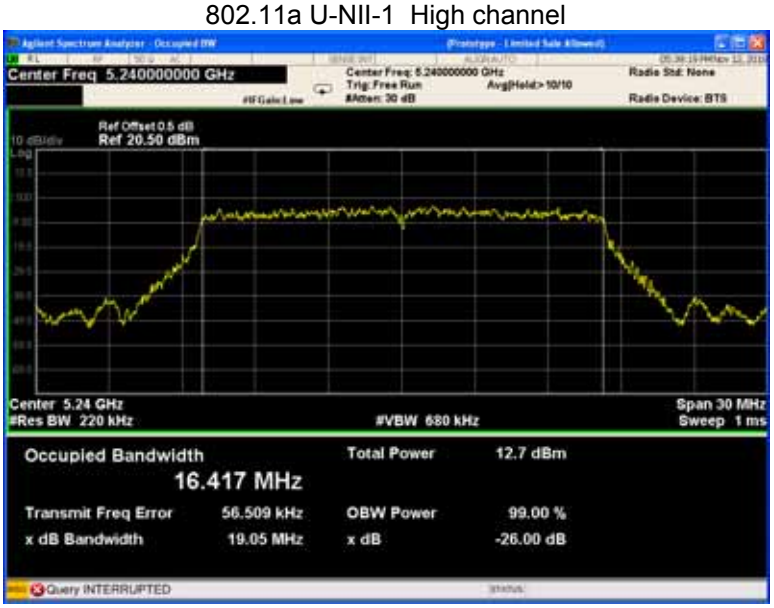
ANT4

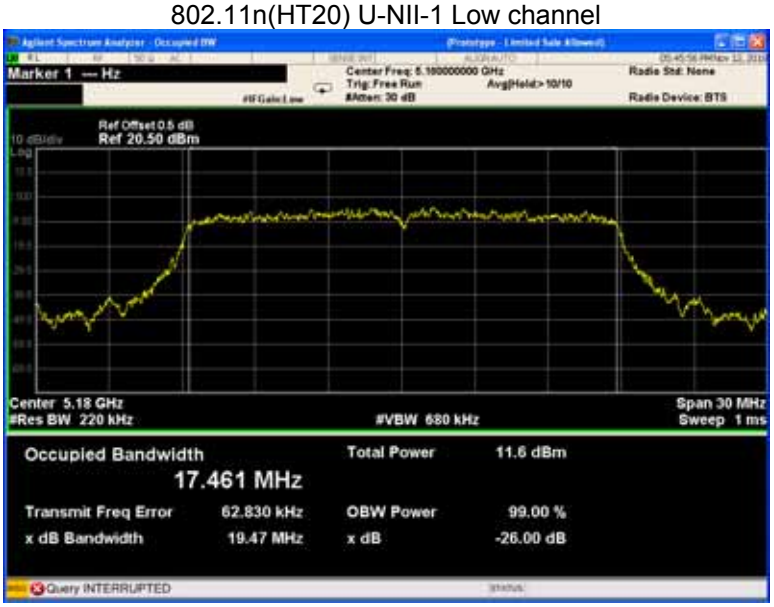
802.11a U-NII-1 Low channel

802.11a U-NII-1 Middle channel

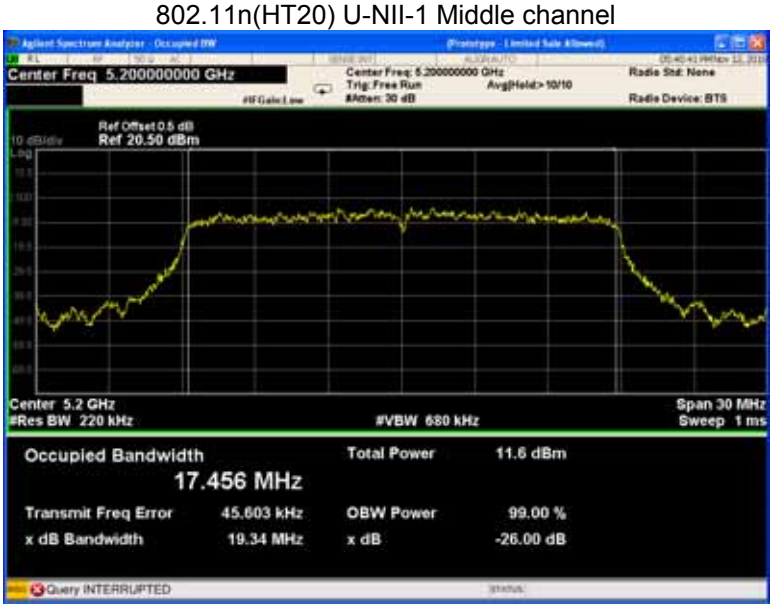
802.11a U-NII-1 High channel



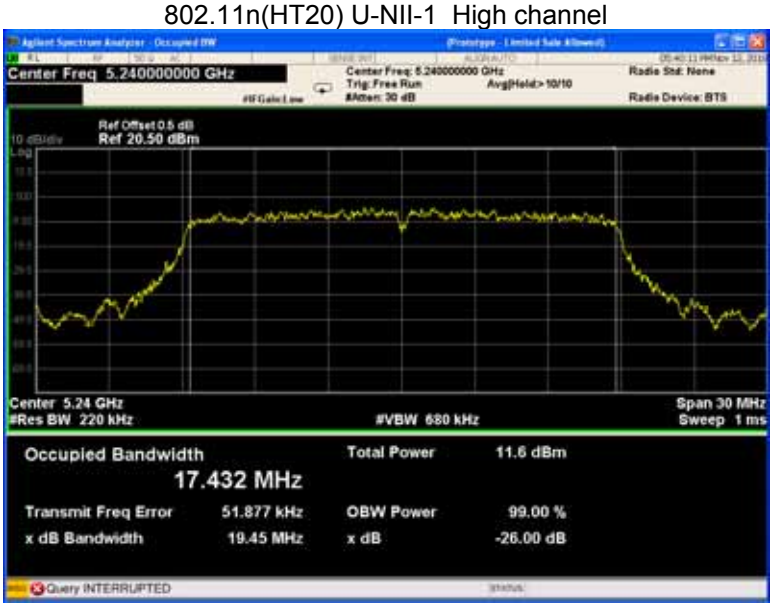
802.11n(HT20) U-NII-1 Low channel



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 Low channel

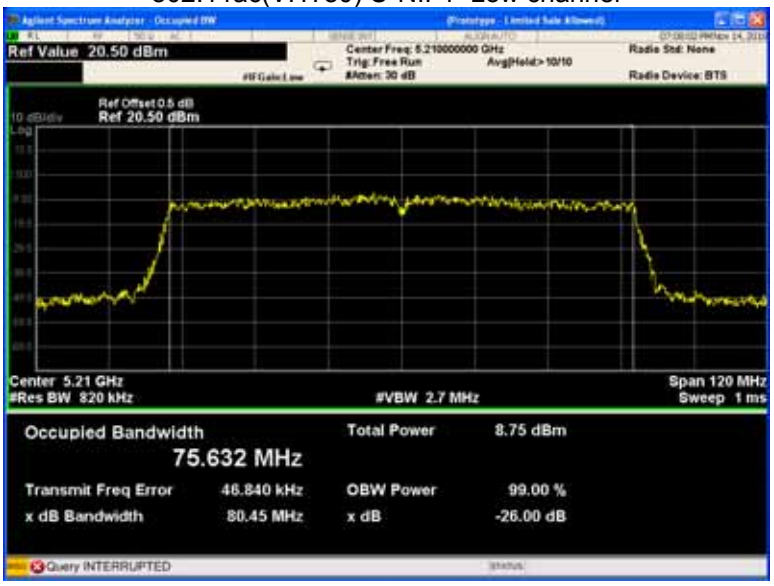
802.11ac(VHT20) U-NII-1 Middle channel

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

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

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

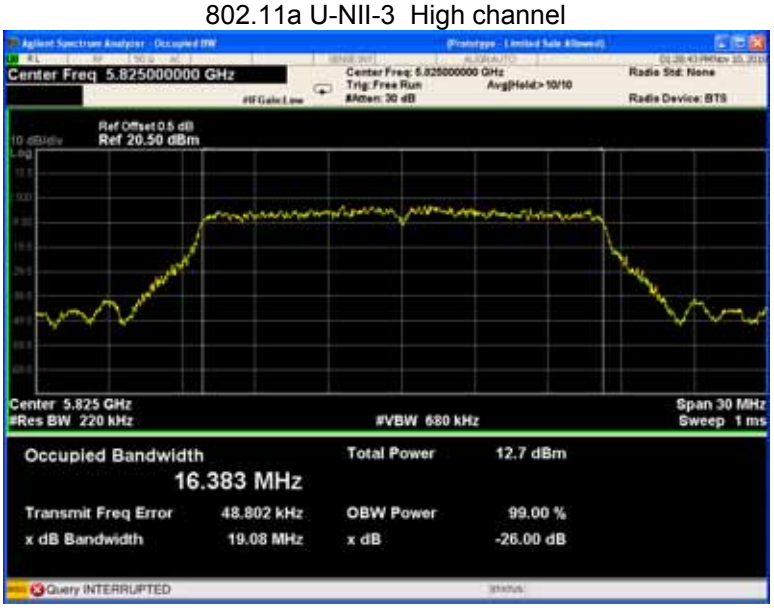
802.11ac(VHT80) U-NII-1 Low channel



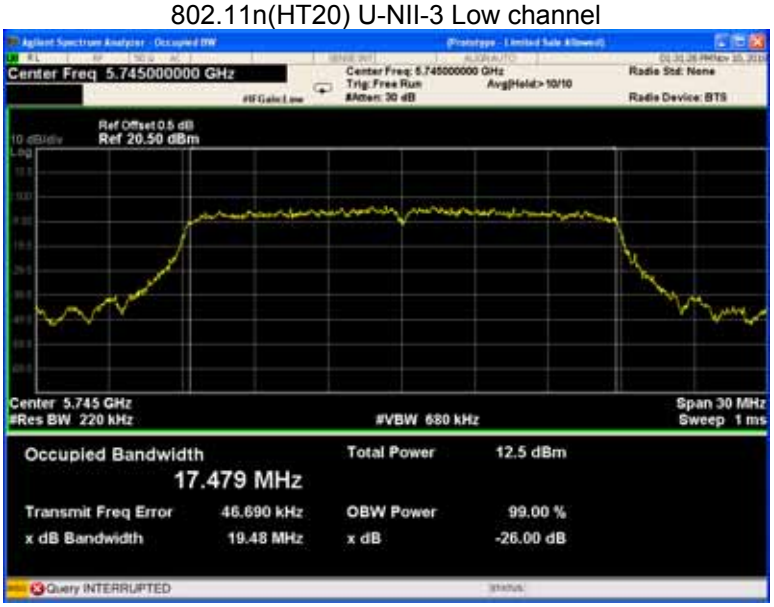
802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

