Appendix

Test Data

for BTEK241111036A02E18

Start date	2024/12/9	Finish date	2024/12/10
Temperature	21.3℃	Humidity	51%
RF specifications	5.8G_WIFI-Module 1 7663	Test Engineer	Zora

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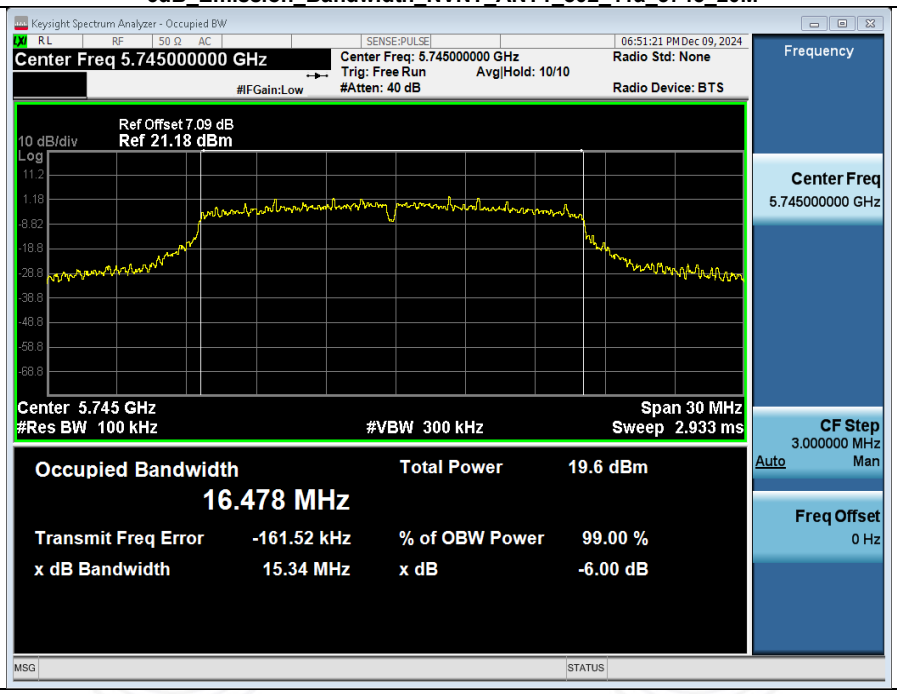
1. -6dB Emission Bandwidth

Condition	Antenna	Mode	Frequency(MHz)	-6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	15.341	0.500	Pass
NVNT	ANT2	802.11a	5745.00	15.128	0.500	Pass
NVNT	ANT1	802.11a	5785.00	15.109	0.500	Pass
NVNT	ANT2	802.11a	5785.00	14.475	0.500	Pass
NVNT	ANT1	802.11a	5825.00	15.166	0.500	Pass
NVNT	ANT2	802.11a	5825.00	15.981	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	15.047	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5745.00	15.127	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	14.474	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5785.00	15.149	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	15.156	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5825.00	16.935	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	15.128	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5745.00	16.316	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	15.070	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5785.00	16.077	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	15.074	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5825.00	15.131	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	35.112	0.500	Pass
NVNT	ANT2	802.11n(HT40)	5755.00	35.087	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	35.146	0.500	Pass
NVNT	ANT2	802.11n(HT40)	5795.00	35.158	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	35.115	0.500	Pass
NVNT	ANT2	802.11ac(VHT40)	5755.00	35.149	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	35.157	0.500	Pass
NVNT	ANT2	802.11ac(VHT40)	5795.00	35.150	0.500	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	75.213	0.500	Pass
NVNT	ANT2	802.11ac(VHT80)	5775.00	75.236	0.500	Pass

-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5745_20M



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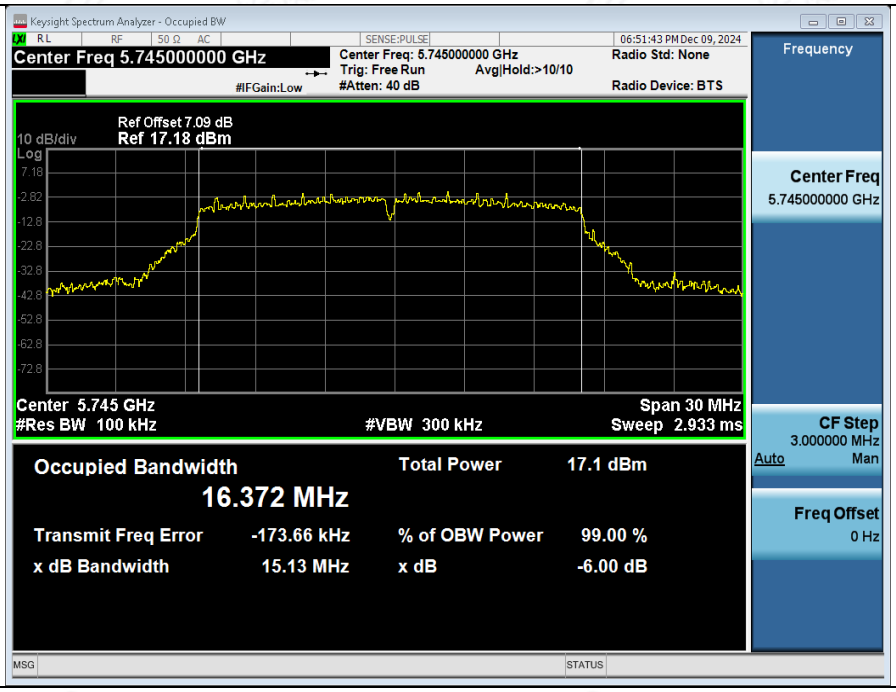

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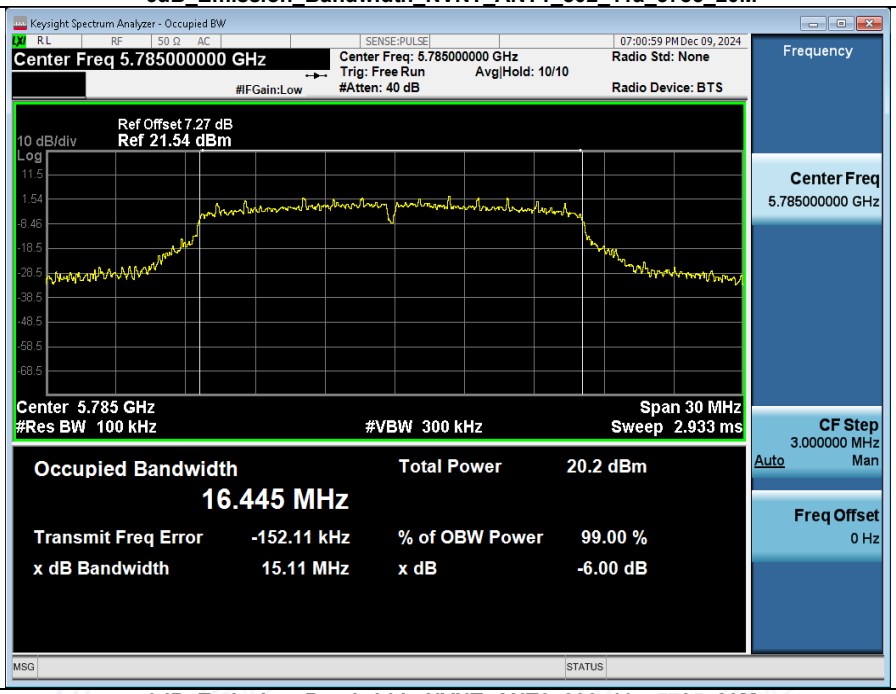

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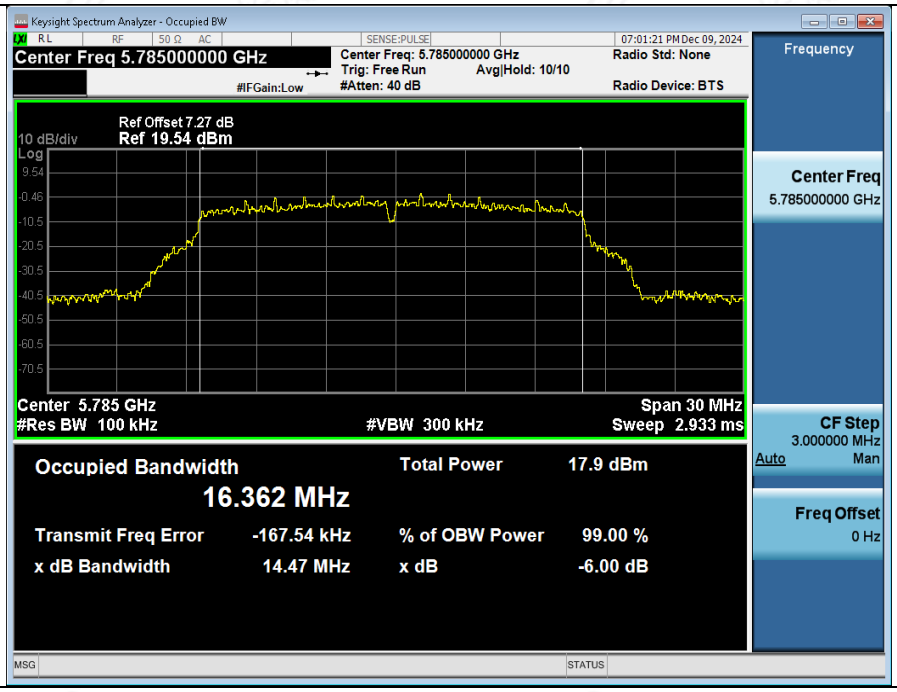

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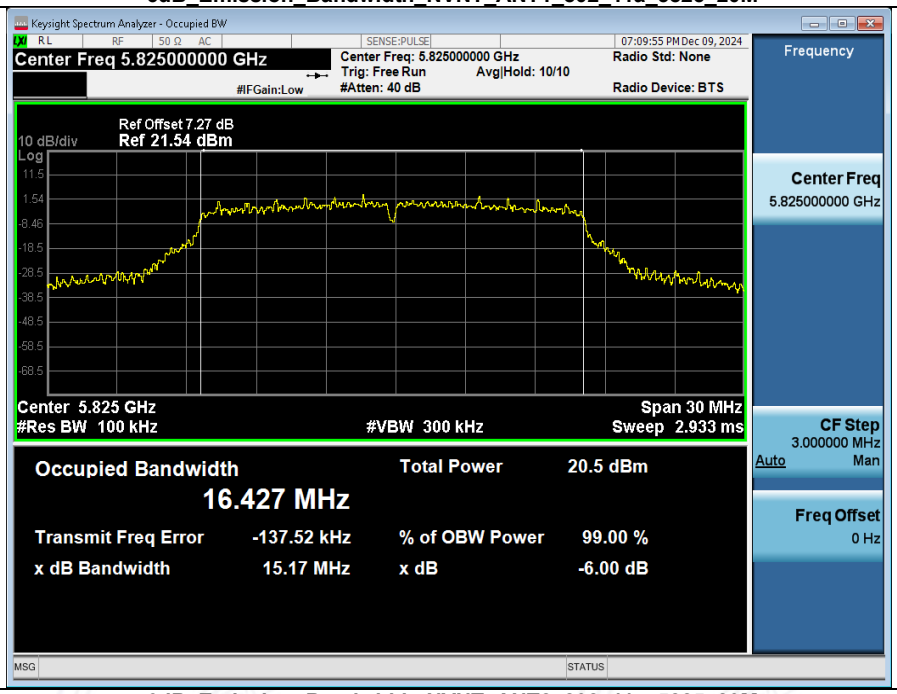

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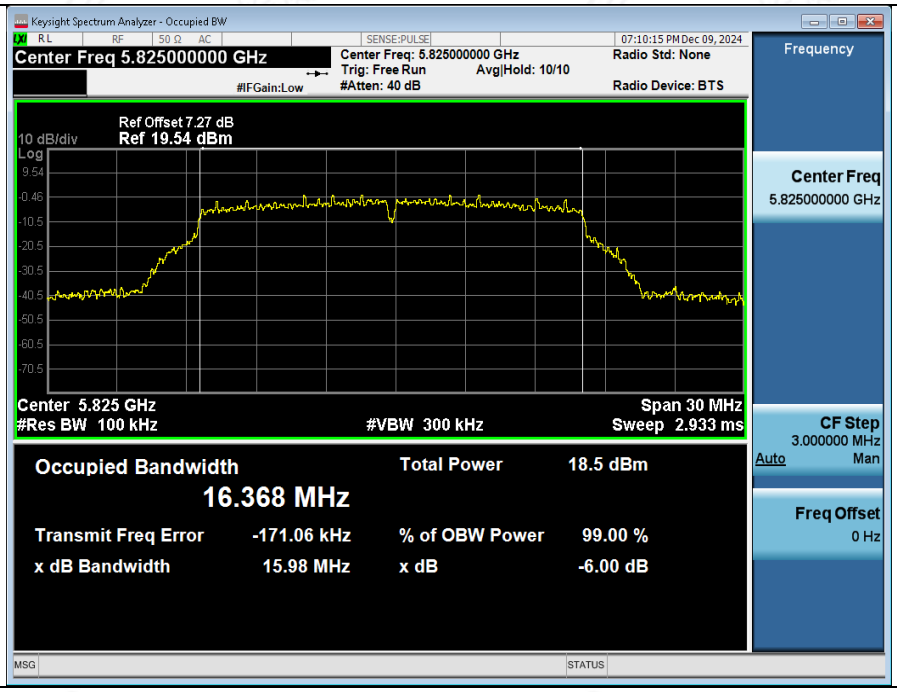

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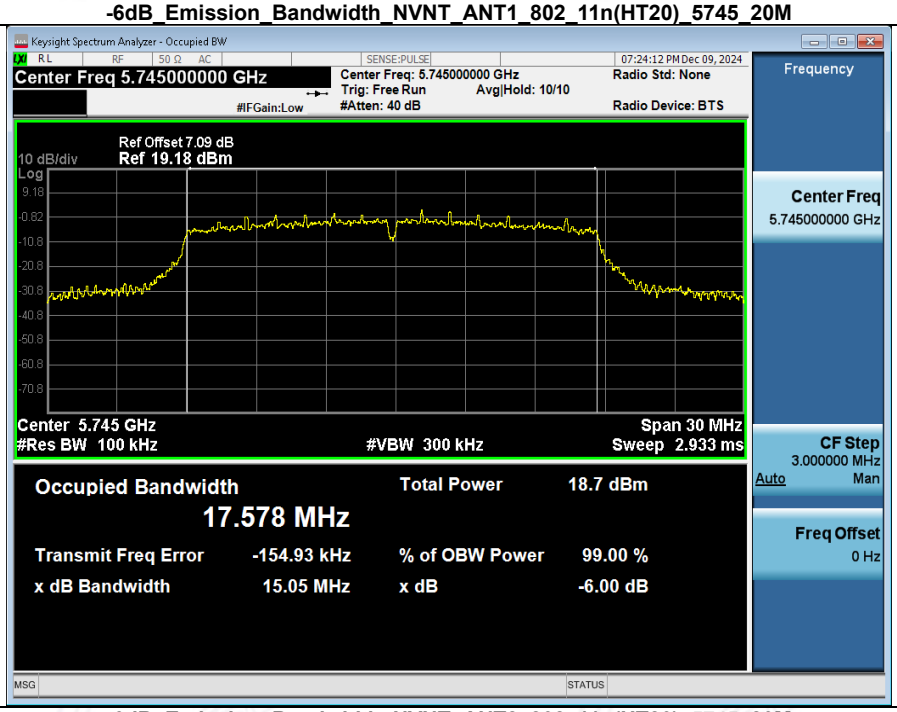

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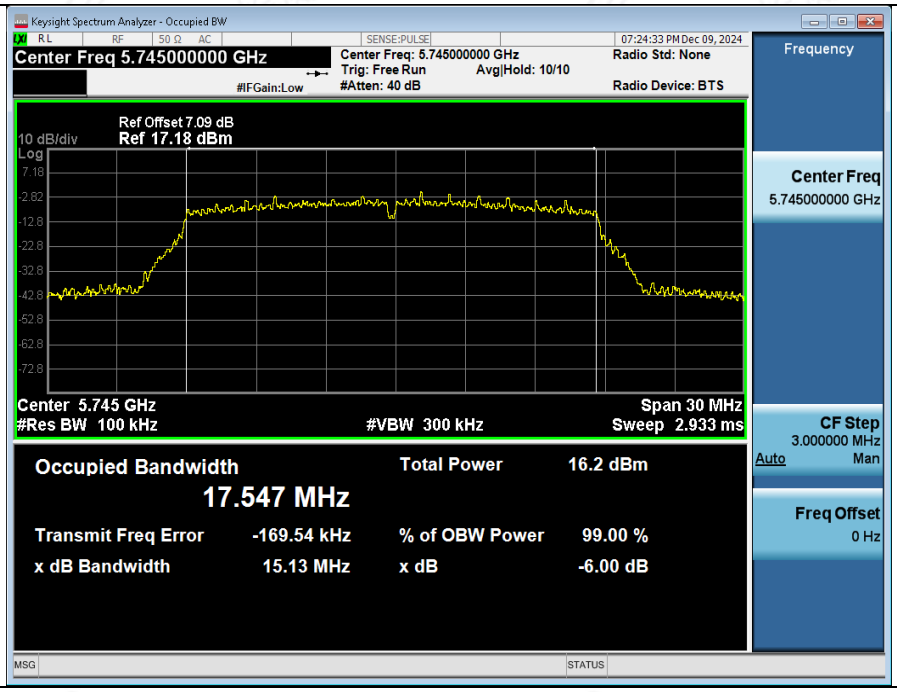

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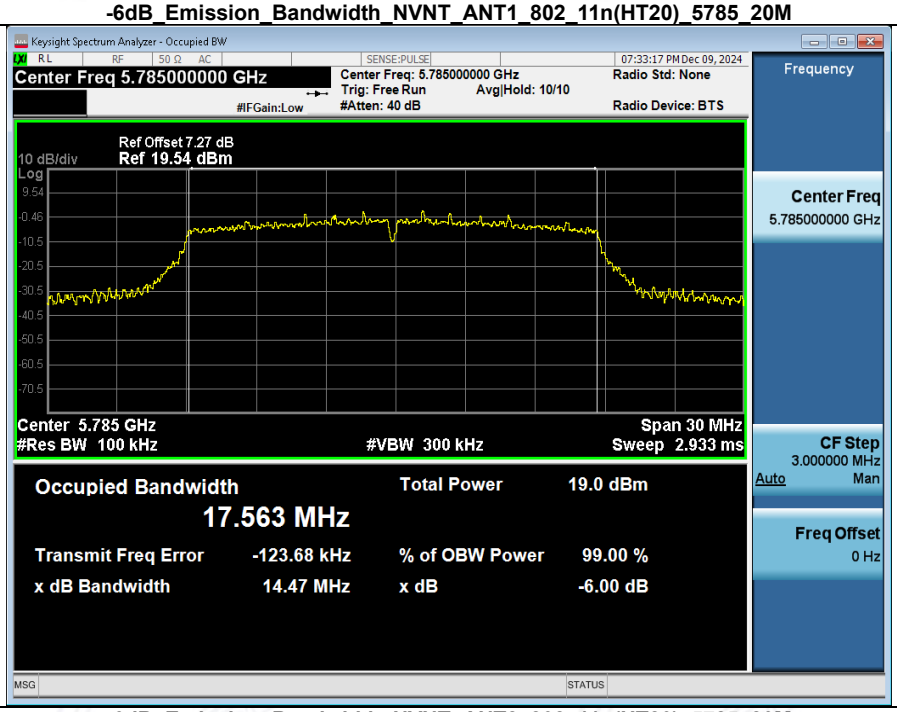

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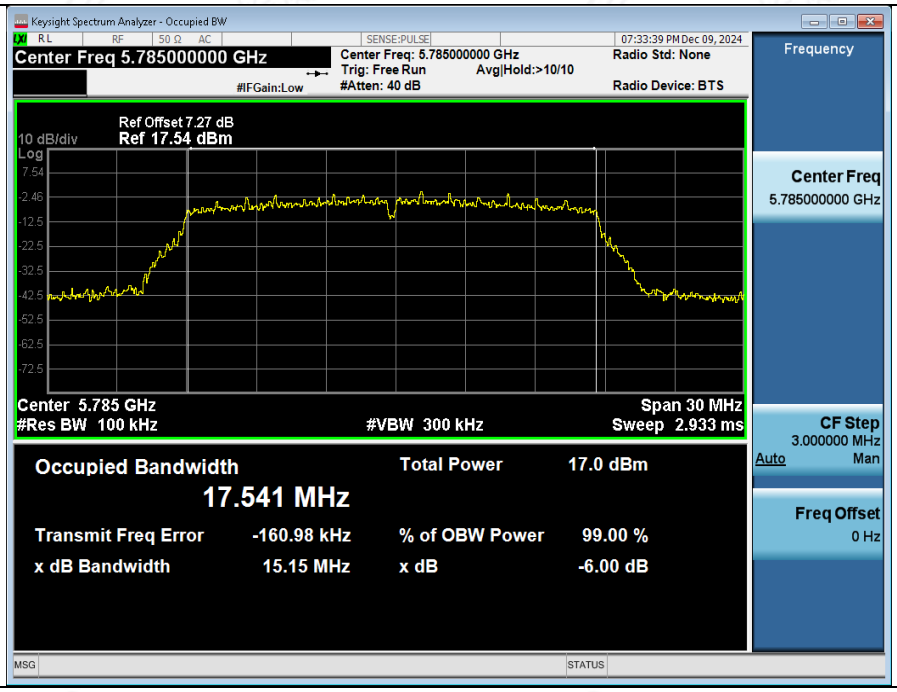

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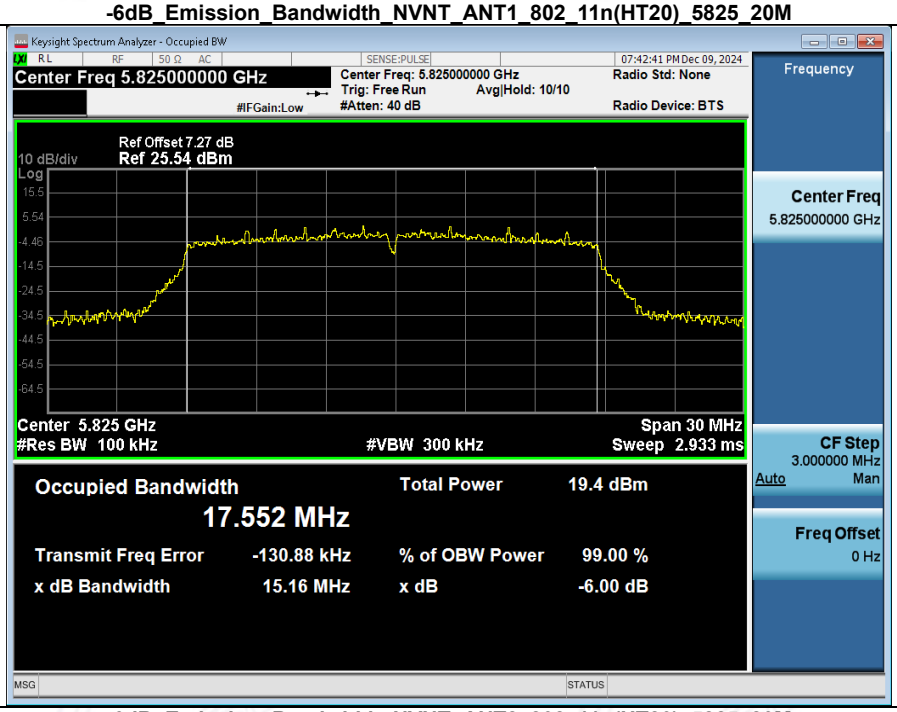

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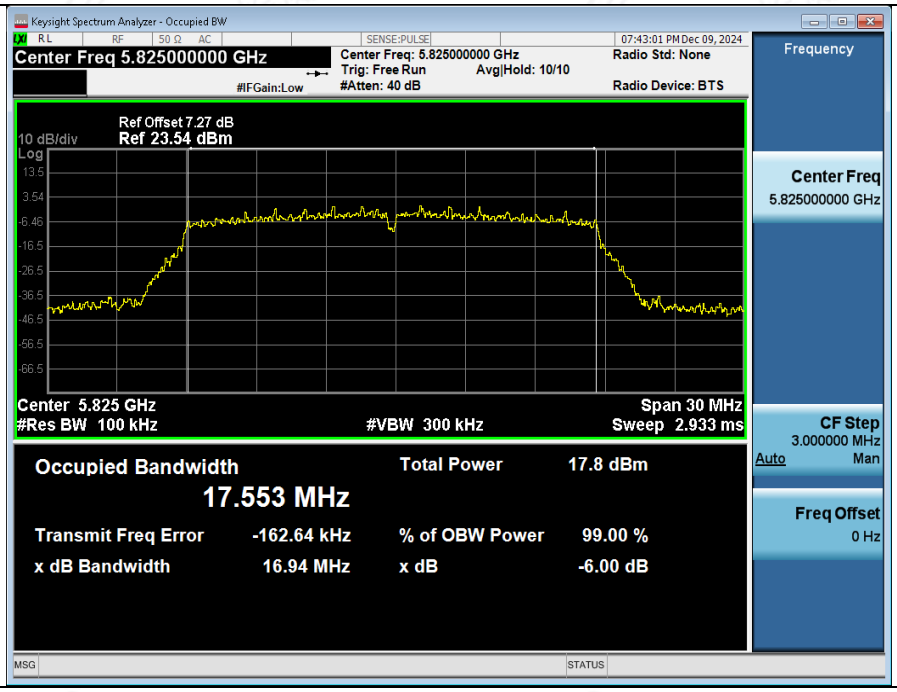

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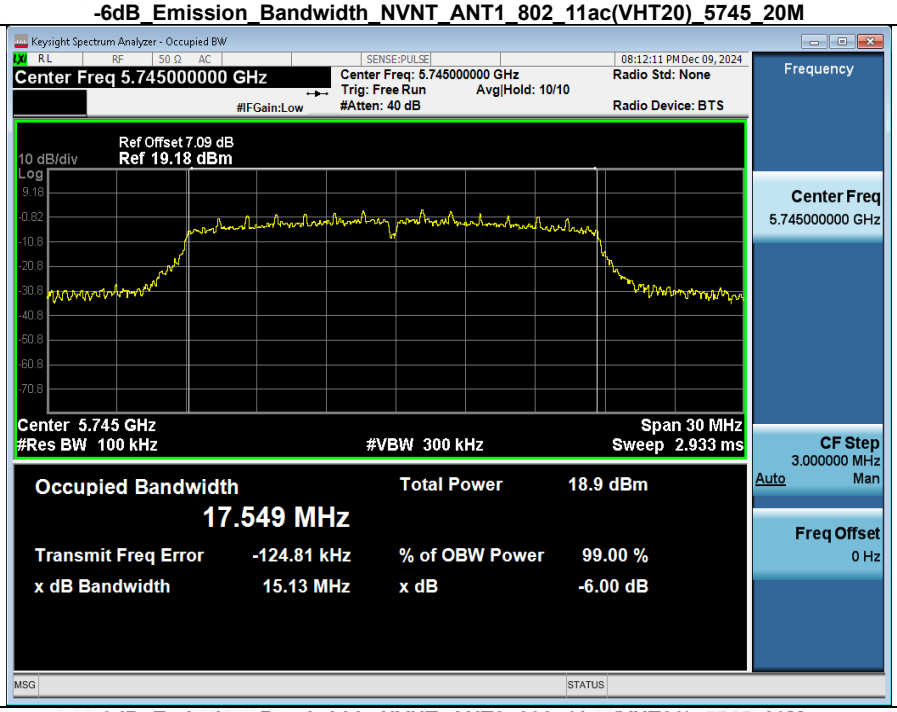

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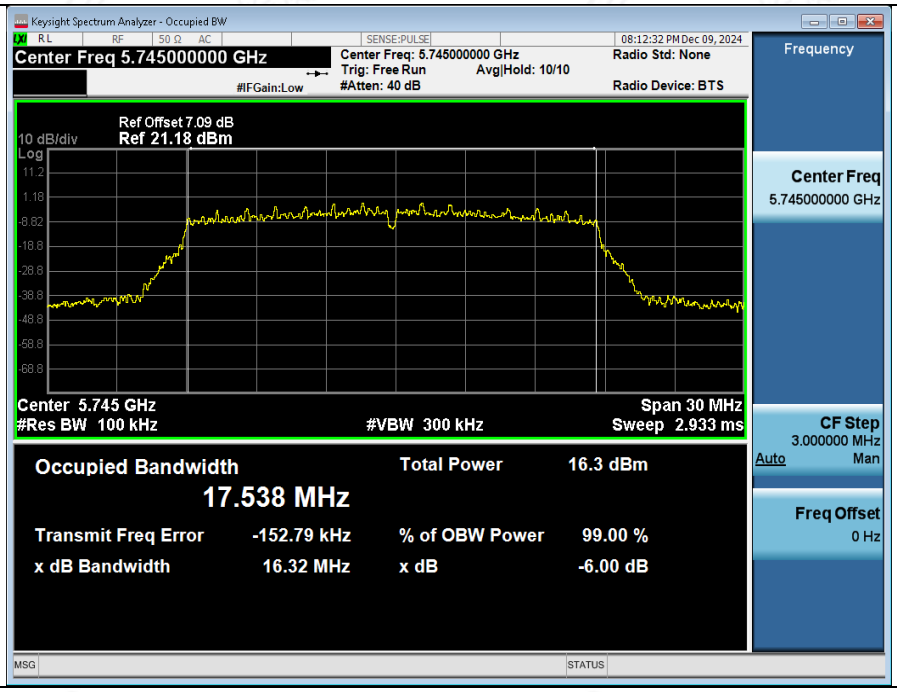

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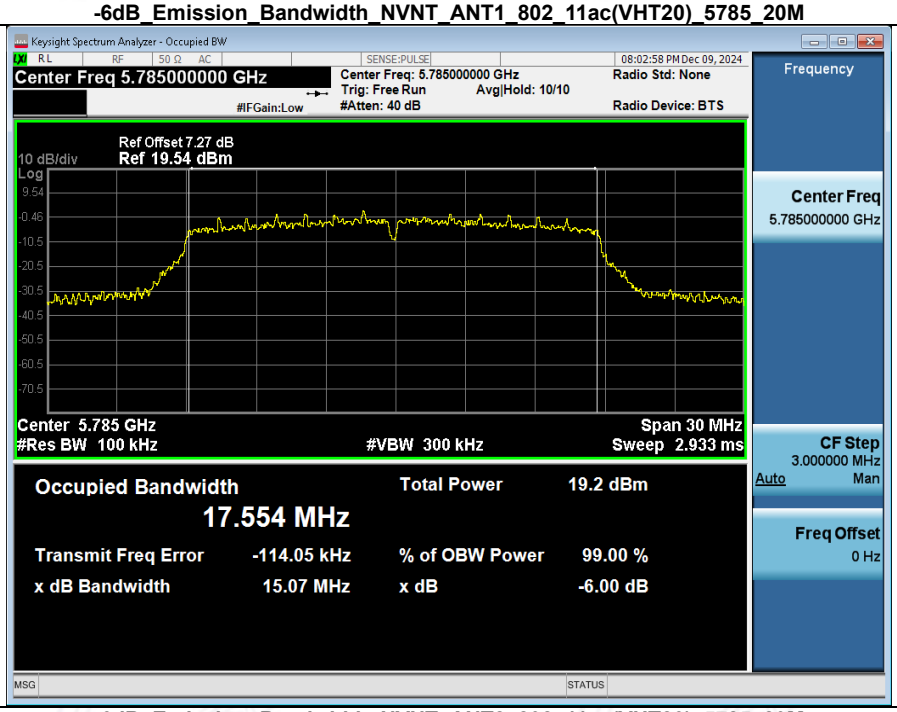

