Appendix

Test Data

for BTEK241111036A01E04

Start date	2024/12/3	Finish date	2024/12/3
Temperature	22.5℃	Humidity	49%
RF specifications	5.8G_WIFI	Test Engineer	Zora

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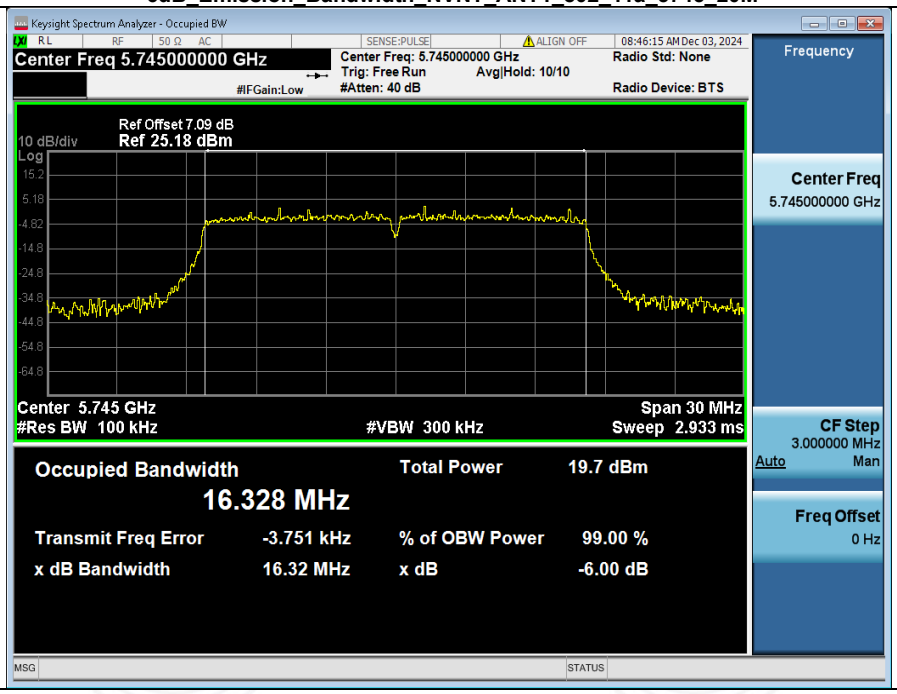
1. -6dB Emission Bandwidth

Condition	Antenna	Mode	Frequency(MHz)	-6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	16.320	0.500	Pass
NVNT	ANT2	802.11a	5745.00	15.988	0.500	Pass
NVNT	ANT1	802.11a	5785.00	16.337	0.500	Pass
NVNT	ANT2	802.11a	5785.00	16.353	0.500	Pass
NVNT	ANT1	802.11a	5825.00	16.361	0.500	Pass
NVNT	ANT2	802.11a	5825.00	16.355	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	17.570	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5745.00	16.922	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	17.549	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5785.00	17.587	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	17.582	0.500	Pass
NVNT	ANT2	802.11n(HT20)	5825.00	17.547	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	17.209	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5745.00	17.176	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	17.561	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5785.00	17.301	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	17.548	0.500	Pass
NVNT	ANT2	802.11ac(VHT20)	5825.00	17.126	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	35.162	0.500	Pass
NVNT	ANT2	802.11n(HT40)	5755.00	35.180	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	34.510	0.500	Pass
NVNT	ANT2	802.11n(HT40)	5795.00	35.068	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	35.408	0.500	Pass
NVNT	ANT2	802.11ac(VHT40)	5755.00	35.352	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	35.178	0.500	Pass
NVNT	ANT2	802.11ac(VHT40)	5795.00	33.960	0.500	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	73.795	0.500	Pass
NVNT	ANT2	802.11ac(VHT80)	5775.00	70.161	0.500	Pass

-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5745_20M



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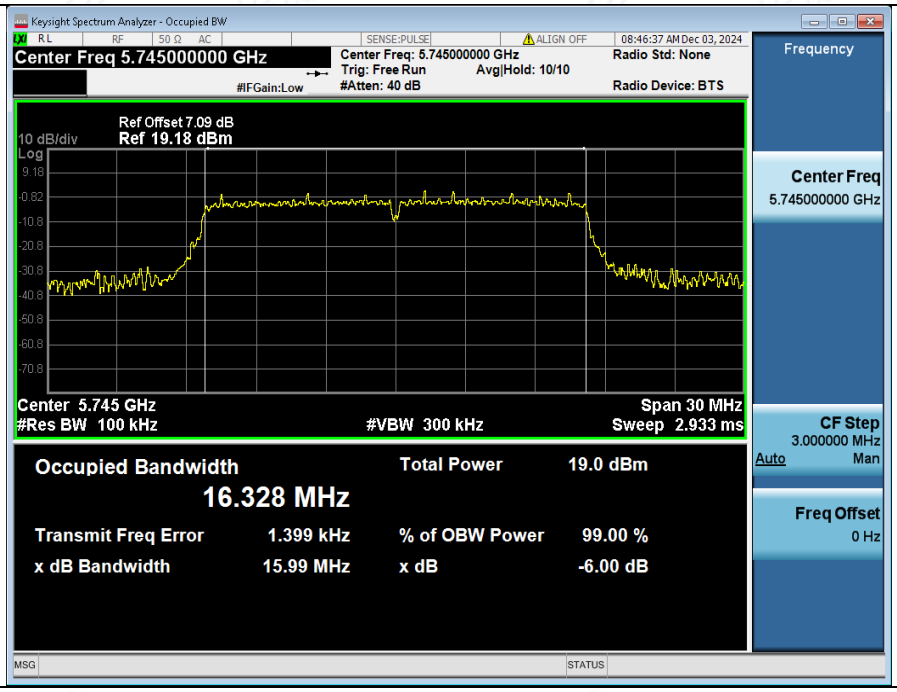

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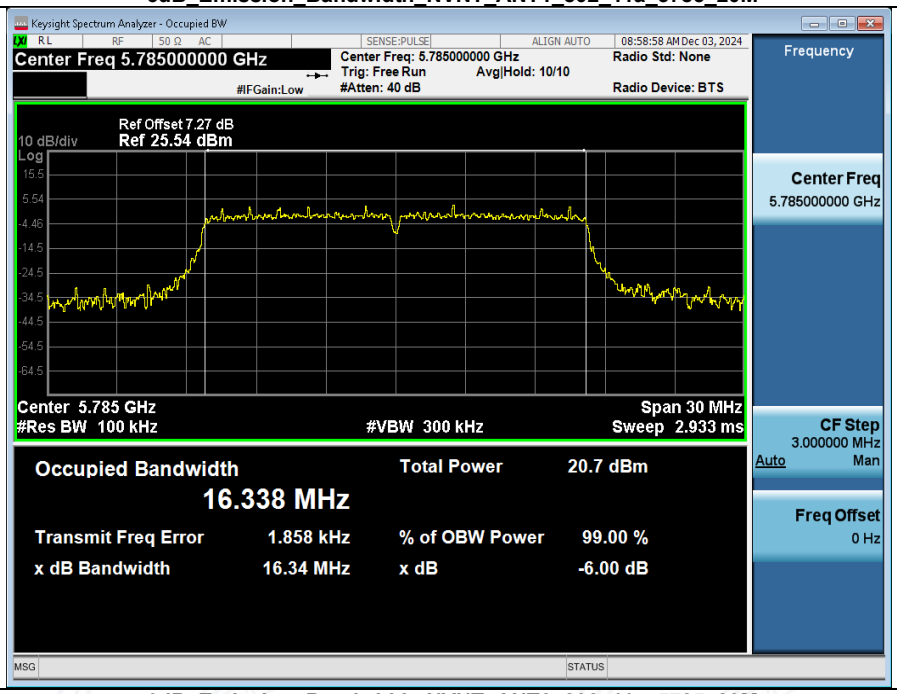

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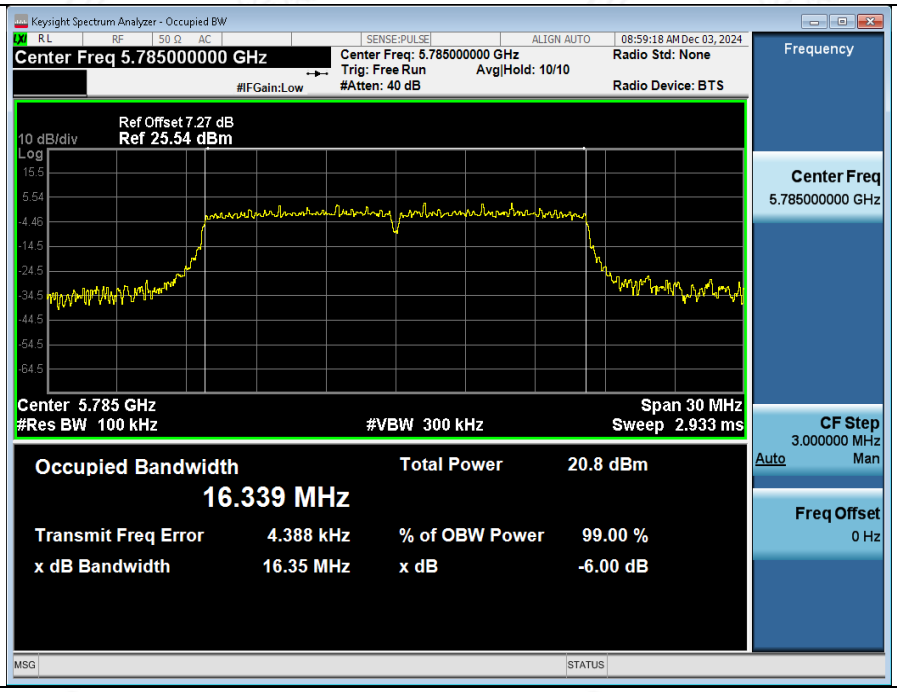

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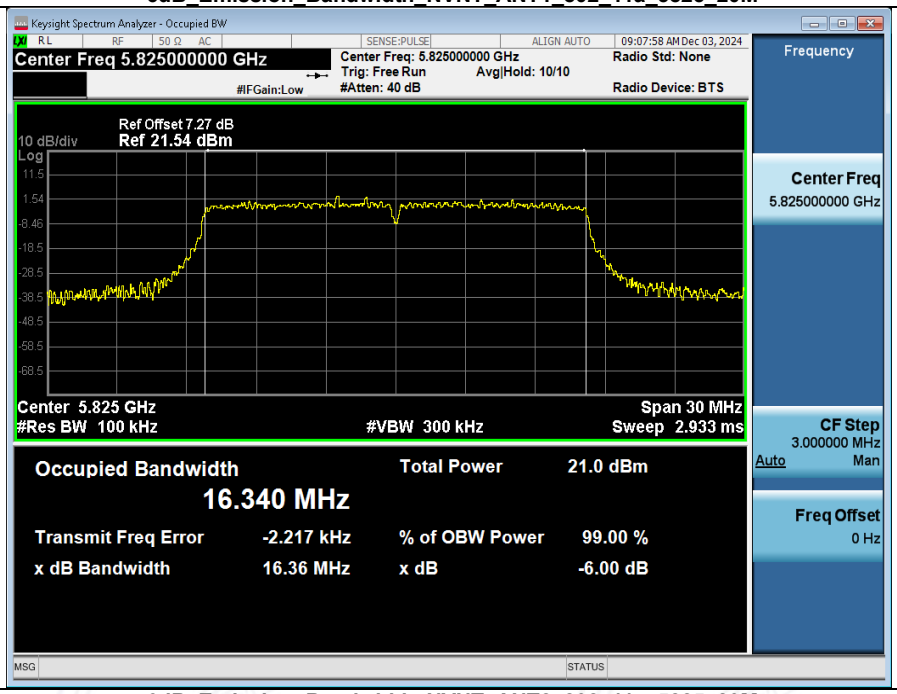

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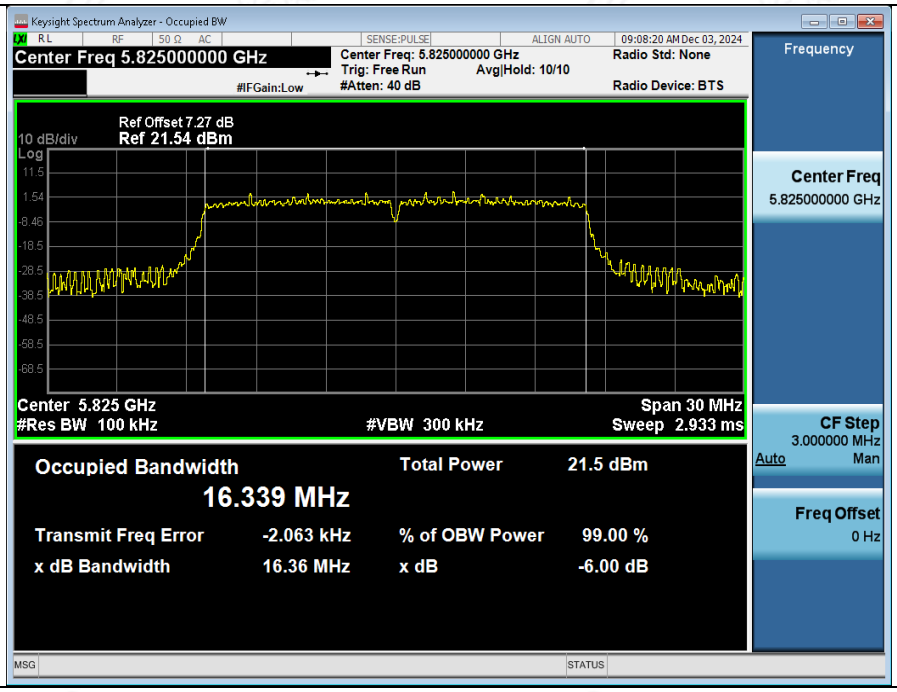

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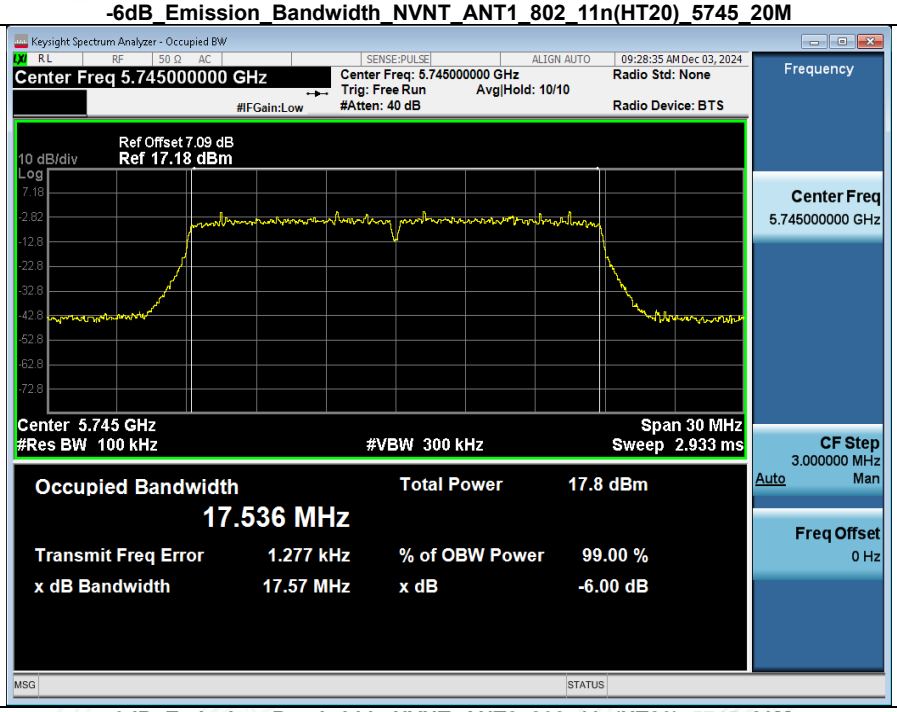

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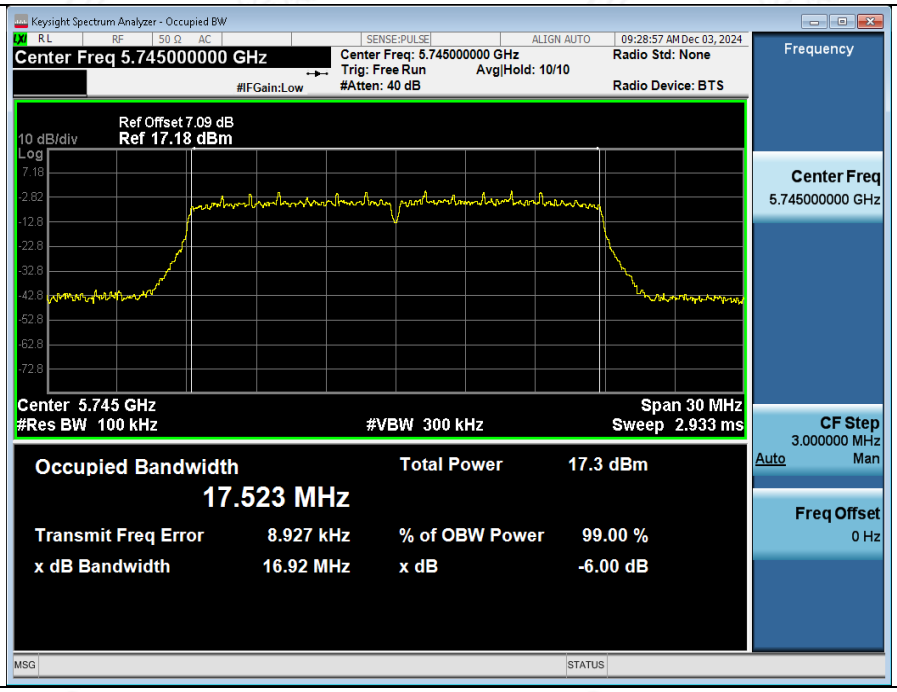

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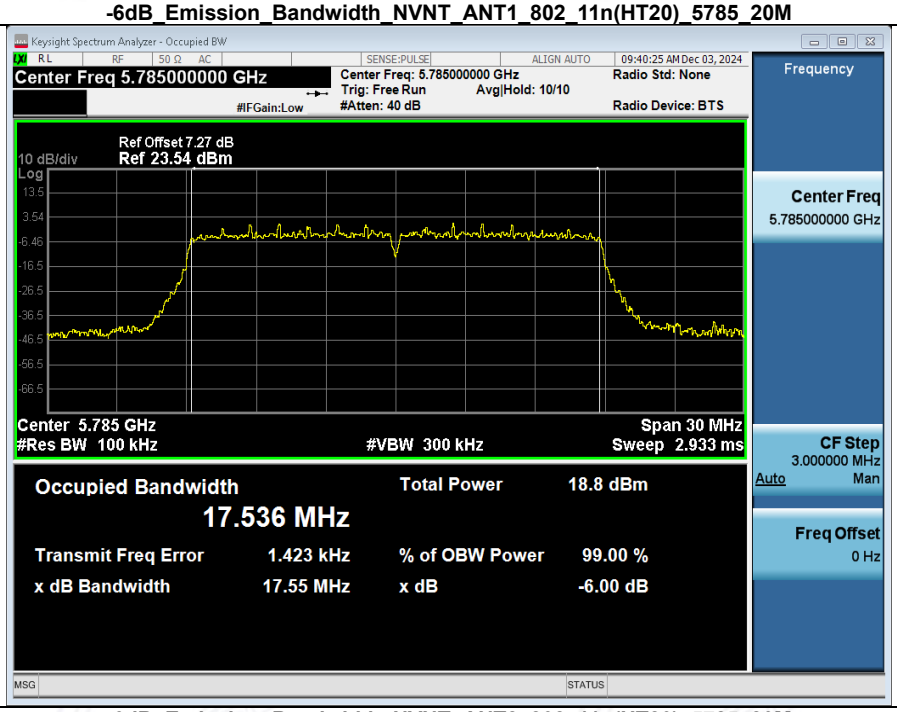

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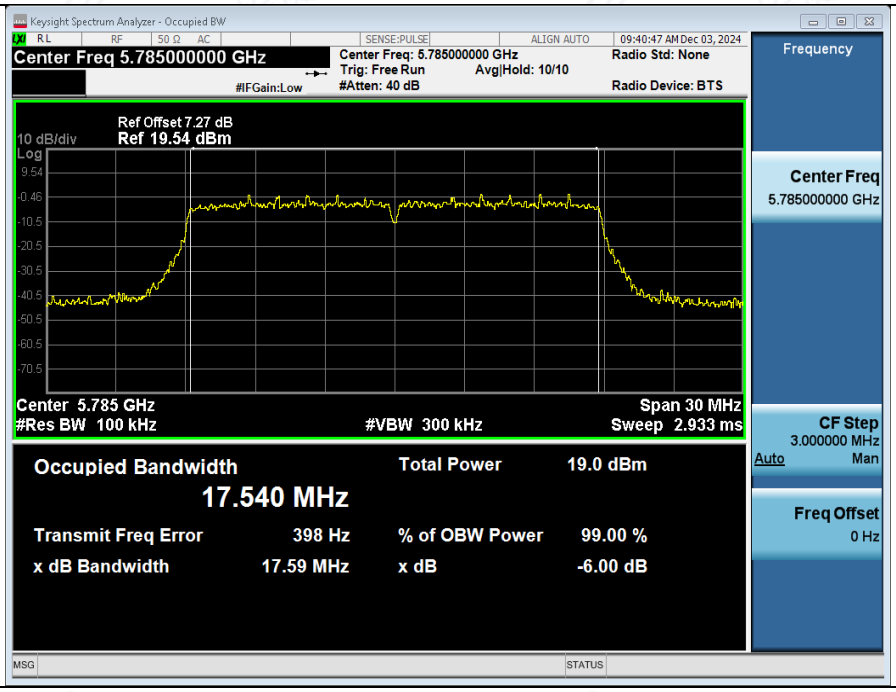

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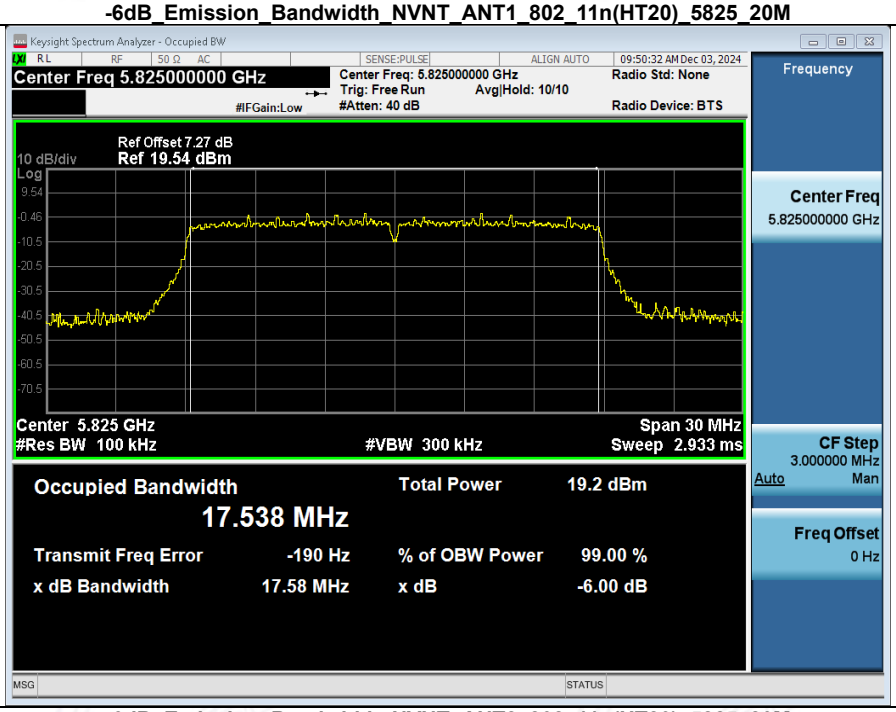

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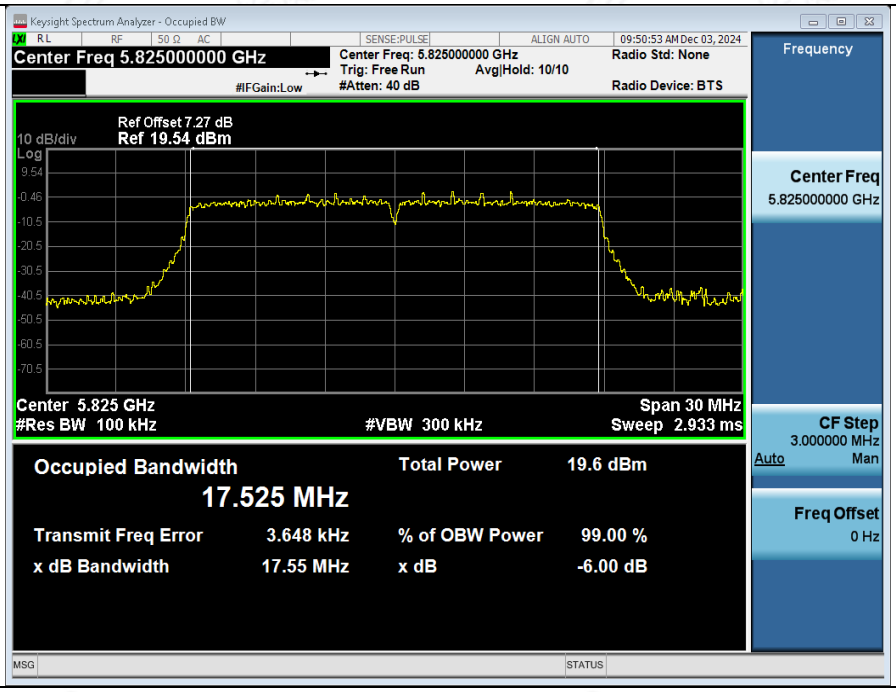

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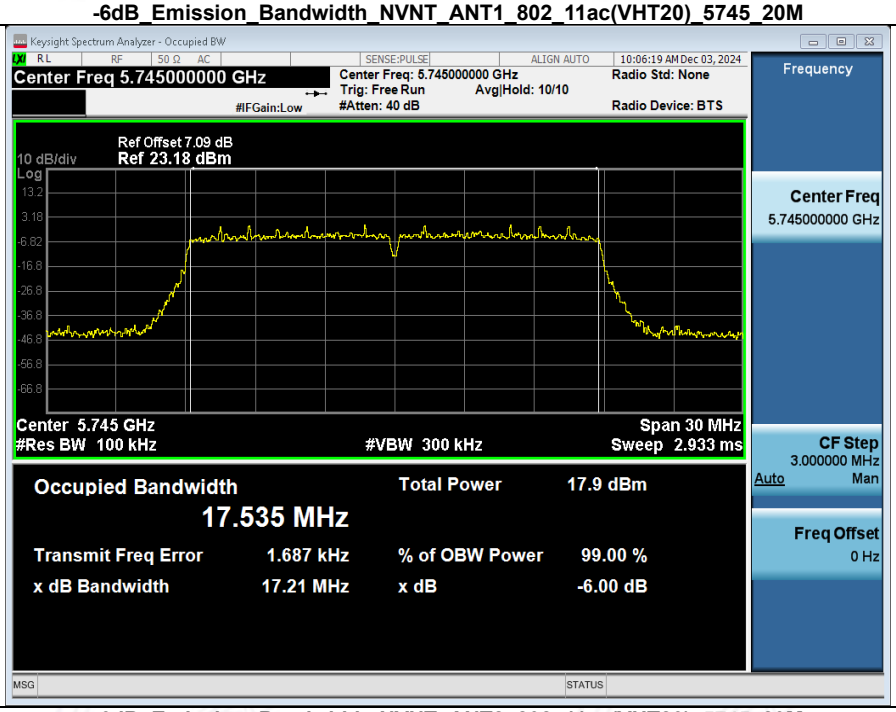

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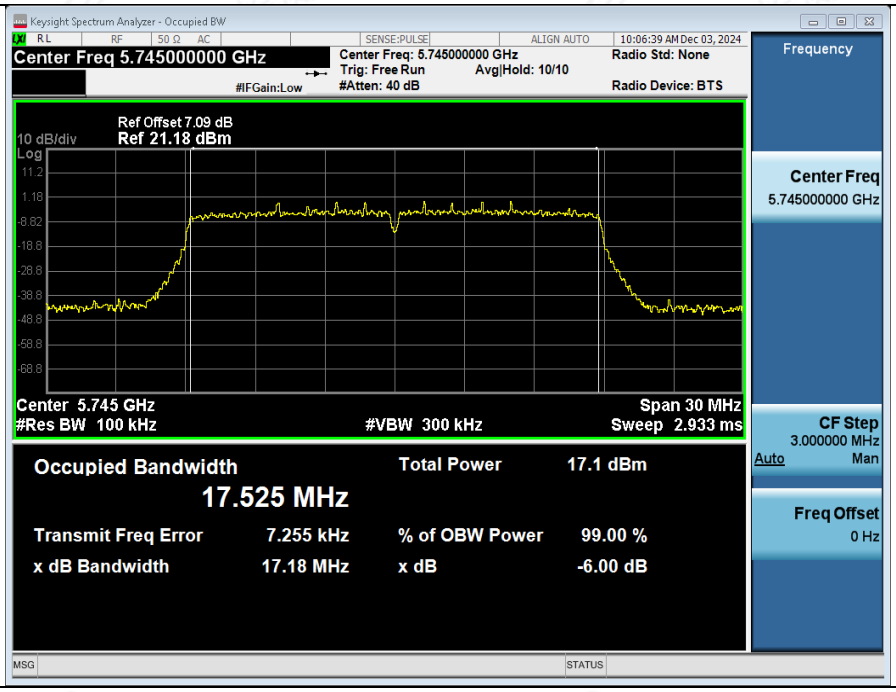

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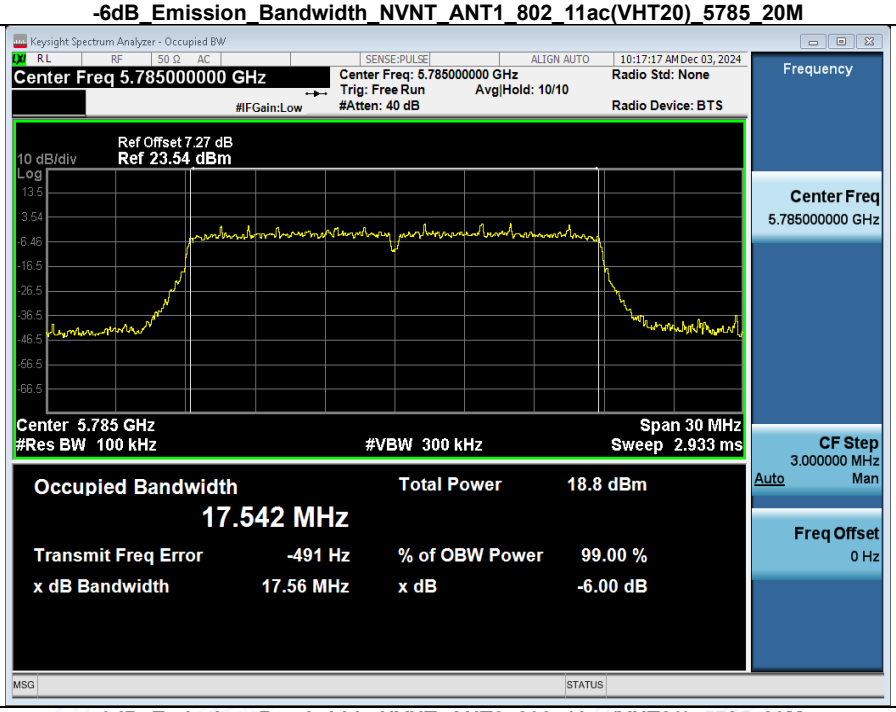

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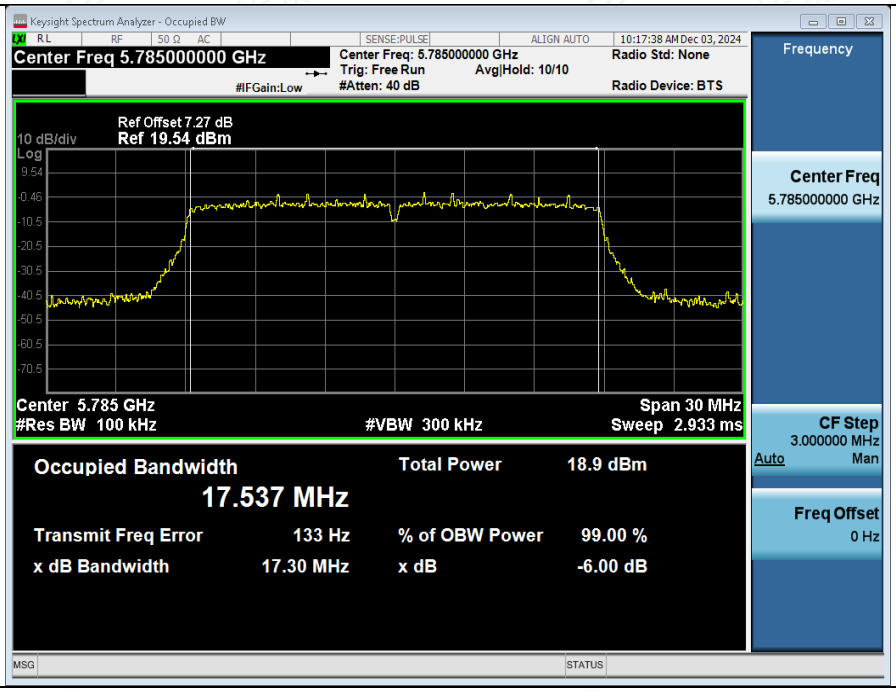

