

## APPENDIX A – TEST DATA OF CONDUCTED EMISSION

### 7663

#### Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)
802.11a	5500	98.69%	0
802.11a	5500	98.60%	0
802.11n HT20	5500	98.52%	0
802.11n HT20	5500	98.48%	0
802.11ac VHT20	5500	98.61%	0
802.11ac VHT20	5500	98.49%	0
802.11n HT40	5510	97.12%	0.13
802.11n HT40	5510	97.09%	0.13
802.11ac VHT40	5510	97.13%	0.13
802.11ac VHT40	5510	97.10%	0.13
802.11ac VHT80	5530	94.41%	0.25
802.11ac VHT80	5530	98.19%	0

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

#### Output Power

Mode	Tones/ RUIndex	Freq (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5500	Chain0	15.64	16.14
802.11a	NA	5500	Chain1	15.42	15.87
802.11a	NA	5580	Chain0	15.64	16.14
802.11a	NA	5580	Chain1	14.88	15.33
802.11a	NA	5700	Chain0	15.61	16.11
802.11a	NA	5700	Chain1	14.54	14.99
802.11n HT20	NA	5500	Chain0	15.49	15.99
802.11n HT20	NA	5500	Chain1	15.44	15.89
802.11n HT20	NA	5500	MIMO	18.48	18.98
802.11n HT20	NA	5580	Chain0	15.44	15.94
802.11n HT20	NA	5580	Chain1	15.07	15.52
802.11n HT20	NA	5580	MIMO	18.27	18.77
802.11n HT20	NA	5700	Chain0	15.55	16.05
802.11n HT20	NA	5700	Chain1	14.84	15.29
802.11n HT20	NA	5700	MIMO	18.22	18.72
802.11ac VHT20	NA	5500	Chain0	15.49	15.99
802.11ac VHT20	NA	5500	Chain1	15.54	15.99
802.11ac VHT20	NA	5500	MIMO	18.53	19.03
802.11ac VHT20	NA	5580	Chain0	15.47	15.97
802.11ac VHT20	NA	5580	Chain1	15.09	15.54
802.11ac VHT20	NA	5580	MIMO	18.29	18.79
802.11ac VHT20	NA	5700	Chain0	15.49	15.99
802.11ac VHT20	NA	5700	Chain1	14.84	15.29
802.11ac VHT20	NA	5700	MIMO	18.19	18.69
802.11n HT40	NA	5510	Chain0	15.38	15.88

802.11n HT40	NA	5510	Chain1	15.32	15.77
802.11n HT40	NA	5510	MIMO	18.36	18.86
802.11n HT40	NA	5590	Chain0	15.41	15.91
802.11n HT40	NA	5590	Chain1	15.09	15.54
802.11n HT40	NA	5590	MIMO	18.26	18.76
802.11n HT40	NA	5670	Chain0	15.52	16.02
802.11n HT40	NA	5670	Chain1	14.95	15.40
802.11n HT40	NA	5670	MIMO	18.25	18.75
802.11ac VHT40	NA	5510	Chain0	15.34	15.84
802.11ac VHT40	NA	5510	Chain1	15.50	15.95
802.11ac VHT40	NA	5510	MIMO	18.43	18.93
802.11ac VHT40	NA	5590	Chain0	15.38	15.88
802.11ac VHT40	NA	5590	Chain1	15.11	15.56
802.11ac VHT40	NA	5590	MIMO	18.26	18.76
802.11ac VHT40	NA	5670	Chain0	15.50	16.00
802.11ac VHT40	NA	5670	Chain1	14.96	15.41
802.11ac VHT40	NA	5670	MIMO	18.25	18.75
802.11ac VHT80	NA	5530	Chain0	14.96	15.46
802.11ac VHT80	NA	5530	Chain1	15.41	15.86
802.11ac VHT80	NA	5530	MIMO	18.20	18.70
802.11ac VHT80	NA	5610	Chain0	15.02	15.52
802.11ac VHT80	NA	5610	Chain1	14.98	15.43
802.11ac VHT80	NA	5610	MIMO	18.01	18.51

## Emission Bandwidth

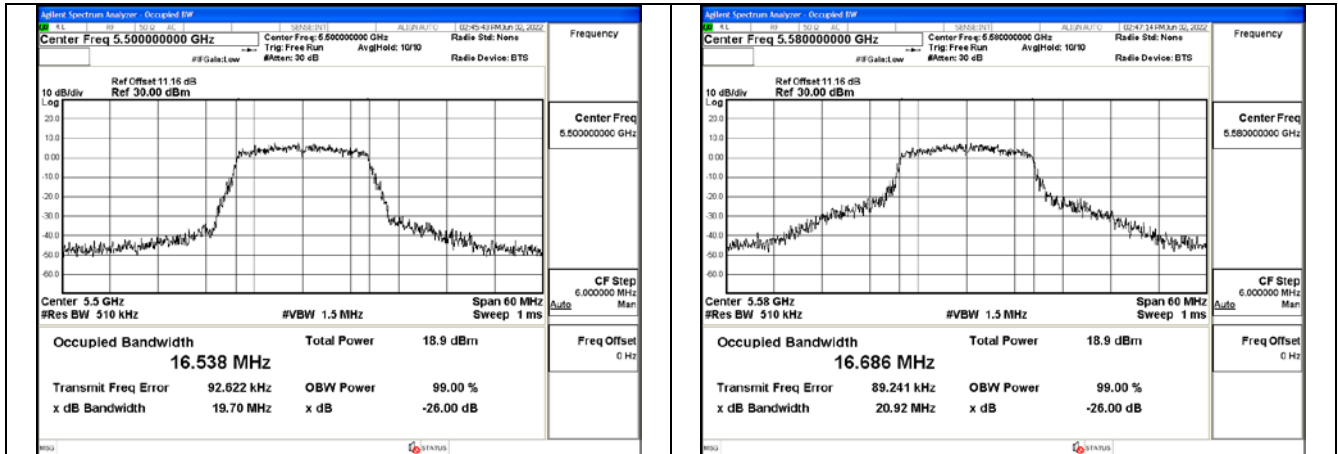
Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.618	Channel No.634	Channel No.658
		5500MHz	5580MHz	5700MHz
802.11a	Chain0	19.70	20.92	20.82
802.11a	Chain1	19.68	19.79	20.05
802.11n HT20	Chain0	19.80	20.64	20.50
802.11n HT20	Chain1	20.15	20.57	20.02
802.11ac VHT20	Chain0	20.15	20.34	20.65
802.11ac VHT20	Chain1	20.03	20.27	20.67

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.620	Channel No.636	Channel No.652
		5510MHz	5590MHz	5670MHz
802.11n HT40	Chain0	39.90	42.26	46.18
802.11n HT40	Chain1	40.24	40.64	40.57
802.11ac VHT40	Chain0	40.70	41.83	44.04
802.11ac VHT40	Chain1	40.47	40.17	40.83

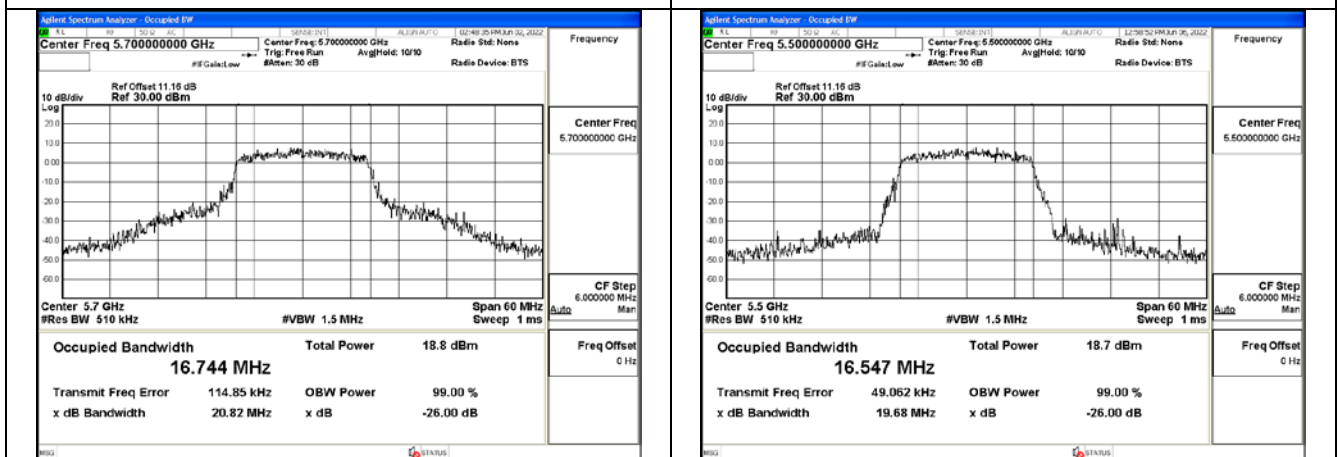
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.624	---	Channel No.640
		5530MHz	---	5610MHz
802.11ac VHT80	Chain0	81.43	---	82.03
802.11ac VHT80	Chain1	81.96	---	82.19

Test Mode: 802.11a



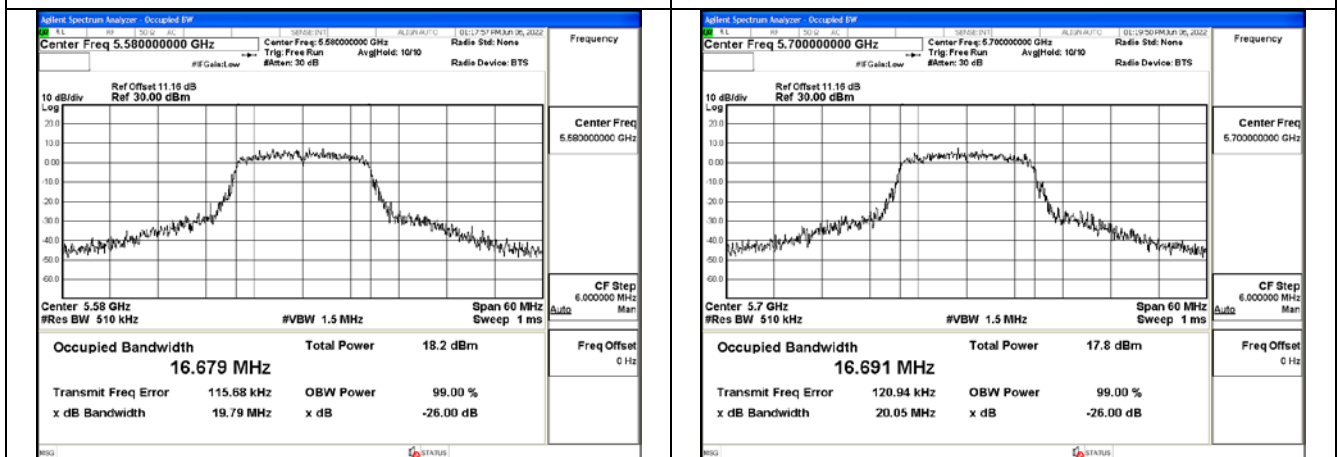
Test Mode:802.11a 5500MHz Chain0

Test Mode:802.11a 5580MHz Chain0



Test Mode:802.11a 5700MHz Chain0

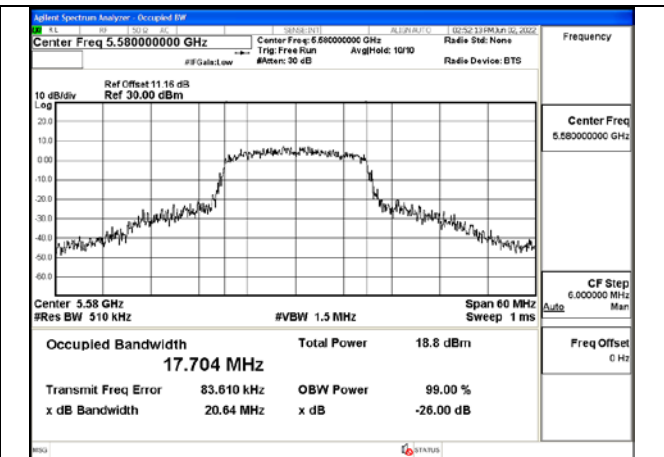
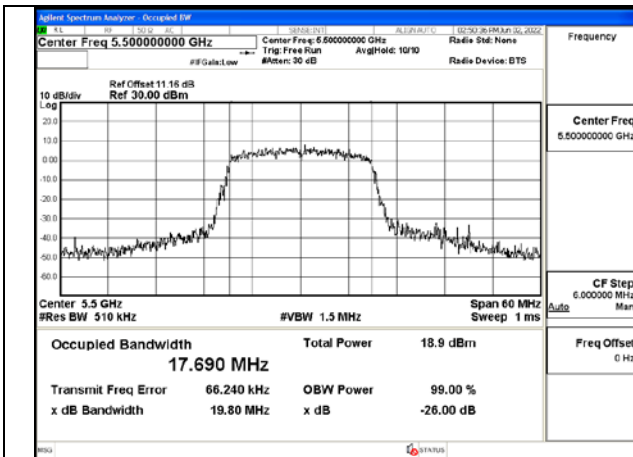
Test Mode:802.11a 5500MHz Chain1



Test Mode:802.11a 5580MHz Chain1

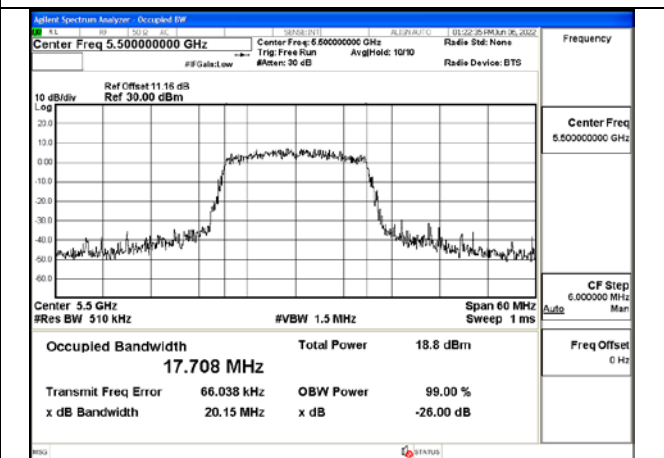
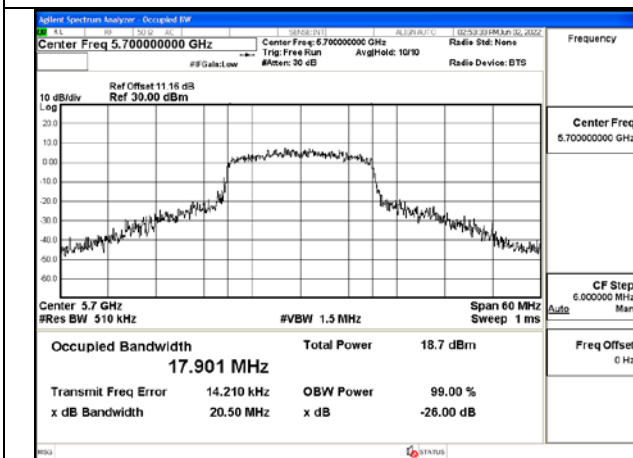
Test Mode:802.11a 5700MHz Chain1

