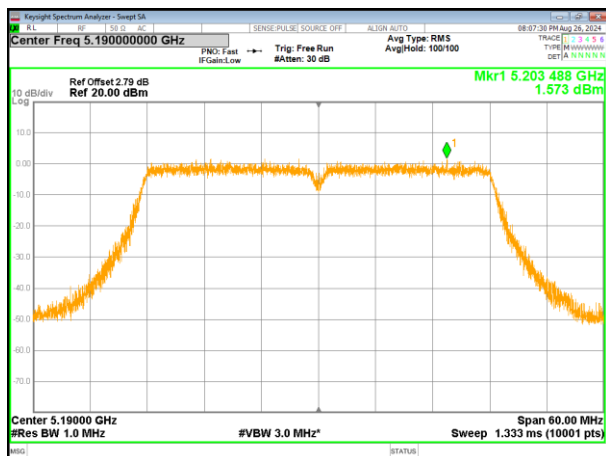
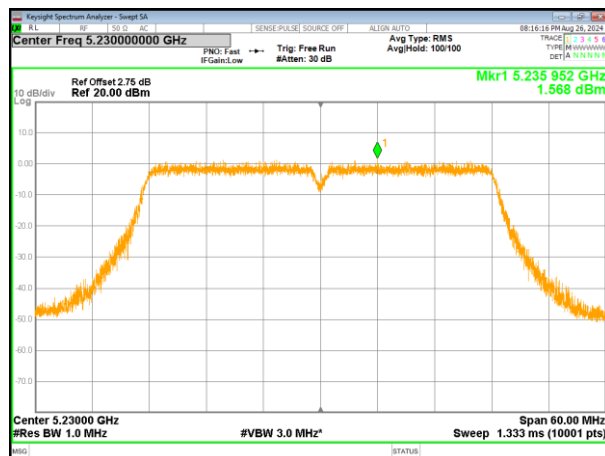


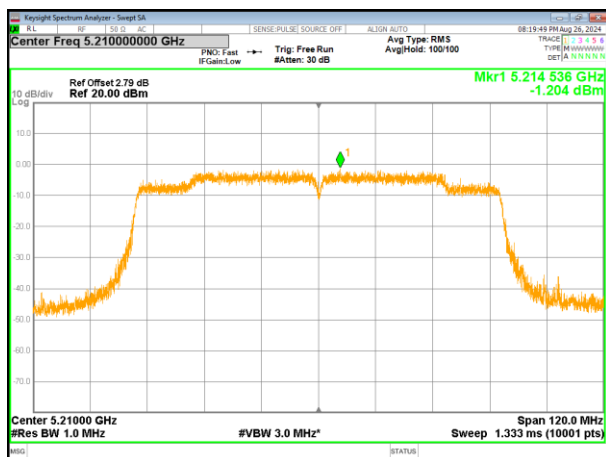
(802.11ac40) PSD plot on channel 38



(802.11ac40) PSD plot on channel 46



(802.11ac80) PSD plot on channel 42



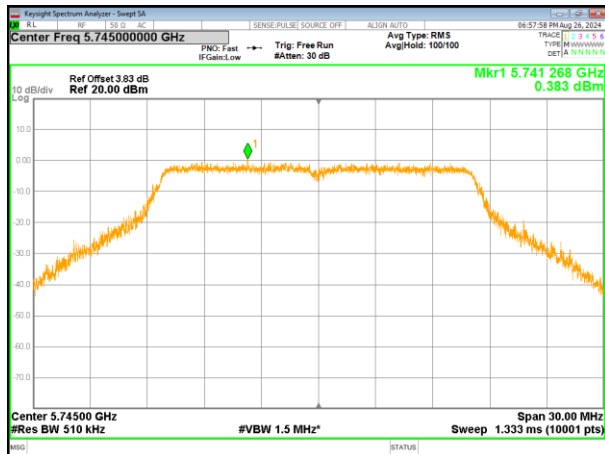
5745-5825MHz

Mode	Frequency	Measured Power Density (dBm/510KHz)	Measured Power Density (dBm/500KHz)	Correction Factor (dB)	Total Measured Power Density (dBm/500KHz)	Limit (dBm/MHz)
802.11 a	5745 MHz	0.383	0.297	0.49	0.787	30
	5785 MHz	0.150	0.064	0.49	0.554	30
	5825 MHz	0.718	0.632	0.49	1.122	30
802.11 n20	5745 MHz	0.633	0.547	0.35	0.897	30
	5785 MHz	0.808	0.722	0.35	1.072	30
	5825 MHz	1.341	1.255	0.35	1.605	30
802.11ac20	5745 MHz	1.546	1.460	0.16	1.620	30
	5785 MHz	1.056	0.970	0.16	1.130	30
	5825 MHz	1.768	1.682	0.16	1.842	30
802.11 n40	5755 MHz	-2.273	-2.359	0.17	-2.189	30
	5795 MHz	-2.292	-2.378	0.17	-2.208	30
802.11ac40	5755 MHz	-2.605	-2.691	0.24	-2.451	30
	5795 MHz	-2.043	-2.129	0.24	-1.889	30
802.11ac80	5775 MHz	-4.598	-4.684	0.42	-4.264	30

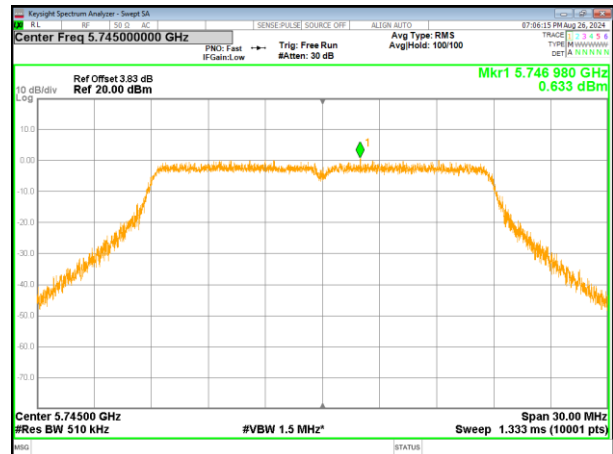
Note: 1. If the measurement is X dBm/510kHz, thus $X \text{ dBm/510kHz} = (10^{X/10}) \cdot (500 / 510) \text{ dBm/500kHz}$

