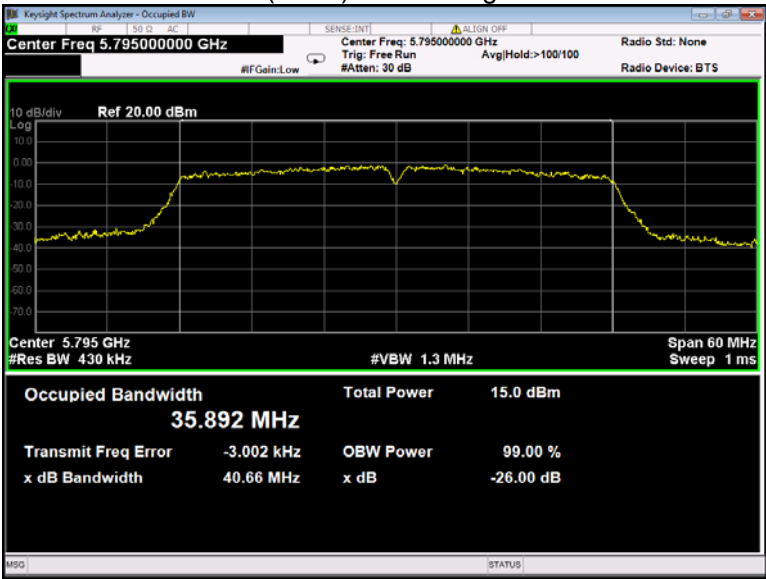
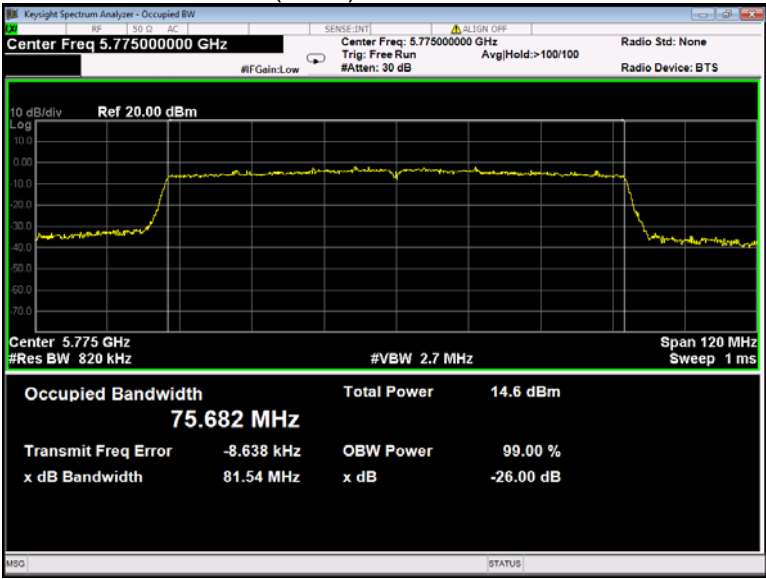


802.11ac(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Low channel



13 Conducted Output Power

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a) KDB662911 D01 Multiple Transmitter Output v02r01
Test Method:	KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section E
Test Limit:	U-NII-1 250mW(24dBm) U-NII-2A 250mW(24dBm) U-NII-2C 250mW(24dBm) U-NII-3 1W(30dBm)
Test Result:	PASS
Remark:	Conducted output power= measurement power+10log(1/x)

13.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the DTS bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

13.2 Test Result :

Band	Operation mode	Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-1	802.11a	14.22	13.71	13.68
	802.11n(HT20)	13.99	13.92	13.65
	802.11n(HT40)	13.80	/	13.87
	802.11ac(HT20)	13.72	13.64	13.80
	802.11ac(HT40)	13.90	/	13.12
	802.11ac(HT80)	14.50	/	/

Band	Operation mode	Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-2A	802.11a	13.86	13.79	13.89
	802.11n(HT20)	13.98	13.99	14.27
	802.11n(HT40)	13.72	/	13.95
	802.11ac(HT20)	13.63	14.08	13.49
	802.11ac(HT40)	13.80	/	13.36
	802.11ac(HT80)	14.47	/	/

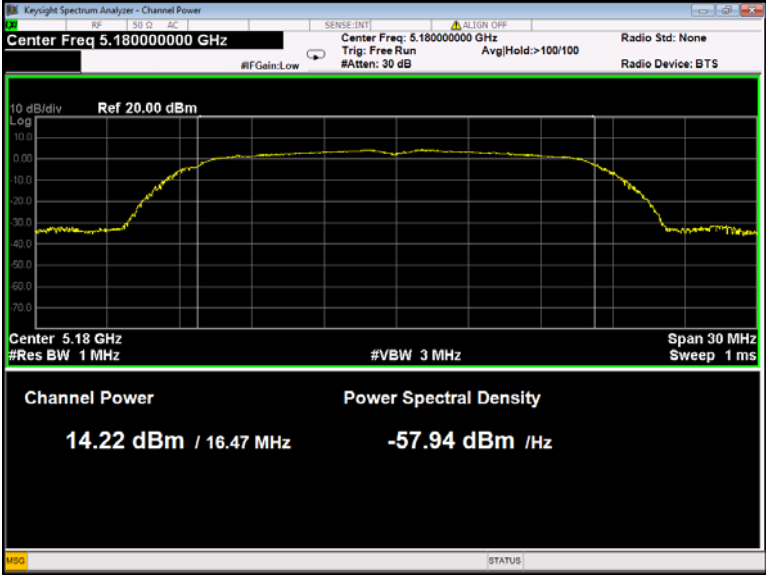
Band	Operation mode	Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-2C	802.11a	13.60	13.74	13.52
	802.11n(HT20)	14.12	14.12	13.29
	802.11n(HT40)	13.60	13.71	13.81
	802.11ac(HT20)	13.78	13.66	13.48
	802.11ac(HT40)	13.76	13.86	13.13
	802.11ac(HT80)	13.84	14.07	/

Band	Operation mode	Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-3	802.11a	13.46	13.73	13.31
	802.11n(HT20)	13.73	13.38	13.28
	802.11n(HT40)	13.78	/	13.19
	802.11ac(HT20)	13.97	13.53	12.63
	802.11ac(HT40)	13.77	/	13.14
	802.11ac(HT80)	13.91	/	/

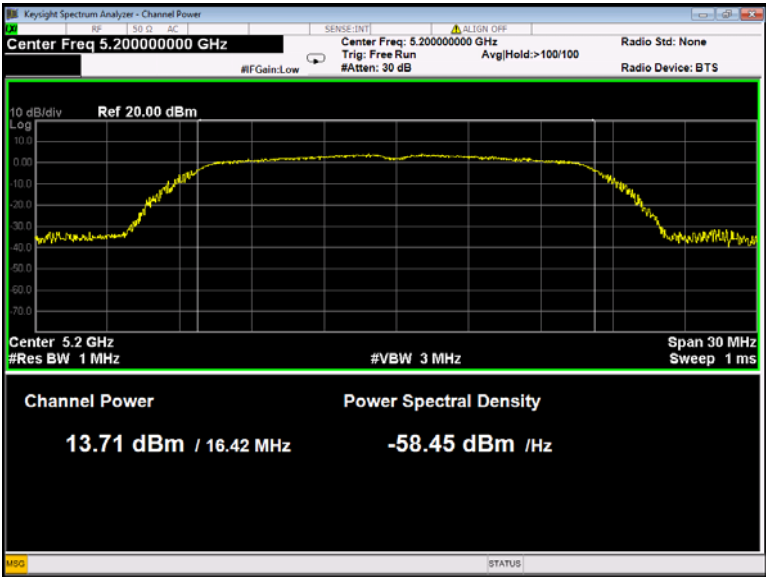
* All transmit signals are completely uncorrelated with each other, Directional gain = G_{ANT} which is less than 6dBi. So the limit does not be reduced.

Test result plots shown as follows:

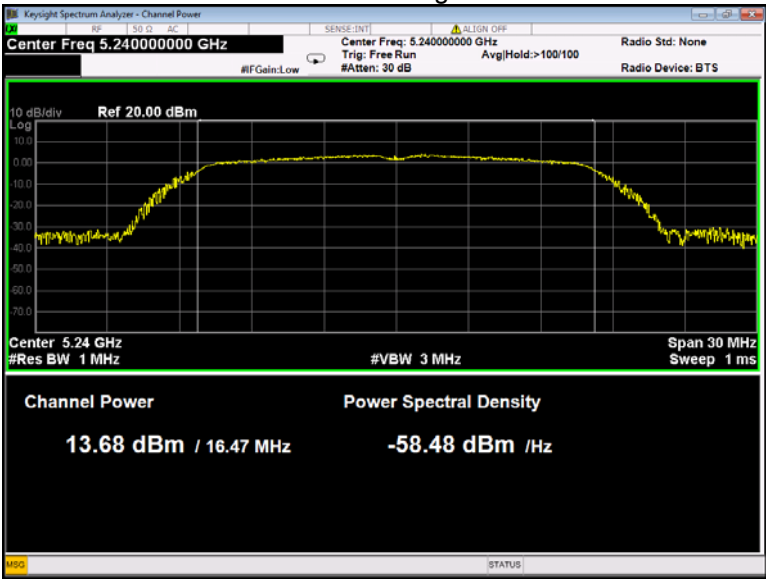
802.11a U-NII-1 Low channel



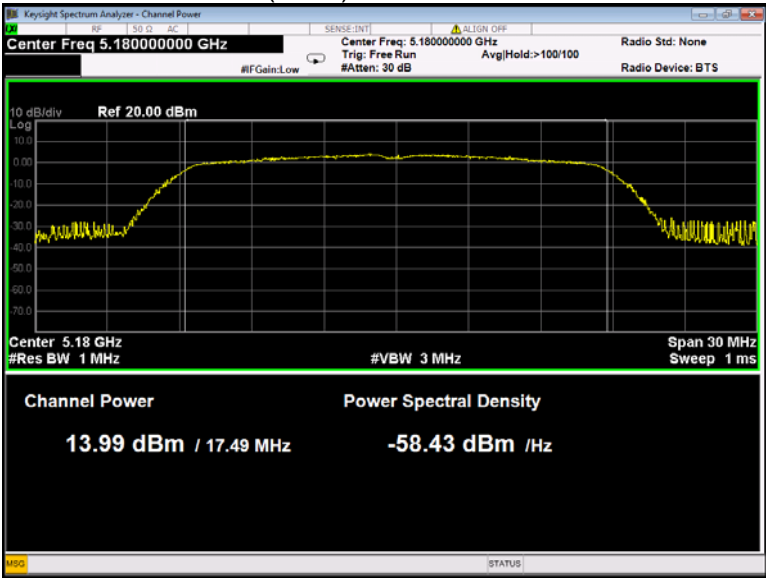
802.11a U-NII-1 Middle channel



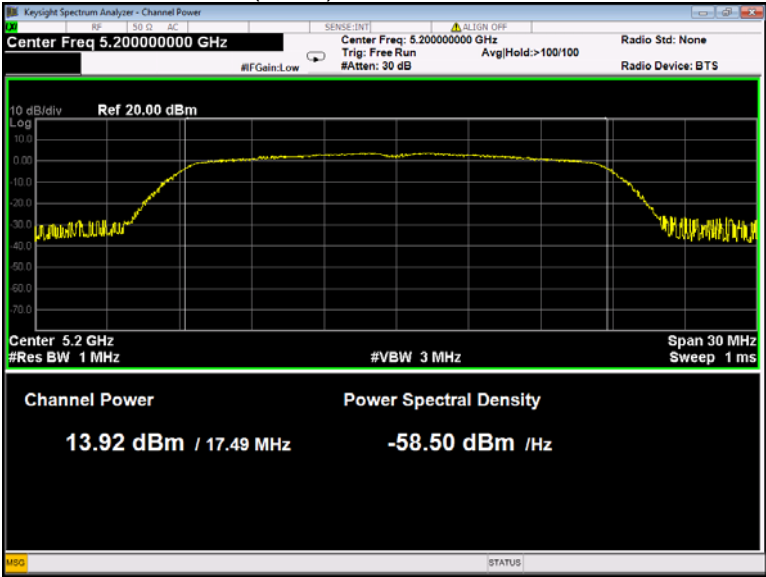
802.11a U-NII-1 High channel



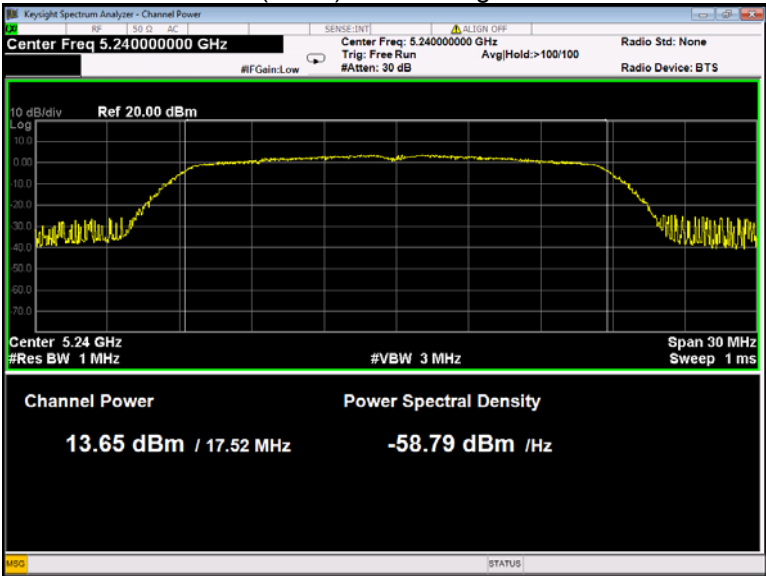
802.11n(HT20) U-NII-1 Low channel



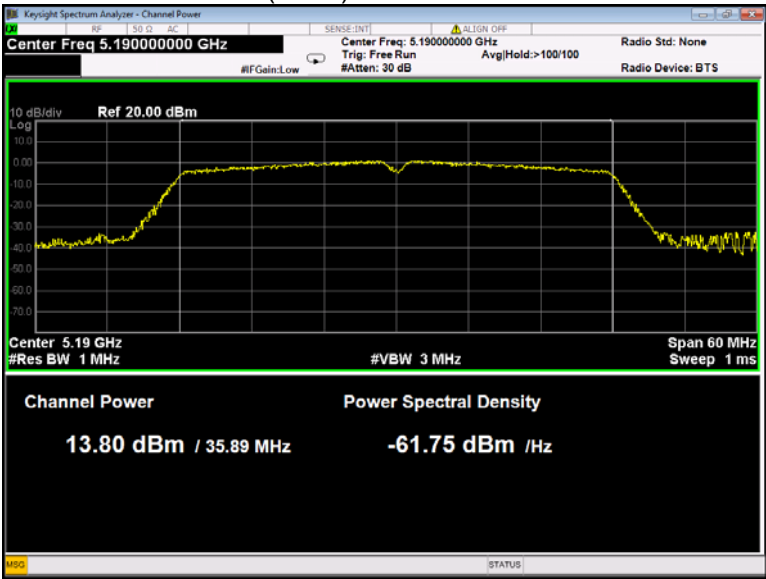
802.11n(HT20) U-NII-1 Middle channel



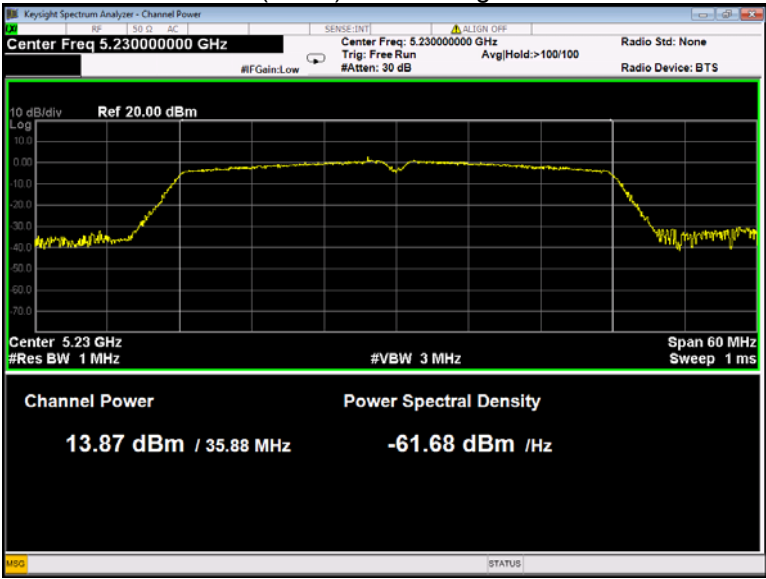
802.11n(HT20) U-NII-1 High channel



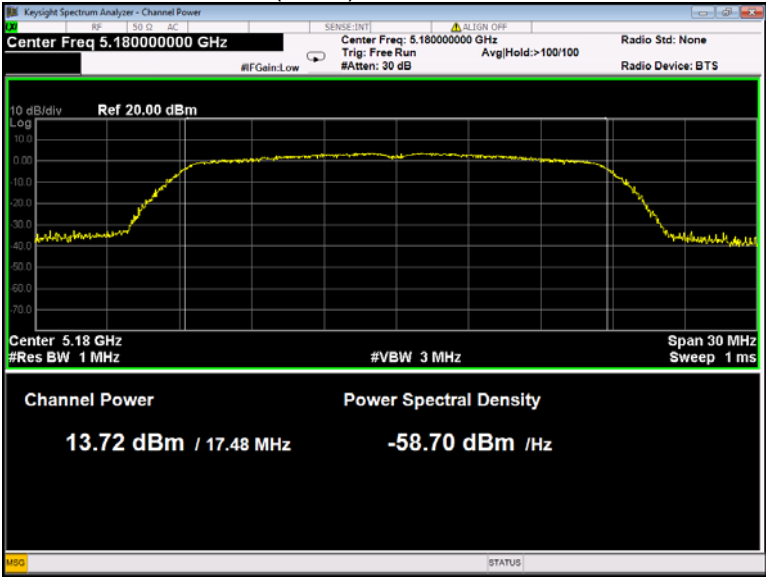
802.11n(HT40) U-NII-1 Low channel



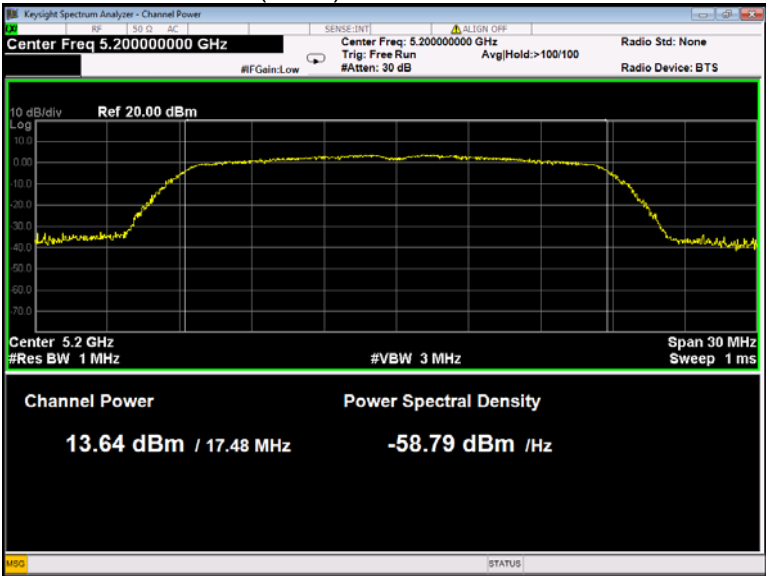
802.11n(HT40) U-NII-1 High channel



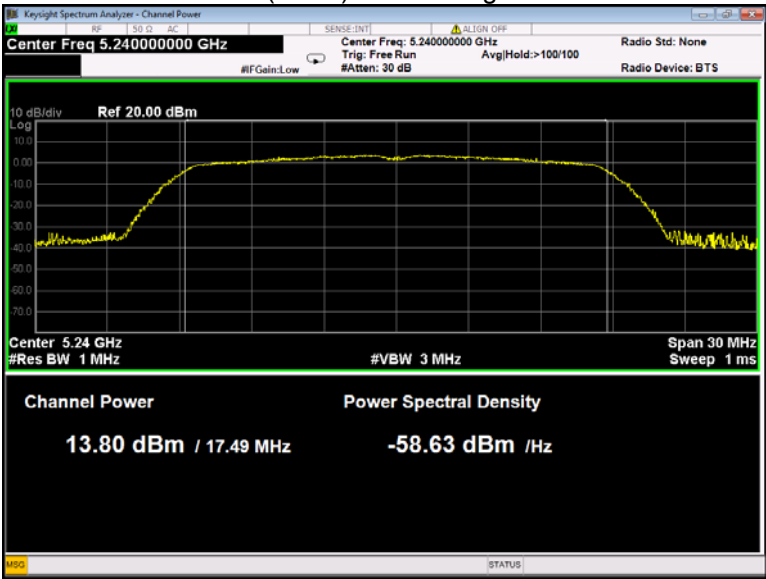
802.11ac(HT20) U-NII-1 Low channel



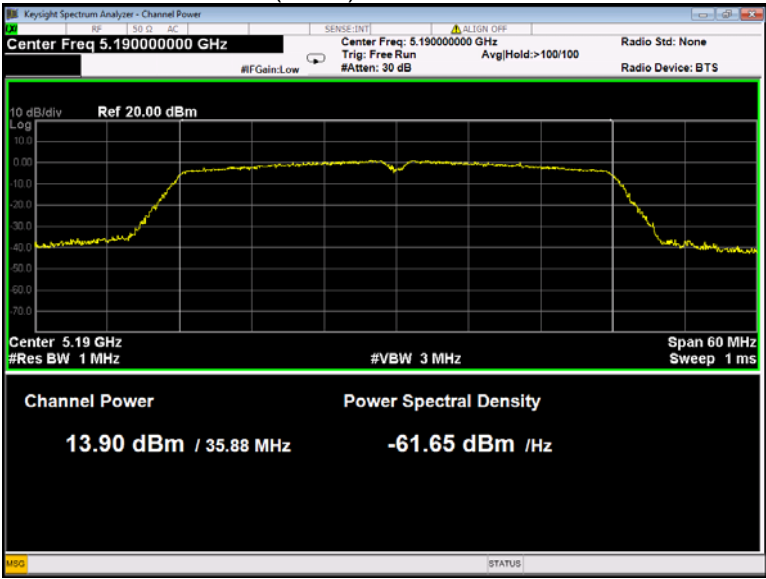
802.11ac(HT20) U-NII-1 Middle channel



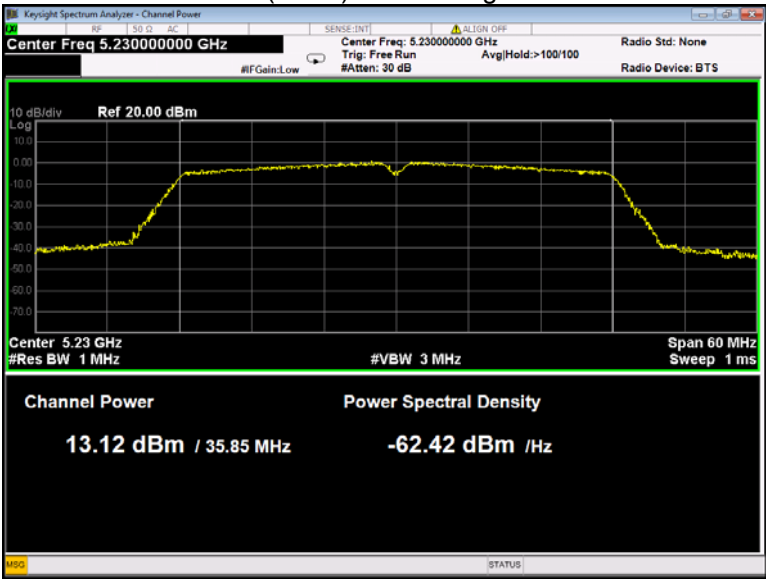
802.11ac(HT20) U-NII-1 High channel



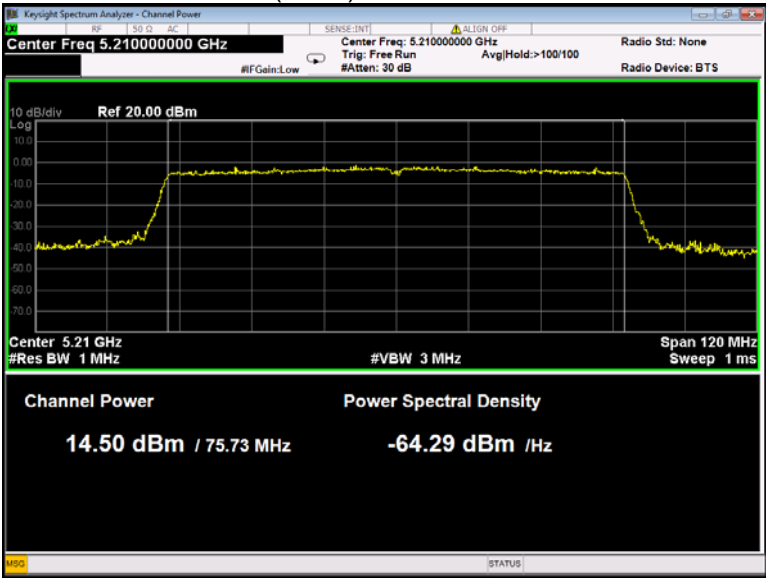
802.11ac(HT40) U-NII-1 Low channel



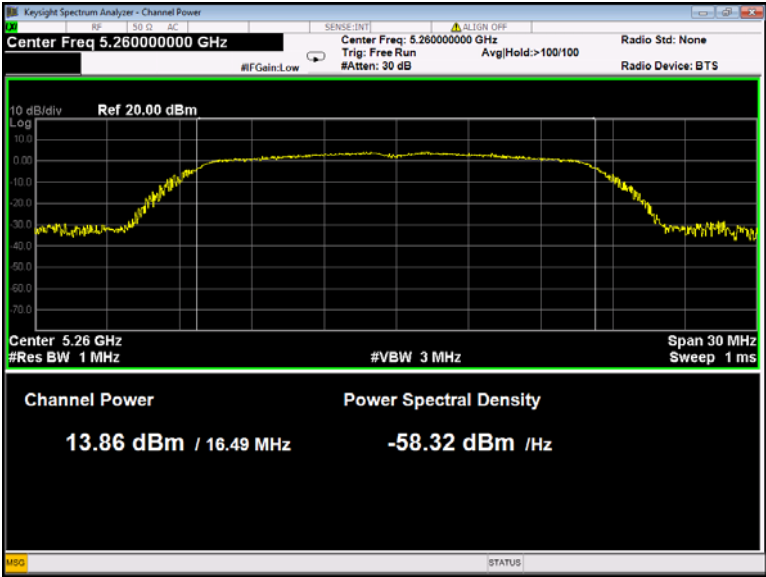
802.11ac(HT40) U-NII-1 High channel



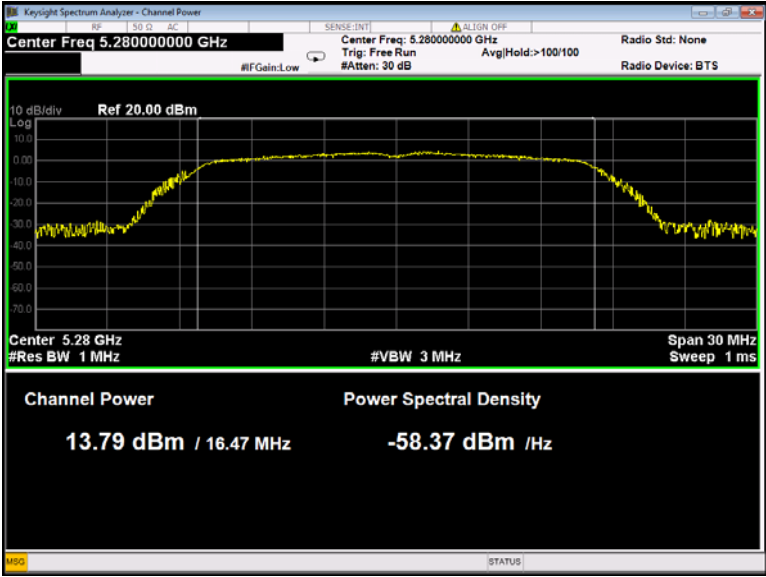
