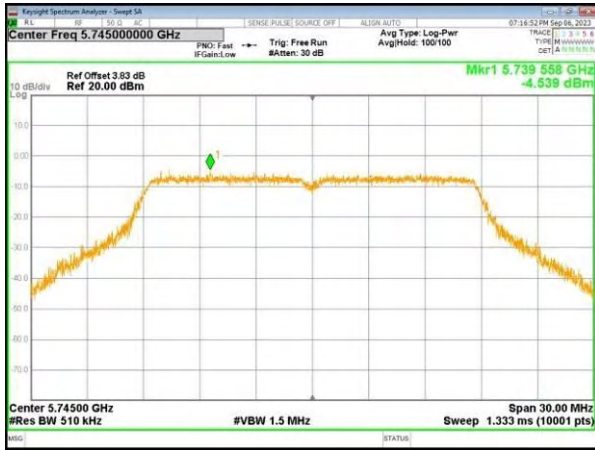


(802.11ac20) PSD plot on channel 149



(802.11n40) PSD plot on channel 151



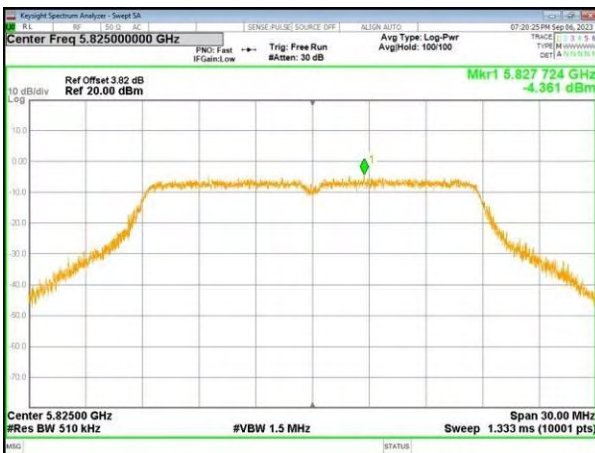
(802.11ac20) PSD plot on channel 157



(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

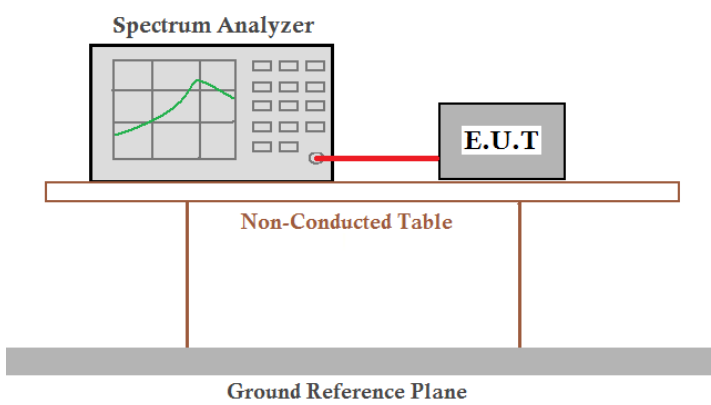


(802.11ac40) PSD plot on channel 159



## 4.7 Band edge

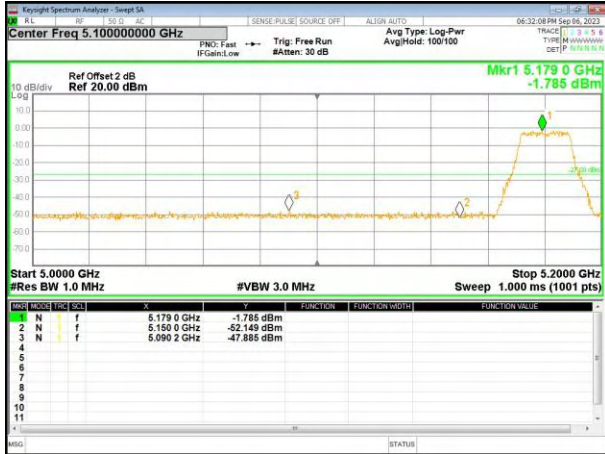
### 4.7.1 Conducted test Method

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:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>	
Test Procedure:	<ol style="list-style-type: none"> <li>1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an Integrated generator.</li> <li>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.</li> <li>3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.</li> <li>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.</li> <li>5. Repeat above procedures until all measured frequencies were complete..</li> </ol>	
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 24.4°C	Humid.: 50%RH
Test voltage:	DC 12V	
Test results:	Pass	

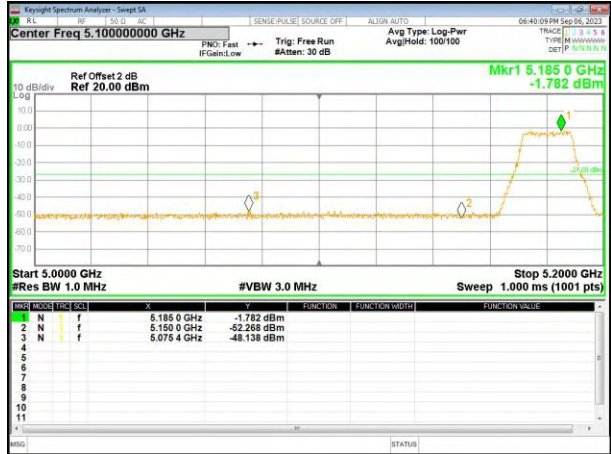
Remark: Antenna gain and cable loss data included in Offset.

5.180~5.240 GHz

(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side



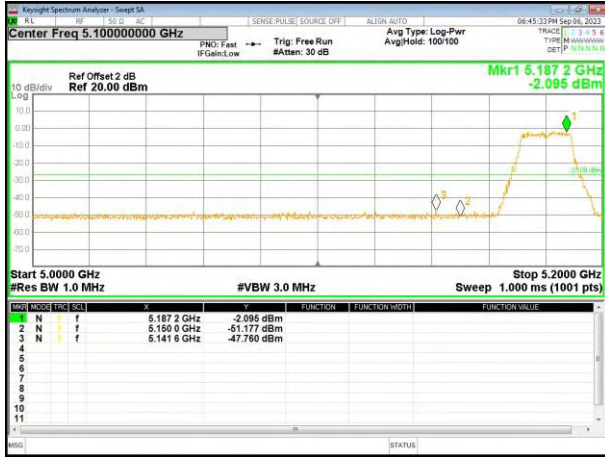
(802.11n20) Band Edge, Right Side



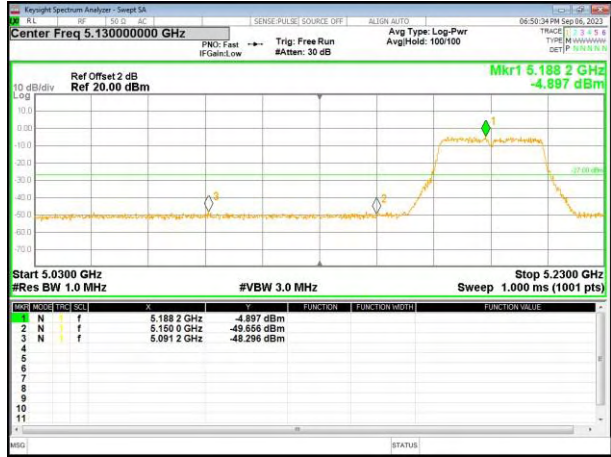


5.180~5.240 GHz

(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side

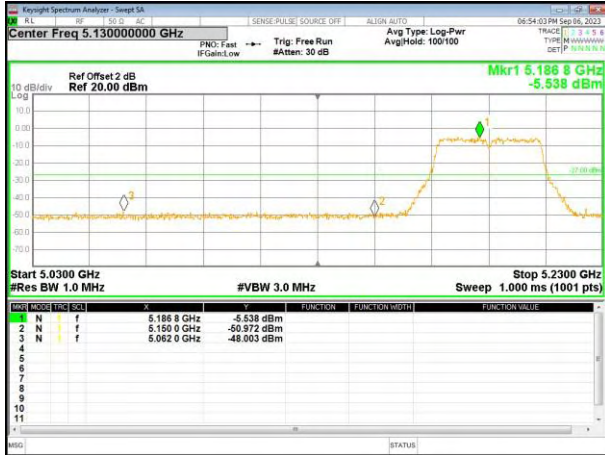


(802.11n40) Band Edge, Right Side

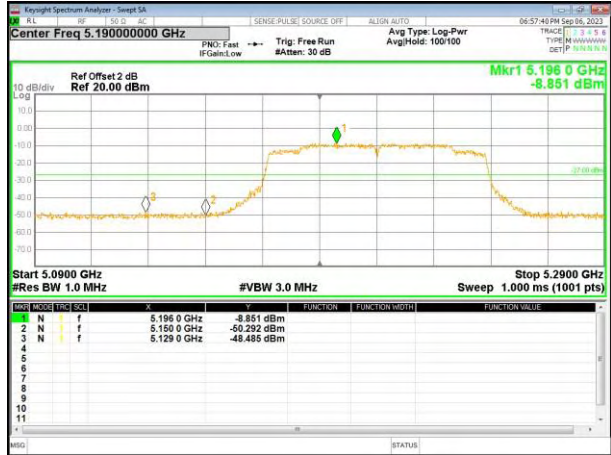


5.180~5.240 GHz

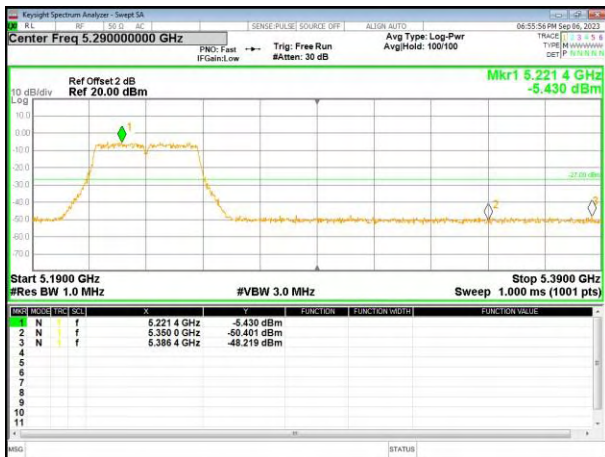
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge

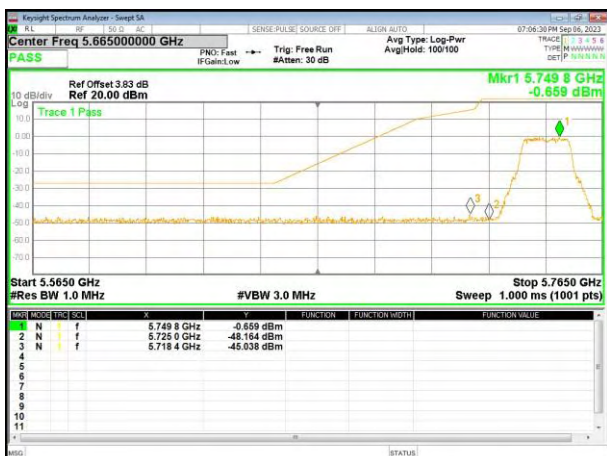


(802.11ac40) Band Edge, Right Side

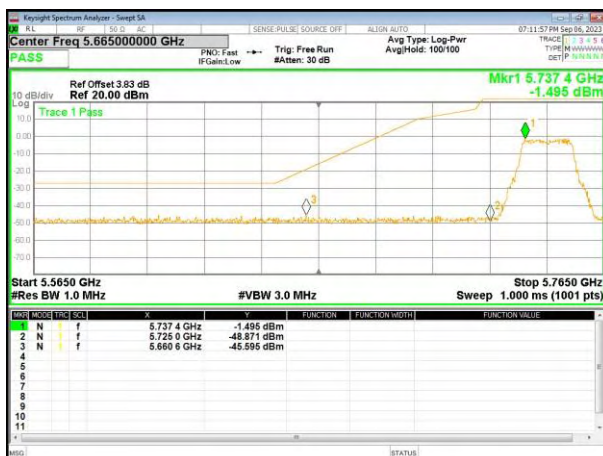


5.745~5.825 GHz

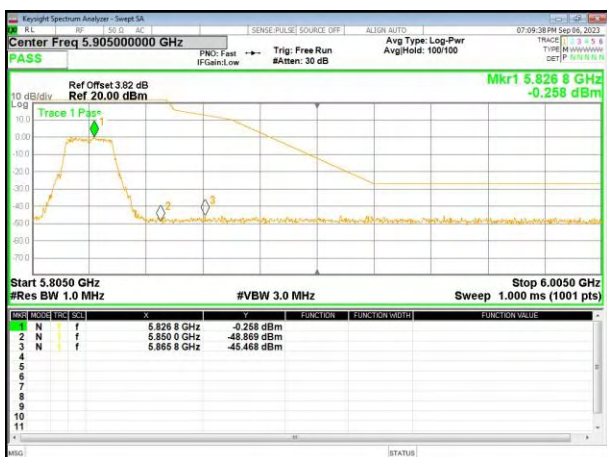
(802.11a) Band Edge, Left Side



(802.11n20) Band Edge, Left Side



(802.11a) Band Edge, Right Side

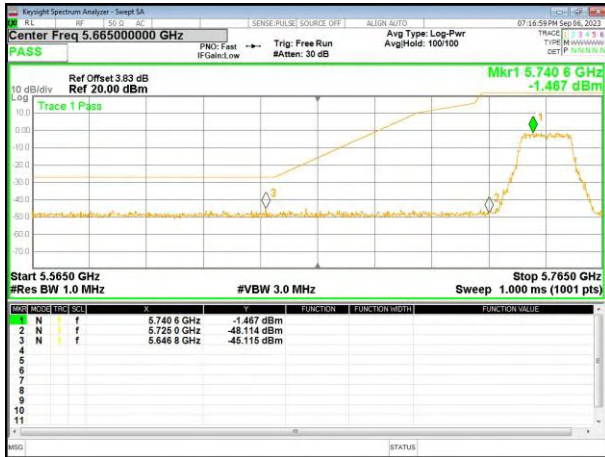


(802.11n20) Band Edge, Right Side

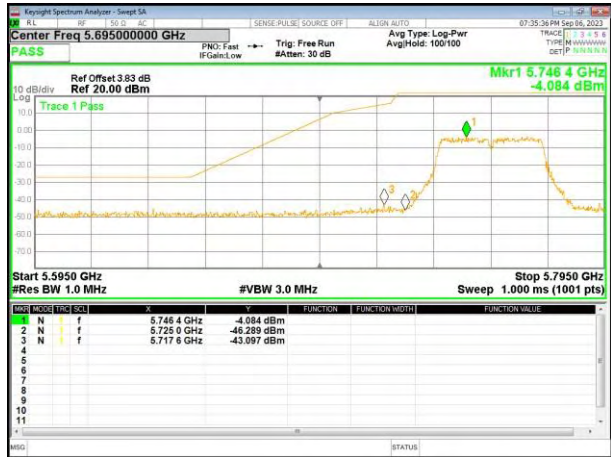


5.745~5.825 GHz

(802.11ac20) Band Edge, Left Side



(802.11n40) Band Edge, Left Side



(802.11ac20) Band Edge, Right Side



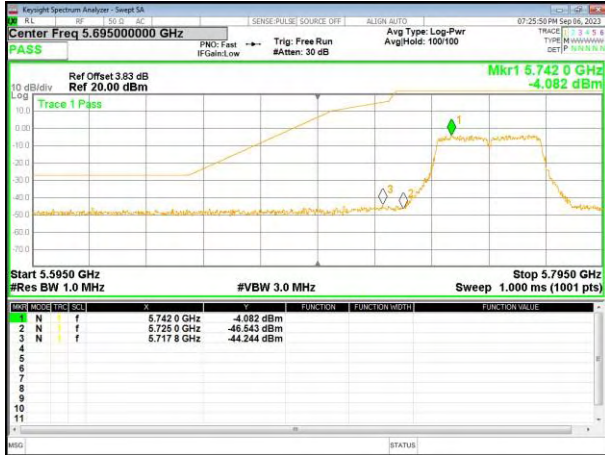
(802.11n40) Band Edge, Right Side



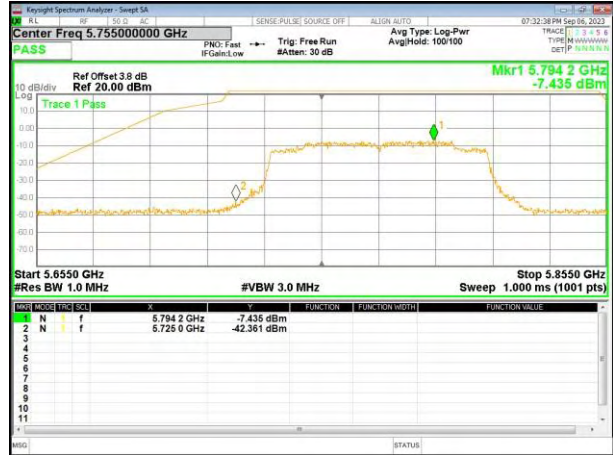


5.745~5.825 GHz

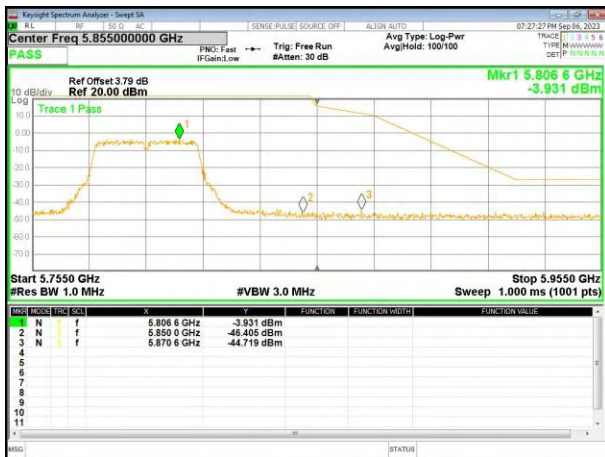
(802.11ac40) Band Edge, Left Side



(802.11ac80) Band Edge



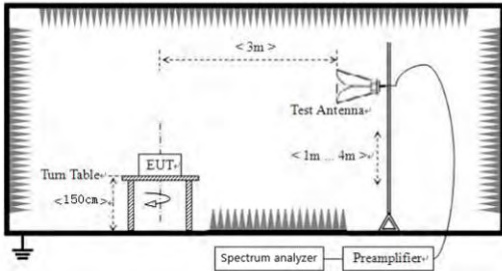
(802.11ac40) Band Edge, Right Side



## 4.8 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					

	
<p>Test Procedure:</p>	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol> <p>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.</p>
<p>Test Instruments:</p>	<p>Refer to section 3.0 for details</p>
<p>Test mode:</p>	<p>Refer to section 2.2 for details</p>
<p>Test results:</p>	<p>Pass</p>

