6. -26 DB & 6DBM EMISSION BANDWIDTH

Test Requirement:	Part 15 Subpart C Section 15.407 (e)
Test Method:	KDB 789033 D02 v02r01

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15.407 (e)		
Bandwidth		
Limit	U-NII-1	N/A
	U-NII-3	≥ 500 kHz

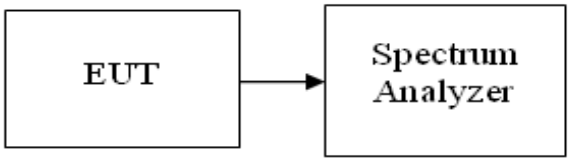
6.2 TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.
Remove the antenna from the EUT and then connect a low-loss RF cable from the antenna port to the spectrum analyzer.
Set the spectrum analyzers RBW = approximately 1% of the emission bandwidth, VBW >RBW, Detector = Peak, Span>26dB bandwidth, and Sweep = auto ,Trace mode = max hold.
Measure the maximum width of the emission that is 26dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
Repeat until all the rest channels were investigated.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULT

Temperature：	26℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC120V
Test Mode ：	TX		

U-NII-1

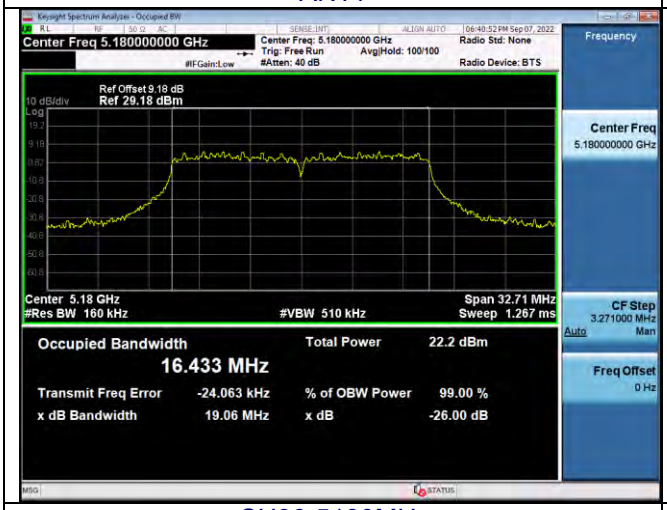
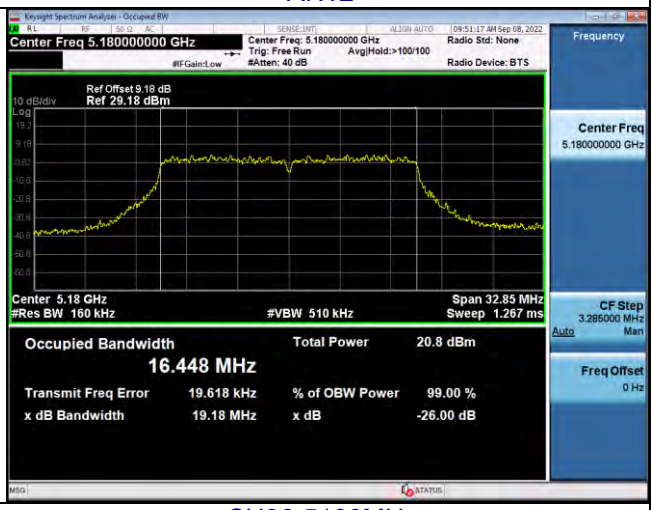
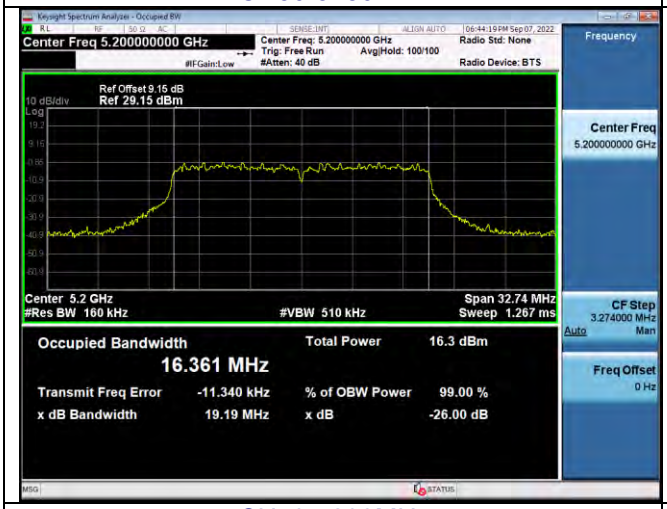
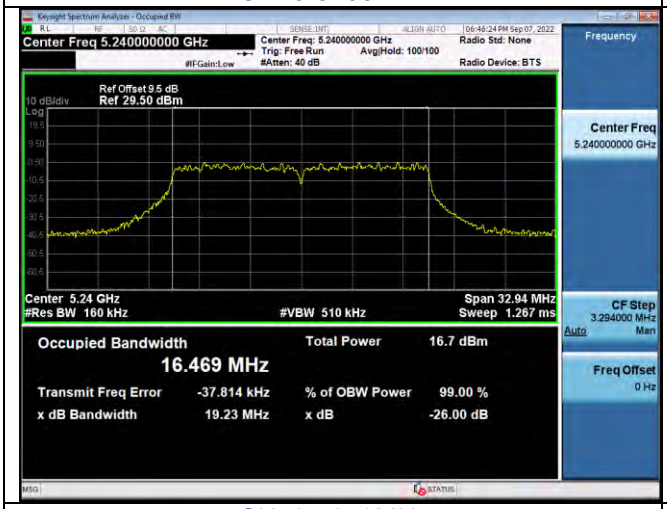
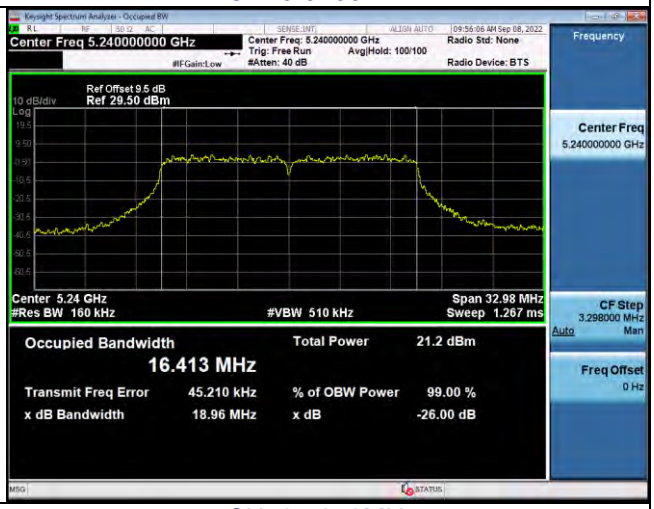
802.11 Mode	Channel No.	Frequency [MHz]	26dB Bandwidth [MHz]		99% Bandwidth [MHz]	
			ANT1	ANT2	ANT1	ANT2
a	36	5180	19.06	19.18	16.433	16.448
	40	5200	19.19	19.36	16.361	16.402
	48	5240	19.23	18.96	16.469	16.413
n (20MHz)	36	5180	20.11	20.12	17.553	17.579
	40	5200	20.03	19.83	17.581	17.553
	48	5240	19.67	20.13	17.534	17.559
ac (20MHz)	36	5180	19.51	20.12	17.557	17.584
	40	5200	19.82	19.88	17.585	17.573
	48	5240	19.79	20.16	17.572	17.594
n(40MHz)	38	5190	40.49	41.05	36.118	36.259
	46	5230	39.63	40.52	36.230	36.268
ac(40MHz)	38	5190	41.75	41.45	36.288	36.279
	46	5230	41.16	41.09	36.186	36.260
ac(80MHz)	42	5210	81.00	80.65	75.547	75.590

U-NII-3

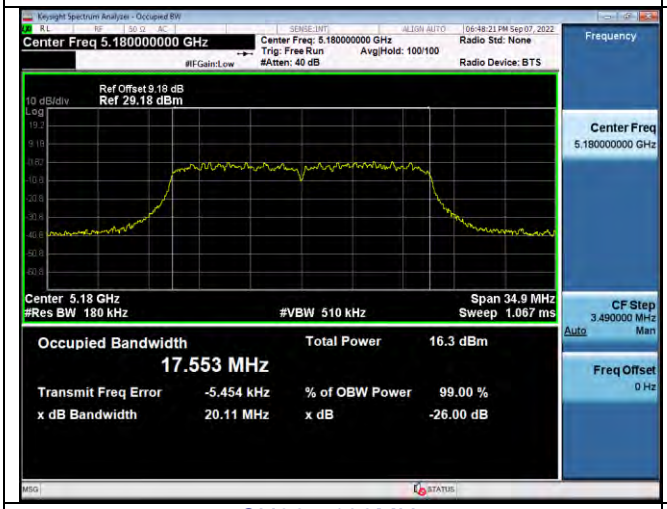
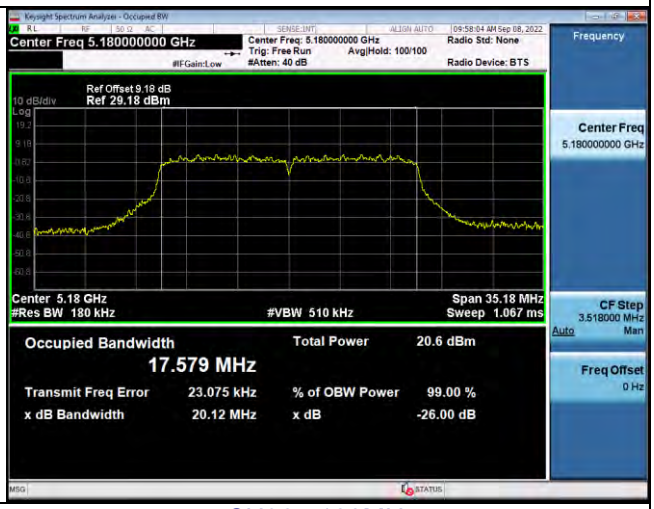
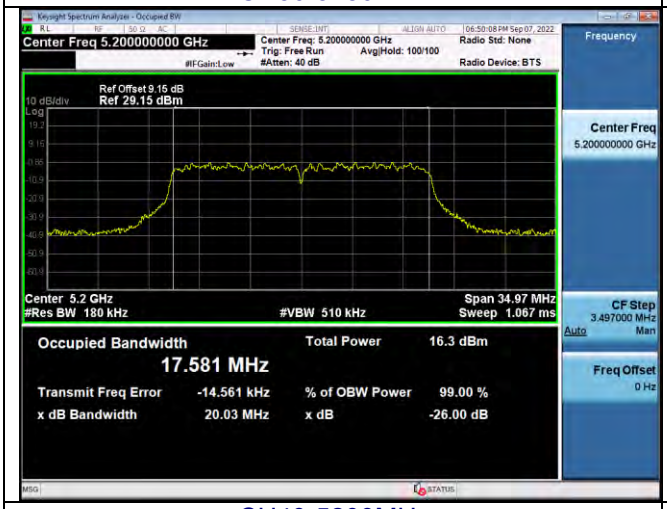
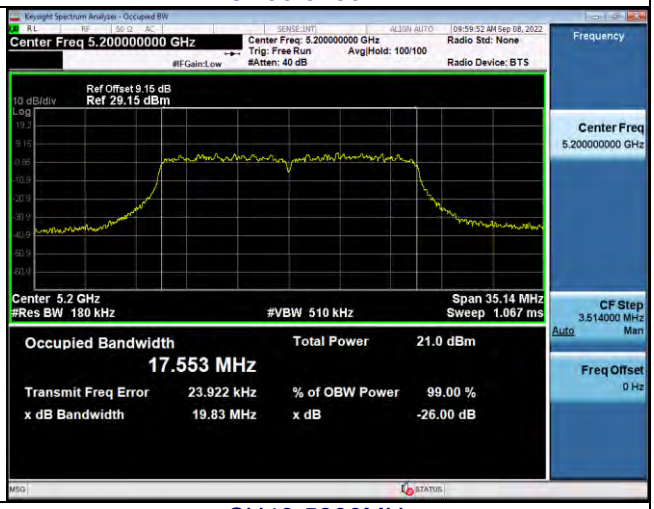
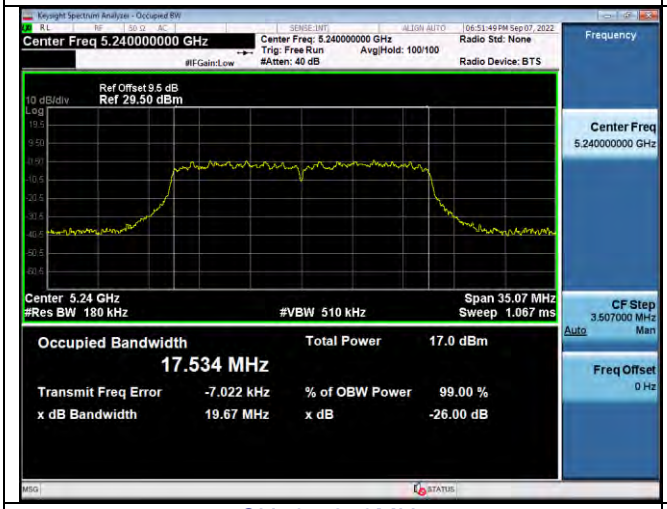
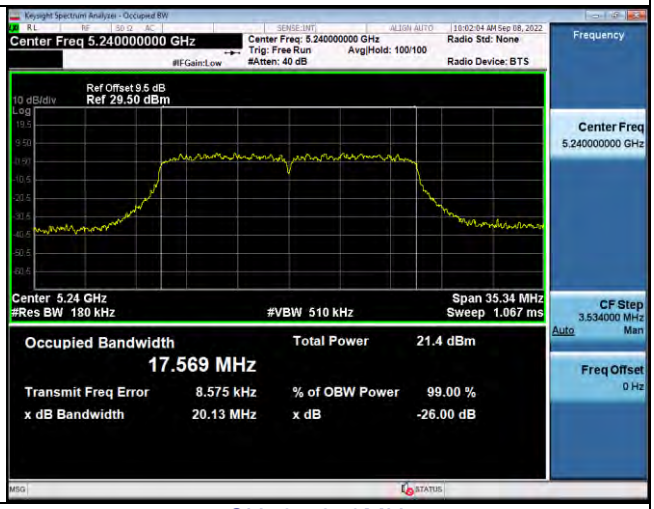
802.11 Mode	Channel No.	Frequency [MHz]	-6db Bandwidth [MHz]		Limit
			ANT1	ANT2	
a	149	5745	16.39	16.47	⩾ 500 kHz
	157	5785	16.36	16.43	
	165	5825	16.42	16.49	
n (20MHz)	149	5745	17.54	17.32	
	157	5785	16.65	17.29	
	165	5825	16.94	17.31	
n (40MHz)	151	5755	16.95	17.33	
	159	5795	17.27	16.80	
ac (20MHz)	149	5745	17.31	17.27	
	157	5785	36.16	36.39	
	165	5825	35.77	36.46	
ac(40MHz)	151	5755	36.05	36.38	
	159	5795	35.57	36.42	
ac(80MHz)	155	5775	75.26	75.24	

