5. POWER SPECTRAL DENSITY TEST

5.1 APPLIED PROCEDURES / LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , 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.

2.For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.1.1 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r01.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/*T*, where *T* is defined in section II.B.l.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

5.1.4 EUT OPERATION CONDITIONS

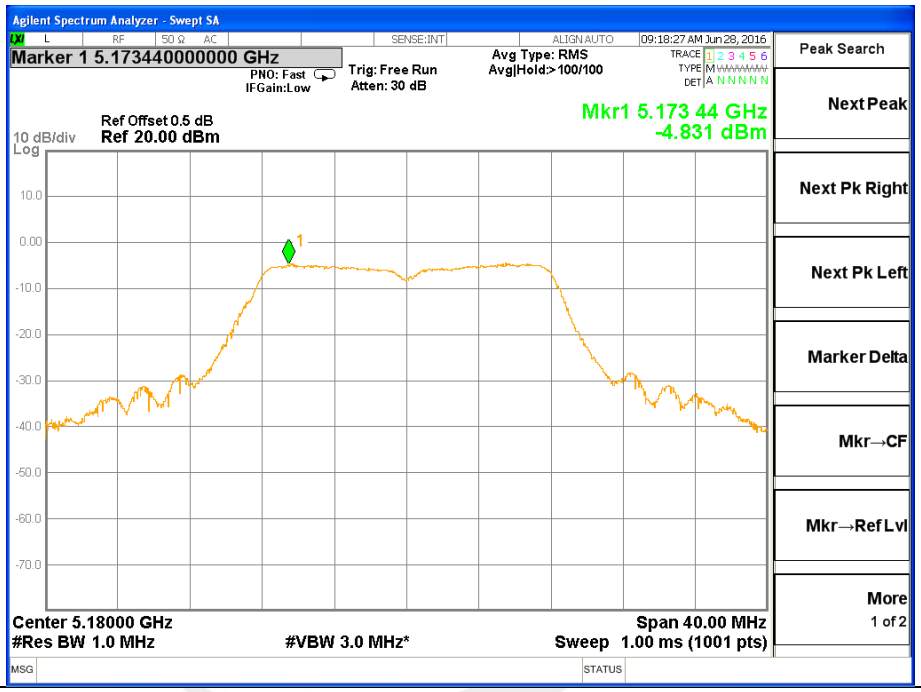
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

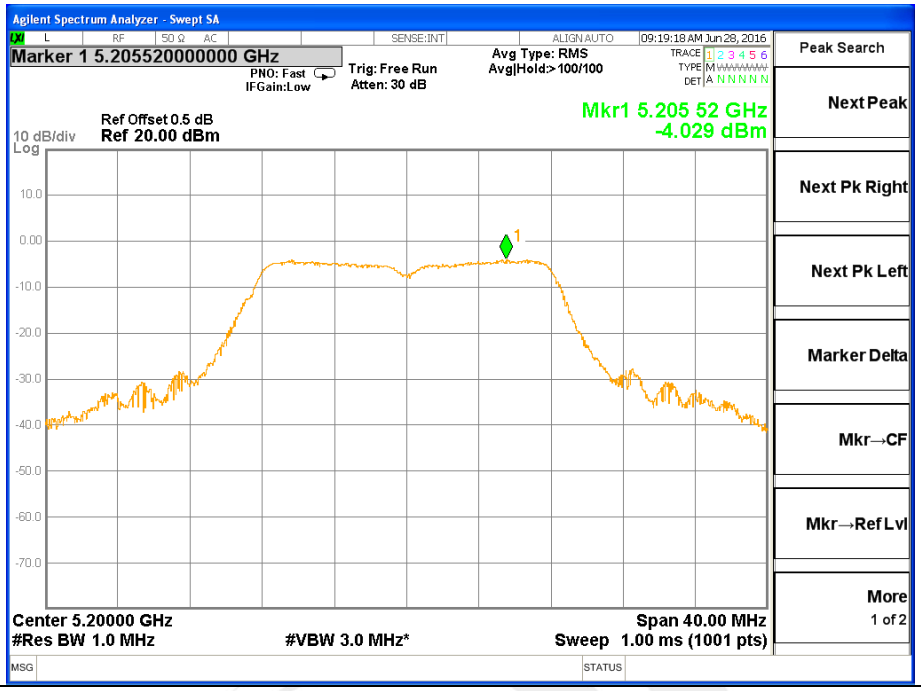
Band I (5.15-5.25GHz)802.11a

Frequency	Power Density (dBm)	Limit (dBm)	Result
5180	-4.83	11	**PASS**
5200	-4.03	11	**PASS**
5240	-3.35	11	**PASS**

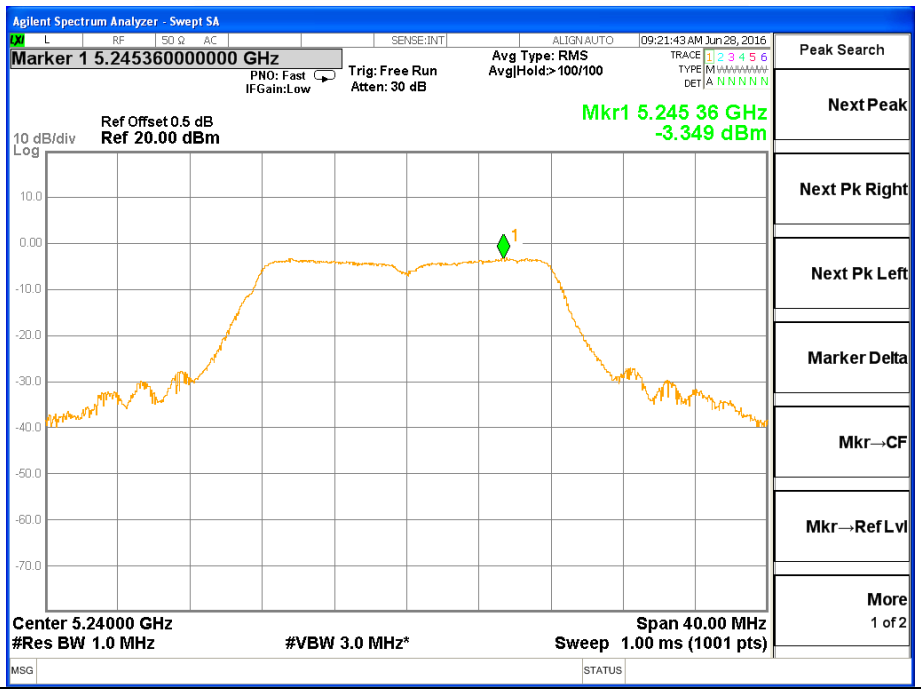
PSD 802.11a Channel 36



PSD 802.11a Channel 40



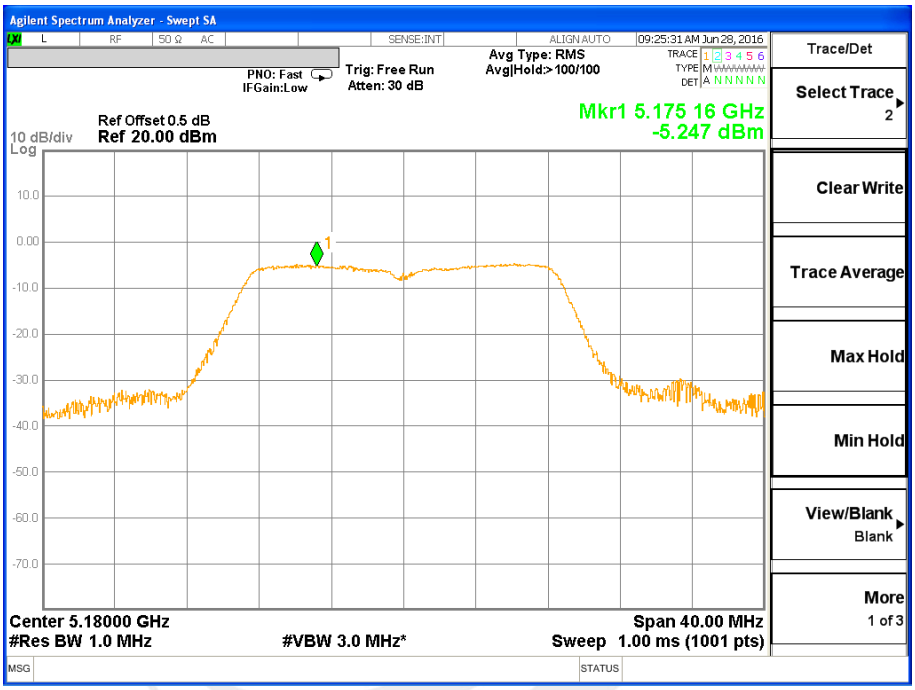
PSD 802.11a Channel 48



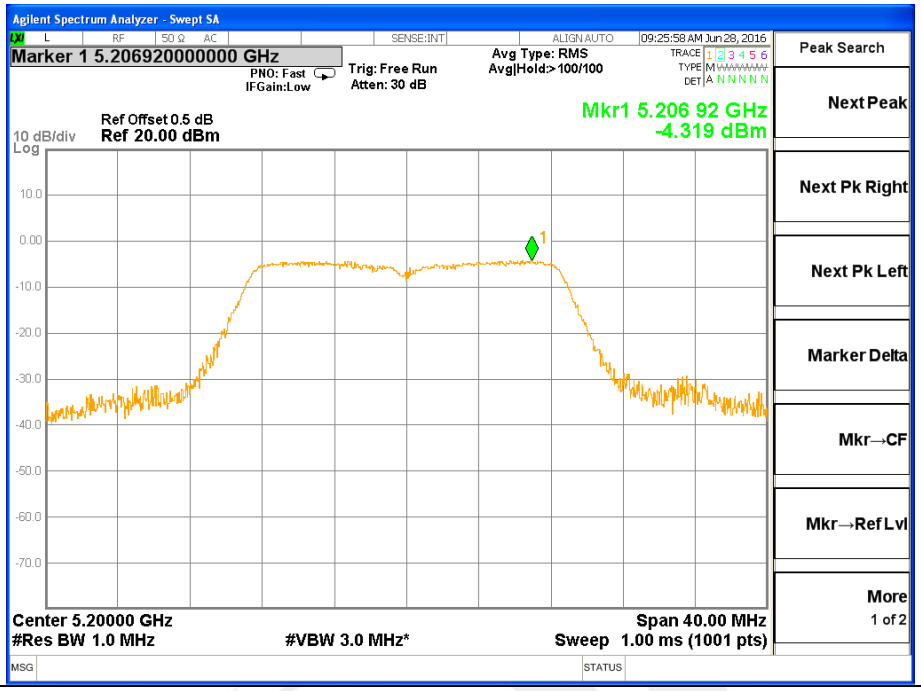
Band I (5.15-5.25GHz) 802.11n(HT20)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5180	-5.25	11	**PASS**
5200	-4.32	11	**PASS**
5240	-3.35	11	**PASS**

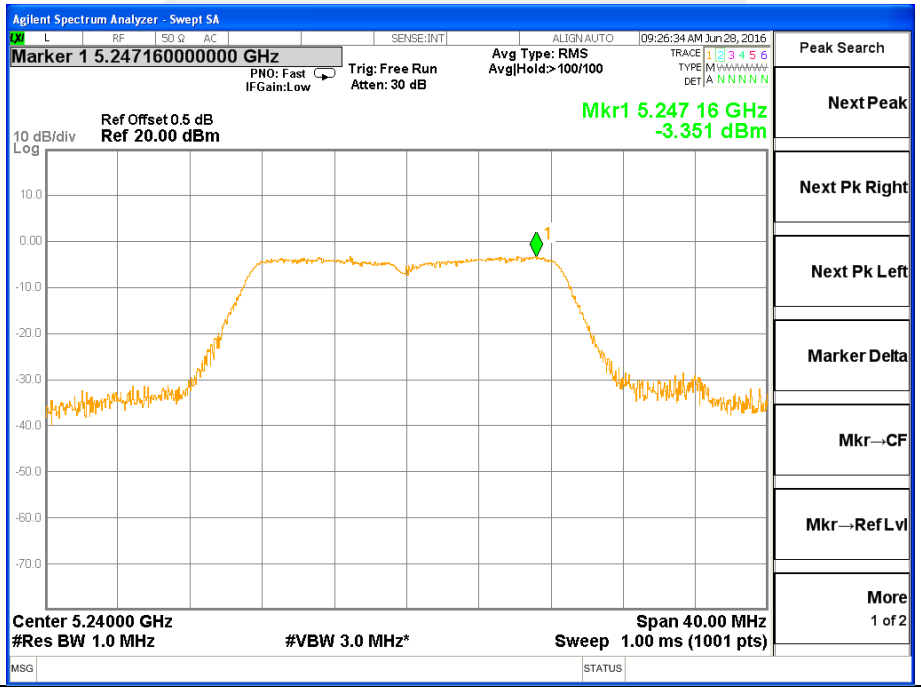
PSD 802.11n(HT20) Channel 36



PSD 802.11n(HT20) Channel 40



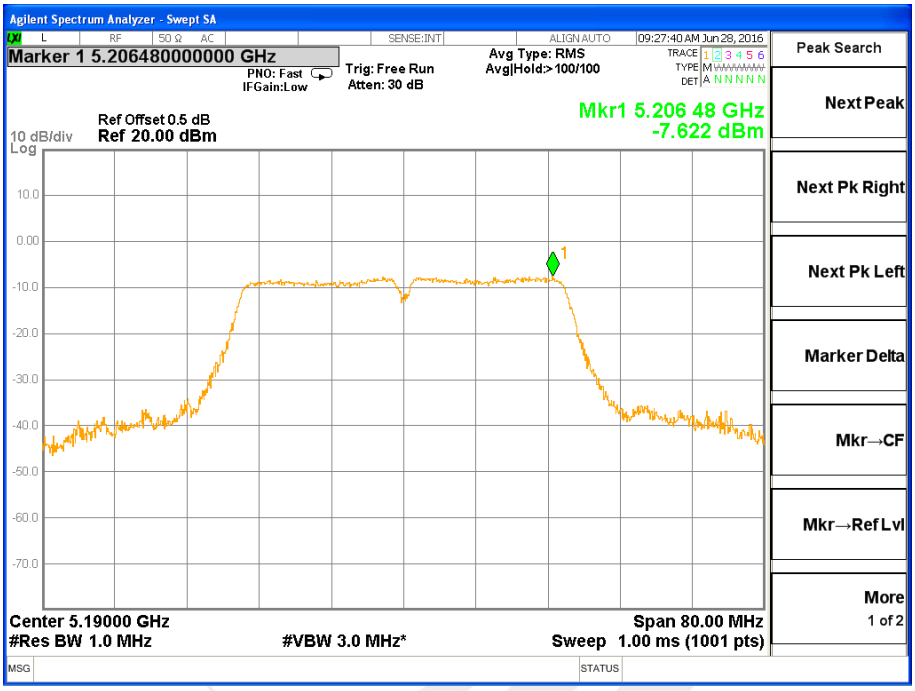
PSD 802.11n(HT20) Channel 48



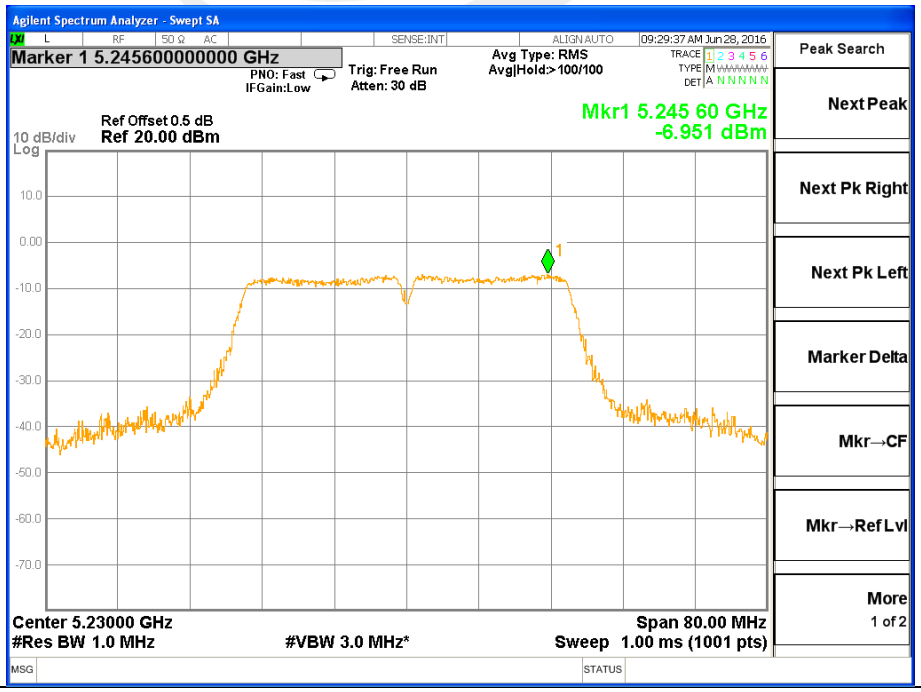
Band I (5.15-5.25GHz) 802.11n(HT40)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5190	-7.62	11	**PASS**
5230	-6.95	11	**PASS**

PSD 802.11n(HT40) Channel 38



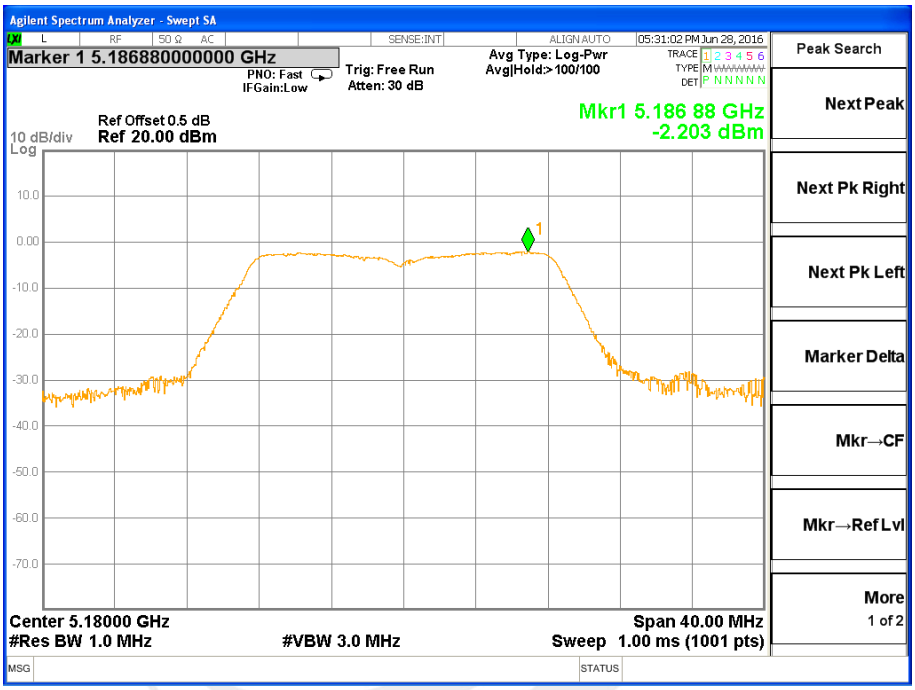
PSD 802.11n(HT40) Channel 46



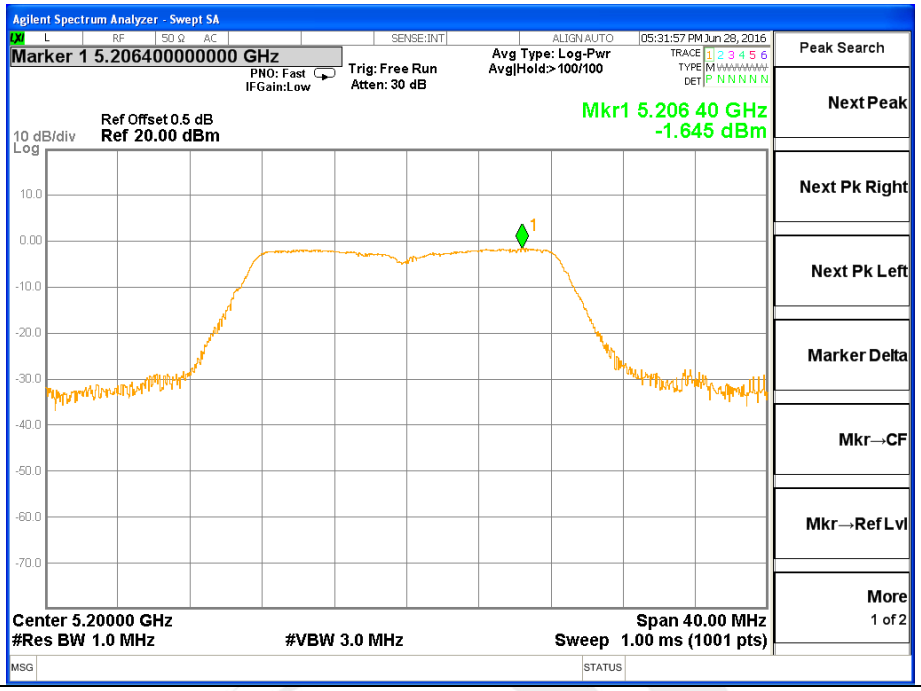
Band I (5.15-5.25GHz) 802.11ac(HT20)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5180	-2.20	11	**PASS**
5200	-1.65	11	**PASS**
5240	-0.79	11	**PASS**