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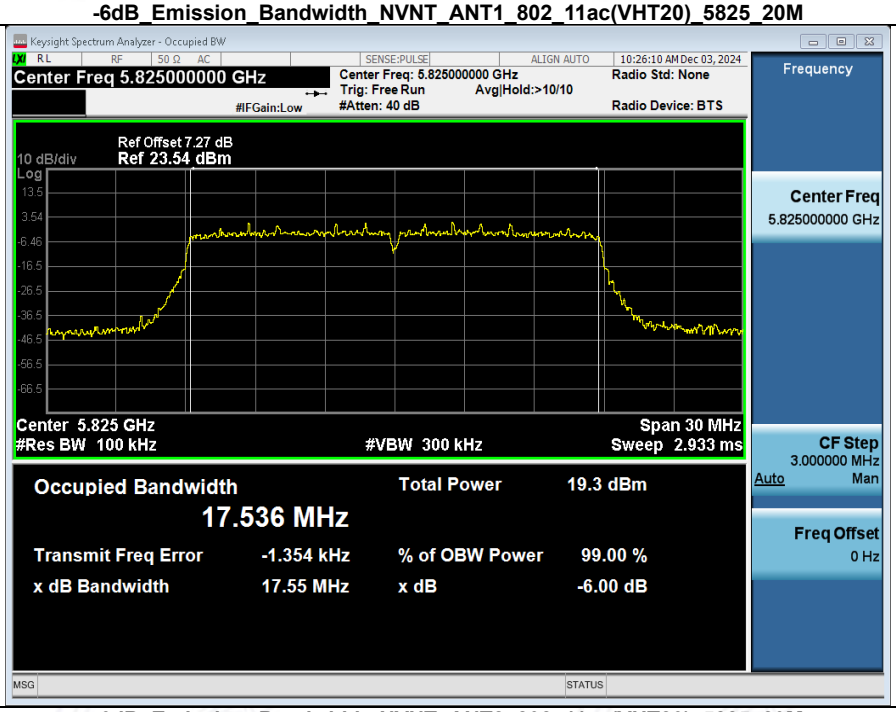

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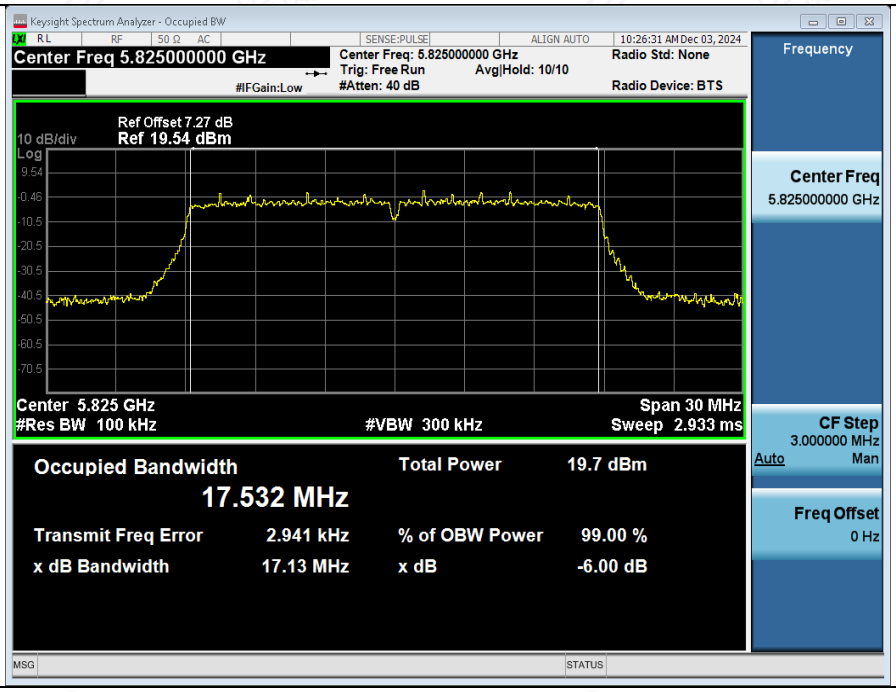

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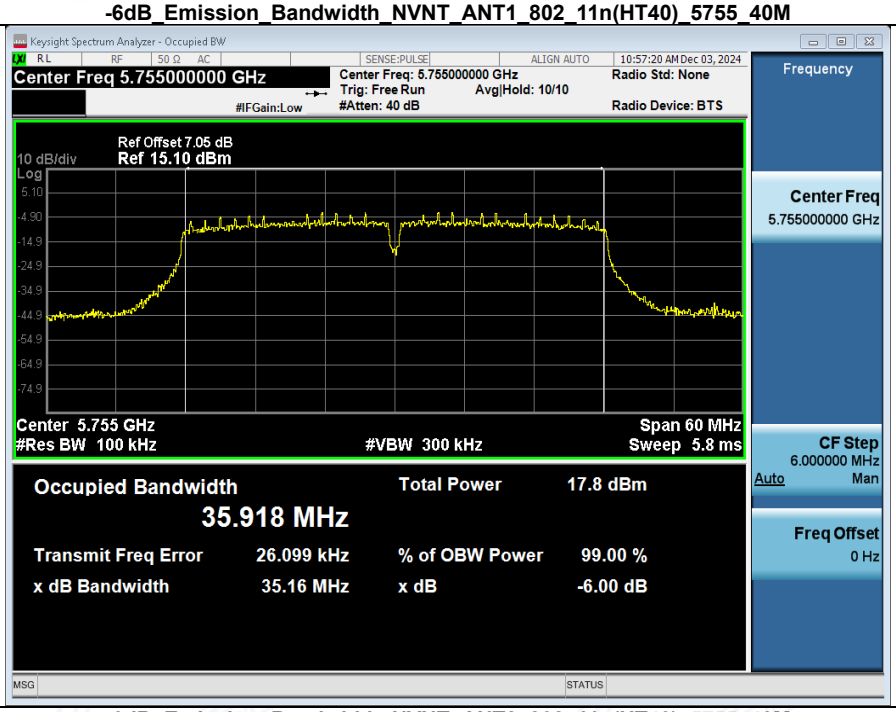

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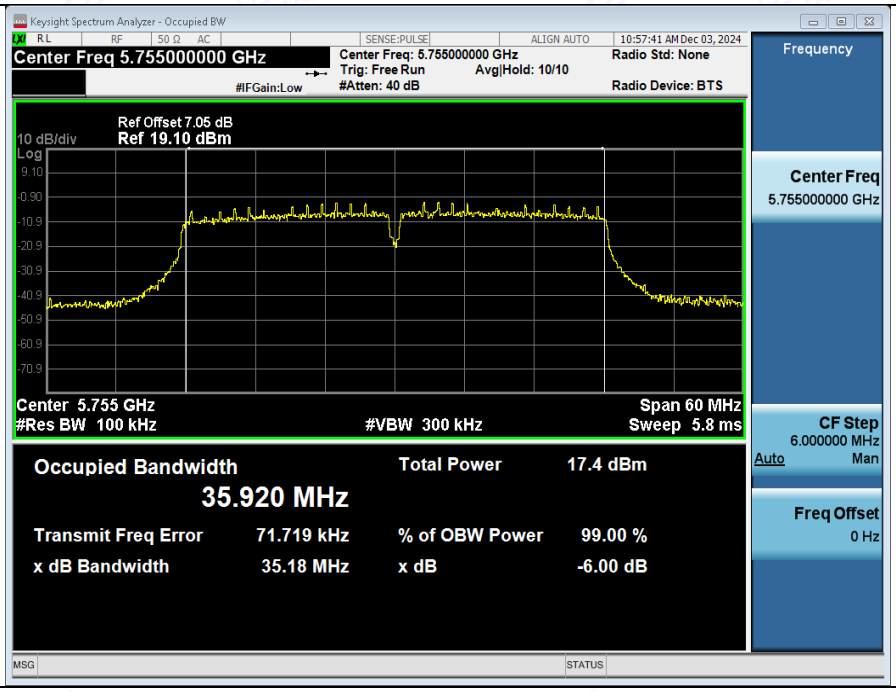

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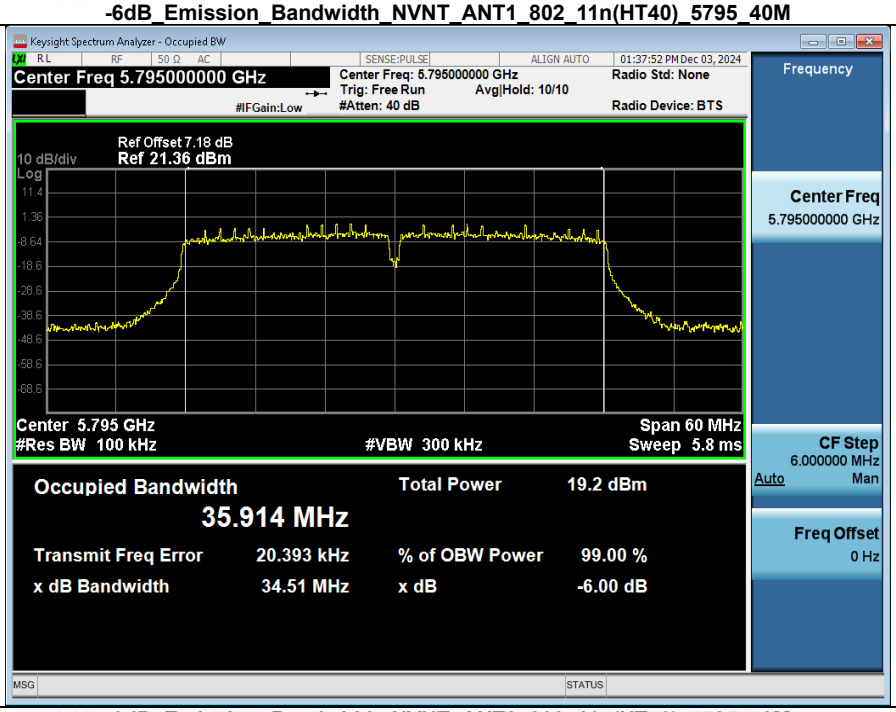

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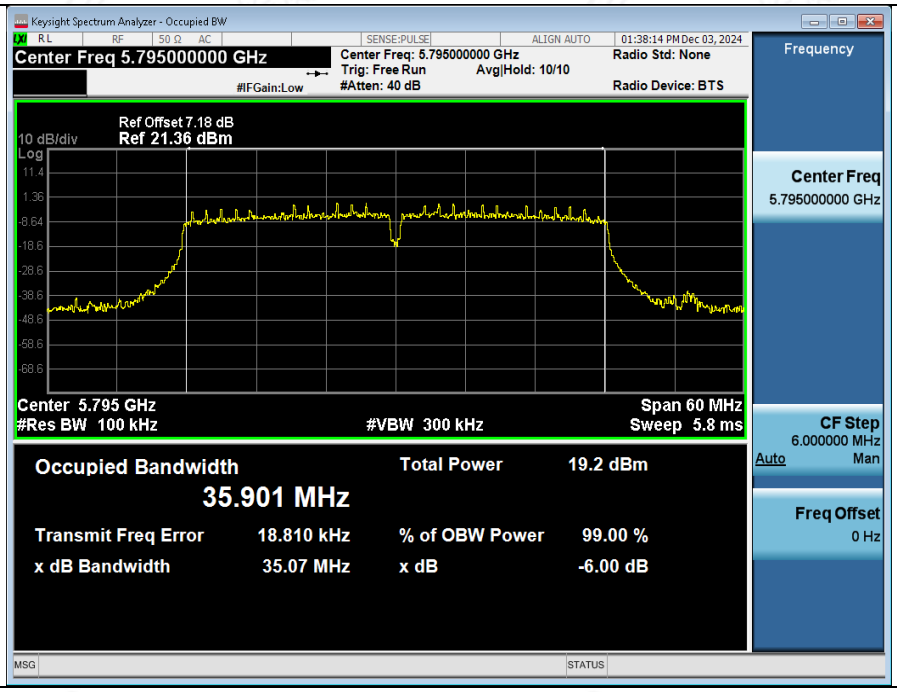

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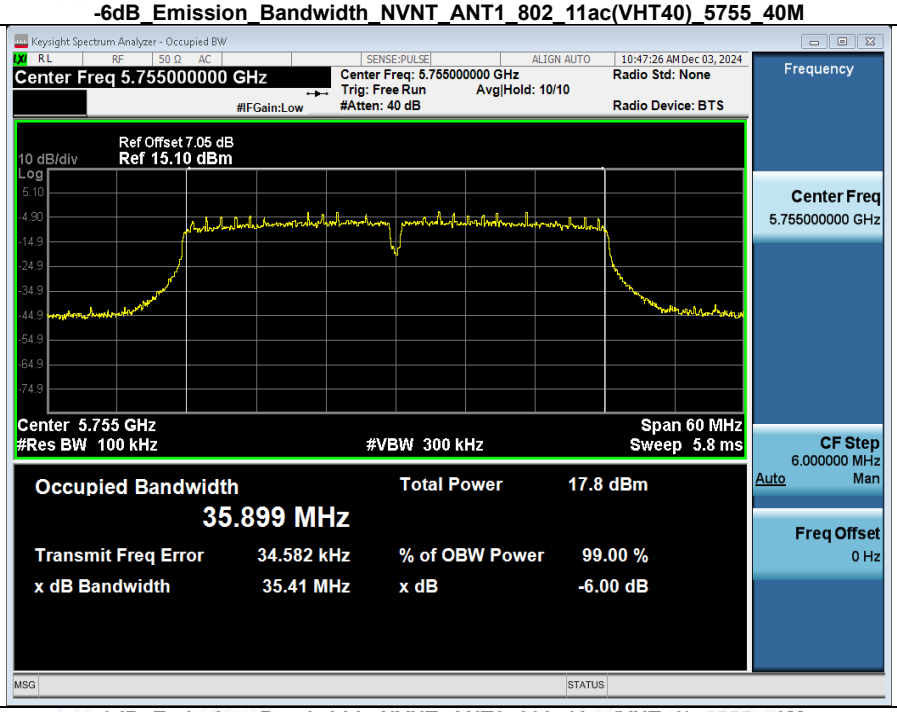

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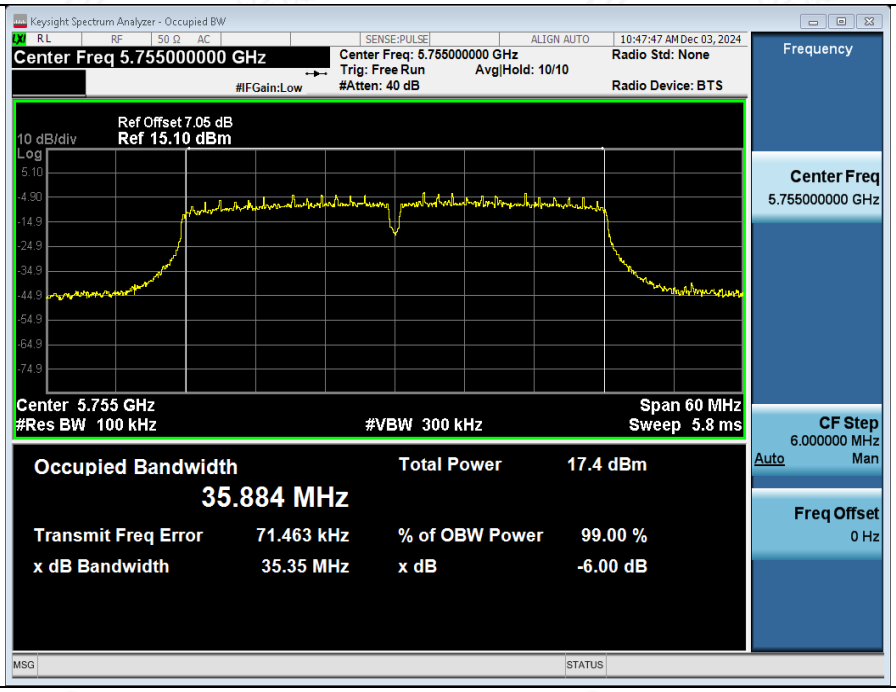

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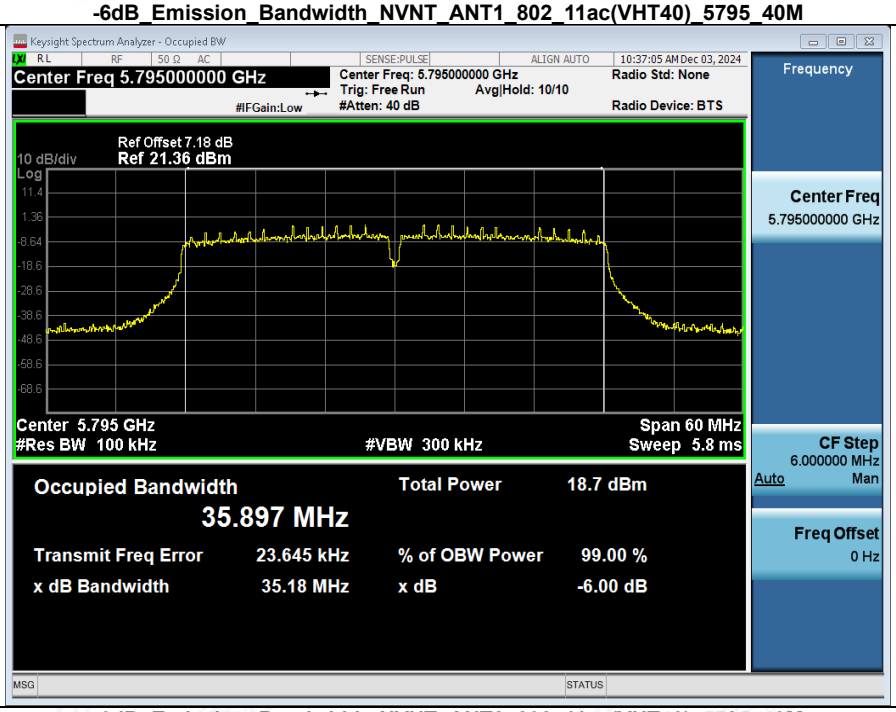

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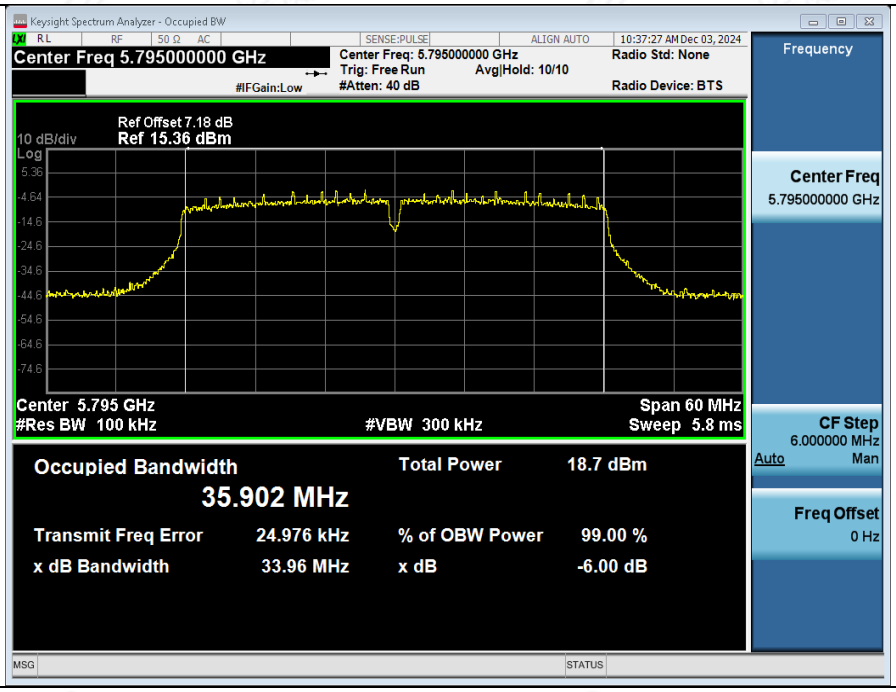

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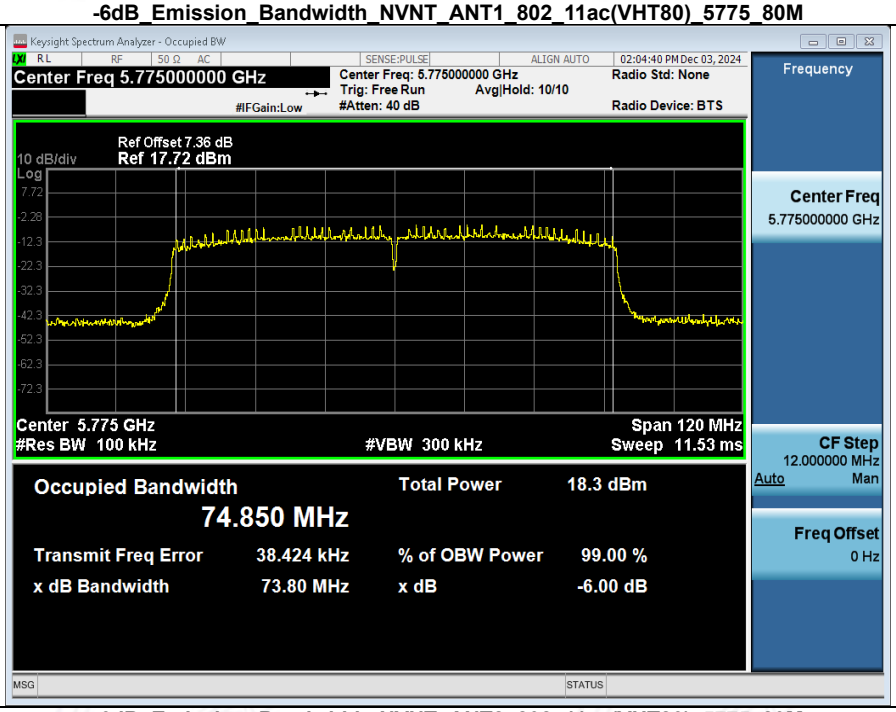

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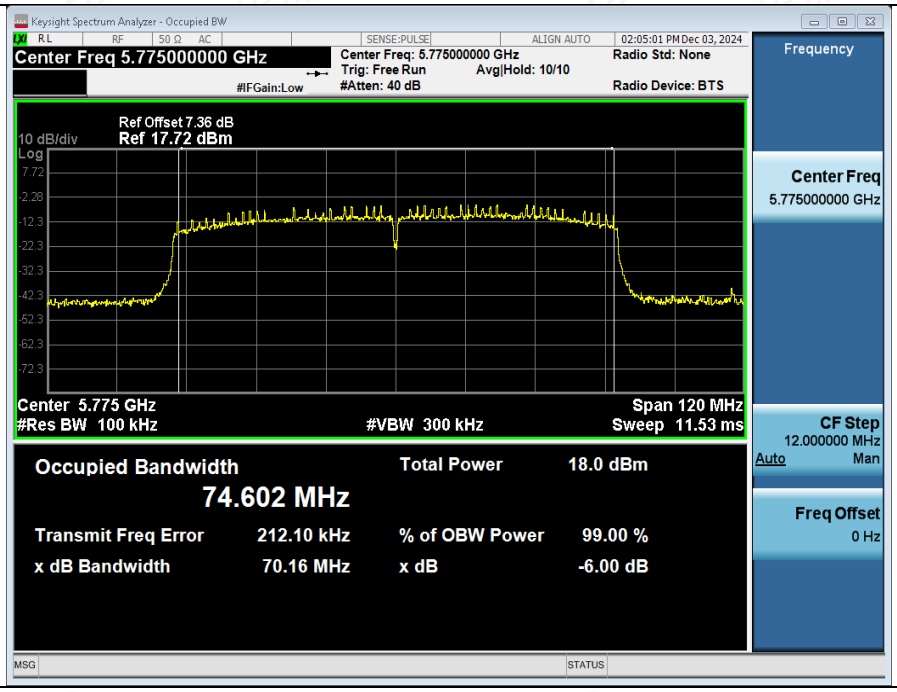
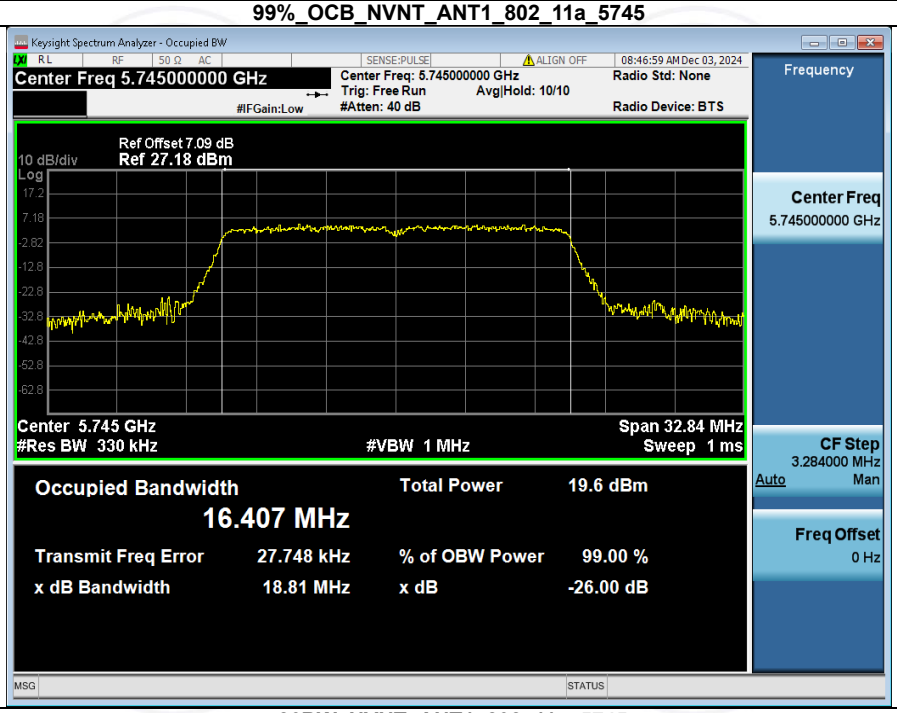

Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
02:05:01 PM Dec 03, 2024
Center Freq 5.775000000 GHz
Center Freq: 5.775000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 7.36 dB
10 dB/div
Ref 17.72 dBm
Log
7.72
-2.28
-12.3
-22.3
-32.3
-42.3
-52.3
-62.3
-72.3
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
74.602 MHz
Total Power
18.0 dBm
Transmit Freq Error
212.10 kHz
% of OBW Power
99.00 %
x dB Bandwidth
70.16 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

2. -26dB and 99% Emission Bandwidth

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5745.00	18.21	16.41
NVNT	ANT2	802.11a	5745.00	18.18	16.42
NVNT	ANT1	802.11a	5785.00	18.35	16.44
NVNT	ANT2	802.11a	5785.00	18.27	16.43
NVNT	ANT1	802.11a	5825.00	18.35	16.43
NVNT	ANT2	802.11a	5825.00	18.14	16.43
NVNT	ANT1	802.11n(HT20)	5745.00	19.23	17.59
NVNT	ANT2	802.11n(HT20)	5745.00	19.31	17.58
NVNT	ANT1	802.11n(HT20)	5785.00	19.36	17.62
NVNT	ANT2	802.11n(HT20)	5785.00	19.48	17.59
NVNT	ANT1	802.11n(HT20)	5825.00	19.33	17.58
NVNT	ANT2	802.11n(HT20)	5825.00	19.31	17.57
NVNT	ANT1	802.11ac(VHT20)	5745.00	19.40	17.59
NVNT	ANT2	802.11ac(VHT20)	5745.00	19.46	17.56
NVNT	ANT1	802.11ac(VHT20)	5785.00	19.40	17.58
NVNT	ANT2	802.11ac(VHT20)	5785.00	19.39	17.60
NVNT	ANT1	802.11ac(VHT20)	5825.00	19.39	17.58
NVNT	ANT2	802.11ac(VHT20)	5825.00	19.33	17.59
NVNT	ANT1	802.11n(HT40)	5755.00	40.93	36.20
NVNT	ANT2	802.11n(HT40)	5755.00	40.62	36.34
NVNT	ANT1	802.11n(HT40)	5795.00	40.70	36.22
NVNT	ANT2	802.11n(HT40)	5795.00	40.36	36.26
NVNT	ANT1	802.11ac(VHT40)	5755.00	40.60	36.12
NVNT	ANT2	802.11ac(VHT40)	5755.00	40.35	36.15
NVNT	ANT1	802.11ac(VHT40)	5795.00	41.01	36.18
NVNT	ANT2	802.11ac(VHT40)	5795.00	40.09	36.12
NVNT	ANT1	802.11ac(VHT80)	5775.00	80.02	74.59
NVNT	ANT2	802.11ac(VHT80)	5775.00	79.64	74.39

99%_OCB_NVNT_ANT1_802_11a_5745



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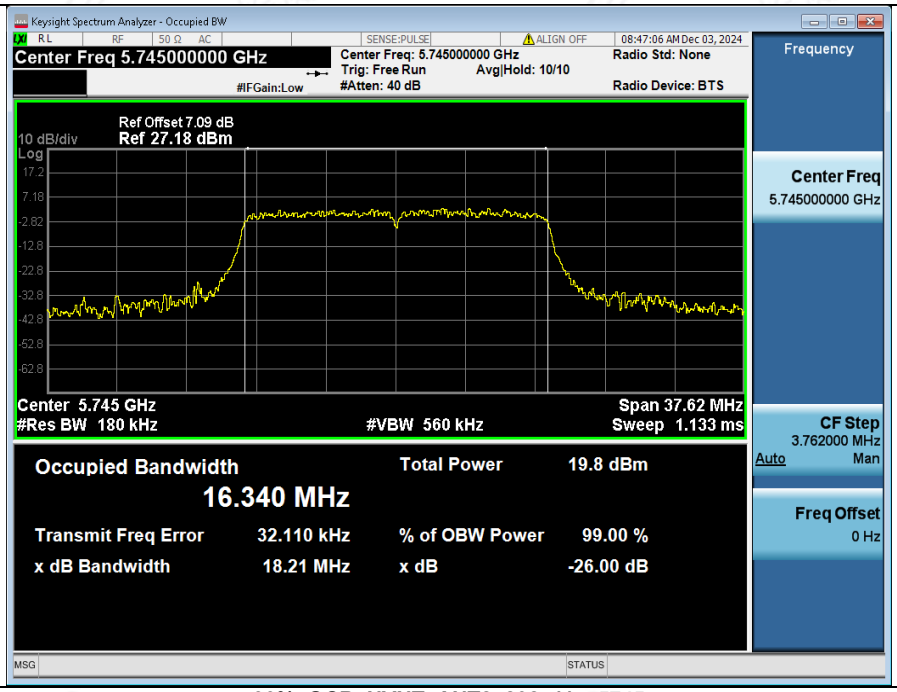

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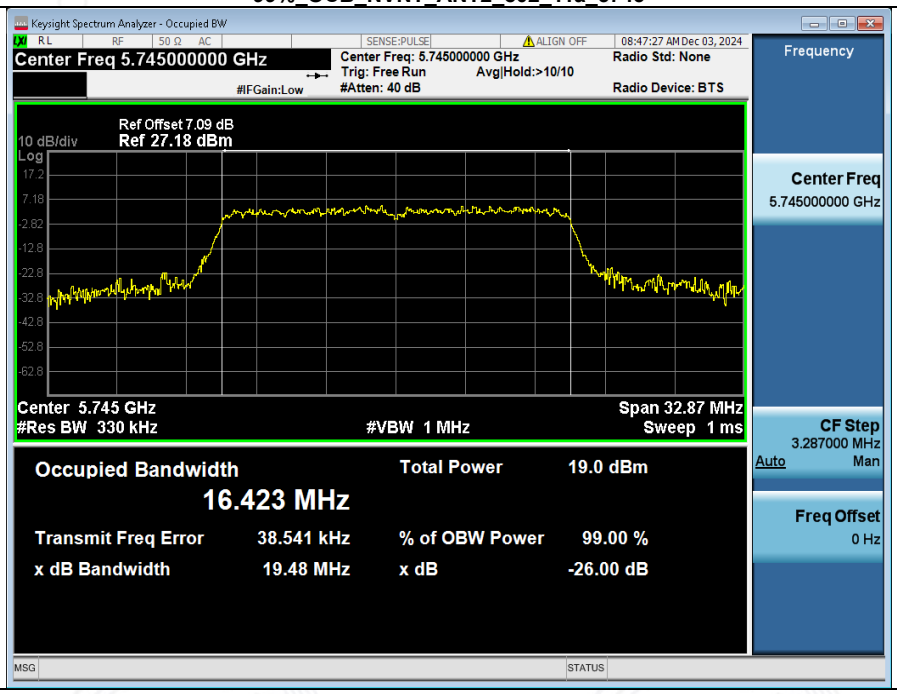

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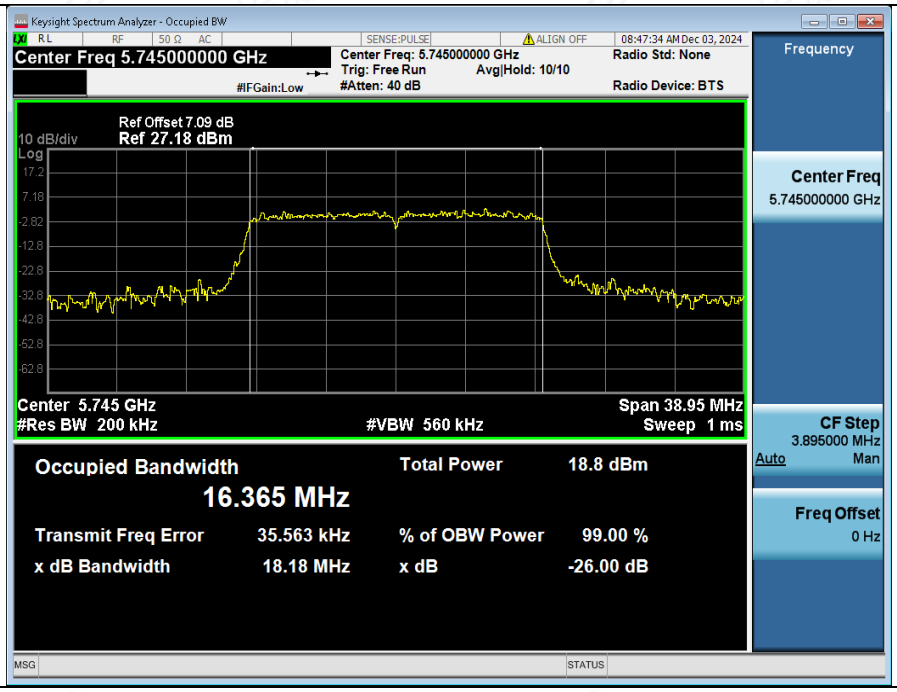

