

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Antenna	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	Chain0	5180	99.52%	0	Fig.1
802.11a	Chain1	5180	99.47%	0	Fig.2
802.11n HT20	Chain0	5180	99.53%	0	Fig.3
802.11n HT20	Chain1	5180	99.52%	0	Fig.4
802.11ac VHT20	Chain0	5180	99.42%	0	Fig.5
802.11ac VHT20	Chain1	5180	99.45%	0	Fig.6
802.11n HT40	Chain0	5190	98.99%	0	Fig.7
802.11n HT40	Chain1	5190	99.14%	0	Fig.8
802.11ac VHT40	Chain0	5190	98.90%	0	Fig.9
802.11ac VHT40	Chain1	5190	98.97%	0	Fig.10
802.11ac VHT80	Chain0	5210	98.28%	0	Fig.11
802.11ac VHT80	Chain1	5210	97.89%	0.09	Fig.12

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

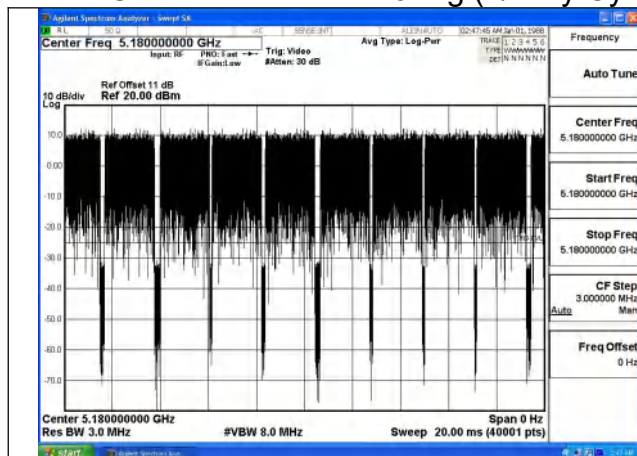


Fig.1

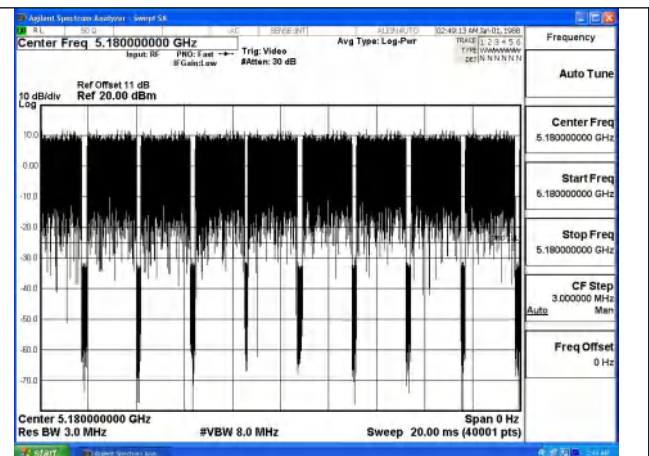


Fig.2

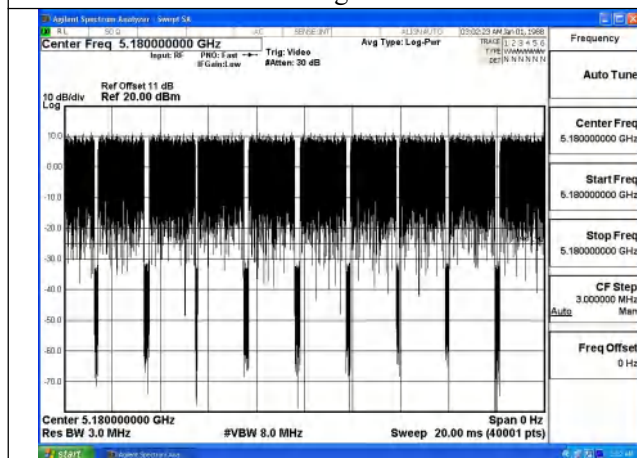


Fig.3

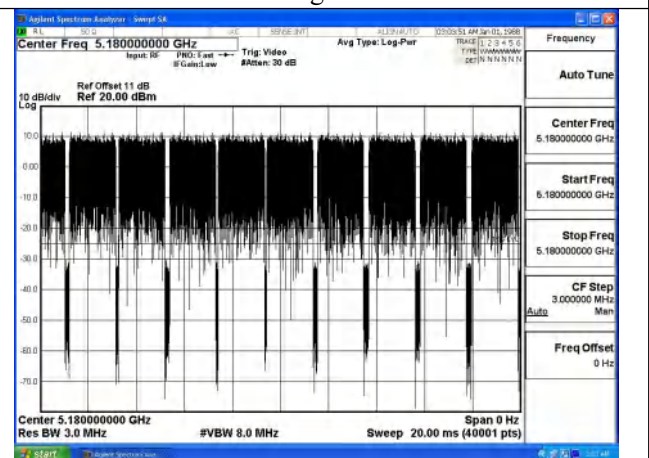


Fig.4

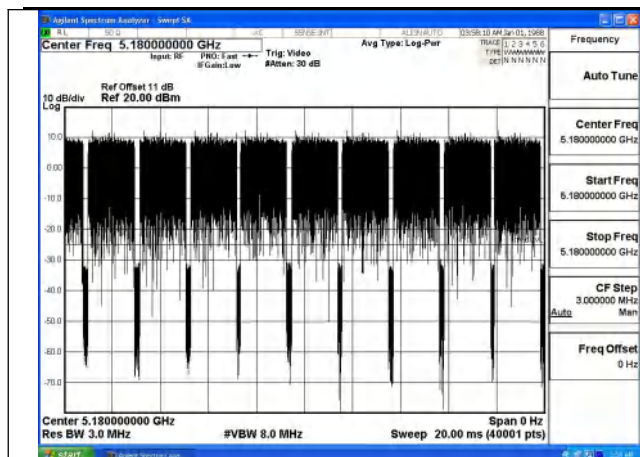


Fig.5

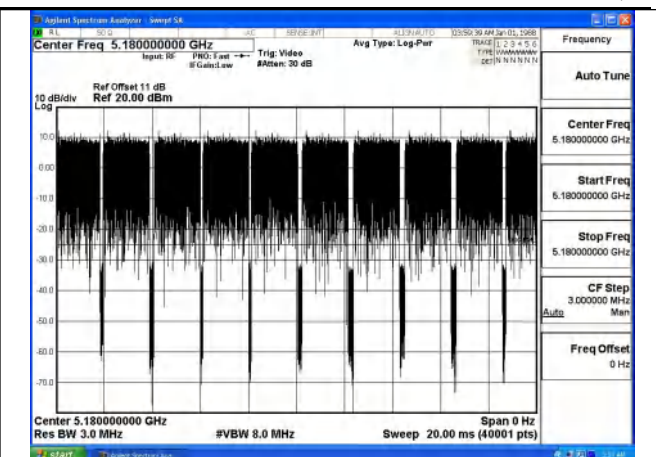


Fig.6

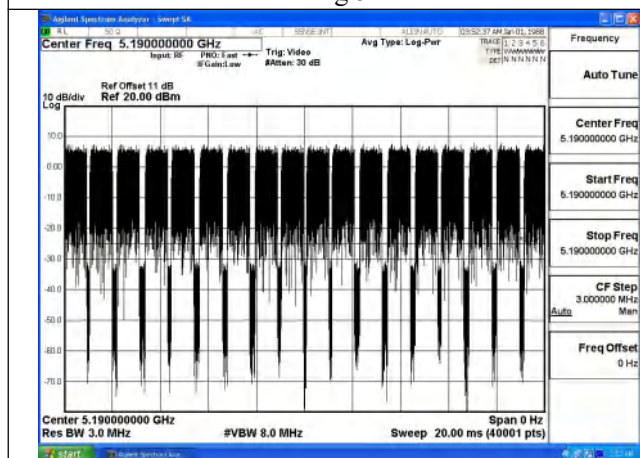


Fig.7

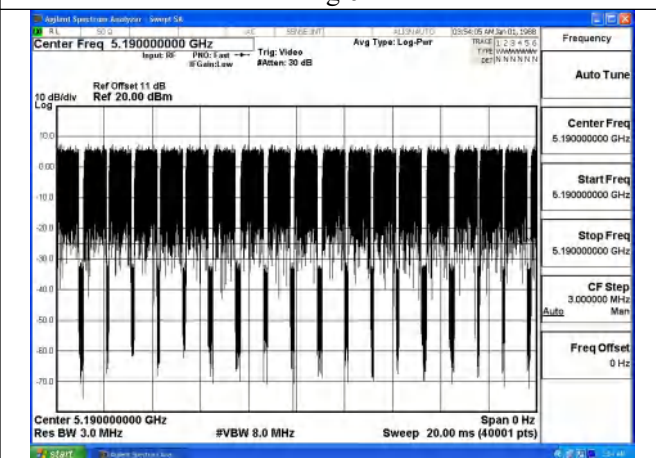


Fig.8

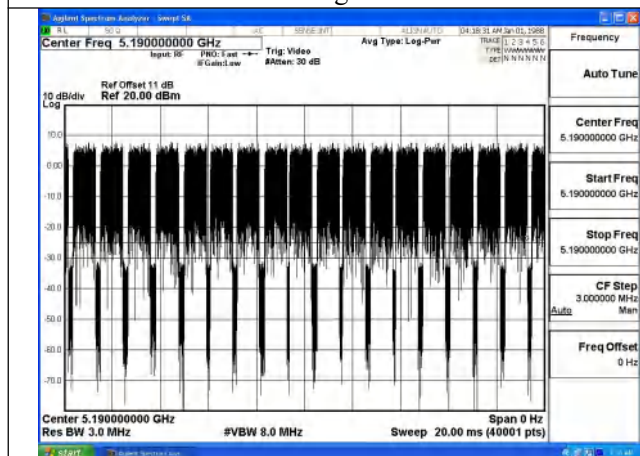


Fig.9

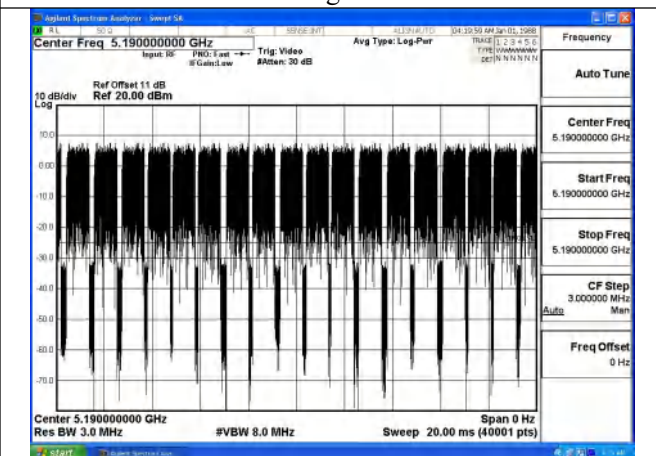


Fig.10

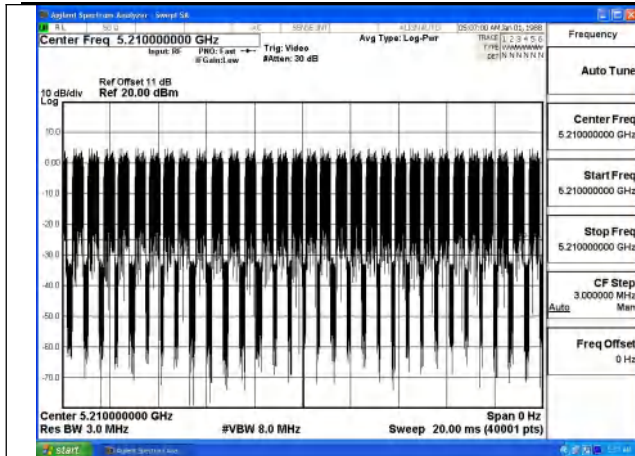


Fig.11

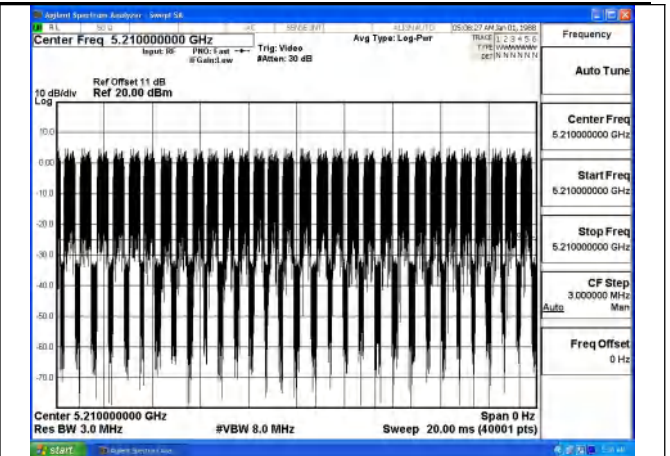


Fig.12

Output Power

Mode	Tones/ RU Index	Frequency (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5180	Chain0	9.25	9.46
802.11a	NA	5180	Chain1	9.19	9.40
802.11a	NA	5220	Chain0	10.05	10.26
802.11a	NA	5220	Chain1	9.82	10.03
802.11a	NA	5240	Chain0	10.08	10.29
802.11a	NA	5240	Chain1	10.00	10.21
802.11n HT20	NA	5180	Chain0	8.84	9.05
802.11n HT20	NA	5180	Chain1	8.85	9.06
802.11n HT20	NA	5180	MIMO	11.86	12.07
802.11n HT20	NA	5220	Chain0	9.83	10.04
802.11n HT20	NA	5220	Chain1	9.64	9.85
802.11n HT20	NA	5220	MIMO	12.75	12.96
