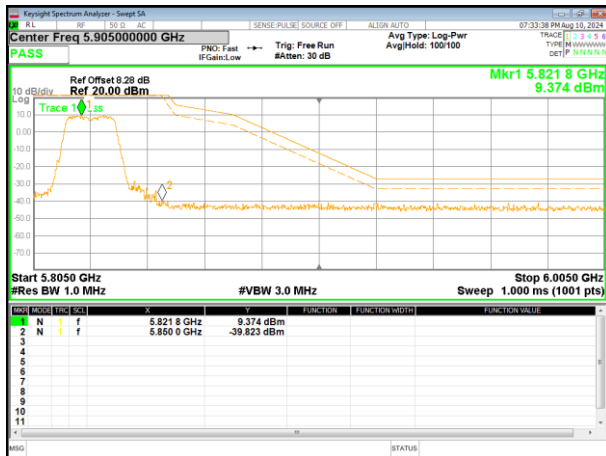
(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

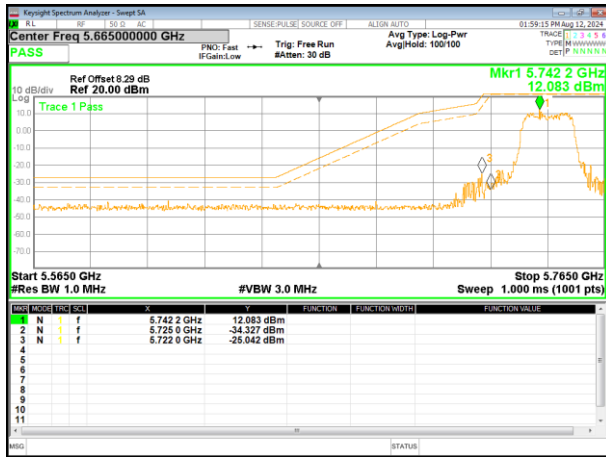


(802.11n20) Band Edge, Right Side

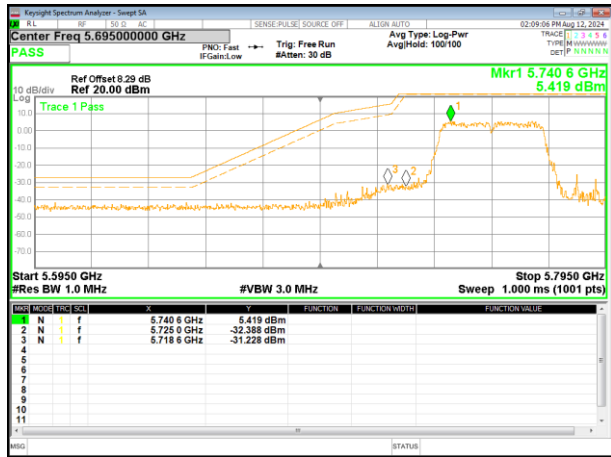


5.745~5.825 GHz

(802.11ac20) Band Edge, Left Side



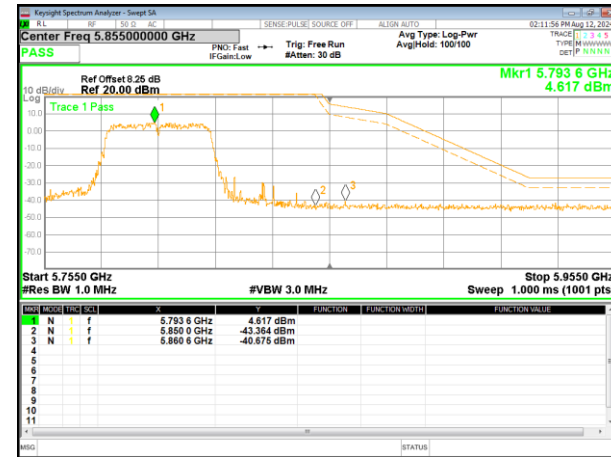
(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

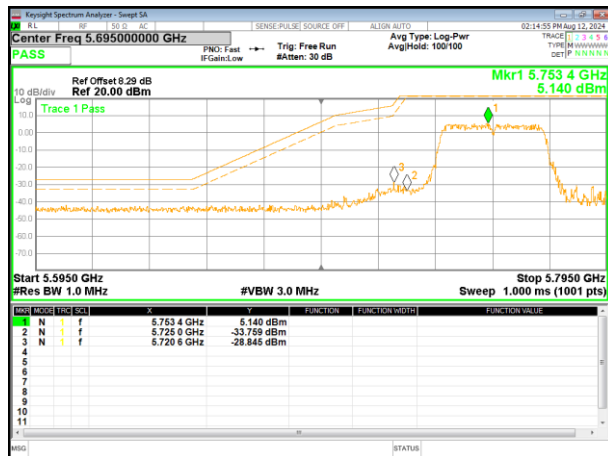


(802.11n40) Band Edge, Right Side

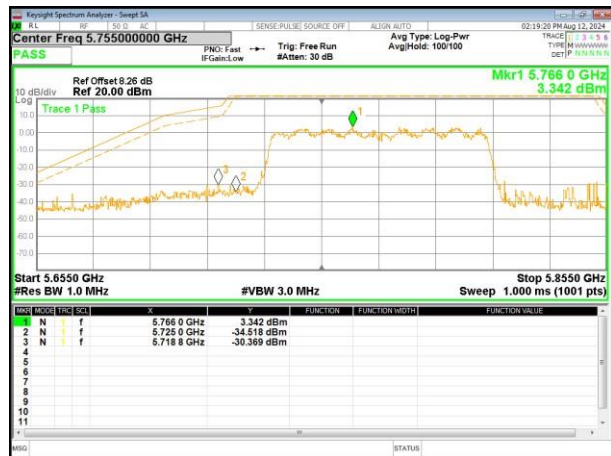


5.745~5.825 GHz

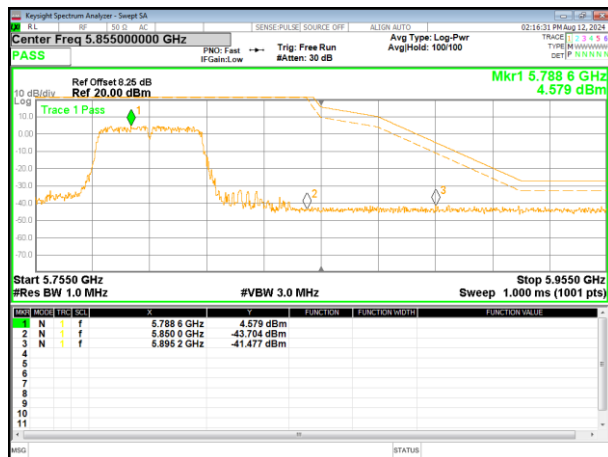
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge

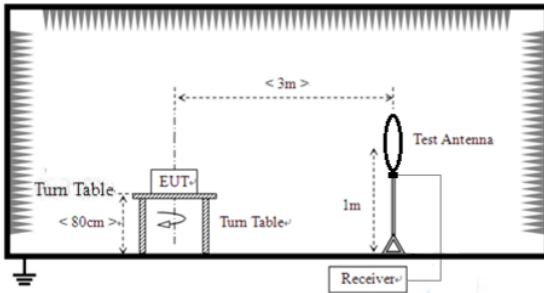
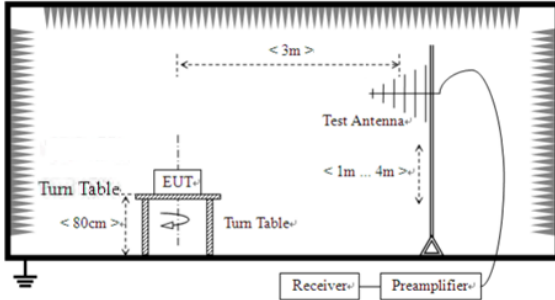


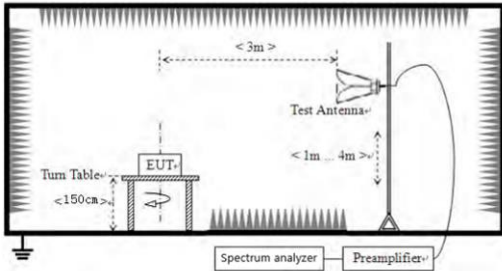
(802.11ac40) Band Edge, Right Side



4.8 Spurious Emission

4.8.1 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 to 1GHz				
					

	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. 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 results:	Pass

