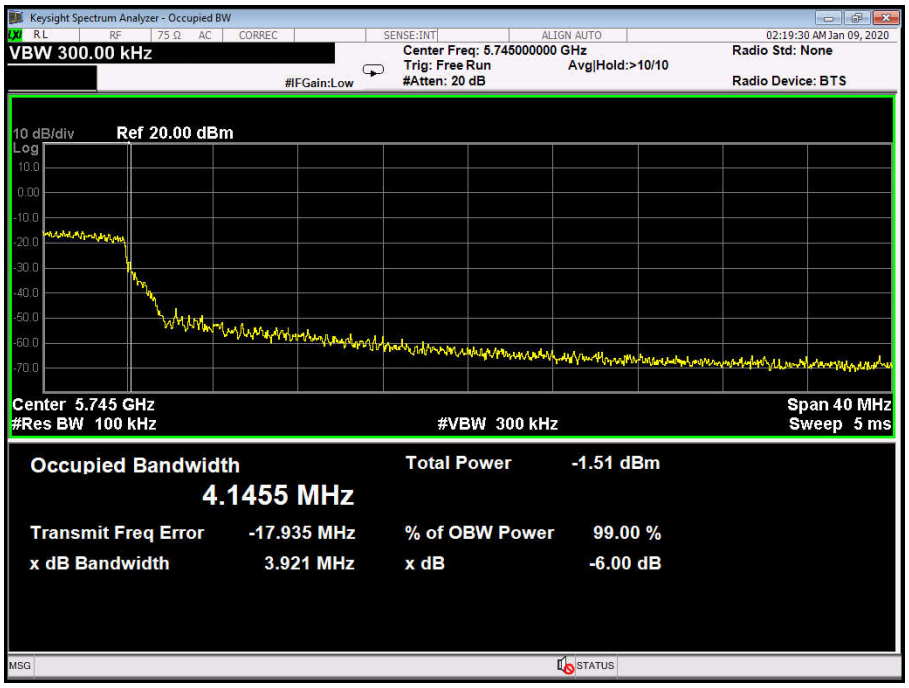
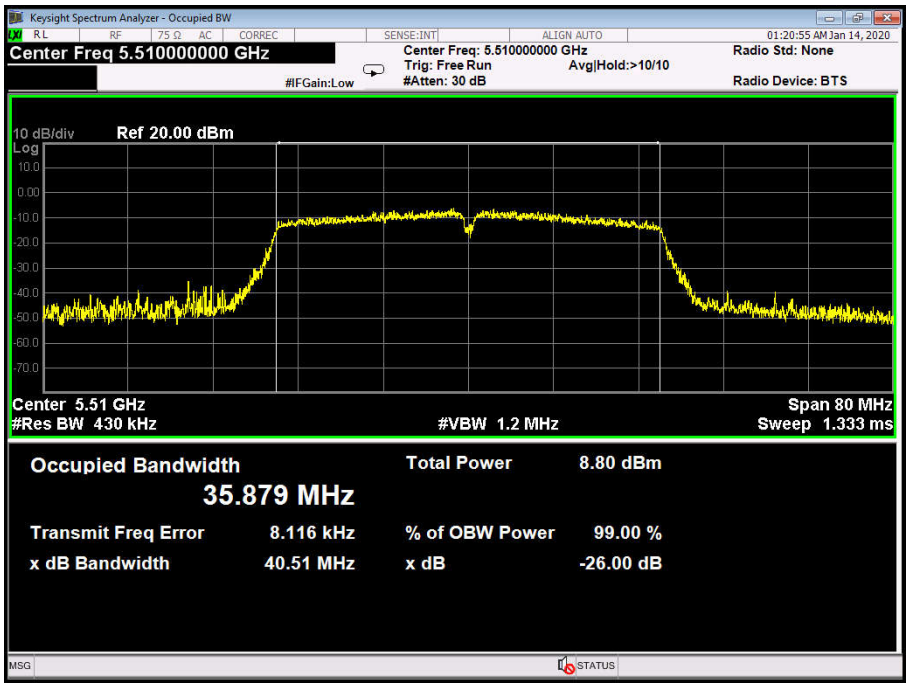
802.11ac(VHT20) Mode

5720 MHz Straddle 5.725-5.85GHz

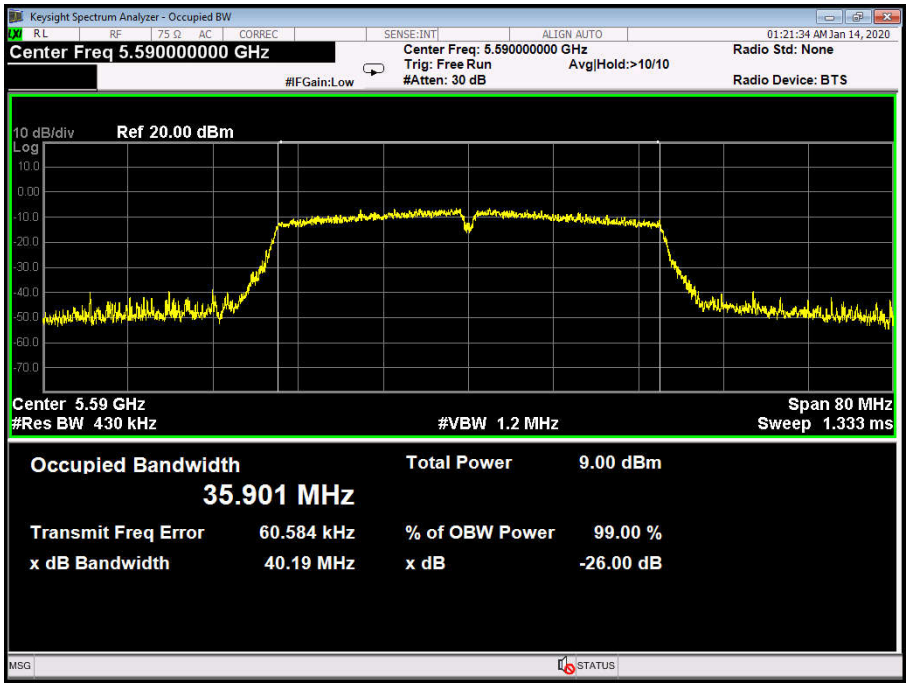


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11N(HT40) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	40.51	35.879
118	5590	40.19	35.901
142	5670	39.99	35.982
802.11N(HT40) Mode			
5510 MHz			



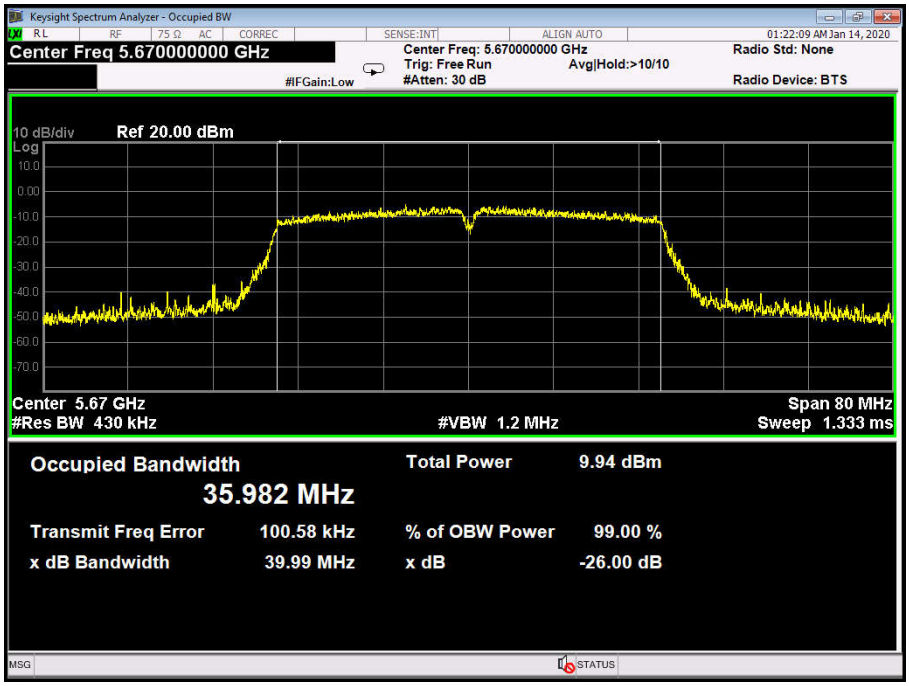
802.11N(HT40) Mode

5590 MHz



802.11N(HT40) Mode

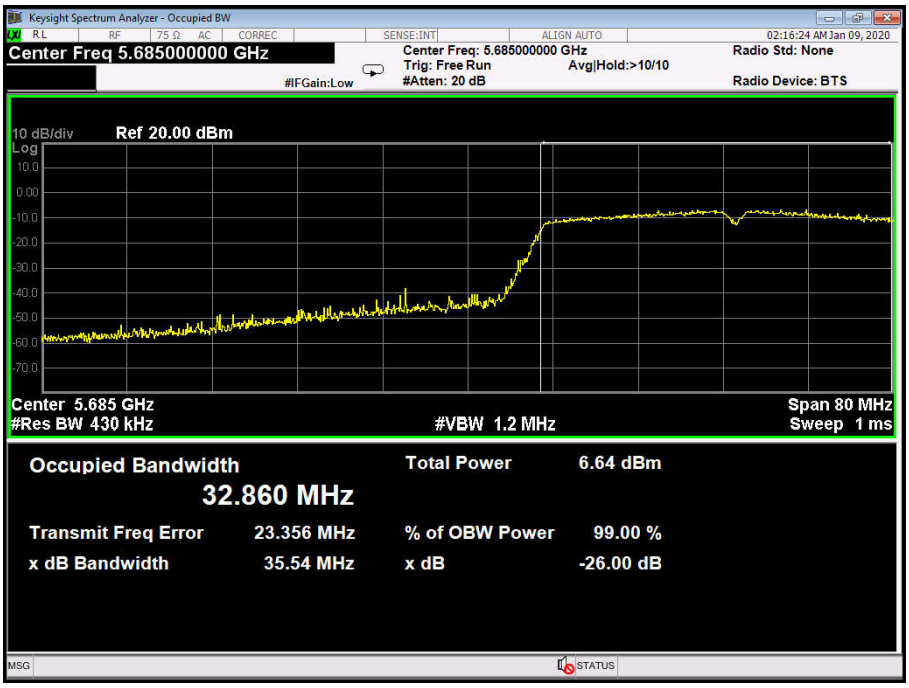
5670 MHz



Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	DC 3.8V			
Test Mode:	TX 802.11n(HT40) Mode (U-NII-2C)			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
142	5710	35.54	----	32.860
		----	3.233	3.9912

