

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	5260	99.96%	0	Fig.1
802.11n HT20	5260	99.95%	0	Fig.2
802.11ac VHT20	5260	99.95%	0	Fig.3
802.11n HT40	5270	99.90%	0	Fig.4
802.11ac VHT40	5270	99.90%	0	Fig.5
802.11ac VHT80	5290	99.81%	0	Fig.6

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

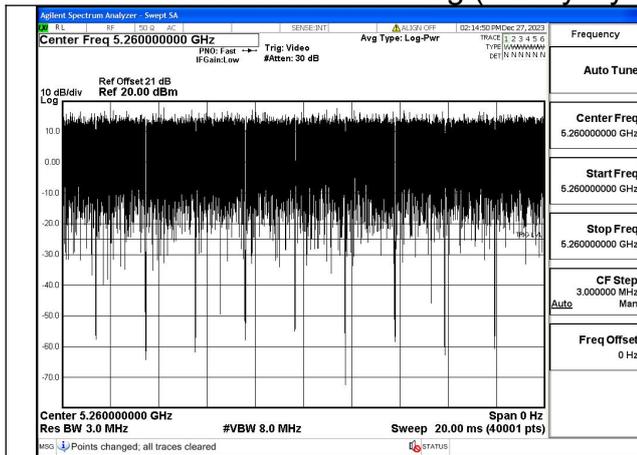


Fig.1

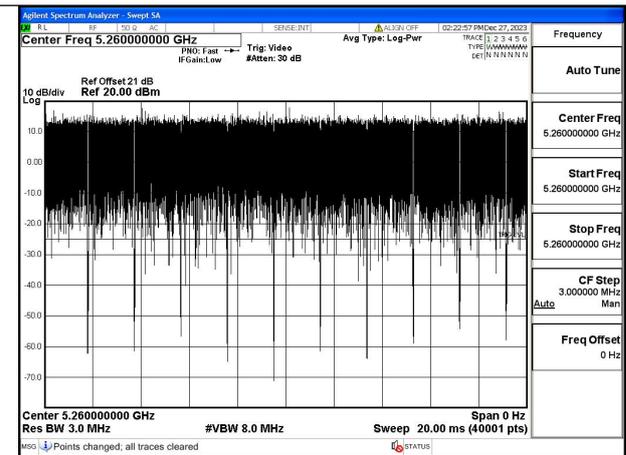


Fig.2

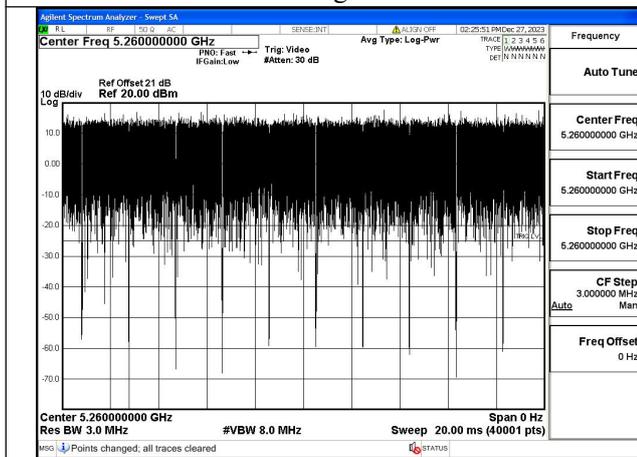


Fig.3

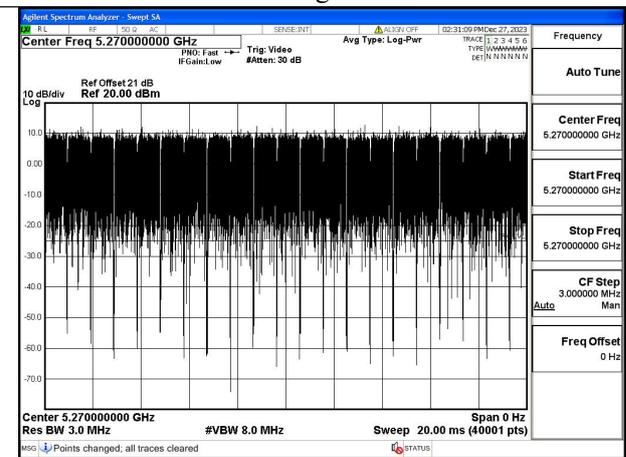


Fig.4

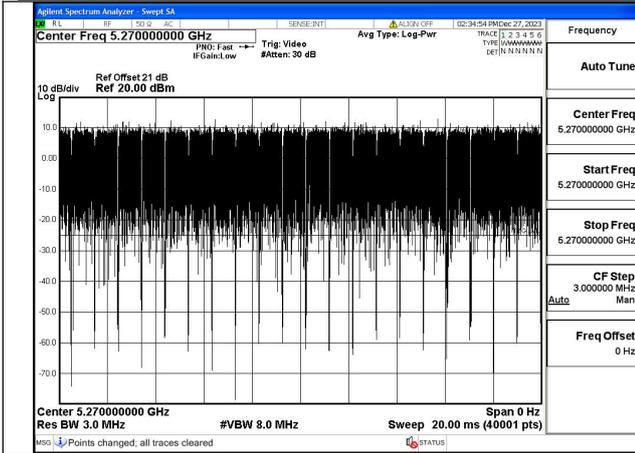


Fig.5

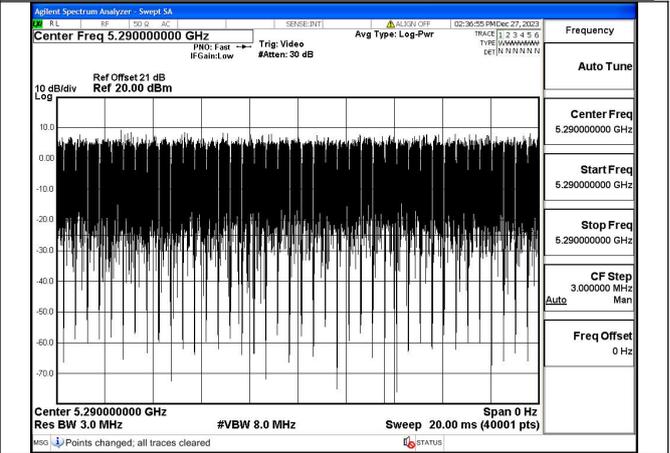


Fig.6

Output Power

Mode	Tones/ RU Index	Frequency (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5260	Chain0	11.85	9.85
802.11a	NA	5280	Chain0	11.67	9.67
802.11a	NA	5320	Chain0	11.55	9.55
802.11n HT20	NA	5260	Chain0	11.84	9.84
802.11n HT20	NA	5280	Chain0	11.70	9.70