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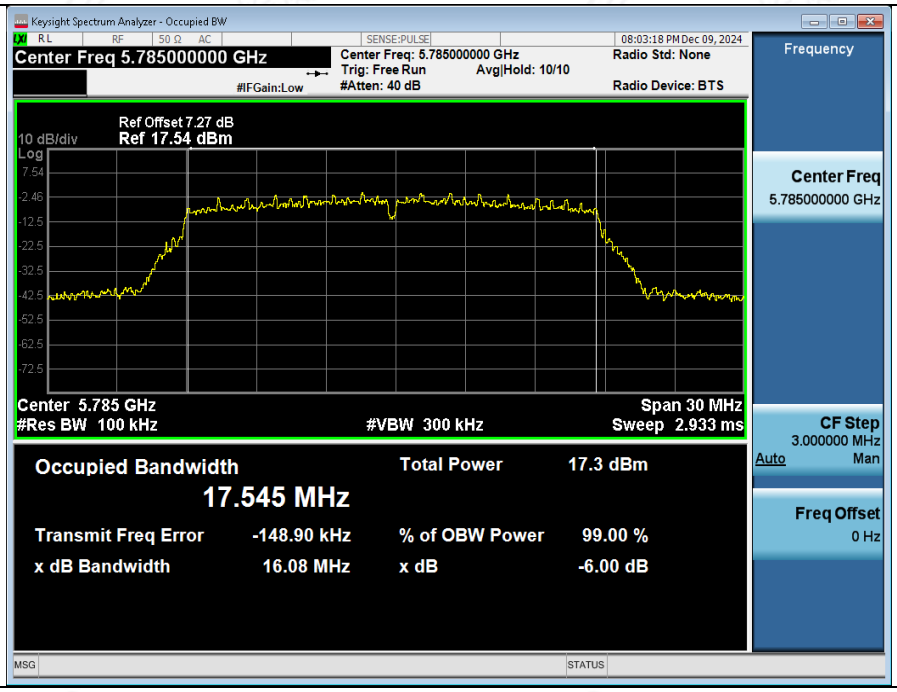

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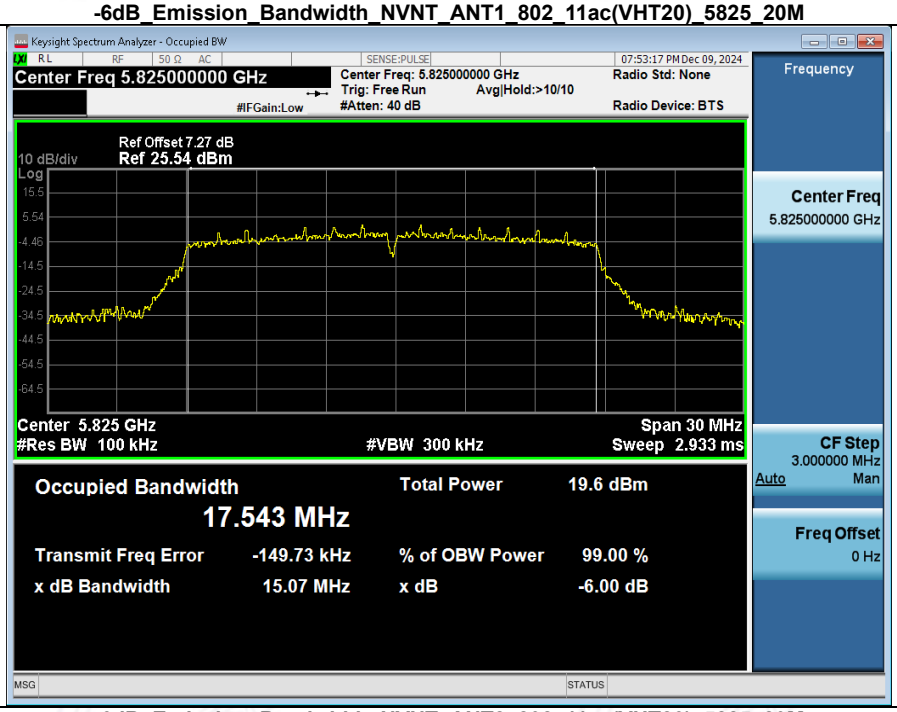

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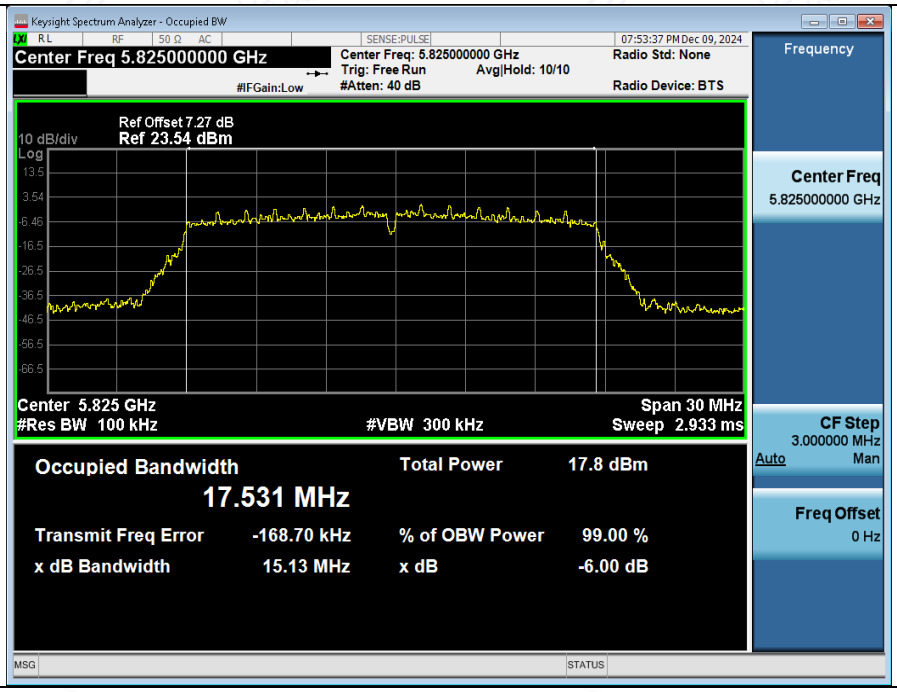

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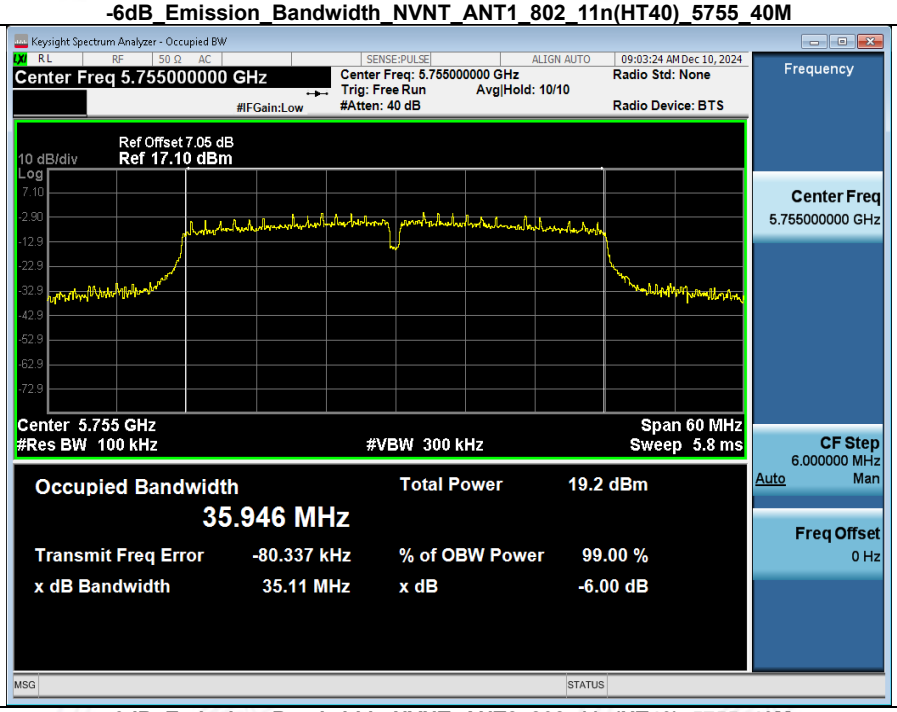

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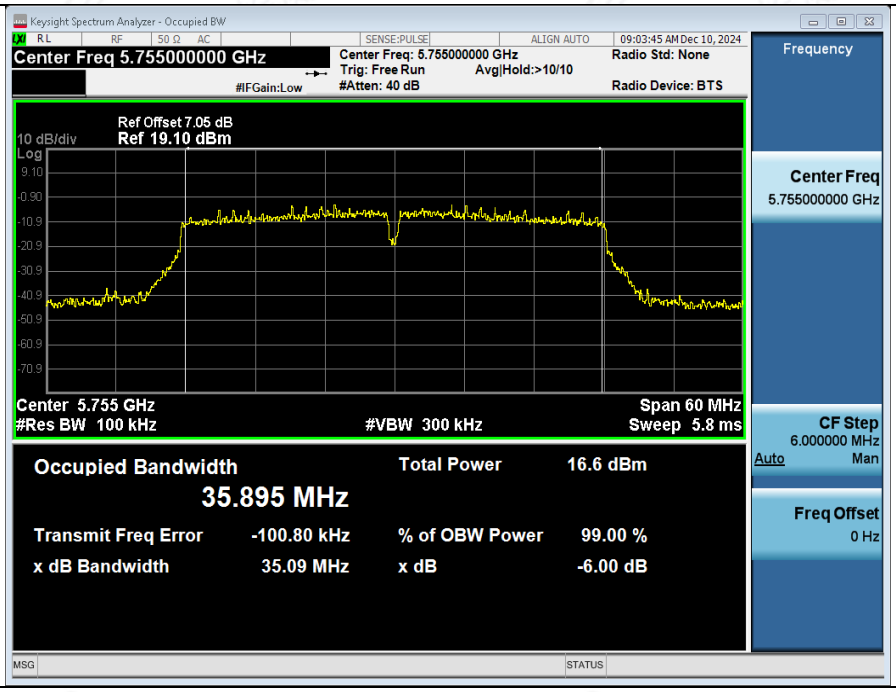

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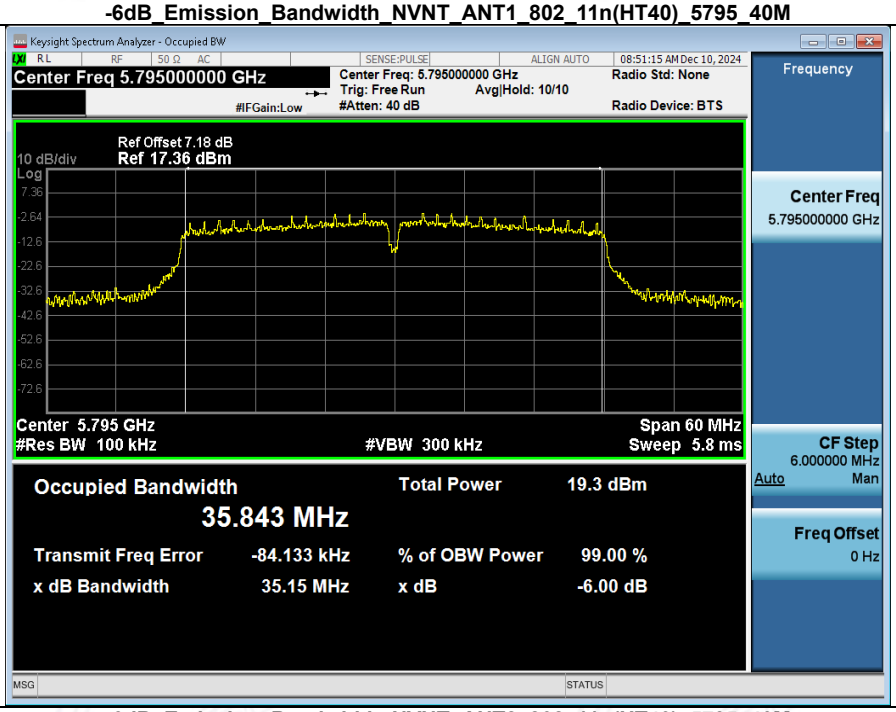

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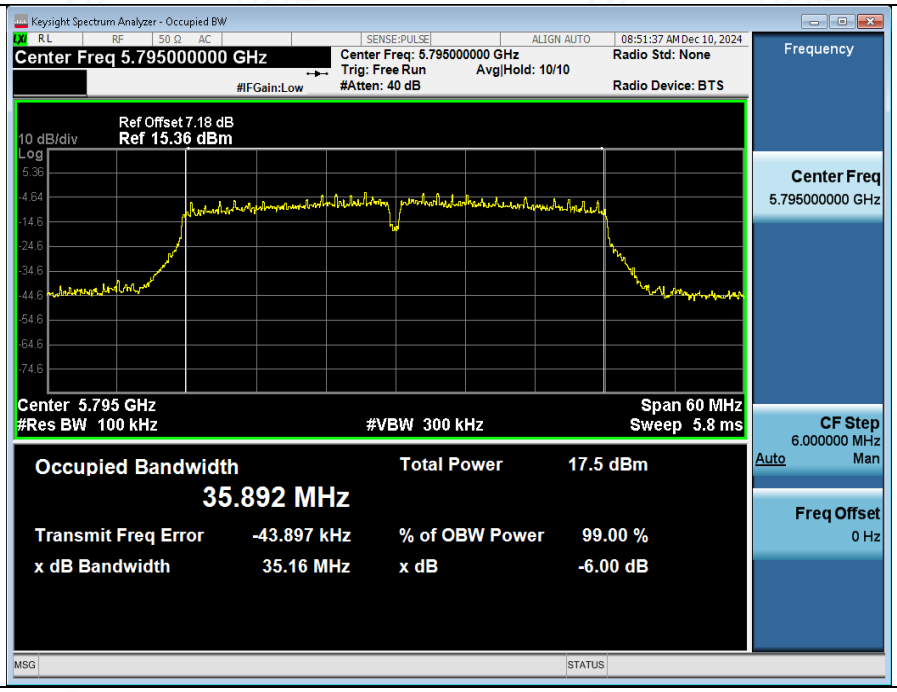

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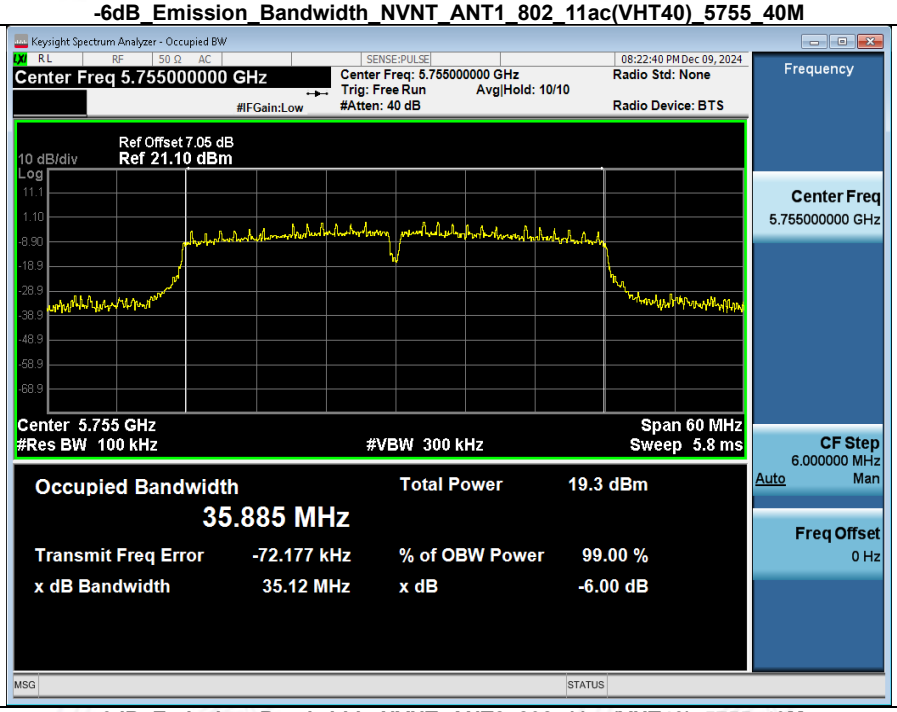

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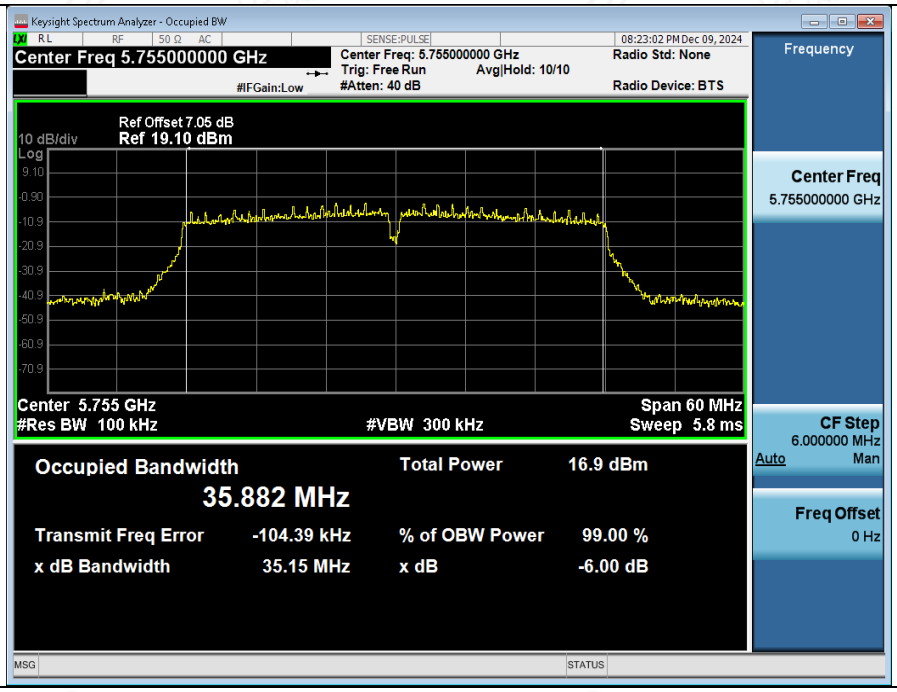

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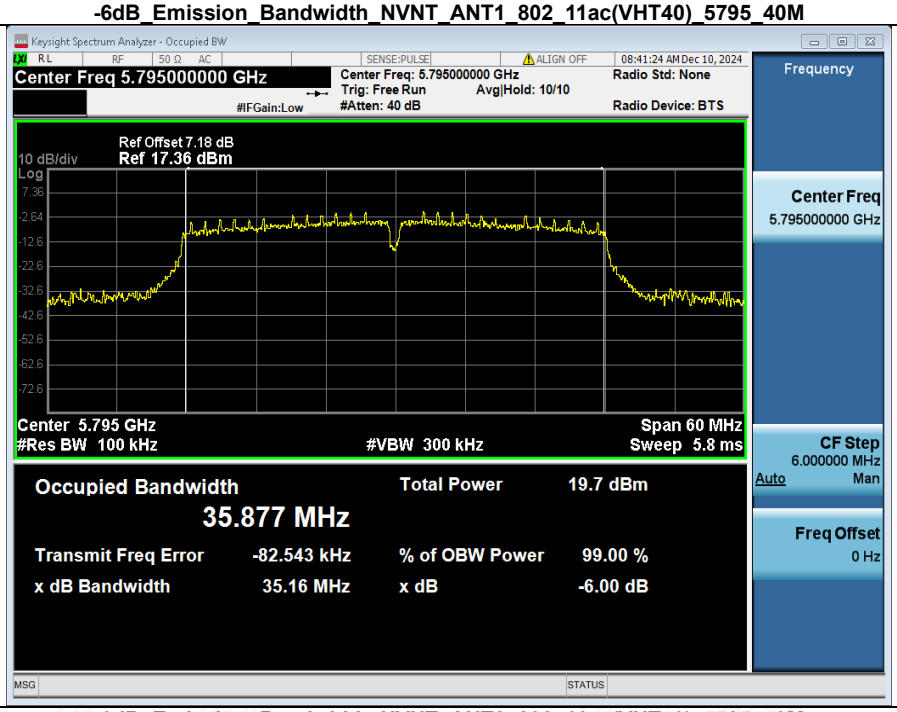

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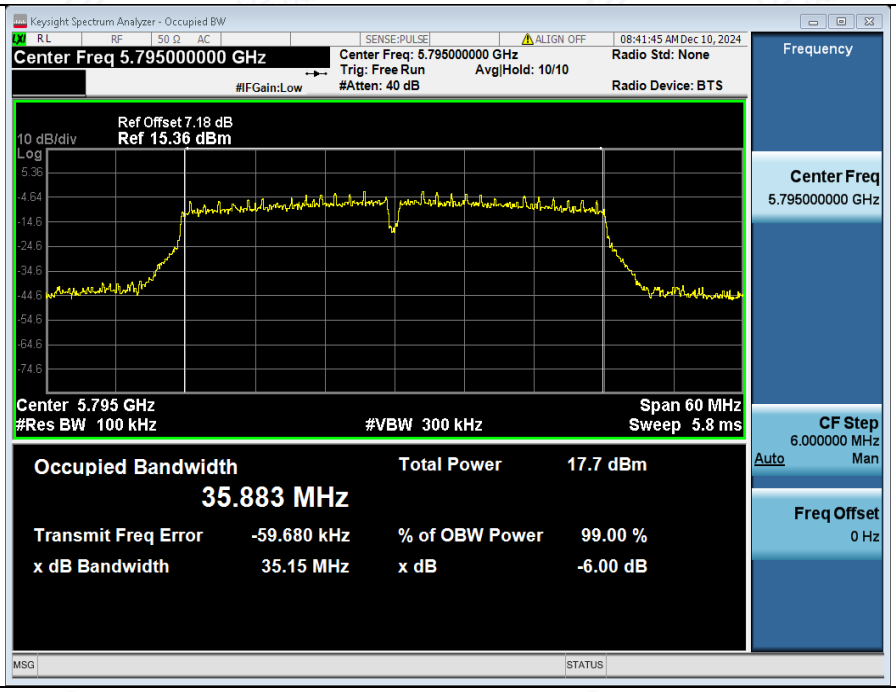

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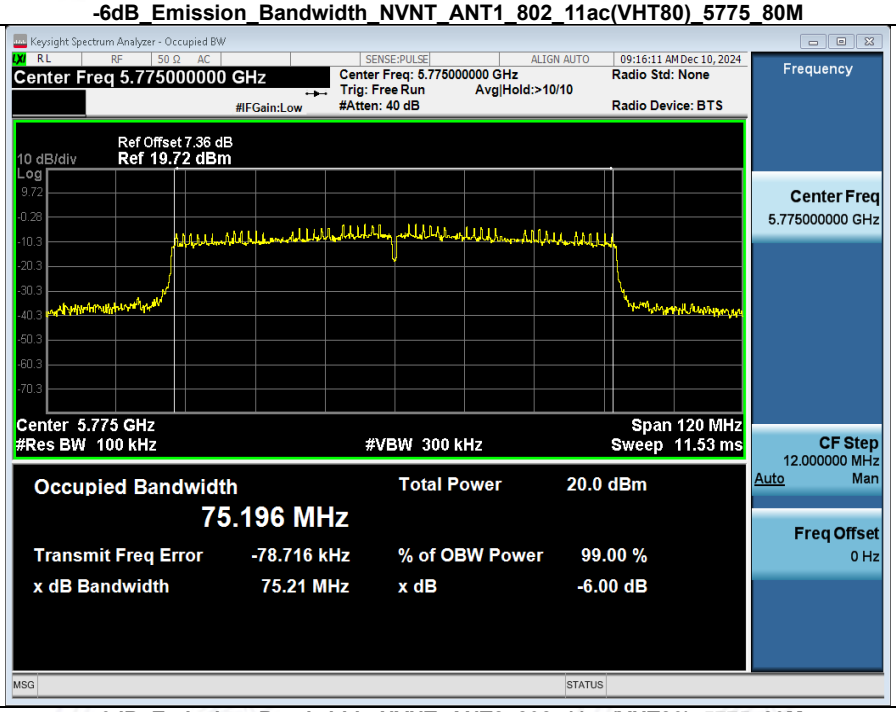
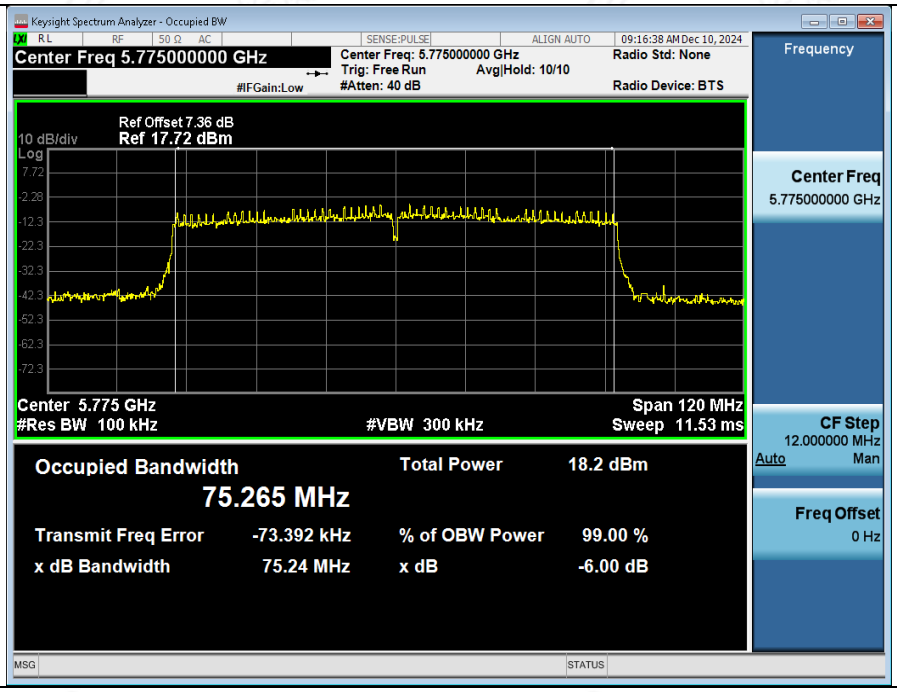


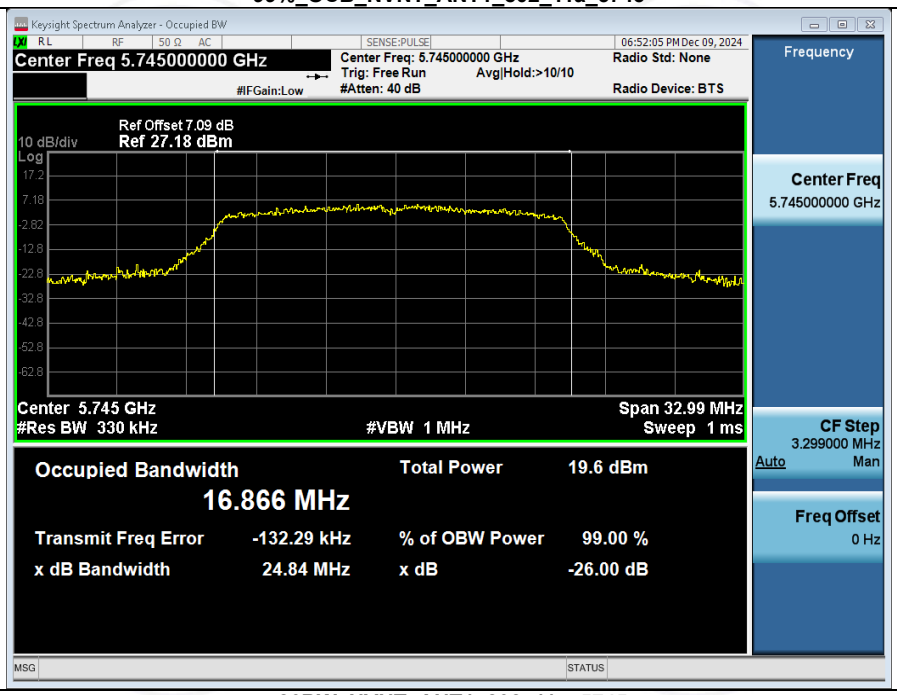
-6dB_Emission_Bandwidth_NVNT_ANT2_802_11ac(VHT80)_5775_80M


Keysight Spectrum Analyzer - Occupied BW
Center Freq 5.775000000 GHz
Center Freq: 5.775000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
09:16:38 AM Dec 10, 2024
Frequency
Ref Offset 7.36 dB
10 dB/div
Ref 17.72 dBm
Center Freq
5.775000000 GHz
Center 5.775 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 120 MHz
Sweep 11.53 ms
CF Step
12.000000 MHz
Auto
Man
Occupied Bandwidth
75.265 MHz
Total Power 18.2 dBm
Transmit Freq Error -73.392 kHz
% of OBW Power 99.00 %
x dB Bandwidth 75.24 MHz
x dB -6.00 dB
Freq Offset
0 Hz

2. -26dB and 99% Emission Bandwidth

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5745.00	23.46	16.87
NVNT	ANT2	802.11a	5745.00	20.13	16.51
NVNT	ANT1	802.11a	5785.00	20.34	16.81
NVNT	ANT2	802.11a	5785.00	20.03	16.59
NVNT	ANT1	802.11a	5825.00	20.15	16.77
NVNT	ANT2	802.11a	5825.00	20.00	16.63
NVNT	ANT1	802.11n(HT20)	5745.00	20.49	17.83
NVNT	ANT2	802.11n(HT20)	5745.00	20.21	17.64
NVNT	ANT1	802.11n(HT20)	5785.00	20.49	17.80
NVNT	ANT2	802.11n(HT20)	5785.00	20.09	17.62
NVNT	ANT1	802.11n(HT20)	5825.00	20.18	17.74
NVNT	ANT2	802.11n(HT20)	5825.00	20.26	17.70
NVNT	ANT1	802.11ac(VHT20)	5745.00	20.57	17.84
NVNT	ANT2	802.11ac(VHT20)	5745.00	20.12	17.67
NVNT	ANT1	802.11ac(VHT20)	5785.00	20.26	17.79
NVNT	ANT2	802.11ac(VHT20)	5785.00	20.21	17.65
NVNT	ANT1	802.11ac(VHT20)	5825.00	20.22	17.75
NVNT	ANT2	802.11ac(VHT20)	5825.00	20.08	17.70
NVNT	ANT1	802.11n(HT40)	5755.00	42.42	36.32
NVNT	ANT2	802.11n(HT40)	5755.00	40.31	36.24
NVNT	ANT1	802.11n(HT40)	5795.00	40.52	36.26
NVNT	ANT2	802.11n(HT40)	5795.00	40.15	36.18
NVNT	ANT1	802.11ac(VHT40)	5755.00	40.70	36.36
NVNT	ANT2	802.11ac(VHT40)	5755.00	40.42	36.14
NVNT	ANT1	802.11ac(VHT40)	5795.00	40.96	36.34
NVNT	ANT2	802.11ac(VHT40)	5795.00	40.04	36.17
NVNT	ANT1	802.11ac(VHT80)	5775.00	84.53	75.46
NVNT	ANT2	802.11ac(VHT80)	5775.00	80.13	75.34