802.11n HT20	NA	5240	Chain0	10.06	10.27
802.11n HT20	NA	5240	Chain1	9.85	10.06
802.11n HT20	NA	5240	MIMO	12.97	13.18
802.11ac VHT20	NA	5180	Chain0	8.88	9.09
802.11ac VHT20	NA	5180	Chain1	9.00	9.21
802.11ac VHT20	NA	5180	MIMO	11.95	12.16
802.11ac VHT20	NA	5220	Chain0	9.65	9.86
802.11ac VHT20	NA	5220	Chain1	9.43	9.64
802.11ac VHT20	NA	5220	MIMO	12.55	12.76
802.11ac VHT20	NA	5240	Chain0	9.67	9.88
802.11ac VHT20	NA	5240	Chain1	9.72	9.93
802.11ac VHT20	NA	5240	MIMO	12.71	12.92
802.11n HT40	NA	5190	Chain0	8.57	8.78
802.11n HT40	NA	5190	Chain1	8.47	8.68
802.11n HT40	NA	5190	MIMO	11.53	11.74
802.11n HT40	NA	5230	Chain0	9.23	9.44
802.11n HT40	NA	5230	Chain1	9.14	9.35
802.11n HT40	NA	5230	MIMO	12.20	12.41
802.11ac VHT40	NA	5190	Chain0	8.50	8.71
802.11ac VHT40	NA	5190	Chain1	8.52	8.73
802.11ac VHT40	NA	5190	MIMO	11.52	11.73
802.11ac VHT40	NA	5230	Chain0	9.07	9.28
802.11ac VHT40	NA	5230	Chain1	8.74	8.95
802.11ac VHT40	NA	5230	MIMO	11.92	12.13
802.11ac VHT80	NA	5210	Chain0	7.68	7.89
802.11ac VHT80	NA	5210	Chain1	7.78	7.99
802.11ac VHT80	NA	5210	MIMO	10.74	10.95

Emission Bandwidth

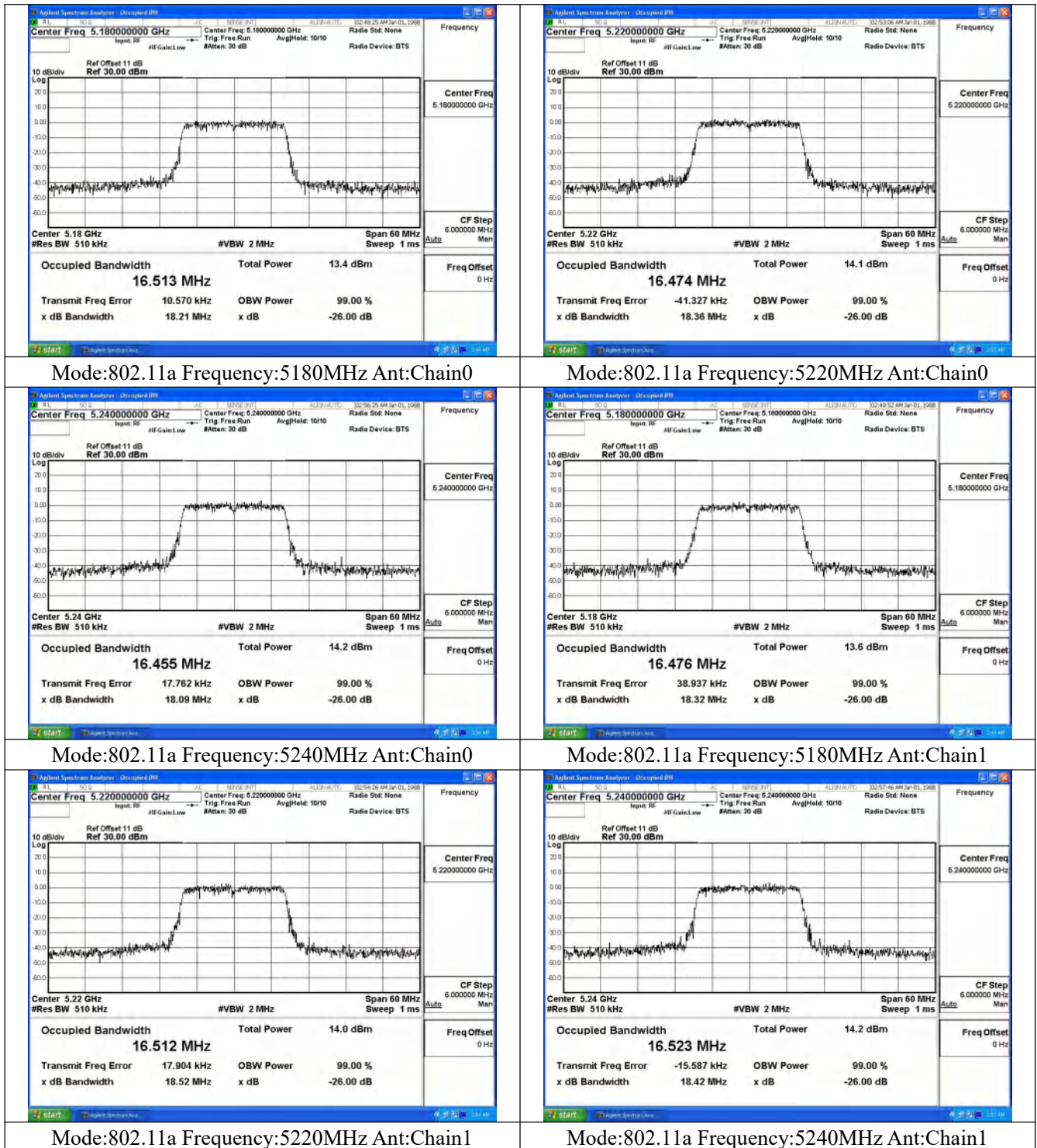
Offset 11dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	18.21	18.36	18.09
802.11a	Chain1	18.32	18.52	18.42
802.11n HT20	Chain0	19.51	19.62	19.50
802.11n HT20	Chain1	19.45	19.68	19.74
802.11ac VHT20	Chain0	19.44	19.21	19.57
802.11ac VHT20	Chain1	19.49	19.45	19.49

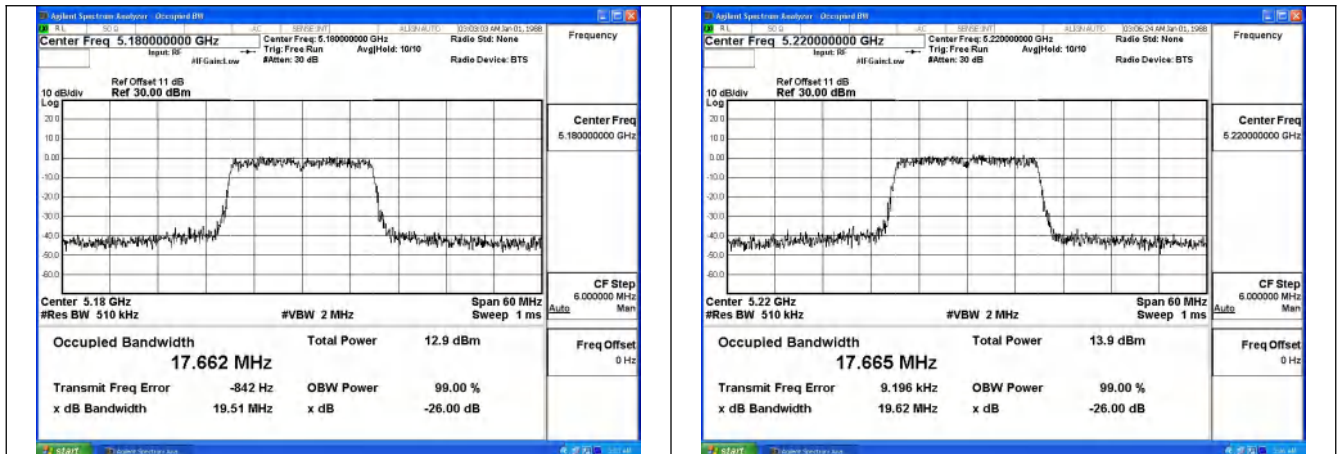
Test Mode	Antenna	26dB Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	40.50	---	40.41
802.11n HT40	Chain1	41.24	---	40.50
802.11ac VHT40	Chain0	39.95	---	40.91
802.11ac VHT40	Chain1	40.84	---	39.67

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	81.21	---	---
802.11ac VHT80	Chain1	80.90	---	---