802.11n HT20	NA	5320	Chain0	11.52	9.52
802.11ac VHT20	NA	5260	Chain0	11.86	9.86
802.11ac VHT20	NA	5280	Chain0	11.70	9.70
802.11ac VHT20	NA	5320	Chain0	11.48	9.48
802.11n HT40	NA	5270	Chain0	11.52	9.52
802.11n HT40	NA	5310	Chain0	11.23	9.23
802.11ac VHT40	NA	5270	Chain0	11.49	9.49
802.11ac VHT40	NA	5310	Chain0	11.24	9.24
802.11ac VHT80	NA	5290	Chain0	11.13	9.13

Emission Bandwidth

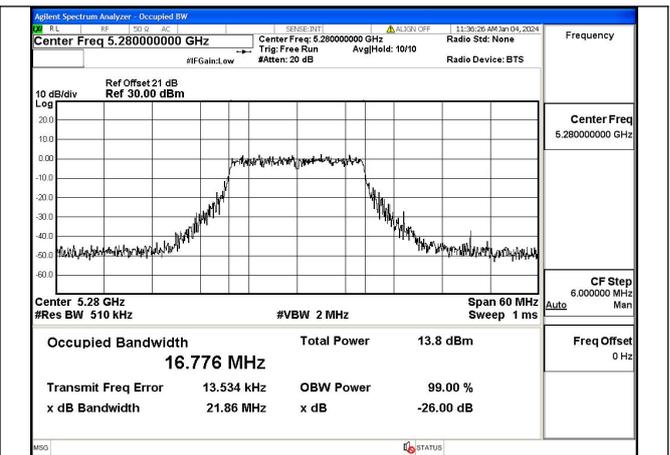
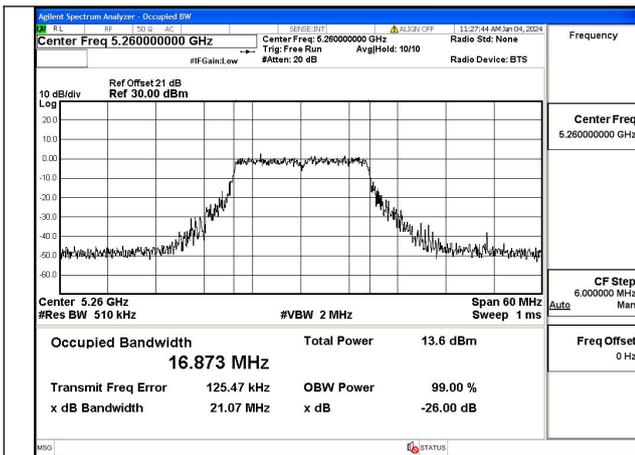
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	21.07	21.86	21.50
802.11n HT20	Chain0	22.30	22.64	23.09
802.11ac VHT20	Chain0	23.27	23.49	22.67

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5270MHz	---	5310MHz
802.11n HT40	Chain0	42.18	---	41.60
802.11ac VHT40	Chain0	41.37	---	41.78

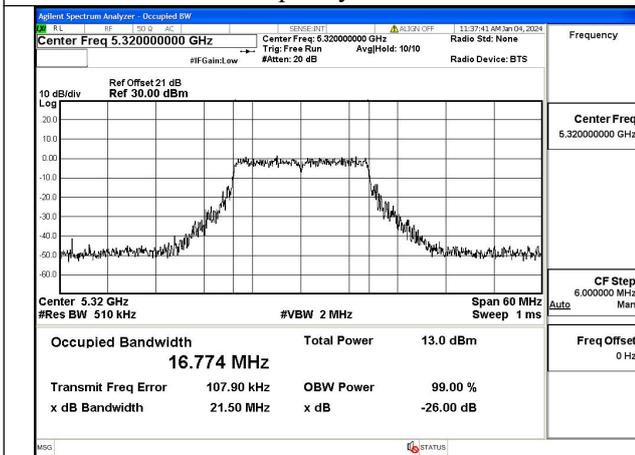
Test Mode	Antenna	26dB Bandwidth (MHz)		
		5290MHz	---	---
802.11ac VHT80	Chain0	84.13	---	---

