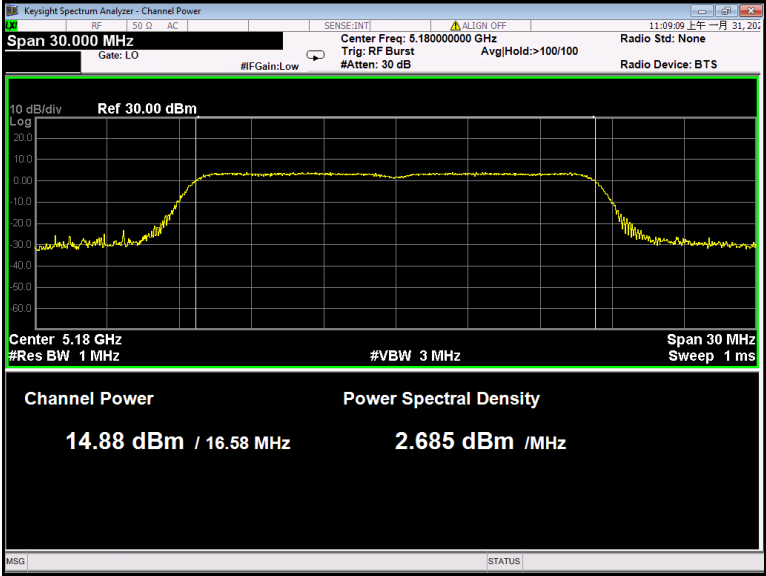


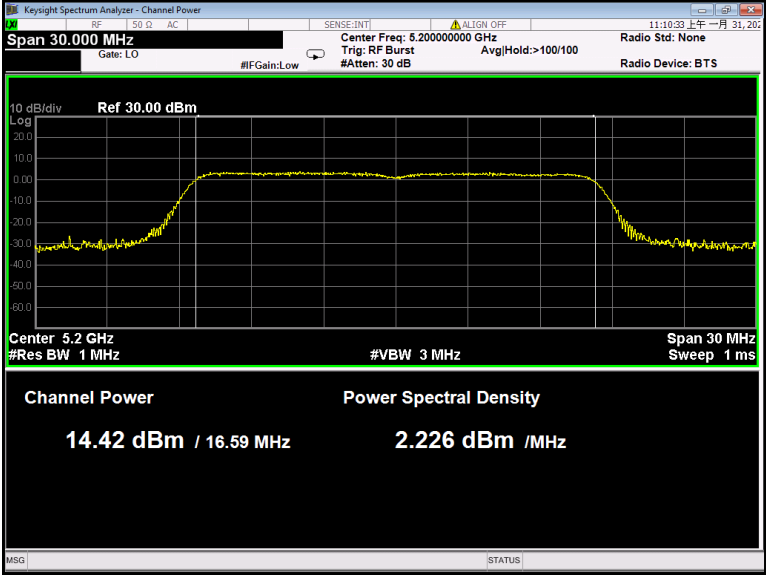
Test result plots shown as follows:

ANT1

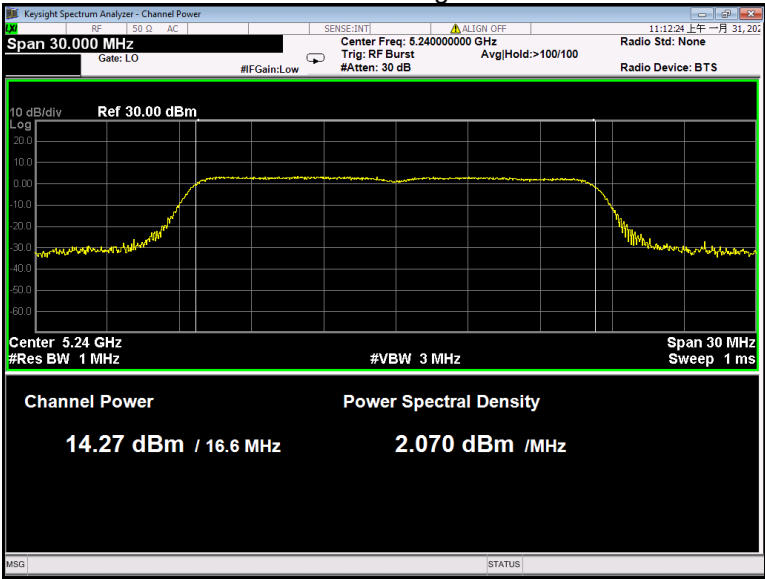
802.11a U-NII-1 Low channel



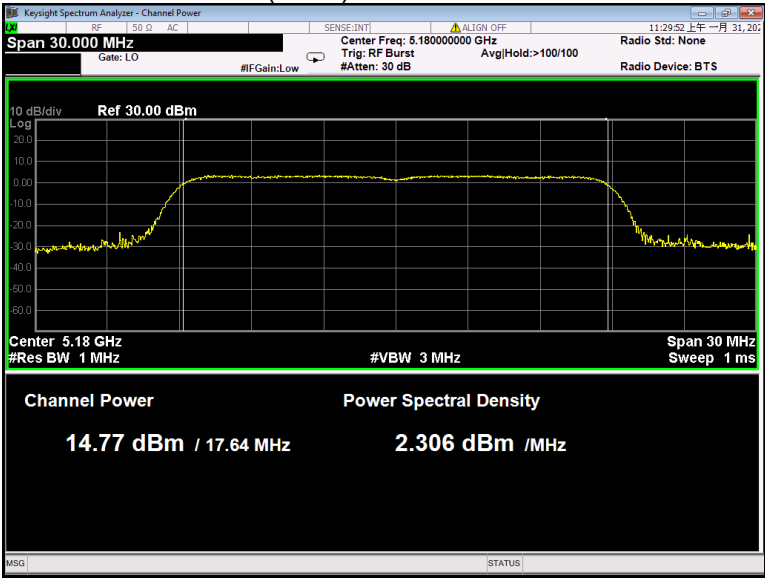
802.11a U-NII-1 Middle channel



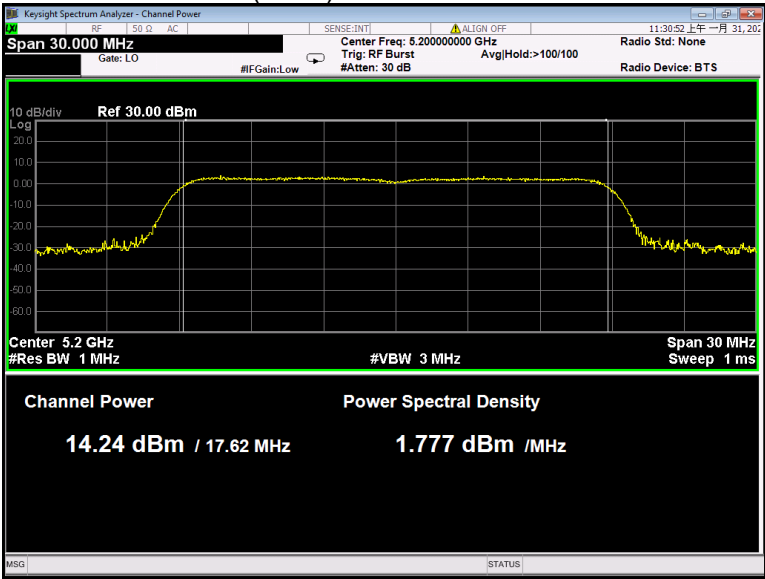
802.11a U-NII-1 High channel



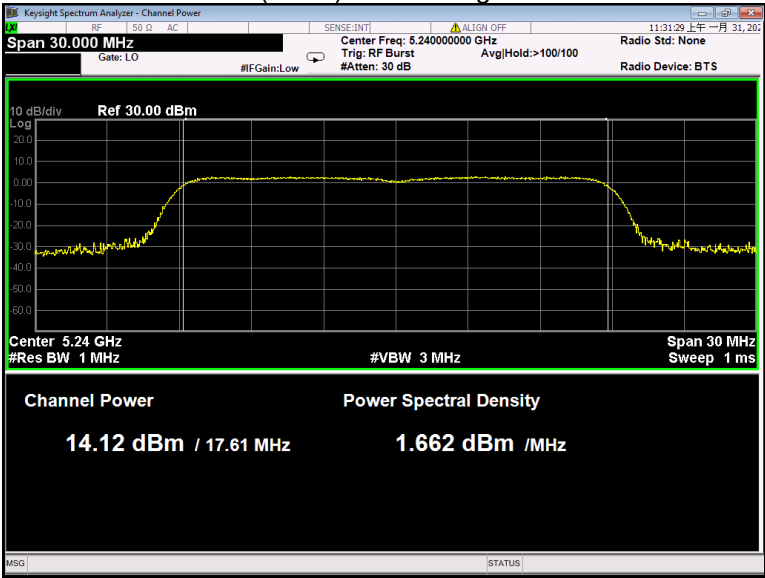
802.11n(HT20) U-NII-1 Low channel



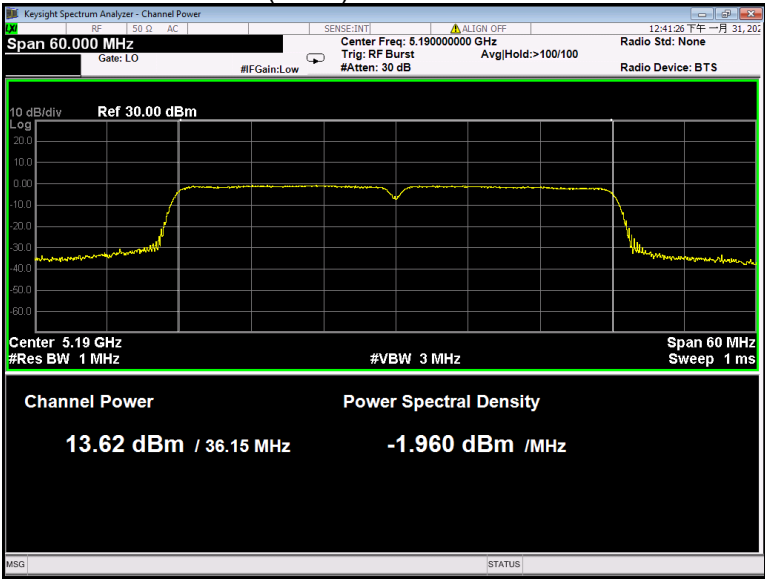
802.11n(HT20) U-NII-1 Middle channel



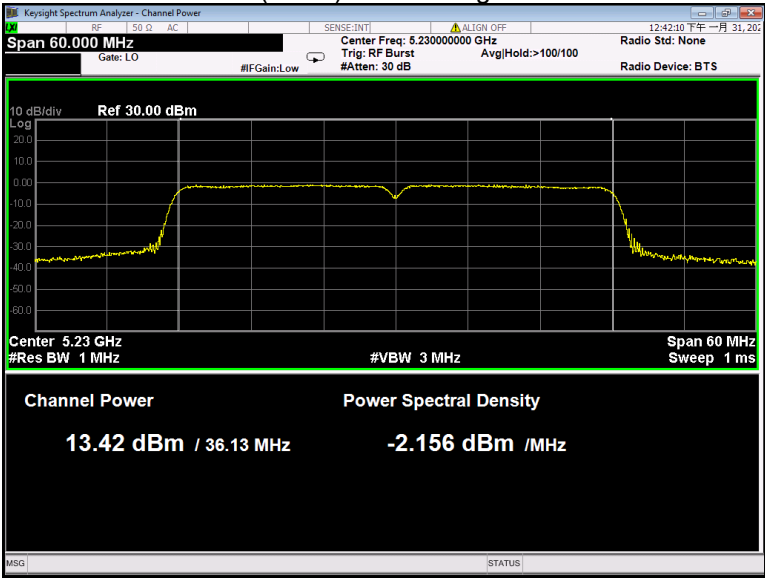
802.11n(HT20) U-NII-1 High channel

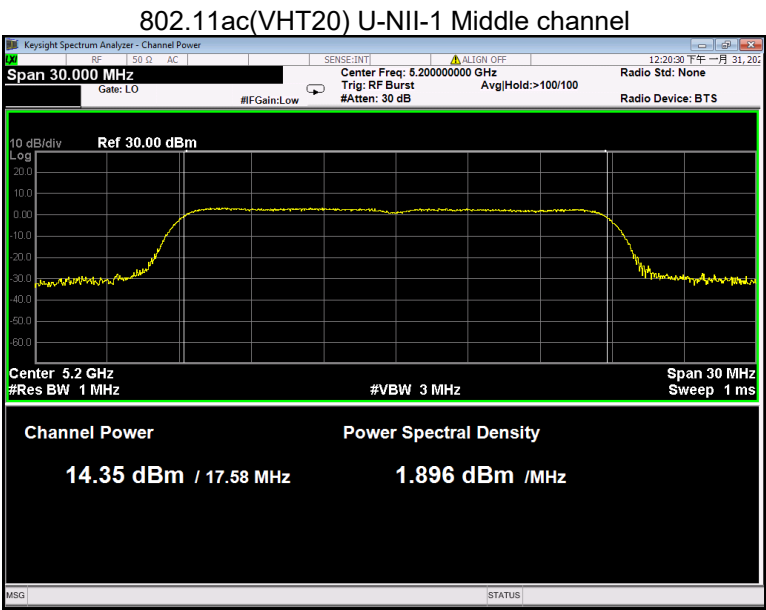
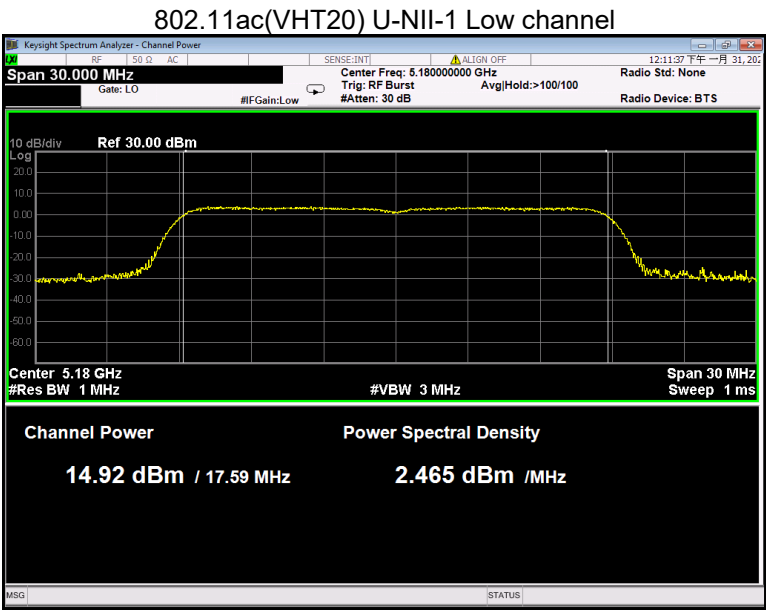


