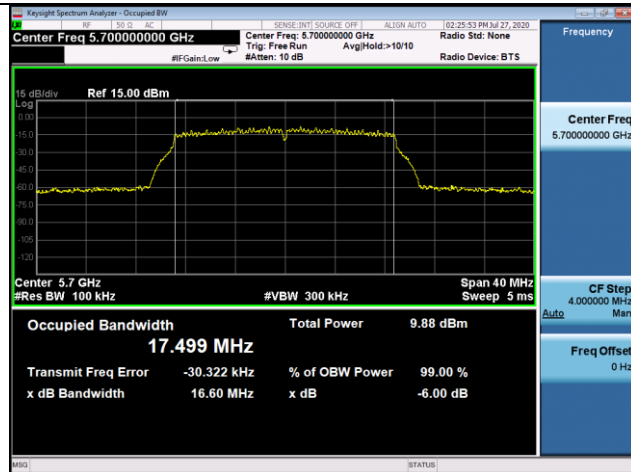
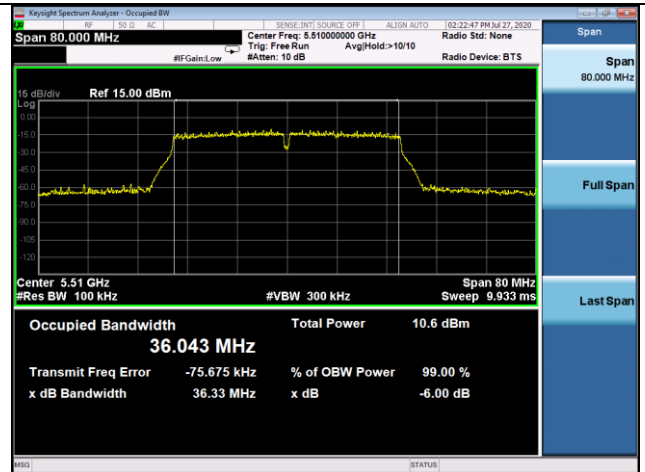


U-NII-2C

IEEE 802.11ac(VHT20) High Channel



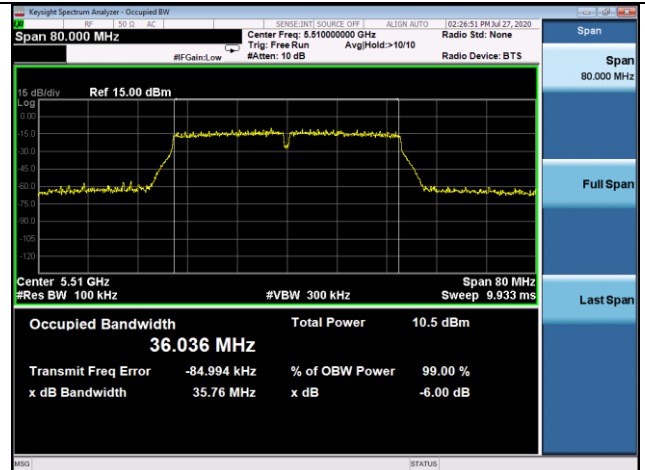
IEEE 802.11n(HT40) Low Channel



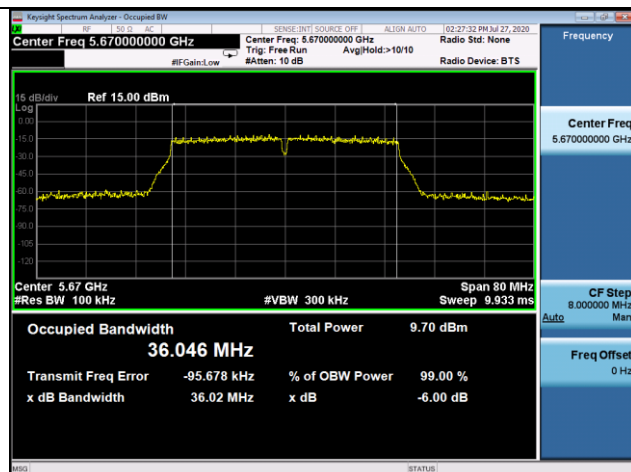
IEEE 802.11n(HT40) High Channel



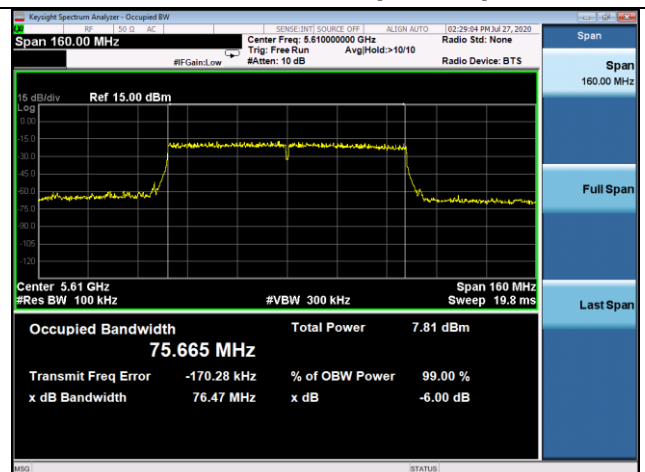
IEEE 802.11ac(VHT40) Low Channel



IEEE 802.11ac(VHT40) High Channel

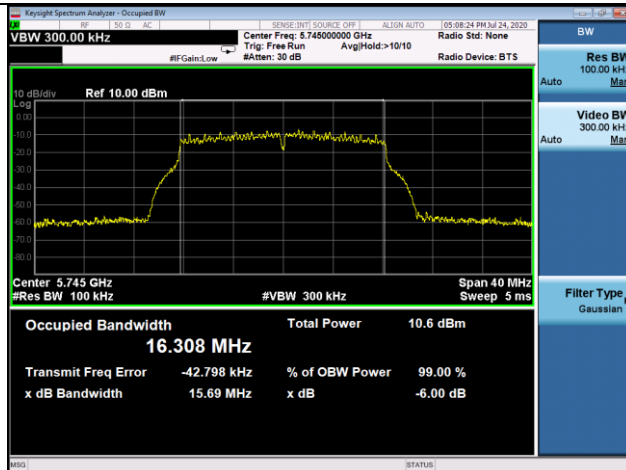


IEEE 802.11ac(VHT80)

