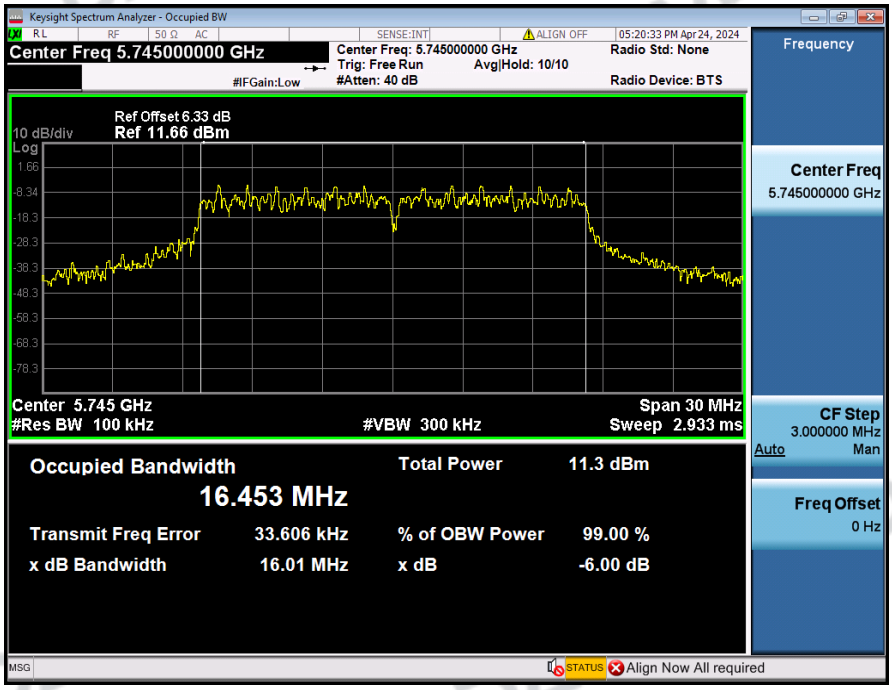
Appendix-5.8GWIFI

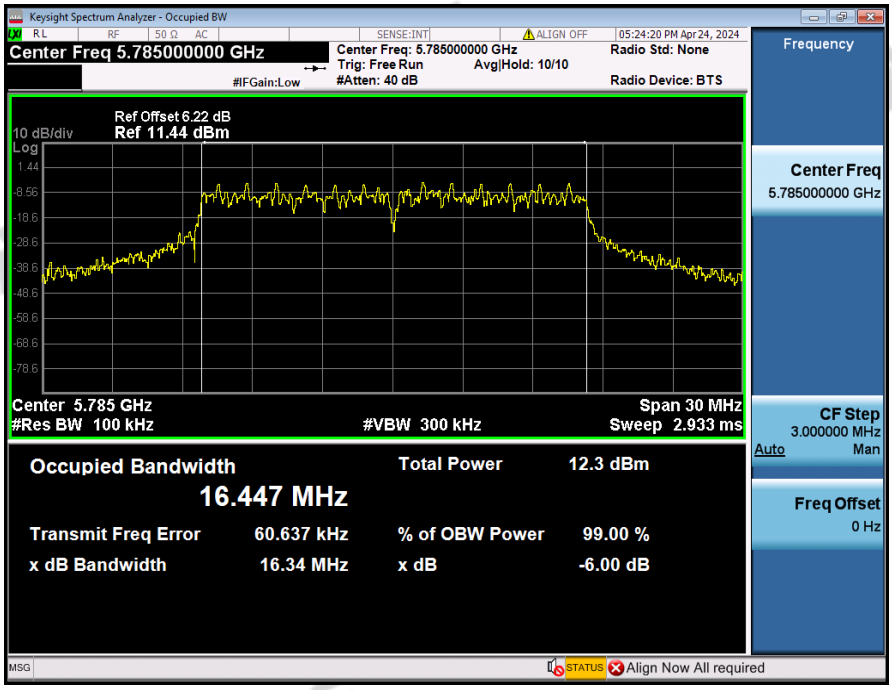
1. -6dB Emission Bandwidth

Condition	Antenna	Mode	Frequency(MHz)	-6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	16.013	0.500	Pass
NVNT	ANT1	802.11a	5785.00	16.340	0.500	Pass
NVNT	ANT1	802.11a	5825.00	15.505	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	17.326	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	17.329	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	17.334	0.500	Pass

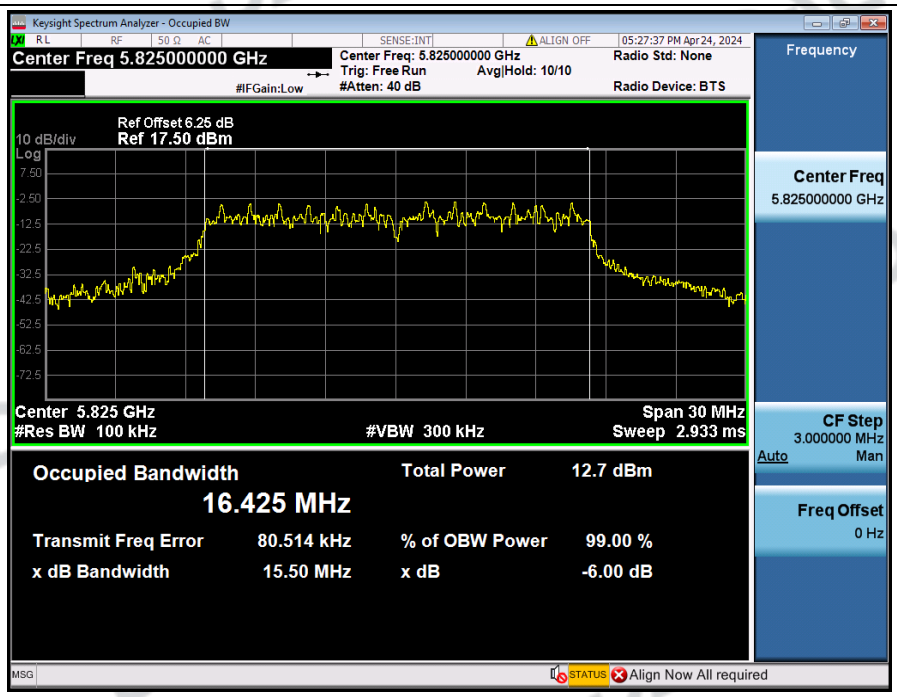
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5745_20M



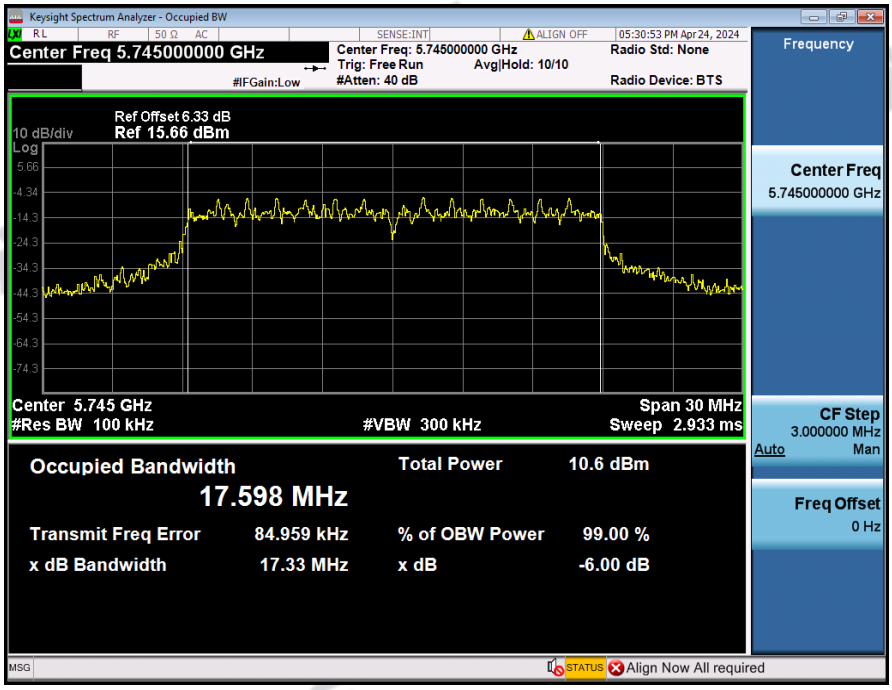
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5785_20M



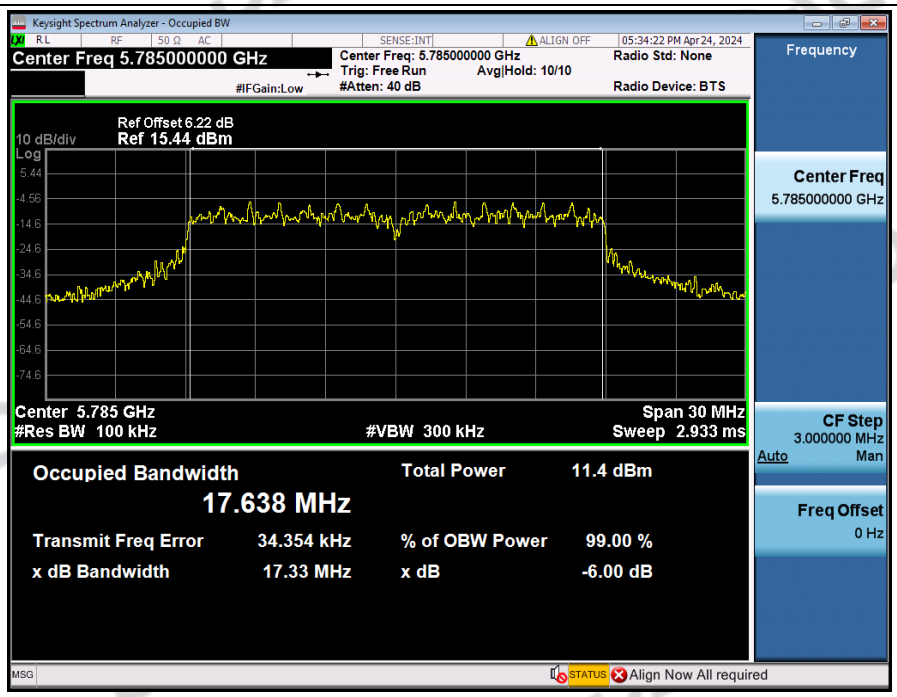
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5825_20M



