

## **APPENDIX A – TEST DATA OF CONDUCTED EMISSION**

**7663**

### **Duty Cycle**

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)
802.11a	5260	98.73%	0
802.11a	5260	98.66%	0
802.11n HT20	5260	98.55%	0
802.11n HT20	5260	98.52%	0
802.11ac VHT20	5260	98.57%	0
802.11ac VHT20	5260	98.53%	0
802.11n HT40	5270	97.21%	0.12
802.11n HT40	5270	97.16%	0.13
802.11ac VHT40	5270	97.14%	0.13
802.11ac VHT40	5270	97.28%	0.12
802.11ac VHT80	5290	94.67%	0.24
802.11ac VHT80	5290	98.25%	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	5260	Chain0	15.42	15.92
802.11a	NA	5260	Chain1	15.36	15.81
802.11a	NA	5280	Chain0	15.50	16.00
802.11a	NA	5280	Chain1	15.31	15.76
802.11a	NA	5320	Chain0	15.63	16.13
802.11a	NA	5320	Chain1	15.61	16.06
802.11n HT20	NA	5260	Chain0	15.47	15.97
802.11n HT20	NA	5260	Chain1	15.11	15.56
802.11n HT20	NA	5260	MIMO	18.30	18.80
802.11n HT20	NA	5280	Chain0	15.49	15.99
802.11n HT20	NA	5280	Chain1	15.11	15.56
802.11n HT20	NA	5280	MIMO	18.31	18.81
802.11n HT20	NA	5320	Chain0	15.65	16.15
802.11n HT20	NA	5320	Chain1	15.34	15.79
802.11n HT20	NA	5320	MIMO	18.51	19.01
802.11ac VHT20	NA	5260	Chain0	15.55	16.05
802.11ac VHT20	NA	5260	Chain1	15.08	15.53
802.11ac VHT20	NA	5260	MIMO	18.33	18.83
802.11ac VHT20	NA	5280	Chain0	15.47	15.97
802.11ac VHT20	NA	5280	Chain1	15.17	15.62
802.11ac VHT20	NA	5280	MIMO	18.33	18.83
802.11ac VHT20	NA	5320	Chain0	15.53	16.03
802.11ac VHT20	NA	5320	Chain1	15.34	15.79
802.11ac VHT20	NA	5320	MIMO	18.45	18.95
802.11n HT40	NA	5270	Chain0	15.19	15.69
802.11n HT40	NA	5270	Chain1	15.07	15.52
802.11n HT40	NA	5270	MIMO	18.14	18.64
802.11n HT40	NA	5310	Chain0	15.43	15.93
802.11n HT40	NA	5310	Chain1	15.21	15.66
802.11n HT40	NA	5310	MIMO	18.33	18.83
802.11ac VHT40	NA	5270	Chain0	15.30	15.80
802.11ac VHT40	NA	5270	Chain1	15.14	15.59
802.11ac VHT40	NA	5270	MIMO	18.23	18.73
802.11ac VHT40	NA	5310	Chain0	15.34	15.84
802.11ac VHT40	NA	5310	Chain1	15.22	15.67
802.11ac VHT40	NA	5310	MIMO	18.29	18.79
802.11ac VHT80	NA	5290	Chain0	15.07	15.57
802.11ac VHT80	NA	5290	Chain1	15.05	15.50
802.11ac VHT80	NA	5290	MIMO	18.07	18.57

### Emission Bandwidth

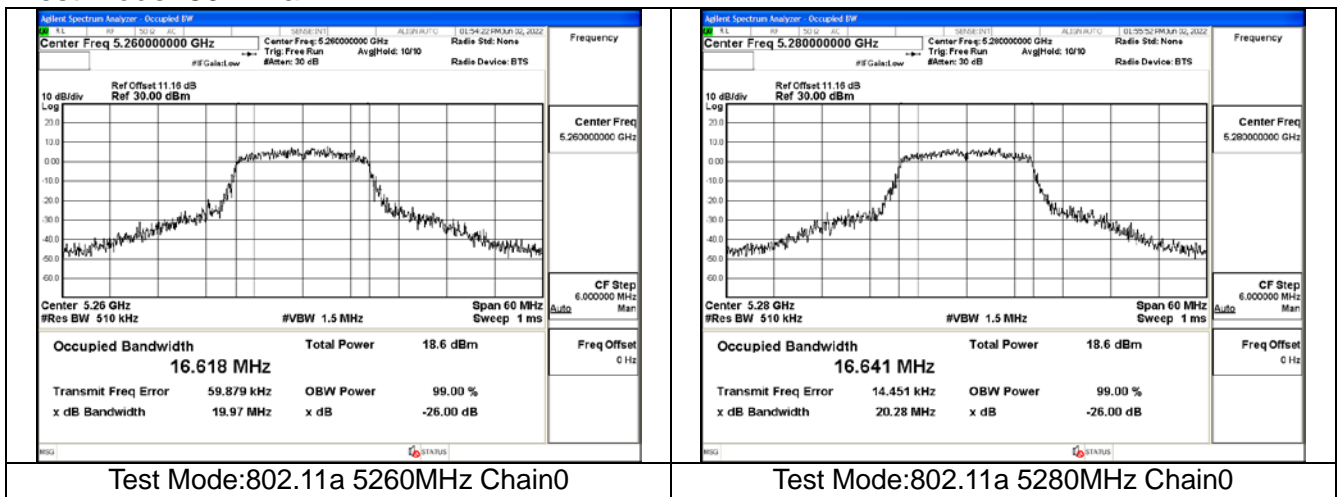
Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

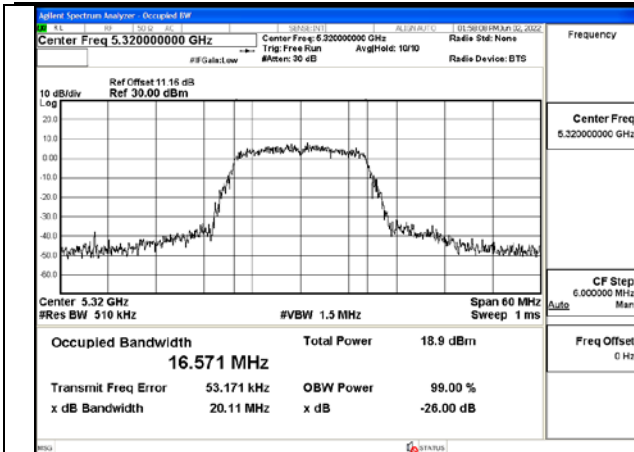
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.570	Channel No.574	Channel No.582
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	19.97	20.28	20.11
802.11a	Chain1	20.22	19.89	19.47
802.11n HT20	Chain0	20.20	20.56	20.64
802.11n HT20	Chain1	20.47	20.07	20.33
802.11ac VHT20	Chain0	20.48	20.32	20.29
802.11ac VHT20	Chain1	20.46	20.48	20.09

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	40.82	---	40.54
802.11n HT40	Chain1	40.10	---	39.82
802.11ac VHT40	Chain0	41.15	---	40.53
802.11ac VHT40	Chain1	41.13	---	40.20

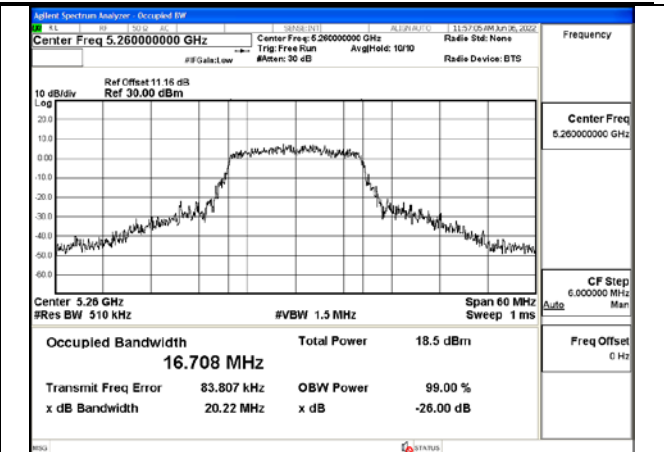
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.576	---	---
		5290MHz	---	---
802.11ac VHT80	Chain0	81.05	---	---
802.11ac VHT80	Chain1	81.71	---	---