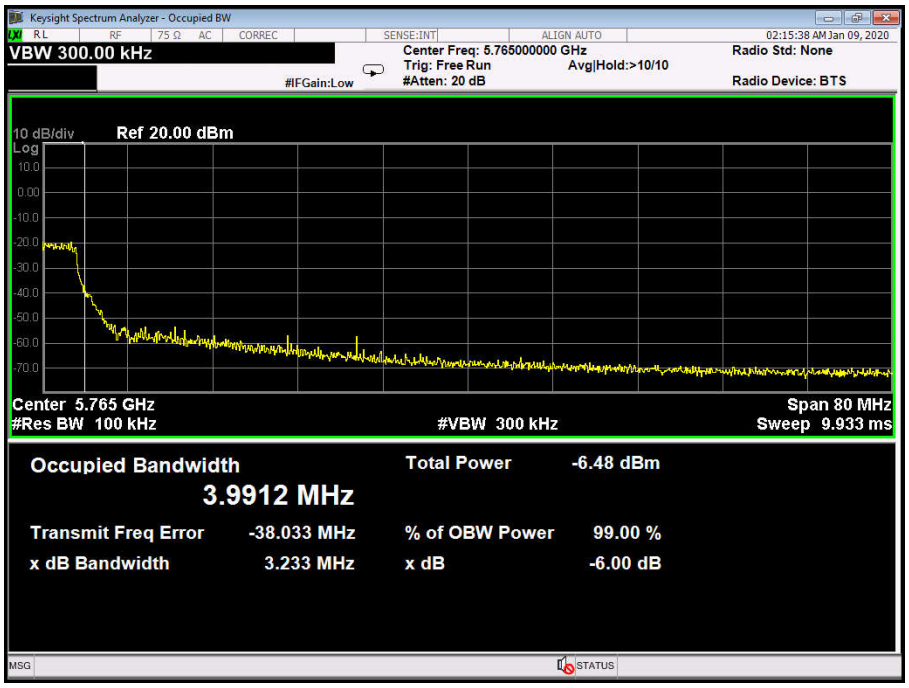
802.11n(HT40) Mode

5710 MHz Straddle 5.47-5.725GHz

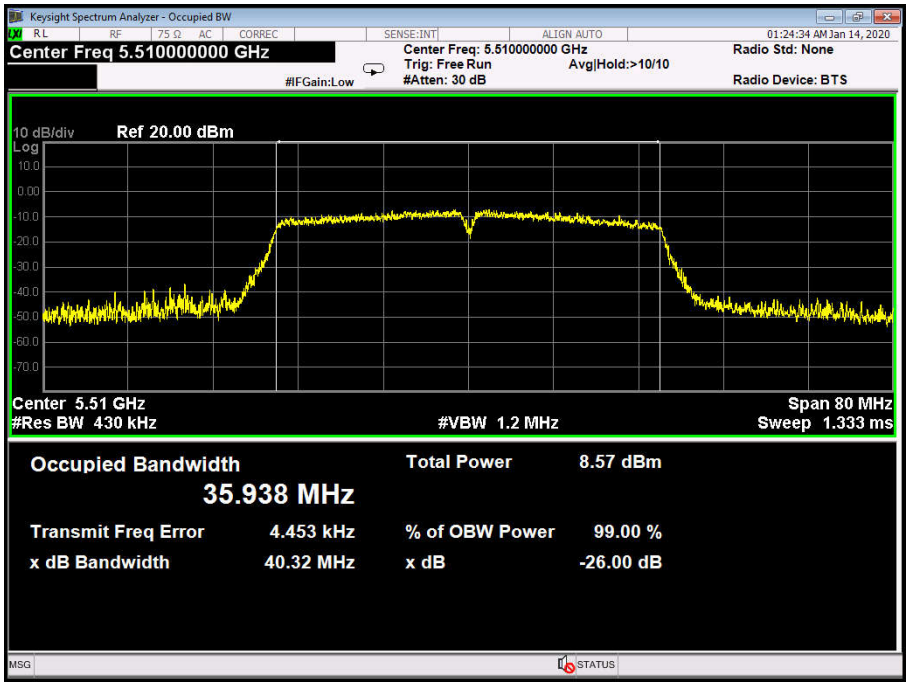


802.11n(HT40) Mode

5710 MHz Straddle 5.725-5.85GHz

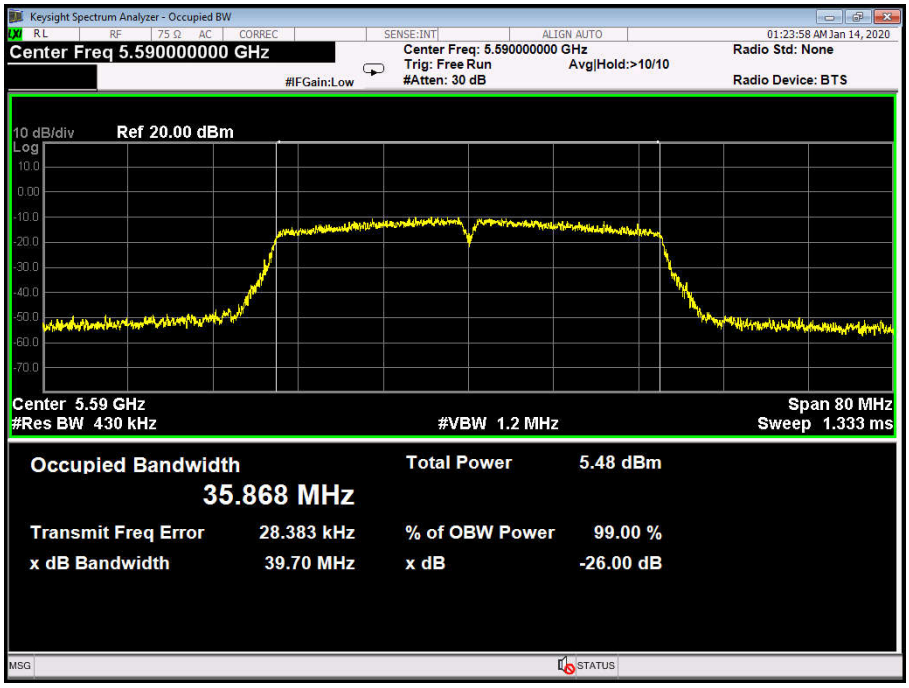


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11 ac(VHT40) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	40.32	35.938
118	5590	39.70	35.868
142	5670	40.08	35.921
802.11ac(VHT40) Mode			
5510 MHz			



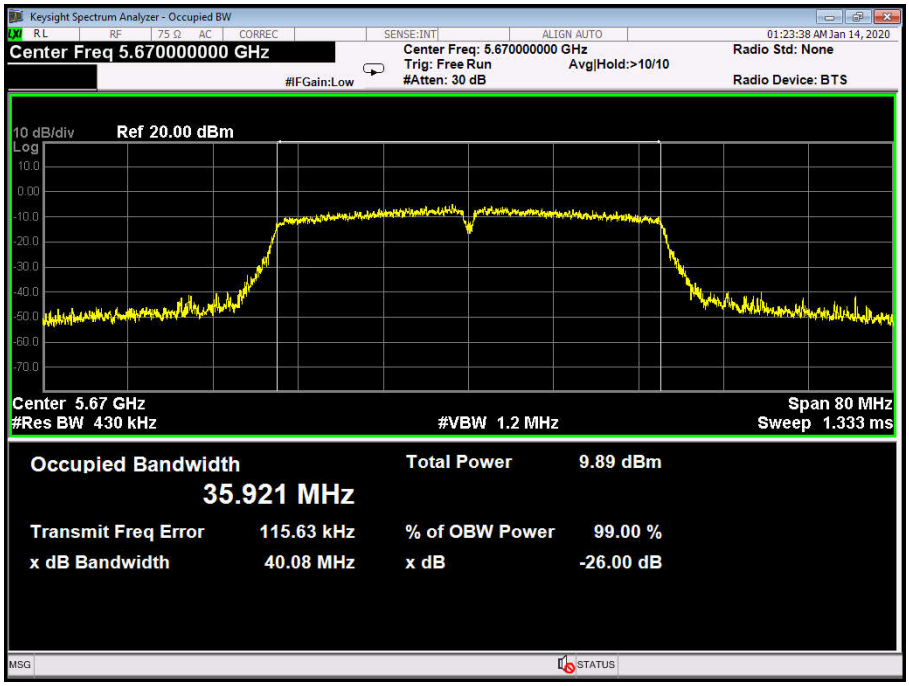
802.11ac(VHT40) Mode

5590 MHz



802.11ac(VHT40) Mode

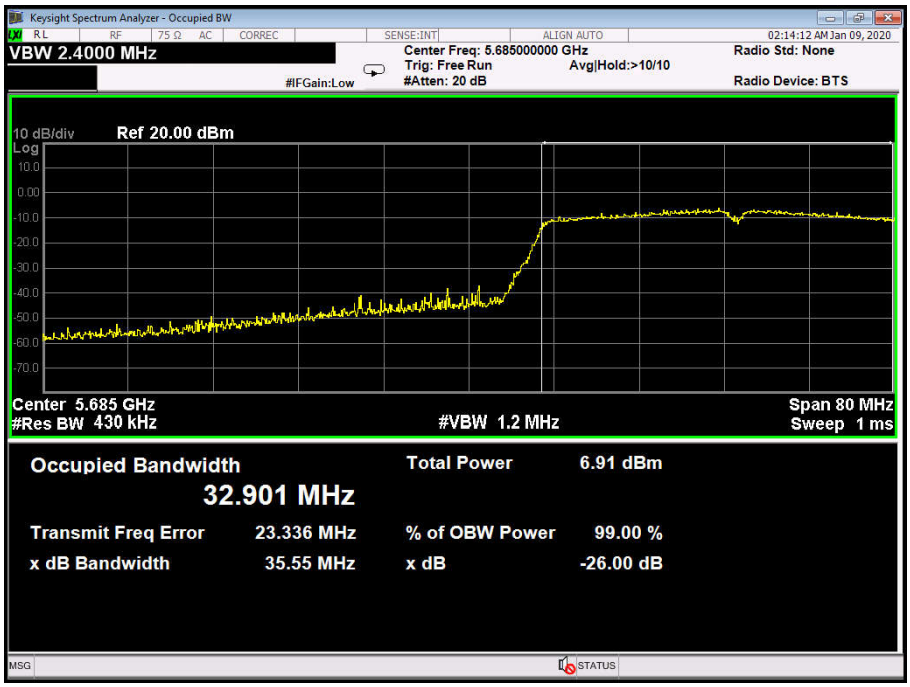
5670 MHz



Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	DC 3.8V			
Test Mode:	TX 802.11ac(VHT40) Mode (U-NII-2C)			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
142	5710	35.55	---	32.901
		----	3.283	5.2179

