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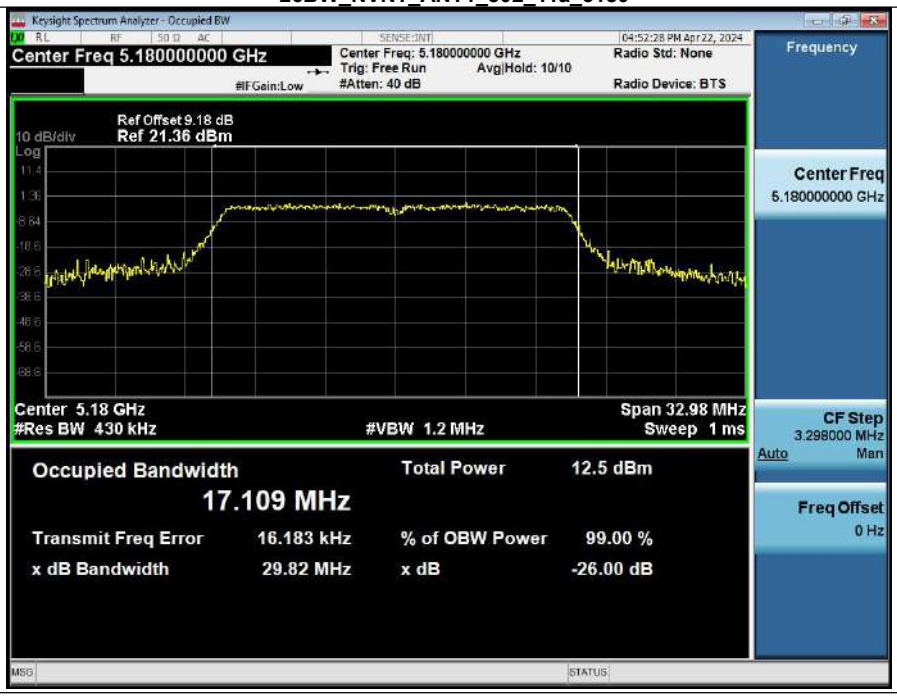
240422 FCC ID WIFI5.2
FCC_5.2G_WIFI (Part15.407) Test Data

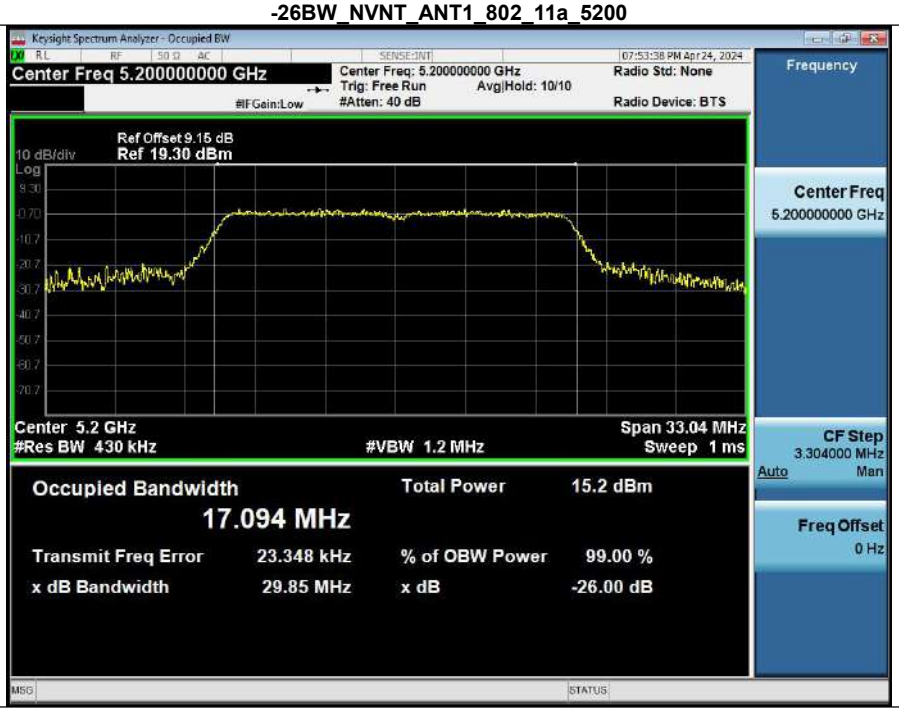
1. -26dB and 99% Emission Bandwidth

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	29.82
NVNT	ANT1	802.11a	5200.00	29.85
NVNT	ANT1	802.11a	5240.00	28.47
NVNT	ANT1	802.11n(HT20)	5180.00	29.84
NVNT	ANT1	802.11n(HT20)	5200.00	32.60
NVNT	ANT1	802.11n(HT20)	5240.00	27.88
NVNT	ANT1	802.11ac(VHT20)	5180.00	32.56
NVNT	ANT1	802.11ac(VHT20)	5200.00	32.68
NVNT	ANT1	802.11ac(VHT20)	5240.00	32.50
NVNT	ANT1	802.11n(HT40)	5190.00	47.61
NVNT	ANT1	802.11n(HT40)	5230.00	49.36
NVNT	ANT1	802.11ac(VHT40)	5190.00	52.15
NVNT	ANT1	802.11ac(VHT40)	5230.00	49.78
NVNT	ANT1	802.11ac(VHT80)	5210.00	98.96

