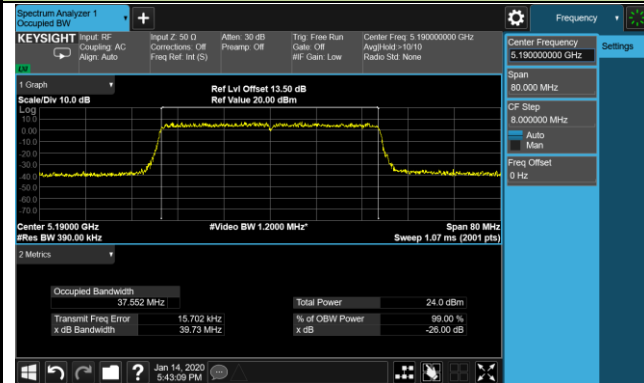
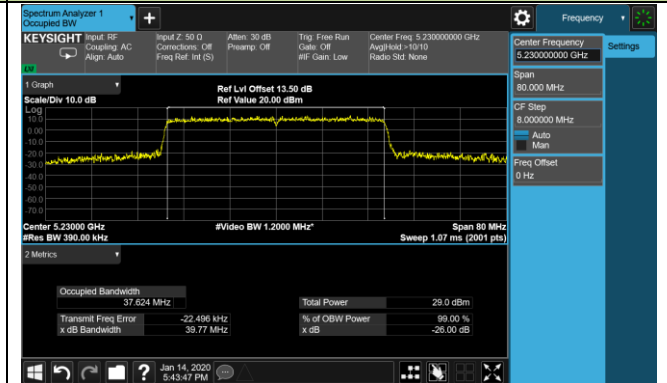
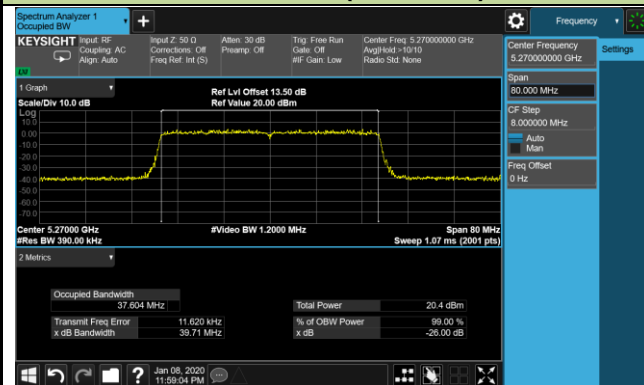
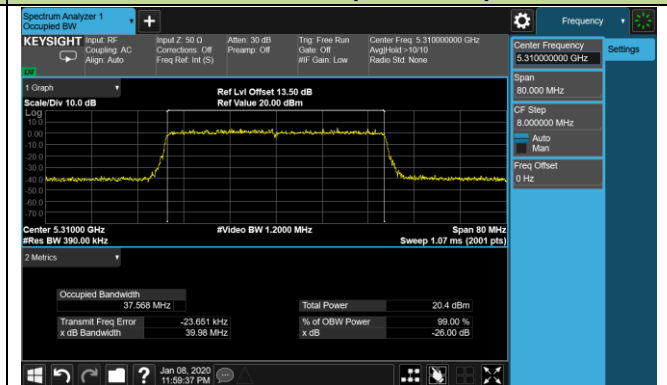
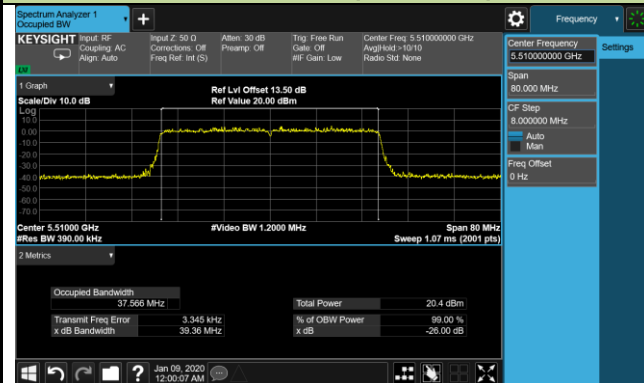
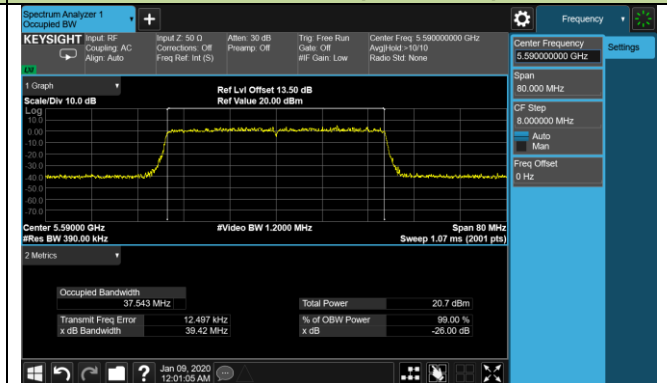
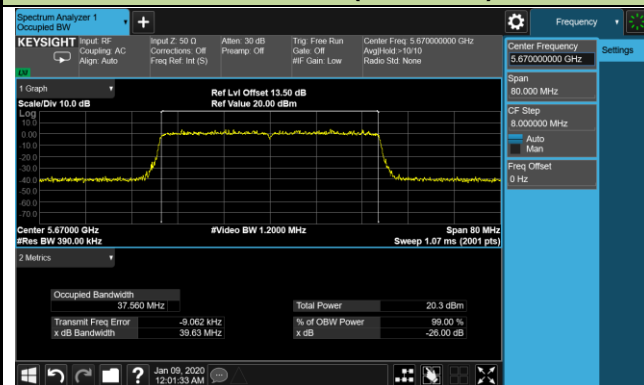
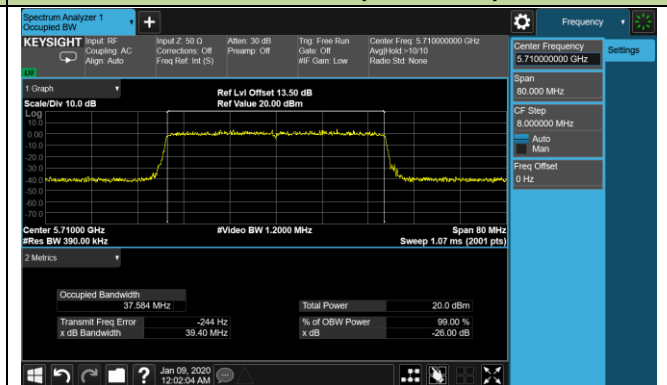
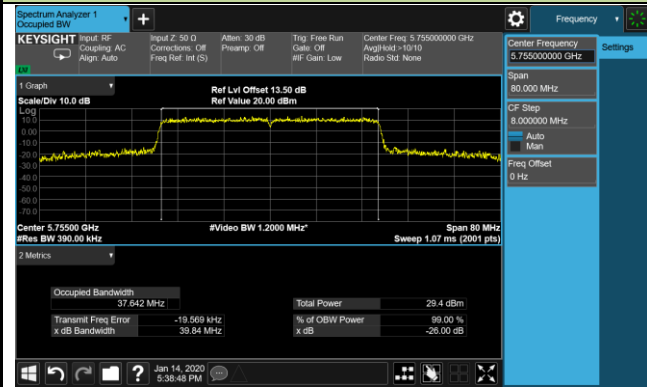


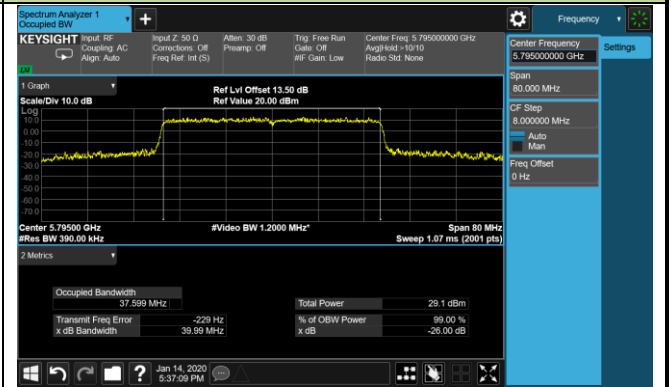
**802.11ax-HE40 26dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 38 (5190MHz)**

**Channel 46 (5230MHz)**

**Channel 54 (5270MHz)**

**Channel 62 (5310MHz)**

**Channel 102 (5510MHz)**

**Channel 118 (5590MHz)**

**Channel 134 (5670MHz)**

**Channel 142 (5710MHz)**


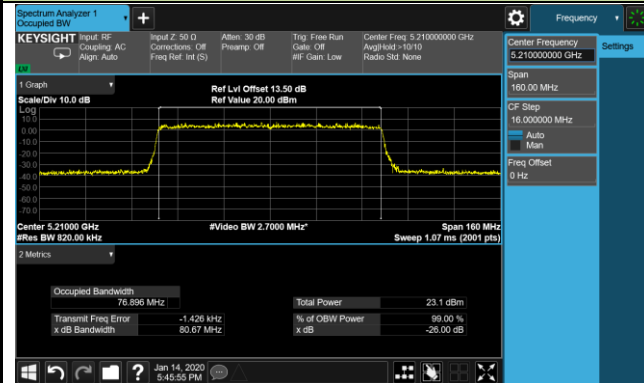
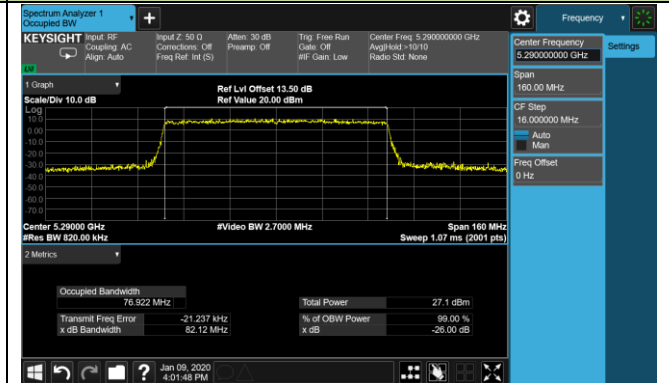
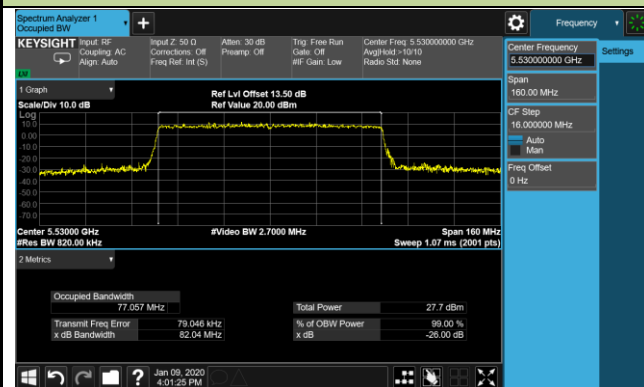
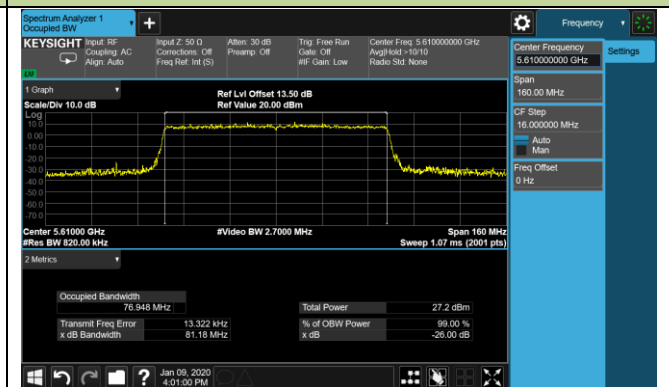
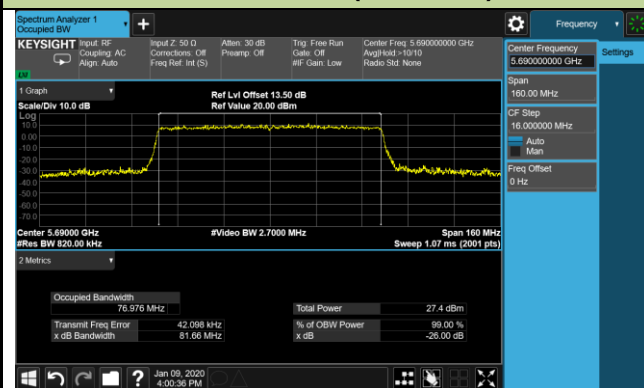
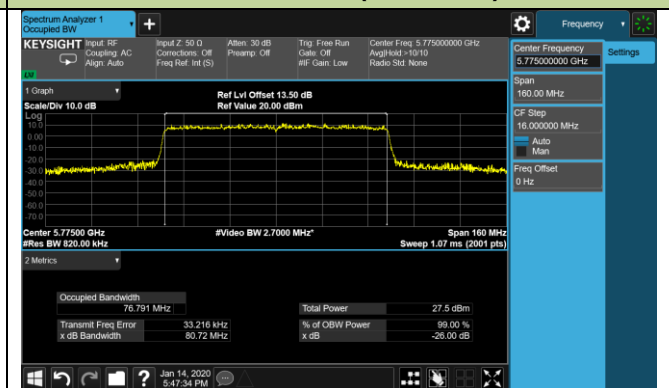
802.11ax-HE40 26dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 151 (5755MHz)