### Test Mode: 802.11a

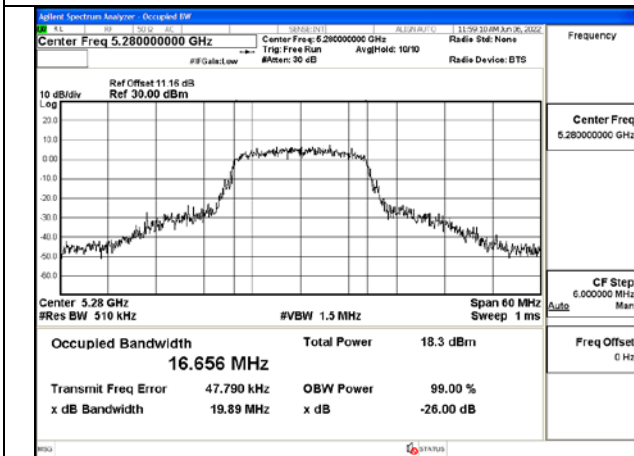




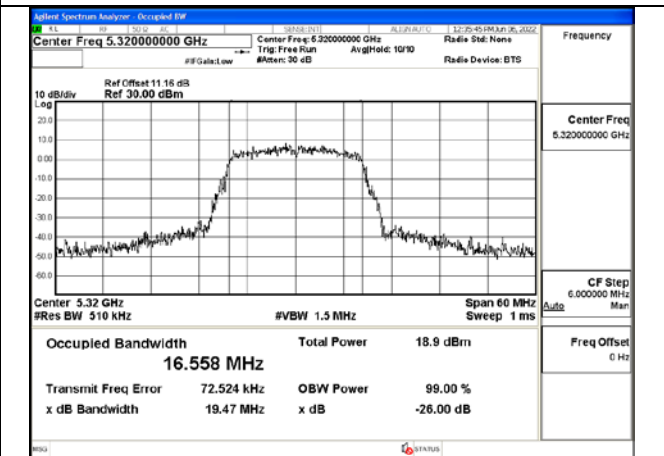
Test Mode:802.11a 5320MHz Chain0



Test Mode:802.11a 5260MHz Chain1

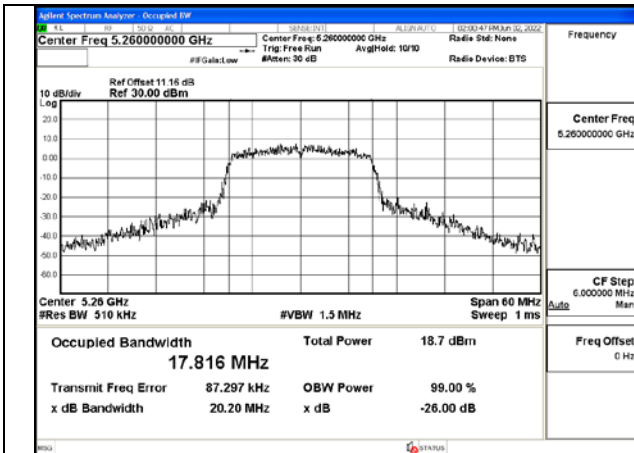


Test Mode:802.11a 5280MHz Chain1

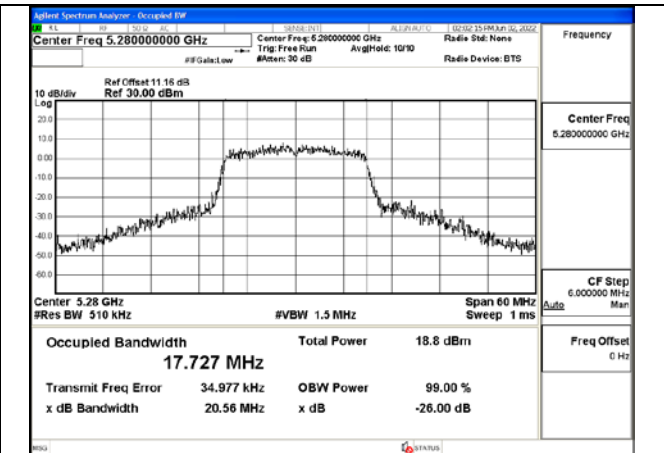


Test Mode:802.11a 5320MHz Chain1

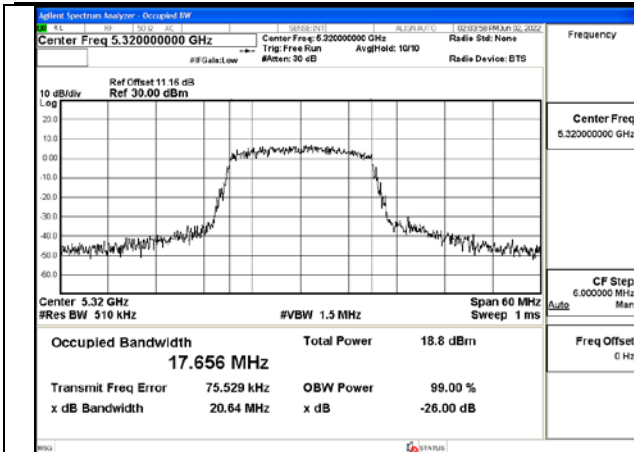
Test Mode: 802.11n HT20



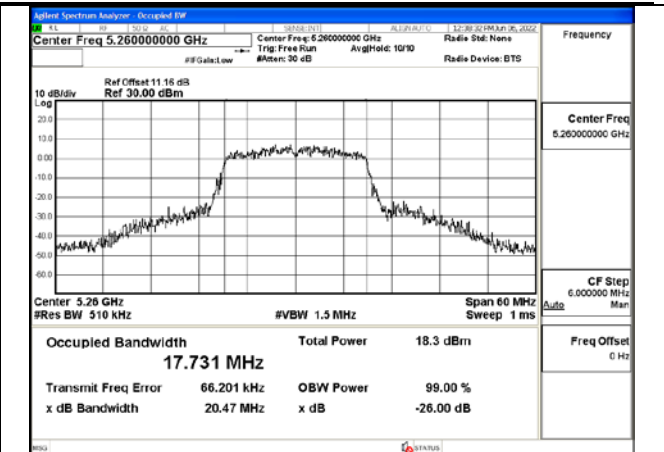
Test Mode:802.11n HT20 5260MHz Chain0



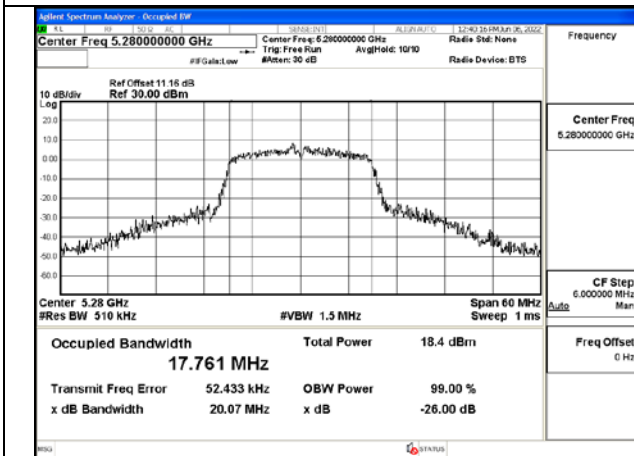
Test Mode:802.11n HT20 5280MHz Chain0



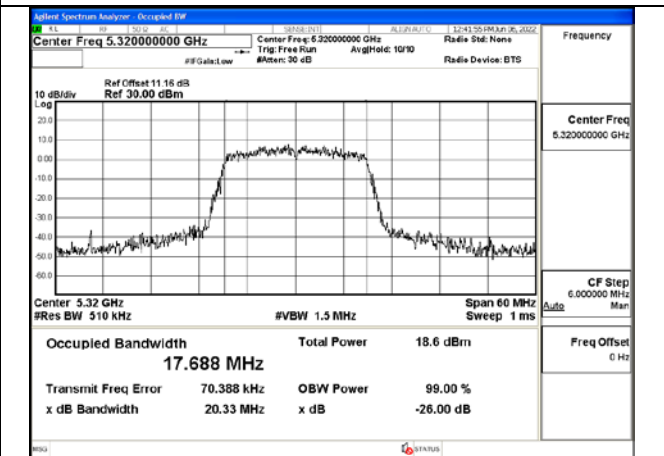
Test Mode:802.11n HT20 5320MHz Chain0



Test Mode:802.11n HT20 5260MHz Chain1

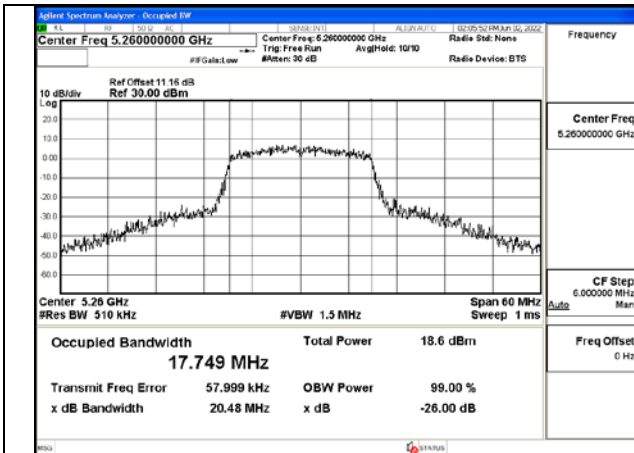


Test Mode:802.11n HT20 5280MHz Chain1

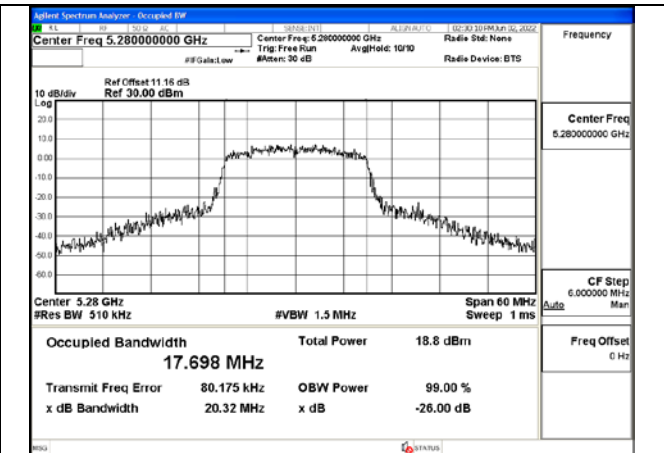


Test Mode:802.11n HT20 5320MHz Chain1

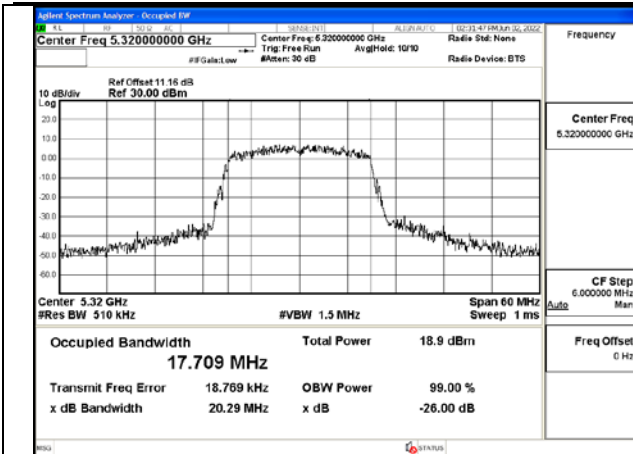
Test Mode: 802.11ac VHT20



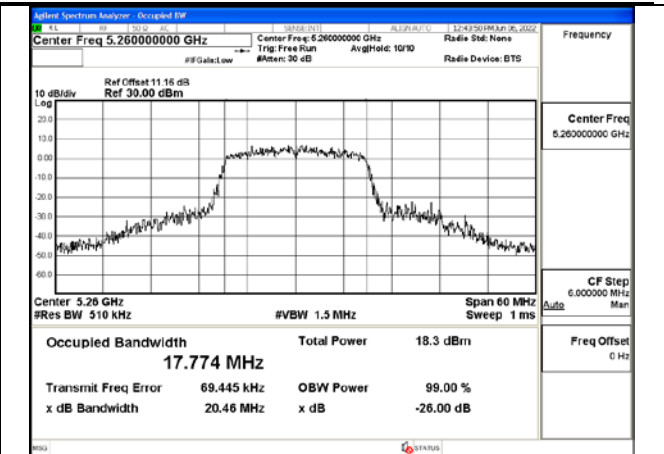
Test Mode:802.11ac VHT20 5260MHz Chain0



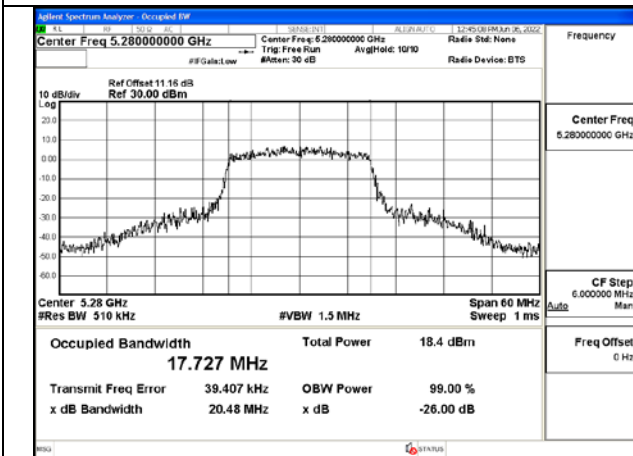
Test Mode:802.11ac VHT20 5280MHz Chain0



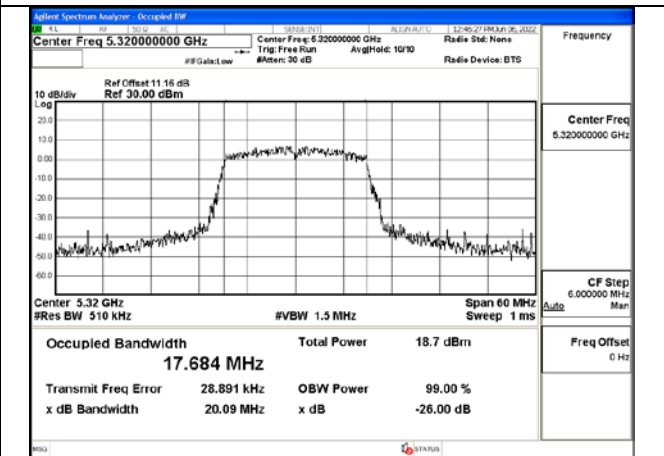
Test Mode:802.11ac VHT20 5320MHz Chain0



Test Mode:802.11ac VHT20 5260MHz Chain1

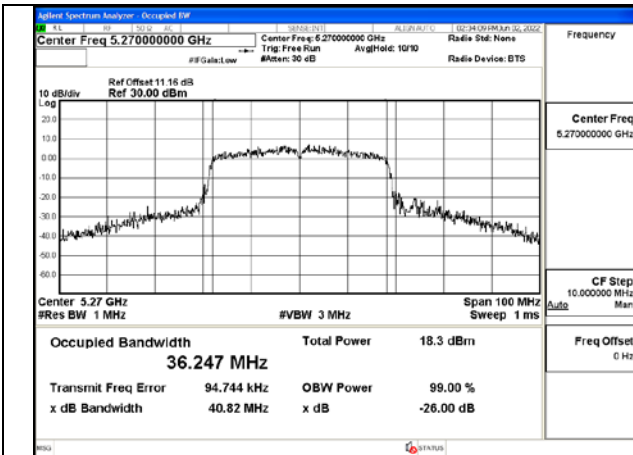


Test Mode:802.11ac VHT20 5280MHz Chain1

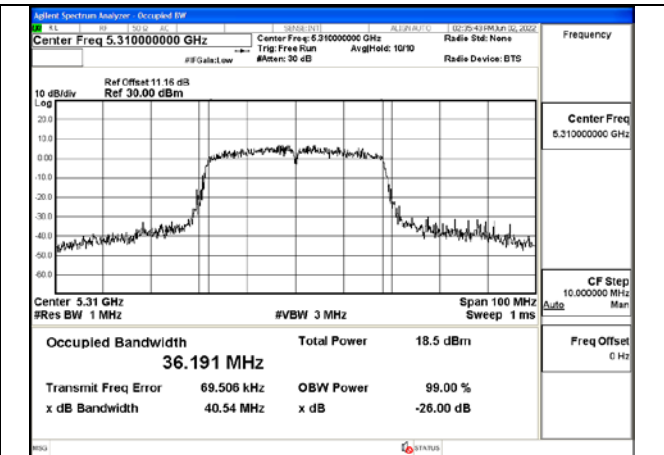


Test Mode:802.11ac VHT20 5320MHz Chain1

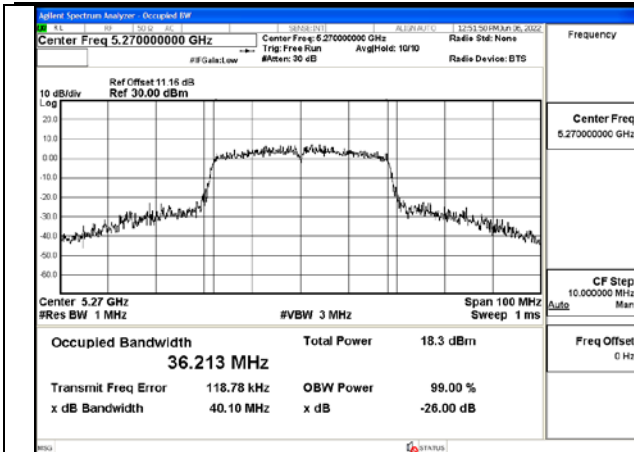
Test Mode: 802.11n HT40



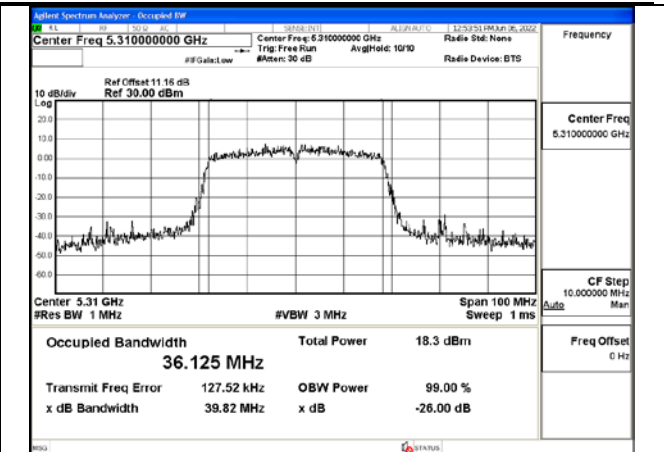
Test Mode:802.11n HT40 5270MHz Chain0



Test Mode:802.11n HT40 5310MHz Chain0

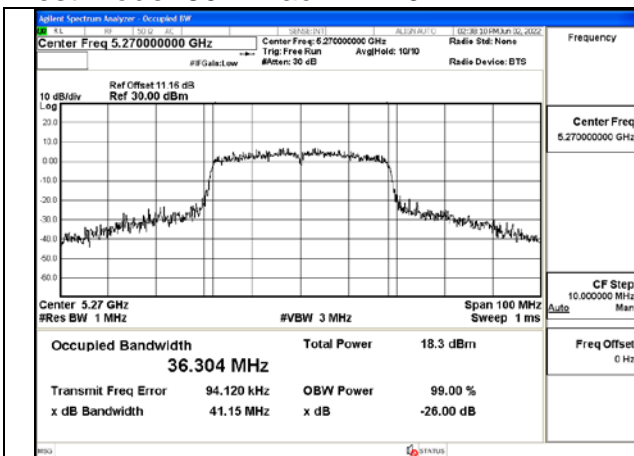


Test Mode:802.11n HT40 5270MHz Chain1

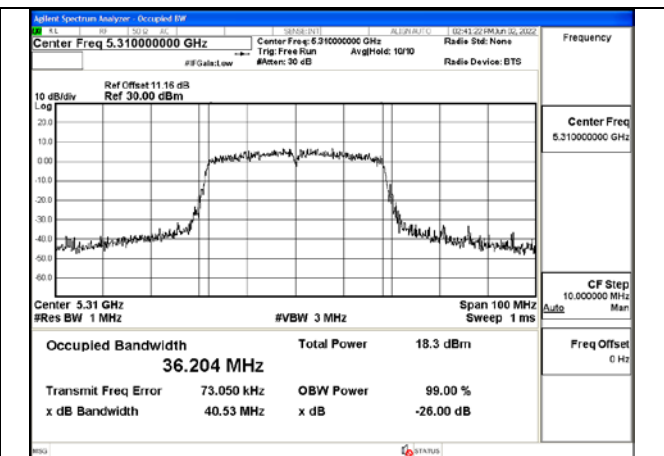


