Appendix

Test Data

for BTEK241111036A02E18

Start date	2024/12/2	Finish date	2024/12/2
Temperature	22.0℃	Humidity	45%
RF specifications	5.2G_WIFI-Module 2 GTV	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	18.13	16.32
NVNT	ANT2	802.11a	5180.00	18.17	16.35
NVNT	ANT1	802.11a	5200.00	18.28	16.34
NVNT	ANT2	802.11a	5200.00	18.07	16.34
NVNT	ANT1	802.11a	5240.00	18.24	16.33
NVNT	ANT2	802.11a	5240.00	18.24	16.35
NVNT	ANT1	802.11n(HT20)	5180.00	19.30	17.51
NVNT	ANT2	802.11n(HT20)	5180.00	19.30	17.53
NVNT	ANT1	802.11n(HT20)	5200.00	19.39	17.52
NVNT	ANT2	802.11n(HT20)	5200.00	19.26	17.53
NVNT	ANT1	802.11n(HT20)	5240.00	19.30	17.51
NVNT	ANT2	802.11n(HT20)	5240.00	19.30	17.51
NVNT	ANT1	802.11ac(VHT20)	5180.00	19.45	17.52
NVNT	ANT2	802.11ac(VHT20)	5180.00	19.39	17.52
NVNT	ANT1	802.11ac(VHT20)	5200.00	19.34	17.53
NVNT	ANT2	802.11ac(VHT20)	5200.00	19.28	17.51
NVNT	ANT1	802.11ac(VHT20)	5240.00	19.30	17.51
NVNT	ANT2	802.11ac(VHT20)	5240.00	19.17	17.50
NVNT	ANT1	802.11n(HT40)	5190.00	41.34	36.01
NVNT	ANT2	802.11n(HT40)	5190.00	40.78	36.09
NVNT	ANT1	802.11n(HT40)	5230.00	40.95	36.04
NVNT	ANT2	802.11n(HT40)	5230.00	41.09	36.07
NVNT	ANT1	802.11ac(VHT40)	5190.00	40.48	36.05
NVNT	ANT2	802.11ac(VHT40)	5190.00	40.67	36.06
NVNT	ANT1	802.11ac(VHT40)	5230.00	40.83	36.07
NVNT	ANT2	802.11ac(VHT40)	5230.00	40.66	35.96
NVNT	ANT1	802.11ac(VHT80)	5210.00	80.27	74.63
NVNT	ANT2	802.11ac(VHT80)	5210.00	80.47	74.54

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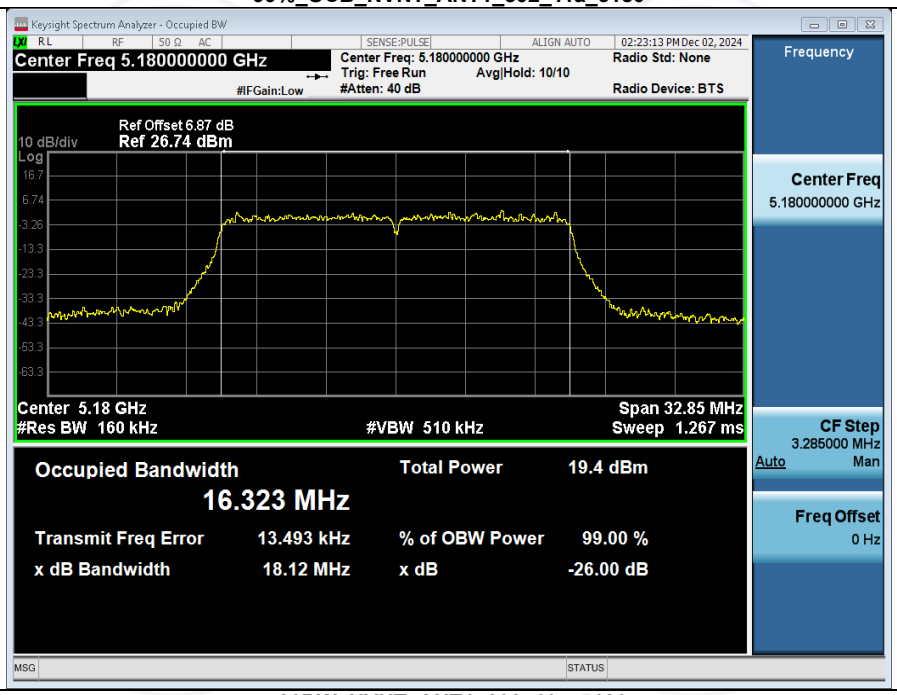

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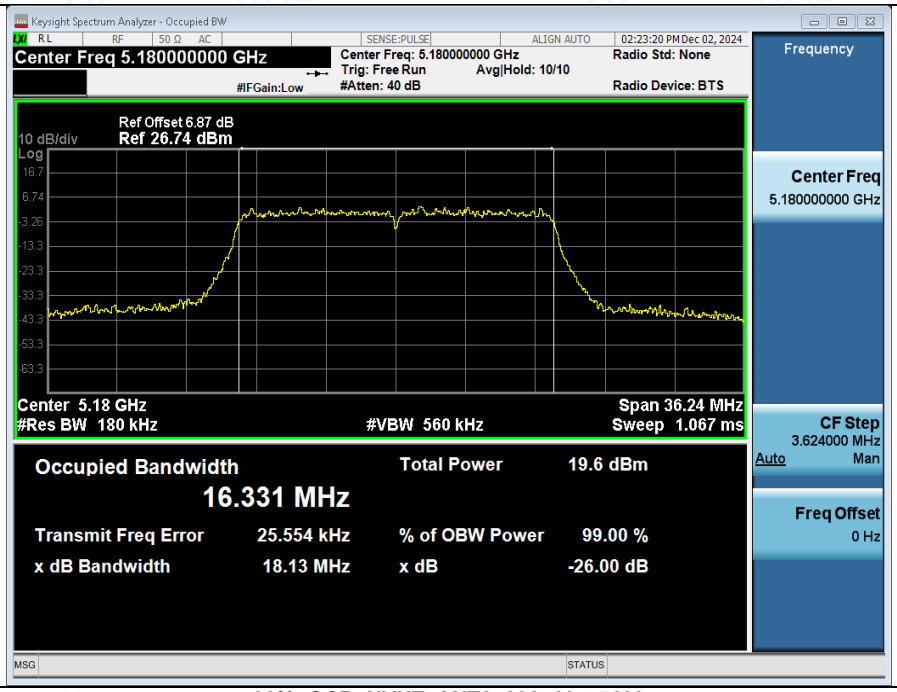

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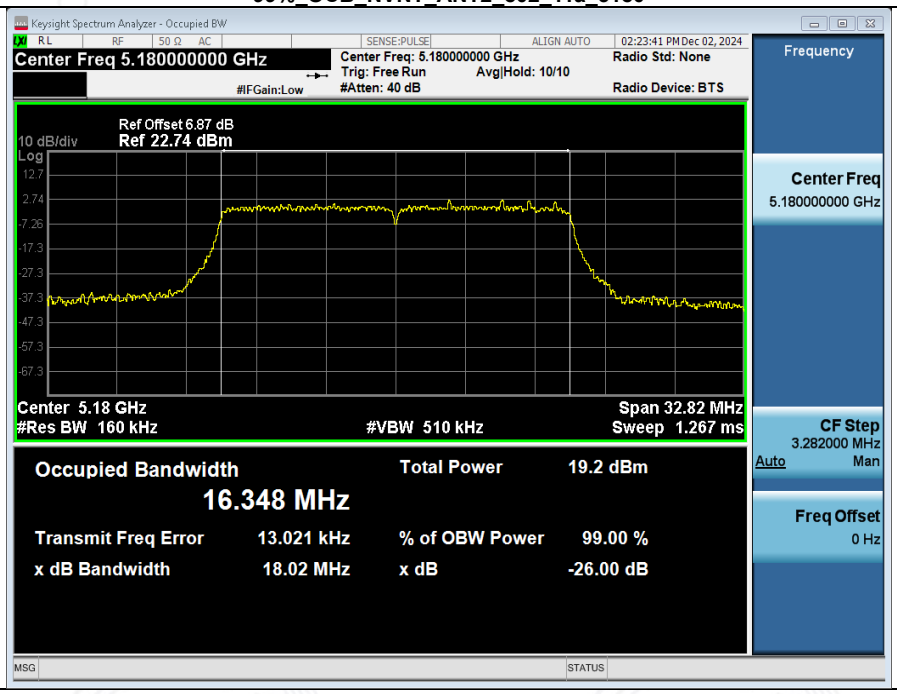

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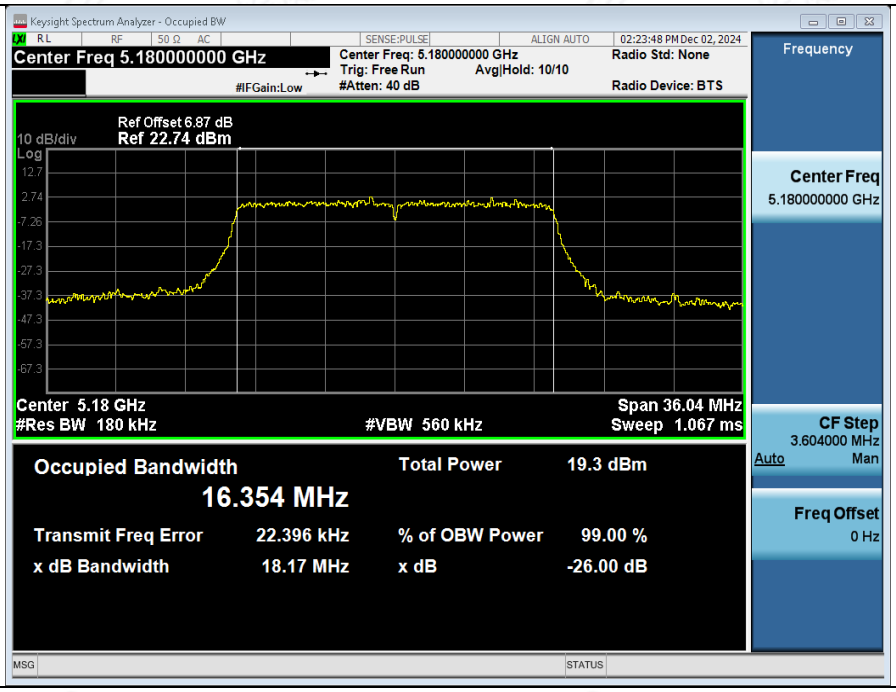

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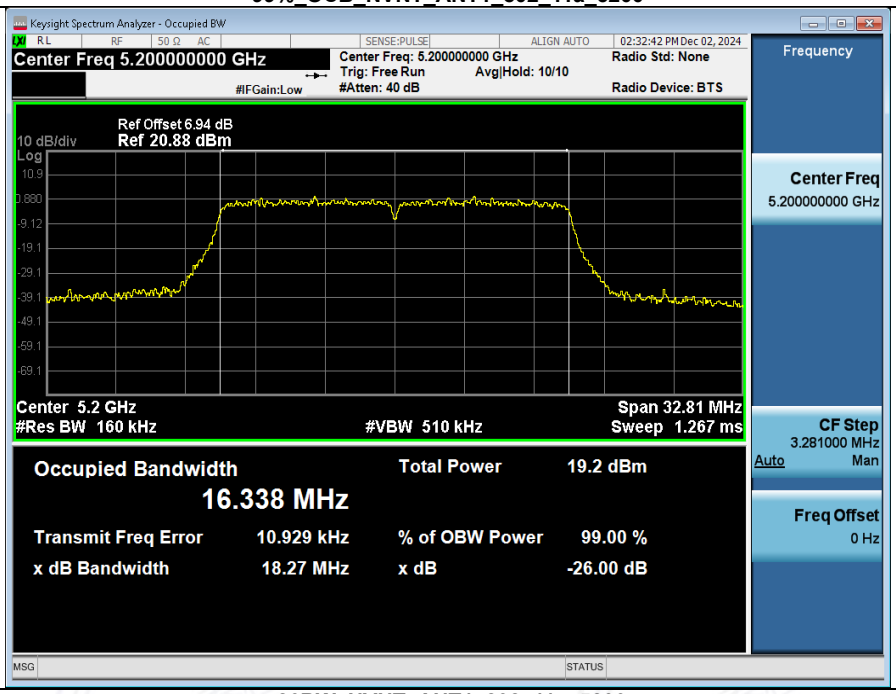

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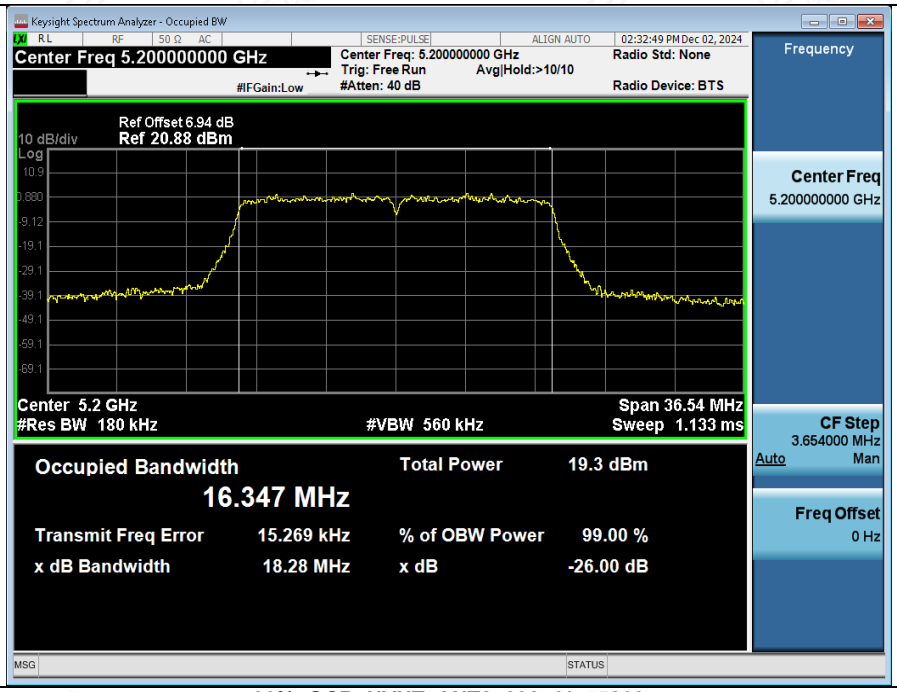

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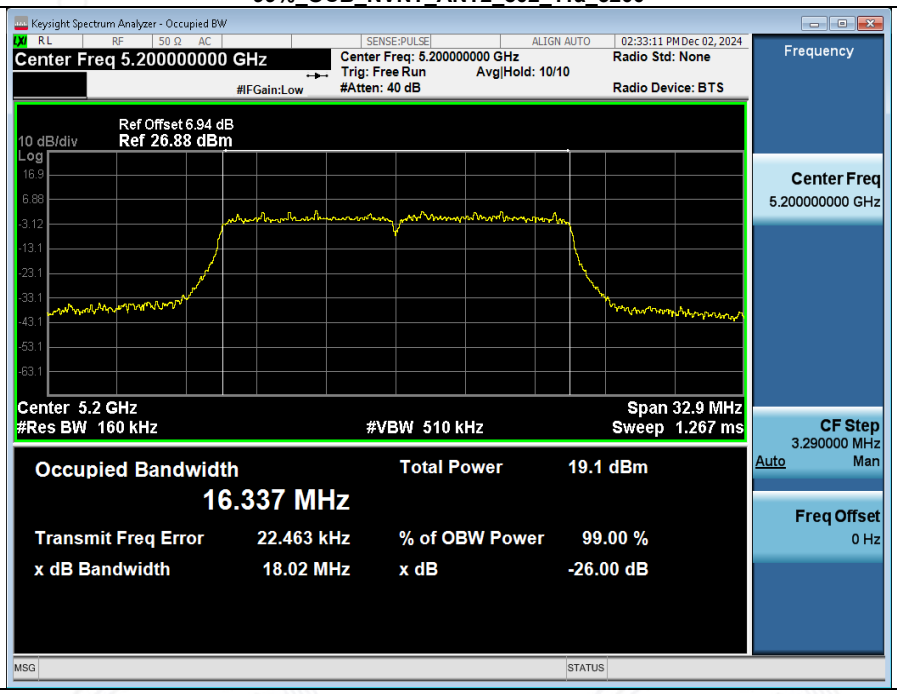

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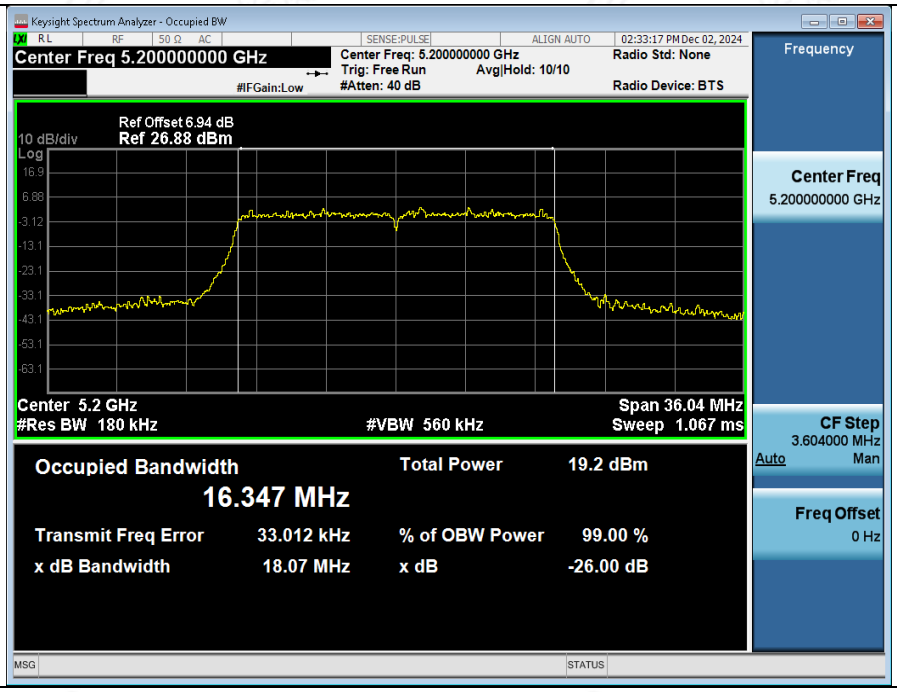

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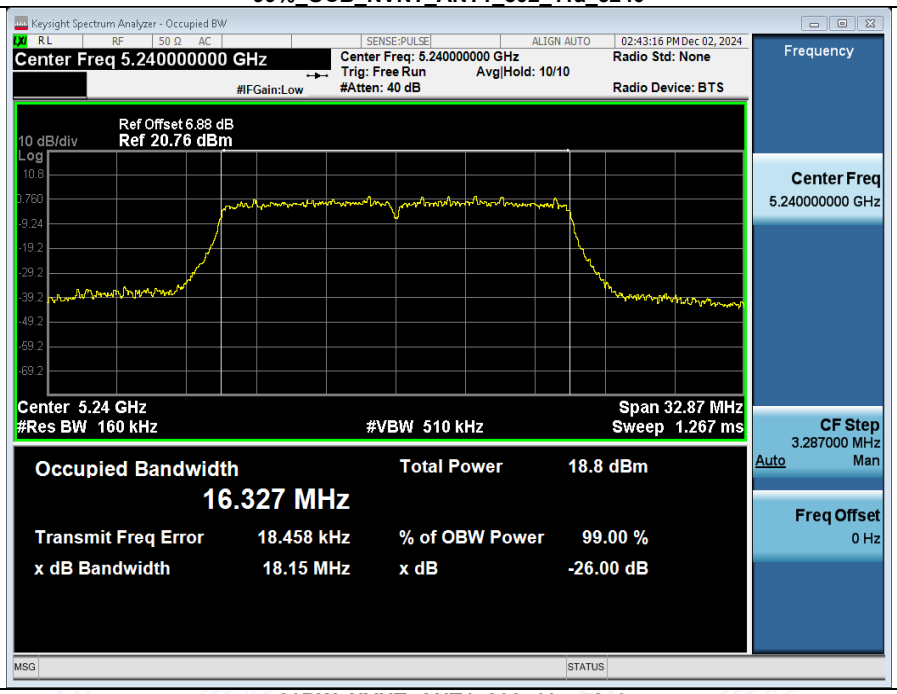

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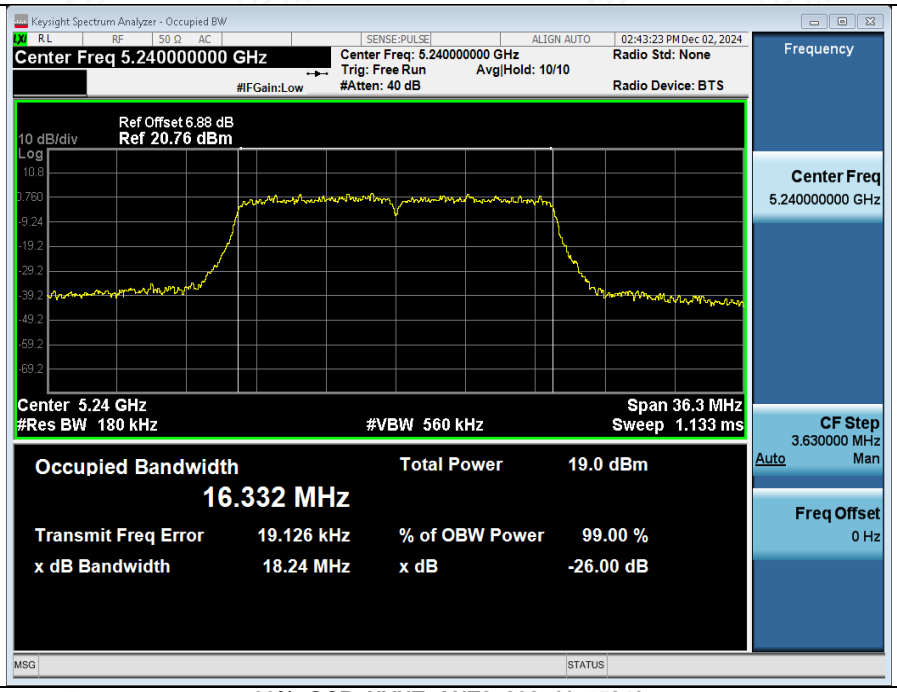

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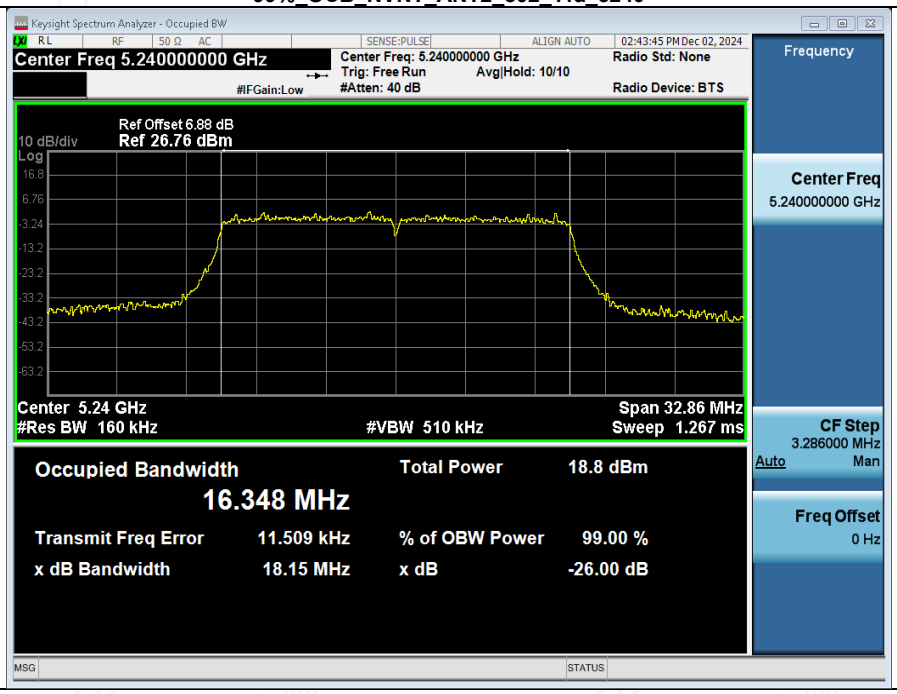

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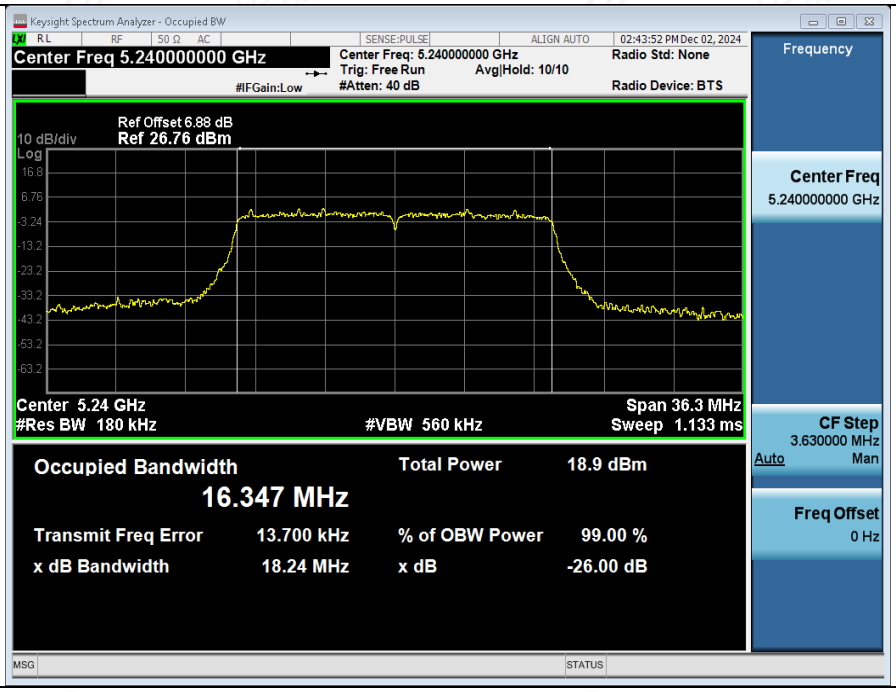

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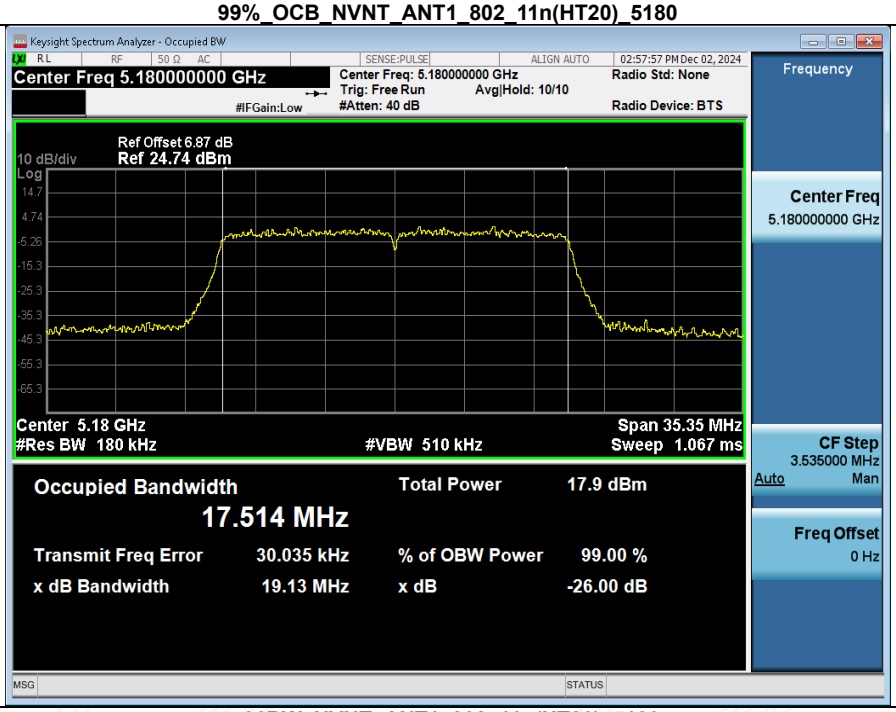