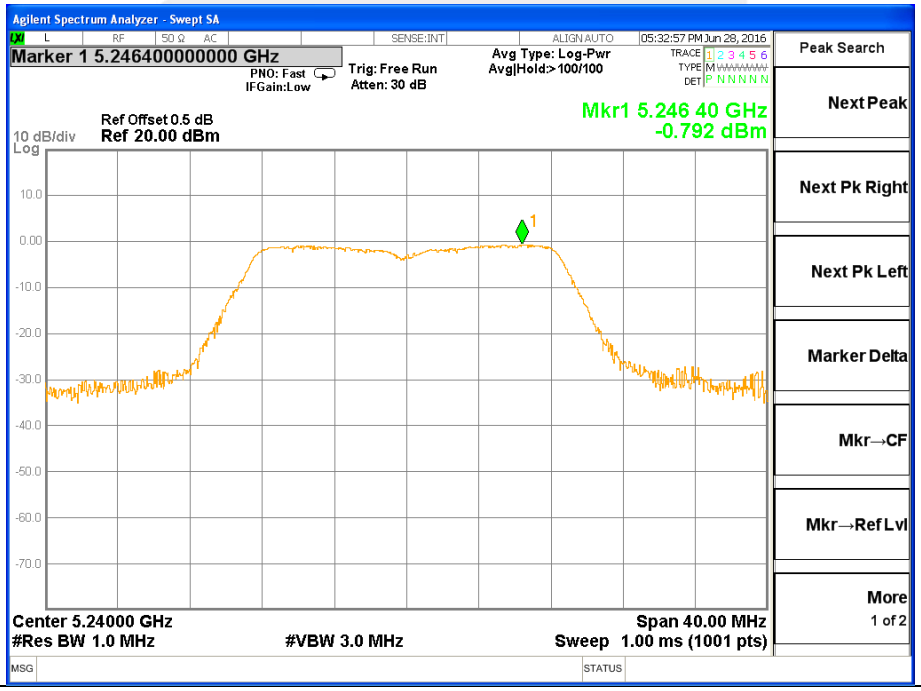
PSD 802.11n(HT20) Channel 36



PSD 802.11n(HT20) Channel 40



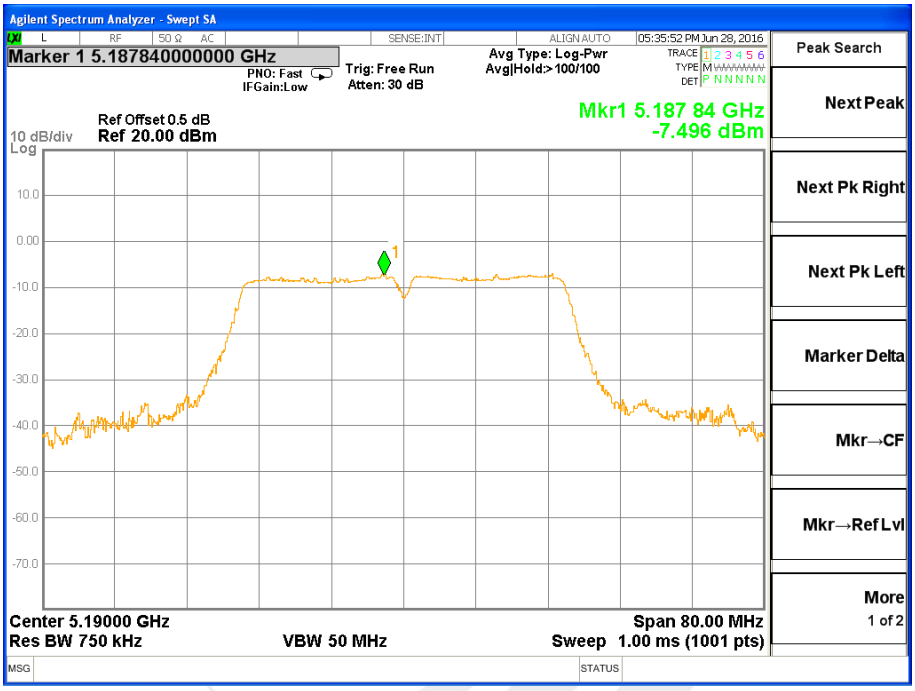
PSD 802.11n(HT20) Channel 48



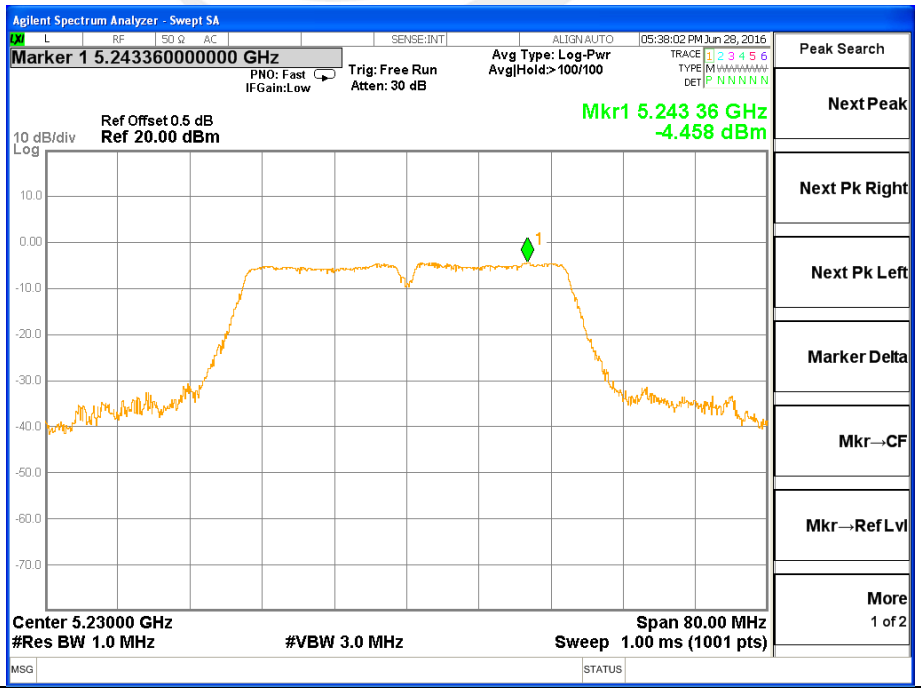
Band I (5.15-5.25GHz) 802.11ac(HT40)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5190	-7.50	11	**PASS**
5230	-4.46	11	**PASS**

PSD 802.11n(HT40) Channel 38



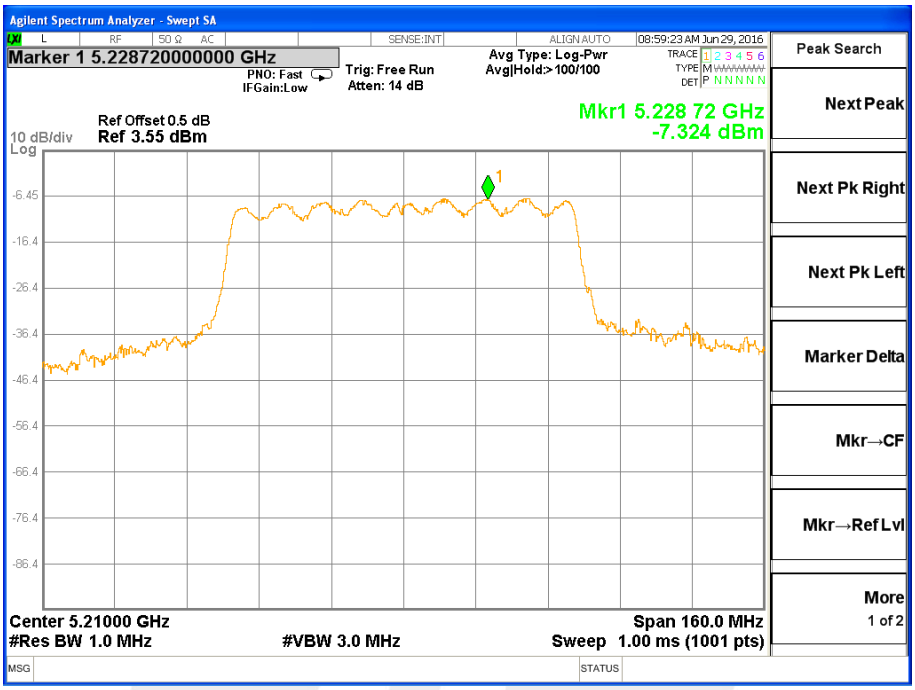
PSD 802.11n(HT40) Channel 46



Band I (5.15-5.25GHz) 802.11ac(HT80)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5210	-7.32	11	**PASS**

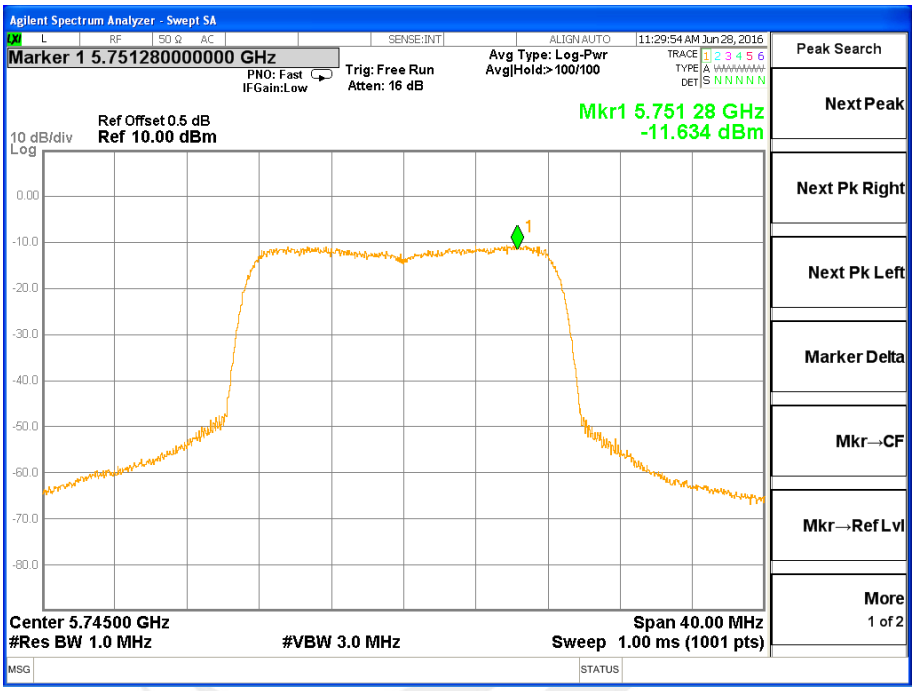
PSD 802.11n(HT80) Channel 42



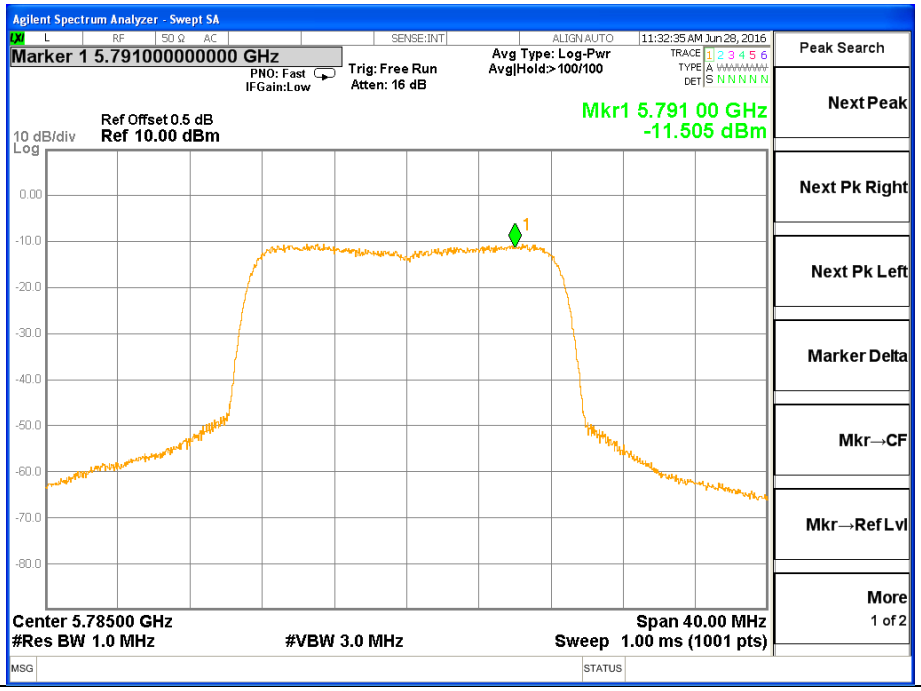
Band IV (5.725-5.850GHz)802.11a

Frequency	Power Density (dBm)	Limit (dBm)	Result
5745	-11.63	30	**PASS**
5785	-11.51	30	**PASS**
5825	-12.00	30	**PASS**

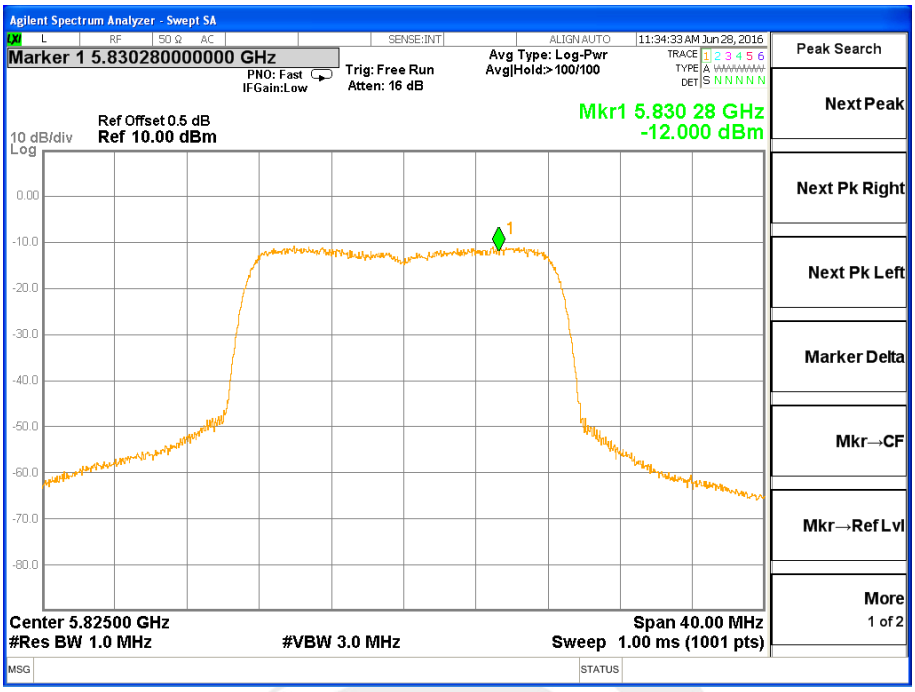
PSD 802.11a Channel 149



PSD 802.11a Channel 157



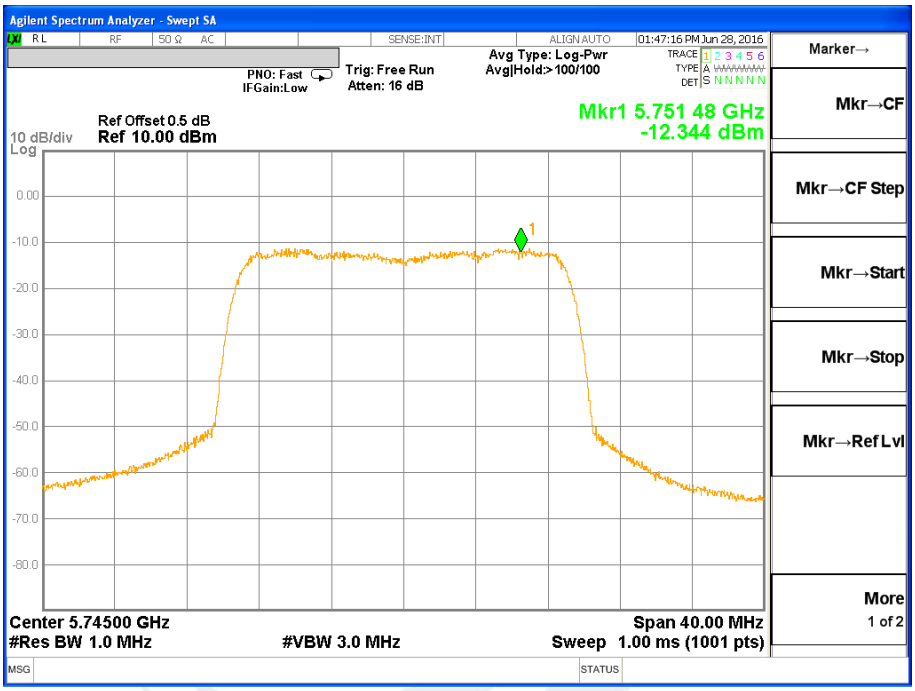
PSD 802.11a Channel 165



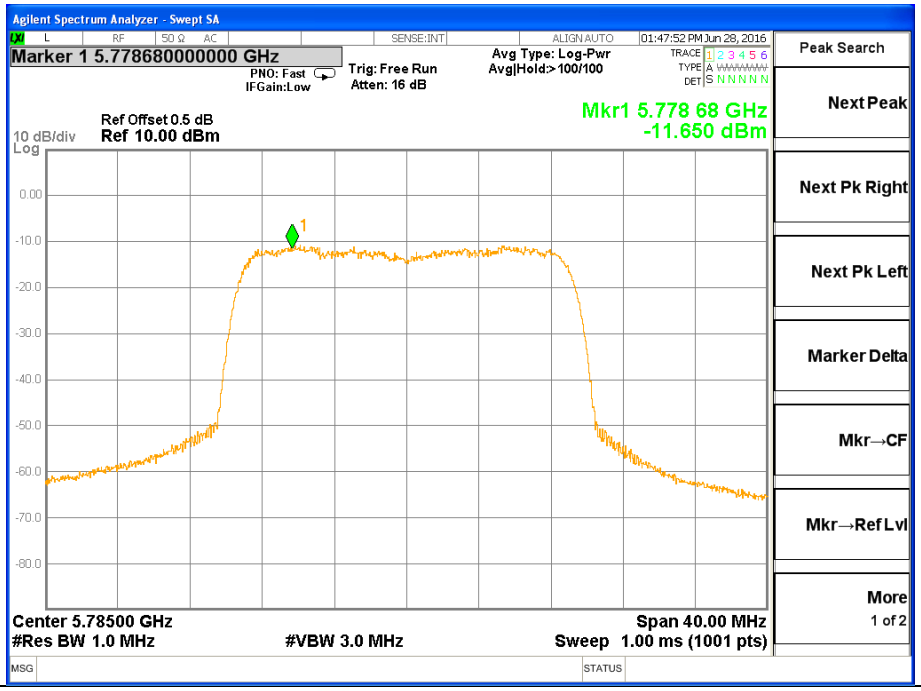
Band IV (5.725-5.850GHz)802.11n(HT20)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5745	-12.34	30	**PASS**
5785	-11.65	30	**PASS**
5825	-12.51	30	**PASS**