802.11ac(HT80) U-NII-1 Low channel



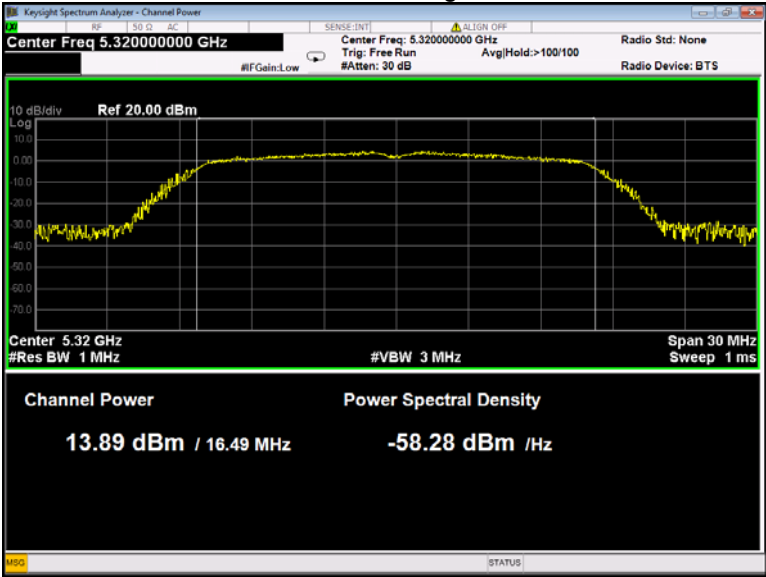
802.11a U-NII-2A Low channel



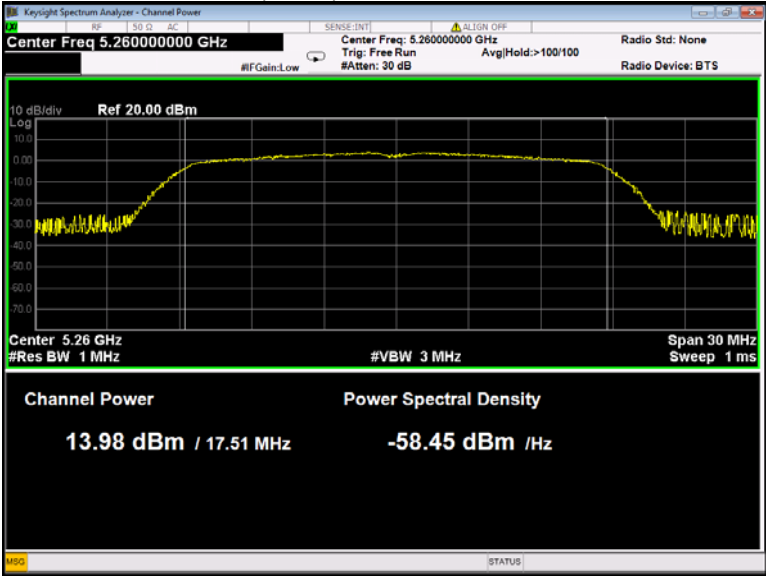
802.11a U-NII-2A Middle channel



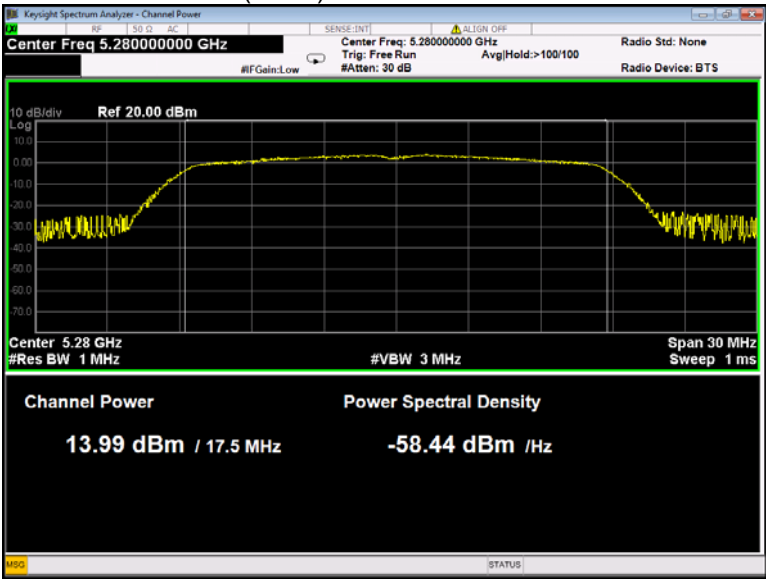
802.11a U-NII-2A High channel



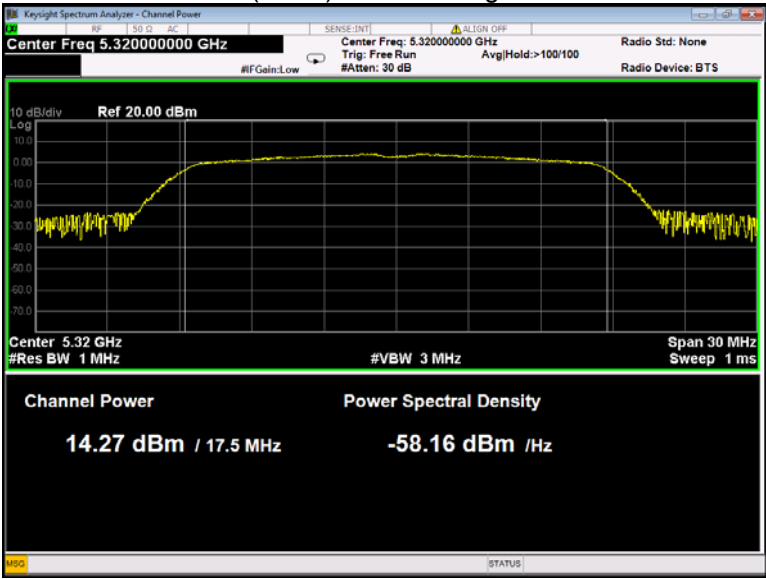
802.11n(HT20) U-NII-2A Low channel



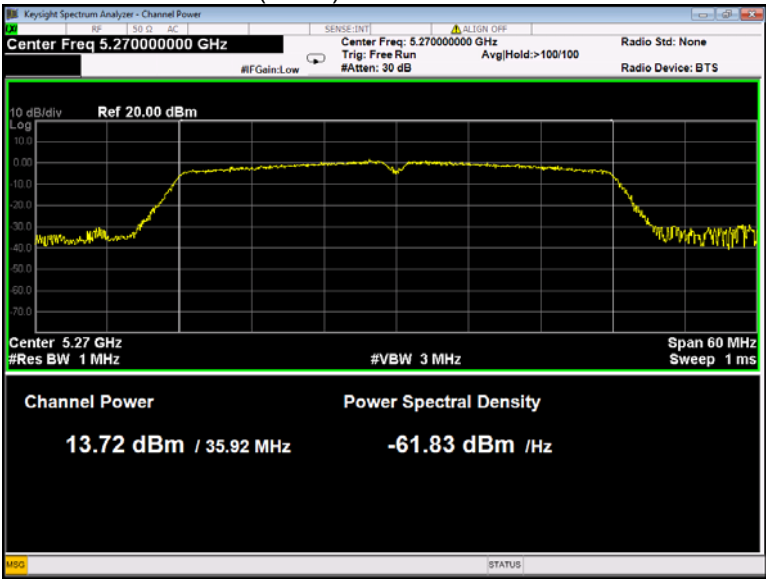
802.11n(HT20) U-NII-2A Middle channel



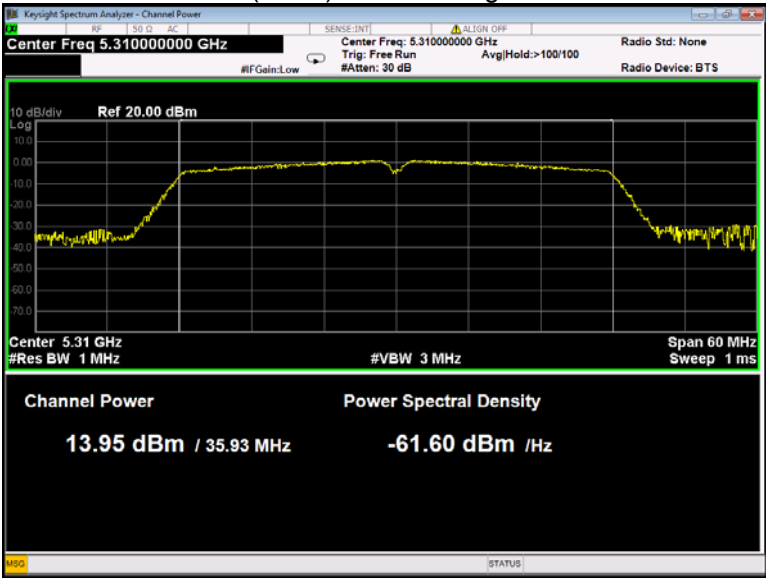
802.11n(HT20) U-NII-2A High channel



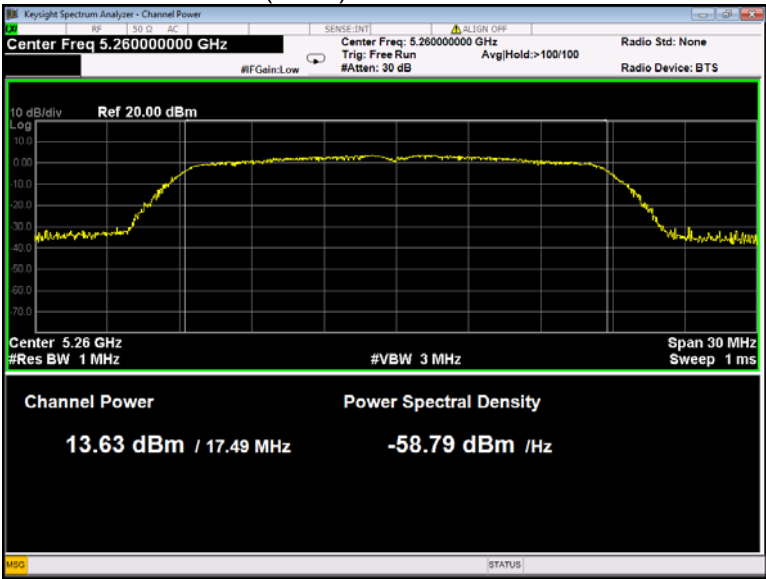
802.11n(HT40) U-NII-2A Low channel



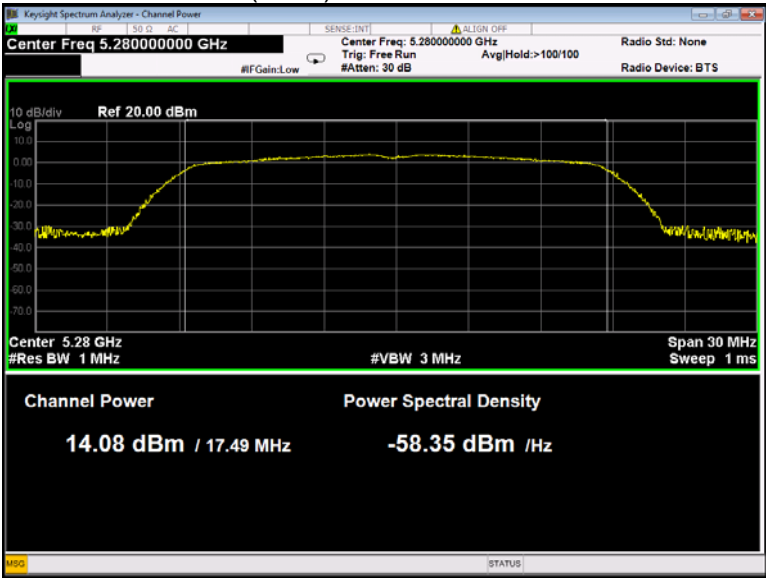
802.11n(HT40) U-NII-2A High channel



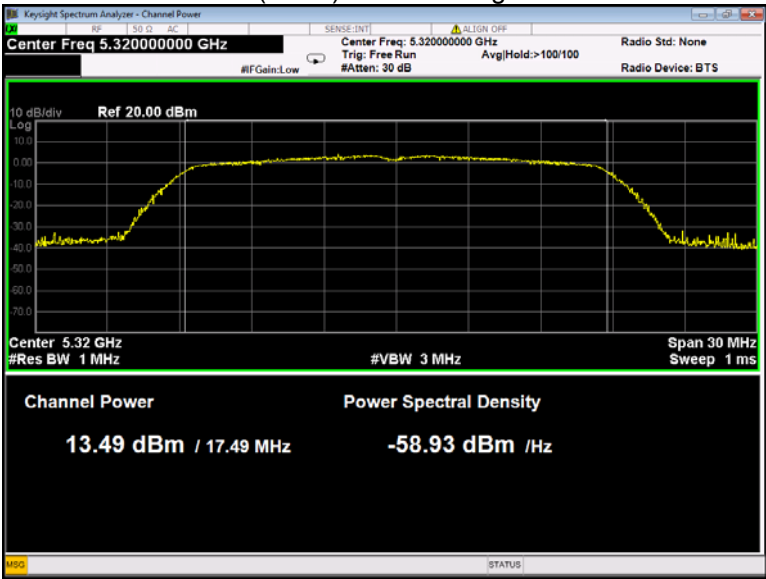
802.11ac(HT20) U-NII-2A Low channel



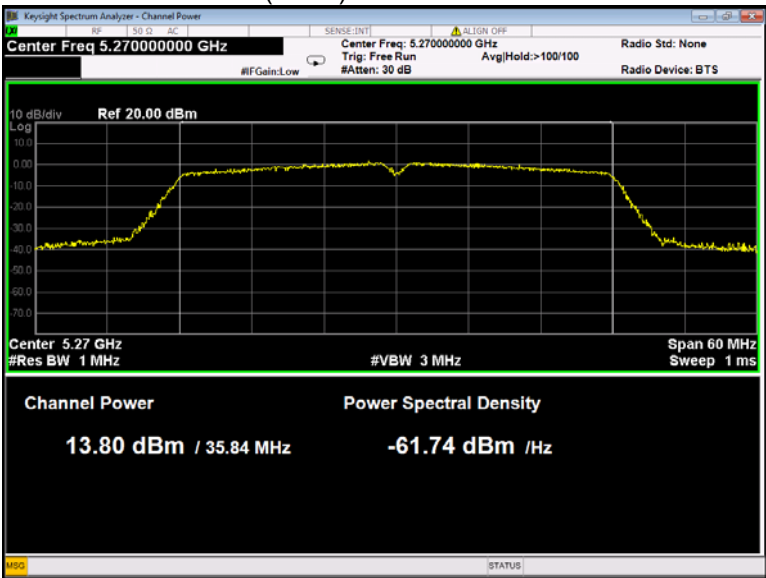
802.11ac(HT20) U-NII-2A Middle channel



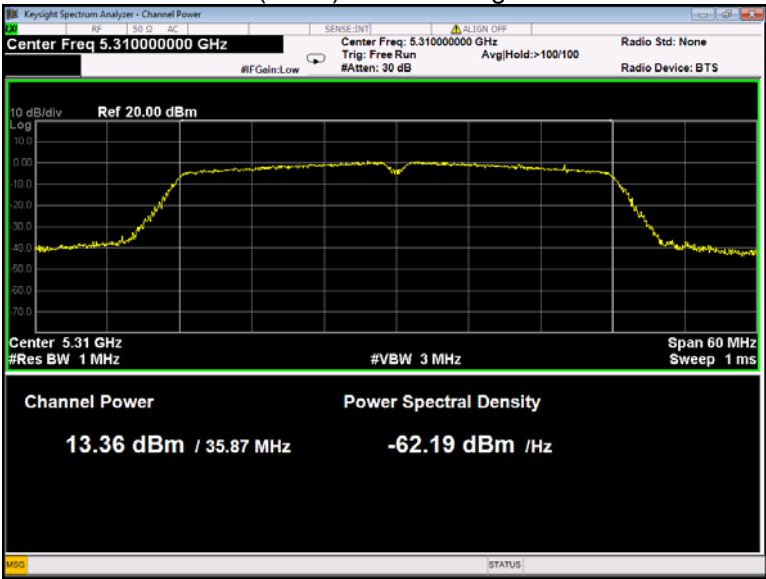
802.11ac(HT20) U-NII-2A High channel



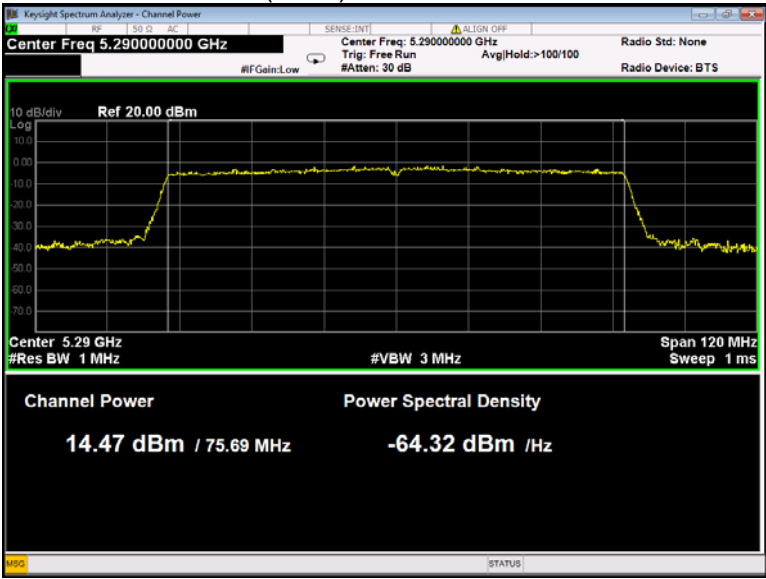
802.11ac(HT40) U-NII-2A Low channel



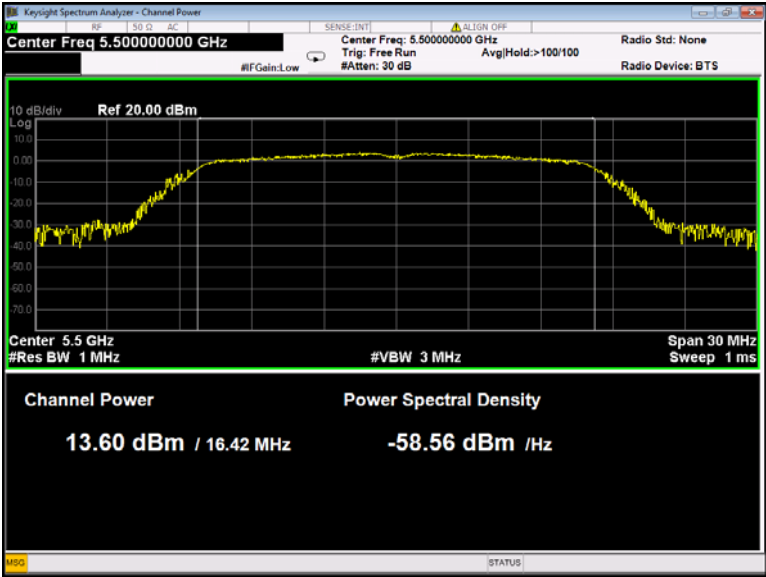