Test Mode: 802.11a



Mode:802.11a Frequency:5260MHz Ant:Chain0

Mode:802.11a Frequency:5280MHz Ant:Chain0

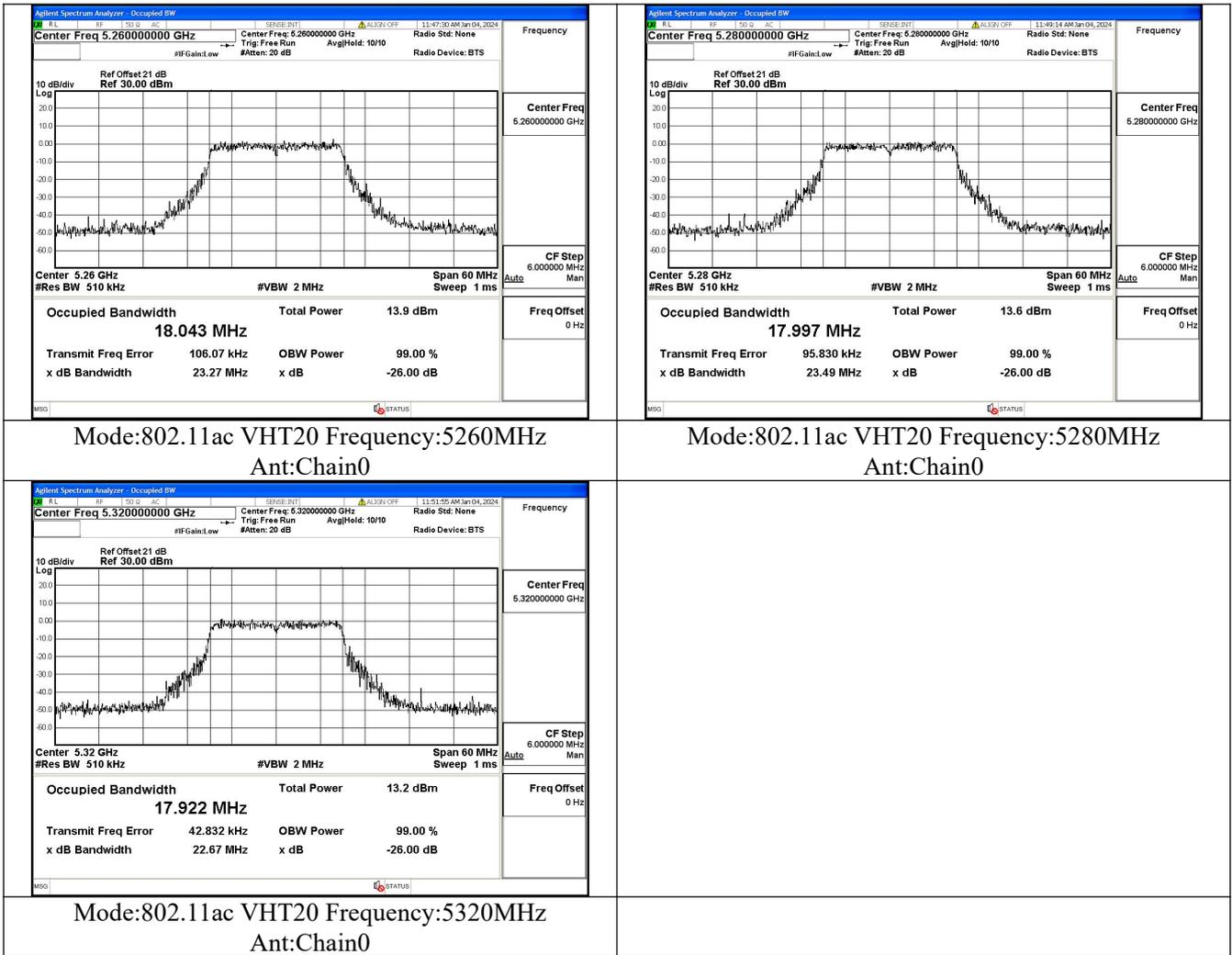


Mode:802.11a Frequency:5320MHz Ant:Chain0

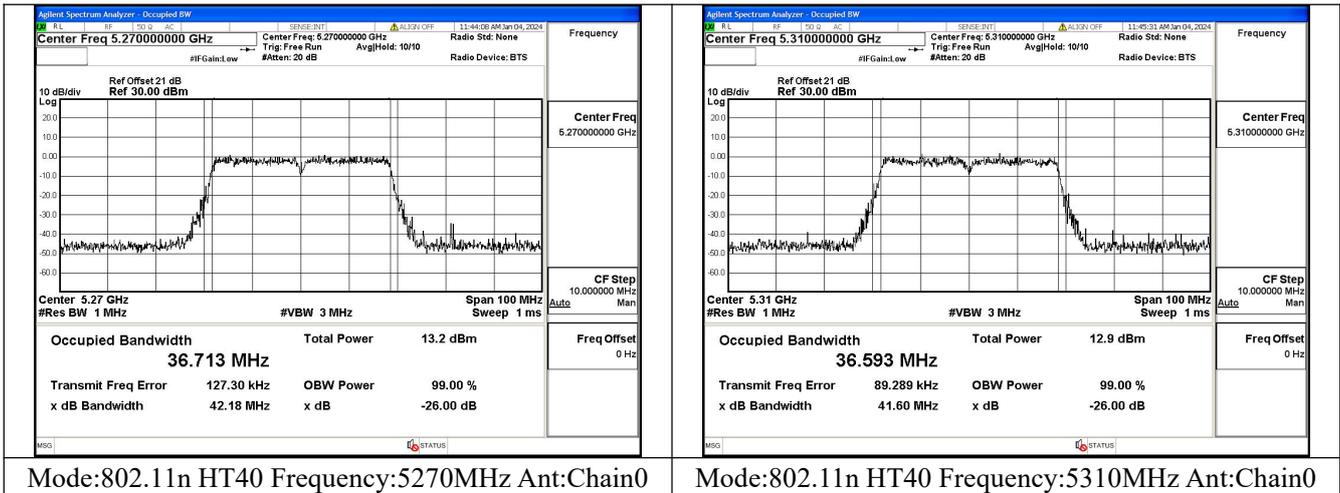
Test Mode: 802.11n HT20

<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.260000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.26 GHz #Res BW 510 kHz</p> <p>Span 60 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 17.997 MHz</p> <p>Total Power 13.8 dBm</p> <p>Transmit Freq Error 67.126 kHz</p> <p>x dB Bandwidth 22.30 MHz</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.280000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.28 GHz #Res BW 510 kHz</p> <p>Span 60 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 18.019 MHz</p> <p>Total Power 13.6 dBm</p> <p>Transmit Freq Error 120.32 kHz</p> <p>x dB Bandwidth 22.64 MHz</p>
<p>Mode:802.11n HT20 Frequency:5260MHz Ant:Chain0</p> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.320000000 GHz</p> <p>Ref Offset 21 dB Ref 30.00 dBm</p> <p>Center 5.32 GHz #Res BW 510 kHz</p> <p>Span 60 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 17.997 MHz</p> <p>Total Power 13.2 dBm</p> <p>Transmit Freq Error 129.95 kHz</p> <p>x dB Bandwidth 23.09 MHz</p>	<p>Mode:802.11n HT20 Frequency:5280MHz Ant:Chain0</p>
<p>Mode:802.11n HT20 Frequency:5320MHz Ant:Chain0</p>	

