

FCC ID: WQTAR4520

### ■ TEST Plot for Ant.1\_802.11ac\_VHT40

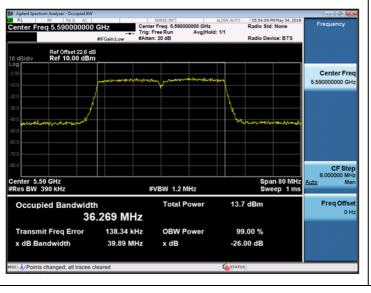
### 802.11ac\_VHT40 UNII 1 BAND 26dB Bandwidth(CH 38)



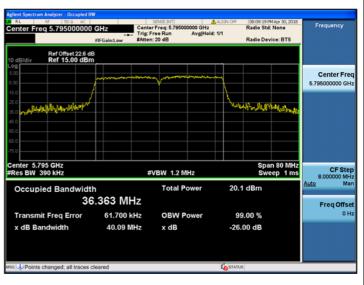
### 802.11ac\_VHT40 UNII 2A BAND 26dB Bandwidth (CH 54)



### 802.11ac\_VHT40 UNII 2C BAND 26dB Bandwidth(CH 118)



### 802.11ac\_VHT40 UNII 3 BAND 26dB Bandwidth (CH 159)



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### ■ TEST RESULTS for Ant.2\_802.11ac\_VHT40

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

FCC ID: WQTAR4520

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5190	38	40.07	N/A	Pass
5230	46	39.78	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5270	54	39.90	N/A	Pass
5310	62	39.89	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5510	102	40.13	N/A	Pass
5590	118	40.12	N/A	Pass
5710	142	39.69	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

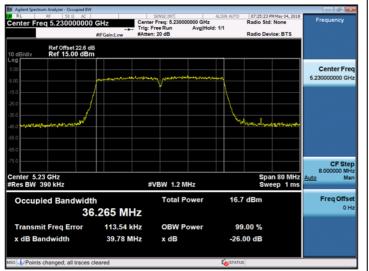
802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	54.57	N/A	Pass
5795	159	40.62	N/A	Pass



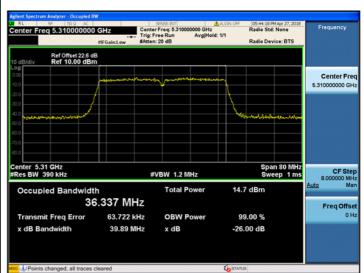
### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.2\_802.11ac\_VHT40**

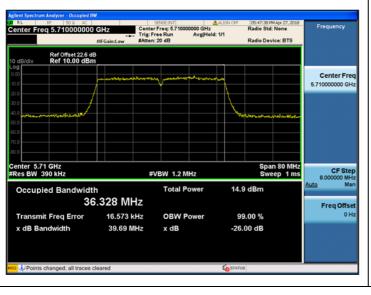
### 802.11ac\_VHT40 UNII 1 BAND 26dB Bandwidth(CH 46)



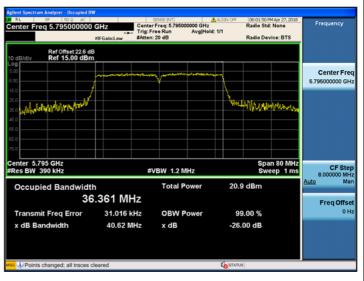
### 802.11ac\_VHT40 UNII 2A BAND 26dB Bandwidth (CH 62)



### 802.11ac\_VHT40 UNII 2C BAND 26dB Bandwidth(CH 142)



### 802.11ac\_VHT40 UNII 3 BAND 26dB Bandwidth (CH 159)



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FCC ID: WQTAR4520

### **■ TEST RESULTS for Ant.3\_802.11ac\_VHT40**

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5190	38	40.03	N/A	Pass
5230	46	39.83	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5270	54	40.08	N/A	Pass
5310	62	40.27	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5510	102	39.88	N/A	Pass
5590	118	40.19	N/A	Pass
5710	142	39.94	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	40.76	N/A	Pass
5795	159	40.23	N/A	Pass