802.11ac(HT40) U-NII-2A High channel



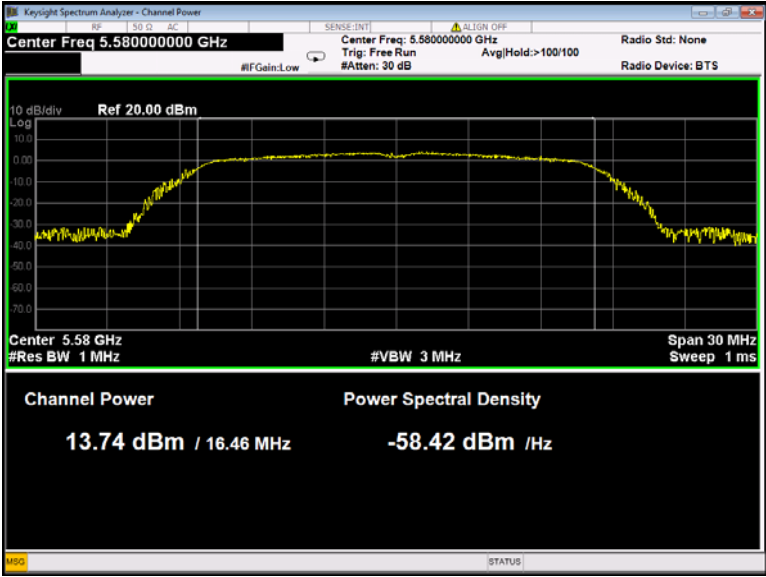
802.11ac(HT80) U-NII-2A Low channel



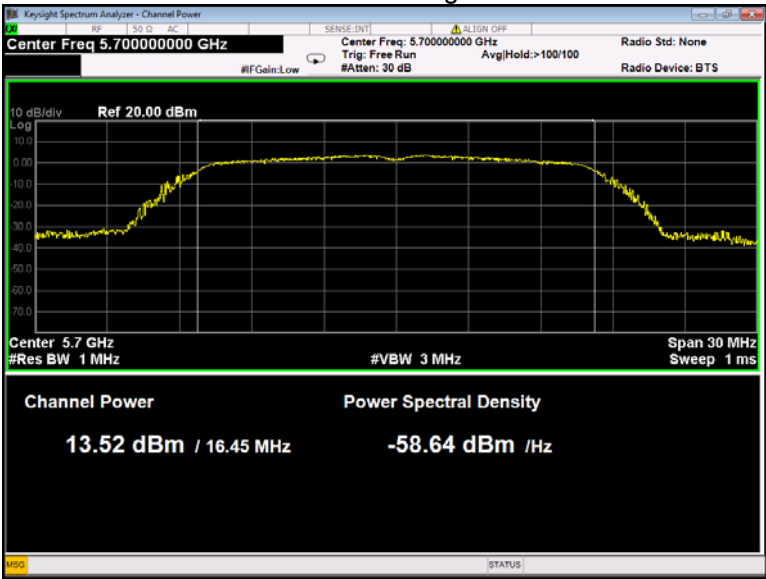
802.11a U-NII-2C Low channel



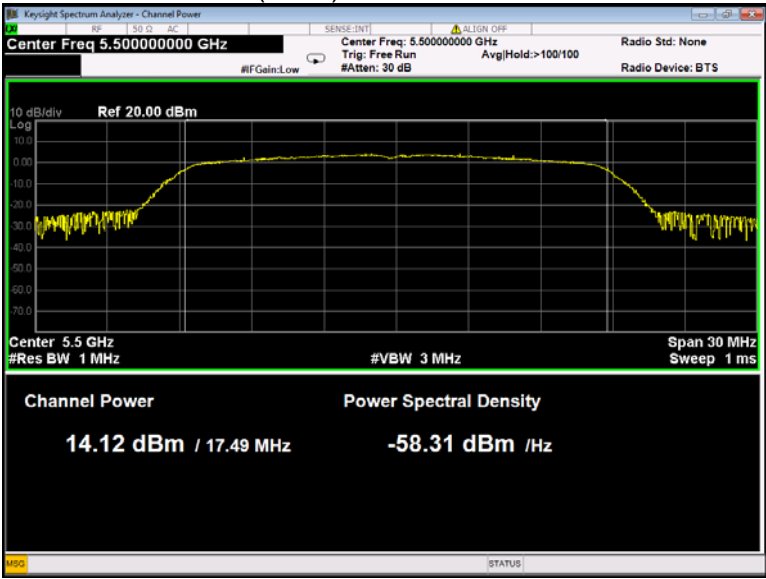
802.11a U-NII-2C Middle channel



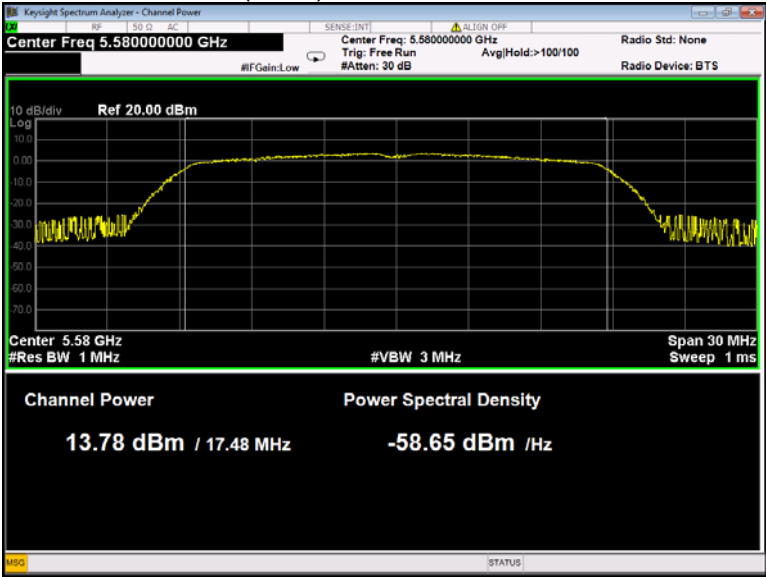
802.11a U-NII-2C High channel



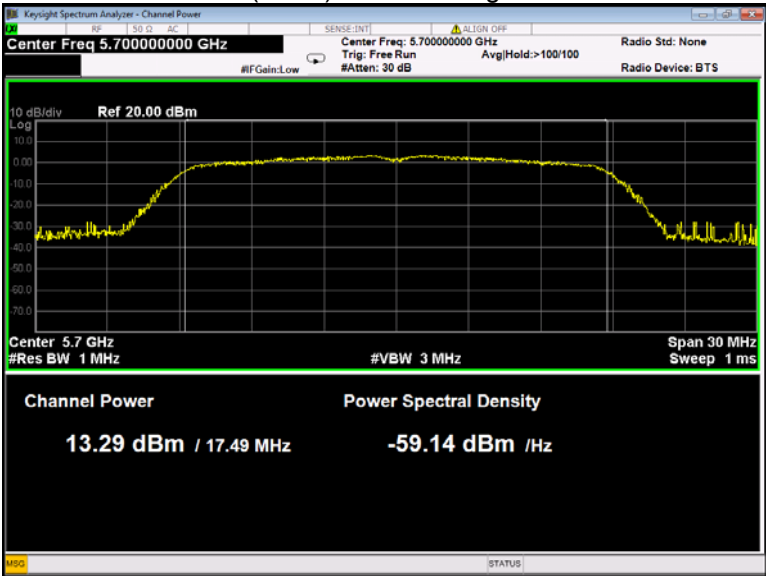
802.11n(HT20) U-NII-2C Low channel



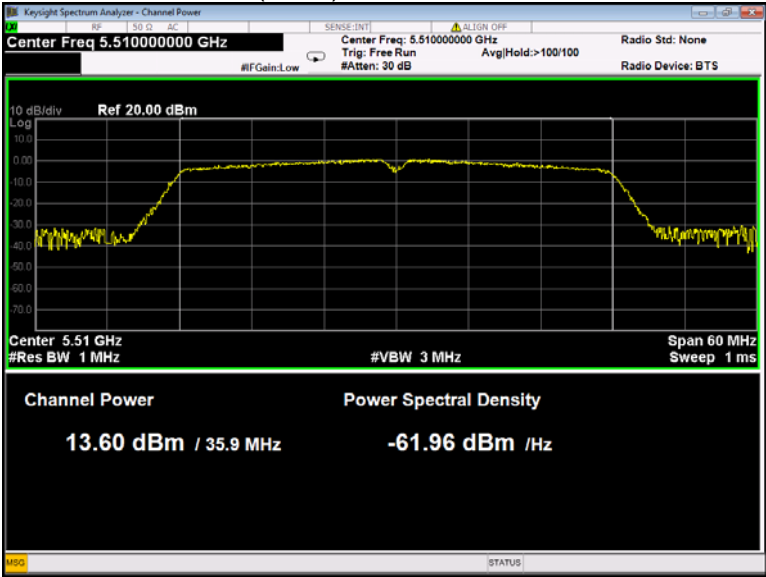
802.11n(HT20) U-NII-2C Middle channel



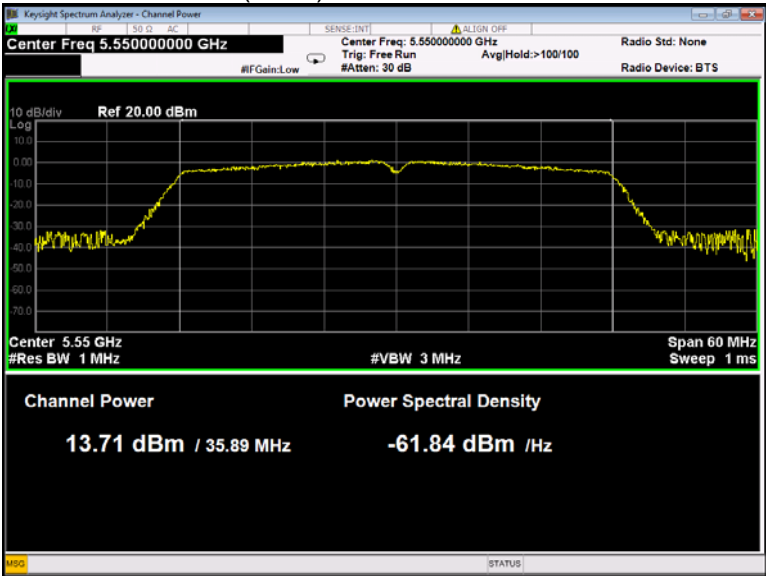
802.11n(HT20) U-NII-2C High channel



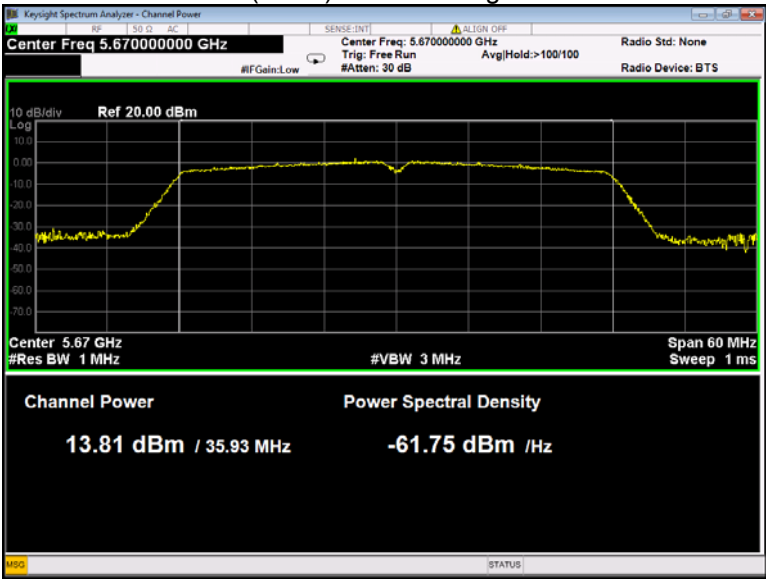
802.11n(HT40) U-NII-2C Low channel



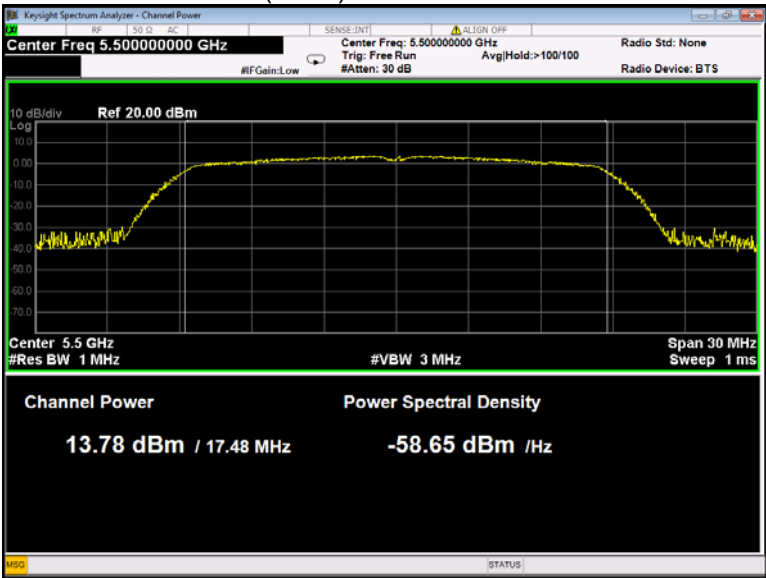
802.11n(HT40) U-NII-2C Middle channel



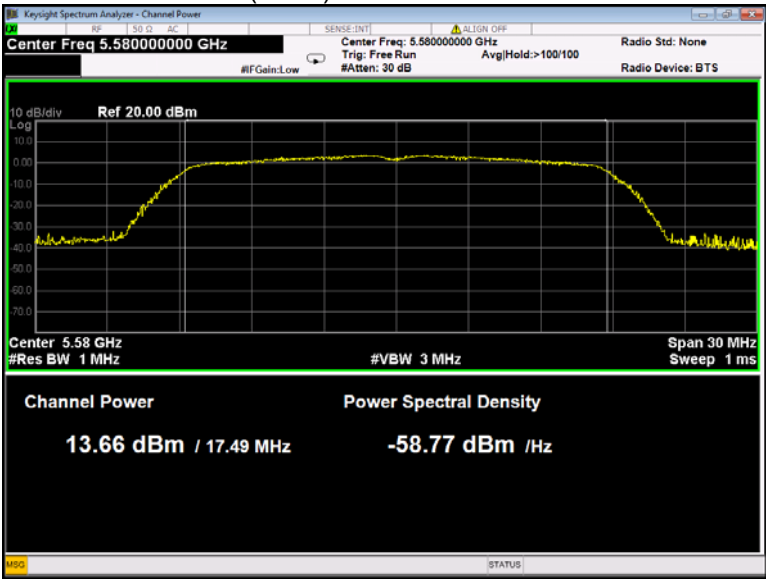
802.11n(HT40) U-NII-2C High channel



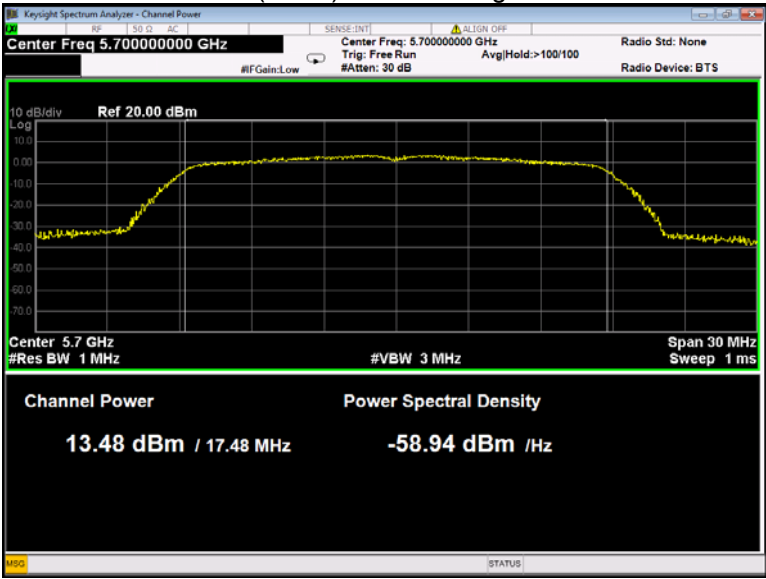
802.11ac(HT20) U-NII-2C Low channel



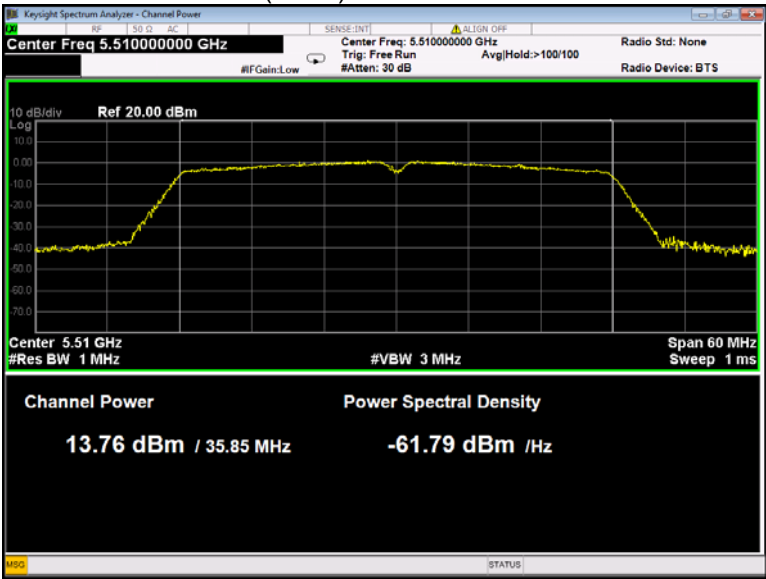
802.11ac(HT20) U-NII-2C Middle channel



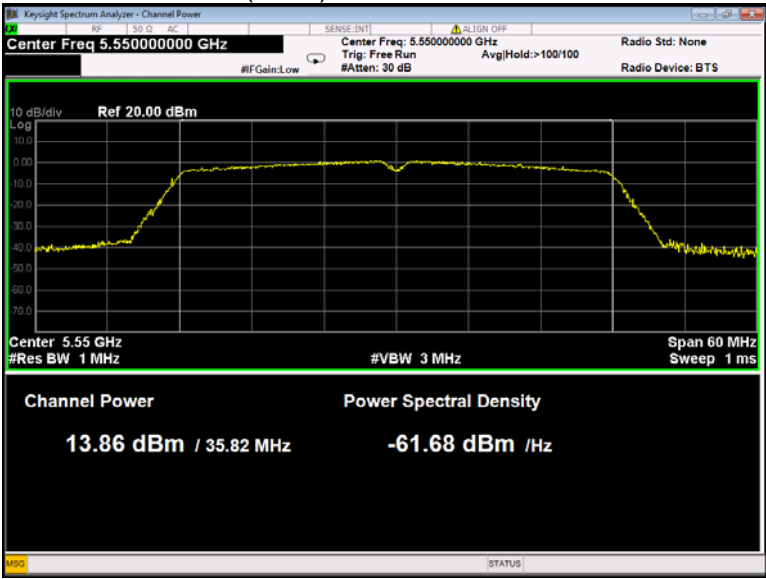
