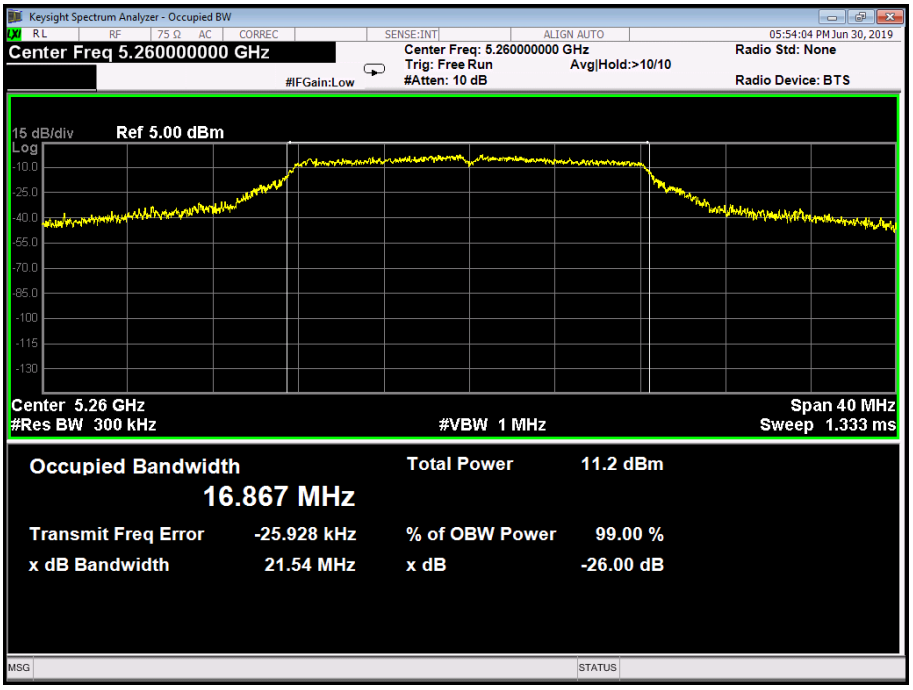
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-2A)		

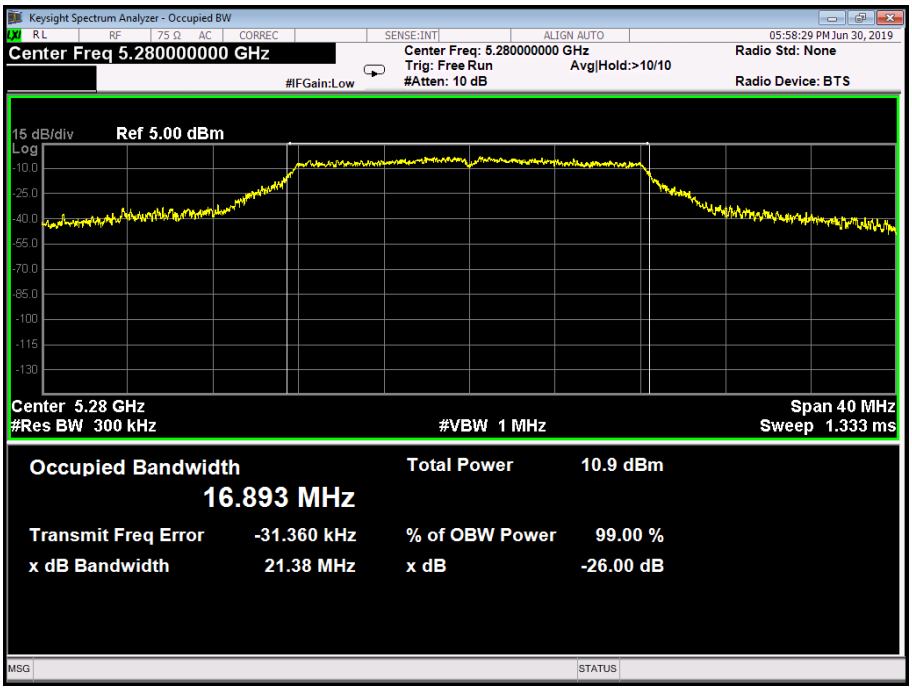
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	21.54	16.867
56	5280	21.38	16.893
64	5320	21.42	16.850

802.11a Mode

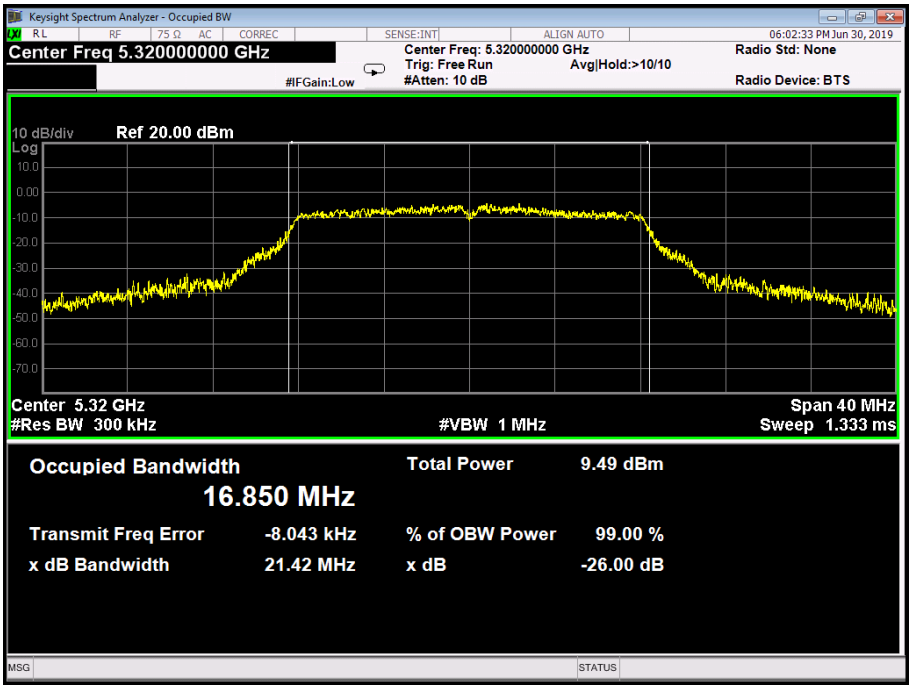
5260 MHz



802.11a Mode
5280 MHz



802.11a Mode
5320 MHz

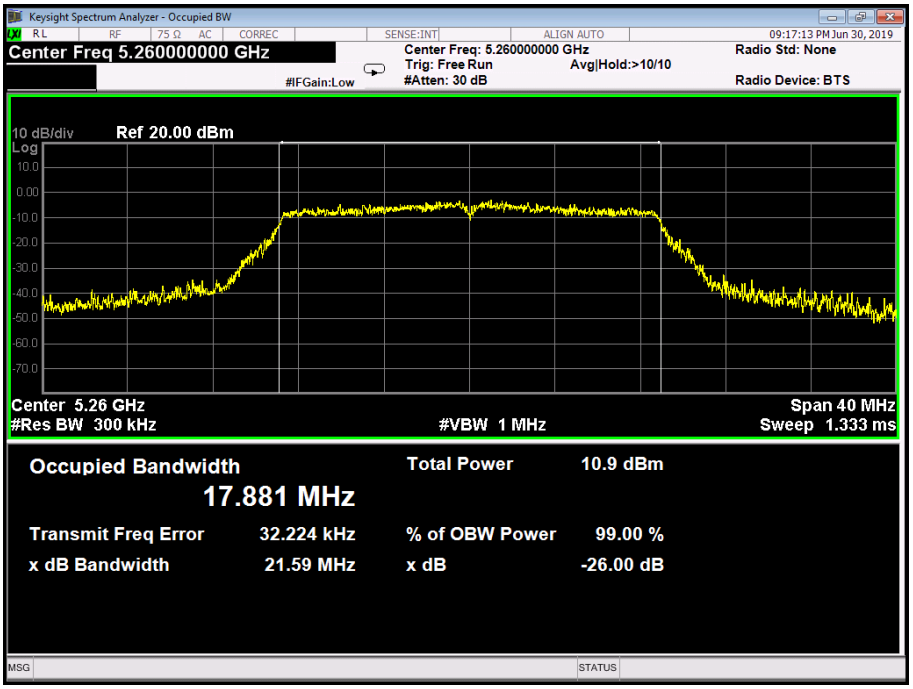


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(HT20) Mode (U-NII-2A)		

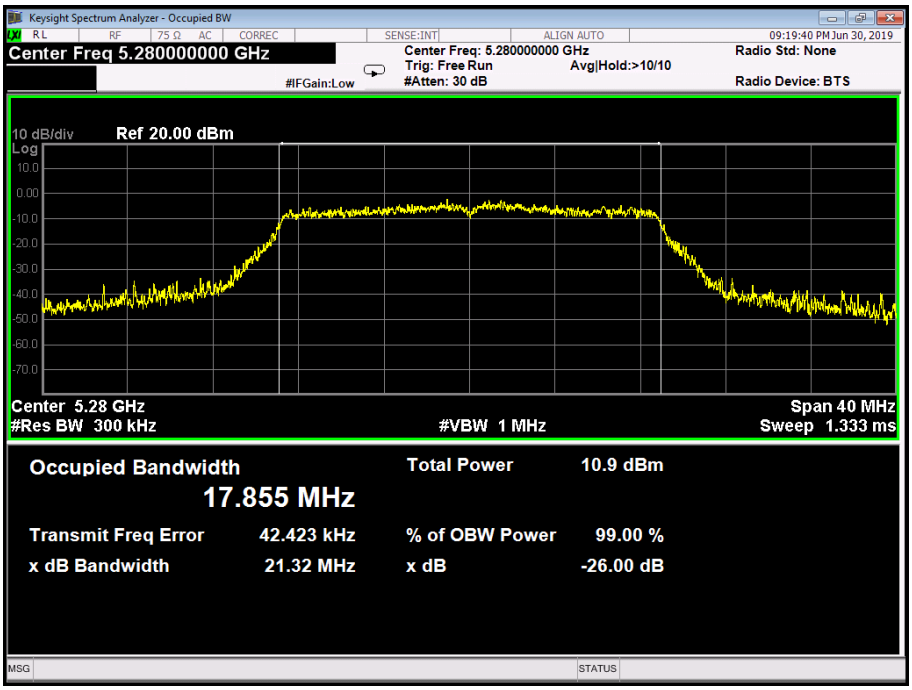
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	21.59	17.881
56	5280	21.32	17.855
64	5320	21.55	17.917

802.11n(HT20) Mode

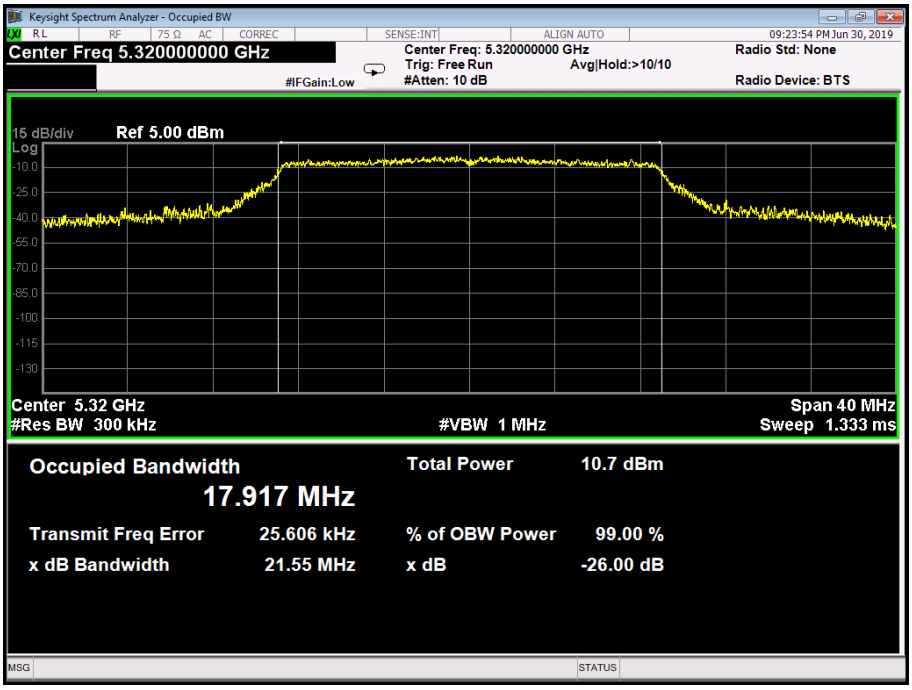
5260 MHz



802.11n(HT20) Mode
5280 MHz



802.11n(HT20) Mode
5320 MHz

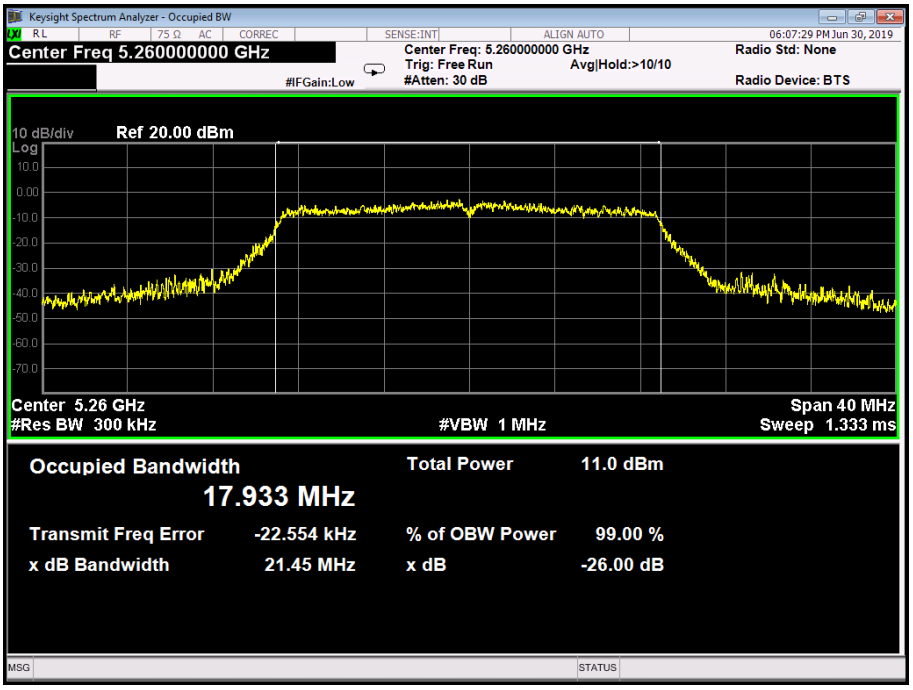


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-2A)		

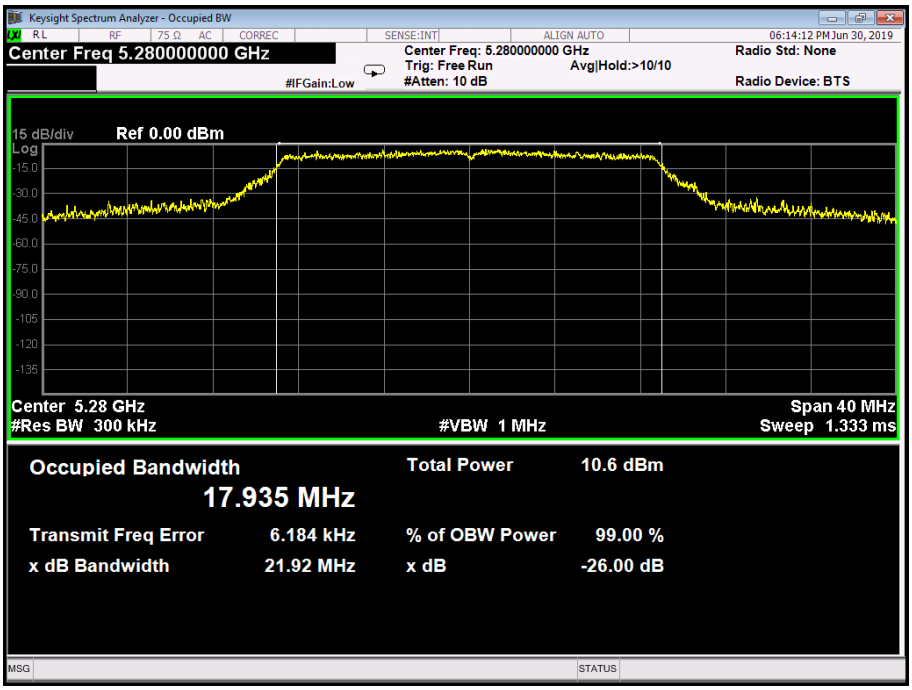
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
52	5260	21.45	17.933
56	5280	21.92	17.935
64	5320	25.23	18.114

802.11ac(20) Mode

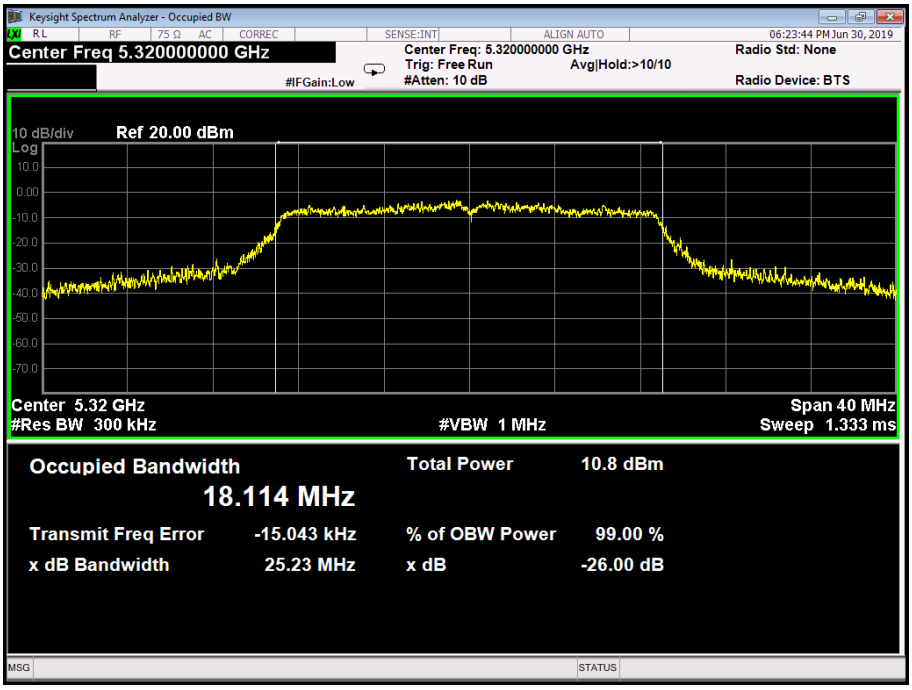
5260 MHz



802.11ac(20) Mode
5280 MHz



802.11ac(20) Mode
5320 MHz

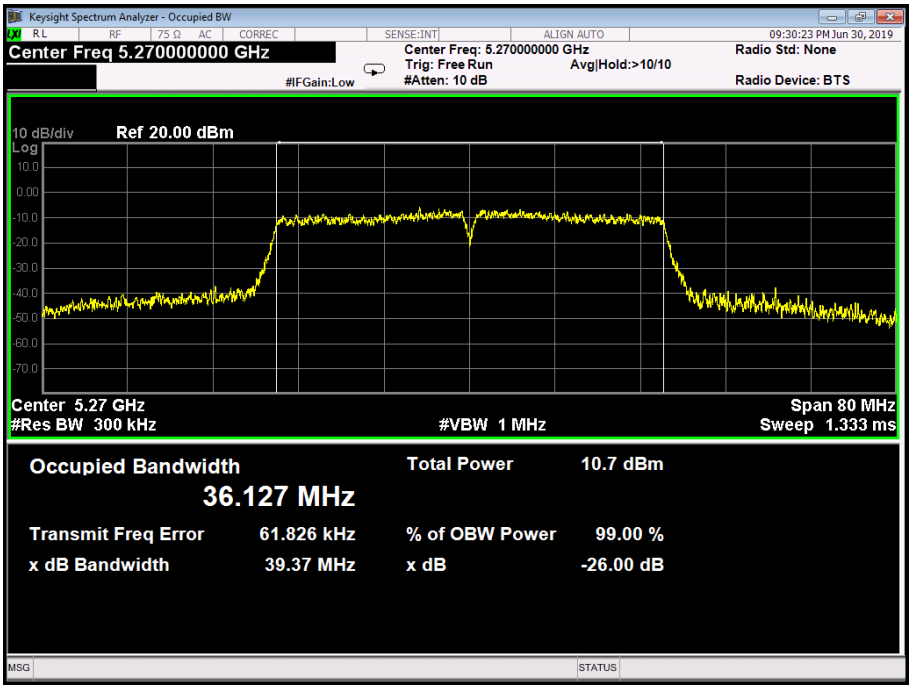


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode (U-NII-2A)		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
54	5270	39.37	36.127
62	5310	38.76	36.086

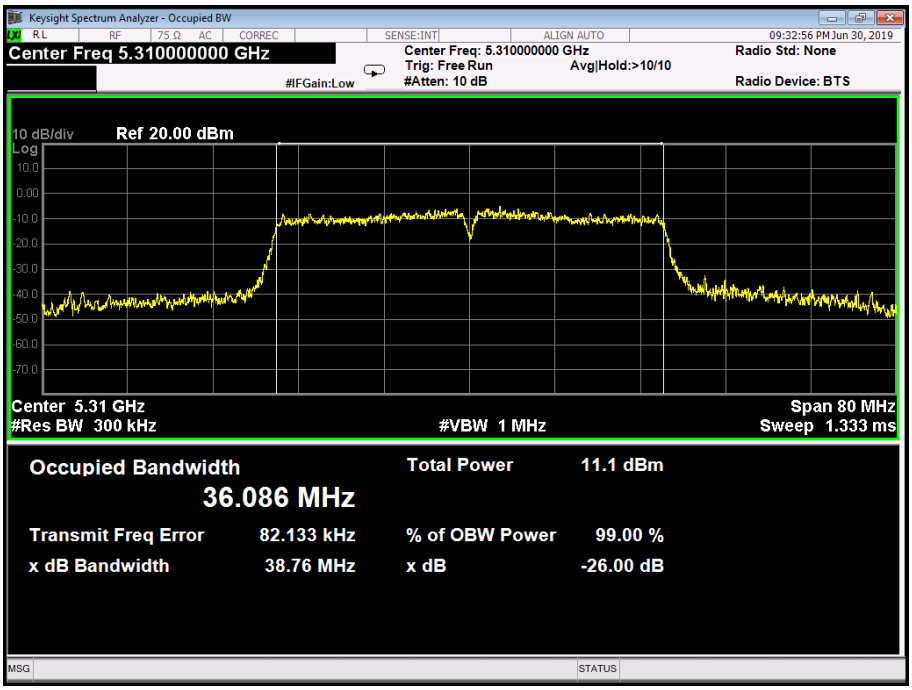
802.11N(HT40) Mode

5270 MHz



802.11N(HT40) Mode

5310 MHz

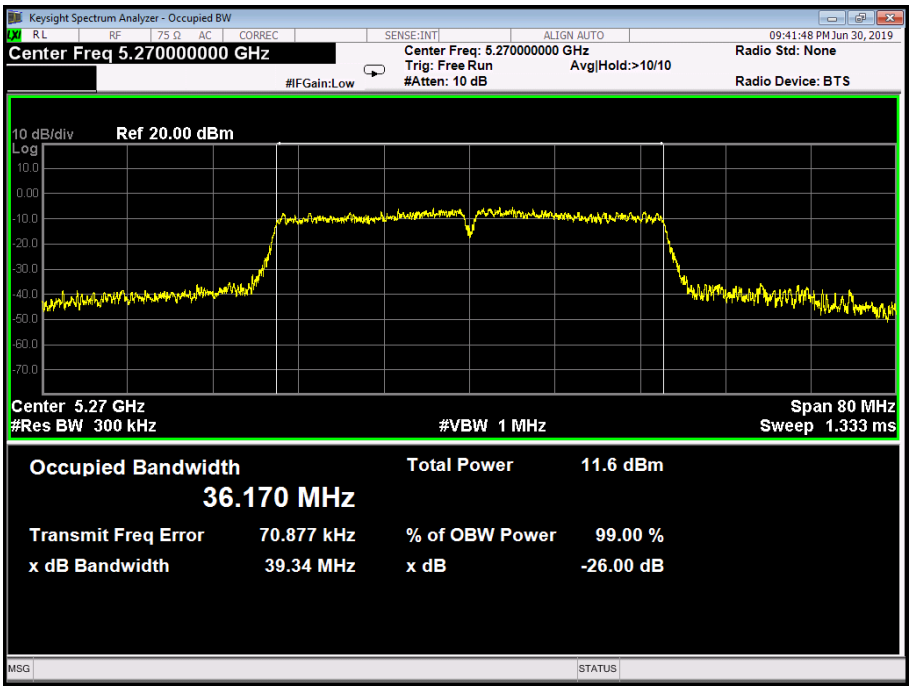


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(40) Mode (U-NII-2A)		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
54	5270	39.34	36.170
62	5310	39.25	36.117

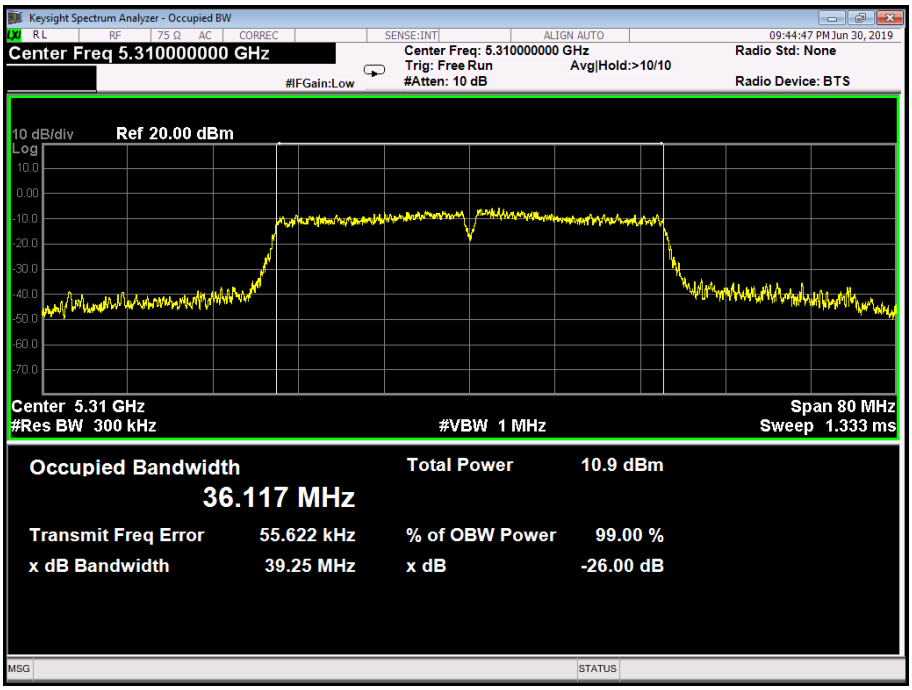
802.11ac(40) Mode

5270 MHz



802.11ac(40) Mode

5310 MHz

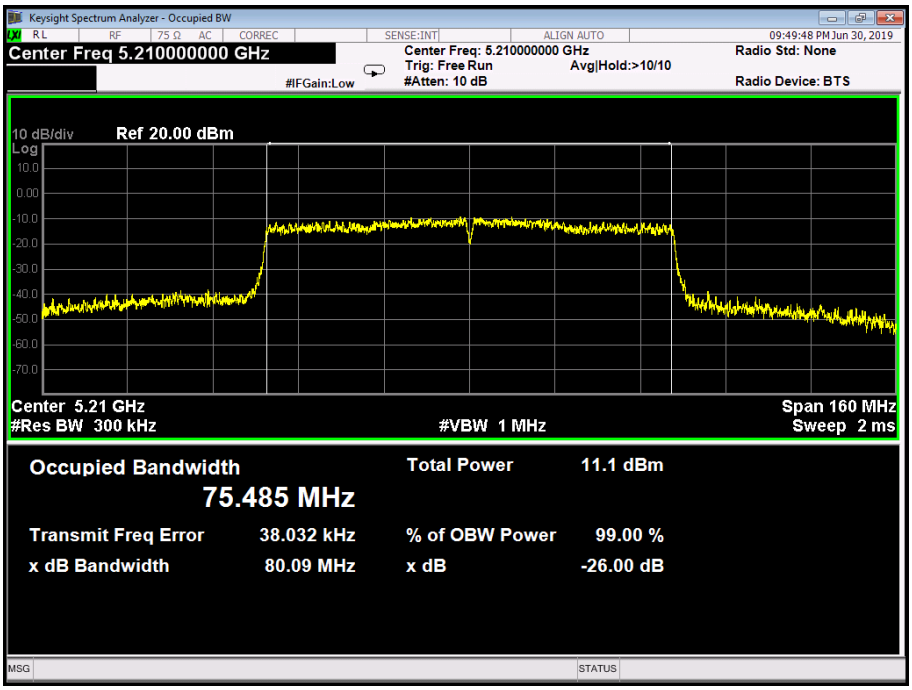


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(80) Mode (U-NII-2A)		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
58	5290	80.09	75.485

802.11ac(80) Mode

5290 MHz

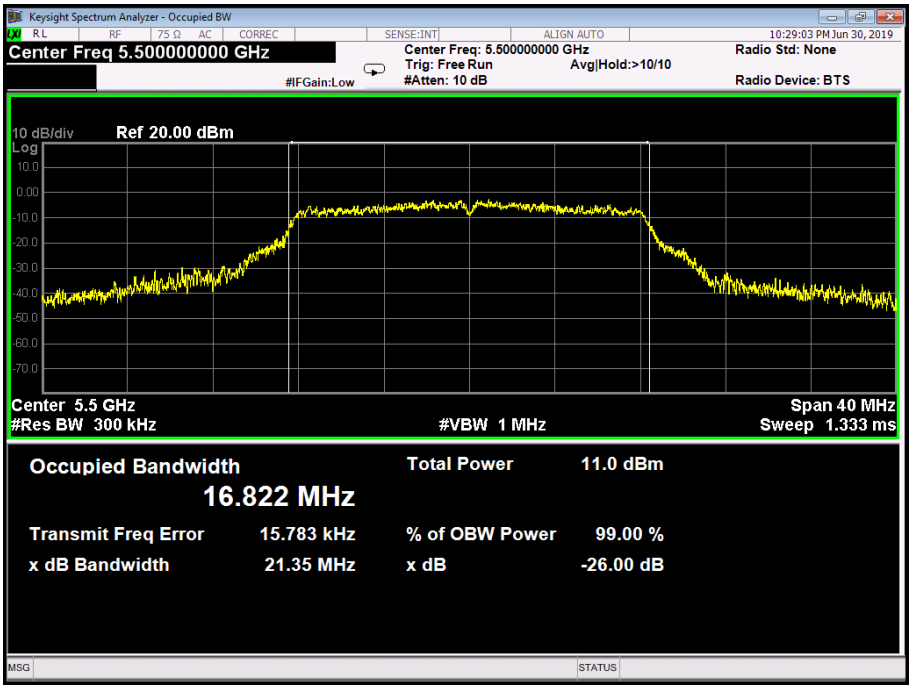


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-2C)		

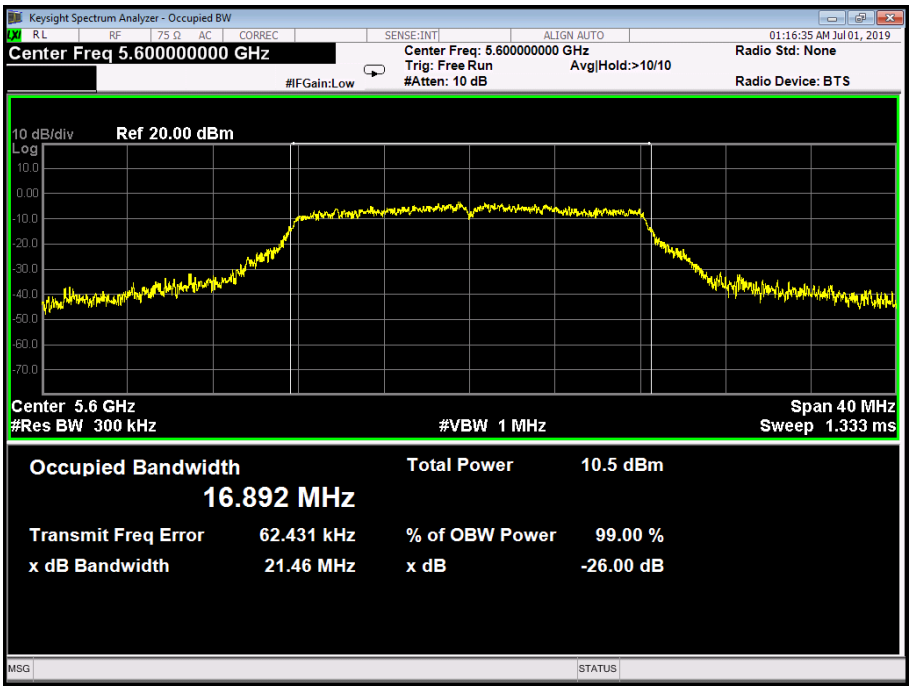
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
100	5500	21.35	19.822
116	5600	21.46	16.892
144	5700	25.27	17.085

