

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	5180	99.88%	0	Fig.1
802.11n HT20	5180	99.24%	0	Fig.2
802.11ac VHT20	5180	99.20%	0	Fig.3
802.11n HT40	5190	99.00%	0	Fig.4
802.11ac VHT40	5190	99.22%	0	Fig.5
802.11ac VHT80	5210	99.61%	0	Fig.6

Note: Correction Factor=10*log (1/Duty Cycle)

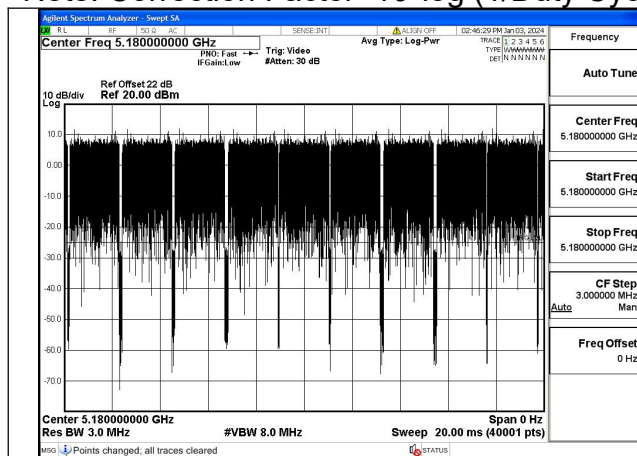


Fig.1

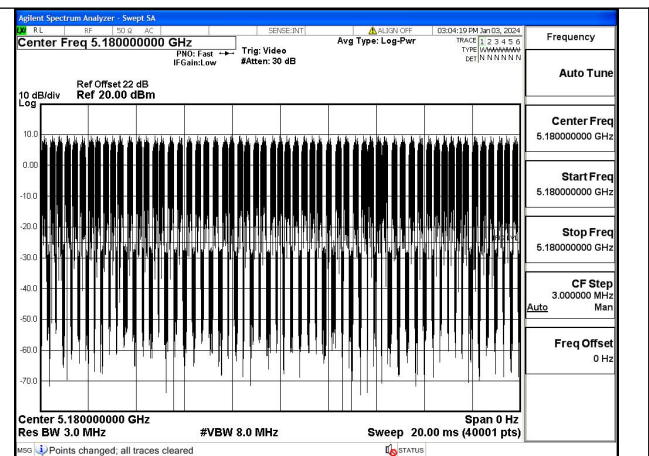


Fig.2

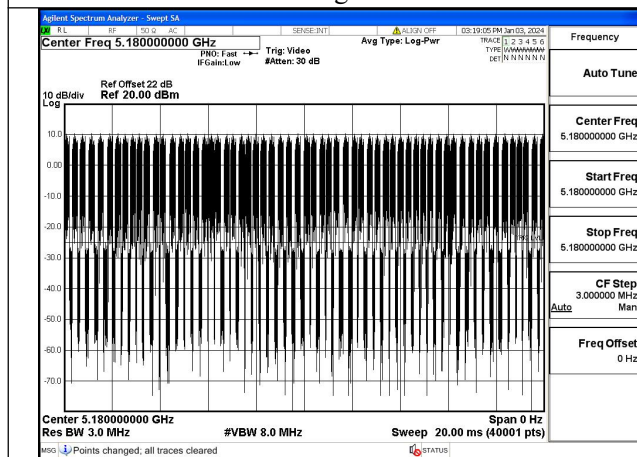


Fig.3

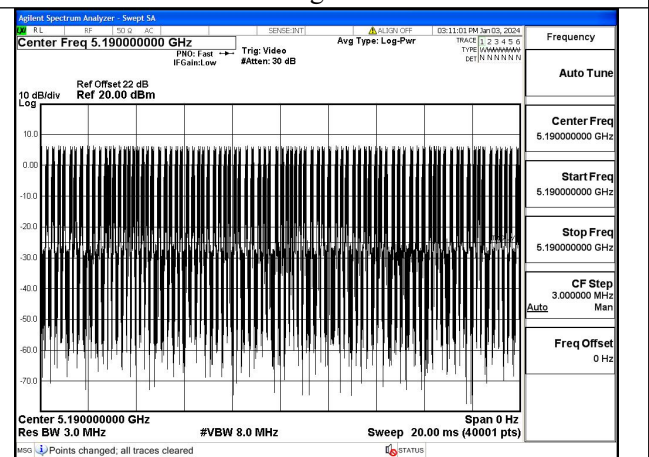


Fig.4

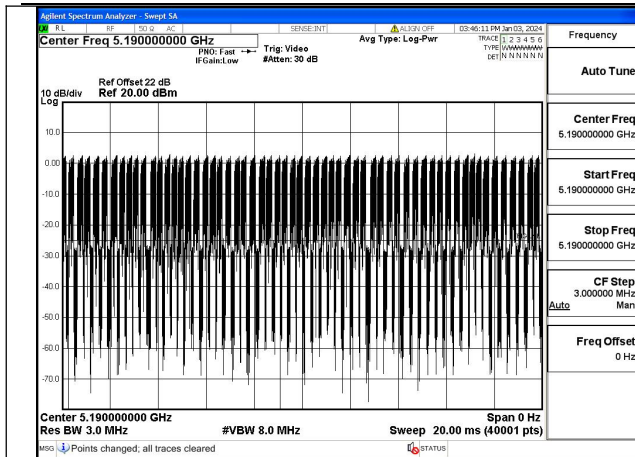


Fig.5

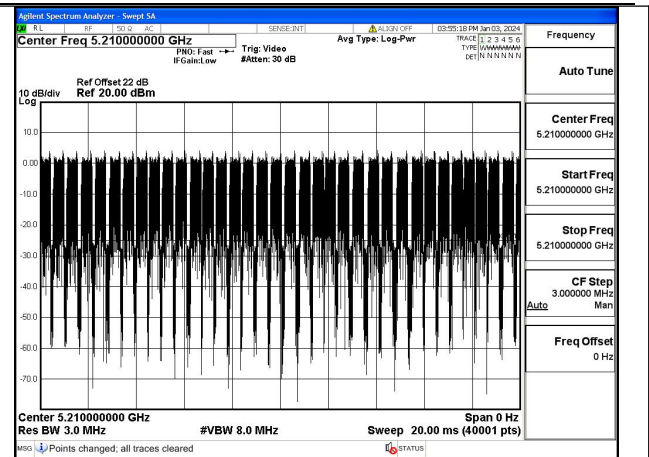


Fig.6

Output Power

Mode	Tones/ RU Index	Frequency (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5180	Chain0	7.93	10.93
802.11a	NA	5220	Chain0	8.01	11.01
802.11a	NA	5240	Chain0	8.06	11.06
802.11n HT20	NA	5180	Chain0	6.99	9.99
802.11n HT20	NA	5220	Chain0	7.28	10.28
802.11n HT20	NA	5240	Chain0	7.46	10.46
802.11ac VHT20	NA	5180	Chain0	5.27	8.27
802.11ac VHT20	NA	5220	Chain0	7.63	10.63
802.11ac VHT20	NA	5240	Chain0	7.59	10.59
802.11n HT40	NA	5190	Chain0	6.62	9.62
802.11n HT40	NA	5230	Chain0	7.19	10.19
802.11ac VHT40	NA	5190	Chain0	7.25	10.25
802.11ac VHT40	NA	5230	Chain0	7.98	10.98
802.11ac VHT80	NA	5210	Chain0	7.67	10.67