Test plot as follows:

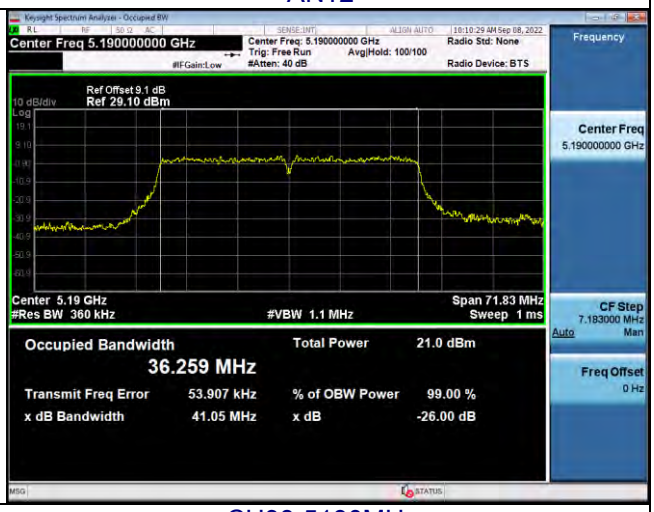
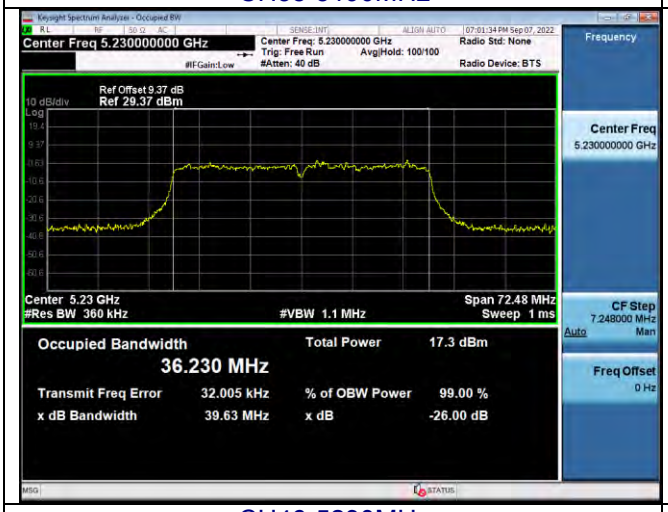
U-NII-1– 802.11a

ANT1	ANT2
	
CH36-5180MHz	CH36-5180MHz
	
CH40-5200MHz	CH40-5200MHz
	
CH48-5240MHz	CH48-5240MHz

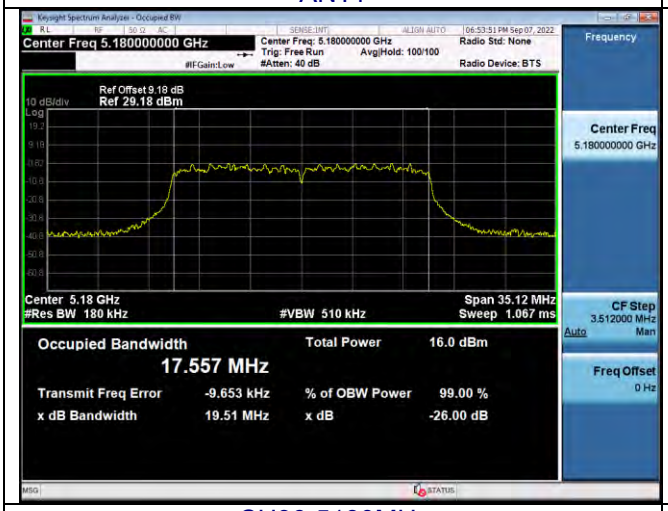
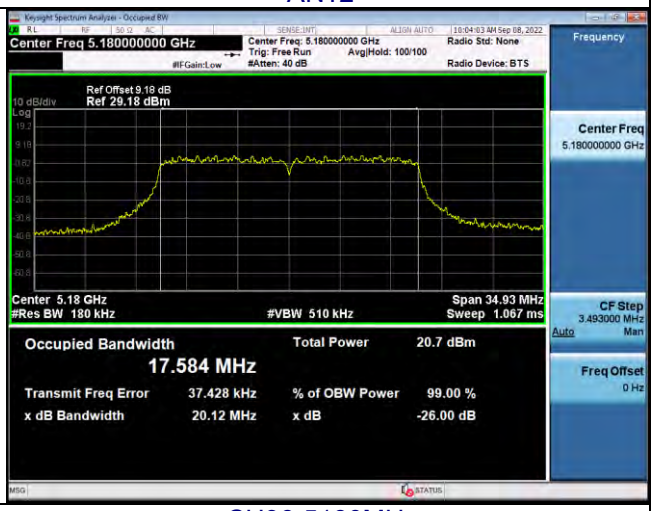
U-NII-1 – 802.11n (20MHz)

ANT1	ANT2
	
CH36-5180MHz	CH36-5180MHz
	
CH40-5200MHz	CH40-5200MHz
	
CH48-5240MHz	CH48-5240MHz

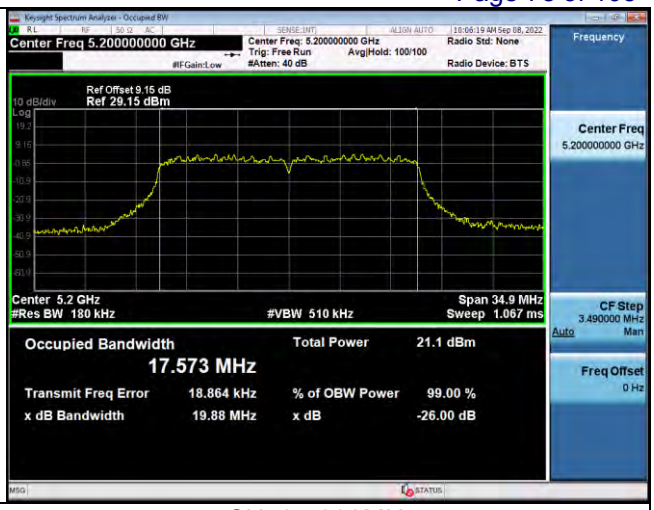
U-NII-1 – 802.11n (40MHz)

ANT1	ANT2
	
CH38-5190MHz	CH38-5190MHz
	
CH46-5230MHz	CH46-5230MHz

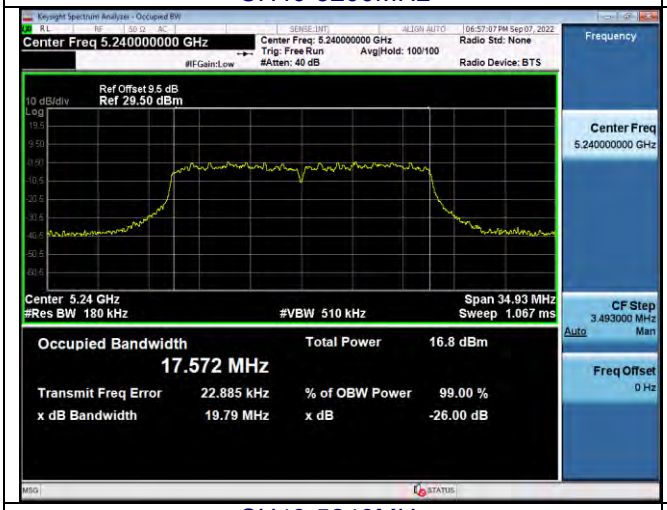
U-NII-1 – 802.11ac 20MHz)

ANT1	ANT2
	
CH36-5180MHz	CH36-5180MHz

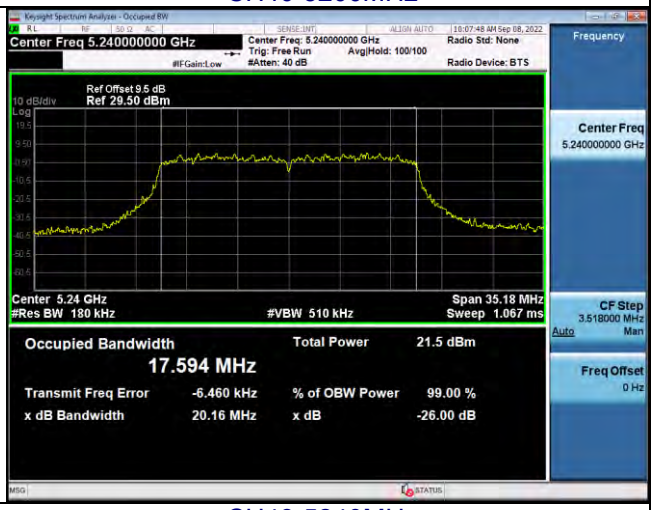
CH40-5200MHz



CH40-5200MHz



CH48-5240MHz



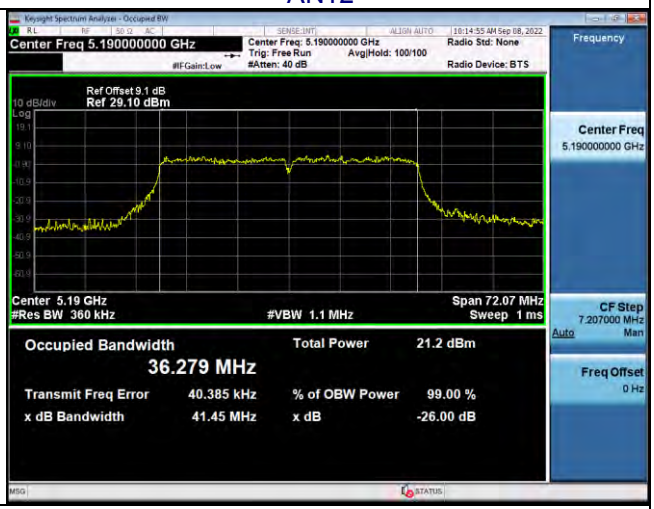
CH48-5240MHz

U-NII-1 – 802.11ac (40MHz)