802.11n(HT40) U-NII-1 Low channel

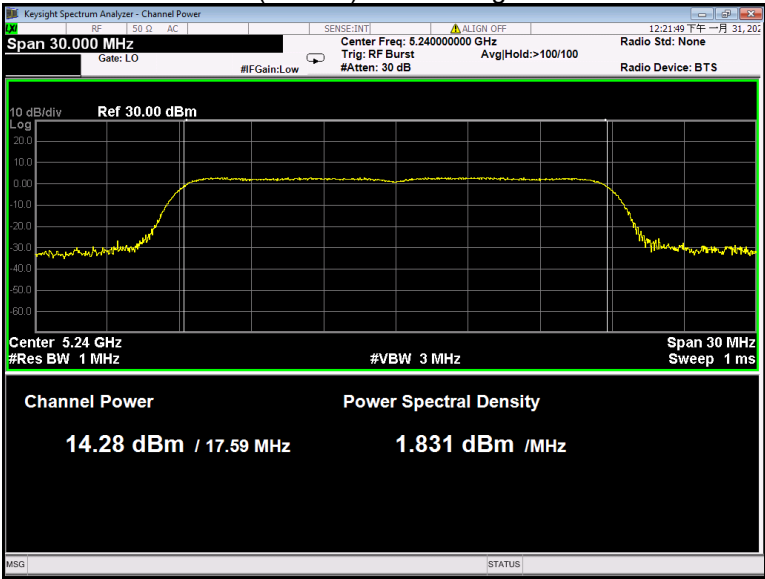


802.11n(HT40) U-NII-1 High channel

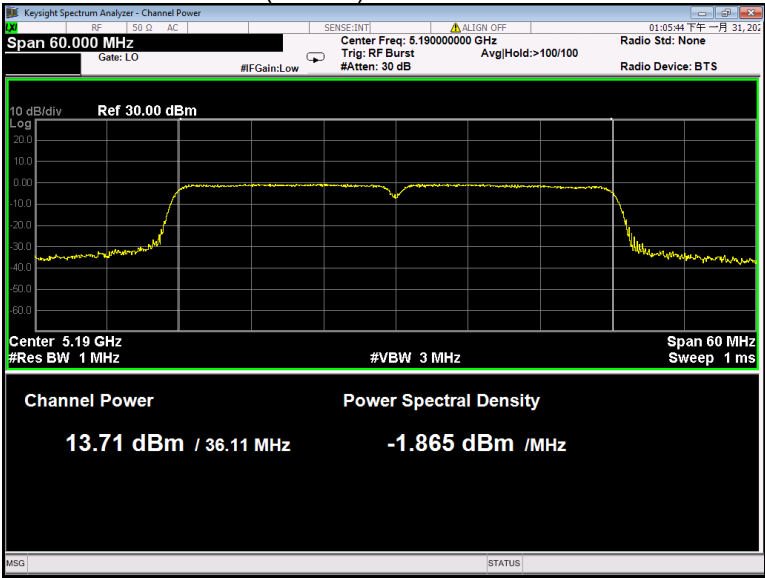




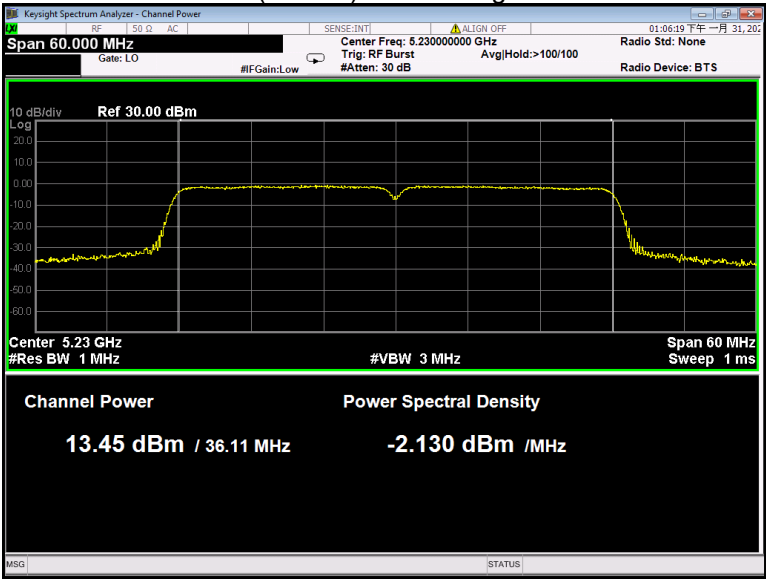
802.11ac(VHT20) U-NII-1 High channel



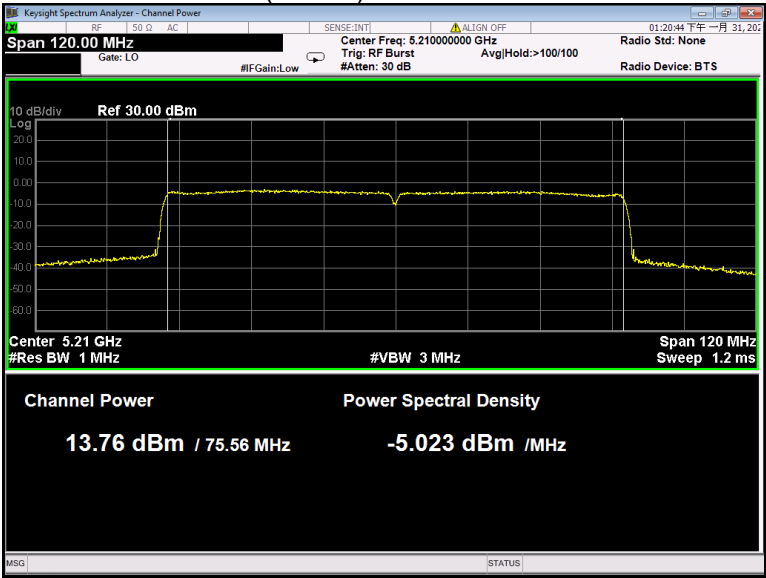
802.11ac(VHT40) U-NII-1 Low channel



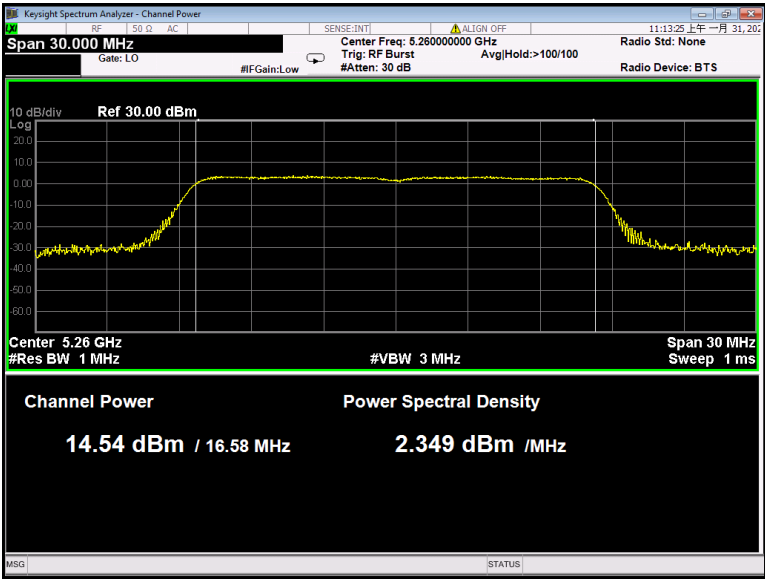
802.11ac(VHT40) U-NII-1 High channel



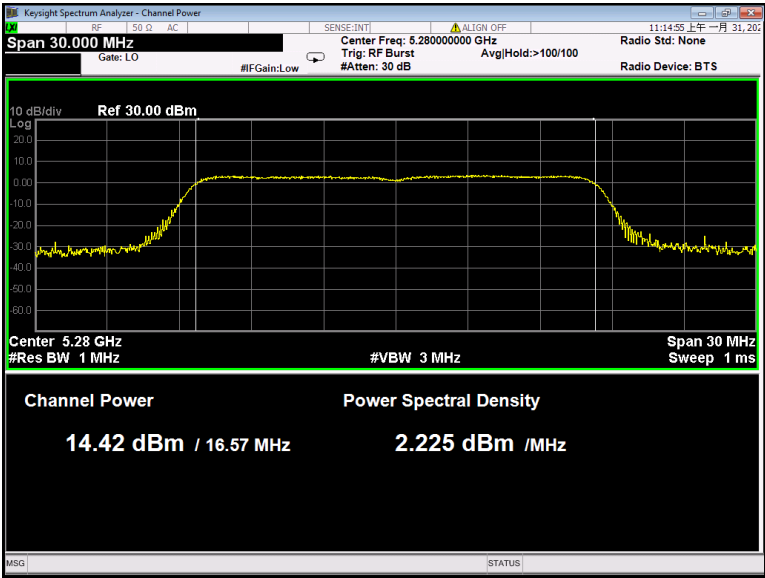
802.11ac(VHT80) U-NII-1 Low channel



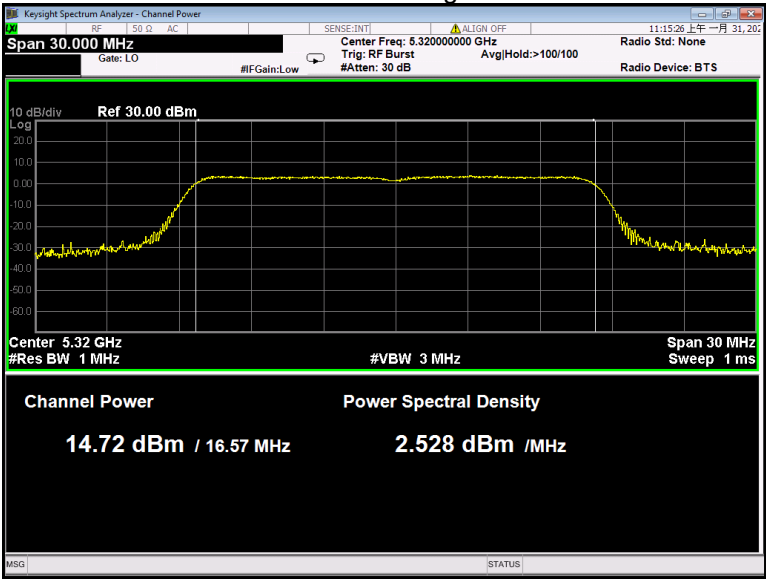
802.11a U-NII-2A Low channel



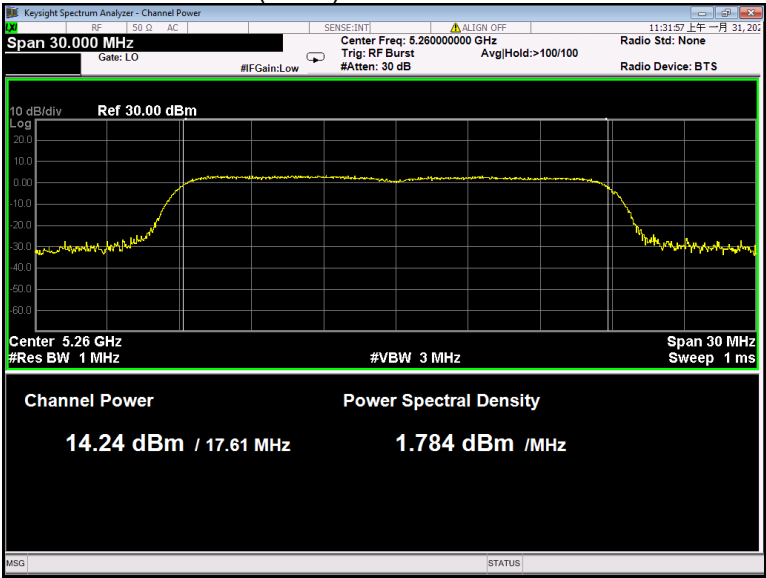
802.11a U-NII-2A Middle channel



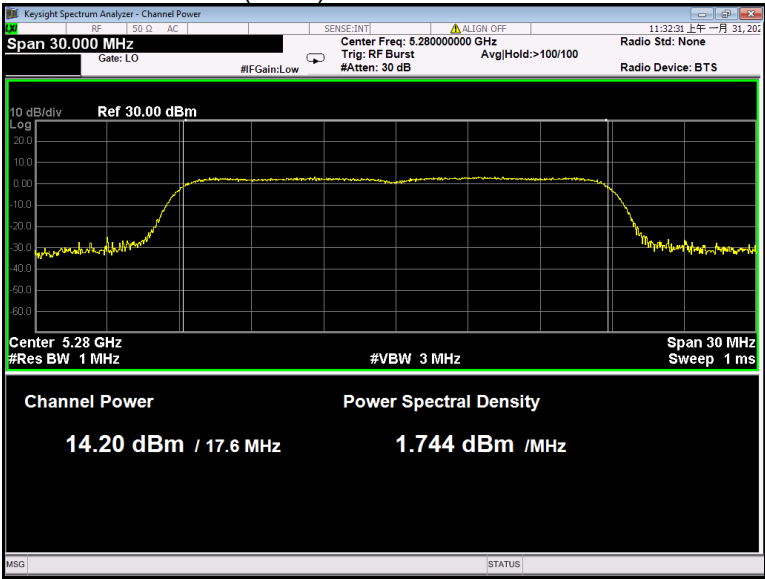
802.11a U-NII-2A High channel



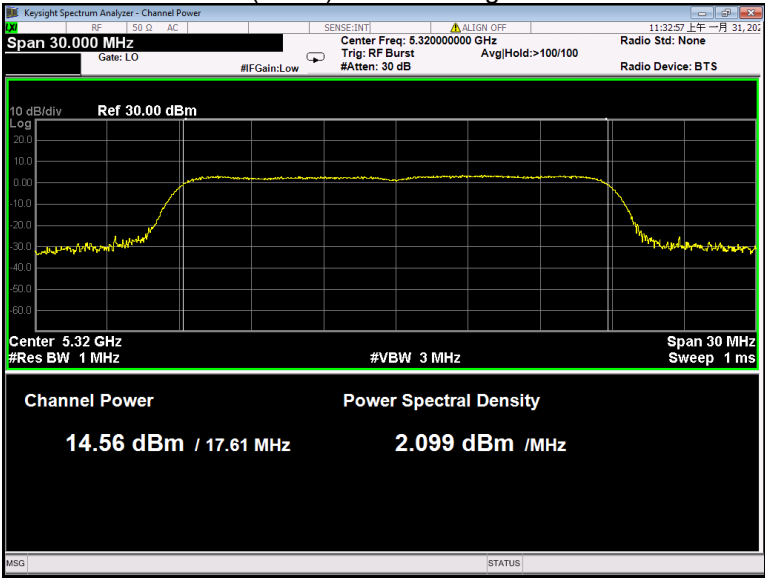
802.11n(HT20) U-NII-2A Low channel



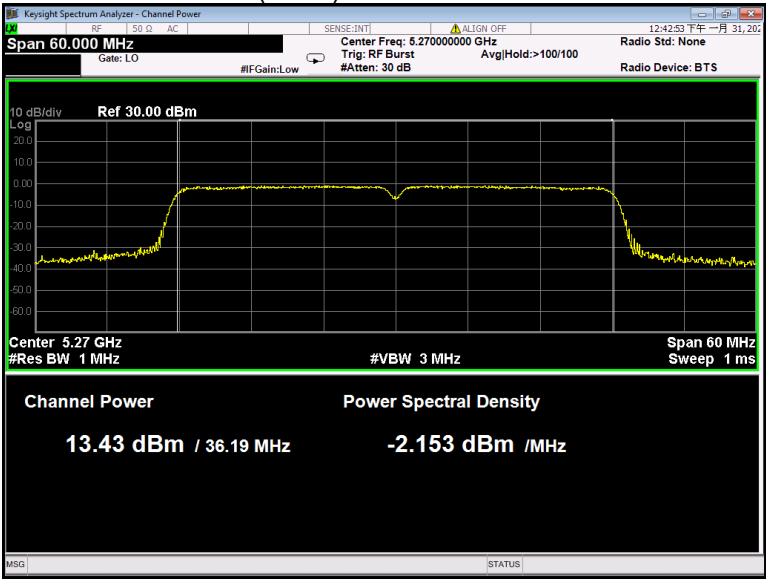
802.11n(HT20) U-NII-2A Middle channel



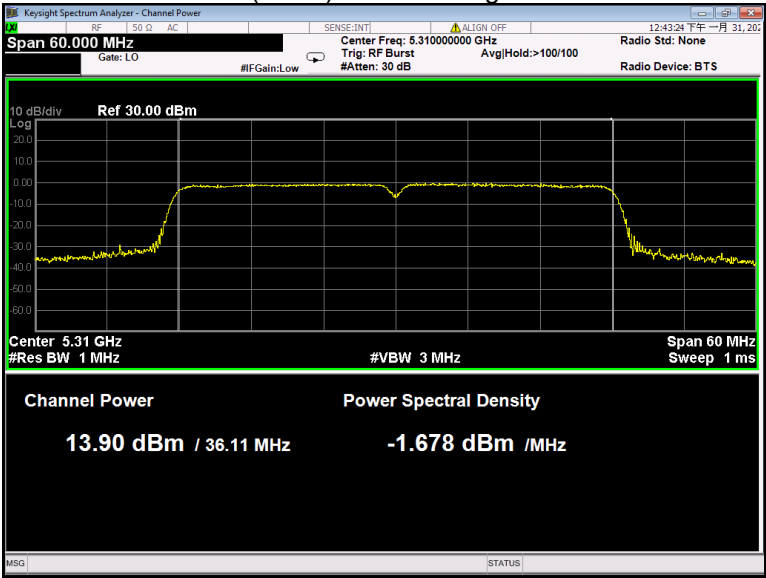
802.11n(HT20) U-NII-2A High channel



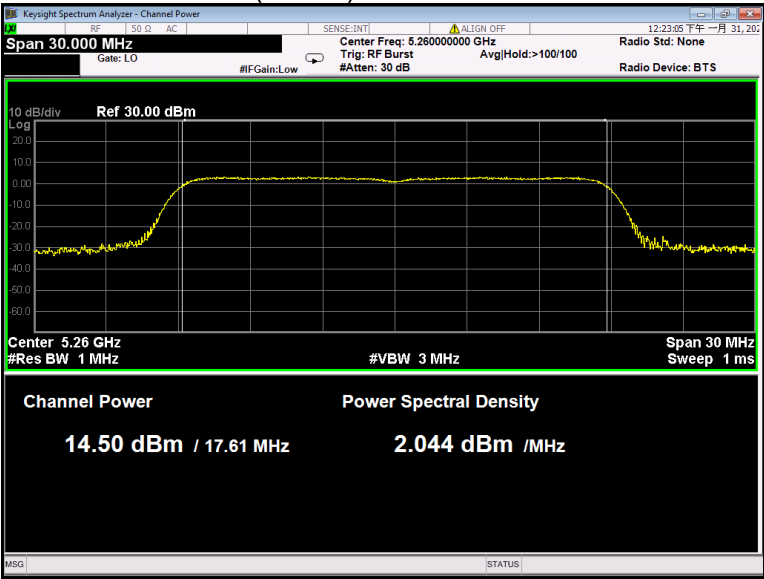
802.11n(HT40) U-NII-2A Low channel



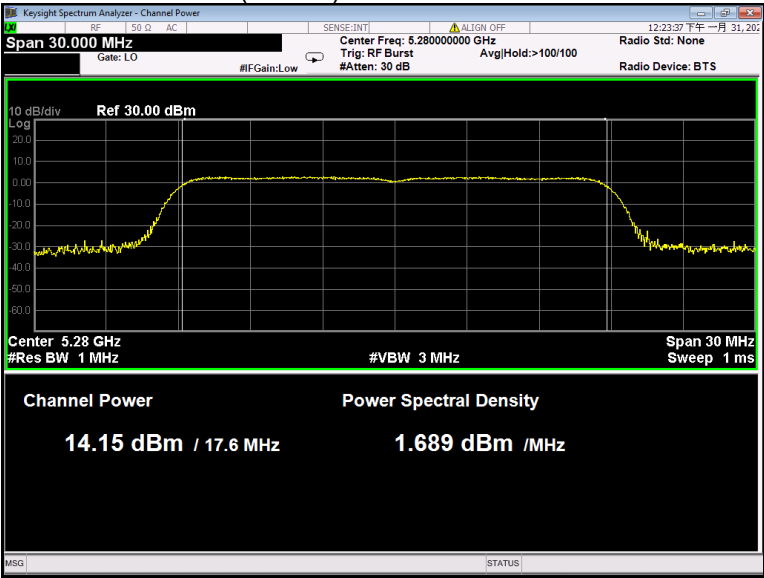
802.11n(HT40) U-NII-2A High channel



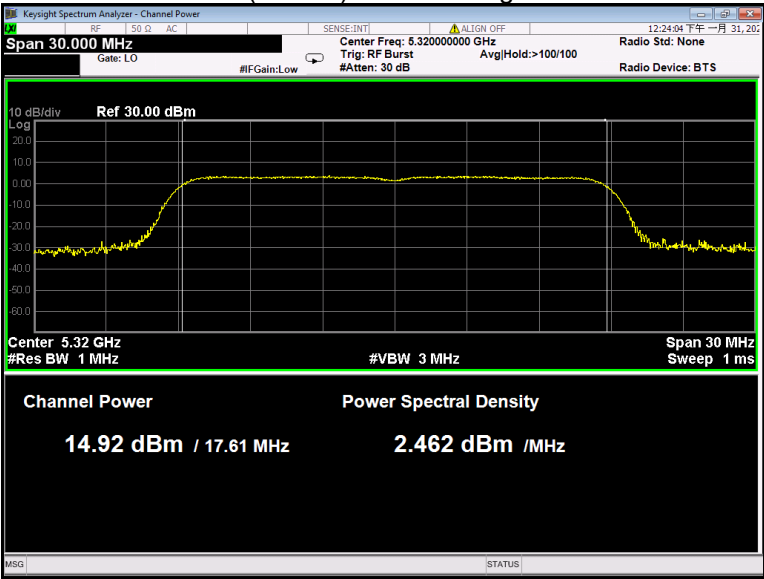
802.11ac(VHT20) U-NII-2A Low channel



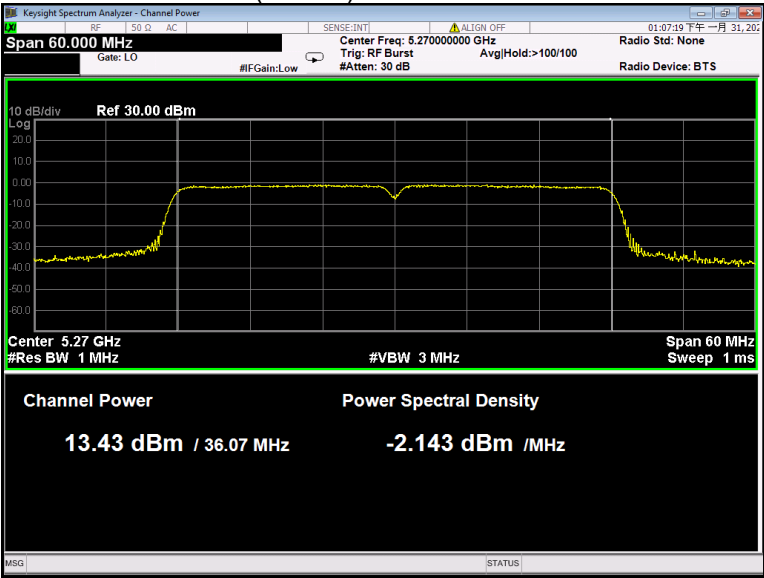
802.11ac(VHT20) U-NII-2A Middle channel



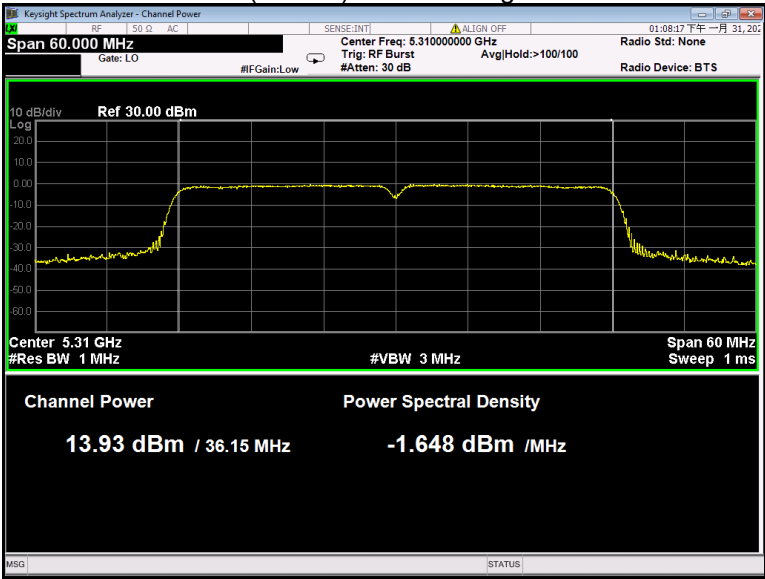
802.11ac(VHT20) U-NII-2A High channel



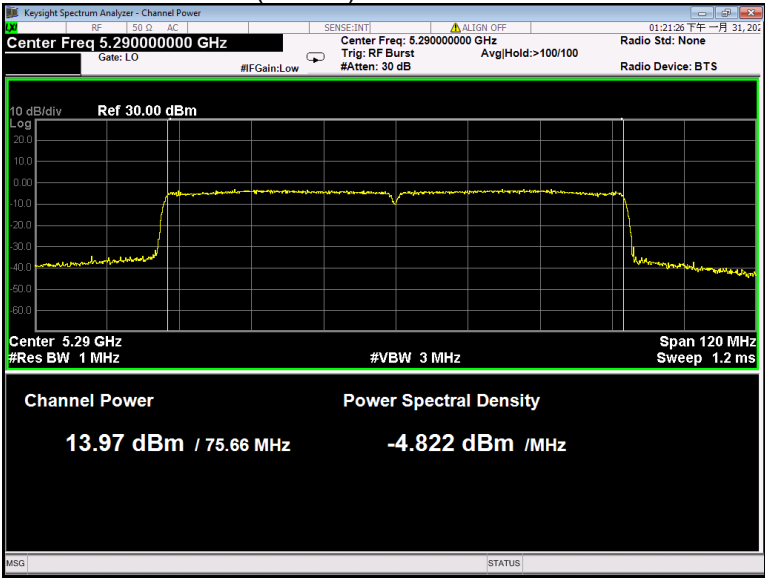
802.11ac(VHT40) U-NII-2A Low channel



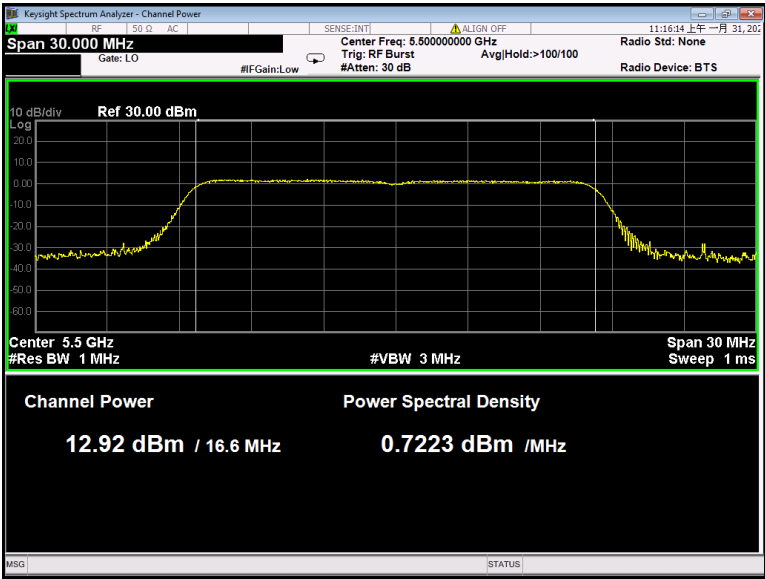
802.11ac(VHT40) U-NII-2A High channel



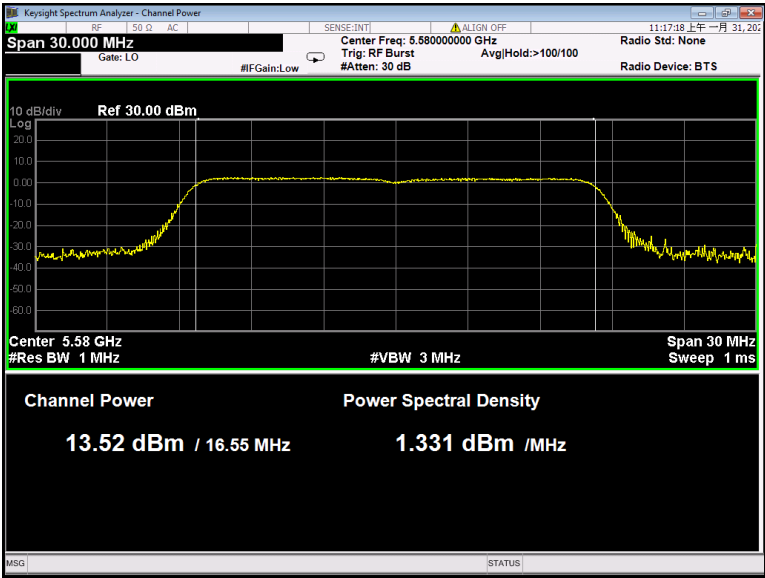
802.11ac(VHT80) U-NII-2A Low channel



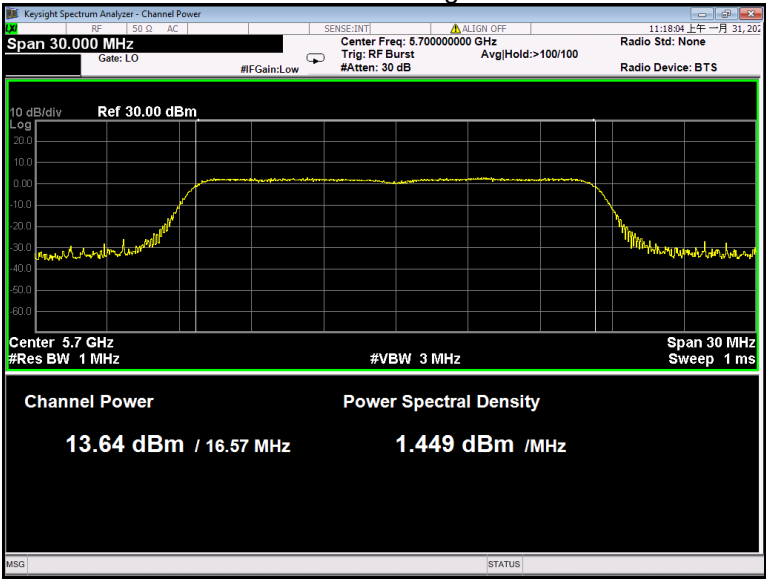
802.11a U-NII-2C Low channel



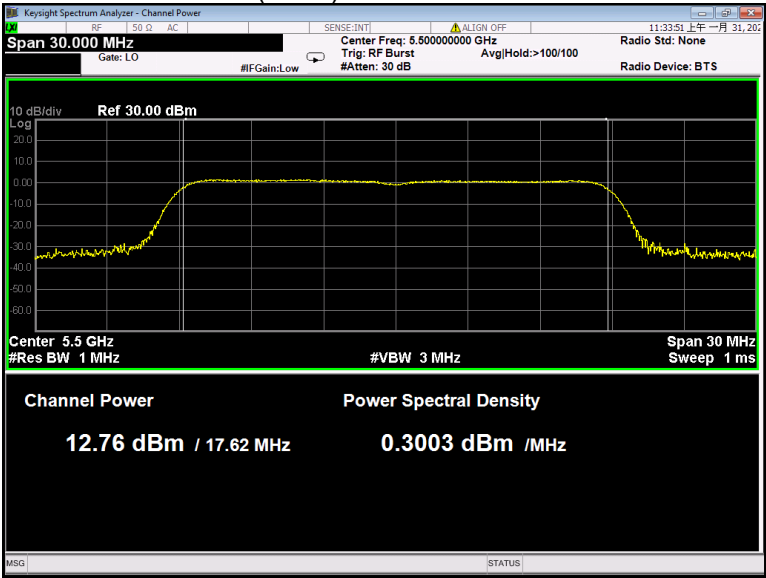
802.11a U-NII-2C Middle channel



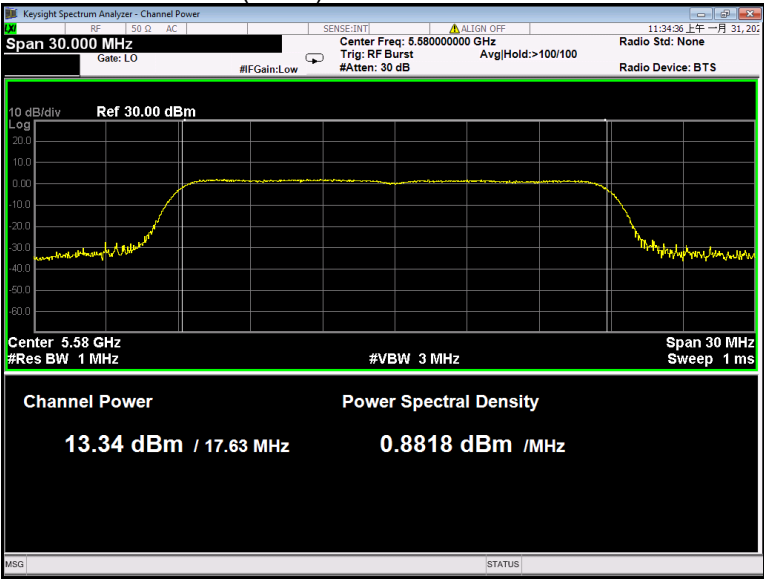
802.11a U-NII-2C High channel



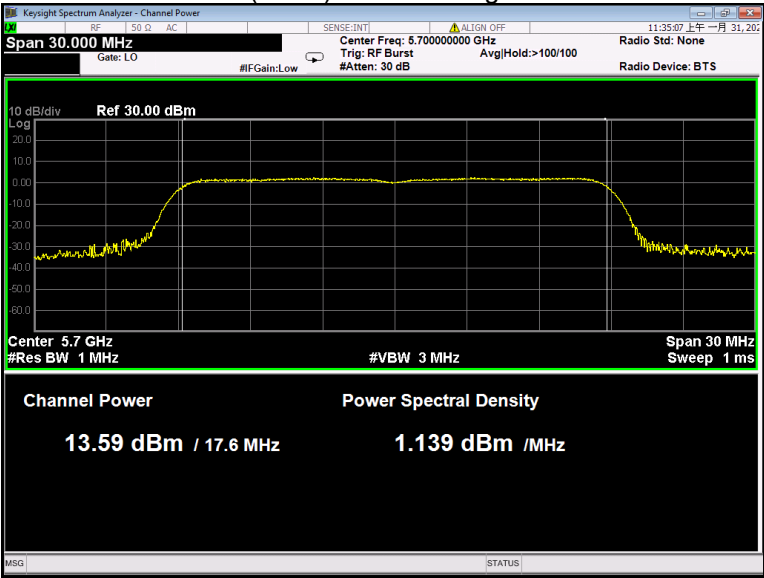
802.11n(HT20) U-NII-2C Low channel



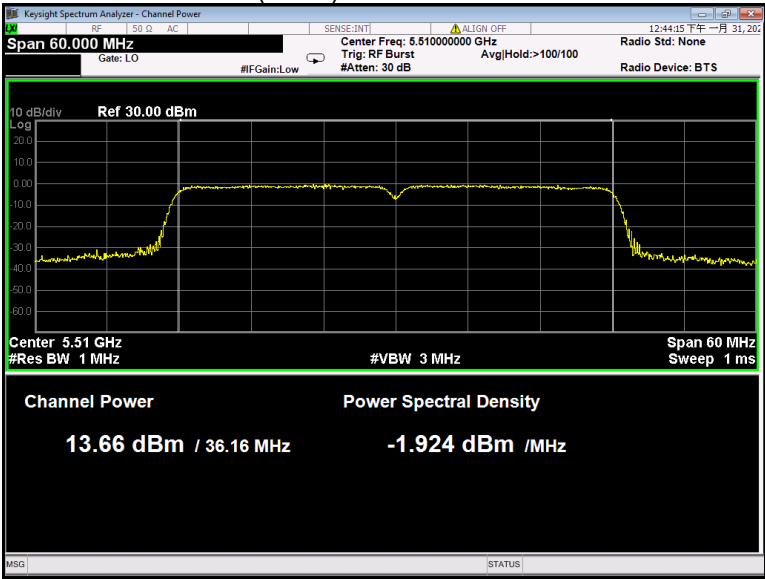
802.11n(HT20) U-NII-2C Middle channel



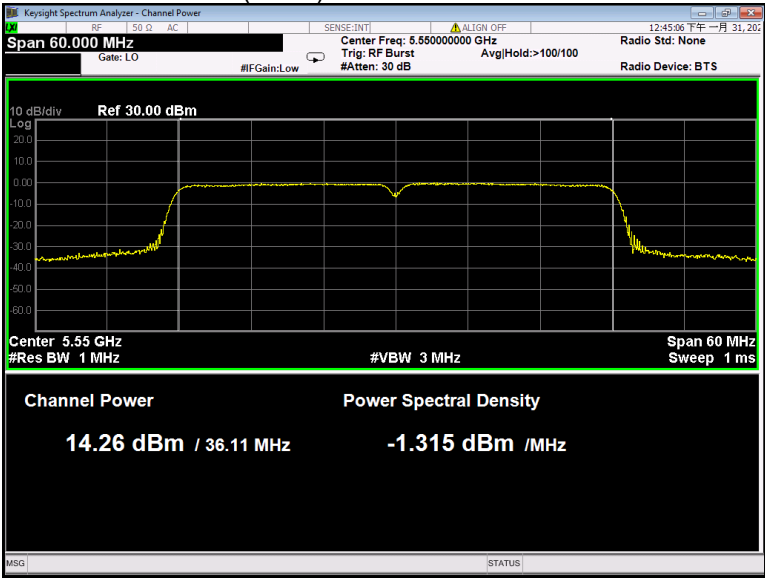
802.11n(HT20) U-NII-2C High channel

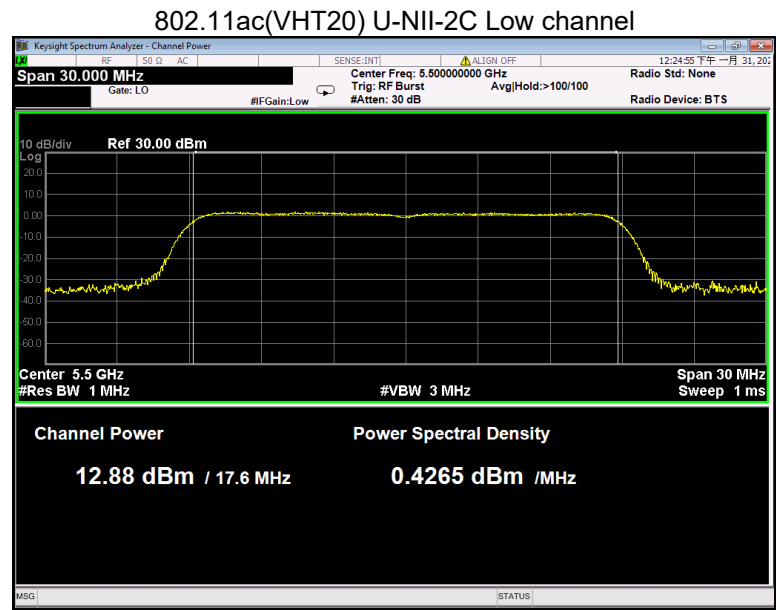
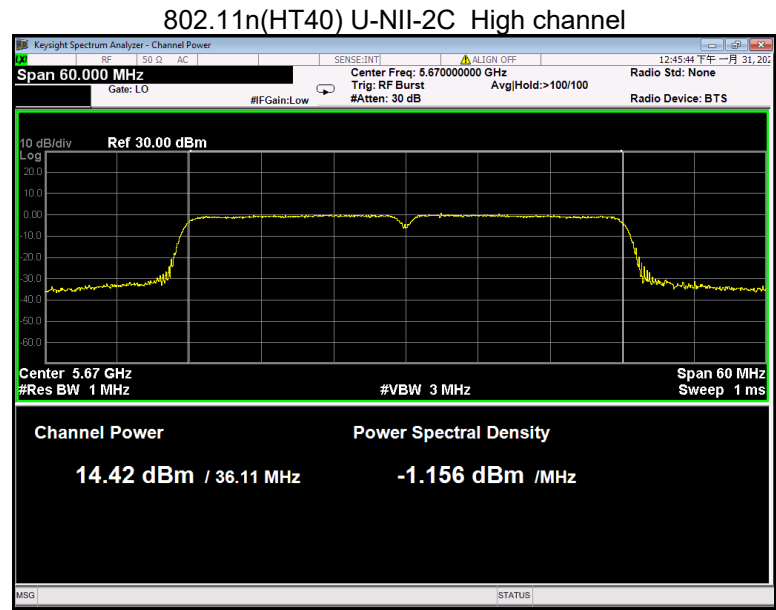