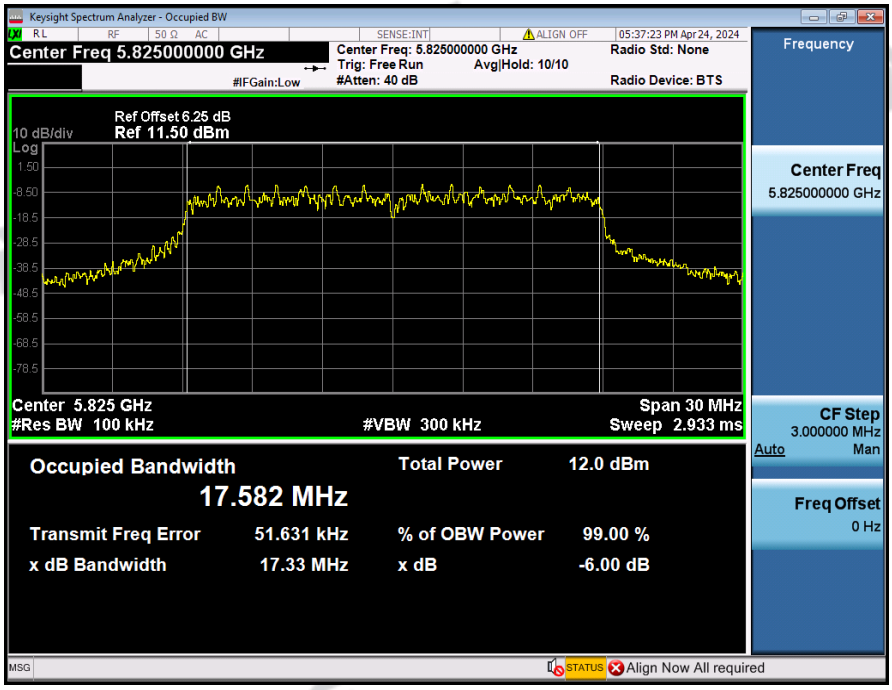
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5745_20M



-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5785_20M



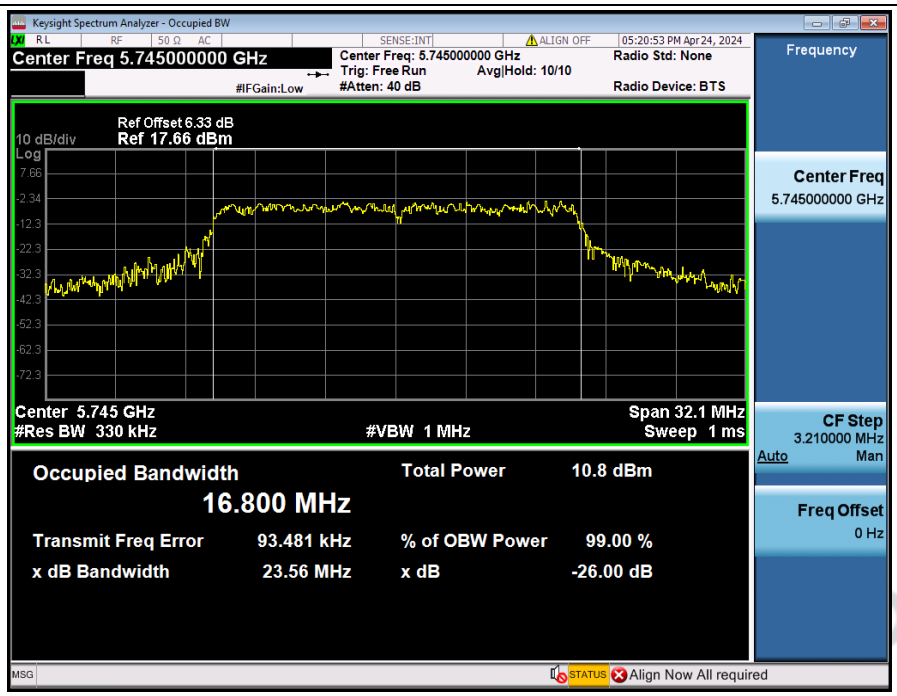
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5825_20M


Keysight Spectrum Analyzer - Occupied BW
Center Freq 5.825000000 GHz
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
05:37:23 PM Apr 24, 2024
Ref Offset 6.25 dB
10 dB/div
Ref 11.50 dBm
Log
Center 5.825 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30 MHz
Sweep 2.933 ms
Occupied Bandwidth
17.582 MHz
Total Power 12.0 dBm
Transmit Freq Error 51.631 kHz
% of OBW Power 99.00 %
x dB Bandwidth 17.33 MHz
x dB -6.00 dB
Frequency
Center Freq
5.825000000 GHz
CF Step
3.000000 MHz
Auto Man
Freq Offset
0 Hz
Align Now All required

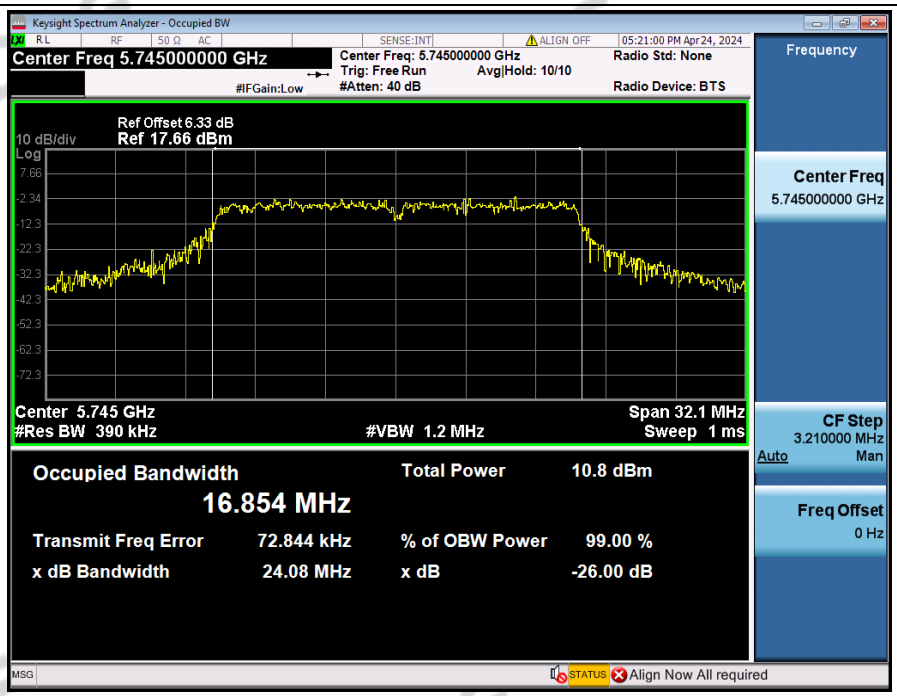
2. -26dB and 99% Emission Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-26dB_Emission_Bandwidth (MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5745.00	24.08	16.80
NVNT	ANT1	802.11a	5785.00	24.41	16.72
NVNT	ANT1	802.11a	5825.00	23.95	16.75
NVNT	ANT1	802.11n(HT20)	5745.00	24.86	17.87
NVNT	ANT1	802.11n(HT20)	5785.00	24.90	17.90
NVNT	ANT1	802.11n(HT20)	5825.00	23.26	17.74