802.11a Mode

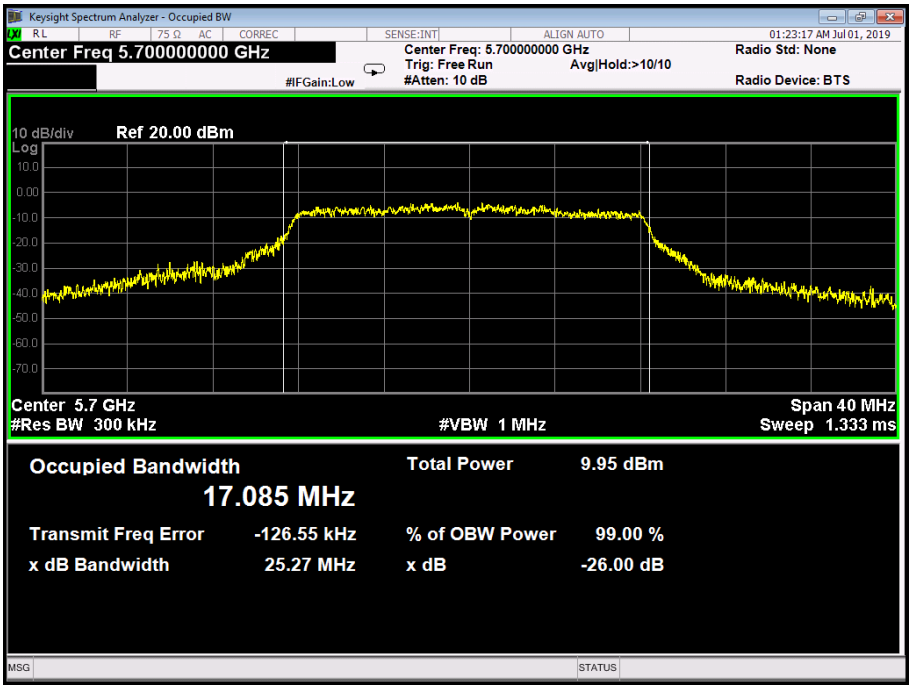
5500 MHz



802.11a Mode
5600 MHz



802.11a Mode
5700 MHz

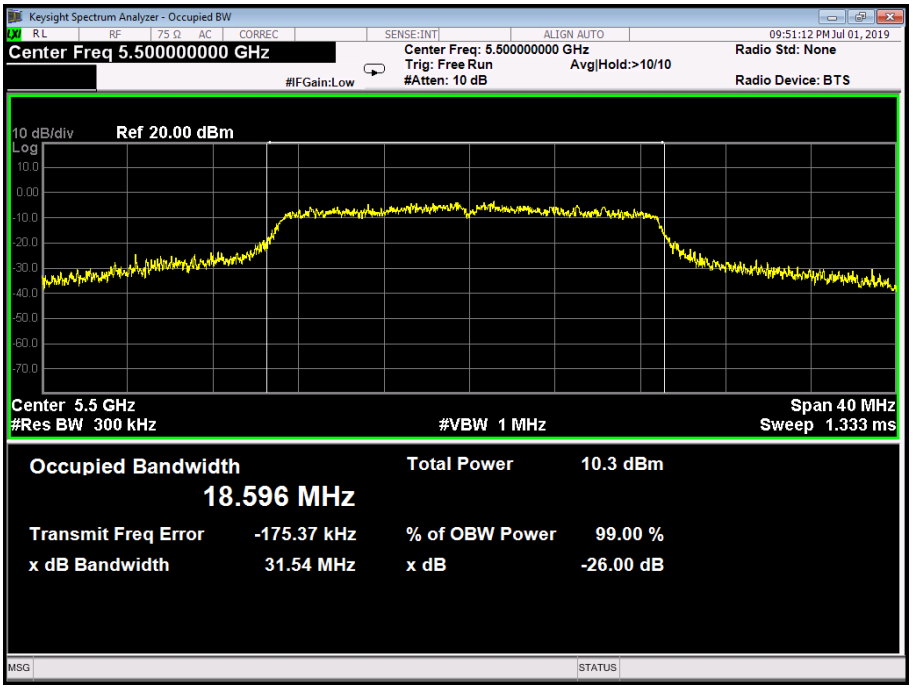


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(HT20) Mode (U-NII-2C)		

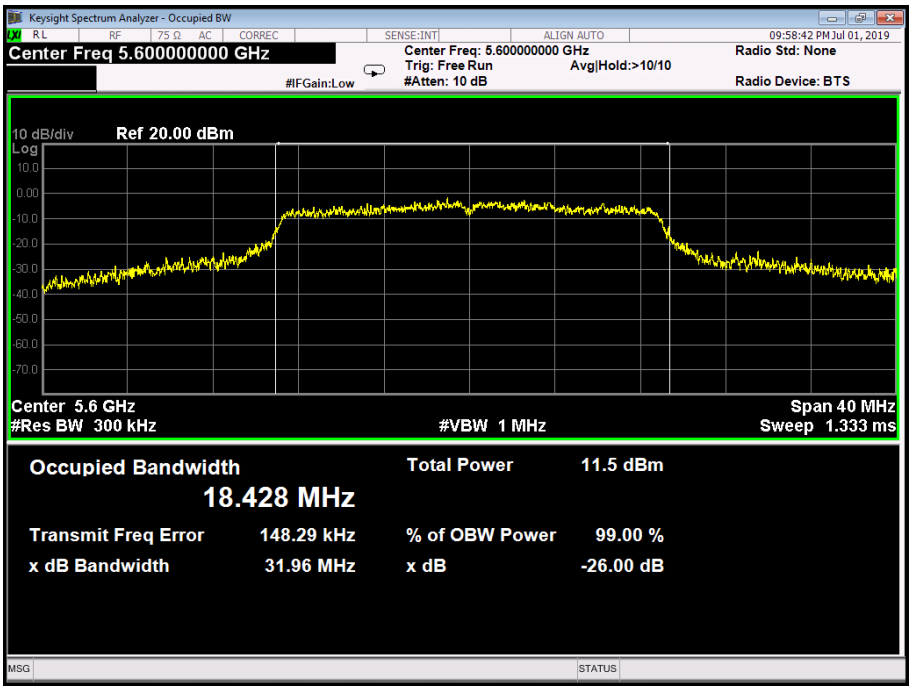
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
100	5500	31.54	18.596
116	5600	31.96	18.428
144	5700	33.09	18.978

802.11n(HT20) Mode

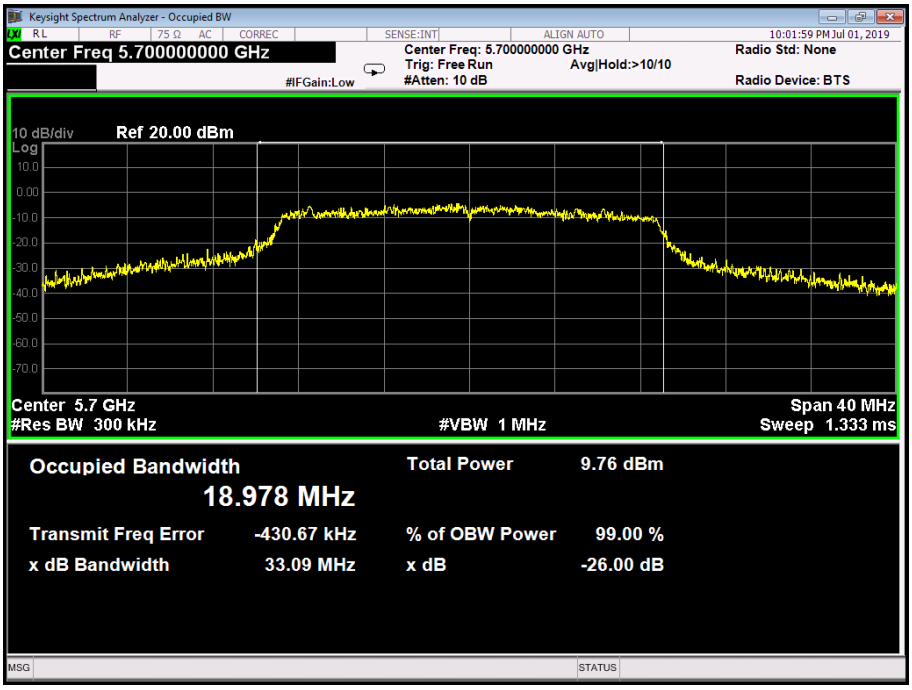
5500 MHz



802.11n(HT20) Mode
5600 MHz



802.11n(HT20) Mode
5700 MHz

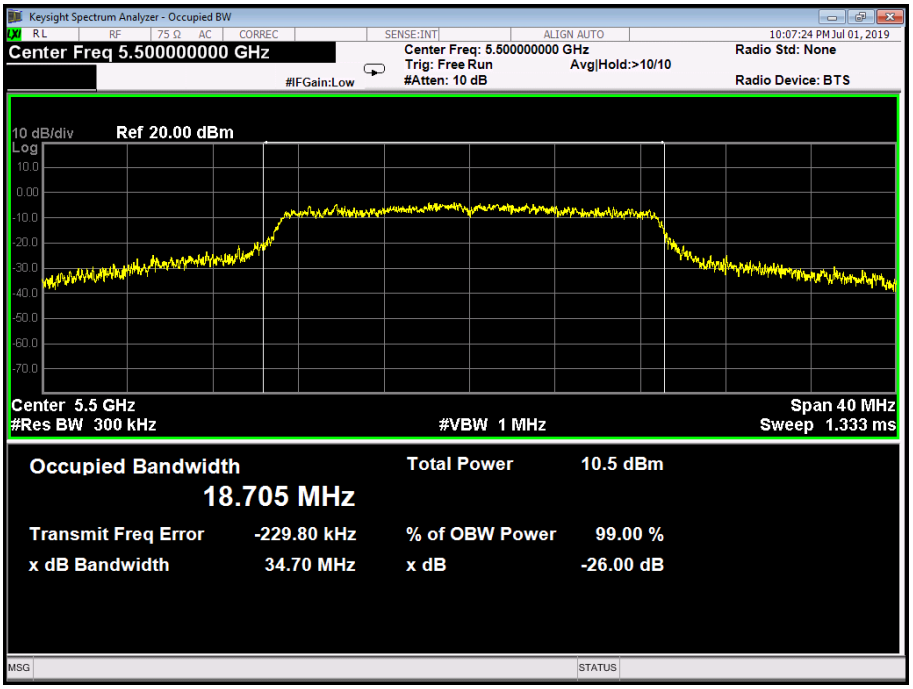


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-2C)		

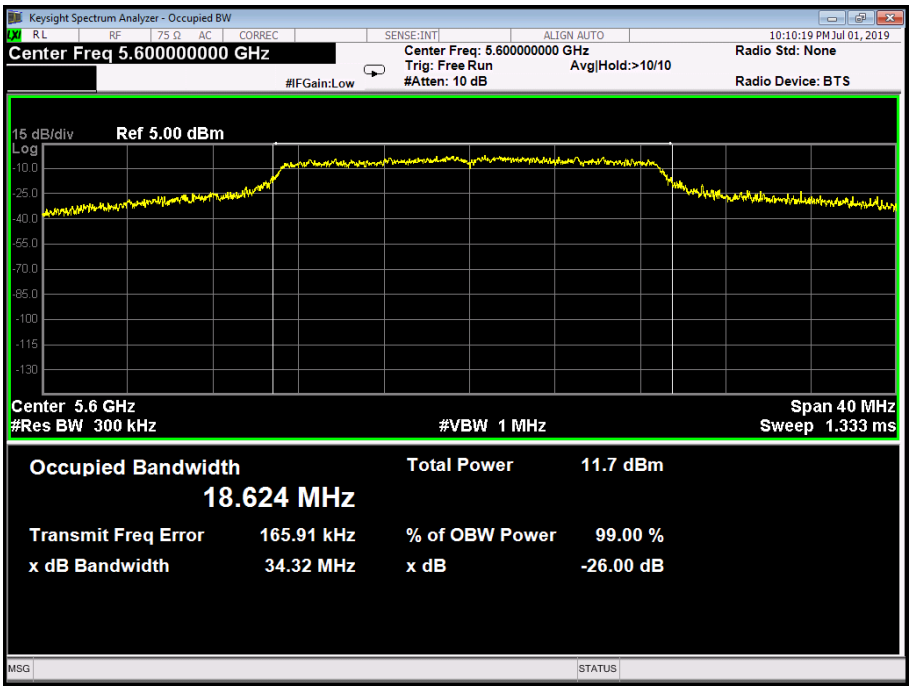
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
100	5500	34.70	18.705
116	5600	34.32	18.624
144	5700	32.03	18.965

802.11ac(20) Mode

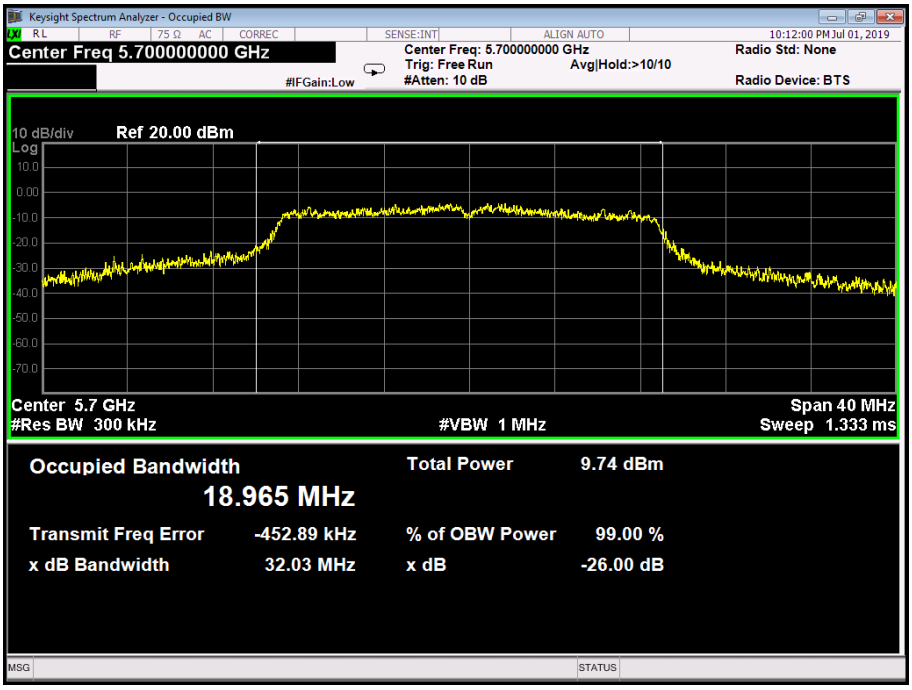
5500 MHz



802.11ac(20) Mode
5600 MHz



802.11ac(20) Mode
5700 MHz

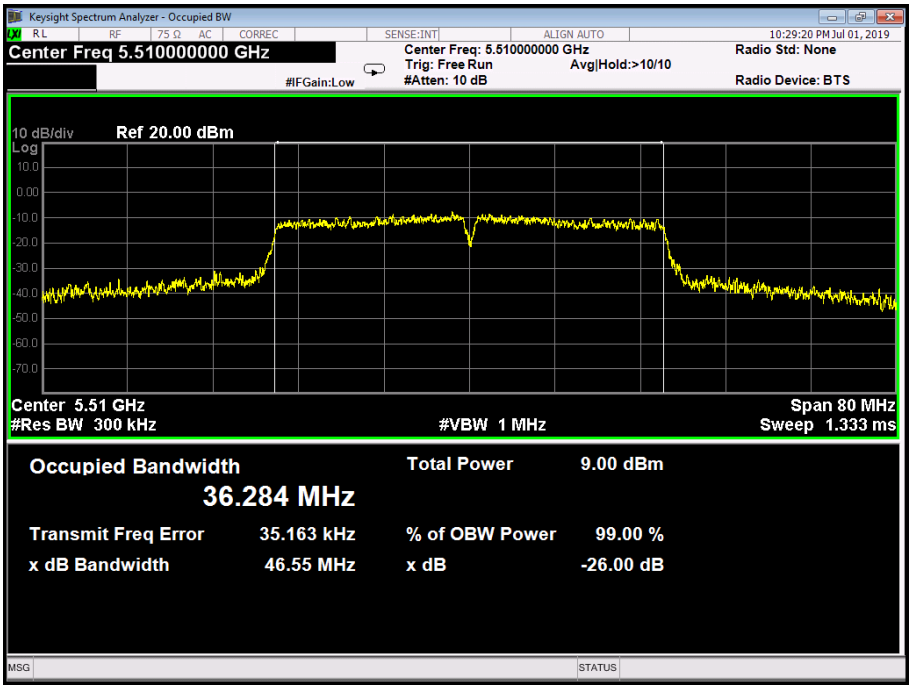


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode (U-NII-2C)		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	46.55	36.284
134	5670	42.60	36.178

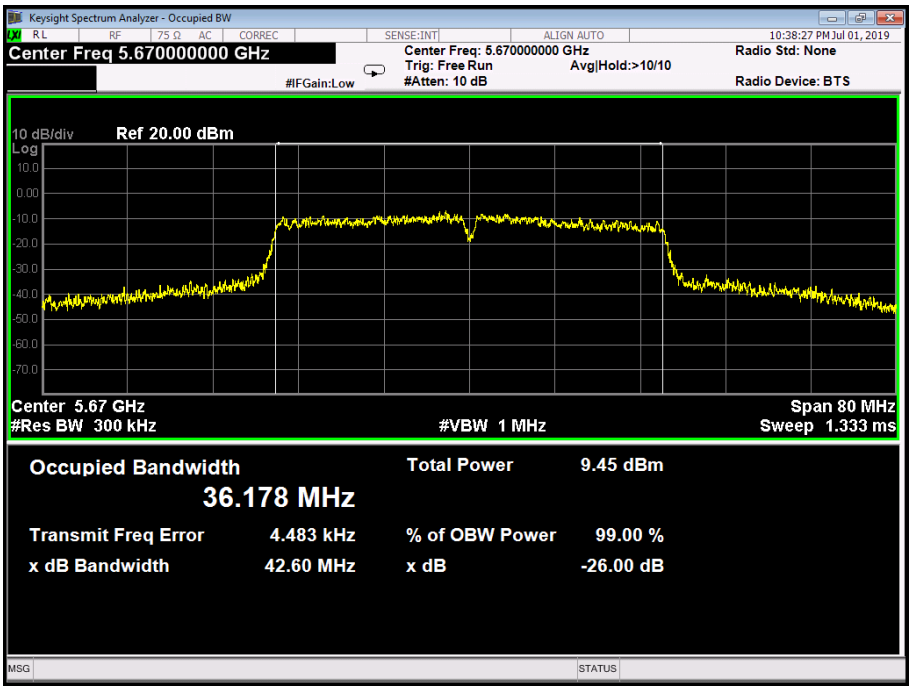
802.11N(HT40) Mode

5510 MHz



802.11N(HT40) Mode

5670 MHz

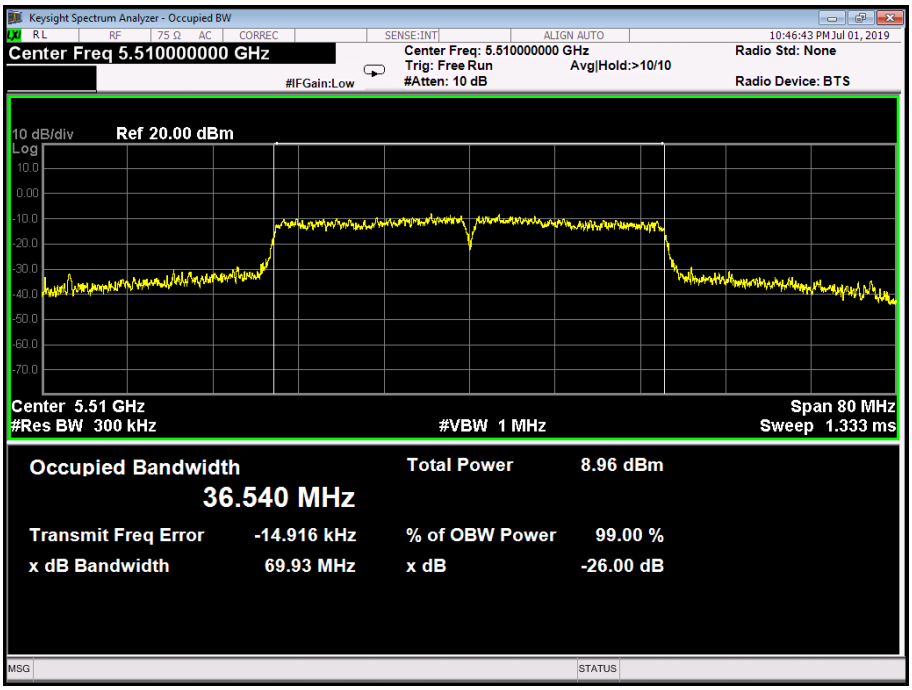


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(HT40) Mode (U-NII-2C)		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
102	5510	69.93	36.540
134	5670	45.13	36.181

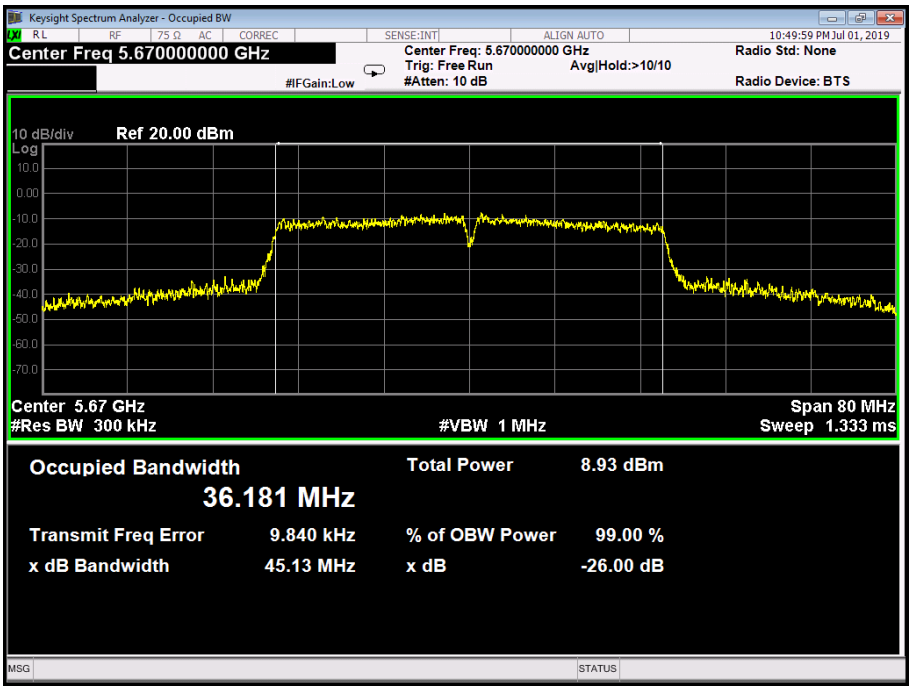
802.11ac(HT40) Mode

5510 MHz



802.11ac(HT40) Mode

5670 MHz

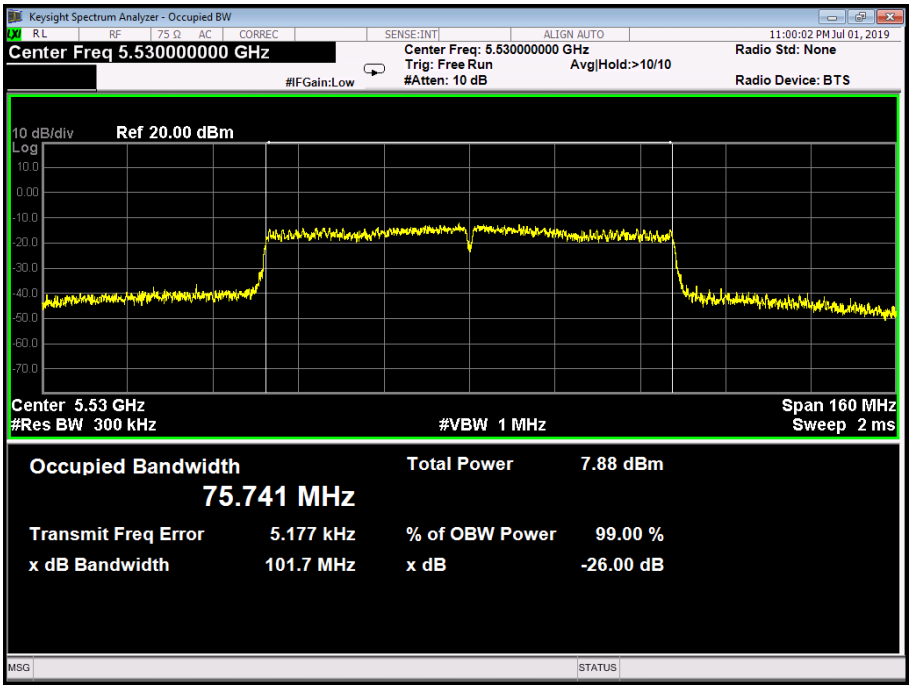


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11 ac(HT80) Mode (U-NII-2C)		

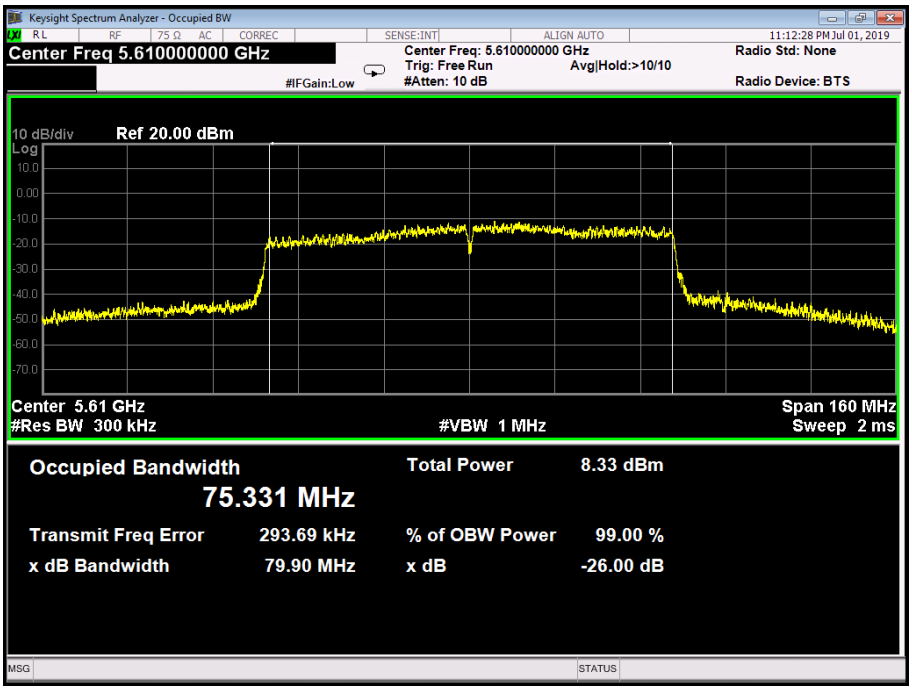
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
106	5530	101.7	75.741
122	5610	79.90	75.331
138	5690	79.76	75.367

802.11ac(HT80) Mode

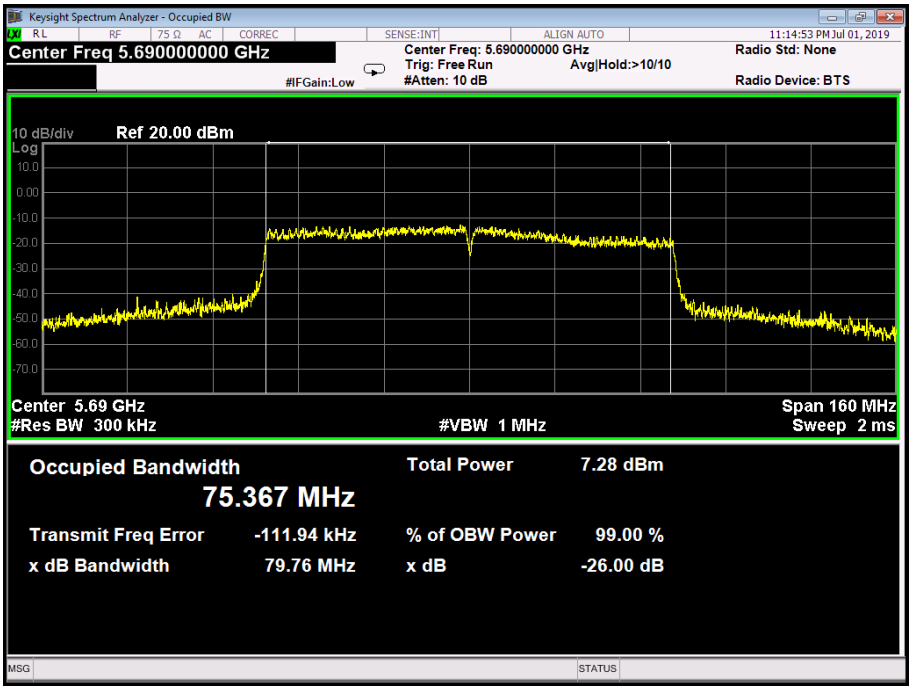
5530 MHz



802.11ac(HT80) Mode
5610 MHz



802.11ac(HT80) Mode
5690 MHz

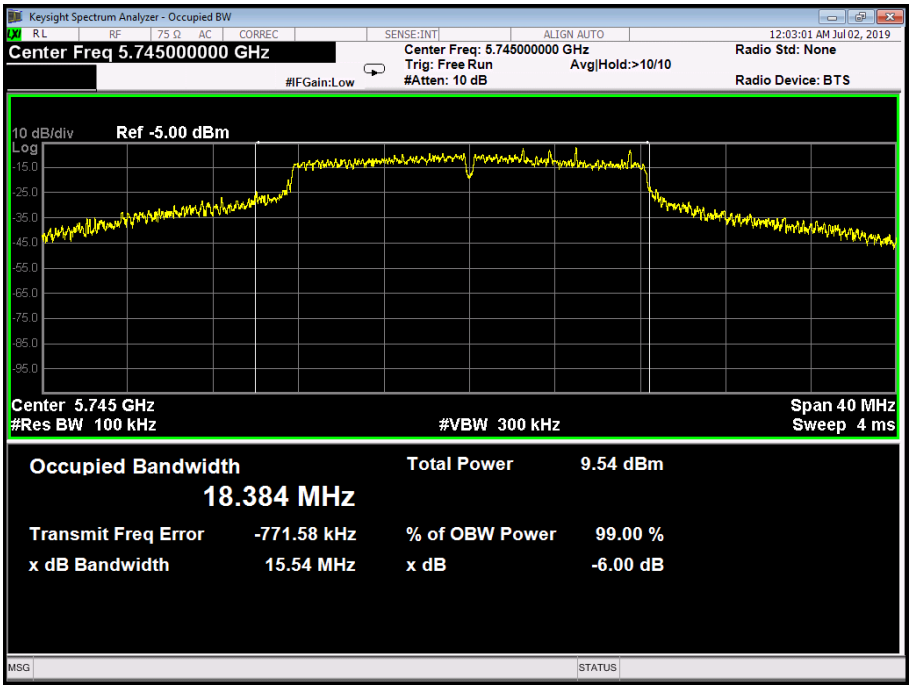


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11a Mode (U-NII-3)		

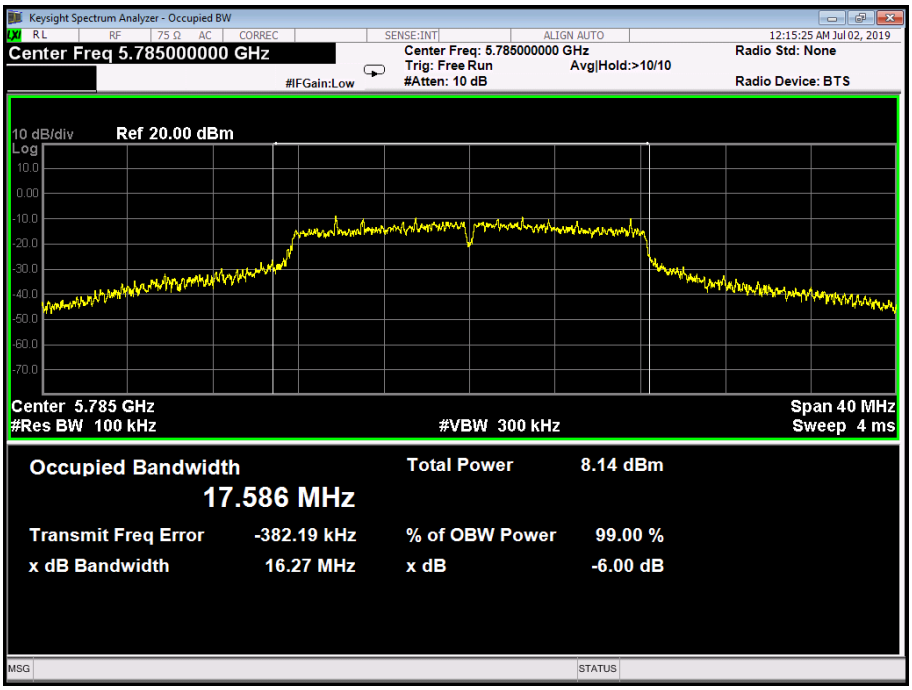
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	15.54	18.384
157	5785	16.27	17.586
165	5825	16.29	17.941