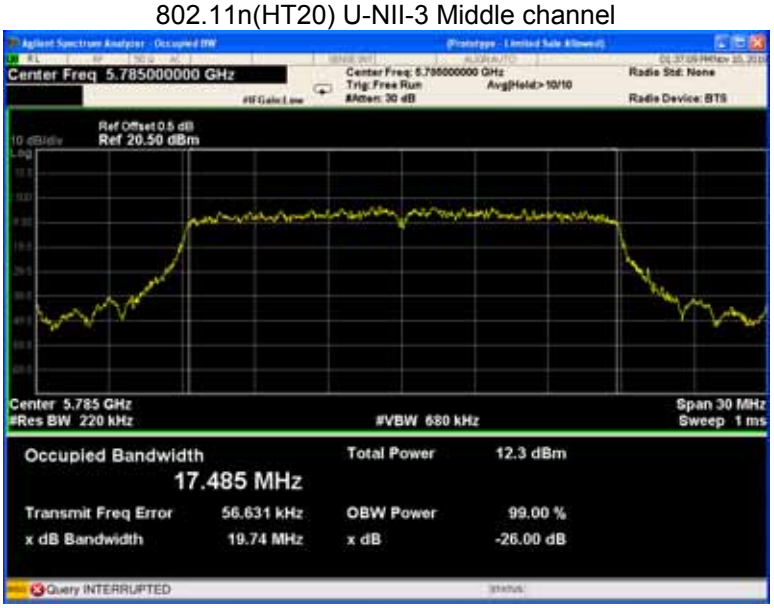
802.11a U-NII-3 High channel



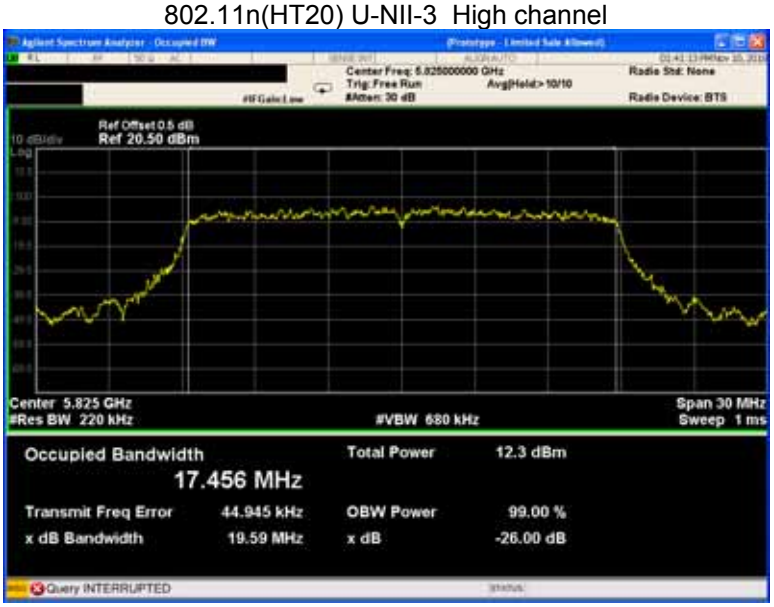
802.11n(HT20) U-NII-3 Low channel



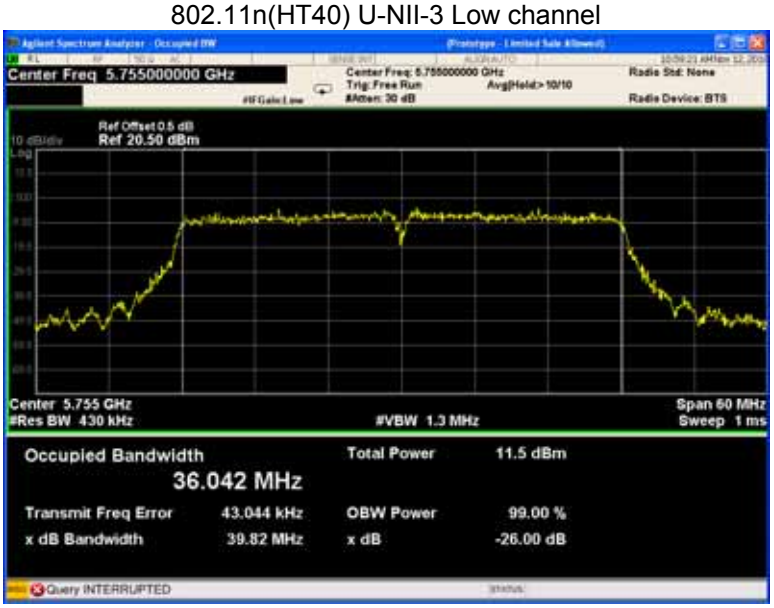
802.11n(HT20) U-NII-3 Middle channel



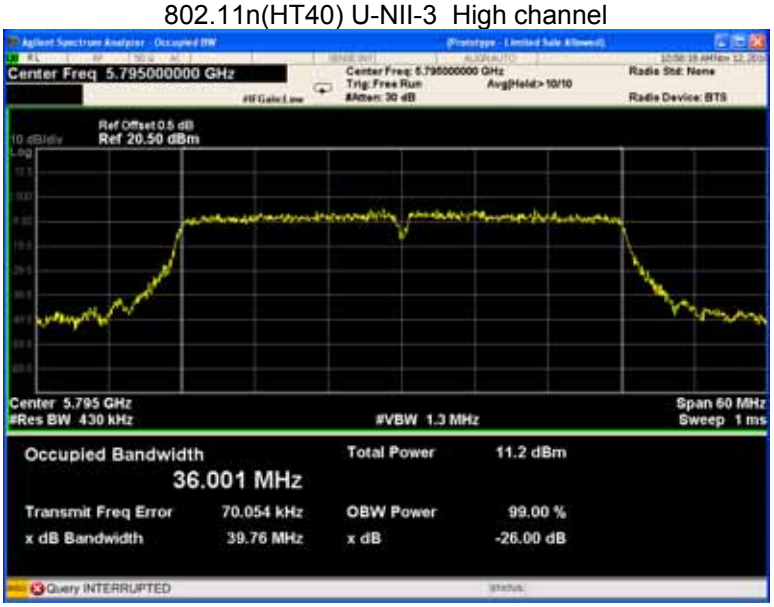
802.11n(HT20) U-NII-3 High channel



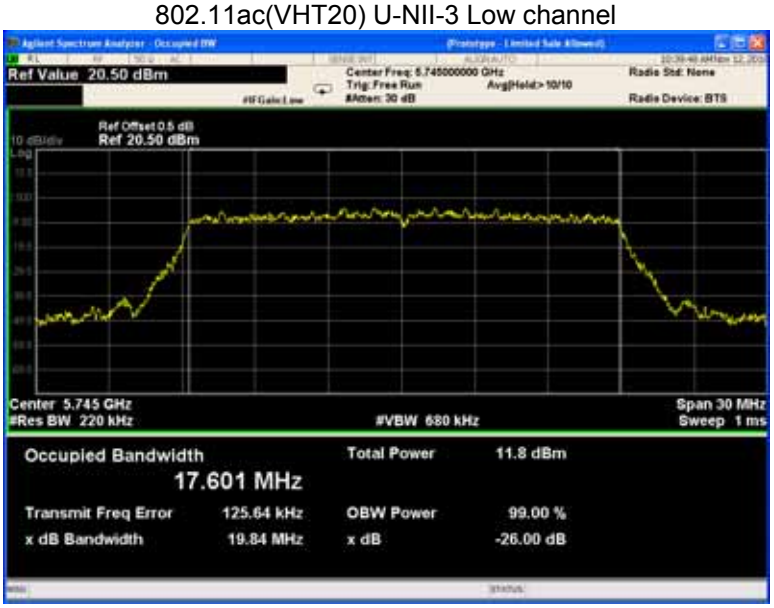
802.11n(HT40) U-NII-3 Low channel



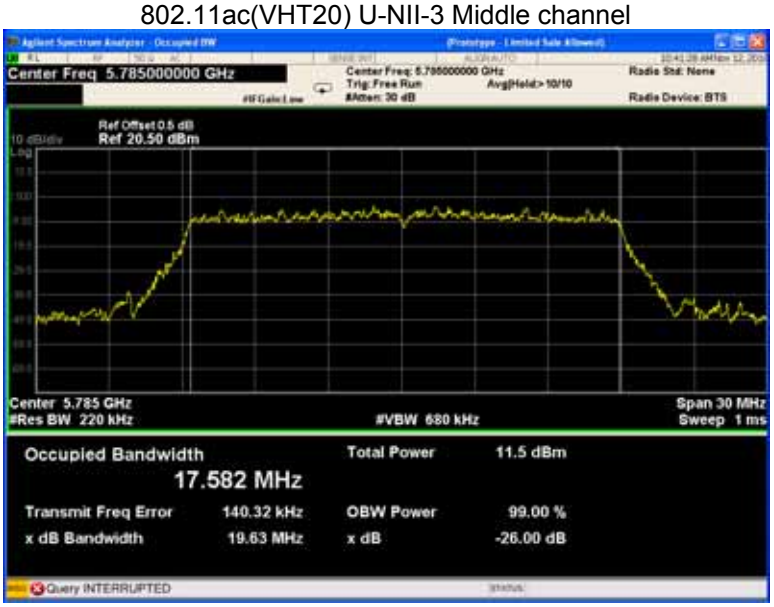
802.11n(HT40) U-NII-3 High channel



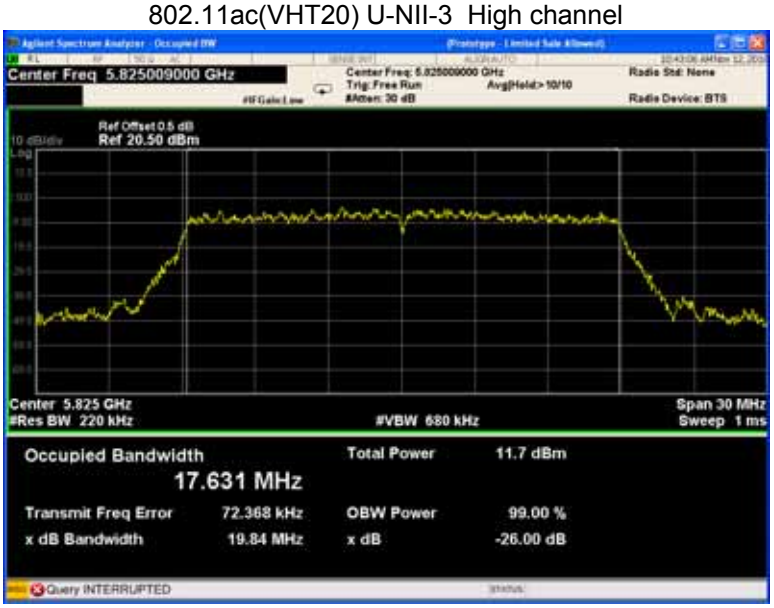
802.11ac(VHT20) U-NII-3 Low channel



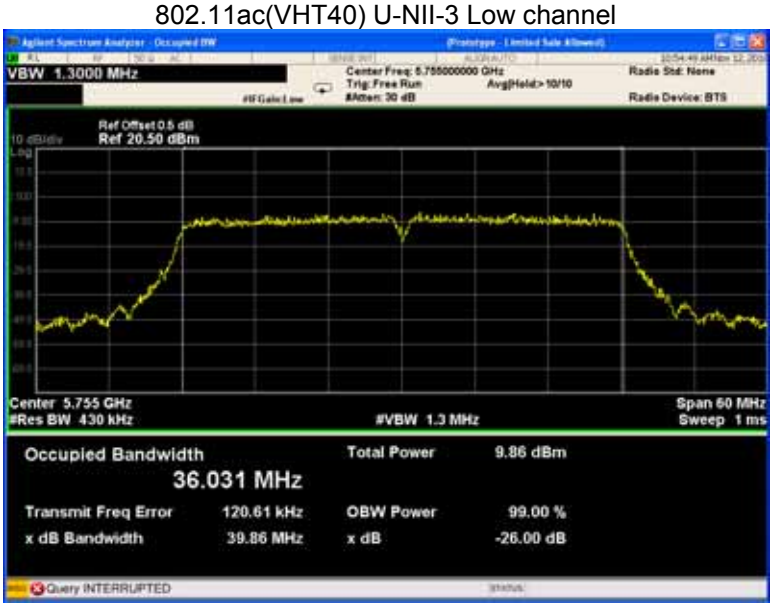
802.11ac(VHT20) U-NII-3 Middle channel



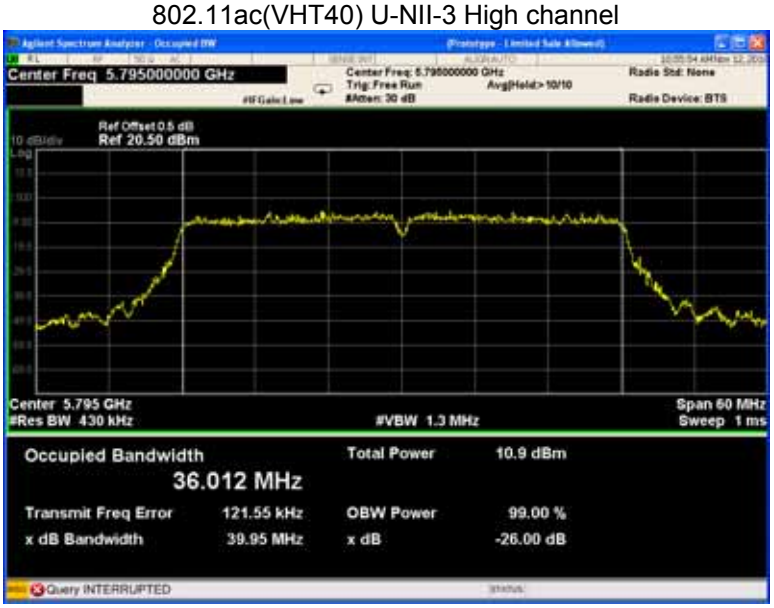
802.11ac(VHT20) U-NII-3 High channel



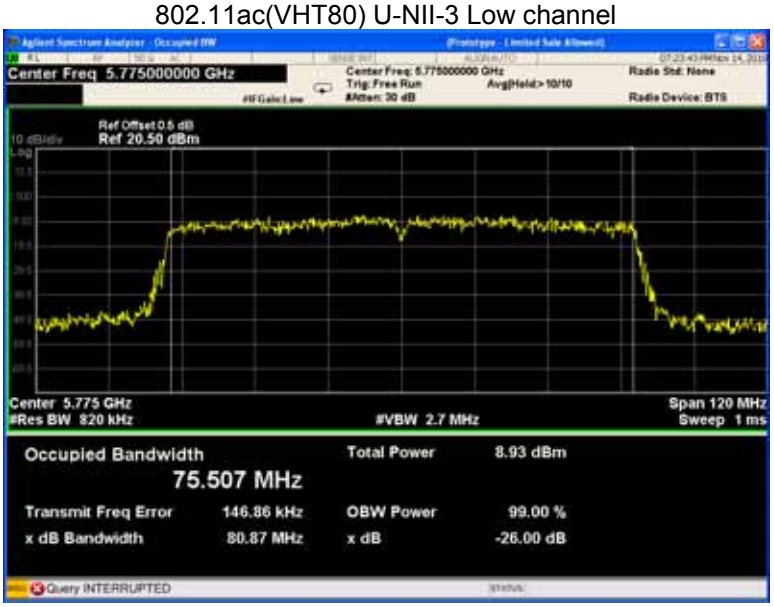
802.11ac(VHT40) U-NII-3 Low channel



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



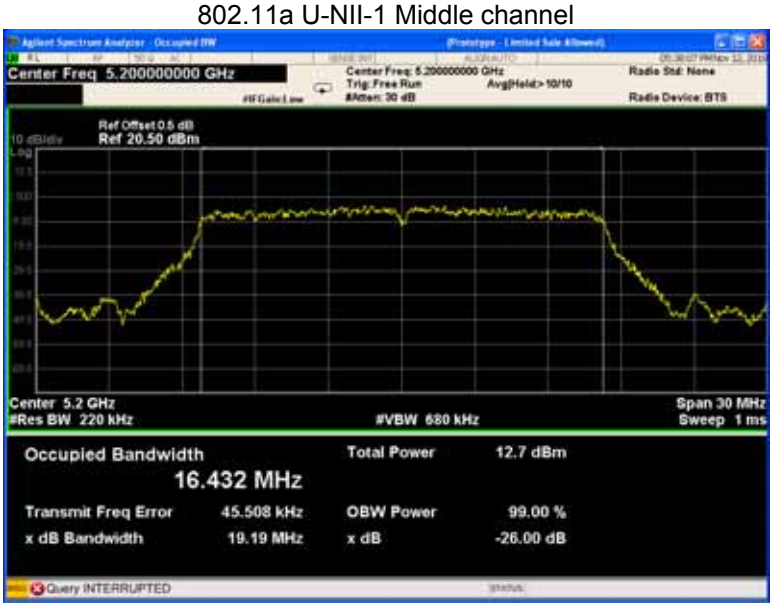
802.11ac(VHT80) U-NII-3 Low channel



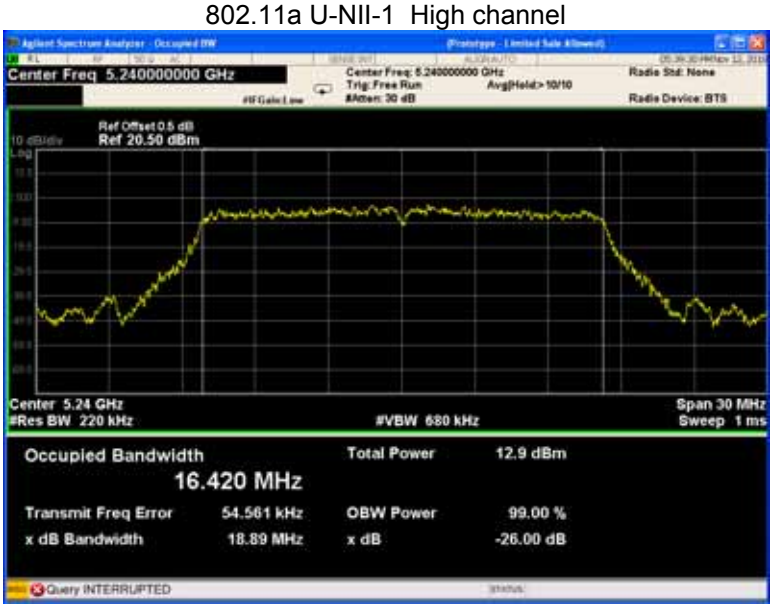
ANT5

802.11a U-NII-1 Low channel

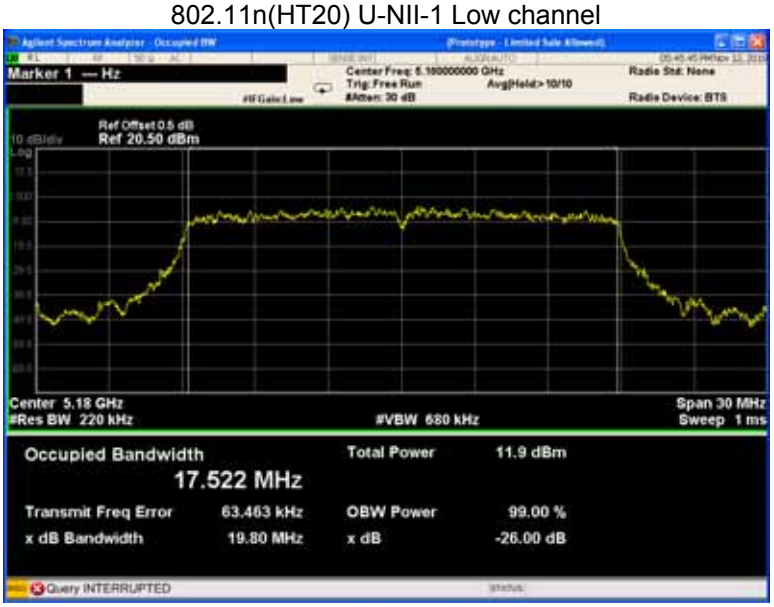
802.11a U-NII-1 Middle channel



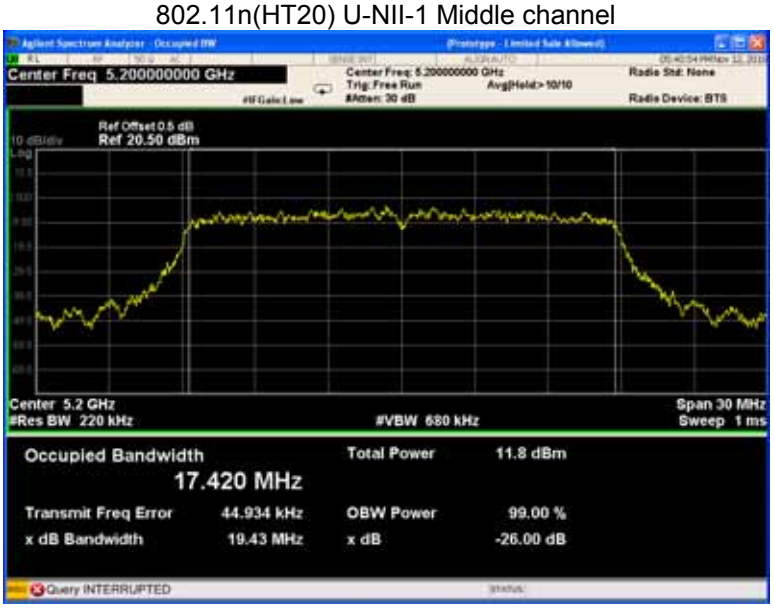
802.11a U-NII-1 High channel



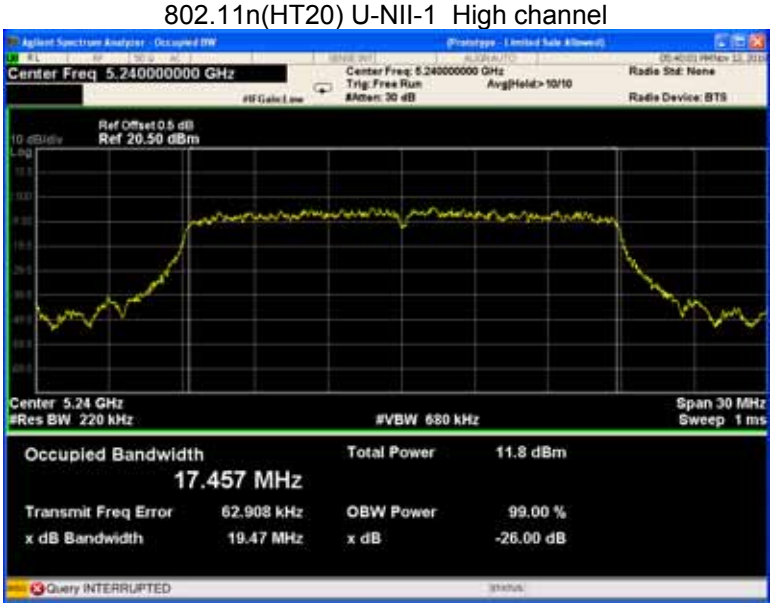
802.11n(HT20) U-NII-1 Low channel



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



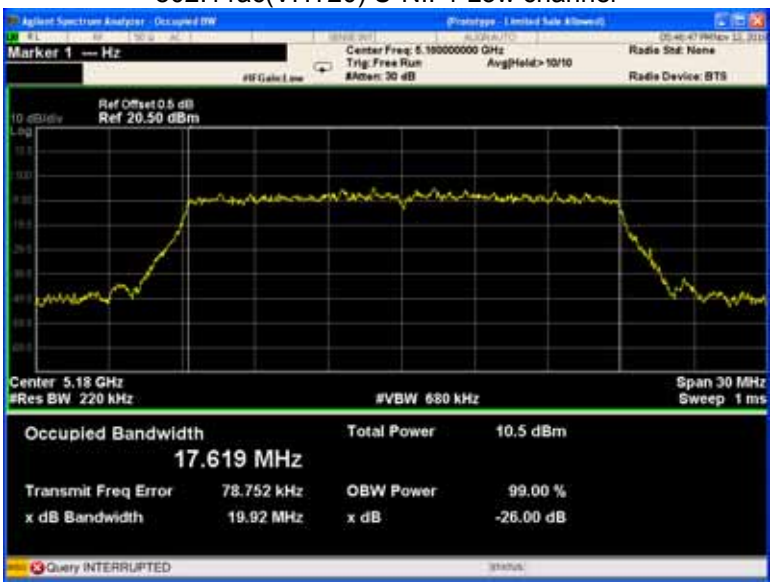
802.11n(HT20) U-NII-1 High channel



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

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

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



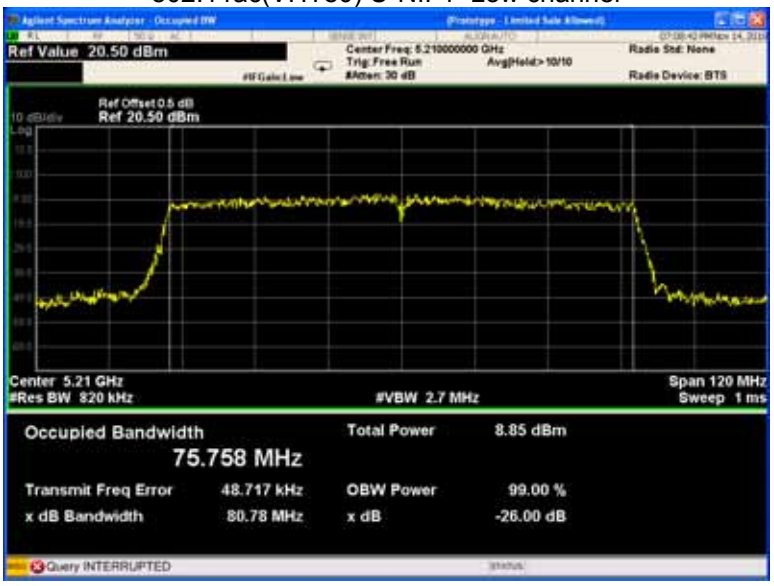
802.11ac(VHT20) U-NII-1 Middle channel

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

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

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

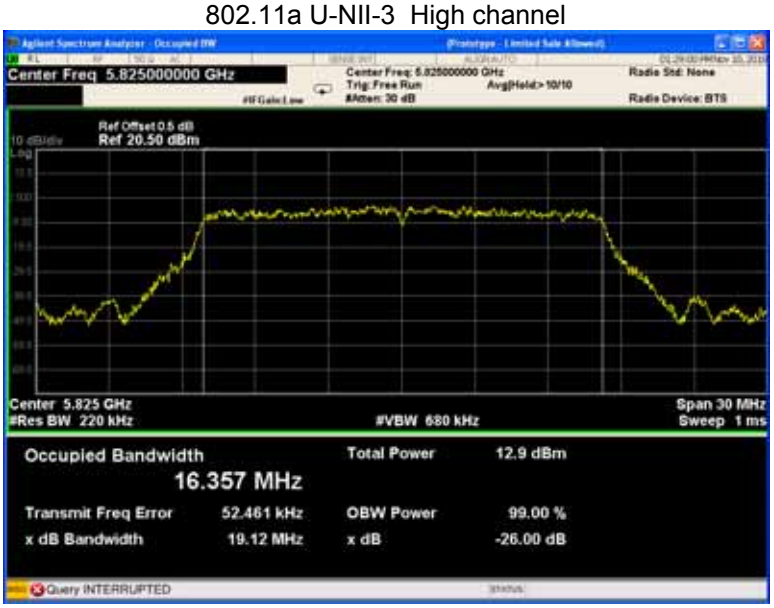
802.11ac(VHT80) U-NII-1 Low channel



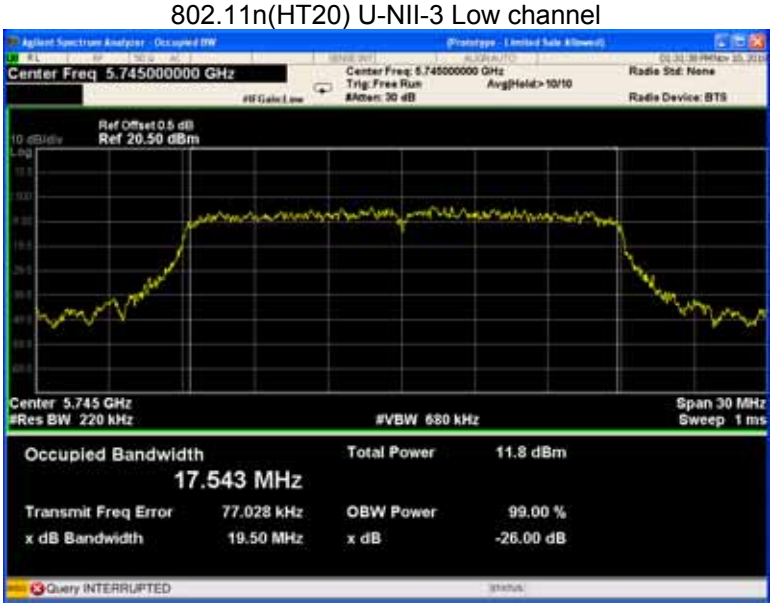
802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

