

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	5260	99.08%	0	Fig.1
802.11a	5260	99.05%	0	Fig.2
802.11n HT20	5260	99.11%	0	Fig.3
802.11n HT20	5260	99.03%	0	Fig.4
802.11n HT40	5270	98.06%	0	Fig.5
802.11n HT40	5270	98.11%	0	Fig.6

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

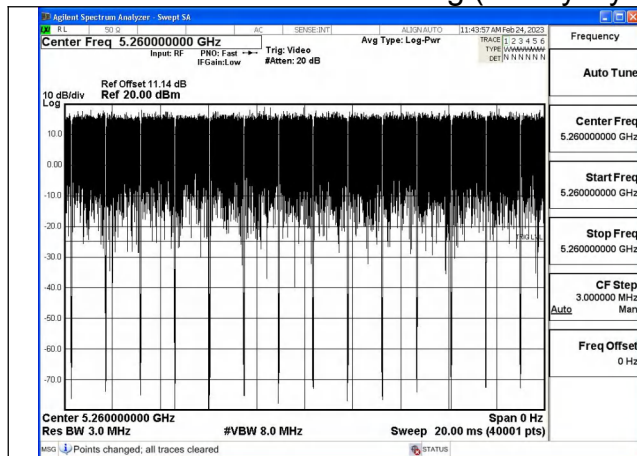


Fig.1

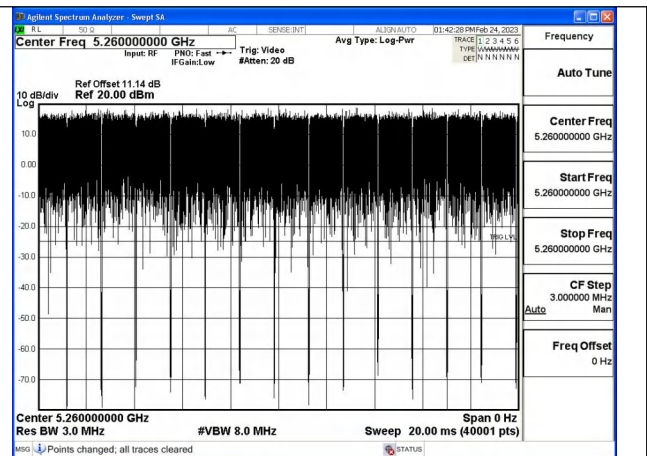


Fig.2

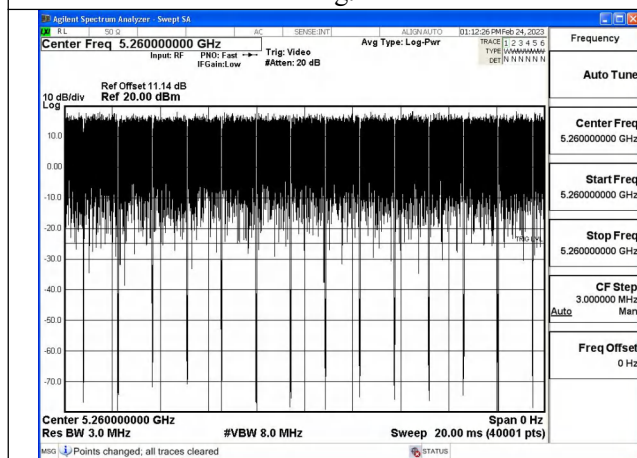


Fig.3

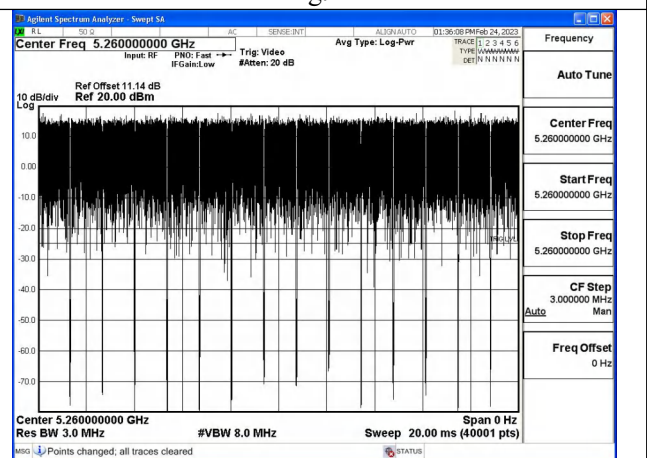


Fig.4

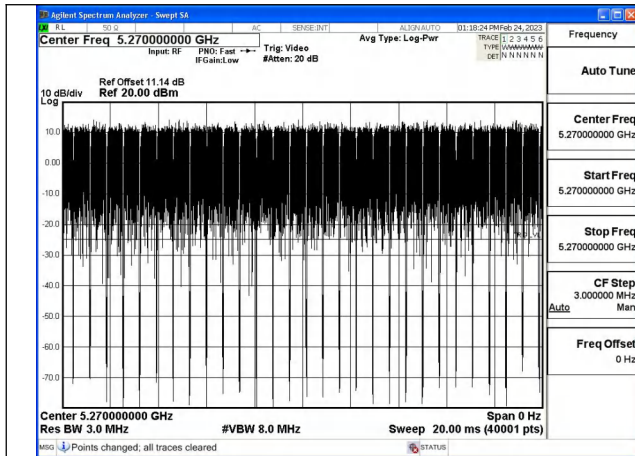


Fig.5

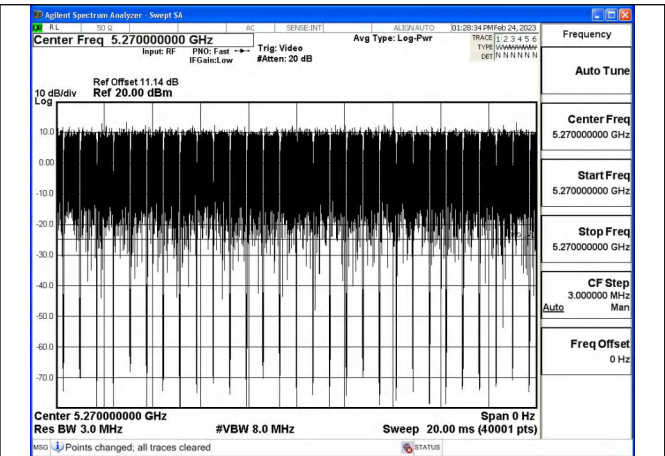


Fig.6

Output Power

Mode	Tones/ RUIndex	Frequency (MHz)	Antenna	Conducted average power output(dBm)	EIRP (dBm)
802.11a	NA	5260	Chain0	15.23	19.30
802.11a	NA	5260	Chain1	15.18	17.68
802.11a	NA	5280	Chain0	14.59	18.66
802.11a	NA	5280	Chain1	14.88	17.38
802.11a	NA	5320	Chain0	15.58	19.65
802.11a	NA	5320	Chain1	15.53	18.03
802.11n HT20	NA	5260	Chain0	12.74	16.81
802.11n HT20	NA	5260	Chain1	14.16	16.66
802.11n HT20	NA	5260	MIMO	16.52	19.88
802.11n HT20	NA	5280	Chain0	10.99	15.06
802.11n HT20	NA	5280	Chain1	13.96	16.46
802.11n HT20	NA	5280	MIMO	15.73	19.09
802.11n HT20	NA	5320	Chain0	10.97	15.04
802.11n HT20	NA	5320	Chain1	14.47	16.97
802.11n HT20	NA	5320	MIMO	16.07	19.43
802.11n HT40	NA	5270	Chain0	9.43	13.50
802.11n HT40	NA	5270	Chain1	12.59	15.09
802.11n HT40	NA	5270	MIMO	14.30	17.66
802.11n HT40	NA	5310	Chain0	10.04	14.11
802.11n HT40	NA	5310	Chain1	14.30	16.80
802.11n HT40	NA	5310	MIMO	15.68	19.04

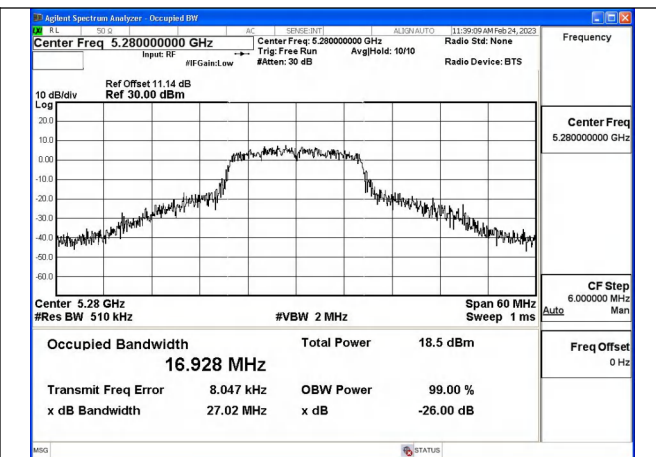
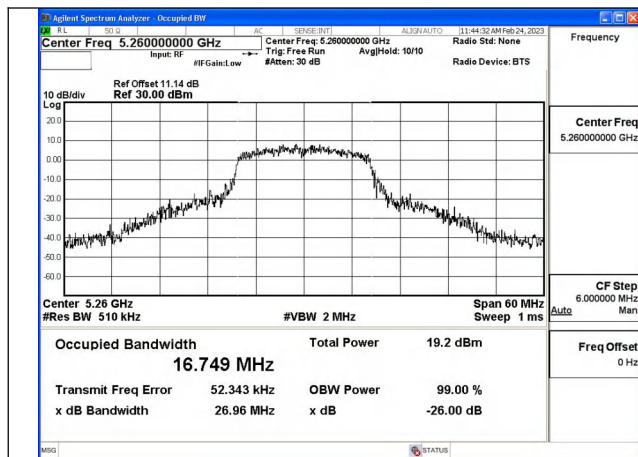
Emission Bandwidth