Remarks:

1. The report only shows the worst mode.
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

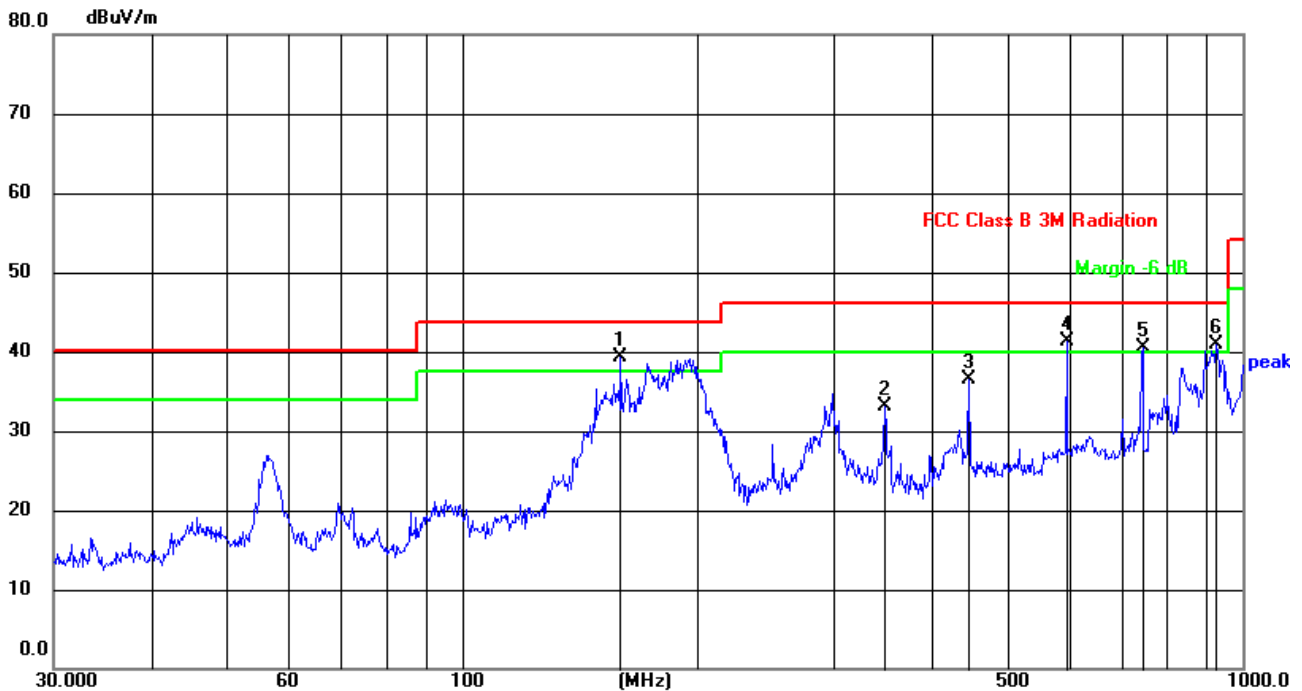
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Below 1GHz

Remark: The test data shows only the worst case 802.11a mode.

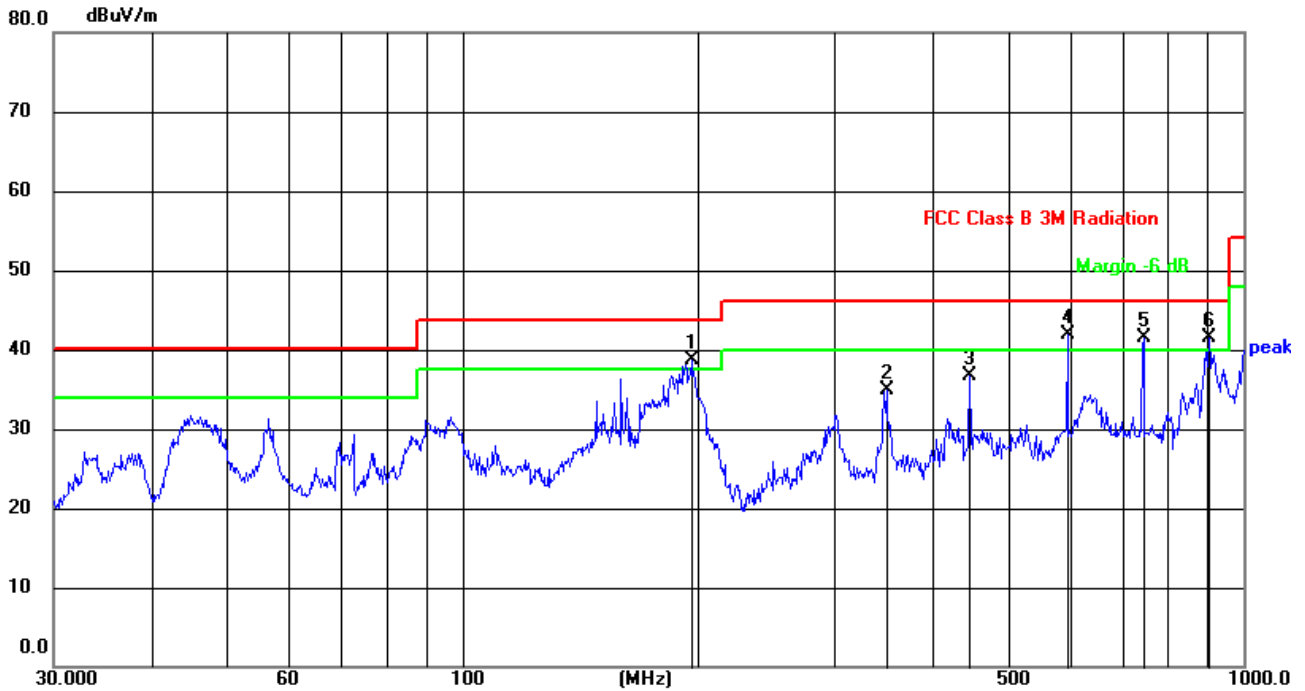
Temperature:	23.4°C	Relative Humidity:	51%
Pressure:	101.2kPa	Test Voltage :	AC 120V
Test Mode :	5.2G TX- 802.11a (5200MHz)		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	159.7844	59.98	-20.58	39.40	43.50	-4.10	QP
2	348.0274	52.47	-19.42	33.05	46.00	-12.95	QP
3	446.4139	52.08	-15.65	36.43	46.00	-9.57	QP
4	595.1326	53.19	-11.86	41.33	46.00	-4.67	QP
5	744.8659	48.78	-8.21	40.57	46.00	-5.43	QP
6	925.7562	45.57	-4.61	40.96	46.00	-5.04	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	196.5098	61.95	-23.29	38.66	43.50	-4.84	QP
2	349.2500	54.34	-19.41	34.93	46.00	-11.07	QP
3	446.4139	52.45	-15.65	36.80	46.00	-9.20	QP
4	595.1326	53.68	-11.86	41.82	46.00	-4.18	QP
5	744.8659	49.62	-8.21	41.41	46.00	-4.59	QP
6	903.3093	46.81	-5.34	41.47	46.00	-4.53	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 802.11a mode



Above 1GHz:

Remark: The test data shows only the worst case 802.11a mode.