Test Mode: 802.11a

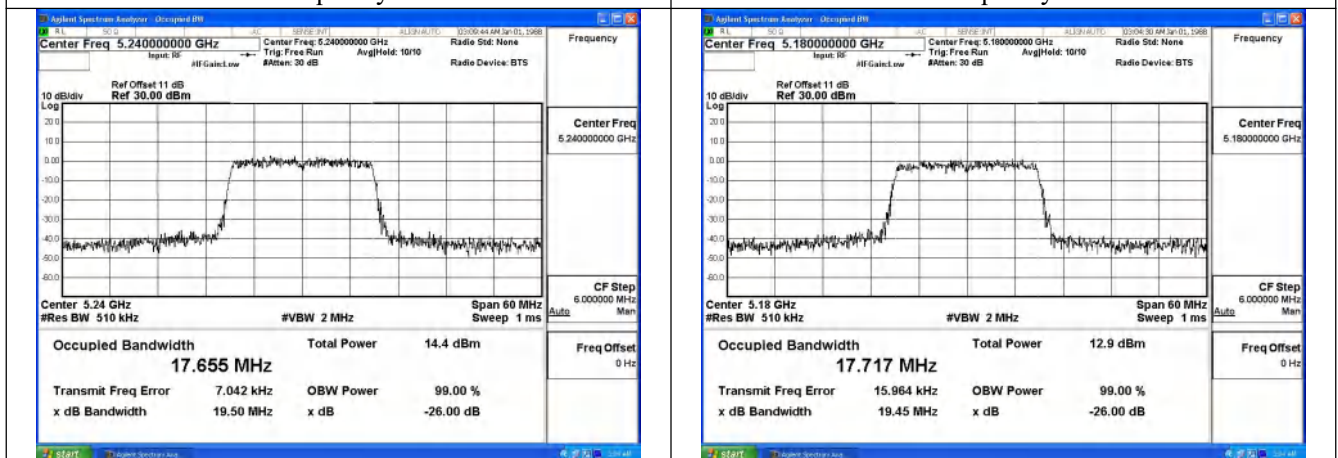


Test Mode: 802.11n HT20



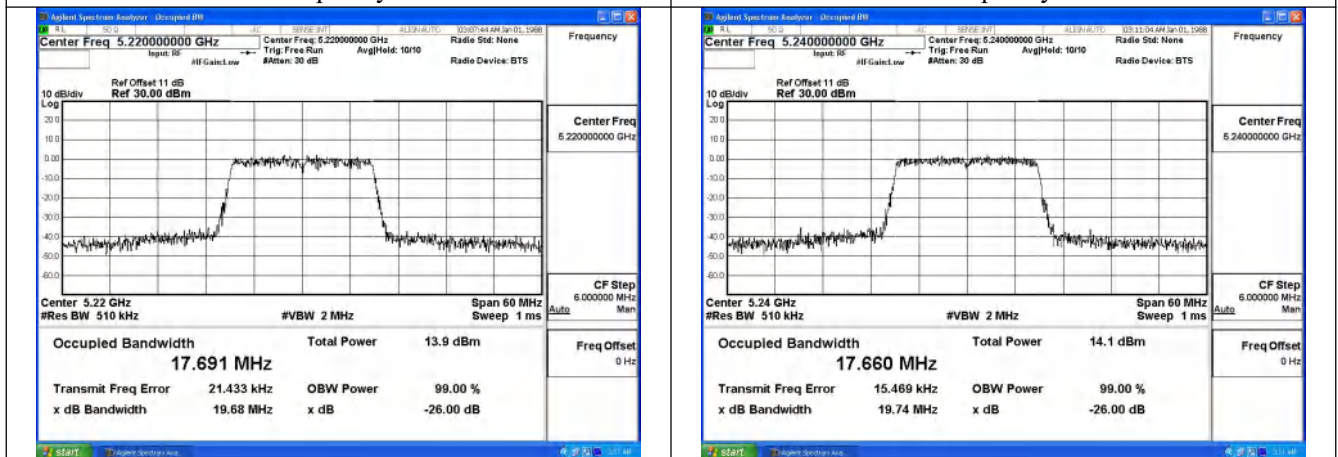
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0

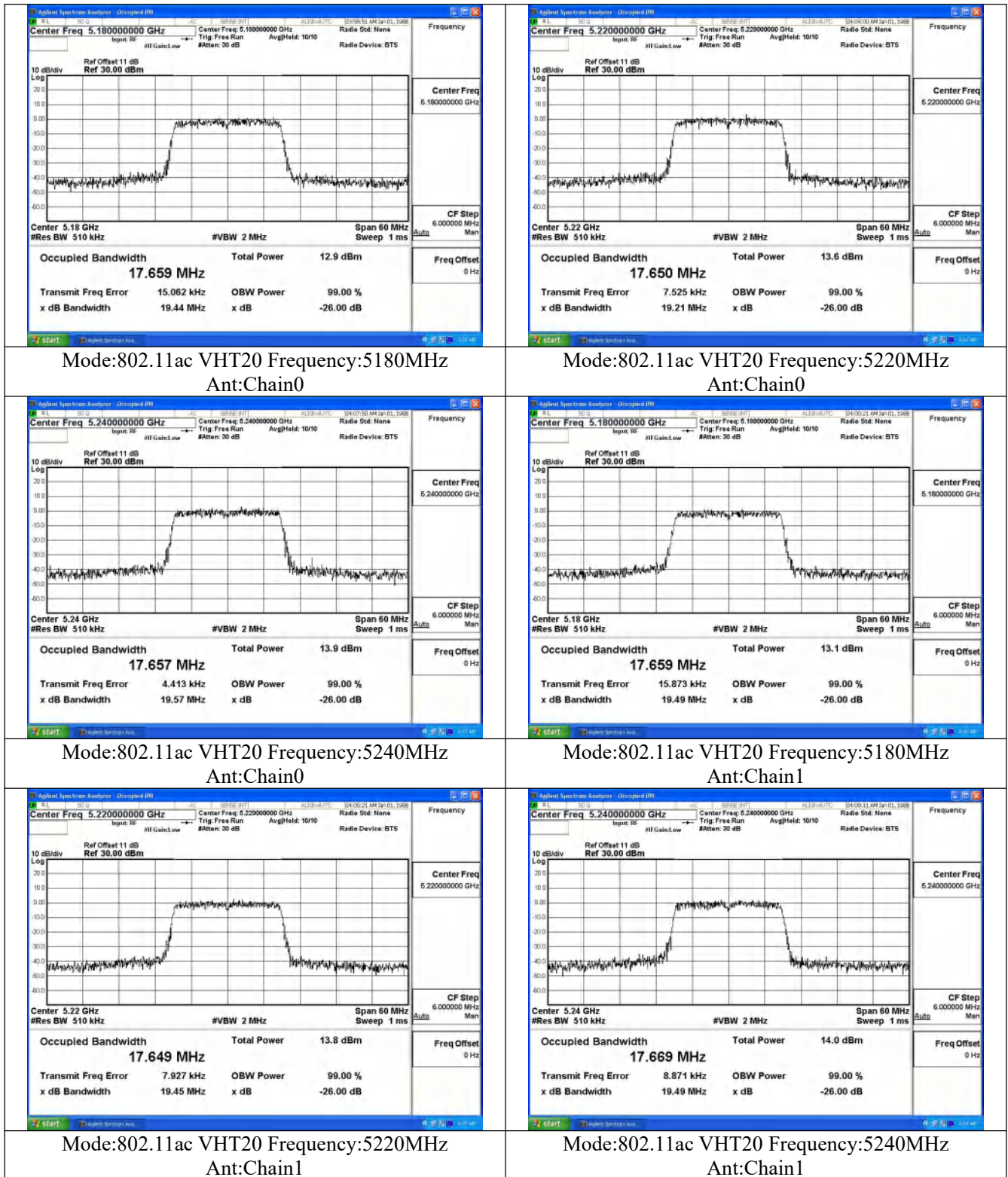
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain1



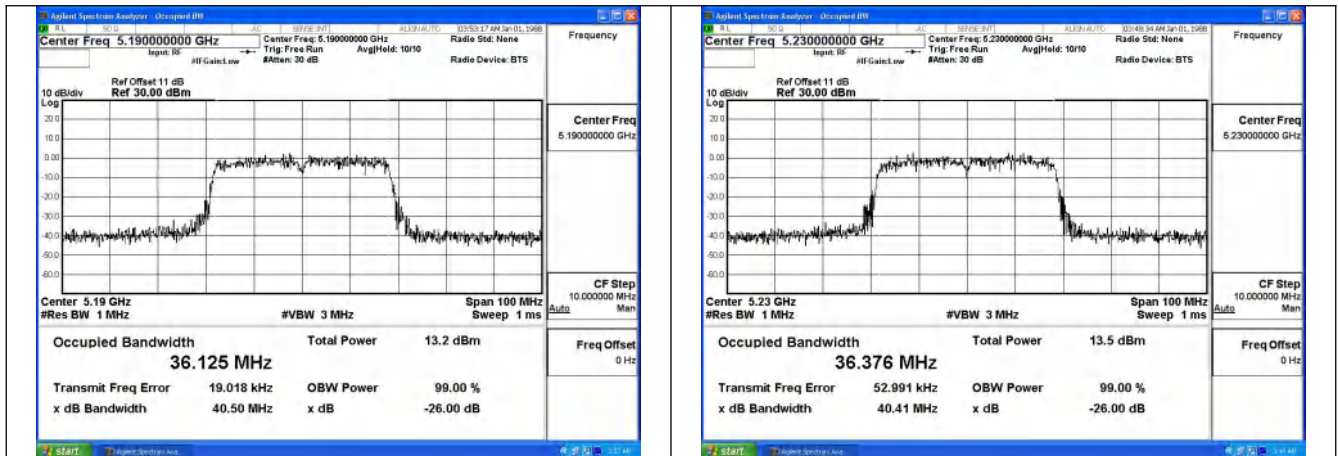
Mode:802.11n HT20 Frequency:5220MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5240MHz Ant:Chain1