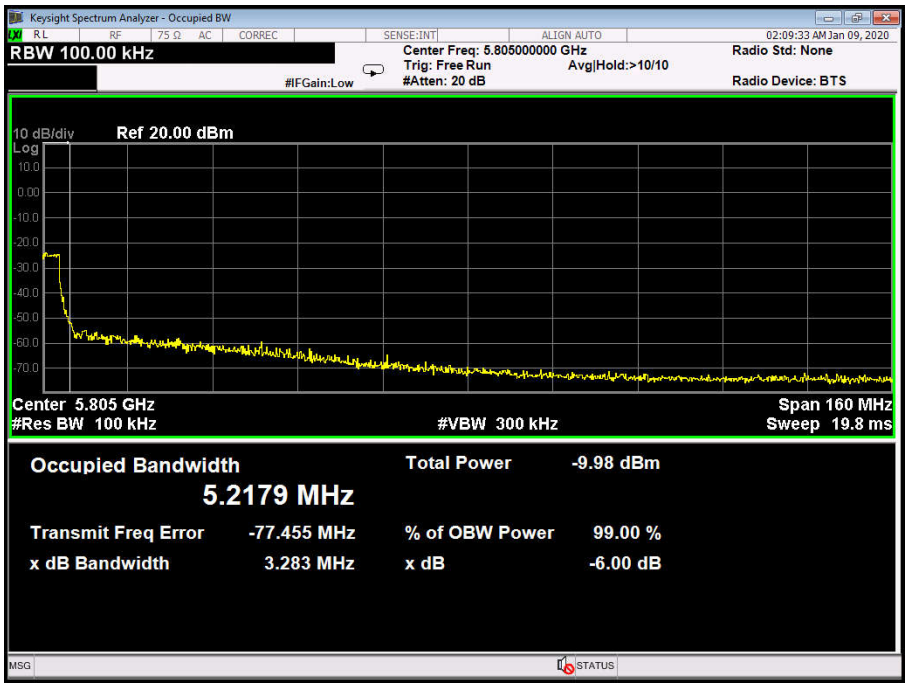
802.11ac(VHT40) Mode

5710 MHz Straddle 5.47-5.725GHz

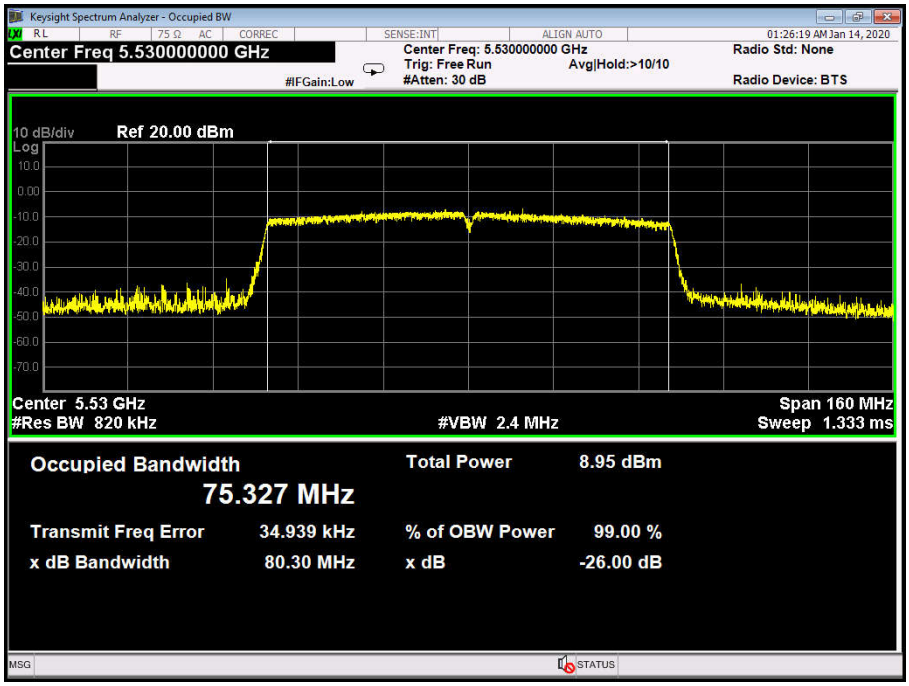


802.11ac(VHT40) Mode

5710 MHz Straddle 5.725-5.85GHz

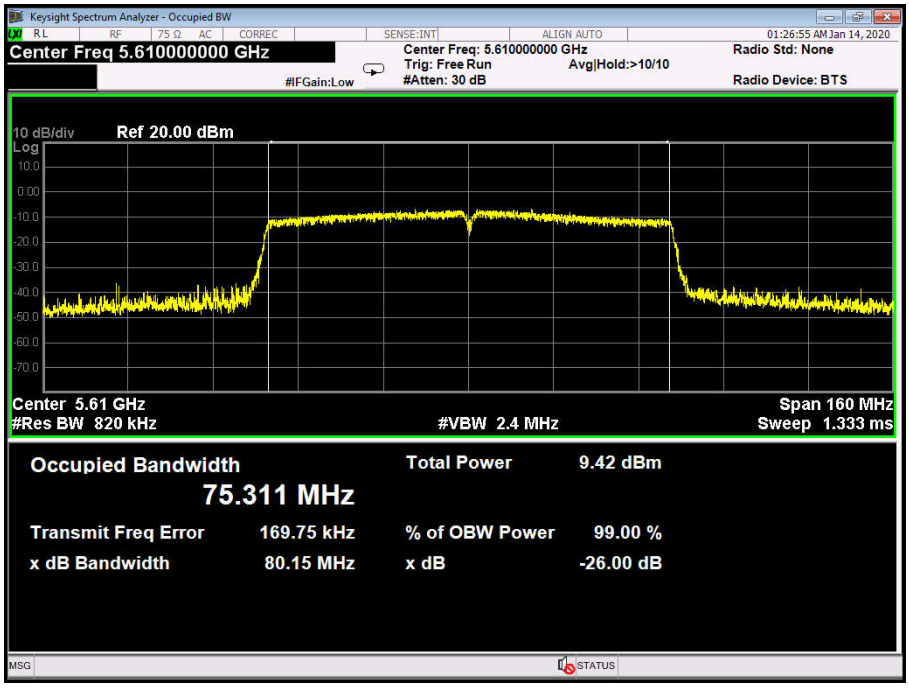


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11 ac(VHT80) Mode (U-NII-2C)		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
106	5530	80.30	75.327
122	5610	80.15	75.311
138	5690	79.99	75.223
802.11ac(VHT80) Mode			
5530 MHz			



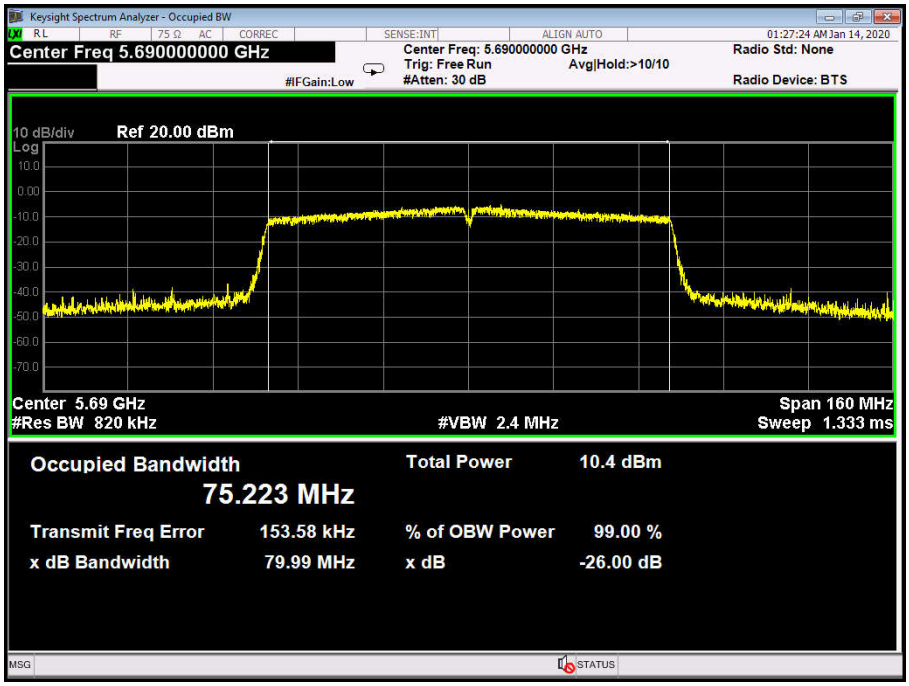
802.11ac(VHT80) Mode

5610 MHz



802.11ac(VHT80) Mode

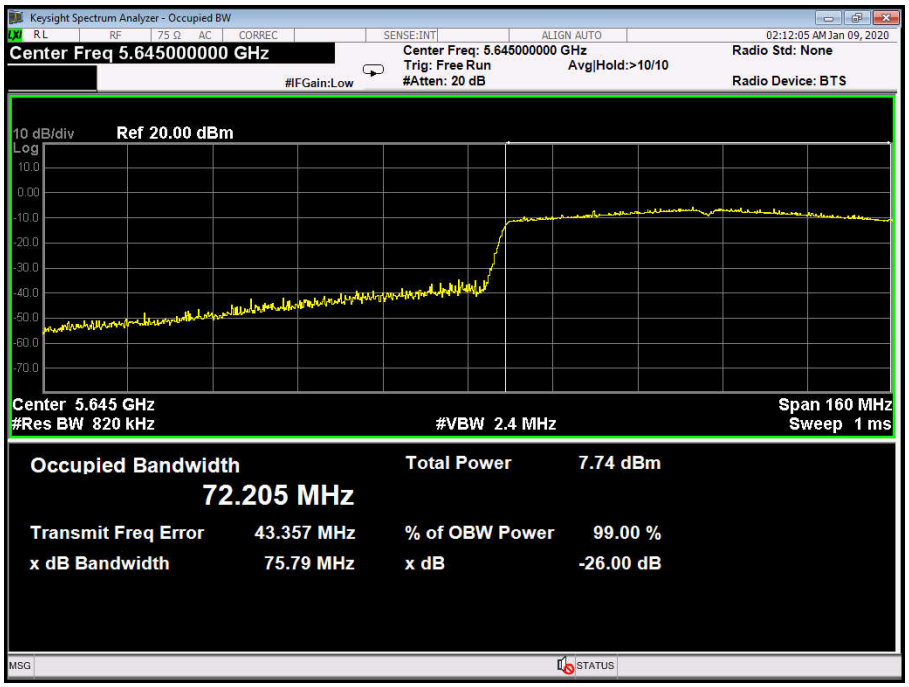
5690 MHz



Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	DC 3.8V			
Test Mode:	TX 802.11ac(HT80) Mode (U-NII-2C)			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
142	5710	75.79	----	72.205
		----	3.284	4.9125