Offset 11.14dB = 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	26.96	27.02	20.01
802.11a	Chain1	20.27	20.23	19.84
802.11n HT20	Chain0	20.44	24.05	20.24
802.11n HT20	Chain1	20.57	20.35	20.07

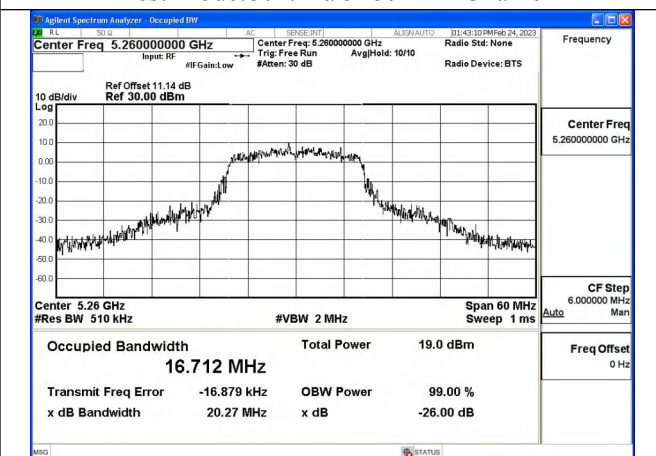
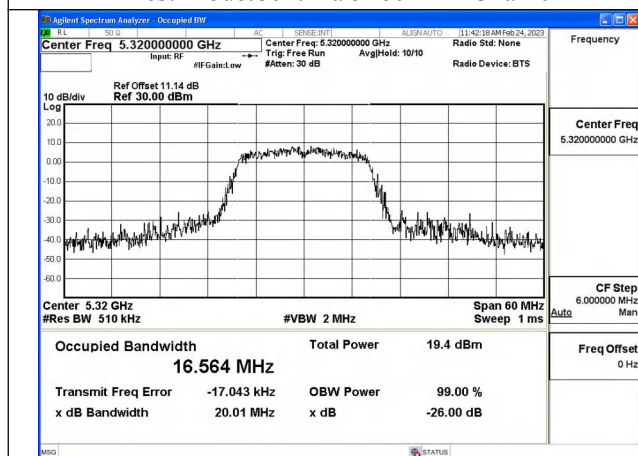
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	40.12	---	40.06
802.11n HT40	Chain1	40.96	---	40.61

Test Mode: 802.11a



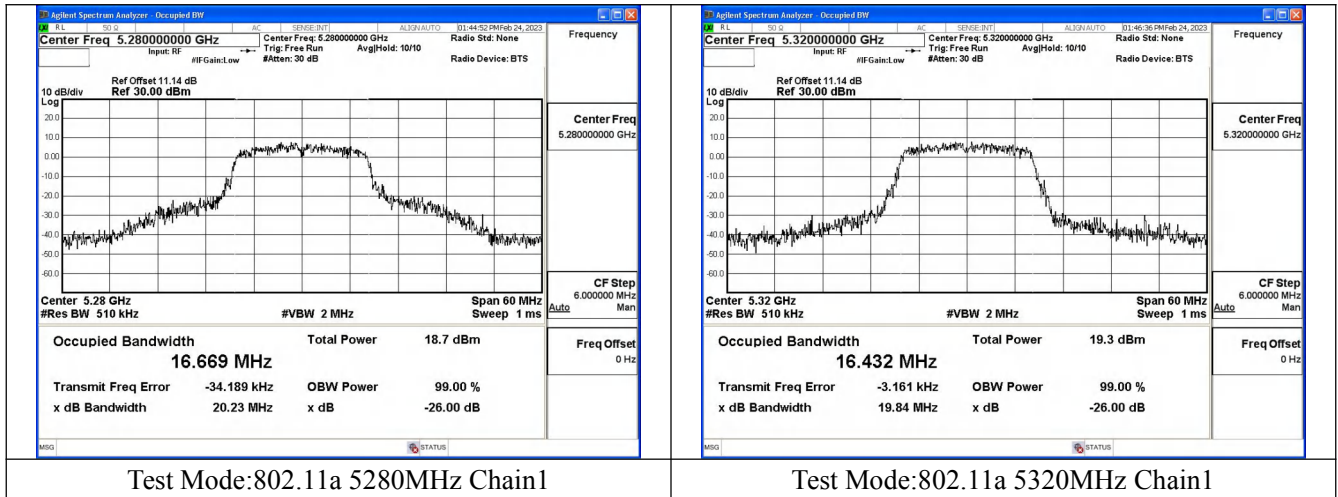
Test Mode:802.11a 5260MHz Chain0

Test Mode:802.11a 5280MHz Chain0

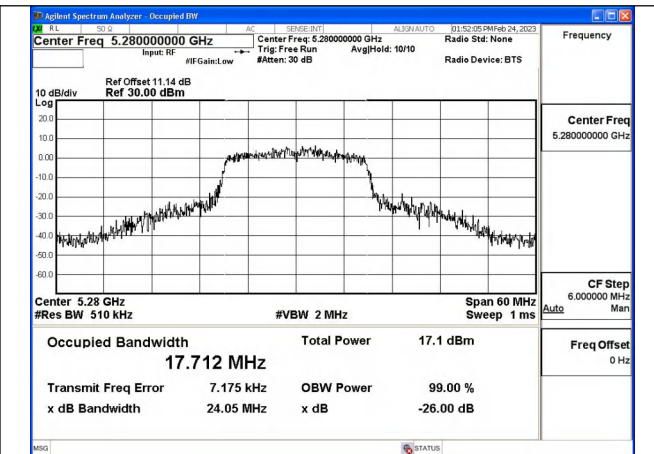
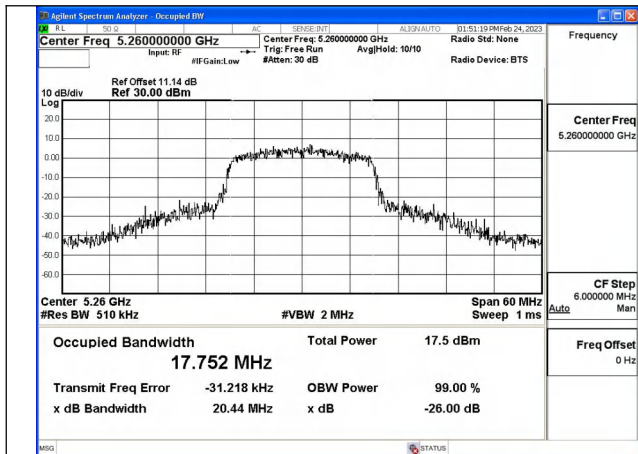


Test Mode:802.11a 5320MHz Chain0

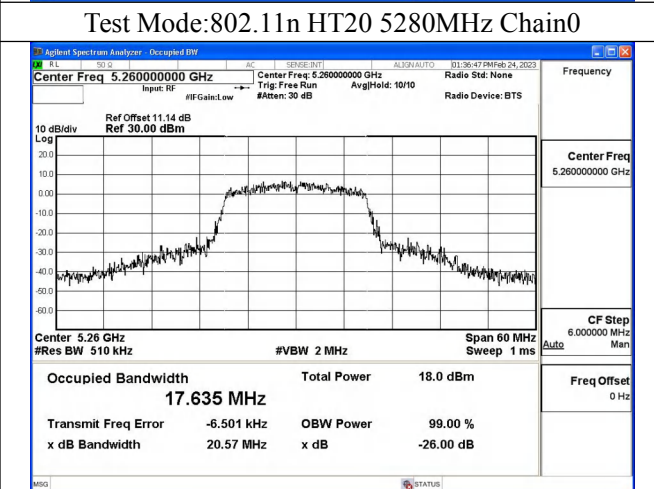
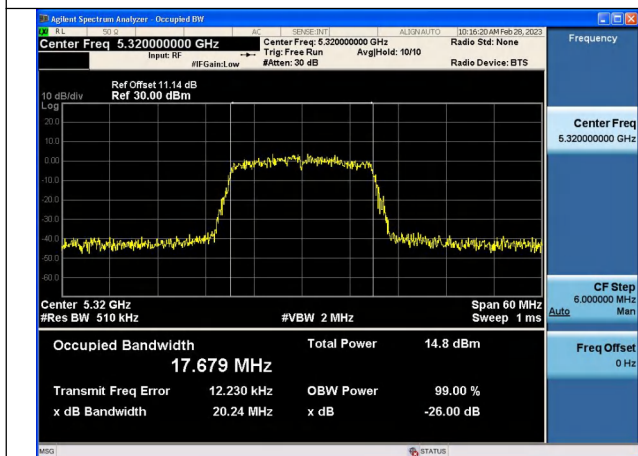
Test Mode:802.11a 5260MHz Chain1



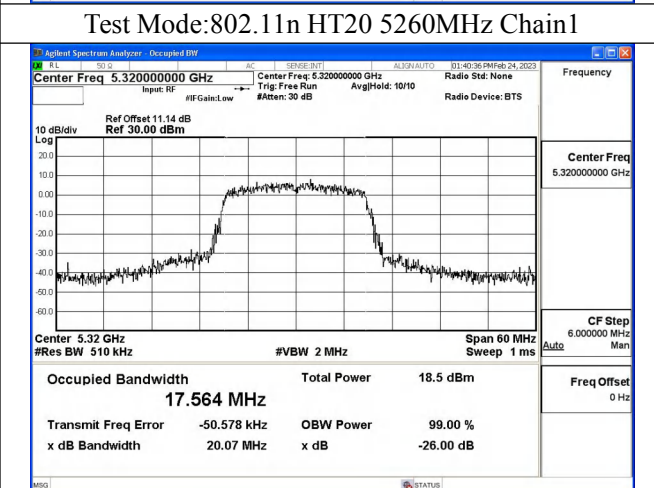
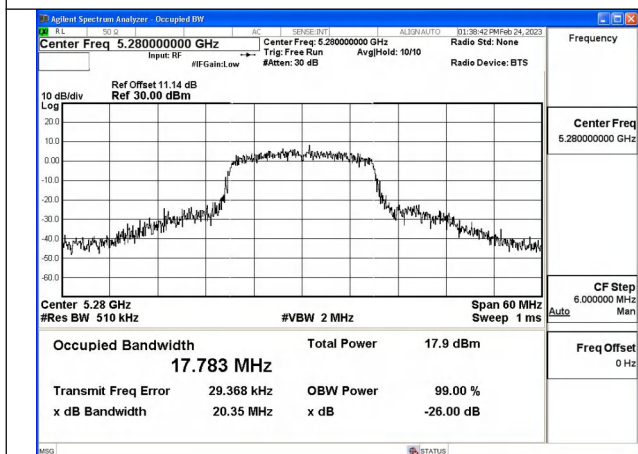
Test Mode: 802.11n HT20