99%_OCB_NVNT_ANT1_802_11a_5745



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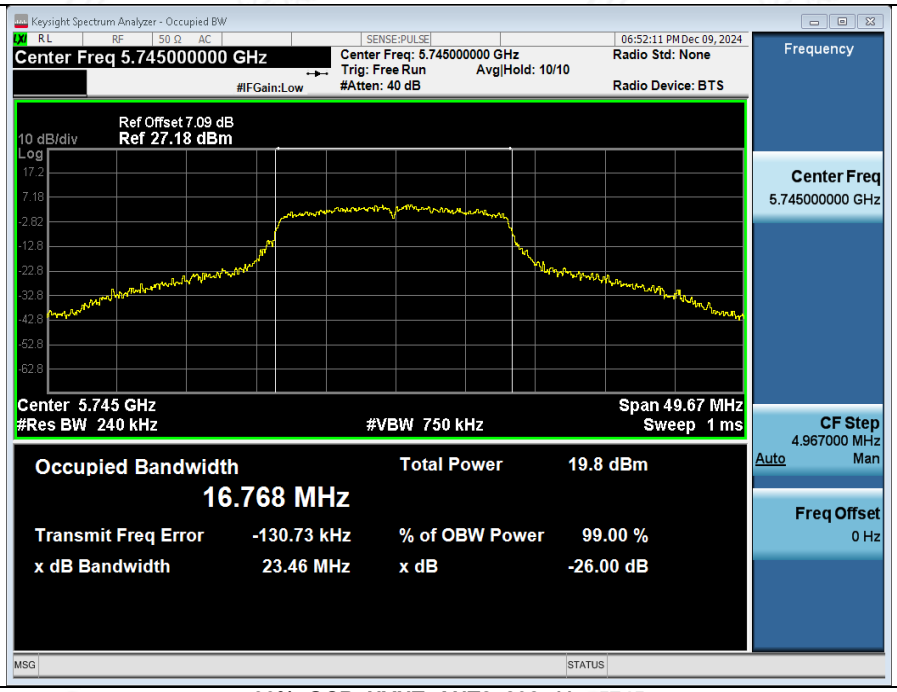
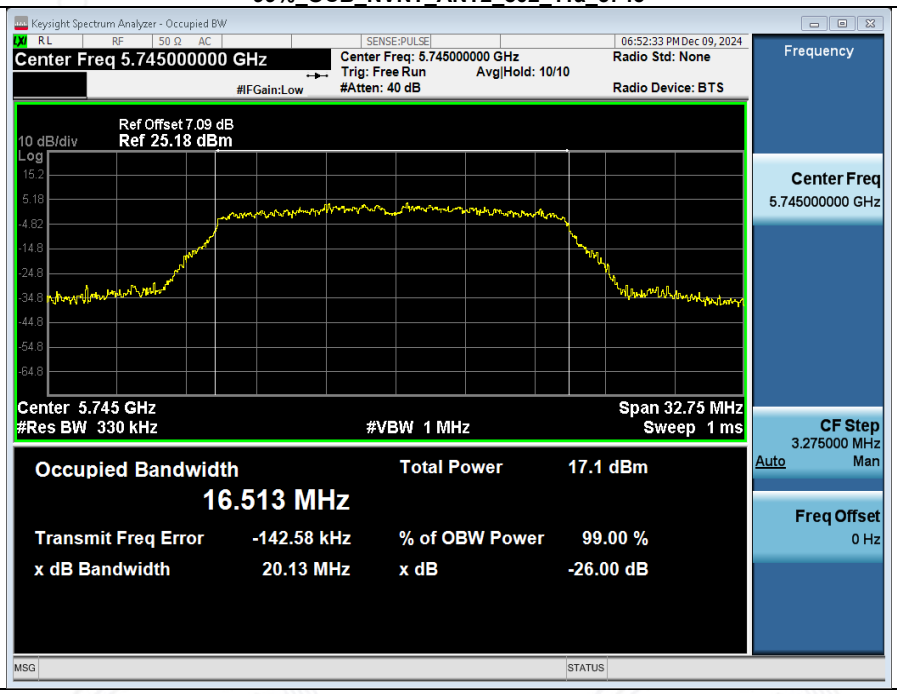


99%_OCB_NVNT_ANT2_802_11a_5745



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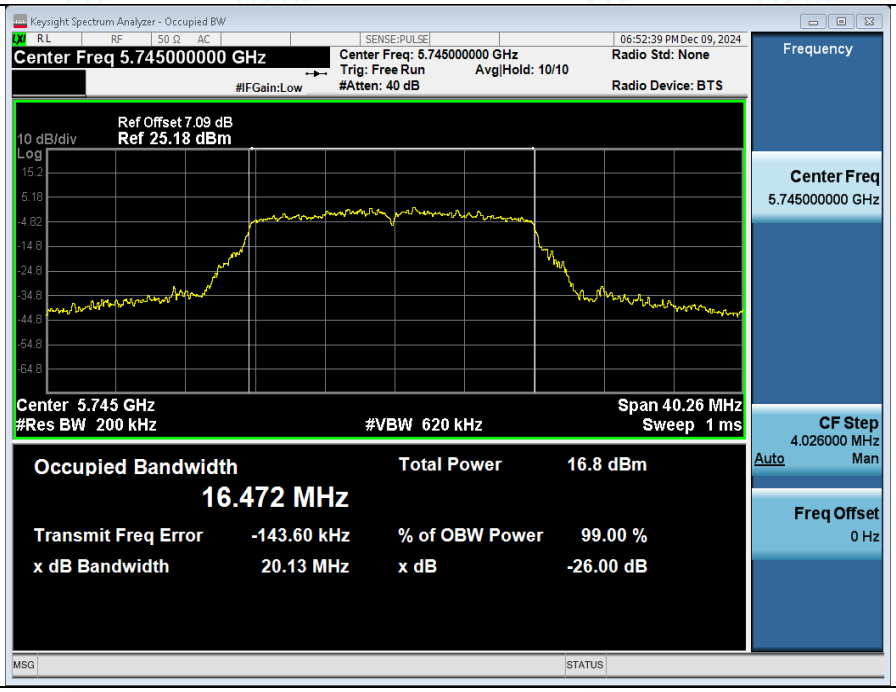

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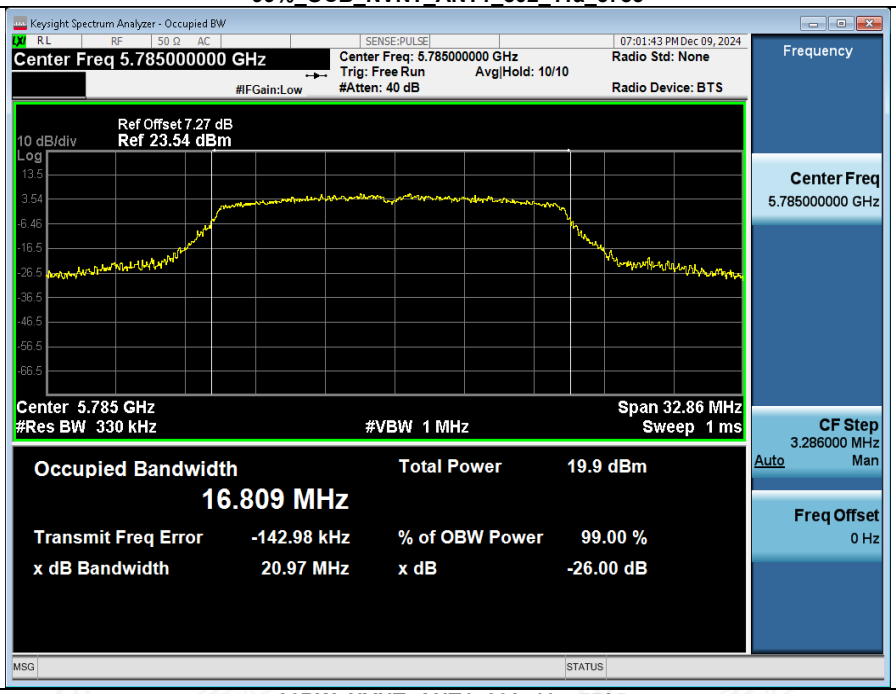

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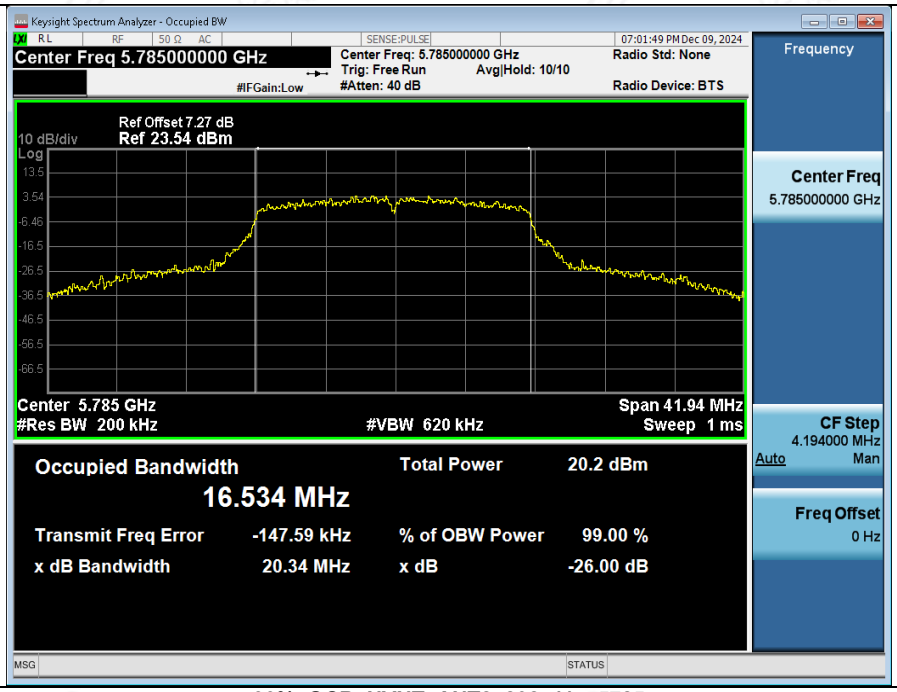
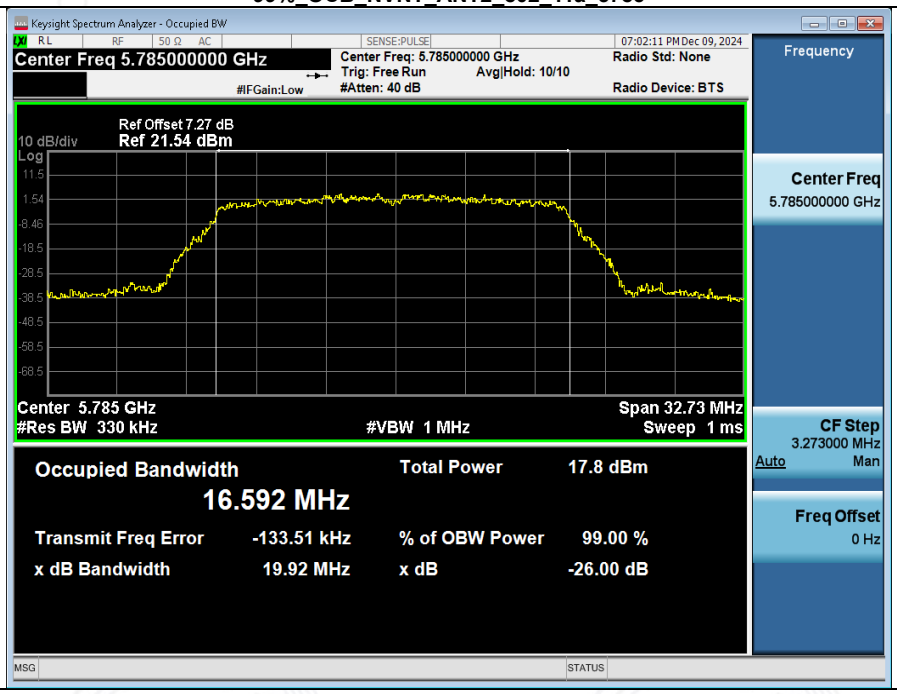


99%_OCB_NVNT_ANT2_802_11a_5785



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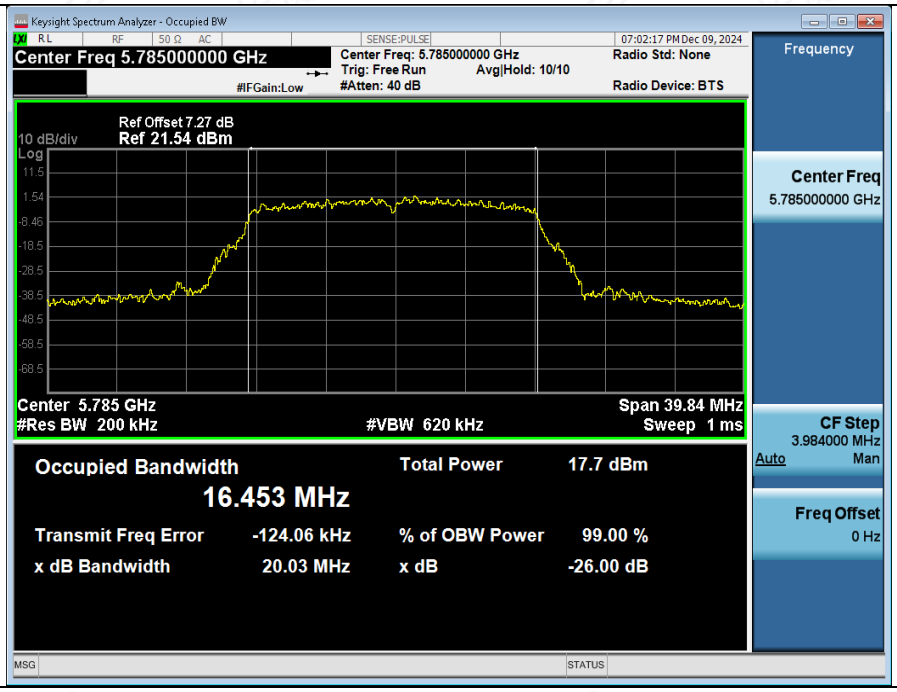

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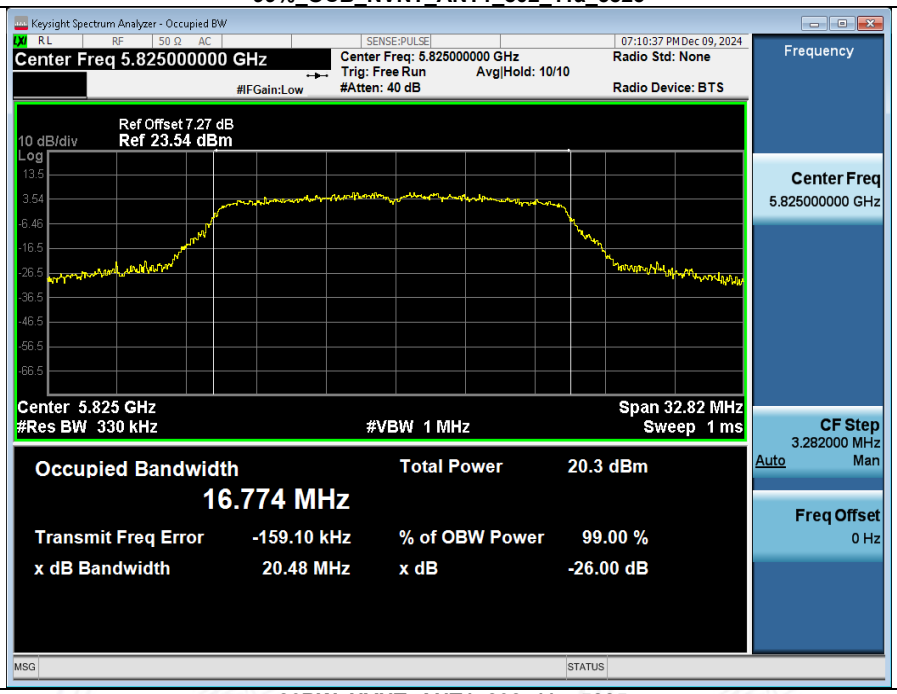

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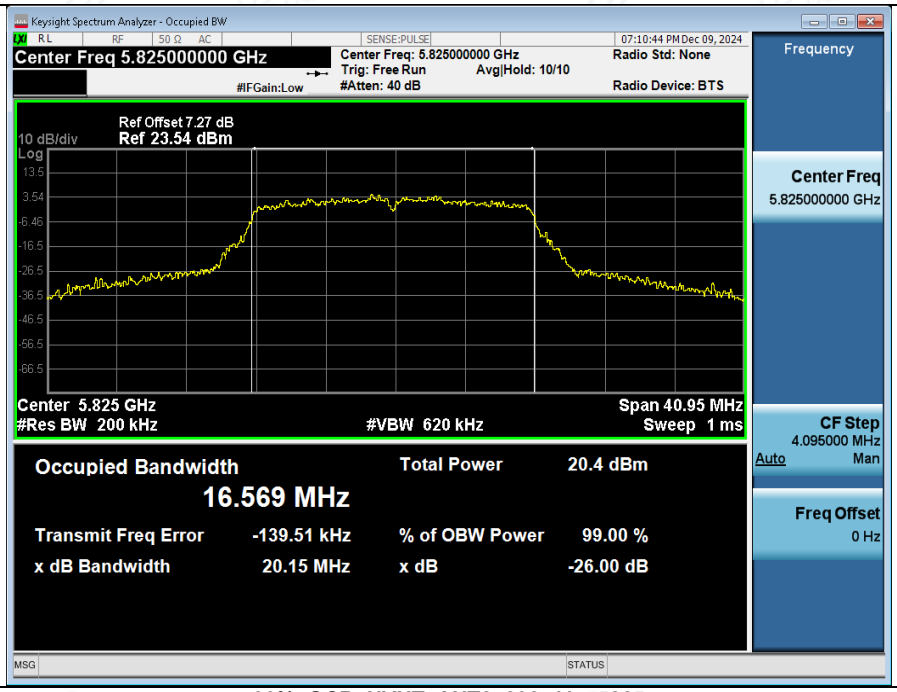

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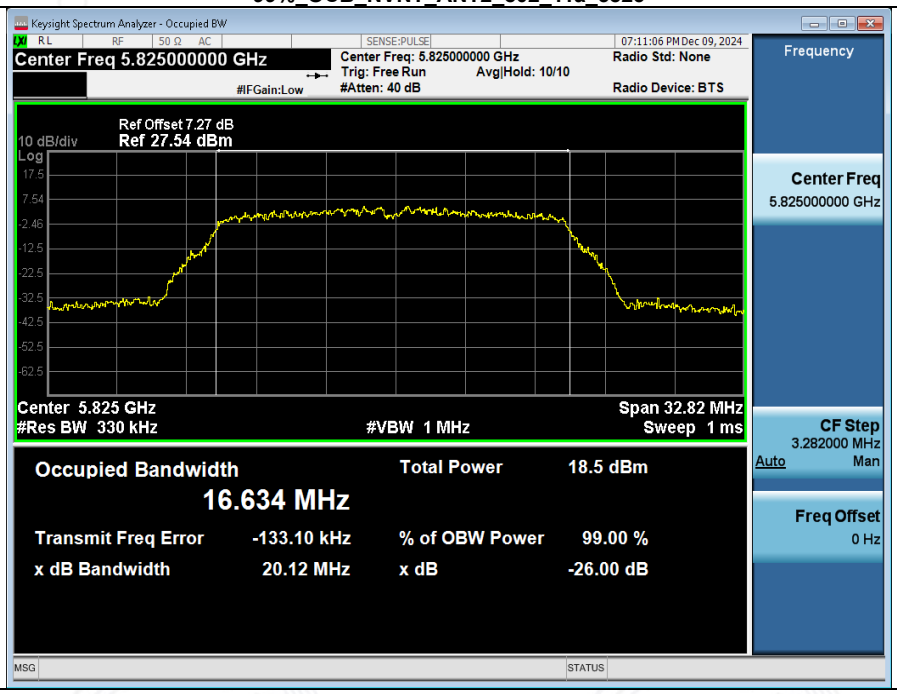

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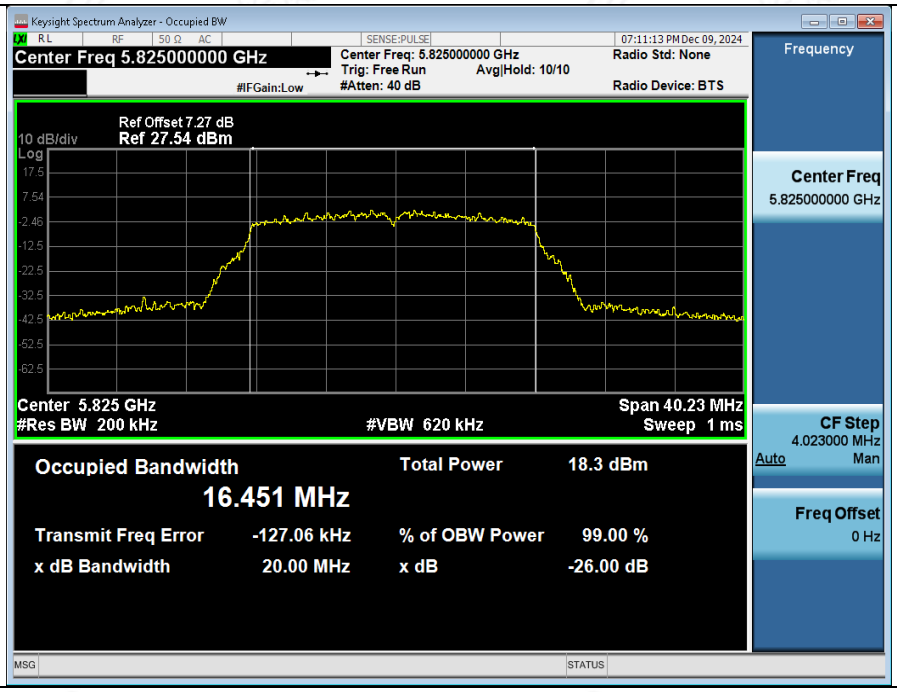

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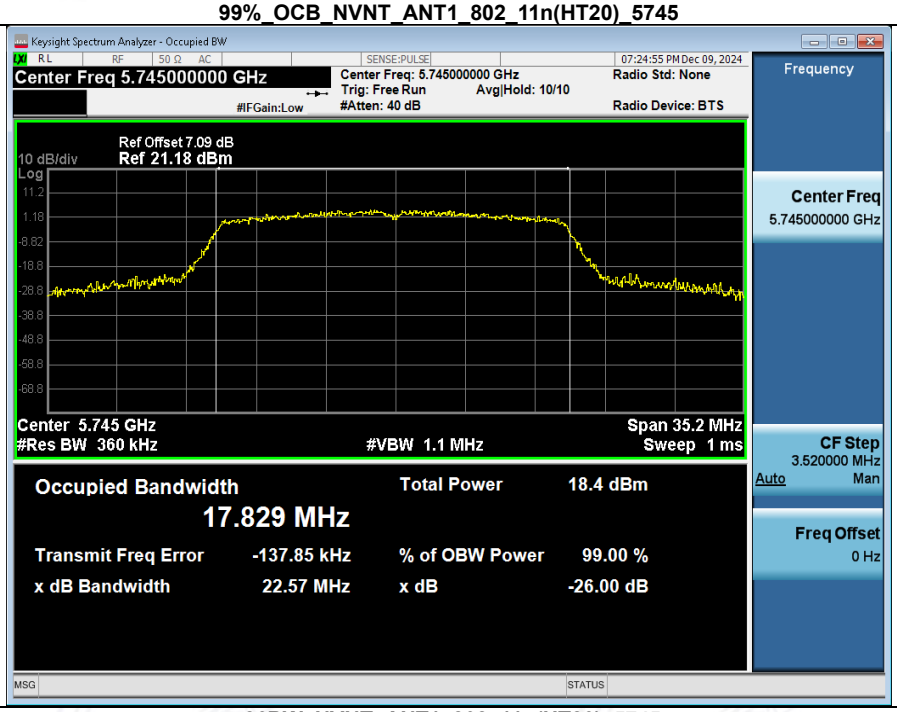

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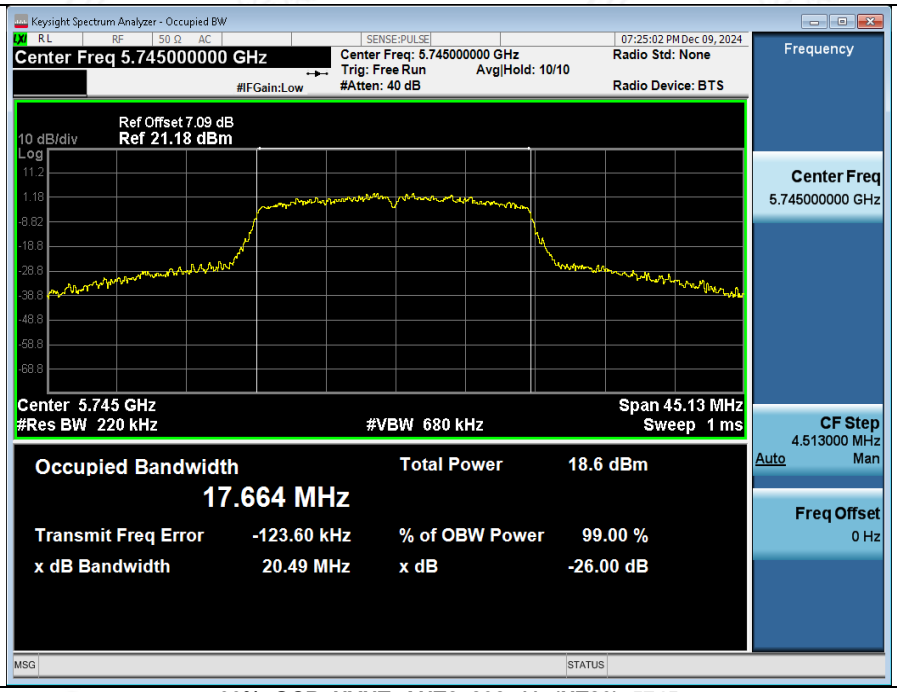

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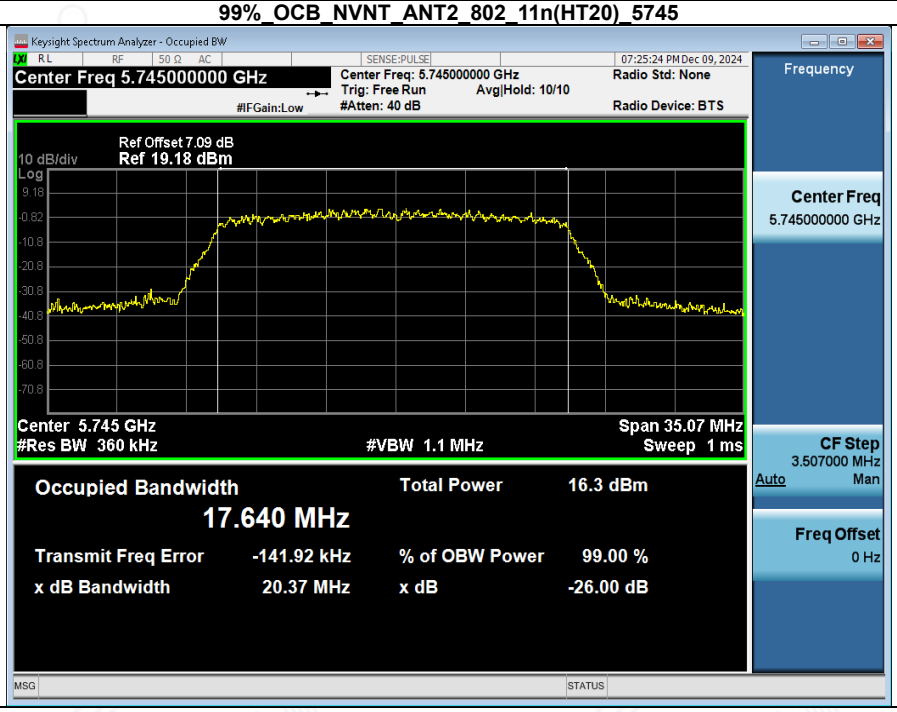

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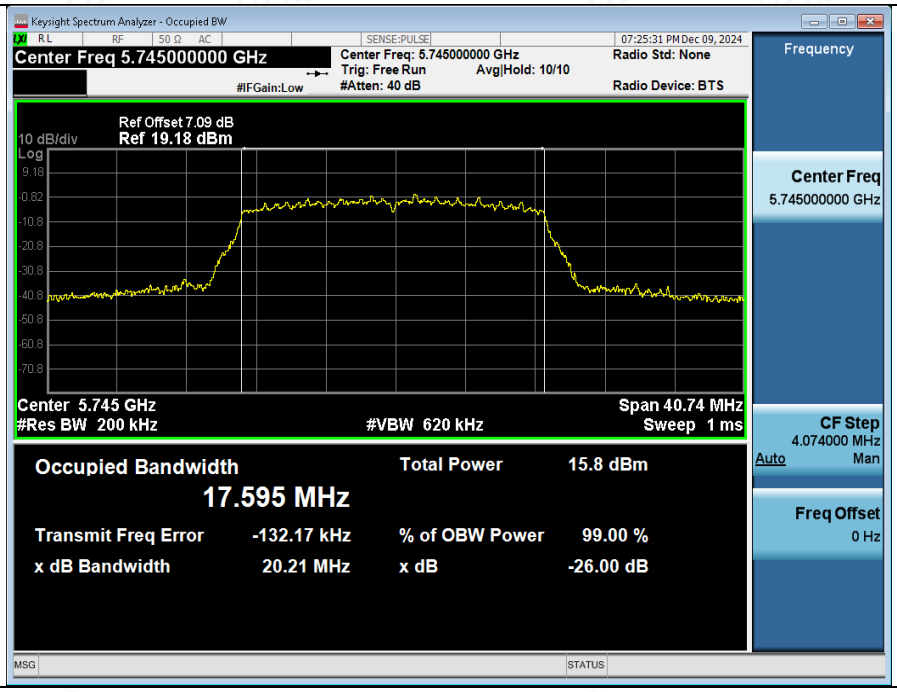

