APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)
802.11a	5260	98.99%	0
802.11n HT20	5260	98.91%	0
802.11ac VHT20	5260	98.86%	0
802.11n HT40	5270	97.74%	0.10
802.11ac VHT40	5270	97.78%	0.10
802.11ac VHT80	5290	95.56%	0.20

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	11.18	10.78
802.11a	NA	5280	Chain0	11.28	10.88
802.11a	NA	5320	Chain0	11.39	10.99
802.11n HT20	NA	5260	Chain0	11.04	10.64
802.11n HT20	NA	5280	Chain0	11.13	10.73
802.11n HT20	NA	5320	Chain0	11.22	10.82
802.11ac VHT20	NA	5260	Chain0	11.03	10.63
802.11ac VHT20	NA	5280	Chain0	11.13	10.73
802.11ac VHT20	NA	5320	Chain0	11.24	10.84
802.11n HT40	NA	5270	Chain0	11.13	10.73
802.11n HT40	NA	5310	Chain0	11.32	10.92
802.11ac VHT40	NA	5270	Chain0	11.16	10.76
802.11ac VHT40	NA	5310	Chain0	11.30	10.90
802.11ac VHT80	NA	5290	Chain0	11.08	10.68

Emission Bandwidth

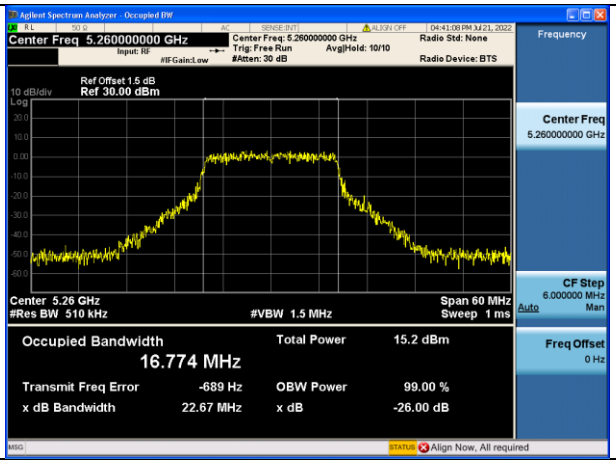
Offset 1.5dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.570	Channel No.574	Channel No.582
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	22.67	22.28	22.06
802.11n HT20	Chain0	24.03	24.02	23.12
802.11ac VHT20	Chain0	23.79	23.18	23.71

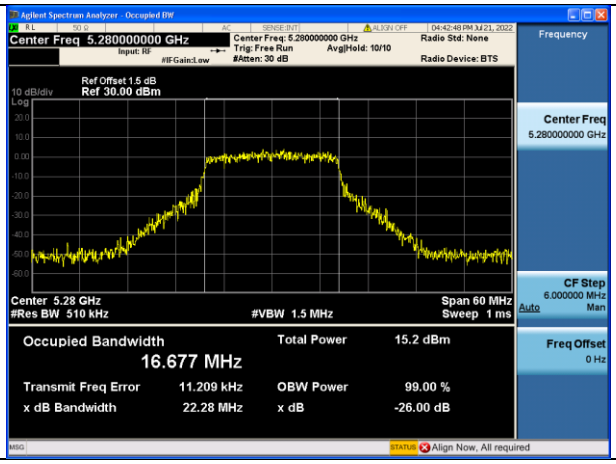
Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	41.55	---	40.57
802.11ac VHT40	Chain0	40.88	---	39.97

Test Mode	Antenna	26dB Bandwidth (MHz)		
		Channel No.576	---	---
		5290MHz	---	---
802.11ac VHT80	Chain0	82.62	---	---