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

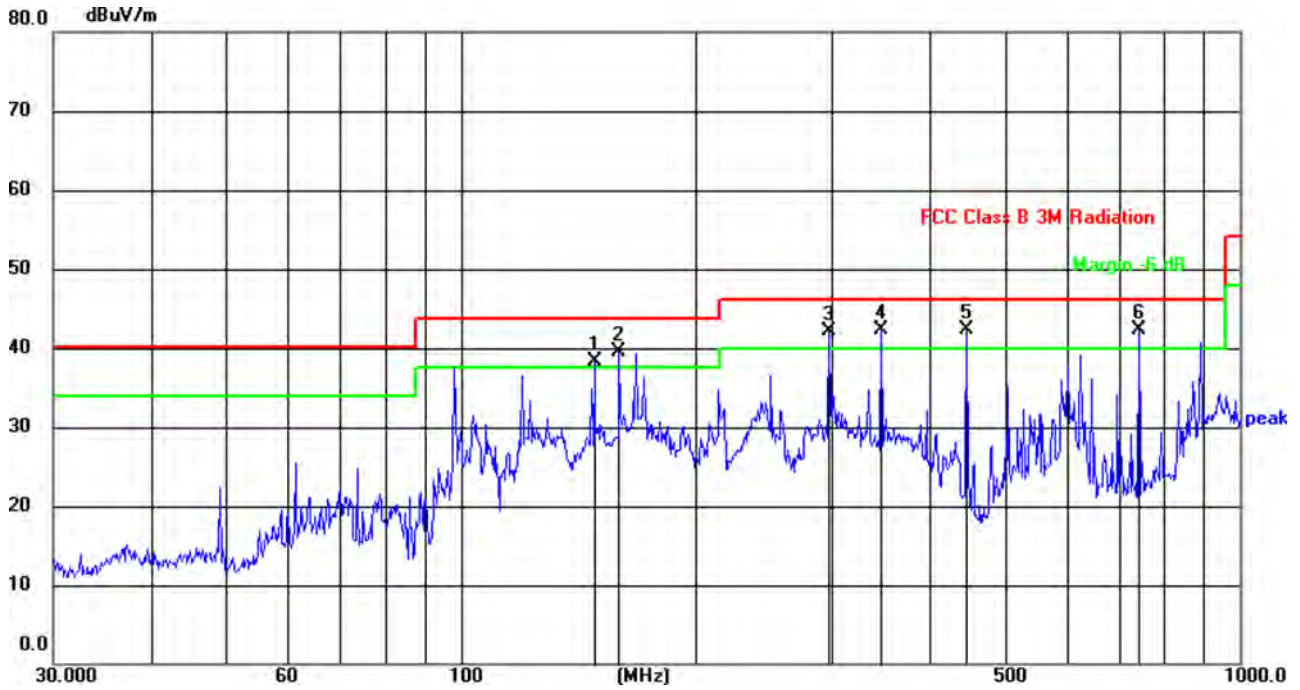
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

**Below 1GHz**

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

Temperature:	24.4°C	Relative Humidity:	50%
Pressure:	101.2kPa	Test Voltage :	DC 12V
Test Mode :	5.8G TX- 802.11a (5825MHz)		

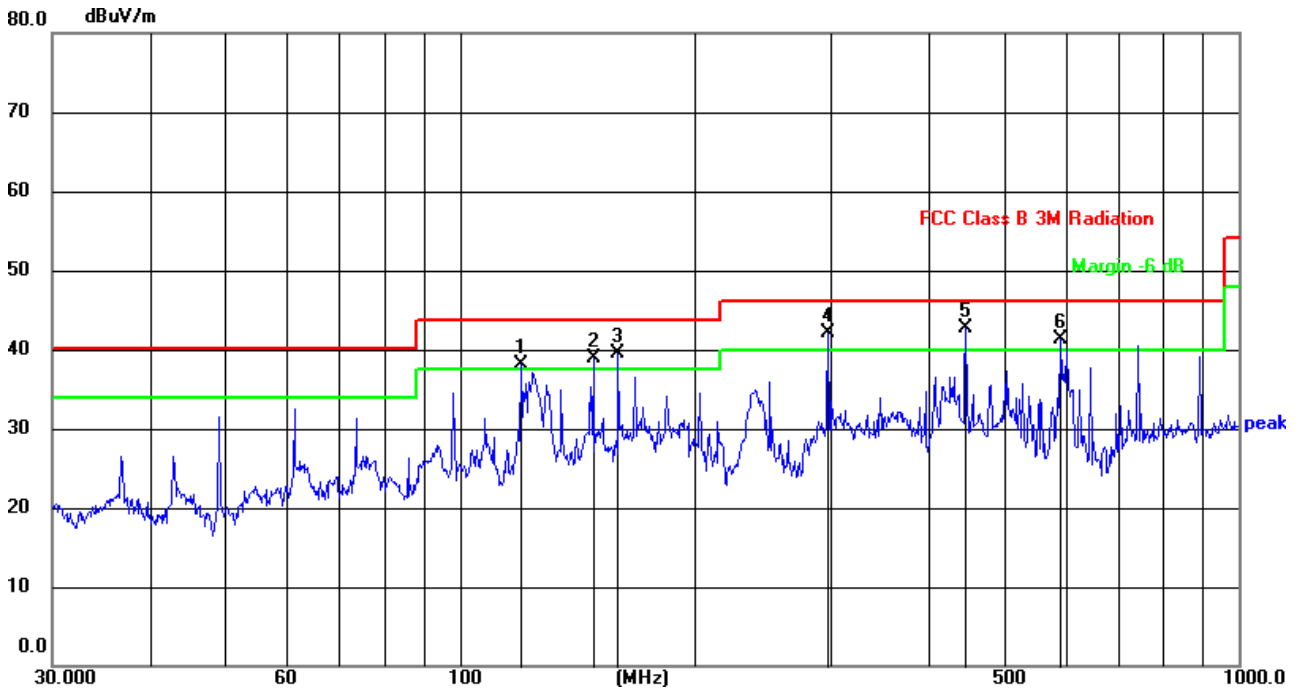
**Horizontal:**



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	148.4410	59.02	-20.68	38.34	43.50	-5.16	QP
2	159.7844	60.08	-20.58	39.50	43.50	-4.00	QP
3	297.2238	62.42	-20.40	42.02	46.00	-3.98	QP
4	346.8091	61.78	-19.40	42.38	46.00	-3.62	QP
5	446.4139	58.02	-15.65	42.37	46.00	-3.63	QP
6	742.2586	50.65	-8.27	42.38	46.00	-3.62	QP



Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	119.8555	61.24	-23.18	38.06	43.50	-5.44	QP
2	148.4410	59.49	-20.68	38.81	43.50	-4.69	QP
3	159.7844	60.17	-20.58	39.59	43.50	-3.91	QP
4	297.2238	62.55	-20.40	42.15	46.00	-3.85	QP
5	446.4139	58.26	-15.65	42.61	46.00	-3.39	QP
6	590.9737	53.35	-11.96	41.39	46.00	-4.61	QP