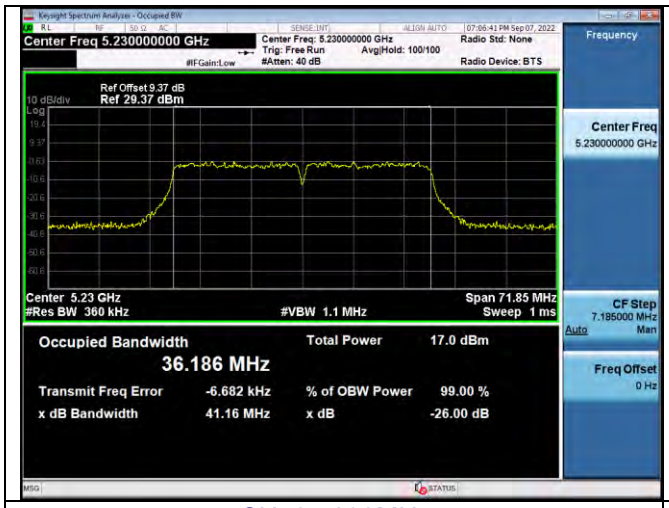
ANT1

CH38-5190MHz

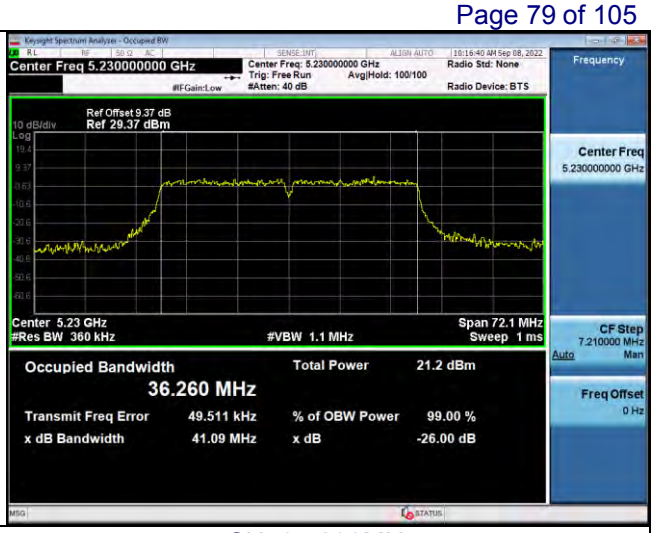
ANT2



CH38-5190MHz



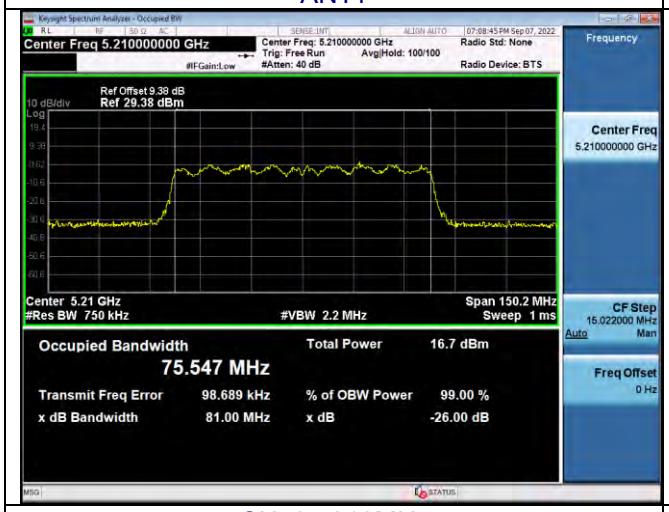
CH46-5230MHz



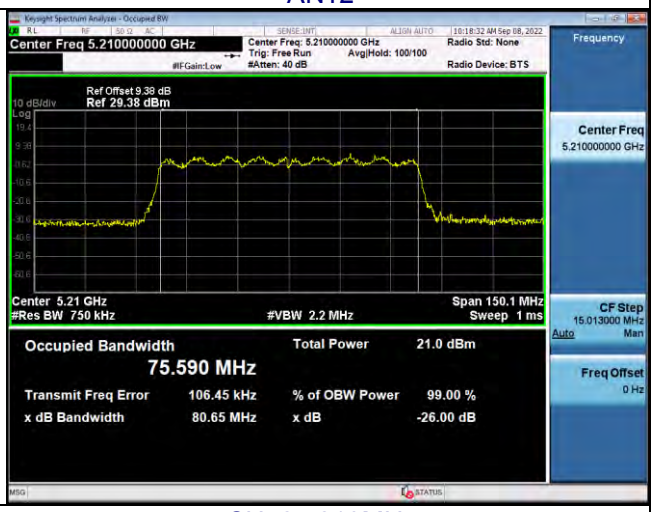
CH46-5230MHz

U-NII-1 –802.11ac (80MHz)

ANT1	ANT2



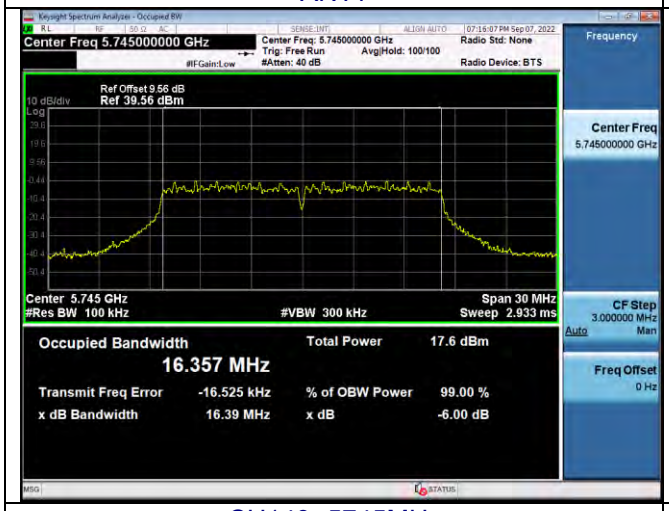
CH42 5210MHz



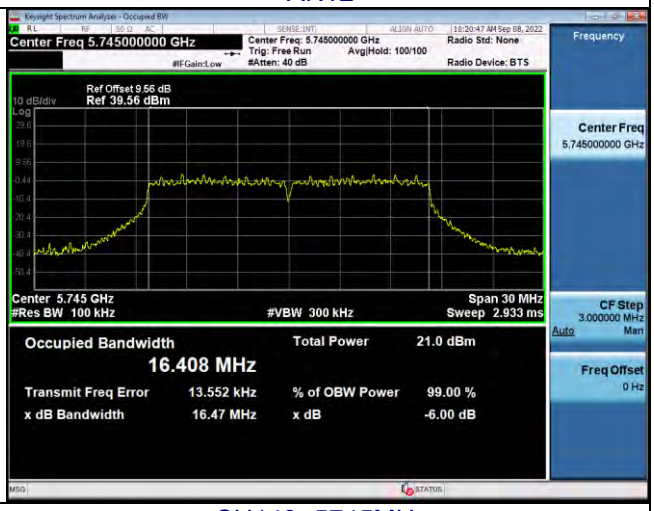
CH42 5210MHz

U-NII-3 –802.11a

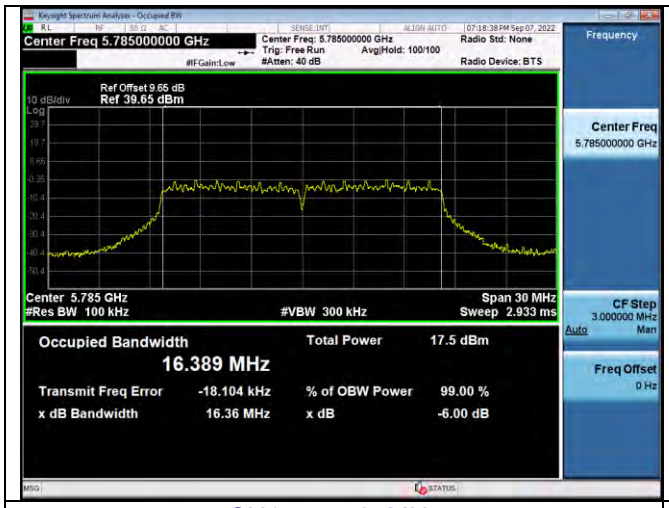
ANT1	ANT2



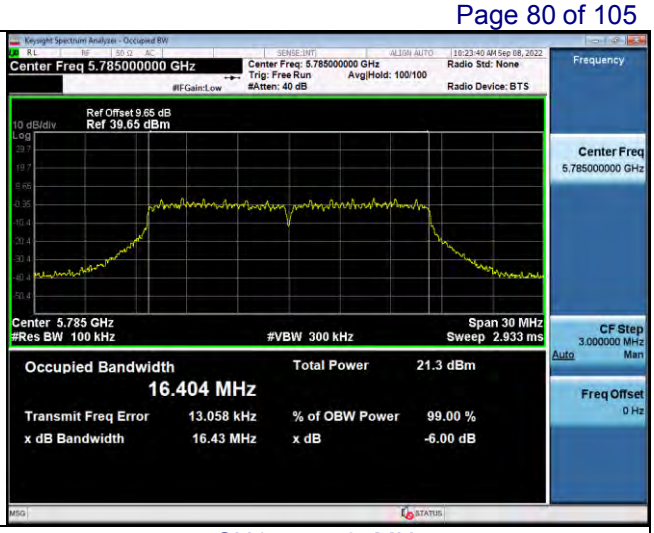
CH149 -5745MHz



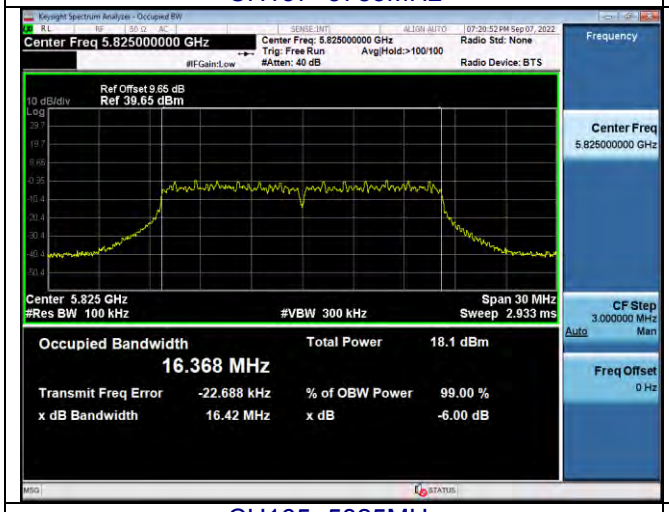
CH149 -5745MHz



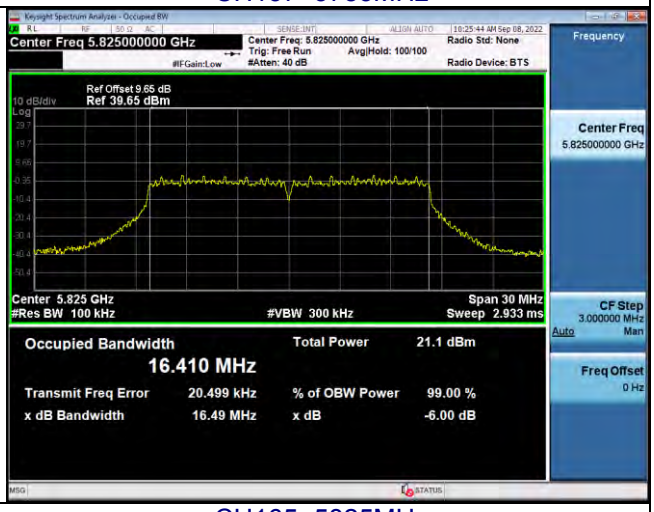
CH157 -5785MHz



CH157 -5785MHz



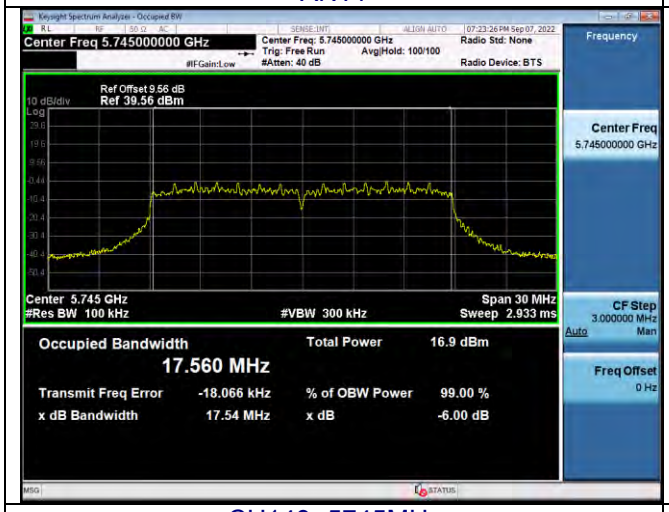
CH165 -5825MHz



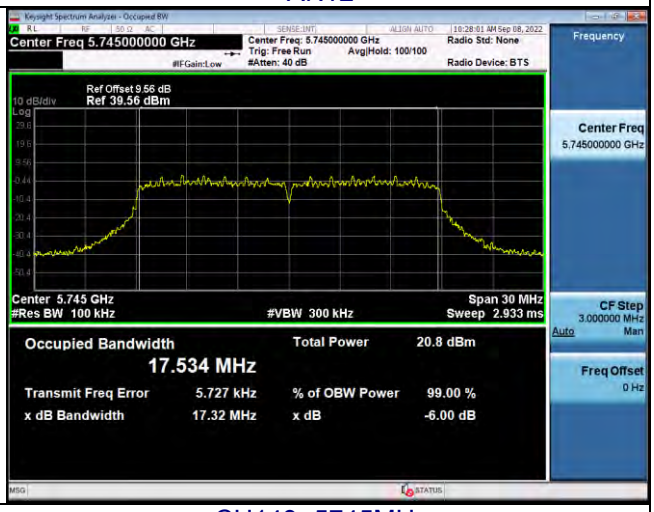
CH165 -5825MHz

U-NII-3–802.11n (20MHz)