-26BW_NVNT_ANT1_802_11a_5180



-26BW_NVNT_ANT1_802_11a_5200



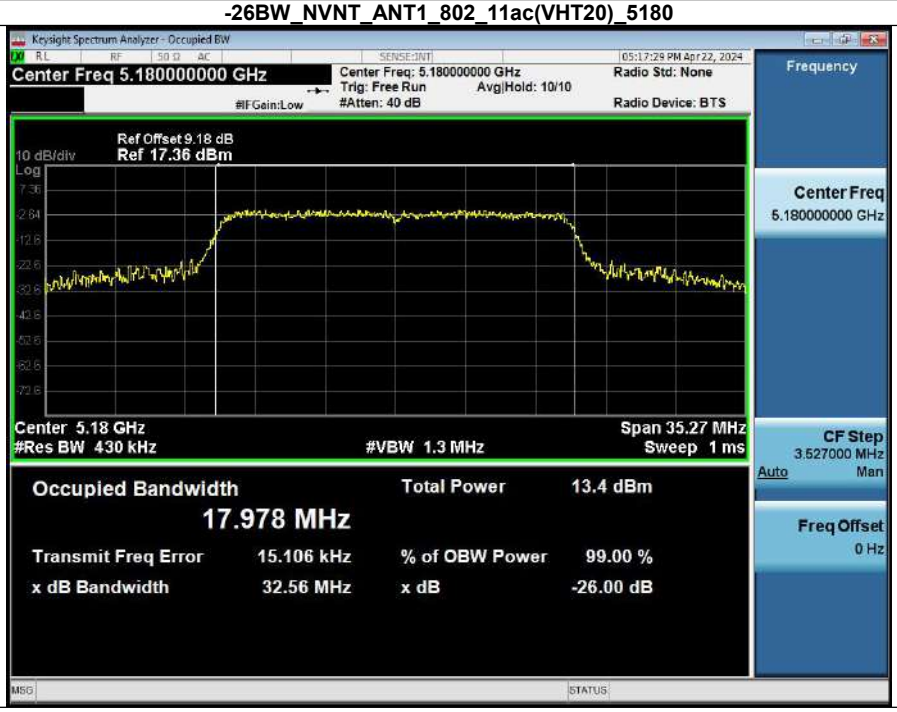
-26BW_NVNT_ANT1_802_11a_5240

-26BW_NVNT_ANT1_802_11n(HT20)_5180

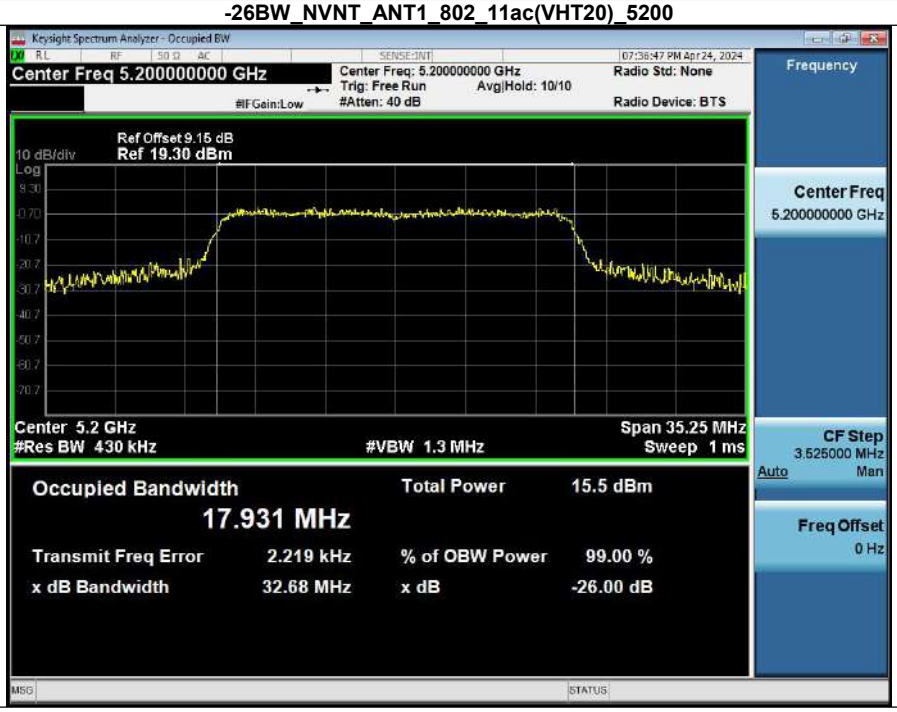
-26BW_NVNT_ANT1_802_11n(HT20)_5200

-26BW_NVNT_ANT1_802_11n(HT20)_5240

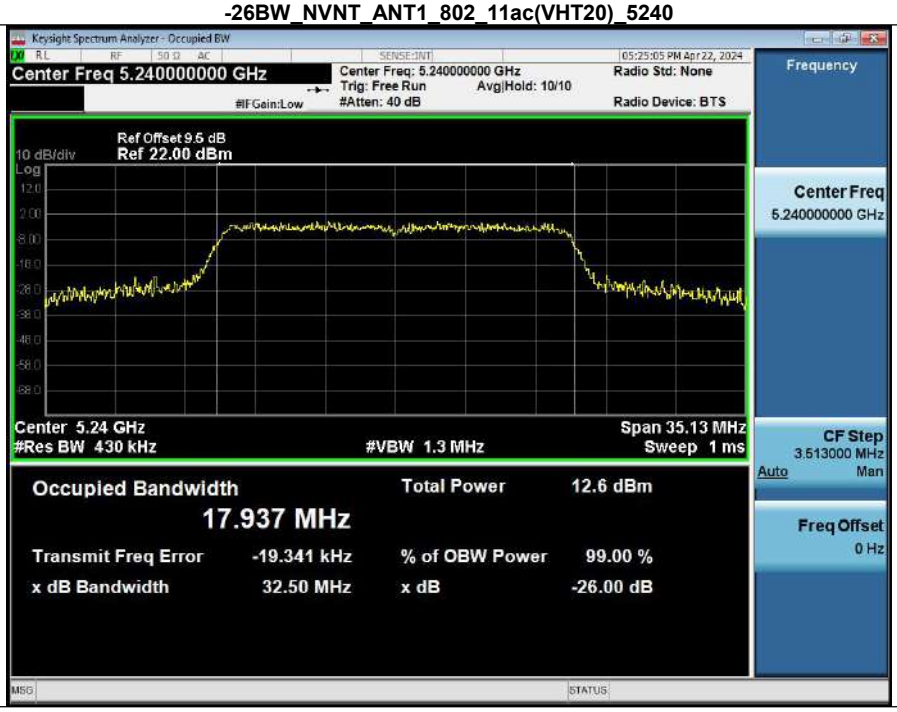
-26BW_NVNT_ANT1_802_11ac(VHT20)_5180



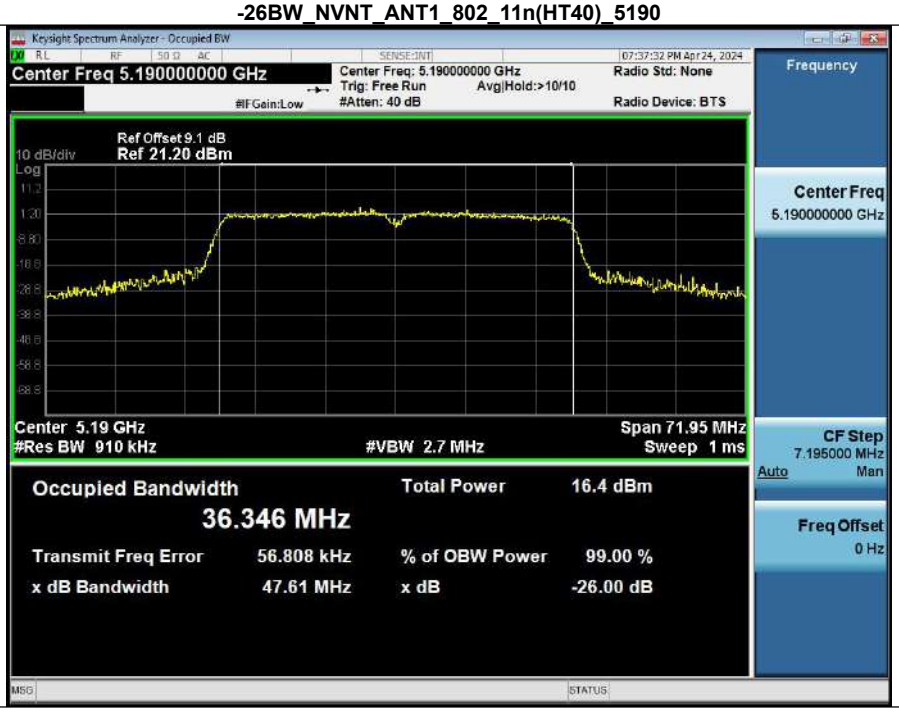
-26BW_NVNT_ANT1_802_11ac(VHT20)_5200



-26BW_NVNT_ANT1_802_11ac(VHT20)_5240

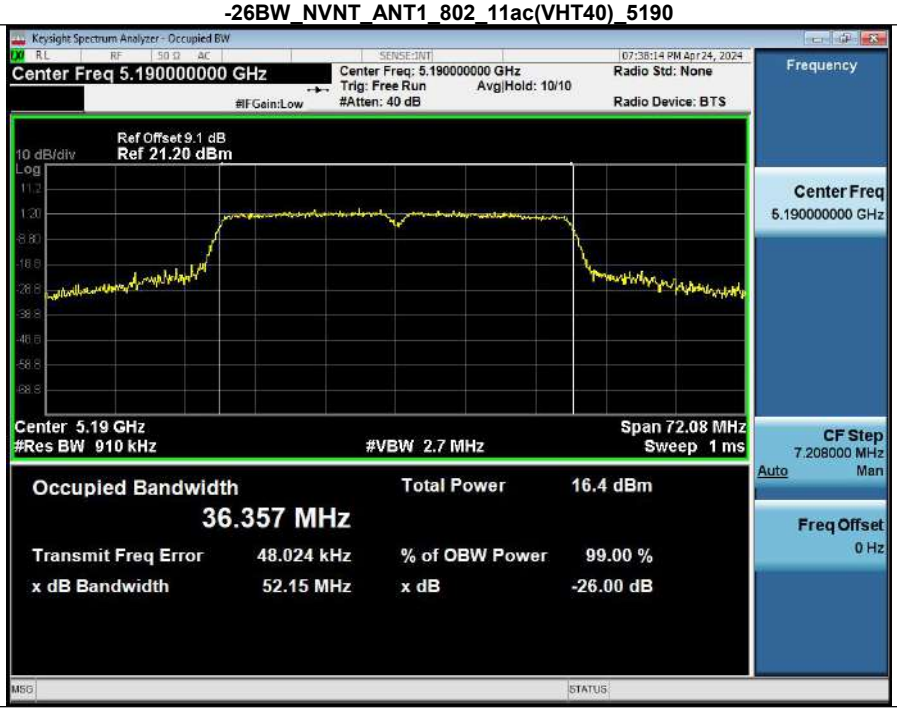


-26BW_NVNT_ANT1_802_11n(HT40)_5190

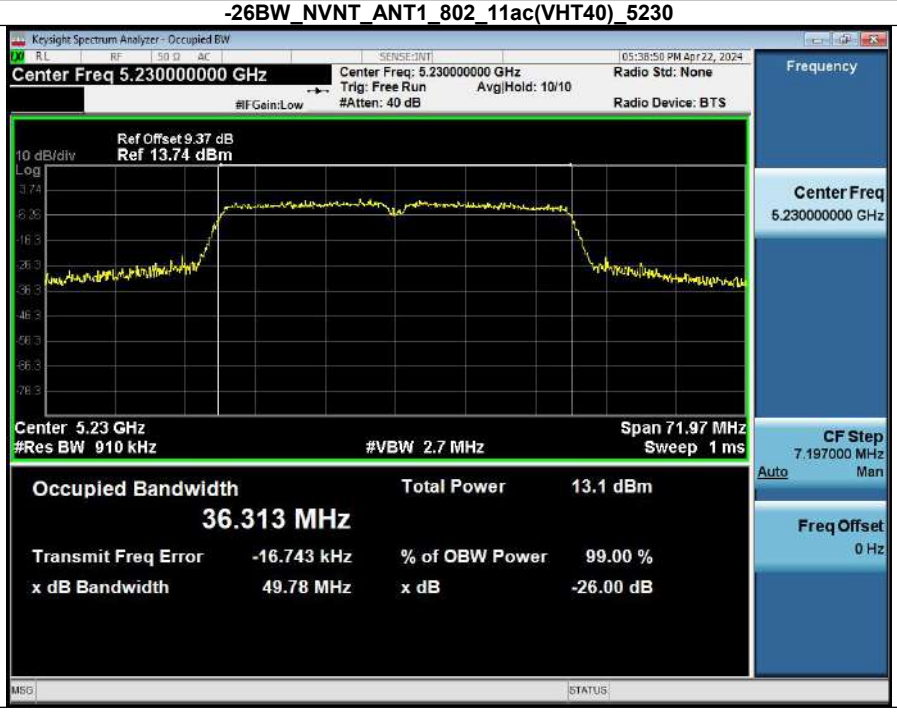


-26BW_NVNT_ANT1_802_11n(HT40)_5230

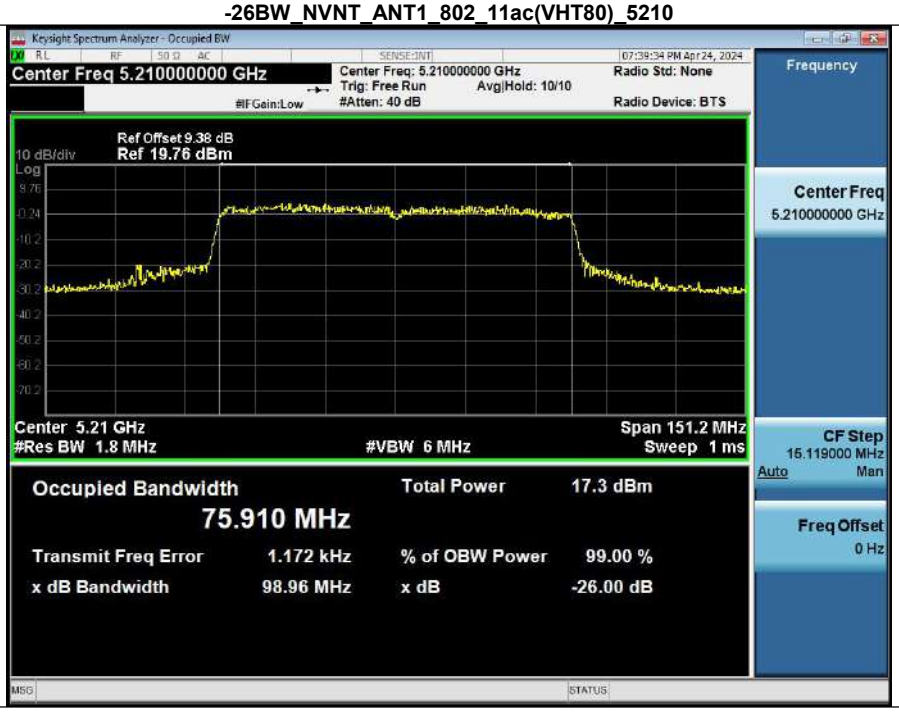
-26BW_NVNT_ANT1_802_11ac(VHT40)_5190



-26BW_NVNT_ANT1_802_11ac(VHT40)_5230



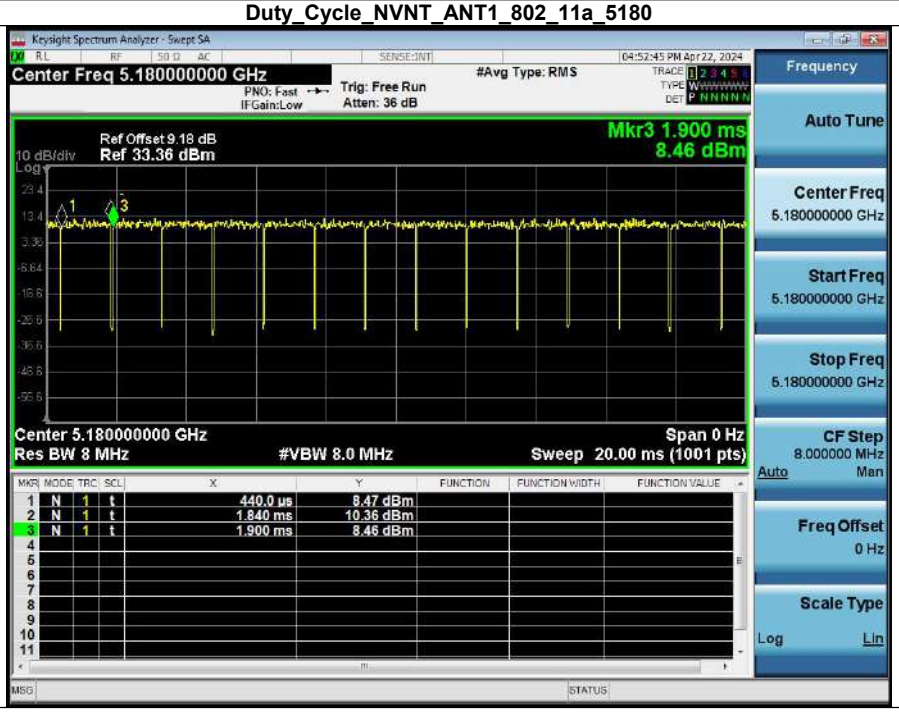
-26BW_NVNT_ANT1_802_11ac(VHT80)_5210



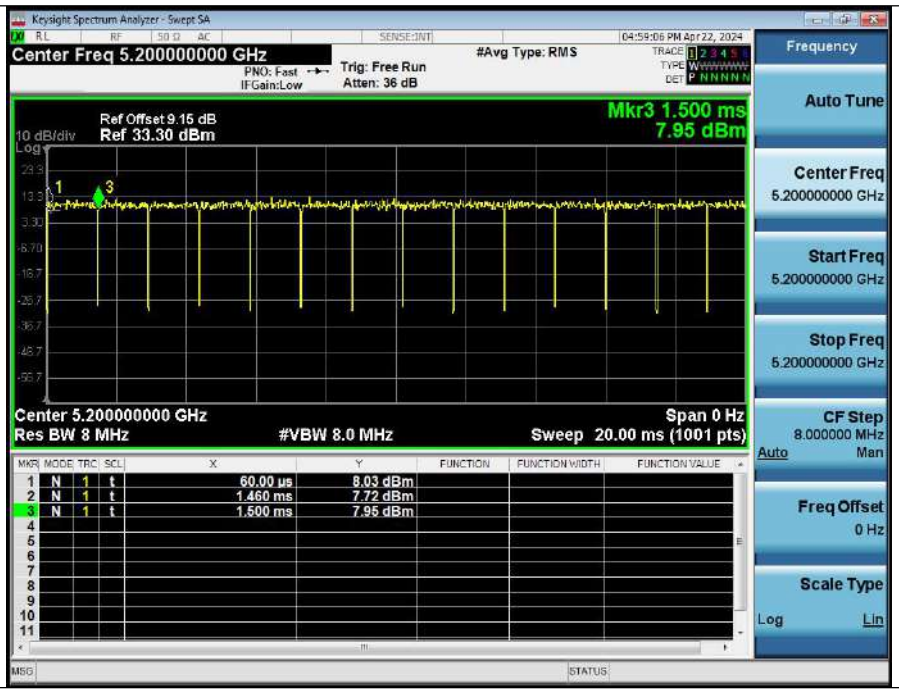
2. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5180.00	95.89	0.18