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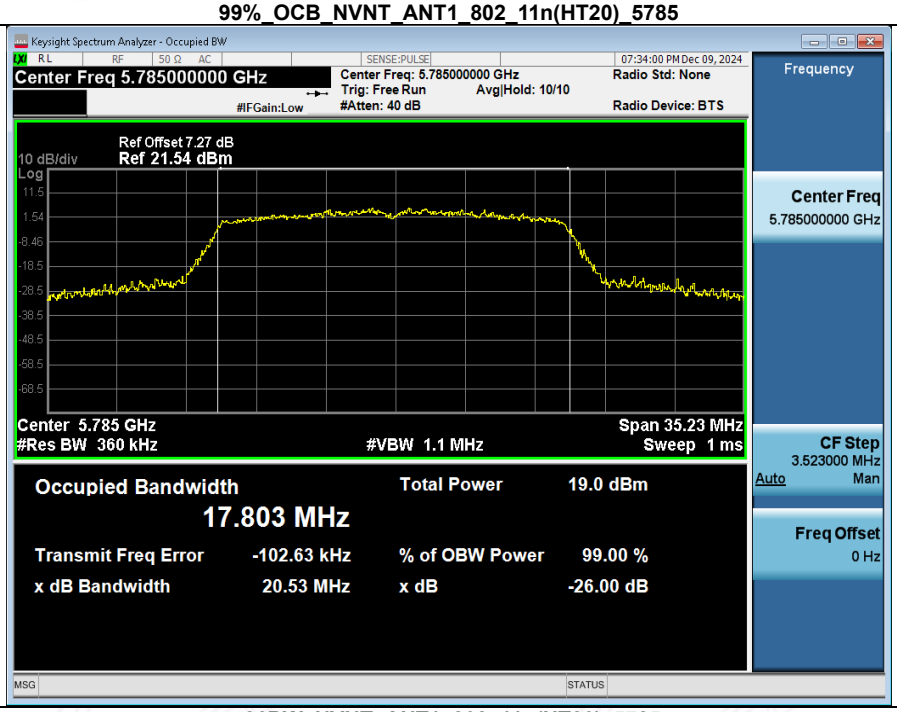

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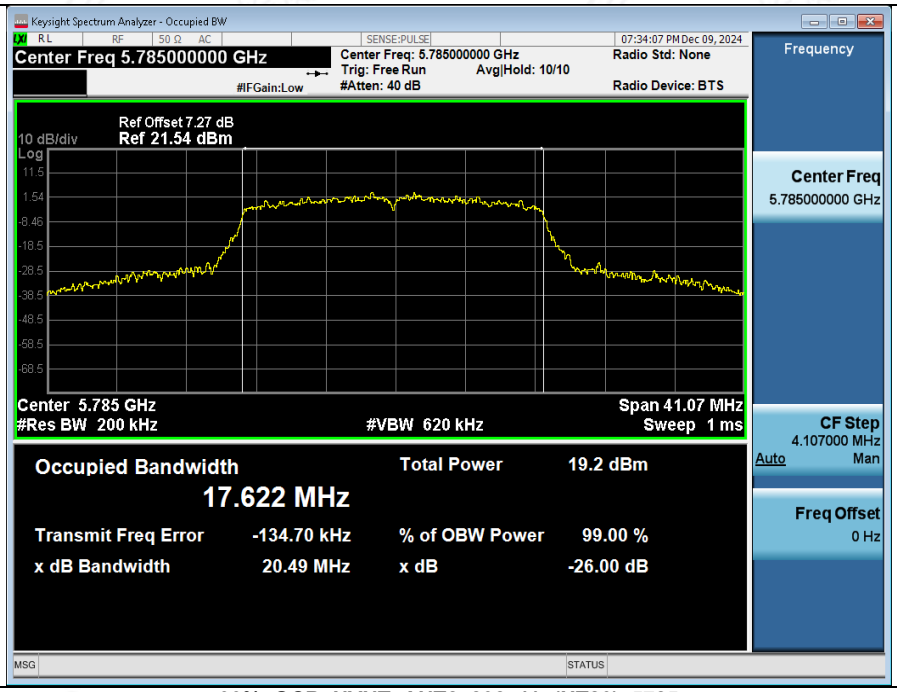

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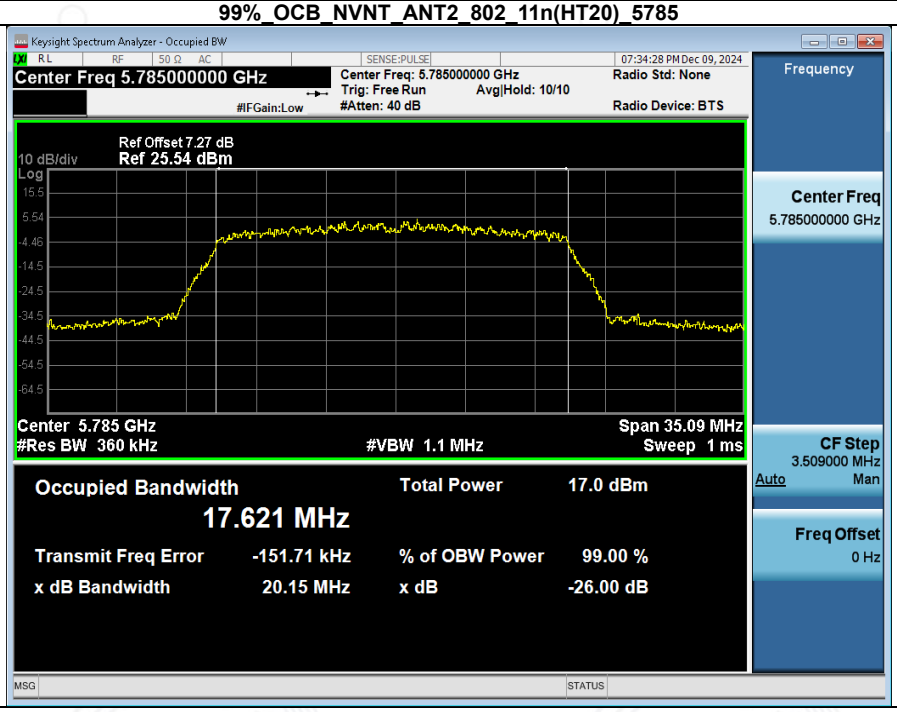

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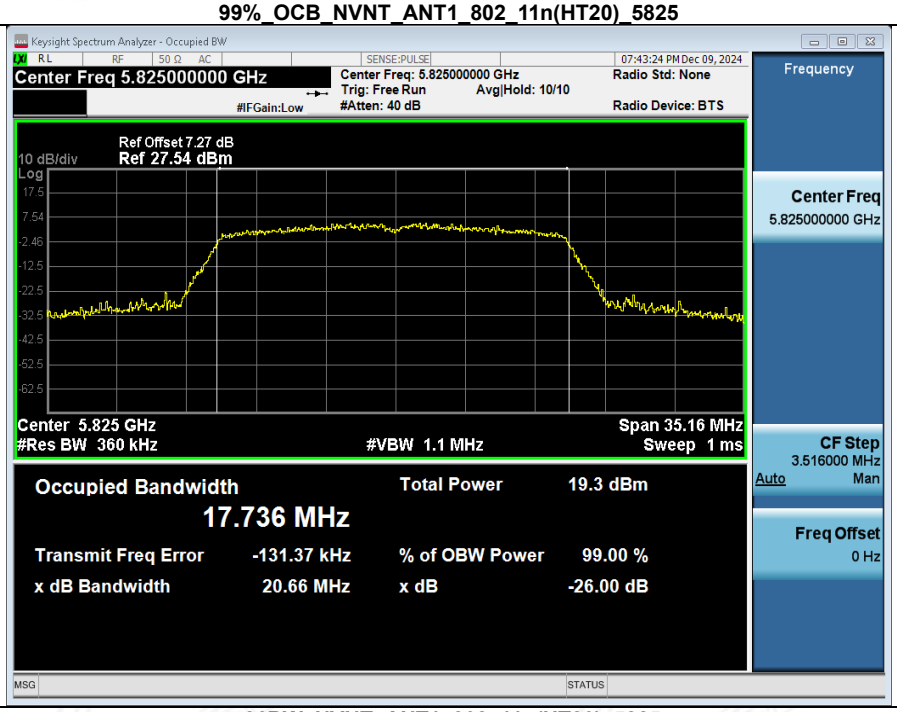

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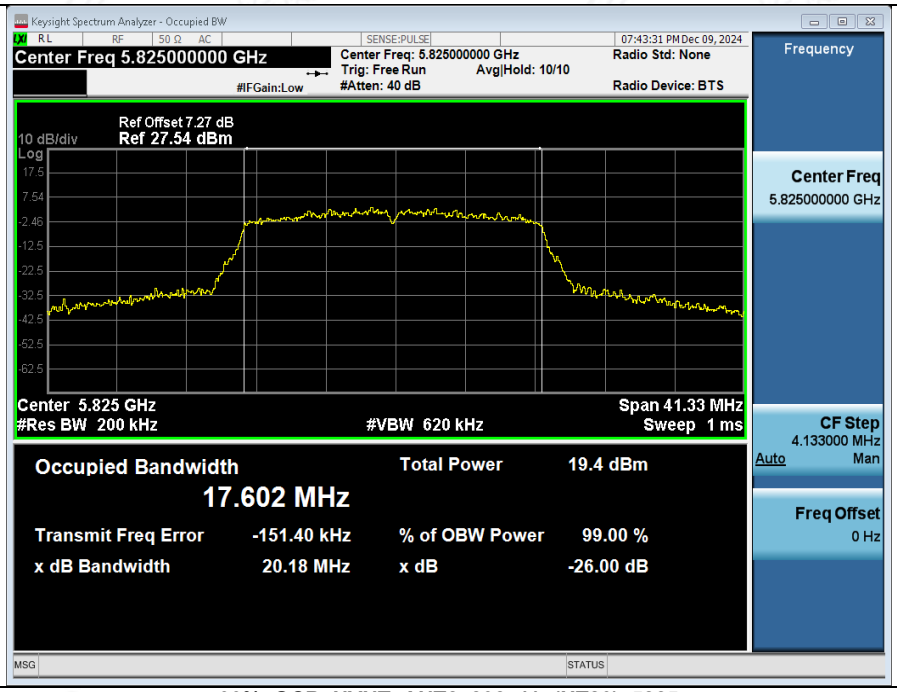

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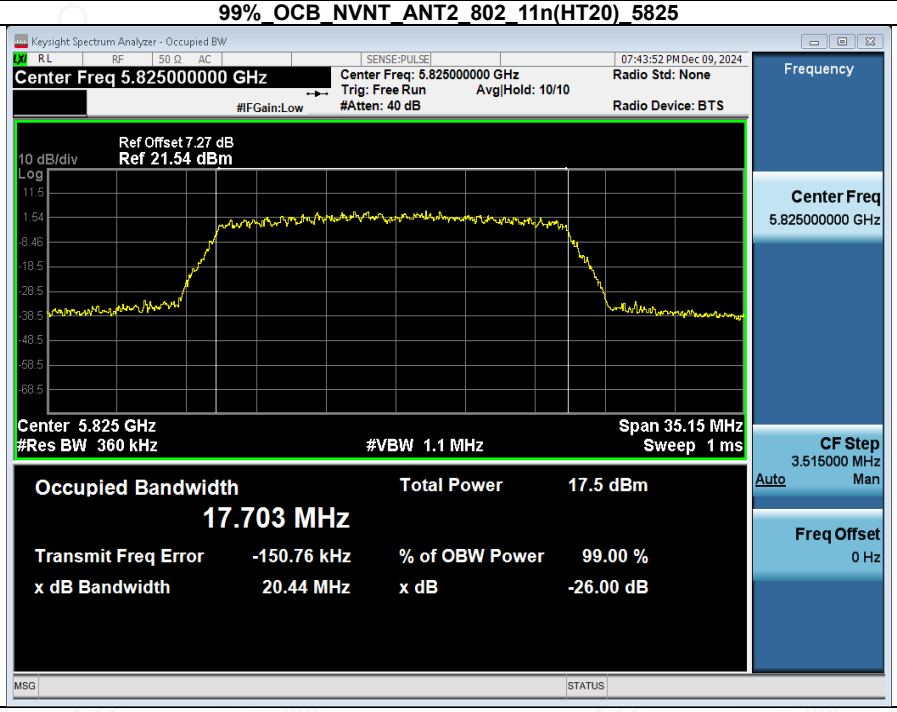

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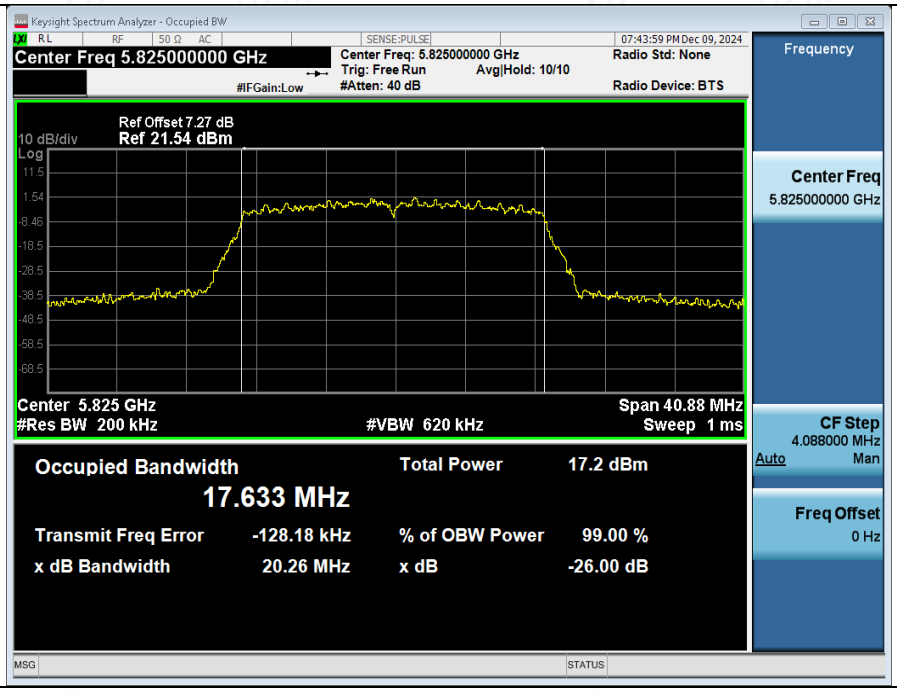

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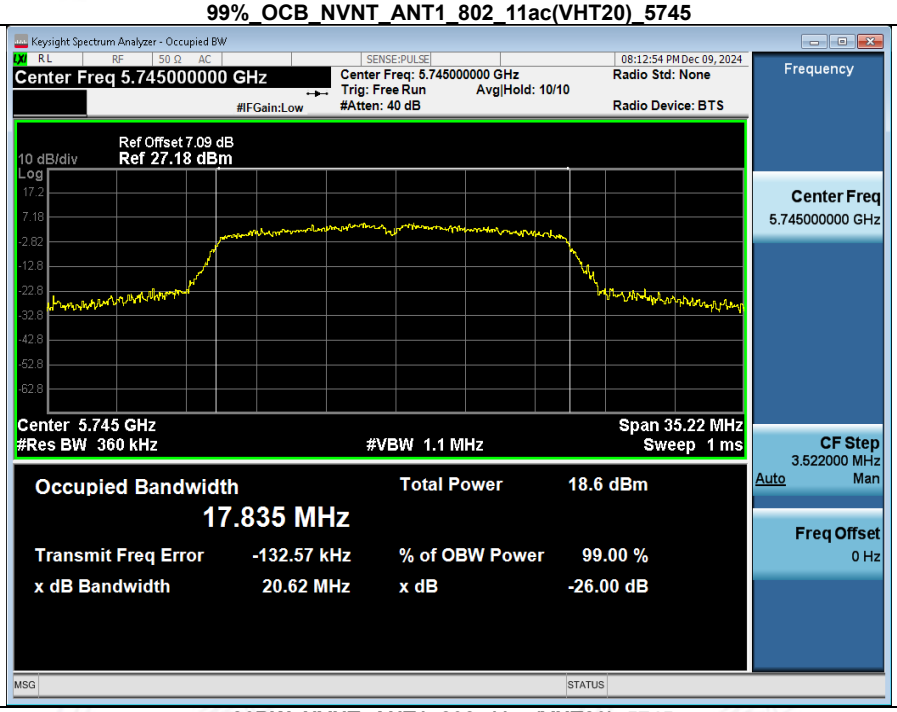

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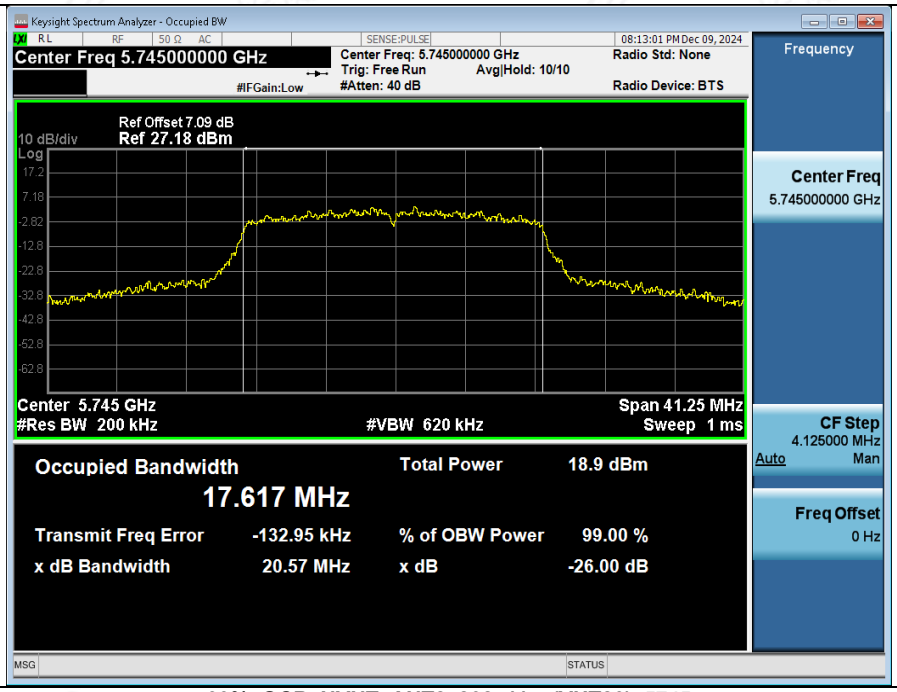

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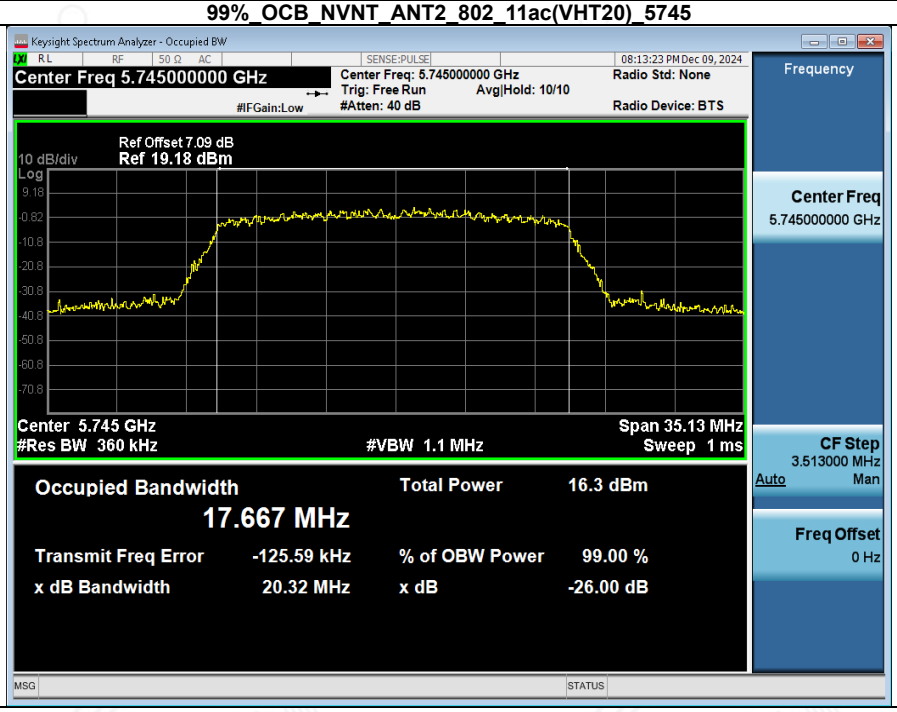

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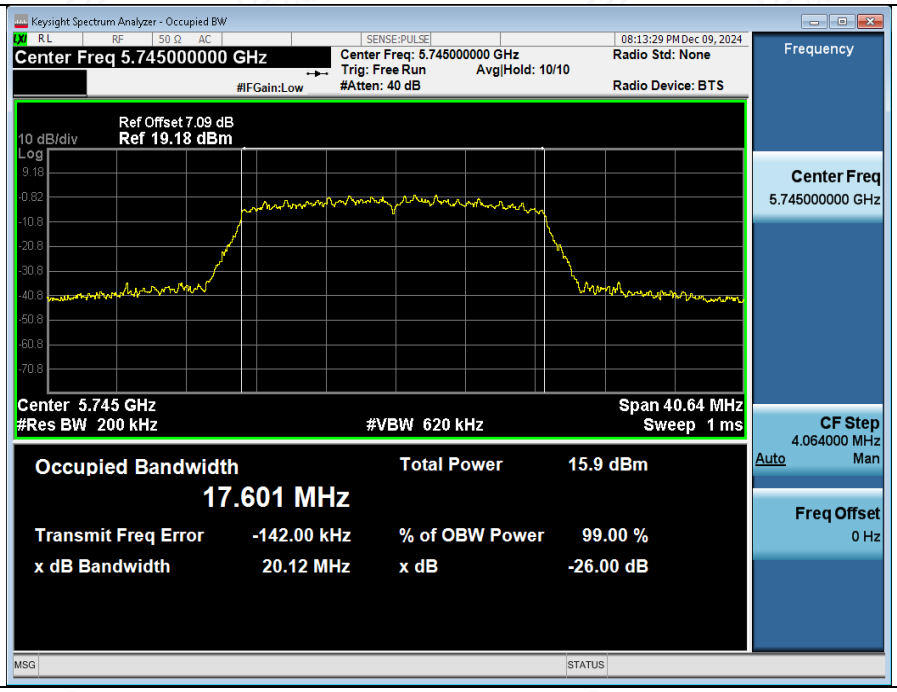

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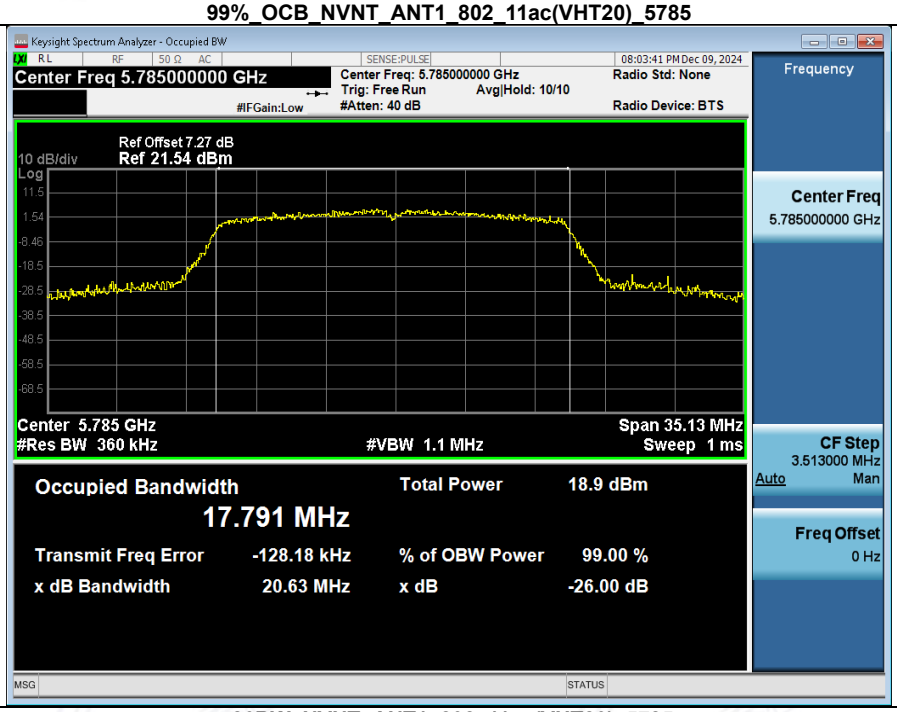

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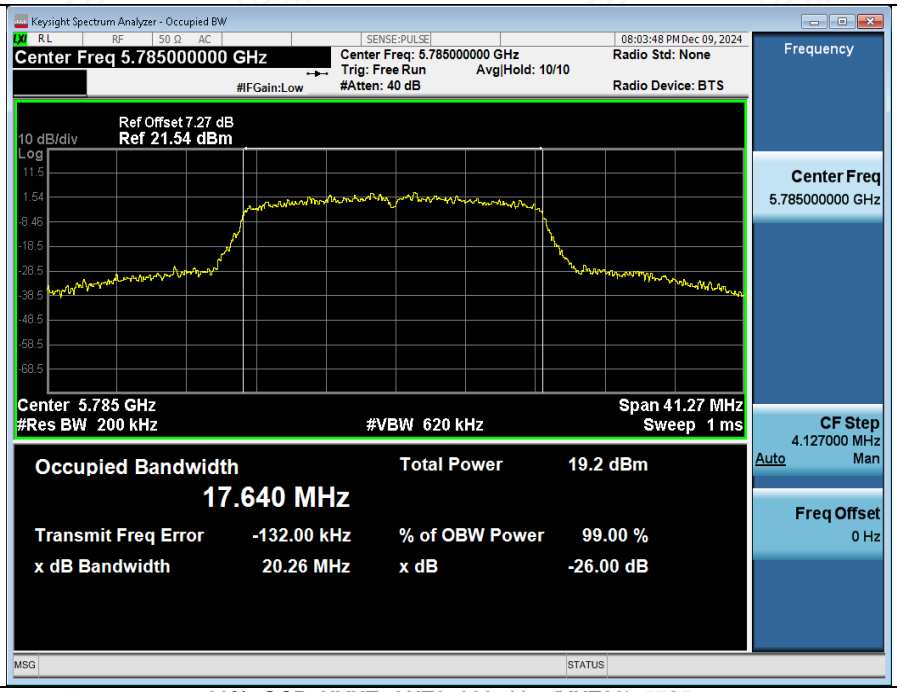

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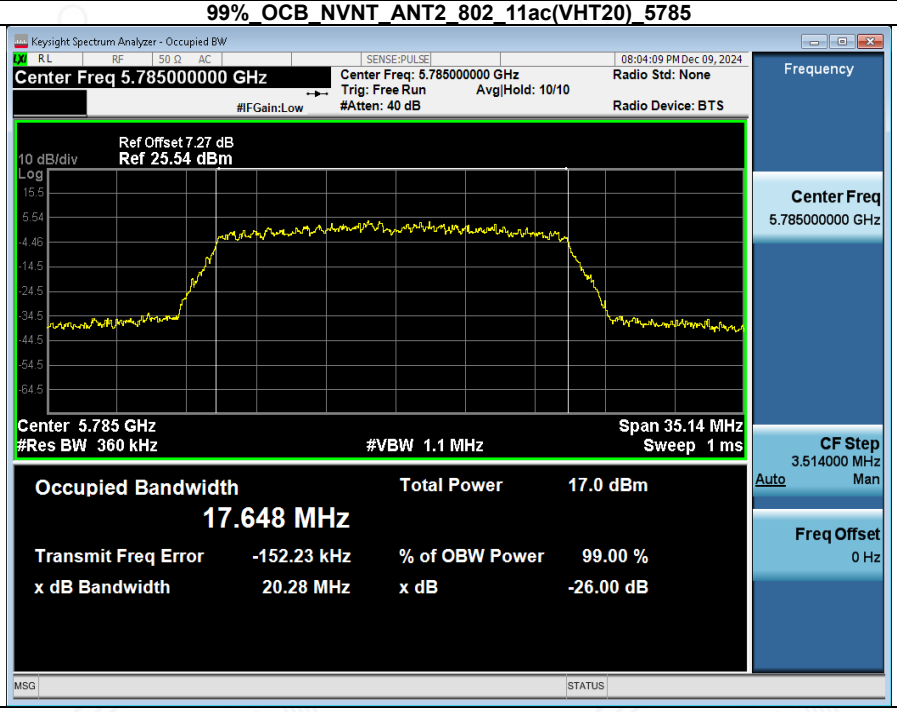

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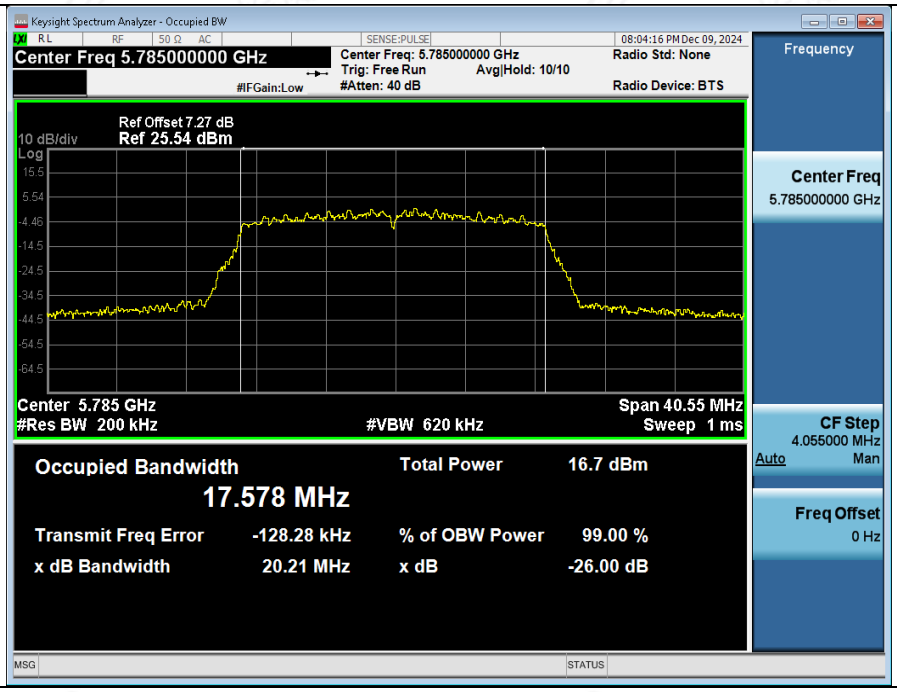

