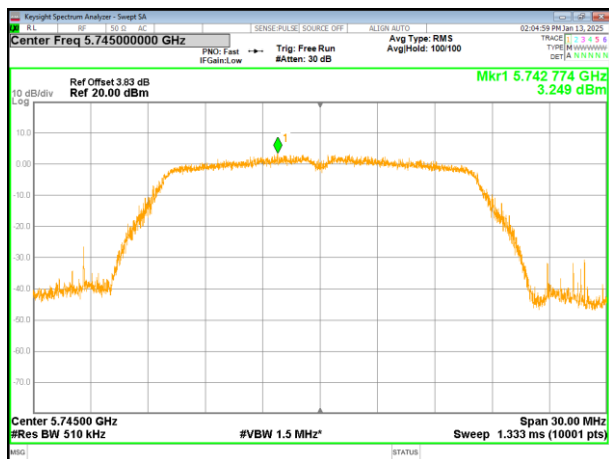
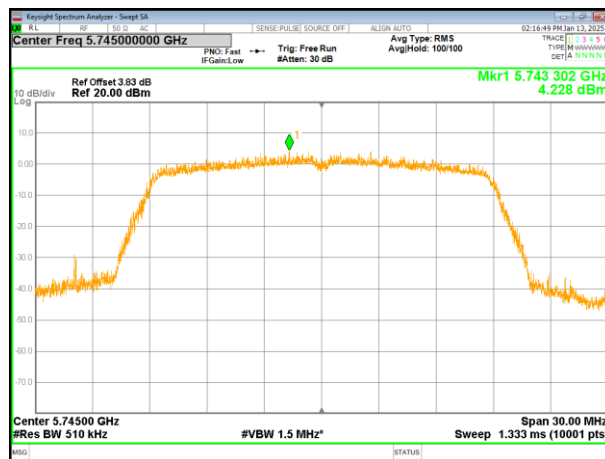