Temperature:	23.4°C	Relative Humidity:	51%
Pressure:	101.2kPa	Test Voltage :	AC 120V
Test Mode :	5.2G TX- 802.11a		

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	
Low Channel:5180MHz									
V	10360.00	46.73	46.20	8.27	38.50	47.30	68.20	-20.90	PK
V	10360.00	37.44	46.20	8.27	38.50	38.01	54.00	-15.99	AV
V	15540.00	44.03	46.30	10.35	38.70	46.78	74.00	-27.22	PK
V	15540.00	34.70	46.30	10.35	38.70	37.45	54.00	-16.55	AV
V	20720.00	52.50	57.40	11.93	37.80	44.83	68.20	-23.37	PK
V	20720.00	43.18	57.40	11.93	37.80	35.51	54.00	-18.49	AV
V	25900.00	50.31	56.50	13.45	39.70	46.96	68.20	-21.24	PK
V	25900.00	40.62	56.50	13.45	39.70	37.27	54.00	-16.73	AV
V	31080.00	47.64	56.10	16.12	41.60	49.26	68.20	-18.94	PK
V	31080.00	41.29	56.10	16.12	41.60	42.91	54.00	-11.09	AV
V	36260.00	44.95	56.80	18.29	42.80	49.94	68.20	-18.26	PK
V	36260.00	38.04	56.80	18.29	42.80	43.03	54.00	-10.97	AV
H	10360.00	46.66	46.20	8.27	38.50	47.23	68.20	-20.97	PK
H	10360.00	36.17	46.20	8.27	38.50	36.74	54.00	-17.26	AV
H	15540.00	43.13	46.30	10.35	38.70	45.88	74.00	-28.12	PK
H	15540.00	32.46	46.30	10.35	38.70	35.21	54.00	-18.79	AV
H	20720.00	54.56	57.40	11.93	37.80	46.89	68.20	-21.31	PK
H	20720.00	44.00	57.40	11.93	37.80	36.33	54.00	-17.67	AV
H	25900.00	51.25	56.50	13.45	39.70	47.90	68.20	-20.30	PK
H	25900.00	40.65	56.50	13.45	39.70	37.30	54.00	-16.70	AV
H	31080.00	48.20	56.10	16.12	41.60	49.82	68.20	-18.38	PK
H	31080.00	41.25	56.10	16.12	41.60	42.87	54.00	-11.13	AV
H	36260.00	44.18	56.80	18.29	42.80	49.17	68.20	-19.03	PK
H	36260.00	38.14	56.80	18.29	42.80	43.13	54.00	-10.87	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:5200MHz									
V	10400.00	45.85	46.20	8.27	38.50	46.42	68.20	-21.78	PK
V	10400.00	37.22	46.20	8.27	38.50	37.79	54.00	-16.21	AV
V	15600.00	44.33	46.30	10.35	38.40	46.78	74.00	-27.22	PK
V	15600.00	36.13	46.30	10.35	38.40	38.58	54.00	-15.42	AV
V	20800.00	53.62	57.40	11.93	37.80	45.95	68.20	-22.25	PK
V	20800.00	44.59	57.40	11.93	37.80	36.92	54.00	-17.08	AV
V	26000.00	49.07	56.50	13.45	39.80	45.82	68.20	-22.38	PK
V	26000.00	41.78	56.50	13.45	39.80	38.53	54.00	-15.47	AV
V	31200.00	47.80	56.10	16.12	41.60	49.42	68.20	-18.78	PK
V	31200.00	41.49	56.10	16.12	41.60	43.11	54.00	-10.89	AV
V	36400.00	44.45	56.80	18.29	42.80	49.44	68.20	-18.76	PK
V	36400.00	37.73	56.80	18.29	42.80	42.72	54.00	-11.28	AV
H	10400.00	46.40	46.20	8.27	38.50	46.97	68.20	-21.23	PK
H	10400.00	37.46	46.20	8.27	38.50	38.03	54.00	-15.97	AV
H	15600.00	44.32	46.30	10.35	38.40	46.77	74.00	-27.23	PK
H	15600.00	36.13	46.30	10.35	38.40	38.58	54.00	-15.42	AV
H	20800.00	52.64	57.40	11.93	37.80	44.97	68.20	-23.23	PK
H	20800.00	42.63	57.40	11.93	37.80	34.96	54.00	-19.04	AV
H	26000.00	48.83	56.50	13.45	39.80	45.58	68.20	-22.62	PK
H	26000.00	41.04	56.50	13.45	39.80	37.79	54.00	-16.21	AV
H	31200.00	48.02	56.10	16.12	41.60	49.64	68.20	-18.56	PK
H	31200.00	41.26	56.10	16.12	41.60	42.88	54.00	-11.12	AV
H	36400.00	44.34	56.80	18.29	42.80	49.33	68.20	-18.87	PK
H	36400.00	38.19	56.80	18.29	42.80	43.18	54.00	-10.82	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)	
High Channel:5240MHz									
V	10480.00	42.88	46.20	8.27	38.60	43.55	68.20	-24.65	PK
V	10480.00	33.56	46.20	8.27	38.60	34.23	54.00	-19.77	AV
V	15720.00	40.62	46.30	10.35	38.40	43.07	74.00	-30.93	PK
V	15720.00	31.46	46.30	10.35	38.40	33.91	54.00	-20.09	AV
V	20960.00	50.02	57.40	11.93	37.50	42.05	68.20	-26.15	PK
V	20960.00	42.05	57.40	11.93	37.50	34.08	54.00	-19.92	AV
V	26200.00	46.28	56.50	13.45	40.10	43.33	68.20	-24.87	PK
V	26200.00	37.51	56.50	13.45	40.10	34.56	54.00	-19.44	AV
V	31440.00	48.46	56.10	16.12	41.30	49.78	68.20	-18.42	PK
V	31440.00	41.85	56.10	16.12	41.30	43.17	54.00	-10.83	AV
V	36680.00	44.46	56.80	18.29	43.10	49.75	68.20	-18.45	PK
V	36680.00	37.95	56.80	18.29	43.10	43.24	54.00	-10.76	AV
H	10480.00	43.10	46.20	8.27	38.60	43.77	68.20	-24.43	PK
H	10480.00	33.56	46.20	8.27	38.60	34.23	54.00	-19.77	AV
H	15720.00	40.91	46.30	10.35	38.40	43.36	74.00	-30.64	PK
H	15720.00	31.54	46.30	10.35	38.40	33.99	54.00	-20.01	AV
H	20960.00	50.20	57.40	11.93	37.50	42.23	68.20	-25.97	PK
H	20960.00	41.94	57.40	11.93	37.50	33.97	54.00	-20.03	AV
H	26200.00	46.01	56.50	13.45	40.10	43.06	68.20	-25.14	PK
H	26200.00	36.93	56.50	13.45	40.10	33.98	54.00	-20.02	AV
H	31440.00	47.85	56.10	16.12	41.30	49.17	68.20	-19.03	PK
H	31440.00	42.23	56.10	16.12	41.30	43.55	54.00	-10.45	AV
H	36680.00	44.65	56.80	18.29	43.10	49.94	68.20	-18.26	PK
H	36680.00	38.16	56.80	18.29	43.10	43.45	54.00	-10.55	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.



Temperature:	23.4°C	Relative Humidity:	51%
Pressure:	101.2kPa	Test Voltage :	AC 120V
Test Mode :	5.8G TX- 802.11a		

Polar (H/V)	Frequency	Meter Reading	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	42.25	46.10	8.77	39.10	44.02	74.00	-29.98	PK
V	11490.00	34.92	46.10	8.77	39.10	36.69	54.00	-17.31	AV
V	17235.00	40.09	47.60	11.10	38.70	42.29	68.20	-25.91	PK
V	17235.00	33.52	47.60	11.10	38.70	35.72	54.00	-18.28	AV
V	22980.00	47.95	56.90	12.73	37.70	41.48	74.00	-32.52	PK
V	22980.00	40.72	56.90	12.73	37.70	34.25	54.00	-19.75	AV
V	28725.00	45.07	55.60	14.25	40.30	44.02	68.20	-24.18	PK
V	28725.00	37.41	55.60	14.25	40.30	36.36	54.00	-17.64	AV
V	34470.00	46.71	55.90	17.26	42.10	50.17	68.20	-18.03	PK
V	34470.00	40.67	55.90	17.26	42.10	44.13	54.00	-9.87	AV
H	11490.00	42.69	46.10	8.77	39.10	44.46	74.00	-29.54	PK
H	11490.00	34.75	46.10	8.77	39.10	36.52	54.00	-17.48	AV
H	17235.00	41.00	47.60	11.10	38.70	43.20	68.20	-25.00	PK
H	17235.00	33.87	47.60	11.10	38.70	36.07	54.00	-17.93	AV
H	22980.00	49.94	56.90	12.73	37.70	43.47	74.00	-30.53	PK
H	22980.00	40.52	56.90	12.73	37.70	34.05	54.00	-19.95	AV
H	28725.00	46.84	55.60	14.25	40.30	45.79	68.20	-22.41	PK
H	28725.00	37.98	55.60	14.25	40.30	36.93	54.00	-17.07	AV
H	34470.00	45.85	55.90	17.26	42.10	49.31	68.20	-18.89	PK
H	34470.00	39.87	55.90	17.26	42.10	43.33	54.00	-10.67	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	42.08	46.10	8.77	39.10	43.85	74.00	-30.15	PK
V	11570.00	34.74	46.10	8.77	39.10	36.51	54.00	-17.49	AV
V	17355.00	39.92	47.60	11.10	38.70	42.12	68.20	-26.08	PK
V	17355.00	33.32	47.60	11.10	38.70	35.52	54.00	-18.48	AV
V	23140.00	47.78	56.90	12.73	37.70	41.31	74.00	-32.69	PK
V	23140.00	40.56	56.90	12.73	37.70	34.09	54.00	-19.91	AV
V	28925.00	44.89	55.60	14.25	40.30	43.84	68.20	-24.36	PK
V	28925.00	37.22	55.60	14.25	40.30	36.17	54.00	-17.83	AV
V	34710.00	45.62	55.90	17.26	42.40	49.38	68.20	-18.82	PK
V	34710.00	40.26	55.90	17.26	42.40	44.02	54.00	-9.98	AV
H	11570.00	42.51	46.10	8.77	39.10	44.28	74.00	-29.72	PK
H	11570.00	34.57	46.10	8.77	39.10	36.34	54.00	-17.66	AV
H	17355.00	40.84	47.60	11.10	38.70	43.04	68.20	-25.16	PK
H	17355.00	33.71	47.60	11.10	38.70	35.91	54.00	-18.09	AV
H	23140.00	49.75	56.90	12.73	37.70	43.28	74.00	-30.72	PK
H	23140.00	40.37	56.90	12.73	37.70	33.90	54.00	-20.10	AV
H	28925.00	46.68	55.60	14.25	40.30	45.63	68.20	-22.57	PK
H	28925.00	37.80	55.60	14.25	40.30	36.75	54.00	-17.25	AV
H	34710.00	45.09	55.90	17.26	42.40	48.85	68.20	-19.35	PK
H	34710.00	39.61	55.90	17.26	42.40	43.37	54.00	-10.63	AV