802.11ac(HT20) U-NII-2C High channel



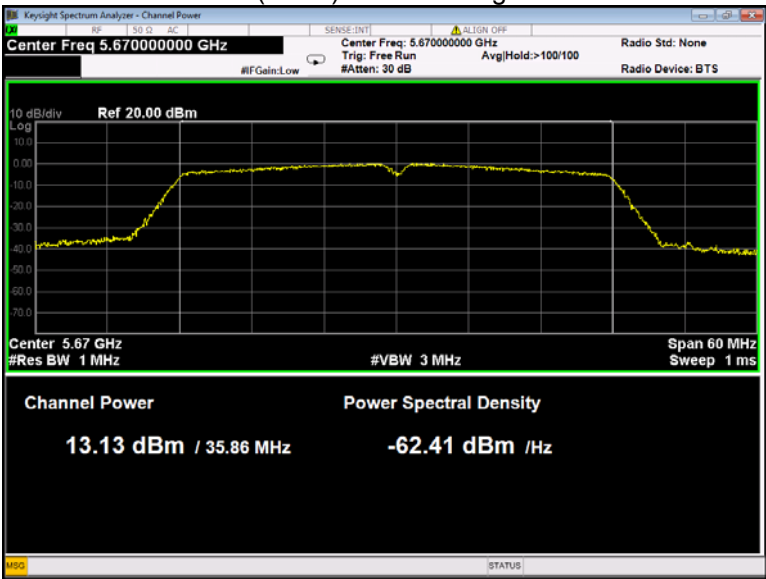
802.11ac(HT40) U-NII-2C Low channel



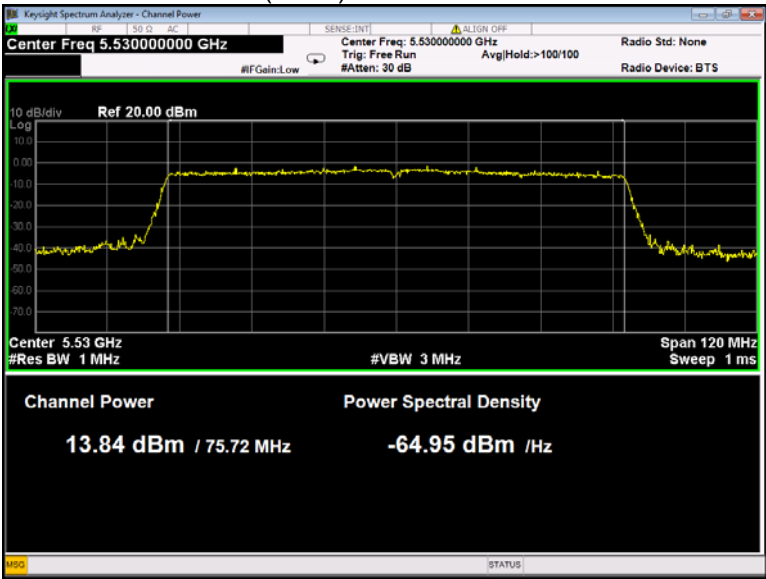
802.11ac(HT40) U-NII-2C Middle channel



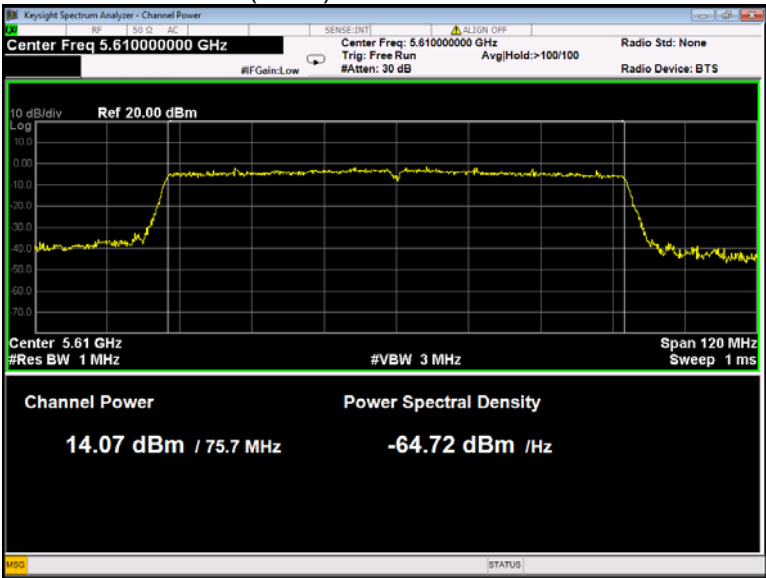
802.11ac(HT40) U-NII-2C High channel



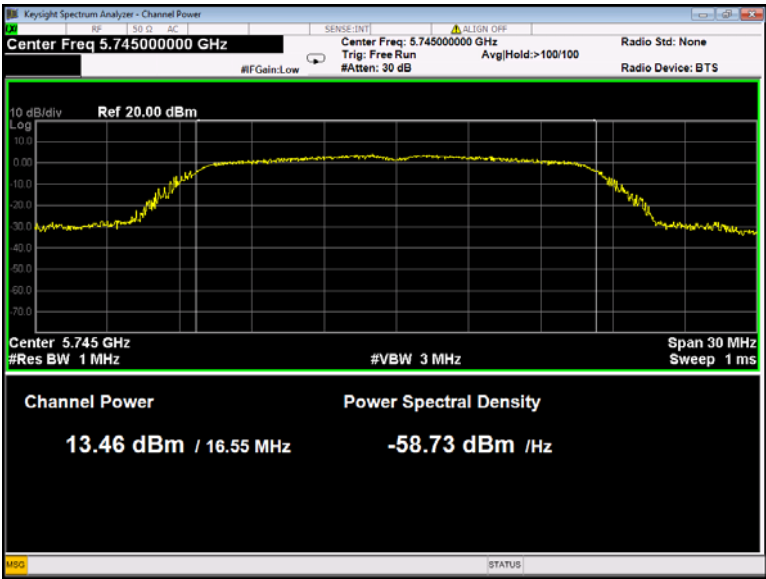
802.11ac(HT80) U-NII-2C Low channel



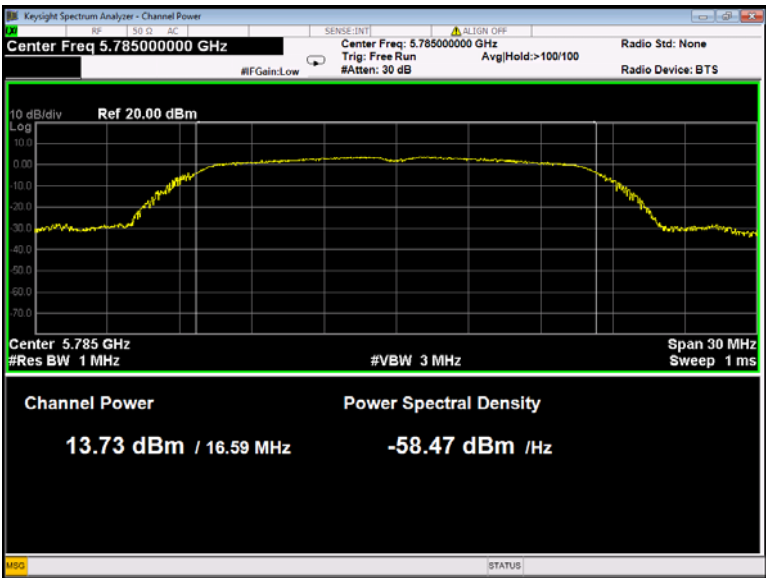
802.11ac(HT80) U-NII-2C Middle channel



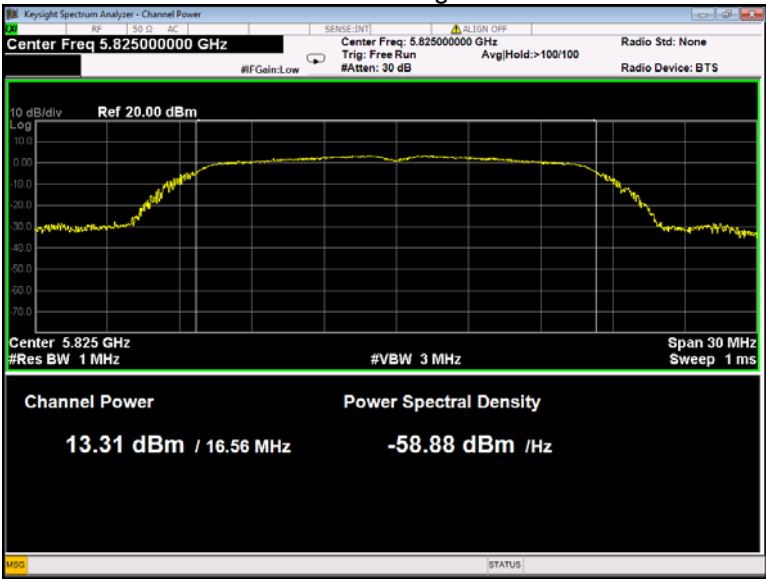
802.11a U-NII-3 Low channel



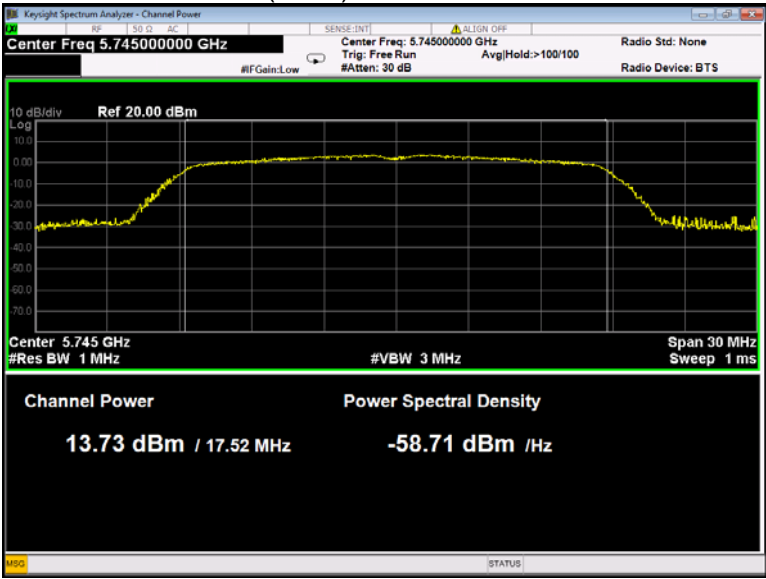
802.11a U-NII-3 Middle channel



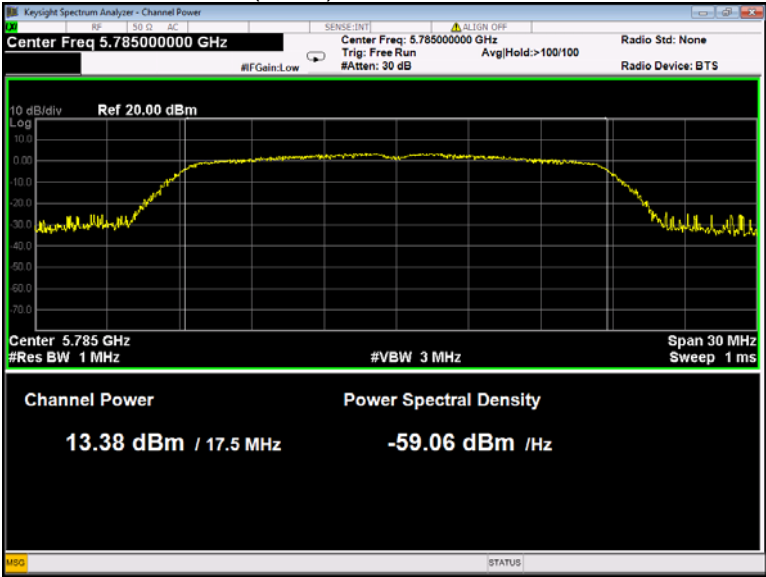
802.11a U-NII-3 High channel



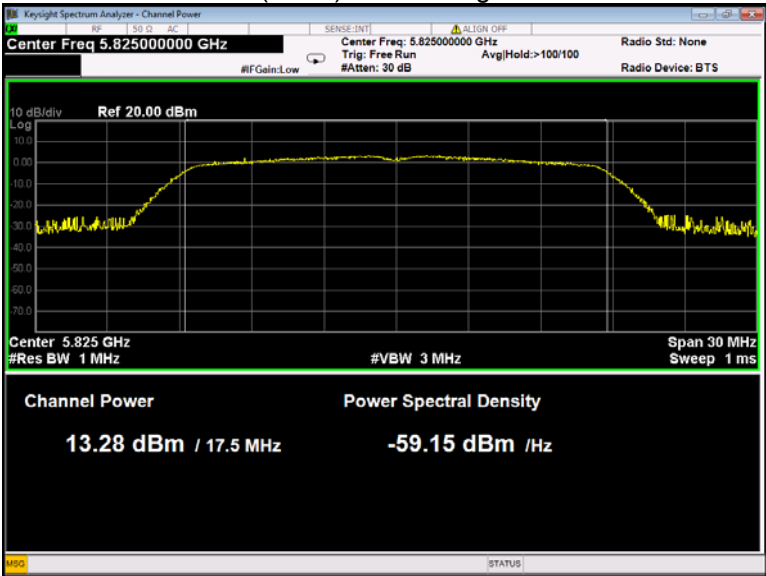
802.11n(HT20) U-NII-3 Low channel



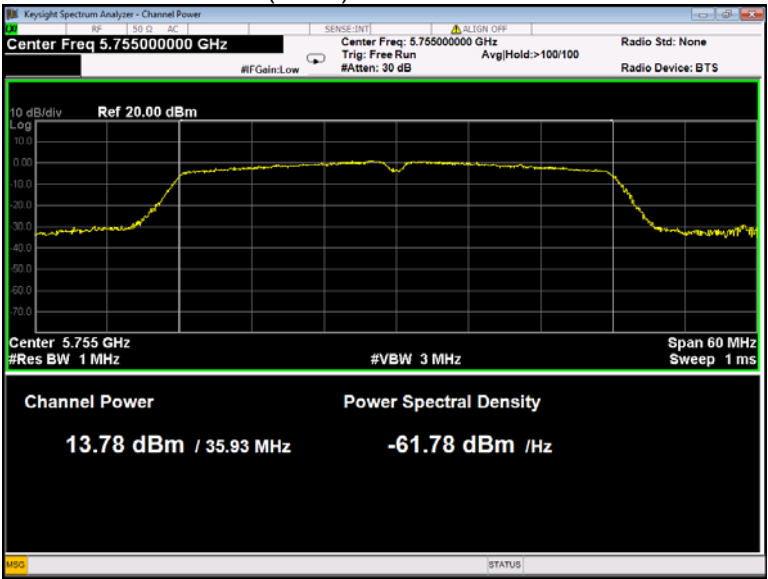
802.11n(HT20) U-NII-3 Middle channel



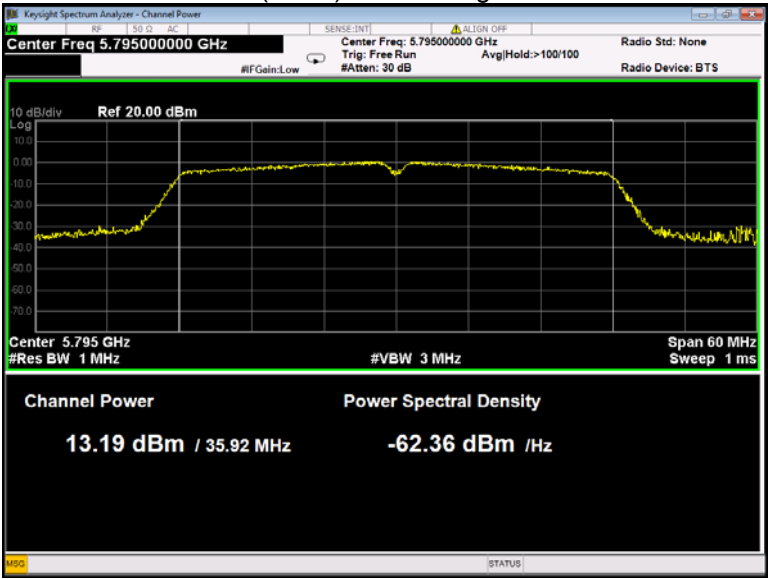
802.11n(HT20) U-NII-3 High channel



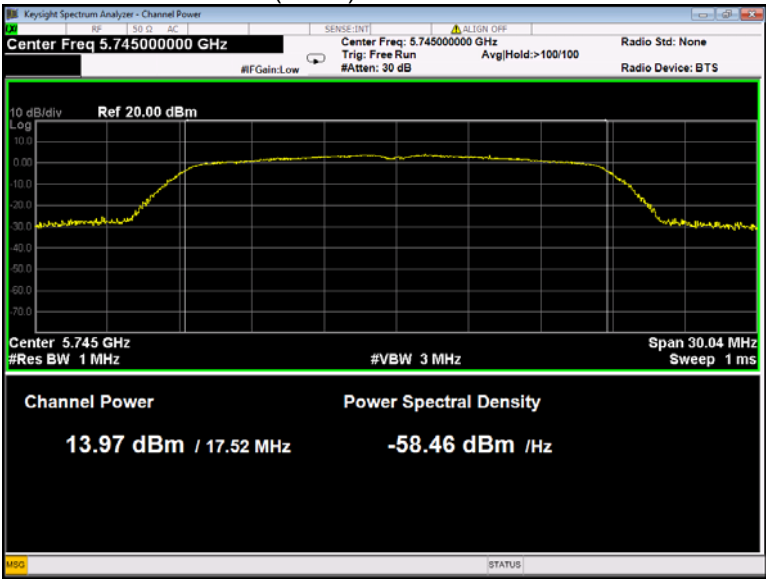
802.11n(HT40) U-NII-3 Low channel



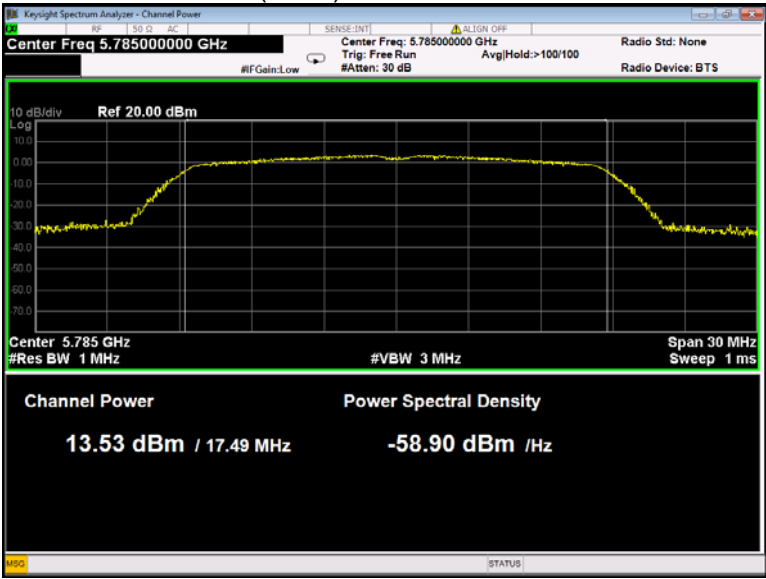
802.11n(HT40) U-NII-3 High channel