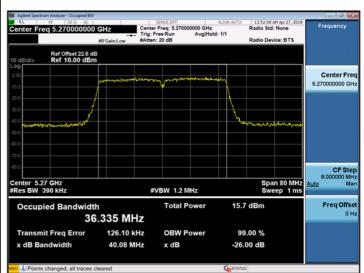
FCC ID: WQTAR4520

### **■ TEST Plot for Ant.3\_802.11ac\_VHT40**

### 802.11ac\_VHT40 UNII 1 BAND 26dB Bandwidth(CH 46)

# | Ref | Section | Analyser - Occupied BW | Service | Ser

### 802.11ac\_VHT40 UNII 2A BAND 26dB Bandwidth (CH 54)



### 802.11ac\_VHT40 UNII 2C BAND 26dB Bandwidth(CH 102)



### 802.11ac\_VHT40 UNII 3 BAND 26dB Bandwidth (CH 159)





FCC ID: WQTAR4520

### **■ TEST RESULTS for Ant.0\_802.11ac\_VHT80**

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	[MHz]	Pass / Fail
5210	42	80.63	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	[MHz]	Pass / Fail
5290	58	81.55	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.50	N/A	Pass
5610	122	81.62	N/A	Pass
5690	138	81.71	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5775	155	81.66	N/A	Pass

Note: DFS test channels should be defined. So, We performed the OBW test to prove that no part of the fundamental emissions of any channels belong to UNII1 and UNII3 band for DFS.



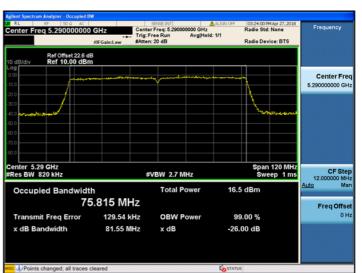
### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.0\_802.11ac\_VHT80**

### 802.11ac\_VHT80 UNII 1 BAND 26dB Bandwidth(CH 42)



802.11ac\_VHT80 UNII 2A BAND 26dB Bandwidth(CH 58)



802.11ac\_VHT80 UNII 2C BAND 26dB Bandwidth(CH 106)



802.11ac\_VHT80 UNII 3 BAND 26dB Bandwidth(CH 155)





FCC ID: WQTAR4520

### **■ TEST RESULTS for Ant.1\_802.11ac\_VHT80**

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5210	42	81.12	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5290	58	81.90	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.72	N/A	Pass
5610	122	81.61	N/A	Pass
5690	138	81.34	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	84.76	N/A	Pass

Note: DFS test channels should be defined. So, We performed the OBW test to prove that no part of the fundamental emissions of any channels belong to UNII1 and UNII3 band for DFS.



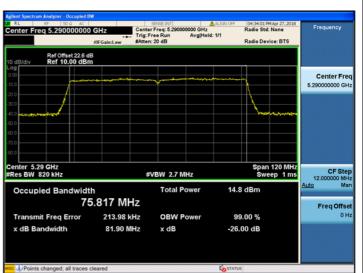
### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.1\_802.11ac\_VHT80**

### 802.11ac\_VHT80 UNII 1 BAND 26dB Bandwidth(CH 42)



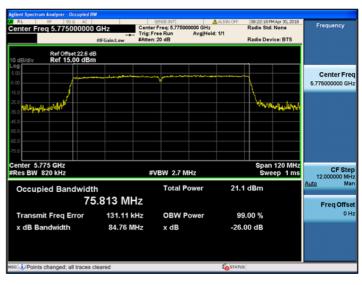
### 802.11ac\_VHT80 UNII 2A BAND 26dB Bandwidth(CH 58)



### 802.11ac\_VHT80 UNII 2C BAND 26dB Bandwidth(CH 138)



### 802.11ac\_VHT80 UNII 3 BAND 26dB Bandwidth(CH 155)





FCC ID: WQTAR4520

### **■ TEST RESULTS for Ant.2\_802.11ac\_VHT80**

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5210	42	80.79	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5290	58	81.81	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.35	N/A	Pass
5610	122	81.89	N/A	Pass
5690	138	81.74	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	81.89	N/A	Pass

Note: DFS test channels should be defined. So, We performed the OBW test to prove that no part of the fundamental emissions of any channels belong to UNII1 and UNII3 band for DFS.