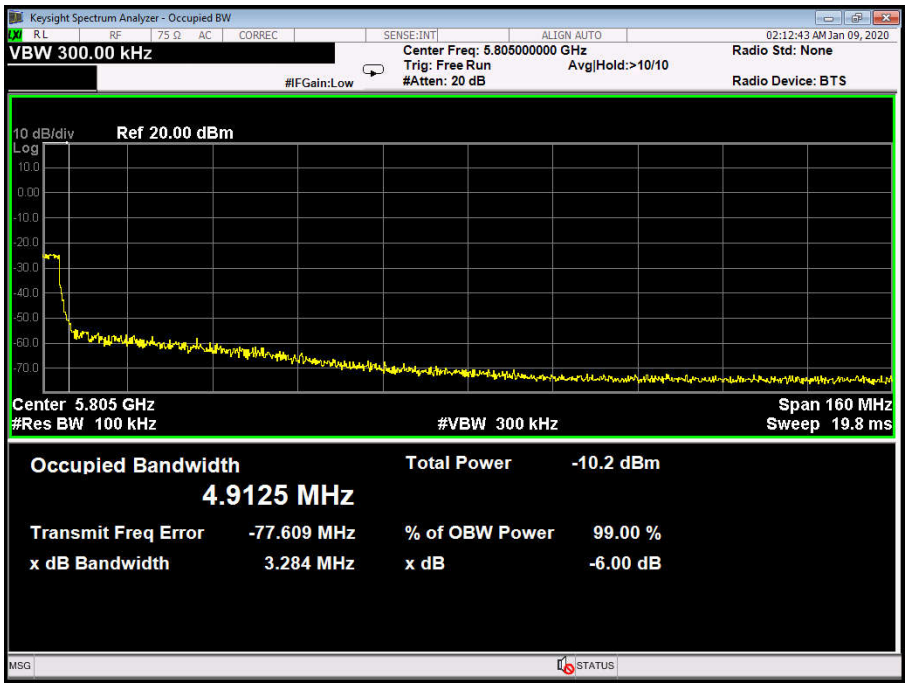
802.11ac(VHT80) Mode

5710 MHz Straddle 5.47-5.725GHz



802.11ac(VHT80) Mode

5690 MHz Straddle 5.725-5.85GHz

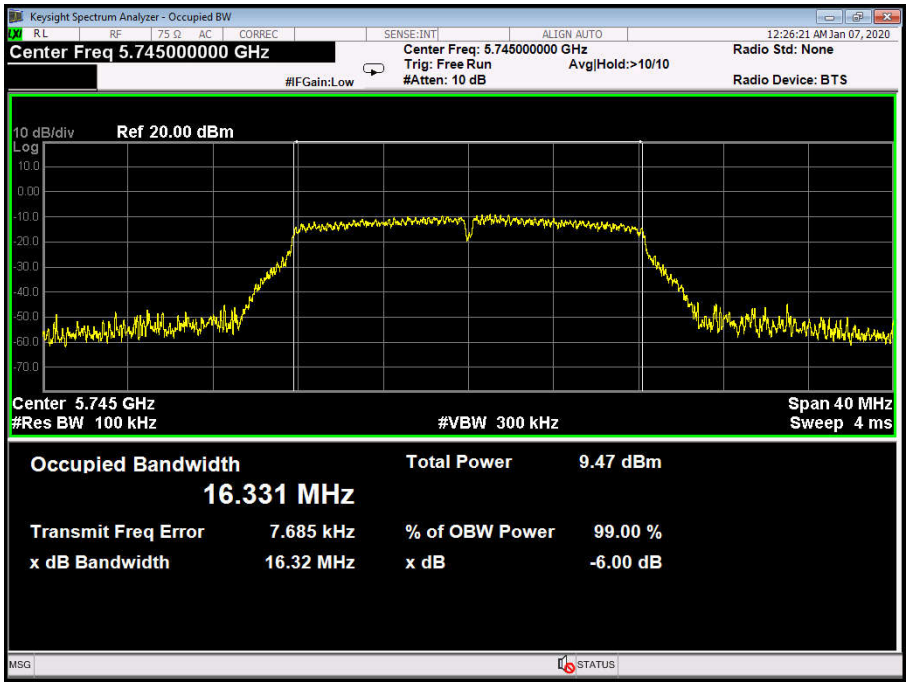


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11a Mode (U-NII-3)		

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	16.32	16.331
157	5785	16.32	17.331
165	5825	16.31	16.343

