

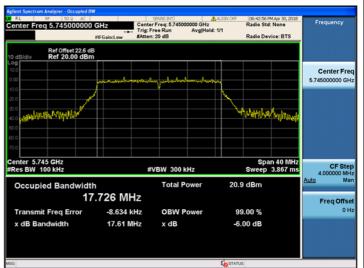
### FCC ID: WQTAR4520

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

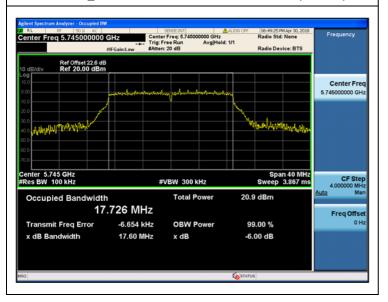
### 802.11a UNII 3 BAND 6dB Bandwidth (CH.149)

# | Applied Spectrum Analyzer - Occupied BW | SPECIAL | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Frequency | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Frequency | Center Freq | 5.745000000 GHz | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Freq Offset | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Freq Offset | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Freq Offset | OHz | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Freq Offset | OHz | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Total Power | 20.9 dBm | Applied Spectrum Analyzer - Occupied Bandwidth | Applied Spectrum Analy

802.11n\_HT20 UNII 3 BAND 6dB Bandwidth(CH.149)



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.3\_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	16.47	0.5	Pass
5785	157	16.42	0.5	Pass
5825	165	16.36	0.5	Pass

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

802.11n_HT20 Mode		Measured Bandwidth Minimum	Minimum Bandwidth	
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5745	149	17.63	0.5	Pass
5785	157	17.62	0.5	Pass
5825	165	17.65	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	17.62	0.5	Pass
5785	157	17.62	0.5	Pass
5825	165	17.58	0.5	Pass



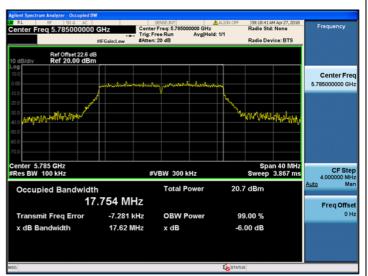
FCC ID: WQTAR4520

### ■ TEST PlotS for Ant.3\_802.11a/n\_HT20/ac\_VHT20

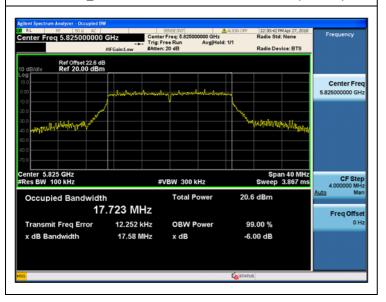
### 802.11a UNII 3 BAND 6dB Bandwidth (CH.165)

Radio Device: BTS Ref Offset 22.6 dB Ref 15.00 dBm Center Freq #VBW 300 kHz Total Power 16.540 MHz 2.606 kHz 99.00 % 16.36 MHz

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



802.11ac\_VHT20 UNII 3 BAND 6dB Bandwidth(CH.165)



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.0\_802.11n\_HT40/ac\_VHT40

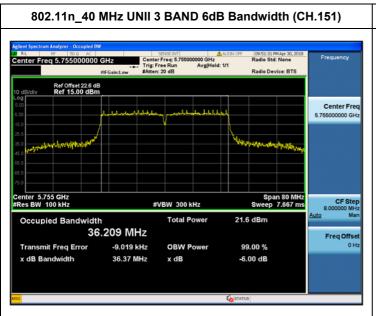
### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT40

802.11n_HT40 Mode		Measured Bandwidth	Minimum Bandwidth	Dana ( 5.8
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.37	0.5	Pass
5795	159	36.40	0.5	Pass

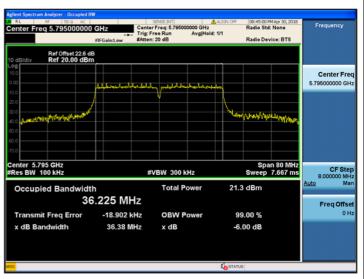
### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	5 (5 )
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.40	0.5	Pass
5795	159	36.38	0.5	Pass

### ■ TEST Plots for Ant.0\_802.11n\_HT40/ac\_VHT40



### 802.11ac\_VHT40 UNII 3 BAND 6dB Bandwidth(CH.159)



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\_802.11n\_HT40/ac\_VHT40

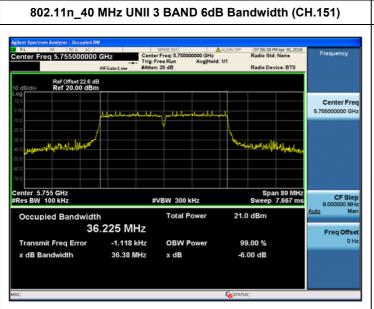
### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT40

802.11n_HT40 Mode		Measured Bandwidth	Minimum Bandwidth	Dana ( 5.8
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.38	0.5	Pass
5795	159	36.41	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	5 (5 )
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.37	0.5	Pass
5795	159	36.39	0.5	Pass

### ■ TEST Plots for Ant.1\_802.11n\_HT40/ac\_VHT40



### 802.11ac\_VHT40 UNII 3 BAND 6dB Bandwidth(CH.151)



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\_802.11n\_HT40/ac\_VHT40

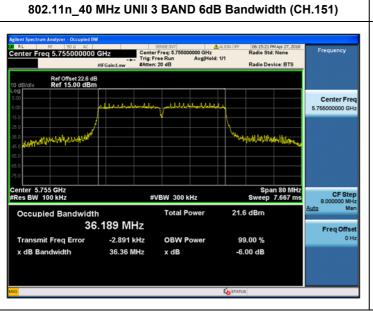
### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT40

802.11n_HT40 Mode		Measured Bandwidth	Minimum Bandwidth	Dana ( 5.8
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.36	0.5	Pass
5795	159	36.39	0.5	Pass

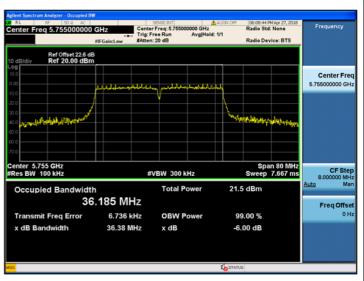
### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	D /F !!
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.38	0.5	Pass
5795	159	36.41	0.5	Pass

### ■ TEST Plots for Ant.2\_802.11n\_HT40/ac\_VHT40







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

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### **■ TEST RESULTS for Ant.3\_802.11n\_HT40/ac\_VHT40**

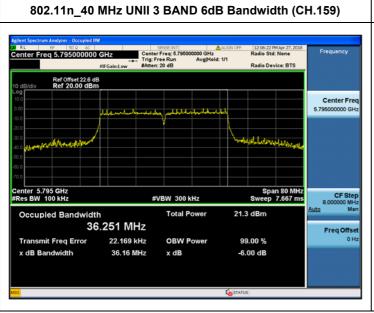
### Conducted 6 dB Bandwidth Measurements for 802.11n\_HT40

802.11n_HT40 Mode		Measured Bandwidth	Minimum Bandwidth	Dana ( 5.8
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.37	0.5	Pass
5795	159	36.16	0.5	Pass

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT40

802.11ac_VHT40 Mode		Measured Bandwidth	Minimum Bandwidth	5 (5 )
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5755	151	36.40	0.5	Pass
5795	159	36.38	0.5	Pass

### ■ TEST Plots for Ant.31\_802.11n\_HT40/ac\_VHT40



### 802.11ac\_VHT40 UNII 3 BAND 6dB Bandwidth(CH.159)



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

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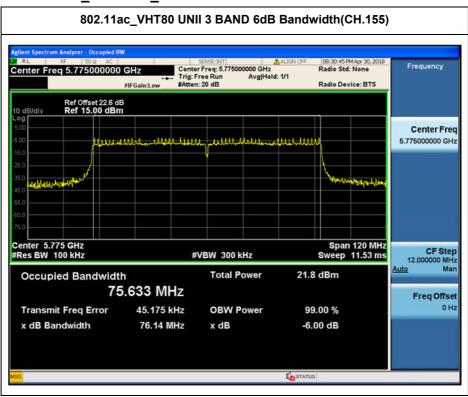
FCC ID: WQTAR4520

### **■ TEST RESULTS Ant.0\_for 802.11ac\_VHT80**

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	Dage / 5all
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	76.14	0.5	Pass

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



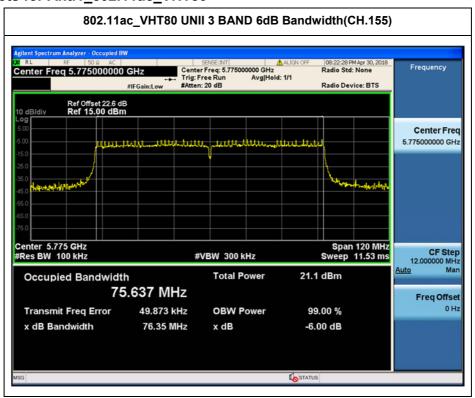
FCC ID: WQTAR4520

### **■ TEST RESULTS Ant.1\_for 802.11ac\_VHT80**

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT80 Mode		Measured Bandwidth	Minimum Bandwidth	Dana (Fall
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	76.35	0.5	Pass

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



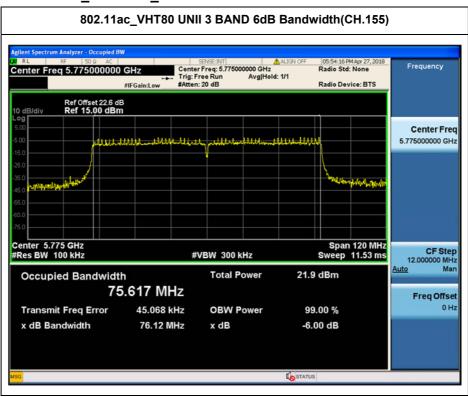
FCC ID: WQTAR4520

### **■ TEST RESULTS Ant.2\_for 802.11ac\_VHT80**

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT8	0 Mode	Measured Bandwidth	Minimum Bandwidth	Dana / Fall
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	76.12	0.5	Pass

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



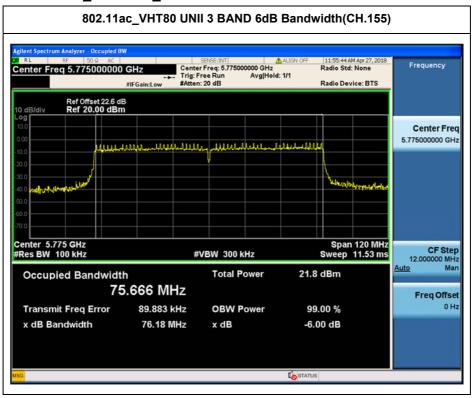
FCC ID: WQTAR4520

### **■ TEST RESULTS Ant.3\_for 802.11ac\_VHT80**

### Conducted 6 dB Bandwidth Measurements for 802.11ac\_VHT80

802.11ac_VHT8	0 Mode	Measured Bandwidth	Minimum Bandwidth	Dana (Fall
Frequency [MHz]	Channel No.	[MHz]	[MHz]	Pass / Fail
5775	155	76.18	0.5	Pass

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



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 0

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			15.48	N/A	Pass
802.11n	5720	144	15.72	N/A	Pass
802.11ac			15.56	N/A	Pass

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			5.76	N/A	Pass
802.11n	5720	144	5.76	N/A	Pass
802.11ac			5.84	N/A	Pass

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Freq Offse

### ■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_Ant 0

Freq Offset

# 802.11a CH.144 Bandwidth | Separation | Sep



802.11n\_HT20 CH.144 Bandwidth

### 802.11ac\_VHT20 CH.144 Bandwidth



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 1

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			15.48	N/A	Pass
802.11n	5720	144	15.72	N/A	Pass
802.11ac			15.76	N/A	Pass

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			5.72	N/A	Pass
802.11n	5720	144	5.80	N/A	Pass
802.11ac			5.84	N/A	Pass

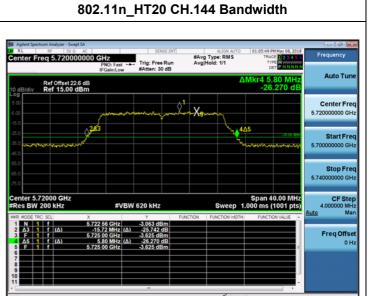
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### FCC ID: WQTAR4520

### ■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_Ant 1

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### 802.11ac\_VHT20 CH.144 Bandwidth



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 2

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			15.56	N/A	Pass
802.11n	5720	144	15.60	N/A	Pass
802.11ac			15.68	N/A	Pass

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			5.60	N/A	Pass
802.11n	5720	144	5.80	N/A	Pass
802.11ac			5.88	N/A	Pass

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### FCC ID: WQTAR4520

### ■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_Ant 2

# 



### 802.11ac\_VHT20 CH.144 Bandwidth



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 3

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			15.32	N/A	Pass
802.11n	5720	144	15.60	N/A	Pass
802.11ac			15.72	N/A	Pass

### Conducted Bandwidth Measurements for 802.11a/n\_HT20/ac\_VHT20 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11a			5.28	N/A	Pass
802.11n	5720	144	5.80	N/A	Pass
802.11ac			5.84	N/A	Pass

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### FCC ID: WQTAR4520

### ■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_Ant 3

Freq Offset

## 



802.11n\_HT20 CH.144 Bandwidth

### 802.11ac\_VHT20 CH.144 Bandwidth



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 0

### Conducted Bandwidth Measurements for 802.11n\_HT40/ac\_VHT40 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11n	5740	440	34.92	N/A	Pass
802.11ac	5710	142	34.76	N/A	Pass

### Conducted Bandwidth Measurements for 802.11n\_HT40/ac\_VHT40 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11n	5710	142	5.00	N/A	Pass
802.11ac			5.00	N/A	Pass

### ■ Straddle channels TEST Plot for 802.11n\_HT40/ac\_VHT40\_Ant 0



802.11n\_HT40 CH.142 Bandwidth

### 802.11ac\_VHT40 CH.142 Bandwidth



FCC ID: WQTAR4520

### ■ Straddle channels TEST RESULTS\_Ant 1

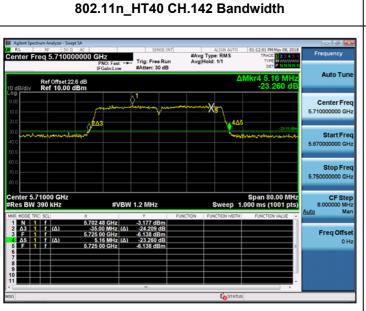
### Conducted Bandwidth Measurements for 802.11n\_HT40/ac\_VHT40 (UNII 2C Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11n	5710	142	35.00	N/A	Pass
802.11ac			34.92	N/A	Pass

### Conducted Bandwidth Measurements for 802.11n\_HT40/ac\_VHT40 (UNII 3 Band)

Mode	Frequency [MHz]	Channel No.	Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
802.11n	5710	142	5.16	N/A	Pass
802.11ac			5.32	N/A	Pass

### ■ Straddle channels TEST Plot for 802.11n\_HT40/ac\_VHT40\_Ant 1



### 802.11ac\_VHT40 CH.142 Bandwidth