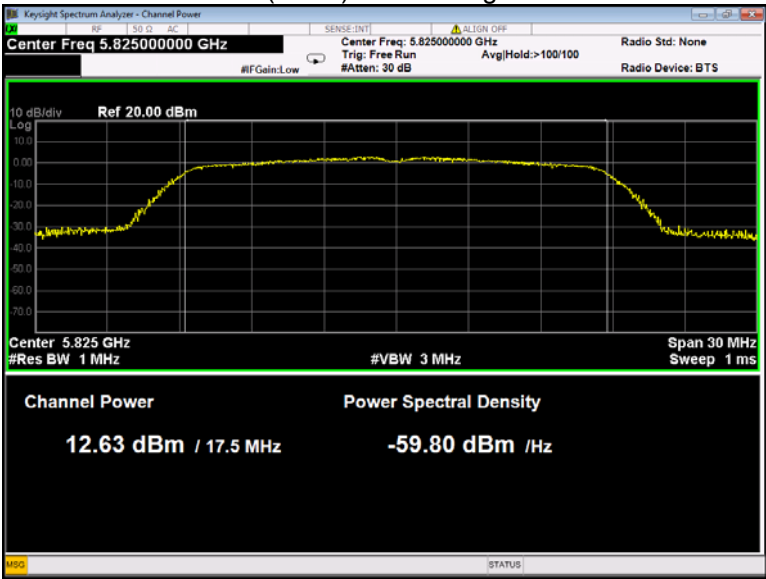
802.11ac(HT20) U-NII-3 Low channel



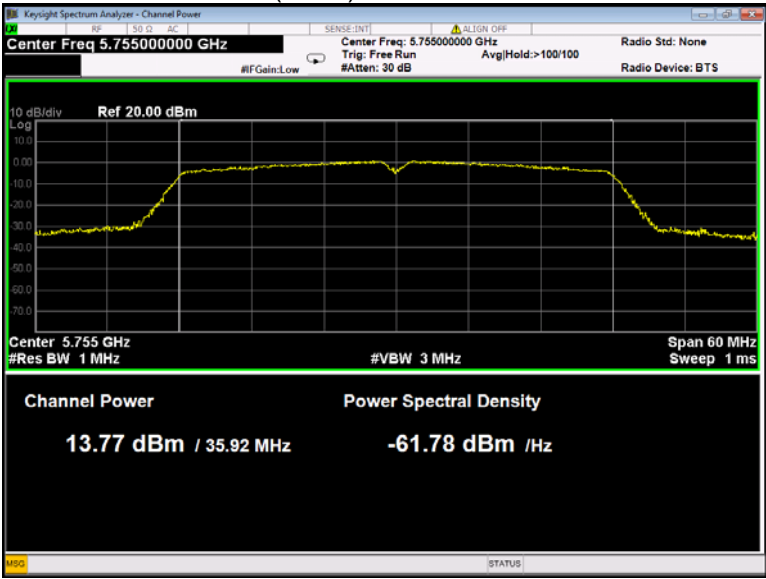
802.11ac(HT20) U-NII-3 Middle channel



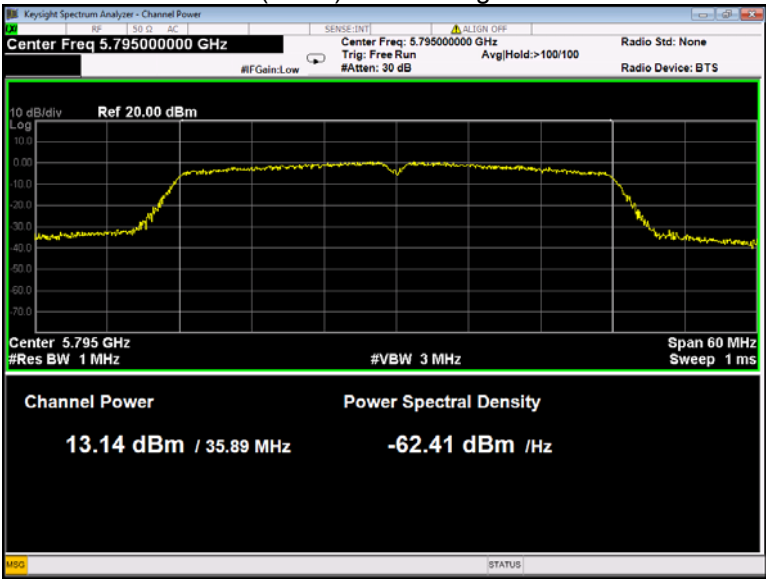
802.11ac(HT20) U-NII-3 High channel



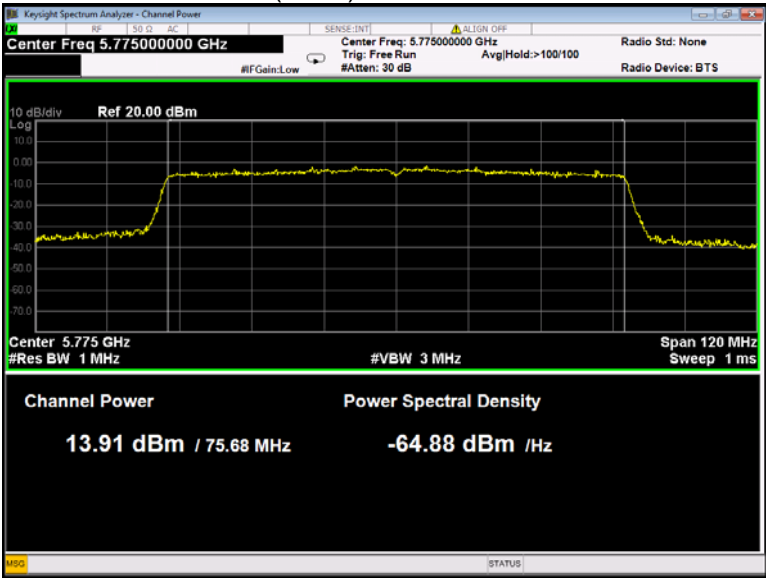
802.11ac(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



802.11ac(HT80) U-NII-3 Low channel



14 Power Spectral density

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a)
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Test Limit:	$\leq 11\text{dBm/MHz}$ for Operation in the U-NII-1(5150MHz-5250MHz, 5250-5350MHz and 5470-5725MHz) of device; $\leq 30\text{dBm/500kHz}$ for Operation in the U-NII-3(5725MHz-5850MHz) of device
Test Result:	PASS

14.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer:
U-NII-1
RBW = 1MHz, VBW $\geq 3 \times$ RBW Sweep = auto; Detector Function = Peak. Trace = Max hold.
U-NII-3
RBW = 510KHz, VBW $\geq 3 \times$ RBW Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section
Submit this plot.