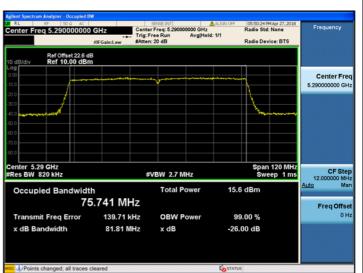
### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.2\_802.11ac\_VHT80**

### 802.11ac\_VHT80 UNII 1 BAND 26dB Bandwidth(CH 42)



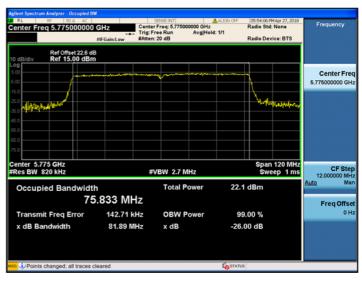
### 802.11ac\_VHT80 UNII 2A BAND 26dB Bandwidth(CH 58)



### 802.11ac\_VHT80 UNII 2C BAND 26dB Bandwidth(CH 106)



### 802.11ac\_VHT80 UNII 3 BAND 26dB Bandwidth(CH 155)





FCC ID: WQTAR4520

### **■ TEST RESULTS for Ant.3\_802.11ac\_VHT80**

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	[MHz]	Pass / Fail
5210	42	80.57	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5290	58	81.35	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.21	N/A	Pass
5610	122	81.97	N/A	Pass
5690	138	81.47	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	Measured Bandwidth	[MHz]	Pass / Fail
5775	155	86.66	N/A	Pass

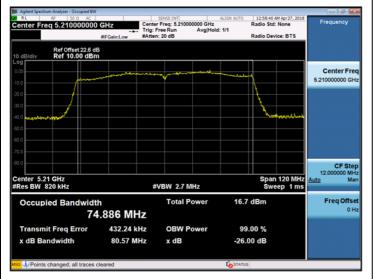
Note: DFS test channels should be defined. So, We performed the OBW test to prove that no part of the fundamental emissions of any channels belong to UNII1 and UNII3 band for DFS.



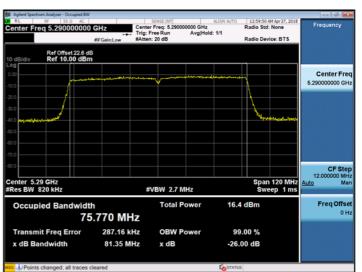
### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.3\_802.11ac\_VHT80**

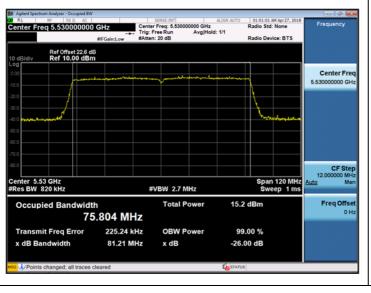
### 802.11ac\_VHT80 UNII 1 BAND 26dB Bandwidth(CH 42)



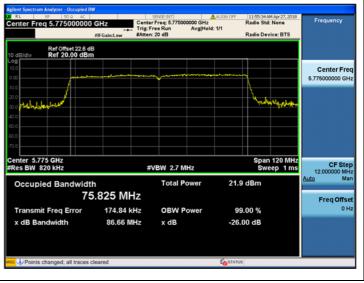
### 802.11ac\_VHT80 UNII 2A BAND 26dB Bandwidth(CH 58)



### 802.11ac\_VHT80 UNII 2C BAND 26dB Bandwidth(CH 106)



### 802.11ac\_VHT80 UNII 3 BAND 26dB Bandwidth(CH 155)



FCC ID: WQTAR4520

### ■ TEST RESULTS for Ant.0, 2\_802.11ac\_VHT160

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT160

802.11ac_VHT160 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5210	42	81.24	N/A	Pass
5290	58	81.19	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT160

802.11ac_VHT160 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.08	N/A	Pass
5610	122	81.28	N/A	Pass



FCC ID: WQTAR4520

### **■ TEST Plot for Ant.0, 2\_802.11ac\_VHT160**



FCC ID: WQTAR4520

### ■ TEST RESULTS for Ant.1, 3\_802.11ac\_VHT160

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT160

802.11ac_VHT160 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5210	42	81.16	N/A	Pass
5290	58	80.78	N/A	Pass

### Conducted 26 dB Bandwidth Measurements for 802.11ac\_VHT160

802.11ac_VHT160 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5530	106	81.22	N/A	Pass
5610	122	80.60	N/A	Pass



### FCC ID: WQTAR4520

### **■ TEST Plot for Ant.1, 3\_802.11ac\_VHT160**



FCC ID: WQTAR4520

### Conducted 6 dB Bandwidth

### ■ TEST RESULTS for Ant.0\_802.11a/n\_HT20/ac\_VHT20

### Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	16.40	0.5	Pass
5785	157	16.40	0.5	Pass
5825	165	16.40	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT20