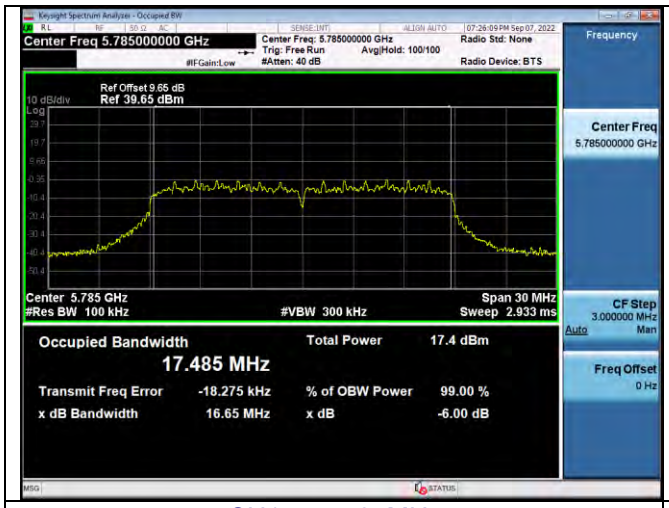
ANT1	ANT2



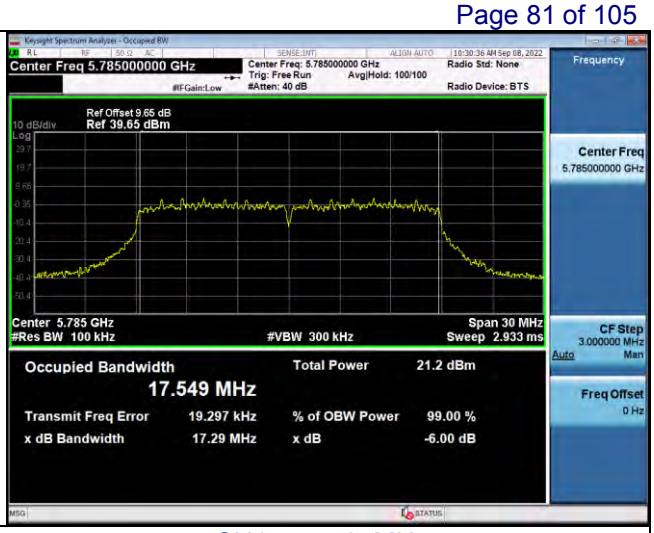
CH149 -5745MHz



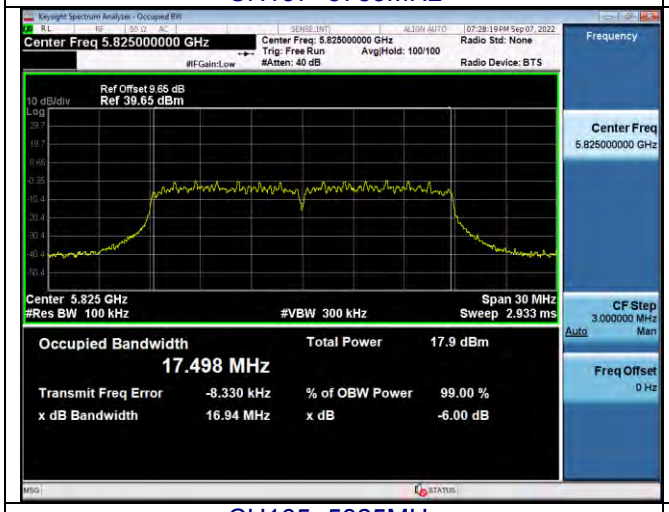
CH149 -5745MHz



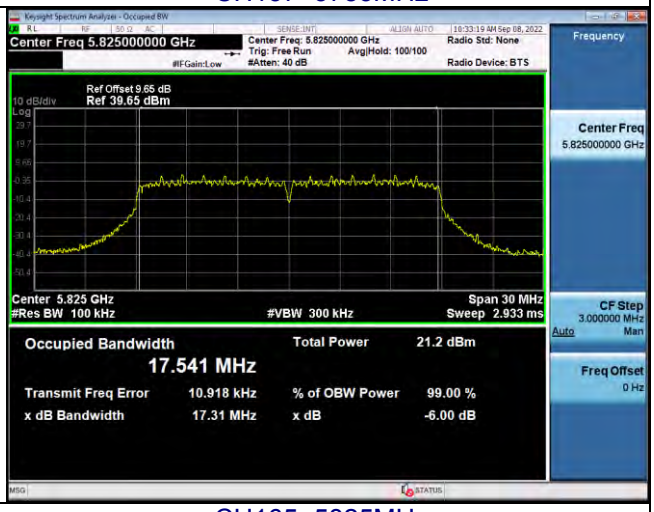
CH157 -5785MHz



CH157 -5785MHz



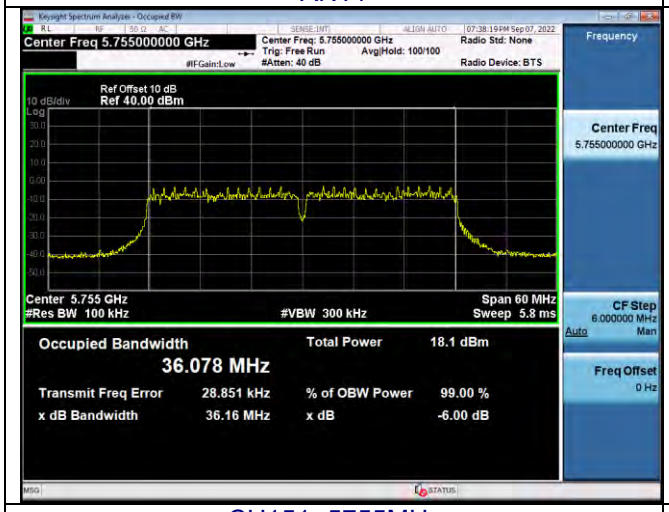
CH165 -5825MHz



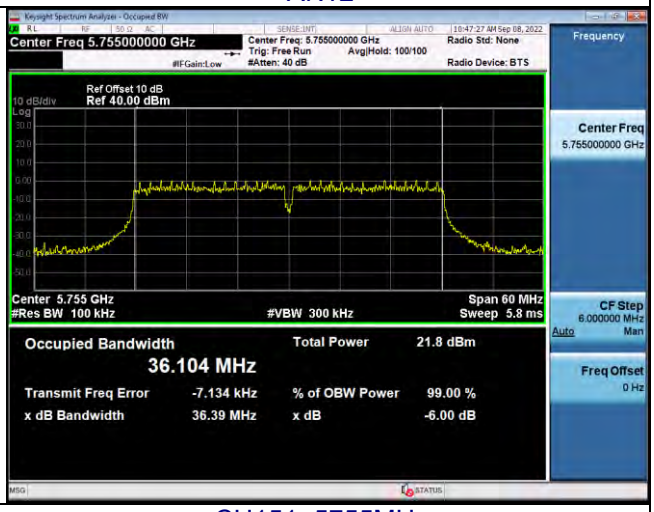
CH165 -5825MHz

U-NII-3 – 802.11n (40MHz)

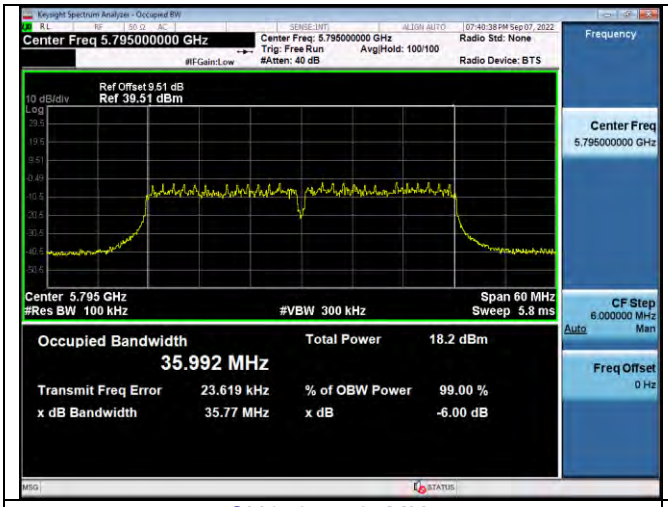
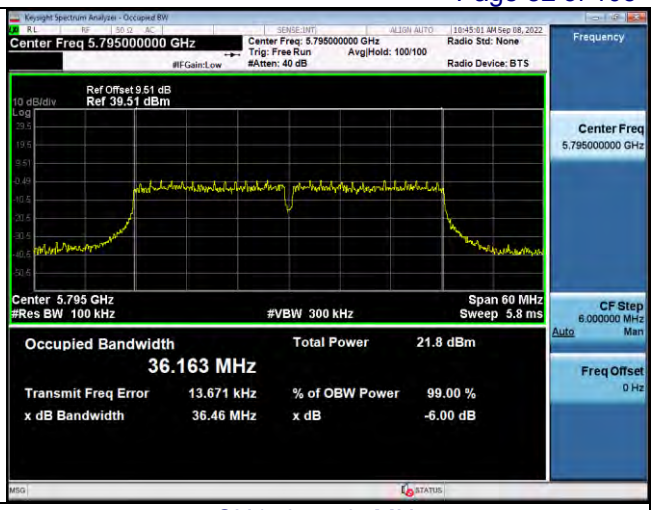
ANT1	ANT2



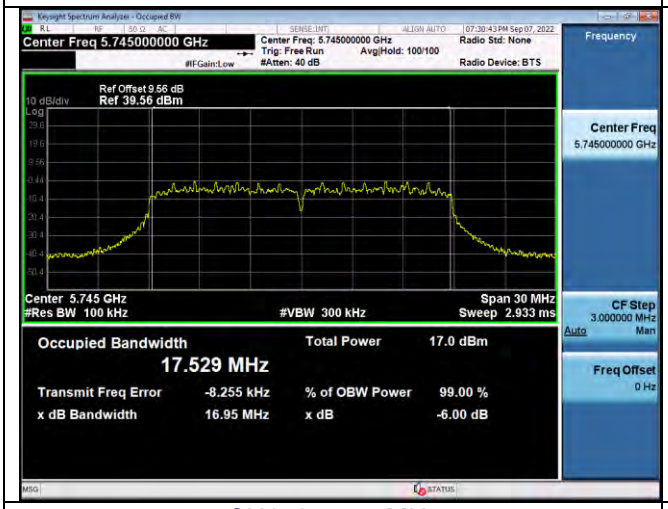
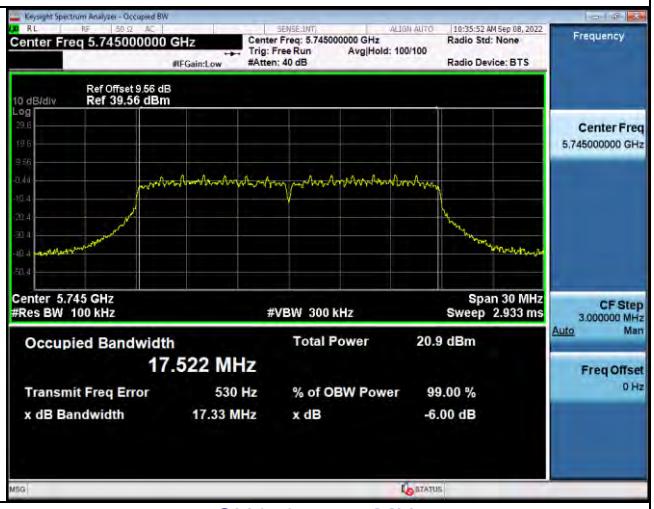
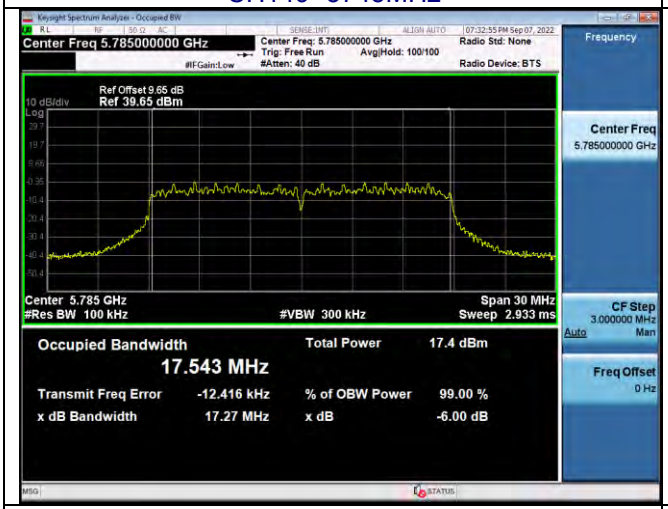
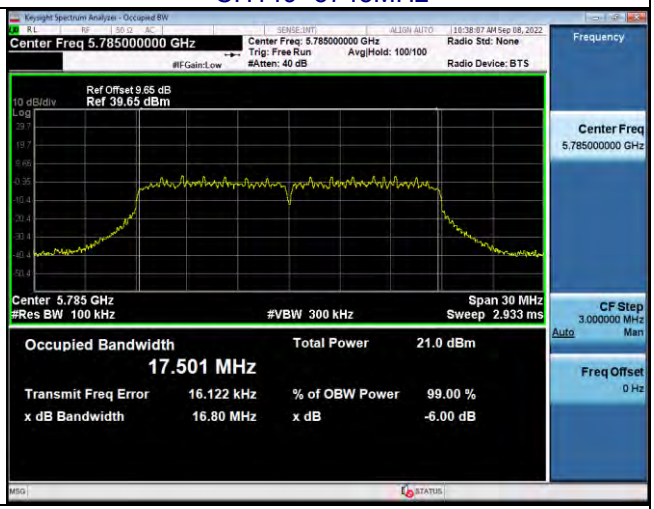
CH151 -5755MHz