Test Mode: 802.11ac VHT20

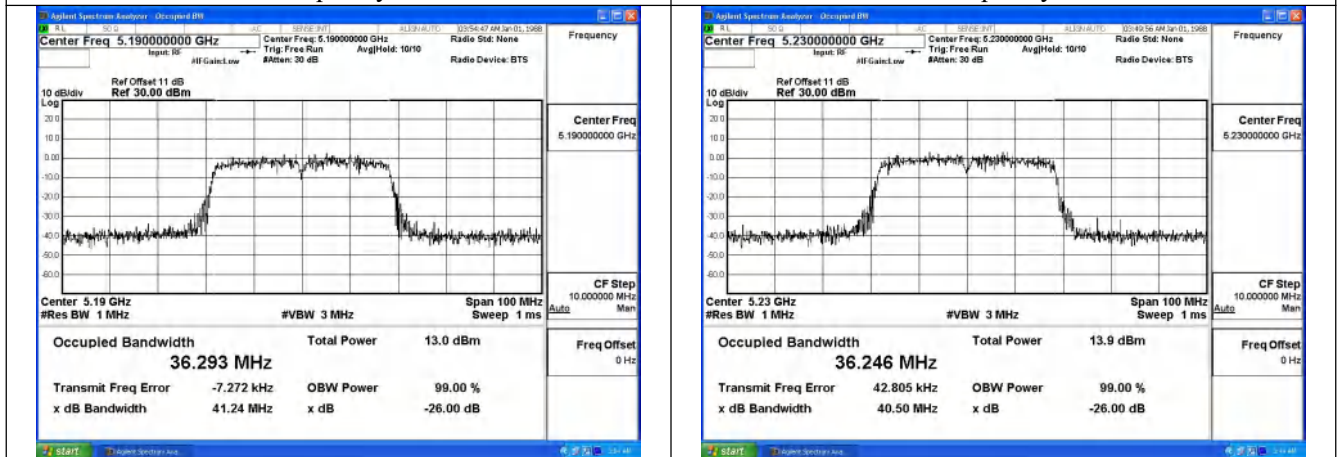


Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:5190MHz Ant:Chain0

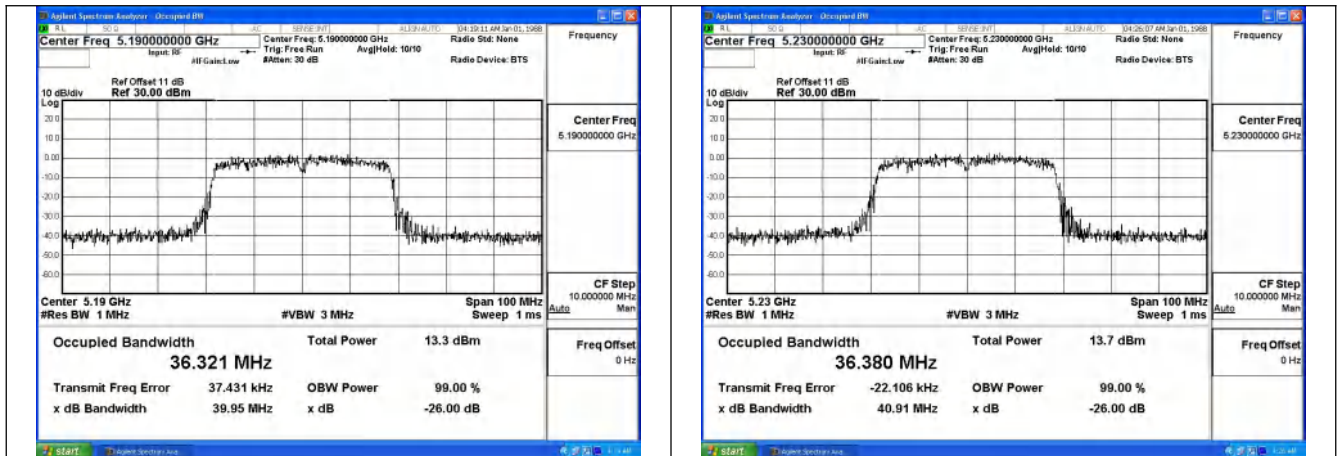
Mode:802.11n HT40 Frequency:5230MHz Ant:Chain0



Mode:802.11n HT40 Frequency:5190MHz Ant:Chain1

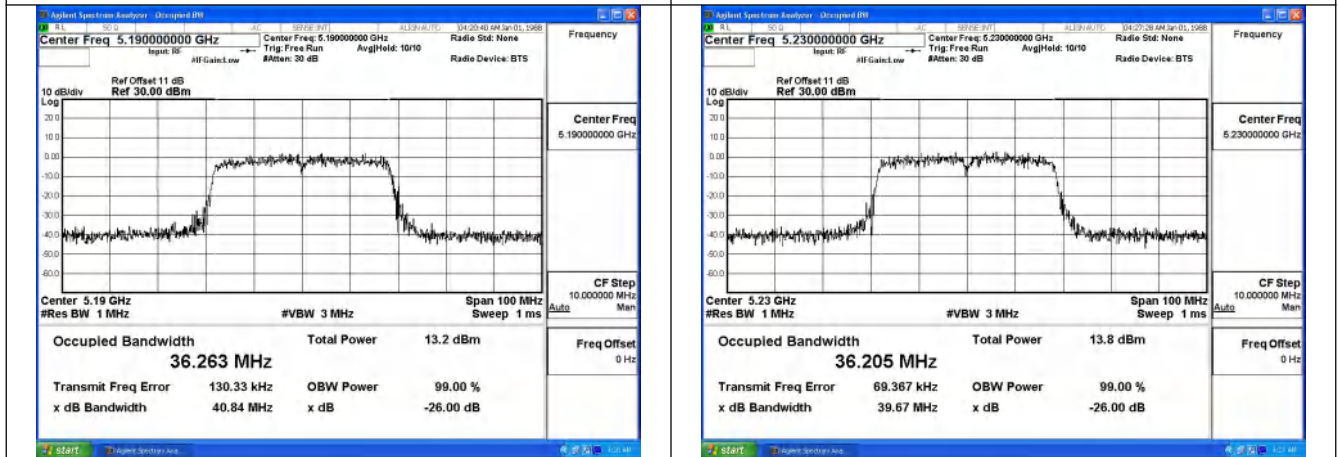
Mode:802.11n HT40 Frequency:5230MHz Ant:Chain1

Test Mode: 802.11ac VHT40



Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0

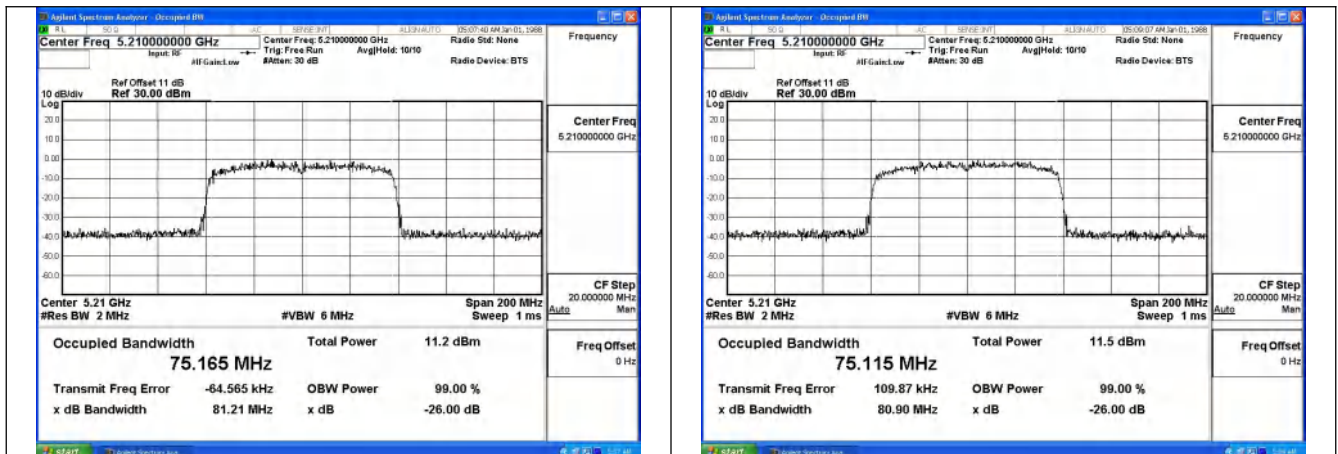
Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain1

Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0

Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain1

Occupied Bandwidth

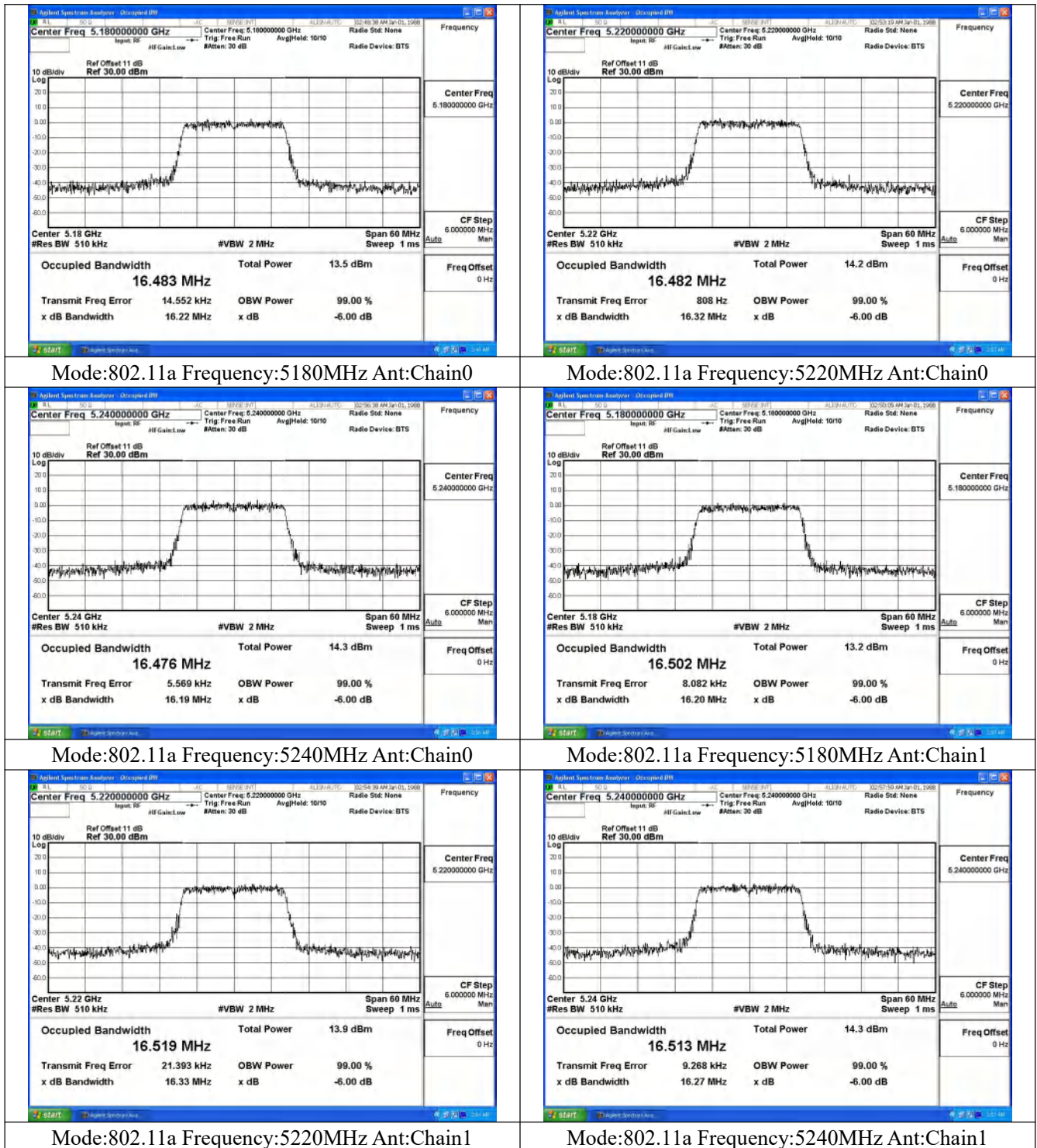
Offset 11dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	16.483	16.482	16.476
802.11a	Chain1	16.502	16.519	16.513
802.11n HT20	Chain0	17.688	17.700	17.654
802.11n HT20	Chain1	17.658	17.752	17.667
802.11ac VHT20	Chain0	17.630	17.685	17.732
802.11ac VHT20	Chain1	17.652	17.714	17.697