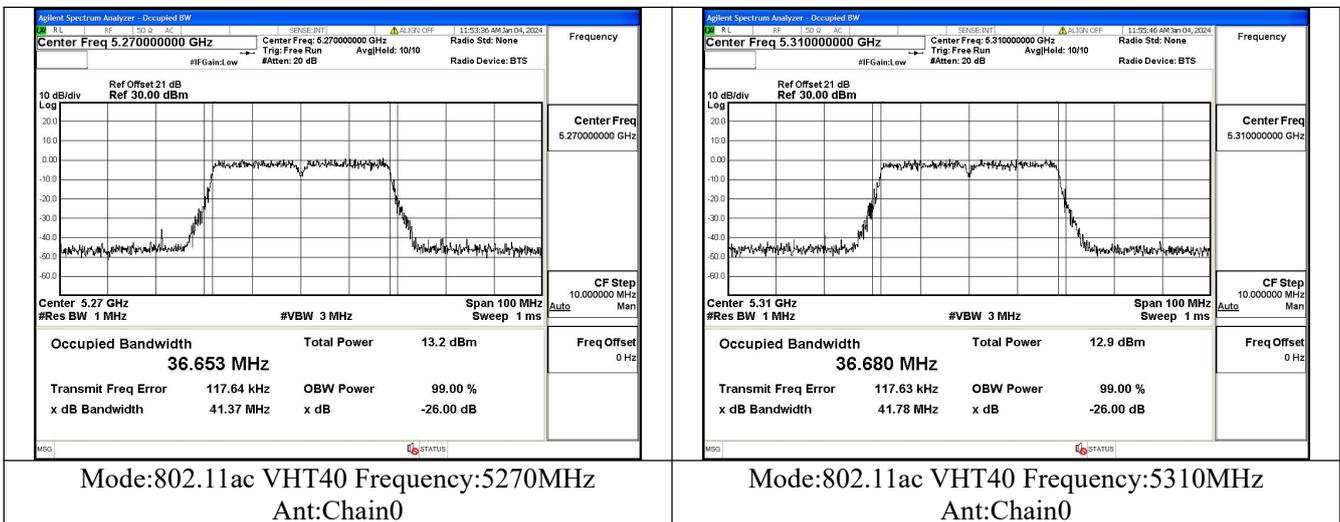
Test Mode: 802.11ac VHT20



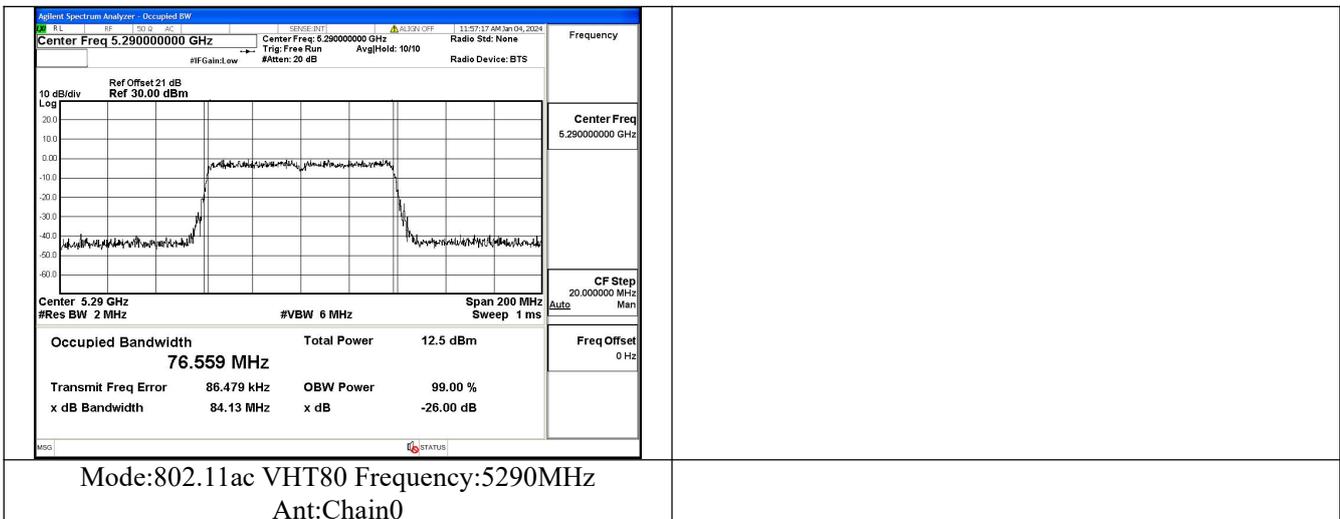
Test Mode: 802.11n HT40



Test Mode: 802.11ac VHT40



Test Mode: 802.11ac VHT80



Occupied Bandwidth

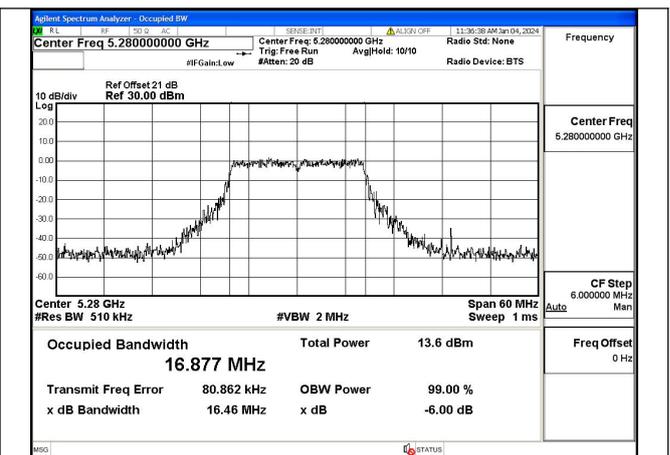
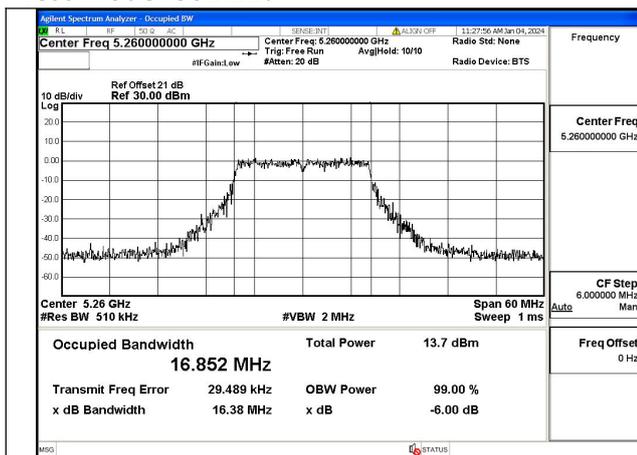
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	16.852	16.877	16.926