NVNT	ANT1	802.11a	5200.00	97.22	0.12
NVNT	ANT1	802.11a	5240.00	95.89	0.18
NVNT	ANT1	802.11n(HT20)	5180.00	95.16	0.22
NVNT	ANT1	802.11n(HT20)	5200.00	95.16	0.22
NVNT	ANT1	802.11n(HT20)	5240.00	95.16	0.22
NVNT	ANT1	802.11ac(VHT20)	5180.00	96.77	0.14
NVNT	ANT1	802.11ac(VHT20)	5200.00	96.77	0.14
NVNT	ANT1	802.11ac(VHT20)	5240.00	96.77	0.14
NVNT	ANT1	802.11n(HT40)	5190.00	93.75	0.28
NVNT	ANT1	802.11n(HT40)	5230.00	93.75	0.28
NVNT	ANT1	802.11ac(VHT40)	5190.00	90.91	0.41
NVNT	ANT1	802.11ac(VHT40)	5230.00	90.91	0.41
NVNT	ANT1	802.11ac(VHT80)	5210.00	82.35	0.84

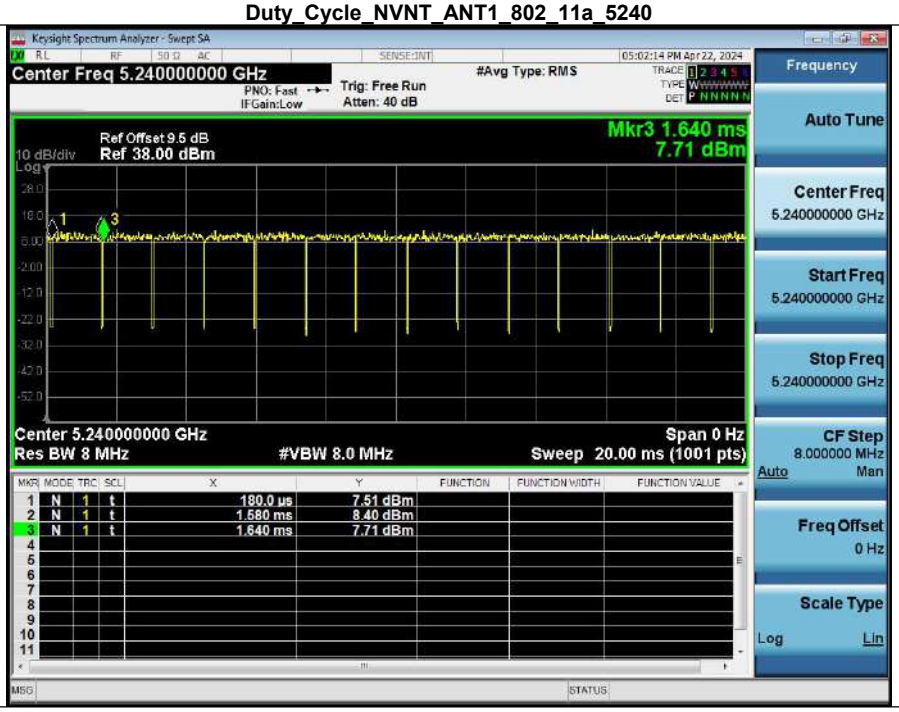
Duty_Cycle_NVNT_ANT1_802_11a_5180



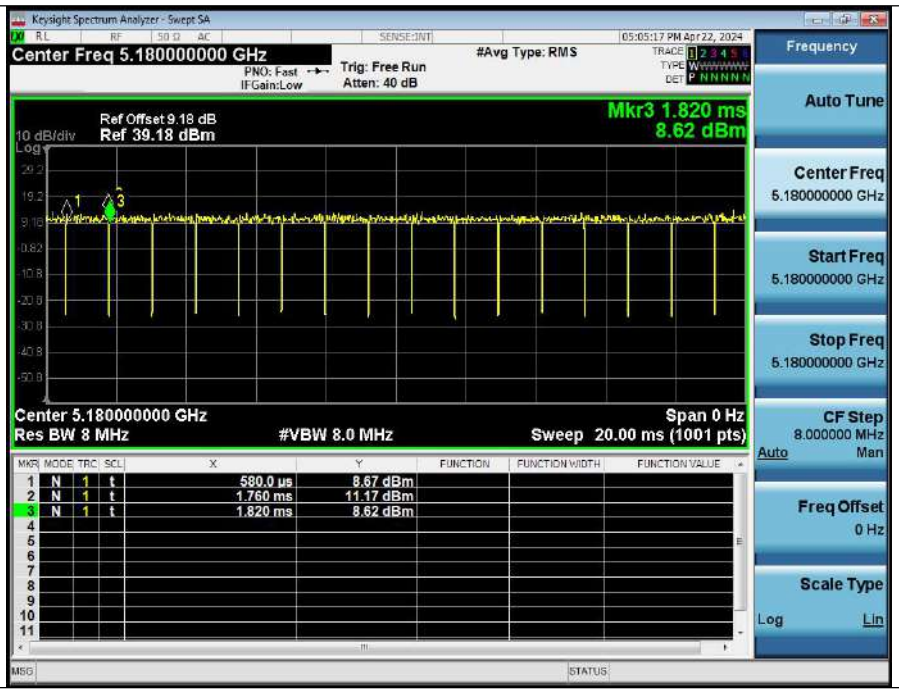
Duty_Cycle_NVNT_ANT1_802_11a_5200



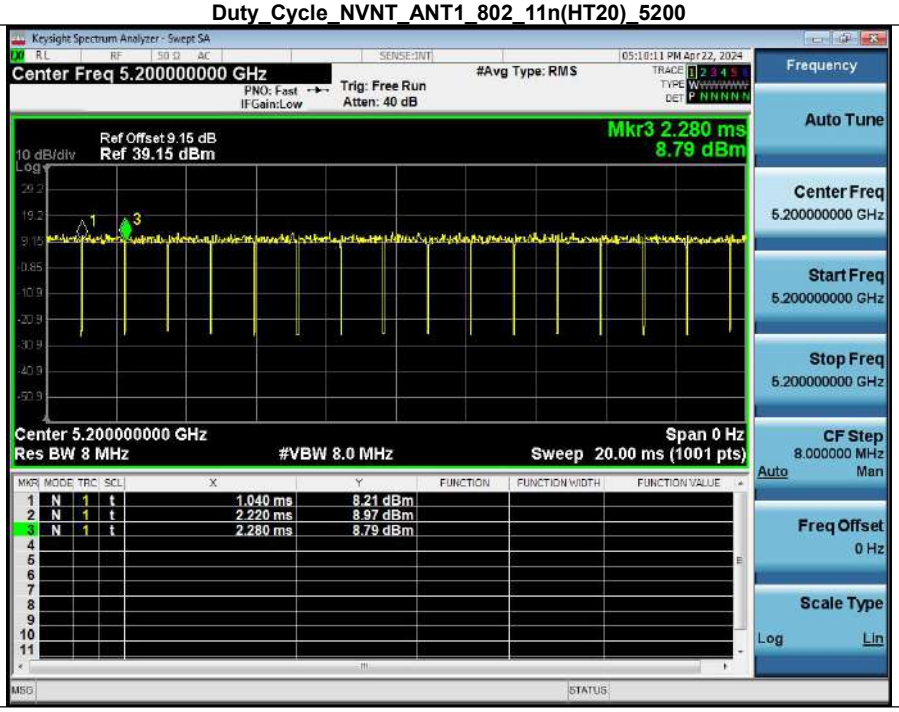
Duty_Cycle_NVNT_ANT1_802_11a_5240



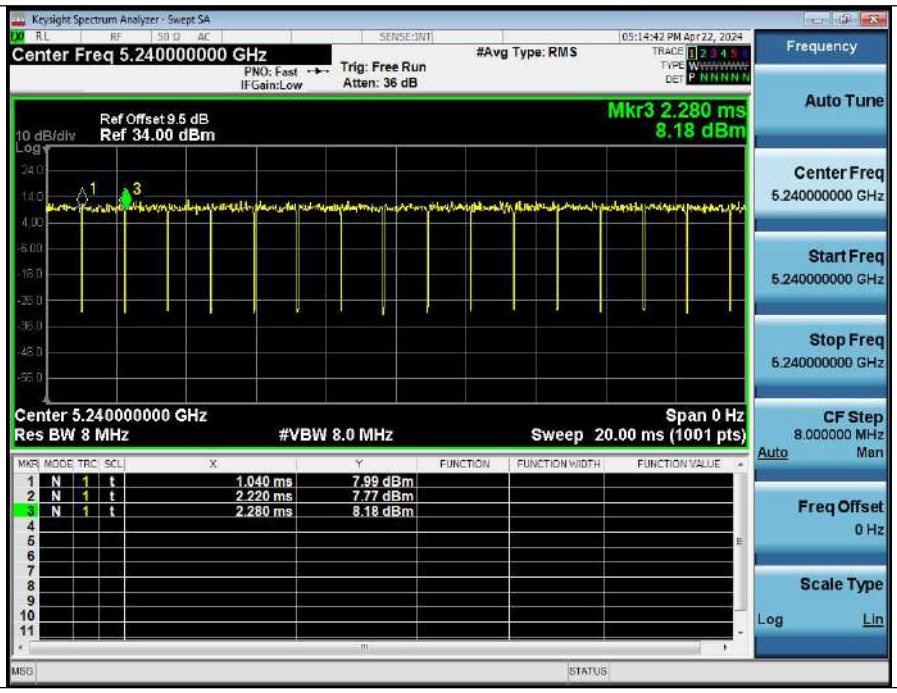
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5180