Test Mode:802.11n HT40 5310MHz Chain1

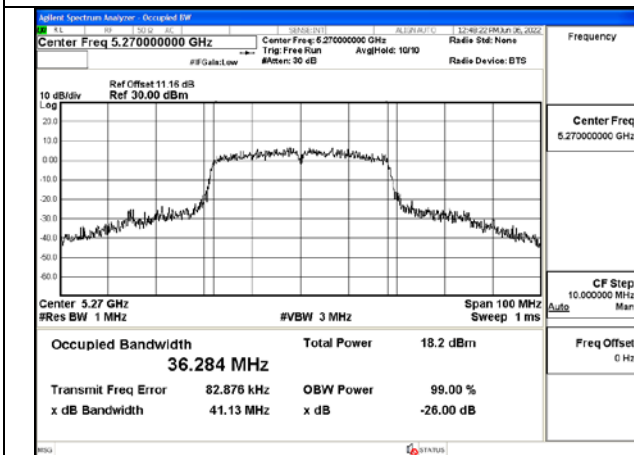
Test Mode: 802.11ac VHT40



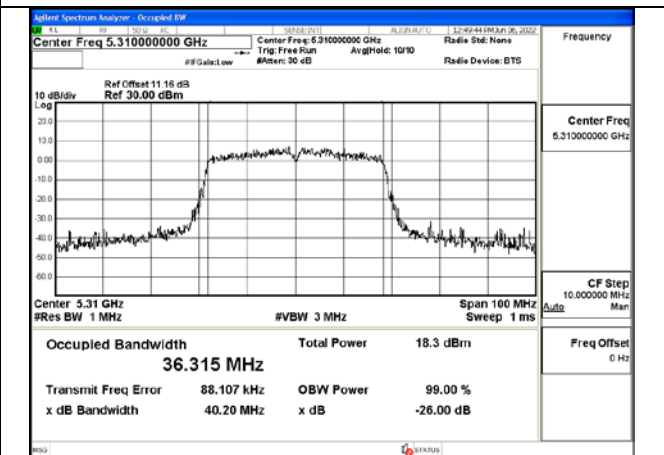
Test Mode:802.11ac VHT40 5270MHz Chain0



Test Mode:802.11ac VHT40 5310MHz Chain0

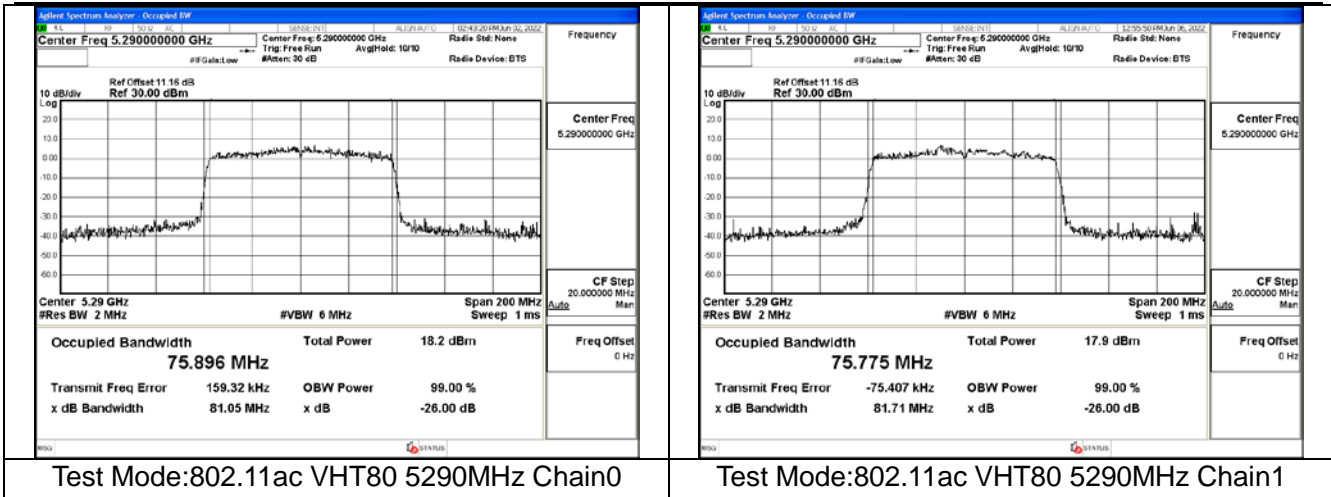


Test Mode:802.11ac VHT40 5270MHz Chain1



Test Mode:802.11ac VHT40 5310MHz Chain1

Test Mode: 802.11ac VHT80



### Occupied Bandwidth

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

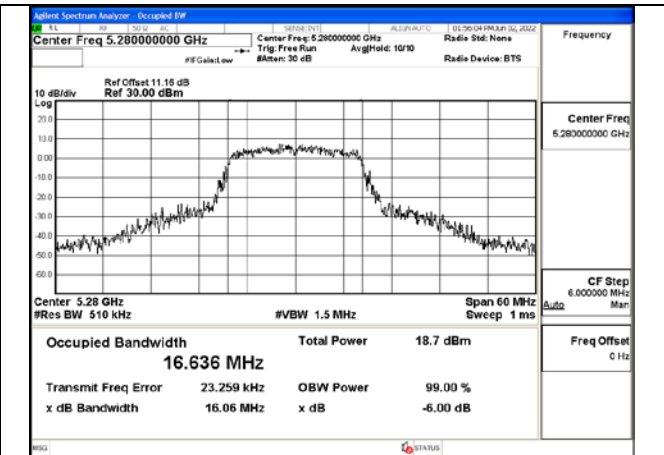
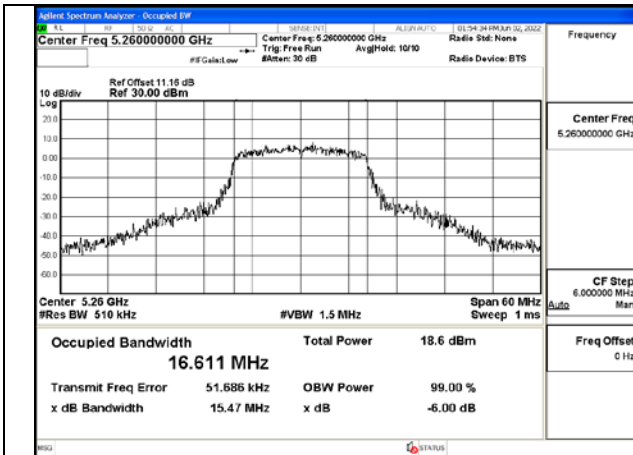
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.570	Channel No.574	Channel No.582
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	16.611	16.636	16.560
802.11a	Chain1	16.517	16.611	16.524
802.11n HT20	Chain0	17.839	17.769	17.636
802.11n HT20	Chain1	17.803	17.761	17.675
802.11ac VHT20	Chain0	17.669	17.673	17.755
802.11ac VHT20	Chain1	17.739	17.642	17.608

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	36.279	---	36.258
802.11n HT40	Chain1	36.247	---	36.299
802.11ac VHT40	Chain0	36.226	---	36.180
802.11ac VHT40	Chain1	36.231	---	36.179

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.576	---	---
		5290MHz	---	---
802.11ac VHT80	Chain0	75.955	---	---
802.11ac VHT80	Chain1	75.804	---	---

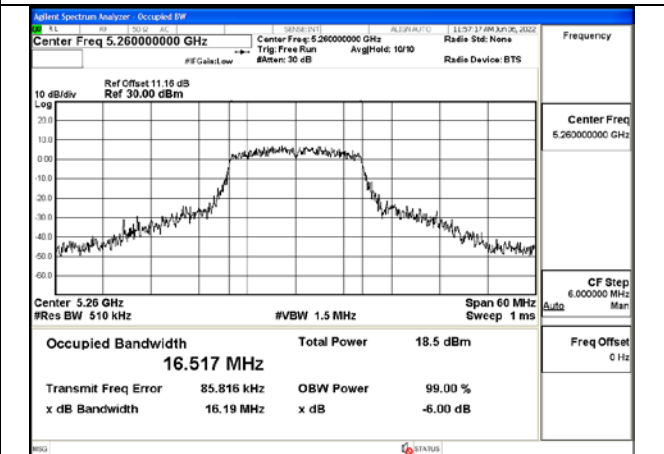
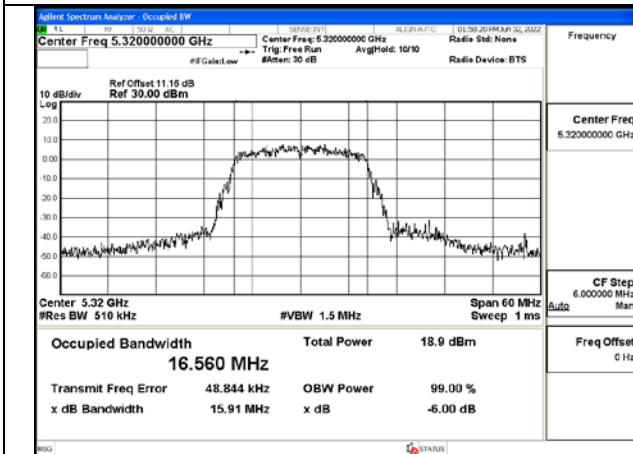


Test Mode: 802.11a



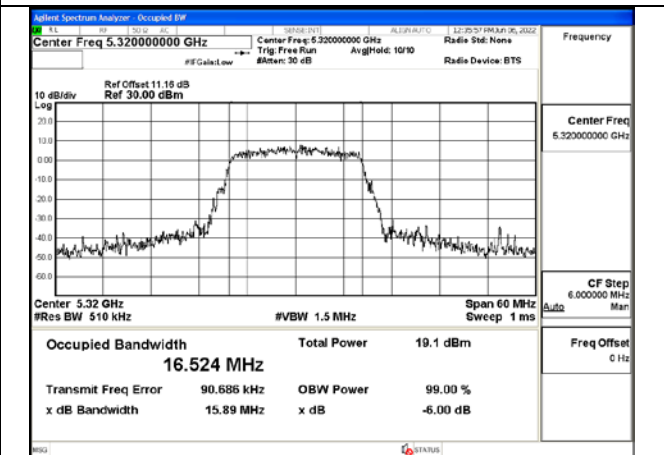
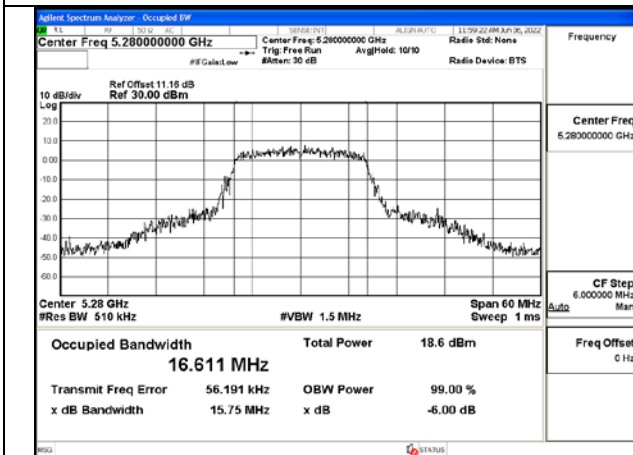
Test Mode:802.11a 5260MHz Chain0

Test Mode:802.11a 5280MHz Chain0



Test Mode:802.11a 5320MHz Chain0

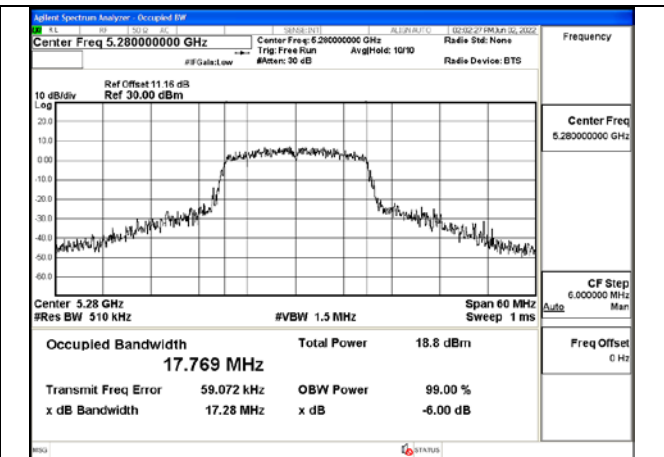
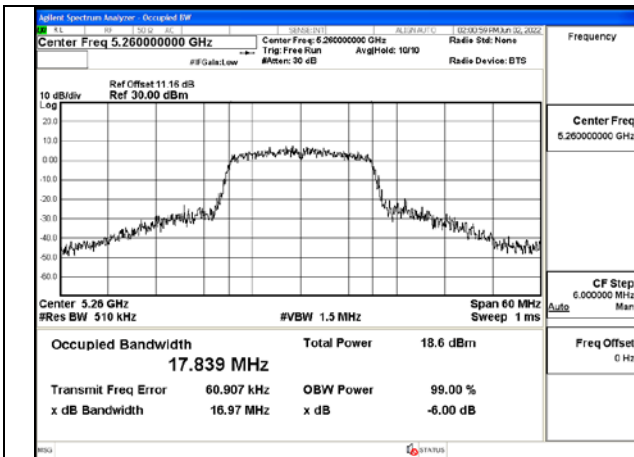
Test Mode:802.11a 5260MHz Chain1