802.11n HT20	Chain0	18.020	18.058	18.057
802.11ac VHT20	Chain0	18.075	18.007	18.099

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5270MHz	---	5310MHz
802.11n HT40	Chain0	36.668	---	36.723
802.11ac VHT40	Chain0	36.648	---	36.656

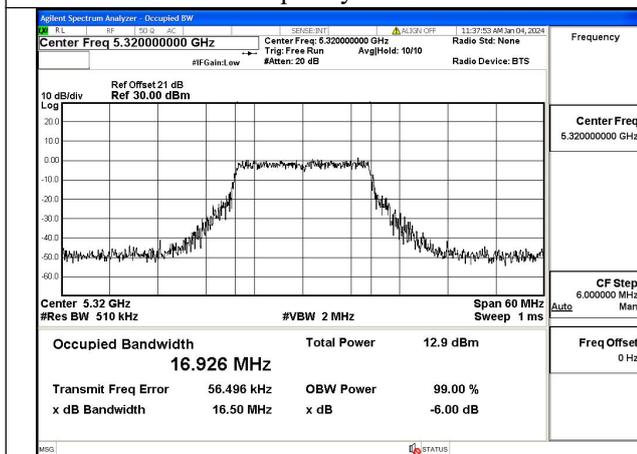
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5290MHz	---	---
802.11ac VHT80	Chain0	76.545	---	---