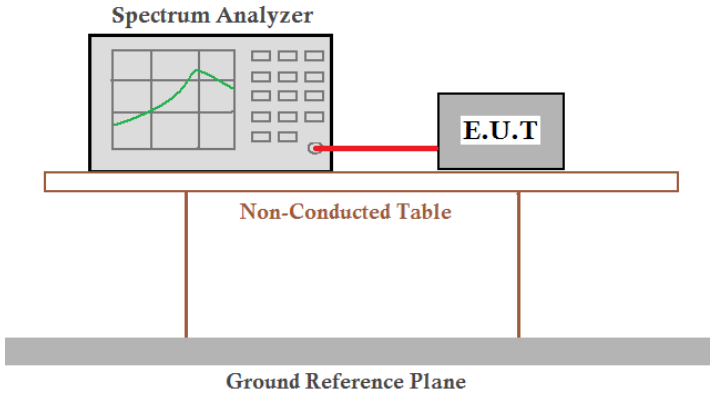


Polar (H/V)	Frequency	Meter Reading	Pre- amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650.00	43.06	46.10	8.77	39.10	44.83	74.00	-29.17	PK
V	11650.00	34.92	46.10	8.77	39.10	36.69	54.00	-17.31	AV
V	17475.00	41.14	47.90	11.23	38.90	43.37	68.20	-24.83	PK
V	17475.00	34.26	47.90	11.23	38.90	36.49	54.00	-17.51	AV
V	23300.00	49.87	57.10	12.73	37.80	43.30	68.20	-24.90	PK
V	23300.00	41.40	57.10	12.73	37.80	34.83	54.00	-19.17	AV
V	29125.00	46.92	55.80	14.25	40.50	45.87	68.20	-22.33	PK
V	29125.00	38.93	55.80	14.25	40.50	37.88	54.00	-16.12	AV
V	34950.00	45.53	56.30	17.91	42.50	49.55	68.20	-18.56	PK
V	34950.00	39.57	56.30	17.91	42.50	43.67	54.00	-10.32	AV
H	11650.00	44.87	46.10	8.77	39.10	46.64	74.00	-27.36	PK
H	11650.00	37.06	46.10	8.77	39.10	38.83	54.00	-15.17	AV
H	17475.00	42.24	47.90	11.23	38.90	44.47	68.20	-23.73	PK
H	17475.00	35.40	47.90	11.23	38.90	37.63	54.00	-16.37	AV
H	23300.00	51.12	57.10	12.73	37.80	44.55	68.20	-23.65	PK
H	23300.00	42.71	57.10	12.73	37.80	36.14	54.00	-17.86	AV
H	29125.00	47.87	55.80	14.25	40.50	46.82	68.20	-21.38	PK
H	29125.00	39.59	55.80	14.25	40.50	38.54	54.00	-15.46	AV
H	34950.00	45.44	56.30	17.91	42.50	49.55	68.20	-18.65	PK
H	34950.00	39.56	56.30	17.91	42.50	43.67	54.00	-10.33	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.

4.8.2 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:		
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 23.4°C	Humid.:51%RH
Test voltage:	AC 120V	
Test results:	Pass	

Remark:

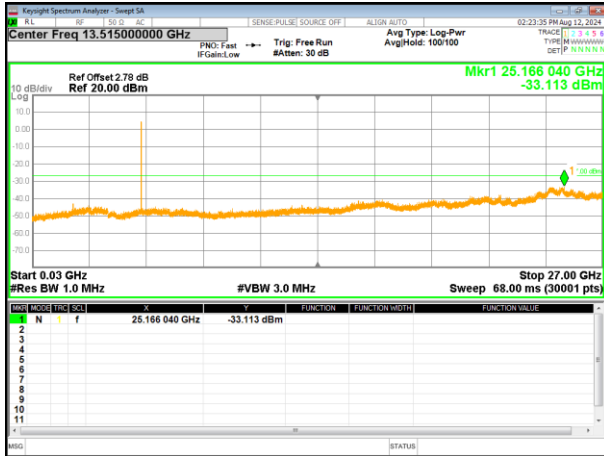
1. Antenna gain and cable loss data included in Offset.
2. We tested 30MHz-40GHz frequency and found 27GHz-40GHz test data was very lower (close to the noise of the spectrum analyzer). The test report only showed data for 30MHz-27GHz