Emission Bandwidth

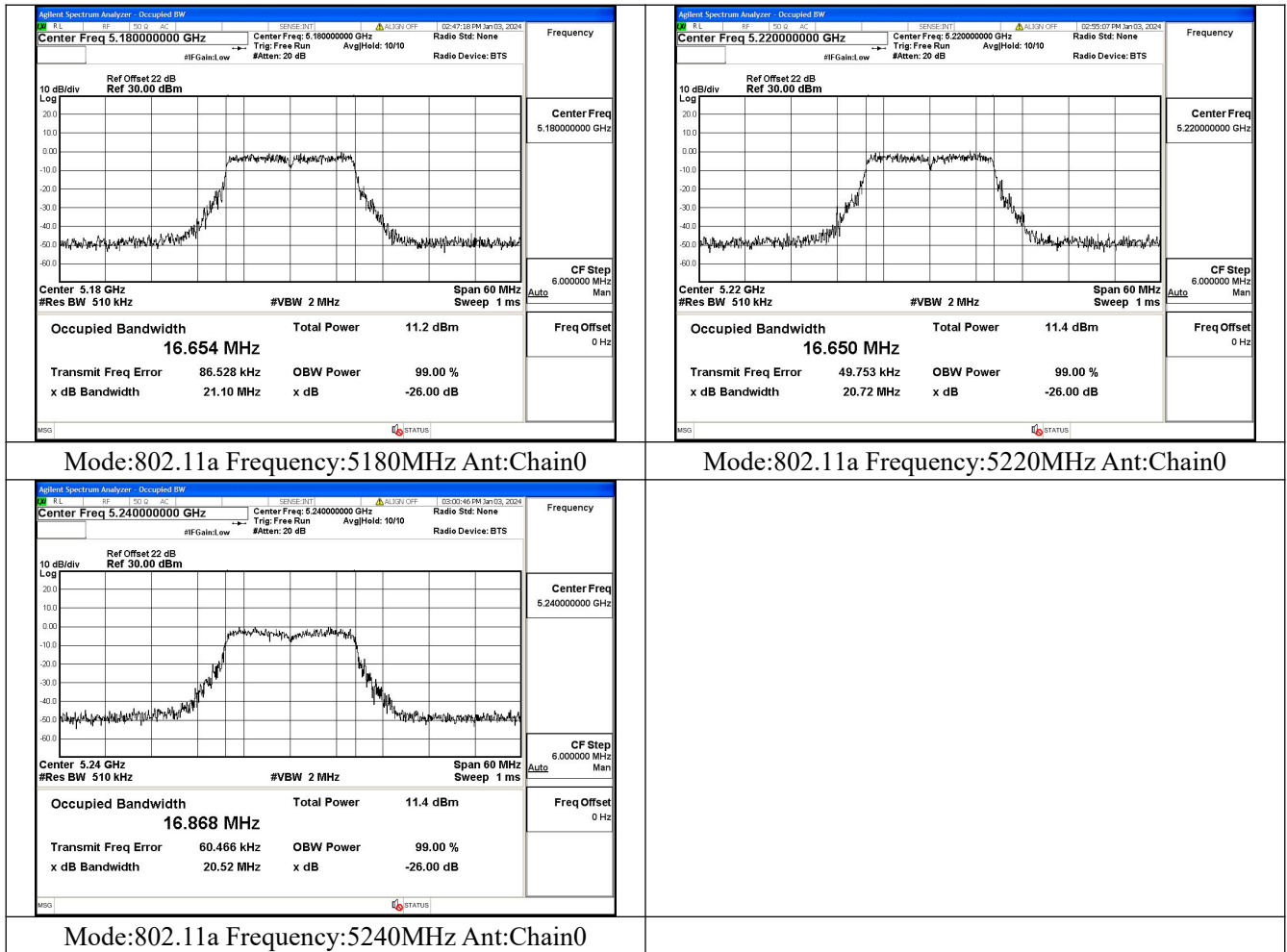
Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	21.10	20.72	20.52
802.11n HT20	Chain0	21.11	21.38	21.47
802.11ac VHT20	Chain0	19.98	19.98	20.75

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	41.61	---	40.61
802.11ac VHT40	Chain0	42.19	---	41.44