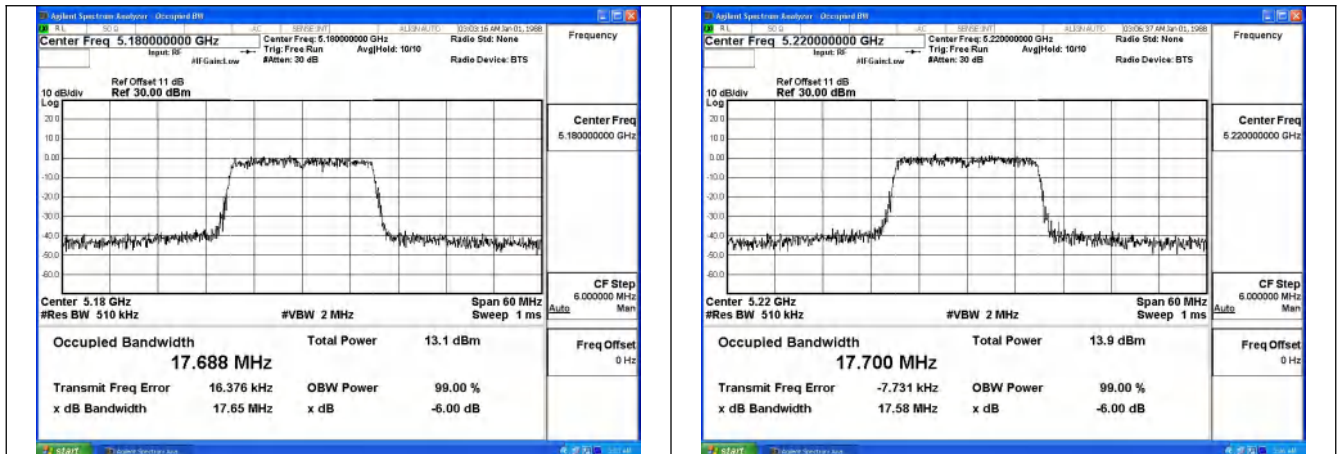
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	36.157	---	36.214
802.11n HT40	Chain1	36.241	---	36.250
802.11ac VHT40	Chain0	36.326	---	36.266
802.11ac VHT40	Chain1	36.239	---	36.244

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	74.996	---	---
802.11ac VHT80	Chain1	75.236	---	---

Test Mode: 802.11a

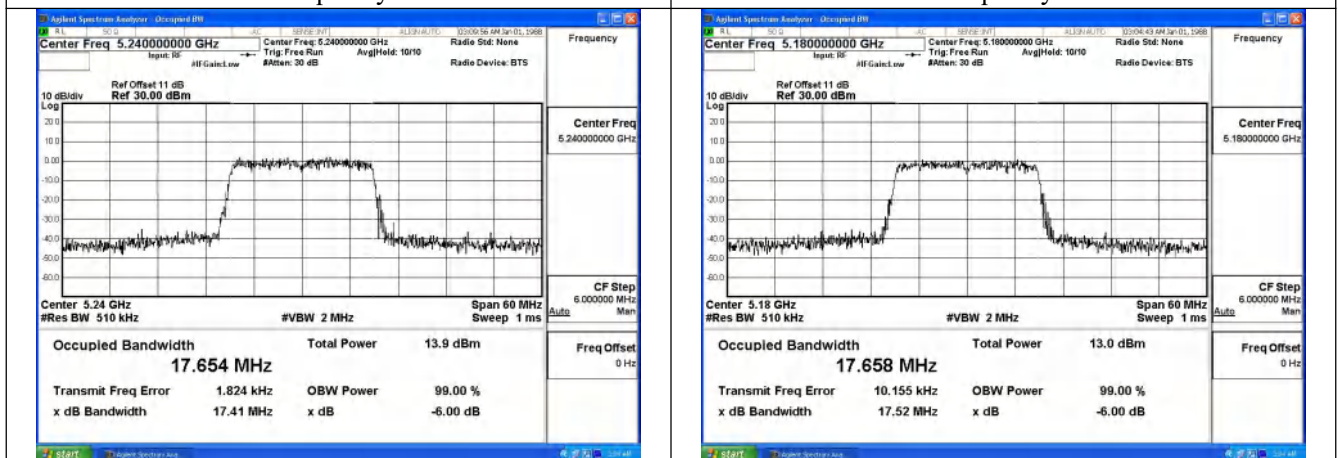


Test Mode: 802.11n HT20



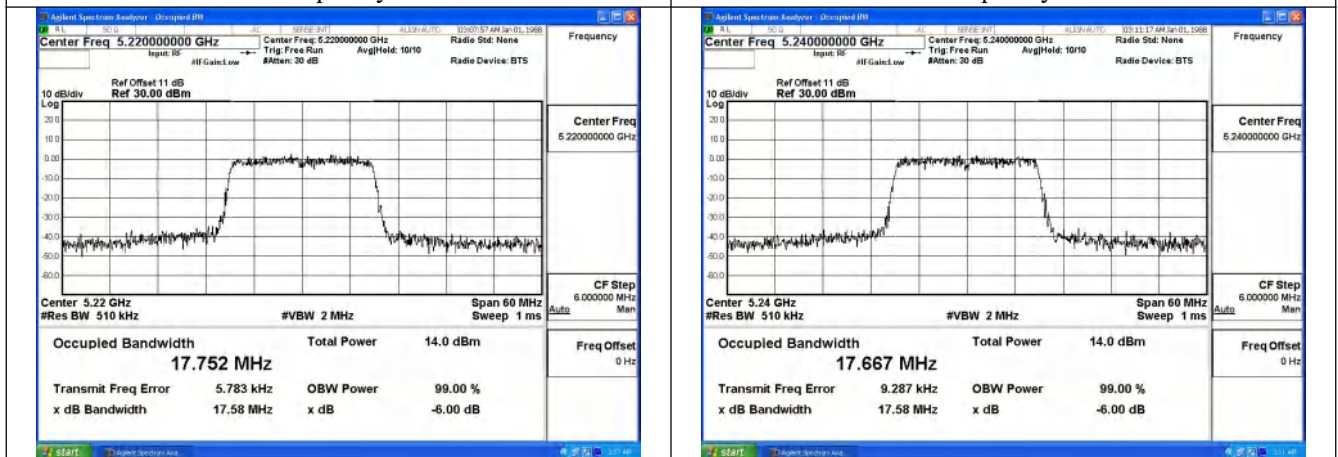
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0

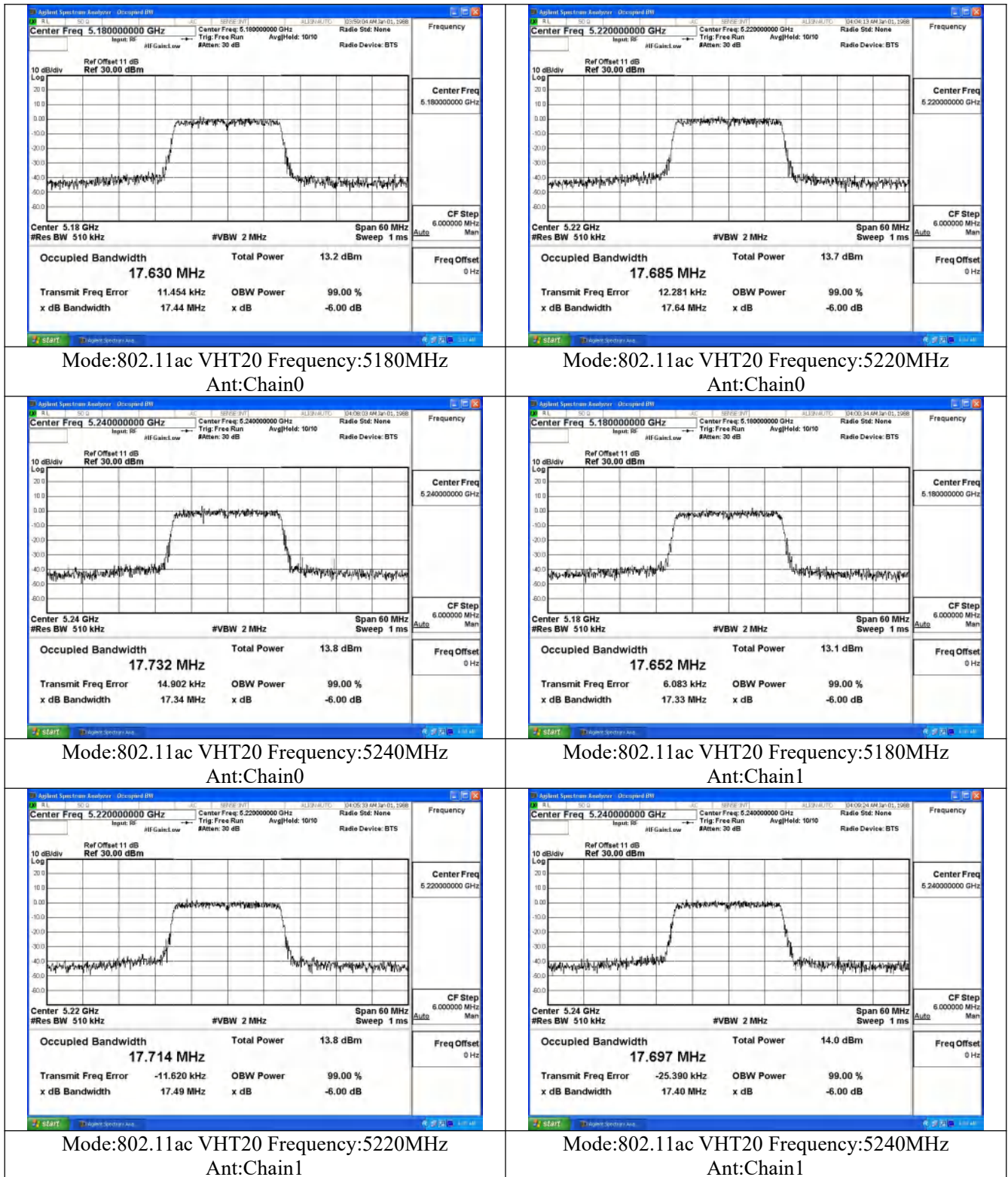
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain1



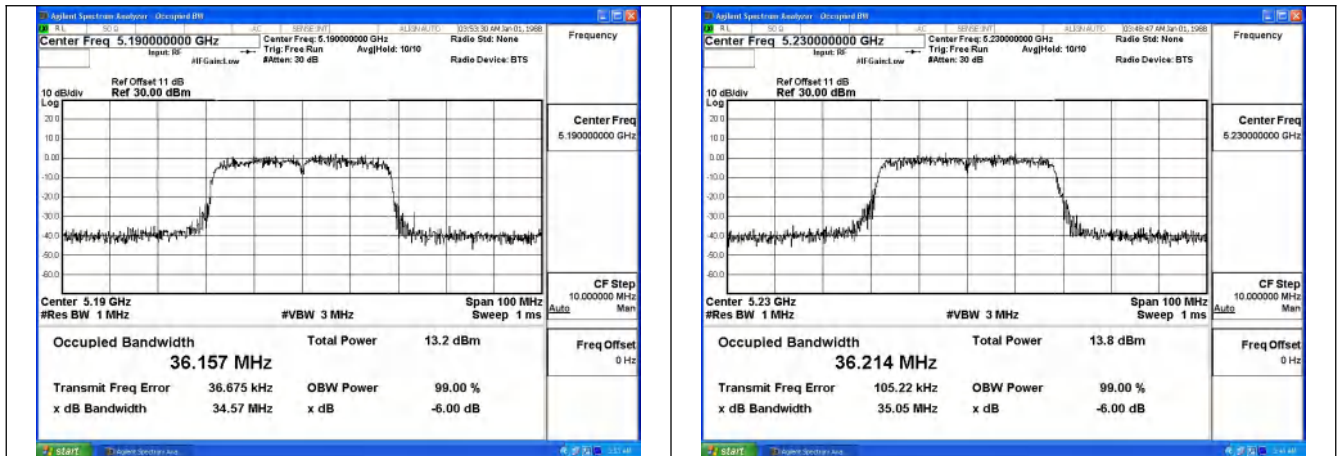
Mode:802.11n HT20 Frequency:5220MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5240MHz Ant:Chain1