Test Mode: 802.11n HT20



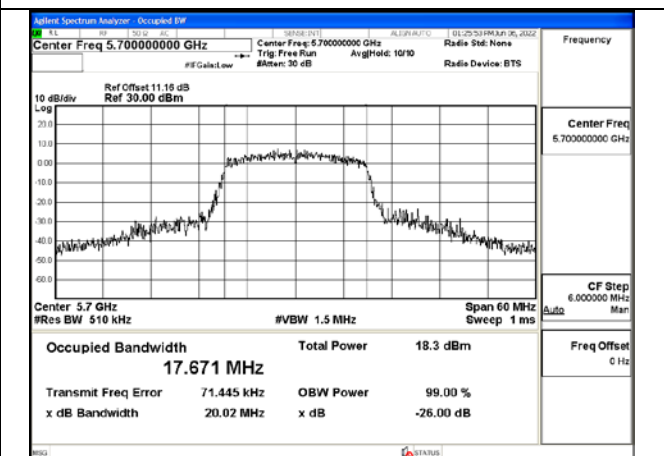
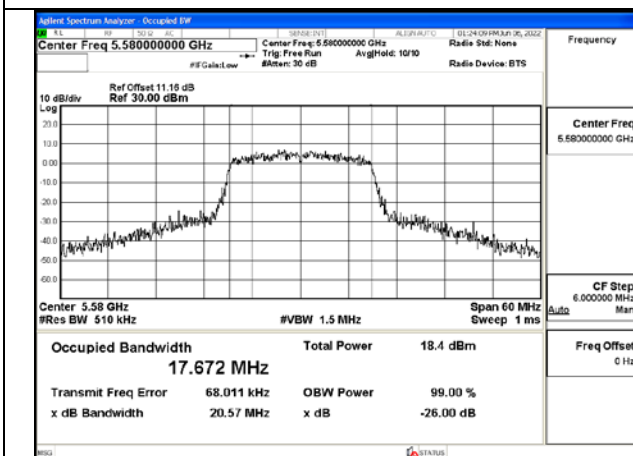
Test Mode:802.11n HT20 5500MHz Chain0

Test Mode:802.11n HT20 5580MHz Chain0



Test Mode:802.11n HT20 5700MHz Chain0

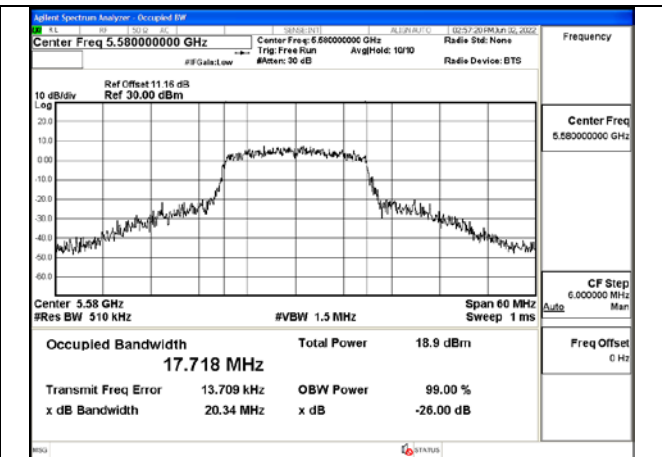
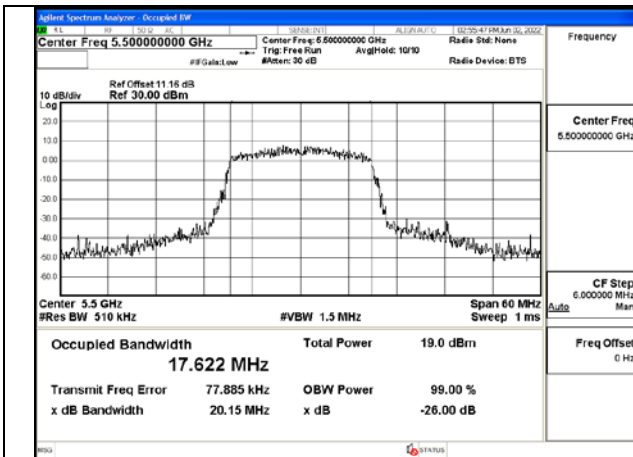
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Test Mode:802.11n HT20 5580MHz Chain1

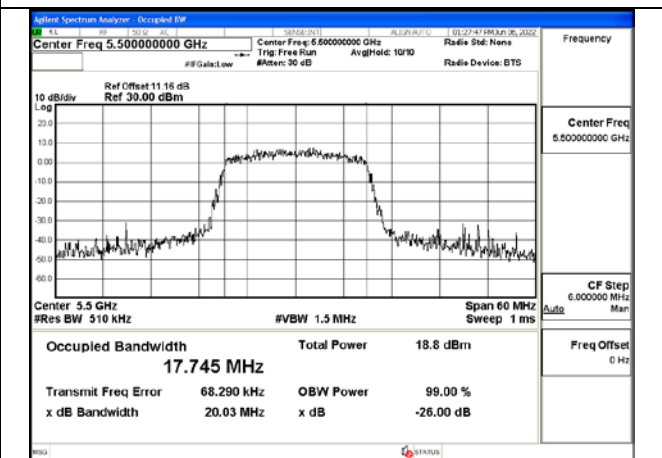
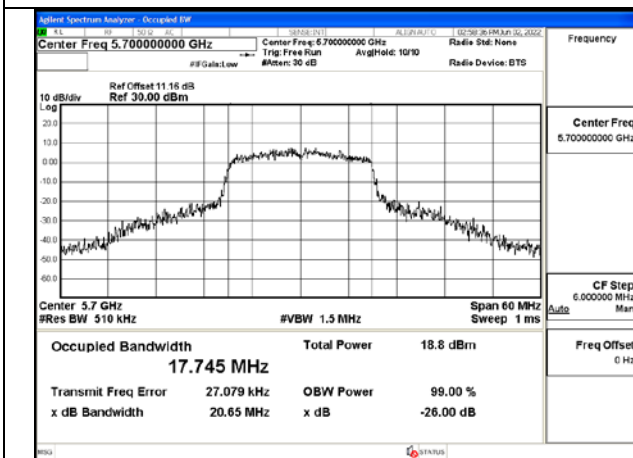
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Test Mode: 802.11ac VHT20



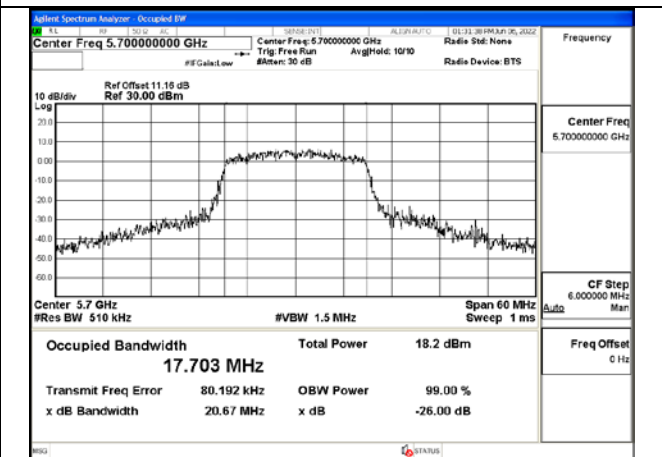
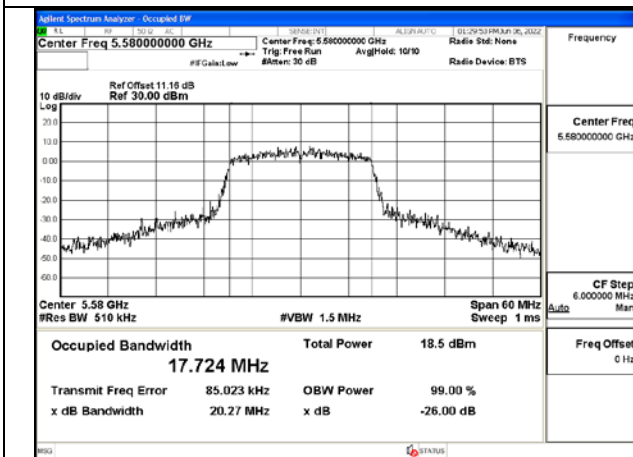
Test Mode:802.11ac VHT20 5500MHz Chain0

Test Mode:802.11ac VHT20 5580MHz Chain0



Test Mode:802.11ac VHT20 5700MHz Chain0

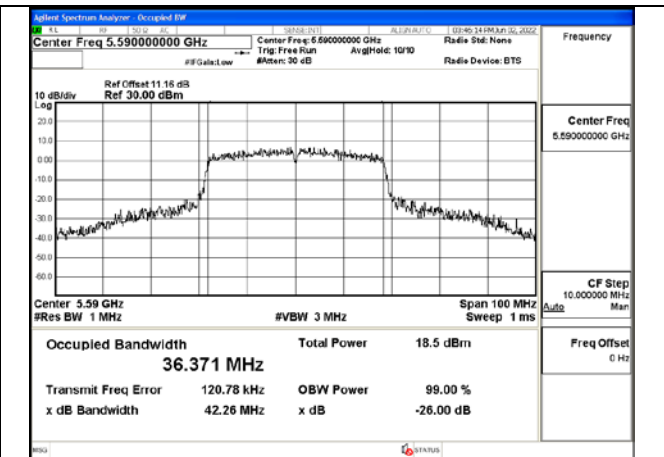
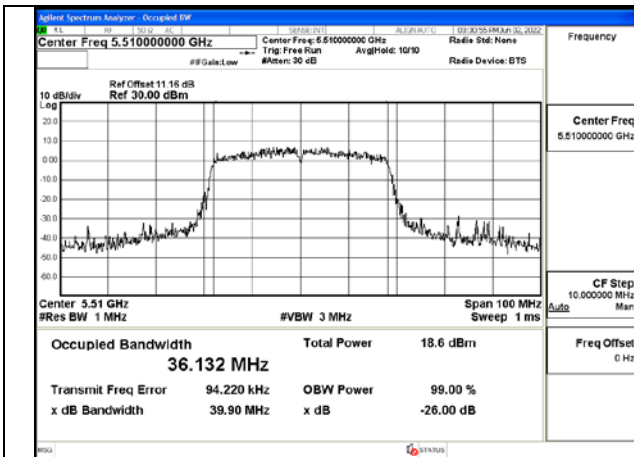
Test Mode:802.11ac VHT20 5500MHz Chain1



Test Mode:802.11ac VHT20 5580MHz Chain1

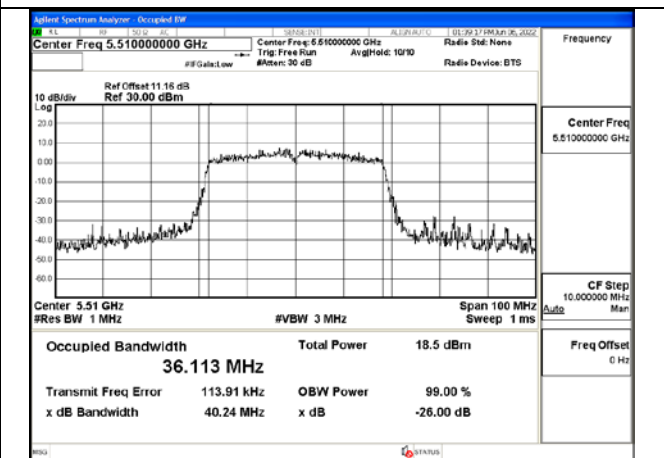
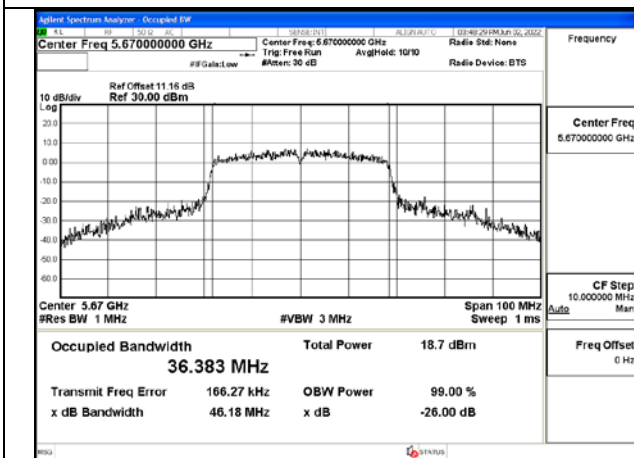
Test Mode:802.11ac VHT20 5700MHz Chain1