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	81.38	---	---

Test Mode: 802.11a



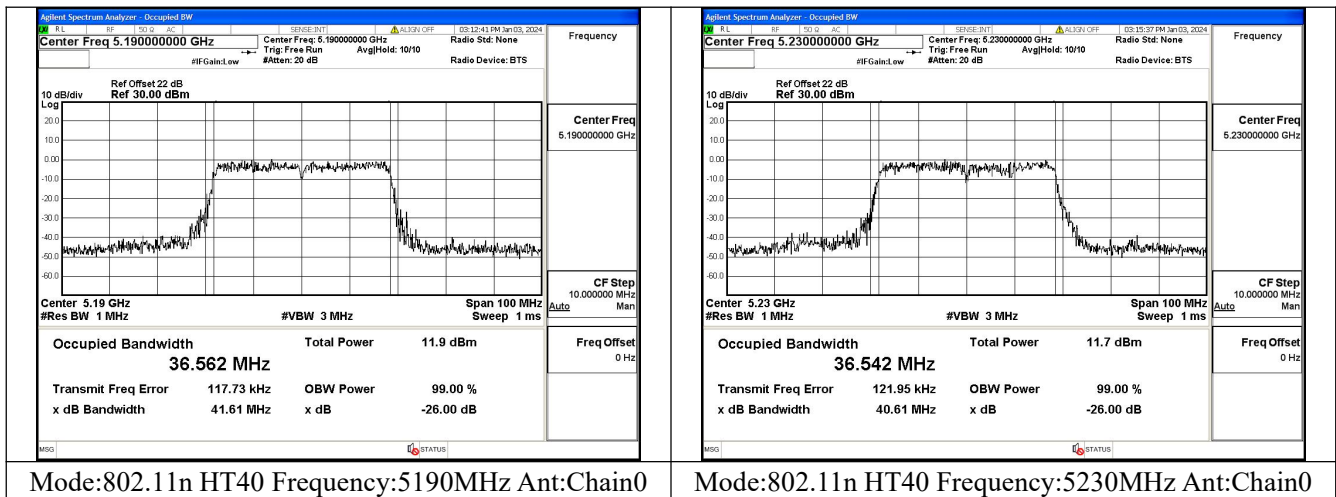
Test Mode: 802.11n HT20

Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.180000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS 10 dB/div Log Center 5.18 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.796 MHz Total Power 11.9 dBm Transmit Freq Error 43.338 kHz OBW Power 99.00 % x dB Bandwidth 21.11 MHz x dB -26.00 dB CF Step 6.000000 MHz Freq Offset 0 Hz MSG STATUS	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.220000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.220000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS 10 dB/div Log Center 5.22 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 18.007 MHz Total Power 12.0 dBm Transmit Freq Error 98.498 kHz OBW Power 99.00 % x dB Bandwidth 21.38 MHz x dB -26.00 dB CF Step 6.000000 MHz Freq Offset 0 Hz MSG STATUS
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0	Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0
Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.240000000 GHz Trig: Free Run AvgHeld: 10/10 Radio Std: None Radio Device: BTS 10 dB/div Log Center 5.24 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.769 MHz Total Power 12.2 dBm Transmit Freq Error 39.636 kHz OBW Power 99.00 % x dB Bandwidth 21.47 MHz x dB -26.00 dB CF Step 6.000000 MHz Freq Offset 0 Hz MSG STATUS	
Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0	