802.11a Mode

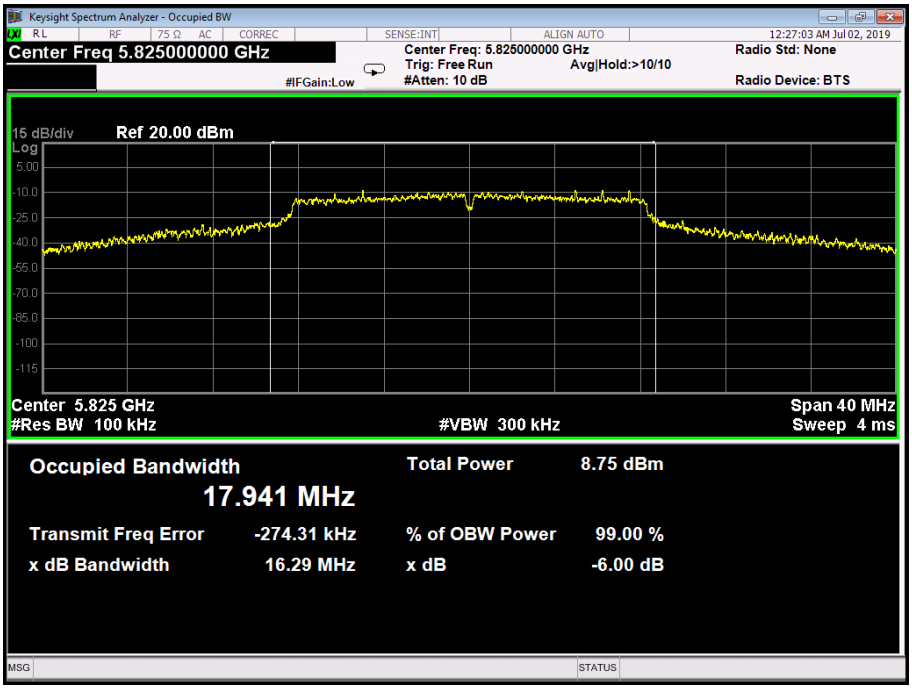
5745 MHz



802.11a Mode
5785 MHz



802.11a Mode
5825 MHz

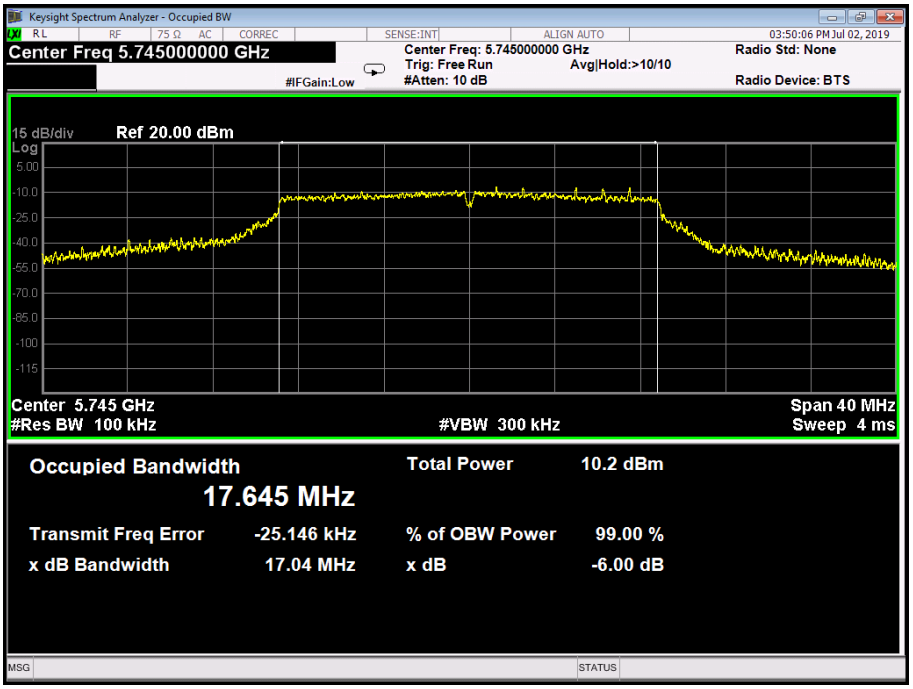


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(20) Mode (U-NII-3)		

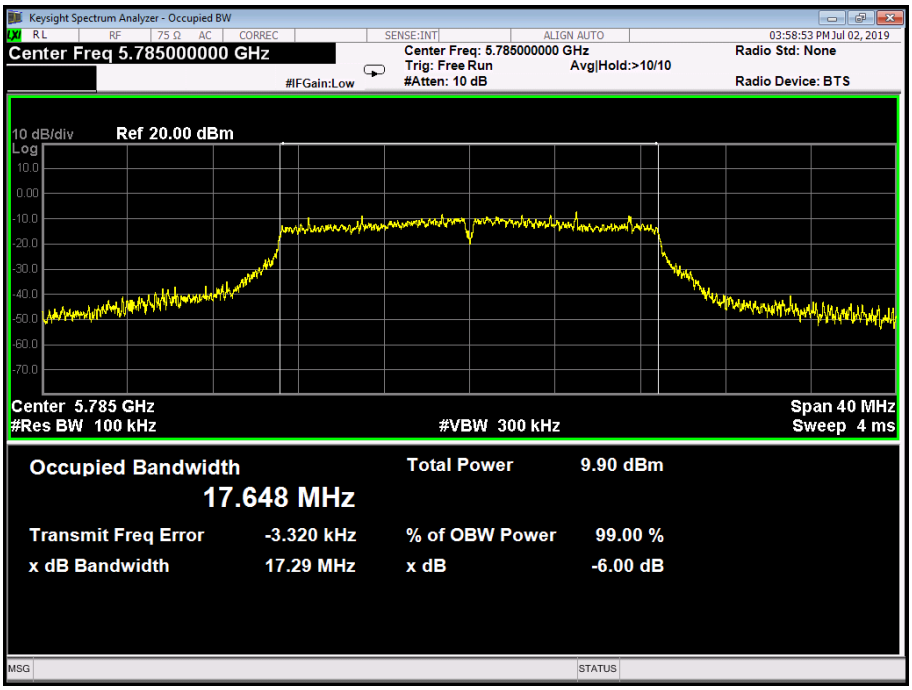
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	17.04	17.645
157	5785	17.29	17.648
165	5825	17.31	17.696

802.11n(HT20) Mode

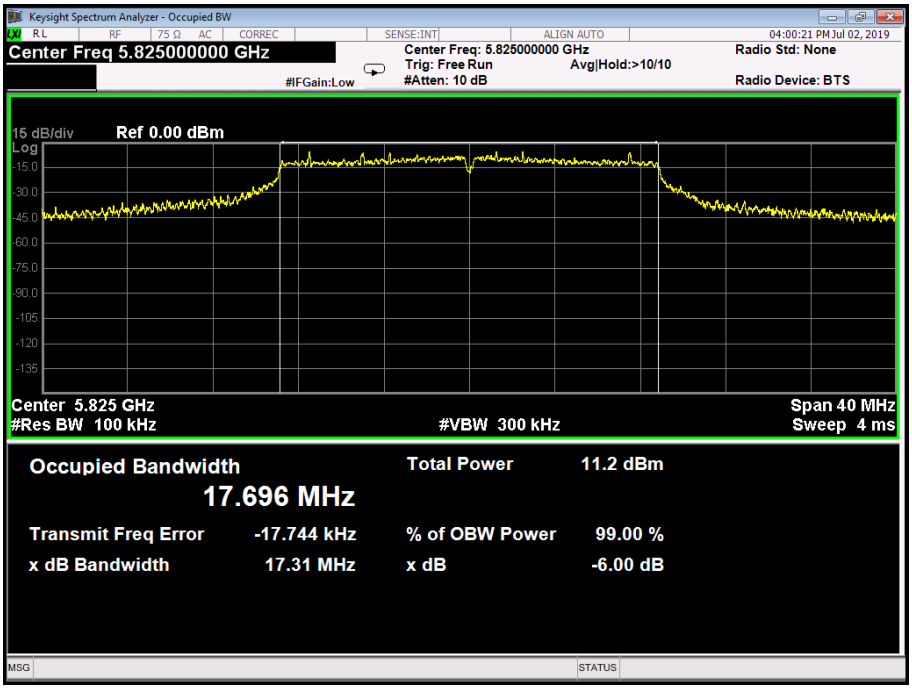
5745 MHz



802.11n(HT20) Mode
5785 MHz



802.11n(HT20) Mode
5825 MHz

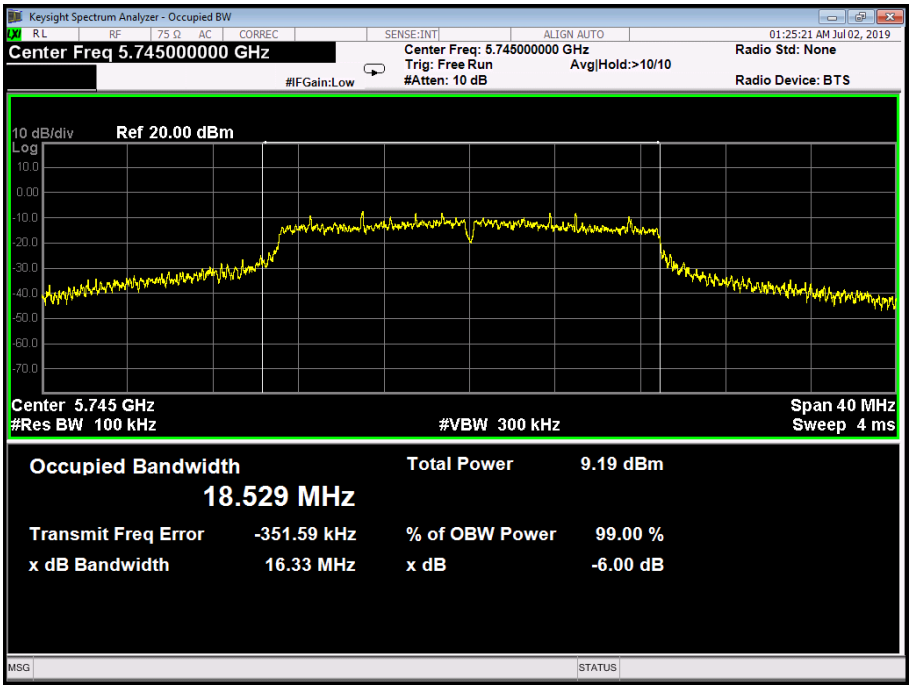


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(20) Mode (U-NII-3)		

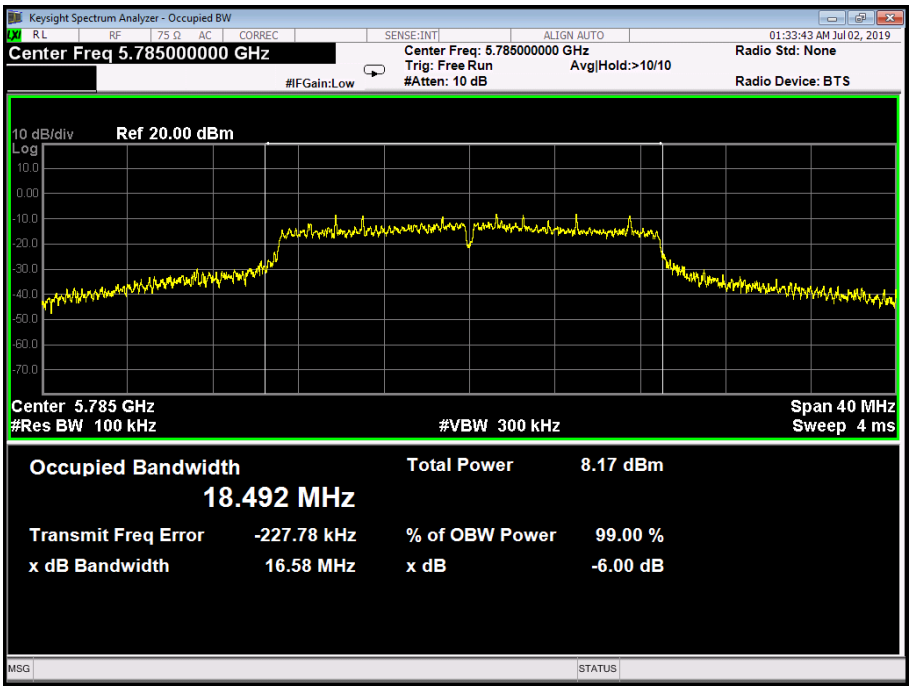
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
149	5745	16.33	18.529
157	5785	16.58	18.492
165	5825	17.12	18.308

802.11ac(20) Mode

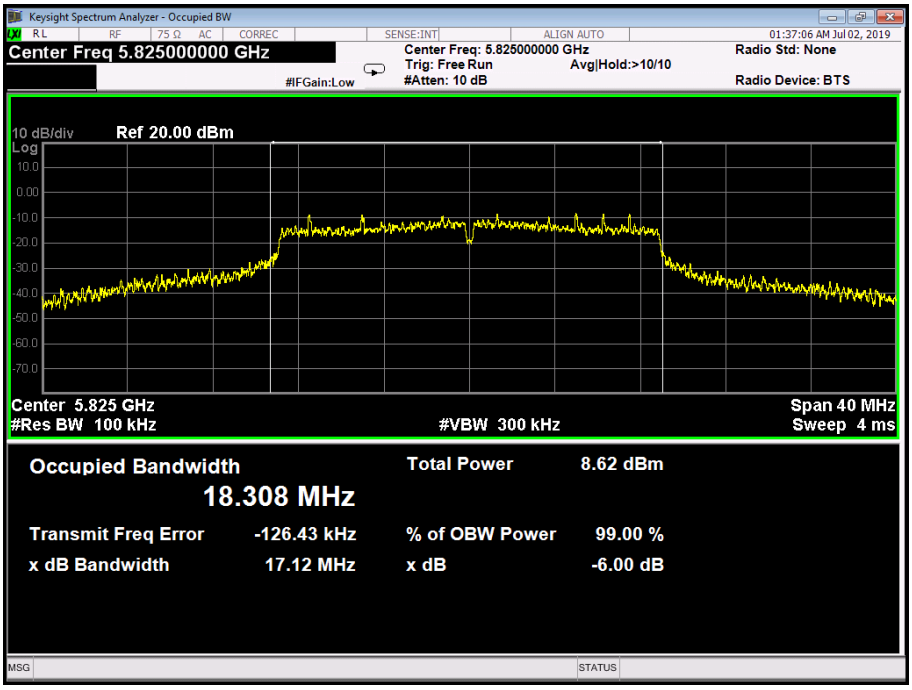
5745 MHz



802.11ac(20) Mode
5785 MHz



802.11ac(20) Mode
5825 MHz

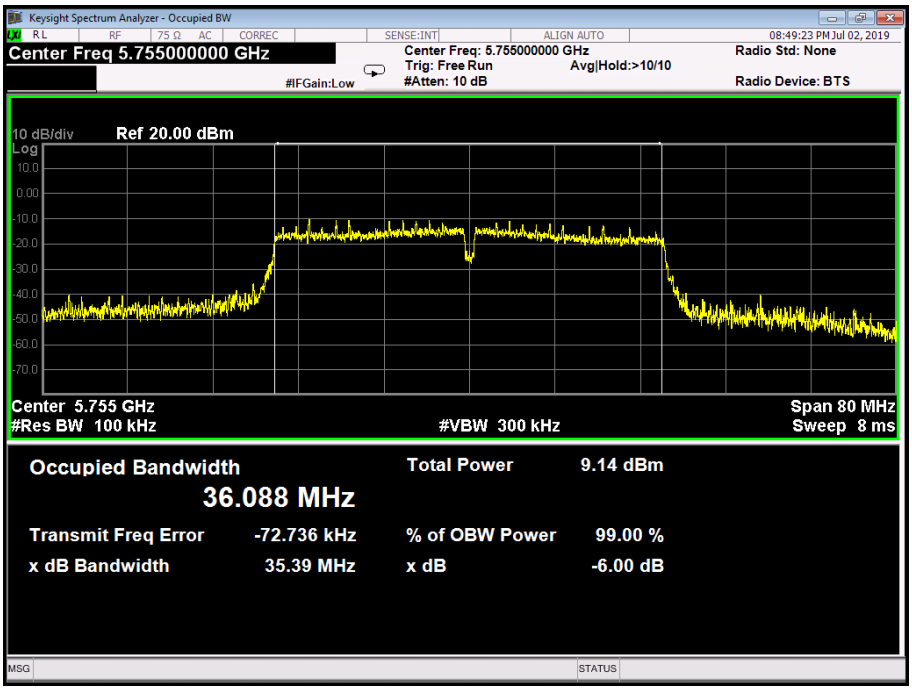


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11n(40) Mode (U-NII-3)		

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	35.39	36.088
159	5795	35.36	36.112

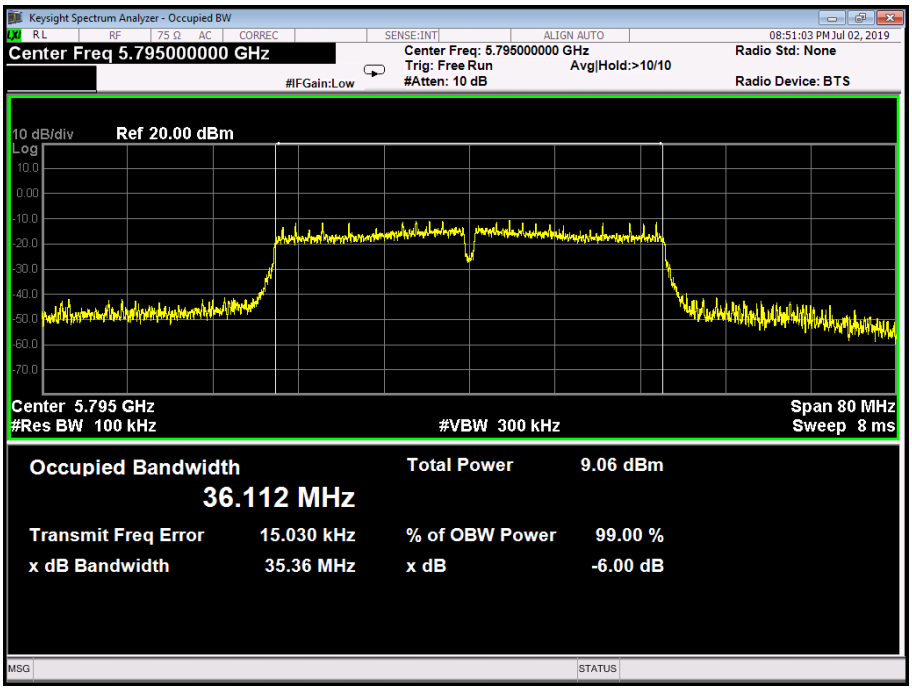
802.11n(HT40) Mode

5755 MHz



802.11n(HT40) Mode

5795 MHz

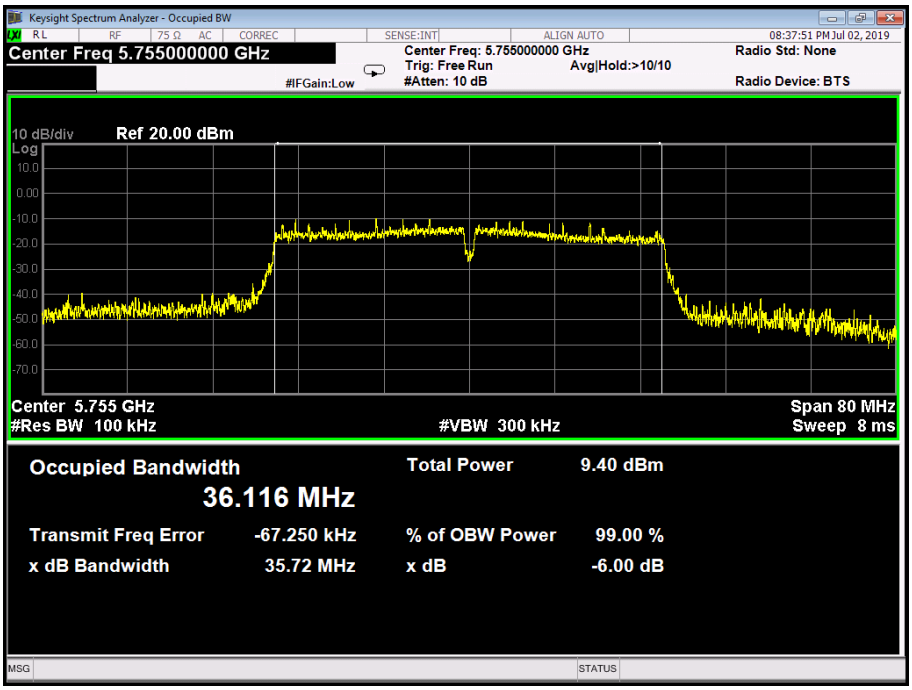


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(40) Mode (U-NII-3)		

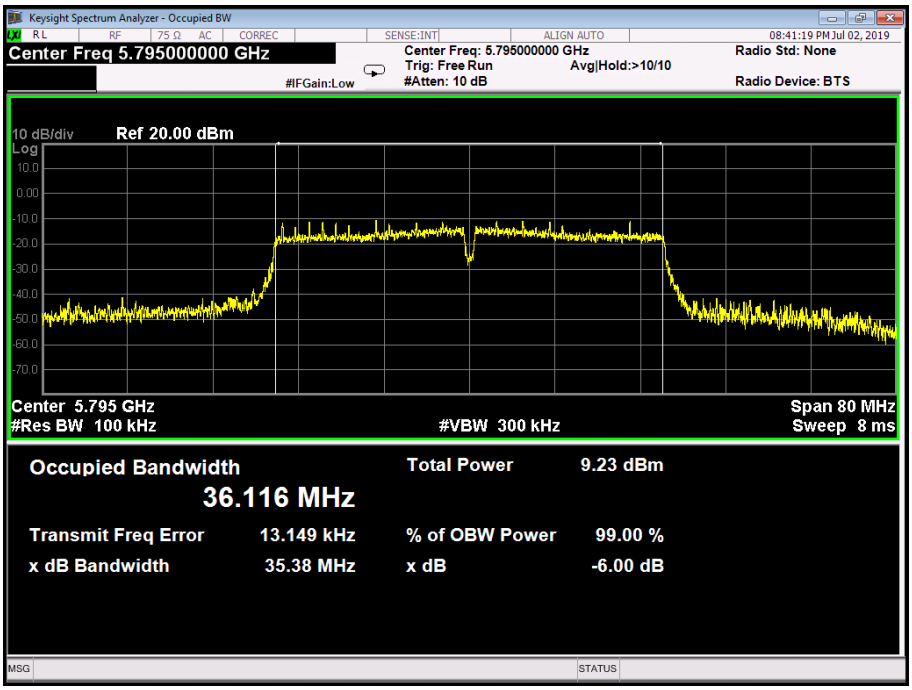
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
151	5755	35.72	36.116
159	5795	35.38	36.116

802.11ac(40) Mode

5755 MHz



802.11ac(40) Mode
5795 MHz

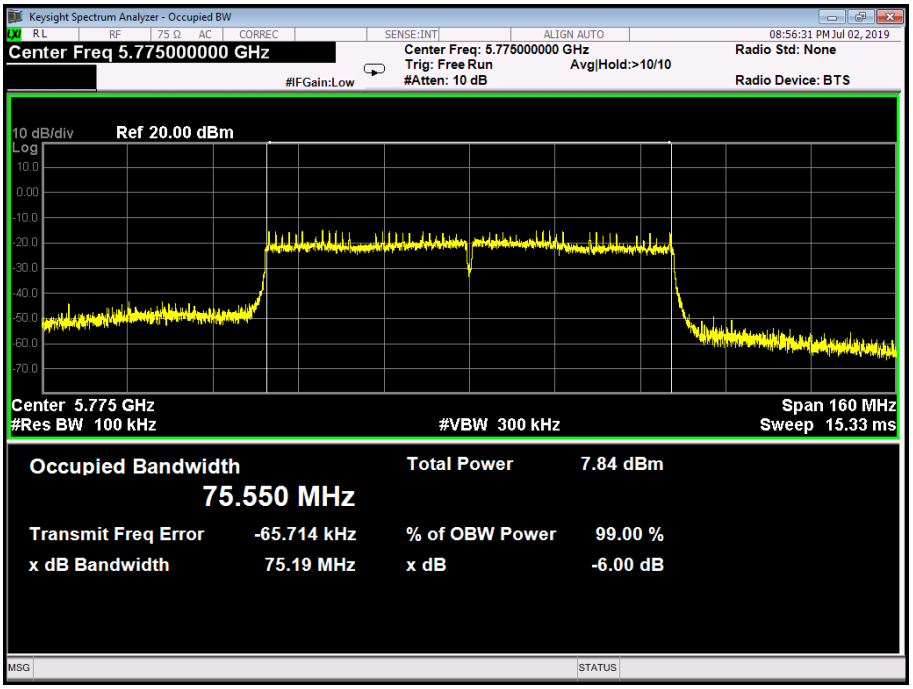


Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11ac(80) Mode (U-NII-3)		

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
155	5775	75.19	75.550

802.11ac(80) Mode

5775 MHz



Attachment E-- Output Power Test Data

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

U-NII-1

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5180	16.57	0	16.57	24
	5200	16.81	0	16.81	
	5240	16.45	0	16.45	
802.11n (HT20)	5180	16.30	0	16.30	
	5200	16.60	0	16.60	
	5240	15.91	0	15.91	
802.11ac (HT20)	5180	16.33	0	16.33	
	5200	16.61	0	16.61	
	5240	16.09	0	16.09	
802.11n (HT40)	5190	14.62	0	14.62	
	5230	15.49	0	15.49	
802.11 ac(40)	5190	15.75	0	15.75	
	5230	15.89	0	15.89	
802.11 ac(80)	5210	14.00	0	14.00	

Result： PASS

Remark:
the Directional Gain=3.0dBi＜6 dBi.

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

U-NII-2A

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5260	15.81	0	15.81	24
	5280	15.61	0	15.61	
	5320	13.84	0	13.84	
802.11n (HT20)	5260	15.30	0	15.30	
	5280	15.41	0	15.41	
	5320	15.25	0	15.25	
802.11ac (HT20)	5260	15.40	0	15.40	
	5280	15.18	0	15.18	
	5320	15.35	0	15.35	
802.11n (HT40)	5270	15.11	0	15.11	
	5310	15.33	0	15.33	
802.11 ac(40)	5270	15.99	0	15.99	
	5310	15.26	0	15.26	
802.11 ac(80)	5290	15.22	0	15.22	

Result： PASS

Remark:
the Directional Gain=3.0dBi＜6 dBi.

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

U-NII-2C

Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5500	16.09	0	16.09	24
	5600	15.44	0	15.44	
	5700	15.17	0	15.17	
802.11n (HT20)	5500	14.86	0	14.86	
	5600	16.55	0	16.55	
	5700	14.69	0	14.69	
802.11ac (HT20)	5500	15.13	0	15.13	
	5600	16.63	0	16.63	
	5700	14.62	0	14.62	
802.11n (HT40)	5510	13.40	0	13.40	
	5670	14.33	0	14.33	
802.11 ac(40)	5510	13.43	0	13.43	
	5670	13.55	0	13.55	
802.11 ac(80)	5530	12.05	0	12.05	
	5610	12.68	0	12.68	
	5690	12.04	0	12.04	

Result： PASS

Remark:
the Directional Gain=3.0dBi＜6 dBi.

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

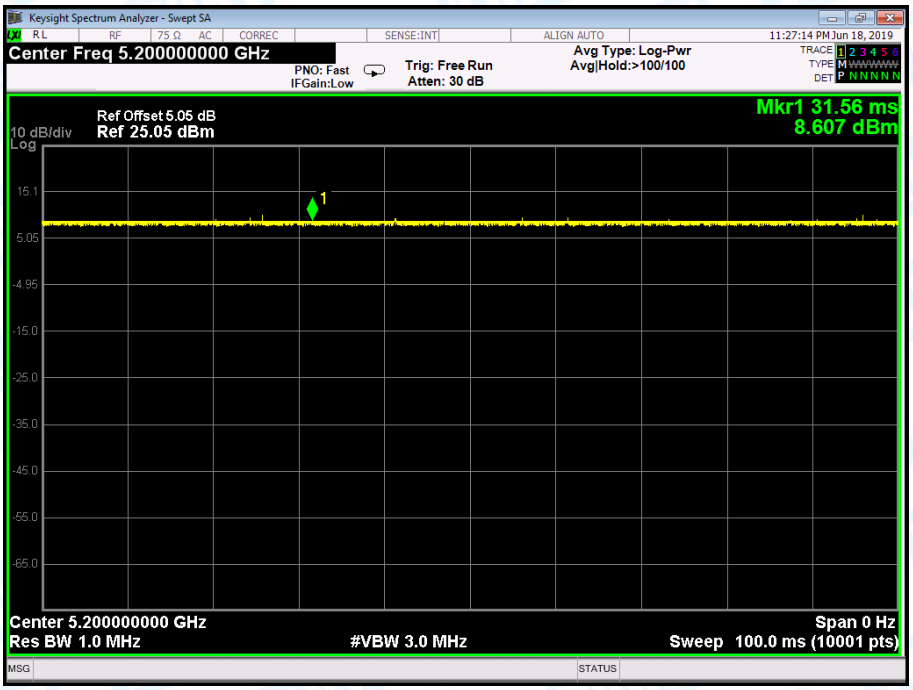
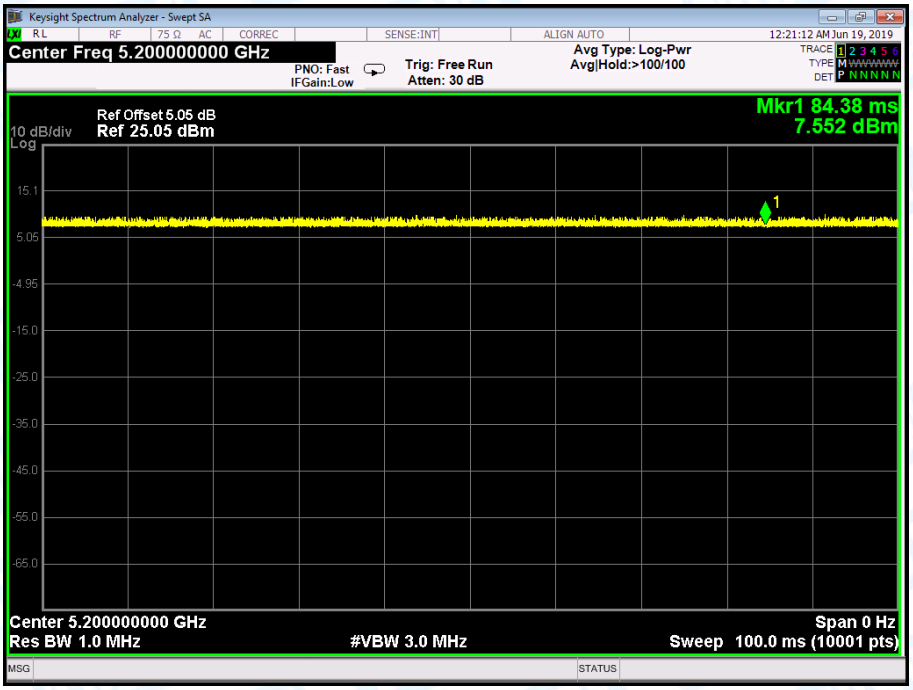
U-NII-3

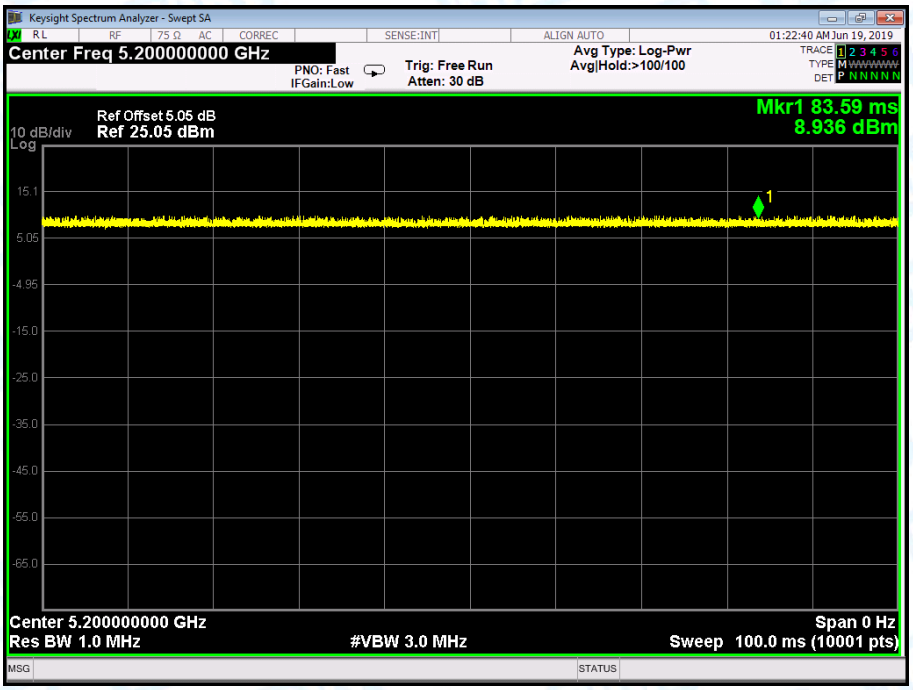
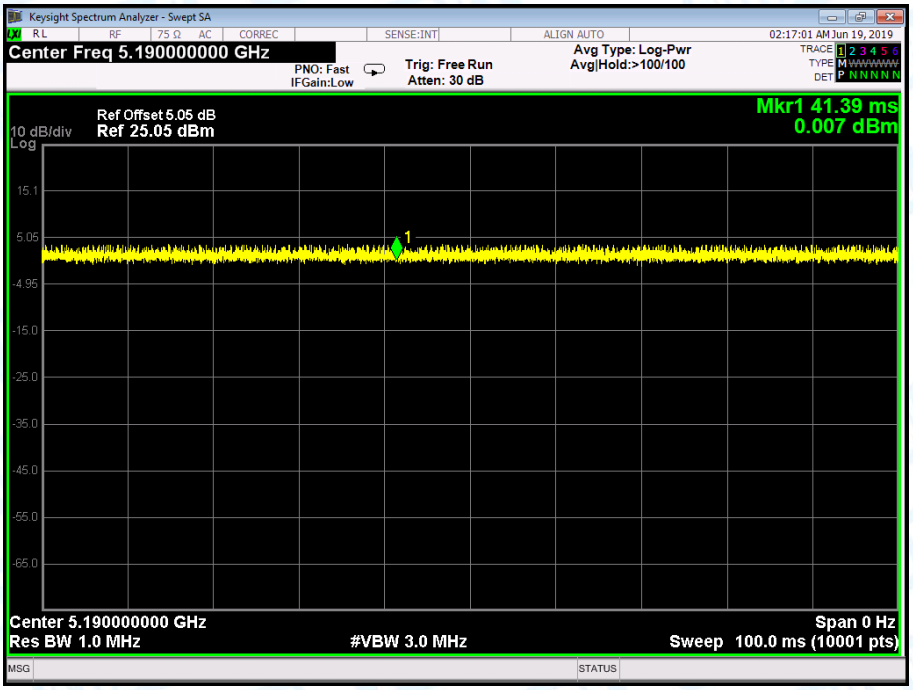
Test Mode	Frequency (MHz)	Test Data			Limit (dBm)
		Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11a	5745	14.61	0	14.61	30
	5785	13.14	0	13.14	
	5825	13.61	0	13.61	
802.11n (HT20)	5745	15.26	0	15.26	
	5785	14.91	0	14.91	
	5825	15.73	0	15.73	
802.11ac (HT20)	5745	14.09	0	14.09	
	5785	13.03	0	13.03	
	5825	13.47	0	13.47	
802.11n (HT40)	5755	13.98	0	13.98	
	5795	14.02	0	14.02	
802.11 ac(40)	5755	14.24	0	14.24	
	5795	14.37	0	14.37	
802.11 ac(80)	5775	12.58	0	12.58	