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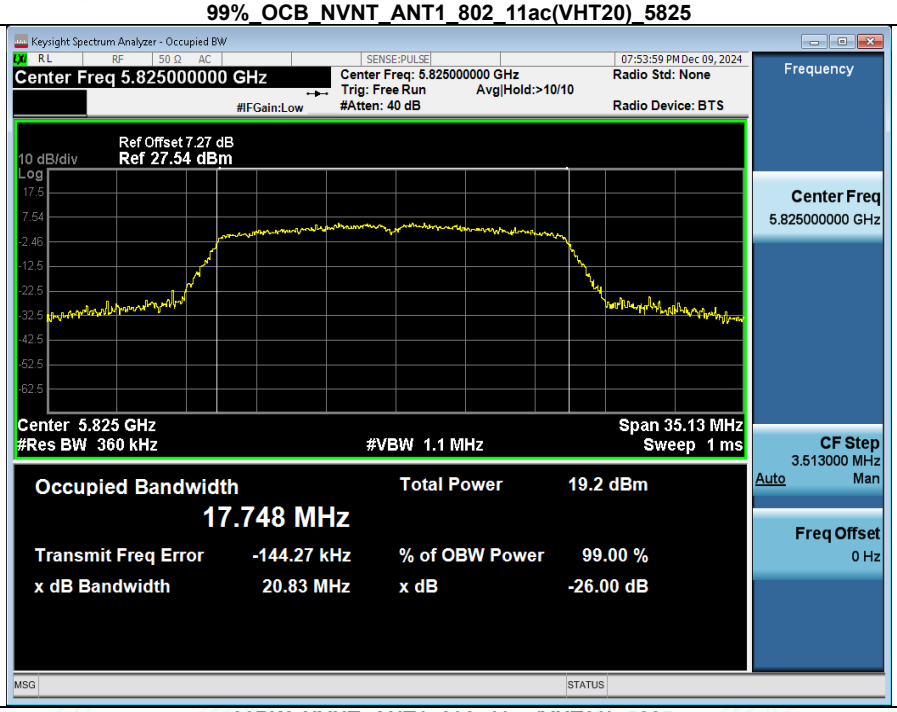

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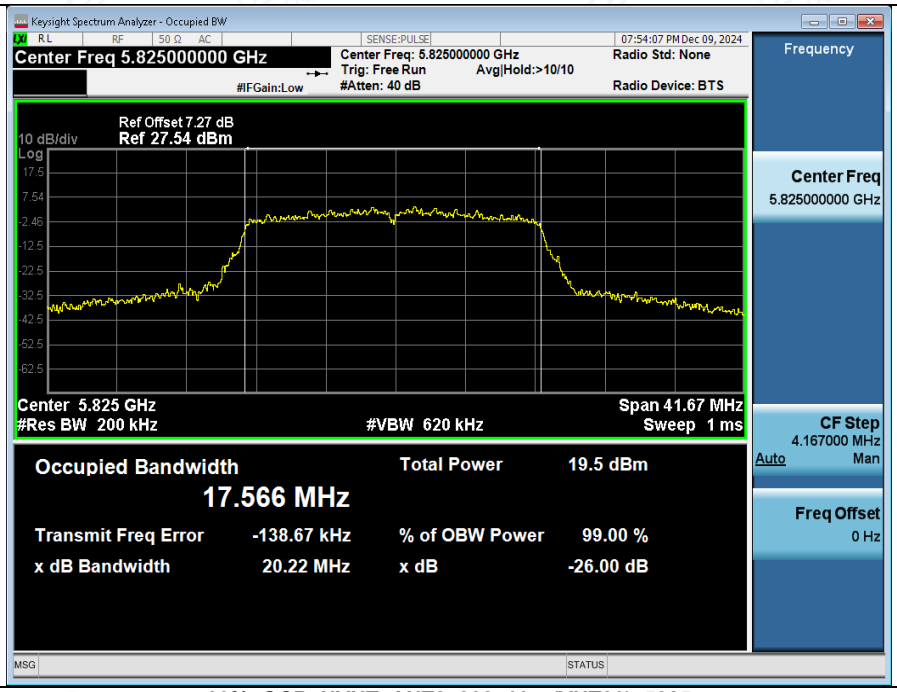

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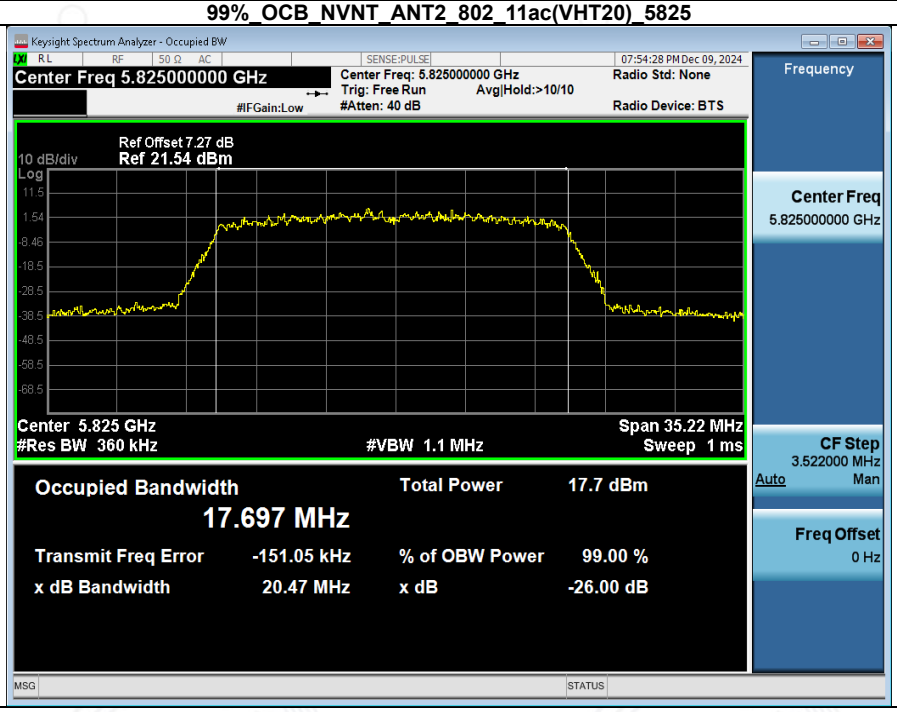

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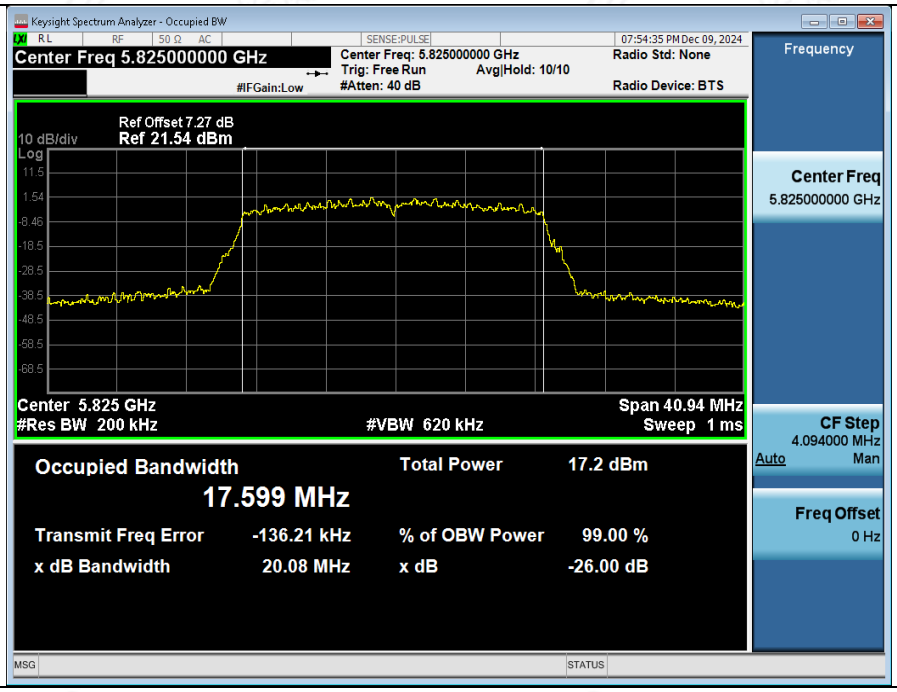

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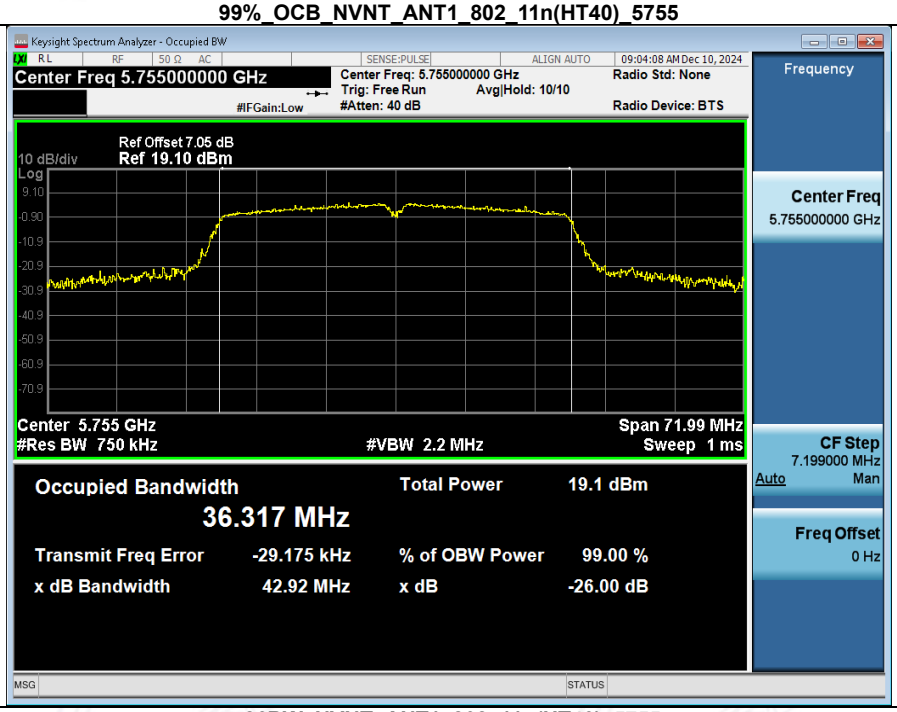

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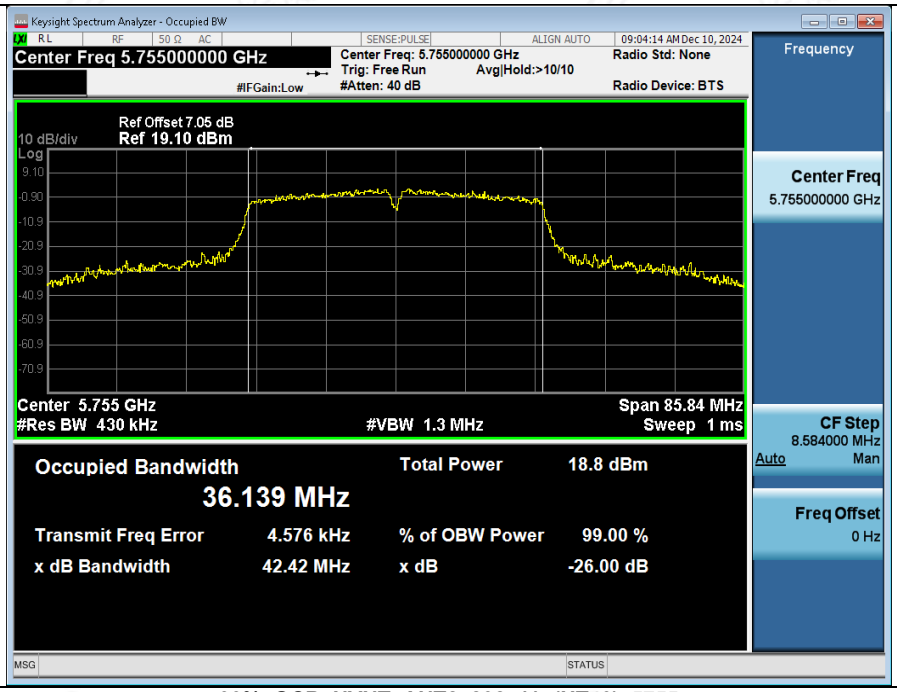

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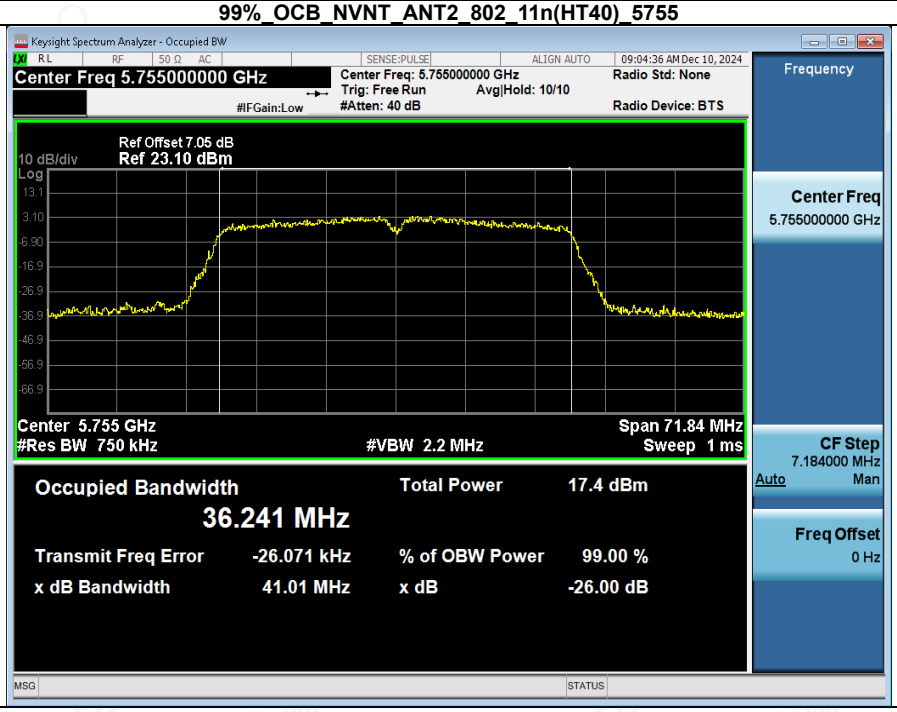

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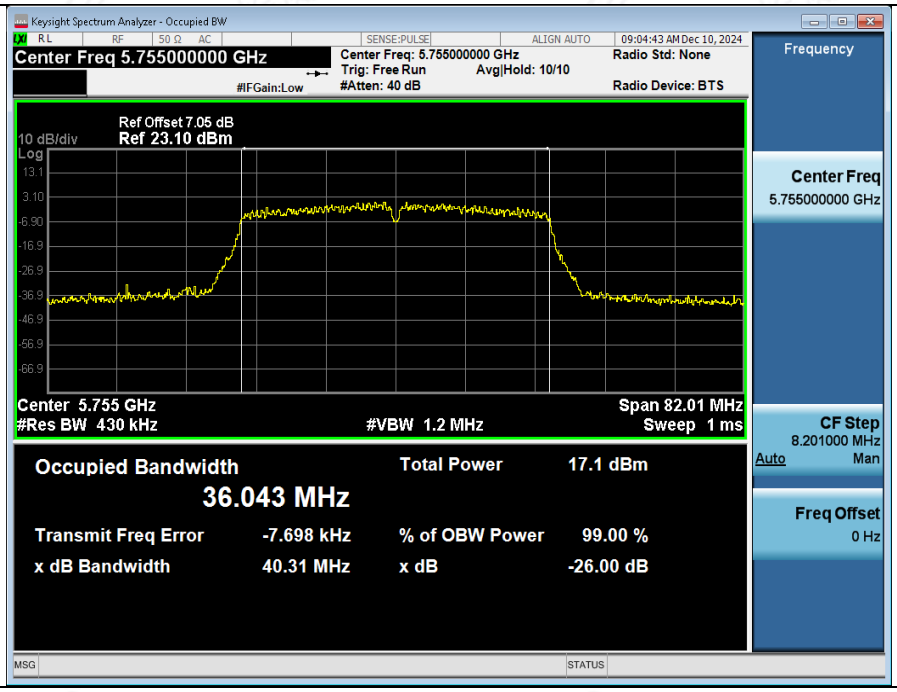

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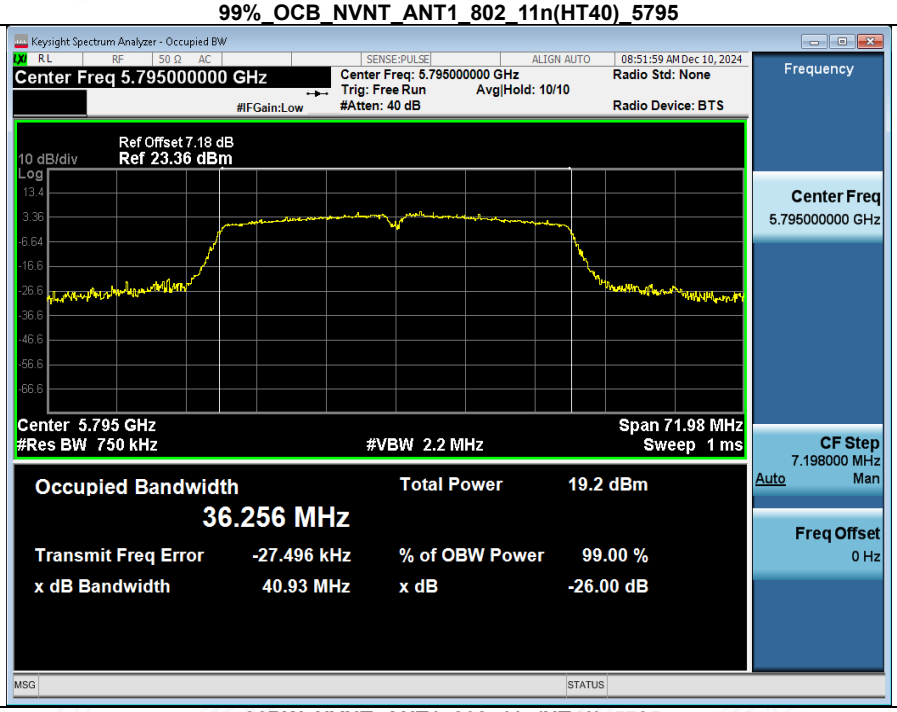

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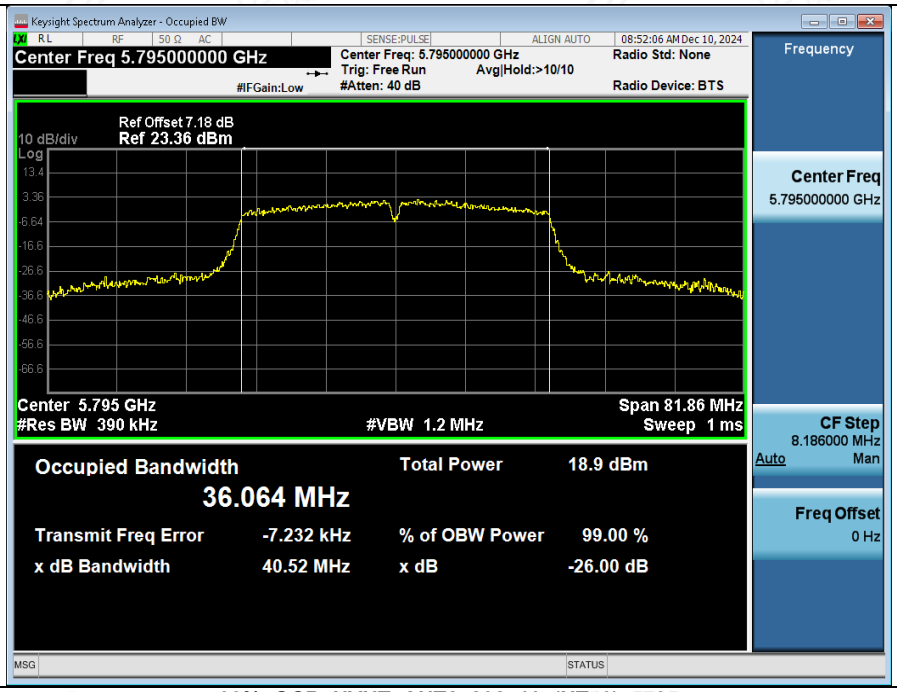

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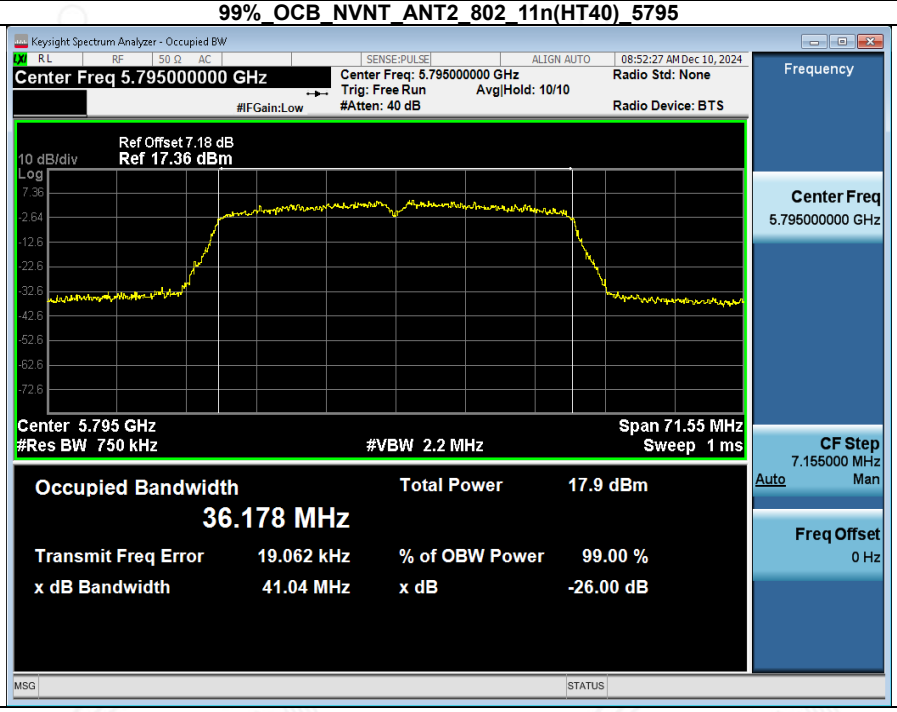

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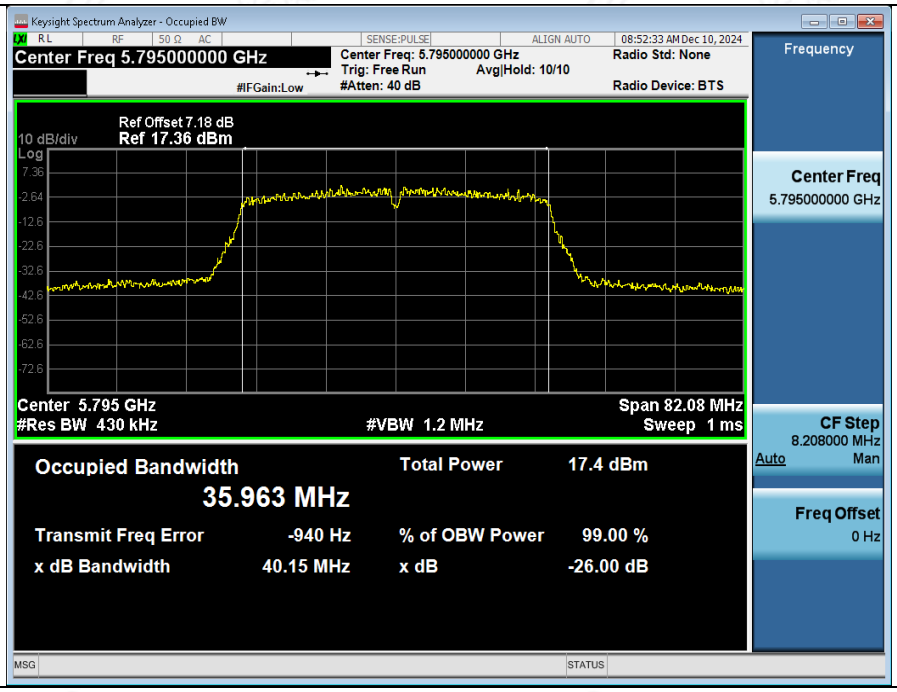

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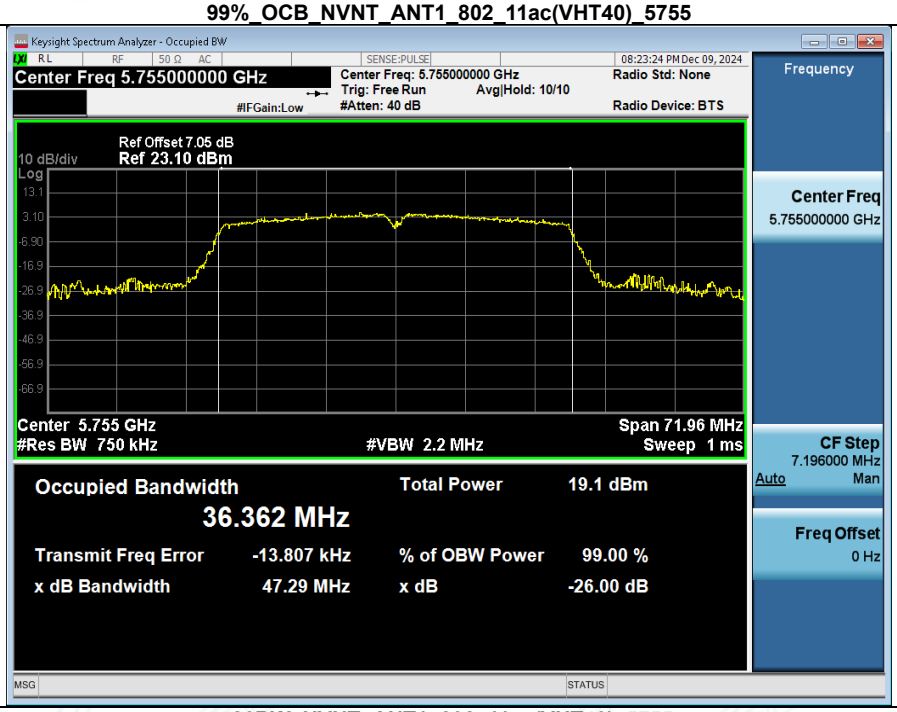

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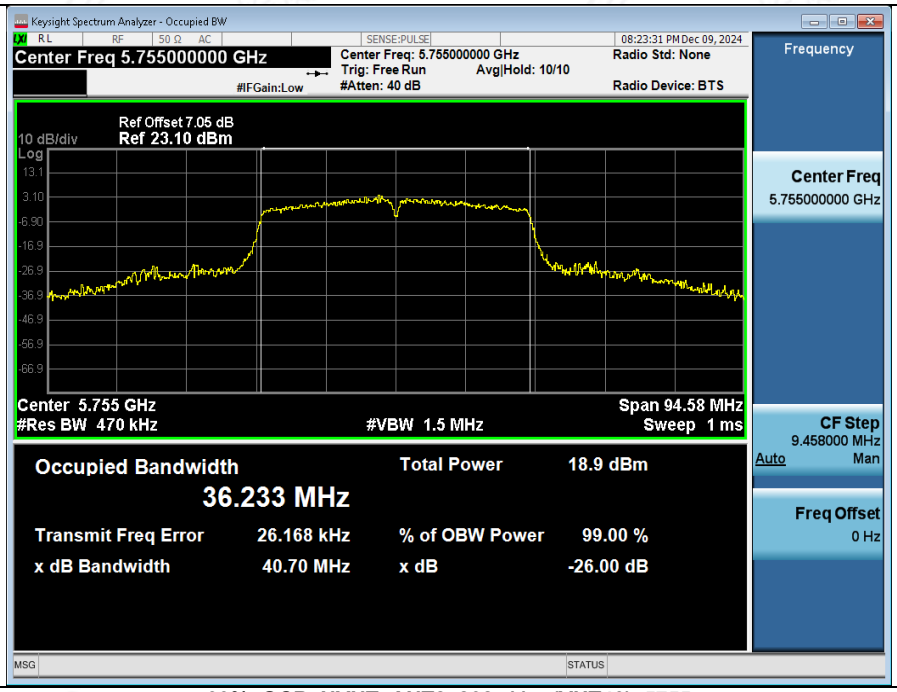

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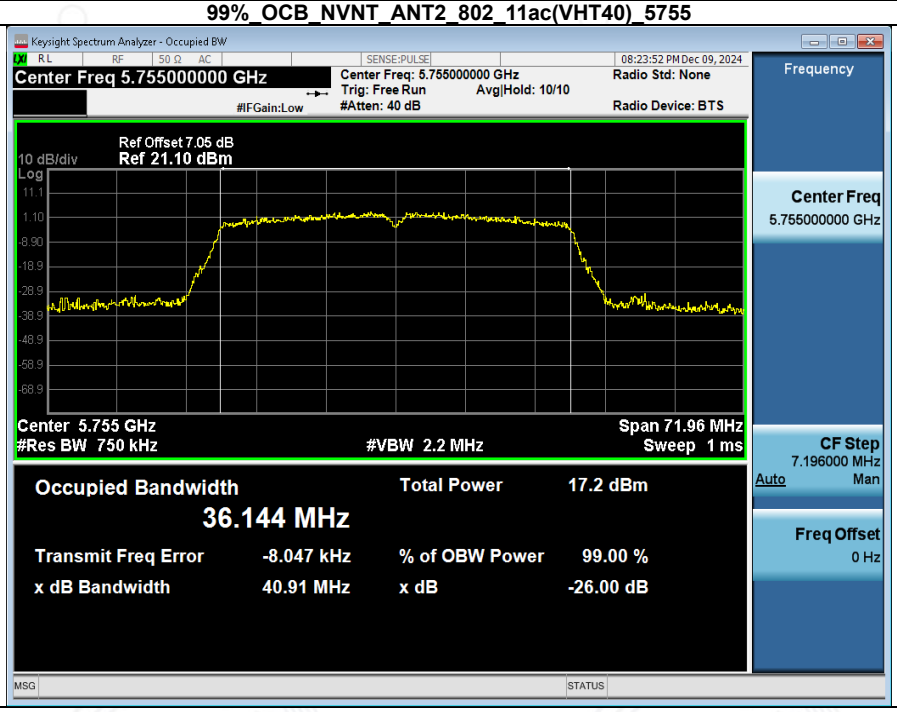

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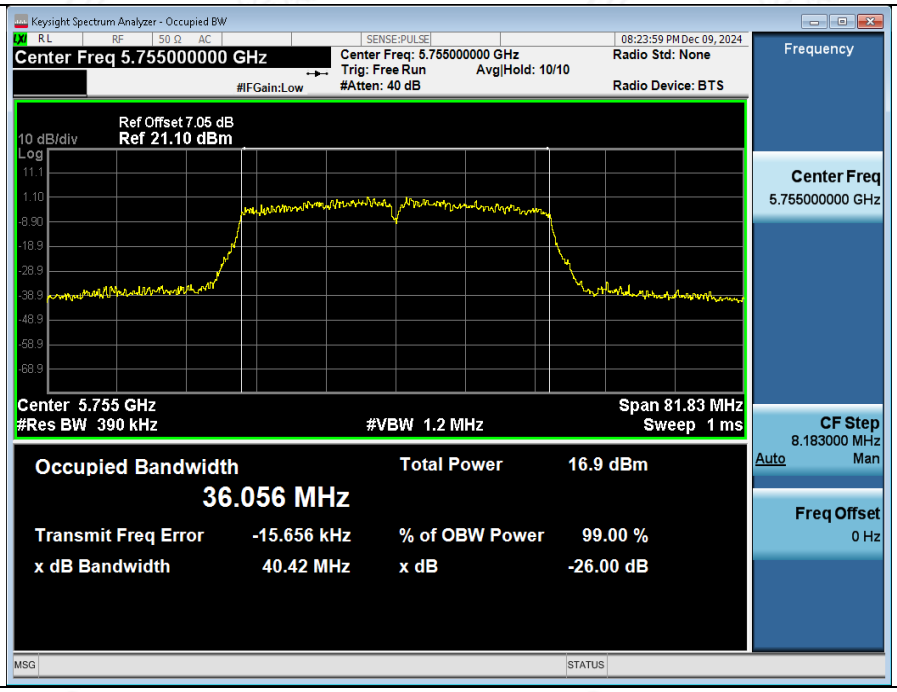