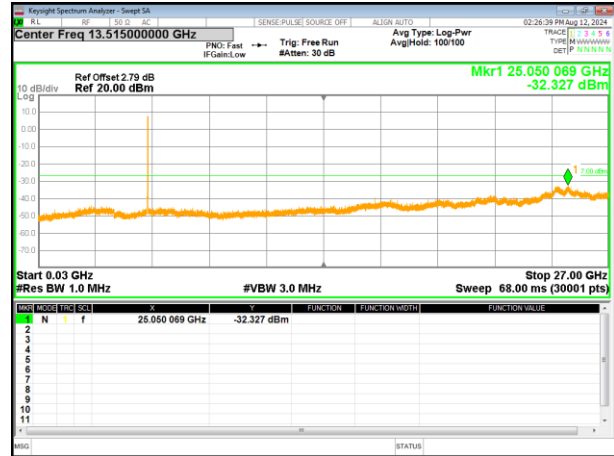
5180-5240MHz

Test Plot

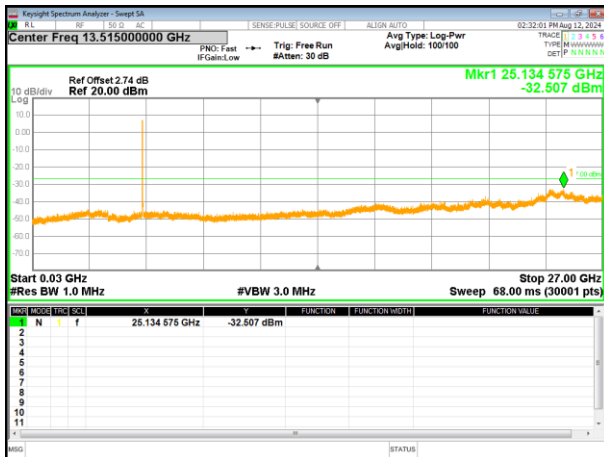
802.11a on channel 36



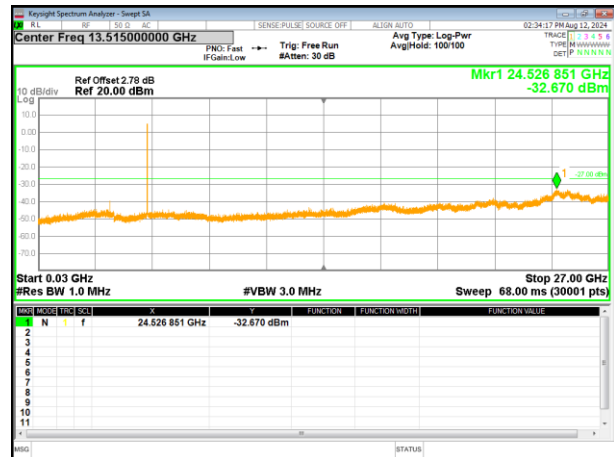
802.11a on channel 40



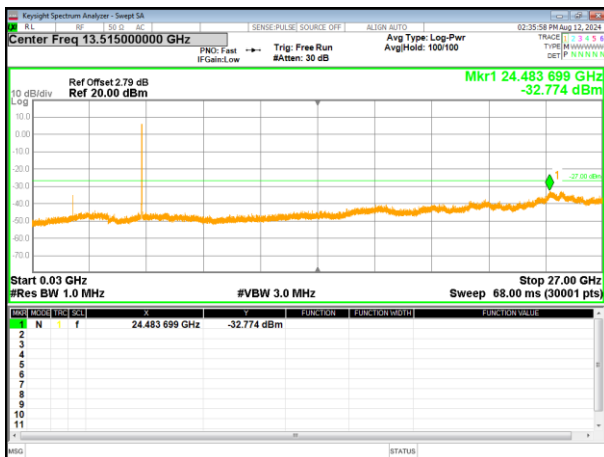
802.11a on channel 48



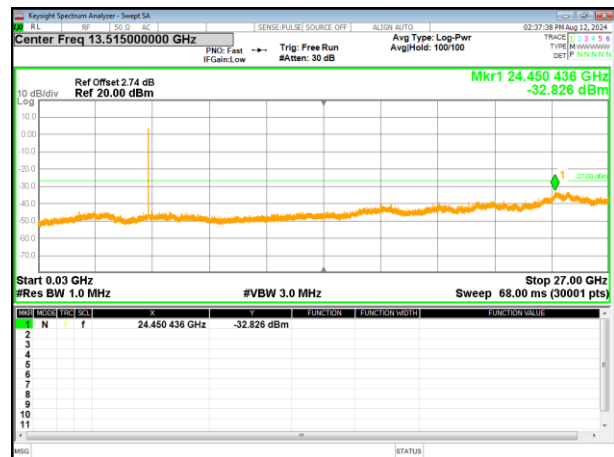
802.11n20 on channel 36



802.11n20 on channel 40



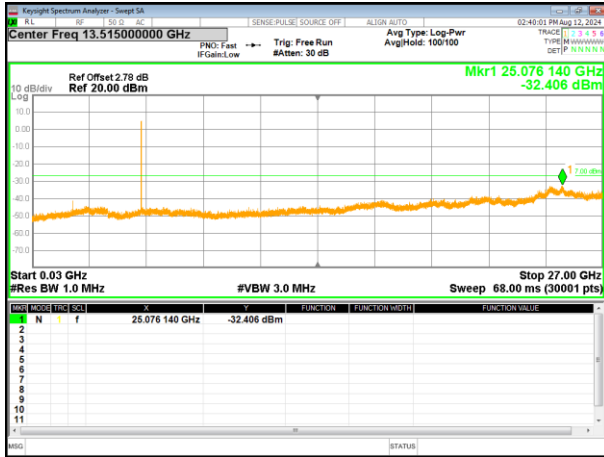
802.11n20 on channel 48



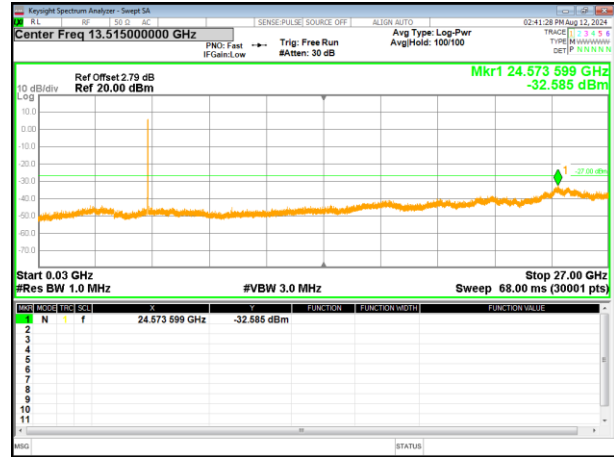


Test Plot

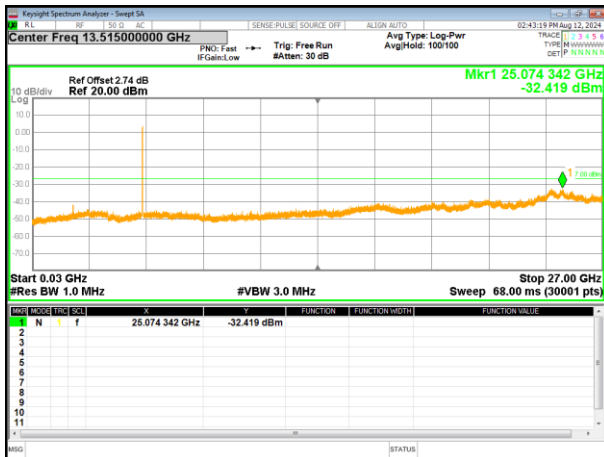
802.11ac20 on channel 36



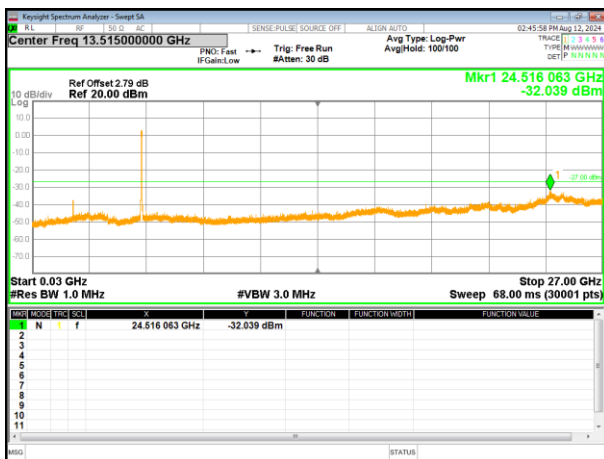
802.11ac20 on channel 40



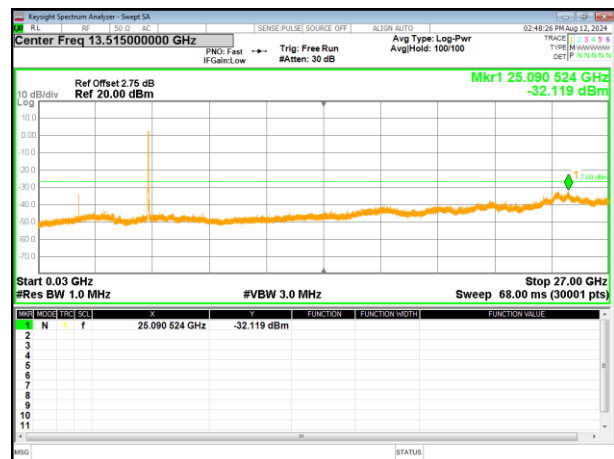
802.11ac20 on channel 48



802.11n40 on channel 38

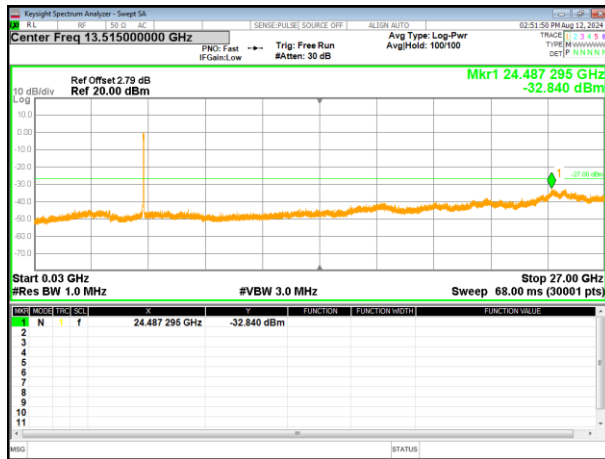


802.11n40 on channel 46

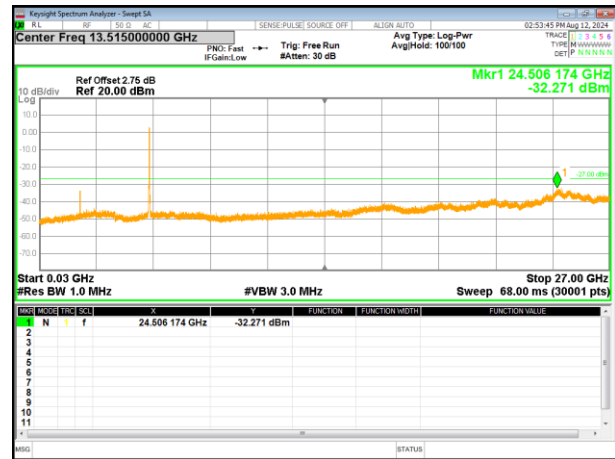


Test Plot

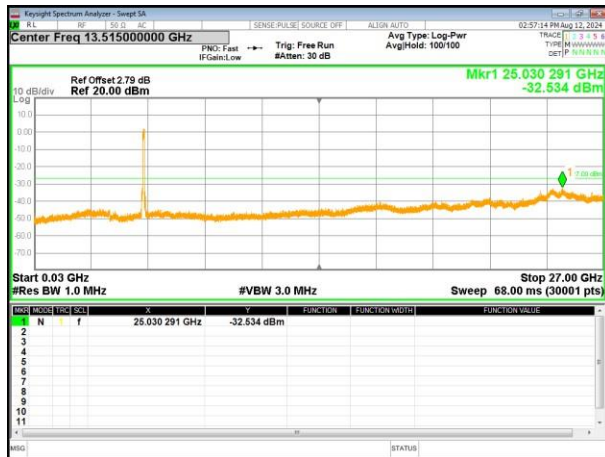
802.11ac40 on channel 38



802.11ac40 on channel 46



802.11ac80 on channel 42

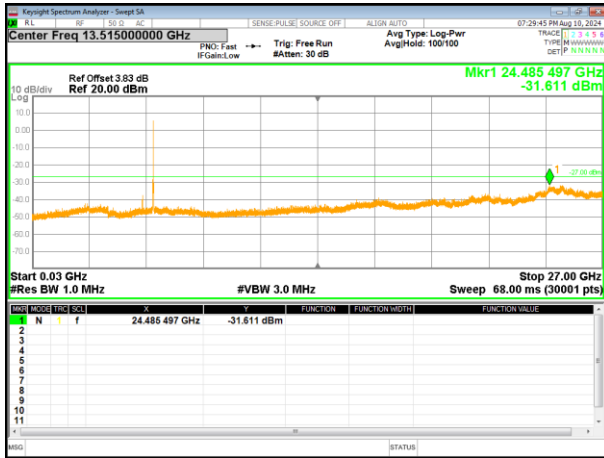




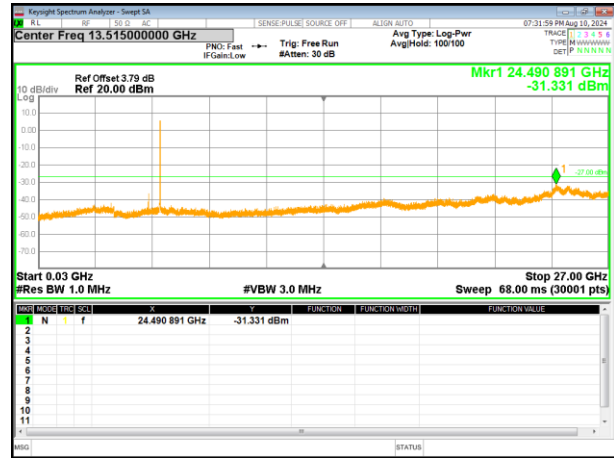
5745-5825MHz

Test Plot

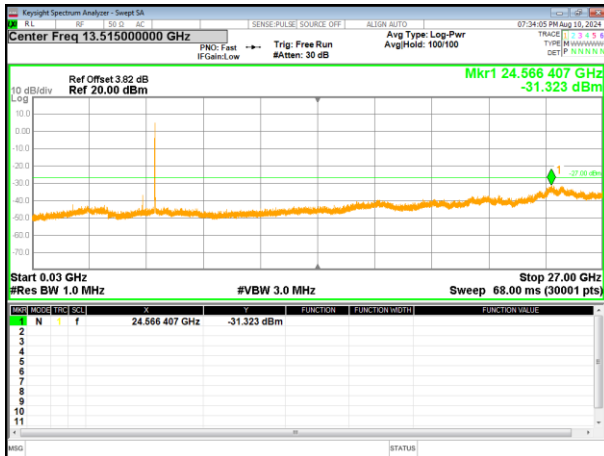
802.11a on channel 149



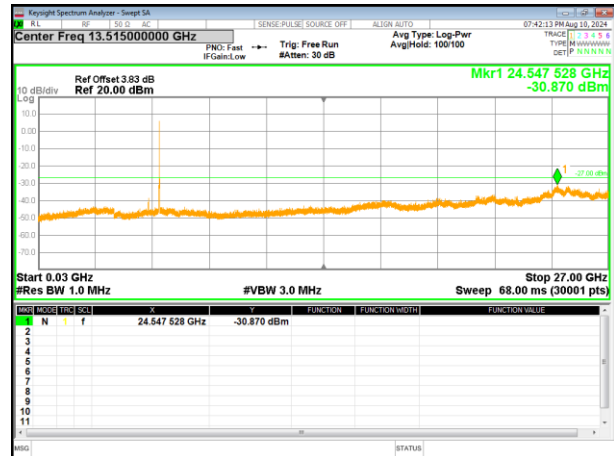
802.11a on channel 157