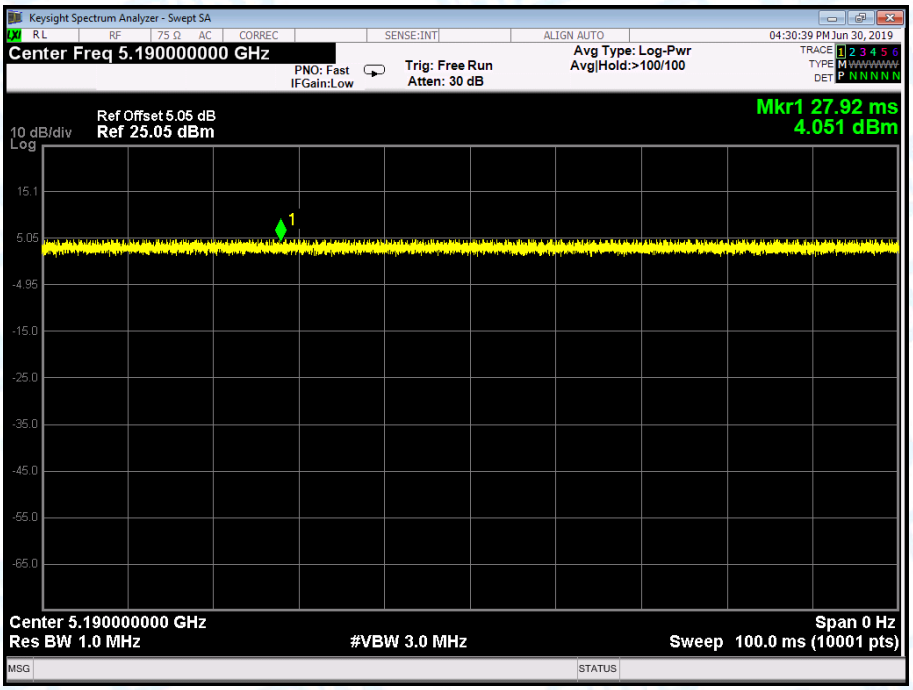
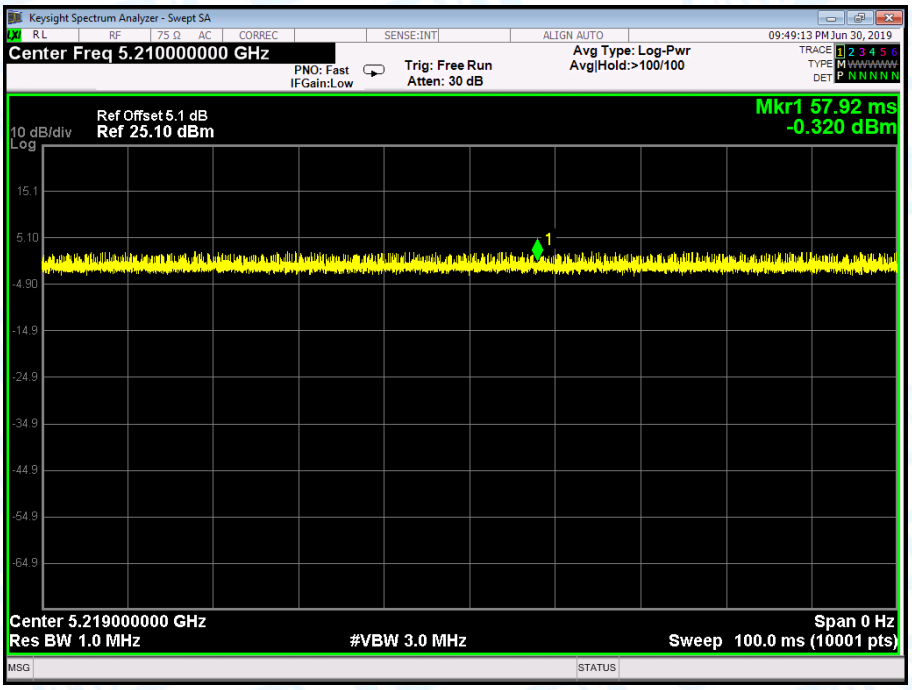
Result： PASS

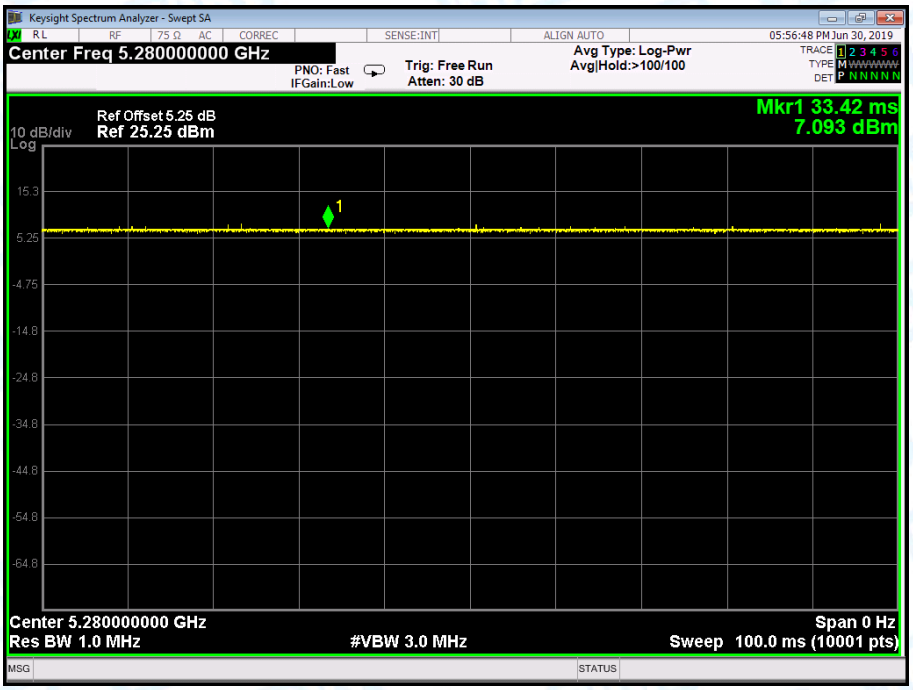
Remark:
the Directional Gain=3.0dBi＜6 dBi.

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(HT20) 5200MHz U-NII-1

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


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

802.11 ac(HT80) 5210MHz U-NII-1


802.11 a 5280MHz U-NII-2A

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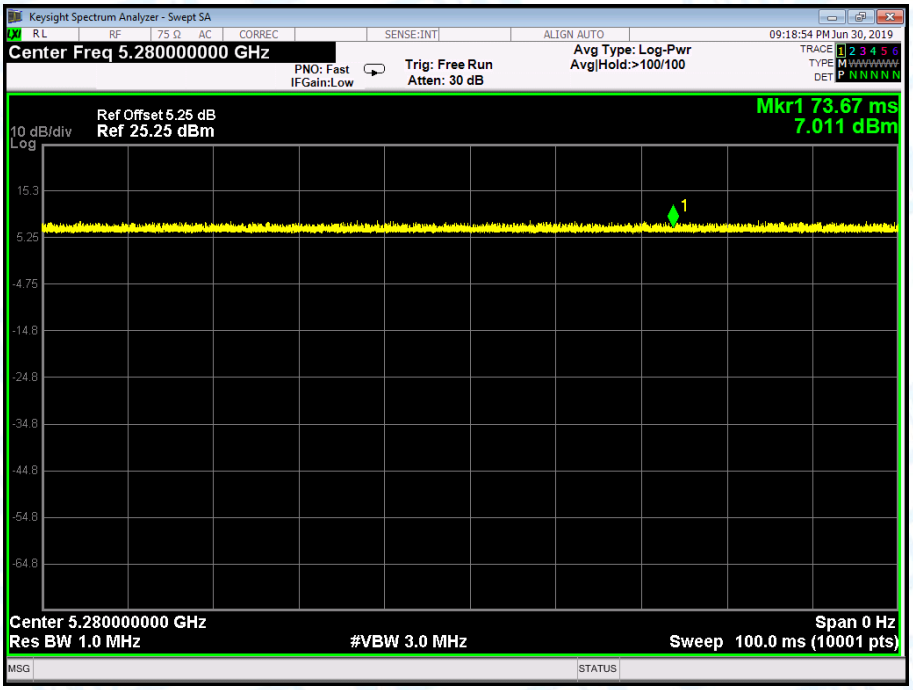

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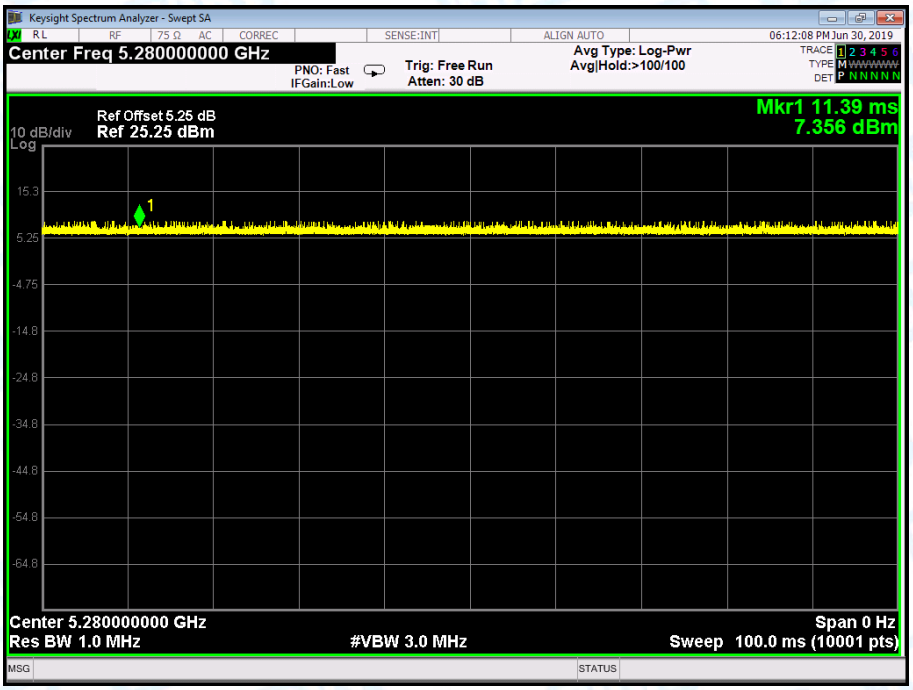
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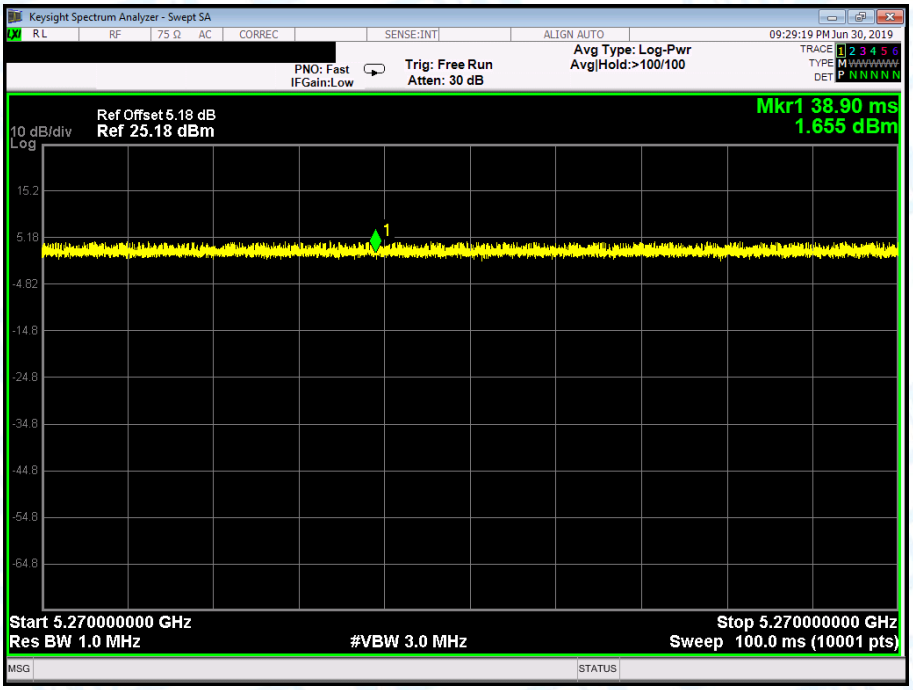
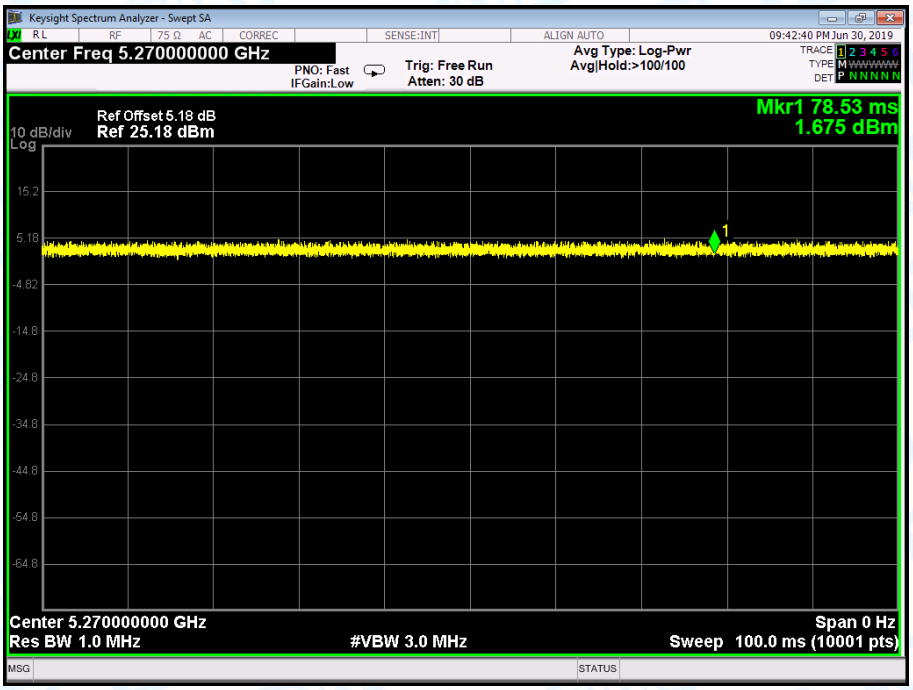
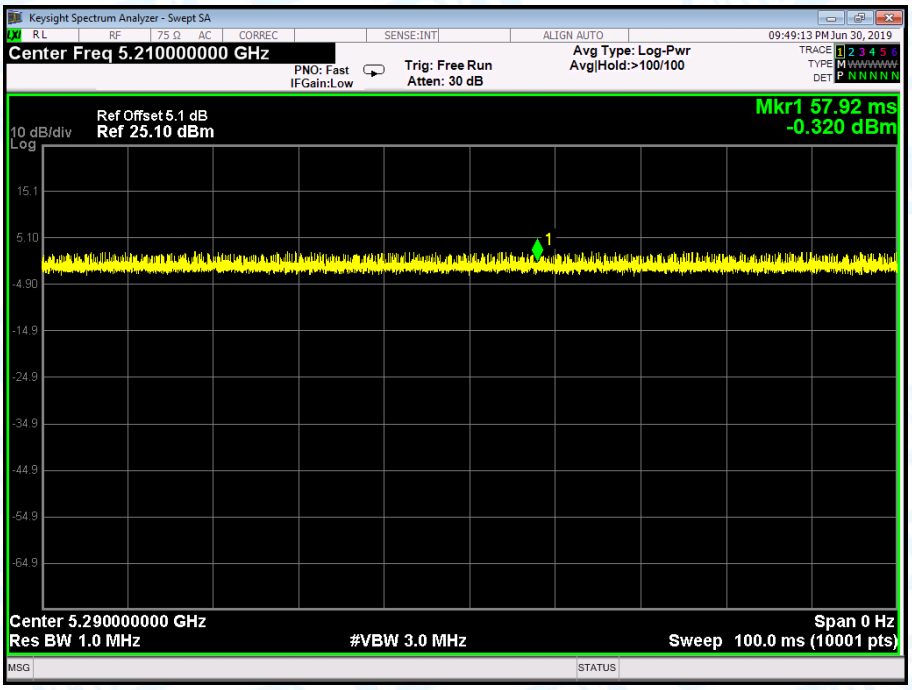
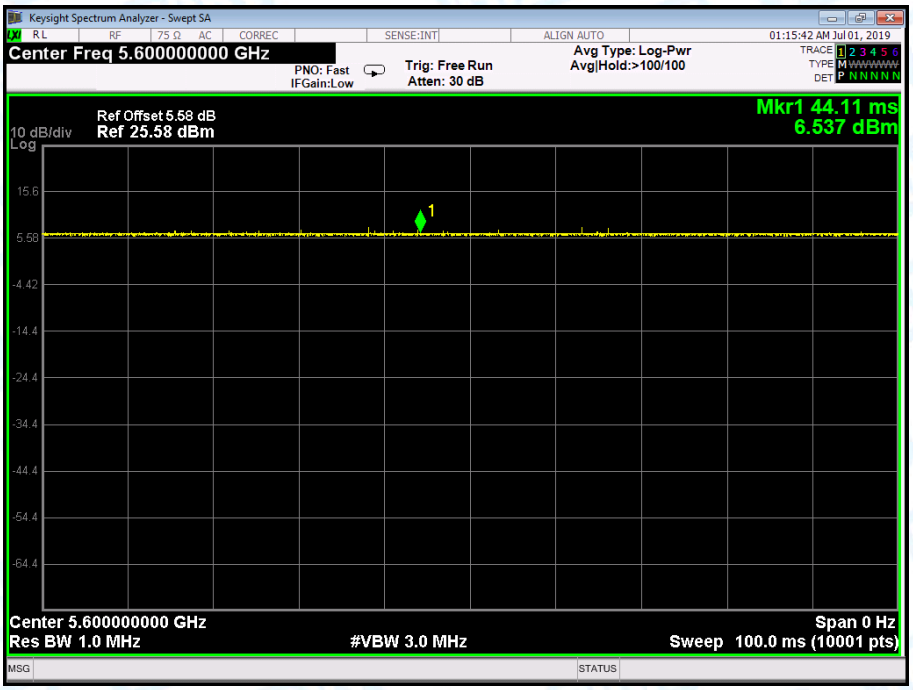
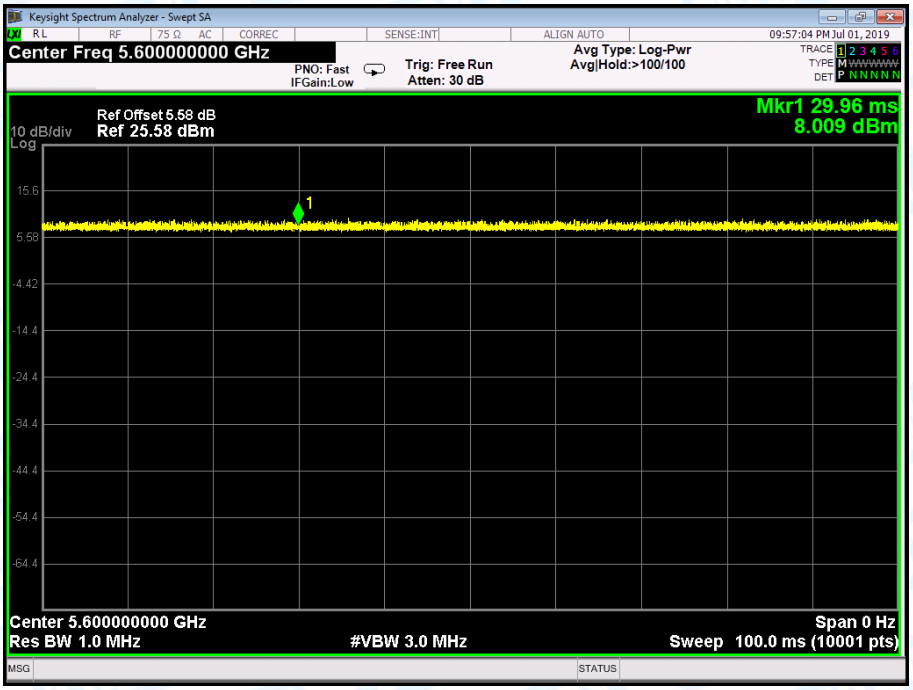


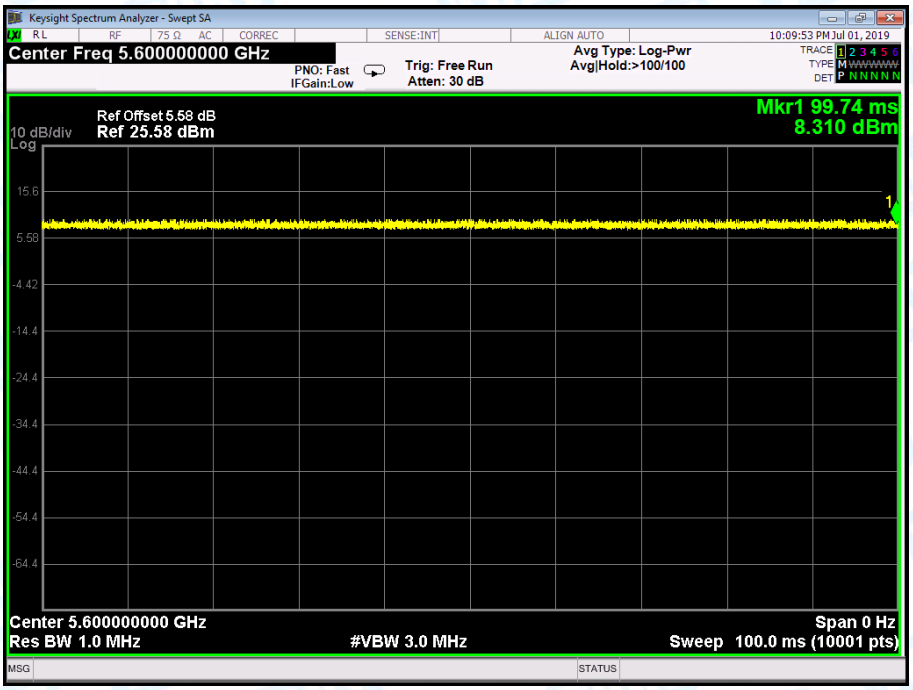
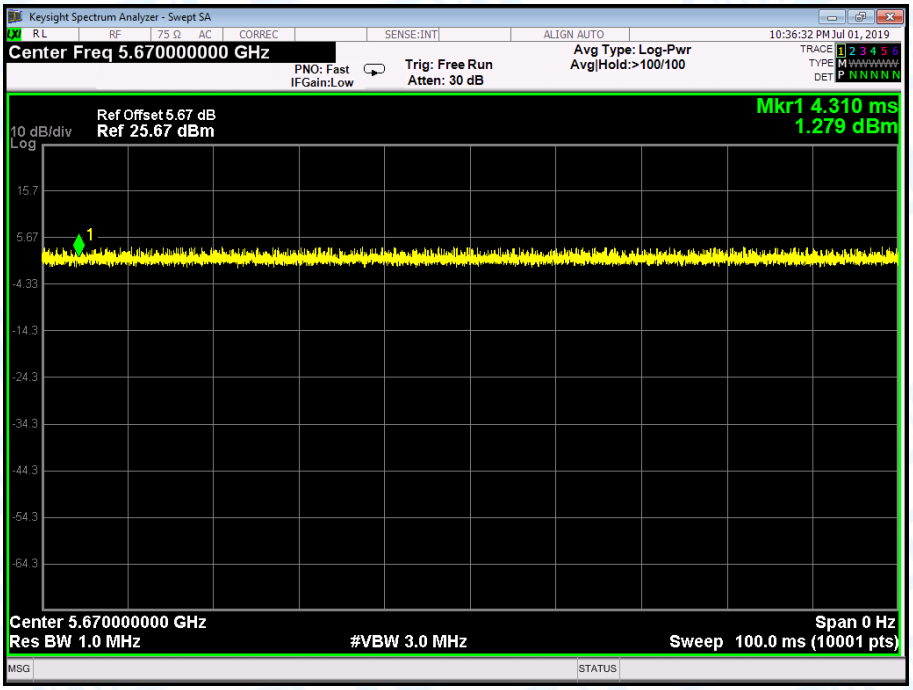
802.11 ac(HT40) 5270MHz U-NII-2A



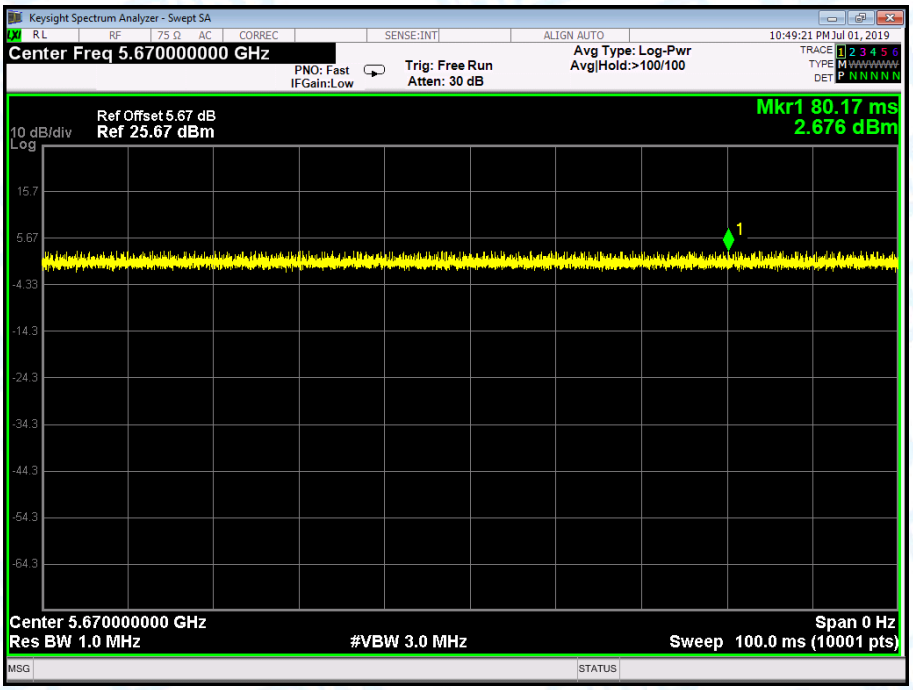
802.11 ac(HT80) 5290MHz U-NII-2A



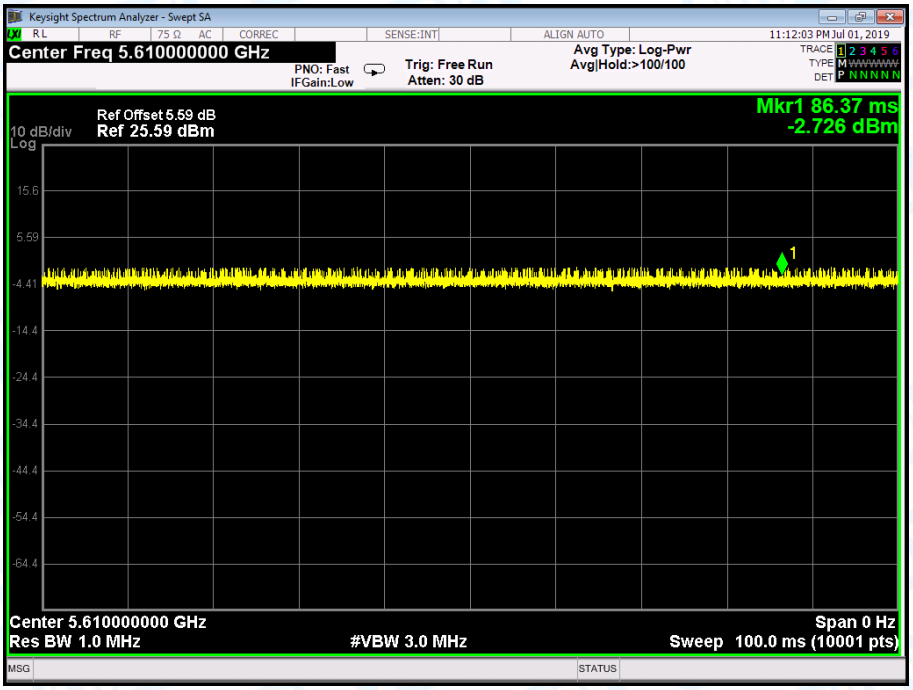
802.11 a 5600MHz U-NII-2C

802.11 n(HT20) 5600MHz U-NII-2C


802.11 ac(HT20) 5600MHz U-NII-2C

802.11 n(HT40) 5630MHz U-NII-2C


802.11 ac(HT40) 5670MHz U-NII-2C



802.11 ac(HT80) 5610MHz U-NII-2C



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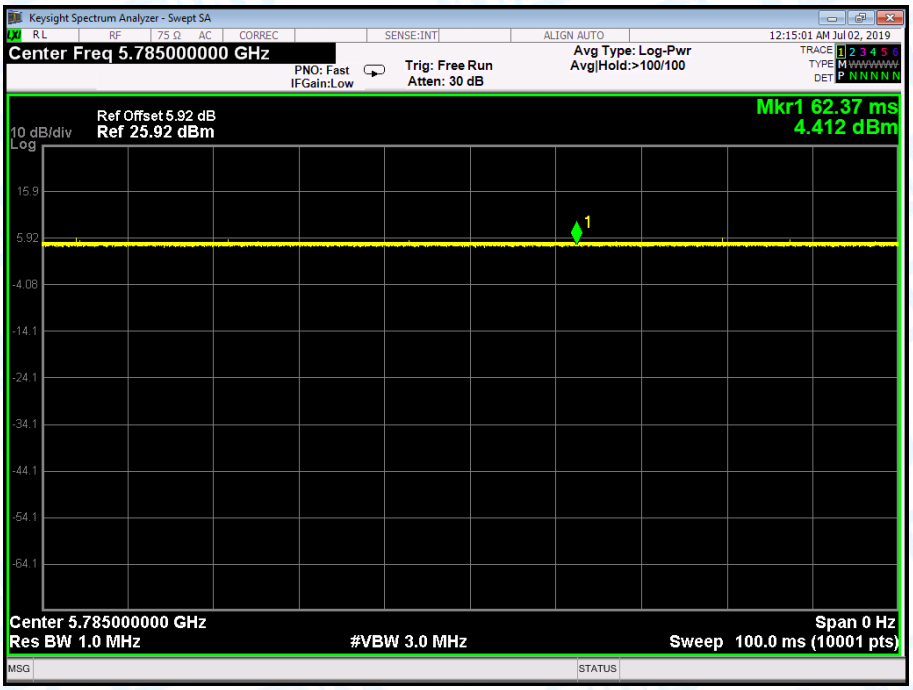
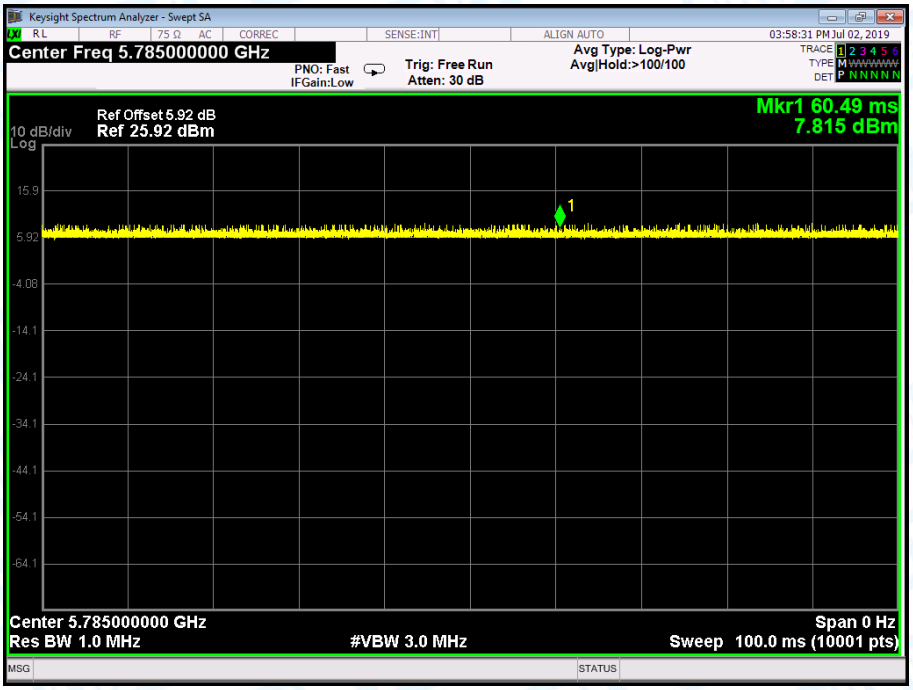