802.11n(HT40) U-NII-2C Low channel

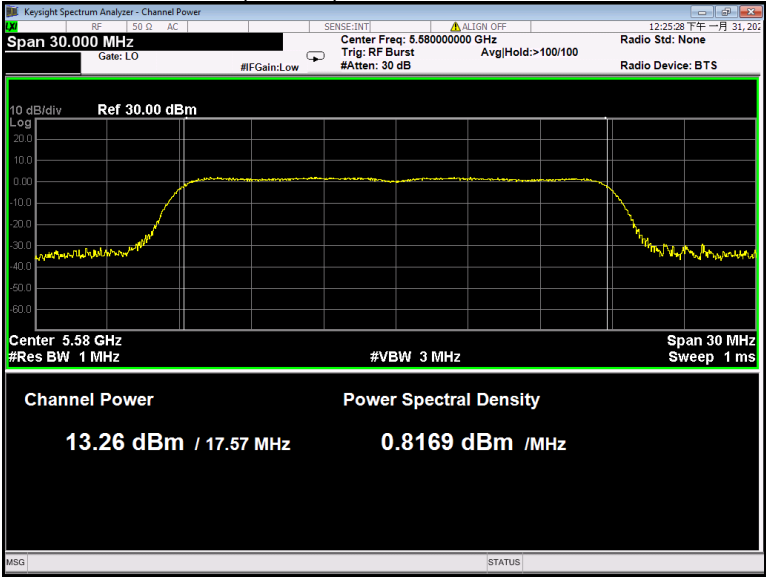


802.11n(HT40) U-NII-2C Middle channel

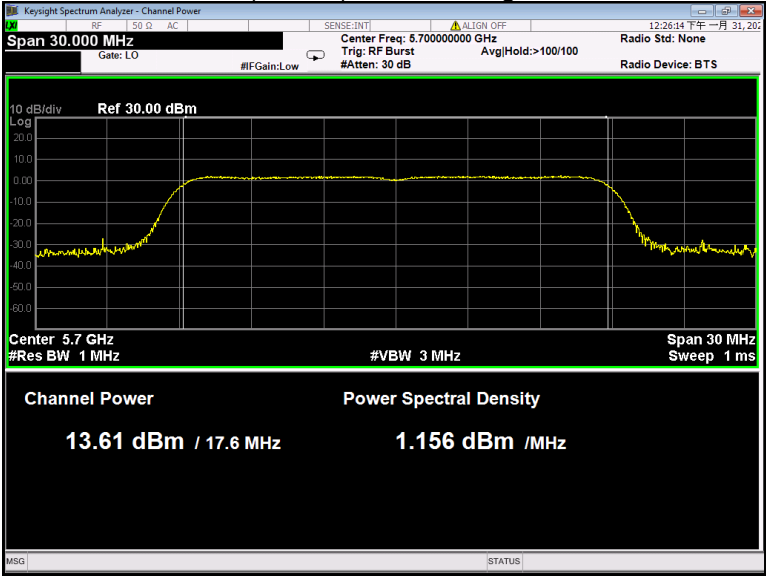




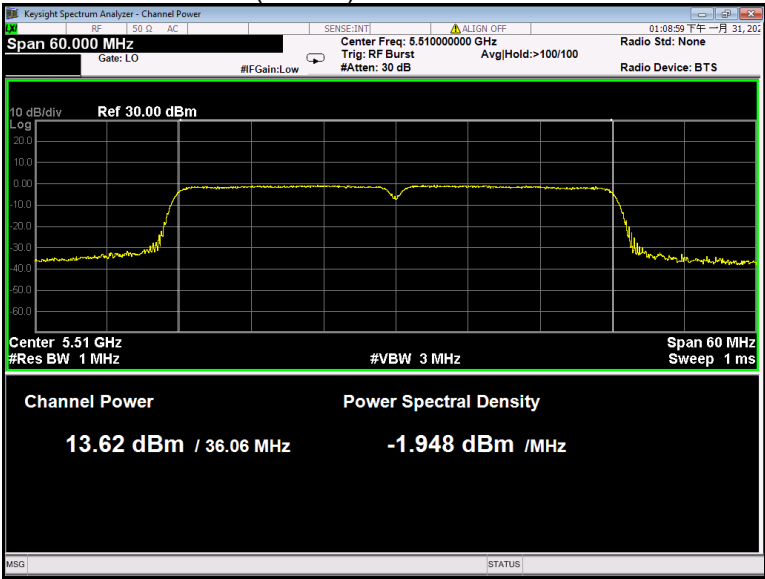
802.11ac(VHT20) U-NII-2C Middle channel



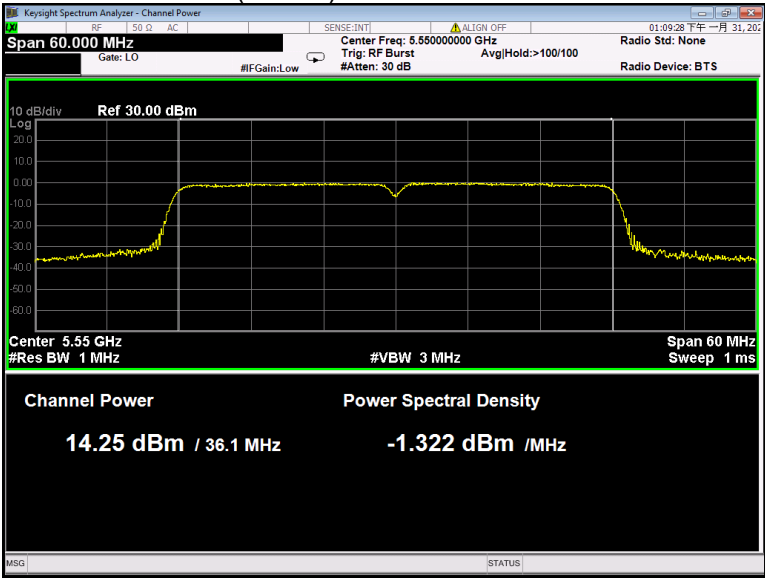
802.11ac(VHT20) U-NII-2C High channel



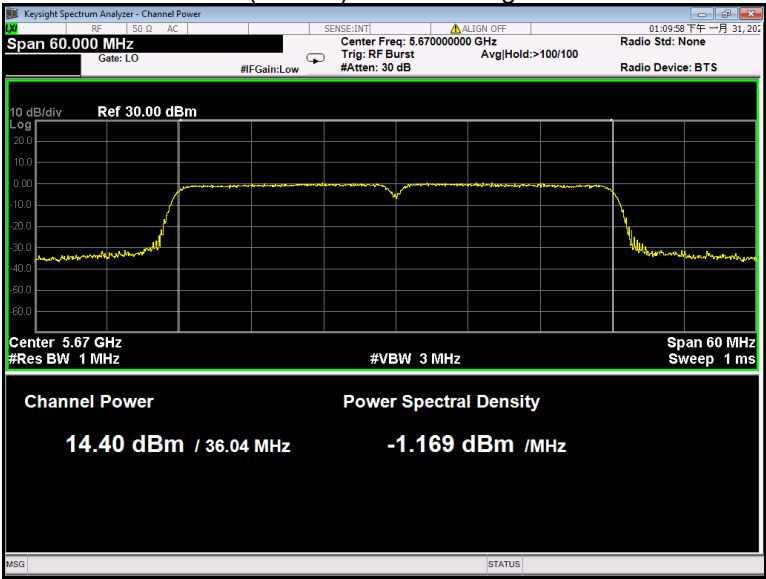
802.11ac(VHT40) U-NII-2C Low channel



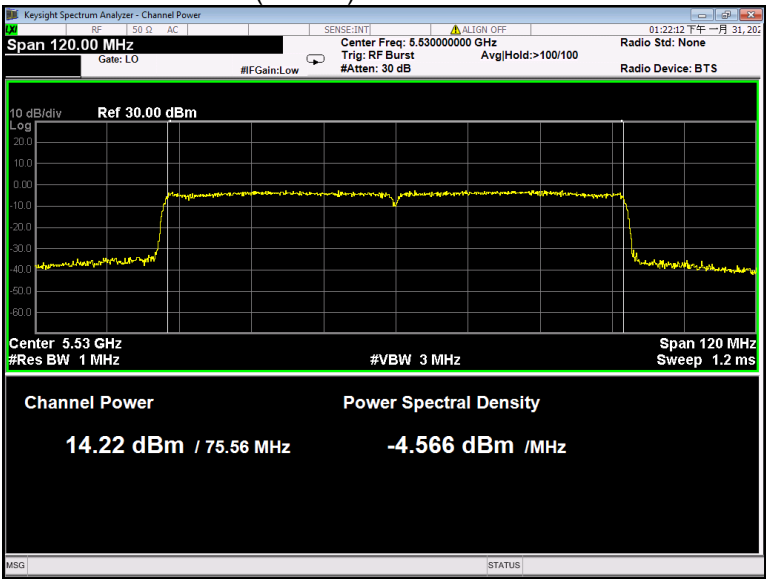
802.11ac(VHT40) U-NII-2C Middle channel

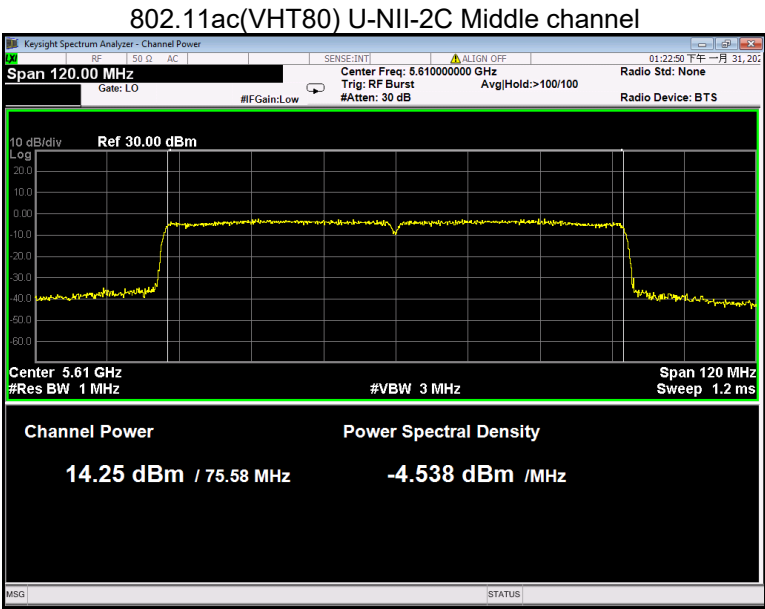


802.11ac(VHT40) U-NII-2C High channel

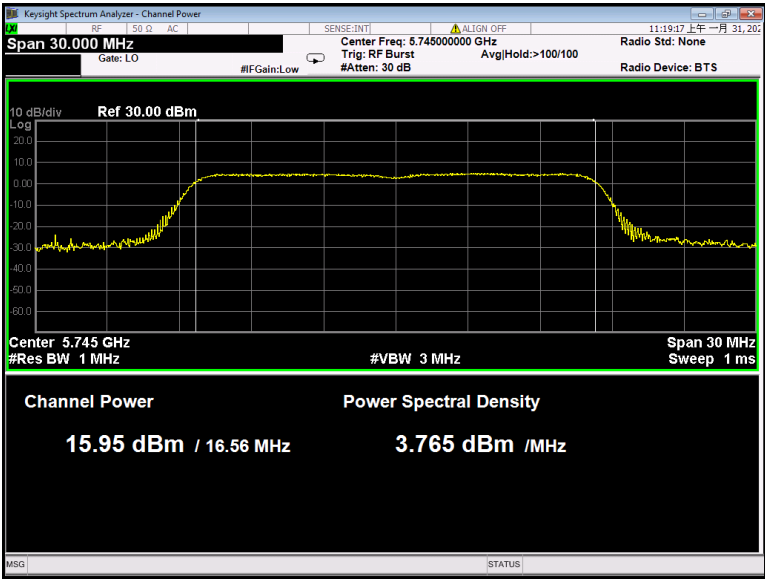


802.11ac(VHT80) U-NII-2C Low channel

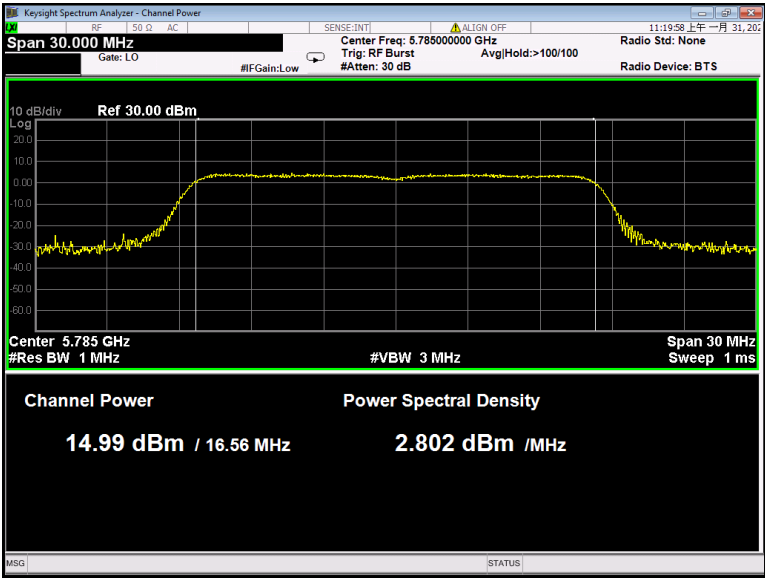




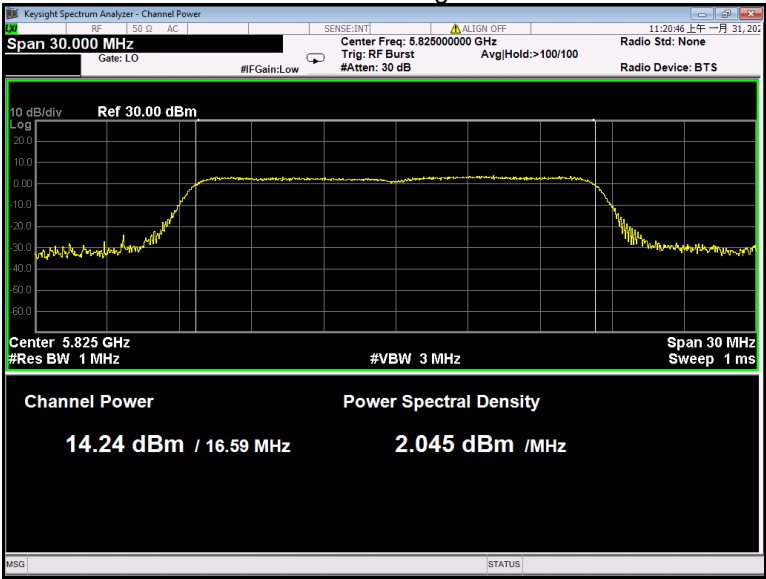
802.11a U-NII-3 Low channel



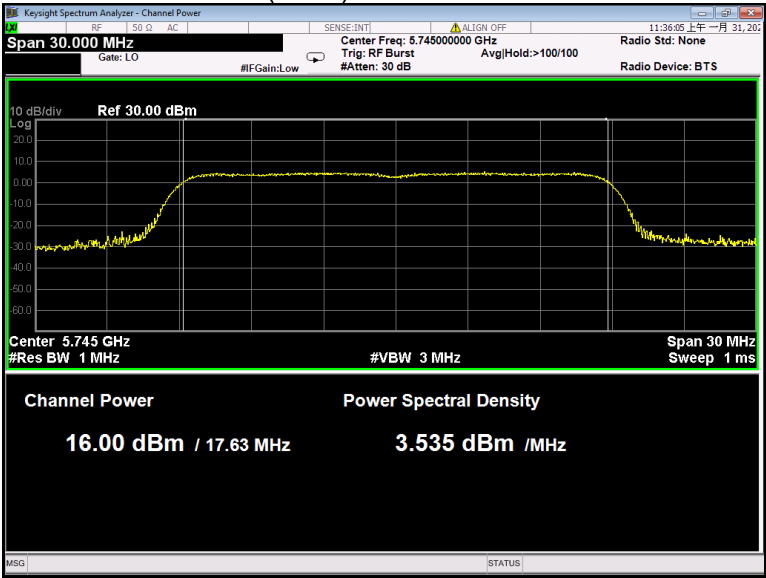
802.11a U-NII-3 Middle channel



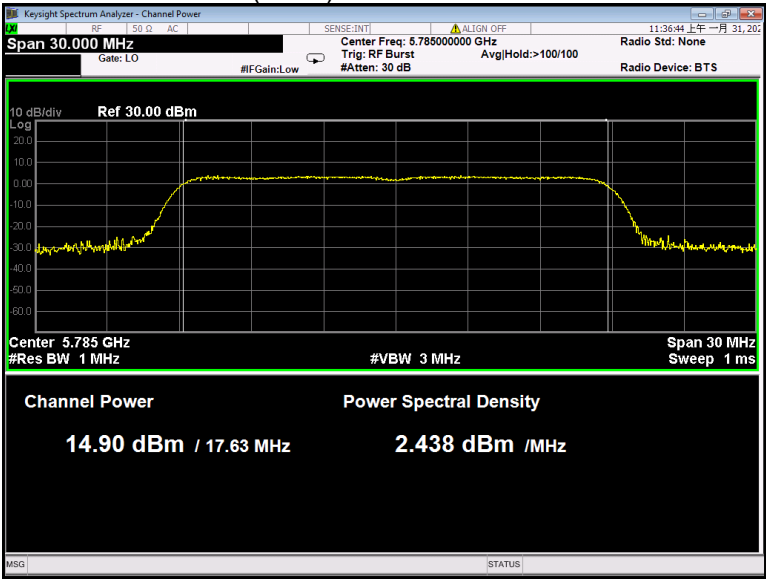
802.11a U-NII-3 High channel



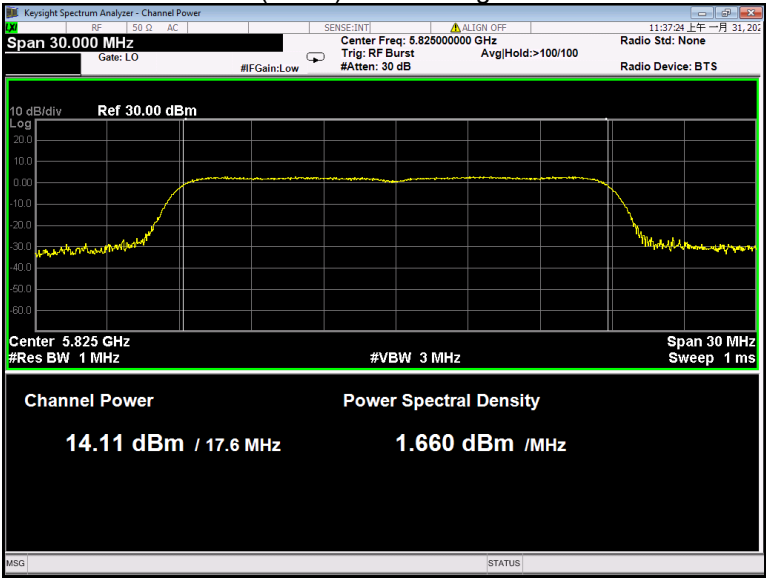
802.11n(HT20) U-NII-3 Low channel



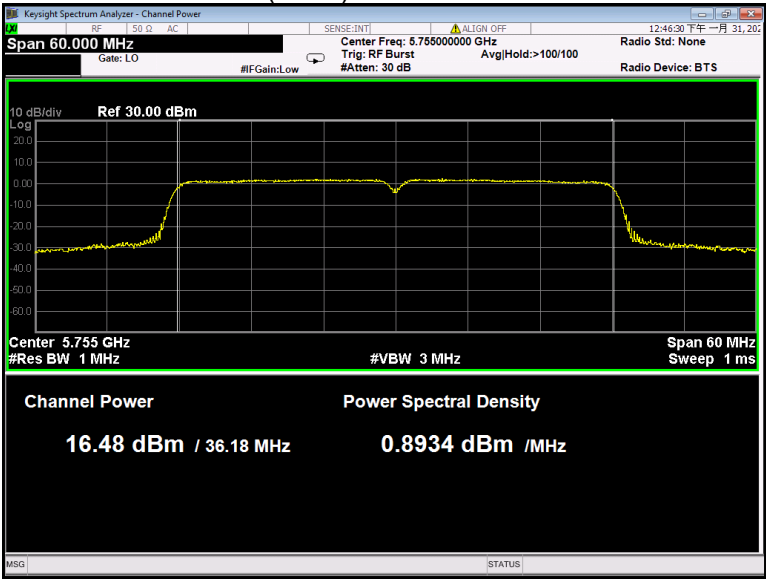
802.11n(HT20) U-NII-3 Middle channel



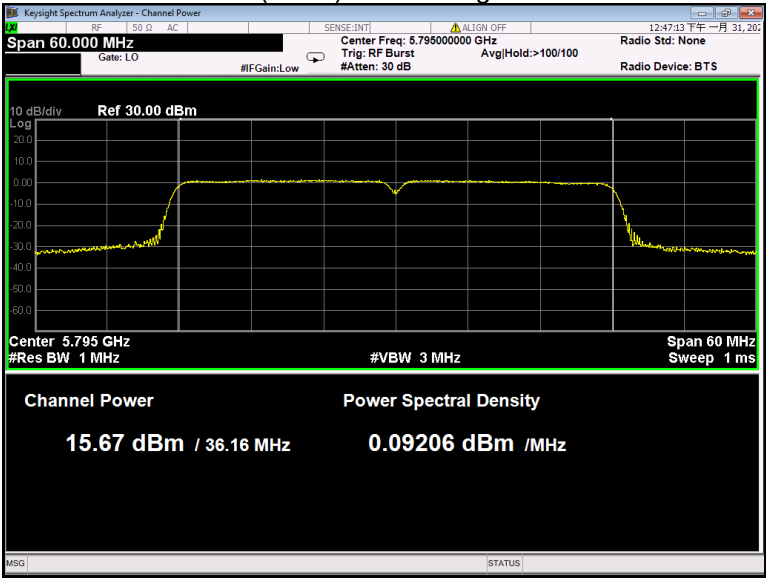
802.11n(HT20) U-NII-3 High channel

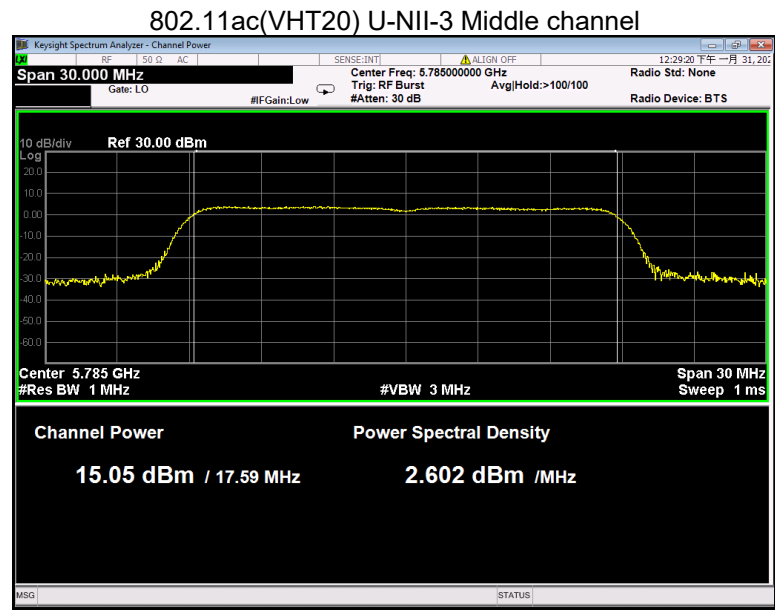
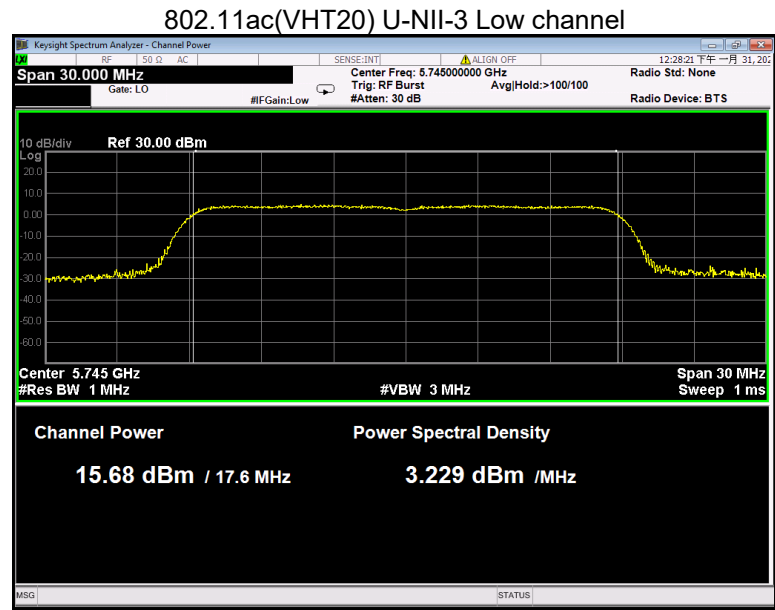