2. Correction Factor (dB)= duty cycle factor

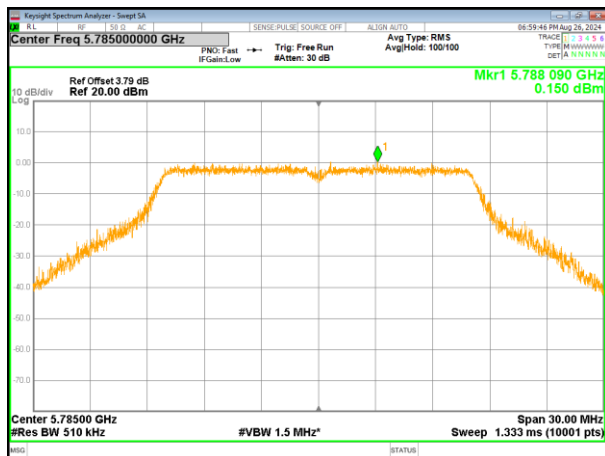
(802.11a) PSD plot on channel 149



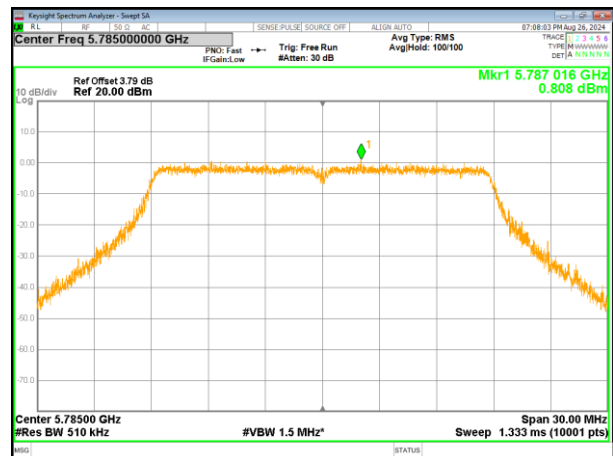
(802.11n20) PSD plot on channel 149



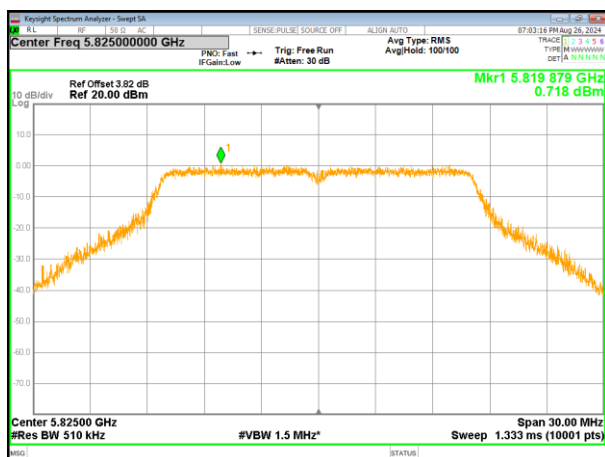
(802.11a) PSD plot on channel 157



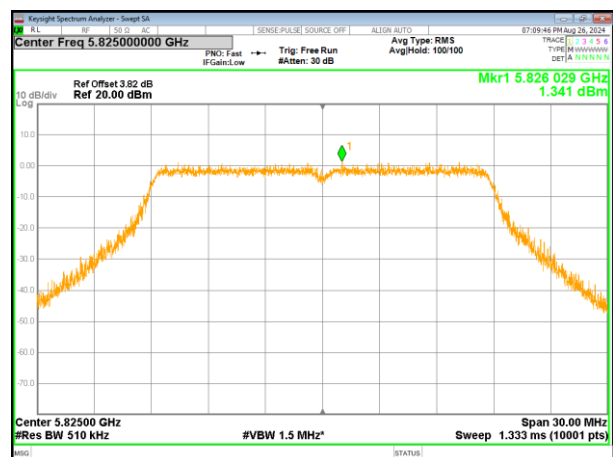
(802.11n20) PSD plot on channel 157



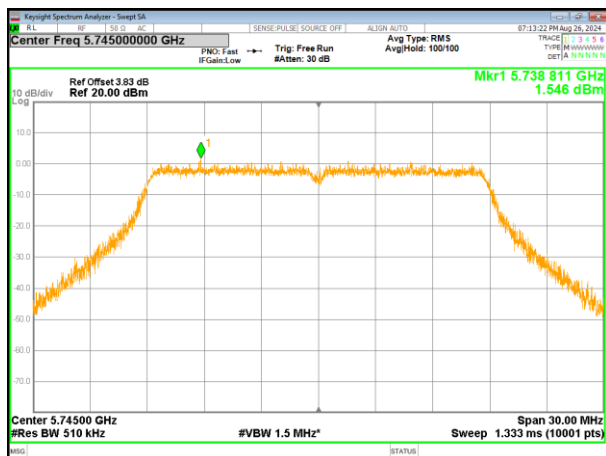
(802.11a) PSD plot on channel 165



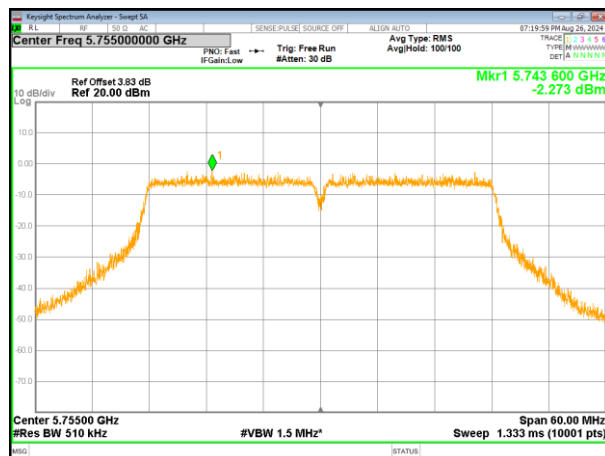
(802.11n20) PSD plot on channel 165



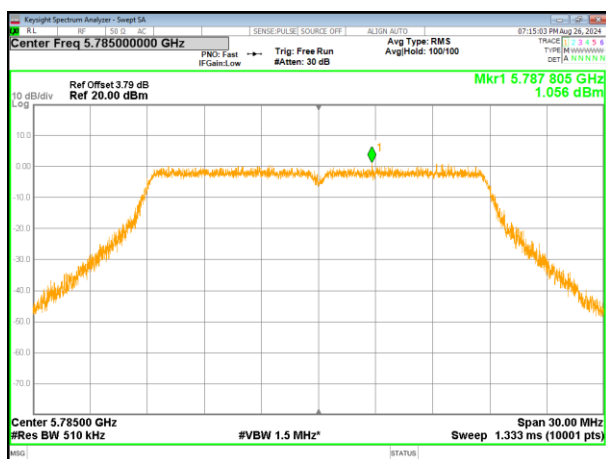
(802.11ac20) PSD plot on channel 149



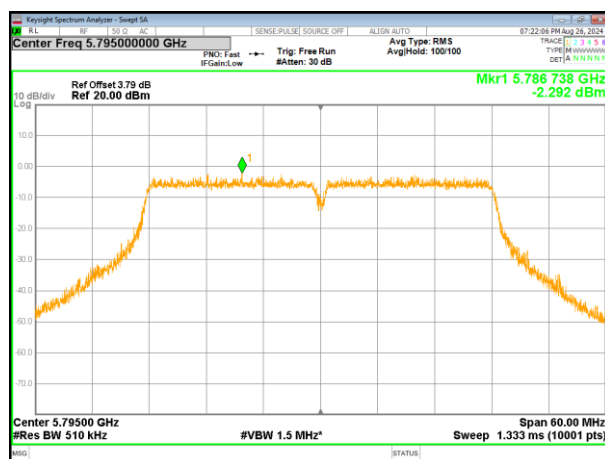
(802.11n40) PSD plot on channel 151



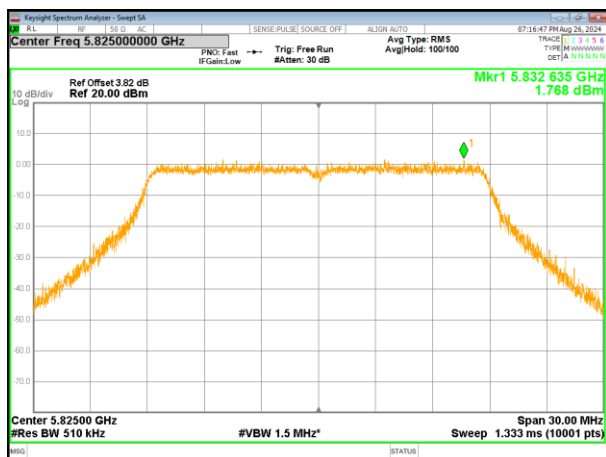
(802.11ac20) PSD plot on channel 157



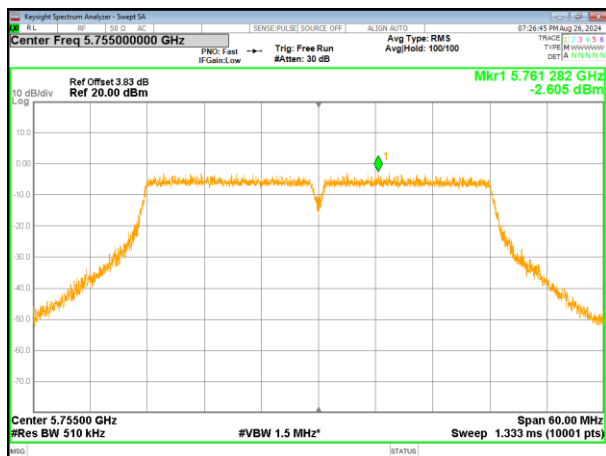
(802.11n40) PSD plot on channel 159



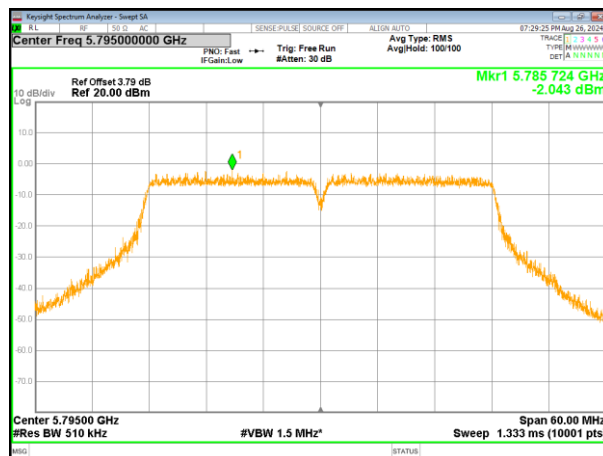
(802.11ac20) PSD plot on channel 165



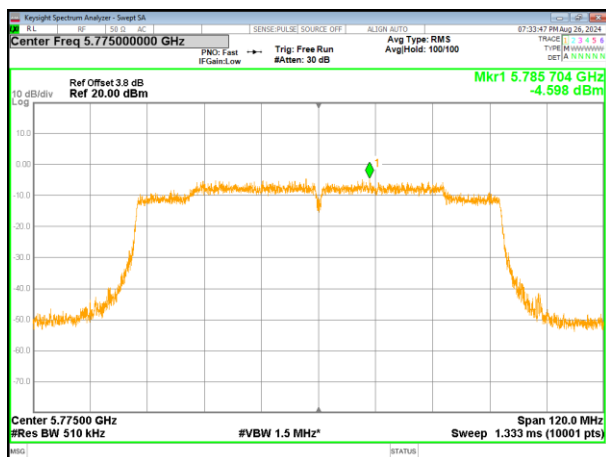
(802.11ac40) PSD plot on channel 151



(802.11ac40) PSD plot on channel 159

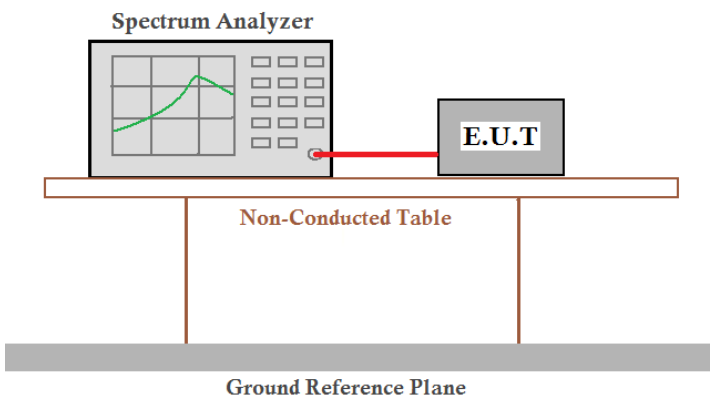


(802.11ac80) PSD plot on channel 155



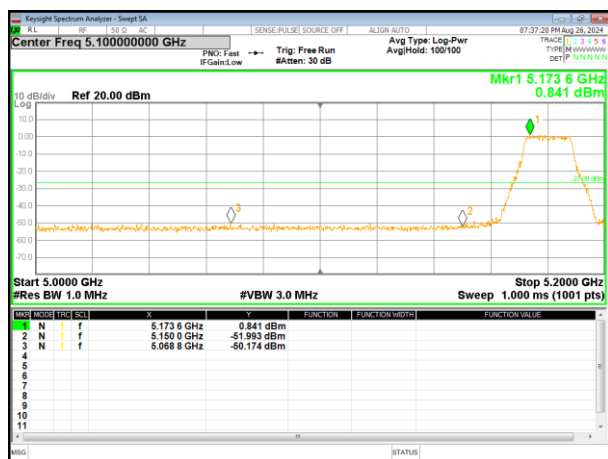
4.7 Band edge

4.7.1 Conducted test Method

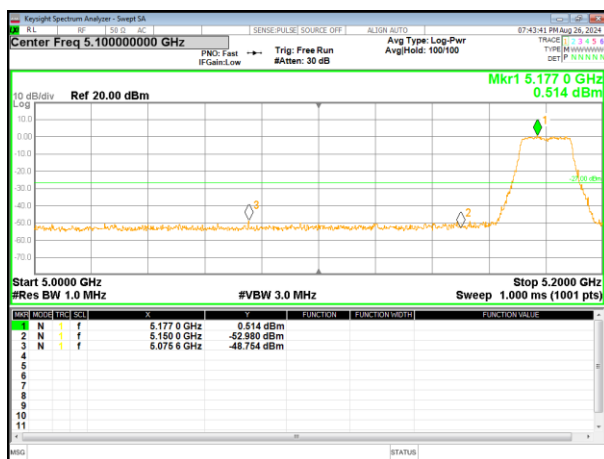
Test Requirement:	FCC Part15 E Section 15.407 b(1)/(4)	
Test Method:	ANSI C63.10: 2013	
Limit:	1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. 2. For transmitters operating solely in the 5.725-5.850 GHz band: 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 and an E.U.T. (Equipment Under Test) are connected by a red cable. They are positioned 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.: 23.4°C	Humid.: 56%RH
Test voltage:	DC12V	
Test results:	Pass	

5.180~5.240 GHz

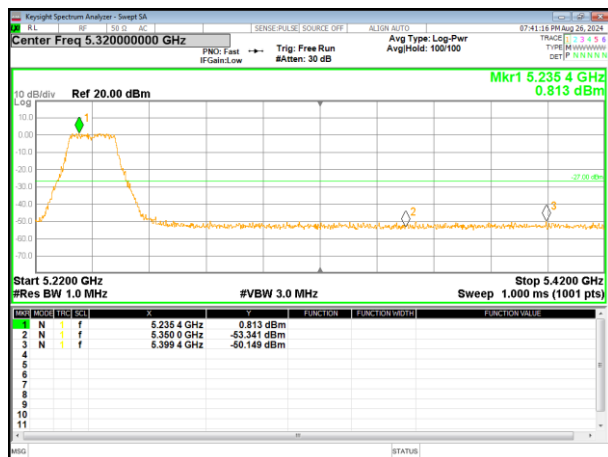
(802.11a) Band Edge, Left Side



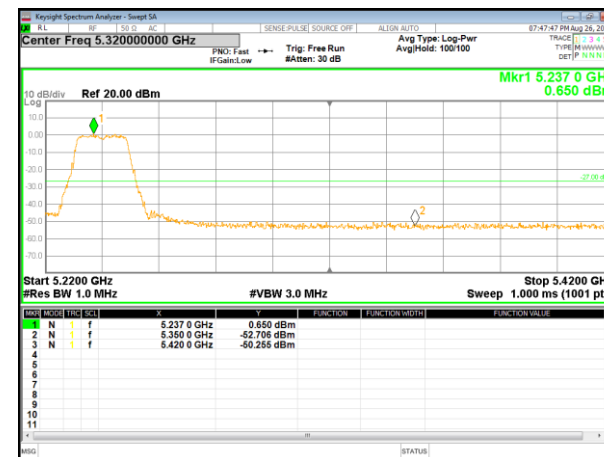
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