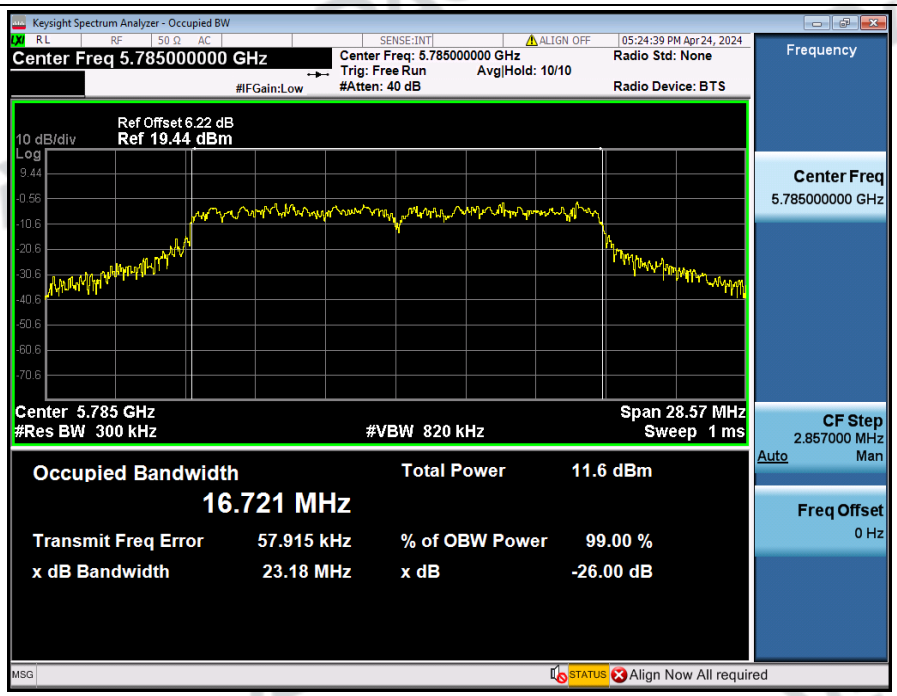
99%_OCB_NVNT_ANT1_802_11a_5745



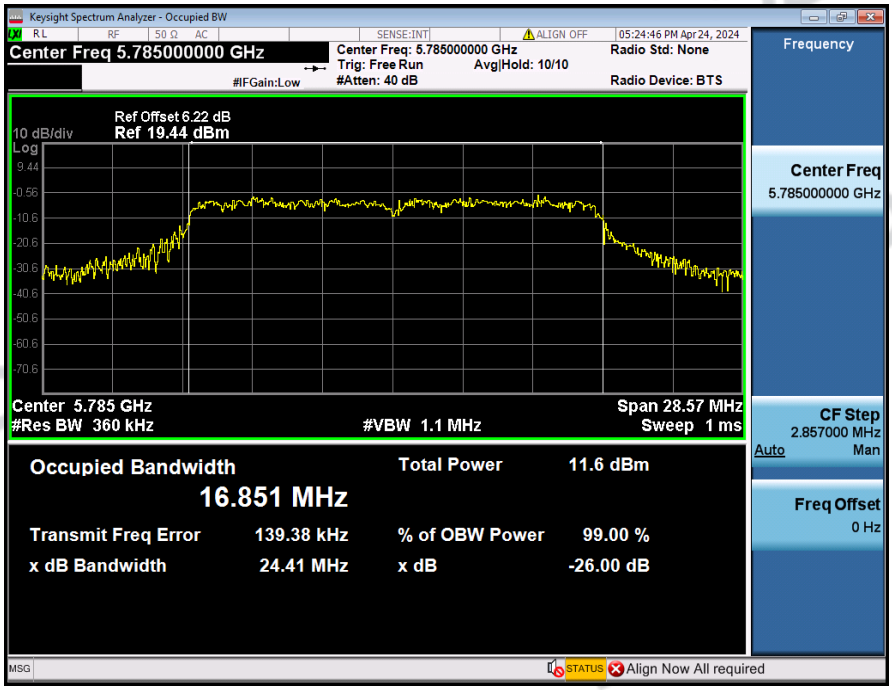
-26BW_NVNT_ANT1_802_11a_5745



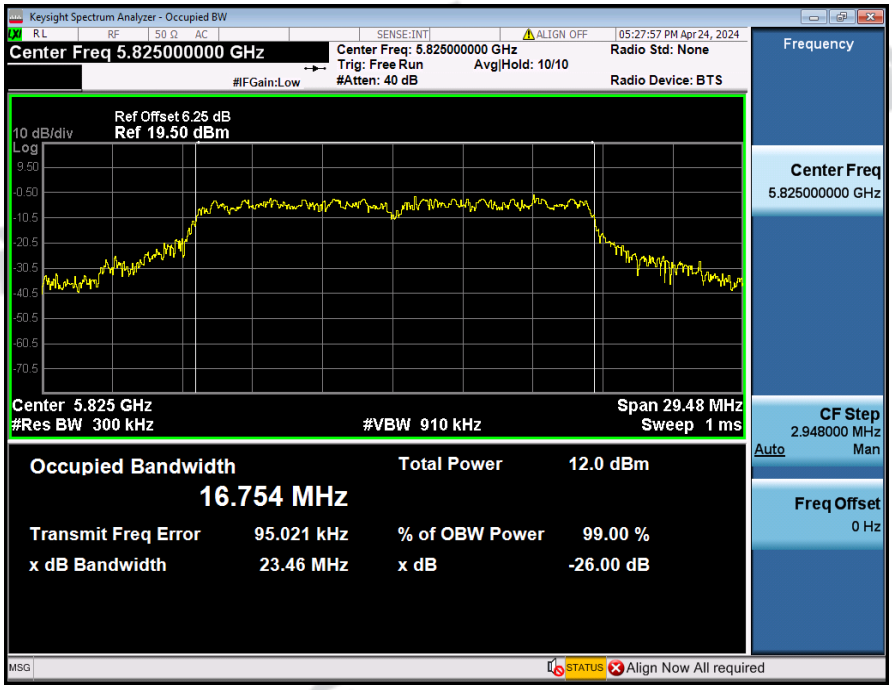
99%_OCB_NVNT_ANT1_802_11a_5785



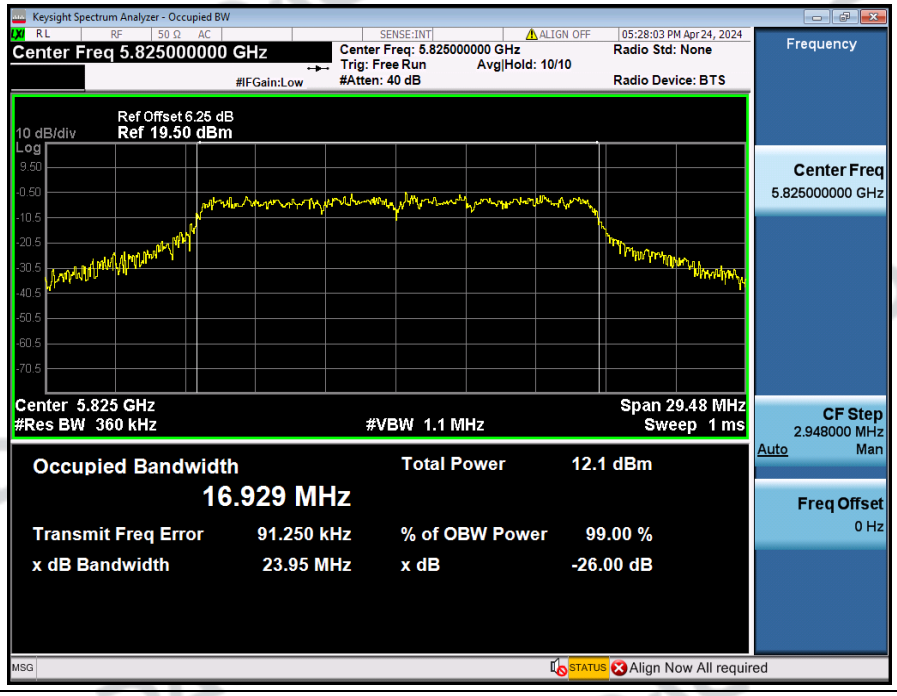
-26BW_NVNT_ANT1_802_11a_5785



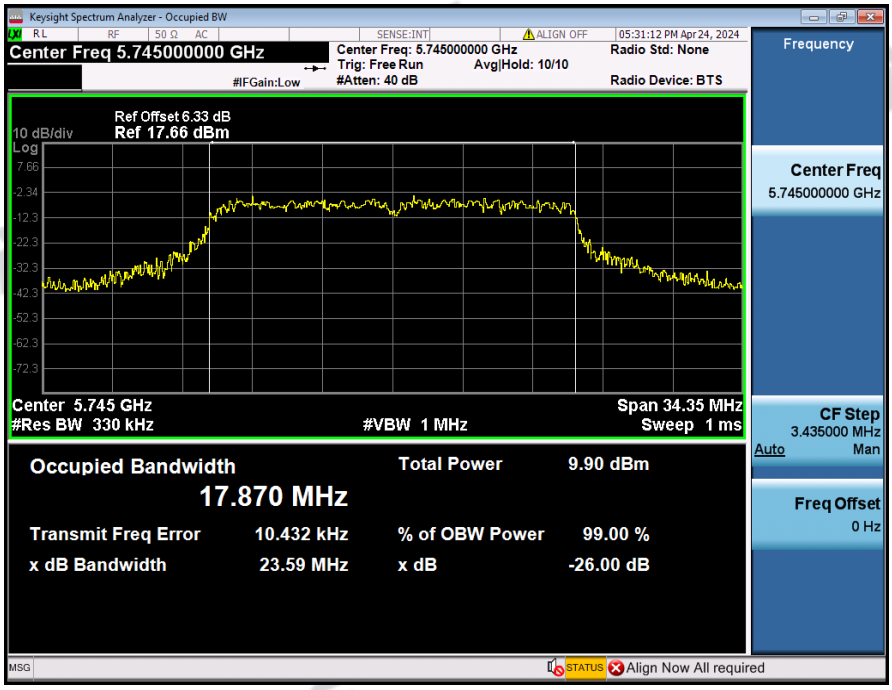
99%_OCB_NVNT_ANT1_802_11a_5825



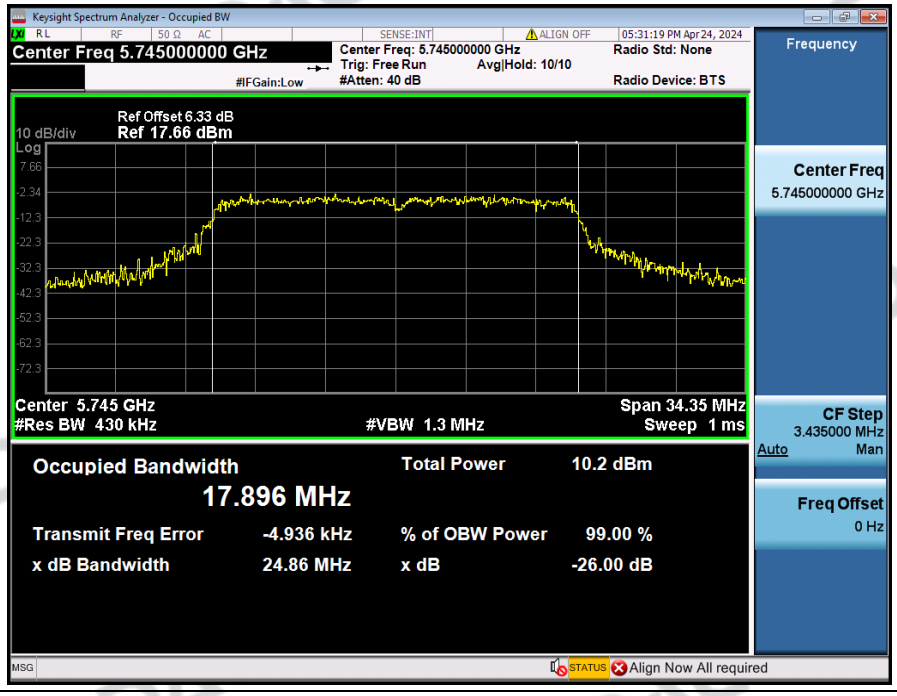
-26BW_NVNT_ANT1_802_11a_5825



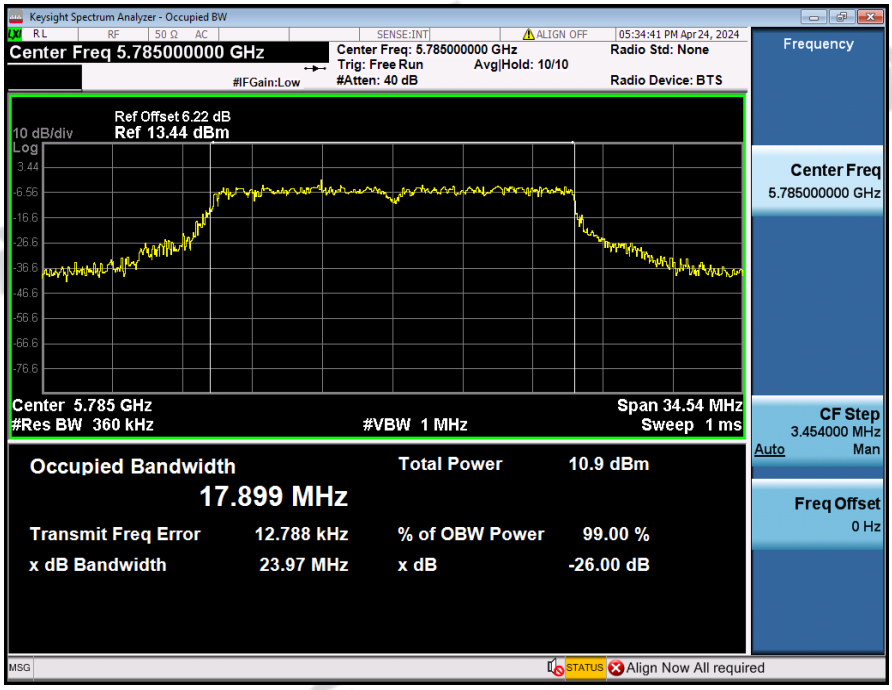
99%_OCB_NVNT_ANT1_802_11n(HT20)_5745



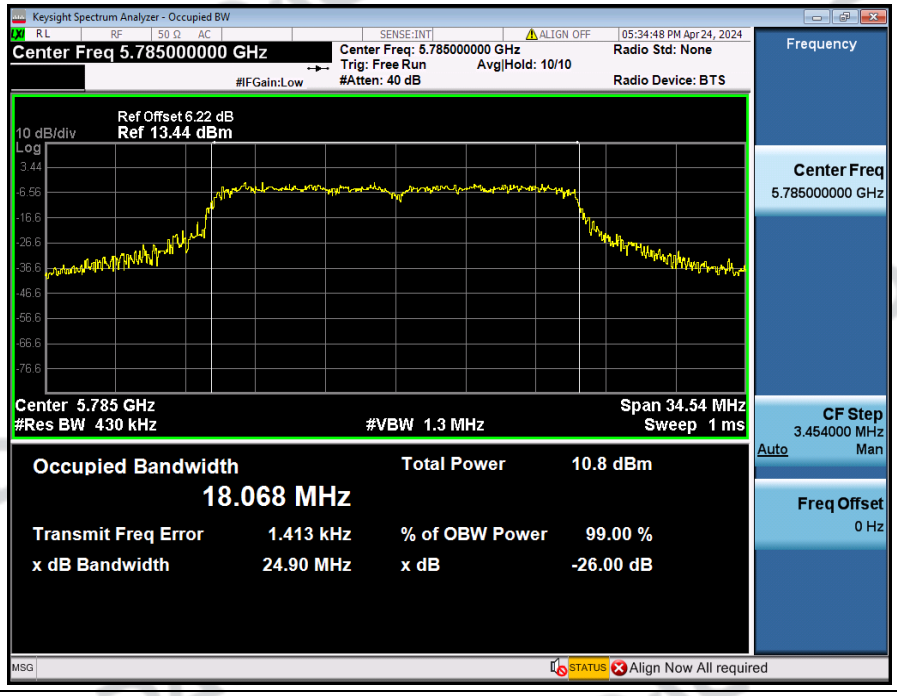
-26BW_NVNT_ANT1_802_11n(HT20)_5745



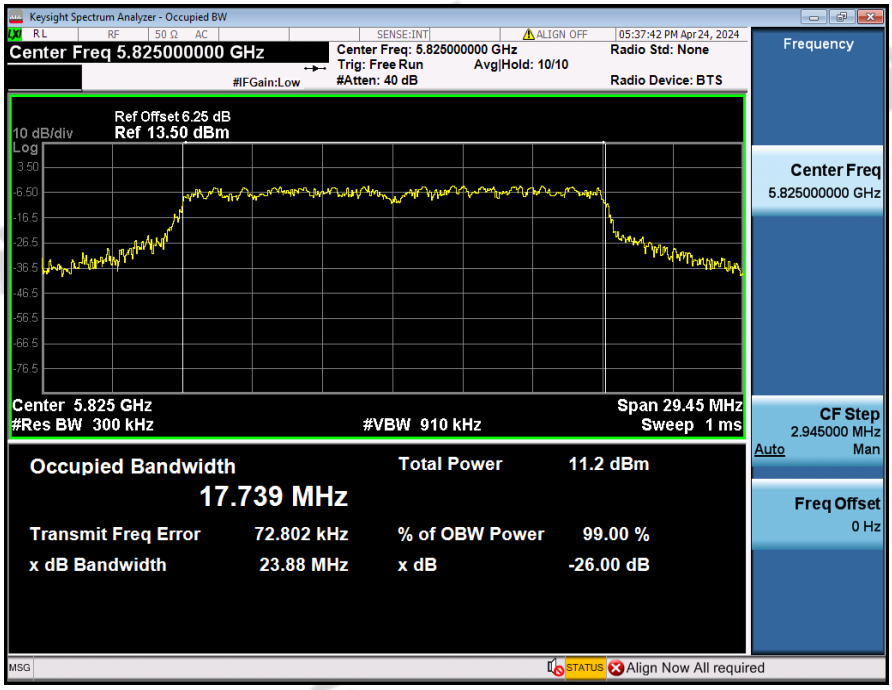
99%_OCB_NVNT_ANT1_802_11n(HT20)_5785