Test Mode: 802.11n HT40



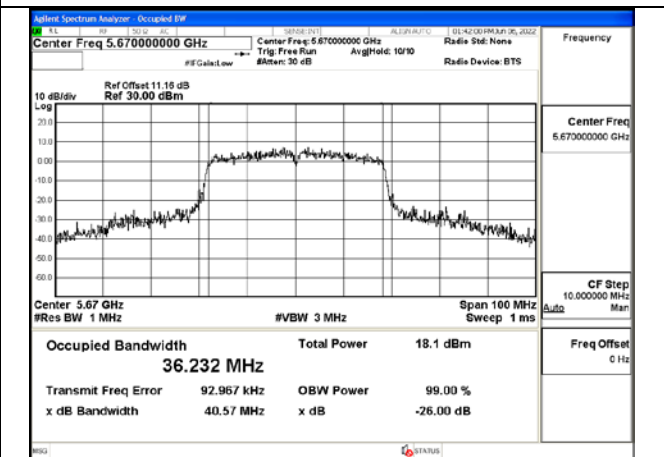
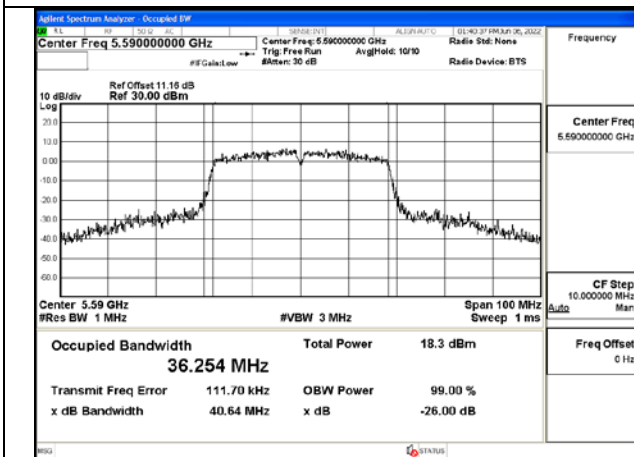
Test Mode:802.11n HT40 5510MHz Chain0

Test Mode:802.11n HT40 5590MHz Chain0



Test Mode:802.11n HT40 5670MHz Chain0

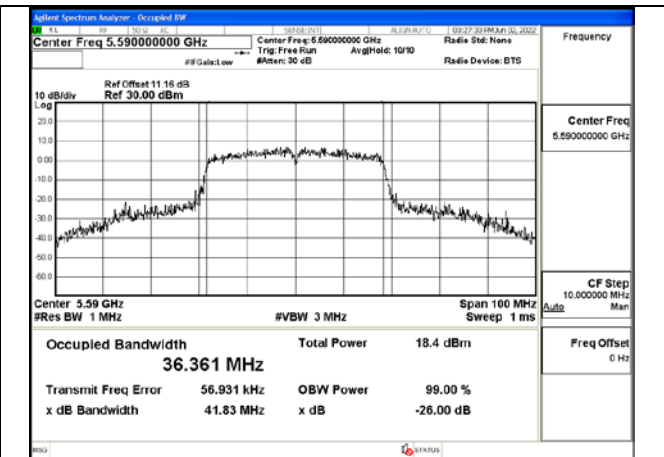
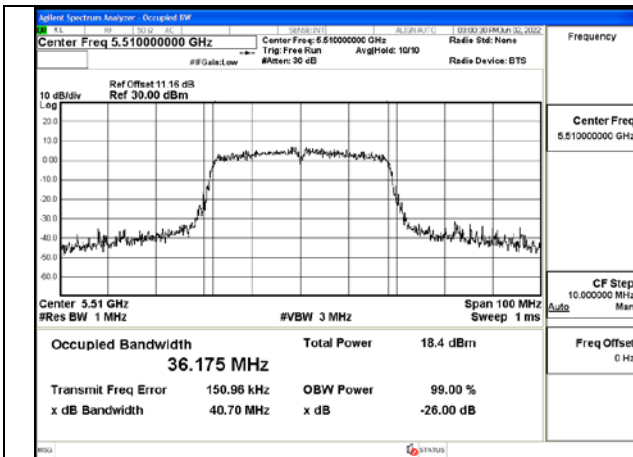
Test Mode:802.11n HT40 5510MHz Chain1



Test Mode:802.11n HT40 5590MHz Chain1

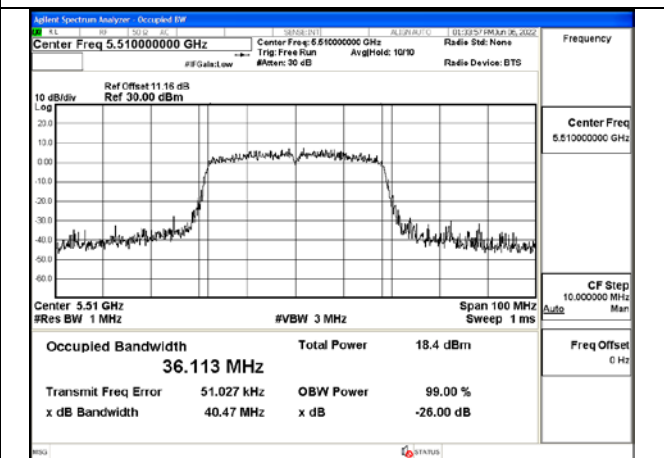
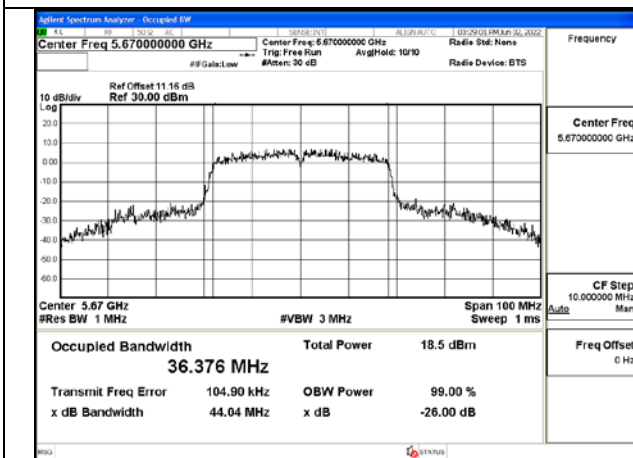
Test Mode:802.11n HT40 5670MHz Chain1

Test Mode: 802.11ac VHT40



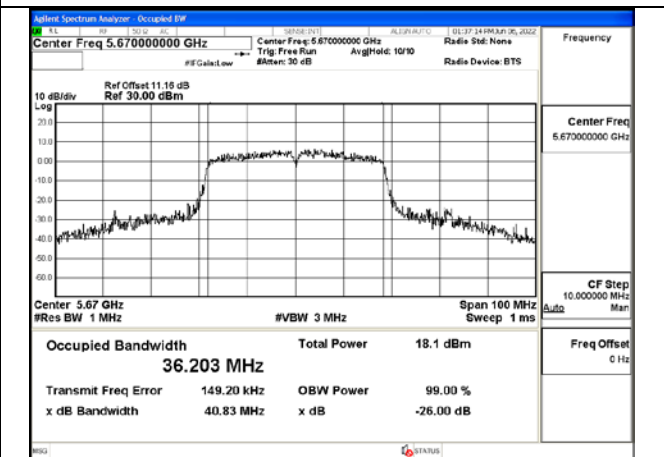
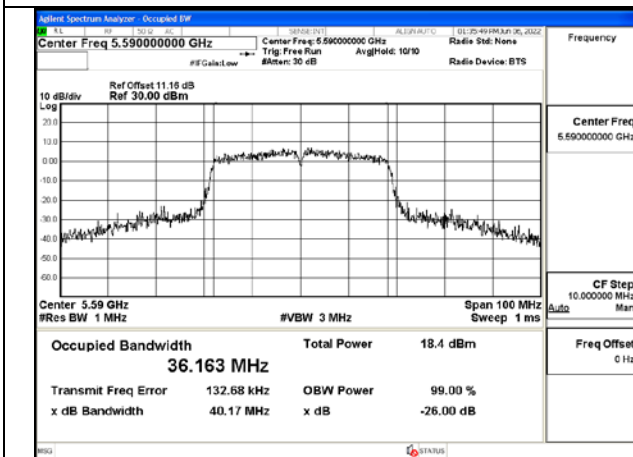
Test Mode:802.11ac VHT40 5510MHz Chain0

Test Mode:802.11ac VHT40 5590MHz Chain0



Test Mode:802.11ac VHT40 5670MHz Chain0

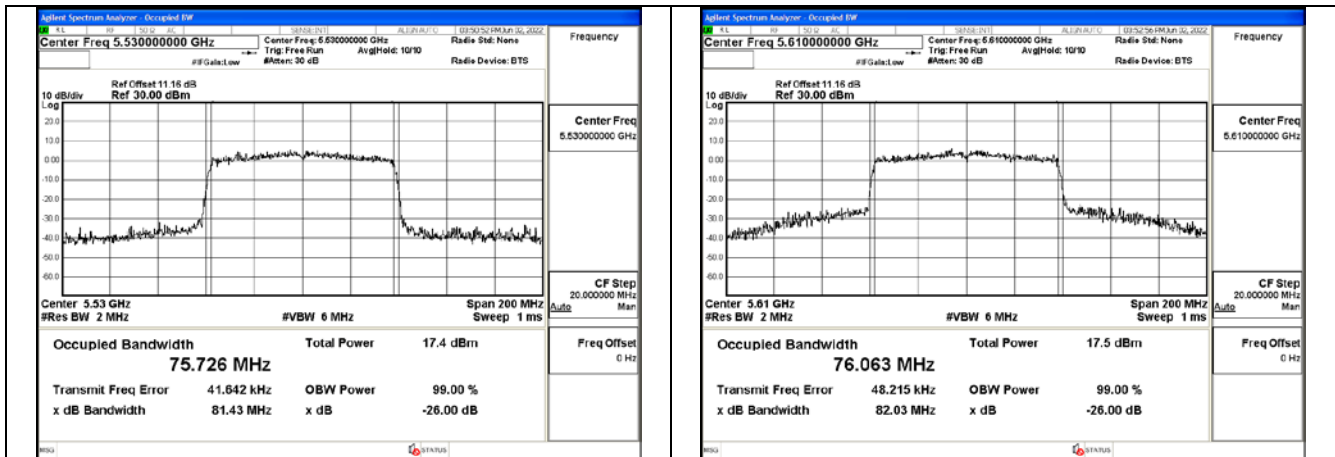
Test Mode:802.11ac VHT40 5510MHz Chain1



Test Mode:802.11ac VHT40 5590MHz Chain1

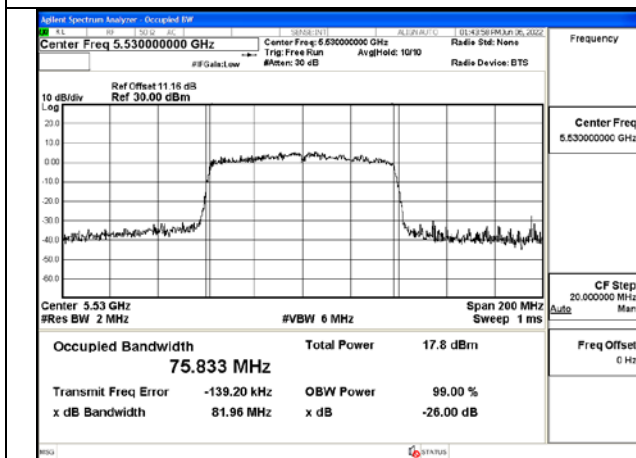
Test Mode:802.11ac VHT40 5670MHz Chain1

Test Mode: 802.11ac VHT80

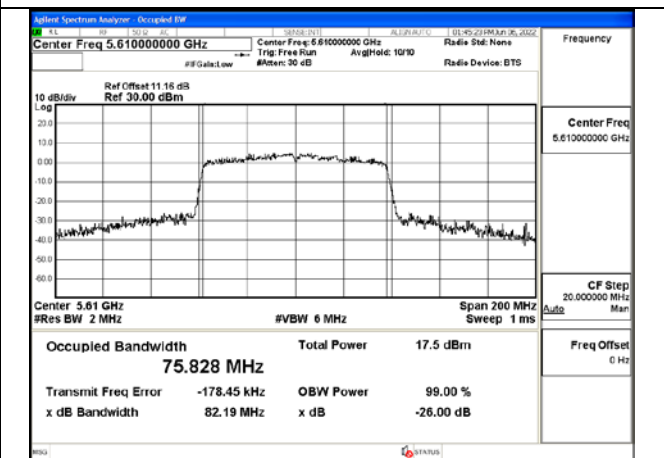


Test Mode:802.11ac VHT80 5530MHz Chain0

Test Mode:802.11ac VHT80 5610MHz Chain0



Test Mode:802.11ac VHT80 5530MHz Chain1



Test Mode:802.11ac VHT80 5610MHz Chain1

**Occupied Bandwidth**

Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

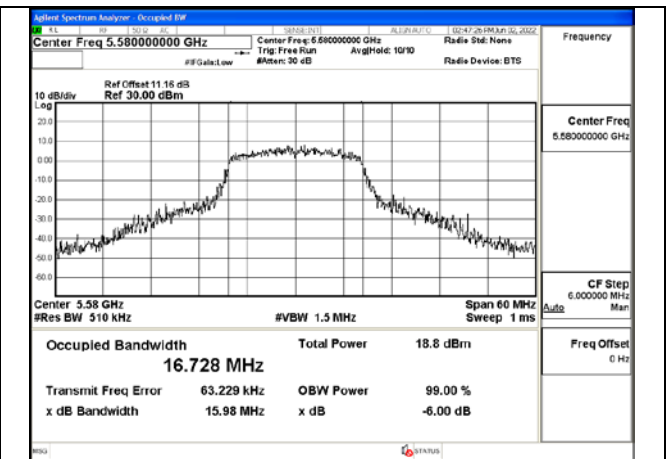
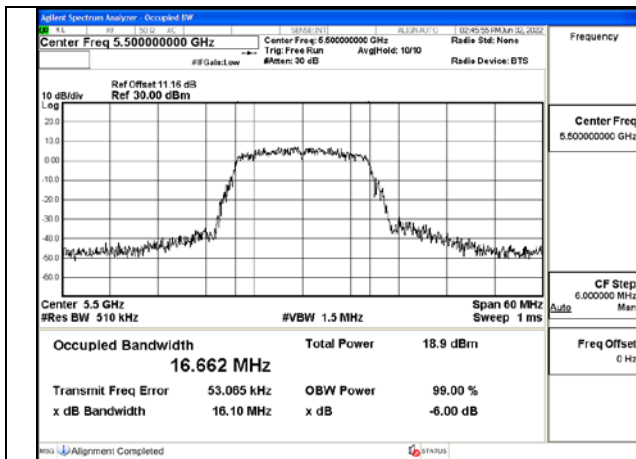
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.618	Channel No.634	Channel No.658
		5500MHz	5580MHz	5700MHz
802.11a	Chain0	16.662	16.728	16.647
802.11a	Chain1	16.540	16.601	16.536
802.11n HT20	Chain0	17.663	17.772	17.749
802.11n HT20	Chain1	17.743	17.715	17.667
802.11ac VHT20	Chain0	17.736	17.806	17.813
802.11ac VHT20	Chain1	17.728	17.640	17.608



Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.620	Channel No.636	Channel No.652
		5510MHz	5590MHz	5670MHz
802.11n HT40	Chain0	36.204	36.393	36.291
802.11n HT40	Chain1	36.107	36.223	36.245
802.11ac VHT40	Chain0	36.140	36.310	36.287
802.11ac VHT40	Chain1	36.100	36.266	36.290

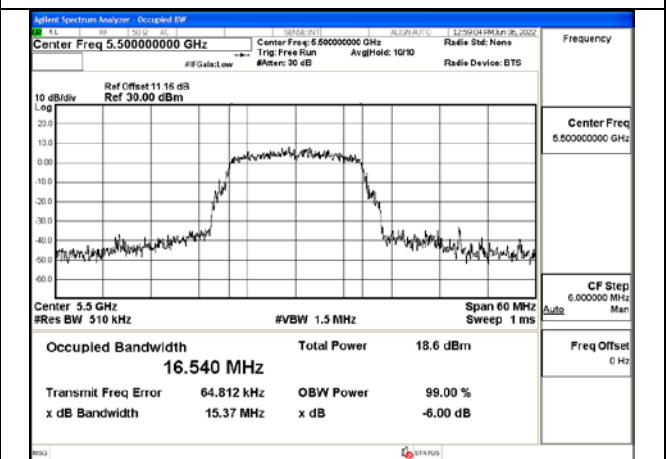
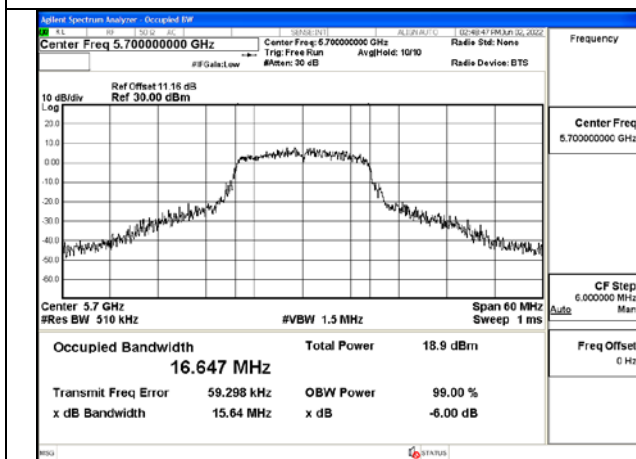
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.624	---	Channel No.640
		5530MHz	---	5610MHz
802.11ac VHT80	Chain0	75.980	---	76.110
802.11ac VHT80	Chain1	75.905	---	75.821