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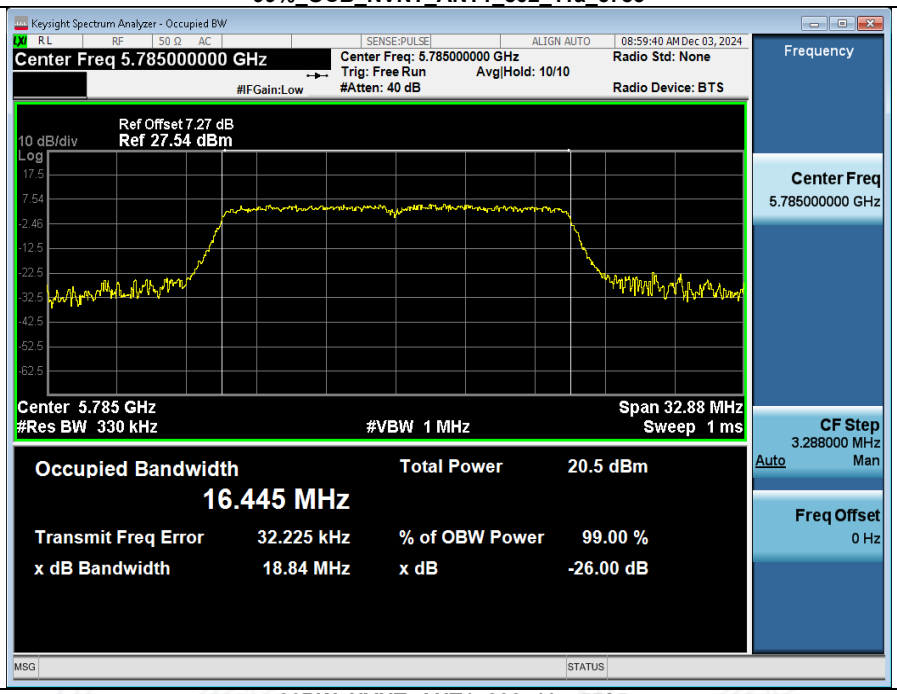

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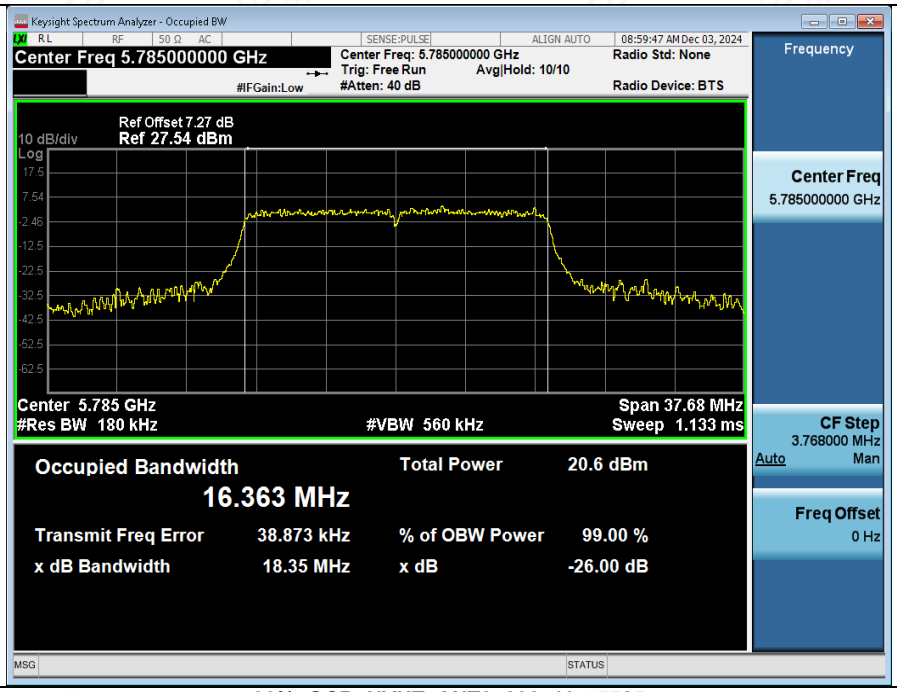
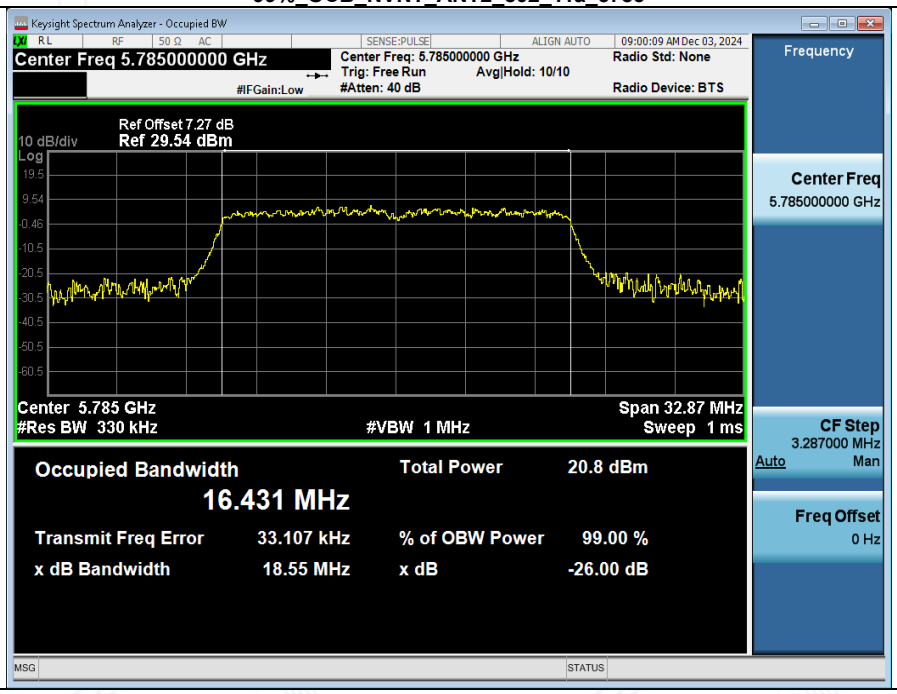


99%_OCB_NVNT_ANT2_802_11a_5785



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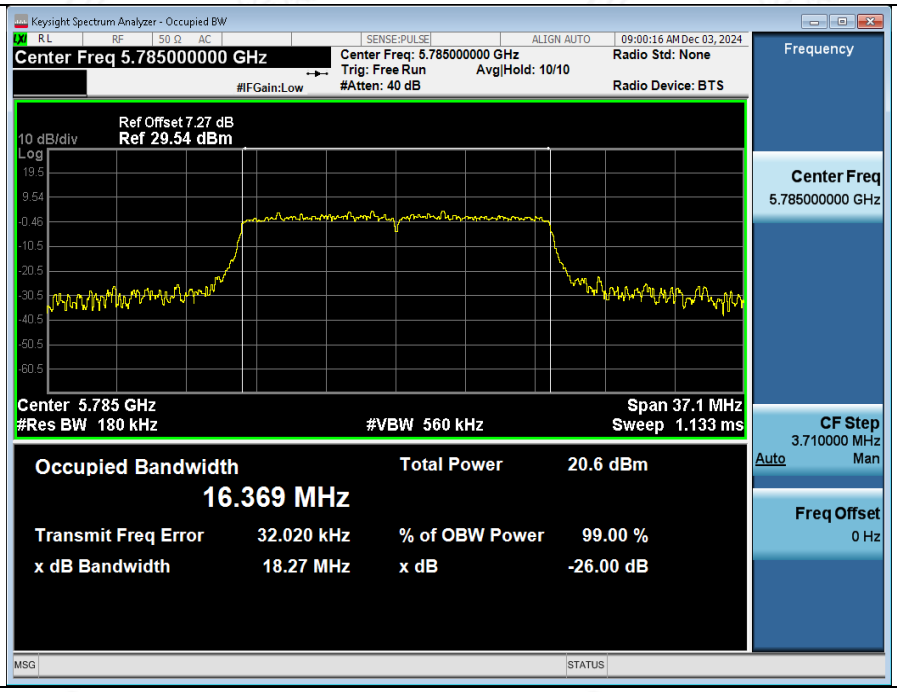

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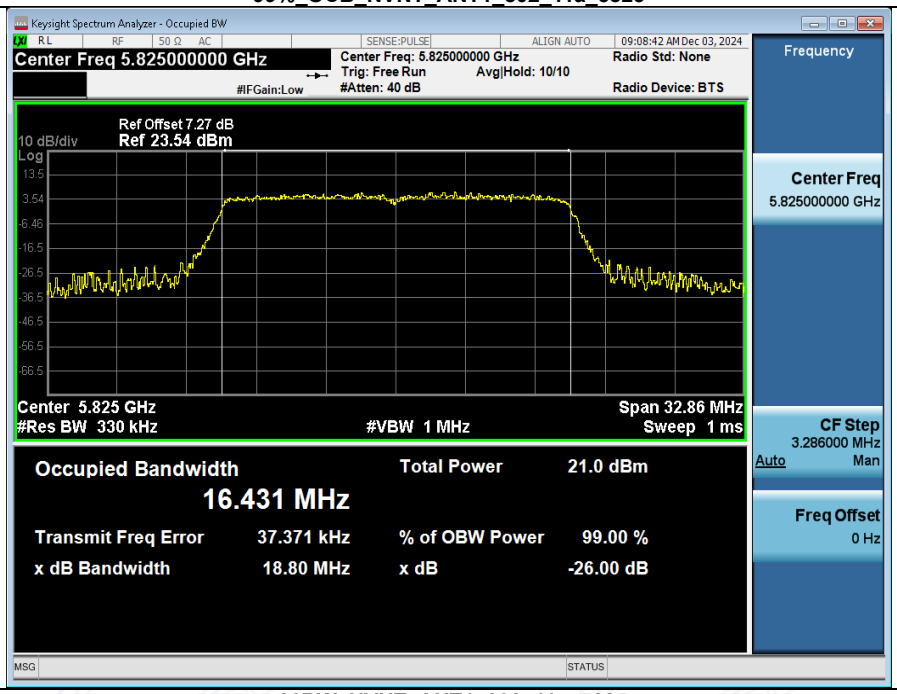

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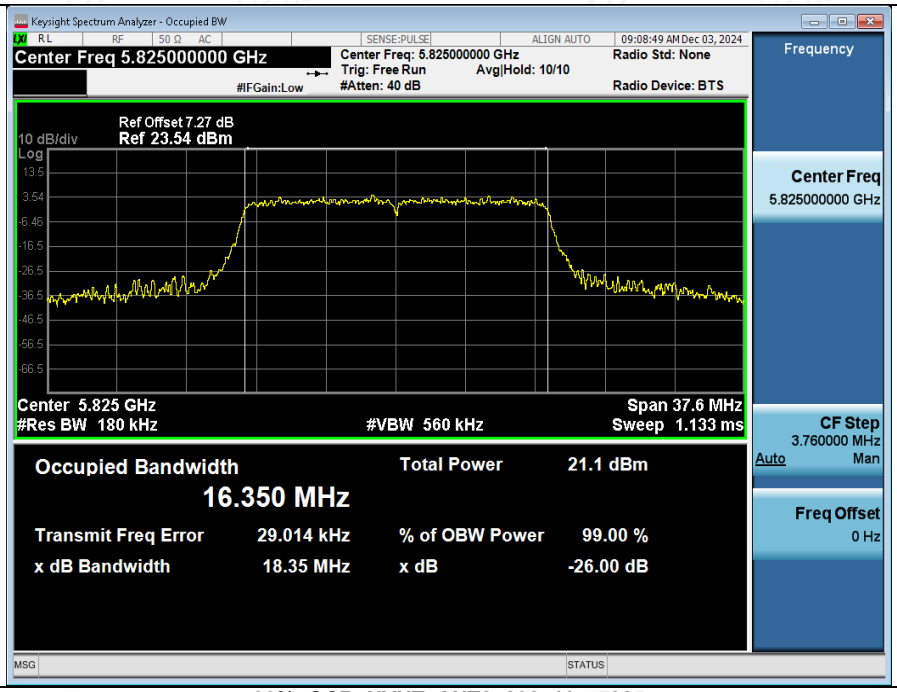

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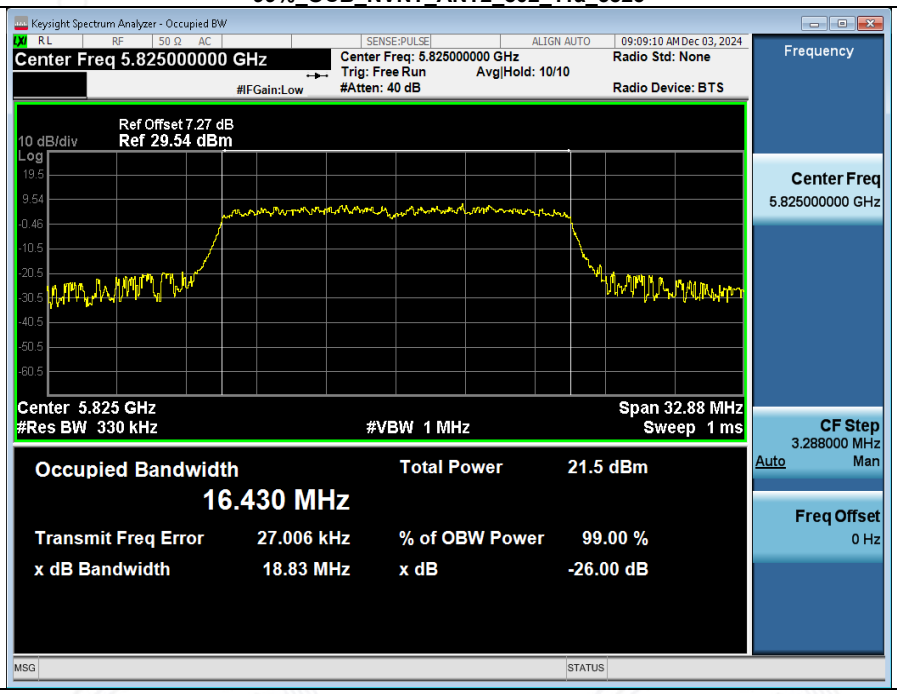

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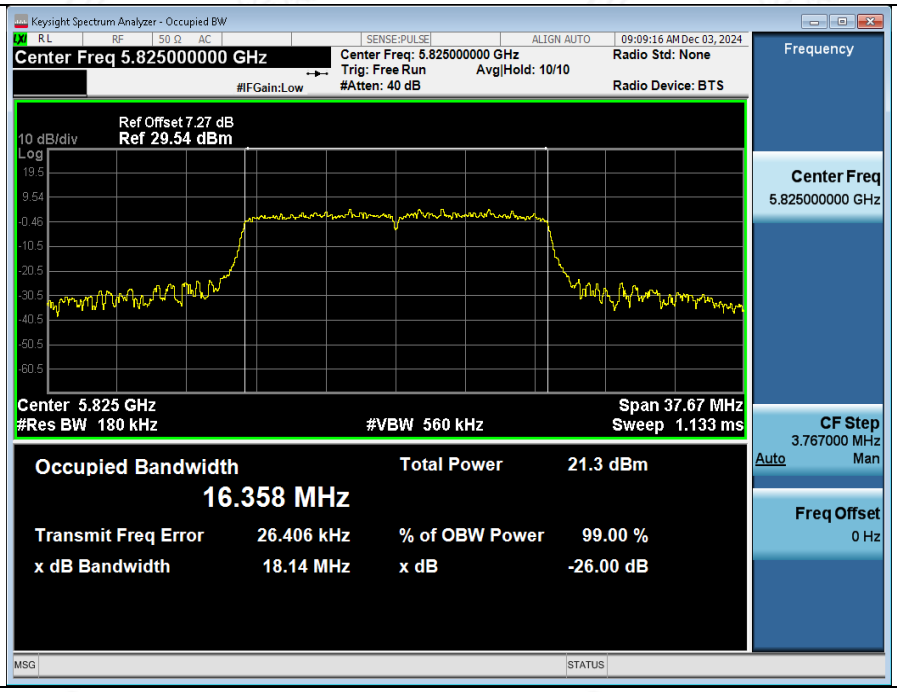

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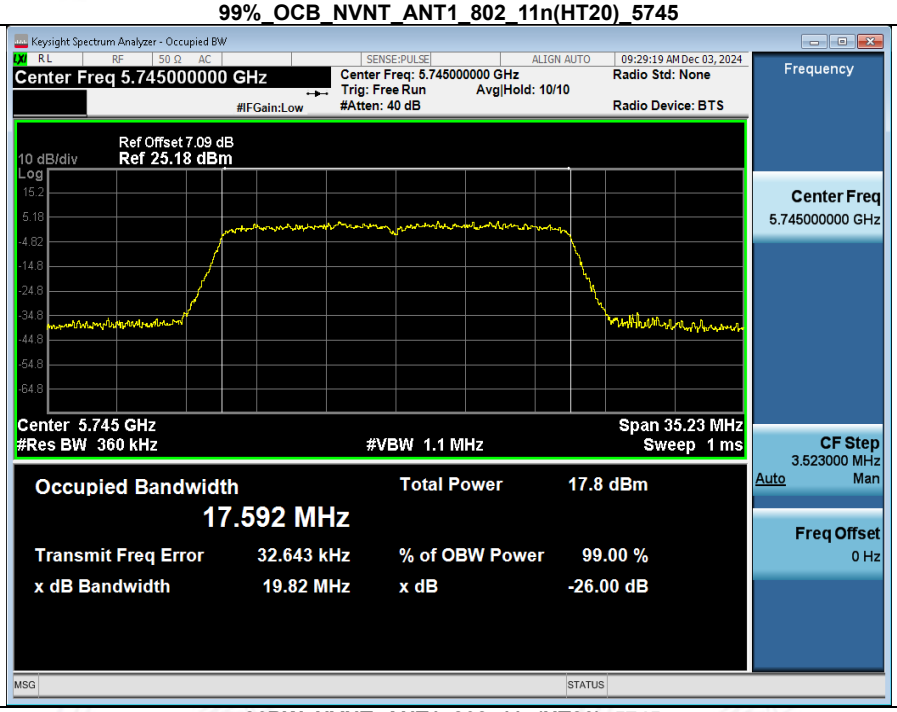

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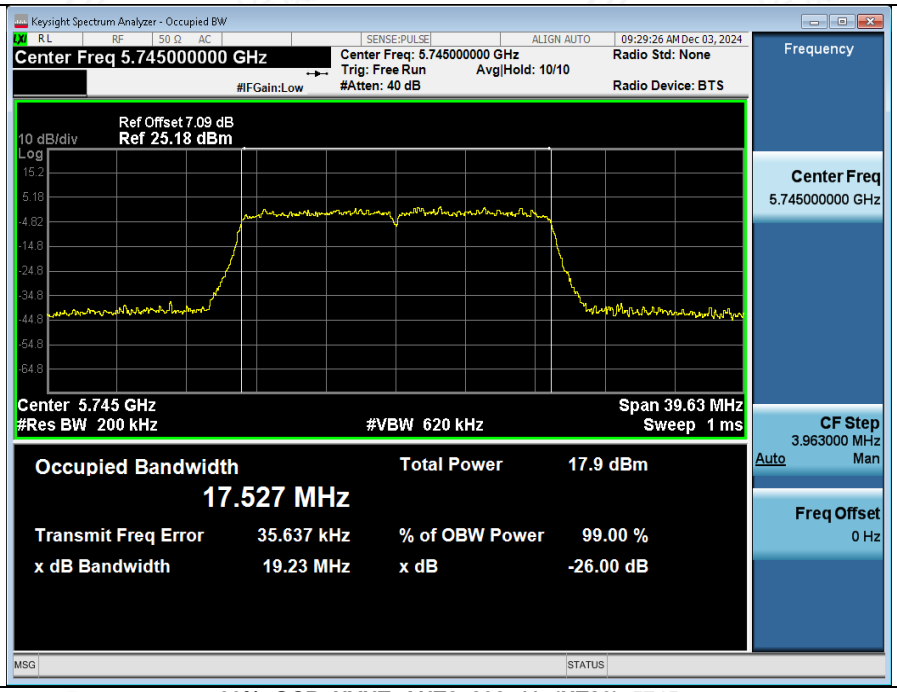

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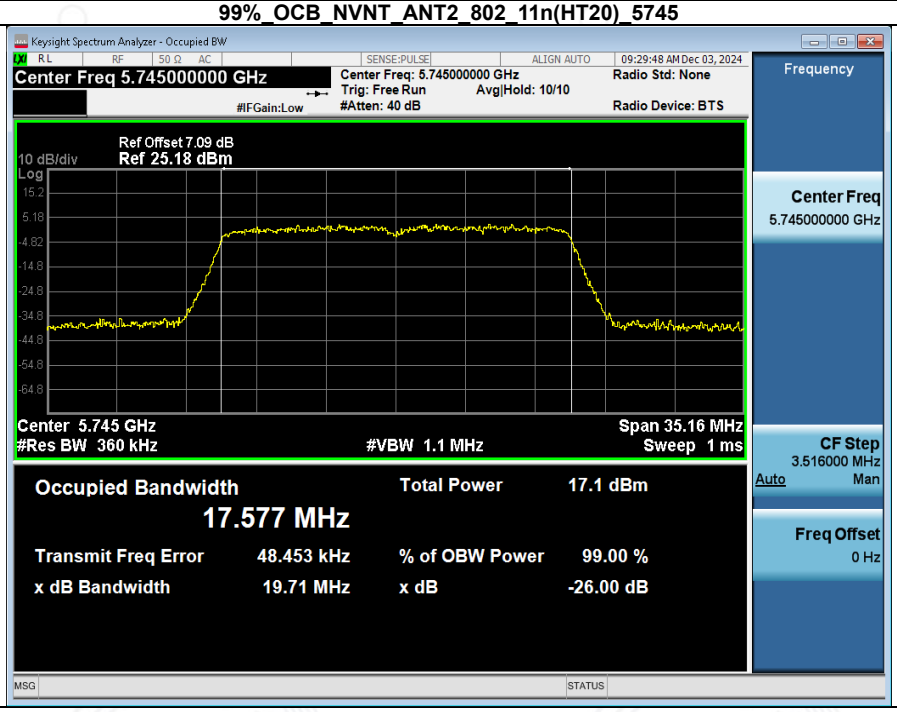

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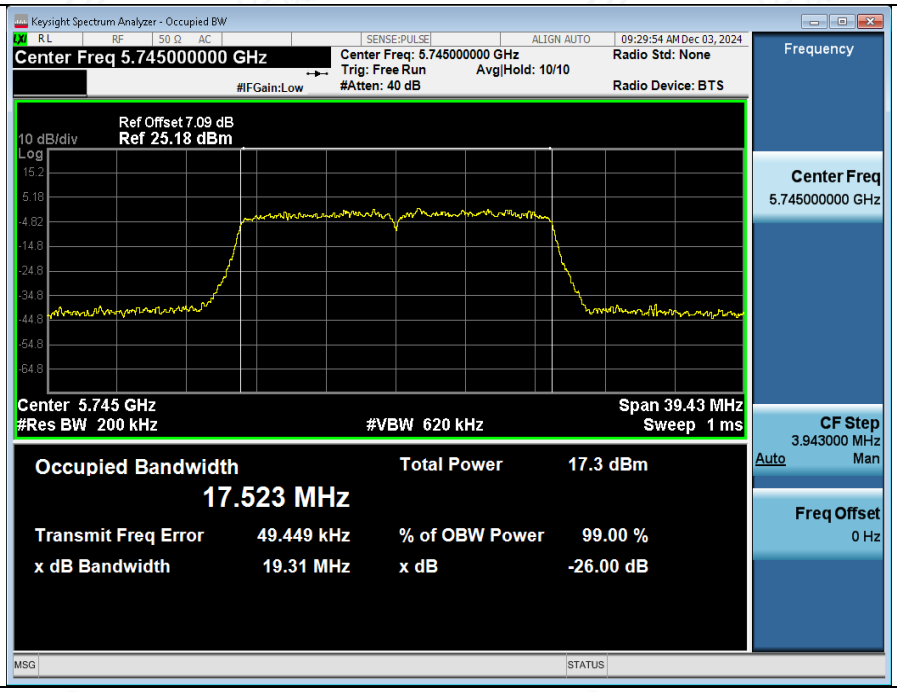

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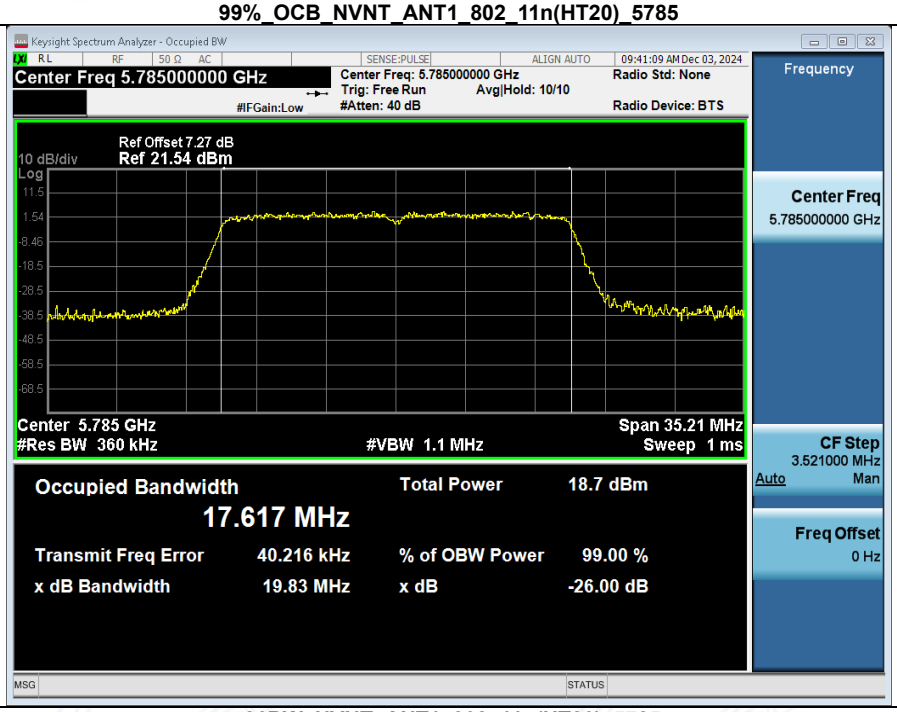

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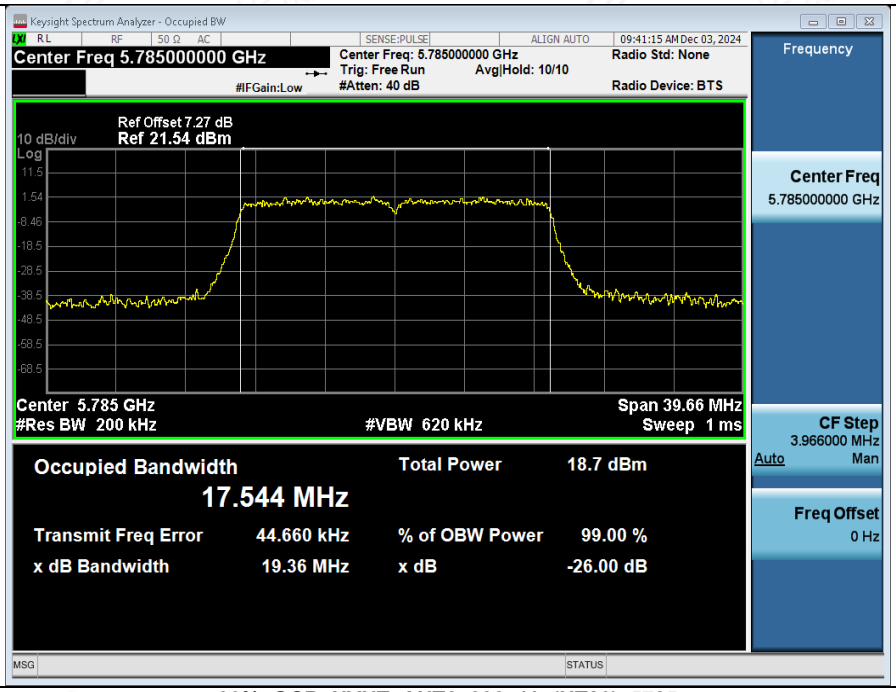

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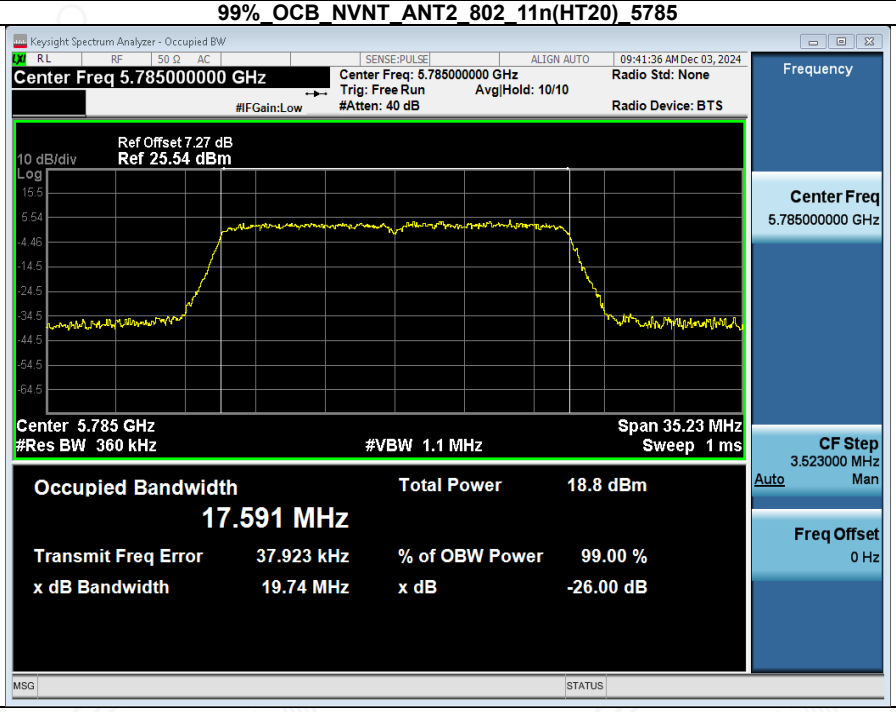

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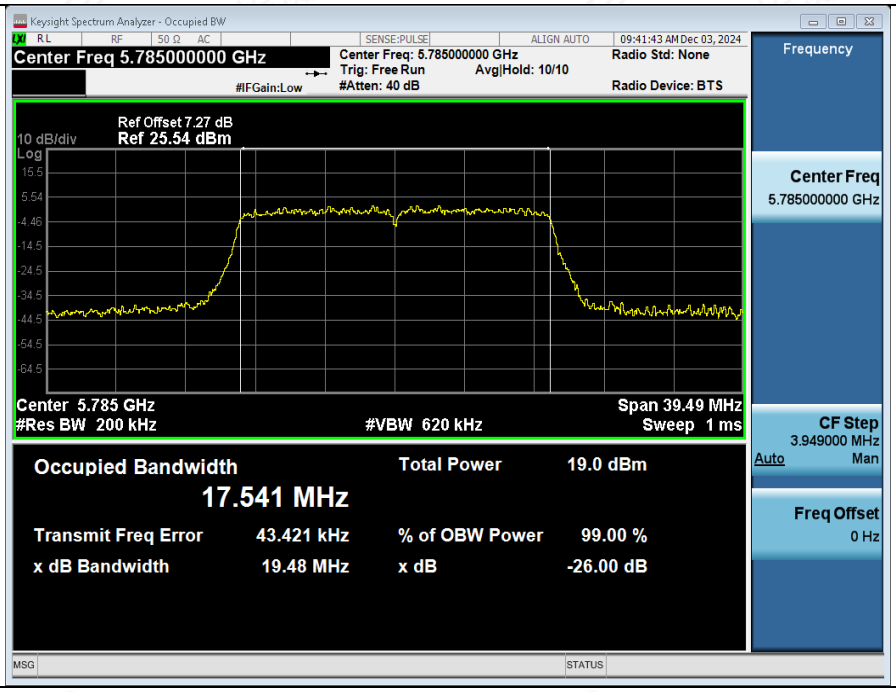