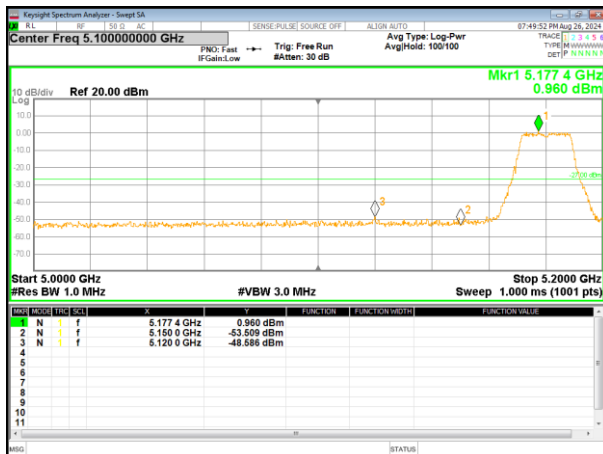


(802.11n20) Band Edge, Right Side

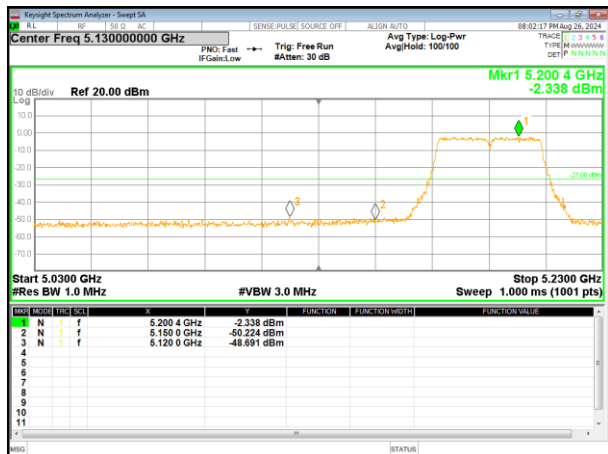


Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

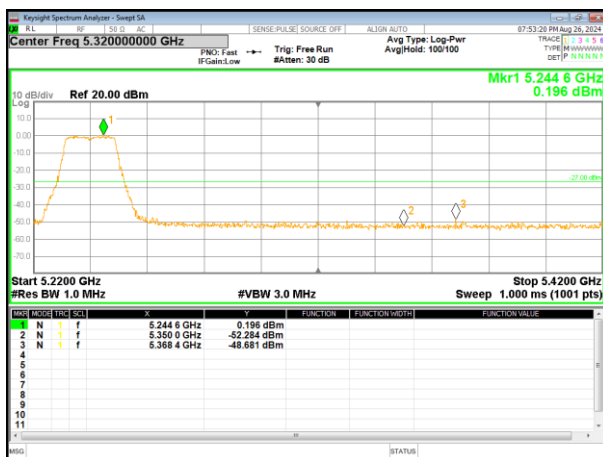
(802.11ac20) Band Edge, Left Side



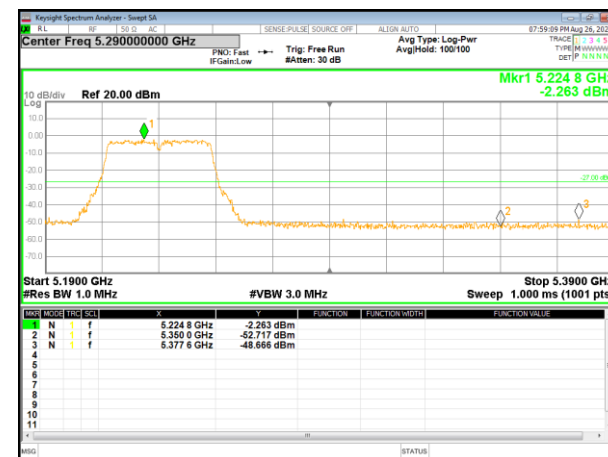
(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

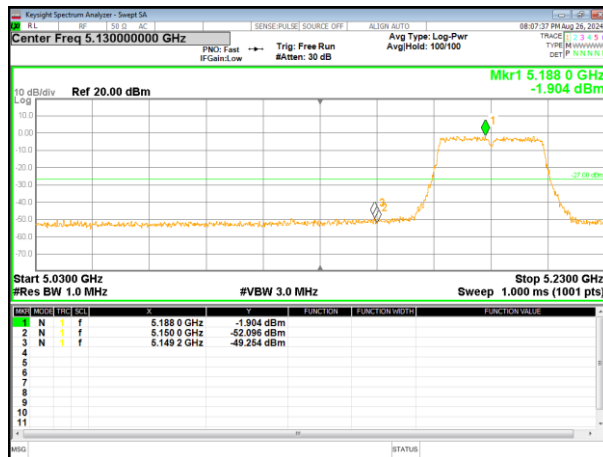


(802.11n40) Band Edge, Right Side

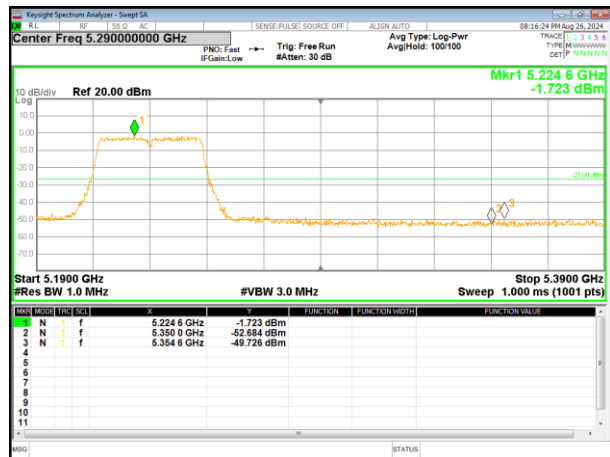


Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

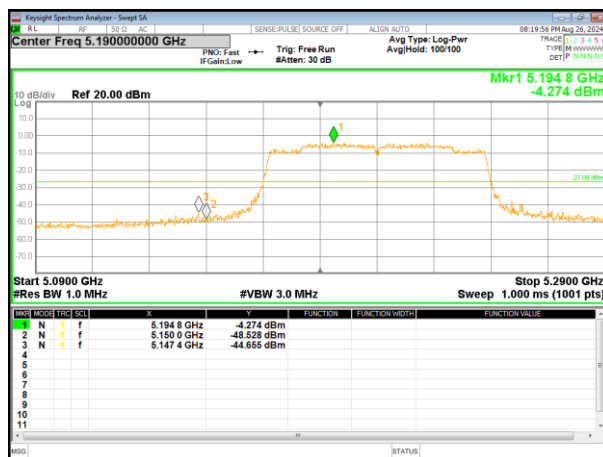
(802.11ac40) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



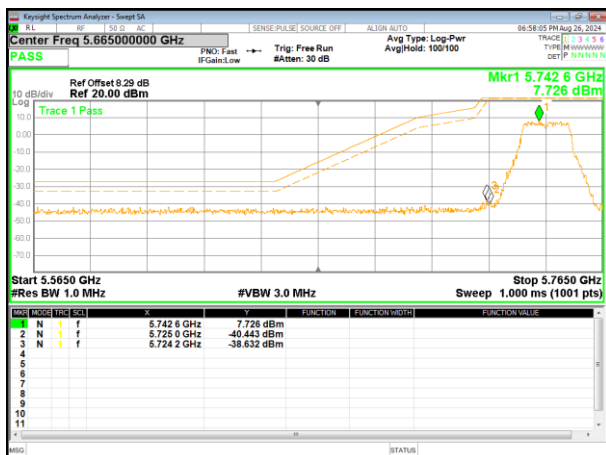
(802.11ac80) Band Edge



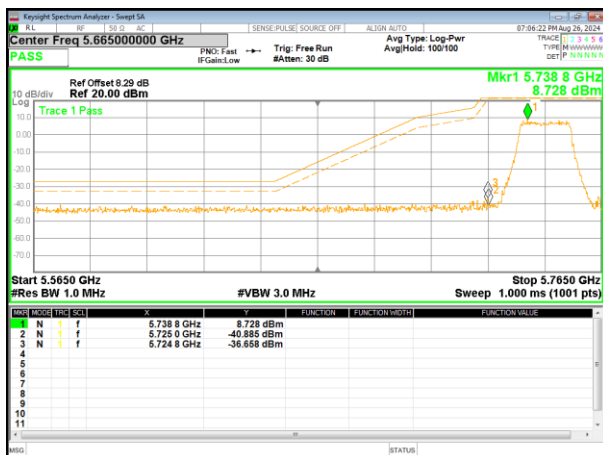
Remark: The antenna gain and cable loss were not compensated in the test data, and the margin value of the Band Edge test was greater than the sum of the antenna gain and cable loss, so the test met the requirements

5.745~5.825 GHz

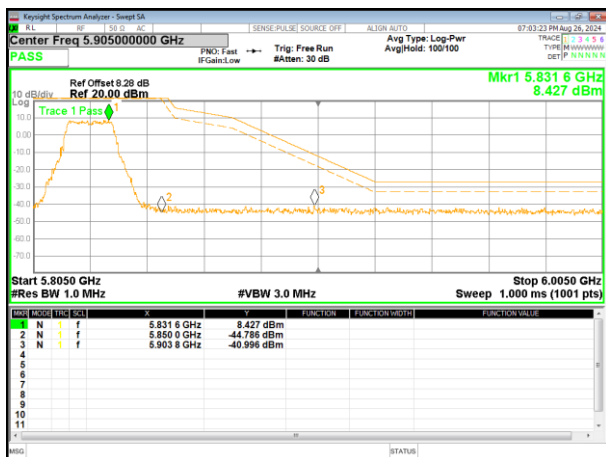
(802.11a) Band Edge, Left Side



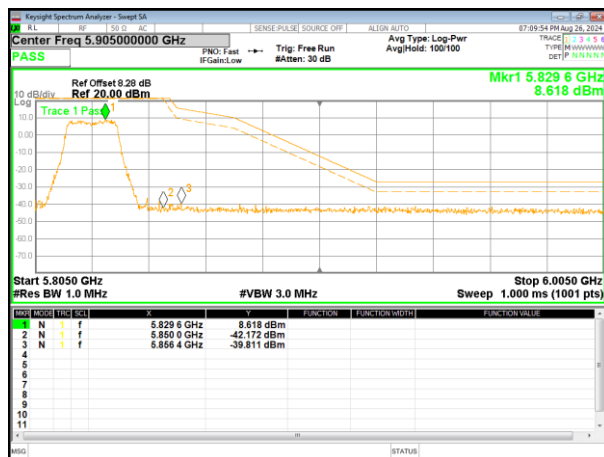
(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

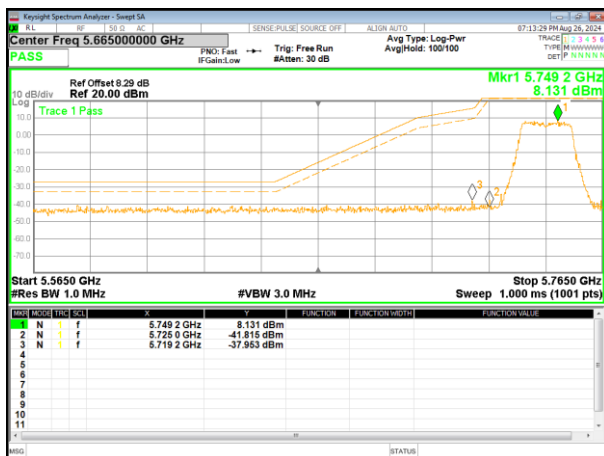


(802.11n20) Band Edge, Right Side

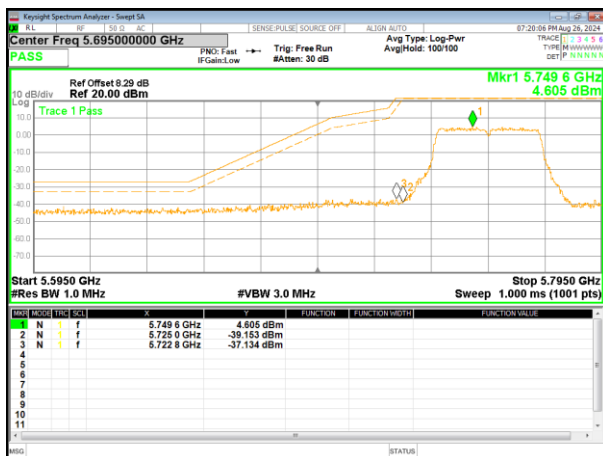


Remark: Antenna gain and cable loss data included in Offset.