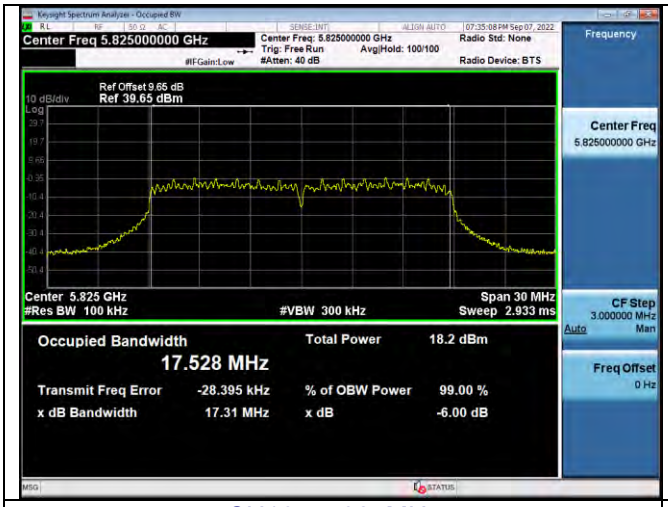
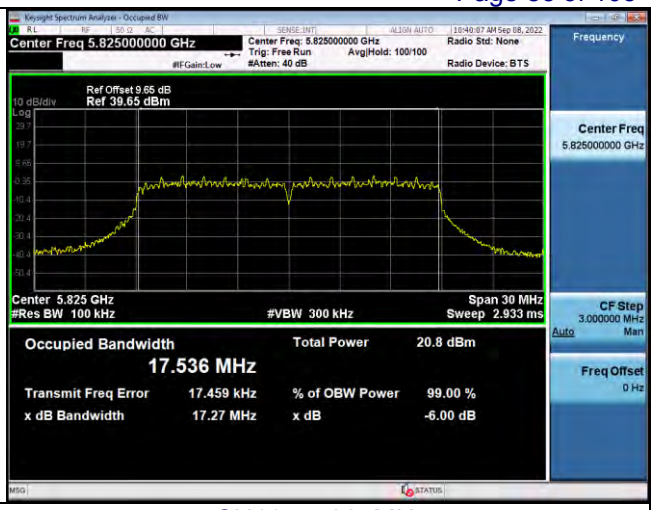


CH151 -5755MHz

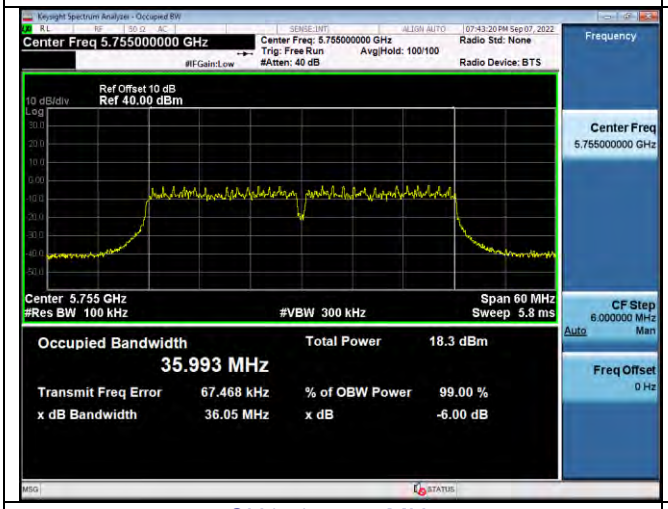
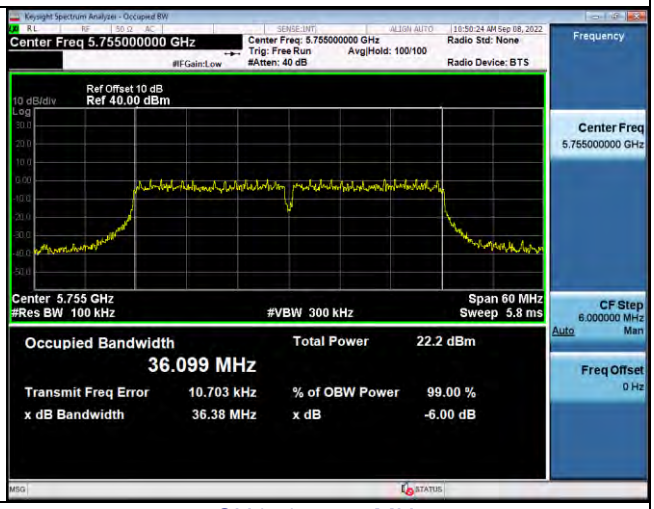
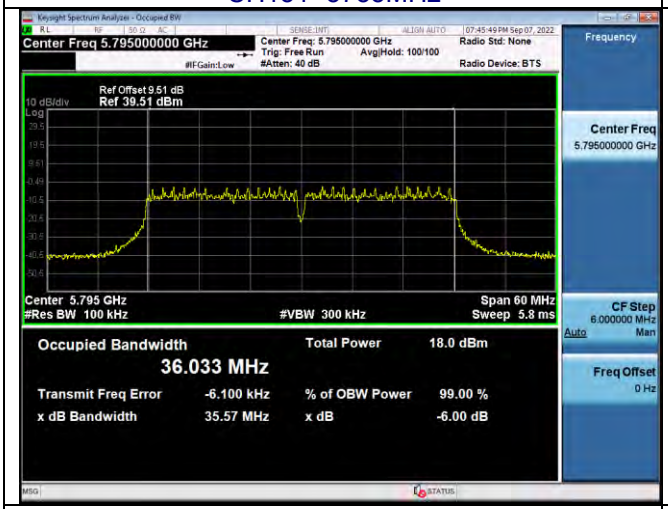
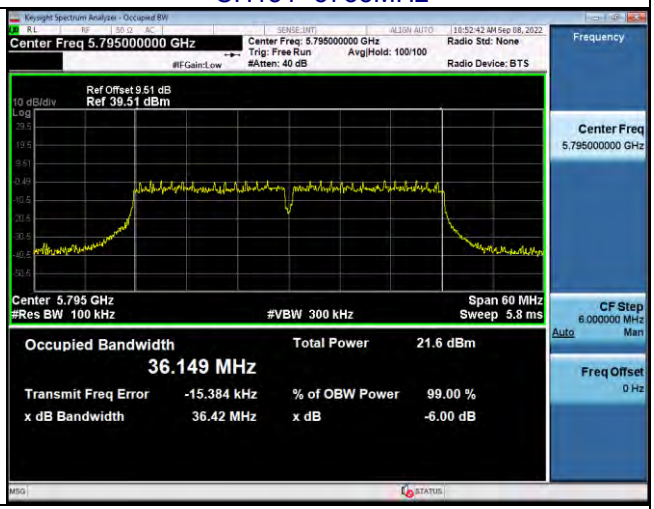
	
CH159 -5795MHz	CH159 -5795MHz

U-NII-3 –802.11ac (20MHz)

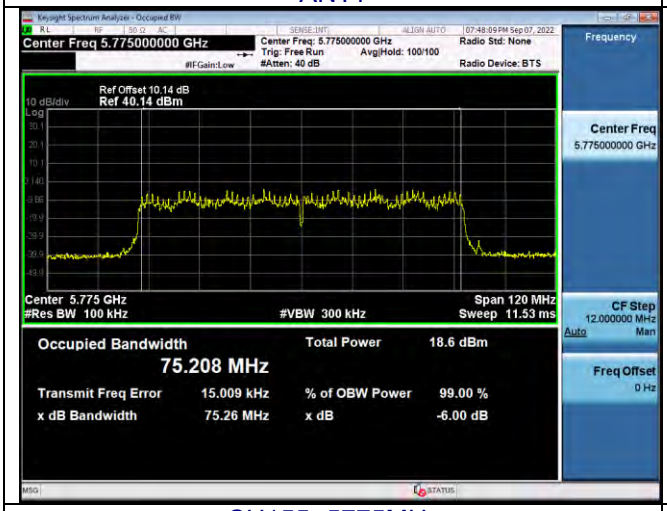
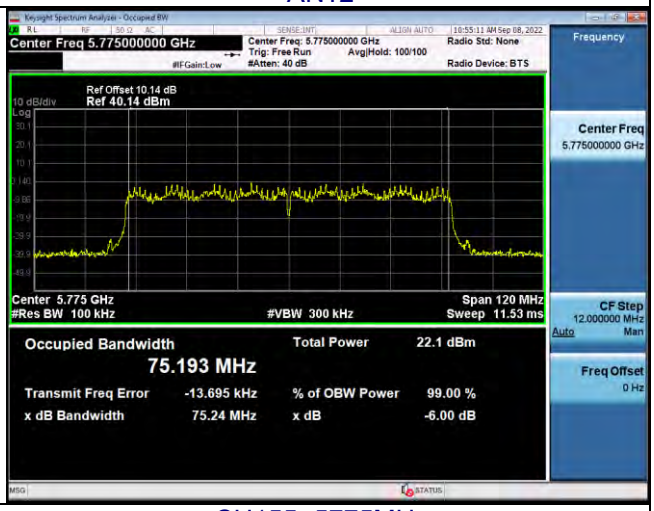
ANT1	ANT2
	
CH149 -5745MHz	CH149 -5745MHz
	
CH157 -5785MHz	CH157 -5785MHz

	
CH165 -5825MHz	CH165 -5825MHz

U-NII-3 – 802.11ac (40MHz)

ANT1	ANT2
	
CH151 -5755MHz	CH151 -5755MHz
	
CH159 -5795MHz	CH159 -5795MHz

U-NII-3 – 802.11ac (80MHz)

ANT1	ANT2
	
CH155 -5775MHz	CH155 -5775MHz

7. OUTPUT POWER TEST

Test Requirement:	15.407 (a)(1)(2)(3)
Test Method:	KDB 789033 D02 v02r01

7.1 APPLIED PROCEDURES/LIMIT

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

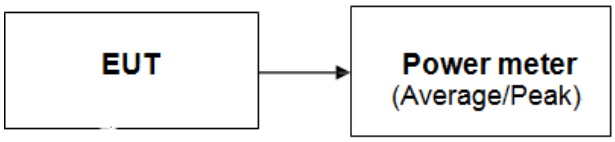
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Item	Band	Limit	Result
Max conducted output power	U-NII-1	0.25W / 23.98dbm	Pass
Max conducted output power	U-NII-3	1 W / 30dbm	Pass

7.2 DEVIATION FROM STANDARD

No deviation.

7.3 TEST SETUP



7.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.5 TEST RESULT

Temperature：	26℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC120V

U-NII-1

802.11 Mode	Channel No.	Frequency [MHz]	Conducted Power [dBm]		Limit [dBm]	MIMO [dBm]	Limit [dBm]
			ANT1	ANT2			
a	36	5180	13.79	14.93	23.98	/	/
	40	5200	11.72	12.32	23.98	/	/
	48	5240	12.16	13.86	23.98	/	/
n(20MHz)	36	5180	11.48	13.05	23.98	15.35	22.4
	40	5200	11.67	12.42	23.98	15.07	22.4
	48	5240	12.07	13.55	23.98	15.88	22.4
ac(20MHz)	36	5180	11.47	13.24	23.98	15.45	22.4
	40	5200	11.73	12.28	23.98	15.02	22.4
	48	5240	12.10	13.92	23.98	16.11	22.4
n(40MHz)	38	5190	9.93	10.78	23.98	13.39	22.4
	46	5230	8.95	10.28	23.98	12.68	22.4
ac(40MHz)	38	5190	9.35	10.38	23.98	12.91	22.4
	46	5230	9.57	9.09	23.98	12.35	22.4
ac(80MHz)	42	5210	7.10	8.19	23.98	10.69	22.4

1.according to KDB662911D01 the MIMO-Power (Total power) is the sum of the conducted power levels measured at the various output ports.
2. For frequncy U-NII-1,If MIMO Gain >6dBi , Power Limit(MIMO)=23.98- (MIMO Gain - 6dBi)
If MIMO Gain <6dBi , PSD Limit(MIMO)=Limit =23.98dBm, in this report, MIMO Gain>6dBi ,
So Power Limit(MIMO)=Limit =23.98-(7.58-6)=23.98-1.58=22.4dBm

U-NII-3

802.11 Mode	Channel No.	Frequency [MHz]	Conducted Power [dBm]		Limit [dBm]	MIMO [dBm]	MIMO Limit
			ANT1	ANT2			
a	149	5745	15.98	18.93	30.00	/	/
	157	5785	15.97	17.32	30.00	/	/
	165	5825	16.28	17.86	30.00	/	/
n (20MHz)	149	5745	15.29	17.05	30.00	19.27	28.42
	157	5785	15.71	17.42	30.00	19.66	28.42
	165	5825	16.34	17.55	30.00	20.00	28.42
ac (20MHz)	149	5745	16.64	17.92	30.00	20.34	28.42
	157	5785	16.12	17.78	30.00	20.04	28.42
	165	5825	16.50	17.28	30.00	19.92	28.42
n (40MHz)	151	5755	13.45	13.24	30.00	16.36	28.42
	159	5795	13.06	13.28	30.00	16.18	28.42
ac(40MHz)	151	5755	13.28	13.38	30.00	16.34	28.42
	159	5795	13.34	14.09	30.00	16.74	28.42
ac(80MHz)	155	5775	11.12	12.19	30.00	14.70	28.42

1.according to KDB662911D01 the MIMO-Power (Total power) is the sum of the conducted power levels measured at the various output ports.
2. For frequncy U-NII-3,If MIMO Gain >6dBi , Power Limit(MIMO)=30- (MIMO Gain - 6dBi)
If MIMO Gain <6dBi , PSD Limit(MIMO)=Limit =30 dBm, in this report, MIMO Gain>6dBi ,
So Power Limit(MIMO)=Limit =30-(7.58-6)=30-1.58=28.42dBm

8. OUT OF BAND EDGE EMISSION

Test Requirement:	15.407 (b)
Test Method:	KDB 789033 D02 v02r01

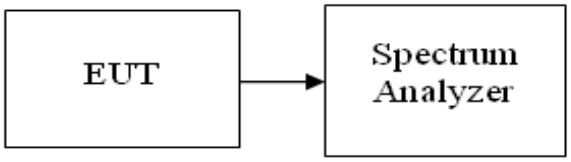
8.1 TEST PROCEDURE

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.

8.2 DEVIATION FROM STANDARD

No deviation.