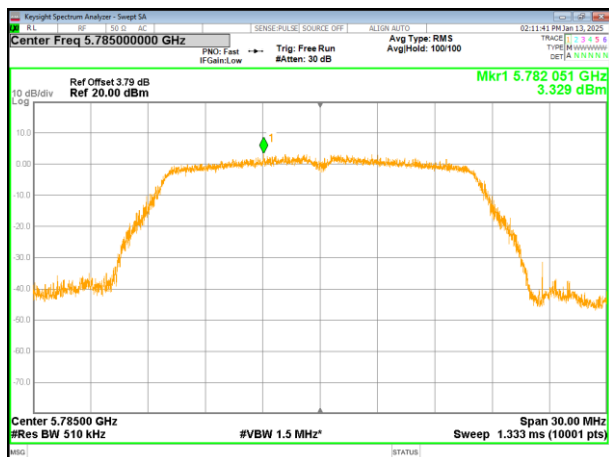
(802.11a) PSD plot on channel 149



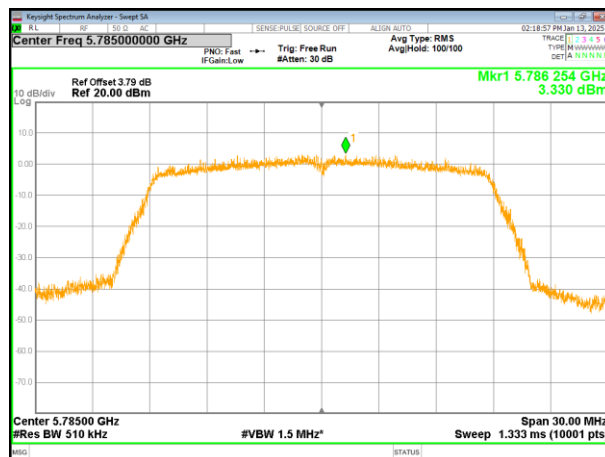
(802.11n20) PSD plot on channel 149



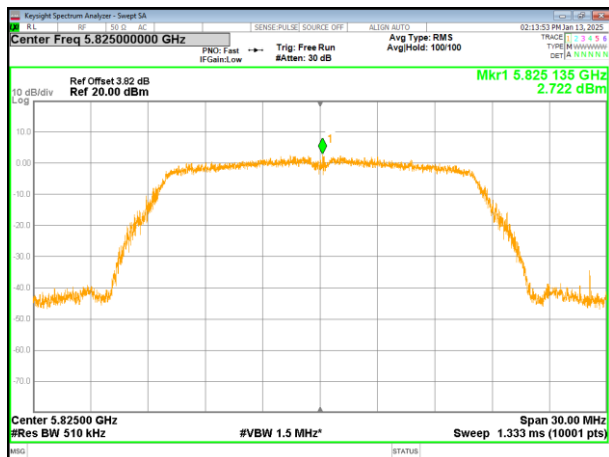
(802.11a) PSD plot on channel 157



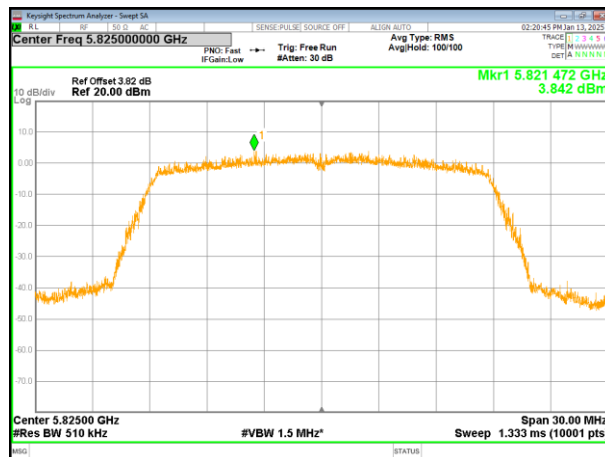
(802.11n20) PSD plot on channel 157



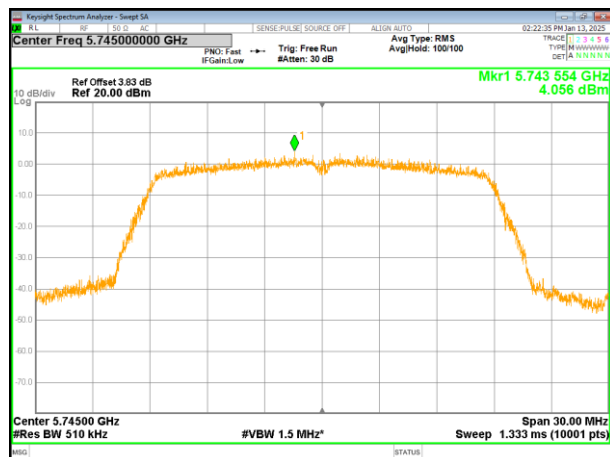
(802.11a) PSD plot on channel 165



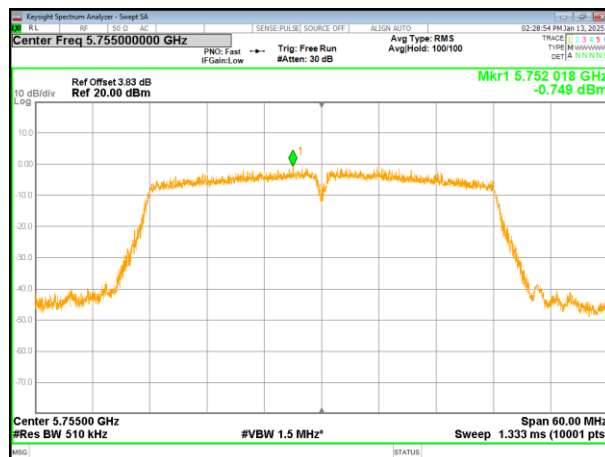
(802.11n20) PSD plot on channel 165



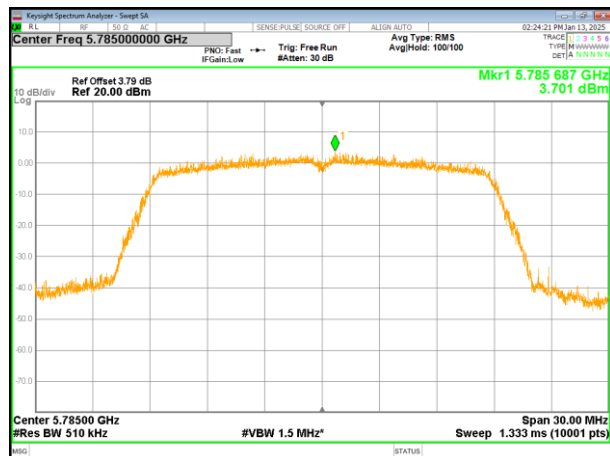
(802.11ac20) PSD plot on channel 149



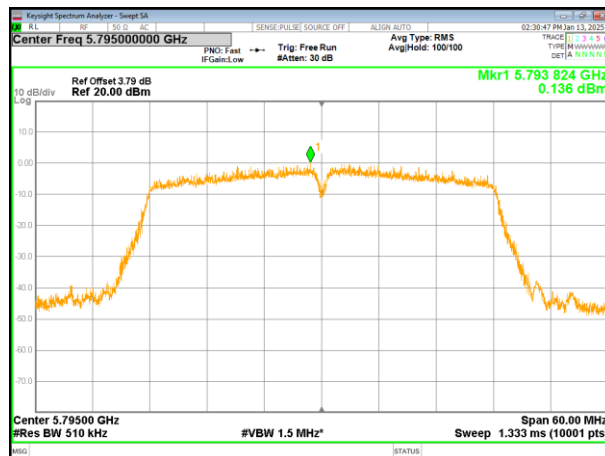
(802.11n40) PSD plot on channel 151



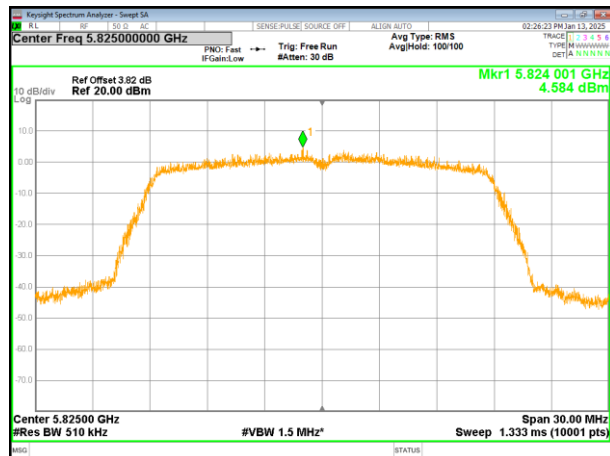
(802.11ac20) PSD plot on channel 157



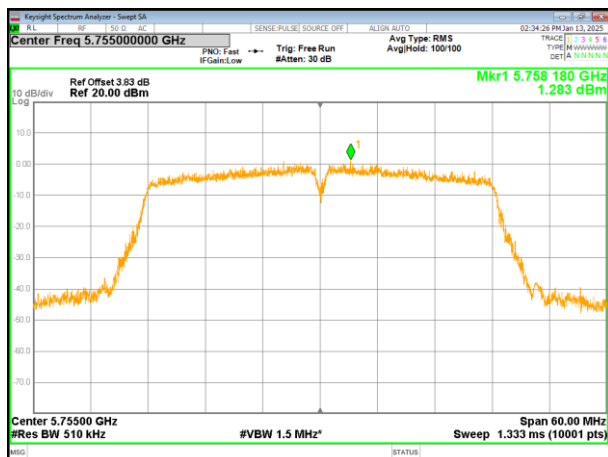
(802.11n40) PSD plot on channel 159



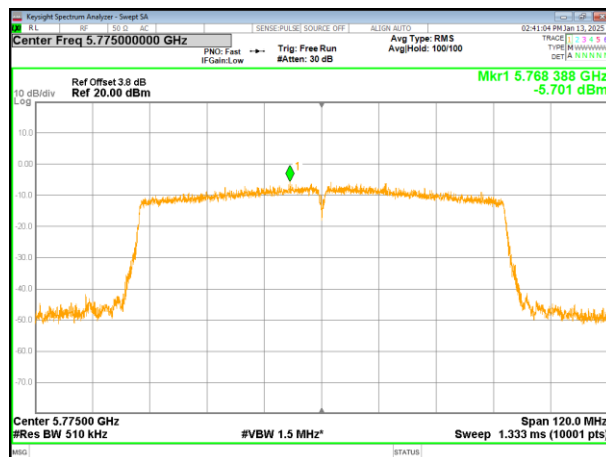
(802.11ac20) PSD plot on channel 165



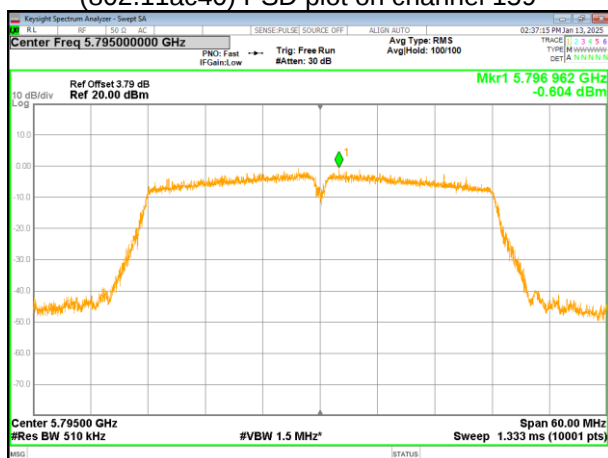
(802.11ac40) PSD plot on channel 151



(802.11ac80) PSD plot on channel 155

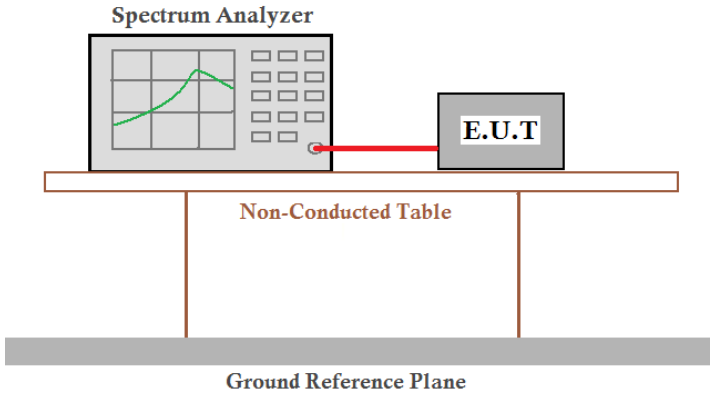


(802.11ac40) PSD plot on channel 159



4.7 Band edge

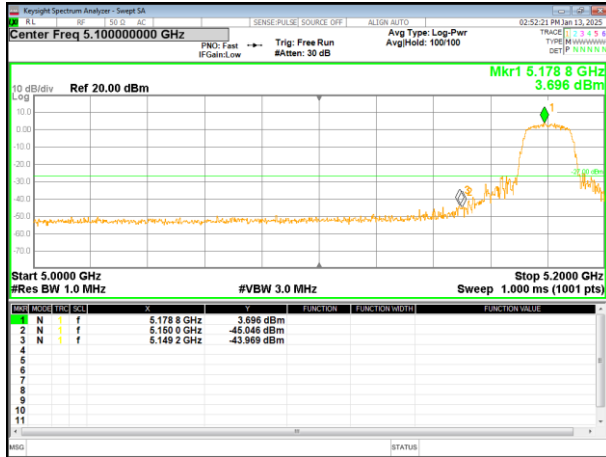
4.7.1 Conducted test Method

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, 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 environment:	Temp.: 23.1°C	Humid.: 39%RH
Test voltage:	AC120/60Hz	
Test results:	Pass	

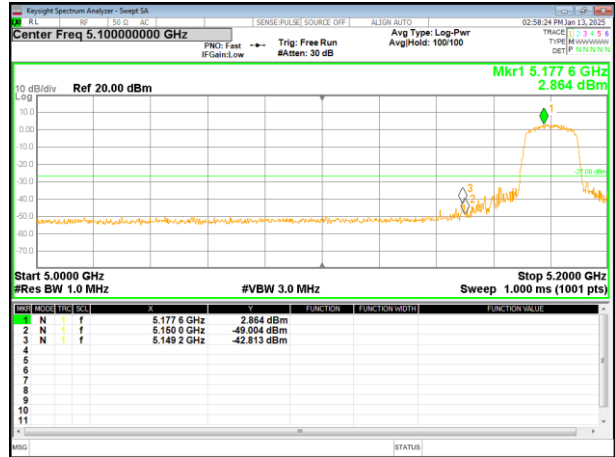
Remark: Due to the margin value of the sideband test being greater than the antenna gain value, the test meets the requirements

5.180~5.240 GHz

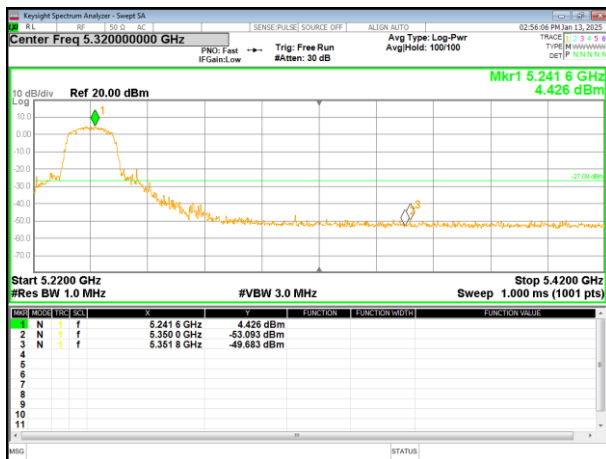
(802.11a) Band Edge, Left Side



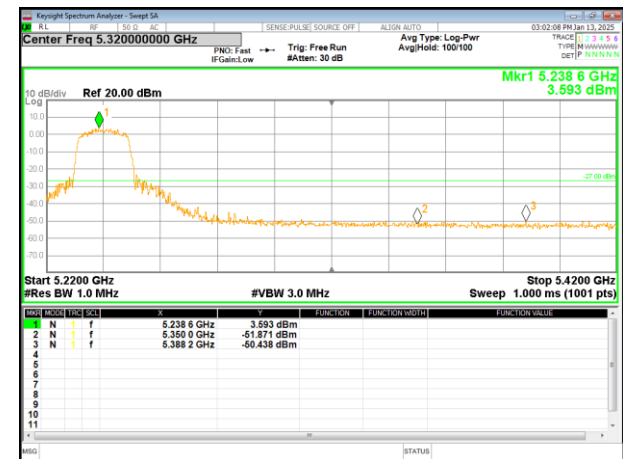
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

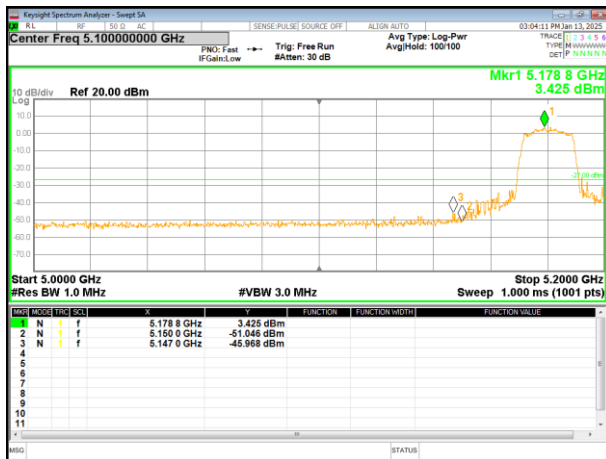


(802.11n20) Band Edge, Right Side

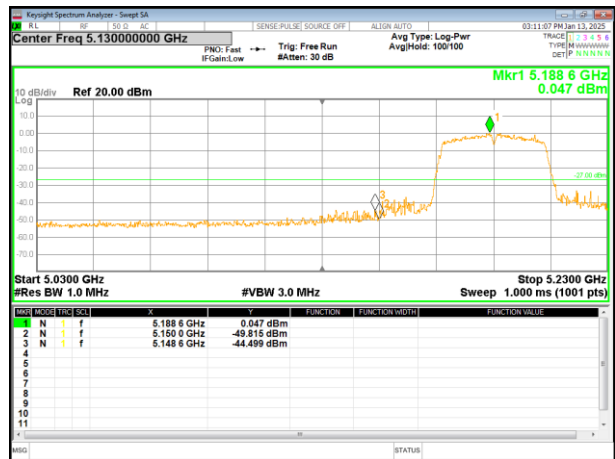


Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

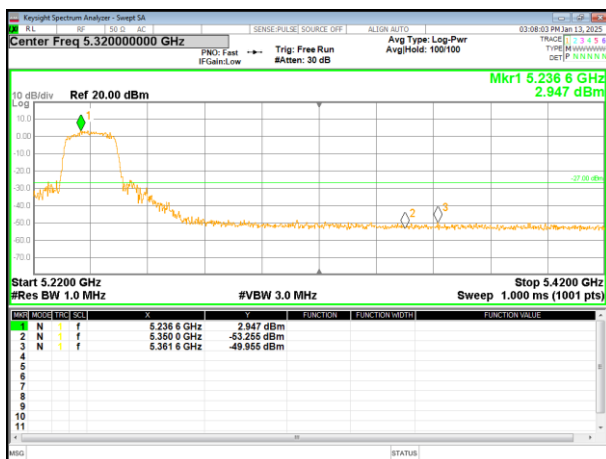
(802.11ac20) Band Edge, Left Side



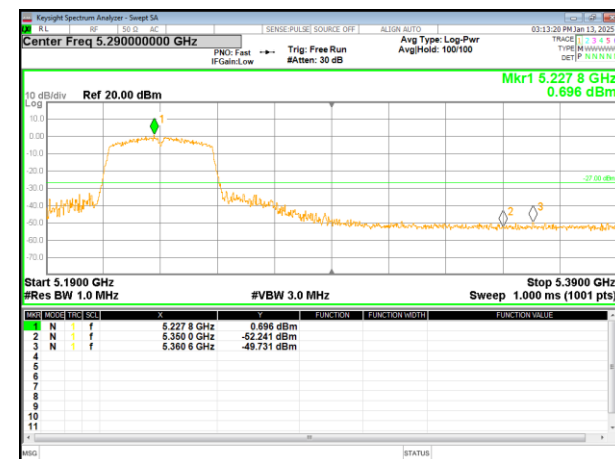
(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

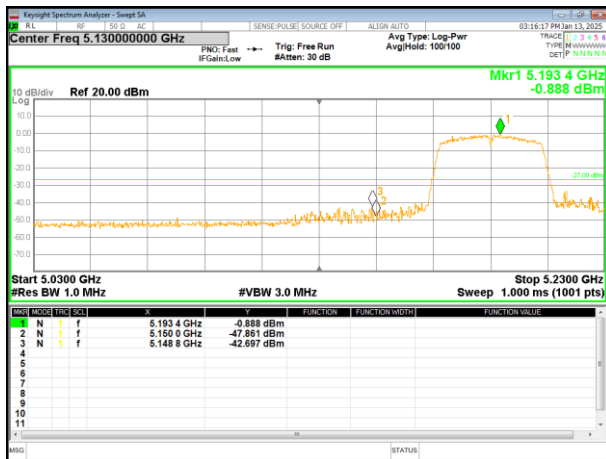


(802.11n40) Band Edge, Right Side

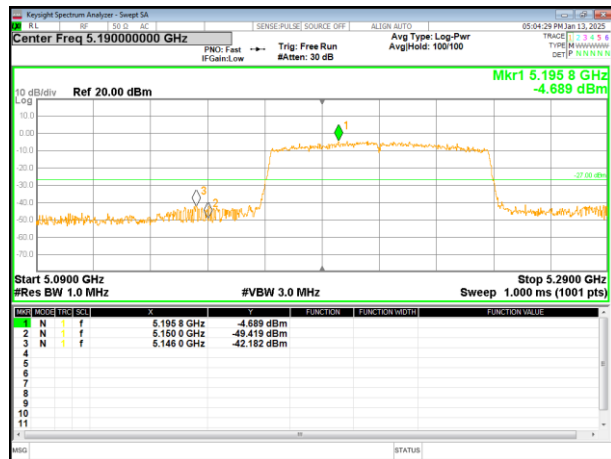


Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

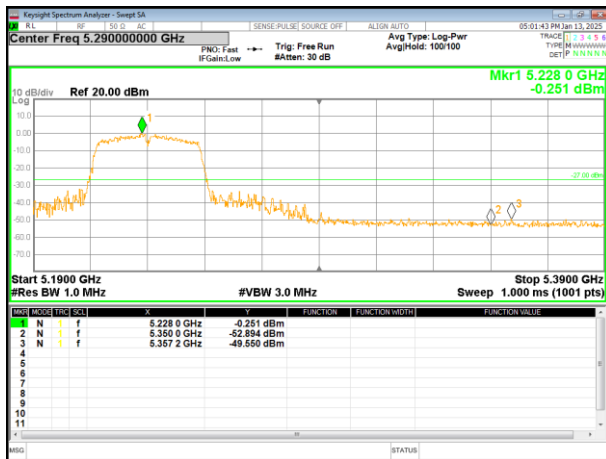
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge



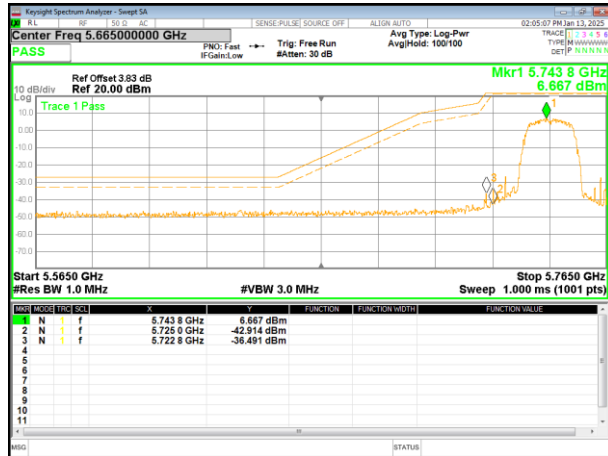
(802.11ac40) Band Edge, Right Side



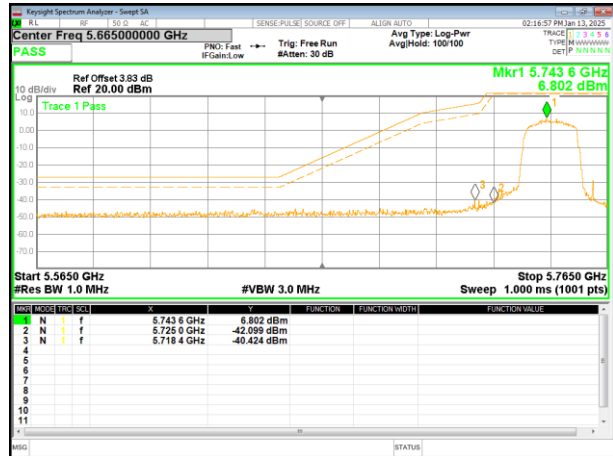
Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

5.745~5.825 GHz

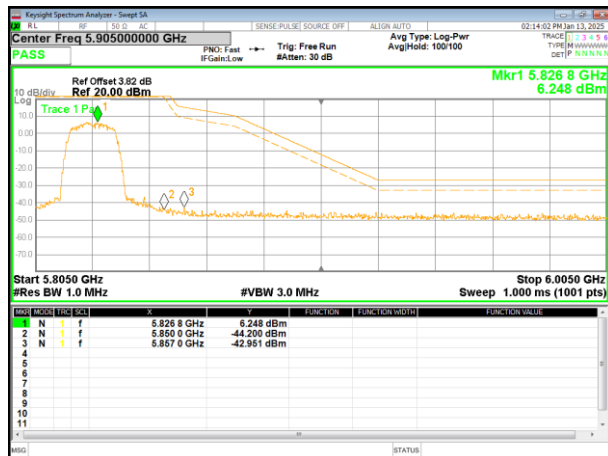
(802.11a) Band Edge, Left Side



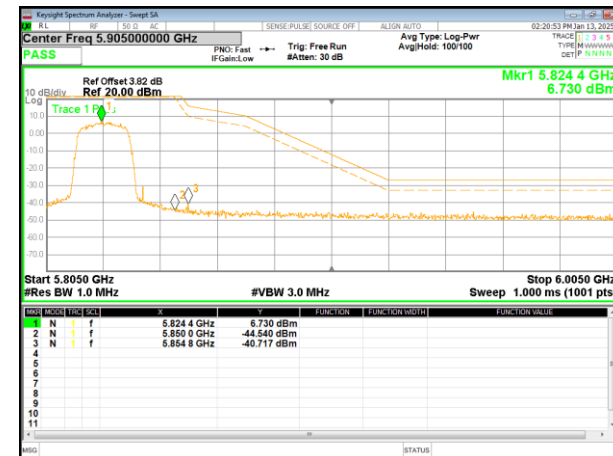
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

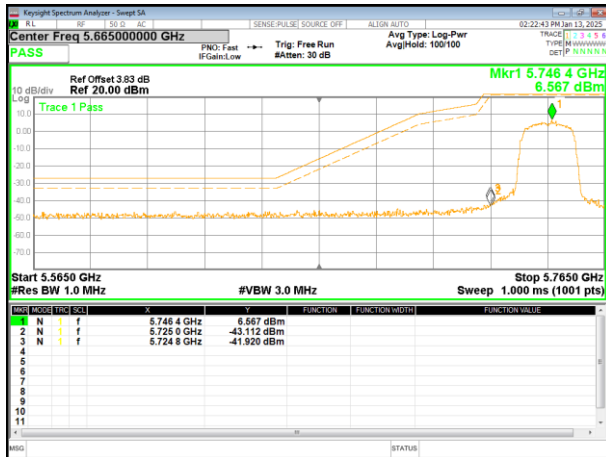


(802.11n20) Band Edge, Right Side

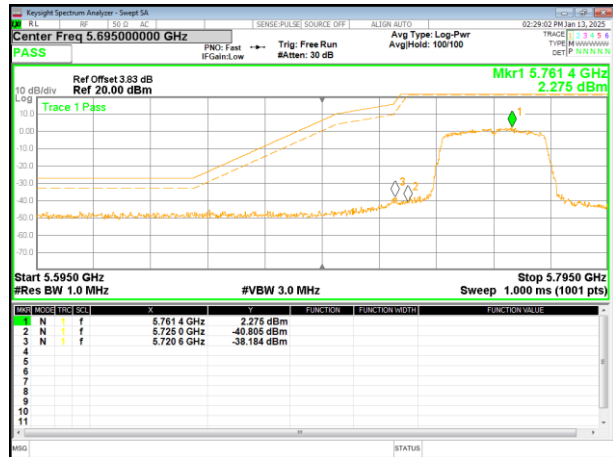


Remark: Antenna gain and cable loss data included in Offset.

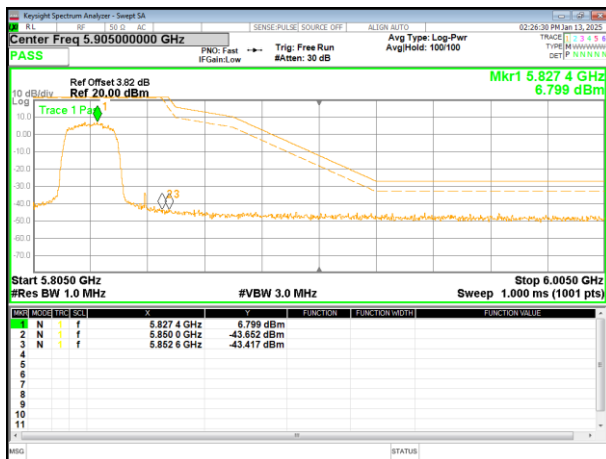
(802.11ac20) Band Edge, Left Side



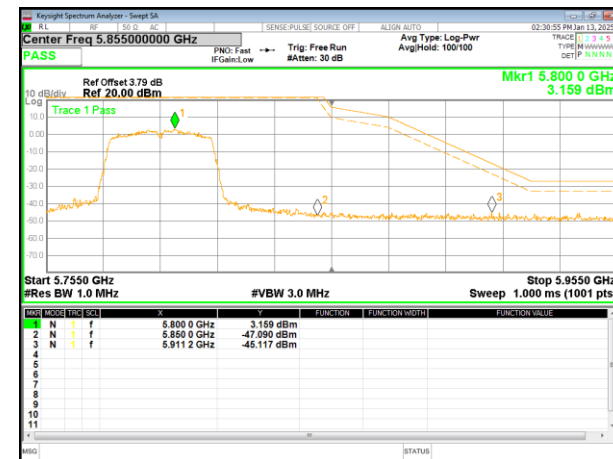
(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

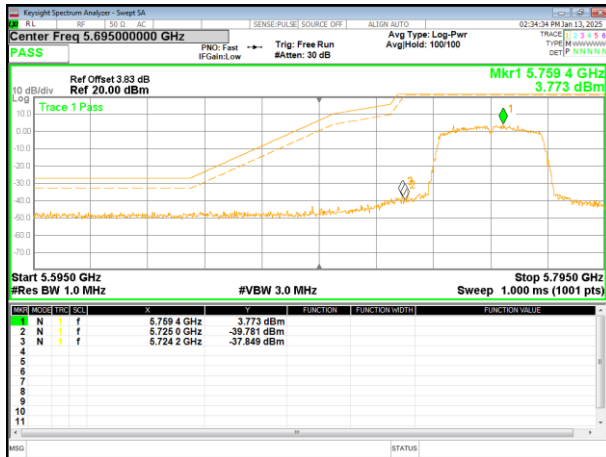


(802.11n40) Band Edge, Right Side

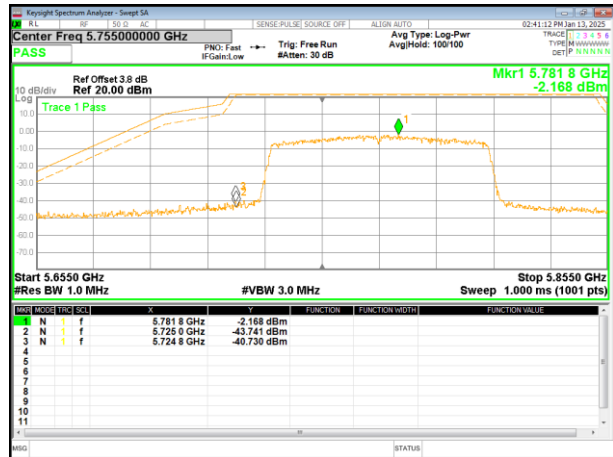


Remark: Antenna gain and cable loss data included in Offset.