-26BW_NVNT_ANT1_802_11n(HT20)_5785



99%_OCB_NVNT_ANT1_802_11n(HT20)_5825

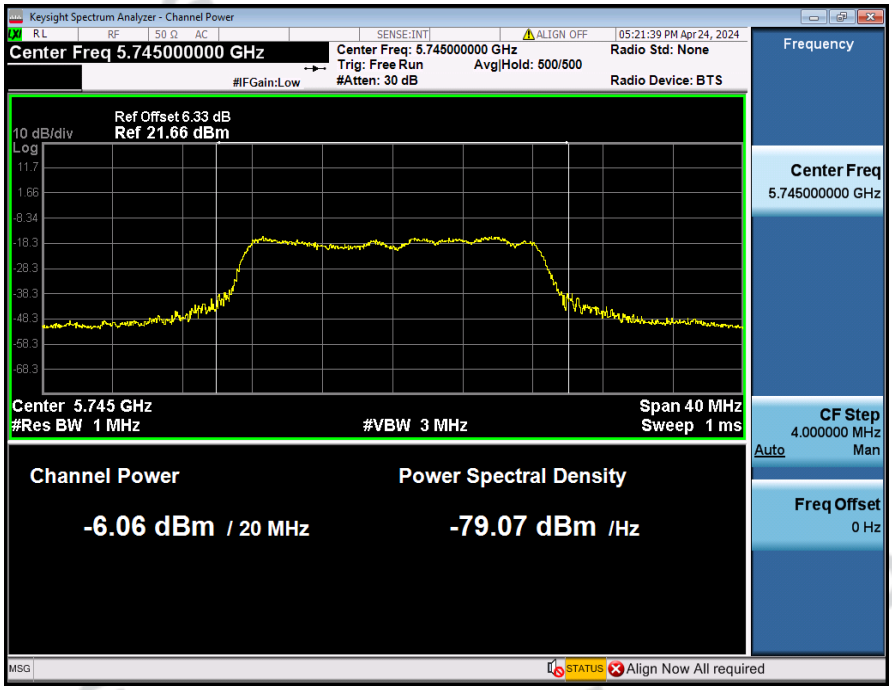


-26BW_NVNT_ANT1_802_11n(HT20)_5825

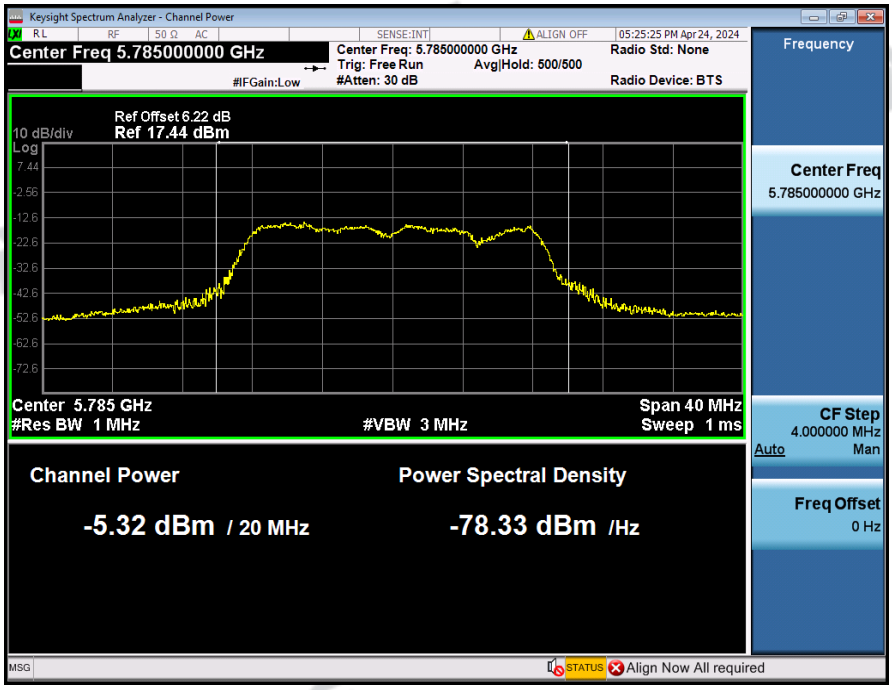
3. Maximum Conducted Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Conducted PK Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	-6.06	30	Pass
NVNT	ANT1	802.11a	5785.00	-5.32	30	Pass
NVNT	ANT1	802.11a	5825.00	-4.59	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	-5.86	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	-5.04	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	-4.72	30	Pass

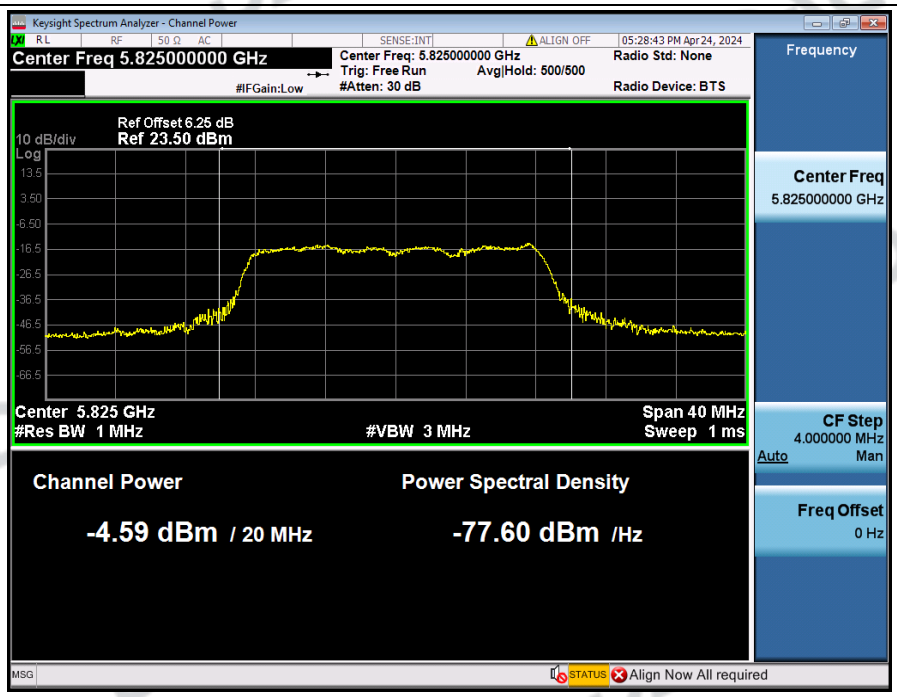
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5745