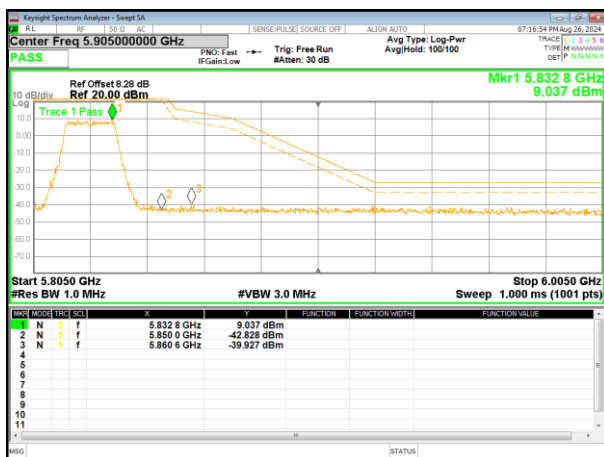
(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

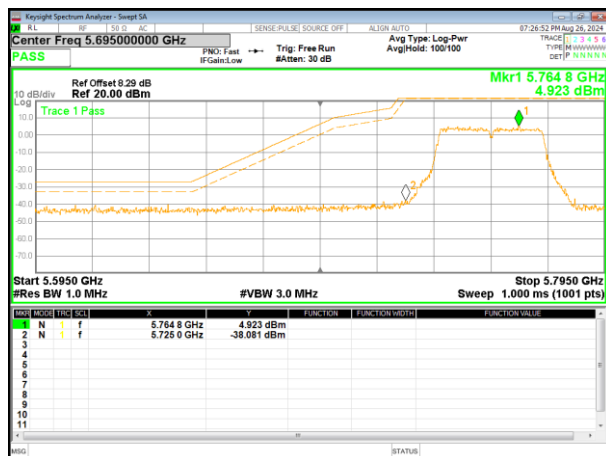


(802.11n40) Band Edge, Right Side

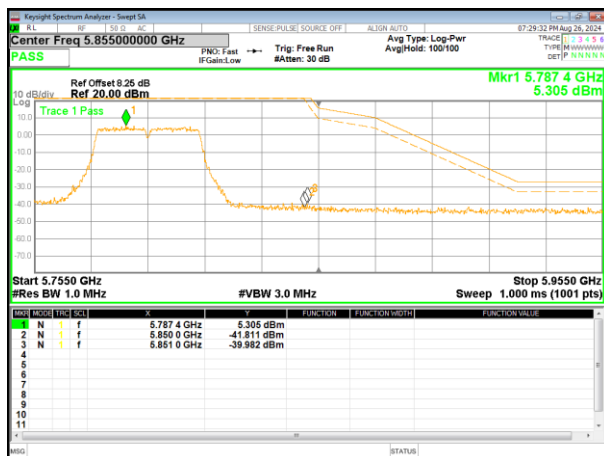


Remark: Antenna gain and cable loss data included in Offset.

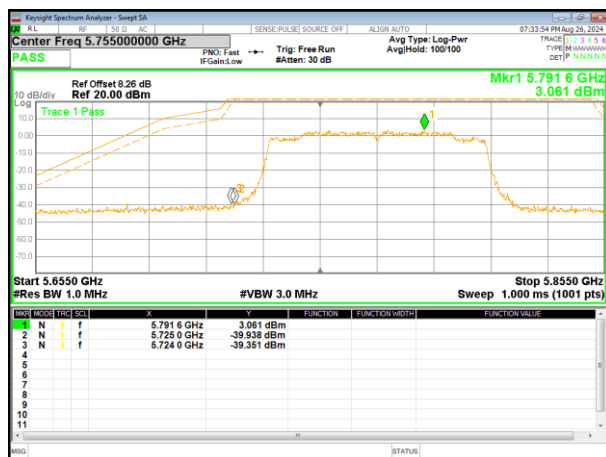
(802.11ac40) Band Edge, Left Side



(802.11ac40) Band Edge, Right Side



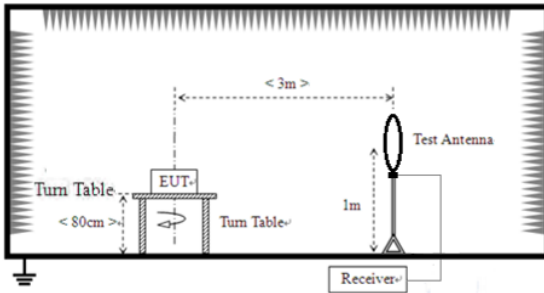
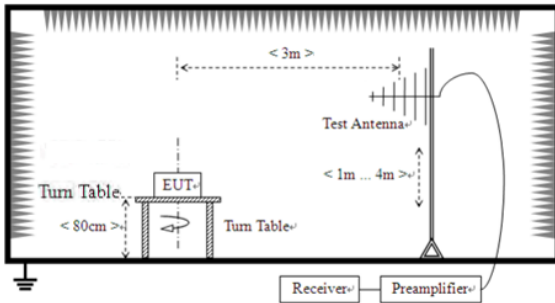
(802.11ac80) Band Edge

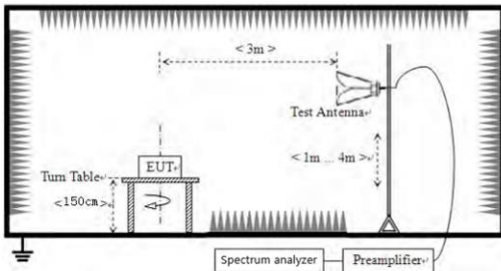


Remark: Antenna gain and cable loss data included in Offset.

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				
					
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. 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

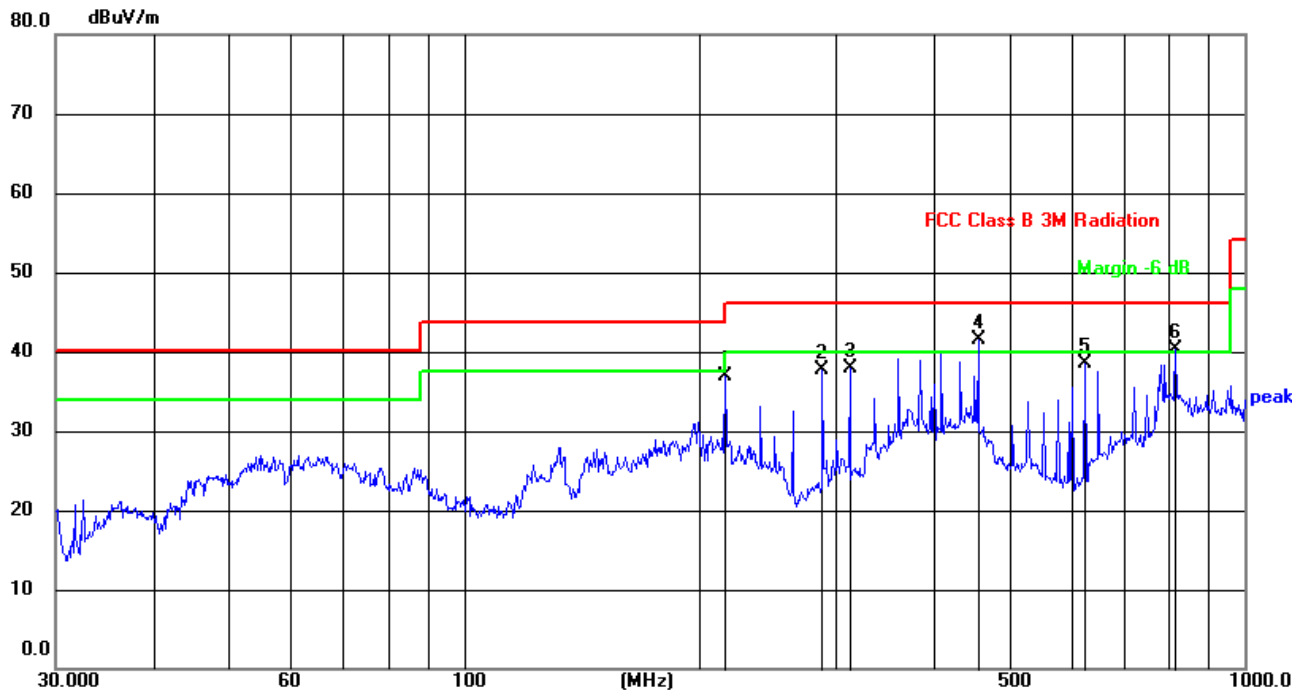
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

Below 1GHz

Remark: The test data shows only the worst case 802.11n20 mode.

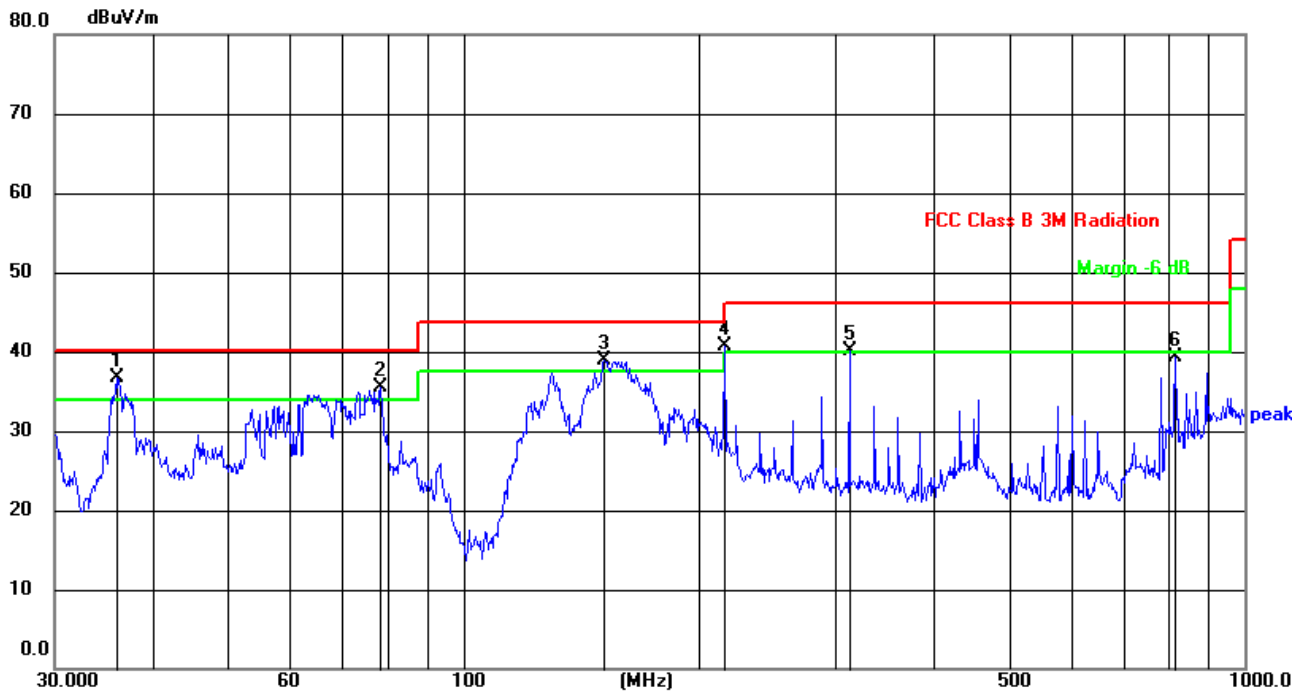
Temperature:	23.4℃	Relative Humidity:	56%
Pressure:	101.2kPa	Test Voltage :	DC12V From adapter
Test Mode :	5.8G TX- 802.11n20 (5785MHz)		

Horizontal:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	216.0235	60.39	-23.53	36.86	46.00	-9.14	QP
2	287.9904	58.69	-20.91	37.78	46.00	-8.22	QP
3	312.1792	57.70	-19.78	37.92	46.00	-8.08	QP
4	455.9057	56.96	-15.54	41.42	46.00	-4.58	QP
5	625.0778	49.13	-10.67	38.46	46.00	-7.54	QP
6	815.9678	46.72	-6.43	40.29	46.00	-5.71	QP

Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	36.0007	58.22	-21.55	36.67	40.00	-3.33	QP
2	78.4133	61.26	-25.77	35.49	40.00	-4.51	QP
3	151.5971	59.46	-20.51	38.95	43.50	-4.55	QP
4	216.0235	64.26	-23.53	40.73	46.00	-5.27	QP
5	312.1792	59.79	-19.78	40.01	46.00	-5.99	QP
6	815.9678	45.74	-6.43	39.31	46.00	-6.69	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.