Remarks:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

**Above 1GHz:**

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

Temperature:	24.4°C	Relative Humidity:	50%
Pressure:	101.2kPa	Test Voltage :	DC 12V
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	
<i>Low Channel:5180MHz</i>									
V	5150.00	51.80	45.70	5.37	32.60	44.07	68.20	-24.13	PK
V	5150.00	46.55	45.70	5.37	32.60	38.82	54.00	-15.18	AV
V	10360.00	52.13	46.20	8.27	38.50	52.70	68.20	-15.50	PK
V	10360.00	41.76	46.20	8.27	38.50	42.33	54.00	-11.67	AV
V	15540.00	49.13	46.30	10.35	38.70	51.88	74.00	-22.12	PK
V	15540.00	38.70	46.30	10.35	38.70	41.45	54.00	-12.55	AV
V	20720.00	58.59	57.40	11.93	37.80	50.92	68.20	-17.28	PK
V	20720.00	48.16	57.40	11.93	37.80	40.49	54.00	-13.51	AV
V	25900.00	56.14	56.50	13.45	39.70	52.79	68.20	-15.41	PK
V	25900.00	45.29	56.50	13.45	39.70	41.94	54.00	-12.06	AV
H	10360.00	52.05	46.20	8.27	38.50	52.62	68.20	-15.58	PK
H	10360.00	40.34	46.20	8.27	38.50	40.91	54.00	-13.09	AV
H	15540.00	48.11	46.30	10.35	38.70	50.86	74.00	-23.14	PK
H	15540.00	36.17	46.30	10.35	38.70	38.92	54.00	-15.08	AV
H	20720.00	60.90	57.40	11.93	37.80	53.23	68.20	-14.97	PK
H	20720.00	49.10	57.40	11.93	37.80	41.43	54.00	-12.57	AV
H	25900.00	57.20	56.50	13.45	39.70	53.85	68.20	-14.35	PK
H	25900.00	45.33	56.50	13.45	39.70	41.98	54.00	-12.02	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)	
<i>Middle Channel:5200MHz</i>									
V	10400.00	51.14	46.20	8.27	38.50	51.71	68.20	-16.49	PK
V	10400.00	41.51	46.20	8.27	38.50	42.08	54.00	-11.92	AV
V	15600.00	49.46	46.30	10.35	38.40	51.91	74.00	-22.09	PK
V	15600.00	40.28	46.30	10.35	38.40	42.73	54.00	-11.27	AV
V	20800.00	59.84	57.40	11.93	37.80	52.17	68.20	-16.03	PK
V	20800.00	49.75	57.40	11.93	37.80	42.08	54.00	-11.92	AV
V	26000.00	54.78	56.50	13.45	39.80	51.53	68.20	-16.67	PK
V	26000.00	46.59	56.50	13.45	39.80	43.34	54.00	-10.66	AV
H	10400.00	51.78	46.20	8.27	38.50	52.35	68.20	-15.85	PK
H	10400.00	41.78	46.20	8.27	38.50	42.35	54.00	-11.65	AV
H	15600.00	49.44	46.30	10.35	38.40	51.89	74.00	-22.11	PK
H	15600.00	40.28	46.30	10.35	38.40	42.73	54.00	-11.27	AV
H	20800.00	58.75	57.40	11.93	37.80	51.08	68.20	-17.12	PK
H	20800.00	47.56	57.40	11.93	37.80	39.89	54.00	-14.11	AV
H	26000.00	54.48	56.50	13.45	39.80	51.23	68.20	-16.97	PK
H	26000.00	45.76	56.50	13.45	39.80	42.51	54.00	-11.49	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	5350.00	51.99	45.70	5.37	33.10	44.76	68.20	-23.44	PK
V	5350.00	46.12	45.70	5.37	33.10	38.89	54.00	-15.11	AV
V	10480.00	47.82	46.20	8.27	38.60	48.49	68.20	-19.71	PK
V	10480.00	37.42	46.20	8.27	38.60	38.09	54.00	-15.91	AV
V	15720.00	45.29	46.30	10.35	38.40	47.74	74.00	-26.26	PK
V	15720.00	35.05	46.30	10.35	38.40	37.50	54.00	-16.50	AV
V	20960.00	55.82	57.40	11.93	37.50	47.85	68.20	-20.35	PK
V	20960.00	46.89	57.40	11.93	37.50	38.92	54.00	-15.08	AV
V	26200.00	51.64	56.50	13.45	40.10	48.69	68.20	-19.51	PK
V	26200.00	41.83	56.50	13.45	40.10	38.88	54.00	-15.12	AV
H	10480.00	48.08	46.20	8.27	38.60	48.75	68.20	-19.45	PK
H	10480.00	37.42	46.20	8.27	38.60	38.09	54.00	-15.91	AV
H	15720.00	45.64	46.30	10.35	38.40	48.09	74.00	-25.91	PK
H	15720.00	35.16	46.30	10.35	38.40	37.61	54.00	-16.39	AV
H	20960.00	56.01	57.40	11.93	37.50	48.04	68.20	-20.16	PK
H	20960.00	46.79	57.40	11.93	37.50	38.82	54.00	-15.18	AV
H	26200.00	51.33	56.50	13.45	40.10	48.38	68.20	-19.82	PK
H	26200.00	41.18	56.50	13.45	40.10	38.23	54.00	-15.77	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:	24.4°C	Relative Humidity:	50%
Pressure:	101.2kPar	Test Voltage :	DC 12V
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	47.14	46.10	8.77	39.10	48.91	74.00	-25.09	PK
V	11490.00	38.92	46.10	8.77	39.10	40.69	54.00	-13.31	AV
V	17235.00	44.70	47.60	11.10	38.70	46.90	68.20	-21.30	PK
V	17235.00	37.35	47.60	11.10	38.70	39.55	54.00	-14.45	AV
V	22980.00	53.49	56.90	12.73	37.70	47.02	74.00	-26.98	PK
V	22980.00	45.43	56.90	12.73	37.70	38.96	54.00	-15.04	AV
V	28725.00	50.28	55.60	14.25	40.30	49.23	68.20	-18.97	PK
V	28725.00	41.71	55.60	14.25	40.30	40.66	54.00	-13.34	AV
H	11490.00	47.62	46.10	8.77	39.10	49.39	74.00	-24.61	PK
H	11490.00	38.75	46.10	8.77	39.10	40.52	54.00	-13.48	AV
H	17235.00	45.73	47.60	11.10	38.70	47.93	68.20	-20.27	PK
H	17235.00	37.77	47.60	11.10	38.70	39.97	54.00	-14.03	AV
H	22980.00	55.72	56.90	12.73	37.70	49.25	74.00	-24.75	PK
H	22980.00	45.20	56.90	12.73	37.70	38.73	54.00	-15.27	AV
H	28725.00	52.26	55.60	14.25	40.30	51.21	68.20	-16.99	PK
H	28725.00	42.34	55.60	14.25	40.30	41.29	54.00	-12.71	AV

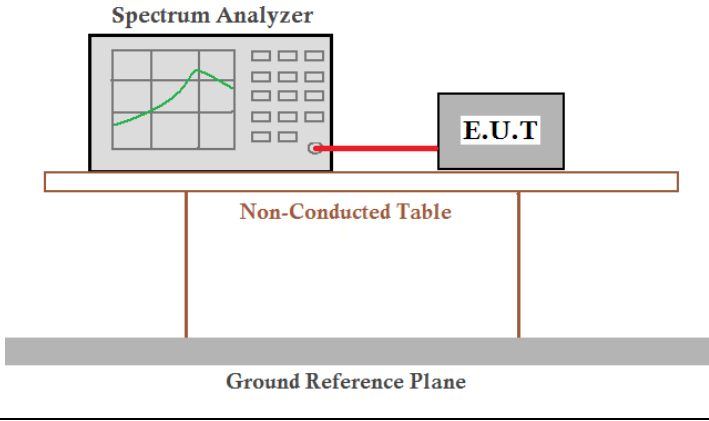
Polar (H/V)	Frequency	Meter Reading	Pre-amplifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:5785MHz									
V	11570.00	46.95	46.10	8.77	39.10	48.72	74.00	-25.28	PK
V	11570.00	38.74	46.10	8.77	39.10	40.51	54.00	-13.49	AV
V	17355.00	44.51	47.60	11.10	38.70	46.71	68.20	-21.49	PK
V	17355.00	37.15	47.60	11.10	38.70	39.35	54.00	-14.65	AV
V	23140.00	53.31	56.90	12.73	37.70	46.84	74.00	-27.16	PK
V	23140.00	45.23	56.90	12.73	37.70	38.76	54.00	-15.24	AV
V	28925.00	50.08	55.60	14.25	40.30	49.03	68.20	-19.17	PK
V	28925.00	41.52	55.60	14.25	40.30	40.47	54.00	-13.53	AV
H	11570.00	47.43	46.10	8.77	39.10	49.20	74.00	-24.80	PK
H	11570.00	38.54	46.10	8.77	39.10	40.31	54.00	-13.69	AV
H	17355.00	45.54	47.60	11.10	38.70	47.74	68.20	-20.46	PK
H	17355.00	37.57	47.60	11.10	38.70	39.77	54.00	-14.23	AV
H	23140.00	55.53	56.90	12.73	37.70	49.06	74.00	-24.94	PK
H	23140.00	45.01	56.90	12.73	37.70	38.54	54.00	-15.46	AV
H	28925.00	52.07	55.60	14.25	40.30	51.02	68.20	-17.18	PK
H	28925.00	42.15	55.60	14.25	40.30	41.10	54.00	-12.90	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	48.05	46.10	8.77	39.10	49.82	74.00	-24.18	PK
V	11650.00	38.91	46.10	8.77	39.10	40.68	54.00	-13.32	AV
V	17475.00	45.90	47.90	11.23	38.90	48.13	68.20	-20.07	PK
V	17475.00	38.18	47.90	11.23	38.90	40.41	54.00	-13.59	AV
V	23300.00	55.64	57.10	12.73	37.80	49.07	68.20	-19.13	PK
V	23300.00	46.18	57.10	12.73	37.80	39.61	54.00	-14.39	AV
V	29125.00	52.35	55.80	14.25	40.50	51.30	68.20	-16.90	PK
V	29125.00	43.41	55.80	14.25	40.50	42.36	54.00	-11.64	AV
H	11650.00	50.07	46.10	8.77	39.10	51.84	74.00	-22.16	PK
H	11650.00	41.33	46.10	8.77	39.10	43.10	54.00	-10.90	AV
H	17475.00	47.13	47.90	11.23	38.90	49.36	68.20	-18.84	PK
H	17475.00	39.47	47.90	11.23	38.90	41.70	54.00	-12.30	AV
H	23300.00	57.06	57.10	12.73	37.80	50.49	68.20	-17.71	PK
H	23300.00	47.64	57.10	12.73	37.80	41.07	54.00	-12.93	AV
H	29125.00	53.41	55.80	14.25	40.50	52.36	68.20	-15.84	PK
H	29125.00	44.15	55.80	14.25	40.50	43.10	54.00	-10.90	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**