Test Mode:802.11a 5280MHz Chain1

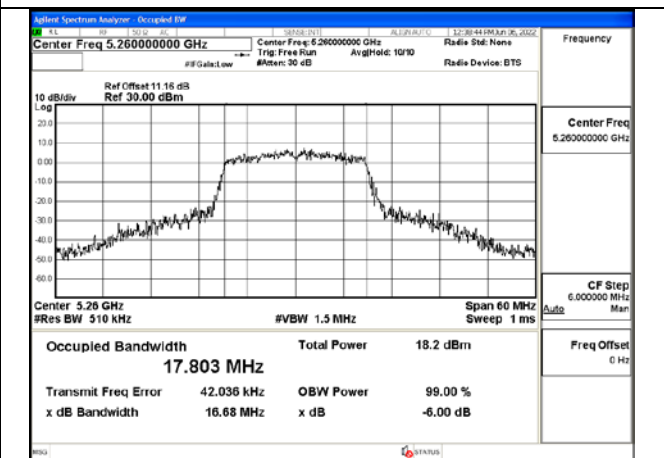
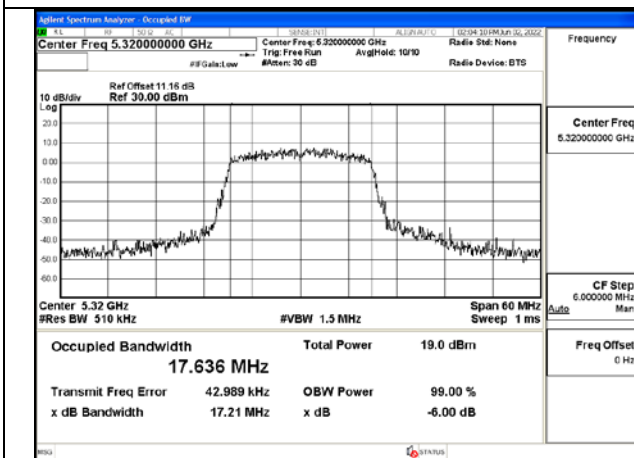
Test Mode:802.11a 5320MHz Chain1

Test Mode: 802.11n HT20



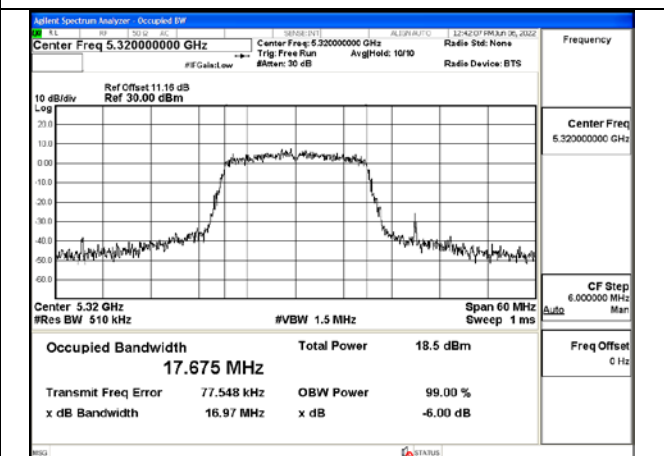
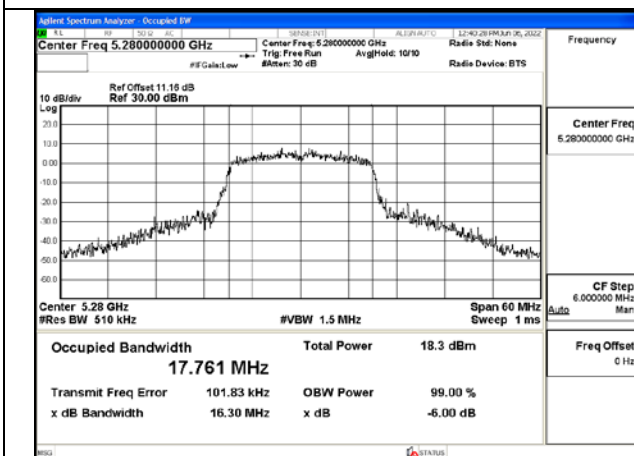
Test Mode:802.11n HT20 5260MHz Chain0

Test Mode:802.11n HT20 5280MHz Chain0



Test Mode:802.11n HT20 5320MHz Chain0

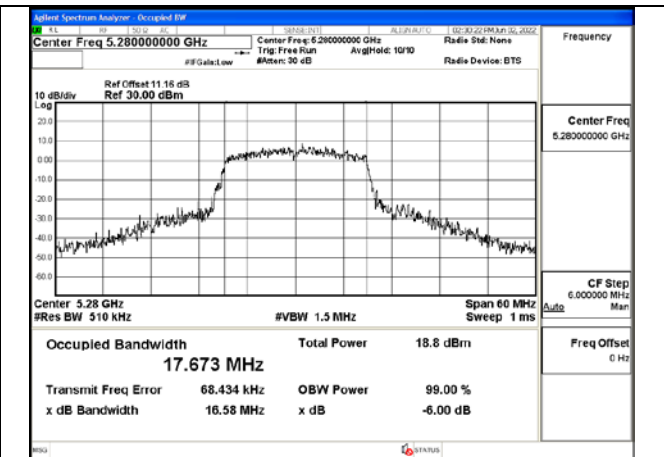
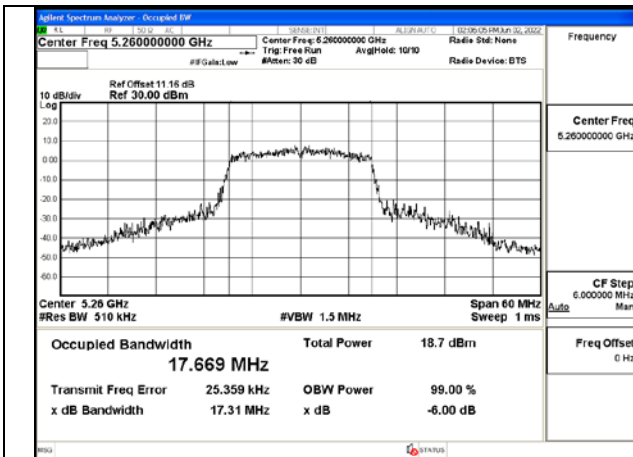
Test Mode:802.11n HT20 5260MHz Chain1



Test Mode:802.11n HT20 5280MHz Chain1

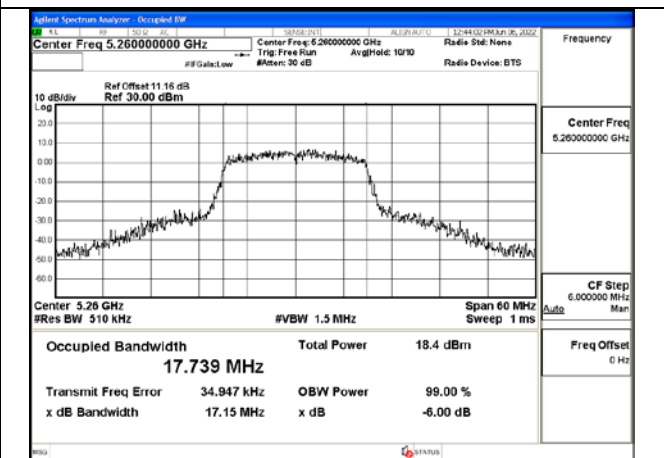
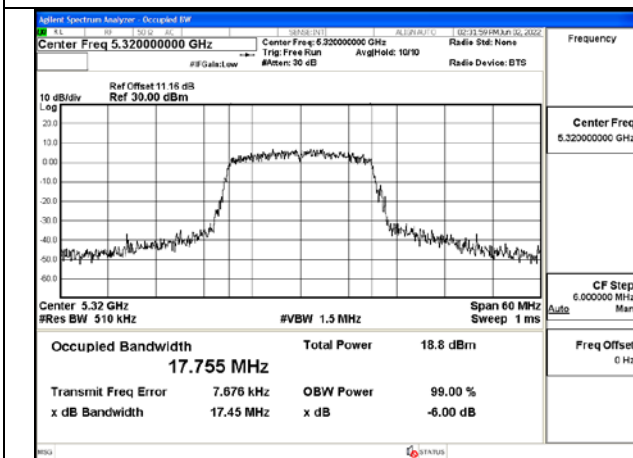
Test Mode:802.11n HT20 5320MHz Chain1

Test Mode: 802.11ac VHT20



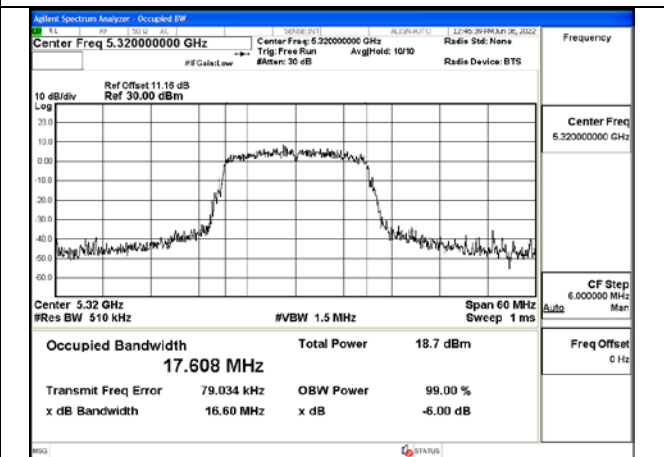
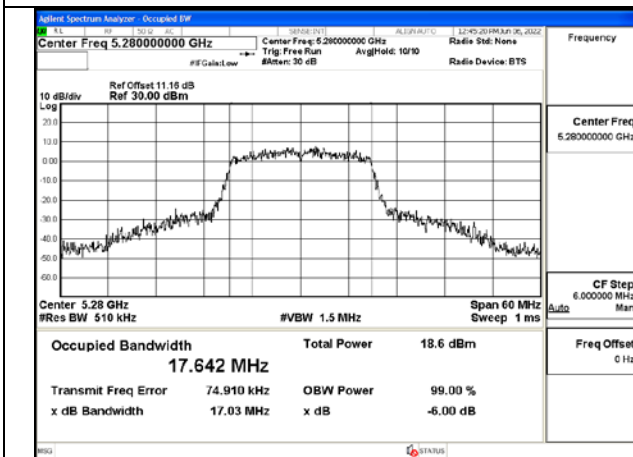
Test Mode:802.11ac VHT20 5260MHz Chain0

Test Mode:802.11ac VHT20 5280MHz Chain0



Test Mode:802.11ac VHT20 5320MHz Chain0

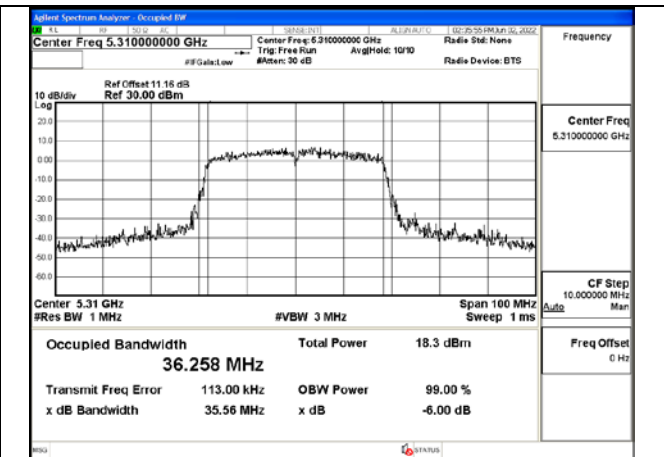
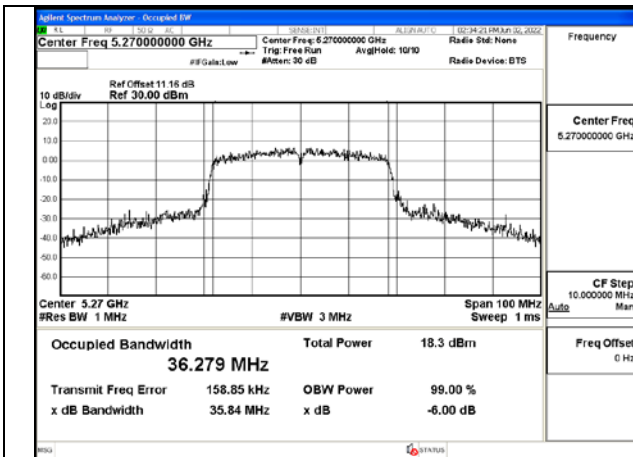
Test Mode:802.11ac VHT20 5260MHz Chain1



Test Mode:802.11ac VHT20 5280MHz Chain1

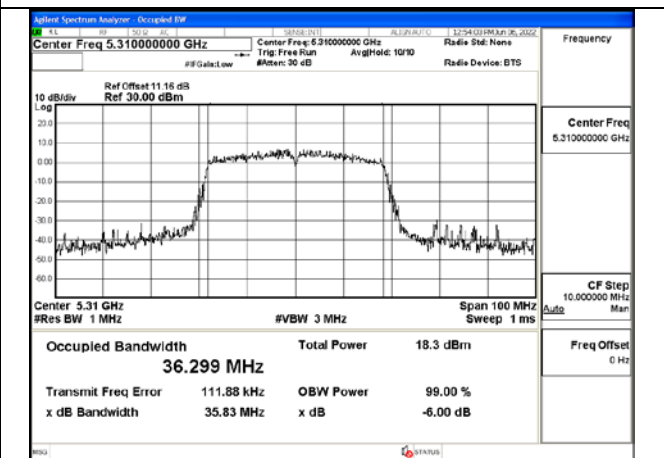
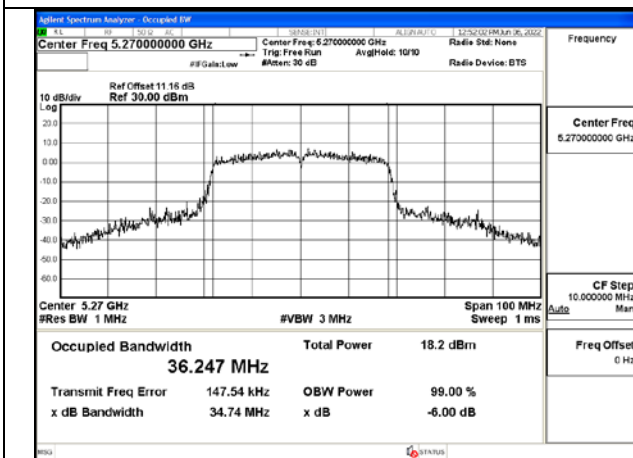
Test Mode:802.11ac VHT20 5320MHz Chain1