14.2 Test Result:

Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-1	802.11a	6.637	6.731	6.646
	802.11n(HT20)	6.510	6.354	6.550
	802.11n(HT40)	4.081	/	3.834
	802.11ac(HT20)	6.500	6.363	5.895
	802.11ac(HT40)	3.735	/	3.212
	802.11ac(HT80)	1.075	/	/
	Limit	≤11.00dBm/MHz		

Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-2A	802.11a	4.424	4.309	4.271
	802.11n(HT20)	5.037	4.118	4.503
	802.11n(HT40)	2.092	/	1.972
	802.11ac(HT20)	4.071	4.065	4.064
	802.11ac(HT40)	1.330	/	1.469
	802.11ac(HT80)	-0.695	/	/
	Limit	≤11.00dBm/MHz		

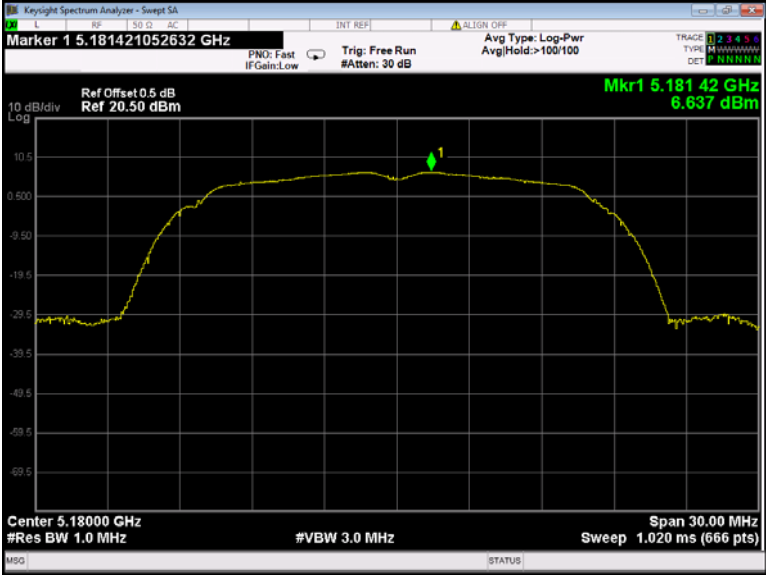
Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-2C	802.11a	4.238	4.408	3.626
	802.11n(HT20)	4.145	4.645	4.067
	802.11n(HT40)	1.645	1.931	0.751
	802.11ac(HT20)	4.102	4.136	3.987
	802.11ac(HT40)	1.312	1.701	1.299
	802.11ac(HT80)	-1.429	-1.177	/
	Limit	≤11.00dBm/MHz		

Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-3	802.11a	4.401	4.383	4.220
	802.11n(HT20)	4.016	4.315	3.516
	802.11n(HT40)	1.742	/	0.766
	802.11ac(HT20)	4.267	3.711	3.971
	802.11ac(HT40)	1.308	/	1.090
	802.11ac(HT80)	-1.417	/	/
	Limit	$\leq 30.00 \text{ dBm/500kHz}$		

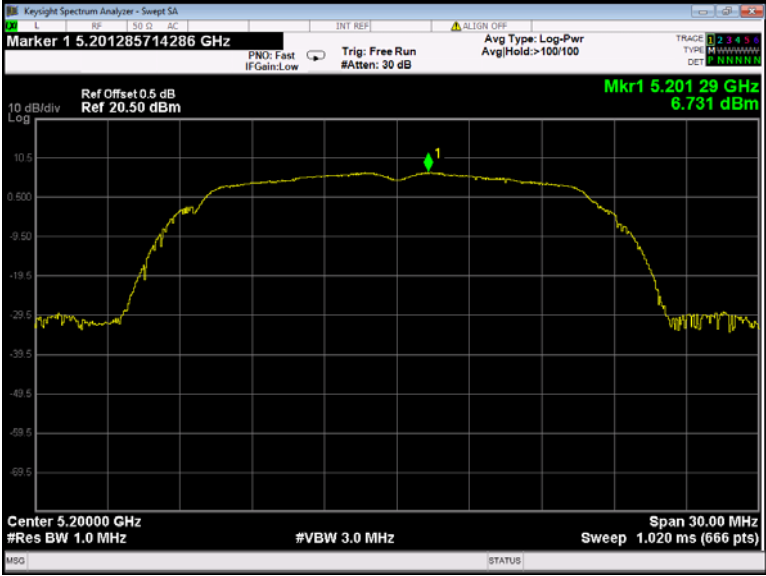
* All transmit signals are completely uncorrelated with each other, Directional gain = G_{ANT} which is less than 6dBi. So the limit does not be reduced.

Test result plots shown as follows:

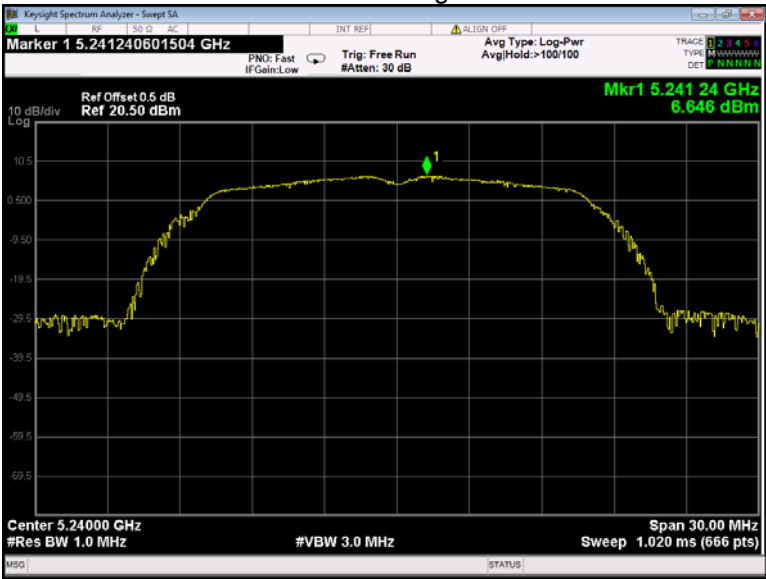
802.11a U-NII-1 Low channel



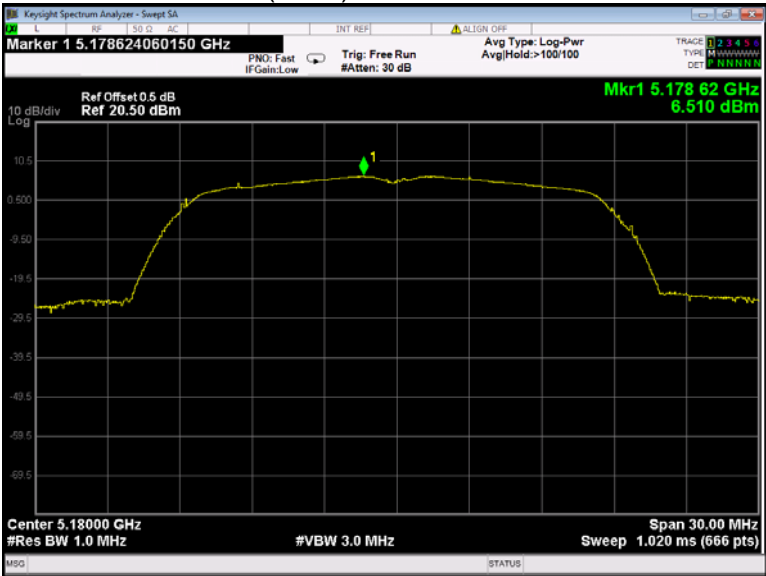
802.11a U-NII-1 Middle channel



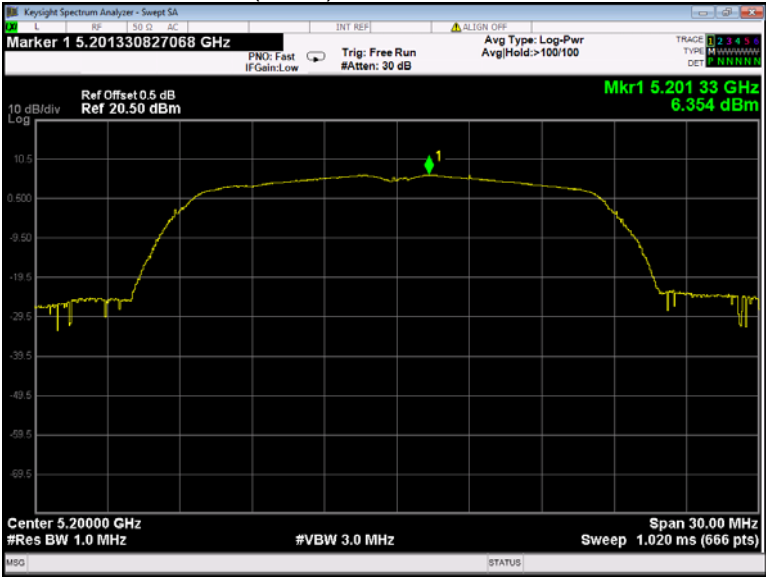
802.11a U-NII-1 High channel



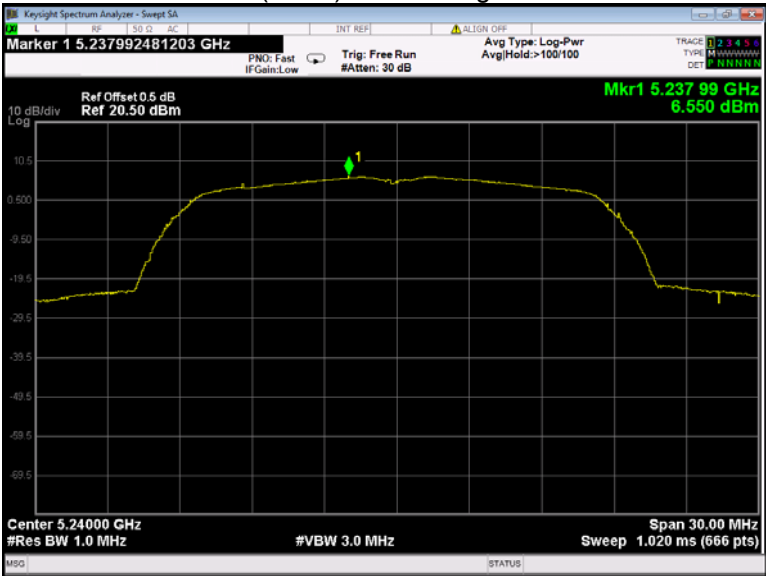
802.11n(HT20) U-NII-1 Low channel



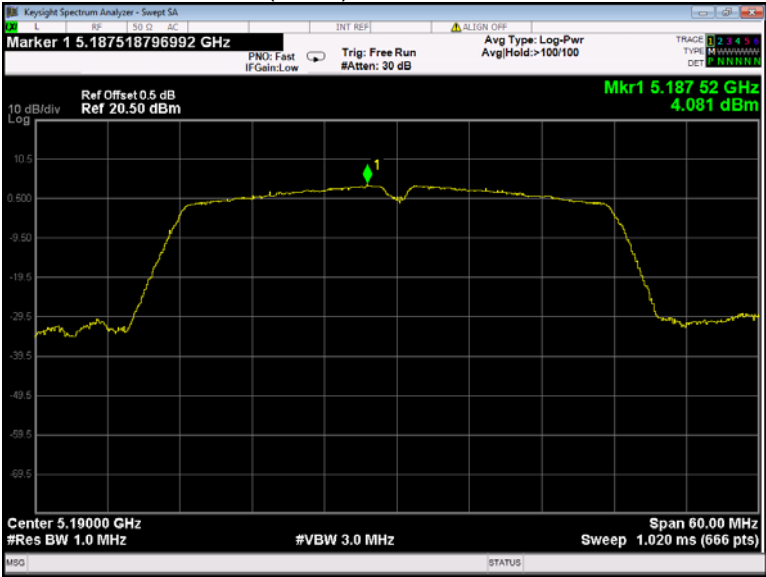
802.11n(HT20) U-NII-1 Middle channel



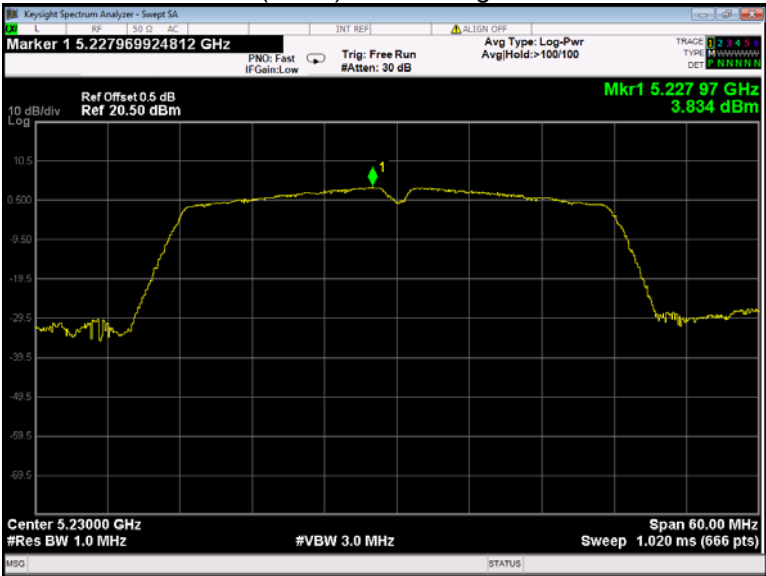
802.11n(HT20) U-NII-1 High channel



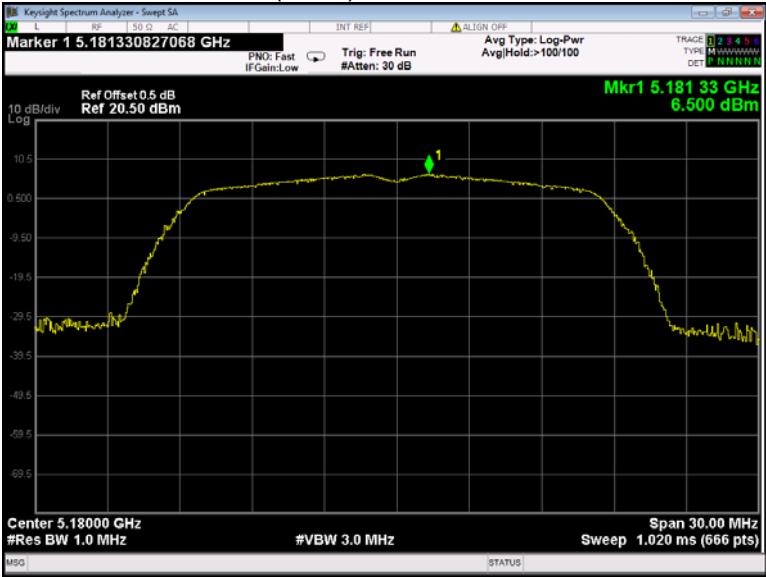
802.11n(HT40) U-NII-1 Low channel



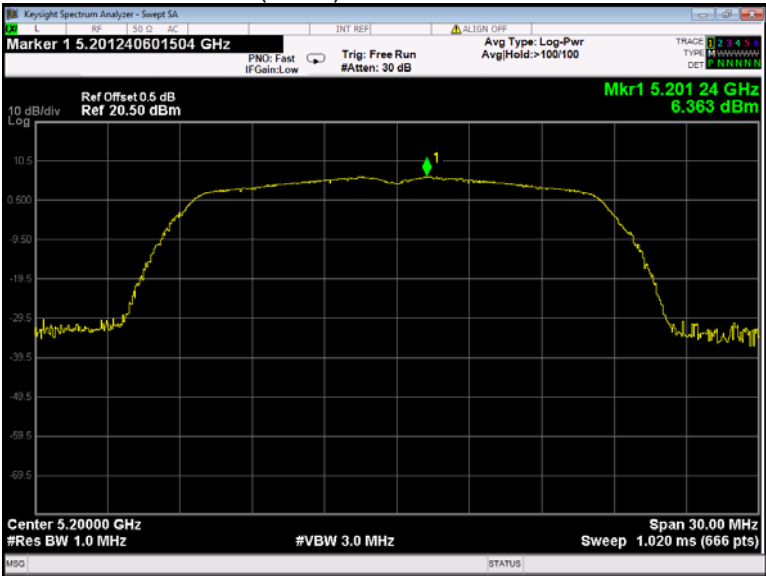
802.11n(HT40) U-NII-1 High channel



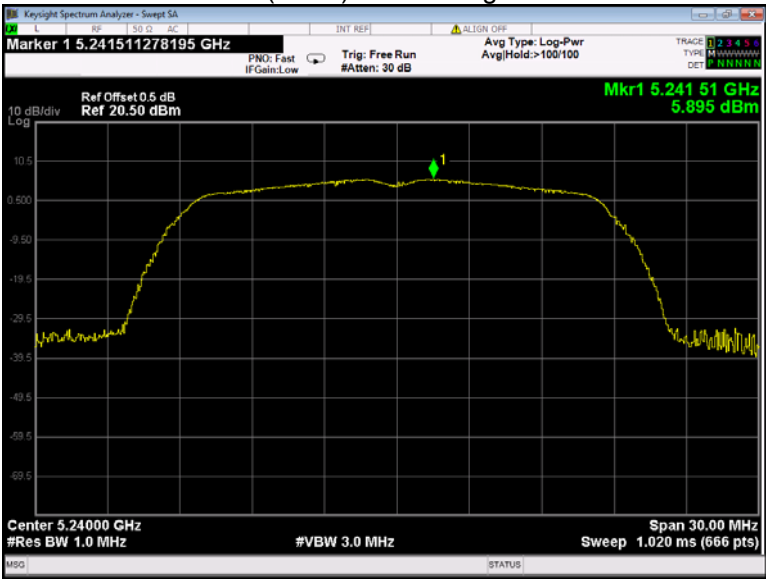
802.11ac(HT20) U-NII-1 Low channel



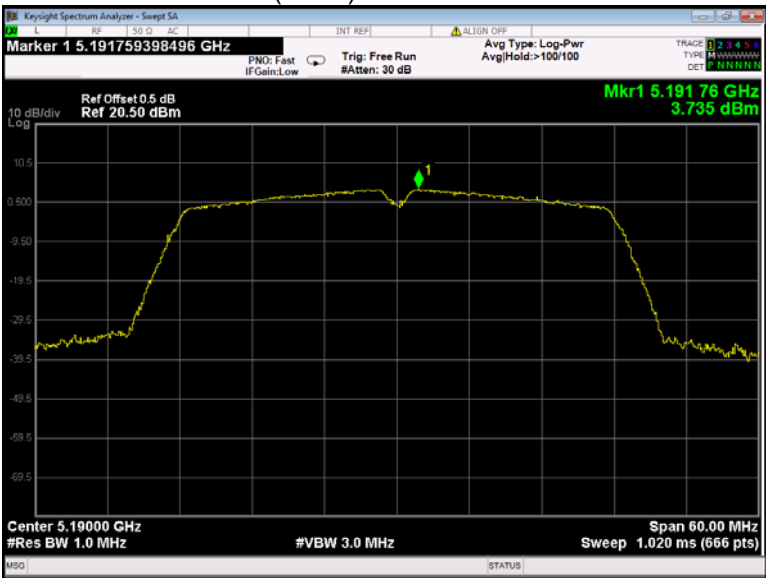
802.11ac(HT20) U-NII-1 Middle channel



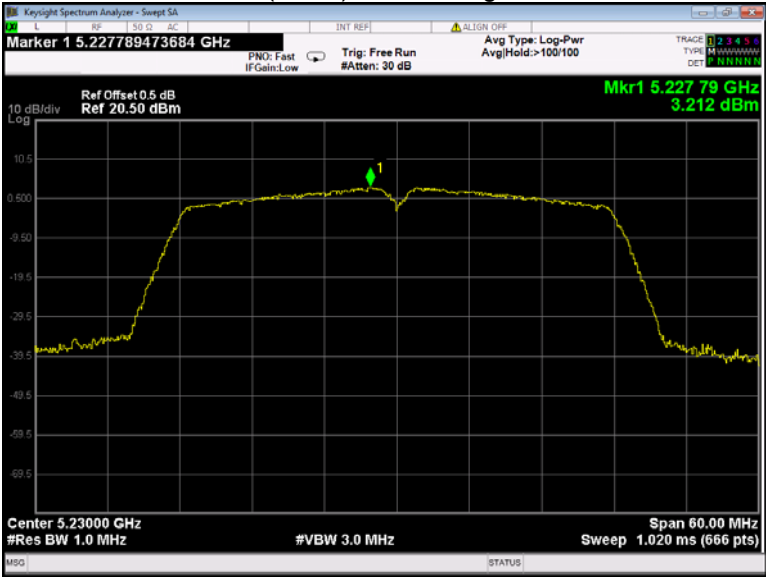
802.11ac(HT20) U-NII-1 High channel



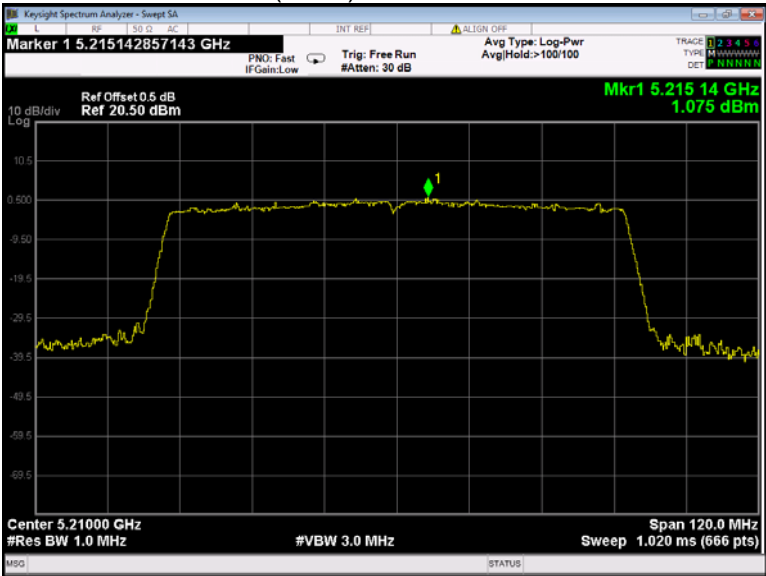
802.11ac(HT40) U-NII-1 Low channel



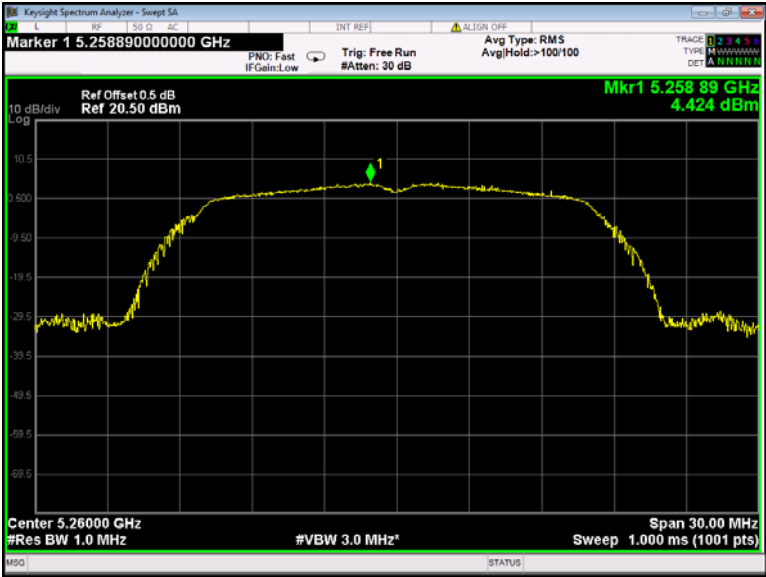
802.11ac(HT40) U-NII-1 High channel



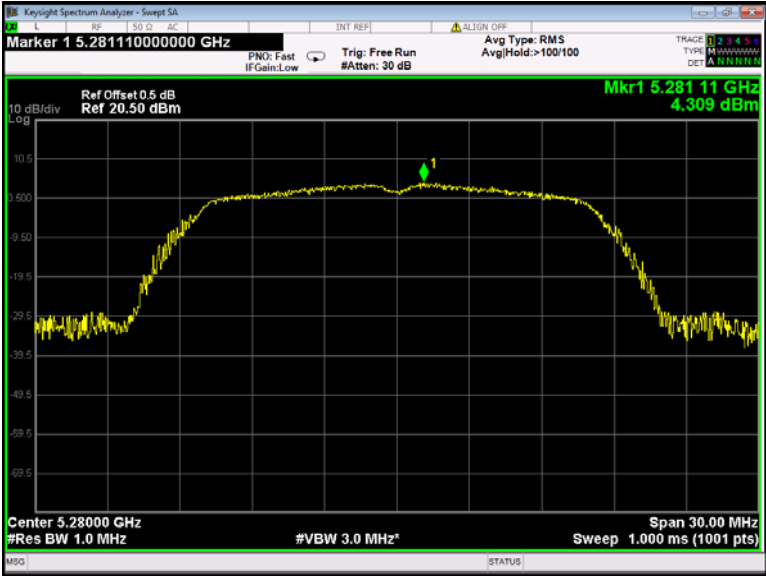
802.11ac(HT80) U-NII-1 Low channel



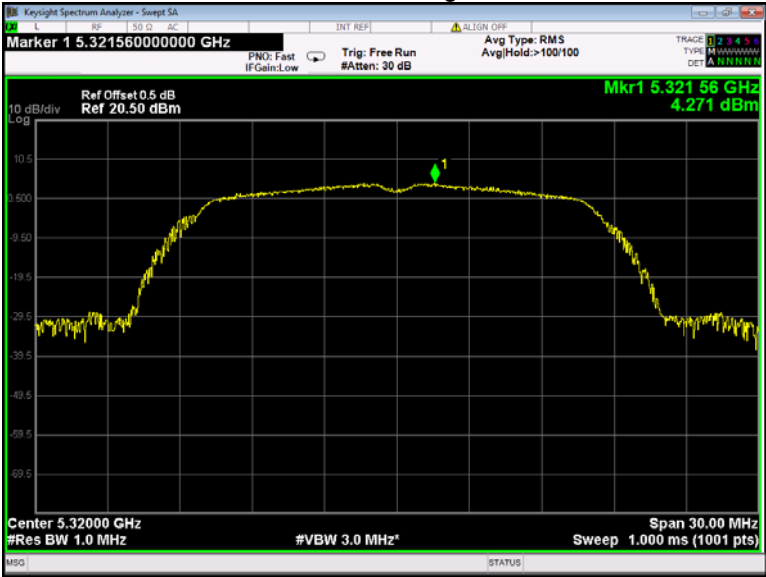
802.11a U-NII-2A Low channel



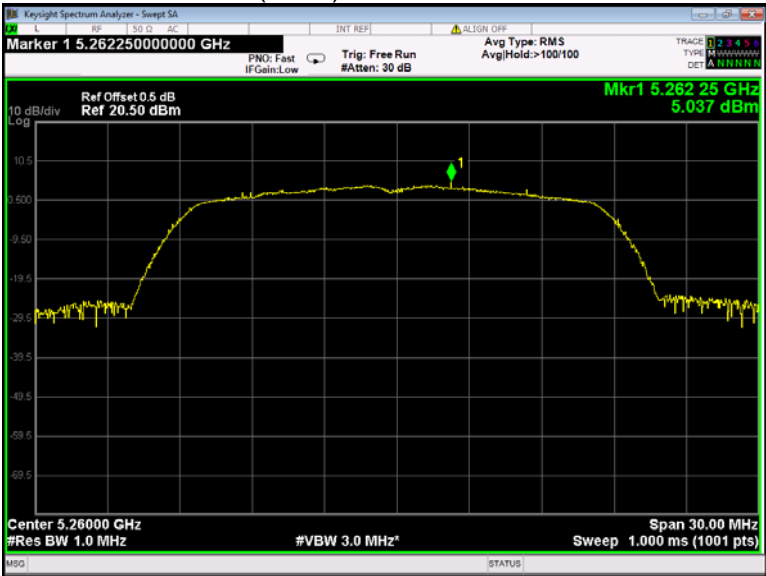
802.11a U-NII-2A Middle channel



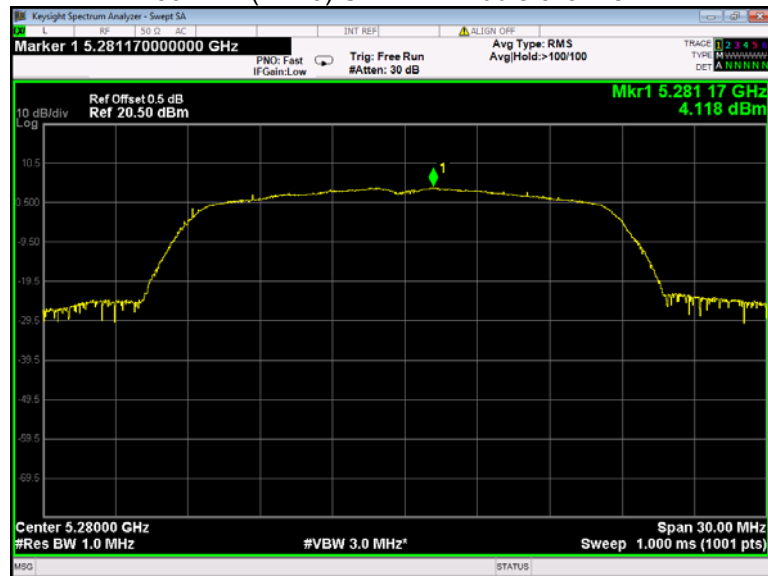
802.11a U-NII-2A High channel



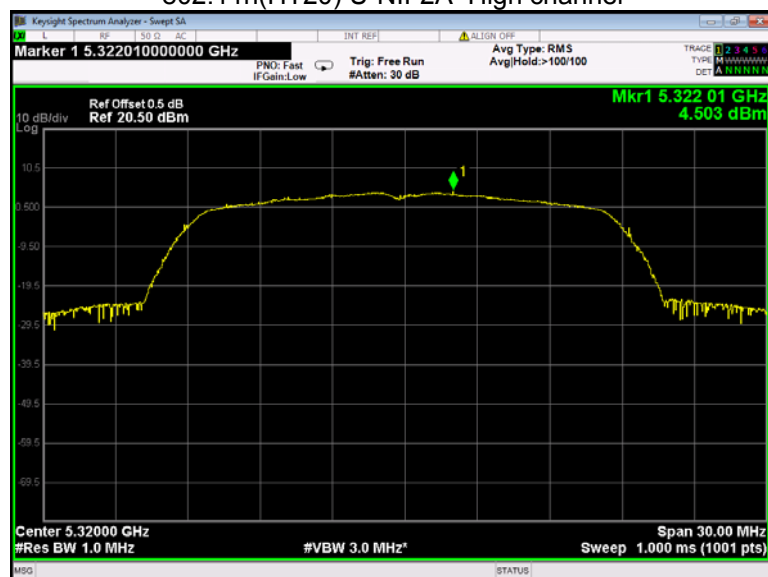
802.11n(HT20) U-NII-2A Low channel



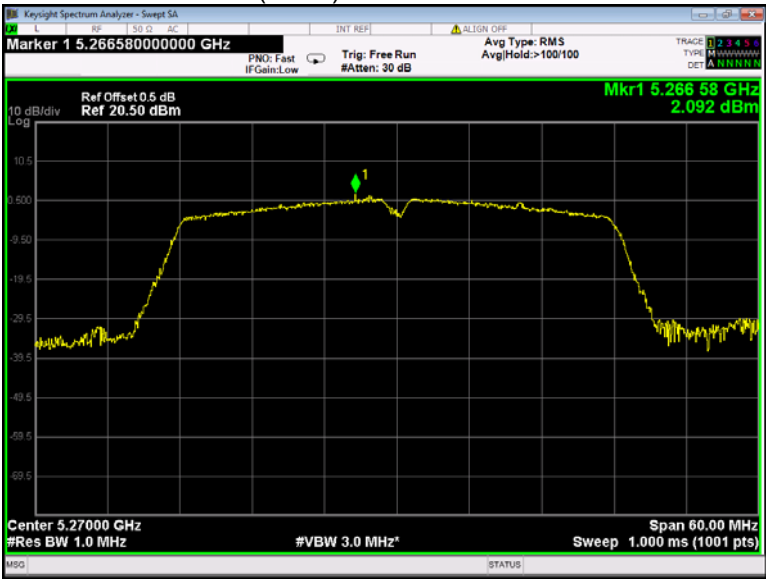
802.11n(HT20) U-NII-2A Middle channel



802.11n(HT20) U-NII-2A High channel



802.11n(HT40) U-NII-2A Low channel



802.11n(HT40) U-NII-2A High channel