802.11n(HT40) U-NII-3 Low channel

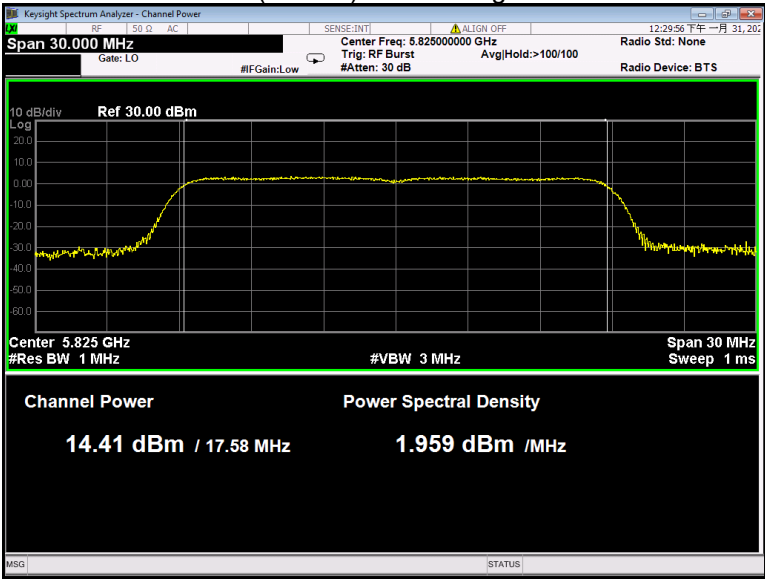


802.11n(HT40) U-NII-3 High channel

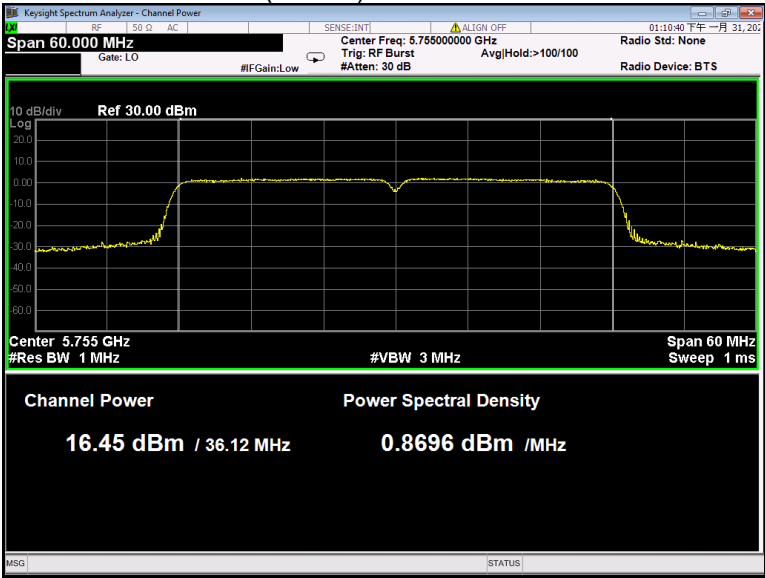




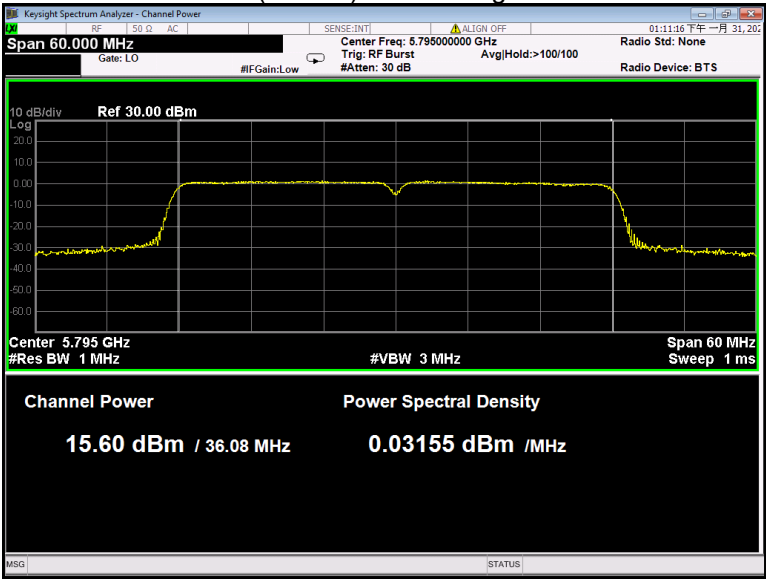
802.11ac(VHT20) U-NII-3 High channel



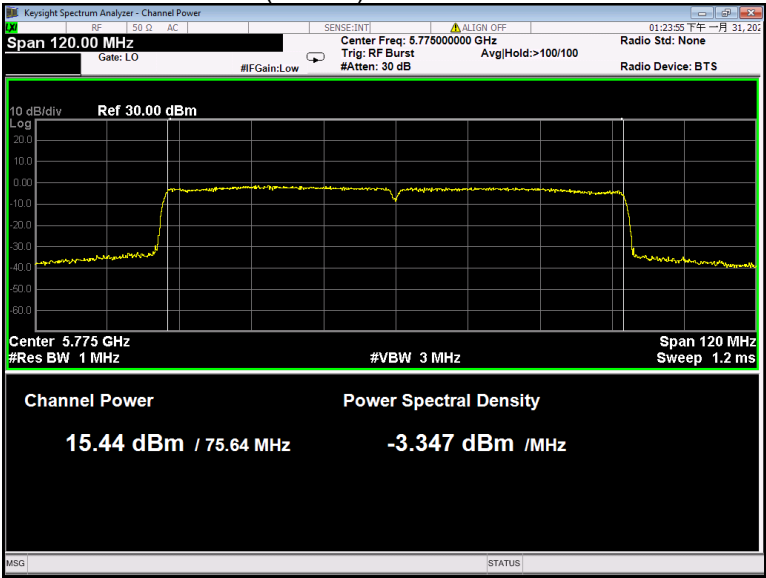
802.11ac(VHT40) U-NII-3 Low channel



802.11ac(VHT40) U-NII-3 High channel

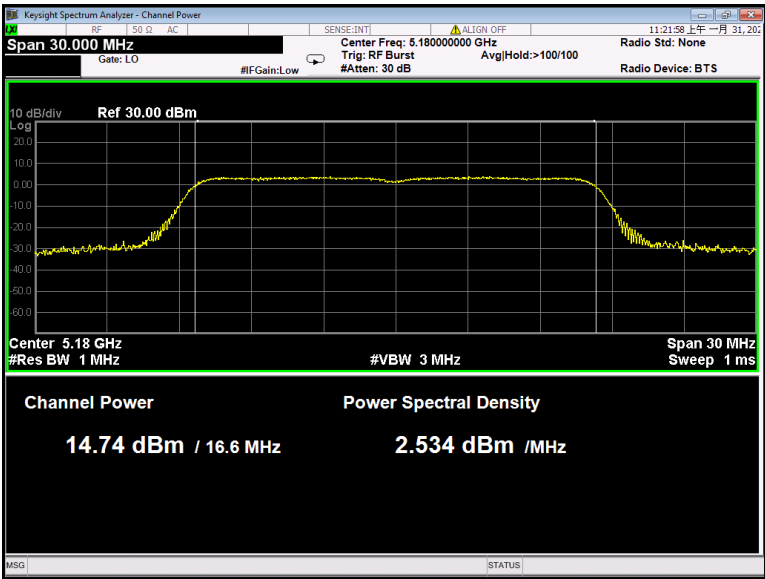


802.11ac(VHT80) U-NII-3 Low channel

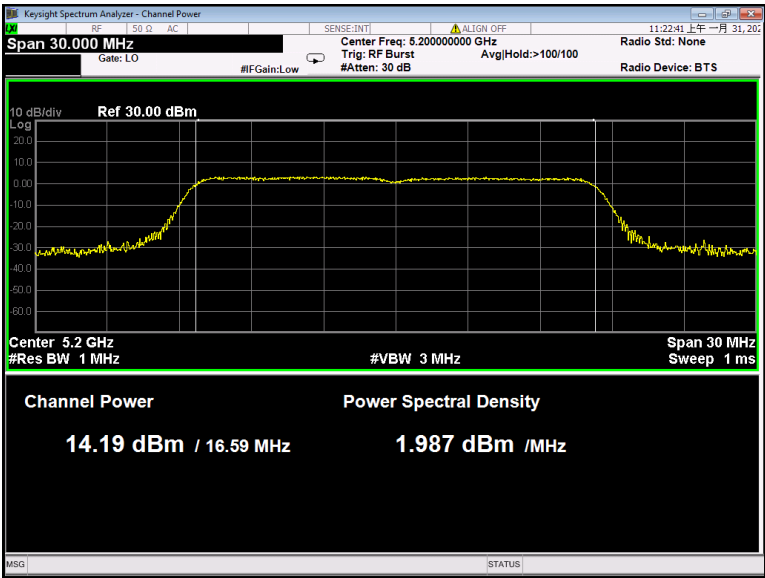


ANT2

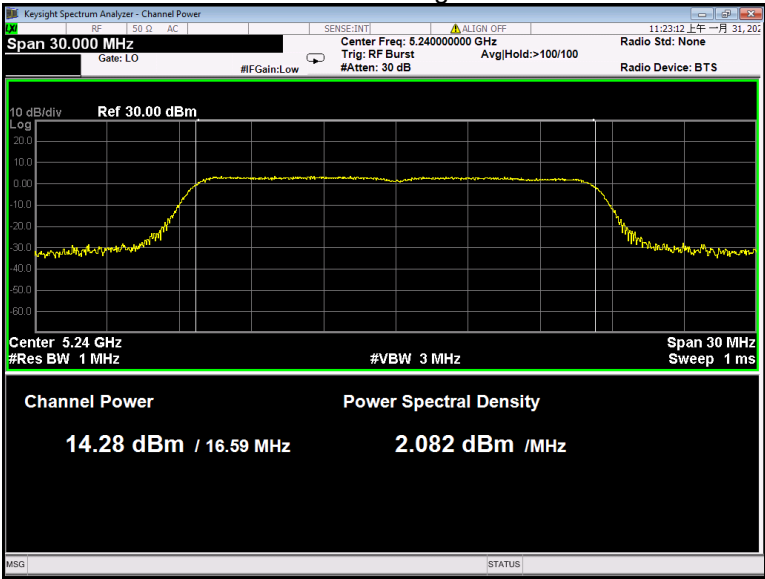
802.11a U-NII-1 Low channel



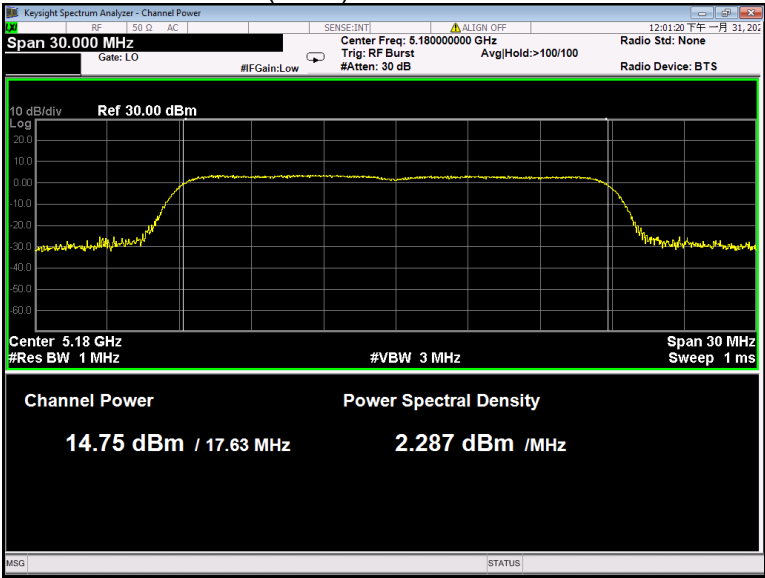
802.11a U-NII-1 Middle channel



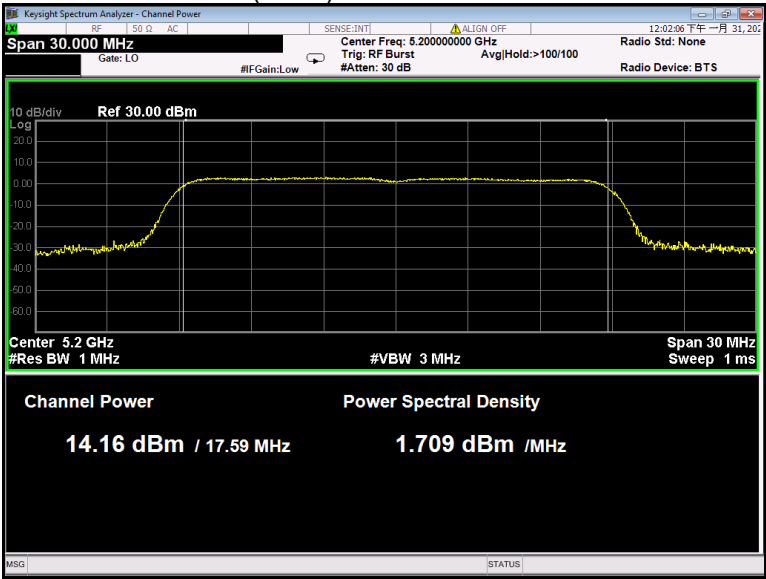
802.11a U-NII-1 High channel



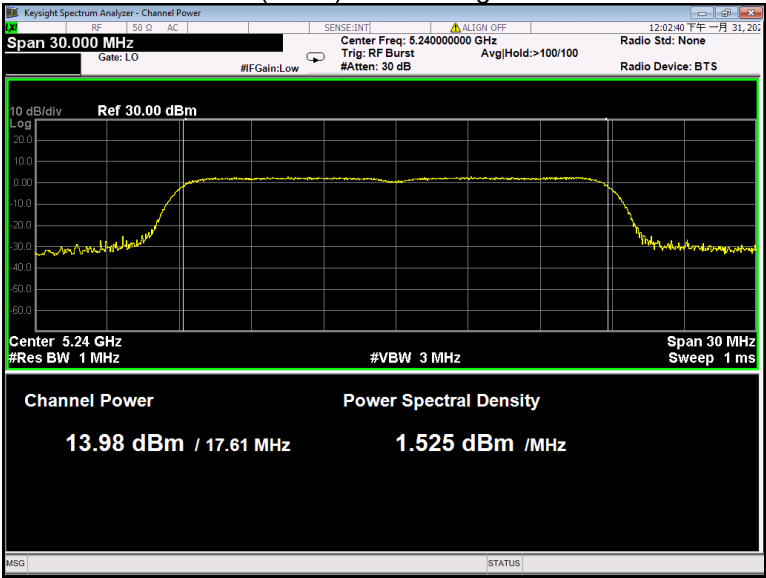
802.11n(HT20) U-NII-1 Low channel



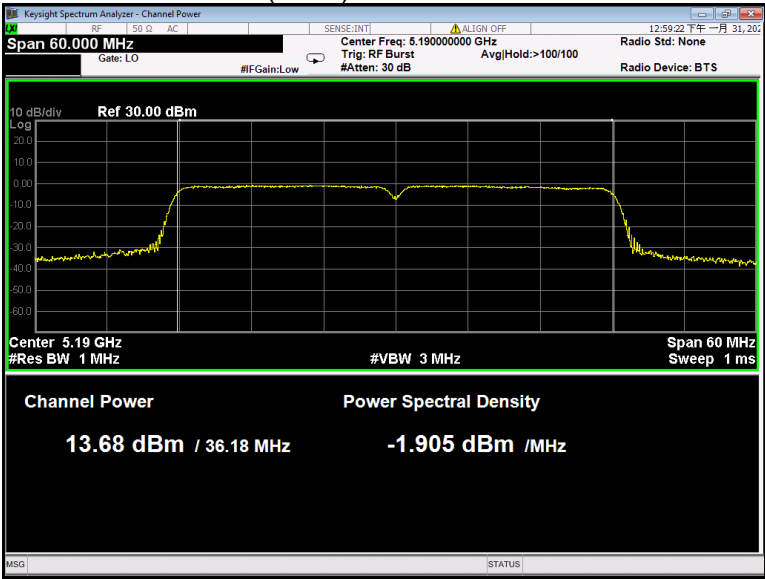
802.11n(HT20) U-NII-1 Middle channel



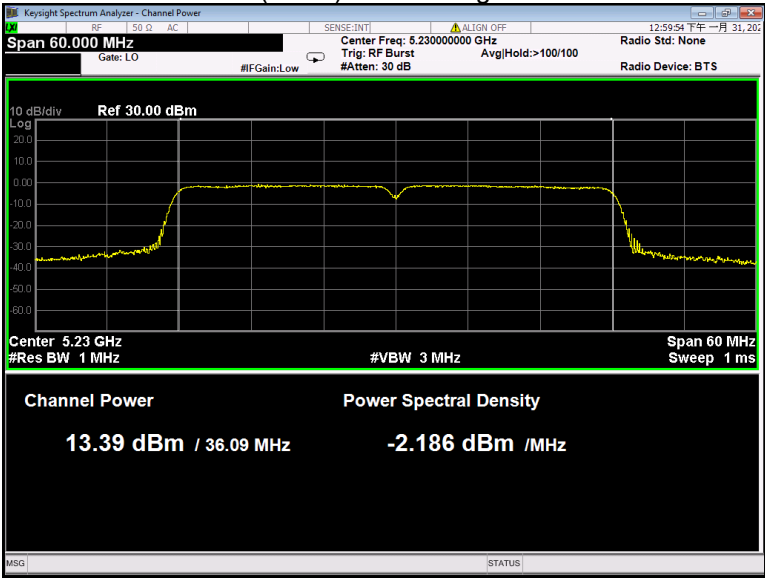
802.11n(HT20) U-NII-1 High channel

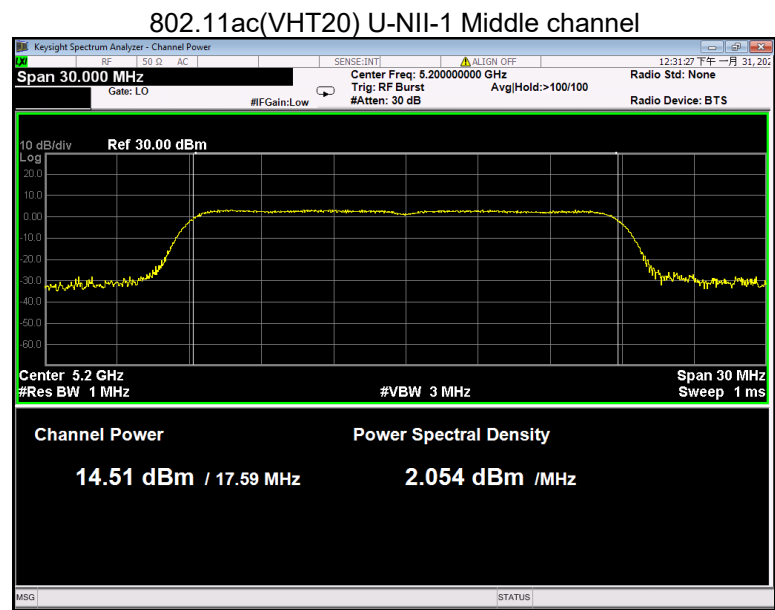
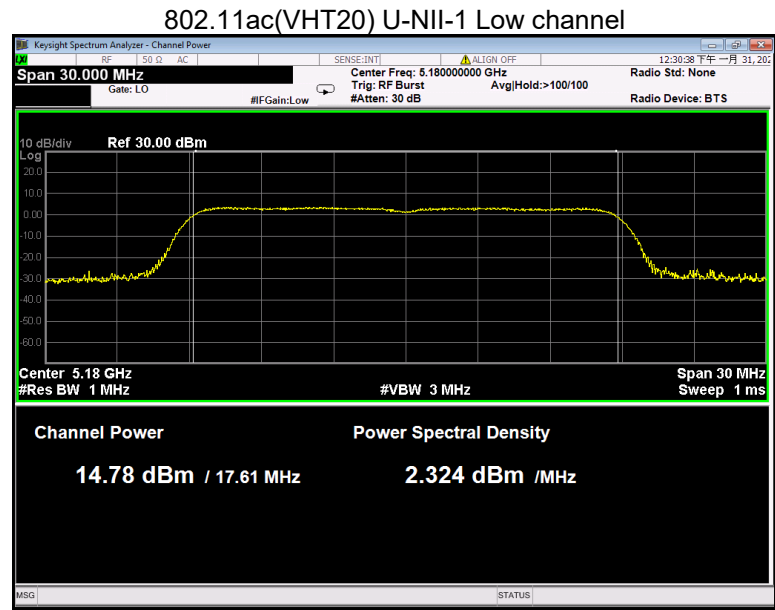


