

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Antenna	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	Chain0	5745	94.70%	0.24	Fig.1
802.11a	Chain1	5745	95.00%	0.22	Fig.2
802.11n HT20	Chain0	5745	94.61%	0.24	Fig.3
802.11n HT20	Chain1	5745	94.24%	0.26	Fig.4
802.11ac VHT20	Chain0	5745	94.59%	0.24	Fig.5
802.11ac VHT20	Chain1	5745	94.30%	0.26	Fig.6
802.11n HT40	Chain0	5755	90.35%	0.44	Fig.7
802.11n HT40	Chain1	5755	90.70%	0.42	Fig.8
802.11ac VHT40	Chain0	5755	90.65%	0.43	Fig.9
802.11ac VHT40	Chain1	5755	90.61%	0.43	Fig.10
802.11ac VHT80	Chain0	5775	84.92%	0.71	Fig.11
802.11ac VHT80	Chain1	5775	84.88%	0.71	Fig.12

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

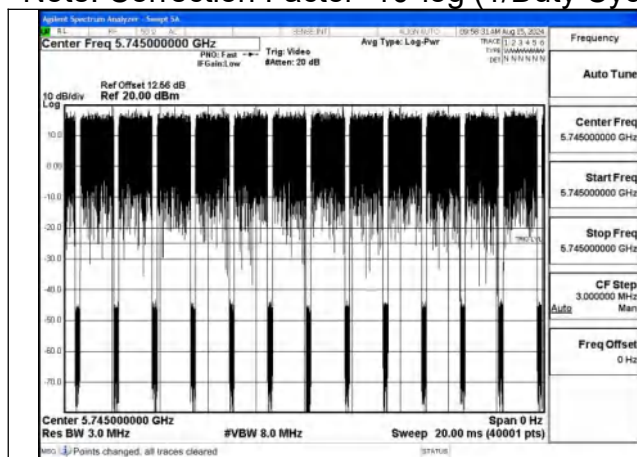


Fig.1

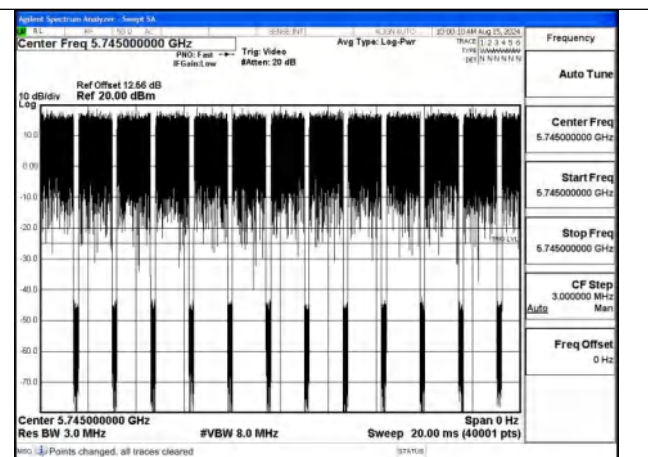


Fig.2

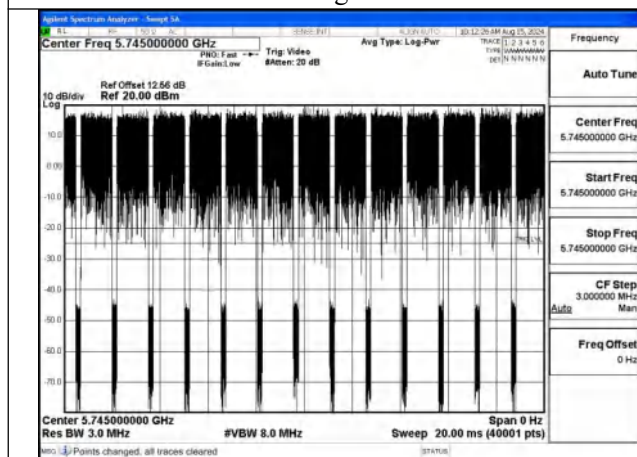


Fig.3

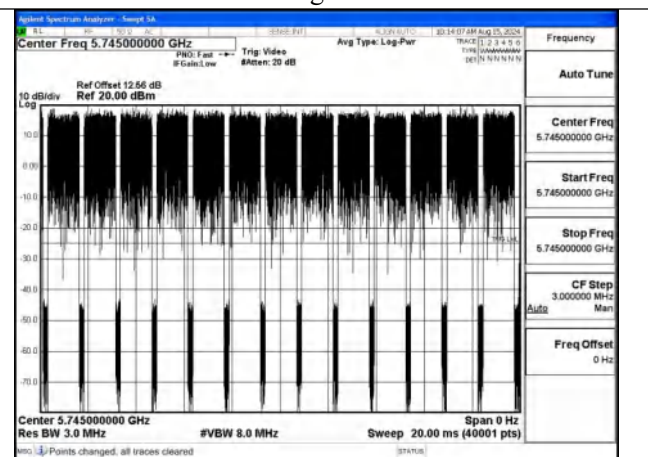


Fig.4

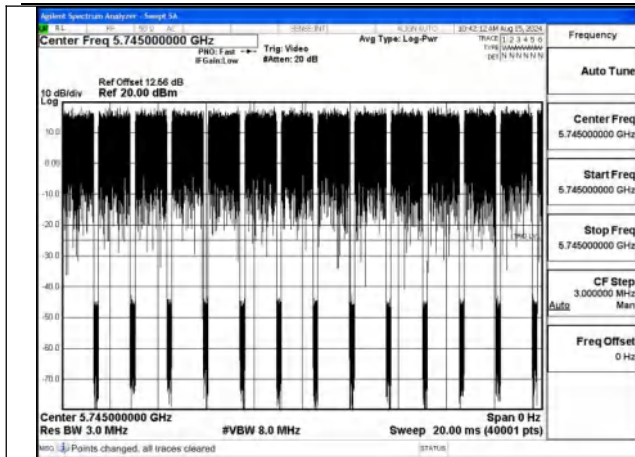


Fig.5

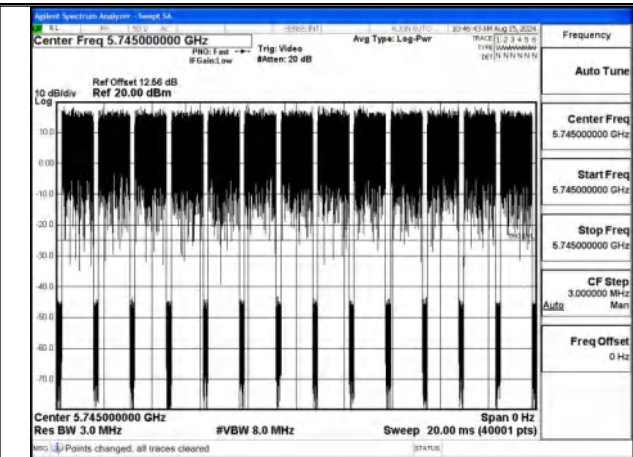


Fig.6

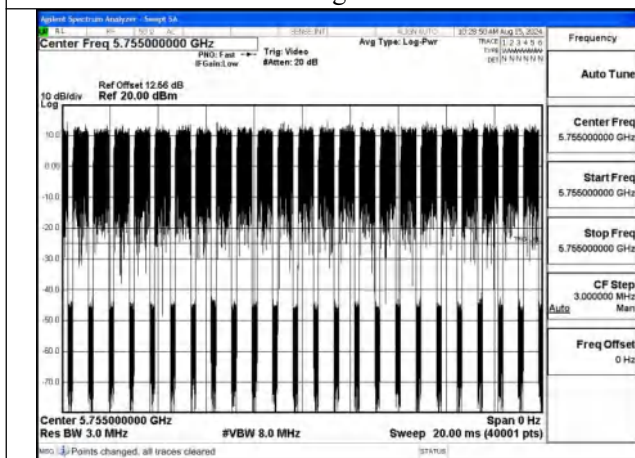


Fig.7

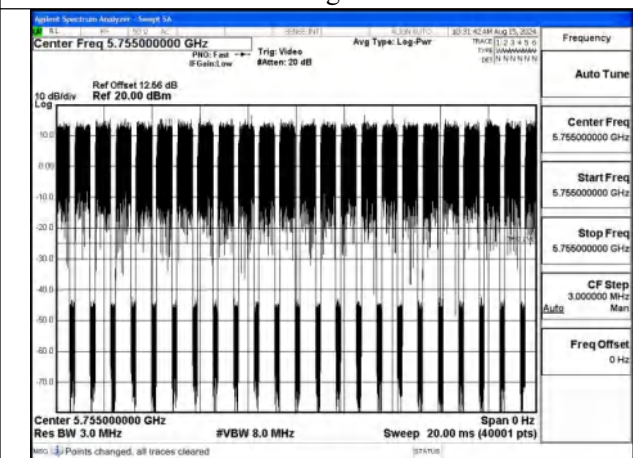


Fig.8

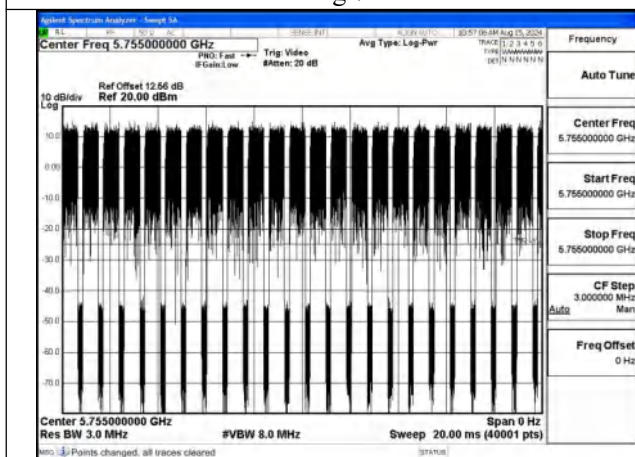


Fig.9

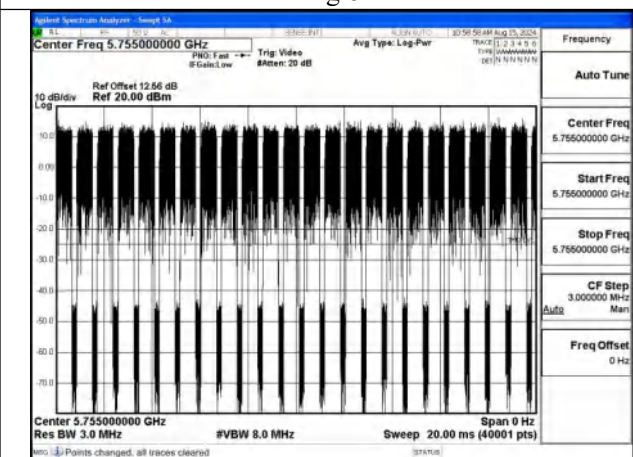


Fig.10

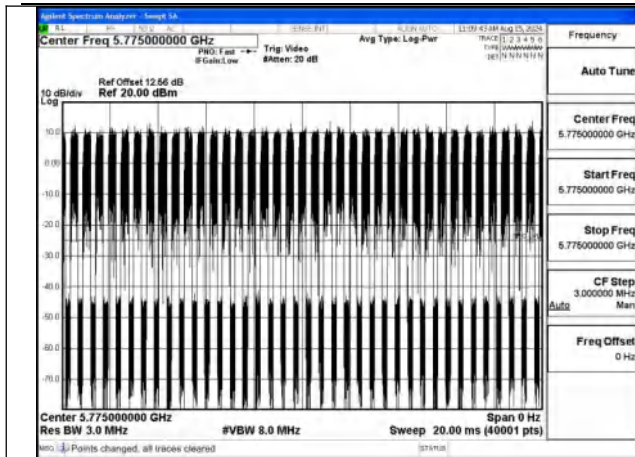


Fig.11

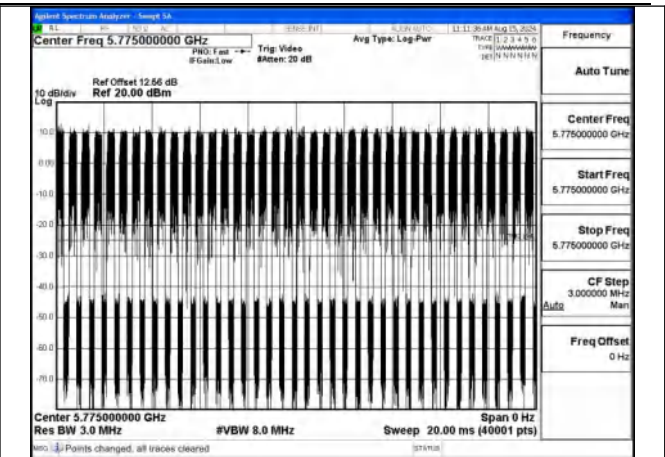


Fig.12

Output Power

Mode	Tones/ RUIndex	Frequency (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5745	Chain0	15.25	13.40
802.11a	NA	5745	Chain1	15.20	11.20
802.11a	NA	5785	Chain0	15.02	13.17
802.11a	NA	5785	Chain1	14.96	10.96
802.11a	NA	5825	Chain0	14.60	12.75
802.11a	NA	5825	Chain1	14.55	10.55
802.11n HT20	NA	5745	Chain0	15.66	13.81
802.11n HT20	NA	5745	Chain1	15.63	11.63
802.11n HT20	NA	5745	MIMO	18.66	15.87
802.11n HT20	NA	5785	Chain0	13.94	12.09
802.11n HT20	NA	5785	Chain1	13.93	9.93
802.11n HT20	NA	5785	MIMO	16.95	14.16
802.11n HT20	NA	5825	Chain0	13.48	11.63
802.11n HT20	NA	5825	Chain1	13.46	9.46
802.11n HT20	NA	5825	MIMO	16.48	13.69
802.11ac VHT20	NA	5745	Chain0	15.01	13.16
802.11ac VHT20	NA	5745	Chain1	15.00	11.00
802.11ac VHT20	NA	5745	MIMO	18.02	15.23
802.11ac VHT20	NA	5785	Chain0	14.86	13.01
802.11ac VHT20	NA	5785	Chain1	14.81	10.81
802.11ac VHT20	NA	5785	MIMO	17.85	15.06
802.11ac VHT20	NA	5825	Chain0	14.36	12.51
802.11ac VHT20	NA	5825	Chain1	14.35	10.35
802.11ac VHT20	NA	5825	MIMO	17.37	14.58
802.11n HT40	NA	5755	Chain0	13.64	11.79
802.11n HT40	NA	5755	Chain1	14.95	10.95
802.11n HT40	NA	5755	MIMO	17.35	14.56
802.11n HT40	NA	5795	Chain0	14.29	12.44
802.11n HT40	NA	5795	Chain1	14.18	10.18
802.11n HT40	NA	5795	MIMO	17.25	14.46
802.11ac VHT40	NA	5755	Chain0	14.53	12.68
802.11ac VHT40	NA	5755	Chain1	14.49	10.49
802.11ac VHT40	NA	5755	MIMO	17.52	14.73
802.11ac VHT40	NA	5795	Chain0	14.13	12.28
802.11ac VHT40	NA	5795	Chain1	14.12	10.12
802.11ac VHT40	NA	5795	MIMO	17.14	14.35
802.11ac VHT80	NA	5775	Chain0	14.06	12.21
802.11ac VHT80	NA	5775	Chain1	13.97	9.97
802.11ac VHT80	NA	5775	MIMO	17.03	14.24