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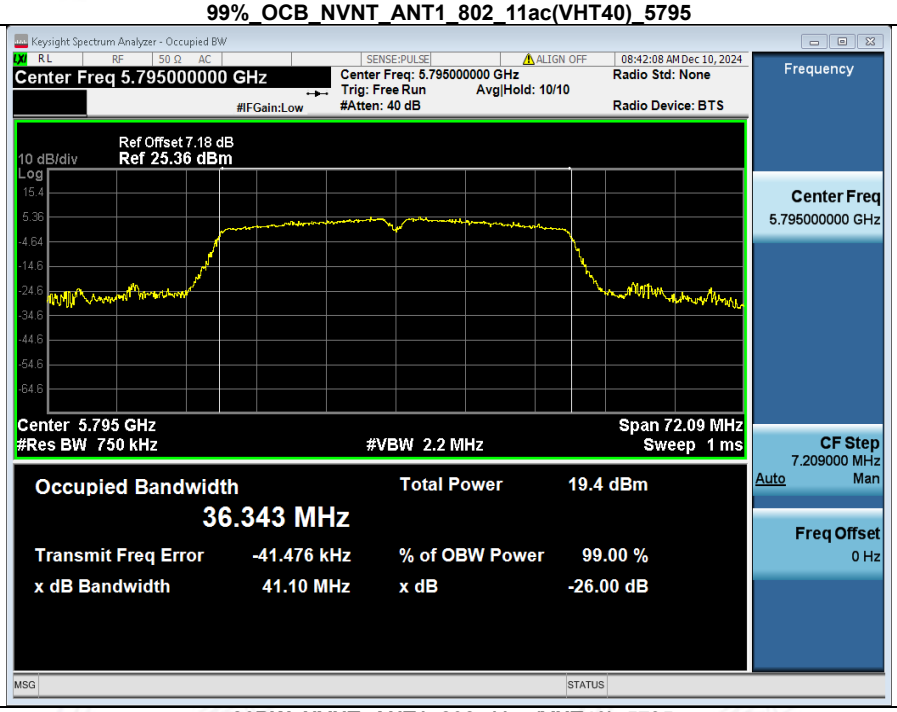

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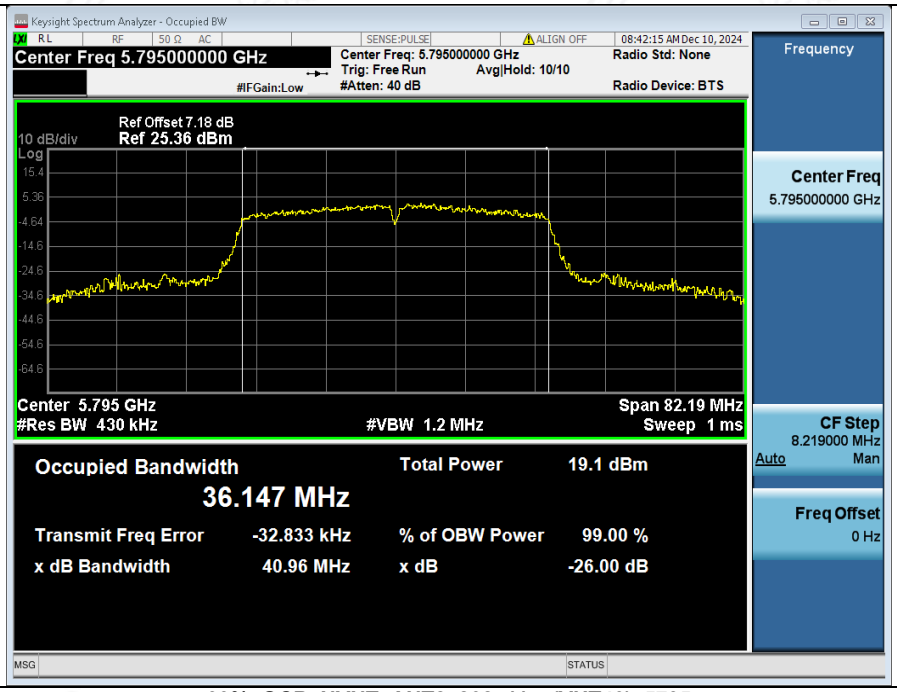

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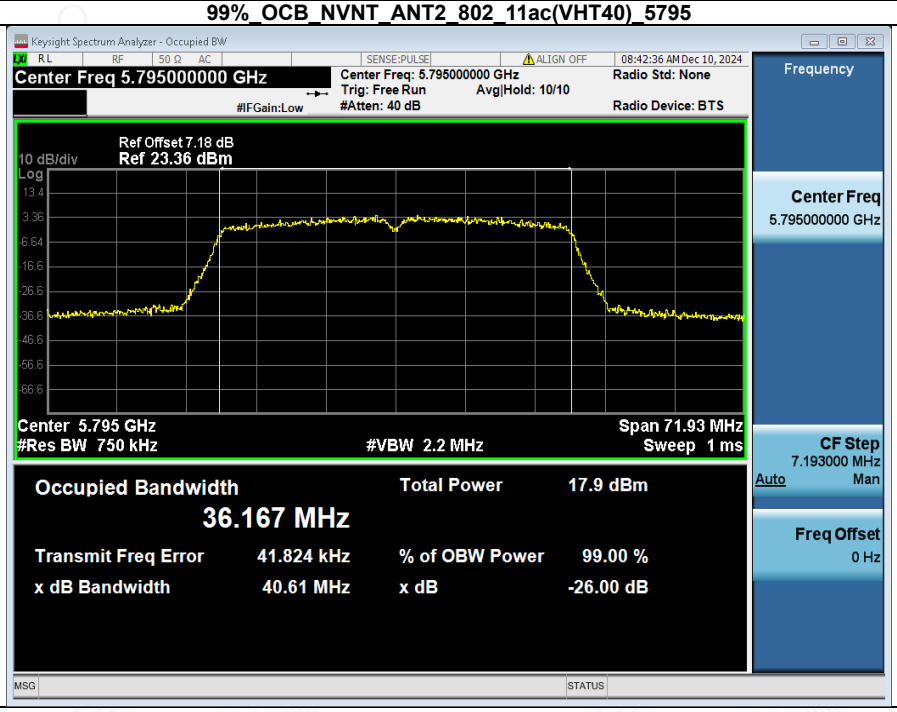

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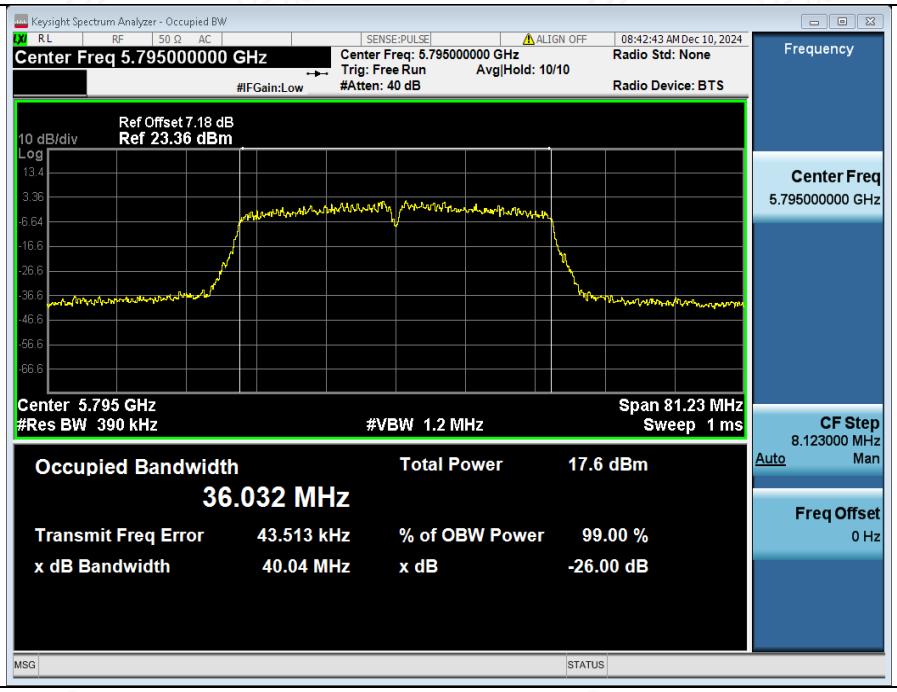

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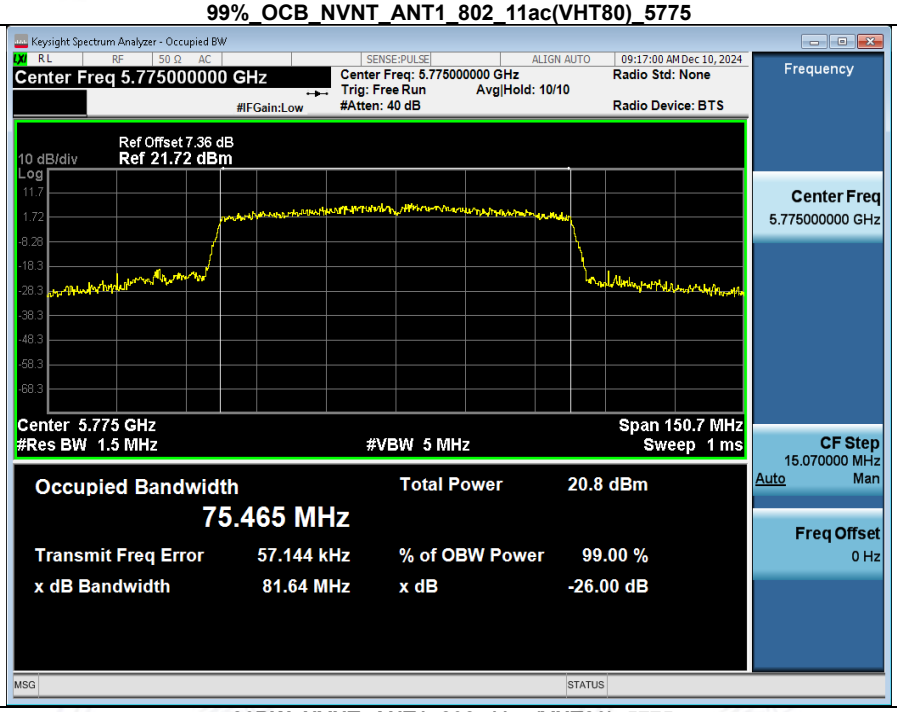

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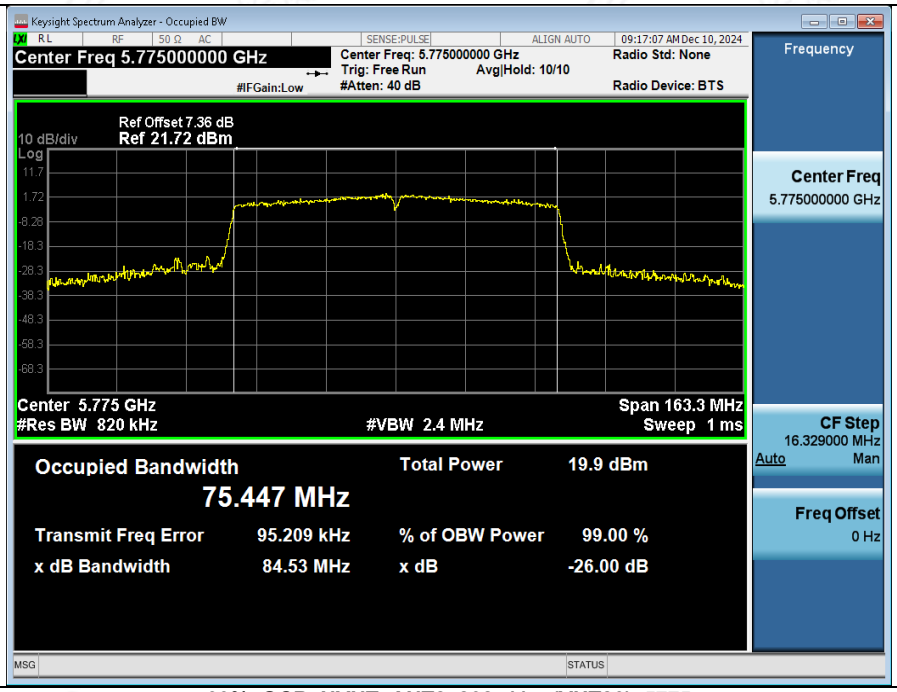

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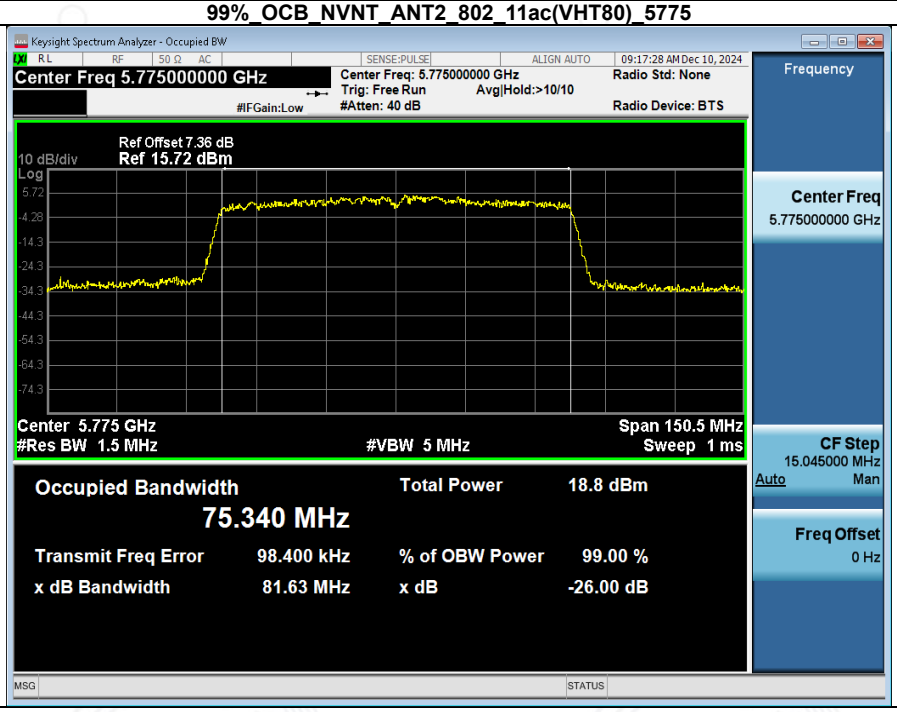

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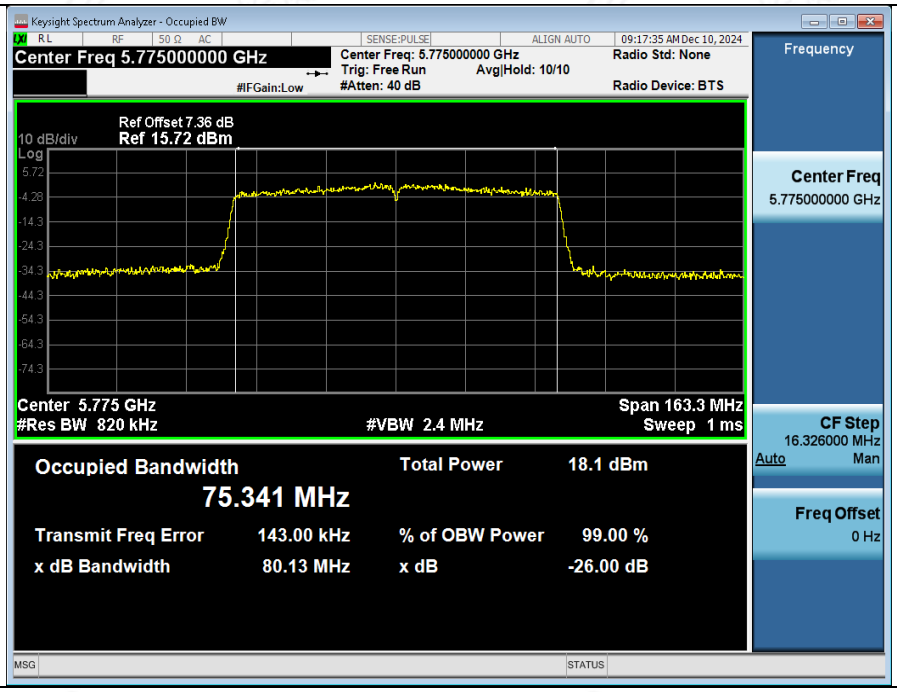
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ALIGN AUTO
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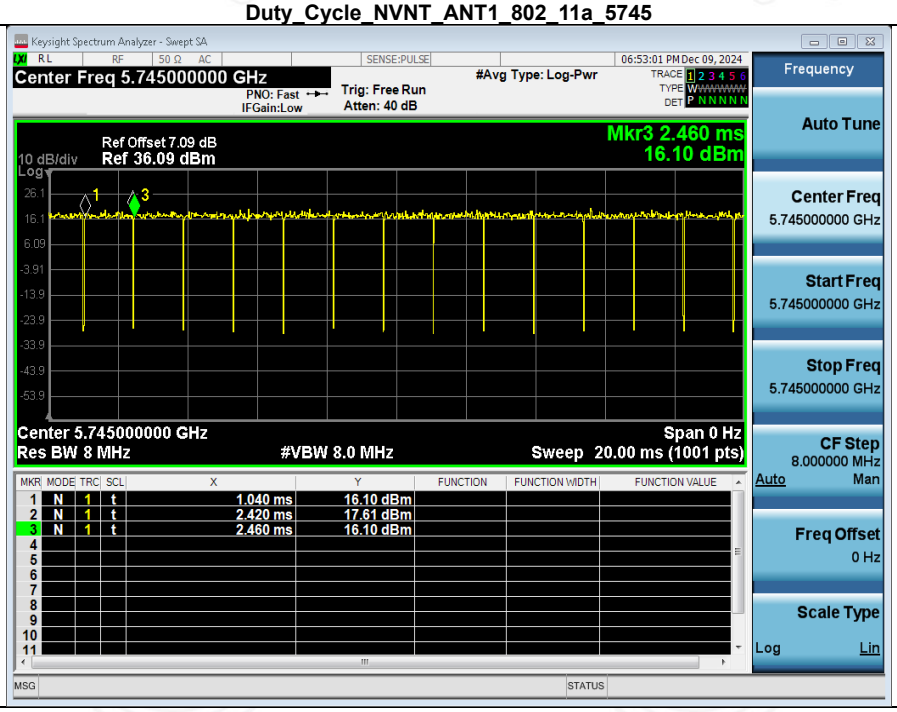
Center Freq: 5.775000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 7.36 dB
10 dB/div
Ref 15.72 dBm
Log
5.72
-4.28
-14.3
-24.3
-34.3
-44.3
-54.3
-64.3
-74.3
Center Freq
5.775000000 GHz
Center 5.775 GHz
#Res BW 820 kHz
#VBW 2.4 MHz
Span 163.3 MHz
Sweep 1 ms
CF Step
16.326000 MHz
Auto
Man
Occupied Bandwidth
75.341 MHz
Total Power
18.1 dBm
Transmit Freq Error
143.00 kHz
% of OBW Power
99.00 %
x dB Bandwidth
80.13 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

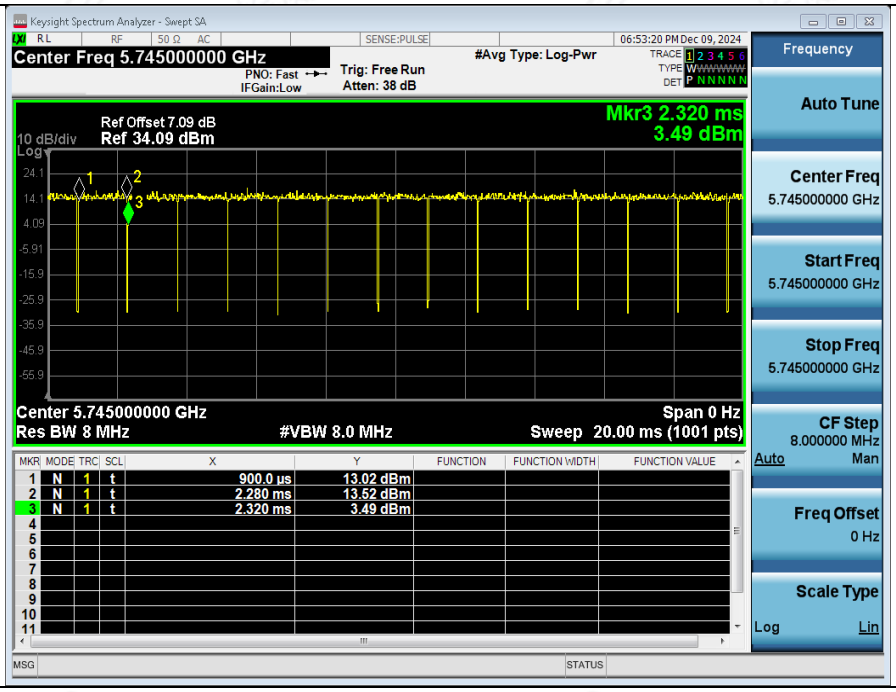
3. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5745.00	97.18	0.12
NVNT	ANT2	802.11a	5745.00	97.18	0.12
NVNT	ANT1	802.11a	5785.00	97.22	0.12
NVNT	ANT2	802.11a	5785.00	97.22	0.12
NVNT	ANT1	802.11a	5825.00	95.83	0.18
NVNT	ANT2	802.11a	5825.00	95.83	0.18
NVNT	ANT1	802.11n(HT20)	5745.00	97.01	0.13
NVNT	ANT2	802.11n(HT20)	5745.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5785.00	97.01	0.13
NVNT	ANT2	802.11n(HT20)	5785.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5825.00	97.01	0.13
NVNT	ANT2	802.11n(HT20)	5825.00	97.01	0.13
NVNT	ANT1	802.11ac(VHT20)	5745.00	94.44	0.25
NVNT	ANT2	802.11ac(VHT20)	5745.00	94.44	0.25
NVNT	ANT1	802.11ac(VHT20)	5785.00	94.44	0.25
NVNT	ANT2	802.11ac(VHT20)	5785.00	94.44	0.25
NVNT	ANT1	802.11ac(VHT20)	5825.00	94.44	0.25
NVNT	ANT2	802.11ac(VHT20)	5825.00	91.89	0.37
NVNT	ANT1	802.11n(HT40)	5755.00	94.29	0.26
NVNT	ANT2	802.11n(HT40)	5755.00	94.29	0.26
NVNT	ANT1	802.11n(HT40)	5795.00	94.12	0.26
NVNT	ANT2	802.11n(HT40)	5795.00	91.43	0.39
NVNT	ANT1	802.11ac(VHT40)	5755.00	85.00	0.71
NVNT	ANT2	802.11ac(VHT40)	5755.00	90.00	0.46
NVNT	ANT1	802.11ac(VHT40)	5795.00	85.00	0.71
NVNT	ANT2	802.11ac(VHT40)	5795.00	90.00	0.46
NVNT	ANT1	802.11ac(VHT80)	5775.00	81.82	0.87
NVNT	ANT2	802.11ac(VHT80)	5775.00	81.82	0.87