8.3 TEST SETUP



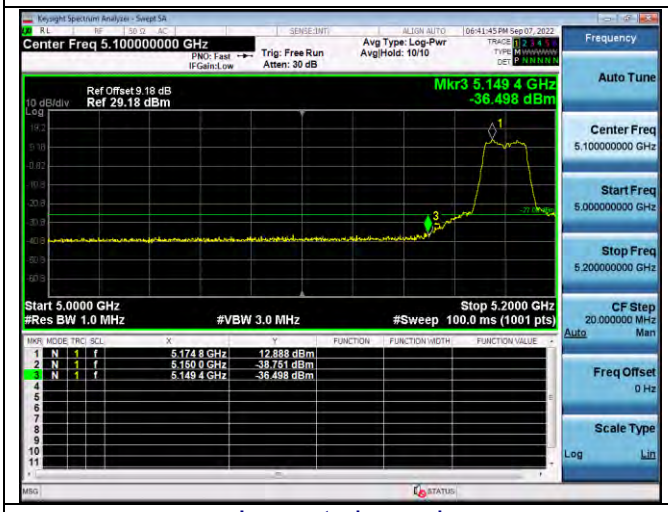
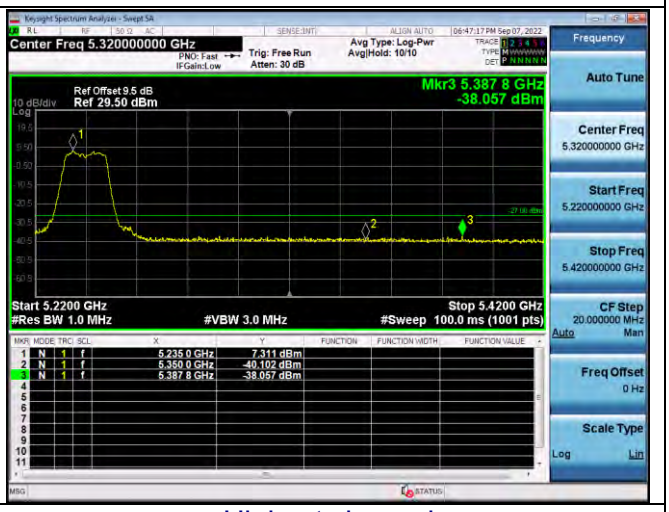
8.4 EUT OPERATION CONDITIONS

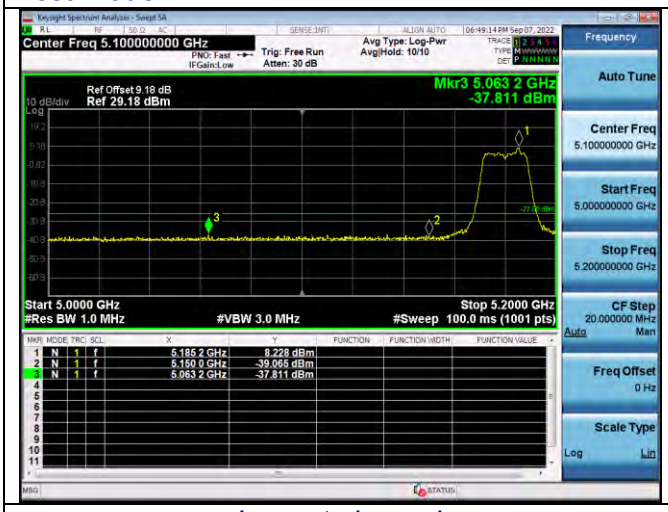
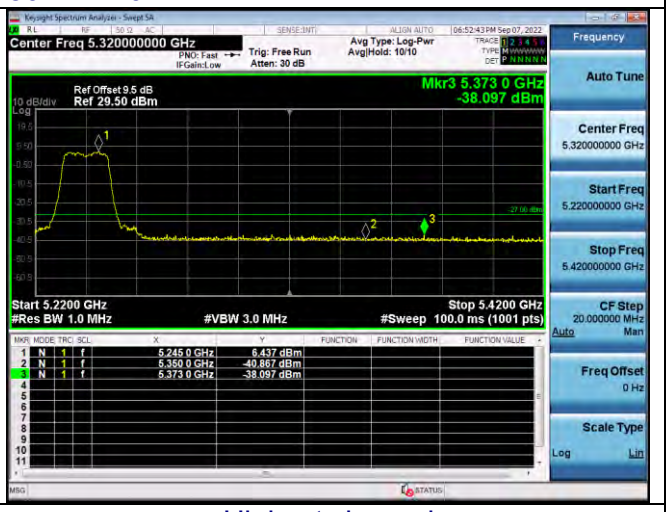
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

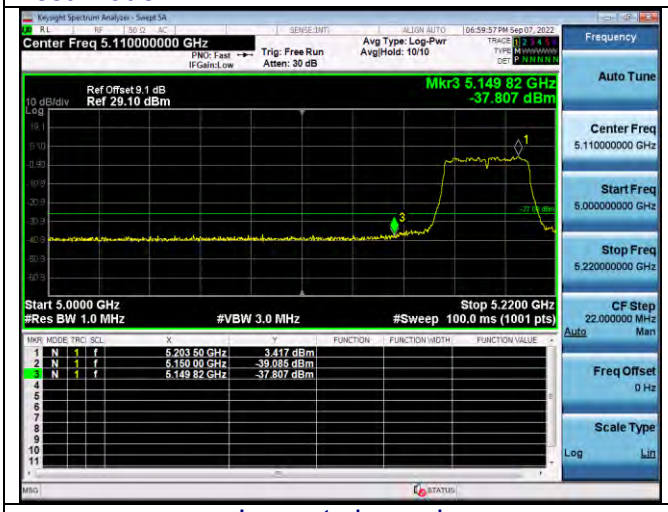
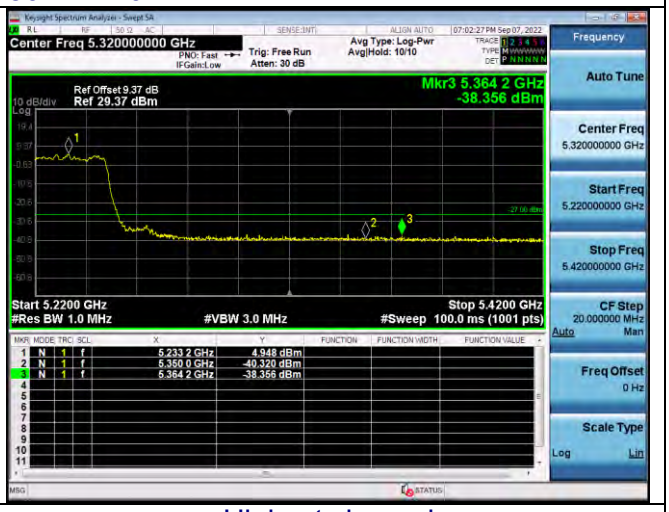
8.5 TEST RESULTS

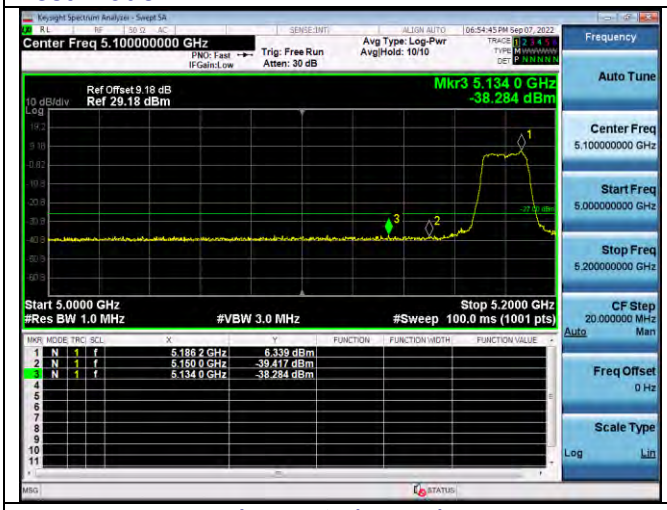
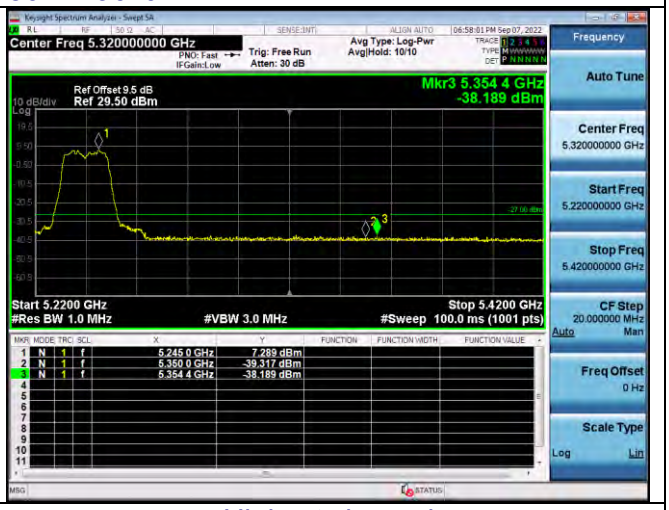
Test plot as follows:

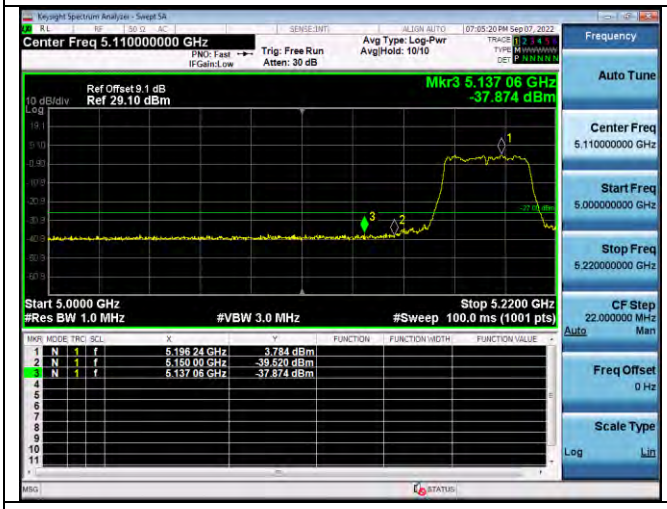
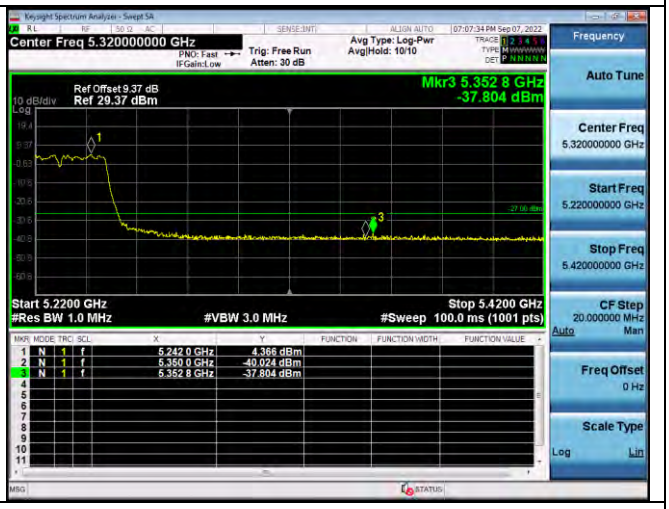
ANT1 -U-NII-1