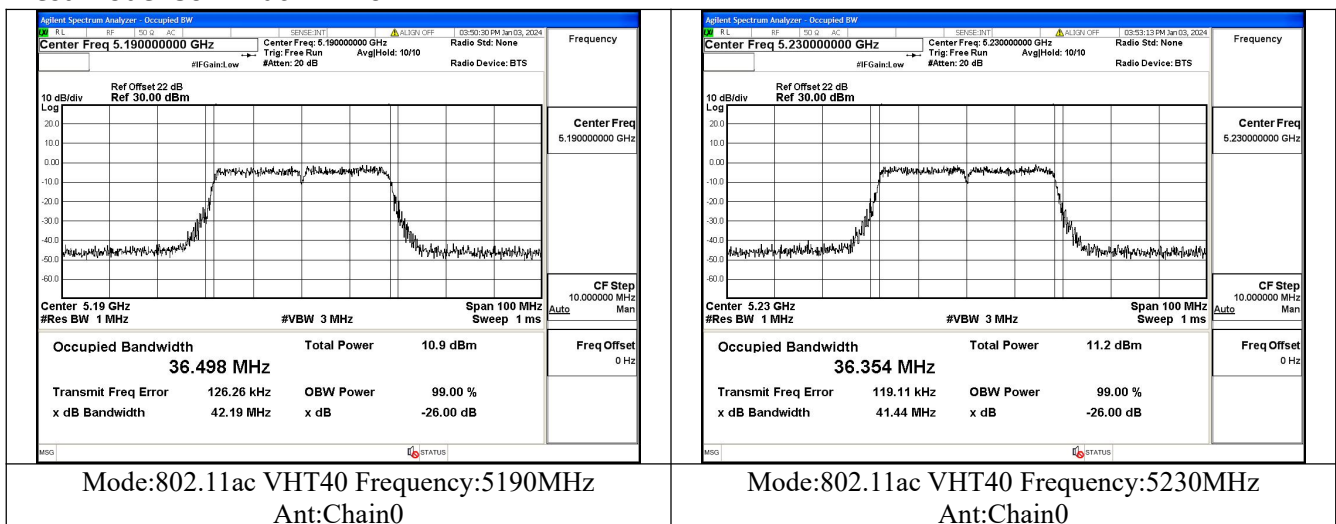
Test Mode: 802.11ac VHT20

Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.18 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.842 MHz Total Power 12.0 dBm Transmit Freq Error 66.431 kHz x dB Bandwidth 19.98 MHz OBW Power 99.00 % x dB -26.00 dB	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.220000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.22 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.746 MHz Total Power 12.5 dBm Transmit Freq Error 90.653 kHz x dB Bandwidth 19.98 MHz OBW Power 99.00 % x dB -26.00 dB
Mode:802.11ac VHT20 Frequency:5180MHz Ant:Chain0	Mode:802.11ac VHT20 Frequency:5220MHz Ant:Chain0
Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.24 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.865 MHz Total Power 12.3 dBm Transmit Freq Error 51.310 kHz x dB Bandwidth 20.75 MHz OBW Power 99.00 % x dB -26.00 dB	
Mode:802.11ac VHT20 Frequency:5240MHz Ant:Chain0	