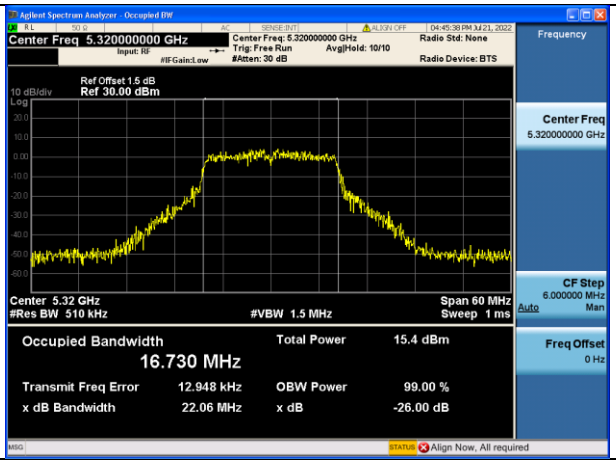
Test Mode: 802.11a



Test Mode:802.11a 5260MHz Chain0

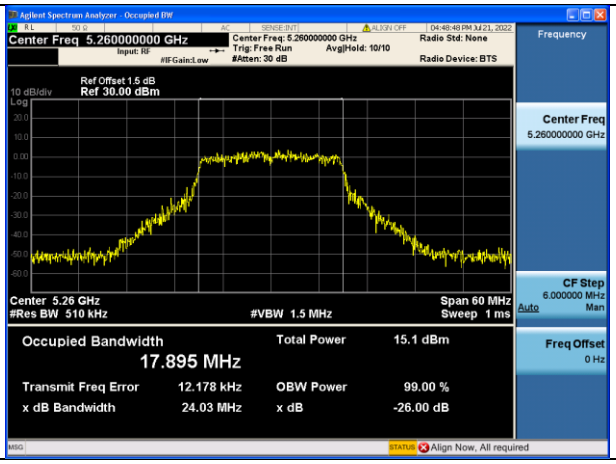


Test Mode:802.11a 5280MHz Chain0

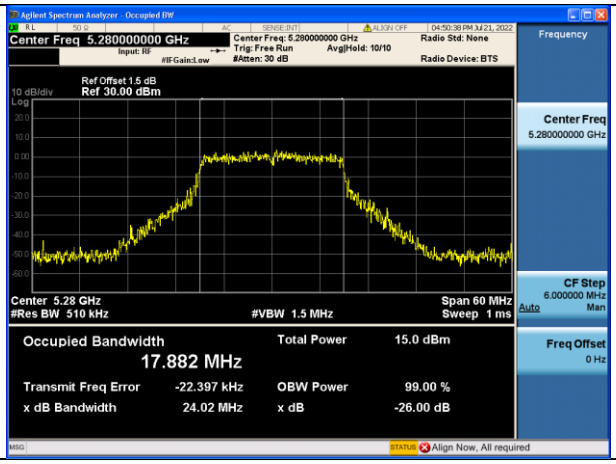


Test Mode:802.11a 5320MHz Chain0

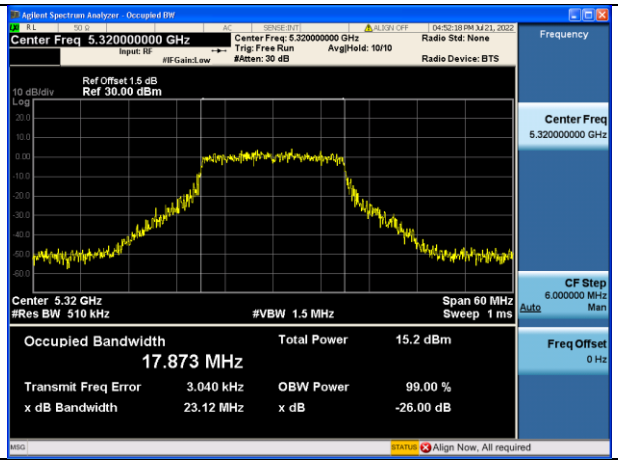
Test Mode: 802.11n HT20



Test Mode:802.11n HT20 5260MHz Chain0

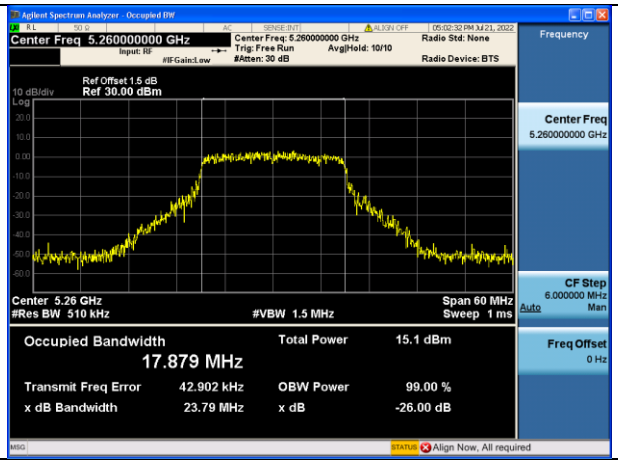


Test Mode:802.11n HT20 5280MHz Chain0

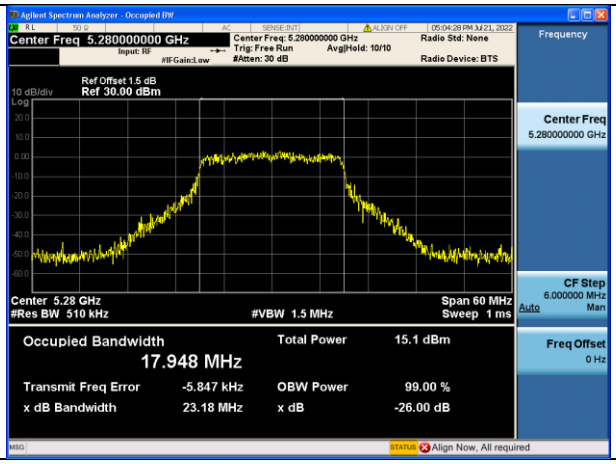


Test Mode:802.11n HT20 5320MHz Chain0

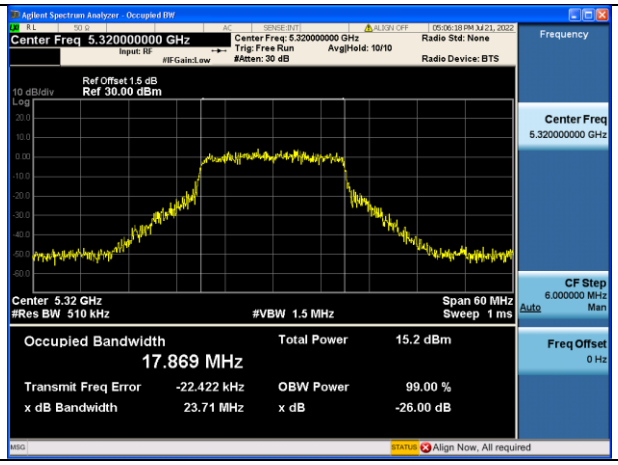
Test Mode: 802.11ac VHT20



Test Mode:802.11ac VHT20 5260MHz Chain0

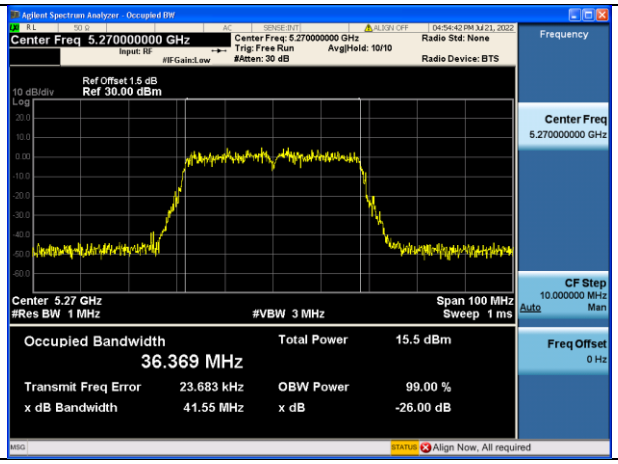
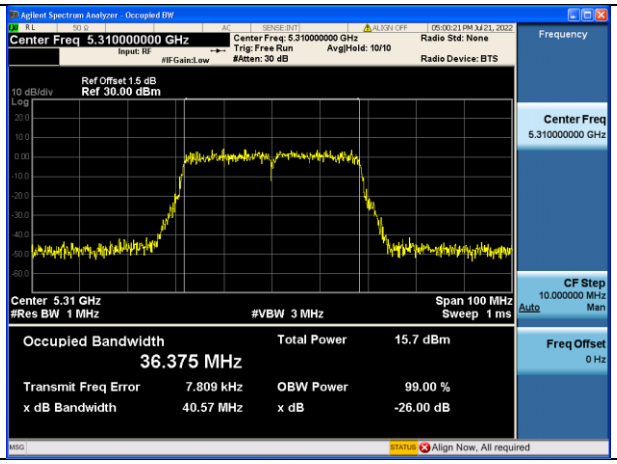


Test Mode:802.11ac VHT20 5280MHz Chain0

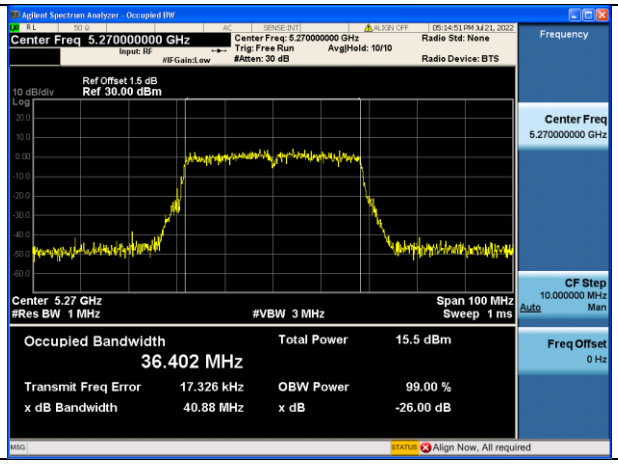
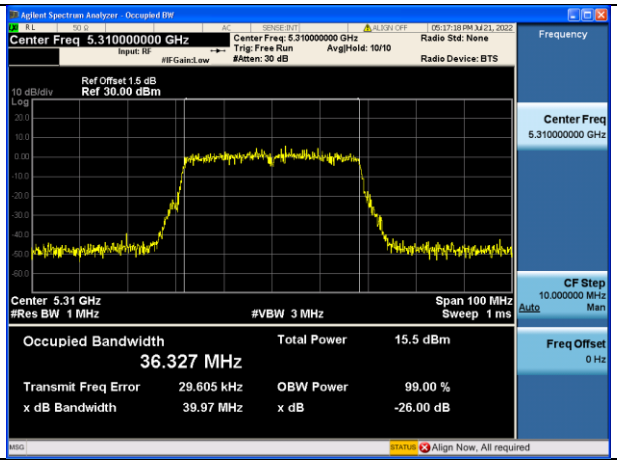


Test Mode:802.11ac VHT20 5320MHz Chain0

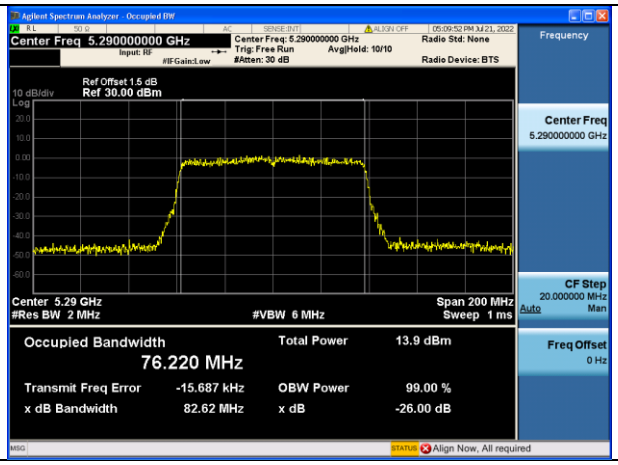
Test Mode: 802.11n HT40

	
Test Mode:802.11n HT40 5270MHz Chain0	Test Mode:802.11n HT40 5310MHz Chain0

Test Mode: 802.11ac VHT40

	
Test Mode:802.11ac VHT40 5270MHz Chain0	Test Mode:802.11ac VHT40 5310MHz Chain0

Test Mode: 802.11ac VHT80

	
Test Mode:802.11ac VHT80 5290MHz Chain0	

Occupied Bandwidth

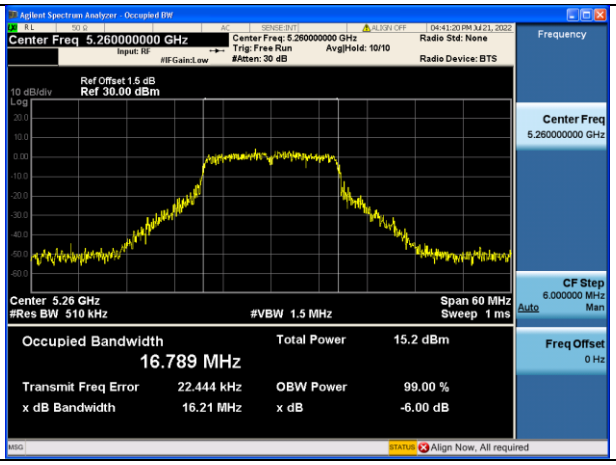
Offset 1.5dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.570	Channel No.574	Channel No.582
		5260MHz	5280MHz	5320MHz
802.11a	Chain0	16.789	16.765	16.756
802.11n HT20	Chain0	17.965	17.836	17.881
802.11ac VHT20	Chain0	17.932	17.854	17.945

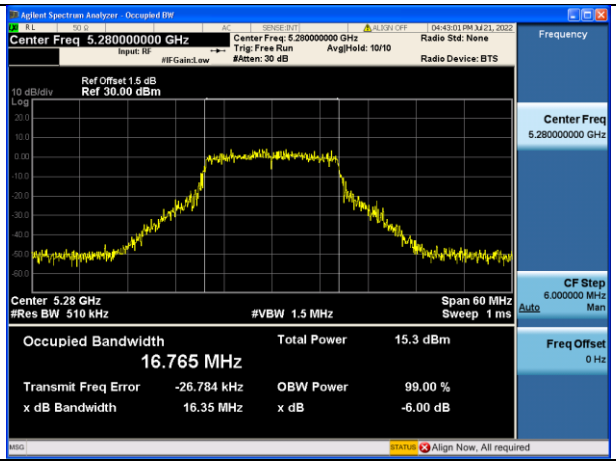
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.572	---	Channel No.580
		5270MHz	---	5310MHz
802.11n HT40	Chain0	36.426	---	36.316
802.11ac VHT40	Chain0	36.447	---	36.486

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		Channel No.576	---	---
		5290MHz	---	---
802.11ac VHT80	Chain0	76.216	---	---

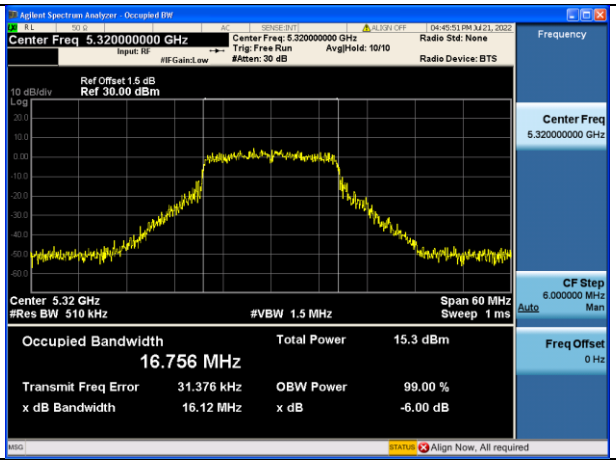
Test Mode: 802.11a



Test Mode:802.11a 5260MHz Chain0

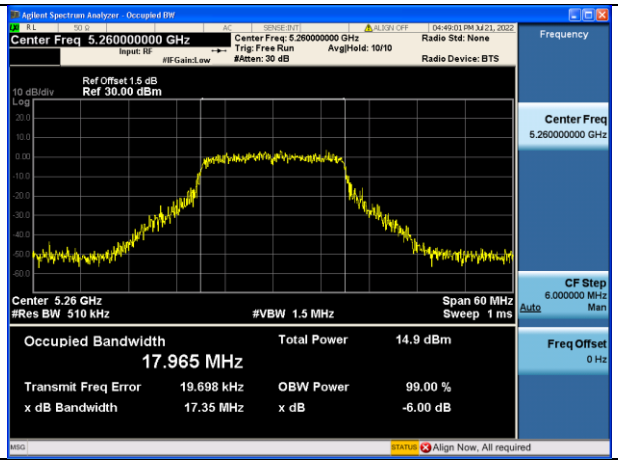


Test Mode:802.11a 5280MHz Chain0

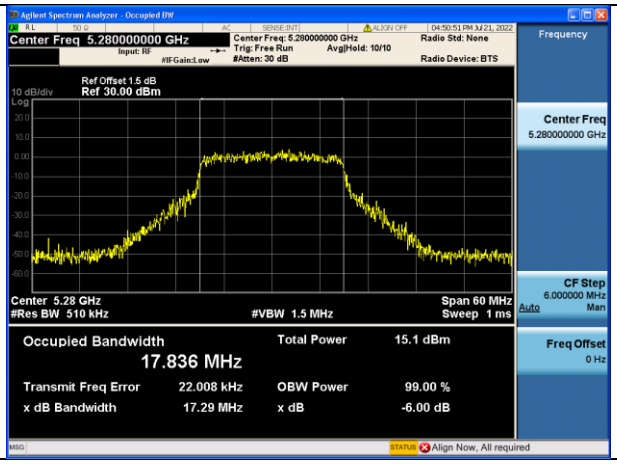


Test Mode:802.11a 5320MHz Chain0

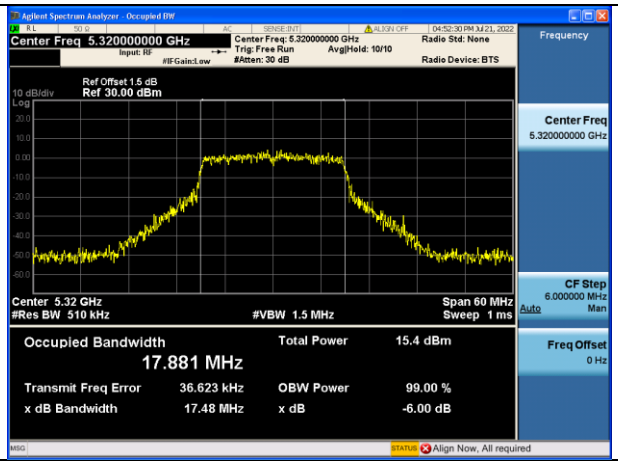
Test Mode: 802.11n HT20



Test Mode:802.11n HT20 5260MHz Chain0

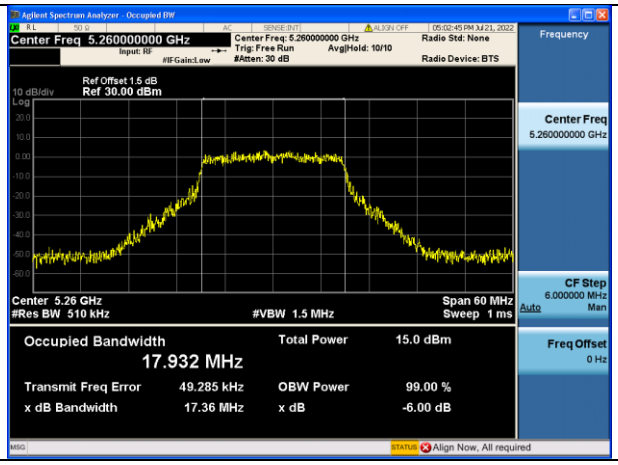


Test Mode:802.11n HT20 5280MHz Chain0

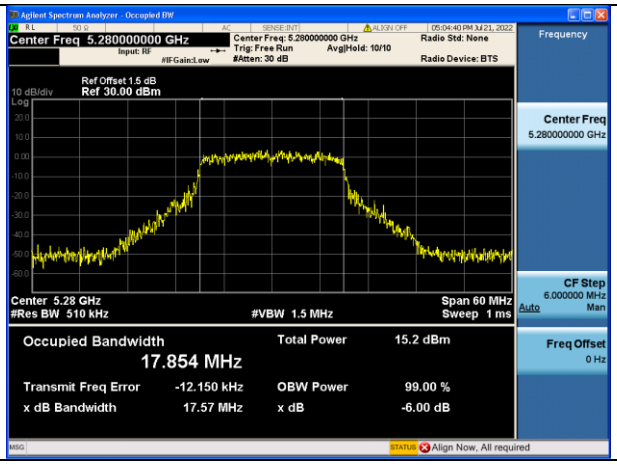


Test Mode:802.11n HT20 5320MHz Chain0

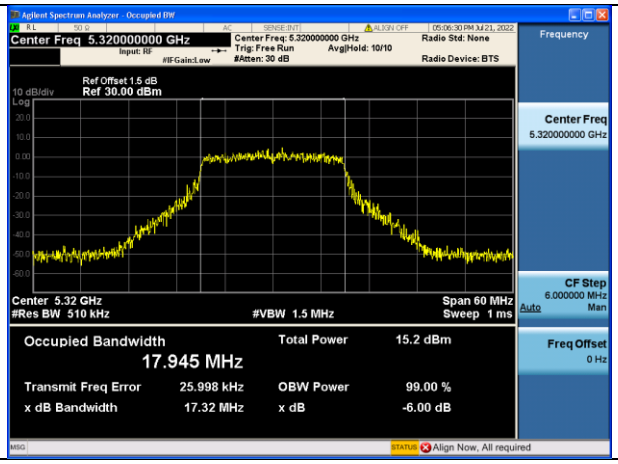
Test Mode: 802.11ac VHT20



Test Mode:802.11ac VHT20 5260MHz Chain0

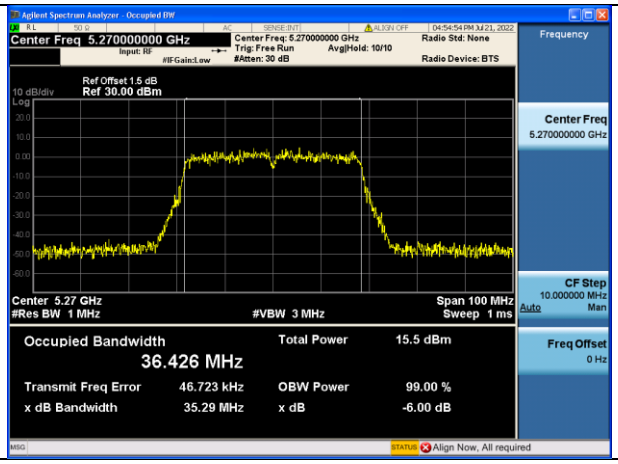


Test Mode:802.11ac VHT20 5280MHz Chain0

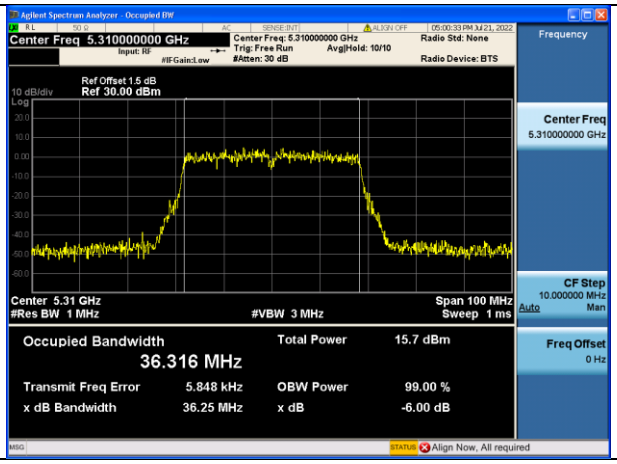


Test Mode:802.11ac VHT20 5320MHz Chain0

Test Mode: 802.11n HT40

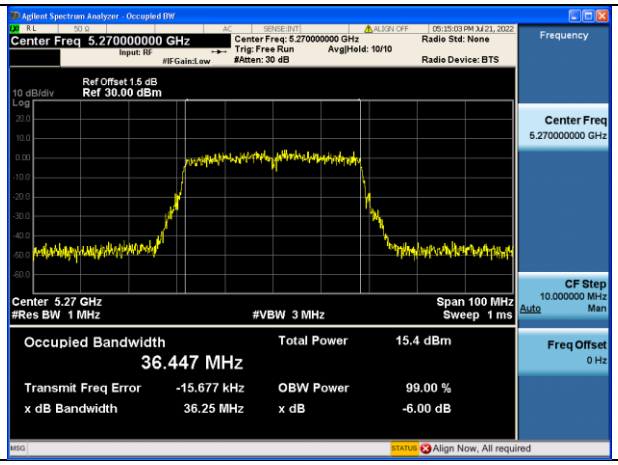


Test Mode:802.11n HT40 5270MHz Chain0

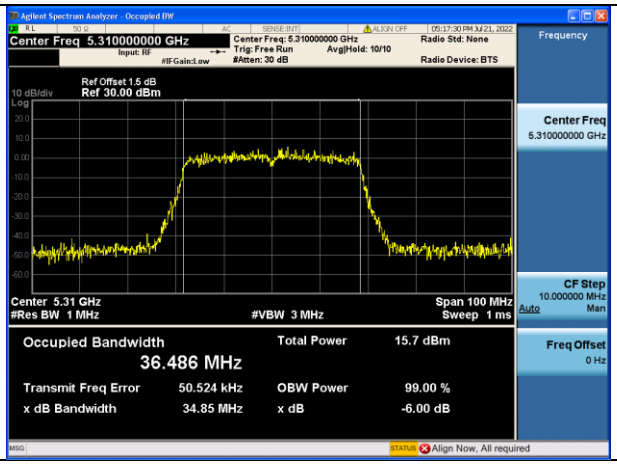


Test Mode:802.11n HT40 5310MHz Chain0

Test Mode: 802.11ac VHT40

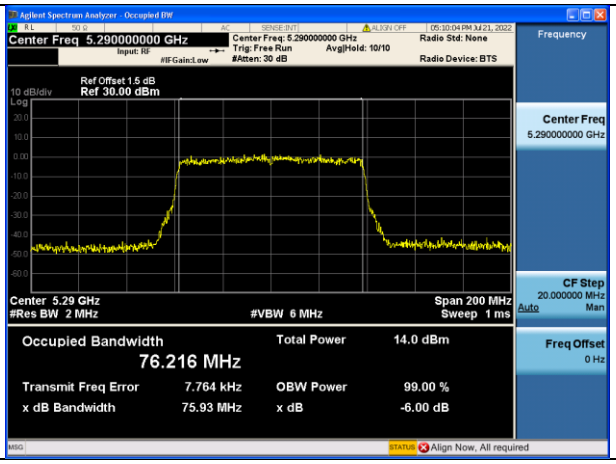


Test Mode:802.11ac VHT40 5270MHz Chain0



Test Mode:802.11ac VHT40 5310MHz Chain0

Test Mode: 802.11ac VHT80

	
Test Mode:802.11ac VHT80 5290MHz Chain0	

Transmitter Power Spectral Density

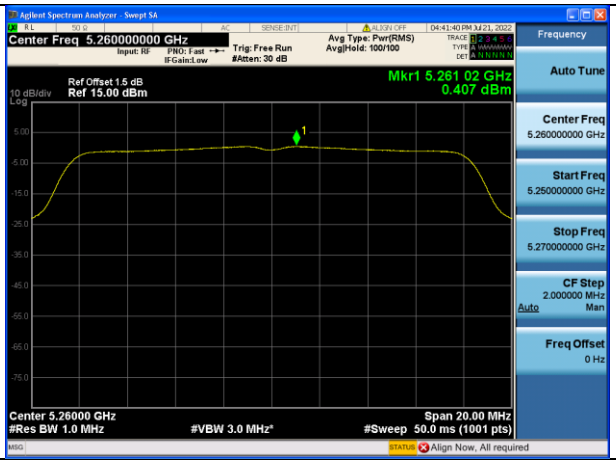
Offset 1.5dB = Attenuator + Temporary antenna connector loss + Cable loss

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	0.407	0	0.535	0	0.610
802.11n HT20	Chain0	0	0.041	0	0.148	0	0.205
802.11ac VHT20	Chain0	0	0.048	0	0.177	0	0.221

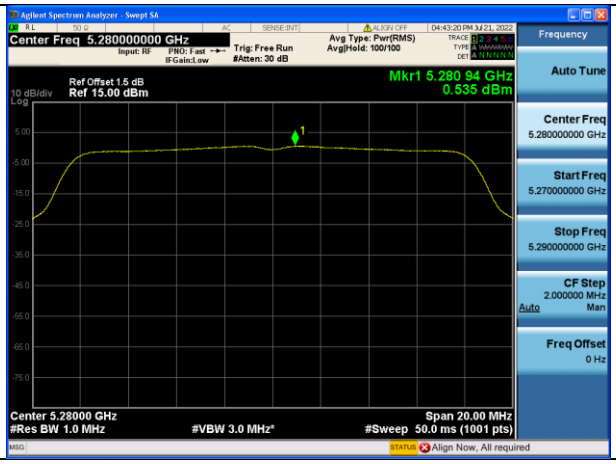
Test Mode	Antenna	5270MHz		---		5310MHz	
		Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11n HT40	Chain0	0.10	-2.848	---	---	0.10	-2.599
802.11ac VHT40	Chain0	0.10	-2.776	---	---	0.10	-2.596

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	0.20	-6.132	---	---	---	---

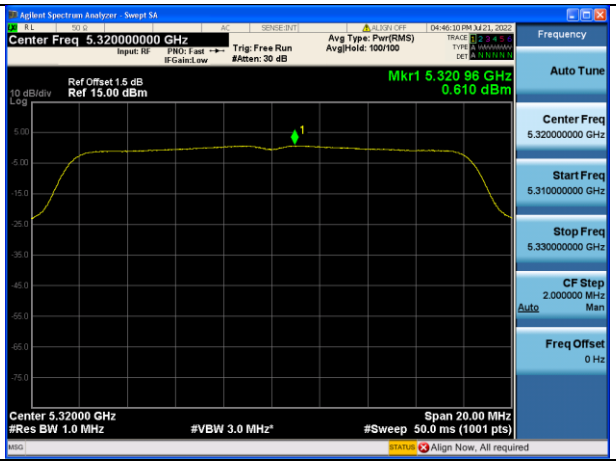
Test Mode: 802.11a



Test Mode:802.11a 5260MHz Chain0



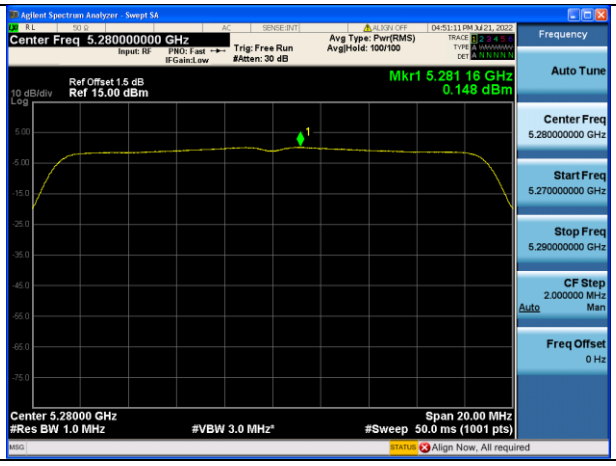
Test Mode:802.11a 5280MHz Chain0



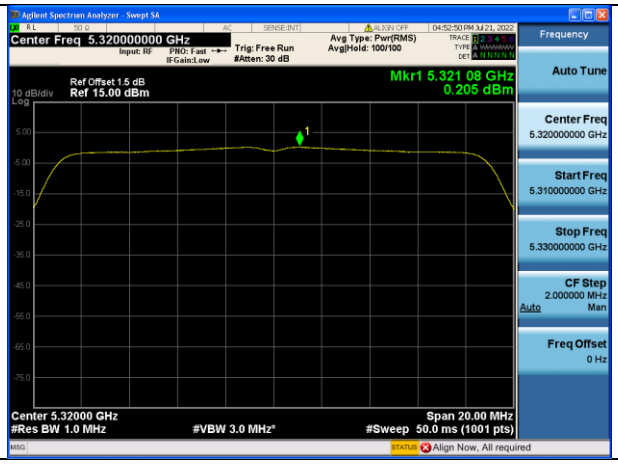
Test Mode:802.11a 5320MHz Chain0

Test Mode: 802.11n HT20

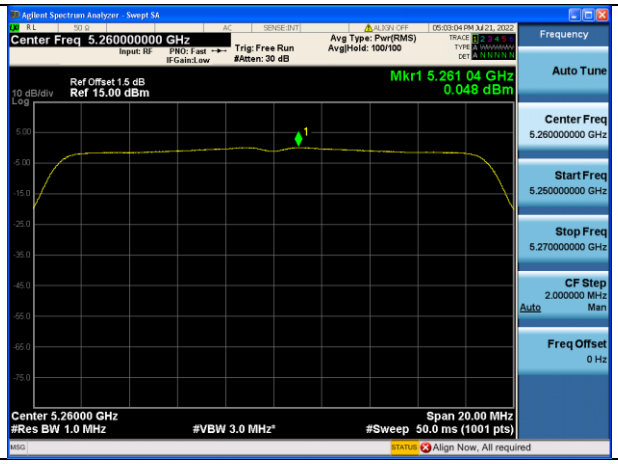
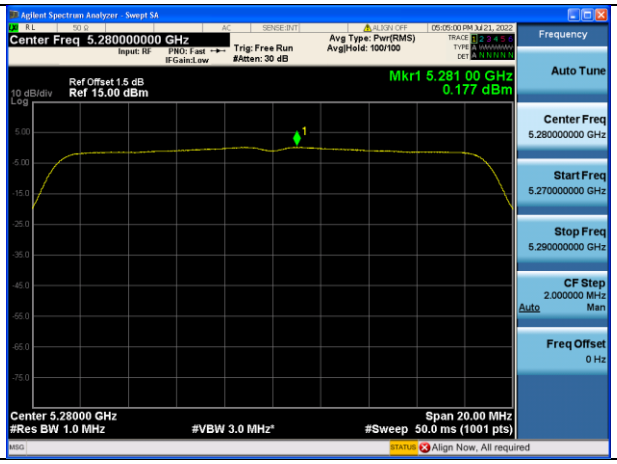
Test Mode:802.11n HT20 5260MHz Chain0

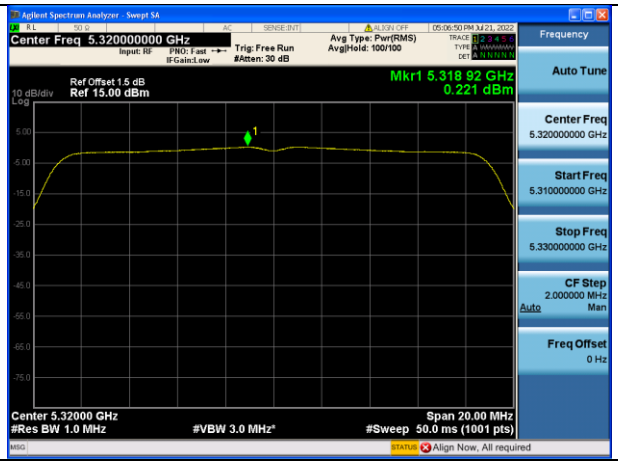


Test Mode:802.11n HT20 5280MHz Chain0

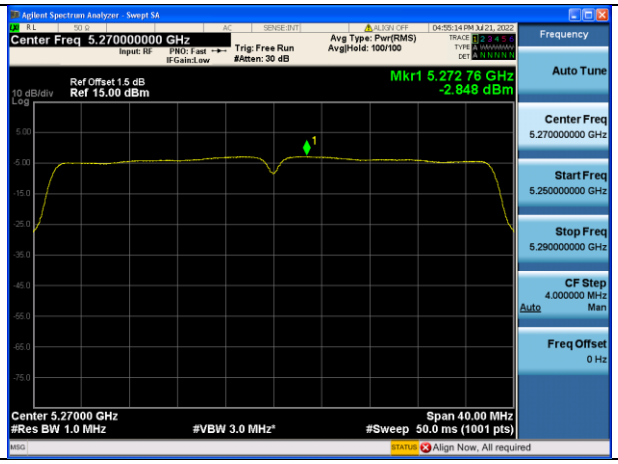
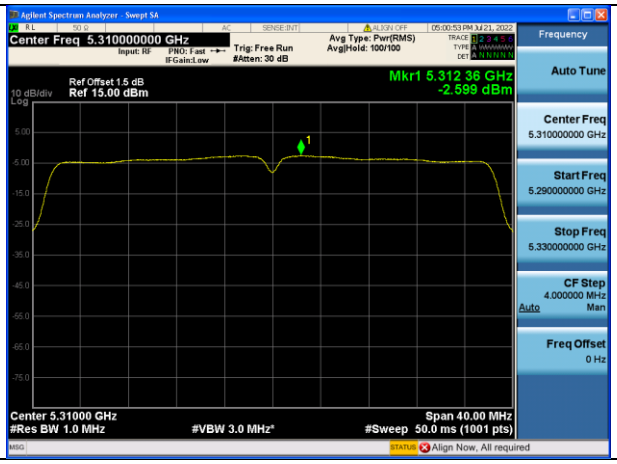
	
Test Mode:802.11n HT20 5320MHz Chain0	

Test Mode: 802.11ac VHT20

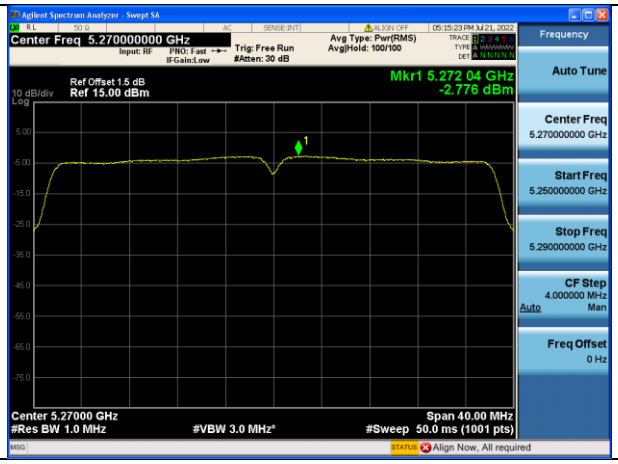
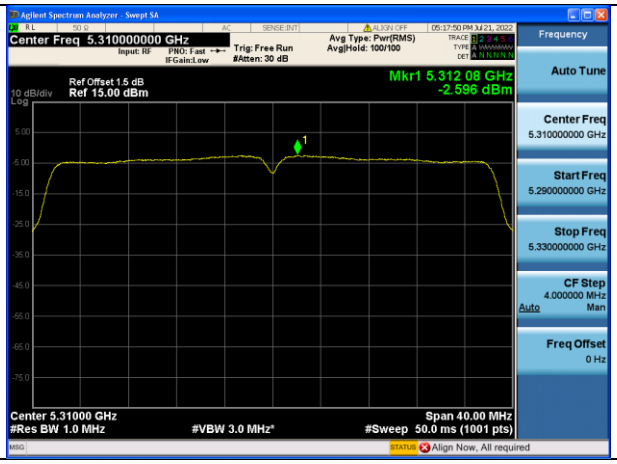
	
Test Mode:802.11ac VHT20 5260MHz Chain0	Test Mode:802.11ac VHT20 5280MHz Chain0

	
Test Mode:802.11ac VHT20 5320MHz Chain0	

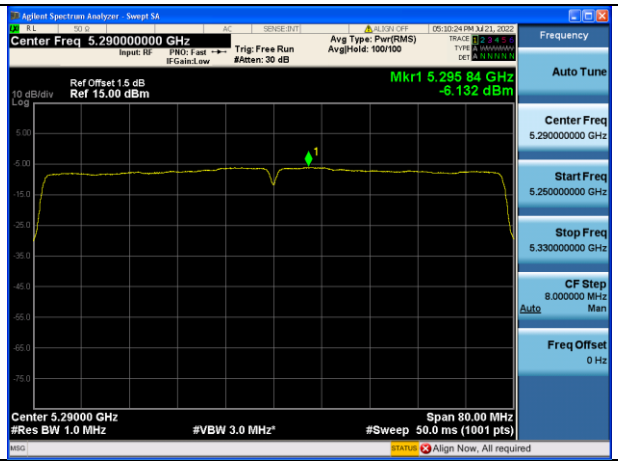
Test Mode: 802.11n HT40

	
Test Mode:802.11n HT40 5270MHz Chain0	Test Mode:802.11n HT40 5310MHz Chain0

Test Mode: 802.11ac VHT40

	
Test Mode:802.11ac VHT40 5270MHz Chain0	Test Mode:802.11ac VHT40 5310MHz Chain0

Test Mode: 802.11ac VHT80

	
Test Mode:802.11ac VHT80 5290MHz Chain0	

Dynamic Frequency Selection

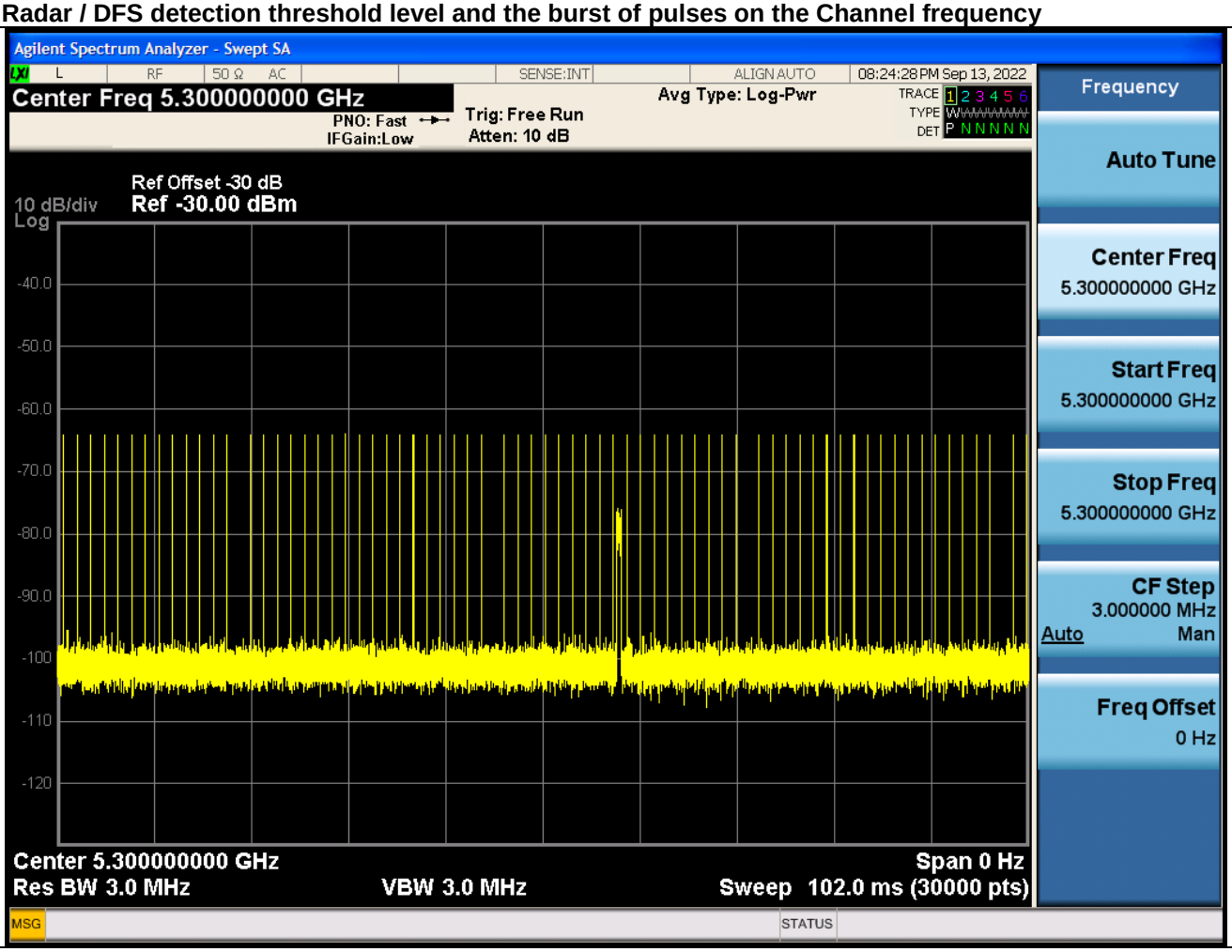
DESCRIPTION OF Master Device

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 –60 dBm.

Radar Waveform Calibration Result

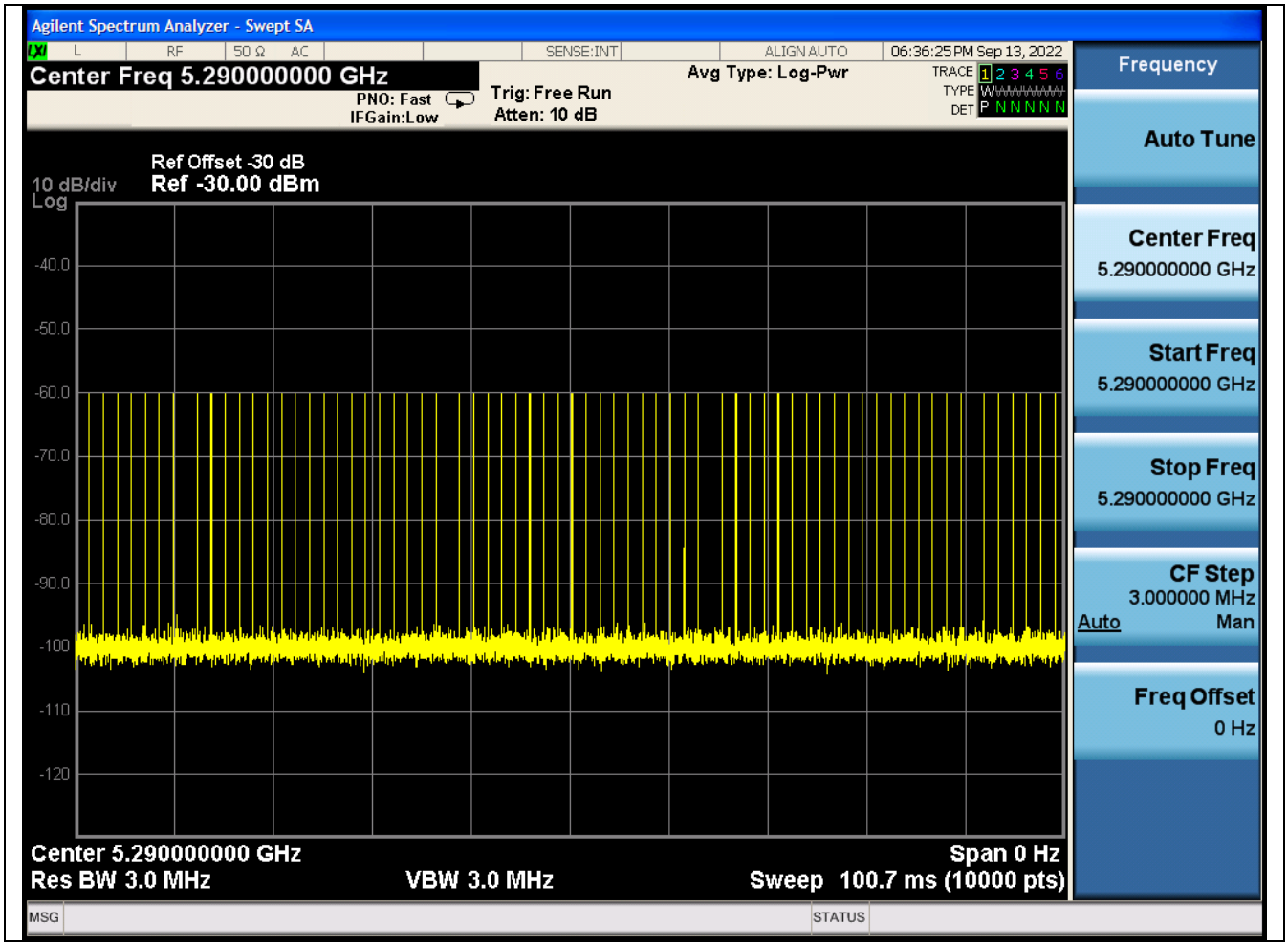
<20MHz / 5300 MHz> Radar Type 0

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

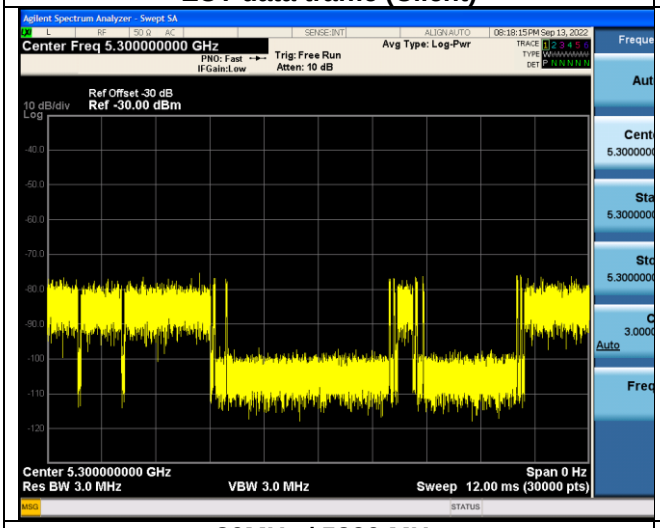
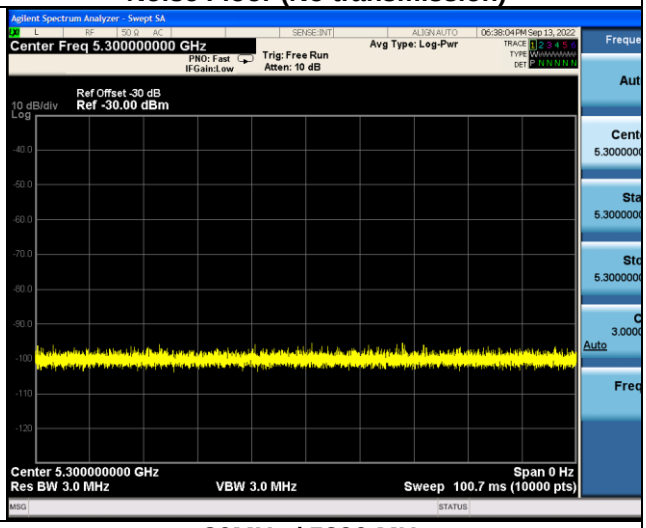
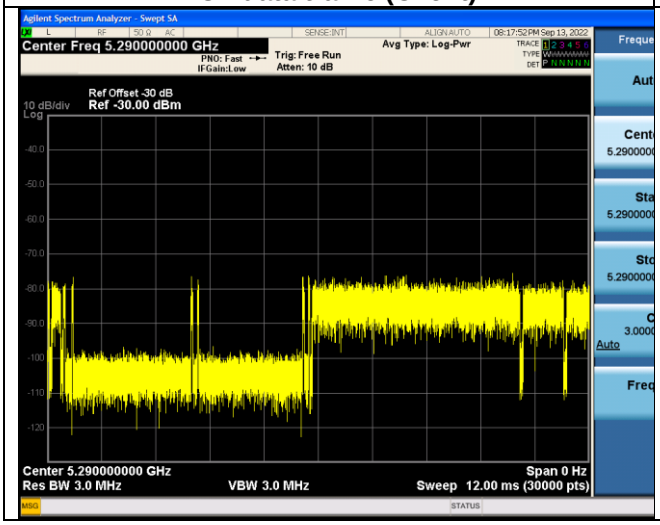
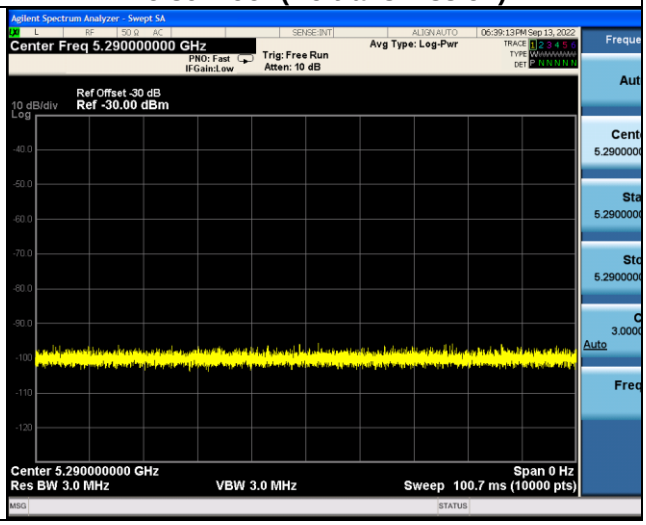


<80MHz / 5290 MHz> Radar Type 0

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


Agilent Spectrum Analyzer - Swept SA
L
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
06:36:25 PM Sep 13, 2022
Center Freq 5.290000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 10 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W
DET P N N N N N
Ref Offset -30 dB
10 dB/div
Log
Ref -30.00 dBm
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
-120
Center 5.290000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 100.7 ms (10000 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
5.290000000 GHz
Start Freq
5.290000000 GHz
Stop Freq
5.290000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz

Data Traffic and Noise Floor Plots

<20MHz / 5300 MHz> EUT data traffic (Client)	<20MHz / 5300 MHz> Noise Floor (No transmission)
	
<80MHz / 5290 MHz> EUT data traffic (Client)	**<80MHz / 5290 MHz> Noise Floor (No transmission)**
	

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

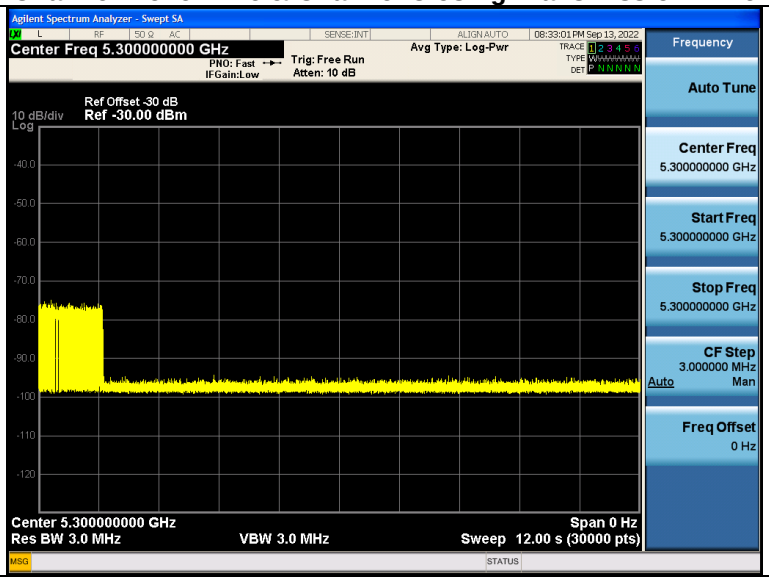
Frequency	Test Item	Test Result	Limit	Pass/Fail
5300MHz	Channel Move Time	＜ 10s*	＜ 10s	Pass
	Channel Closing Transmission Time	200ms	＜ 260ms	Pass
	Non-Occupancy Period	≥ 30	≥ 30 min	Pass
5290MHz	Channel Move Time	＜ 10s*	＜ 10s	Pass
	Channel Closing Transmission Time	200ms	＜ 260ms	Pass
	Non-Occupancy Period	≥ 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.

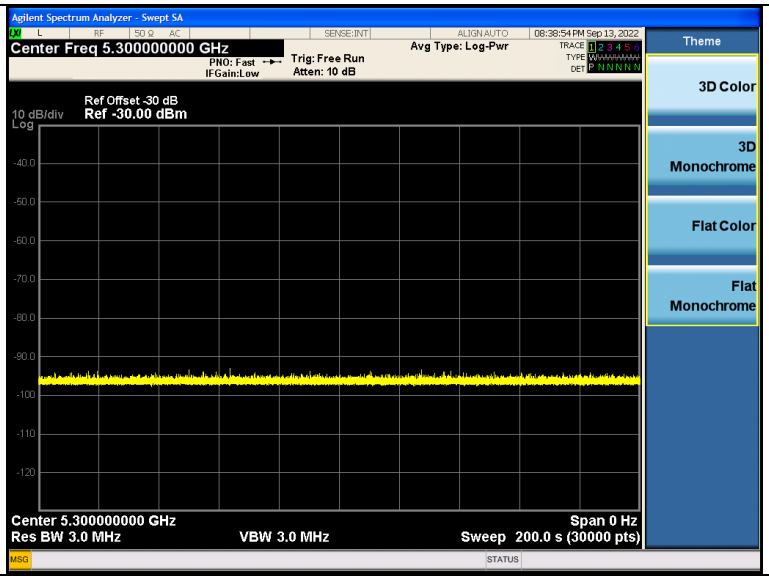
Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period for Client Beacon Test Plots

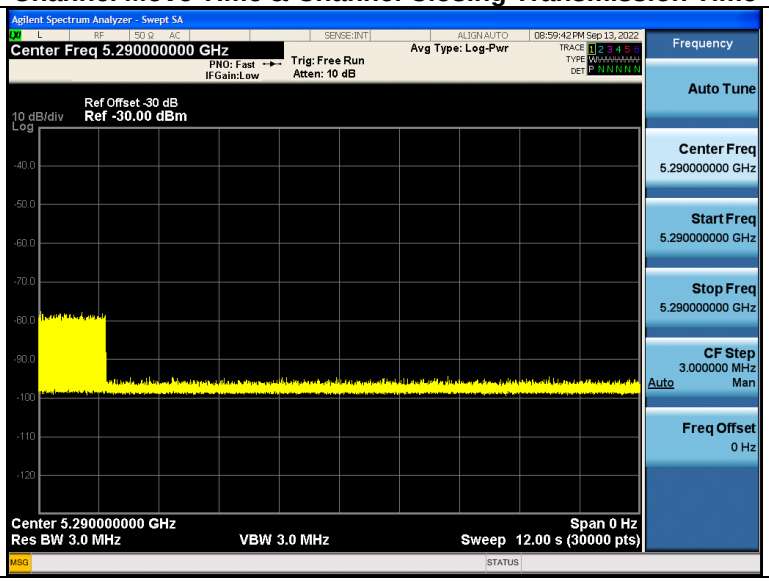
<20MHz / 5300 MHz>

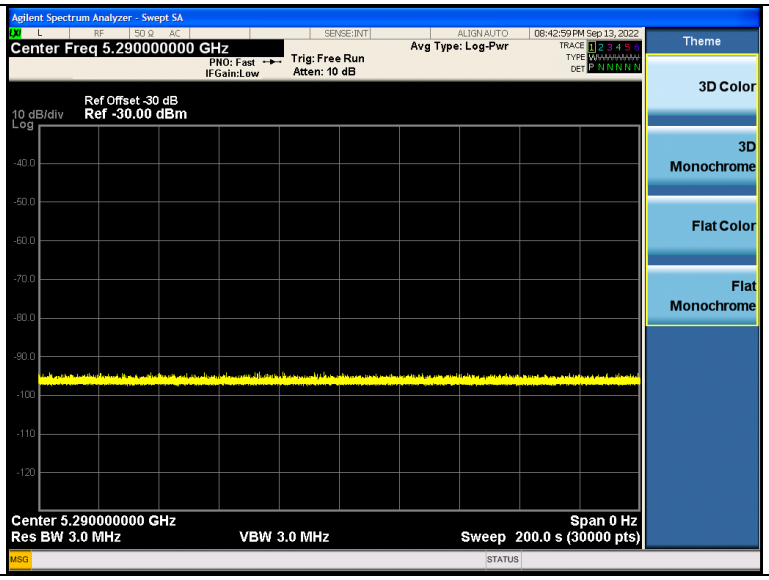
Channel Move Time & Channel Closing Transmission Time



Non-Occupancy Period



<80MHz / 5290MHz>
Channel Move Time & Channel Closing Transmission Time

Non-Occupancy Period


Agilent Spectrum Analyzer - Swept SA
Center Freq 5.290000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 10 dB
Avg Type: Log-Pwr
08:42:59 PM Sep 13, 2022
Ref Offset -30 dB
10 dB/div
Log
Ref -30.00 dBm
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
-120
Center 5.290000000 GHz
Res BW 3.0 MHz
VBW 3.0 MHz
Span 0 Hz
Sweep 200.0 s (30000 pts)
Theme
3D Color
3D Monochrome
Flat Color
Flat Monochrome
MSG
STATUS