Above 1GHz:

Temperature:	23.4℃	Relative Humidity:	56%
Pressure:	101.2kPa	Test Voltage :	DC12V
Test Mode :	5.2G TX- 802.11n20		

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	48.98	46.20	8.27	38.50	49.55	68.20	-18.65	PK
V	10360.00	42.20	46.20	8.27	38.50	42.77	54.00	-11.23	AV
V	15540.00	52.82	46.30	10.35	38.70	55.57	74.00	-18.43	PK
V	15540.00	39.23	46.30	10.35	38.70	41.98	54.00	-12.02	AV
V	20720.00	57.53	57.40	11.93	37.80	49.86	68.20	-18.34	PK
V	20720.00	50.34	57.40	11.93	37.80	42.67	54.00	-11.33	AV
V	25900.00	54.66	56.50	13.45	39.70	51.31	68.20	-16.89	PK
V	25900.00	46.59	56.50	13.45	39.70	43.24	54.00	-10.76	AV
H	10360.00	50.32	46.20	8.27	38.50	50.89	68.20	-17.31	PK
H	10360.00	42.21	46.20	8.27	38.50	42.78	54.00	-11.22	AV
H	15540.00	54.76	46.30	10.35	38.70	57.51	74.00	-16.49	PK
H	15540.00	41.08	46.30	10.35	38.70	43.83	54.00	-10.17	AV
H	20720.00	59.08	57.40	11.93	37.80	51.41	68.20	-16.79	PK
H	20720.00	51.63	57.40	11.93	37.80	43.96	54.00	-10.04	AV
H	25900.00	56.40	56.50	13.45	39.70	53.05	68.20	-15.15	PK
H	25900.00	46.59	56.50	13.45	39.70	43.24	54.00	-10.76	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	49.86	46.20	8.27	38.50	50.43	68.20	-17.77	PK
V	10400.00	42.00	46.20	8.27	38.50	42.57	54.00	-11.43	AV
V	15600.00	53.93	46.30	10.35	38.40	56.38	74.00	-17.62	PK
V	15600.00	40.10	46.30	10.35	38.40	42.55	54.00	-11.45	AV
V	20800.00	59.00	57.40	11.93	37.80	51.33	68.20	-16.87	PK
V	20800.00	50.08	57.40	11.93	37.80	42.41	54.00	-11.59	AV
V	26000.00	53.01	56.50	13.45	39.80	49.76	68.20	-18.44	PK
V	26000.00	46.49	56.50	13.45	39.80	43.24	54.00	-10.76	AV
H	10400.00	50.36	46.20	8.27	38.50	50.93	68.20	-17.27	PK
H	10400.00	41.29	46.20	8.27	38.50	41.86	54.00	-12.14	AV
H	15600.00	54.68	46.30	10.35	38.40	57.13	74.00	-16.87	PK
H	15600.00	41.01	46.30	10.35	38.40	43.46	54.00	-10.54	AV
H	20800.00	58.75	57.40	11.93	37.80	51.08	68.20	-17.12	PK
H	20800.00	50.04	57.40	11.93	37.80	42.37	54.00	-11.63	AV
H	26000.00	55.13	56.50	13.45	39.80	51.88	68.20	-16.32	PK
H	26000.00	48.10	56.50	13.45	39.80	44.85	54.00	-9.15	AV

<i>Polar (H/V)</i>	<i>Frequency (MHz)</i>	<i>Meter Reading (dBuV)</i>	<i>Pre- amplifier (dB)</i>	<i>Cable Loss (dB)</i>	<i>Antenna Factor (dB)</i>	<i>Emission Level (dBuV/m)</i>	<i>Limits (dBuV/m)</i>	<i>Margin (dB)</i>	<i>Detect or Type</i>
High Channel:5240MHz									
V	10480.00	50.77	46.20	8.27	38.60	51.44	68.20	-16.76	PK
V	10480.00	43.22	46.20	8.27	38.60	43.89	54.00	-10.11	AV
V	15720.00	54.57	46.30	10.35	38.40	57.02	74.00	-16.98	PK
V	15720.00	41.42	46.30	10.35	38.40	43.87	54.00	-10.13	AV
V	20960.00	58.89	57.40	11.93	37.50	50.92	68.20	-17.28	PK
V	20960.00	50.84	57.40	11.93	37.50	42.87	54.00	-11.13	AV
V	26200.00	51.96	56.50	13.45	40.10	49.01	68.20	-19.19	PK
V	26200.00	44.64	56.50	13.45	40.10	41.69	54.00	-12.31	AV
H	10480.00	47.76	46.20	8.27	38.60	48.43	68.20	-19.77	PK
H	10480.00	41.97	46.20	8.27	38.60	42.64	54.00	-11.36	AV
H	15720.00	51.40	46.30	10.35	38.40	53.85	74.00	-20.15	PK
H	15720.00	38.04	46.30	10.35	38.40	40.49	54.00	-13.51	AV
H	20960.00	58.54	57.40	11.93	37.50	50.57	68.20	-17.63	PK
H	20960.00	50.54	57.40	11.93	37.50	42.57	54.00	-11.43	AV
H	26200.00	54.22	56.50	13.45	40.10	51.27	68.20	-16.93	PK
H	26200.00	46.26	56.50	13.45	40.10	43.31	54.00	-10.69	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℃	Relative Humidity:	56%
Pressure:	101.2kPa	Test Voltage :	DC12V
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	52.77	46.10	8.77	39.10	54.54	74.00	-19.46	PK
V	11490.00	39.85	46.10	8.77	39.10	41.62	54.00	-12.38	AV
V	17235.00	45.49	47.60	11.10	38.70	47.69	68.20	-20.51	PK
V	17235.00	37.92	47.60	11.10	38.70	40.12	54.00	-13.88	AV
V	22980.00	59.12	56.90	12.73	37.70	52.65	74.00	-21.35	PK
V	22980.00	46.79	56.90	12.73	37.70	40.32	54.00	-13.68	AV
V	28725.00	49.69	55.60	14.25	40.30	48.64	68.20	-19.56	PK
V	28725.00	41.67	55.60	14.25	40.30	40.62	54.00	-13.38	AV
H	11490.00	51.77	46.10	8.77	39.10	53.54	74.00	-20.46	PK
H	11490.00	38.30	46.10	8.77	39.10	40.07	54.00	-13.93	AV
H	17235.00	46.65	47.60	11.10	38.70	48.85	68.20	-19.35	PK
H	17235.00	38.53	47.60	11.10	38.70	40.73	54.00	-13.27	AV
H	22980.00	60.36	56.90	12.73	37.70	53.89	74.00	-20.11	PK
H	22980.00	48.10	56.90	12.73	37.70	41.63	54.00	-12.37	AV
H	28725.00	52.71	55.60	14.25	40.30	51.66	68.20	-16.54	PK
H	28725.00	44.14	55.60	14.25	40.30	43.09	54.00	-10.91	AV

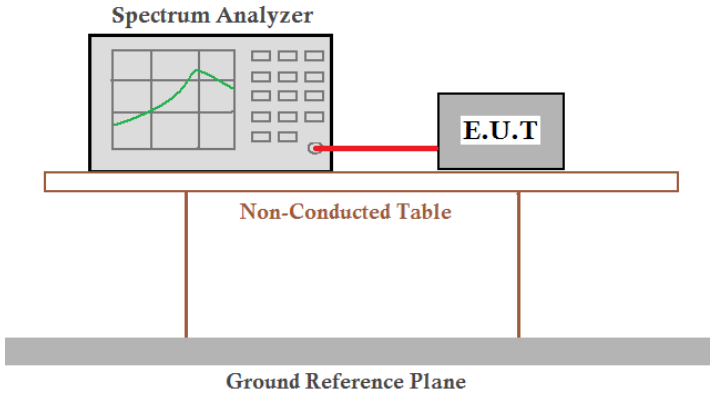
Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detect or Type
Middle Channel:5785MHz									
V	11570.00	51.14	46.10	8.77	39.10	52.91	74.00	-21.09	PK
V	11570.00	39.10	46.10	8.77	39.10	40.87	54.00	-13.13	AV
V	17355.00	46.64	47.60	11.10	38.70	48.84	68.20	-19.36	PK
V	17355.00	39.73	47.60	11.10	38.70	41.93	54.00	-12.07	AV
V	23140.00	60.05	56.90	12.73	37.70	53.58	74.00	-20.42	PK
V	23140.00	47.33	56.90	12.73	37.70	40.86	54.00	-13.14	AV
V	28925.00	49.12	55.60	14.25	40.30	48.07	68.20	-20.13	PK
V	28925.00	42.80	55.60	14.25	40.30	41.75	54.00	-12.25	AV
H	11570.00	50.79	46.10	8.77	39.10	52.56	74.00	-21.44	PK
H	11570.00	38.91	46.10	8.77	39.10	40.68	54.00	-13.32	AV
H	17355.00	44.96	47.60	11.10	38.70	47.16	68.20	-21.04	PK
H	17355.00	38.08	47.60	11.10	38.70	40.28	54.00	-13.72	AV
H	23140.00	59.17	56.90	12.73	37.70	52.7	74.00	-21.30	PK
H	23140.00	47.19	56.90	12.73	37.70	40.72	54.00	-13.28	AV
H	28925.00	50.83	55.60	14.25	40.30	49.78	68.20	-18.42	PK
H	28925.00	43.59	55.60	14.25	40.30	42.54	54.00	-11.46	AV

<i>Polar (H/V)</i>	<i>Frequency</i>	<i>Meter Reading</i>	<i>Pre- amplifier</i>	<i>Cable Loss</i>	<i>Antenna Factor</i>	<i>Emission Level</i>	<i>Limits</i>	<i>Margin</i>	<i>Detect or Type</i>
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:5825MHz									
V	11650.00	49.72	46.10	8.77	39.10	51.49	74.00	-22.51	PK
V	11650.00	37.76	46.10	8.77	39.10	39.53	54.00	-14.47	AV
V	17475.00	44.71	47.90	11.23	38.90	46.94	68.20	-21.26	PK
V	17475.00	39.68	47.90	11.23	38.90	41.91	54.00	-12.09	AV
V	23300.00	54.66	57.10	12.73	37.80	48.09	68.20	-20.11	PK
V	23300.00	47.78	57.10	12.73	37.80	41.21	54.00	-12.79	AV
V	29125.00	50.94	55.80	14.25	40.50	49.89	68.20	-18.31	PK
V	29125.00	43.30	55.80	14.25	40.50	42.25	54.00	-11.75	AV
H	11650.00	51.87	46.10	8.77	39.10	53.64	74.00	-20.36	PK
H	11650.00	41.11	46.10	8.77	39.10	42.88	54.00	-11.12	AV
H	17475.00	46.39	47.90	11.23	38.90	48.62	68.20	-19.58	PK
H	17475.00	39.66	47.90	11.23	38.90	41.89	54.00	-12.11	AV
H	23300.00	54.51	57.10	12.73	37.80	47.94	68.20	-20.26	PK
H	23300.00	48.22	57.10	12.73	37.80	41.65	54.00	-12.35	AV
H	29125.00	51.83	55.80	14.25	40.50	50.78	68.20	-17.42	PK
H	29125.00	44.40	55.80	14.25	40.50	43.35	54.00	-10.65	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

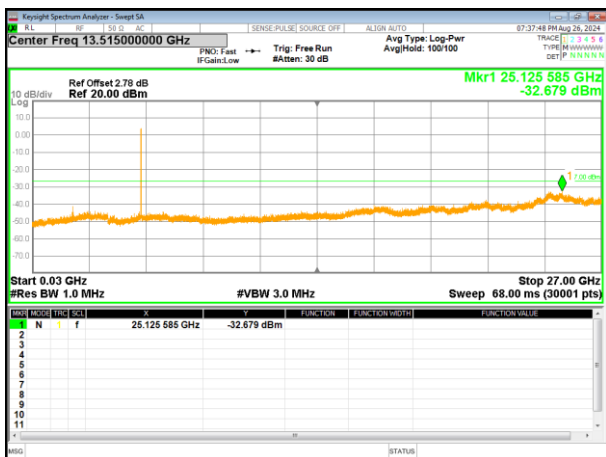
Test Requirement:	FCC Part15 E Section 15.407 b(1)/(4)	
Test Method:	ANSI C63.10:2013	
Limit:	-27dBm/MHz	
Test setup:	 The diagram illustrates the test setup for conducted emissions. A Spectrum Analyzer is connected to an Equipment Under Test (E.U.T.) via a red cable. Both the Spectrum Analyzer and the 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 environment:	Temp.: 23.4°C	Humid.:56%RH
Test voltage:	DC12V	
Test results:	Pass	