Test Mode: 802.11a



Mode:802.11a Frequency:5260MHz Ant:Chain0

Mode:802.11a Frequency:5280MHz Ant:Chain0

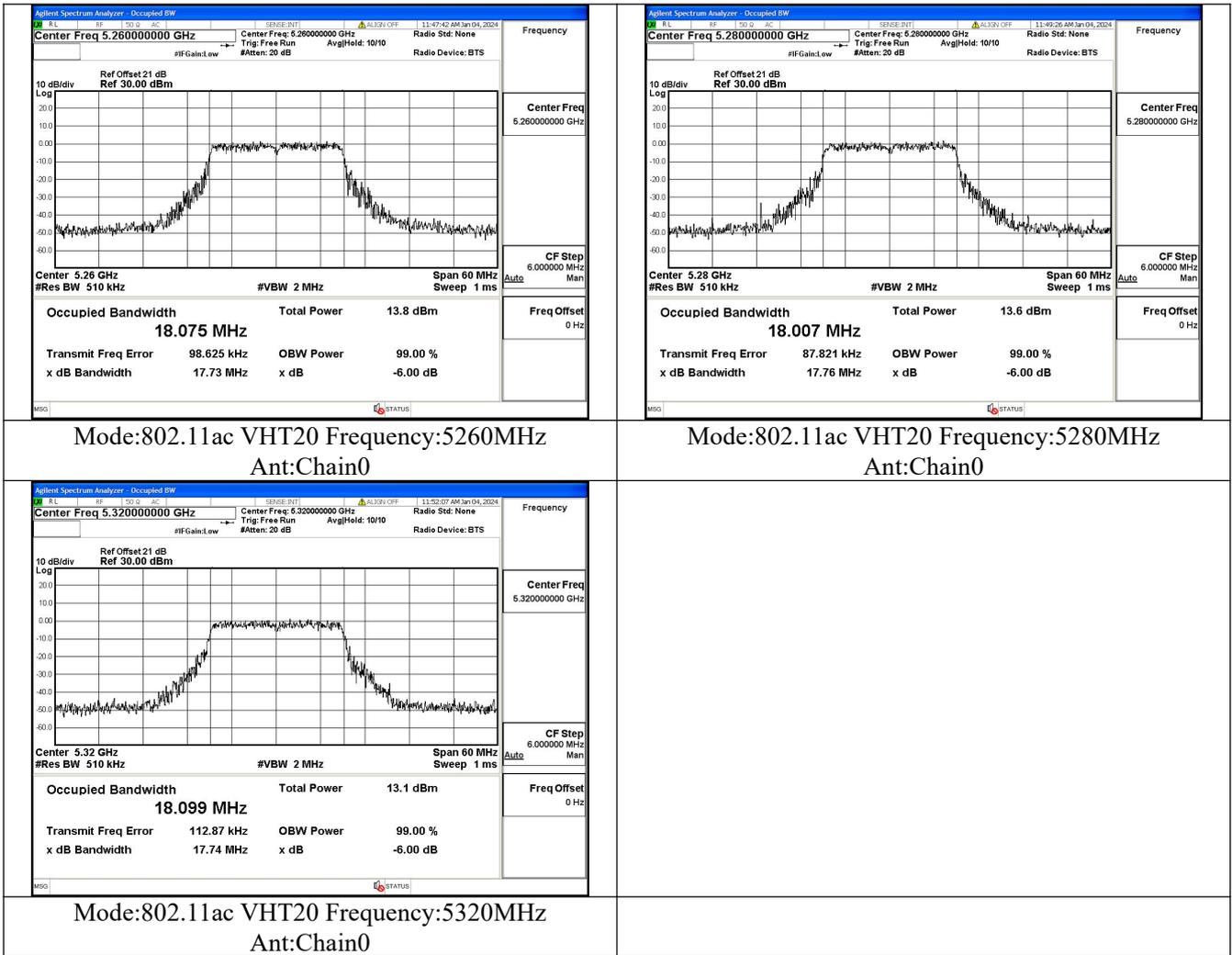


Mode:802.11a Frequency:5320MHz Ant:Chain0

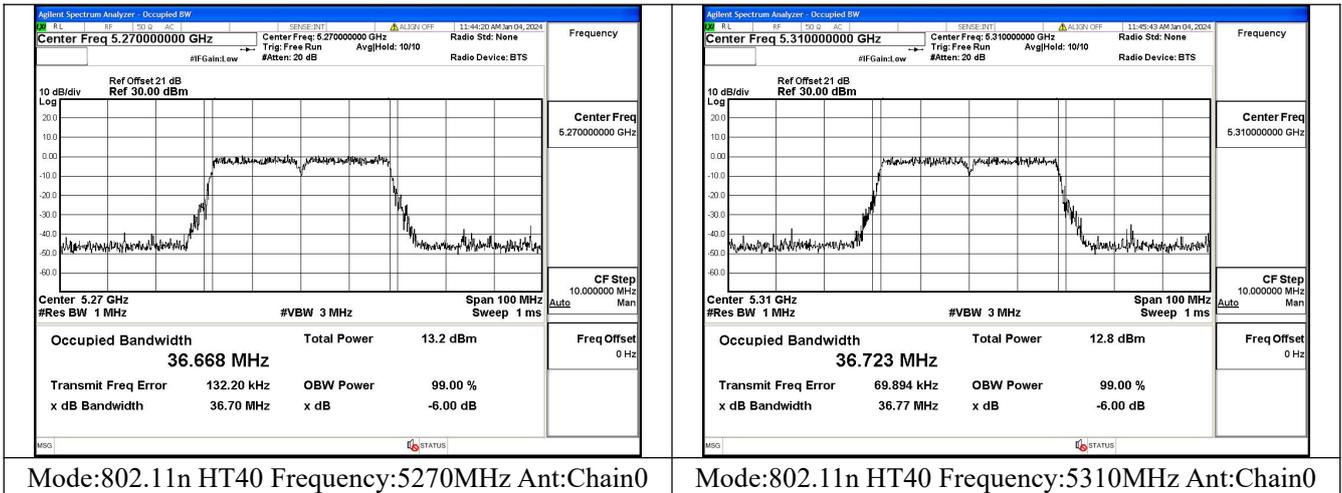
Test Mode: 802.11n HT20

<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.260000000 GHz</p> <p>Center Freq 5.260000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Device: BTS</p> <p>Ref Offset 21 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.26 GHz</p> <p>#Res BW 510 kHz</p> <p>#VBW 2 MHz</p> <p>Span 60 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 18.020 MHz</p> <p>Total Power 13.8 dBm</p> <p>Transmit Freq Error 107.61 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.79 MHz</p> <p>x dB -6.00 dB</p>	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.280000000 GHz</p> <p>Center Freq 5.280000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Device: BTS</p> <p>Ref Offset 21 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.28 GHz</p> <p>#Res BW 510 kHz</p> <p>#VBW 2 MHz</p> <p>Span 60 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 18.058 MHz</p> <p>Total Power 13.6 dBm</p> <p>Transmit Freq Error 19.492 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.78 MHz</p> <p>x dB -6.00 dB</p>
<p>Mode:802.11n HT20 Frequency:5260MHz Ant:Chain0</p> <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.320000000 GHz</p> <p>Center Freq 5.320000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 10/10</p> <p>Radio Device: BTS</p> <p>Ref Offset 21 dB</p> <p>Ref 30.00 dBm</p> <p>Center 5.32 GHz</p> <p>#Res BW 510 kHz</p> <p>#VBW 2 MHz</p> <p>Span 60 MHz</p> <p>Sweep 1 ms</p> <p>Occupied Bandwidth 18.057 MHz</p> <p>Total Power 13.1 dBm</p> <p>Transmit Freq Error 91.502 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 17.75 MHz</p> <p>x dB -6.00 dB</p>	<p>Mode:802.11n HT20 Frequency:5280MHz Ant:Chain0</p>
<p>Mode:802.11n HT20 Frequency:5320MHz Ant:Chain0</p>	