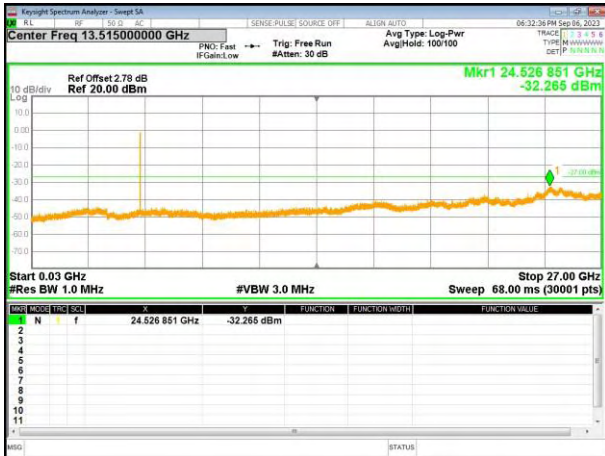
Test Requirement:	FCC Part15 C Section 15.209, Part 15E Section 15.407(b)(4)	
Test Method:	ANSI C63.10:2013	
Limit:	-27dBm/MHz	
Test setup:		
Test Instruments:	Refer to section 3.0 for details	
Test mode:	Refer to section 2.2 for details	
Test environment:	Temp.: 24.4°C	Humid.: 50%RH
Test voltage:	DC 12V	
Test results:	Pass	