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

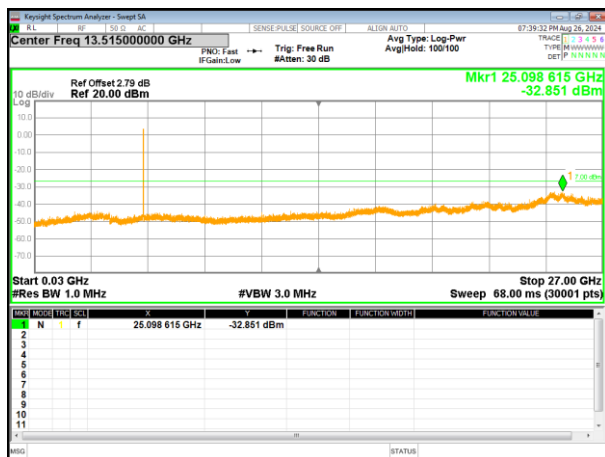
5180-5240MHz

Test Plot

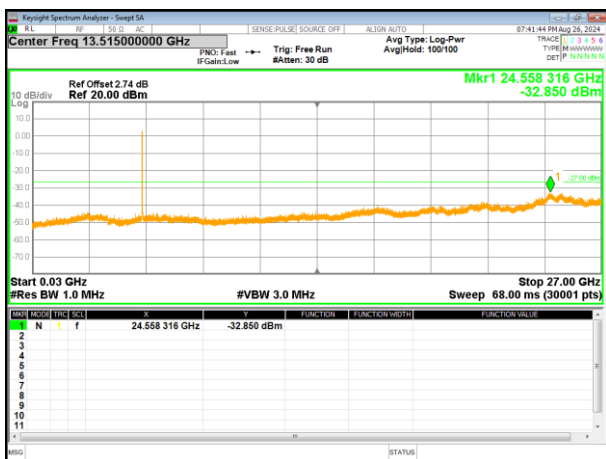
802.11a on channel 36



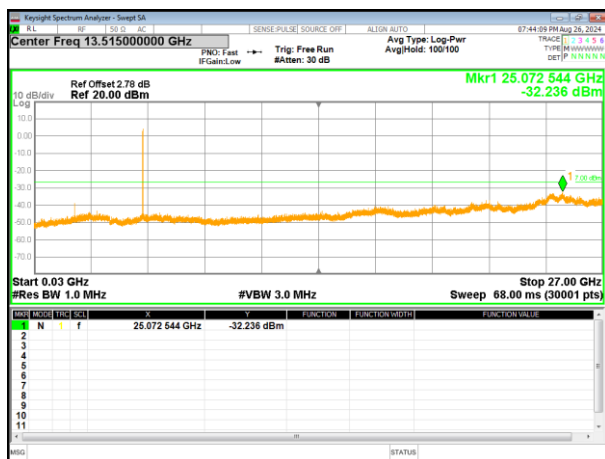
802.11a on channel 40



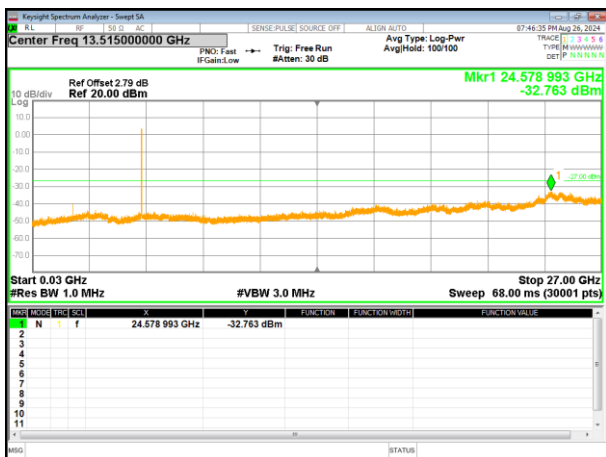
802.11a on channel 48



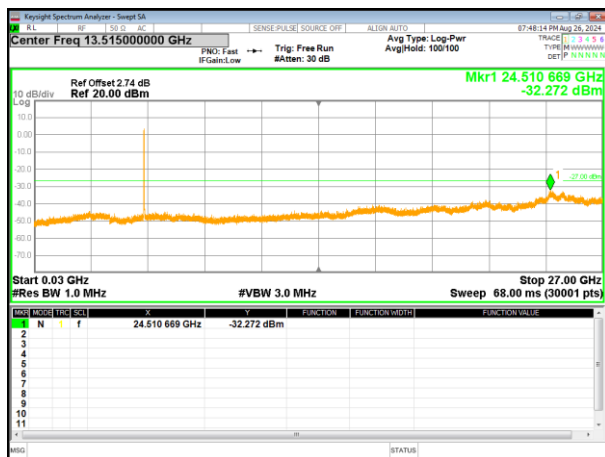
802.11n20 on channel 36



802.11n20 on channel 40

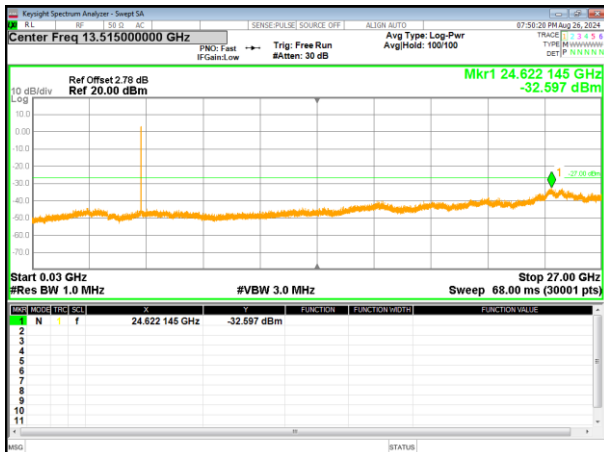


802.11n20 on channel 48

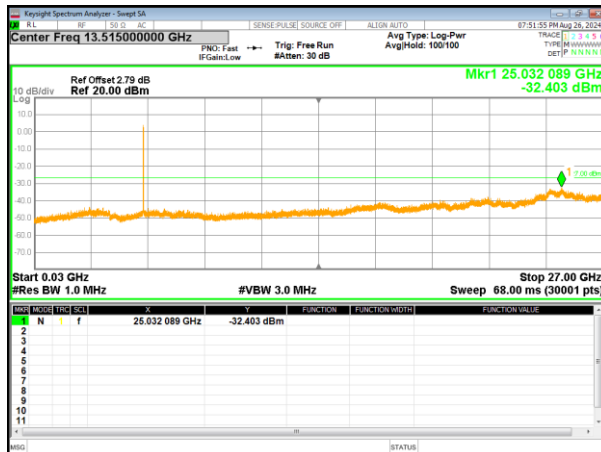


Test Plot

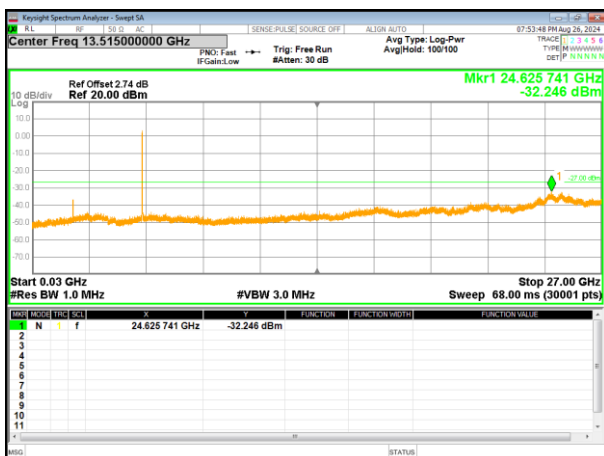
802.11ac20 on channel 36



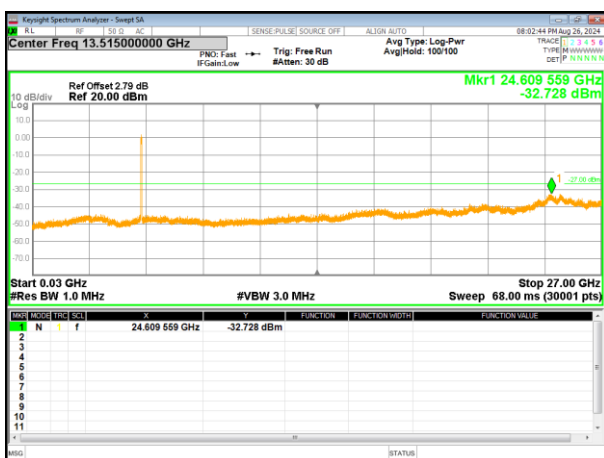
802.11ac20 on channel 40



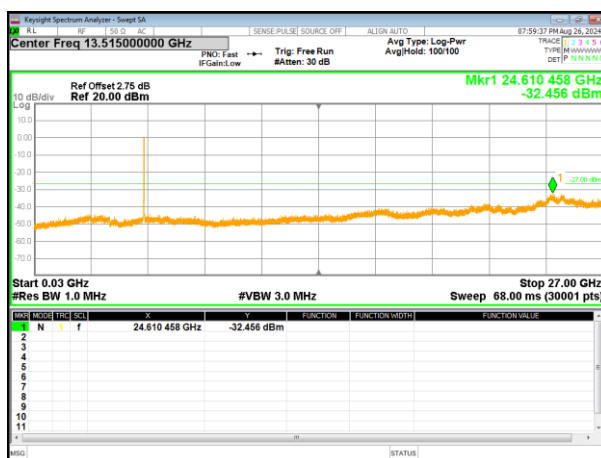
802.11ac20 on channel 48



802.11n40 on channel 38

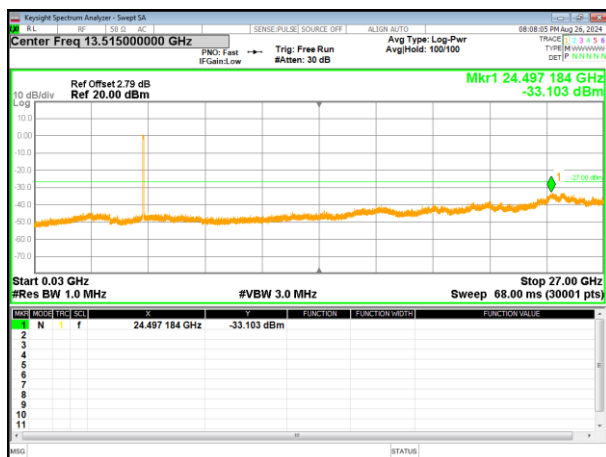


802.11n40 on channel 46

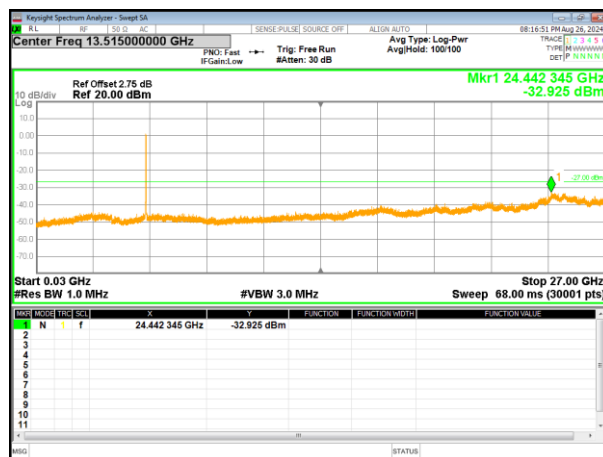


Test Plot

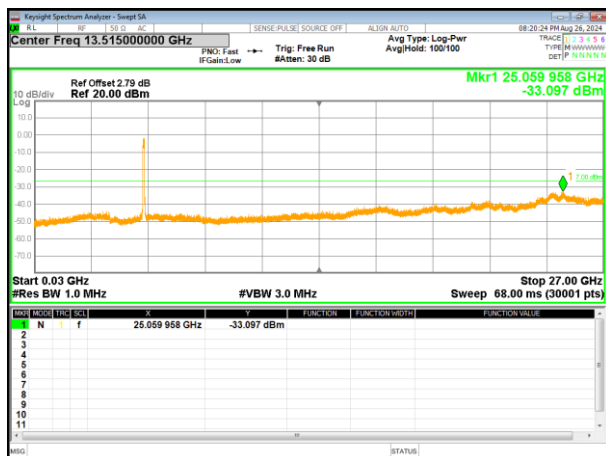
802.11ac40 on channel 38



802.11ac40 on channel 46



802.11ac80 on channel 42

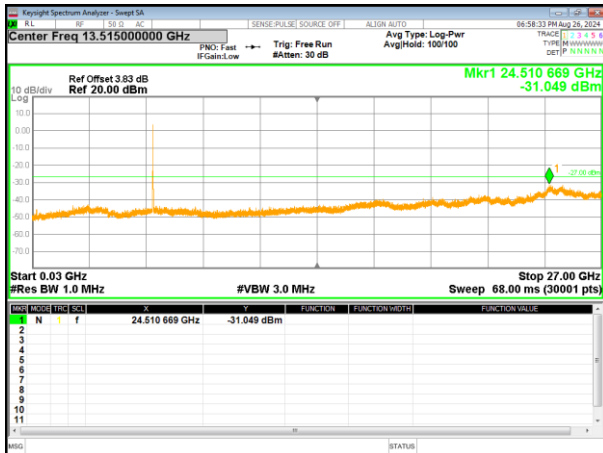


Remark: The antenna gain were not compensated in the test data, and the margin value of the test was greater than the antenna gain, so the test met the requirements