Emission Bandwidth

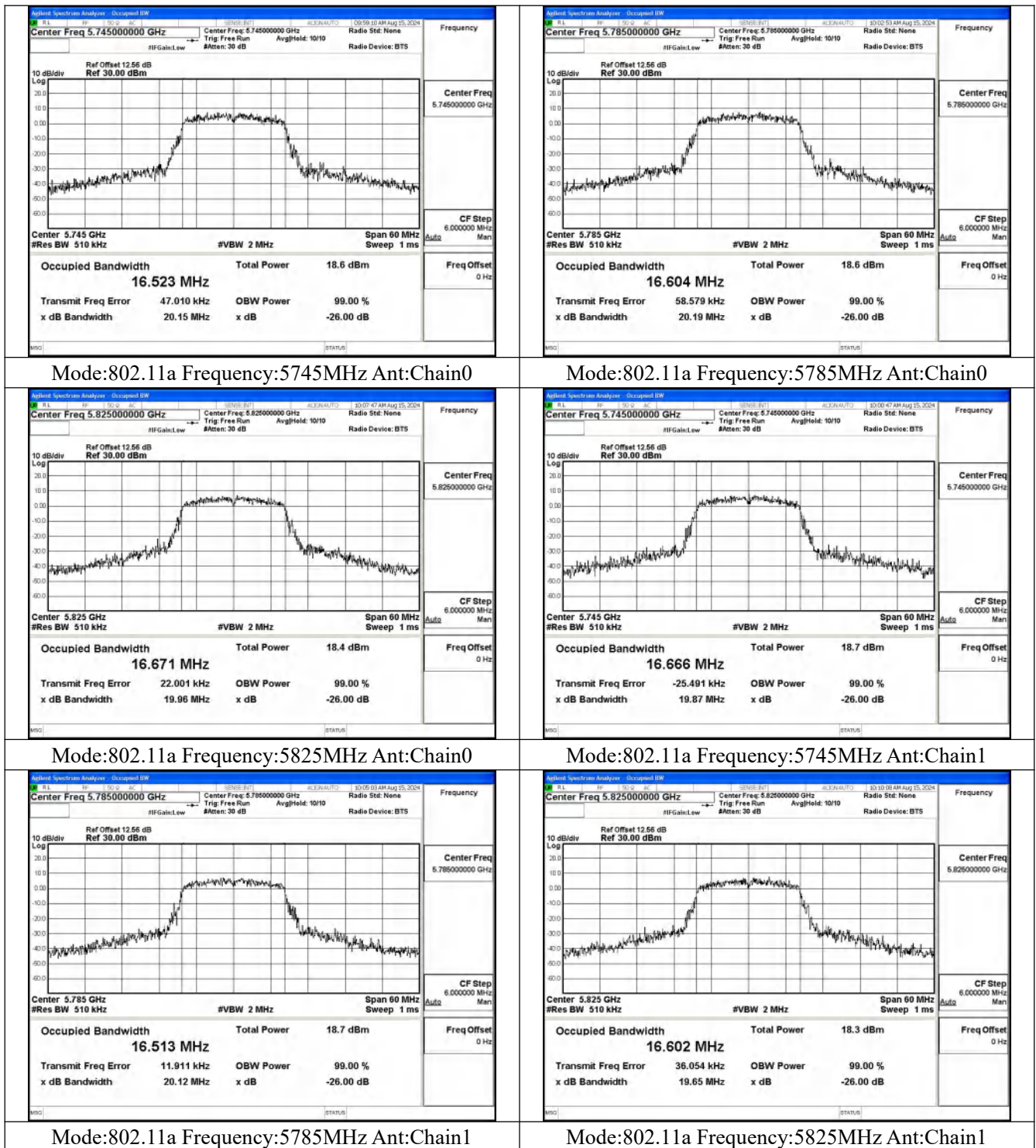
Offset 12.56dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5745MHz	5785MHz	5825MHz
802.11a	Chain0	20.15	20.19	19.96
802.11a	Chain1	19.87	20.12	19.65
802.11n HT20	Chain0	20.09	20.15	20.15
802.11n HT20	Chain1	20.09	20.07	19.83
802.11ac VHT20	Chain0	20.24	20.04	20.02
802.11ac VHT20	Chain1	20.51	20.20	20.52

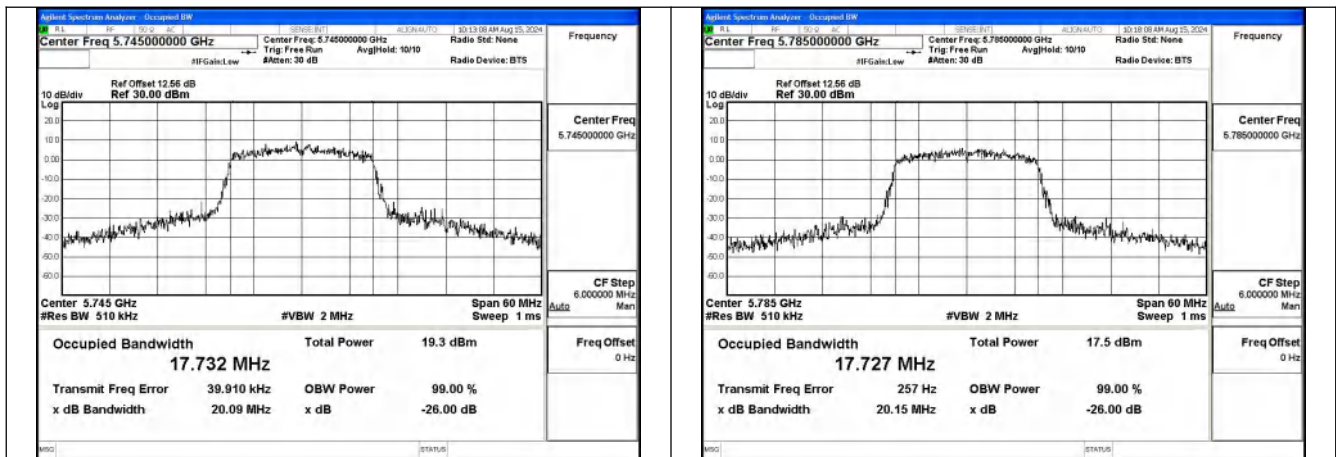
Test Mode	Antenna	26dB Bandwidth (MHz)		
		5755MHz	---	5795MHz
802.11n HT40	Chain0	40.42	---	39.88
802.11n HT40	Chain1	40.44	---	40.85
802.11ac VHT40	Chain0	40.23	---	39.96
802.11ac VHT40	Chain1	40.87	---	40.31

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5775MHz	---	---
802.11ac VHT80	Chain0	80.52	---	---
802.11ac VHT80	Chain1	81.39	---	---

Test Mode: 802.11a

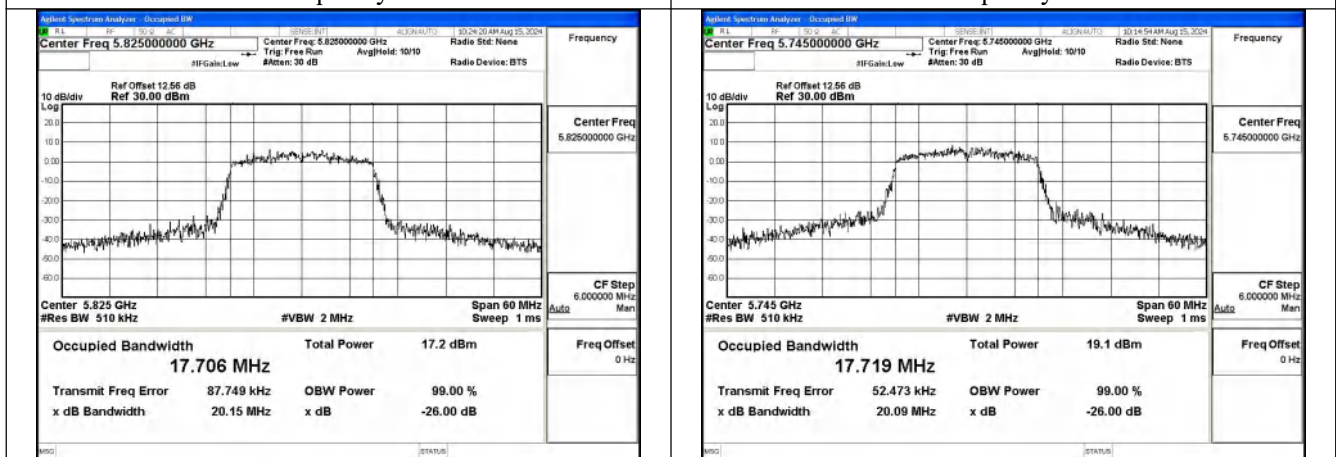


Test Mode: 802.11n HT20



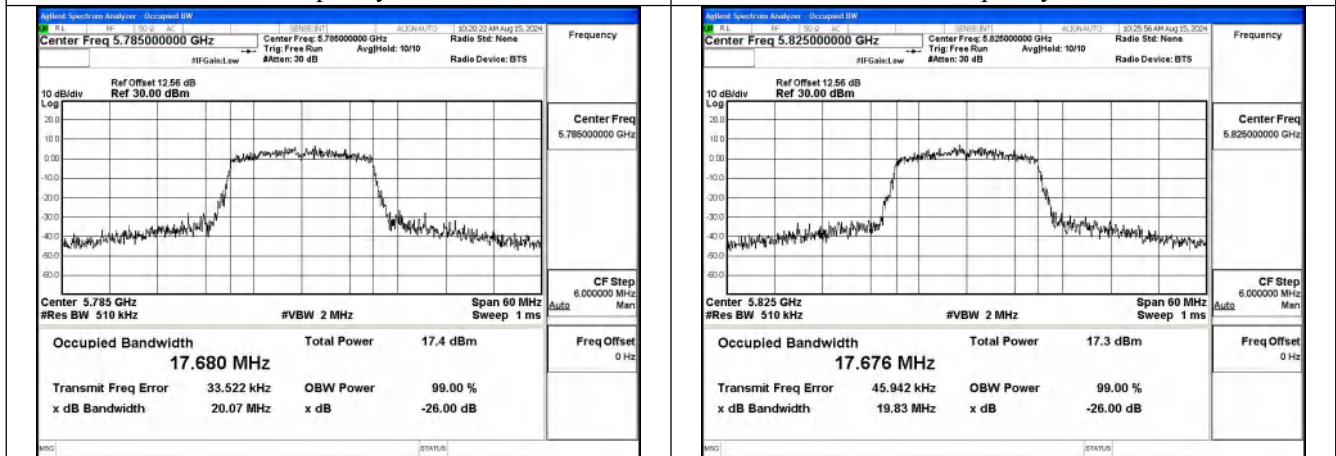
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5785MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5825MHz Ant:Chain0

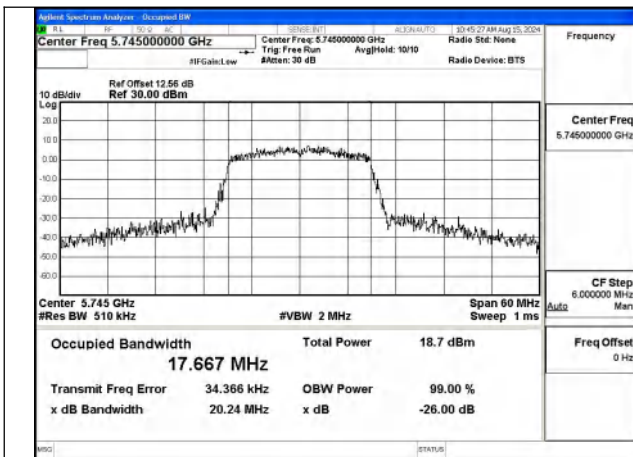
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain1



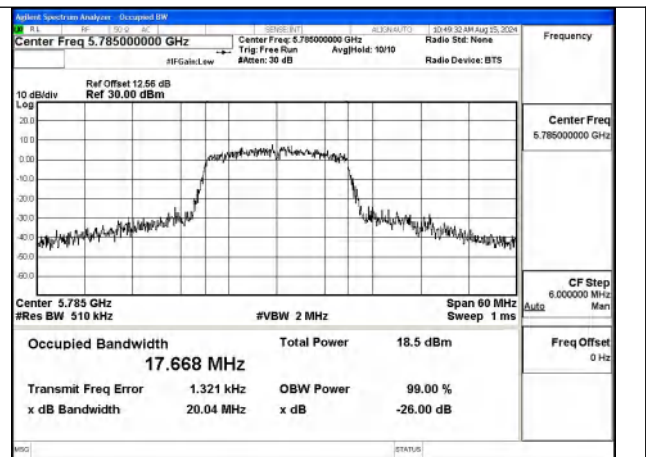
Mode:802.11n HT20 Frequency:5785MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5825MHz Ant:Chain1

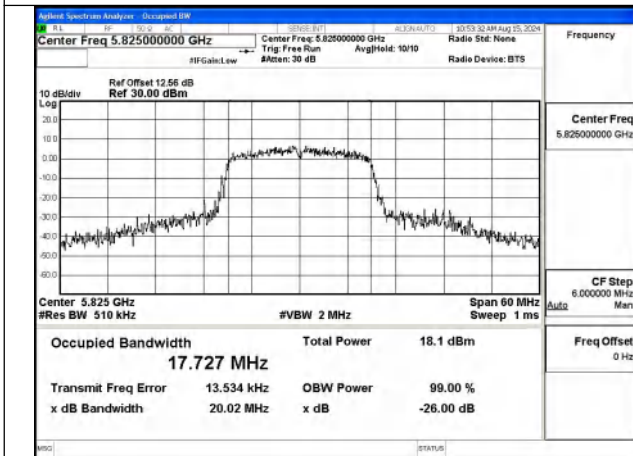
Test Mode: 802.11ac VHT20



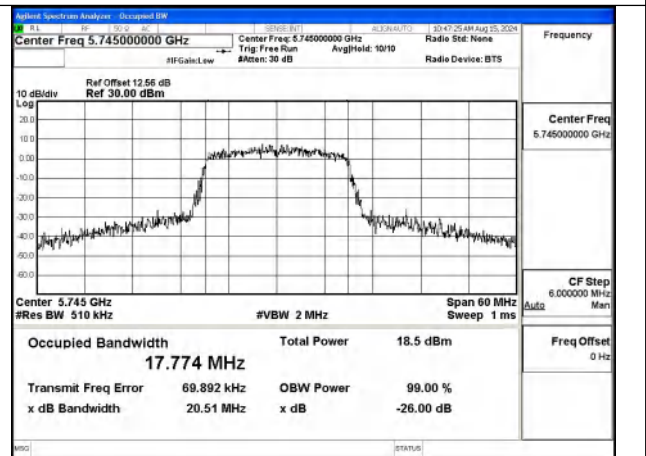
Mode:802.11ac VHT20 Frequency:5745MHz
Ant:Chain0