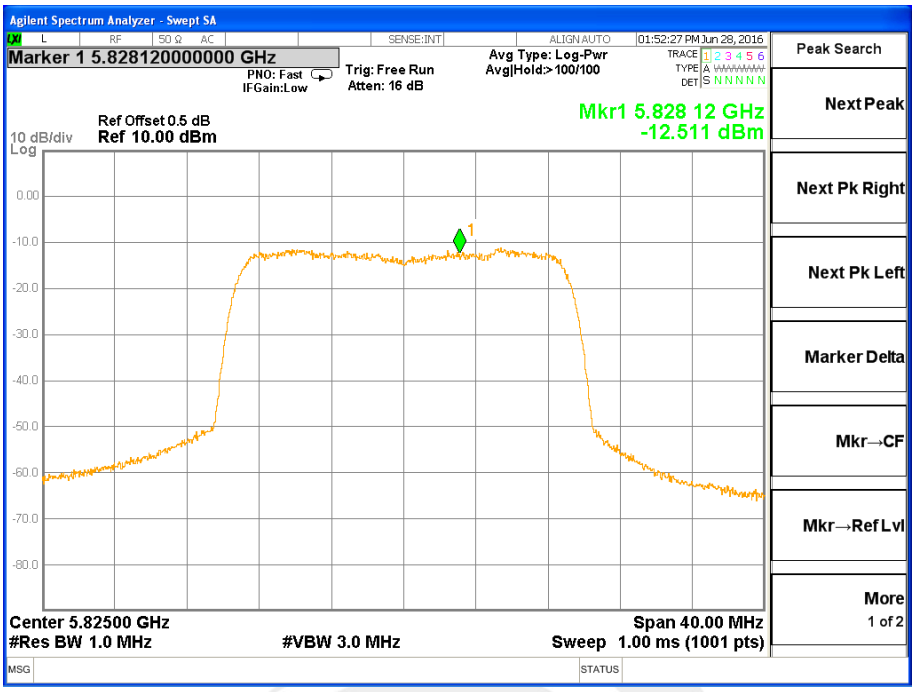
PSD 802.11n(HT20) Channel 149



PSD 802.11n(HT20) Channel 157



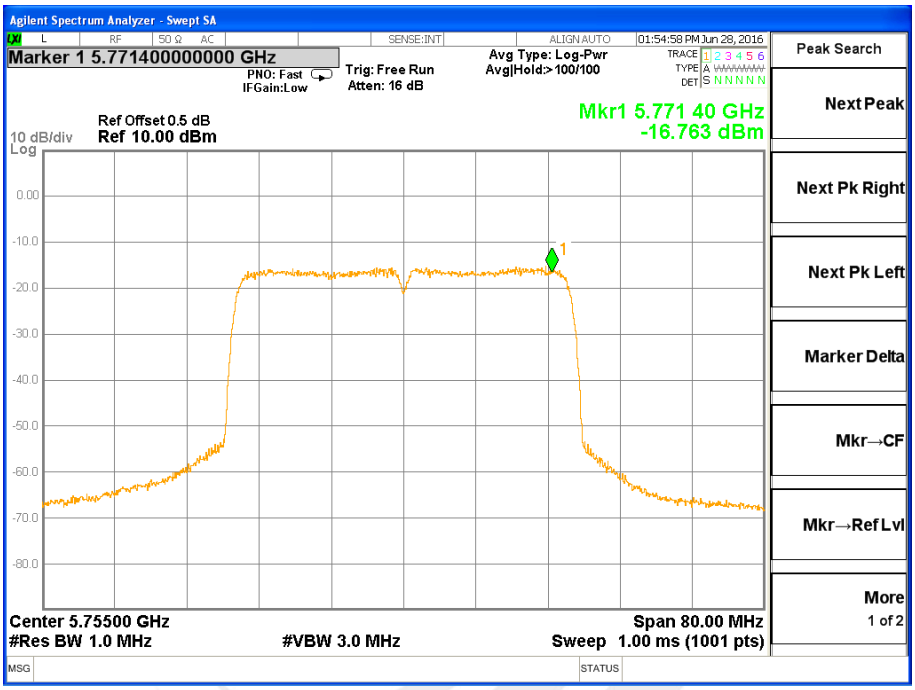
PSD 802.11n(HT20) Channel 165



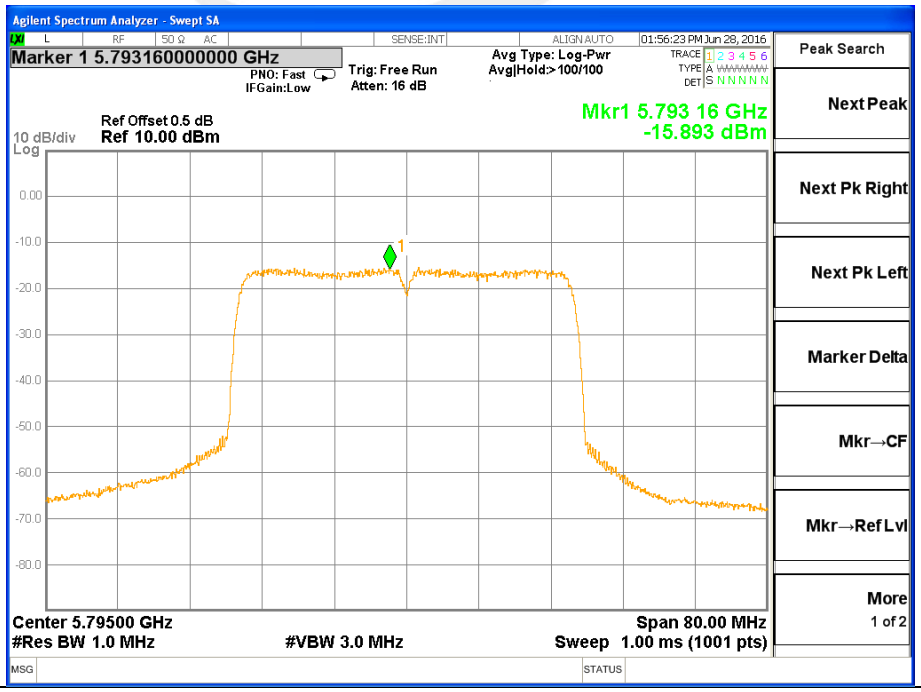
Band IV (5.725-5.850GHz)802.11n(HT40)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5755	-16.76	30	**PASS**
5795	-15.89	30	**PASS**

PSD 802.11n(HT40) Channel 151



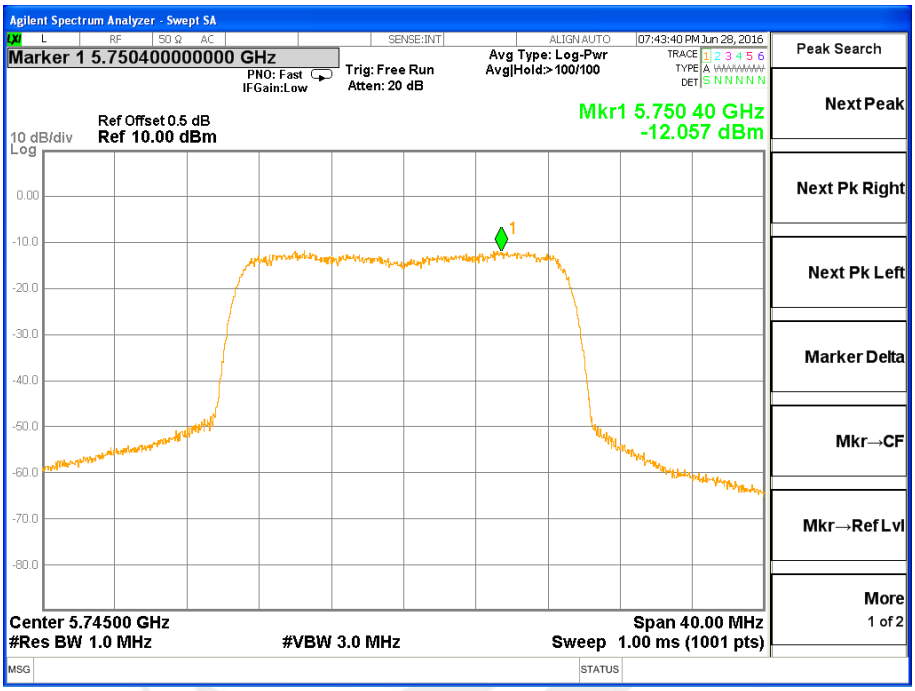
PSD 802.11n(HT40) Channel 157



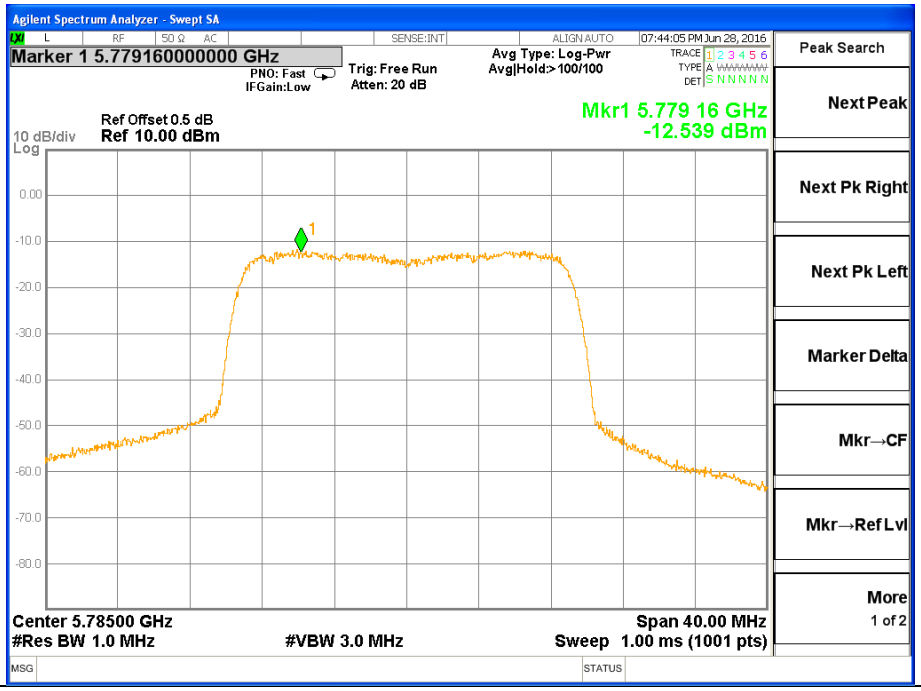
Band IV (5.725-5.850GHz)802.11ac(HT20)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5745	-12.06	30	**PASS**
5785	-12.54	30	**PASS**
5825	-13.47	30	**PASS**

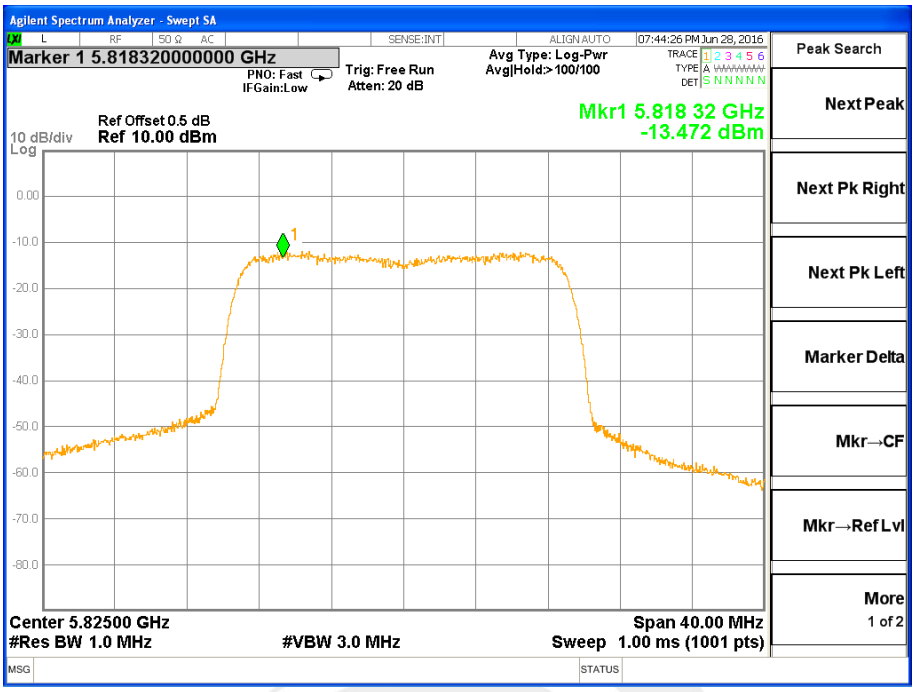
PSD 802.11ac(HT20) Channel 149



PSD 802.11ac(HT20) Channel 157



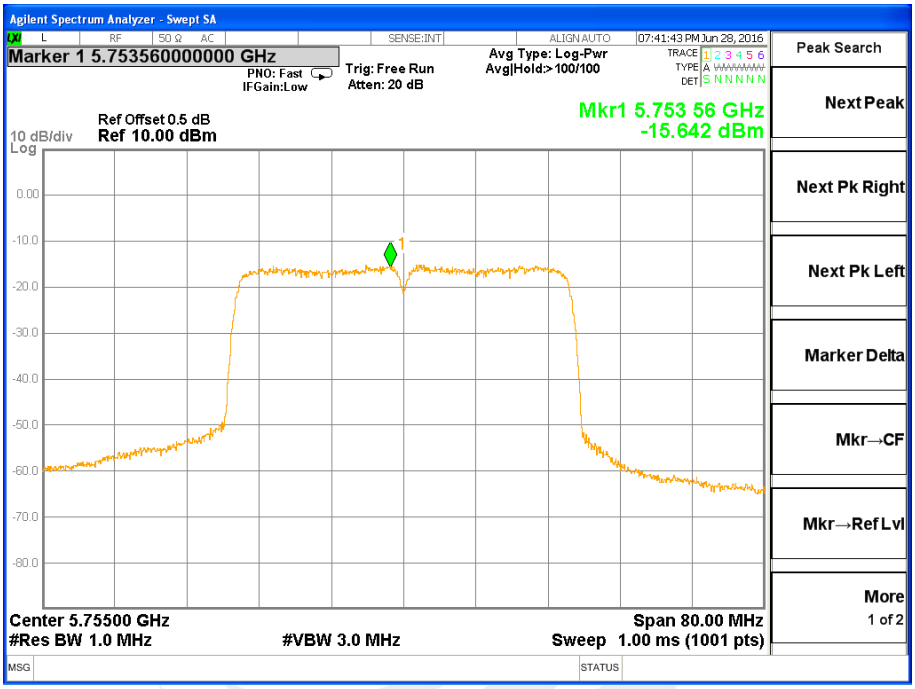
PSD 802.11ac(HT20) Channel 165



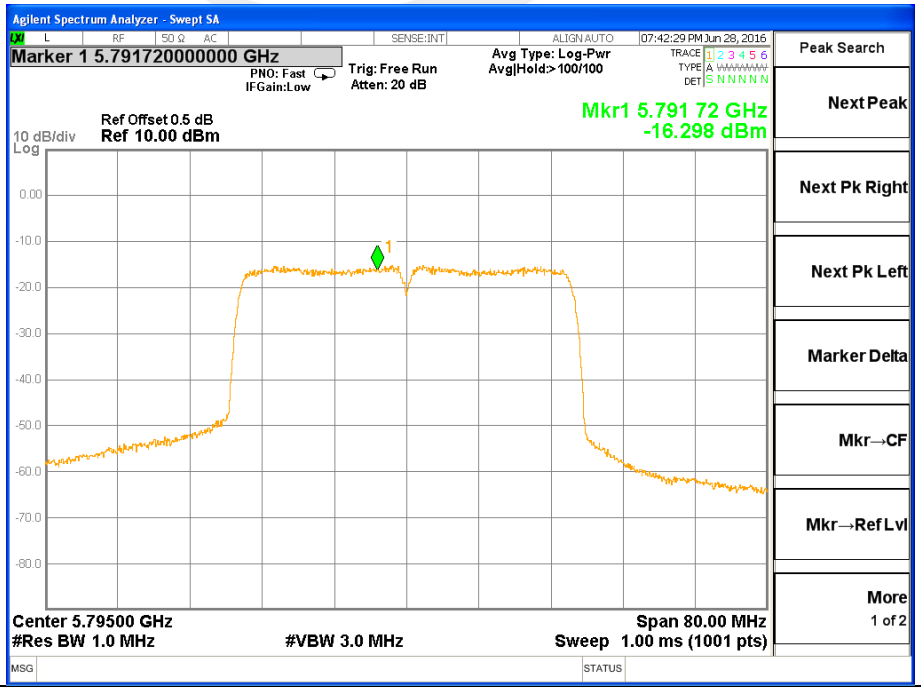
Band IV (5.725-5.850GHz)802.11ac(HT40)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5755	-15.64	30	**PASS**
5795	-16.30	30	**PASS**

PSD 802.11ac(HT40) Channel 151



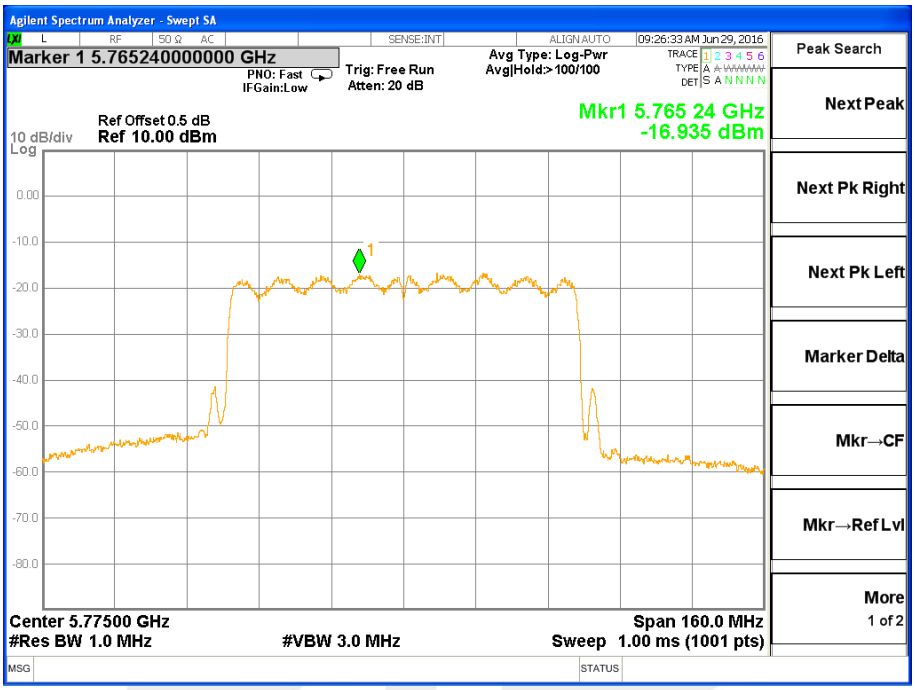
PSD 802.11ac(HT40) Channel 157



Band IV (5.725-5.850GHz)802.11ac(HT80)

Frequency	Power Density (dBm)	Limit (dBm)	Result
5775	-16.94	30	**PASS**

PSD 802.11ac(HT80) Channel 155



6. BANDWIDTH MEASUREMENT

6.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

See list of measuring instruments of this test report.

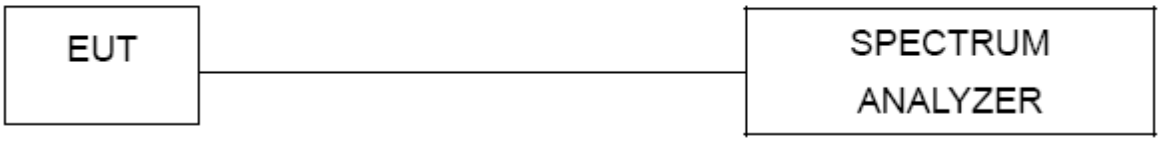
6.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r01
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > =RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak 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%.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 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.