802.11 n(HT20) 5785MHz U-NII-3


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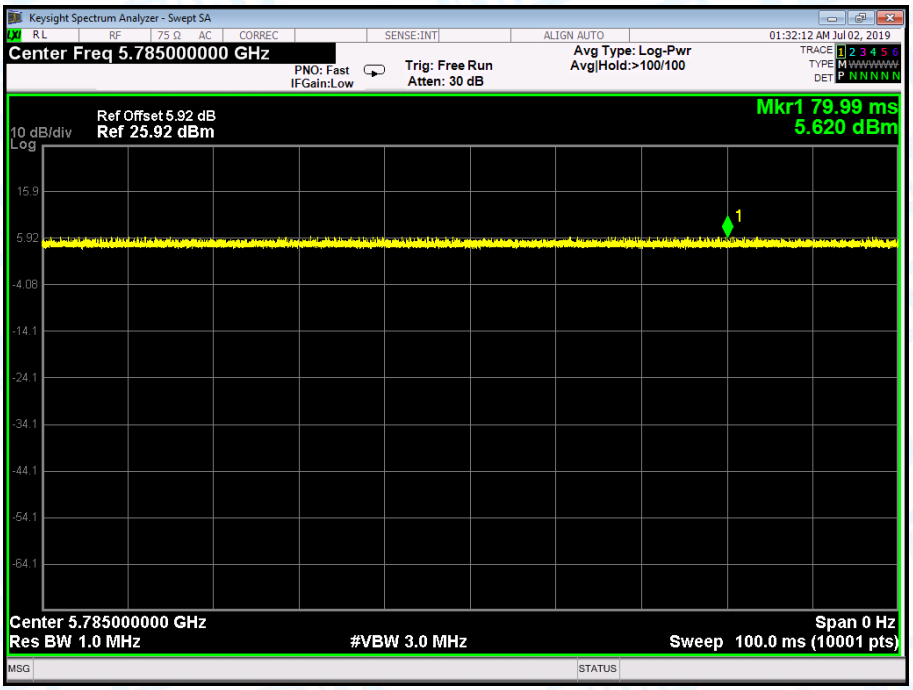
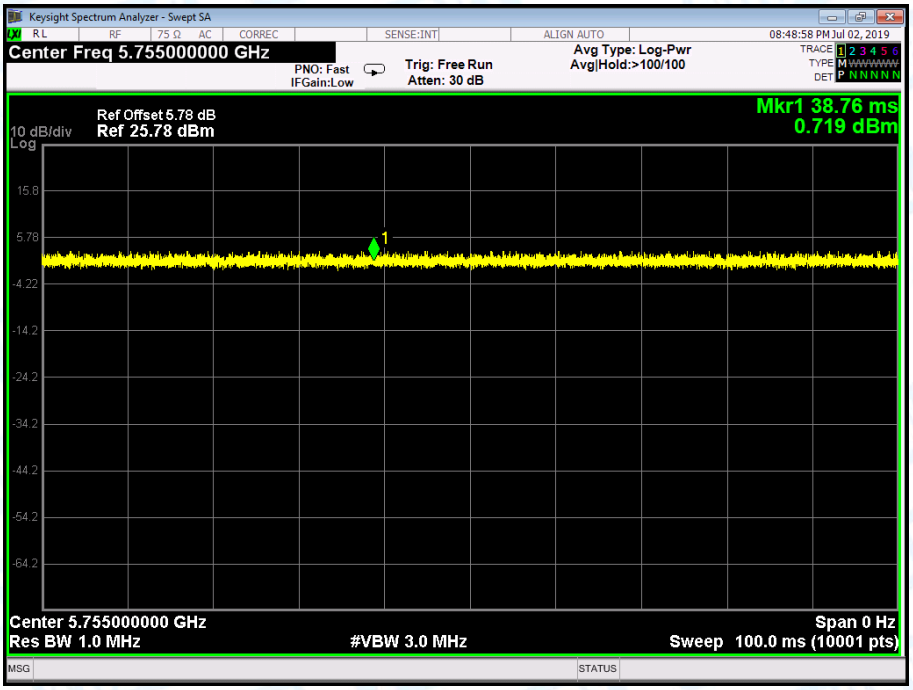
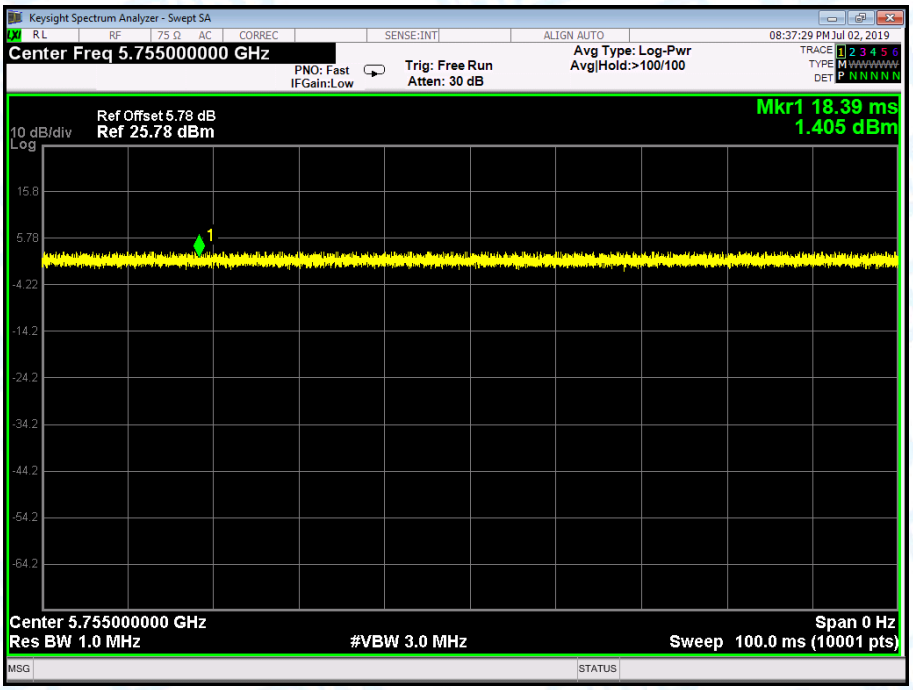
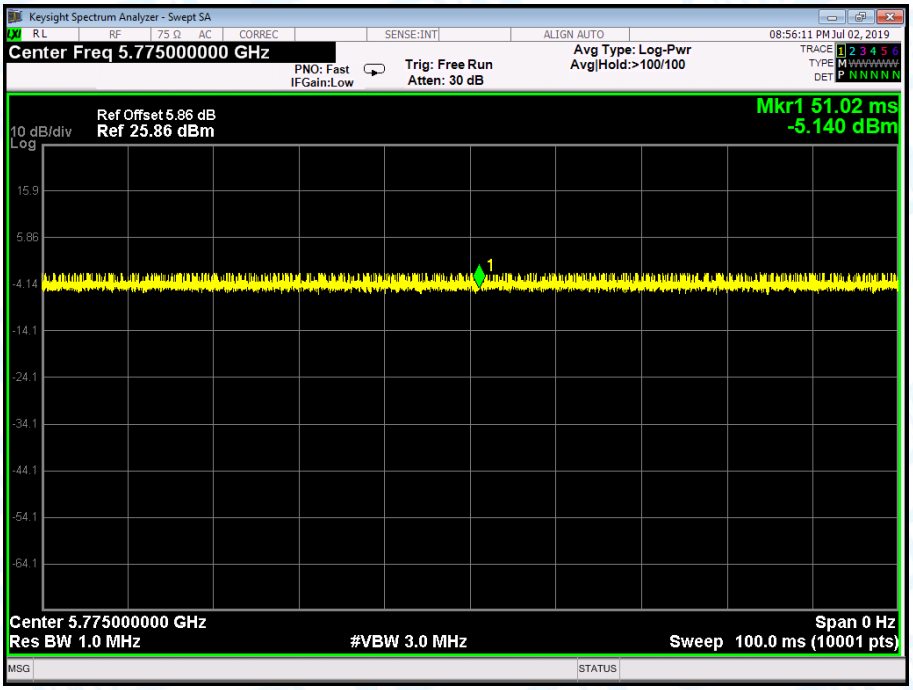

802.11 n(HT40) 5755MHz U-NII-3


802.11 ac(HT40) 5755MHz U-NII-3


802.11 ac(HT80) 5775MHz U-NII-3


Attachment F-- Power Spectral Density Test Data

Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

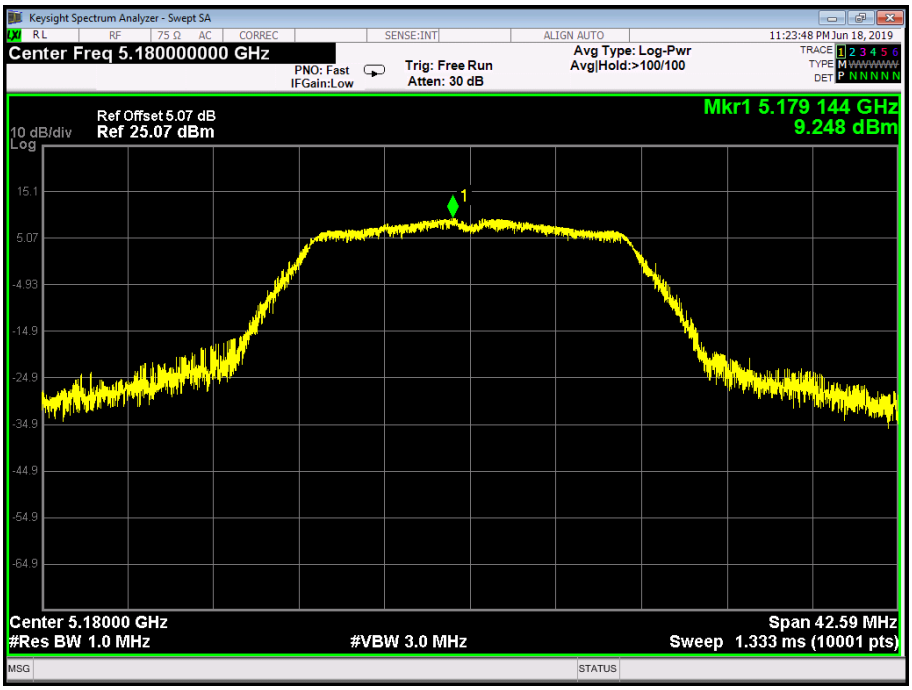
U-NII-1			
Test Mode	Frequency (MHz)	Test Data Power Density (dBm/MHz)	Limit (dBm)
802.11a	5180	9.248	11
	5200	9.504	
	5240	9.053	
802.11n (HT20)	5180	9.250	
	5200	9.306	
	5240	9.836	
802.11ac (HT20)	5180	9.177	
	5200	9.490	
	5240	8.770	
802.11n (HT40)	5190	4.637	
	5230	5.306	
802.11ac(40)	5190	6.363	
	5230	6.281	
802.11ac(80)	5210	1.333	

Result： PASS

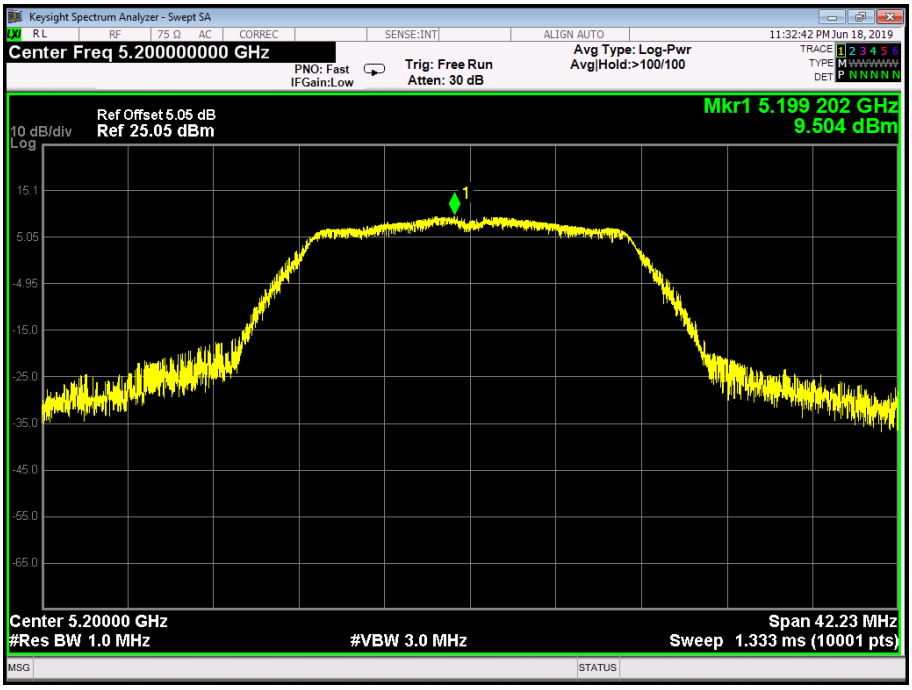
Remark:
the Directional Gain=3.0dBi＜6 dBi.

Test plots please refer to below pages:

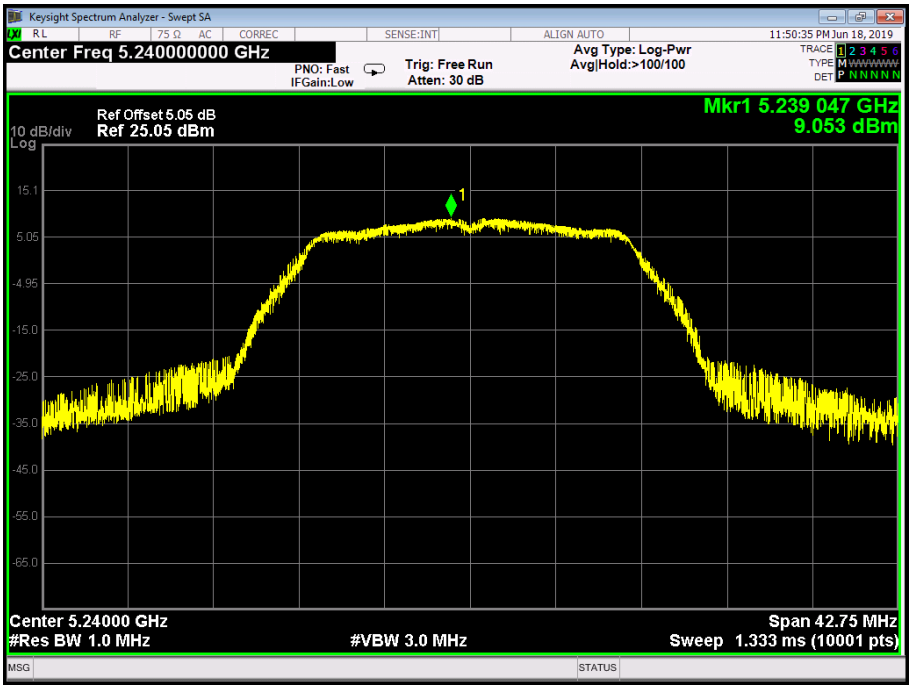
802.11 a 5180 MHz

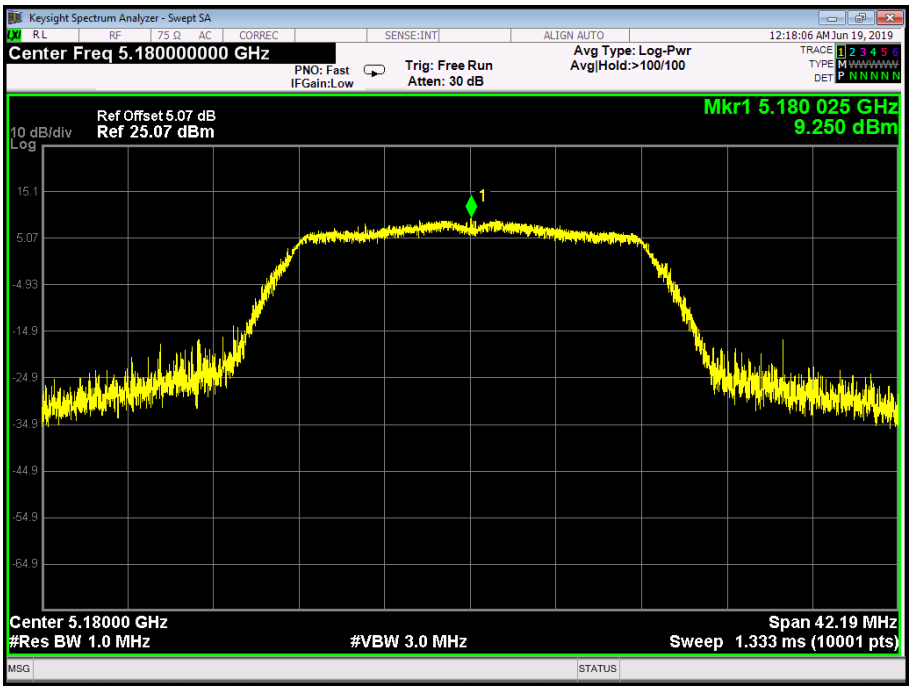
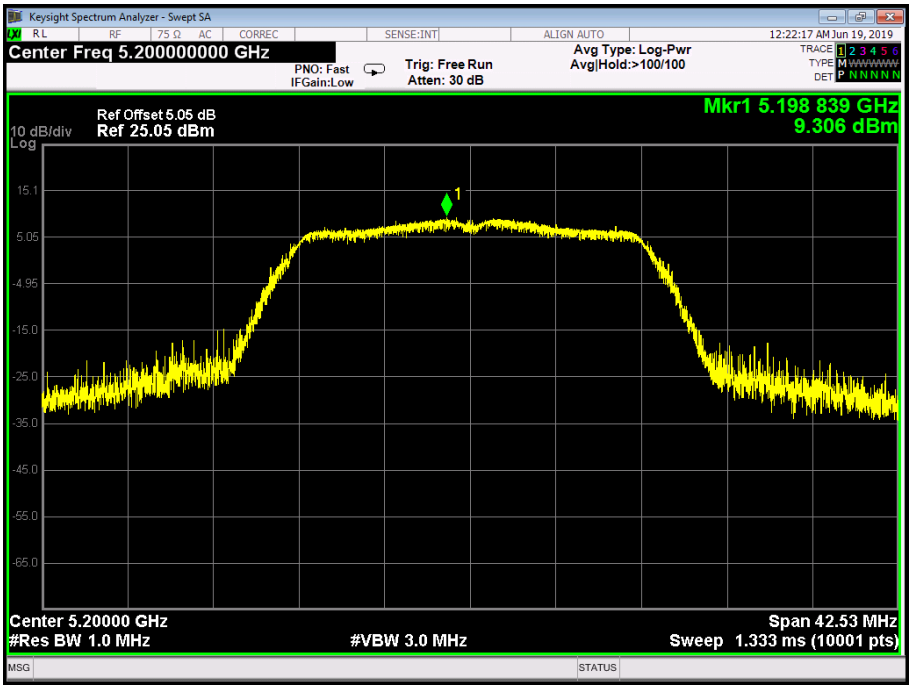


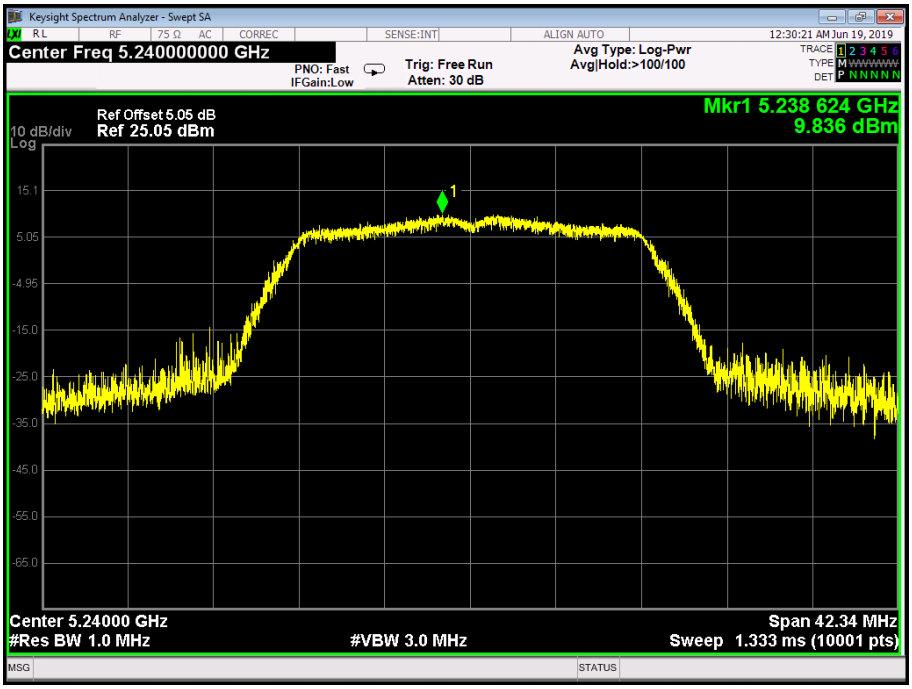
802.11 a 5200 MHz

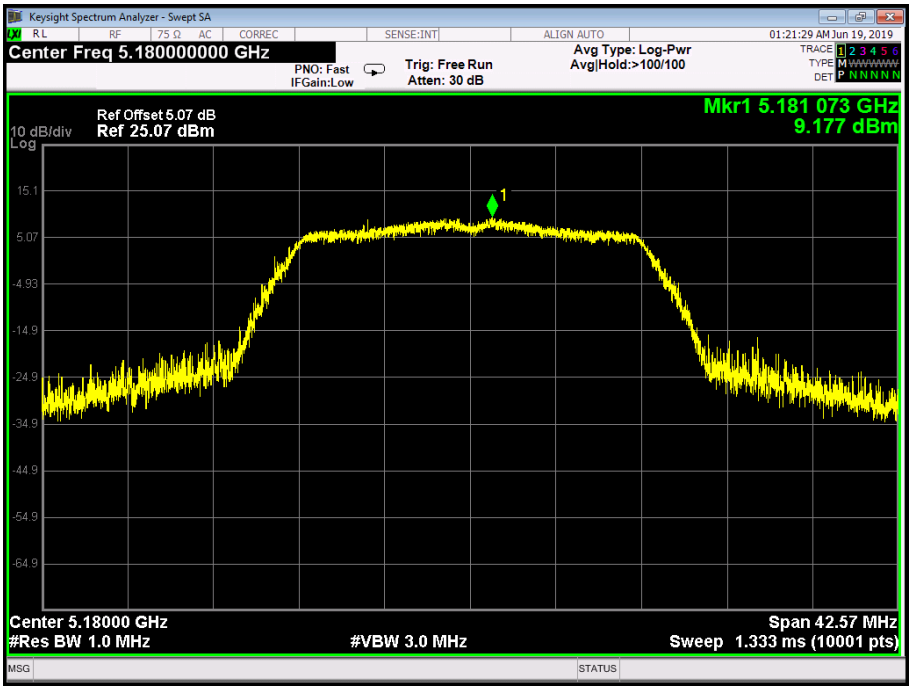
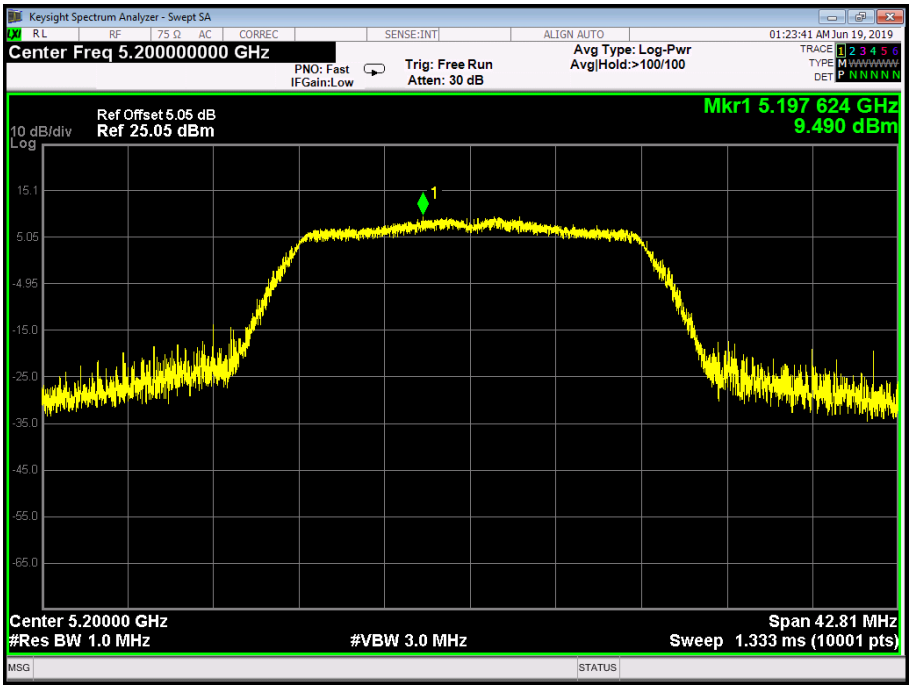


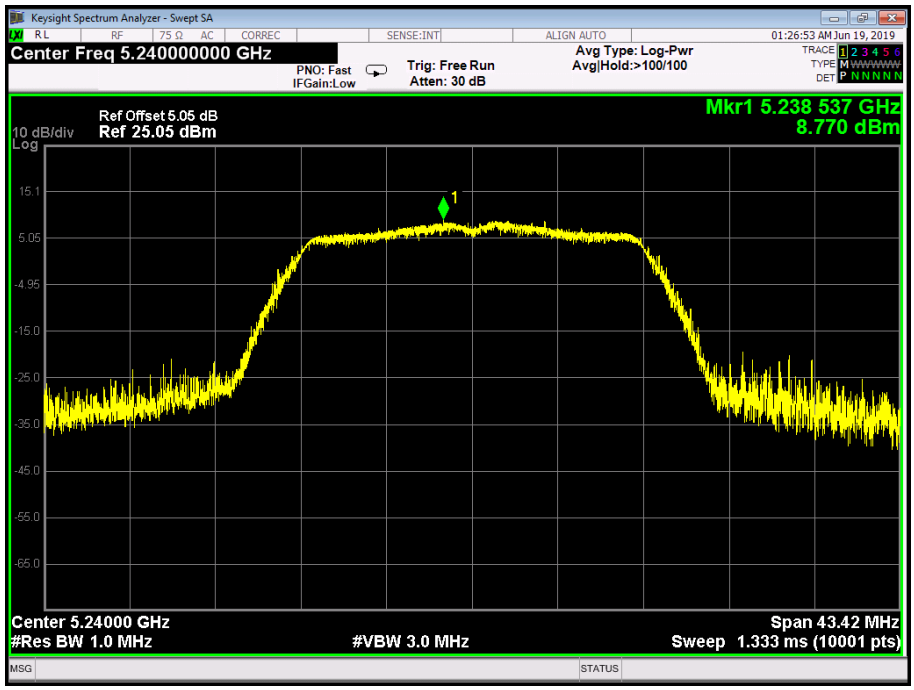
802.11 a 5240 MHz

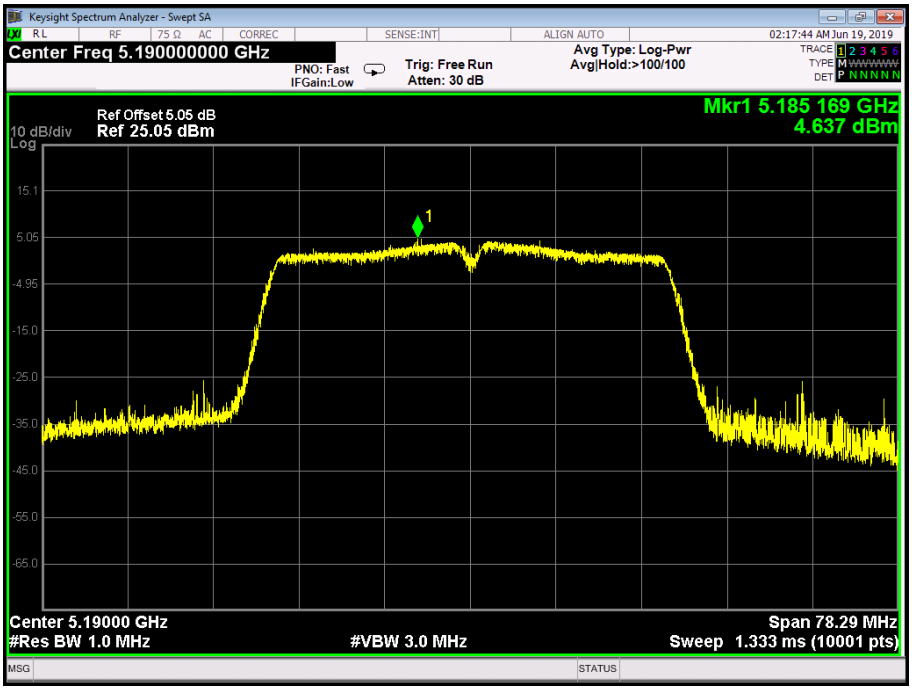

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
11:50:35 PM Jun 18, 2019
Center Freq 5.240000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.05 dB
10 dB/div
Log
Ref 25.05 dBm
Mkr1 5.239 047 GHz
9.053 dBm
15.1
5.05
-4.95
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
Center 5.24000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 42.75 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

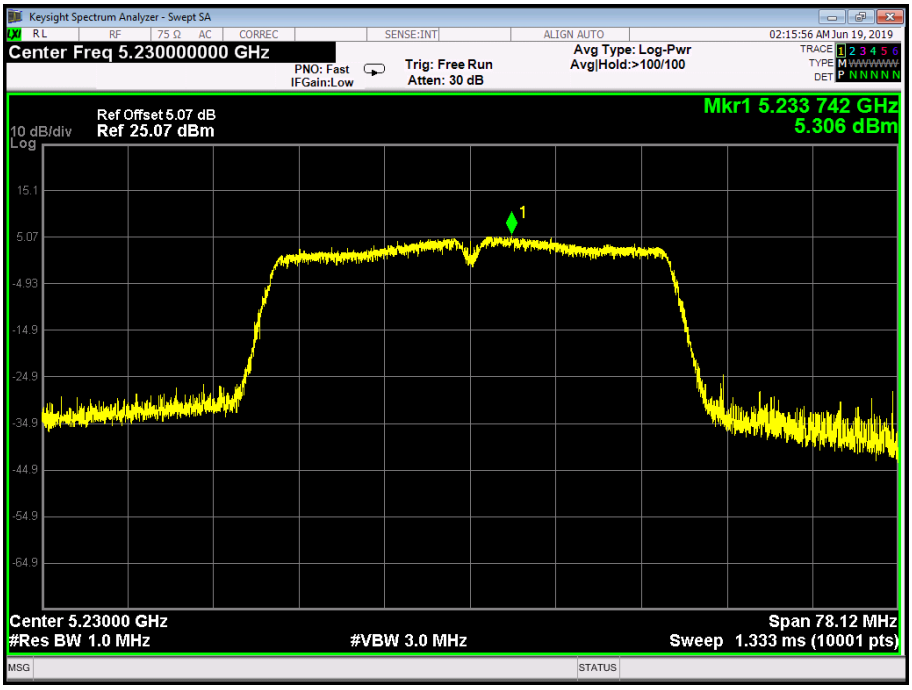
802.11 n(20) 5180 MHz

802.11 n(20) 5200 MHz

802.11 n(20) 5240 MHz

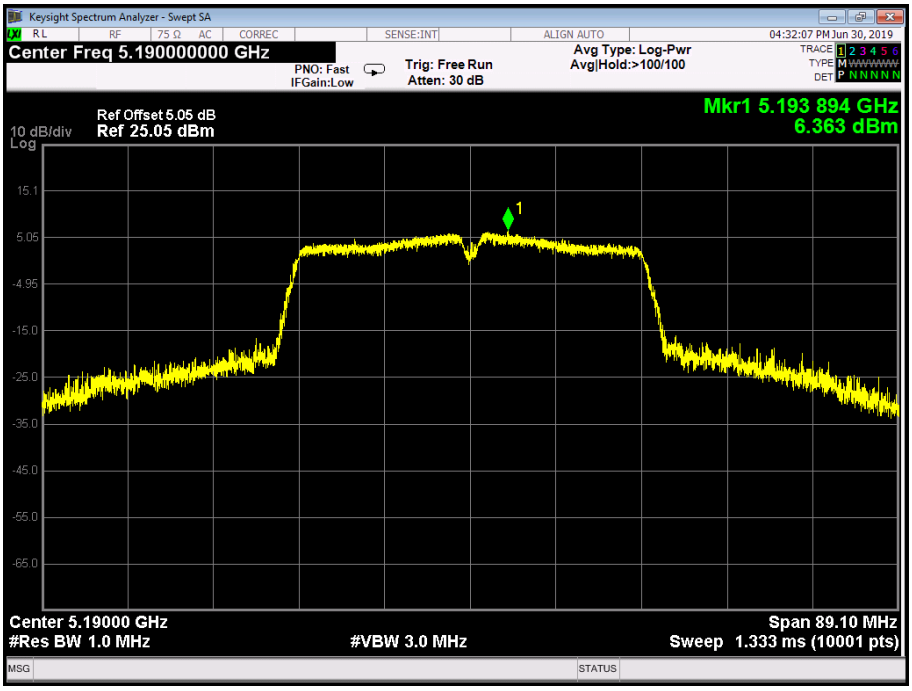
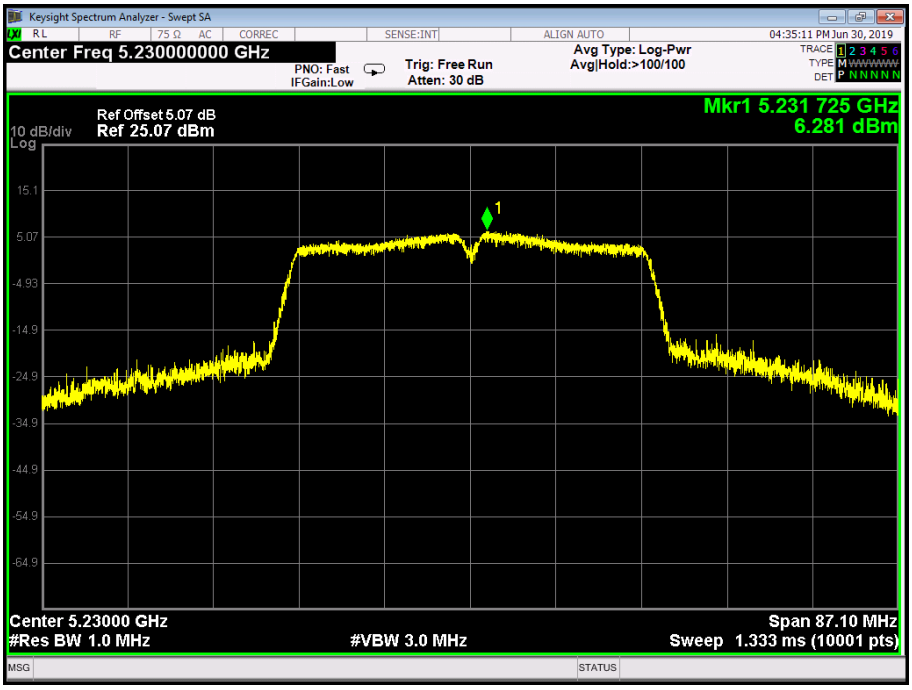