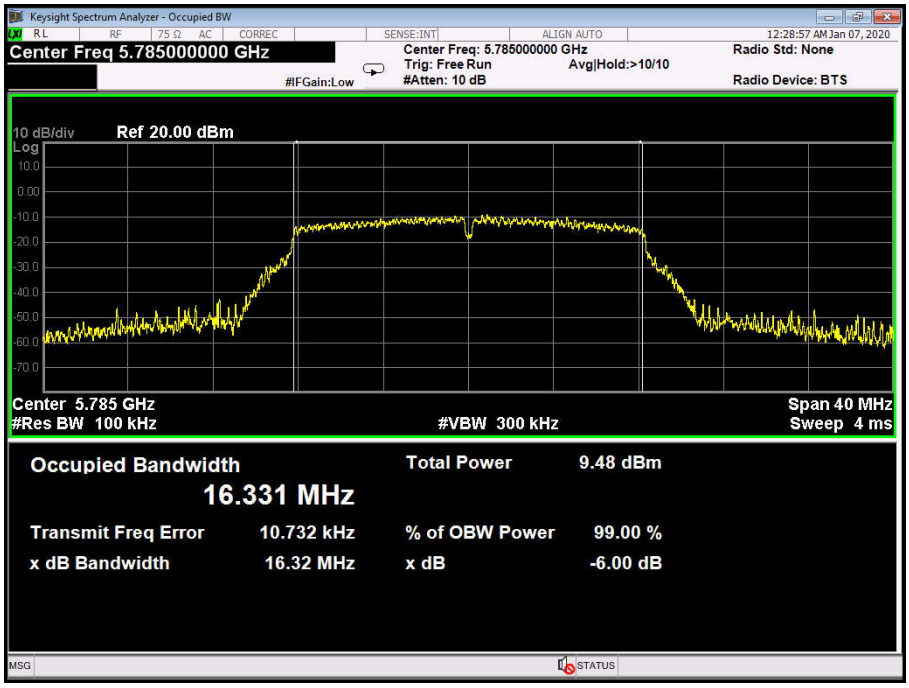
802.11a Mode

5745 MHz



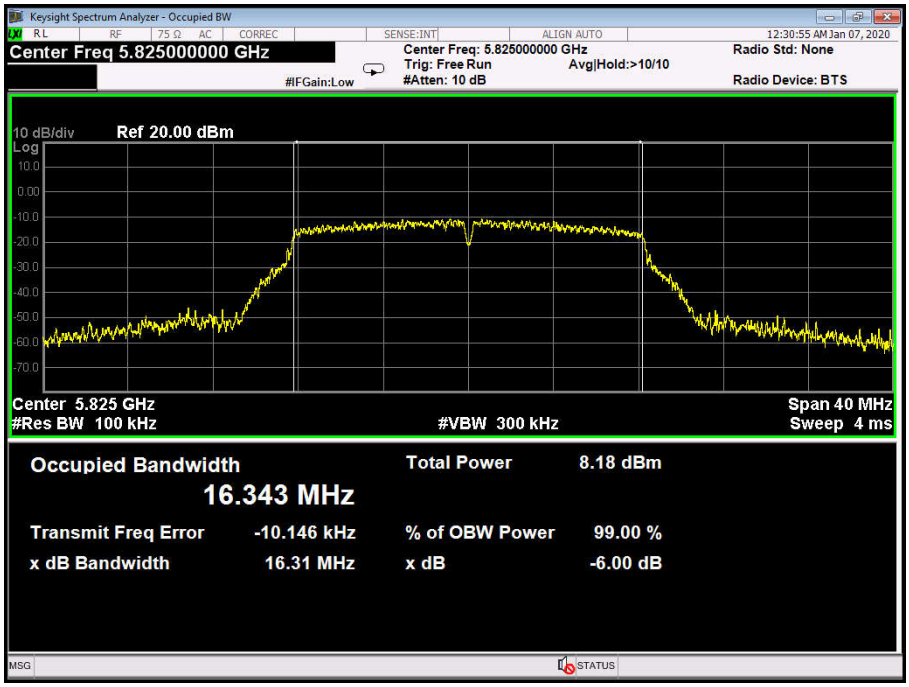
802.11a Mode

5785 MHz

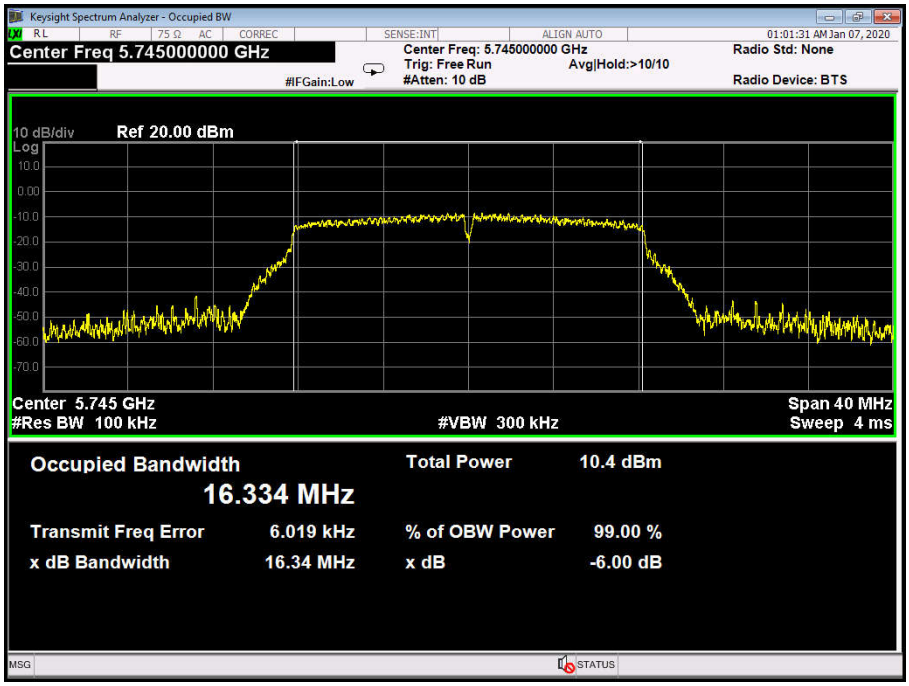


802.11a Mode

5825 MHz

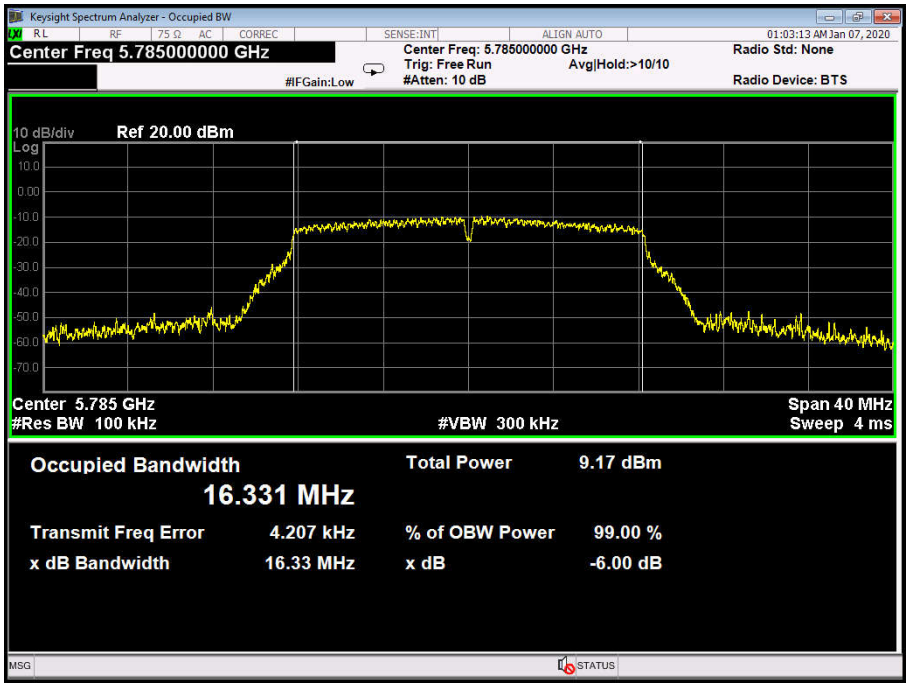


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11n(HT20) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	16.34	16.334
157	5785	16.33	16.331
165	5825	16.36	16.357
802.11n(HT20) Mode			
5745 MHz			



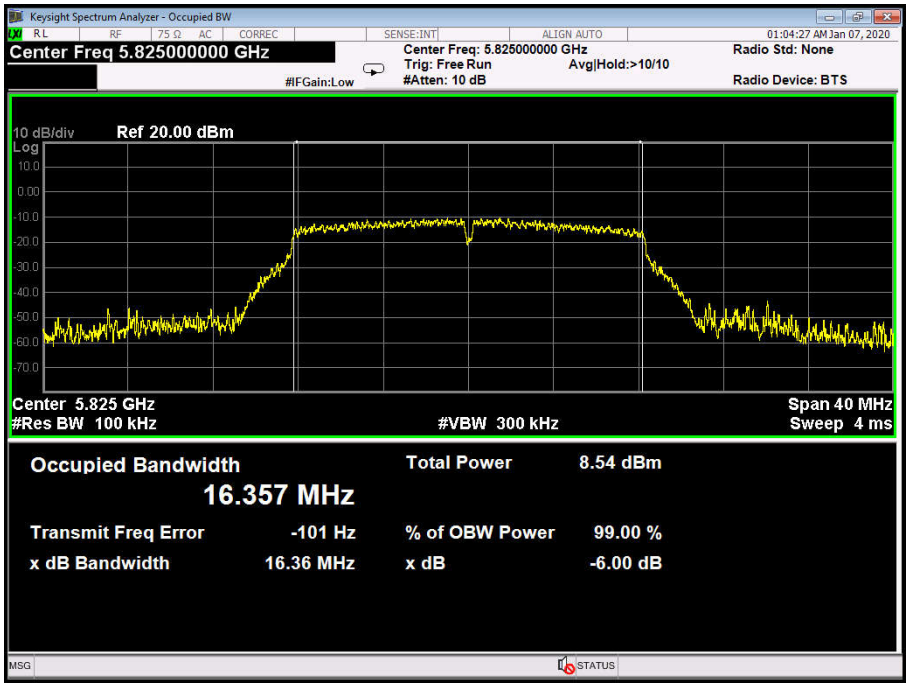
802.11n(HT20) Mode

5785 MHz

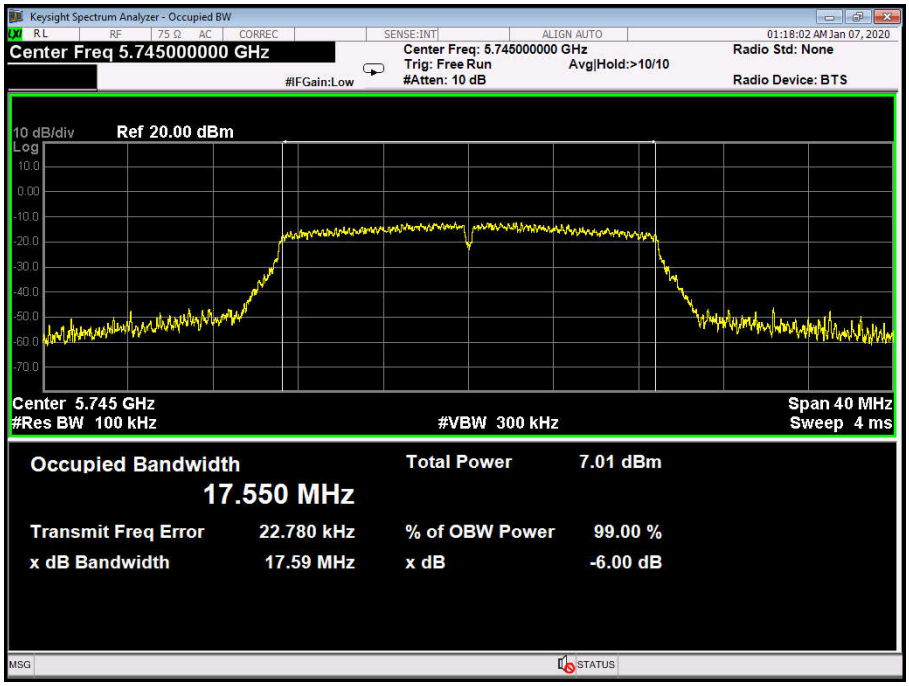


802.11n(HT20) Mode

5825 MHz

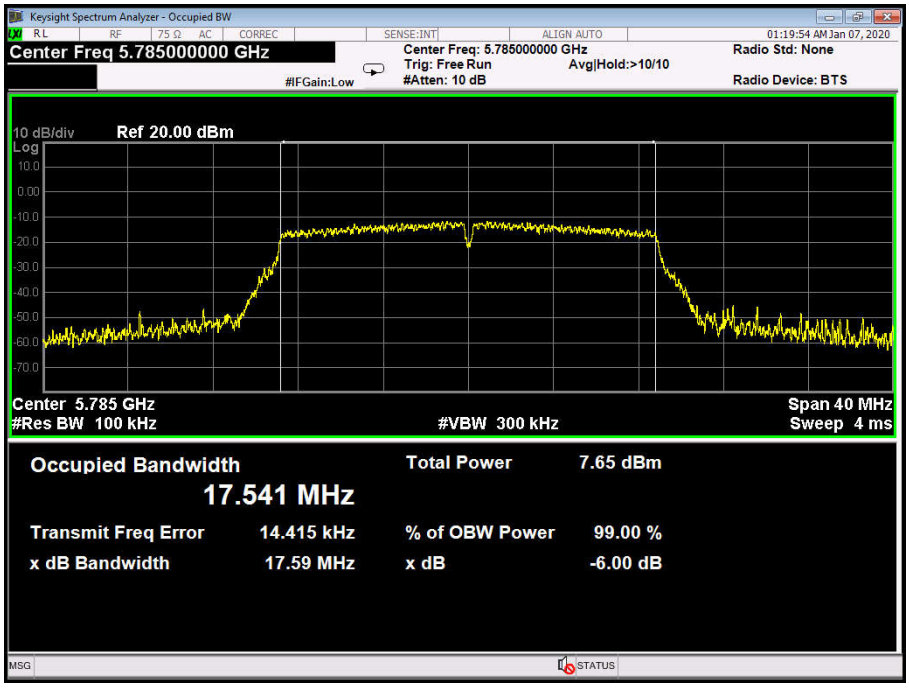


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11ac(VHT20) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	17.59	17.550
157	5785	17.59	17.541
165	5825	17.58	17.550
802.11ac(VHT20) Mode			
5745 MHz			