Test Mode: 802.11n HT20 5260MHz Chain0



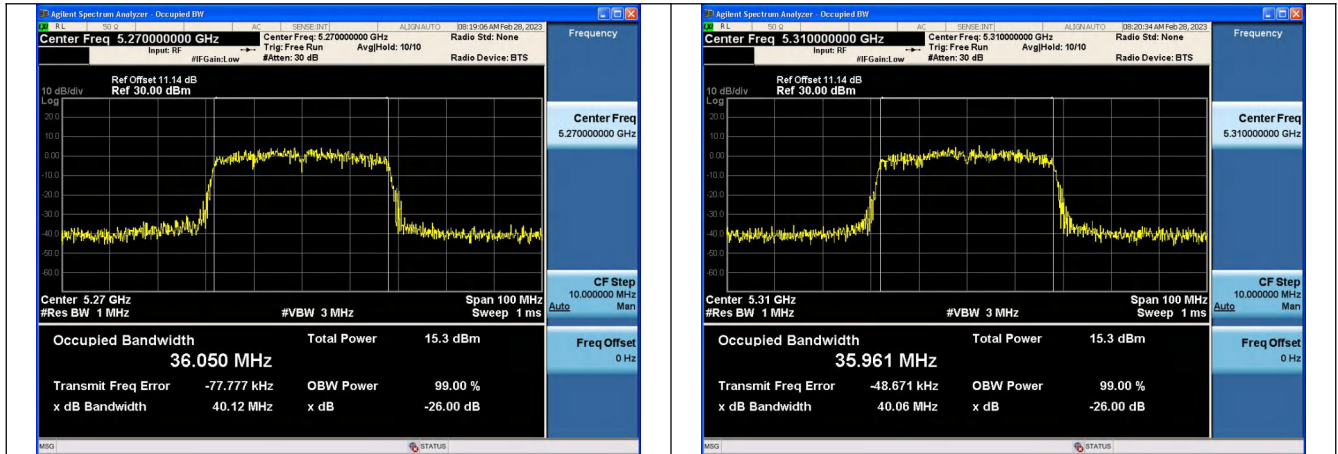
Test Mode: 802.11n HT20 5320MHz Chain0



Test Mode: 802.11n HT20 5280MHz Chain1

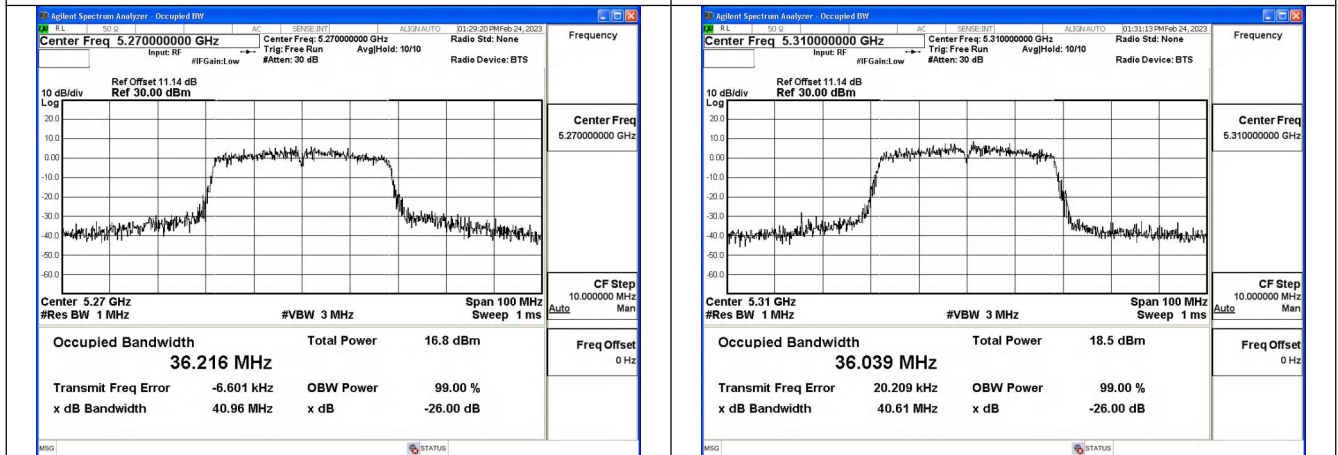
Test Mode: 802.11n HT20 5320MHz Chain1

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

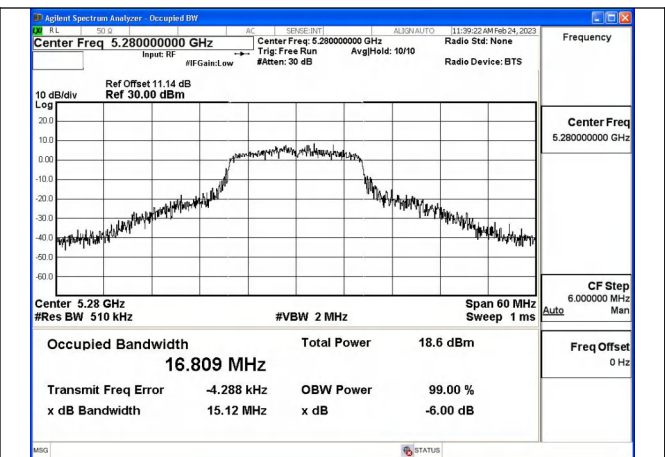
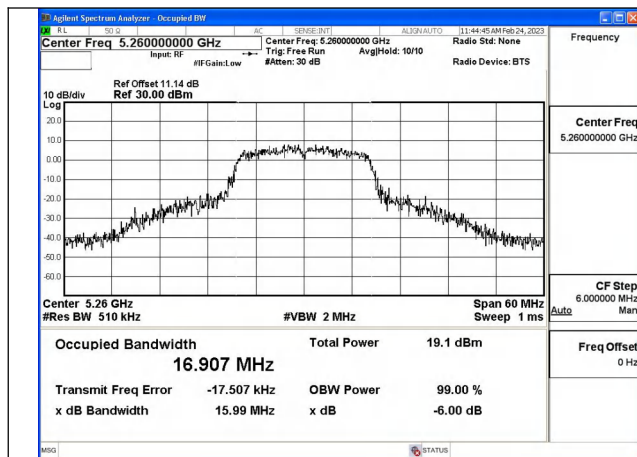
Occupied Bandwidth

Offset 11.14dB = 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	16.907	16.809	16.720
802.11a	Chain1	16.563	16.621	16.638
802.11n HT20	Chain0	17.691	17.780	17.664
802.11n HT20	Chain1	17.739	17.659	17.613

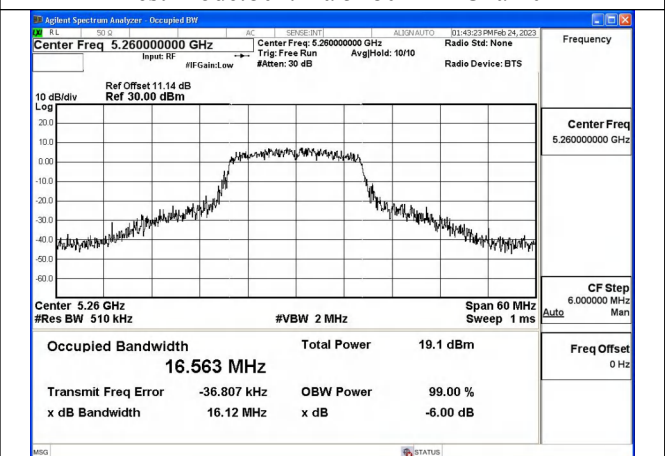
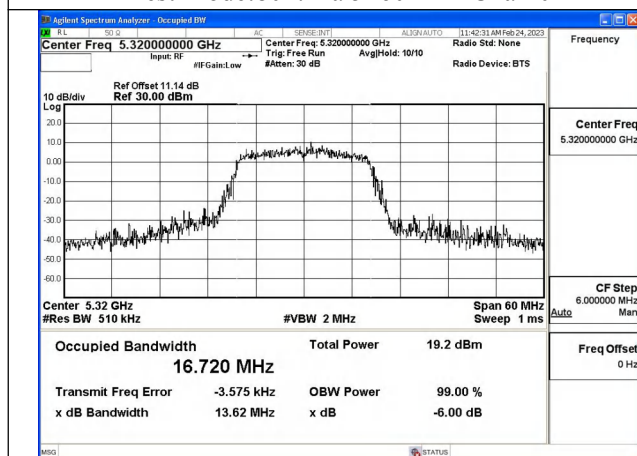
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	36.044	---	36.144
802.11n HT40	Chain1	36.136	---	36.099