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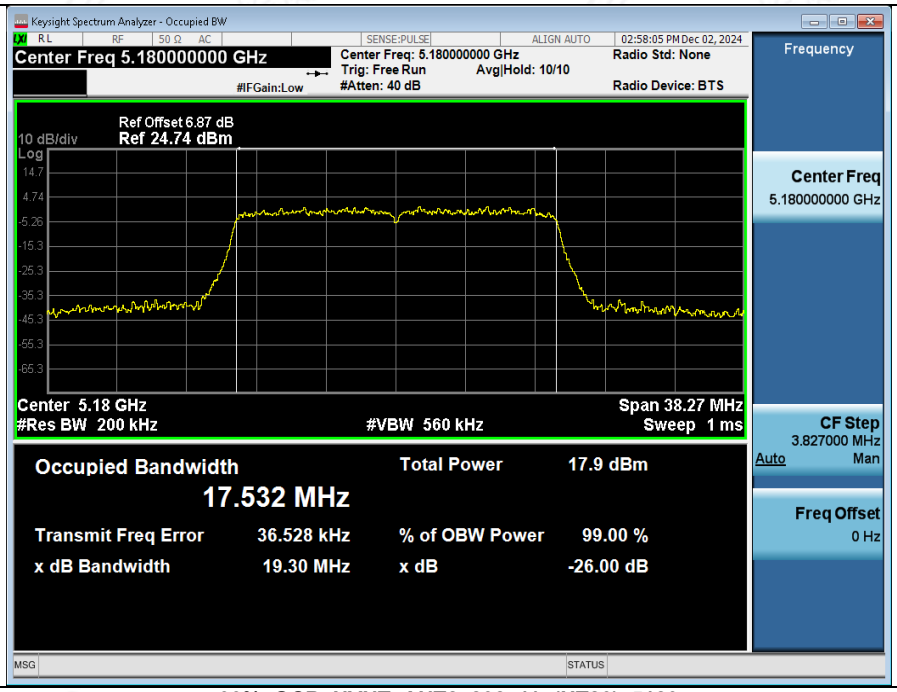

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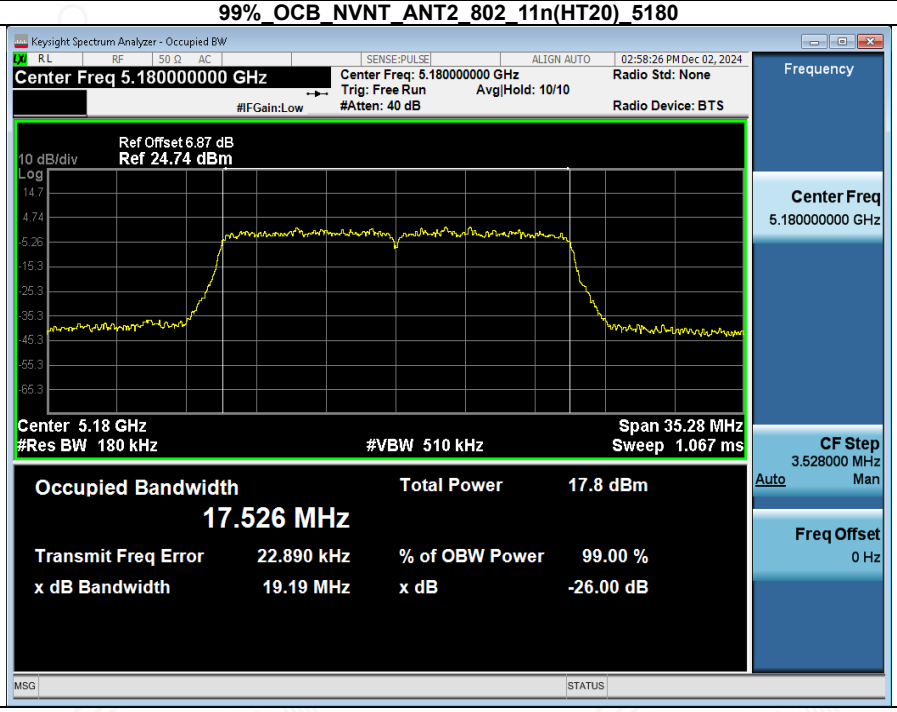

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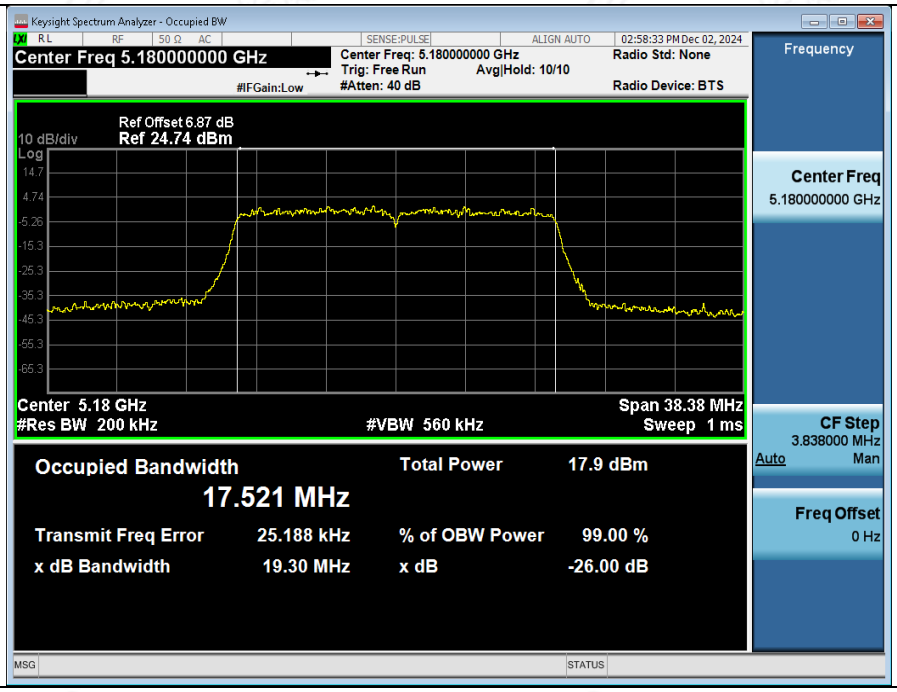

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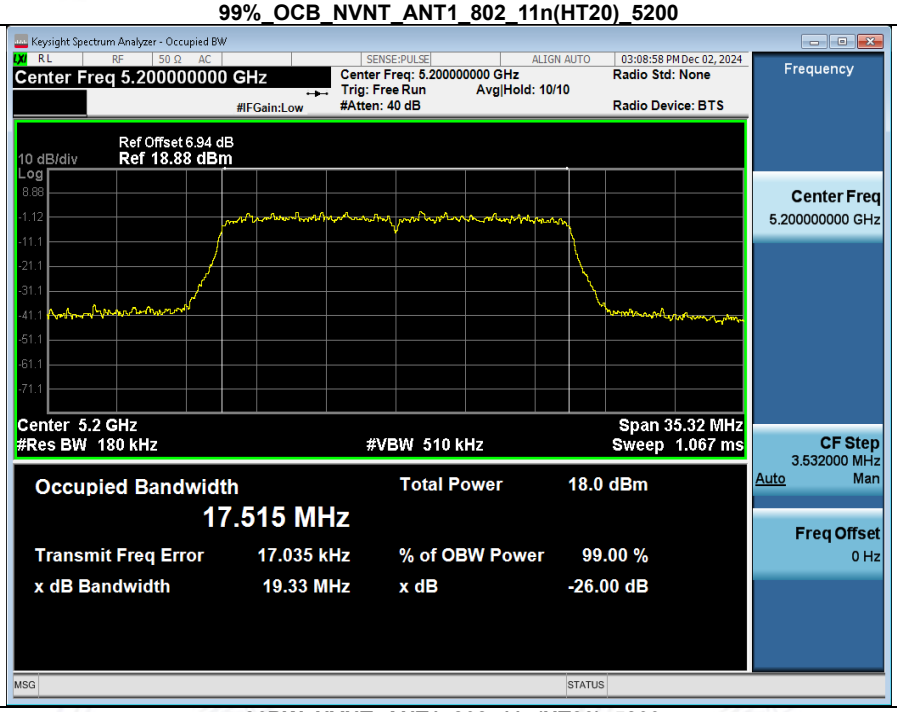

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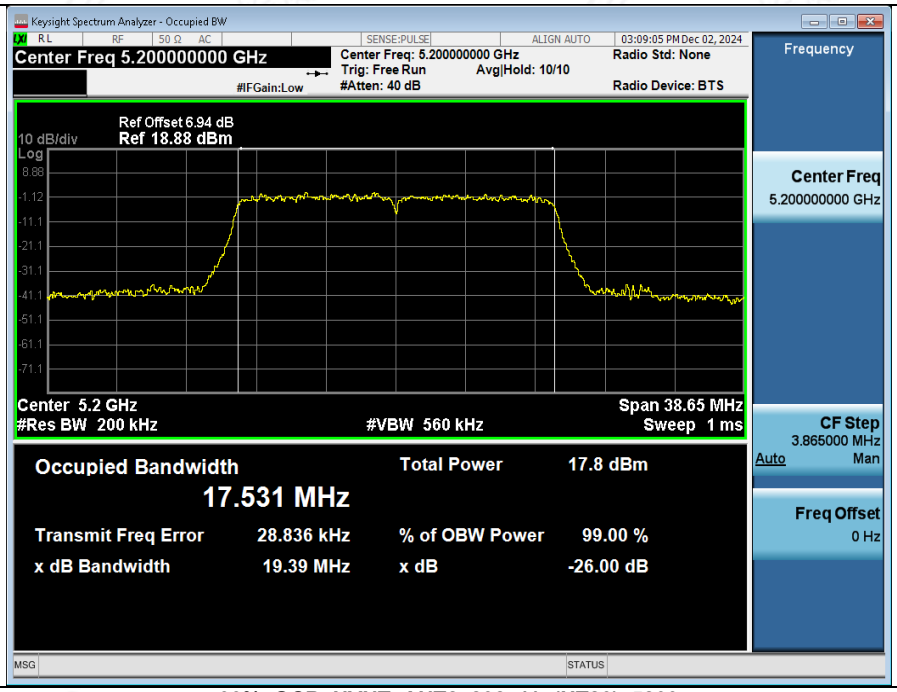

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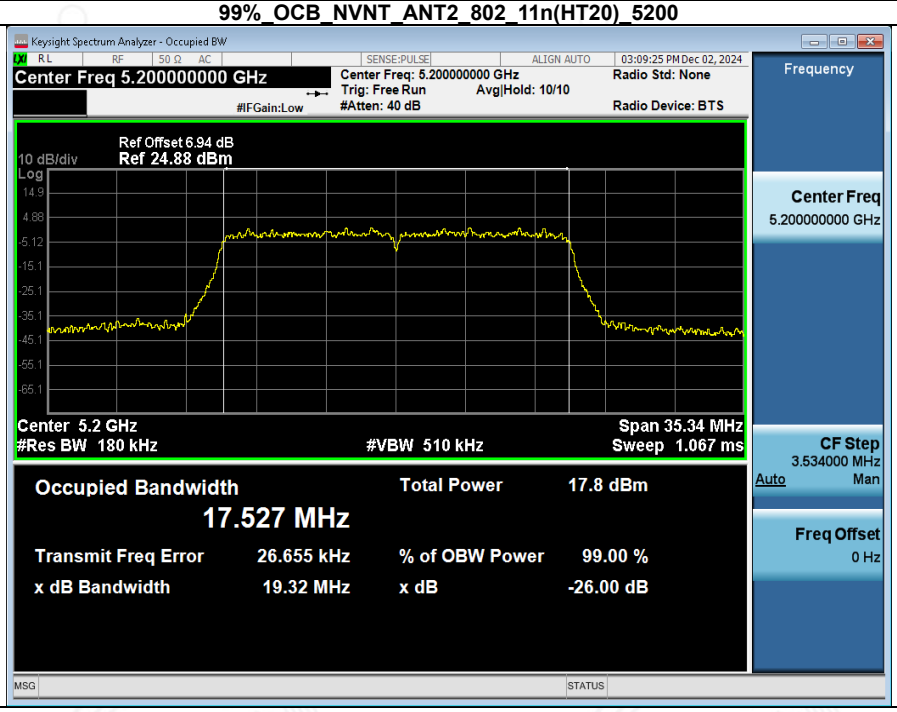

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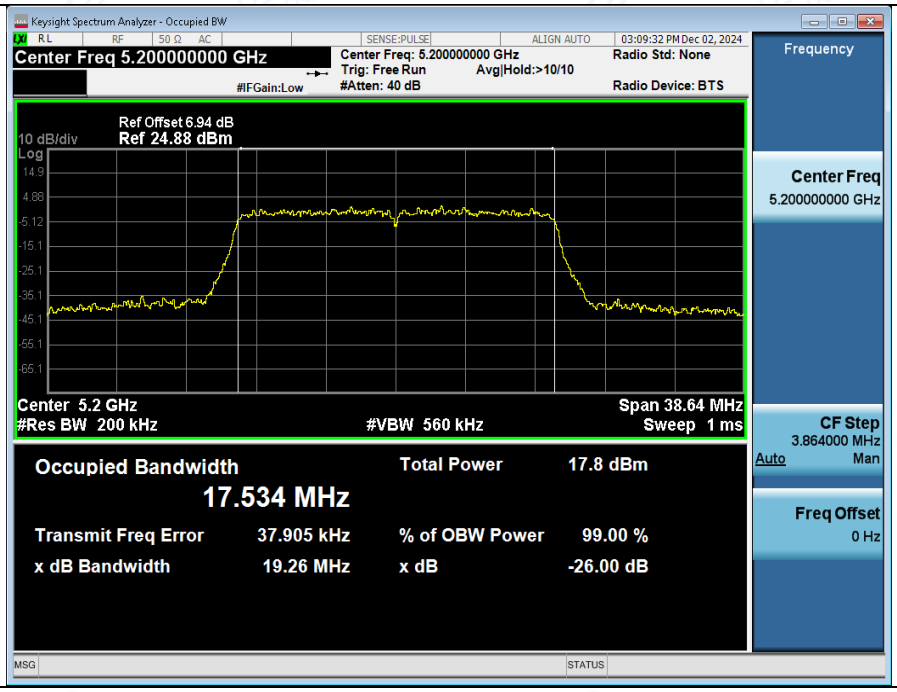

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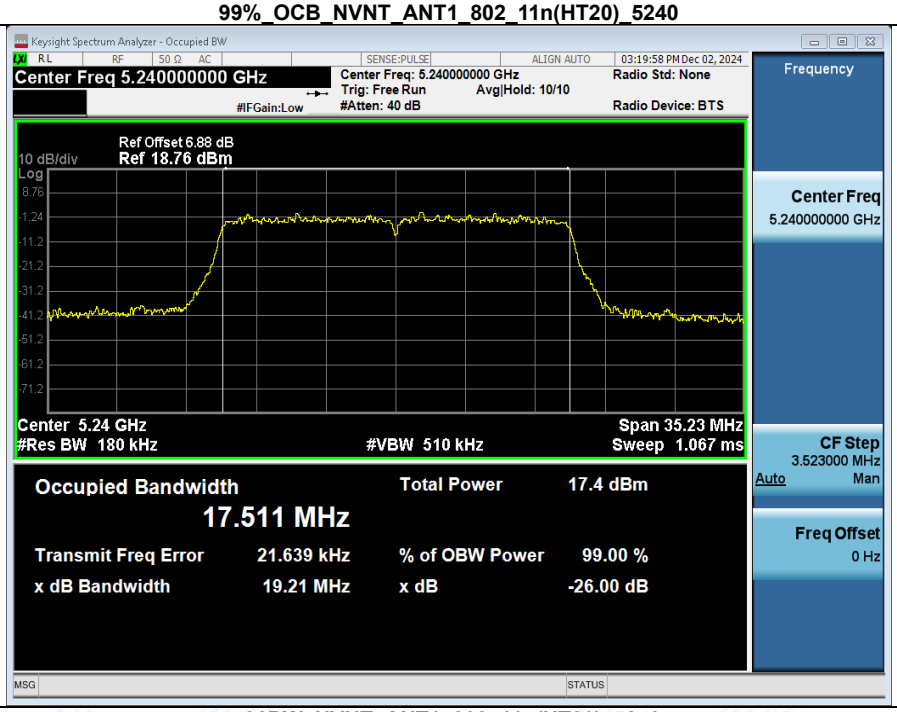

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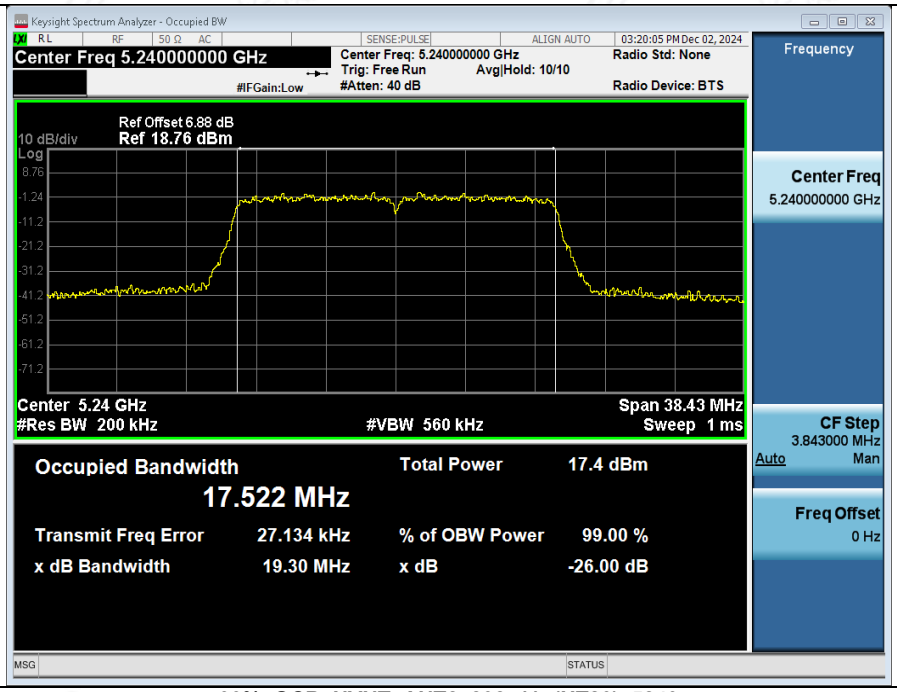

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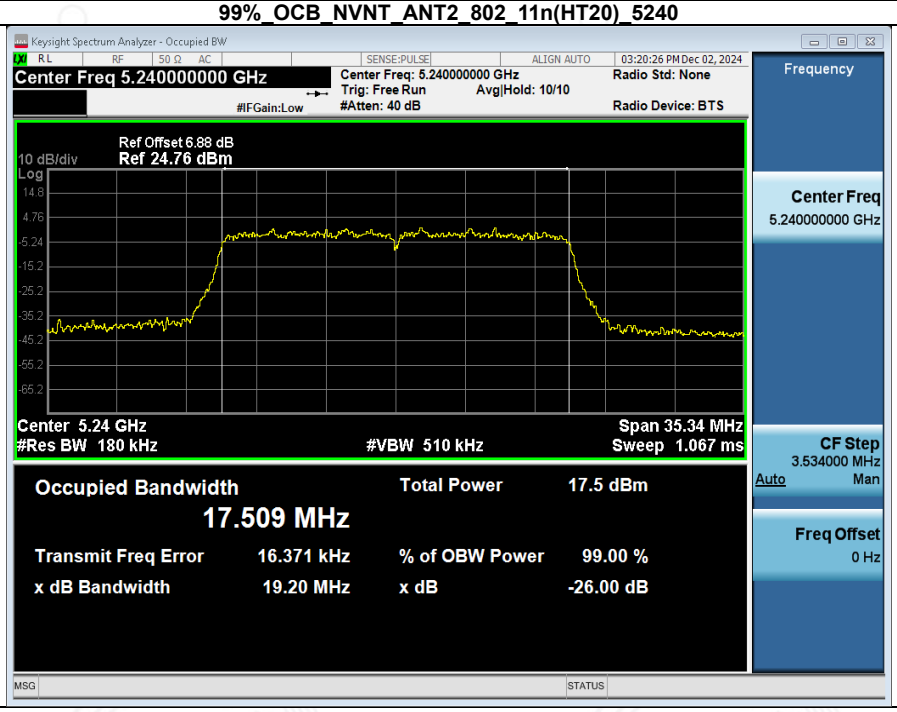

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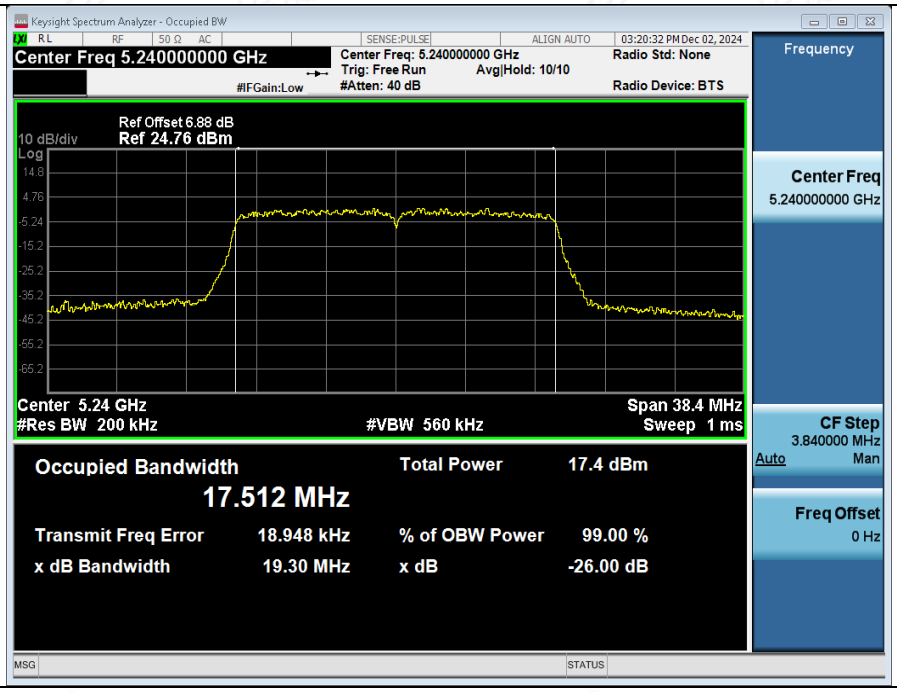

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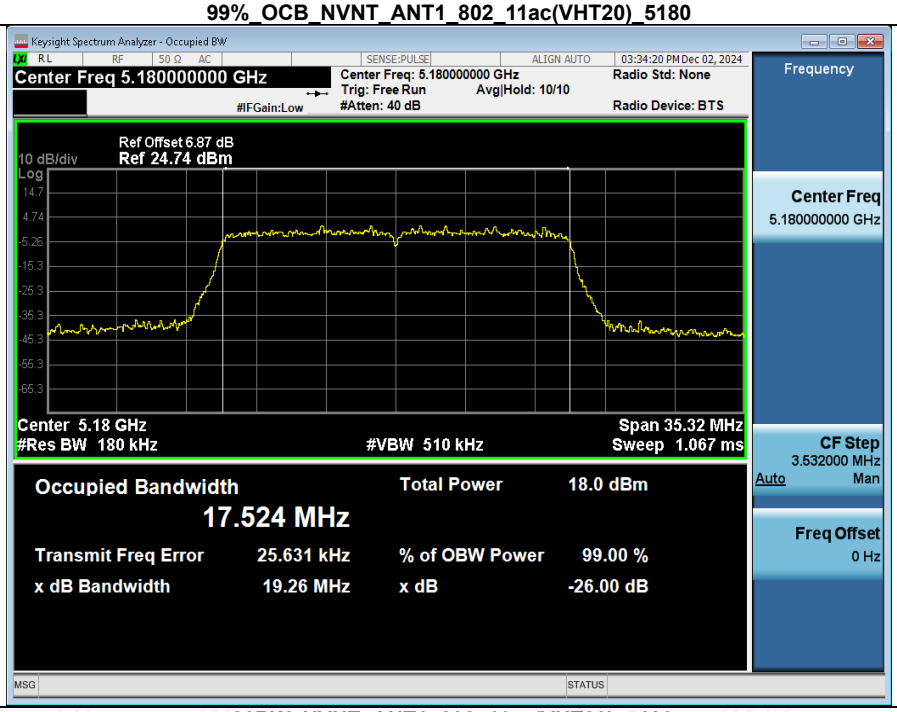

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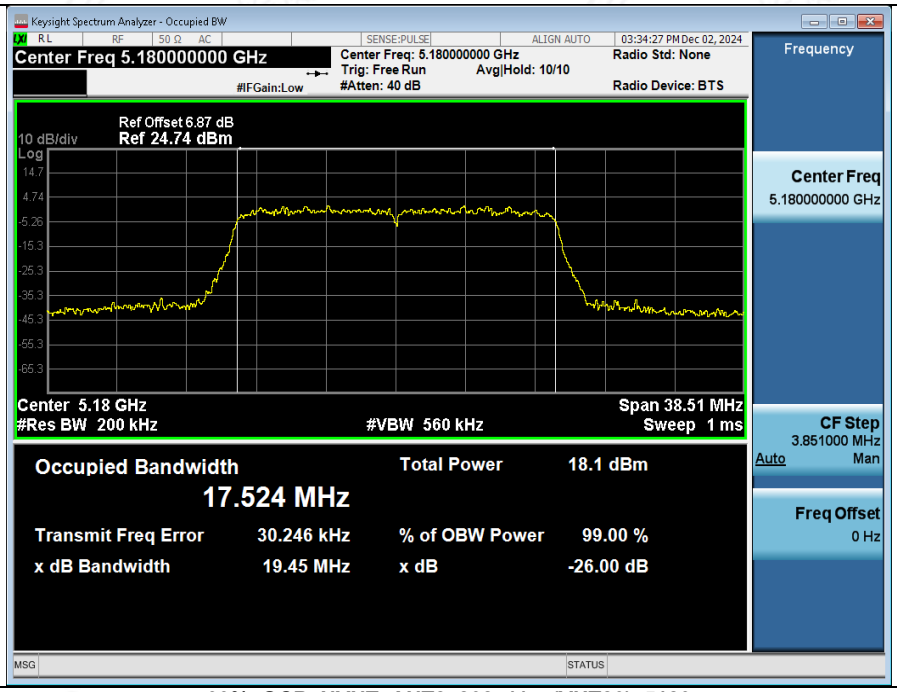

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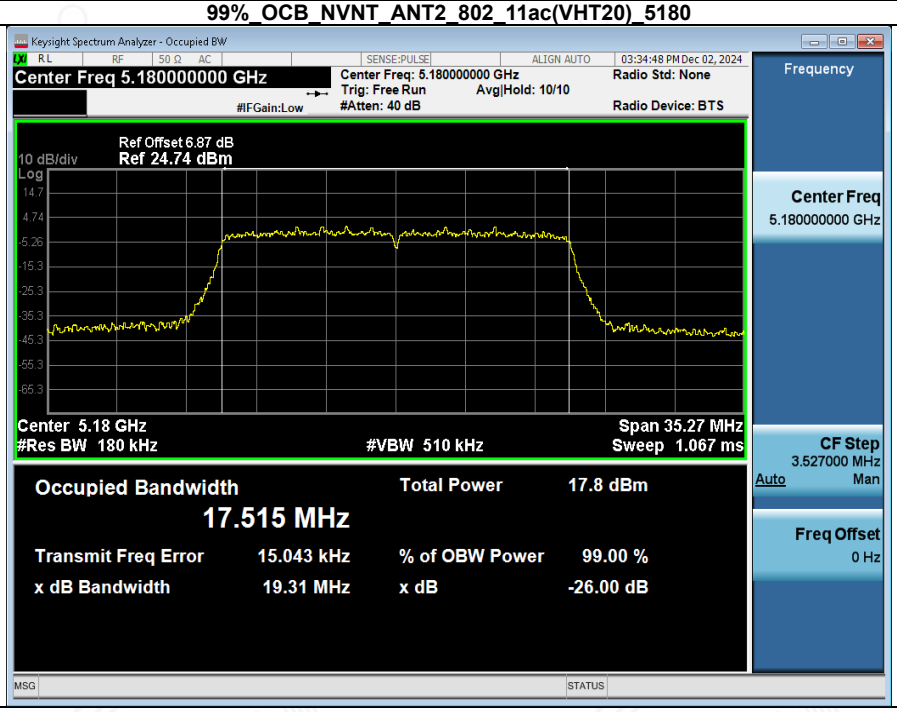

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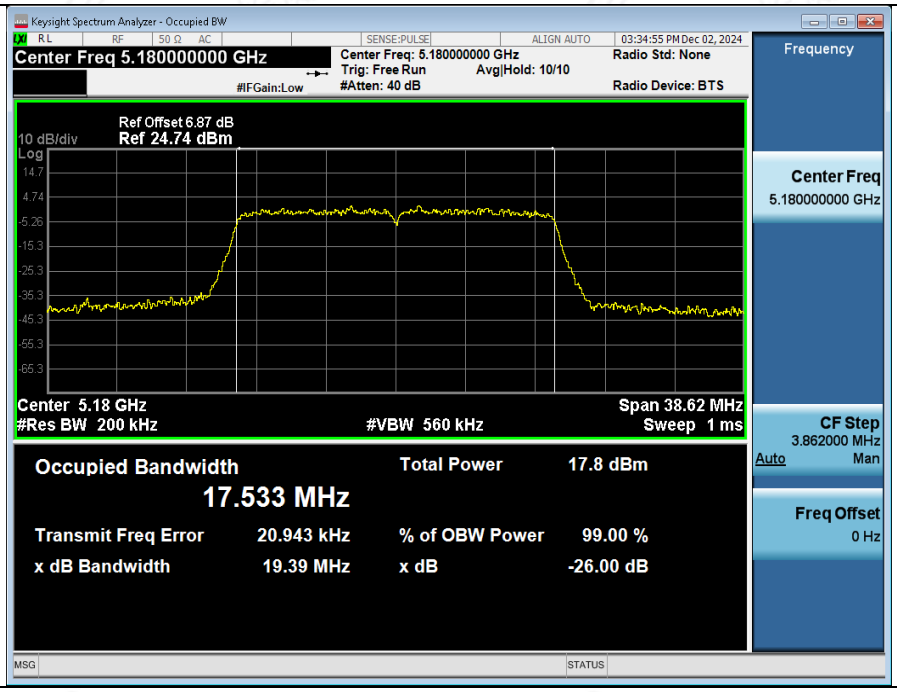