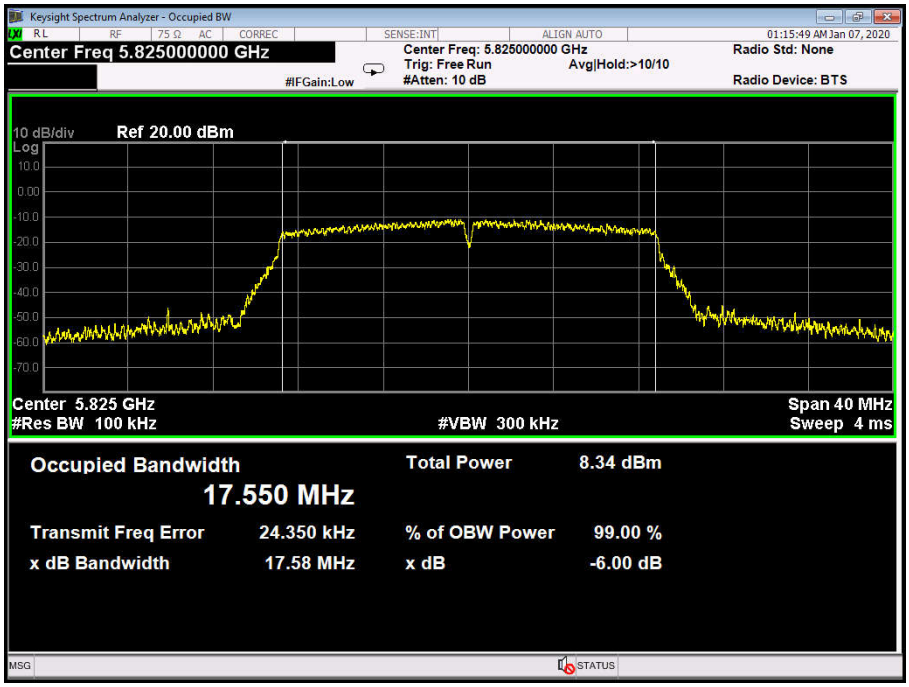
802.11ac(VHT20) Mode

5785 MHz

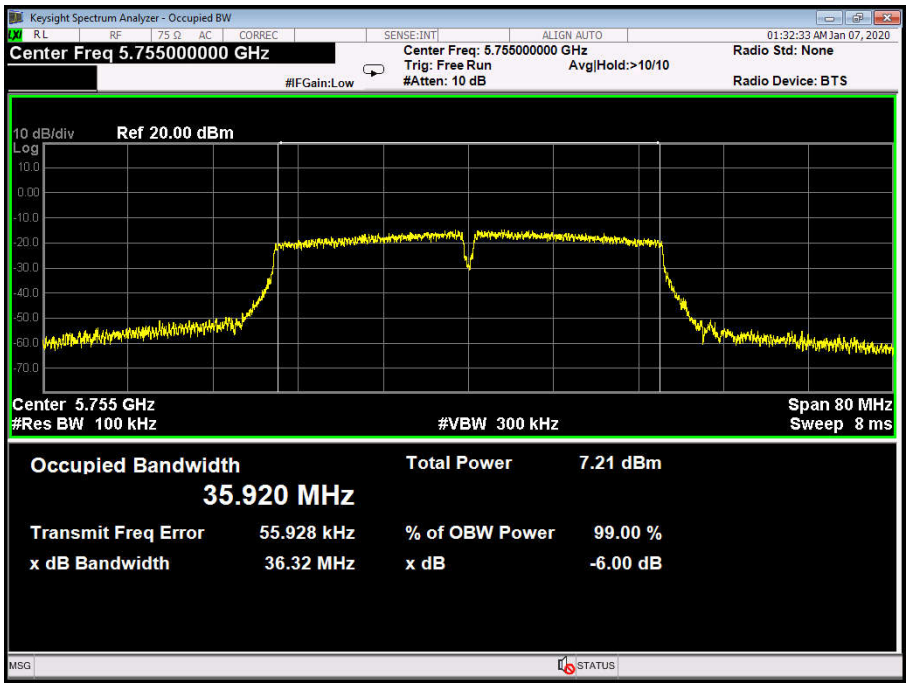


802.11ac(VHT20) Mode

5825 MHz

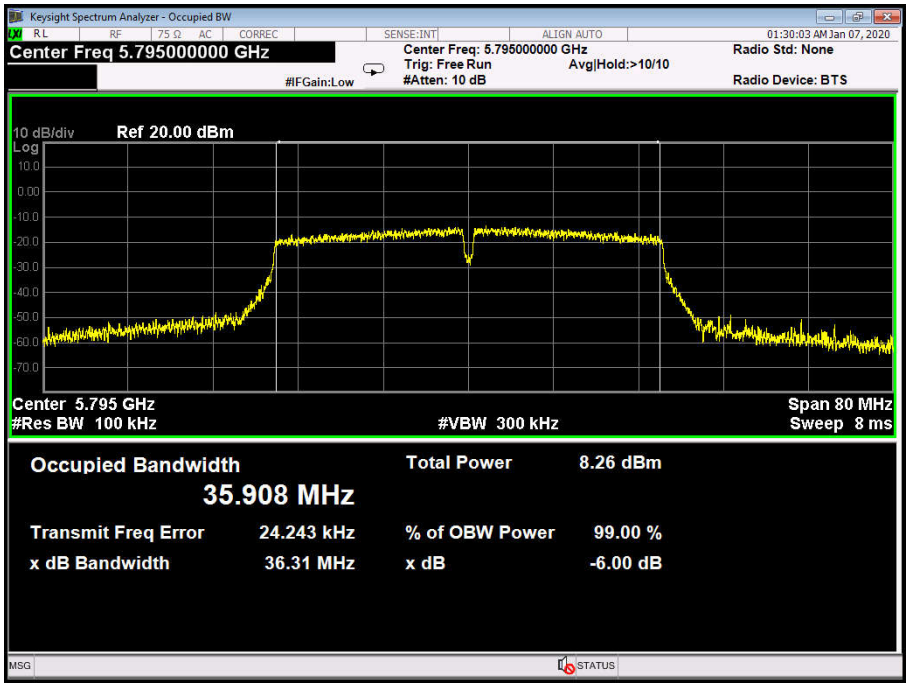


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11n(HT40) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	36.32	35.920
159	5795	36.31	35.908
802.11n(HT40) Mode			
5755 MHz			

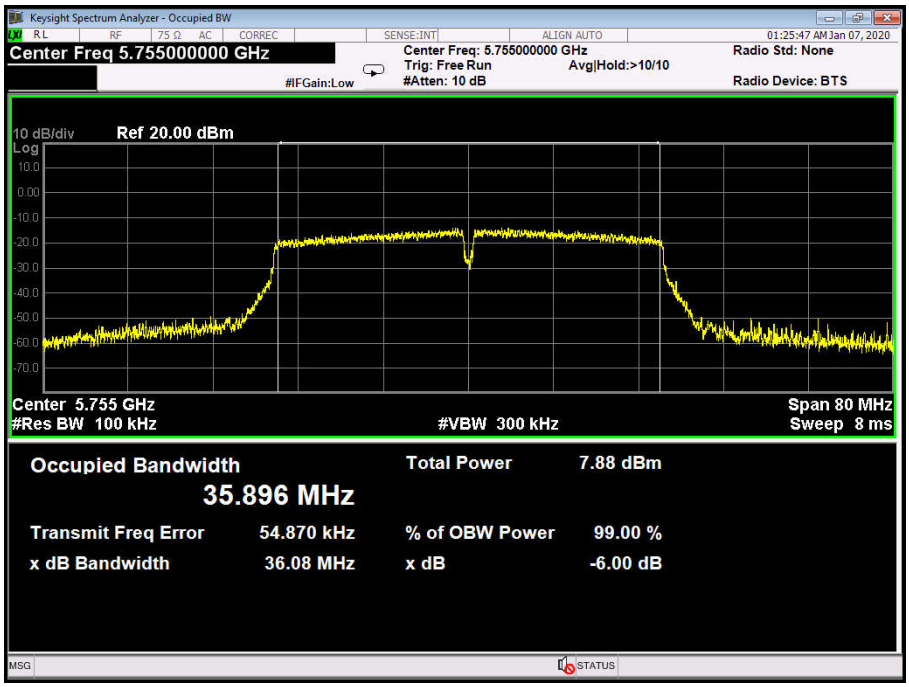


802.11n(HT40) Mode

5795 MHz

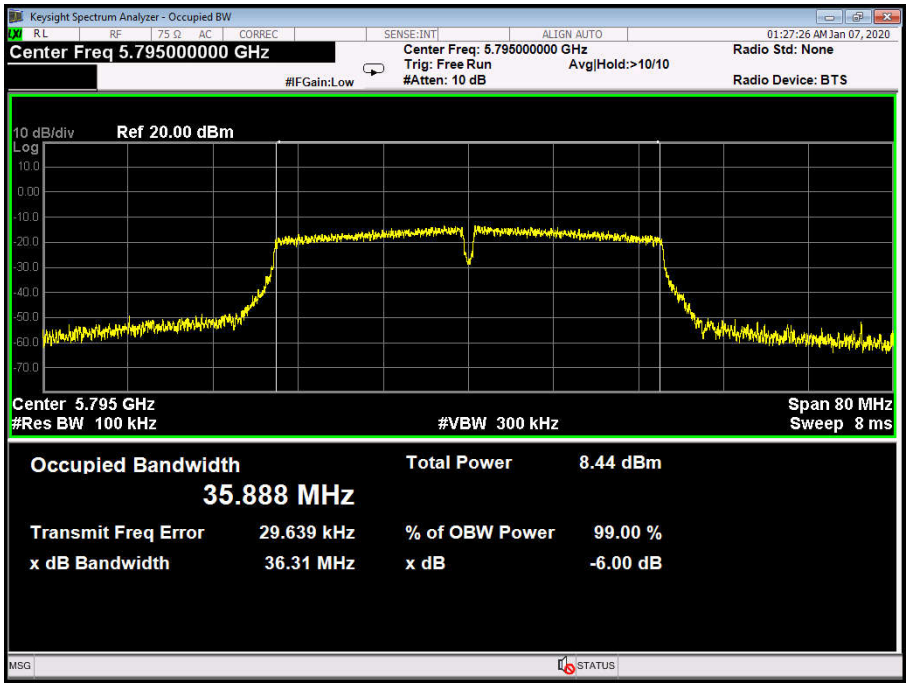


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11ac(VHT40) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	36.08	35.896
159	5795	36.31	35.888
802.11ac(VHT40) Mode			
5755 MHz			