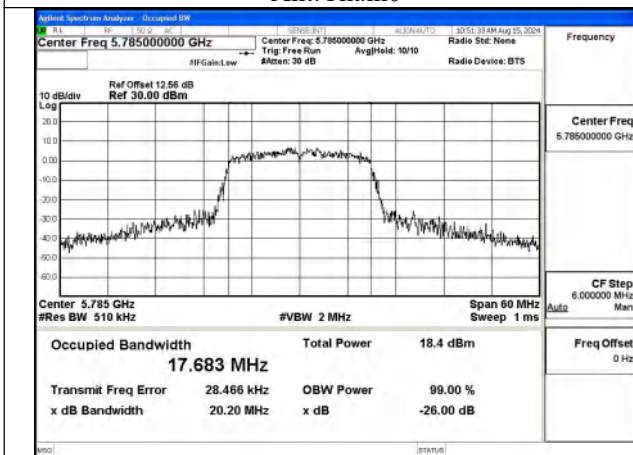
Mode:802.11ac VHT20 Frequency:5785MHz
Ant:Chain0



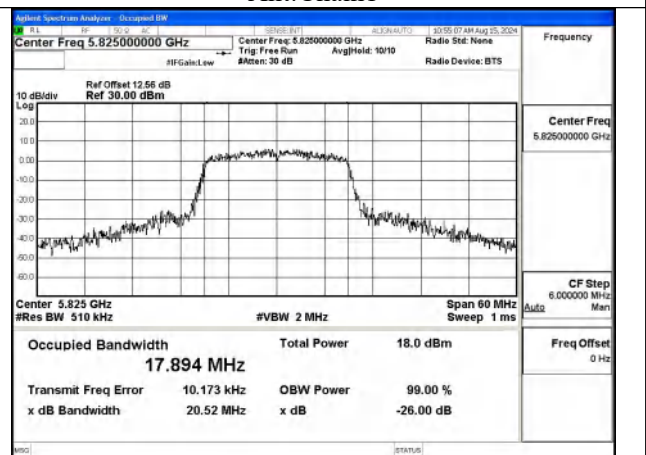
Mode:802.11ac VHT20 Frequency:5825MHz
Ant:Chain0



Mode:802.11ac VHT20 Frequency:5745MHz
Ant:Chain1

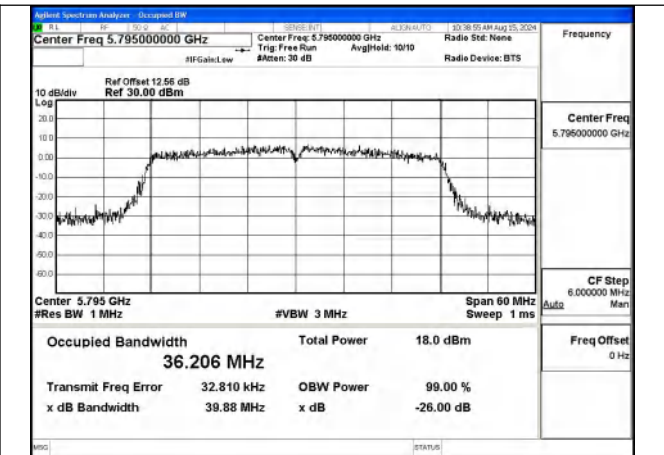
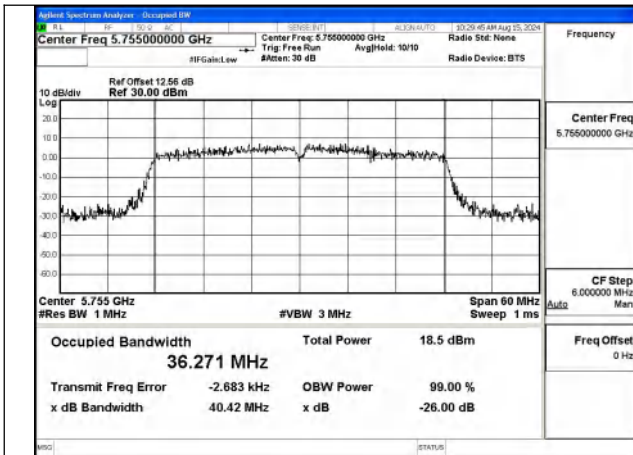


Mode:802.11ac VHT20 Frequency:5785MHz
Ant:Chain1

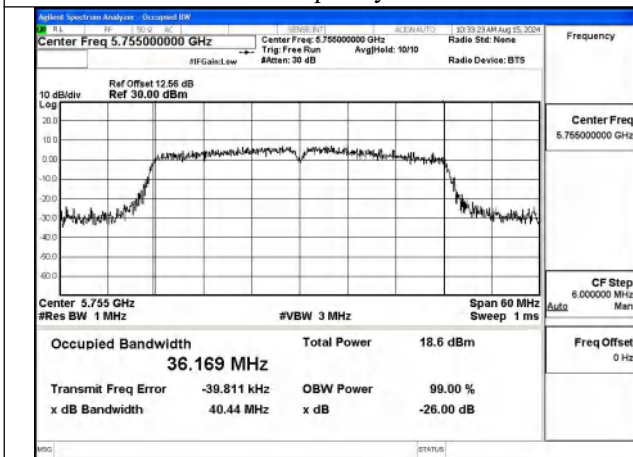


Mode:802.11ac VHT20 Frequency:5825MHz
Ant:Chain1

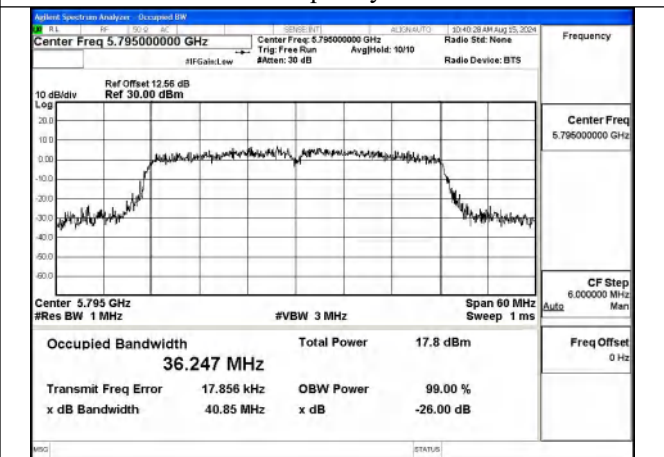
Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:5755MHz Ant:Chain0



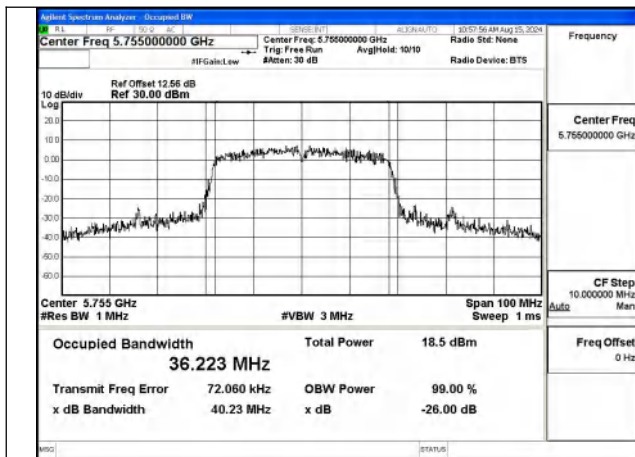
Mode:802.11n HT40 Frequency:5795MHz Ant:Chain0



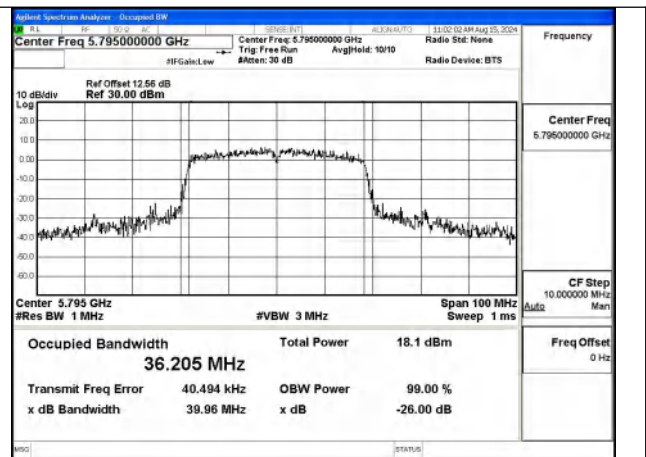
Mode:802.11n HT40 Frequency:5755MHz Ant:Chain1

Mode:802.11n HT40 Frequency:5795MHz Ant:Chain1

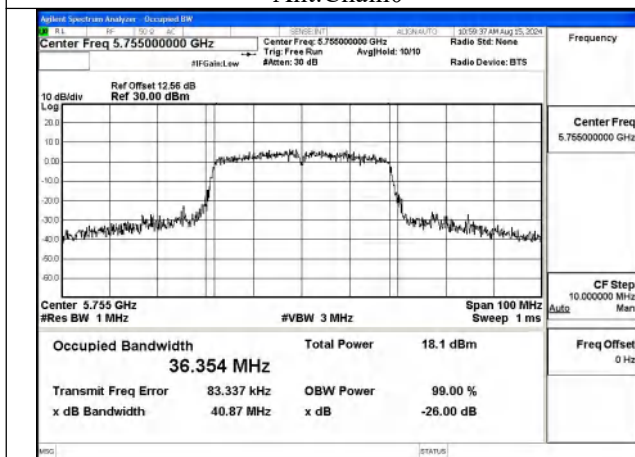
Test Mode: 802.11ac VHT40



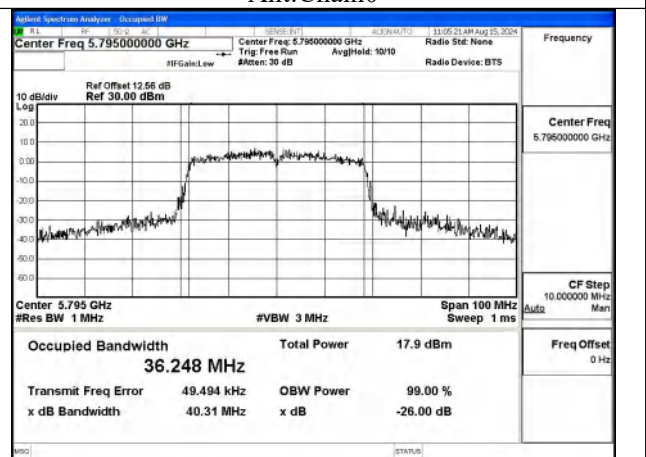
Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain0

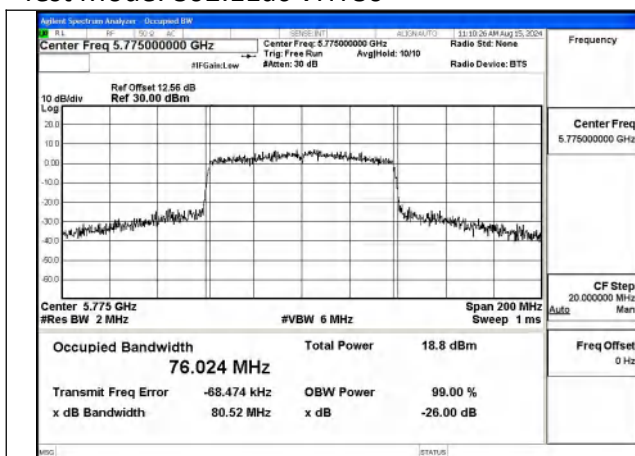


Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain1

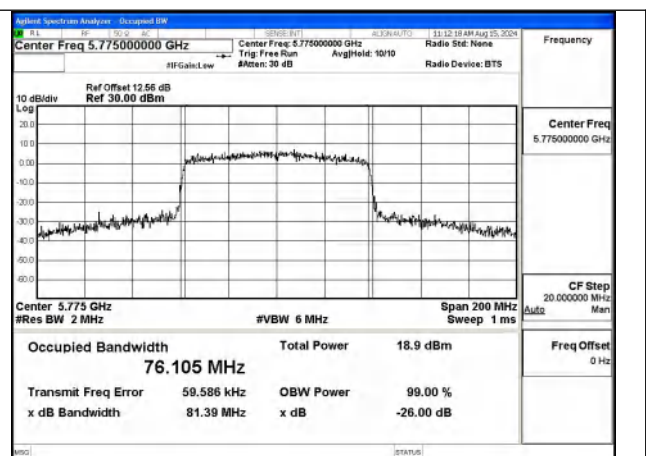


Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain1

Occupied Bandwidth

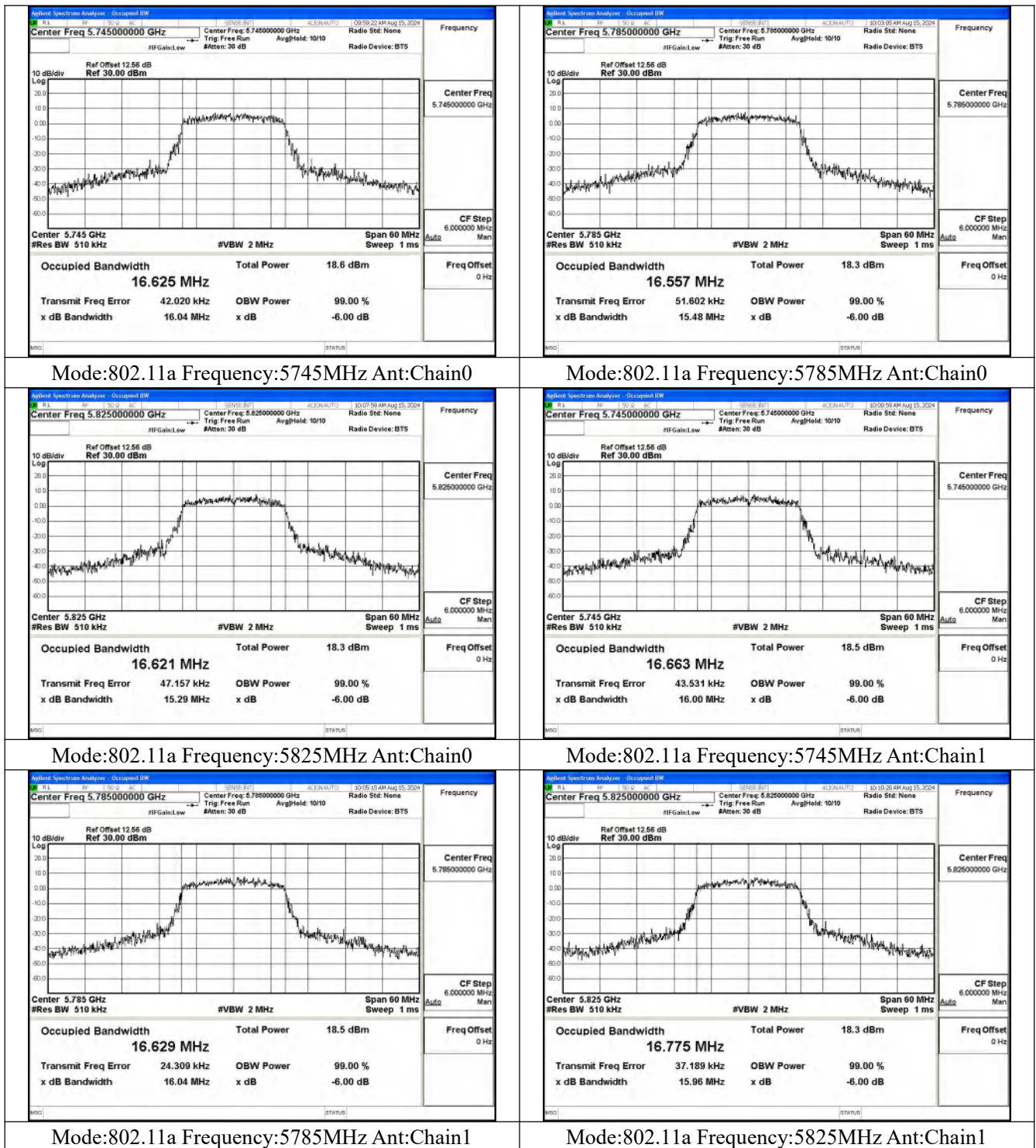
Offset 12.56dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5745MHz	5785MHz	5825MHz
802.11a	Chain0	16.625	16.557	16.621
802.11a	Chain1	16.663	16.629	16.775
802.11n HT20	Chain0	17.704	17.667	17.626
802.11n HT20	Chain1	17.747	17.649	17.720
802.11ac VHT20	Chain0	17.623	17.669	17.668
802.11ac VHT20	Chain1	17.644	17.737	17.710