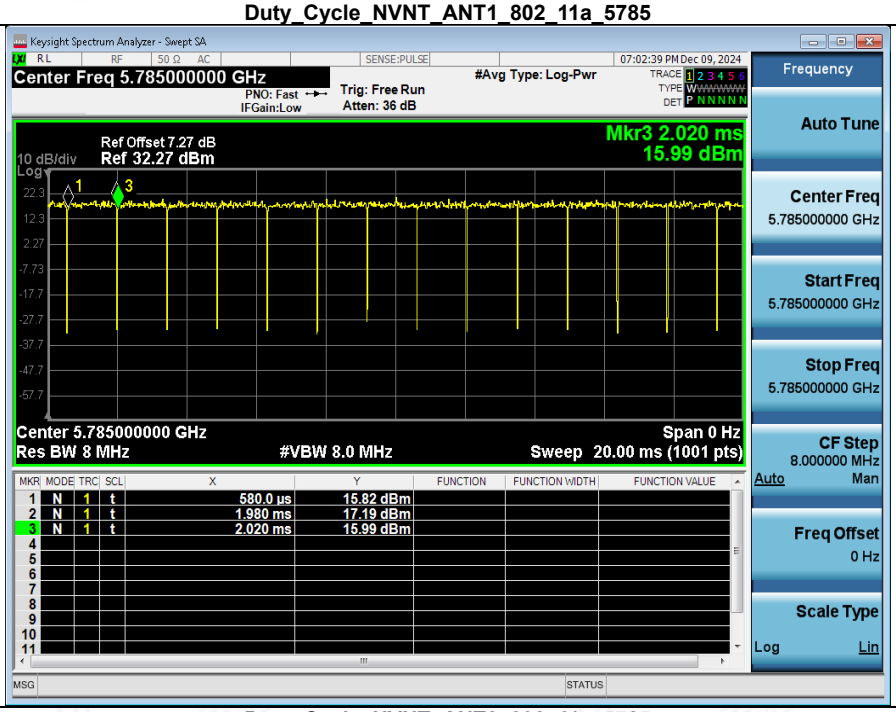
Duty_Cycle_NVNT_ANT1_802_11a_5745



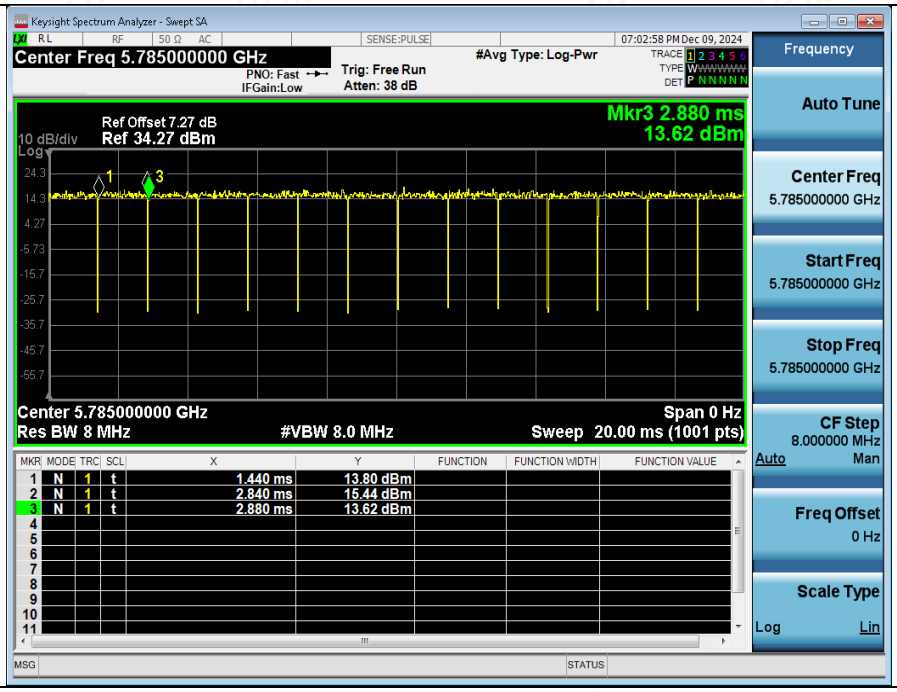
Duty_Cycle_NVNT_ANT2_802_11a_5745



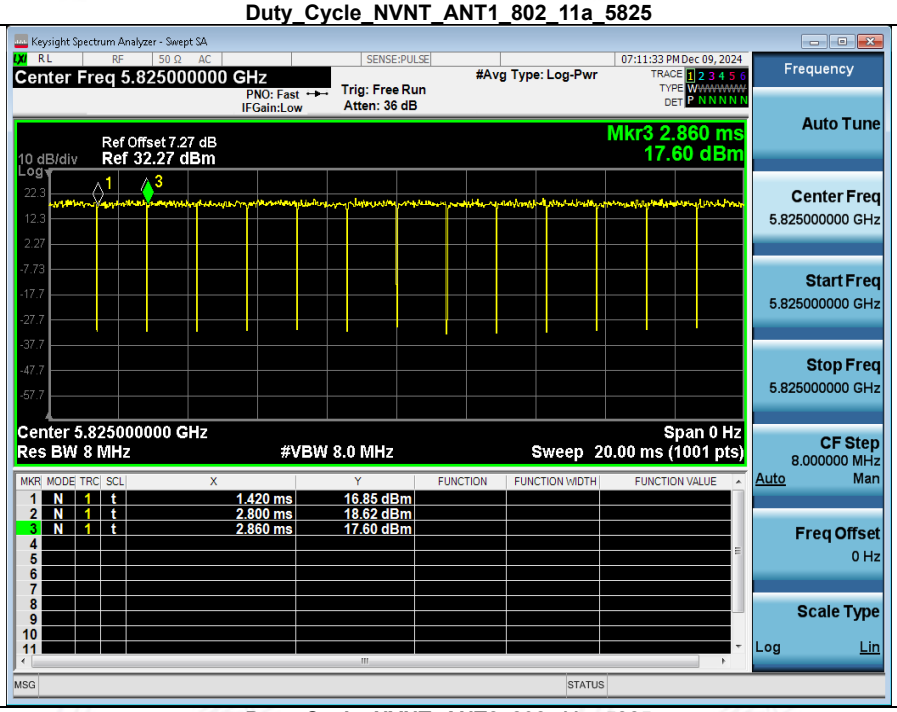
Duty_Cycle_NVNT_ANT1_802_11a_5785



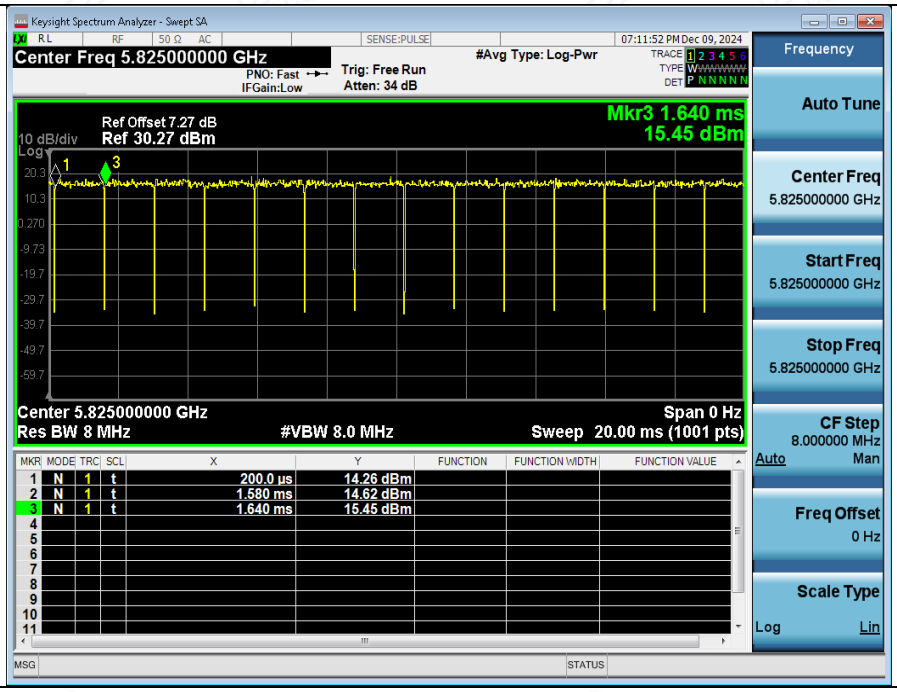
Duty_Cycle_NVNT_ANT2_802_11a_5785



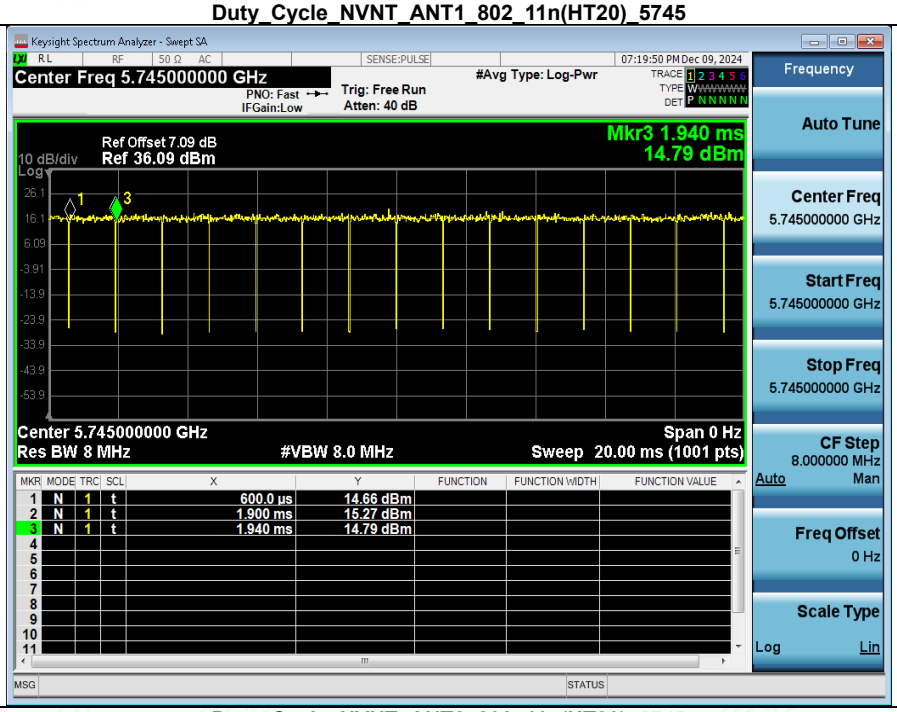
Duty_Cycle_NVNT_ANT1_802_11a_5825



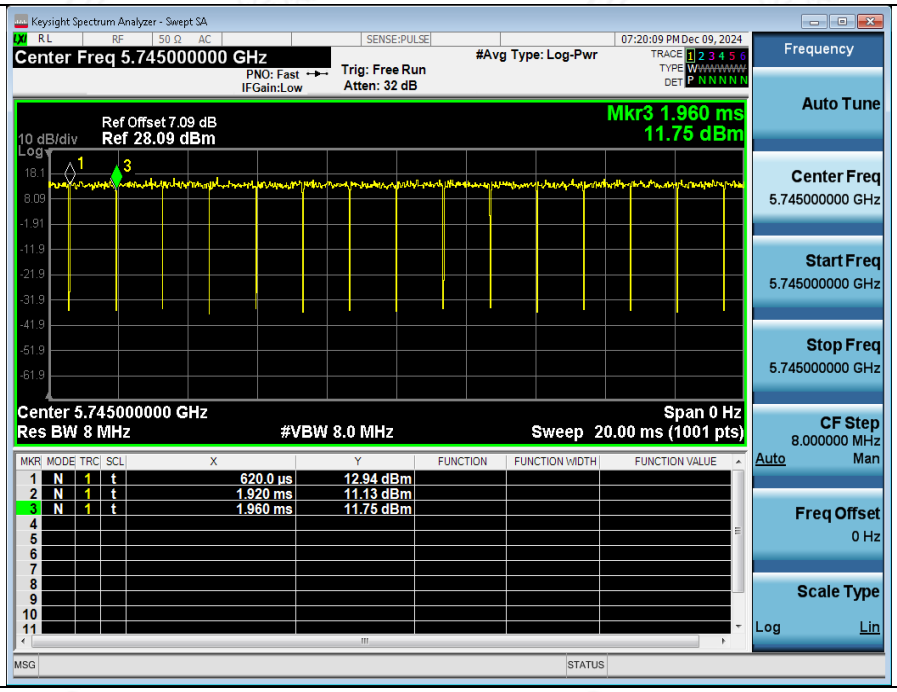
Duty_Cycle_NVNT_ANT2_802_11a_5825



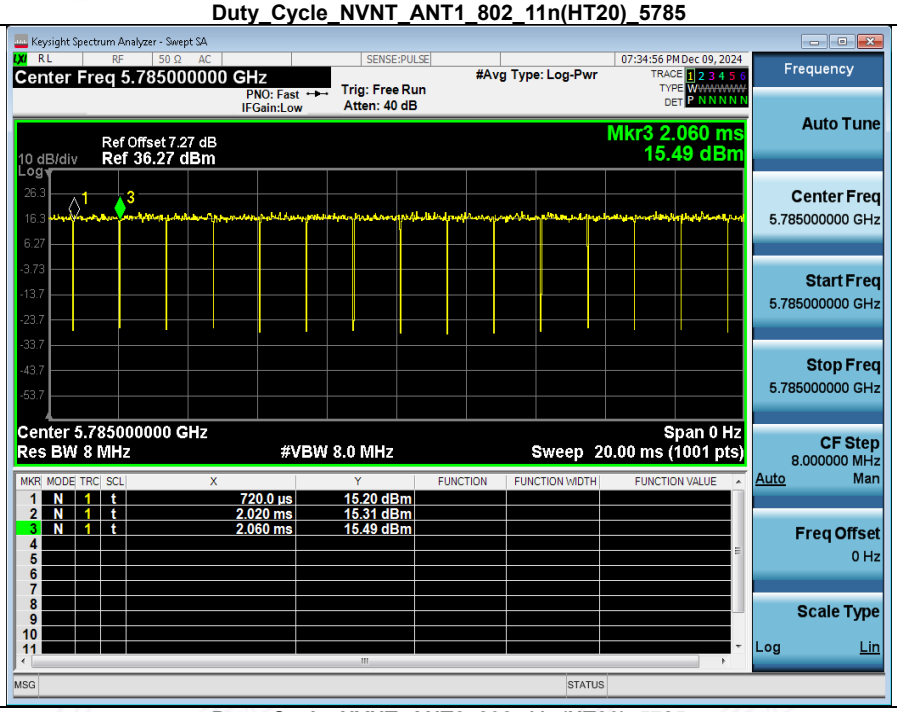
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5745



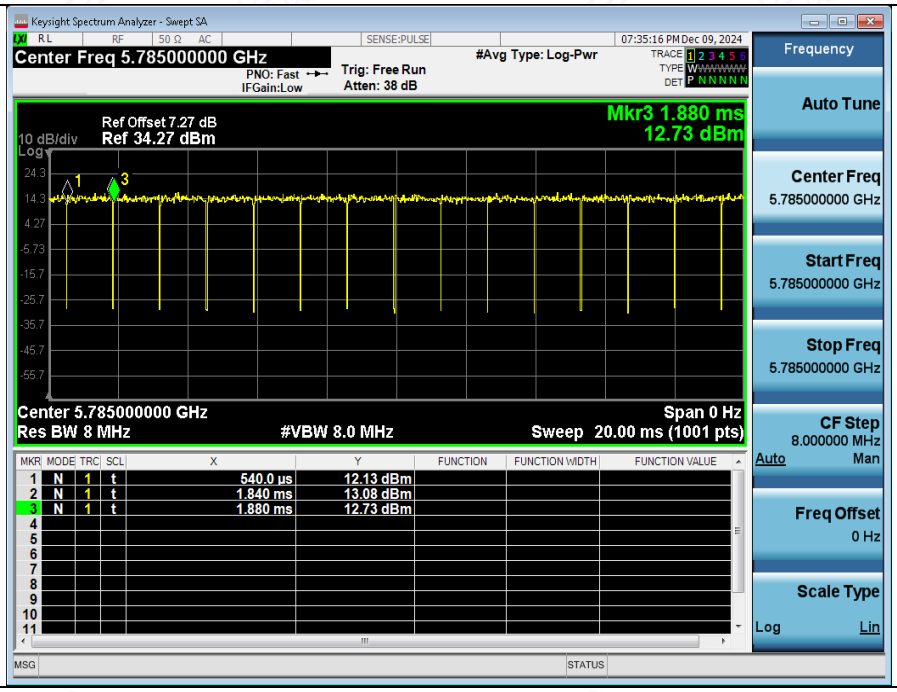
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5745



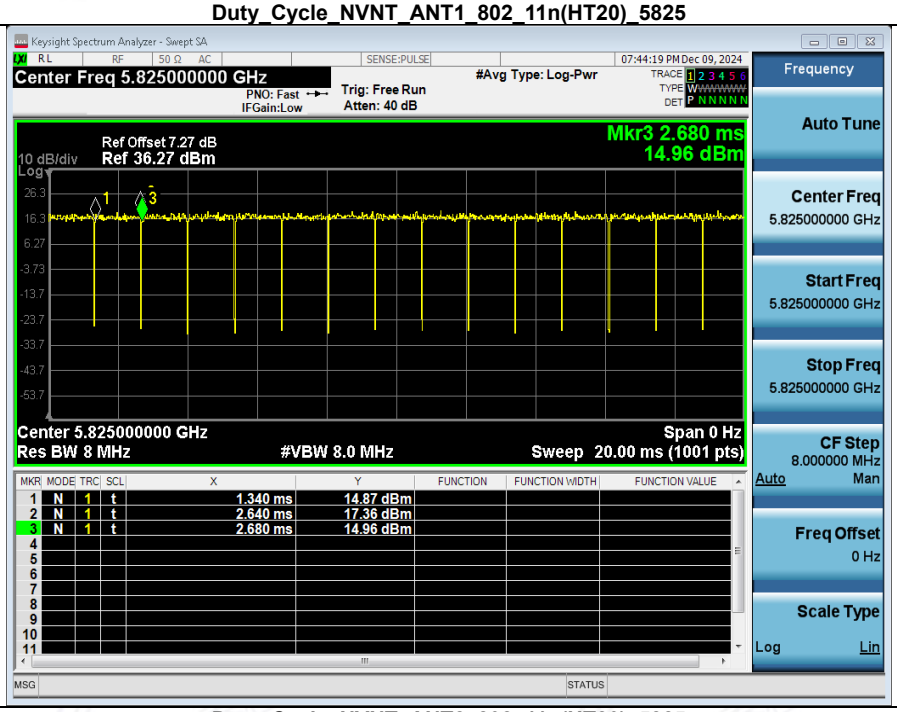
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5785



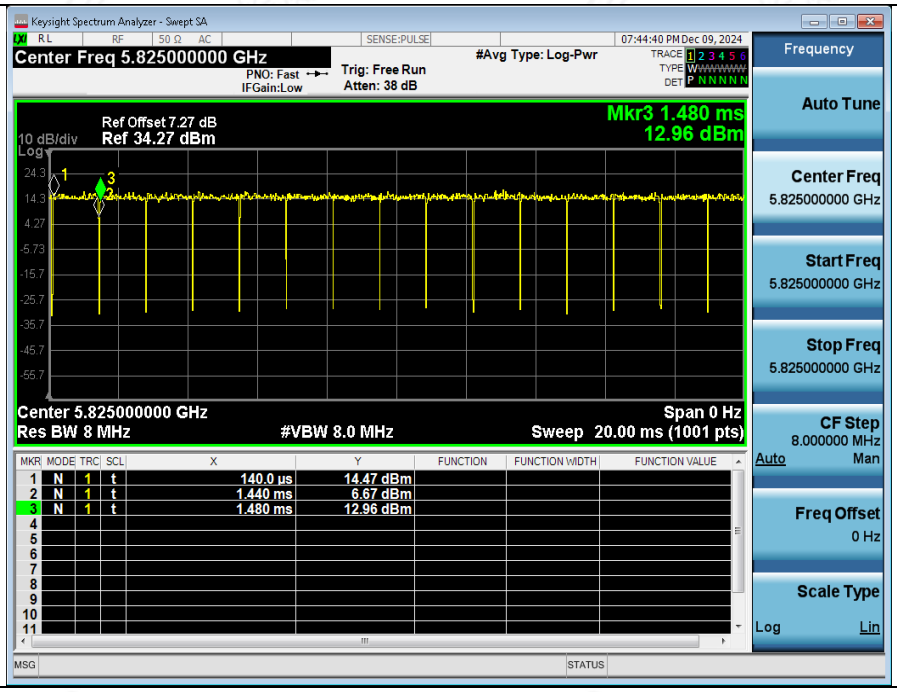
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5785



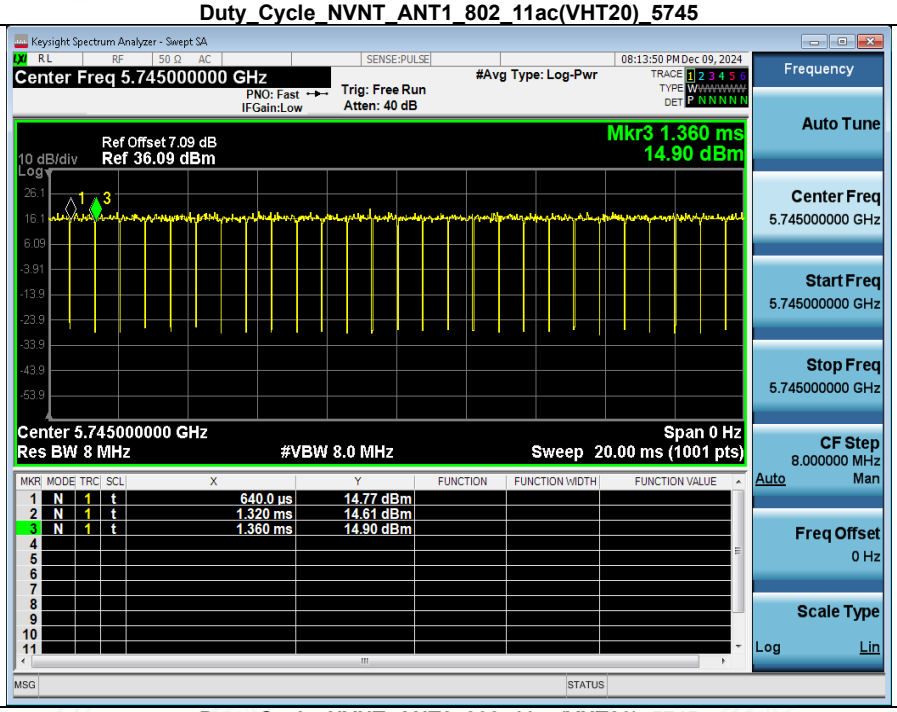
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5825



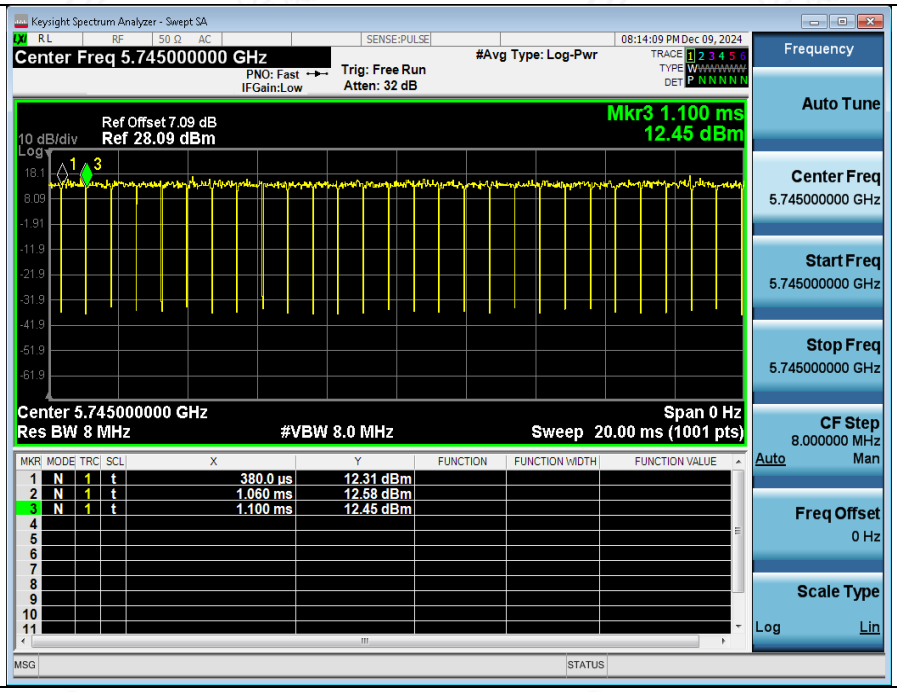
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5825



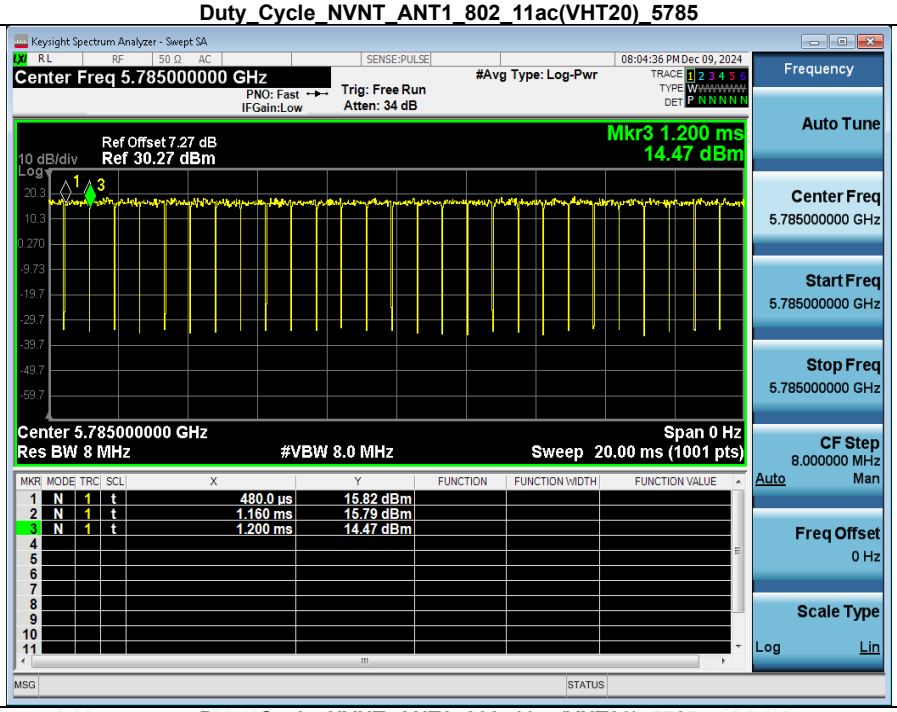
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5745



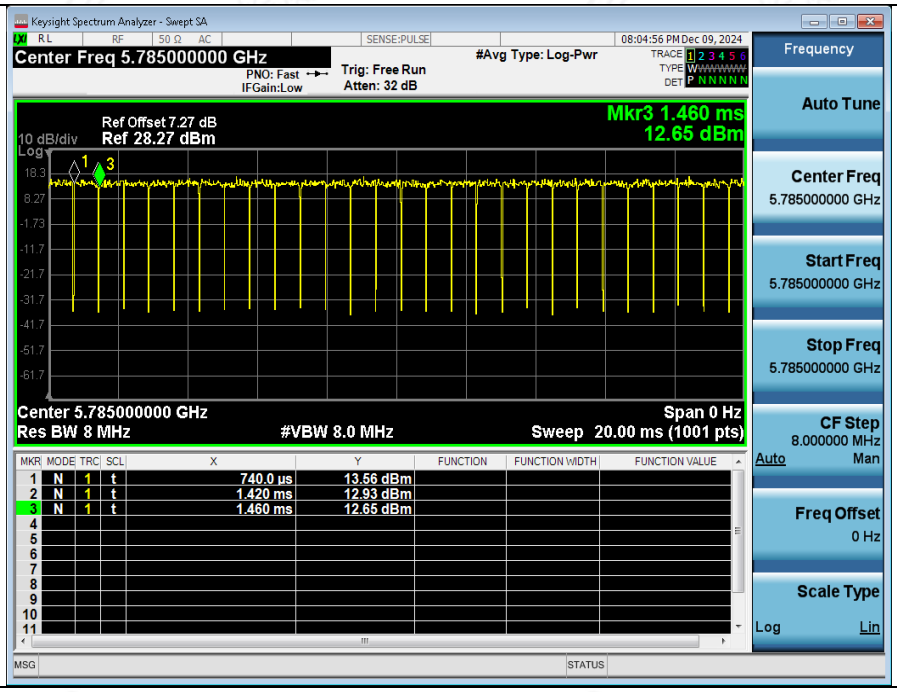
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5745



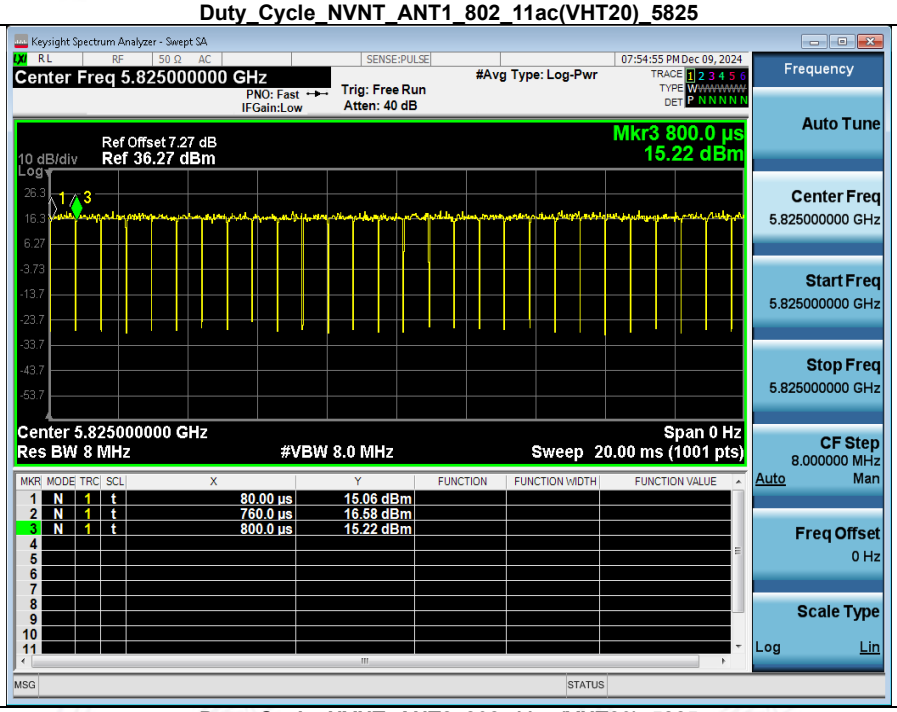
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5785



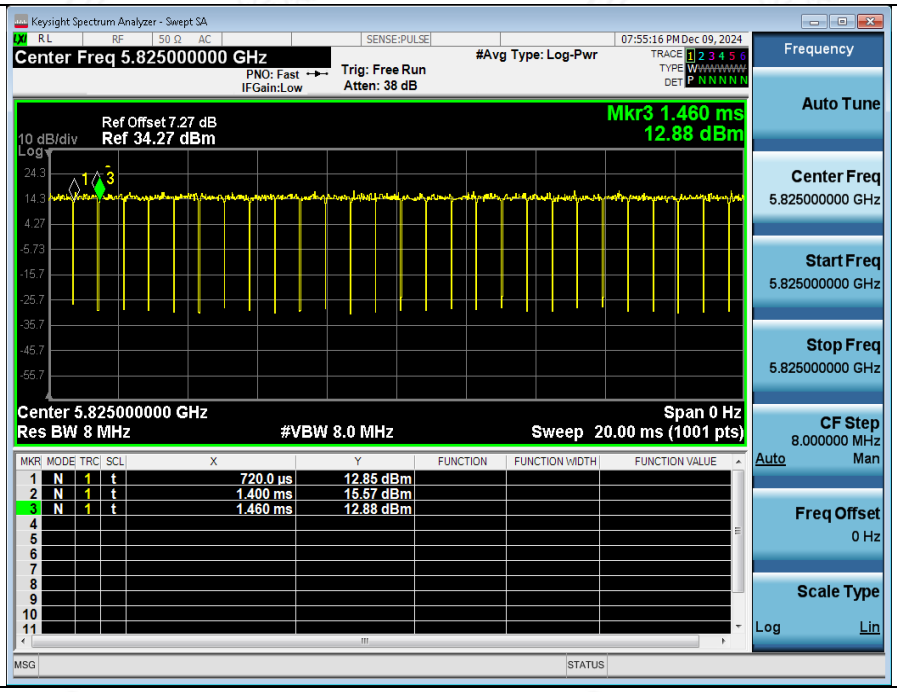
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5785



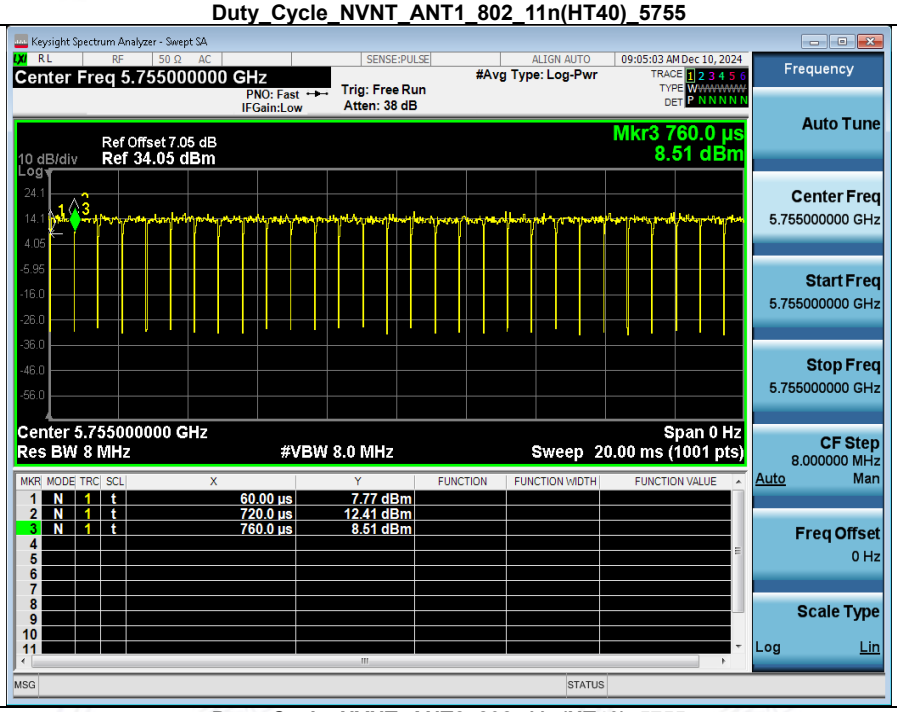
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5825



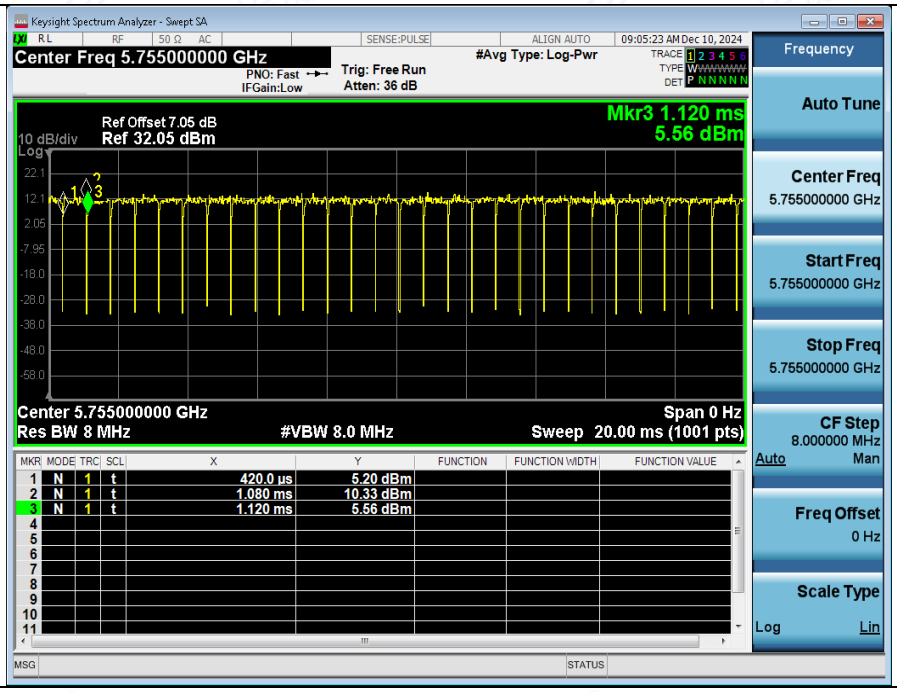
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5825



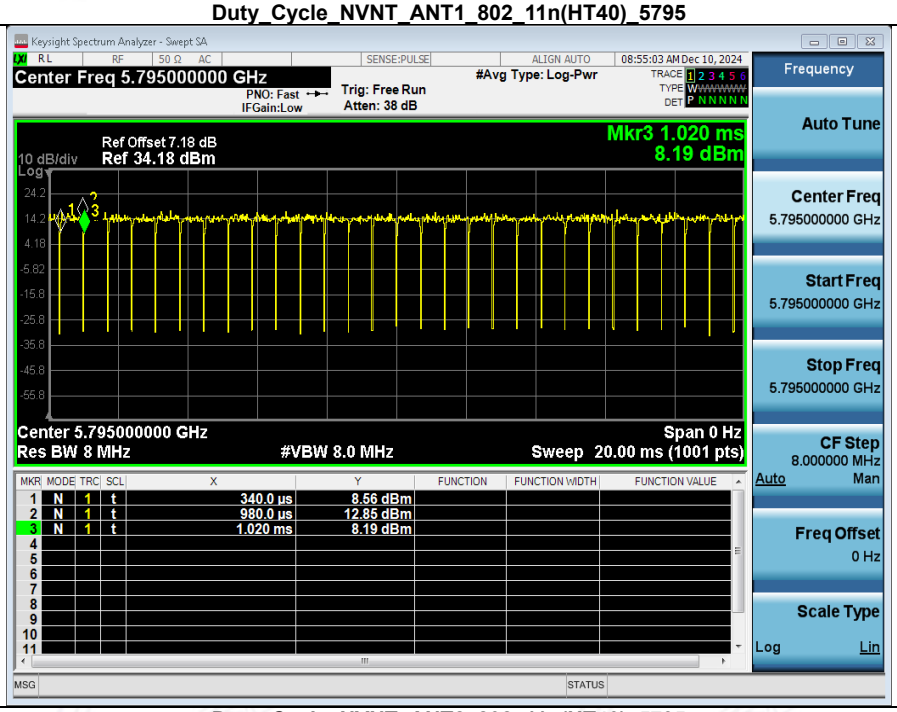
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5755