Test Mode: 802.11ac VHT20

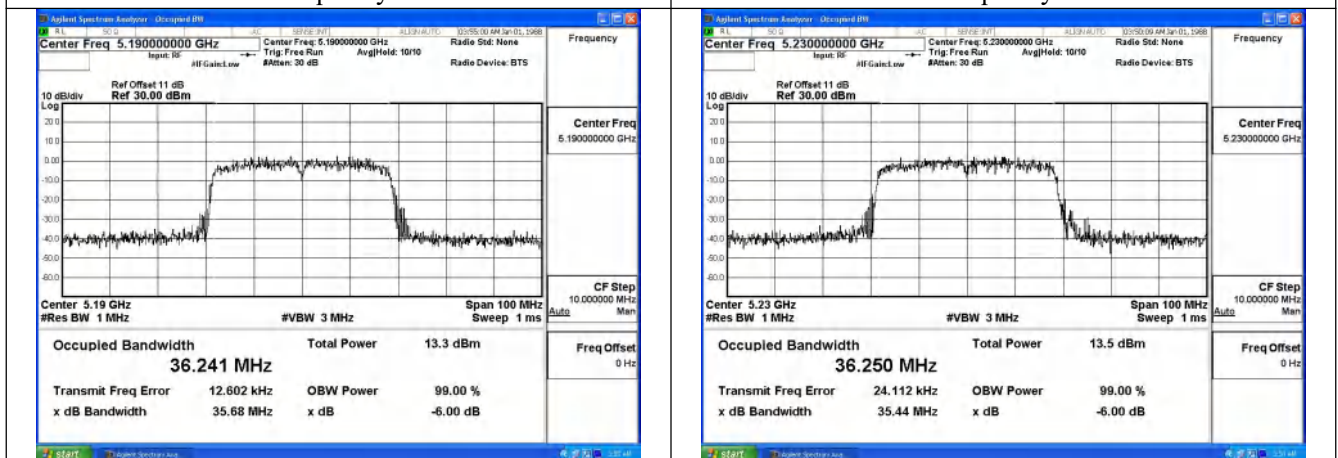


Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:5190MHz Ant:Chain0

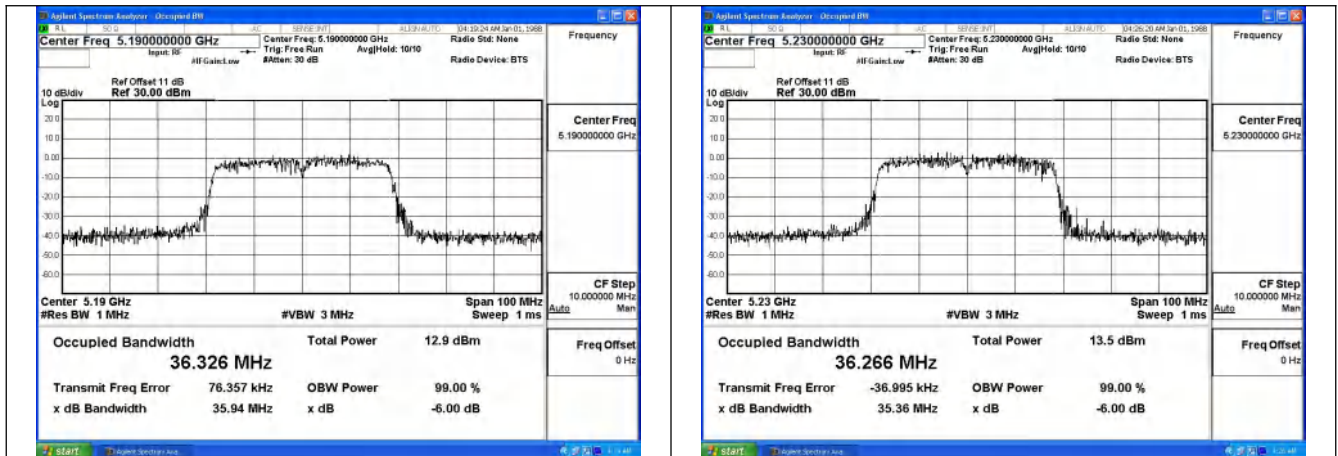
Mode:802.11n HT40 Frequency:5230MHz Ant:Chain0



Mode:802.11n HT40 Frequency:5190MHz Ant:Chain1

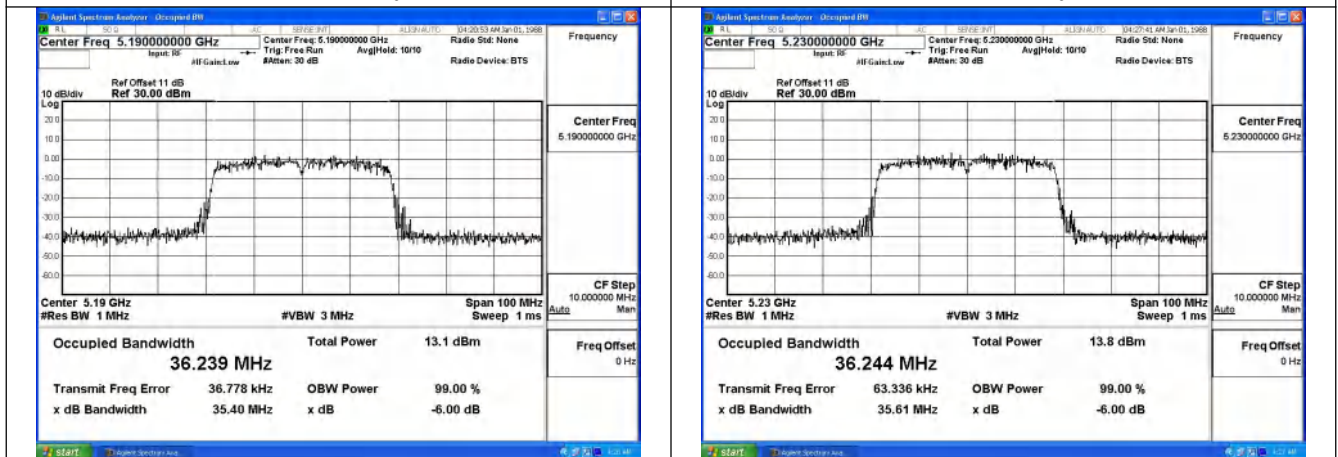
Mode:802.11n HT40 Frequency:5230MHz Ant:Chain1

Test Mode: 802.11ac VHT40



Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0

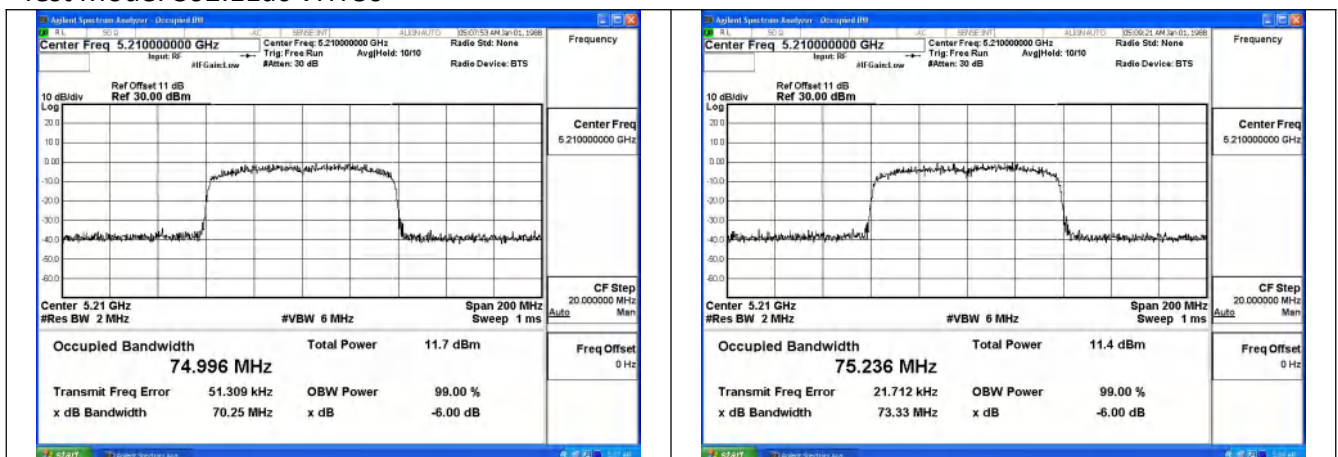
Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain1

Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0

Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain1

Transmitter Power Spectral Density

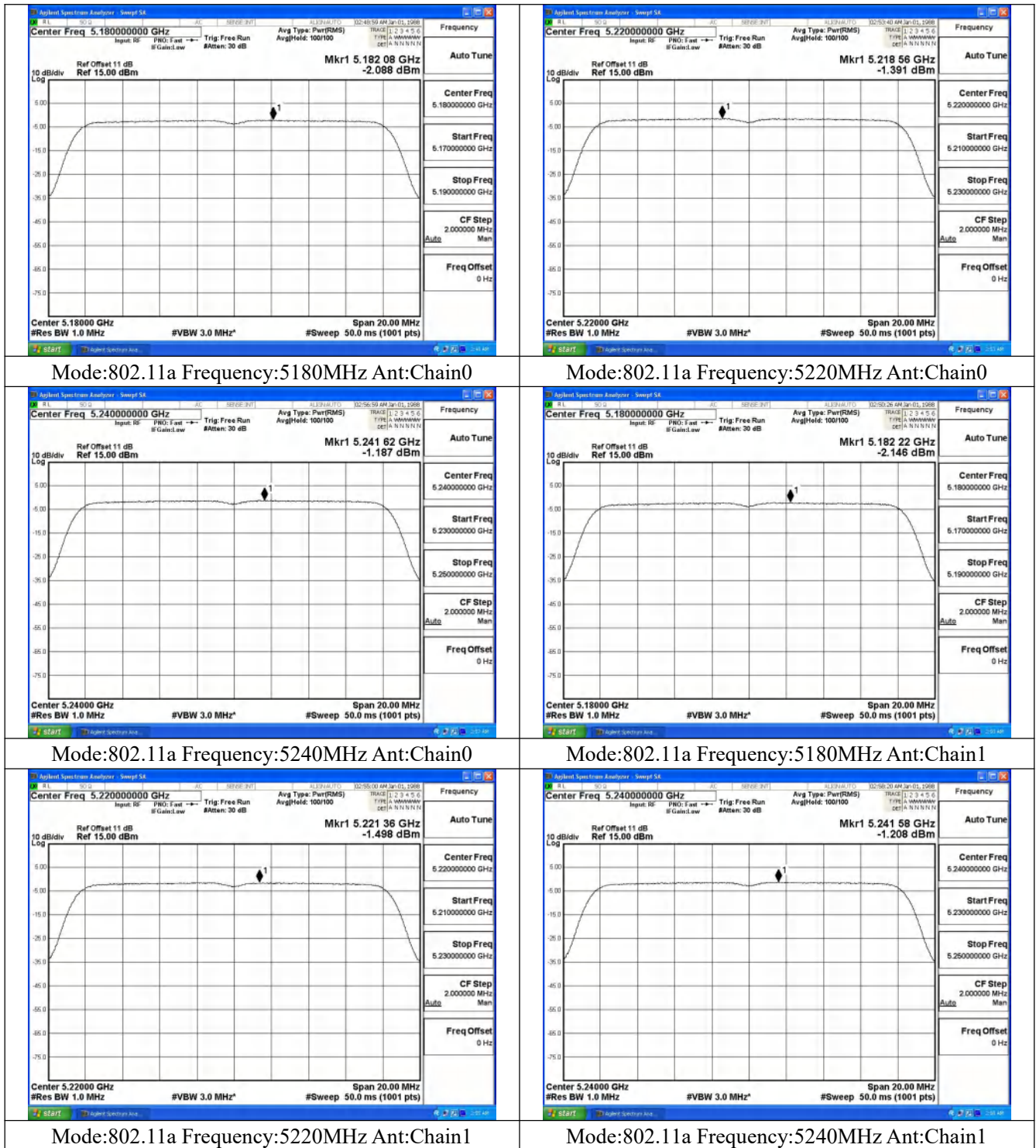
Offset 11dB = Attenuator + Temporary antenna connector loss + Cable loss