Channel 159 (5795MHz)

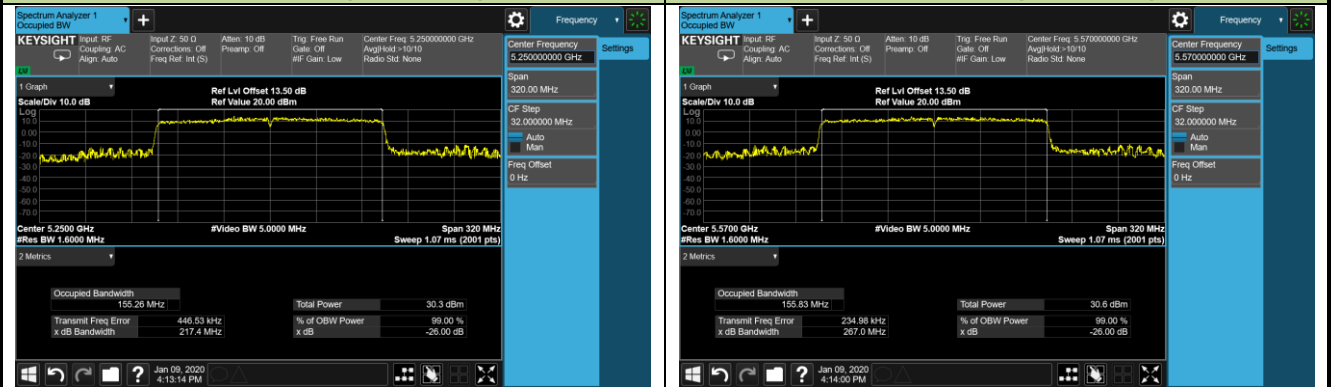


**802.11ax-HE80 26dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 42 (5210MHz)**

**Channel 58 (5290MHz)**

**Channel 106 (5530MHz)**

**Channel 122 (5610MHz)**

**Channel 138 (5690MHz)**

**Channel 155 (5775MHz)**


802.11ax-HE160 26dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 50 (5250MHz)

Channel 114 (5570MHz)



### 7.3. 6dB Bandwidth Measurement

#### 7.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

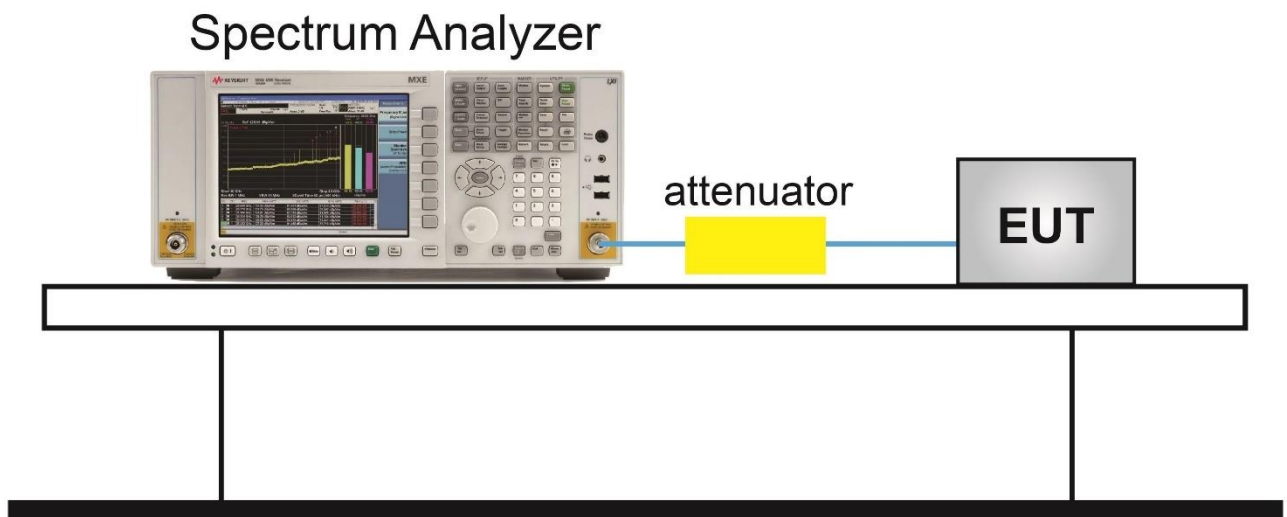
#### 7.3.2. Test Procedure used

ANSI C63-2013 - Section 12.4.2

#### 7.3.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW  $\geq 3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

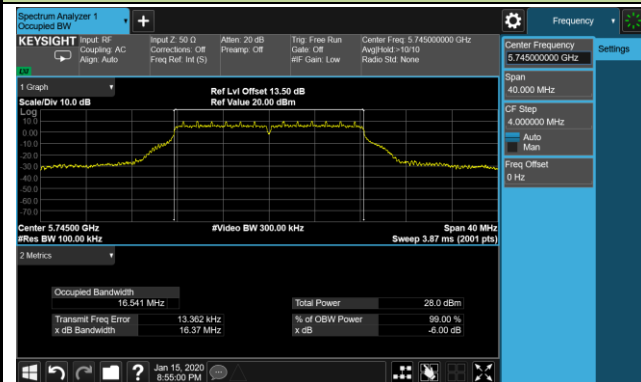
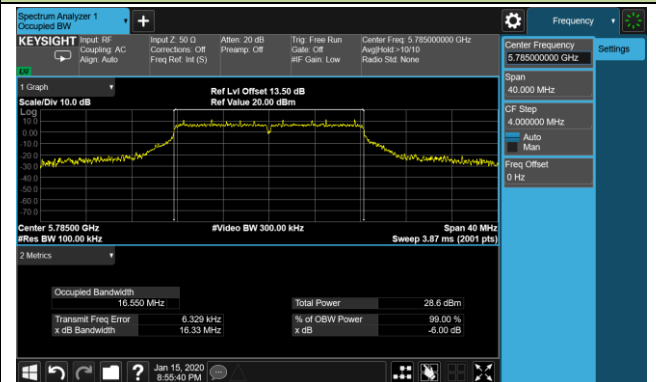
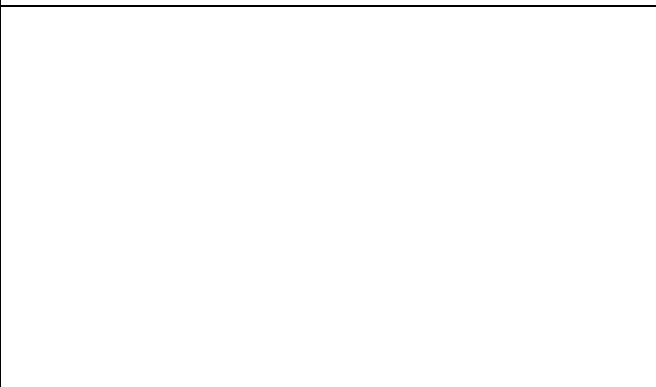
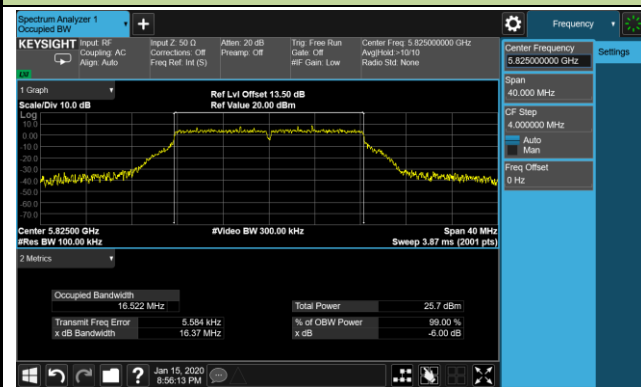
#### 7.3.4. Test Setup