802.11n(HT40) U-NII-1 Low channel

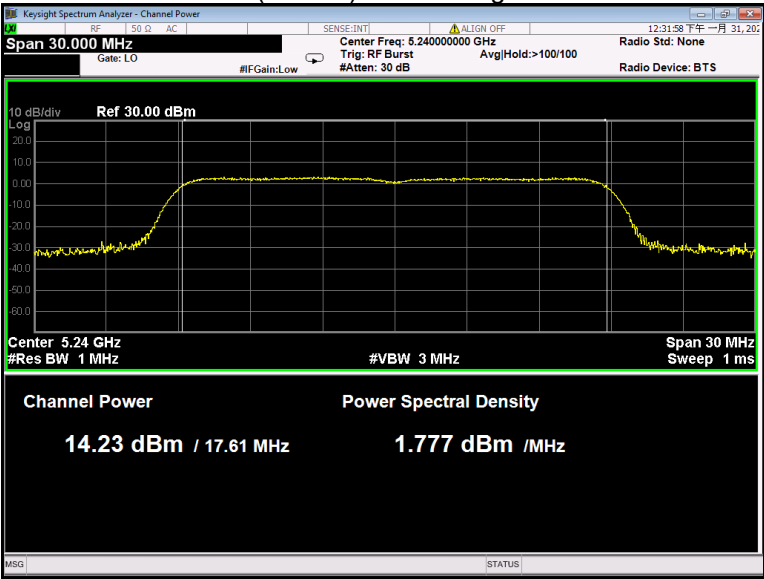


802.11n(HT40) U-NII-1 High channel

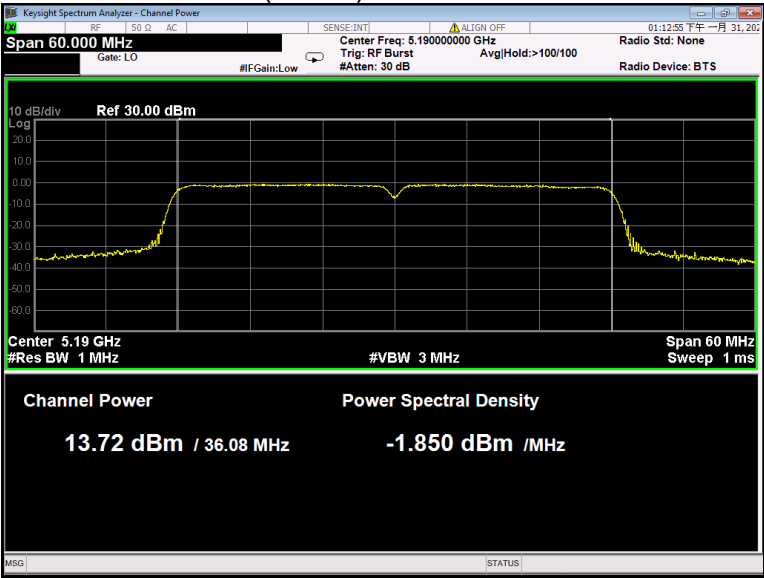




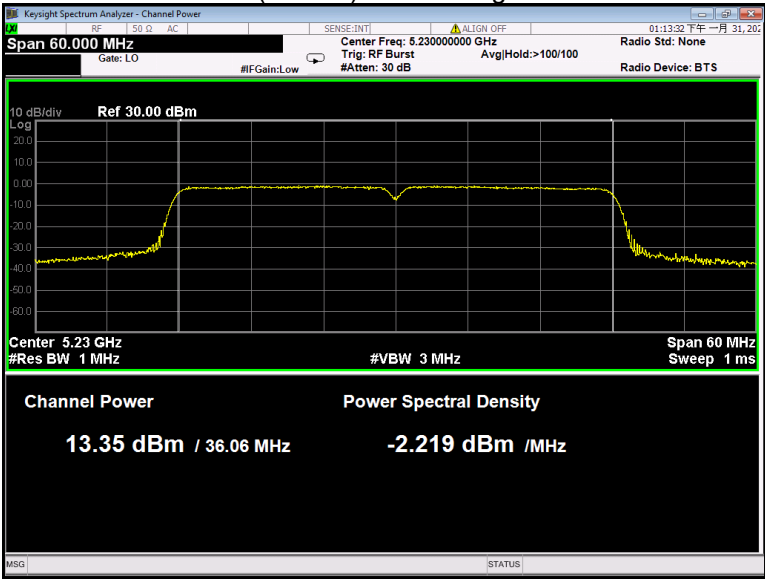
802.11ac(VHT20) U-NII-1 High channel



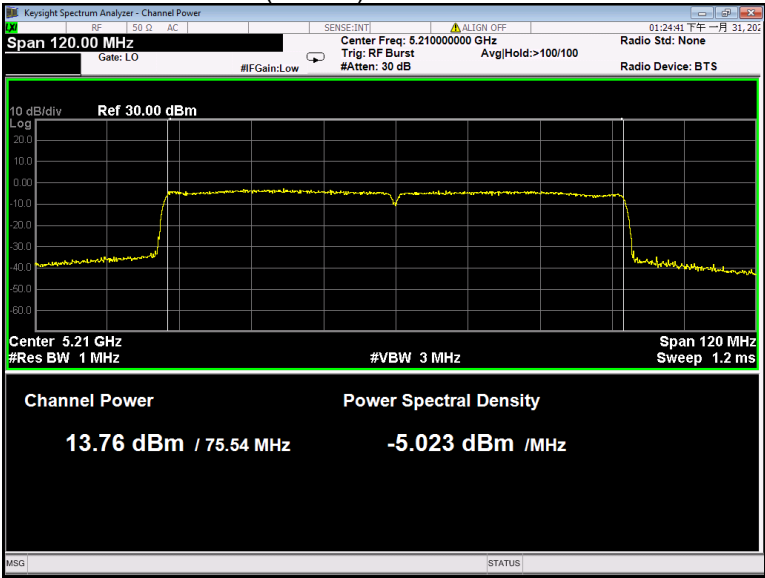
802.11ac(VHT40) U-NII-1 Low channel



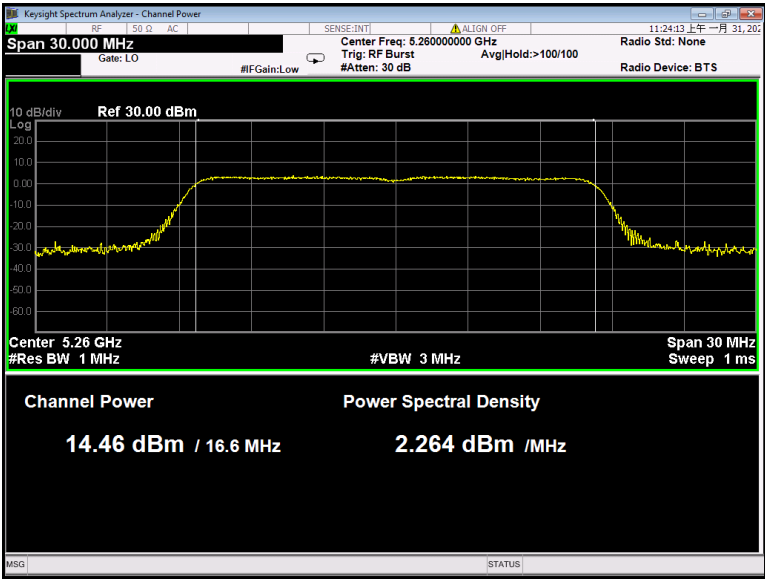
802.11ac(VHT40) U-NII-1 High channel



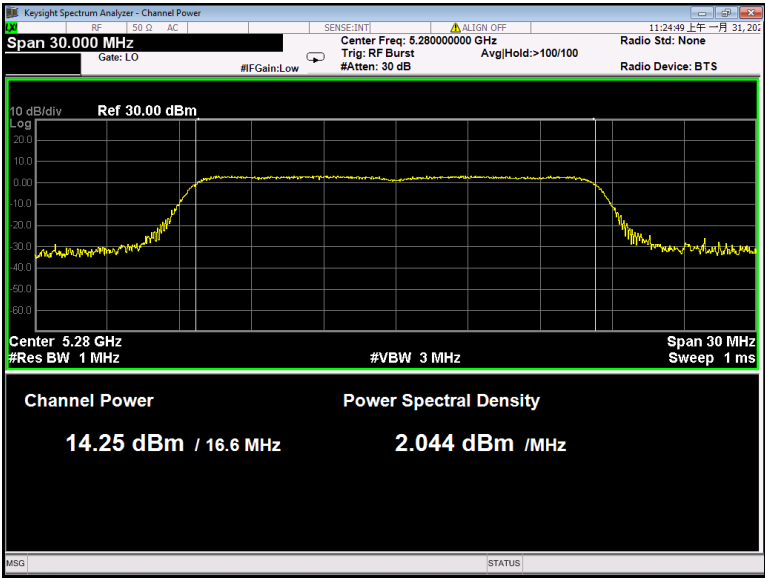
802.11ac(VHT80) U-NII-1 Low channel



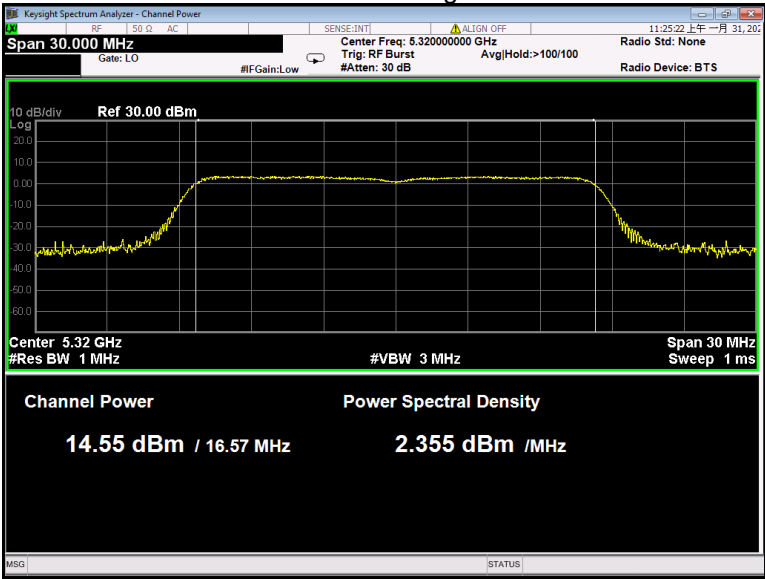
802.11a U-NII-2A Low channel



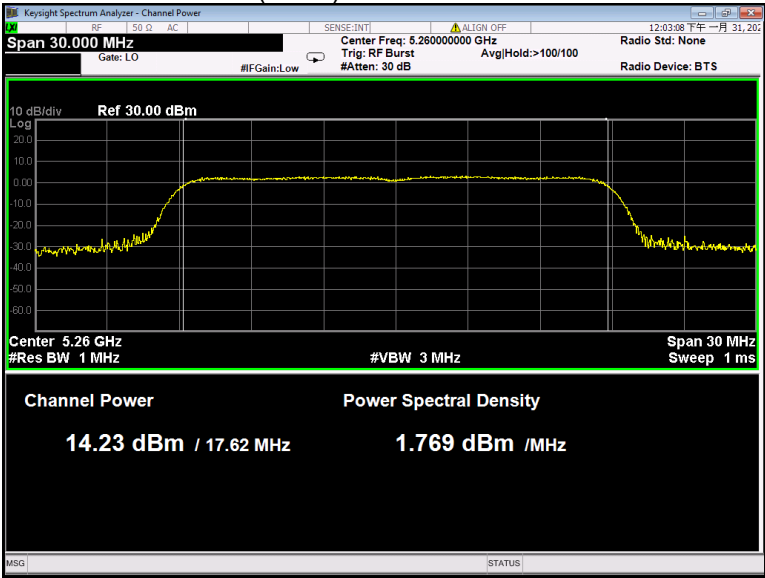
802.11a U-NII-2A Middle channel



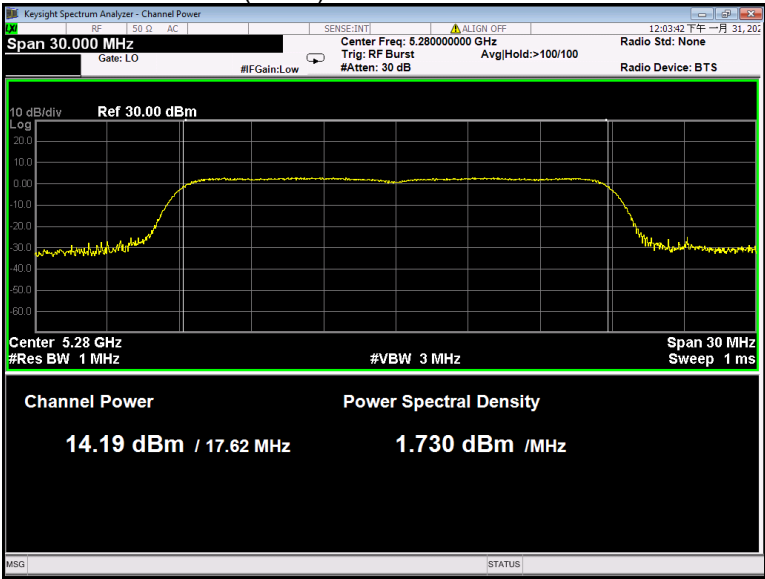
802.11a U-NII-2A High channel



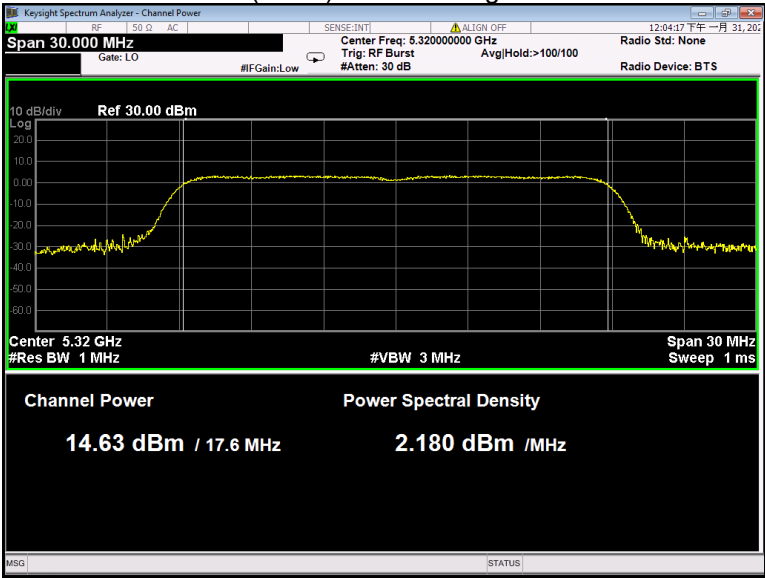
802.11n(HT20) U-NII-2A Low channel



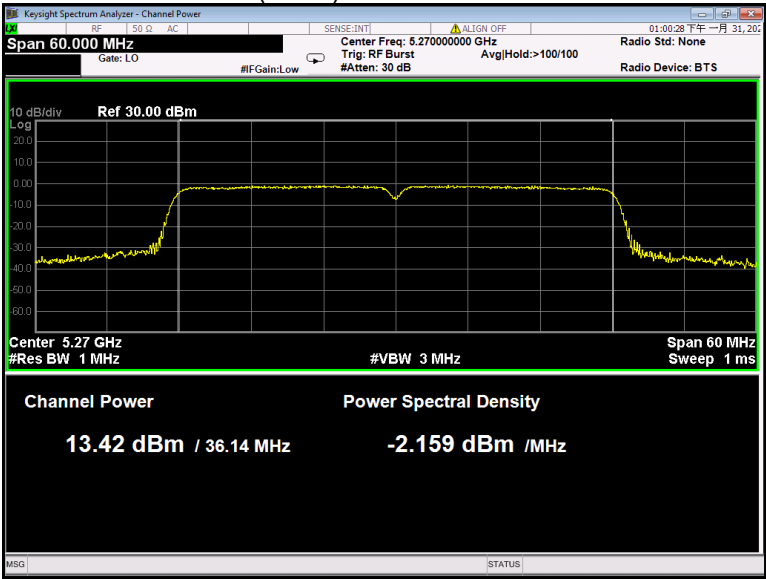
802.11n(HT20) U-NII-2A Middle channel



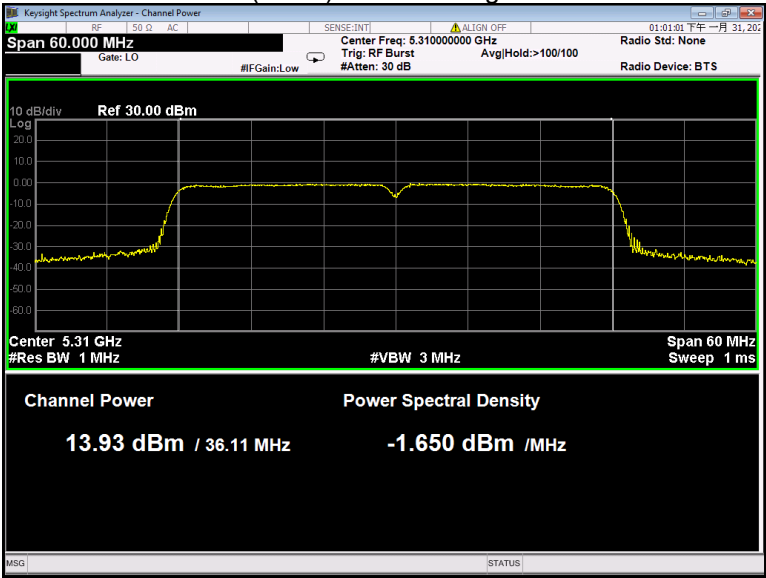
802.11n(HT20) U-NII-2A High channel



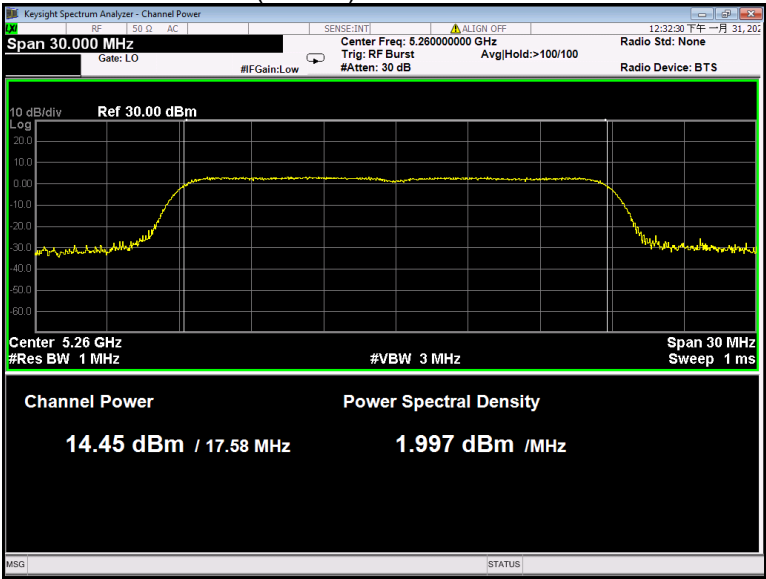
802.11n(HT40) U-NII-2A Low channel



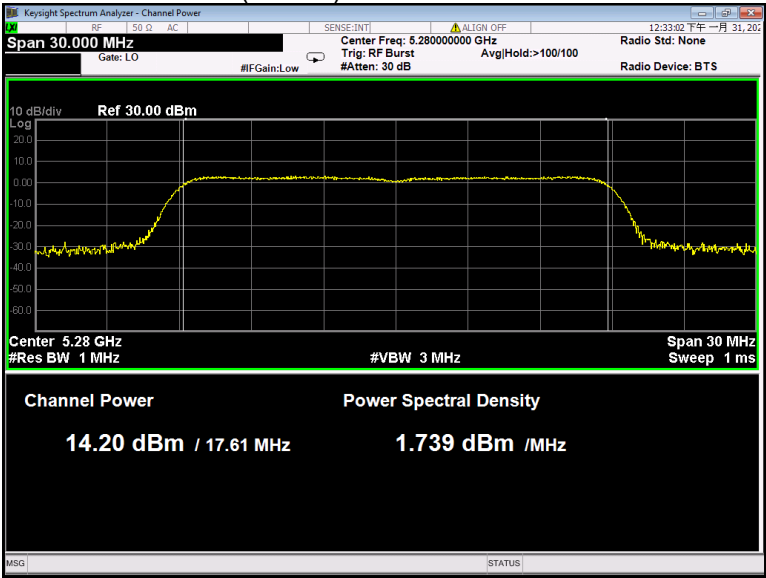
802.11n(HT40) U-NII-2A High channel



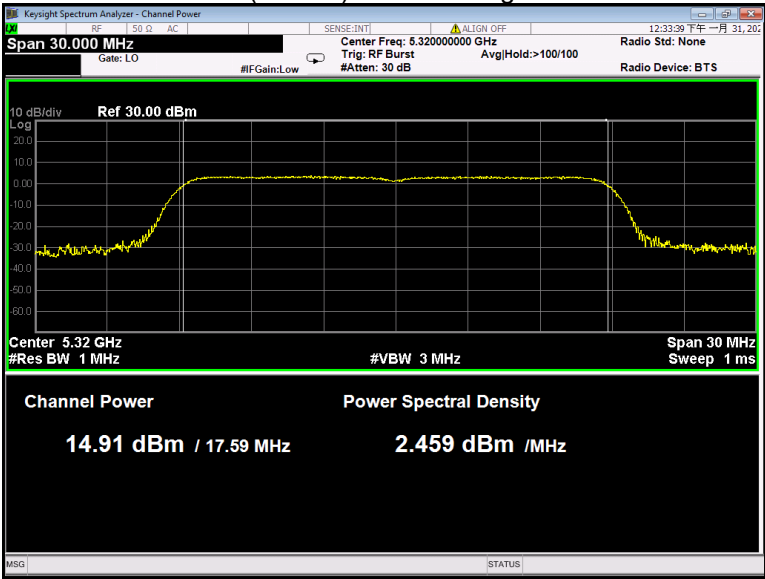
802.11ac(VHT20) U-NII-2A Low channel



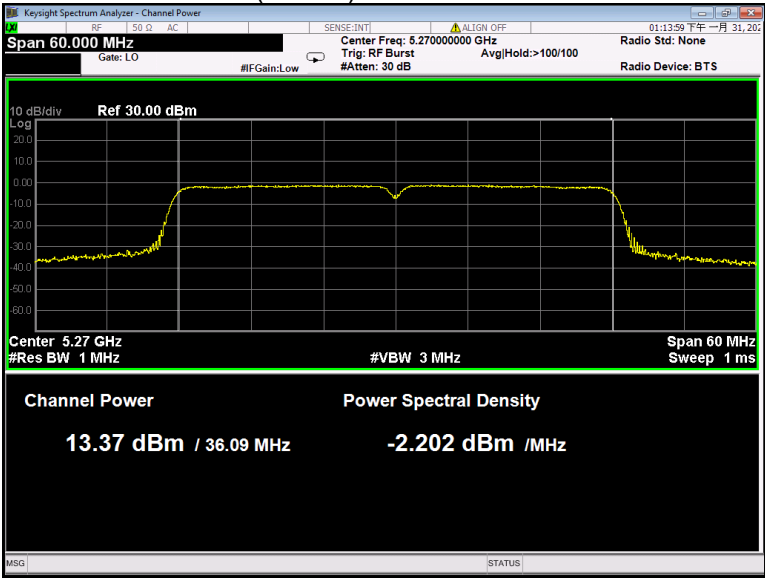
802.11ac(VHT20) U-NII-2A Middle channel



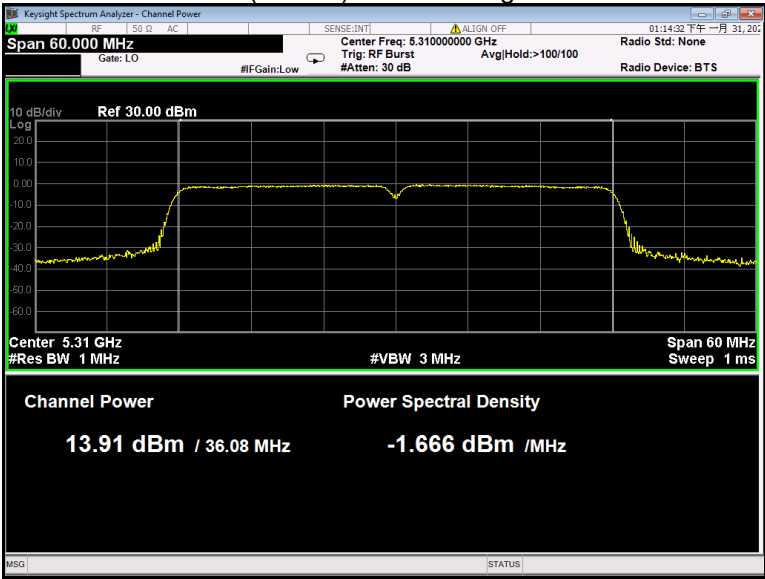
802.11ac(VHT20) U-NII-2A High channel



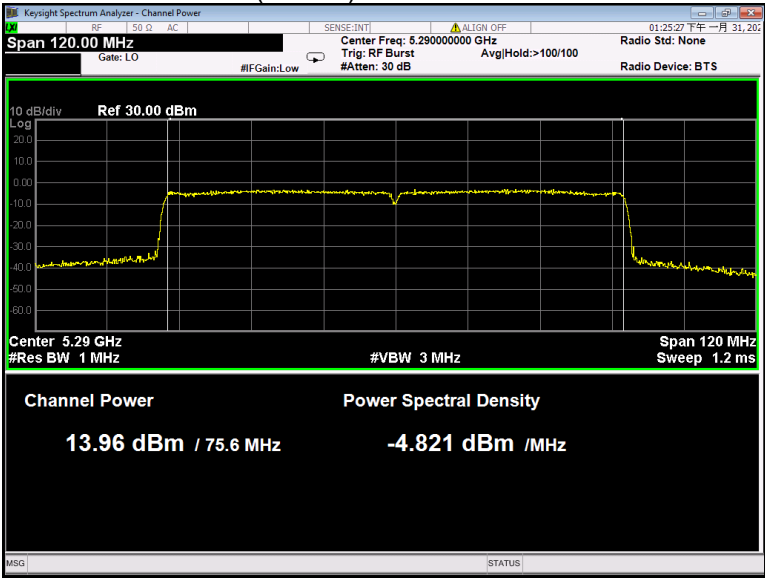
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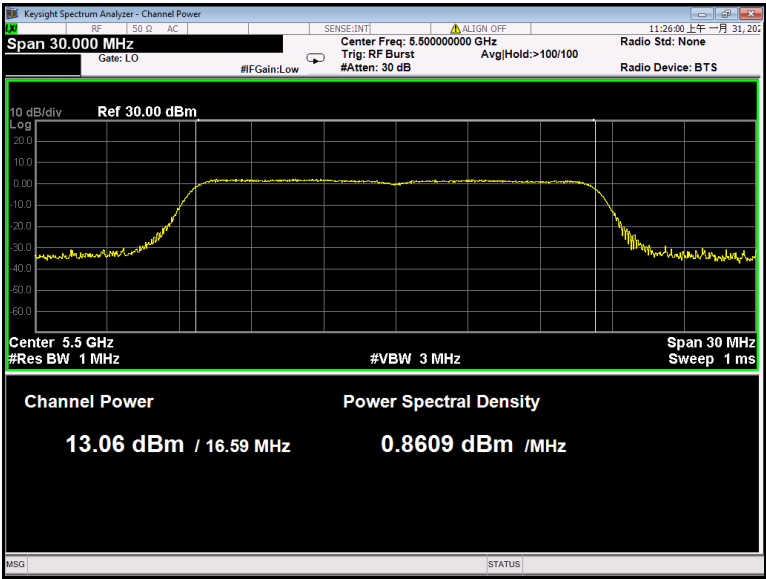
802.11ac(VHT40) U-NII-2A High channel



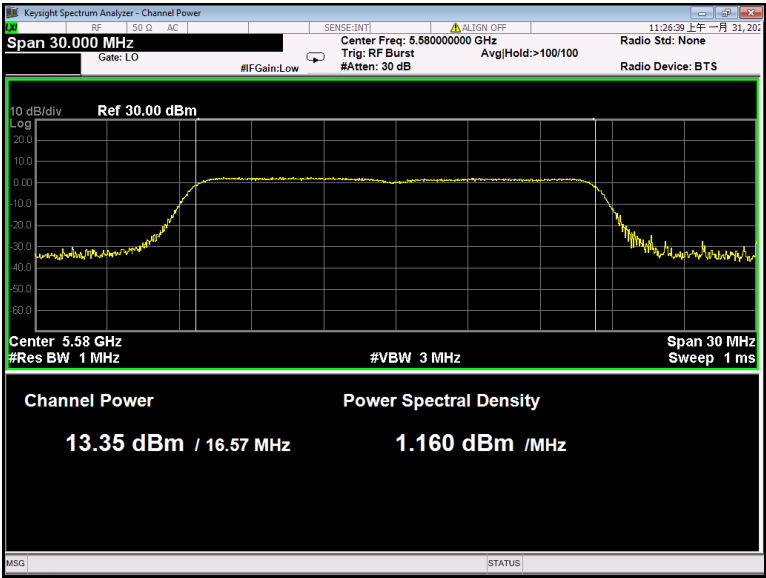
802.11ac(VHT80) U-NII-2A Low channel



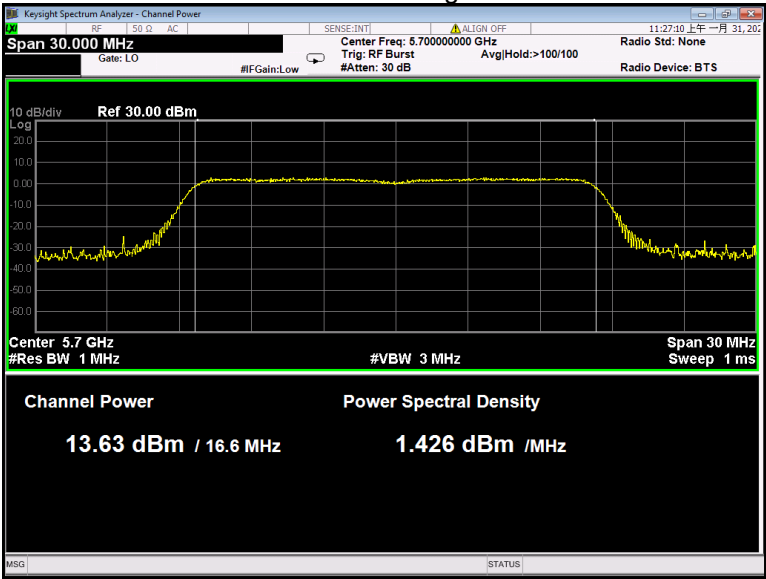
802.11a U-NII-2C Low channel



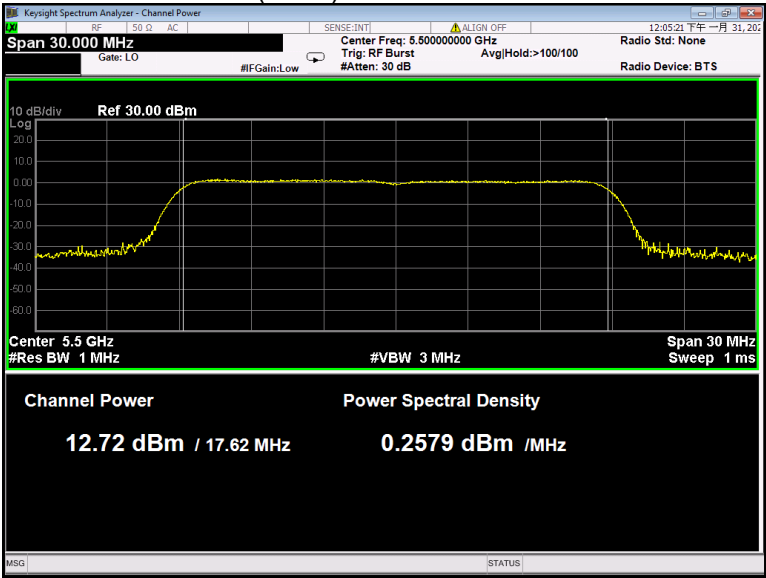
802.11a U-NII-2C Middle channel



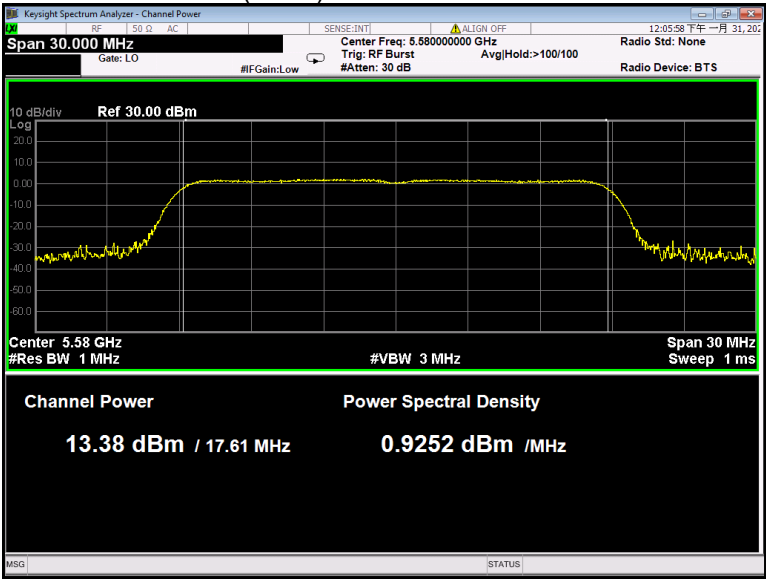
802.11a U-NII-2C High channel



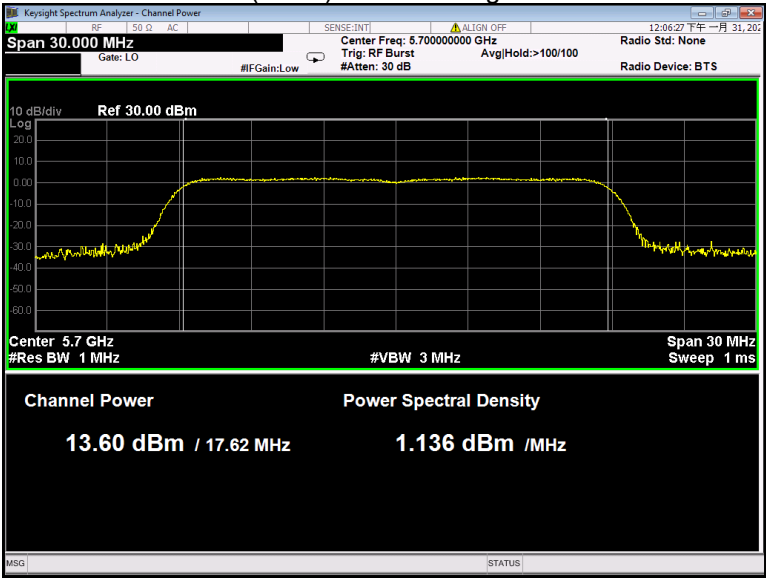
802.11n(HT20) U-NII-2C Low channel



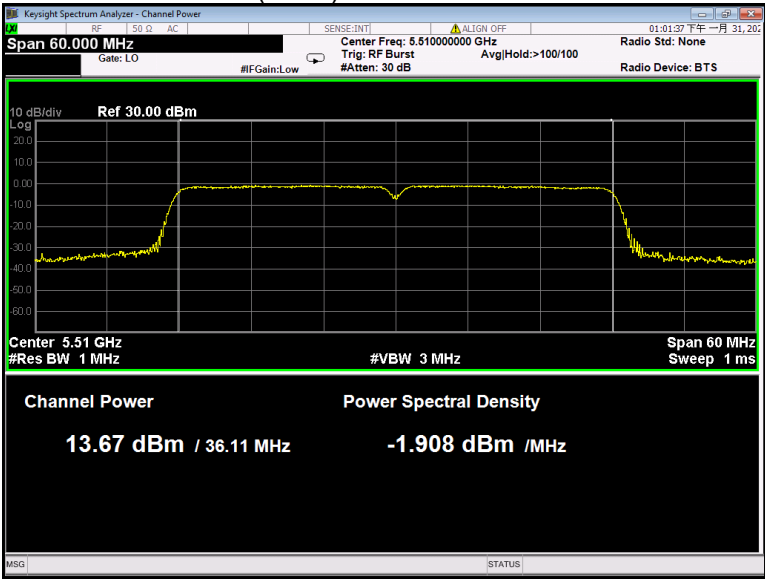
802.11n(HT20) U-NII-2C Middle channel



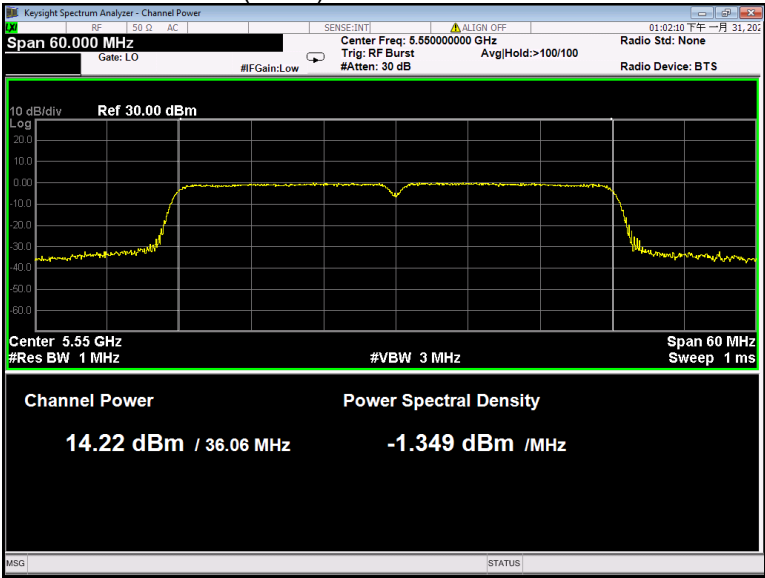
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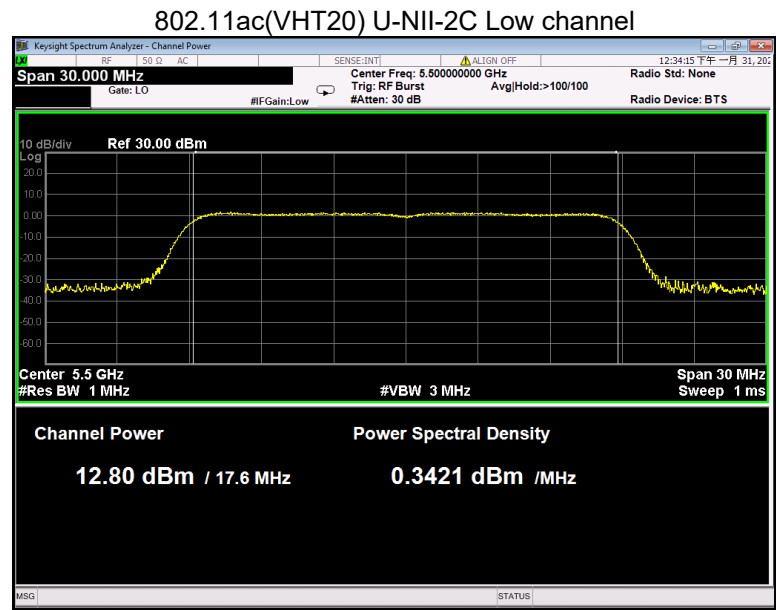
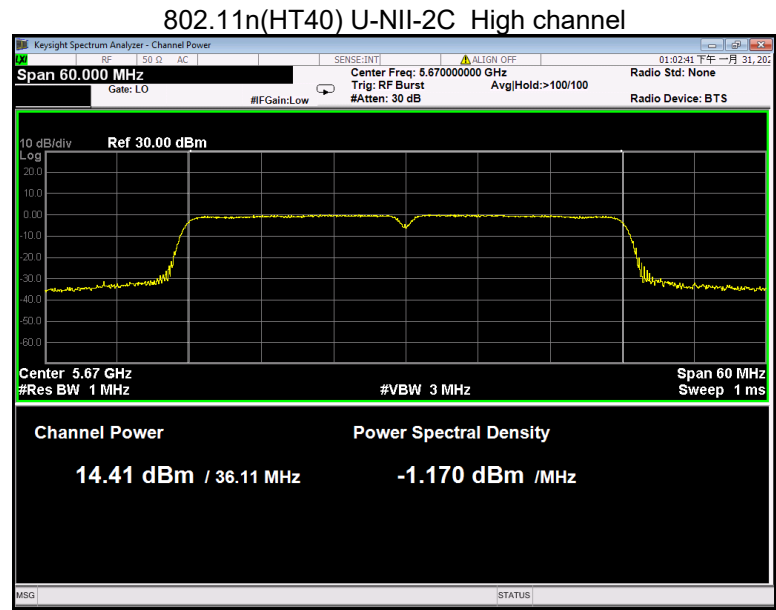