Test Mode: 802.11a



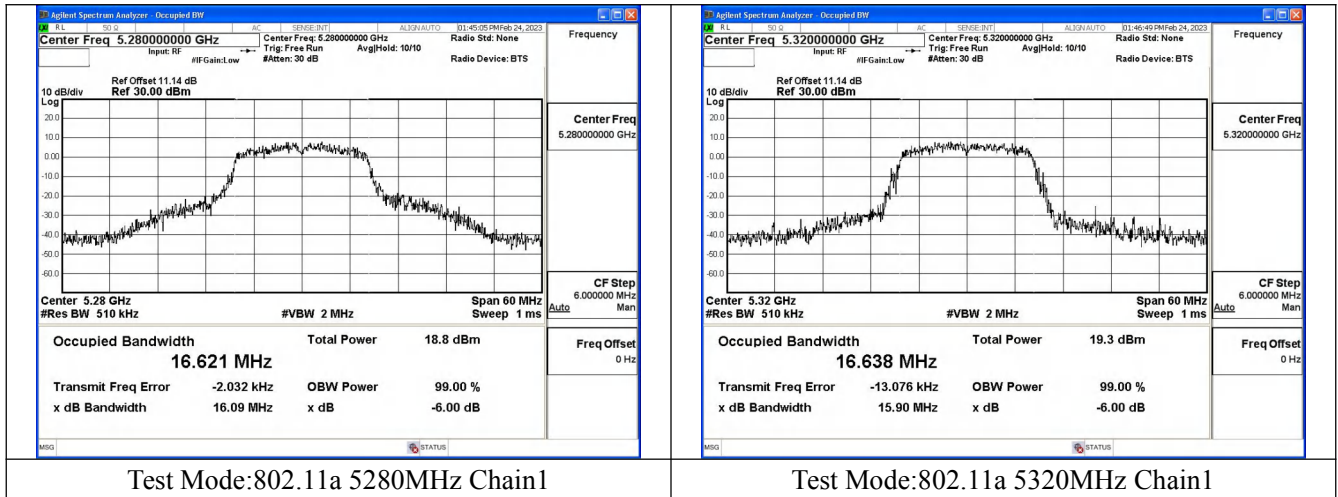
Test Mode:802.11a 5260MHz Chain0

Test Mode:802.11a 5280MHz Chain0

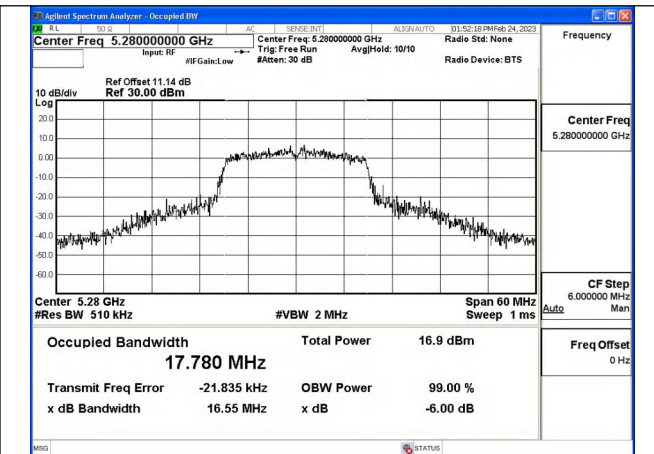
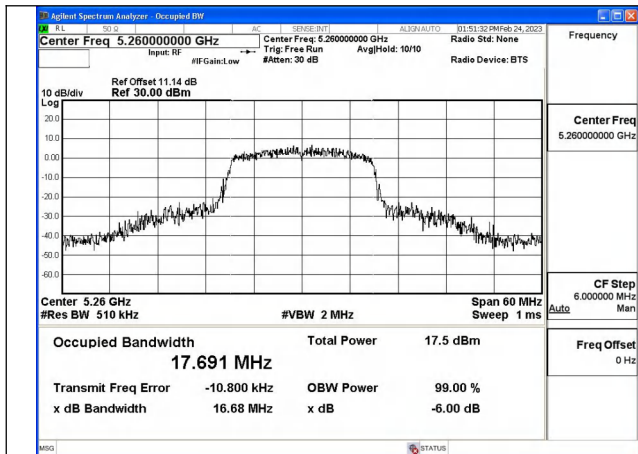


Test Mode:802.11a 5320MHz Chain0

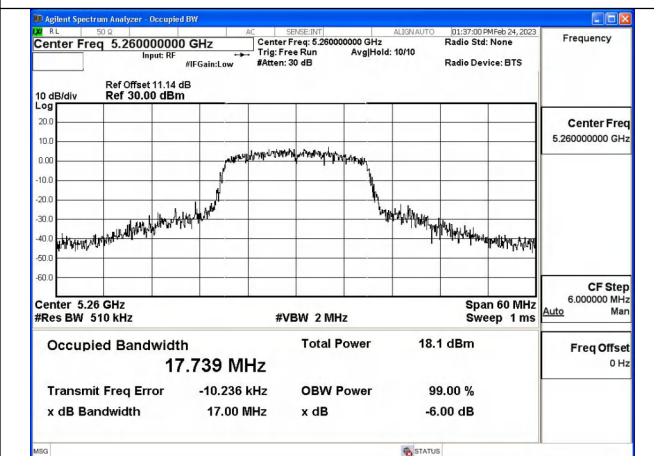
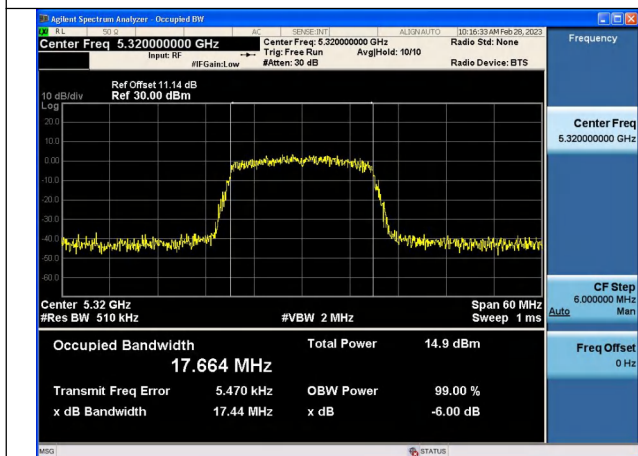
Test Mode:802.11a 5260MHz Chain1



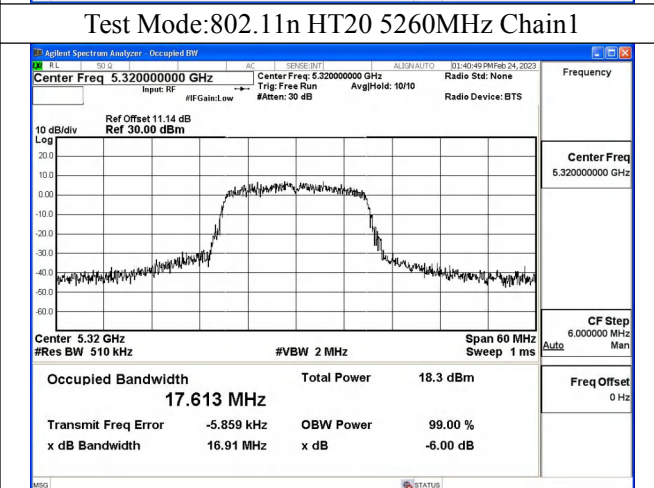
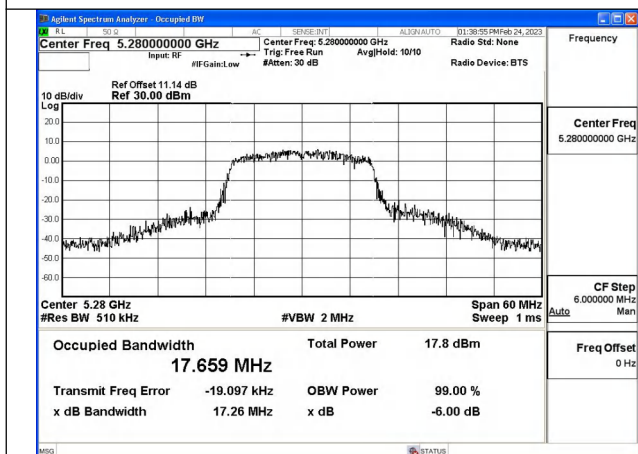
Test Mode: 802.11n HT20



