

Appendix B: Test Results of 2.4GHz Wi-Fi

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Appendix B.1: Test Results of Conducted Peak Power

Conducted Peak Power:

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Limit (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Result
NVNT	ANT1	802.11b	2412.00	Peak	20.95	30	-3.00	17.95	36	Pass
NVNT	ANT1	802.11b	2437.00	Peak	21.23	30	-3.00	18.23	36	Pass
NVNT	ANT1	802.11b	2462.00	Peak	21.81	30	-3.00	18.81	36	Pass
NVNT	ANT1	802.11g	2412.00	Peak	21.09	30	-3.00	18.09	36	Pass
NVNT	ANT1	802.11g	2437.00	Peak	21.43	30	-3.00	18.43	36	Pass
NVNT	ANT1	802.11g	2462.00	Peak	21.80	30	-3.00	18.80	36	Pass
NVNT	ANT2	802.11b	2412.00	Peak	19.39	30	-3.00	16.39	36	Pass
NVNT	ANT2	802.11b	2437.00	Peak	20.00	30	-3.00	17.00	36	Pass
NVNT	ANT2	802.11b	2462.00	Peak	20.96	30	-3.00	17.96	36	Pass
NVNT	ANT2	802.11g	2412.00	Peak	19.44	30	-3.00	16.44	36	Pass
NVNT	ANT2	802.11g	2437.00	Peak	20.04	30	-3.00	17.04	36	Pass
NVNT	ANT2	802.11g	2462.00	Peak	20.97	30	-3.00	17.97	36	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	Peak	20.84	30	-3.00	17.84	36	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	Peak	19.66	30	-3.00	16.66	36	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	Peak	21.23	30	-3.00	18.23	36	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	Peak	19.82	30	-3.00	16.82	36	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	Peak	21.80	30	-3.00	18.80	36	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	Peak	21.35	30	-3.00	18.35	36	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	Peak	21.63	30	-3.00	18.63	36	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	Peak	19.97	30	-3.00	16.97	36	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	Peak	20.02	30	-3.00	17.02	36	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	Peak	20.53	30	-3.00	17.53	36	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	Peak	20.13	30	-3.00	17.13	36	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	Peak	21.38	30	-3.00	18.38	36	Pass

Antenna	Mode	Frequency (MHz)	MIMO_Conducted Power(dBm)	Limit (dBm)	Gain (dBi)	EIRP Power (dBm)	Limit (dBm)	Result
MIMO_TX	802.11n(HT20)	2412.00	23.30	30	-3.00	20.30	36	Pass
MIMO_TX	802.11n(HT20)	2437.00	23.59	30	-3.00	20.59	36	Pass
MIMO_TX	802.11n(HT20)	2462.00	24.59	30	-3.00	21.59	36	Pass
MIMO_TX	802.11ax(HE20)	2412.00	23.89	30	-3.00	20.89	36	Pass
MIMO_TX	802.11ax(HE20)	2437.00	23.29	30	-3.00	20.29	36	Pass
MIMO_TX	802.11ax(HE20)	2462.00	23.81	30	-3.00	20.81	36	Pass

Conducted Average Power (for reference only):

Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	AVG	15.86	30	Pass
NVNT	ANT2	802.11b	2412.00	AVG	13.31	30	Pass
NVNT	ANT1	802.11b	2437.00	AVG	16.53	30	Pass
NVNT	ANT2	802.11b	2437.00	AVG	14.91	30	Pass
NVNT	ANT1	802.11b	2462.00	AVG	17.27	30	Pass
NVNT	ANT2	802.11b	2462.00	AVG	16.37	30	Pass
NVNT	ANT1	802.11g	2412.00	AVG	15.81	30	Pass
NVNT	ANT2	802.11g	2412.00	AVG	14.11	30	Pass
NVNT	ANT1	802.11g	2437.00	AVG	16.38	30	Pass
NVNT	ANT2	802.11g	2437.00	AVG	14.75	30	Pass
NVNT	ANT1	802.11g	2462.00	AVG	17.90	30	Pass
NVNT	ANT2	802.11g	2462.00	AVG	13.45	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	AVG	14.64	30	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	AVG	14.49	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	AVG	17.69	30	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	AVG	14.38	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	AVG	15.04	30	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	AVG	19.25	30	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	AVG	16.69	30	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	AVG	14.00	30	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	AVG	16.58	30	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	AVG	14.31	30	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	AVG	15.95	30	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	AVG	14.98	30	Pass