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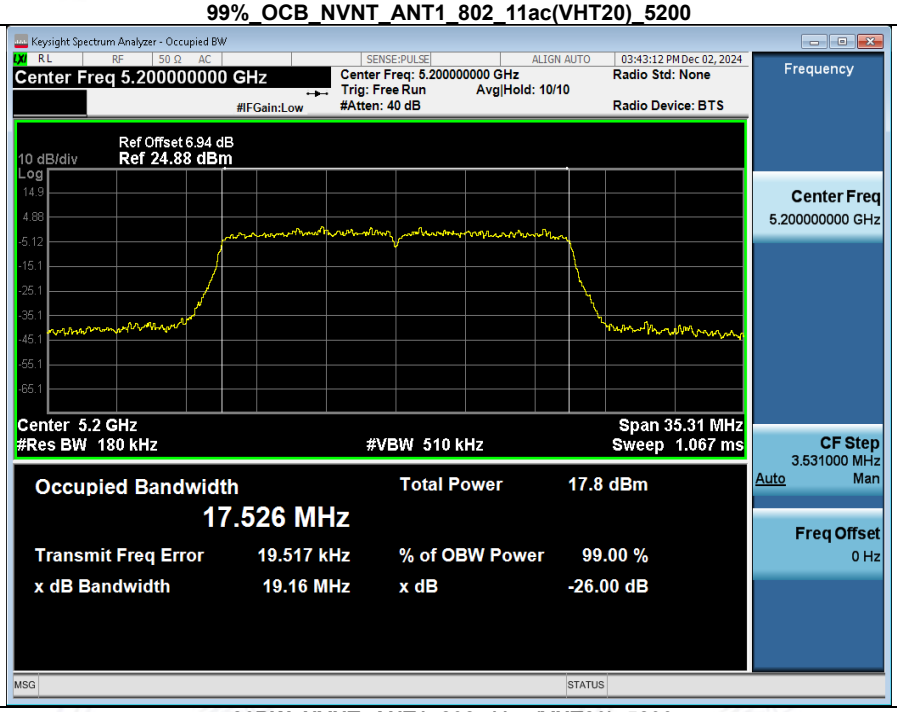

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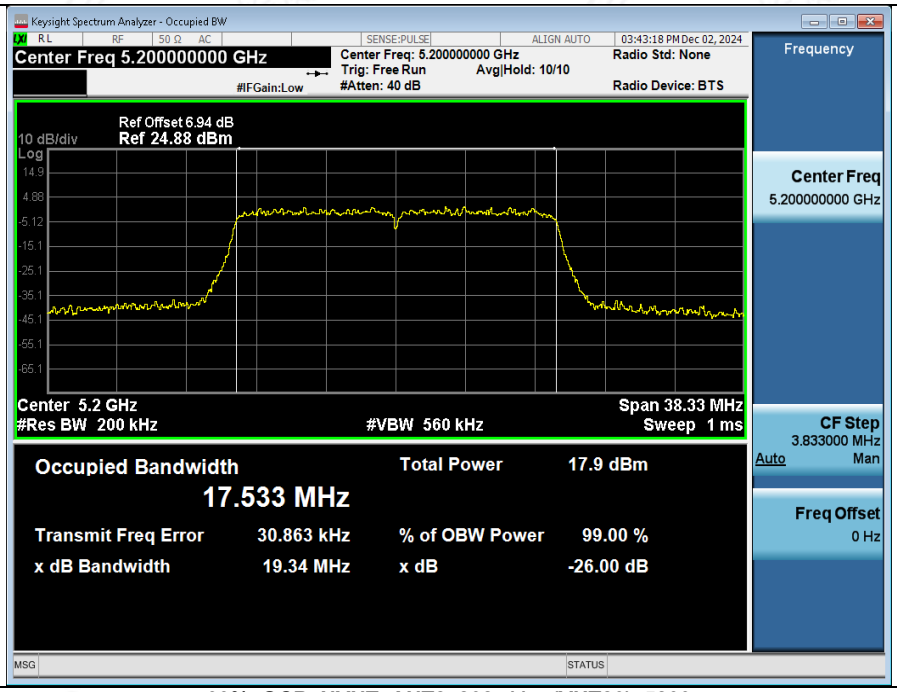

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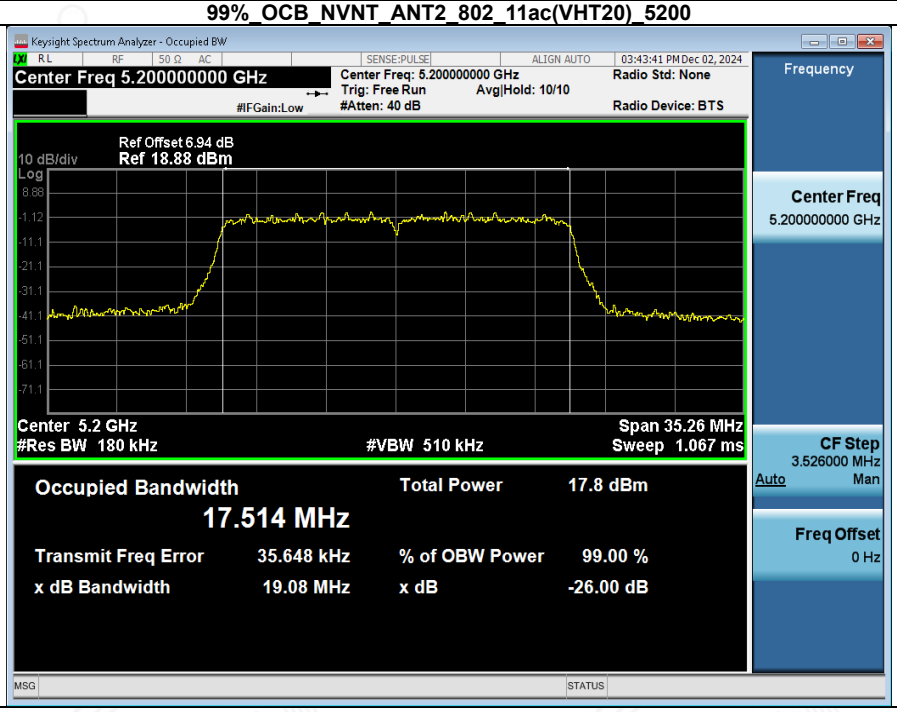

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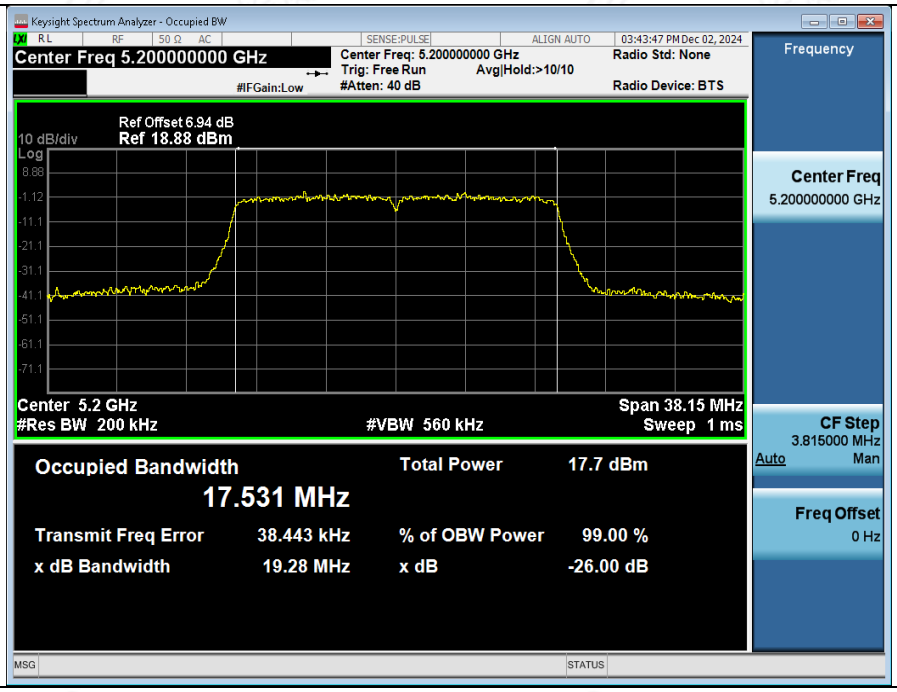

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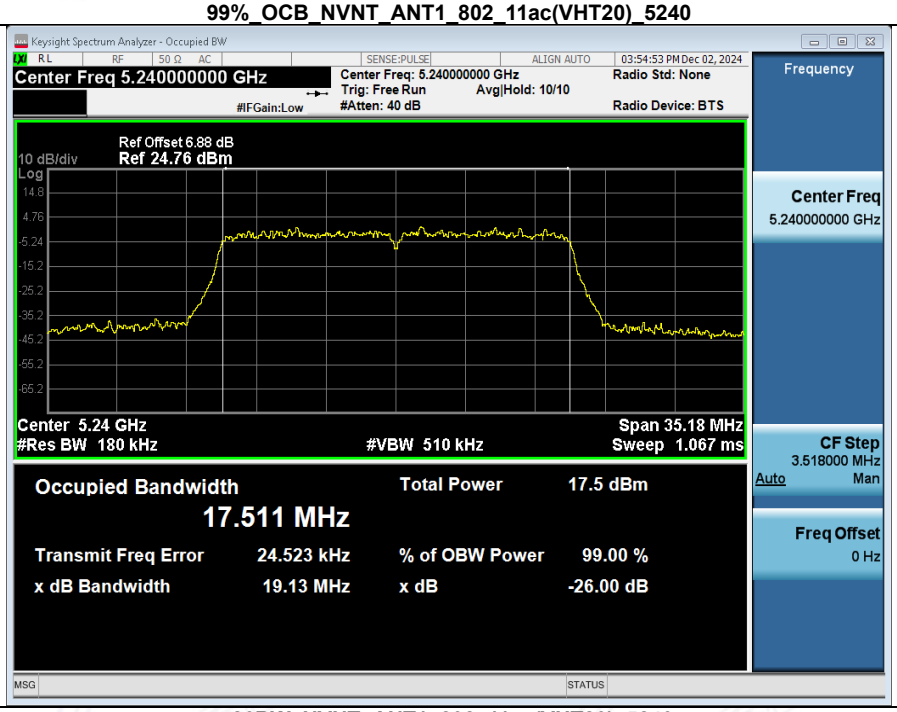

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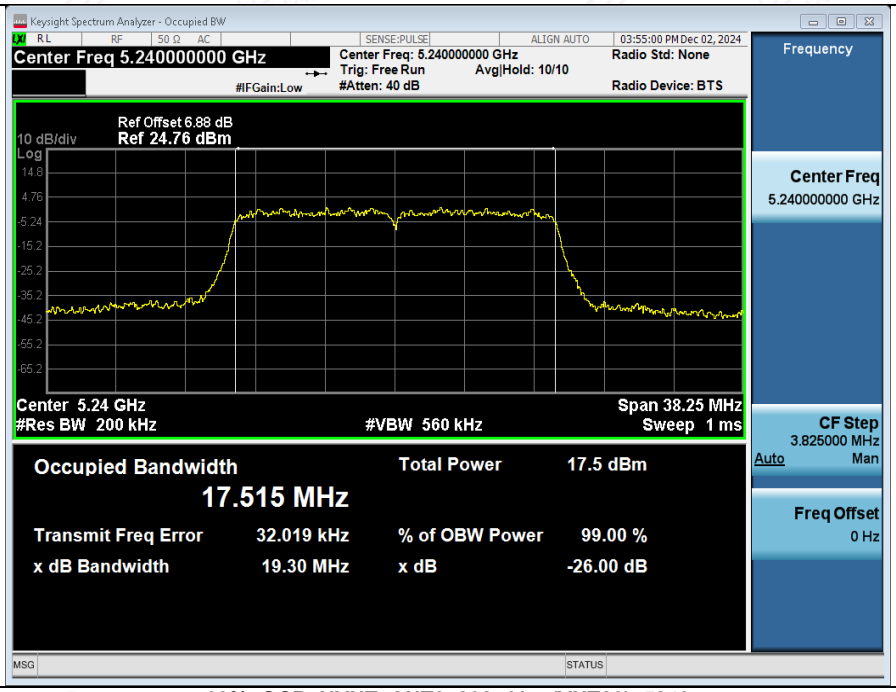

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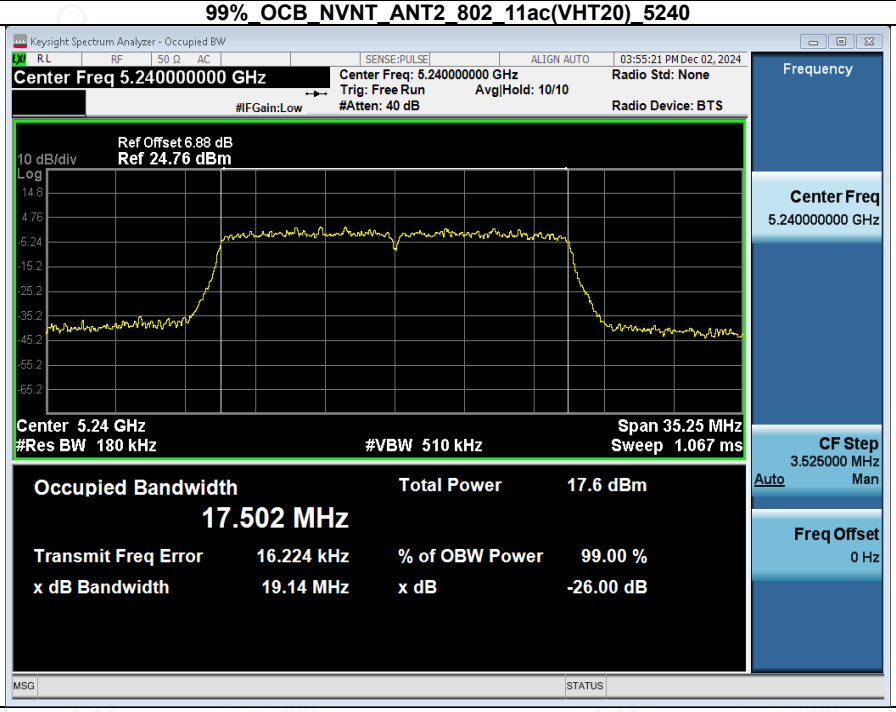

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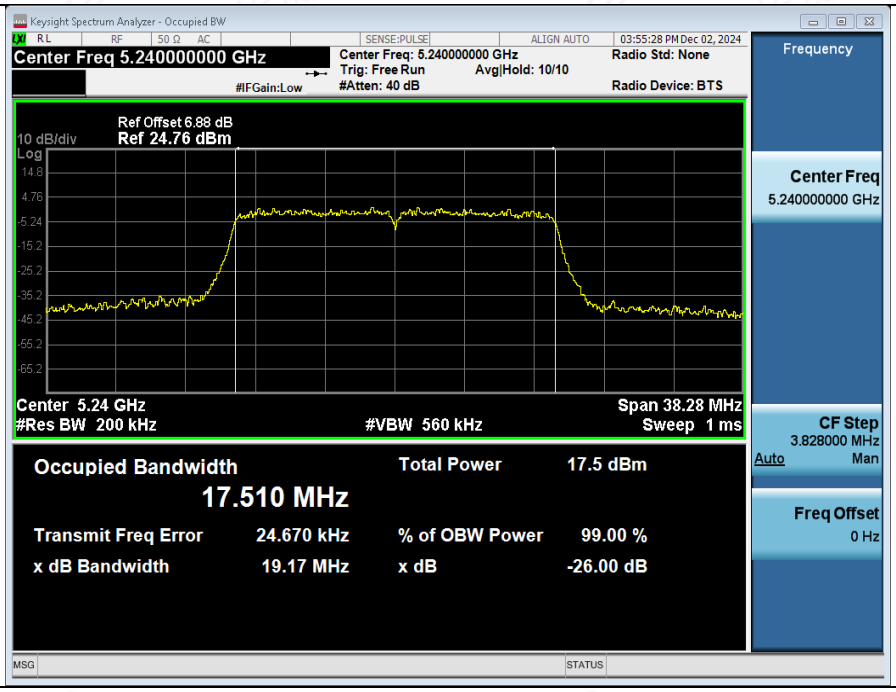

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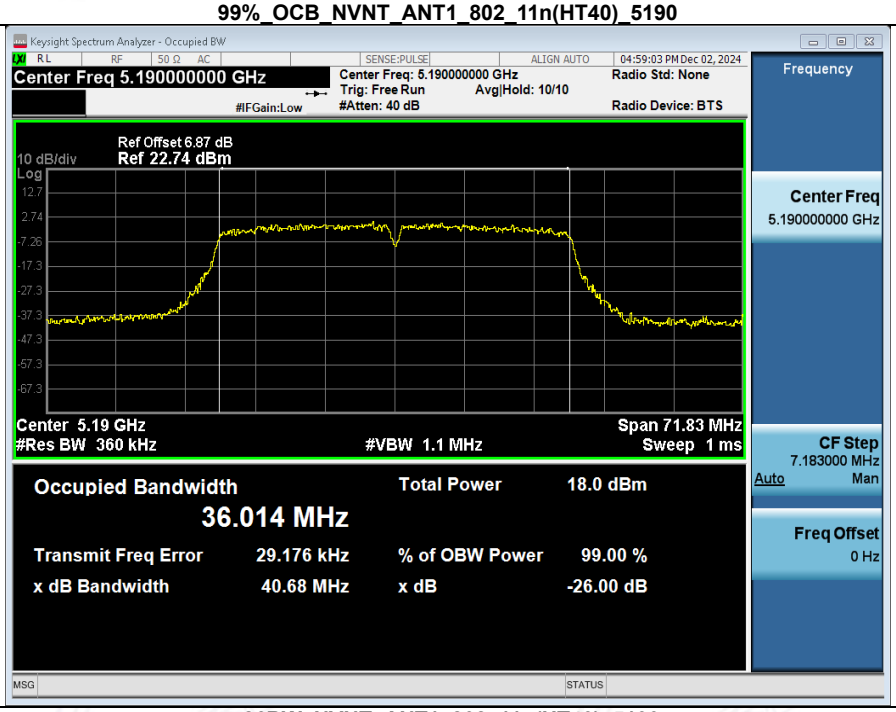

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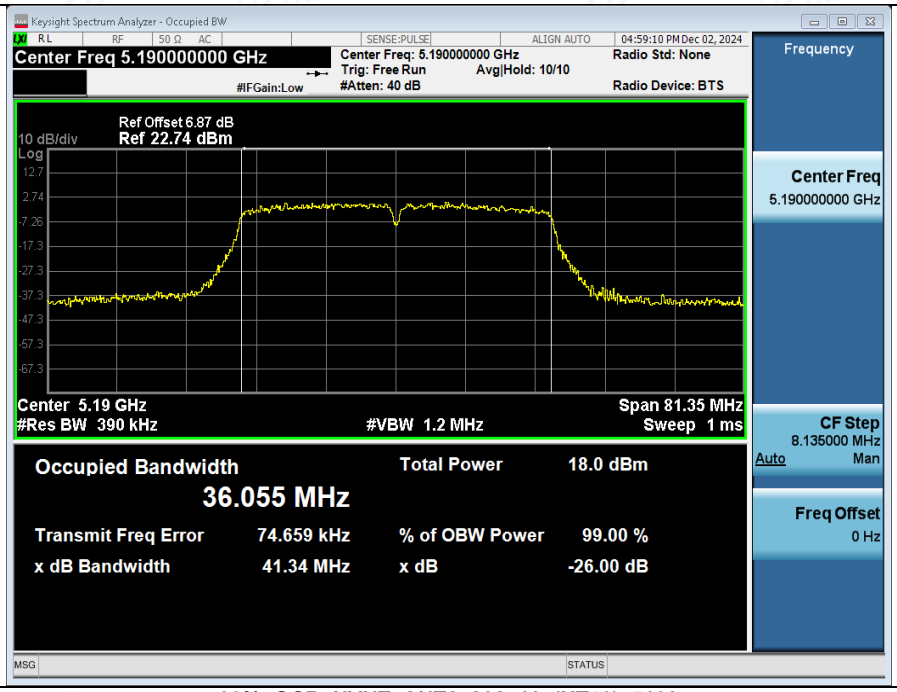

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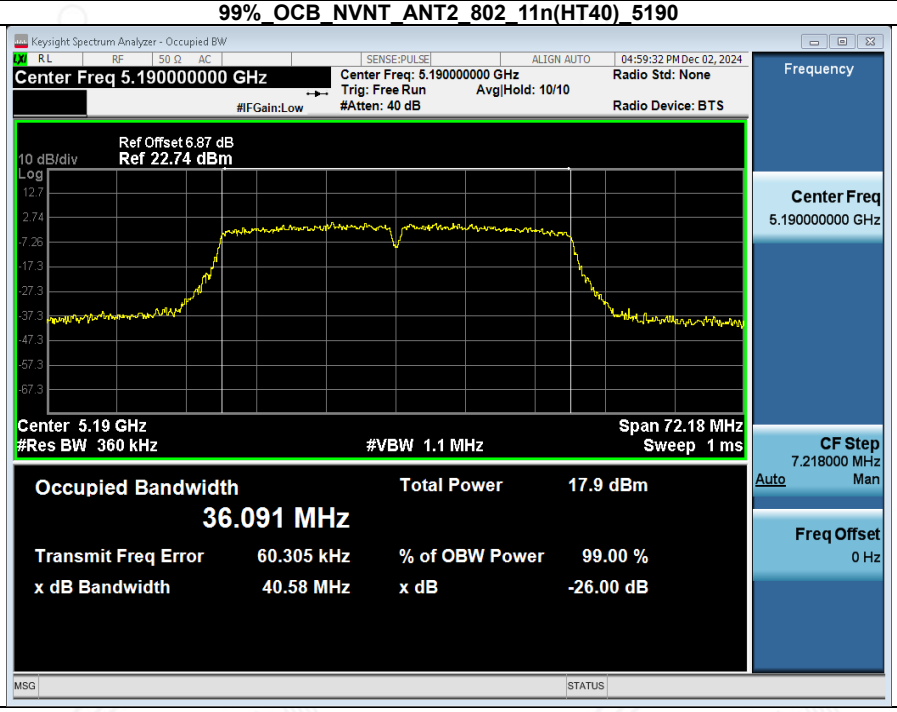

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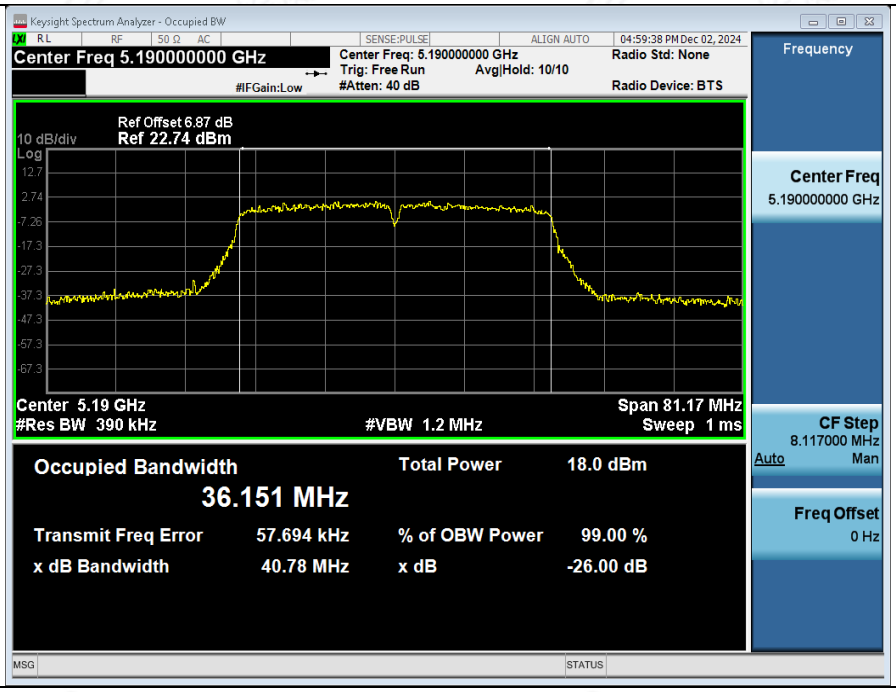

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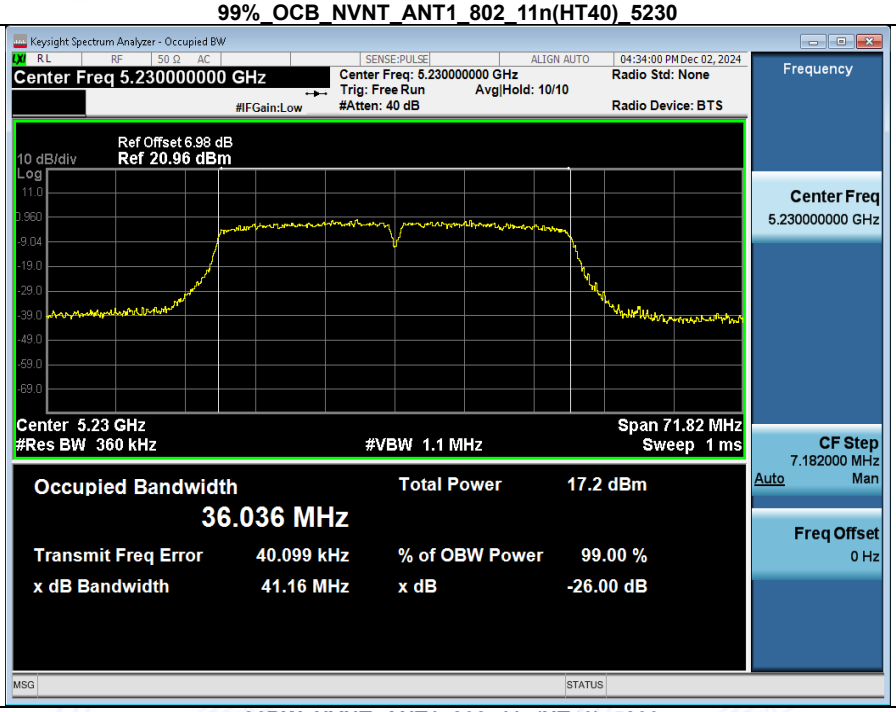

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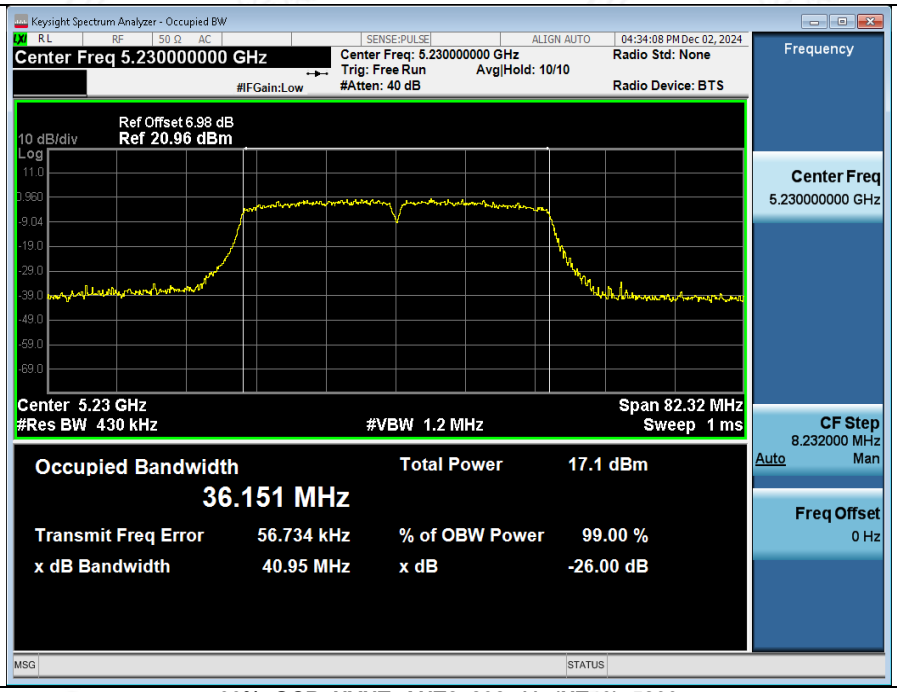