Test Mode: 802.11n HT40



Test Mode:802.11n HT40 5270MHz Chain0

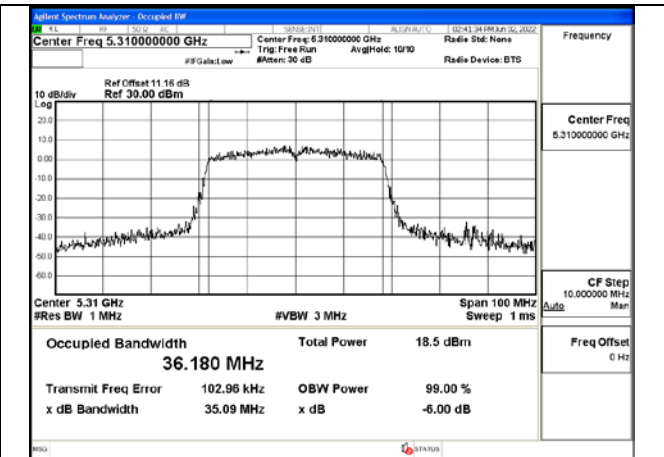
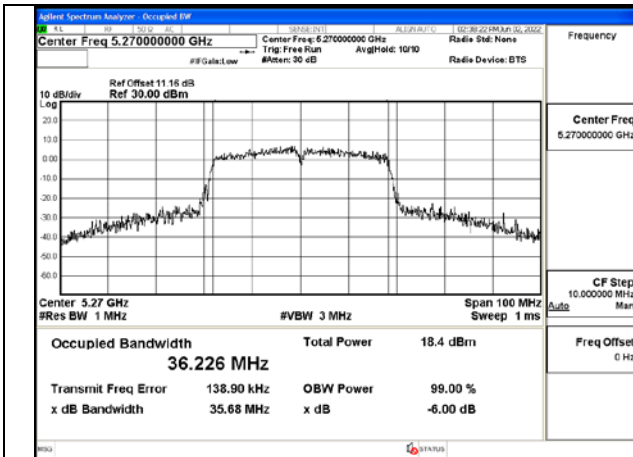
Test Mode:802.11n HT40 5310MHz Chain0



Test Mode:802.11n HT40 5270MHz Chain1

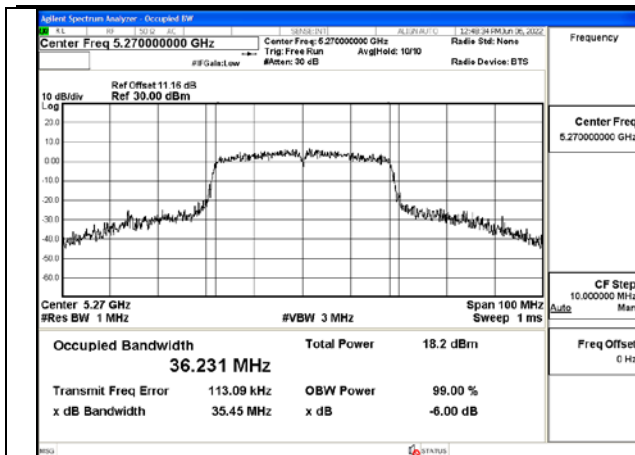
Test Mode:802.11n HT40 5310MHz Chain1

Test Mode: 802.11ac VHT40

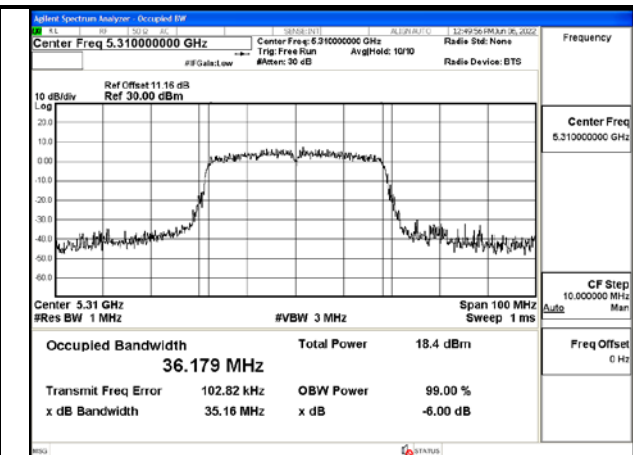


Test Mode:802.11ac VHT40 5270MHz Chain0

Test Mode:802.11ac VHT40 5310MHz Chain0

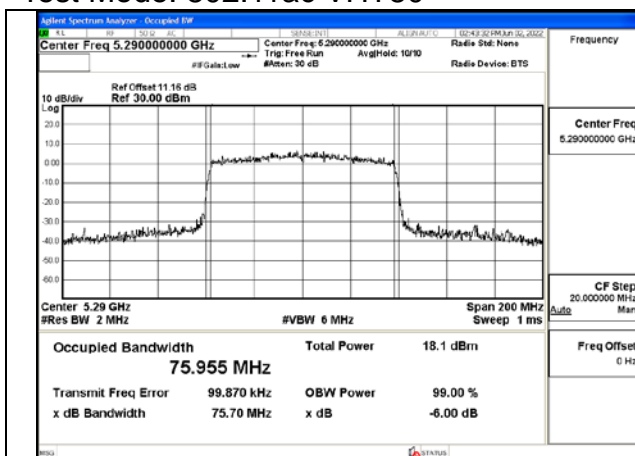


Test Mode:802.11ac VHT40 5270MHz Chain1

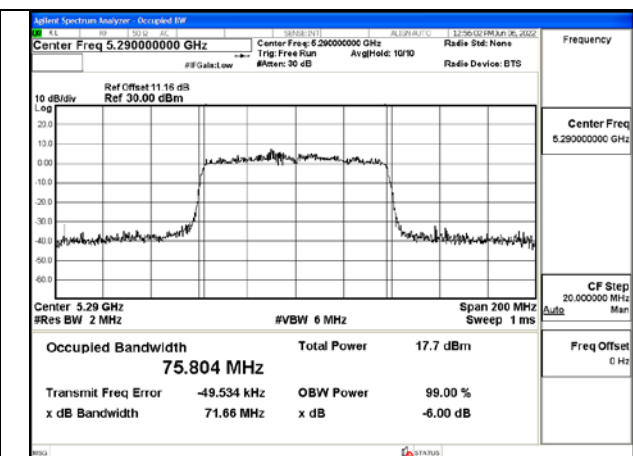


Test Mode:802.11ac VHT40 5310MHz Chain1

Test Mode: 802.11ac VHT80



Test Mode:802.11ac VHT80 5290MHz Chain0



Test Mode:802.11ac VHT80 5290MHz Chain1

### Transmitter Power Spectral Density

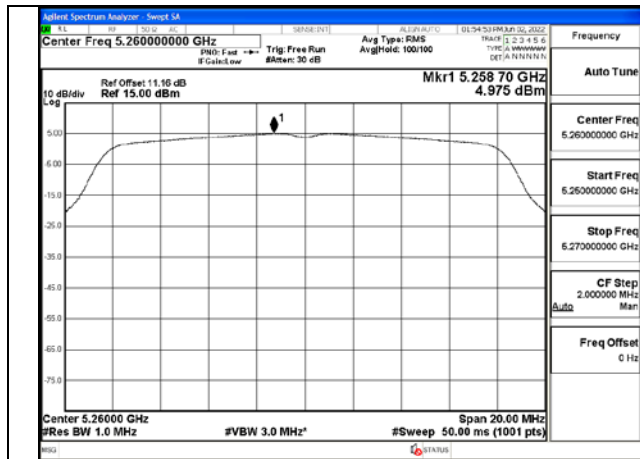
Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	5260MHz		5280MHz		5320MHz	
		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	4.975	0	4.891	0	5.196
802.11a	Chain1	0	4.768	0	4.803	0	5.165
802.11n HT20	Chain0	0	4.843	0	4.863	0	5.015
802.11n HT20	Chain1	0	4.412	0	4.450	0	4.642
802.11n HT20	MIMO	0	7.643	0	7.672	0	7.843
802.11ac VHT20	Chain0	0	4.736	0	4.657	0	4.902
802.11ac VHT20	Chain1	0	4.352	0	4.561	0	4.667
802.11ac VHT20	MIMO	0	7.559	0	7.620	0	7.796

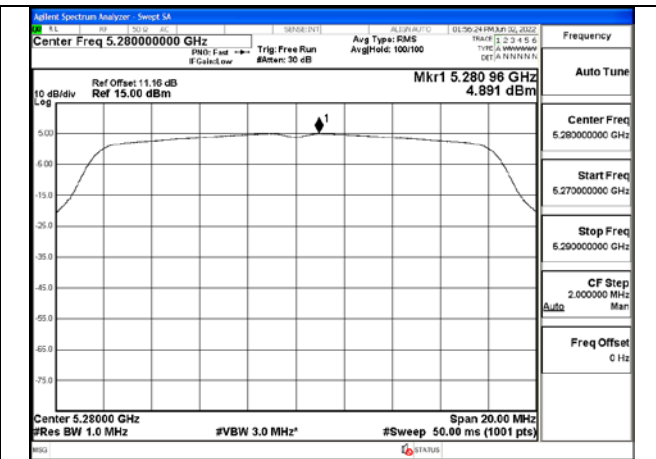
Test Mode	Antenna	5270MHz		---		5310MHz	
		Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11n HT40	Chain0	0.12	1.486	---	---	0.12	1.682
802.11n HT40	Chain1	0.12	1.434	---	---	0.12	1.485
802.11n HT40	MIMO	0.12	4.470	---	---	0.12	4.595
802.11ac VHT40	Chain0	0.13	1.641	---	---	0.13	1.678
802.11ac VHT40	Chain1	0.13	1.495	---	---	0.13	1.562
802.11ac VHT40	MIMO	0.13	4.579	---	---	0.13	4.631

Test Mode	Antenna	5290MHz		---		---	
		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	0.24	-1.608	---	---	---	---
802.11ac VHT80	Chain1	0.24	-0.394	---	---	---	---
802.11ac VHT80	MIMO	0.24	2.052	---	---	---	---