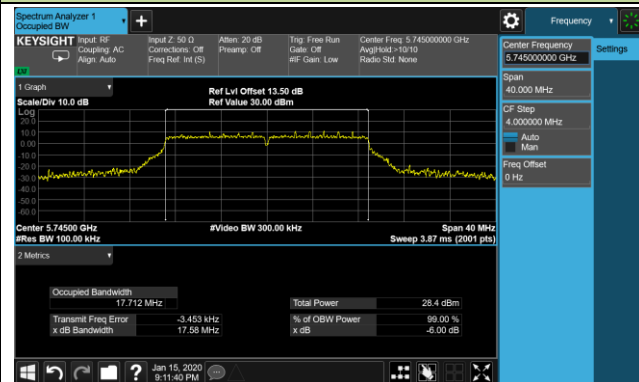
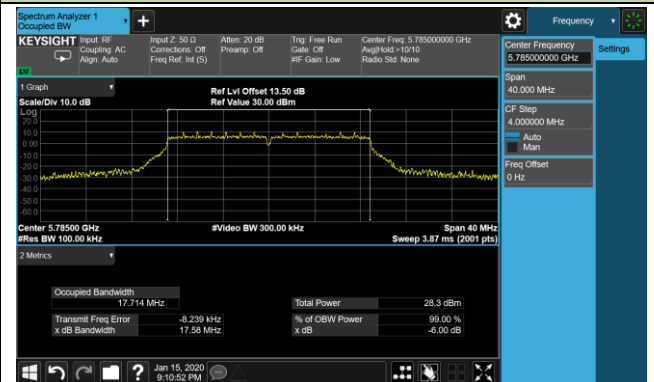
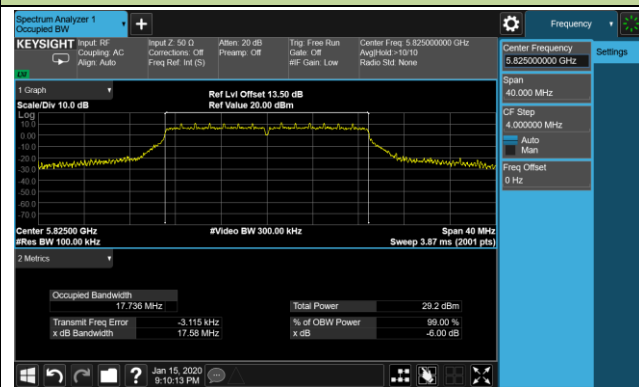
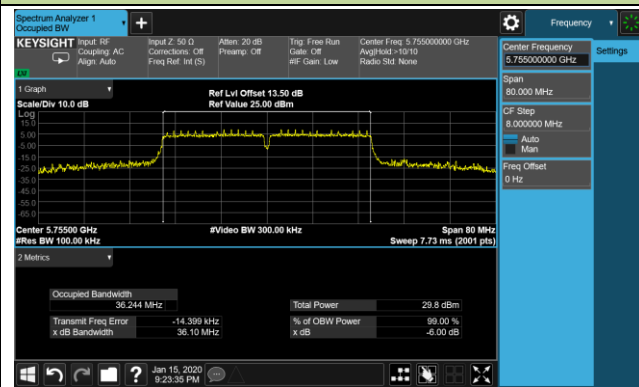
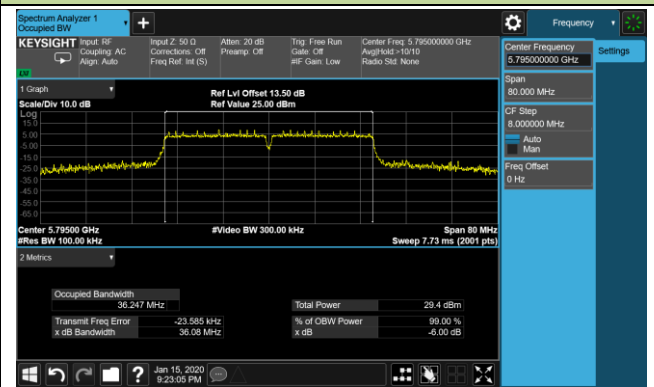


### 7.3.5. Test Result

Product	ACCESS POINT	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	SR2	Test Date	2020/01/15

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
Ant 0 / Ant 0 + 1 + 2 + 3						
802.11a	6Mbps	149	5745	16.37	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.33	≥ 0.5	Pass
802.11a	6Mbps	165	5825	16.37	≥ 0.5	Pass
802.11ac-VHT20	MCS0	149	5745	17.58	≥ 0.5	Pass
802.11ac-VHT20	MCS0	157	5785	17.58	≥ 0.5	Pass
802.11ac-VHT20	MCS0	165	5825	17.58	≥ 0.5	Pass
802.11ac-VHT40	MCS0	151	5755	36.10	≥ 0.5	Pass
802.11ac-VHT40	MCS0	159	5795	36.08	≥ 0.5	Pass
802.11ac-VHT80	MCS0	155	5775	75.26	≥ 0.5	Pass
802.11ax-HE20	MCS0	149	5745	19.01	≥ 0.5	Pass
802.11ax-HE20	MCS0	157	5785	18.98	≥ 0.5	Pass
802.11ax-HE20	MCS0	165	5825	18.97	≥ 0.5	Pass
802.11ax-HE40	MCS0	151	5755	37.45	≥ 0.5	Pass
802.11ax-HE40	MCS0	159	5795	36.66	≥ 0.5	Pass
802.11ax-HE80	MCS0	155	5775	76.09	≥ 0.5	Pass

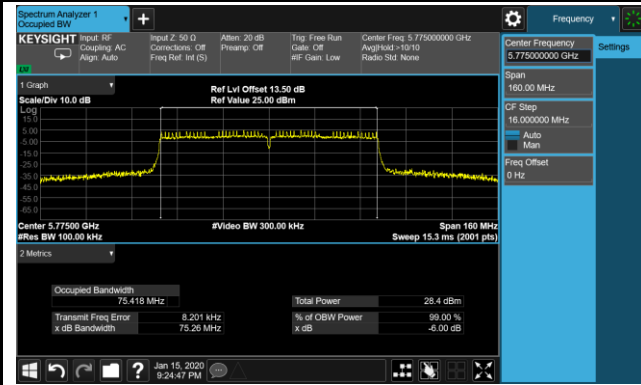
**802.11a 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 149 (5745MHz)**

**Channel 157 (5785MHz)**

**Channel 165 (5825MHz)**


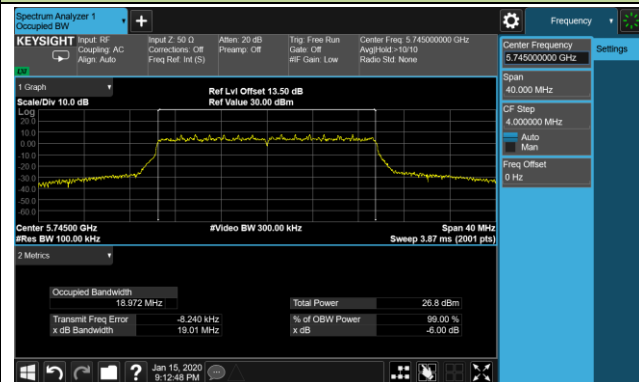
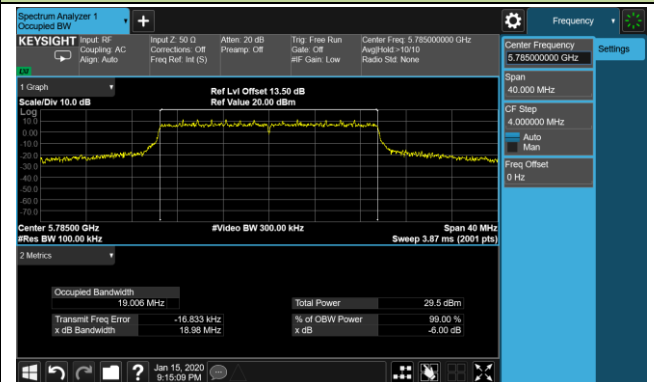
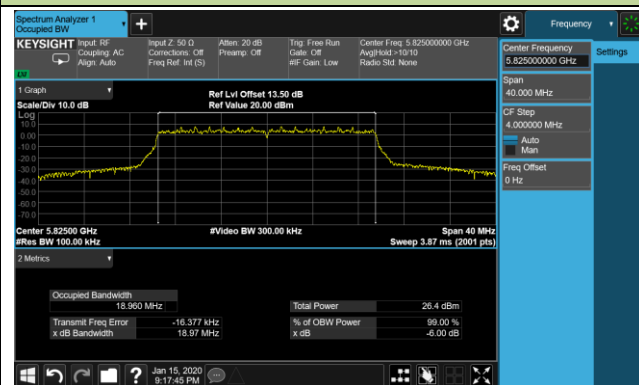
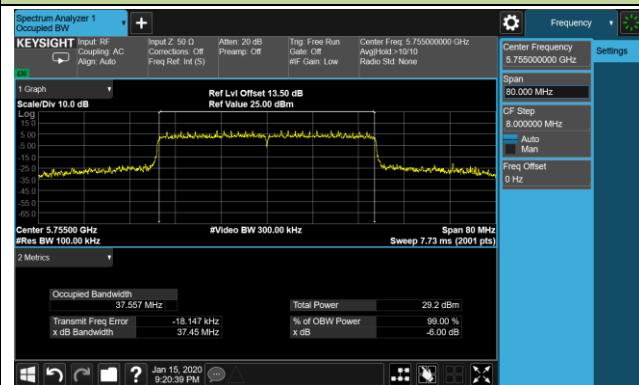
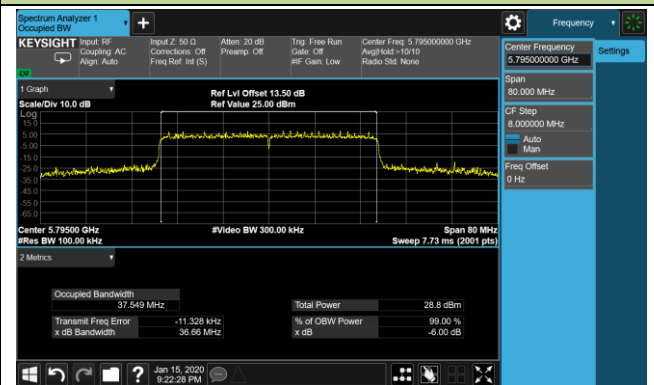
**802.11ac-VHT20 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 149 (5745MHz)**

**Channel 157 (5785MHz)**

**Channel 165 (5825MHz)**

**802.11ac-VHT40 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 151 (5755MHz)**

**Channel 159 (5795MHz)**




802.11ac-VHT80 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3

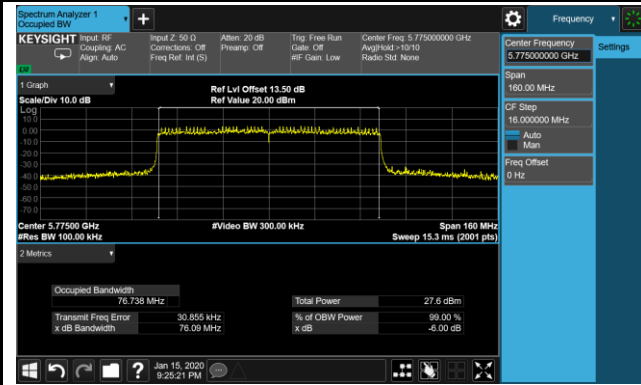
Channel 155 (5775MHz)



**802.11ax-HE20 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 149 (5745MHz)**

**Channel 157 (5785MHz)**

**Channel 165 (5825MHz)**

**802.11ax-HE40 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3**
**Channel 151 (5755MHz)**

**Channel 159 (5795MHz)**


802.11ax-HE80 6dB Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3

Channel 155 (5775MHz)



## **7.4. Output Power Measurement**

### **7.4.1. Test Limit**

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

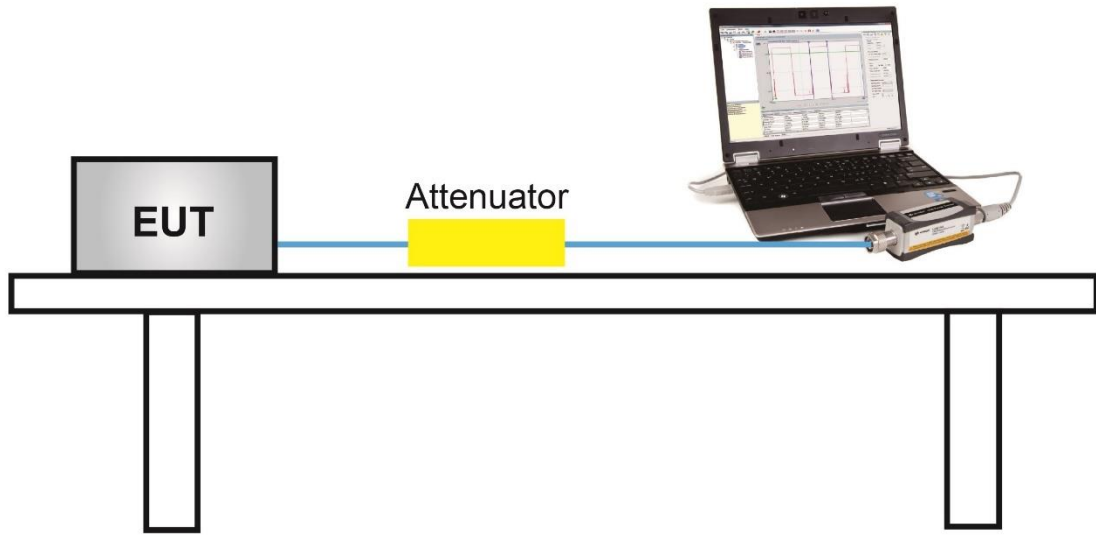
### **7.4.2. Test Procedure Used**

ANSI C63-2013 - Section 12.3

### **7.4.3. Test Setting**

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

#### 7.4.4. Test Setup



### 7.4.5. Test Result

Power output test was verified over all data rates of each mode shown as below table, and then choose the maximum power output (gray marker) for final test of each channel.