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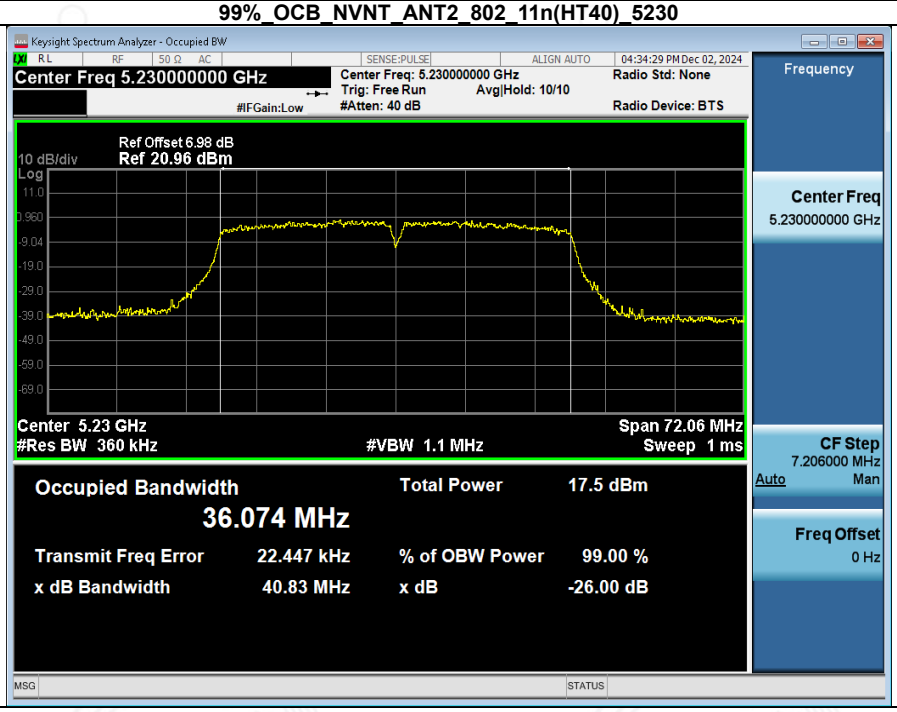

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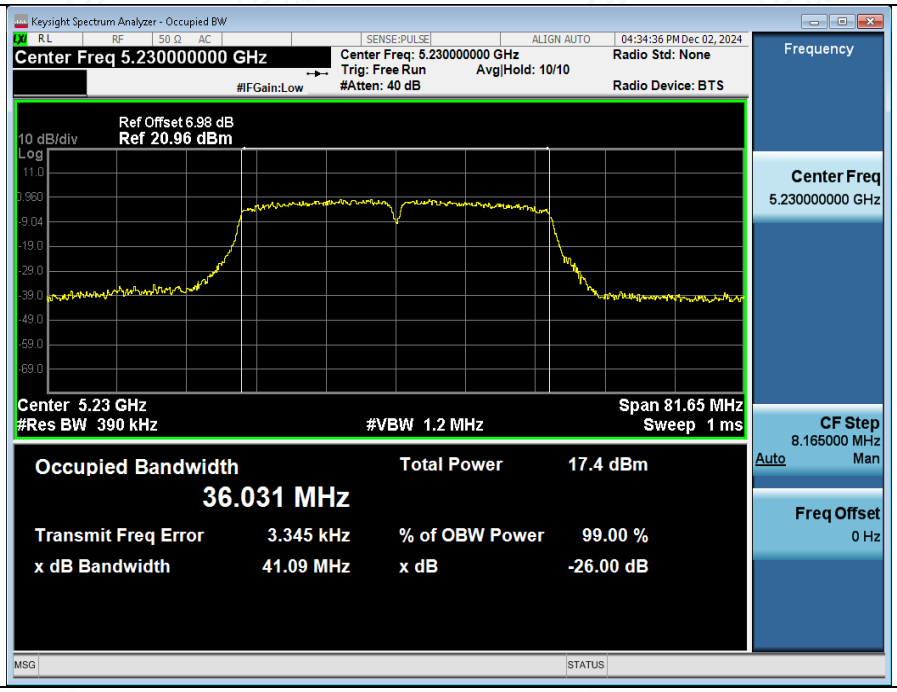
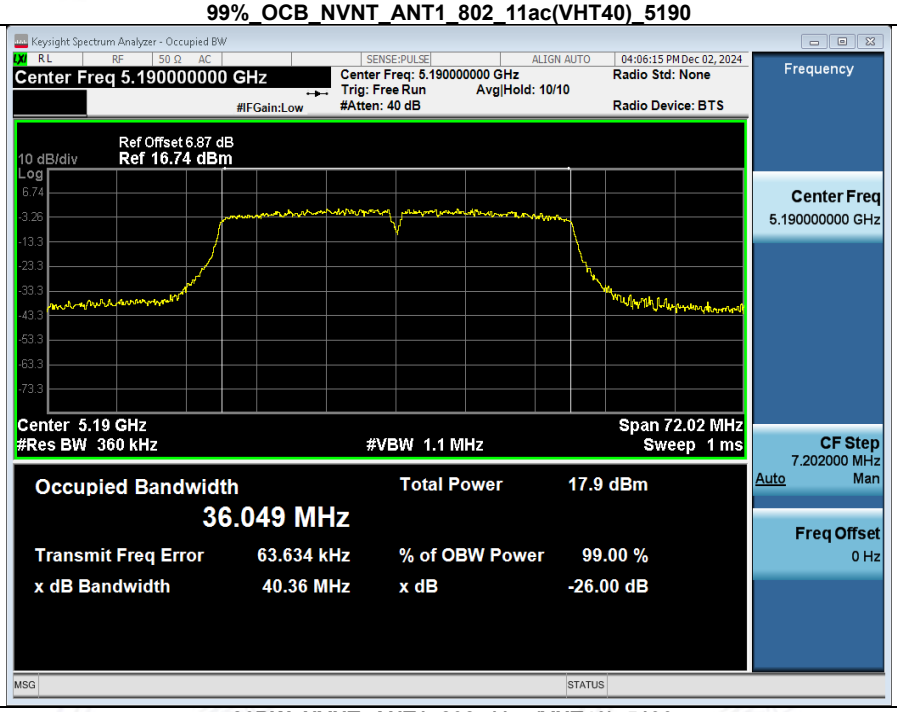


99%_OCB_NVNT_ANT1_802_11ac(VHT40)_5190



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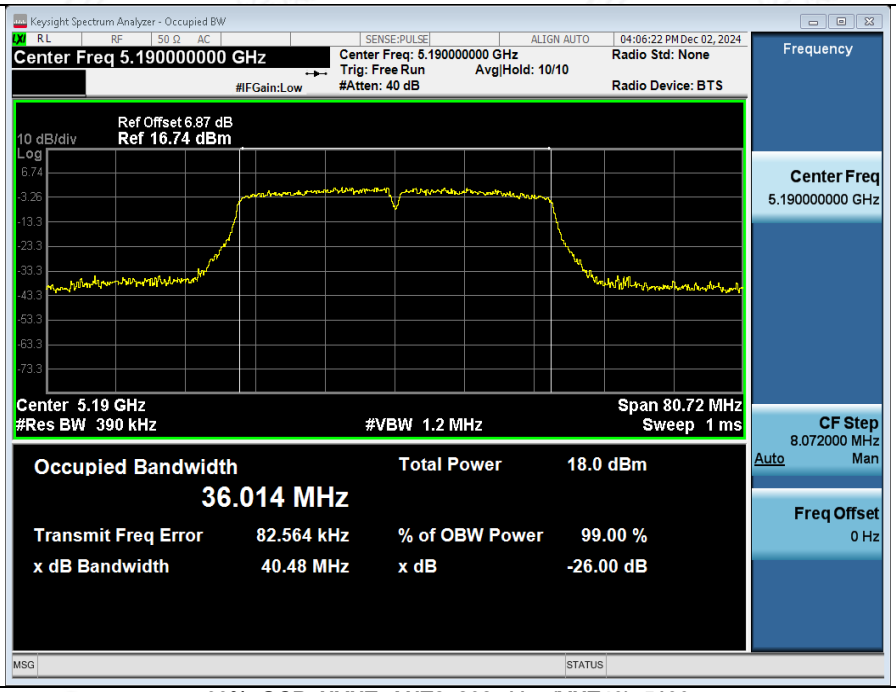

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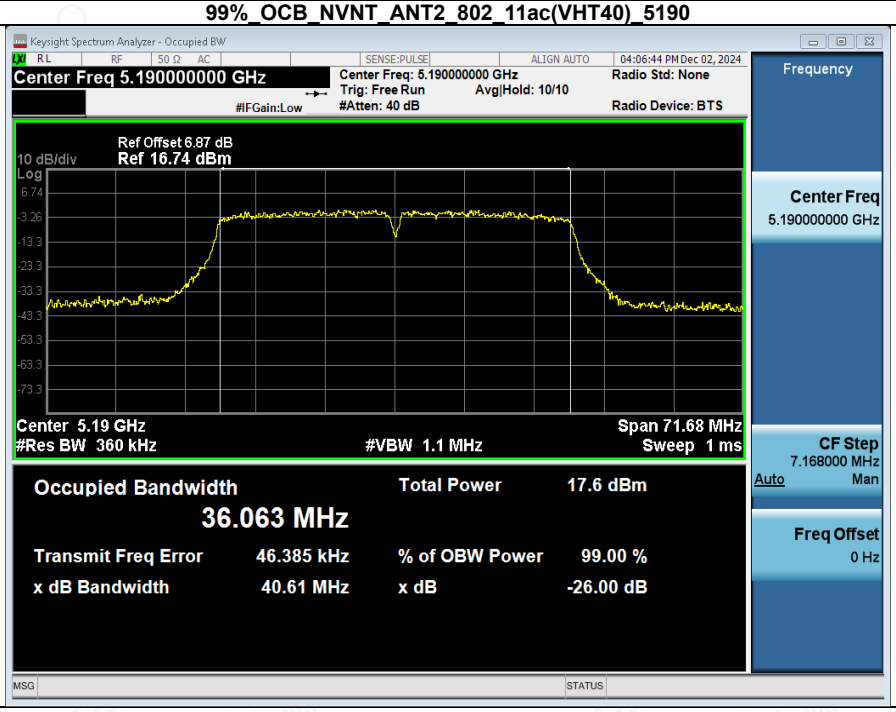

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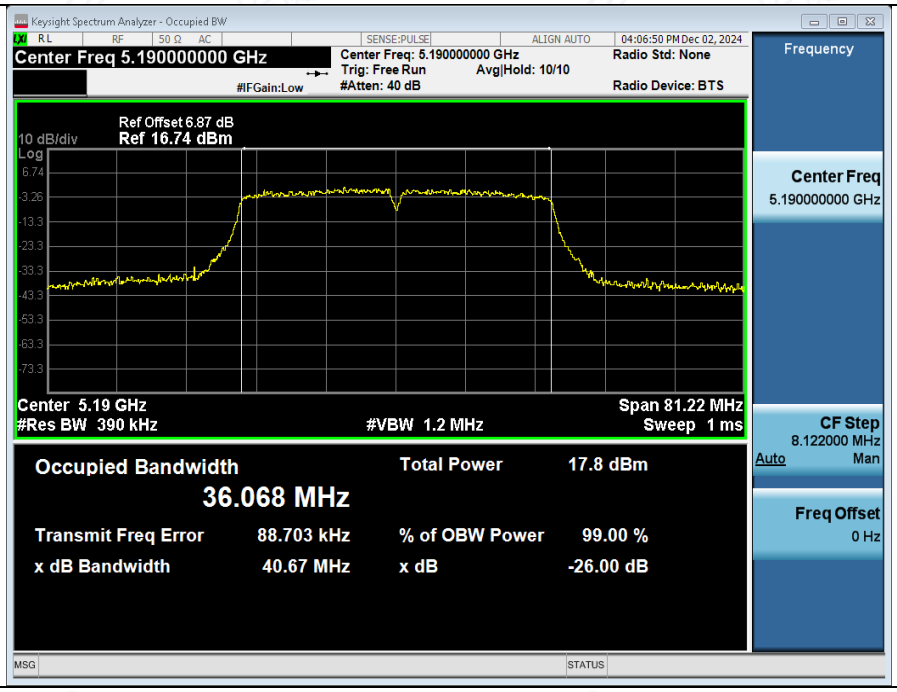

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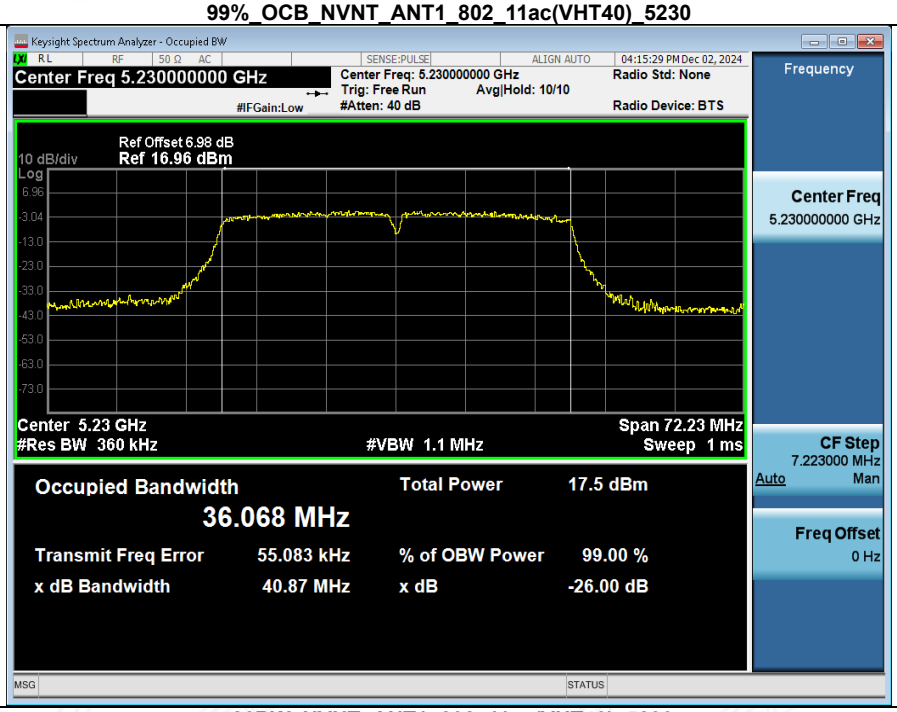

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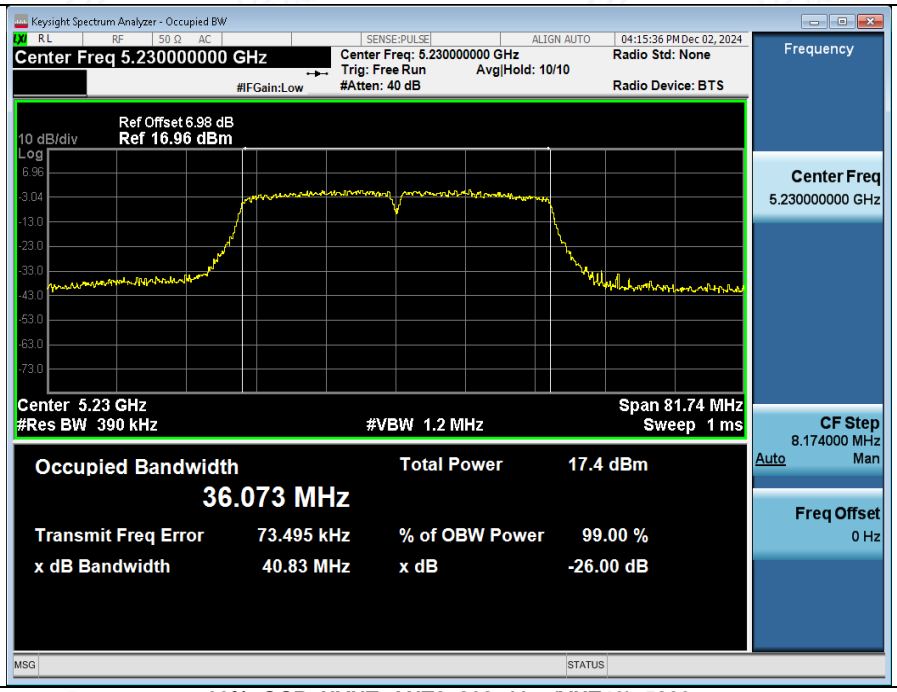

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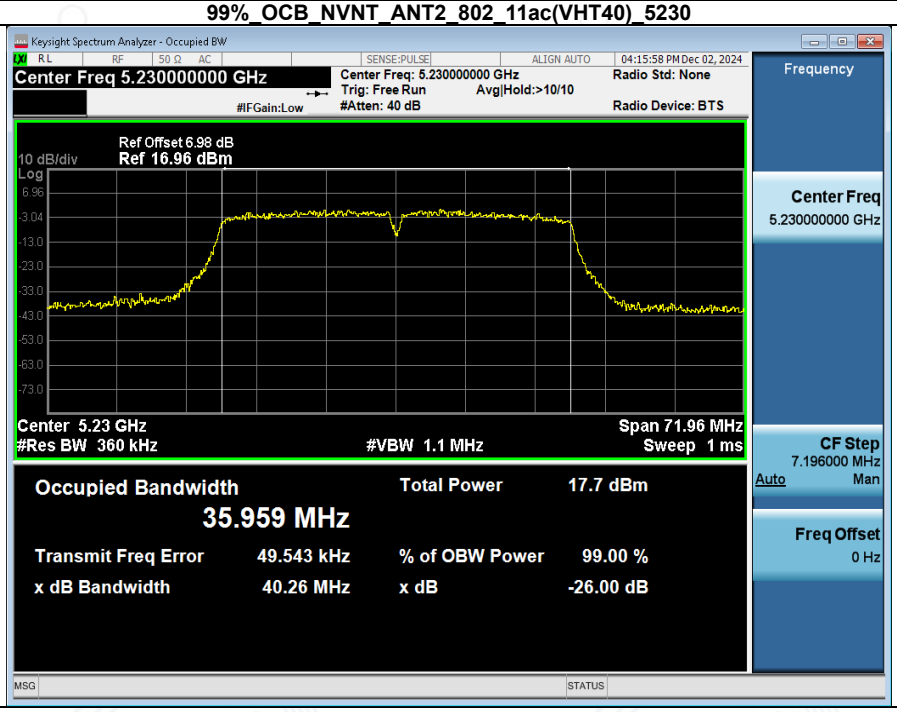

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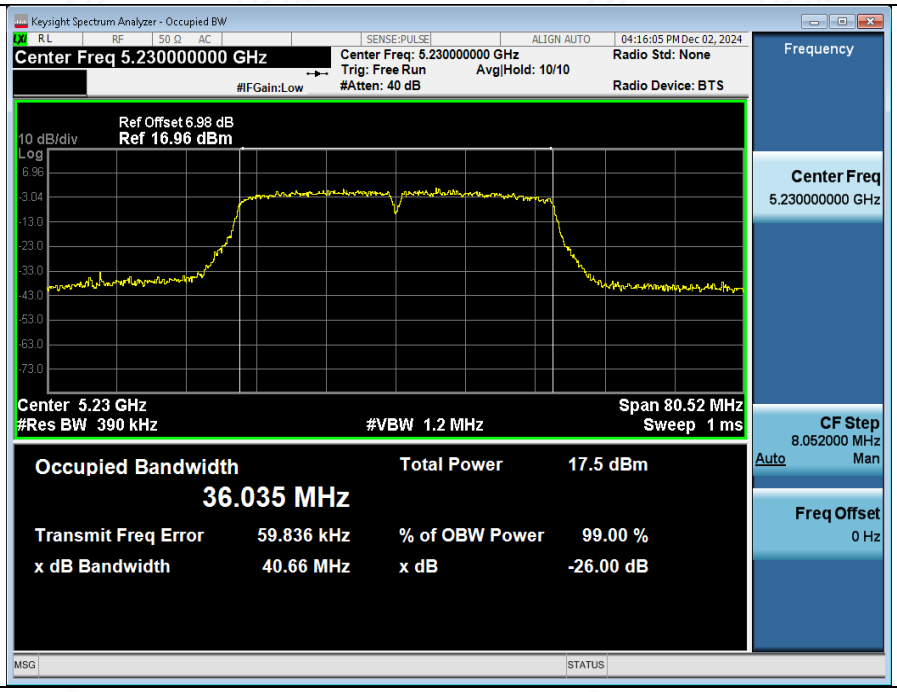
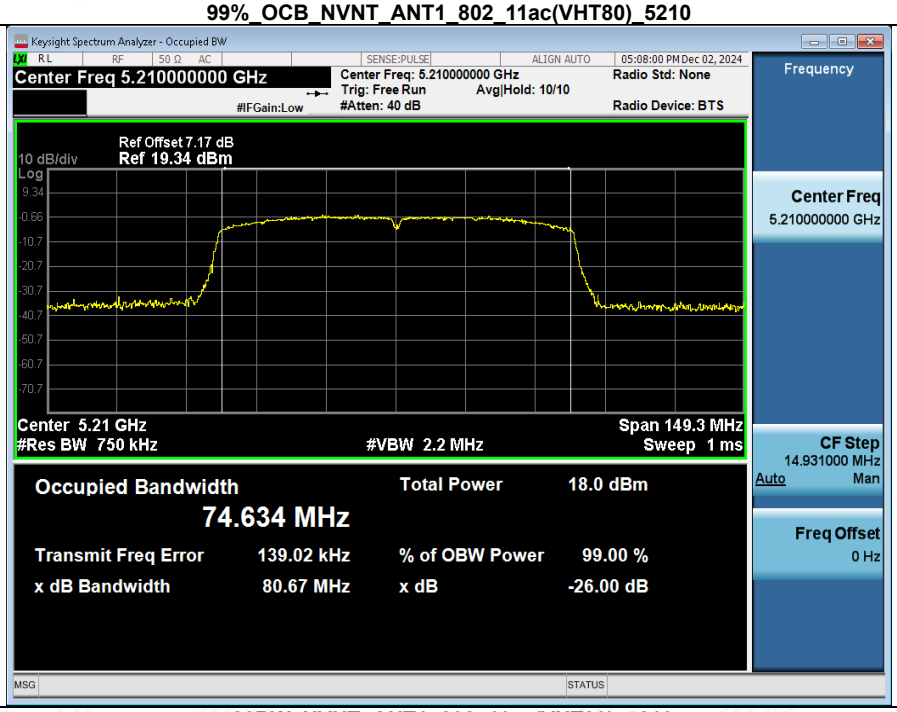


99%_OCB_NVNT_ANT1_802_11ac(VHT80)_5210



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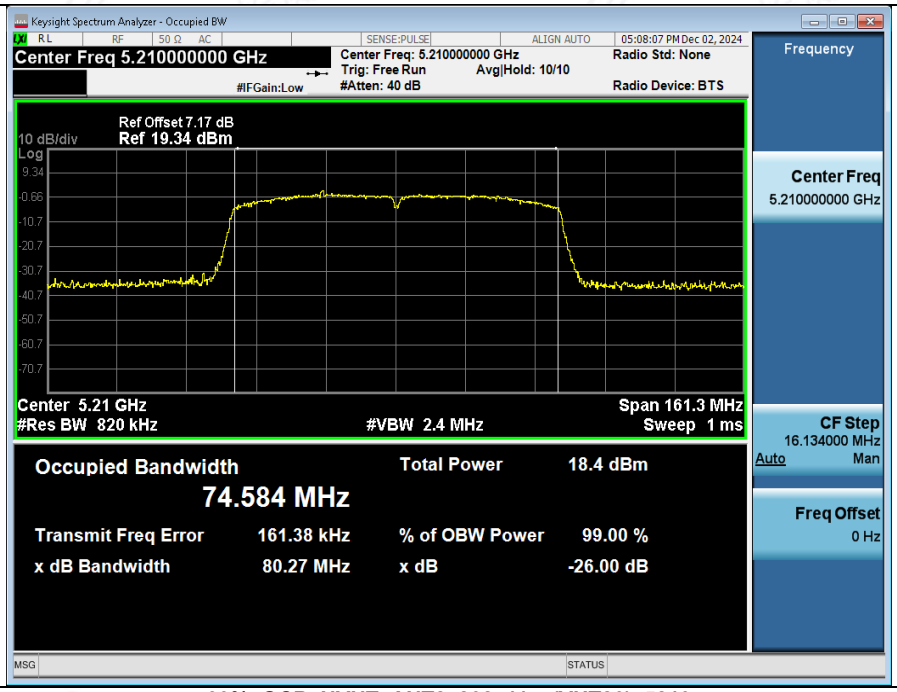

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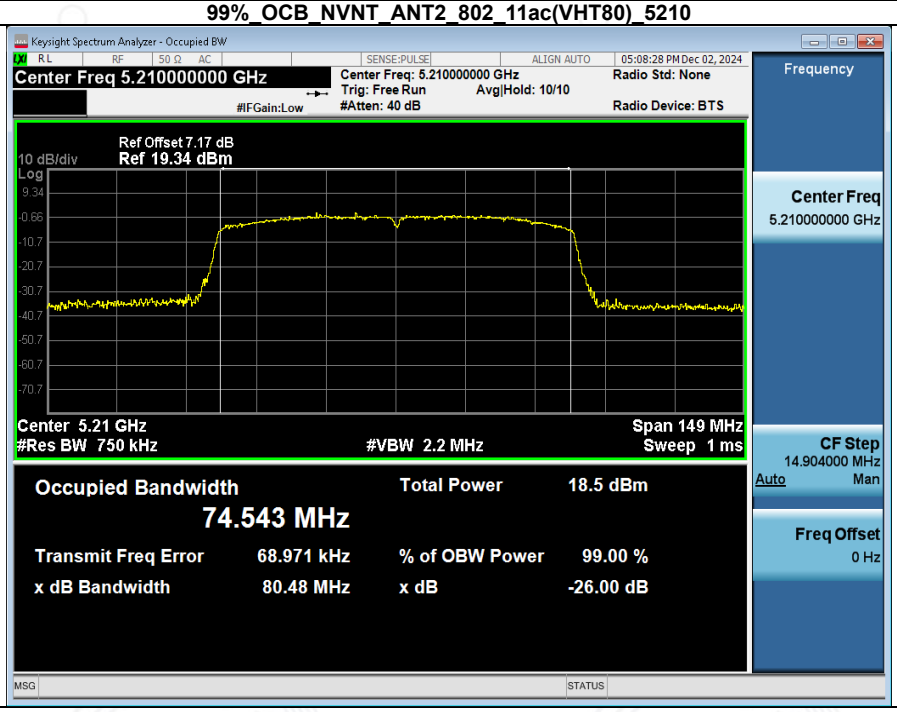

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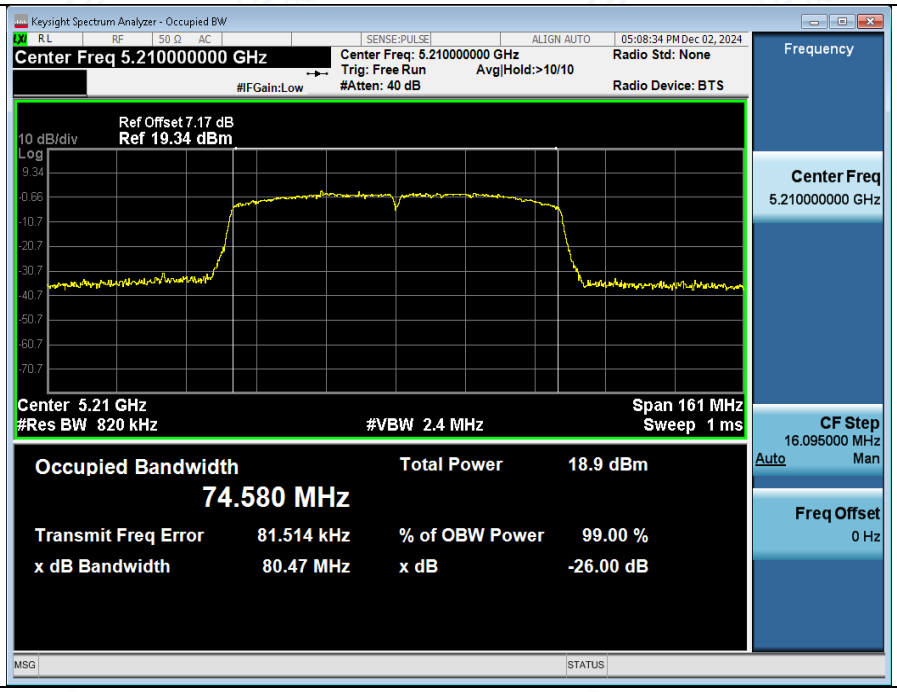
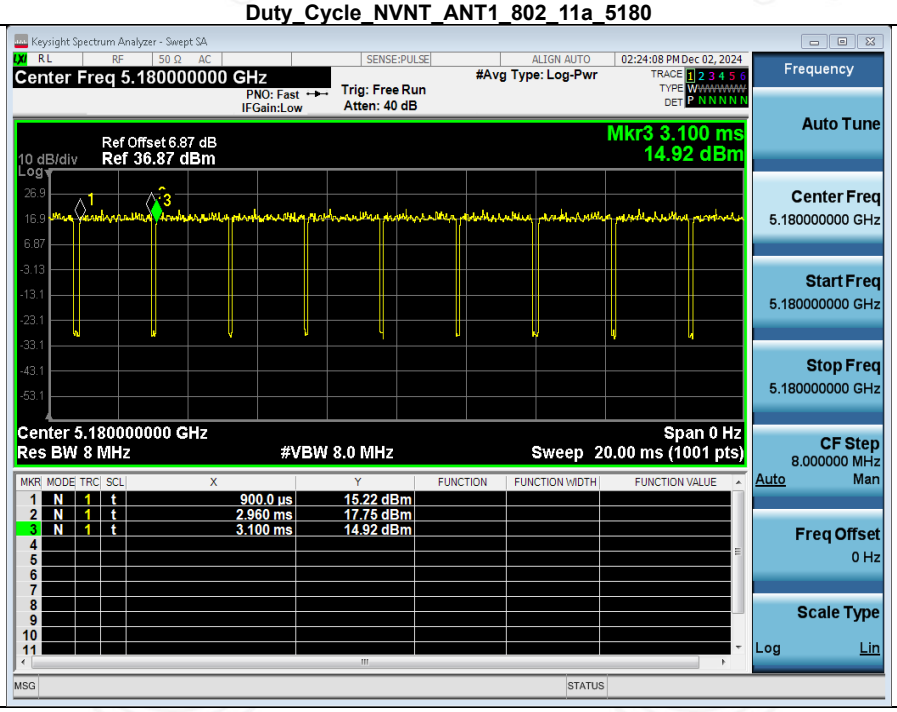

Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
05:08:34 PM Dec 02, 2024
Center Freq 5.210000000 GHz
Center Freq: 5.210000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 7.17 dB
10 dB/div
Ref 19.34 dBm
Log
9.34
-0.66
-10.7
-20.7
-30.7
-40.7
-50.7
-60.7
-70.7
Center Freq
5.210000000 GHz
Center 5.21 GHz
#Res BW 820 kHz
#VBW 2.4 MHz
Span 161 MHz
Sweep 1 ms
CF Step
16.095000 MHz
Auto
Man
Occupied Bandwidth
74.580 MHz
Total Power
18.9 dBm
Transmit Freq Error
81.514 kHz
% of OBW Power
99.00 %
x dB Bandwidth
80.47 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

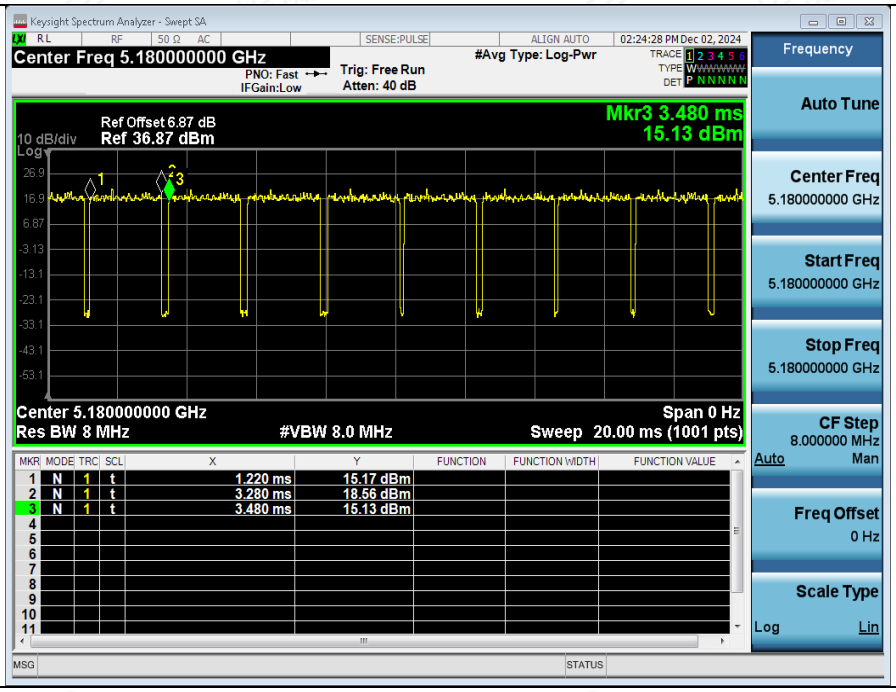
2. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5180.00	93.64	0.29
NVNT	ANT2	802.11a	5180.00	91.15	0.40
NVNT	ANT1	802.11a	5200.00	91.15	0.40
NVNT	ANT2	802.11a	5200.00	93.64	0.29
NVNT	ANT1	802.11a	5240.00	93.64	0.29
NVNT	ANT2	802.11a	5240.00	89.57	0.48
NVNT	ANT1	802.11n(HT20)	5180.00	93.20	0.31
NVNT	ANT2	802.11n(HT20)	5180.00	88.89	0.51
NVNT	ANT1	802.11n(HT20)	5200.00	90.57	0.43
NVNT	ANT2	802.11n(HT20)	5200.00	95.05	0.22
NVNT	ANT1	802.11n(HT20)	5240.00	91.43	0.39
NVNT	ANT2	802.11n(HT20)	5240.00	93.20	0.31
NVNT	ANT1	802.11ac(VHT20)	5180.00	88.99	0.51
NVNT	ANT2	802.11ac(VHT20)	5180.00	93.27	0.30
NVNT	ANT1	802.11ac(VHT20)	5200.00	88.99	0.51
NVNT	ANT2	802.11ac(VHT20)	5200.00	89.81	0.47
NVNT	ANT1	802.11ac(VHT20)	5240.00	94.17	0.26
NVNT	ANT2	802.11ac(VHT20)	5240.00	89.72	0.47
NVNT	ANT1	802.11n(HT40)	5190.00	81.03	0.91
NVNT	ANT2	802.11n(HT40)	5190.00	82.46	0.84
NVNT	ANT1	802.11n(HT40)	5230.00	79.66	0.99
NVNT	ANT2	802.11n(HT40)	5230.00	81.03	0.91
NVNT	ANT1	802.11ac(VHT40)	5190.00	80.00	0.97
NVNT	ANT2	802.11ac(VHT40)	5190.00	83.93	0.76
NVNT	ANT1	802.11ac(VHT40)	5230.00	88.89	0.51
NVNT	ANT2	802.11ac(VHT40)	5230.00	78.33	1.06
NVNT	ANT1	802.11ac(VHT80)	5210.00	71.88	1.43
NVNT	ANT2	802.11ac(VHT80)	5210.00	74.19	1.30

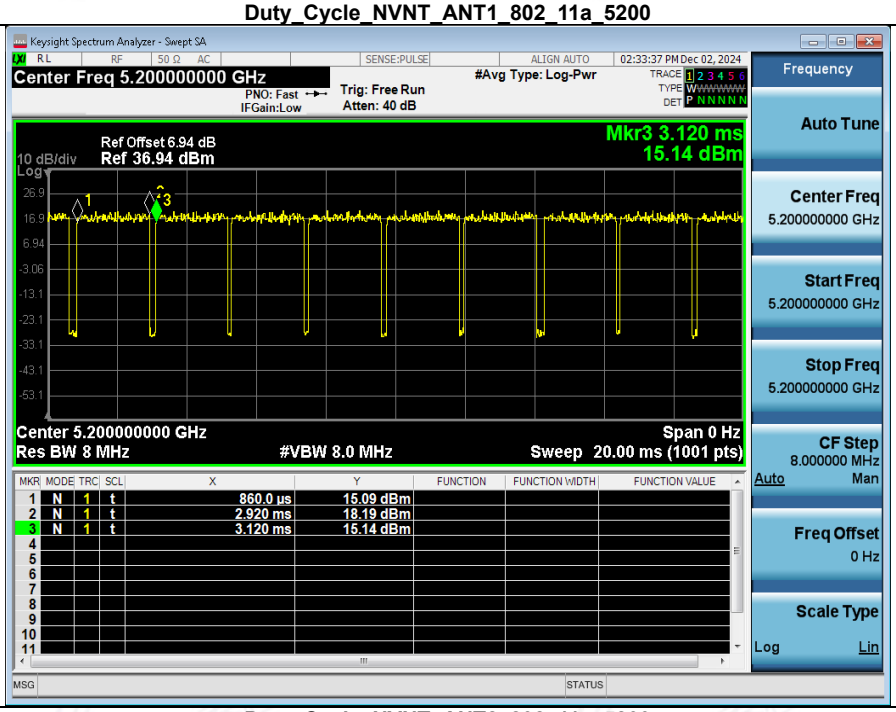
Duty_Cycle_NVNT_ANT1_802_11a_5180



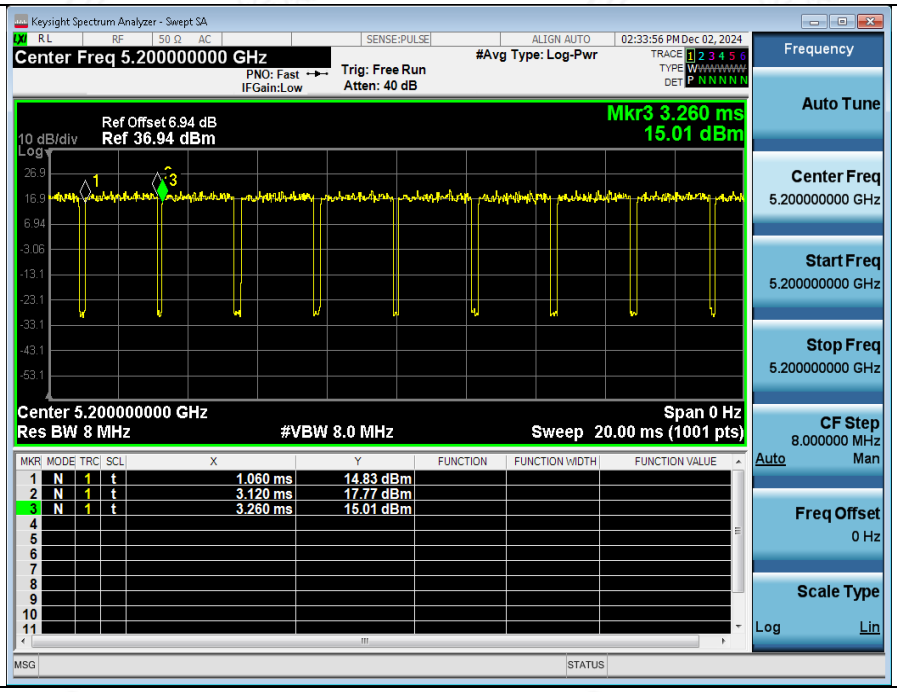
Duty_Cycle_NVNT_ANT2_802_11a_5180



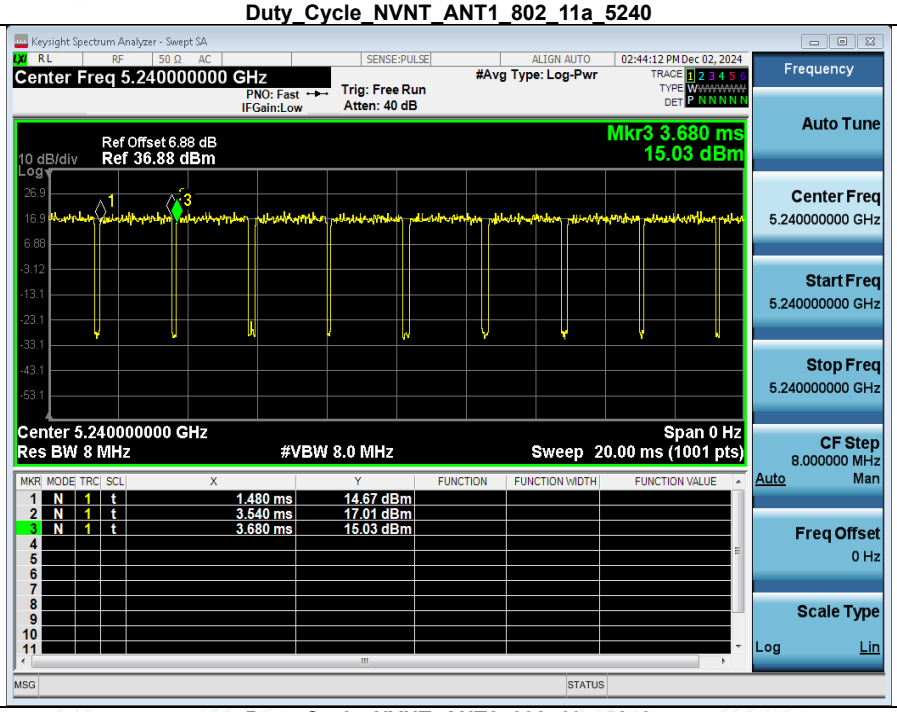
Duty_Cycle_NVNT_ANT1_802_11a_5200



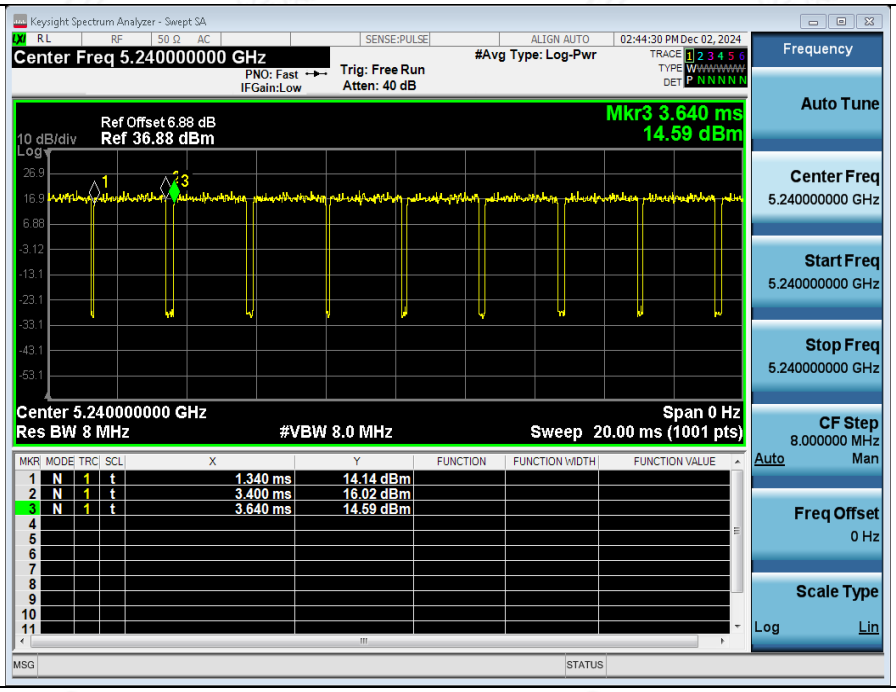
Duty_Cycle_NVNT_ANT2_802_11a_5200



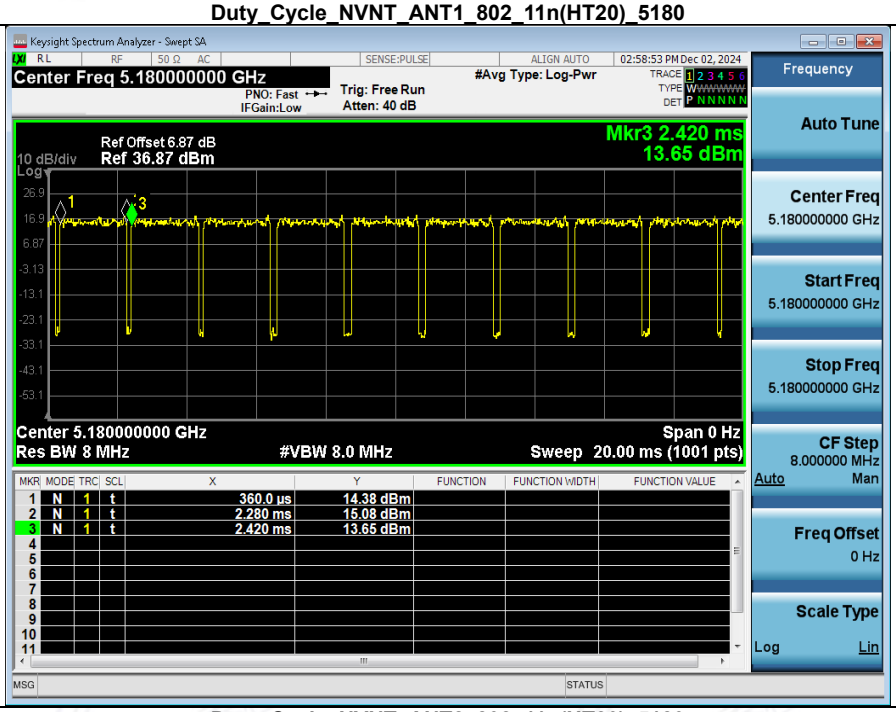
Duty_Cycle_NVNT_ANT1_802_11a_5240



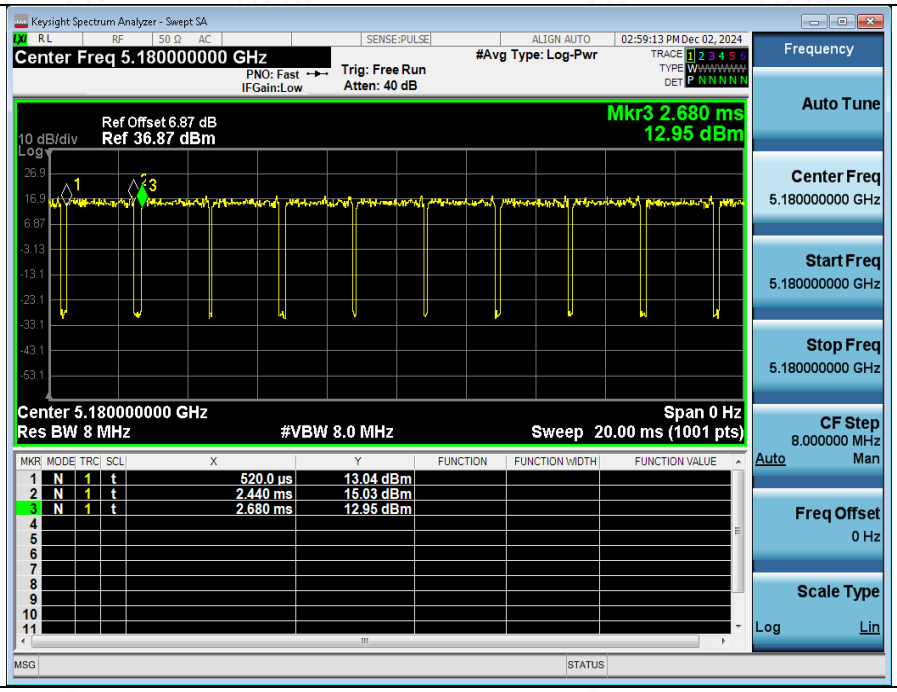
Duty_Cycle_NVNT_ANT2_802_11a_5240



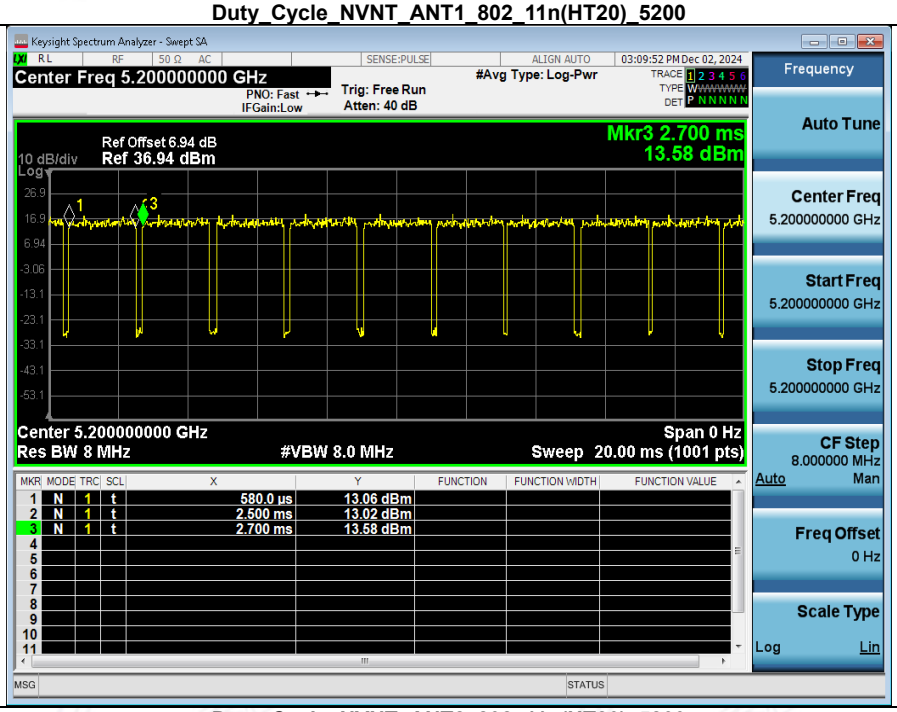
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5180



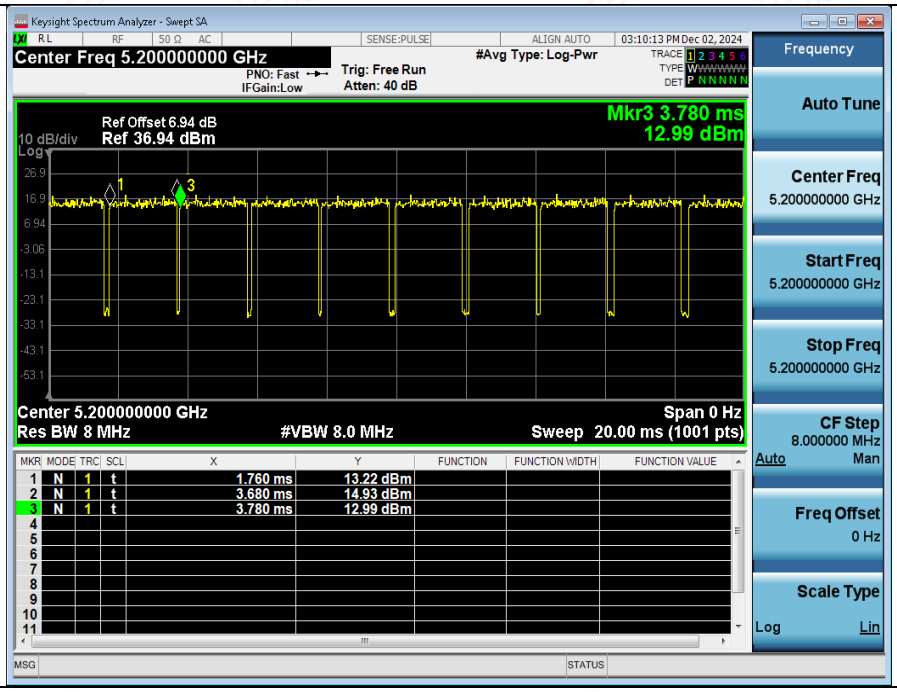
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5180



Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5200



Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5200



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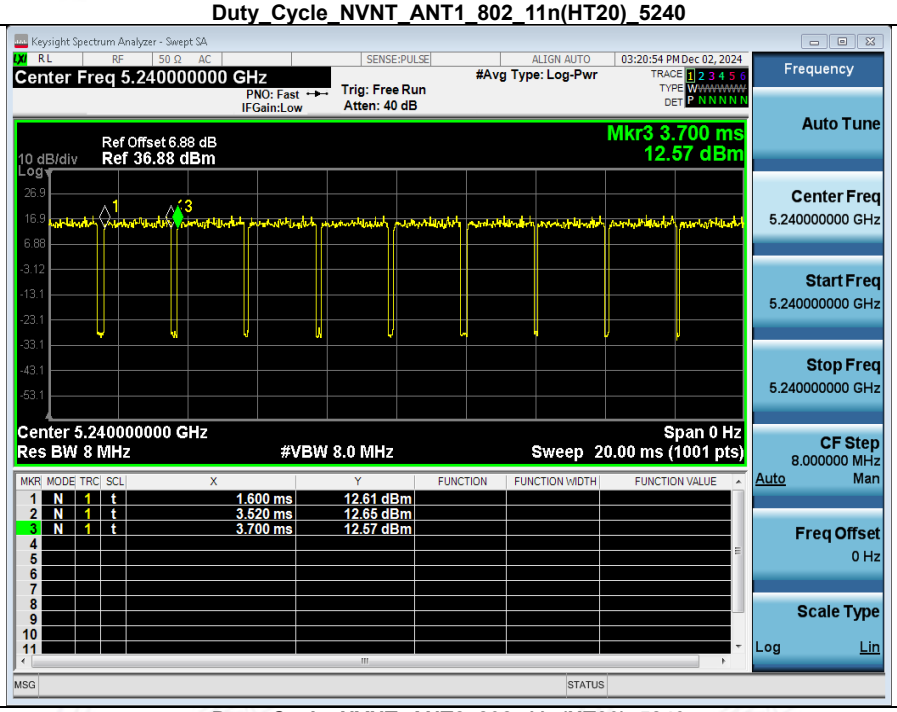

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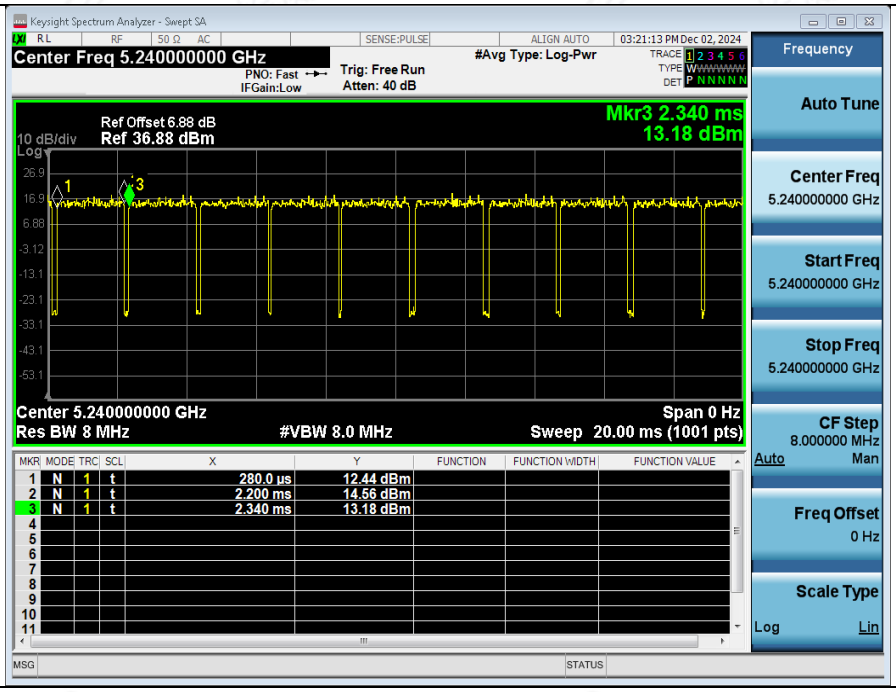
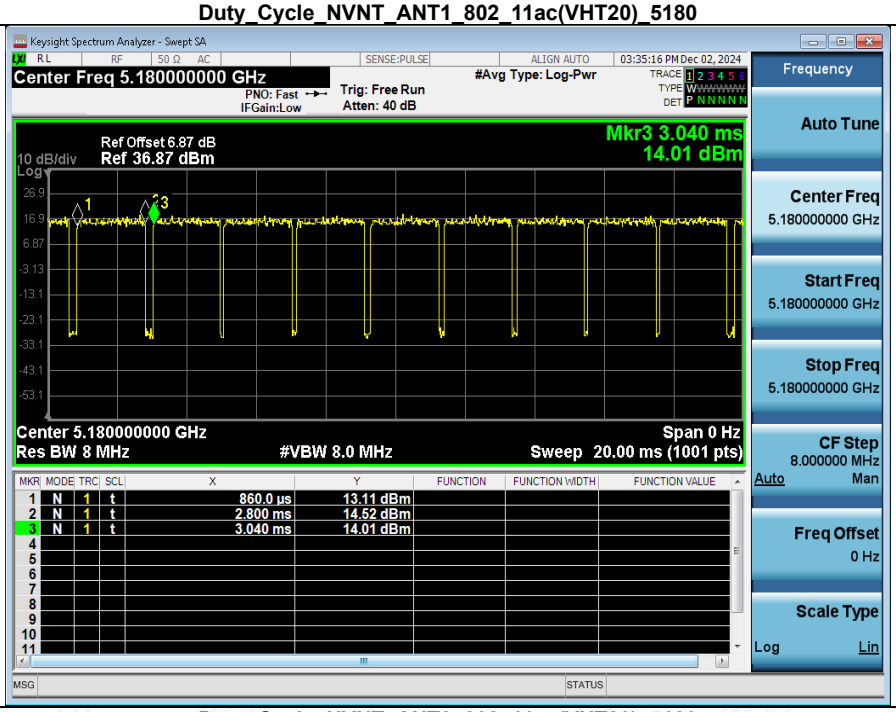


Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5180



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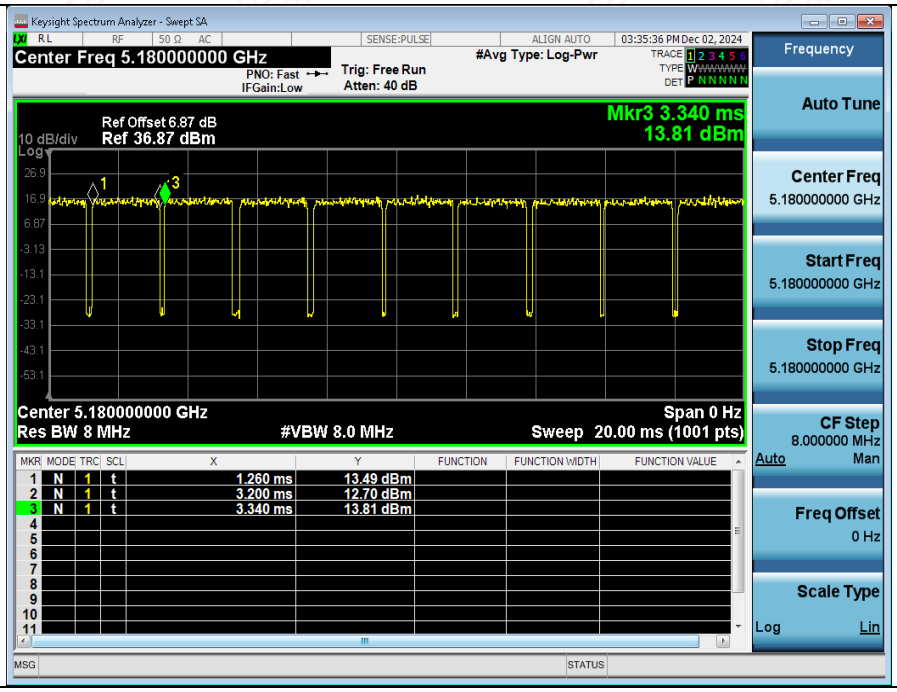

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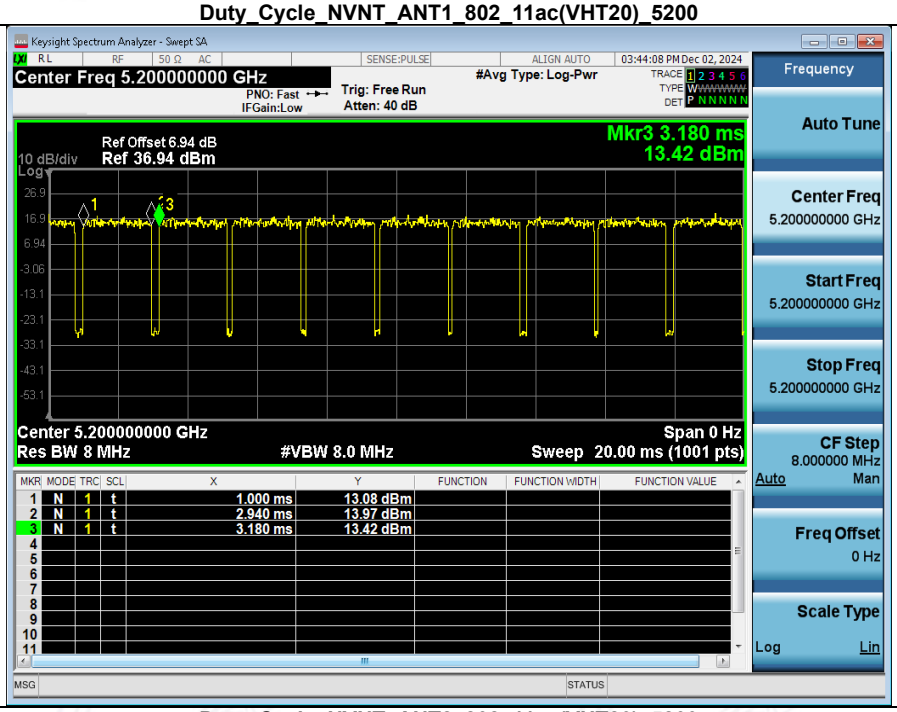
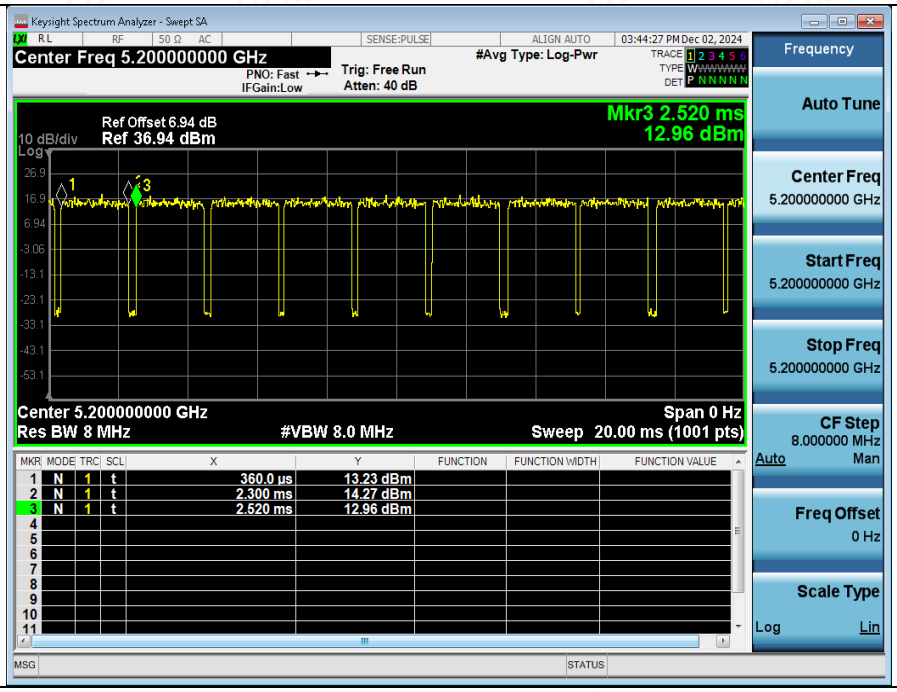


Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5200



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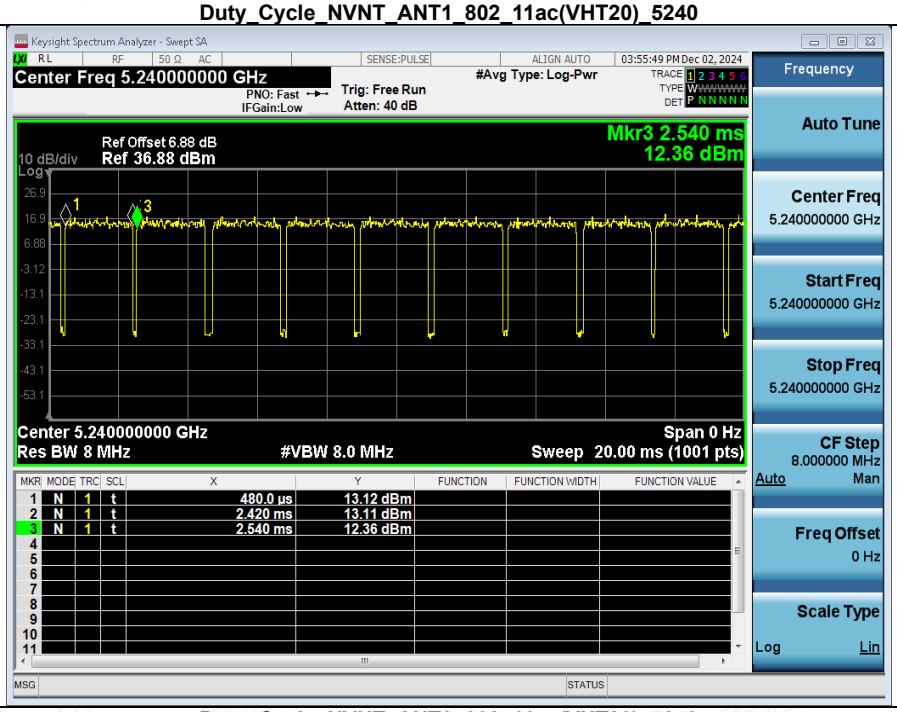

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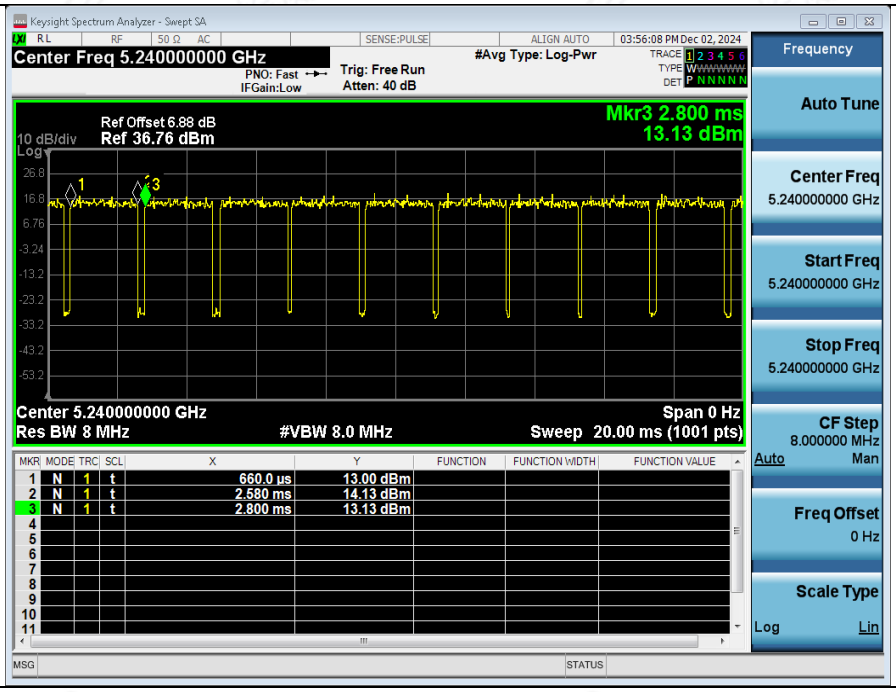
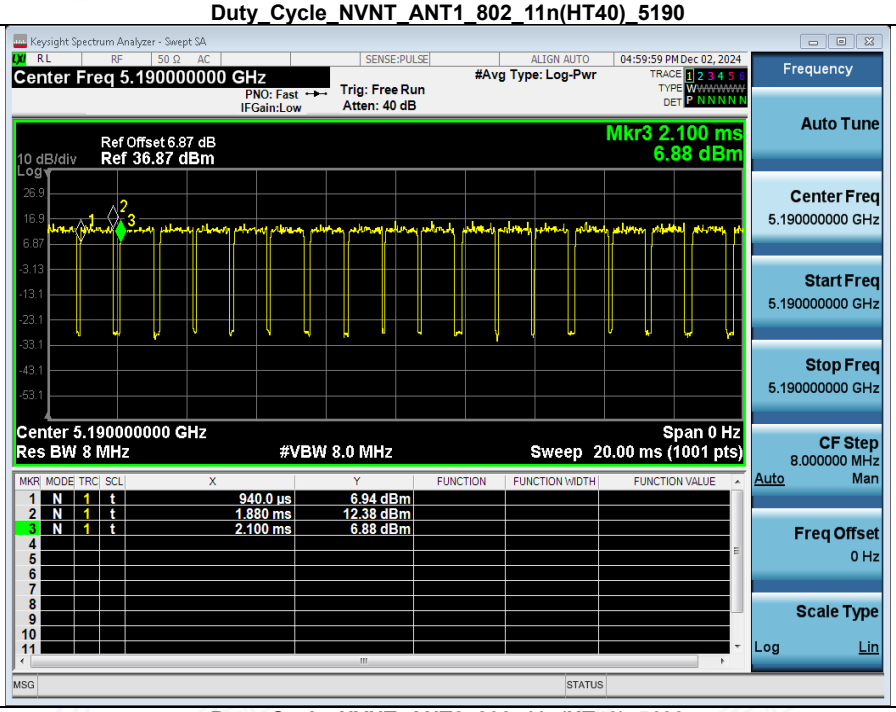


Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5190



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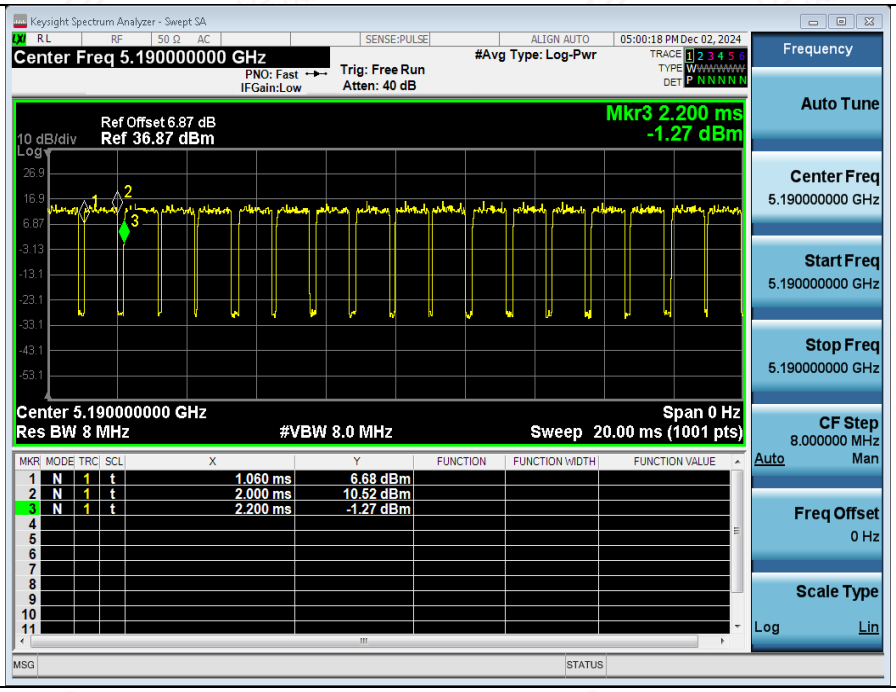
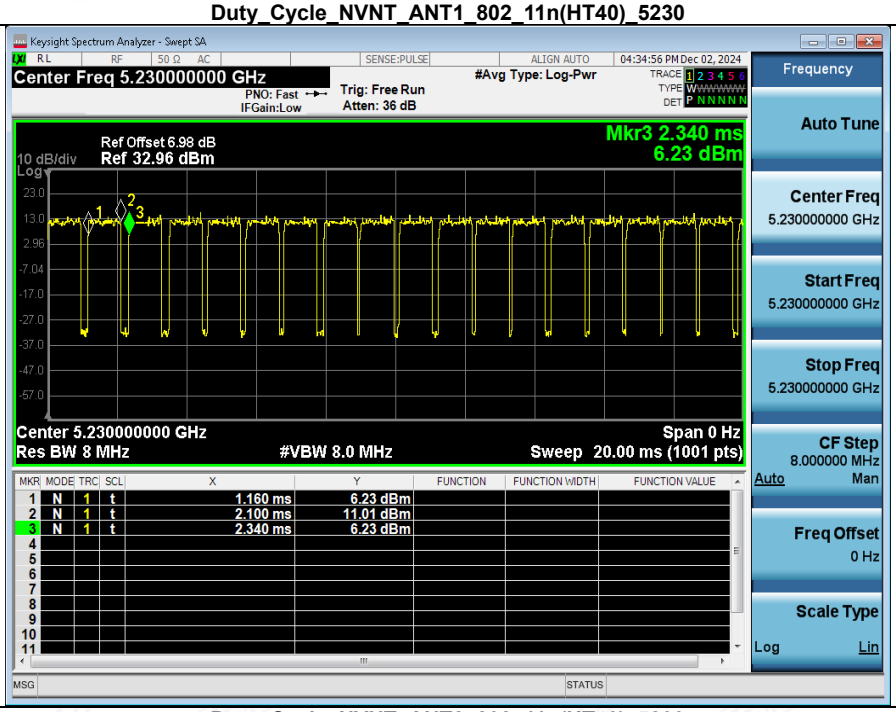


Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5230



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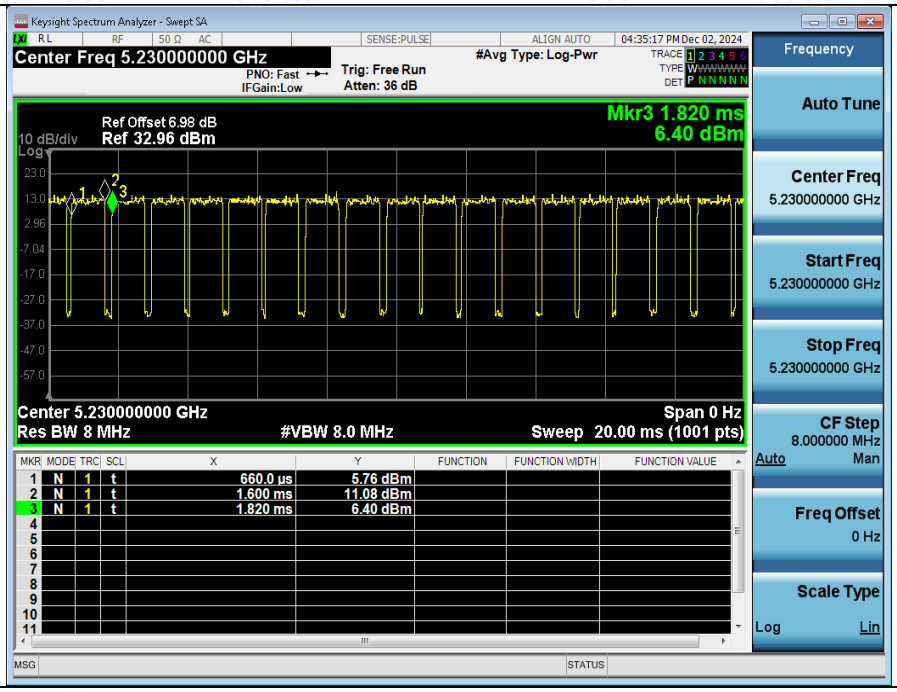

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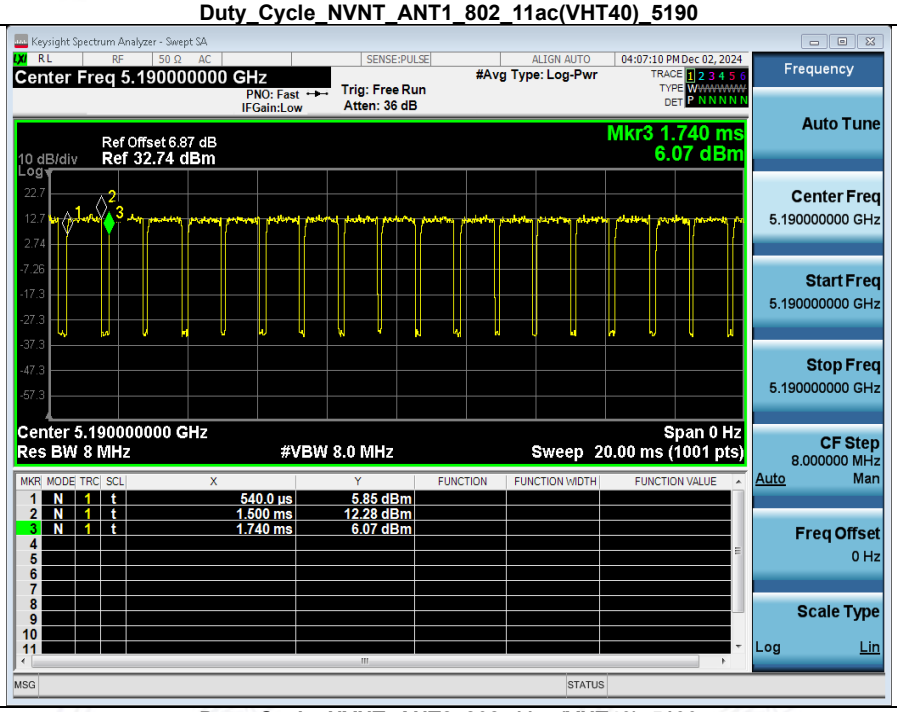

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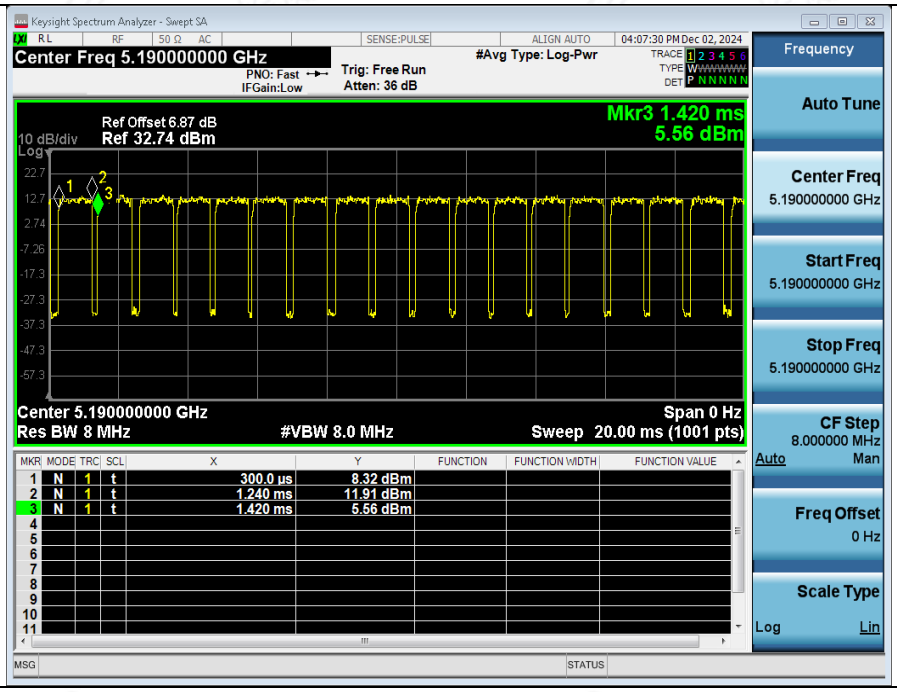
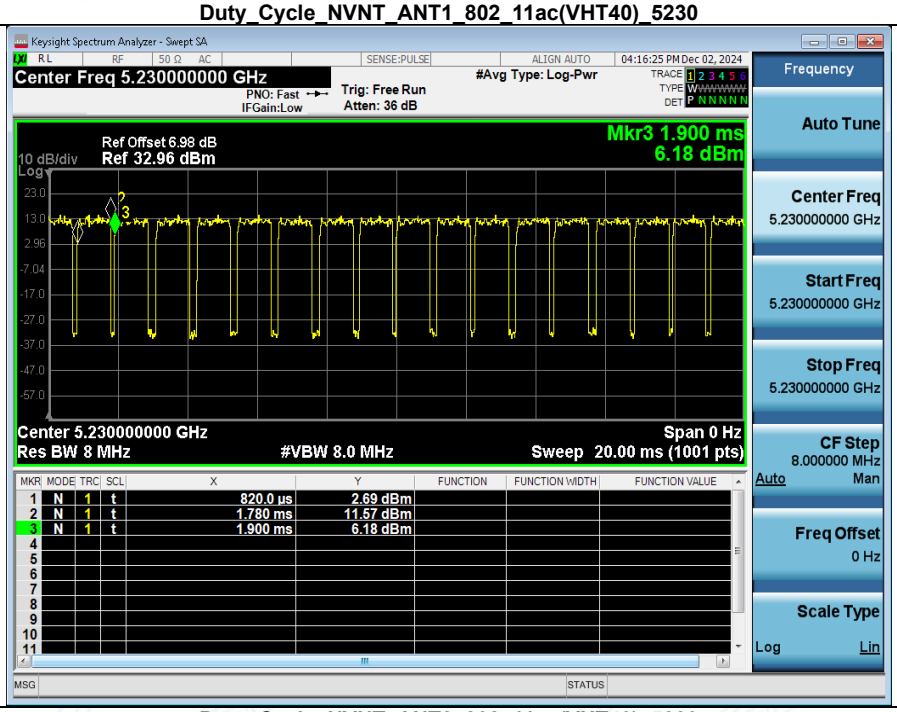
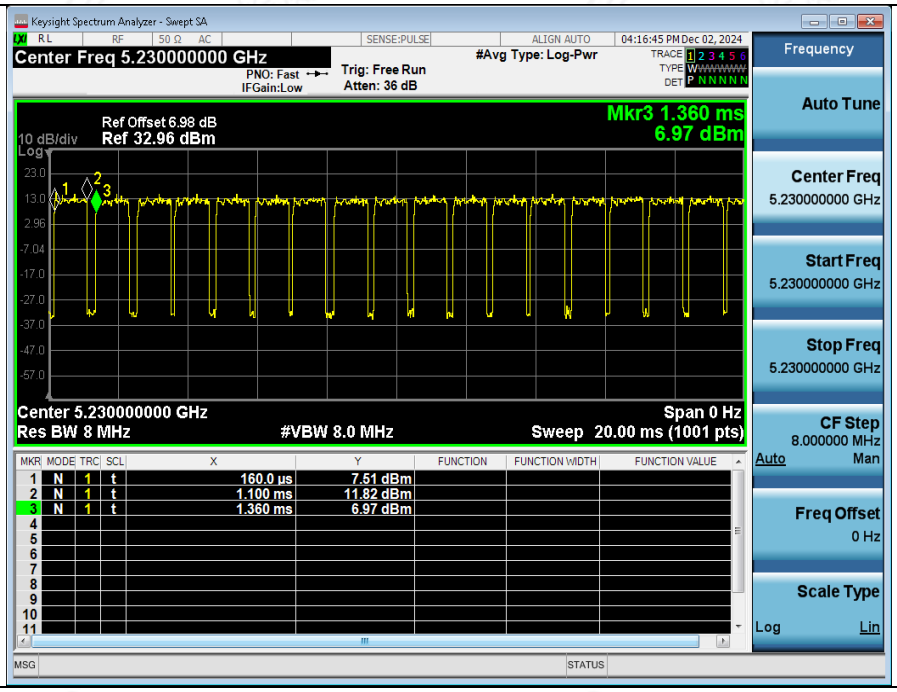


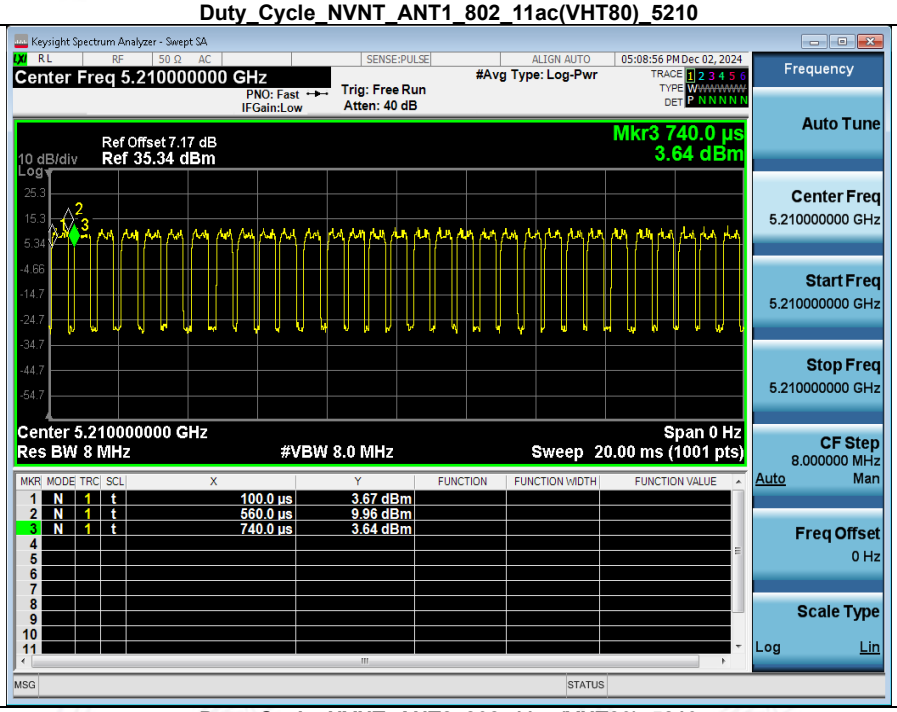
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5230



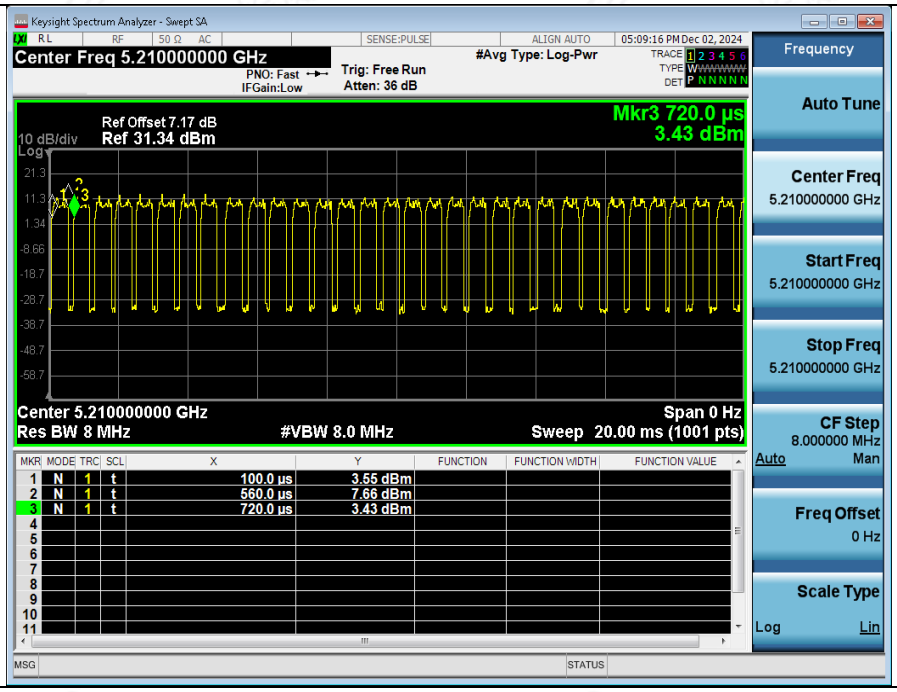
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5230