Test Mode: 802.11n HT20 5260MHz Chain0



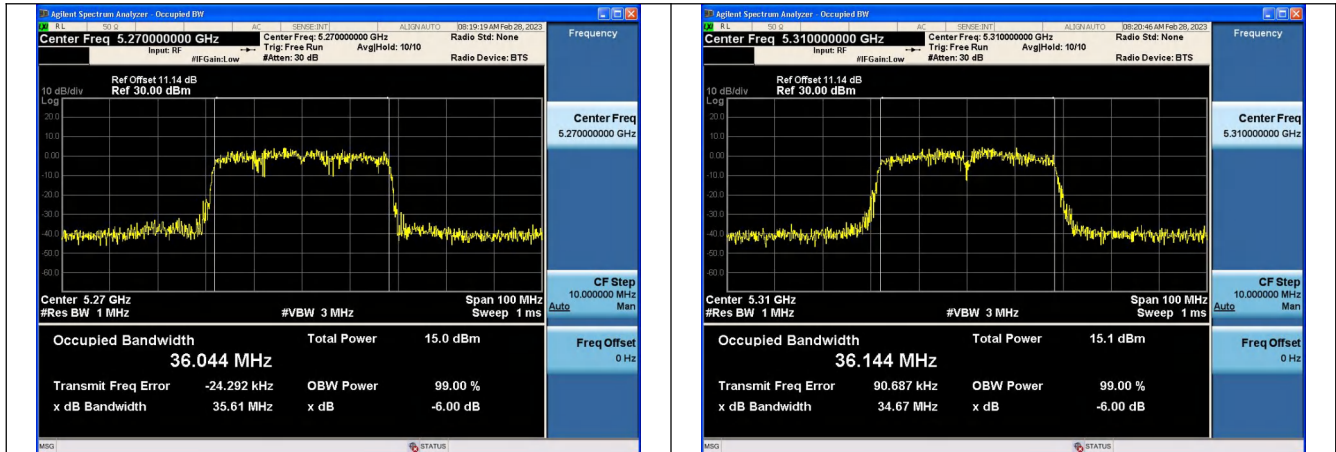
Test Mode: 802.11n HT20 5320MHz Chain0



Test Mode: 802.11n HT20 5280MHz Chain1

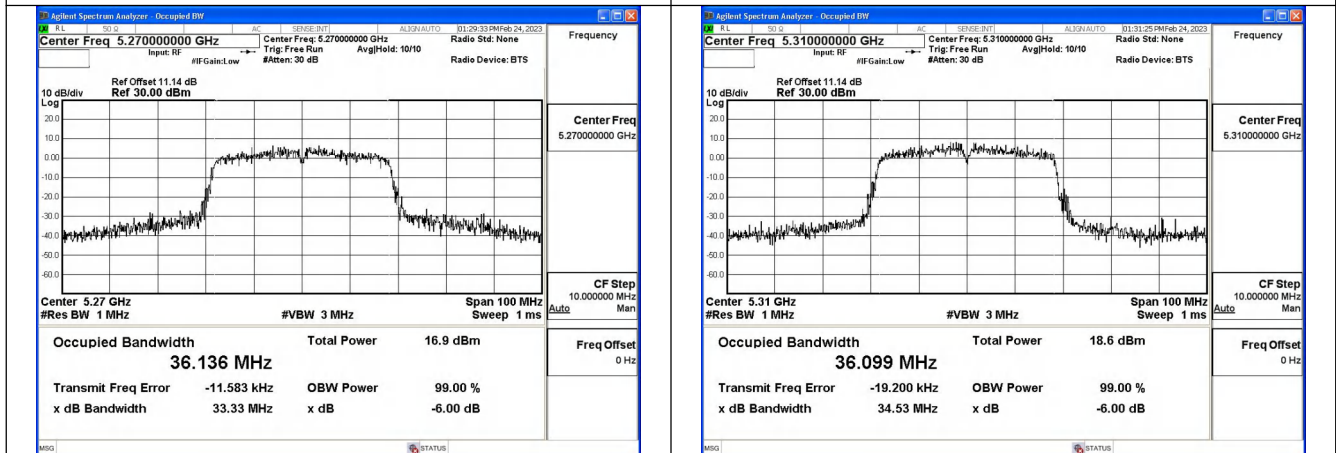
Test Mode: 802.11n HT20 5320MHz Chain1

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

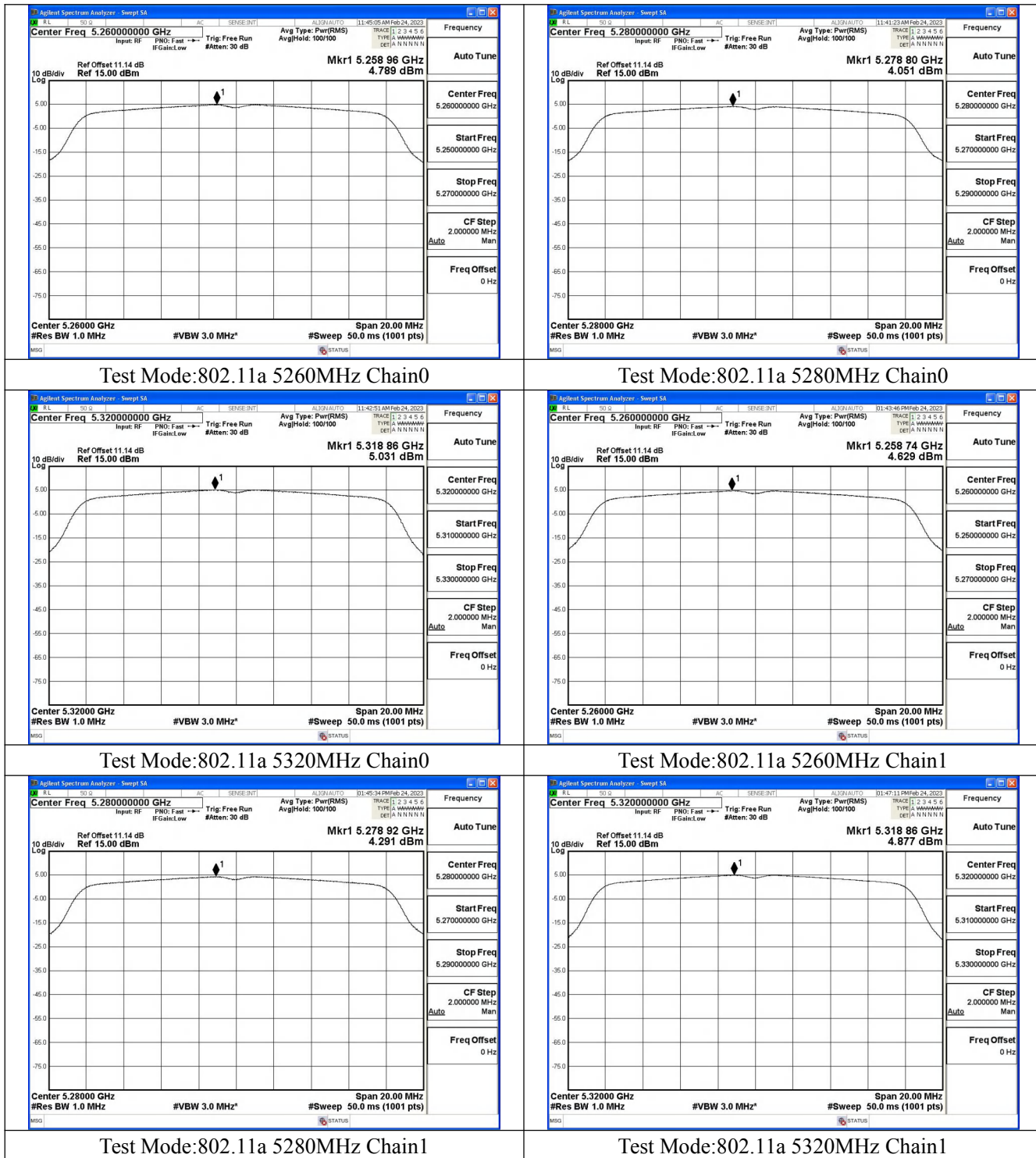
Transmitter Power Spectral Density

Offset 11.14dB = Attenuator + Temporary antenna connector loss + Cable loss

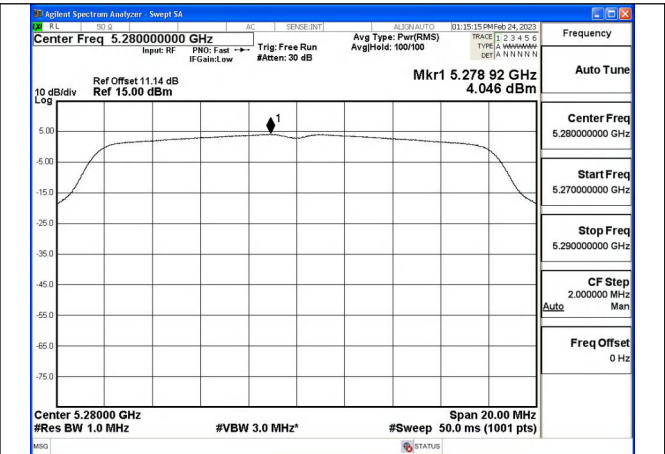
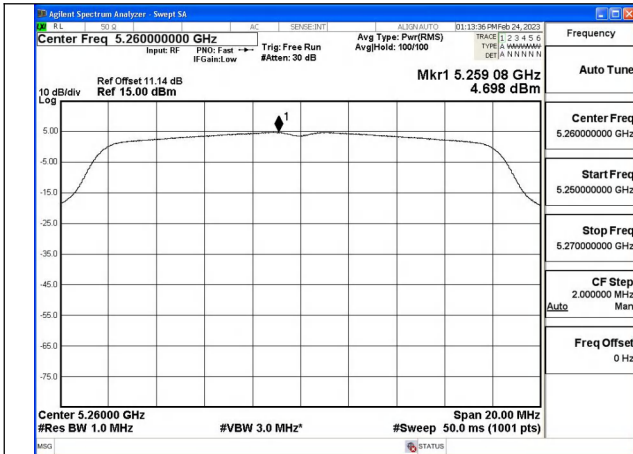
Test Mode	Antenna	Tones	5260MHz		5280MHz		5320MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11a	Chain0	NA	0	4.789	---	4.051	---	5.031
802.11a	Chain1	NA	0	4.629	---	4.291	---	4.877
802.11n HT20	Chain0	NA	0	4.698	---	4.046	---	4.967
802.11n HT20	Chain1	NA	0	3.594	---	3.148	---	3.685
802.11n HT20	MIMO	NA	0	7.191	---	6.630	---	7.383

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	0.391	---	---	---	0.542
802.11n HT40	Chain1	NA	0	-1.198	---	---	---	0.702
802.11n HT40	MIMO	NA	0	2.679	---	---	---	3.633