802.11n(HT40) U-NII-2C Low channel

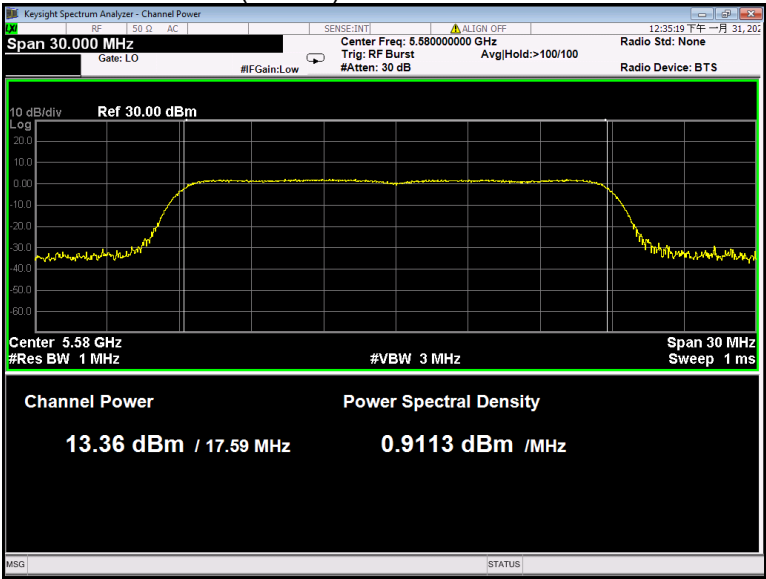


802.11n(HT40) U-NII-2C Middle channel

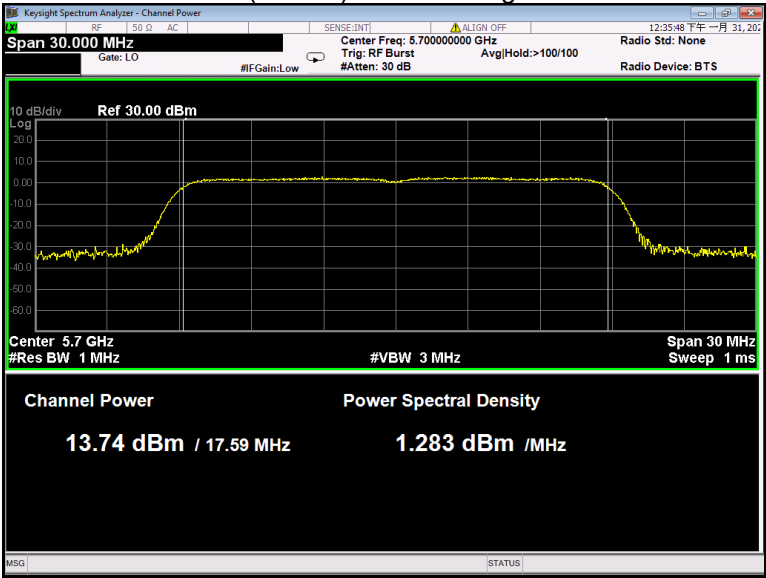




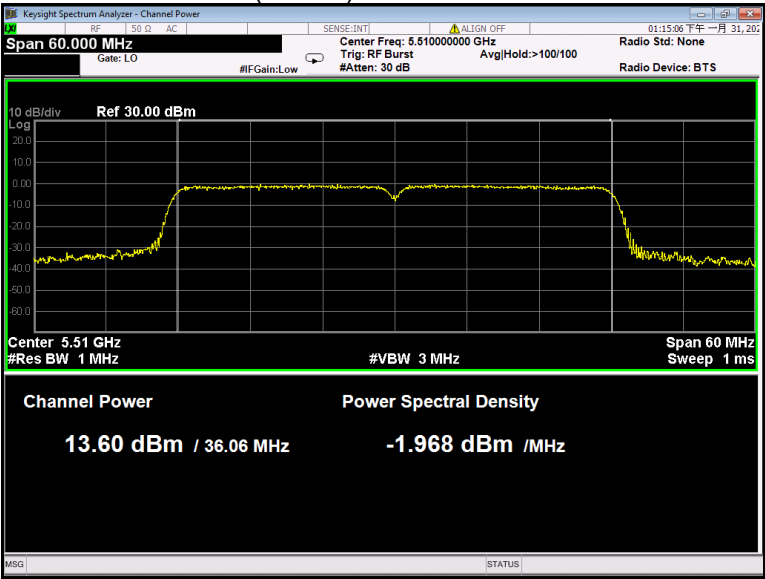
802.11ac(VHT20) U-NII-2C Middle channel



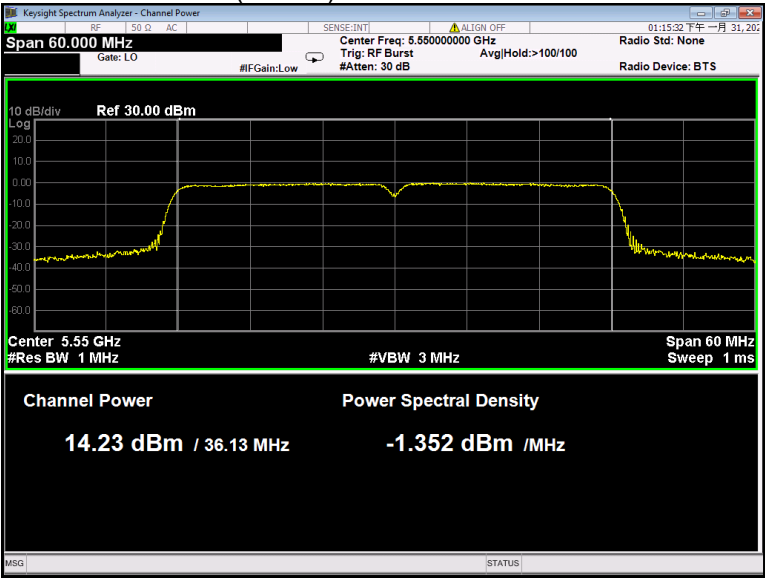
802.11ac(VHT20) U-NII-2C High channel



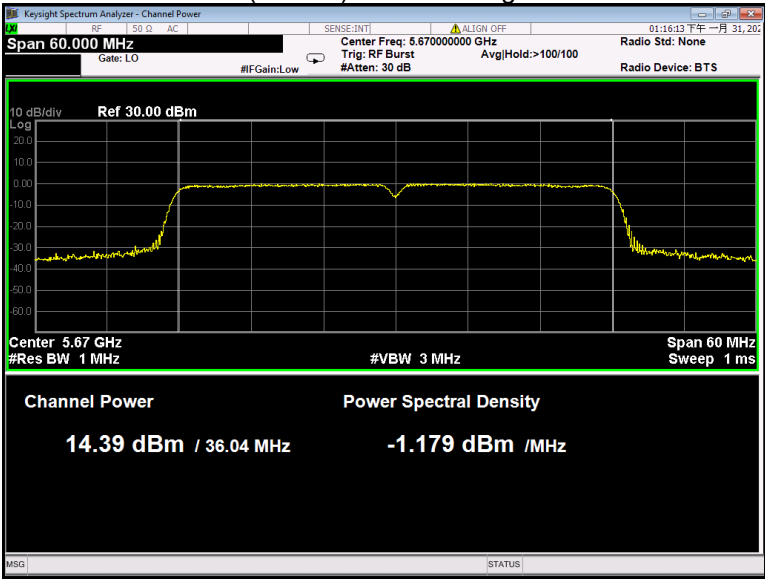
802.11ac(VHT40) U-NII-2C Low channel



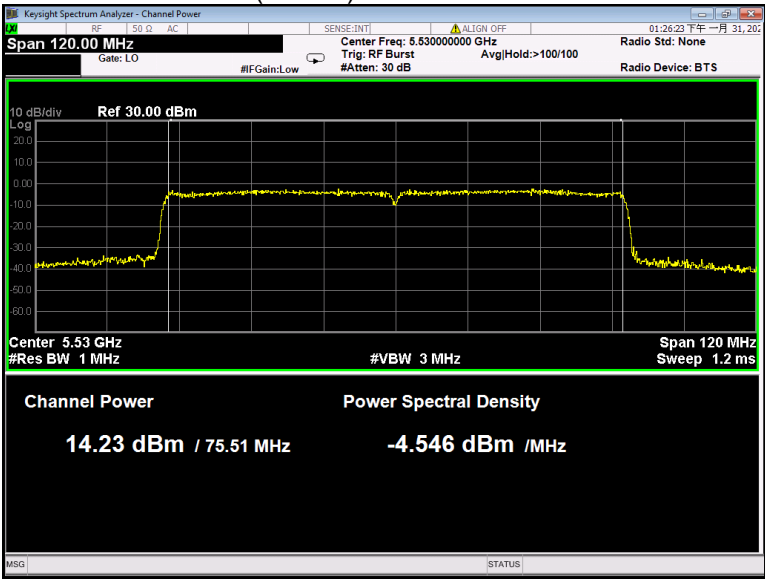
802.11ac(VHT40) U-NII-2C Middle channel

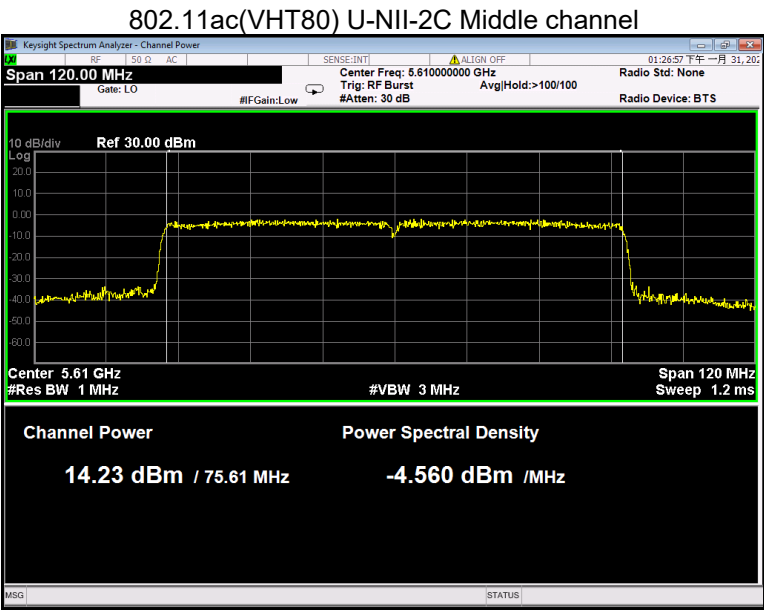


802.11ac(VHT40) U-NII-2C High channel

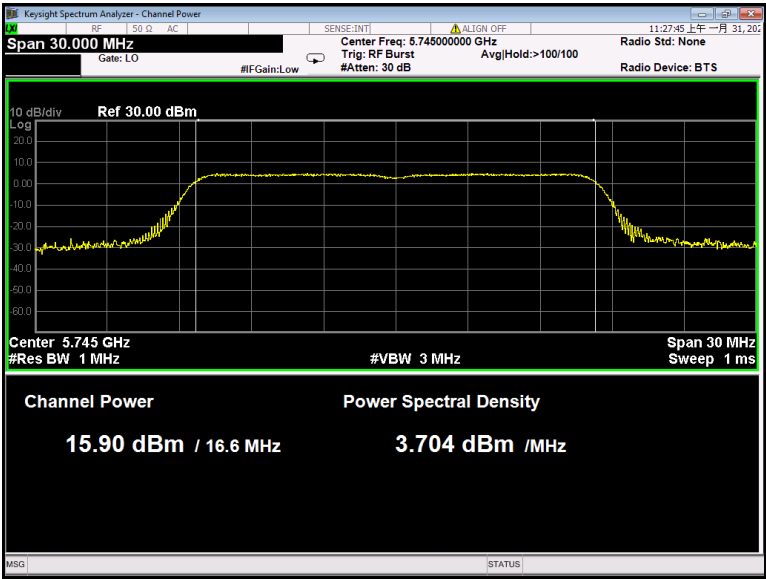


802.11ac(VHT80) U-NII-2C Low channel

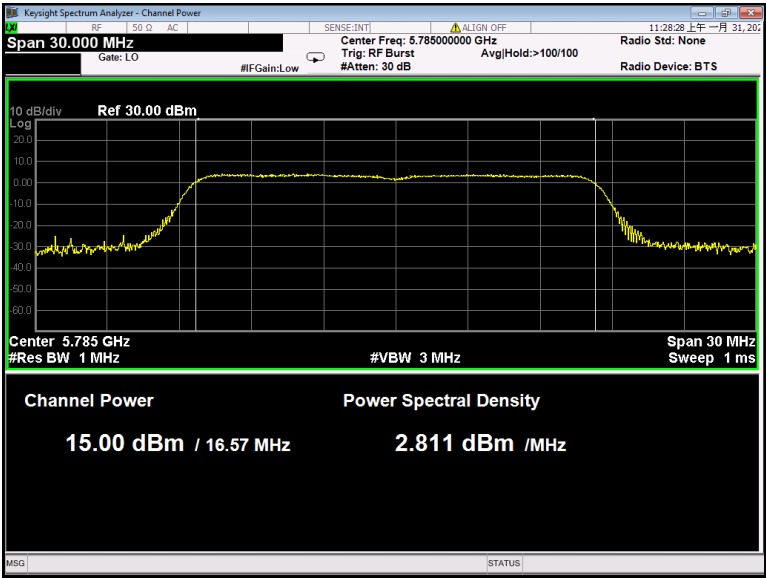




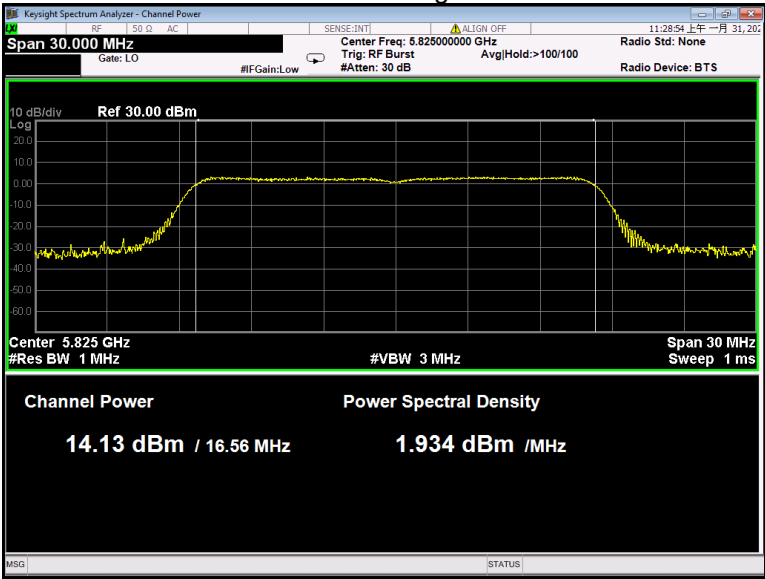
802.11a U-NII-3 Low channel



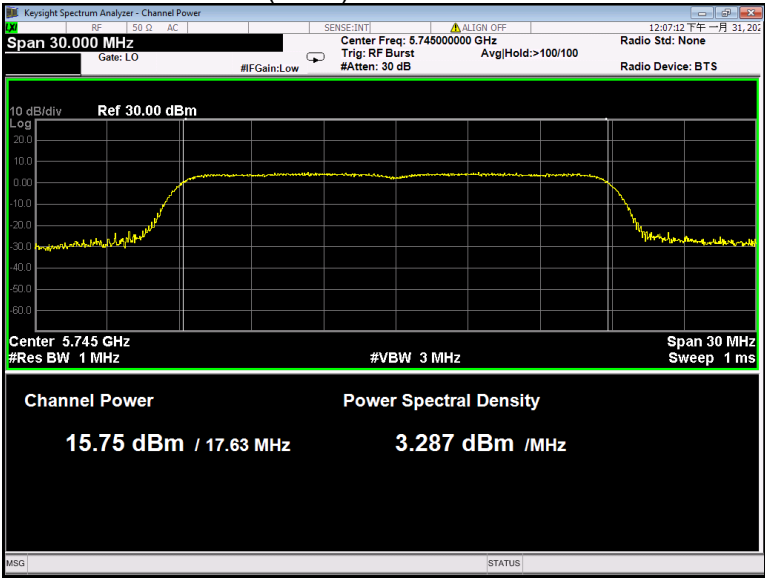
802.11a U-NII-3 Middle channel



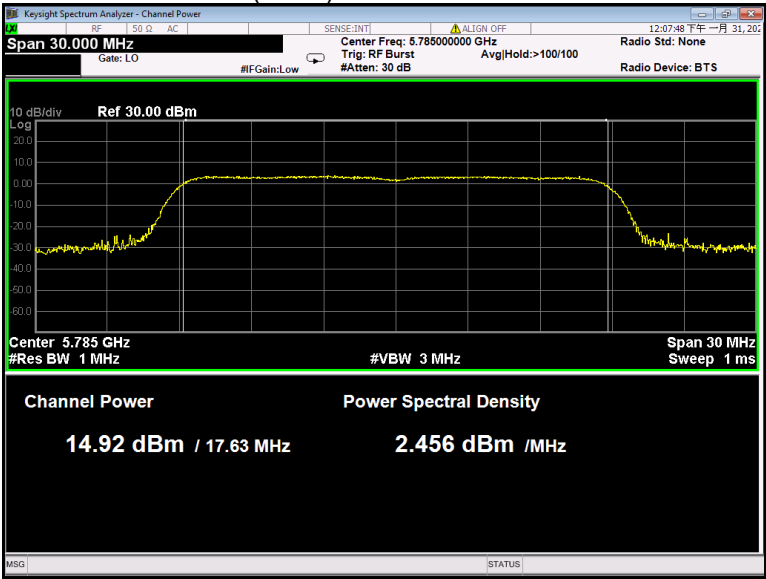
802.11a U-NII-3 High channel



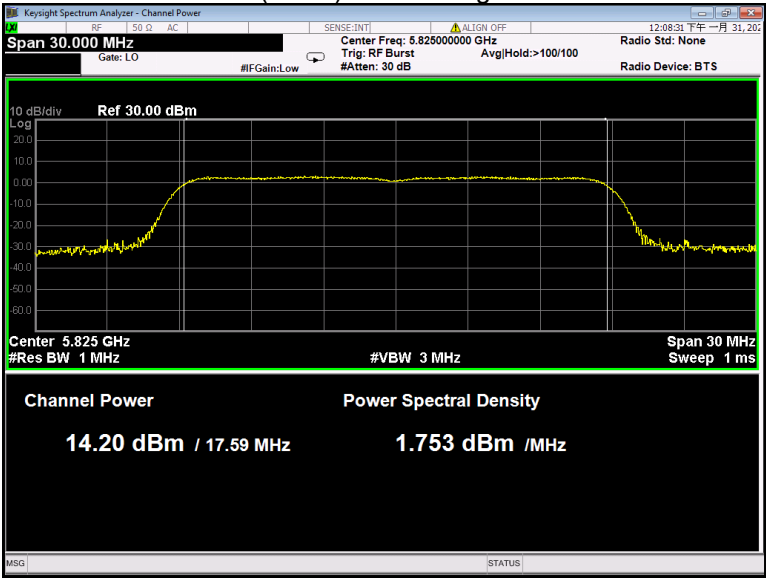
802.11n(HT20) U-NII-3 Low channel



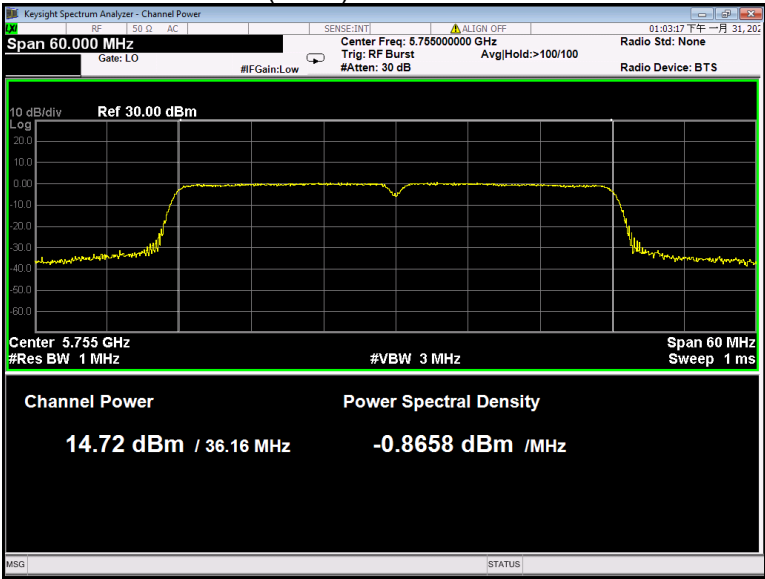
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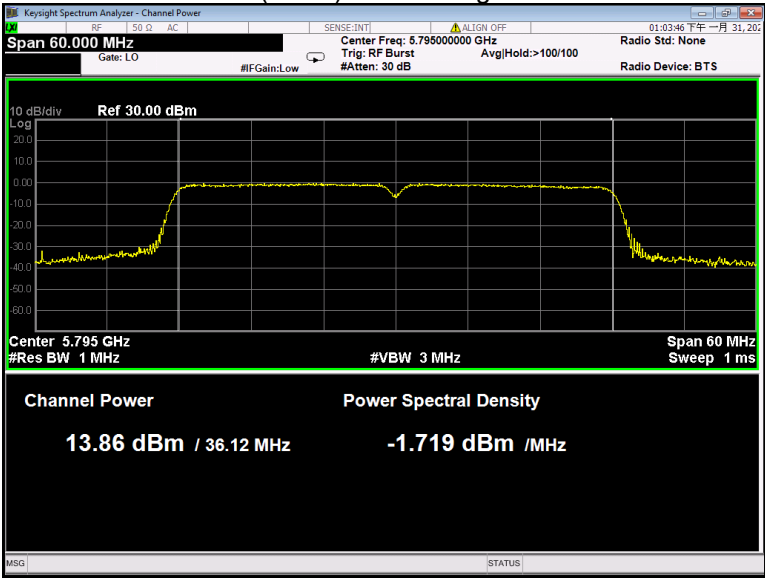
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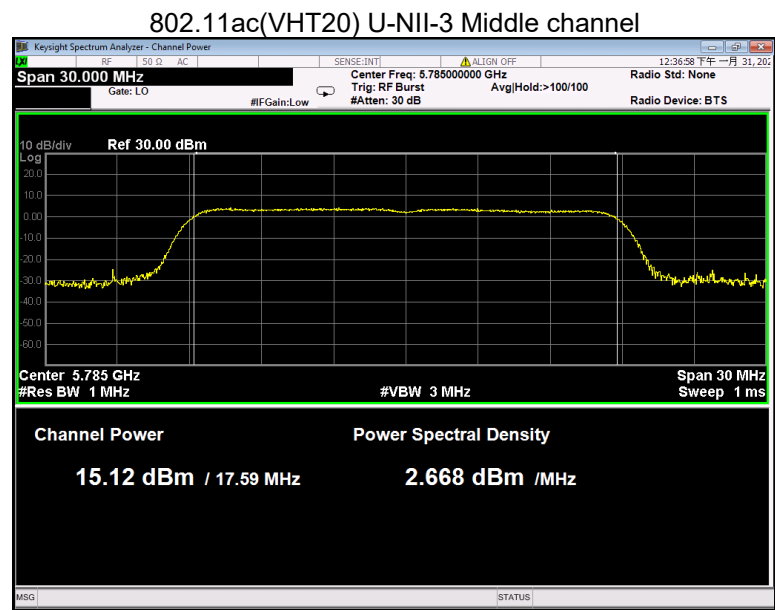
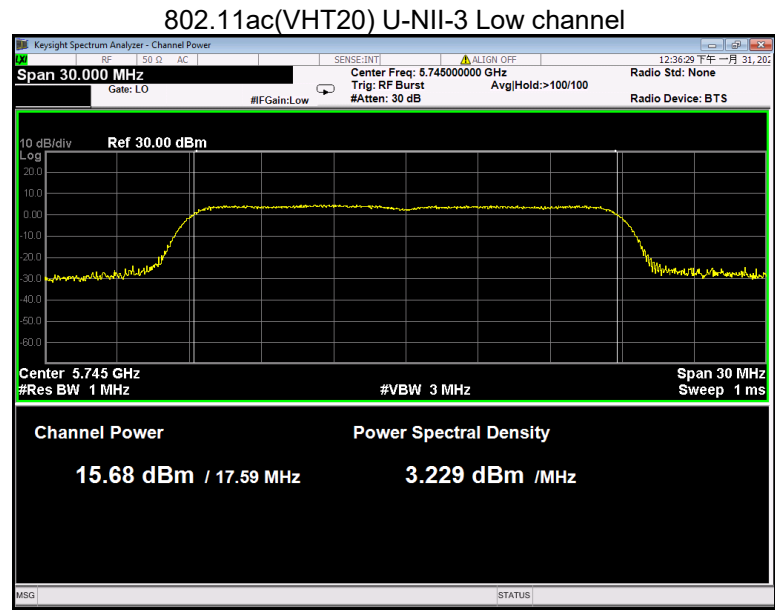


802.11n(HT40) U-NII-3 Low channel

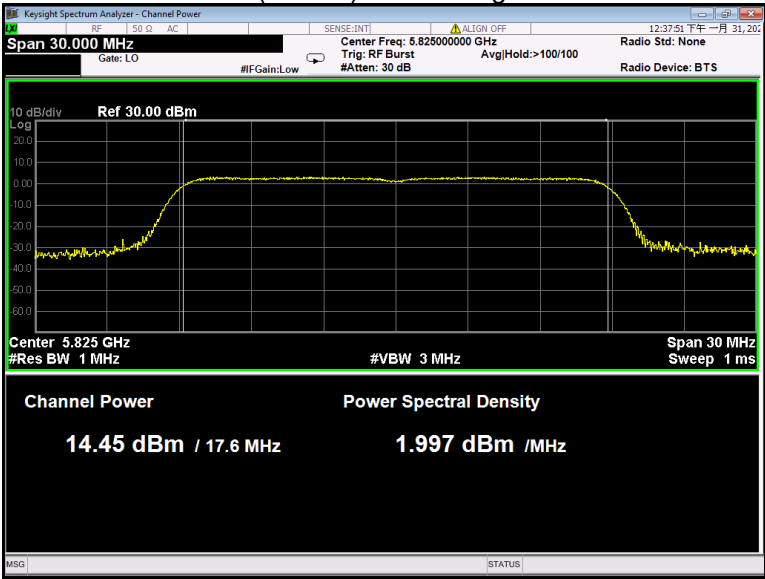


802.11n(HT40) U-NII-3 High channel

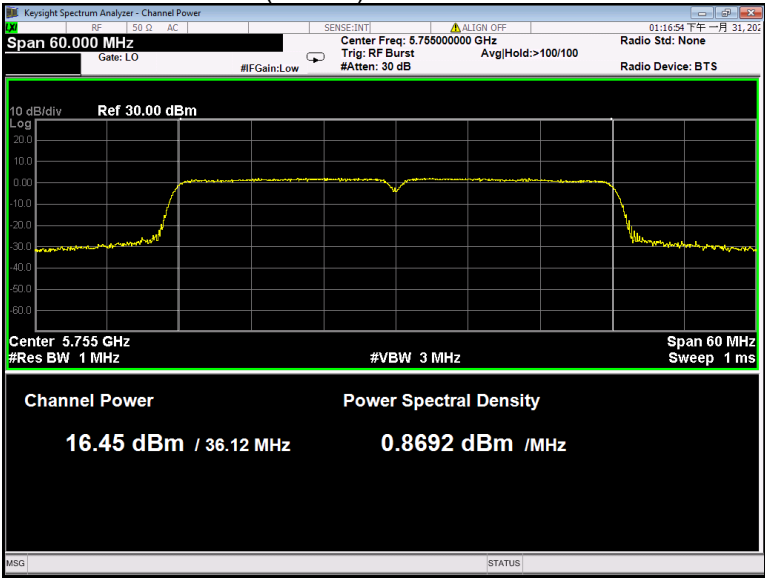




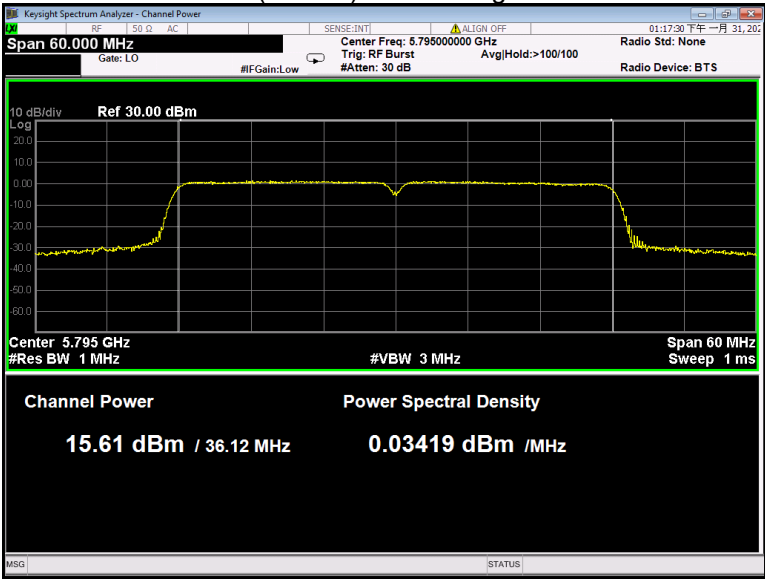
802.11ac(VHT20) U-NII-3 High channel



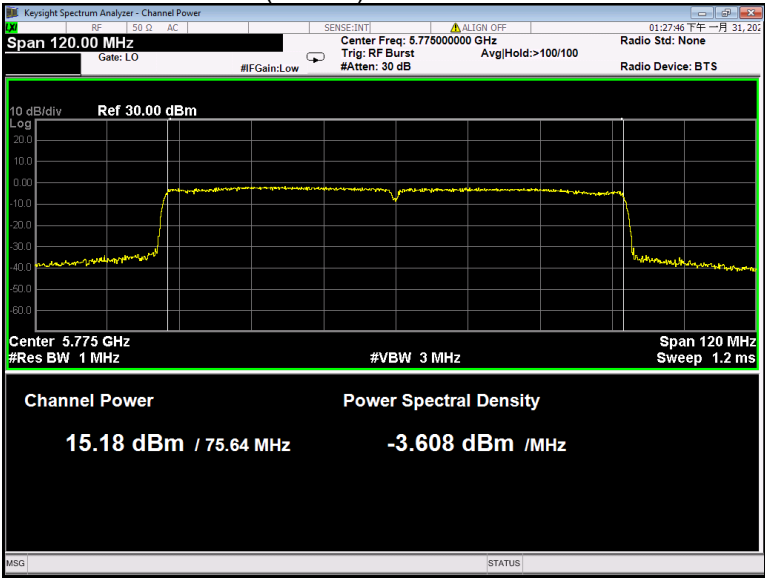
802.11ac(VHT40) U-NII-3 Low channel



802.11ac(VHT40) U-NII-3 High channel



802.11ac(VHT80) U-NII-3 Low channel



14 Power Spectral Density

Test Requirement:	FCC 47CFR Part 15 Section 15.407(a)
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Test Limit:	For the band 5.15-5.25 GHz For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the band 5.725-5.850 GHz The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.
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

ANT 1

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-1	802.11a	Low	3.774	0.50	4.274
		Middle	3.726		4.226
		High	2.981		3.481
	802.11n(HT20)	Low	4.142	0.55	4.692
		Middle	3.436		3.986
		High	3.304		3.854
	802.11n(HT40)	Low	-1.469	0.94	-0.529
		Middle	/		/
		High	-1.891		-0.951
	802.11ac(VHT20)	Low	4.001	0.52	4.521
		Middle	3.347		3.867
		High	3.535		4.055
	802.11ac(VHT40)	Low	-1.68	1.03	-0.65
		Middle	/		/
		High	-1.476		-0.446
	802.11ac(VHT80)	Low	4.018	1.69	5.708
		Middle	/		/
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-2A	802.11a	Low	3.414	0.70	4.114
		Middle	3.347		4.047
		High	3.704		4.404
	802.11n(HT20)	Low	3.23	0.64	3.87
		Middle	2.955		3.595
		High	4.011		4.651
	802.11n(HT40)	Low	-1.353	1.01	-0.343
		Middle	/		/
		High	-1.149		-0.139
	802.11ac(VHT20)	Low	3.468	0.55	4.018
		Middle	3.678		4.228
		High	4.004		4.554
	802.11ac(VHT40)	Low	-1.353	0.99	-0.363
		Middle	/		/
		High	-1.149		-0.159
	802.11ac(VHT80)	Low	-4.005	1.78	-2.225
		Middle	/		/
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-2C	802.11a	Low	1.993	0.52	2.513
		Middle	2.280		2.800
		High	2.964		3.484
	802.11n(HT20)	Low	1.549	0.56	2.109
		Middle	2.406		2.966
		High	2.875		3.435
	802.11n(HT40)	Low	-1.424	0.99	-0.434
		Middle	-0.878		0.112
		High	-0.436		0.554
	802.11ac(VHT20)	Low	1.946	0.55	2.496
		Middle	2.287		2.837
		High	2.761		3.311
	802.11ac(VHT40)	Low	-1.724	0.98	-0.744
		Middle	-1.006		-0.026
		High	-0.683		0.297
	802.11ac(VHT80)	Low	-2.396	1.79	-0.606
		Middle	-3.212		-1.422
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-3	802.11a	Low	1.767	0.50	2.267
		Middle	1.168		1.668
		High	0.337		0.837
	802.11n(HT20)	Low	1.8	0.57	2.37
		Middle	1.062		1.632
		High	0.129		0.699
	802.11n(HT40)	Low	-1.373	0.99	-0.383
		Middle	/		/
		High	-2.612		-1.622
	802.11ac(VHT20)	Low	2.284	0.52	2.804
		Middle	0.888		1.408
		High	0.132		0.652
	802.11ac(VHT40)	Low	-1.104	0.99	-0.114
		Middle	/		/
		High	-2.434		-1.444
	802.11ac(VHT80)	Low	-4.515	1.78	-2.735
		Middle	/		/
		High	/		/