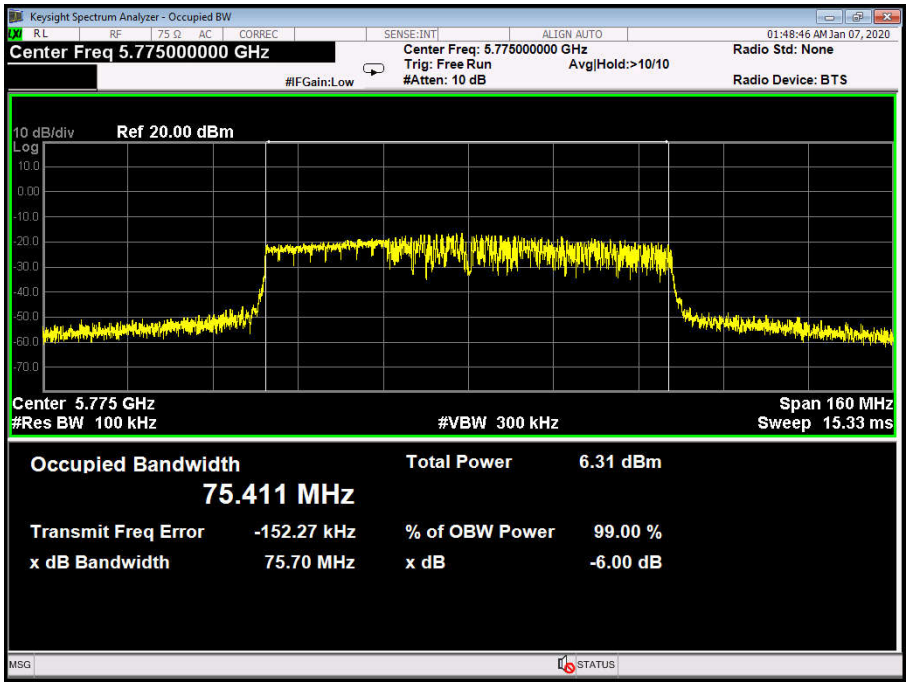


802.11ac(VHT40) Mode

5795 MHz



Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		
Test Mode:	TX 802.11ac(HT80) Mode (U-NII-3)		
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
155	5775	75.70	75.411
802.11ac(VHT80) Mode			
5775 MHz			



Attachment E--AVG Output Power Test Data

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		

U-NII-1

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5180	16.29	0	16.29	24
	5200	16.51	0	16.51	
	5240	16.35	0	16.35	
802.11n (HT20)	5180	16.48	0	16.48	
	5200	16.44	0	16.44	
	5240	16.80	0	16.80	
802.11ac (VHT20)	5180	16.37	0	16.37	
	5200	16.14	0	16.14	
	5240	16.46	0	16.46	
802.11n (HT40)	5190	16.45	0	16.45	
	5230	16.82	0	16.82	
802.11 ac(VHT40)	5190	16.44	0	16.44	
	5230	16.67	0	16.67	
802.11 ac(VHT80)	5210	16.53	0	16.53	

Result: PASS

Remark:
the Directional Gain=2.92dBi＜6 dBi.
So P_{out} =P_{limit}=24dBm

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		

U-NII-2A

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5260	15.98	0	15.98	24
	5280	15.96	0	15.96	
	5320	16.07	0	16.07	
802.11n (HT20)	5260	15.83	0	15.83	
	5280	15.69	0	15.69	
	5320	16.83	0	16.83	
802.11ac (VHT20)	5260	15.87	0	15.87	
	5280	15.64	0	15.64	
	5320	15.91	0	15.91	
802.11n (HT40)	5270	16.09	0	16.09	
	5310	15.78	0	15.78	
802.11 ac(VHT40)	5270	15.80	0	15.80	
	5310	15.57	0	15.57	
802.11 ac(VHT80)	5290	15.74	0	15.74	

Result: PASS

Remark:
the Directional Gain=2.92dBi＜6 dBi.
So P_{out} =P_{limit}=24dBm

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		

U-NII-2C

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5500	15.93	0	15.93	24
	5600	13.34	0	13.34	
	5720	15.89	0	15.89	
802.11n (HT20)	5500	15.18	0	15.18	
	5600	13.54	0	13.54	
	5720	15.41	0	15.41	
802.11ac (VHT20)	5500	15.65	0	15.65	
	5600	12.52	0	12.52	
	5720	13.48	0	13.48	
802.11n (HT40)	5510	15.65	0	15.65	
	5590	12.52	0	12.52	
	5710	13.48	0	13.48	
802.11 ac(VHT40)	5510	16.07	0	16.07	
	5590	13.22	0	13.22	
	5710	15.40	0	15.40	
802.11 ac(VHT80)	5530	14.76	0	14.76	
	5610	13.08	0	13.08	
	5690	14.63	0	14.63	

Result: PASS

Remark:
the Directional Gain=2.92dBi＜6 dBi.
So P_{out} =P_{limit}=24dBm

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		

U-NII-2C

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a 5720MHz Straddle 5.47-5.725GHz		13.78	0	13.78	**24**
802.11a 5720MHz Straddle 5.725-5.85GHz		6.57	0	6.57	**30**
802.11n(HT20) 5720MHz Straddle 5.47-5.725GHz		13.58	0	13.58	**24**
802.11n(HT20) 5720MHz Straddle 5.725-5.85GHz		6.48	0	6.48	**30**
802.11ac(VHT20) 5720MHz Straddle 5.47-5.725GHz		14.02	0	14.02	**24**
802.11ac(VHT20) 5720MHz Straddle 5.725-5.85GHz		6.78	0	6.78	**30**
802.11n(HT40) 5710MHz Straddle 5.47-5.725GHz		14.93	0	14.93	**24**
802.11n(HT40) 5710MHz Straddle 5.725-5.85GHz		3.12	0	3.12	**30**
802.11ac(VHT40) 5710MHz Straddle 5.47-5.725GHz		14.38	0	14.38	**24**
802.11ac(VHT40) 5710MHz Straddle 5.725-5.85GHz		3.07	0	3.07	**30**
802.11ac(VHT80) 5690MHz Straddle 5.47-5.725GHz		13.59	0	13.59	**24**
802.11ac(VHT80) 5690MHz Straddle 5.725-5.85GHz		3.09	0	3.09	**30**
Result: PASS					

Remark:
the Directional Gain=2.92dBi＜6 dBi.
So P_{out} =P_{limit}

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.8V		

U-NII-3

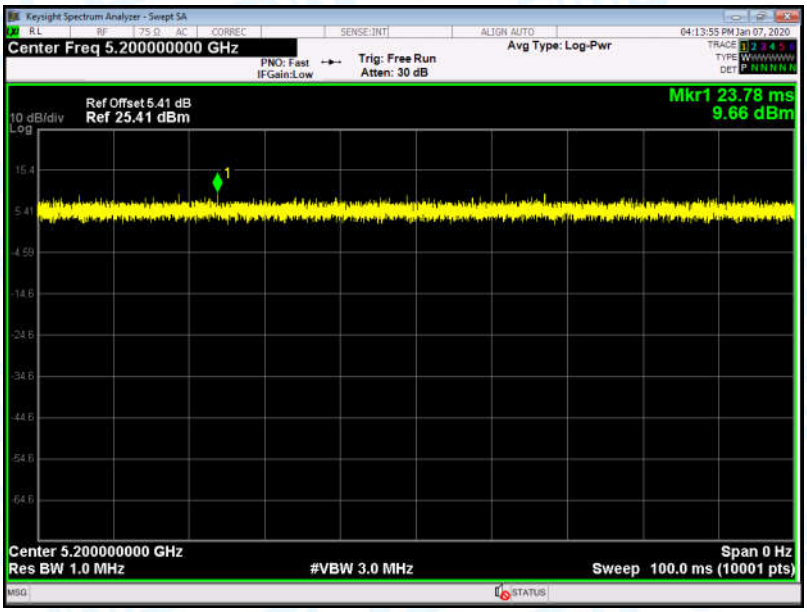
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5745	15.20	0	15.20	30
	5785	15.10	0	15.10	
	5825	13.51	0	13.51	
802.11n (HT20)	5745	16.19	0	16.19	
	5785	14.87	0	14.87	
	5825	13.92	0	13.92	
802.11ac (VHT20)	5745	12.88	0	12.88	
	5785	13.94	0	13.94	
	5825	12.71	0	12.71	
802.11n (HT40)	5755	13.30	0	13.30	
	5795	13.71	0	13.71	
802.11 ac(VHT40)	5755	13.53	0	13.53	
	5795	14.14	0	14.14	
802.11 ac(VHT80)	5775	13.79	0	13.79	

Result: PASS

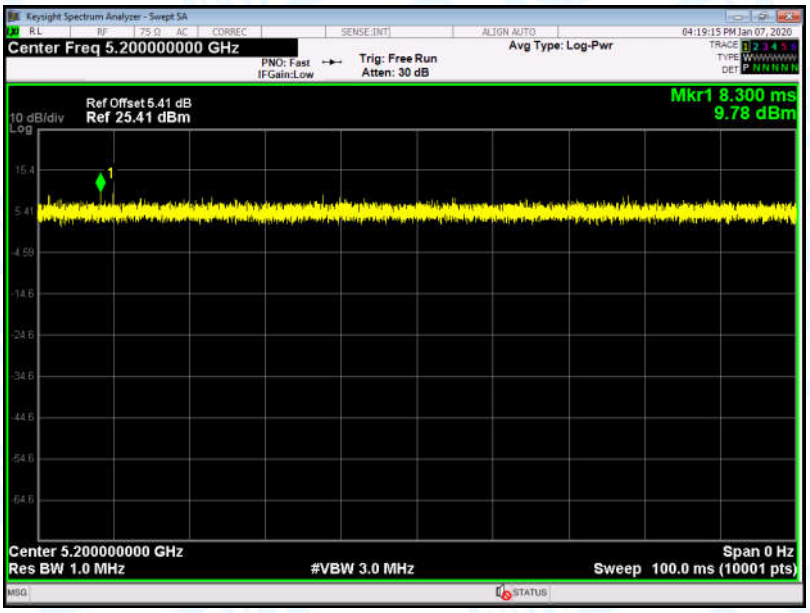
Remark:
the Directional Gain=2.92dBi＜6 dBi.
So P_{out} =P_{limit}=30dBm

Test Mode		Duty cycle
U-NII-1	802.11 a	>98%
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-2A	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-2C	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
U-NII-3	802.11 a	
	802.11 n(HT20)	
	802.11 ac(HT20)	
	802.11 n(HT40)	
	802.11 ac(HT40)	
	802.11 ac(HT80)	
Please see the next plots.		