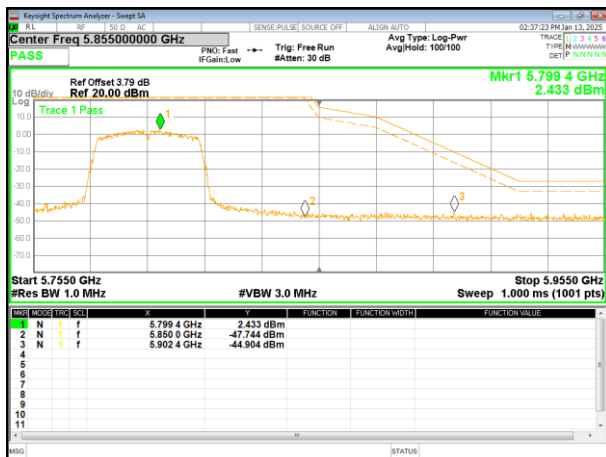
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge



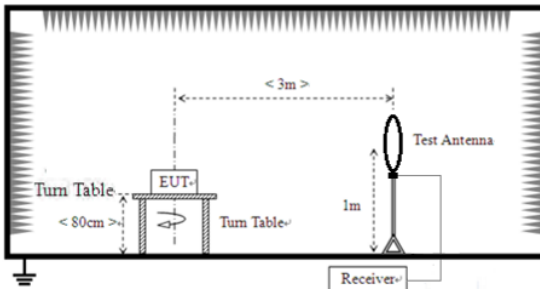
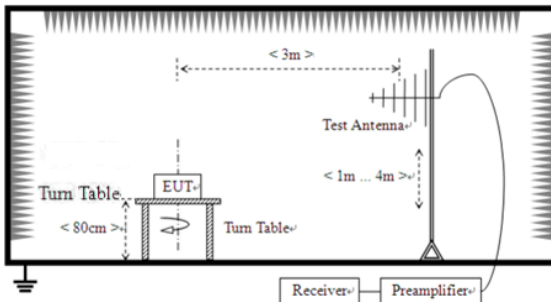
(802.11ac40) Band Edge, Right Side

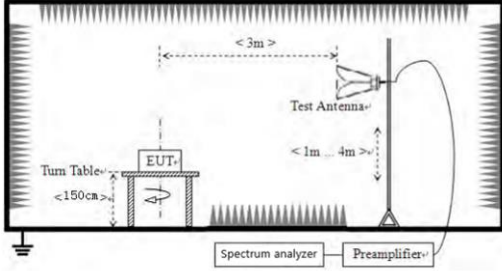


Remark: Antenna gain and cable loss data included in Offset.

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				
					
	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

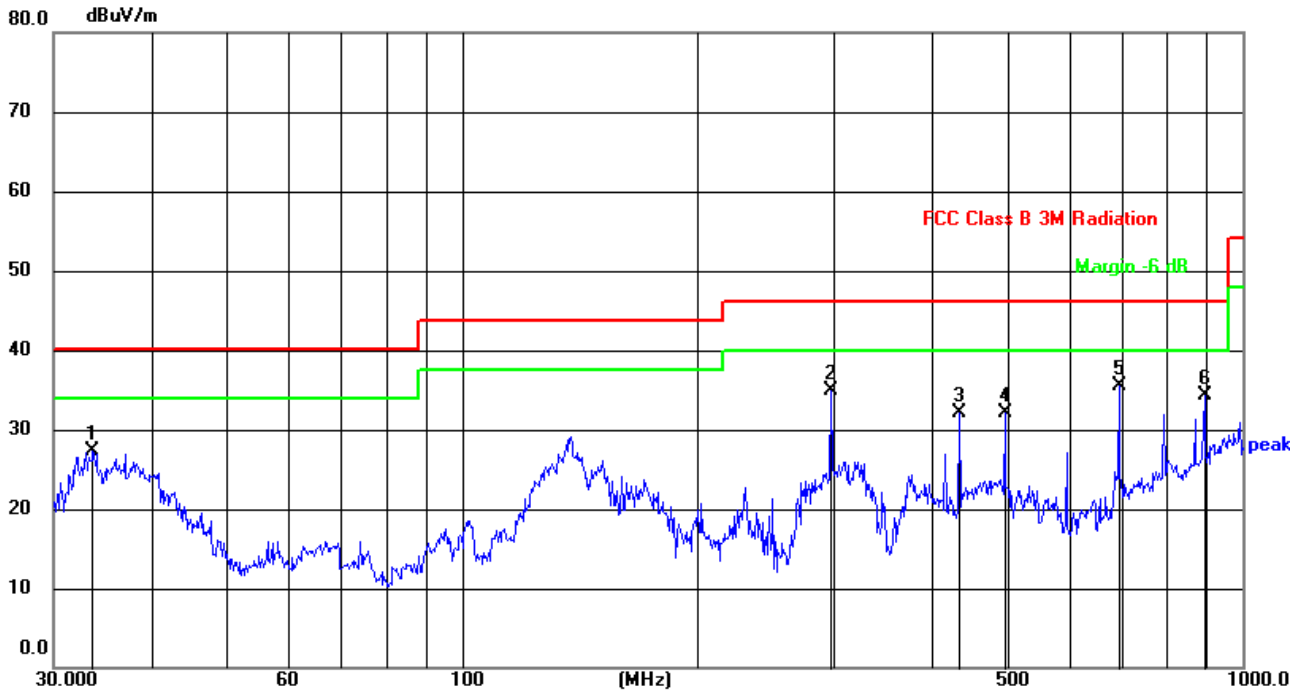
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Below 1GHz

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

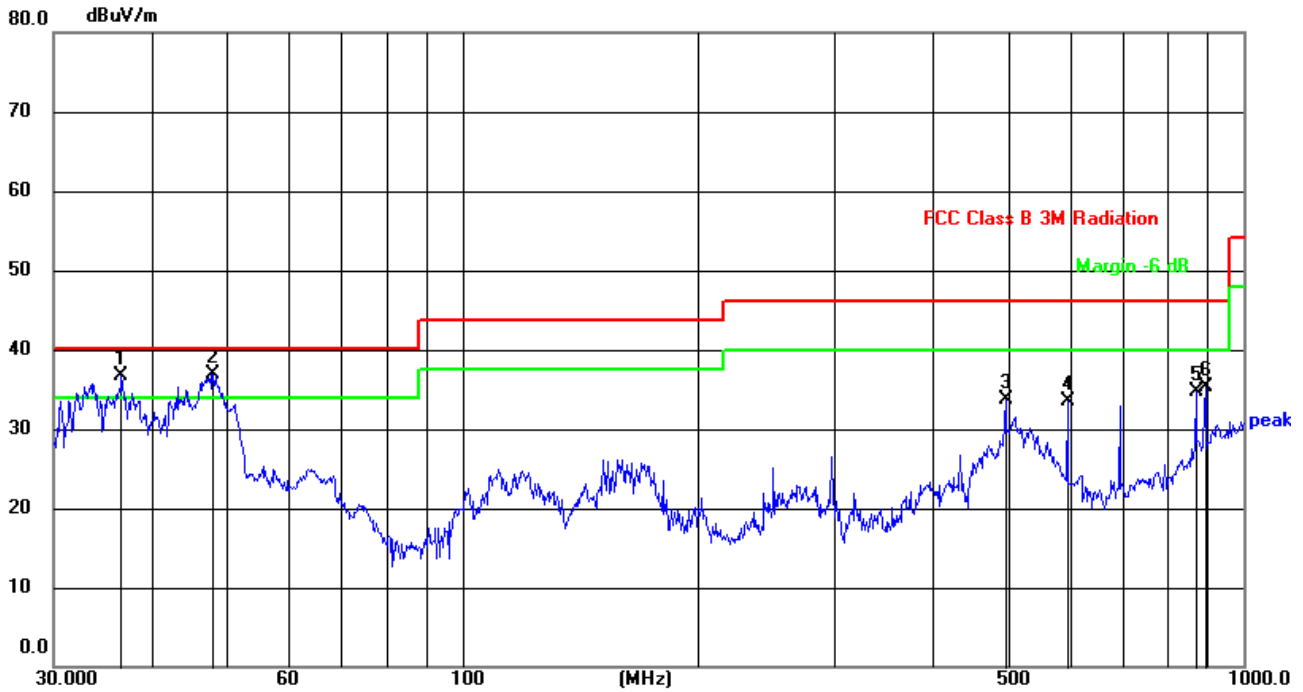
Temperature:	23.1°C	Relative Humidity:	39%
Pressure:	101.2kPa	Test Voltage :	AC120V/60Hz
Test Mode :	5.2G TX- 802.11a (5240MHz)		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	33.6802	49.34	-21.98	27.36	40.00	-12.64	QP
2	297.2238	55.26	-20.40	34.86	46.00	-11.14	QP
3	434.0649	48.20	-16.01	32.19	46.00	-13.81	QP
4	495.9343	46.52	-14.41	32.11	46.00	-13.89	QP
5	694.4174	44.83	-9.32	35.51	46.00	-10.49	QP
6	893.8564	39.85	-5.54	34.31	46.00	-11.69	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	36.6372	58.14	-21.46	36.68	40.00	-3.32	QP
2	47.9938	58.50	-21.56	36.94	40.00	-3.06	QP
3	495.9343	48.03	-14.41	33.62	46.00	-12.38	QP
4	595.1326	45.29	-11.86	33.43	46.00	-12.57	QP
5	869.1300	40.71	-5.95	34.76	46.00	-11.24	QP
6	893.8564	40.91	-5.54	35.37	46.00	-10.63	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:	23.1°C	Relative Humidity:	39%
Pressure:	101.2kPa	Test Voltage :	AC120V/60Hz
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	50.70	46.20	8.27	38.50	51.27	68.20	-16.93	PK
V	10360.00	40.23	46.20	8.27	38.50	40.80	54.00	-13.20	AV
V	15540.00	46.27	46.30	10.35	38.70	49.02	74.00	-24.98	PK
V	15540.00	36.03	46.30	10.35	38.70	38.78	54.00	-15.22	AV
V	20720.00	54.95	57.40	11.93	37.80	47.28	68.20	-20.92	PK
V	20720.00	45.25	57.40	11.93	37.80	37.58	54.00	-16.42	AV
V	25900.00	52.35	56.50	13.45	39.70	49.00	68.20	-19.20	PK
V	25900.00	43.24	56.50	13.45	39.70	39.89	54.00	-14.11	AV
V	31080.00	50.89	56.10	16.12	41.60	52.51	68.20	-15.69	PK
V	31080.00	43.15	56.10	16.12	41.60	44.77	54.00	-9.23	AV
V	36260.00	47.96	56.80	18.29	42.80	52.25	68.20	-15.95	PK
V	36260.00	40.76	56.80	18.29	42.80	45.05	54.00	-8.95	AV
H	10360.00	49.54	46.20	8.27	38.50	50.11	68.20	-18.09	PK
H	10360.00	37.97	46.20	8.27	38.50	38.54	54.00	-15.46	AV
H	15540.00	45.28	46.30	10.35	38.70	48.03	74.00	-25.97	PK
H	15540.00	34.16	46.30	10.35	38.70	36.91	54.00	-17.09	AV
H	20720.00	57.38	57.40	11.93	37.80	49.71	68.20	-18.50	PK
H	20720.00	46.28	57.40	11.93	37.80	38.61	54.00	-15.39	AV
H	25900.00	53.87	56.50	13.45	39.70	50.52	68.20	-17.68	PK
H	25900.00	43.27	56.50	13.45	39.70	39.92	54.00	-14.08	AV
H	31080.00	50.99	56.10	16.12	41.60	52.61	68.20	-15.59	PK
H	31080.00	43.08	56.10	16.12	41.60	44.70	54.00	-9.30	AV
H	36260.00	46.91	56.80	18.29	42.80	51.20	68.20	-17.00	PK
H	36260.00	41.64	56.80	18.29	42.80	45.93	54.00	-8.07	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	48.11	46.20	8.27	38.50	48.68	68.20	-19.52	PK
V	10400.00	38.89	46.20	8.27	38.50	39.46	54.00	-14.54	AV
V	15600.00	46.16	46.30	10.35	38.40	48.61	74.00	-25.40	PK
V	15600.00	37.87	46.30	10.35	38.40	40.32	54.00	-13.68	AV
V	20800.00	56.26	57.40	11.93	37.80	48.59	68.20	-19.61	PK
V	20800.00	46.63	57.40	11.93	37.80	38.96	54.00	-15.04	AV
V	26000.00	51.91	56.50	13.45	39.80	48.66	68.20	-19.54	PK
V	26000.00	43.67	56.50	13.45	39.80	40.42	54.00	-13.58	AV
V	31200.00	50.97	56.10	16.12	41.60	52.59	68.20	-15.61	PK
V	31200.00	44.14	56.10	16.12	41.60	45.76	54.00	-8.24	AV
V	36400.00	47.25	56.80	18.29	42.80	51.54	68.20	-16.66	PK
V	36400.00	40.58	56.80	18.29	42.80	44.87	54.00	-9.13	AV
H	10400.00	48.73	46.20	8.27	38.50	49.30	68.20	-18.90	PK
H	10400.00	39.47	46.20	8.27	38.50	40.04	54.00	-13.96	AV
H	15600.00	46.54	46.30	10.35	38.40	48.99	74.00	-25.01	PK
H	15600.00	37.95	46.30	10.35	38.40	40.40	54.00	-13.60	AV
H	20800.00	54.89	57.40	11.93	37.80	47.22	68.20	-20.98	PK
H	20800.00	44.32	57.40	11.93	37.80	36.65	54.00	-17.35	AV
H	26000.00	51.29	56.50	13.45	39.80	48.04	68.20	-20.16	PK
H	26000.00	42.74	56.50	13.45	39.80	39.49	54.00	-14.51	AV
H	31200.00	50.17	56.10	16.12	41.60	51.79	68.20	-16.41	PK
H	31200.00	42.93	56.10	16.12	41.60	44.55	54.00	-9.45	AV
H	36400.00	47.38	56.80	18.29	42.80	51.67	68.20	-16.53	PK
H	36400.00	41.42	56.80	18.29	42.80	45.71	54.00	-8.29	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	45.15	46.20	8.27	38.60	45.82	68.20	-22.38	PK
V	10480.00	35.14	46.20	8.27	38.60	35.81	54.00	-18.19	AV
V	15720.00	43.51	46.30	10.35	38.40	45.96	74.00	-28.04	PK
V	15720.00	32.82	46.30	10.35	38.40	35.27	54.00	-18.73	AV
V	20960.00	52.55	57.40	11.93	37.50	44.58	68.20	-23.62	PK
V	20960.00	44.16	57.40	11.93	37.50	36.19	54.00	-17.81	AV
V	26200.00	48.65	56.50	13.45	40.10	45.70	68.20	-22.50	PK
V	26200.00	39.12	56.50	13.45	40.10	36.17	54.00	-17.83	AV
V	31440.00	50.92	56.10	16.12	41.30	52.24	68.20	-15.96	PK
V	31440.00	43.83	56.10	16.12	41.30	45.15	54.00	-8.85	AV
V	36680.00	46.10	56.80	18.29	43.10	50.69	68.20	-17.51	PK
V	36680.00	40.56	56.80	18.29	43.10	45.15	54.00	-8.85	AV
H	10480.00	44.97	46.20	8.27	38.60	45.64	68.20	-22.56	PK
H	10480.00	35.21	46.20	8.27	38.60	35.88	54.00	-18.12	AV
H	15720.00	43.15	46.30	10.35	38.40	45.60	74.00	-28.40	PK
H	15720.00	32.88	46.30	10.35	38.40	35.33	54.00	-18.67	AV
H	20960.00	53.00	57.40	11.93	37.50	45.03	68.20	-23.17	PK
H	20960.00	43.72	57.40	11.93	37.50	35.75	54.00	-18.25	AV
H	26200.00	47.85	56.50	13.45	40.10	44.90	68.20	-23.30	PK
H	26200.00	38.15	56.50	13.45	40.10	35.20	54.00	-18.80	AV
H	31440.00	50.14	56.10	16.12	41.30	51.46	68.20	-16.74	PK
H	31440.00	44.09	56.10	16.12	41.30	45.41	54.00	-8.59	AV
H	36680.00	47.21	56.80	18.29	43.10	51.80	68.20	-16.40	PK
H	36680.00	41.33	56.80	18.29	43.10	45.92	54.00	-8.08	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:	23.1°C	Relative Humidity:	39%
Pressure:	101.2kPa	Test Voltage :	AC120V/60Hz
Test Mode :	5.8G TX- 802.11n20		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenn Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Typ
Low Channel:5745MHz									
V	11490.00	49.12	46.10	8.77	39.10	50.89	74.00	-23.11	PK
V	11490.00	36.68	46.10	8.77	39.10	38.45	54.00	-15.55	AV
V	17235.00	43.17	47.60	11.10	38.70	45.37	68.20	-22.83	PK
V	17235.00	35.32	47.60	11.10	38.70	37.52	54.00	-16.48	AV
V	22980.00	56.85	56.90	12.73	37.70	50.38	74.00	-23.62	PK
V	22980.00	43.43	56.90	12.73	37.70	36.96	54.00	-17.04	AV
V	28725.00	50.25	55.60	14.25	40.30	49.20	68.20	-19.00	PK
V	28725.00	43.41	55.60	14.25	40.30	42.36	54.00	-11.64	AV
V	34470.00	49.91	55.90	17.26	42.10	53.37	68.20	-14.83	PK
V	34470.00	41.81	55.90	17.26	42.10	45.27	54.00	-8.73	AV
H	11490.00	47.83	46.10	8.77	39.10	49.60	74.00	-24.40	PK
H	11490.00	36.36	46.10	8.77	39.10	38.13	54.00	-15.87	AV
H	17235.00	42.19	47.60	11.10	38.70	44.39	68.20	-23.81	PK
H	17235.00	35.61	47.60	11.10	38.70	37.81	54.00	-16.19	AV
H	22980.00	58.53	56.90	12.73	37.70	52.06	74.00	-21.94	PK
H	22980.00	48.59	56.90	12.73	37.70	42.12	54.00	-11.88	AV
H	28725.00	49.47	55.60	14.25	40.30	48.42	68.20	-19.78	PK
H	28725.00	43.79	55.60	14.25	40.30	42.74	54.00	-11.26	AV
H	34470.00	49.06	55.90	17.26	42.10	52.52	68.20	-15.68	PK
H	34470.00	42.05	55.90	17.26	42.10	45.51	54.00	-8.49	AV