**Test Mode: 802.11a**



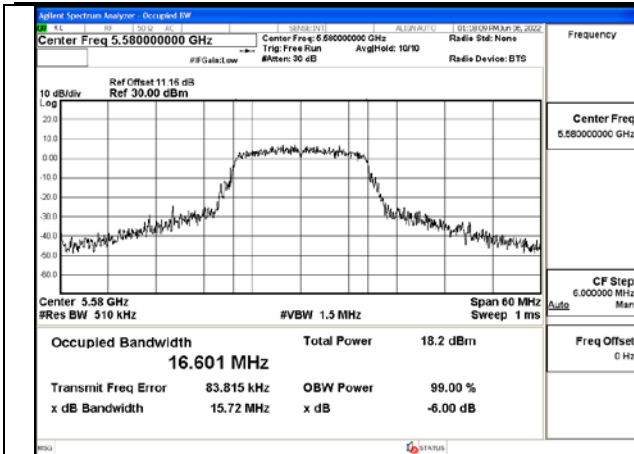
Test Mode:802.11a 5500MHz Chain0

Test Mode:802.11a 5580MHz Chain0

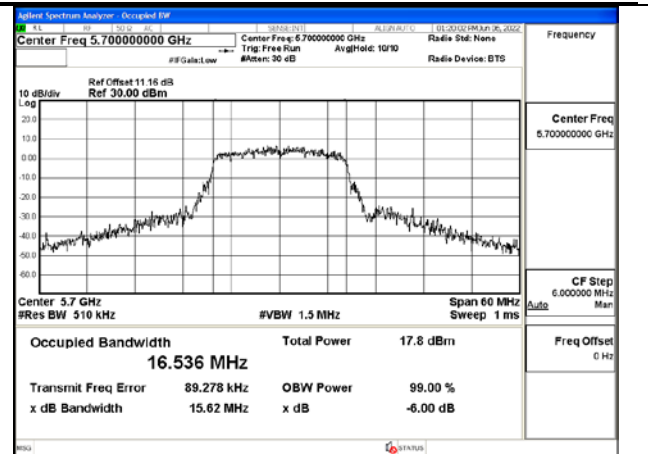


Test Mode:802.11a 5700MHz Chain0

Test Mode:802.11a 5500MHz Chain1

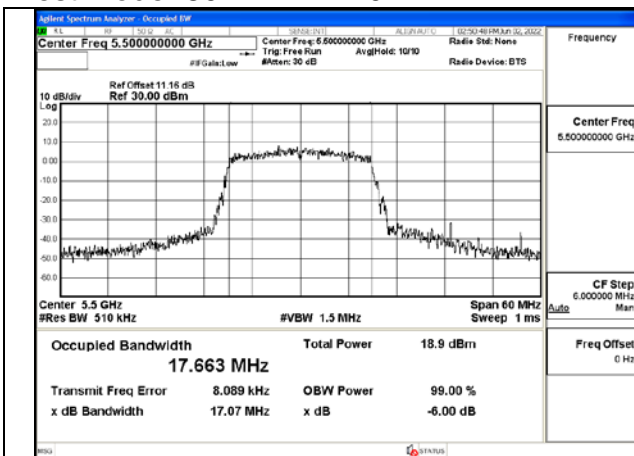


Test Mode:802.11a 5580MHz Chain1

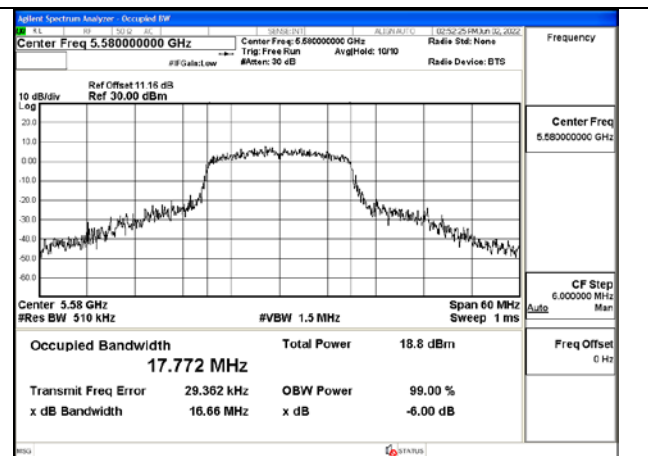


Test Mode:802.11a 5700MHz Chain1

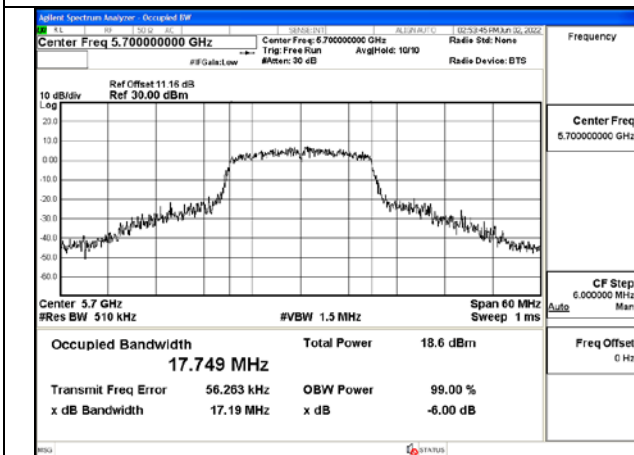
Test Mode: 802.11n HT20



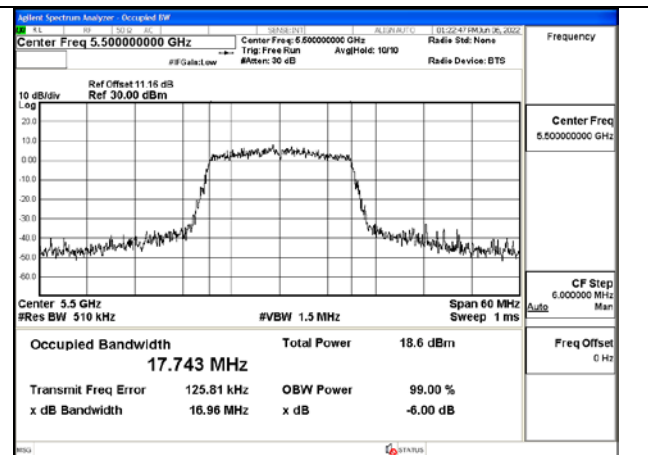
Test Mode:802.11n HT20 5500MHz Chain0



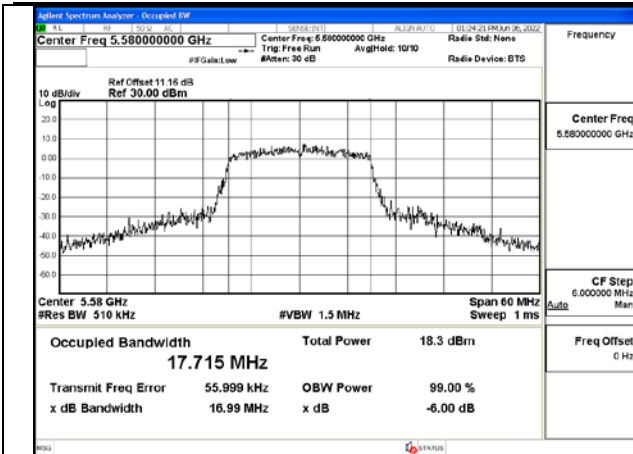
Test Mode:802.11n HT20 5580MHz Chain0



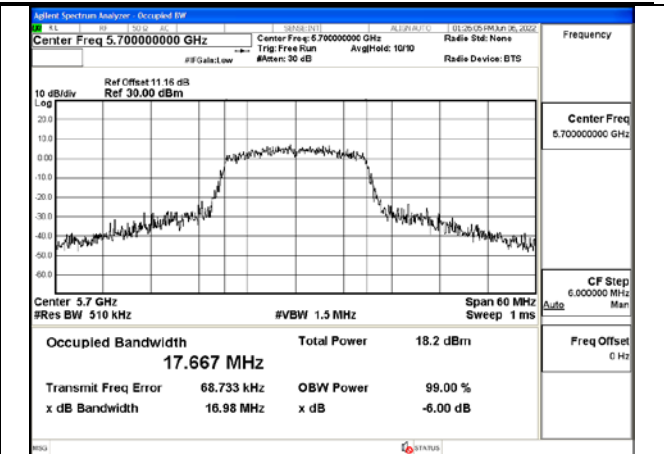
Test Mode:802.11n HT20 5700MHz Chain0



Test Mode:802.11n HT20 5500MHz Chain1

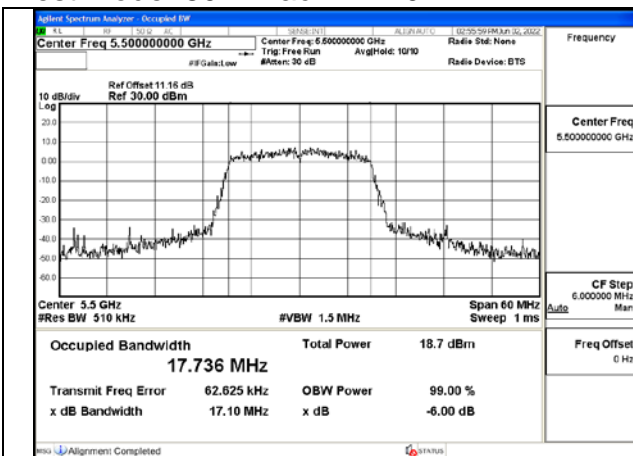


Test Mode:802.11n HT20 5580MHz Chain1

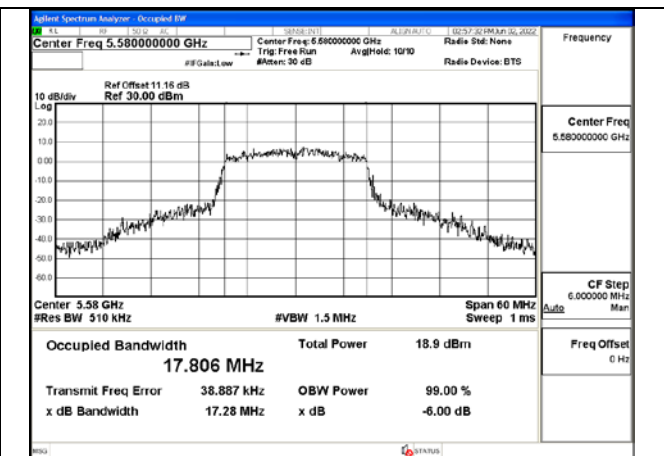


Test Mode:802.11n HT20 5700MHz Chain1

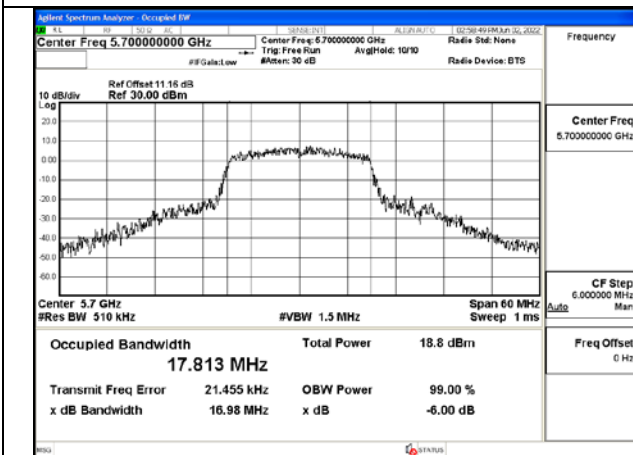
Test Mode: 802.11ac VHT20



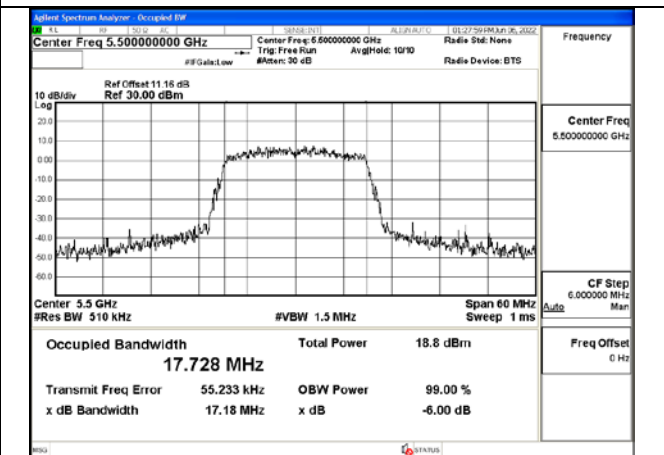
Test Mode:802.11ac VHT20 5500MHz Chain0



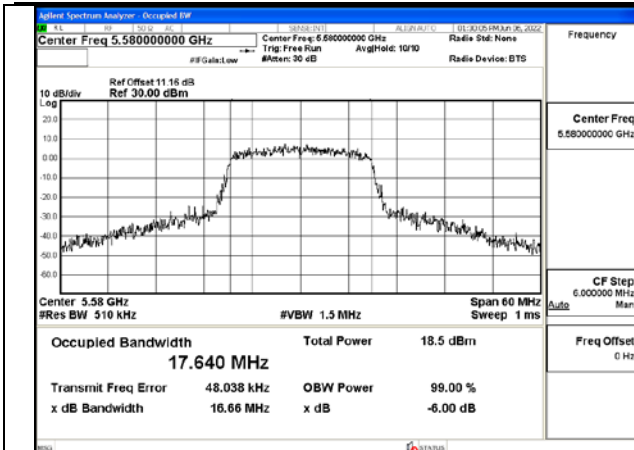
Test Mode:802.11ac VHT20 5580MHz Chain0



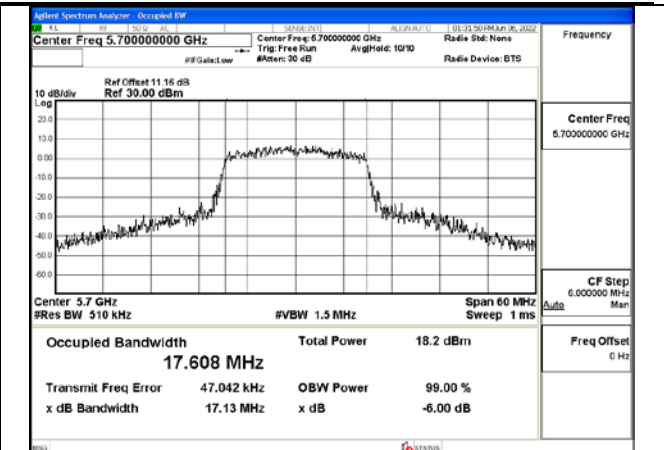
Test Mode:802.11ac VHT20 5700MHz Chain0



Test Mode:802.11ac VHT20 5500MHz Chain1

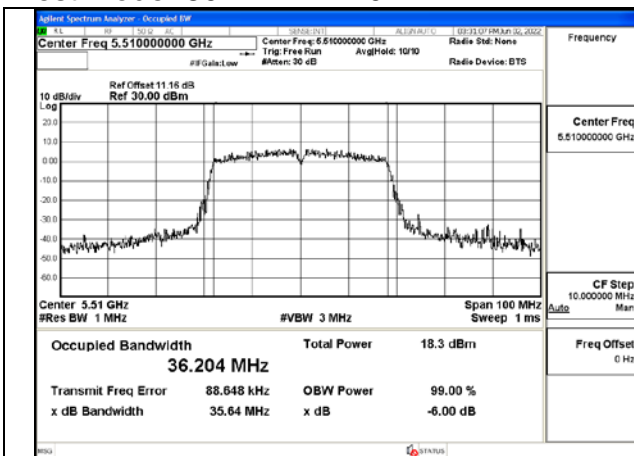


Test Mode:802.11ac VHT20 5580MHz Chain1

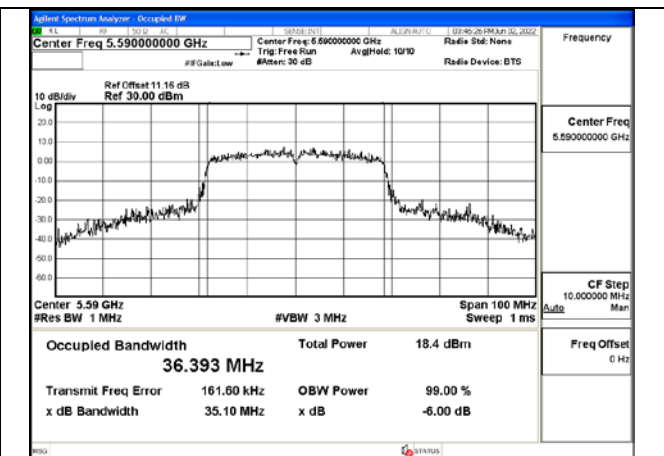


Test Mode:802.11ac VHT20 5700MHz Chain1

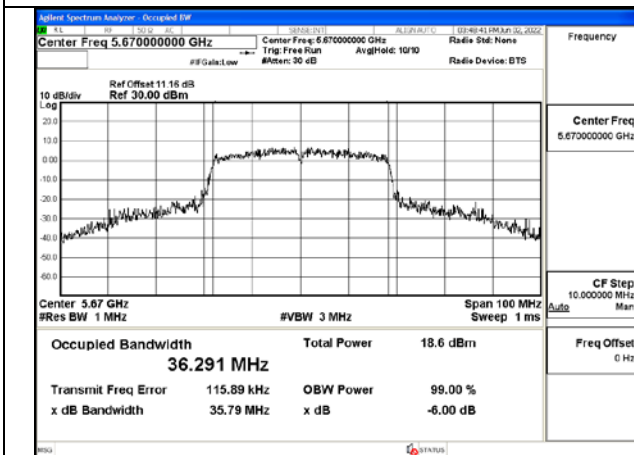
Test Mode: 802.11n HT40



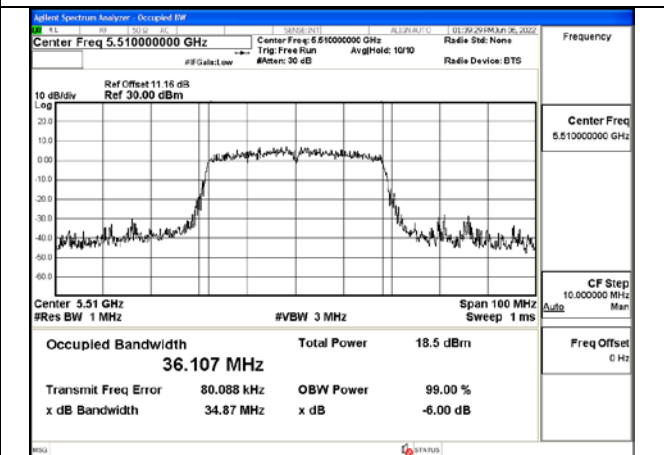
Test Mode:802.11n HT40 5510MHz Chain0



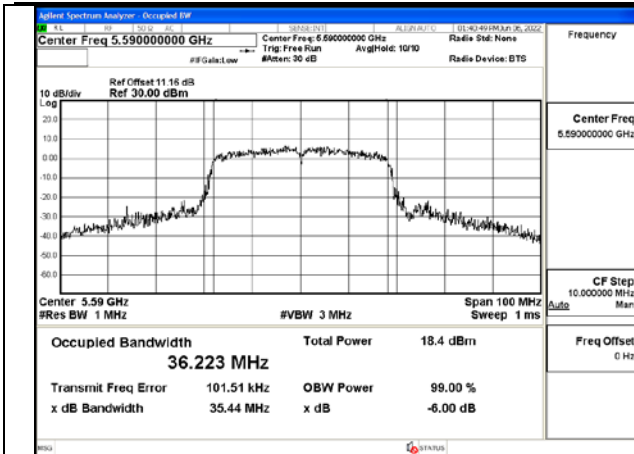
Test Mode:802.11n HT40 5590MHz Chain0



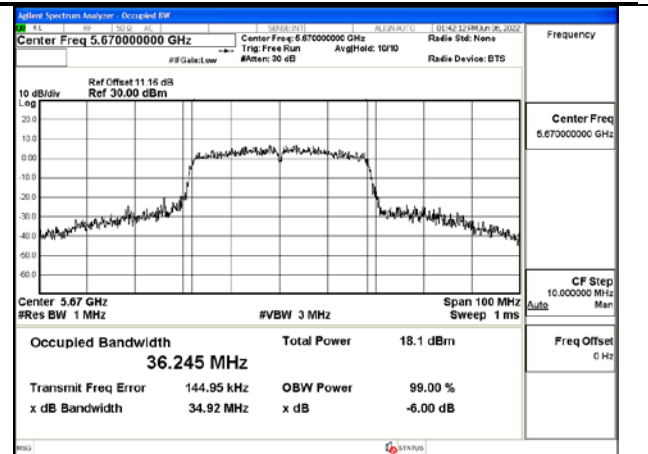
Test Mode:802.11n HT40 5670MHz Chain0



Test Mode:802.11n HT40 5510MHz Chain1

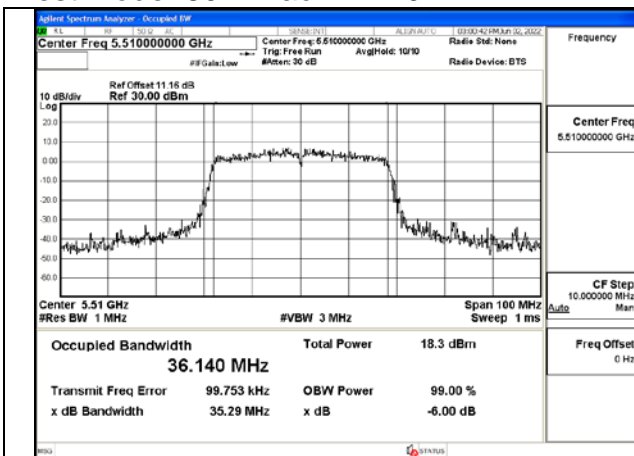


Test Mode:802.11n HT40 5590MHz Chain1

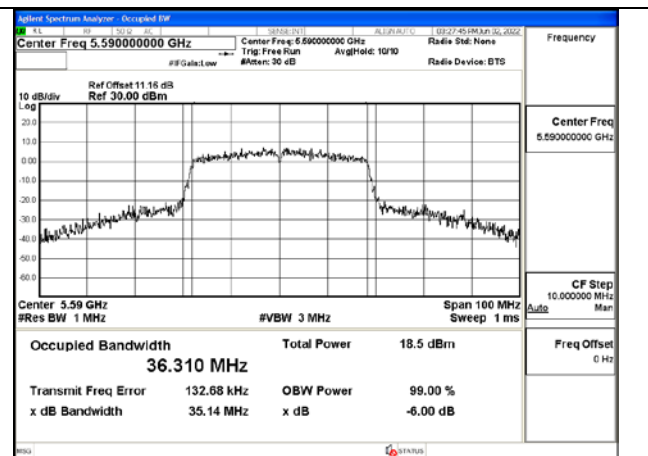


Test Mode:802.11n HT40 5670MHz Chain1

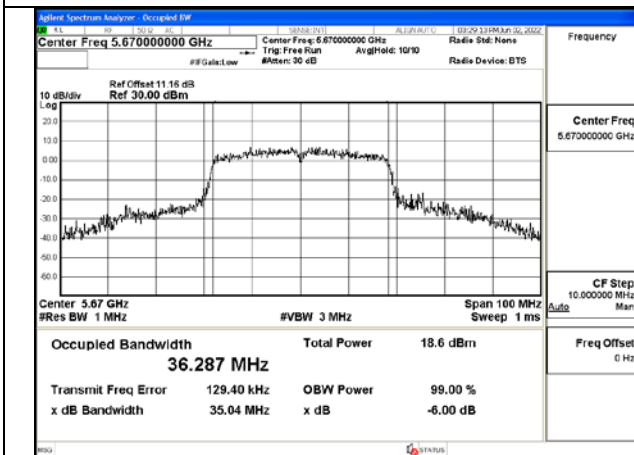
Test Mode: 802.11ac VHT40



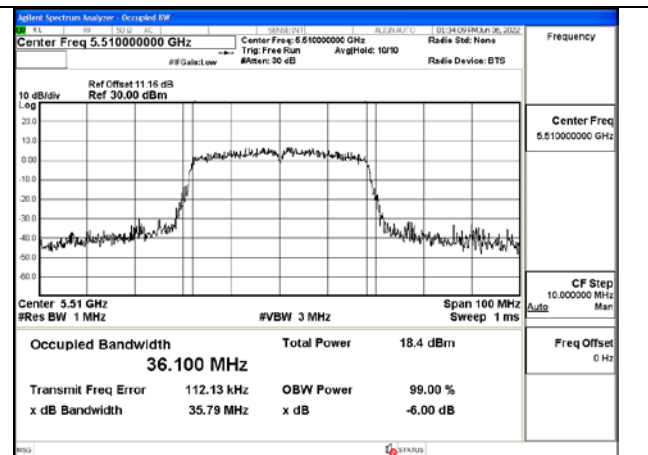
Test Mode:802.11ac VHT40 5510MHz Chain0