For Ant 0 / Ant 0 + 1 + 2 + 3 port for Omni Antenna:

Test Mode	Bandwidth	Channel	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11a	20	36	5180	6Mbps	19.05
				24Mbps	18.79
				54Mbps	18.67
802.11ac	20	36	5180	MCS0	19.52
				MCS4	19.31
				MCS8	19.08
802.11ac	40	38	5190	MCS0	15.42
				MCS4	15.26
				MCS9	15.02
802.11ac	80	42	5210	MCS0	15.07
				MCS4	14.78
				MCS9	14.62
802.11ac	160	50	5250	MCS0	10.75
				MCS4	10.61
				MCS9	10.33
802.11ax	20	36	5180	MCS0	19.01
				MCS6	18.85
				MCS11	18.63
802.11ax	40	38	5190	MCS0	16.41
				MCS6	16.24
				MCS11	16.05
802.11ax	80	42	5210	MCS0	15.27
				MCS6	15.10
				MCS11	14.92
802.11ax	160	50	5250	MCS0	12.61
				MCS6	12.46
				MCS11	12.31

Product	ACCESS POINT	Temperature	24°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	SR2	Test Date	2020/01/06
Antenna Type	Omni Antenna (AP-ANT-20W)	Test Item	Output Power

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)	Result
				Ant 0	Ant 1	Ant 2	Ant 3			
Ant 0 + 1 + 2 + 3 (CDD Mode)										
11a	6Mbps	36	5180	19.05	17.89	18.46	18.36	24.48	≤ 30.00	Pass
11a	6Mbps	44	5220	19.02	19.31	19.46	19.22	25.28	≤ 30.00	Pass
11a	6Mbps	48	5240	19.16	19.02	19.04	19.58	25.23	≤ 30.00	Pass
11a	6Mbps	52	5260	14.39	13.69	14.03	13.29	19.89	≤ 23.98	Pass
11a	6Mbps	60	5300	14.48	13.46	13.22	13.49	19.71	≤ 23.98	Pass
11a	6Mbps	64	5320	14.14	13.44	13.57	13.41	19.67	≤ 23.98	Pass
11a	6Mbps	100	5500	14.47	13.52	13.45	13.91	19.88	≤ 23.98	Pass
11a	6Mbps	120	5600	14.56	13.67	13.41	13.46	19.82	≤ 23.98	Pass
11a	6Mbps	140	5700	14.53	13.52	13.23	13.33	19.71	≤ 23.98	Pass
11a	6Mbps	144	5720	14.67	13.38	13.47	13.54	19.82	≤ 22.89	Pass
11a	6Mbps	149	5745	21.10	21.74	22.24	21.38	27.66	≤ 30.00	Pass
11a	6Mbps	157	5785	21.14	19.75	21.13	21.57	26.97	≤ 30.00	Pass
11a	6Mbps	165	5825	20.92	21.75	22.04	21.13	27.50	≤ 30.00	Pass
11ac-VHT20	MCS0	36	5180	19.52	19.06	19.05	19.23	25.24	≤ 30.00	Pass
11ac-VHT20	MCS0	44	5220	20.65	21.45	20.05	19.57	26.51	≤ 30.00	Pass
11ac-VHT20	MCS0	48	5240	21.73	20.48	20.16	20.59	26.80	≤ 30.00	Pass
11ac-VHT20	MCS0	52	5260	14.47	13.46	14.21	13.34	19.92	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	14.29	13.41	14.09	13.35	19.83	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	14.18	13.45	14.05	13.21	19.76	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	14.54	13.16	14.07	13.57	19.89	≤ 23.98	Pass
11ac-VHT20	MCS0	120	5600	14.52	13.42	13.88	13.20	19.81	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	14.57	13.11	13.49	12.81	19.57	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	14.42	13.44	13.58	13.07	19.68	≤ 22.96	Pass
11ac-VHT20	MCS0	149	5745	21.34	21.97	21.14	20.03	27.20	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	22.44	22.12	21.72	20.31	27.74	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	22.17	20.83	21.42	19.44	27.10	≤ 30.00	Pass

11ac-VHT40	MCS0	38	5190	15.42	14.78	14.16	14.70	20.81	≤ 30.00	Pass
11ac-VHT40	MCS0	46	5230	21.76	21.35	20.96	20.78	27.25	≤ 30.00	Pass
11ac-VHT40	MCS0	54	5270	17.62	16.82	16.29	16.42	22.84	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	14.86	13.94	13.46	13.79	20.07	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	16.68	16.16	15.87	16.09	22.23	≤ 23.98	Pass
11ac-VHT40	MCS0	118	5590	17.68	16.94	16.49	16.91	23.05	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	17.91	17.18	16.67	16.94	23.22	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	17.86	17.25	16.61	16.82	23.18	≤ 23.98	Pass
11ac-VHT40	MCS0	151	5755	22.04	22.32	21.88	21.34	27.93	≤ 30.00	Pass
11ac-VHT40	MCS0	159	5795	22.19	21.36	21.78	20.82	27.59	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	15.07	14.17	13.55	14.04	20.26	≤ 30.00	Pass
11ac-VHT80	MCS0	58	5290	14.74	13.67	13.54	13.88	20.00	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	15.14	14.02	13.95	13.94	20.31	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	17.77	17.38	17.67	17.27	23.55	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	17.71	17.03	17.53	17.01	23.35	≤ 23.98	Pass
11ac-VHT80	MCS0	155	5775	19.97	19.19	18.98	19.08	25.34	≤ 30.00	Pass
802.11ac-VHT160 Straddle 5.15-5.25GHz										
11ac-VHT160	MCS0	50	5250	10.75	10.62	10.62	10.62	16.67	≤ 30.00	Pass
802.11ac-VHT160 Straddle 5.25-5.35GHz										
11ac-VHT160	MCS0	50	5250	10.69	10.56	10.13	10.76	16.56	≤ 23.98	Pass
11ac-VHT160	MCS0	50	5250	13.73	13.60	13.39	13.70	19.63	N/A	N/A
Note: The total power was calculated through formula and recorded the value for reference only.										
11ac-VHT160	MCS0	114	5570	14.54	13.78	13.34	13.57	19.85	≤ 23.98	Pass
11ax-HE20	MCS0	36	5180	19.01	18.64	18.97	18.77	24.87	≤ 30.00	Pass
11ax-HE20	MCS0	44	5220	20.27	20.52	20.36	20.04	26.32	≤ 30.00	Pass
11ax-HE20	MCS0	48	5240	19.85	20.22	19.91	19.79	25.97	≤ 30.00	Pass
11ax-HE20	MCS0	52	5260	14.78	14.01	13.89	13.64	20.12	≤ 23.98	Pass
11ax-HE20	MCS0	60	5300	14.69	14.14	13.96	13.59	20.13	≤ 23.98	Pass
11ax-HE20	MCS0	64	5320	14.74	13.95	13.94	13.47	20.07	≤ 23.98	Pass
11ax-HE20	MCS0	100	5500	12.12	11.17	10.87	11.03	17.35	≤ 23.98	Pass
11ax-HE20	MCS0	120	5600	14.79	13.98	13.41	13.38	19.95	≤ 23.98	Pass
11ax-HE20	MCS0	140	5700	11.48	10.47	10.44	10.59	16.79	≤ 23.98	Pass
11ax-HE20	MCS0	144	5720	14.64	13.97	13.22	13.48	19.88	≤ 22.95	Pass
11ax-HE20	MCS0	149	5745	21.14	22.21	21.01	21.24	27.45	≤ 30.00	Pass
11ax-HE20	MCS0	157	5785	22.16	22.13	21.76	21.70	27.96	≤ 30.00	Pass
11ax-HE20	MCS0	165	5825	20.89	22.07	20.75	20.97	27.22	≤ 30.00	Pass



11ax-HE40	MCS0	38	5190	16.41	15.72	15.26	15.42	21.75	≤ 30.00	Pass
11ax-HE40	MCS0	46	5230	21.32	21.88	21.21	21.38	27.48	≤ 30.00	Pass
11ax-HE40	MCS0	54	5270	17.56	17.31	17.02	16.79	23.20	≤ 23.98	Pass
11ax-HE40	MCS0	62	5310	14.83	13.88	13.85	13.85	20.14	≤ 23.98	Pass
11ax-HE40	MCS0	102	5510	17.13	16.25	16.19	16.51	22.56	≤ 23.98	Pass
11ax-HE40	MCS0	118	5590	17.63	17.19	16.58	16.77	23.08	≤ 23.98	Pass
11ax-HE40	MCS0	134	5670	17.77	17.26	16.68	16.66	23.14	≤ 23.98	Pass
11ax-HE40	MCS0	142	5710	17.43	17.05	16.43	16.56	22.91	≤ 23.98	Pass
11ax-HE40	MCS0	151	5755	21.61	21.34	20.73	21.03	27.21	≤ 30.00	Pass
11ax-HE40	MCS0	159	5795	21.73	21.77	20.78	20.99	27.36	≤ 30.00	Pass
11ax-HE80	MCS0	42	5210	15.27	14.97	14.24	14.24	20.72	≤ 30.00	Pass
11ax-HE80	MCS0	58	5290	14.55	13.68	13.48	13.45	19.83	≤ 23.98	Pass
11ax-HE80	MCS0	106	5530	16.32	15.19	15.38	15.78	21.71	≤ 23.98	Pass
11ax-HE80	MCS0	122	5610	17.84	17.14	17.71	17.16	23.49	≤ 23.98	Pass
11ax-HE80	MCS0	138	5690	17.77	17.19	17.62	16.85	23.39	≤ 23.98	Pass
11ax-HE80	MCS0	155	5775	19.43	18.97	18.85	18.69	25.01	≤ 30.00	Pass
802.11ax-HE160 Straddle 5.15-5.25GHz										
11ax-HE160	MCS0	50	5250	12.61	12.30	12.28	11.31	18.17	≤ 30.00	Pass
802.11ax-HE160 Straddle 5.25-5.35GHz										
11ax-HE160	MCS0	50	5250	12.35	12.39	11.97	10.37	17.86	≤ 23.98	Pass
11ax-HE160	MCS0	50	5250	15.49	15.36	15.14	13.88	21.03	N/A	N/A
Note: The total power was calculated through formula and recorded the value for reference only.										
11ax-HE160	MCS0	114	5570	15.33	14.96	14.87	15.02	21.07	≤ 23.98	Pass

Note 1: Total Average Power (dBm) =  $10 \cdot \log\{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)} + 10^{(\text{Ant 2 Average Power} / 10)} + 10^{(\text{Ant 3 Average Power} / 10)}\}$ .