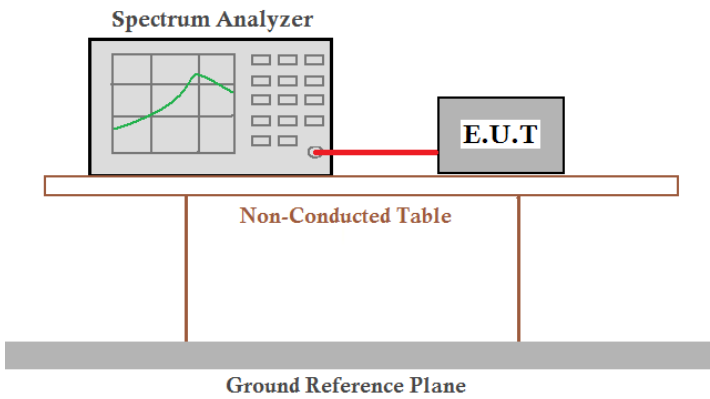
Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
Middle Channel:5785MHz									
V	11570.00	48.56	46.10	8.77	39.10	50.33	74.00	-23.67	PK
V	11570.00	36.88	46.10	8.77	39.10	38.65	54.00	-15.35	AV
V	17355.00	42.81	47.60	11.10	38.70	45.01	68.20	-23.19	PK
V	17355.00	37.06	47.60	11.10	38.70	39.26	54.00	-14.74	AV
V	23140.00	58.79	56.90	12.73	37.70	52.32	74.00	-21.68	PK
V	23140.00	47.52	56.90	12.73	37.70	41.05	54.00	-12.95	AV
V	28925.00	47.09	55.60	14.25	40.30	46.04	68.20	-22.16	PK
V	28925.00	43.05	55.60	14.25	40.30	42.00	54.00	-12.00	AV
V	34710.00	48.62	55.90	17.26	42.40	52.38	68.20	-15.82	PK
V	34710.00	42.39	55.90	17.26	42.40	46.15	54.00	-7.85	AV
H	11570.00	49.16	46.10	8.77	39.10	50.93	74.00	-23.07	PK
H	11570.00	37.79	46.10	8.77	39.10	39.56	54.00	-14.44	AV
H	17355.00	43.76	47.60	11.10	38.70	45.96	68.20	-22.24	PK
H	17355.00	36.80	47.60	11.10	38.70	39.00	54.00	-15.00	AV
H	23140.00	60.09	56.90	12.73	37.70	53.62	74.00	-20.38	PK
H	23140.00	48.38	56.90	12.73	37.70	41.91	54.00	-12.09	AV
H	28925.00	49.26	55.60	14.25	40.30	48.21	68.20	-19.99	PK
H	28925.00	42.70	55.60	14.25	40.30	41.65	54.00	-12.35	AV
H	34710.00	47.04	55.90	17.26	42.40	50.80	68.20	-17.40	PK
H	34710.00	42.30	55.90	17.26	42.40	46.06	54.00	-7.94	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	48.82	46.10	8.77	39.10	50.59	74.00	-23.41	PK
V	11650.00	36.68	46.10	8.77	39.10	38.45	54.00	-15.55	AV
V	17475.00	43.61	47.90	11.23	38.90	45.84	68.20	-22.37	PK
V	17475.00	38.48	47.90	11.23	38.90	40.71	54.00	-13.29	AV
V	23300.00	52.89	57.10	12.73	37.80	46.32	68.20	-21.88	PK
V	23300.00	47.60	57.10	12.73	37.80	41.03	54.00	-12.97	AV
V	29125.00	48.87	55.80	14.25	40.50	47.82	68.20	-20.38	PK
V	29125.00	43.94	55.80	14.25	40.50	42.89	54.00	-11.11	AV
V	34950.00	47.86	56.30	17.91	42.50	51.97	68.20	-16.23	PK
V	34950.00	42.02	56.30	17.91	42.50	46.13	54.00	-7.87	AV
H	11650.00	49.47	46.10	8.77	39.10	51.24	74.00	-22.76	PK
H	11650.00	35.27	46.10	8.77	39.10	37.04	54.00	-16.96	AV
H	17475.00	43.47	47.90	11.23	38.90	45.70	68.20	-22.50	PK
H	17475.00	38.24	47.90	11.23	38.90	40.47	54.00	-13.53	AV
H	23300.00	54.22	57.10	12.73	37.80	47.65	68.20	-20.55	PK
H	23300.00	48.38	57.10	12.73	37.80	41.81	54.00	-12.19	AV
H	29125.00	50.32	55.80	14.25	40.50	49.27	68.20	-18.93	PK
H	29125.00	44.00	55.80	14.25	40.50	42.95	54.00	-11.05	AV
H	34950.00	47.56	56.30	17.91	42.50	51.67	68.20	-16.53	PK
H	34950.00	41.86	56.30	17.91	42.50	45.97	54.00	-8.03	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.: 23.1°C	Humid.: 39%RH
Test voltage:	AC120/60Hz	
Test results:	Pass	

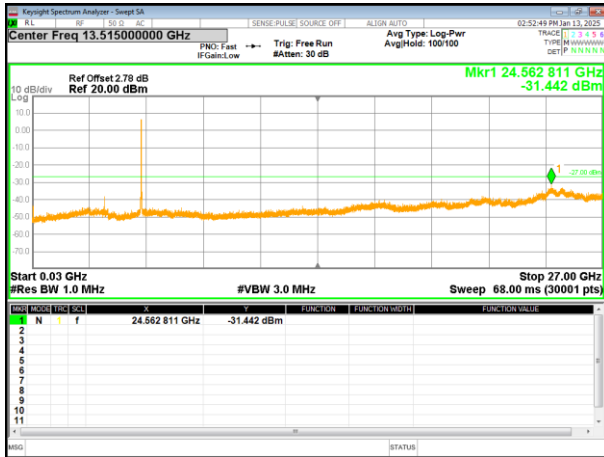
Remark:

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.