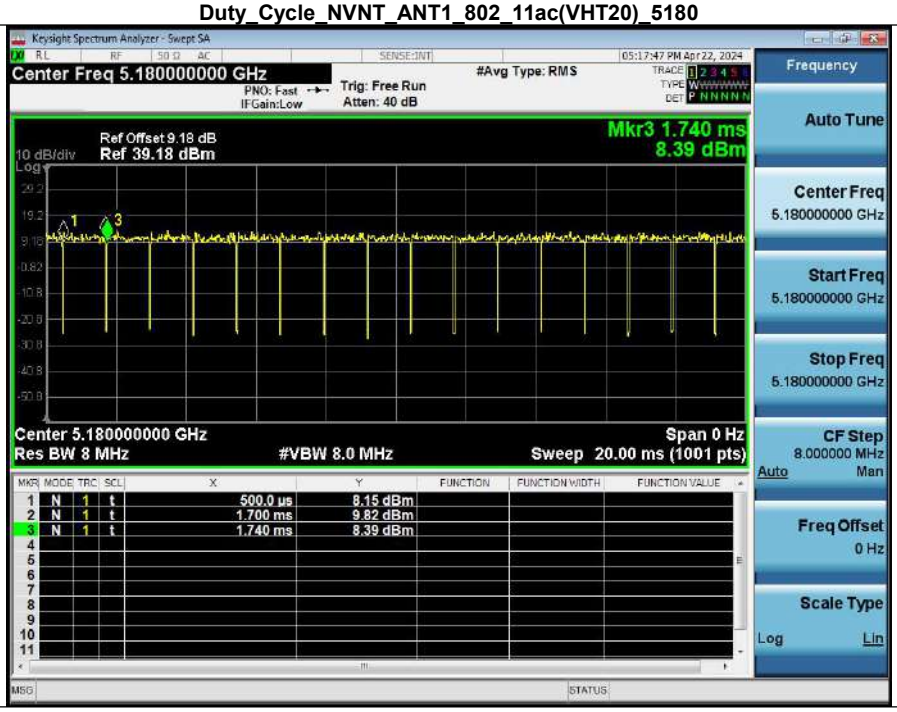
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5200



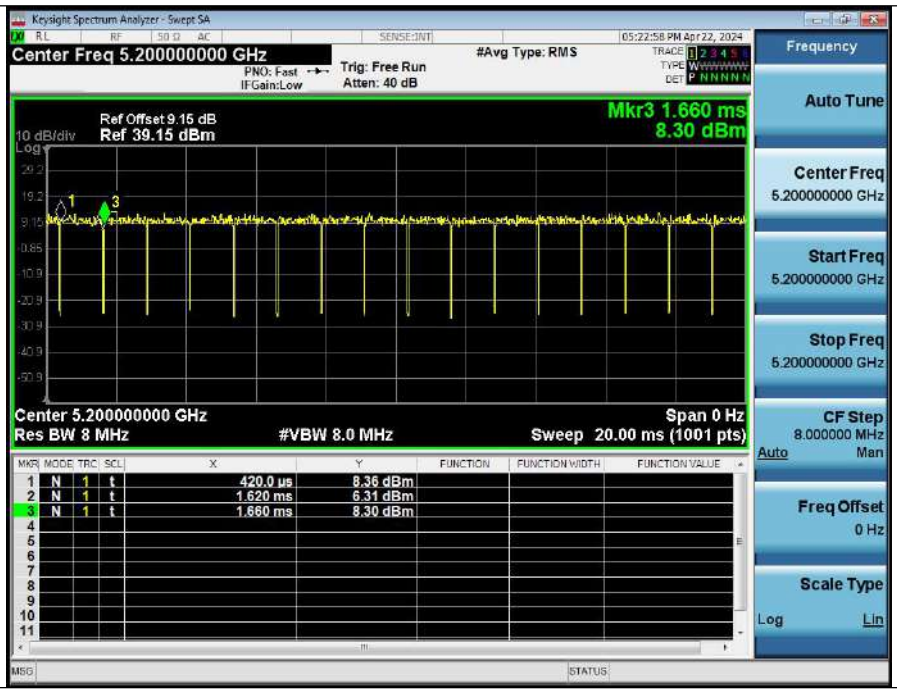
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5240



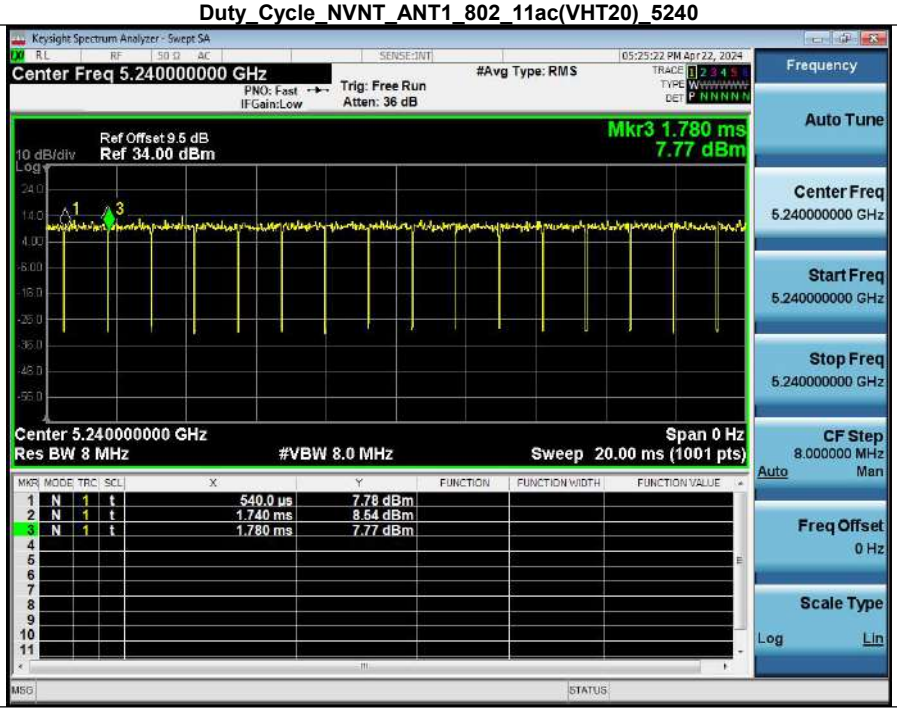
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5180



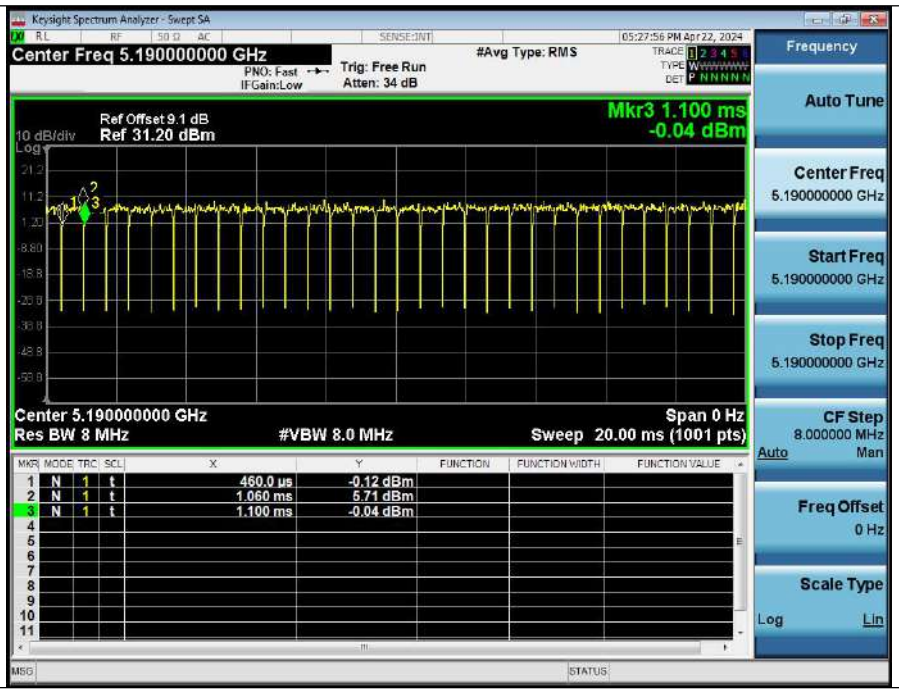
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5200



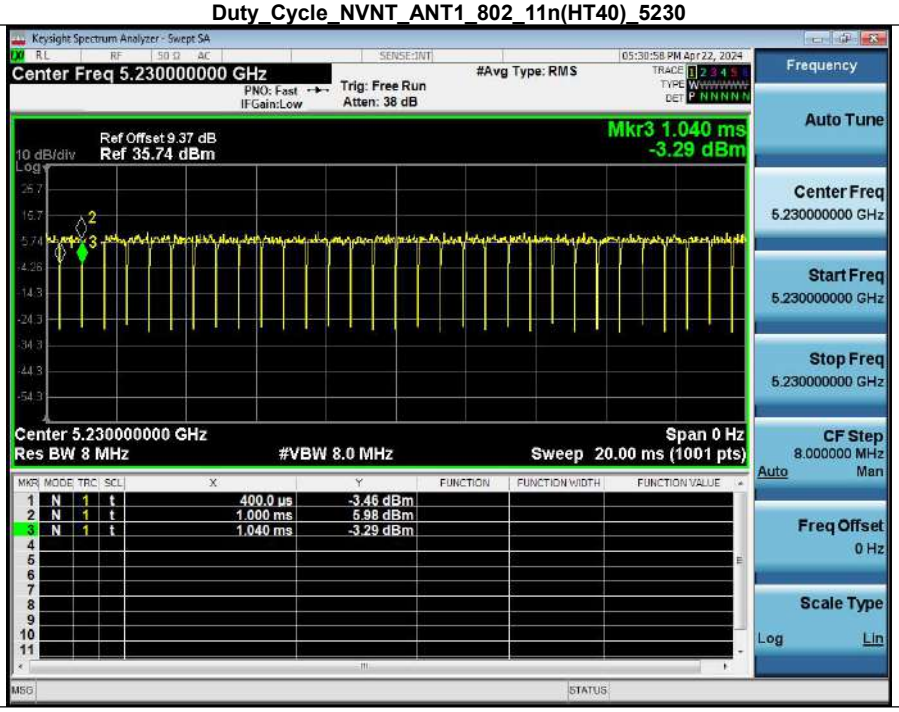
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5240



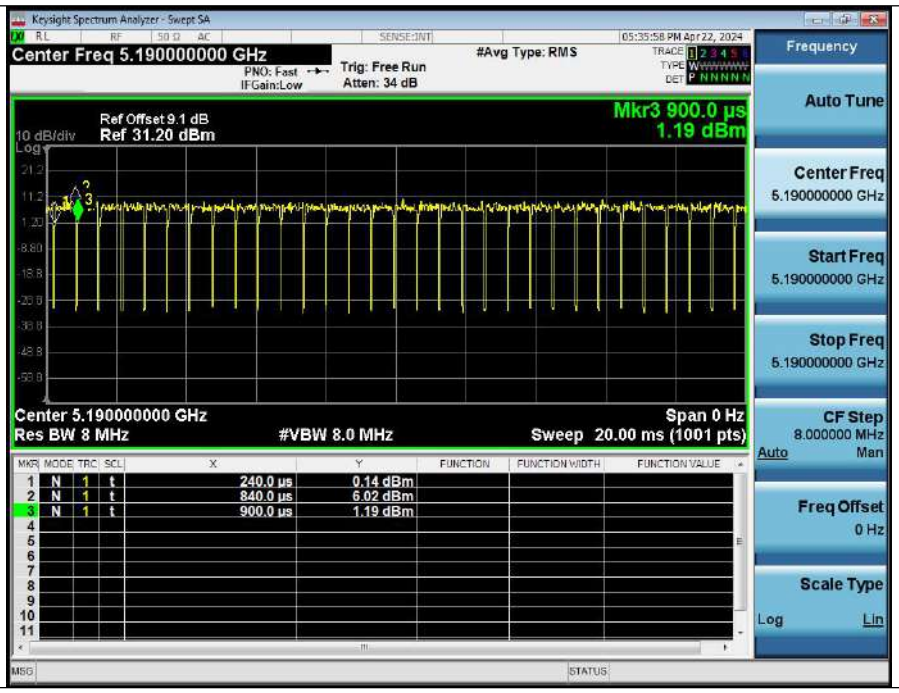
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5190



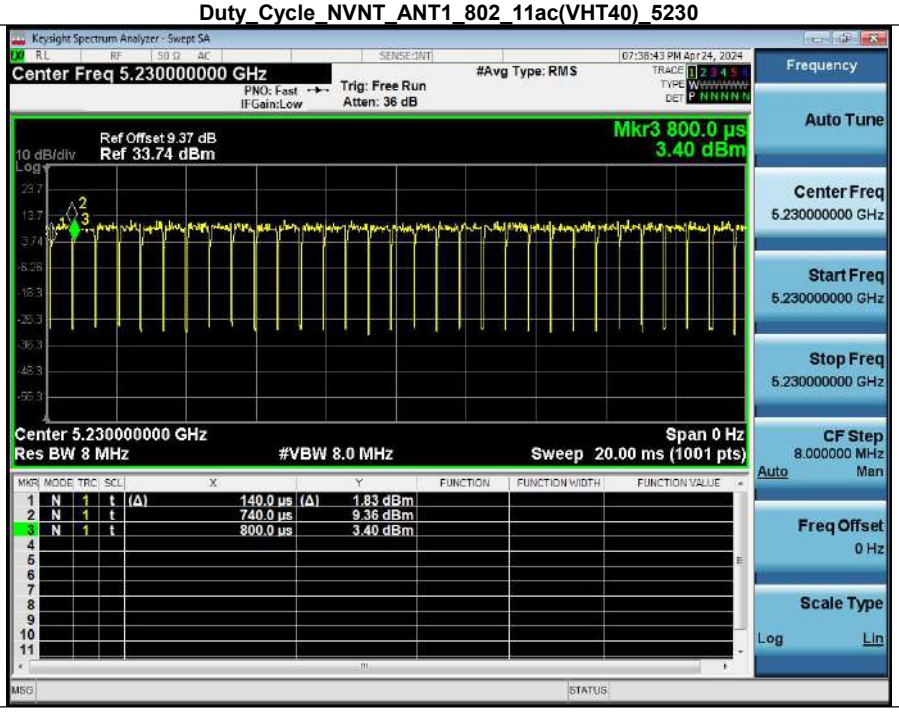
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5230



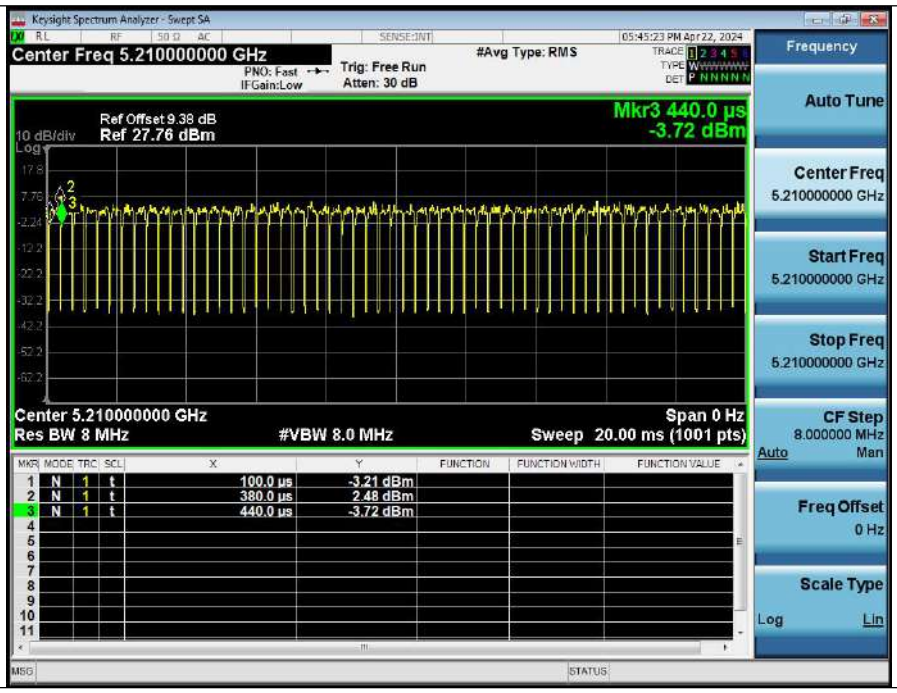
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5190



Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5230



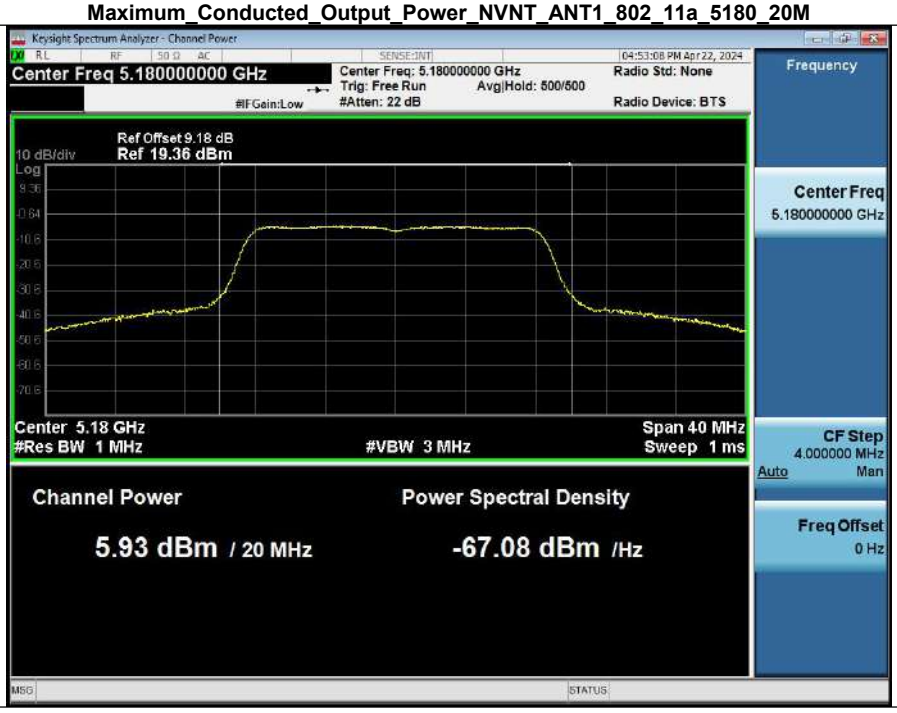
Duty_Cycle_NVNT_ANT1_802_11ac(VHT80)_5210


Keysight Spectrum Analyzer - Swept SA
05:45:23 PM Apr 22, 2024
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
#Avg Type: RMS
Frequency
Auto Tune
Ref Offset 9.38 dB
10 dB/div
Ref 27.76 dBm
Mkr3 440.0 µs
-3.72 dBm
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
Center 5.210000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (1001 pts)
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
1 N 1 t 100.0 µs -3.21 dBm
2 N 1 t 380.0 µs 2.48 dBm
3 N 1 t 440.0 µs -3.72 dBm

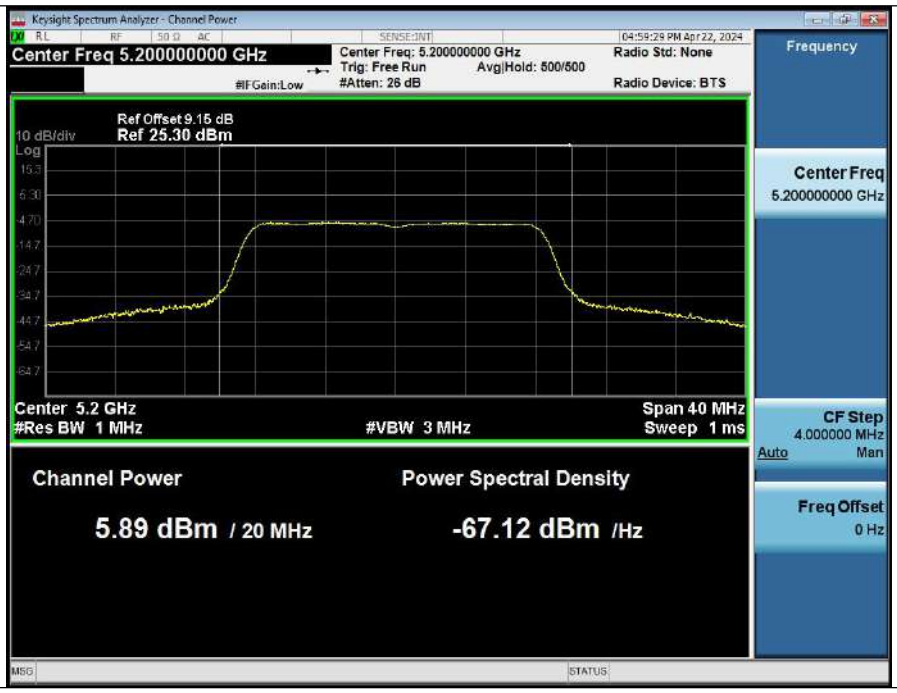
3. Maximum Conducted Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	5.93	0.18	6.11	24	Pass
NVNT	ANT1	802.11a	5200.00	5.89	0.12	6.01	24	Pass
NVNT	ANT1	802.11a	5240.00	5.55	0.18	5.73	24	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	6.59	0.22	6.81	24	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	6.13	0.22	6.35	24	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	5.79	0.22	6.01	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	6.58	0.14	6.72	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	6.13	0.14	6.27	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	5.74	0.14	5.88	24	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	5.55	0.28	5.83	24	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	5.06	0.28	5.34	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	5.63	0.41	6.04	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	5.06	0.00	5.06	24	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	4.95	0.84	5.79	24	Pass

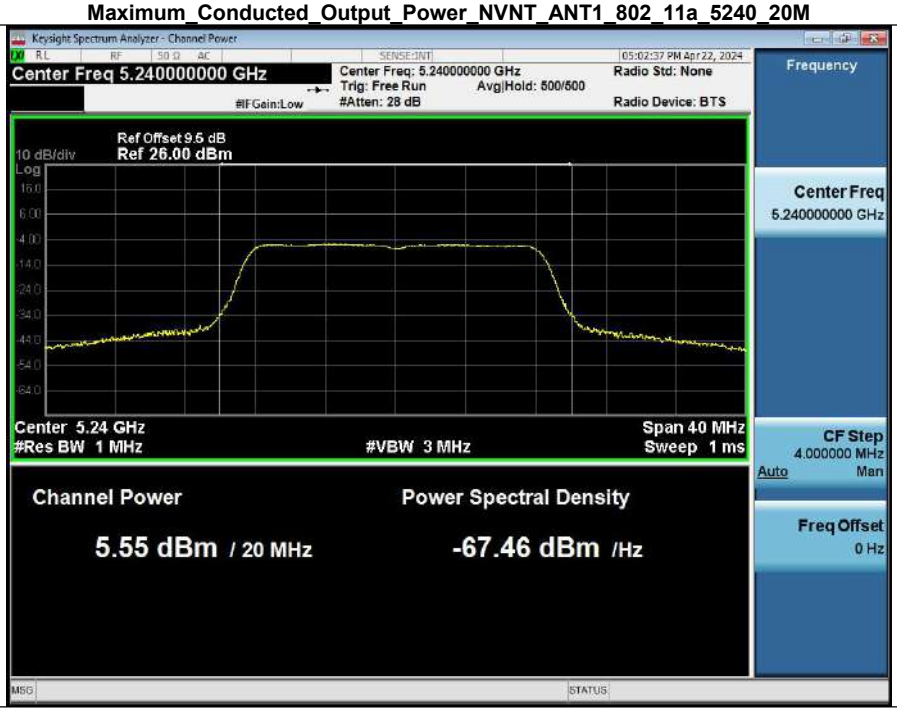
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5180_20M



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5200_20M

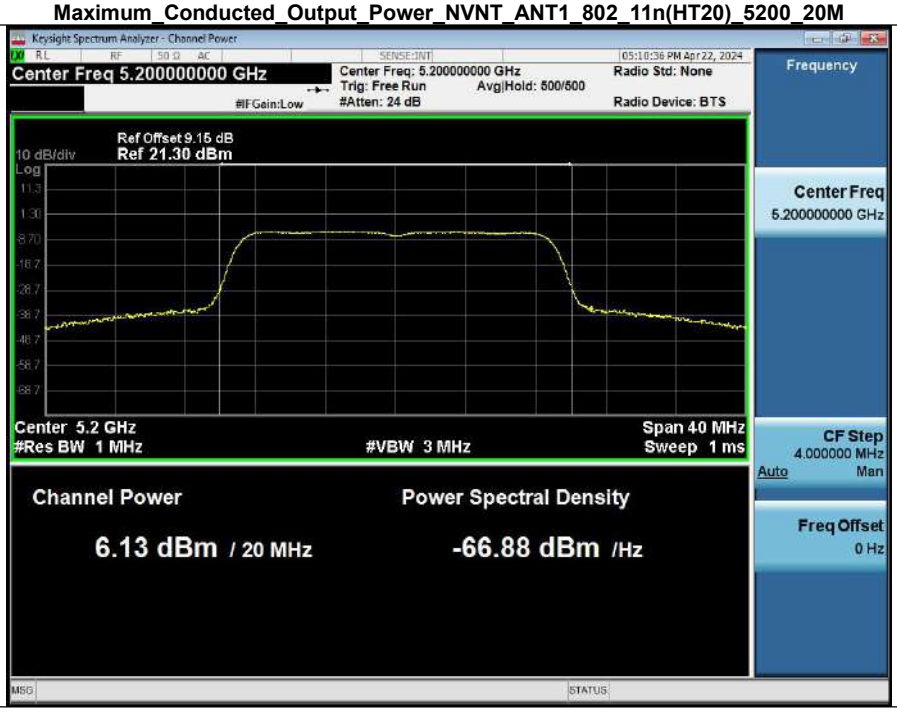


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5240_20M

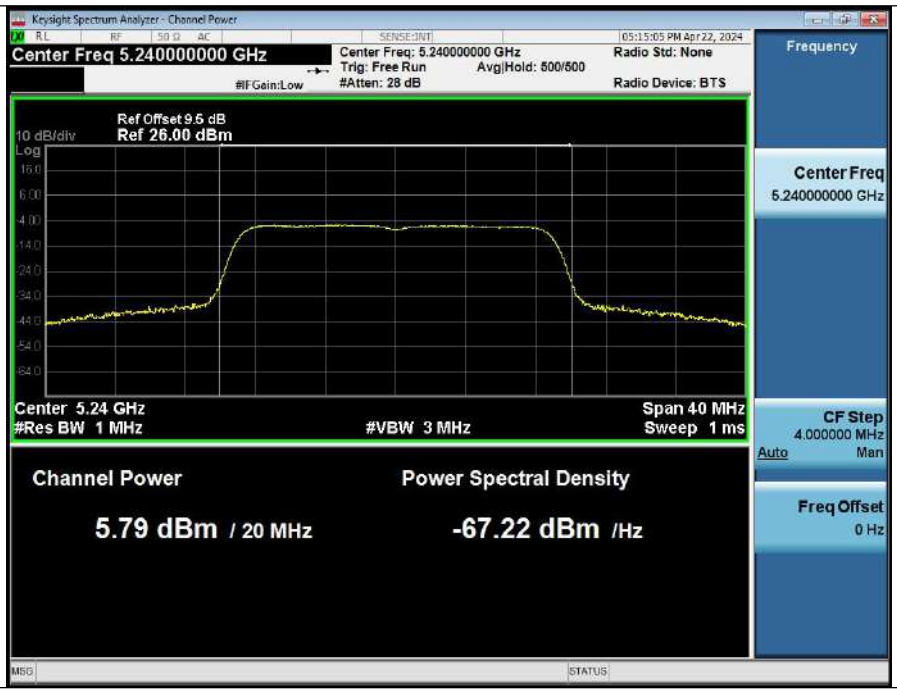


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5180_20M

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5200_20M



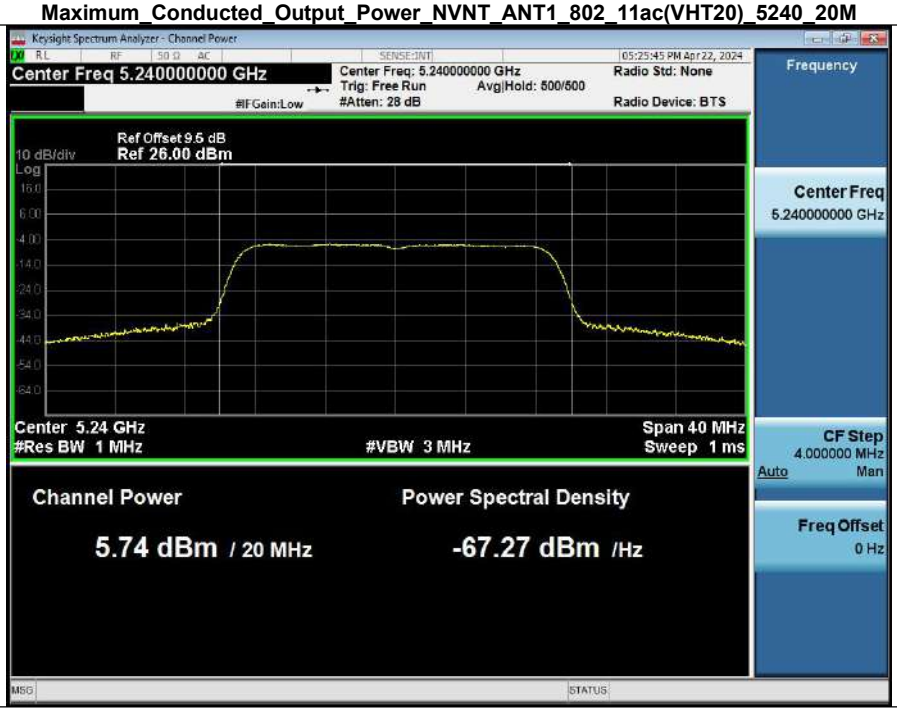
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5240_20M



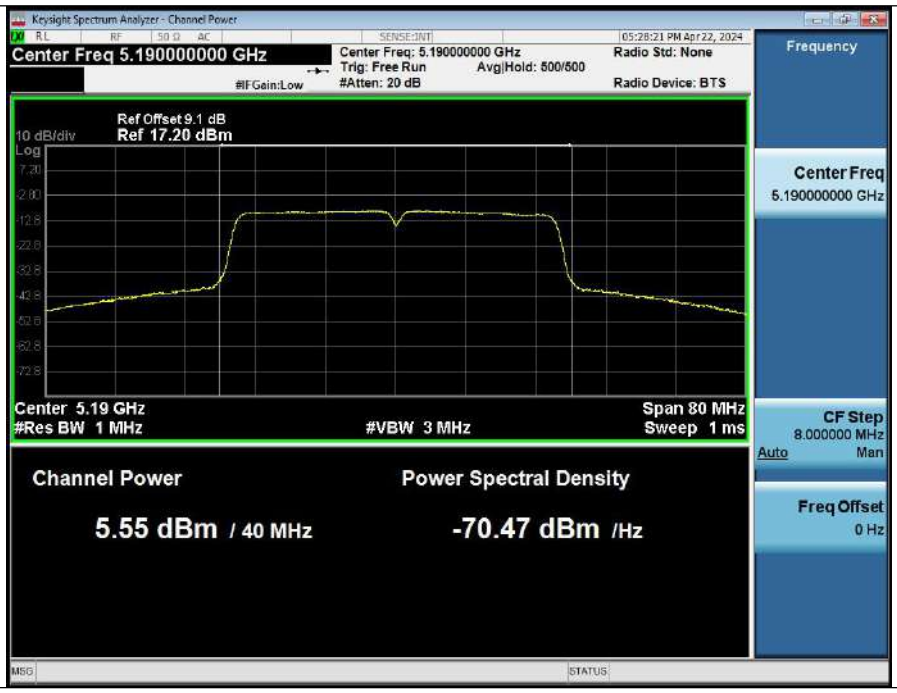
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5180_20M

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5200_20M

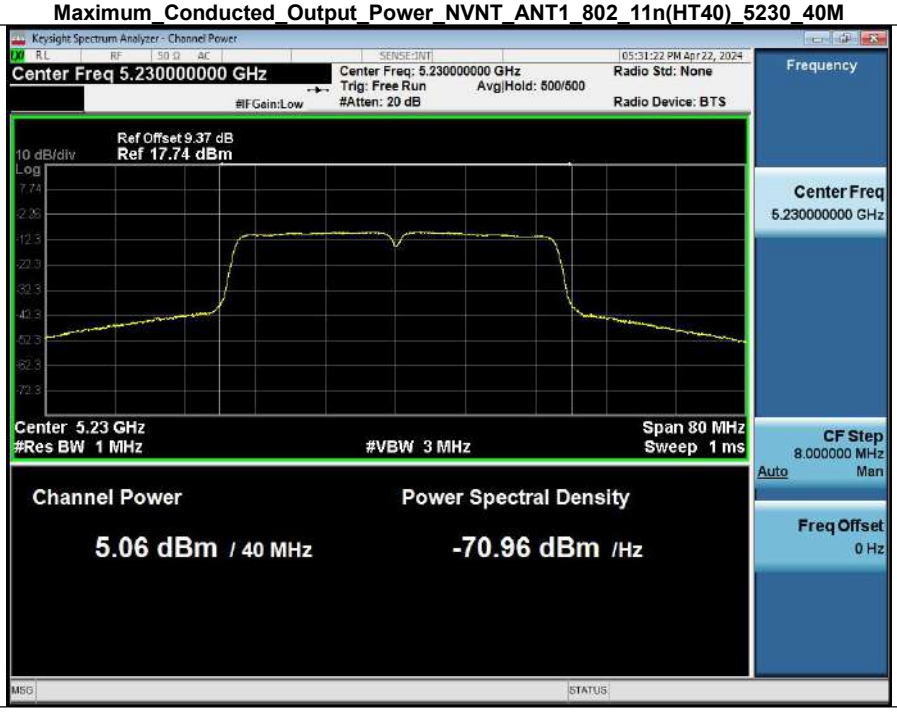
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5240_20M



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT40)_5190_40M

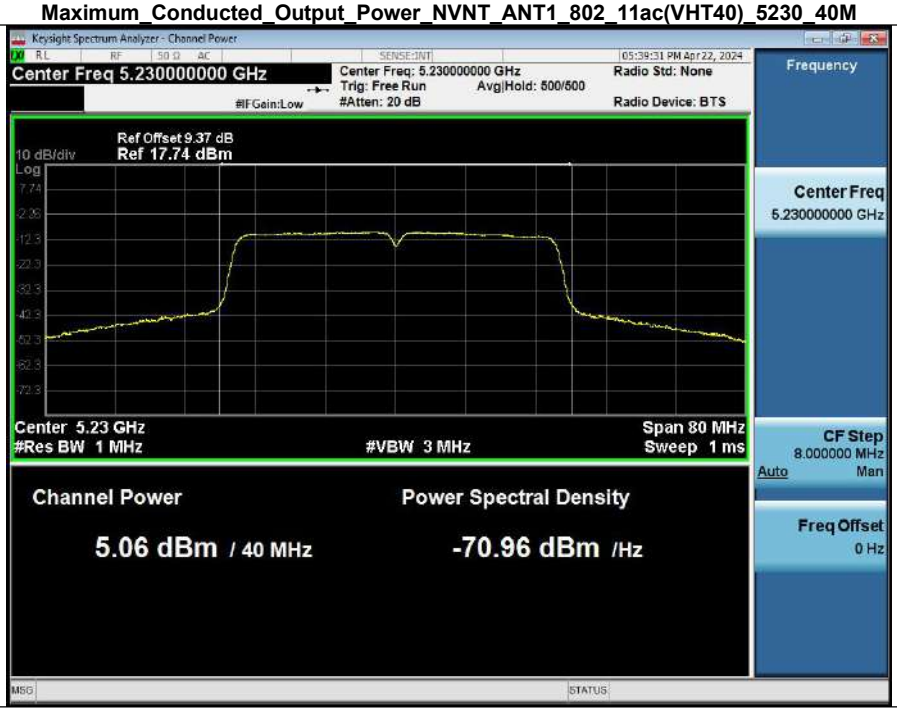


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT40)_5230_40M

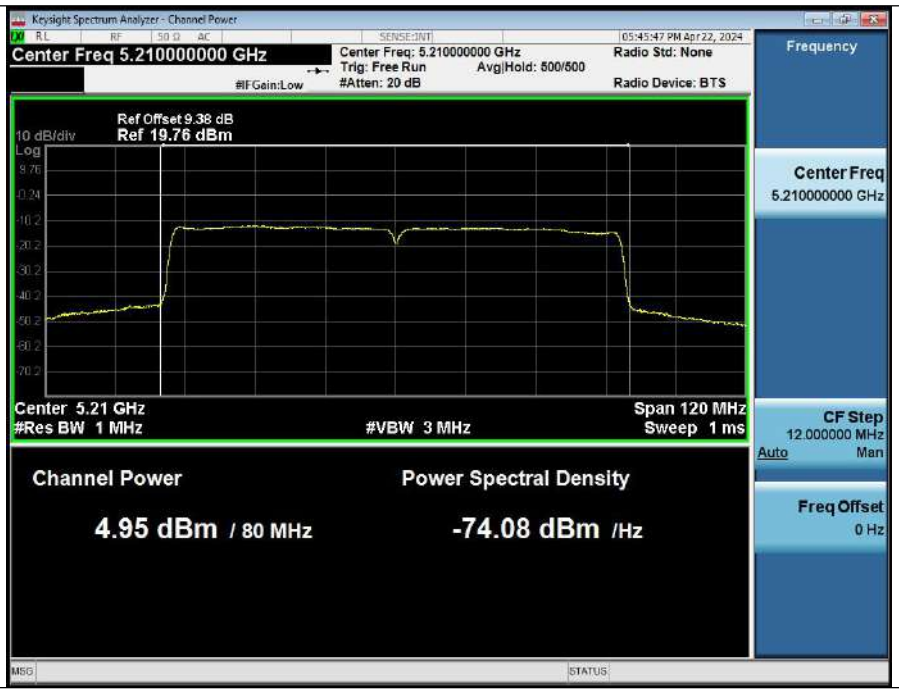


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT40)_5190_40M

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT40)_5230_40M



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT80)_5210_80M


Keysight Spectrum Analyzer - Channel Power
Center Freq 5.210000000 GHz
Center Freq: 5.210000000 GHz
Trig: Free Run
Avg|Hold: 500/500
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
05:45:47 PM Apr 22, 2024
Frequency
Ref Offset 9.38 dB
10 dB/div
Ref 19.76 dBm
Log
Center Freq
5.210000000 GHz
Center 5.21 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 120 MHz
Sweep 1 ms
CF Step
12.000000 MHz
Auto
Man
Channel Power
4.95 dBm / 80 MHz
Power Spectral Density
-74.08 dBm /Hz
Freq Offset
0 Hz
MSG
STATUS

4. Power Spectral Density

Condition	Antenna	Modulation	Frequency (MHz)	PSD(dBm/MHz)	Duty factor(dB)	Total PSD(dBm/MHz)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	-5.17	0.18	-5.00	11	Pass
NVNT	ANT1	802.11a	5200.00	-5.43	0.12	-5.31	11	Pass
NVNT	ANT1	802.11a	5240.00	-5.80	0.18	-5.62	11	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	-4.63	0.22	-4.41	11	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	-5.33	0.22	-5.11	11	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	-5.56	0.22	-5.34	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	-4.86	0.14	-4.72	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	-5.25	0.14	-5.11	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	-6.15	0.14	-6.01	11	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	-8.60	0.28	-8.32	11	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	-9.09	0.28	-8.81	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	-8.81	0.41	-8.40	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	-9.17	0.00	-9.17	11	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	-12.14	0.84	-11.30	11	Pass

Power_Spectral_Density_NVNT_ANT1_802_11a_5180

Power_Spectral_Density_NVNT_ANT1_802_11a_5200

Power_Spectral_Density_NVNT_ANT1_802_11a_5240

Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5180

Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5200

Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5240

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT20)_5180

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT20)_5200

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT20)_5240

Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_5190

Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_5230

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5190

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5230

Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT80)_5210

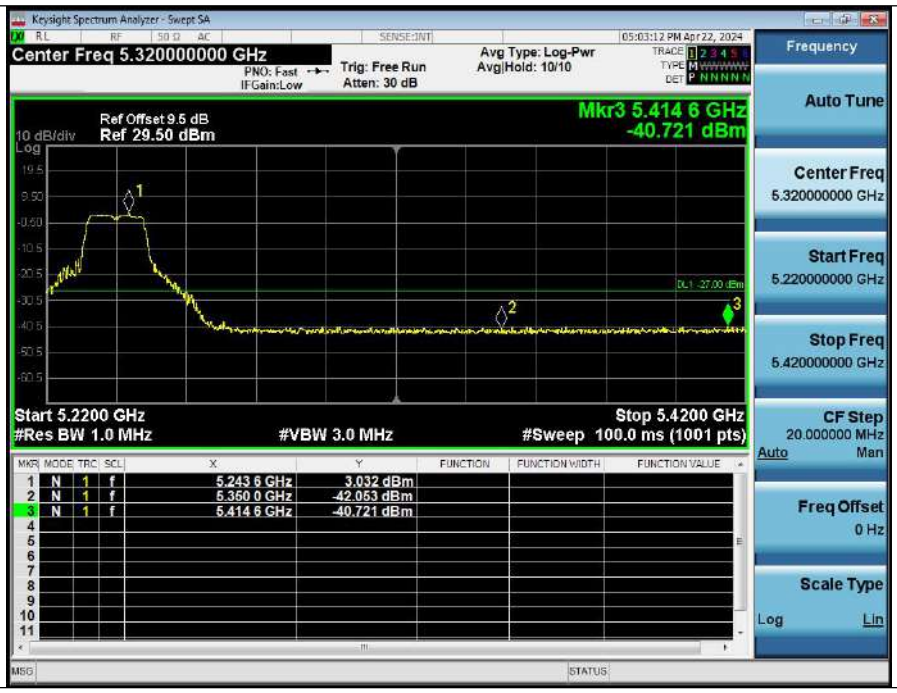
Keysight Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 22 dB
#Avg Type: RMS
Avg|Hold: 100/100
05:46:06 PM Apr 22, 2024
Ref Offset 9.38 dB
10 dB/div
Ref 19.76 dBm
Log
Mkr1 5.187 56 GHz
-12.140 dBm
Center 5.21000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Span 120.0 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.150000000 GHz
Stop Freq
5.270000000 GHz
CF Step
12.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

5. Bandedge

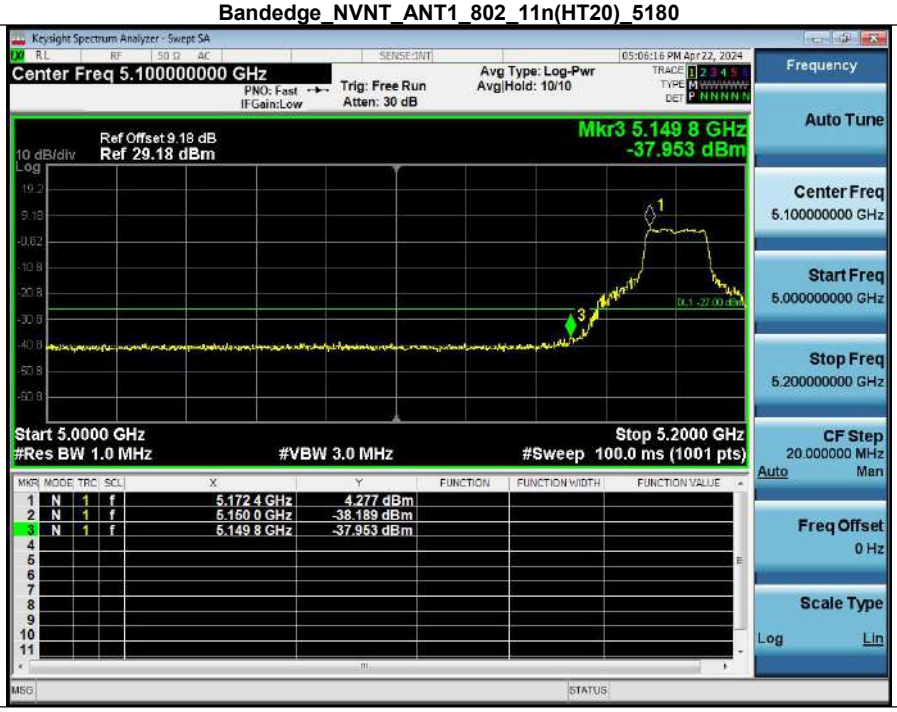
Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	5057.20	-39.35	-27	Pass
NVNT	ANT1	802.11a	5240.00	5414.60	-40.72	-27	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	5149.80	-37.95	-27	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	5415.20	-40.43	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	5149.60	-36.22	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	5409.00	-40.43	-27	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	5149.31	-30.51	-27	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	5412.02	-40.45	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	5149.52	-29.04	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	5381.78	-40.95	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	5144.06	-32.91	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	5390.18	-40.88	-27	Pass
Reamrk: Antenna gain is covered in the test.							

Bandedge_NVNT_ANT1_802_11a_5180

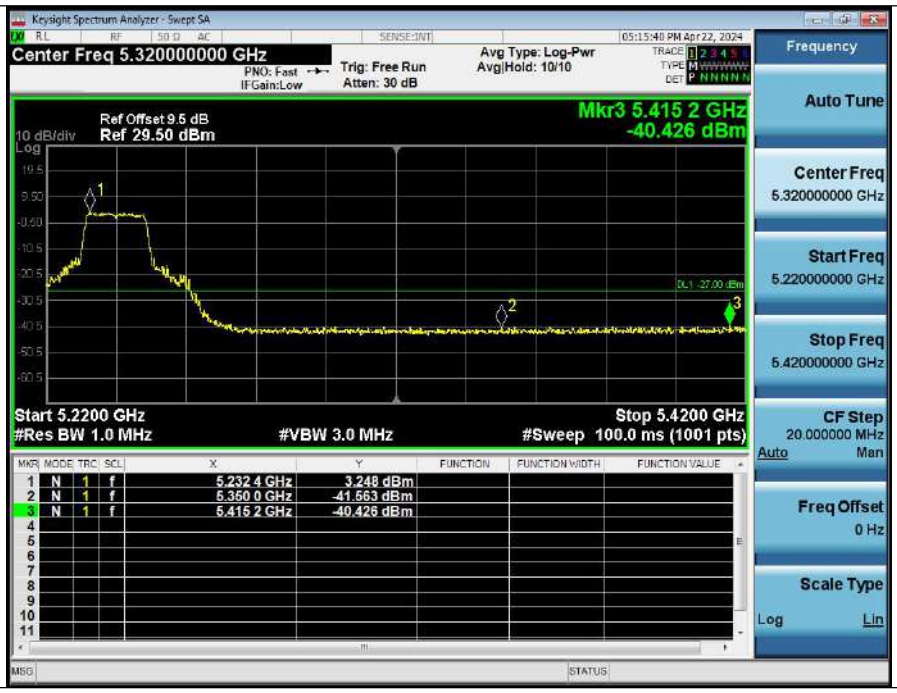
Bandedge_NVNT_ANT1_802_11a_5240



Bandedge_NVNT_ANT1_802_11n(HT20)_5180



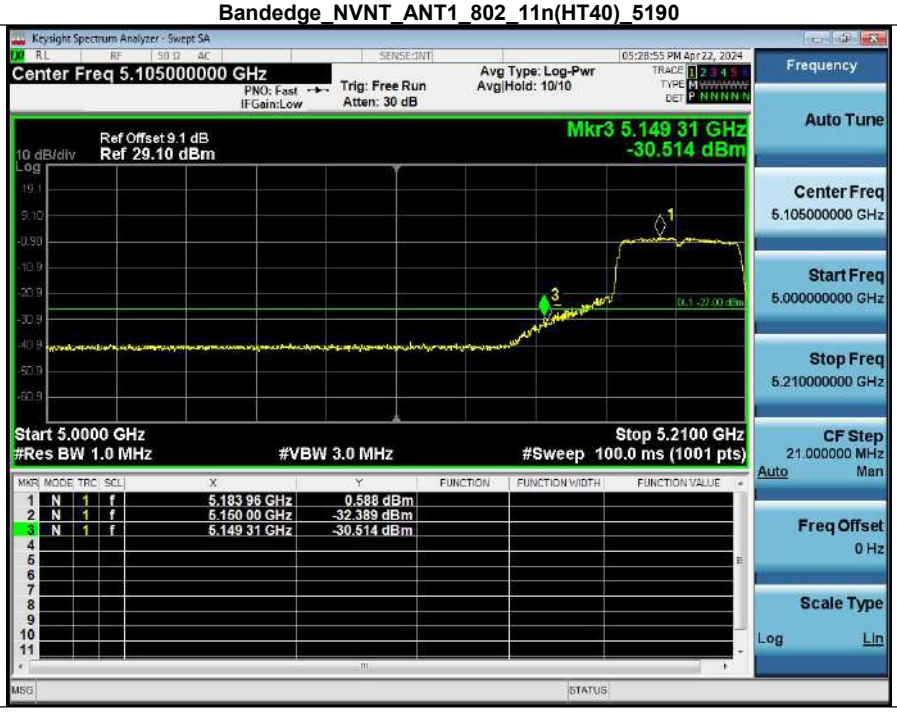
Bandedge_NVNT_ANT1_802_11n(HT20)_5240



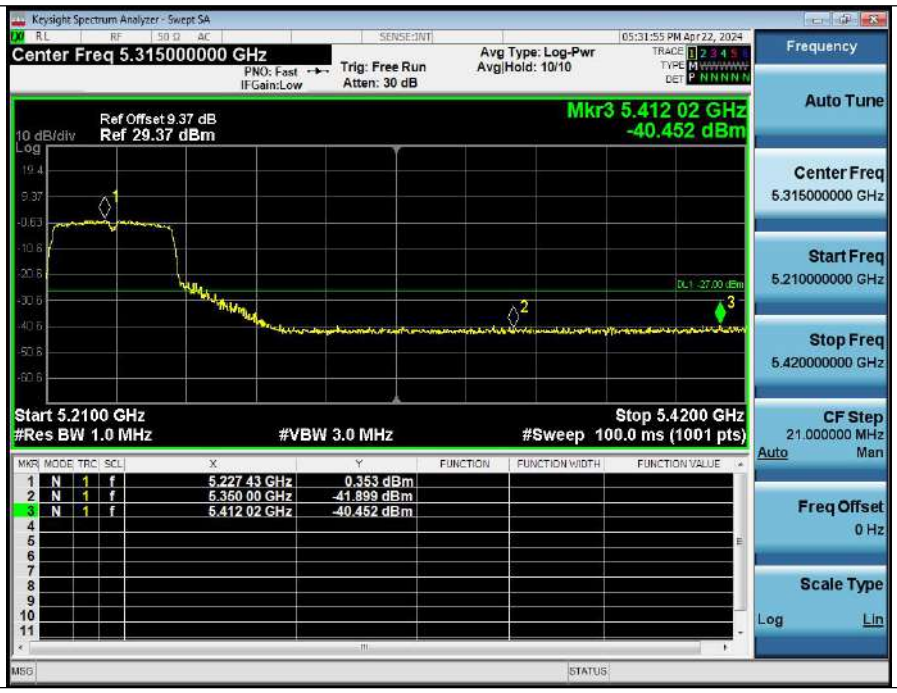
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5180

Bandedge_NVNT_ANT1_802_11ac(VHT20)_5240

Bandedge_NVNT_ANT1_802_11n(HT40)_5190



Bandedge_NVNT_ANT1_802_11n(HT40)_5230



Bandedge_NVNT_ANT1_802_11ac(VHT40)_5190

Bandedge_NVNT_ANT1_802_11ac(VHT40)_5230

Bandedge_NVNT_ANT1_802_11ac(VHT80)_5210

6. Spurious Emission

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	718.22	-27.93	-27	Pass
NVNT	ANT1	802.11a	5200.00	24938.27	-29.28	-27	Pass
NVNT	ANT1	802.11a	5240.00	24938.27	-29.16	-27	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	25467.67	-29.94	-27	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	25123.56	-30.17	-27	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	25017.68	-29.50	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	25811.78	-29.51	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	25785.31	-29.96	-27	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	24991.21	-30.13	-27	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	25652.96	-30.24	-27	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	2597.59	-27.99	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	2465.24	-28.07	-27	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	25044.15	-30.00	-27	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	25732.37	-28.85	-27	Pass
Reamrk: Antenna gain is covered in the test.							

Spurious_Emission_NVNT_ANT1_802_11a_5180_20M

Spurious_Emission_NVNT_ANT1_802_11a_5200_20M

Spurious_Emission_NVNT_ANT1_802_11a_5240_20M

Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5180_20M

Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5200_20M

Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5240_20M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT20)_5180_20M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT20)_5200_20M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT20)_5240_20M

Spurious_Emission_NVNT_ANT1_802_11n(HT40)_5190_40M

Spurious_Emission_NVNT_ANT1_802_11n(HT40)_5230_40M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT40)_5190_40M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT40)_5230_40M

Spurious_Emission_NVNT_ANT1_802_11ac(VHT80)_5210_80M

Keysight Spectrum Analyzer - Swept SA
05:47:16 PM Apr 22, 2024
Center Freq 13.265000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
Frequency
Auto Tune
Ref Offset 9.38 dB
10 dB/div
Ref 29.38 dBm
Mkr2 25.732 GHz
-28.846 dBm
Center Freq
13.265000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.500000000 GHz
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 26.50 GHz
Sweep 66.27 ms (1001 pts)
CF Step
2.647000000 GHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 5.192 GHz -3.284 dBm
2 N 1 f 25.732 GHz -28.846 dBm
MSG
STATUS

7. Frequency Stability

Condition	Antenna	Modulation	Frequency (MHz)	Fc(MHz)	Fl(MHz)	Fh(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5180.00	5180.030	5171.336	5188.724	5150~5250	Pass
NVNT	ANT1	802.11a	5200.00	5199.984	5191.284	5208.684	5150~5250	Pass
NVNT	ANT1	802.11a	5240.00	5240.014	5231.352	5248.676	5150~5250	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	5180.032	5170.852	5189.212	5150~5250	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	5200.032	5190.868	5209.196	5150~5250	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	5240.004	5230.876	5249.132	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	5180.032	5170.844	5189.220	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	5200.046	5190.856	5209.236	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	5240.016	5230.888	5249.144	5150~5250	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	5190.040	5171.752	5208.328	5150~5250	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	5230.056	5211.816	5248.296	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	5190.060	5171.792	5208.328	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	5230.048	5211.800	5248.296	5150~5250	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	5210.036	5172.044	5248.028	5150~5250	Pass