802.11 a 5200MHz U-NII-1

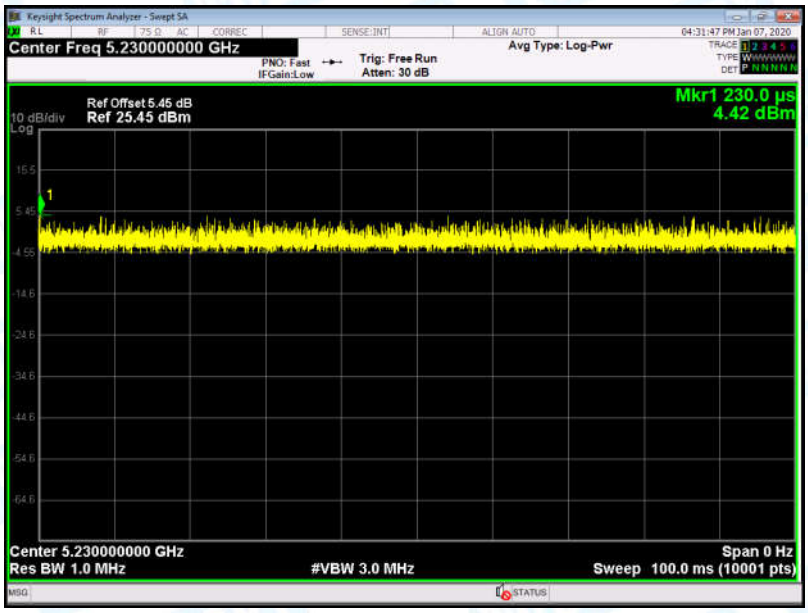


802.11 n(HT20) 5200MHz U-NII-1

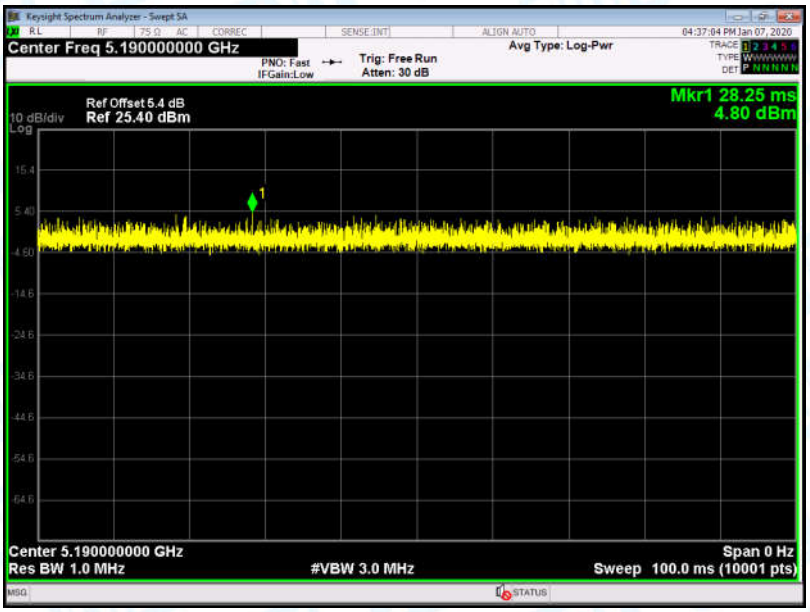


802.11 ac(vHT20) 5200MHz U-NII-1

802.11 n(HT40) 5190MHz U-NII-1

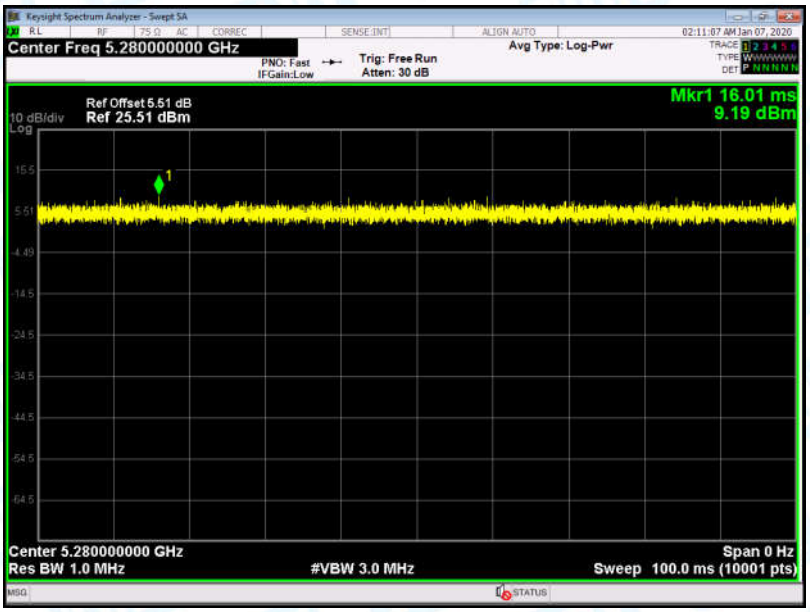


802.11 ac(vHT40) 5190MHz U-NII-1

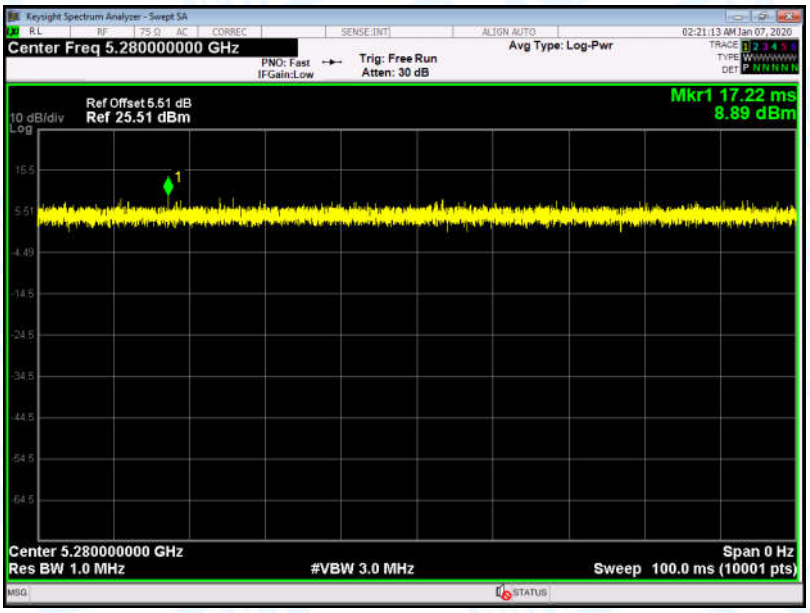


802.11 ac(vHT80) 5210MHz U-NII-1

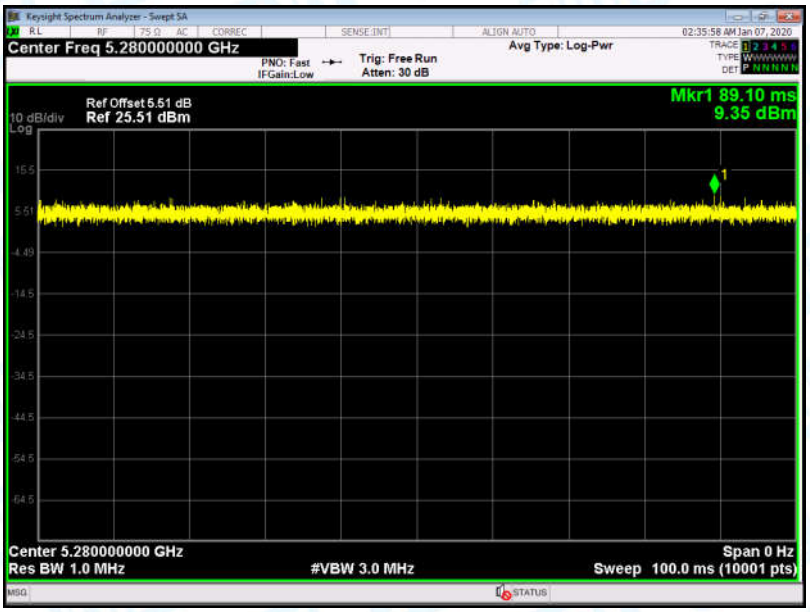
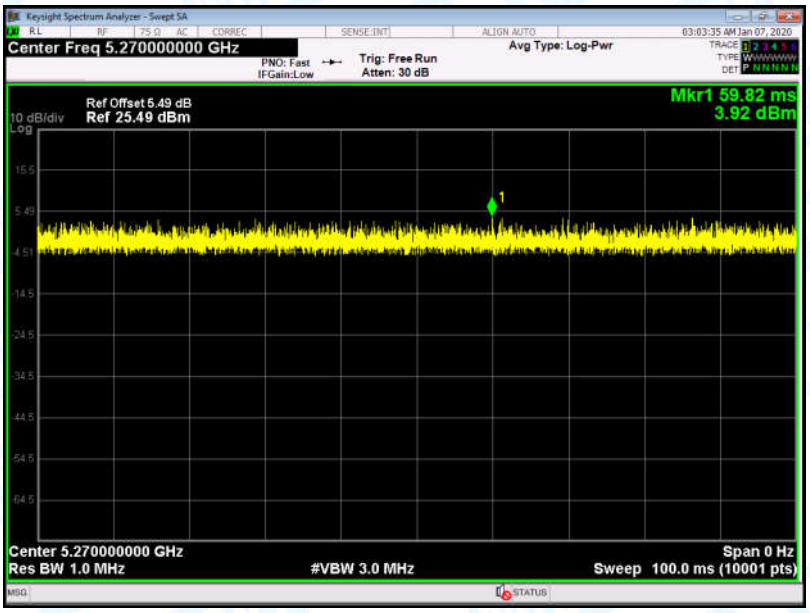
802.11 a 5280MHz U-NII-2A



802.11 n(HT20) 5280MHz U-NII-2A



802.11 ac(vHT20) 5280MHz U-NII-2A



802.11 n(HT40) 5270MHz U-NII-2A