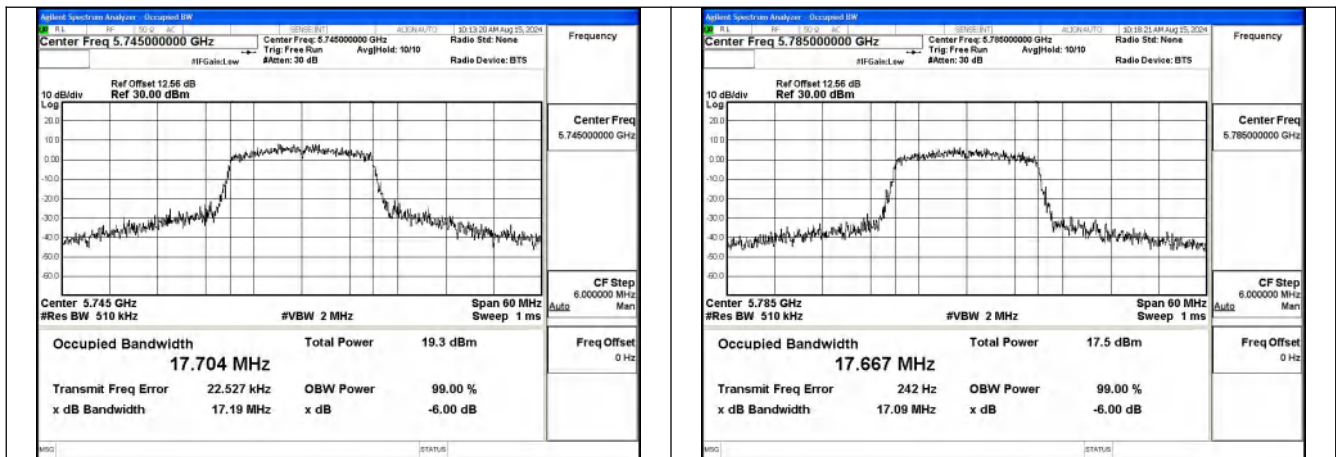
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5755MHz	---	5795MHz
802.11n HT40	Chain0	36.181	---	36.183
802.11n HT40	Chain1	36.070	---	36.302
802.11ac VHT40	Chain0	36.185	---	36.168
802.11ac VHT40	Chain1	36.263	---	36.306

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5775MHz	---	---
802.11ac VHT80	Chain0	75.827	---	---
802.11ac VHT80	Chain1	76.085	---	---

Test Mode: 802.11a

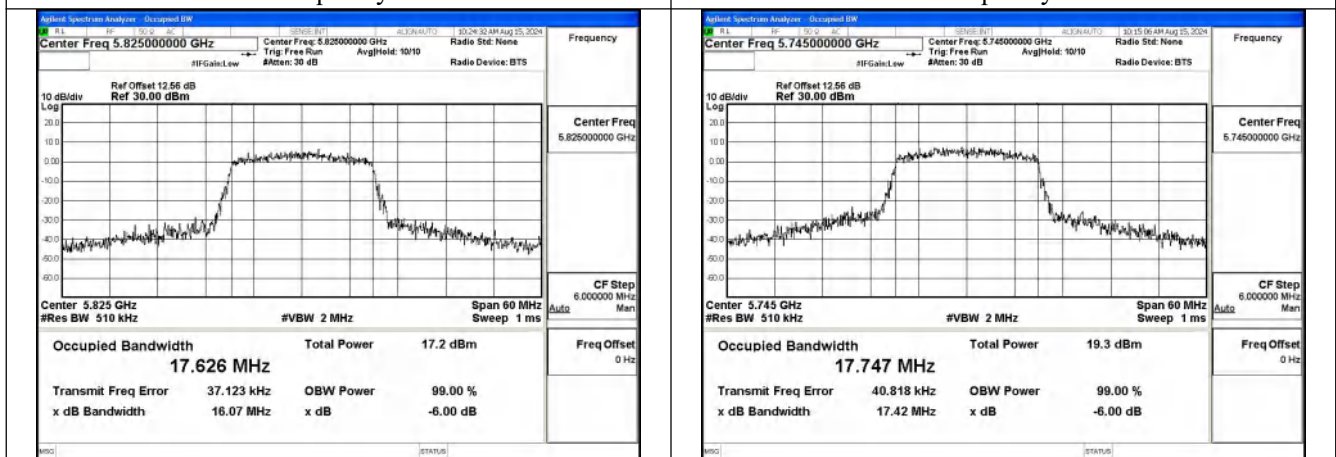


Test Mode: 802.11n HT20



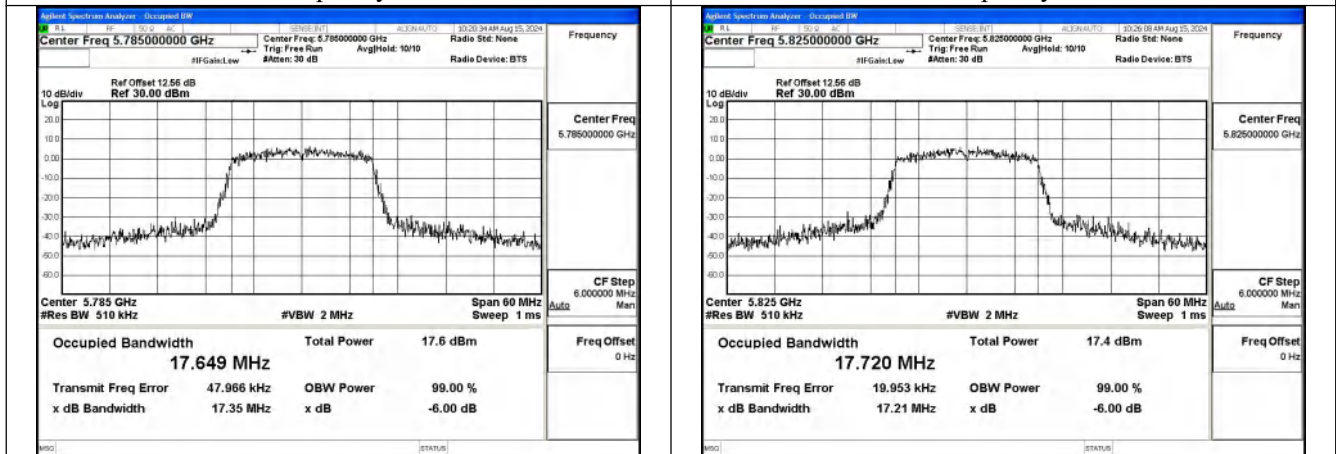
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5785MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5825MHz Ant:Chain0

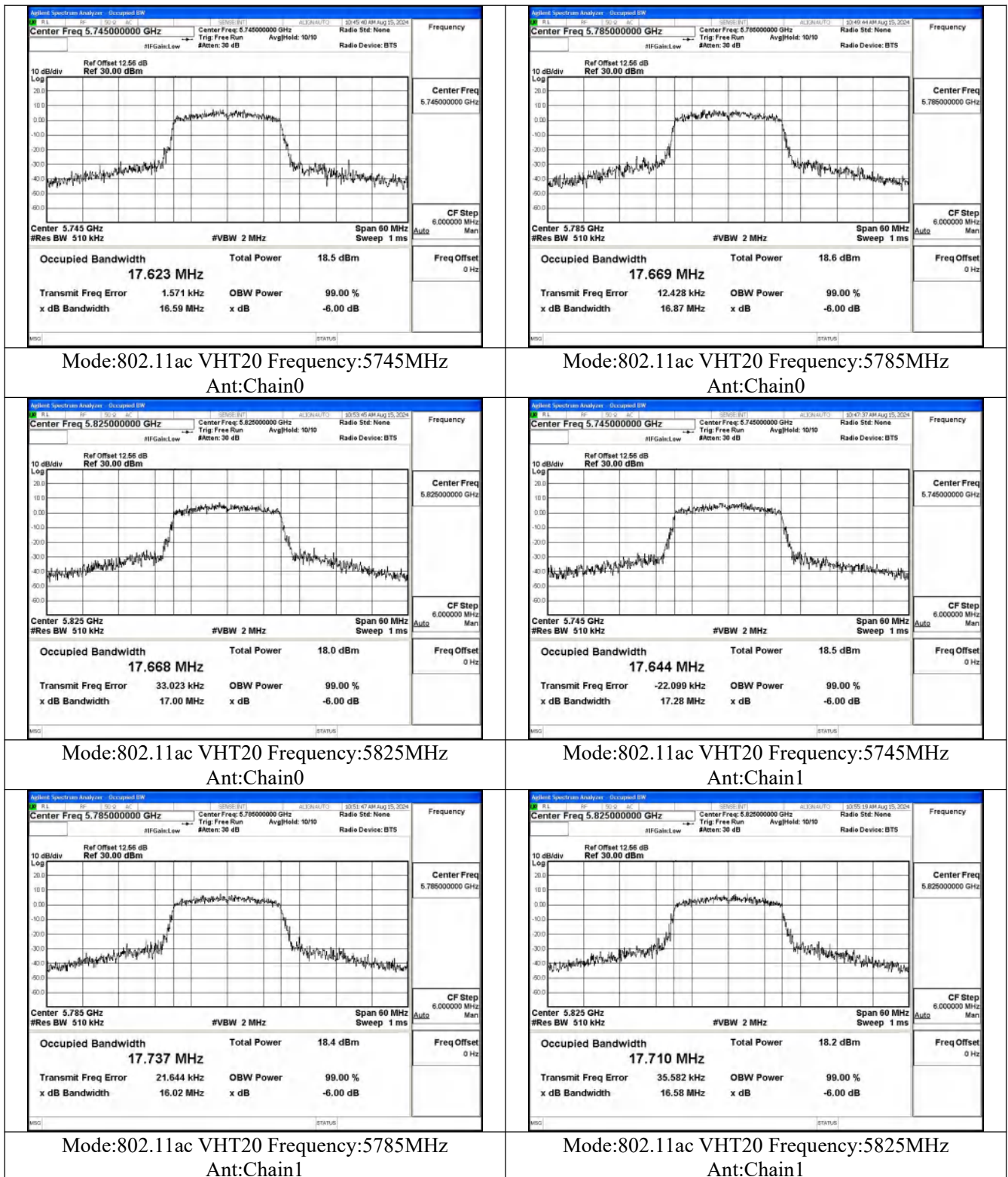
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain1



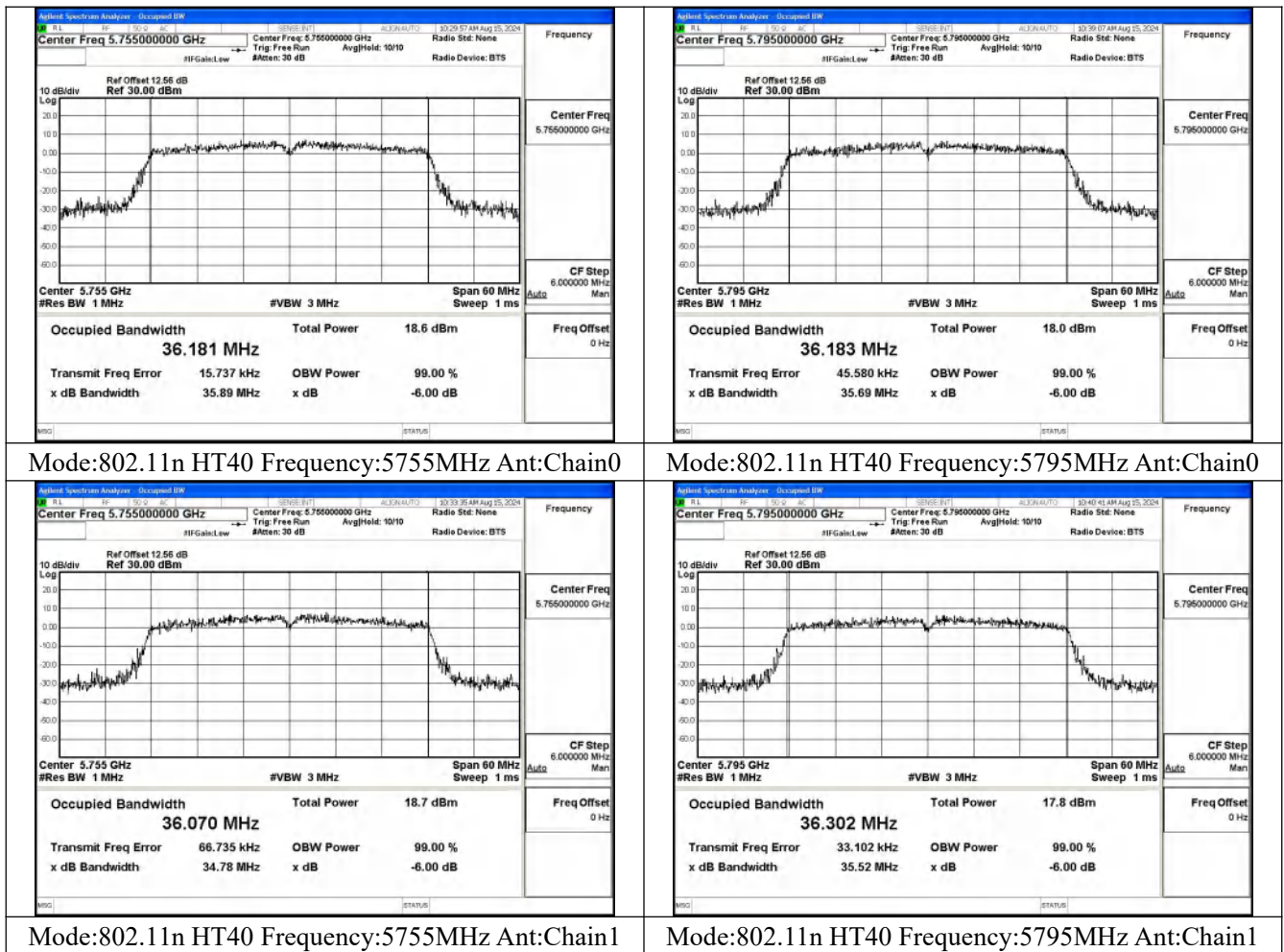
Mode:802.11n HT20 Frequency:5785MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5825MHz Ant:Chain1