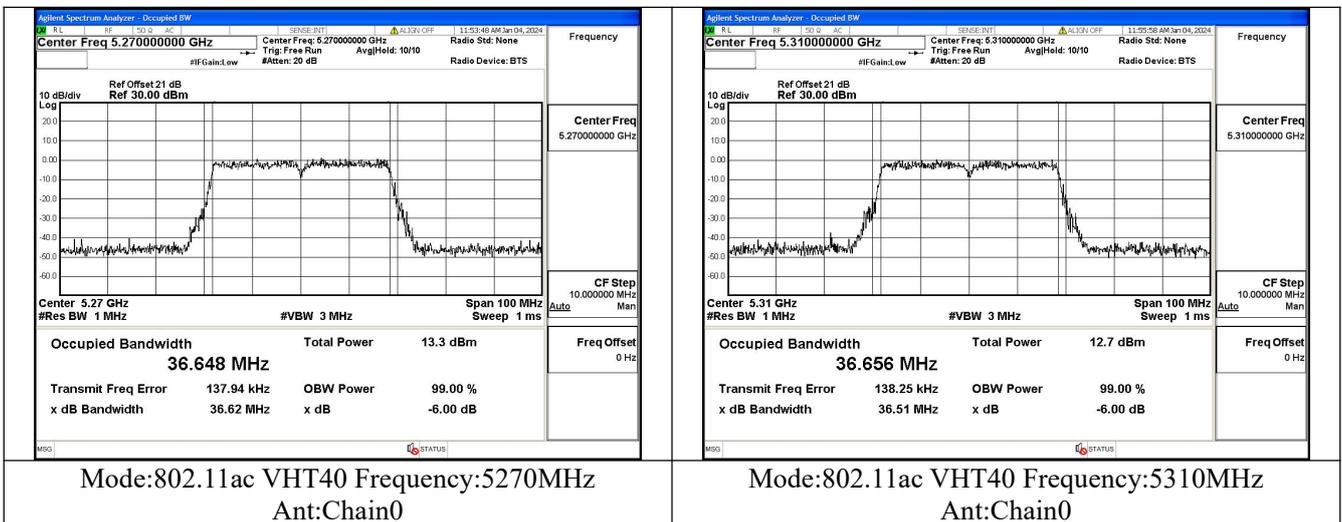
Test Mode: 802.11ac VHT20



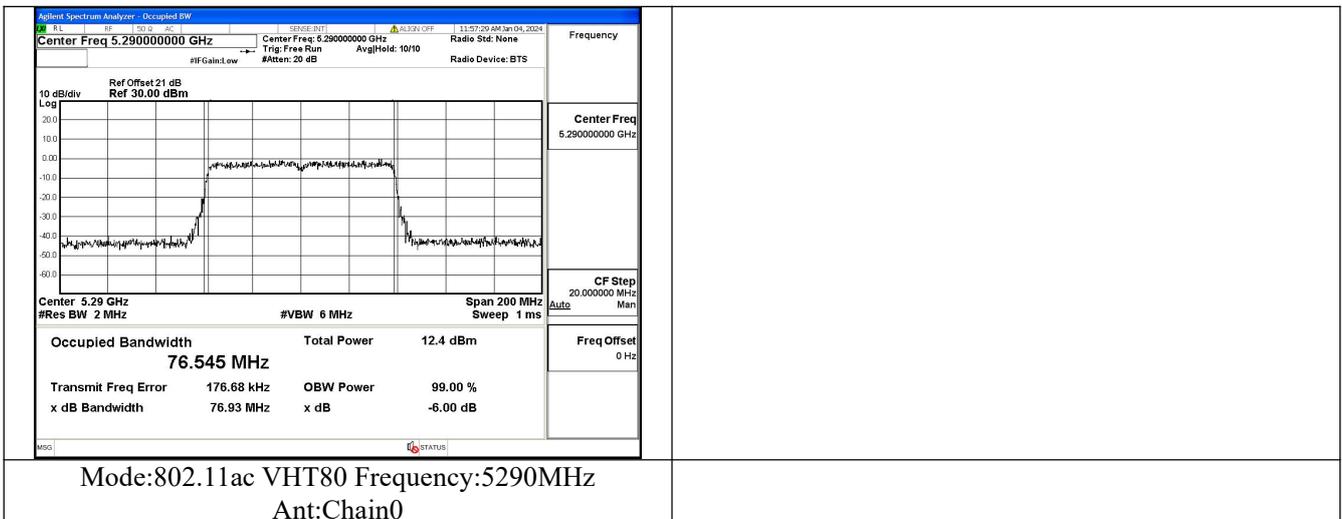
Test Mode: 802.11n HT40



Test Mode: 802.11ac VHT40



Test Mode: 802.11ac VHT80



Transmitter Power Spectral Density

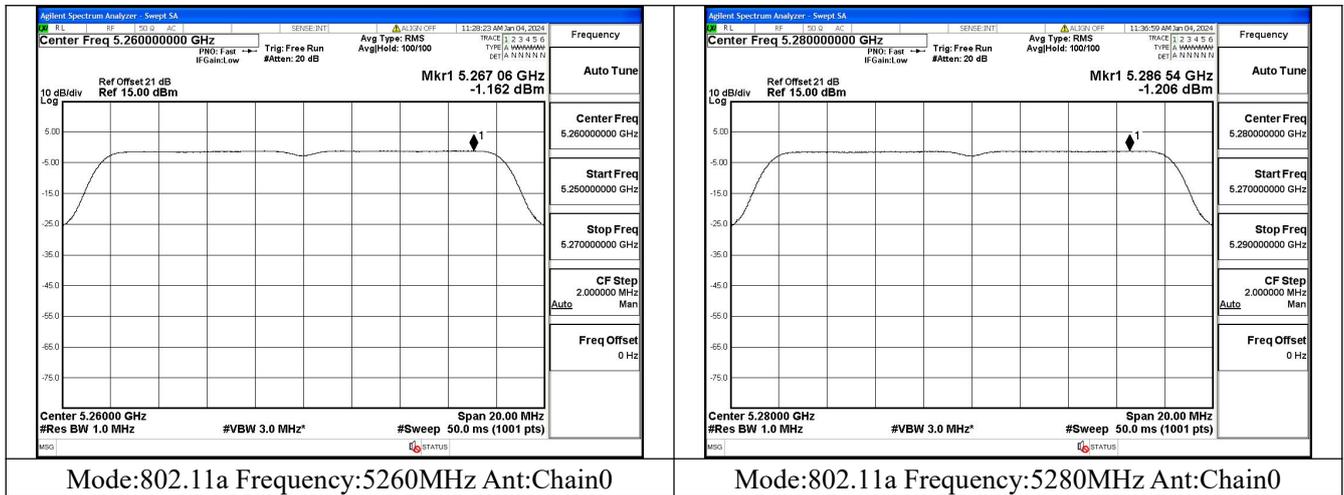
Offset 21dB = Attenuator + Temporary antenna connector loss + Cable loss