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

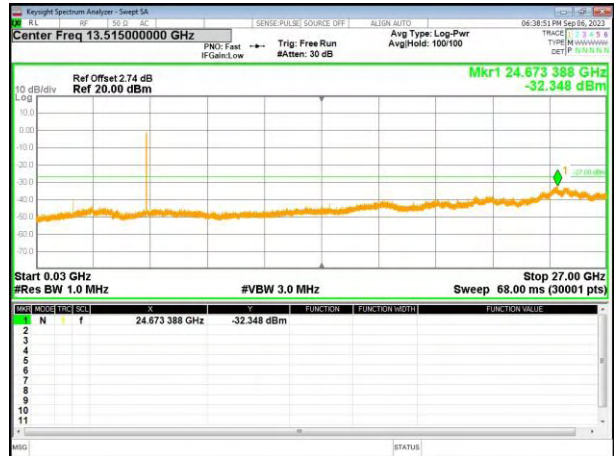
5180-5240MHz

Test Plot

802.11a on channel 36



802.11a on channel 40



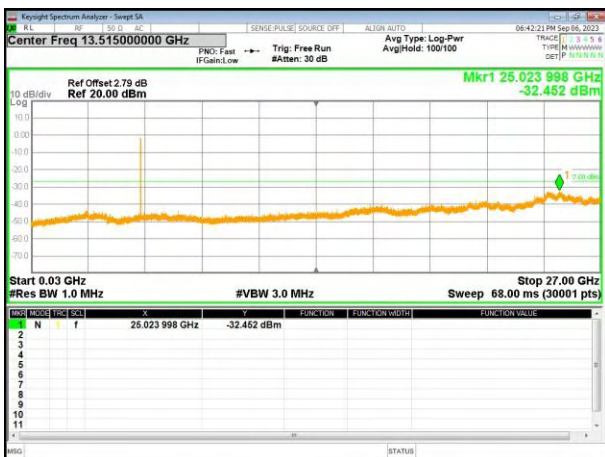
802.11a on channel 48



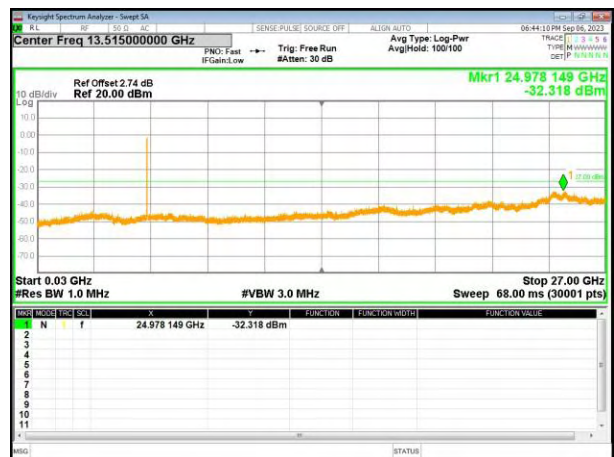
802.11n20 on channel 36



802.11n20 on channel 40



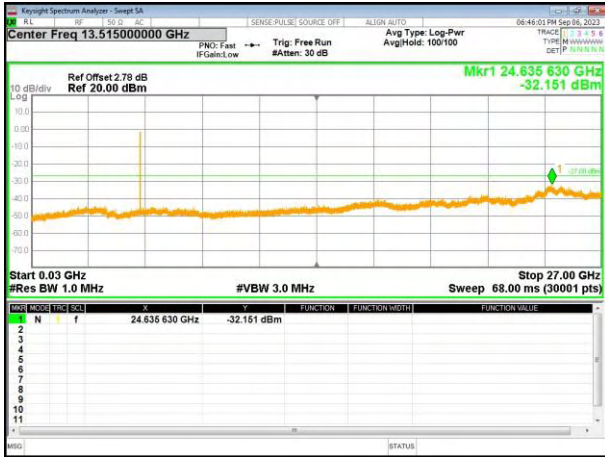
802.11n20 on channel 48



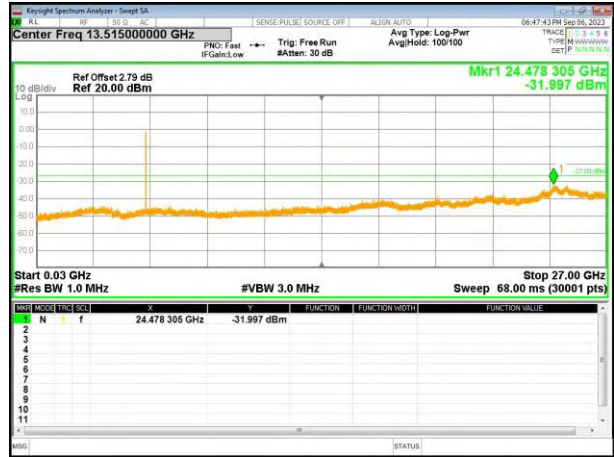


Test Plot

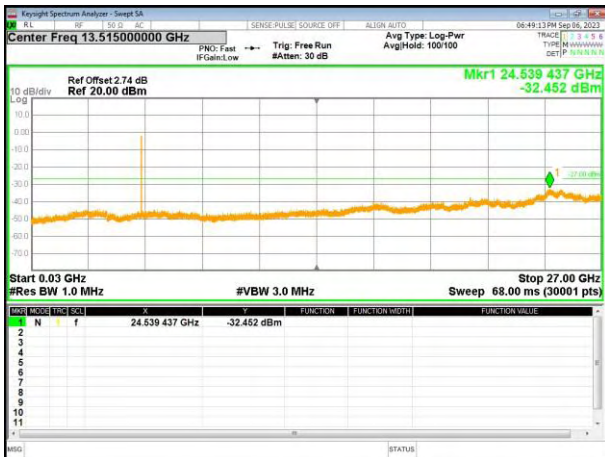
802.11ac20 on channel 36



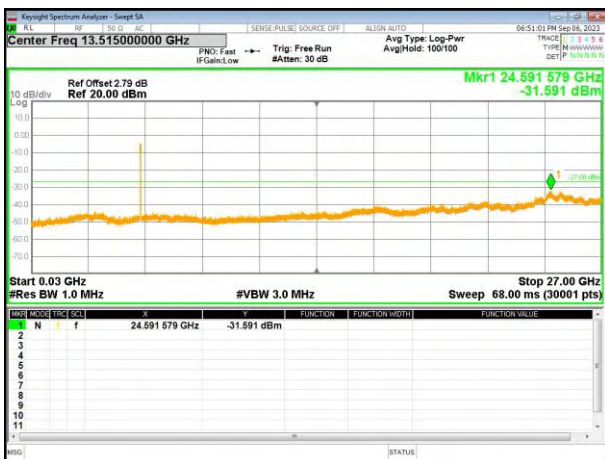
802.11ac20 on channel 40



802.11ac20 on channel 48



802.11n40 on channel 38

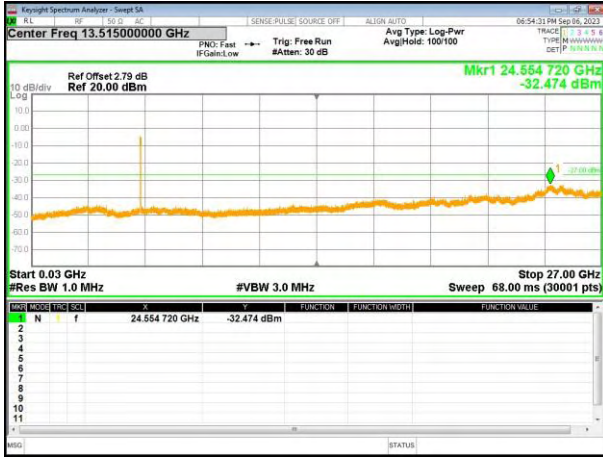


802.11n40 on channel 46

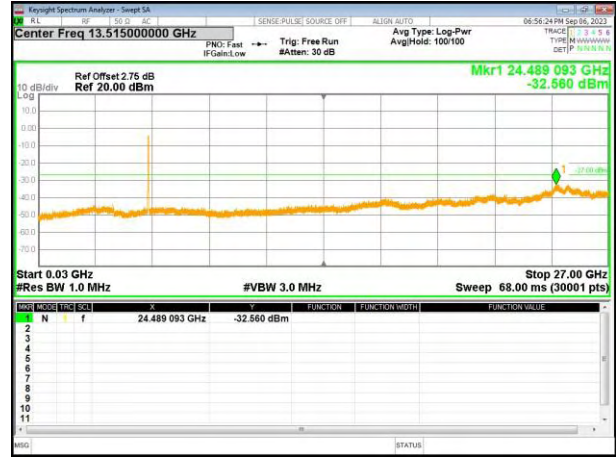


Test Plot

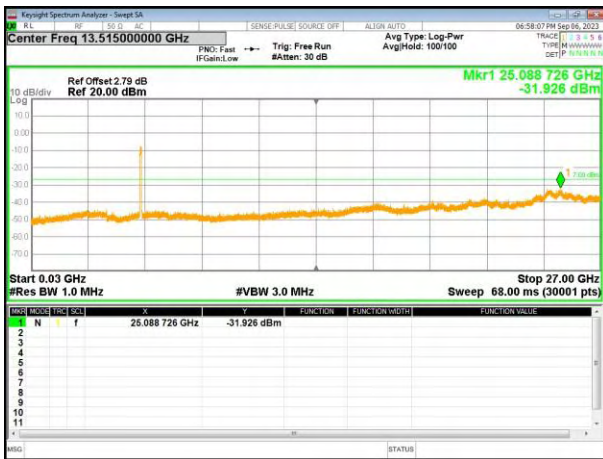
802.11ac40 on channel 38



802.11ac40 on channel 46



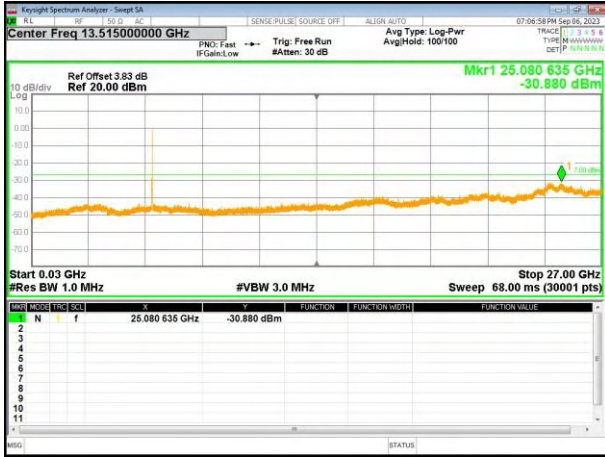
802.11ac80 on channel 42



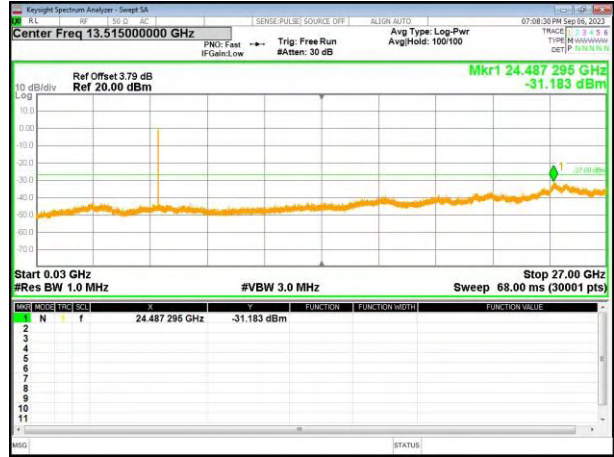
5745-5825MHz

Test Plot

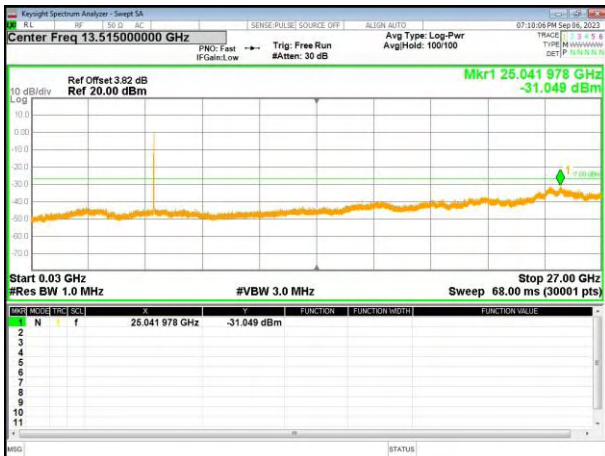
802.11a on channel 149



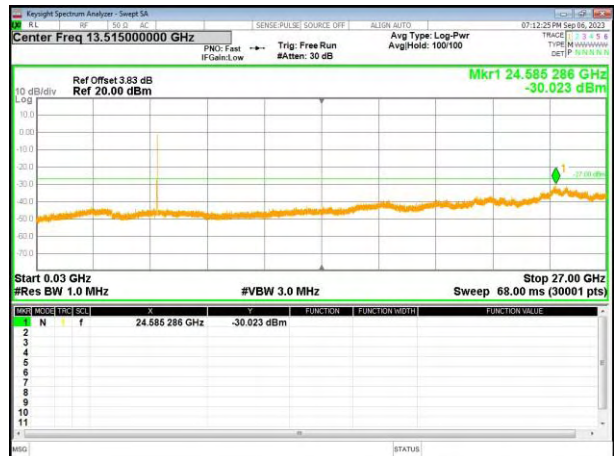
802.11a on channel 157



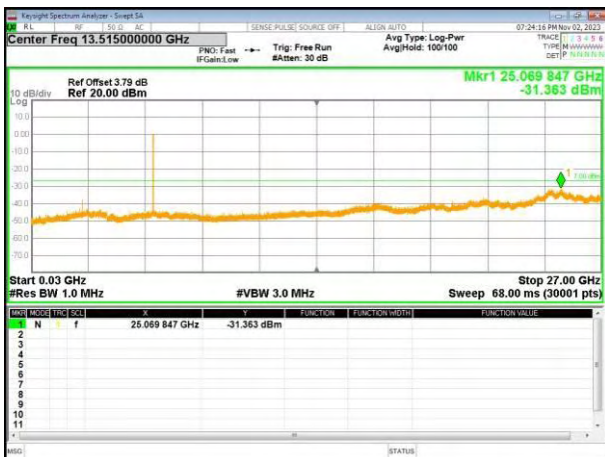
802.11a on channel 165



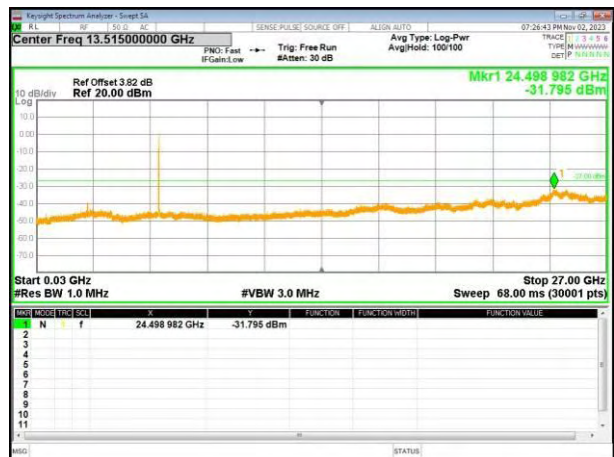
802.11n20 on channel 149



802.11n20 on channel 157



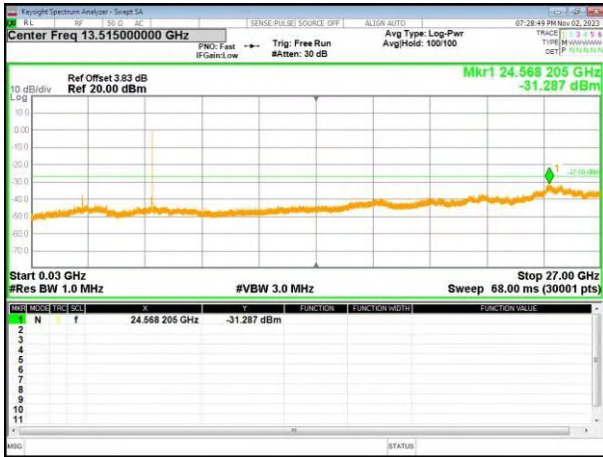
