APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Duty Cycle

Test Mode	Antenna	Frequency (MHz)	Duty Cycle (%)	Correction Factor(dB)	Plot
802.11a	Chain0	5180	97.76%	0.10	Fig.1
802.11a	Chain1	5180	98.10%	0	Fig.2
802.11n HT20	Chain0	5180	97.73%	0.10	Fig.3
802.11n HT20	Chain1	5180	97.90%	0.09	Fig.4
802.11ac VHT20	Chain0	5180	97.60%	0.11	Fig.5
802.11ac VHT20	Chain1	5180	97.95%	0.09	Fig.6
802.11n HT40	Chain0	5190	95.75%	0.19	Fig.7
802.11n HT40	Chain1	5190	96.37%	0.16	Fig.8
802.11ac VHT40	Chain0	5190	95.81%	0.19	Fig.9
802.11ac VHT40	Chain1	5190	96.31%	0.16	Fig.10
802.11ac VHT80	Chain0	5210	93.21%	0.31	Fig.11
802.11ac VHT80	Chain1	5210	94.21%	0.26	Fig.12

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

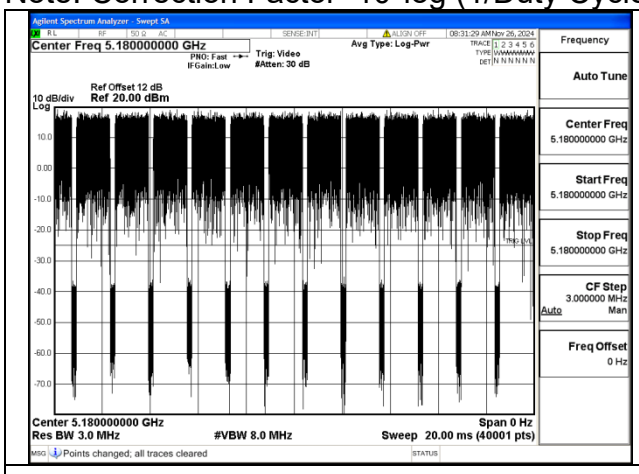


Fig.1

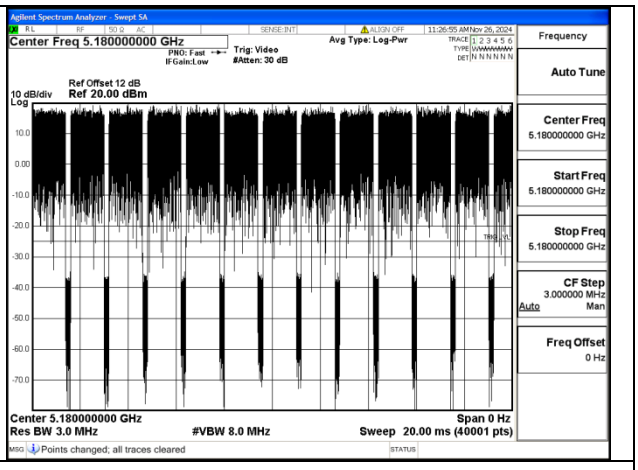


Fig.2

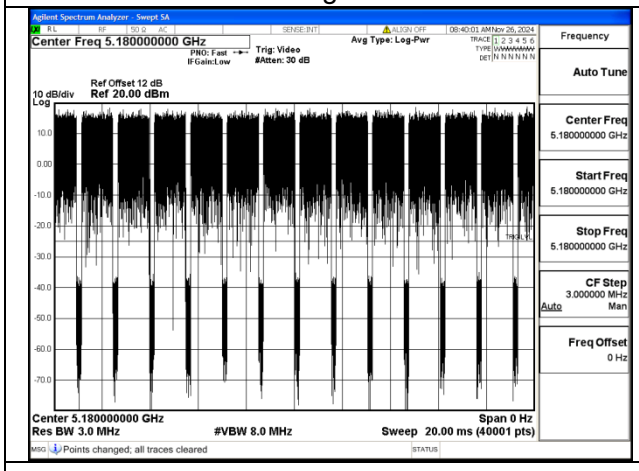


Fig.3

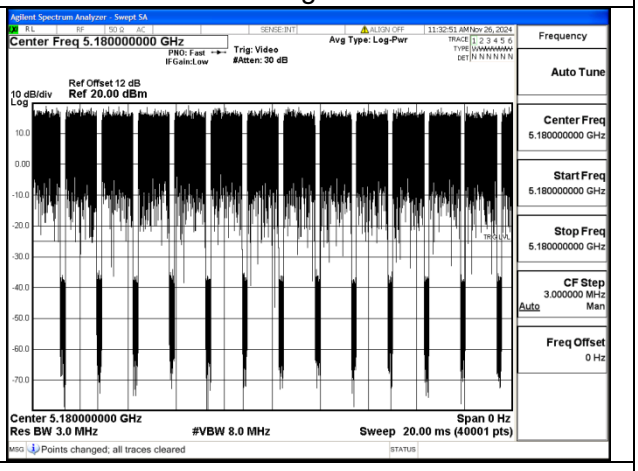


Fig.4

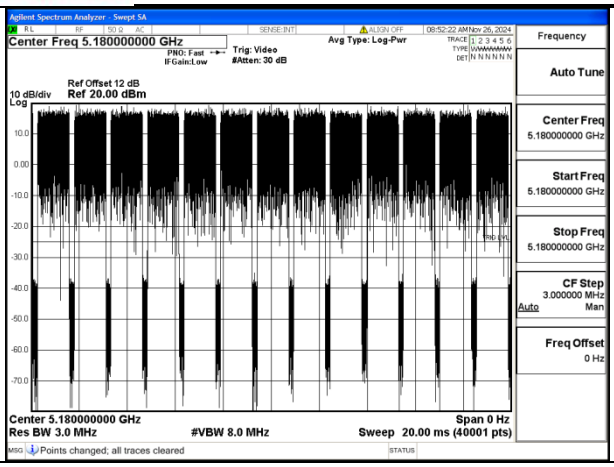


Fig.5

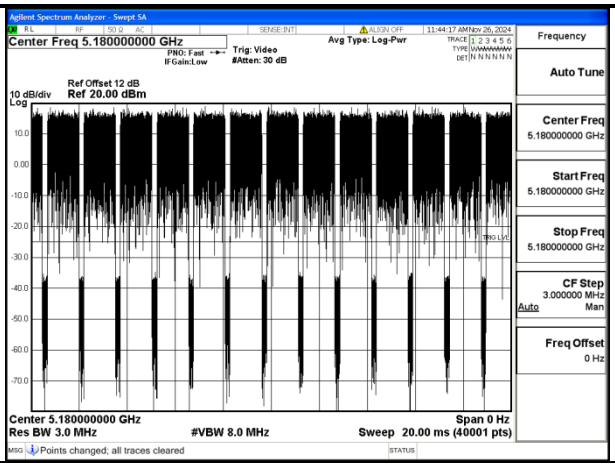


Fig.6

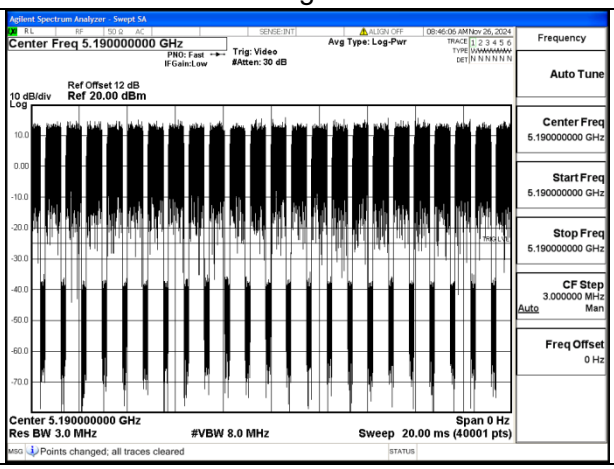


Fig.7

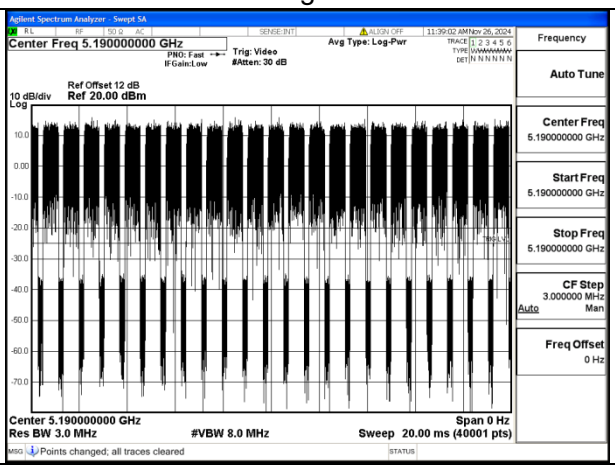


Fig.8

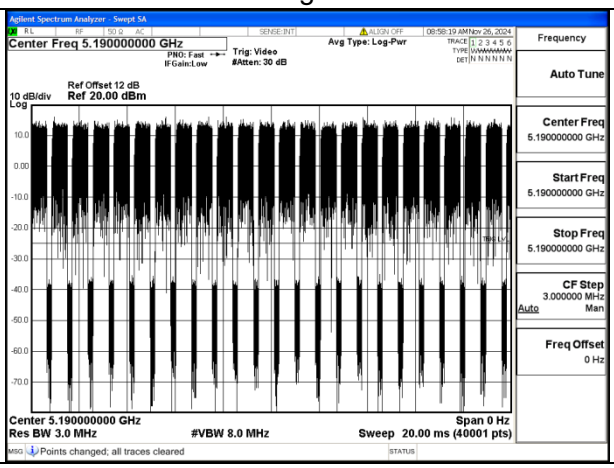


Fig.9

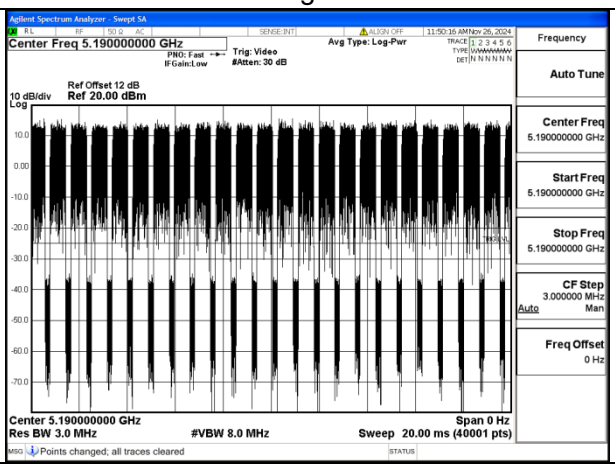


Fig.10

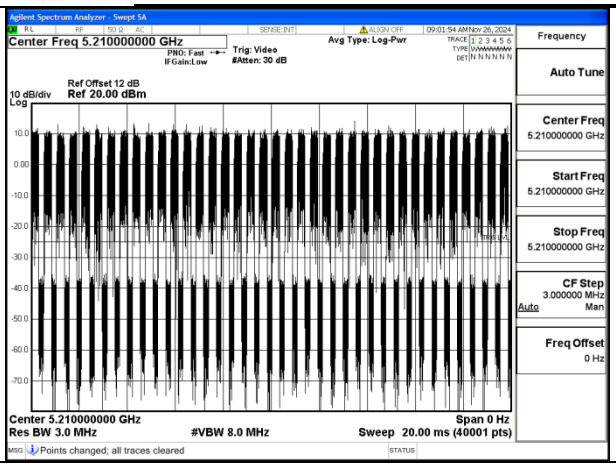

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
09:01:54 AM Nov 26, 2024
Ref Offset 12 dB
10 dB/div
Ref 20.00 dBm
Log
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 5.210000000 GHz
Res BW 3.0 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
Points changed; all traces cleared

Fig.11

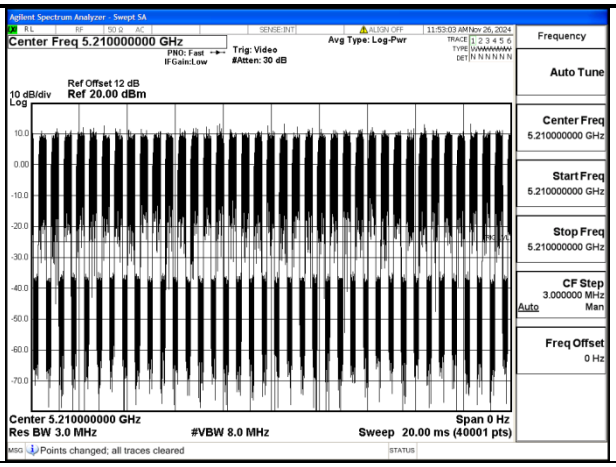

Agilent Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
11:53:03 AM Nov 26, 2024
Ref Offset 12 dB
10 dB/div
Ref 20.00 dBm
Log
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
Center 5.210000000 GHz
Res BW 3.0 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (40001 pts)
Points changed; all traces cleared

Fig.12

Output Power

Mode	Tones/ RUIndex	Frequency (MHz)	Antenna	Conductedaverage power output(dBm)	EIRP (dBm)
802.11a	NA	5180	Chain0	15.91	16.51
802.11a	NA	5180	Chain1	15.88	16.48
802.11a	NA	5220	Chain0	15.44	16.04
802.11a	NA	5220	Chain1	15.46	16.06
802.11a	NA	5240	Chain0	15.53	16.13
802.11a	NA	5240	Chain1	14.84	15.44
802.11n HT20	NA	5180	Chain0	15.08	15.68
802.11n HT20	NA	5180	Chain1	15.37	15.97
802.11n HT20	NA	5180	MIMO	18.24	18.84
802.11n HT20	NA	5220	Chain0	14.43	15.03
802.11n HT20	NA	5220	Chain1	14.54	15.14
802.11n HT20	NA	5220	MIMO	17.50	18.10
802.11n HT20	NA	5240	Chain0	14.39	14.99
802.11n HT20	NA	5240	Chain1	14.57	15.17
802.11n HT20	NA	5240	MIMO	17.49	18.09
802.11ac VHT20	NA	5180	Chain0	15.52	16.12
802.11ac VHT20	NA	5180	Chain1	15.37	15.97
802.11ac VHT20	NA	5180	MIMO	18.46	19.06
802.11ac VHT20	NA	5220	Chain0	15.32	15.92
802.11ac VHT20	NA	5220	Chain1	14.71	15.31
802.11ac VHT20	NA	5220	MIMO	18.04	18.64
802.11ac VHT20	NA	5240	Chain0	15.52	16.12
802.11ac VHT20	NA	5240	Chain1	14.64	15.24
802.11ac VHT20	NA	5240	MIMO	18.11	18.71
802.11n HT40	NA	5190	Chain0	15.02	15.62
802.11n HT40	NA	5190	Chain1	14.83	15.43
802.11n HT40	NA	5190	MIMO	17.94	18.54
802.11n HT40	NA	5230	Chain0	14.13	14.73
802.11n HT40	NA	5230	Chain1	14.37	14.97
802.11n HT40	NA	5230	MIMO	17.26	17.86
802.11ac VHT40	NA	5190	Chain0	15.13	15.73
802.11ac VHT40	NA	5190	Chain1	14.63	15.23
802.11ac VHT40	NA	5190	MIMO	17.90	18.50
802.11ac VHT40	NA	5230	Chain0	14.87	15.47
802.11ac VHT40	NA	5230	Chain1	14.40	15.00
802.11ac VHT40	NA	5230	MIMO	17.65	18.25
802.11ac VHT80	NA	5210	Chain0	14.26	14.86
802.11ac VHT80	NA	5210	Chain1	14.85	15.45
802.11ac VHT80	NA	5210	MIMO	17.58	18.18

Emission Bandwidth

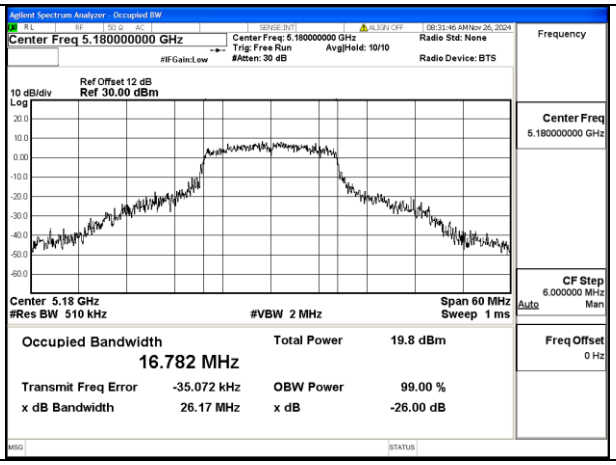
Offset 12dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	26.17	24.80	21.68
802.11a	Chain1	19.80	20.01	19.92
802.11n HT20	Chain0	23.26	20.72	20.67
802.11n HT20	Chain1	20.87	20.46	20.57
802.11ac VHT20	Chain0	26.60	22.12	22.21
802.11ac VHT20	Chain1	21.79	20.36	20.14

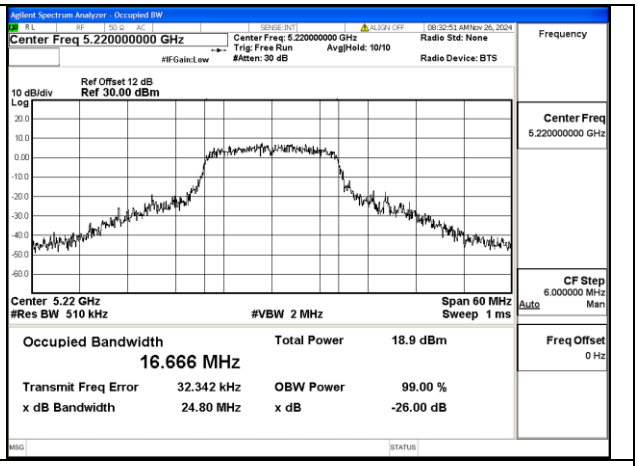
Test Mode	Antenna	26dB Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	47.19	---	39.79
802.11n HT40	Chain1	44.02	---	41.06
802.11ac VHT40	Chain0	49.48	---	46.93
802.11ac VHT40	Chain1	41.45	---	40.46

Test Mode	Antenna	26dB Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	81.04	---	---
802.11ac VHT80	Chain1	80.97	---	---

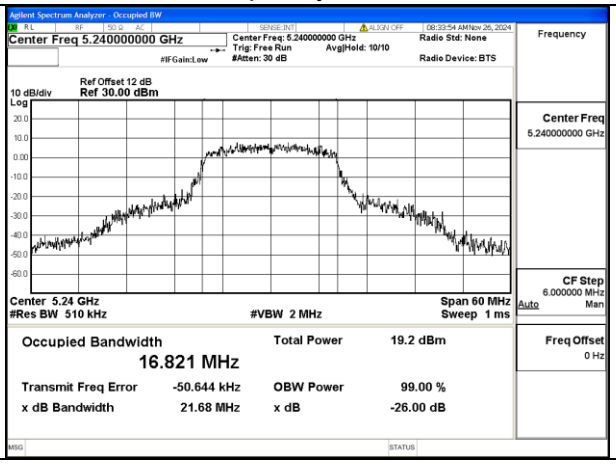
Test Mode: 802.11a



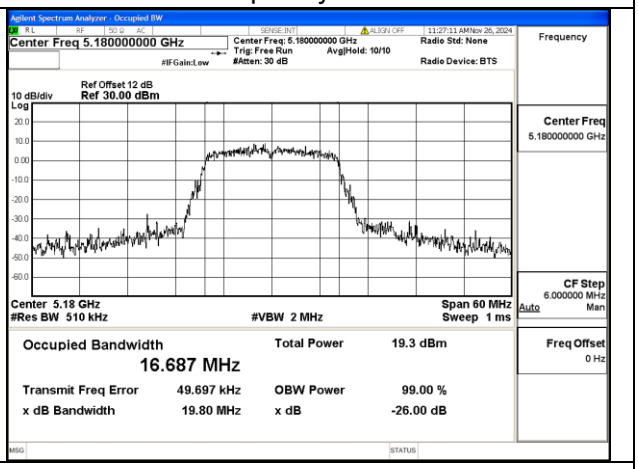
Mode:802.11a Frequency:5180MHz Ant:Chain0



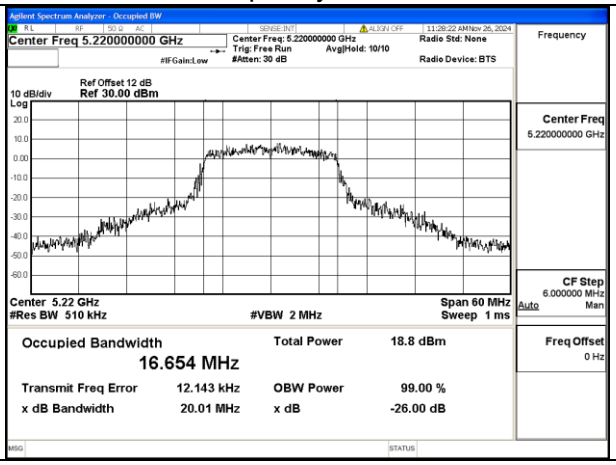
Mode:802.11a Frequency:5220MHz Ant:Chain0



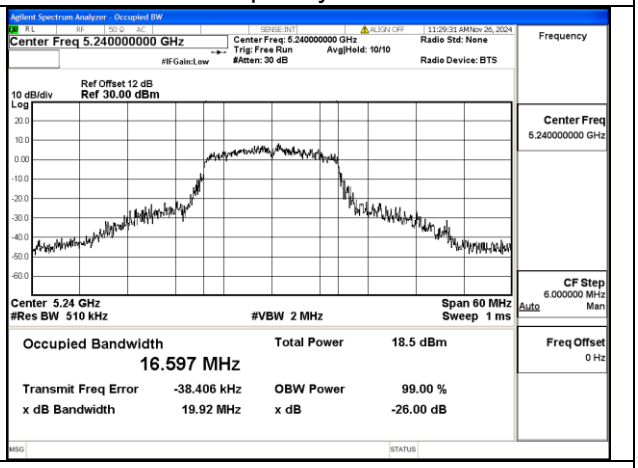
Mode:802.11a Frequency:5240MHz Ant:Chain0



Mode:802.11a Frequency:5180MHz Ant:Chain1

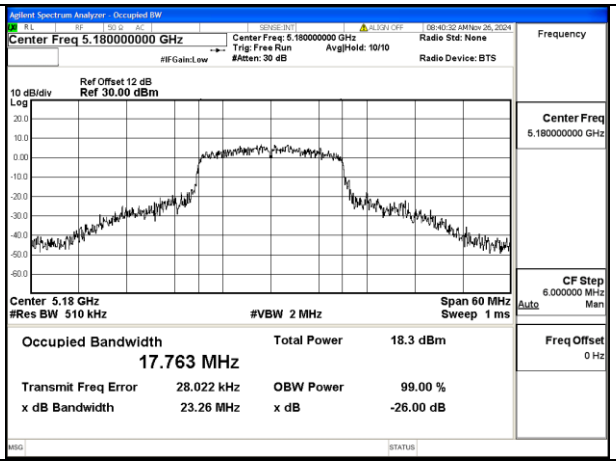


Mode:802.11a Frequency:5220MHz Ant:Chain1

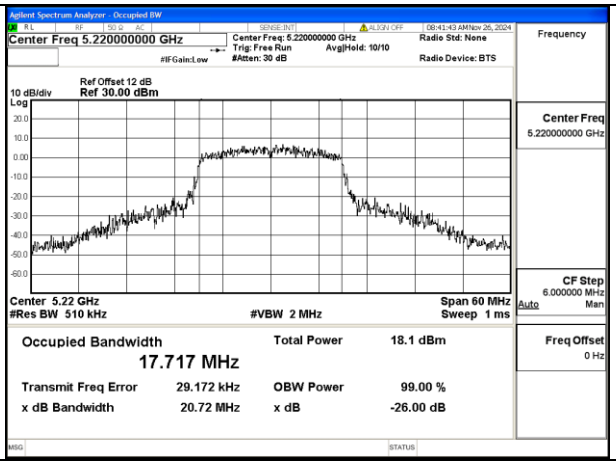


Mode:802.11a Frequency:5240MHz Ant:Chain1

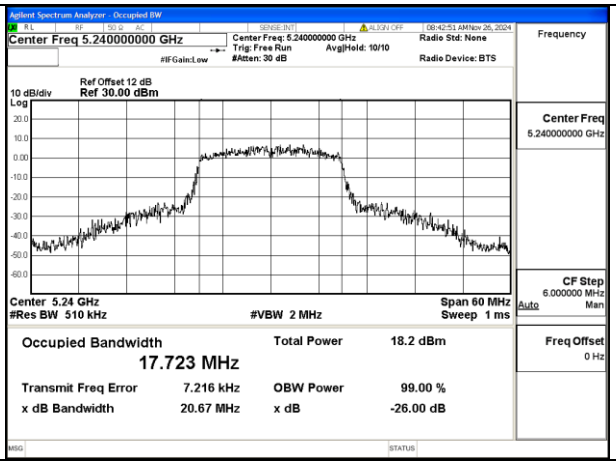
Test Mode: 802.11n HT20



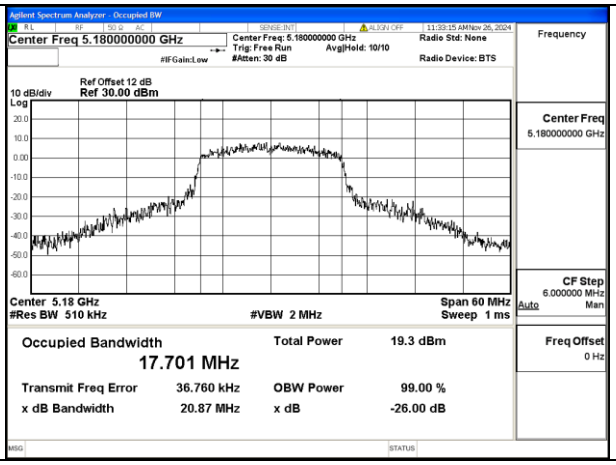
Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain0



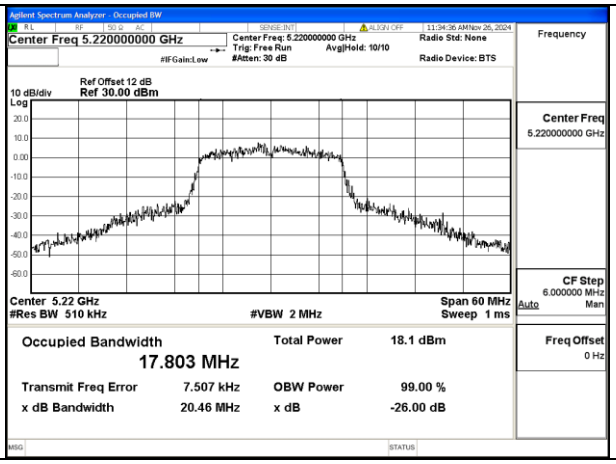
Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain0



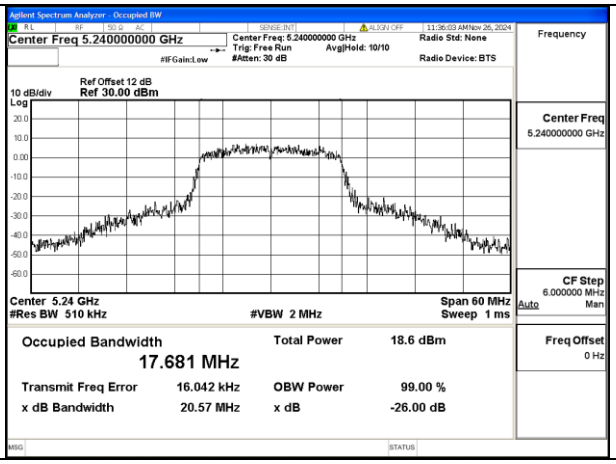
Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain1

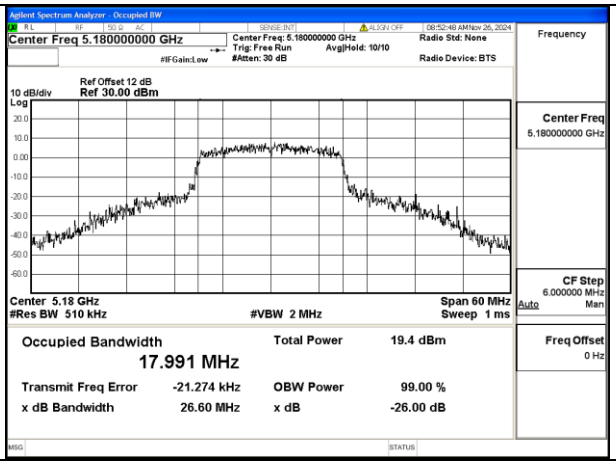


Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain1

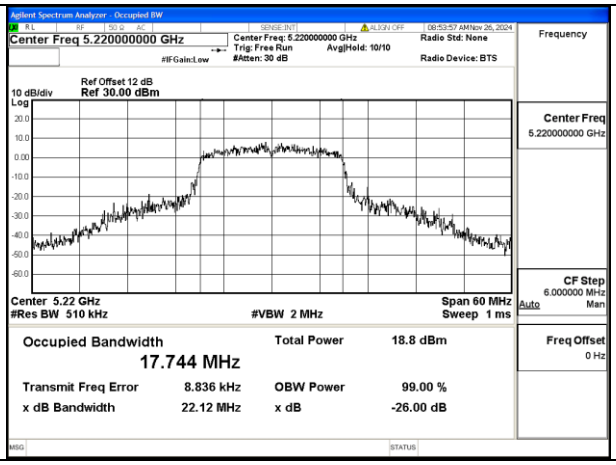


Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain1

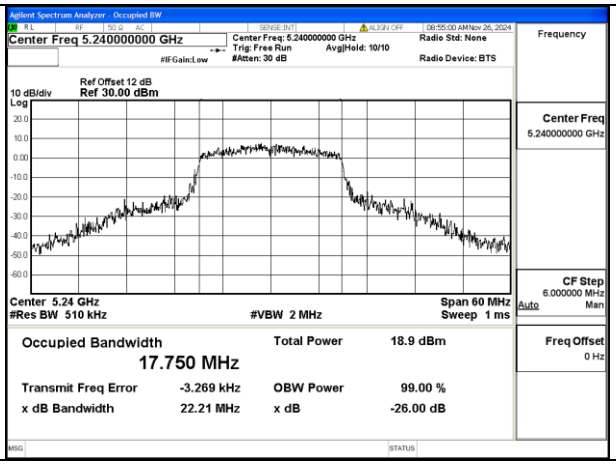
Test Mode: 802.11ac VHT20



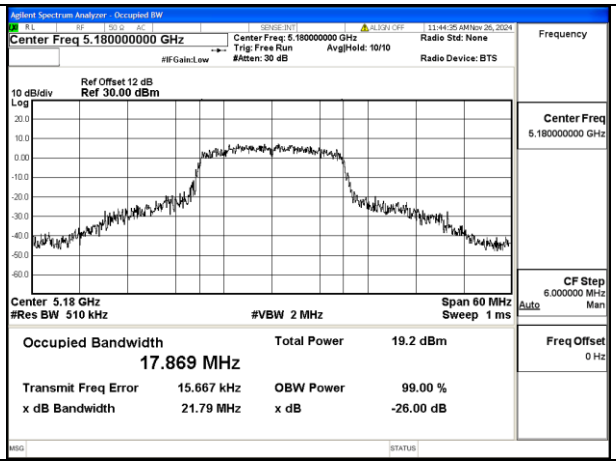
Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain0



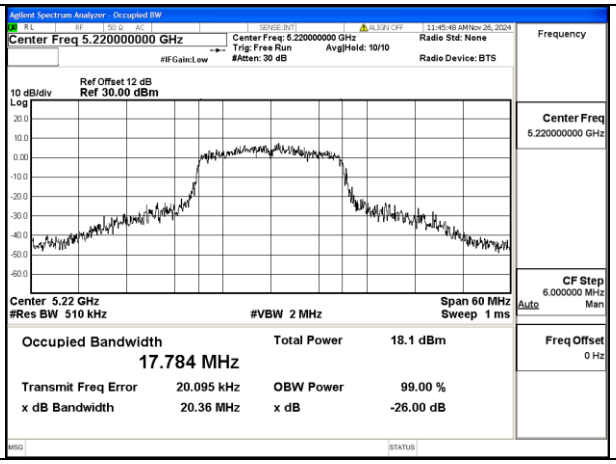
Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain0



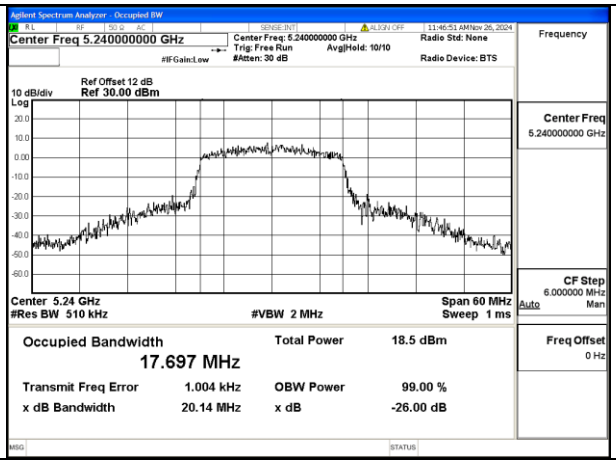
Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain1

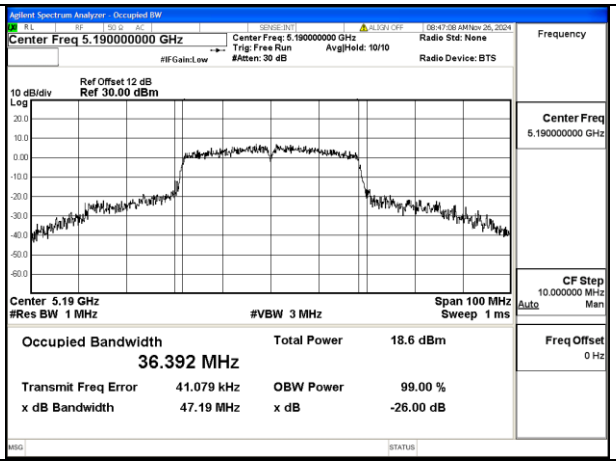


Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain1

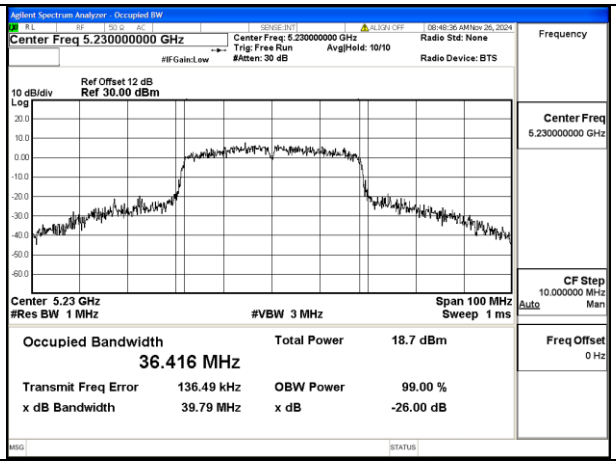


Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain1

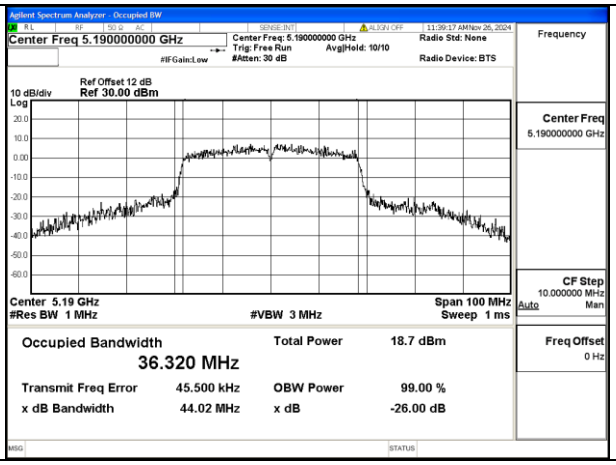
Test Mode: 802.11n HT40



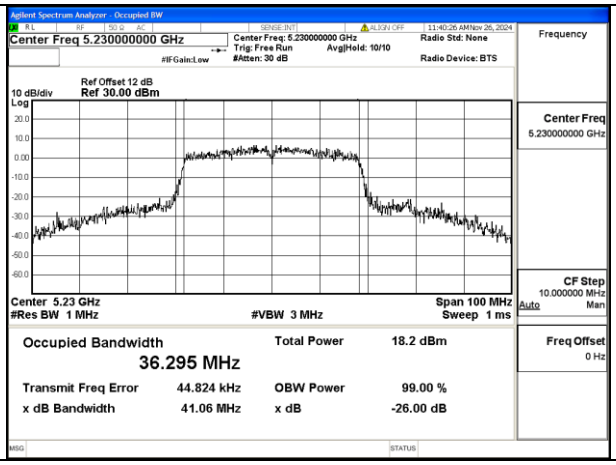
Mode:802.11n HT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11n HT40 Frequency:5230MHz
Ant:Chain0

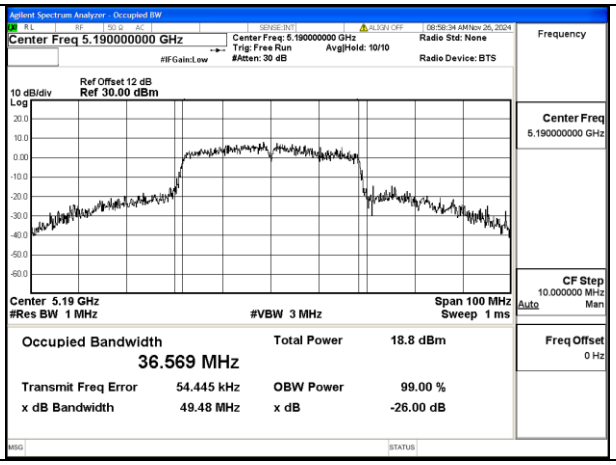


Mode:802.11n HT40 Frequency:5190MHz
Ant:Chain1

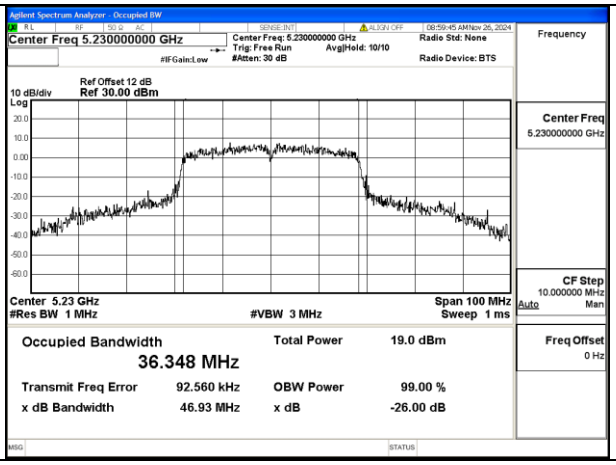


Mode:802.11n HT40 Frequency:5230MHz
Ant:Chain1

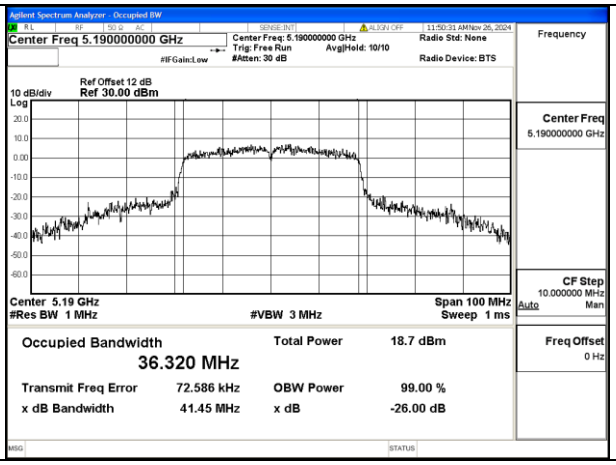
Test Mode: 802.11ac VHT40



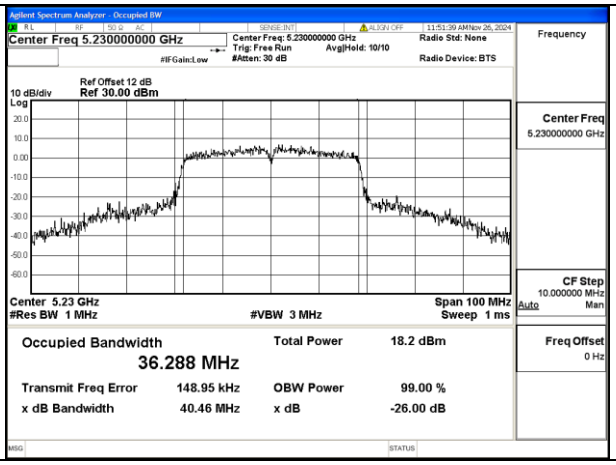
Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0

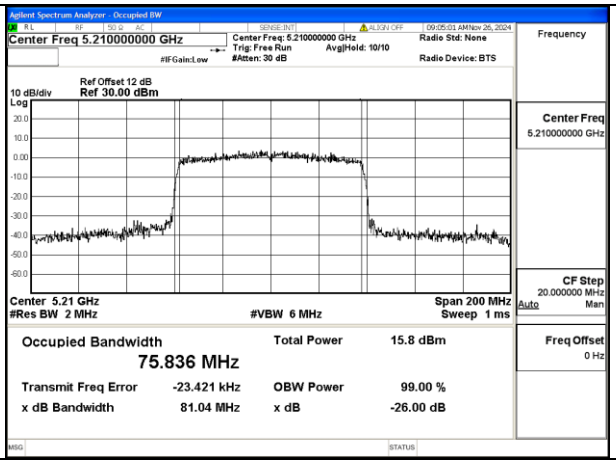


Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain1

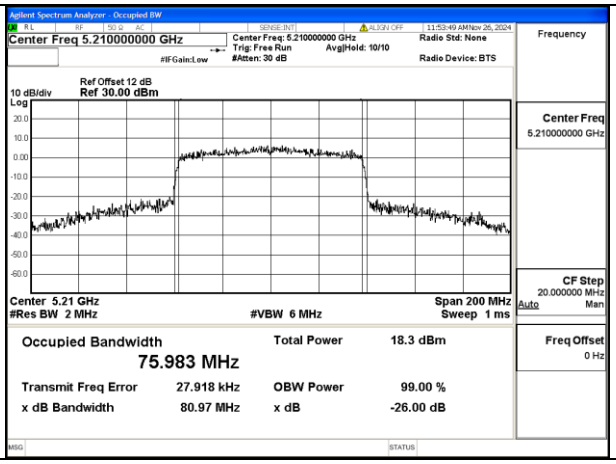


Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain1

Occupied Bandwidth

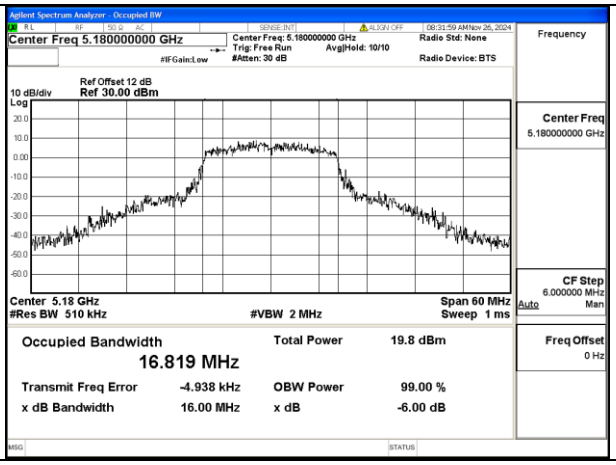
Offset 12dB = Attenuator + Temporary antenna connector loss + Cable loss

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5180MHz	5220MHz	5240MHz
802.11a	Chain0	16.819	16.870	16.794
802.11a	Chain1	16.536	16.629	16.569
802.11n HT20	Chain0	17.748	17.863	17.758
802.11n HT20	Chain1	17.751	17.887	17.784
802.11ac VHT20	Chain0	17.804	17.886	17.723
802.11ac VHT20	Chain1	17.868	17.758	17.712

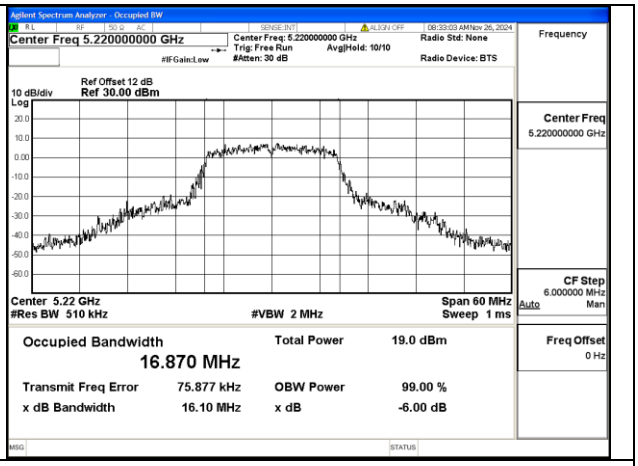
Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5190MHz	---	5230MHz
802.11n HT40	Chain0	36.402	---	36.346
802.11n HT40	Chain1	36.351	---	36.268
802.11ac VHT40	Chain0	36.475	---	36.483
802.11ac VHT40	Chain1	36.333	---	36.272

Test Mode	Antenna	Occupied Bandwidth (MHz)		
		5210MHz	---	---
802.11ac VHT80	Chain0	75.875	---	---
802.11ac VHT80	Chain1	76.102	---	---

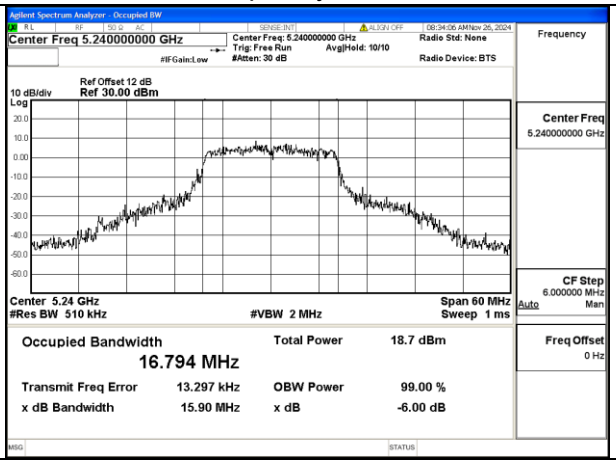
Test Mode: 802.11a



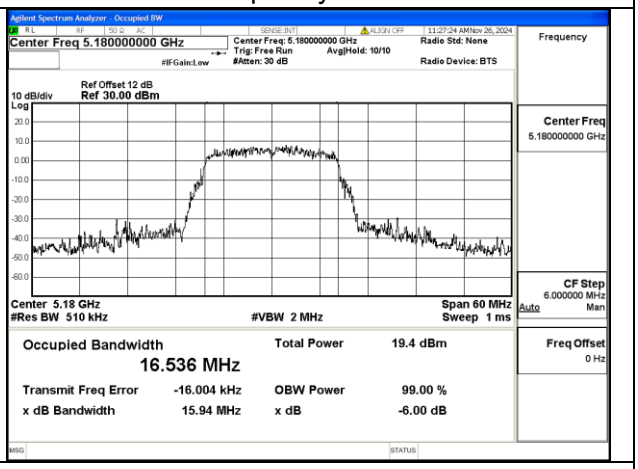
Mode:802.11a Frequency:5180MHz Ant:Chain0



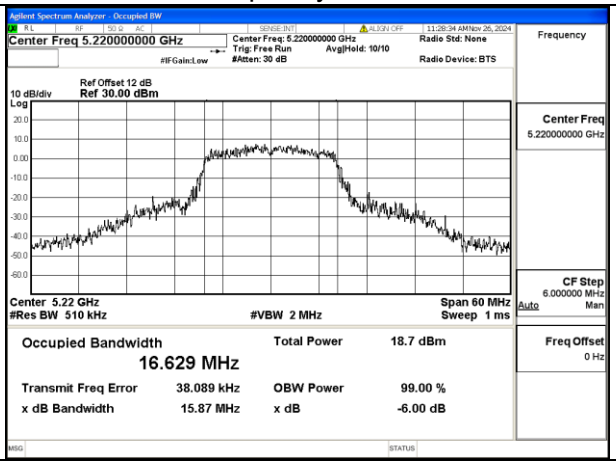
Mode:802.11a Frequency:5220MHz Ant:Chain0



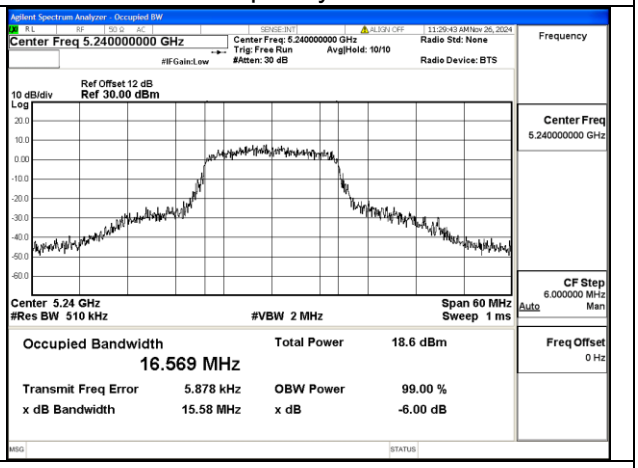
Mode:802.11a Frequency:5240MHz Ant:Chain0



Mode:802.11a Frequency:5180MHz Ant:Chain1

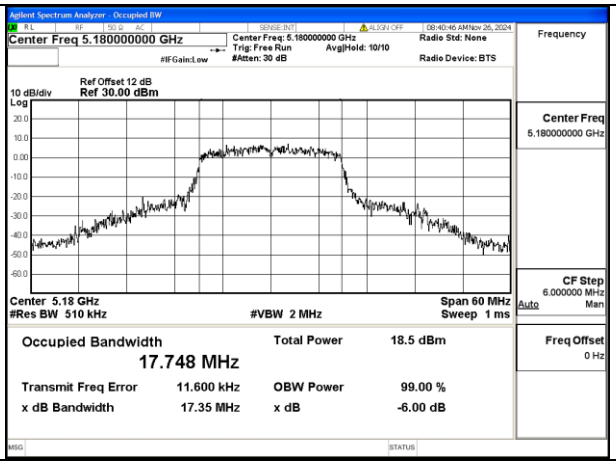


Mode:802.11a Frequency:5220MHz Ant:Chain1

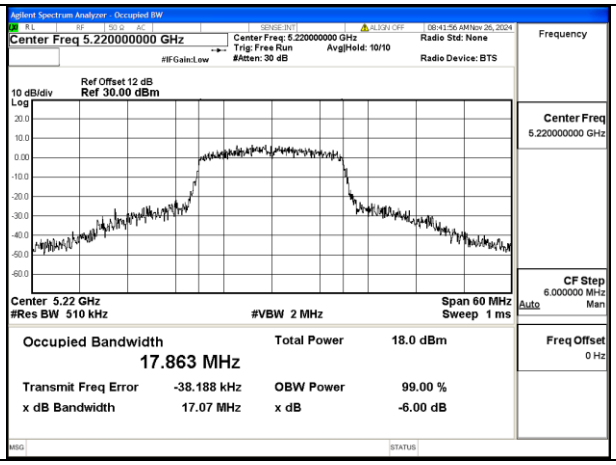


Mode:802.11a Frequency:5240MHz Ant:Chain1

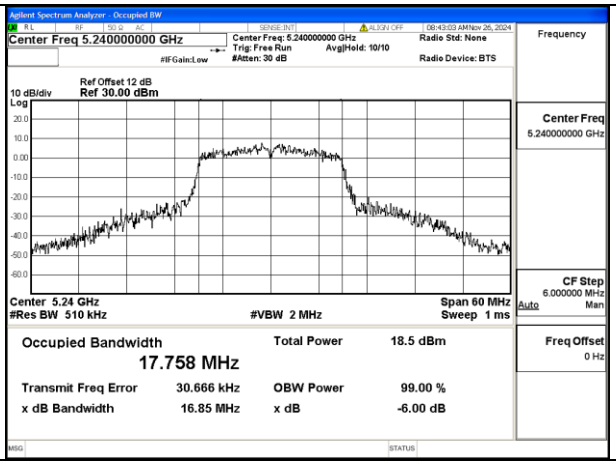
Test Mode: 802.11n HT20



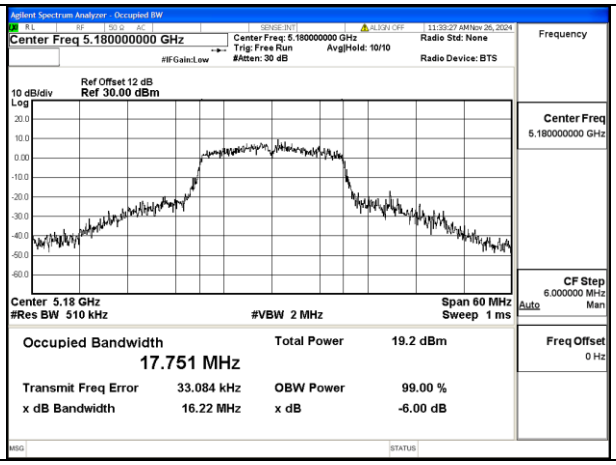
Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain0



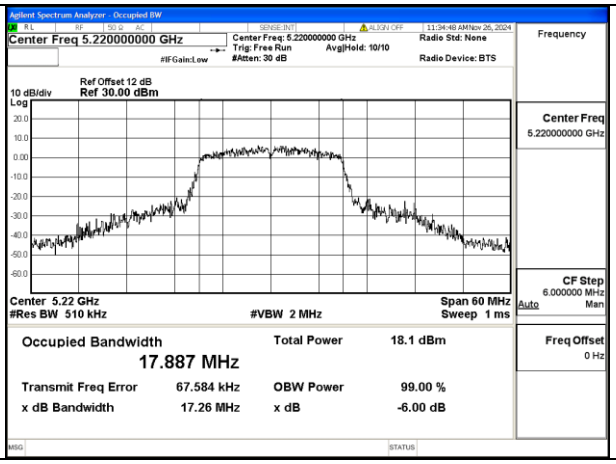
Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain0



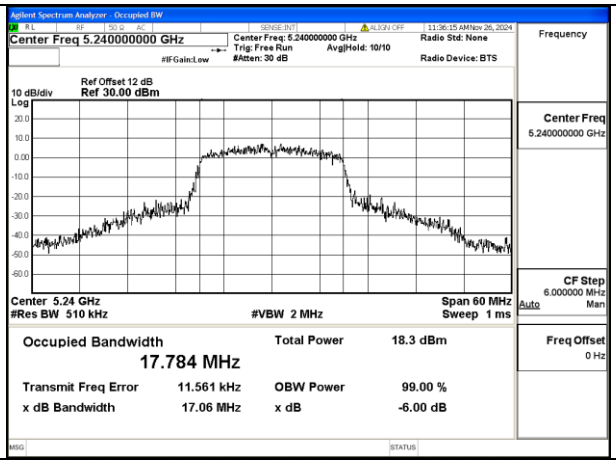
Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain1

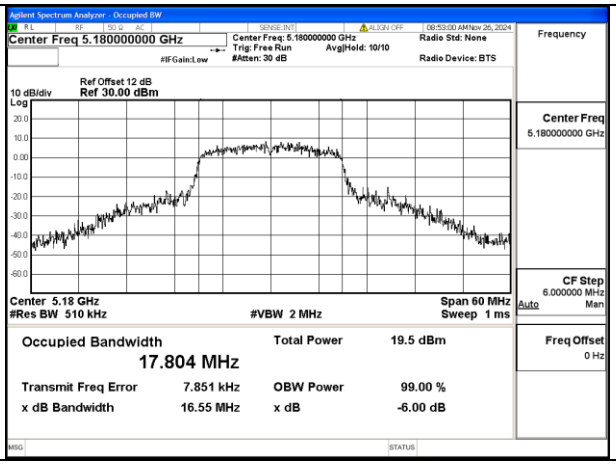


Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain1

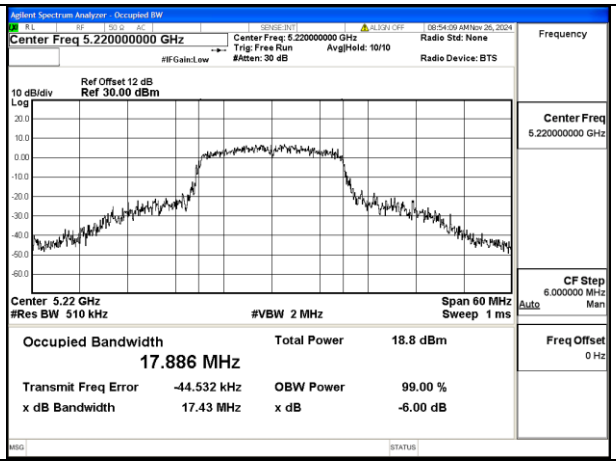


Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain1

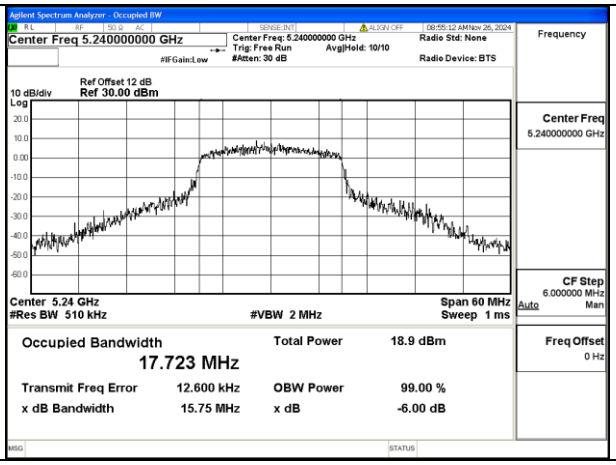
Test Mode: 802.11ac VHT20



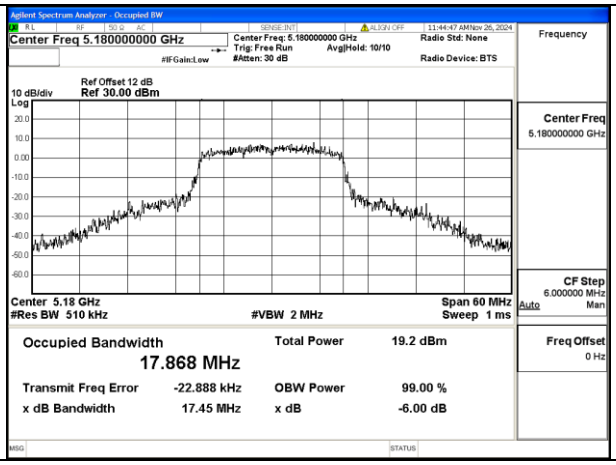
Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain0



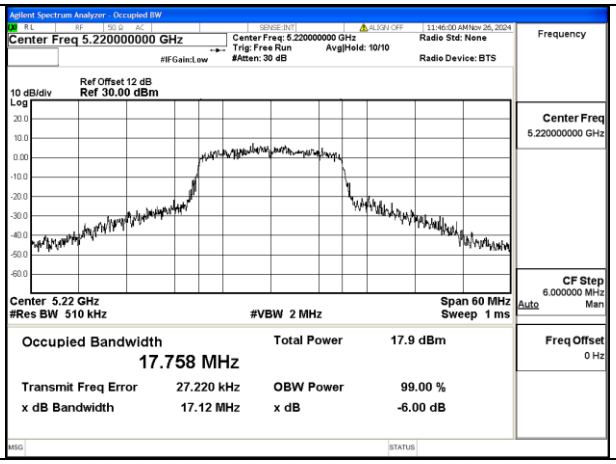
Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain0



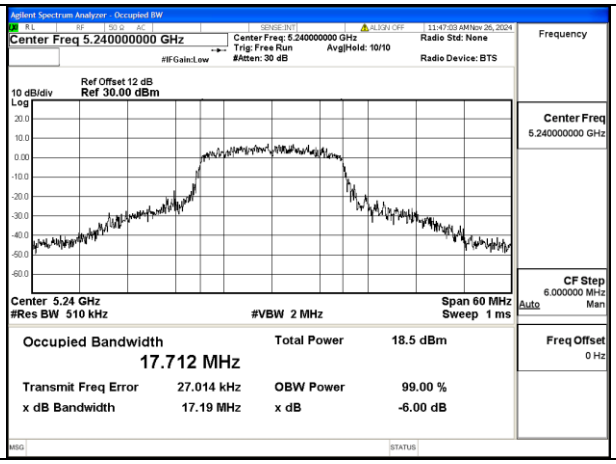
Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain1

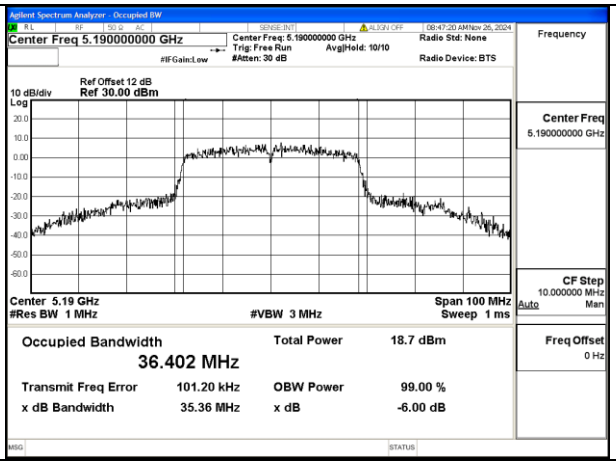


Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain1

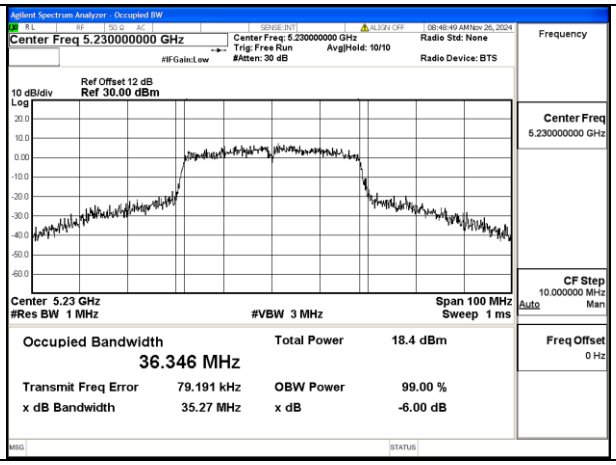


Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain1

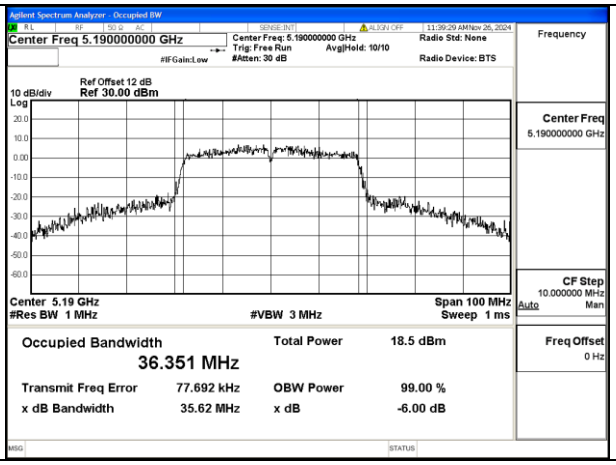
Test Mode: 802.11n HT40



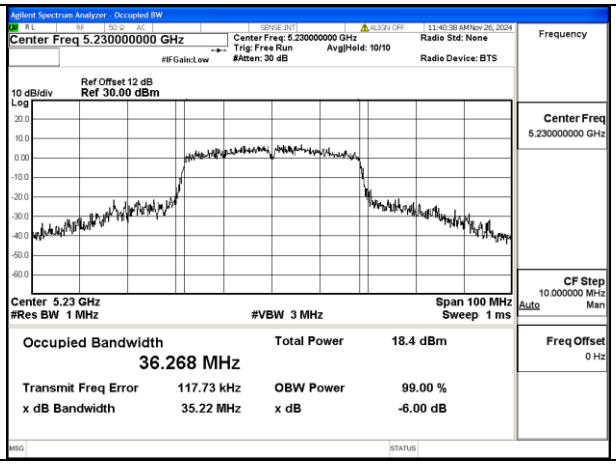
Mode:802.11n HT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11n HT40 Frequency:5230MHz
Ant:Chain0

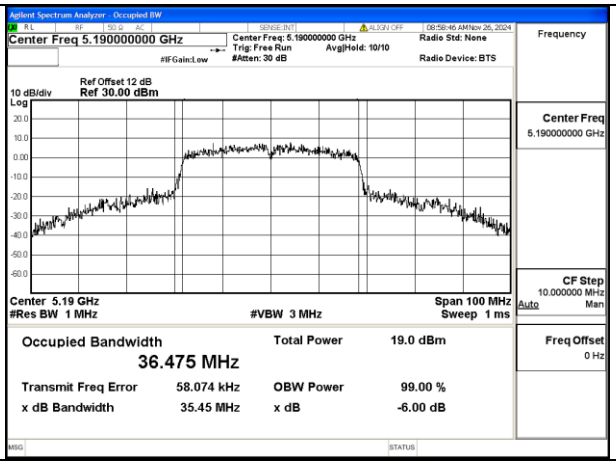


Mode:802.11n HT40 Frequency:5190MHz
Ant:Chain1

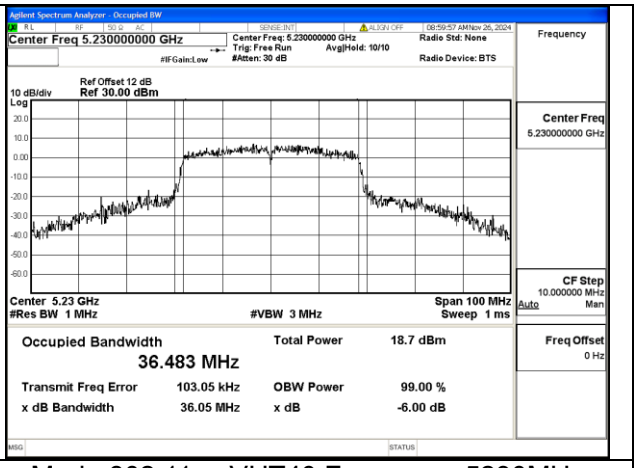


Mode:802.11n HT40 Frequency:5230MHz
Ant:Chain1

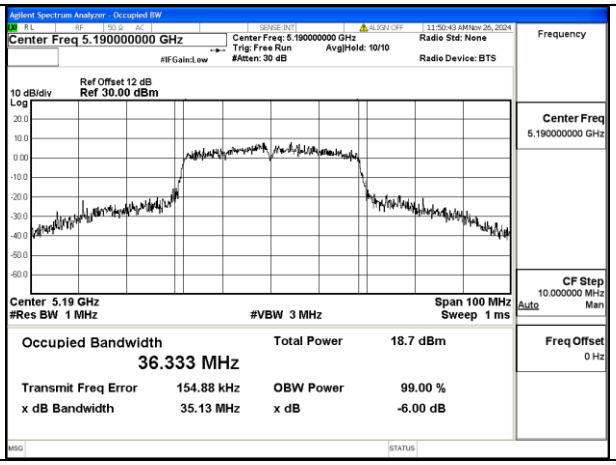
Test Mode: 802.11ac VHT40



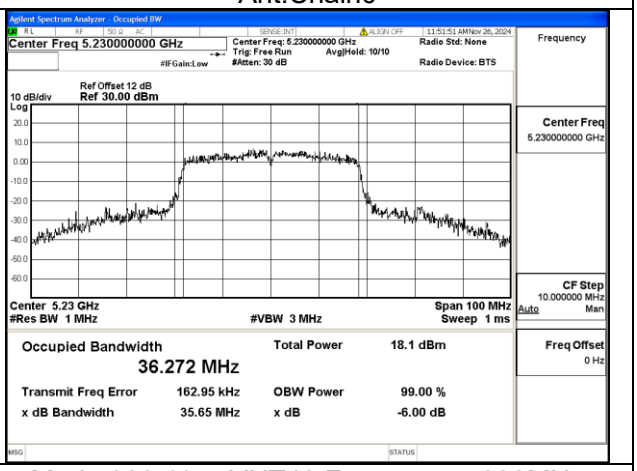
Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain0



Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain0

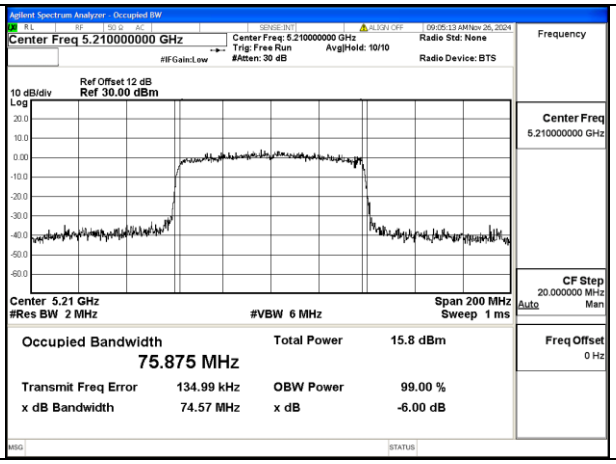


Mode:802.11ac VHT40 Frequency:5190MHz
Ant:Chain1

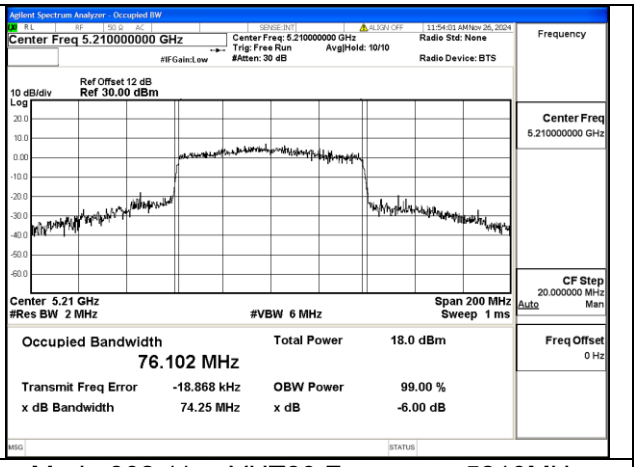


Mode:802.11ac VHT40 Frequency:5230MHz
Ant:Chain1

Test Mode: 802.11ac VHT80



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain0



Mode:802.11ac VHT80 Frequency:5210MHz
Ant:Chain1

Transmitter Power Spectral Density

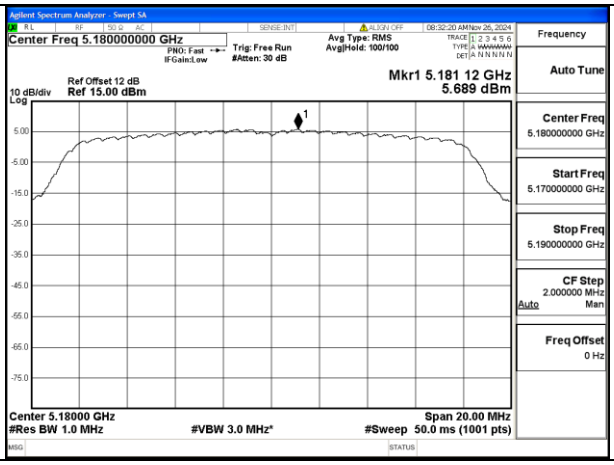
Offset 12dB = Attenuator + Temporary antenna connector loss + Cable loss

TestMode	Antenna	Tones	5180MHz		5220MHz		5240MHz	
			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	0.10	5.789	0.10	5.200	0.10	5.493
802.11a	Chain1	NA	0.00	5.178	0.00	5.075	0.00	4.810
802.11n HT20	Chain0	NA	0.10	4.440	0.10	3.883	0.10	4.046
802.11n HT20	Chain1	NA	0.09	4.929	0.09	4.278	0.09	4.345
802.11n HT20	MIMO	NA	0.10	7.702	0.10	7.095	0.10	7.208
802.11ac VHT20	Chain0	NA	0.11	5.232	0.11	4.686	0.11	4.672
802.11ac VHT20	Chain1	NA	0.09	4.855	0.09	4.090	0.09	4.361
802.11ac VHT20	MIMO	NA	0.11	8.058	0.11	7.409	0.11	7.530

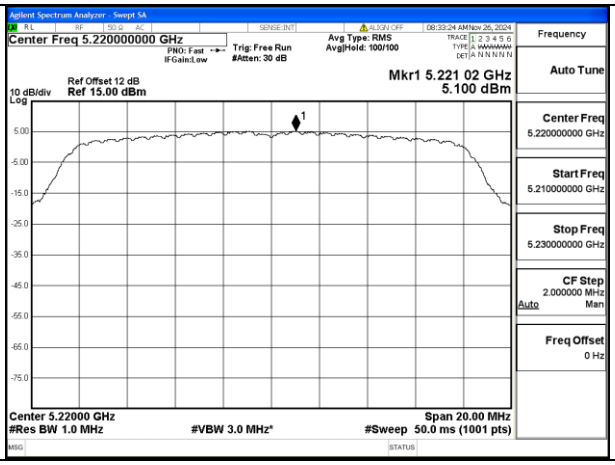
TestMode	Antenna	Tones	5190MHz		---		5230MHz	
			Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)	Correction Factor(dB)	Power Density (dBm/MHz)
802.11n HT40	Chain0	NA	0.19	1.569	---	---	0.19	1.040
802.11n HT40	Chain1	NA	0.16	1.409	---	---	0.16	1.055
802.11n HT40	MIMO	NA	0.19	4.500	---	---	0.19	4.058
802.11ac VHT40	Chain0	NA	0.19	2.002	---	---	0.19	1.640
802.11ac VHT40	Chain1	NA	0.16	1.123	---	---	0.16	1.018
802.11ac VHT40	MIMO	NA	0.19	4.595	---	---	0.19	4.350

TestMode	Antenna	Tones	5210MHz		---		---	
			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	0.31	-1.483	---	---	---	---
802.11ac VHT80	Chain1	NA	0.26	-1.657	---	---	---	---
802.11ac VHT80	MIMO	NA	0.31	1.441	---	---	---	---

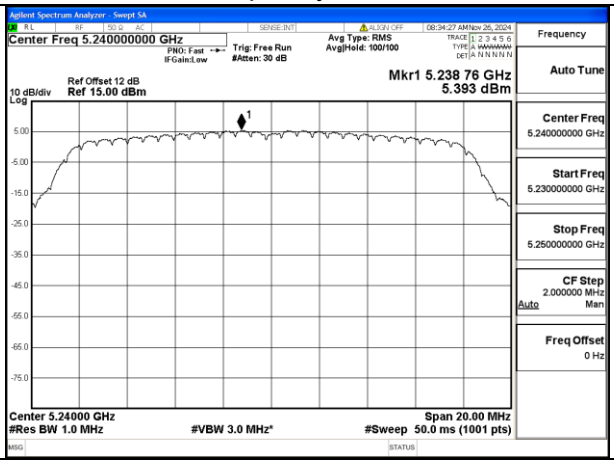
Test Mode: 802.11a



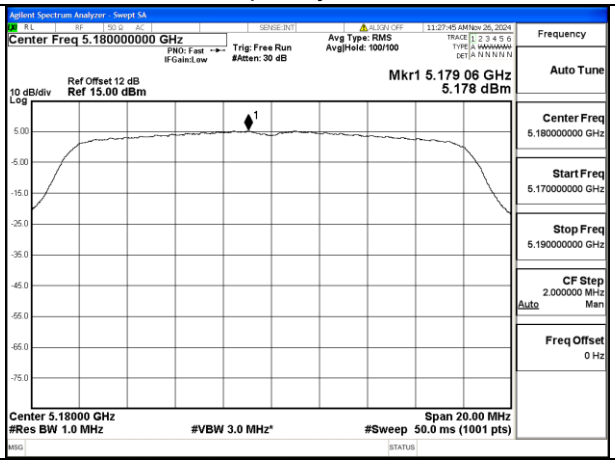
Mode:802.11a Frequency:5180MHz Ant:Chain0



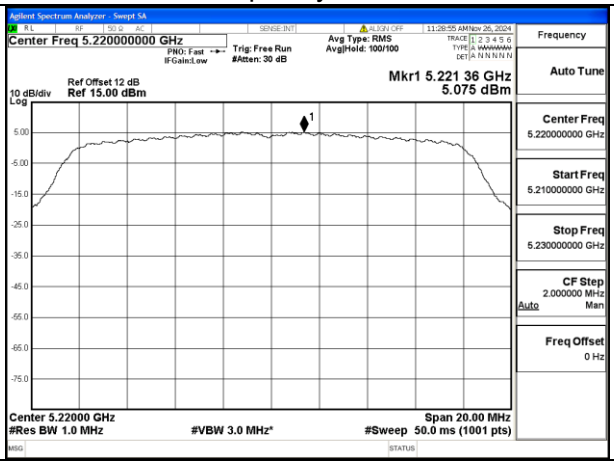
Mode:802.11a Frequency:5220MHz Ant:Chain0



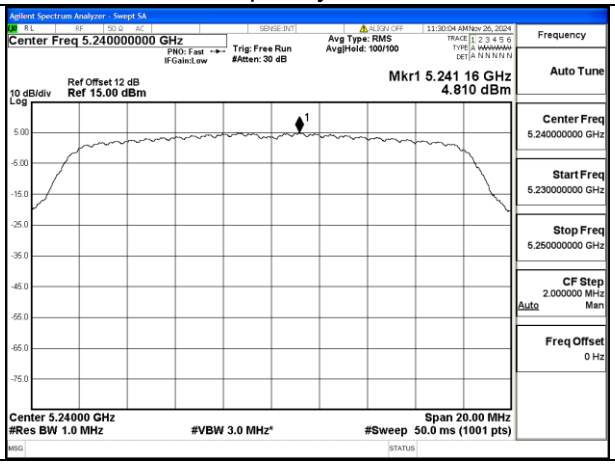
Mode:802.11a Frequency:5240MHz Ant:Chain0



Mode:802.11a Frequency:5180MHz Ant:Chain1

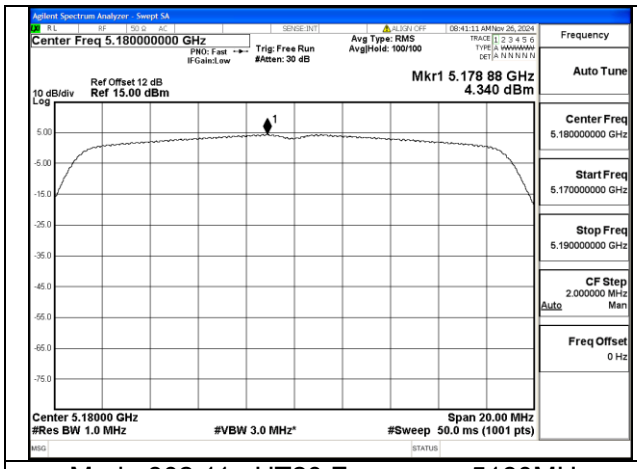


Mode:802.11a Frequency:5220MHz Ant:Chain1

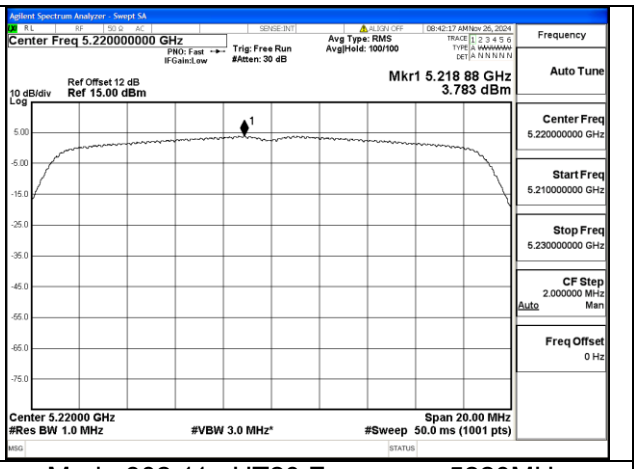


Mode:802.11a Frequency:5240MHz Ant:Chain1

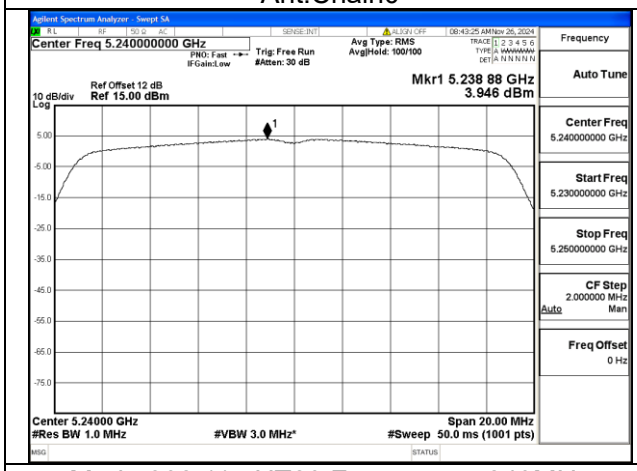
Test Mode: 802.11n HT20



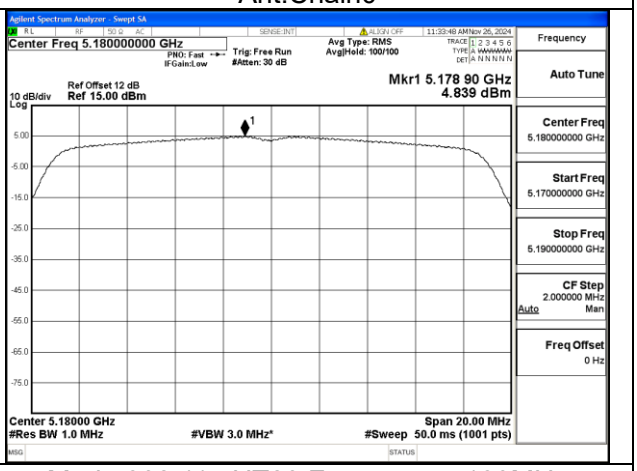
Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain0



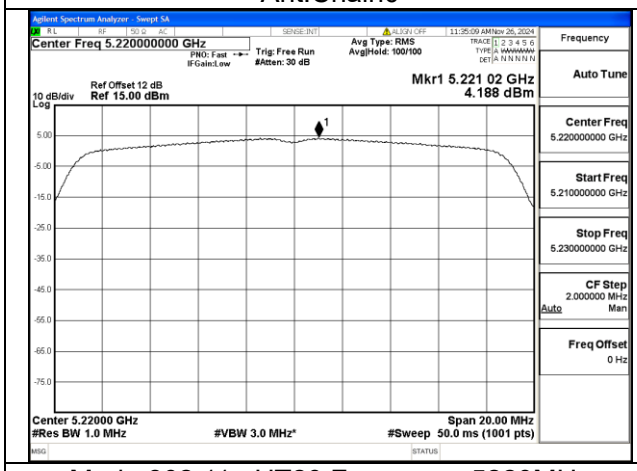
Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain0



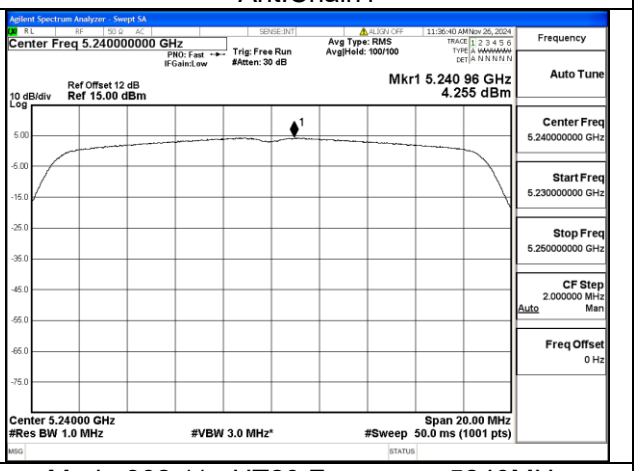
Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11n HT20 Frequency:5180MHz
Ant:Chain1

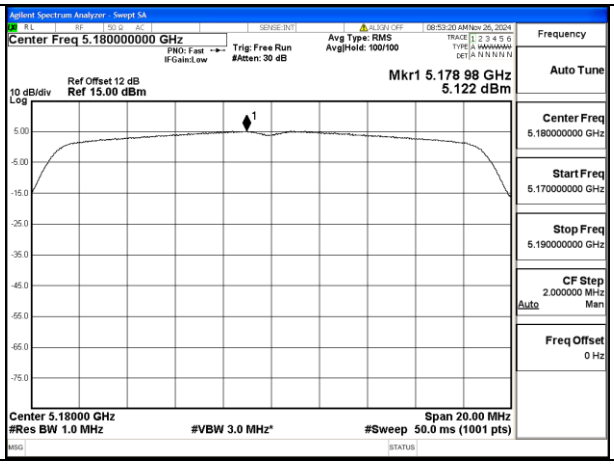


Mode:802.11n HT20 Frequency:5220MHz
Ant:Chain1

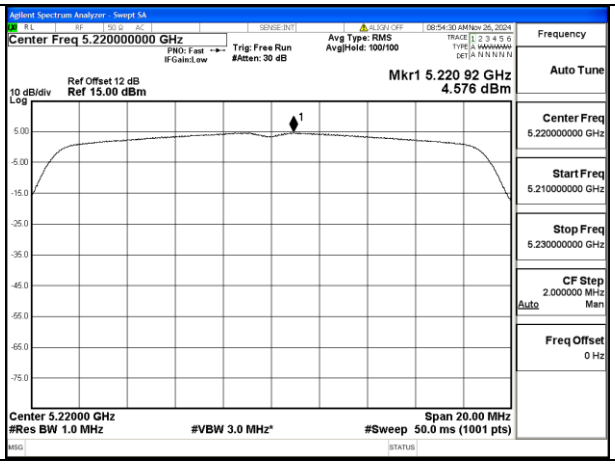


Mode:802.11n HT20 Frequency:5240MHz
Ant:Chain1

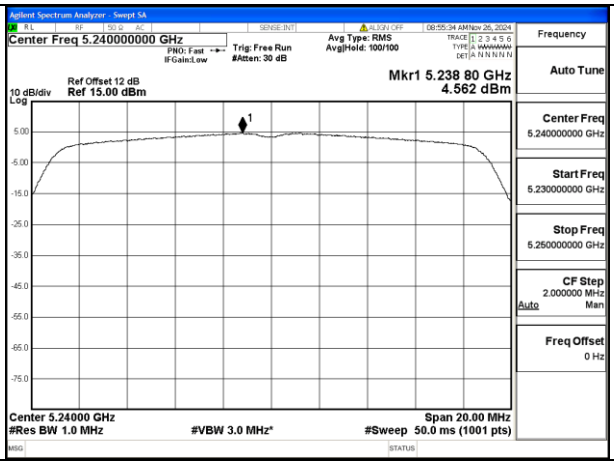
Test Mode: 802.11ac VHT20



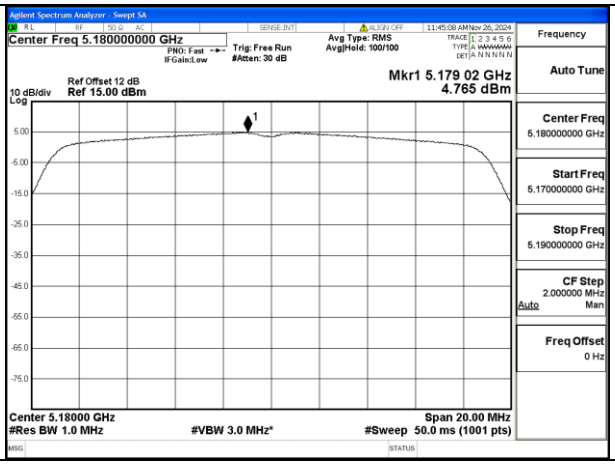
Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain0



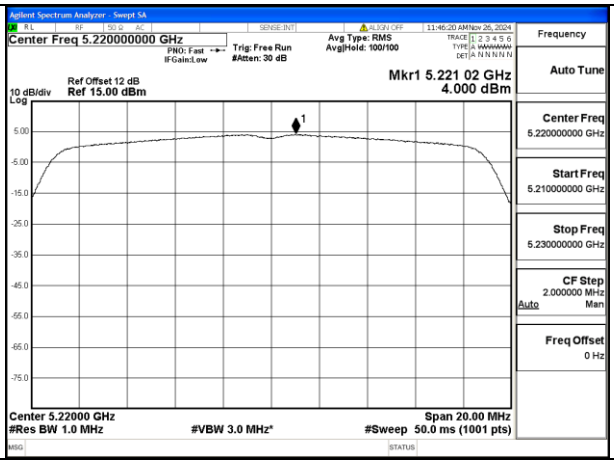
Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain0



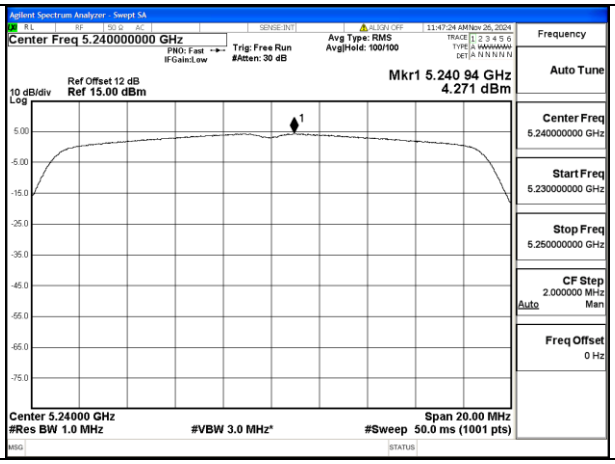
Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain0



Mode:802.11ac VHT20 Frequency:5180MHz
Ant:Chain1



Mode:802.11ac VHT20 Frequency:5220MHz
Ant:Chain1



Mode:802.11ac VHT20 Frequency:5240MHz
Ant:Chain1