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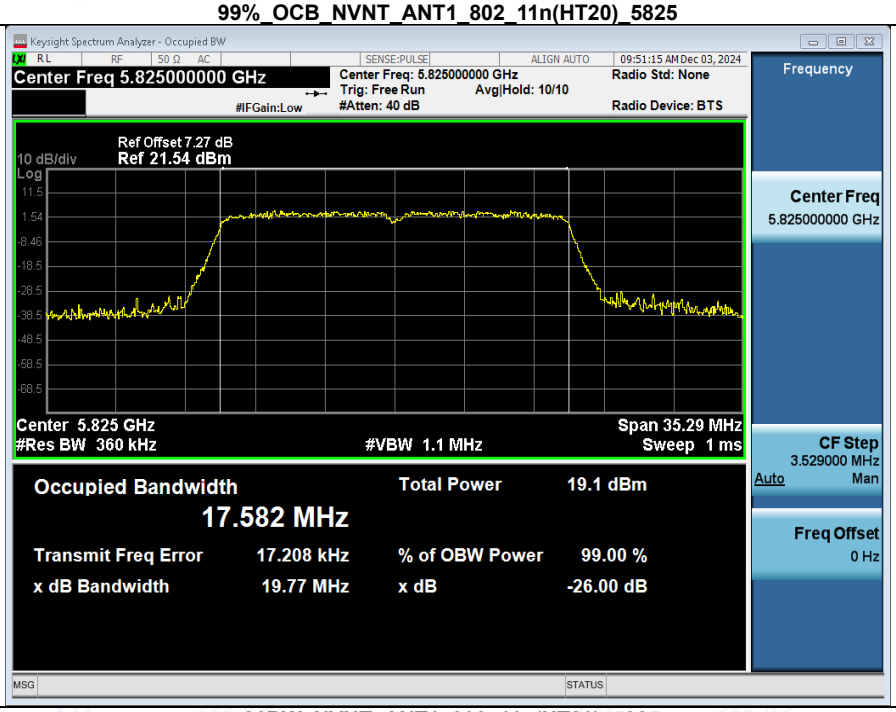

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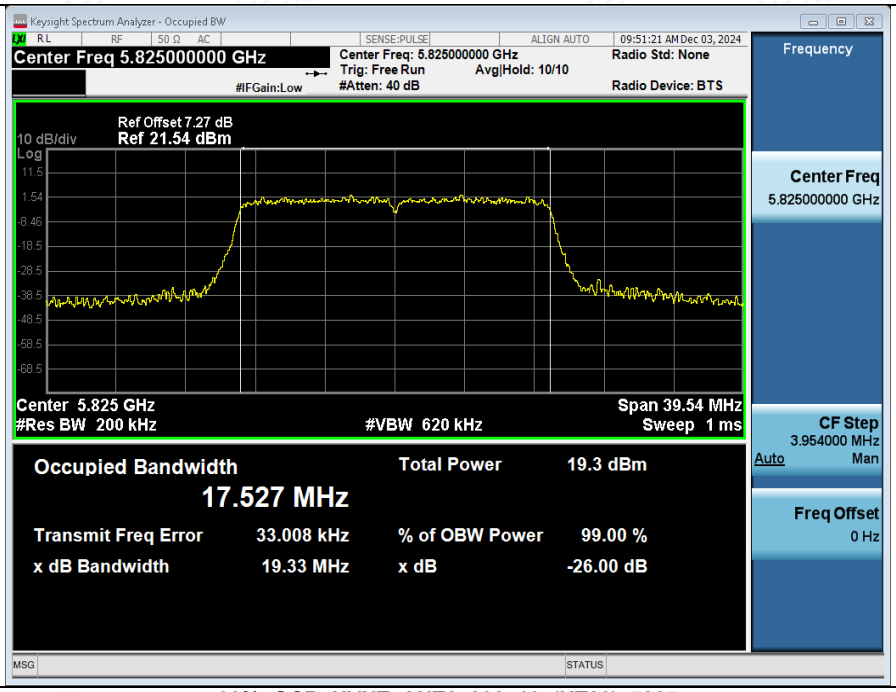

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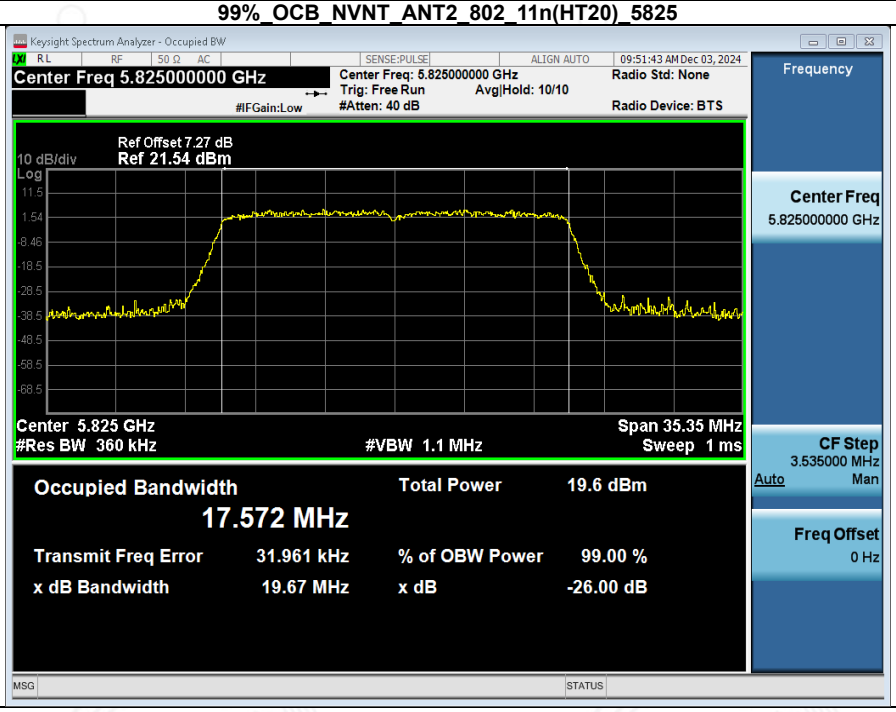

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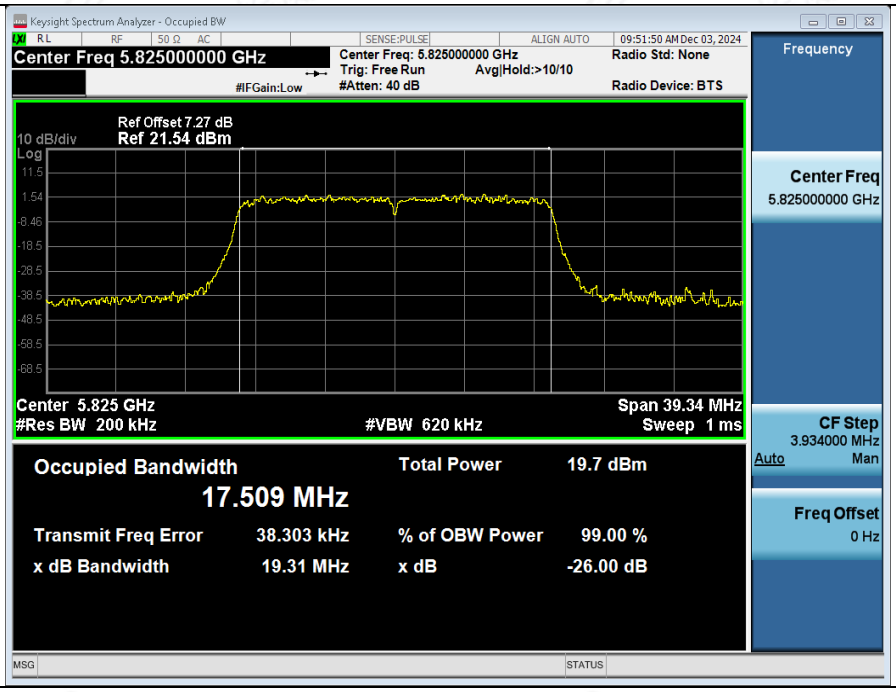

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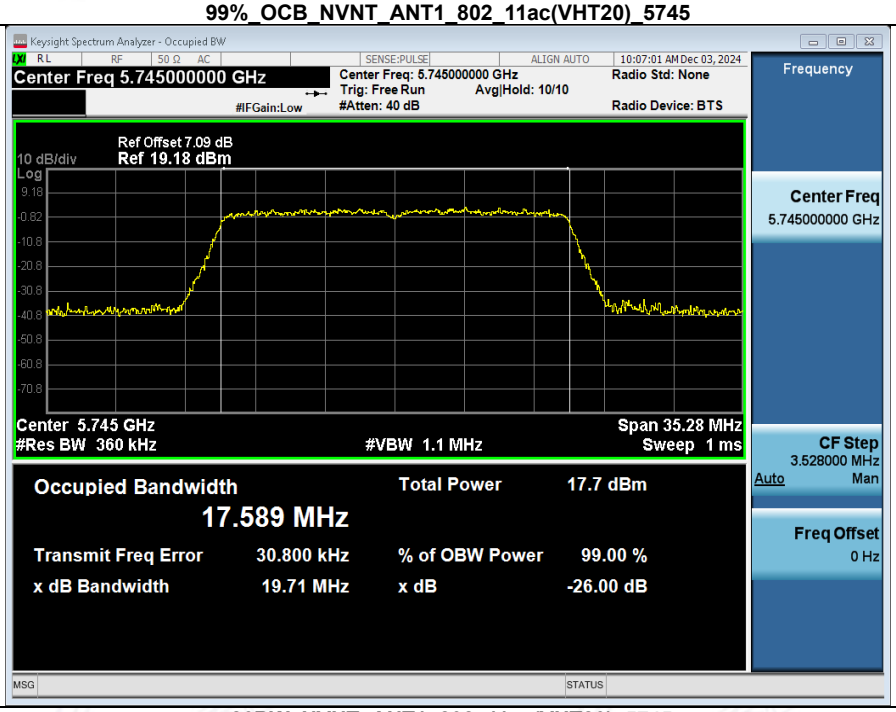

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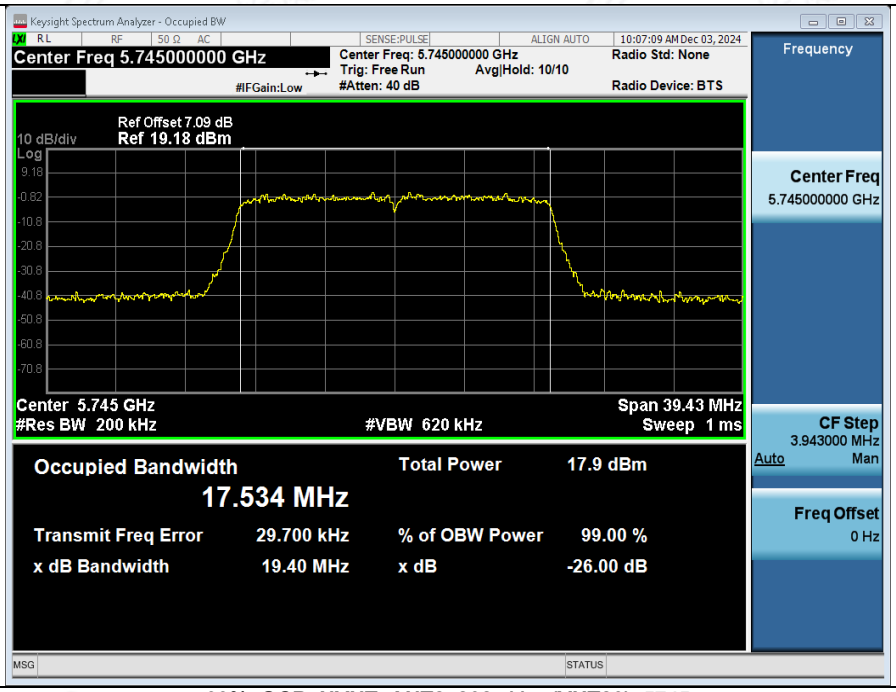

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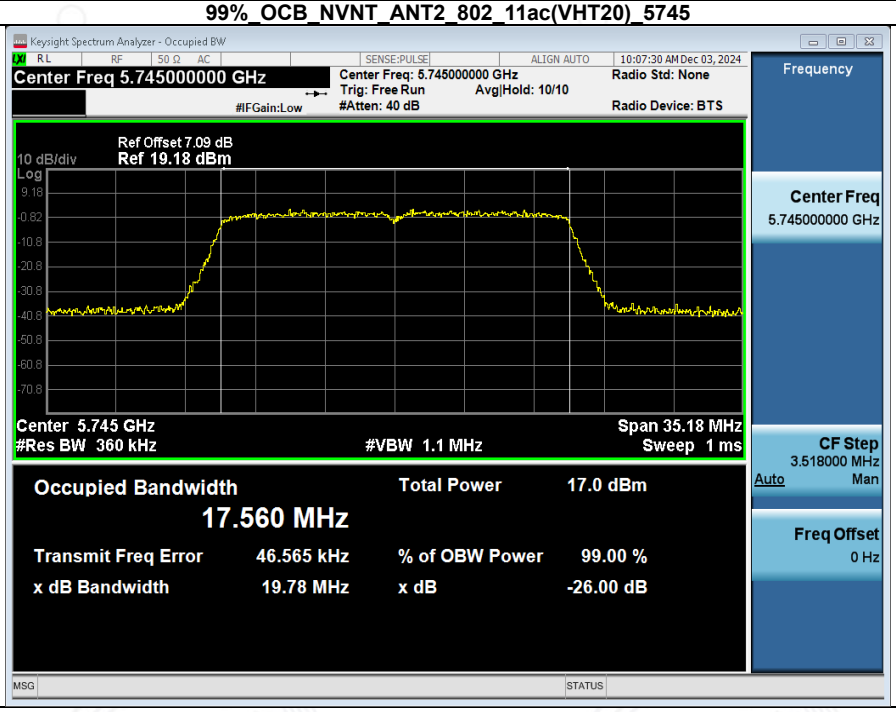

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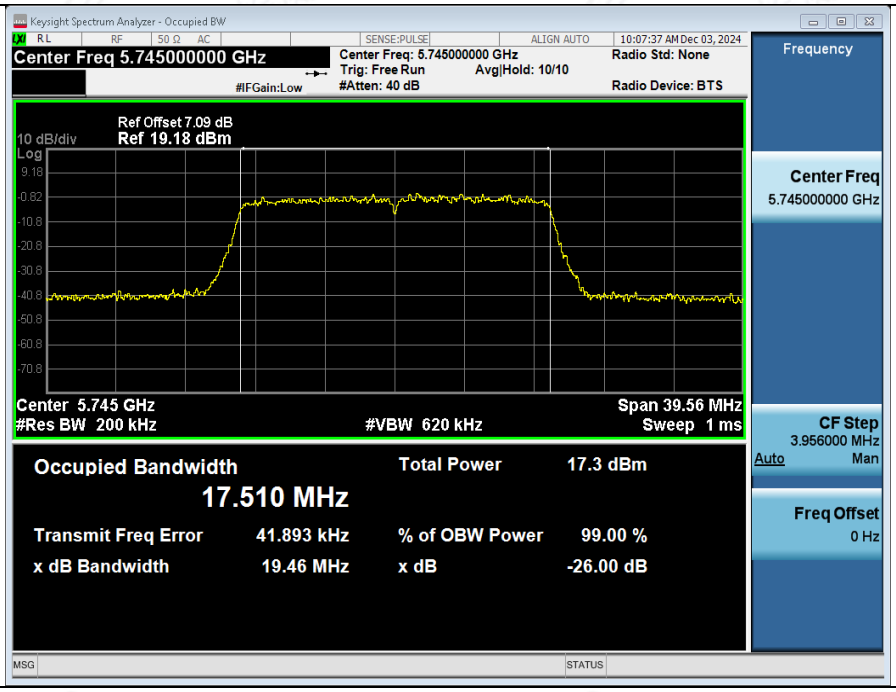

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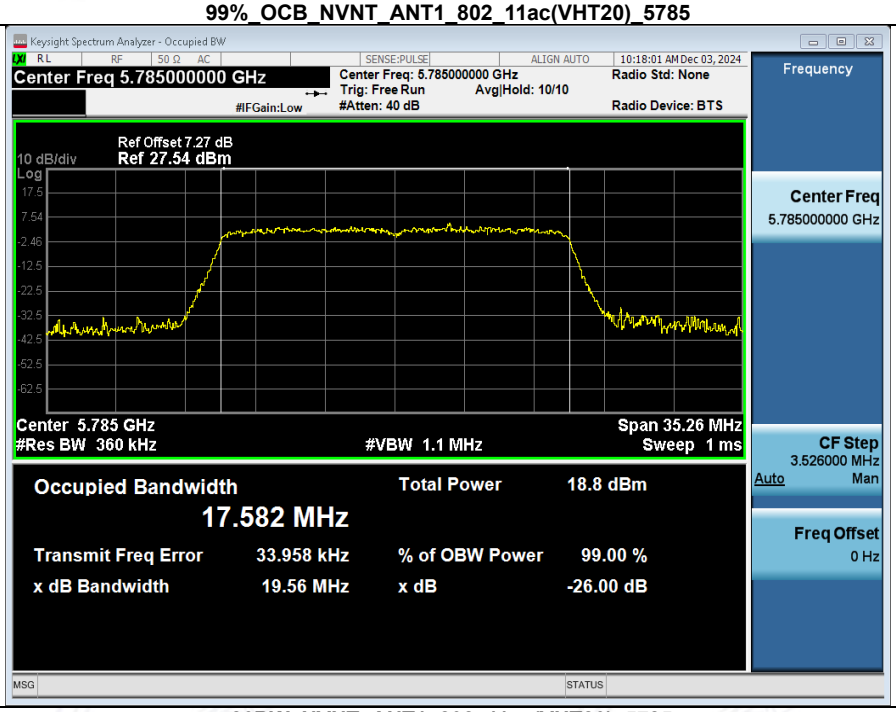

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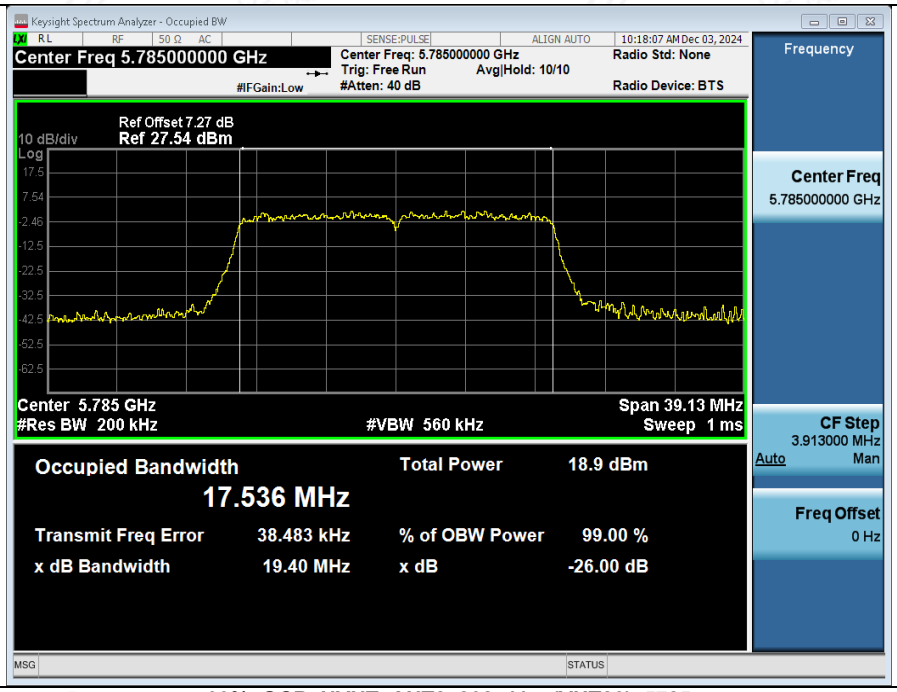

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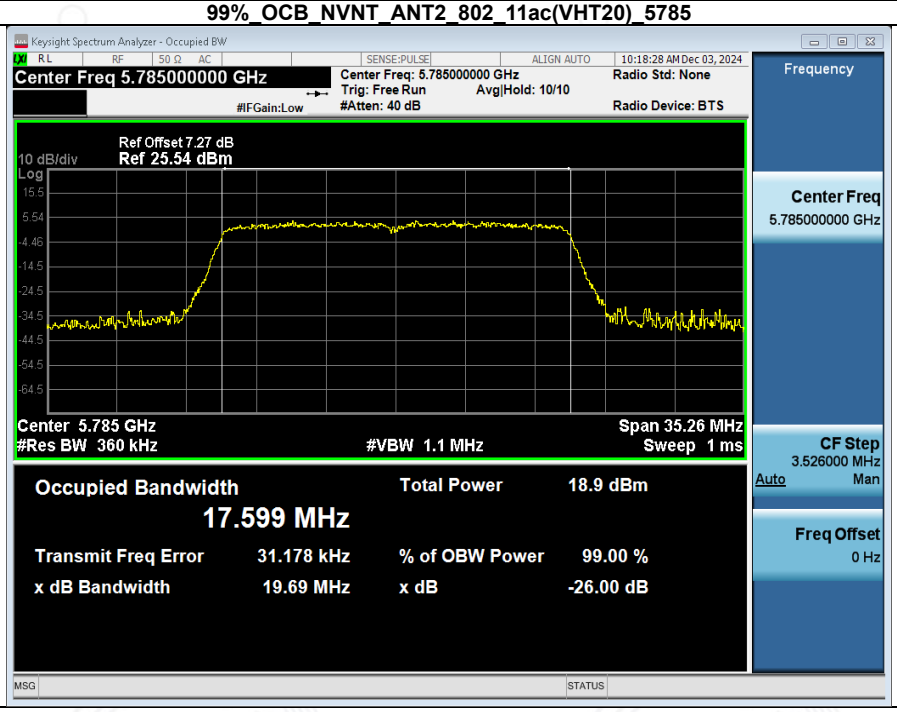

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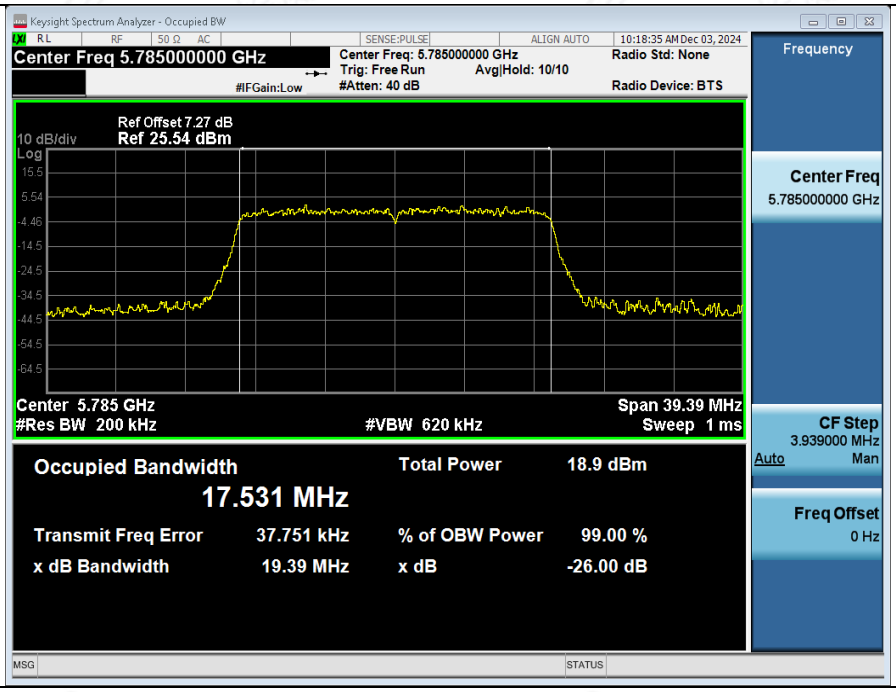

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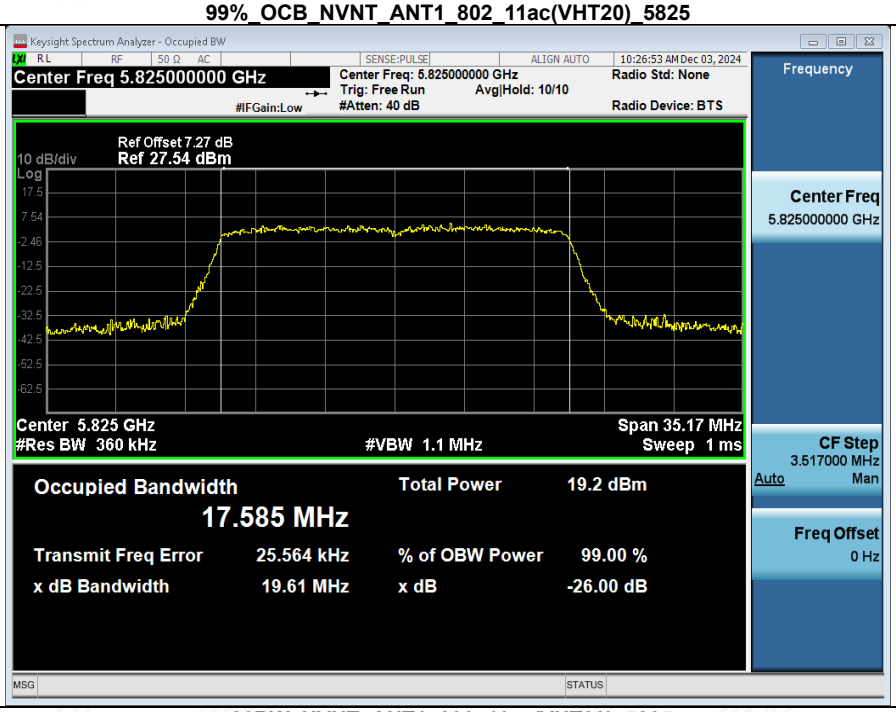

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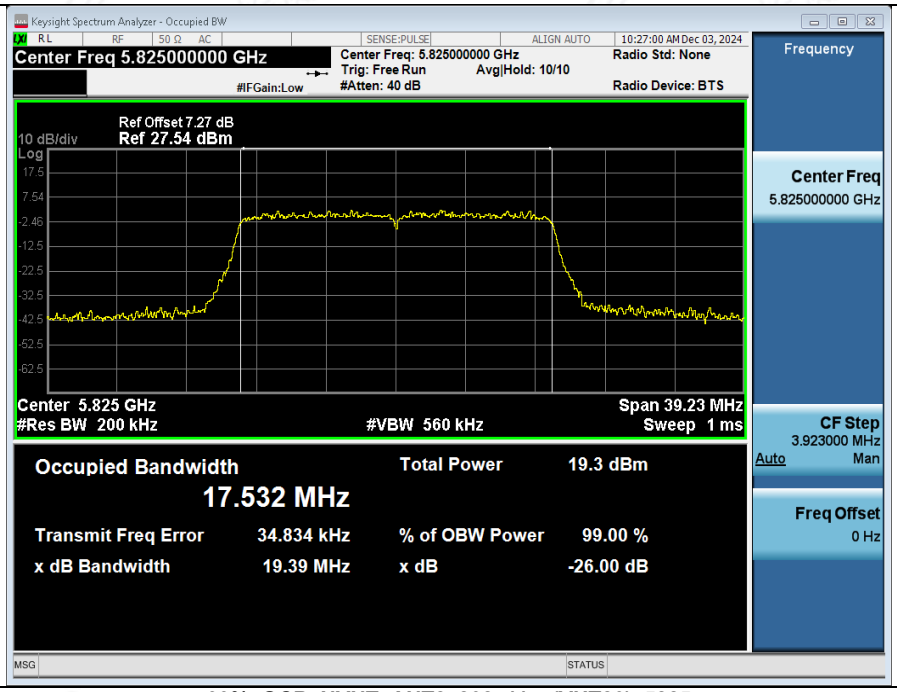

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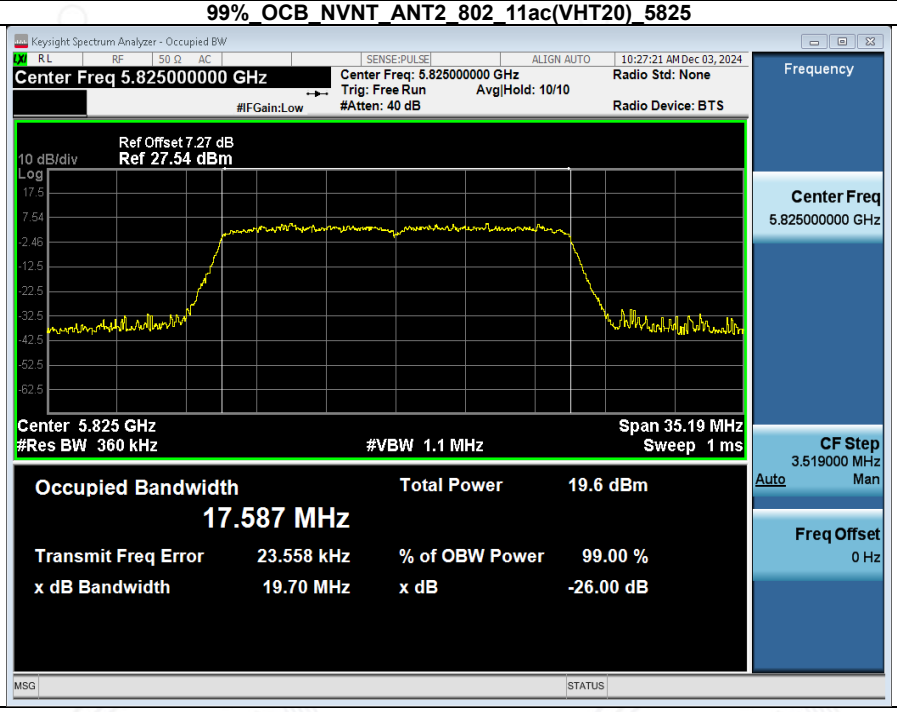

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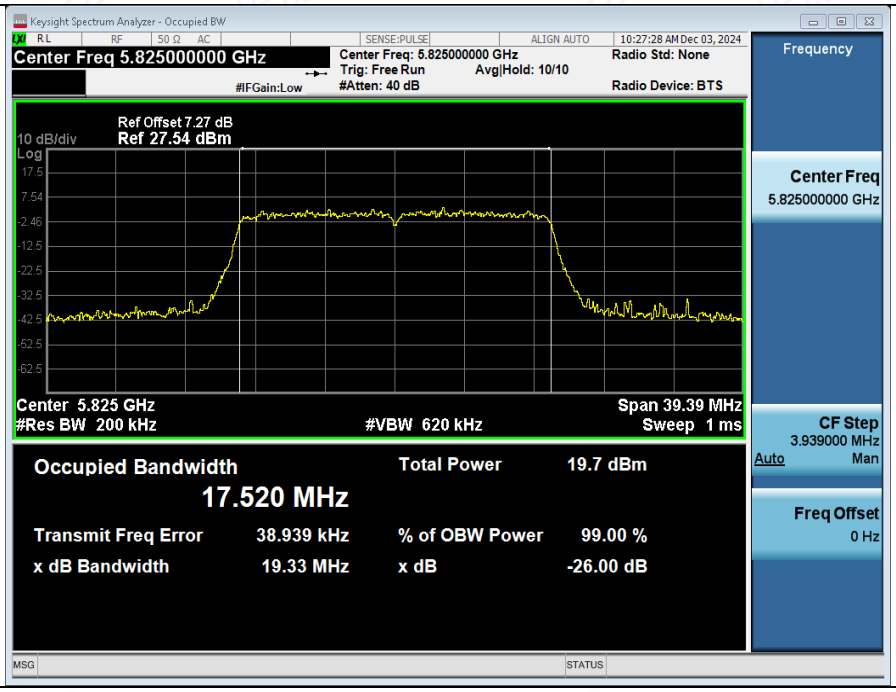

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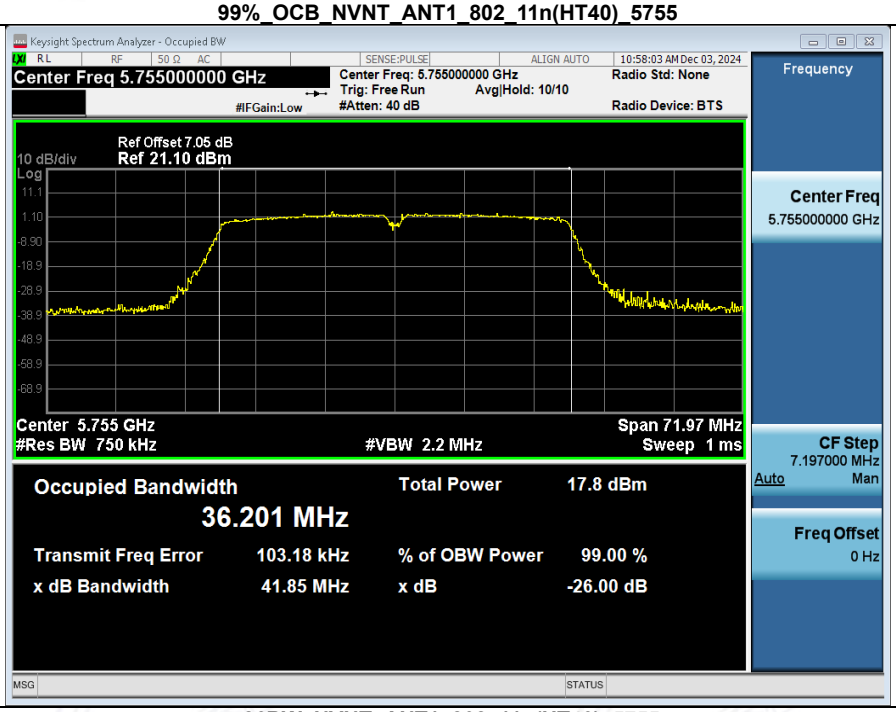