Duty_Cycle_NVNT_ANT1_802_11ac(VHT80)_5210



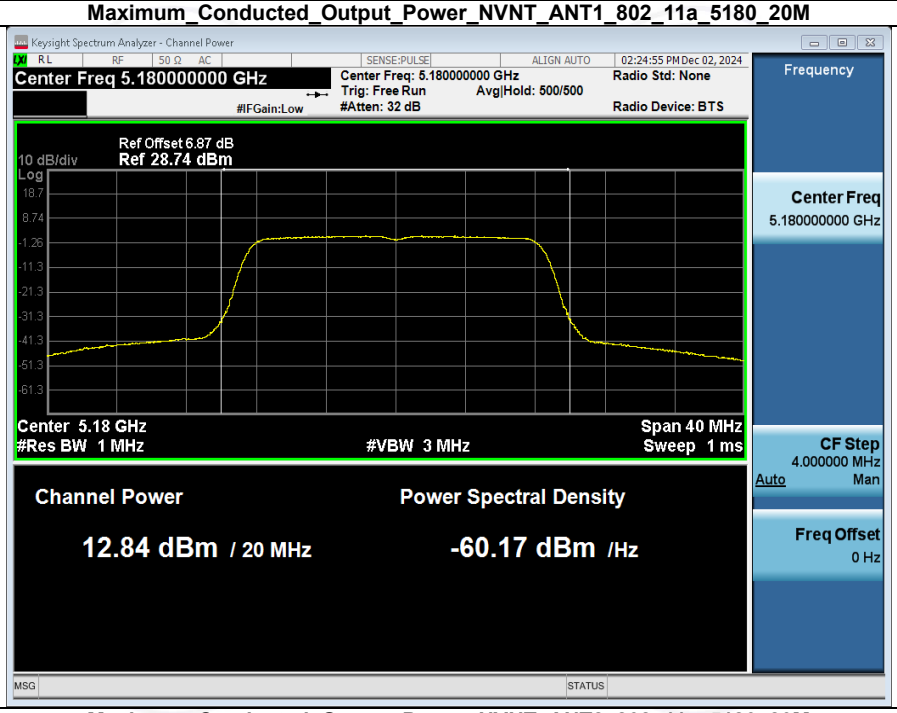
Duty_Cycle_NVNT_ANT2_802_11ac(VHT80)_5210


Keysight Spectrum Analyzer - Swept SA
Center Freq 5.210000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 36 dB
#Avg Type: Log-Pwr
05:09:16 PM Dec 02, 2024
Ref Offset 7.17 dB
10 dB/div
Ref 31.34 dBm
Mkr3 720.0 µs
3.43 dBm
Center 5.210000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 t 100.0 µs 3.55 dBm
2 N 1 t 560.0 µs 7.66 dBm
3 N 1 t 720.0 µs 3.43 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
MSG
STATUS

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	12.84	0.29	13.13	24	Pass
NVNT	ANT2	802.11a	5180.00	12.71	0.40	13.11	24	Pass
NVNT	ANT1	802.11a	5200.00	12.66	0.40	13.06	24	Pass
NVNT	ANT2	802.11a	5200.00	12.69	0.29	12.98	24	Pass
NVNT	ANT1	802.11a	5240.00	12.28	0.29	12.57	24	Pass
NVNT	ANT2	802.11a	5240.00	12.44	0.48	12.92	24	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	11.16	0.31	11.47	24	Pass
NVNT	ANT2	802.11n(HT20)	5180.00	10.98	0.51	11.49	24	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	11.04	0.43	11.47	24	Pass
NVNT	ANT2	802.11n(HT20)	5200.00	10.87	0.22	11.09	24	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	10.62	0.39	11.01	24	Pass
NVNT	ANT2	802.11n(HT20)	5240.00	10.64	0.31	10.95	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	11.16	0.51	11.67	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5180.00	10.99	0.30	11.29	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	11.05	0.51	11.56	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5200.00	10.90	0.47	11.37	24	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	10.57	0.26	10.83	24	Pass
NVNT	ANT2	802.11ac(VHT20)	5240.00	10.58	0.47	11.05	24	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	10.78	0.91	11.69	24	Pass
NVNT	ANT2	802.11n(HT40)	5190.00	10.77	0.84	11.61	24	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	10.90	0.99	11.89	24	Pass
NVNT	ANT2	802.11n(HT40)	5230.00	10.94	0.91	11.85	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	10.71	0.97	11.68	24	Pass
NVNT	ANT2	802.11ac(VHT40)	5190.00	10.41	0.76	11.17	24	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	10.29	0.51	10.80	24	Pass
NVNT	ANT2	802.11ac(VHT40)	5230.00	10.35	1.06	11.41	24	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	9.75	1.43	11.18	24	Pass
NVNT	ANT2	802.11ac(VHT80)	5210.00	10.08	1.30	11.38	24	Pass

Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5180_20M



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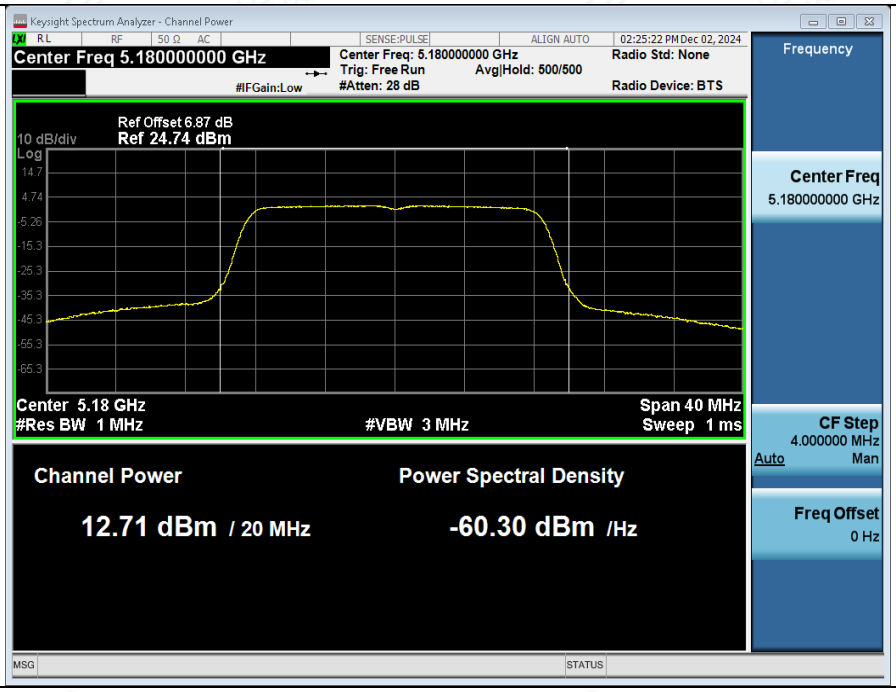

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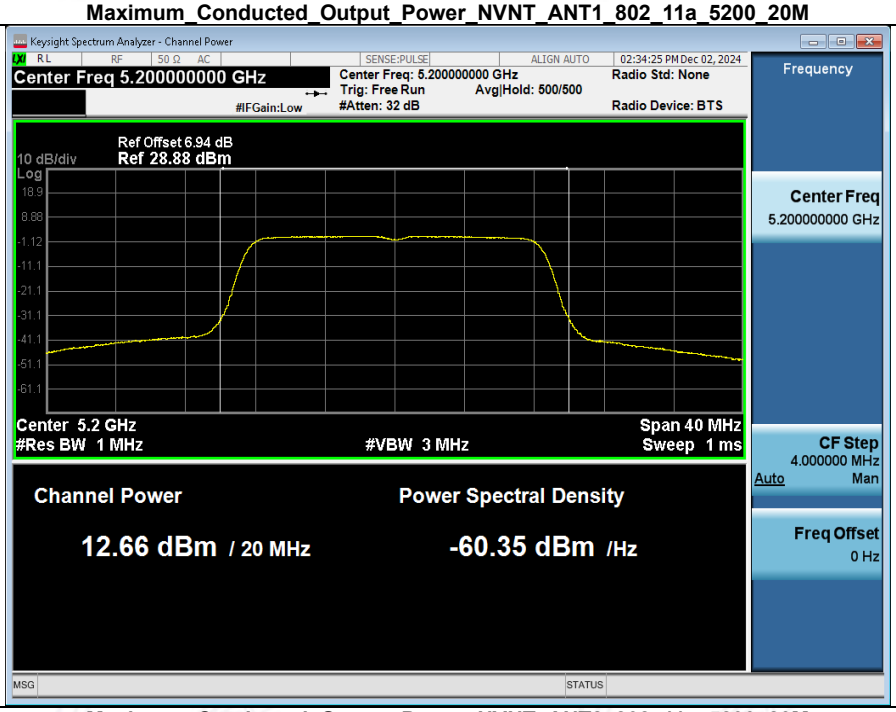

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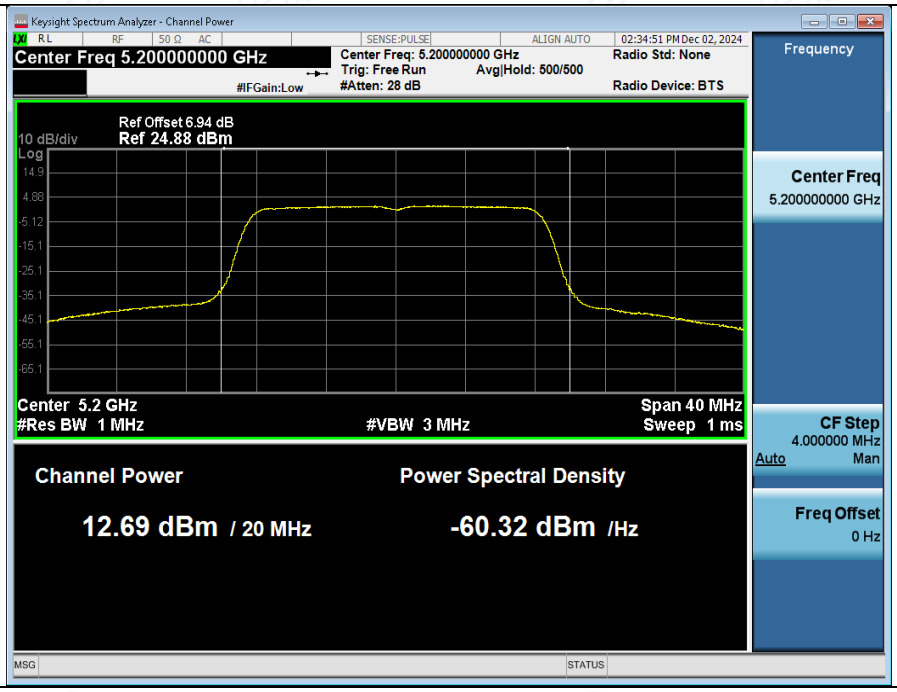
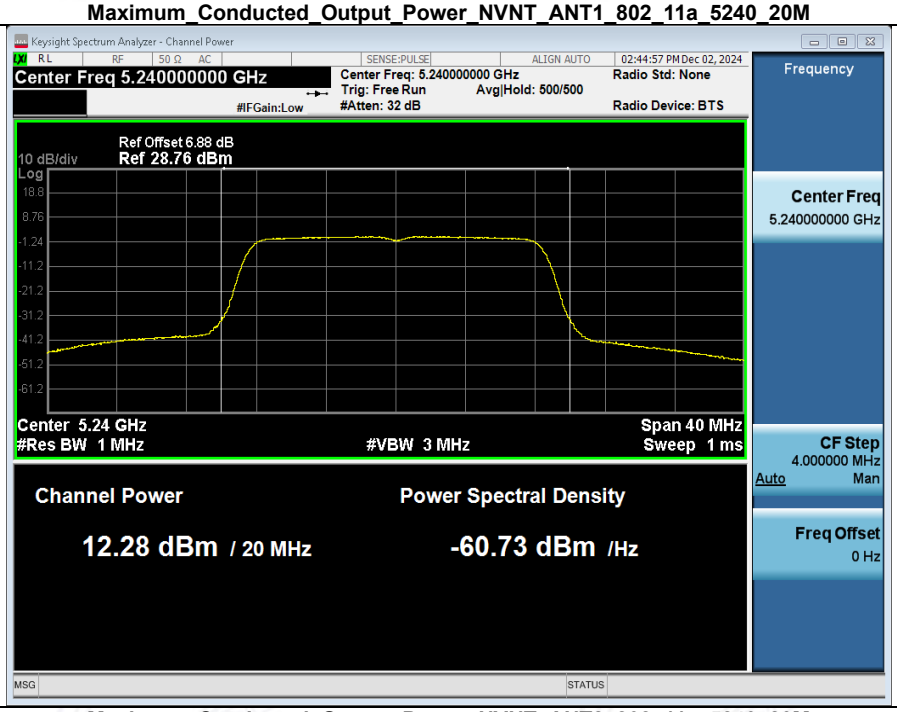


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5240_20M



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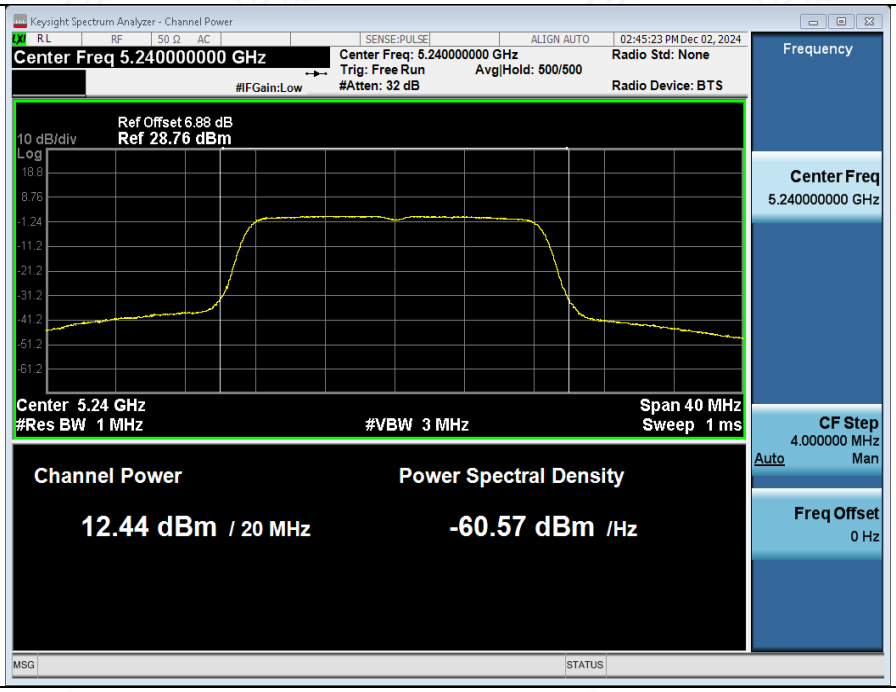

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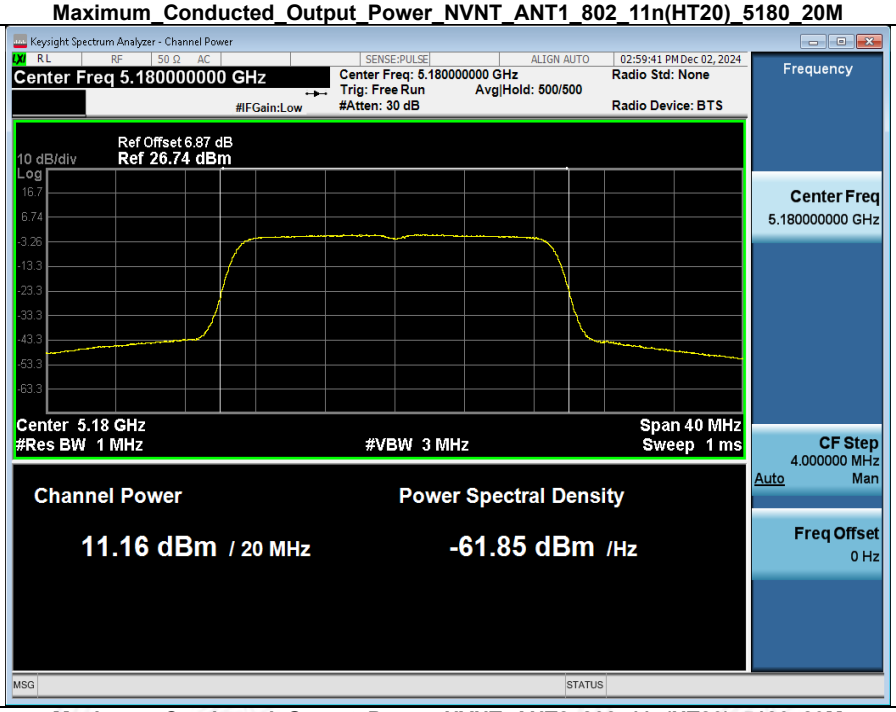

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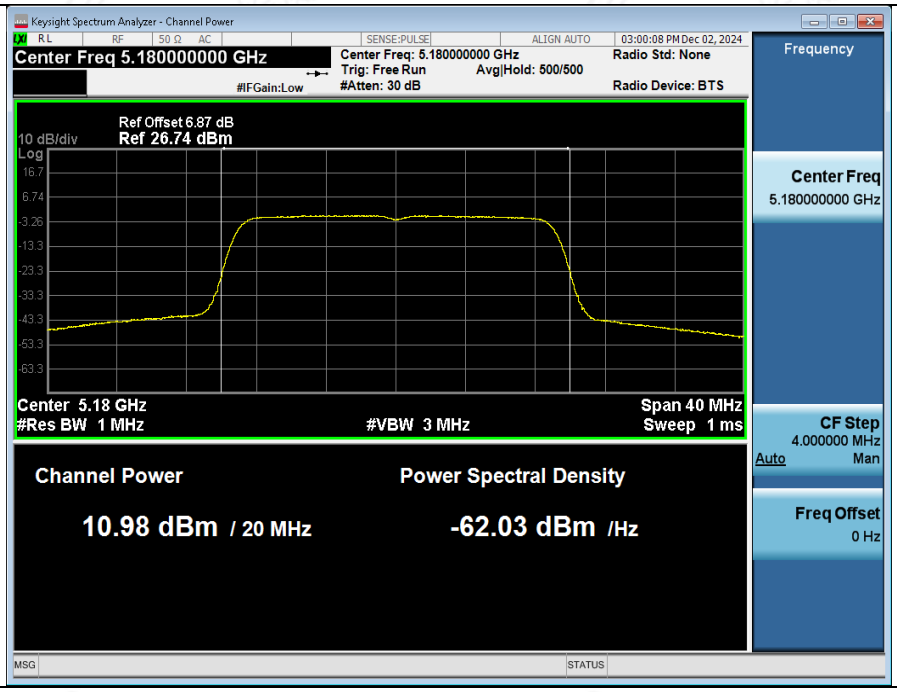

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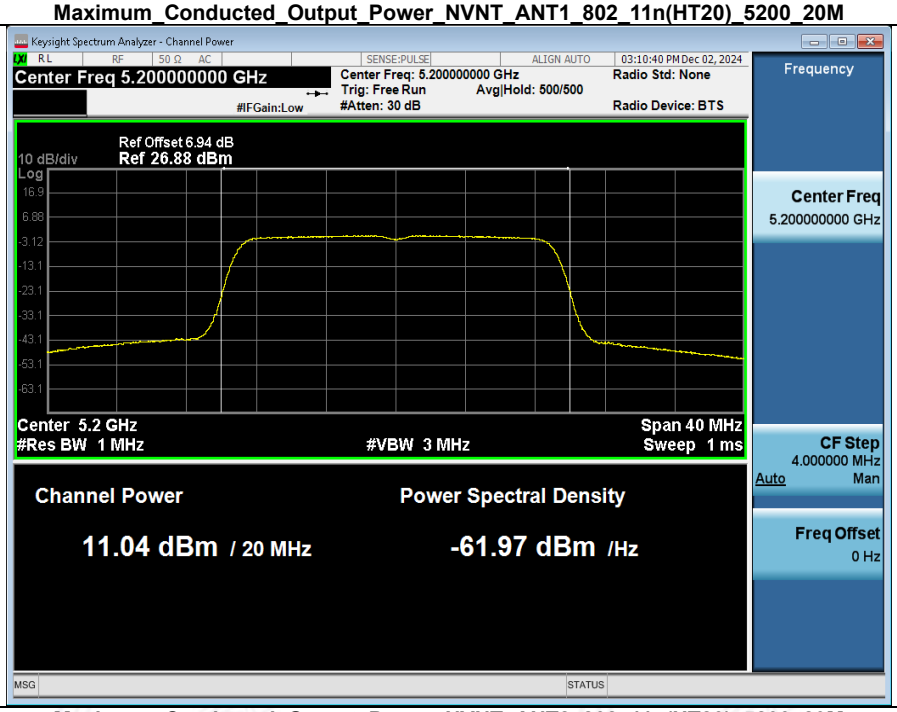

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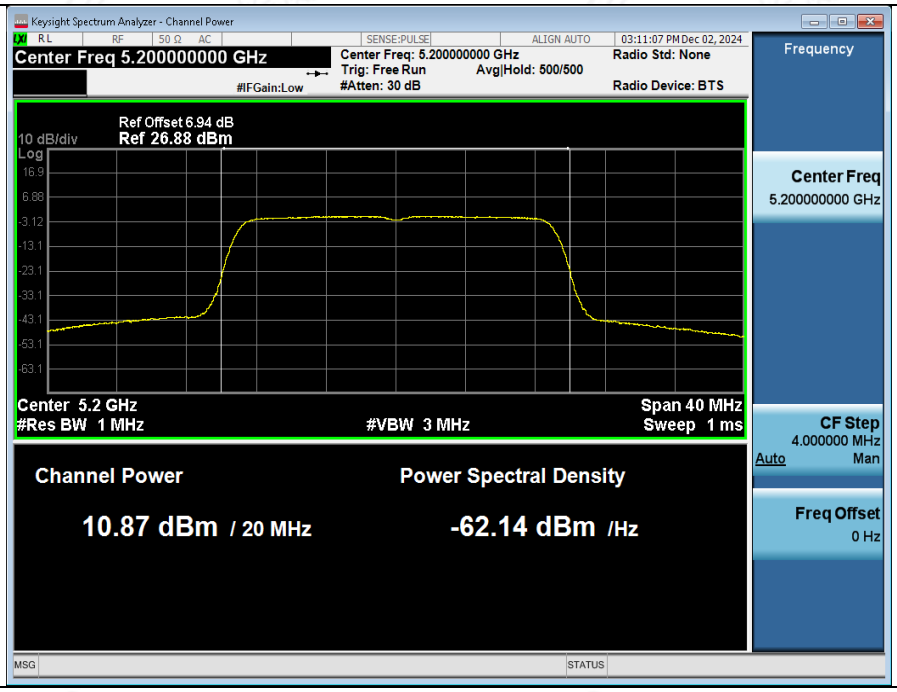

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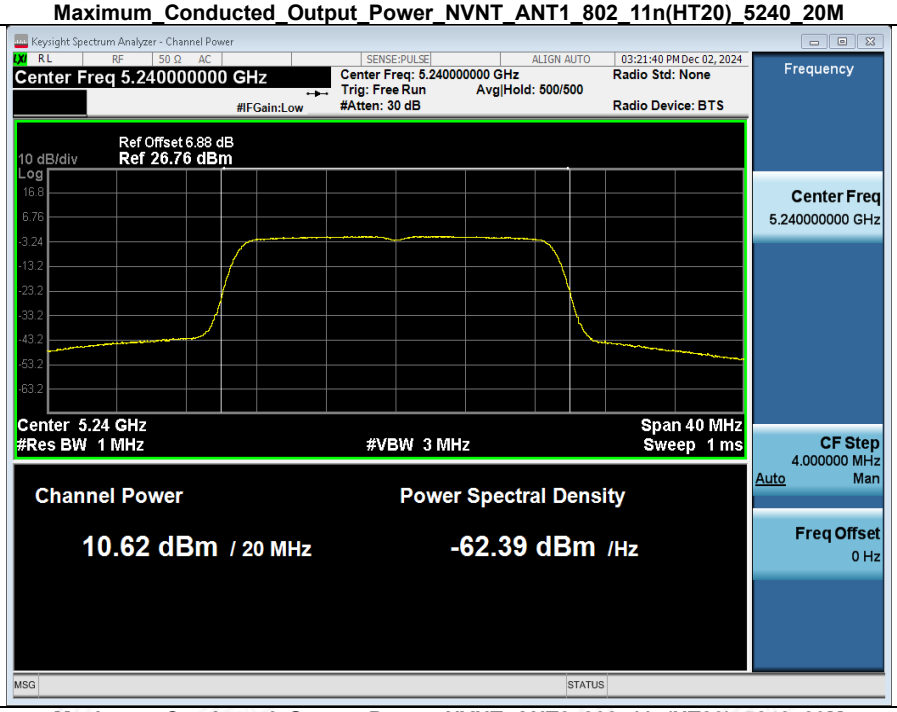

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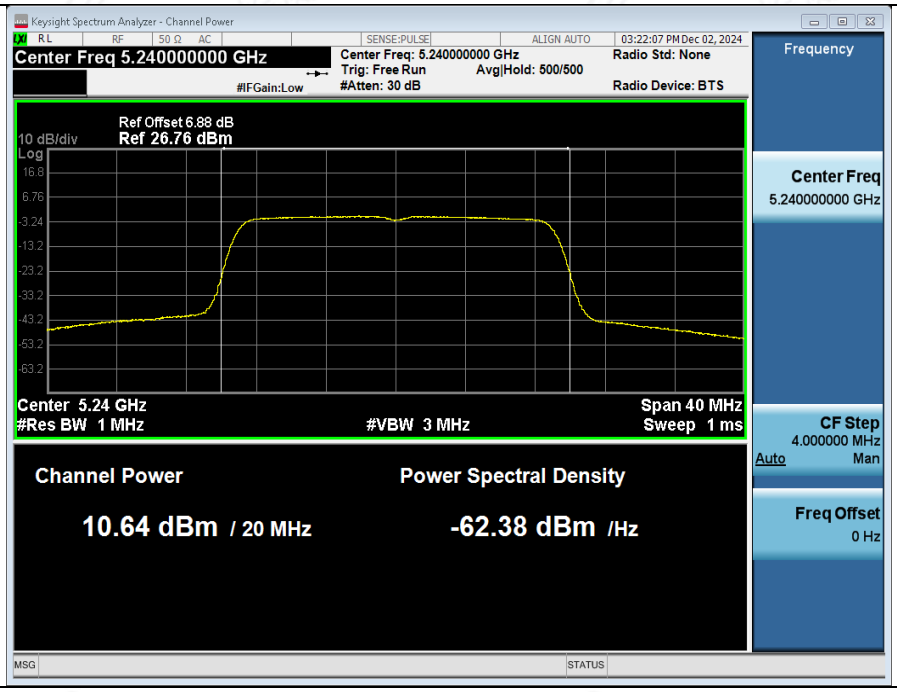

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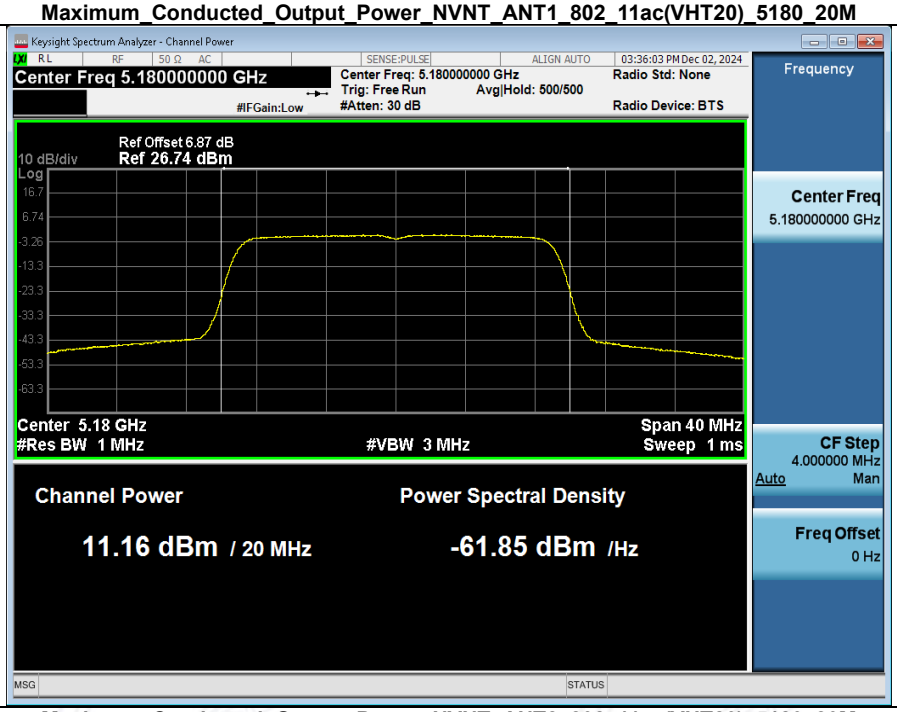