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
12:30:21 AM Jun 19, 2019
Center Freq 5.240000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.05 dB
10 dB/div
Log
Ref 25.05 dBm
Mkr1 5.238 624 GHz
9.836 dBm
15.1
5.05
-4.95
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
Center 5.24000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 42.34 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

802.11 ac(20) 5180 MHz

802.11 ac(20) 5200 MHz

802.11 ac(20) 5240 MHz

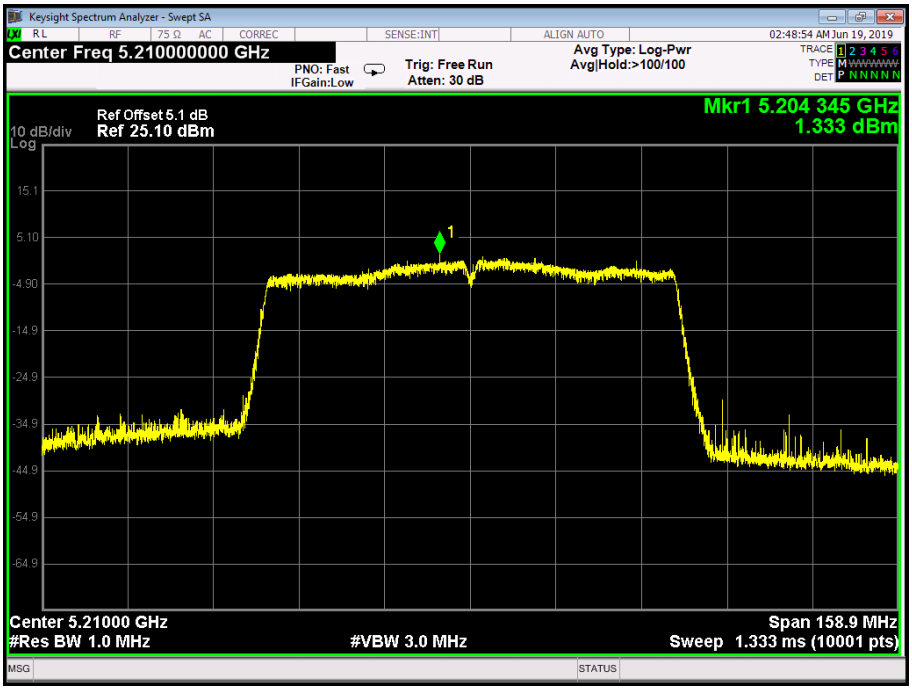

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
01:26:53 AM Jun 19, 2019
Center Freq 5.240000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 5.05 dB
10 dB/div
Log
Ref 25.05 dBm
Mkr1 5.238 537 GHz
8.770 dBm
15.1
5.05
-4.95
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
1
Center 5.24000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 43.42 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

802.11 n(40) 5190 MHz


802.11 n(40) 5230 MHz


802.11 ac(40) 5190 MHz

802.11 ac(40) 5230 MHz


802.11 ac(80) 5290 MHz



Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

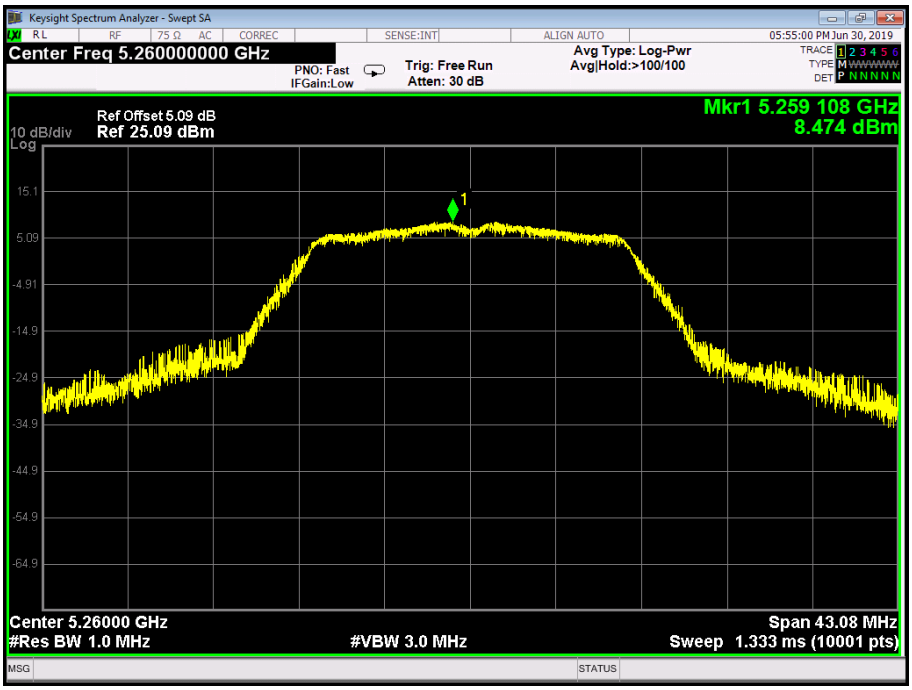
U-NII-2A			
Test Mode	Frequency (MHz)	Test Data Power Density (dBm/MHz)	Limit (dBm)
802.11a	5260	8.474	11
	5280	8.251	
	5320	6.682	
802.11n (HT20)	5260	8.040	
	5280	8.354	
	5320	7.937	
802.11ac (HT20)	5260	8.398	
	5280	7.739	
	5320	8.105	
802.11n (HT40)	5270	4.931	
	5310	5.403	
802.11ac(40)	5270	5.754	
	5310	5.153	
802.11ac(80)	5290	2.232	

Result： PASS

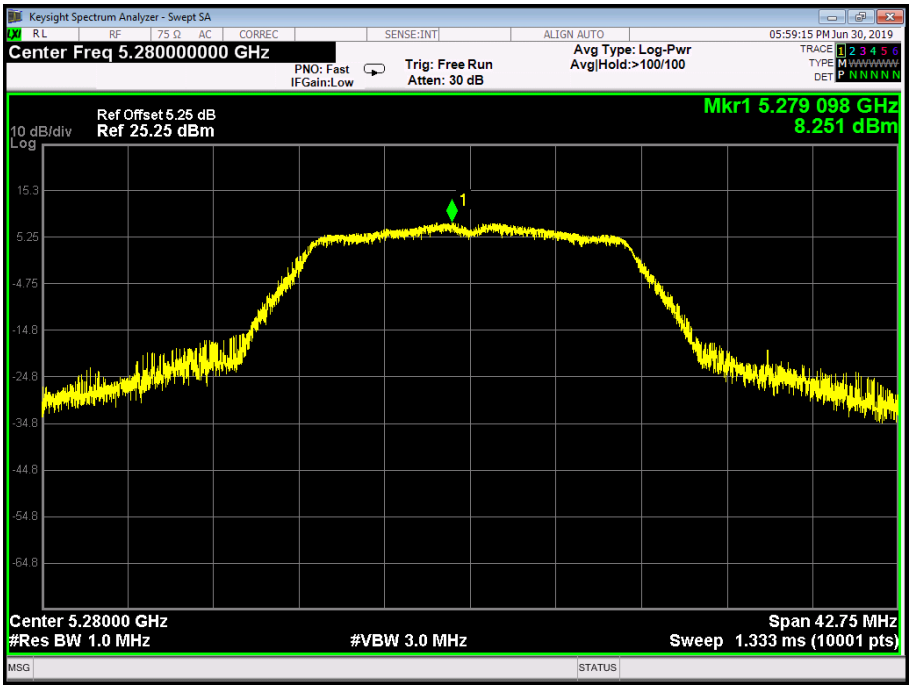
Remark:
the Directional Gain=3.0dBi＜6 dBi.

Test plots please refer to below pages:

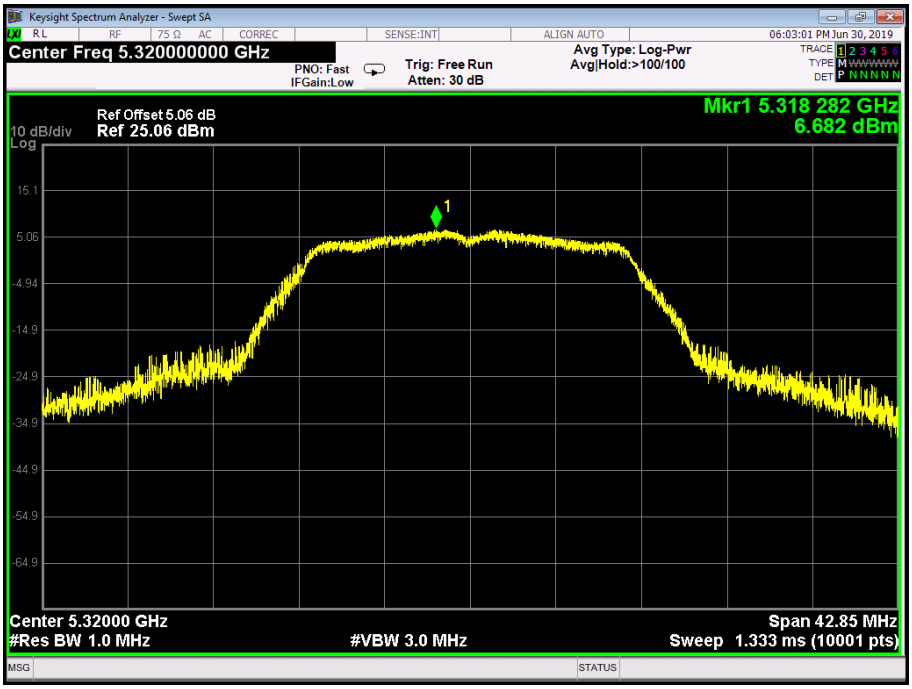
802.11 a 5260 MHz



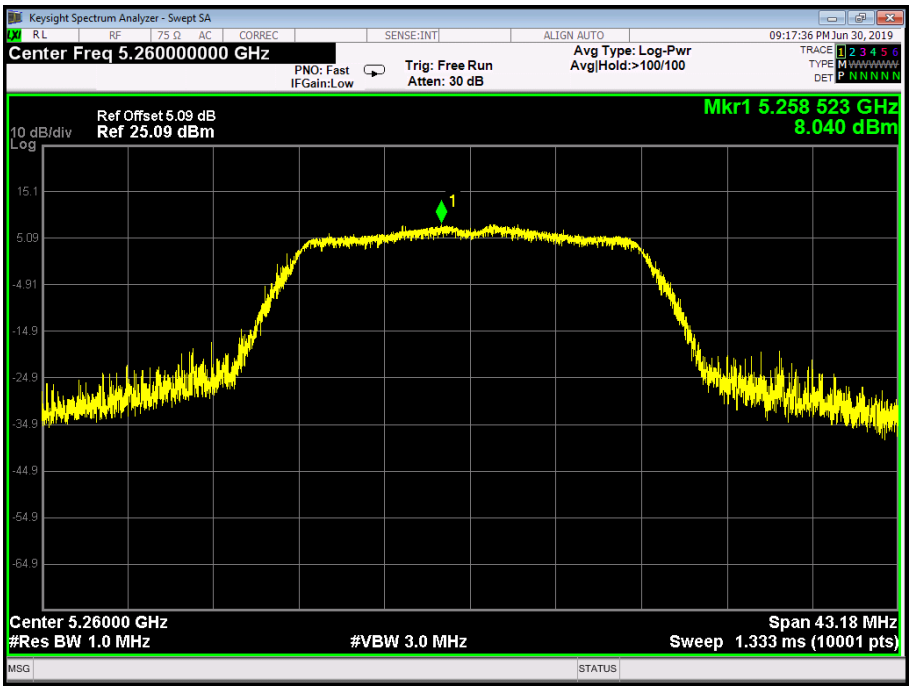
802.11 a 5280 MHz



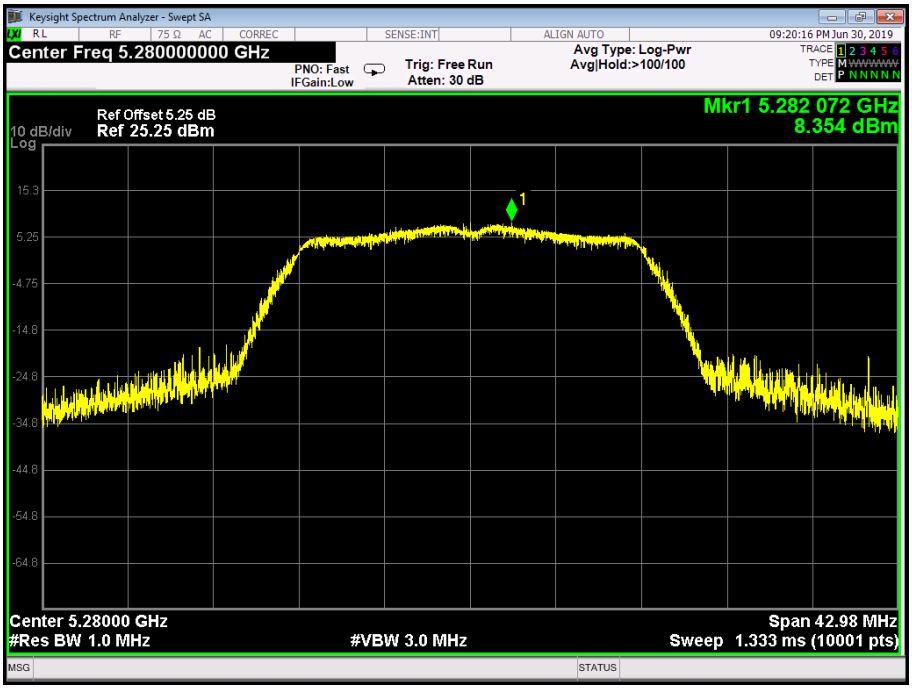
802.11 a 5320 MHz


Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
06:03:01 PM Jun 30, 2019
Center Freq 5.320000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.06 dB
10 dB/div
Log
Ref 25.06 dBm
Mkr1 5.318 282 GHz
6.682 dBm
15.1
5.06
-4.94
-14.9
-24.9
-34.9
-44.9
-54.9
-64.9
1
Center 5.32000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 42.85 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

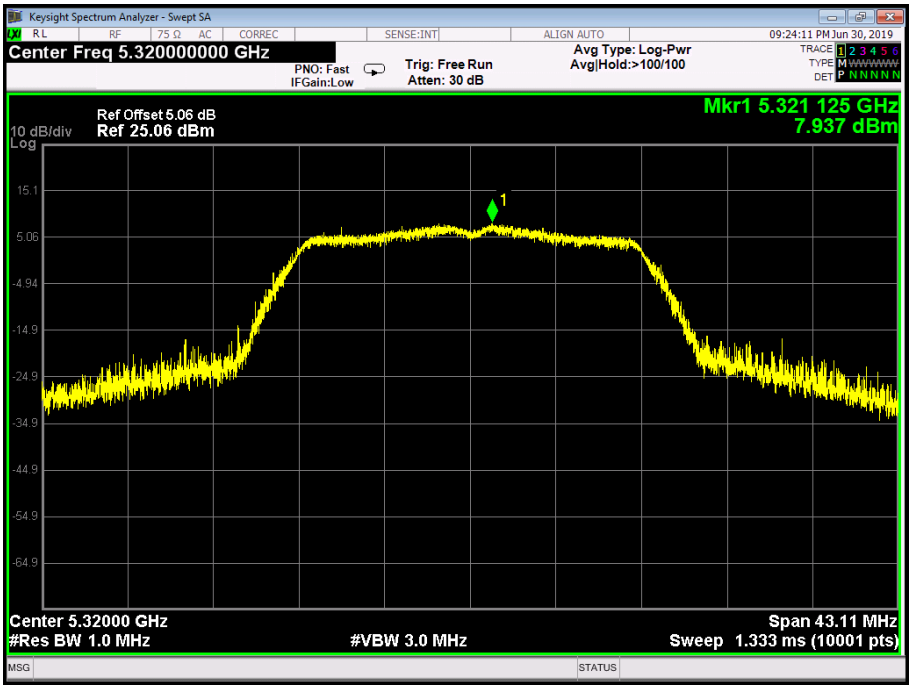
802.11 n(20) 5260 MHz

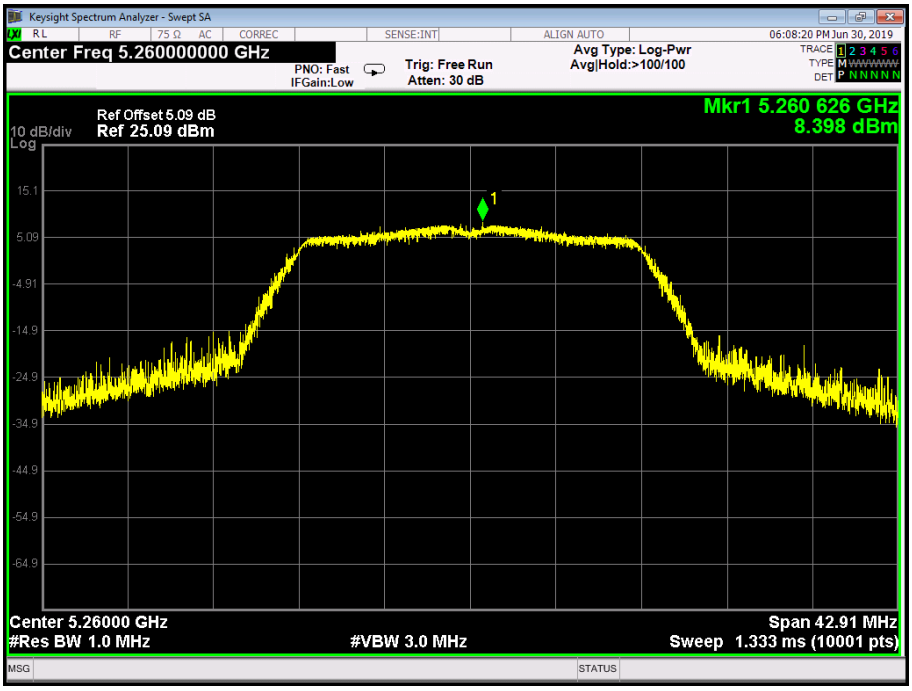
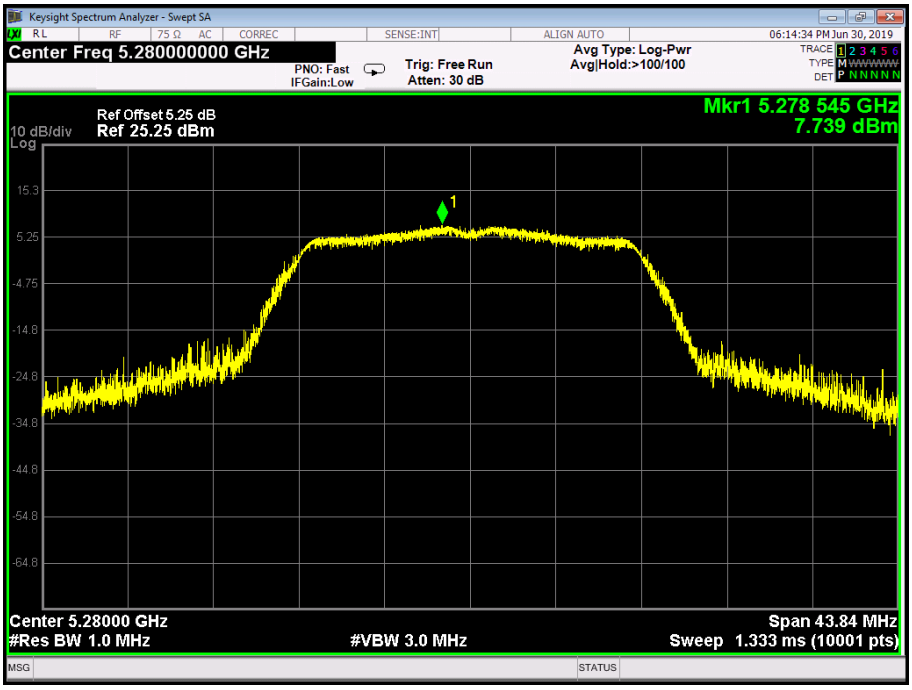


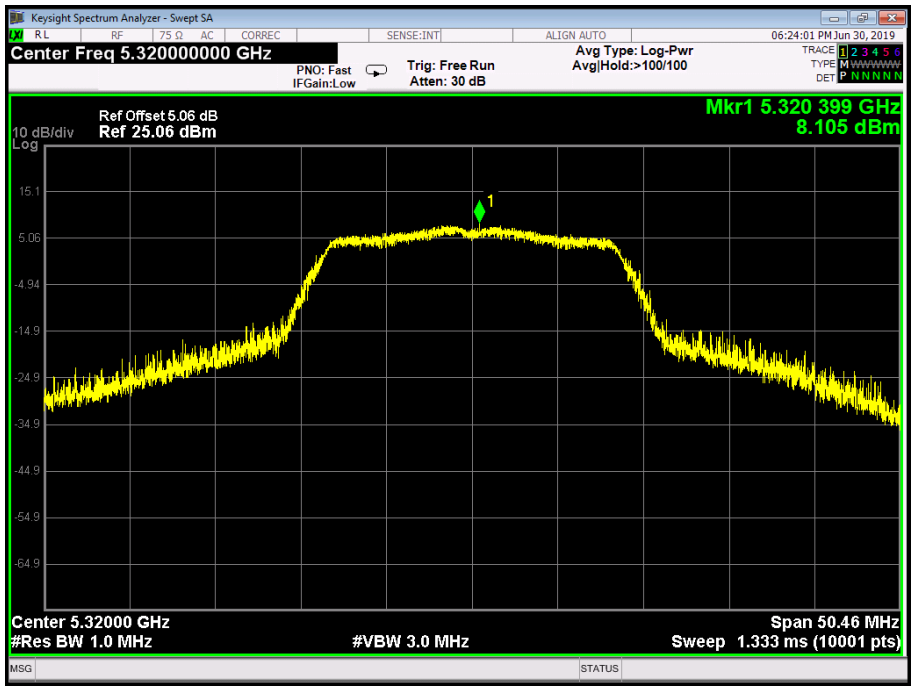
802.11 n(20) 5280 MHz

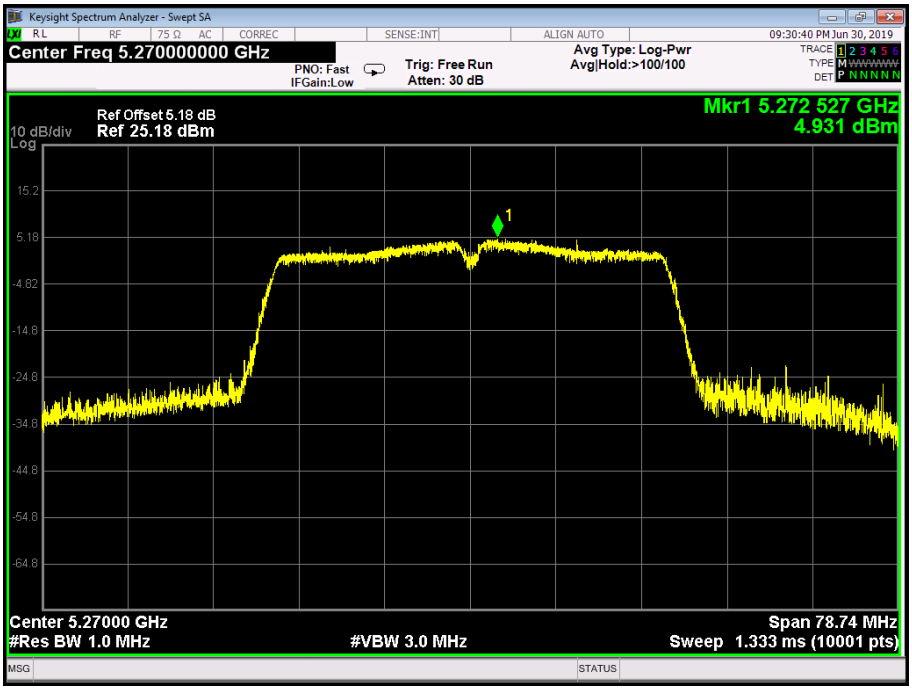
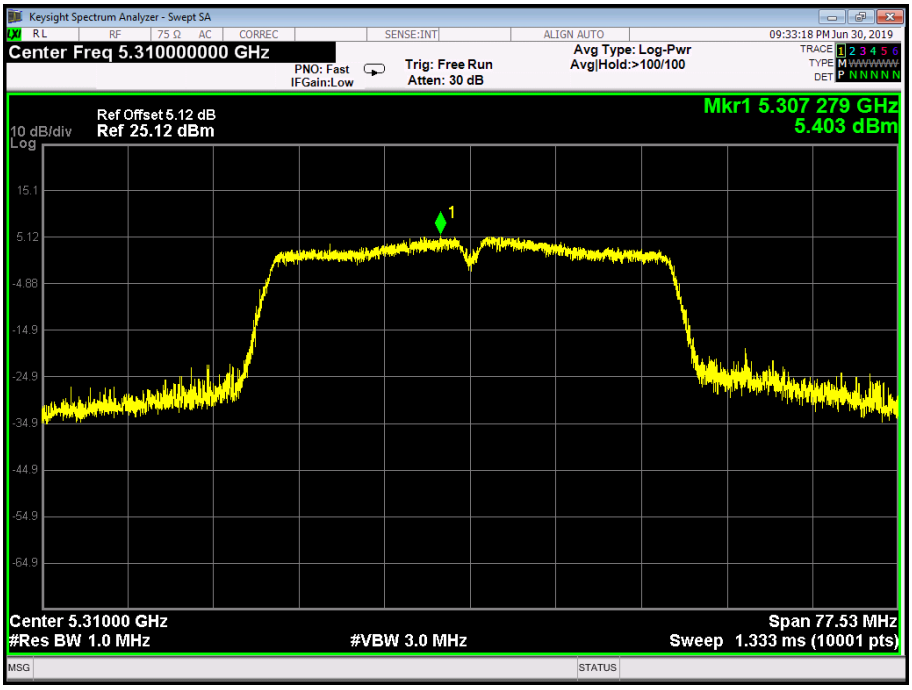


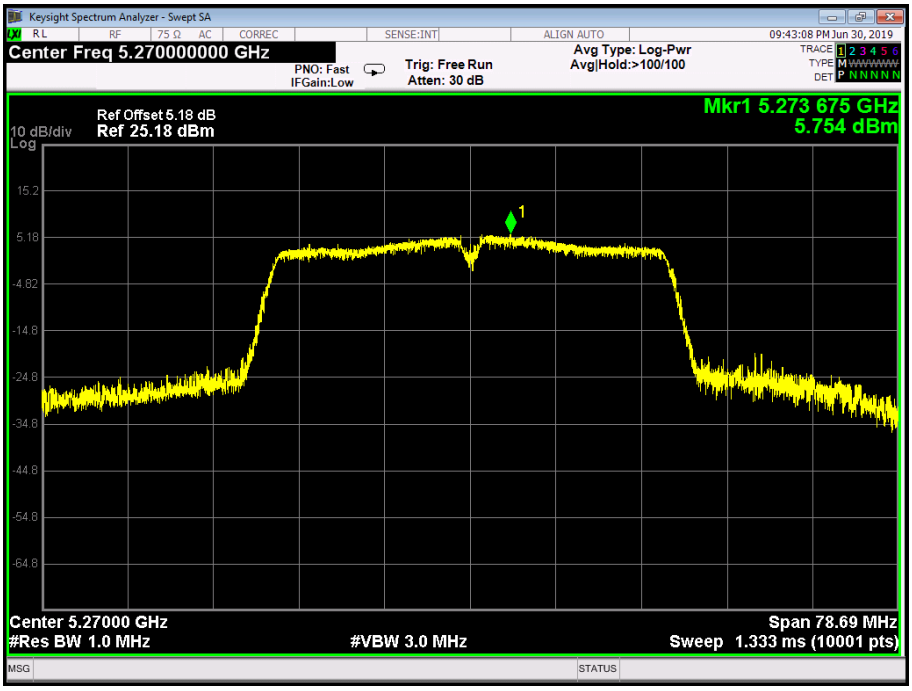
802.11 n(20) 5320 MHz

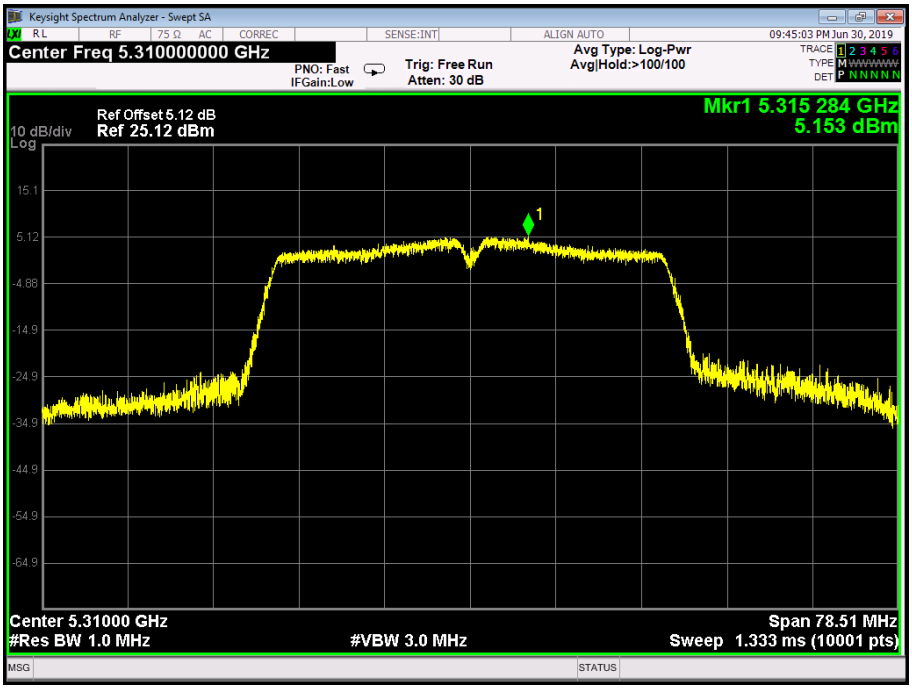

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
09:24:11 PM Jun 30, 2019
Center Freq 5.320000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.06 dB
10 dB/div
Log
Ref 25.06 dBm
Mkr1 5.321 125 GHz
7.937 dBm
15.1
5.06
-4.94
-14.9
-24.9
-34.9
-44.9
-54.9
-64.9
Center 5.32000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 43.11 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

802.11 ac(20) 5260 MHz

802.11 ac(20) 5280 MHz

802.11 ac(20) 5320 MHz

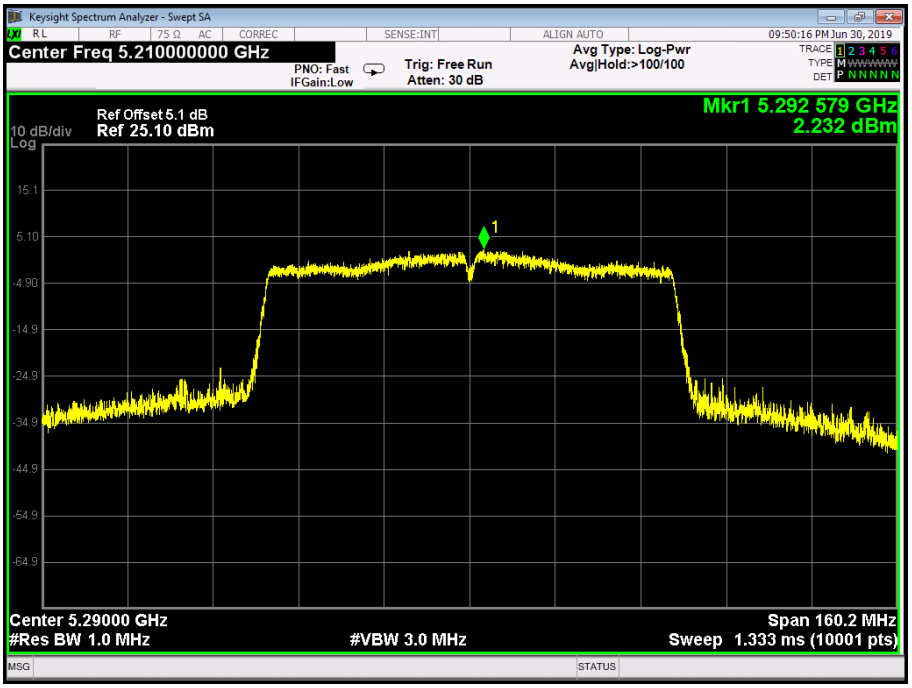

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
06:24:01 PM Jun 30, 2019
Center Freq 5.320000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 5.06 dB
10 dB/div
Log
Ref 25.06 dBm
Mkr1 5.320 399 GHz
8.105 dBm
15.1
5.06
-4.94
-14.9
-24.9
-34.9
-44.9
-54.9
-64.9
Center 5.32000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.46 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