Note 2:

NII-1 Band, Average Power Limit (dBm) = 30dBm.

NII-2 Band, Average Power Limit (dBm) = 23.98dBm.

Note 3:

For straddle channel 20MHz Bandwidth 5720MHz, the conducted power limit is as below:

802.11a =  $11 + 10 \cdot \log(B) = 22.89\text{dBm}$ ,  $B = 20.94/2 + 5 = 15.47\text{MHz}$ ,

802.11ac-VHT20 =  $11 + 10 \cdot \log(B) = 22.96\text{dBm}$ ,  $B = 21.39/2 + 5 = 15.70\text{MHz}$ ,

802.11ax-HE20 =  $11 + 10 \cdot \log(B) = 22.95\text{dBm}$ ,  $B = 21.33/2 + 5 = 15.67\text{MHz}$ .

## 7.5. Transmit Power Control

### 7.5.1. Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

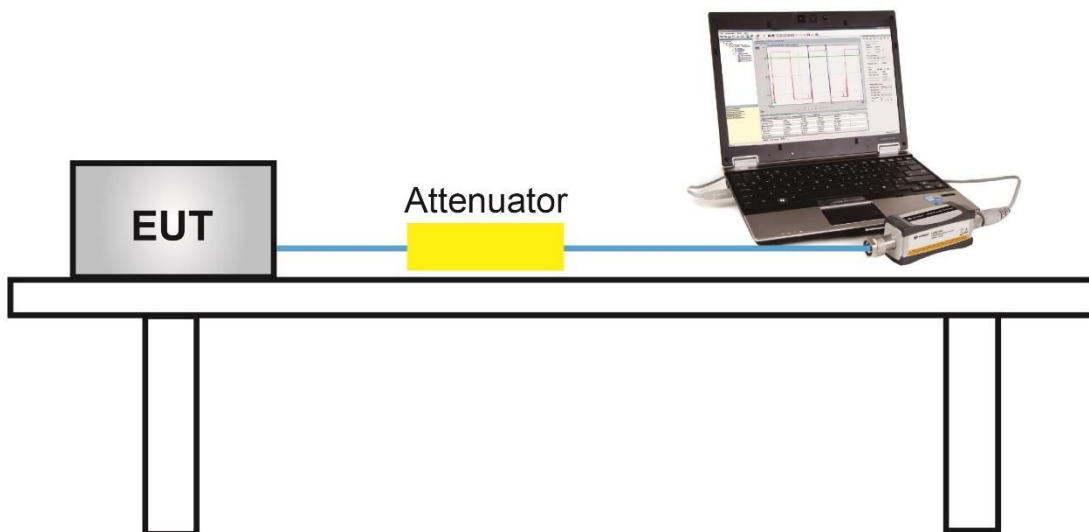
### 7.5.2. Test Procedure Used

ANSI C63-2013 - Section 12.3

### 7.5.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

### 7.5.4. Test Setup



### 7.5.5. Test Result

It gets addressed in the operational description.

## 7.6. Power Spectral Density Measurement

### 7.6.1. Test Limit

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 7.6.2. Test Procedure Used

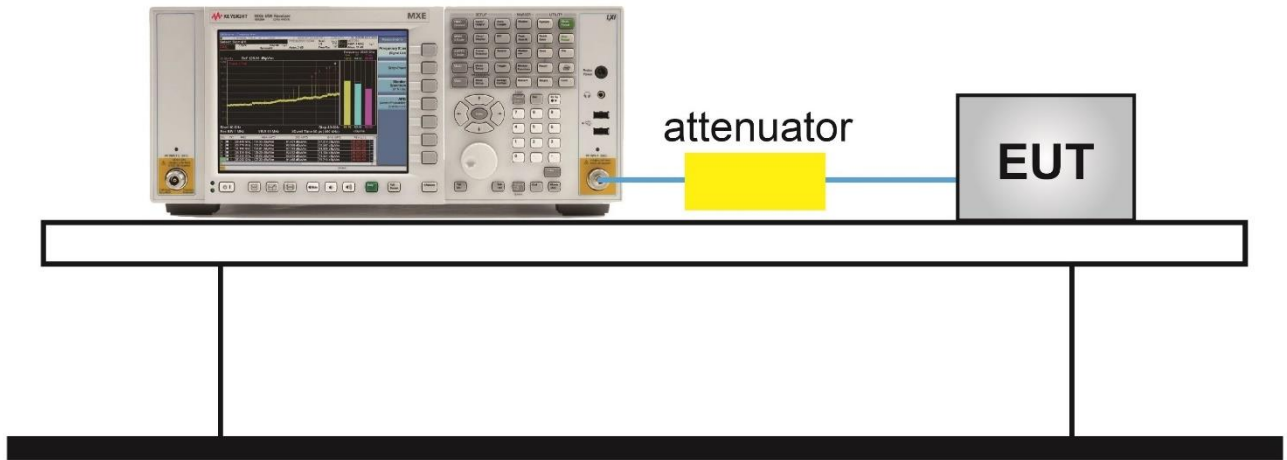
ANSI C63-2013 - Section 12.6

### 7.6.3. Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz,  
RBW = 100 kHz
4. VBW = 3MHz
5. Number of sweep points  $\geq 2 \times (\text{span} / \text{RBW})$
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
10. Add  $10 \cdot \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add  $10 \cdot \log(1/0.25) = 6$  dB if the duty cycle is 25 percent.
11. When the measurement bandwidth of Maximum PSD is specified in 500 kHz, add a constant factor  $10 \cdot \log(500\text{kHz}/100\text{kHz}) = 6.99$  dB to the measured result.

### 7.6.4. Test Setup

## Spectrum Analyzer



### 7.6.5. Test Result

Product	ACCESS POINT	Temperature	24°C
Test Engineer	Kevin Ker	Relative Humidity	59%
Test Site	SR2	Test Date	2020/01/09 ~ 2020/03/23
Test Item	Power Spectral Density (UNII-Band 1 and UNII-Band 2)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/MHz)	Ant 1 PSD (dBm/MHz)	Ant 2 PSD (dBm/MHz)	Ant 3 PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
Ant 0 + 1 + 2 + 3											
11a	6Mbps	36	5180	8.25	7.94	7.75	7.97	95.12	14.22	≤14.98	Pass
11a	6Mbps	44	5220	9.15	8.63	8.65	7.15	95.12	14.69	≤14.98	Pass
11a	6Mbps	48	5240	8.60	9.02	8.72	7.49	95.12	14.73	≤14.98	Pass
11a	6Mbps	52	5260	3.00	2.54	2.61	2.04	95.12	8.80	≤8.98	Pass
11a	6Mbps	60	5300	3.14	2.57	2.39	2.10	95.12	8.80	≤8.98	Pass
11a	6Mbps	64	5320	3.00	2.64	2.74	2.17	95.12	8.89	≤8.98	Pass
11a	6Mbps	100	5500	2.99	2.32	2.42	2.33	95.12	8.76	≤8.98	Pass
11a	6Mbps	120	5600	3.20	2.45	2.19	2.07	95.12	8.74	≤8.98	Pass
11a	6Mbps	140	5700	2.95	2.26	1.93	2.11	95.12	8.57	≤8.98	Pass
11a	6Mbps	144	5720	2.96	2.35	2.57	2.16	95.12	8.76	≤8.98	Pass
11ac-VHT20	MCS0	36	5180	8.38	8.09	7.99	8.14	97.92	14.26	≤14.98	Pass
11ac-VHT20	MCS0	44	5220	7.84	8.76	8.87	8.61	97.92	14.65	≤14.98	Pass
11ac-VHT20	MCS0	48	5240	7.61	9.11	8.77	8.67	97.92	14.69	≤14.98	Pass
11ac-VHT20	MCS0	52	5260	2.33	2.28	2.55	2.28	97.92	8.47	≤8.98	Pass
11ac-VHT20	MCS0	60	5300	2.80	2.68	2.46	2.33	97.92	8.68	≤8.98	Pass
11ac-VHT20	MCS0	64	5320	2.82	2.62	2.60	2.06	97.92	8.65	≤8.98	Pass
11ac-VHT20	MCS0	100	5500	3.23	1.88	2.03	2.35	97.92	8.52	≤8.98	Pass
11ac-VHT20	MCS0	120	5600	3.18	2.29	2.10	1.62	97.92	8.45	≤8.98	Pass
11ac-VHT20	MCS0	140	5700	3.07	2.27	1.92	2.04	97.92	8.46	≤8.98	Pass
11ac-VHT20	MCS0	144	5720	3.24	2.66	2.49	2.19	97.92	8.77	≤8.98	Pass