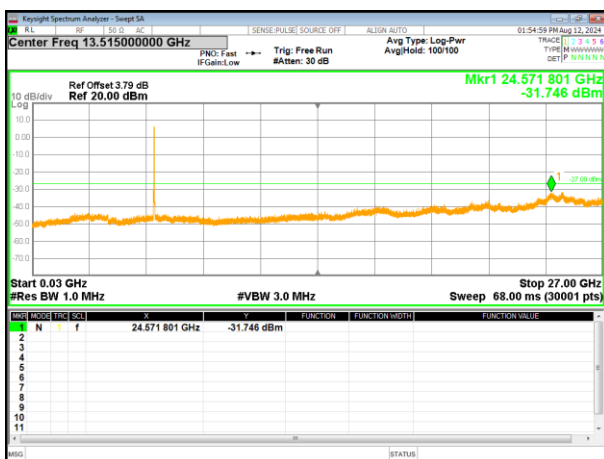
802.11a on channel 165



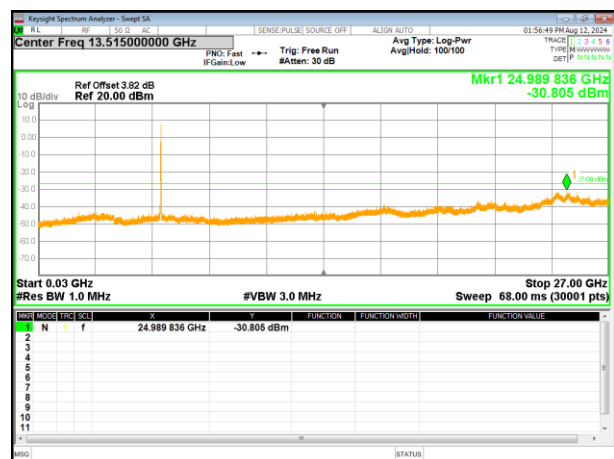
802.11n20 on channel 149



802.11n20 on channel 157

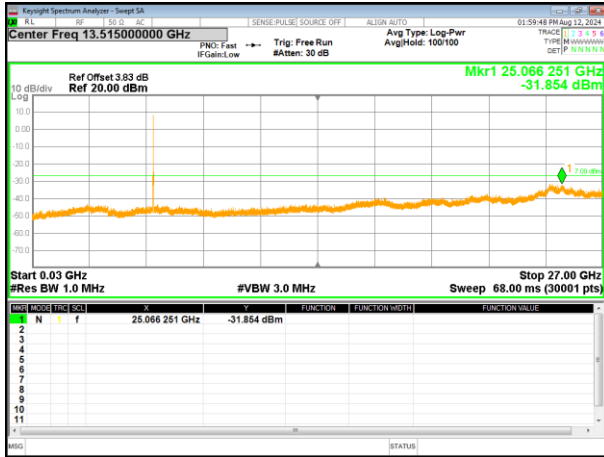


802.11n20 on channel 165

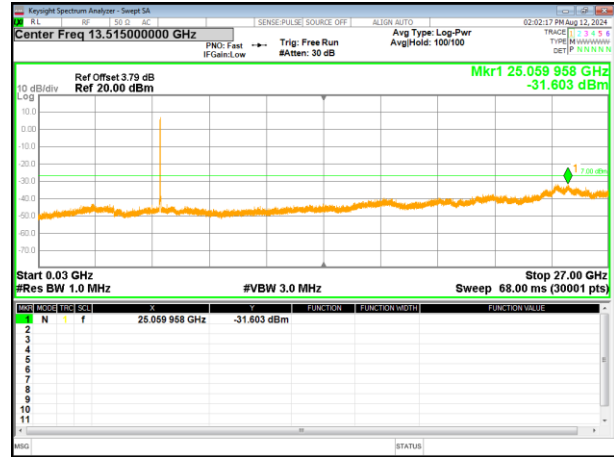


Test Plot

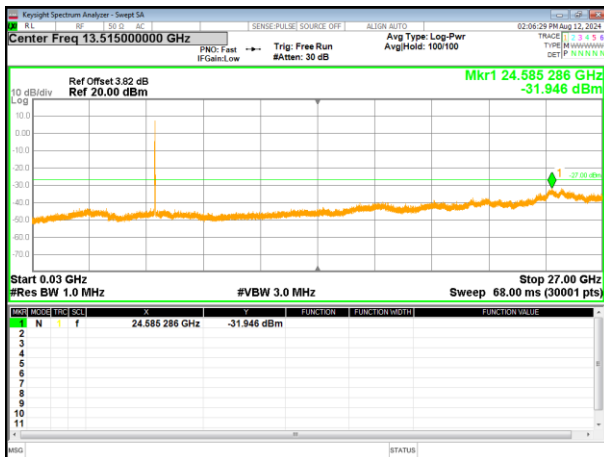
802.11ac20 on channel 149



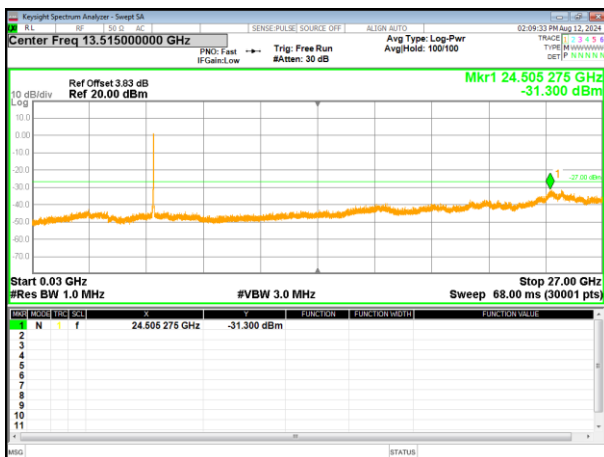
802.11ac20 on channel 157



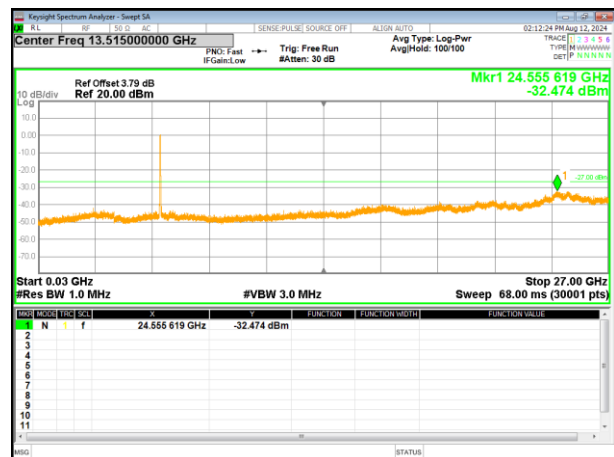
802.11ac20 on channel 165



802.11n40 on channel 151

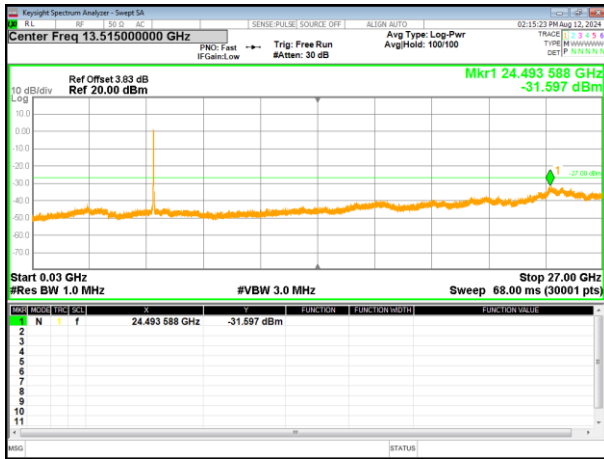


802.11n40 on channel 159

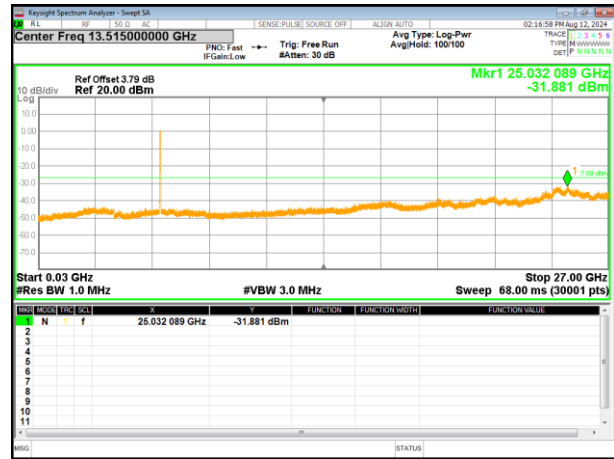


Test Plot

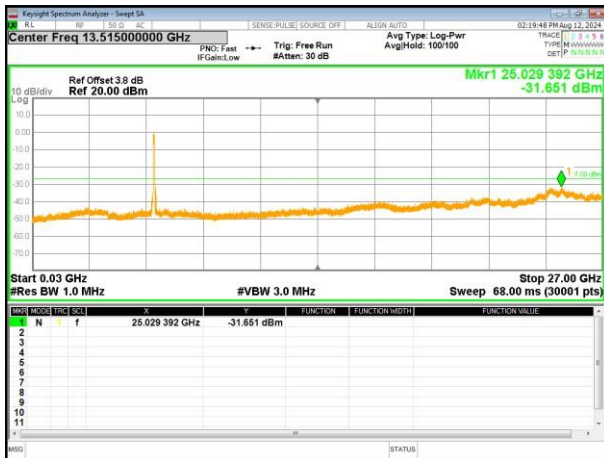
802.11ac40 on channel 151



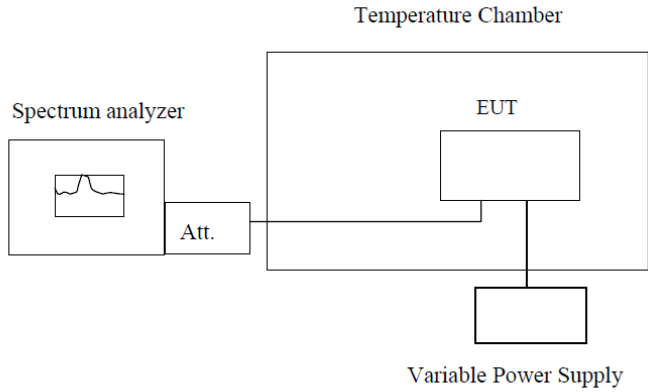
802.11ac40 on channel 159



802.11ac80 on channel 155



4.9 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: AC 120V					
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	5180.113	5179.795	5180.440	5180.193
	5190	5190.102	5199.810	5200.316	5190.204
	5200	5200.105	5199.795	5200.341	5200.195
	5210	5210.110	5209.773	5210.319	5210.197
	5220	5220.104	5219.788	5220.335	5220.202
	5230	5230.103	5229.781	5230.327	5230.220
	5240	5240.075	5239.790	5240.336	5240.206