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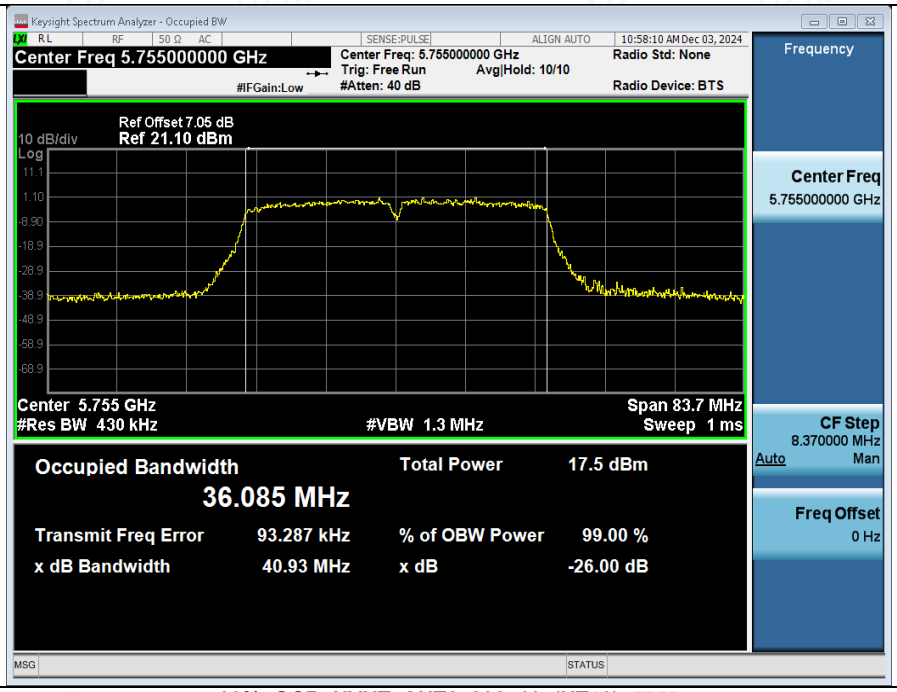

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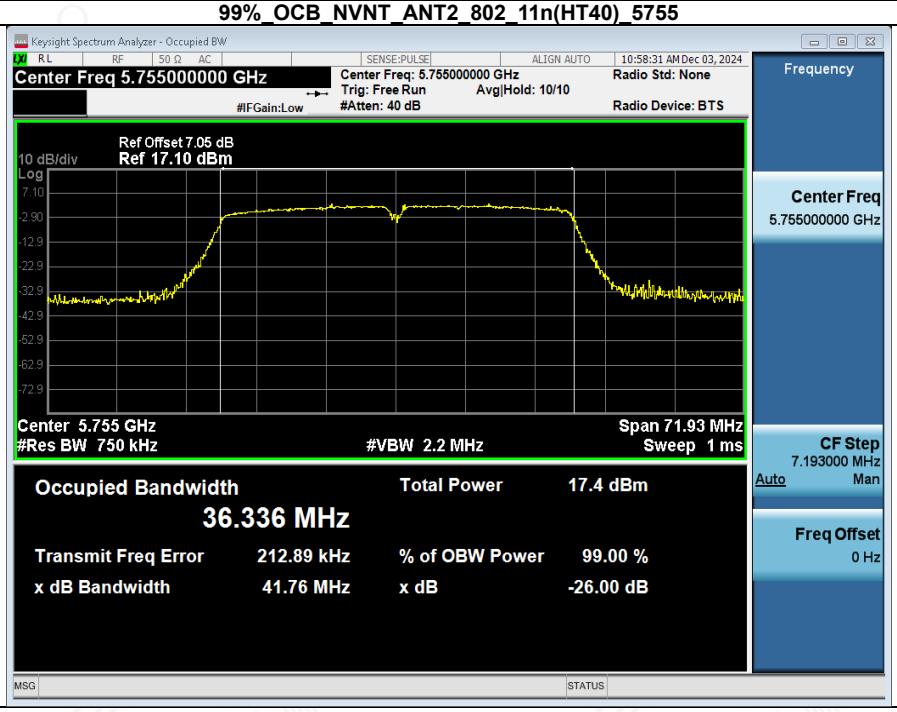

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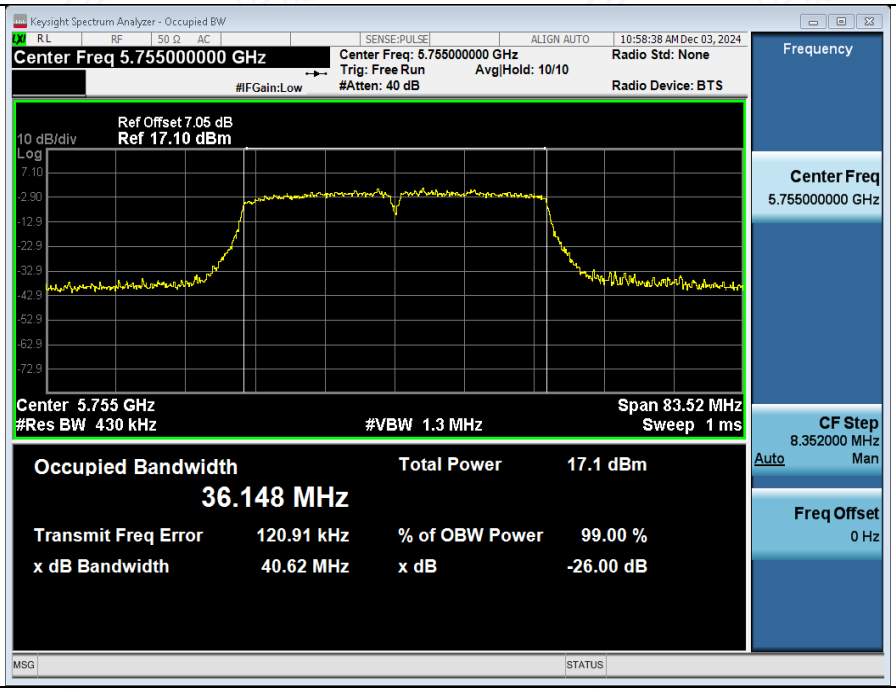

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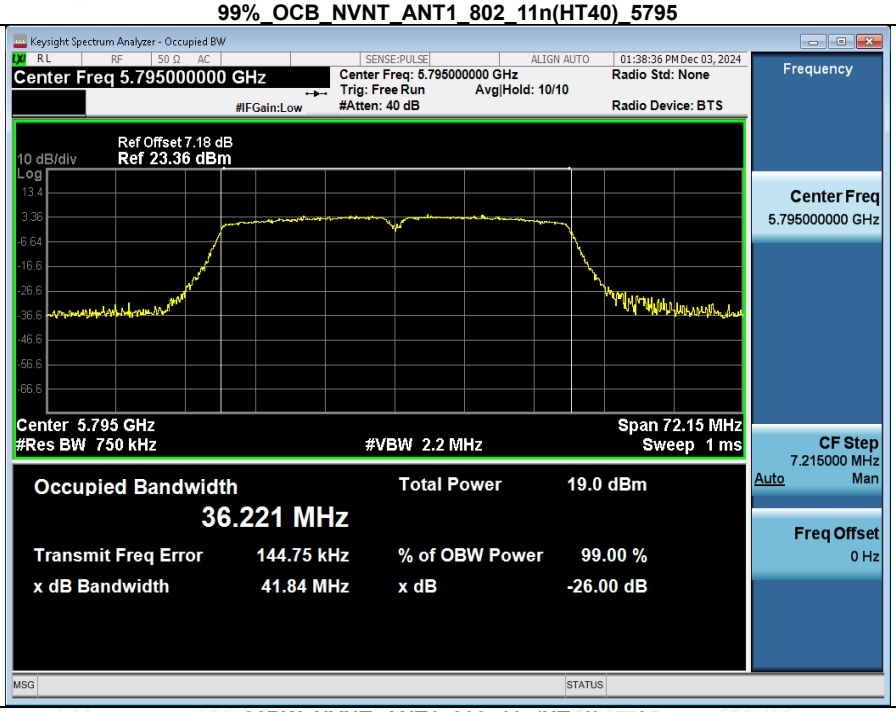

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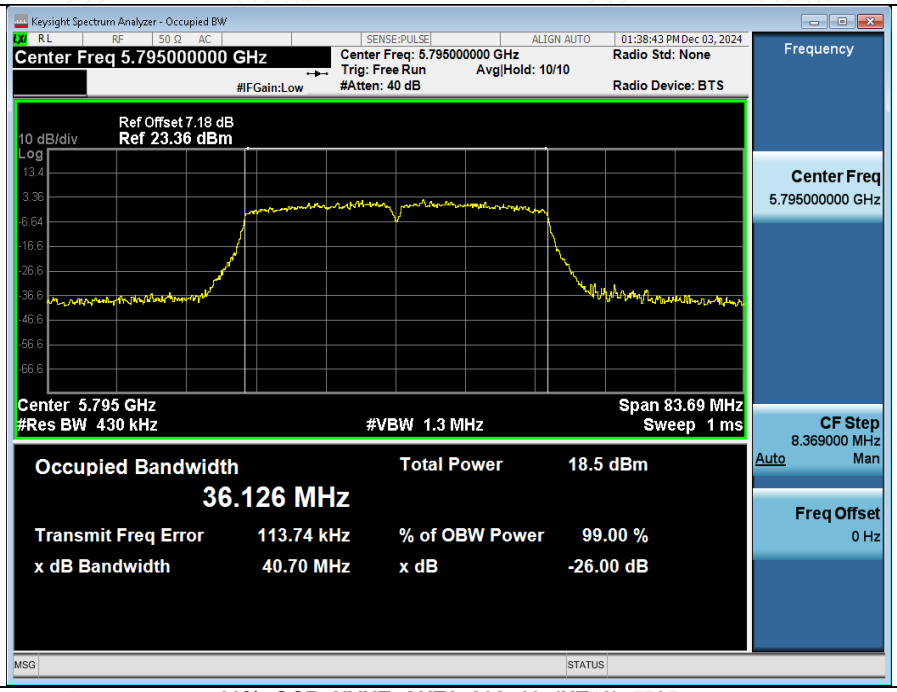

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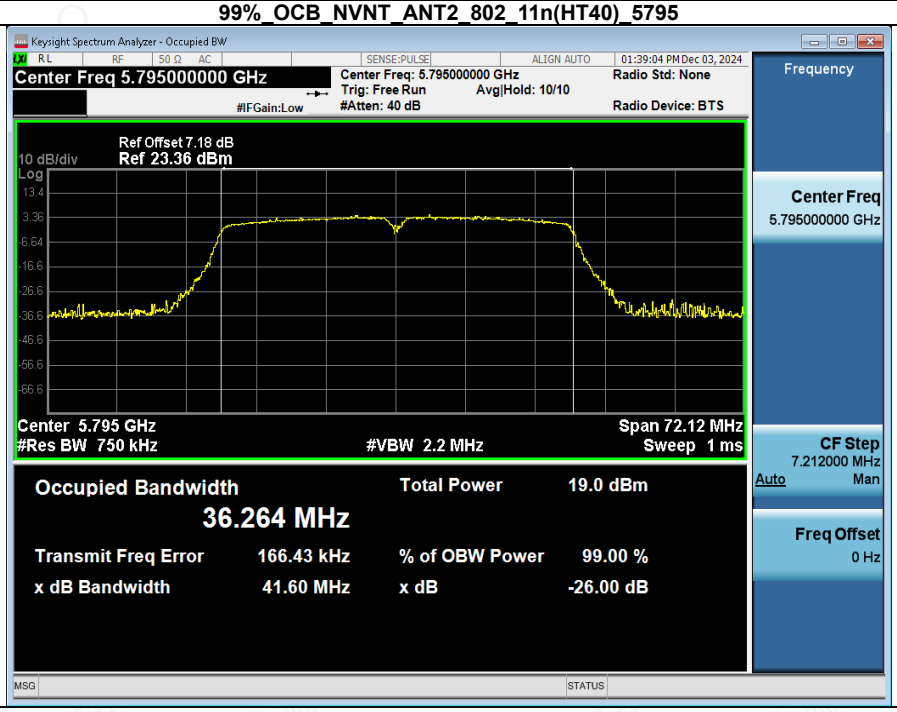

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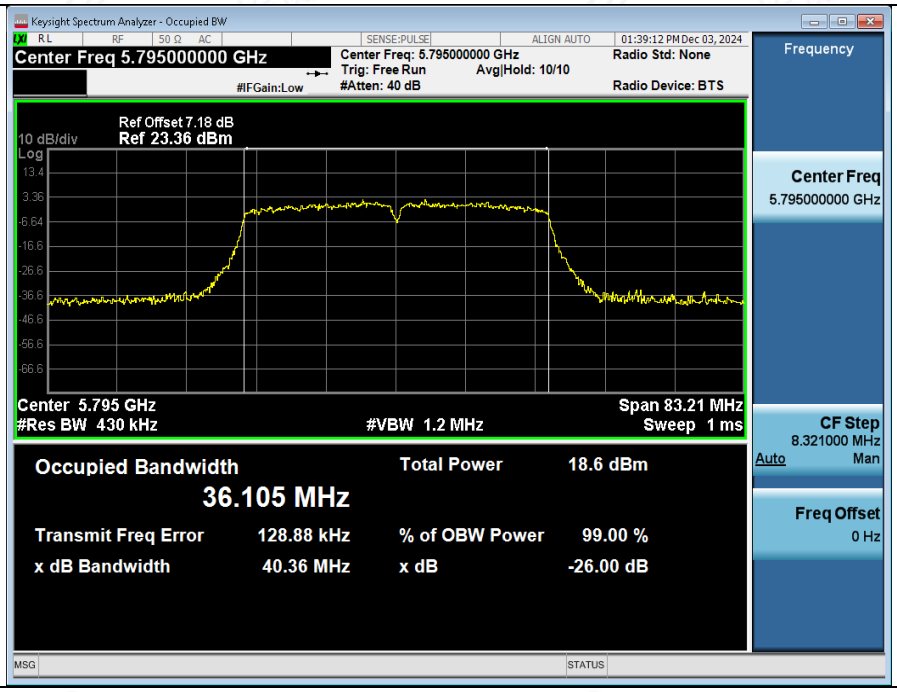

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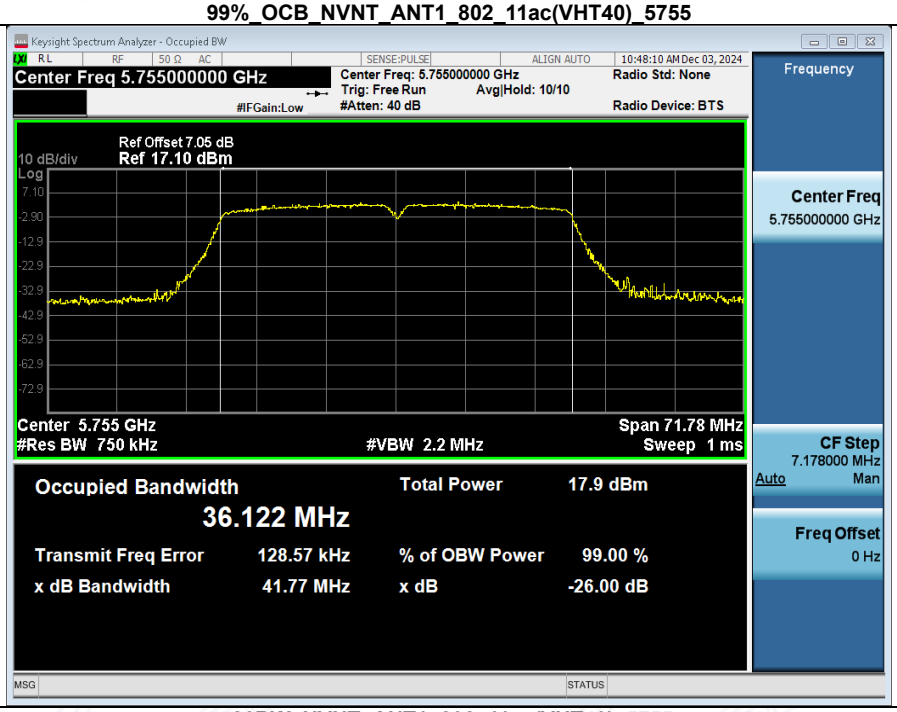

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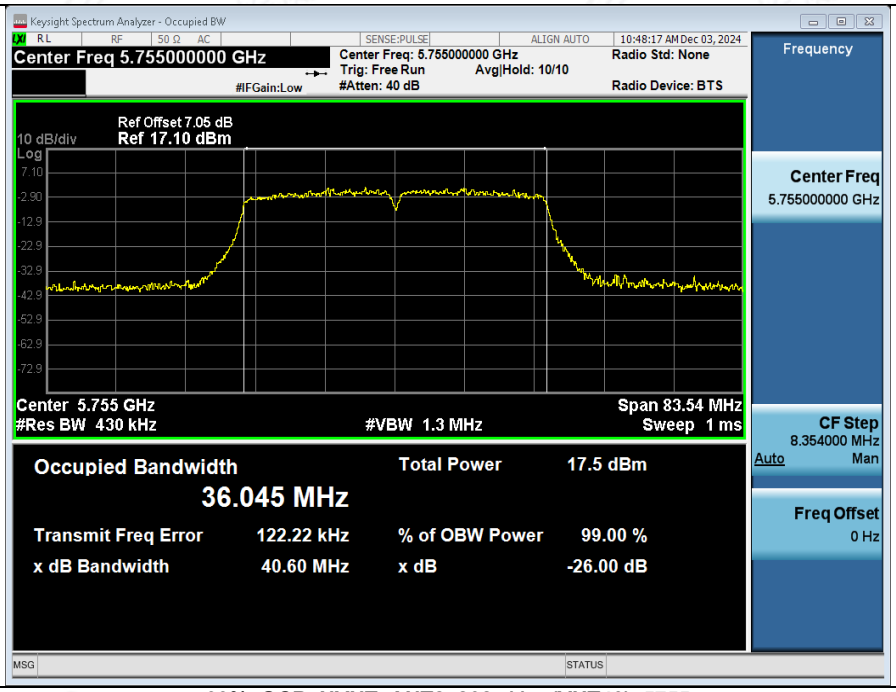

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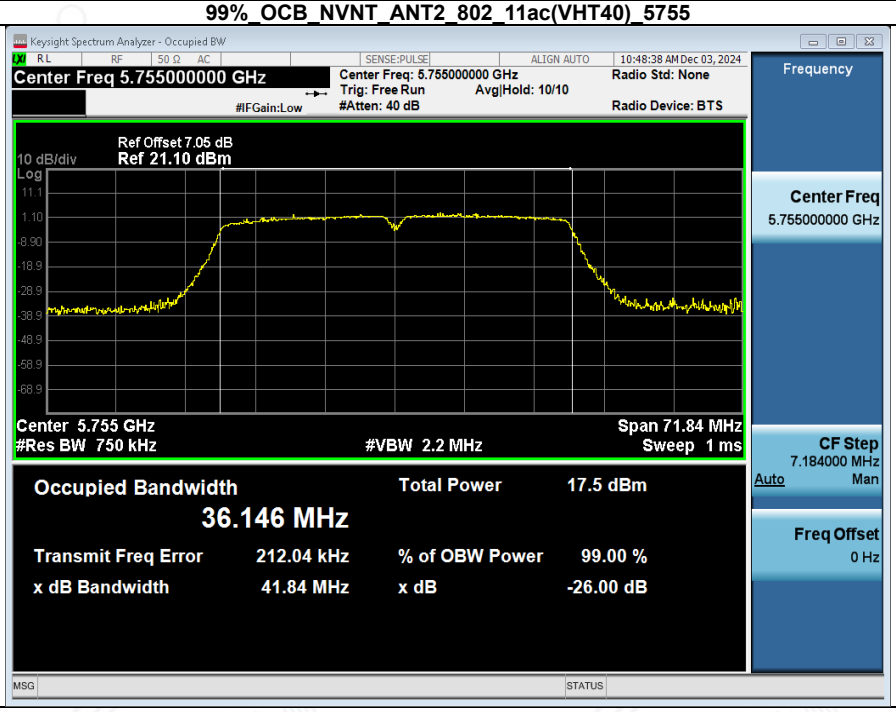

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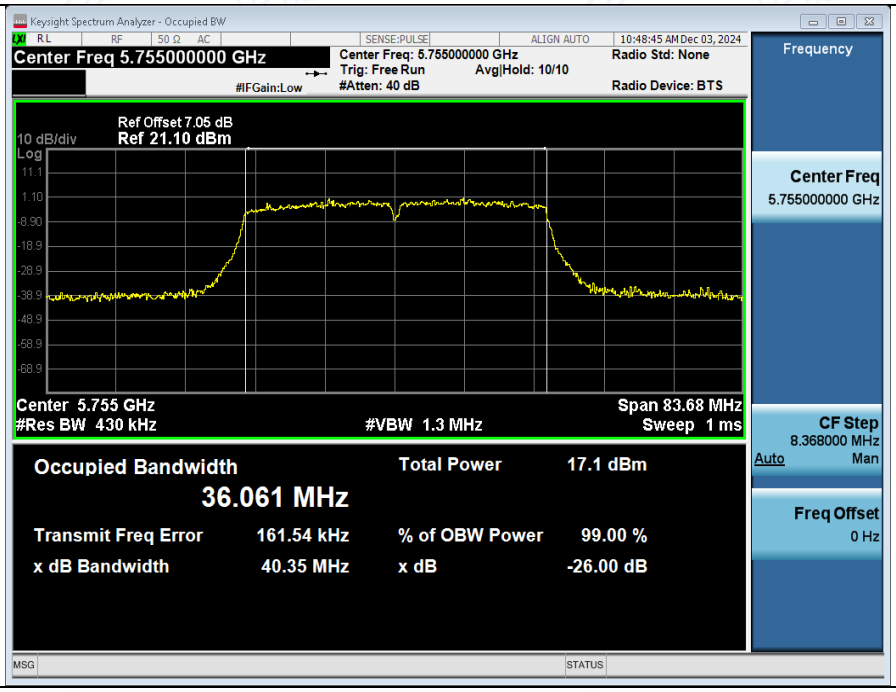

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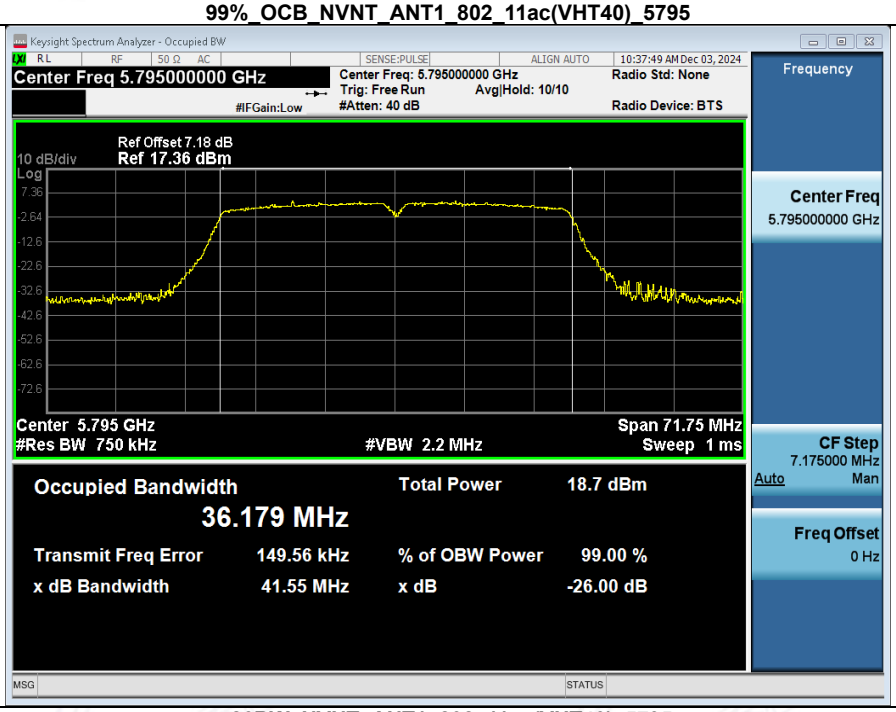

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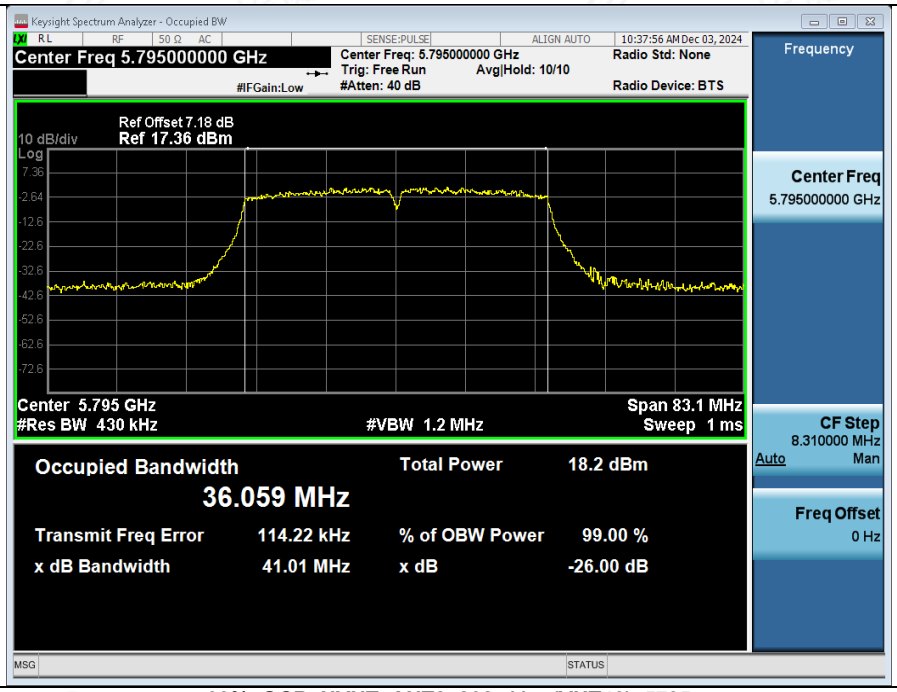

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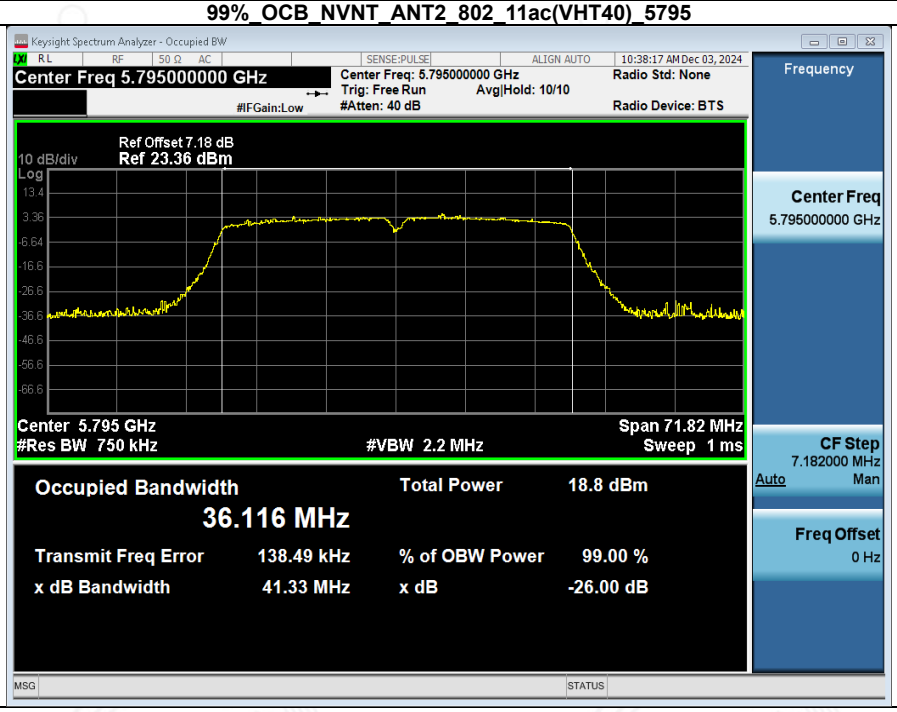

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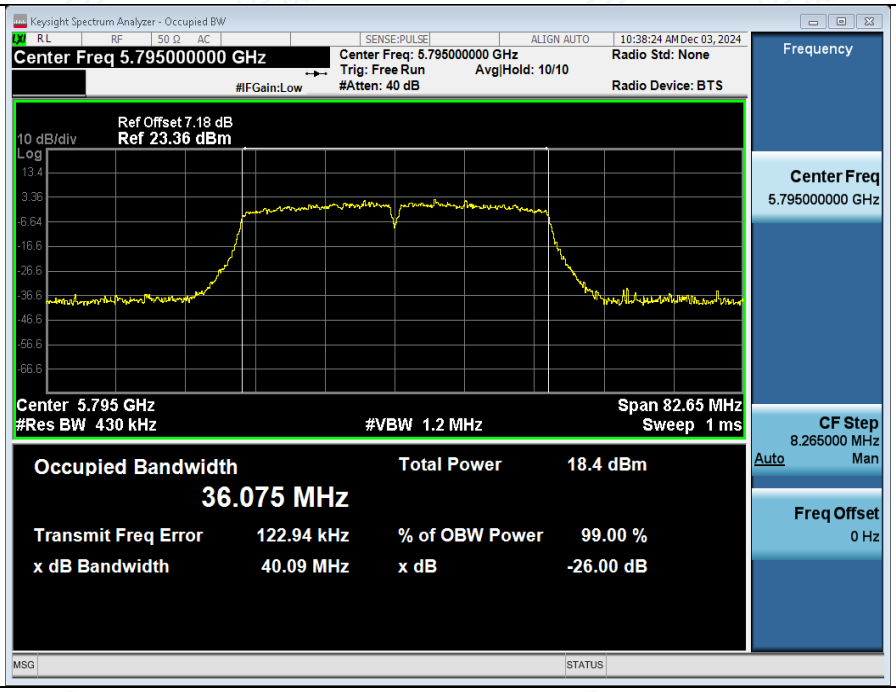

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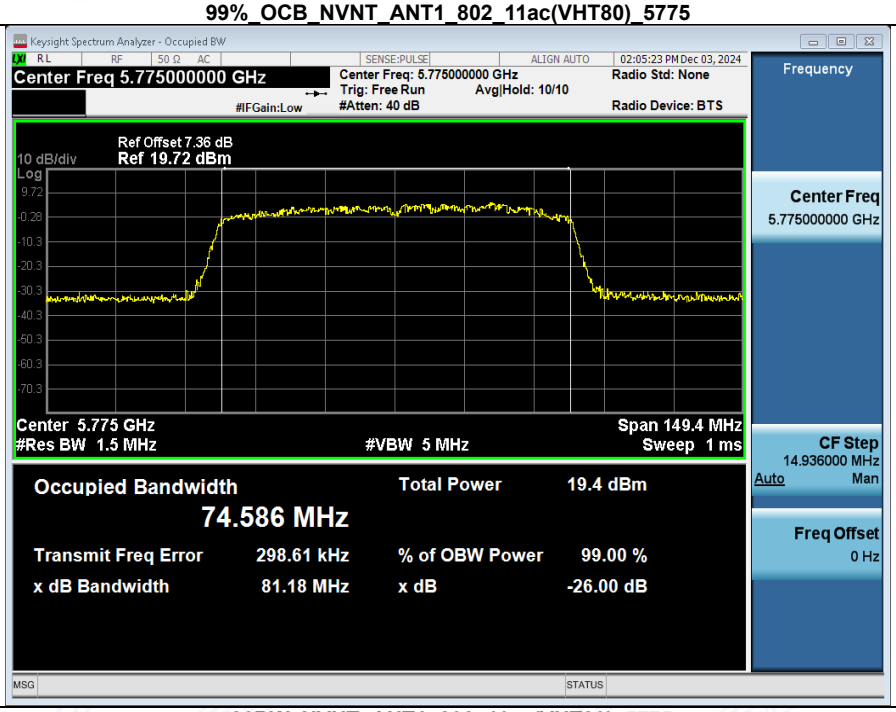

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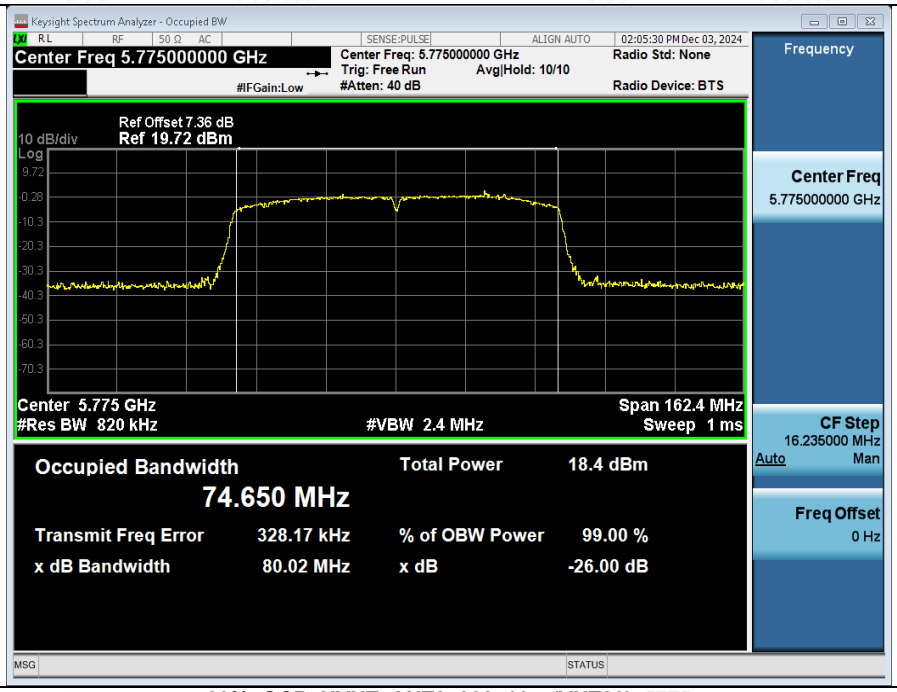