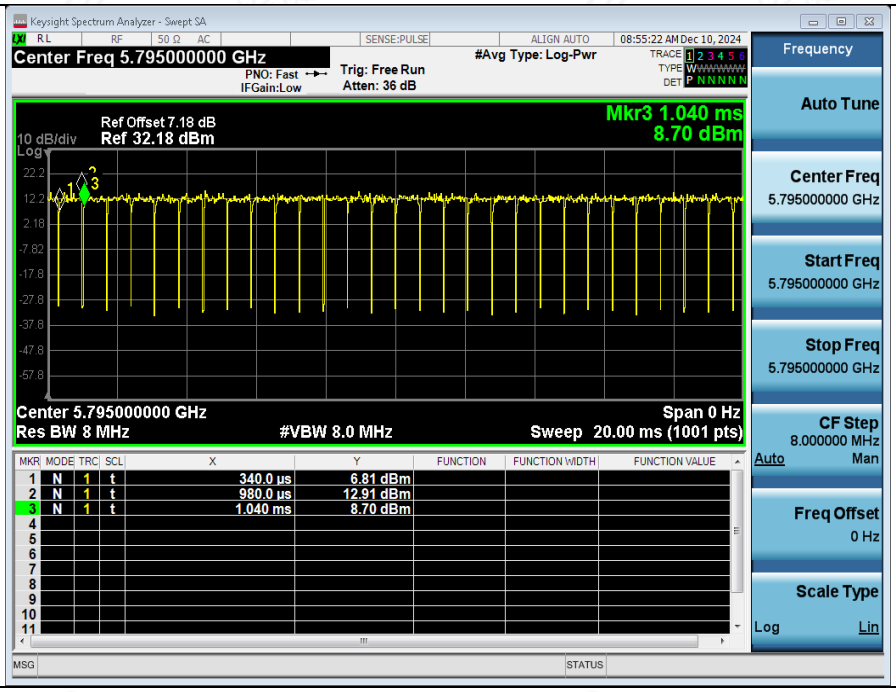
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5755



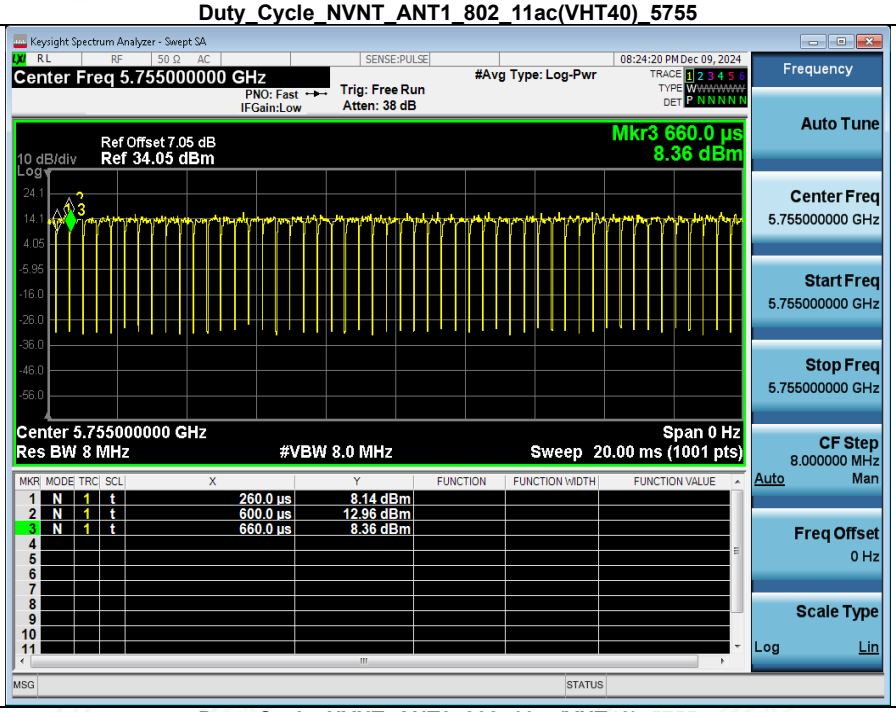
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5795



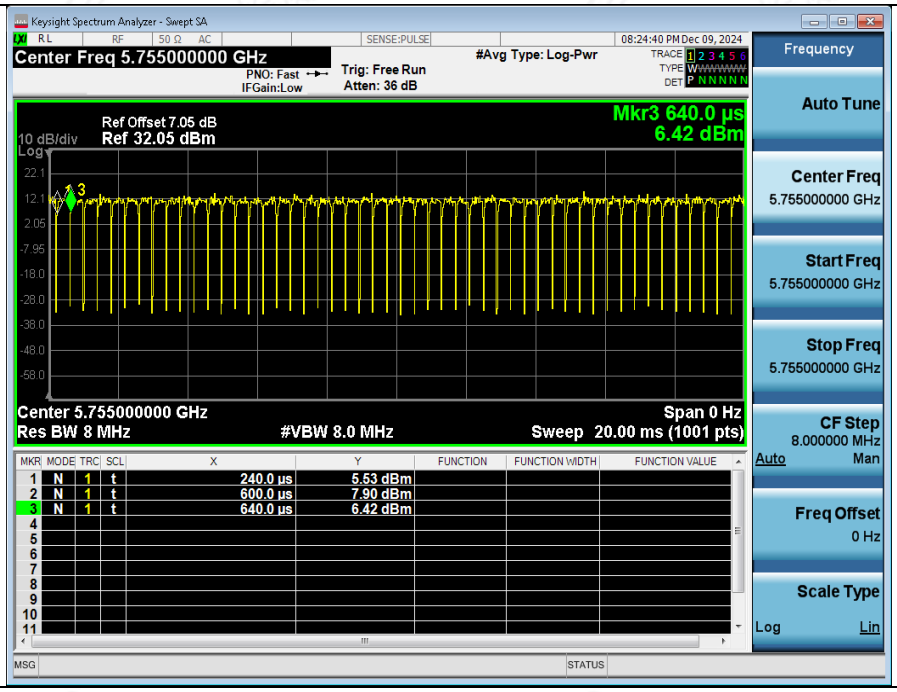
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5795



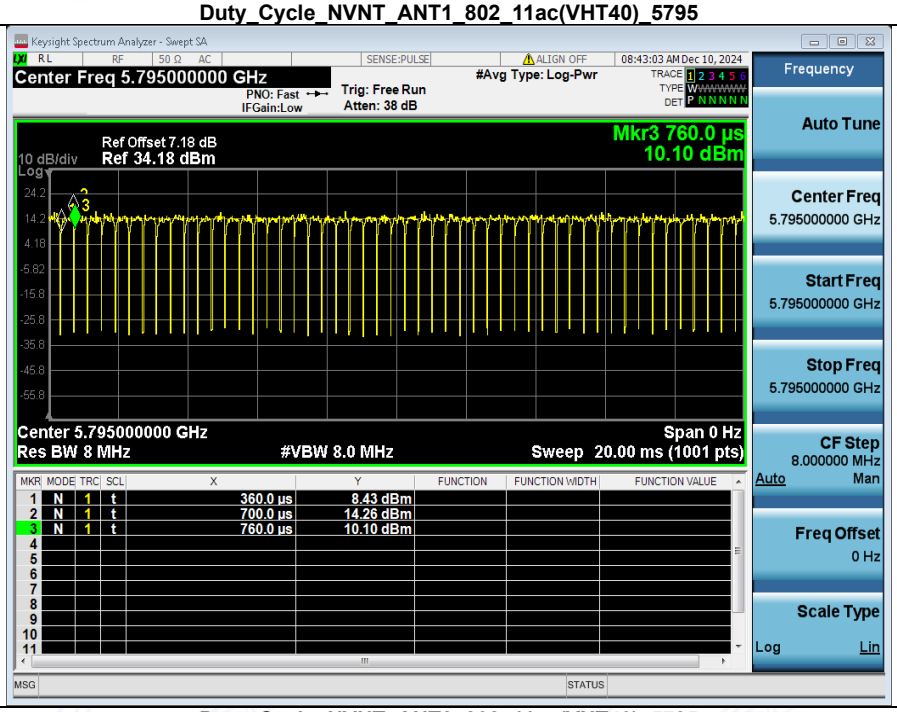
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5755



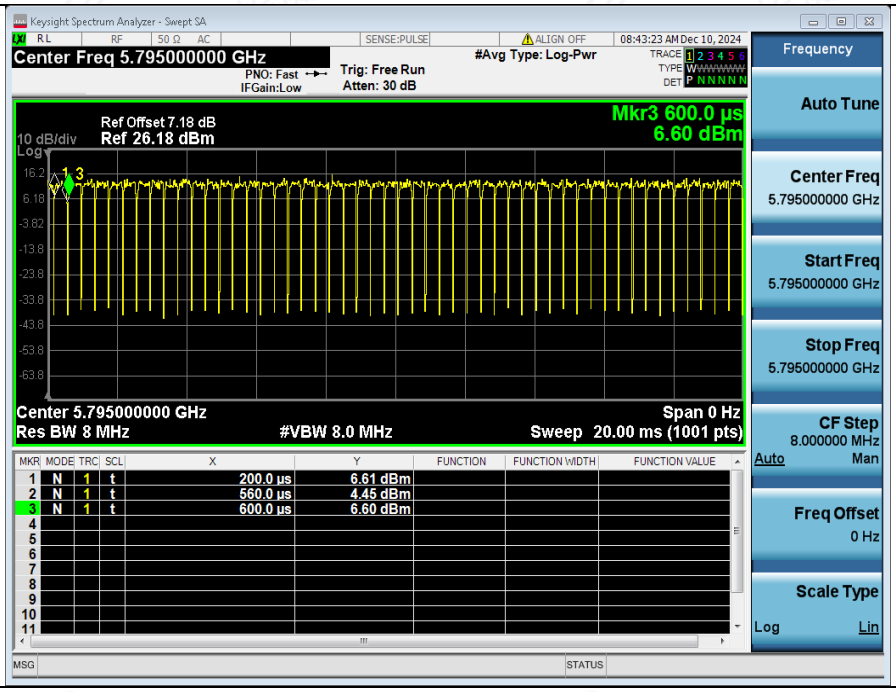
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5755



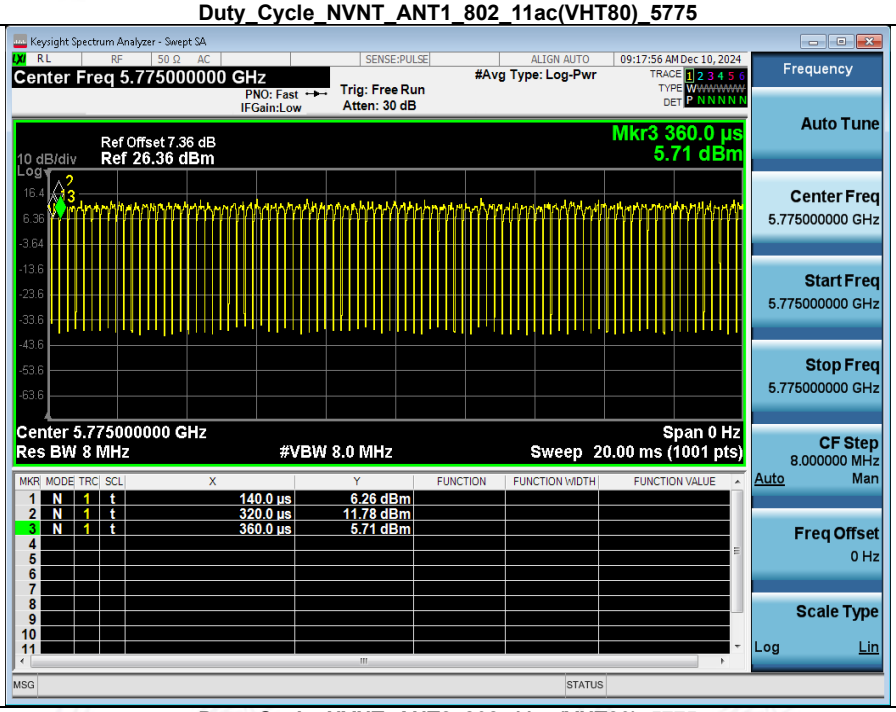
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5795



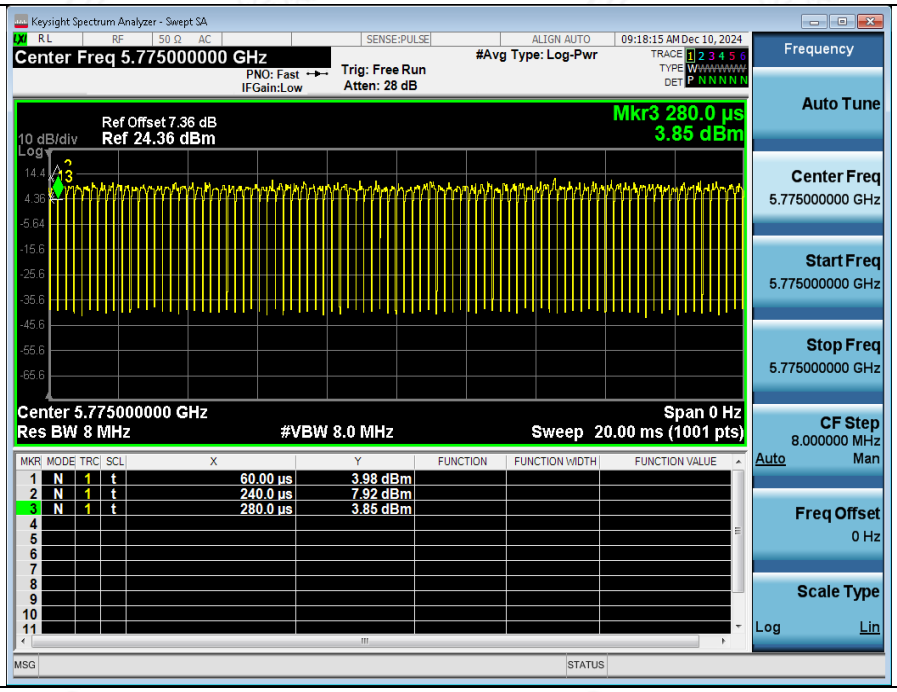
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5795



Duty_Cycle_NVNT_ANT1_802_11ac(VHT80)_5775



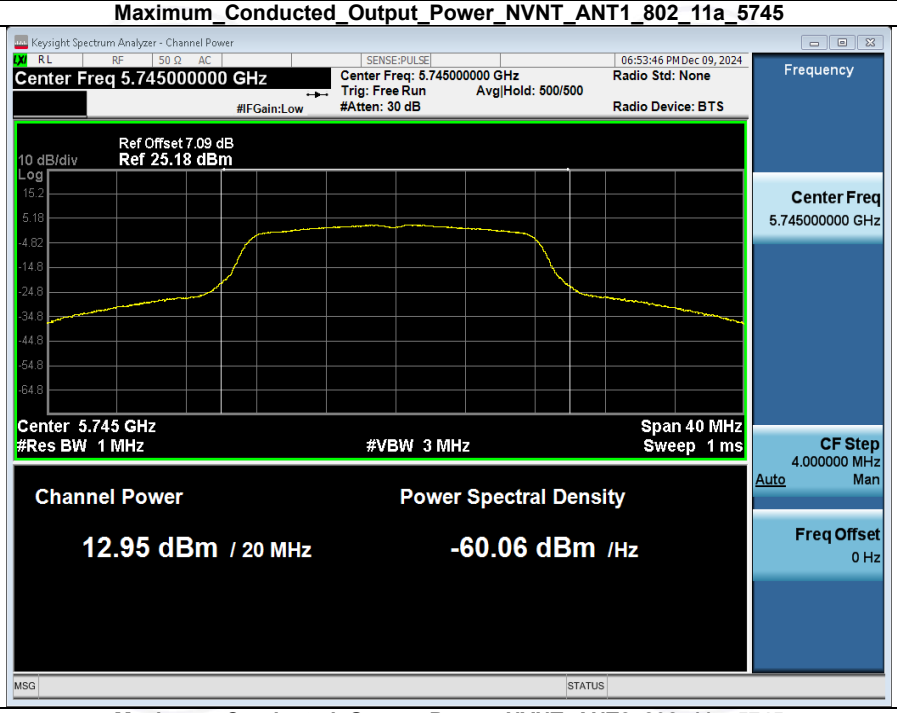
Duty_Cycle_NVNT_ANT2_802_11ac(VHT80)_5775


Keysight Spectrum Analyzer - Swept SA
Center Freq 5.775000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 28 dB
#Avg Type: Log-Pwr
09:18:15 AM Dec 10, 2024
Ref Offset 7.36 dB
10 dB/div
Ref 24.36 dBm
Mkr3 280.0 µs
3.85 dBm
Center 5.775000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (1001 pts)
1 N 1 t 60.00 µs 3.98 dBm
2 N 1 t 240.0 µs 7.92 dBm
3 N 1 t 280.0 µs 3.85 dBm
Frequency
Auto Tune
Center Freq
5.775000000 GHz
Start Freq
5.775000000 GHz
Stop Freq
5.775000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

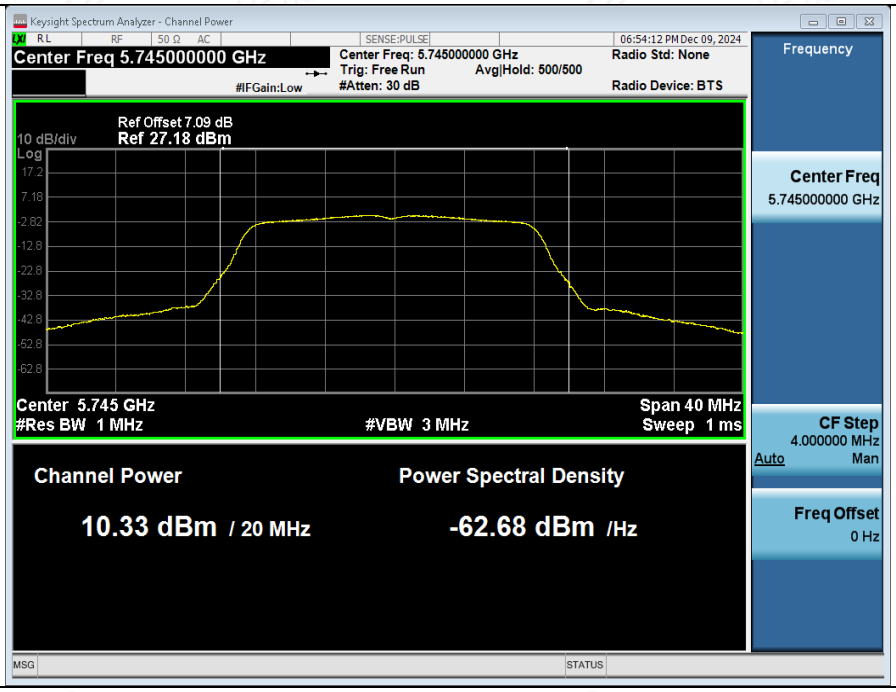
4. Maximum Conducted Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	12.95	0.12	13.07	30	Pass
NVNT	ANT2	802.11a	5745.00	10.33	0.12	10.45	30	Pass
NVNT	ANT1	802.11a	5785.00	13.35	0.12	13.47	30	Pass
NVNT	ANT2	802.11a	5785.00	11.13	0.12	11.25	30	Pass
NVNT	ANT1	802.11a	5825.00	13.81	0.18	13.99	30	Pass
NVNT	ANT2	802.11a	5825.00	11.72	0.18	11.90	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	11.88	0.13	12.01	30	Pass
NVNT	ANT2	802.11n(HT20)	5745.00	9.21	0.13	9.34	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	12.33	0.13	12.46	30	Pass
NVNT	ANT2	802.11n(HT20)	5785.00	10.00	0.13	10.13	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	12.63	0.13	12.76	30	Pass
NVNT	ANT2	802.11n(HT20)	5825.00	10.55	0.13	10.68	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	11.84	0.25	12.09	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5745.00	9.08	0.25	9.33	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	12.21	0.25	12.46	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5785.00	9.83	0.25	10.08	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	12.53	0.25	12.78	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5825.00	10.45	0.37	10.82	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	11.91	0.26	12.17	30	Pass
NVNT	ANT2	802.11n(HT40)	5755.00	9.53	0.26	9.79	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	12.39	0.26	12.65	30	Pass
NVNT	ANT2	802.11n(HT40)	5795.00	10.37	0.39	10.76	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	11.79	0.71	12.50	30	Pass
NVNT	ANT2	802.11ac(VHT40)	5755.00	9.14	0.46	9.60	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	11.96	0.71	12.67	30	Pass
NVNT	ANT2	802.11ac(VHT40)	5795.00	9.84	0.46	10.30	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	11.69	0.87	12.56	30	Pass
NVNT	ANT2	802.11ac(VHT80)	5775.00	9.43	0.87	10.30	30	Pass

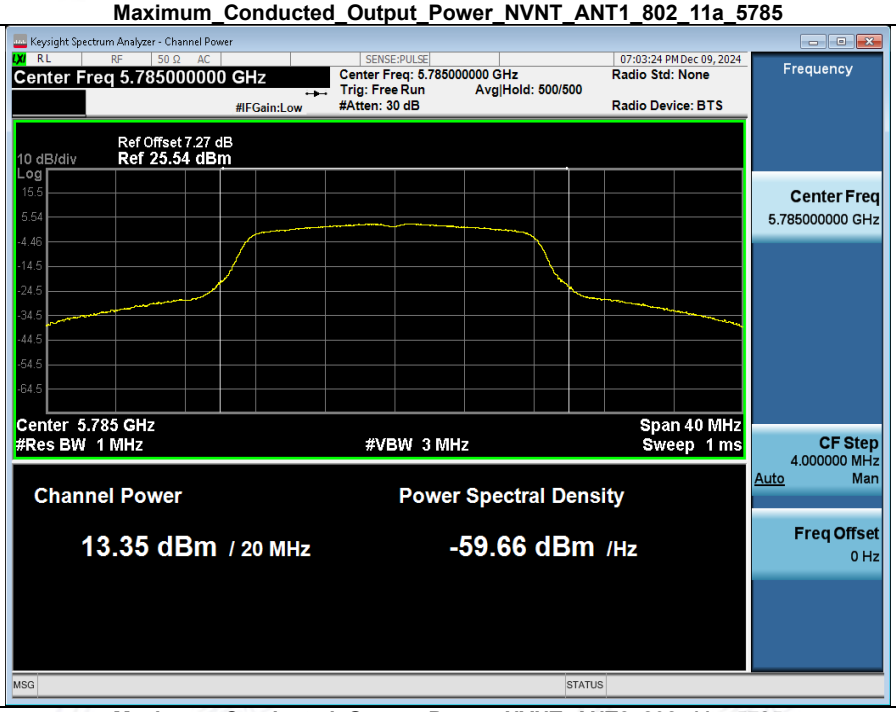
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5745



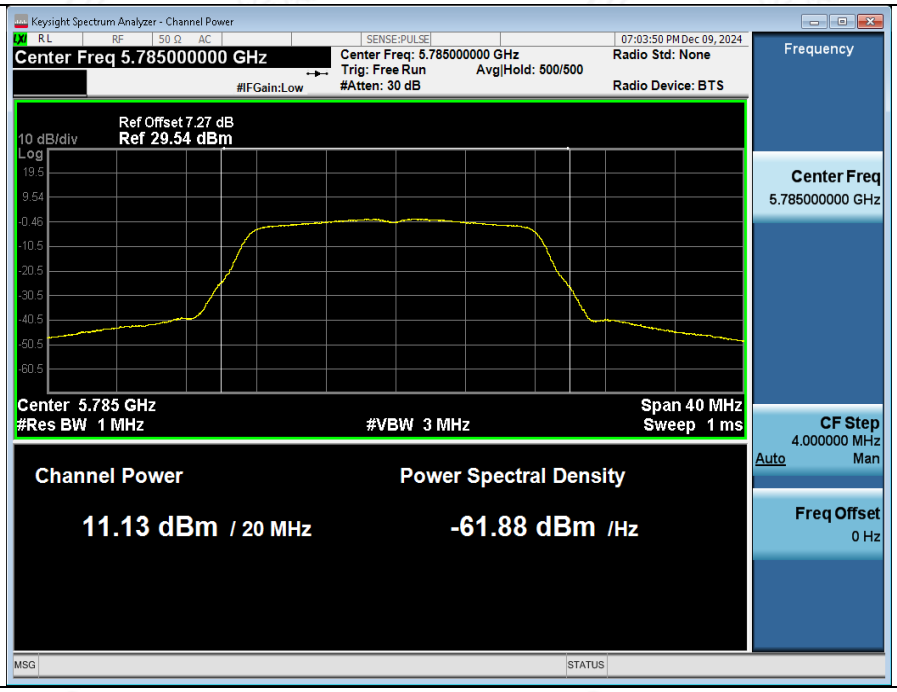
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5745



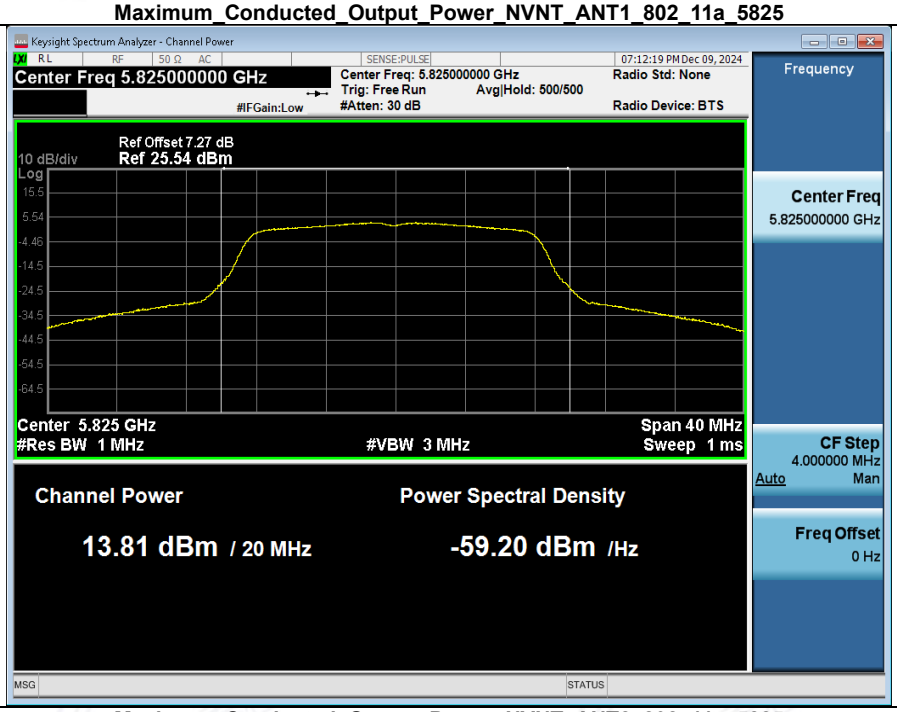
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5785



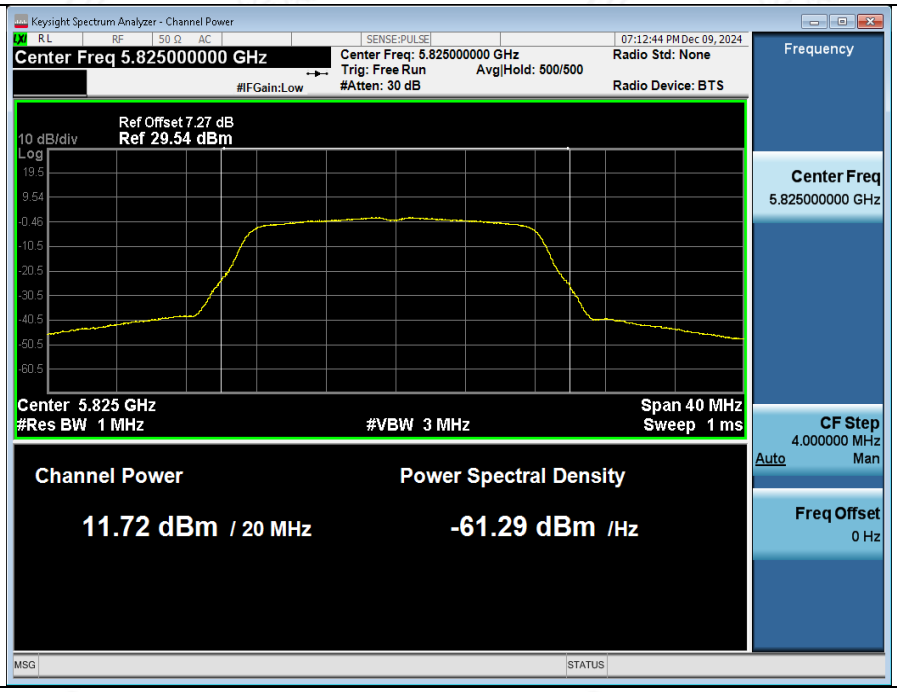
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5785



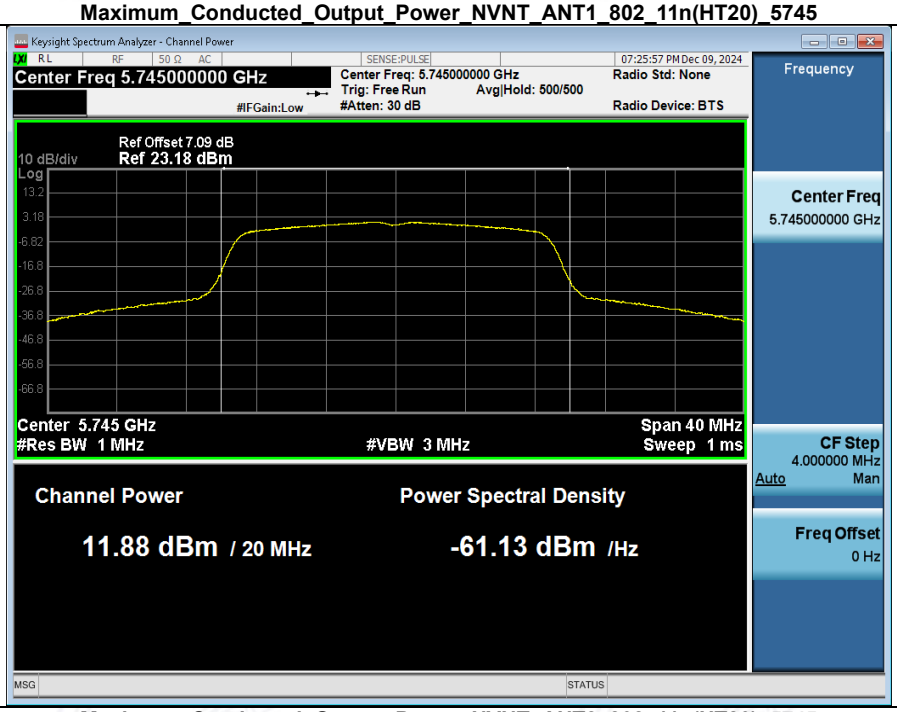
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5825



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5825



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5745



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