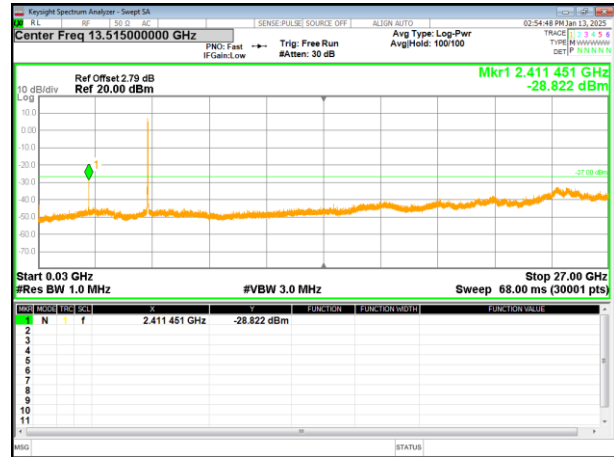
5180-5240MHz

Test Plot

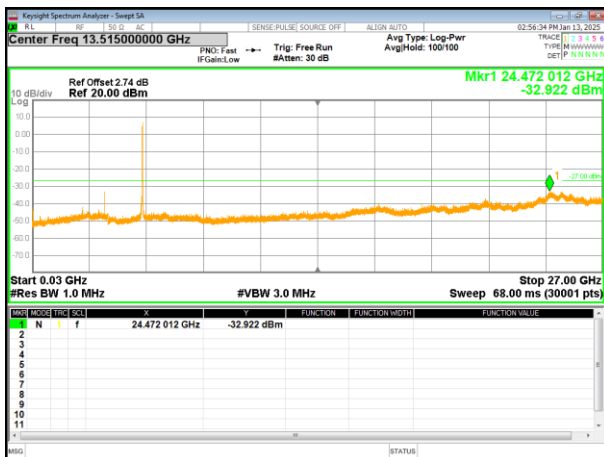
802.11a on channel 36



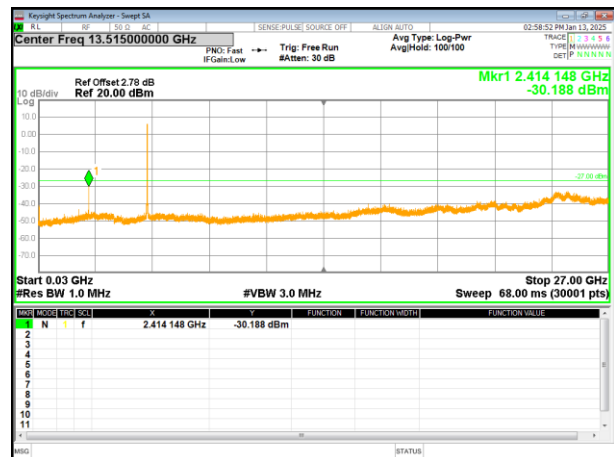
802.11a on channel 40



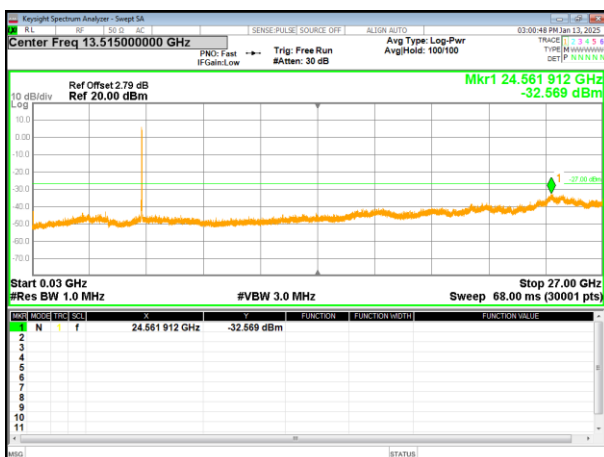
802.11a on channel 48



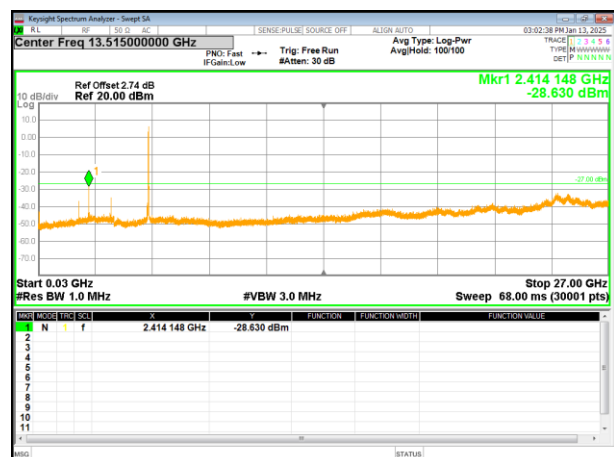
802.11n20 on channel 36



802.11n20 on channel 40

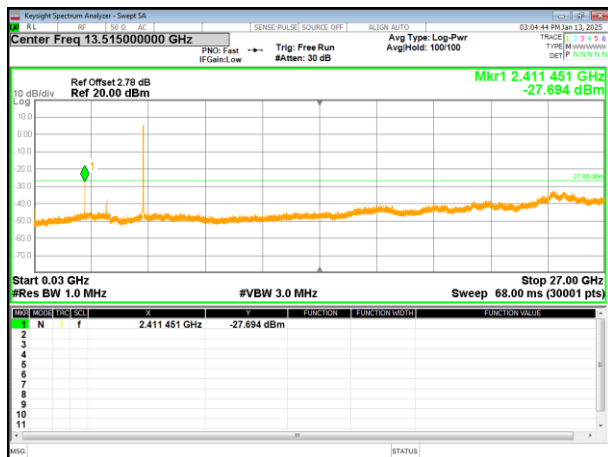


802.11n20 on channel 48

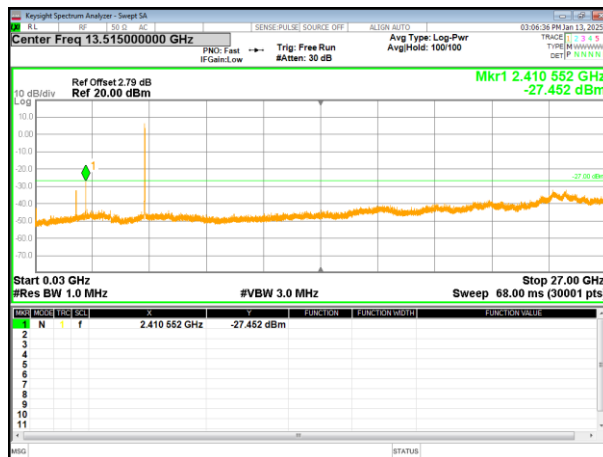


Test Plot

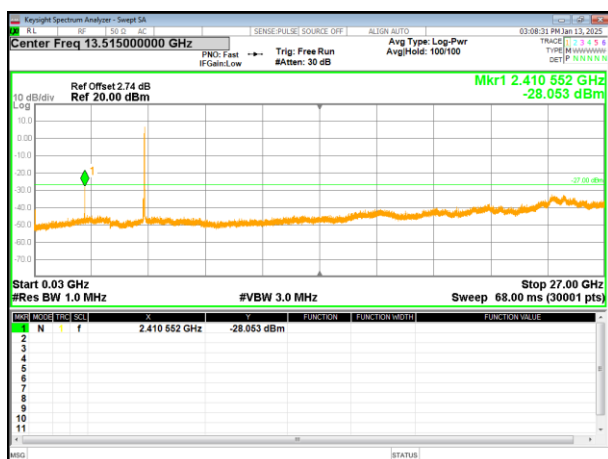
802.11ac20 on channel 36



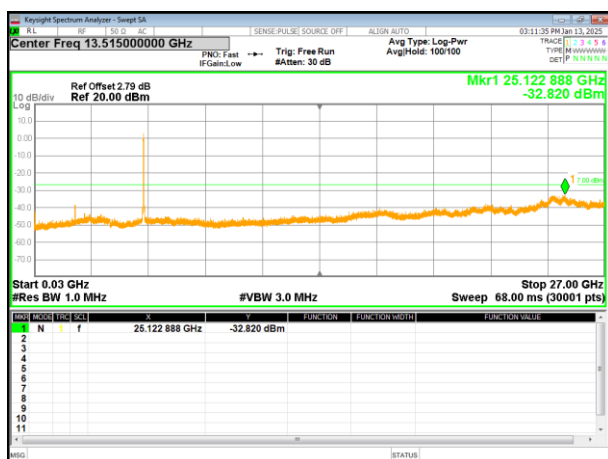
802.11ac20 on channel 40



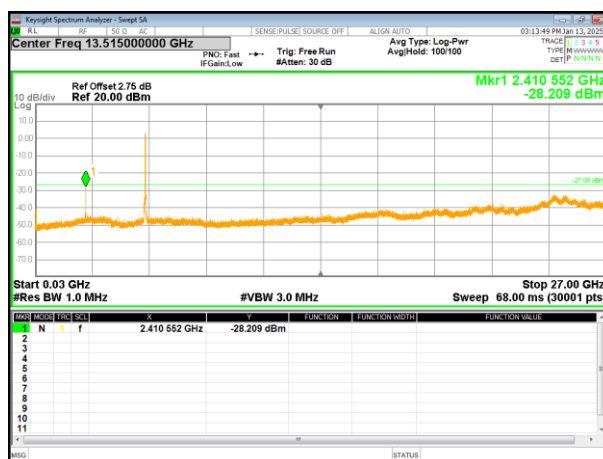
802.11ac20 on channel 48



802.11n40 on channel 38

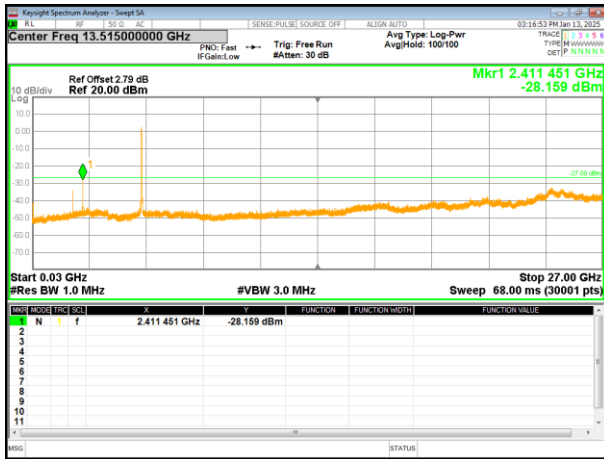


802.11n40 on channel 46

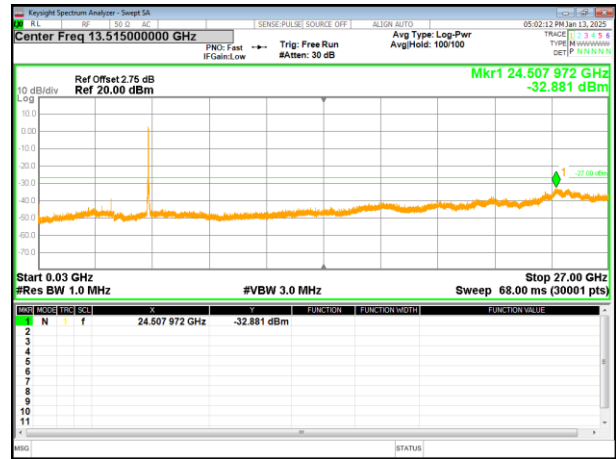


Test Plot

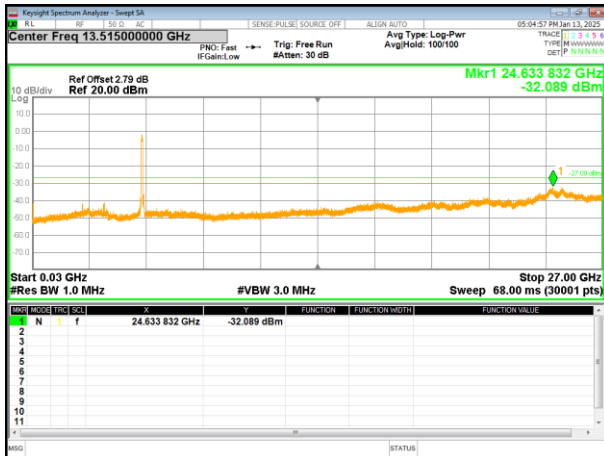
802.11ac40 on channel 38



802.11ac40 on channel 46



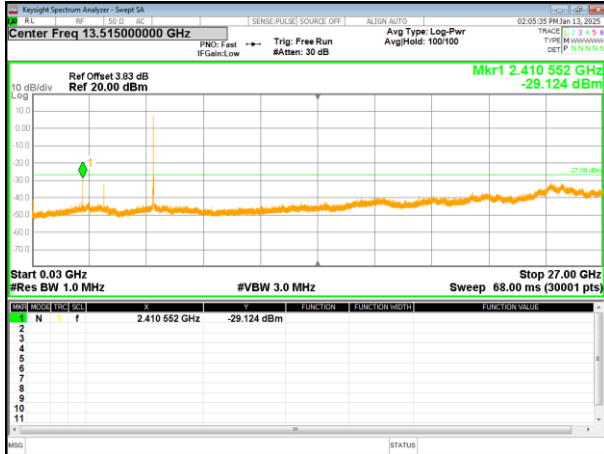
802.11ac80 on channel 42



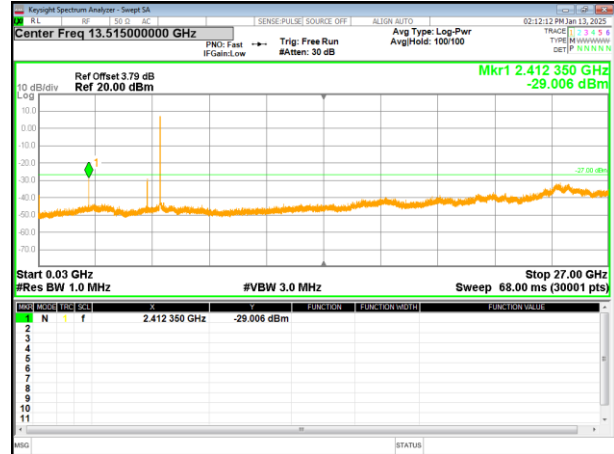
5745-5825MHz

Test Plot

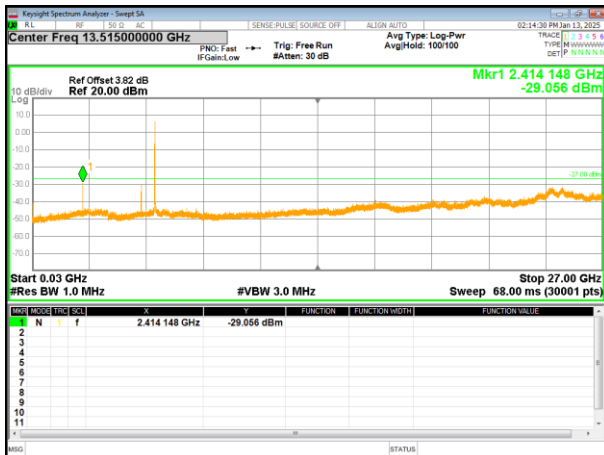
802.11a on channel 149



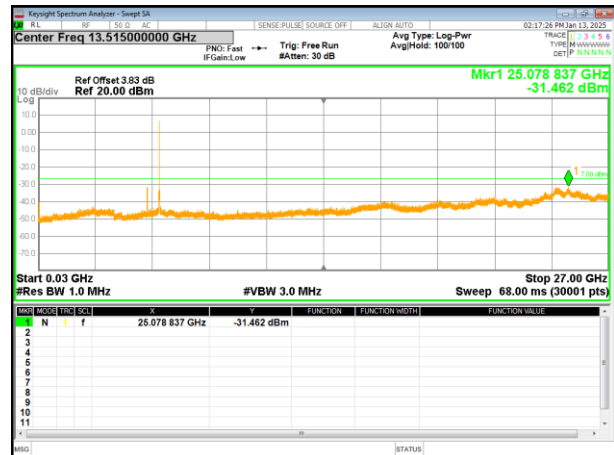
802.11a on channel 157



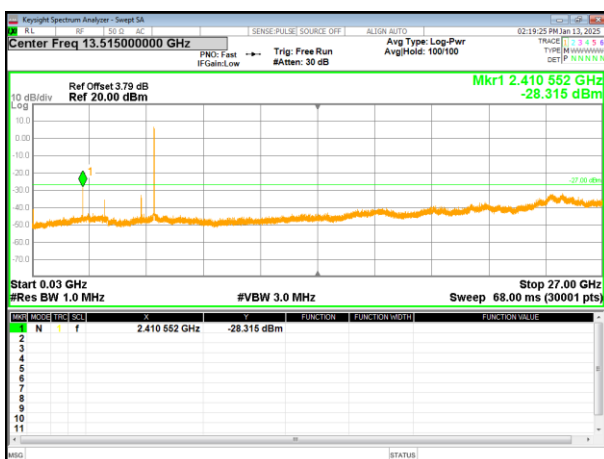
802.11a on channel 165



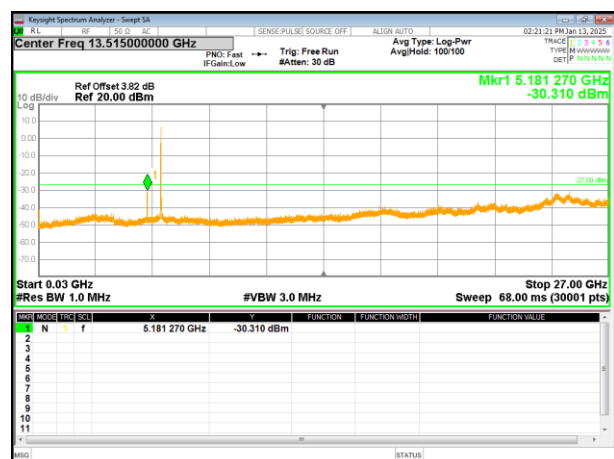
802.11n20 on channel 149



802.11n20 on channel 157

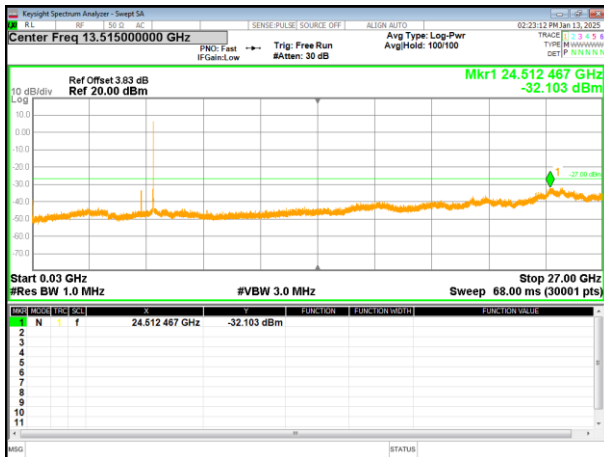


802.11n20 on channel 165

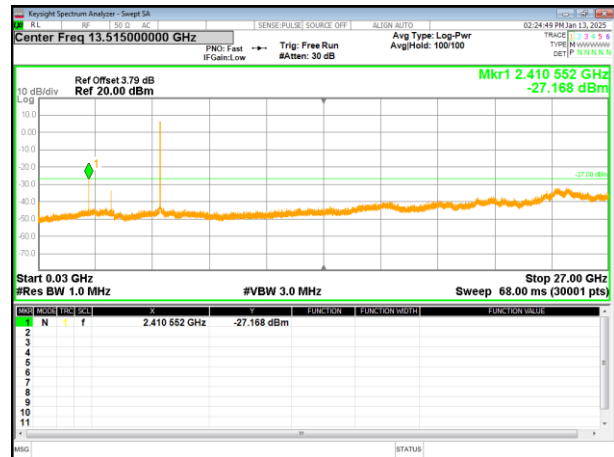


Test Plot

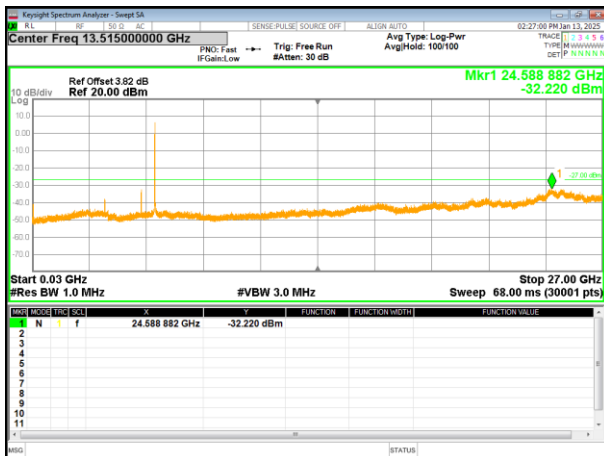
802.11ac20 on channel 149



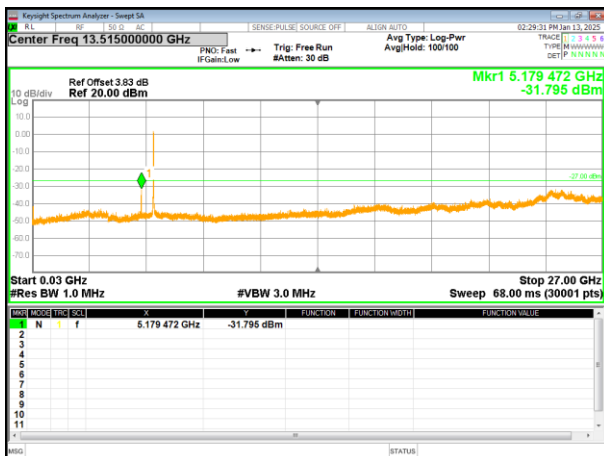
802.11ac20 on channel 157



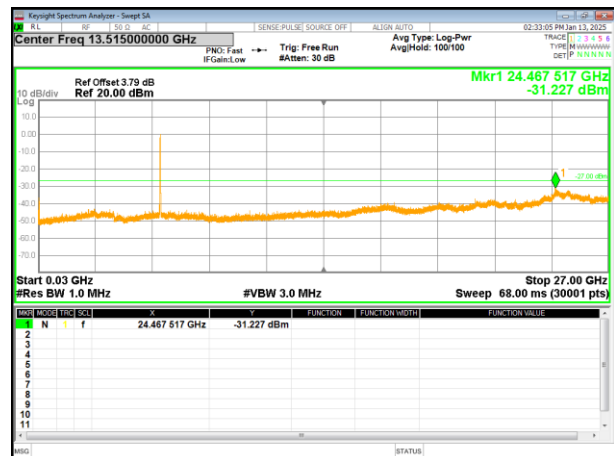
802.11ac20 on channel 165



802.11n40 on channel 151

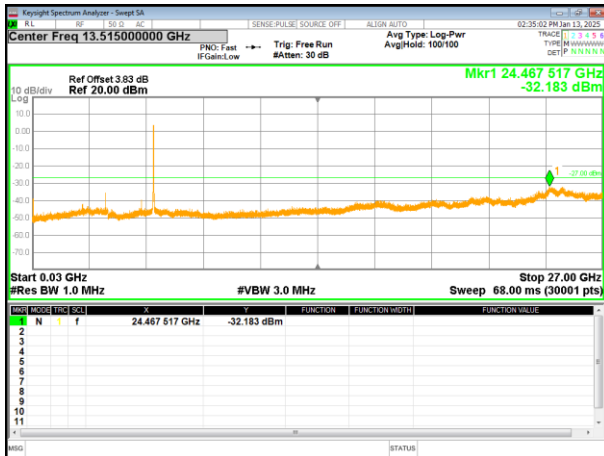


802.11n40 on channel 159

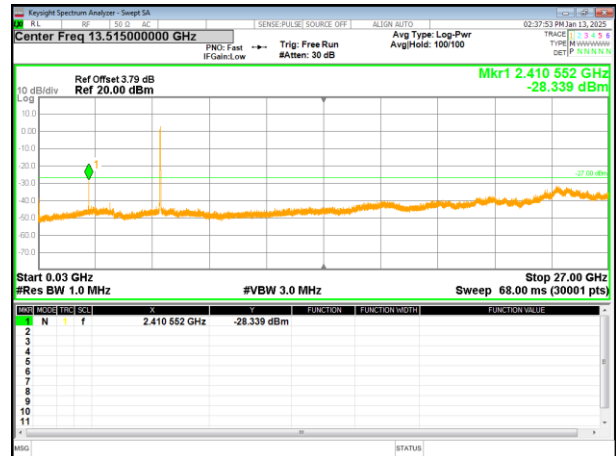


Test Plot

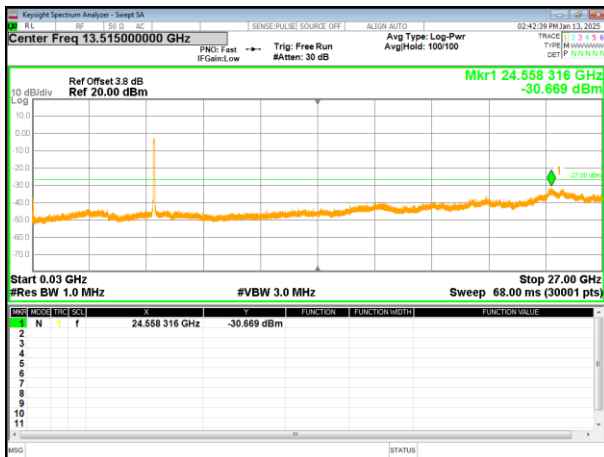
802.11ac40 on channel 151



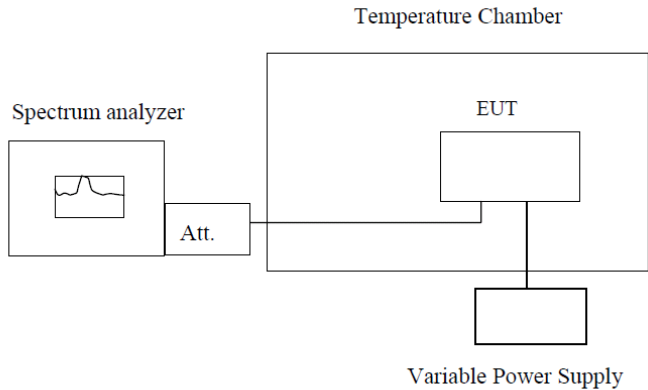
802.11ac40 on channel 159



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:AC120V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5180	5179.989	5180.040	5179.797	5179.889
	5190	5189.985	5199.914	5199.671	5189.900
	5200	5199.980	5199.939	5199.696	5199.891
	5210	5209.986	5209.917	5209.673	5209.892
	5220	5219.981	5219.932	5219.688	5219.898
	5230	5229.979	5229.925	5229.679	5229.916
	5240	5239.952	5239.933	5239.687	5239.901
-20	5180	5179.984	5179.975	5179.983	5179.946
	5190	5189.975	5180.081	5189.984	5189.945
	5200	5199.983	5199.956	5199.975	5199.939
	5210	5209.975	5209.981	5299.982	5209.929
	5220	5219.996	5219.959	5219.975	5219.939
	5230	5229.974	5229.974	5229.995	5299.937
	5240	5239.992	5239.967	5239.973	5239.941
-10	5180	5179.989	5179.925	5179.661	5179.889
	5190	5189.985	5189.920	5189.672	5189.900
	5200	5199.980	5199.915	5199.662	5199.891
	5210	5209.986	5209.921	5209.662	5209.892
	5220	5219.981	5219.916	5219.669	5219.898
	5230	5229.979	5229.914	5229.685	5229.916
	5240	5239.952	5239.887	5239.657	5239.888
0	5180	5179.766	5179.904	5179.673	5179.900