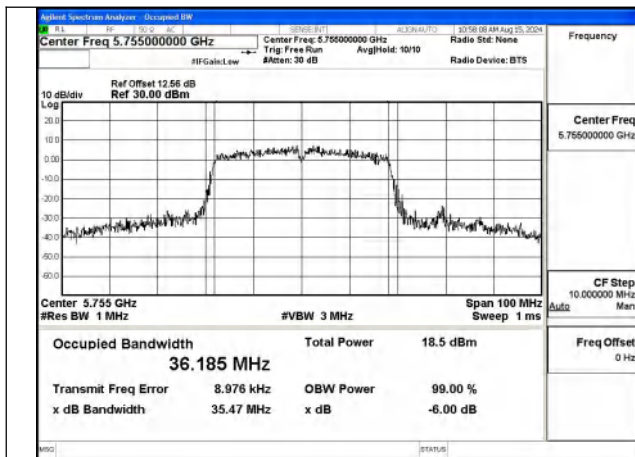
Test Mode: 802.11ac VHT20



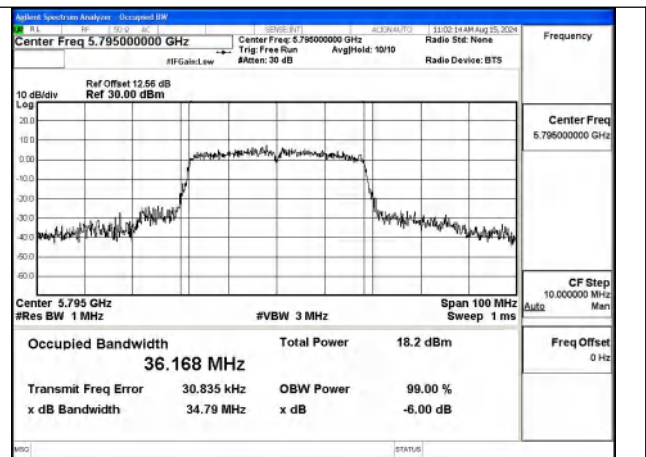
Test Mode: 802.11n HT40



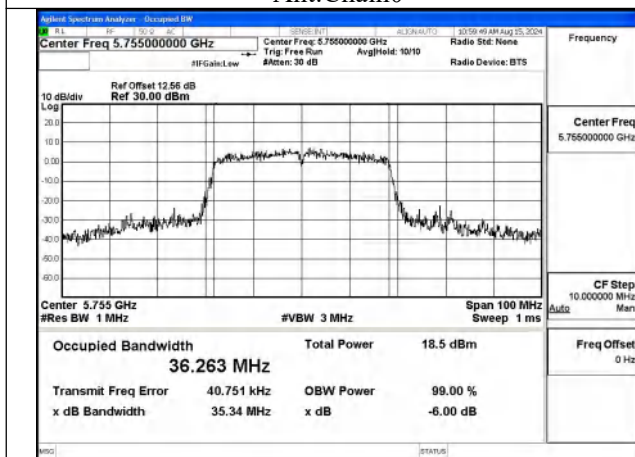
Test Mode: 802.11ac VHT40



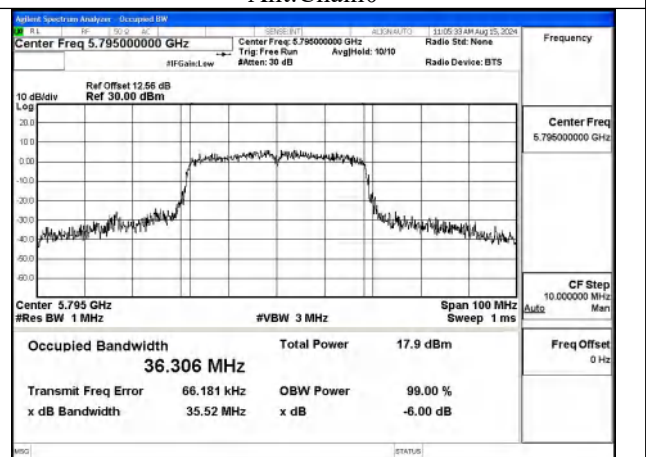
Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain0

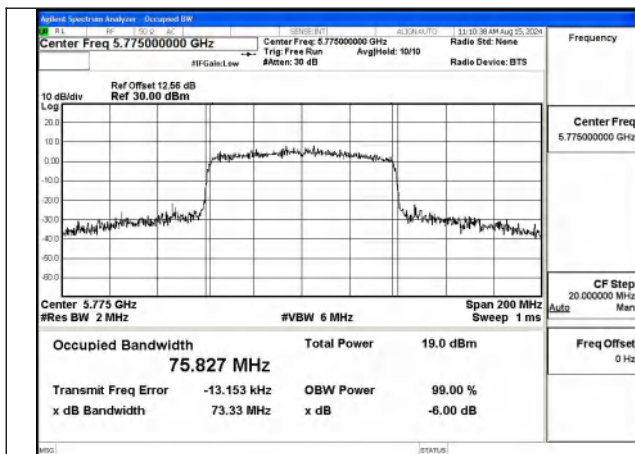


Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain1

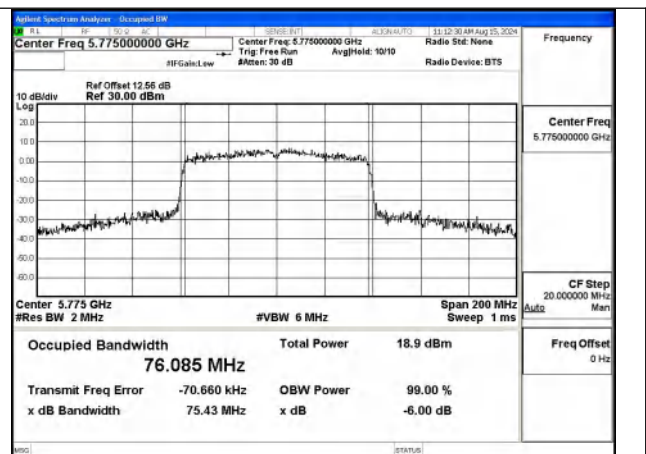


Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain1

6dB Bandwidth

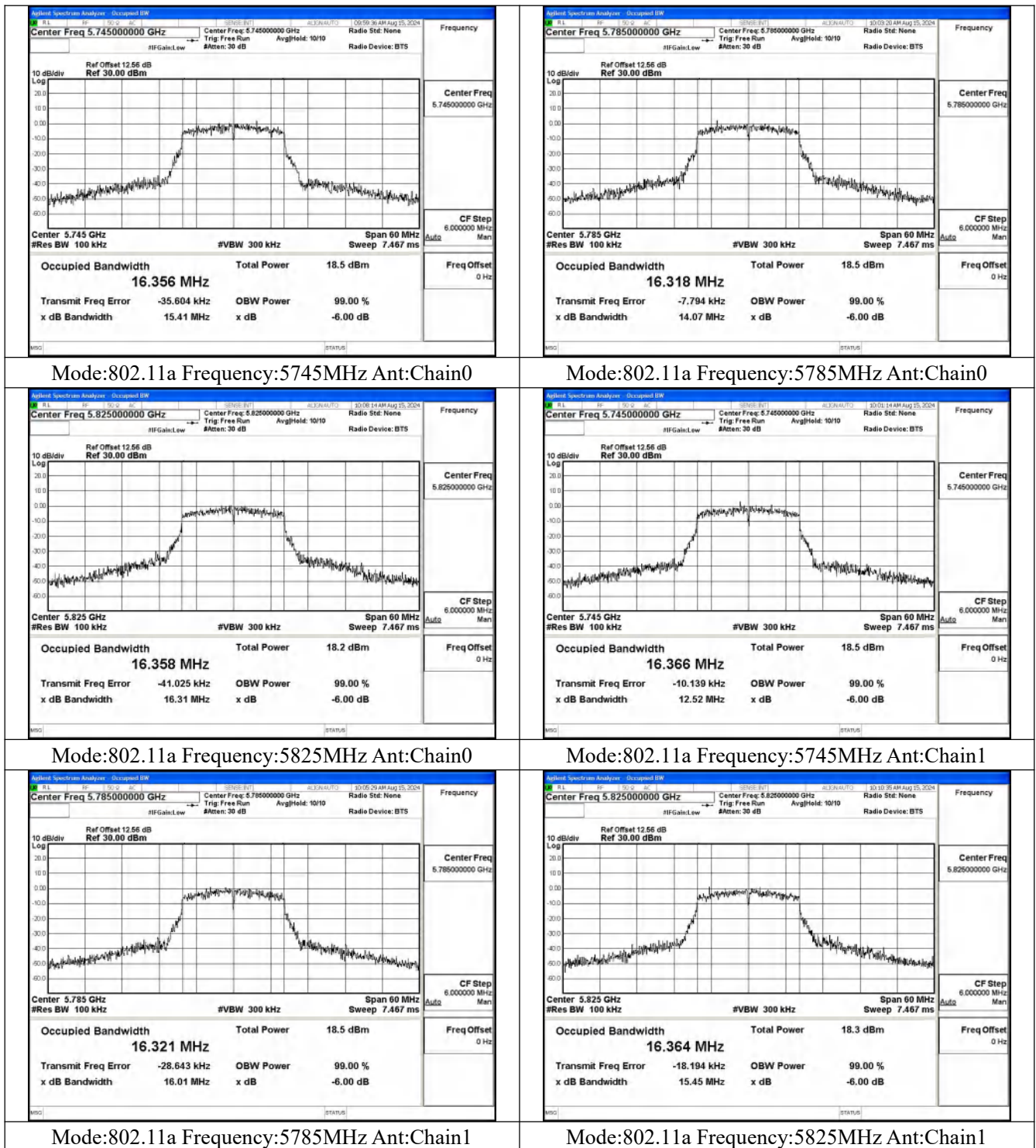
Offset 12.56dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	6dB Bandwidth (MHz)		
		5745MHz	5785MHz	5825MHz
802.11a	Chain0	15.41	14.07	16.31
802.11a	Chain1	12.52	16.01	15.45
802.11n HT20	Chain0	16.76	11.94	17.52
802.11n HT20	Chain1	17.29	14.36	16.40
802.11ac VHT20	Chain0	16.30	17.58	13.79
802.11ac VHT20	Chain1	14.02	13.81	17.54

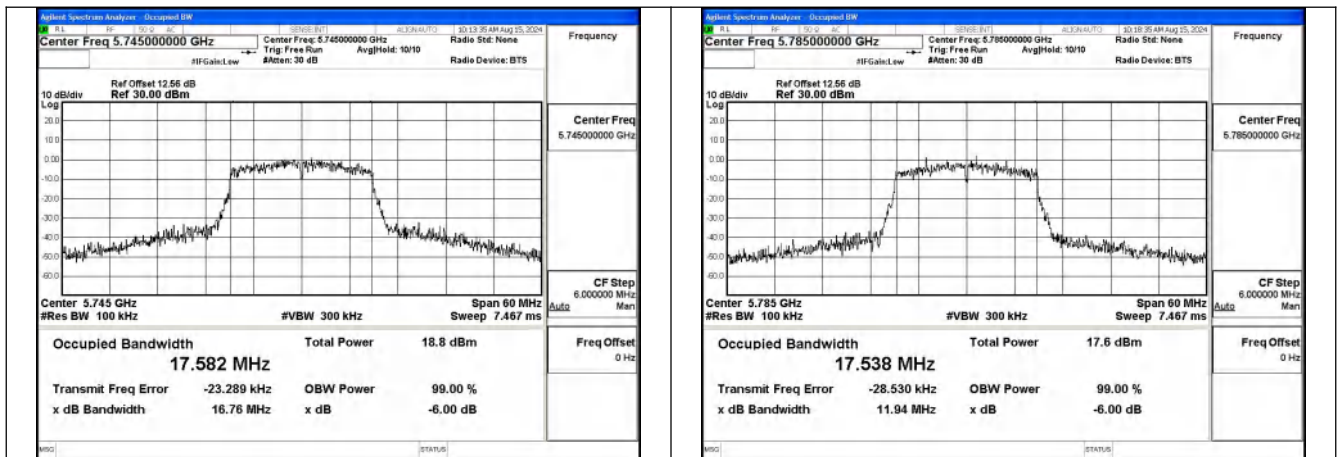
Test Mode	Antenna	6dB Bandwidth (MHz)		
		5755MHz	---	5795MHz
802.11n HT40	Chain0	35.64	---	31.23
802.11n HT40	Chain1	31.09	---	33.76
802.11ac VHT40	Chain0	28.20	---	31.30
802.11ac VHT40	Chain1	36.06	---	35.11

Test Mode	Antenna	6dB Bandwidth (MHz)		
		5775MHz	---	---
802.11ac VHT80	Chain0	73.81	---	---
802.11ac VHT80	Chain1	71.65	---	---

Test Mode: 802.11a

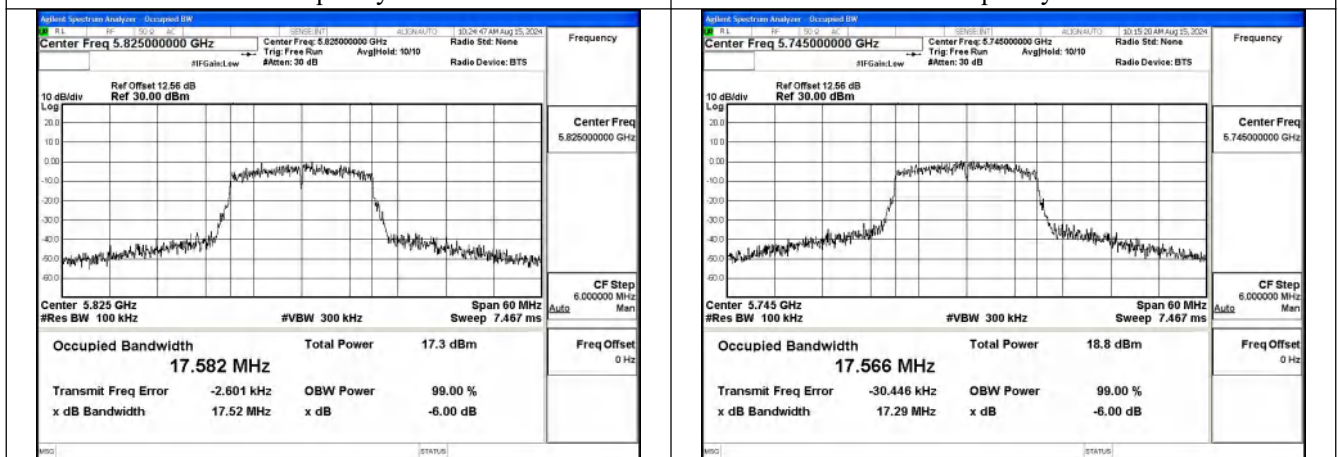


Test Mode: 802.11n HT20



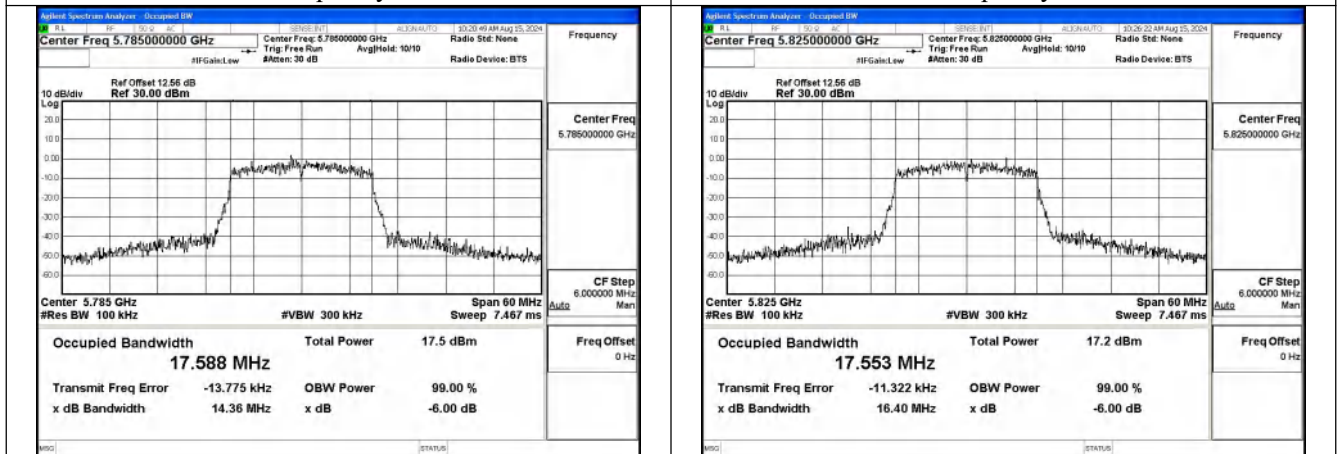
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain0