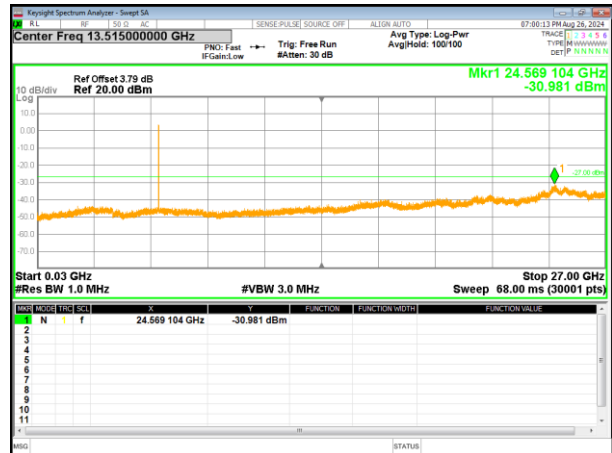
5745-5825MHz

Test Plot

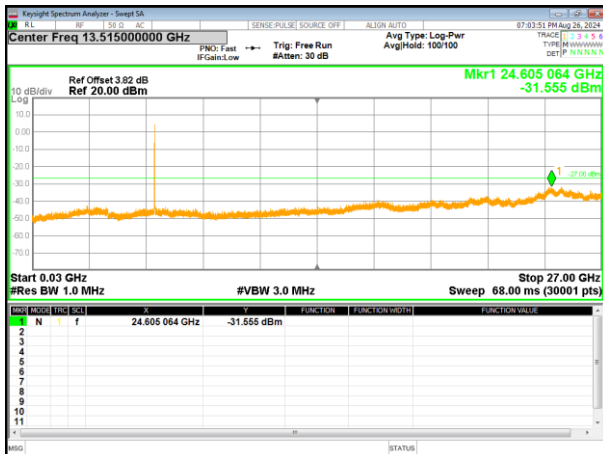
802.11a on channel 149



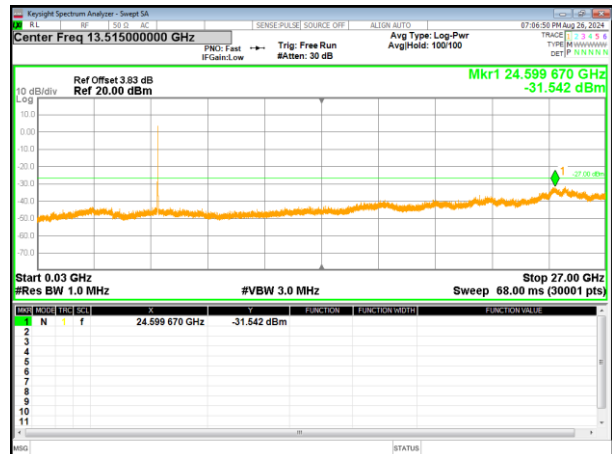
802.11a on channel 157



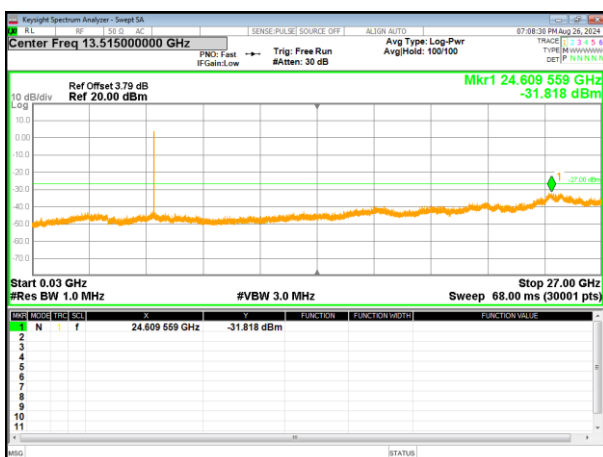
802.11a on channel 165



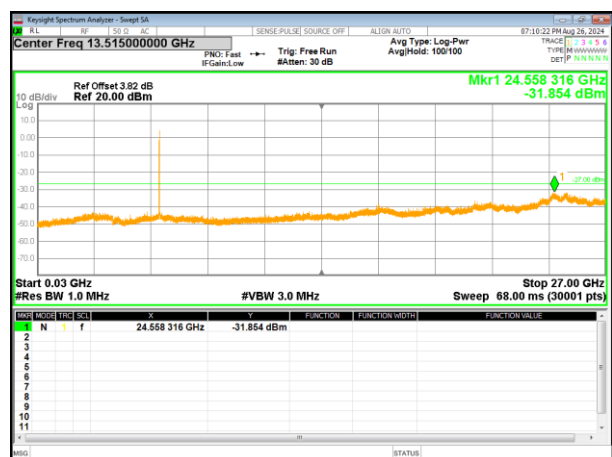
802.11n20 on channel 149



802.11n20 on channel 157

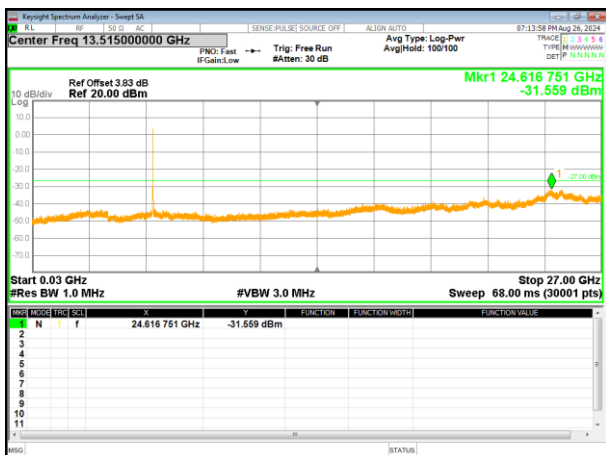


802.11n20 on channel 165

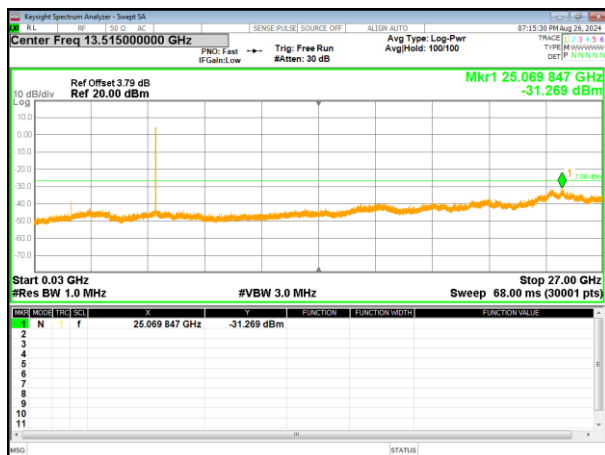


Test Plot

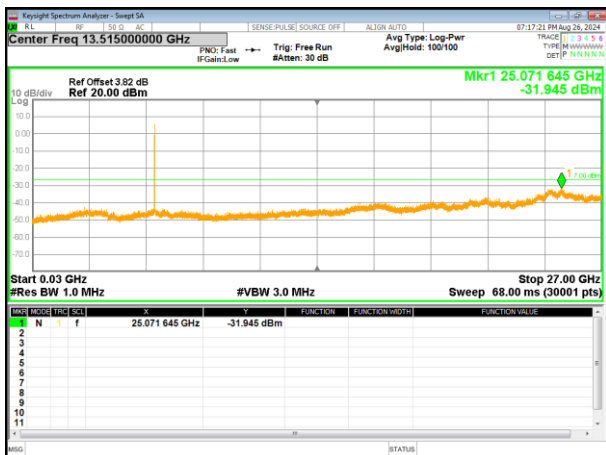
802.11ac20 on channel 149



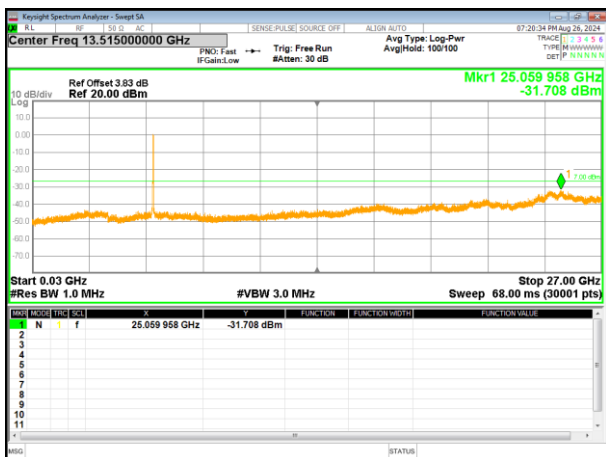
802.11ac20 on channel 157



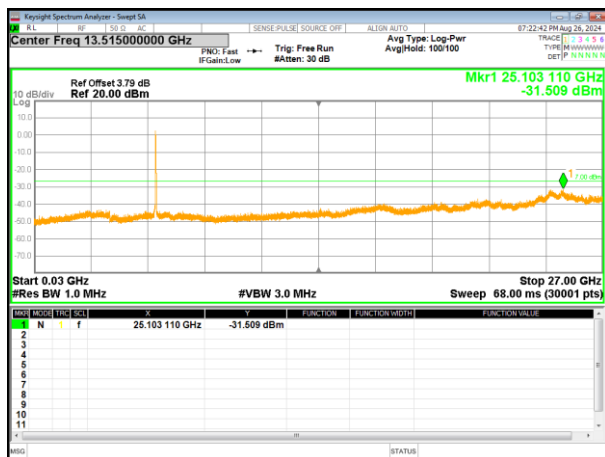
802.11ac20 on channel 165



802.11n40 on channel 151

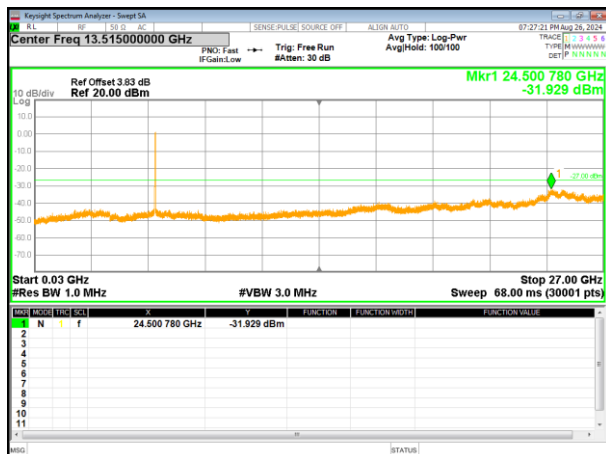


802.11n40 on channel 159

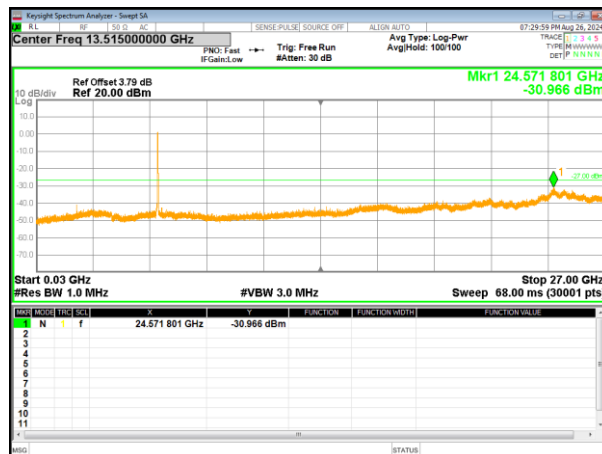


Test Plot

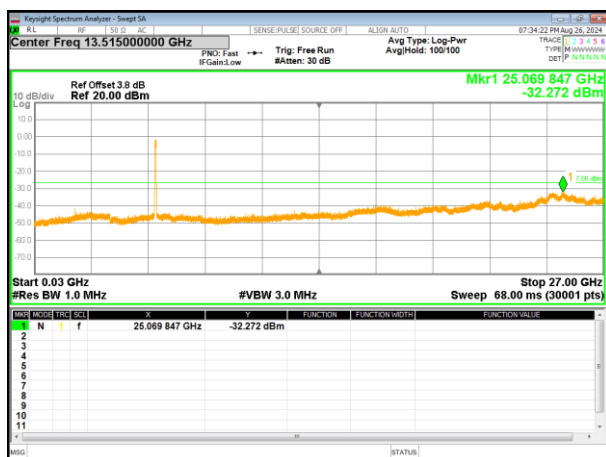
802.11ac40 on channel 151



802.11ac40 on channel 159

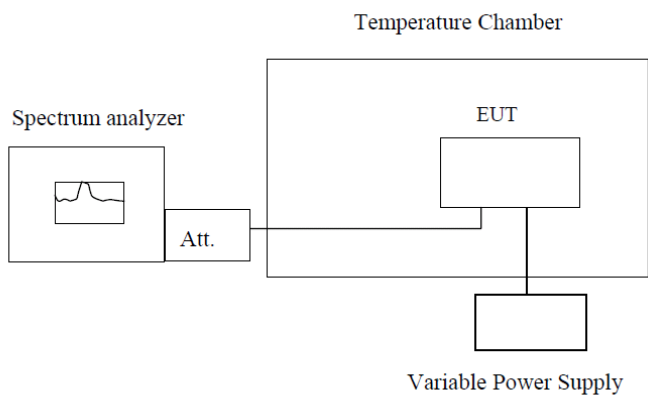


802.11ac80 on channel 155



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

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: DC12V					
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	5179.766	5179.807	5180.364	5180.317
	5190	5189.757	5189.799	5190.356	5190.327
	5200	5199.765	5199.807	5200.365	5200.318
	5210	5209.757	5209.799	5210.358	5210.319
	5220	5219.778	5219.820	5220.380	5220.324
	5230	5229.756	5229.798	5230.358	5230.342
	5240	5239.775	5239.817	5240.377	5240.314
-20	5180	5180.340	5180.126	5180.062	5180.338
	5190	5190.331	5190.298	5190.062	5190.333
	5200	5200.339	5200.296	5200.056	5200.328
	5210	5210.331	5210.351	5210.046	5210.334
	5220	5220.352	5220.340	5220.057	5220.327
	5230	5230.330	5230.327	5230.056	5230.325
	5240	5240.348	5240.344	5240.059	5240.298
-10	5180	5180.349	5179.775	5180.041	5180.317
	5190	5190.345	5189.771	5190.053	5190.327
	5200	5200.340	5199.766	5200.044	5200.318
	5210	5210.346	5209.772	5210.045	5210.319
	5220	5220.341	5219.767	5220.053	5220.324
	5230	5230.339	5229.765	5230.070	5230.342
	5240	5240.312	5239.739	5240.043	5240.314
0	5180	5180.126	5179.754	5180.053	5180.328
	5190	5190.298	5189.765	5190.045	5190.328
	5200	5200.296	5199.756	5200.053	5200.319
	5210	5210.351	5209.757	5210.045	5210.323
	5220	5220.340	5219.764	5220.067	5220.317
	5230	5230.327	5229.782	5230.044	5230.338
	5240	5240.254	5239.789	5240.063	5240.316
10	5180	5180.328	5179.766	5180.062	5180.329
	5190	5190.339	5189.757	5190.059	5190.319
	5200	5200.330	5199.765	5200.054	5200.327

	5210	5210.331	5209.757	5210.060	5210.319
	5220	5220.338	5219.778	5220.056	5220.338
	5230	5230.356	5229.756	5230.053	5230.316
	5240	5240.341	5239.775	5240.027	5240.334
20	5180	5180.406	5179.019	5180.311	5180.091
	5190	5190.349	5189.808	5190.356	5190.355
	5200	5200.344	5199.799	5200.365	5200.380
	5210	5210.350	5209.810	5210.358	5210.364
	5220	5220.345	5219.799	5220.380	5220.354
	5230	5230.343	5229.820	5230.358	5230.382
	5240	5240.316	5239.799	5240.377	5240.370
30	5180	5180.332	5179.807	5180.364	5180.374
	5190	5190.343	5189.799	5190.356	5190.374
	5200	5200.334	5199.807	5200.365	5200.369
	5210	5210.335	5209.799	5210.358	5210.364
	5220	5220.342	5219.820	5220.380	5220.370
	5230	5230.360	5229.798	5230.358	5230.364
	5240	5240.332	5239.817	5240.377	5240.362
40	5180	5180.344	5179.806	5180.150	5180.353
	5190	5190.335	5189.808	5190.324	5190.363
	5200	5200.343	5199.799	5200.322	5200.354
	5210	5210.335	5209.810	5210.378	5210.355
	5220	5220.356	5219.799	5220.368	5220.361
	5230	5230.334	5229.820	5230.355	5230.379
	5240	5240.352	5239.799	5240.373	5240.351
50	5180	5180.344	5179.807	5180.364	5180.326
	5190	5190.335	5189.799	5190.356	5190.355
	5200	5200.343	5199.807	5200.365	5200.380
	5210	5210.335	5209.799	5210.358	5210.364
	5220	5220.356	5219.820	5220.380	5220.354
	5230	5230.334	5229.798	5230.358	5230.382
	5240	5240.352	5239.817	5240.377	5240.370

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)
10.2	5180	5180.363	5180.374	5180.364	5180.489
	5190	5190.365	5190.372	5190.356	5190.363
	5200	5200.357	5200.366	5200.365	5200.388
	5210	5210.373	5210.356	5210.358	5210.366