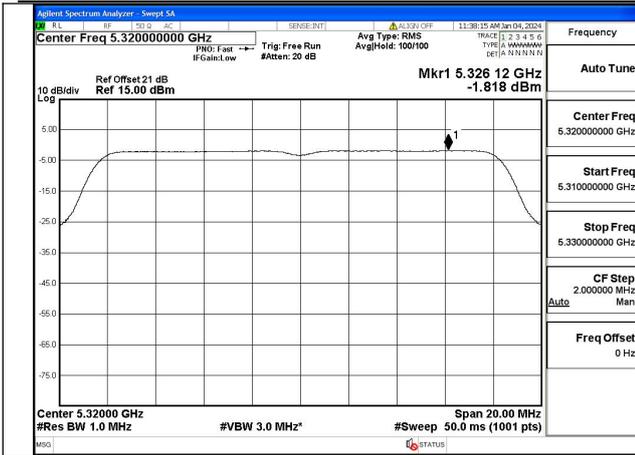
Test Mode	Antenna	Tones	5260MHz		5280MHz		5320MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11a	Chain0	NA	0	-1.162	0	-1.206	0	-1.818
802.11n HT20	Chain0	NA	0	-1.403	0	-1.459	0	-2.069
802.11ac VHT20	Chain0	NA	0	-1.381	0	-1.539	0	-2.173

Test Mode	Antenna	Tones	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	NA	0	-4.645	---	---	0	-5.132
802.11ac VHT40	Chain0	NA	0	-4.586	---	---	0	-5.130

Test Mode	Antenna	Tones	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	NA	0	-7.868	---	---	---	---

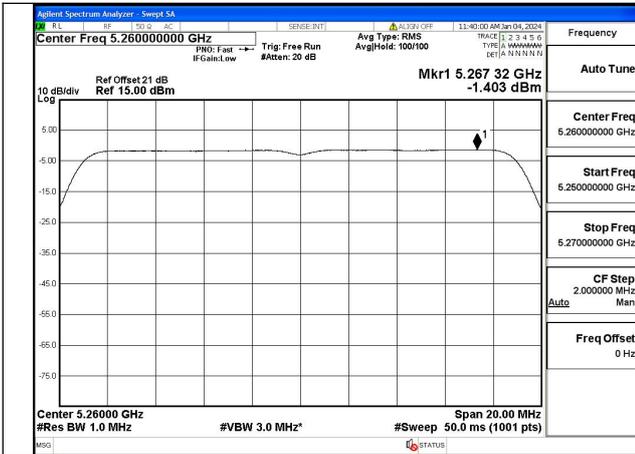
Test Mode: 802.11a



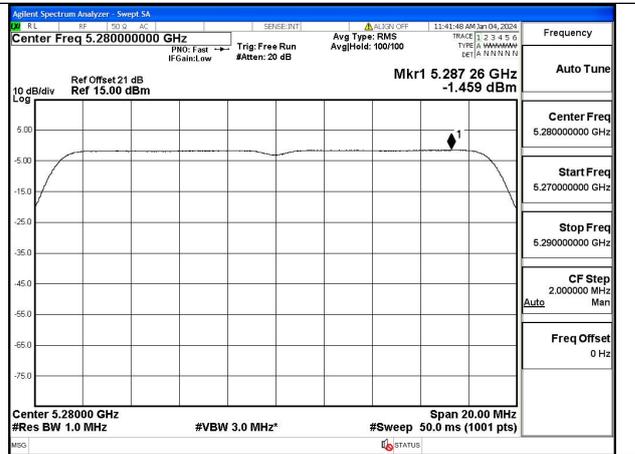


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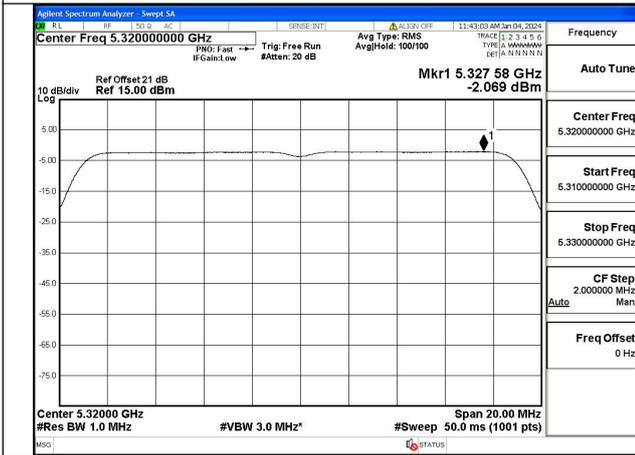
Test Mode: 802.11n HT20



Mode:802.11n HT20 Frequency:5260MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5280MHz Ant:Chain0



Mode:802.11n HT20 Frequency:5320MHz Ant:Chain0

Test Mode: 802.11ac VHT20