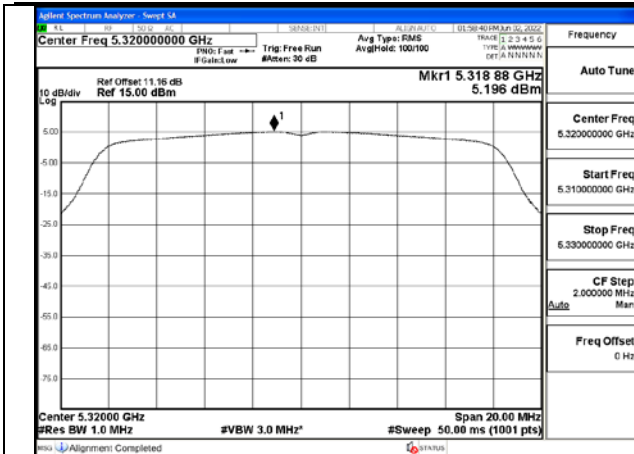
Test Mode: 802.11a



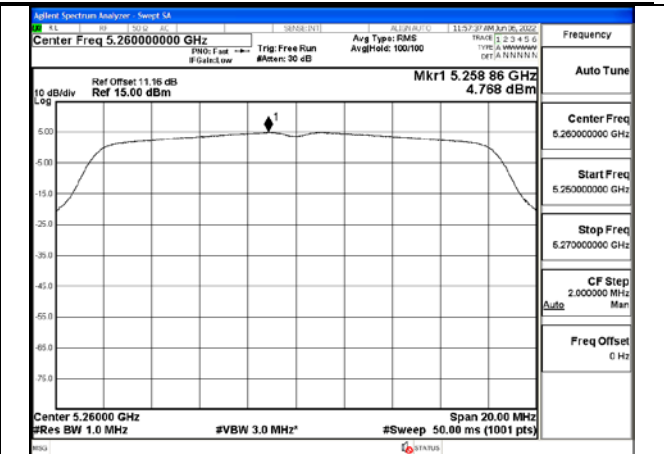
Test Mode:802.11a 5260MHz Chain0



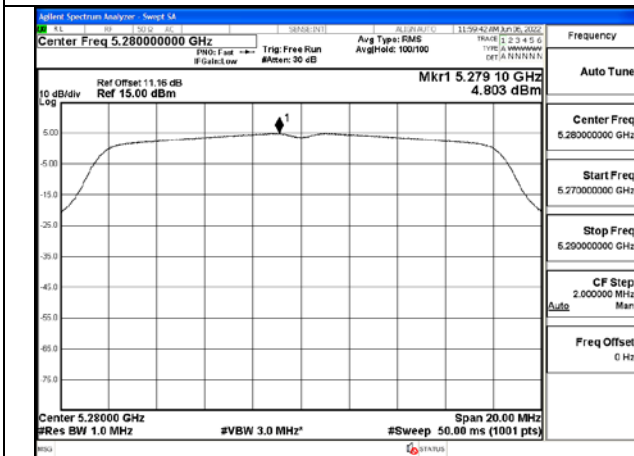
Test Mode:802.11a 5280MHz Chain0



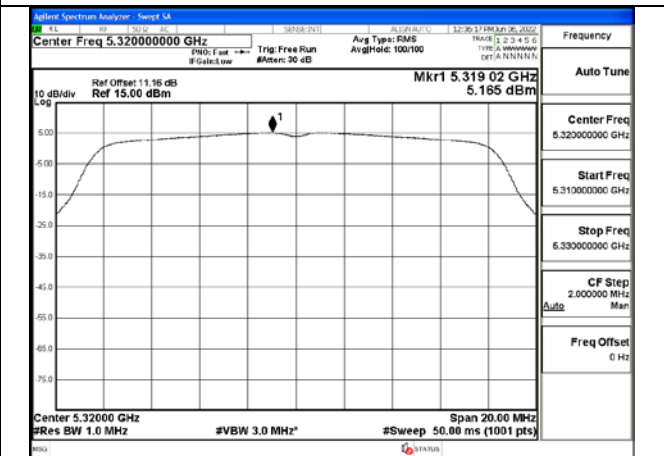
Test Mode:802.11a 5320MHz Chain0



Test Mode:802.11a 5260MHz Chain1

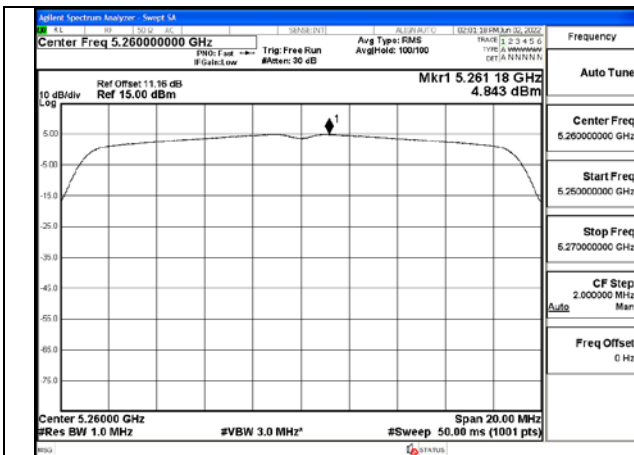


Test Mode:802.11a 5280MHz Chain1

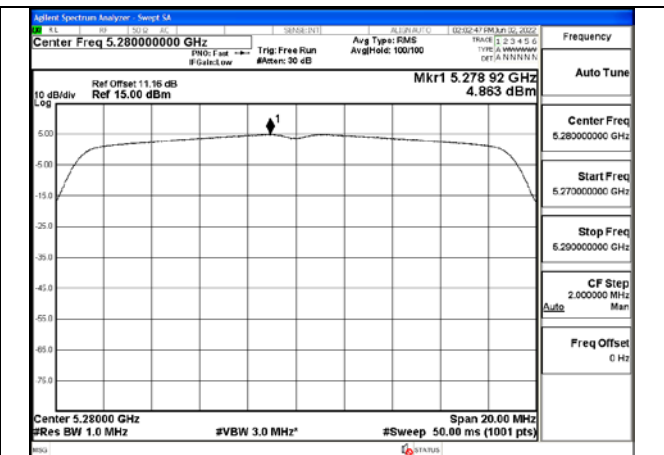


Test Mode:802.11a 5320MHz Chain1

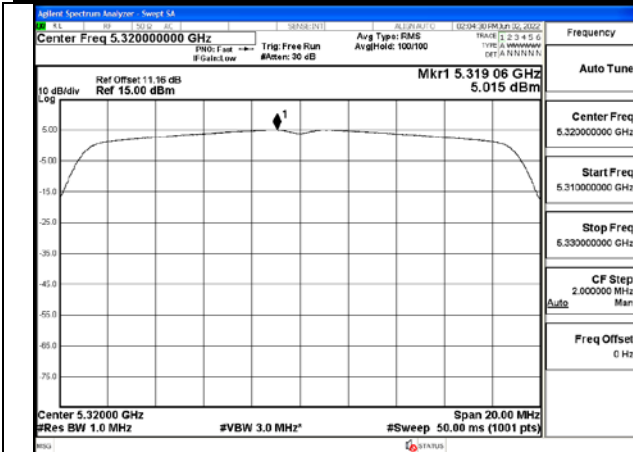
Test Mode: 802.11n HT20



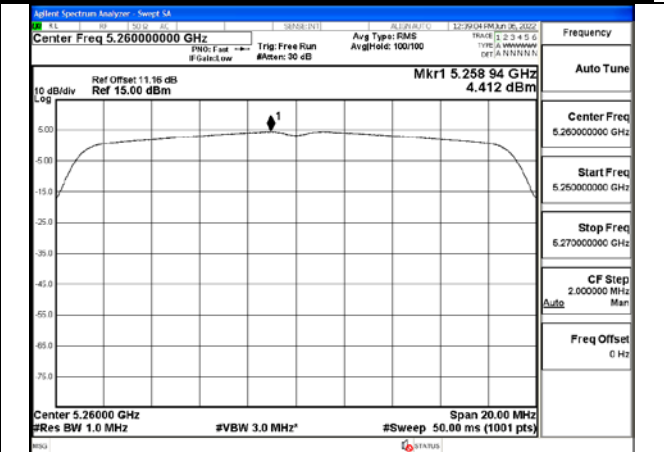
Test Mode:802.11n HT20 5260MHz Chain0



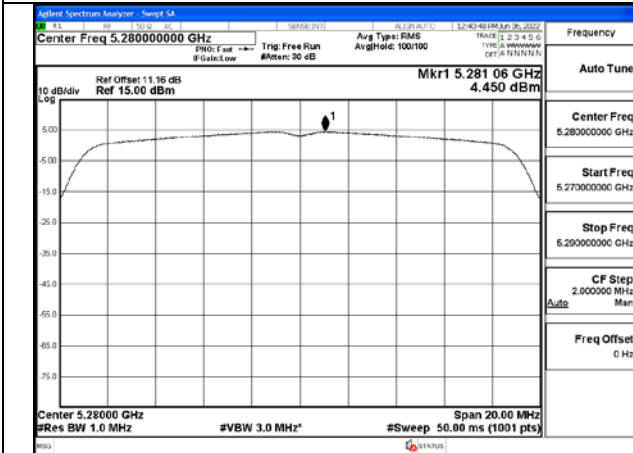
Test Mode:802.11n HT20 5280MHz Chain0



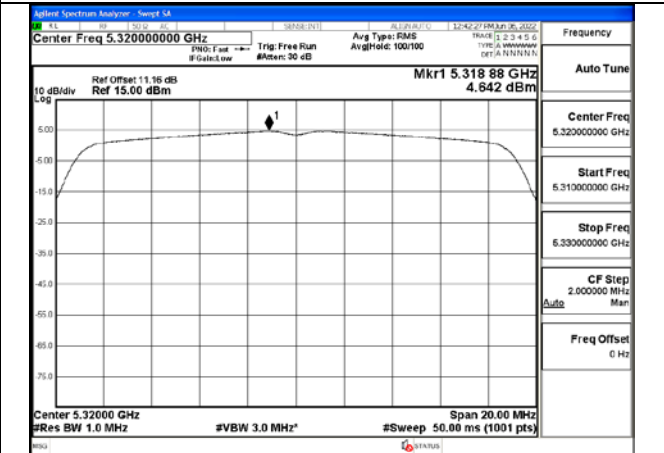
Test Mode:802.11n HT20 5320MHz Chain0



Test Mode:802.11n HT20 5260MHz Chain1

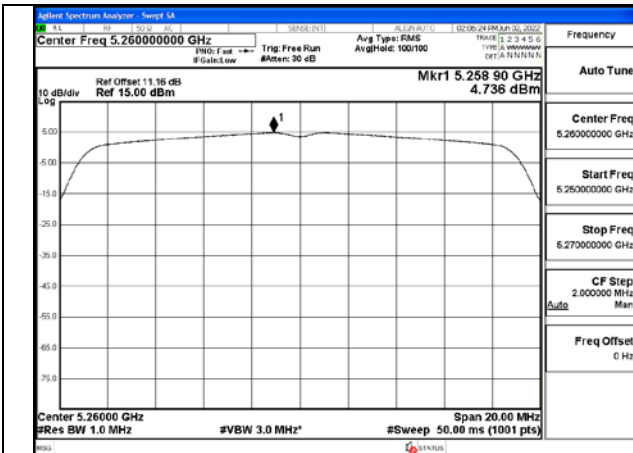


Test Mode:802.11n HT20 5280MHz Chain1

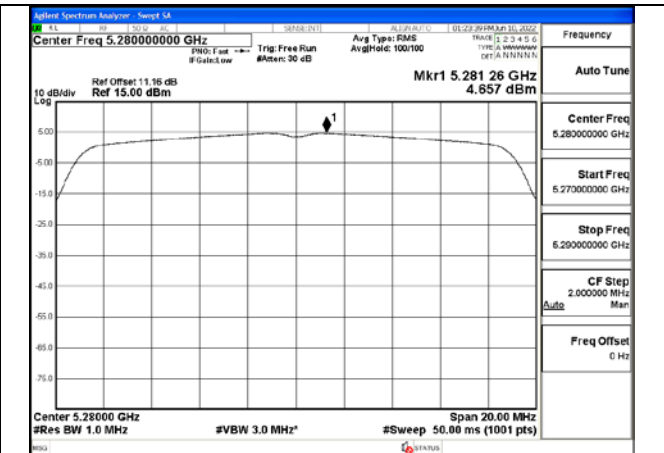


Test Mode:802.11n HT20 5320MHz Chain1

Test Mode: 802.11ac VHT20

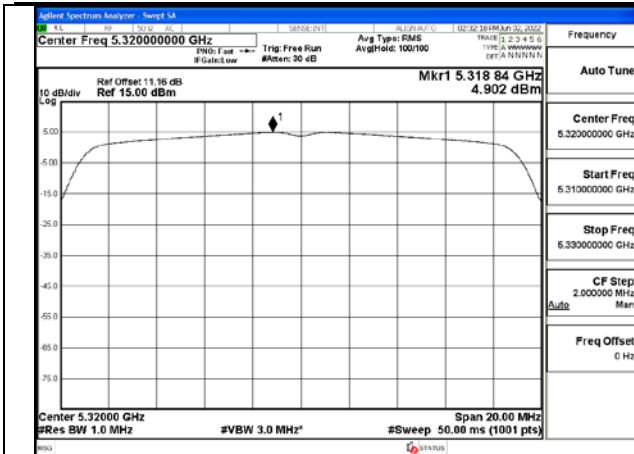


Test Mode:802.11ac VHT20 5260MHz Chain0

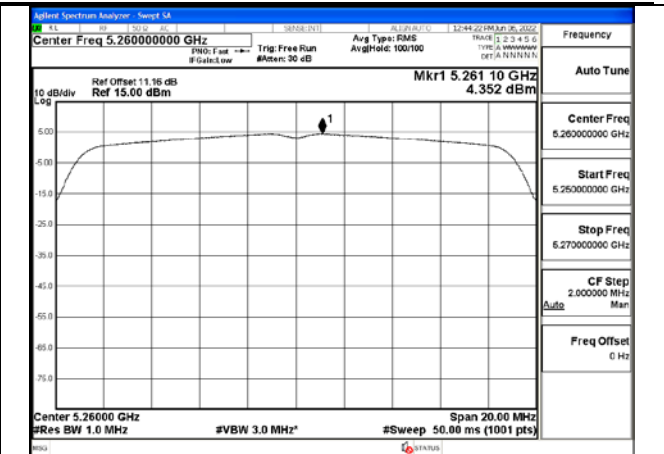


Test Mode:802.11ac VHT20 5280MHz Chain0

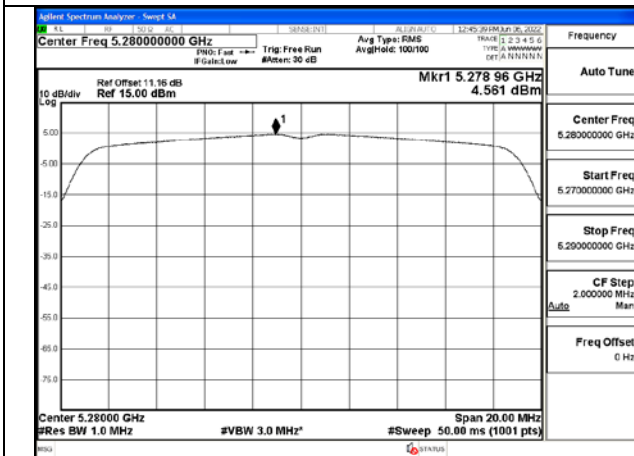




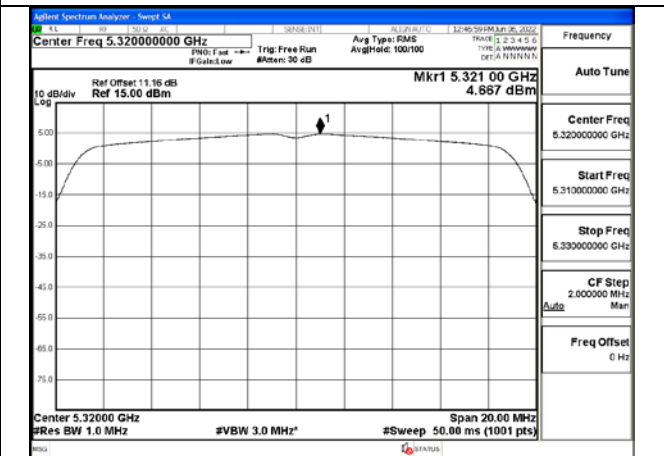
Test Mode:802.11ac VHT20 5320MHz Chain0



Test Mode:802.11ac VHT20 5260MHz Chain1

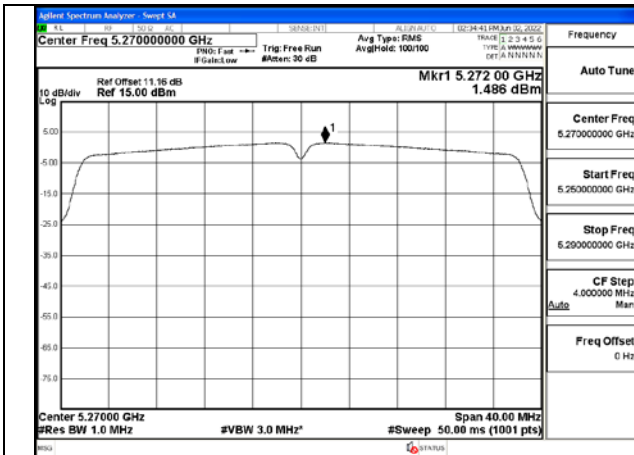


Test Mode:802.11ac VHT20 5280MHz Chain1

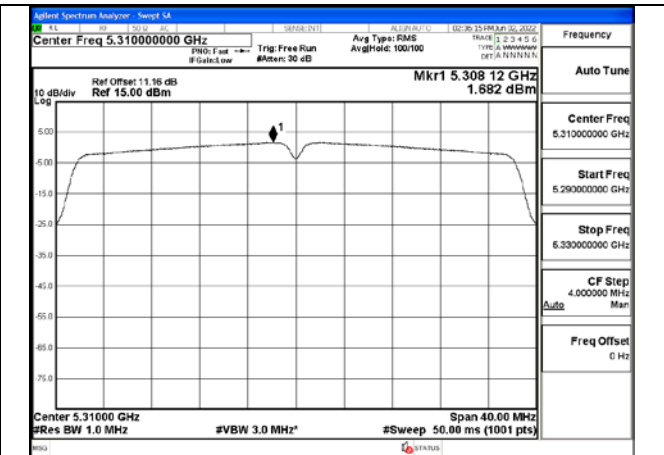


Test Mode:802.11ac VHT20 5320MHz Chain1

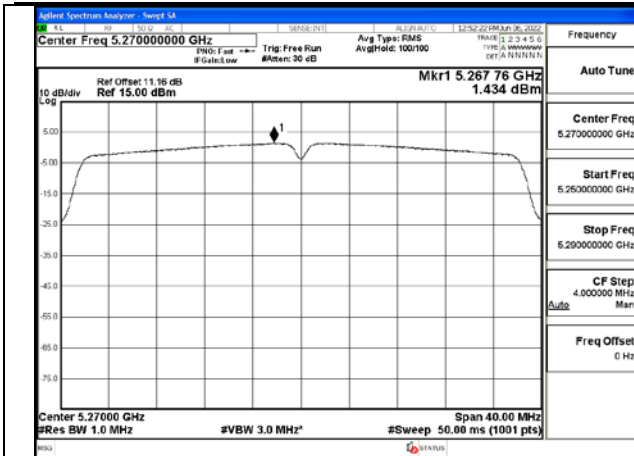
Test Mode: 802.11n HT40



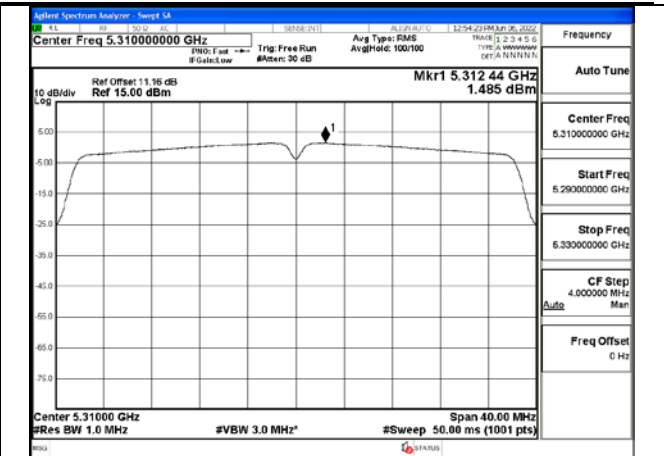
Test Mode:802.11n HT40 5270MHz Chain0



Test Mode:802.11n HT40 5310MHz Chain0

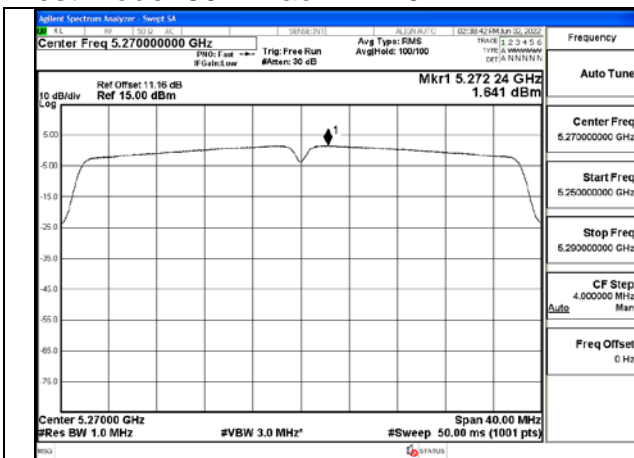


Test Mode:802.11n HT40 5270MHz Chain1

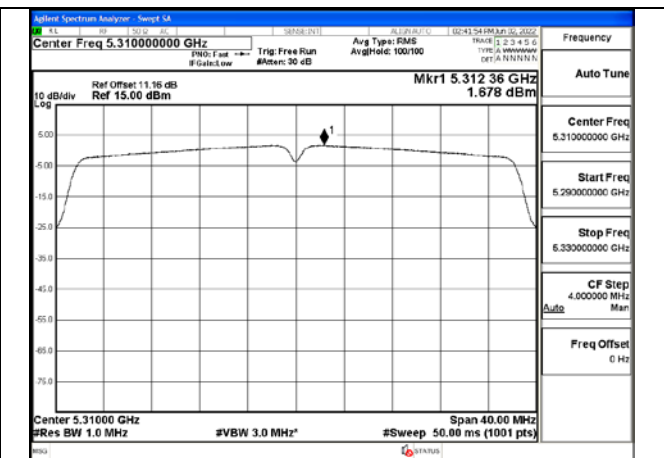


Test Mode:802.11n HT40 5310MHz Chain1

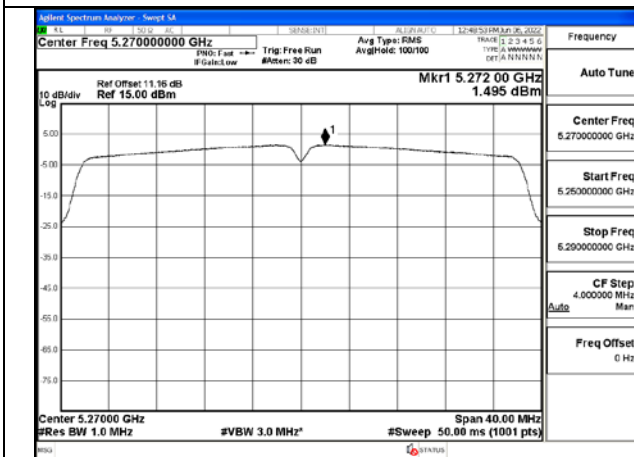
Test Mode: 802.11ac VHT40



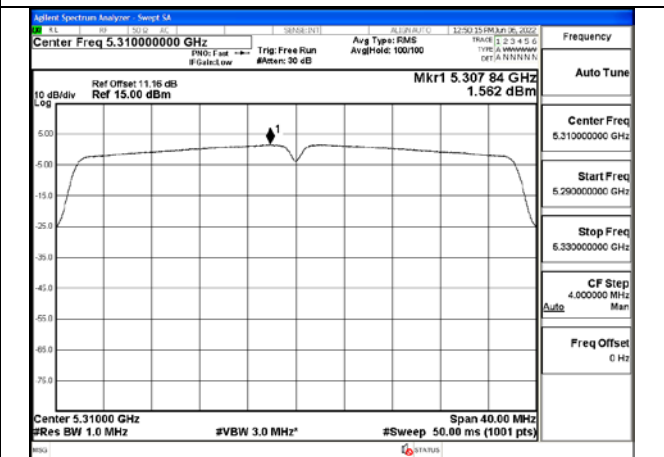
Test Mode:802.11ac VHT40 5270MHz Chain0



Test Mode:802.11ac VHT40 5310MHz Chain0

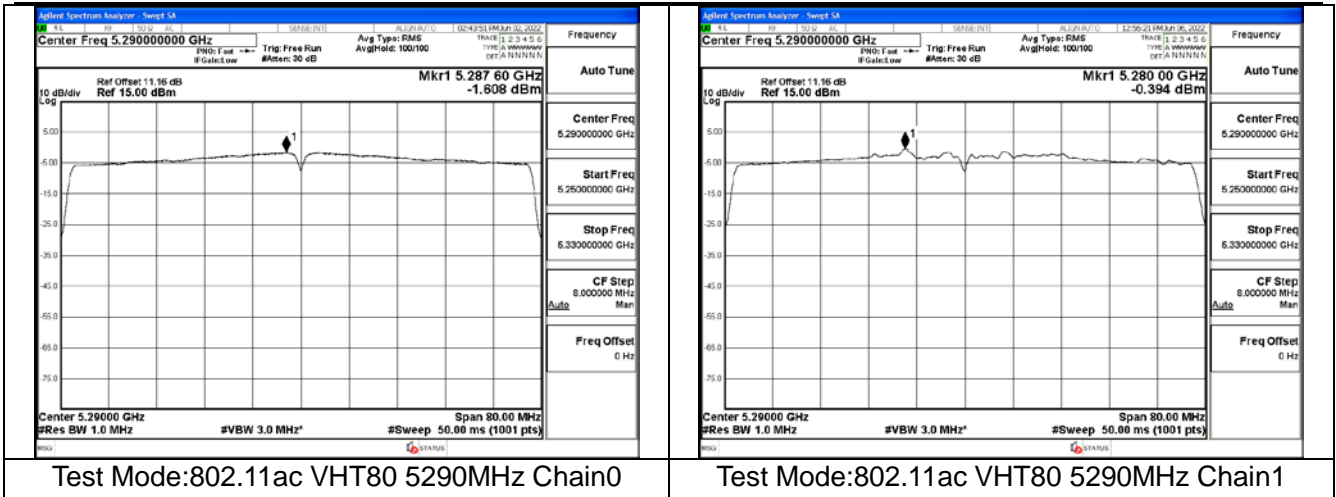


Test Mode:802.11ac VHT40 5270MHz Chain1



Test Mode:802.11ac VHT40 5310MHz Chain1

Test Mode: 802.11ac VHT80