6.1.5 TEST RESULTS

Band I (5.150-5.250GHz)

Frequency (MHz)	802.11a 26dB Bandwidth(MHz)	Pass/Fail
5180	20.57	N/A
5200	20.51	N/A
5240	20.68	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT20) 26dB Bandwidth(MHz)	Pass/Fail
5180	21.33	N/A
5200	21.44	N/A
5240	21.44	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT40) 26dB Bandwidth(MHz)	Pass/Fail
5190	42.97	N/A
5230	42.74	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Band I (5.150-5.250GHz)

Frequency (MHz)	802.11ac(HT20) 26dB Bandwidth(MHz)	Pass/Fail
5180	21.99	N/A
5200	21.85	N/A
5240	21.77	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT40) 26dB Bandwidth(MHz)	Pass/Fail
5190	42.61	N/A
5230	42.57	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT80) 26dB Bandwidth(MHz)	Pass/Fail
5210	85.76	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Band IV (5.725-5.850GHz)

Frequency (MHz)	802.11a 26dB Bandwidth(MHz)	Pass/Fail
5745	20.48	N/A
5785	20.62	N/A
5825	20.39	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT20) 26dB Bandwidth(MHz)	Pass/Fail
5745	21.33	N/A
5785	21.56	N/A
5825	21.52	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT40) 26dB Bandwidth(MHz)	Pass/Fail
5755	41.60	N/A
5795	42.00	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Band IV (5.725-5.850GHz)

Frequency (MHz)	802.11ac(HT20) 26dB Bandwidth(MHz)	Pass/Fail
5745	21.47	N/A
5785	21.29	N/A
5825	21.39	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT40) 26dB Bandwidth(MHz)	Pass/Fail
5755	42.71	N/A
5795	42.54	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT80) 26dB Bandwidth(MHz)	Pass/Fail
5775	84.26	N/A

Note: N/A, 26 db bandwidth measurement limit only embodied in the report.

6.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth:

6.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v01r01.
The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW ≥ 3 · RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

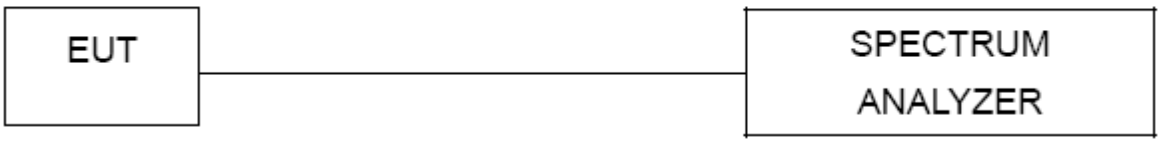
6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

6.2.2 DEVIATION FROM STANDARD

No deviation.

6.2.3 TEST SETUP



6.2.4 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.

6.2.5 TEST RESULTS

Band I (5.150-5.250GHz)

Frequency (MHz)	802.11a 99% Bandwidth(MHz)	Pass/Fail
5180	16.604	N/A
5200	16.622	N/A
5240	16.648	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT20) 99% Bandwidth(MHz)	Pass/Fail
5180	17.750	N/A
5200	17.735	N/A
5240	17.738	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT40) 99% Bandwidth(MHz)	Pass/Fail
5190	36.319	N/A
5230	36.325	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Band I (5.150-5.250GHz)

Frequency (MHz)	802.11ac(HT20) 99% Bandwidth(MHz)	Pass/Fail
5180	17.813	N/A
5200	17.815	N/A
5240	17.810	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT40) 99% Bandwidth(MHz)	Pass/Fail
5190	36.245	N/A
5230	36.235	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT80) 99% Bandwidth(MHz)	Pass/Fail
5210	76.166	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Band IV (5.725-5.850GHz)

Frequency (MHz)	802.11a 99% Bandwidth(MHz)	Pass/Fail
5745	16.598	N/A
5785	16.601	N/A
5825	16.612	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT20) 99% Bandwidth(MHz)	Pass/Fail
5745	17.473	N/A
5785	17.751	N/A
5825	17.765	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11n(HT40) 99% Bandwidth(MHz)	Pass/Fail
5755	36.187	N/A
5795	36.210	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Band IV (5.725-5.850GHz)

Frequency (MHz)	802.11ac(HT20) 99% Bandwidth(MHz)	Pass/Fail
5745	17.739	N/A
5785	17.737	N/A
5825	17.753	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT40) 99% Bandwidth(MHz)	Pass/Fail
5755	36.304	N/A
5795	36.320	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

Frequency (MHz)	802.11ac(HT80) 99% Bandwidth(MHz)	Pass/Fail
5775	75.851	N/A

Note: N/A, 99% bandwidth measurement limit only embodied in the report.

6.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

6.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v01r01.

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) 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.

6.3.2 DEVIATION FROM STANDARD

No deviation.

6.3.3 TEST SETUP

6.3.4 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.

6.3.5 TEST RESULTS

Band IV (5.725-5.850GHz)

Frequency (MHz)	802.11n(HT20) 6dB Bandwidth(MHz)	Pass/Fail
5745	16.57	>500KHz
5785	16.56	>500KHz
5825	16.57	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

Frequency (MHz)	802.11n(HT20) 6dB Bandwidth(MHz)	Pass/Fail
5745	17.64	>500KHz
5785	17.72	>500KHz
5825	17.74	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

Frequency (MHz)	802.11n(HT40) 6dB Bandwidth(MHz)	Pass/Fail
5755	36.55	>500KHz
5795	36.52	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

Frequency (MHz)	802.11ac(HT20) 6dB Bandwidth(MHz)	Pass/Fail
5745	17.73	>500KHz
5785	17.74	>500KHz
5825	17.75	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

Frequency (MHz)	802.11ac(HT40) 6dB Bandwidth(MHz)	Pass/Fail
5755	36.47	>500KHz
5795	36.47	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

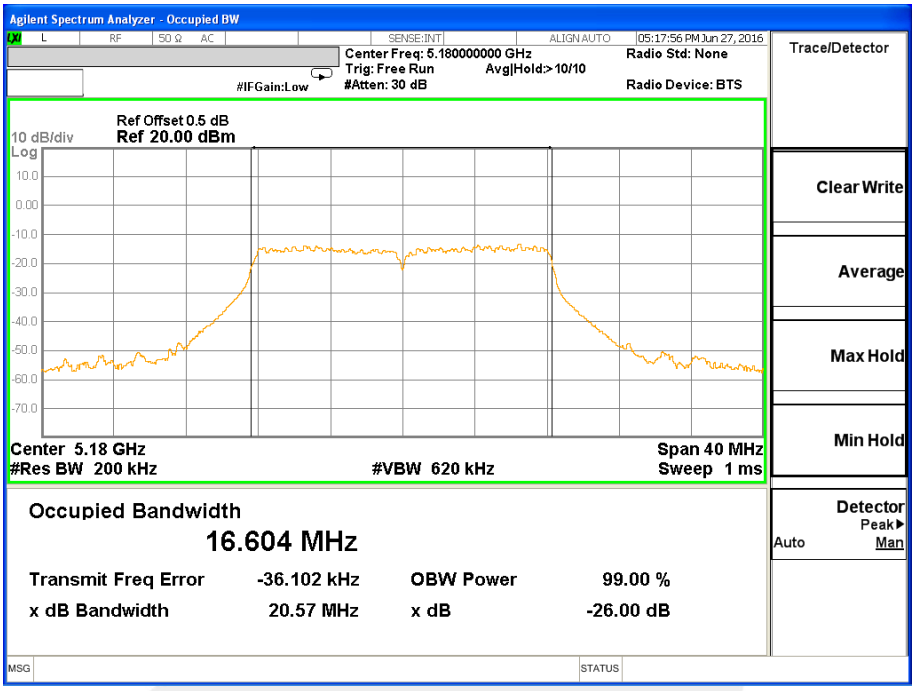
Frequency (MHz)	802.11ac(HT80) 6dB Bandwidth(MHz)	Pass/Fail
5775	76.54	>500KHz

Note: N/A, 6 db bandwidth measurement limit only embodied in the report

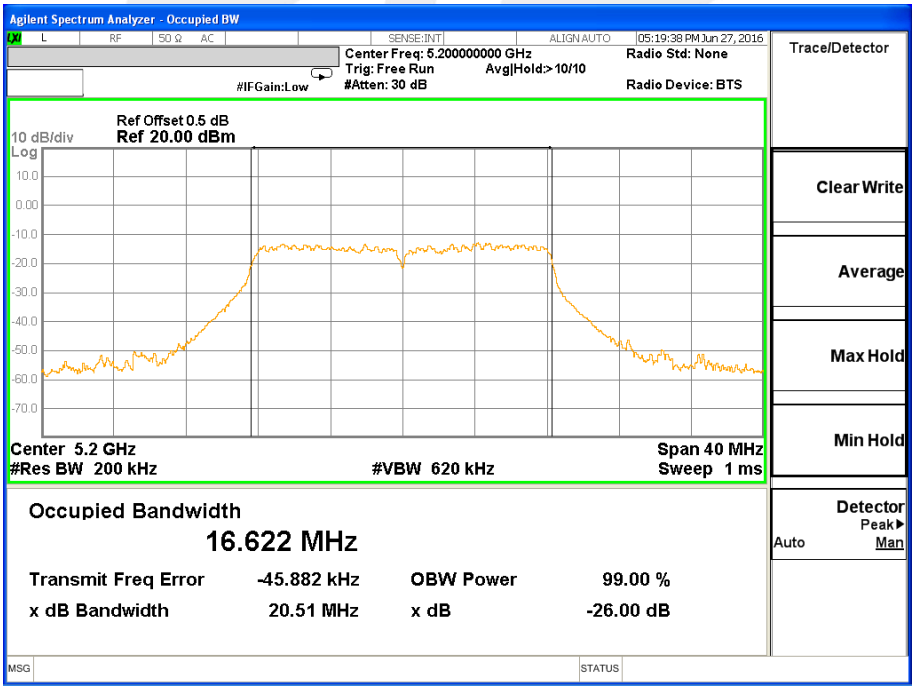
6.4 BANDWIDTH TEST POLT

Band I (5.150-5.250GHz)) 802.11a 26 dB &99% Bandwidth

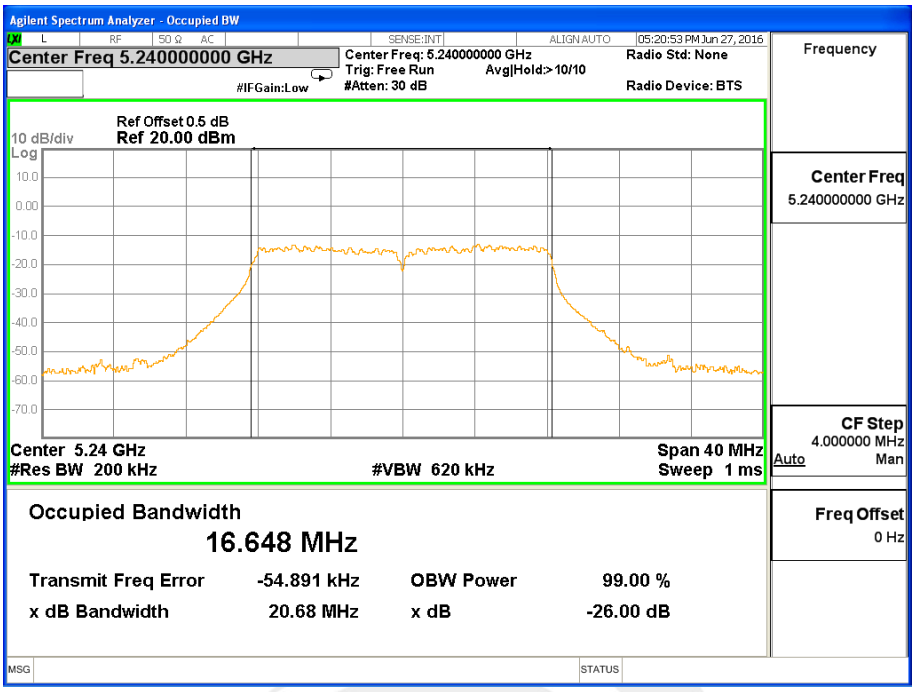
26 dB &99% Bandwidth 802.11a Channel 36



26 dB &99% Bandwidth 802.11a Channel 40

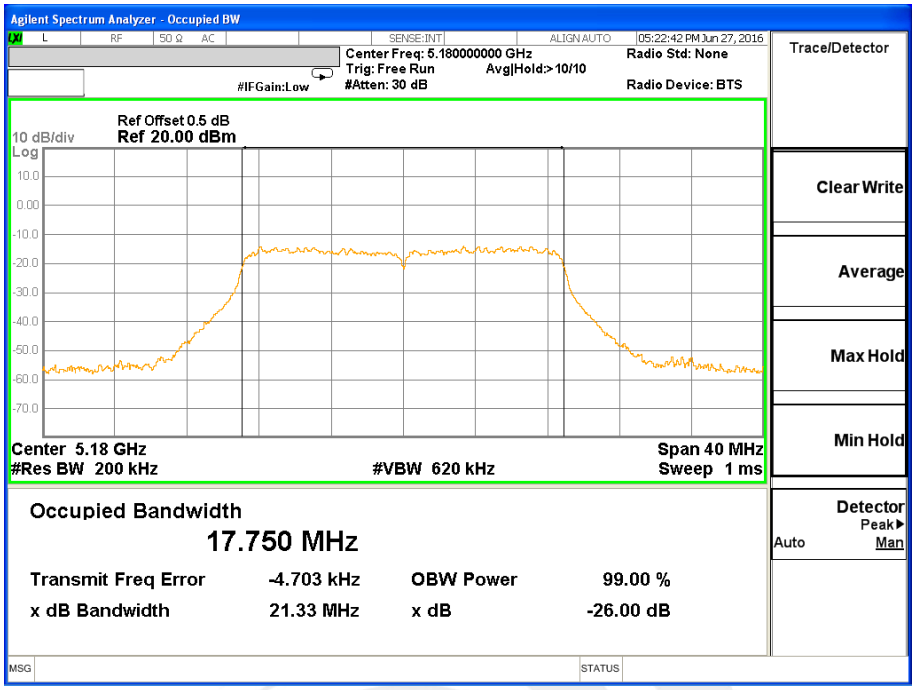


26 dB &99% Bandwidth 802.11a Channel 48

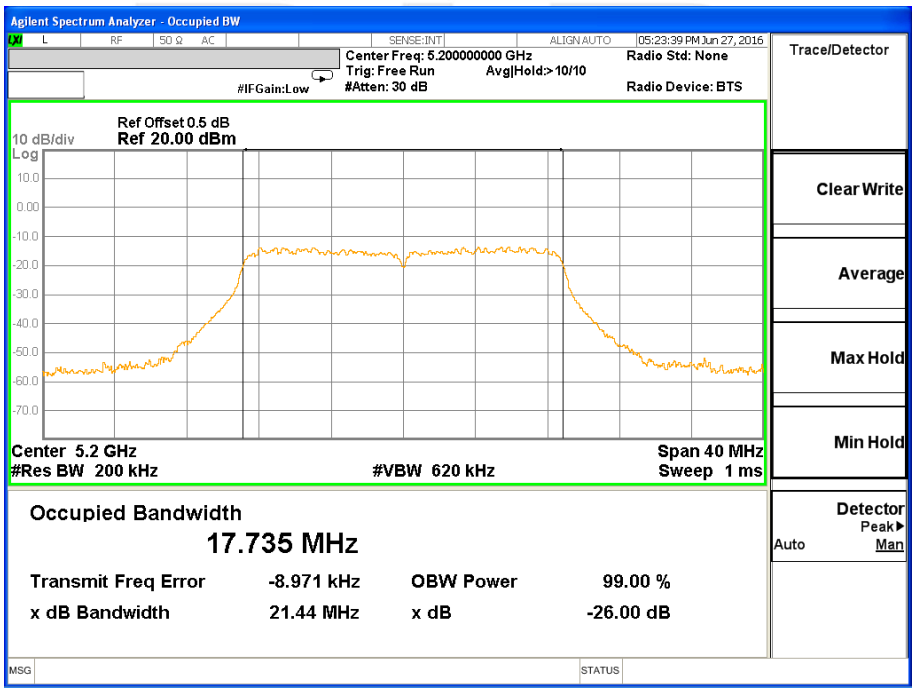


Band I (5.150-5.250GHz) 802.11n(HT20) 26 dB &99% Bandwidth

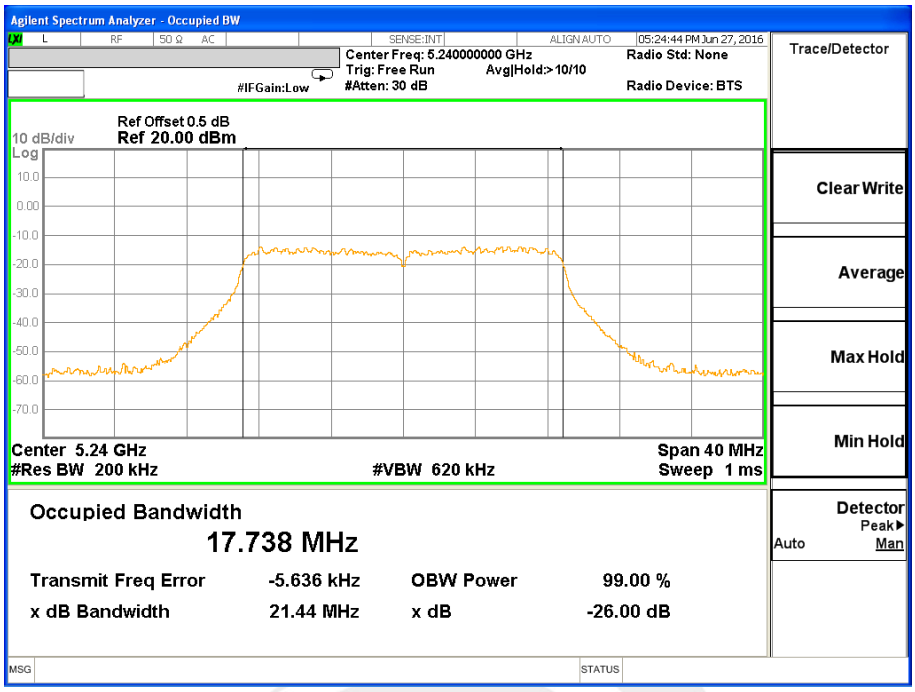
26 dB &99% Bandwidth 802.11n(HT20) Channel 36



26 dB &99% Bandwidth 802.11n(HT20) Channel 40

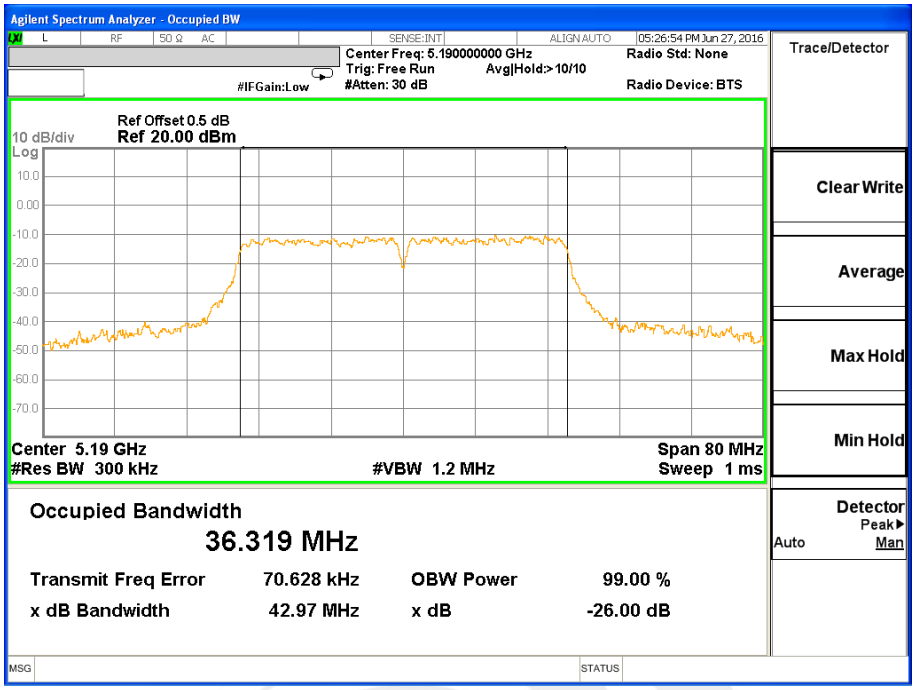


26 dB &99% Bandwidth 802.11n(HT20) Channel 48

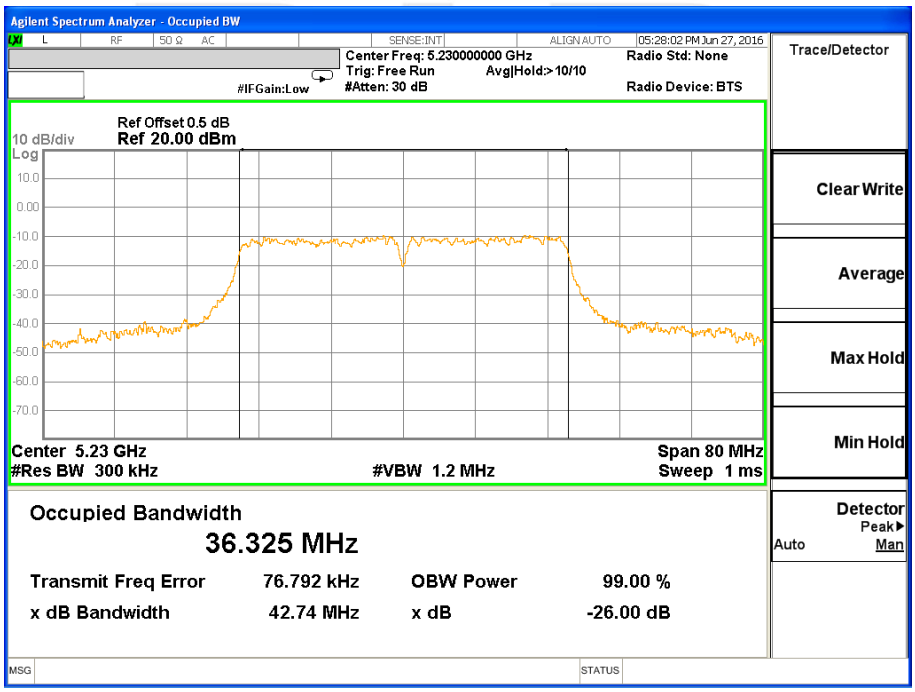


Band I (5.150-5.250GHz) 802.11n(HT40) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11n(HT40) Channel 38