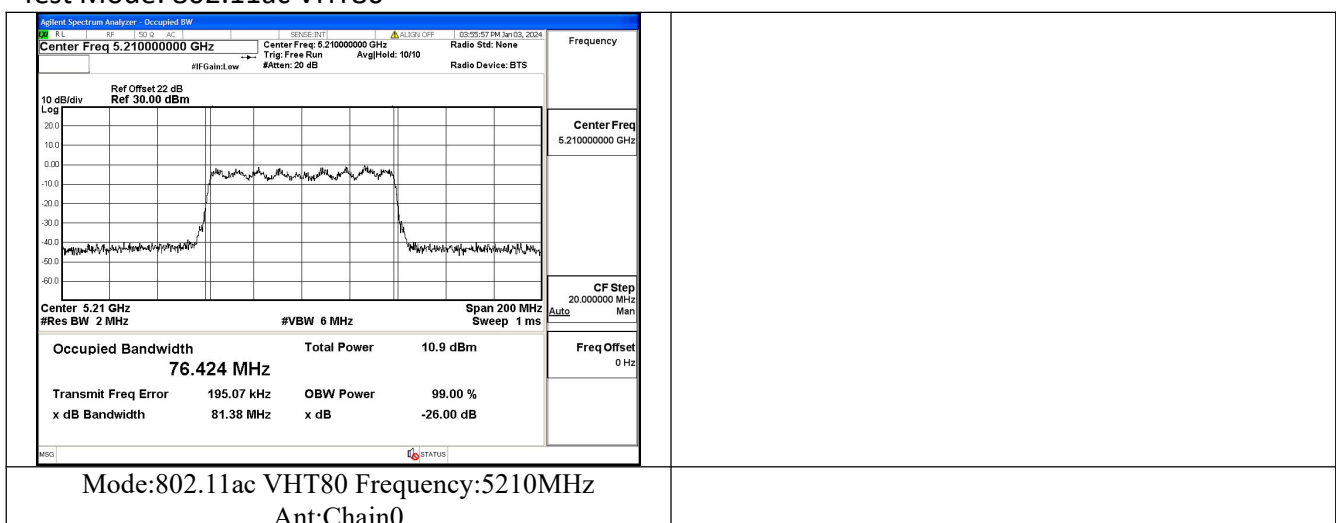
Test Mode: 802.11n HT40



Test Mode: 802.11ac VHT40



Test Mode: 802.11ac VHT80



Occupied Bandwidth

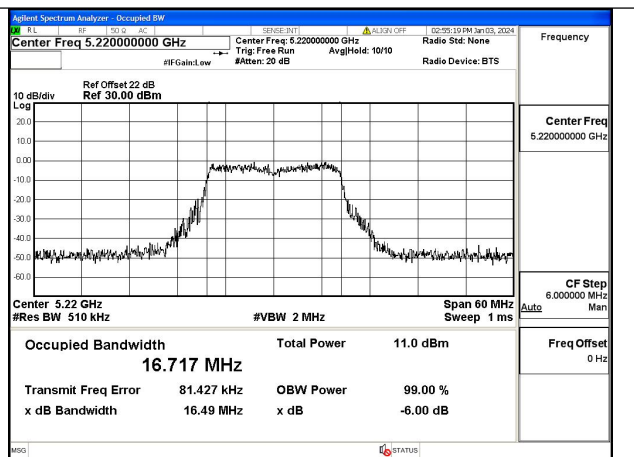
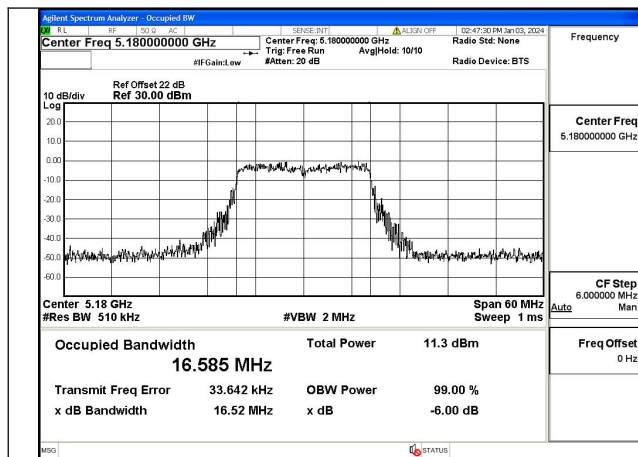
Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	16.585	16.717	16.753
802.11n HT20	Chain0	17.883	17.583	17.847
802.11ac VHT20	Chain0	17.844	17.635	17.908

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	36.295	---	36.497
802.11ac VHT40	Chain0	36.514	---	36.435

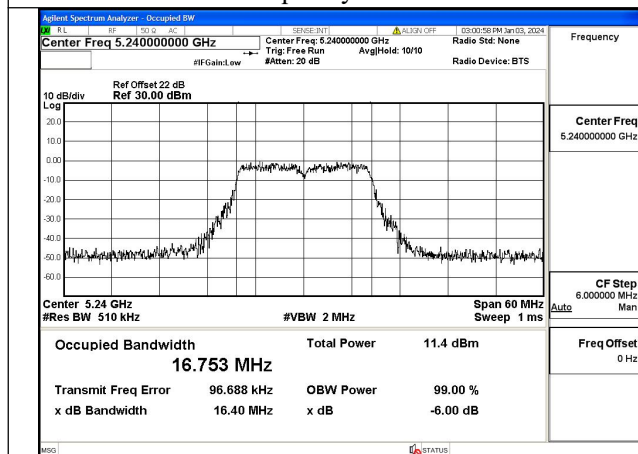
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	76.243	---	---