## 8822 Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)
802.11a	5260	87.24%	0.59
802.11a	5260	87.26%	0.59
802.11n HT20	5260	87.09%	0.60
802.11n HT20	5260	87.06%	0.60
802.11ac VHT20	5260	87.09%	0.60
802.11ac VHT20	5260	86.17%	0.65
802.11n HT40	5270	79.69%	0.99
802.11n HT40	5270	79.84%	0.98
802.11ac VHT40	5270	78.80%	1.03
802.11ac VHT40	5270	79.86%	0.98
802.11ac VHT80	5290	71.70%	1.45
802.11ac VHT80	5290	71.77%	1.44

Note: Correction Factor= $10 \cdot \log(1/\text{Duty Cycle})$

## Output Power

Mode	Tones/ RUIndex	Freq (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5260	Chain0	16.12	16.47
802.11a	NA	5260	Chain1	13.67	14.07
802.11a	NA	5280	Chain0	16.68	17.03
802.11a	NA	5280	Chain1	13.86	14.26
802.11a	NA	5320	Chain0	16.94	17.29
802.11a	NA	5320	Chain1	13.77	14.17
802.11n HT20	NA	5260	Chain0	14.01	14.36
802.11n HT20	NA	5260	Chain1	13.36	13.76
802.11n HT20	NA	5260	MIMO	16.71	17.11
802.11n HT20	NA	5280	Chain0	13.25	13.60
802.11n HT20	NA	5280	Chain1	13.55	13.95
802.11n HT20	NA	5280	MIMO	16.41	16.81
802.11n HT20	NA	5320	Chain0	14.53	14.88
802.11n HT20	NA	5320	Chain1	14.68	15.08
802.11n HT20	NA	5320	MIMO	17.62	18.02
802.11ac VHT20	NA	5260	Chain0	13.58	13.93
802.11ac VHT20	NA	5260	Chain1	13.61	14.01
802.11ac VHT20	NA	5260	MIMO	16.61	17.01
802.11ac VHT20	NA	5280	Chain0	14.17	14.52
802.11ac VHT20	NA	5280	Chain1	13.66	14.06
802.11ac VHT20	NA	5280	MIMO	16.93	17.33
802.11ac VHT20	NA	5320	Chain0	14.56	14.91
802.11ac VHT20	NA	5320	Chain1	13.92	14.32
802.11ac VHT20	NA	5320	MIMO	17.26	17.66
802.11n HT40	NA	5270	Chain0	13.18	13.53
802.11n HT40	NA	5270	Chain1	13.42	13.82
802.11n HT40	NA	5270	MIMO	16.31	16.71
802.11n HT40	NA	5310	Chain0	13.39	13.74
802.11n HT40	NA	5310	Chain1	13.79	14.19
802.11n HT40	NA	5310	MIMO	16.60	17.00
802.11ac VHT40	NA	5270	Chain0	13.13	13.48
802.11ac VHT40	NA	5270	Chain1	12.43	12.83
802.11ac VHT40	NA	5270	MIMO	15.80	16.20
802.11ac VHT40	NA	5310	Chain0	13.34	13.69
802.11ac VHT40	NA	5310	Chain1	12.81	13.21
802.11ac VHT40	NA	5310	MIMO	16.09	16.49
802.11ac VHT80	NA	5290	Chain0	11.75	12.10
802.11ac VHT80	NA	5290	Chain1	12.08	12.48
802.11ac VHT80	NA	5290	MIMO	14.93	15.33

### Emission Bandwidth

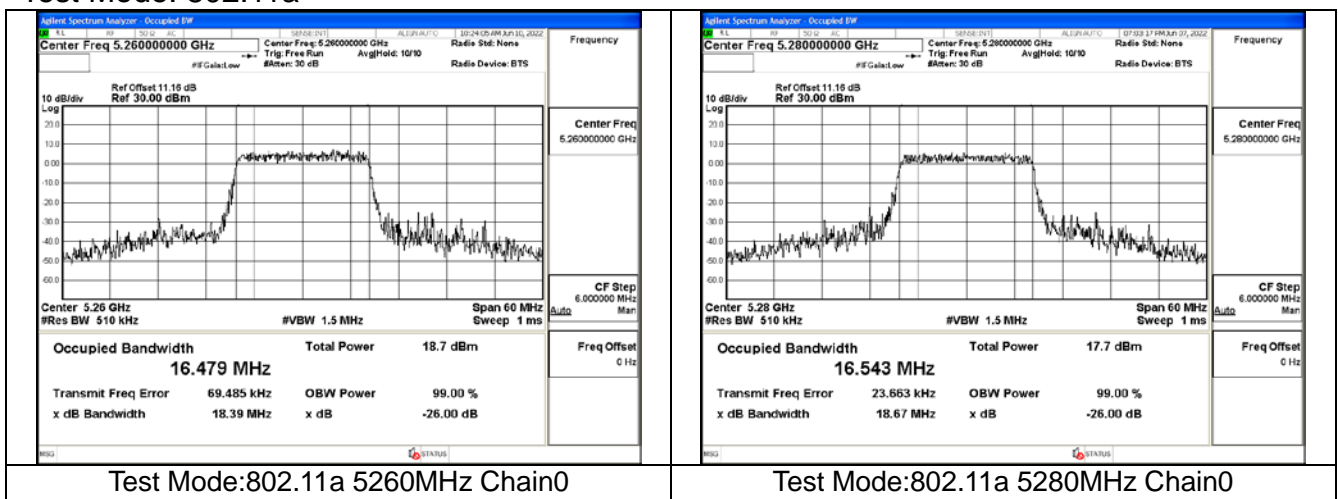
Offset 11.16dB = Attenuator + Temporary antenna connector loss + Cable loss