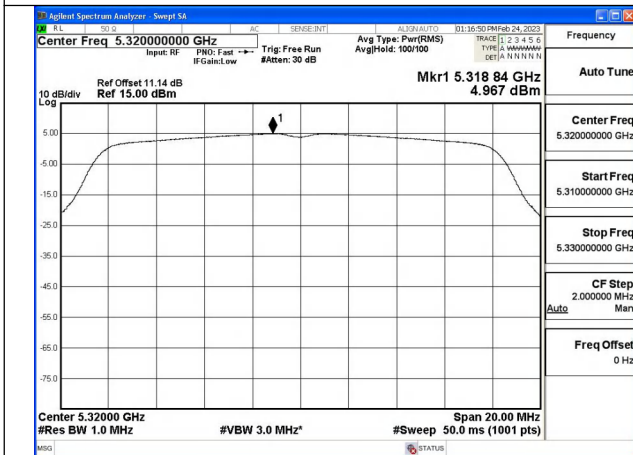
Test Mode: 802.11a



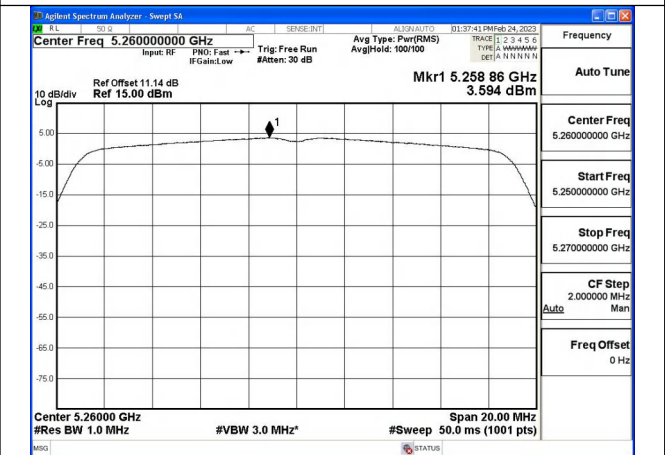
Test Mode: 802.11n HT20



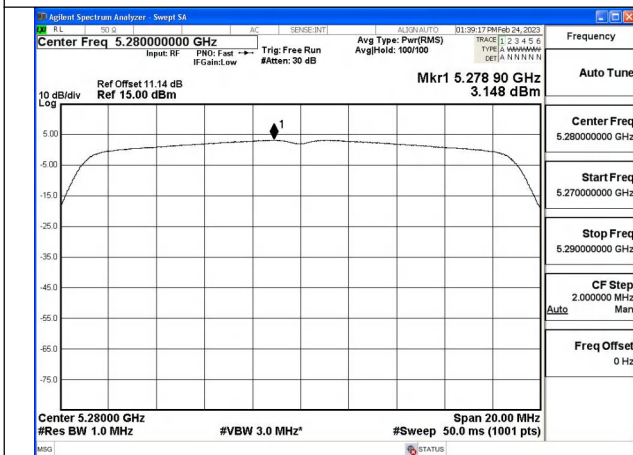
Test Mode:802.11n HT20 5260MHz Chain0



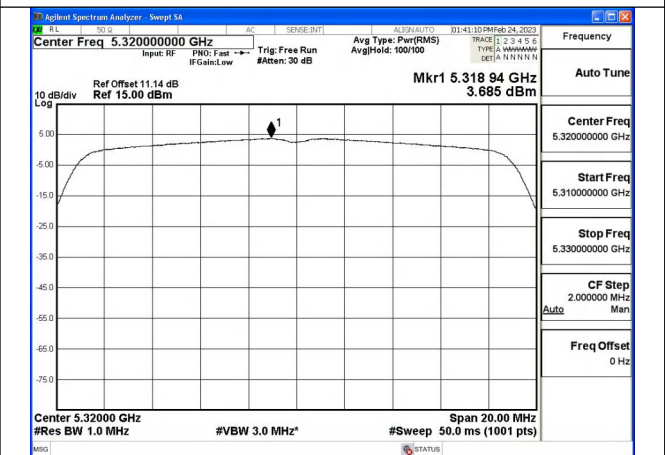
Test Mode:802.11n HT20 5280MHz Chain0



Test Mode:802.11n HT20 5320MHz Chain0



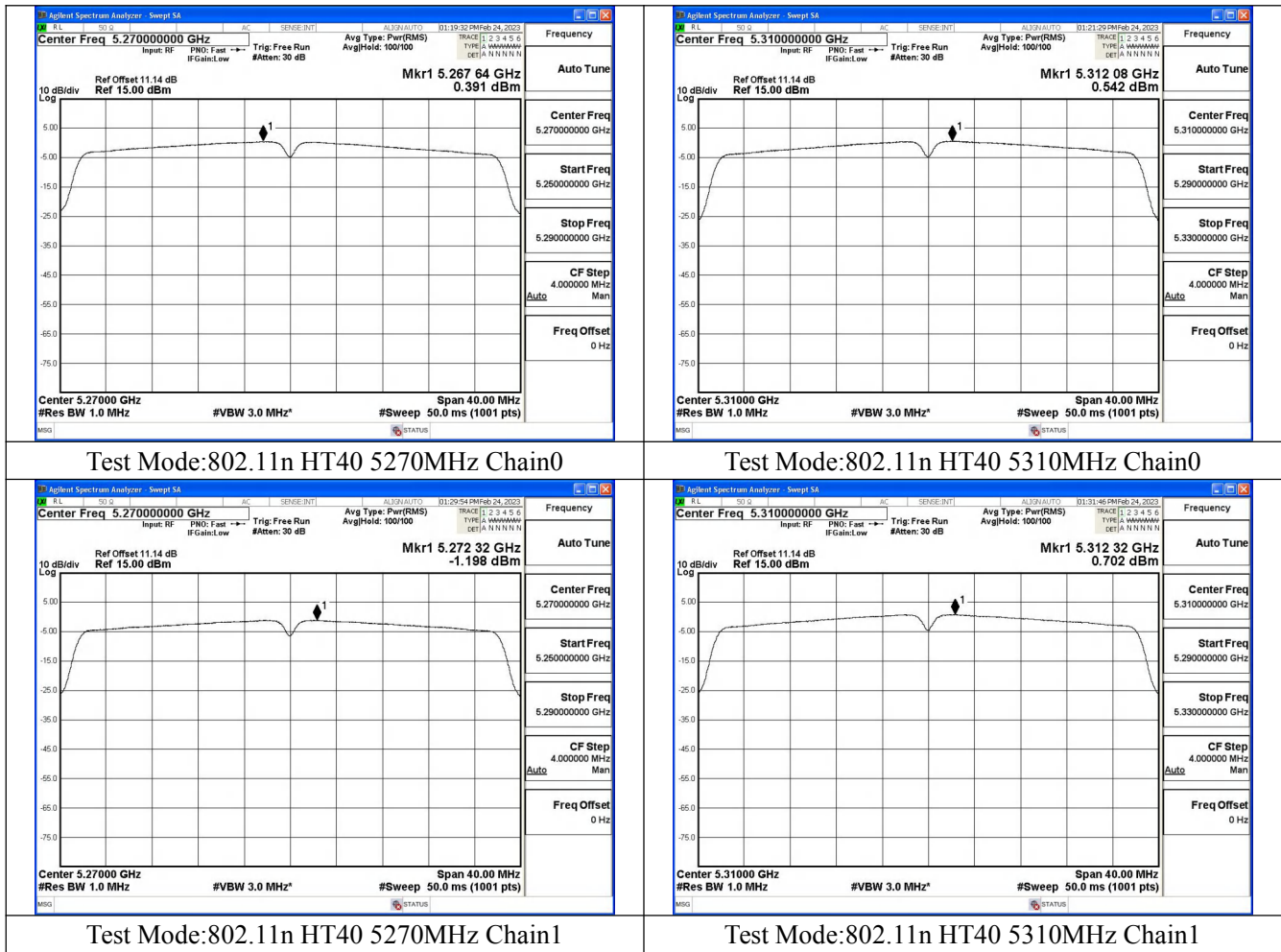
Test Mode:802.11n HT20 5260MHz Chain1



Test Mode:802.11n HT20 5280MHz Chain1

Test Mode:802.11n HT20 5320MHz Chain1

Test Mode: 802.11n HT40



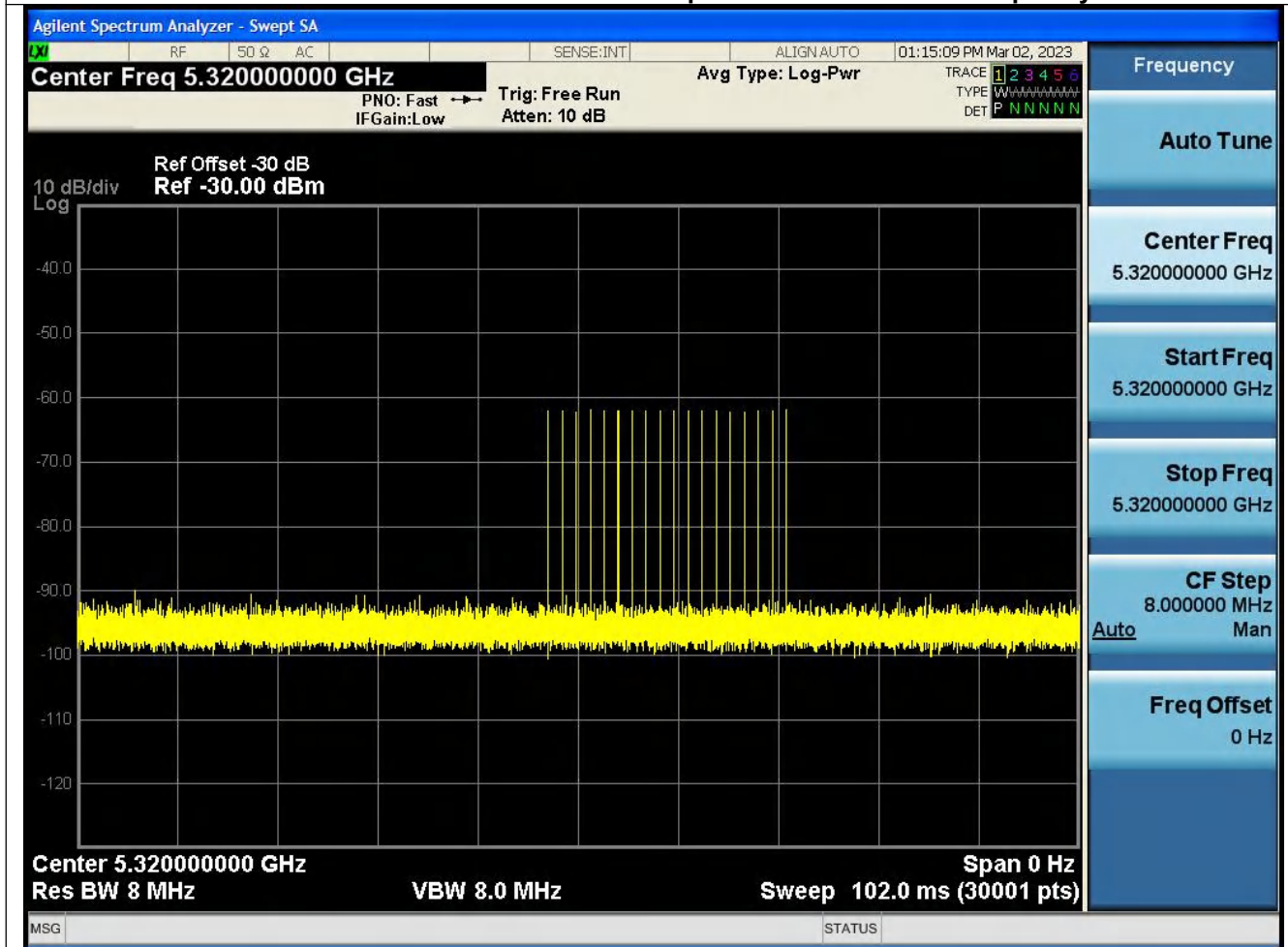
Dynamic Frequency Selection DESCRIPTION OF Master Device