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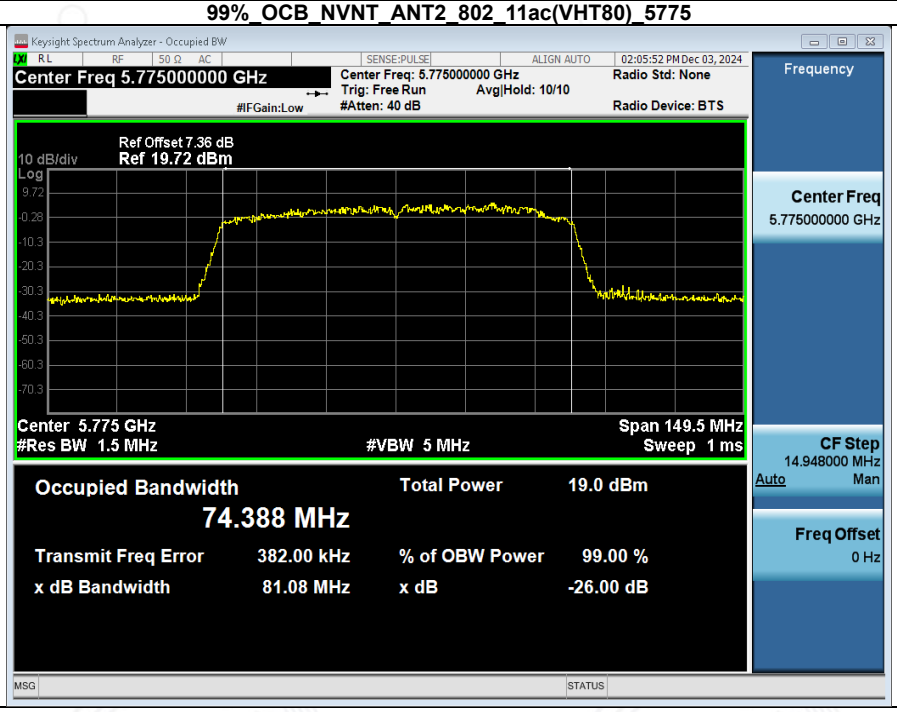
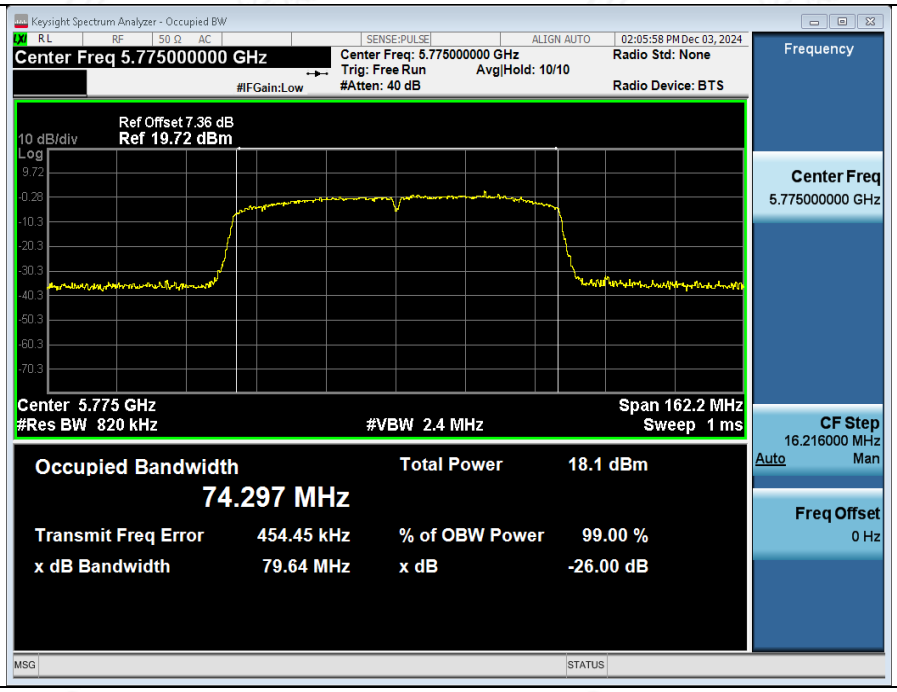


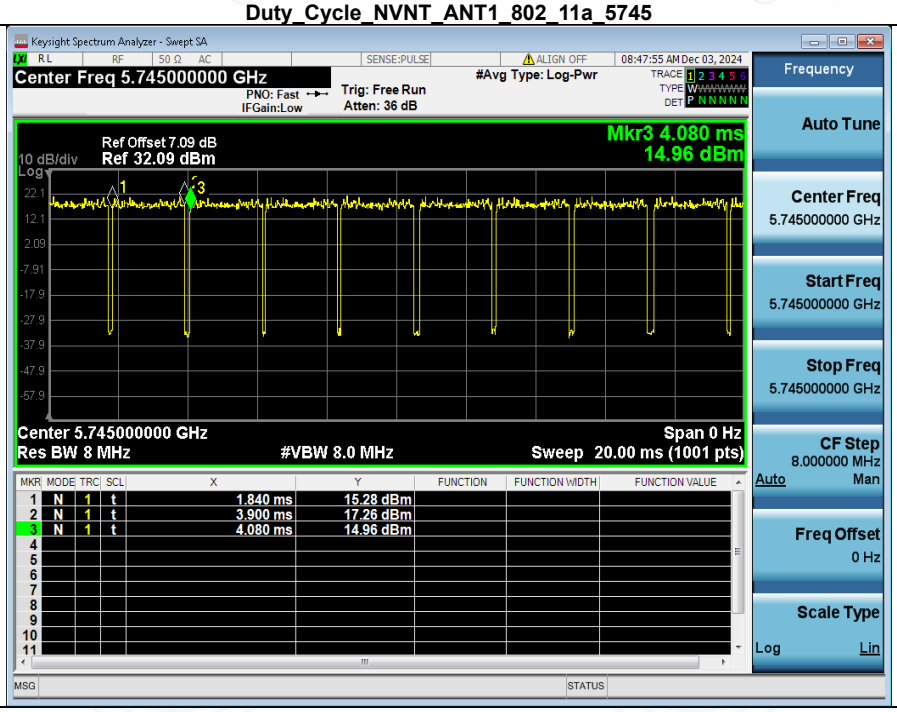
-26BW_NVNT_ANT2_802_11ac(VHT80)_5775


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
02:05:58 PM Dec 03, 2024
Ref Offset 7.36 dB
10 dB/div
Ref 19.72 dBm
Center 5.775 GHz
#Res BW 820 kHz
#VBW 2.4 MHz
Span 162.2 MHz
Sweep 1 ms
Occupied Bandwidth
74.297 MHz
Total Power 18.1 dBm
Transmit Freq Error 454.45 kHz
% of OBW Power 99.00 %
x dB Bandwidth 79.64 MHz
x dB -26.00 dB
Frequency
Center Freq
5.775000000 GHz
CF Step
16.216000 MHz
Auto Man
Freq Offset
0 Hz

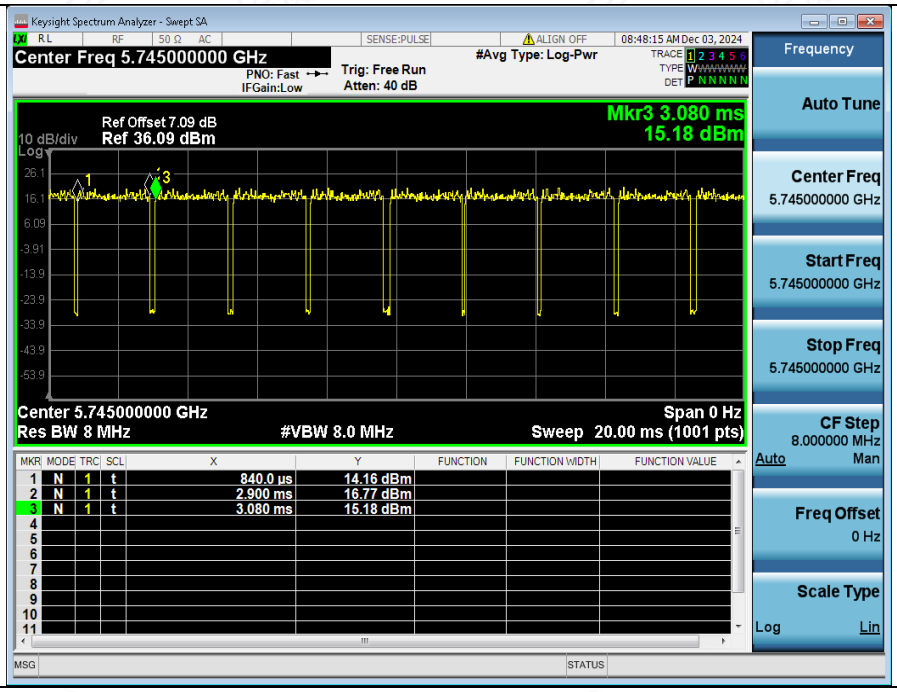
3. Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5745.00	91.96	0.36
NVNT	ANT2	802.11a	5745.00	91.96	0.36
NVNT	ANT1	802.11a	5785.00	93.69	0.28
NVNT	ANT2	802.11a	5785.00	94.50	0.25
NVNT	ANT1	802.11a	5825.00	93.64	0.29
NVNT	ANT2	802.11a	5825.00	91.96	0.36
NVNT	ANT1	802.11n(HT20)	5745.00	93.20	0.31
NVNT	ANT2	802.11n(HT20)	5745.00	92.31	0.35
NVNT	ANT1	802.11n(HT20)	5785.00	94.12	0.26
NVNT	ANT2	802.11n(HT20)	5785.00	94.12	0.26
NVNT	ANT1	802.11n(HT20)	5825.00	94.12	0.26
NVNT	ANT2	802.11n(HT20)	5825.00	94.12	0.26
NVNT	ANT1	802.11ac(VHT20)	5745.00	90.57	0.43
NVNT	ANT2	802.11ac(VHT20)	5745.00	88.99	0.51
NVNT	ANT1	802.11ac(VHT20)	5785.00	93.20	0.31
NVNT	ANT2	802.11ac(VHT20)	5785.00	88.89	0.51
NVNT	ANT1	802.11ac(VHT20)	5825.00	90.65	0.43
NVNT	ANT2	802.11ac(VHT20)	5825.00	92.31	0.35
NVNT	ANT1	802.11n(HT40)	5755.00	90.38	0.44
NVNT	ANT2	802.11n(HT40)	5755.00	82.46	0.84
NVNT	ANT1	802.11n(HT40)	5795.00	88.68	0.52
NVNT	ANT2	802.11n(HT40)	5795.00	82.76	0.82
NVNT	ANT1	802.11ac(VHT40)	5755.00	84.21	0.75
NVNT	ANT2	802.11ac(VHT40)	5755.00	87.27	0.59
NVNT	ANT1	802.11ac(VHT40)	5795.00	87.27	0.59
NVNT	ANT2	802.11ac(VHT40)	5795.00	67.61	1.70
NVNT	ANT1	802.11ac(VHT80)	5775.00	76.67	1.15
NVNT	ANT2	802.11ac(VHT80)	5775.00	74.19	1.30

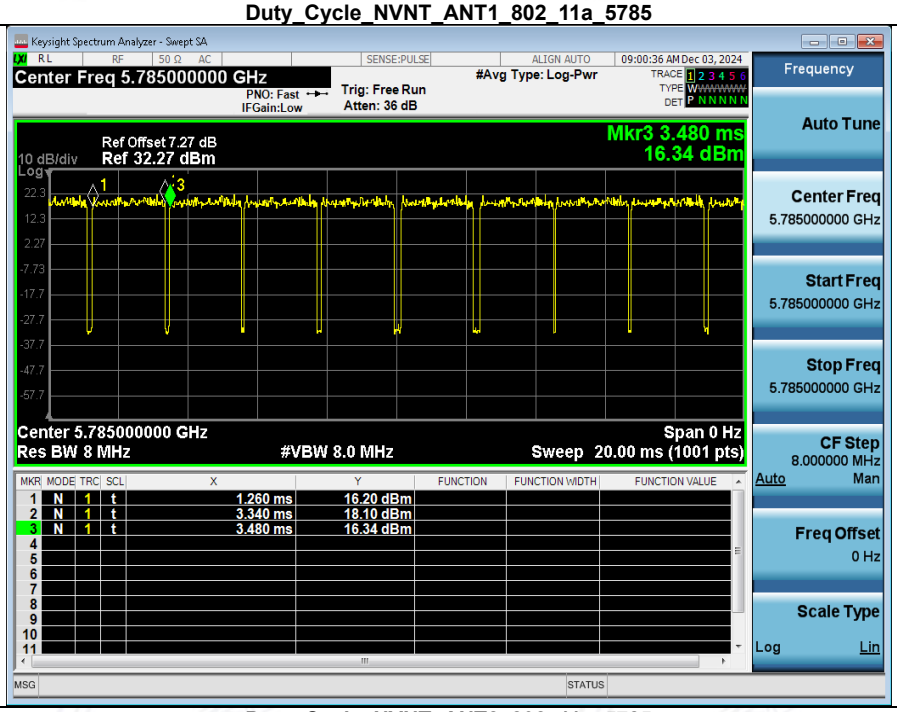
Duty_Cycle_NVNT_ANT1_802_11a_5745



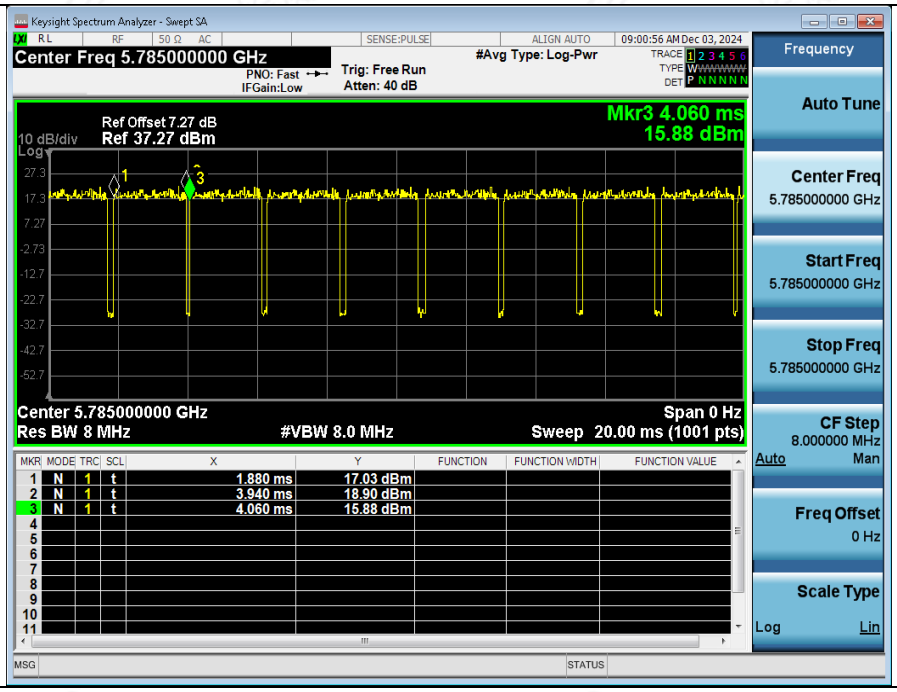
Duty_Cycle_NVNT_ANT2_802_11a_5745



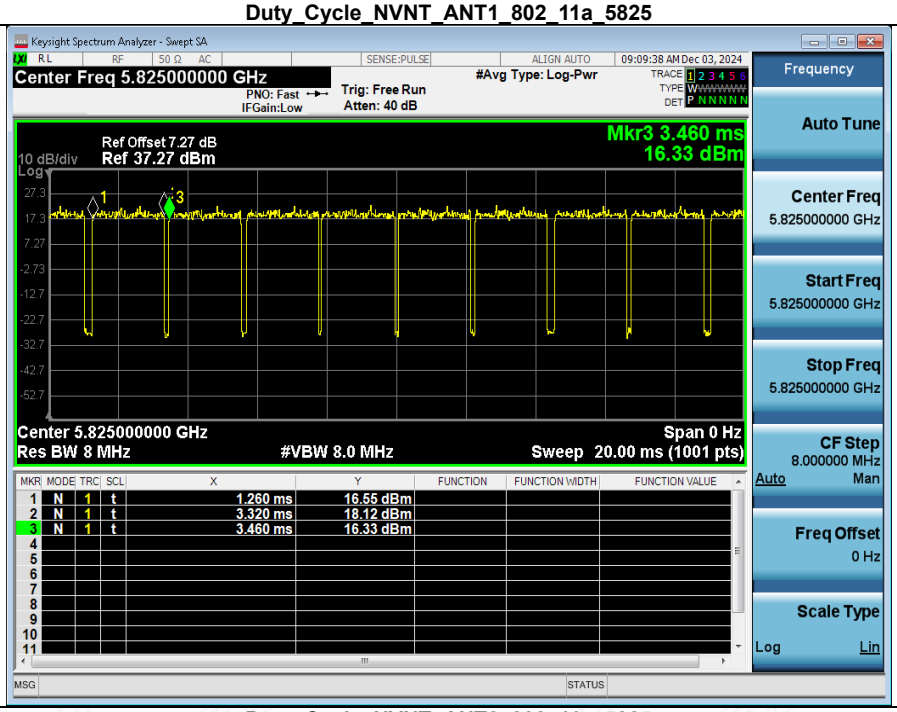
Duty_Cycle_NVNT_ANT1_802_11a_5785



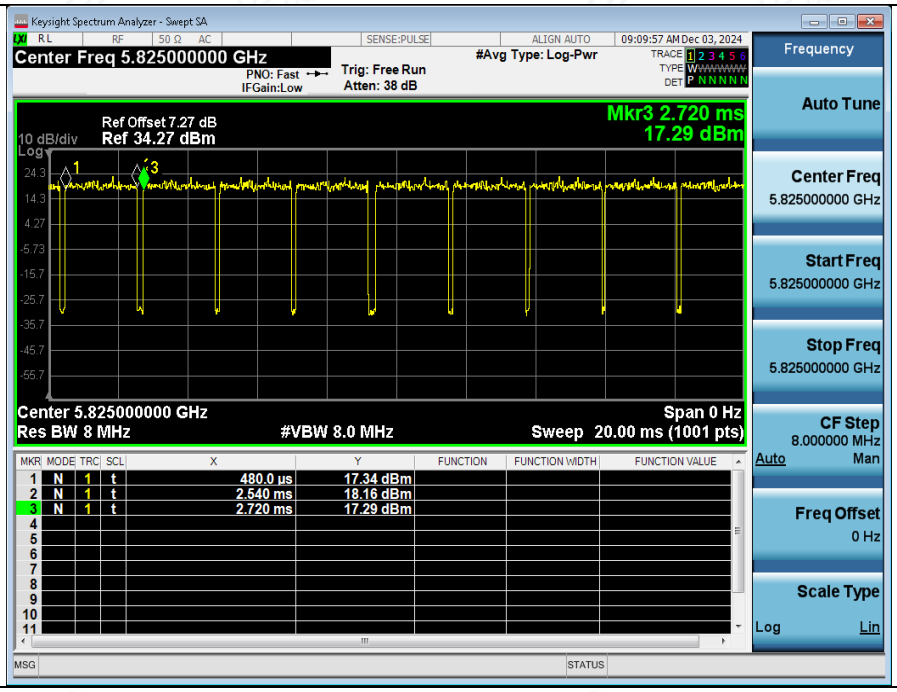
Duty_Cycle_NVNT_ANT2_802_11a_5785



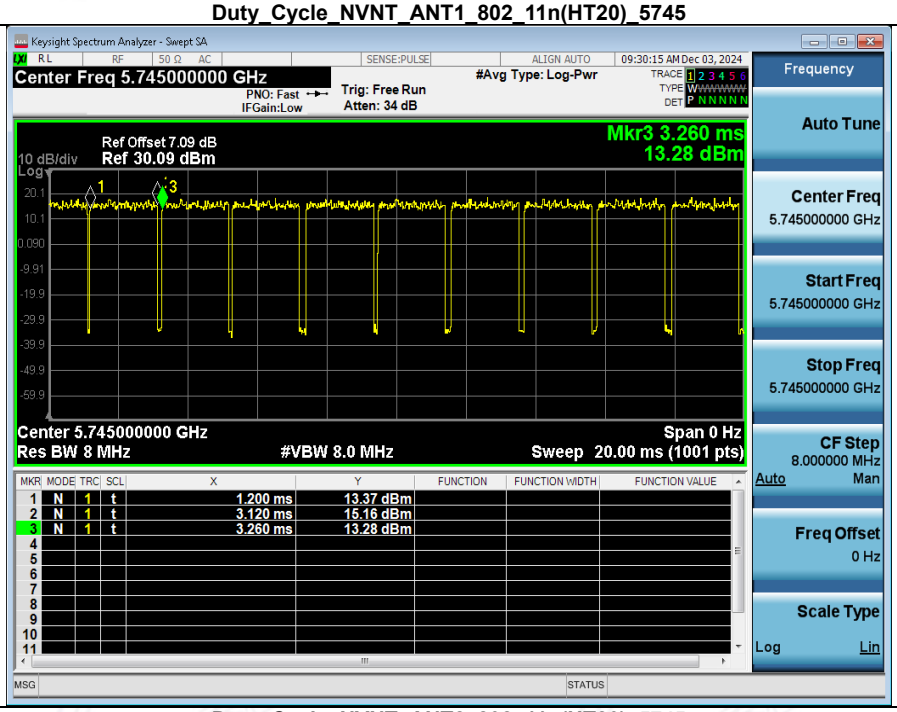
Duty_Cycle_NVNT_ANT1_802_11a_5825



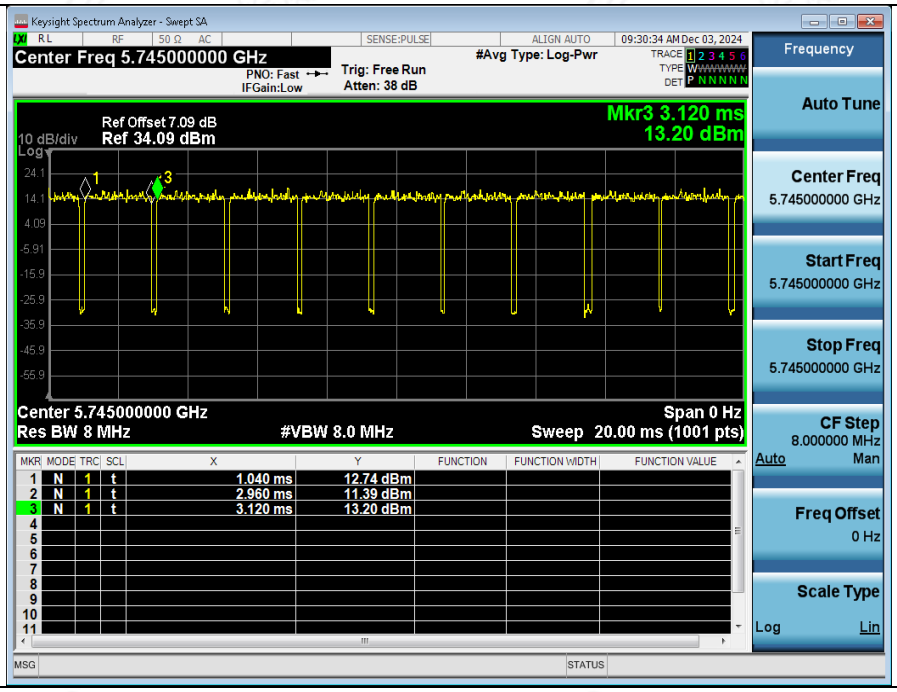
Duty_Cycle_NVNT_ANT2_802_11a_5825



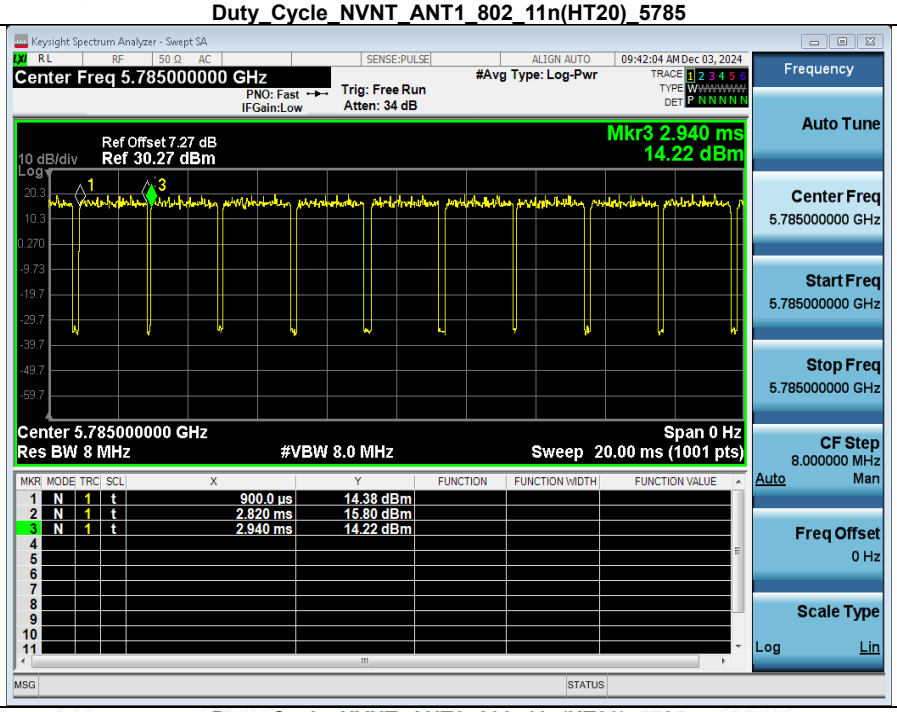
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5745



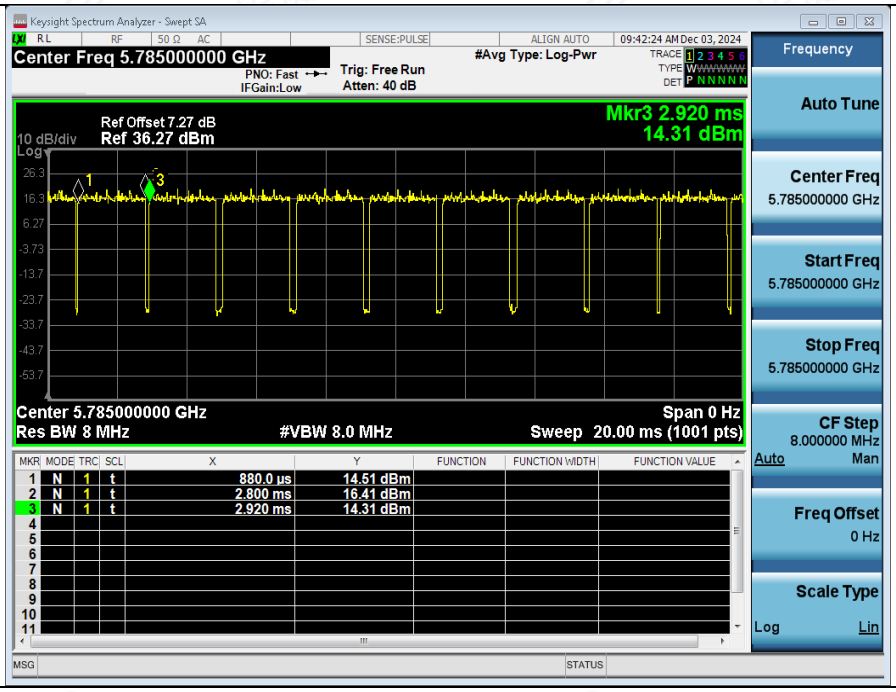
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5745



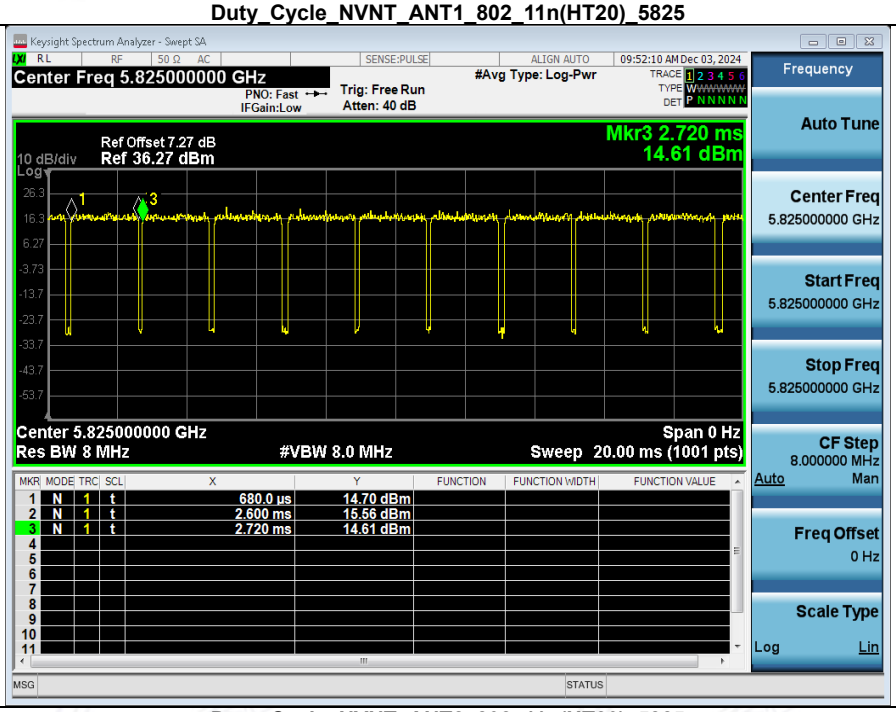
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5785



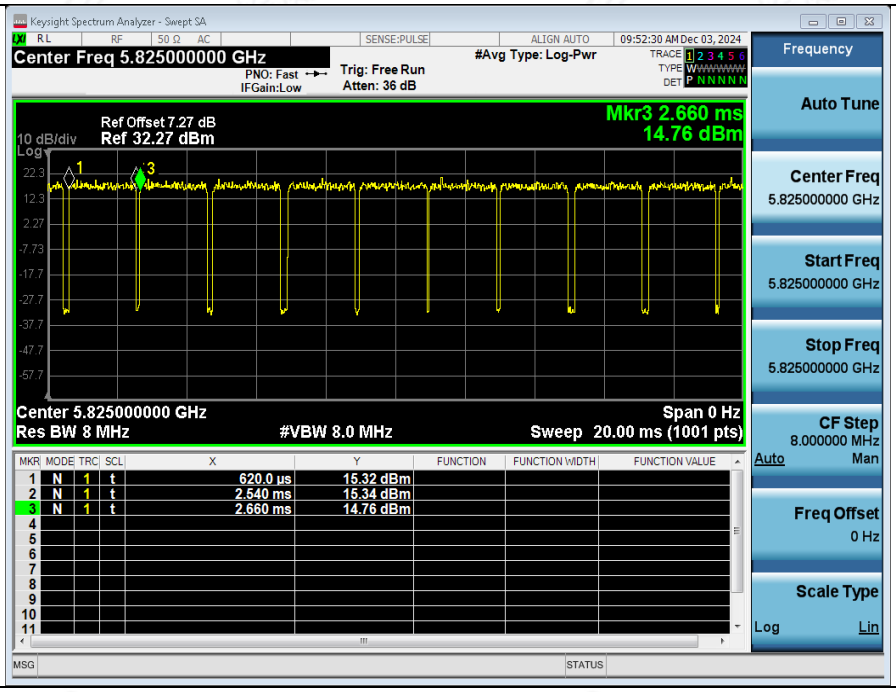
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5785



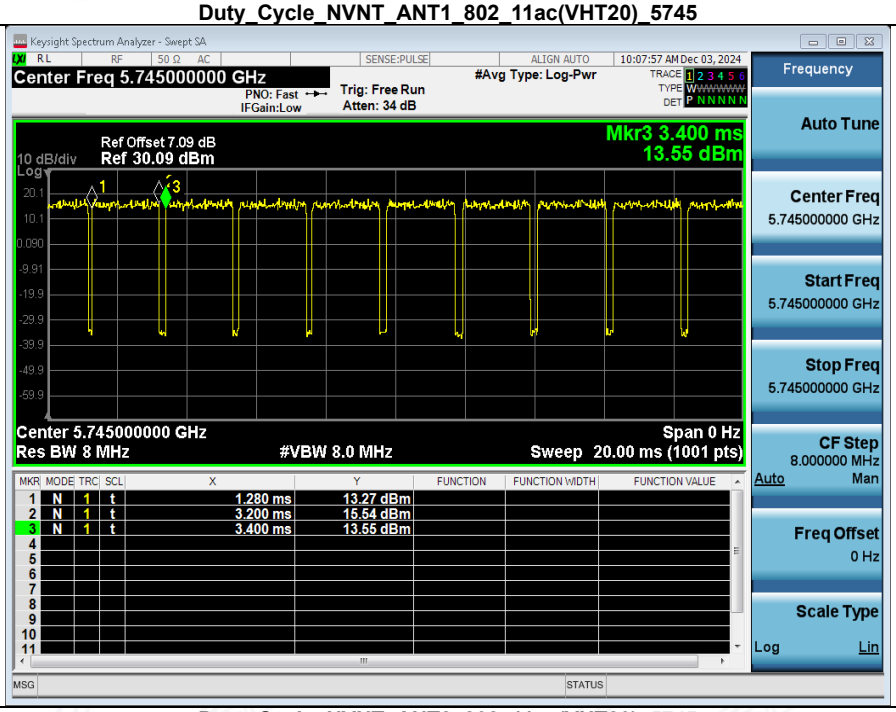
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_5825