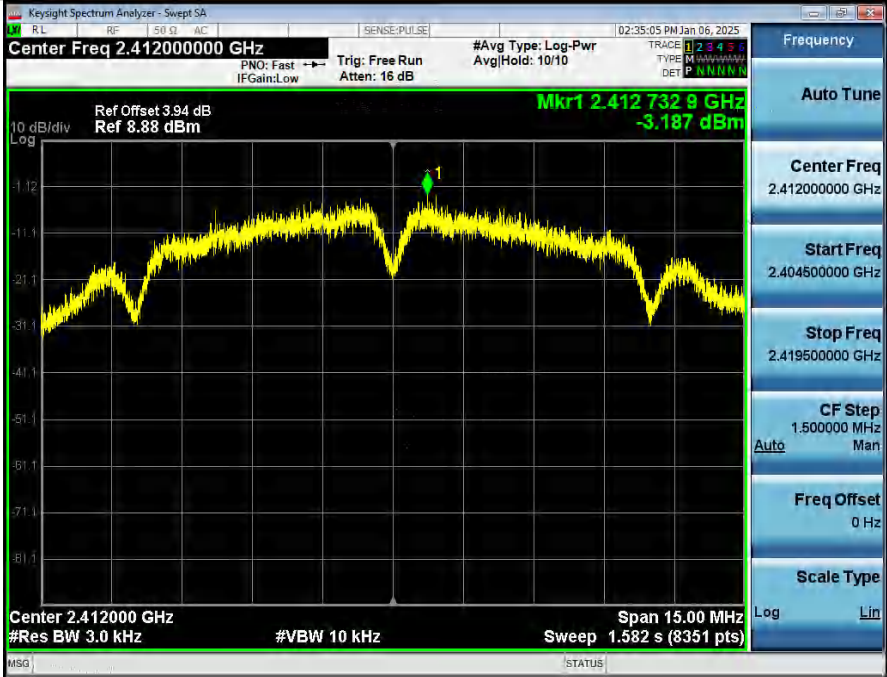
Condition	Antenna	Mode	Frequency(MHz)	MIMO_Conducted_Power(dBm)	Limit(dBm)	Result
NVNT	MIMO_TX	802.11n(HT20)	2412.00	17.58	30	Pass
NVNT	MIMO_TX	802.11n(HT20)	2437.00	19.35	30	Pass
NVNT	MIMO_TX	802.11n(HT20)	2462.00	20.64	30	Pass
NVNT	MIMO_TX	802.11ax(HE20)	2412.00	18.56	30	Pass
NVNT	MIMO_TX	802.11ax(HE20)	2437.00	18.60	30	Pass
NVNT	MIMO_TX	802.11ax(HE20)	2462.00	18.51	30	Pass