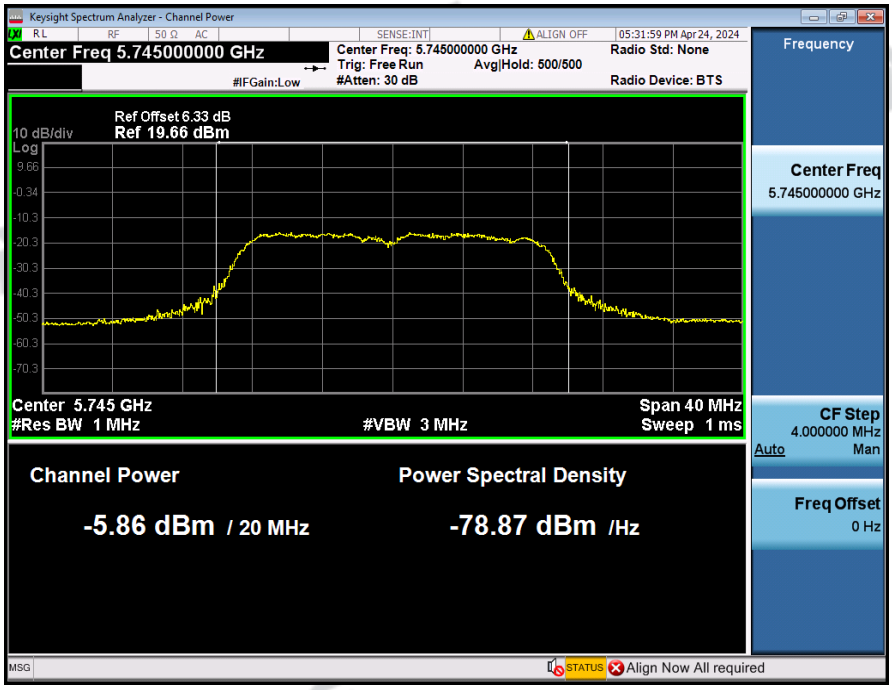
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5785



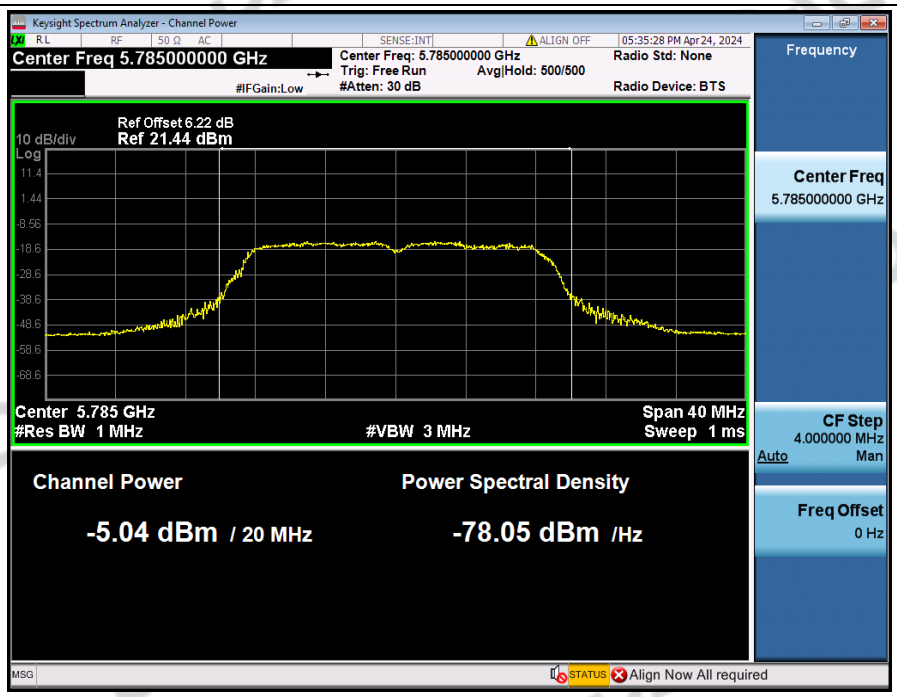
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11a_5825



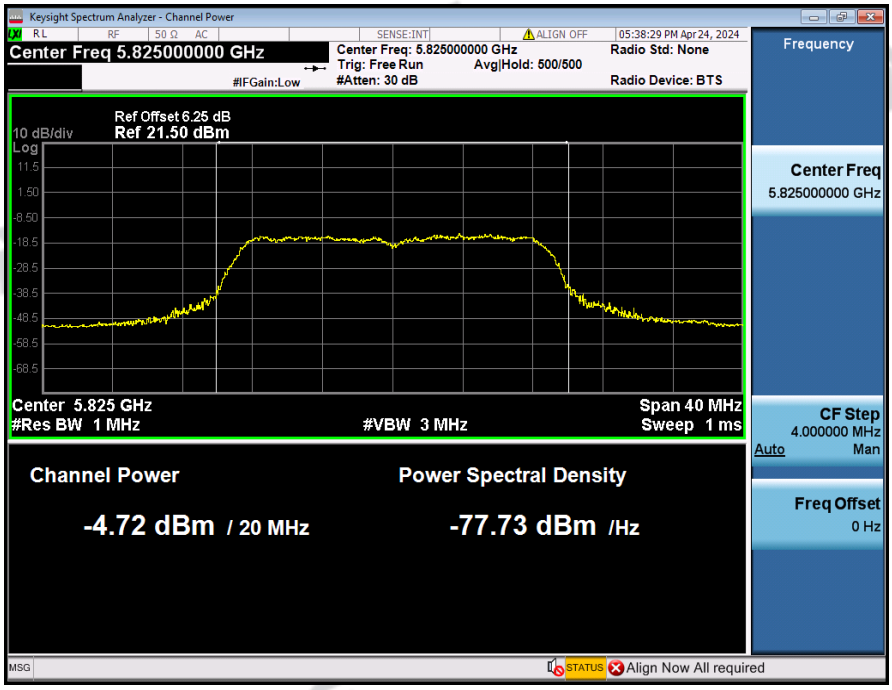
Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5745



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5785



Maximum_Conducted_Output_Power_NVNT_ANT1_802_11n(HT20)_5825


Keysight Spectrum Analyzer - Channel Power
Center Freq 5.825000000 GHz
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold: 500/500
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
05:38:29 PM Apr 24, 2024
Frequency
Ref Offset 6.25 dB
10 dB/div
Ref 21.50 dBm
Log
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 40 MHz
Sweep 1 ms
Center Freq
5.825000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
Channel Power
-4.72 dBm / 20 MHz
Power Spectral Density
-77.73 dBm /Hz
Align Now All required

4. Power Spectral Density

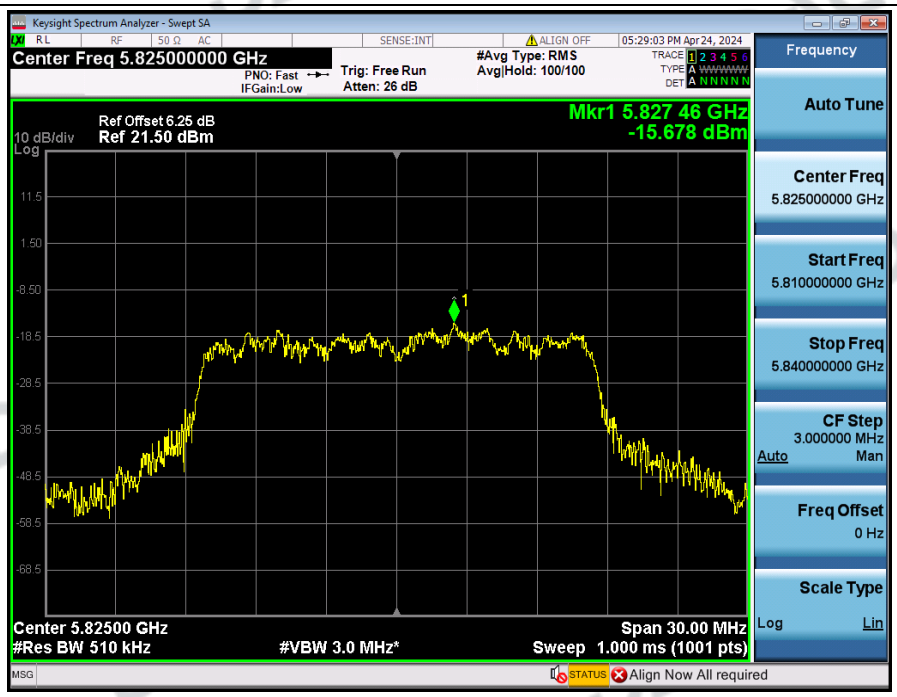
Condition	Antenna	Modulation	Frequency (MHz)	PSD_SA (dBm/RBW)	RB factor (dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
NVNT	ANT1	802.11a	5745.00	-17.04	-0.086	-17.126	30	Pass
NVNT	ANT1	802.11a	5785.00	-15.91	-0.086	-15.996	30	Pass
NVNT	ANT1	802.11a	5825.00	-15.68	-0.086	-15.766	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	-16.86	-0.086	-16.946	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	-15.99	-0.086	-16.076	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	-16.86	-0.086	-16.946	30	Pass

PSD_SA (dBm/510kHz) = PSD(dBm/500kHz) + RB factor (dB); RB factor (dB) = 10*log(500/510)=-0.086dB

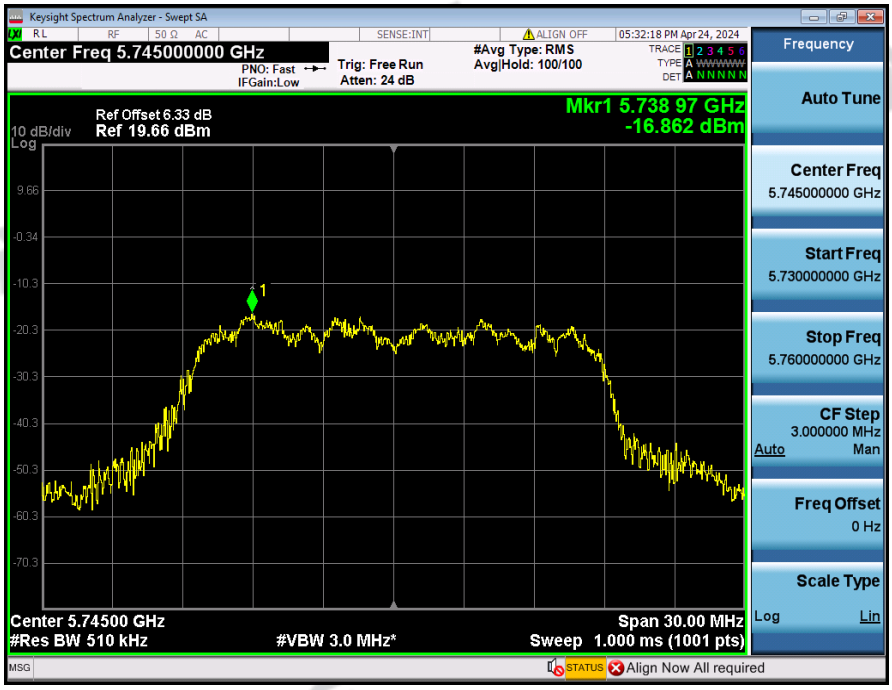
Power_Spectral_Density_NVNT_ANT1_802_11a_5745