802.11n_HT20 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.62	0.5	Pass
5785	157	17.60	0.5	Pass
5825	165	17.62	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT20

802.11ac_VHT20 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.60	0.5	Pass
5785	157	17.64	0.5	Pass
5825	165	17.66	0.5	Pass



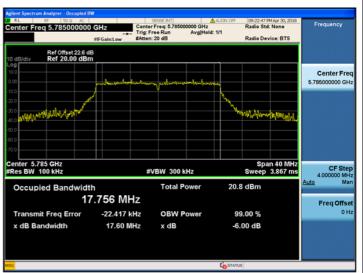
FCC ID: WQTAR4520

### ■ TEST PlotS for 802.11a/n\_HT20/ac\_VHT20

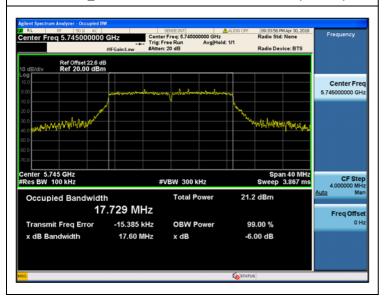
### 802.11a UNII 3 BAND 6dB Bandwidth (CH.149)

## | Special Spectrum Analyzer - Occupied BW | Special Sp

### 802.11n\_HT20 UNII 3 BAND 6dB Bandwidth(CH.157)



### 802.11ac\_VHT20 UNII 3 BAND 6dB Bandwidth(CH.149)



Note: In order to simplify the report, attached plots were only the most narrow channel.

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FCC ID: WQTAR4520

### ■ TEST RESULTS for Ant.1\_802.11a/n\_HT20/ac\_VHT20

### Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth	Minimum Bandwidth	_ ,
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	16.41	0.5	Pass
5785	157	16.38	0.5	Pass
5825	165	16.41	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT20

802.11n_HT20 Mode		Measured Bandwidth	Minimum Bandwidth	_ /- "
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.61	0.5	Pass
5785	157	17.67	0.5	Pass
5825	165	17.60	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT20

802.11ac_VHT20 Mode		Measured Bandwidth	Minimum Bandwidth	_ ,
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.67	0.5	Pass
5785	157	17.61	0.5	Pass
5825	165	17.61	0.5	Pass



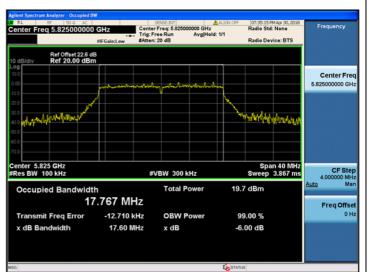
### FCC ID: WQTAR4520

### ■ TEST PlotS for Ant.1\_802.11a/n\_HT20/ac\_VHT20

### 802.11a UNII 3 BAND 6dB Bandwidth (CH.157)

### | Ref Offset 22.6 dB | Ref 20.00 dBm | Ref 20.

802.11n\_HT20 UNII 3 BAND 6dB Bandwidth(CH.165)



802.11ac\_VHT20 UNII 3 BAND 6dB Bandwidth(CH.157)

Total Power

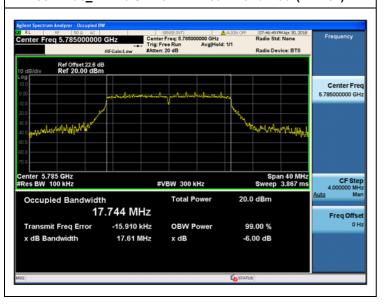
16.540 MHz

-11.549 kHz

16.38 MHz

19.8 dBm

99.00 %



Note: In order to simplify the report, attached plots were only the most narrow channel.

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FCC ID: WQTAR4520

### ■ TEST RESULTS for Ant.2\_802.11a/n\_HT20/ac\_VHT20

### Conducted 6 dB Bandwidth Measurements for 802.11a

802.11a Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	16.37	0.5	Pass
5785	157	16.40	0.5	Pass
5825	165	16.41	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT20

802.11n_HT20 Mode		Measured Bandwidth	Minimum Bandwidth	_ ,
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.61	0.5	Pass
5785	157	17.62	0.5	Pass
5825	165	17.62	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT20

802.11ac_VHT20 Mode		Measured Bandwidth	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.60	0.5	Pass
5785	157	17.62	0.5	Pass
5825	165	17.66	0.5	Pass