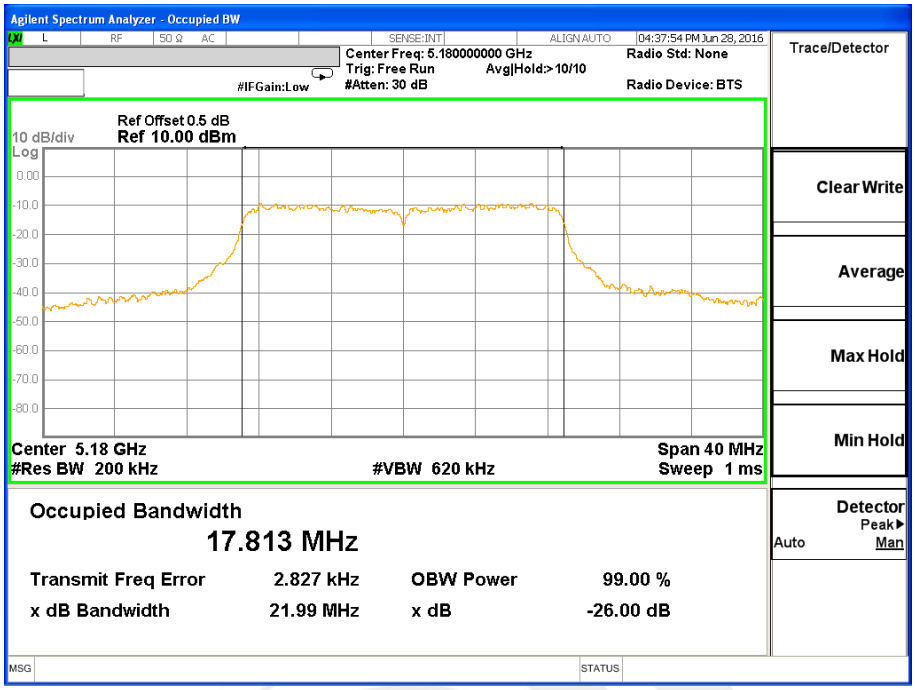


26 dB &99% Bandwidth 802.11n(HT40) Channel 46

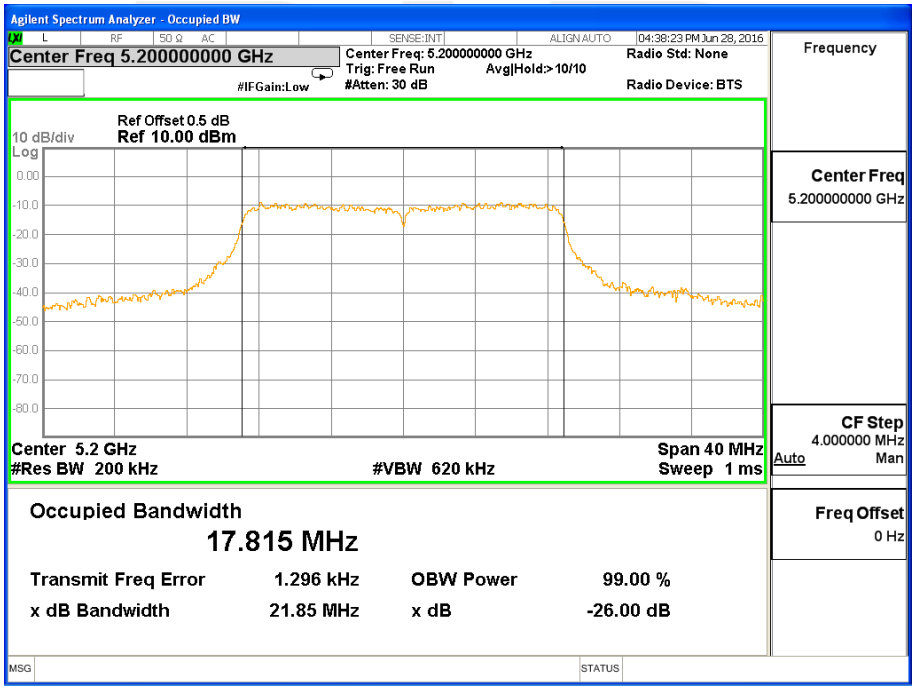


Band I (5.150-5.250GHz) 802.11ac(HT20) 26 dB &99% Bandwidth

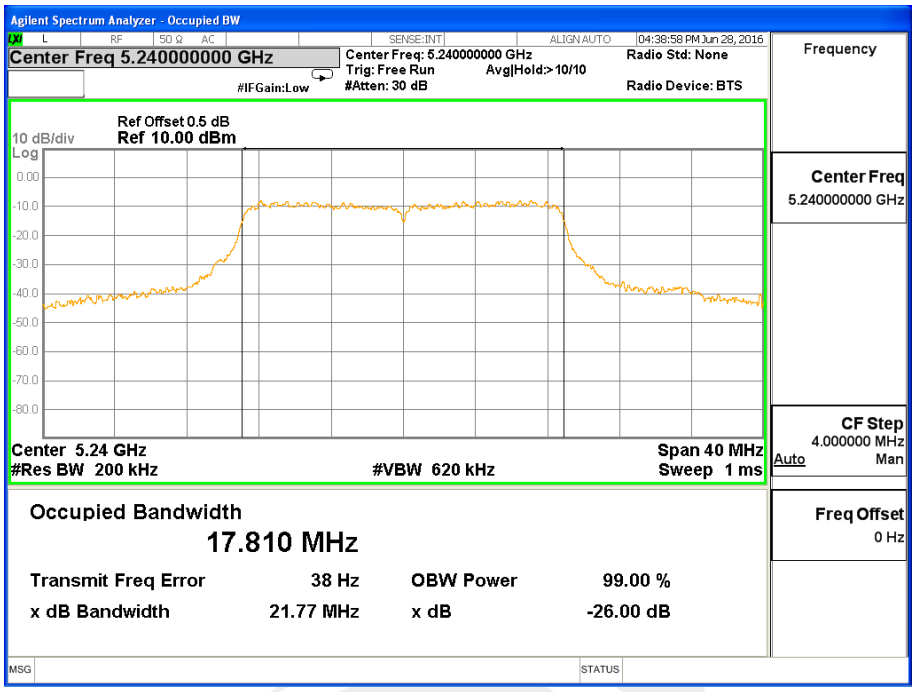
26 dB &99% Bandwidth 802.11ac(HT20) Channel 36



26 dB &99% Bandwidth 802.11ac(HT20) Channel 40

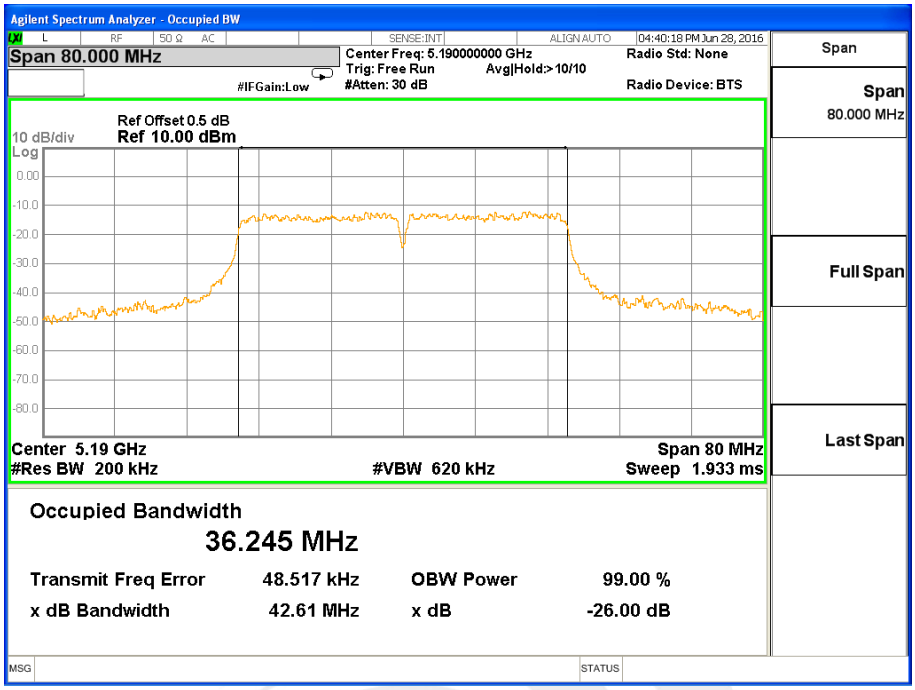


26 dB &99% Bandwidth 802.11ac(HT20) Channel 48

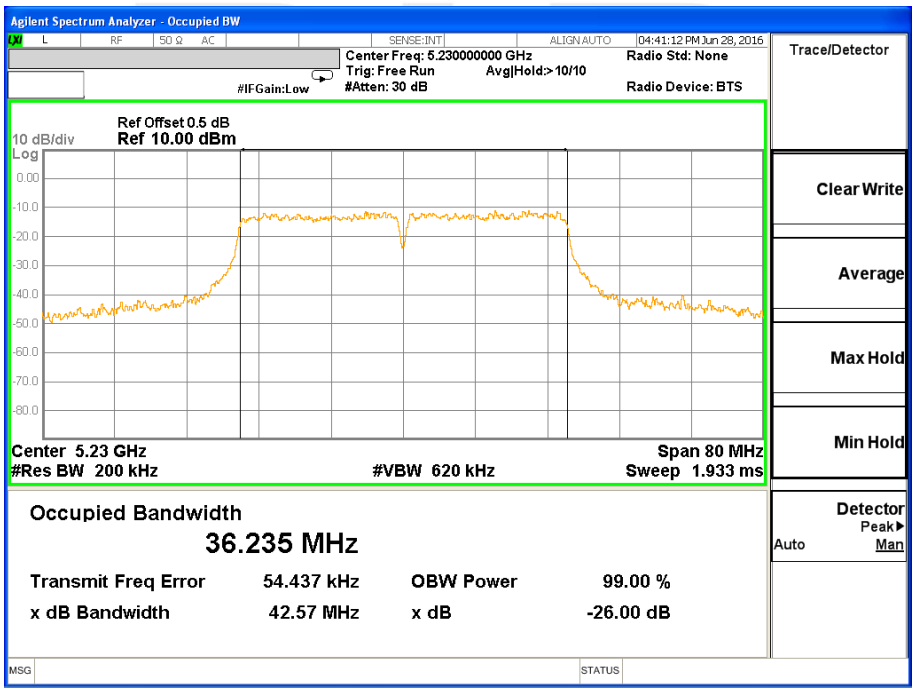


Band I (5.150-5.250GHz) 802.11ac(HT40) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11ac(HT40) Channel 38

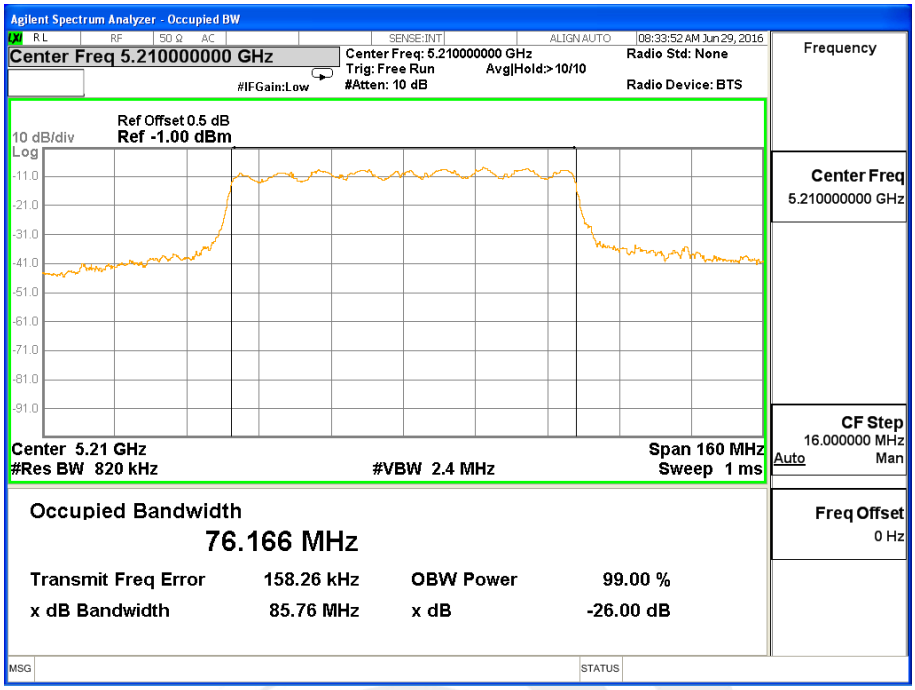


26 dB &99% Bandwidth 802.11ac(HT40) Channel 46



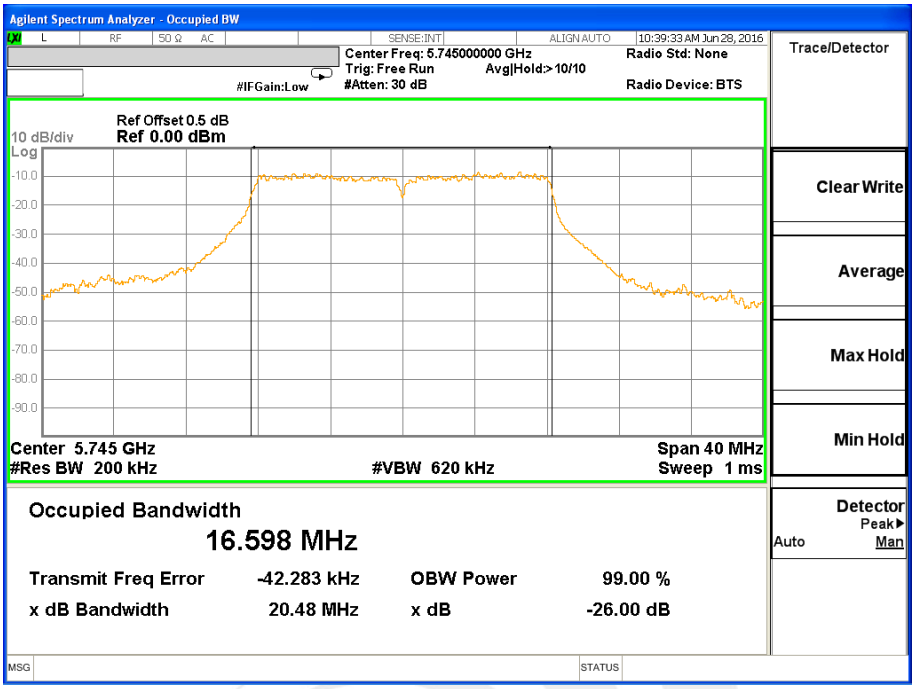
Band I (5.150-5.250GHz) 802.11ac(HT80) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11ac(HT80) Channel 42

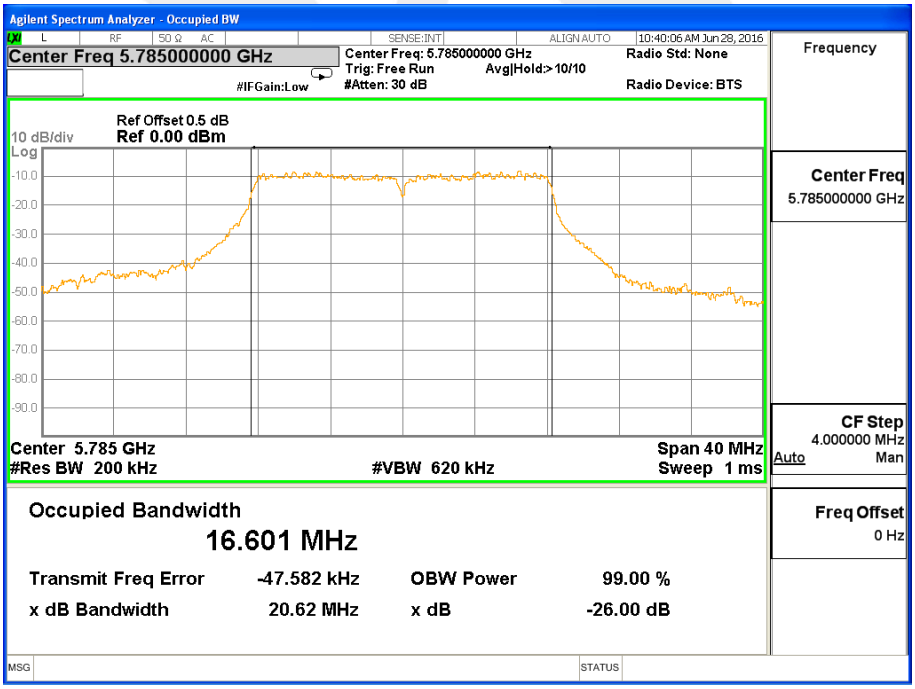


Band IV (5.725-5.850GHz) 802.11a, 26 dB &99% Bandwidth

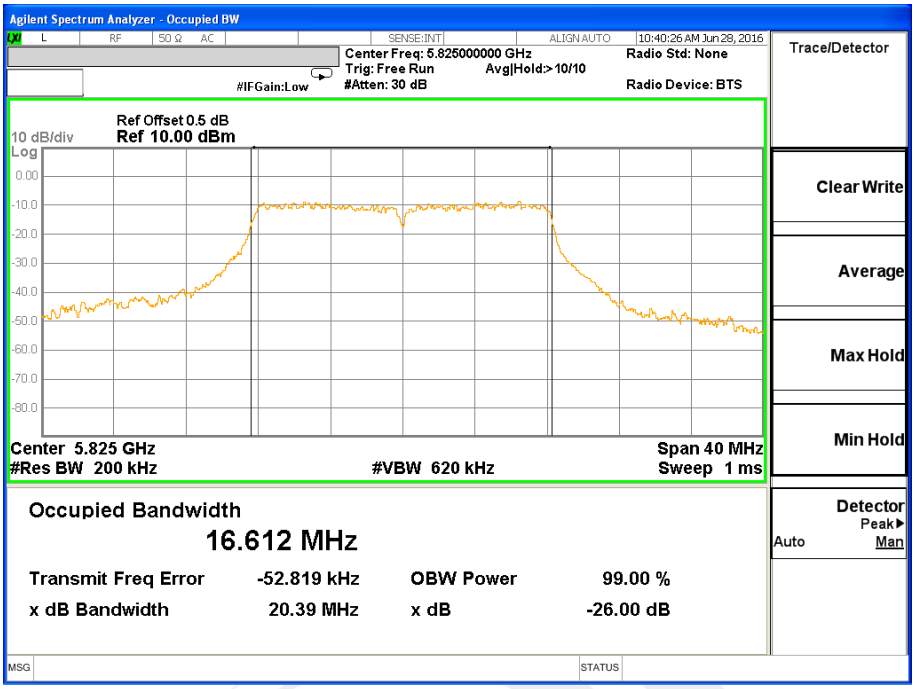
26 dB &99% Bandwidth 802.11a Channel 149