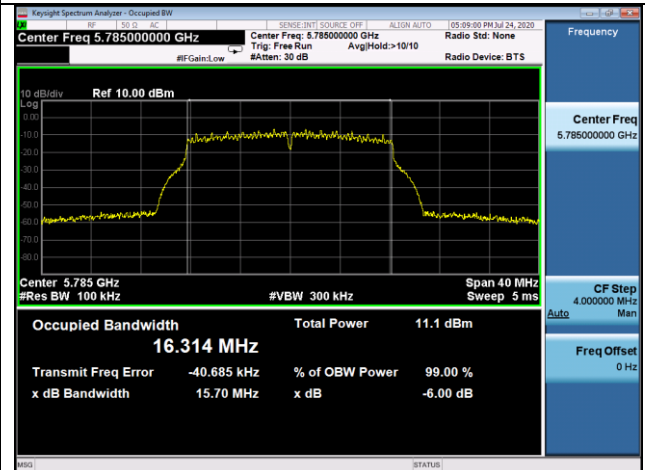


U-NII-3

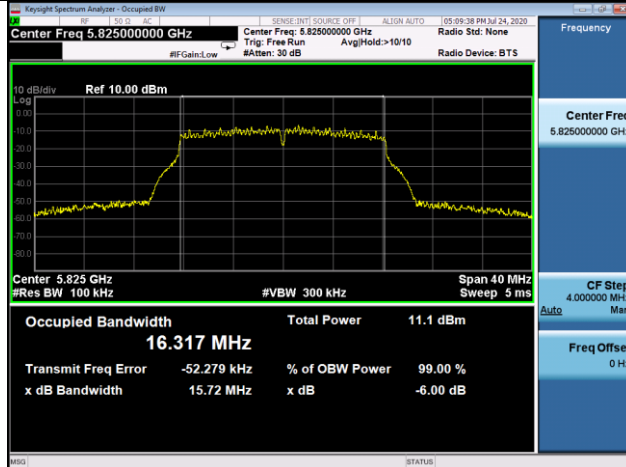
IEEE 802.11a Low Channel



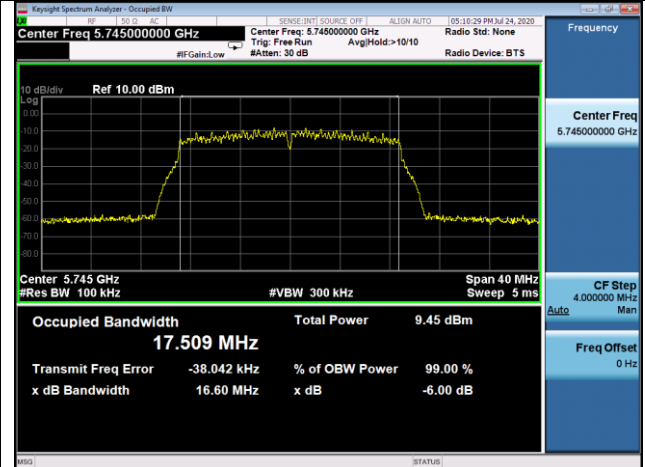
IEEE 802.11a Middle Channel



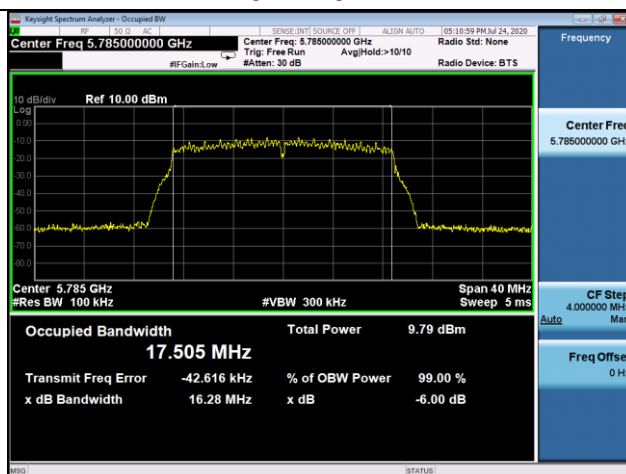
IEEE 802.11a High Channel



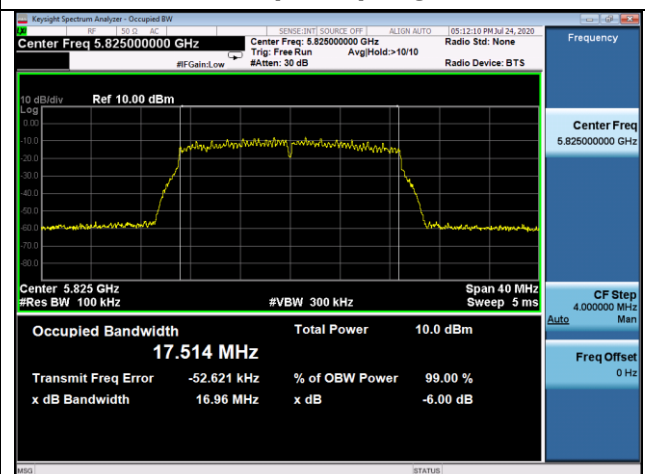
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