Mode:802.11n HT20 Frequency:5785MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5825MHz Ant:Chain0

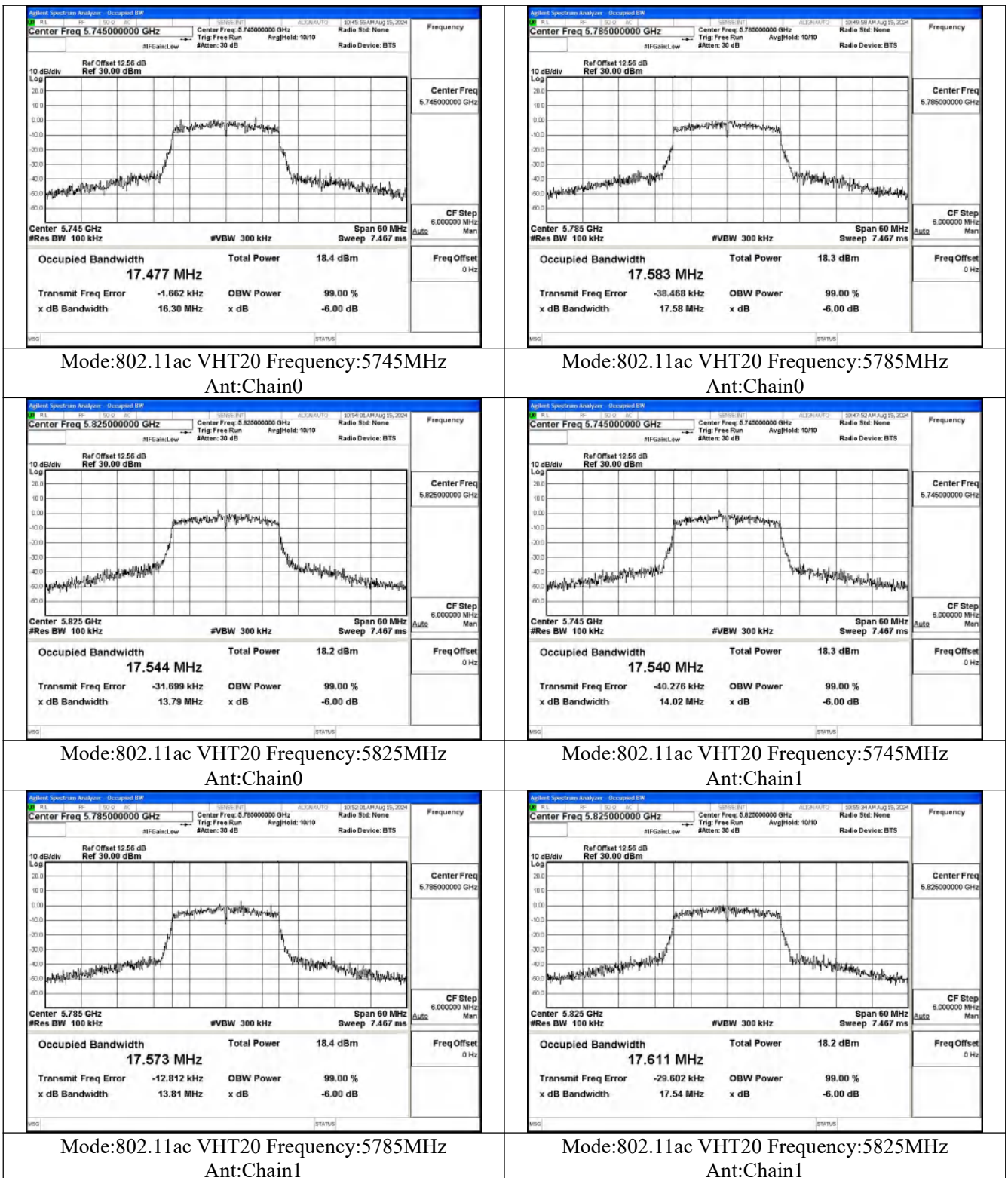
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain1



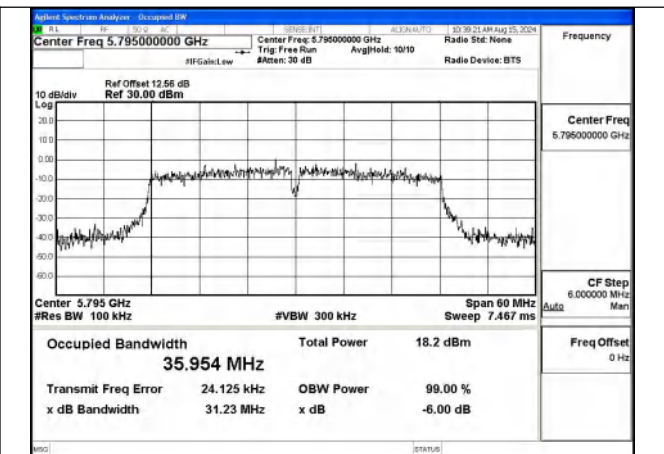
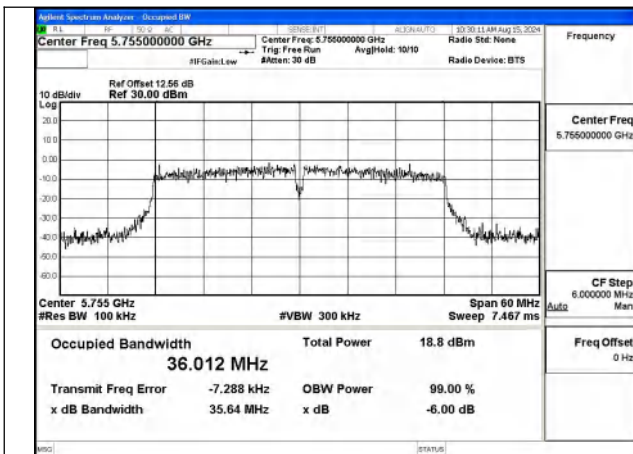
Mode:802.11n HT20 Frequency:5785MHz Ant:Chain1

Mode:802.11n HT20 Frequency:5825MHz Ant:Chain1

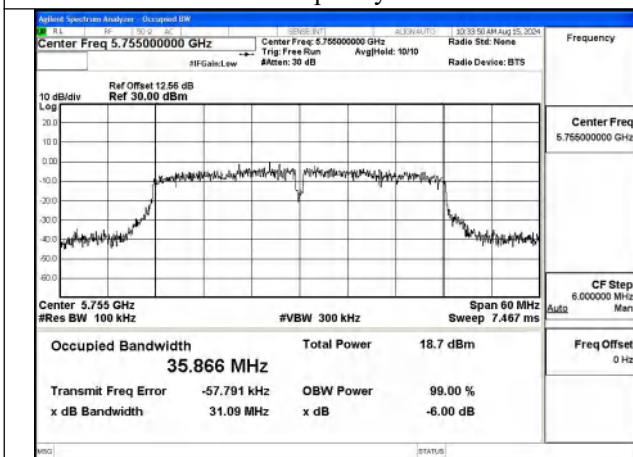
Test Mode: 802.11ac VHT20



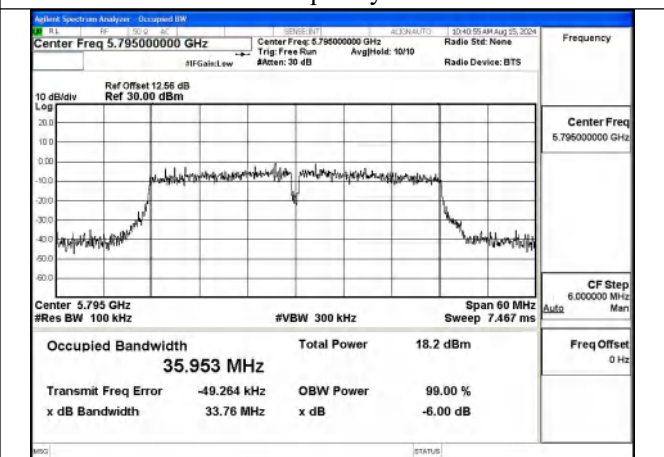
Test Mode: 802.11n HT40



Mode:802.11n HT40 Frequency:5755MHz Ant:Chain0



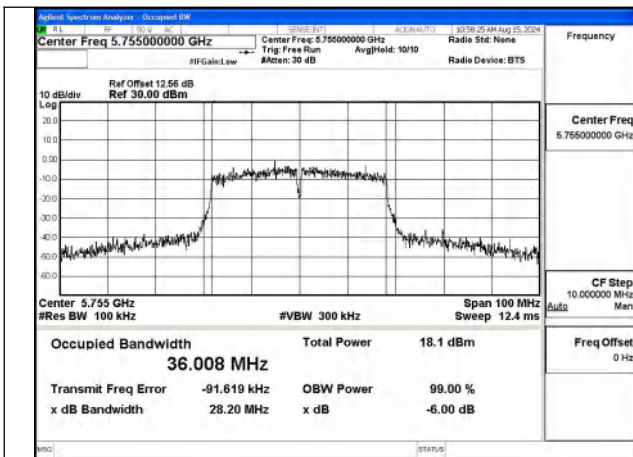
Mode:802.11n HT40 Frequency:5795MHz Ant:Chain0



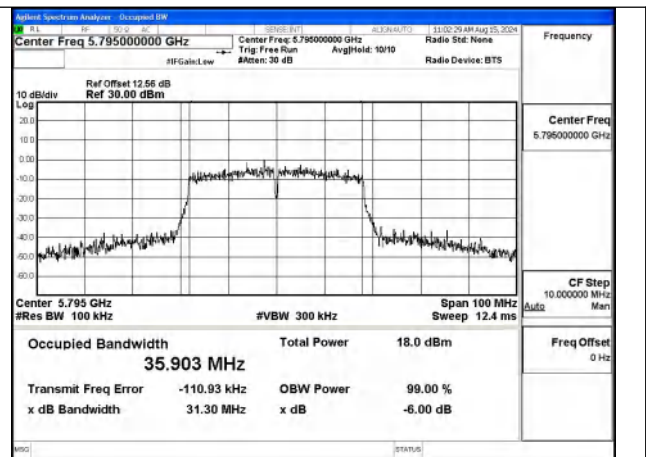
Mode:802.11n HT40 Frequency:5755MHz Ant:Chain1

Mode:802.11n HT40 Frequency:5795MHz Ant:Chain1

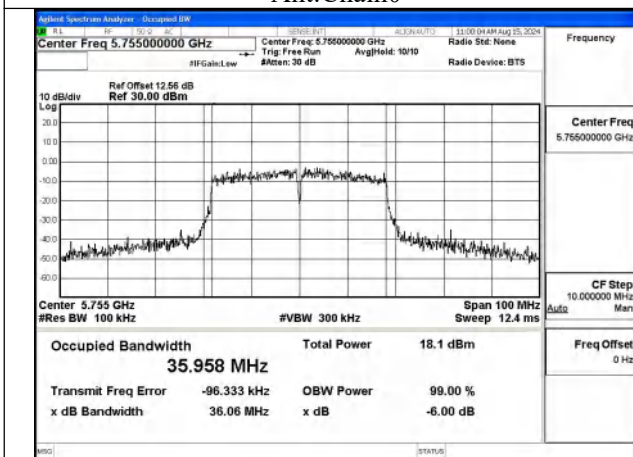
Test Mode: 802.11ac VHT40



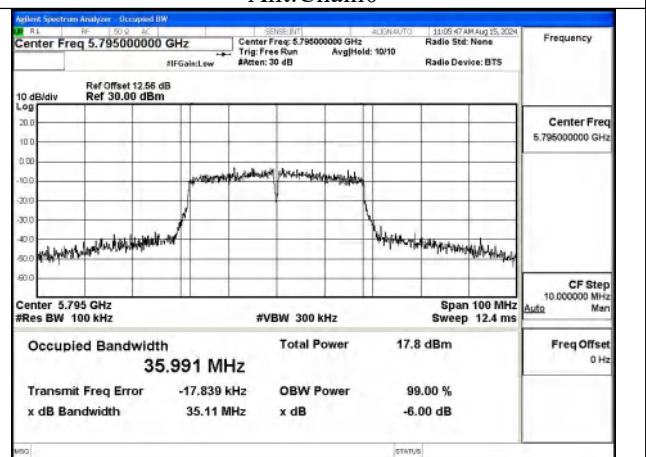
Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain0

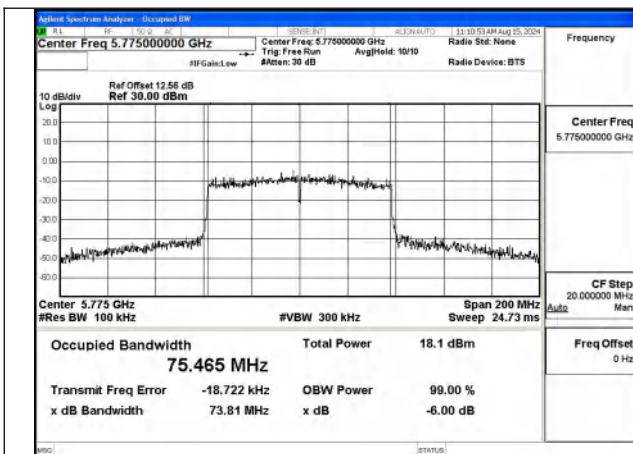


Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain1

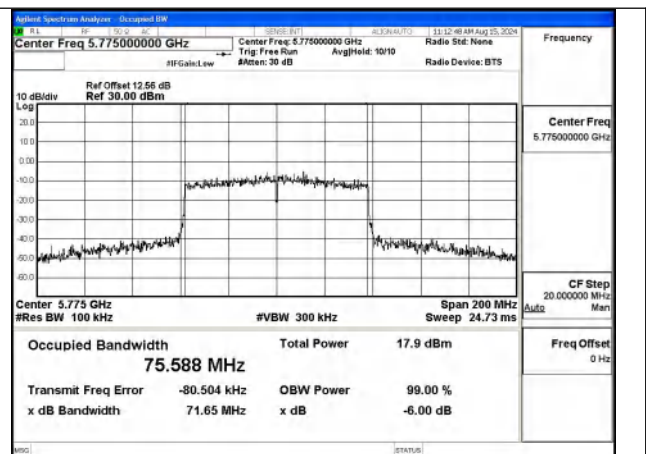


Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain1

Transmitter Power Spectral Density

Offset 12.56dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Tones	5745MHz		5785MHz		5825MHz	
			Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)
802.11a	Chain0	NA	0.24	3.227	0.24	3.144	0.24	2.629
802.11a	Chain1	NA	0.24	3.363	0.24	3.461	0.24	2.854
802.11n HT20	Chain0	NA	0.24	3.606	0.24	1.783	0.24	1.506
802.11n HT20	Chain1	NA	0.24	3.595	0.24	2.038	0.24	1.492
802.11n HT20	MIMO	NA	0.24	6.611	0.24	4.923	0.24	4.509
802.11ac VHT20	Chain0	NA	0.24	2.892	0.24	2.836	0.24	2.413
802.11ac VHT20	Chain1	NA	0.24	2.902	0.24	2.889	0.24	2.462
802.11ac VHT20	MIMO	NA	0.24	5.907	0.24	5.873	0.24	5.448

Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result.