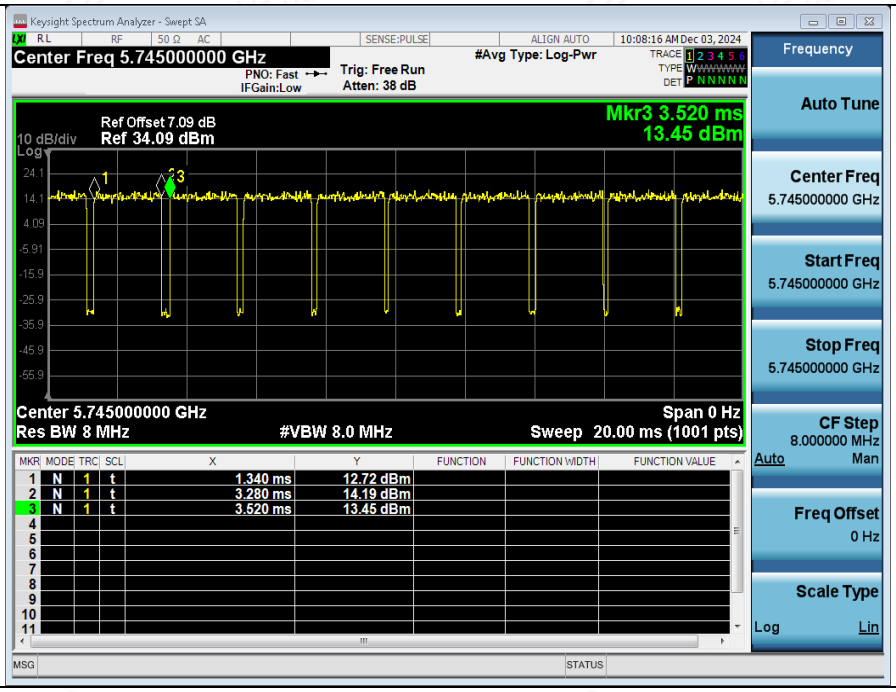
Duty_Cycle_NVNT_ANT2_802_11n(HT20)_5825



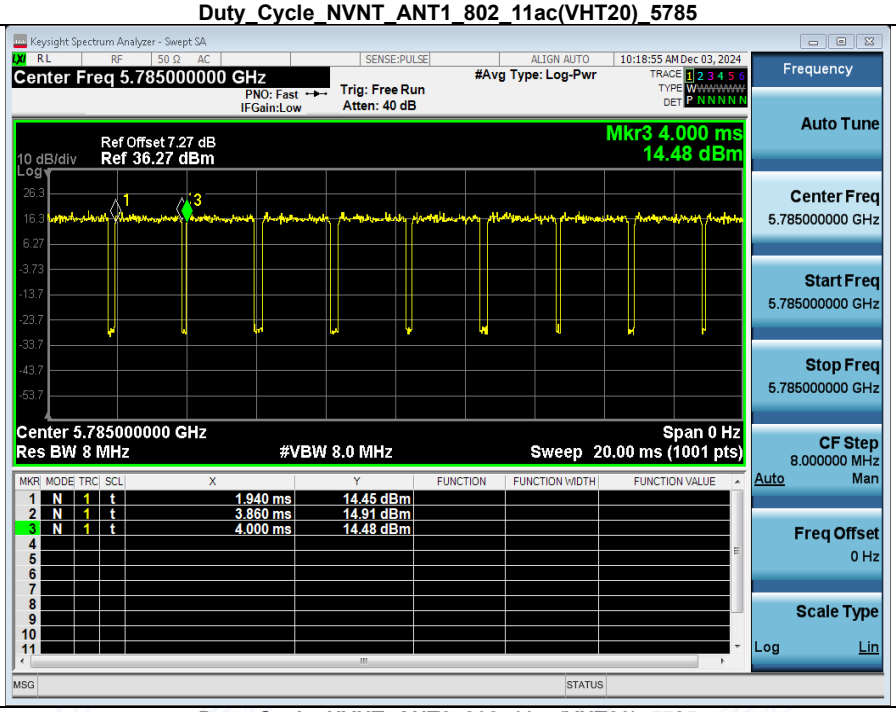
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5745



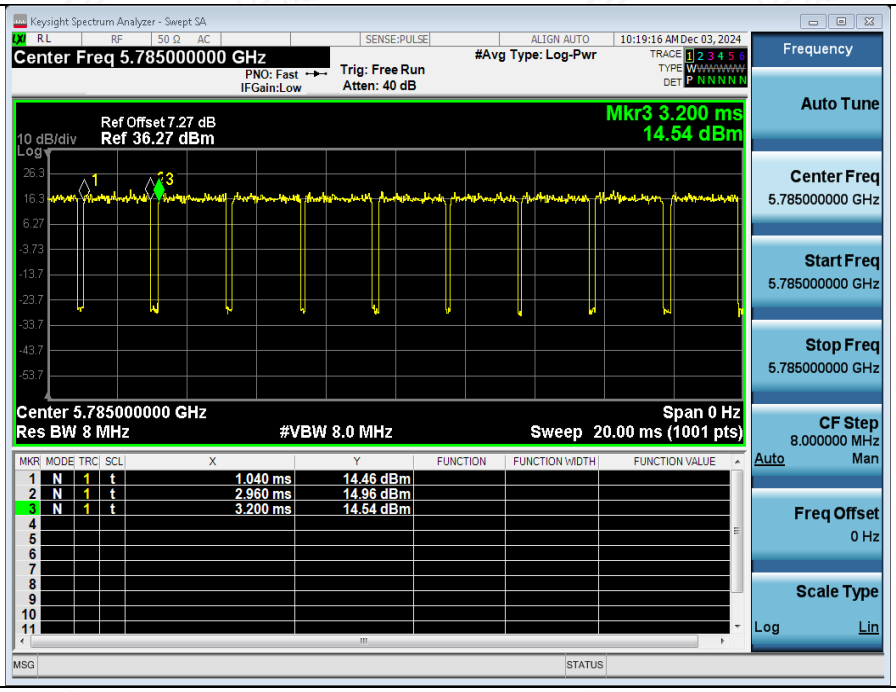
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5745



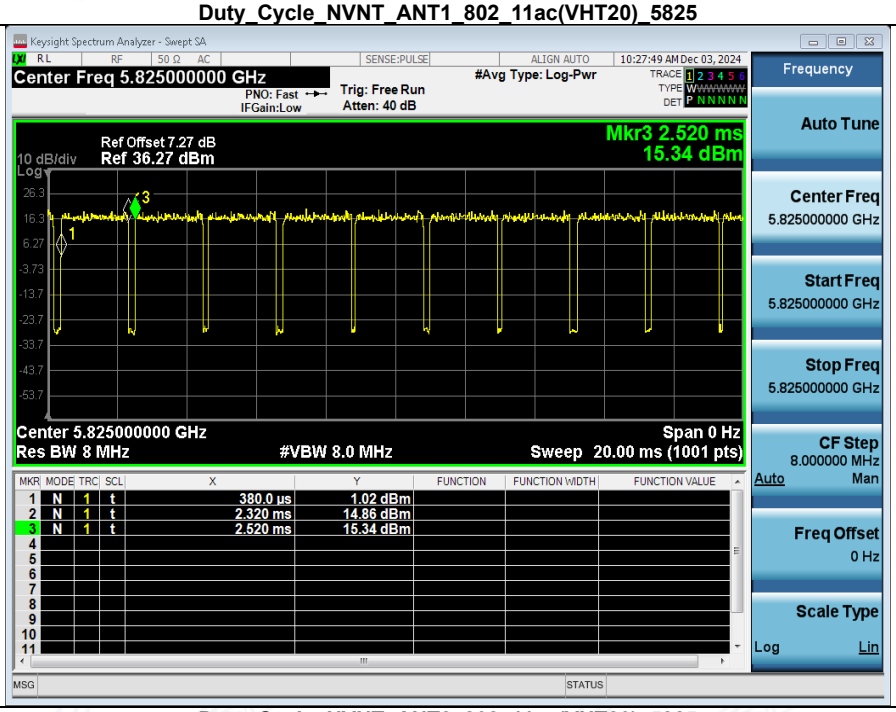
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5785



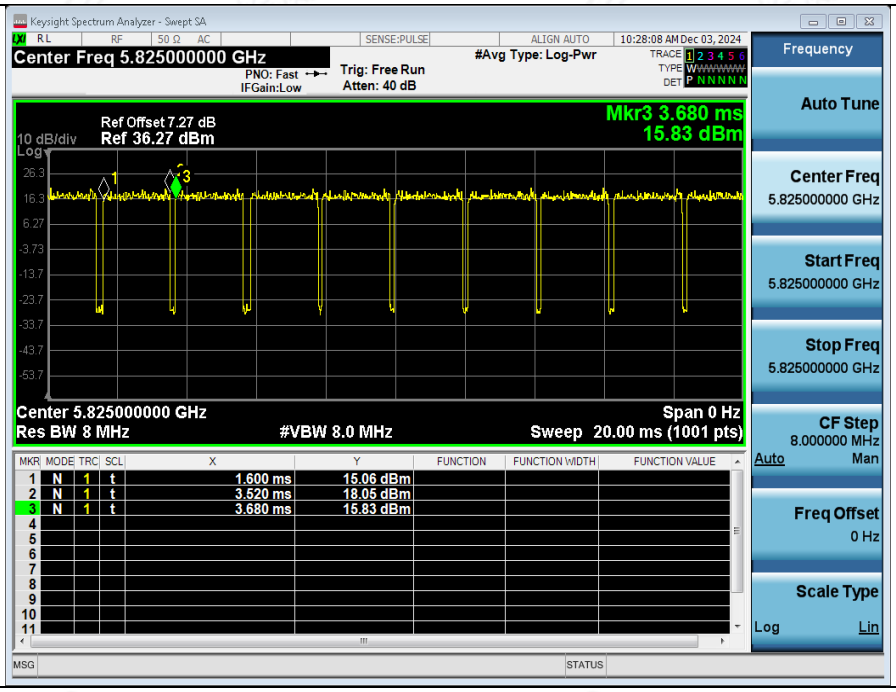
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5785



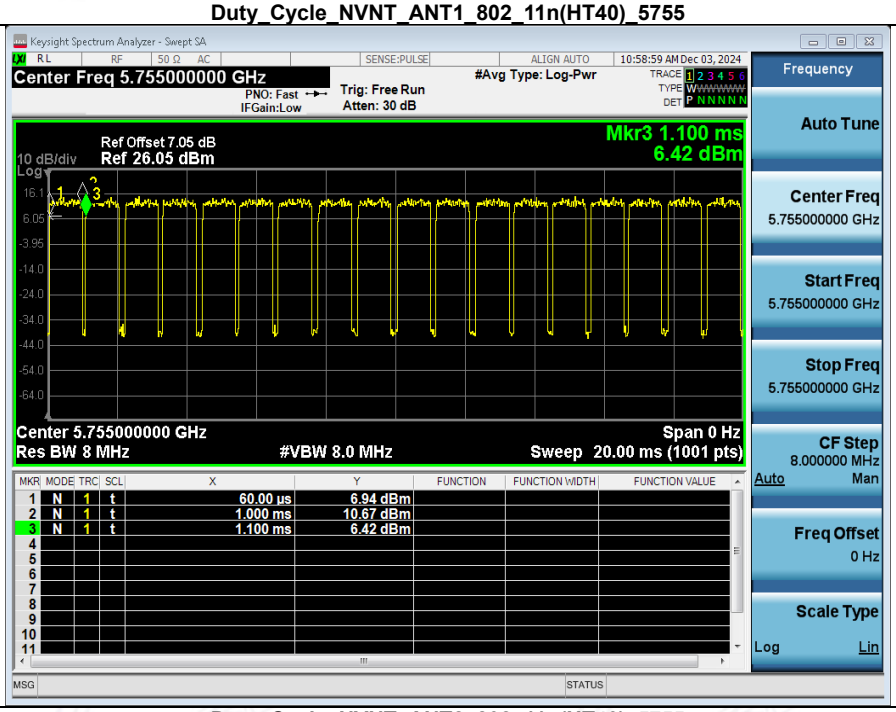
Duty_Cycle_NVNT_ANT1_802_11ac(VHT20)_5825



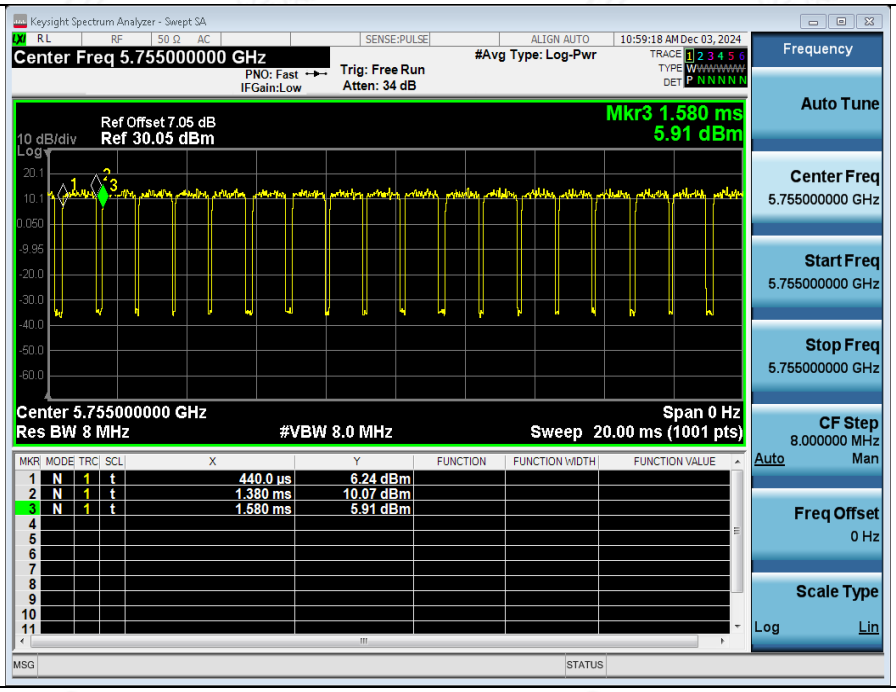
Duty_Cycle_NVNT_ANT2_802_11ac(VHT20)_5825



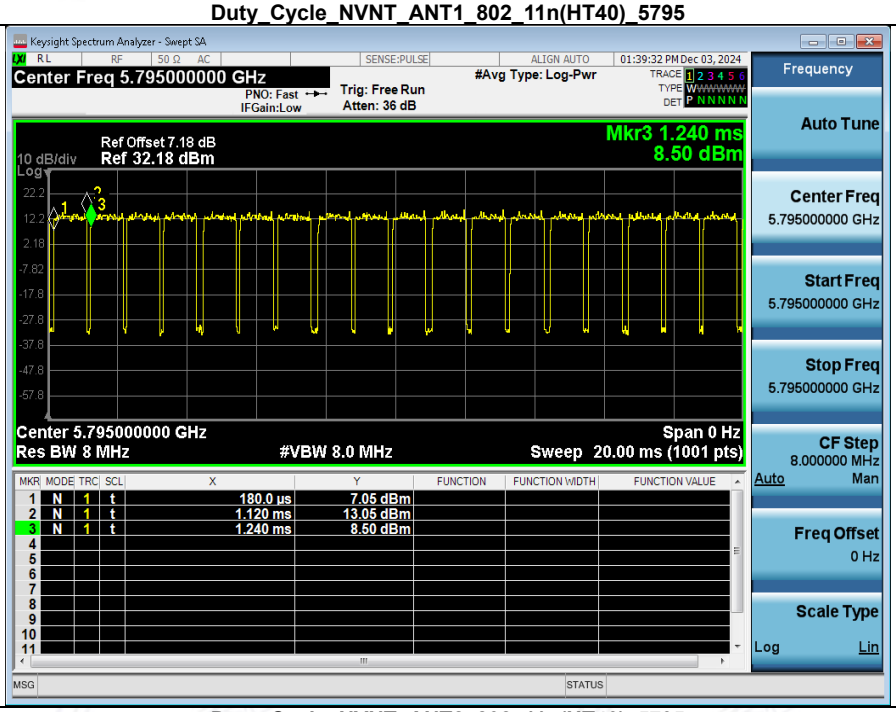
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5755



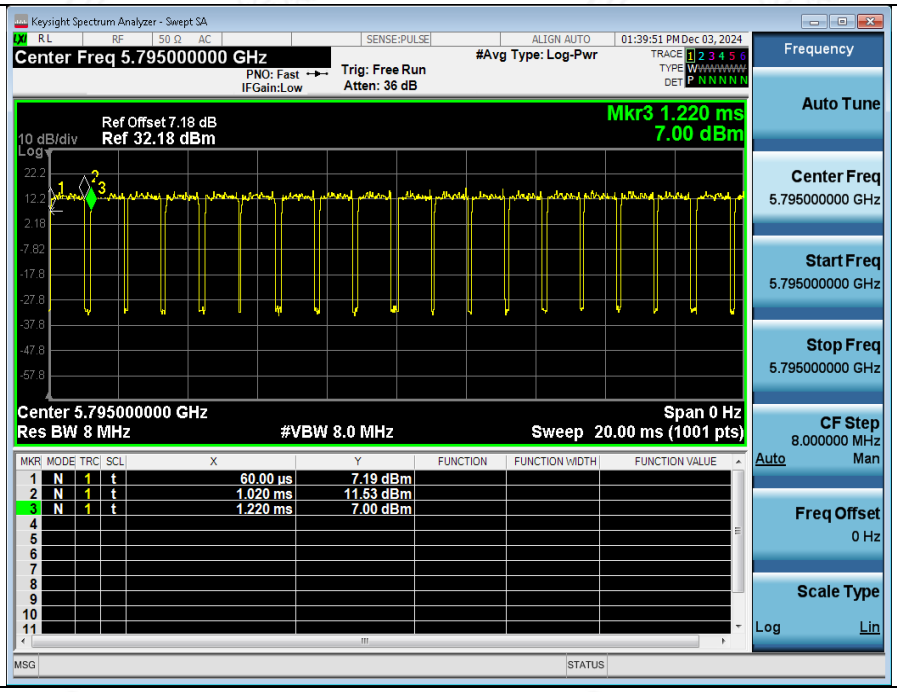
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5755



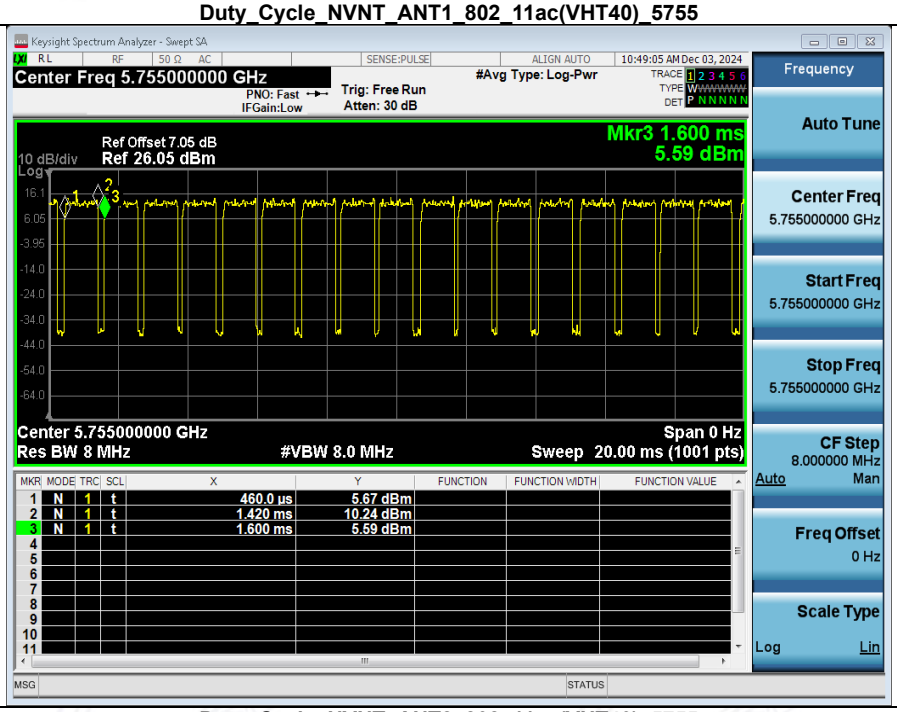
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_5795



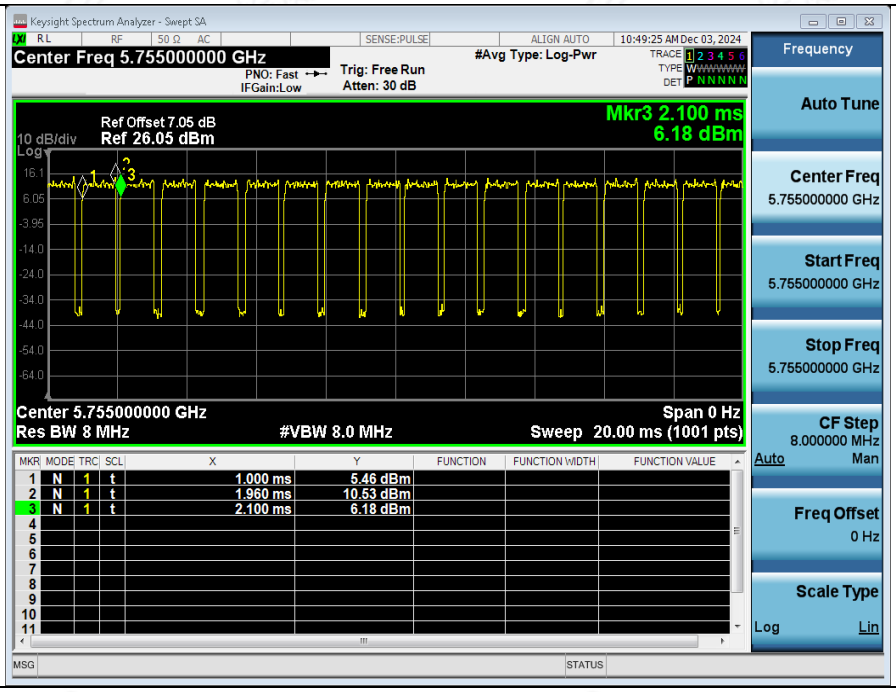
Duty_Cycle_NVNT_ANT2_802_11n(HT40)_5795



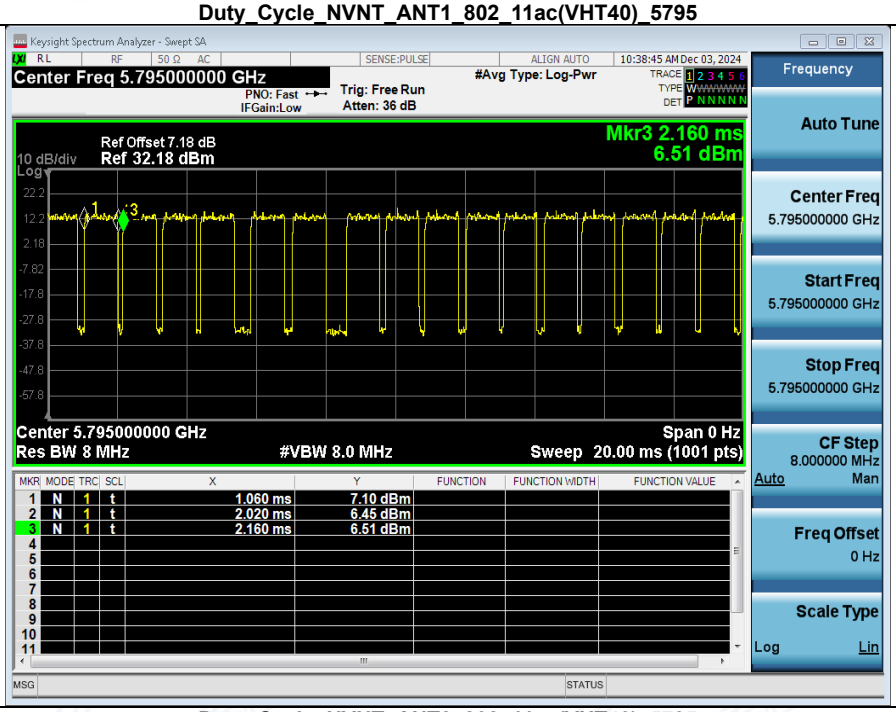
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5755



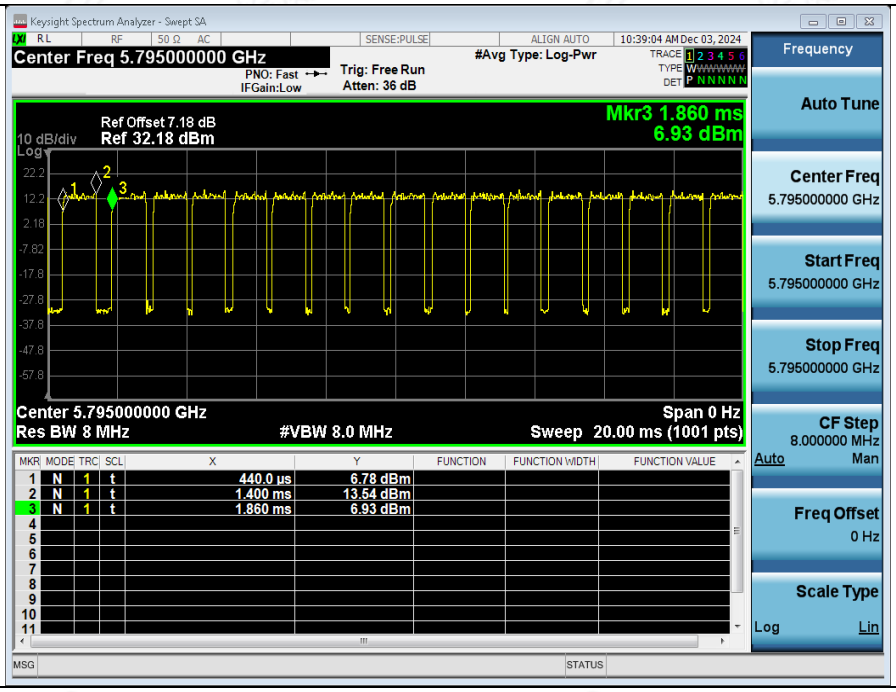
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5755



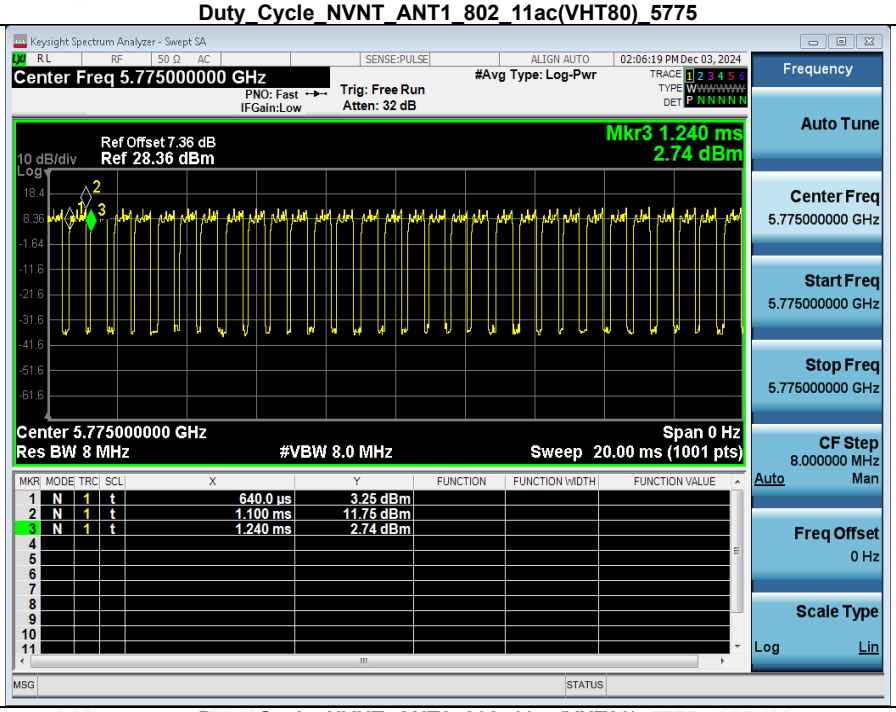
Duty_Cycle_NVNT_ANT1_802_11ac(VHT40)_5795



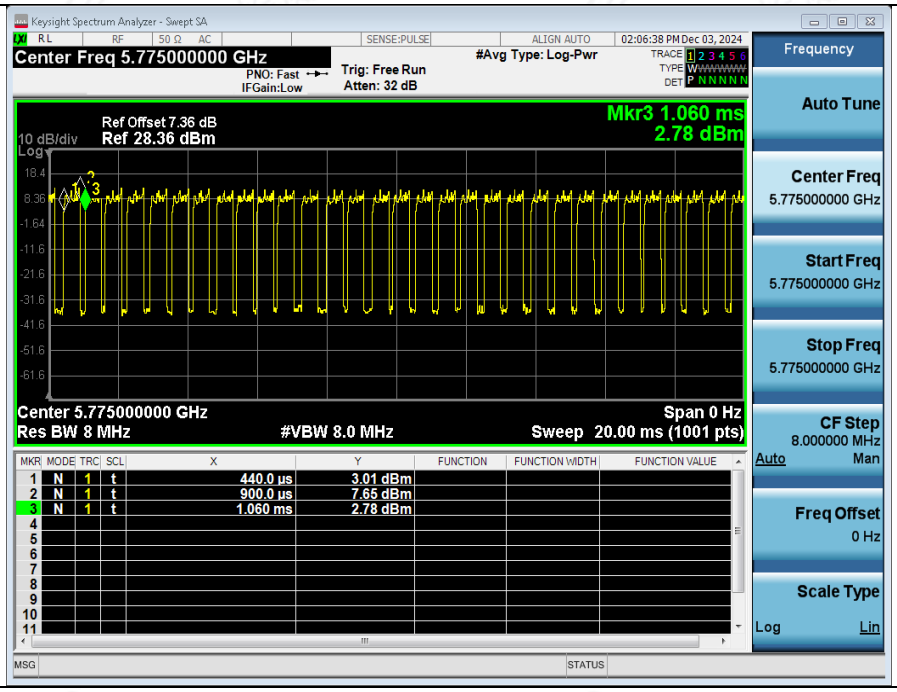
Duty_Cycle_NVNT_ANT2_802_11ac(VHT40)_5795



Duty_Cycle_NVNT_ANT1_802_11ac(VHT80)_5775



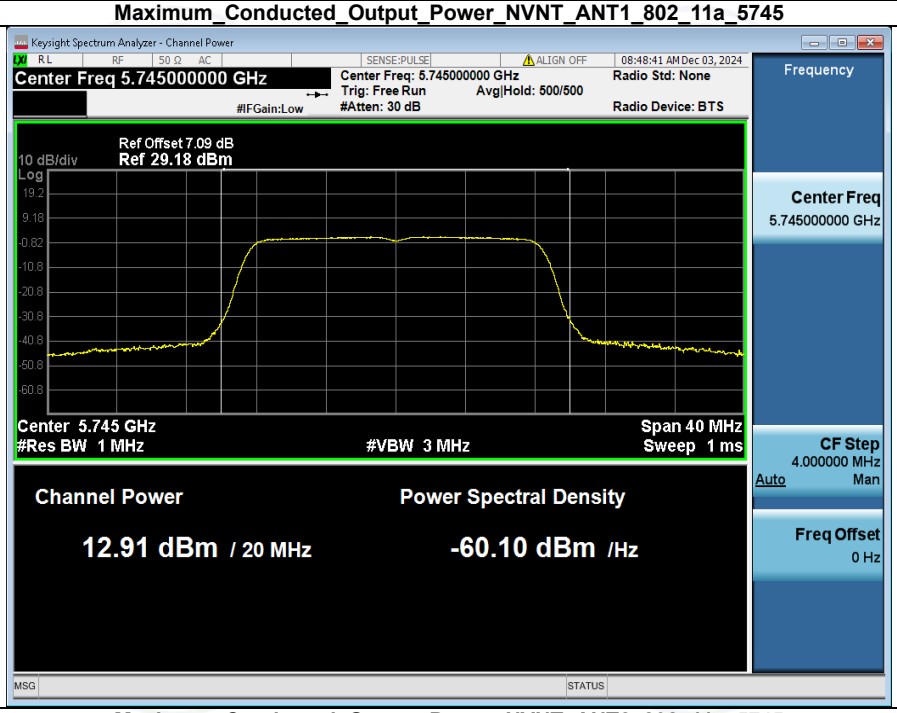
Duty_Cycle_NVNT_ANT2_802_11ac(VHT80)_5775


Keysight Spectrum Analyzer - Swept SA
Center Freq 5.775000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 32 dB
#Avg Type: Log-Pwr
02:06:38 PM Dec 03, 2024
Ref Offset 7.36 dB
10 dB/div
Ref 28.36 dBm
Mkr3 1.060 ms
2.78 dBm
Center 5.775000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (1001 pts)
1 N 1 t 440.0 µs 3.01 dBm
2 N 1 t 900.0 µs 7.65 dBm
3 N 1 t 1.060 ms 2.78 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