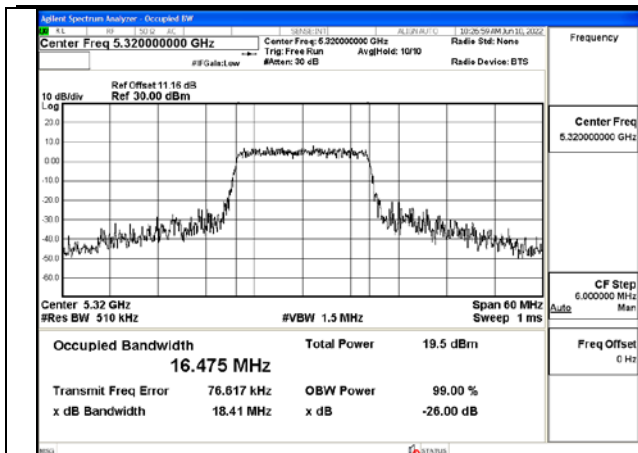
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.570	Channel No.574	Channel No.582
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	18.39	18.67	18.41
802.11a	Chain1	18.78	18.55	18.68
802.11n HT20	Chain0	19.51	19.58	19.15
802.11n HT20	Chain1	19.18	19.29	19.57
802.11ac VHT20	Chain0	21.58	19.92	22.47
802.11ac VHT20	Chain1	19.51	19.64	19.75

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	40.43	---	40.76
802.11n HT40	Chain1	42.36	---	40.53
802.11ac VHT40	Chain0	41.10	---	45.97
802.11ac VHT40	Chain1	40.48	---	41.39

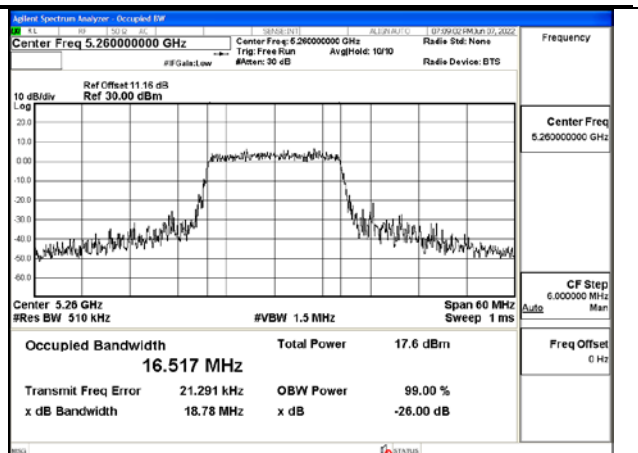
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.576	---	---
		5290MHz	---	---
802.11ac VHT80	Chain0	89.92	---	---
802.11ac VHT80	Chain1	80.24	---	---

Test Mode: 802.11a

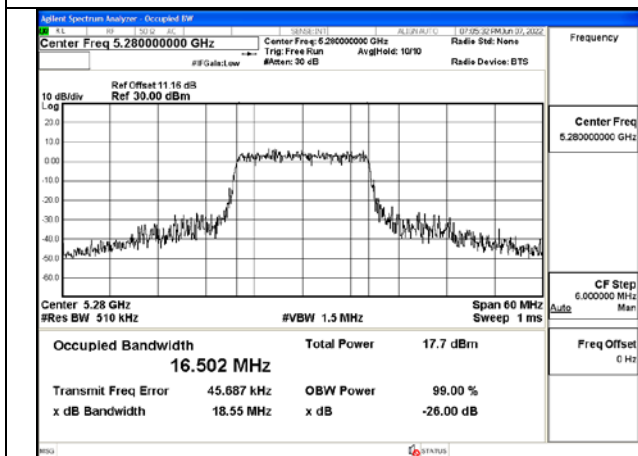




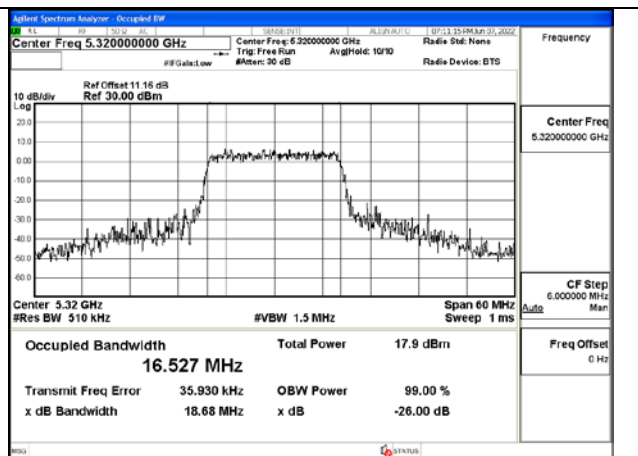
Test Mode:802.11a 5320MHz Chain0



Test Mode:802.11a 5260MHz Chain1

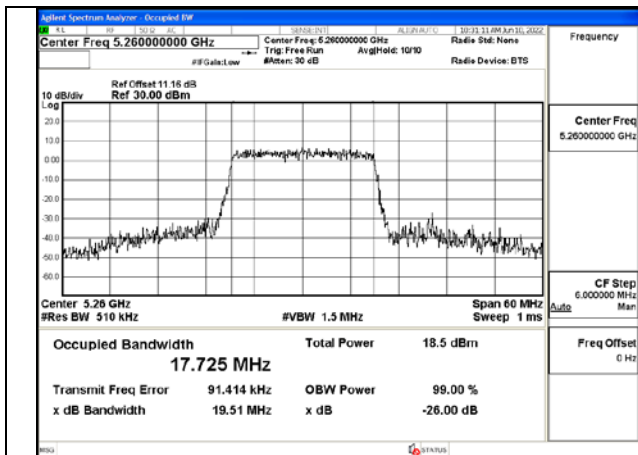


Test Mode:802.11a 5280MHz Chain1

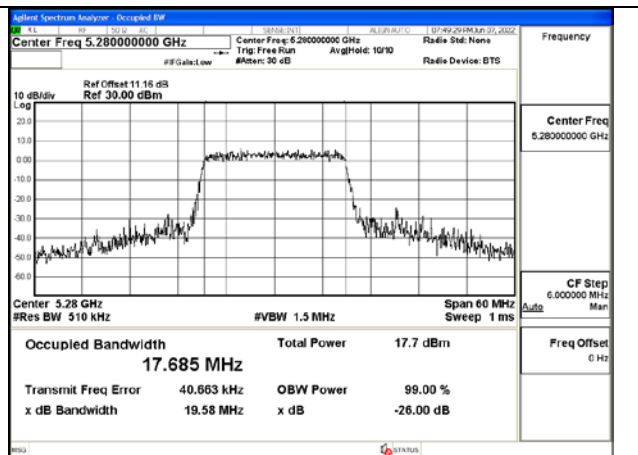


Test Mode:802.11a 5320MHz Chain1

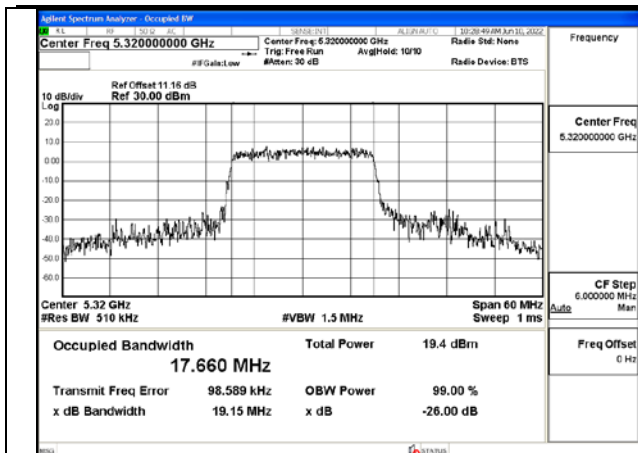
Test Mode: 802.11n HT20



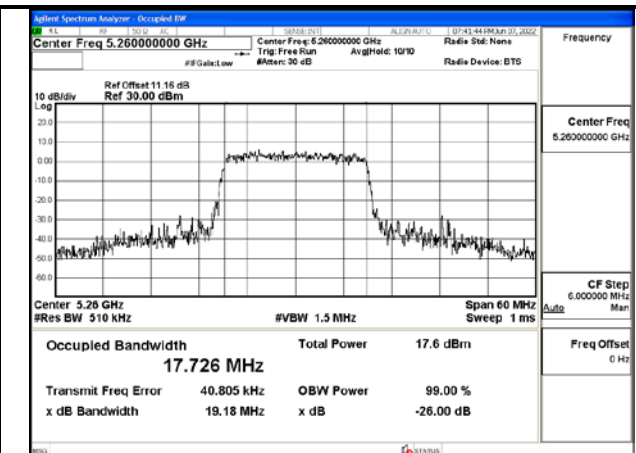
Test Mode:802.11n HT20 5260MHz Chain0



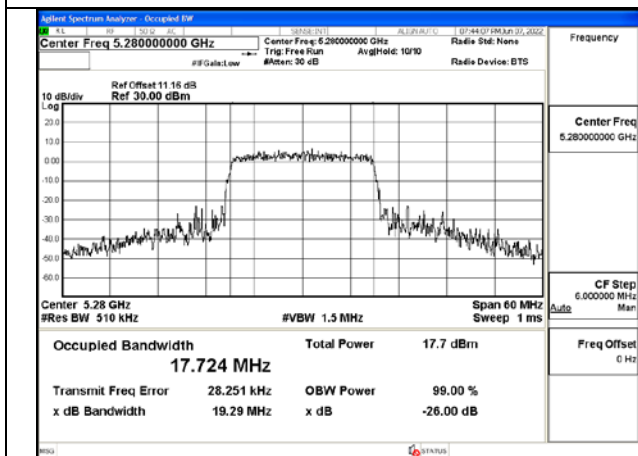
Test Mode:802.11n HT20 5280MHz Chain0



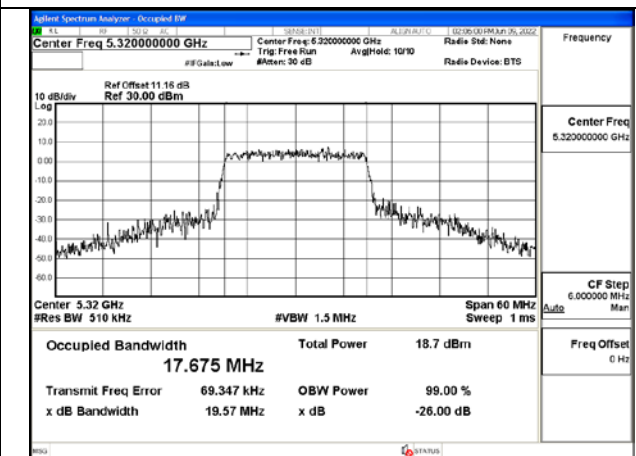
Test Mode:802.11n HT20 5320MHz Chain0



Test Mode:802.11n HT20 5260MHz Chain1

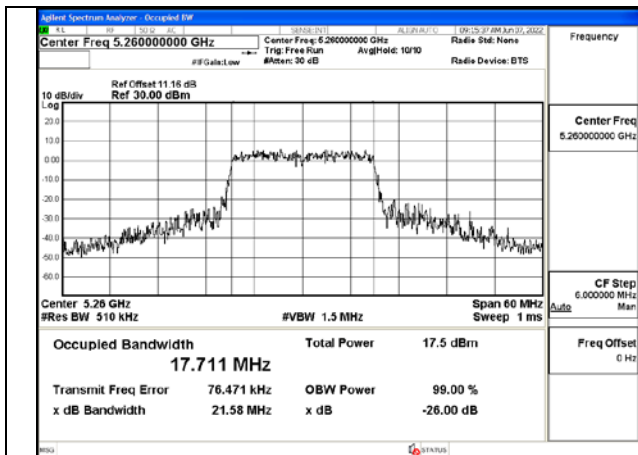


Test Mode:802.11n HT20 5280MHz Chain1

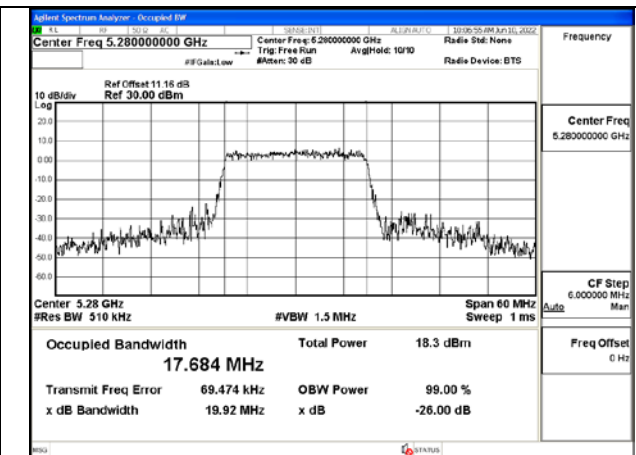


Test Mode:802.11n HT20 5320MHz Chain1

Test Mode: 802.11ac VHT20



Test Mode:802.11ac VHT20 5260MHz Chain0



Test Mode:802.11ac VHT20 5280MHz Chain0