26 dB &99% Bandwidth 802.11a Channel 157

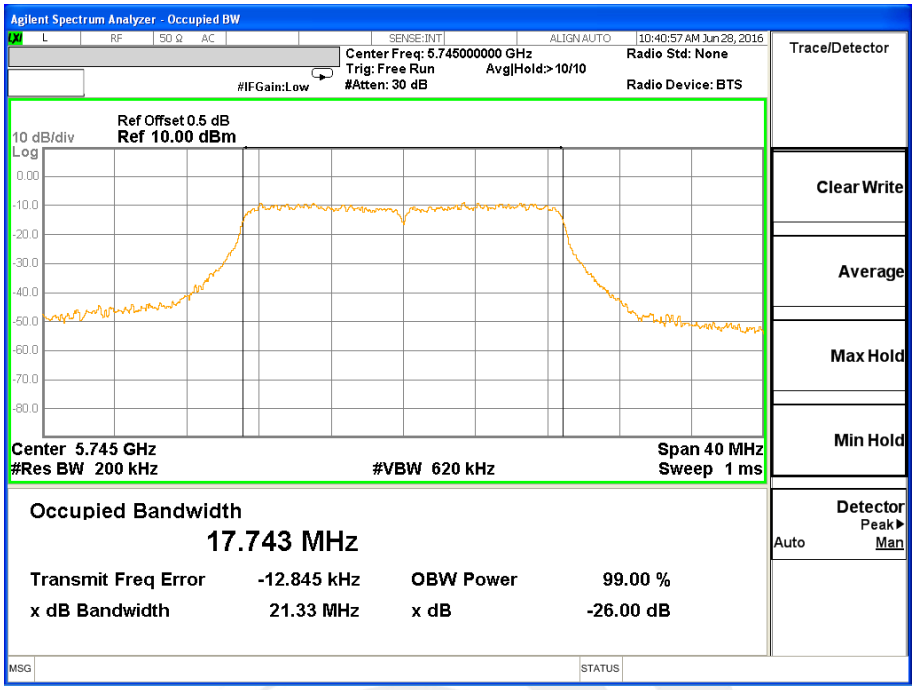


26 dB &99% Bandwidth 802.11a Channel 165

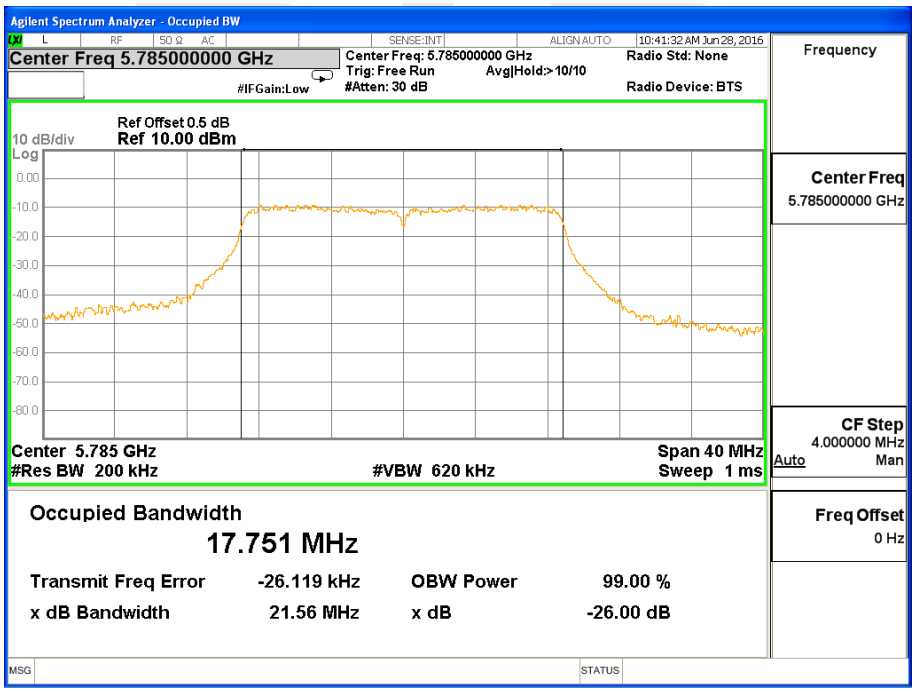


Band IV (5.725-5.850GHz) 802.11n(HT20) 26 dB &99% Bandwidth

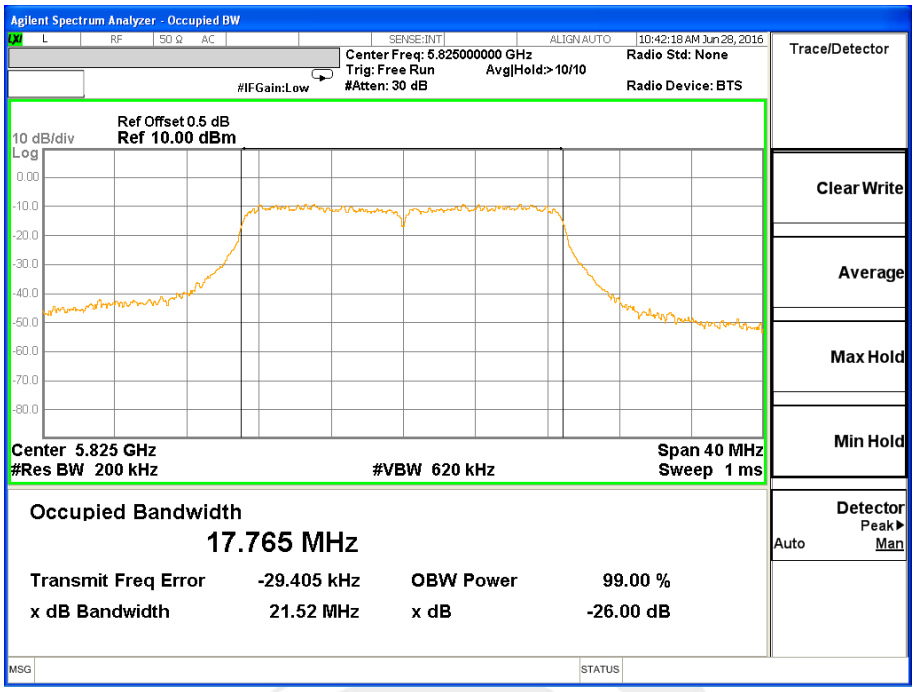
26 dB &99% Bandwidth 802.11n(HT20) Channel 149



26 dB &99% Bandwidth 802.11n(HT20) Channel 157

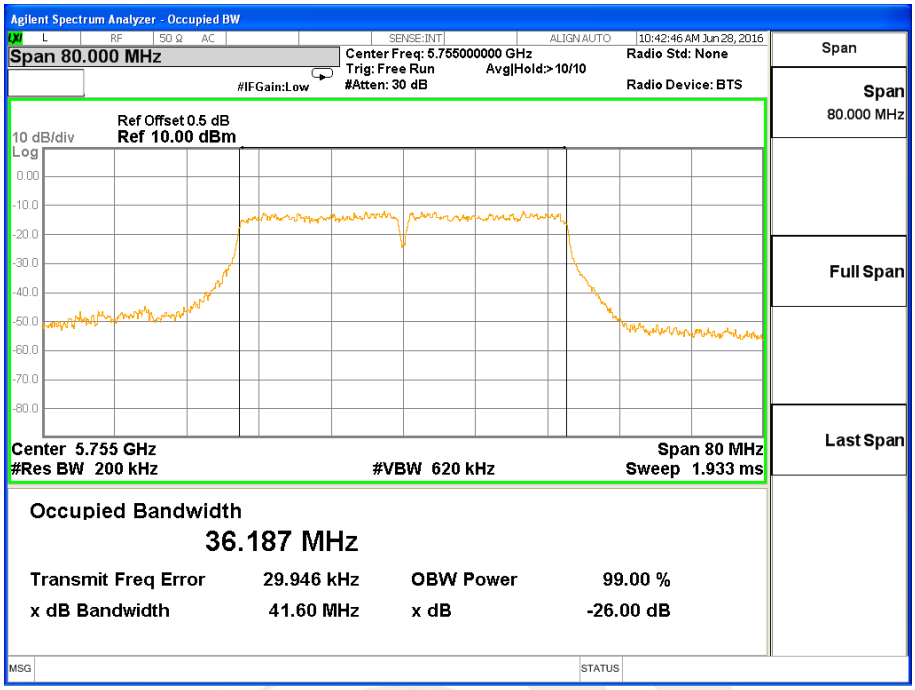


26 dB &99% Bandwidth 802.11n(HT20) Channel 165

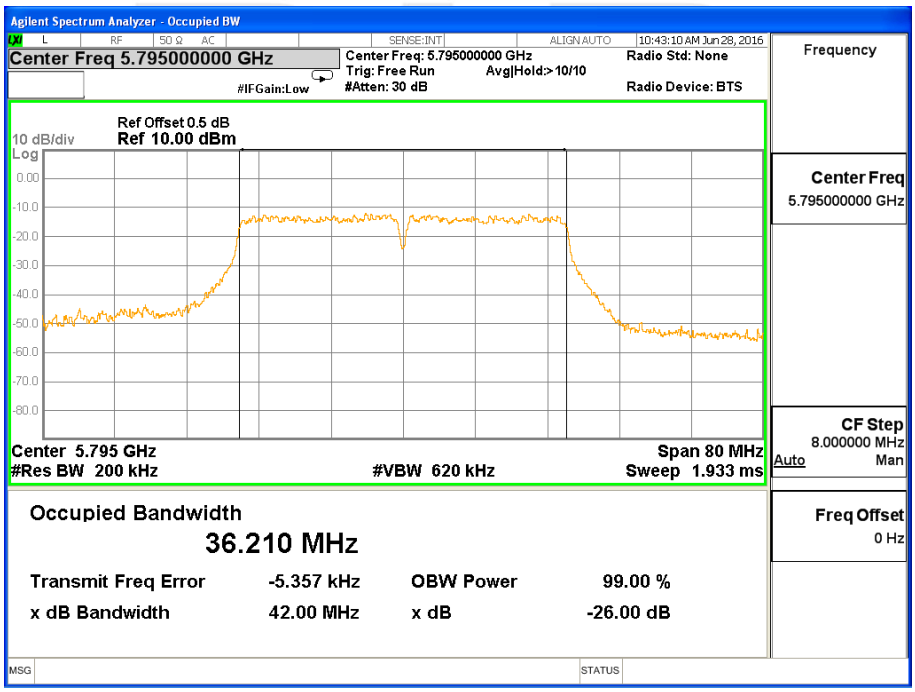


Band IV (5.725-5.850GHz) 802.11n(HT40) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11n(HT40) Channel 151

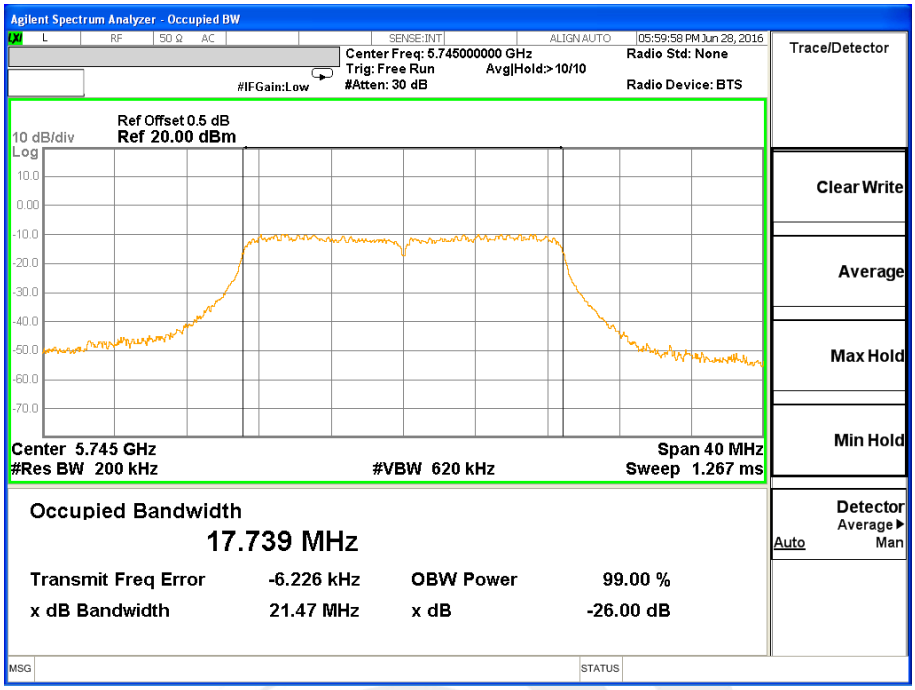


26 dB &99% Bandwidth 802.11n(HT40) Channel 159

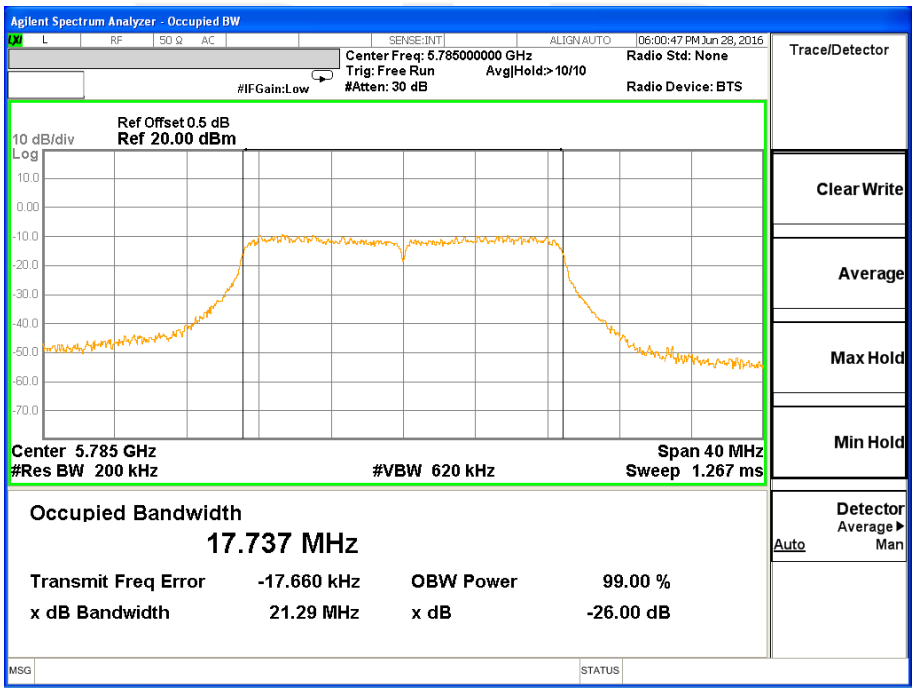


Band IV (5.725-5.850GHz) 802.11ac(HT20) 26 dB &99% Bandwidth

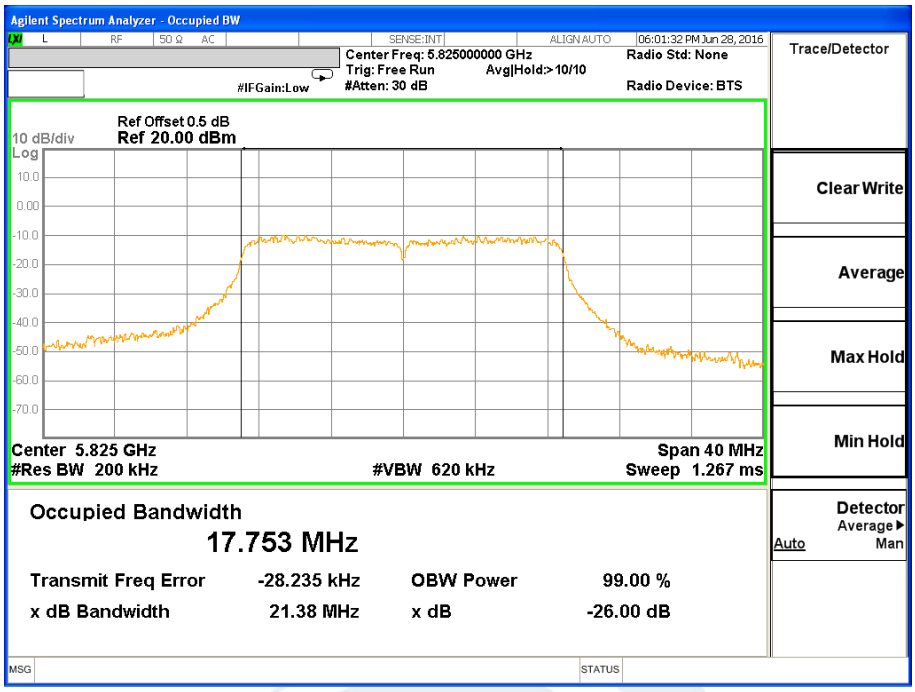
26 dB &99% Bandwidth 802.11ac(HT20) Channel 149



26 dB &99% Bandwidth 802.11ac(HT20) Channel 157

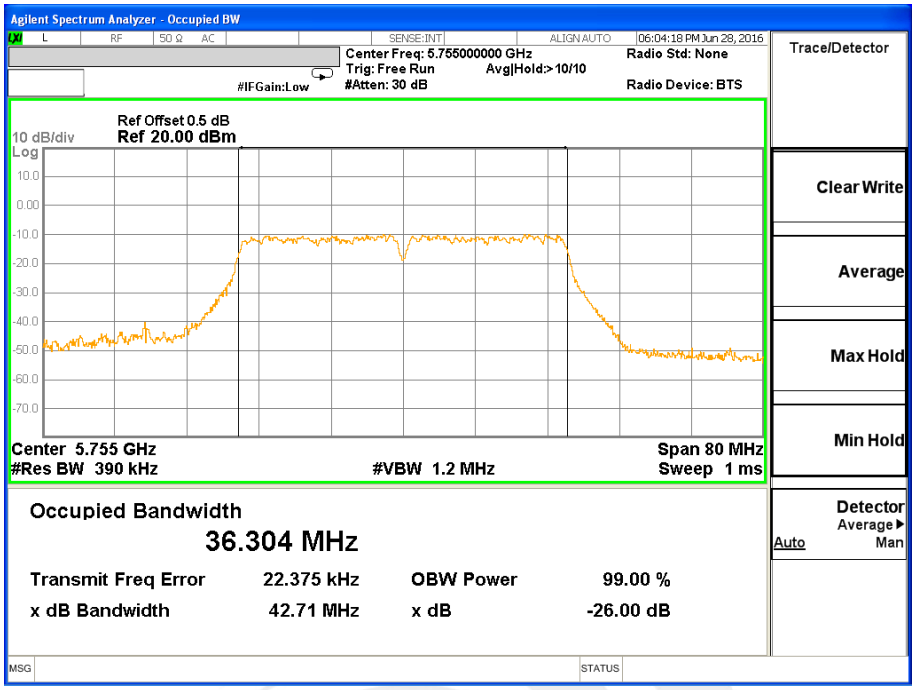


26 dB &99% Bandwidth 802.11ac(HT20) Channel 165

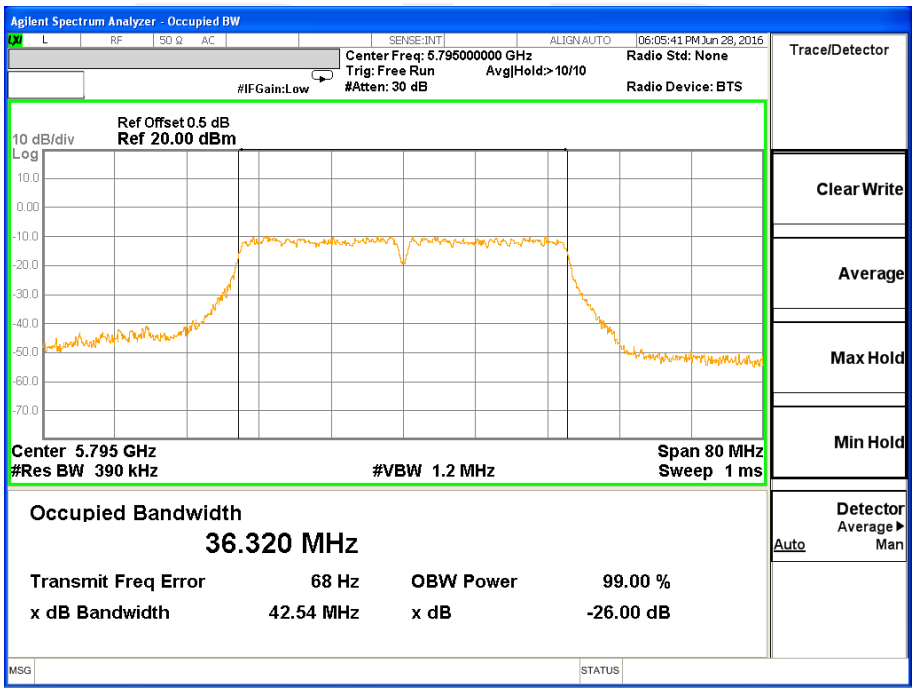


Band IV (5.725-5.850GHz) 802.11ac(HT40) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11ac(HT40) Channel 151

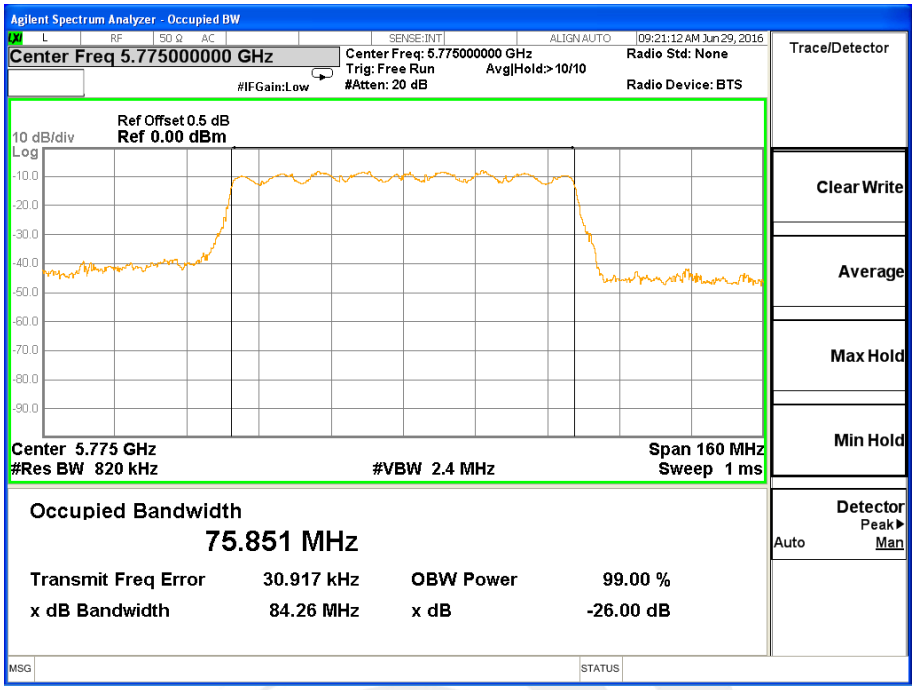


26 dB &99% Bandwidth 802.11ac(HT40) Channel 159



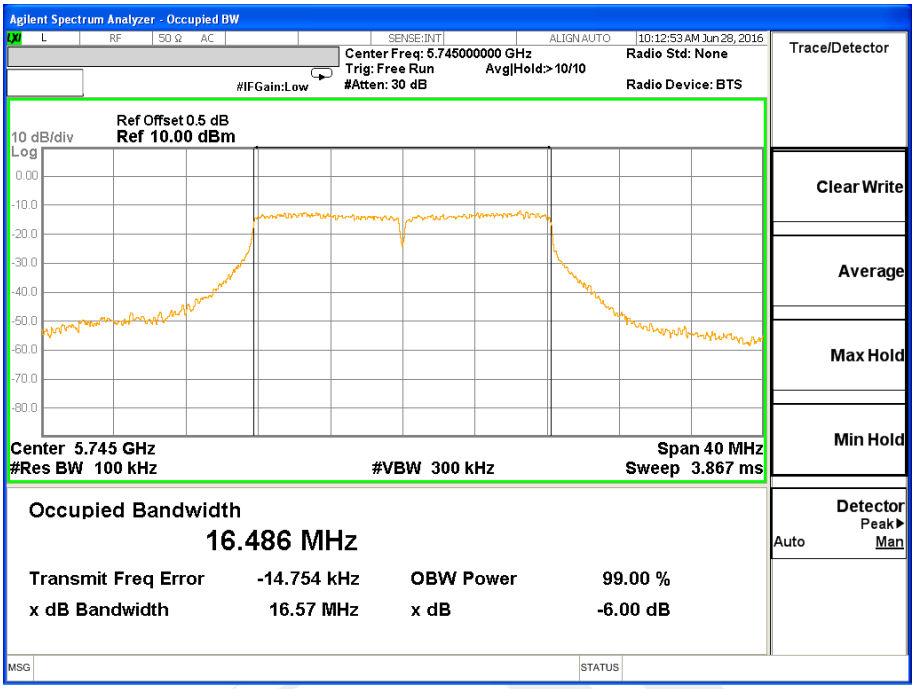
Band IV (5.725-5.850GHz) 802.11ac(HT80) 26 dB &99% Bandwidth

26 dB &99% Bandwidth 802.11ac(HT80) Channel 155

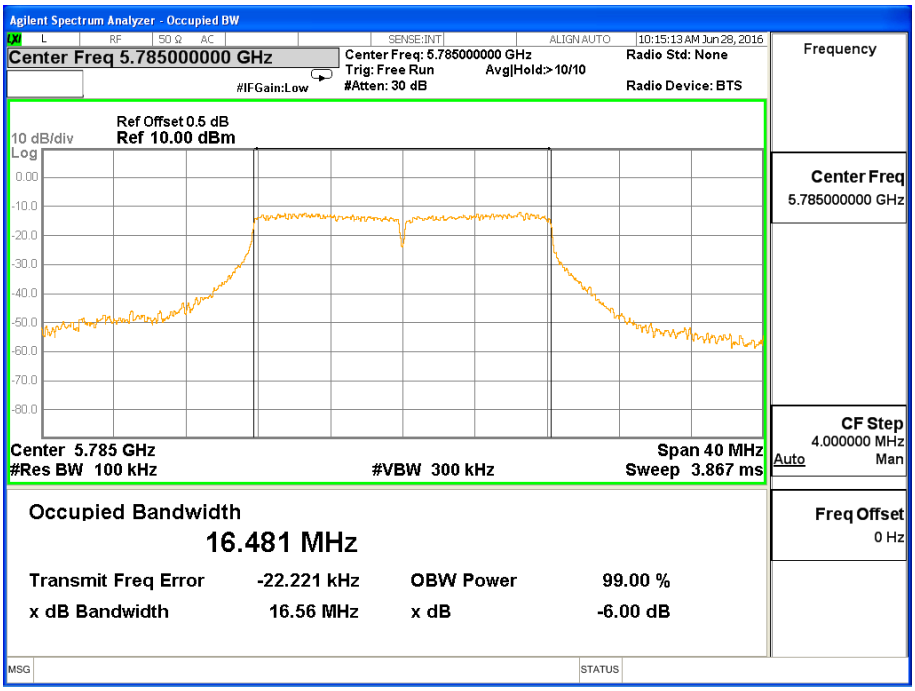


Band IV (5.725-5.850GHz) 802.11a, 6 dB Bandwidth

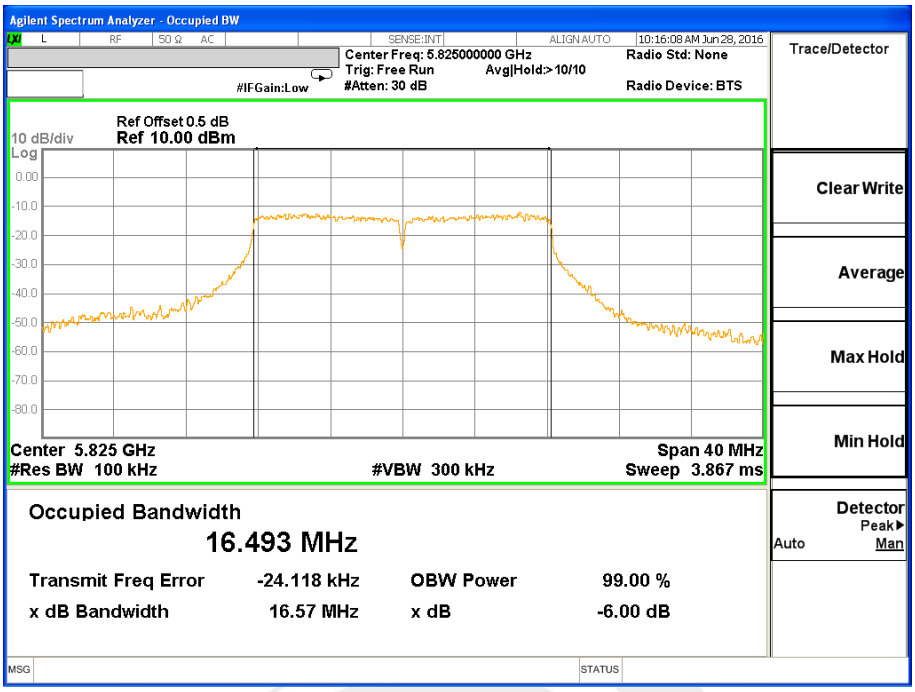
6 dB Bandwidth 802.11a Channel 149



6 dB Bandwidth 802.11a Channel 157

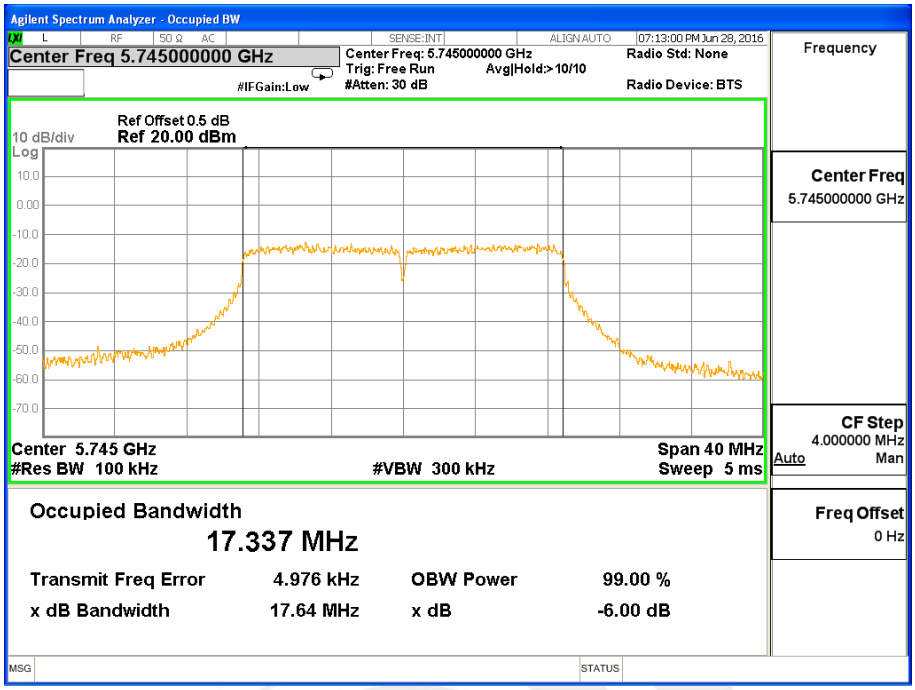


6 dB Bandwidth 802.11a Channel 165

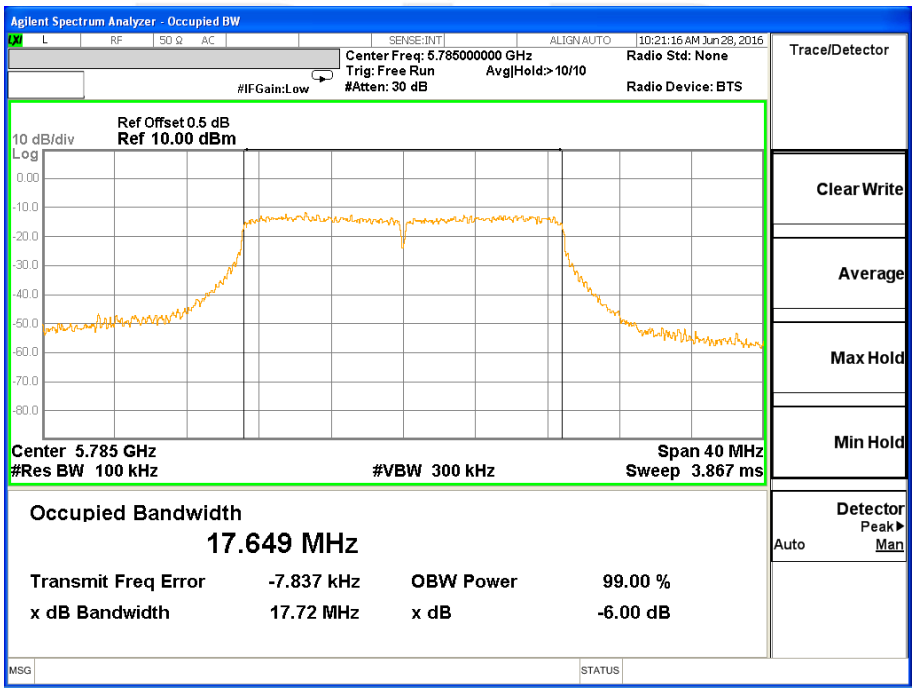


Band IV (5.725-5.850GHz) 802.11n(HT20) 6 dB Bandwidth

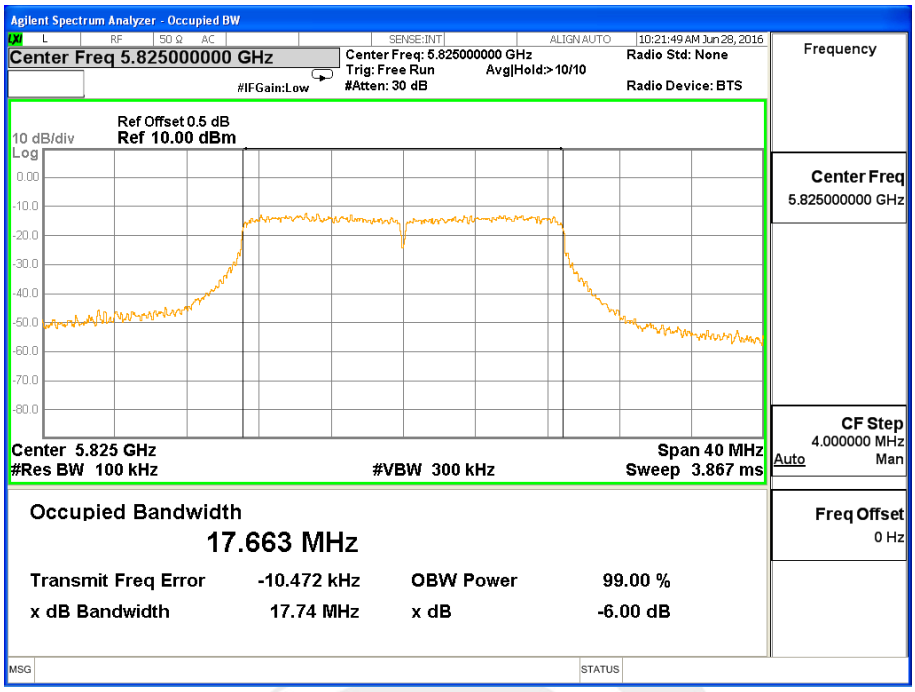
6 dB Bandwidth 802.11n(HT20) Channel 149



6 dB Bandwidth 802.11n(HT20) Channel 157

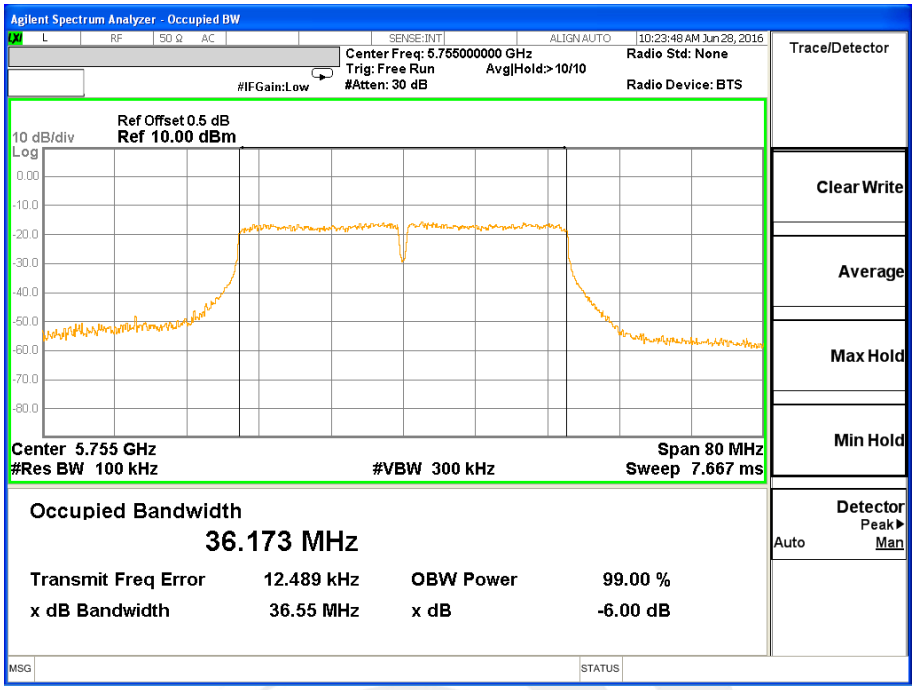


6 dB Bandwidth 802.11n(HT20) Channel 165

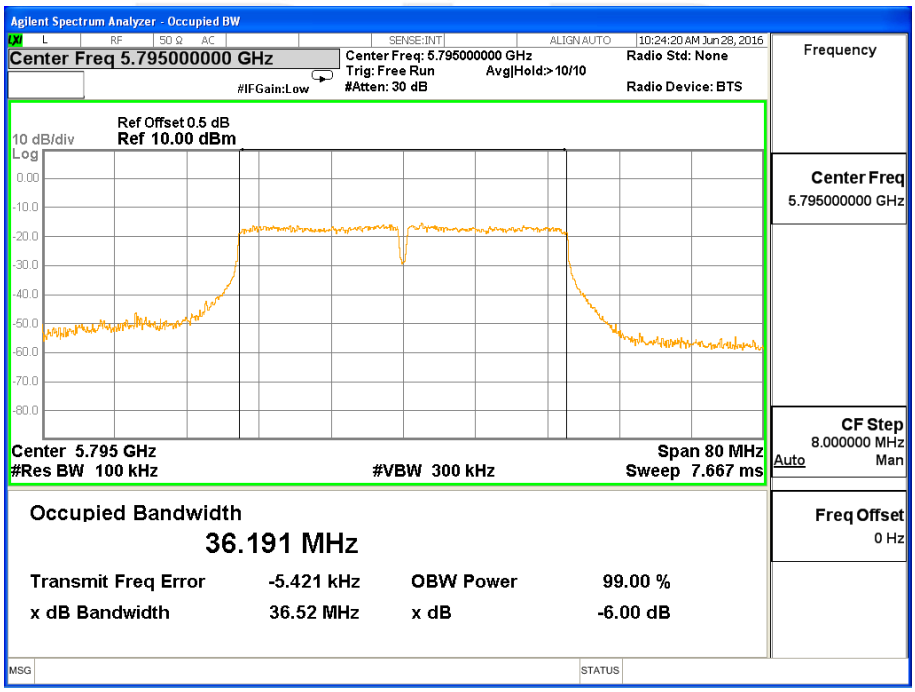


Band IV (5.725-5.850GHz) 802.11n(HT40) 6 dB Bandwidth

6 dB Bandwidth 802.11n(HT40) Channel 151

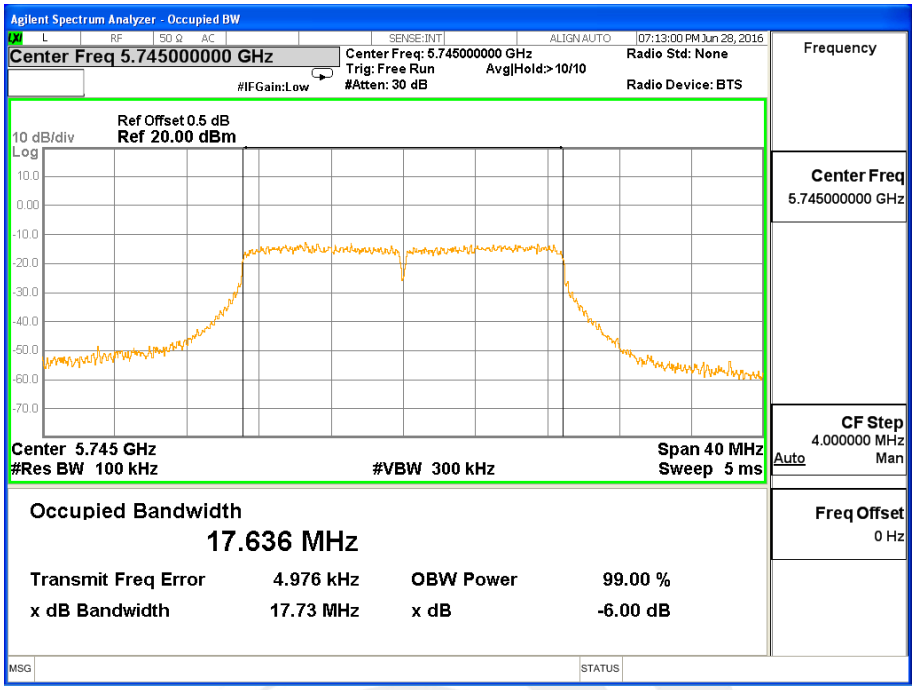


6 dB Bandwidth 802.11n(HT40) Channel 159

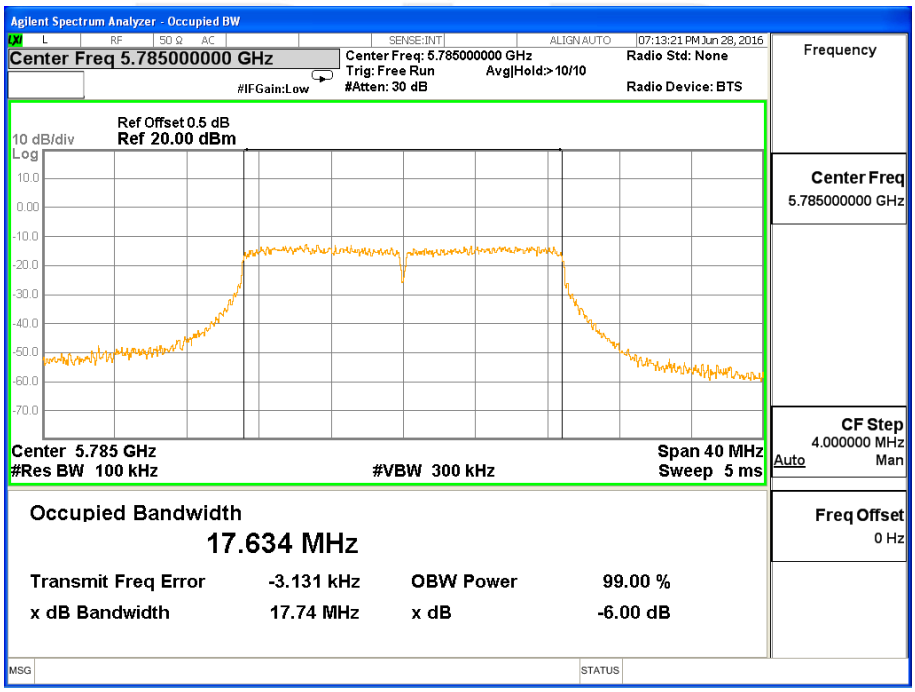


Band IV (5.725-5.850GHz) 802.11ac(HT20) 6 dB Bandwidth

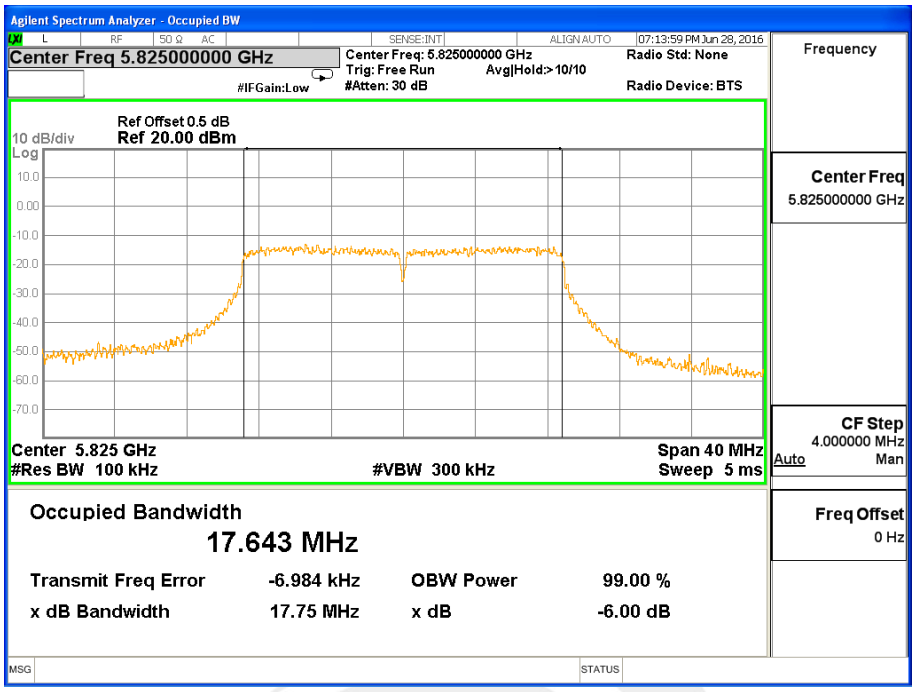
6 dB Bandwidth 802.11ac(HT20) Channel 149



6 dB Bandwidth 802.11ac(HT20) Channel 157

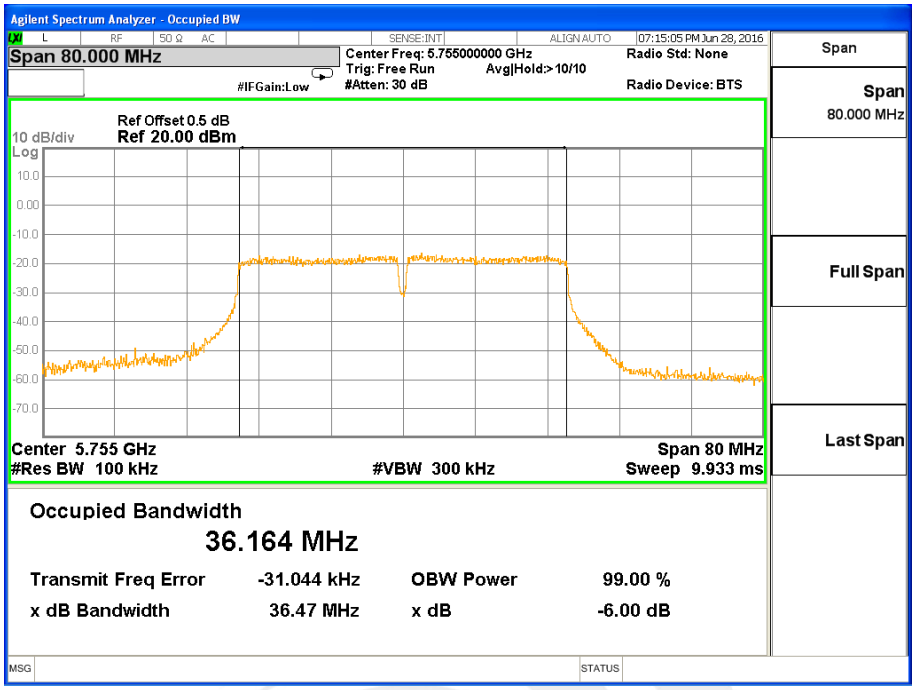


6 dB Bandwidth 802.11ac(HT20) Channel 165

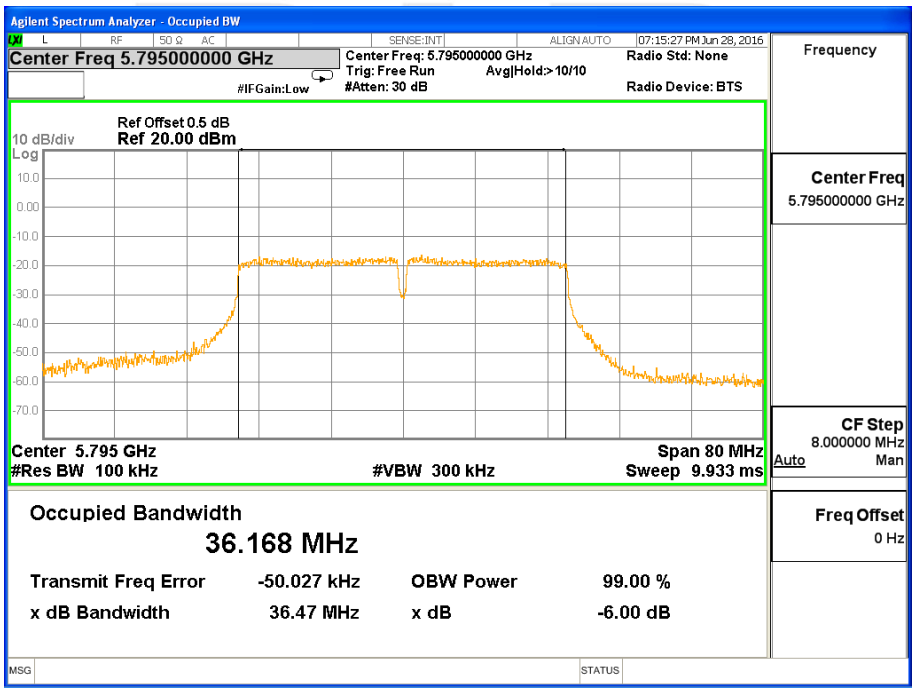


Band IV (5.725-5.850GHz) 802.11ac(HT40) 6 dB Bandwidth

6 dB Bandwidth 802.11ac(HT40) Channel 151

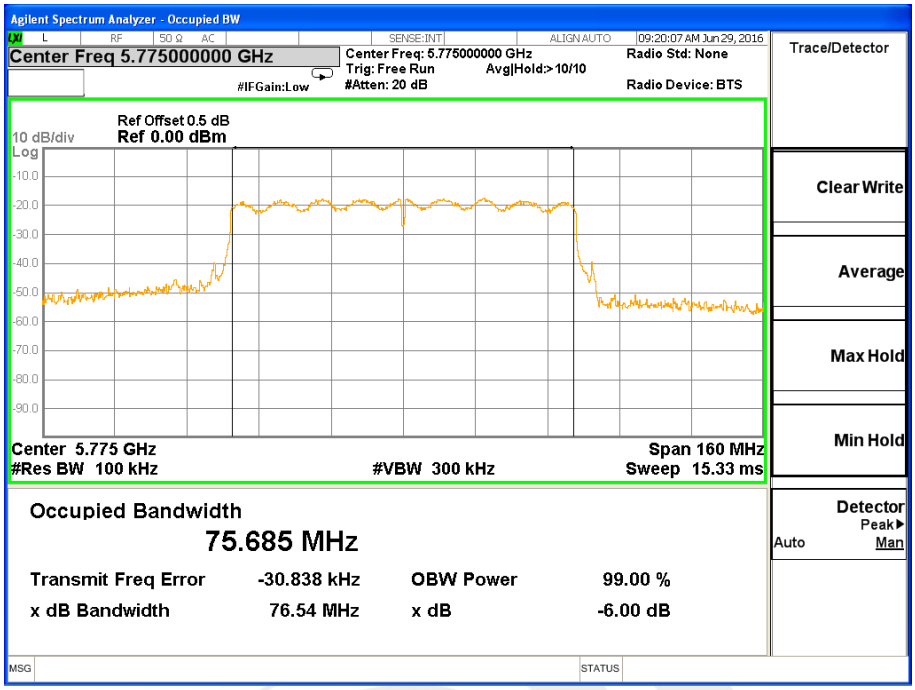


6 dB Bandwidth 802.11ac(HT40) Channel 159



Band IV (5.725-5.850GHz) 802.11ac(HT80) 6 dB Bandwidth

6 dB Bandwidth 802.11ac(HT80) Channel 155



7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 APPLIED PROCEDURES / LIMIT

For mobile and portable 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. 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 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

FCC Part15 (15.407) , Subpart E

Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(a) (1) (iv)	Peak Output Power	0.25 watt	5150-5250	PASS
15.407(a) (3)		1 watt	5725-5825	

7.1.1 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP

7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

Band I (5.15-5.25GHz)

Test Channel	Frequency(MHz)	Peak Power (dBm)	Average Power (dBm)	LIMIT(dBm)
802.11a				
36	5180	3.62	1.33	23.98
40	5200	3.35	1.42	23.98
48	5240	5.17	3.27	23.98
802.11n(HT20)				
36	5180	2.88	1.02	23.98
40	5200	4.12	2.41	23.98
48	5240	5.59	3.63	23.98
802.11n(HT40)				
38	5190	0.57	-1.26	23.98
46	5230	0.43	-1.41	23.98
802.11ac(HT20)				
36	5180	3.40	1.36	23.98
40	5200	2.63	1.12	23.98
48	5240	3.45	1.99	23.98
802.11ac(HT40)				
38	5190	0.25	-1.36	23.98
46	5230	-0.05	-1.33	23.98
802.11ac(HT80)				
42	5210	-0.12	-1.25	23.98

Note:

1. For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 0.25 W.

Band IV (5.725-5.85GHz)

Test Channel	Frequency(MHz)	Power (dBm)	Power (dBm)	LIMIT(dBm)
802.11a				
149	5745	3.23	1.35	30
157	5785	4.89	2.41	30
165	5825	2.87	1.02	30
802.11n(HT20)				
149	5745	5.39	3.26	30
157	5785	5.71	2.32	30
165	5825	3.87	1.25	30
802.11n(HT40)				
151	5755	2.23	0.25	30
159	5795	1.38	0.01	30
802.11ac(HT20)				
149	5745	3.52	11.02	30
157	5785	5.35	10.32	30
165	5825	3.64	9.89	30
802.11ac(HT40)				
151	5755	1.74	0.14	30
159	5795	1.34	0.10	30
802.11ac(HT80)				
155	5775	-0.71	-1.02	30

Note:

1. For the band 5.745-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W.

8. FREQUENCY STABILITY MEASUREMENT

8.1 LIMIT OF FREQUENCY STABILITY

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.

8.1.1 MEASURING INSTRUMENTS

See list of measuring instruments of this test report.

8.1.2 TEST PROCEDURES

1. To ensure emission at the band edge is maintained 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, which is set to maximum hold function and peak detector. The peak value of the power envelope was 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.

8.1.3 TEST SETUP

8.1.4 TEST RESULTS

Voltage	Band I (5.15-5.25GHz)Measurement Frequency(MHz)
DC (V)	5200
4.5	5199.9642

5.0	5199.9442
5.5	5199.9442
Max.Deviation(MHz)	0.0559
Max.Deviation(ppm)	10.9

Temperature Vs. Frequency Stabilty:

Temperature	Measurement Frequency(MHz)
(^{o}C)	5200
-30	5199.9577
-20	5199.9587
-10	5199.9545
0	5199.9568
10	5199.9569
20	5199.9577
30	5199.9569
40	5199.9578
50	5199.9567
Max.Deviation(MHz)	0.0457
Max.Deviation(ppm)	8.77

Voltage	Band IV (5.725-5.85GHz) Measurement Frequency(MHz)
DC (V)	5785
4.5	5784.9568

5.0	5784.9548
5.5	5784.9537
Max.Deviation(MHz)	0.0468
Max.Deviation(ppm)	9.00

Temperature Vs. Frequency Stabilty:

Temperature	**Measurement Frequency(MHz)**
(^{o}C)	5785
-30	5785.9653
-20	5785.9643
-10	5785.9668
0	5785.9647
10	5785.9625
20	5785.9642
30	5785.9668
40	5785.9664
50	5785.9664
Max.Deviation(MHz)	0.9668
Max.Deviation(ppm)	1

9. AUTOMATICALLY DISCONTINUE TRANSMISSION

9.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

9.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

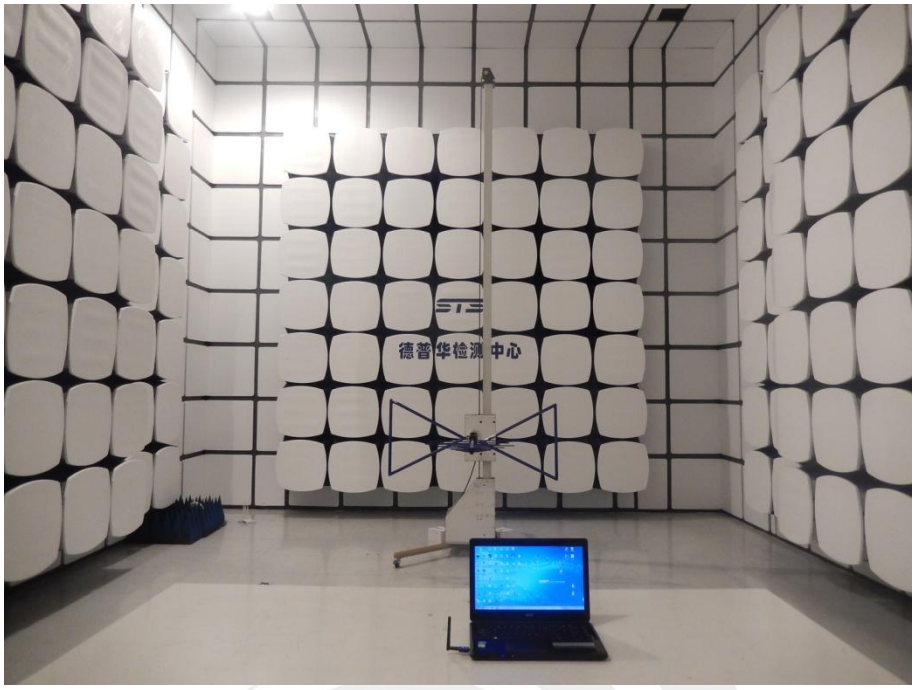
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

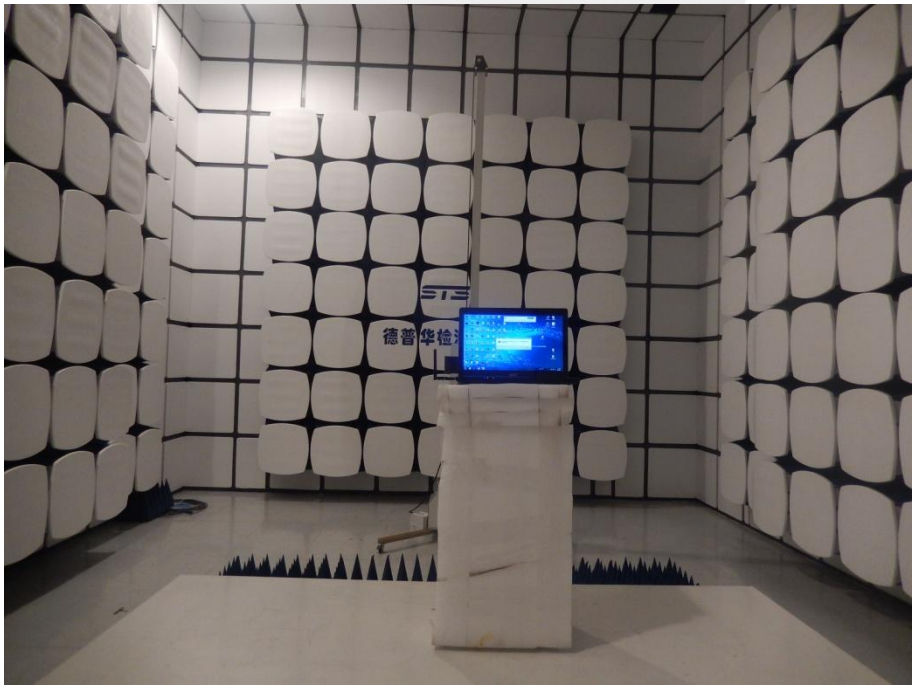
10.2 EUT ANTENNA

The EUT antenna is Dipole Antenna. It comply with the standard requirement.

APPENDIX - PHOTOS OF TEST SETUP

Radiated Measurement Photos





Conducted Measurement Photos