	5220	5220.359	5220.365	5220.380	5220.380
	5230	5230.379	5230.361	5230.358	5230.373
	5240	5240.359	5240.367	5240.373	5240.381
12	5180	5180.339	5179.825	5180.363	5180.374
	5190	5190.335	5189.931	5190.366	5190.392
	5200	5200.343	5199.807	5200.357	5200.366
	5210	5210.336	5209.832	5210.389	5210.356
	5220	5220.356	5219.810	5220.359	5220.365
	5230	5230.334	5229.825	5230.345	5230.361
	5240	5240.352	5239.819	5240.359	5240.376
13.8	5180	5180.353	5179.816	5180.352	5180.353
	5190	5190.349	5189.813	5190.364	5190.363
	5200	5200.344	5199.808	5200.356	5200.353
	5210	5210.350	5209.814	5210.358	5210.355
	5220	5220.345	5219.809	5220.366	5220.361
	5230	5230.343	5229.807	5230.384	5230.384
	5240	5240.316	5239.781	5240.357	5240.351

Frequency stability versus Temp.					
Power Supply: DC12V					
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	5745.167	5745.405	5744.792	5745.004
	5755	5755.174	5755.413	5754.780	5755.014
	5775	5775.167	5775.432	5774.791	5775.035
	5785	5785.159	5785.408	5784.797	5785.011
	5795	5795.166	5795.405	5794.815	5795.007
	5825	5825.096	5825.411	5824.806	5825.005
-20	5745	5745.011	5745.168	5745.415	5745.422
	5755	5755.037	5755.175	5755.418	5754.805
	5775	5775.033	5775.193	5775.423	5774.806
	5785	5785.017	5785.169	5785.415	5784.808
	5795	5795.006	5795.165	5795.407	5794.791
	5825	5824.941	5825.168	5825.419	5824.786
-10	5745	5745.336	5744.818	5745.411	5744.969
	5755	5755.362	5754.825	5755.414	5755.352
	5775	5775.358	5774.843	5775.419	5775.353
	5785	5785.342	5784.819	5785.411	5785.355
	5795	5795.331	5794.815	5795.403	5795.338
	5825	5825.266	5824.818	5825.415	5825.333
0	5745	5745.330	5744.807	5745.411	5745.340
	5755	5755.355	5754.823	5755.414	5755.365
	5775	5775.336	5774.823	5775.419	5775.361
	5785	5785.345	5784.826	5785.411	5785.344
	5795	5795.343	5794.839	5795.403	5795.333
	5825	5825.353	5824.819	5825.415	5825.267
10	5745	5745.330	5744.817	5745.400	5745.335
	5755	5755.355	5754.834	5755.408	5755.346
	5775	5775.336	5774.836	5775.402	5775.363
	5785	5785.345	5784.818	5785.394	5785.338
	5795	5795.343	5794.835	5795.402	5795.334
	5825	5825.353	5824.834	5825.334	5825.336
20	5745	5745.346	5744.842	5745.409	5745.339
	5755	5755.360	5754.814	5755.426	5755.357
	5775	5775.345	5774.838	5775.413	5775.337
	5785	5785.332	5784.838	5785.400	5785.363
	5795	5795.326	5794.829	5795.395	5795.355
	5825	5825.360	5824.845	5825.432	5825.363
30	5745	5745.336	5744.828	5745.394	5745.364
	5755	5755.343	5754.830	5755.418	5755.335
	5775	5775.360	5774.834	5775.421	5775.358
	5785	5785.336	5784.826	5785.403	5785.357
	5795	5795.332	5794.817	5795.421	5795.348
	5825	5825.335	5824.827	5825.422	5825.362
40	5745	5745.346	5744.812	5745.411	5745.333
	5755	5755.360	5754.837	5755.414	5755.365



	5775	5775.345	5774.819	5775.419	5775.361
	5785	5785.332	5784.828	5785.411	5785.344
	5795	5795.326	5794.826	5795.403	5795.333
	5825	5825.360	5824.837	5825.415	5825.267
50	5745	5745.325	5744.828	5745.395	5745.350
	5755	5755.341	5754.830	5755.421	5755.363
	5775	5775.340	5774.834	5775.404	5775.348
	5785	5785.343	5784.826	5785.413	5785.334
	5795	5795.350	5794.817	5795.412	5795.328
	5825	5825.335	5824.827	5825.425	5825.361

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	5745.034	5745.404	5745.400	5744.787
	5755	5755.016	5755.422	5755.418	5754.811
	5775	5775.015	5775.425	5775.421	5774.792
	5785	5785.018	5785.407	5785.403	5784.800
	5795	5795.029	5795.426	5795.422	5794.798
	5825	5825.010	5825.426	5825.422	5824.807
12	5745	5745.000	5745.399	5745.395	5744.803
	5755	5755.016	5755.425	5755.421	5754.816
	5775	5775.015	5775.408	5775.404	5774.801
	5785	5785.018	5785.417	5785.413	5784.787
	5795	5795.025	5795.416	5795.412	5794.781
	5825	5825.010	5825.429	5825.425	5824.814
13.8	5745	5745.021	5745.415	5745.400	5744.792
	5755	5755.035	5755.430	5755.408	5754.810
	5775	5775.020	5775.417	5775.402	5774.790
	5785	5785.007	5785.404	5785.394	5784.816
	5795	5795.001	5795.399	5795.402	5794.808
	5825	5825.035	5825.436	5825.334	5824.816

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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