The Master Device is a SKSpruce Technologies Co., Ltd., Indoor Access Point, FCC ID: 2AHKT-WIA3300-20. The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is $-64+4.07(\text{ant gain}) = -59.93 \text{ dBm}$

Radar Waveform Calibration Result

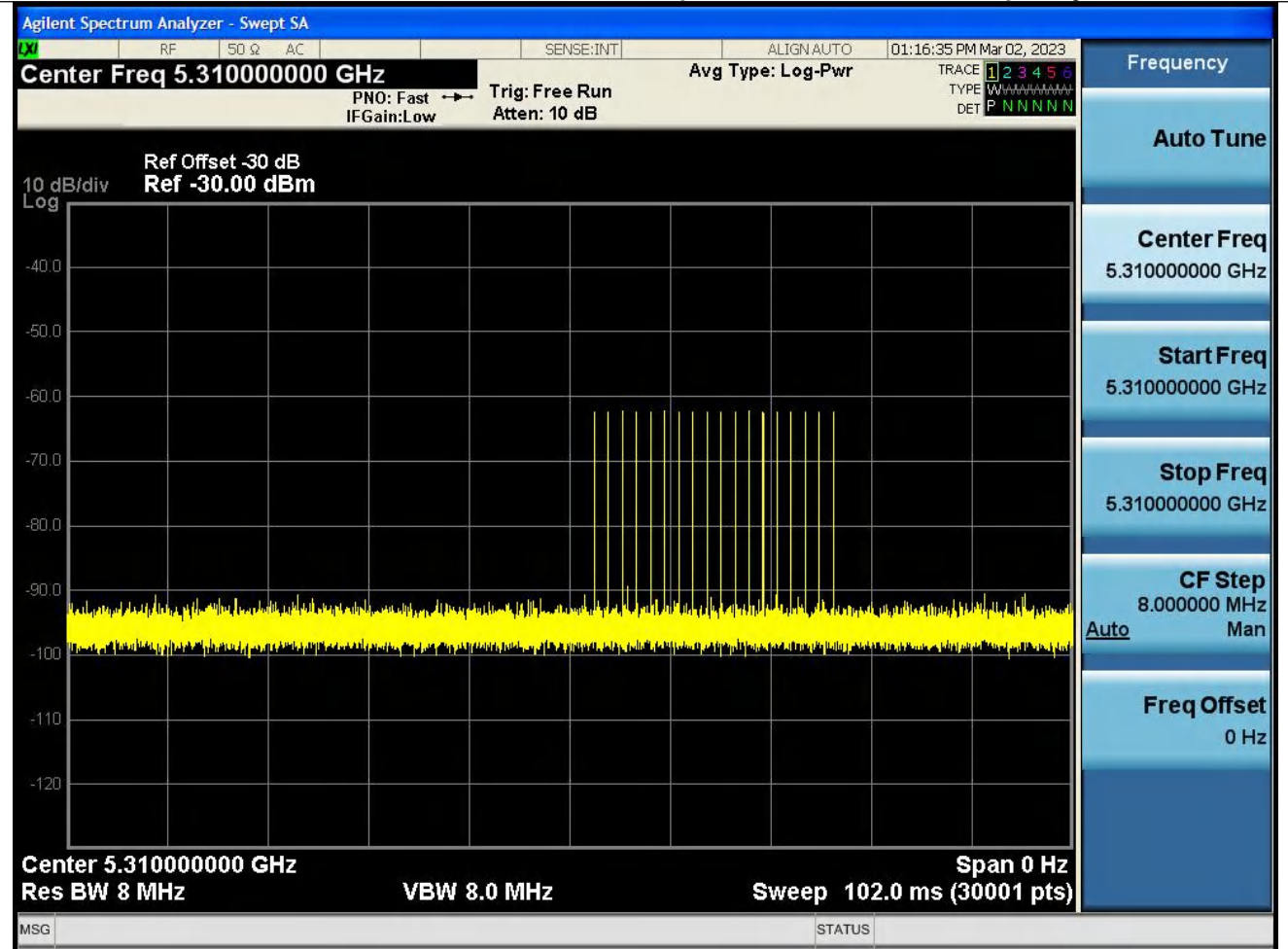
<20MHz / 5320 MHz> Radar Type 0

Radar / DFS detection threshold level and the burst of pulses on the Channel frequency

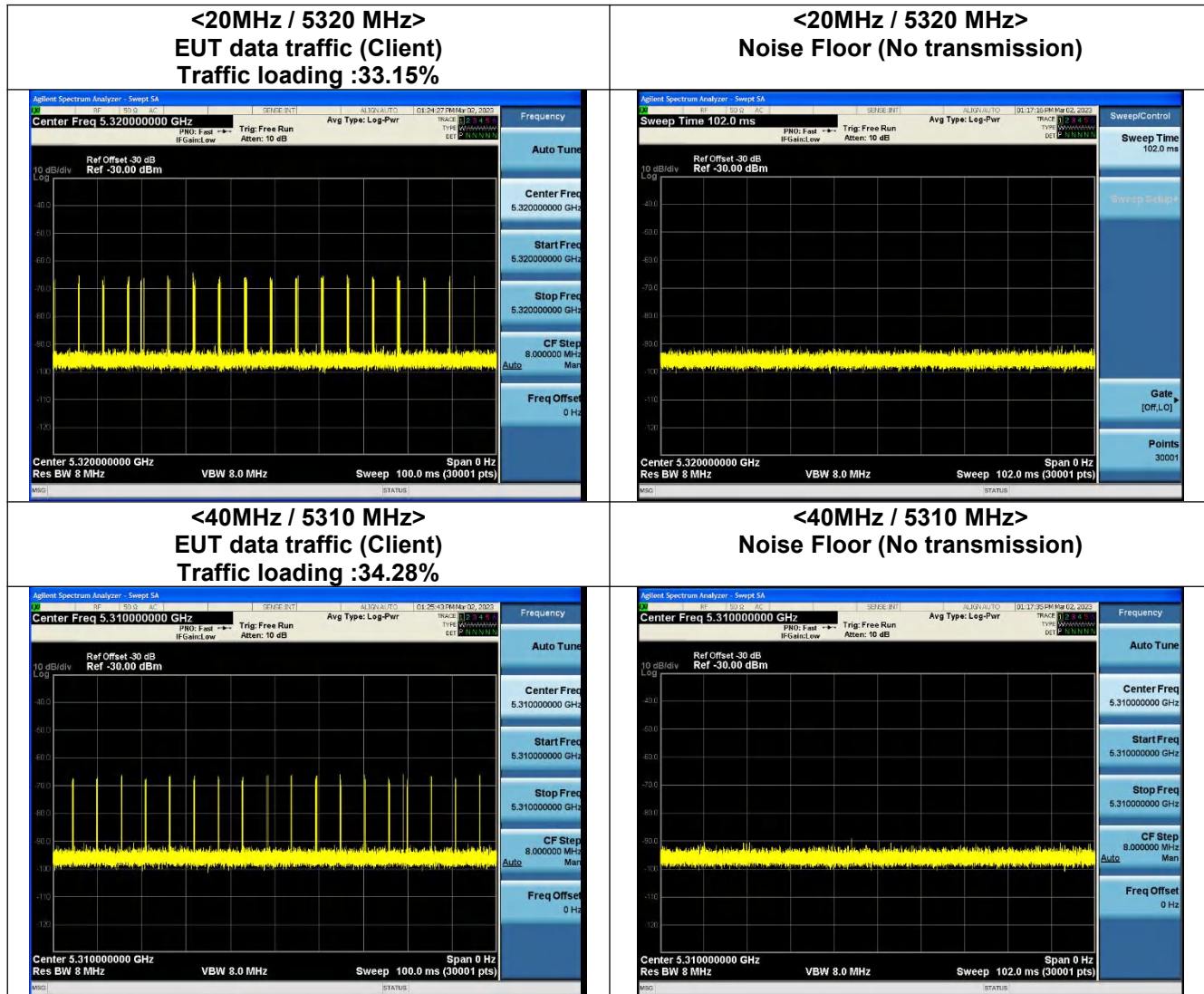


<40MHz / 5310 MHz> Radar Type 0

Radar / DFS detection threshold level and the burst of pulses on the Channel frequency



Data Traffic and Noise Floor Plots



Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period for Client Beacon Test

Frequency	Test Item	Test Result	Limit	Pass/Fail
5300MHz	Channel Move Time	< 10s*	< 10s	Pass
	Channel Closing Transmission Time	200ms	< 260ms	Pass
	Non-Occupancy Period	≥ 30	≥ 30 min	Pass
5310MHz	Channel Move Time	< 10s*	< 10s	Pass
	Channel Closing Transmission Time	202.8ms	< 260ms	Pass
	Non-Occupancy Period	≥ 30	≥ 30 min	Pass

Note*: We notice clearly that “Channel Move Time” is less than 10s from the figure.
The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.