802.11n20 on channel 165



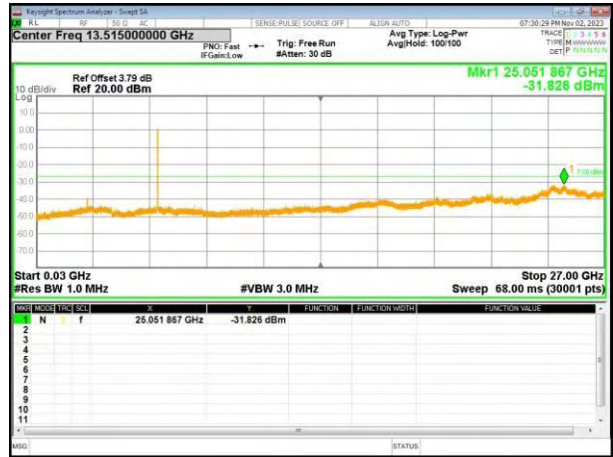


Test Plot

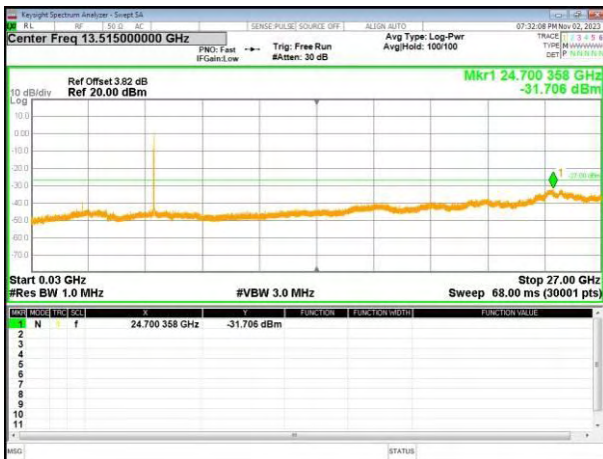
802.11ac20 on channel 149



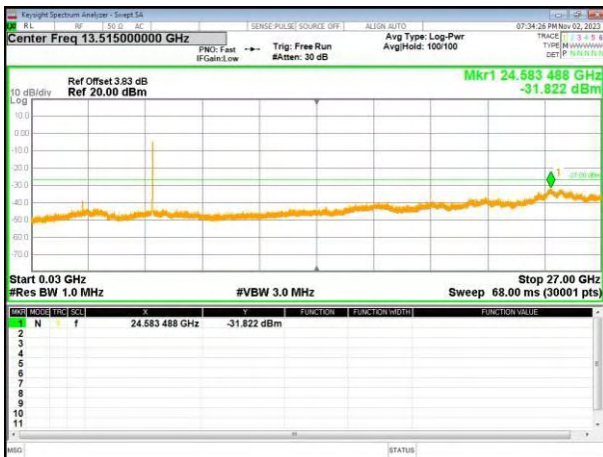
802.11ac20 on channel 157



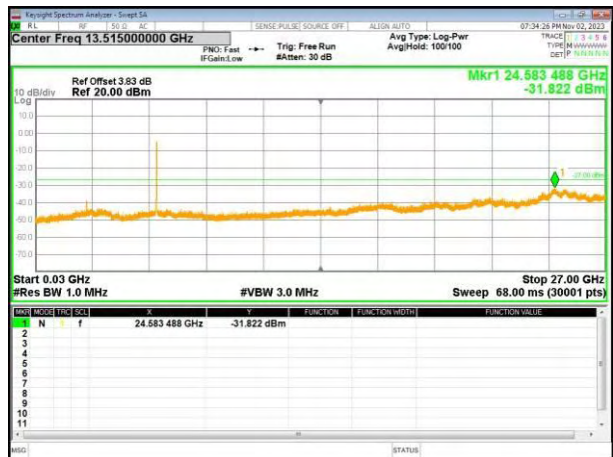
802.11ac20 on channel 165



802.11n40 on channel 151



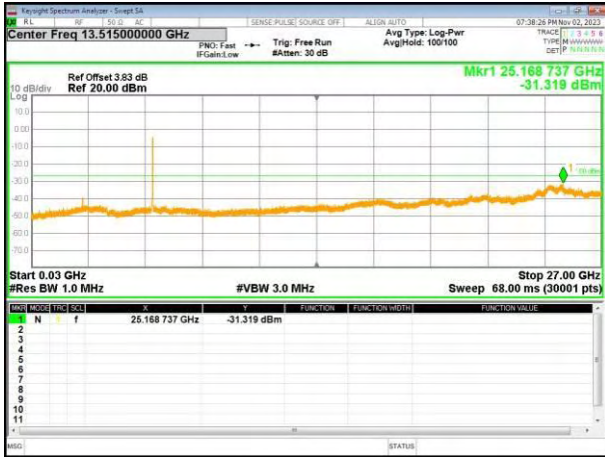
802.11n40 on channel 159



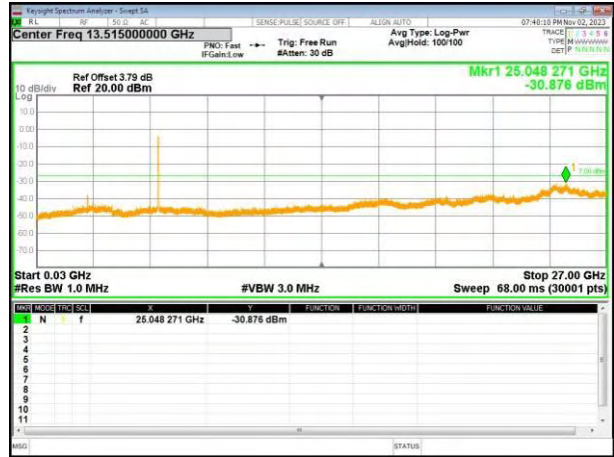


Test Plot

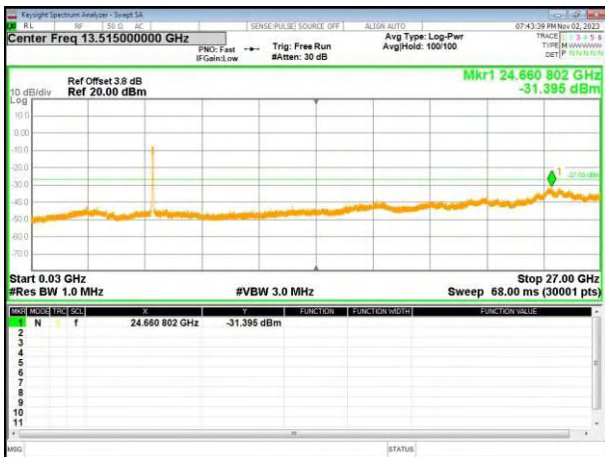
802.11ac40 on channel 151



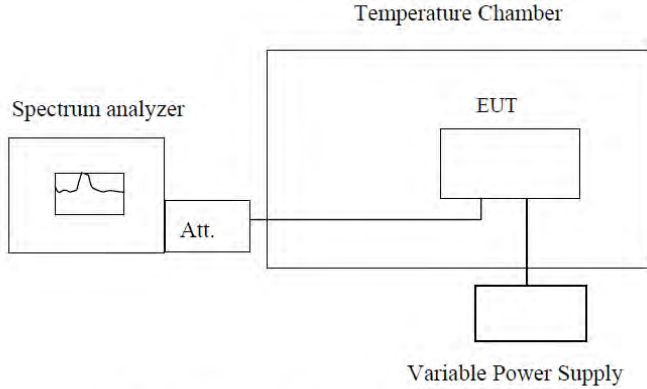
802.11ac40 on channel 159



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:	<ol style="list-style-type: none"> <li>a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.</li> <li>b. Turn the EUT on and couple its output to a spectrum analyzer.</li> <li>c. Turn the EUT off and set the chamber to the highest temperature specified.</li> <li>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.</li> <li>e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.</li> <li>f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minute</li> <li>s. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.</li> </ol>
Test setup:	 <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

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

Measurement data:

Frequency stability versus Temp.					
Power Supply: DC 12V					
Temp. (°C)	Operating Frequency (MHz)	0 minute	2 minute	5 minute	10 minute
		Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	5180	5179.966	5180.095	5179.536	5179.911
	5190	5189.956	5200.109	5199.410	5189.921
	5200	5199.959	5200.094	5199.435	5199.913
	5210	5209.965	5210.072	5209.412	5209.914
	5220	5219.960	5220.087	5219.427	5219.919
	5230	5229.958	5230.080	5229.418	5229.937
	5240	5239.931	5240.089	5239.426	5239.923
-20	5180	5179.959	5180.071	5179.421	5179.932
	5190	5189.950	5190.062	5189.420	5189.927
	5200	5199.958	5200.069	5199.413	5199.923
	5210	5209.950	5210.061	5209.402	5209.929
	5220	5219.971	5220.082	5219.412	5219.922
	5230	5229.949	5230.060	5229.403	5229.920
	5240	5239.967	5240.079	5239.412	5239.894
-10	5180	5179.968	5180.080	5179.400	5179.911
	5190	5189.964	5190.076	5189.411	5189.921
	5200	5199.959	5200.070	5199.401	5199.913
	5210	5209.965	5210.076	5209.401	5209.914
	5220	5219.960	5220.071	5219.408	5219.919
	5230	5229.958	5230.069	5229.424	5229.937
	5240	5239.931	5240.043	5239.396	5239.910
0	5180	5179.745	5180.059	5179.412	5179.922
	5190	5199.917	5190.070	5189.403	5189.922
	5200	5199.915	5200.060	5199.410	5199.914
	5210	5209.970	5210.061	5209.401	5209.920
	5220	5219.959	5220.068	5219.422	5219.912
	5230	5229.946	5230.086	5229.398	5229.933
	5240	5239.963	5240.059	5239.416	5239.912
10	5180	5179.947	5180.071	5179.421	5179.923
	5190	5189.958	5190.062	5189.417	5189.913
	5200	5199.949	5200.069	5199.411	5199.922
	5210	5209.950	5210.061	5209.416	5209.914

	5220	5219.957	5220.082	5219.411	5219.933
	5230	5229.975	5230.060	5229.407	5229.911
	5240	5239.960	5240.079	5239.380	5239.930
20	5180	5180.025	5179.324	5179.670	5179.685
	5190	5189.968	5190.113	5189.714	5189.949
	5200	5199.963	5200.103	5199.722	5199.975
	5210	5209.969	5300.113	5209.714	5209.959
	5220	5219.964	5220.103	5219.735	5219.949
	5230	5229.962	5230.124	5229.712	5229.977
	5240	5239.935	5240.103	5239.730	5239.966
30	5180	5179.951	5180.112	5179.723	5179.968
	5190	5189.962	5190.104	5189.714	5179.968
	5200	5199.953	5200.111	5199.722	5189.963
	5210	5209.954	5210.103	5209.714	5199.959
	5220	5219.961	5220.124	5219.735	5209.965
	5230	5229.979	5230.102	5229.712	5219.959
	5240	5239.951	5240.121	5239.730	5229.957
40	5180	5179.963	5180.111	5179.509	5179.947
	5190	5189.954	5190.113	5199.681	5189.957
	5200	5199.962	5200.103	5199.679	5199.949
	5210	5209.954	5300.113	5209.734	5209.950
	5220	5219.975	5220.103	5219.723	5219.956
	5230	5229.953	5230.124	5229.709	5229.974
	5240	5239.971	5240.103	5239.726	5239.947
50	5180	5179.963	5180.112	5179.723	5179.920
	5190	5189.954	5190.104	5189.714	5189.949
	5200	5199.962	5200.111	5199.722	5199.975
	5210	5209.954	5210.103	5209.714	5209.959
	5220	5219.975	5220.124	5219.735	5219.949
	5230	5229.953	5230.102	5229.712	5229.977
	5240	5239.971	5240.121	5239.730	5239.966

Frequency stability versus Voltage					
Temperature: 25°C					
Power Supply (VDC)	Operating Frequency (MHz)	0 minute Measured Frequency (MHz)	2 minute Measured Frequency (MHz)	5 minute Measured Frequency (MHz)	10 minute Measured Frequency (MHz)
10.80	5180	5179.972	5180.115	5179.723	5180.083
	5190	5189.968	5200.108	5189.714	5199.958
	5200	5199.963	5200.136	5199.722	5199.983
	5210	5209.969	5210.114	5209.714	5209.961
	5220	5219.964	5220.129	5219.735	5219.975
	5230	5229.962	5230.122	5229.712	5229.968
	5240	5239.935	5240.131	5239.726	5239.977
12.00	5180	5179.958	5180.130	5179.722	5179.968
	5190	5189.954	5180.236	5189.723	5189.966
	5200	5199.962	5200.111	5199.714	5199.961
	5210	5209.955	5210.136	5299.720	5209.951
	5220	5219.975	5220.114	5219.714	5219.960
	5230	5229.953	5230.129	5229.733	5299.958
	5240	5239.971	5240.123	5239.712	5239.963
13.20	5180	5179.972	5180.121	5179.711	5179.947
	5190	5189.968	5190.118	5189.722	5189.957
	5200	5199.963	5200.112	5199.713	5199.948
	5210	5209.969	5210.118	5209.714	5209.950
	5220	5219.964	5220.113	5219.721	5219.956
	5230	5229.962	5230.111	5229.738	5229.979
	5240	5239.935	5240.085	5239.710	5239.947



Frequency stability versus Temp.					
Power Supply: DC 12V					
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	5745	5744.948	5745.114	5744.704	5744.946
	5755	5754.958	5755.121	5754.711	5754.934
	5775	5774.979	5775.114	5774.728	5774.946
	5785	5784.955	5785.106	5784.703	5784.952
	5795	5794.951	5795.113	5794.699	5794.970
	5825	5824.949	5825.042	5824.702	5824.962
-20	5745	5744.945	5745.125	5744.698	5744.957
	5755	5754.960	5755.127	5754.723	5754.970
	5775	5774.959	5775.131	5774.704	5774.956
	5785	5784.962	5785.123	5784.712	5784.942
	5795	5794.972	5795.114	5794.710	5794.936
	5825	5824.954	5825.123	5824.720	5824.970
-10	5745	5744.955	5745.115	5744.714	5744.576
	5755	5754.981	5755.122	5754.716	5754.959
	5775	5774.977	5775.140	5774.719	5774.961
	5785	5784.961	5785.116	5784.710	5784.963
	5795	5794.950	5795.112	5794.701	5794.946
	5825	5824.885	5825.114	5824.710	5824.942
0	5745	5744.949	5745.104	5744.714	5744.947
	5755	5754.974	5755.120	5754.716	5754.972
	5775	5774.955	5775.120	5774.719	5774.969
	5785	5784.964	5785.123	5784.710	5784.952
	5795	5794.962	5795.136	5794.701	5794.941
	5825	5824.972	5825.115	5824.710	5824.876
10	5745	5744.949	5745.114	5744.703	5744.942
	5755	5754.974	5755.131	5754.710	5754.953
	5775	5774.955	5775.133	5774.702	5774.971
	5785	5784.964	5785.115	5784.693	5784.946
	5795	5794.962	5795.132	5794.700	5794.942
	5825	5824.972	5825.130	5824.629	5824.945
20	5745	5744.965	5745.139	5744.712	5744.946
	5755	5754.979	5755.111	5754.728	5754.964
	5775	5774.964	5775.135	5774.713	5774.945
	5785	5784.951	5785.135	5784.699	5784.971
	5795	5794.945	5795.126	5794.693	5794.963
	5825	5824.979	5825.141	5824.727	5824.972
30	5745	5744.955	5745.125	5744.697	5744.971
	5755	5754.962	5755.127	5754.720	5754.942
	5775	5774.979	5775.131	5774.721	5774.966
	5785	5784.955	5785.123	5784.702	5784.965
	5795	5794.951	5795.114	5794.719	5794.956
	5825	5824.954	5825.123	5824.717	5824.971
40	5745	5744.965	5745.109	5744.714	5744.940
	5755	5754.979	5755.134	5754.716	5754.972
	5775	5774.964	5775.116	5774.719	5774.969

	5785	5784.951	5785.125	5784.710	5784.952
	5795	5794.945	5795.123	5794.701	5794.941
	5825	5824.979	5825.133	5824.710	5824.876
50	5745	5744.965	5745.139	5744.714	5744.946
	5755	5754.959	5755.111	5754.727	5754.964
	5775	5774.964	5775.135	5774.713	5774.945
	5785	5784.951	5785.135	5784.699	5784.972
	5795	5794.945	5795.125	5794.693	5794.963
	5825	5824.979	5825.145	5824.727	5824.972

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)
10.80	5745	5744.944	5745.114	5744.703	5744.941
	5755	5754.960	5755.121	5754.720	5754.965
	5775	5774.959	5775.114	5774.721	5774.947
	5785	5784.962	5785.106	5784.702	5784.955
	5795	5794.973	5795.113	5794.720	5794.953
	5825	5824.954	5825.042	5824.717	5824.963
12.00	5745	5744.944	5745.125	5744.698	5744.957
	5755	5754.960	5755.127	5754.723	5754.970
	5775	5774.959	5775.131	5774.704	5774.956
	5785	5784.962	5785.123	5784.712	5784.942
	5795	5794.969	5795.114	5794.710	5794.936
	5825	5824.954	5825.123	5824.720	5824.970
13.20	5745	5744.965	5745.138	5744.714	5744.946
	5755	5754.979	5755.111	5754.728	5754.964
	5775	5774.964	5775.135	5774.713	5774.945
	5785	5784.951	5785.135	5784.699	5784.971
	5795	5794.945	5795.126	5794.693	5794.963
	5825	5824.979	5825.141	5824.727	5824.972

## 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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