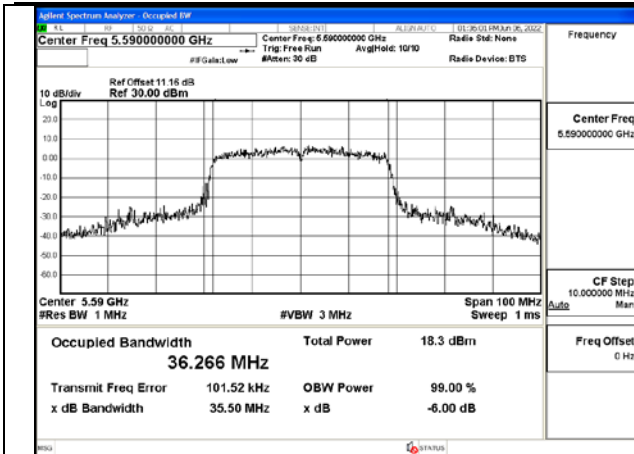
Test Mode:802.11ac VHT40 5590MHz Chain0



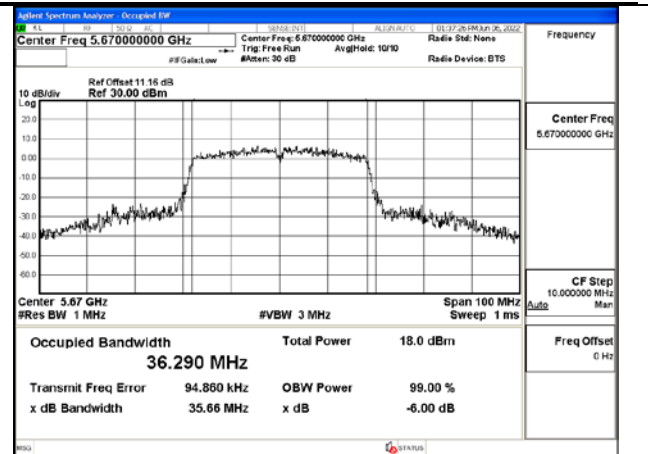
Test Mode:802.11ac VHT40 5670MHz Chain0



Test Mode:802.11ac VHT40 5510MHz Chain1

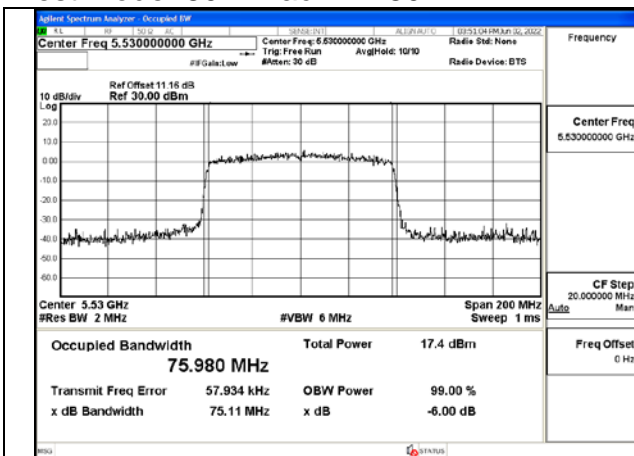


Test Mode:802.11ac VHT40 5590MHz Chain1

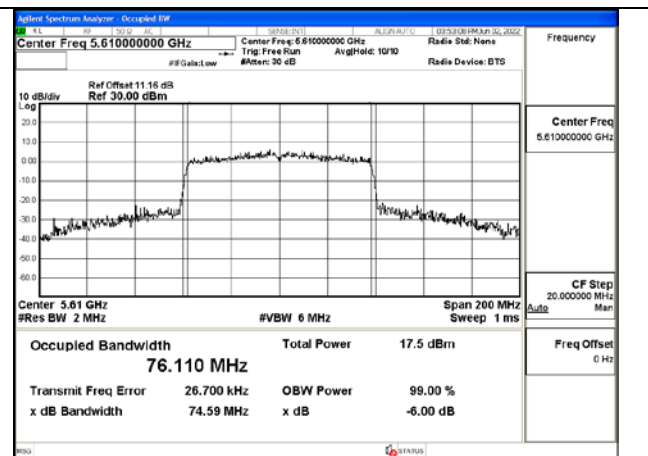


Test Mode:802.11ac VHT40 5670MHz Chain1

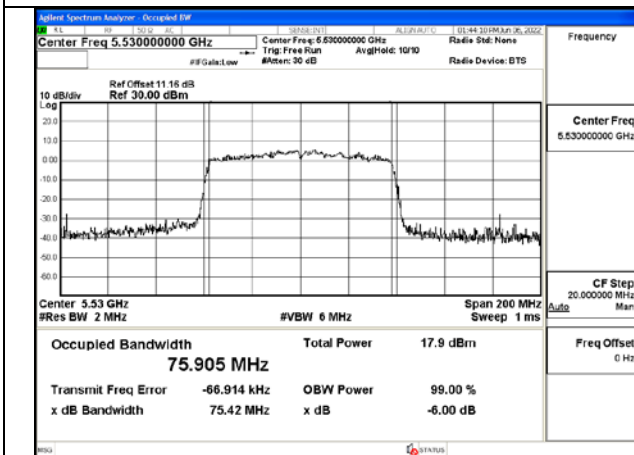
Test Mode: 802.11ac VHT80



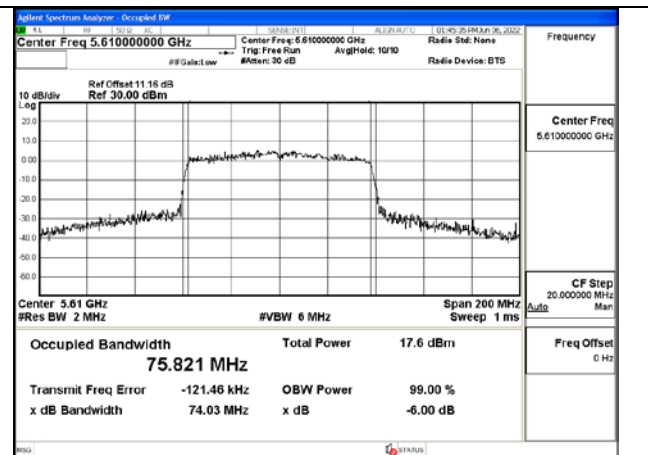
Test Mode:802.11ac VHT80 5530MHz Chain0



Test Mode:802.11ac VHT80 5610MHz Chain0



Test Mode:802.11ac VHT80 5530MHz Chain1



Test Mode:802.11ac VHT80 5610MHz Chain1

## Transmitter Power Spectral Density

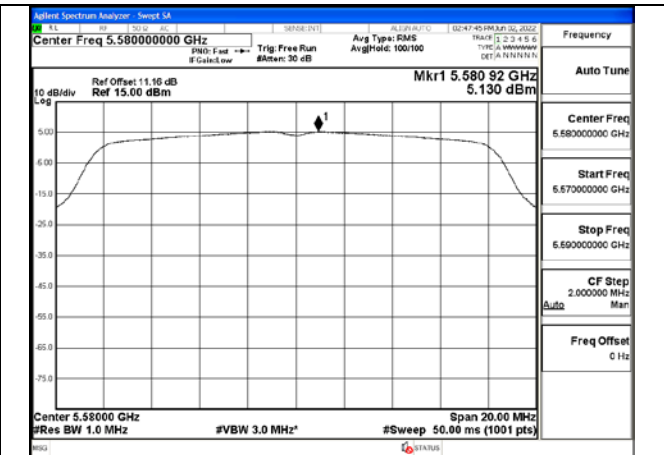
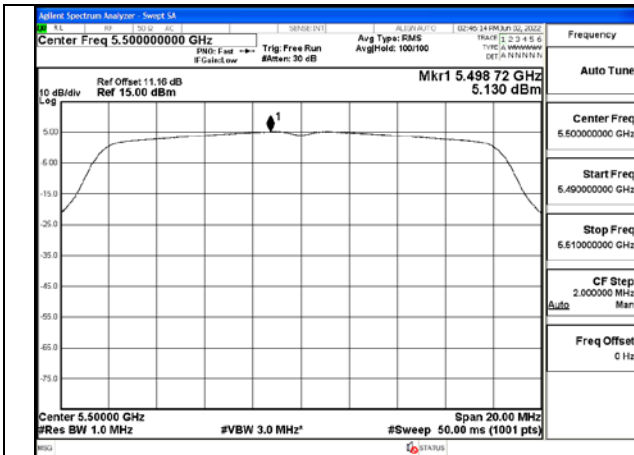
Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	5500MHz		5580MHz		5700MHz	
		Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11a	Chain0	0	5.130	0	5.130	0	5.070
802.11a	Chain1	0	4.890	0	4.445	0	4.029
802.11n HT20	Chain0	0	4.833	0	4.737	0	4.860
802.11n HT20	Chain1	0	4.775	0	4.469	0	4.179
802.11n HT20	MIMO	0	7.814	0	7.615	0	7.543
802.11ac VHT20	Chain0	0	4.702	0	4.771	0	4.805
802.11ac VHT20	Chain1	0	4.785	0	4.502	0	4.133
802.11ac VHT20	MIMO	0	7.754	0	7.649	0	7.492

Test Mode	Antenna	5510MHz		5590MHz		5670MHz	
		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	0.13	1.720	0.13	1.778	0.13	1.880
802.11n HT40	Chain1	0.13	1.678	0.13	1.521	0.13	1.325
802.11n HT40	MIMO	0.13	4.709	0.13	4.662	0.13	4.622
802.11ac VHT40	Chain0	0.13	1.694	0.13	1.766	0.13	1.850
802.11ac VHT40	Chain1	0.13	1.631	0.13	1.528	0.13	1.287
802.11ac VHT40	MIMO	0.13	4.673	0.13	4.659	0.13	4.588

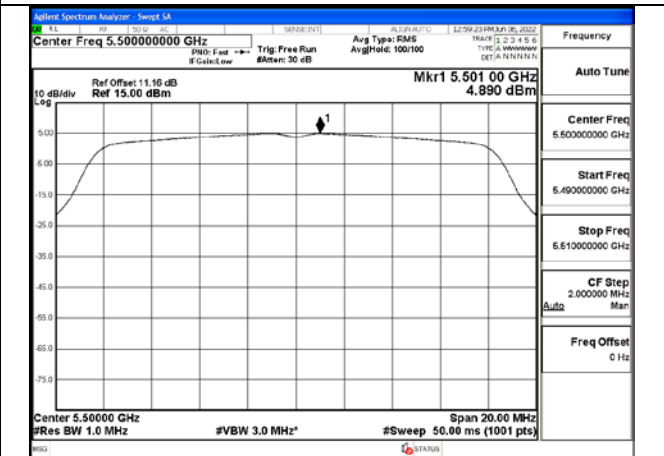
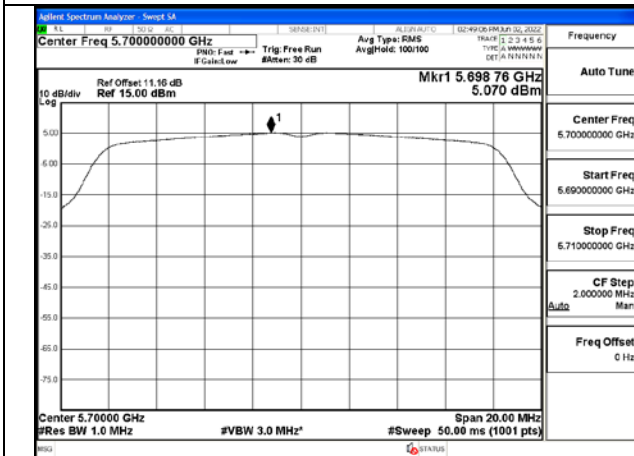
Test Mode	Antenna	5530MHz		---		5610MHz	
		Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11ac VHT80	Chain0	0.25	-1.626	---	---	0.25	-1.548
802.11ac VHT80	Chain1	0.25	-0.698	---	---	0.25	-0.911
802.11ac VHT80	MIMO	0.25	1.873	---	---	0.25	1.792

Test Mode: 802.11a



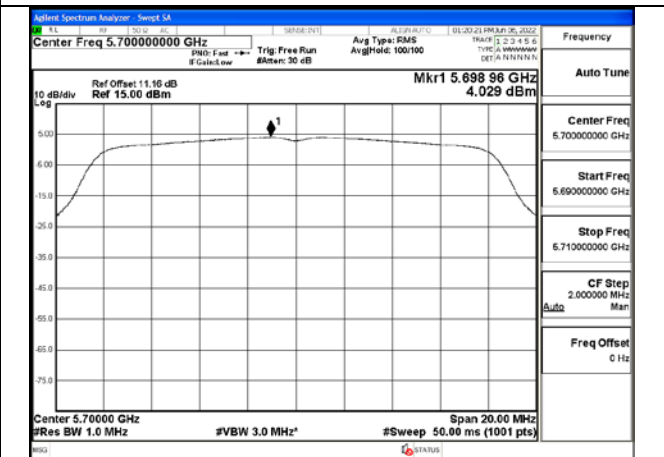
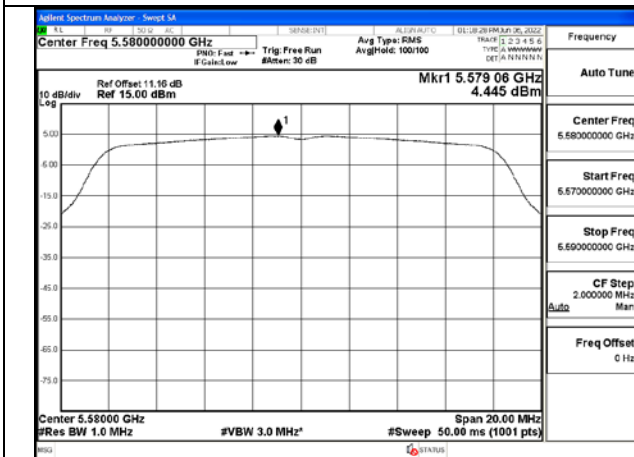
Test Mode:802.11a 5500MHz Chain0