802.11 n(40) 5270 MHz

802.11 n(40) 5310 MHz


802.11 ac(40) 5270 MHz


802.11 ac(40) 5310 MHz


802.11 ac(80) 5210 MHz



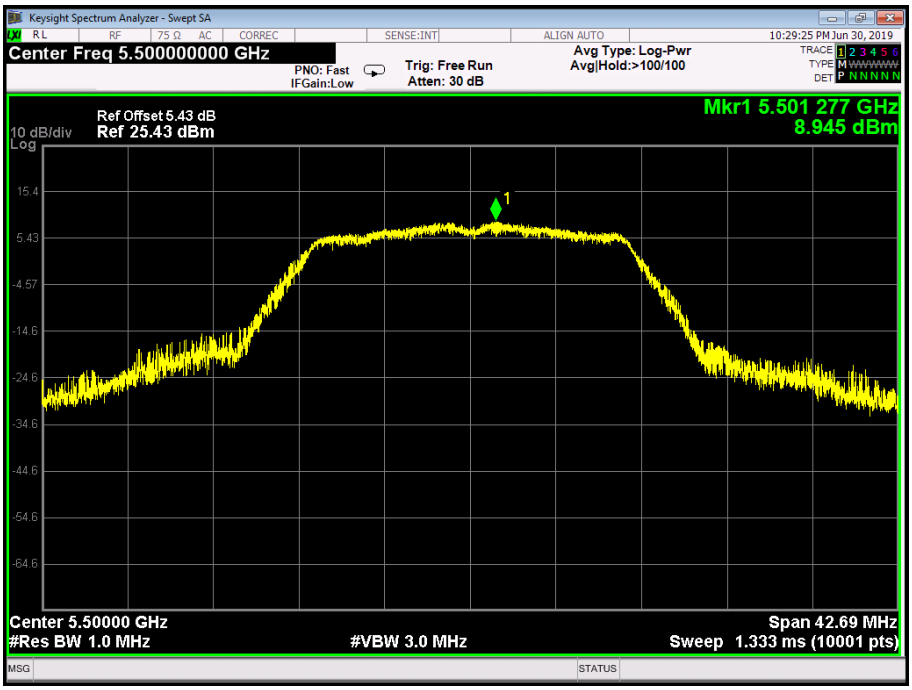
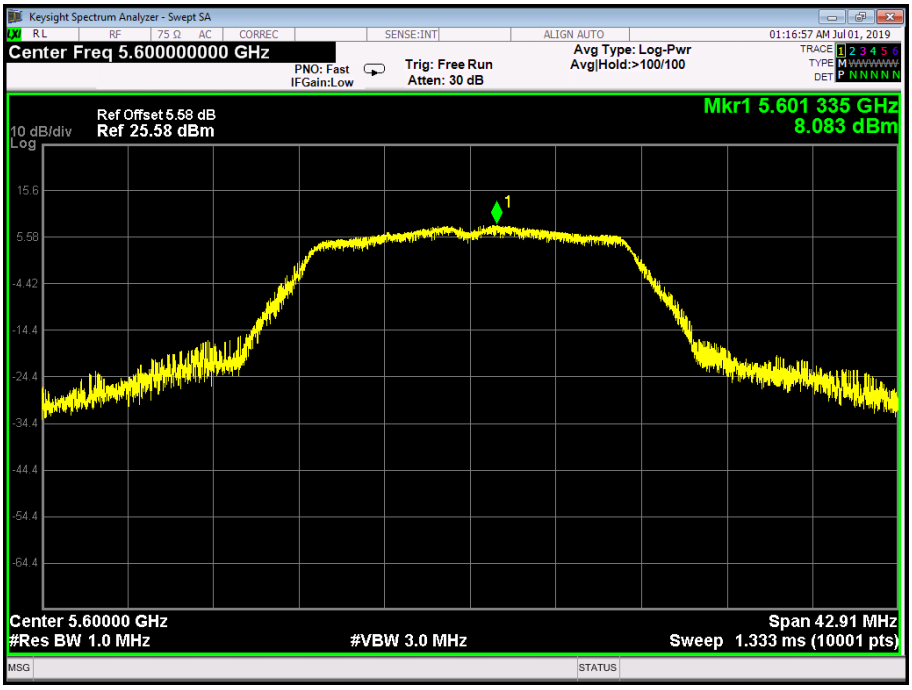
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

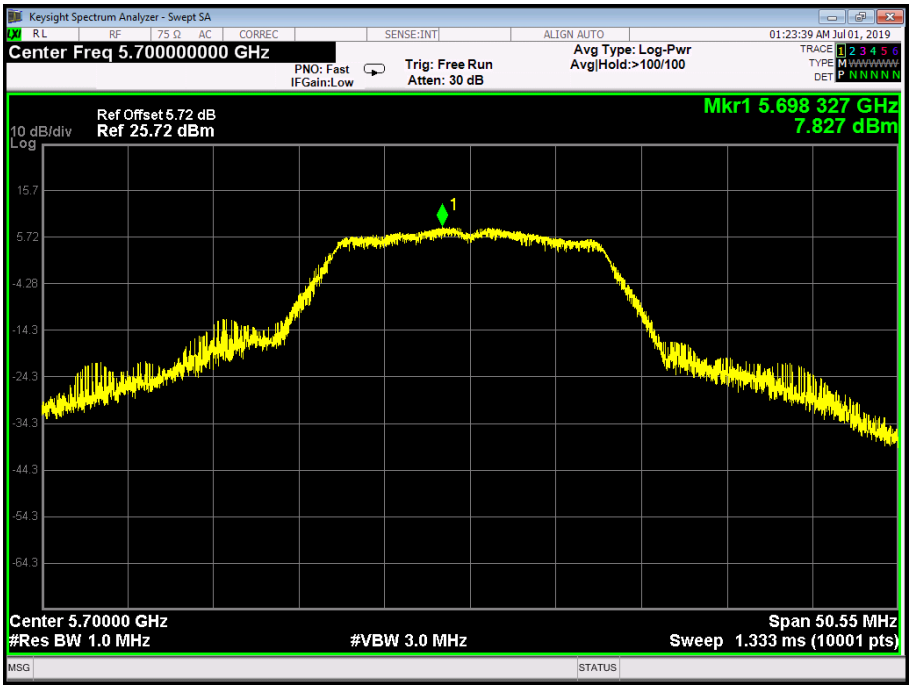
U-NII-2C			
Test Mode	Frequency (MHz)	Test Data Power Density (dBm/MHz)	Limit (dBm)
802.11a	5500	8.945	11
	5600	8.083	
	5700	7.827	
802.11n (HT20)	5500	8.707	
	5600	9.198	
	5700	7.064	
802.11ac (HT20)	5500	7.527	
	5600	9.133	
	5700	7.614	
802.11n (HT40)	5510	3.527	
	5670	4.079	
802.11ac(40)	5510	3.604	
	5670	4.030	
802.11ac(80)	5530	-0.170	
	5610	-0.117	
	5690	0.318	

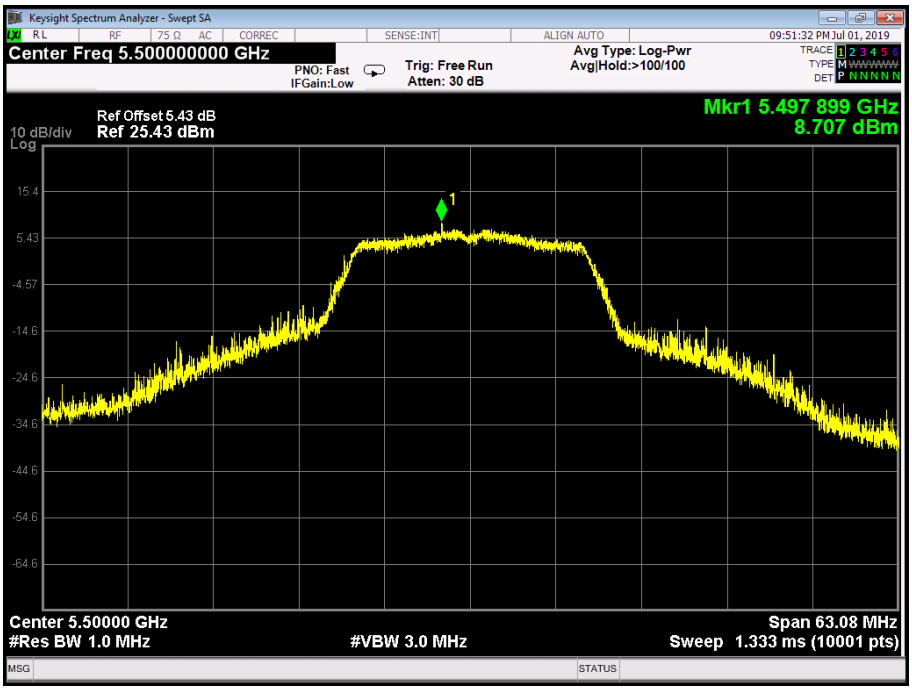
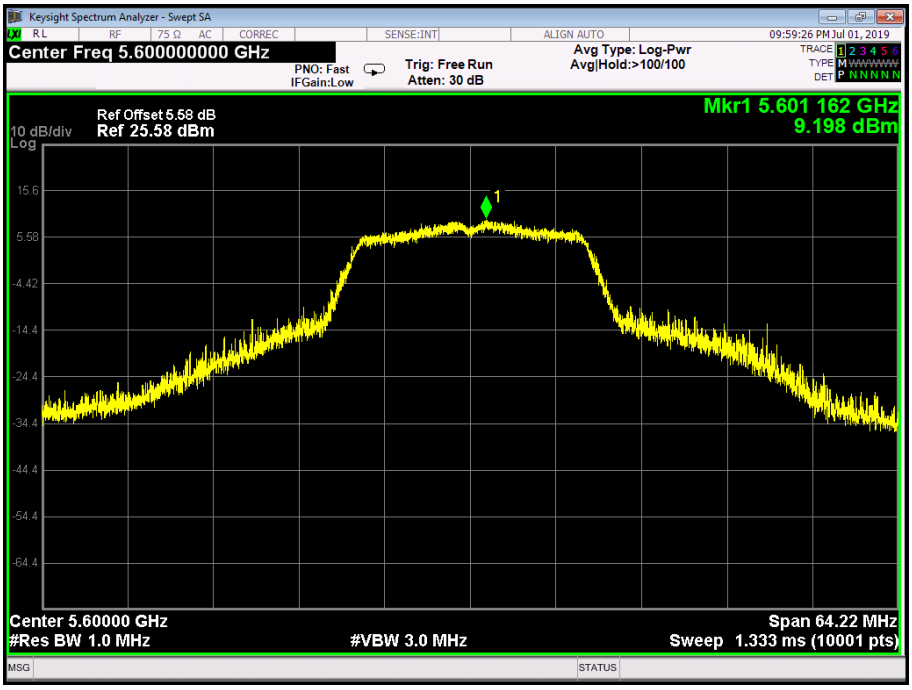
Result: PASS

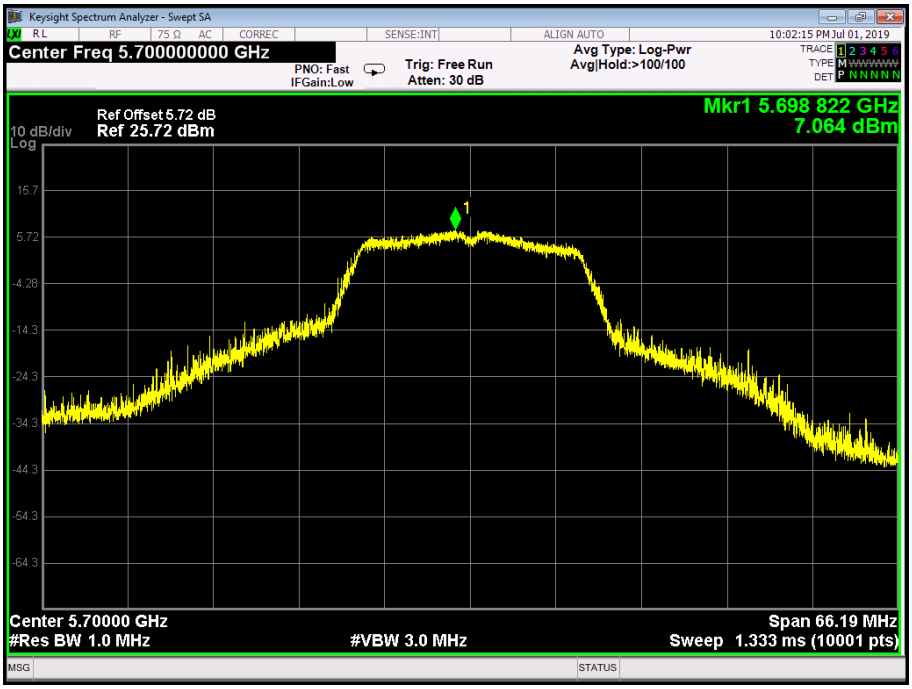
Remark:
the Directional Gain=3.0dBi＜6 dBi.

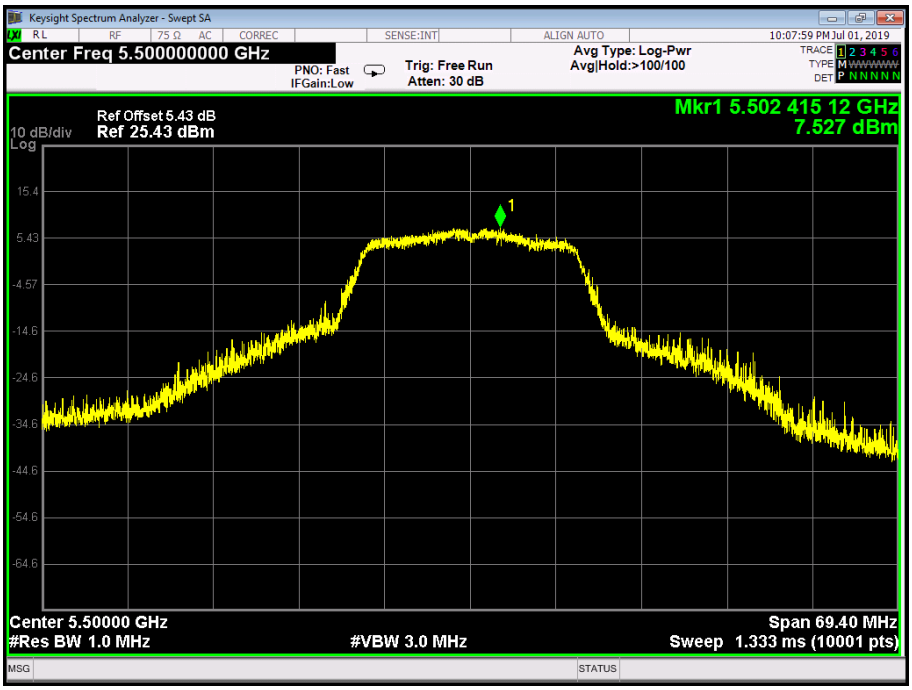
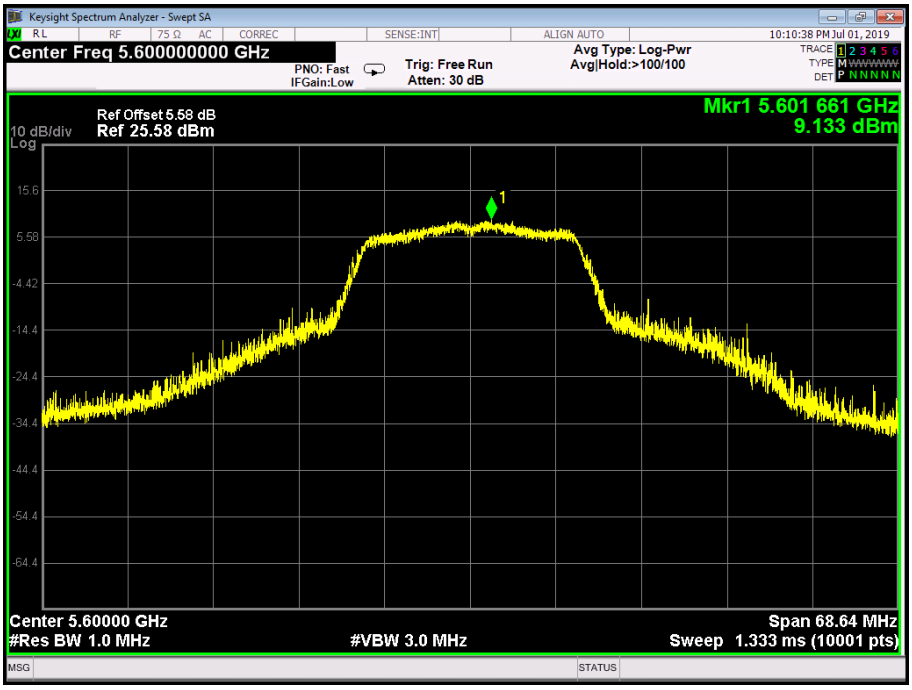
Test plots please refer to below pages:

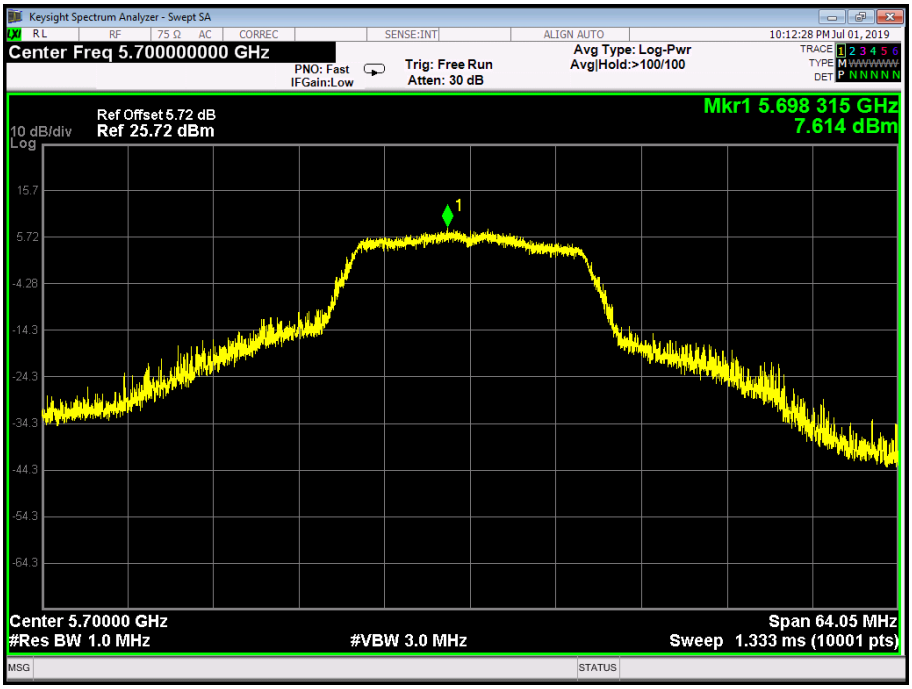
802.11 a 5500 MHz

802.11 a 5600 MHz

802.11 a 5700 MHz

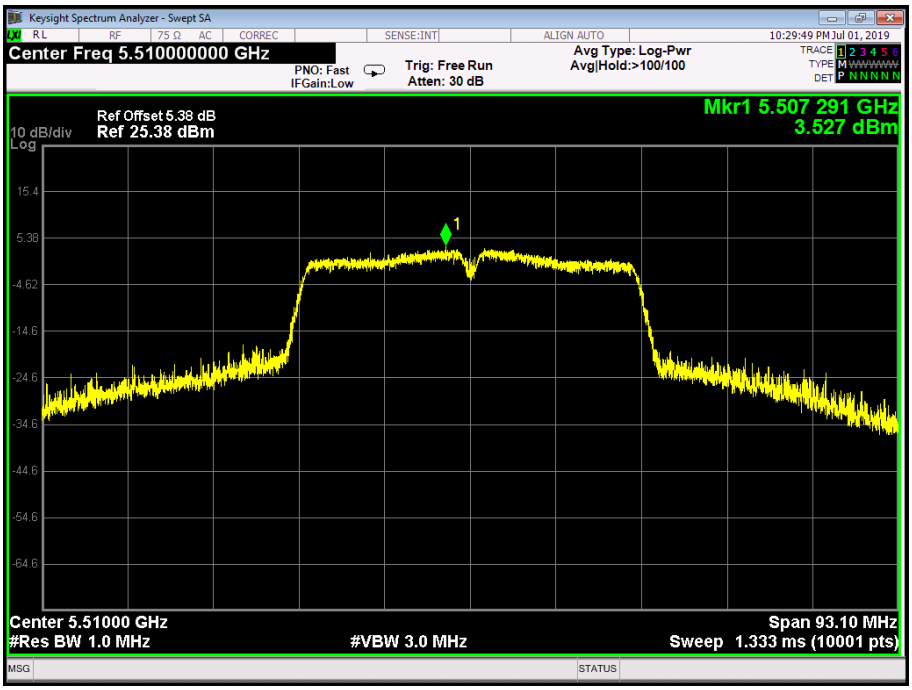

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
01:23:39 AM Jul 01, 2019
Center Freq 5.700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.72 dB
10 dB/div
Log
Ref 25.72 dBm
Mkr1 5.698 327 GHz
7.827 dBm
15.7
5.72
-4.28
-14.3
-24.3
-34.3
-44.3
-54.3
-64.3
Center 5.70000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 50.55 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

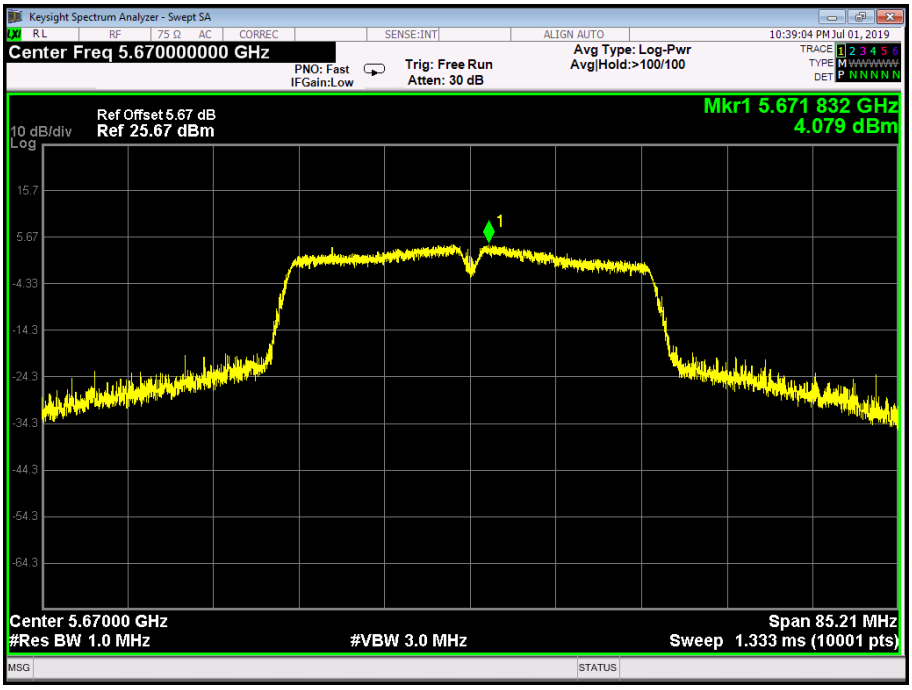
802.11 n(20) 5500 MHz

802.11 n(20) 5600 MHz

802.11 n(20) 5700 MHz

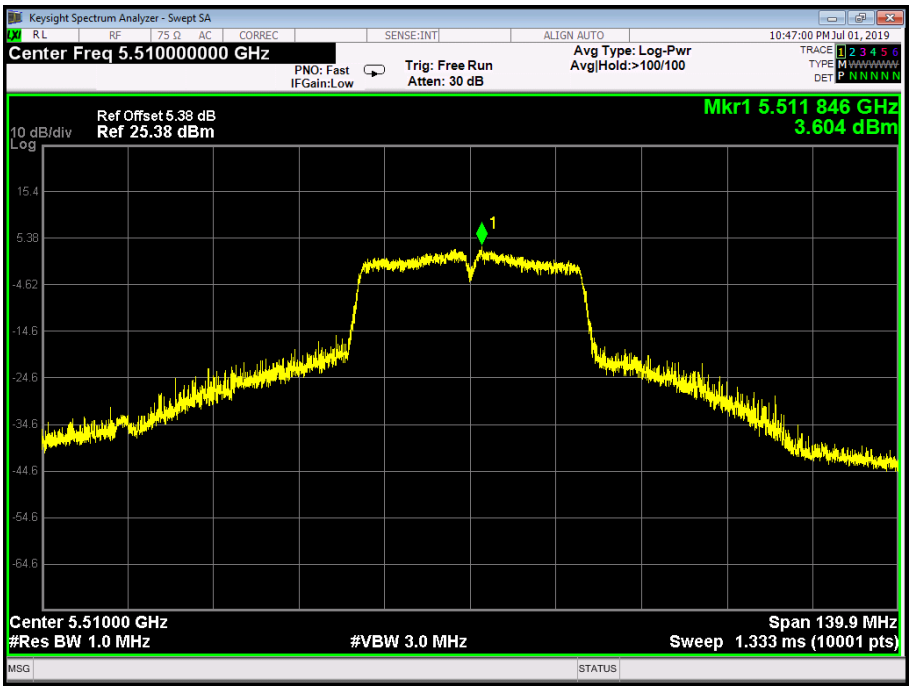
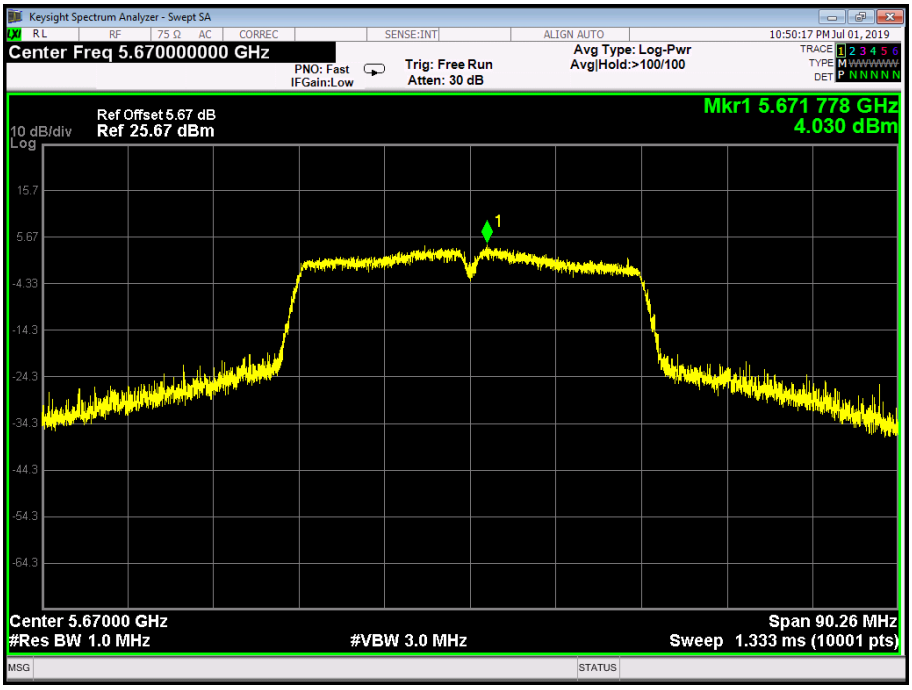

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
10:02:15 PM Jul 01, 2019
Center Freq 5.700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.72 dB
10 dB/div
Log
Ref 25.72 dBm
Mkr1 5.698 822 GHz
7.064 dBm
15.7
5.72
-4.28
-14.3
-24.3
-34.3
-44.3
-54.3
-64.3
Center 5.70000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 66.19 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

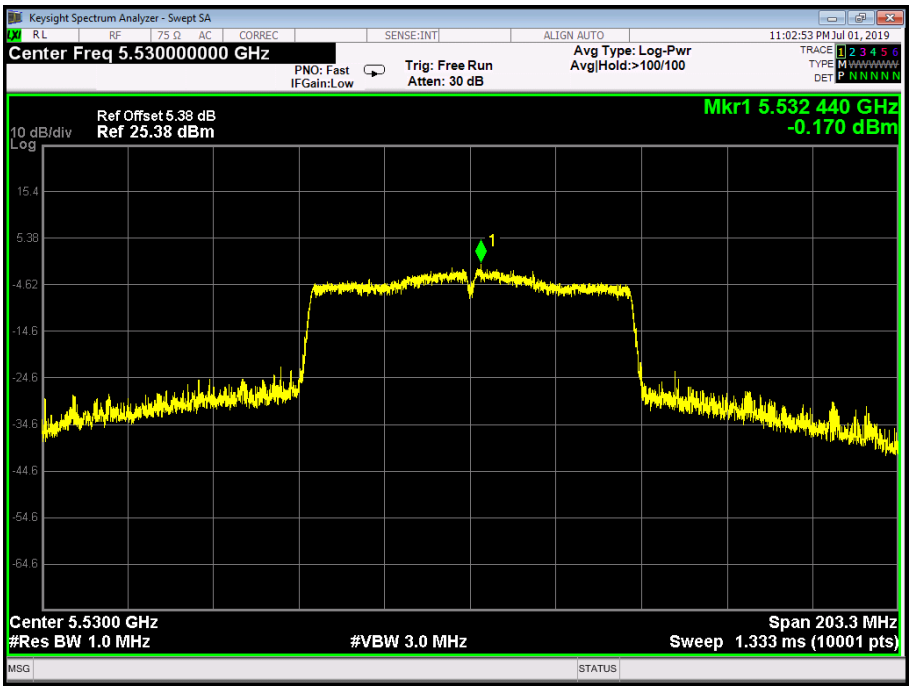
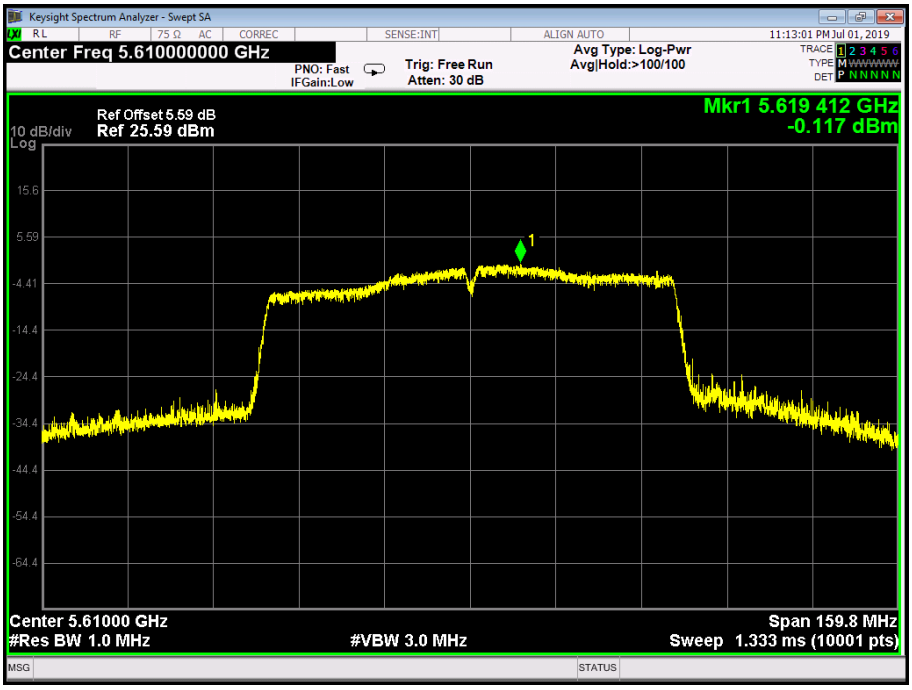
802.11 ac(20) 5500 MHz

802.11 ac(20) 5600 MHz

802.11 ac(20) 5700 MHz

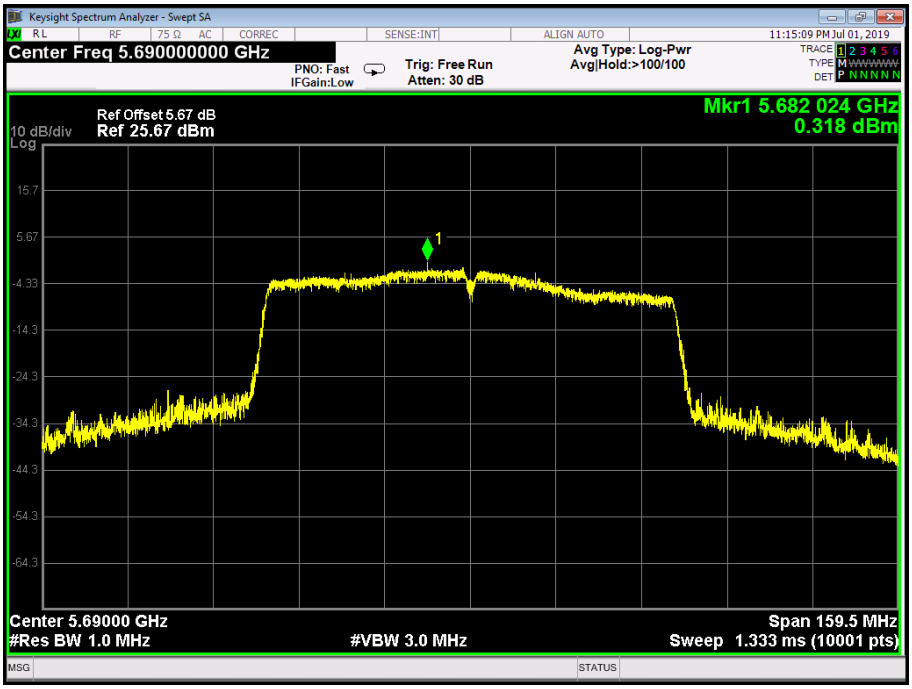

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
10:12:28 PM Jul 01, 2019
Center Freq 5.700000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.72 dB
10 dB/div
Log
Ref 25.72 dBm
Mkr1 5.698 315 GHz
7.614 dBm
15.7
5.72
-4.28
-14.3
-24.3
-34.3
-44.3
-54.3
-64.3
1
Center 5.70000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 64.05 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