ANT 2

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-1	802.11a	Low	3.810	0.49	4.300
		Middle	3.485		3.975
		High	3.200		3.690
	802.11n(HT20)	Low	3.886	0.72	4.606
		Middle	3.348		4.068
		High	3.162		3.882
	802.11n(HT40)	Low	-1.893	0.98	-0.913
		Middle	/		/
		High	-1.896		-0.916
	802.11ac(VHT20)	Low	4.139	0.70	4.839
		Middle	3.175		3.875
		High	3.114		3.814
	802.11ac(VHT40)	Low	-2.042	0.98	-1.062
		Middle	/		/
		High	-1.627		-0.647
	802.11ac(VHT80)	Low	-4.507	1.78	-2.727
		Middle	/		/
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-2A	802.11a	Low	3.129	0.51	3.639
		Middle	3.192		3.702
		High	3.419		3.929
	802.11n(HT20)	Low	3.382	0.54	3.922
		Middle	3.129		3.669
		High	4.392		4.932
	802.11n(HT40)	Low	-1.775	0.99	-0.785
		Middle	/		/
		High	-0.734		0.256
	802.11ac(VHT20)	Low	3.374	0.52	3.894
		Middle	3.016		3.536
		High	3.538		4.058
	802.11ac(VHT40)	Low	-1.682	1.05	-0.632
		Middle	/		/
		High	-0.979		0.071
	802.11ac(VHT80)	Low	-3.874	2.10	-1.774
		Middle	/		/
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-2C	802.11a	Low	1.611	0.58	2.191
		Middle	2.307		2.887
		High	2.808		3.388
	802.11n(HT20)	Low	1.65	0.57	2.22
		Middle	2.071		2.641
		High	2.769		3.339
	802.11n(HT40)	Low	-1.832	0.99	-0.842
		Middle	-1.07		-0.08
		High	-0.609		0.381
	802.11ac(VHT20)	Low	1.649	0.57	2.219
		Middle	2.384		2.954
		High	3.099		3.669
	802.11ac(VHT40)	Low	-1.796	0.98	-0.816
		Middle	-0.975		0.005
		High	-0.627		0.353
	802.11ac(VHT80)	Low	-2.460	1.78	-0.680
		Middle	-2.907		-1.127
		High	/		/

Band	Operation mode	Channel	Measurements (dBm/MHz)	Duty Cycle Factor (dB)	Power Spectral Density (dBm/MHz)
U-NII-3	802.11a	Low	1.767	0.49	2.257
		Middle	1.168		1.658
		High	0.337		0.827
	802.11n(HT20)	Low	1.8	0.56	2.36
		Middle	1.062		1.622
		High	0.129		0.689
	802.11n(HT40)	Low	-1.373	0.99	-0.383
		Middle	/		/
		High	-2.612		-1.622
	802.11ac(VHT20)	Low	2.284	0.52	2.804
		Middle	0.888		1.408
		High	0.132		0.652
	802.11ac(VHT40)	Low	-1.104	1.00	-0.104
		Middle	/		/
		High	-2.434		-1.434
	802.11ac(VHT80)	Low	-4.515	1.86	-2.655
		Middle	/		/
		High	/		/

Total:

Band	Operation mode	Channel	Conducted Output Power		
			(dBm)		
			Ant. 1	Ant. 2	SUM
U-NII-1	802.11n(HT20)	Low	4.692	4.606	7.660
		Middle	3.986	4.068	7.037
		High	3.854	3.882	6.878
	802.11ac (HT20)	Low	4.521	4.839	7.693
		Middle	3.867	3.875	6.881
		High	4.055	3.814	6.946
	802.11n(HT40)	Low	-0.529	-0.913	2.294
		High	-0.951	-0.916	2.077
	802.11ac (HT40)	Low	-0.65	-1.062	2.159
		High	-0.446	-0.647	2.465
	802.11ac (HT80)	Middle	5.708	-2.727	6.290

Band	Operation mode	Channel	Conducted Output Power		
			(dBm)		
			Ant. 1	Ant. 2	SUM
U-NII-2A	802.11n(HT20)	Low	3.87	3.922	6.906
		Middle	3.595	3.669	6.642
		High	4.651	4.932	7.804
	802.11ac (HT20)	Low	4.018	3.894	6.967
		Middle	4.228	3.536	6.906
		High	4.554	4.058	7.323
	802.11n(HT40)	Low	-0.343	-0.785	2.452
		High	-0.139	0.256	3.073
	802.11ac (HT40)	Low	-0.363	-0.632	2.515
		High	-0.159	0.071	2.968
	802.11ac (HT80)	Middle	-2.225	-1.774	1.017

Band	Operation mode	Channel	Conducted Output Power		
			(dBm)		
			Ant. 1	Ant. 2	SUM
U-NII-2C	802.11n(HT20)	Low	2.109	2.22	5.175
		Middle	2.966	2.641	5.817
		High	3.435	3.339	6.398
	802.11ac (HT20)	Low	2.496	2.219	5.370
		Middle	2.837	2.954	5.906
		High	3.311	3.669	6.504
	802.11n(HT40)	Low	-0.434	-0.842	2.377
		Middle	0.112	-0.08	3.027
		High	0.554	0.381	3.479
	802.11ac (HT40)	Low	-0.744	-0.816	2.230
		Middle	-0.026	0.005	3.000
		High	0.297	0.353	3.335
	802.11ac (HT80)	Low	-0.606	-0.68	2.367
		Middle	-1.422	-1.127	1.738

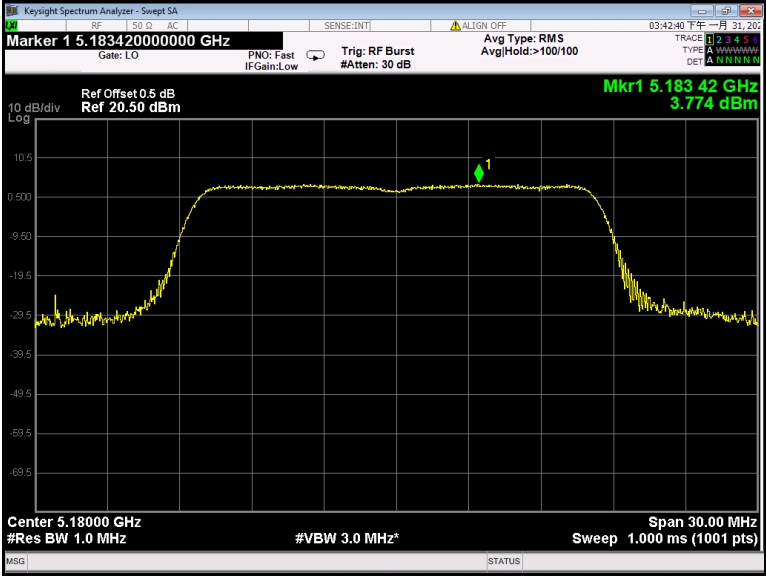
Band	Operation mode	Channel	Conducted Output Power		
			(dBm)		
			Ant. 1	Ant. 2	SUM
U-NII-3	802.11n(HT20)	Low	2.37	2.36	5.375
		Middle	1.632	1.622	4.637
		High	0.699	0.689	3.704
	802.11ac (HT20)	Low	2.804	2.804	5.814
		Middle	1.408	1.408	4.418
		High	0.652	0.652	3.662
	802.11n(HT40)	Low	-0.383	-0.383	2.627
		High	-1.622	-1.622	1.388
	802.11ac (HT40)	Low	-0.114	-0.104	2.901
		High	-1.444	-1.434	1.571
	802.11ac (HT80)	Middle	-2.735	-2.655	0.315

* 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.

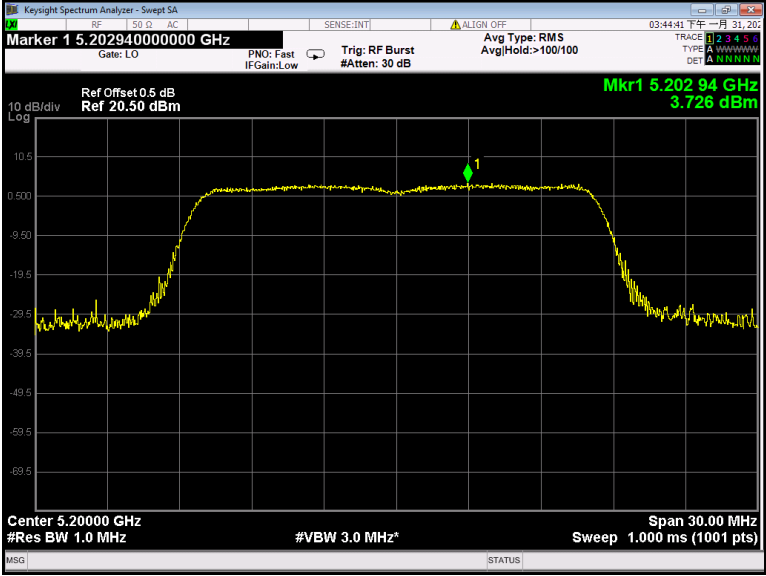
Test result plots shown as follows:

ANT 1

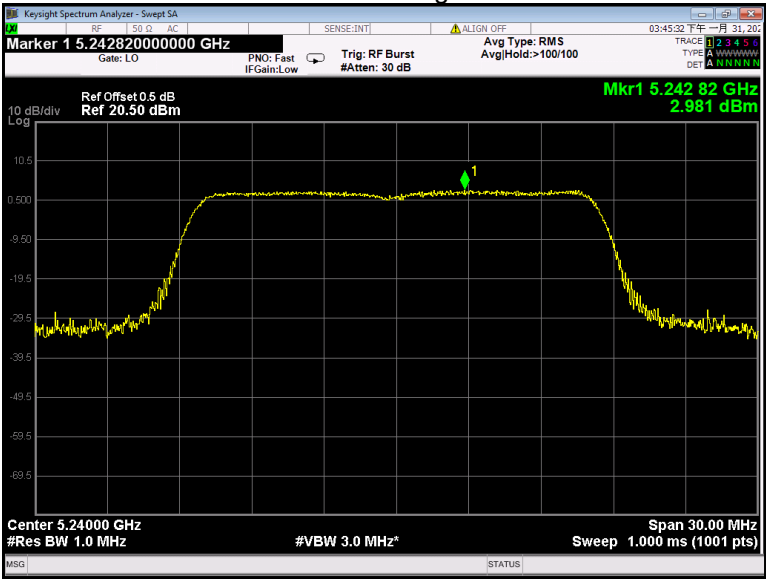
802.11a U-NII-1 Low channel



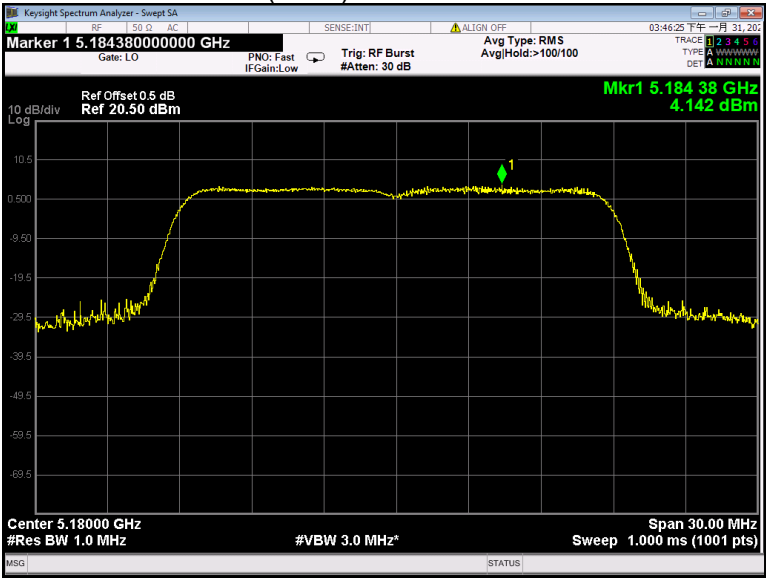
802.11a U-NII-1 Middle channel



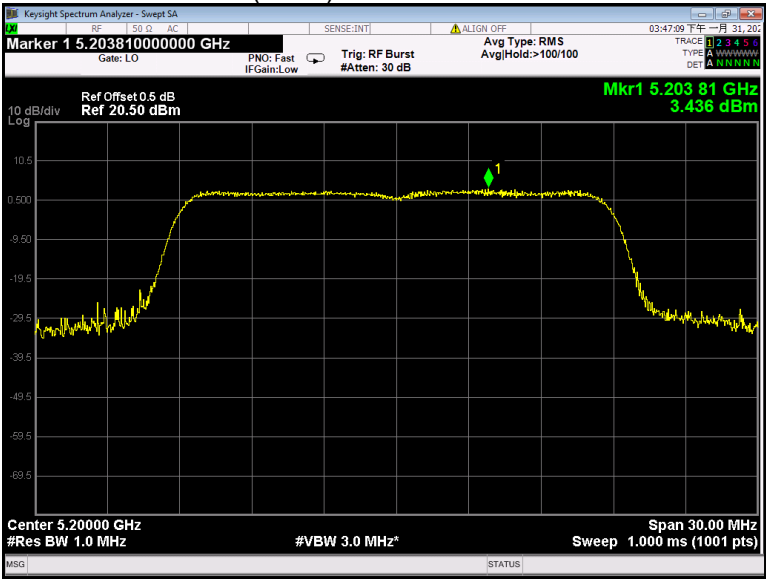
802.11a U-NII-1 High channel



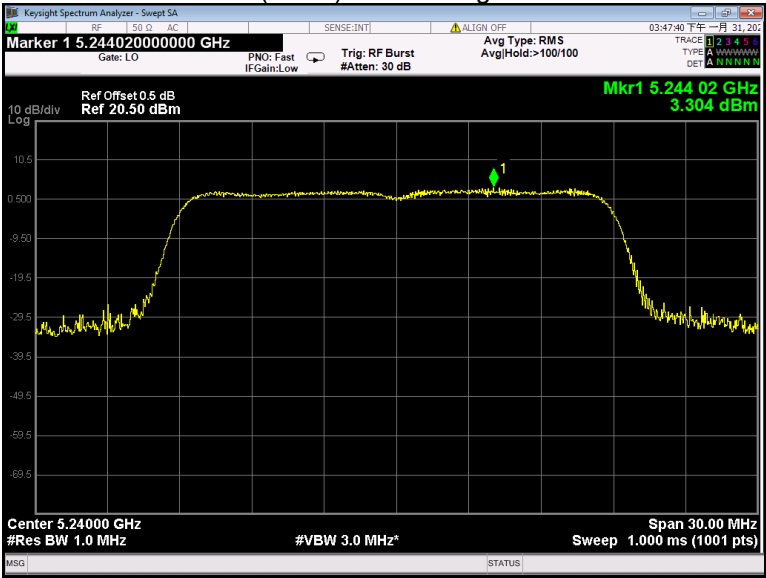
802.11n(HT20) U-NII-1 Low channel



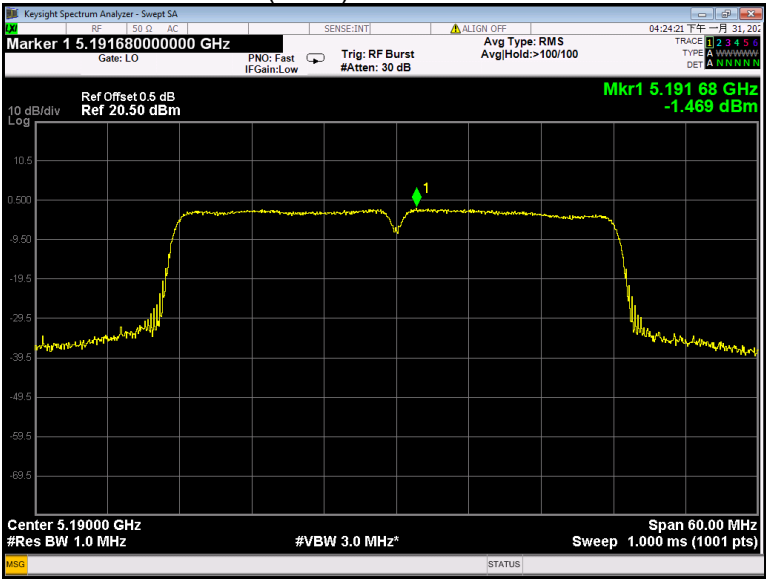
802.11n(HT20) U-NII-1 Middle channel



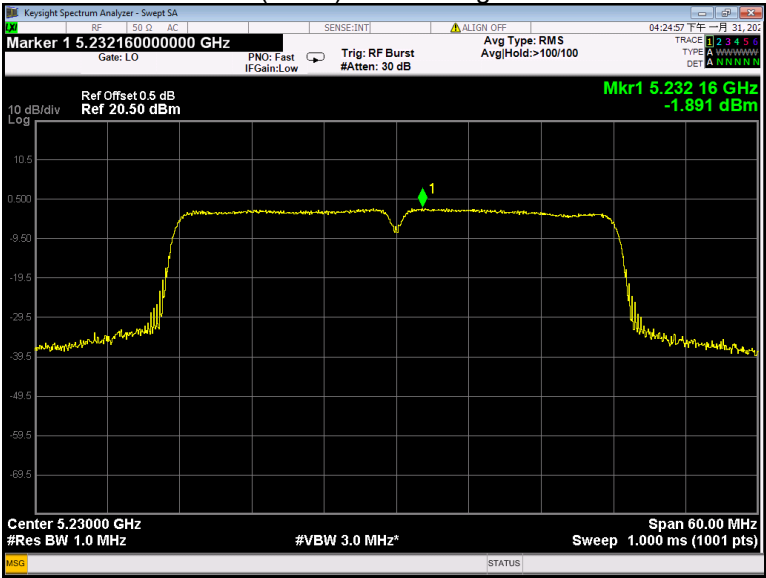
802.11n(HT20) U-NII-1 High channel

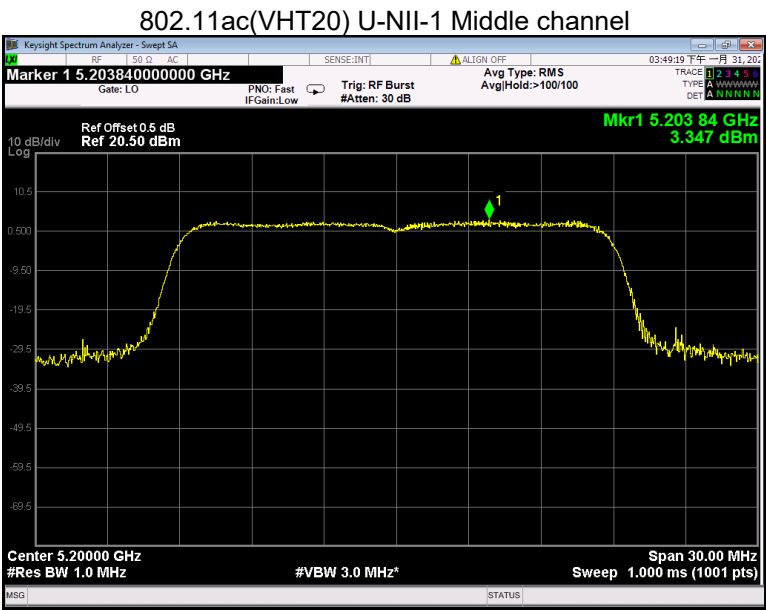
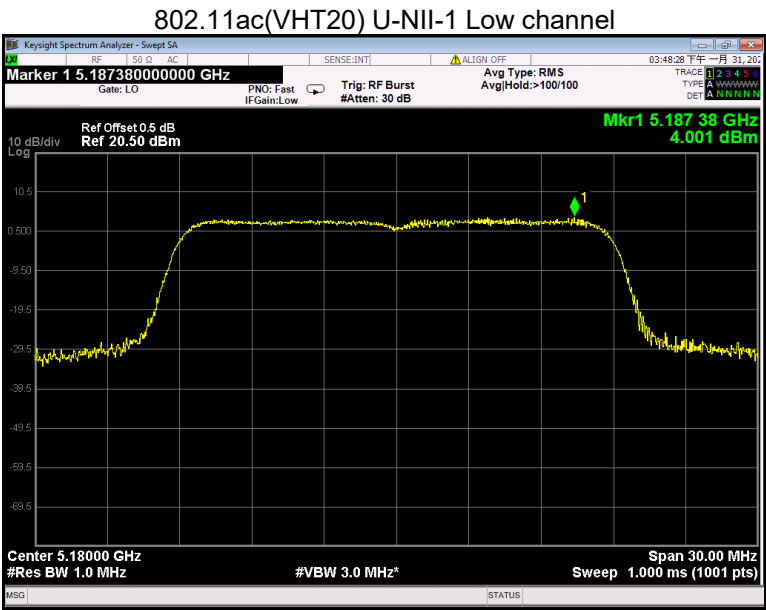