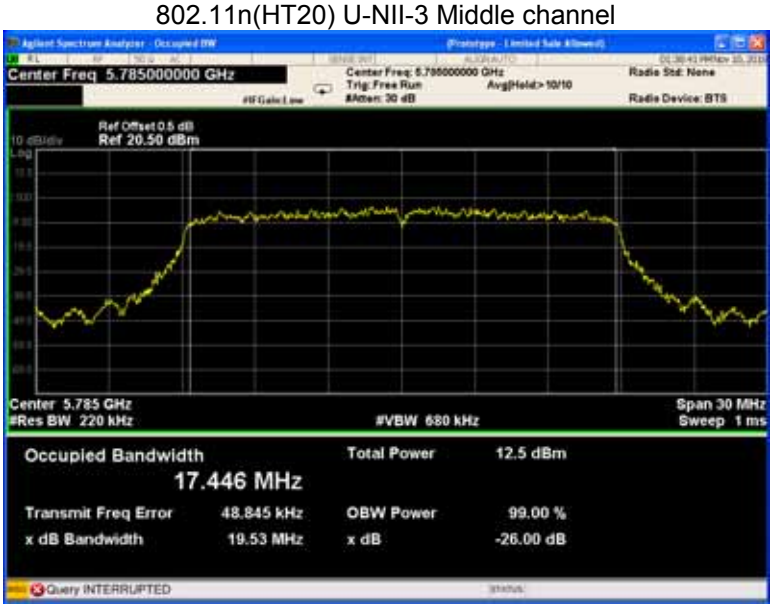
802.11a U-NII-3 High channel



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

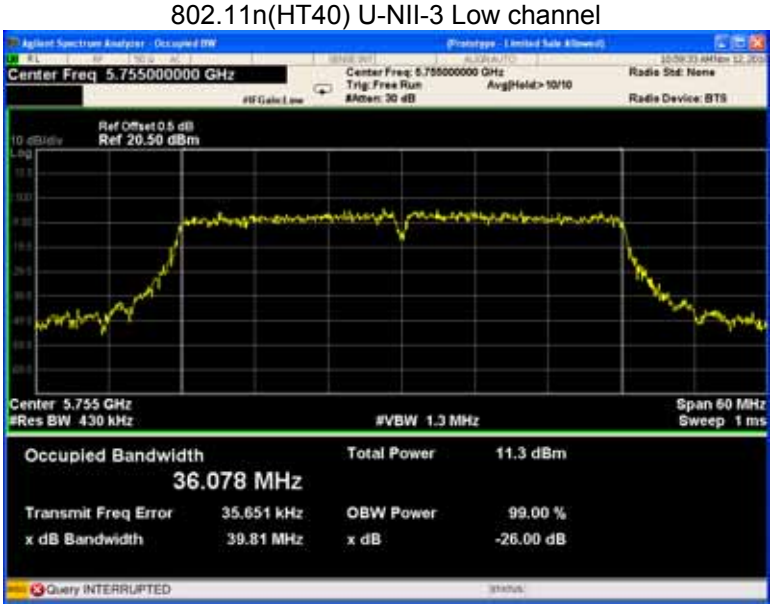


802.11n(HT20) U-NII-3 Middle channel

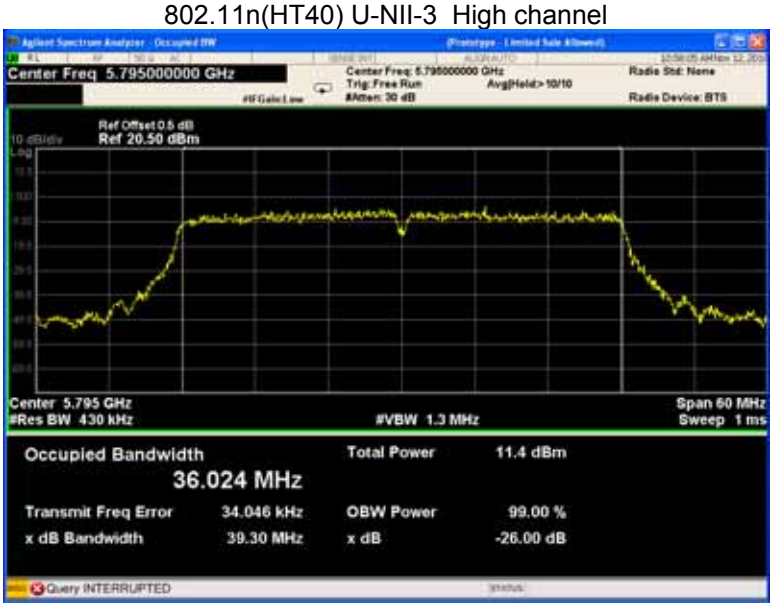


802.11n(HT20) U-NII-3 High channel

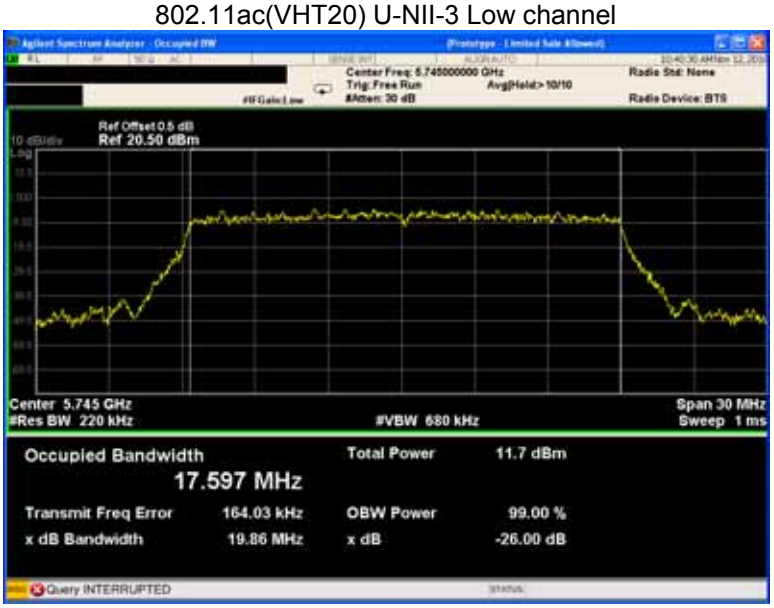
802.11n(HT40) U-NII-3 Low channel



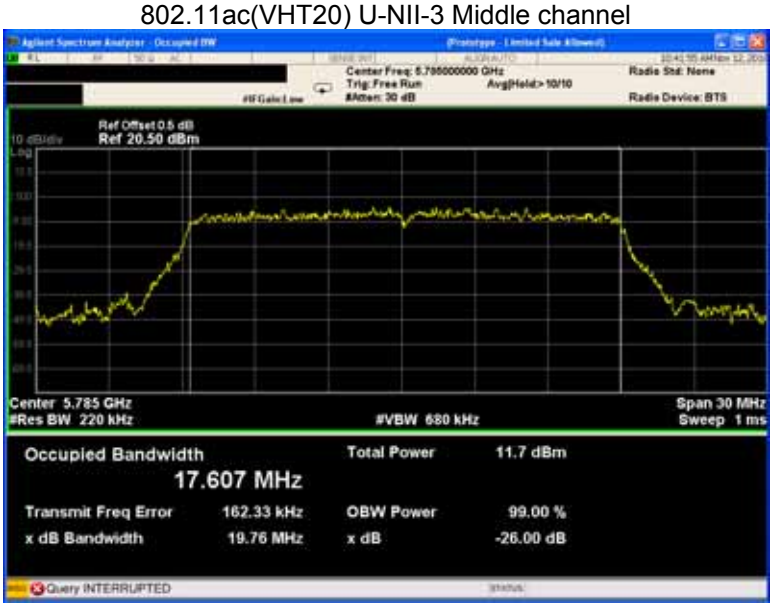
802.11n(HT40) U-NII-3 High channel



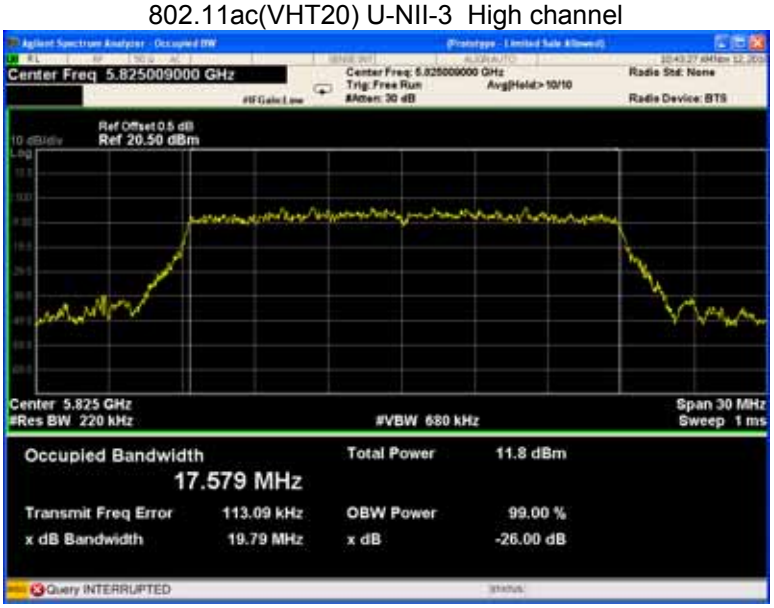
802.11ac(VHT20) U-NII-3 Low channel



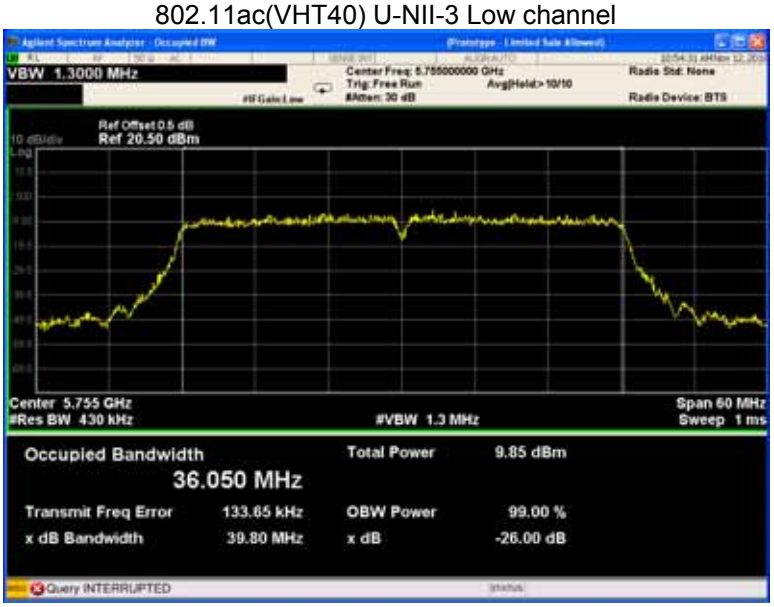
802.11ac(VHT20) U-NII-3 Middle channel



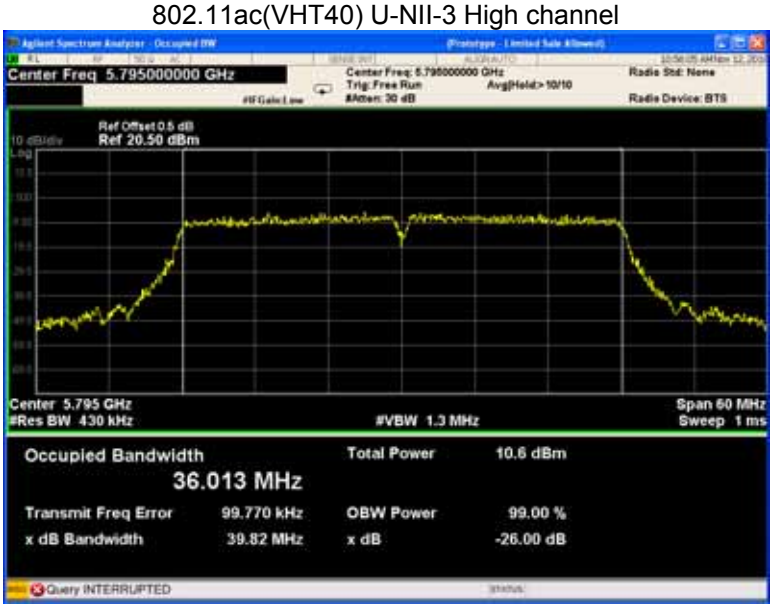
802.11ac(VHT20) U-NII-3 High channel



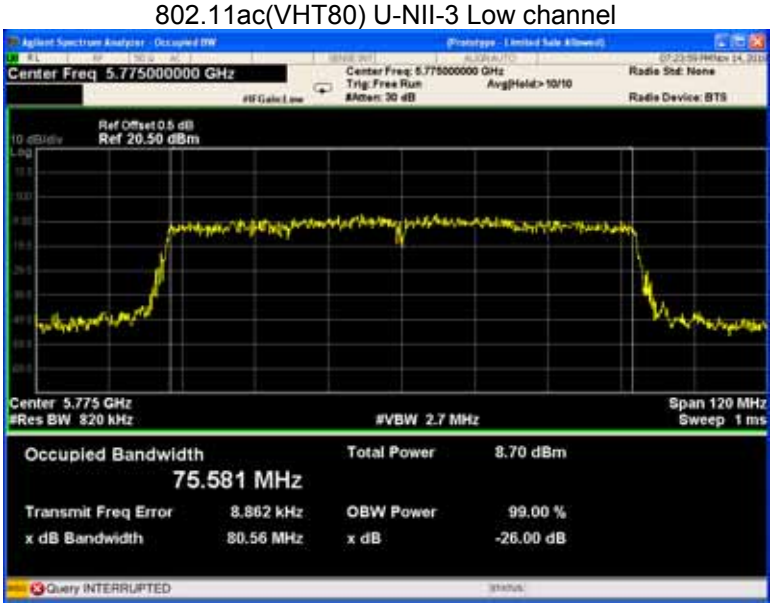
802.11ac(VHT40) U-NII-3 Low channel



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



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



14 Conducted Output Power

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E
Test Limit:	U-NII-1 250mW(24dBm) U-NII-3 1W(30dBm)
Test Result:	PASS
Remark:	Conducted output power= measurement power+10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power

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: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = RMS, Set the span to fully encompass the bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

14.2 Test Result :

*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.

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT1
U-NII-1	802.11a	Low	13.97
		Middle	13.63
		High	14.53
	802.11n(HT20)	Low	13.38
		Middle	13.49
		High	14.21
	802.11n(HT40)	Low	13.37
		Middle	/
		High	14.37
	802.11ac(VHT20)	Low	15.87
		Middle	16.31
		High	16.94
	802.11ac(VHT40)	Low	15.46
		Middle	/
		High	16.65
U-NII-3	802.11a	Low	13.15
		Middle	13.50
		High	13.58
	802.11n(HT20)	Low	12.15
		Middle	12.98
		High	12.69
	802.11n(HT40)	Low	12.86
		Middle	/
		High	13.09
	802.11ac(VHT20)	Low	14.65
		Middle	15.63
		High	15.78
	802.11ac(VHT40)	Low	14.51
		Middle	/
		High	15.38

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT2
U-NII-1	802.11a	Low	13.98
		Middle	13.78
		High	14.72
	802.11n(HT20)	Low	13.13
		Middle	12.78
		High	14.07
	802.11n(HT40)	Low	12.77
		Middle	/
		High	13.94
	802.11ac(VHT20)	Low	16.10
		Middle	15.77
		High	16.45
	802.11ac(VHT40)	Low	15.39
		Middle	/
		High	16.01
U-NII-3	802.11a	Low	13.28
		Middle	14.15
		High	13.26
	802.11n(HT20)	Low	12.11
		Middle	12.46
		High	12.74
	802.11n(HT40)	Low	12.60
		Middle	/
		High	13.09
	802.11ac(VHT20)	Low	14.73
		Middle	15.09
		High	15.35
	802.11ac(VHT40)	Low	14.55
		Middle	/
		High	15.12

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT1+ANT2
U-NII-1	802.11a	Low	16.99
		Middle	16.72
		High	17.64
	802.11n(HT20)	Low	16.27
		Middle	16.16
		High	17.15
	802.11n(HT40)	Low	16.09
		Middle	/
		High	17.17
	802.11ac(VHT20)	Low	19.00
		Middle	19.06
		High	19.71
	802.11ac(VHT40)	Low	18.44
		Middle	/
		High	19.35
U-NII-3	802.11a	Low	16.23
		Middle	16.85
		High	16.43
	802.11n(HT20)	Low	15.14
		Middle	15.74
		High	15.73
	802.11n(HT40)	Low	15.74
		Middle	/
		High	16.10
	802.11ac(VHT20)	Low	17.70
		Middle	18.38
		High	18.58
	802.11ac(VHT40)	Low	17.54
		Middle	/
		High	18.26

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT4
U-NII-1	802.11a	Low	12.64
		Middle	12.50
		High	12.71
	802.11n(HT20)	Low	11.62
		Middle	11.96
		High	11.86
	802.11n(HT40)	Low	10.83
		Middle	/
		High	10.96
	802.11ac(VHT20)	Low	10.35
		Middle	10.50
		High	10.54
	802.11ac(VHT40)	Low	9.36
		Middle	/
		High	9.45
	802.11ac(VHT80)	Low	8.75
		Middle	/
		High	/
U-NII-3	802.11a	Low	12.92
		Middle	12.81
		High	12.82
	802.11n(HT20)	Low	11.59
		Middle	11.73
		High	11.66
	802.11n(HT40)	Low	10.62
		Middle	/
		High	10.70
	802.11ac(VHT20)	Low	10.54
		Middle	10.85
		High	10.71
	802.11ac(VHT40)	Low	9.90
		Middle	/
		High	9.93
	802.11ac(VHT80)	Low	8.78
		Middle	/
		High	/

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT5
U-NII-1	802.11a	Low	12.67
		Middle	12.55
		High	12.97
	802.11n(HT20)	Low	11.86
		Middle	11.69
		High	11.85
	802.11n(HT40)	Low	10.94
		Middle	/
		High	10.46
	802.11ac(VHT20)	Low	10.44
		Middle	10.49
		High	10.36
	802.11ac(VHT40)	Low	9.52
		Middle	/
		High	9.40
	802.11ac(VHT80)	Low	8.85
		Middle	/
		High	/
U-NII-3	802.11a	Low	12.60
		Middle	12.74
		High	12.91
	802.11n(HT20)	Low	11.71
		Middle	11.53
		High	11.97
	802.11n(HT40)	Low	10.52
		Middle	/
		High	10.79
	802.11ac(VHT20)	Low	10.78
		Middle	10.96
		High	10.80
	802.11ac(VHT40)	Low	9.41
		Middle	/
		High	9.85
	802.11ac(VHT80)	Low	8.92
		Middle	/
		High	/

Band	Operation mode	CH	Conducted Output Power (dBm)
			ANT4+ANT5
U-NII-1	802.11a	Low	15.67
		Middle	15.54
		High	15.85
	802.11n(HT20)	Low	14.75
		Middle	14.84
		High	14.87
	802.11n(HT40)	Low	13.90
		Middle	/
		High	13.73
	802.11ac(VHT20)	Low	13.41
		Middle	13.51
		High	13.46
	802.11ac(VHT40)	Low	12.45
		Middle	/
		High	12.44
	802.11ac(VHT80)	Low	11.81
		Middle	/
		High	/
U-NII-3	802.11a	Low	15.77
		Middle	15.79
		High	15.88
	802.11n(HT20)	Low	14.66
		Middle	14.64
		High	14.83
	802.11n(HT40)	Low	13.58
		Middle	/
		High	13.76
	802.11ac(VHT20)	Low	13.67
		Middle	13.92
		High	13.77
	802.11ac(VHT40)	Low	12.67
		Middle	/
		High	12.90
	802.11ac(VHT80)	Low	11.86
		Middle	/
		High	/

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

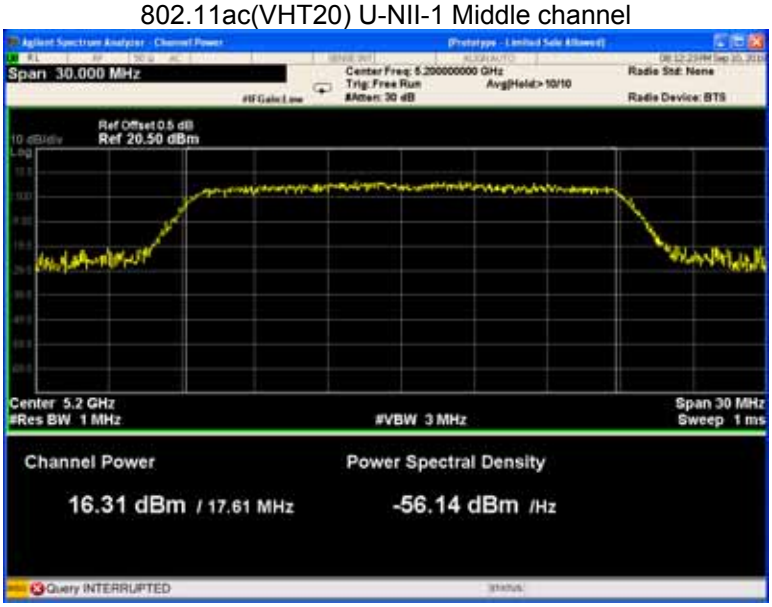
802.11n(HT20) U-NII-1 High channel

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

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

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

802.11ac(VHT20) U-NII-1 Middle 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

802.11a 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

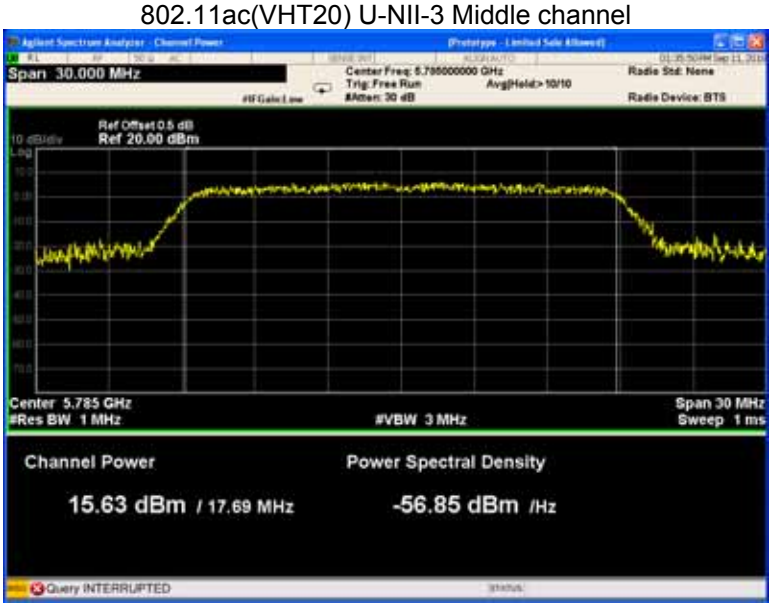
802.11n(HT20) U-NII-3 High channel

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

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

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

802.11ac(VHT20) U-NII-3 Middle 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

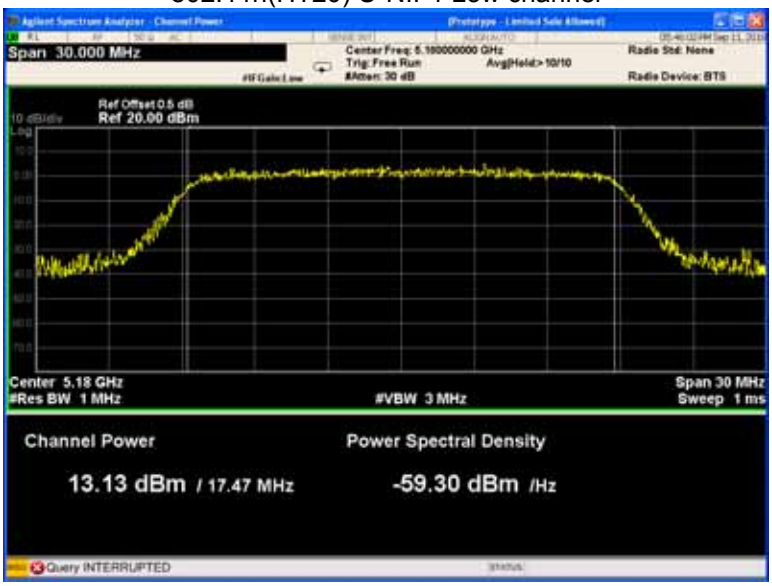
ANT2

802.11a U-NII-1 Low channel

802.11a U-NII-1 Middle channel

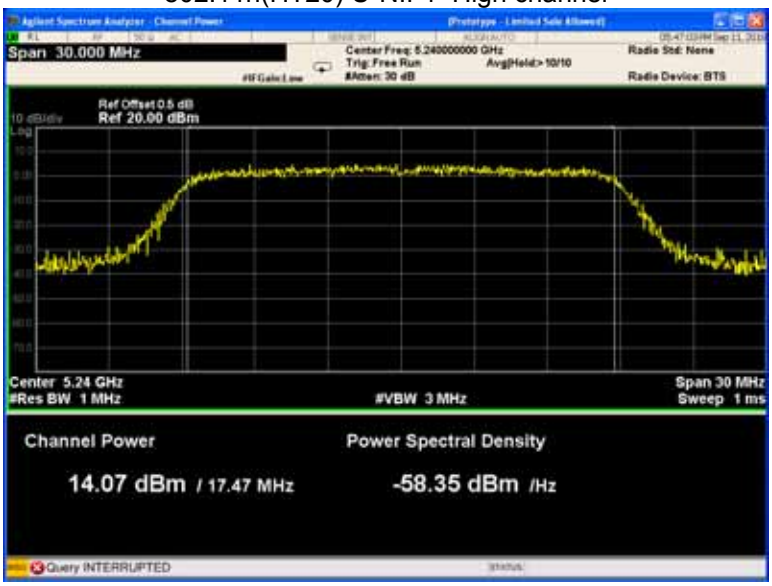
802.11a U-NII-1 High channel

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



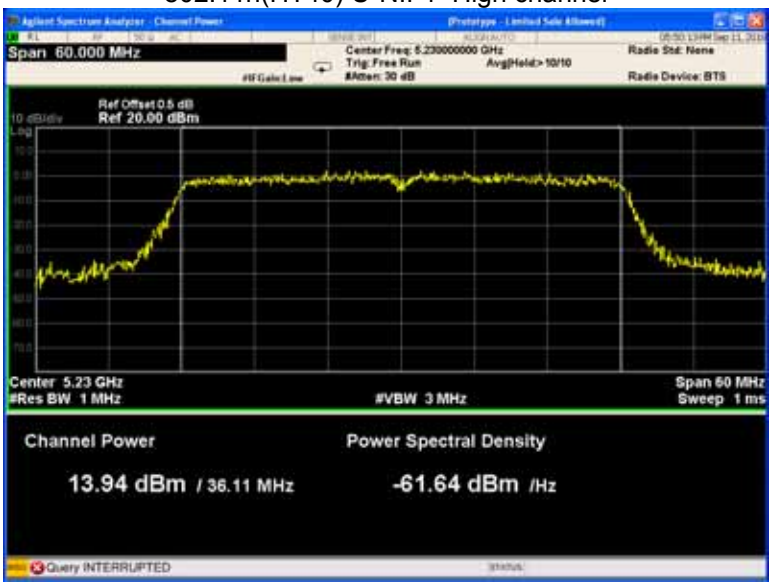
802.11n(HT20) U-NII-1 Middle channel

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 Low channel

802.11ac(VHT20) U-NII-1 Middle 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