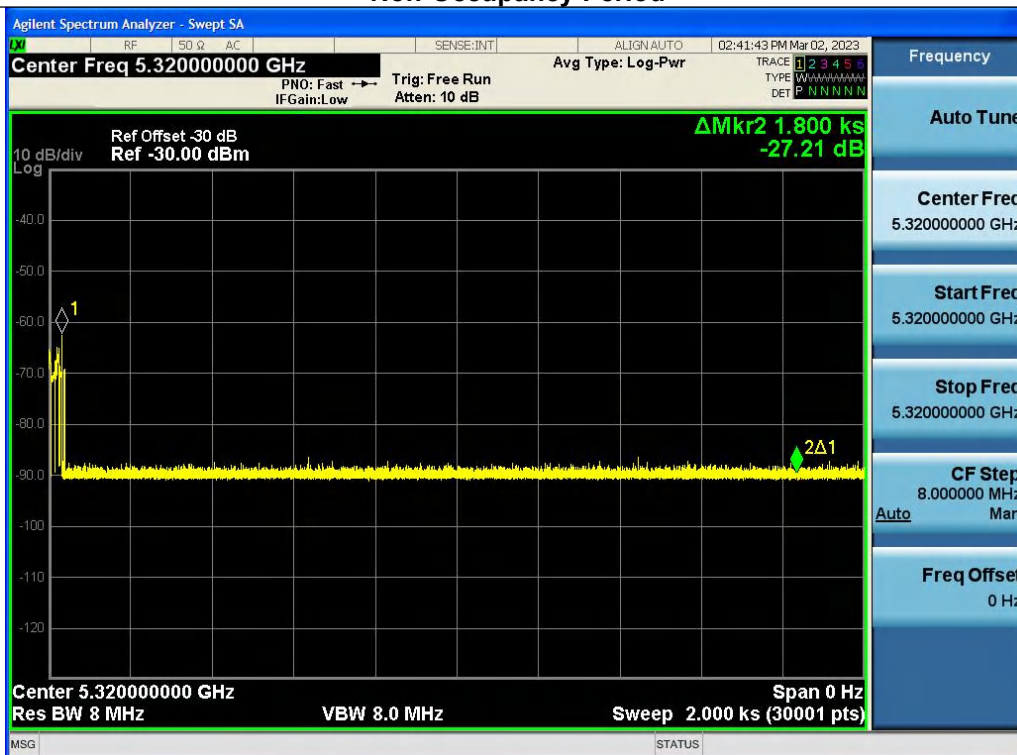
Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period for Client Beacon Test Plots

<20MHz / 5320 MHz>

Channel Move Time & Channel Closing Transmission Time



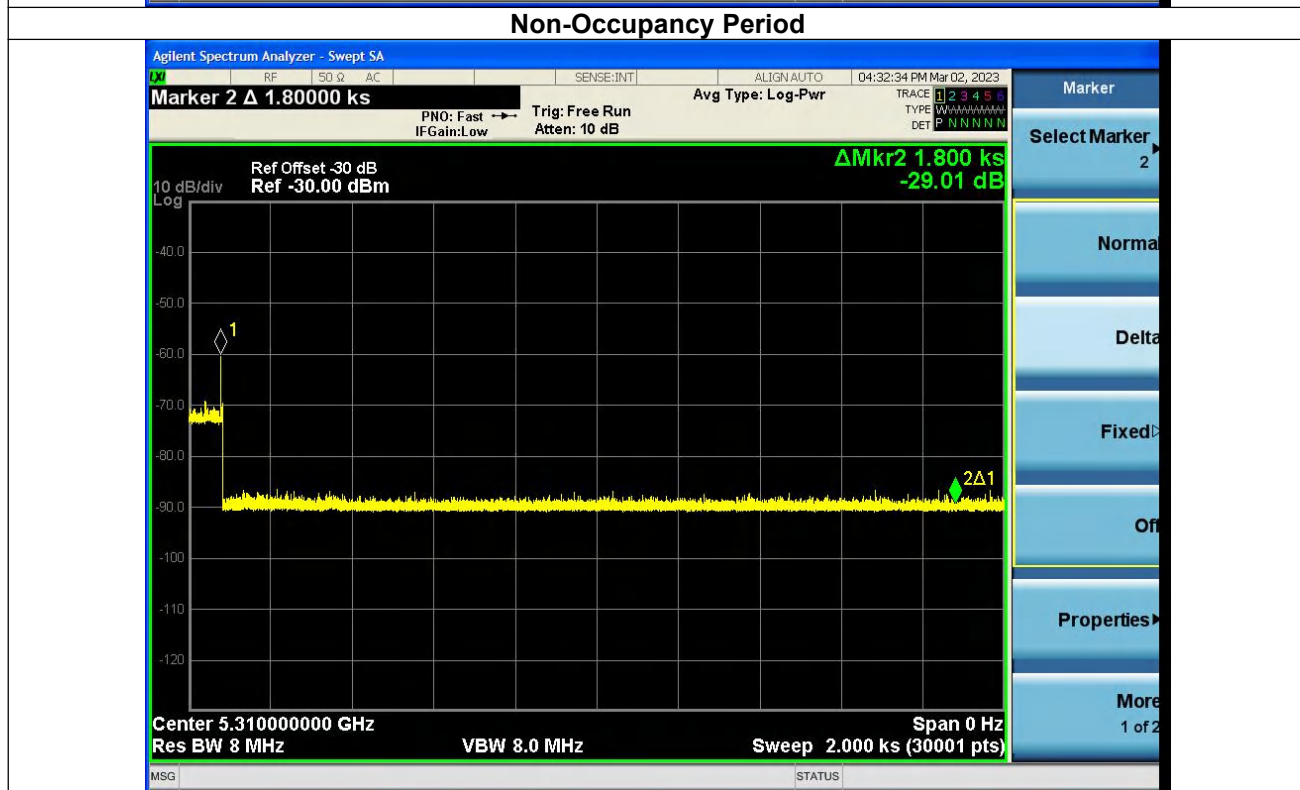
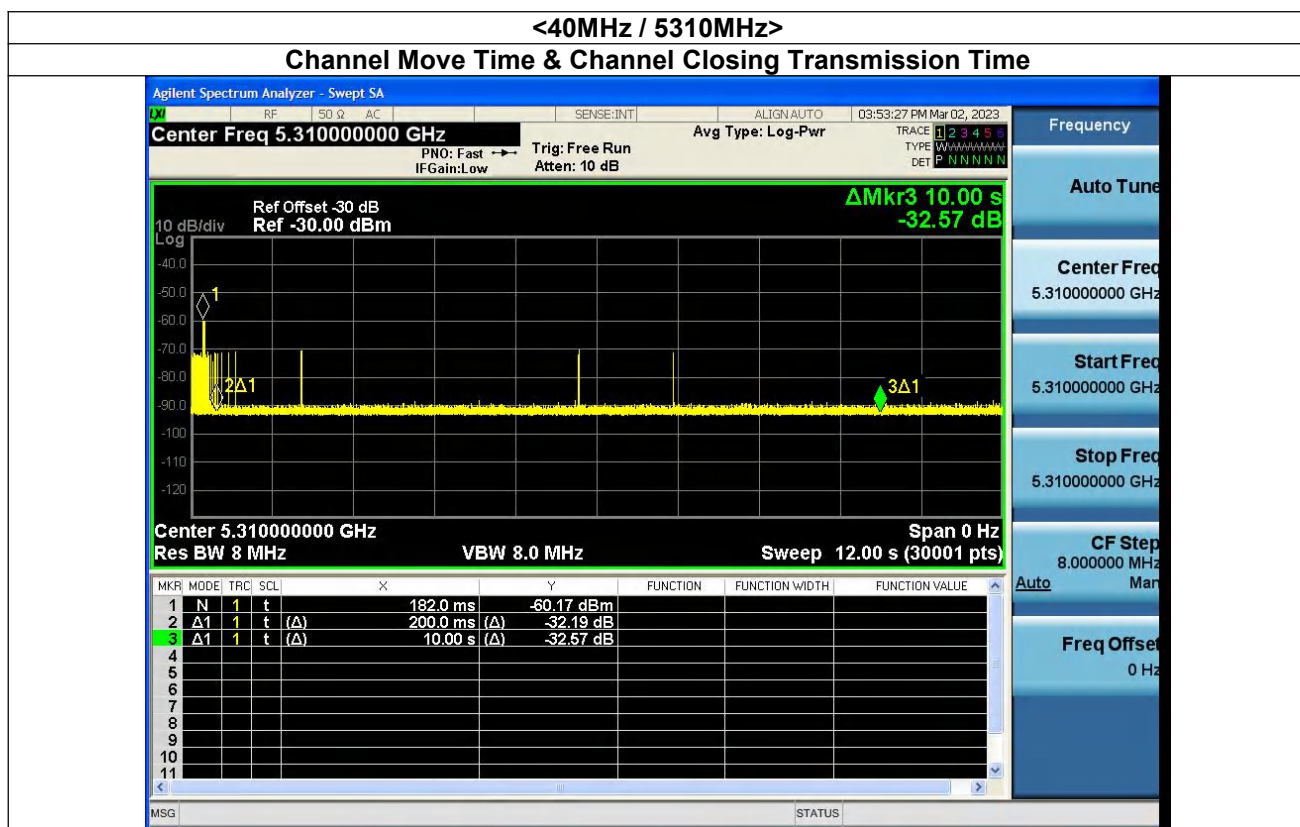
Non-Occupancy Period



Note:

Dwell (0.4 ms) = Sweep Time (12000 ms) / Sweep Point Bins (30000)

Channel Closing Transmission Time (200 + 0 ms) = 200 + Number of beacon after 200ms(0) X Dwell (0.4 ms) < 260ms



Note:

$$\text{Dwell (0.4 ms)} = \text{Sweep Time (12000 ms)} / \text{Sweep Point Bins (30000)}$$

Channel Closing Transmission Time (200+2.8 ms) = 200 + Number of beacon after 200ms(7) X Dwell (0.4 ms) < 260ms