Test Mode: 802.11a



Mode:802.11a Frequency:5180MHz Ant:Chain0

Mode:802.11a Frequency:5220MHz Ant:Chain0



Mode:802.11a Frequency:5240MHz Ant:Chain0

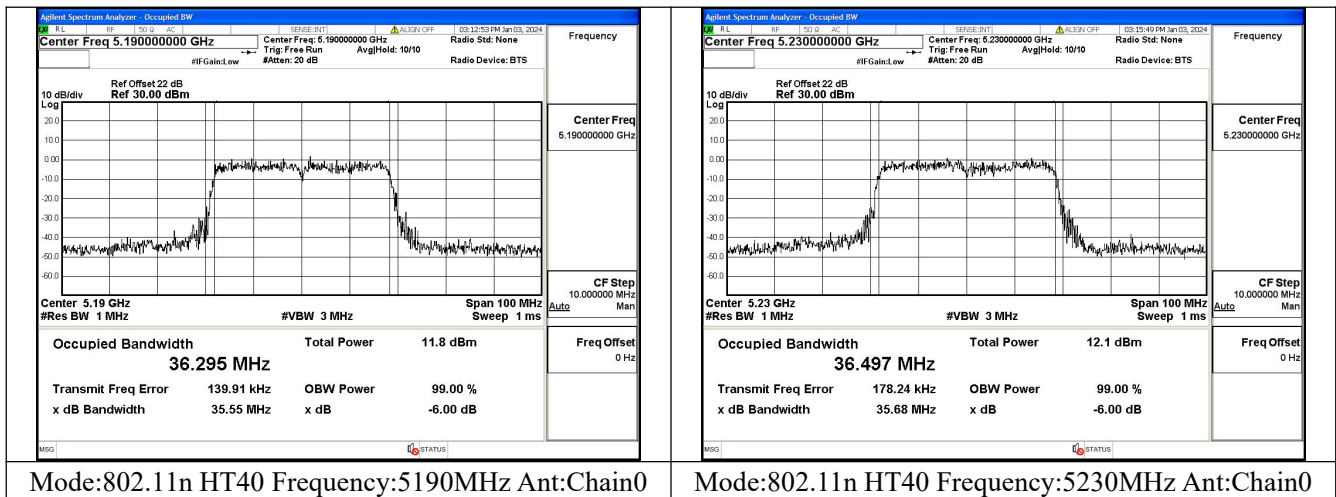
Test Mode: 802.11n HT20

Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 510 kHz Occupied Bandwidth 17.883 MHz Total Power 11.7 dBm Transmit Freq Error 47.191 kHz x dB Bandwidth 17.28 MHz OBW Power 99.00 % x dB -6.00 dB	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.220000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center 5.22 GHz #Res BW 510 kHz Occupied Bandwidth 17.583 MHz Total Power 12.2 dBm Transmit Freq Error 162.22 kHz x dB Bandwidth 17.49 MHz OBW Power 99.00 % x dB -6.00 dB
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0	Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0
Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 510 kHz Occupied Bandwidth 17.847 MHz Total Power 12.2 dBm Transmit Freq Error 29.122 kHz x dB Bandwidth 17.71 MHz OBW Power 99.00 % x dB -6.00 dB	
Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0	