802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

802.11a U-NII-3 High channel

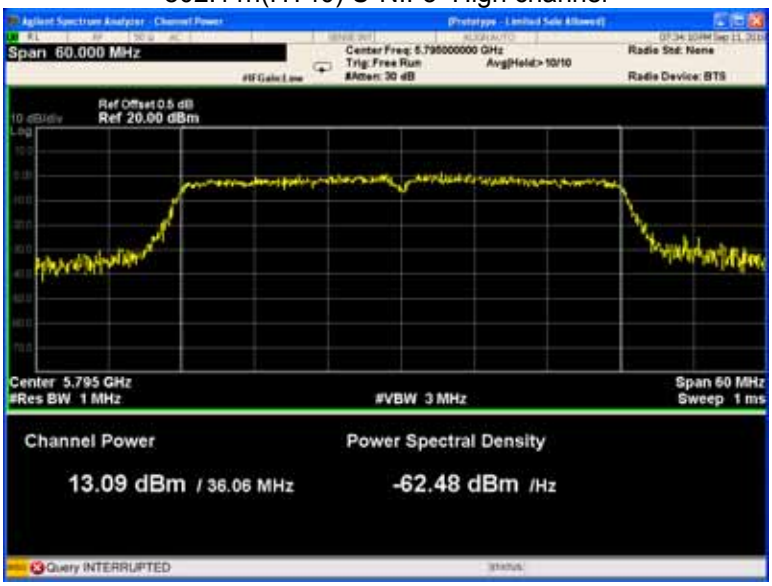
802.11n(HT20) U-NII-3 Low channel

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

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

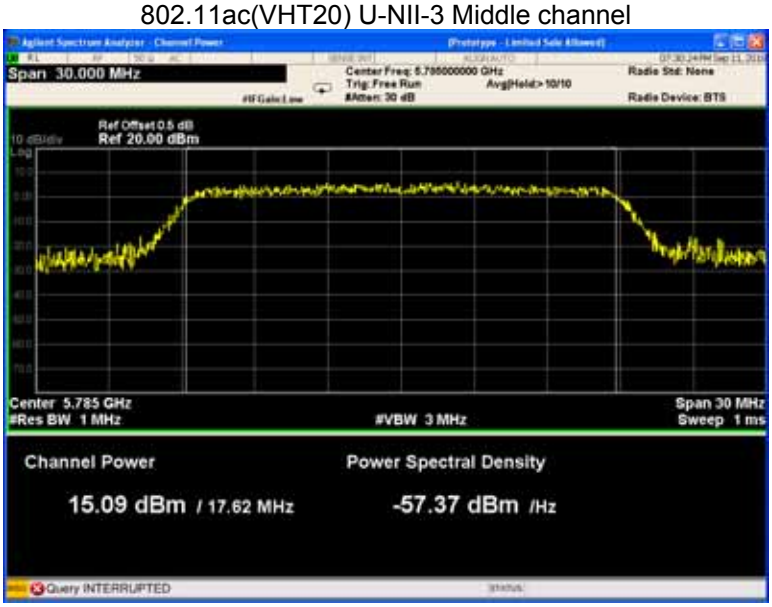
802.11n(HT40) U-NII-3 Low channel

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



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

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



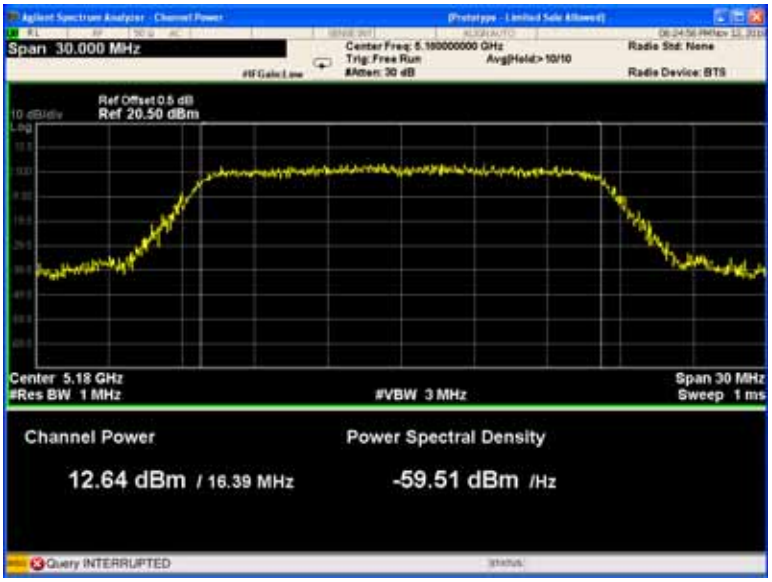
802.11ac(VHT20) U-NII-3 High channel

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

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

ANT4

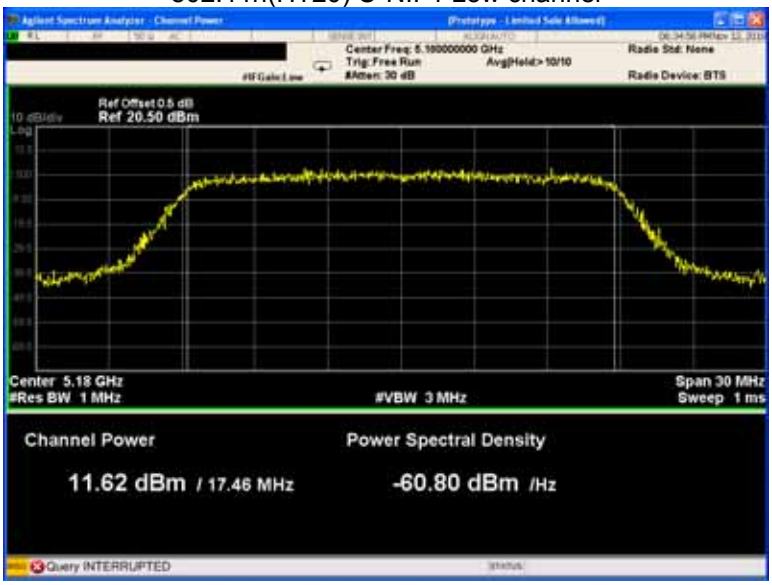
802.11a U-NII-1 Low channel



802.11a U-NII-1 Middle channel

802.11a U-NII-1 High channel

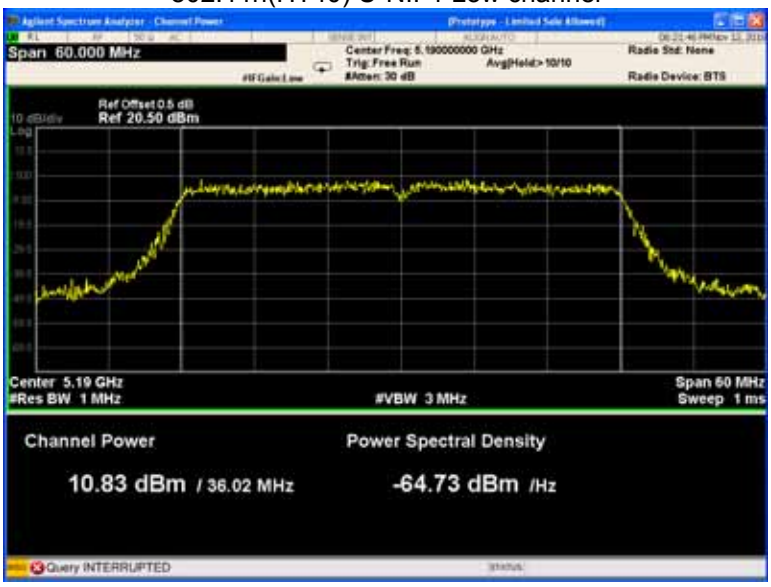
802.11n(HT20) U-NII-1 Low channel



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

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

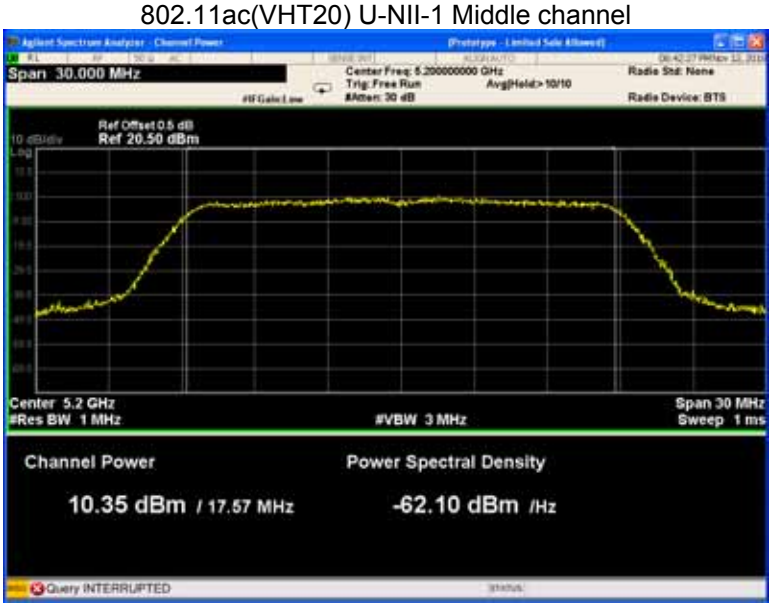
802.11n(HT40) U-NII-1 Low channel



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

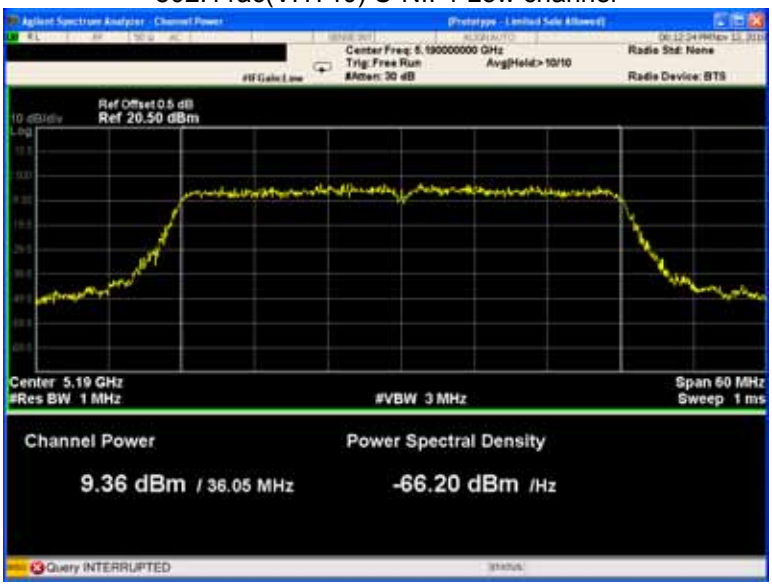
802.11ac(VHT20) U-NII-1 Low channel

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



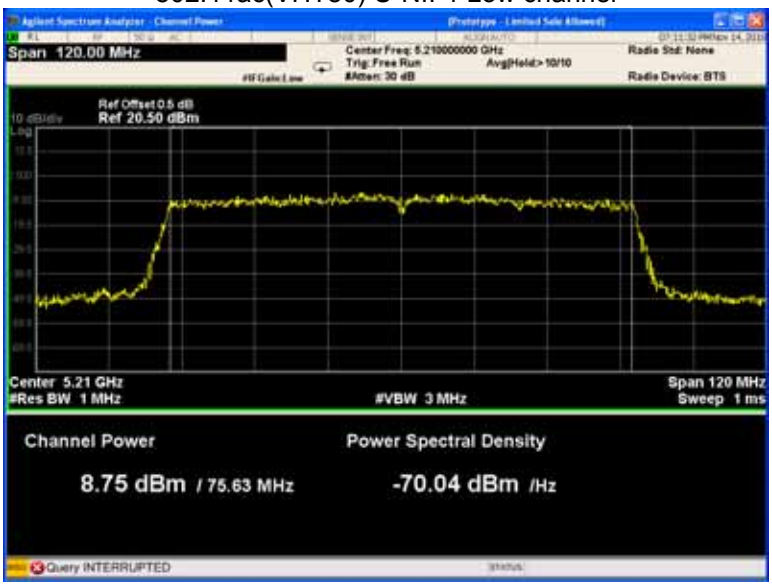
802.11ac(VHT20) U-NII-1 High channel

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-3 Low channel

802.11a U-NII-3 Middle channel

802.11a U-NII-3 High channel

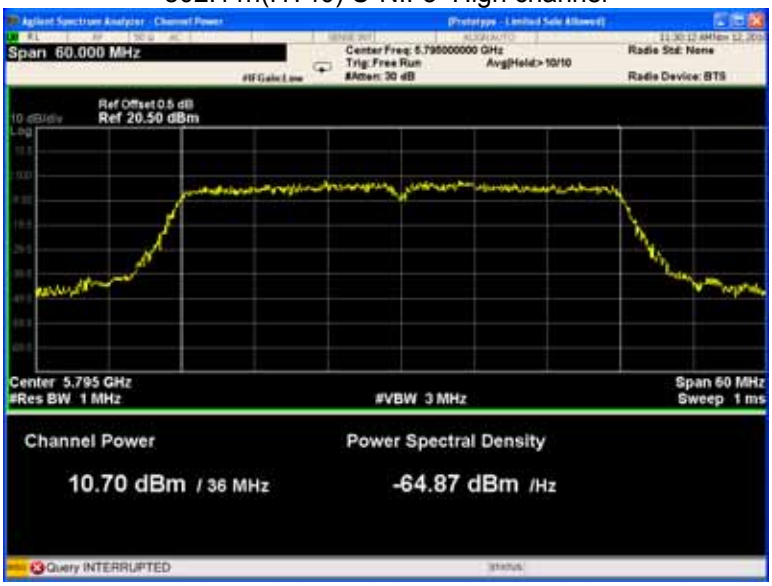
802.11n(HT20) U-NII-3 Low channel

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

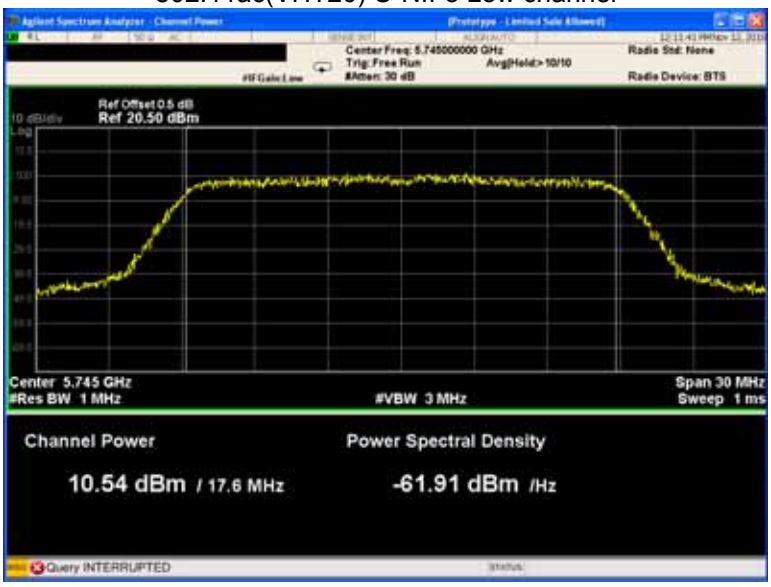
802.11n(HT20) U-NII-3 High channel

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

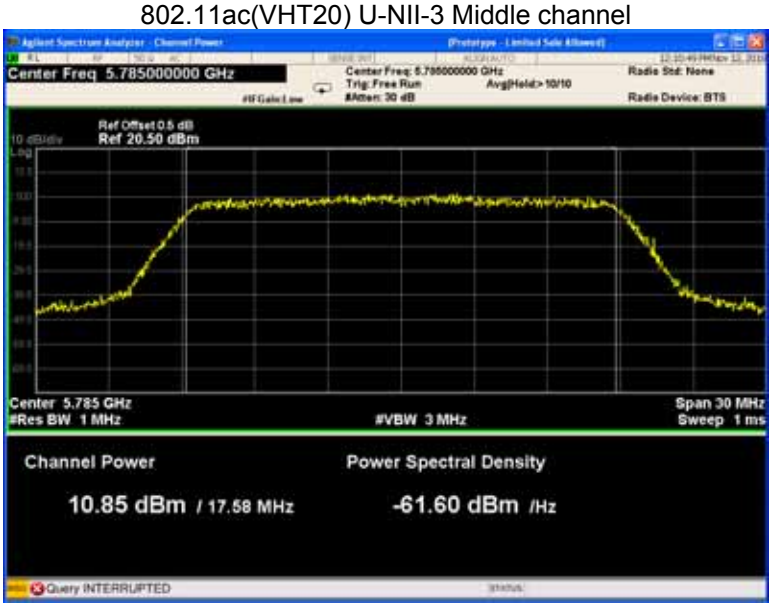
802.11n(HT40) U-NII-3 High channel



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



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

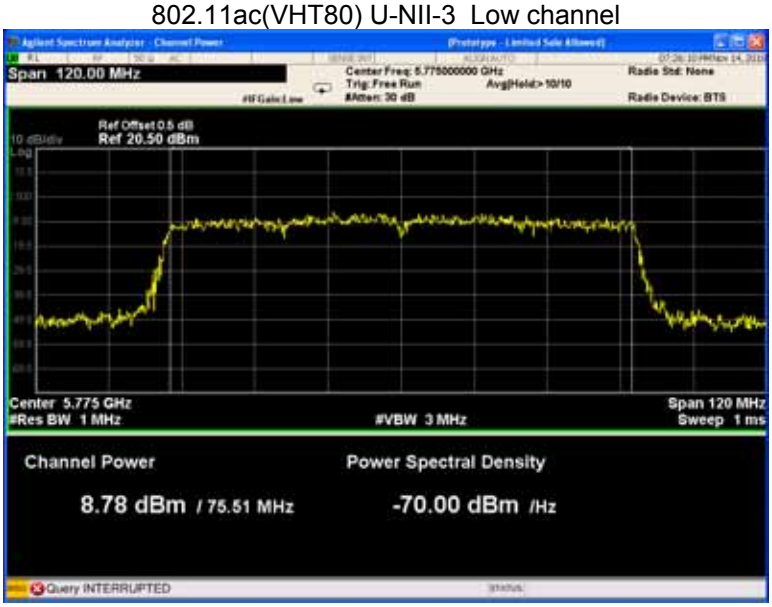


802.11ac(VHT20) U-NII-3 High channel

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

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

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



ANT5

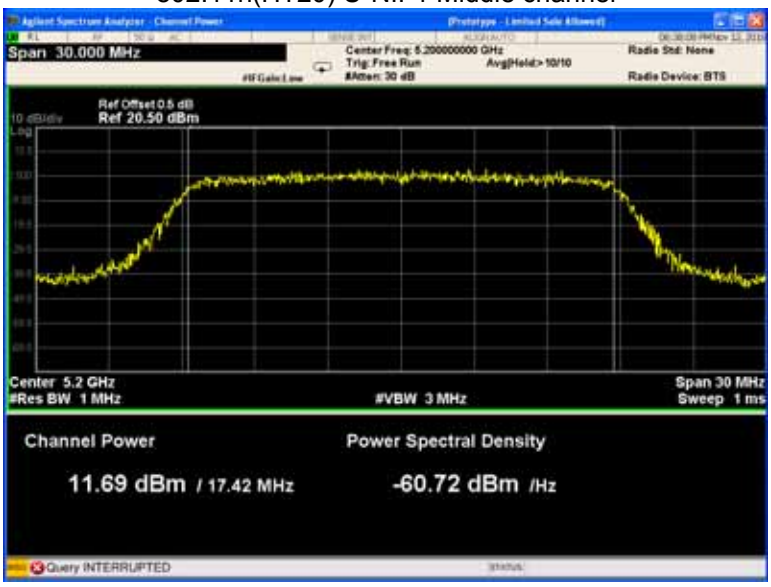
802.11a U-NII-1 Low channel

802.11a U-NII-1 Middle channel

802.11a U-NII-1 High channel

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

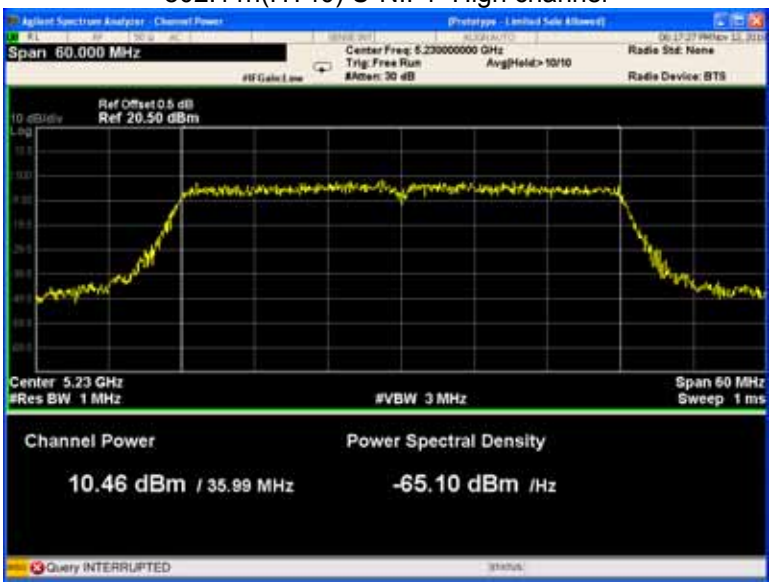
802.11n(HT20) U-NII-1 Middle channel



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

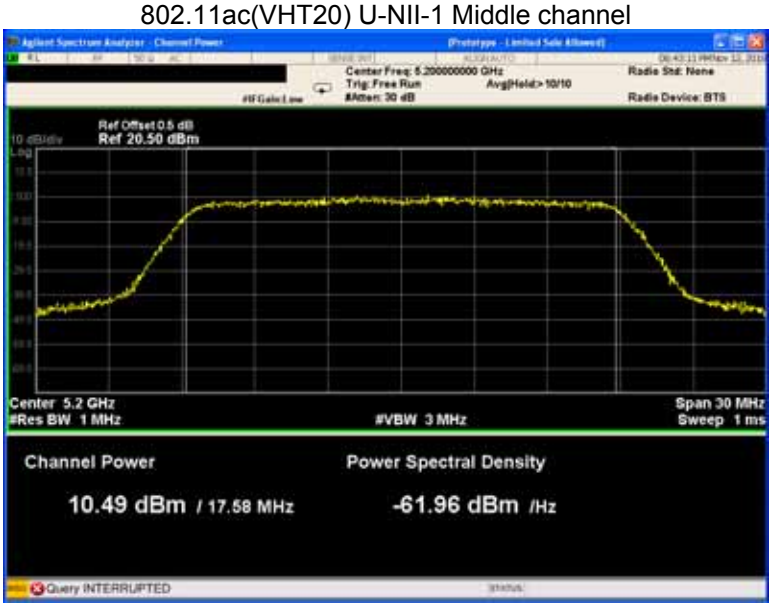
802.11n(HT40) U-NII-1 Low channel

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



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

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

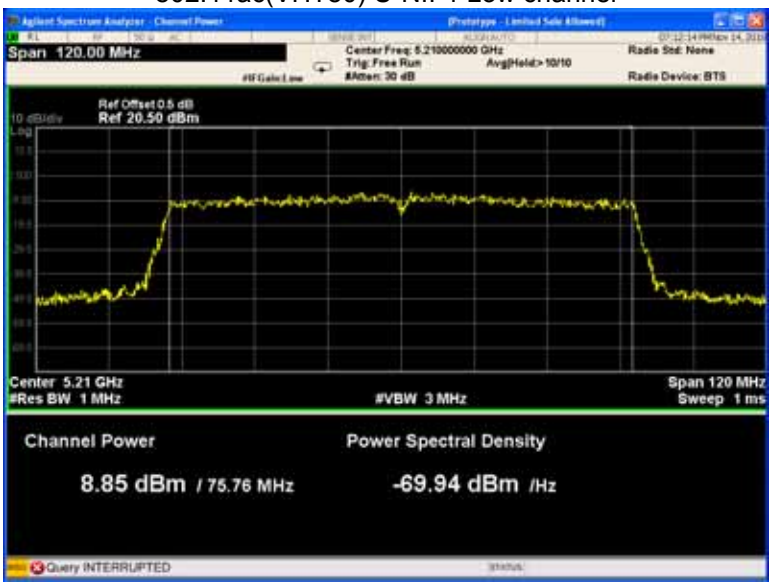


802.11ac(VHT20) U-NII-1 High channel

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

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

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



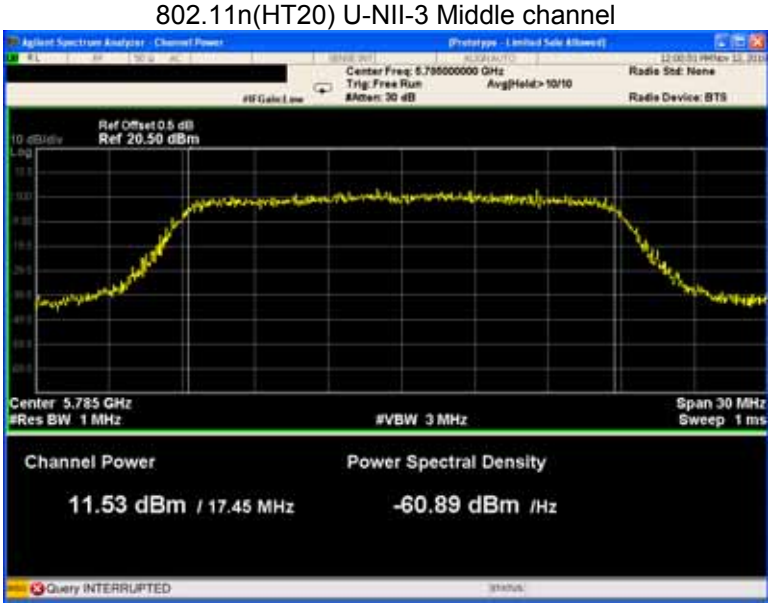
802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