Test Mode:802.11a 5580MHz Chain0



Test Mode:802.11a 5700MHz Chain0

Test Mode:802.11a 5500MHz Chain1

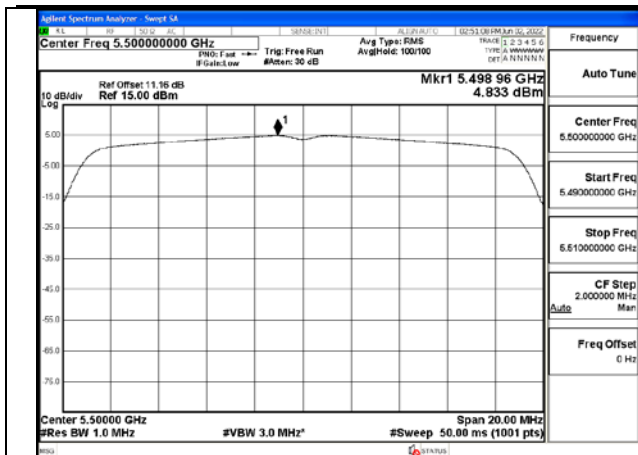


Test Mode:802.11a 5580MHz Chain1

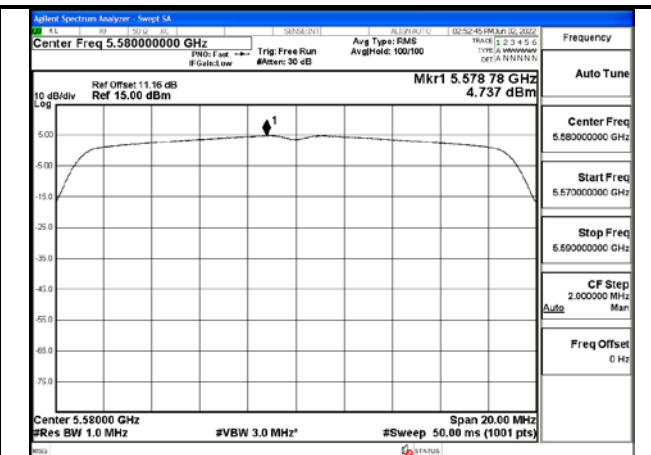
Test Mode:802.11a 5700MHz Chain1

Test Mode: 802.11n HT20

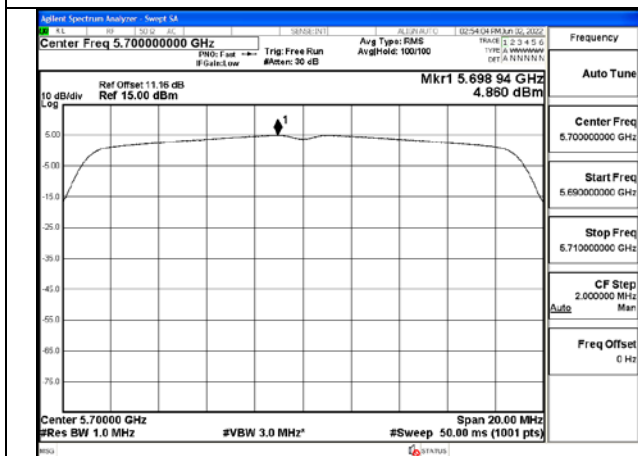




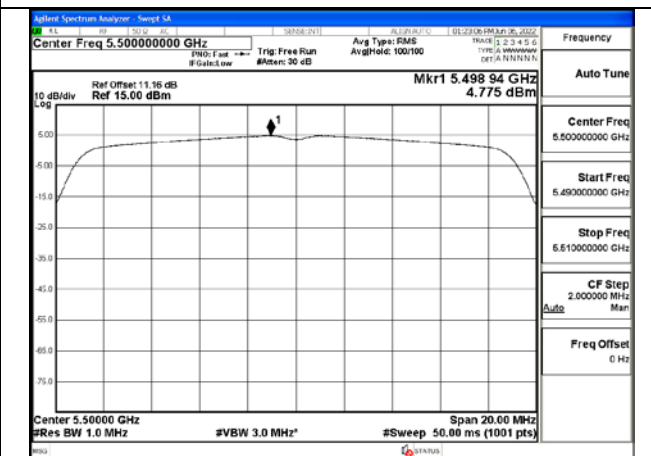
Test Mode:802.11n HT20 5500MHz Chain0



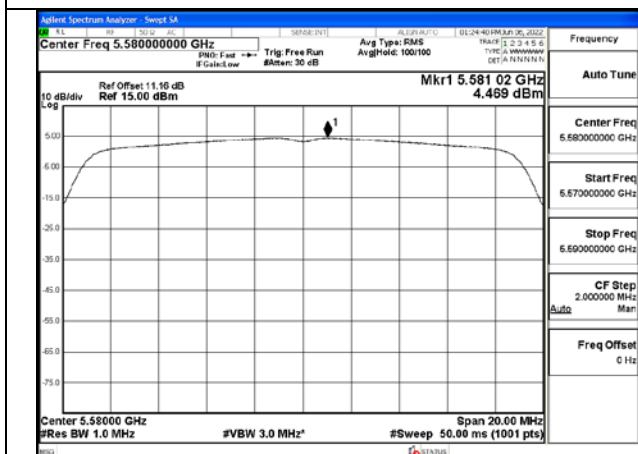
Test Mode:802.11n HT20 5580MHz Chain0



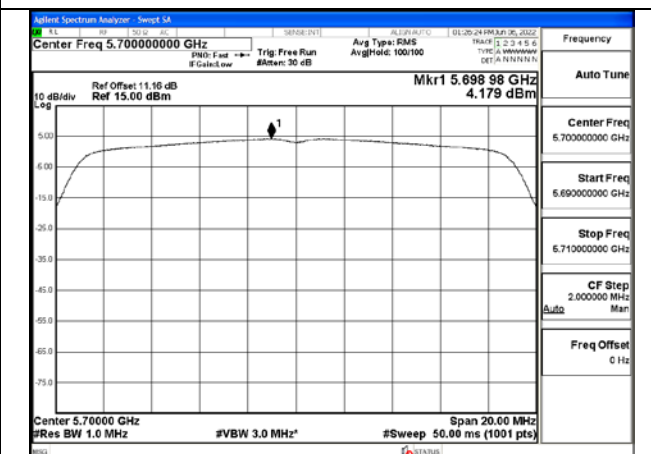
Test Mode:802.11n HT20 5700MHz Chain0



Test Mode:802.11n HT20 5500MHz Chain1

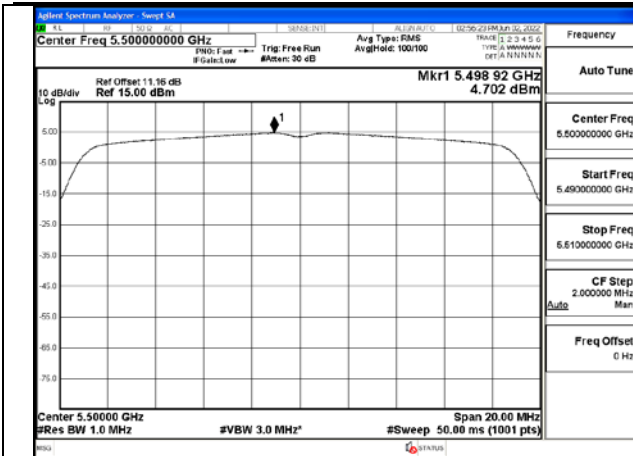


Test Mode:802.11n HT20 5580MHz Chain1

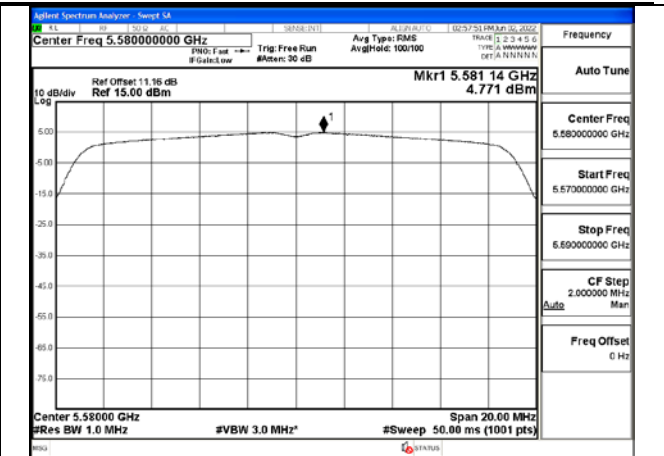


Test Mode:802.11n HT20 5700MHz Chain1

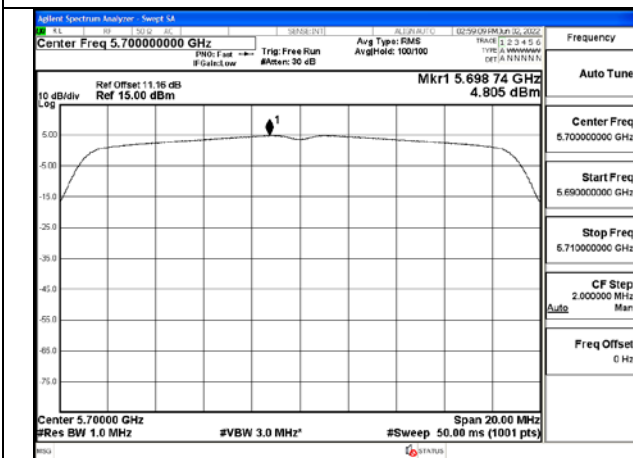
Test Mode: 802.11ac VHT20



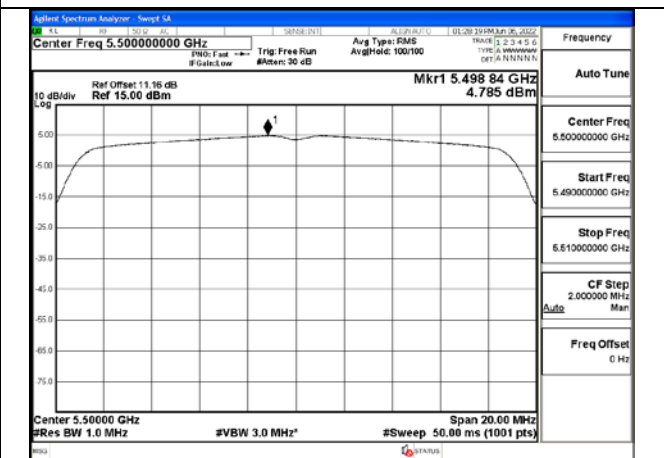
Test Mode:802.11ac VHT20 5500MHz Chain0



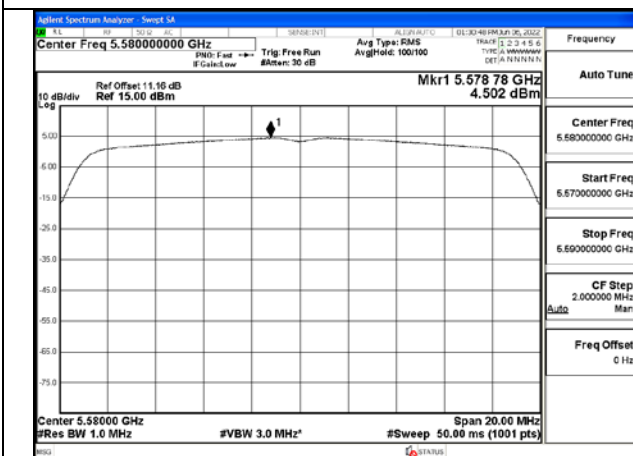
Test Mode:802.11ac VHT20 5580MHz Chain0



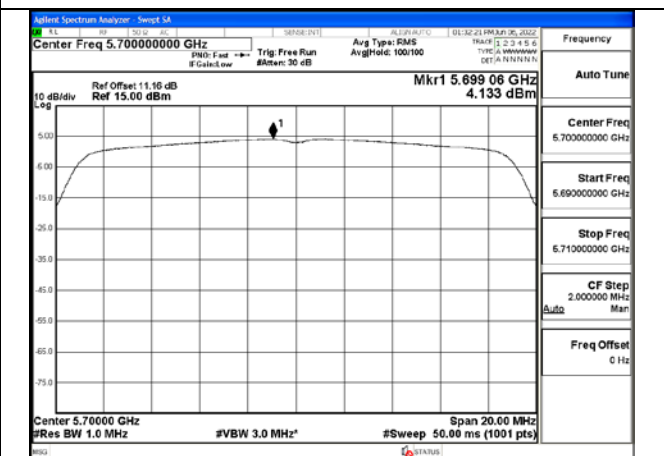
Test Mode:802.11ac VHT20 5700MHz Chain0



Test Mode:802.11ac VHT20 5500MHz Chain1

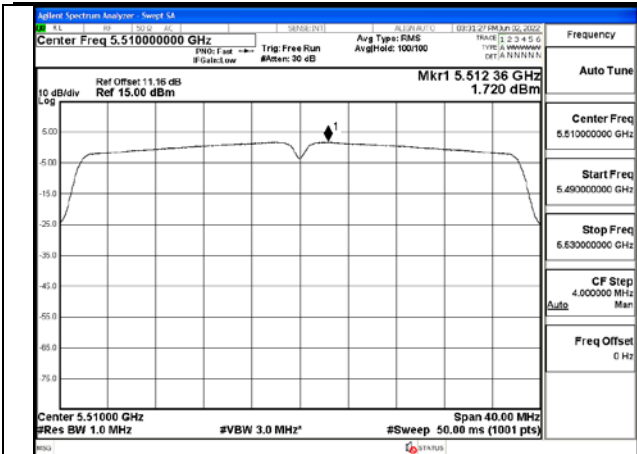


Test Mode:802.11ac VHT20 5580MHz Chain1

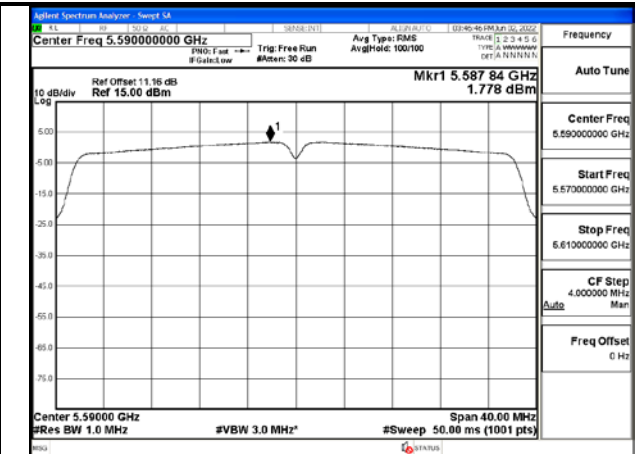


Test Mode:802.11ac VHT20 5700MHz Chain1

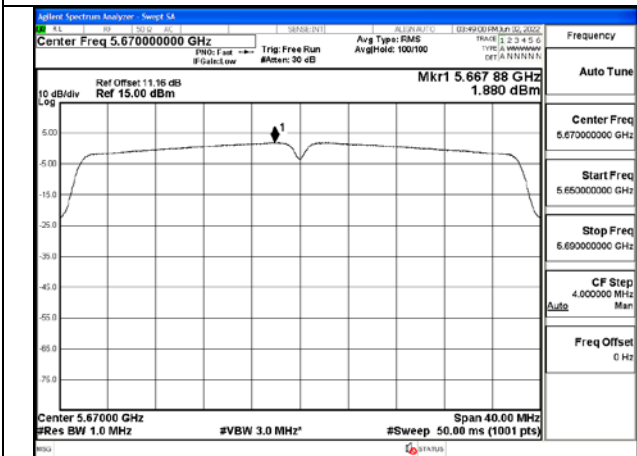
Test Mode: 802.11n HT40



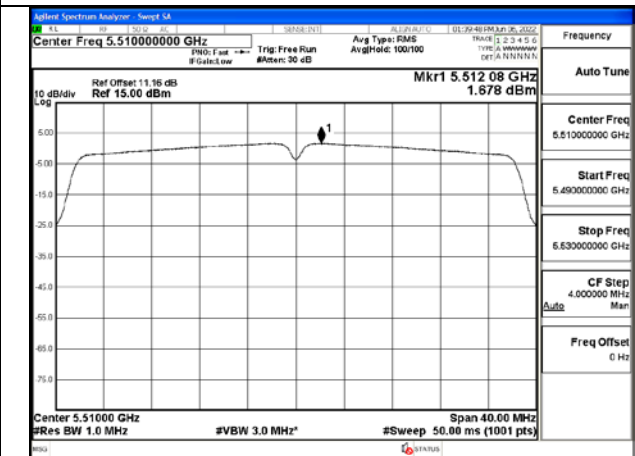