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	0.00	-2.088	0.00	-1.391	0.00	-1.187
802.11a	Chain1	NA	0.00	-2.146	0.00	-1.498	0.00	-1.208
802.11n HT20	Chain0	NA	0.00	-2.485	0.00	-1.811	0.00	-1.618
802.11n HT20	Chain1	NA	0.00	-2.546	0.00	-1.813	0.00	-1.653
802.11n HT20	MIMO	NA	0.00	0.495	0.00	1.198	0.00	1.375
802.11ac VHT20	Chain0	NA	0.00	-2.628	0.00	-1.918	0.00	-1.699
802.11ac VHT20	Chain1	NA	0.00	-2.611	0.00	-1.938	0.00	-1.635
802.11ac VHT20	MIMO	NA	0.00	0.391	0.00	1.082	0.00	1.343

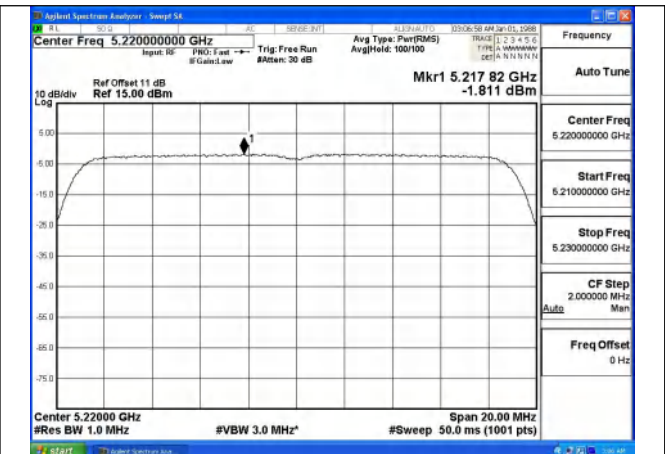
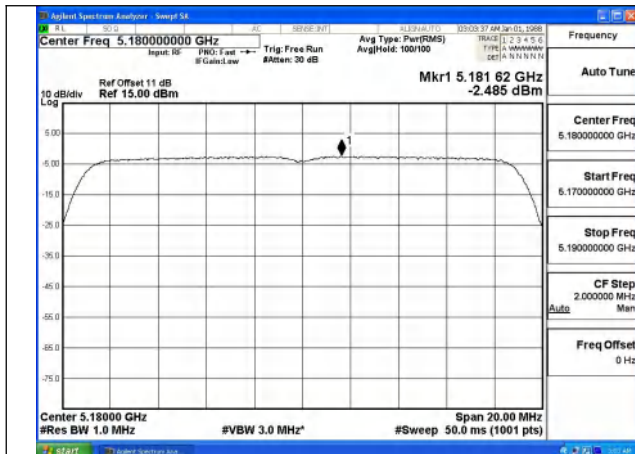
Test Mode	Antenna	Tones	5190MHz		---		5230MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11n HT40	Chain0	NA	0.00	-5.438	---	---	0.00	-4.918
802.11n HT40	Chain1	NA	0.00	-5.512	---	---	0.00	-4.751
802.11n HT40	MIMO	NA	0.00	-2.465	---	---	0.00	-1.823
802.11ac VHT40	Chain0	NA	0.00	-5.599	---	---	0.00	-4.875
802.11ac VHT40	Chain1	NA	0.00	-5.524	---	---	0.00	-4.897
802.11ac VHT40	MIMO	NA	0.00	-2.551	---	---	0.00	-1.876

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	0.00	-8.821	---	---	---	---
802.11ac VHT80	Chain1	NA	0.09	-8.749	---	---	---	---
802.11ac VHT80	MIMO	NA	0.09	-5.775	---	---	---	---

Test Mode: 802.11a

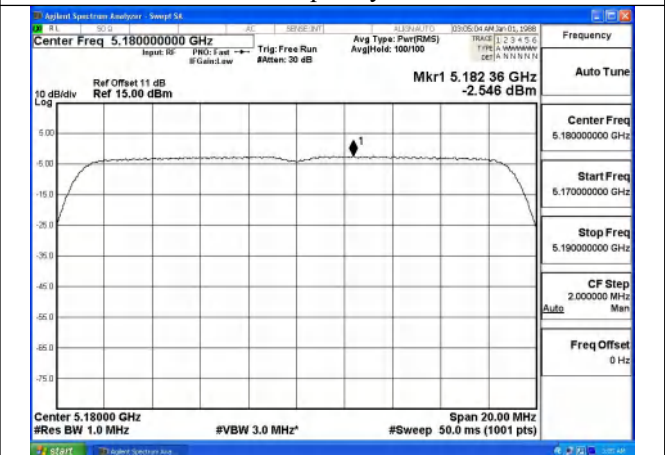
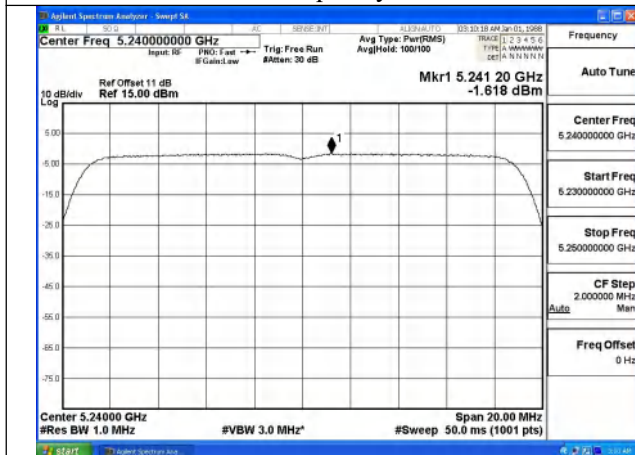


Test Mode: 802.11n HT20



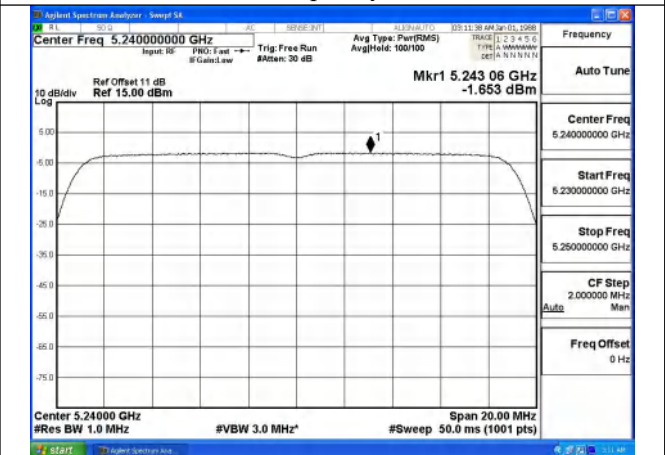
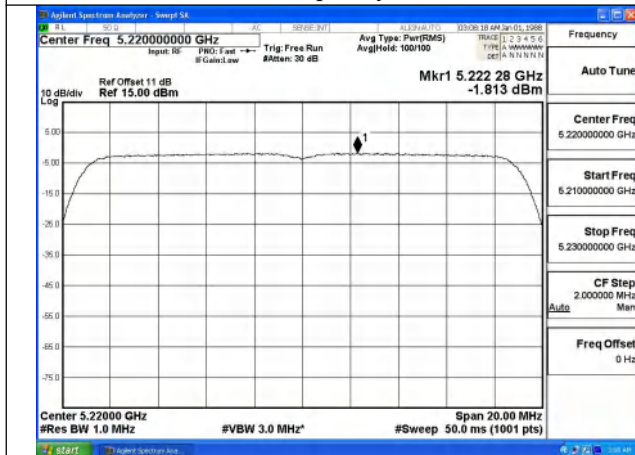
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5220MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5240MHz Ant:Chain0

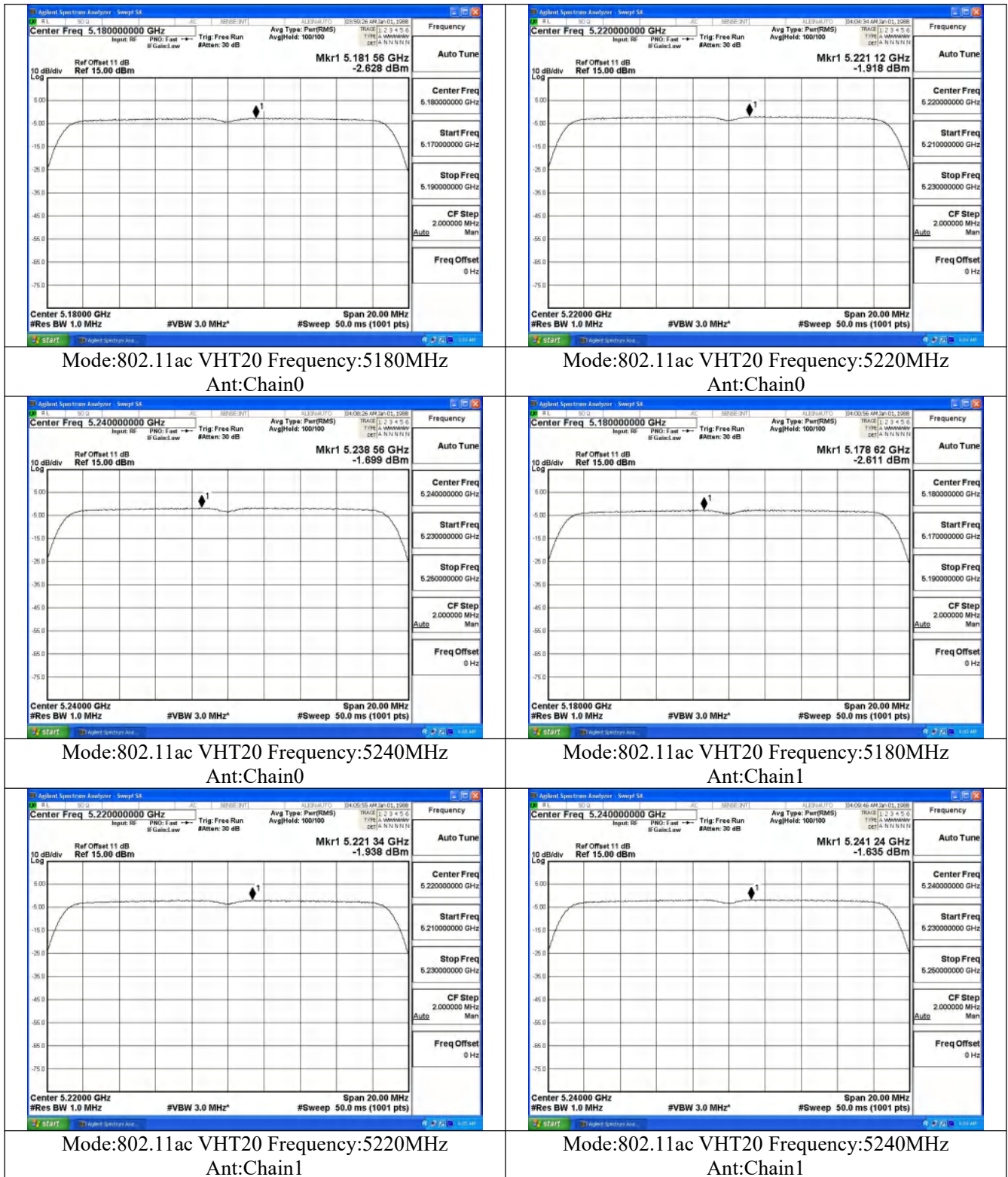
Mode:802.11n HT20 Frequency:5180MHz Ant:Chain1