802.11a U-NII-3 High channel

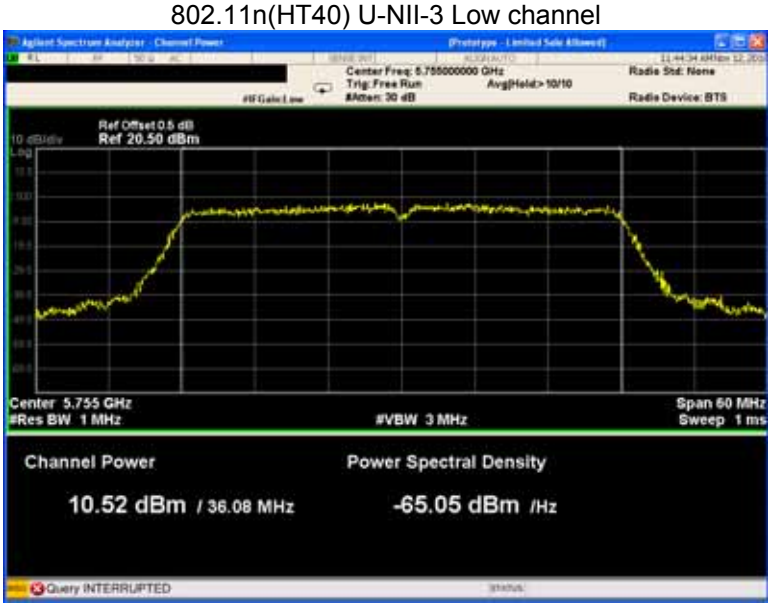
802.11n(HT20) U-NII-3 Low channel

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



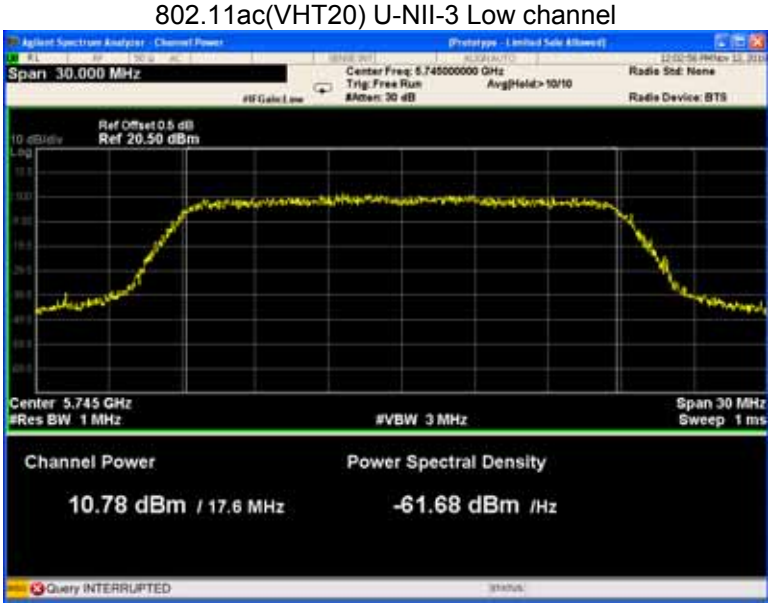
802.11n(HT20) U-NII-3 High channel

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

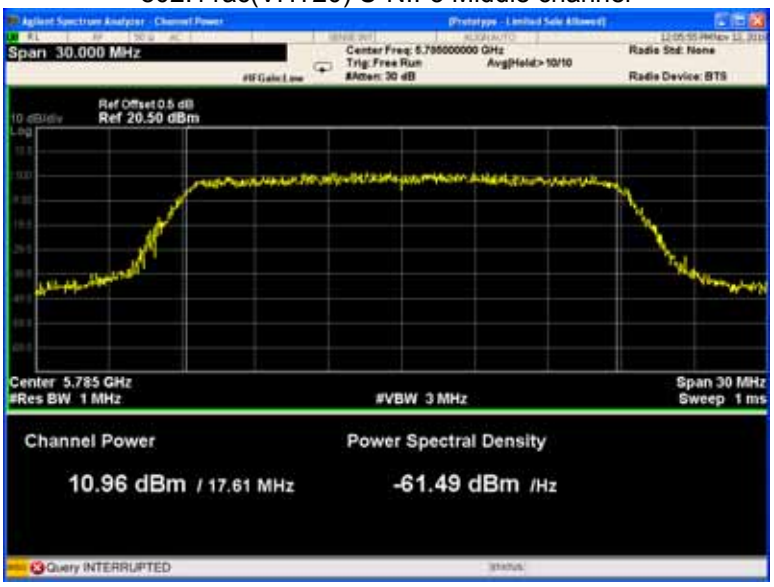


802.11n(HT40) U-NII-3 High channel

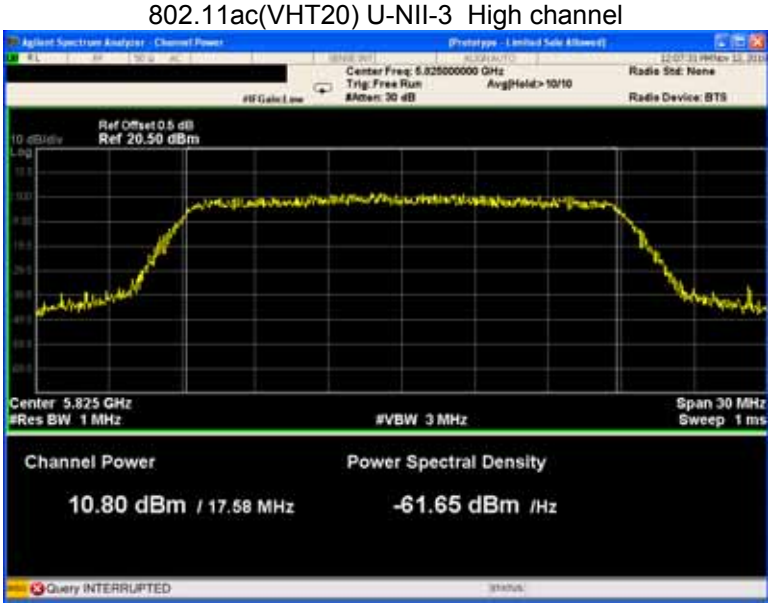
802.11ac(VHT20) U-NII-3 Low channel



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

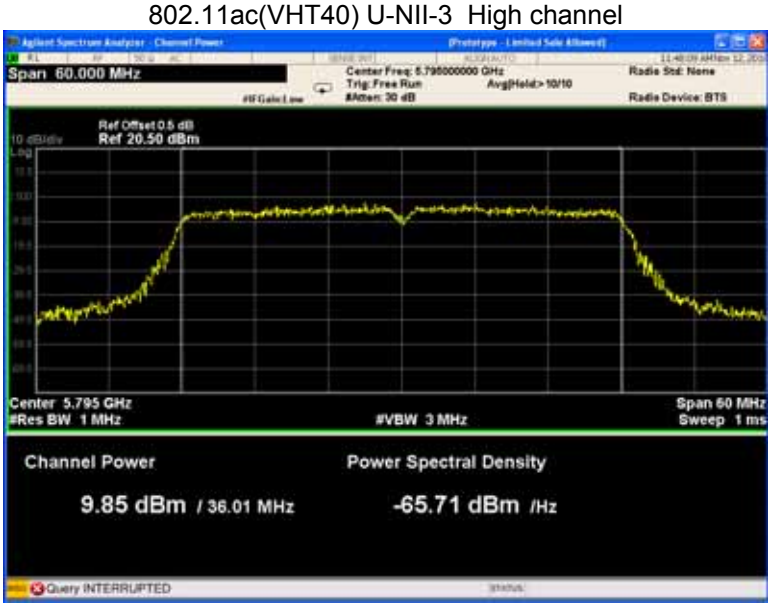


802.11ac(VHT20) U-NII-3 High channel



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

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



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

15 Power Spectral density

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 , Section F
Test Limit:	≤11.00dBm/MHz for Operation in the U-NII-1(5150MHz-5250MHz)of mobile device ≤30.00dBm/500KHz for Operation in the U-NII-3(5725MHz-5850MHz)of device
Test Result:	PASS

15.1 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 ≥3* RBW Sweep = auto; Detector Function = Peak. Trae = Max hold.

U-NII-3

RBW = 510KHz, VBW ≥3* RBW Sweep = auto; Detector Function = Peak. Trae = Max hold.

3. Allow the trae to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjaent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

15.2 Test Result:

*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.

Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT1
U-NII-1	802.11a	Low	5.213
		Middle	4.748
		High	6.557
	802.11n(HT20)	Low	4.265
		Middle	5.219
		High	5.670
	802.11n(HT40)	Low	2.320
		Middle	/
		High	2.843
	802.11ac(VHT20)	Low	6.348
		Middle	7.339
		High	7.399
	802.11ac(VHT40)	Low	3.799
		Middle	/
		High	5.599
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	2.983
		Middle	3.048
		High	2.515
	802.11n(HT20)	Low	1.002
		Middle	1.187
		High	1.939
	802.11n(HT40)	Low	2.644
		Middle	/
		High	-1.566
	802.11ac(VHT20)	Low	4.193
		Middle	4.286
		High	4.068
	802.11ac(VHT40)	Low	-0.116
		Middle	/
		High	0.524
	Limit	≤30.00dBm/500KHz	

Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT2
U-NII-1	802.11a	Low	5.788
		Middle	5.847
		High	7.121
	802.11n(HT20)	Low	3.778
		Middle	4.695
		High	6.290
	802.11n(HT40)	Low	1.851
		Middle	/
		High	2.612
	802.11ac(VHT20)	Low	7.121
		Middle	7.479
		High	7.466
	802.11ac(VHT40)	Low	4.287
		Middle	/
		High	5.762
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	1.861
		Middle	1.574
		High	2.285
	802.11n(HT20)	Low	-0.109
		Middle	-0.222
		High	0.100
	802.11n(HT40)	Low	-2.517
		Middle	/
		High	-1.640
	802.11ac(VHT20)	Low	2.057
		Middle	1.981
		High	2.661
	802.11ac(VHT40)	Low	-0.642
		Middle	/
		High	-1.349
	Limit	≤30.00dBm/500KHz	

Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT1+ ANT2
U-NII-1	802.11a	Low	8.52
		Middle	8.34
		High	9.86
	802.11n(HT20)	Low	7.04
		Middle	7.98
		High	9.00
	802.11n(HT40)	Low	5.10
		Middle	/
		High	5.74
	802.11ac(VHT20)	Low	9.76
		Middle	10.42
		High	10.44
	802.11ac(VHT40)	Low	7.06
		Middle	/
		High	8.69
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	5.47
		Middle	5.38
		High	5.41
	802.11n(HT20)	Low	3.49
		Middle	3.55
		High	4.13
	802.11n(HT40)	Low	3.80
		Middle	/
		High	1.41
	802.11ac(VHT20)	Low	6.27
		Middle	6.29
		High	6.43
	802.11ac(VHT40)	Low	2.64
		Middle	/
		High	2.70
	Limit	≤30.00dBm/500KHz	

Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT4
U-NII-1	802.11a	Low	4.007
		Middle	4.200
		High	5.980
	802.11n(HT20)	Low	2.657
		Middle	4.435
		High	3.806
	802.11n(HT40)	Low	0.194
		Middle	/
		High	1.496
	802.11ac(VHT20)	Low	3.637
		Middle	2.341
		High	2.032
	802.11ac(VHT40)	Low	0.441
		Middle	/
		High	-1.451
	802.11ac(VHT80)	Low	-4.559
		Middle	/
		High	/
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	1.810
		Middle	2.450
		High	1.527
	802.11n(HT20)	Low	0.569
		Middle	1.462
		High	0.557
	802.11n(HT40)	Low	-3.266
		Middle	/
		High	-5.412
	802.11ac(VHT20)	Low	-2.494
		Middle	-0.936
		High	-1.323
	802.11ac(VHT40)	Low	-5.928
		Middle	/
		High	-4.675
	802.11ac(VHT80)	Low	-8.728
		Middle	/
		High	/
	Limit	≤30.00dBm/500KHz	

Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT5
U-NII-1	802.11a	Low	4.085
		Middle	4.542
		High	6.357
	802.11n(HT20)	Low	3.251
		Middle	3.826
		High	2.786
	802.11n(HT40)	Low	-0.143
		Middle	/
		High	0.909
	802.11ac(VHT20)	Low	3.684
		Middle	2.482
		High	1.683
	802.11ac(VHT40)	Low	-0.695
		Middle	/
		High	-1.842
	802.11ac(VHT80)	Low	-5.242
		Middle	/
		High	/
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	1.794
		Middle	2.571
		High	1.396
	802.11n(HT20)	Low	1.249
		Middle	2.238
		High	1.224
	802.11n(HT40)	Low	-3.375
		Middle	/
		High	-3.434
	802.11ac(VHT20)	Low	-2.531
		Middle	-1.038
		High	-0.211
	802.11ac(VHT40)	Low	-5.392
		Middle	/
		High	-4.795
	802.11ac(VHT80)	Low	-8.903
		Middle	/
		High	/
	Limit	≤30.00dBm/500KHz	

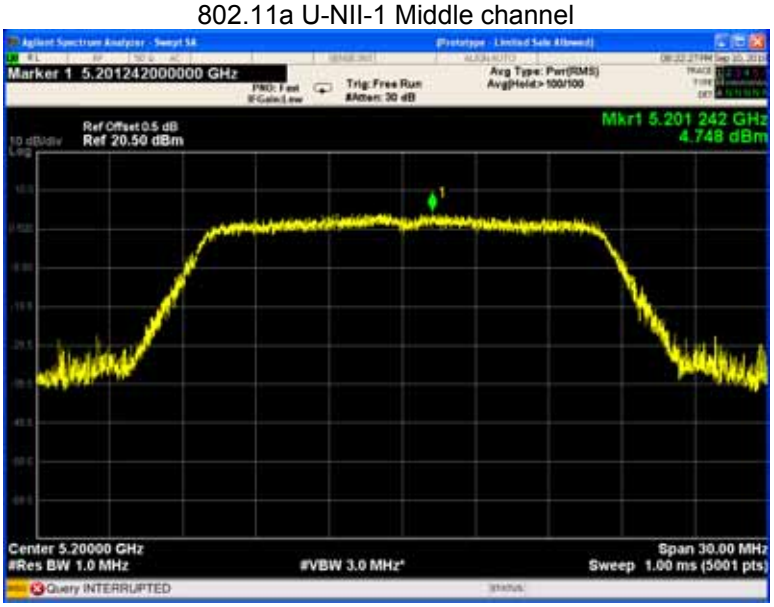
Band	Operation mode	CH	Power Spectral Density (dBm/MHz)
			ANT4+ ANT5
U-NII-1	802.11a	Low	7.06
		Middle	7.38
		High	9.18
	802.11n(HT20)	Low	5.97
		Middle	7.15
		High	6.34
	802.11n(HT40)	Low	3.04
		Middle	/
		High	4.22
	802.11ac(VHT20)	Low	6.67
		Middle	5.42
		High	4.87
	802.11ac(VHT40)	Low	2.92
		Middle	/
		High	1.37
	802.11ac(VHT80)	Low	-1.88
		Middle	/
		High	/
	Limit	≤11.00dBm/MHz	
U-NII-3	802.11a	Low	4.81
		Middle	5.52
		High	4.47
	802.11n(HT20)	Low	3.93
		Middle	4.88
		High	3.91
	802.11n(HT40)	Low	-0.31
		Middle	/
		High	-1.30
	802.11ac(VHT20)	Low	0.50
		Middle	2.02
		High	2.28
	802.11ac(VHT40)	Low	-2.64
		Middle	/
		High	-1.72
	802.11ac(VHT80)	Low	-5.80
		Middle	/
		High	/
	Limit	≤30.00dBm/500KHz	

Test result plots shown as follows:

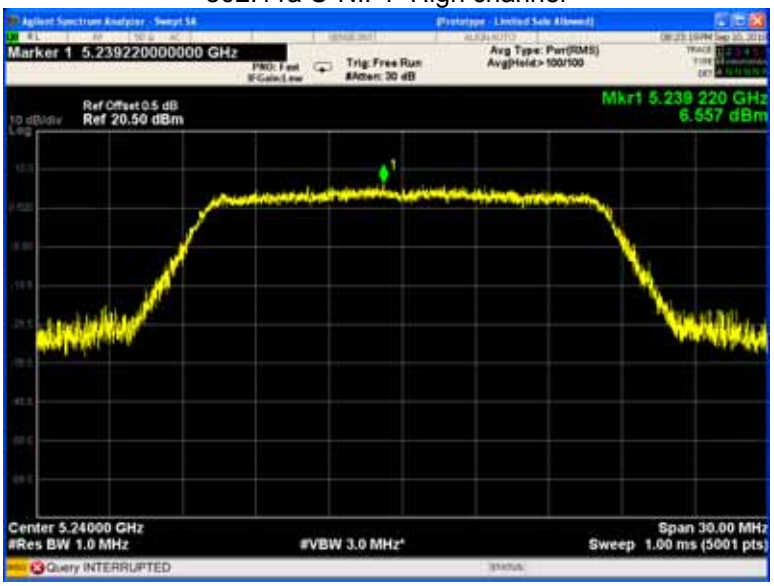
ANT1

802.11a U-NII-1 Low channel

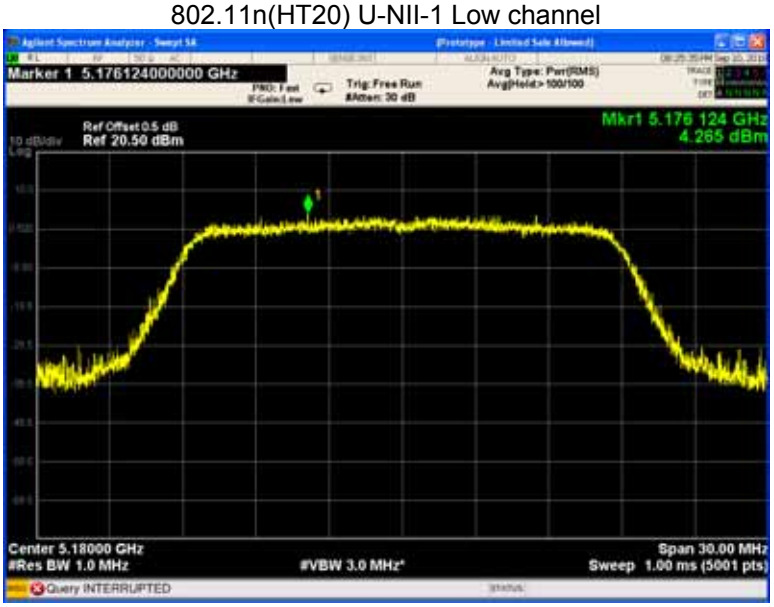
802.11a U-NII-1 Middle channel



802.11a U-NII-1 High channel

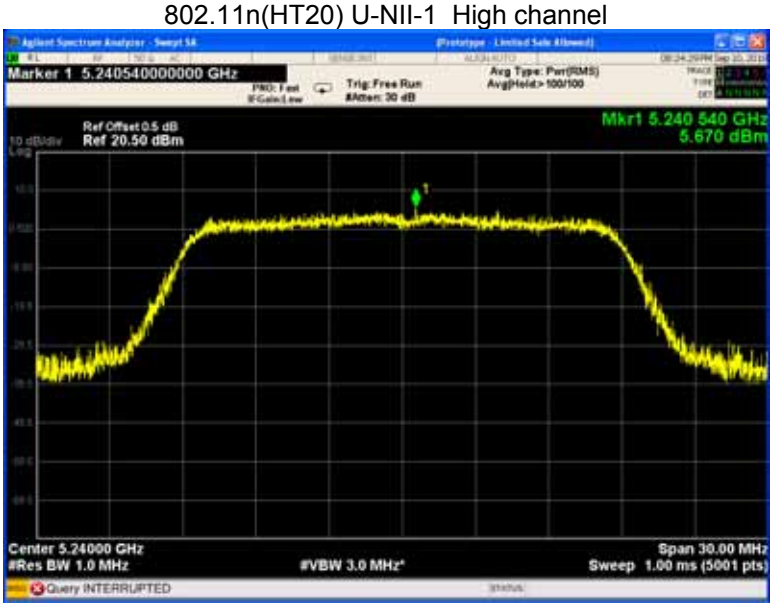


802.11n(HT20) U-NII-1 Low channel



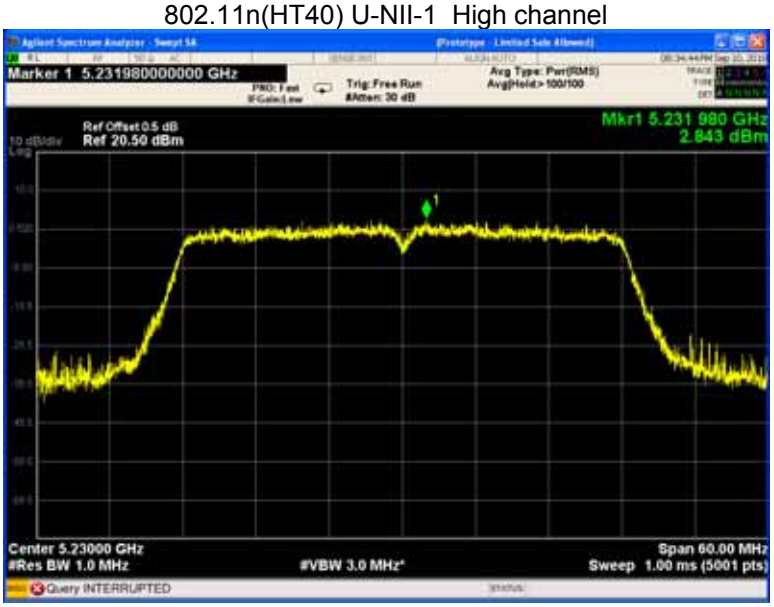
802.11n(HT20) U-NII-1 Middle channel

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

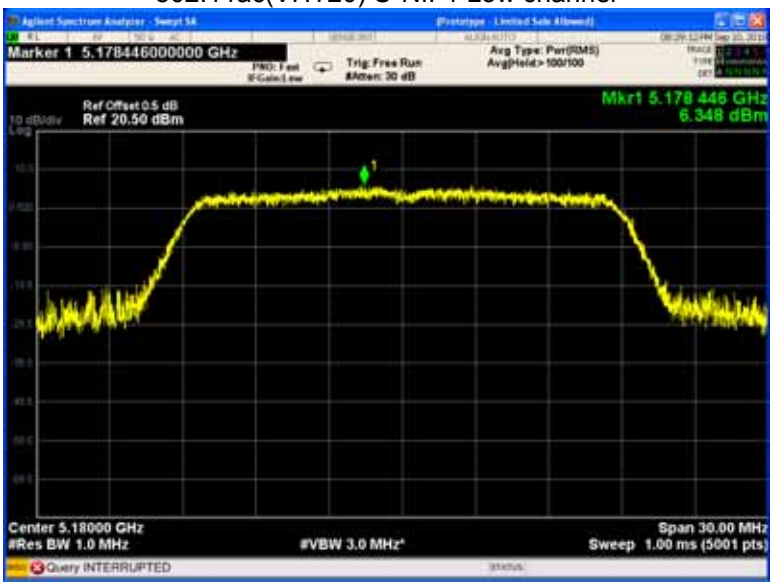


802.11n(HT40) U-NII-1 Low channel

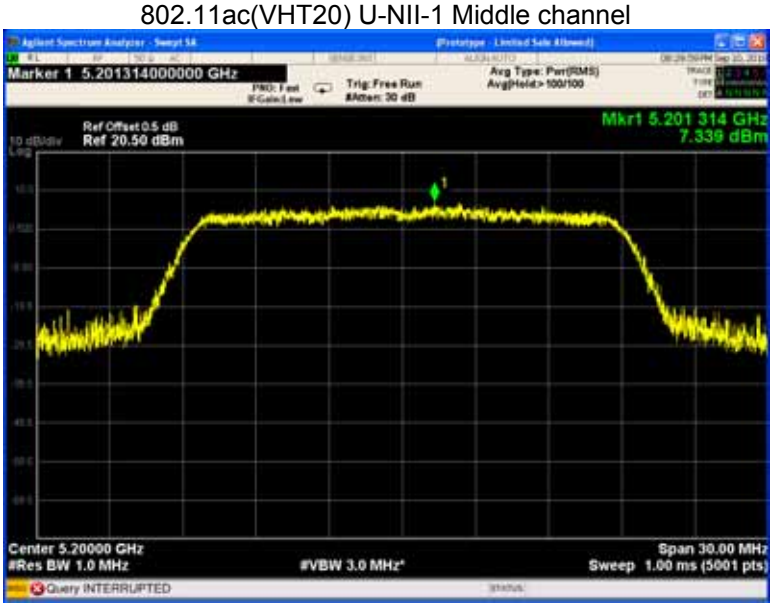
802.11n(HT40) U-NII-1 High channel



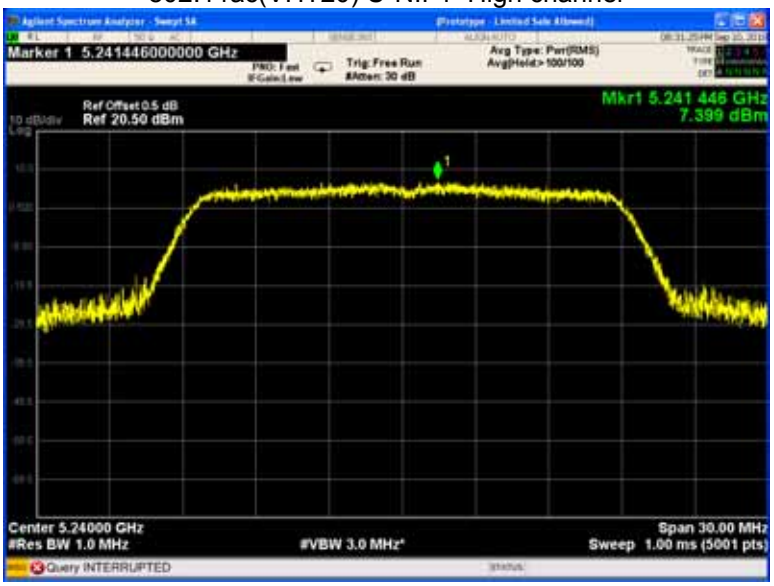
802.11ac(VHT20) U-NII-1 Low channel



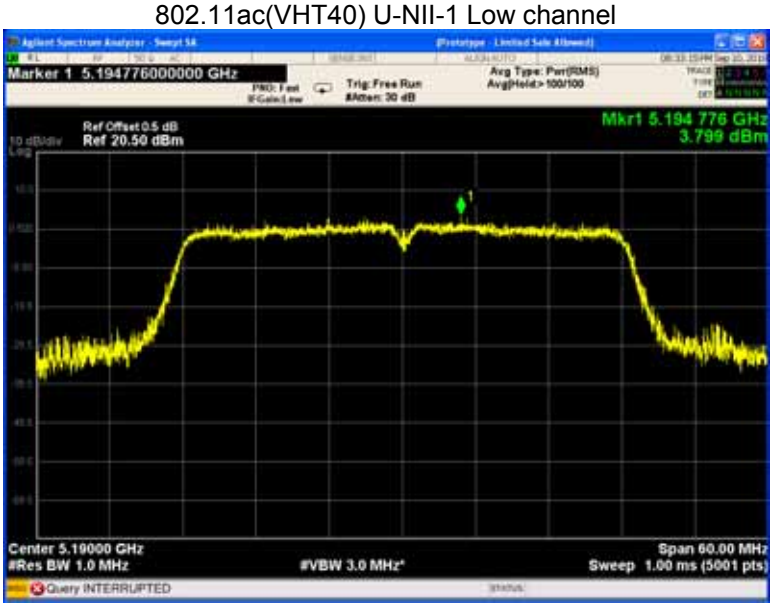
802.11ac(VHT20) U-NII-1 Middle channel



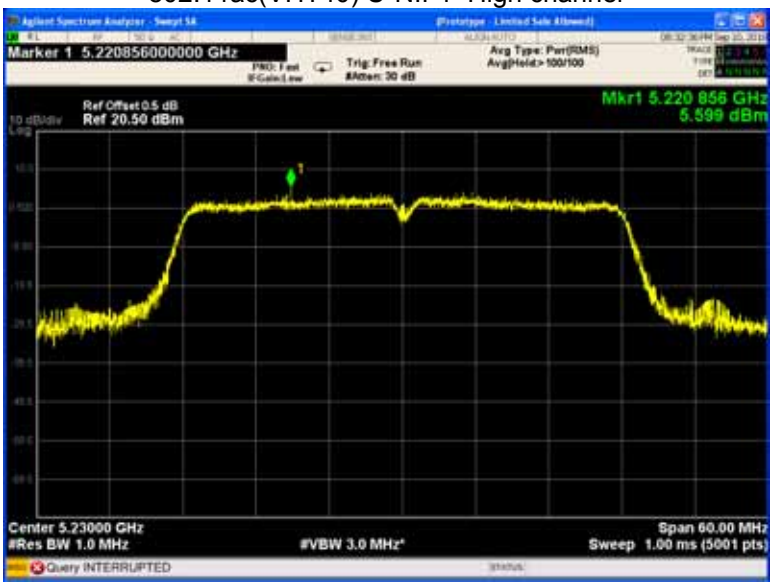
802.11ac(VHT20) U-NII-1 High channel



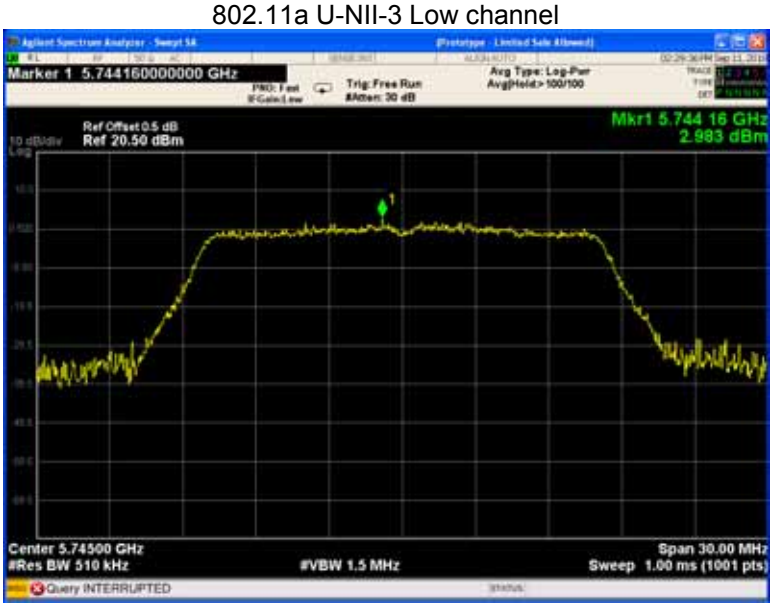
802.11ac(VHT40) U-NII-1 Low channel



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

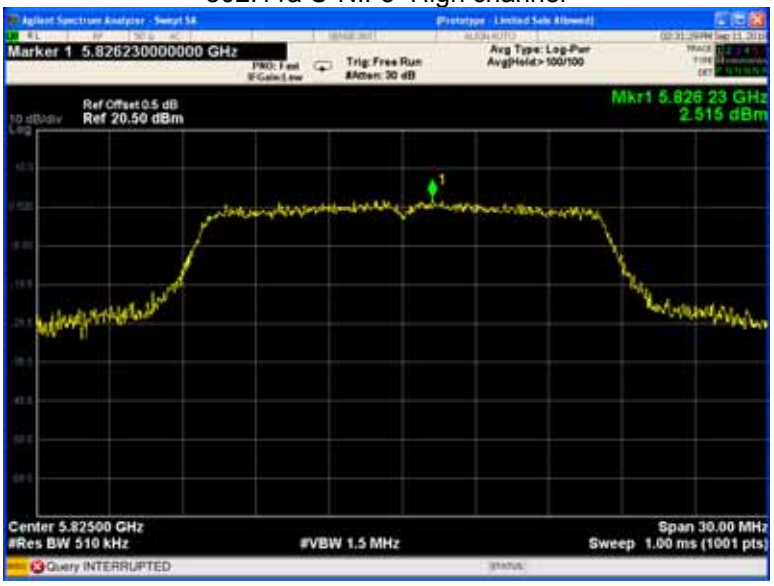


802.11a U-NII-3 Low channel



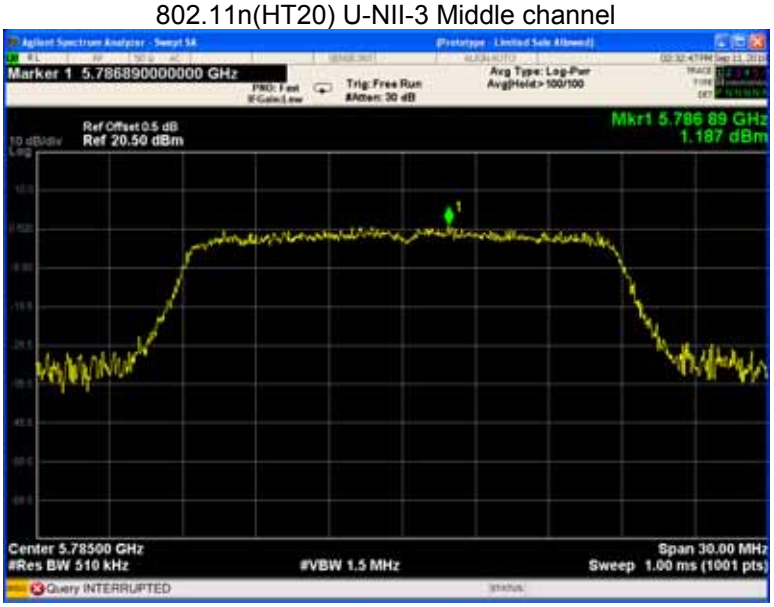
802.11a U-NII-3 Middle channel

802.11a U-NII-3 High channel



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

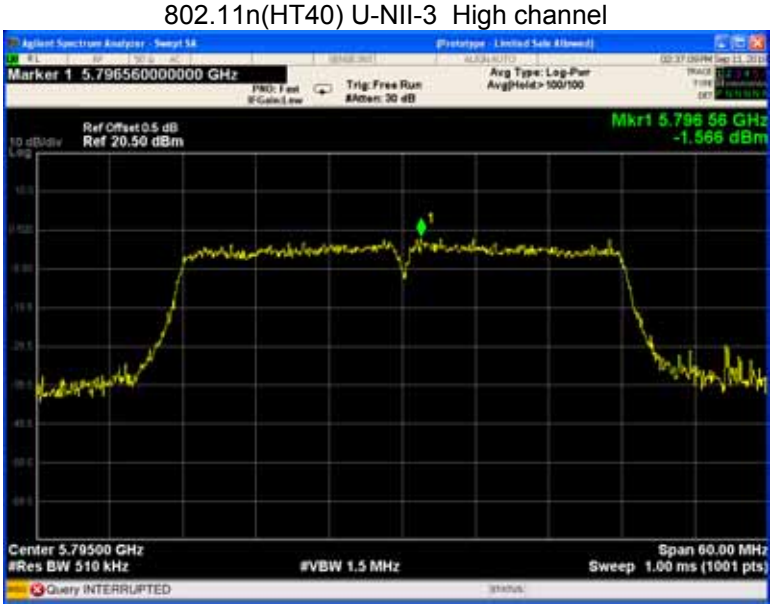
802.11n(HT20) U-NII-3 Middle channel



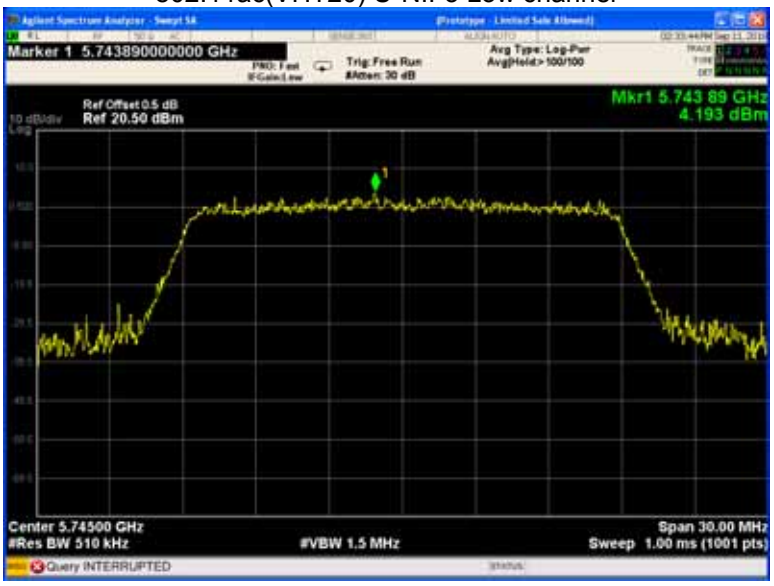
802.11n(HT20) U-NII-3 High channel

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

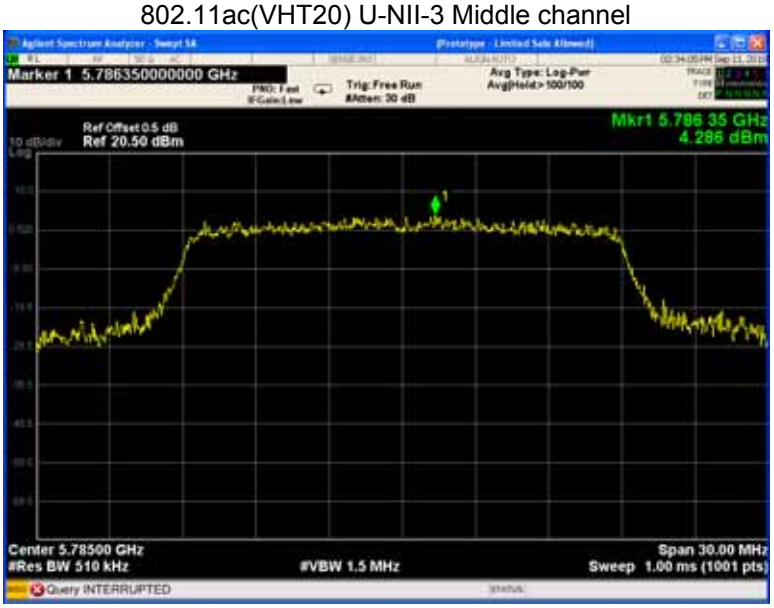
802.11n(HT40) U-NII-3 High channel



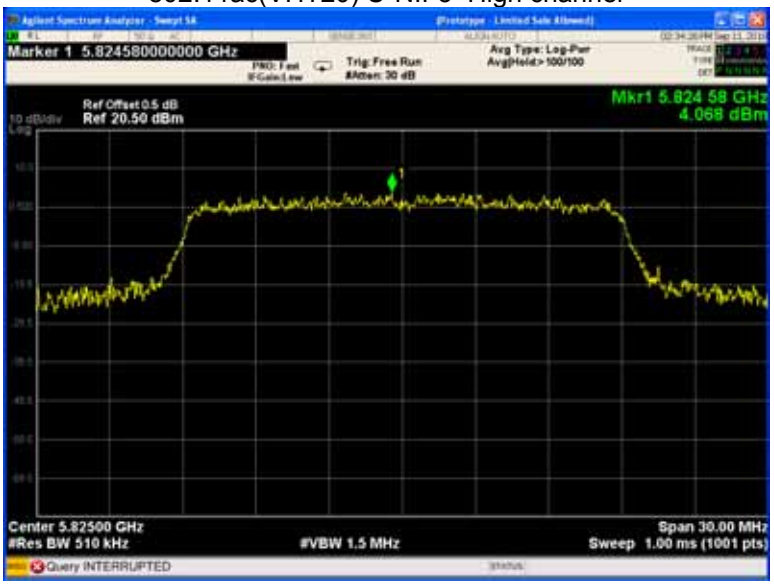
802.11ac(VHT20) U-NII-3 Low channel



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

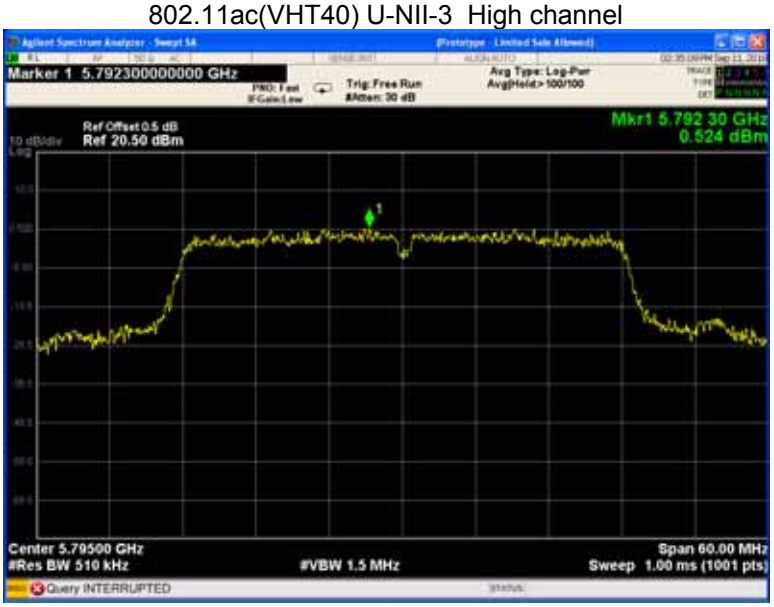


802.11ac(VHT20) U-NII-3 High channel



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

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



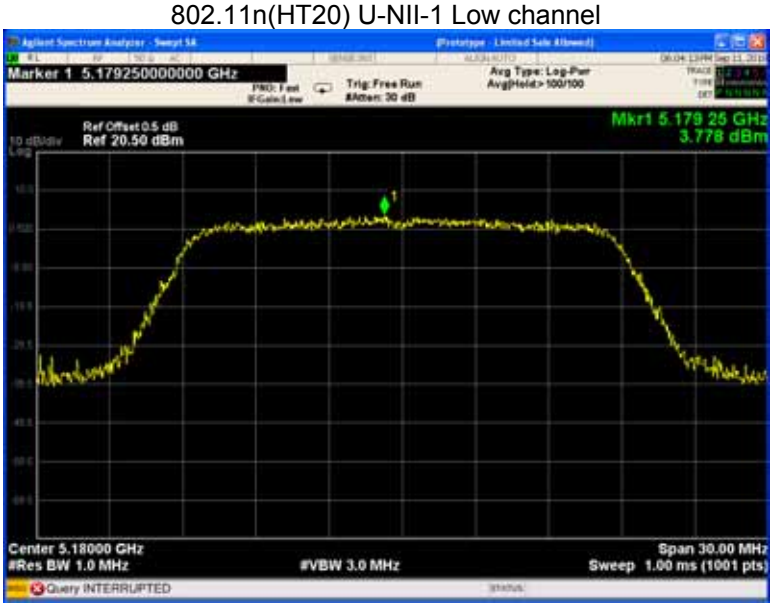
ANT2

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

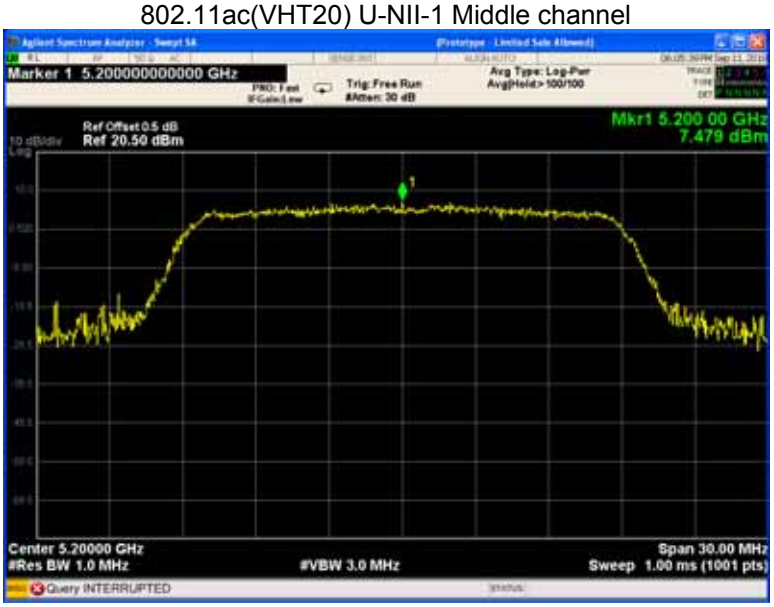
802.11n(HT20) U-NII-1 High channel

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

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

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

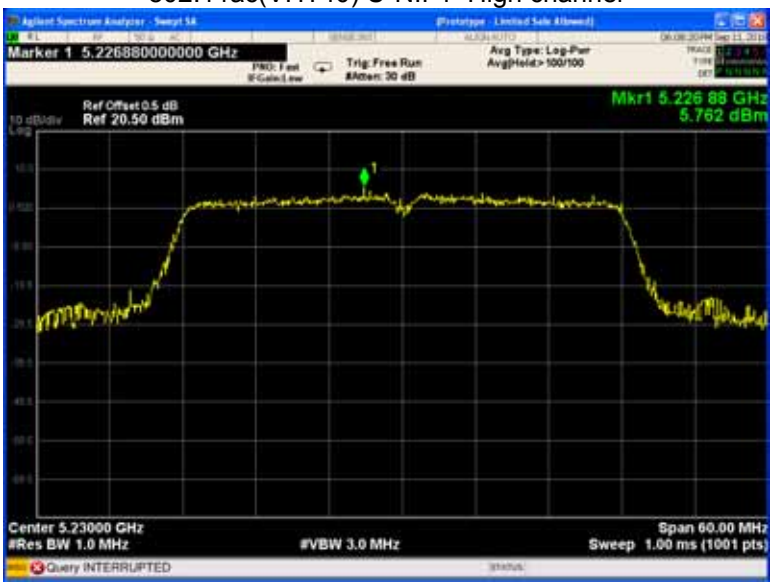
802.11ac(VHT20) U-NII-1 Middle channel



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

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

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



802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

802.11a U-NII-3 High channel

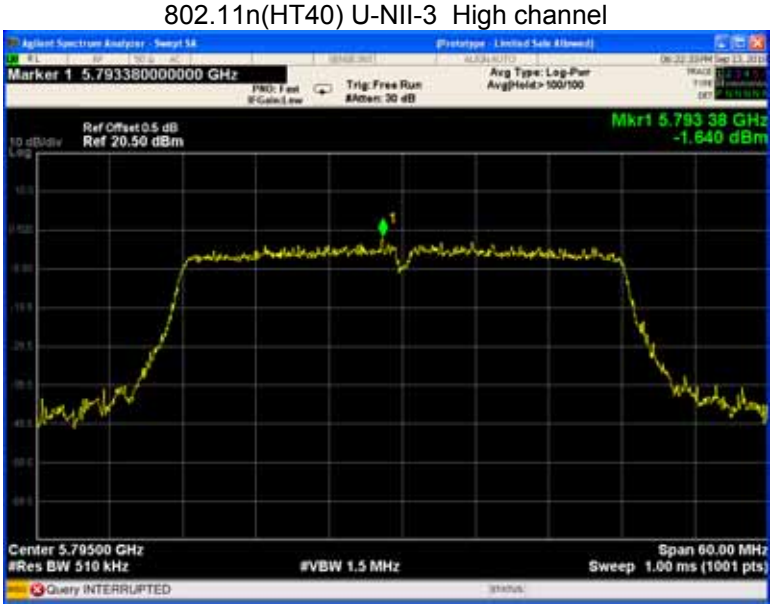
802.11n(HT20) U-NII-3 Low channel

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

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

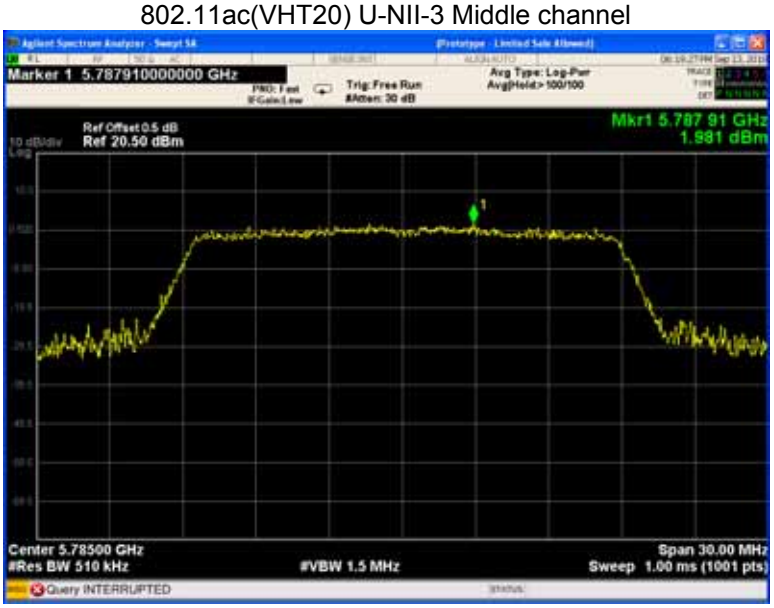
802.11n(HT40) U-NII-3 Low channel

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

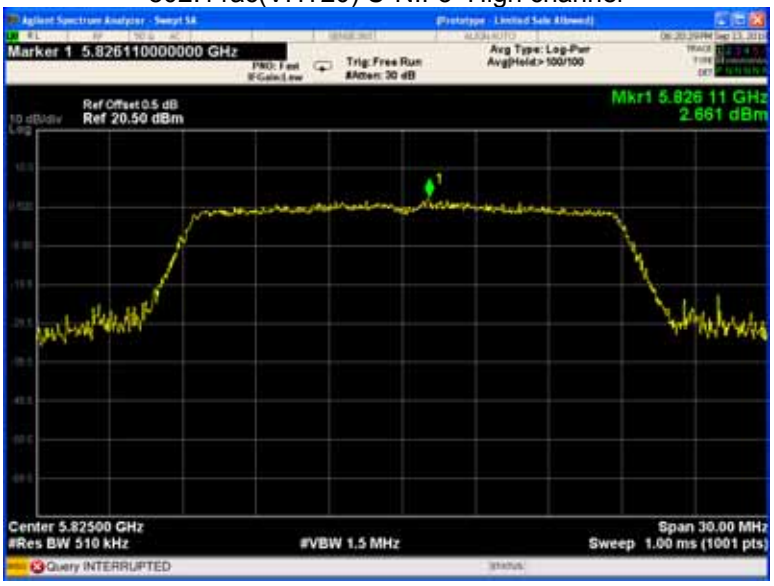


802.11ac(VHT20) U-NII-3 Low channel

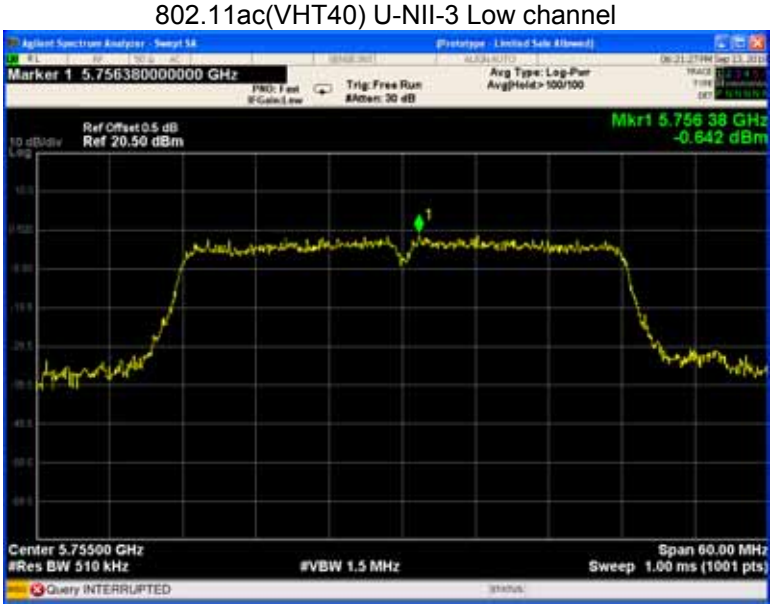
802.11ac(VHT20) U-NII-3 Middle channel



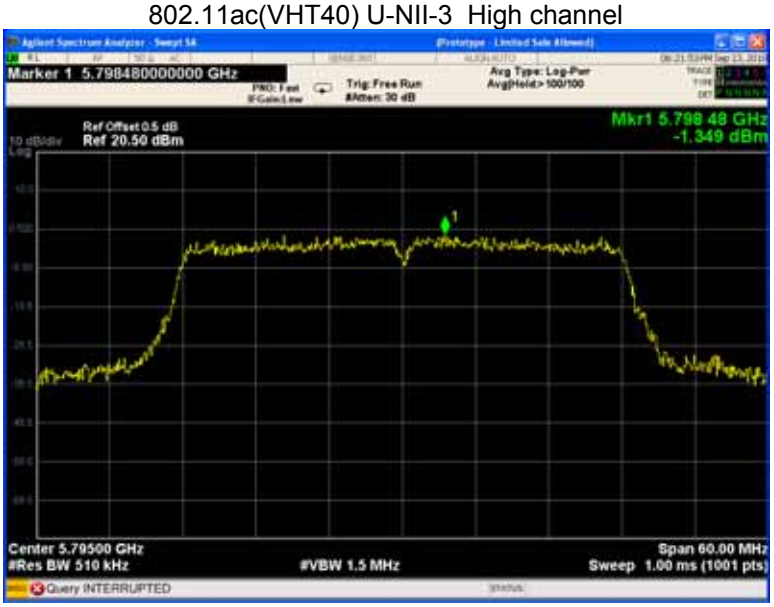