11ac-VHT40	MCS0	38	5190	1.21	0.72	0.19	0.38	96.51	6.82	≤14.98	Pass
11ac-VHT40	MCS0	46	5230	7.86	5.71	7.40	6.36	96.51	13.09	≤14.98	Pass
11ac-VHT40	MCS0	54	5270	2.54	2.53	2.36	1.64	96.51	8.46	≤8.98	Pass
11ac-VHT40	MCS0	62	5310	0.46	-0.44	-0.06	-0.42	96.51	6.08	≤8.98	Pass
11ac-VHT40	MCS0	102	5510	2.10	1.24	1.16	1.22	96.51	7.62	≤8.98	Pass
11ac-VHT40	MCS0	118	5590	3.36	2.68	2.13	2.64	96.51	8.90	≤8.98	Pass
11ac-VHT40	MCS0	134	5670	3.59	2.68	2.28	2.36	96.51	8.93	≤8.98	Pass
11ac-VHT40	MCS0	142	5710	3.45	2.63	2.26	2.51	96.51	8.91	≤8.98	Pass
11ac-VHT80	MCS0	42	5210	-1.66	-2.65	-2.92	-2.79	94.05	3.81	≤14.98	Pass
11ac-VHT80	MCS0	58	5290	-2.60	-3.36	-3.41	-3.52	94.05	3.08	≤8.98	Pass
11ac-VHT80	MCS0	106	5530	-2.26	-3.33	-3.66	-2.48	94.05	3.39	≤8.98	Pass
11ac-VHT80	MCS0	122	5610	0.58	0.23	0.54	-0.11	94.05	6.61	≤8.98	Pass
11ac-VHT80	MCS0	138	5690	0.36	-0.24	0.39	-0.64	94.05	6.28	≤8.98	Pass
802.11ac-VHT160 Straddle 5.15-5.25GHz											
11ac-VHT160	MCS0	50	5250	-6.10	-6.07	-6.49	-5.79	86.95	0.52	≤14.98	Pass
802.11ac-VHT160 Straddle 5.25-5.35GHz											
11ac-VHT160	MCS0	50	5250	-6.21	-6.29	-6.86	-6.66	86.95	0.13	≤8.98	Pass
11ax-HE20	MCS0	36	5180	8.14	7.97	7.65	7.84	97.70	14.03	≤14.98	Pass
11ax-HE20	MCS0	44	5220	9.35	9.17	8.33	8.29	97.70	14.93	≤14.98	Pass
11ax-HE20	MCS0	48	5240	9.44	8.68	8.94	8.20	97.70	14.96	≤14.98	Pass
11ax-HE20	MCS0	52	5260	2.73	2.36	2.03	2.38	97.70	8.50	≤8.98	Pass
11ax-HE20	MCS0	60	5300	2.65	2.07	2.36	2.11	97.70	8.43	≤8.98	Pass
11ax-HE20	MCS0	64	5320	2.78	2.21	2.64	1.83	97.70	8.50	≤8.98	Pass
11ax-HE20	MCS0	100	5500	0.75	-0.14	-0.08	0.02	97.70	6.27	≤8.98	Pass
11ax-HE20	MCS0	120	5600	3.27	2.24	2.14	1.96	97.70	8.56	≤8.98	Pass
11ax-HE20	MCS0	140	5700	-0.05	-0.99	-1.00	-1.24	97.70	5.33	≤8.98	Pass
11ax-HE20	MCS0	144	5720	2.98	2.20	2.49	1.70	97.70	8.49	≤8.98	Pass
11ax-HE40	MCS0	38	5190	2.70	2.37	1.99	1.93	94.86	8.51	≤14.98	Pass
11ax-HE40	MCS0	46	5230	8.16	7.99	7.45	7.37	94.86	14.01	≤14.98	Pass
11ax-HE40	MCS0	54	5270	3.01	2.61	2.58	2.31	94.86	8.88	≤8.98	Pass
11ax-HE40	MCS0	62	5310	0.47	-1.03	-0.60	-0.84	94.86	5.79	≤8.98	Pass
11ax-HE40	MCS0	102	5510	2.13	1.65	1.28	1.52	94.86	7.91	≤8.98	Pass
11ax-HE40	MCS0	118	5590	3.14	2.56	2.25	2.52	94.86	8.88	≤8.98	Pass
11ax-HE40	MCS0	134	5670	3.01	2.44	2.26	2.71	94.86	8.86	≤8.98	Pass
11ax-HE40	MCS0	142	5710	3.07	2.69	2.02	2.94	94.86	8.95	≤8.98	Pass

11ax-HE80	MCS0	42	5210	-0.83	-1.78	-2.10	-2.28	92.53	4.65	≤14.98	Pass
11ax-HE80	MCS0	58	5290	-3.11	-4.38	-3.90	-4.51	92.53	2.42	≤8.98	Pass
11ax-HE80	MCS0	106	5530	-0.79	-2.23	-2.32	-1.56	92.53	4.68	≤8.98	Pass
11ax-HE80	MCS0	122	5610	2.80	0.08	0.41	0.02	92.53	7.35	≤8.98	Pass
11ax-HE80	MCS0	138	5690	0.20	-0.31	-0.09	-0.50	92.53	6.19	≤8.98	Pass
802.11ax-HE160 Straddle 5.15-5.25GHz											
11ax-HE160	MCS0	50	5250	-4.44	-4.41	-4.10	-5.31	88.29	2.02	≤14.98	Pass
802.11ax-HE160 Straddle 5.25-5.35GHz											
11ax-HE160	MCS0	50	5250	-4.67	-4.99	-4.63	-5.96	88.29	1.53	≤8.98	Pass

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/MHz) =  $10 \cdot \log\{10^{(\text{Ant } 0 \text{ PSD}/10)} + 10^{(\text{Ant } 1 \text{ PSD}/10)} + 10^{(\text{Ant } 2 \text{ PSD}/10)} + 10^{(\text{Ant } 3 \text{ PSD}/10)}\}$  (dBm/MHz).

Note 2: When EUT duty cycle < 98%, Total PSD (dBm/MHz) =  $10 \cdot \log\{10^{(\text{Ant } 0 \text{ PSD}/10)} + 10^{(\text{Ant } 1 \text{ PSD}/10)} + 10^{(\text{Ant } 2 \text{ PSD}/10)} + 10^{(\text{Ant } 3 \text{ PSD}/10)}\}$  (dBm/MHz) +  $10 \cdot \log(1/\text{Duty Cycle})$ .

Note 3: NII-1 Band, PSD Limit (dBm/MHz) = 17dBm/MHz - (8.02dBi - 6dBi) = 14.98dBm/MHz.

NII-2 Band, PSD Limit (dBm/MHz) = 11dBm/MHz - (8.02dBi - 6dBi) = 8.98dBm/MHz.

Product	ACCESS POINT	Temperature	22°C
Test Engineer	Kevin Ker	Relative Humidity	54%
Test Site	SR2	Test Date	2020/01/09 ~ 2020/03/18
Test Item	Power Spectral Density (UNII-Band 4)		
Antenna Type	Omin Antenna (ANT-2x2-5005)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/100kHz)	Ant 1 PSD (dBm/100kHz)	Ant 2 PSD (dBm/100kHz)	Ant 3 PSD (dBm/100kHz)	Duty Cycle (%)	Constant Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
Ant 0 + 1 + 2 + 3												
11a	6Mbps	149	5745	2.77	2.63	2.86	2.12	95.12	6.99	15.83	≤ 27.98	Pass
11a	6Mbps	157	5785	1.82	2.19	2.64	1.78	95.12	6.99	15.35	≤ 27.98	Pass
11a	6Mbps	165	5825	1.84	2.28	2.80	2.01	95.12	6.99	15.48	≤ 27.98	Pass
11ac-VHT20	MCS0	149	5745	1.40	2.11	2.57	1.64	97.92	6.99	15.06	≤ 27.98	Pass
11ac-VHT20	MCS0	157	5785	1.65	1.98	2.07	1.33	97.92	6.99	14.87	≤ 27.98	Pass
11ac-VHT20	MCS0	165	5825	1.34	1.28	2.67	1.26	97.92	6.99	14.78	≤ 27.98	Pass
11ac-VHT40	MCS0	151	5755	-0.49	-0.54	0.08	-0.53	96.51	6.99	12.80	≤ 27.98	Pass
11ac-VHT40	MCS0	159	5795	-0.79	-0.77	0.09	-0.65	96.51	6.99	12.65	≤ 27.98	Pass
11ac-VHT80	MCS0	155	5775	-5.73	-5.84	-5.55	-6.38	94.05	6.99	7.41	≤ 27.98	Pass
11ax-HE20	MCS0	149	5745	1.30	1.80	2.22	1.24	97.70	6.99	14.77	≤ 27.98	Pass
11ax-HE20	MCS0	157	5785	1.52	1.44	2.23	1.30	97.70	6.99	14.75	≤ 27.98	Pass
11ax-HE20	MCS0	165	5825	-0.79	1.27	2.24	1.14	97.70	6.99	14.21	≤ 27.98	Pass
11ax-HE40	MCS0	151	5755	-1.15	-1.44	-0.66	-1.41	94.86	6.99	12.09	≤ 27.98	Pass
11ax-HE40	MCS0	159	5795	-1.69	-1.59	-0.88	-1.54	94.86	6.99	11.83	≤ 27.98	Pass
11ax-HE80	MCS0	155	5775	-6.61	-6.72	-6.52	-7.73	92.53	6.99	6.48	≤ 27.98	Pass

Note 1: When EUT duty cycle ≥ 98%, Total PSD (dBm/500kHz) =  $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$  (dBm/100kHz) + Constant Factor.

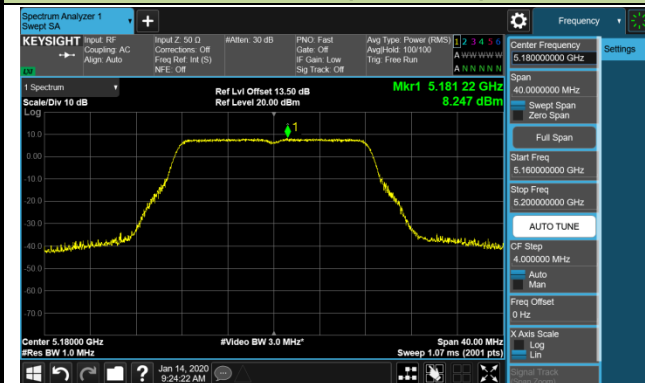
Note 2: When EUT duty cycle < 98%, Total PSD (dBm/500kHz) =  $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$  (dBm/100kHz) + Constant Factor +  $10 \cdot \log(1/\text{Duty Cycle})$ .

Note 3: PSD Limit (dBm/500kHz) = 30dBm/500kHz - (8.02dBi - 6dBi) = 27.98dBm/500kHz.

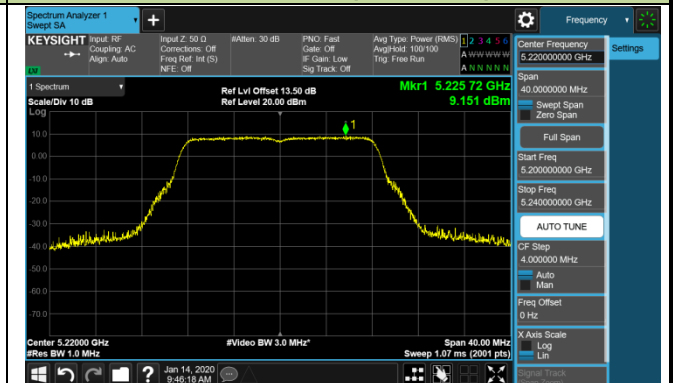


## 802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3

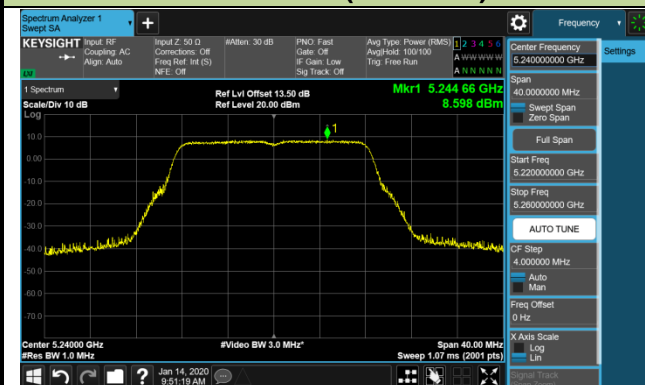
### Channel 36 (5180MHz)



### Channel 44 (5220MHz)



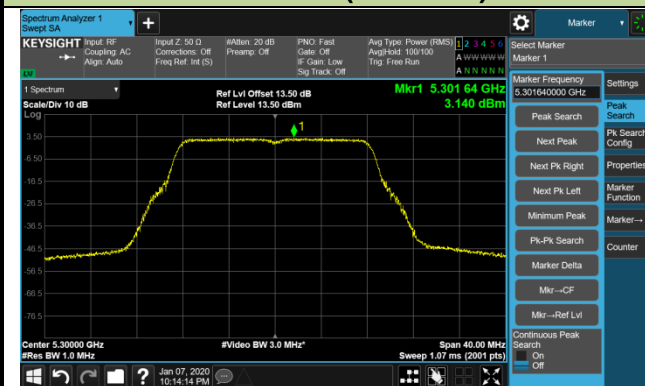
### Channel 48 (5240MHz)