Test mode:	802.11a
	
Lowest channel	Highest channel

Test mode:	802.11n20
	
Lowest channel	Highest channel

Test mode:	802.11n40
	
Lowest channel	Highest channel

Test mode:	802.11ac20
	
Lowest channel	Highest channel

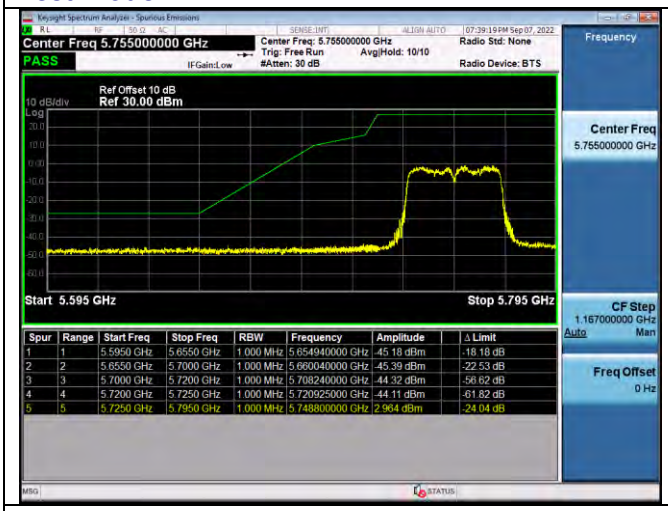
Test mode:	802.11ac40
	
Lowest channel	Highest channel

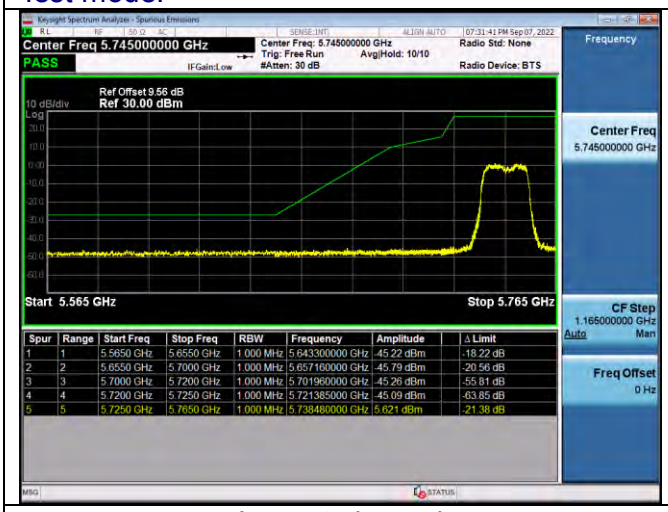
Test mode:	802.11ac80
	
Lowest channel	Highest channel

ANT1- U-NII-3

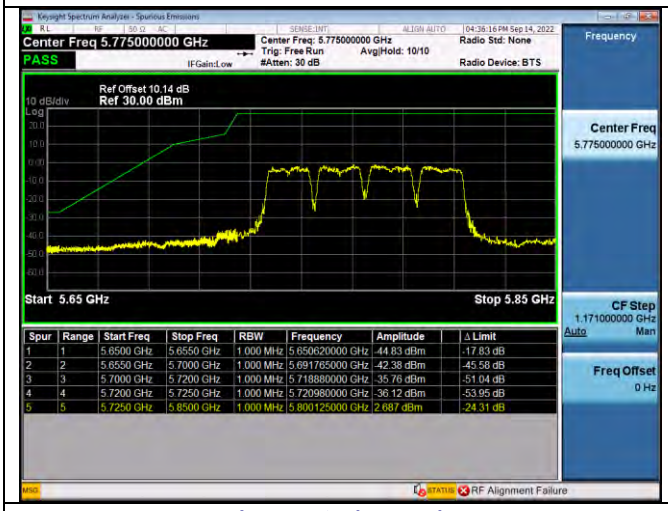
Test mode:	802.11a
	
Lowest channel	Highest channel

Test mode:	802.11n20
	
Lowest channel	Highest channel

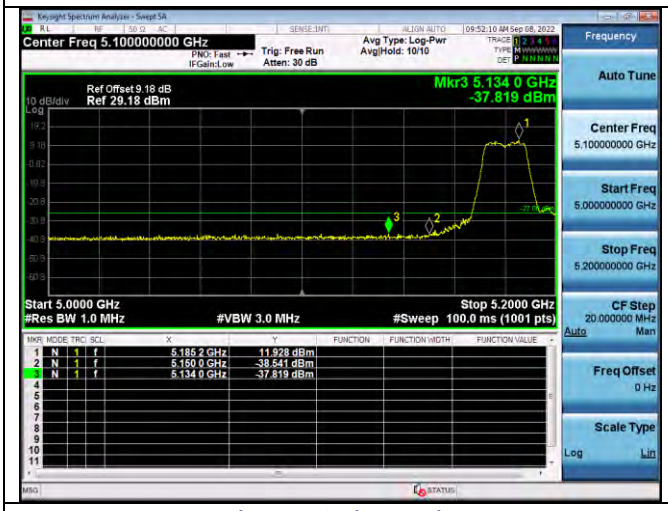
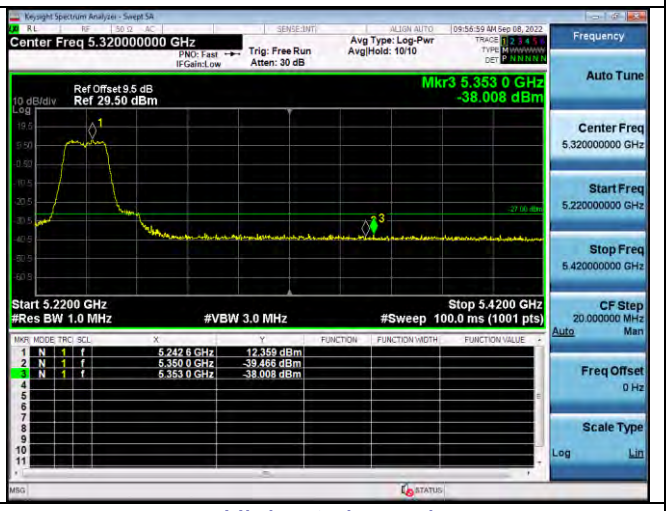
Test mode:	802.11n40
	
Lowest channel	Highest channel

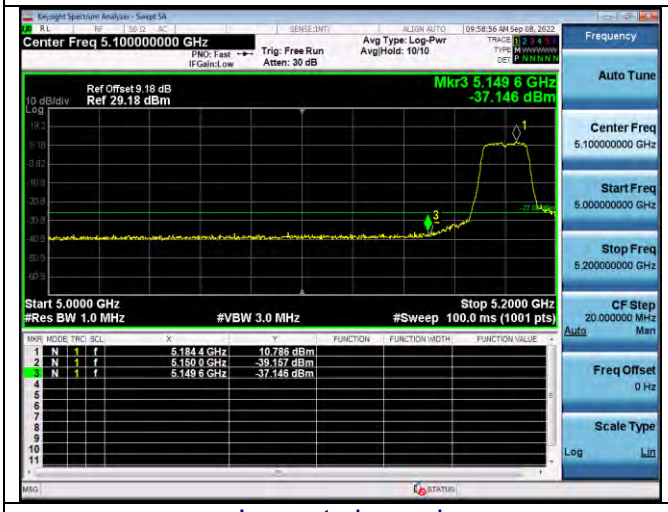
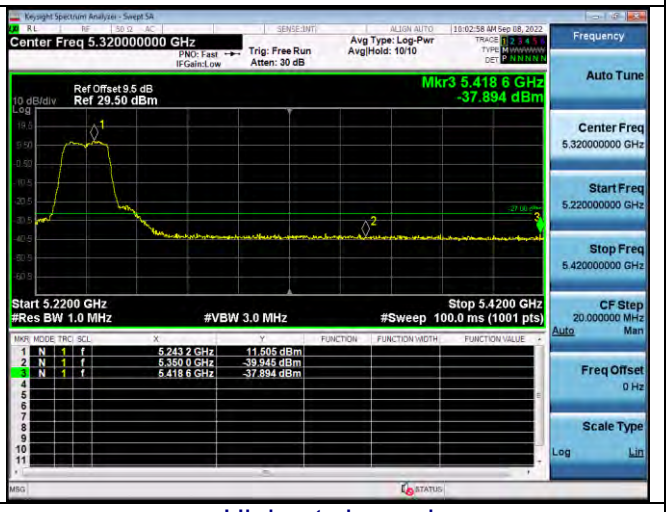
Test mode:	802.11ac20
	
Lowest channel	Highest channel

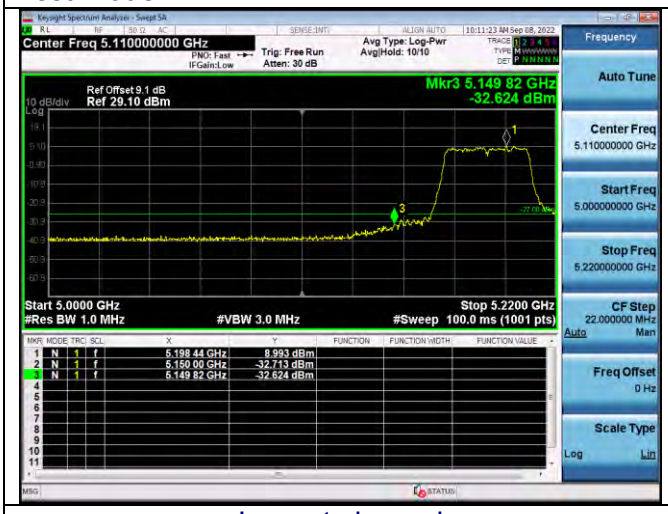
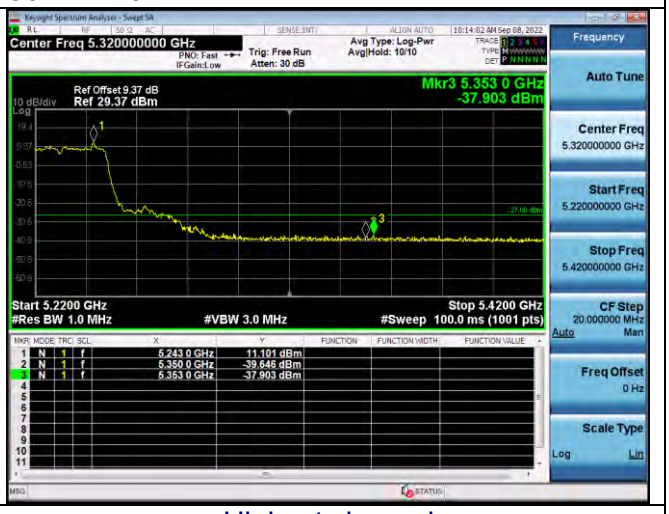
Test mode:	802.11ac40
	