802.11n(HT40) U-NII-1 Low channel

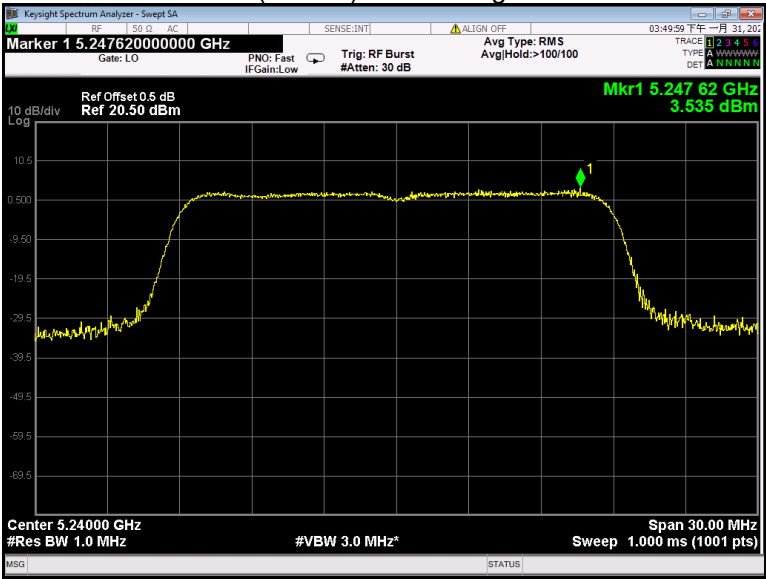


802.11n(HT40) U-NII-1 High channel

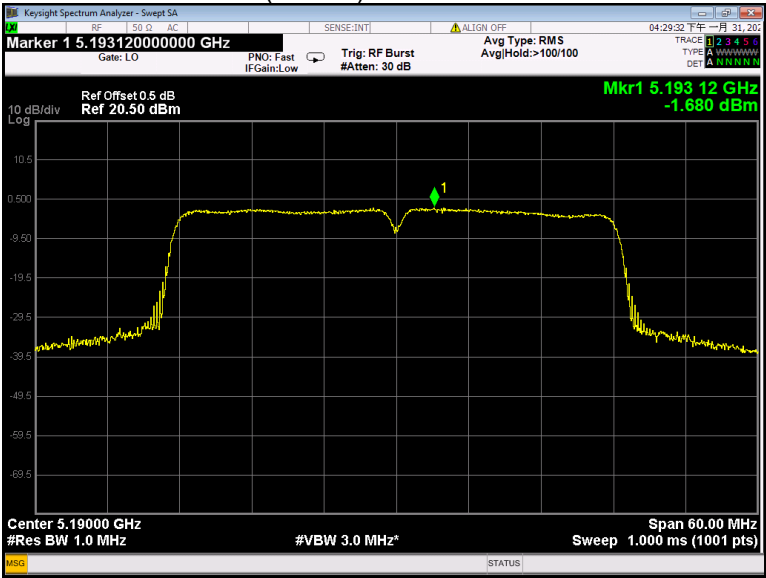




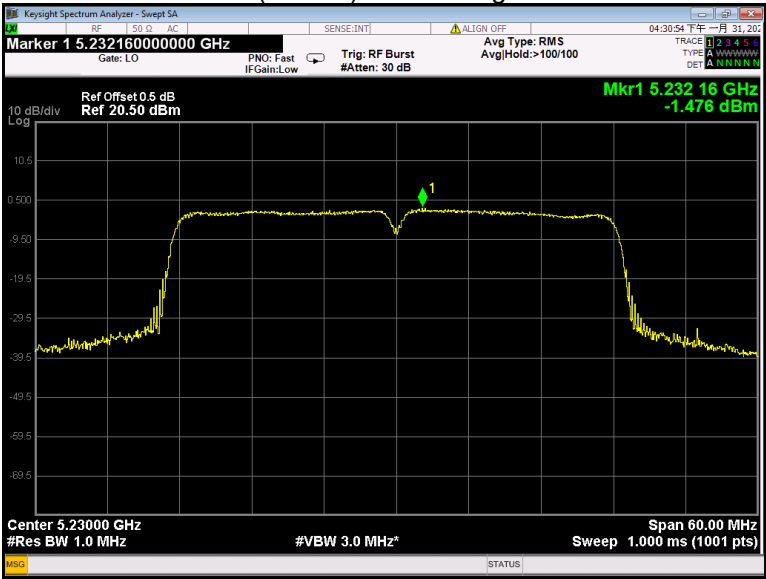
802.11ac(VHT20) U-NII-1 High channel



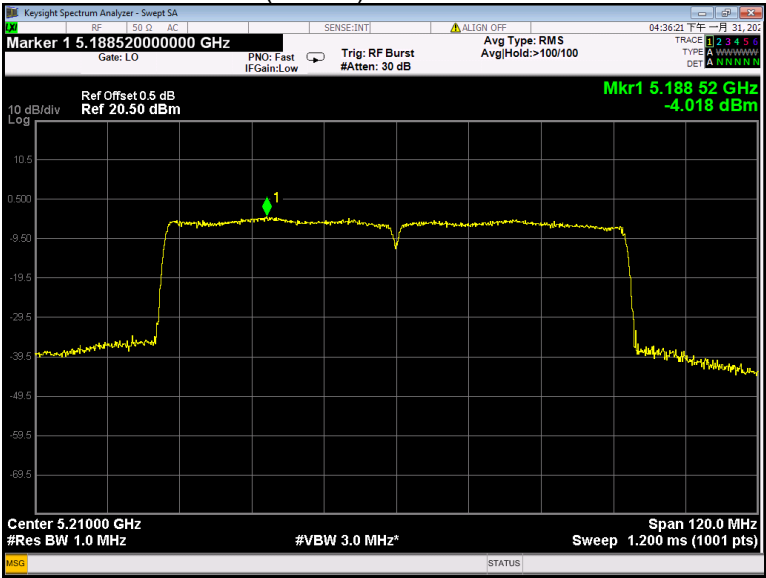
802.11ac(VHT40) U-NII-1 Low channel



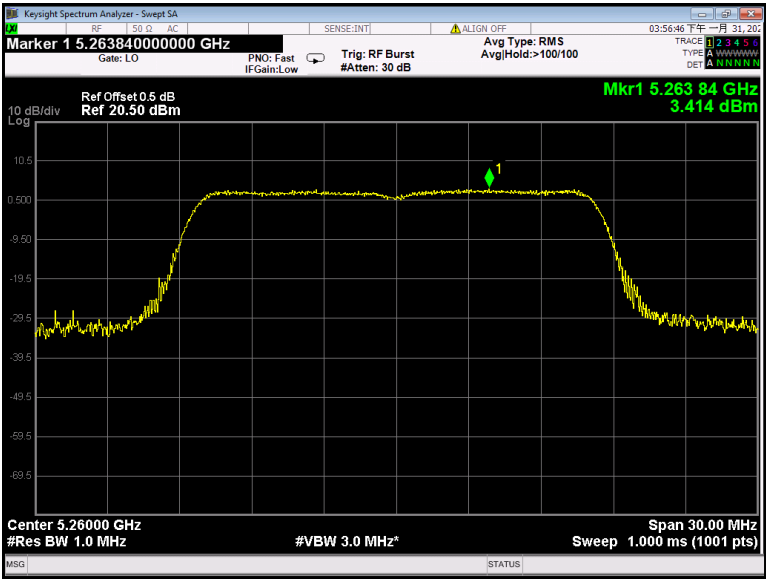
802.11ac(VHT40) U-NII-1 High channel



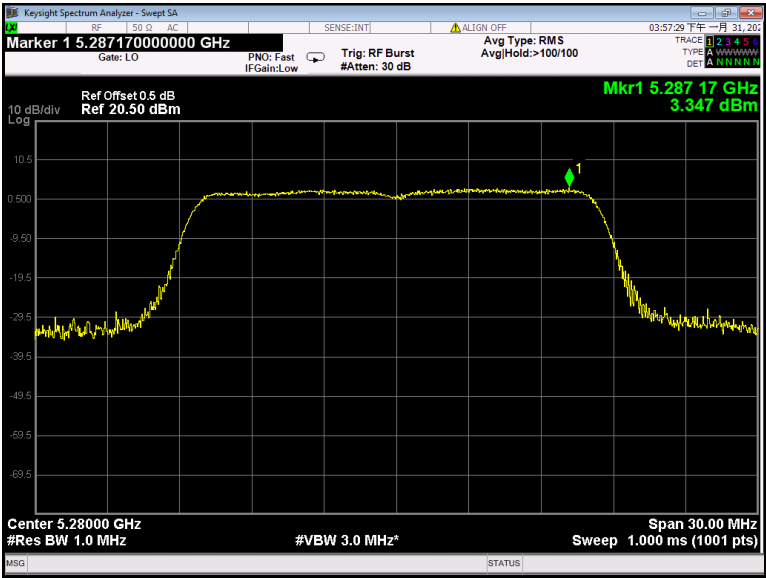
802.11ac(VHT80) U-NII-1 Low channel



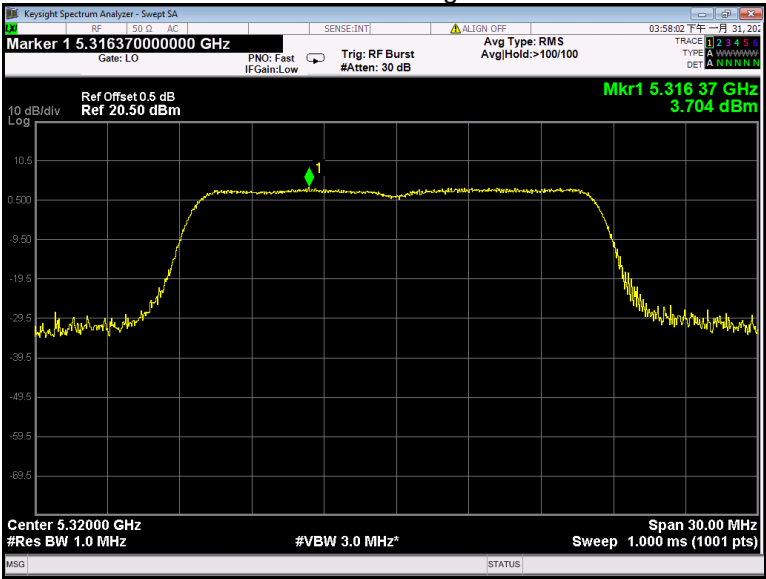
802.11a U-NII-2A Low channel



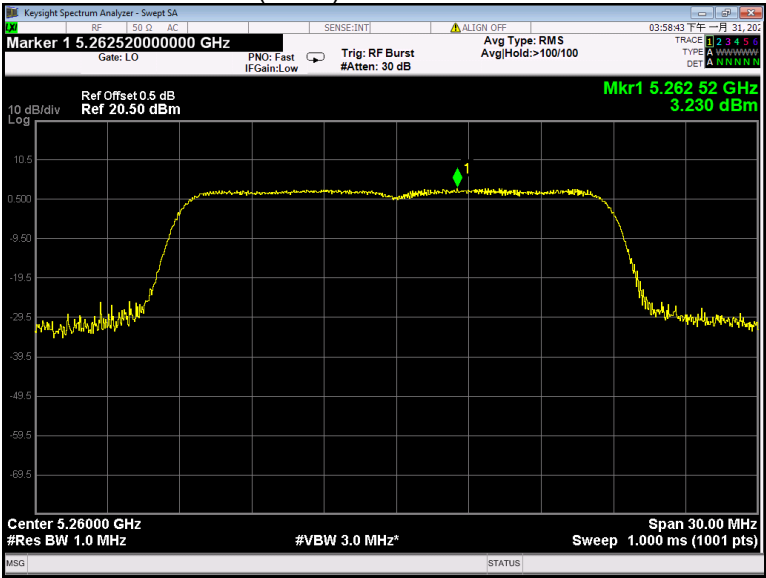
802.11a U-NII-2A Middle channel



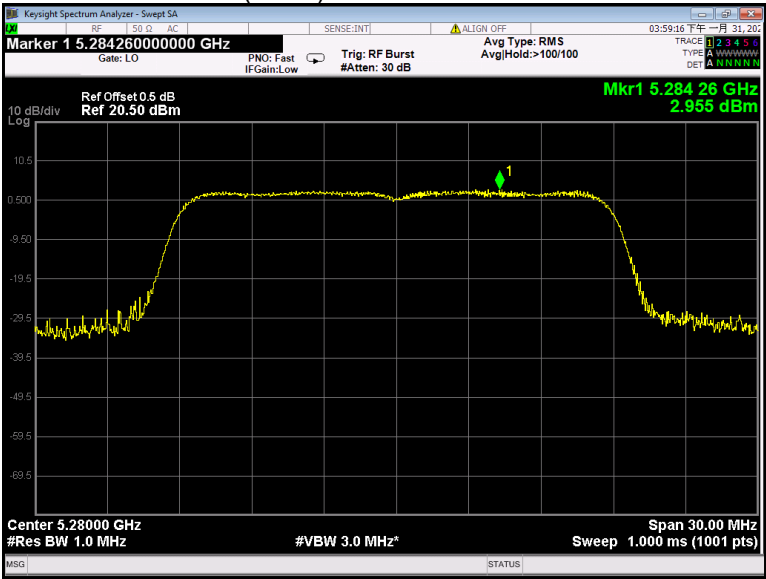
802.11a U-NII-2A High channel



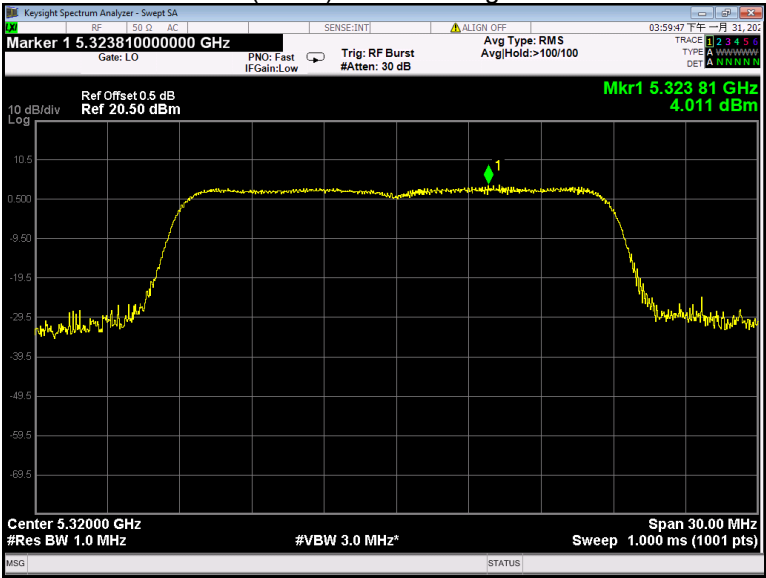
802.11n(HT20) U-NII-2A Low channel



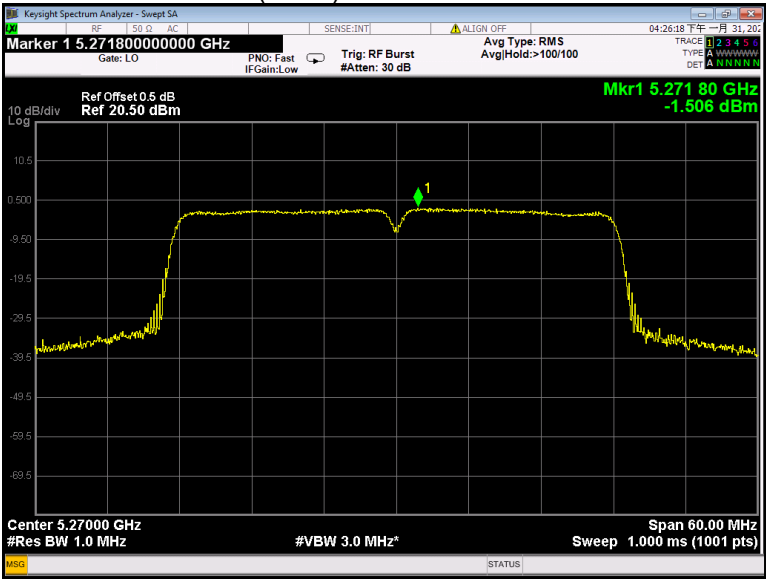
802.11n(HT20) U-NII-2A Middle channel



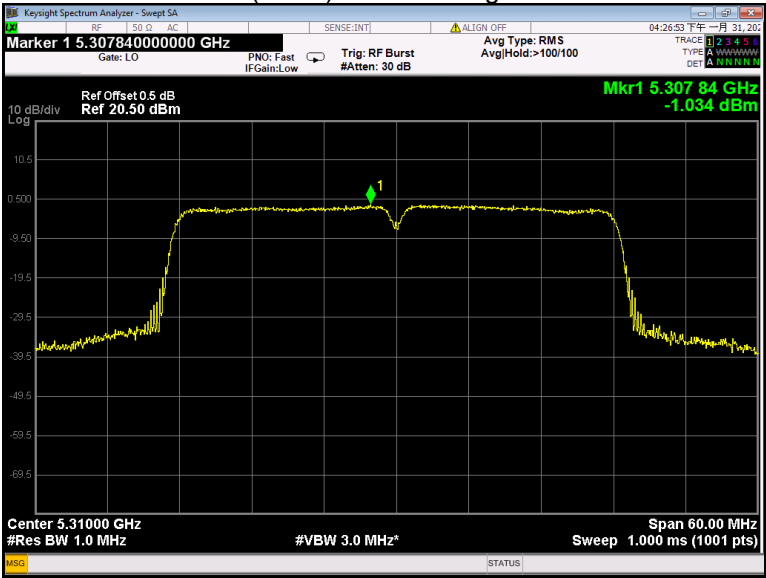
802.11n(HT20) U-NII-2A High channel



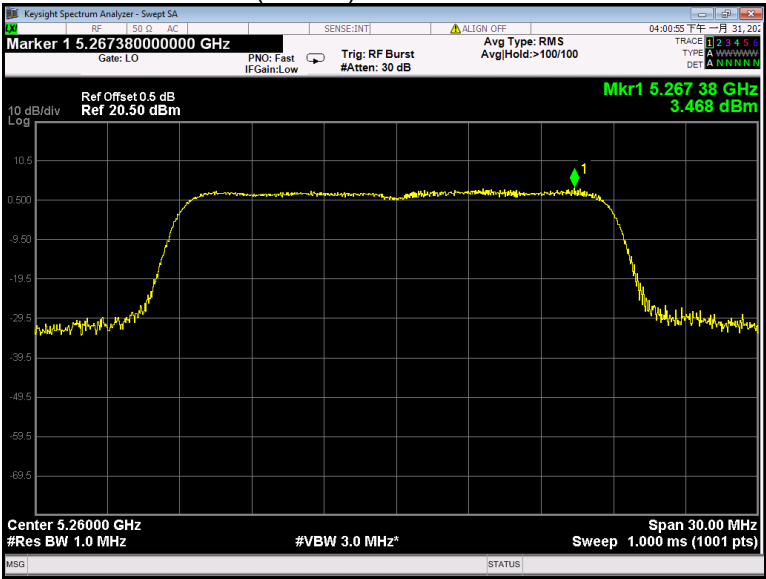
802.11n(HT40) U-NII-2A Low channel



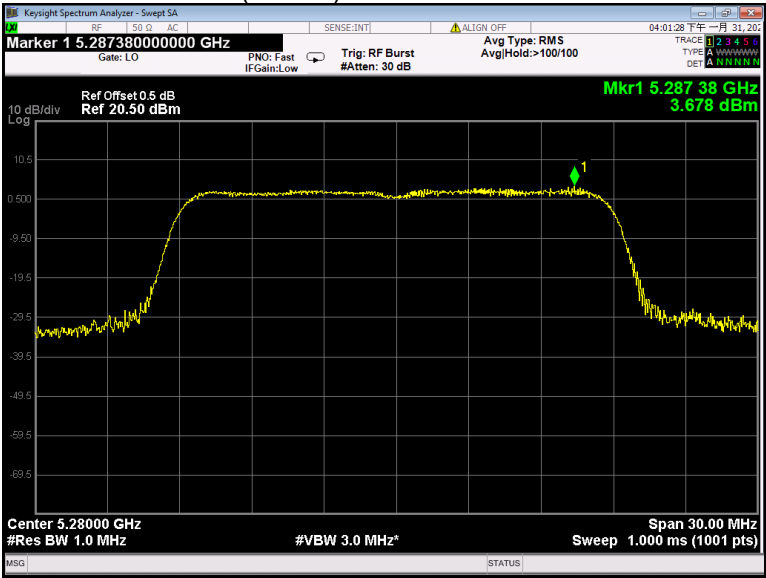
802.11n(HT40) U-NII-2A High channel



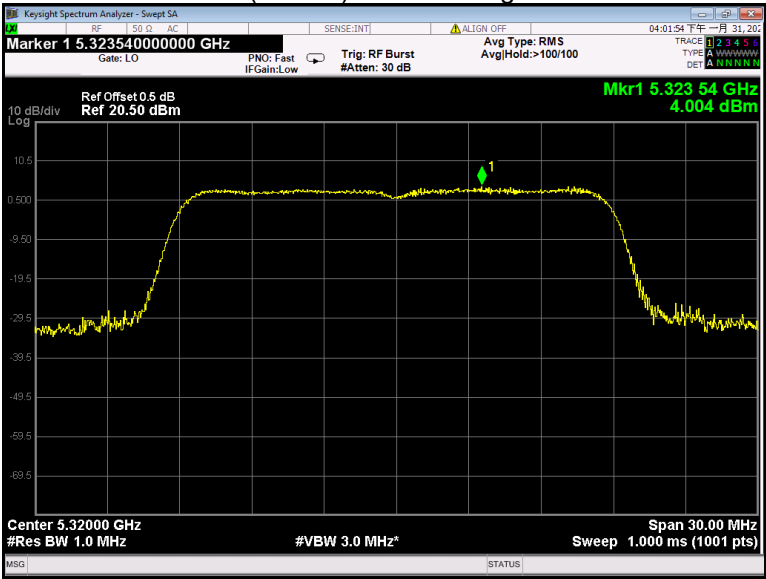
802.11ac(VHT20) U-NII-2A Low channel



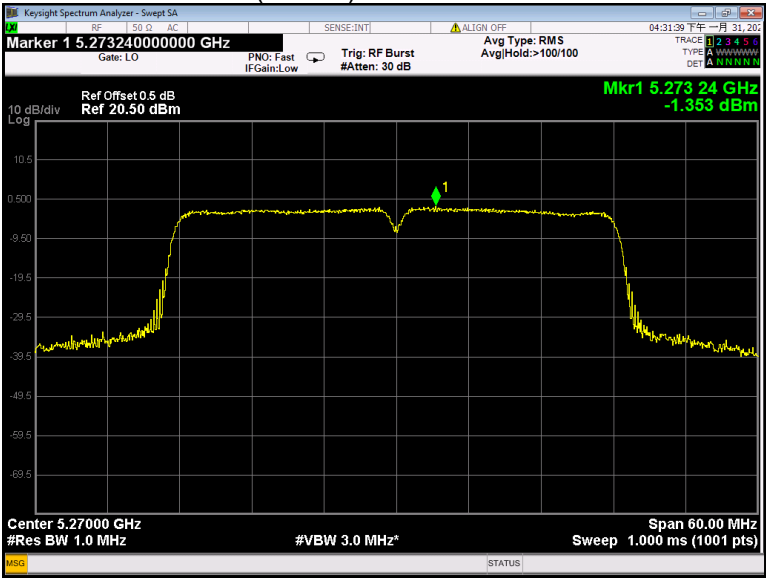
802.11ac(VHT20) U-NII-2A Middle channel



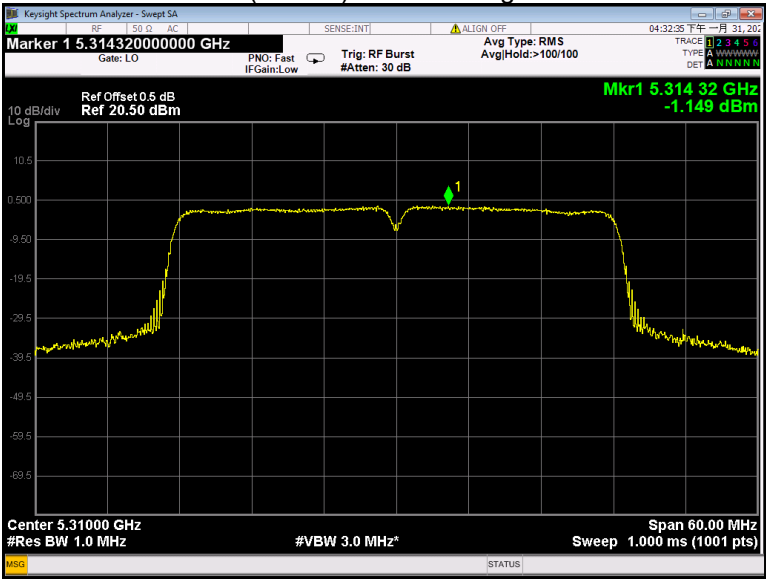
802.11ac(VHT20) U-NII-2A High channel



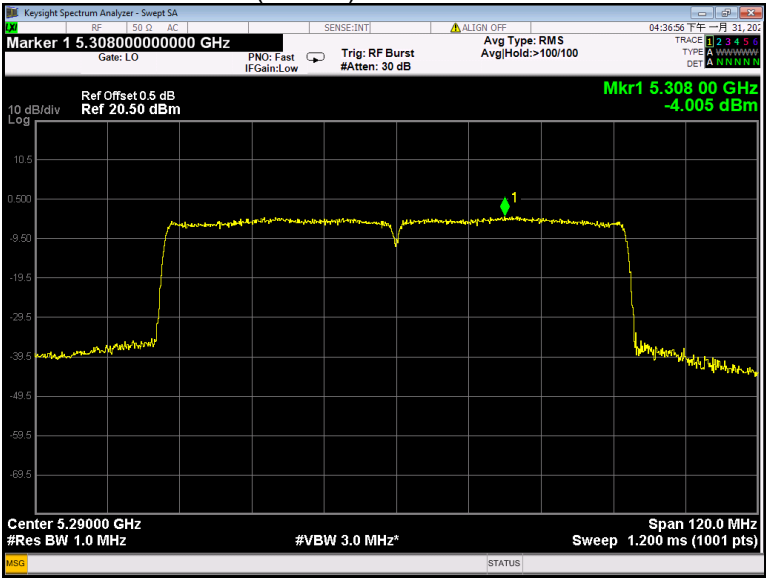
802.11ac(VHT40) U-NII-2A Low channel



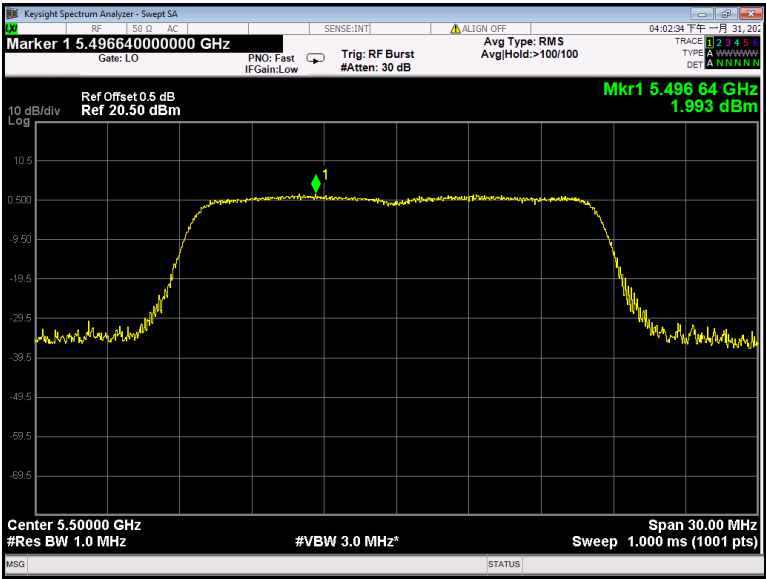
802.11ac(VHT40) U-NII-2A High channel



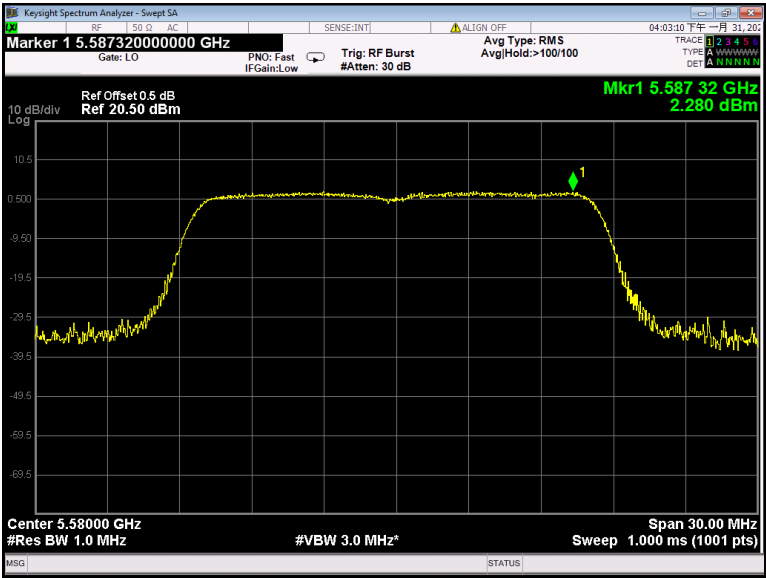
802.11ac(VHT80) U-NII-2A Low channel



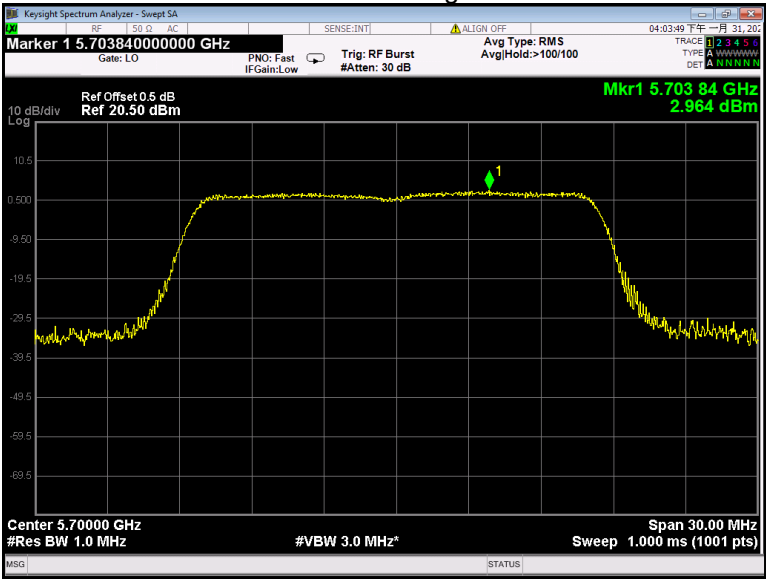
802.11a U-NII-2C Low channel



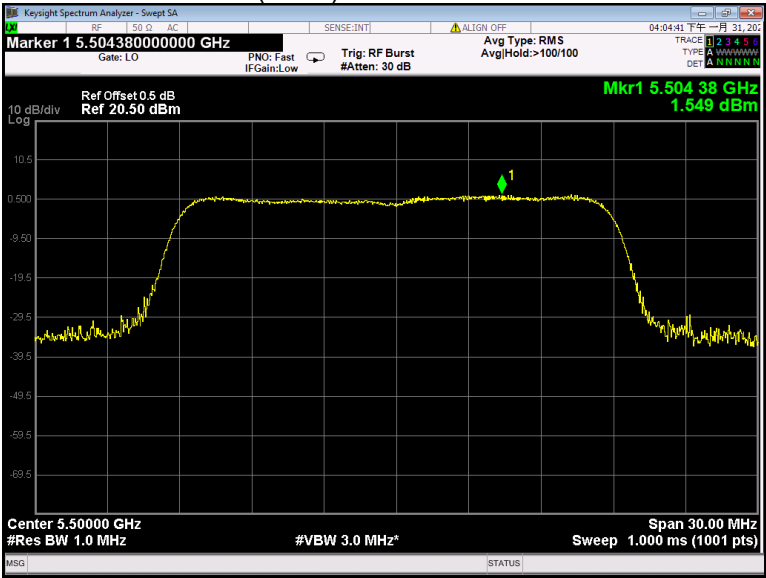
802.11a U-NII-2C Middle channel



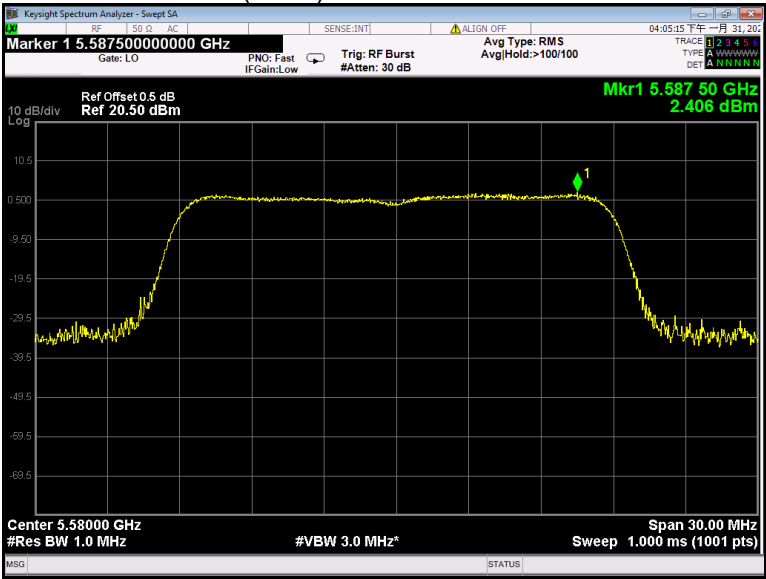
802.11a U-NII-2C High channel



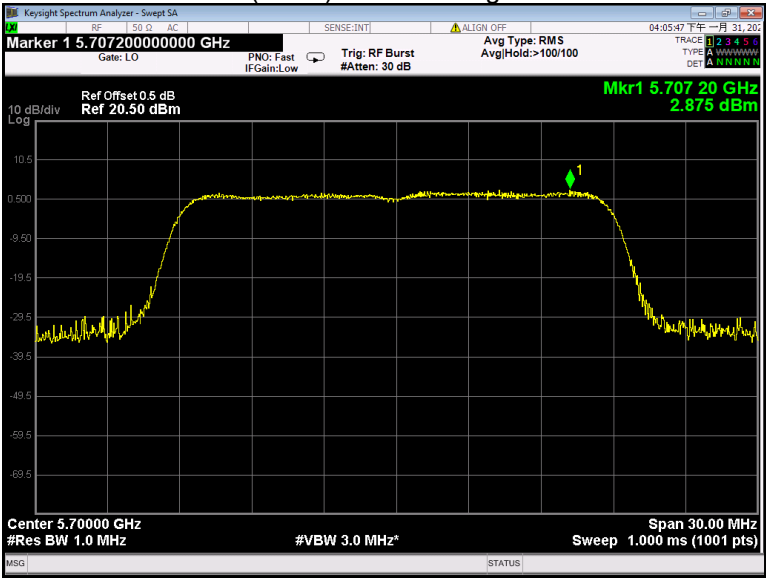
802.11n(HT20) U-NII-2C Low channel



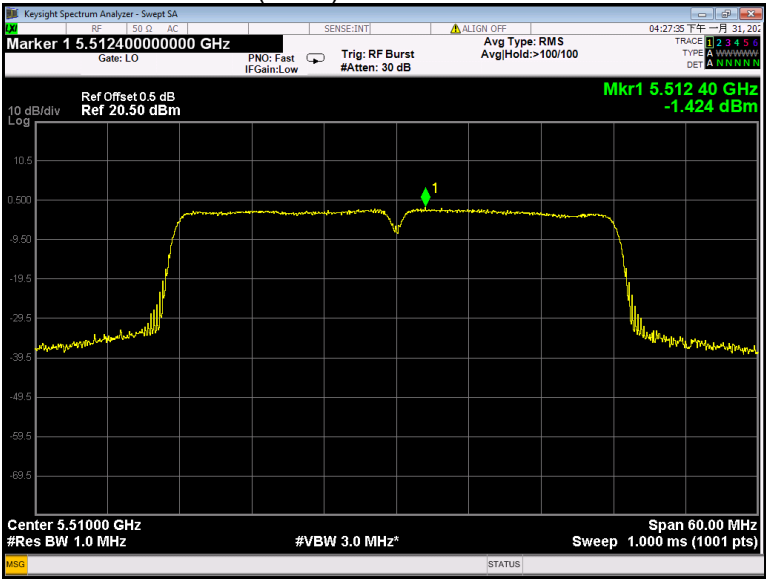
802.11n(HT20) U-NII-2C Middle channel



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



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



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