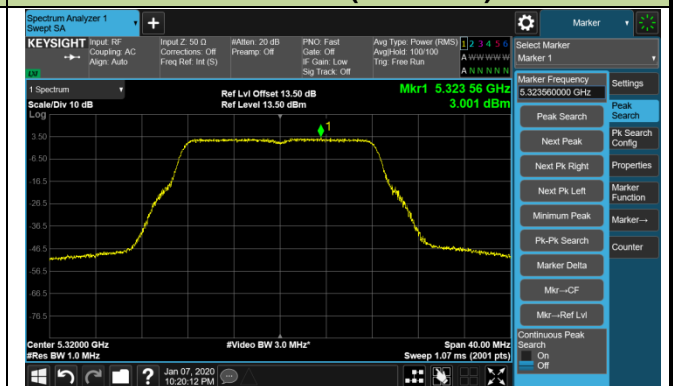
### Channel 52 (5260MHz)



### Channel 60 (5300MHz)



### Channel 64 (5320MHz)



### Channel 100 (5500MHz)

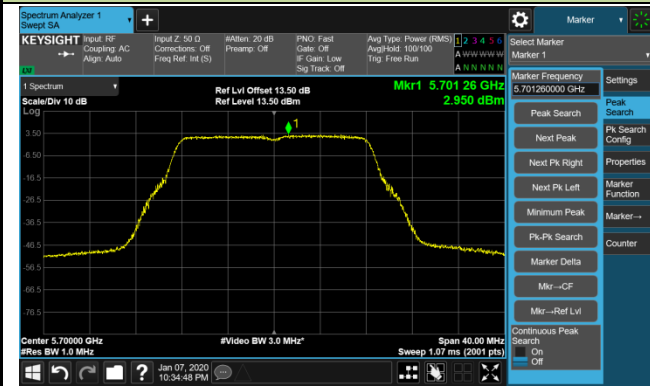


### Channel 120 (5600MHz)



## 802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (CDD Mode)

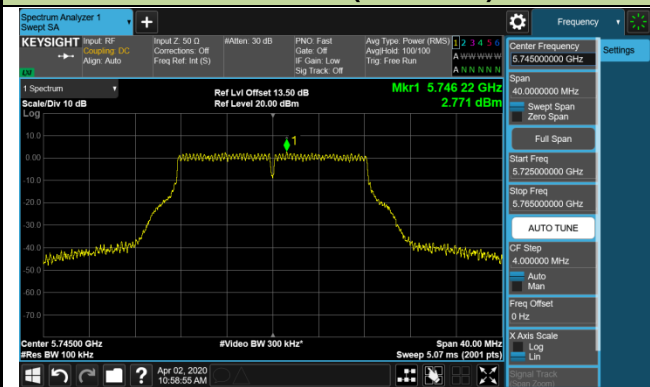
### Channel 140 (5700MHz)



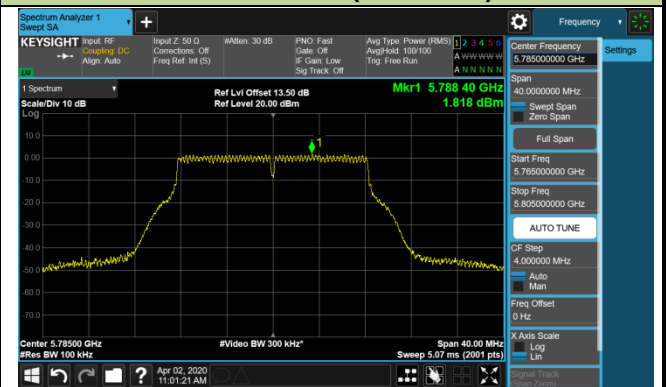
### Channel 144 (5720MHz)



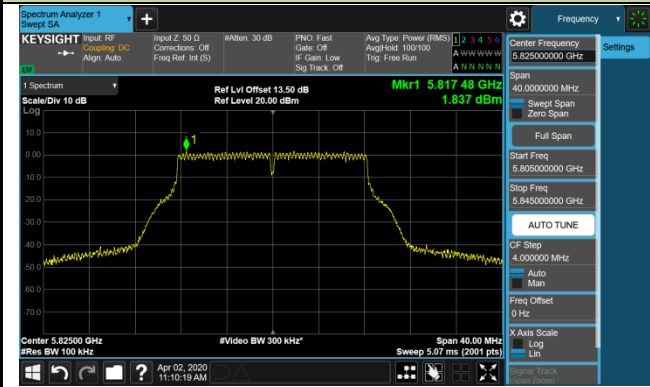
### Channel 149 (5745MHz)



### Channel 157 (5785MHz)

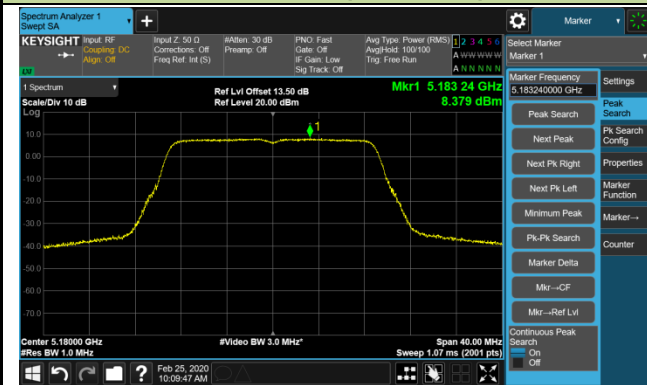


### Channel 165 (5825MHz)

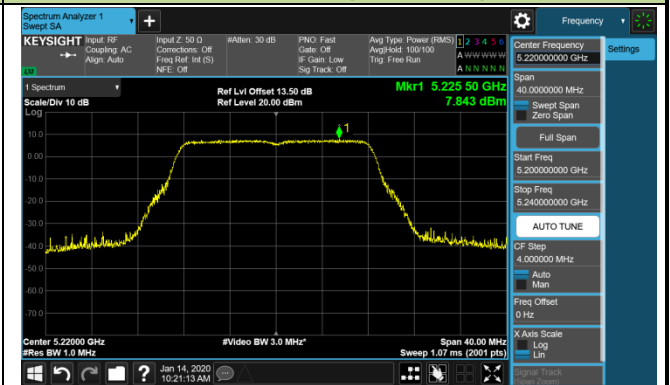


## 802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (CDD Mode)

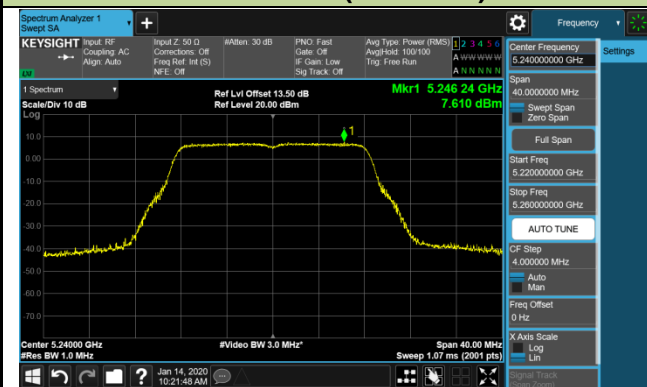
### Channel 36 (5180MHz)



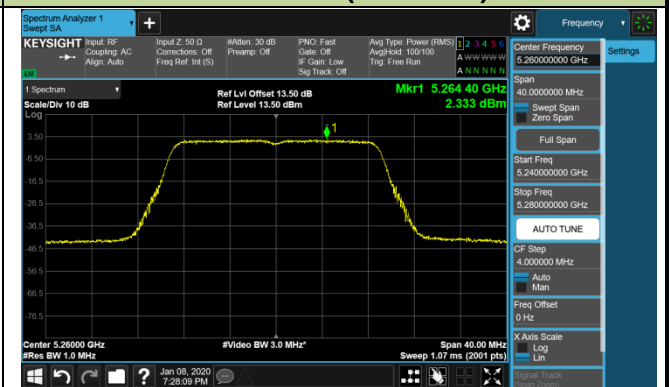
### Channel 44 (5220MHz)



### Channel 48 (5240MHz)



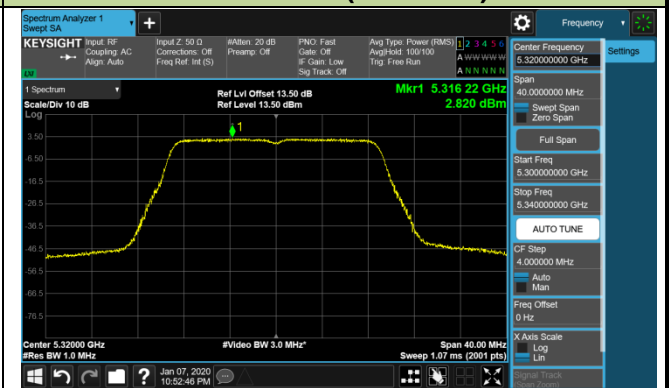
### Channel 52 (5260MHz)



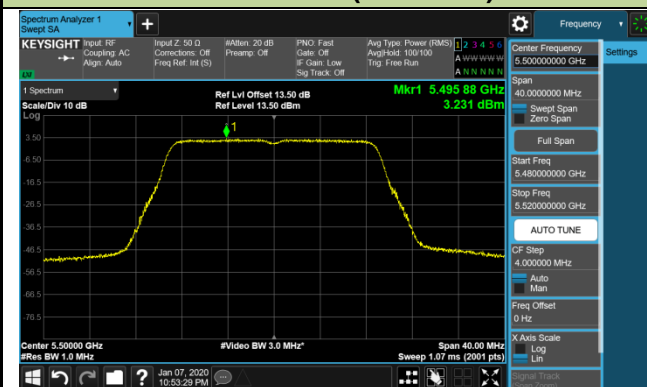
### Channel 60 (5300MHz)



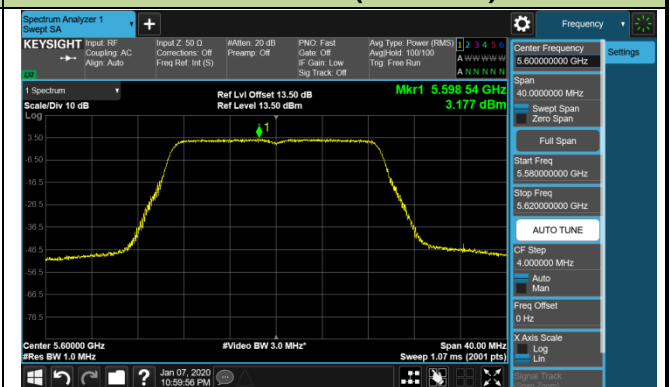
### Channel 64 (5320MHz)