	5190	5199.938	5189.914	5189.664	5189.901
	5200	5199.936	5199.905	5199.671	5199.892
	5210	5209.991	5209.906	5209.662	5299.899
	5220	5219.980	5219.913	5219.683	5219.891
	5230	5229.967	5229.931	5229.659	5229.912
	5240	5239.984	5239.903	5239.677	5239.890
10	5180	5179.968	5179.916	5179.682	5179.901
	5190	5189.979	5189.906	5189.678	5189.892
	5200	5199.970	5199.914	5199.672	5199.900
	5210	5209.971	5209.906	5209.677	5209.892
	5220	5219.978	5219.927	5219.672	5219.912
	5230	5229.996	5229.905	5229.668	5229.890
	5240	5239.981	5239.923	5239.641	5239.908
20	5180	5179.770	5179.945	5179.984	5179.936
	5190	5199.942	5189.956	5189.975	5189.937

	5200	5199.940	5199.947	5199.983	5199.928
	5210	5209.995	5209.948	5209.975	5299.936
	5220	5219.984	5219.955	5219.996	5219.928
	5230	5229.971	5229.973	5229.973	5229.949
	5240	5239.988	5239.945	5239.991	5239.927
30	5180	5179.945	5179.956	5179.972	5180.061
	5190	5189.975	5189.957	5189.983	5199.936
	5200	5200.000	5199.948	5199.974	5199.961
	5210	5209.984	5299.956	5209.975	5209.939
	5220	5219.975	5219.948	5219.982	5219.954
	5230	5230.003	5229.969	5229.999	5229.947
	5240	5239.991	5239.947	5239.971	5239.955
40	5180	5179.770	5179.945	5179.984	5179.936
	5190	5199.942	5189.956	5189.975	5189.937
	5200	5199.940	5199.947	5199.983	5199.928
	5210	5209.995	5209.948	5209.975	5299.936
	5220	5219.984	5219.955	5219.996	5219.928
	5230	5229.971	5229.973	5229.973	5229.949
	5240	5239.988	5239.945	5239.991	5239.927
50	5180	5179.972	5179.957	5179.984	5179.946
	5190	5189.983	5189.948	5189.975	5179.946
	5200	5199.974	5199.956	5199.983	5189.942
	5210	5209.975	5209.948	5209.975	5199.937
	5220	5219.982	5219.969	5219.996	5209.943
	5230	5230.000	5229.947	5229.973	5219.938
	5240	5239.972	5239.965	5239.991	5229.936

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)
AC 102V	5180	5179.978	5179.945	5179.993	5179.942
	5190	5189.972	5189.956	5189.989	5189.928
	5200	5199.985	5199.947	5199.984	5199.929
	5210	5209.989	5209.948	5209.990	5209.951
	5220	5219.975	5219.955	5219.985	5219.937
	5230	5229.968	5229.973	5229.982	5229.947
	5240	5180.108	5179.961	5179.984	5179.925
AC 120V	5180	5199.983	5189.955	5189.975	5189.936
	5190	5200.008	5199.955	5199.983	5199.927
	5200	5209.986	5209.967	5209.975	5209.928
	5210	5220.001	5219.958	5219.996	5219.935
	5220	5229.994	5299.961	5229.973	5229.953
	5230	5240.002	5239.958	5239.991	5239.938
	5240	5180.108	5179.961	5179.984	5179.925
AC 138V	5180	5179.983	5179.957	5179.983	5179.936
	5190	5189.984	5189.948	5189.984	5189.937
	5200	5199.975	5199.956	5199.975	5199.928
	5210	5299.984	5209.948	5299.982	5299.936
	5220	5219.975	5219.969	5219.975	5219.928
	5230	5229.996	5229.947	5229.995	5229.949
	5240	5239.974	5239.965	5239.973	5239.927

Frequency stability versus Temp.					
Power Supply: AC120V					
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	5744.965	5744.946	5744.974	5744.923
	5755	5754.982	5754.953	5754.991	5754.948
	5775	5774.981	5774.945	5774.992	5774.929
	5785	5784.984	5784.937	5784.974	5784.938
	5795	5794.995	5794.944	5794.992	5794.936