-20	5180	5180.106	5179.771	5180.325	5180.214
	5190	5190.096	5189.762	5190.325	5190.210
	5200	5200.104	5199.770	5200.319	5200.205
	5210	5210.095	5209.762	5210.309	5210.212
	5220	5220.115	5219.783	5220.320	5220.205
	5230	5230.094	5229.761	5300.319	5230.203
	5240	5240.111	5239.780	5240.322	5240.177
-10	5180	5180.115	5179.780	5180.304	5180.193
	5190	5190.110	5189.776	5190.316	5190.204
	5200	5200.105	5199.771	5200.307	5200.195
	5210	5210.110	5209.777	5210.308	5210.197
	5220	5220.104	5219.772	5220.316	5220.202
	5230	5230.103	5229.770	5230.333	5230.220
	5240	5240.075	5239.744	5240.306	5240.193
0	5180	5179.892	5179.759	5180.316	5180.204
	5190	5200.063	5189.770	5190.308	5190.205
	5200	5200.061	5199.761	5200.316	5200.196
	5210	5210.115	5209.762	5210.308	5300.204
	5220	5220.103	5219.769	5220.330	5220.195
	5230	5230.091	5229.787	5230.307	5230.216
	5240	5240.107	5239.760	5240.326	5240.195
10	5180	5180.094	5179.771	5180.325	5180.205
	5190	5190.104	5189.762	5190.322	5190.196
	5200	5200.095	5199.770	5200.317	5200.204
	5210	5210.095	5209.762	5210.323	5210.197
	5220	5220.101	5219.783	5220.319	5220.216
	5230	5230.120	5229.761	5230.316	5230.194
	5240	5240.104	5239.780	5240.290	5240.213
20	5180	5180.172	5179.024	5180.574	5179.967