### Channel 100 (5500MHz)



### Channel 120 (5600MHz)

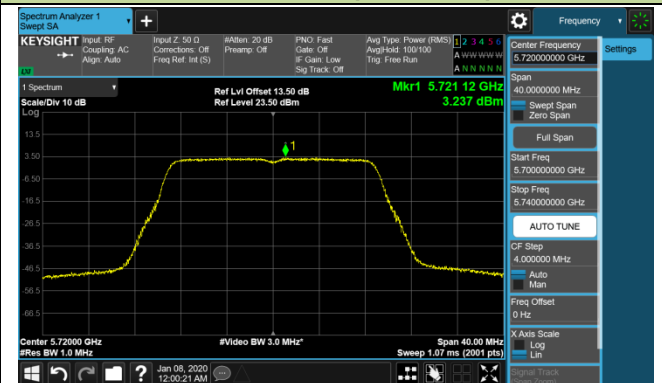


## 802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (CDD Mode)

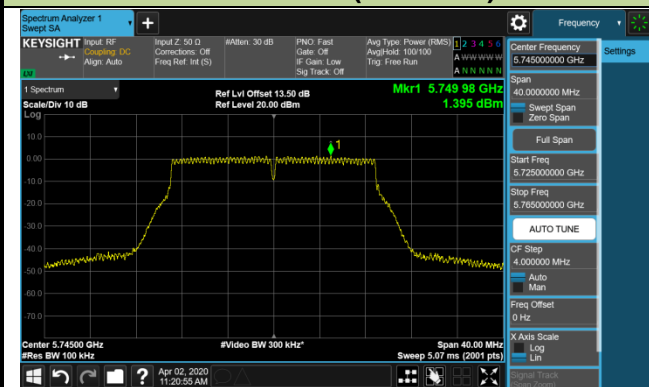
### Channel 140 (5700MHz)



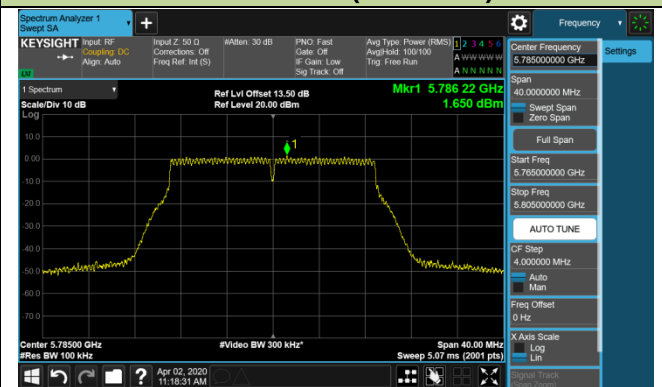
### Channel 144 (5720MHz)



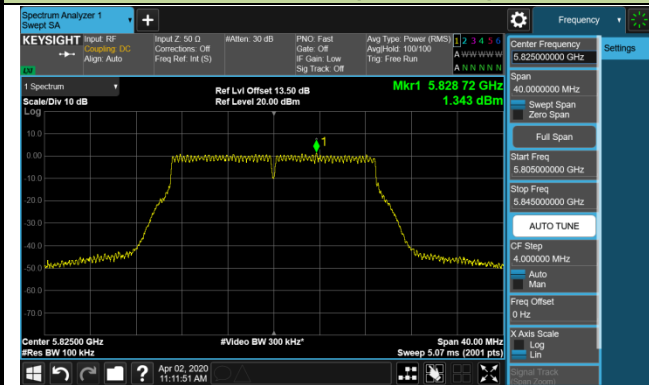
### Channel 149 (5745MHz)



### Channel 157 (5785MHz)

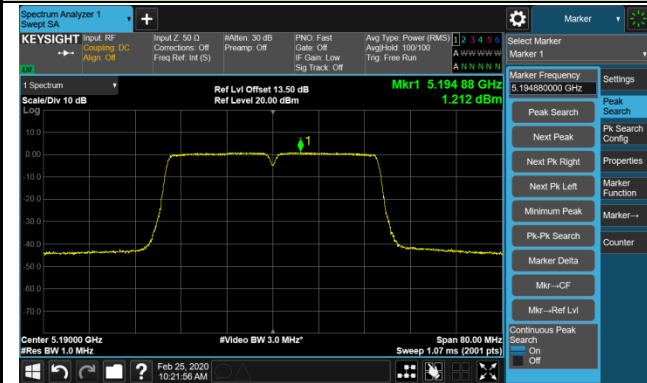


### Channel 165 (5825MHz)

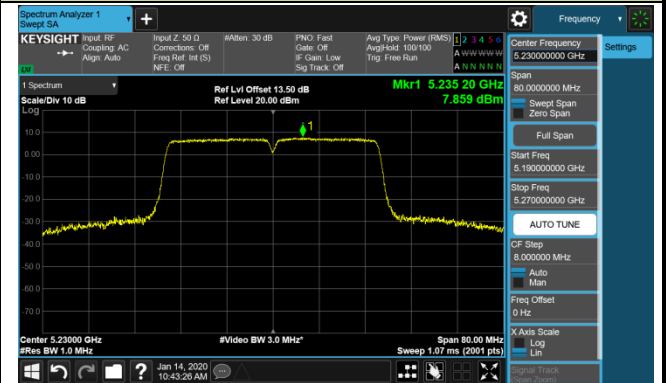


## 802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (CDD Mode)

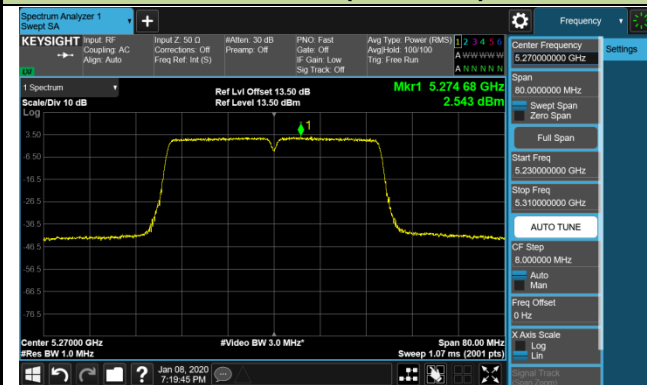
### Channel 38 (5190MHz)



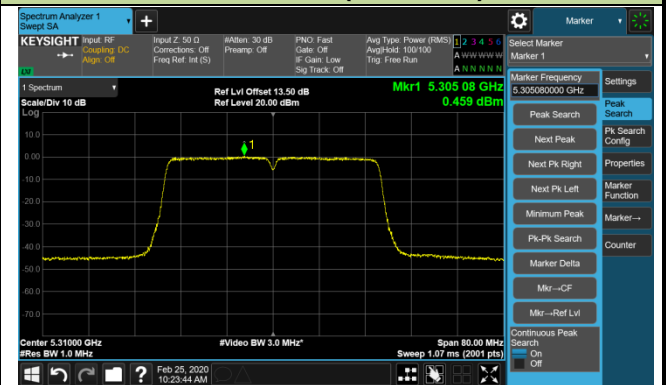
### Channel 46 (5230MHz)



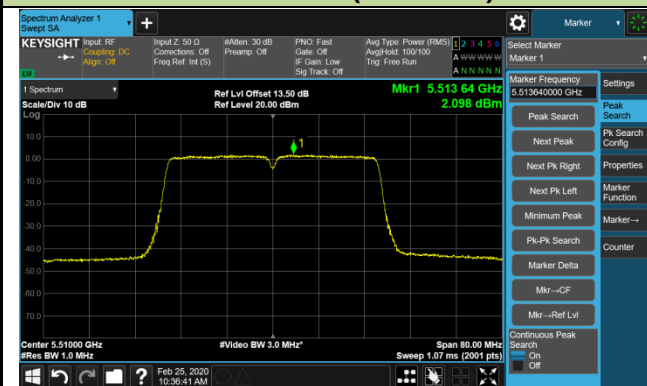
### Channel 54 (5270MHz)



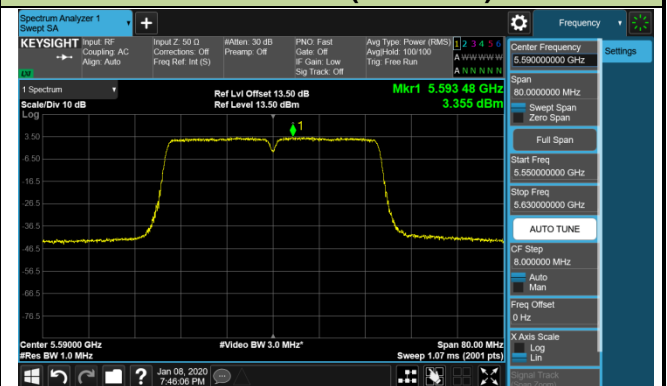
### Channel 62 (5310MHz)



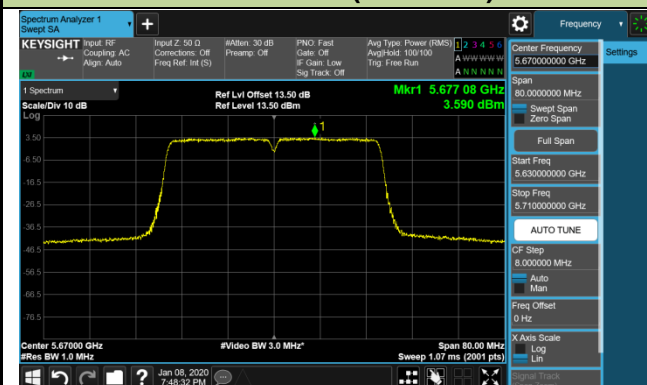
### Channel 102 (5510MHz)



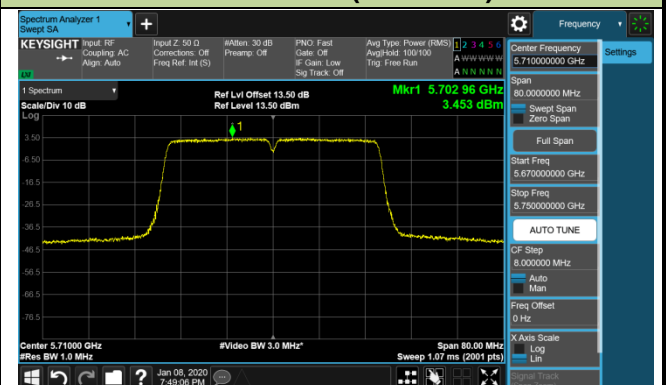
### Channel 118 (5590MHz)



### Channel 134 (5670MHz)

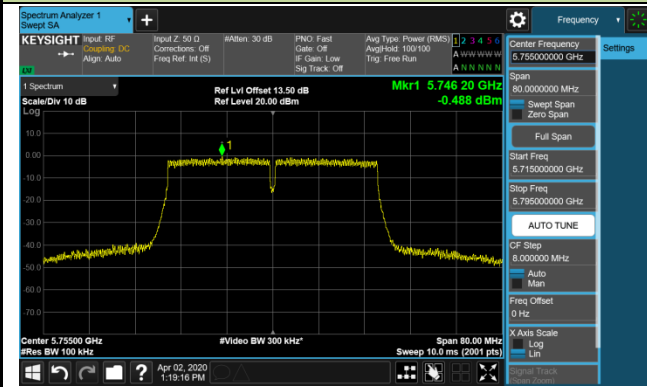


### Channel 142 (5710MHz)



802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (CDD Mode)

Channel 151 (5755MHz)



Channel 159 (5795MHz)