802.11 n(40) 5510 MHz


802.11 n(40) 5670 MHz


802.11 ac(40) 5510 MHz

802.11 ac(40) 5670 MHz


802.11 ac(80) 5530 MHz

802.11 ac(80) 5610 MHz

802.11 ac(80) 5690 MHz


Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
11:15:09 PM Jul 01, 2019
Center Freq 5.690000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.67 dB
10 dB/div
Log
Ref 25.67 dBm
Mkr1 5.682 024 GHz
0.318 dBm
15.7
5.67
-4.33
-14.3
-24.3
-34.3
-44.3
-54.3
-64.3
1
Center 5.69000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Span 159.5 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

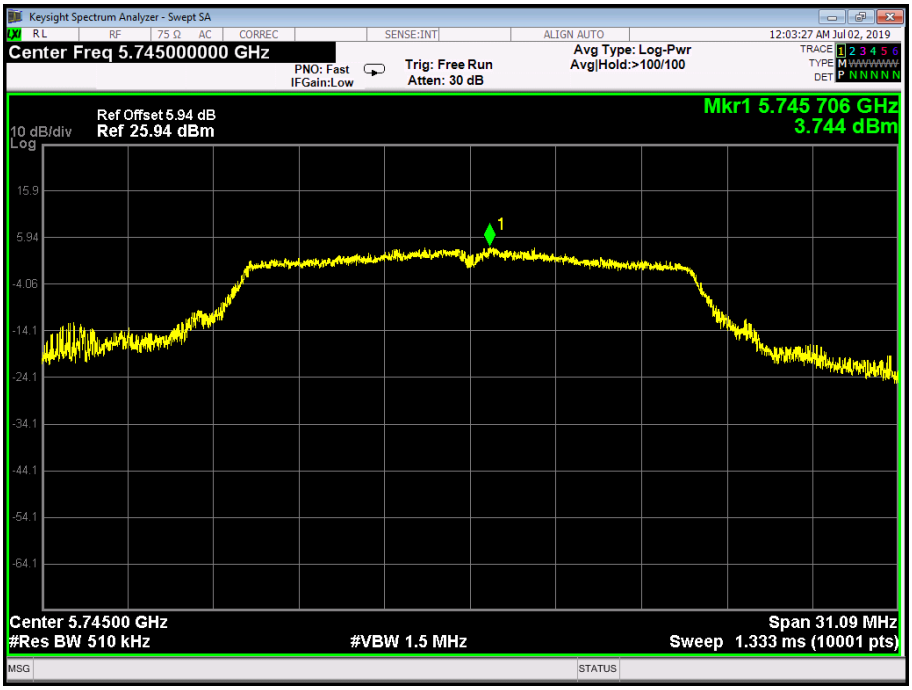
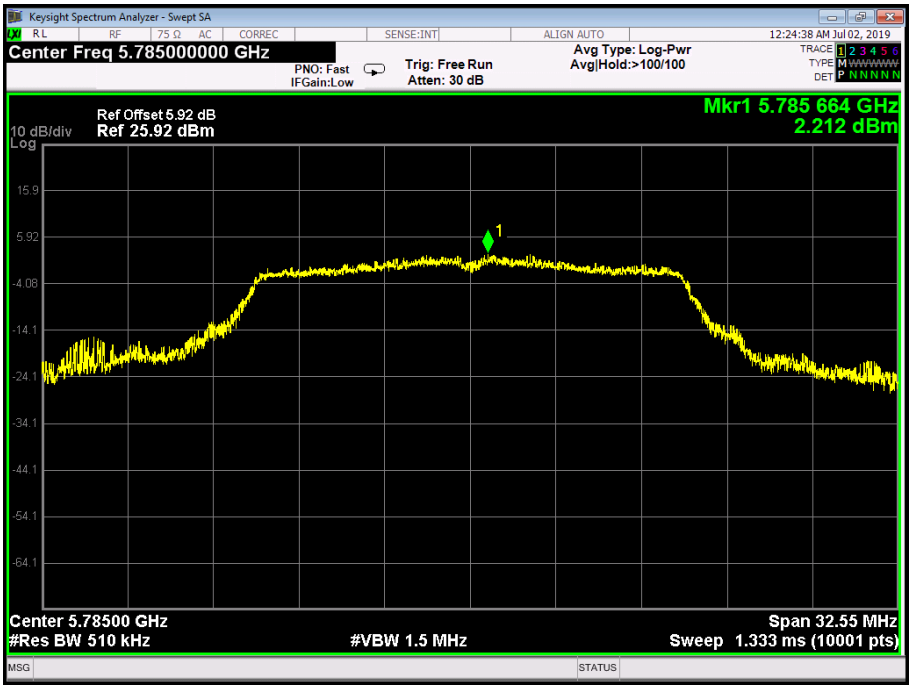
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		

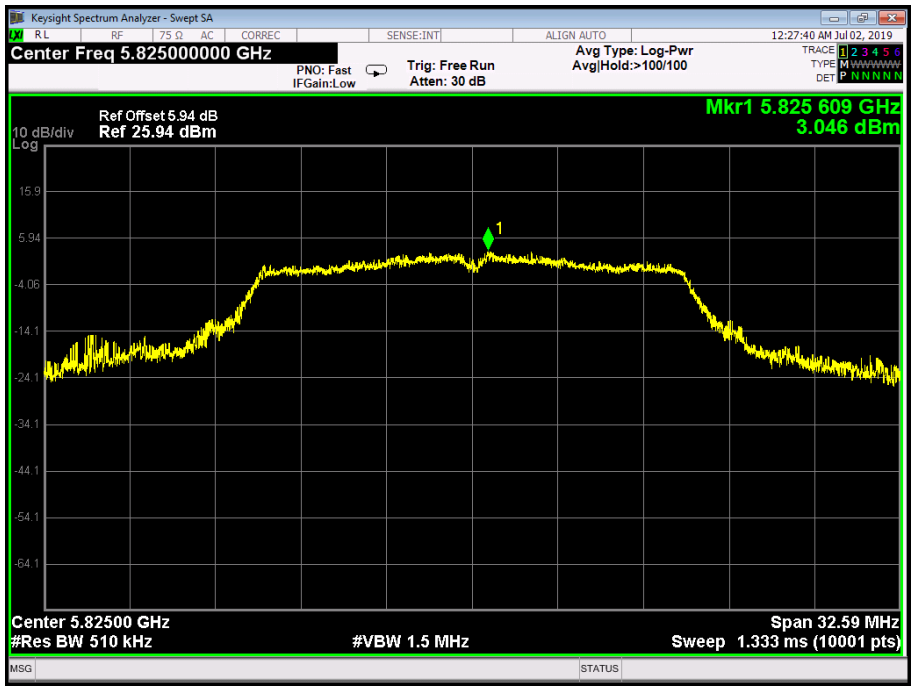
U-NII-3			
Test Mode	Frequency (MHz)	Test Data Power Density (dBm/MHz)	Limit (dBm)
802.11a	5745	3.744	30
	5785	2.212	
	5825	3.046	
802.11n (HT20)	5745	4.528	
	5785	4.302	
	5825	5.812	
802.11ac (HT20)	5745	3.457	
	5785	2.296	
	5825	3.084	
802.11n (HT40)	5755	0.913	
	5795	0.434	
802.11ac(40)	5755	0.611	
	5795	0.529	
802.11ac(80)	5775	-4.066	

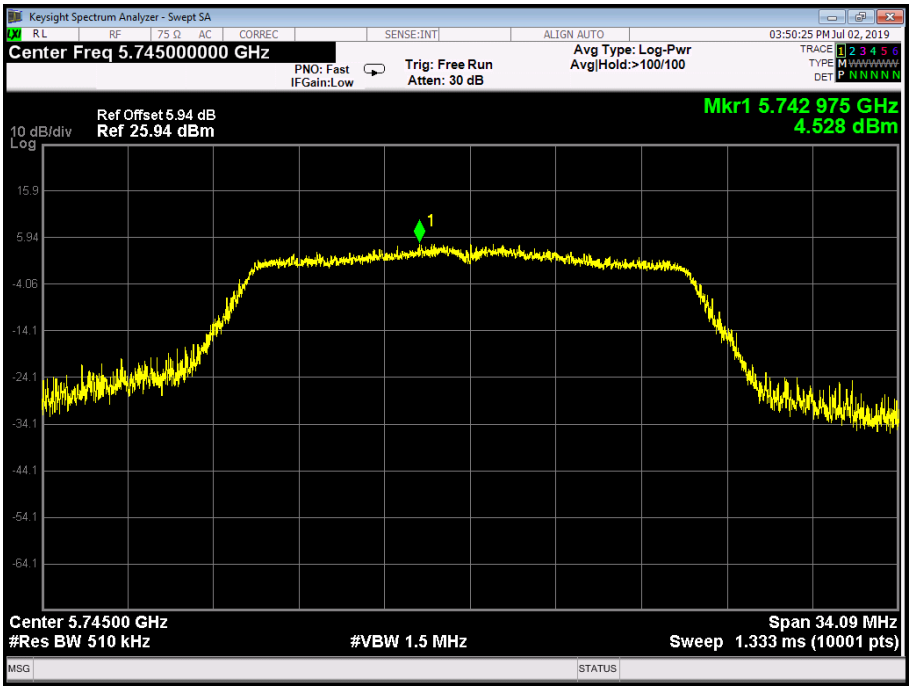
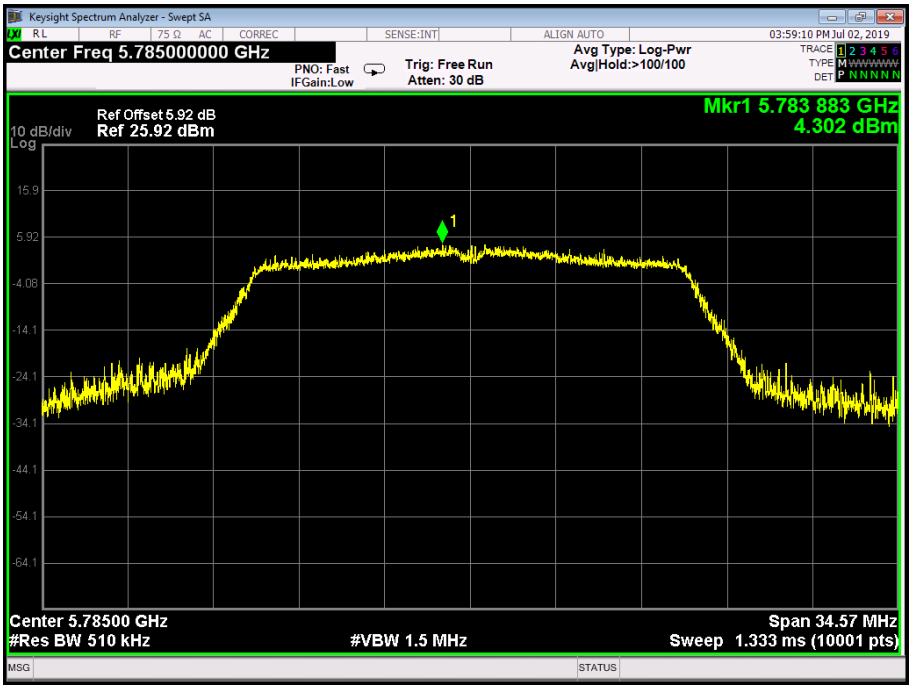
Result: PASS

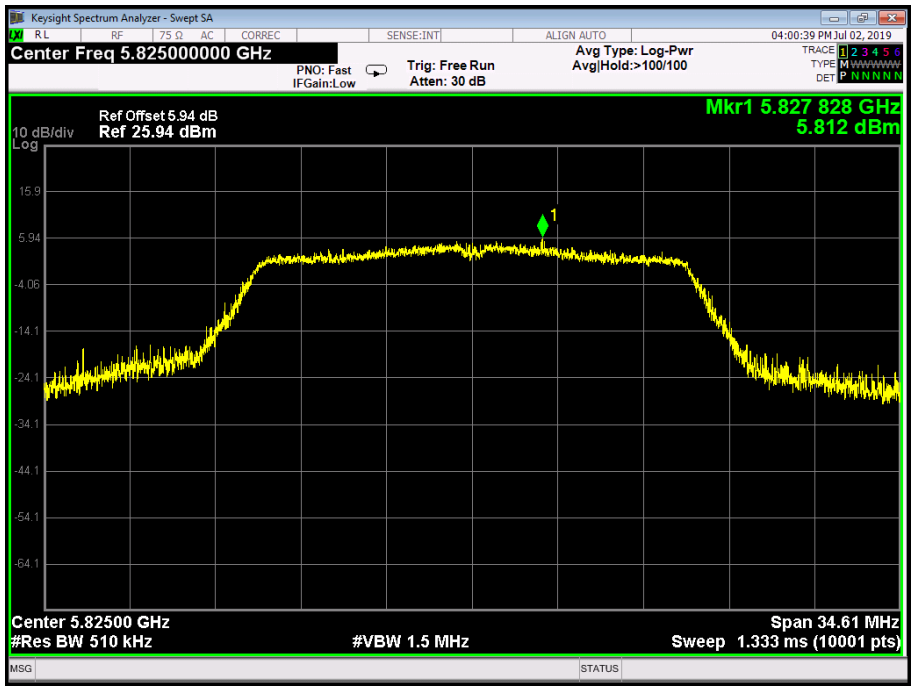
Remark:
the Directional Gain=3.0dBi＜6 dBi.

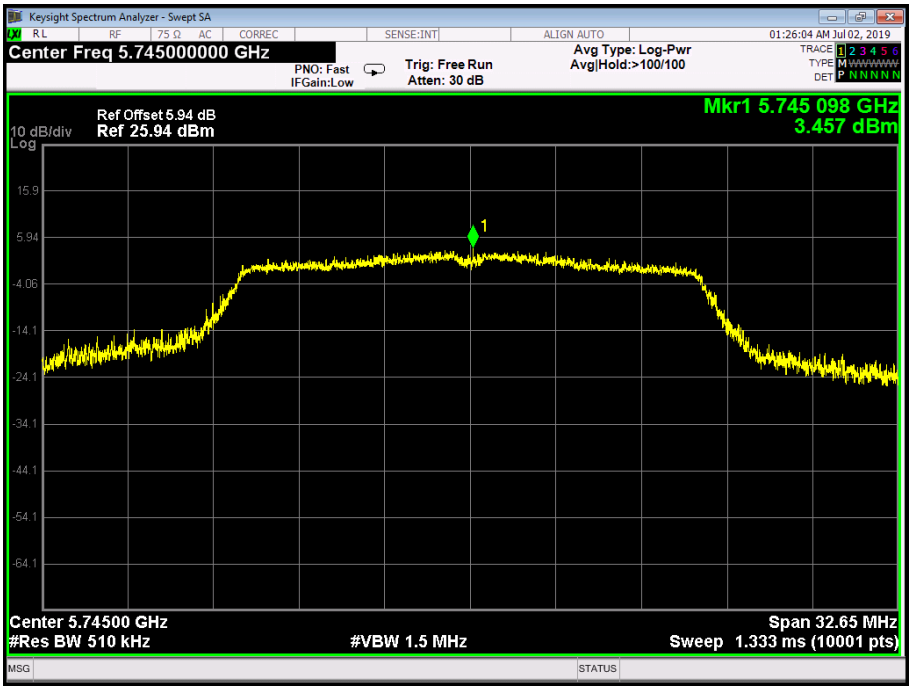
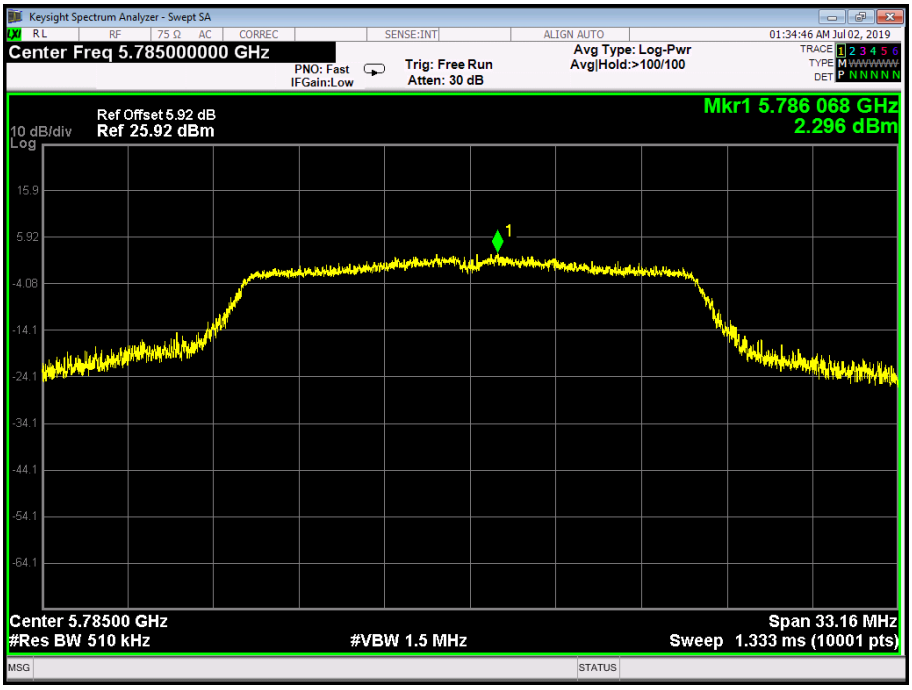
Test plots please refer to below pages:

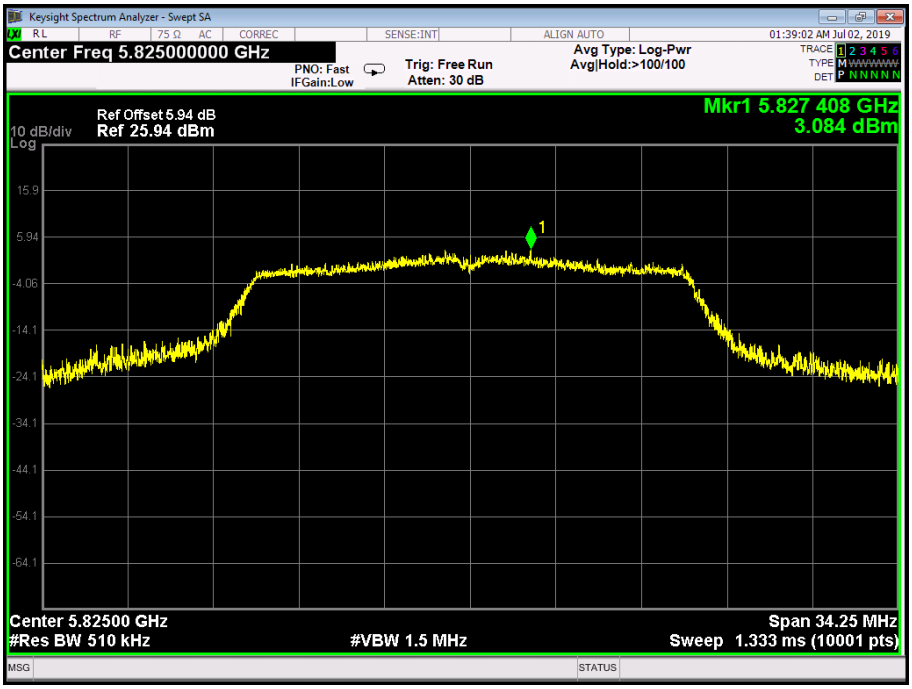
802.11 a 5745 MHz

802.11 a 5785 MHz

802.11 a 5825 MHz

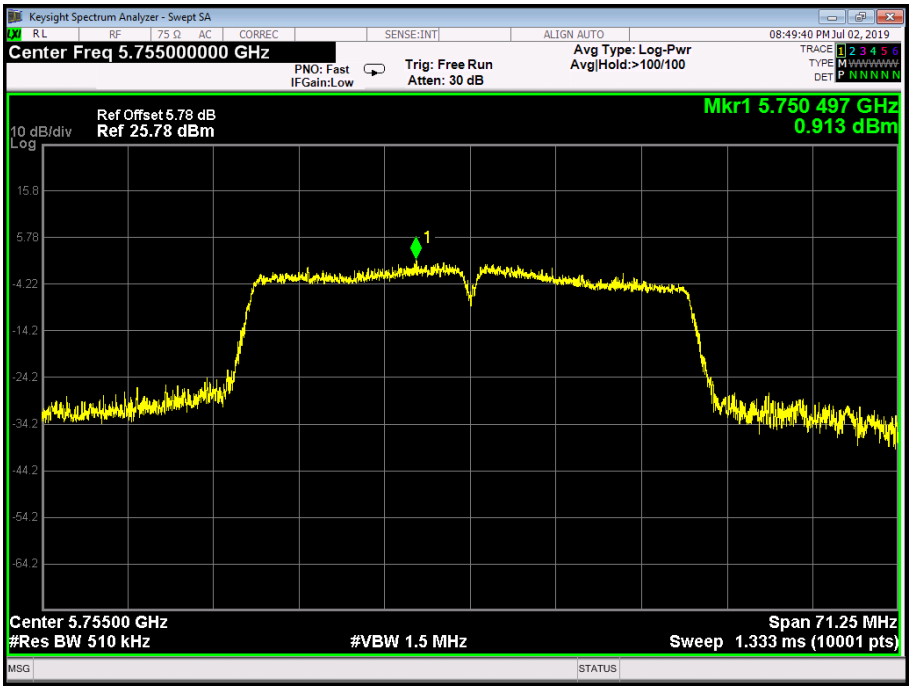

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
12:27:40 AM Jul 02, 2019
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 5.94 dB
10 dB/div
Log
Ref 25.94 dBm
Mkr1 5.825 609 GHz
3.046 dBm
15.9
5.94
-4.06
-14.1
-24.1
-34.1
-44.1
-54.1
-64.1
1
Center 5.82500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 32.59 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

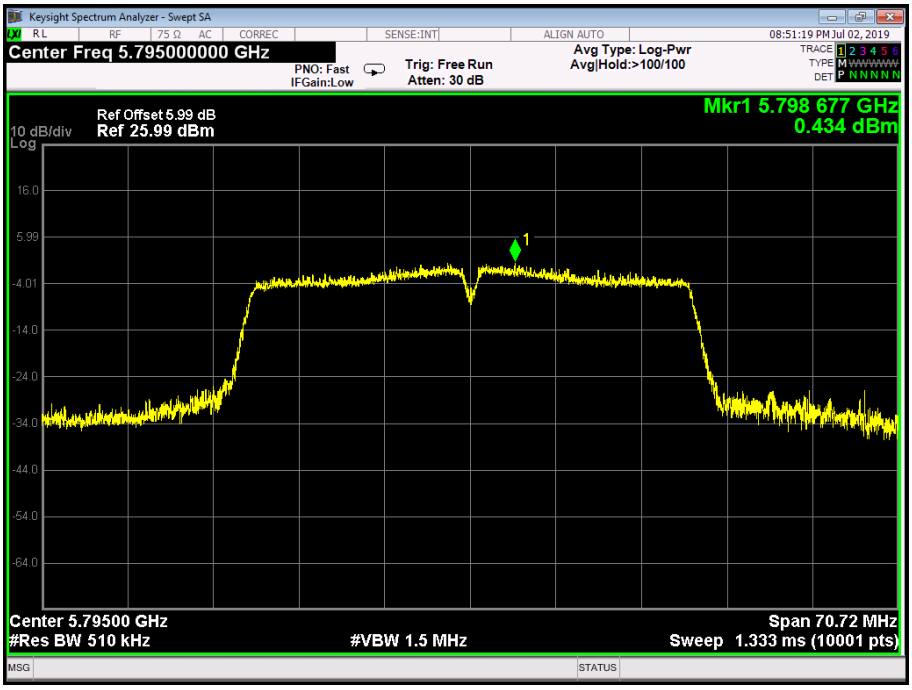
802.11 n(20) 5745 MHz

802.11 n(20) 5785 MHz

802.11 n(20) 5825 MHz

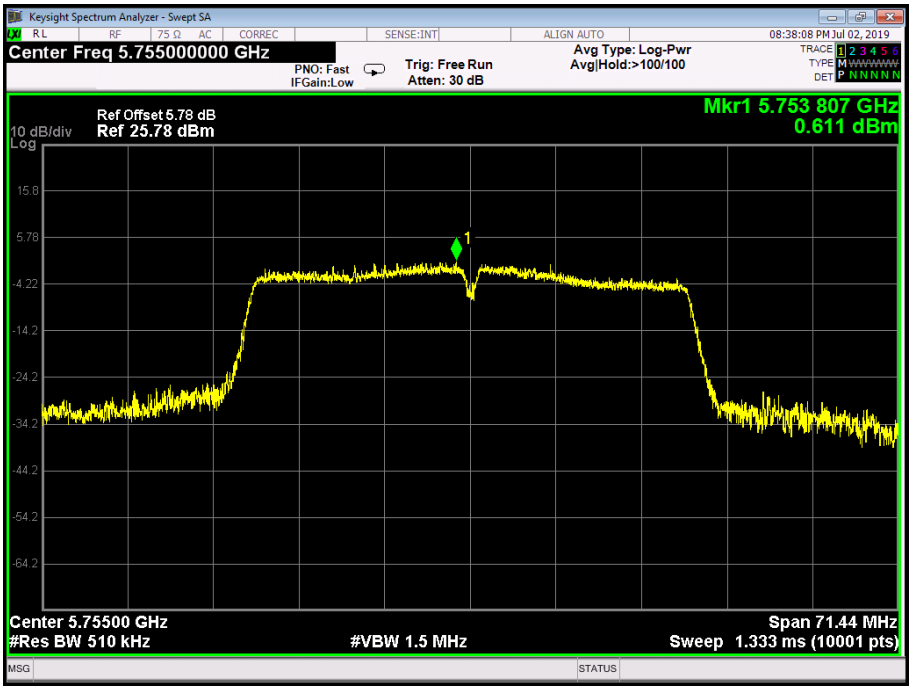

Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
04:00:39 PM Jul 02, 2019
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 5.94 dB
10 dB/div
Log
Ref 25.94 dBm
Mkr1 5.827 828 GHz
5.812 dBm
15.9
5.94
-4.06
-14.1
-24.1
-34.1
-44.1
-54.1
-64.1
1
Center 5.82500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 34.61 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

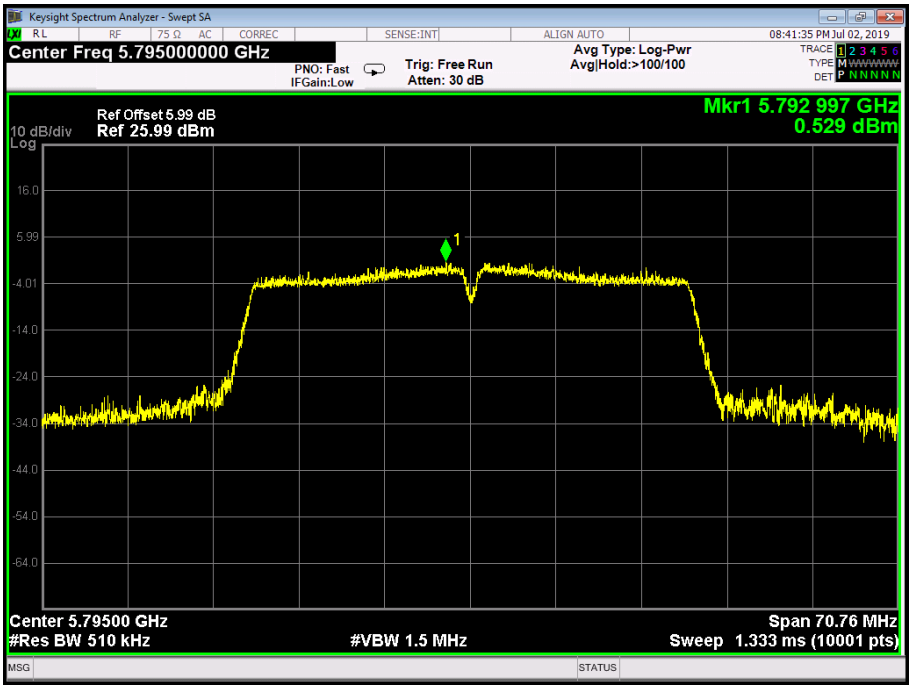
802.11 ac(20) 5745 MHz

802.11 ac(20) 5785 MHz

802.11 ac(20) 5825 MHz


Keysight Spectrum Analyzer - Swept SA
RL
RF
75 Ω AC
CORREC
SENSE:INT
ALIGN AUTO
01:39:02 AM Jul 02, 2019
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 5.94 dB
10 dB/div
Log
Ref 25.94 dBm
Mkr1 5.827 408 GHz
3.084 dBm
15.9
5.94
-4.06
-14.1
-24.1
-34.1
-44.1
-54.1
-64.1
1
Center 5.82500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz
Span 34.25 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

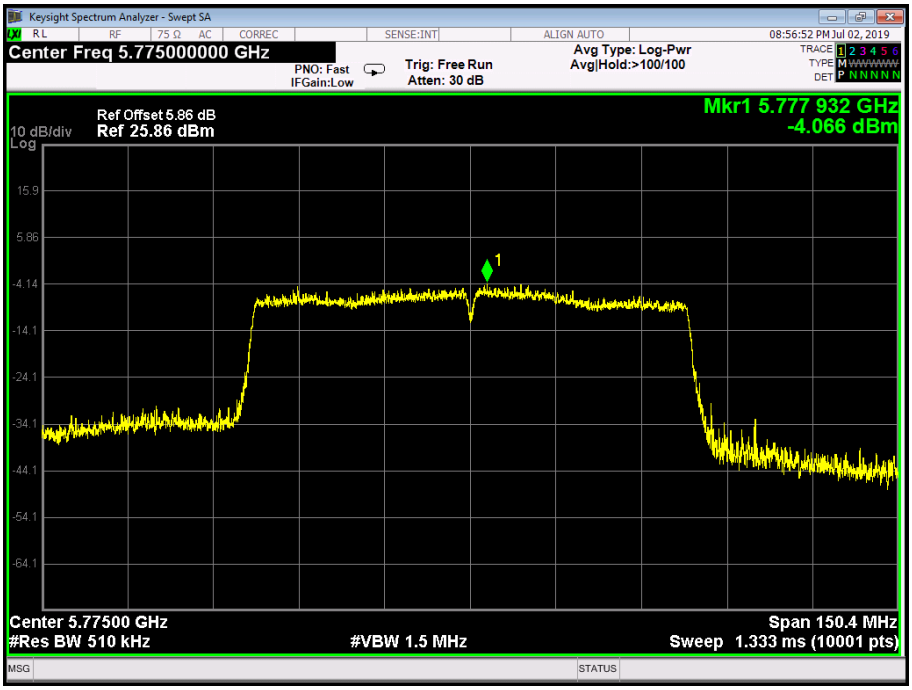
802.11 n(40) 5755 MHz


802.11 n(40) 5795 MHz


802.11 ac(40) 5755 MHz


802.11 ac(40) 5795 MHz


802.11 ac(80) 5775 MHz



Attachment G-- Frequency Stability Measurement Test Data

801.11a U-NII-1: 5180 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**
132	5180.01
120	5180.01
118	5180.01
Max. Deviation (MHz)	0.01
Max. Deviation (ppm)	1.93
Temperature vs. Frequency Stability	
Temperature (℃)	**Measurement Frequency (MHz)**
0	5180.01
10	5180.01
20	5180.01
30	5180.01
40	5180.01
50	5180.01
Max. Deviation (MHz)	0.01
Max. Deviation (ppm)	1.93
Limit (ppm)	**20**
Result	**Pass**

801.11a U-NII-2A: 5260 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**
132	5260.00
120	5260.00
118	5260.00
Max. Deviation (MHz)	0.00
Max. Deviation (ppm)	0
Temperature vs. Frequency Stability	
Temperature (℃)	**Measurement Frequency (MHz)**
0	5260.00
10	5260.00
20	5260.00
30	5260.00
40	5260.00
50	5260.00
Max. Deviation (MHz)	0.00
Max. Deviation (ppm)	0
Limit (ppm)	**20**
Result	**Pass**

801.11a U-NII-2C: 5500 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**
132	5500.00
120	5500.00
118	5500.00
Max. Deviation (MHz)	0.00
Max. Deviation (ppm)	0
Temperature vs. Frequency Stability	
Temperature (℃)	**Measurement Frequency (MHz)**
0	5500.00
10	5500.00
20	5500.00
30	5500.00
40	5500.00
50	5500.00
Max. Deviation (MHz)	0.00
Max. Deviation (ppm)	0
Limit (ppm)	**20**
Result	**Pass**

801.11a U-NII-3: 5745 MHz	
Voltage vs. Frequency Stability	
Voltage (V)	**Measurement Frequency (MHz)**
132	5744.98
120	5744.98
118	5744.98
Max. Deviation (MHz)	-0.02
Max. Deviation (ppm)	-3.48
Temperature vs. Frequency Stability	
Temperature (℃)	**Measurement Frequency (MHz)**
0	5744.98
10	5744.98
20	5744.98
30	5744.98
40	5744.98
50	5744.98
Max. Deviation (MHz)	-0.02
Max. Deviation (ppm)	-3.48
Limit (ppm)	**20**
Result	**Pass**

-----END OF REPORT-----