Power_Spectral_Density_NVNT_ANT1_802_11a_5785

Power_Spectral_Density_NVNT_ANT1_802_11a_5825

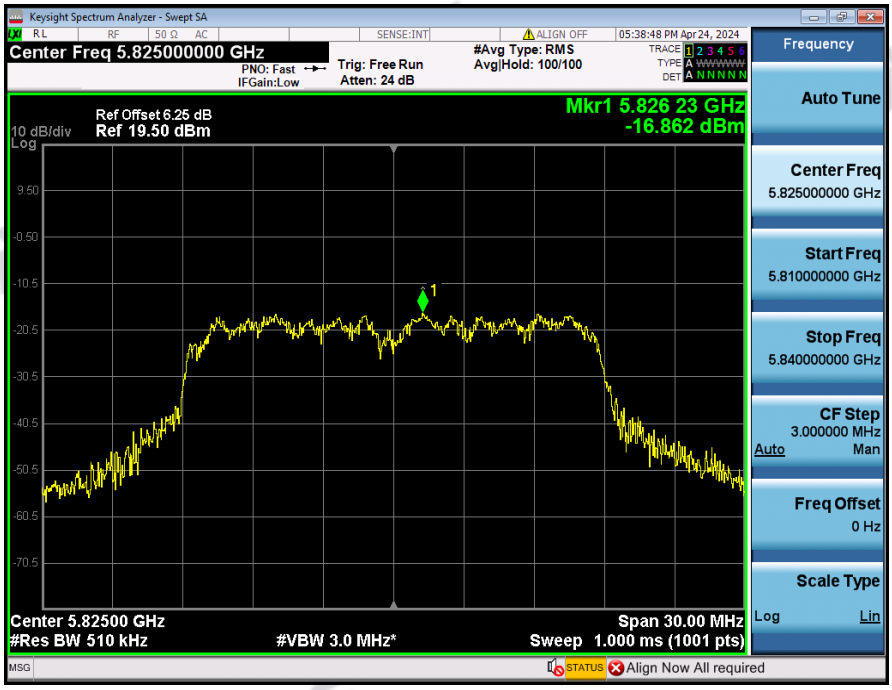


Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5745



Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5785

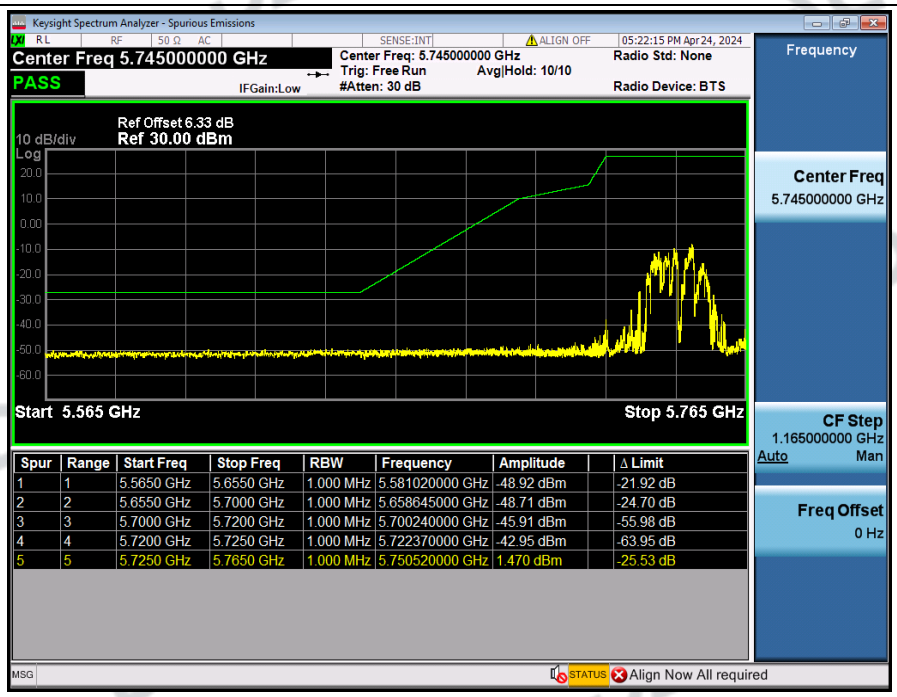
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5825


Keysight Spectrum Analyzer - Swept SA
Center Freq 5.825000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 24 dB
#Avg Type: RMS
Avg|Hold: 100/100
05:38:48 PM Apr 24, 2024
Ref Offset 6.25 dB
10 dB/div
Ref 19.50 dBm
Log
Mkr1 5.826 23 GHz
-16.862 dBm
Center 5.82500 GHz
#Res BW 510 kHz
#VBW 3.0 MHz*
Span 30.00 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
5.825000000 GHz
Start Freq
5.810000000 GHz
Stop Freq
5.840000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
Align Now All required

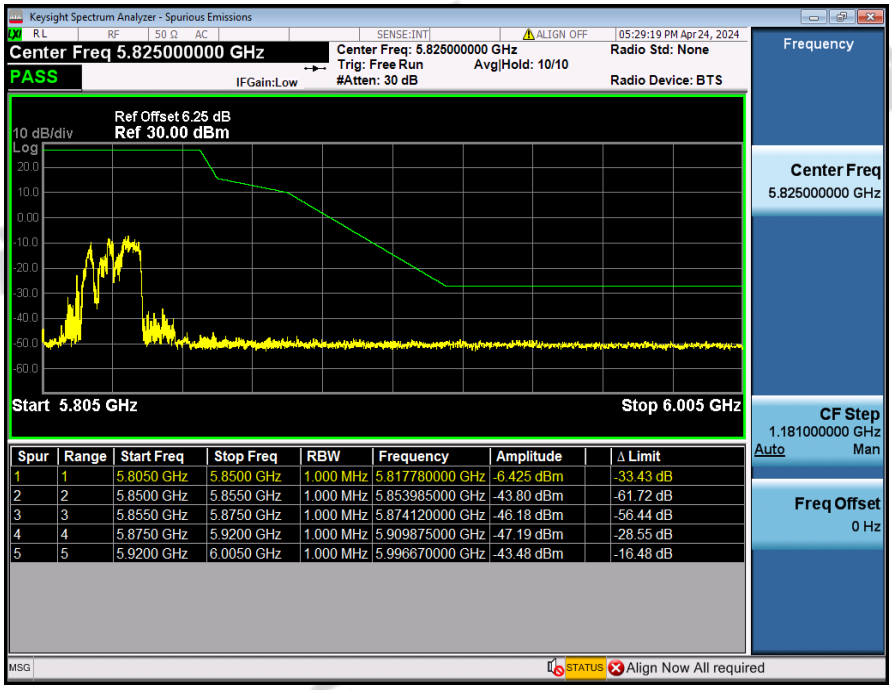
5. Bandedge

Condition	Antenna	Modulation	TX_Frequency (MHz)	Frequency Area(MHz)	Frequency(MHz)	Amplitude(dBm)	Limit(dBm)	Result
NVNT	ANT1	802.11a	LCH	5565-5655	5581.020	-48.92	-27.00	Pass
NVNT	ANT1	802.11a	LCH	5655-5700	5658.645	-48.71	-24.00	Pass
NVNT	ANT1	802.11a	LCH	5700-5720	5700.240	-45.91	10.07	Pass
NVNT	ANT1	802.11a	LCH	5720-5725	5722.370	-42.95	21.00	Pass
NVNT	ANT1	802.11a	HCH	5850-5855	5853.985	-43.80	17.91	Pass
NVNT	ANT1	802.11a	HCH	5855-5875	5874.120	-46.18	10.25	Pass
NVNT	ANT1	802.11a	HCH	5875-5920	5909.875	-47.19	-18.67	Pass
NVNT	ANT1	802.11a	HCH	5920-6005	5996.670	-43.48	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5565-5655	5654.190	-49.10	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5655-5700	5660.265	-49.05	-22.67	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5700-5720	5702.580	-48.33	10.72	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5720-5725	5722.690	-44.14	21.73	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5850-5855	5854.520	-46.82	16.69	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5855-5875	5874.240	-47.39	10.21	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5875-5920	5905.510	-48.16	-15.09	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5920-6005	5989.530	-44.12	-27.00	Pass

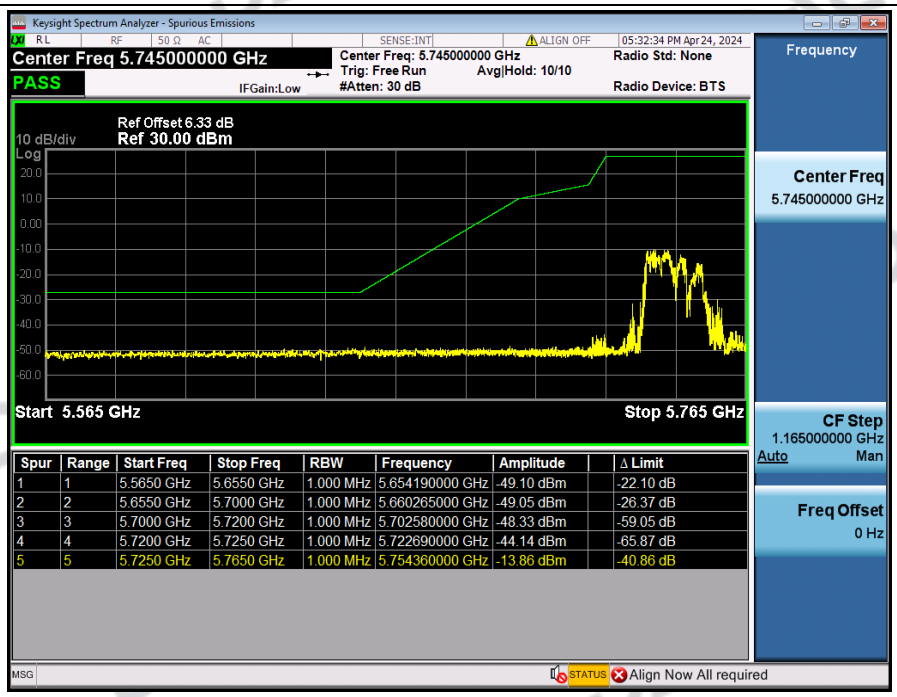
Bandedge_NVNT_ANT1_802_11a_5745



Bandedge_NVNT_ANT1_802_11a_5825



Bandedge_NVNT_ANT1_802_11n(HT20)_5745



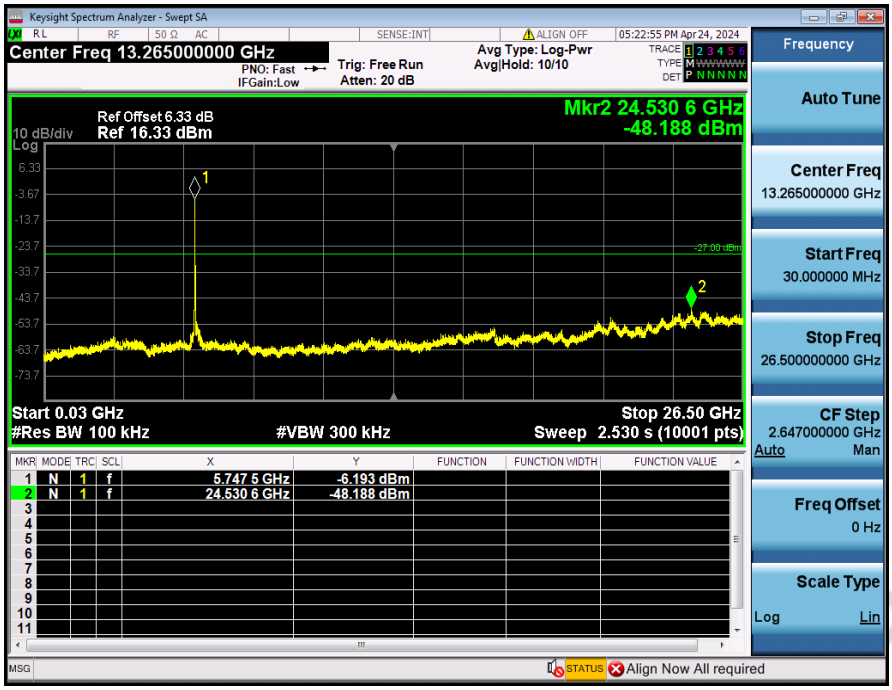
Bandedge_NVNT_ANT1_802_11n(HT20)_5825

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.8050 GHz	5.8500 GHz	1.000 MHz	5.830740000 GHz	-6.813 dBm	-33.81 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.854520000 GHz	-46.82 dBm	-63.52 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.874240000 GHz	-47.39 dBm	-57.61 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.905510000 GHz	-48.16 dBm	-33.10 dB
5	5	5.9200 GHz	6.0050 GHz	1.000 MHz	5.989530000 GHz	-44.12 dBm	-17.12 dB