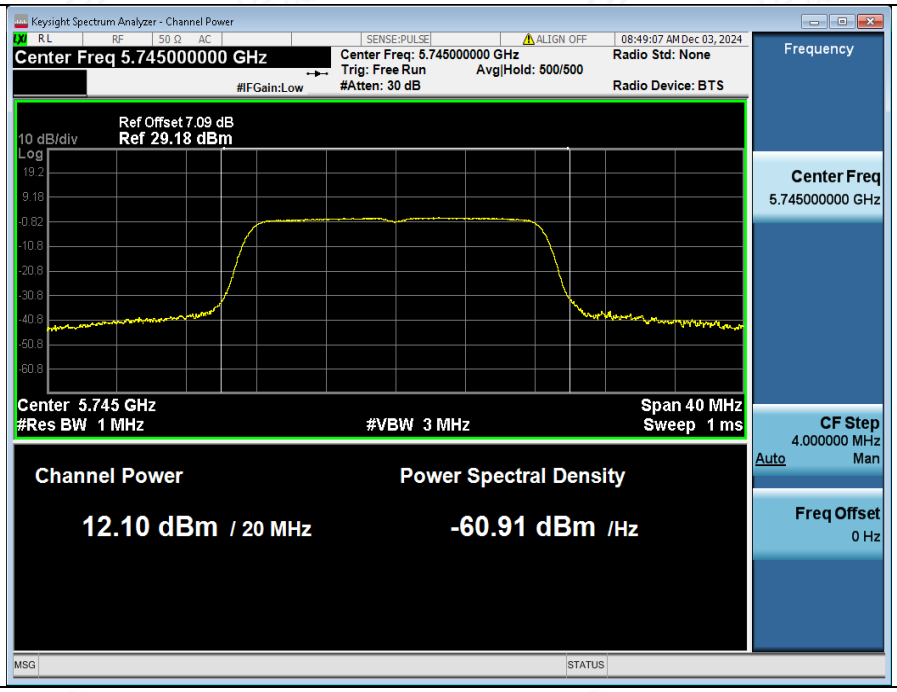
4. Maximum Conducted Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	12.91	0.36	13.27	30	Pass
NVNT	ANT2	802.11a	5745.00	12.10	0.36	12.46	30	Pass
NVNT	ANT1	802.11a	5785.00	13.89	0.28	14.17	30	Pass
NVNT	ANT2	802.11a	5785.00	13.96	0.25	14.21	30	Pass
NVNT	ANT1	802.11a	5825.00	14.31	0.29	14.60	30	Pass
NVNT	ANT2	802.11a	5825.00	14.65	0.36	15.01	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	11.06	0.31	11.37	30	Pass
NVNT	ANT2	802.11n(HT20)	5745.00	10.39	0.35	10.74	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	11.95	0.26	12.21	30	Pass
NVNT	ANT2	802.11n(HT20)	5785.00	12.01	0.26	12.27	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	12.50	0.26	12.76	30	Pass
NVNT	ANT2	802.11n(HT20)	5825.00	12.84	0.26	13.10	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	11.02	0.43	11.45	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5745.00	10.32	0.51	10.83	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	11.94	0.31	12.25	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5785.00	12.05	0.51	12.56	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	12.42	0.43	12.85	30	Pass
NVNT	ANT2	802.11ac(VHT20)	5825.00	12.86	0.35	13.21	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	10.38	0.44	10.82	30	Pass
NVNT	ANT2	802.11n(HT40)	5755.00	10.00	0.84	10.84	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	11.16	0.52	11.68	30	Pass
NVNT	ANT2	802.11n(HT40)	5795.00	11.47	0.82	12.29	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	10.27	0.75	11.02	30	Pass
NVNT	ANT2	802.11ac(VHT40)	5755.00	9.86	0.59	10.45	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	11.14	0.59	11.73	30	Pass
NVNT	ANT2	802.11ac(VHT40)	5795.00	11.18	1.70	12.88	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	9.65	1.15	10.80	30	Pass
NVNT	ANT2	802.11ac(VHT80)	5775.00	9.34	1.30	10.64	30	Pass

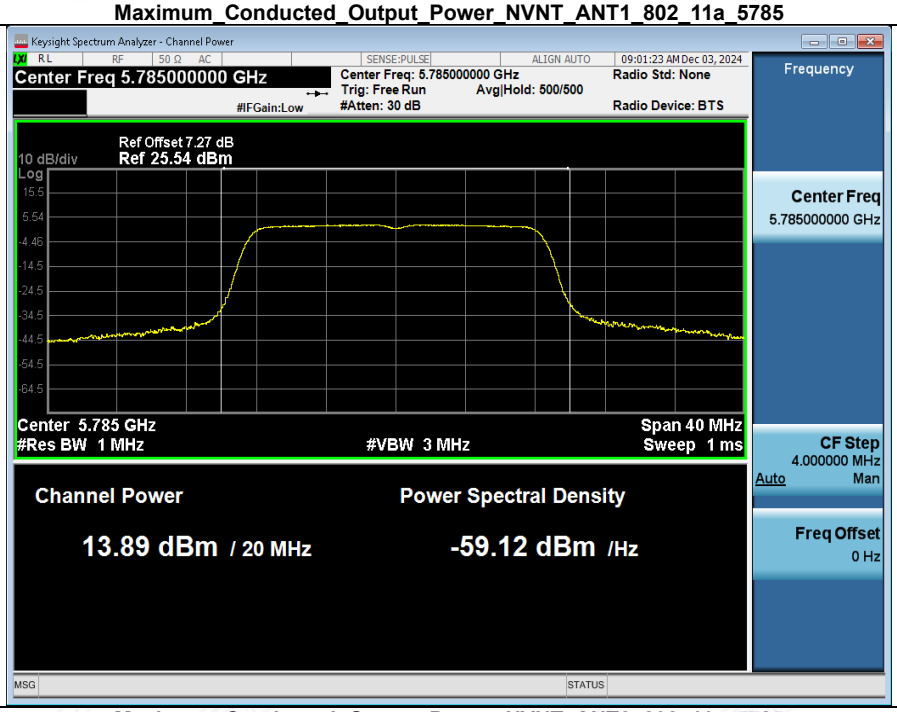
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5745



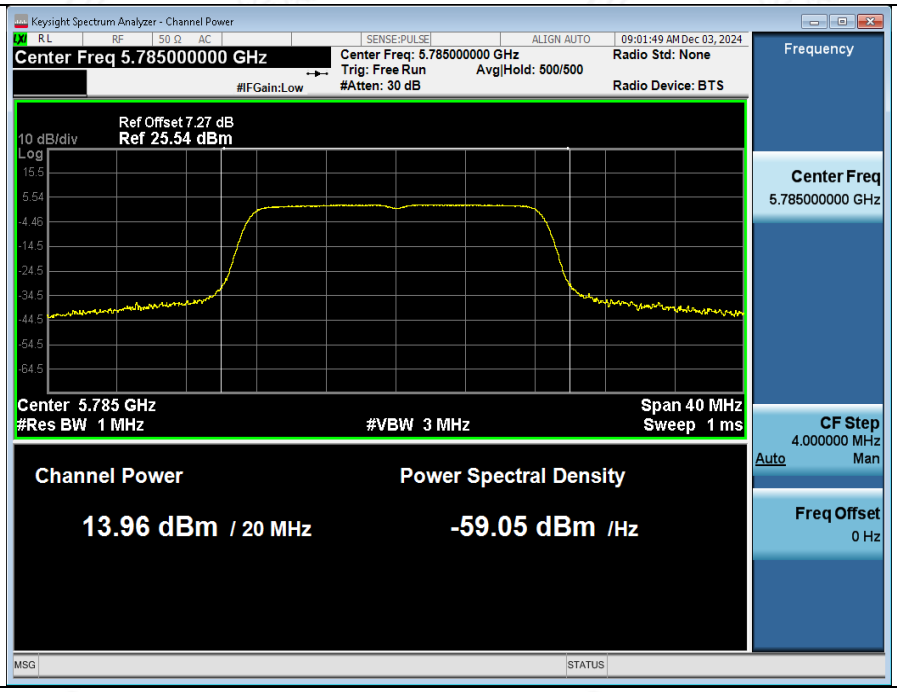
Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5745



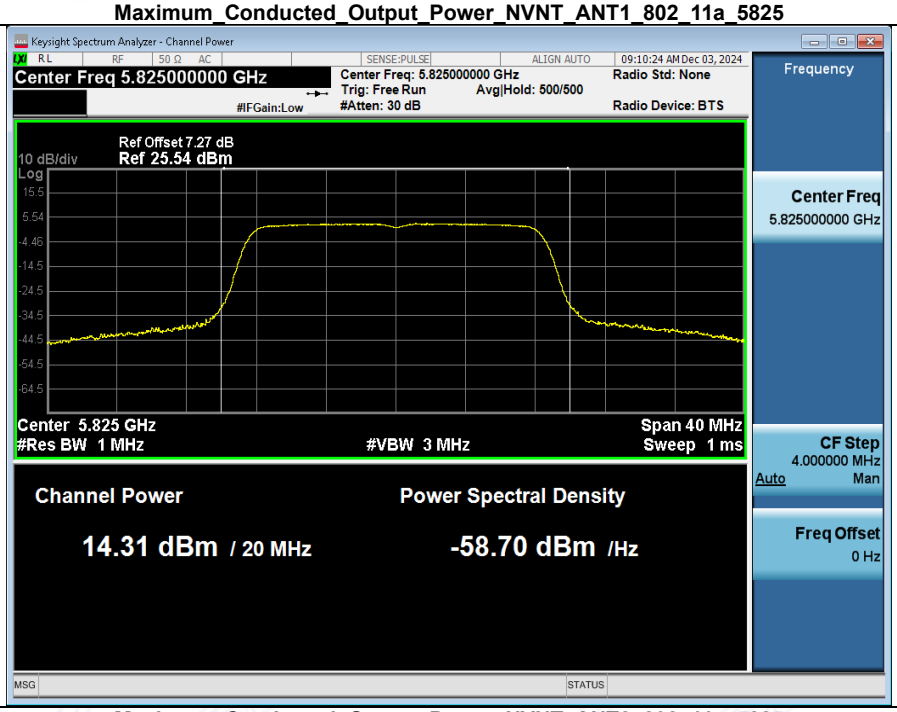
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5785



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11a_5785



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5825



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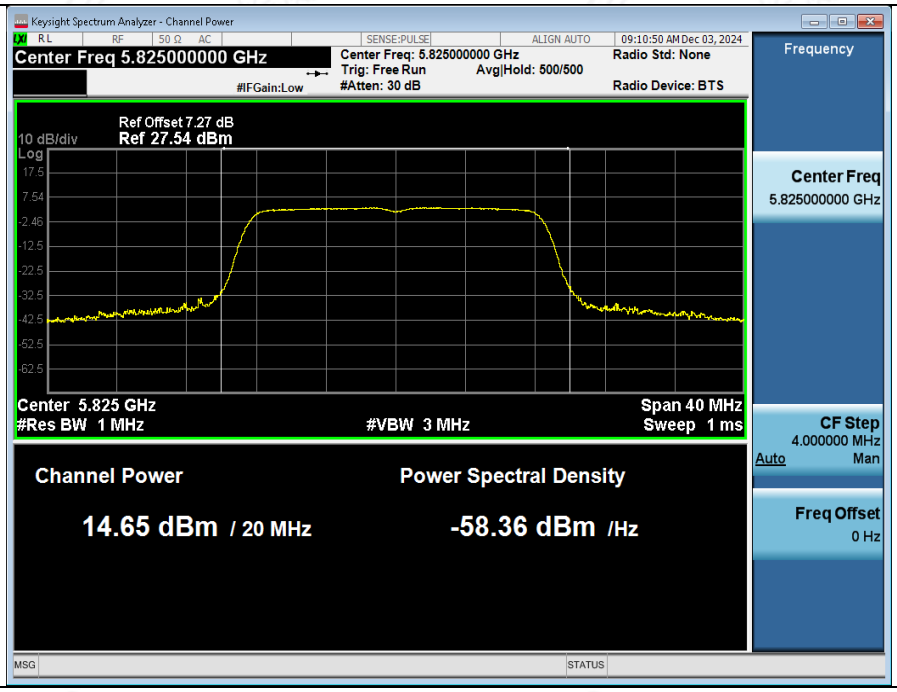
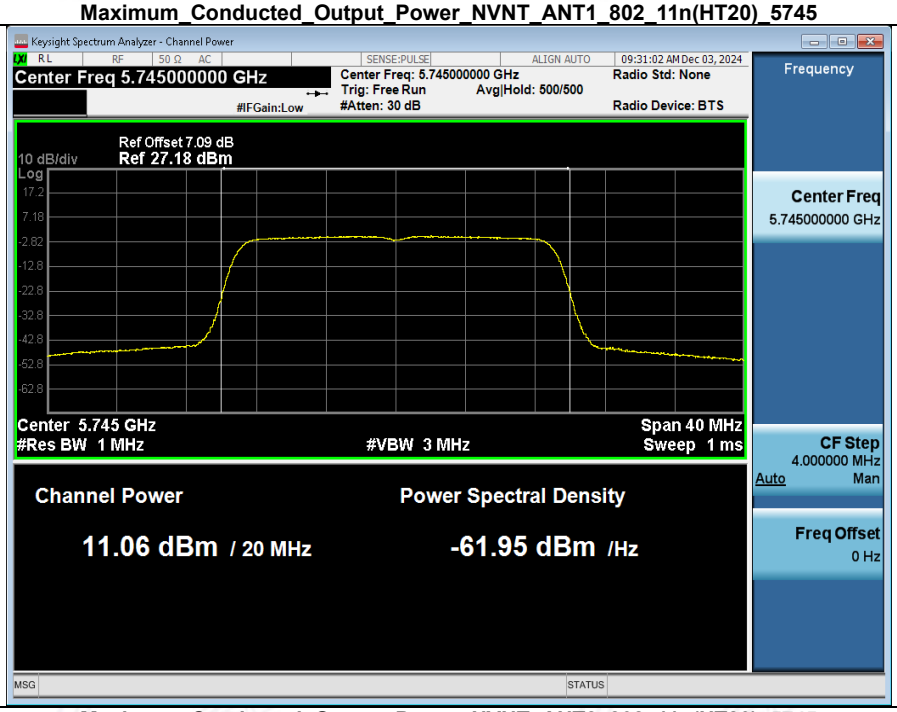


Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5745



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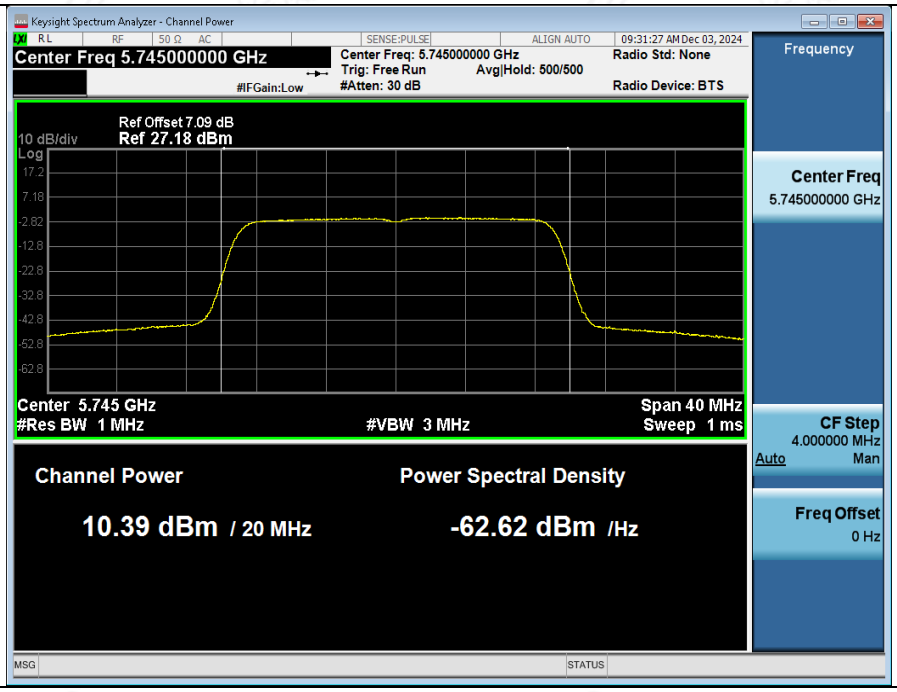

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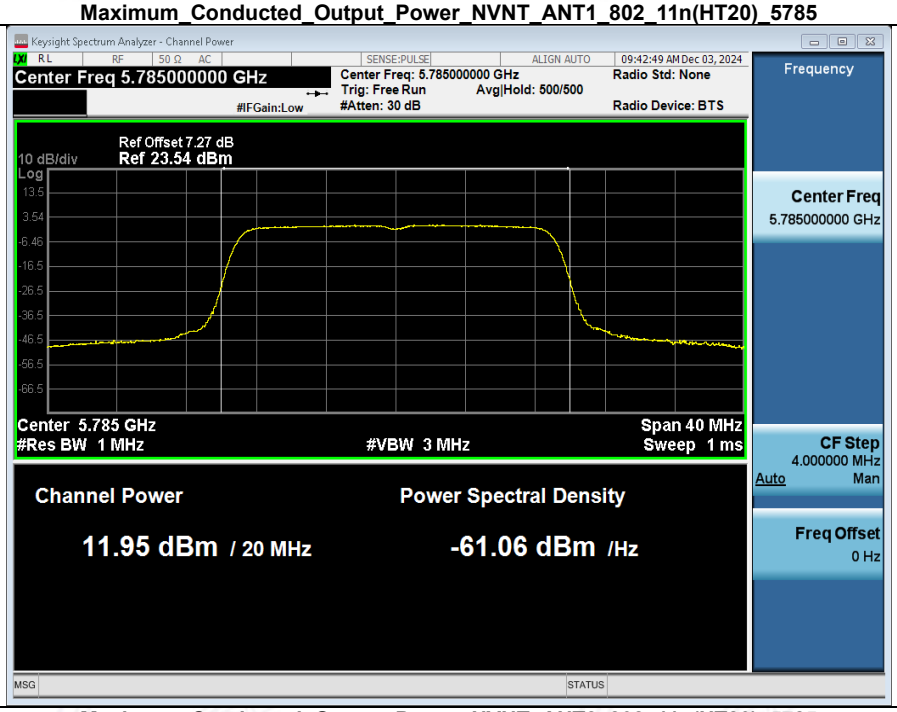

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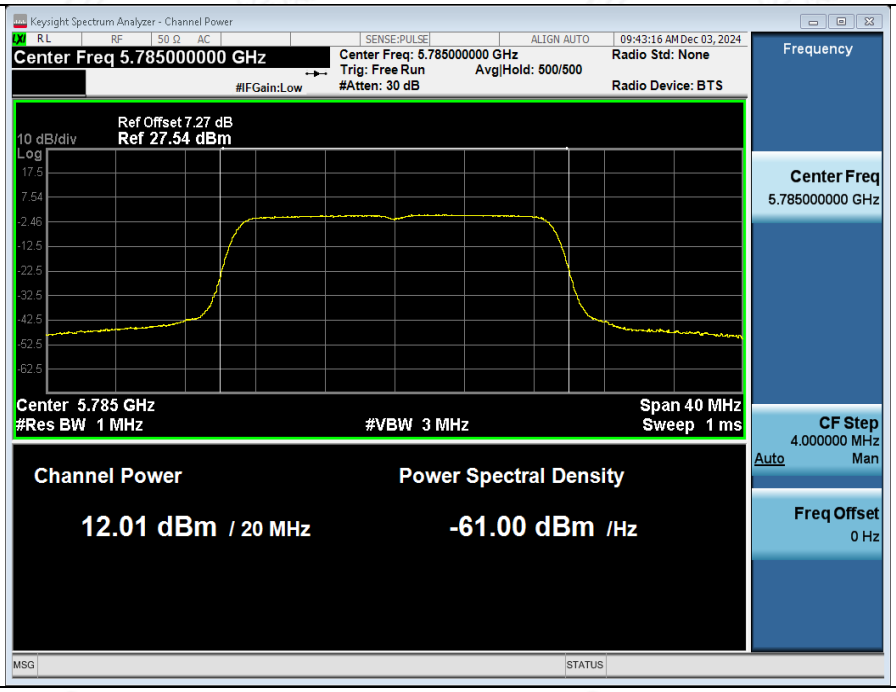

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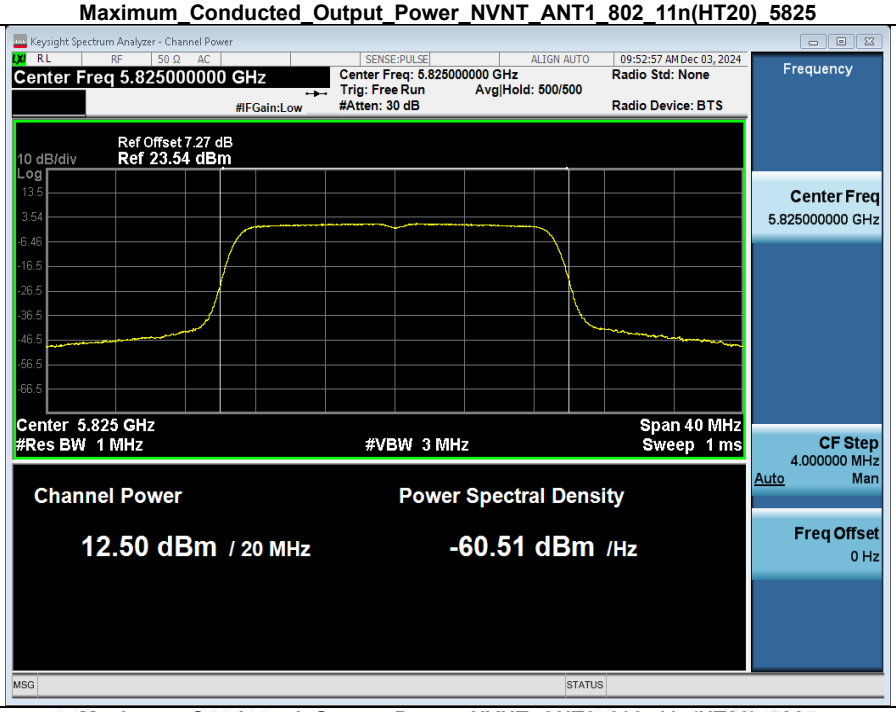

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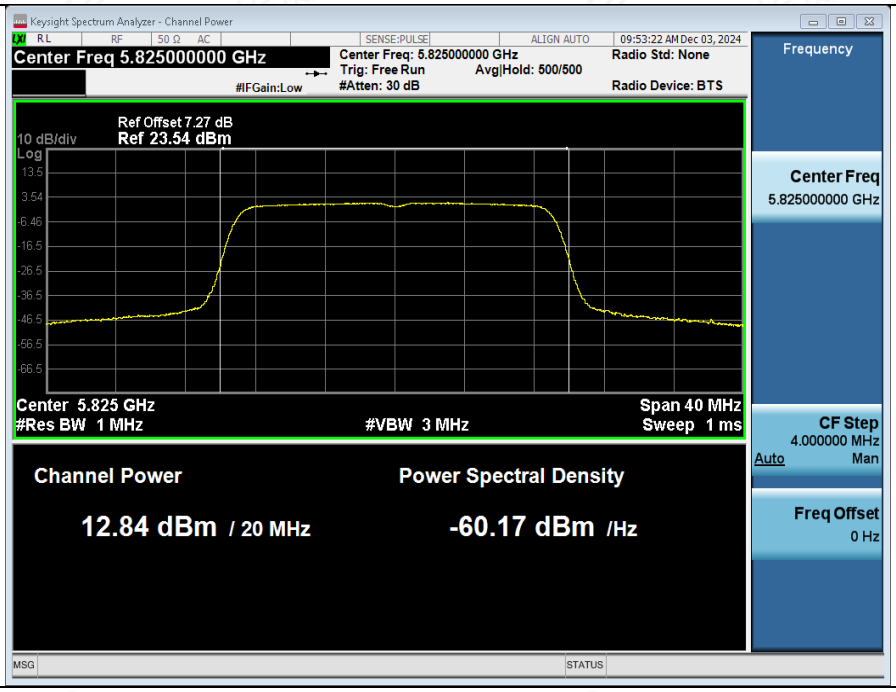

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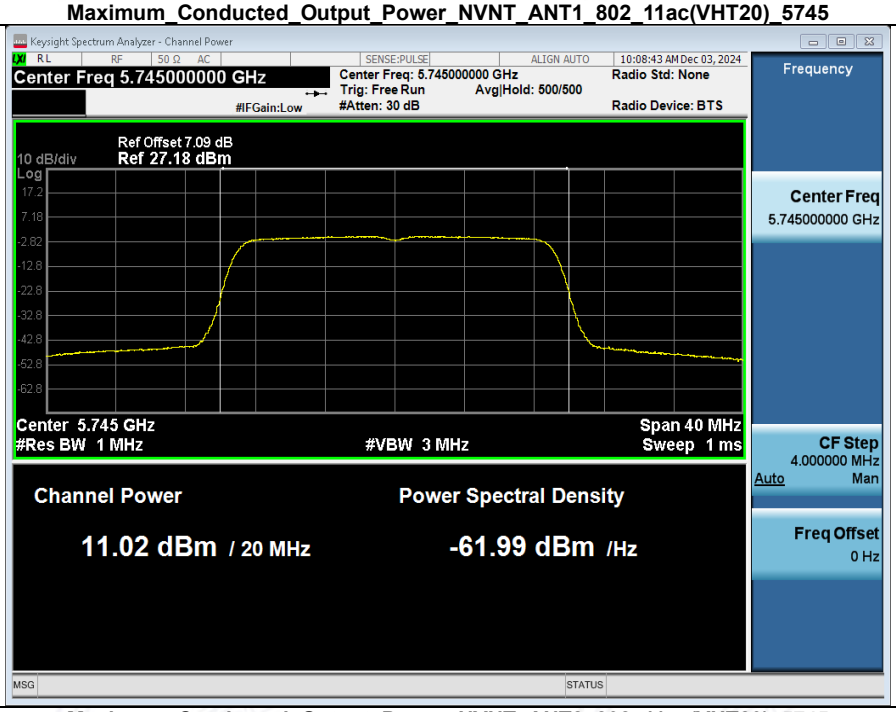

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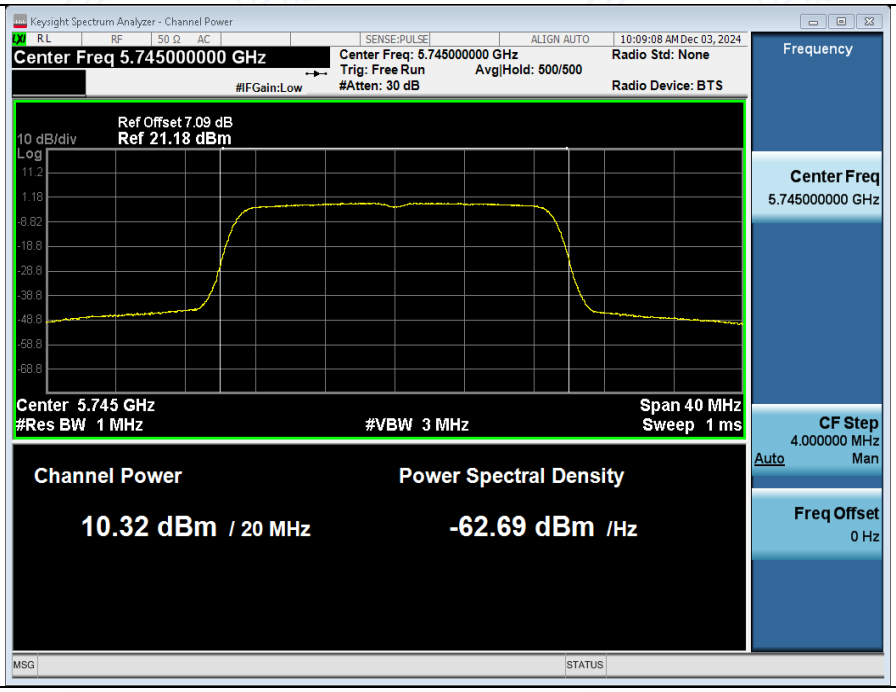
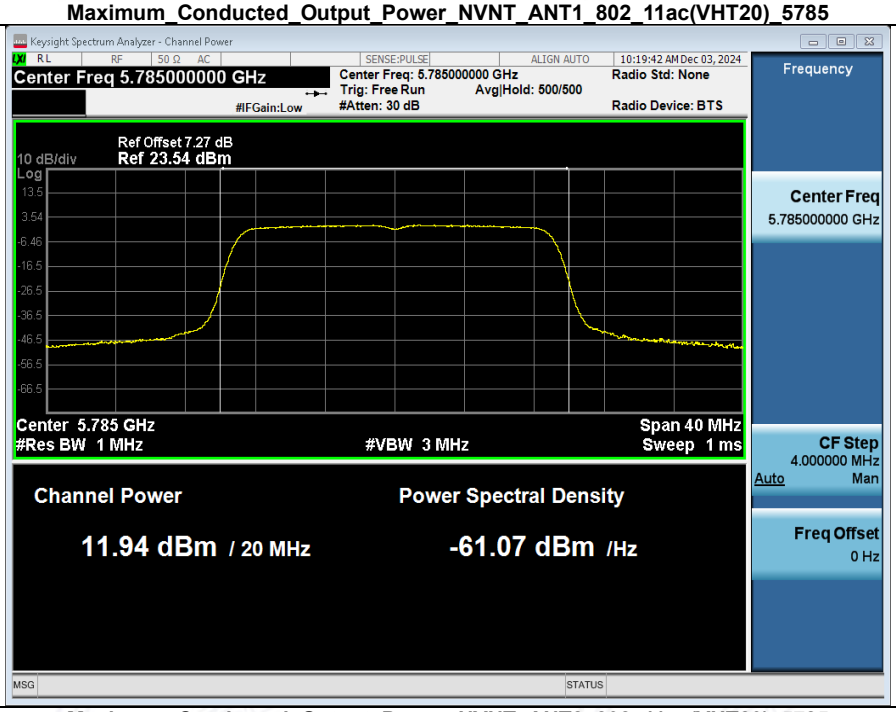
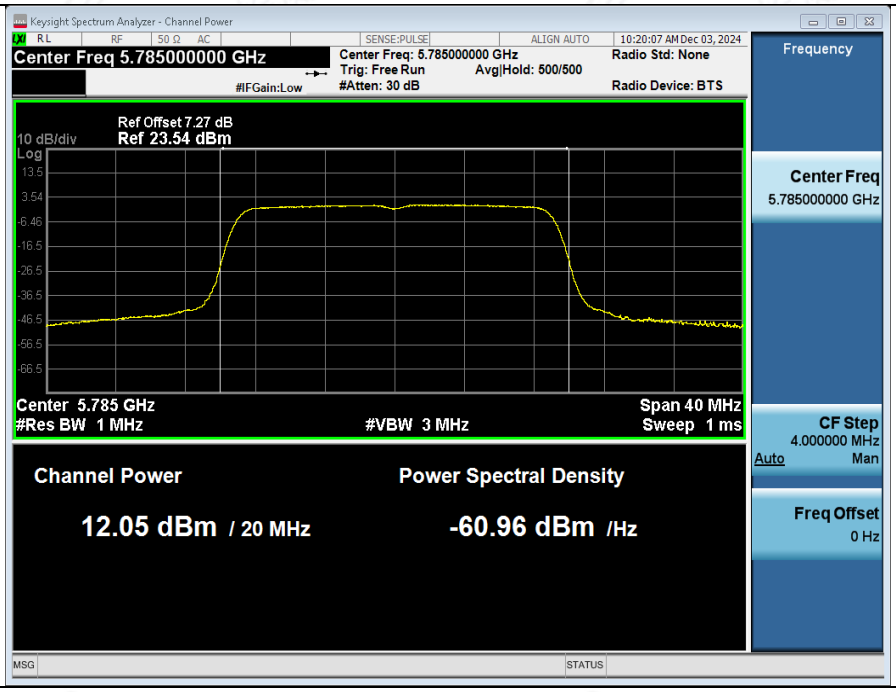


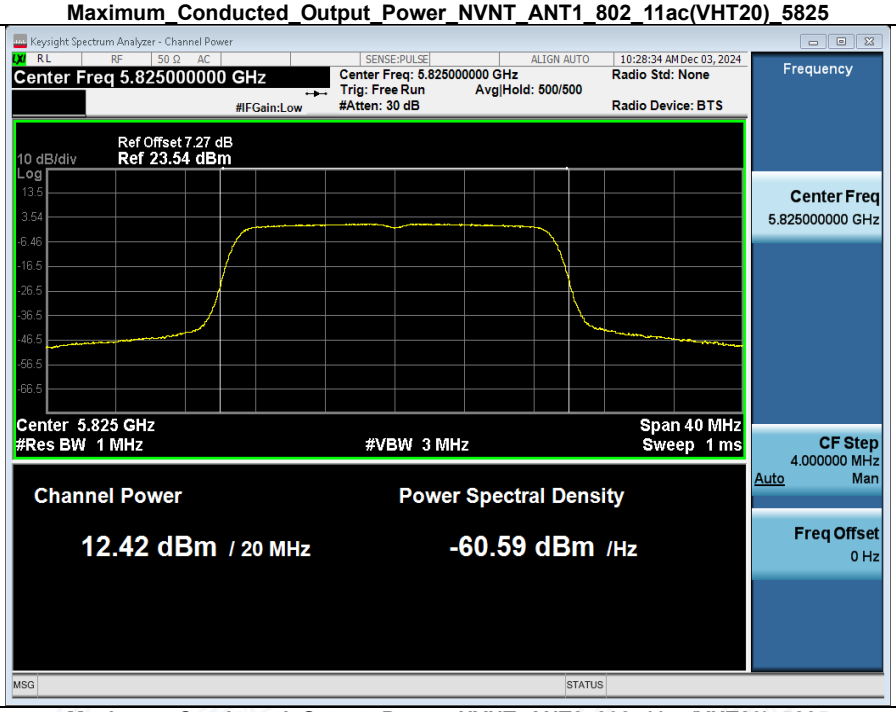
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5785



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT20)_5785



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11ac(VHT20)_5825



Maximum_Conducted_Output_Power_NVNT_ANT2_802_11ac(VHT20)_5825