	5190	5190.114	5189.813	5190.619	5190.232
	5200	5200.109	5199.804	5200.628	5200.257
	5210	5210.114	5299.814	5210.621	5210.242
	5220	5220.108	5219.804	5220.643	5220.232
	5230	5230.107	5229.825	5230.621	5230.260
	5240	5240.079	5239.804	5240.640	5240.249
30	5180	5180.098	5179.812	5180.627	5180.250
	5190	5190.108	5189.804	5190.619	5180.250
	5200	5200.099	5199.812	5200.628	5190.246
	5210	5210.099	5209.804	5210.621	5200.241
	5220	5220.105	5219.825	5220.643	5210.248
	5230	5230.124	5229.803	5230.621	5220.242
	5240	5240.095	5239.822	5240.640	5230.240
40	5180	5180.110	5179.811	5180.413	5180.229
	5190	5190.100	5189.813	5200.587	5190.240
	5200	5200.108	5199.804	5200.585	5200.231
	5210	5210.099	5299.814	5210.641	5210.233
	5220	5220.119	5219.804	5220.631	5220.239
	5230	5230.098	5229.825	5230.618	5230.257
	5240	5240.115	5239.804	5240.636	5240.230
50	5180	5180.110	5179.812	5180.627	5180.202
	5190	5190.100	5189.804	5190.619	5190.232
	5200	5200.108	5199.812	5200.628	5200.257
	5210	5210.099	5209.804	5210.621	5210.242
	5220	5220.119	5219.825	5220.643	5220.232
	5230	5230.098	5229.803	5230.621	5230.260
	5240	5240.115	5239.822	5240.640	5240.249

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
AC102V	5180	5180.015	5179.815	5180.647	5180.370
	5190	5190.010	5199.809	5190.639	5200.245
	5200	5200.005	5199.837	5200.648	5200.270
	5210	5210.010	5209.815	5210.641	5210.249
	5220	5220.004	5219.830	5220.663	5220.263
	5230	5230.002	5229.823	5230.641	5230.256
	5240	5239.974	5239.832	5240.656	5240.265
AC120V	5180	5180.001	5179.830	5180.646	5180.255
	5190	5189.996	5179.936	5190.648	5190.254
	5200	5200.004	5199.812	5200.640	5200.248
	5210	5209.996	5209.837	5300.656	5210.239
	5220	5220.015	5219.815	5220.642	5220.248
	5230	5229.993	5229.830	5230.662	5300.247
	5240	5240.010	5239.824	5240.642	5240.251
AC138V	5180	5180.015	5179.821	5180.635	5180.234
	5190	5190.010	5189.818	5190.647	5190.245
	5200	5200.005	5199.813	5200.639	5200.235
	5210	5210.010	5209.819	5210.641	5210.238
	5220	5220.004	5219.814	5220.649	5220.244
	5230	5230.002	5229.812	5230.667	5230.267
	5240	5239.974	5239.786	5240.640	5240.235



Frequency stability versus Temp.					
Power Supply: AC 120V					
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	5744.957	5744.822	5745.684	5745.244
	5755	5754.966	5754.828	5755.692	5755.232
	5775	5774.986	5774.821	5775.711	5775.244
	5785	5784.961	5784.814	5785.687	5785.250
	5795	5794.957	5794.821	5795.684	5795.269
	5825	5824.953	5824.751	5825.690	5825.261
-20	5745	5744.954	5744.833	5745.678	5745.255
	5755	5754.968	5754.834	5755.704	5755.268
	5775	5774.966	5774.838	5775.687	5775.254
	5785	5784.968	5784.831	5785.696	5785.240
	5795	5794.978	5794.822	5795.695	5795.235
	5825	5824.958	5824.832	5825.708	5825.269
-10	5745	5744.964	5744.823	5745.694	5744.874
	5755	5754.989	5754.829	5755.697	5755.257
	5775	5774.984	5774.847	5775.702	5775.259
	5785	5784.967	5784.824	5785.694	5785.261
	5795	5794.956	5794.820	5795.686	5795.245
	5825	5824.889	5824.823	5825.698	5825.241
0	5745	5744.958	5744.812	5745.694	5745.245
	5755	5754.982	5754.827	5755.697	5755.270
	5775	5774.962	5774.827	5775.702	5775.267
	5785	5784.970	5784.831	5785.694	5785.250
	5795	5794.968	5794.844	5795.686	5795.240
	5825	5824.976	5824.824	5825.698	5825.175
10	5745	5744.958	5744.822	5745.683	5745.240
	5755	5754.982	5754.838	5755.691	5755.251
	5775	5774.962	5774.840	5775.685	5775.269
	5785	5784.970	5784.823	5785.677	5785.244
	5795	5794.968	5794.840	5795.685	5795.241
	5825	5824.976	5824.839	5825.617	5825.244
20	5745	5744.974	5744.847	5745.692	5745.244
	5755	5754.987	5754.818	5755.709	5755.262
	5775	5774.971	5774.842	5775.696	5775.243
	5785	5784.957	5784.843	5785.683	5785.269
	5795	5794.951	5794.834	5795.678	5795.262
	5825	5824.983	5824.850	5825.715	5825.271
30	5745	5744.964	5744.833	5745.677	5745.269
	5755	5754.970	5754.834	5755.701	5755.240
	5775	5774.986	5774.838	5775.704	5775.264
	5785	5784.961	5784.831	5785.686	5785.263
	5795	5794.957	5794.822	5795.704	5795.255
	5825	5824.958	5824.832	5825.705	5825.270
40	5745	5744.974	5744.817	5745.694	5745.238



	5755	5754.987	5754.841	5755.697	5755.270
	5775	5774.971	5774.823	5775.702	5775.267
	5785	5784.957	5784.833	5785.694	5785.250
	5795	5794.951	5794.831	5795.686	5795.240
	5825	5824.983	5824.842	5825.698	5825.175
50	5745	5744.974	5744.847	5745.694	5745.244
	5755	5754.967	5754.818	5755.708	5755.262
	5775	5774.971	5774.842	5775.696	5775.243
	5785	5784.957	5784.843	5785.683	5785.270
	5795	5794.951	5794.833	5795.678	5795.262
	5825	5824.983	5824.854	5825.715	5825.271

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)
AC102V	5745	5745.068	5744.822	5745.663	5745.233
	5755	5755.083	5754.828	5755.681	5755.257
	5775	5775.082	5774.821	5775.684	5775.239
	5785	5785.084	5784.814	5785.666	5785.247
	5795	5795.095	5794.821	5795.685	5795.246
	5825	5825.075	5824.751	5825.685	5825.256
AC120V	5745	5745.068	5744.833	5745.658	5745.249
	5755	5755.083	5754.834	5755.684	5755.262
	5775	5775.082	5774.838	5775.667	5775.248
	5785	5785.084	5784.831	5785.676	5785.234
	5795	5795.091	5794.822	5795.675	5795.229
	5825	5825.075	5824.832	5825.688	5825.263
AC138V	5745	5745.089	5744.846	5745.674	5745.238
	5755	5755.102	5754.818	5755.689	5755.256
	5775	5775.087	5774.842	5775.676	5775.237
	5785	5785.073	5784.843	5785.663	5785.263
	5795	5795.067	5794.834	5795.658	5795.256
	5825	5825.100	5824.850	5825.695	5825.265

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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