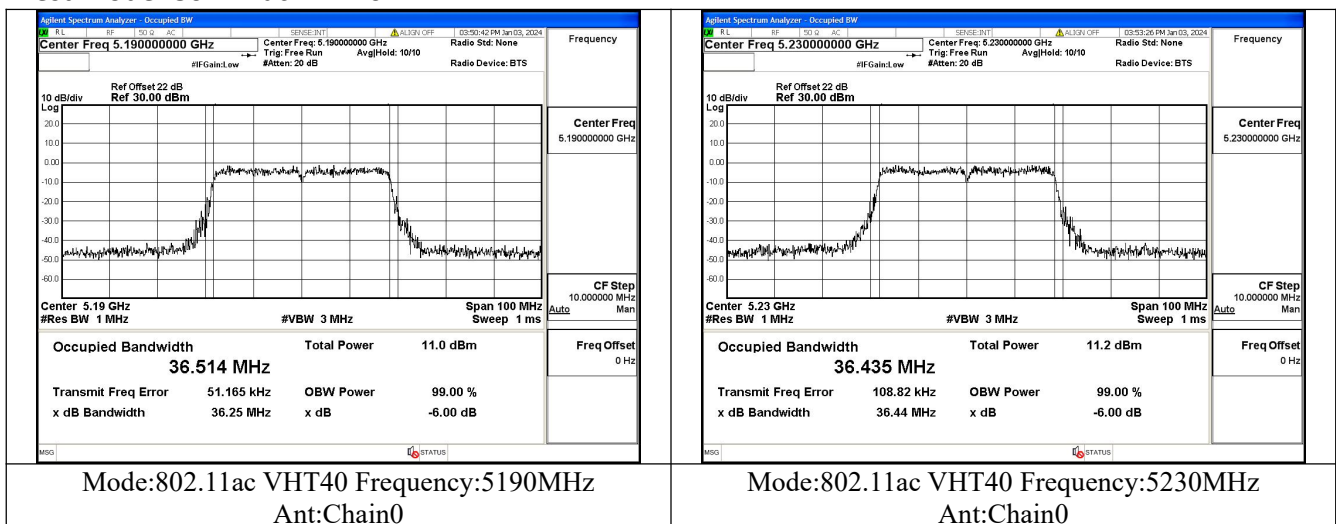
Test Mode: 802.11ac VHT20

Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.18 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.844 MHz Total Power 12.0 dBm Transmit Freq Error 77.738 kHz x dB Bandwidth 17.07 MHz OBW Power 99.00 % x dB -6.00 dB	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.220000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.22 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.635 MHz Total Power 12.2 dBm Transmit Freq Error 60.097 kHz x dB Bandwidth 16.96 MHz OBW Power 99.00 % x dB -6.00 dB
Mode:802.11ac VHT20 Frequency:5180MHz Ant:Chain0	Mode:802.11ac VHT20 Frequency:5220MHz Ant:Chain0
Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 22 dB Ref 30.00 dBm Center Freq 5.24 GHz #Res BW 510 kHz #VBW 2 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 17.908 MHz Total Power 12.3 dBm Transmit Freq Error 71.726 kHz x dB Bandwidth 17.58 MHz OBW Power 99.00 % x dB -6.00 dB	
Mode:802.11ac VHT20 Frequency:5240MHz Ant:Chain0	

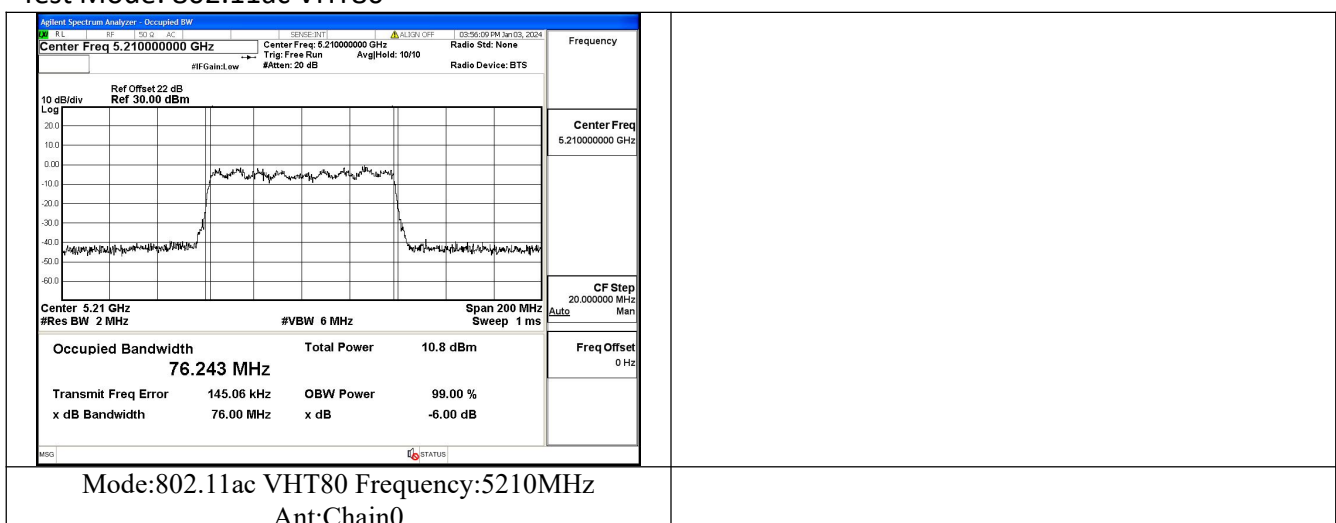
Test Mode: 802.11n HT40



Test Mode: 802.11ac VHT40



Test Mode: 802.11ac VHT80



Transmitter Power Spectral Density

Offset 22dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Tones	5180MHz		5220MHz		5240MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11a	Chain0	NA	0	-3.431	0	-3.273	0	-3.283
802.11n HT20	Chain0	NA	0	-3.990	0	-3.669	0	-3.487
802.11ac VHT20	Chain0	NA	0	-3.456	0	-3.359	0	-3.619

Test Mode	Antenna	Tones	5190MHz		---		5230MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11n HT40	Chain0	NA	0	-7.202	---	---	0	-6.661
802.11ac VHT40	Chain0	NA	0	-6.621	---	---	0	-6.309

Test Mode	Antenna	Tones	5210MHz		---		---	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11ac VHT80	Chain0	NA	0	-8.155	---	---	---	---

Test Mode: 802.11a