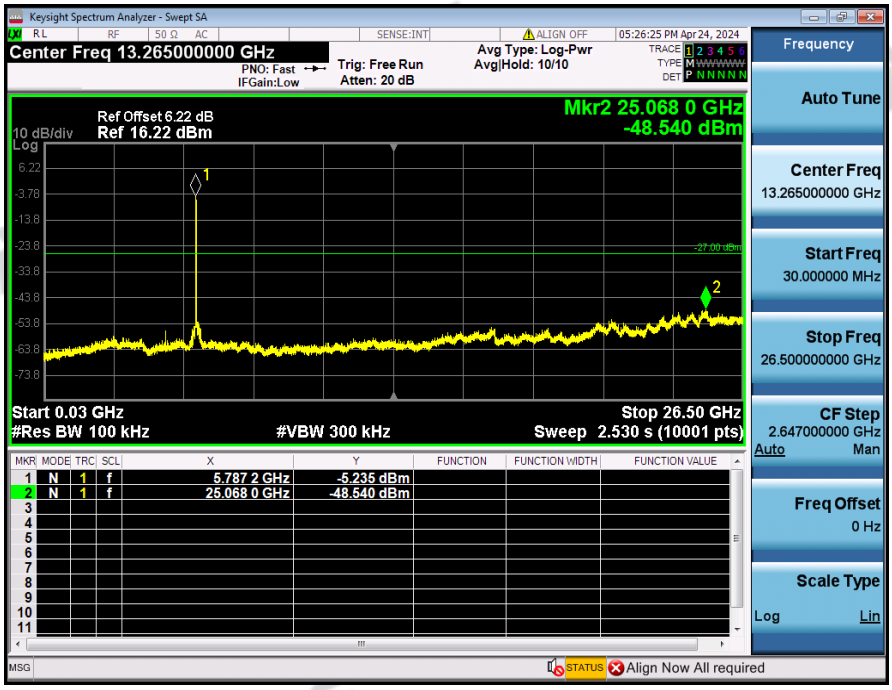
6. Spurious Emission

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark Frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	24530.63	-48.19	-27	Pass
NVNT	ANT1	802.11a	5785.00	25067.97	-48.54	-27	Pass
NVNT	ANT1	802.11a	5825.00	24922.39	-49.09	-27	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	25009.74	-47.33	-27	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	24917.09	-47.76	-27	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	25073.27	-48.58	-27	Pass

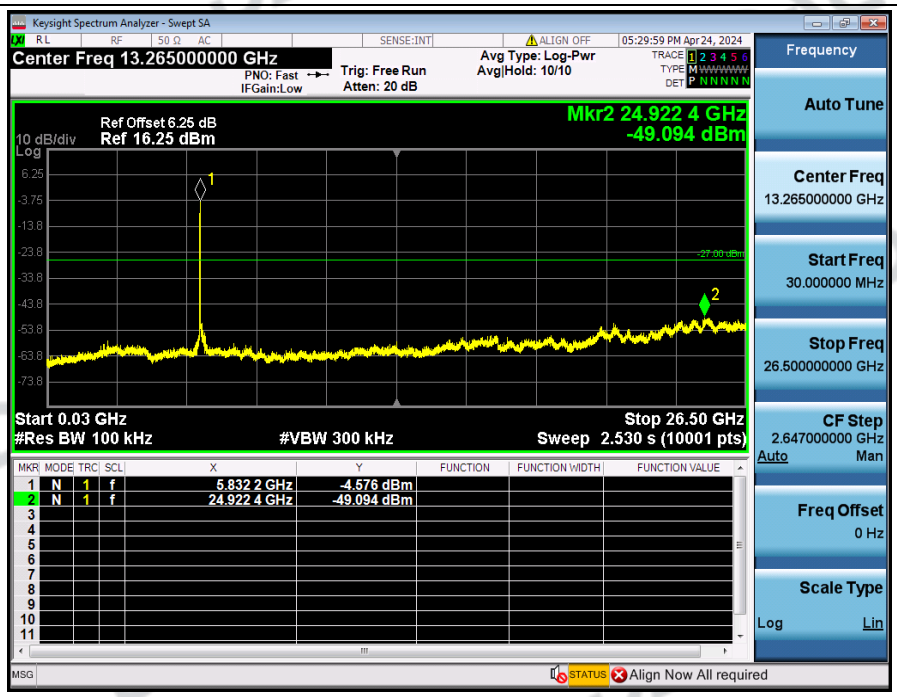
Spurious_Emission_NVNT_ANT1_802_11a_5745



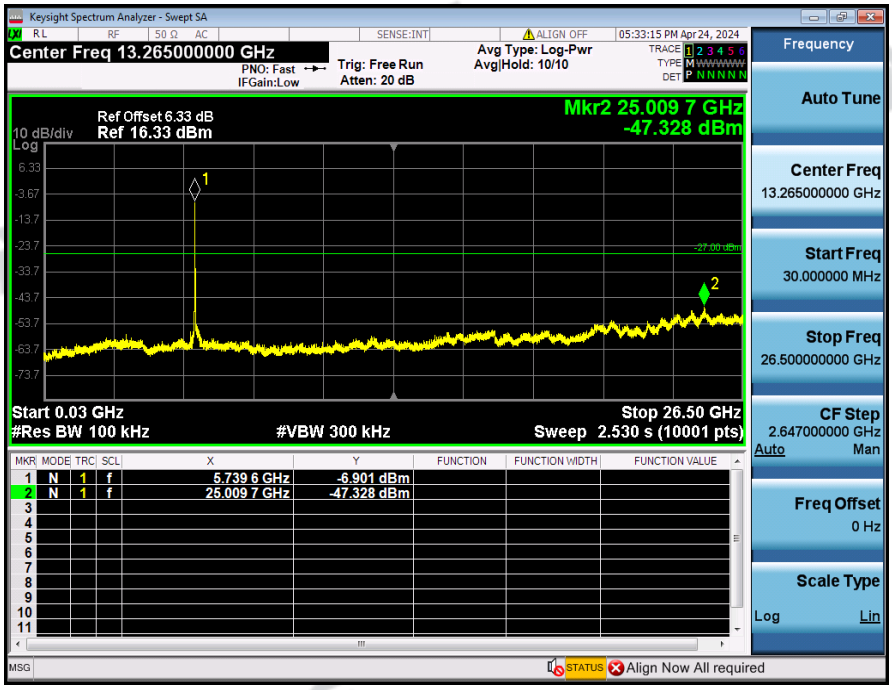
Spurious_Emission_NVNT_ANT1_802_11a_5785



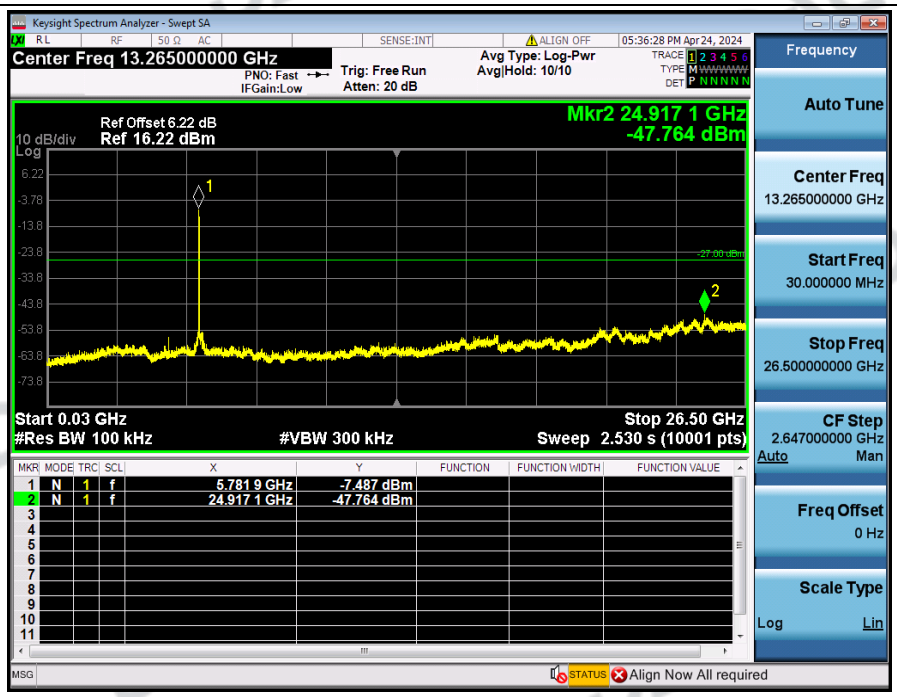
Spurious_Emission_NVNT_ANT1_802_11a_5825