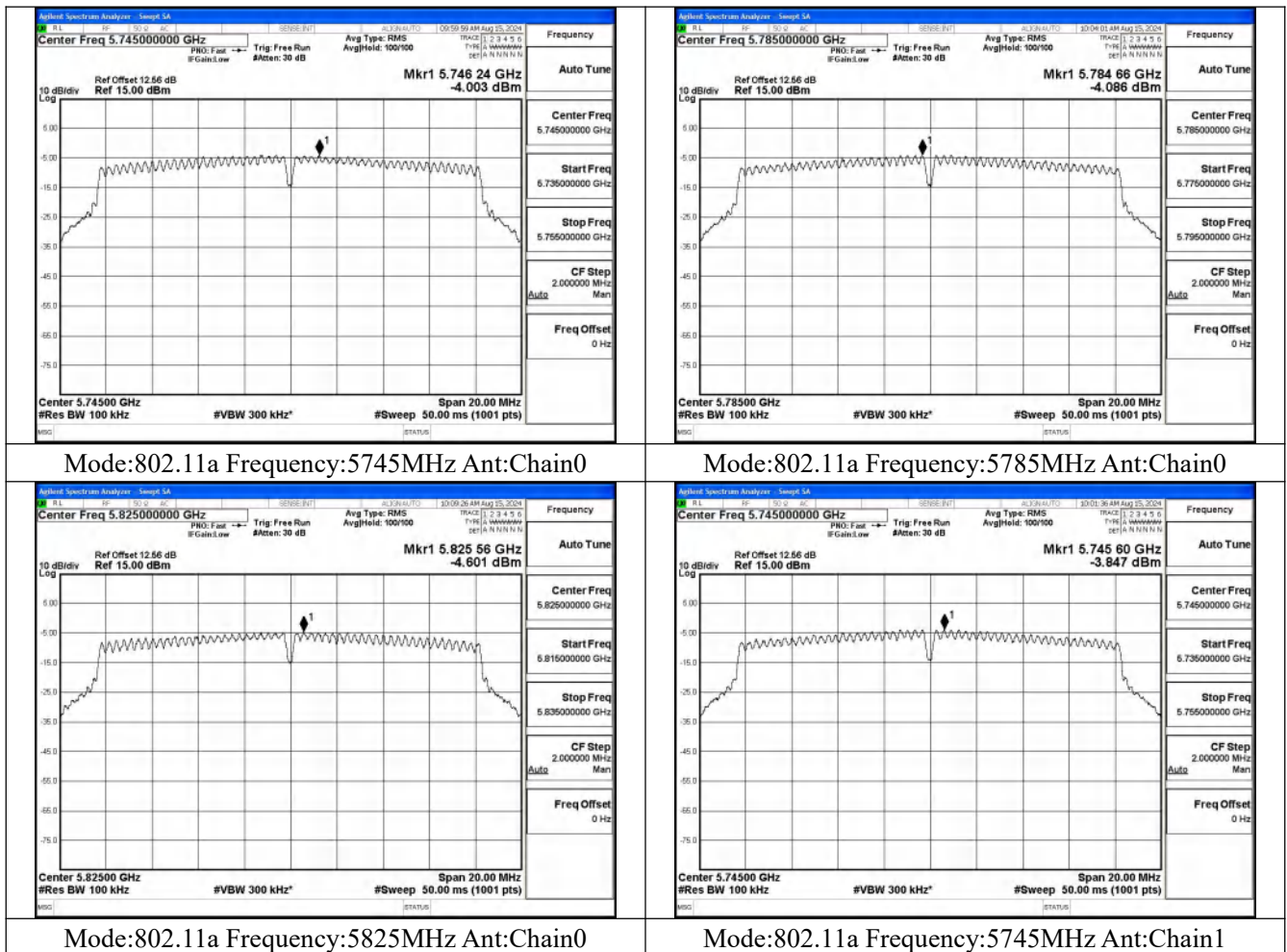
Test Mode	Antenna	Tones	5755MHz		---		5795MHz	
			Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)
802.11n HT40	Chain0	NA	0.44	0.328	---	---	0.44	-0.377
802.11n HT40	Chain1	NA	0.44	0.040	---	---	0.44	-0.434
802.11n HT40	MIMO	NA	0.44	3.197	---	---	0.44	2.605
802.11ac VHT40	Chain0	NA	0.43	-0.478	---	---	0.43	-0.761
802.11ac VHT40	Chain1	NA	0.43	-0.240	---	---	0.43	-0.325
802.11ac VHT40	MIMO	NA	0.43	2.653	---	---	0.43	2.473

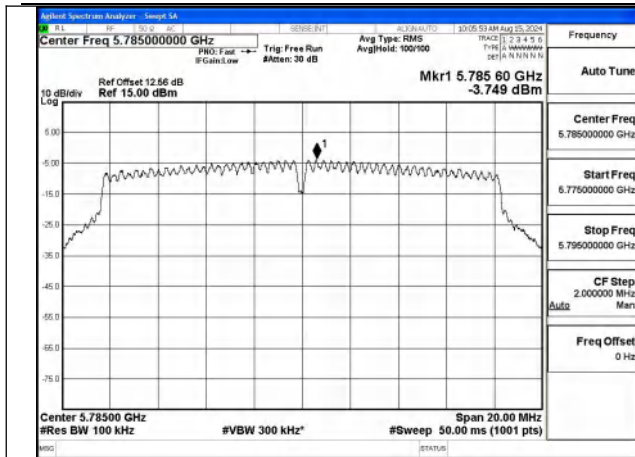
Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result.

Test Mode	Antenna	Tones	5775MHz		---		---	
			Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)	Correction Factor (dB)	Power Density (dBm/500KHz)
802.11ac VHT80	Chain0	NA	0.71	-2.954	---	---	---	---
802.11ac VHT80	Chain1	NA	0.71	-3.001	---	---	---	---
802.11ac VHT80	MIMO	NA	0.71	0.033	---	---	---	---

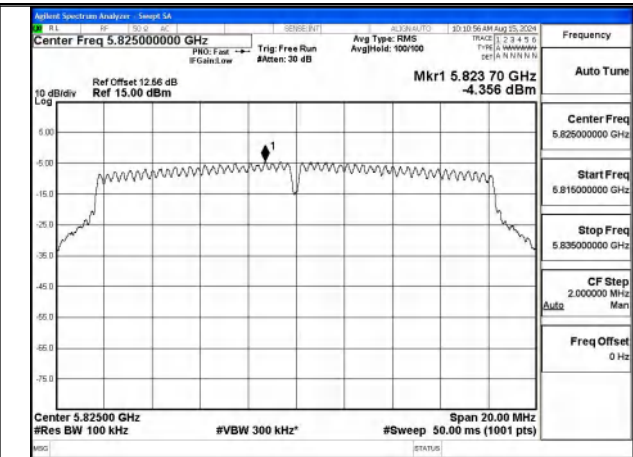
Note: As measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result.

Test Mode: 802.11a



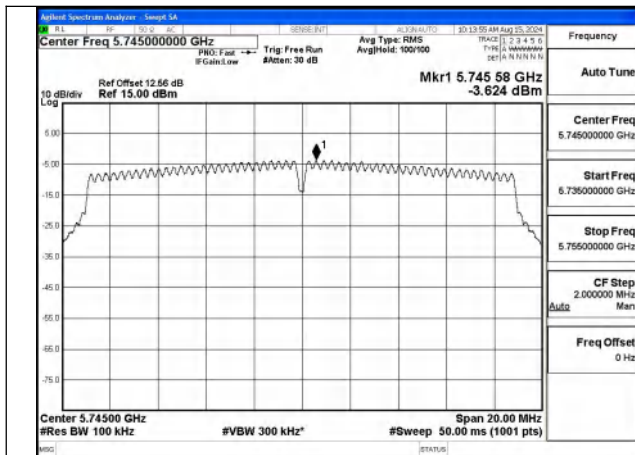


Mode:802.11a Frequency:5785MHz Ant:Chain1

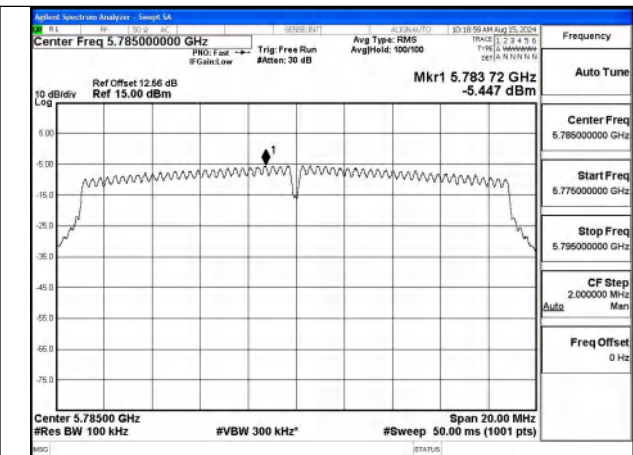


Mode:802.11a Frequency:5825MHz Ant:Chain1

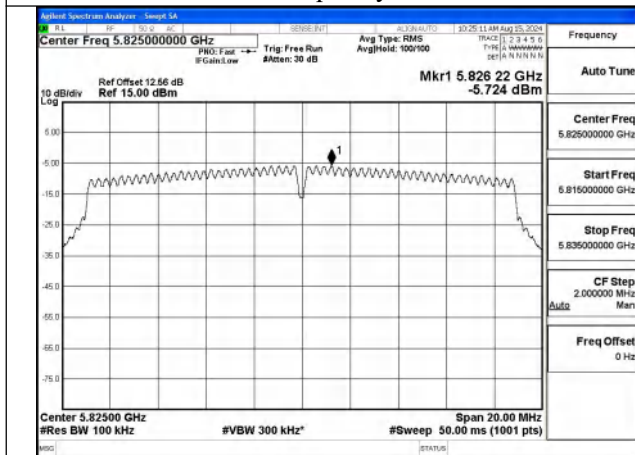
Test Mode: 802.11n HT20



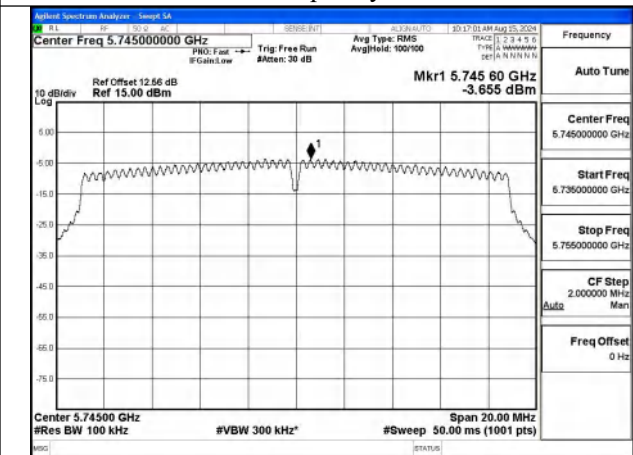
Mode:802.11n HT20 Frequency:5745MHz Ant:Chain0



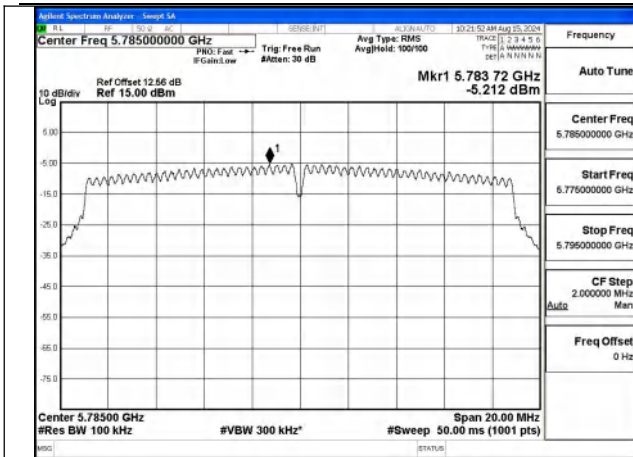
Mode:802.11n HT20 Frequency:5785MHz Ant:Chain0



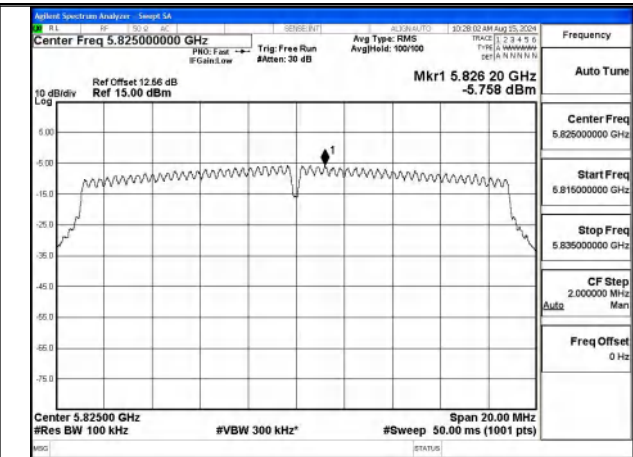
Mode:802.11n HT20 Frequency:5825MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5745MHz Ant:Chain1