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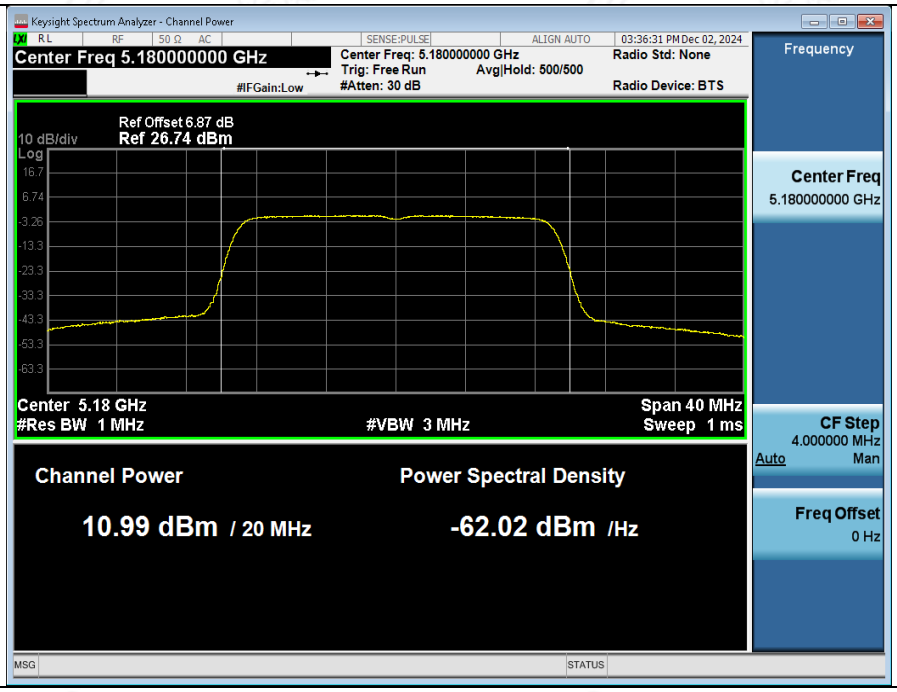

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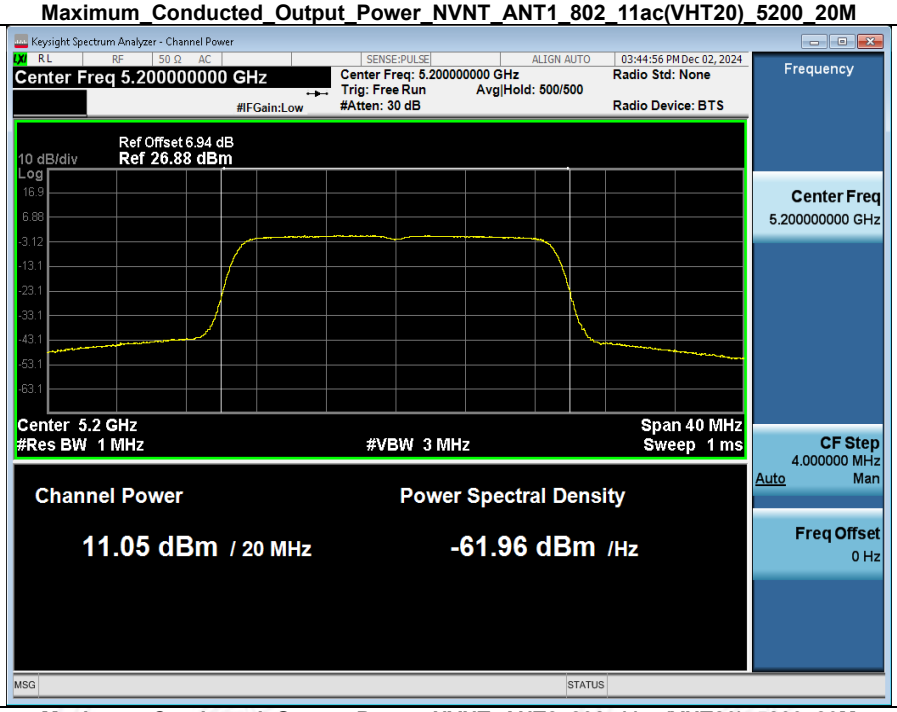

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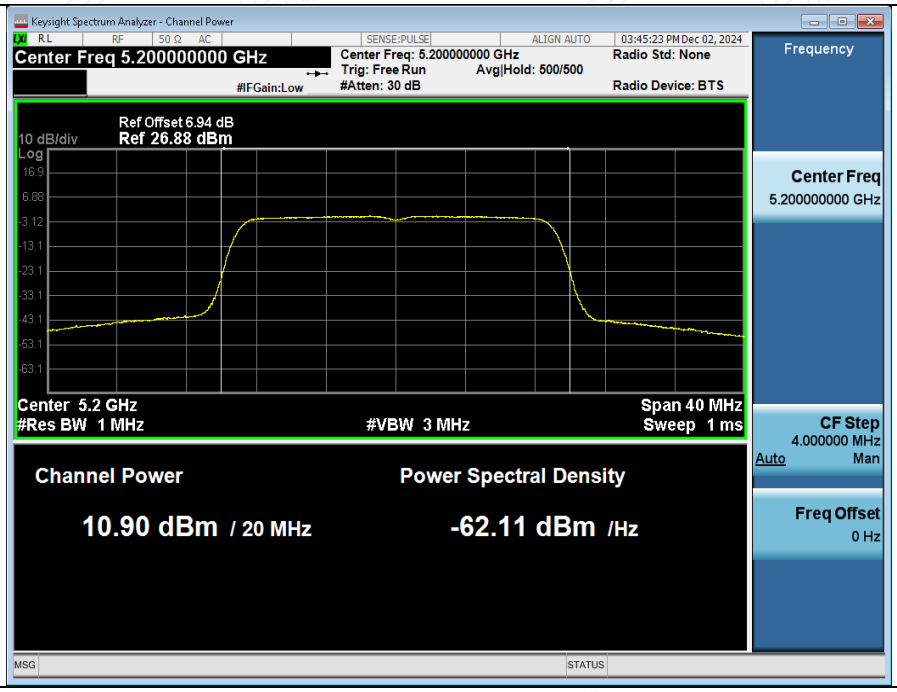
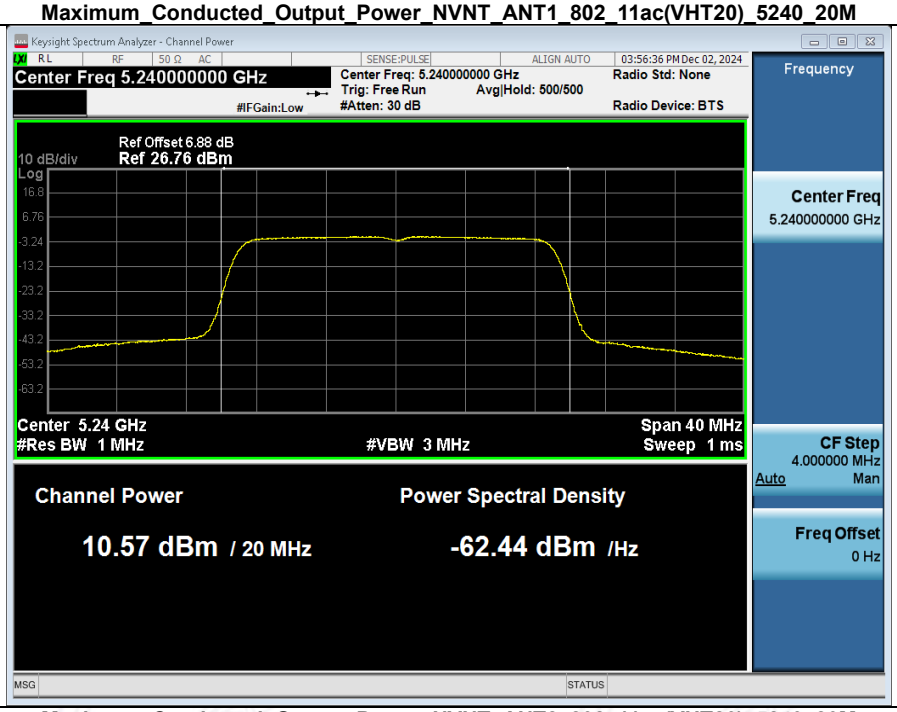


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5240_20M



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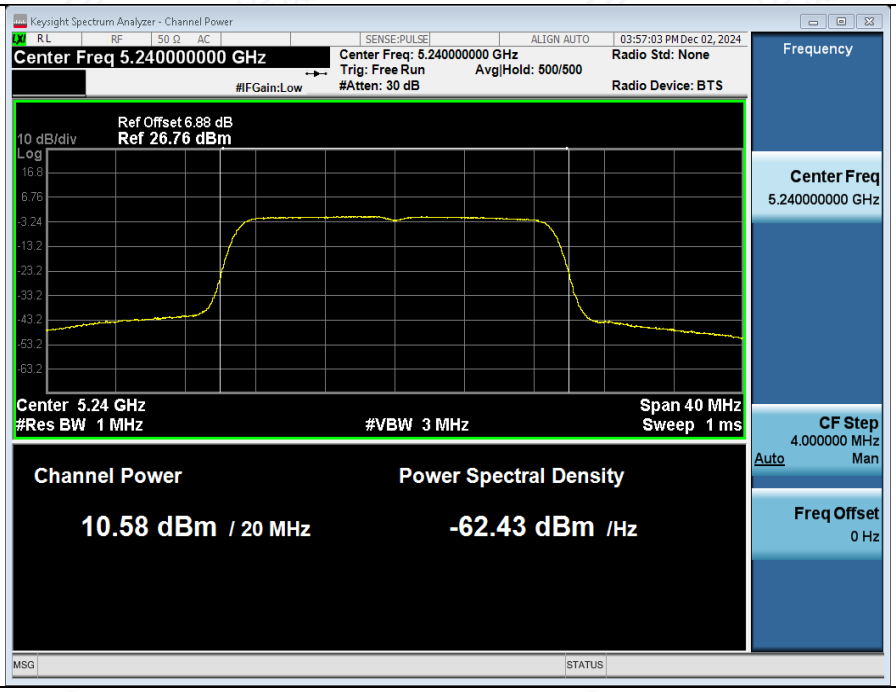
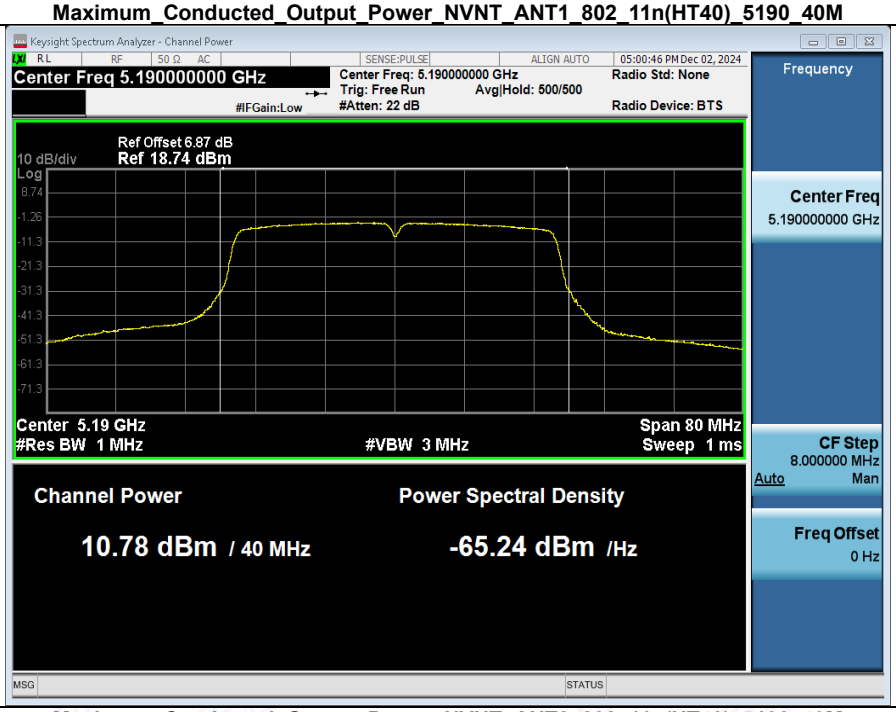


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT40)_5190_40M



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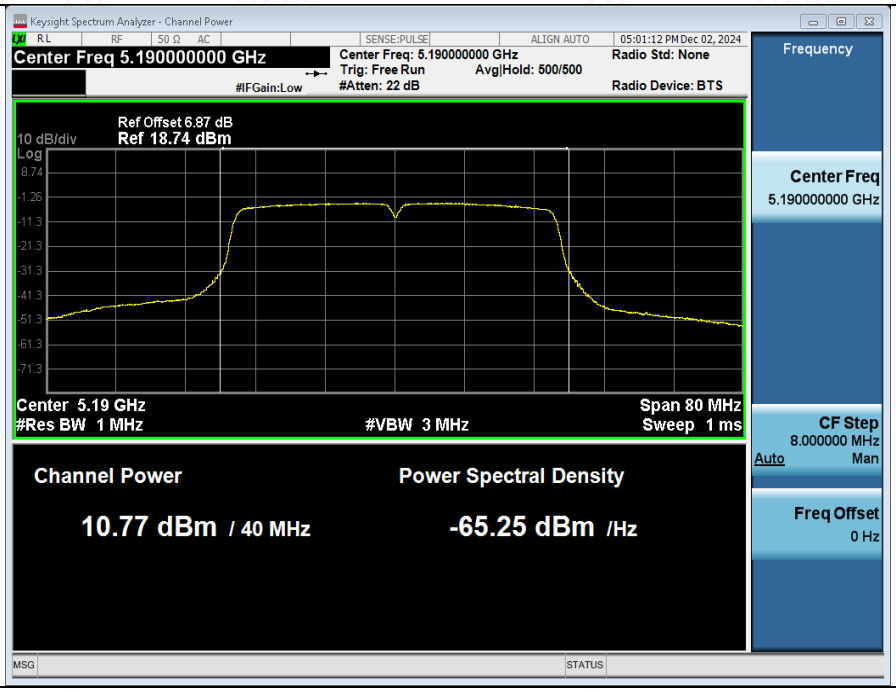

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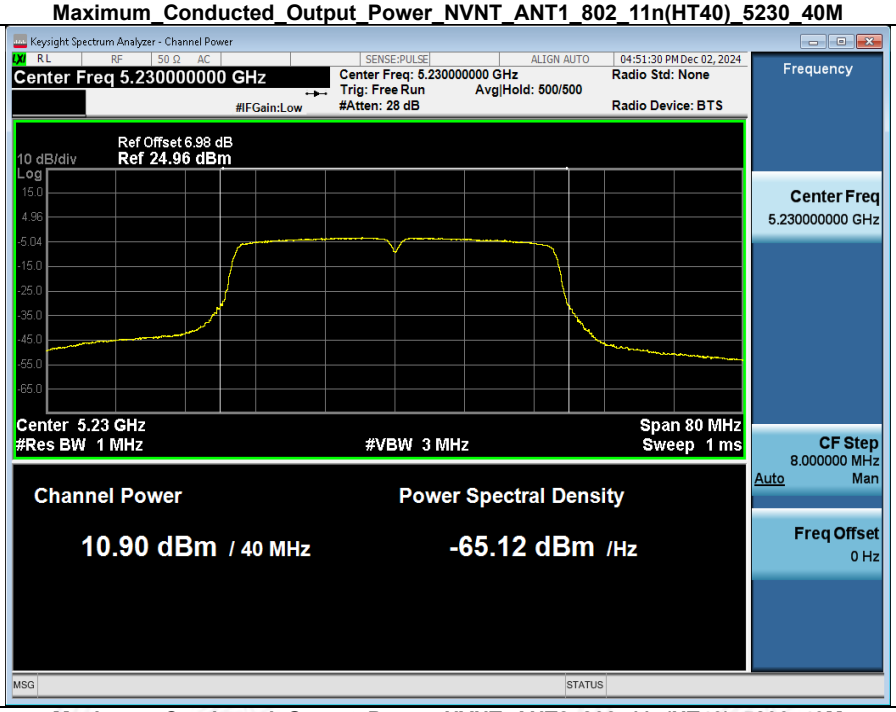

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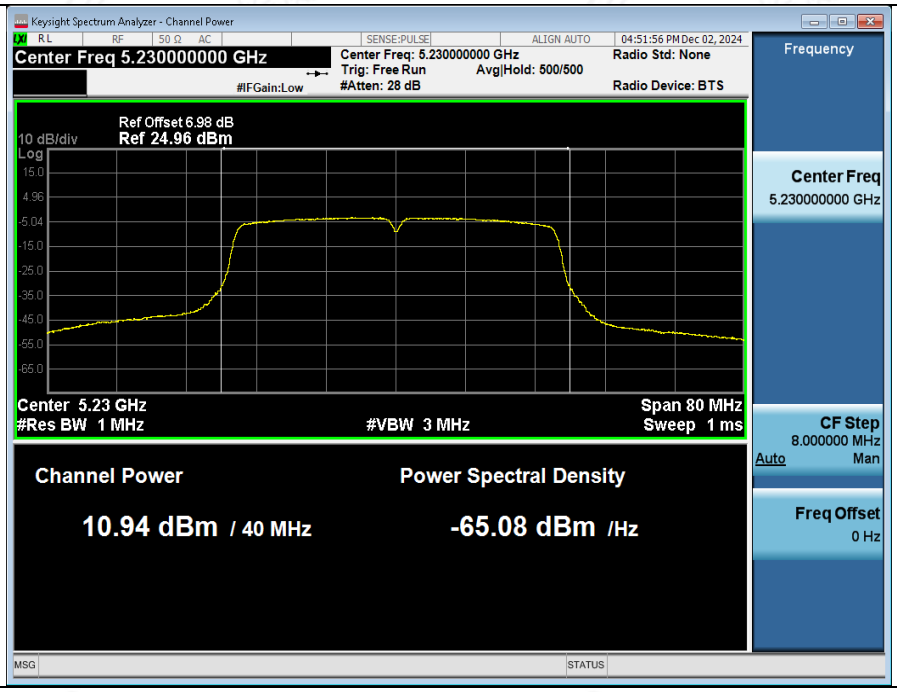
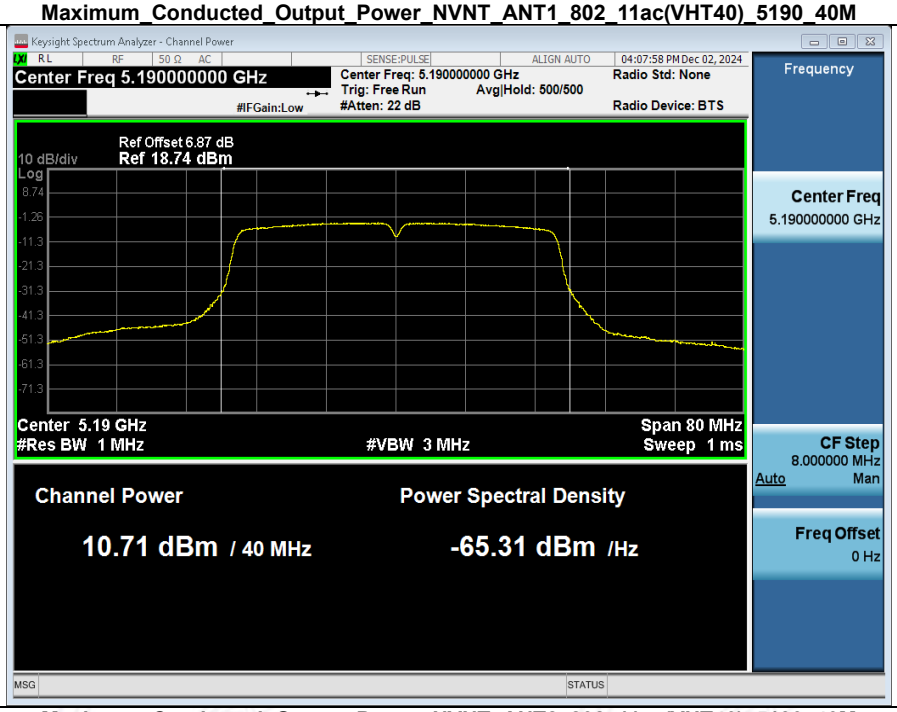
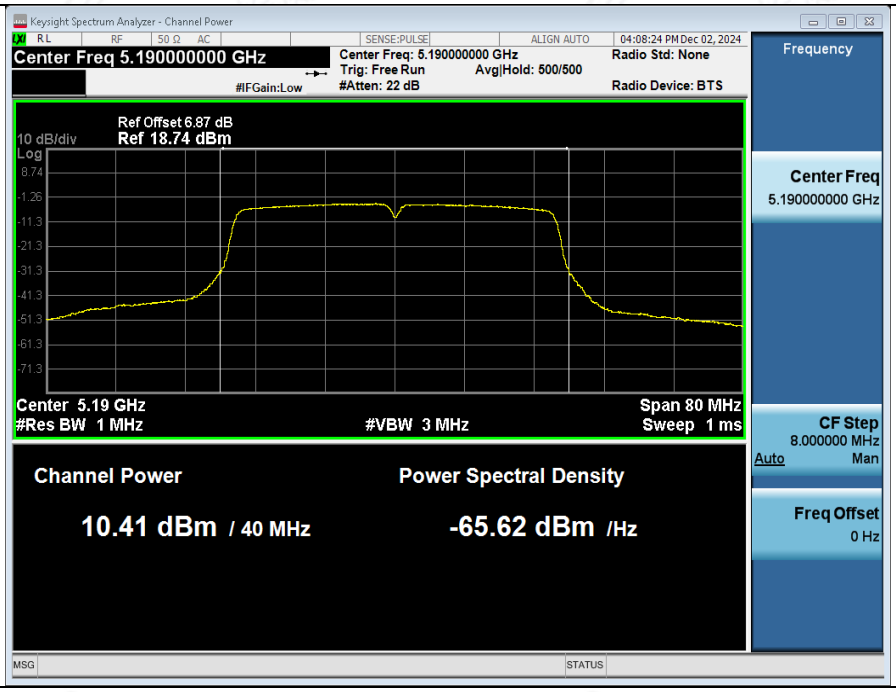


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT40)_5190_40M



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT40)_5190_40M



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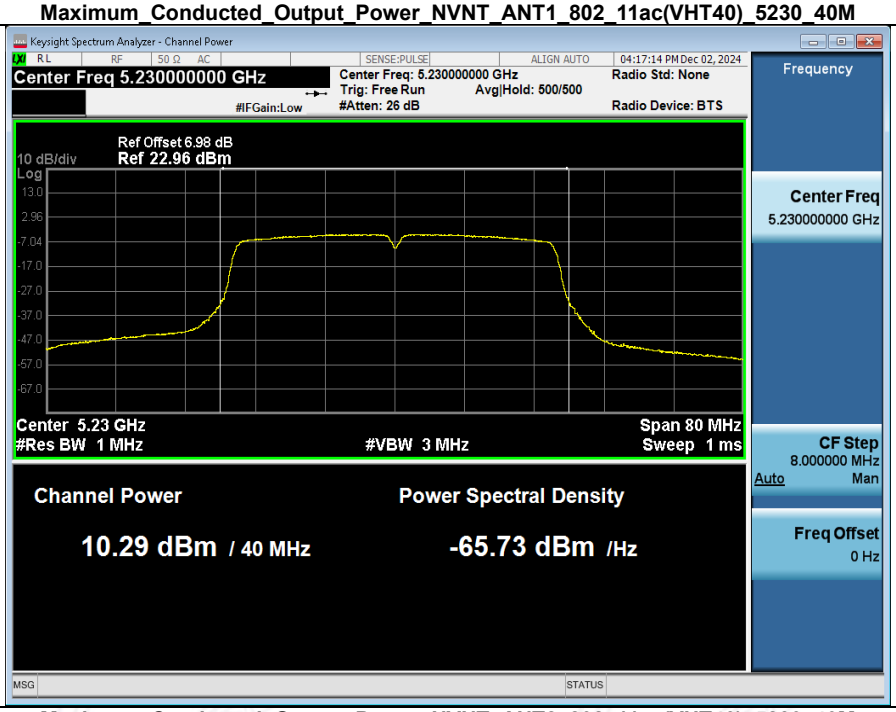

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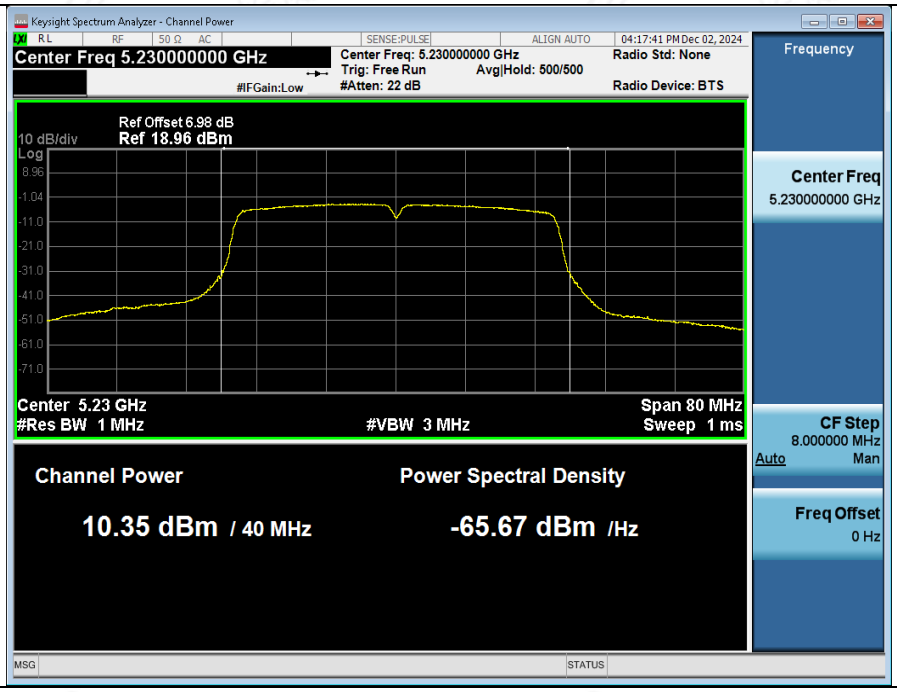

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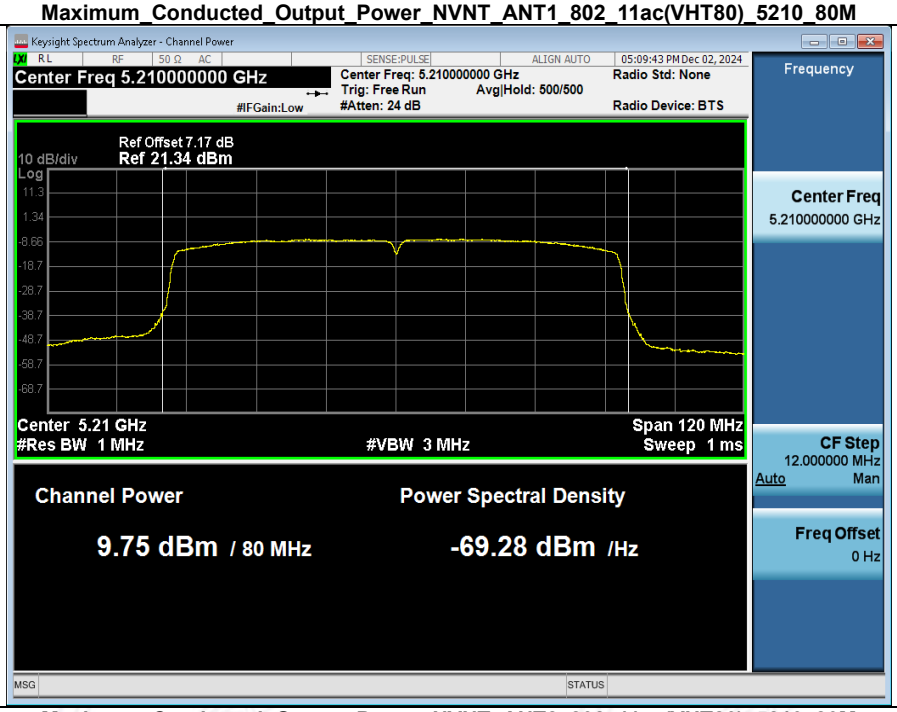

Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT80)_5210_80M