802.11ac(VHT20) U-NII-3 High channel



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



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



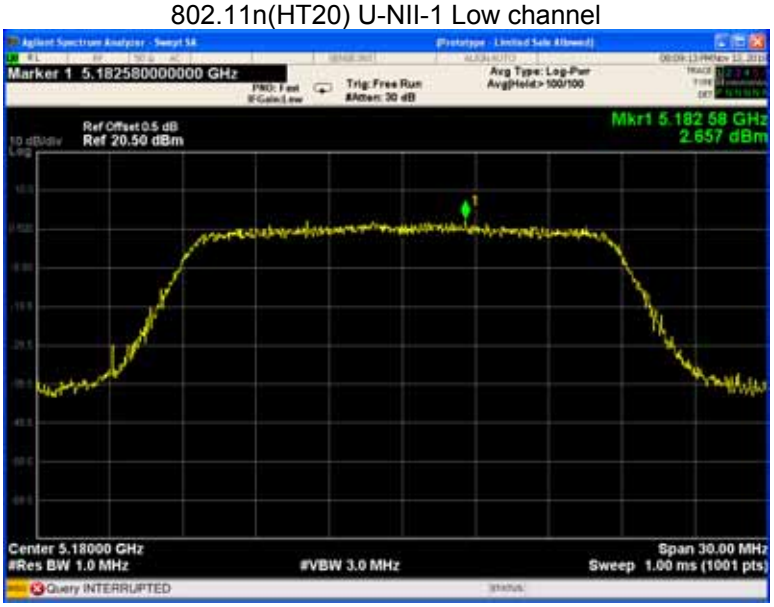
ANT4

802.11a U-NII-1 Low channel

802.11a U-NII-1 Middle channel

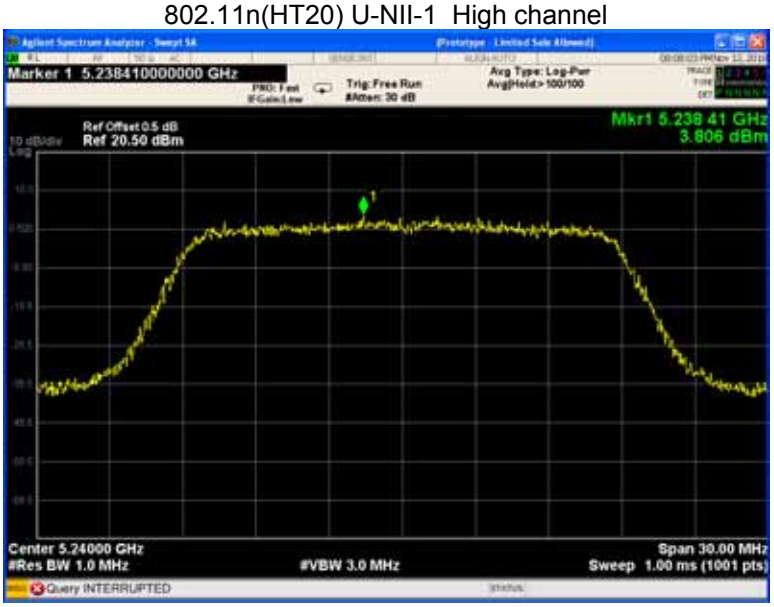
802.11a U-NII-1 High channel

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



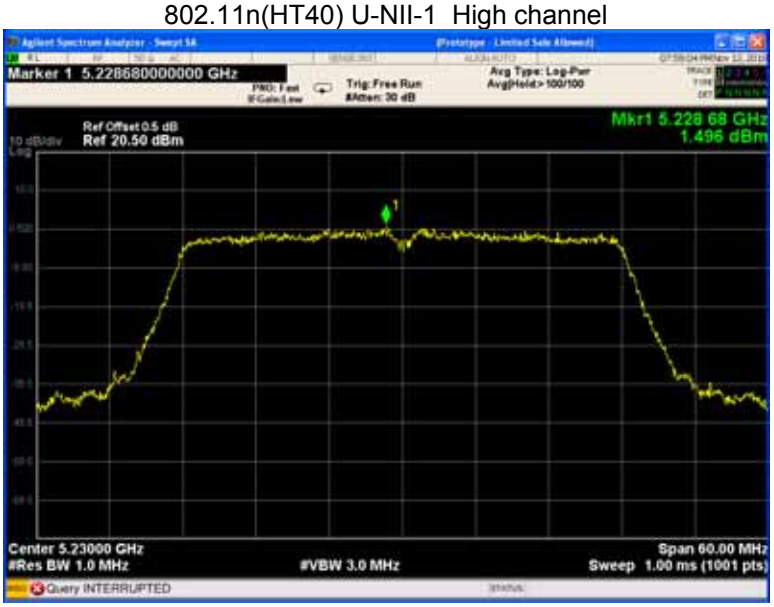
802.11n(HT20) U-NII-1 Middle channel

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



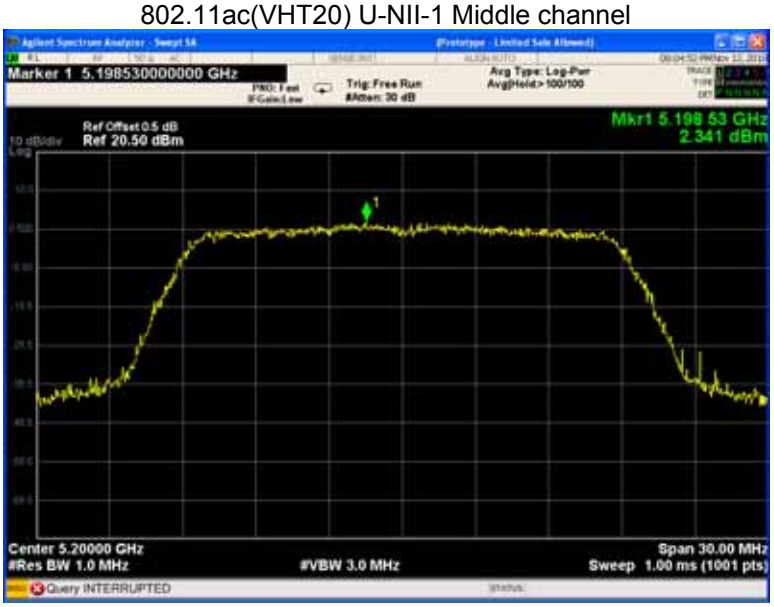
802.11n(HT40) U-NII-1 Low channel

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

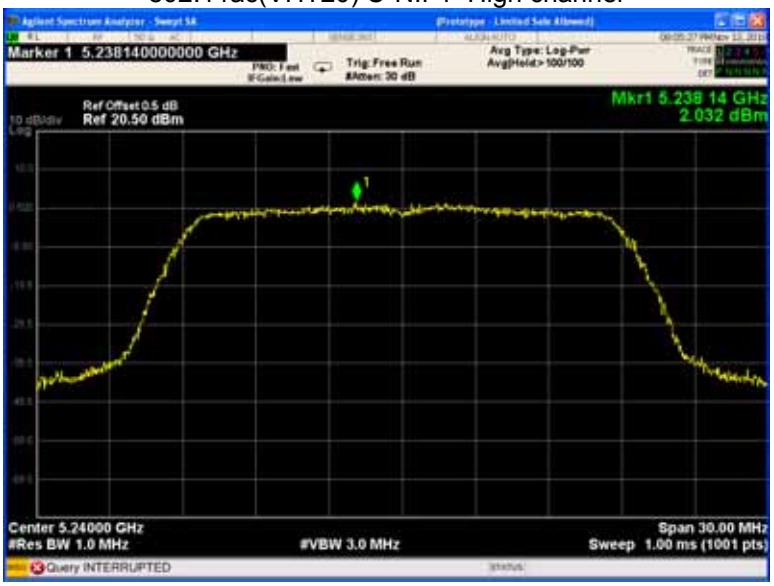


802.11ac(VHT20) U-NII-1 Low channel

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



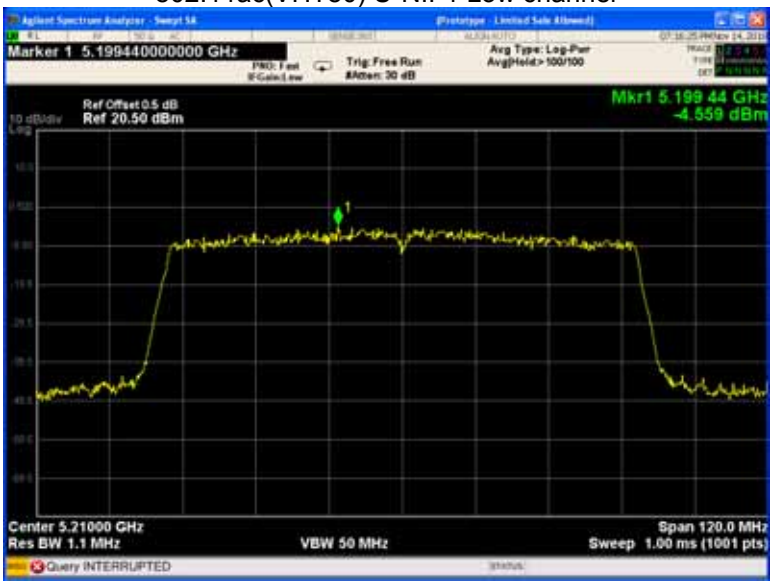
802.11ac(VHT20) U-NII-1 High channel



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

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

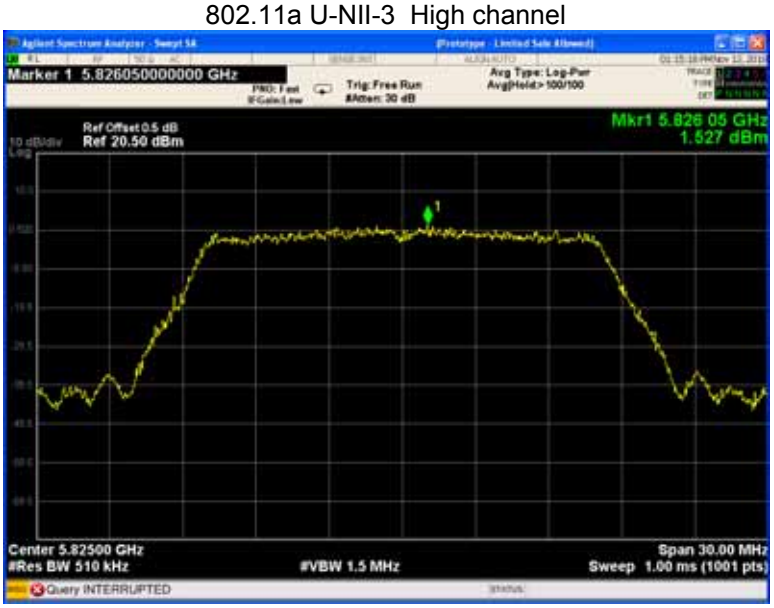
802.11ac(VHT80) U-NII-1 Low channel



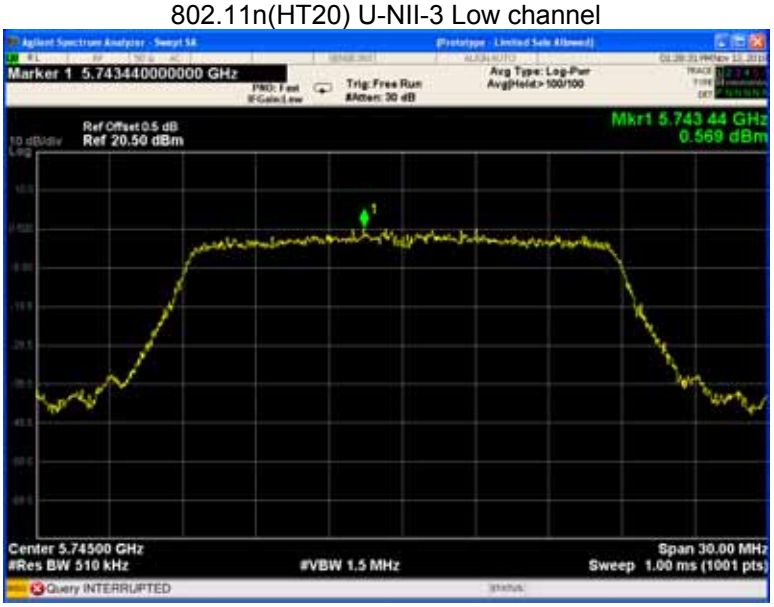
802.11a U-NII-3 Low channel

802.11a U-NII-3 Middle channel

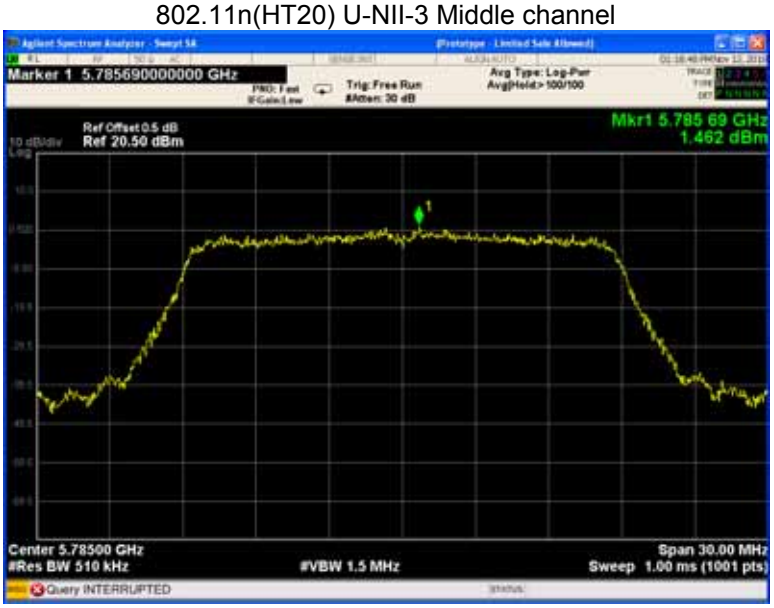
802.11a U-NII-3 High channel



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

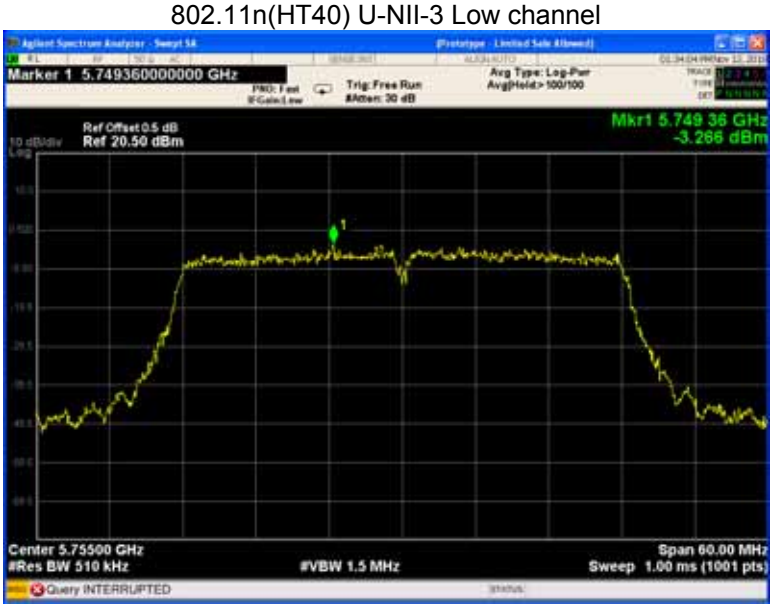


802.11n(HT20) U-NII-3 Middle channel

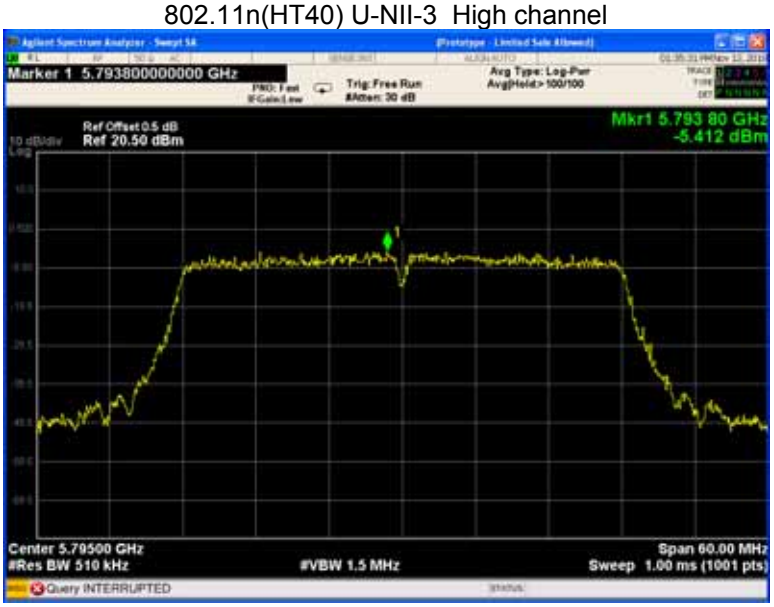


802.11n(HT20) U-NII-3 High channel

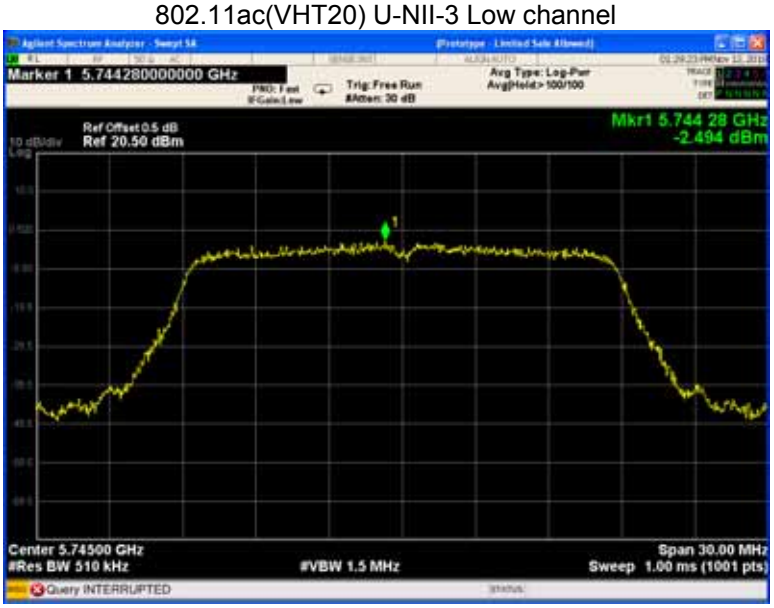
802.11n(HT40) U-NII-3 Low channel



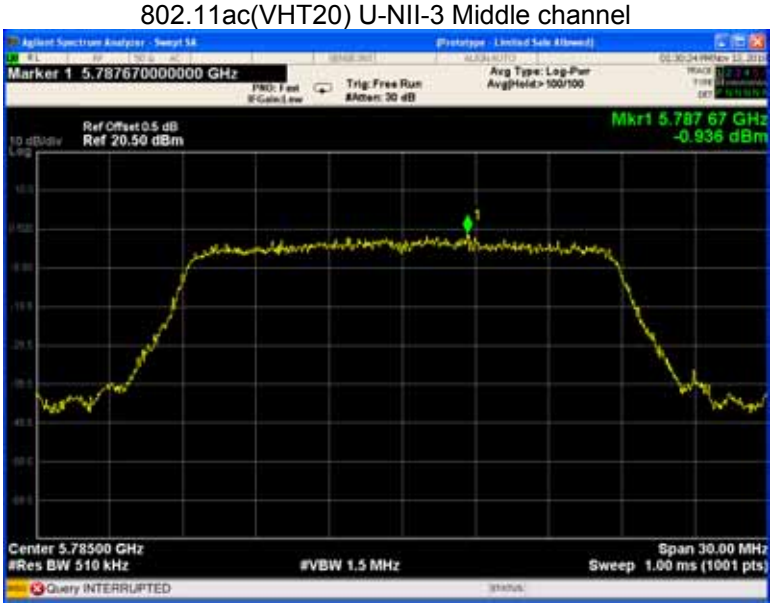
802.11n(HT40) U-NII-3 High channel



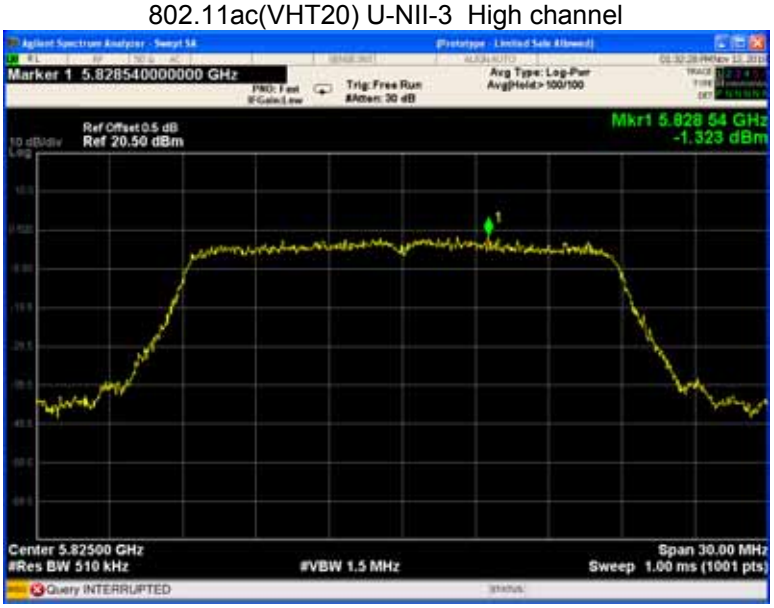
802.11ac(VHT20) U-NII-3 Low channel



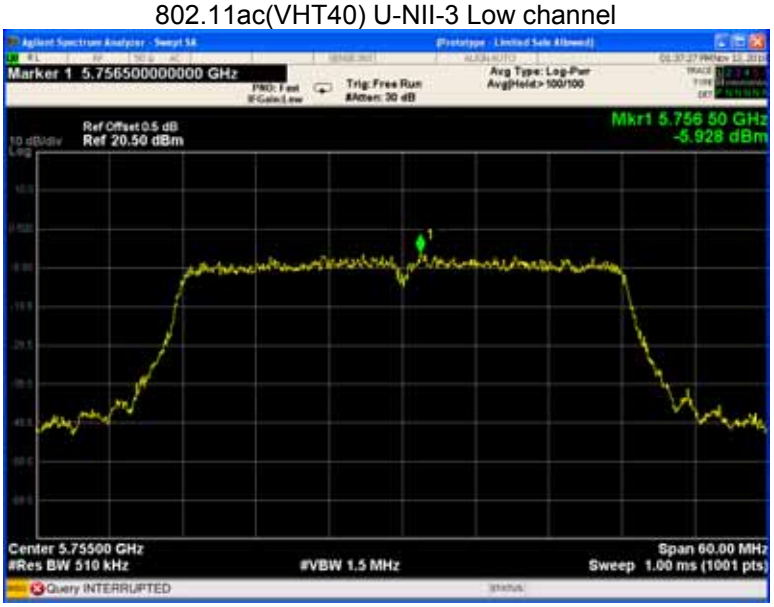
802.11ac(VHT20) U-NII-3 Middle channel



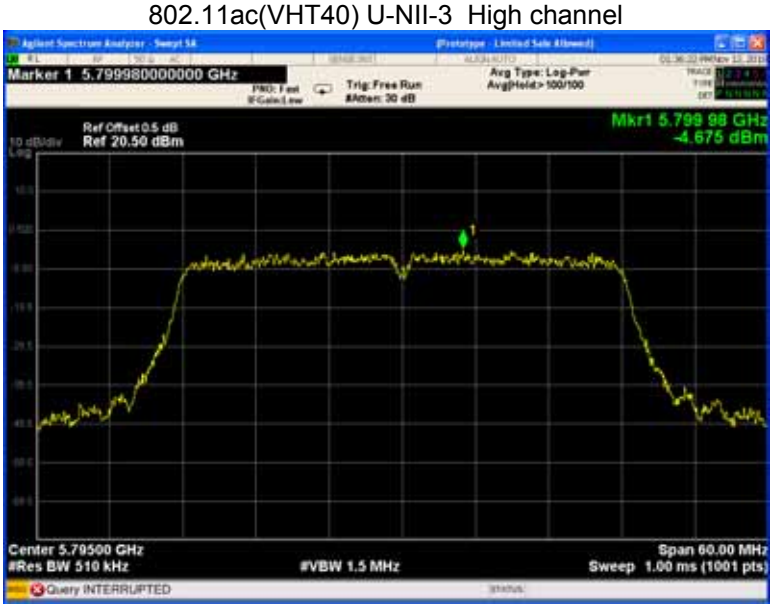
802.11ac(VHT20) U-NII-3 High channel



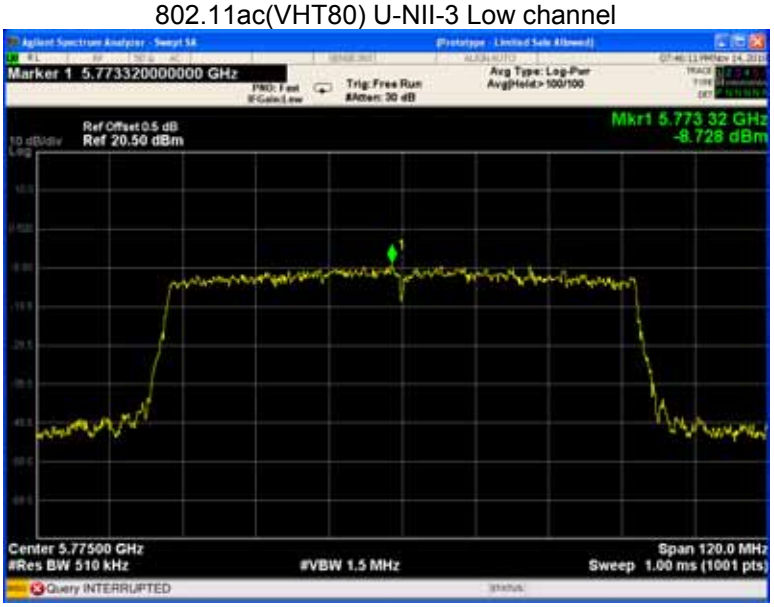
802.11ac(VHT40) U-NII-3 Low channel



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



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



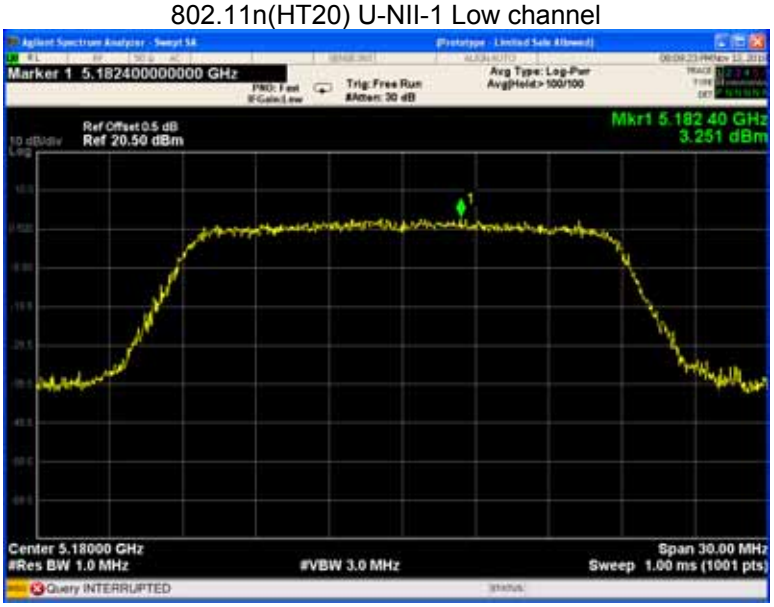
ANT5

802.11a U-NII-1 Low channel

802.11a U-NII-1 Middle channel

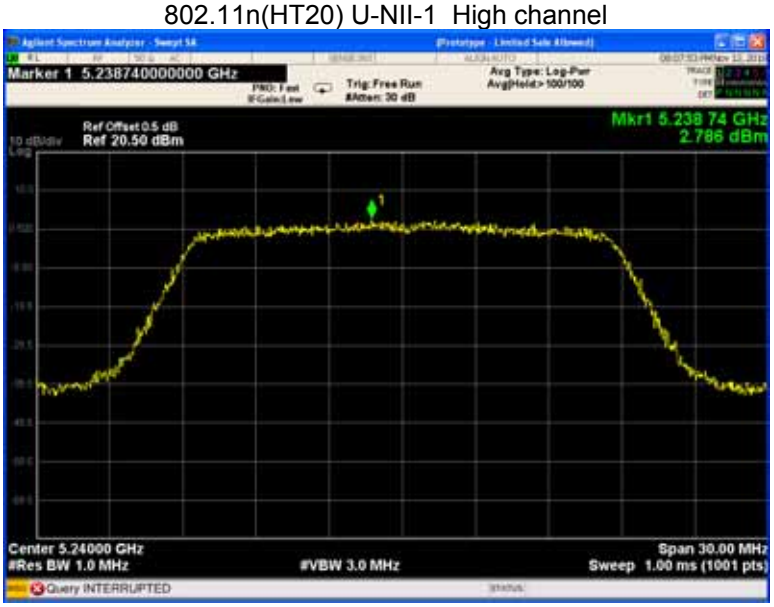
802.11a U-NII-1 High channel

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



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

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

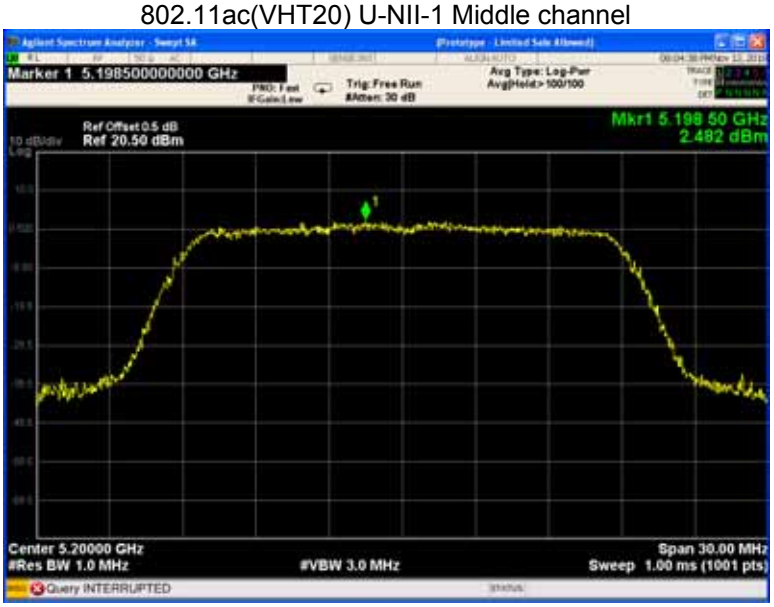


802.11n(HT40) U-NII-1 Low channel

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

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

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



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

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

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

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

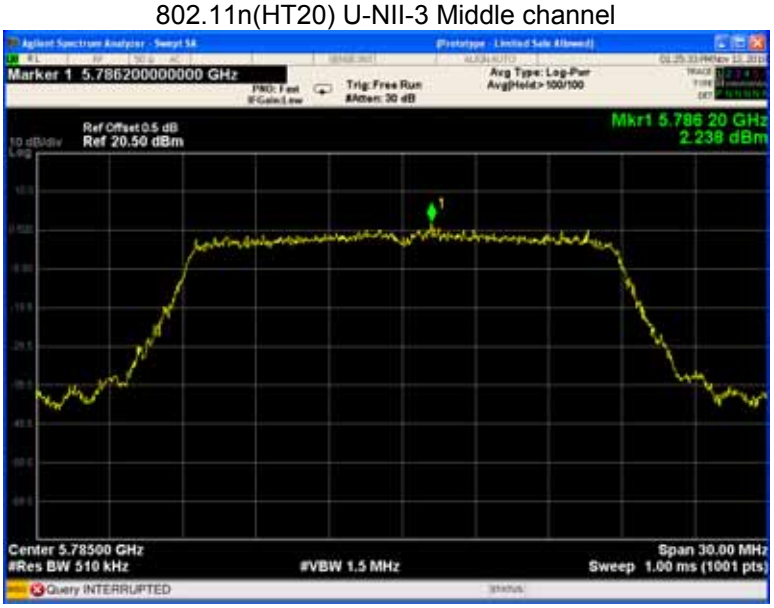
802.11a U-NII-3 Low channel