Lowest channel	Highest channel

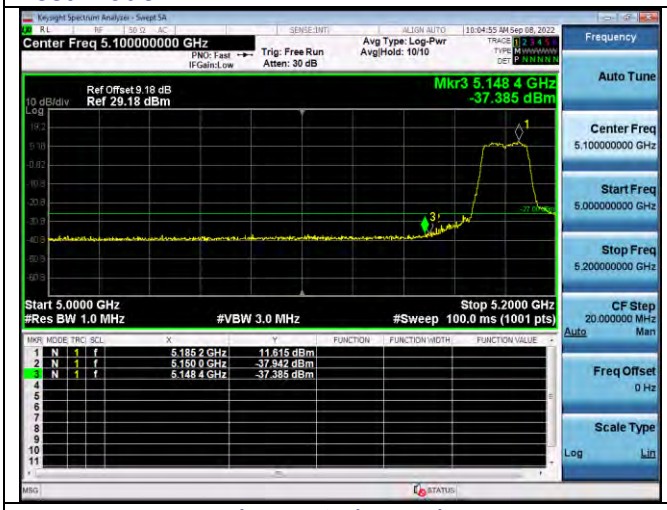
Test mode:	802.11ac80
	
Lowest channel	Highest channel

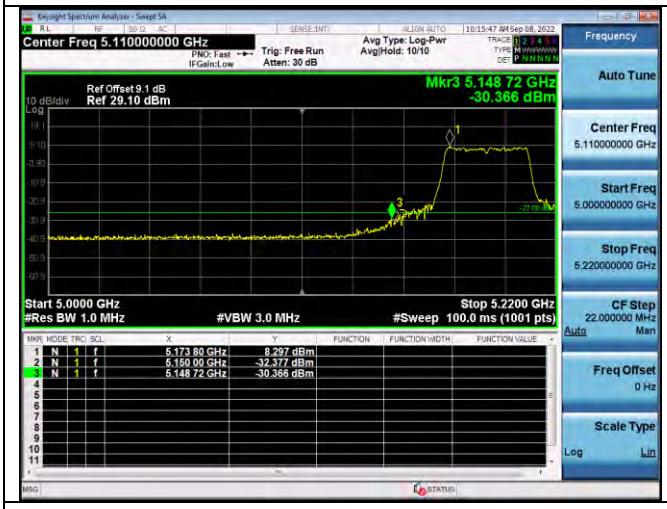
ANT2- U-NII-1

Test mode:	802.11a
	
Lowest channel	Highest channel

Test mode:	802.11n20
	
Lowest channel	Highest channel

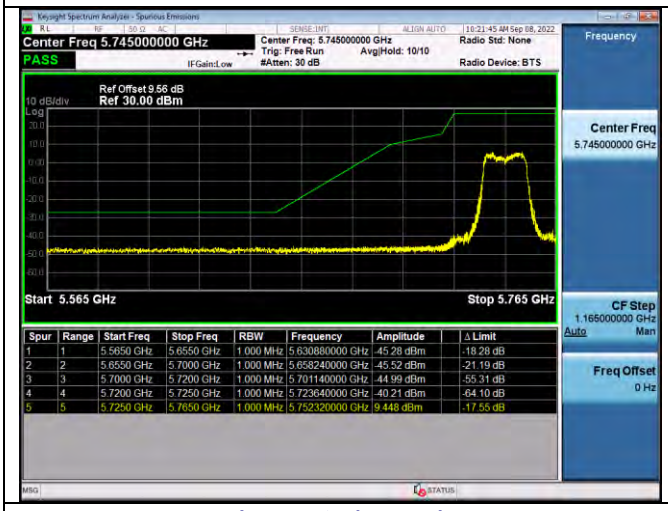
Test mode:	802.11n40
	
Lowest channel	Highest channel

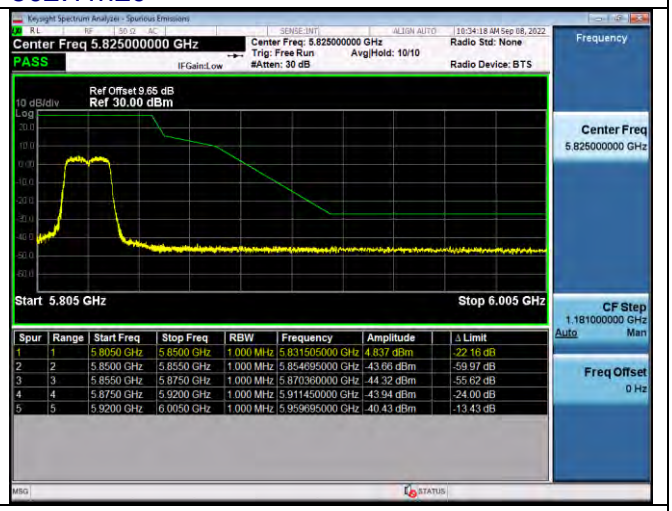
Test mode:	802.11ac20
	
Lowest channel	Highest channel

Test mode:	802.11ac40
	
Lowest channel	Highest channel

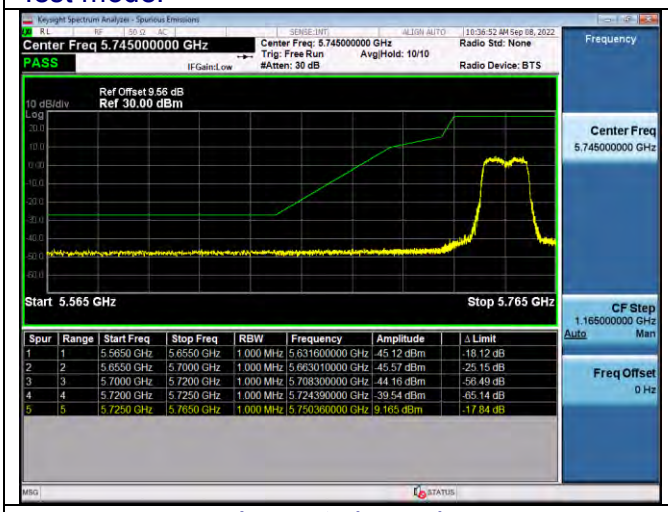
Test mode:	802.11ac80
	
Lowest channel	Highest channel

ANT2- U-NII-3

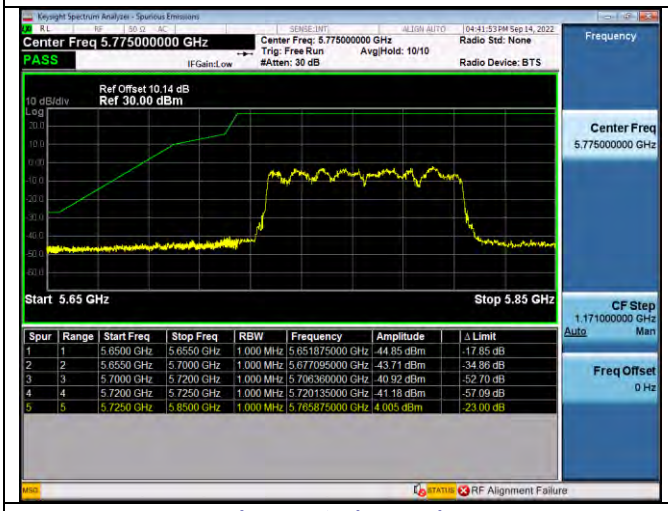
Test mode:	802.11a
	
Lowest channel	Highest channel

Test mode:	802.11n20
	
Lowest channel	Highest channel

Test mode:	802.11n40
	
Lowest channel	Highest channel

Test mode:	802.11ac20
	
Lowest channel	Highest channel

Test mode:	802.11ac40
	
Lowest channel	Highest channel

Test mode:	802.11ac80
	
Lowest channel	Highest channel

9. FREQUENCY STABILITY MEASUREMENT

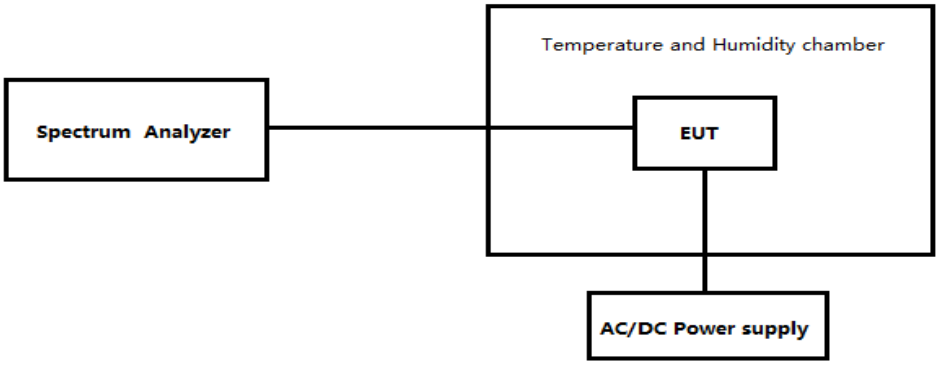
9.1 LIMIT

According to§15.407(g),Manufacturers 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 in the user's manual.

9.2 TESTPROCEDURE

1. To ensure emission at the band edge is main tainted within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, whichissettomaximumholdfunctionandpeakdetector.Thepeakvalueofthepowerenvelopewas measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

9.3 TESTCONFIGURATION



9.4 TEST RESULT

Temperature：	26℃	Relative Humidity：	54%
Pressure：	101kPa	Test Voltage ：	AC120V

Note: Only the test results of the worst channel are displayed

ANT1-802.11a- CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	86	0.0165
40	120	71	0.0137
30	120	63	0.0122
20	120	66	0.0127
10	120	61	0.0119
0	120	66	0.0127
-10	120	77	0.0148
-20	120	95	0.0184
-30	120	67	0.0130

ANT1-802.11a-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	84	0.0161
40	120	73	0.0139
30	120	66	0.0125
20	120	77	0.0146
10	120	89	0.0170
0	120	62	0.0118
-10	120	91	0.0175
-20	120	93	0.0178
-30	120	78	0.0148

ANT1-802.11a-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	93	0.0161
40	120	75	0.0131
30	120	64	0.0112
20	120	70	0.0122
10	120	78	0.0136
0	120	80	0.0140
-10	120	83	0.0144
-20	120	74	0.0128
-30	120	92	0.0160

ANT1-802.11a-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	85	0.0146
40	120	61	0.0104
30	120	84	0.0144

20	120	68	0.0116
10	120	73	0.0125
0	120	69	0.0118
-10	120	94	0.0161
-20	120	90	0.0155
-30	120	77	0.0132

ANT1-802.11n20-CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	62	0.0120
40	120	73	0.0141
30	120	67	0.0129
20	120	80	0.0155
10	120	60	0.0116
0	120	64	0.0124
-10	120	76	0.0147
-20	120	93	0.0180
-30	120	88	0.0170

ANT1-802.11n20-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	80	0.0153
40	120	78	0.0149
30	120	60	0.0115
20	120	88	0.0169
10	120	63	0.0121
0	120	72	0.0138
-10	120	82	0.0157
-20	120	75	0.0143
-30	120	75	0.0143

ANT1-802.11n20-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	96	0.0167
40	120	87	0.0151
30	120	70	0.0122
20	120	81	0.0141
10	120	87	0.0151
0	120	68	0.0118
-10	120	95	0.0165
-20	120	64	0.0111
-30	120	87	0.0151

ANT1-802.11n20-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	91	0.0156
40	120	95	0.0163
30	120	77	0.0132
20	120	66	0.0113
10	120	64	0.0110
0	120	72	0.0123
-10	120	75	0.0129
-20	120	73	0.0125
-30	120	80	0.0137

ANT1-802.11n40-CH38

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	82	0.0158
40	120	75	0.0144
30	120	86	0.0166
20	120	94	0.0180
10	120	93	0.0179
0	120	61	0.0117
-10	120	62	0.0120
-20	120	84	0.0162
-30	120	87	0.0167

ANT1-802.11n40-CH46

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	70	0.0133
40	120	79	0.0151
30	120	93	0.0178
20	120	75	0.0144
10	120	68	0.0130
0	120	81	0.0155
-10	120	88	0.0168
-20	120	86	0.0164
-30	120	69	0.0133

ANT1-802.11n40-CH151

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	74	0.0129
40	120	85	0.0147

30	120	87	0.0151
20	120	74	0.0128
10	120	64	0.0112
0	120	80	0.0139
-10	120	67	0.0116
-20	120	68	0.0118
-30	120	76	0.0132

ANT1-802.11n40-CH159

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	79	0.0136
40	120	65	0.0113
30	120	93	0.0161
20	120	65	0.0111
10	120	95	0.0164
0	120	64	0.0110
-10	120	76	0.0130
-20	120	61	0.0105
-30	120	70	0.0121

ANT1-802.11ac20-CH36

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	92	0.0178
40	120	67	0.0130
30	120	69	0.0133
20	120	79	0.0152
10	120	81	0.0157
0	120	90	0.0173
-10	120	74	0.0143
-20	120	68	0.0132
-30	120	78	0.0151

ANT1-802.11ac20-CH48

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	82	0.0157
40	120	67	0.0127
30	120	60	0.0115
20	120	63	0.0120
10	120	68	0.0130
0	120	95	0.0181
-10	120	61	0.0116
-20	120	90	0.0172

-30	120	68	0.0131

ANT1-802.11ac20-CH149

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	69	0.0119
40	120	82	0.0143
30	120	62	0.0107
20	120	65	0.0113
10	120	79	0.0137
0	120	71	0.0123
-10	120	70	0.0122
-20	120	77	0.0134
-30	120	93	0.0161

ANT1-802.11ac20-CH165

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	73	0.0126
40	120	72	0.0123
30	120	75	0.0129
20	120	65	0.0112
10	120	66	0.0114
0	120	60	0.0104
-10	120	72	0.0123
-20	120	61	0.0104
-30	120	94	0.0162

ANT1-802.11ac40-CH38

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	70	0.0135
40	120	76	0.0147
30	120	95	0.0183
20	120	76	0.0147
10	120	67	0.0129
0	120	61	0.0117
-10	120	87	0.0169
-20	120	77	0.0148
-30	120	79	0.0151

ANT1-802.11ac40-CH46

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	79	0.0151
40	120	79	0.0150

30	120	66	0.0126
20	120	81	0.0155
10	120	73	0.0140
0	120	93	0.0179
-10	120	93	0.0179
-20	120	61	0.0117
-30	120	74	0.0142

ANT1-802.11ac40-CH151

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	65	0.0112
40	120	64	0.0112
30	120	94	0.0163
20	120	61	0.0107
10	120	67	0.0117
0	120	84	0.0147
-10	120	86	0.0149
-20	120	72	0.0125
-30	120	80	0.0138

ANT1-802.11ac40-CH159

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	89	0.0153
40	120	95	0.0165
30	120	83	0.0143
20	120	84	0.0144
10	120	71	0.0122
0	120	82	0.0141
-10	120	61	0.0106
-20	120	61	0.0106
-30	120	72	0.0124

ANT1-802.11ac80-CH42

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	79	0.0152
40	120	66	0.0127
30	120	91	0.0174
20	120	74	0.0143
10	120	69	0.0132
0	120	93	0.0178
-10	120	80	0.0154
-20	120	94	0.0180
-30	120	76	0.0146

ANT1-802.11ac80-CH155

Temperature (°C)	Voltage (AC:V)	Frequency Measure with time Elapsed	
		MCF	(ppm)
50	120	78	0.0136
40	120	72	0.0125
30	120	67	0.0116
20	120	71	0.0124
10	120	86	0.0150
0	120	60	0.0104
-10	120	78	0.0136
-20	120	83	0.0143
-30	120	66	0.0114

10.ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

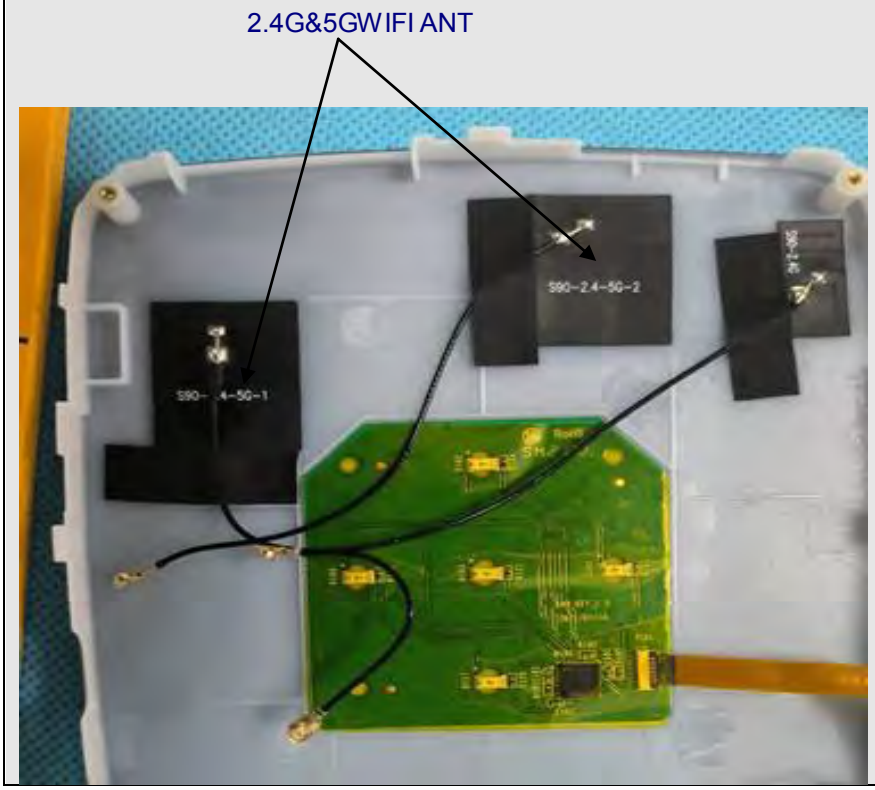
Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna used in this product is a FPC antenna, and the best case gain of the antenna is antenna port 1:5.59dBi and Antenna port 2:4.22 dBi,

EUT Antenna:



10. TEST SETUP PHOTO

Reference to the test setup file for details.

11. EUT CONSTRUCTIONAL DETAILS

Reference to the external photos file and internal photos file for details.

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