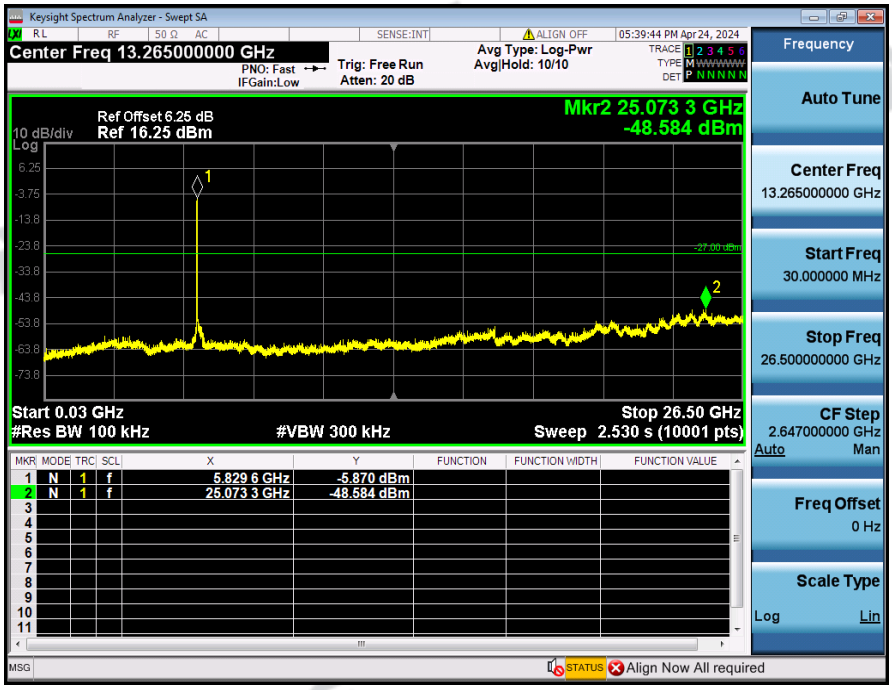
Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5745



Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5785



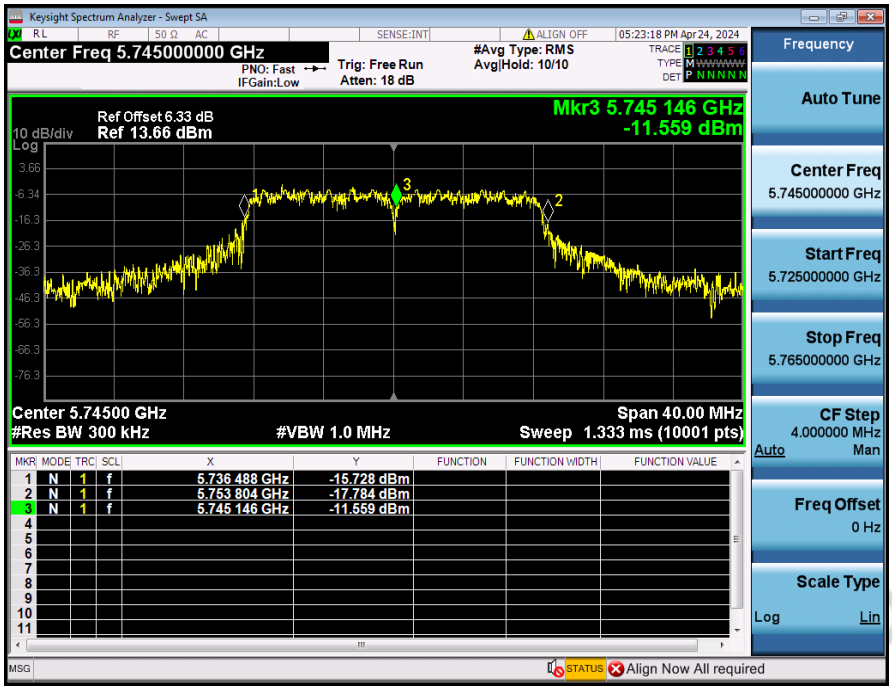
Spurious_Emission_NVNT_ANT1_802_11n(HT20)_5825


Keysight Spectrum Analyzer - Swept SA
Center Freq 13.265000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
05:39:44 PM Apr 24, 2024
Ref Offset 6.25 dB
10 dB/div
Ref 16.25 dBm
Log
Mkr2 25.073 3 GHz
-48.584 dBm
-27.00 dBm
Start 0.03 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.530 s (10001 pts)
1 N 1 f 5.829 6 GHz -5.870 dBm
2 N 1 f 25.073 3 GHz -48.584 dBm
Frequency
Auto Tune
Center Freq
13.265000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.500000000 GHz
CF Step
2.647000000 GHz
Auto Man
Freq Offset
0 Hz
Scale Type
Log Lin
Align Now All required

7. Frequency Stability

Condition	Antenna	Modulation	Frequency (MHz)	Fc(MHz)	Fl(MHz)	Fh(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	5745.146	5736.488	5753.804	5725~5850	Pass
NVNT	ANT1	802.11a	5785.00	5785.048	5776.300	5793.796	5725~5850	Pass
NVNT	ANT1	802.11a	5825.00	5825.122	5816.428	5833.816	5725~5850	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	5745.036	5735.944	5754.128	5725~5850	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	5785.044	5775.952	5794.136	5725~5850	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	5825.092	5816.056	5834.128	5725~5850	Pass

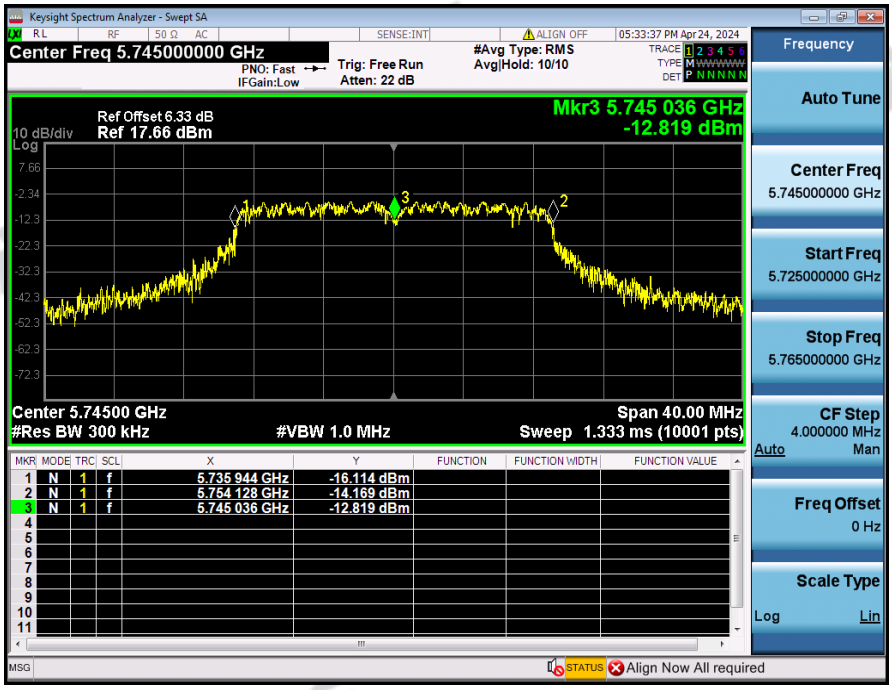
Frequency_Stability_NVNT_ANT1_802_11a_5745



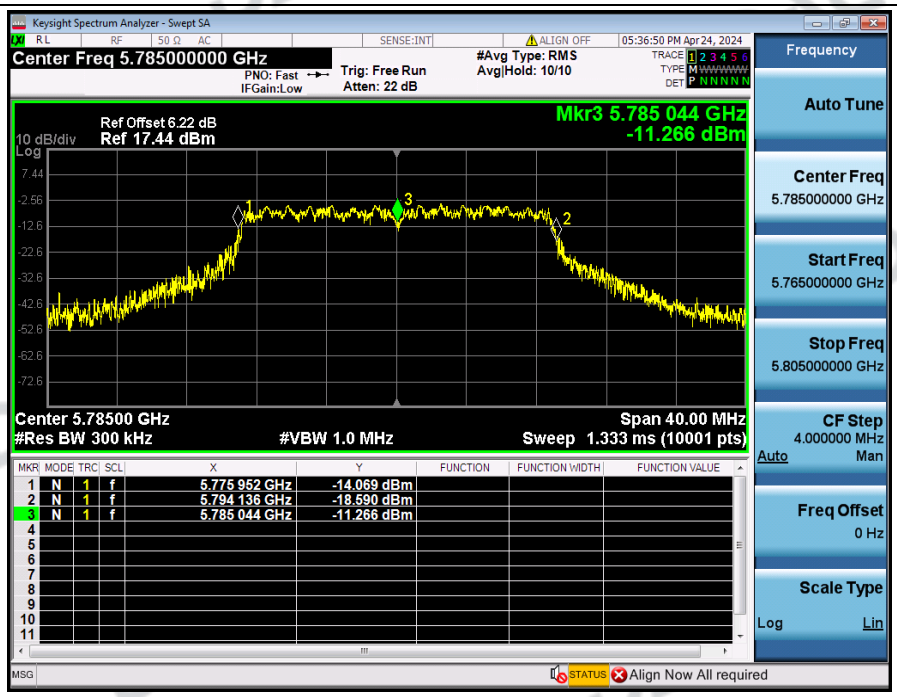
Frequency_Stability_NVNT_ANT1_802_11a_5785

Frequency_Stability_NVNT_ANT1_802_11a_5825

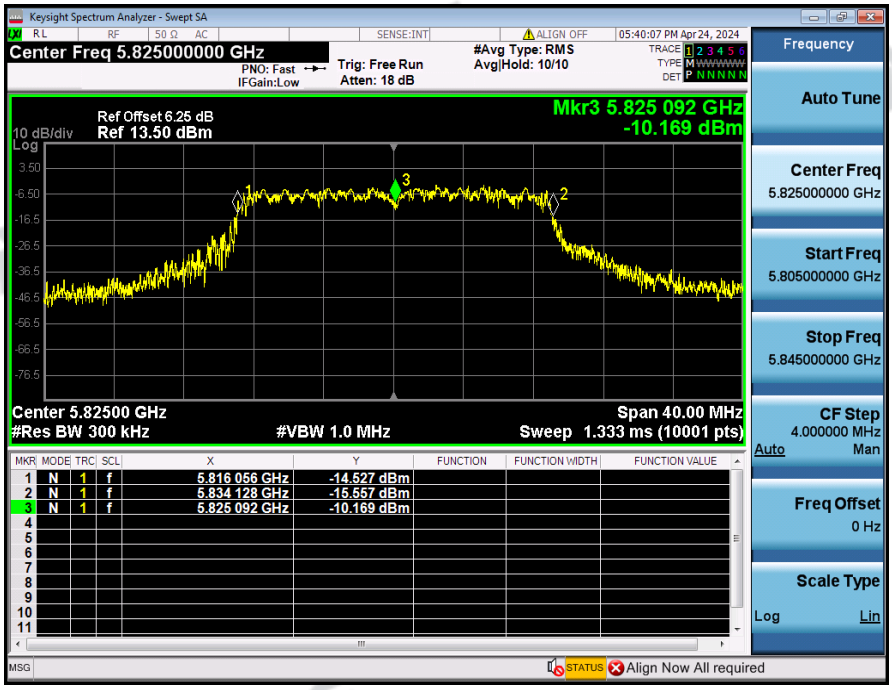
Frequency_Stability_NVNT_ANT1_802_11n(HT20)_5745



Frequency_Stability_NVNT_ANT1_802_11n(HT20)_5785



Frequency_Stability_NVNT_ANT1_802_11n(HT20)_5825



********** End of Report **********