	5825	5824.976	5824.873	5824.989	5824.946
-20	5745	5744.965	5744.957	5744.969	5744.939
	5755	5754.982	5754.959	5754.994	5754.953
	5775	5774.981	5774.962	5774.975	5774.938
	5785	5784.984	5784.954	5784.984	5784.925
	5795	5794.991	5794.945	5794.982	5794.919
	5825	5824.976	5824.954	5824.992	5824.953
-10	5745	5744.986	5744.970	5744.985	5744.928
	5755	5755.001	5754.943	5754.999	5754.947
	5775	5774.986	5774.966	5774.984	5774.927
	5785	5784.973	5784.966	5784.971	5784.954
	5795	5794.967	5794.957	5794.965	5794.946
	5825	5825.001	5824.972	5824.999	5824.955
0	5745	5744.969	5744.946	5744.975	5744.928
	5755	5754.980	5754.953	5754.982	5754.917
	5775	5775.001	5774.945	5774.999	5774.928
	5785	5784.977	5784.937	5784.975	5784.935
	5795	5794.973	5794.944	5794.971	5794.953
	5825	5824.971	5824.873	5824.974	5824.945
10	5745	5744.966	5744.957	5744.969	5744.939
	5755	5754.982	5754.959	5754.994	5754.953
	5775	5774.981	5774.962	5774.975	5774.938
	5785	5784.984	5784.954	5784.984	5784.925
	5795	5794.994	5794.945	5794.982	5794.919
	5825	5824.976	5824.954	5824.992	5824.953
20	5745	5745.045	5744.947	5744.985	5744.559
	5755	5755.003	5754.954	5754.987	5754.942
	5775	5774.999	5774.971	5774.990	5774.943
	5785	5784.983	5784.947	5784.982	5784.946
	5795	5794.972	5794.943	5794.973	5794.929
	5825	5824.907	5824.945	5824.982	5824.925
30	5745	5744.966	5744.957	5744.969	5744.939
	5755	5754.982	5754.959	5754.994	5754.953
	5775	5774.981	5774.962	5774.975	5774.938
	5785	5784.984	5784.954	5784.984	5784.925
	5795	5794.994	5794.945	5794.982	5794.919
	5825	5824.976	5824.954	5824.992	5824.953
40	5745	5745.045	5744.947	5744.985	5744.559
	5755	5755.003	5754.954	5754.987	5754.942
	5775	5774.999	5774.971	5774.990	5774.943
	5785	5784.983	5784.947	5784.982	5784.946

50	5795	5794.995	5794.944	5794.992	5794.936
	5825	5824.976	5824.873	5824.989	5824.946
	5745	5744.969	5744.946	5744.975	5744.928
	5755	5754.980	5754.953	5754.982	5754.917
	5775	5775.001	5774.945	5774.999	5774.928
	5785	5784.977	5784.937	5784.975	5784.935
	5795	5794.973	5794.944	5794.971	5794.953
	5825	5824.971	5824.873	5824.974	5824.945

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)
AC 108V	5745	5744.970	5744.946	5744.974	5744.924
	5755	5754.996	5754.963	5754.981	5754.936
	5775	5774.977	5774.964	5774.973	5774.953
	5785	5784.986	5784.946	5784.965	5784.929
	5795	5794.984	5794.963	5794.972	5794.925
	5825	5824.994	5824.961	5824.901	5824.928
AC 120V	5745	5744.986	5744.971	5744.983	5744.928
	5755	5755.001	5754.943	5754.999	5754.947
	5775	5774.986	5774.966	5774.984	5774.927
	5785	5784.973	5784.966	5784.971	5784.954
	5795	5794.967	5794.957	5794.965	5794.946
	5825	5825.001	5824.972	5824.999	5824.955
AC 132V	5745	5744.976	5744.957	5744.968	5744.953
	5755	5754.984	5754.959	5754.991	5754.925
	5775	5775.001	5774.962	5774.992	5774.948
	5785	5784.977	5784.954	5784.974	5784.948
	5795	5794.973	5794.945	5794.991	5794.939
	5825	5824.976	5824.954	5824.989	5824.954

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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