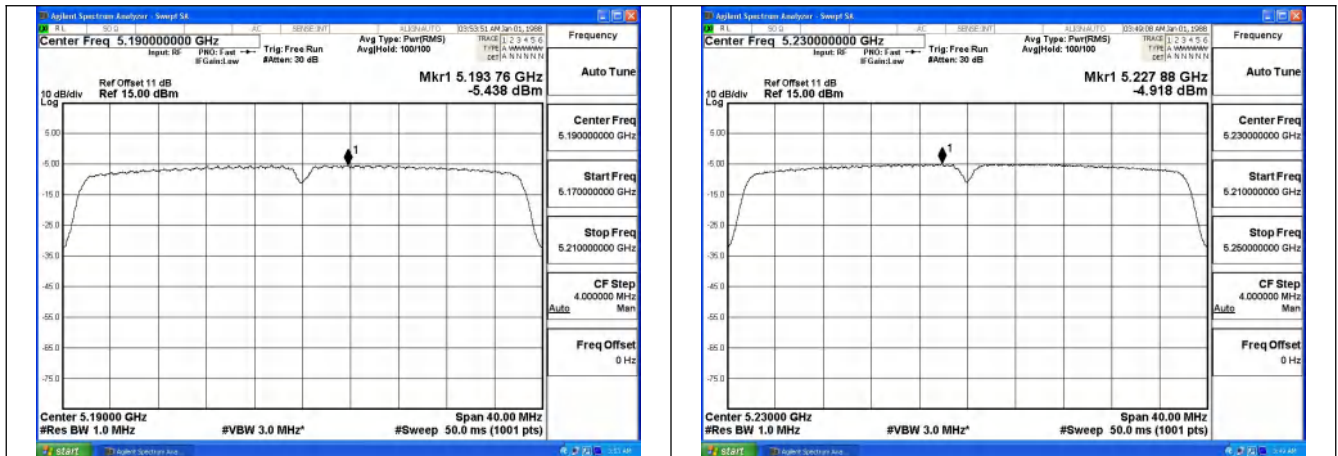
Mode:802.11n HT20 Frequency:5220MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5240MHz Ant:Chain1

Test Mode: 802.11ac VHT20

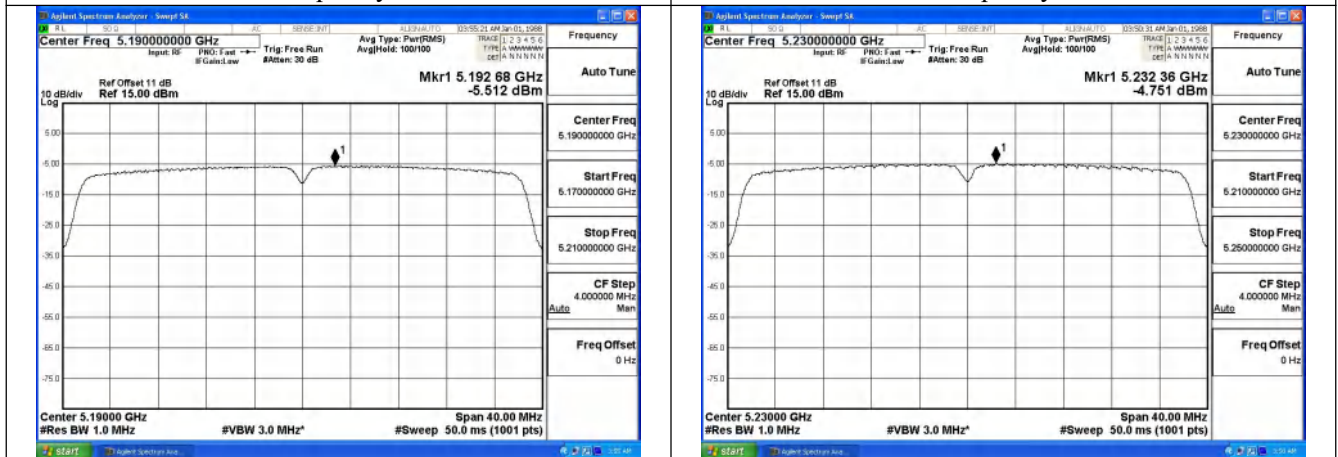


Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:5190MHz Ant:Chain0

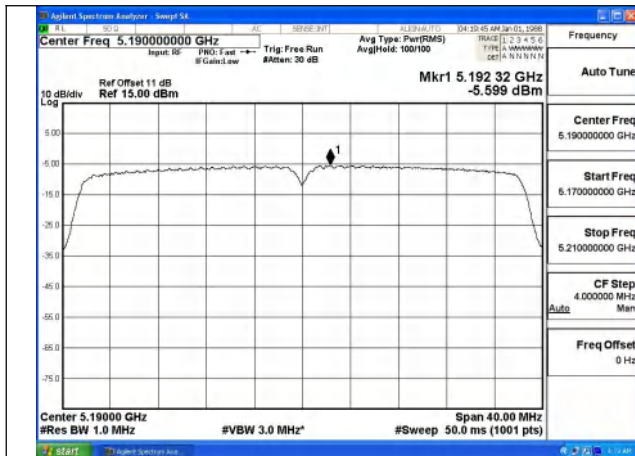
Mode:802.11n HT40 Frequency:5230MHz Ant:Chain0



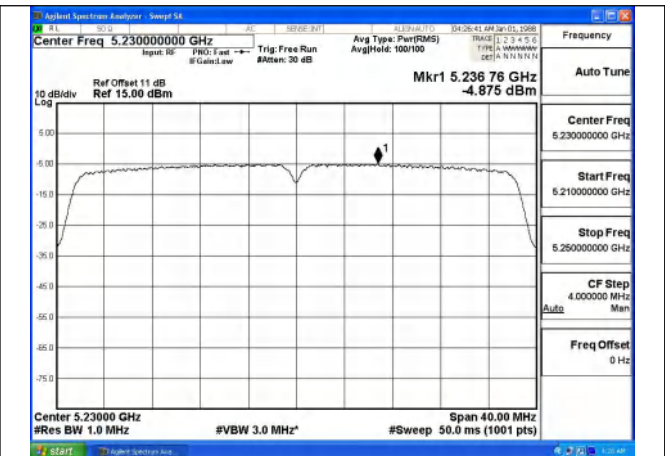
Mode:802.11n HT40 Frequency:5190MHz Ant:Chain1

Mode:802.11n HT40 Frequency:5230MHz Ant:Chain1

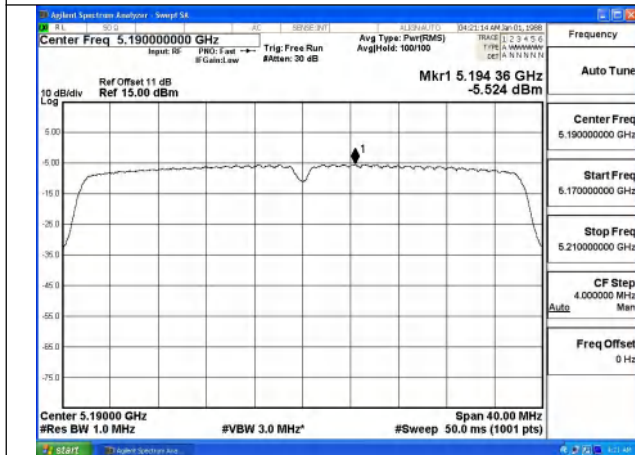
Test Mode: 802.11ac VHT40



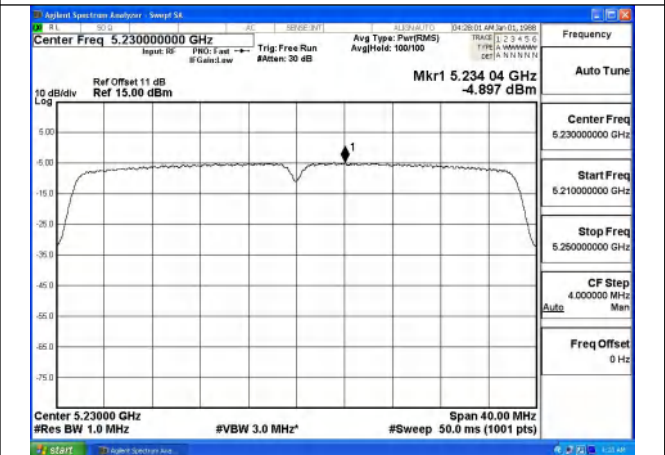
Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0

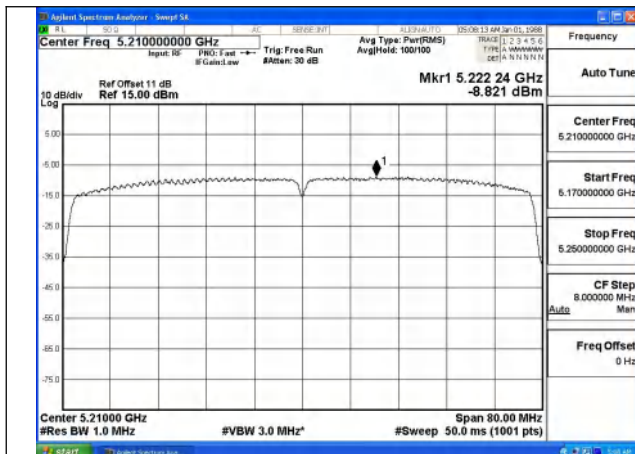


Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain1

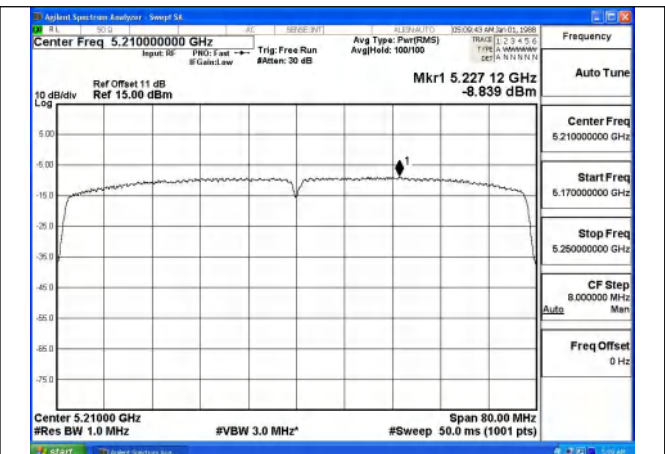


Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain1