Appendix

Test Data

for BTEK241111036A02E18

Start date	2024/12/9	Finish date	2024/12/9
Temperature	22.0℃	Humidity	42%
RF specifications	5.2G_WIFI-Module 1 7663	Test Engineer	Zora

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1. -26dB and 99% Emission Bandwidth

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	19.87	16.41
NVNT	ANT2	802.11a	5180.00	20.11	16.40
NVNT	ANT1	802.11a	5200.00	19.82	16.45
NVNT	ANT2	802.11a	5200.00	20.20	16.42
NVNT	ANT1	802.11a	5240.00	19.89	16.44
NVNT	ANT2	802.11a	5240.00	19.92	16.41
NVNT	ANT1	802.11n(HT20)	5180.00	20.14	17.53
NVNT	ANT2	802.11n(HT20)	5180.00	20.21	17.57
NVNT	ANT1	802.11n(HT20)	5200.00	20.22	17.56
NVNT	ANT2	802.11n(HT20)	5200.00	20.11	17.59
NVNT	ANT1	802.11n(HT20)	5240.00	20.03	17.57
NVNT	ANT2	802.11n(HT20)	5240.00	20.22	17.58
NVNT	ANT1	802.11ac(VHT20)	5180.00	20.03	17.55
NVNT	ANT2	802.11ac(VHT20)	5180.00	20.01	17.58
NVNT	ANT1	802.11ac(VHT20)	5200.00	20.15	17.56
NVNT	ANT2	802.11ac(VHT20)	5200.00	20.02	17.58
NVNT	ANT1	802.11ac(VHT20)	5240.00	20.01	17.52
NVNT	ANT2	802.11ac(VHT20)	5240.00	19.78	17.57
NVNT	ANT1	802.11n(HT40)	5190.00	40.57	36.01
NVNT	ANT2	802.11n(HT40)	5190.00	39.99	36.00
NVNT	ANT1	802.11n(HT40)	5230.00	40.37	36.03
NVNT	ANT2	802.11n(HT40)	5230.00	39.96	35.99
NVNT	ANT1	802.11ac(VHT40)	5190.00	40.53	36.03
NVNT	ANT2	802.11ac(VHT40)	5190.00	39.76	35.94
NVNT	ANT1	802.11ac(VHT40)	5230.00	40.66	36.00
NVNT	ANT2	802.11ac(VHT40)	5230.00	40.00	35.98
NVNT	ANT1	802.11ac(VHT80)	5210.00	80.75	75.47
NVNT	ANT2	802.11ac(VHT80)	5210.00	79.92	75.33

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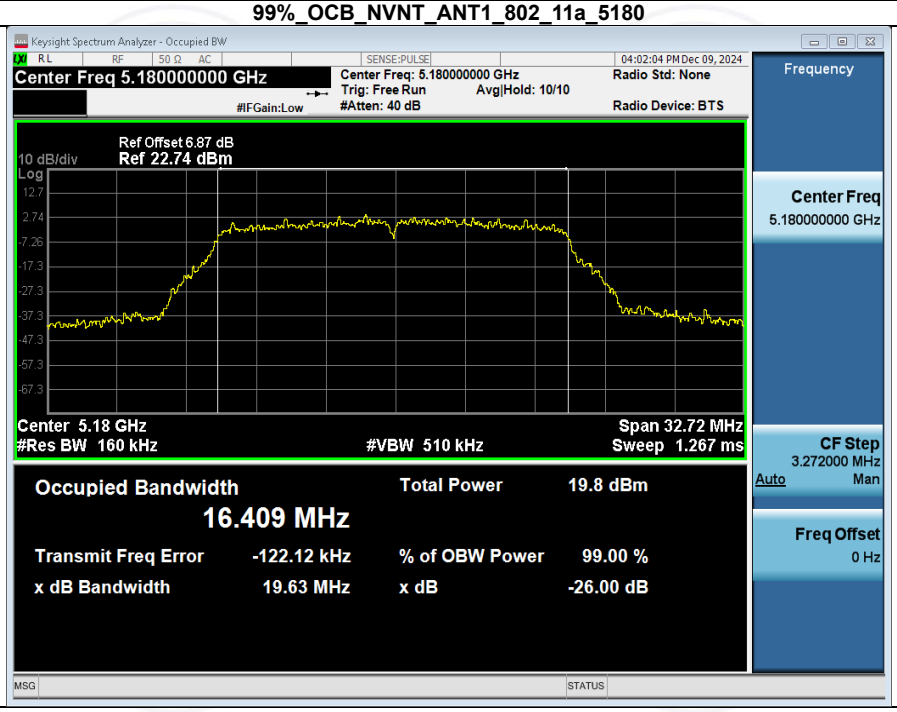

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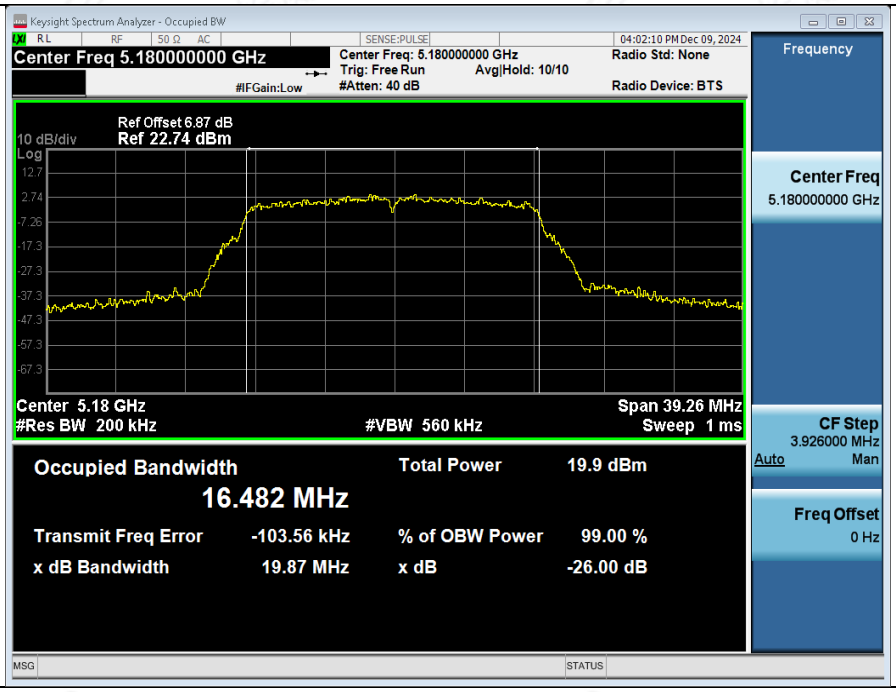

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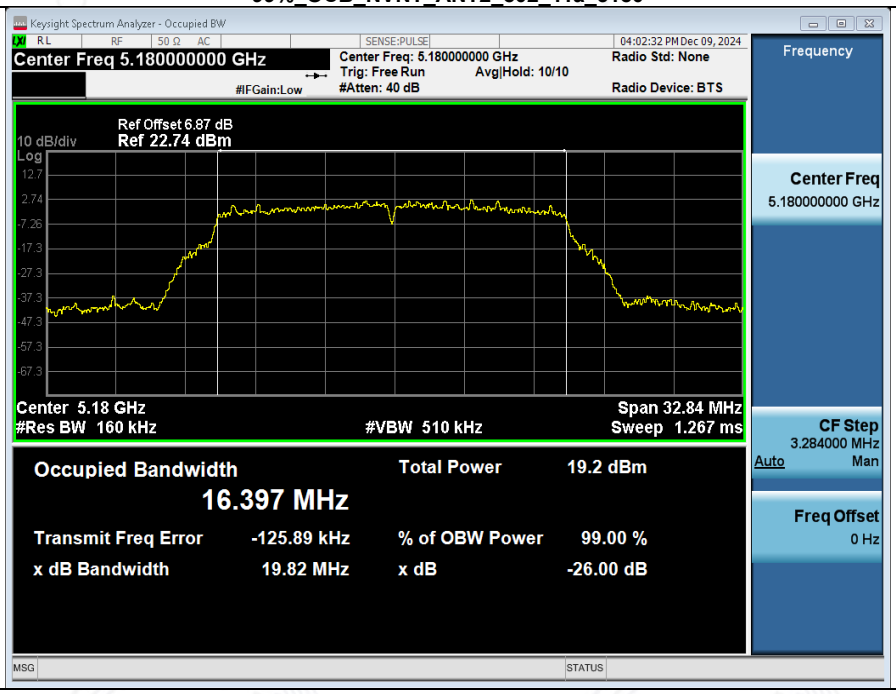

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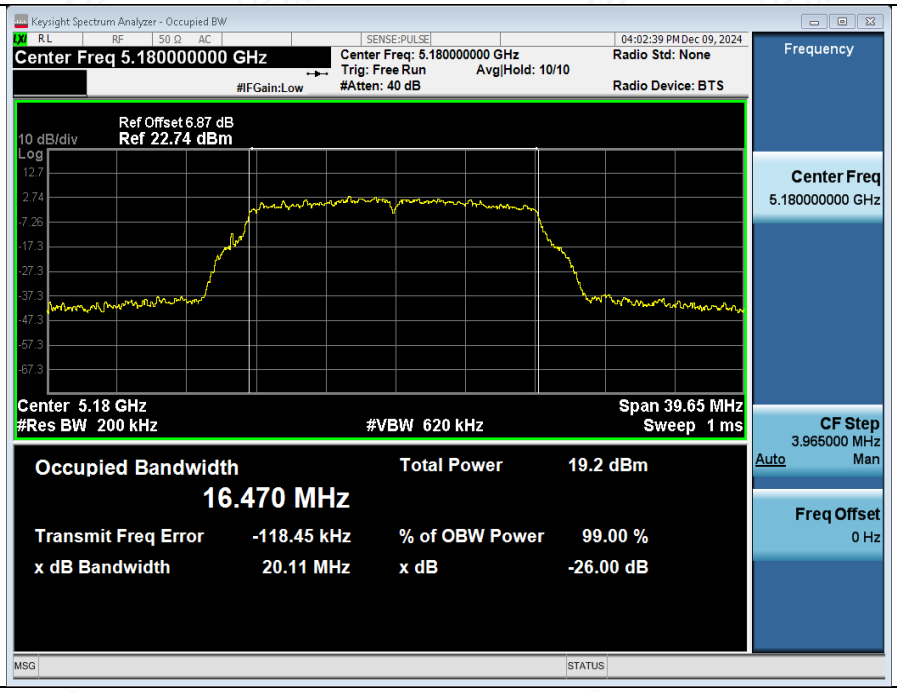

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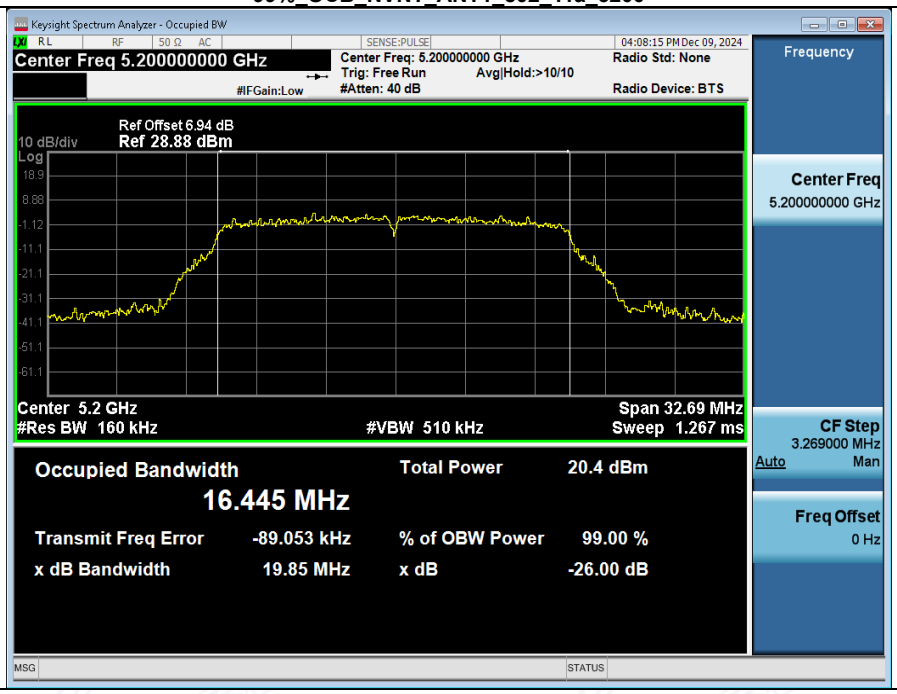

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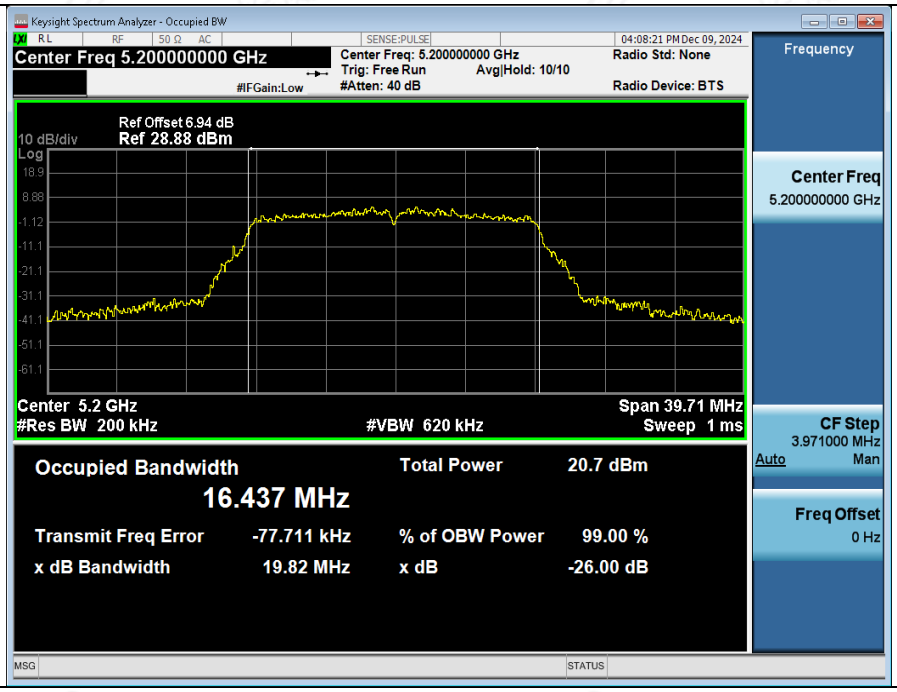

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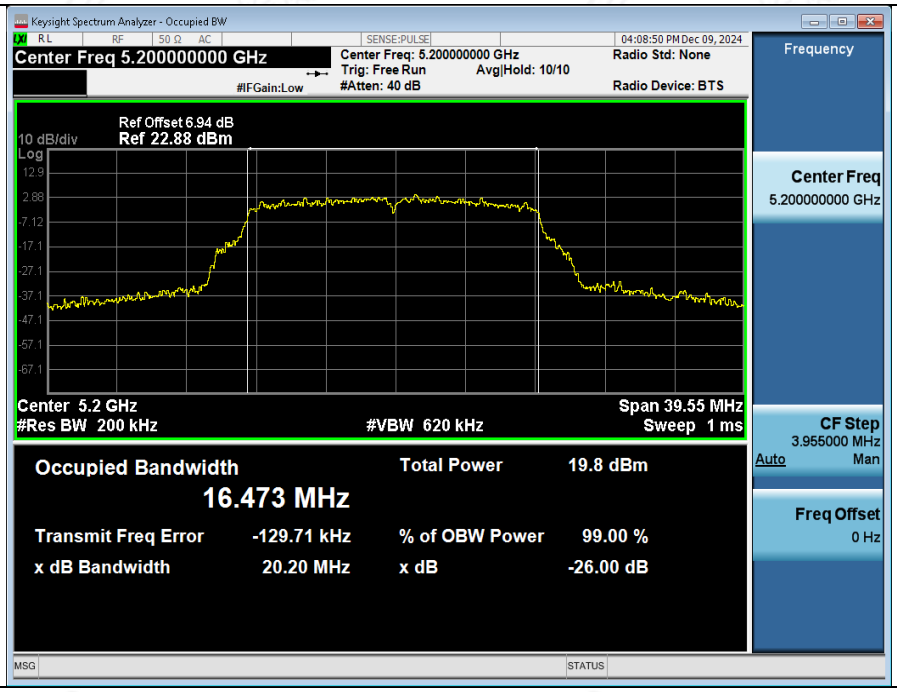

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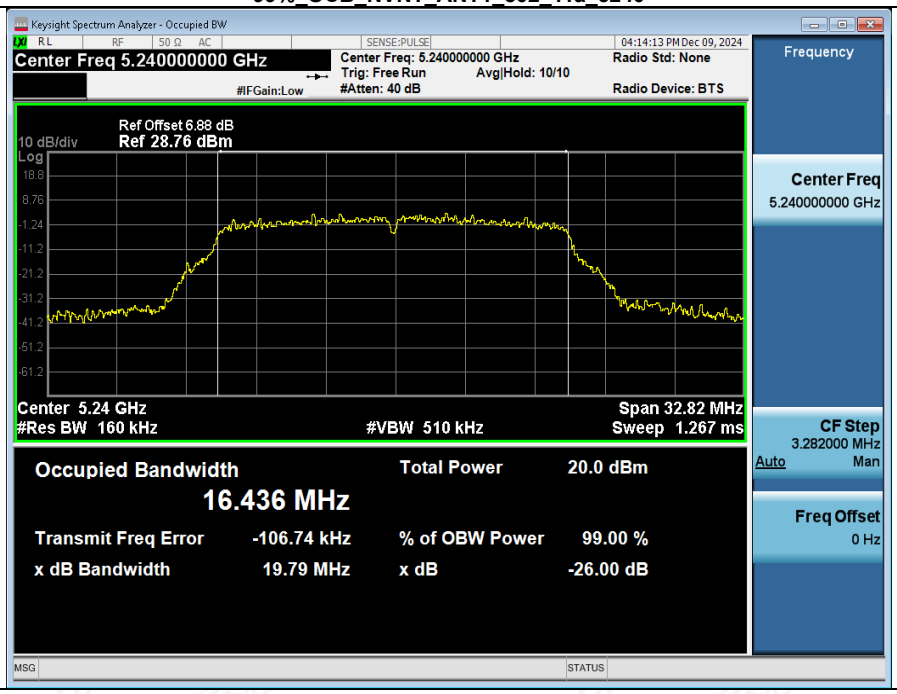

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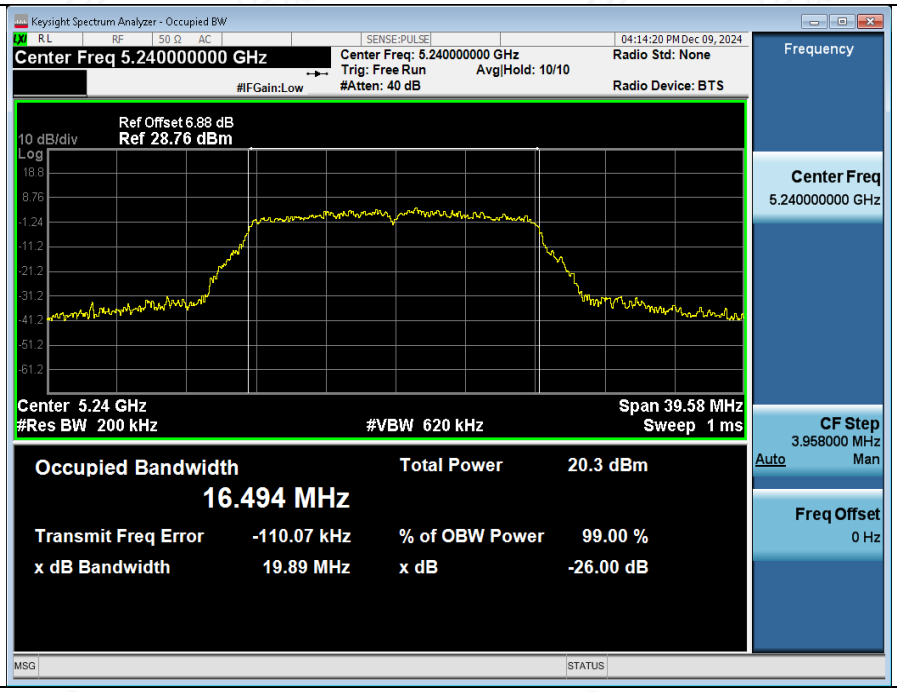

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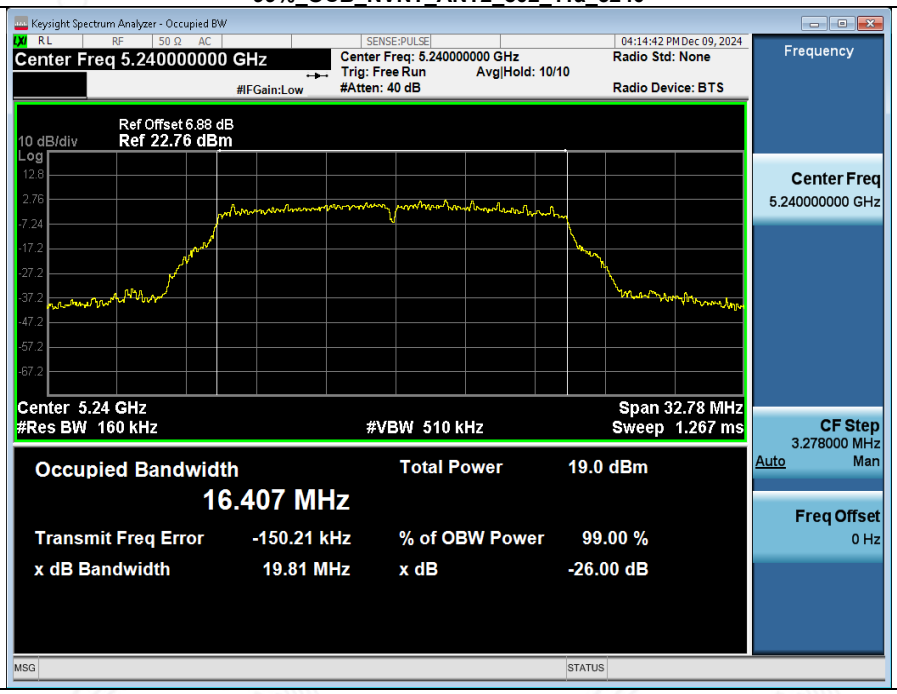

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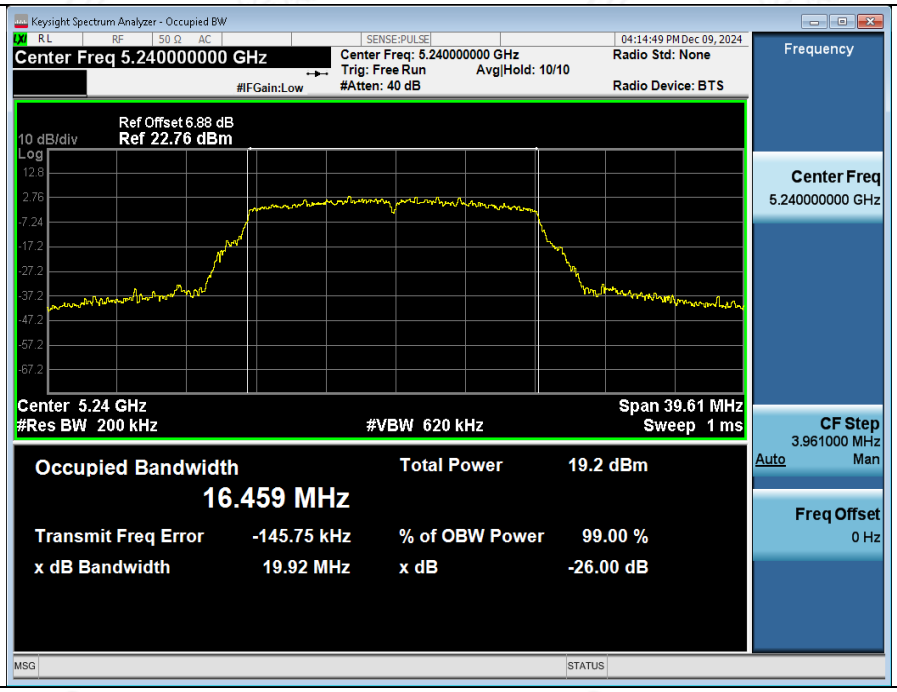

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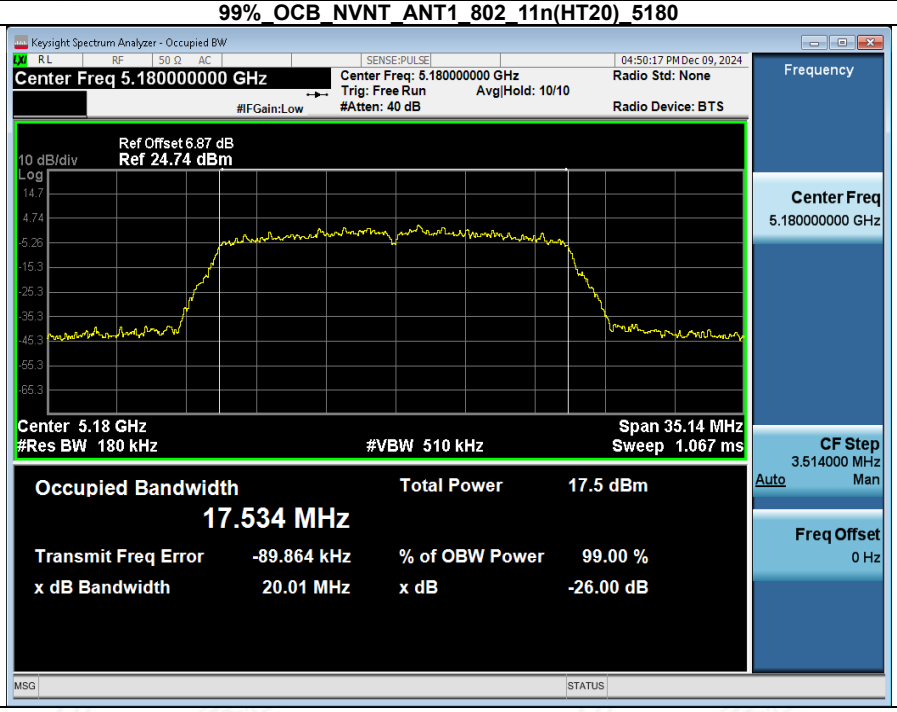

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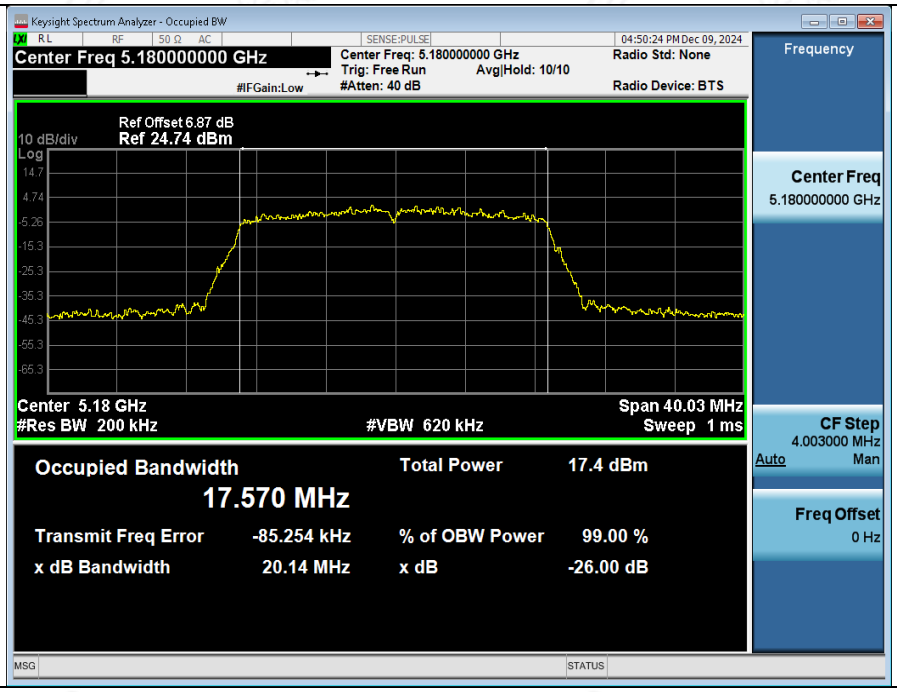

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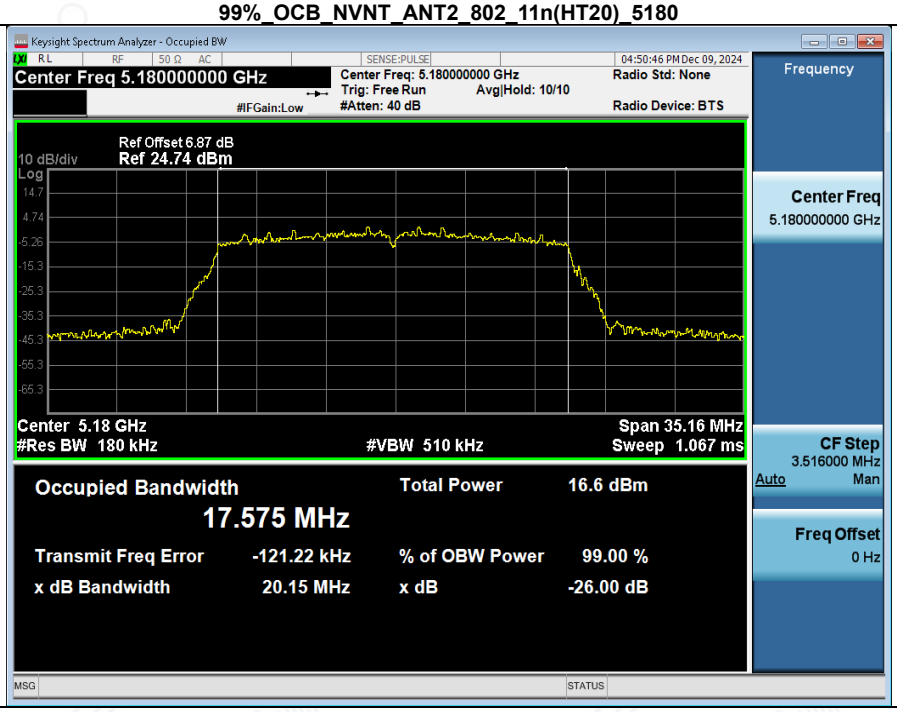

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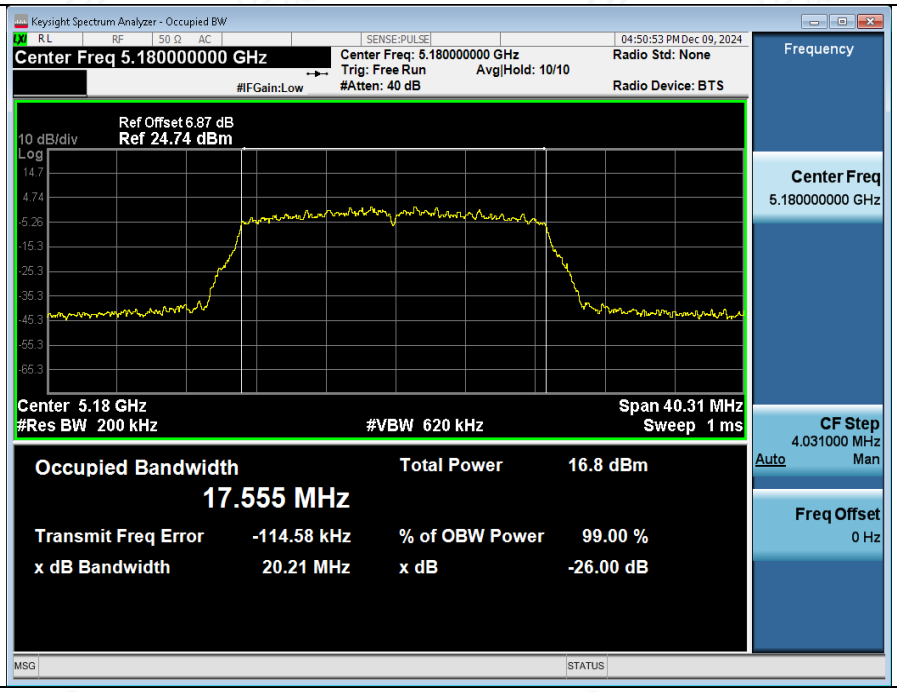

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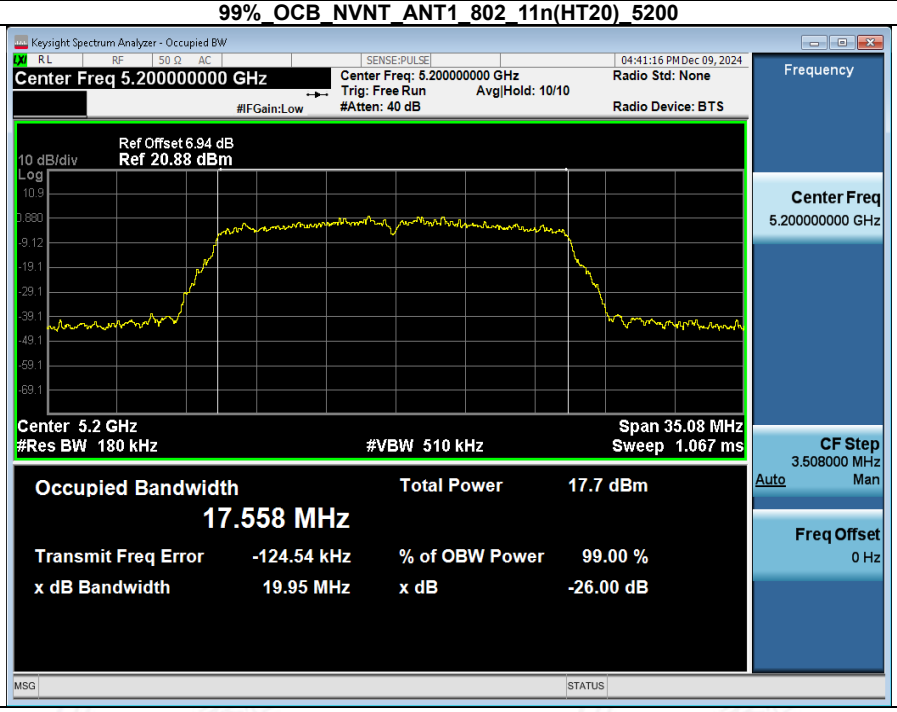

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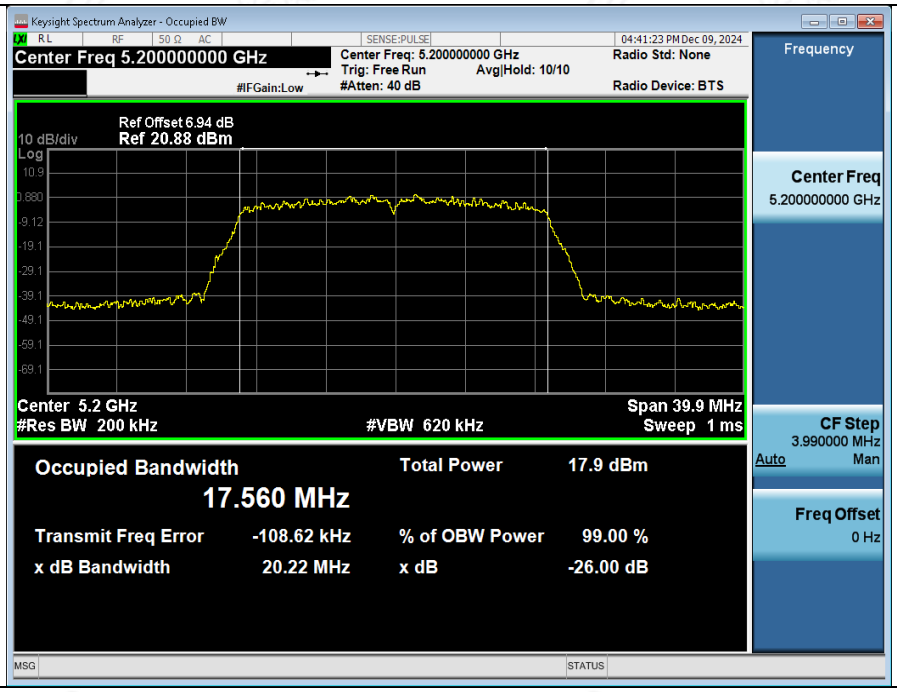

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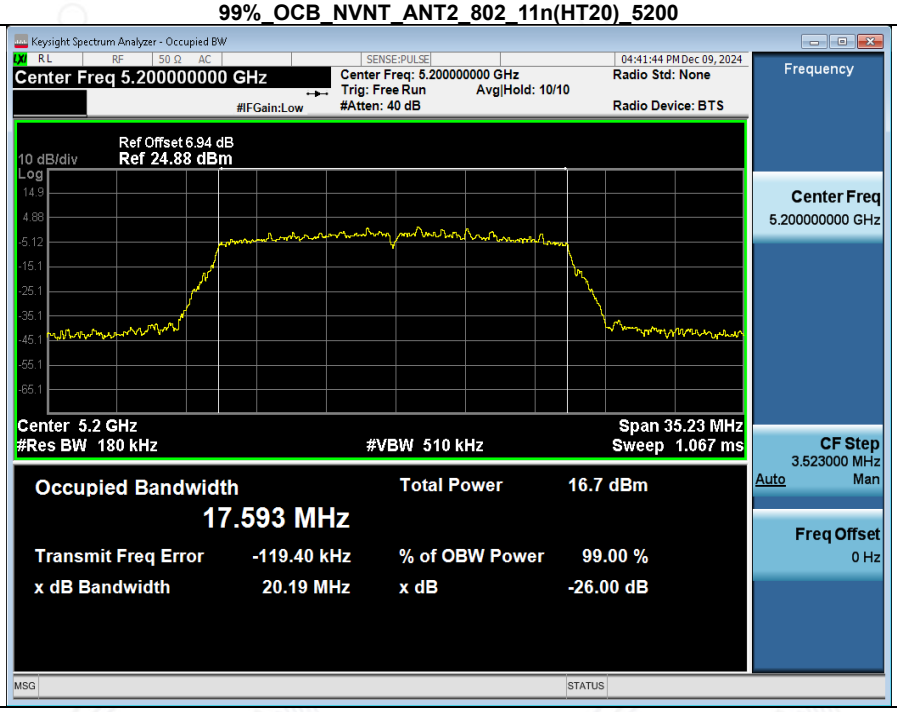

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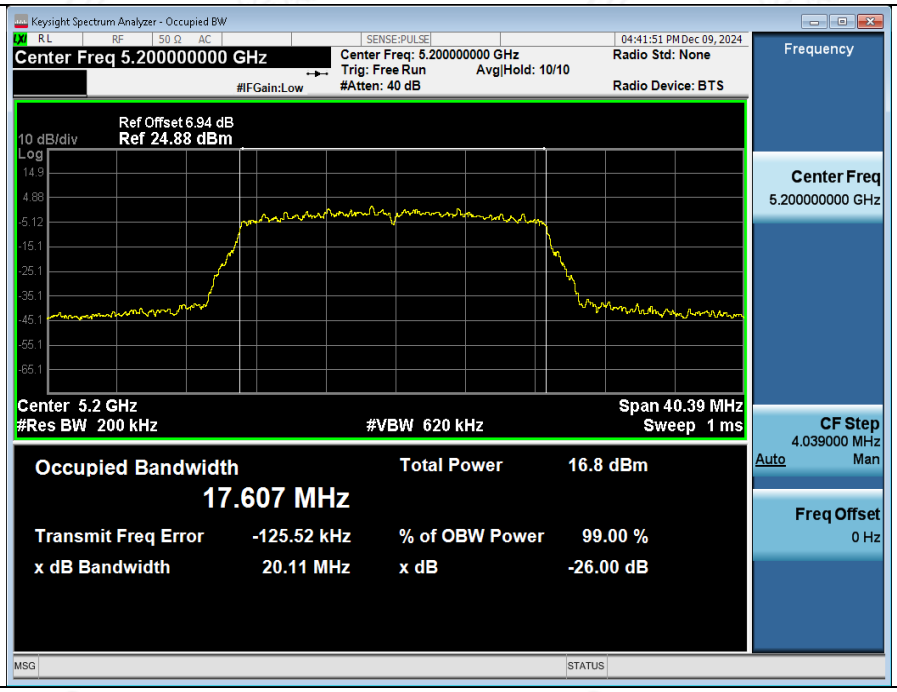

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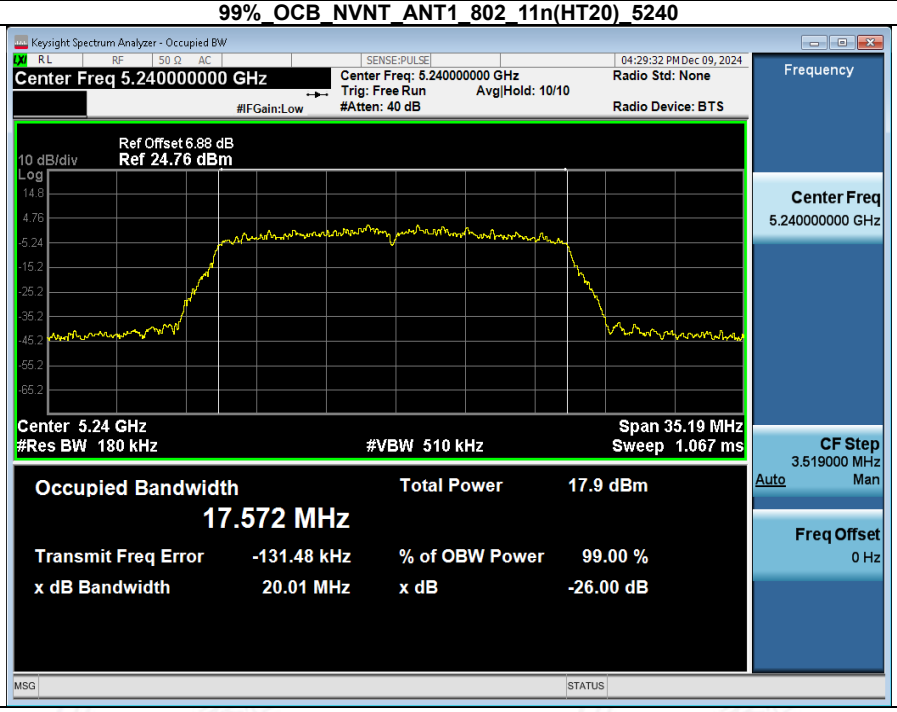

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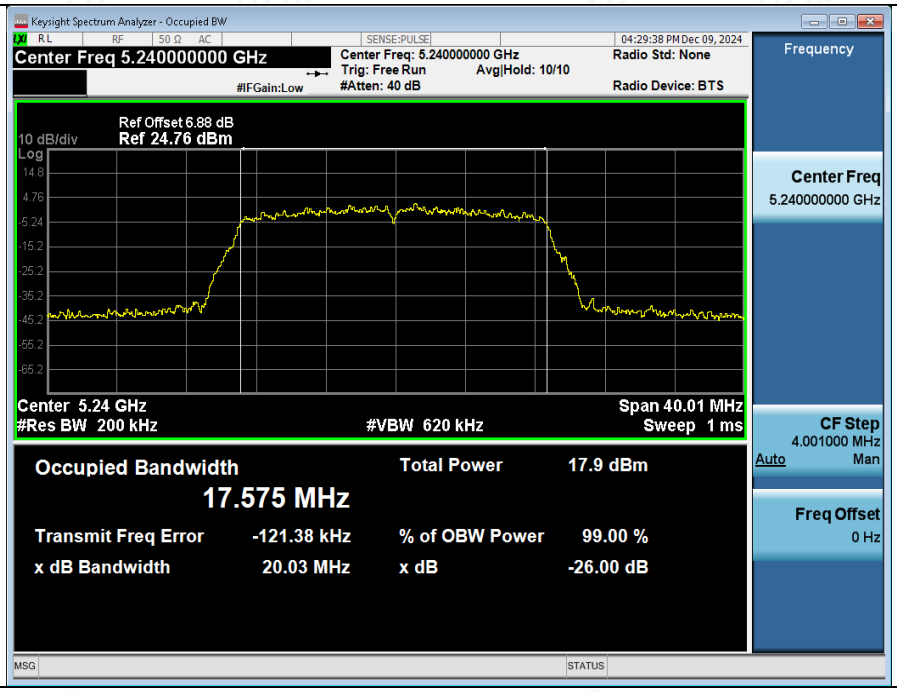

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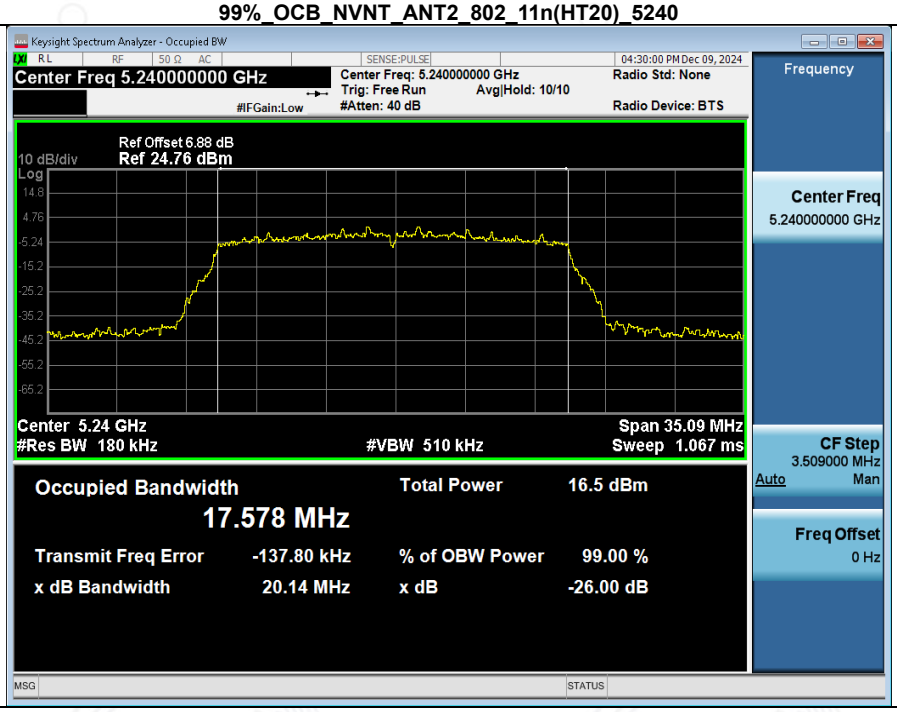

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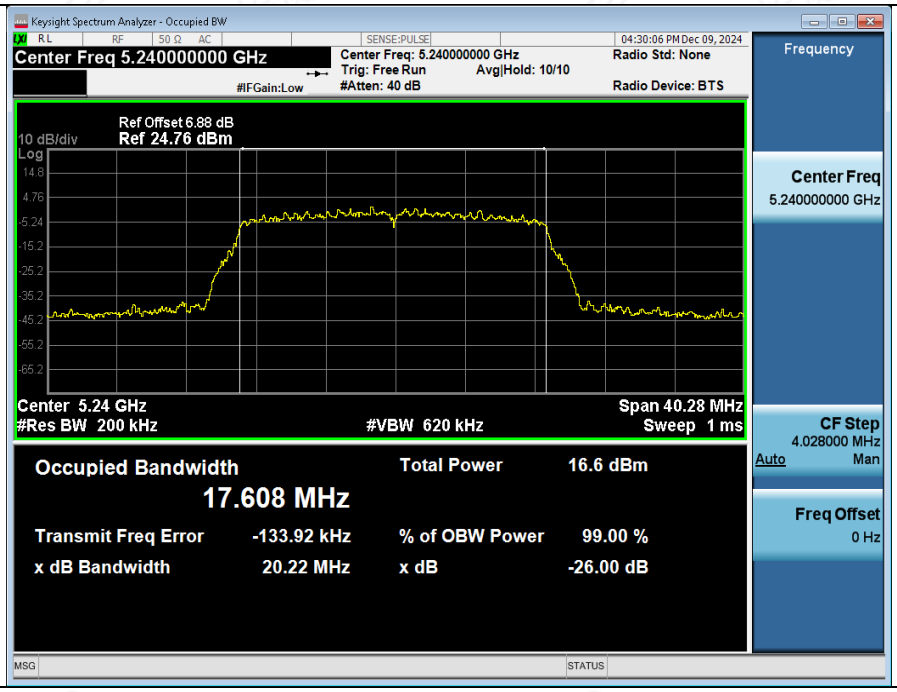

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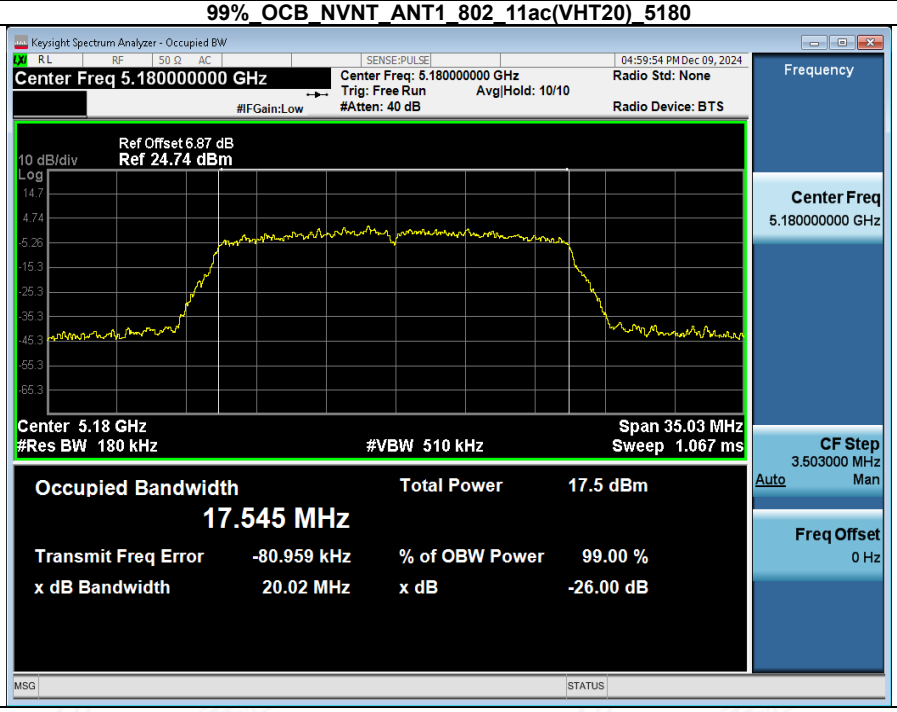

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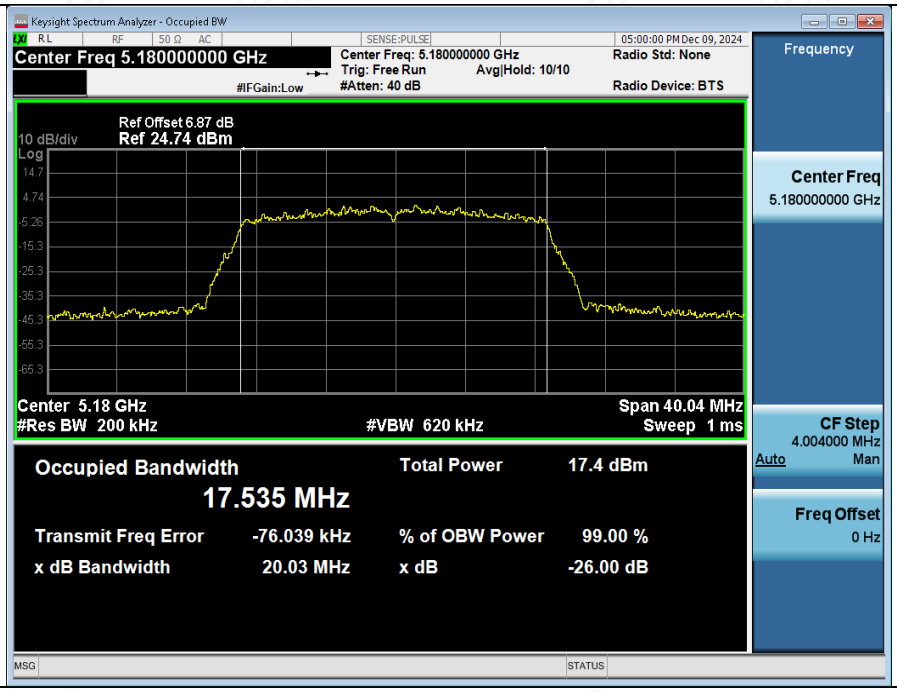

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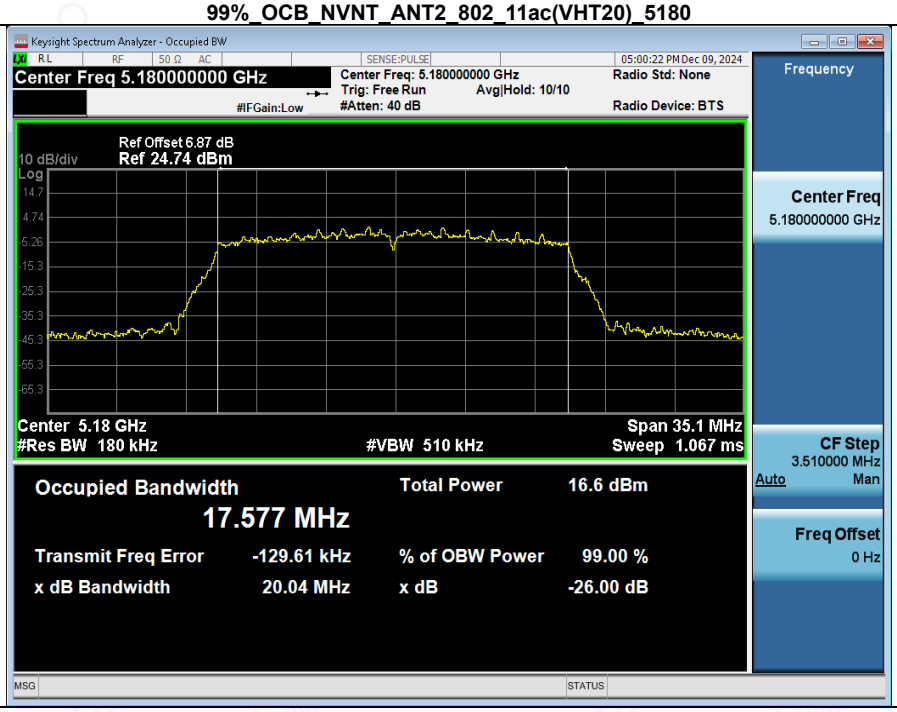

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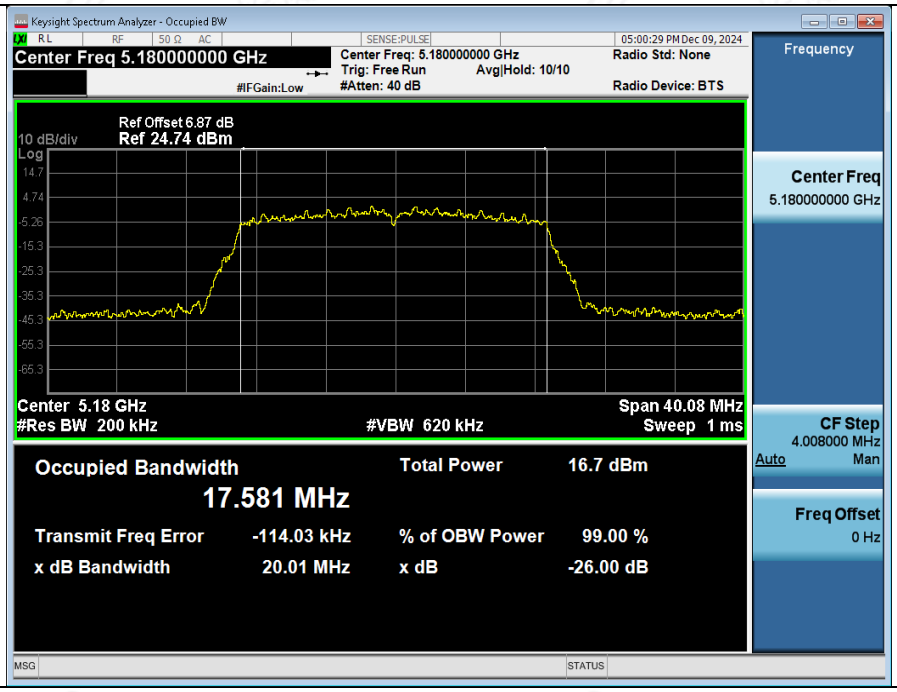

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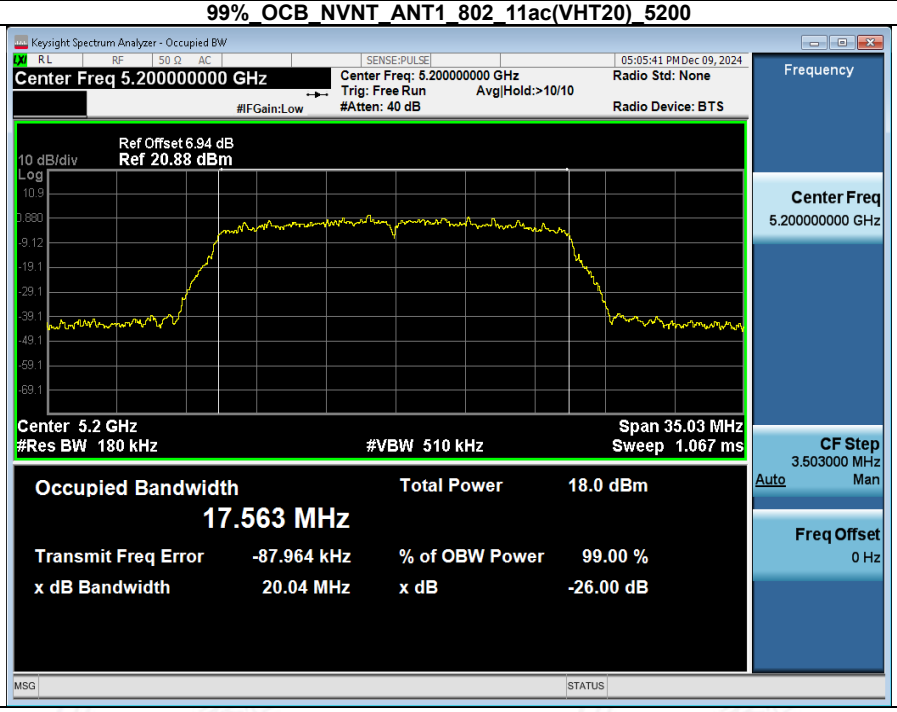

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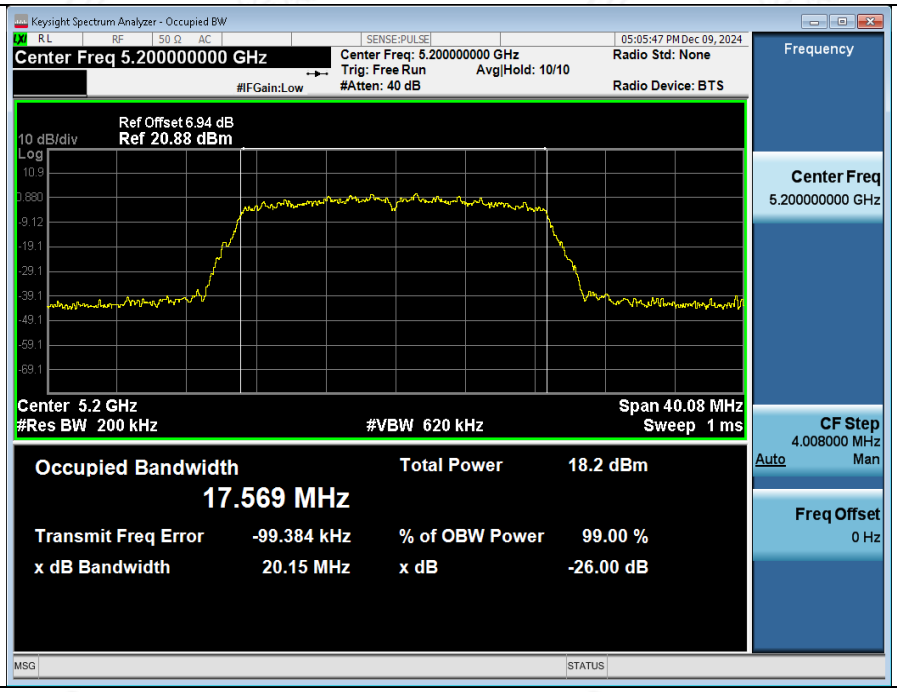

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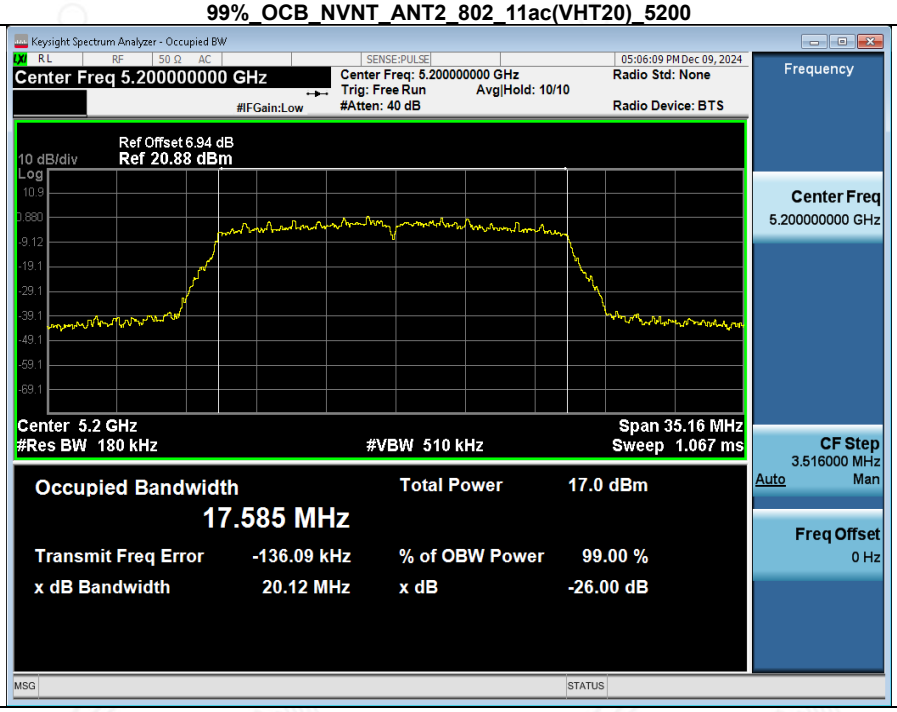

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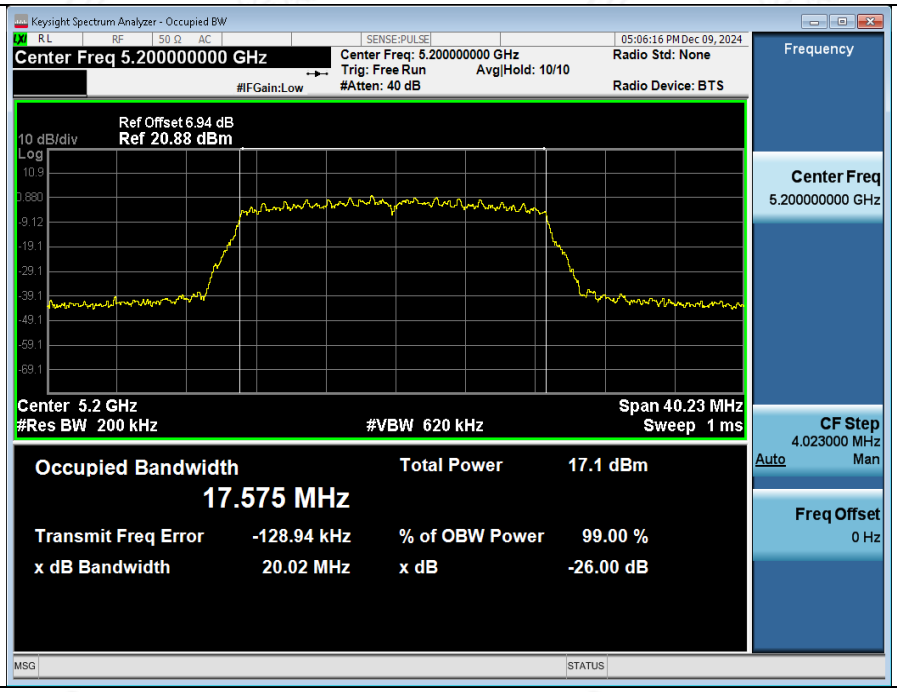

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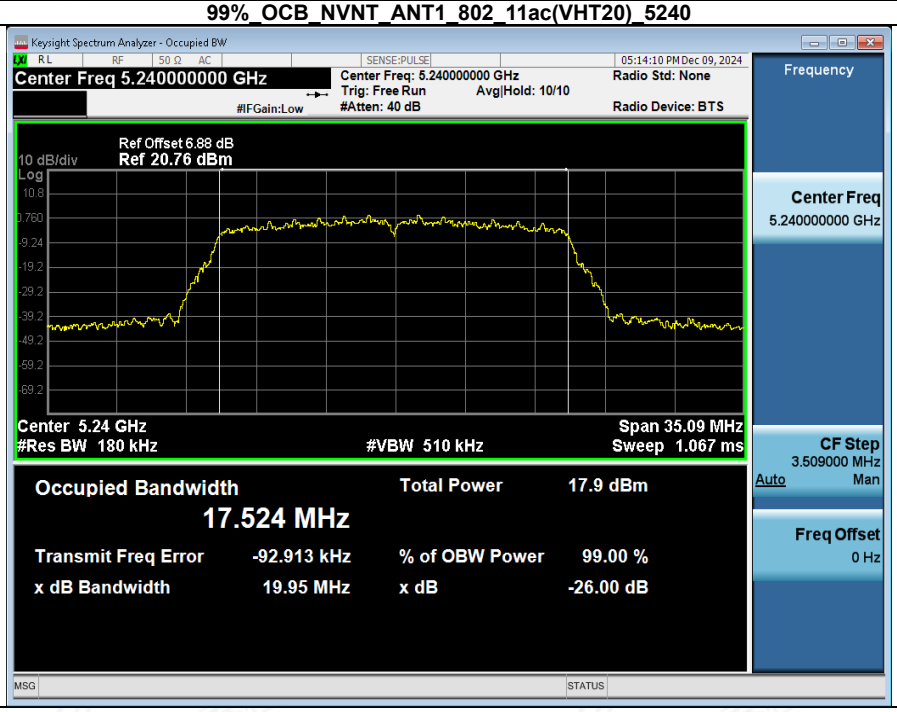

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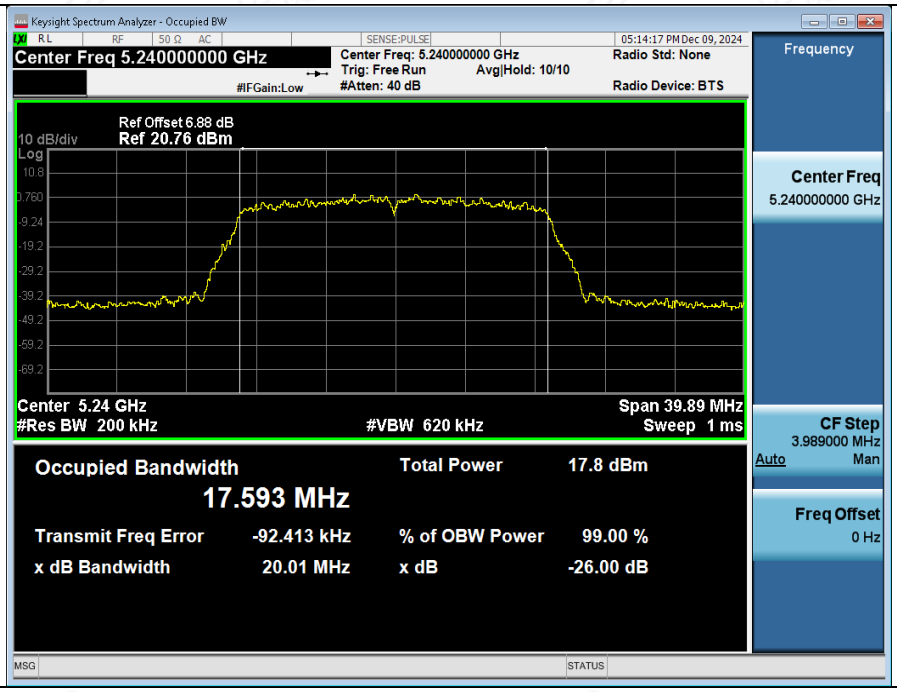

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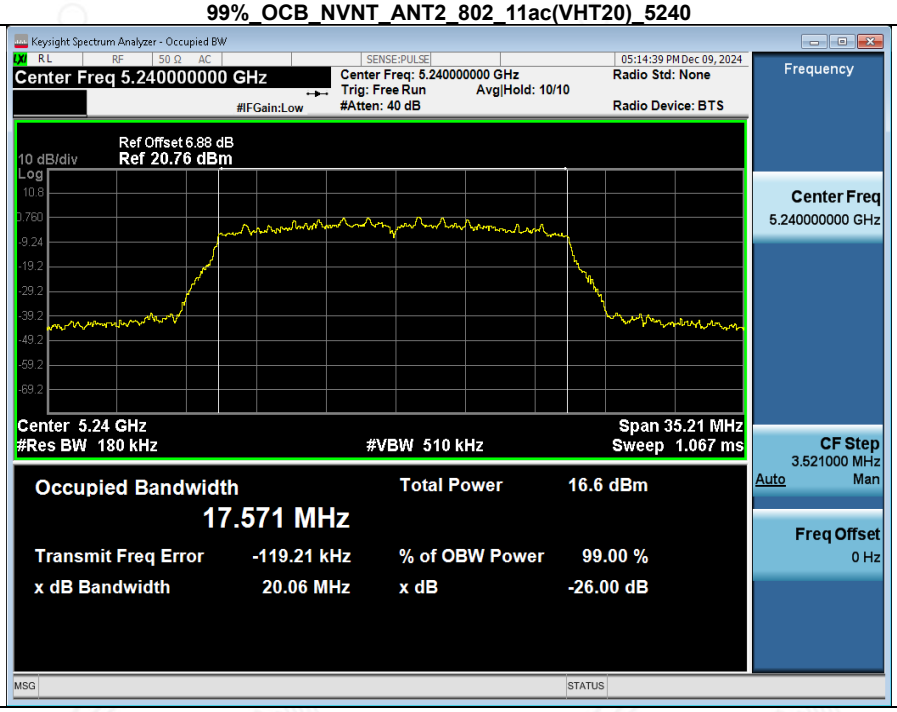

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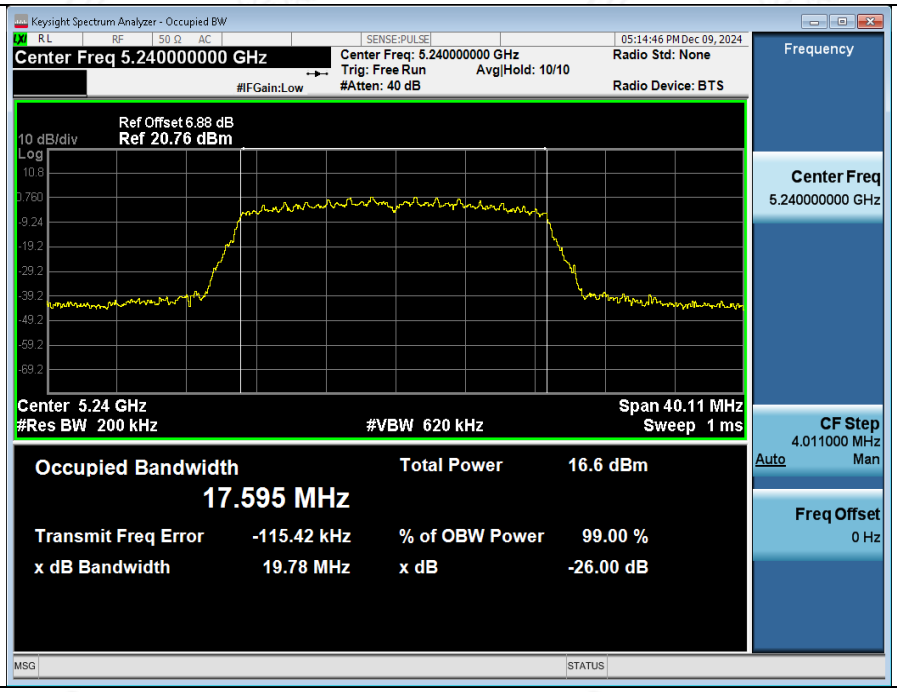

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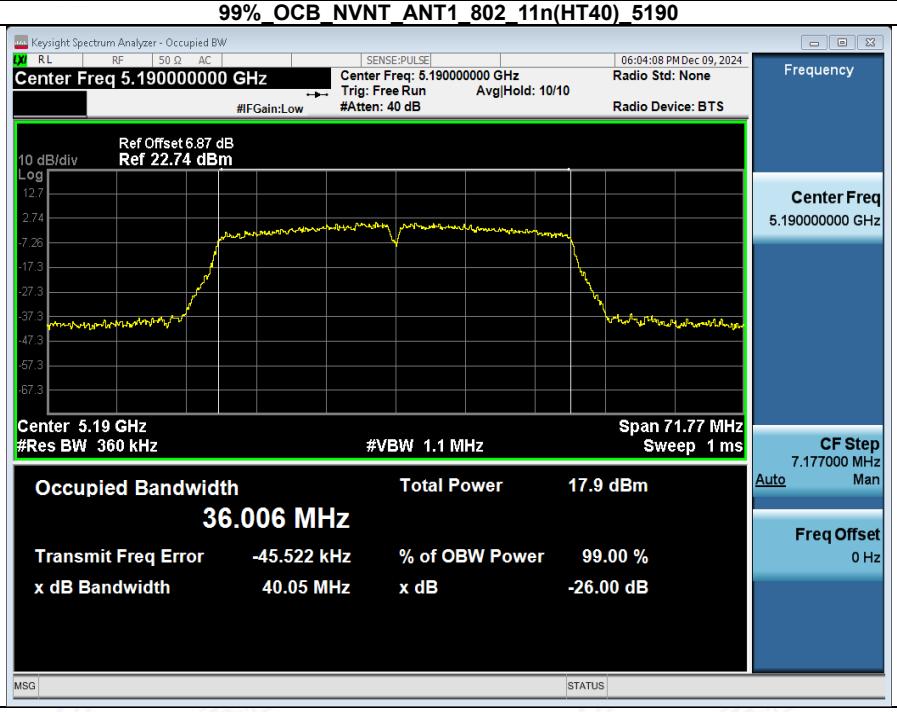

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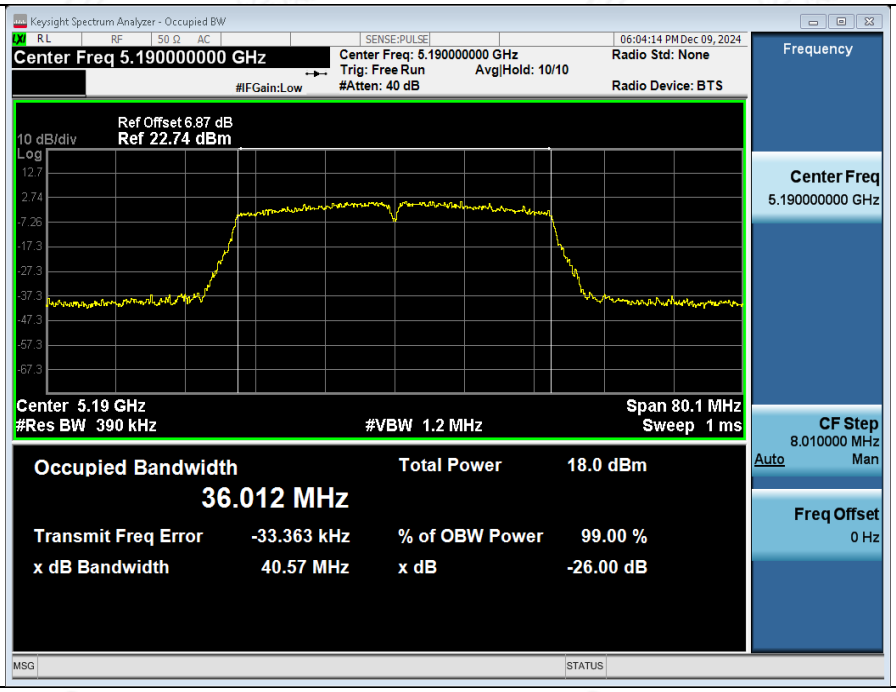

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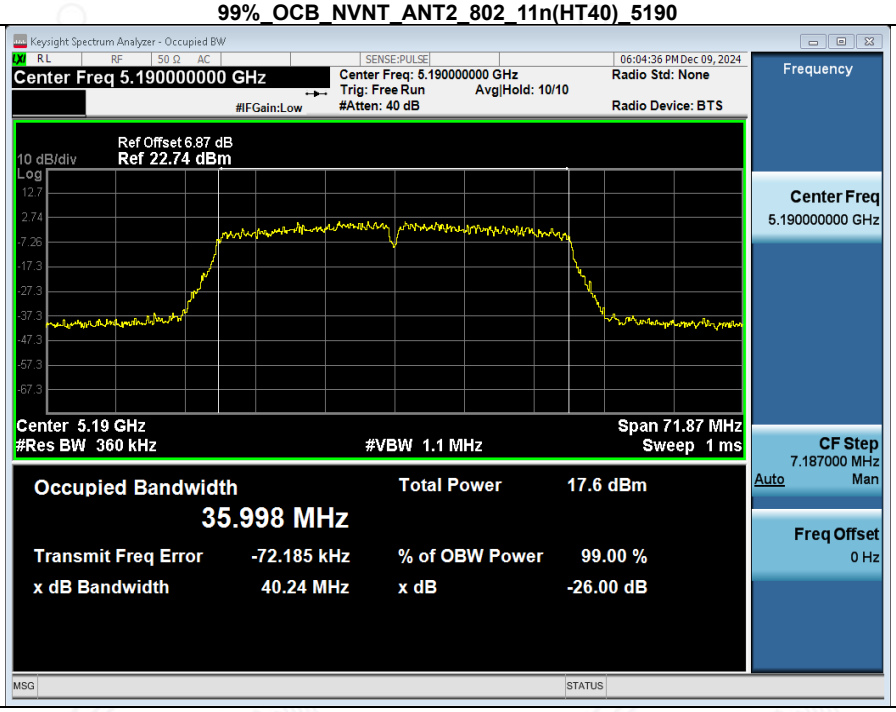

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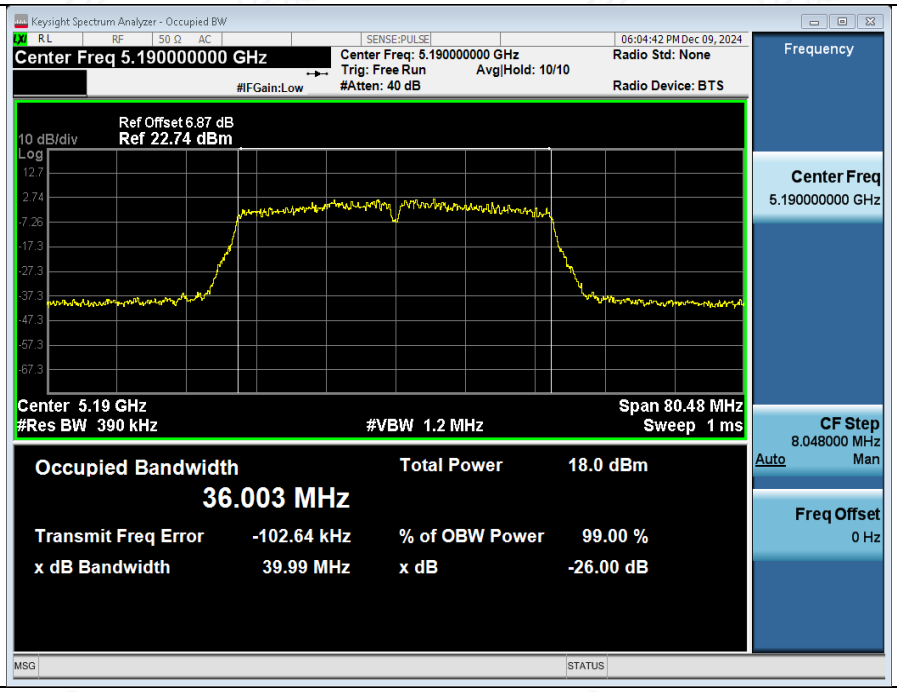

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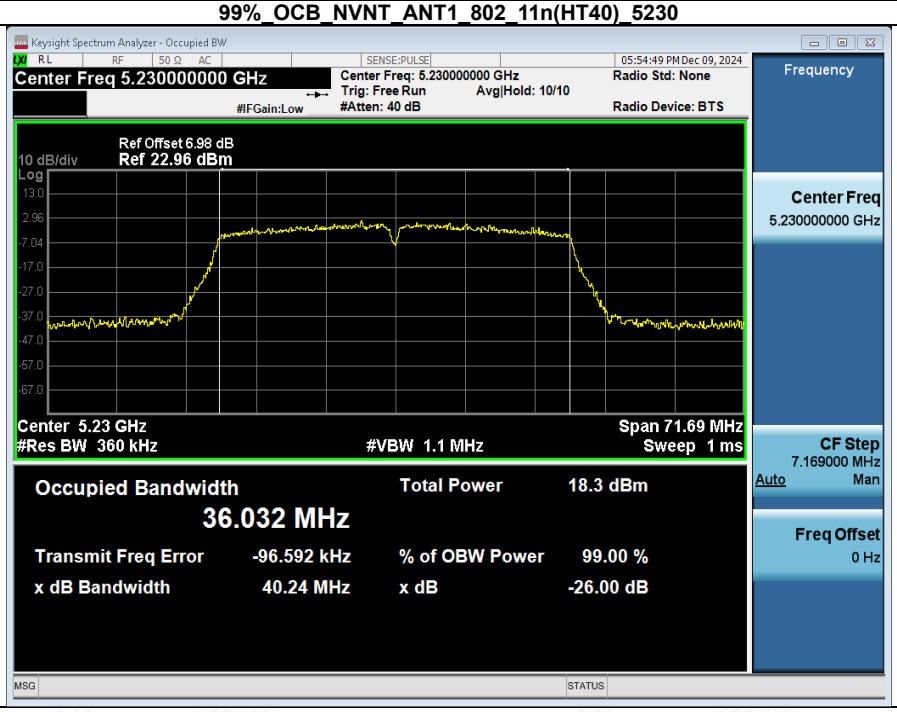

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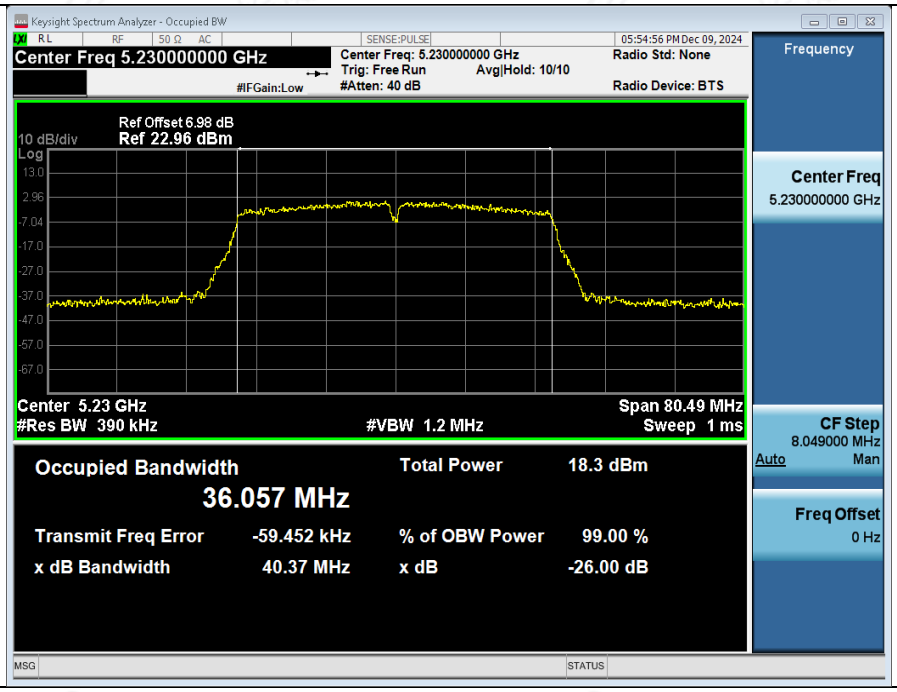

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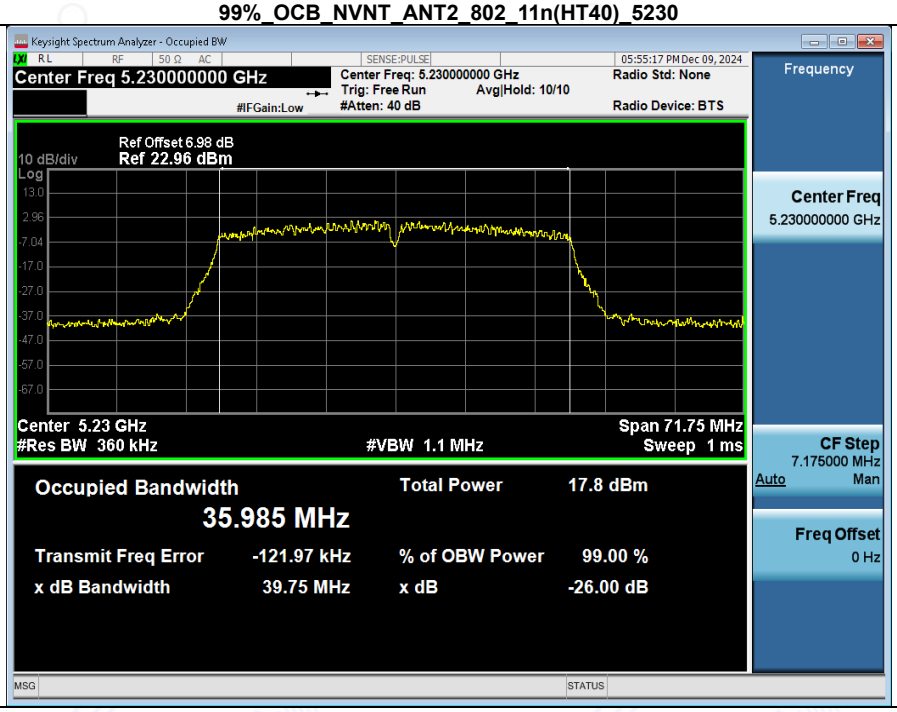

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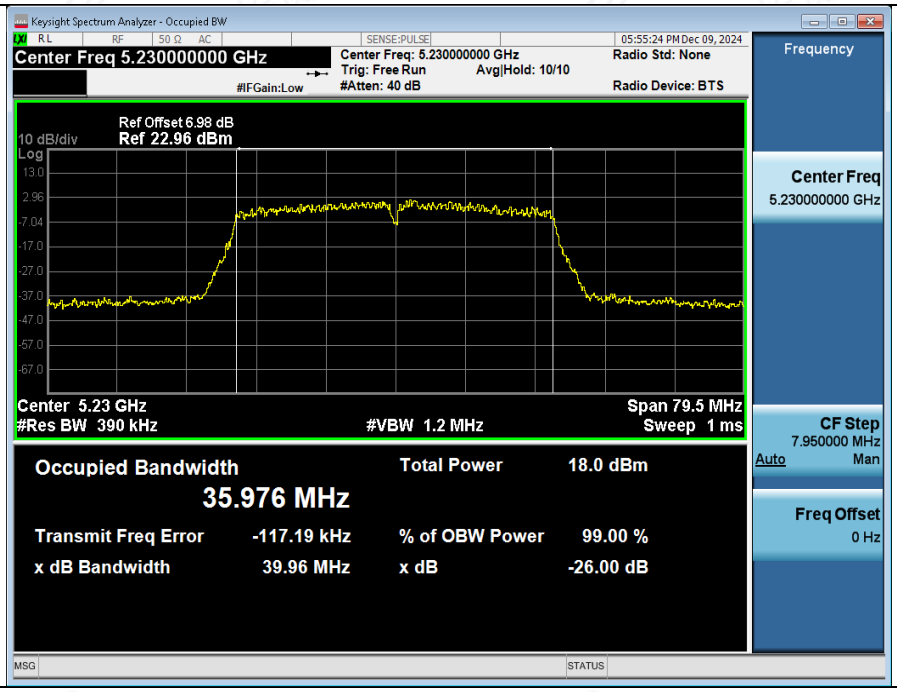
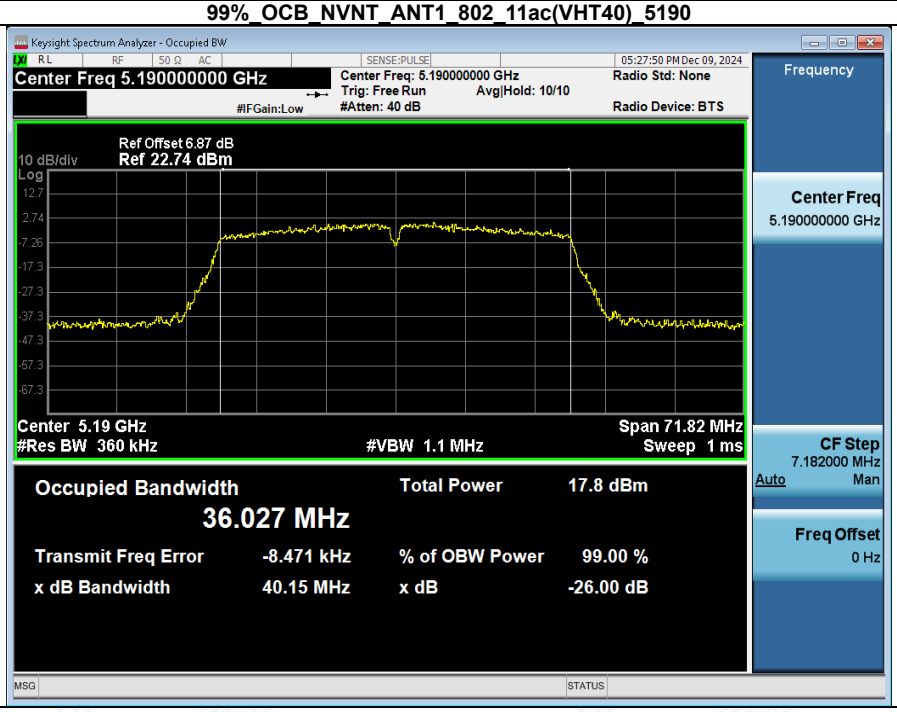
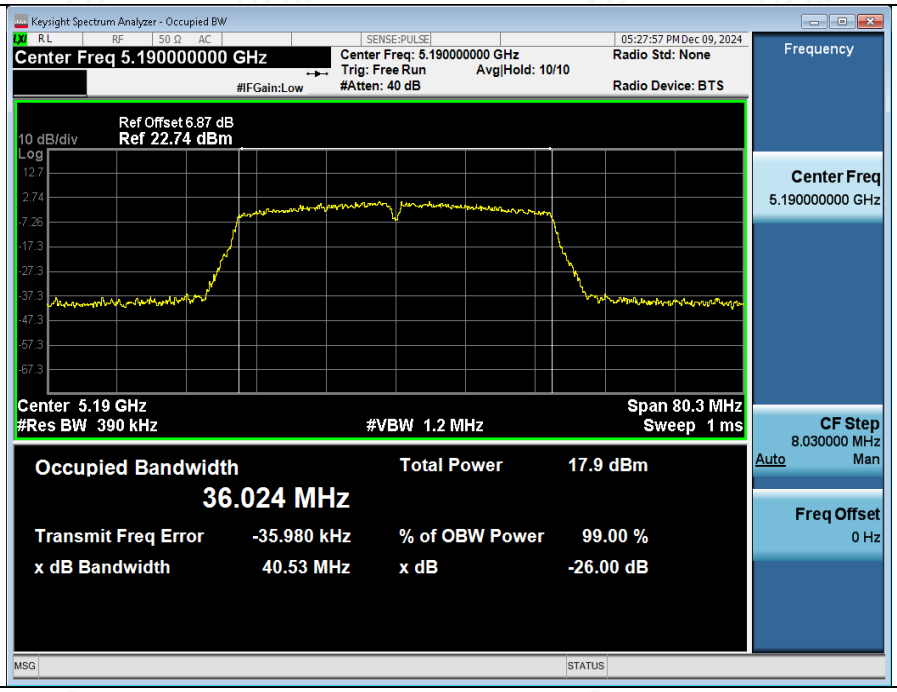


99%_OCB_NVNT_ANT1_802_11ac(VHT40)_5190



-26BW_NVNT_ANT1_802_11ac(VHT40)_5190



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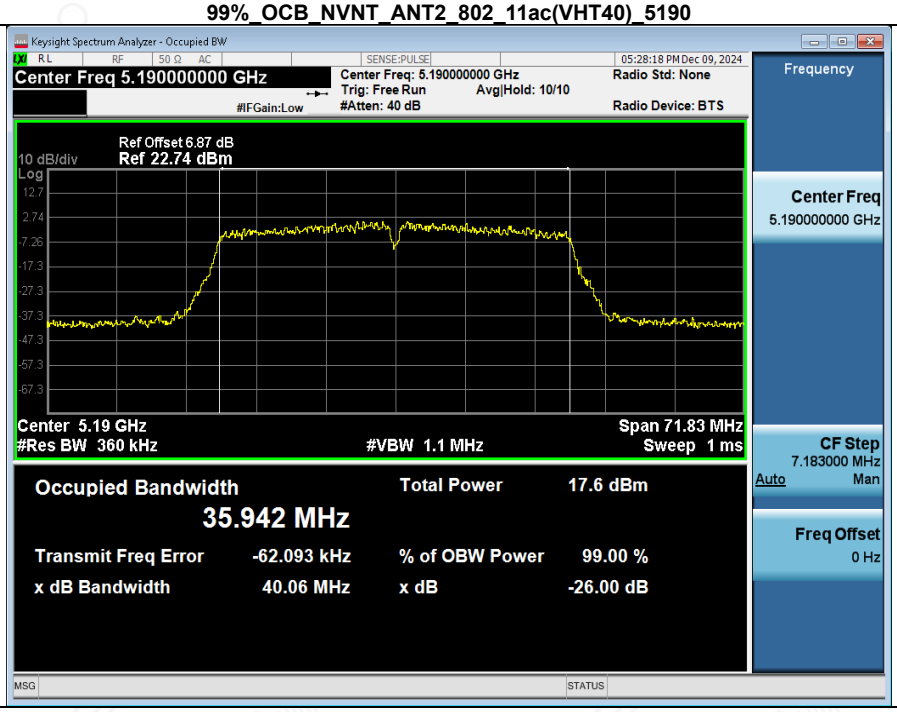

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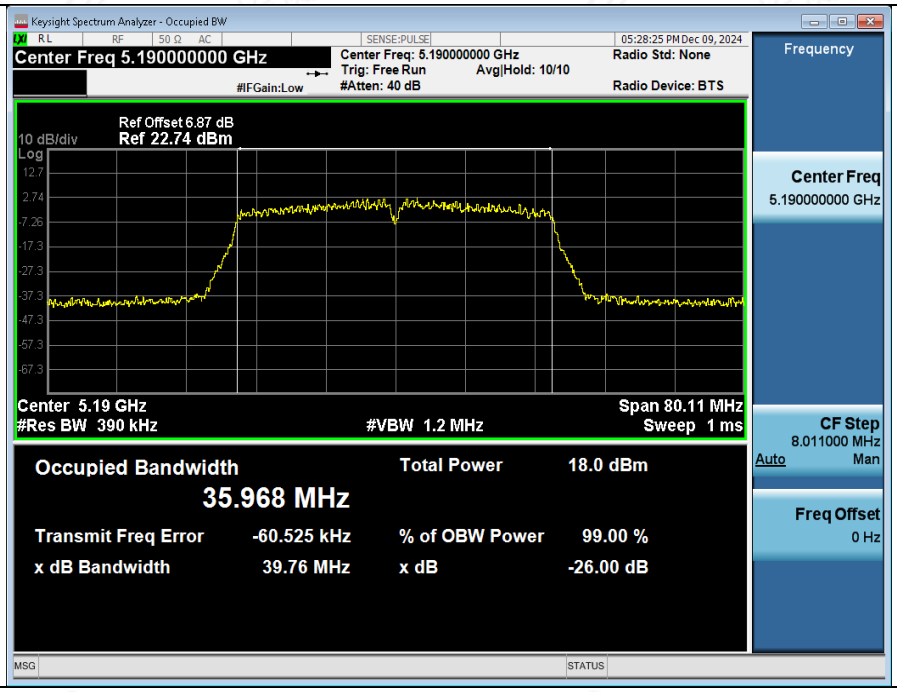
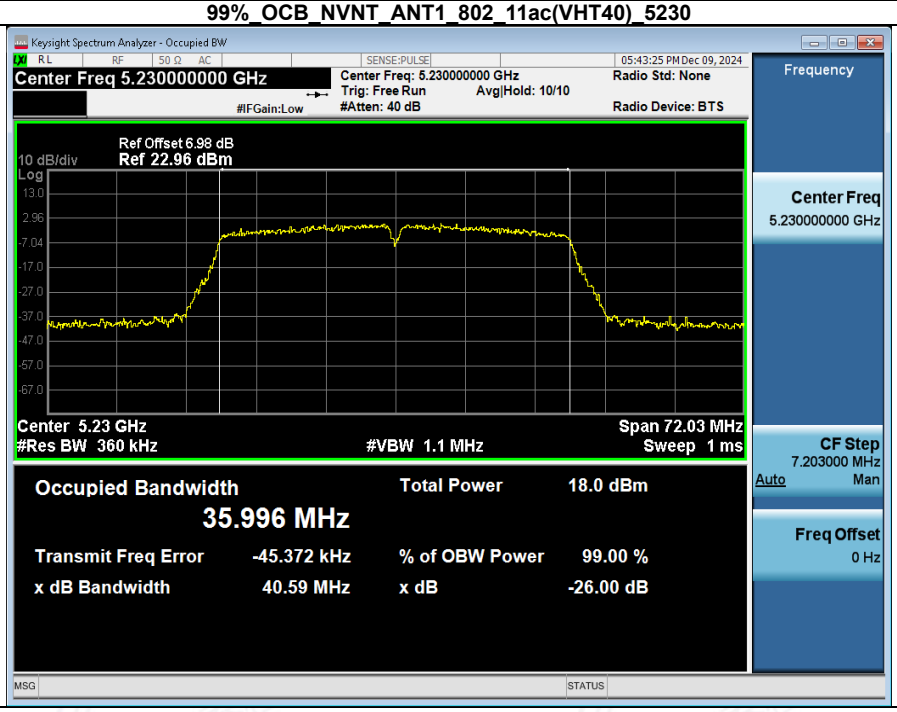
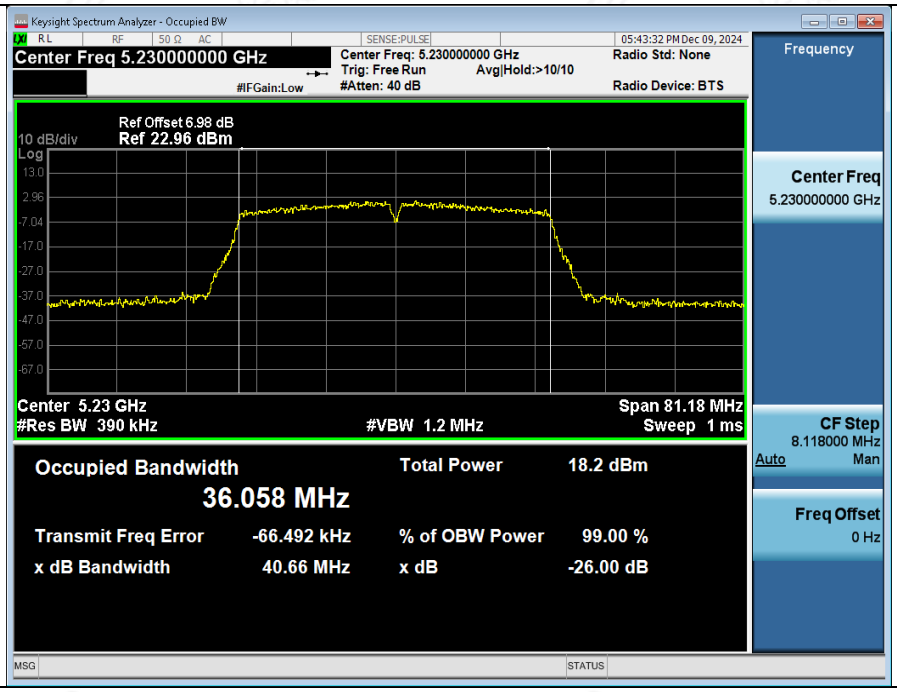


99%_OCB_NVNT_ANT1_802_11ac(VHT40)_5230



-26BW_NVNT_ANT1_802_11ac(VHT40)_5230



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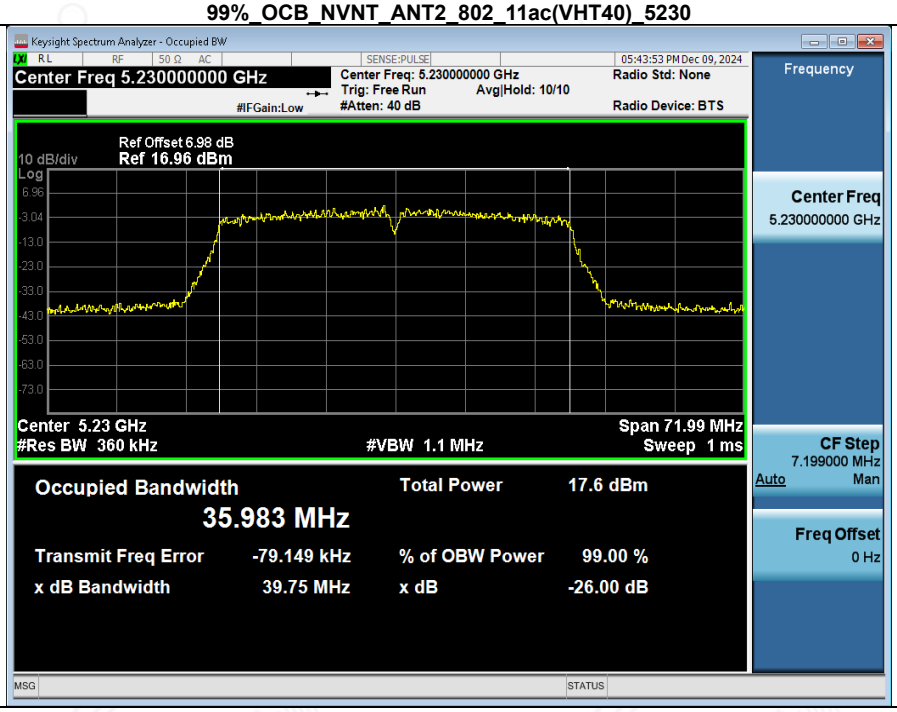

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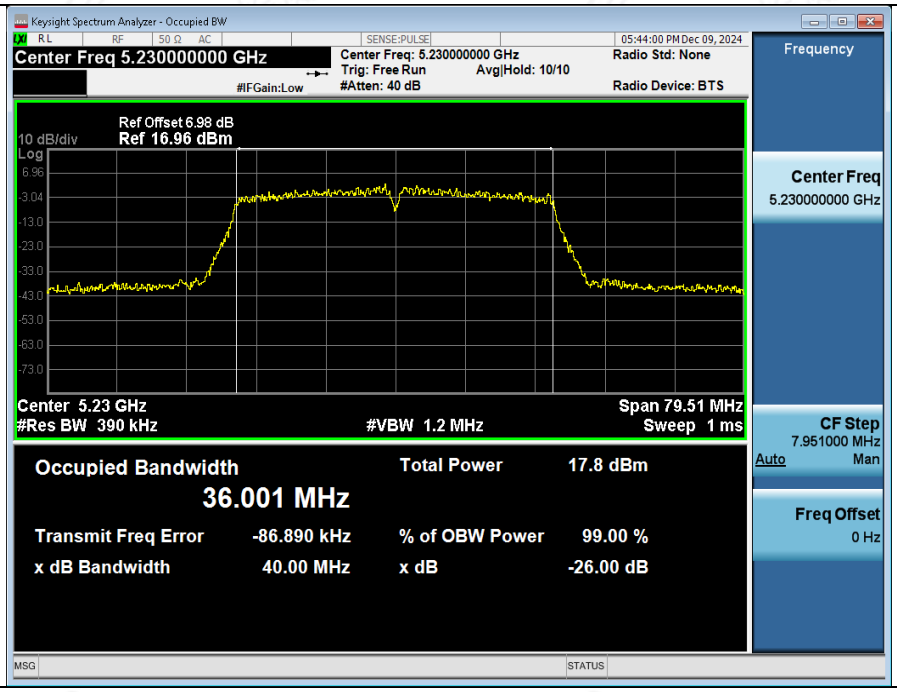
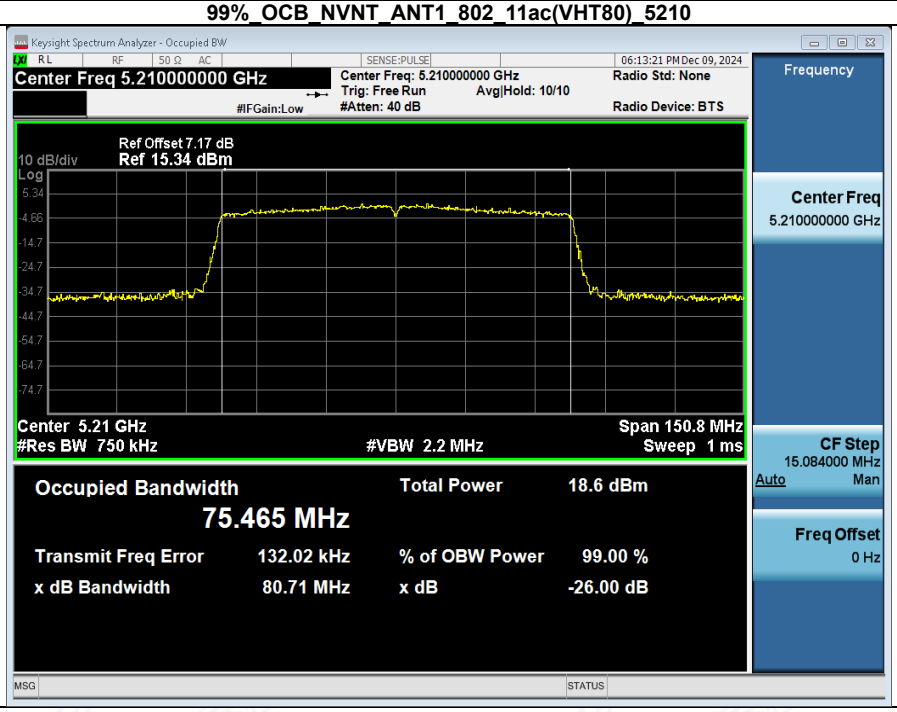
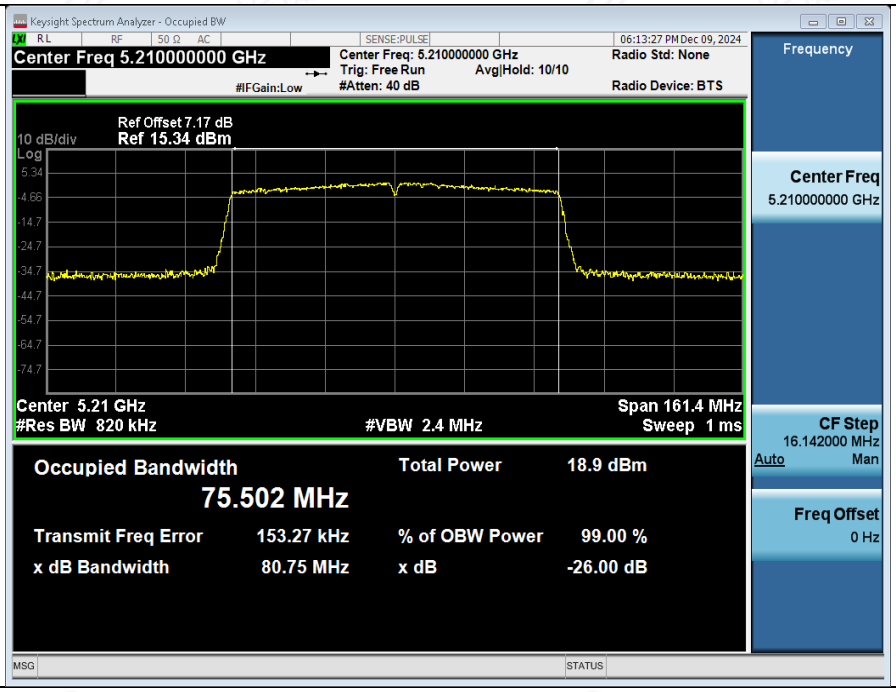


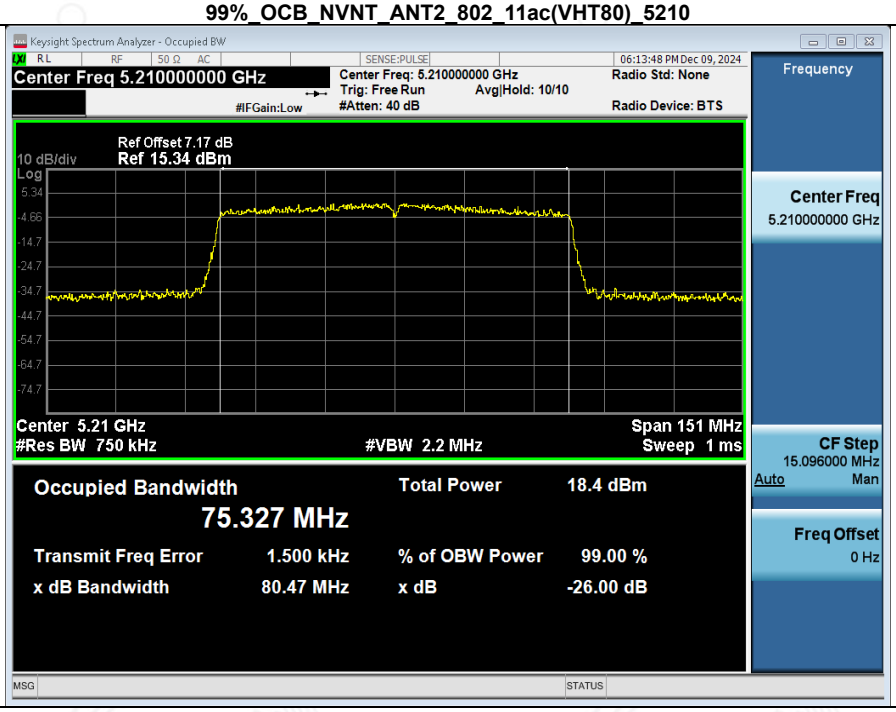
99%_OCB_NVNT_ANT1_802_11ac(VHT80)_5210



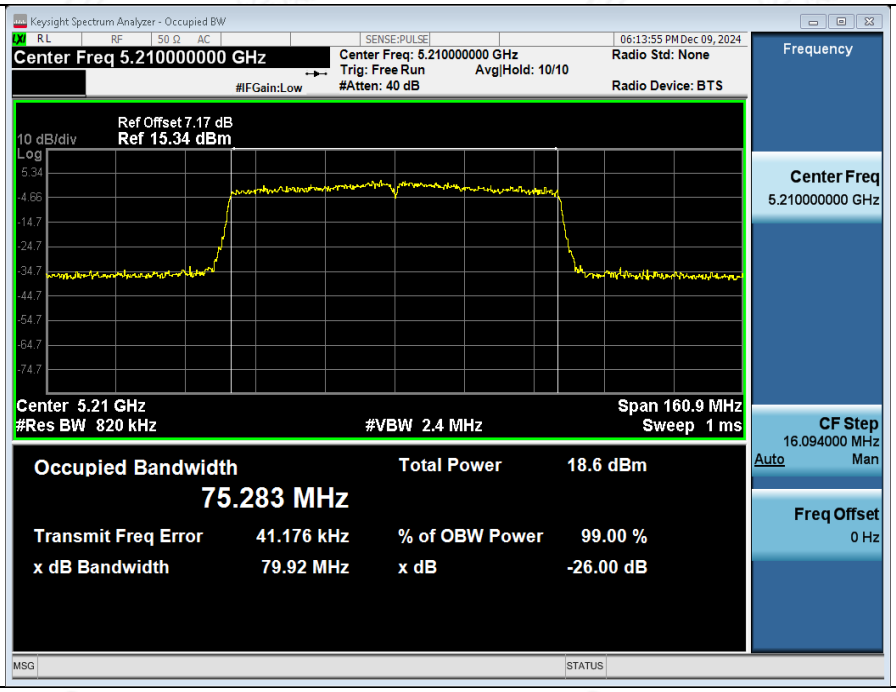
-26BW_NVNT_ANT1_802_11ac(VHT80)_5210



99%_OCB_NVNT_ANT2_802_11ac(VHT80)_5210



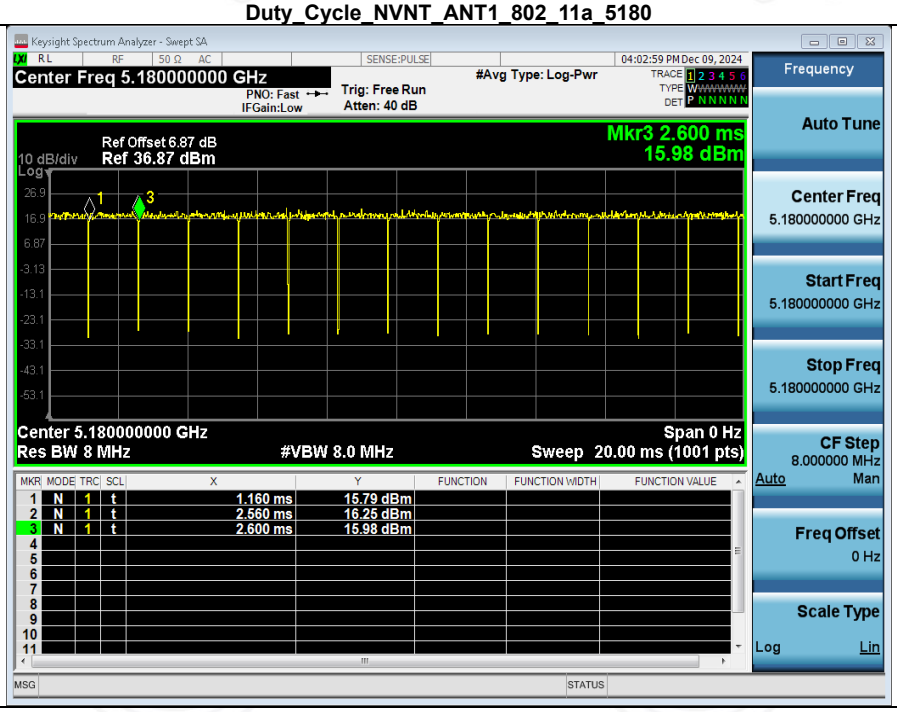
-26BW_NVNT_ANT2_802_11ac(VHT80)_5210


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:PULSE
06:13:55 PM Dec 09, 2024
Center Freq 5.210000000 GHz
Center Freq: 5.210000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Frequency
Ref Offset 7.17 dB
10 dB/div
Ref 15.34 dBm
Log
5.34
-4.66
-14.7
-24.7
-34.7
-44.7
-54.7
-64.7
-74.7
Center Freq
5.210000000 GHz
Center 5.21 GHz
#Res BW 820 kHz
#VBW 2.4 MHz
Span 160.9 MHz
Sweep 1 ms
CF Step
16.094000 MHz
Auto
Man
Occupied Bandwidth
75.283 MHz
Total Power
18.6 dBm
Transmit Freq Error
41.176 kHz
% of OBW Power
99.00 %
x dB Bandwidth
79.92 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

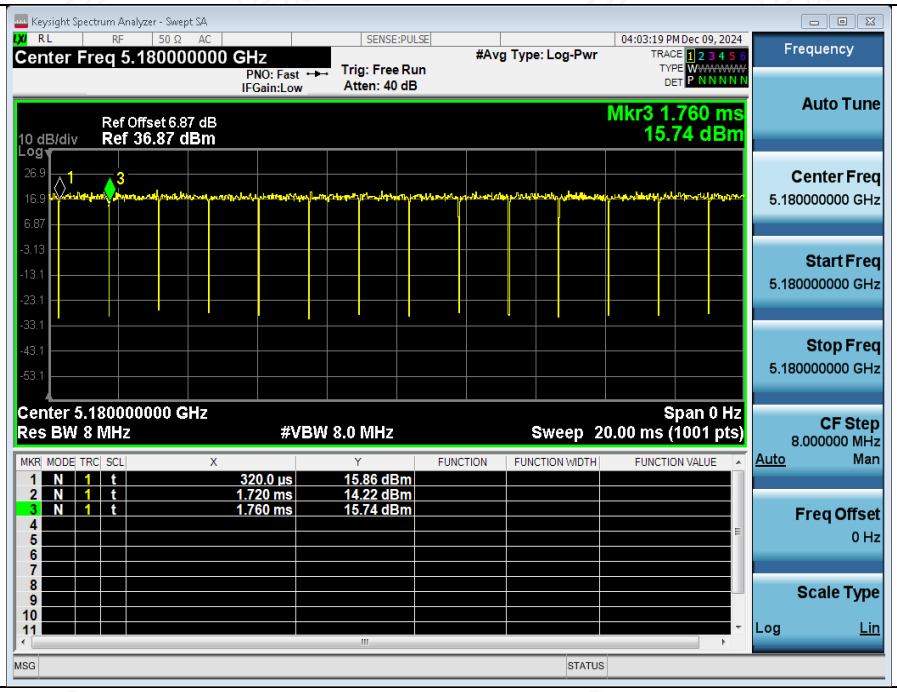
2. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5180.00	97.22	0.12
NVNT	ANT2	802.11a	5180.00	97.22	0.12
NVNT	ANT1	802.11a	5200.00	97.18	0.12
NVNT	ANT2	802.11a	5200.00	95.83	0.18
NVNT	ANT1	802.11a	5240.00	97.22	0.12
NVNT	ANT2	802.11a	5240.00	97.22	0.12
NVNT	ANT1	802.11n(HT20)	5180.00	97.01	0.13
NVNT	ANT2	802.11n(HT20)	5180.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5200.00	97.01	0.13
NVNT	ANT2	802.11n(HT20)	5200.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5240.00	95.59	0.20
NVNT	ANT2	802.11n(HT20)	5240.00	97.01	0.13
NVNT	ANT1	802.11ac(VHT20)	5180.00	91.89	0.37
NVNT	ANT2	802.11ac(VHT20)	5180.00	94.44	0.25
NVNT	ANT1	802.11ac(VHT20)	5200.00	91.89	0.37
NVNT	ANT2	802.11ac(VHT20)	5200.00	94.44	0.25
NVNT	ANT1	802.11ac(VHT20)	5240.00	94.44	0.25
NVNT	ANT2	802.11ac(VHT20)	5240.00	94.44	0.25
NVNT	ANT1	802.11n(HT40)	5190.00	91.18	0.40
NVNT	ANT2	802.11n(HT40)	5190.00	94.12	0.26
NVNT	ANT1	802.11n(HT40)	5230.00	91.18	0.40
NVNT	ANT2	802.11n(HT40)	5230.00	94.12	0.26
NVNT	ANT1	802.11ac(VHT40)	5190.00	90.00	0.46
NVNT	ANT2	802.11ac(VHT40)	5190.00	90.00	0.46
NVNT	ANT1	802.11ac(VHT40)	5230.00	90.00	0.46
NVNT	ANT2	802.11ac(VHT40)	5230.00	90.00	0.46
NVNT	ANT1	802.11ac(VHT80)	5210.00	83.33	0.79
NVNT	ANT2	802.11ac(VHT80)	5210.00	83.33	0.79

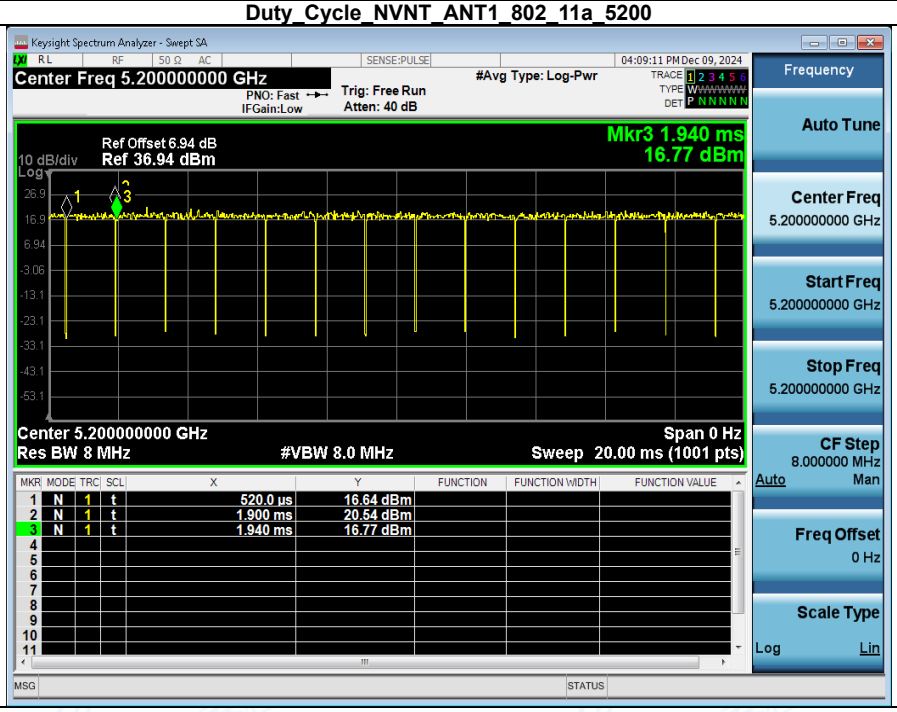
Duty_Cycle_NVNT_ANT1_802_11a_5180



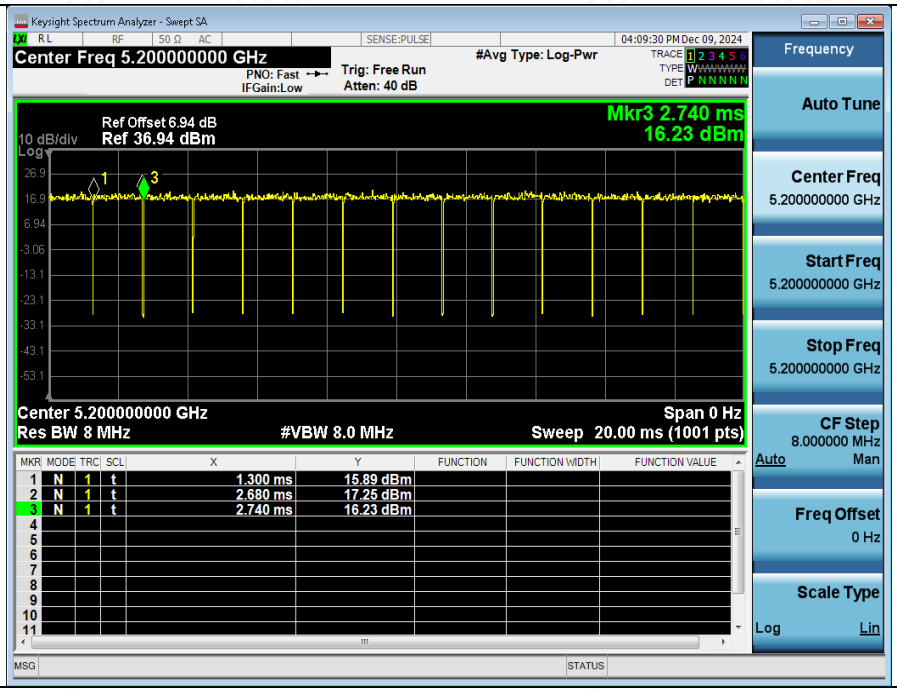
Duty_Cycle_NVNT_ANT2_802_11a_5180



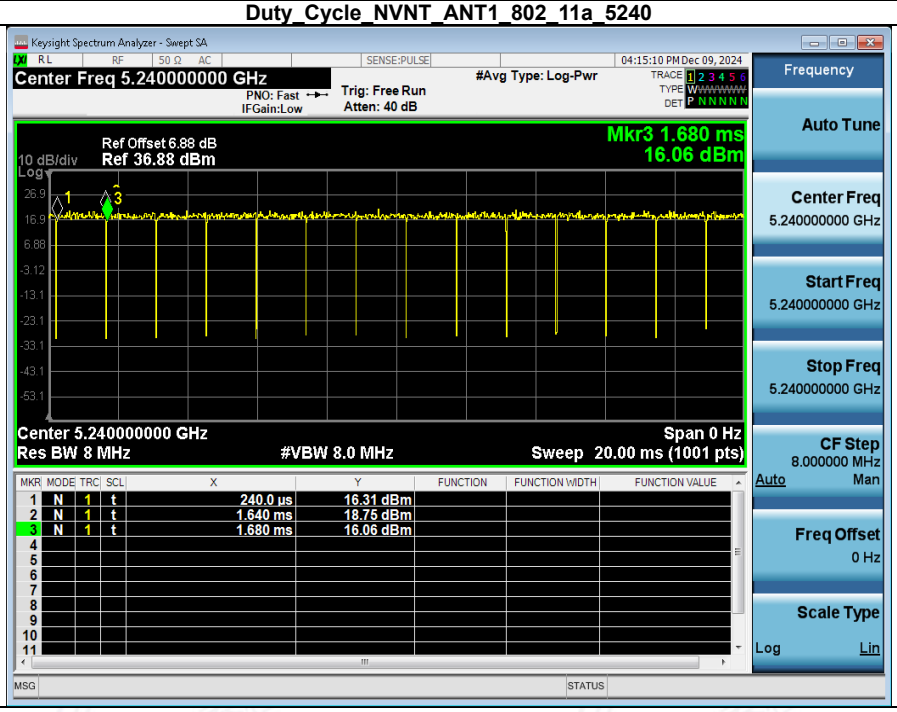
Duty_Cycle_NVNT_ANT1_802_11a_5200



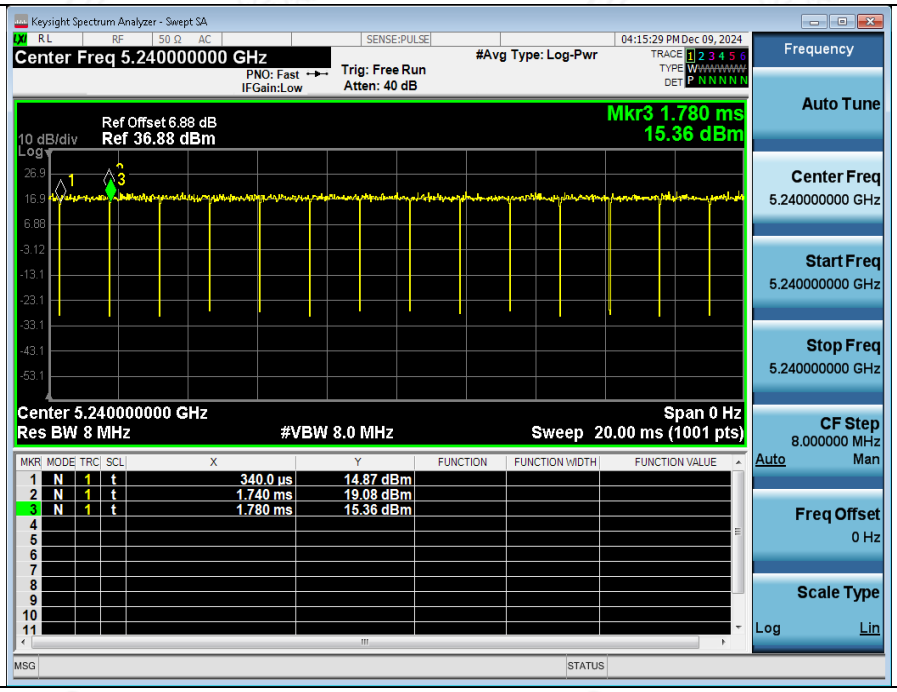
Duty_Cycle_NVNT_ANT2_802_11a_5200



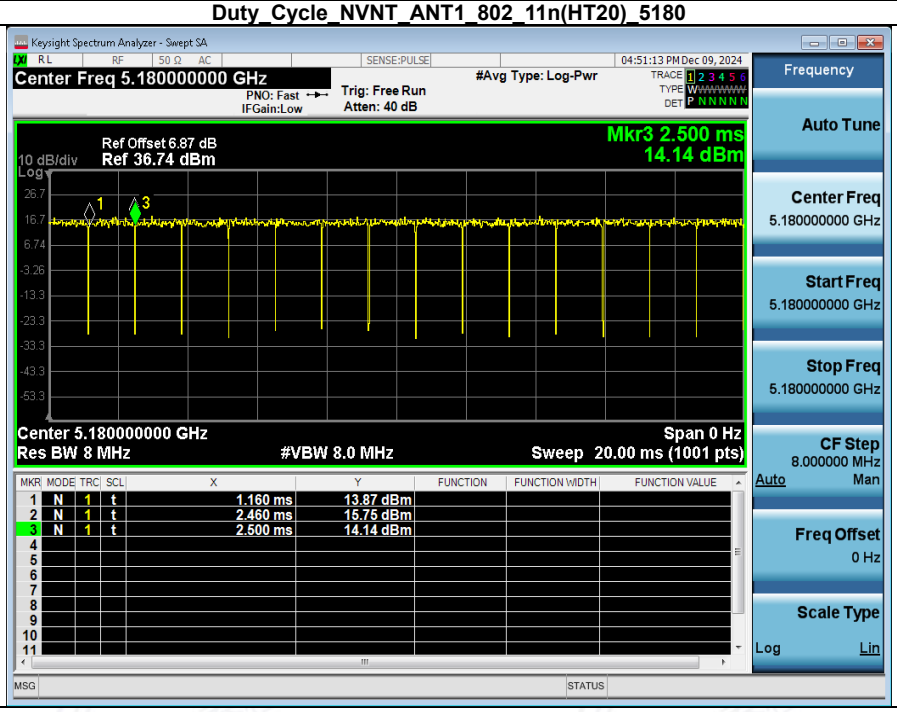
Duty_Cycle_NVNT_ANT1_802_11a_5240



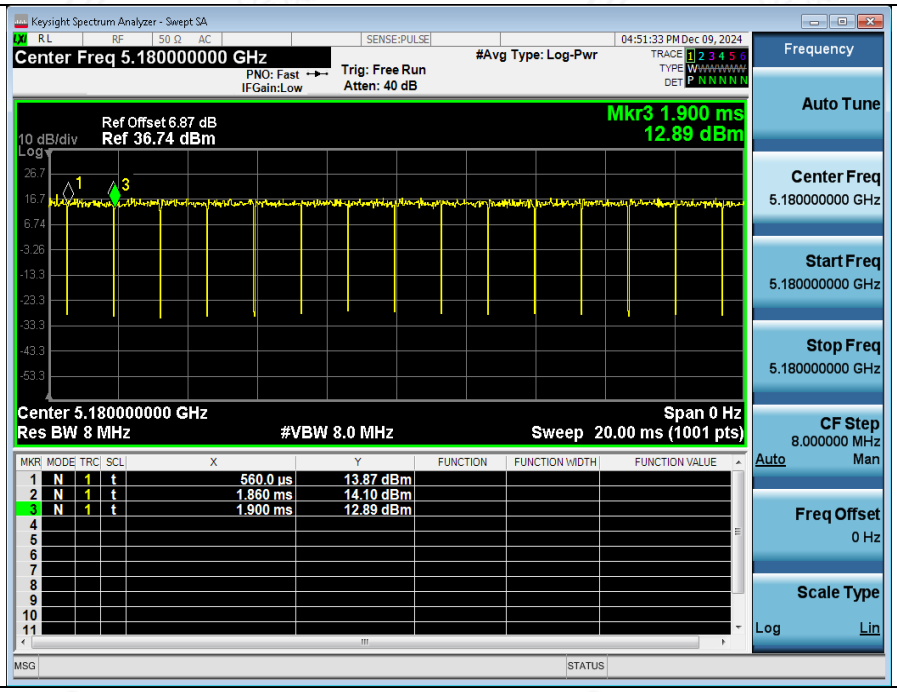
Duty_Cycle_NVNT_ANT2_802_11a_5240



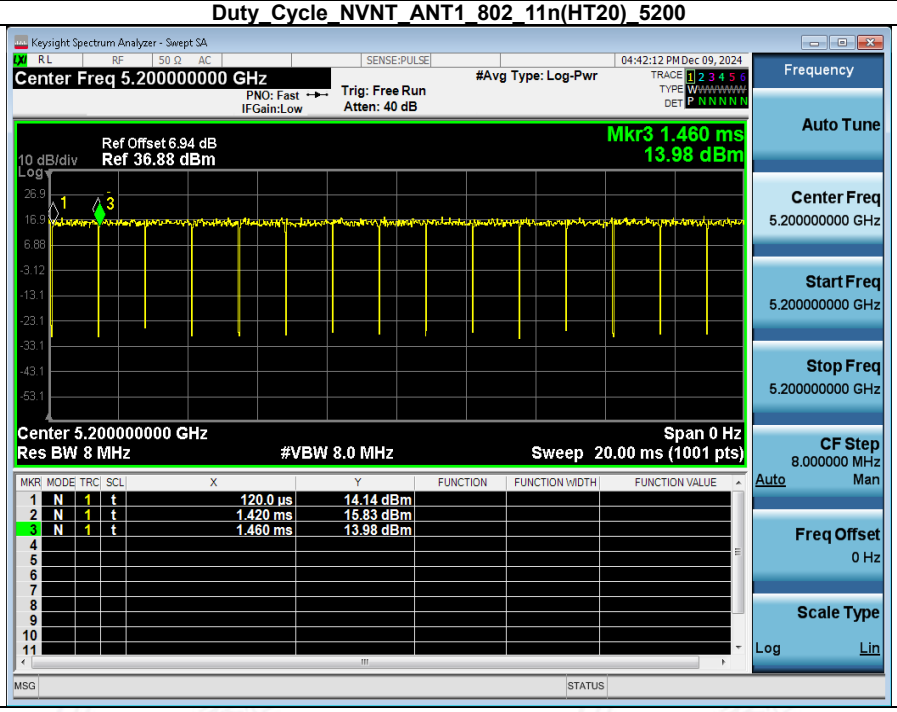
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5180



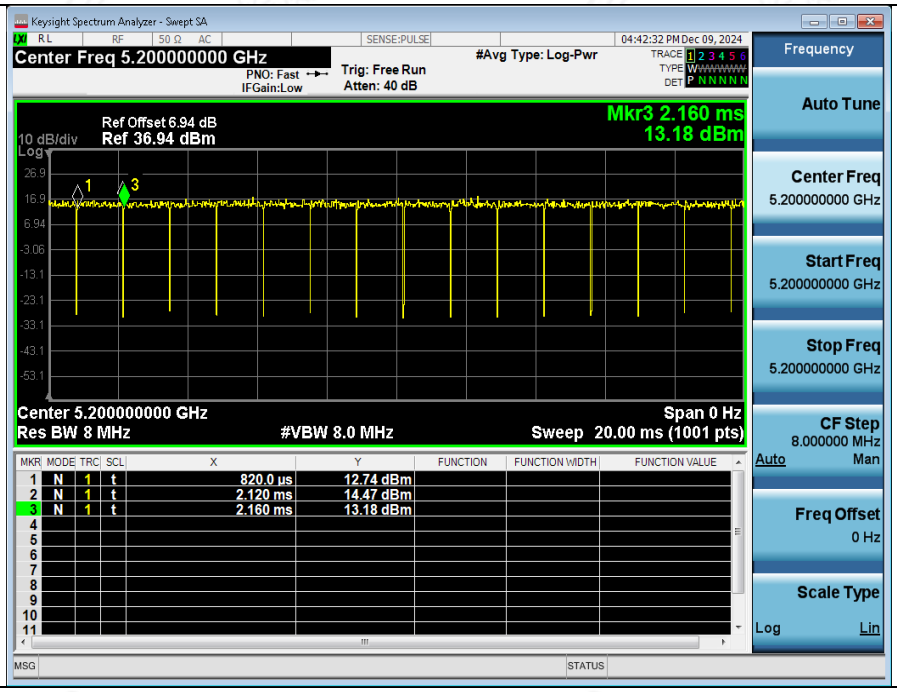
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5180



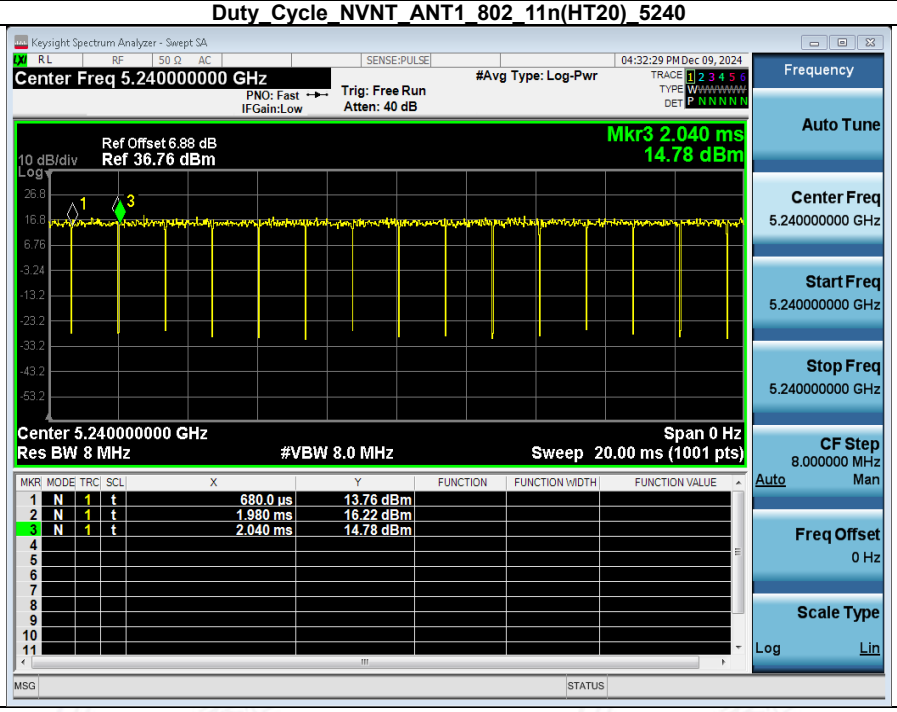
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5200



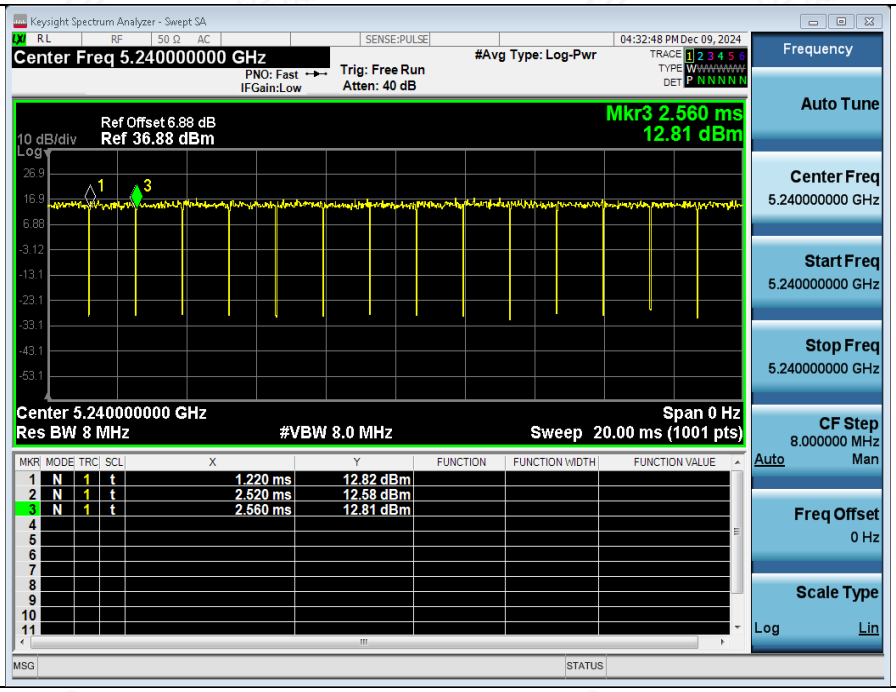
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5200



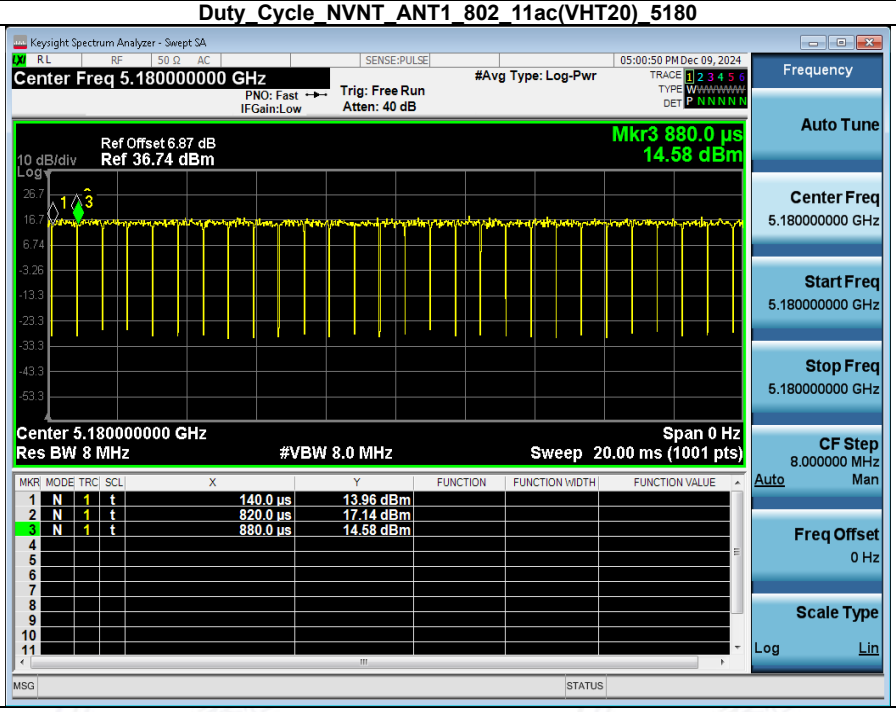
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5240



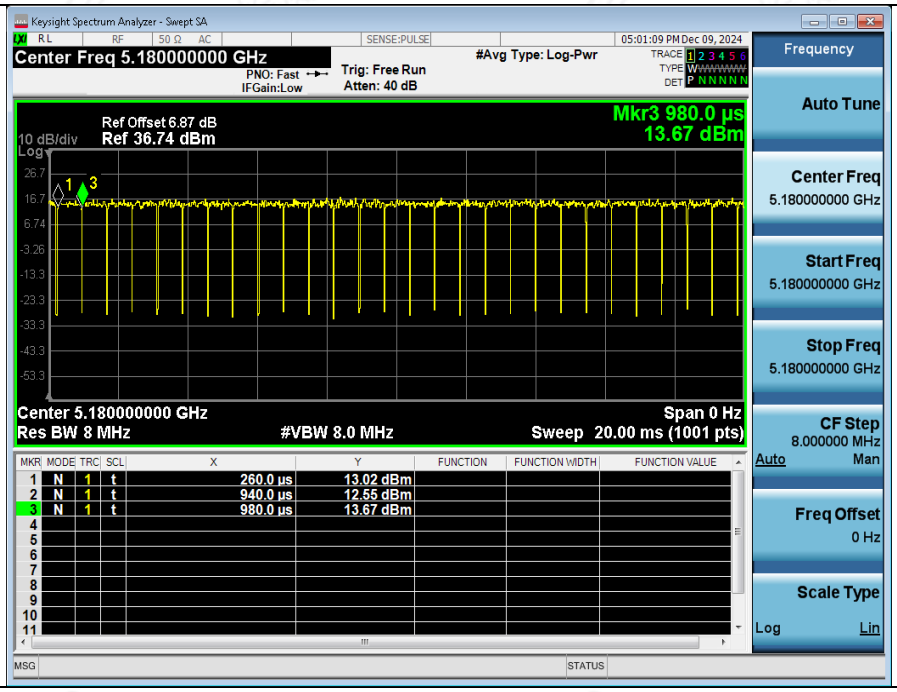
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5240



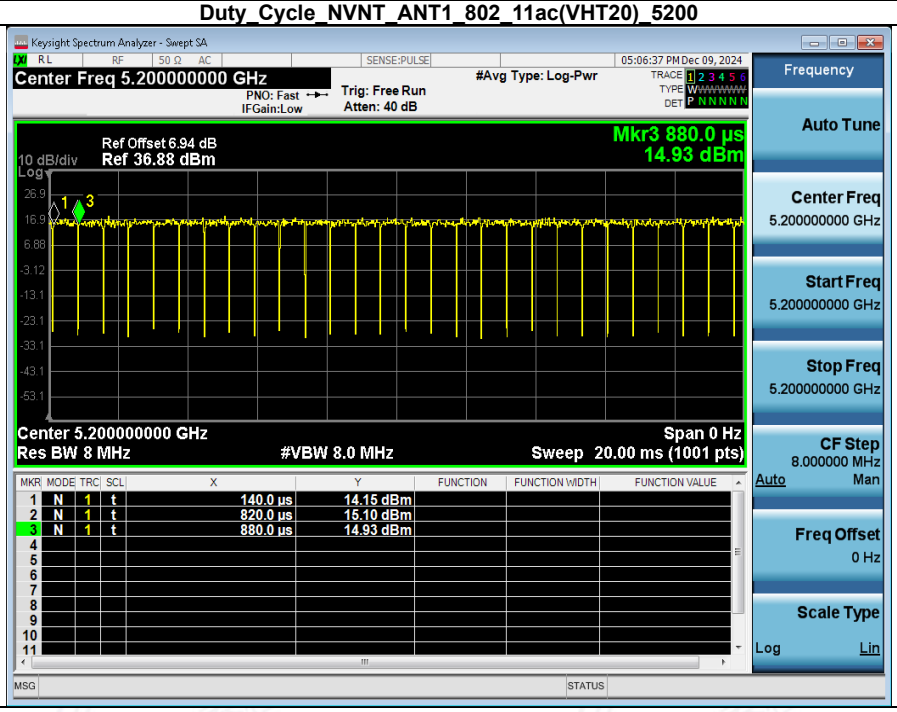
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5180



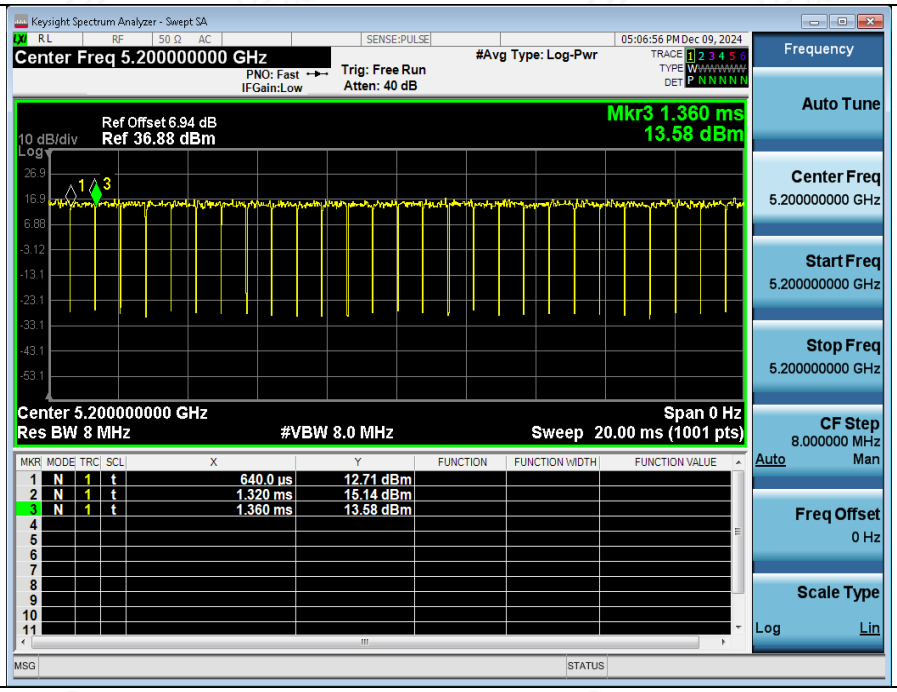
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5180



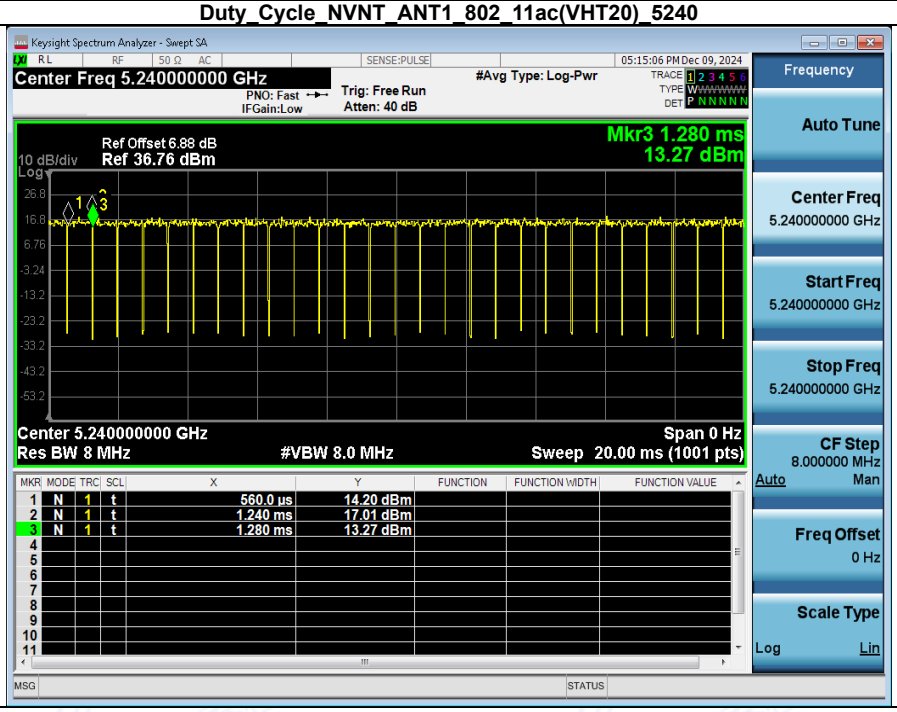
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5200



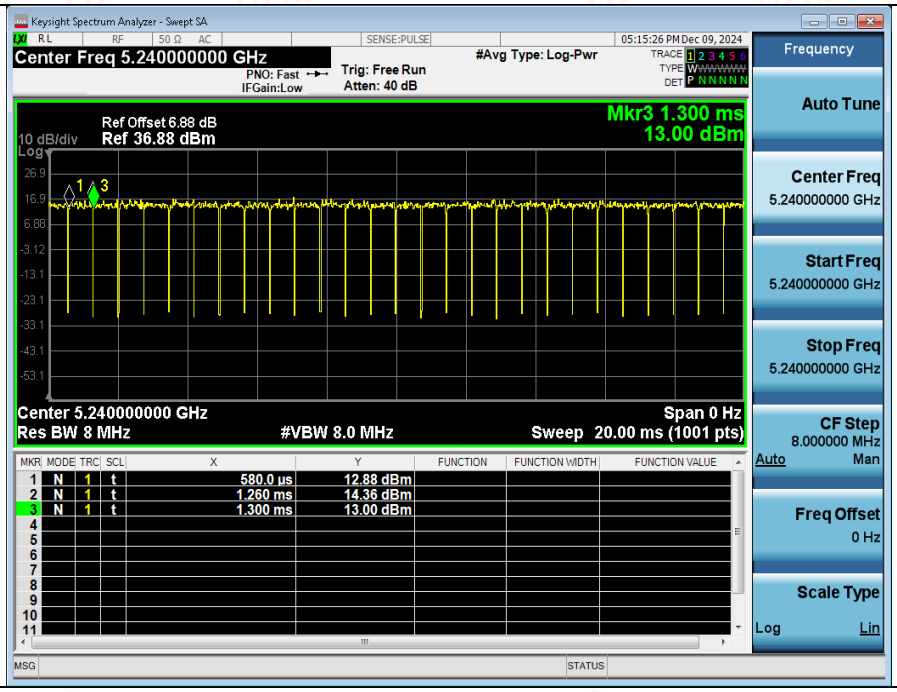
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5200



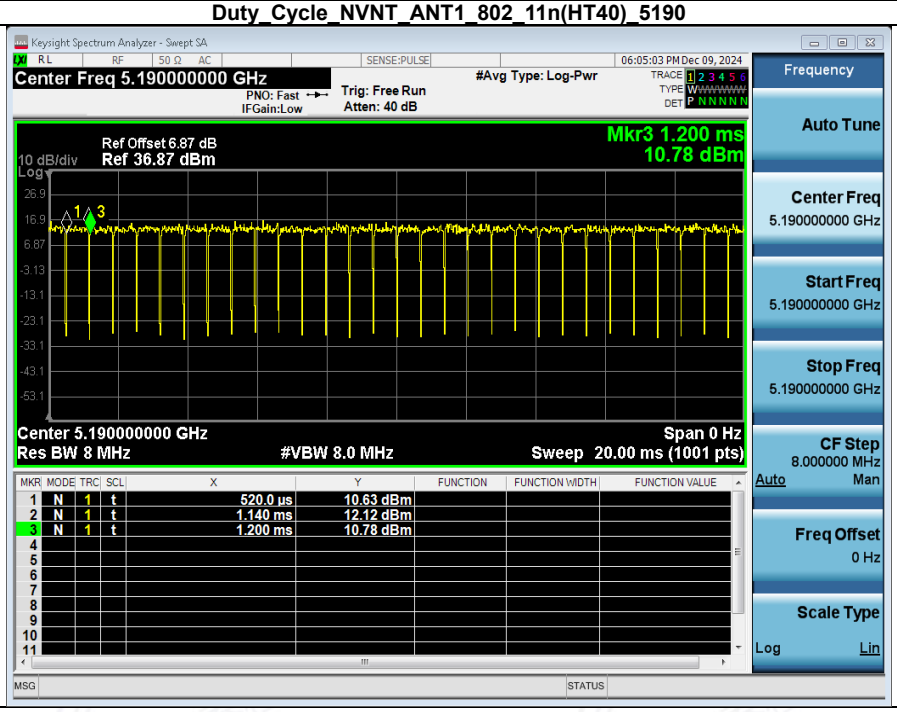
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5240



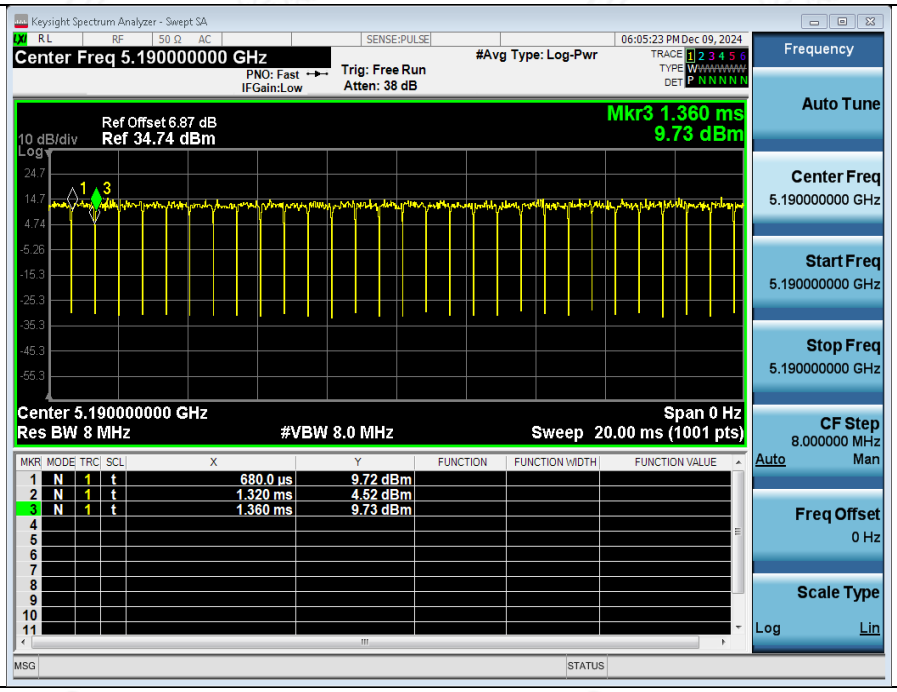
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5240



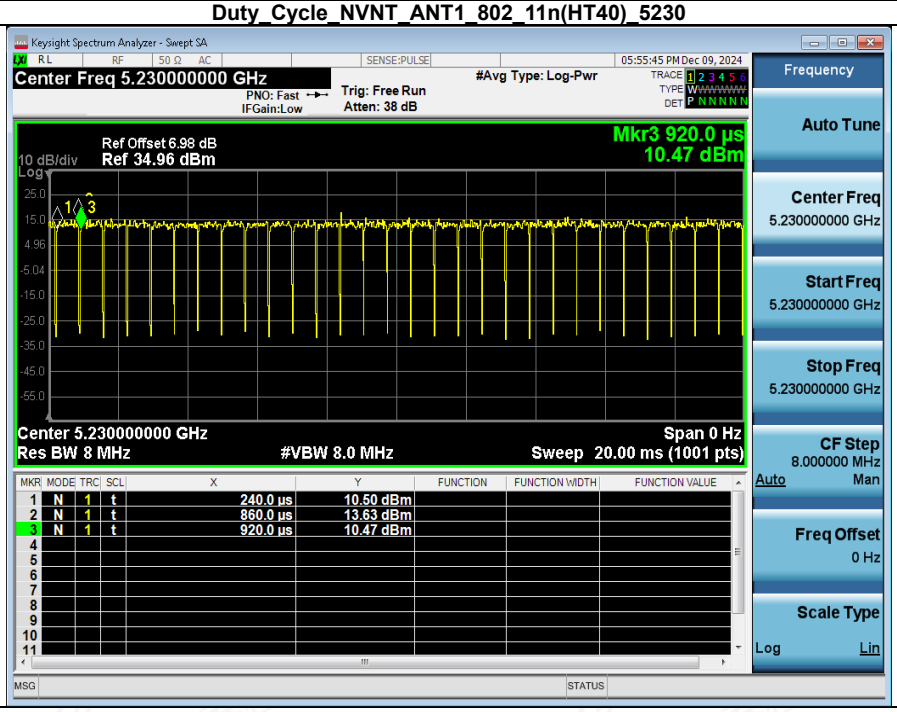
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5190



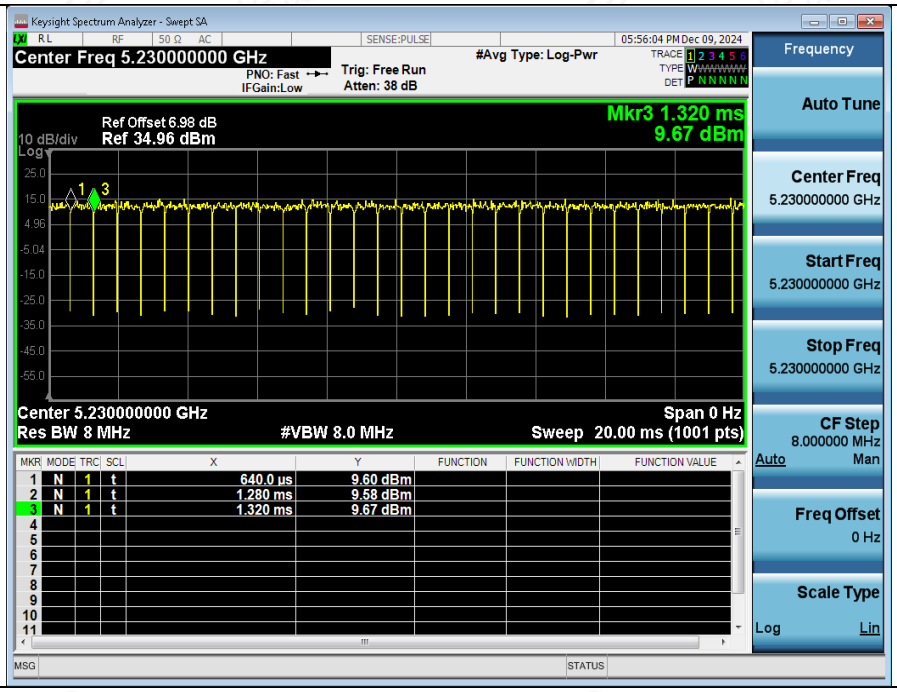
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5190



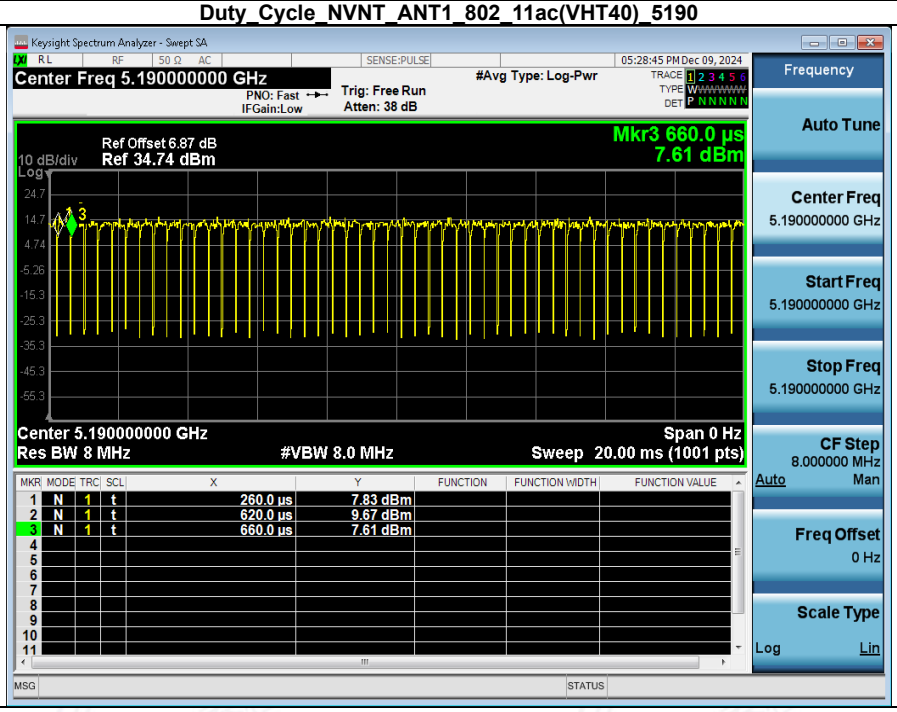
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5230



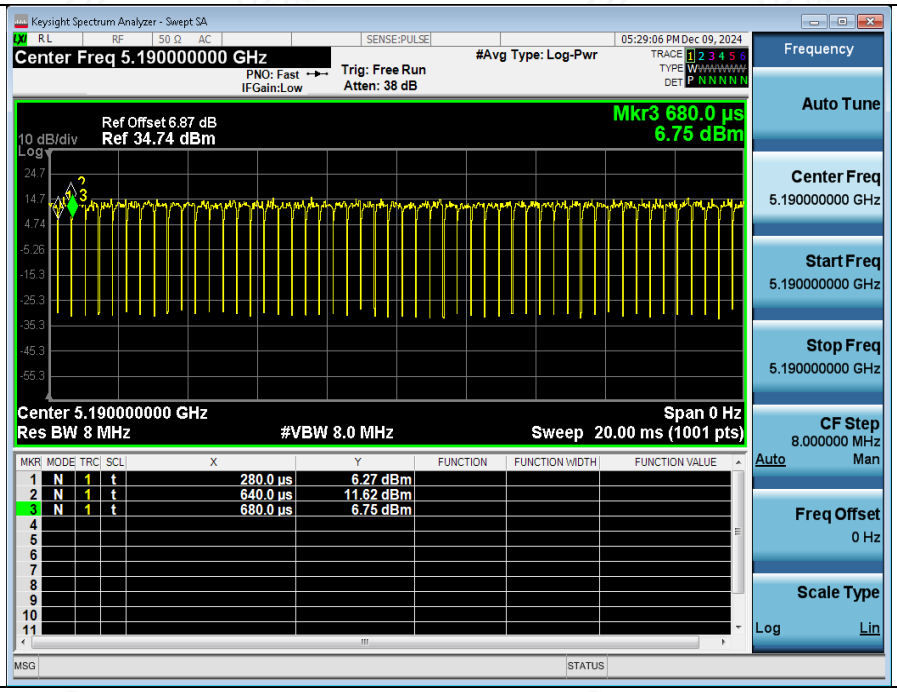
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5230



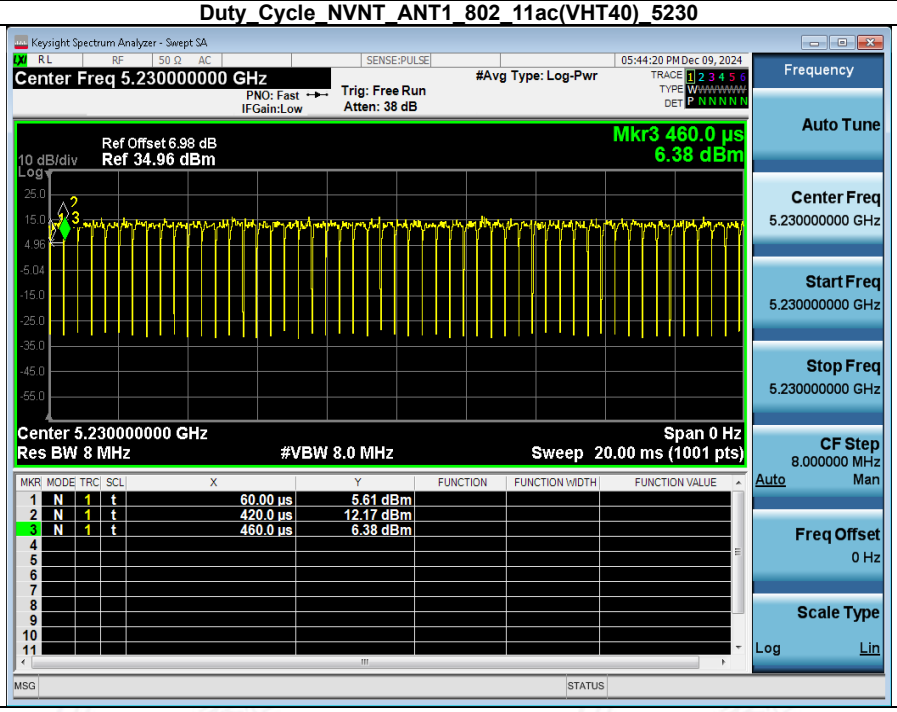
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5190



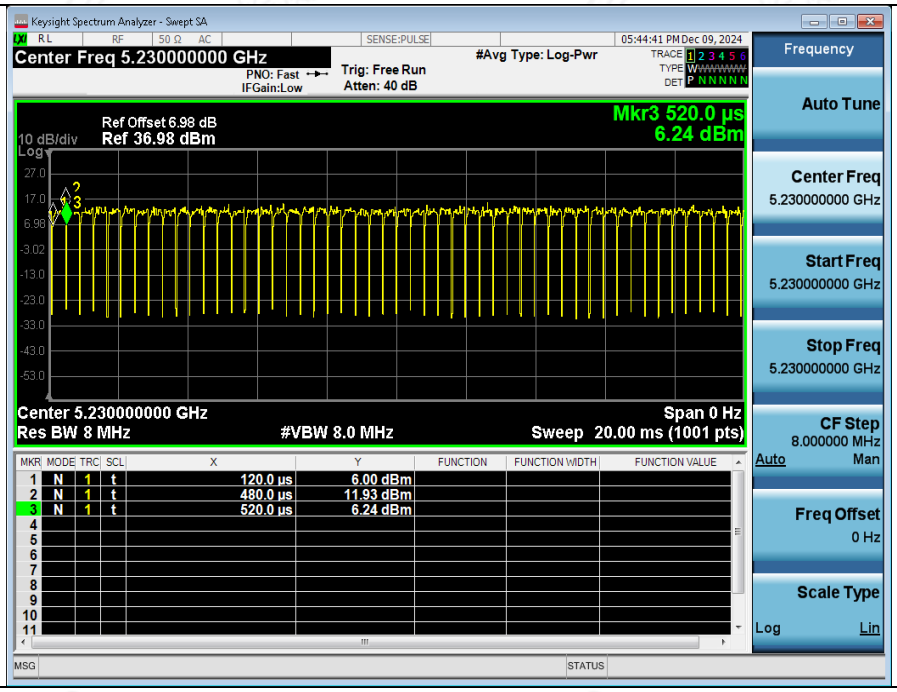
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5190



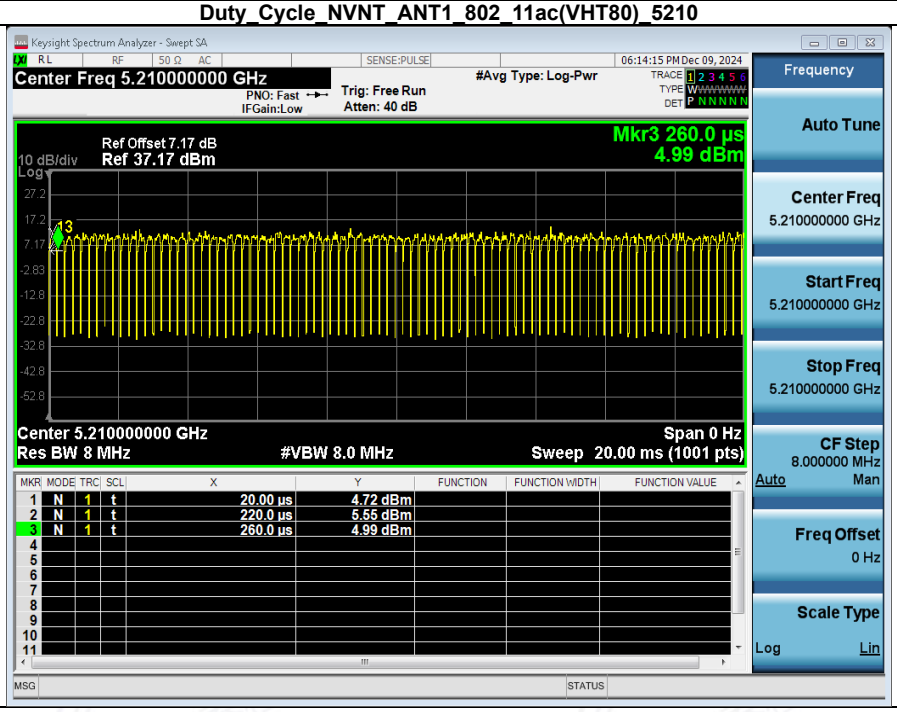
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5230



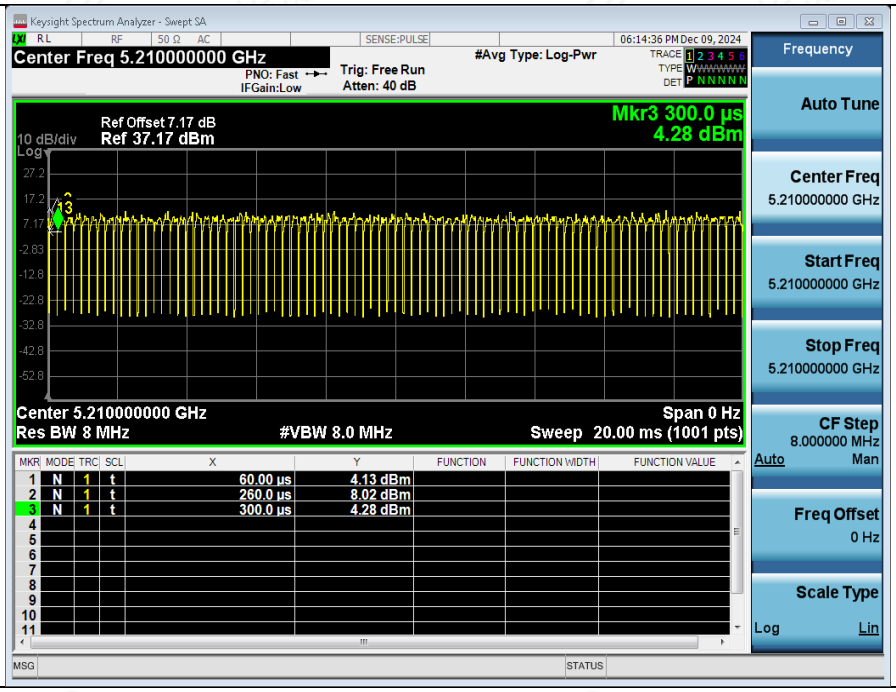
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5230



Duty_Cycle_NVNT_ANT1_802_11ac(VHT80)_5210



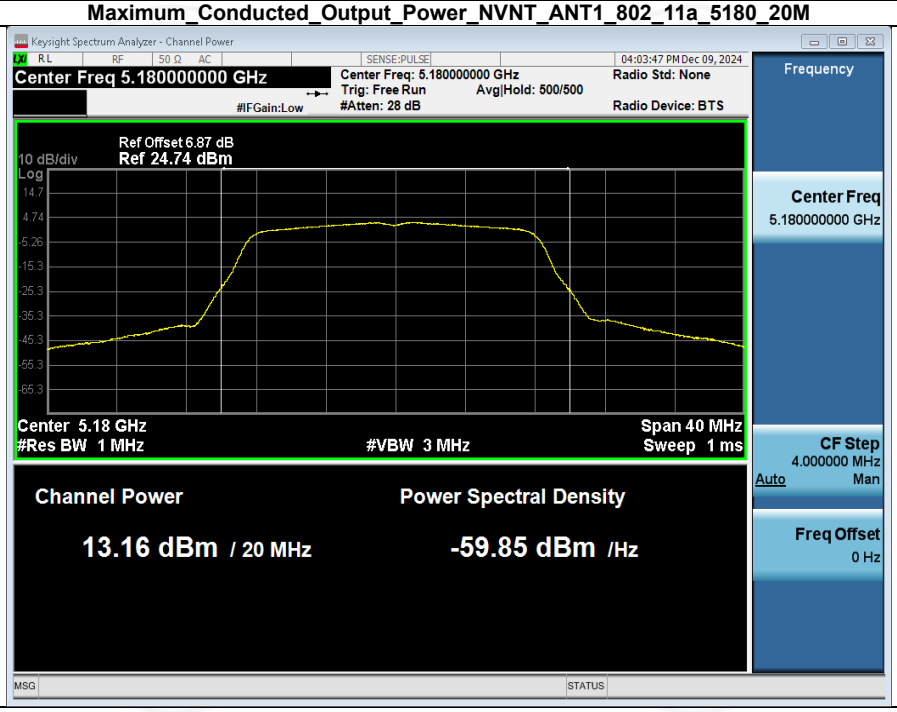
Duty_Cycle_NVNT_ANT2_802_11ac(VHT80)_5210


Keysight Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 40 dB
#Avg Type: Log-Pwr
06:14:36 PM Dec 09, 2024
Ref Offset 7.17 dB
10 dB/div
Ref 37.17 dBm
Mkr3 300.0 µs
4.28 dBm
Center 5.210000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (1001 pts)
1 N 1 t 60.00 µs 4.13 dBm
2 N 1 t 260.0 µs 8.02 dBm
3 N 1 t 300.0 µs 4.28 dBm
Frequency
Auto Tune
Center Freq
5.210000000 GHz
Start Freq
5.210000000 GHz
Stop Freq
5.210000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

3. Maximum Conducted Output Power

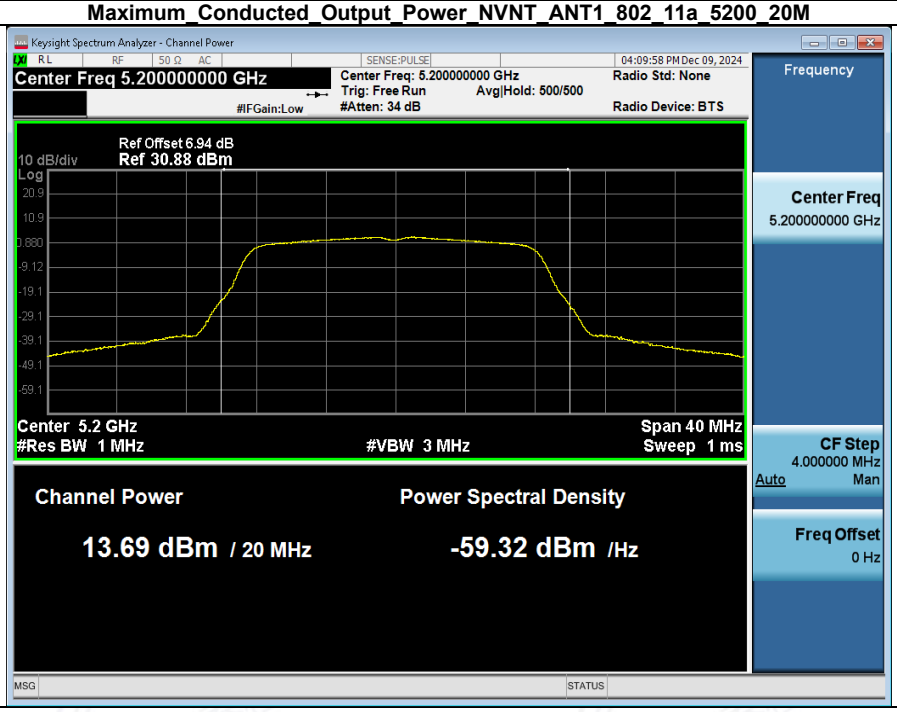
Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5180.00	13.16	0.12	13.28	24	Pass
NVNT	ANT2	802.11a	5180.00	12.64	0.12	12.76	24	Pass
NVNT	ANT1	802.11a	5200.00	13.69	0.12	13.81	24	Pass
NVNT	ANT2	802.11a	5200.00	12.98	0.18	13.16	24	Pass
NVNT	ANT1	802.11a	5240.00	13.70	0.12	13.82	24	Pass
NVNT	ANT2	802.11a	5240.00	12.71	0.12	12.83	24	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	10.64	0.13	10.77	24	Pass
NVNT	ANT2	802.11n(HT20)	5180.00	10.06	0.13	10.19	24	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	11.03	0.13	11.16	24	Pass
NVNT	ANT2	802.11n(HT20)	5200.00	10.32	0.13	10.45	24	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	11.05	0.20	11.25	24	Pass
NVNT	ANT2	802.11n(HT20)	5240.00	10.10	0.13	10.23	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	10.48	0.37	10.85	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5180.00	9.95	0.25	10.20	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	11.12	0.37	11.49	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5200.00	10.28	0.25	10.53	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	11.00	0.25	11.25	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5240.00	9.89	0.25	10.14	24	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	11.02	0.40	11.42	24	Pass
NVNT	ANT2	802.11n(HT40)	5190.00	10.32	0.26	10.58	24	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	11.40	0.40	11.80	24	Pass
NVNT	ANT2	802.11n(HT40)	5230.00	10.44	0.26	10.70	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	10.84	0.46	11.30	24	Pass
NVNT	ANT2	802.11ac(VHT40)	5190.00	10.23	0.46	10.69	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	11.11	0.46	11.57	24	Pass
NVNT	ANT2	802.11ac(VHT40)	5230.00	10.14	0.46	10.60	24	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	10.87	0.79	11.66	24	Pass
NVNT	ANT2	802.11ac(VHT80)	5210.00	10.02	0.79	10.81	24	Pass

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5180_20M



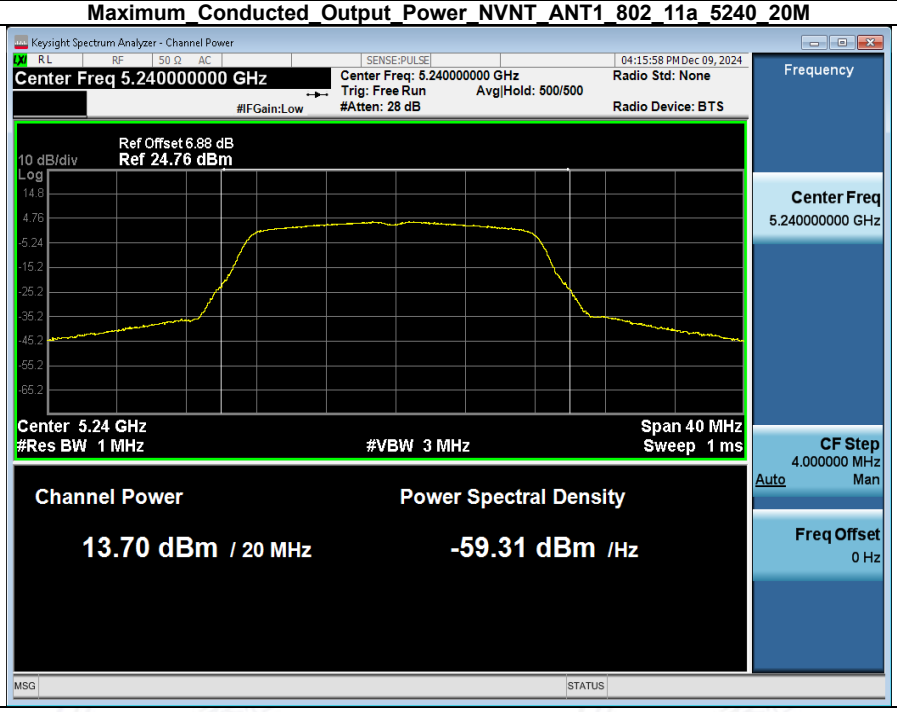
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5180_20M

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5200_20M



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5200_20M

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5240_20M



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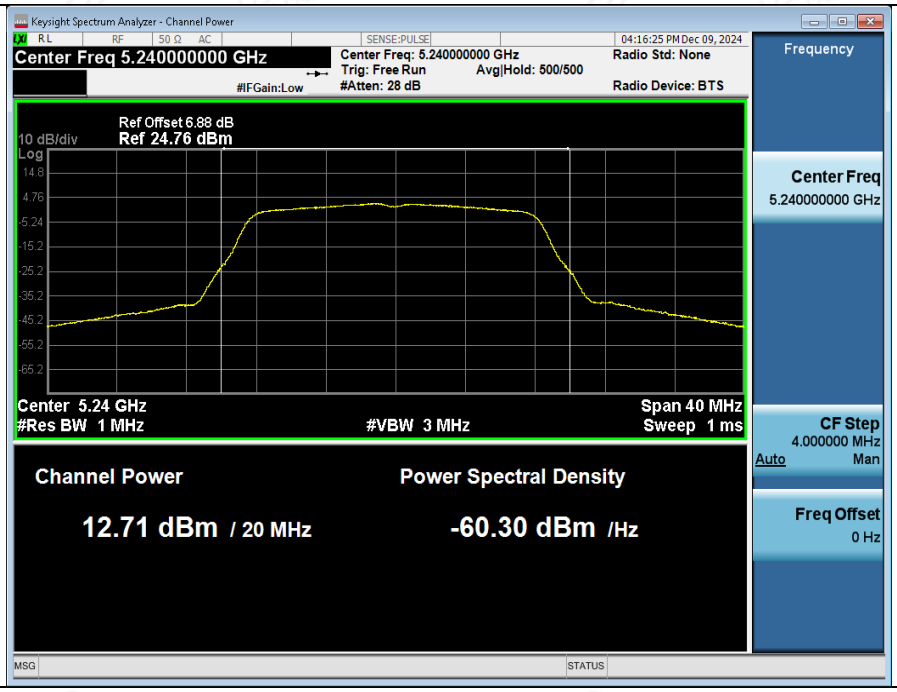
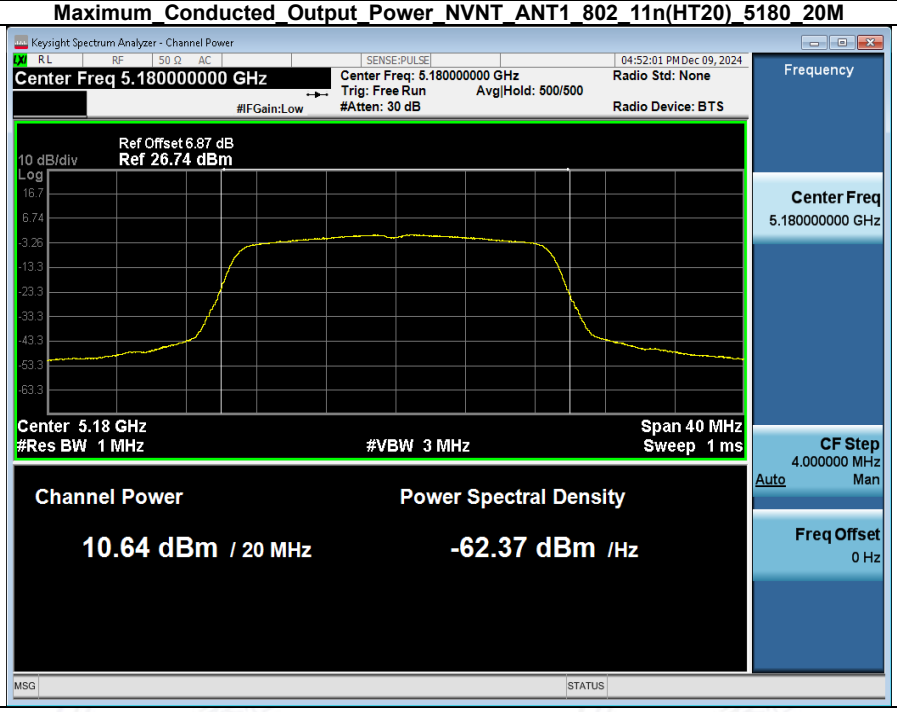


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5180_20M



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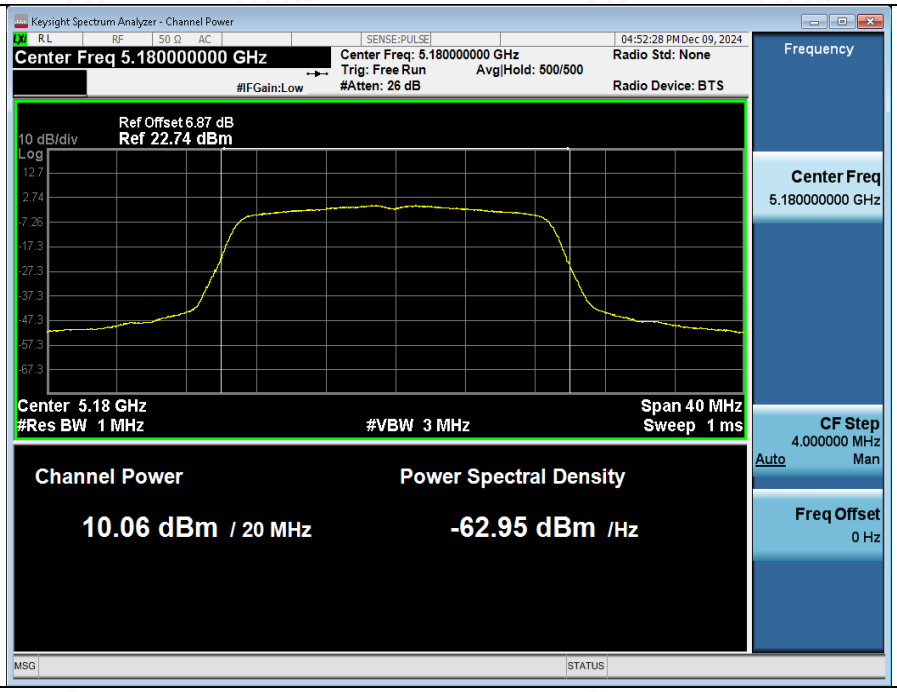

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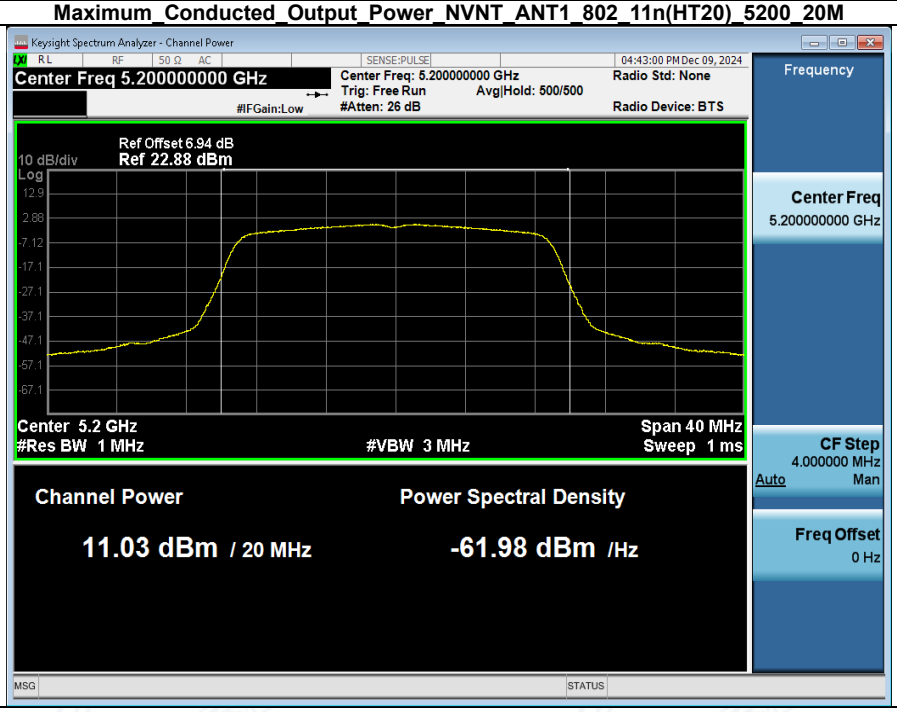

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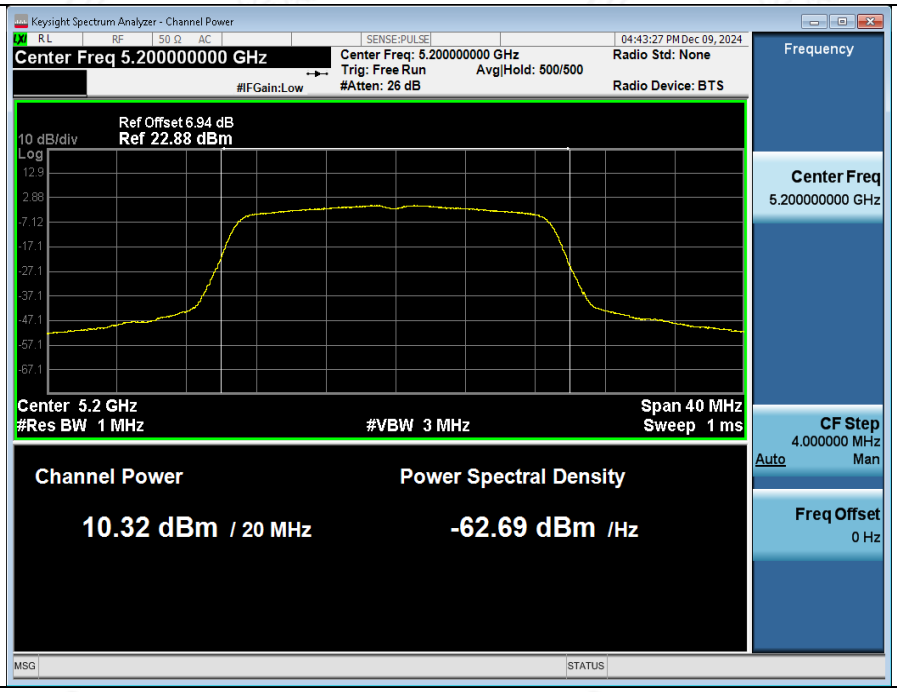

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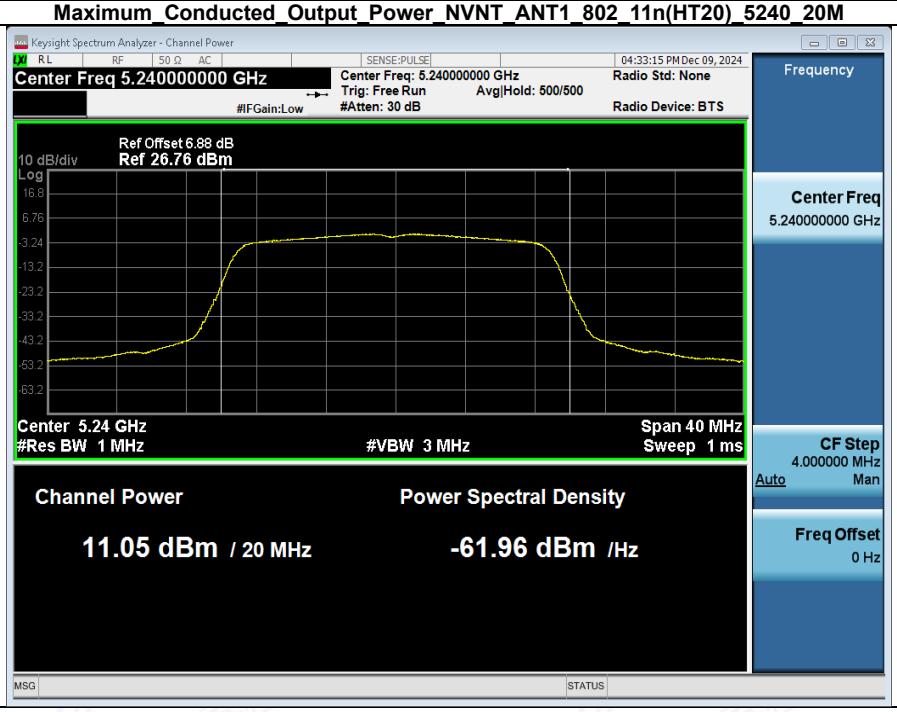

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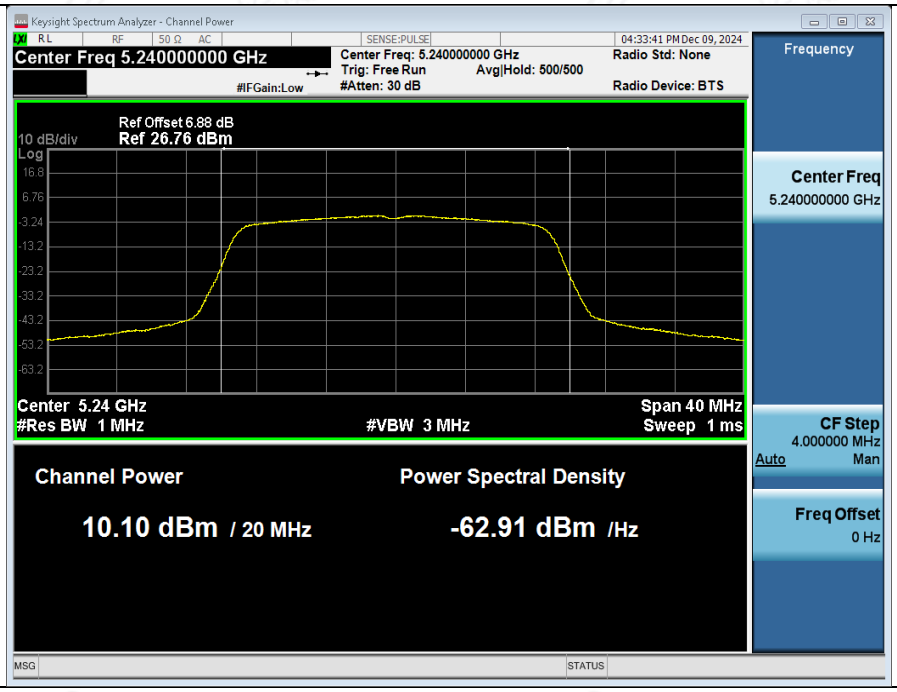
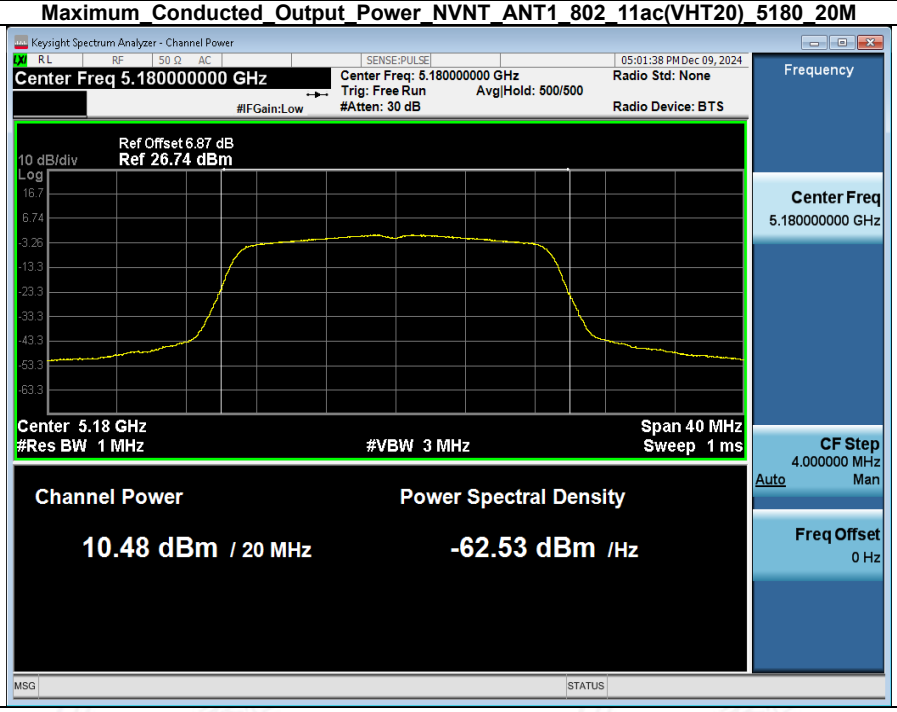
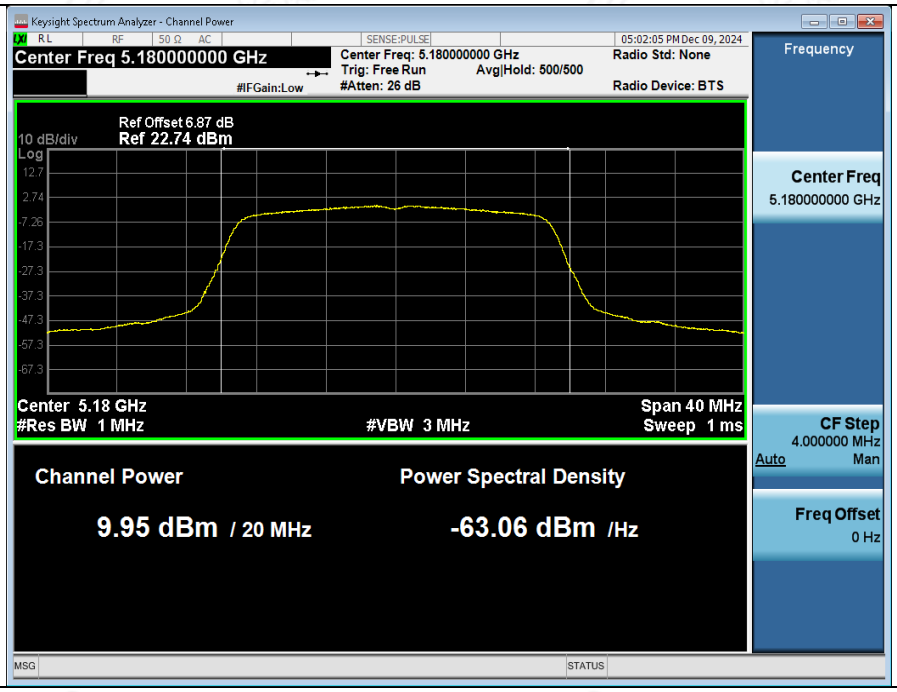


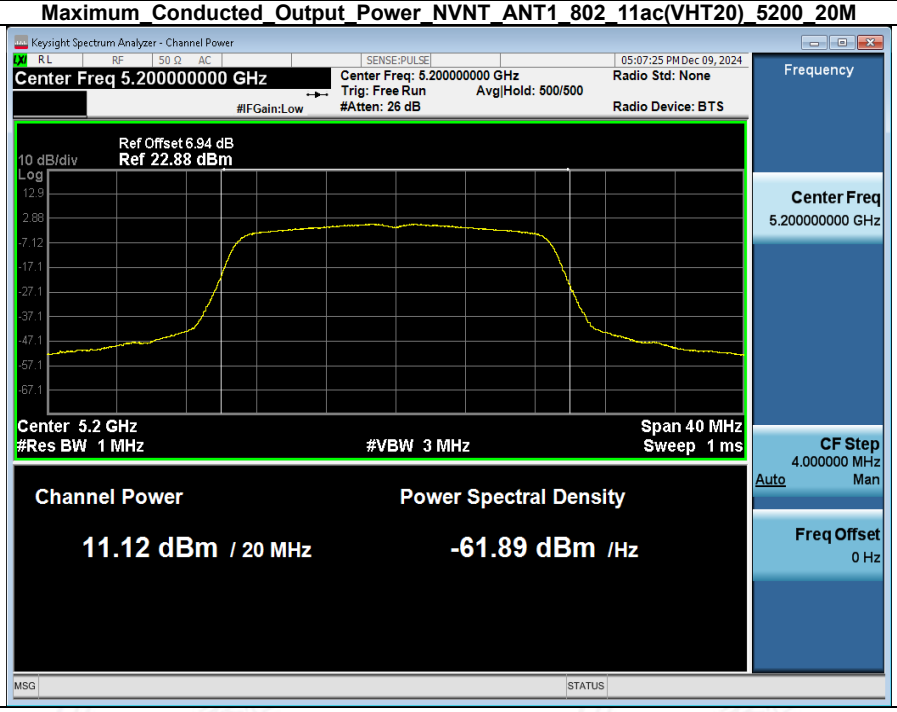
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5180_20M



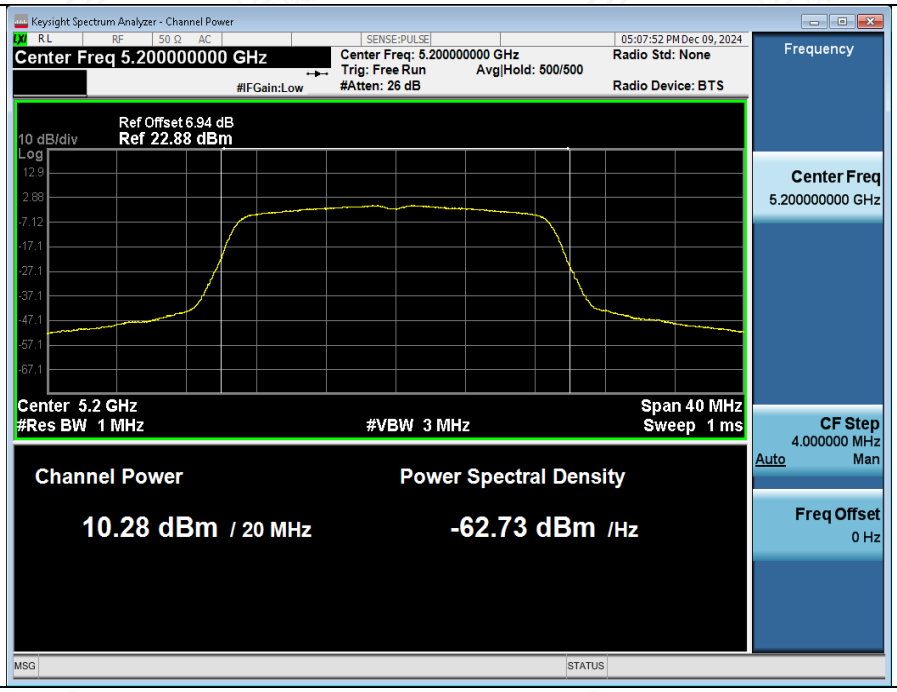
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT20)_5180_20M



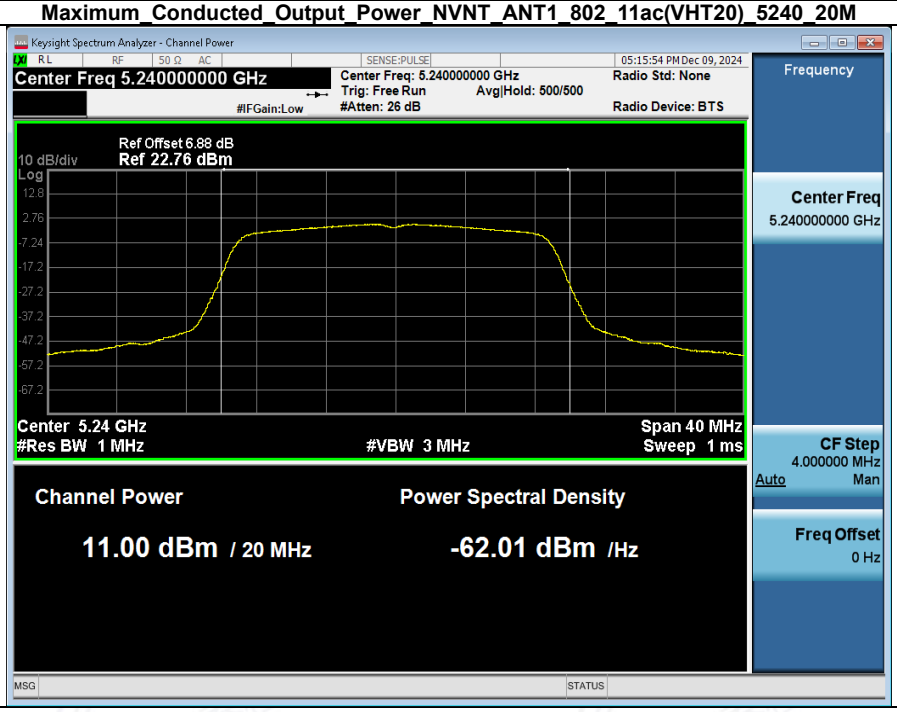
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5200_20M



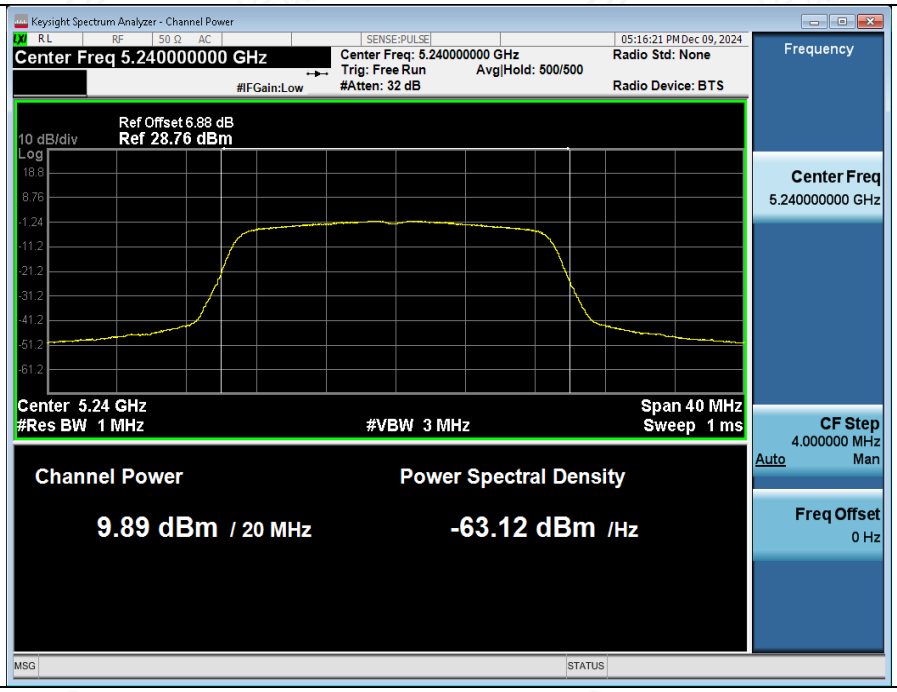
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT20)_5200_20M



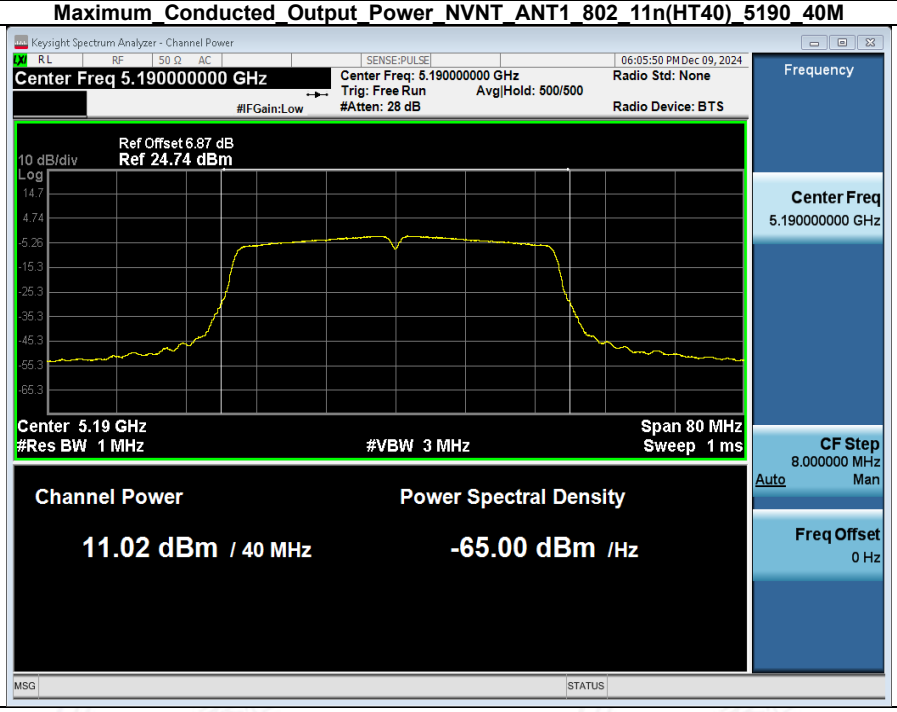
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5240_20M



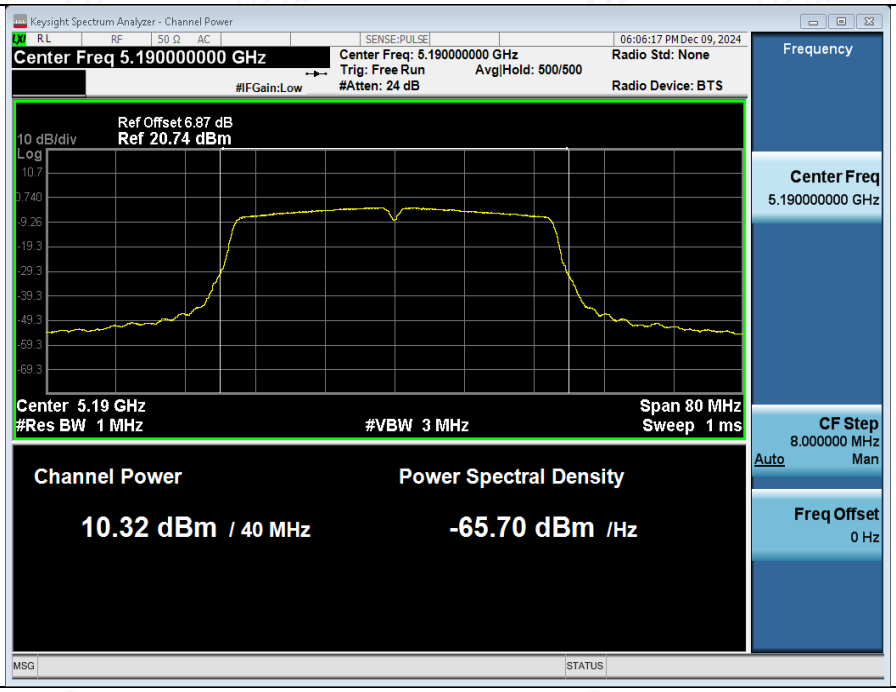
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT20)_5240_20M



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT40)_5190_40M



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11n(HT40)_5190_40M



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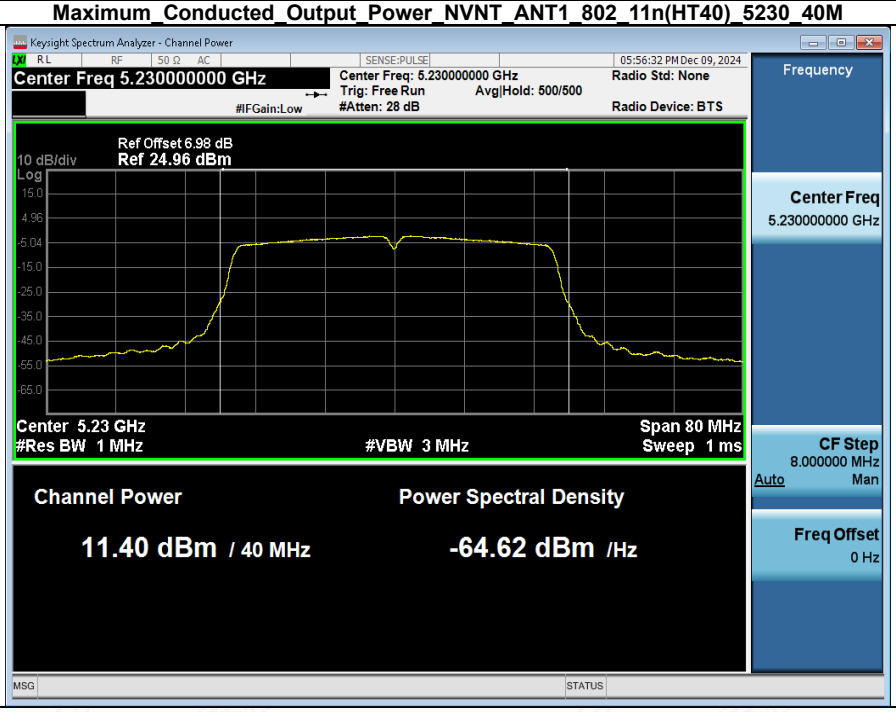
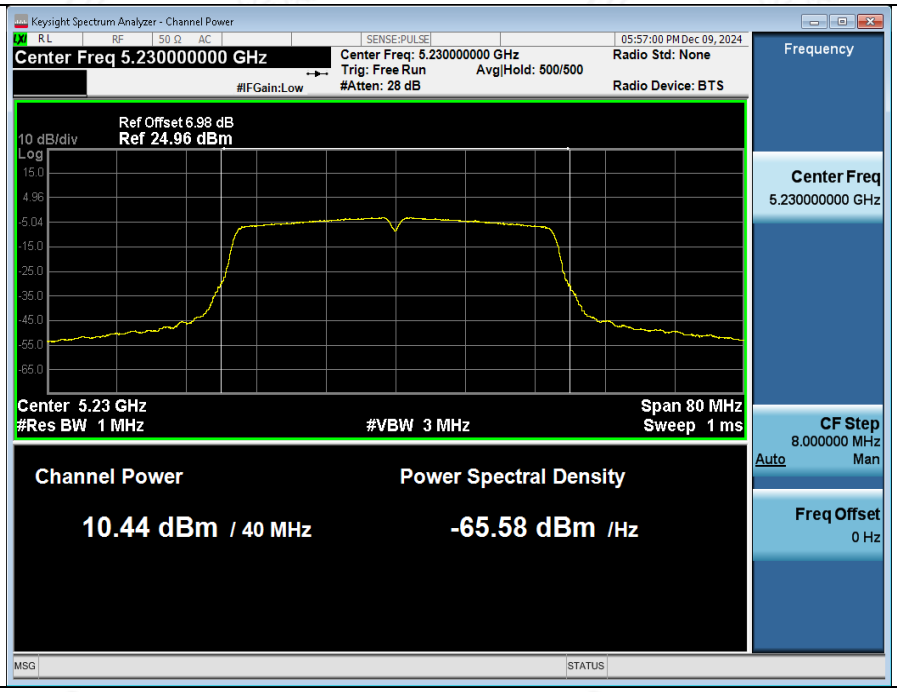
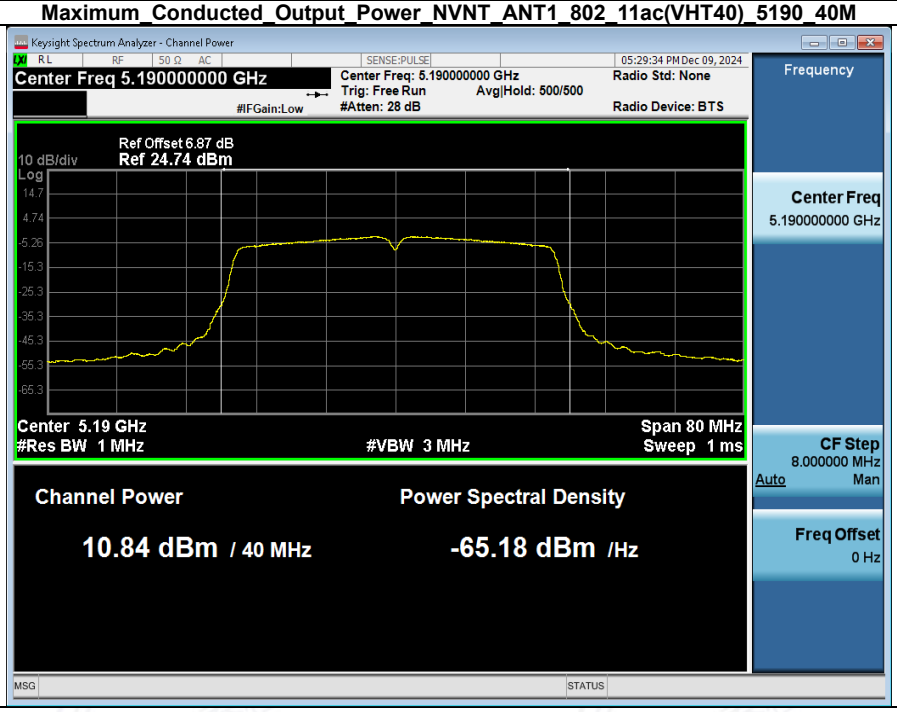


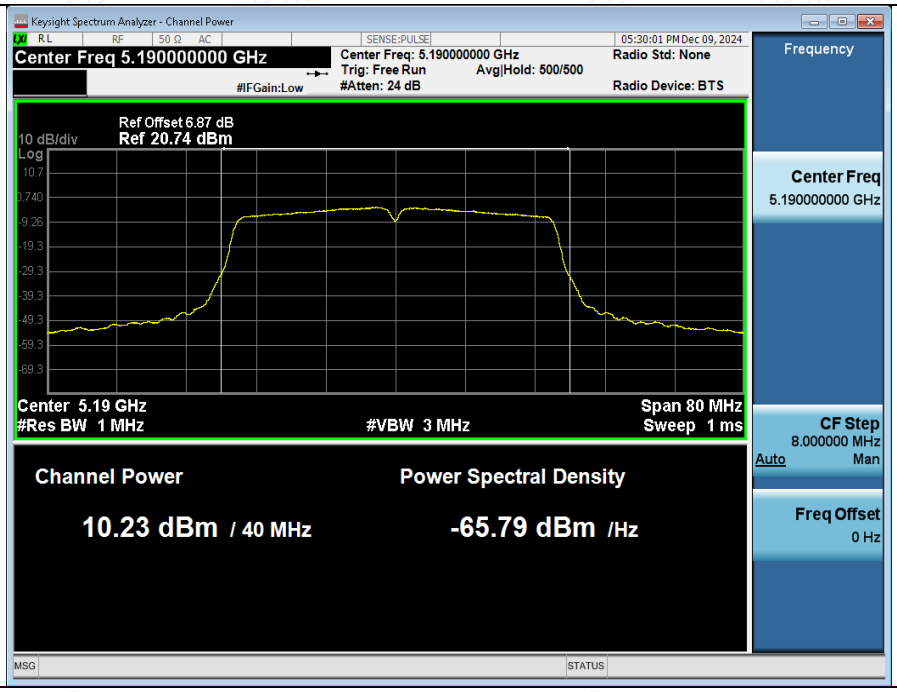
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11n(HT40)_5230_40M



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT40)_5190_40M



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT40)_5190_40M



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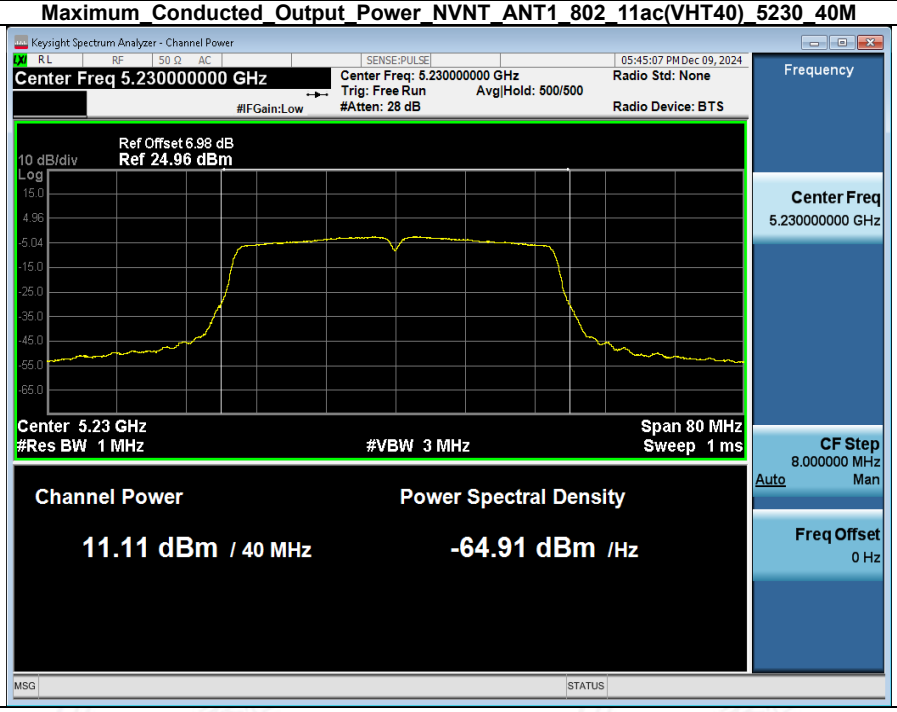
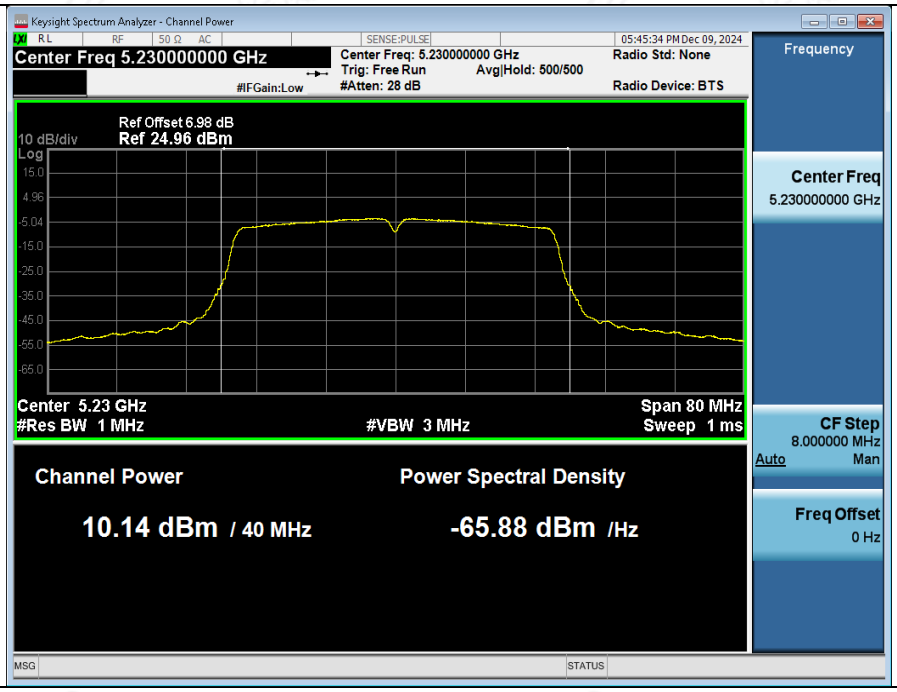


Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT40)_5230_40M



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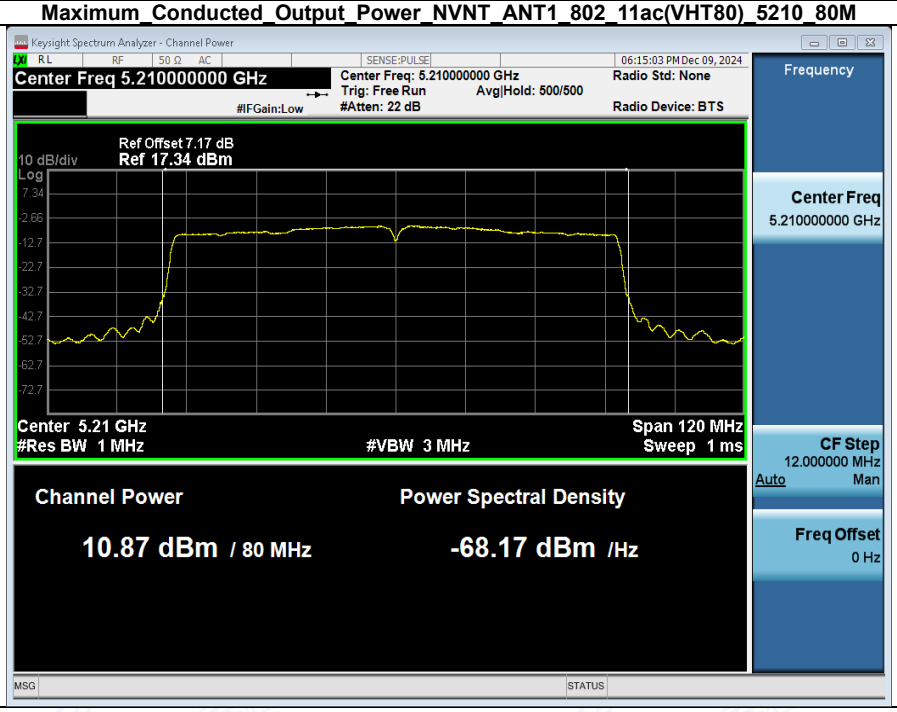

Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT80)_5210_80M