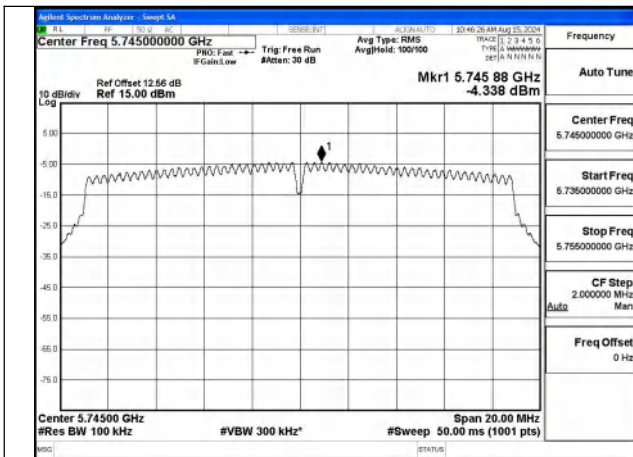


Mode:802.11n HT20 Frequency:5785MHz Ant:Chain1

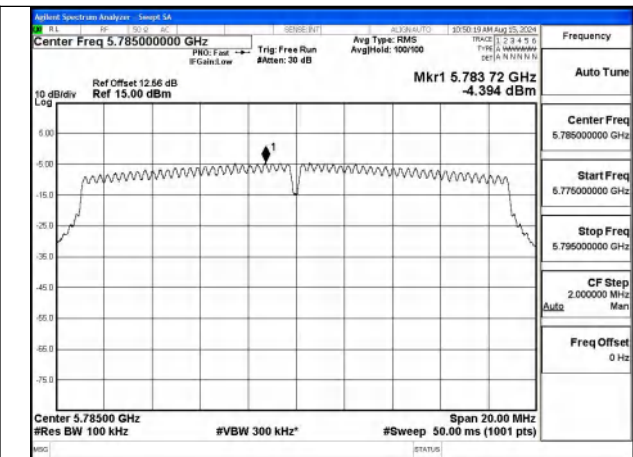


Mode:802.11n HT20 Frequency:5825MHz Ant:Chain1

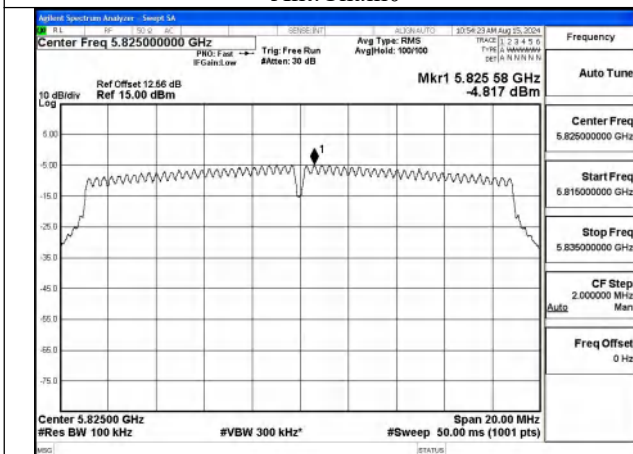
Test Mode: 802.11ac VHT20



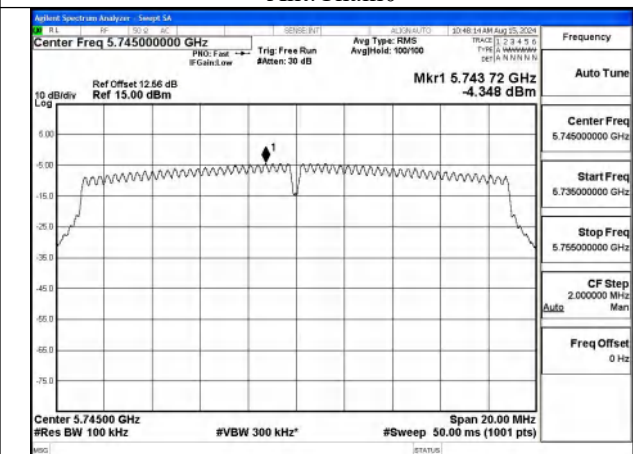
Mode:802.11ac VHT20 Frequency:5745MHz
Ant:Chain0



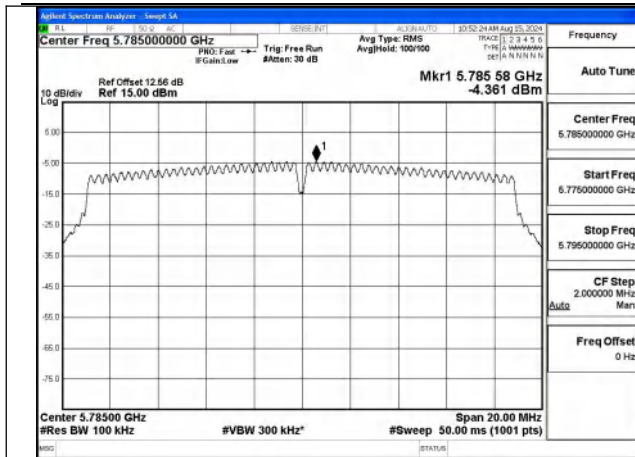
Mode:802.11ac VHT20 Frequency:5785MHz
Ant:Chain0



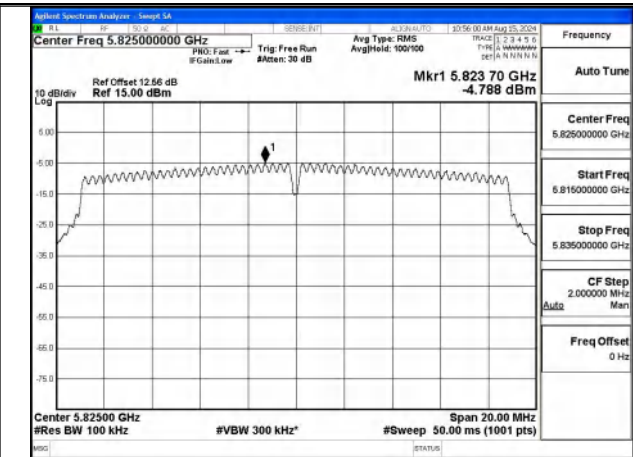
Mode:802.11ac VHT20 Frequency:5825MHz
Ant:Chain0



Mode:802.11ac VHT20 Frequency:5745MHz
Ant:Chain1

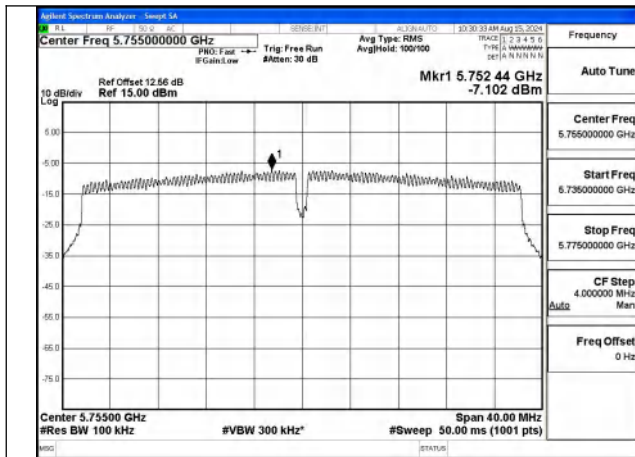


Mode:802.11ac VHT20 Frequency:5785MHz
Ant:Chain1

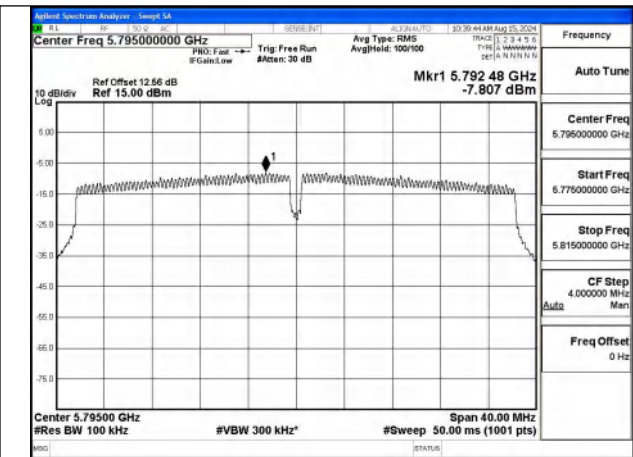


Mode:802.11ac VHT20 Frequency:5825MHz
Ant:Chain1

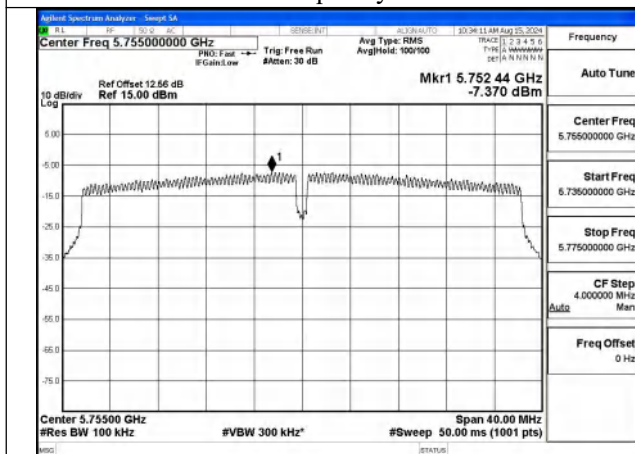
Test Mode: 802.11n HT40



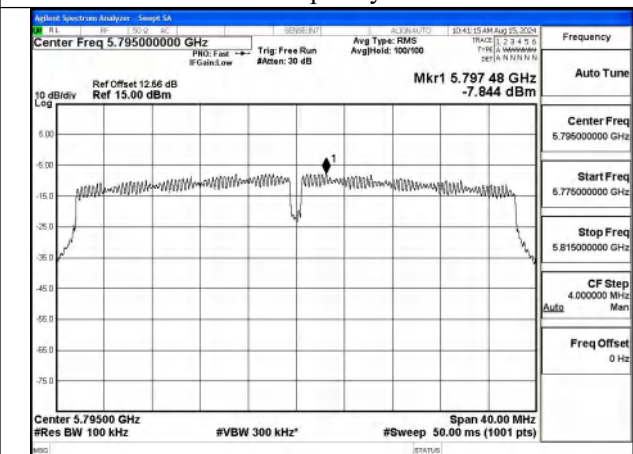
Mode:802.11n HT40 Frequency:5755MHz Ant:Chain0



Mode:802.11n HT40 Frequency:5795MHz Ant:Chain0

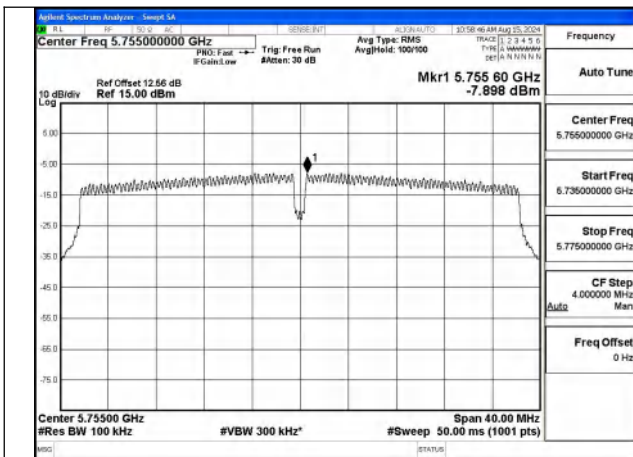


Mode:802.11n HT40 Frequency:5755MHz Ant:Chain1

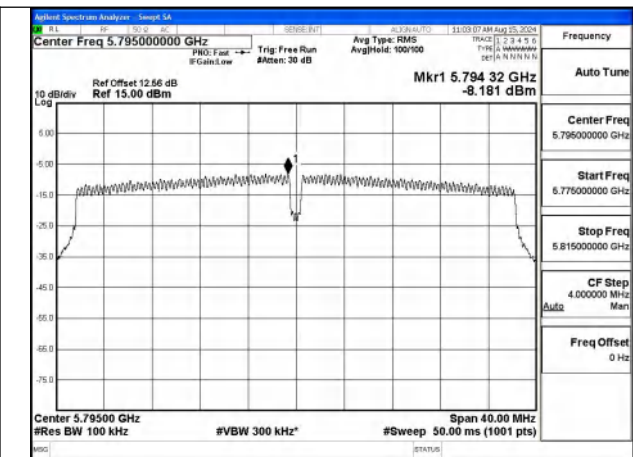


Mode:802.11n HT40 Frequency:5795MHz Ant:Chain1

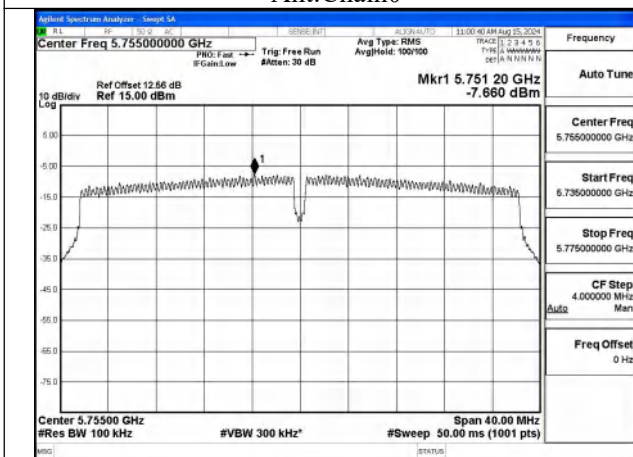
Test Mode: 802.11ac VHT40



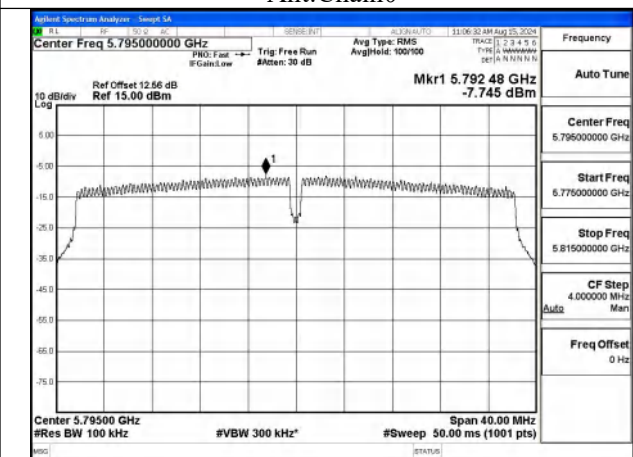
Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain0

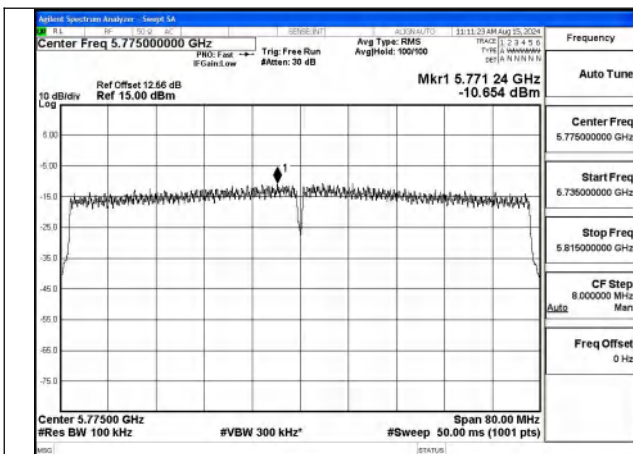


Mode:802.11ac VHT40 Frequency:5755MHz
Ant:Chain1

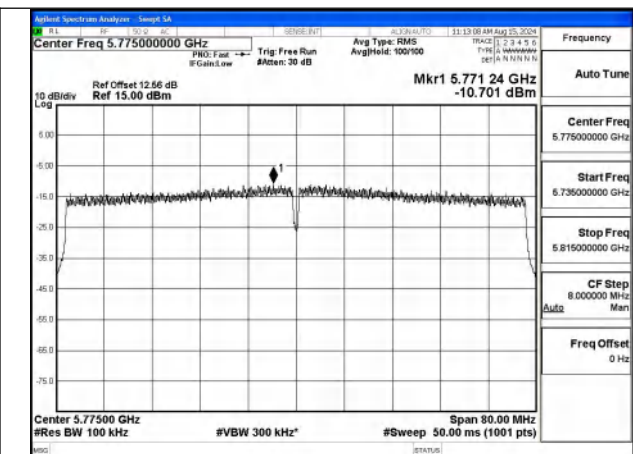


Mode:802.11ac VHT40 Frequency:5795MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5775MHz
Ant:Chain1