Test Mode:802.11n HT40 5510MHz Chain0



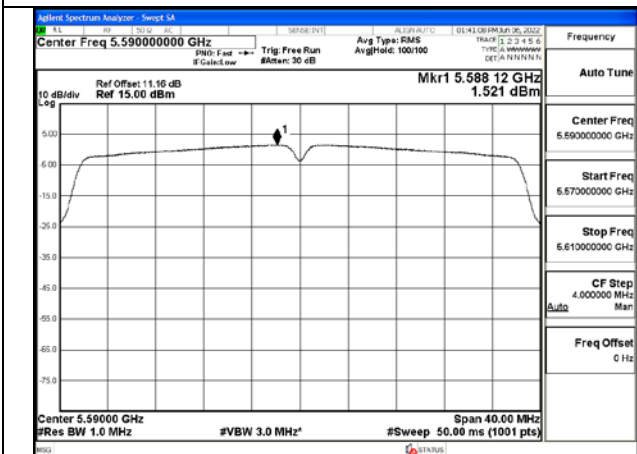
Test Mode:802.11n HT40 5590MHz Chain0



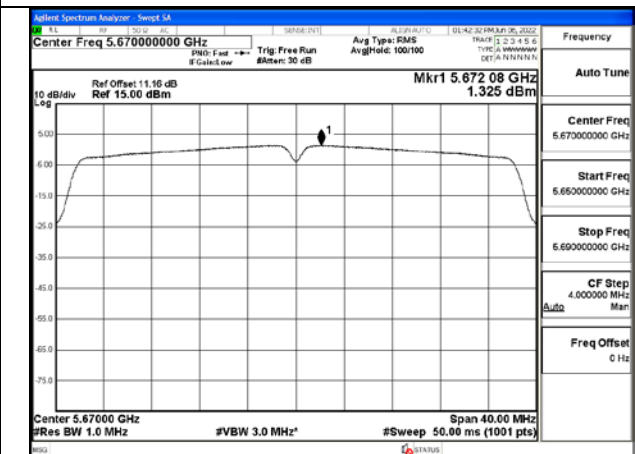
Test Mode:802.11n HT40 5670MHz Chain0



Test Mode:802.11n HT40 5510MHz Chain1

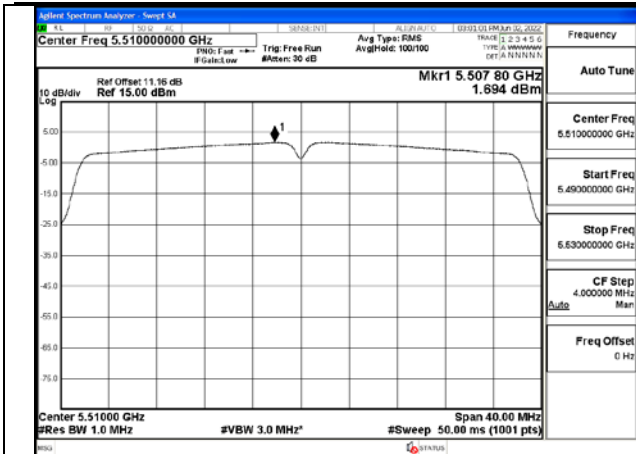


Test Mode:802.11n HT40 5590MHz Chain1

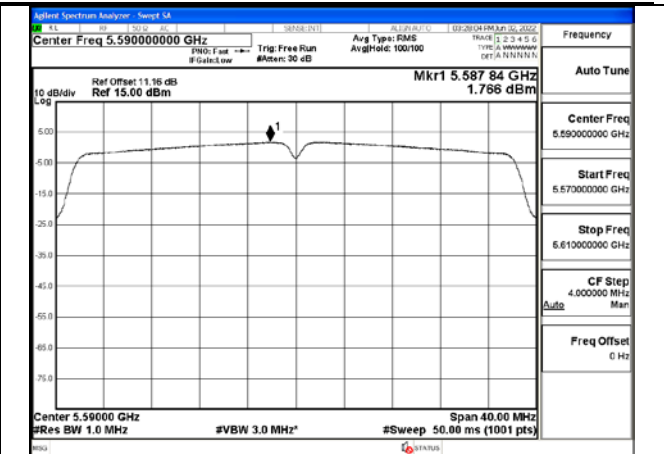


Test Mode:802.11n HT40 5670MHz Chain1

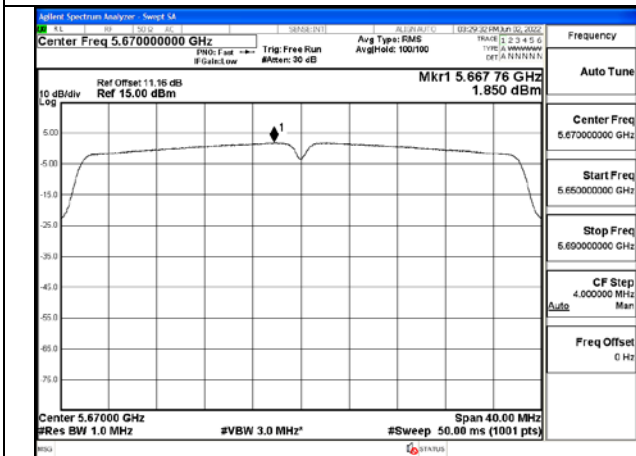
Test Mode: 802.11ac VHT40



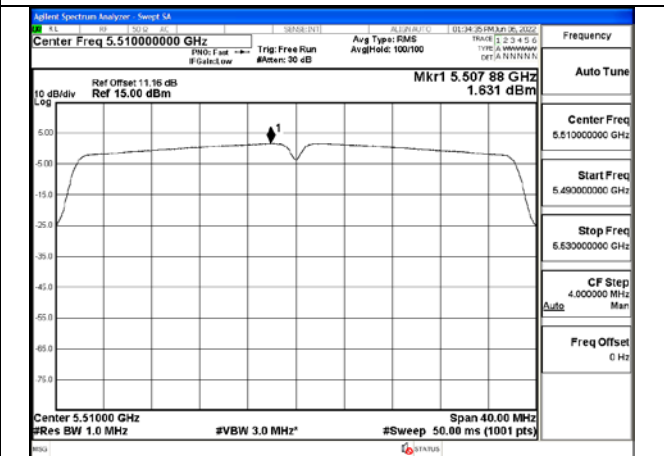
Test Mode:802.11ac VHT40 5510MHz Chain0



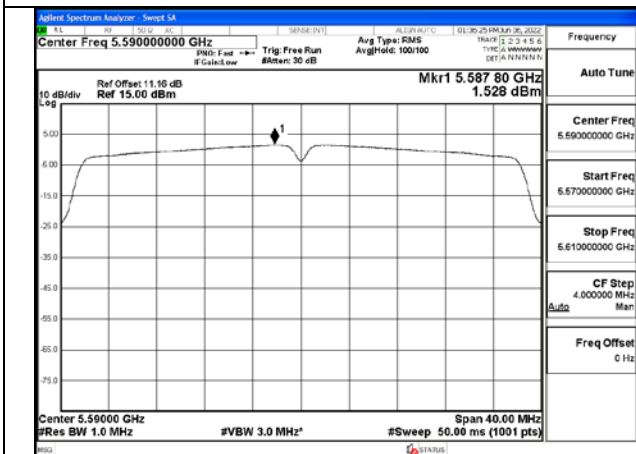
Test Mode:802.11ac VHT40 5590MHz Chain0



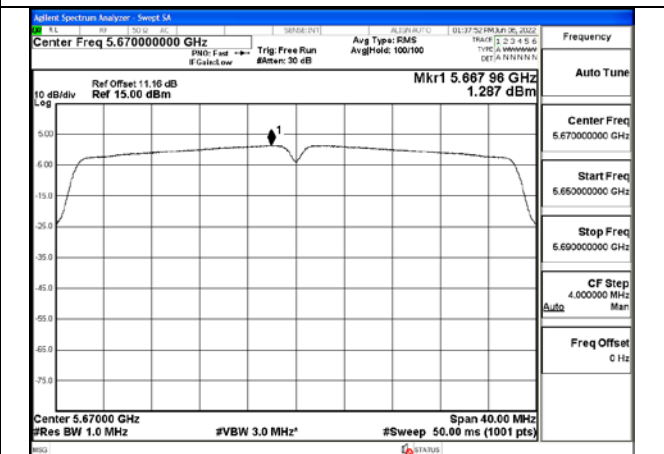
Test Mode:802.11ac VHT40 5670MHz Chain0



Test Mode:802.11ac VHT40 5510MHz Chain1

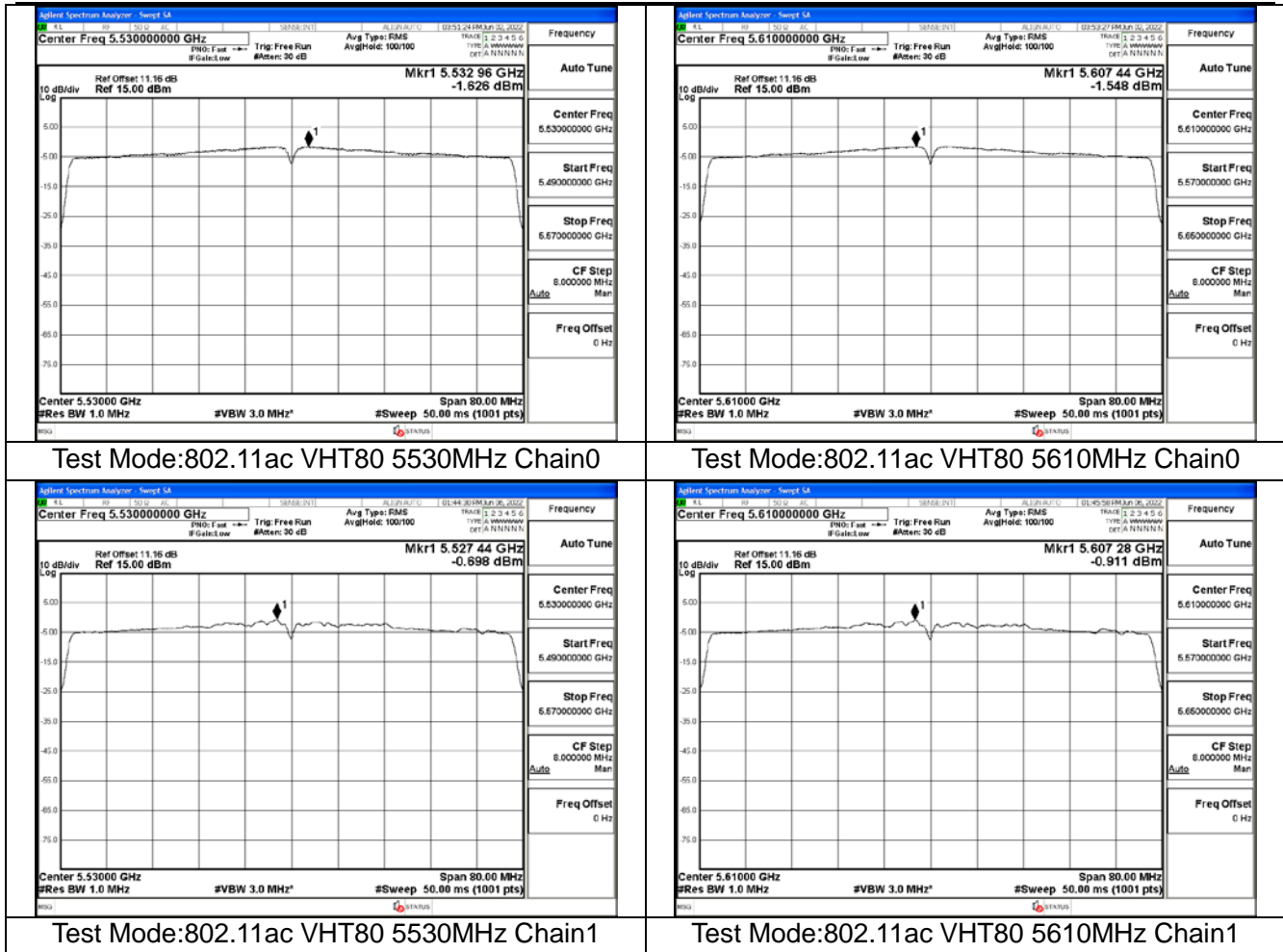


Test Mode:802.11ac VHT40 5590MHz Chain1



Test Mode:802.11ac VHT40 5670MHz Chain1

Test Mode: 802.11ac VHT80



## 8822 Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)
802.11a	5500	86.85%	0.61
802.11a	5500	86.71%	0.62
802.11n HT20	5500	85.99%	0.66
802.11n HT20	5500	86.70%	0.62
802.11ac VHT20	5500	86.65%	0.62
802.11ac VHT40	5500	86.67%	0.62
802.11n HT40	5510	79.23%	1.01
802.11n HT40	5510	78.85%	1.03
802.11ac VHT40	5510	79.37%	1.00
802.11ac VHT40	5510	78.43%	1.06
802.11ac VHT80	5530	70.90%	1.49
802.11ac VHT80	5530	71.19%	1.48

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