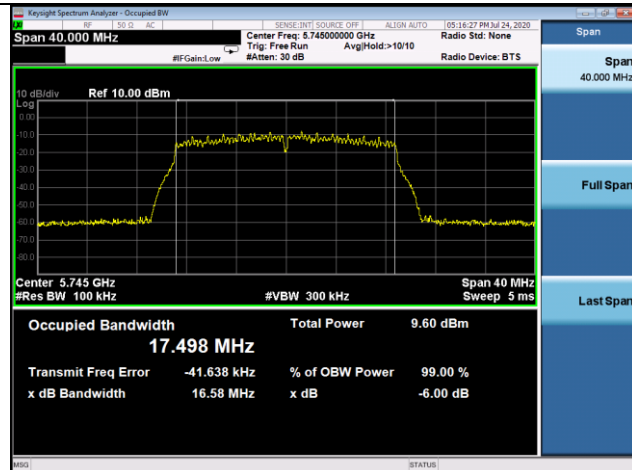


IEEE 802.11n(HT20) High Channel

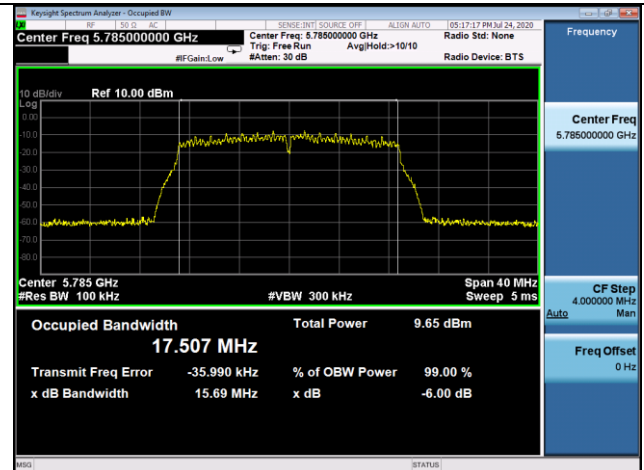


U-NII-3

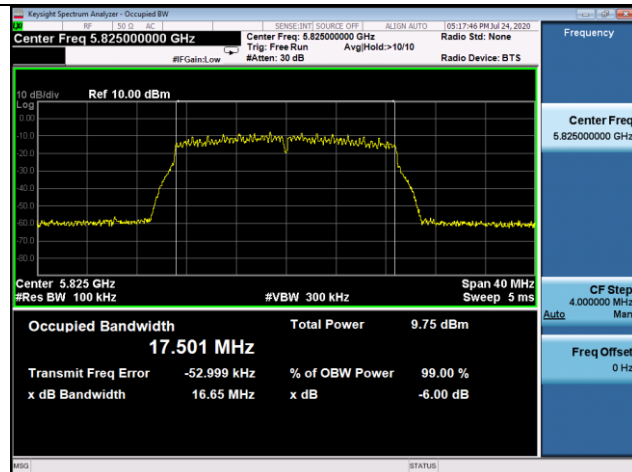
IEEE 802.11ac(VHT20) Low Channel



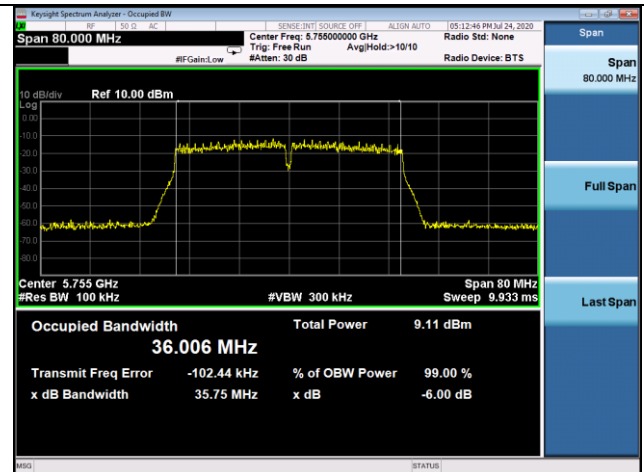
IEEE 802.11ac(VHT20) Middle Channel



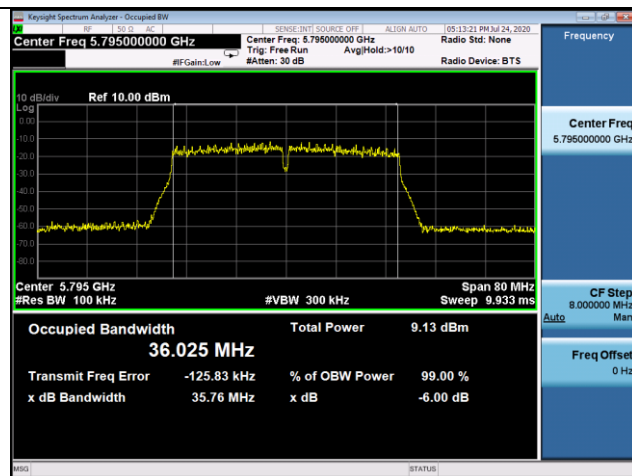
IEEE 802.11ac(VHT20) High Channel



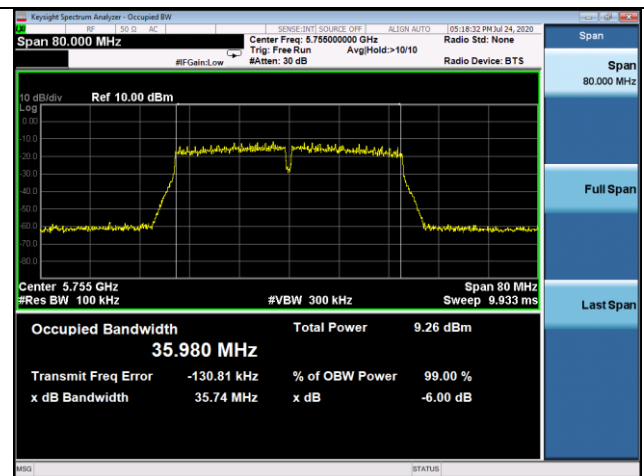
IEEE 802.11n(HT40) Low Channel



IEEE 802.11n(HT40) High Channel

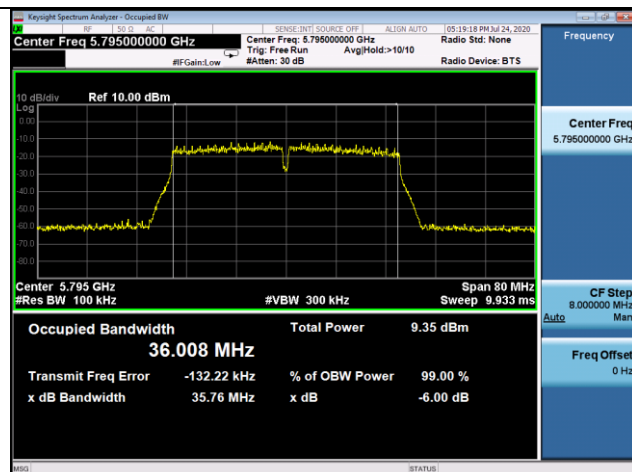


IEEE 802.11ac(VHT40) Low Channel

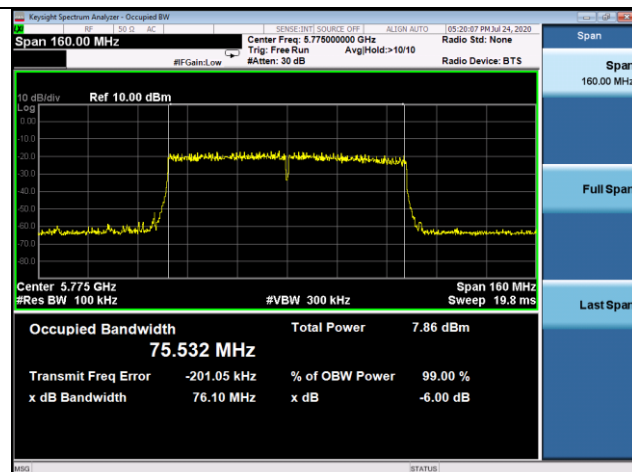


U-NII-3

IEEE 802.11ac(VHT40) High Channel



IEEE 802.11ac(VHT80)

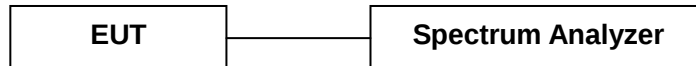


6. 26dB Bandwidth & 99% Occupied Bandwidth

6.1 Limits

No restriction limits.

6.2 Test SET-UP (Block Diagram of Configuration)



6.3 Test Procedure

The antenna port of the EUT was connected to the input of a spectrum analyzer.

Analyzer was set as below according to FCC KDB789033(v02r01):

1. For 26dB bandwidth, Set the RBW = Approximately 1% of the emission bandwidth
 2. Set the VBW > RBW
 3. Detector = peak.
 4. Sweep time = auto couple.
 5. Trace mode = max hold.
 6. Allow trace to fully stabilize.
 7. 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 26 dB relative to the maximum level measured in the fundamental emission.
-
1. For 99% occupied bandwidth, Set the RBW = 1% to 5% of the OBW
 2. Set the VBW $\geq 3 \times$ RBW
 3. Detector = peak.
 4. Span = 1.5 times to 5.0 times the OBW
 5. Sweep time = auto couple.
 6. Trace mode = max hold. Allow trace to fully stabilize.
 7. Use the 99% power bandwidth function of the spectrum analyzer measure the occupied bandwidth.

6.4 Measurement Results

Pass

Please refer to following table and plots.

U-NII-1 Band			
Temperature :	23 °C	Humidity : 53 %	
Test By:	Sance	Test Date : July 24, 2020	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5180	6	19.52	16.437
Channel: 5200	6	19.39	16.404
Channel: 5240	6	19.52	16.452
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5180	MCS0	19.86	17.558
Channel: 5200	MCS0	19.98	17.569
Channel: 5240	MCS0	20.00	17.557
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5190	MCS0	40.94	36.483
Channel: 5230	MCS0	40.82	36.459
IEEE 802.11ac (VHT20) Mode (OFDM)			
Channel: 5180	MCS0	20.00	17.547
Channel: 5200	MCS0	19.82	17.595
Channel: 5240	MCS0	20.17	17.584
IEEE 802.11ac (VHT40) Mode (OFDM)			
Channel: 5190	MCS0	40.47	36.277
Channel: 5230	MCS0	40.79	36.392
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5210	MCS0	80.09	75.768
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_0) was recorded.			

U-NII-2A Band			
Temperature :	23 °C	Humidity : 53 %	
Test By:	Sance	Test Date : July 24, 2020	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5260	6	19.63	16.459
Channel: 5300	6	19.27	16.434
Channel: 5320	6	19.51	16.451
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5260	MCS0	19.87	17.587
Channel: 5300	MCS0	19.94	17.597
Channel: 5320	MCS0	20.00	17.578
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5270	MCS0	40.94	36.593
Channel: 5310	MCS0	41.01	36.546
IEEE 802.11ac (VHT20) Mode (OFDM)			
Channel: 5260	MCS0	20.00	17.583
Channel: 5300	MCS0	19.98	17.575
Channel: 5320	MCS0	20.01	17.598
IEEE 802.11ac (VHT40) Mode (OFDM)			
Channel: 5270	MCS0	41.08	36.400
Channel: 5310	MCS0	40.85	36.388
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5290	MCS0	80.32	76.014
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_0) was recorded.			

U-NII-2C Band			
Temperature :	23 °C	Humidity : 53 %	
Test By:	Sance	Test Date : July 24, 2020	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5500	6	19.53	16.475
Channel: 5600	6	19.70	16.478
Channel: 5700	6	19.56	16.476
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5500	MCS0	19.96	17.587
Channel: 5600	MCS0	20.13	17.564
Channel: 5700	MCS0	19.92	17.584
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5510	MCS0	41.14	36.577
Channel: 5670	MCS0	41.16	36.589
IEEE 802.11ac (VHT20) Mode (OFDM)			
Channel: 5500	MCS0	19.86	17.586
Channel: 5600	MCS0	19.99	17.575
Channel: 5700	MCS0	20.00	17.567
IEEE 802.11ac (VHT40) Mode (OFDM)			
Channel: 5510	MCS0	40.95	36.364
Channel: 5670	MCS0	40.85	36.399
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5610	MCS0	80.47	75.939
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_0) was recorded.			

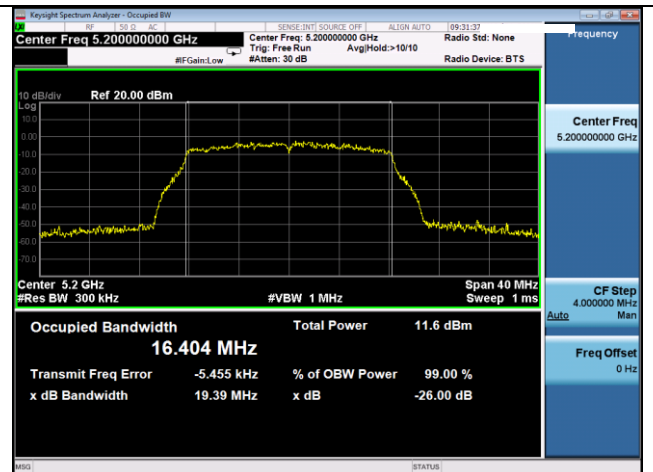
U-NII-3 Band			
Temperature :	23 °C	Humidity : 53 %	
Test By:	Sance	Test Date : July 24, 2020	
Test Result:	PASS		
Frequency MHz	Data Rate Mbps	26dB Bandwidth MHz	99% Occupied Bandwidth MHz
IEEE 802.11a Mode (OFDM)			
Channel: 5745	6	19.59	16.460
Channel: 5785	6	19.49	16.453
Channel: 5825	6	19.65	16.484
IEEE 802.11n(HT20) Mode (OFDM)			
Channel: 5745	MCS0	19.94	17.590
Channel: 5785	MCS0	20.03	17.584
Channel: 5825	MCS0	20.03	17.594
IEEE 802.11n(HT40) Mode (OFDM)			
Channel: 5755	MCS0	41.09	36.514
Channel: 5795	MCS0	41.14	36.564
IEEE 802.11ac (VHT20) Mode (OFDM)			
Channel: 5745	MCS0	20.03	17.566
Channel: 5785	MCS0	19.99	17.603
Channel: 5825	MCS0	19.97	17.589
IEEE 802.11ac (VHT40) Mode (OFDM)			
Channel: 5755	MCS0	40.83	36.319
Channel: 5795	MCS0	40.80	36.337
IEEE 802.11ac (VHT80) Mode (OFDM)			
Channel: 5775	MCS0	80.26	75.809
Note: Both of antennas have considered during pre-test, but only the worst case (ANT_0) was recorded.			

U-NII-1 Band

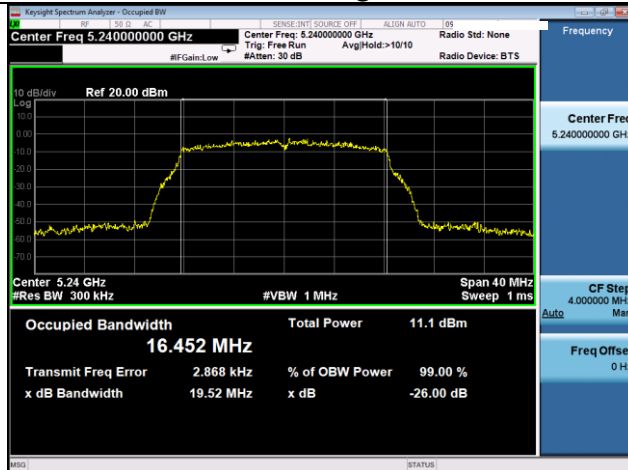
IEEE 802.11a Low Channel



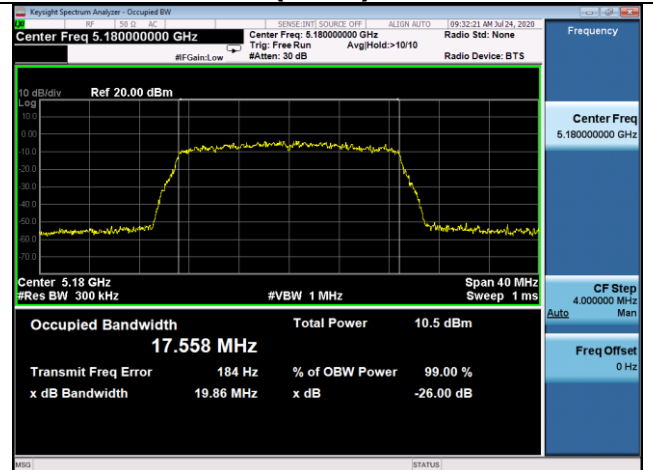
IEEE 802.11a Middle Channel



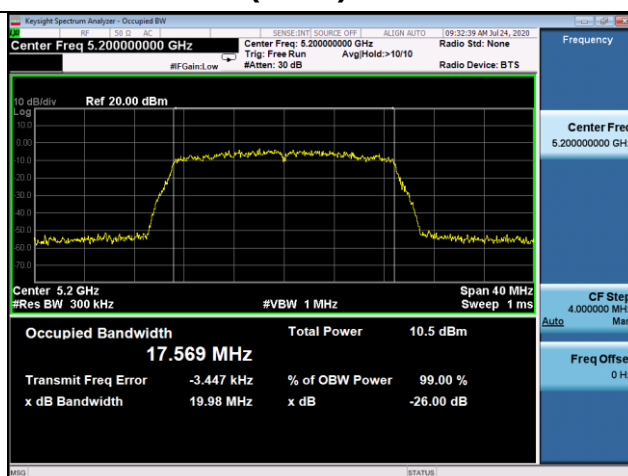
IEEE 802.11a High Channel



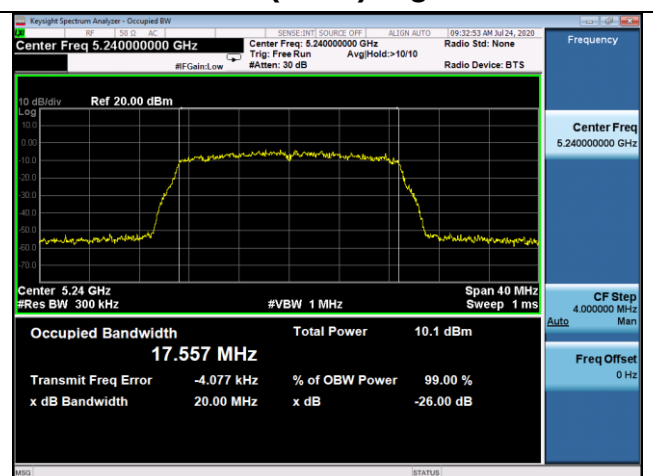
IEEE 802.11n(HT20) Low Channel



IEEE 802.11n(HT20) Middle Channel

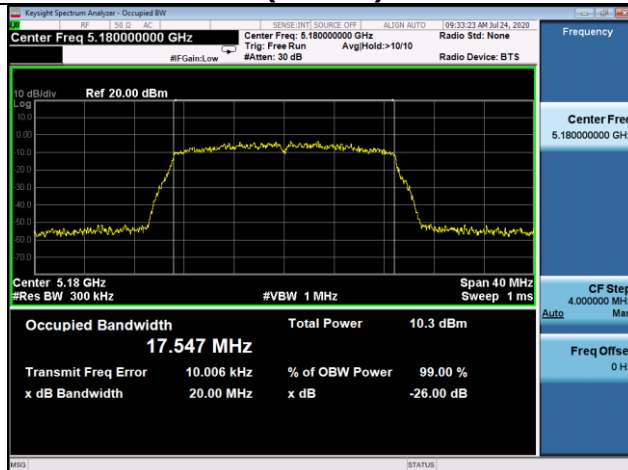


IEEE 802.11n(HT20) High Channel

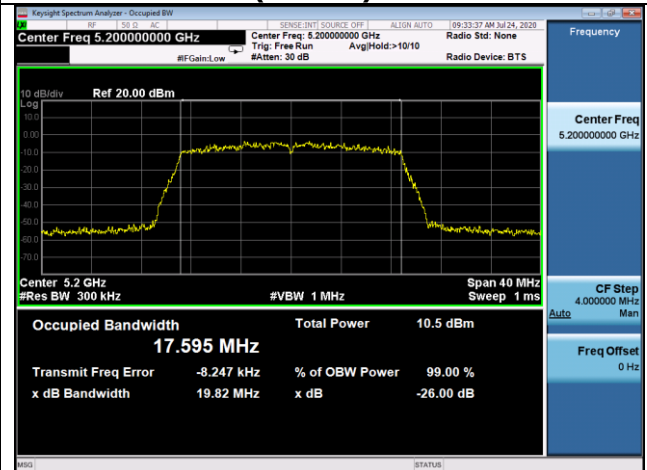


U-NII-1 Band

IEEE 802.11ac(VHT20) Low Channel



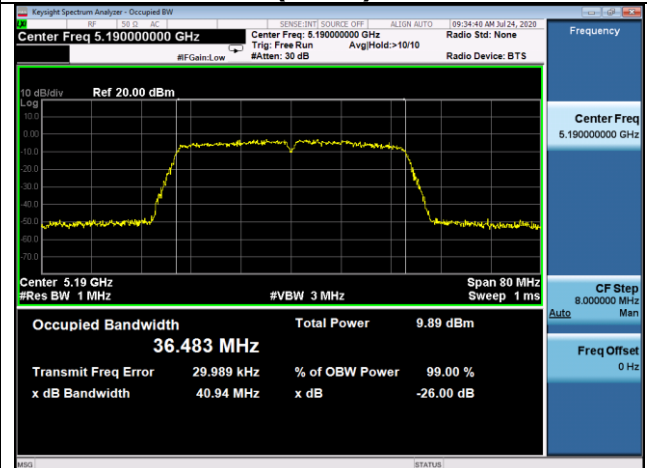
IEEE 802.11ac(VHT20) Middle Channel



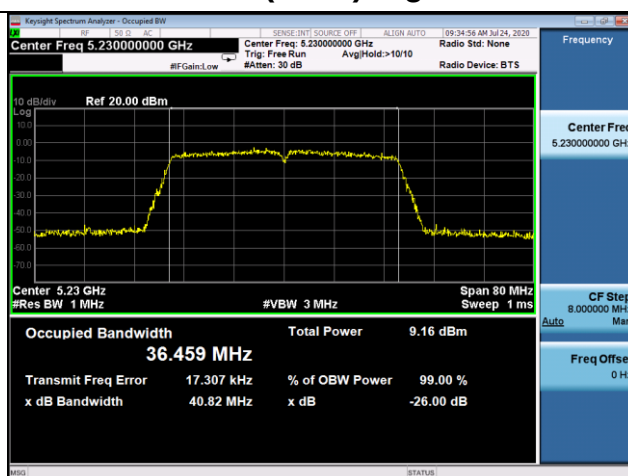
IEEE 802.11ac(VHT20) High Channel



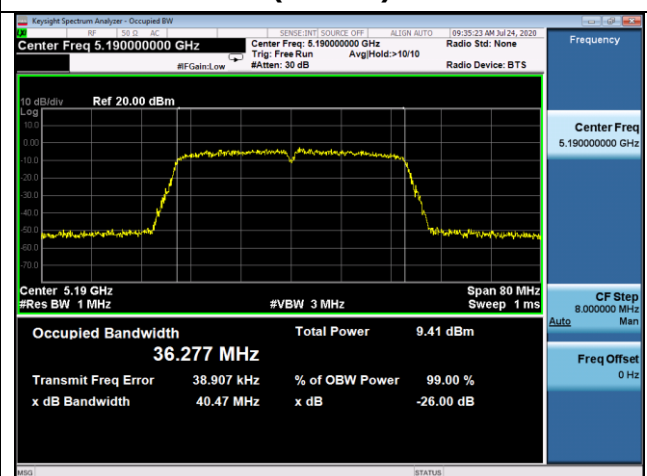
IEEE 802.11n(HT40) Low Channel



IEEE 802.11n(HT40) High Channel

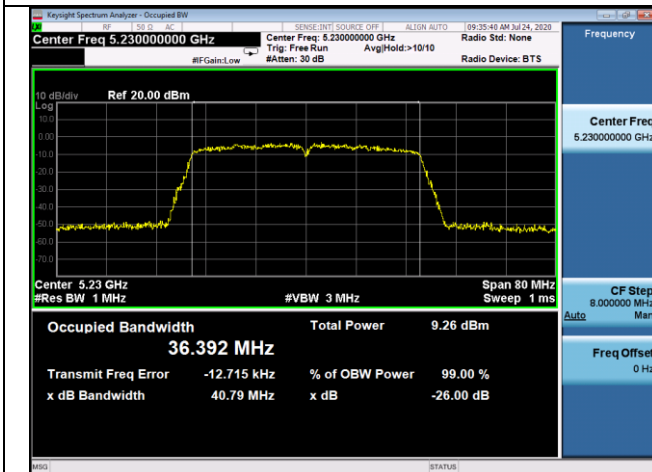


IEEE 802.11ac(VHT40) Low Channel

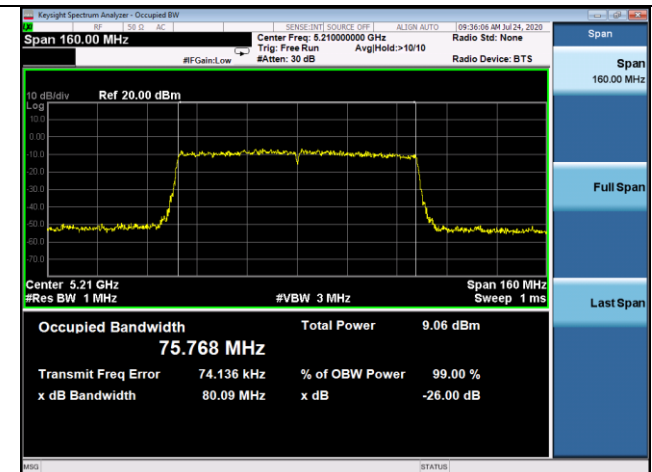


U-NII-1 Band

IEEE 802.11ac(VHT40) High Channel

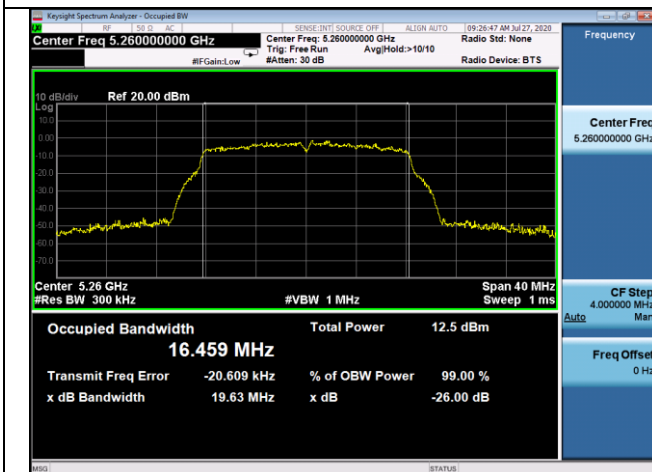


IEEE 802.11ac(VHT80)

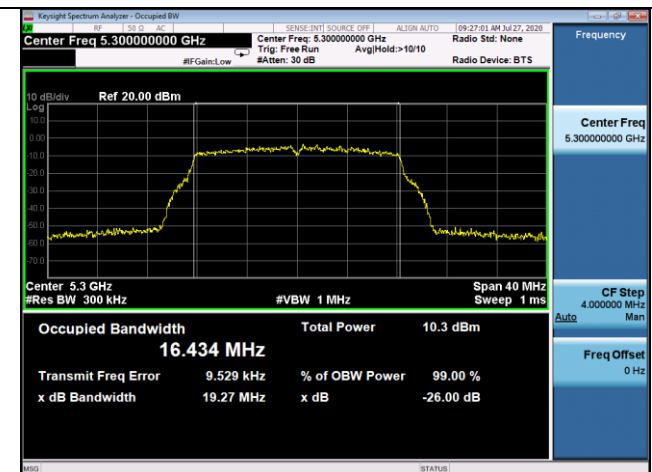


U-NII-2A Band

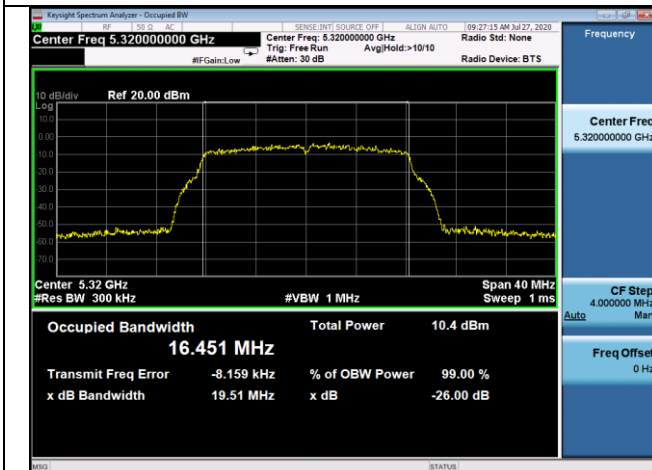
IEEE 802.11a Low Channel



IEEE 802.11a Middle Channel



IEEE 802.11a High Channel

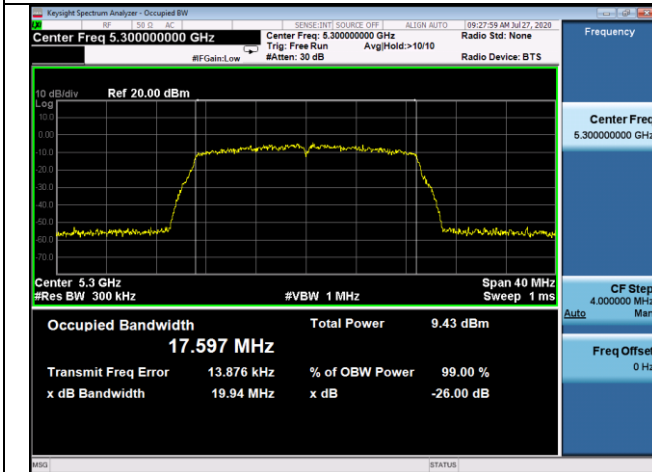


IEEE 802.11n(HT20) Low Channel

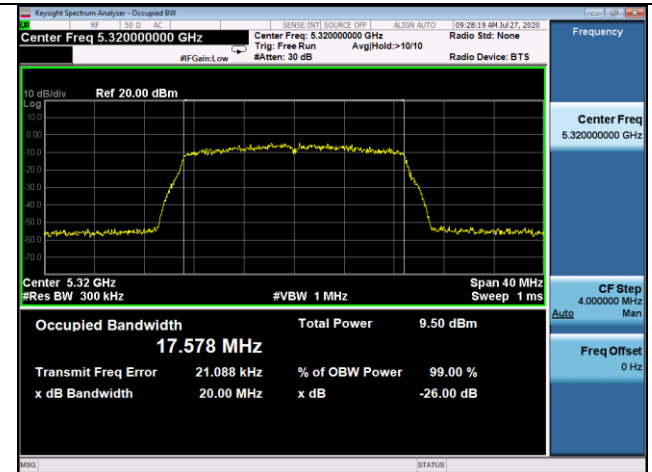


U-NII-2A Band

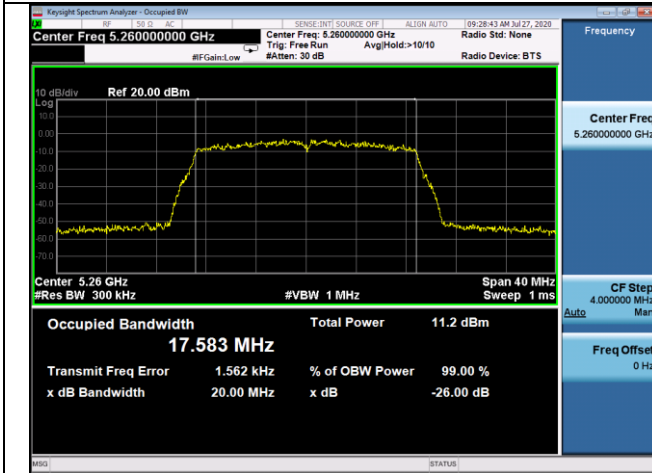
IEEE 802.11n(HT20) Middle Channel



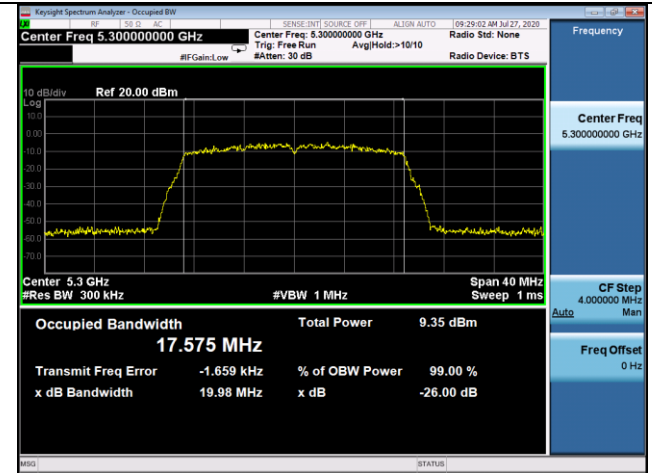
IEEE 802.11n(HT20) High Channel



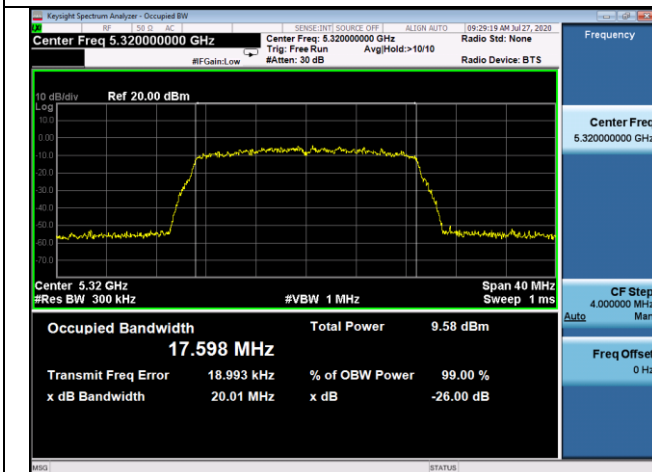
IEEE 802.11ac(VHT20) Low Channel



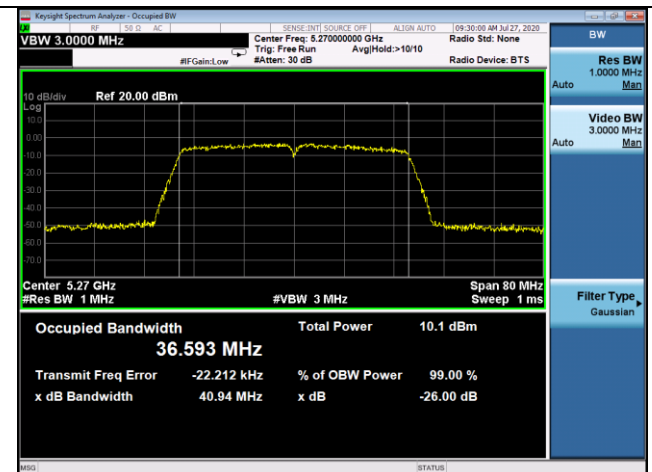
IEEE 802.11ac(VHT20) Middle Channel



IEEE 802.11ac(VHT20) High Channel

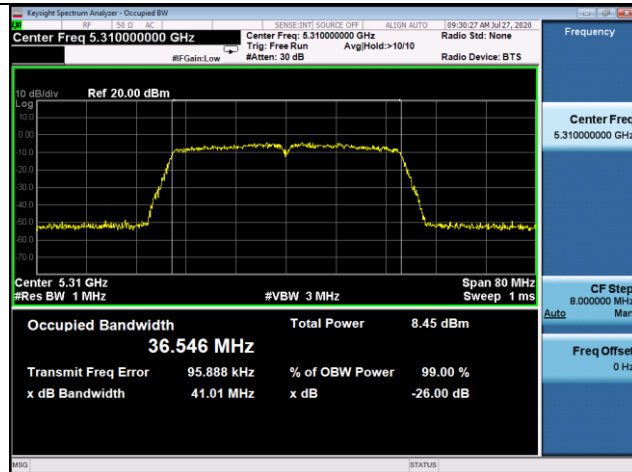


IEEE 802.11n(HT40) Low Channel

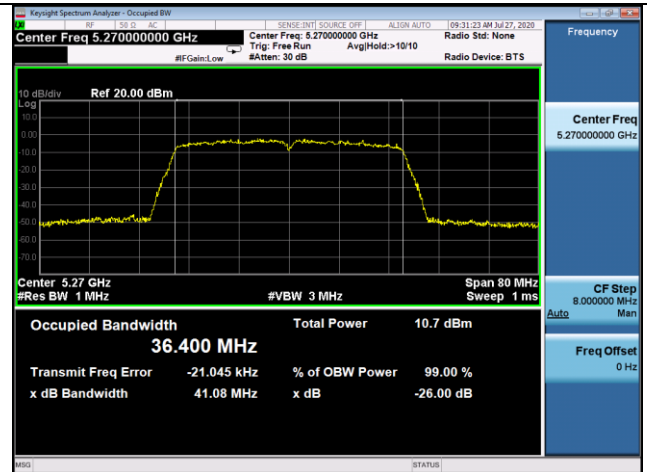


U-NII-2A Band

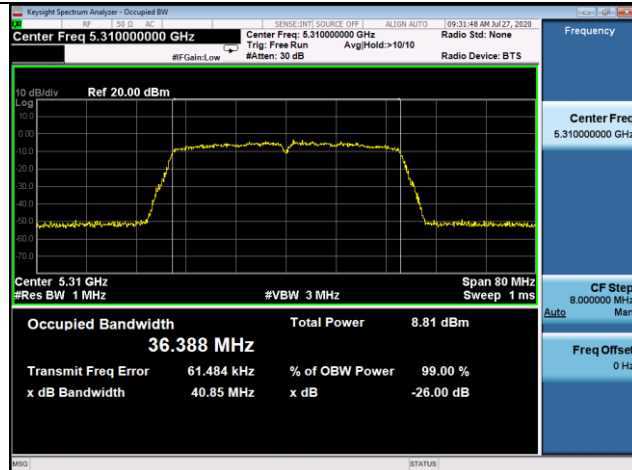
IEEE 802.11n(HT40) High Channel



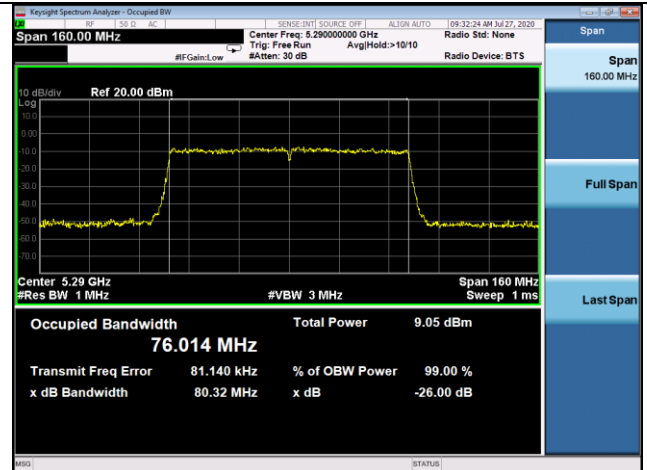
IEEE 802.11ac(VHT40) Low Channel



IEEE 802.11ac(VHT40) High Channel

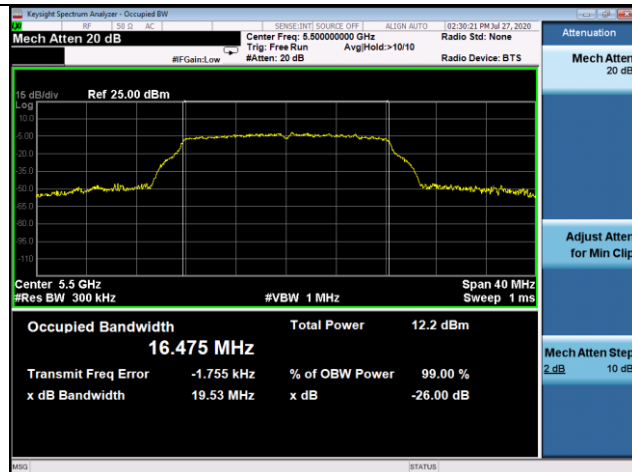


IEEE 802.11ac(VHT80)

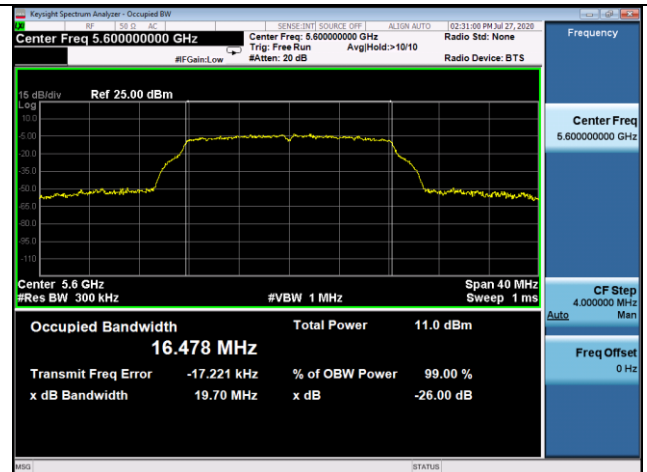


U-NII-2C Band

IEEE 802.11a Low Channel

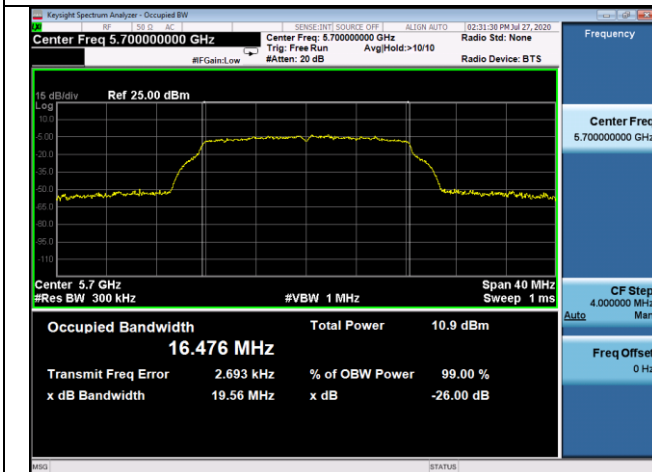


IEEE 802.11a Middle Channel

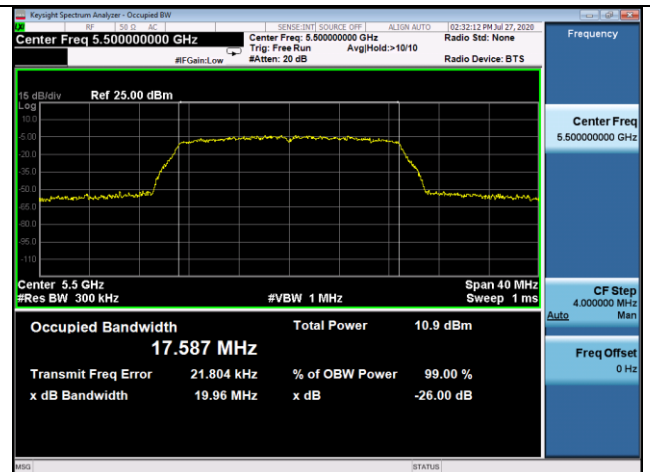


U-NII-2C Band

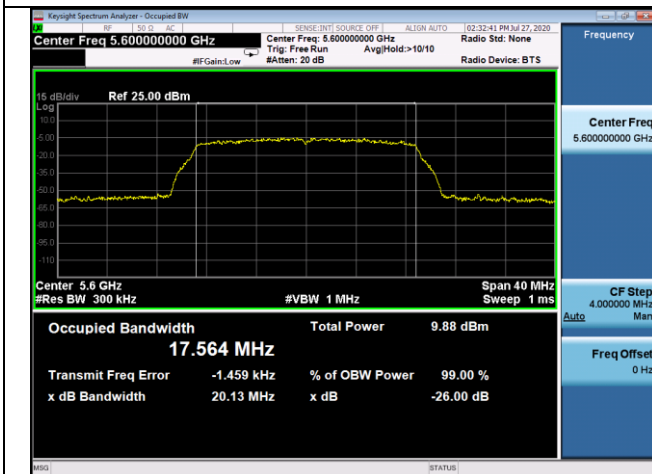
IEEE 802.11a High Channel



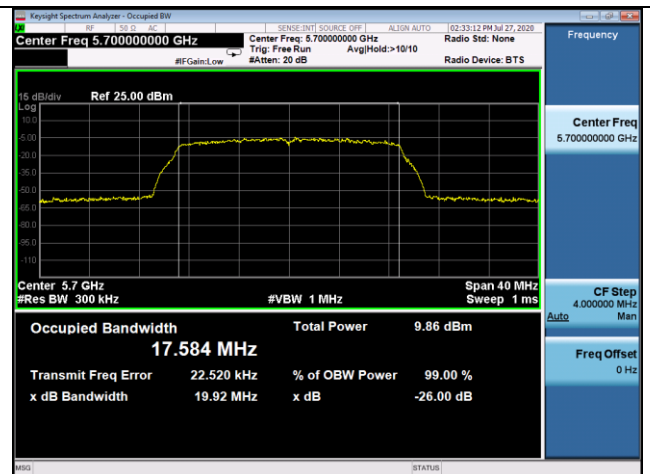
IEEE 802.11n(HT20) Low Channel



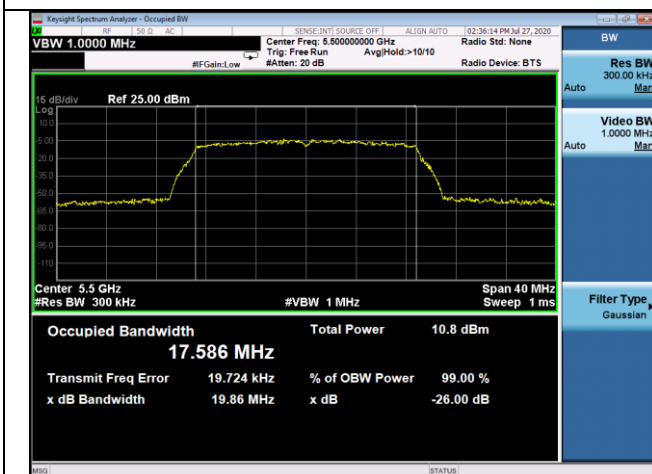
IEEE 802.11n(HT20) Middle Channel



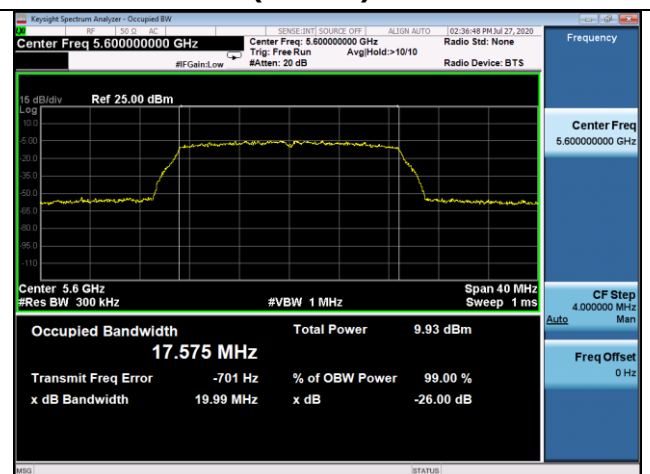
IEEE 802.11n(HT20) High Channel



IEEE 802.11ac(VHT20) Low Channel

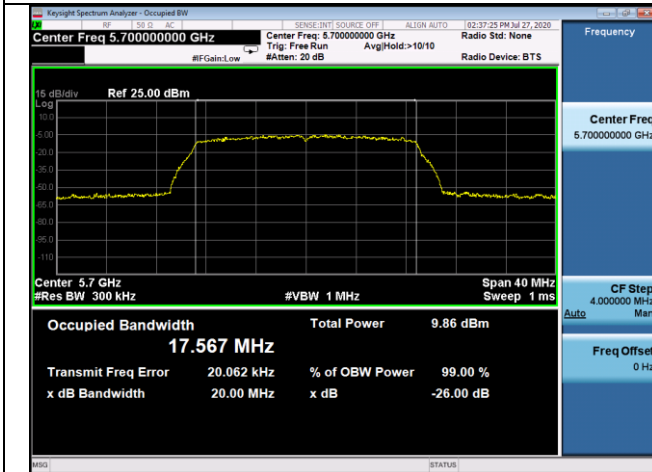


IEEE 802.11ac(VHT20) Middle Channel

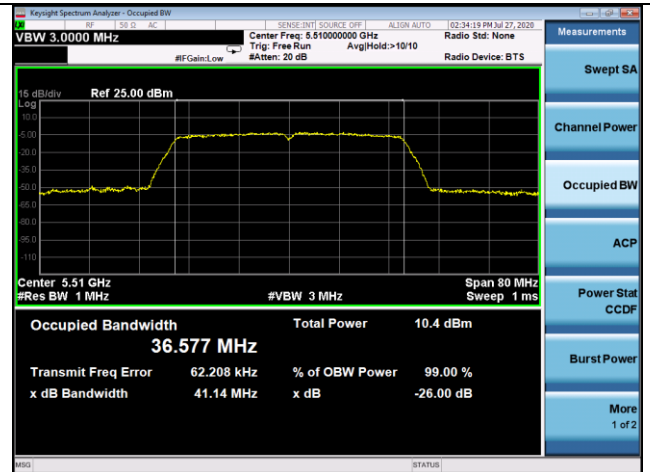


U-NII-2C Band

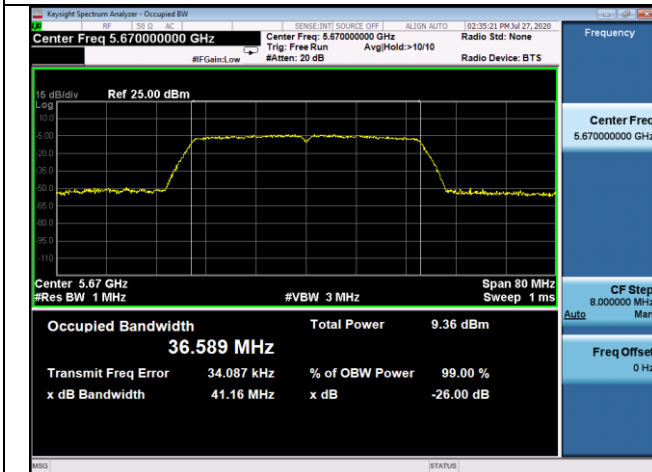
IEEE 802.11ac(VHT20) High Channel



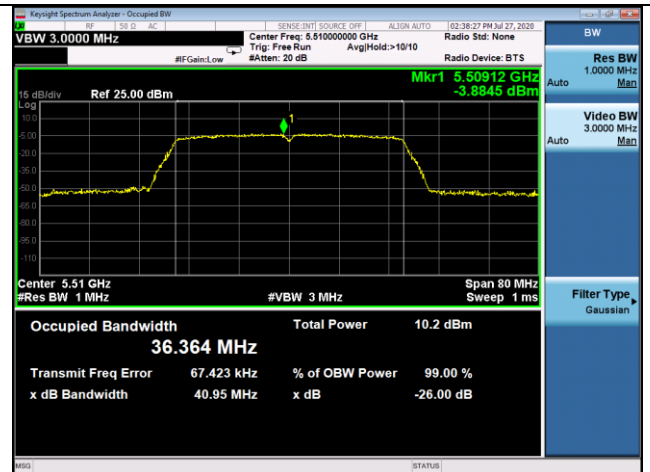
IEEE 802.11n(HT40) Low Channel



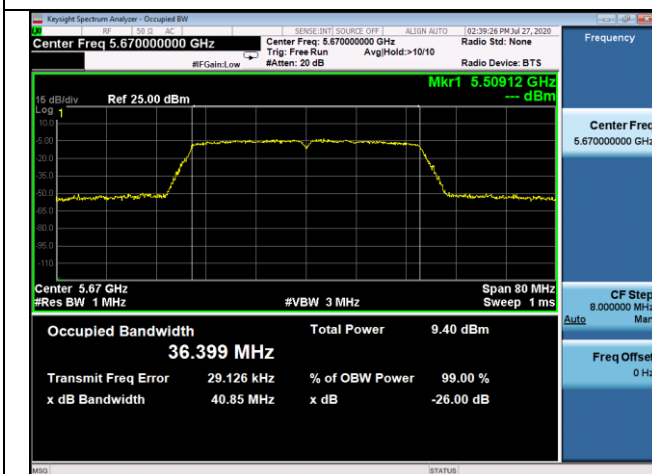
IEEE 802.11n(HT40) High Channel



IEEE 802.11ac(VHT40) Low Channel



IEEE 802.11ac(VHT40) High Channel



IEEE 802.11ac(VHT80)