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

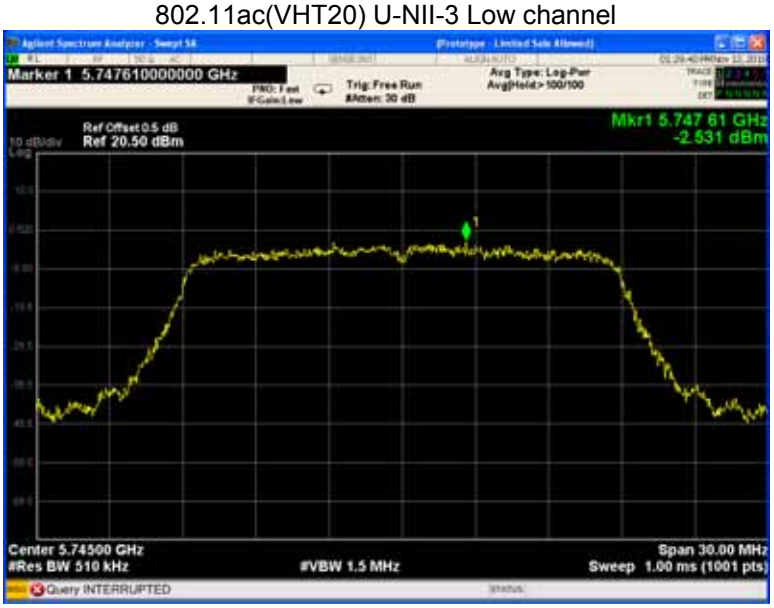


802.11n(HT20) U-NII-3 High channel

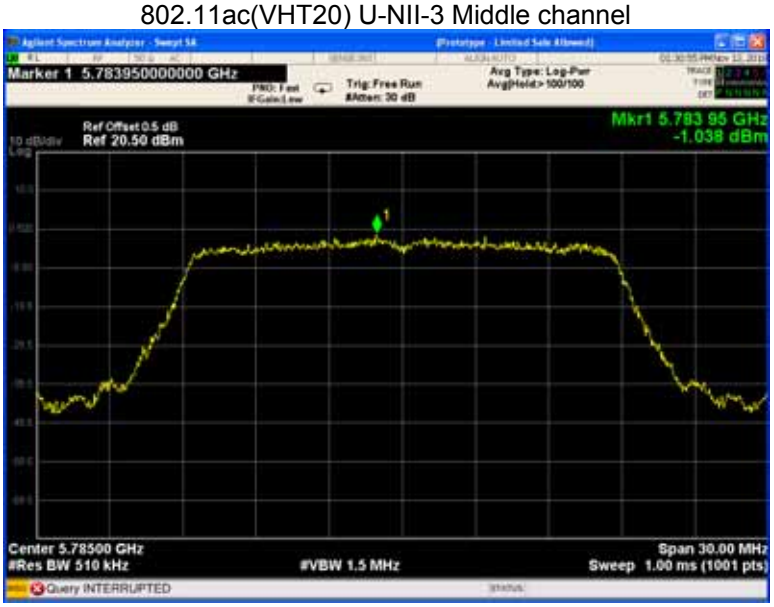
802.11n(HT40) U-NII-3 Low channel

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

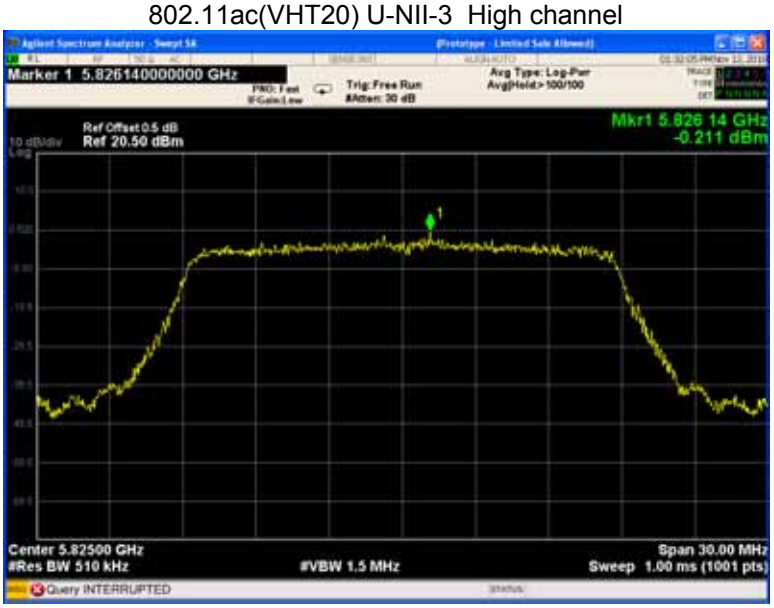
802.11ac(VHT20) U-NII-3 Low channel



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

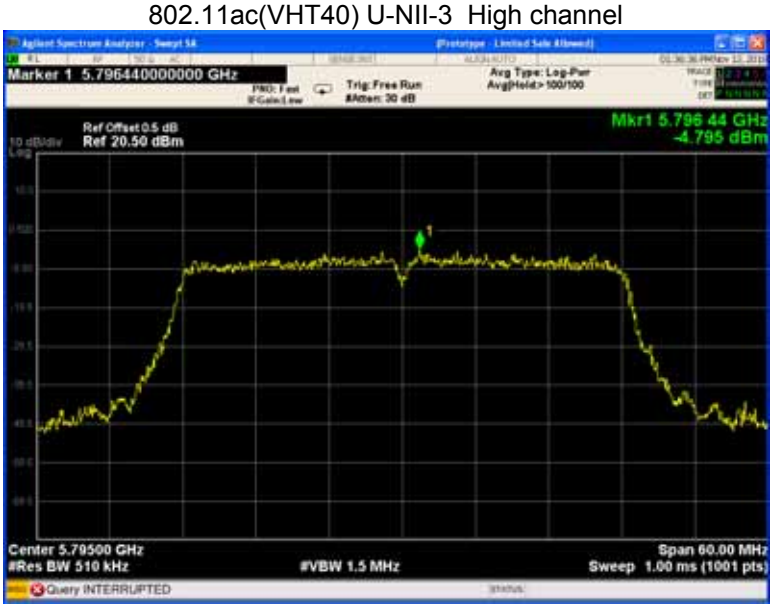


802.11ac(VHT20) U-NII-3 High channel

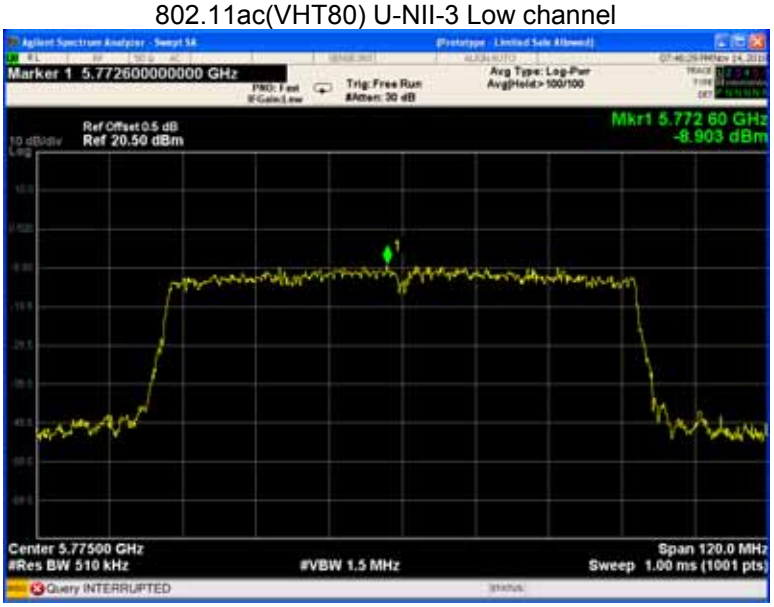


802.11ac(VHT40) U-NII-3 Low channel

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



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



16 Frequency Stability

Test Requirement:	FCC CFR47 Part 15 Section 15.407(g)
Test Method:	ANSI C63.10:2013
Test Limit:	Manufaturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual or 20ppm.
Test Result:	PASS

16.1 Test Procedure:

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
   EUT have transmitted absence of unmodulation signal and fixed channelise. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±20ppm The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

2. Extreme temperature rule is 0°C~ 40°C.

16.2 Test Result:

U-NII-1 Test Frequency:5180MHz				
Temperature (℃)	Power Supply (VAC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
40	120	1766	0.3053	20
30		1759	0.3041	20
25		1762	0.3046	20
20		1762	0.3046	20
15		1766	0.3053	20
10		1760	0.3042	20
0		1760	0.3043	20
20	108	1767	0.3054	20
20	132	1760	0.3042	20

U-NII-3 Test Frequency:5785MHz				
Temperature (℃)	Power Supply (VAC)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
40		1750	0.3025	20
30		1759	0.3040	20
25		1753	0.3030	20
20		1750	0.3025	20
15		1755	0.3034	20
10		1751	0.3026	20
0		1753	0.3029	20
20	108	1752	0.3028	20
20	132	1759	0.3040	20

17 Antenna Requirement

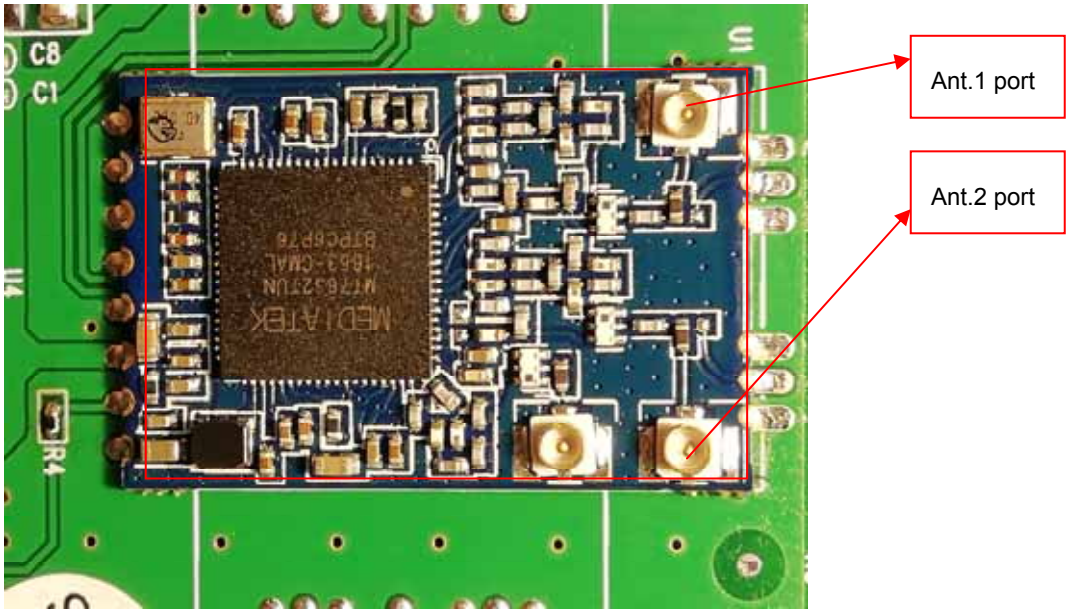
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attahed antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufaturer may design the unit so that a broken antenna can be replaed by the user, but the use of a standard antenna jak or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in acordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

This device uses of two antennas that uses a specified coupling to the intentional radiator. Antenna connectors complied with the requirement.

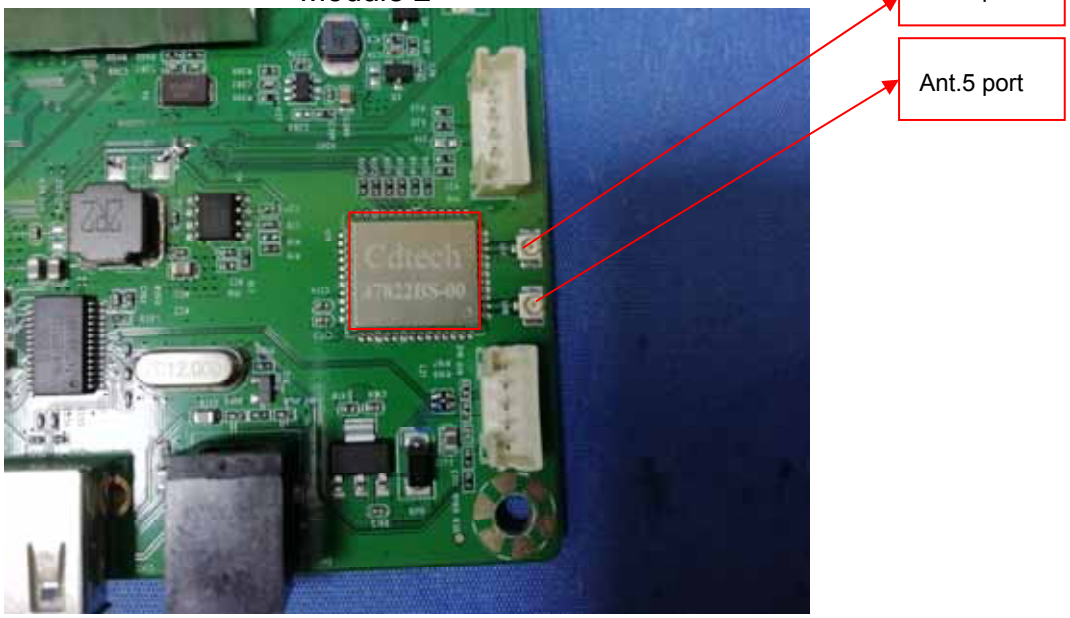
Result:

The EUT have four Integrated Antenna four 5G WiFi, meets the requirements of FCC 15.203.

Module 1



Module 2



18 FCC ID: 2AQ7Q-DB0355 RF Exposure Report

Note: Please refer to RF Exposure Report: WTS18S09122875-4W.

19 Photographs - Model DB0355 Test Setup Photos

Note: Please refer to Photos: WTS18S09122875-5W.

20 Photographs - Constructional Details

20.1 Model DB0355 - External Photos

Note: Please refer to Photos: WTS18S09122875-5W.

20.2 Model DB0355 - Internal Photos

Note: Please refer to Photos: WTS18S09122875-5W.

======End of Report======