Appendix B.2: Test Results of Peak Power Spectral Density

Antenna	Modulation	Frequency (MHz)	SA_PSD(dBm/3kHz)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
ANT1	802.11b	2412.00	-3.19	-3.19	8	Pass
ANT2	802.11b	2412.00	-3.76	-3.76	8	Pass
ANT1	802.11b	2437.00	-2.69	-2.69	8	Pass
ANT2	802.11b	2437.00	-2.75	-2.75	8	Pass
ANT1	802.11b	2462.00	-4.00	-4.00	8	Pass
ANT2	802.11b	2462.00	-2.49	-2.49	8	Pass
ANT1	802.11g	2412.00	-12.39	-12.39	8	Pass
ANT2	802.11g	2412.00	-11.40	-11.40	8	Pass
ANT1	802.11g	2437.00	-12.39	-12.39	8	Pass
ANT2	802.11g	2437.00	-11.12	-11.12	8	Pass
ANT1	802.11g	2462.00	-12.69	-12.69	8	Pass
ANT2	802.11g	2462.00	-10.19	-10.19	8	Pass
ANT1	802.11n(HT20)	2412.00	-12.85	-12.85	8	Pass
ANT2	802.11n(HT20)	2412.00	-11.00	-11.00	8	Pass
ANT1	802.11n(HT20)	2437.00	-12.26	-12.26	8	Pass
ANT2	802.11n(HT20)	2437.00	-9.67	-9.67	8	Pass
ANT1	802.11n(HT20)	2462.00	-11.49	-11.49	8	Pass
ANT2	802.11n(HT20)	2462.00	-10.46	-10.46	8	Pass
ANT1	802.11ax(HE20)	2412.00	-15.56	-15.56	8	Pass
ANT2	802.11ax(HE20)	2412.00	-13.89	-13.89	8	Pass
ANT1	802.11ax(HE20)	2437.00	-15.11	-15.11	8	Pass
ANT2	802.11ax(HE20)	2437.00	-13.39	-13.39	8	Pass
ANT1	802.11ax(HE20)	2462.00	-16.09	-16.09	8	Pass
ANT2	802.11ax(HE20)	2462.00	-13.15	-13.15	8	Pass

Antenna	Modulation	Frequency (MHz)	SA_MIMO_PSD(dBm/3kHz)	MIMO_PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
MIMO_TX	802.11n(HT20)	2412.00	-9.66	-9.66	8	Pass
MIMO_TX	802.11n(HT20)	2437.00	-8.76	-8.76	8	Pass
MIMO_TX	802.11n(HT20)	2462.00	-9.46	-9.46	8	Pass
MIMO_TX	802.11ax(HE20)	2412.00	-12.17	-12.17	8	Pass
MIMO_TX	802.11ax(HE20)	2437.00	-12.02	-12.02	8	Pass
MIMO_TX	802.11ax(HE20)	2462.00	-11.76	-11.76	8	Pass

Power_Spectral_Density_NVNT_ANT1_802_11b_2412



Power_Spectral_Density_NVNT_ANT2_802_11b_2412



Power_Spectral_Density_NVNT_ANT1_802_11b_2437

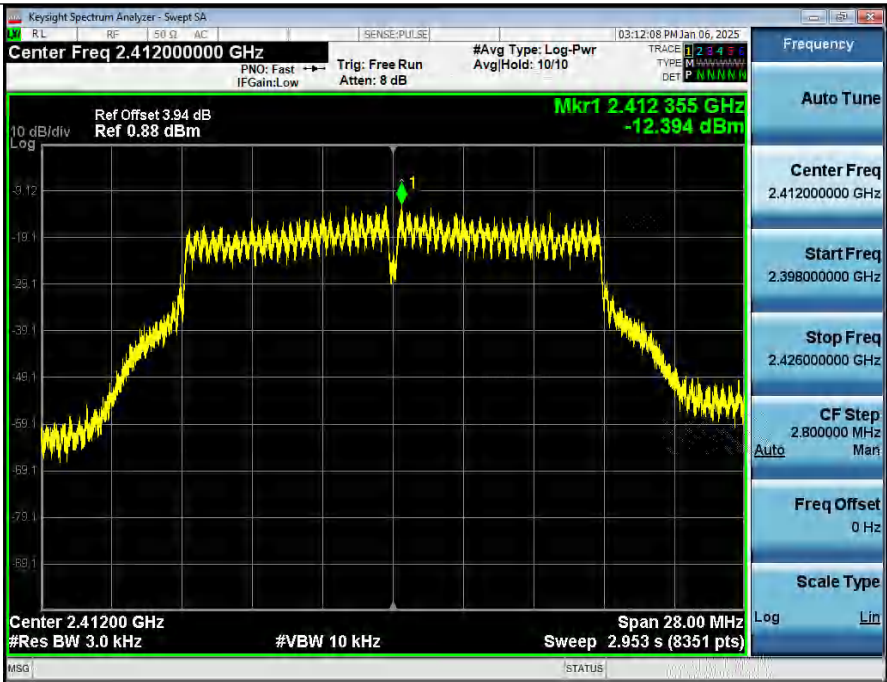


Power_Spectral_Density_NVNT_ANT2_802_11b_2437

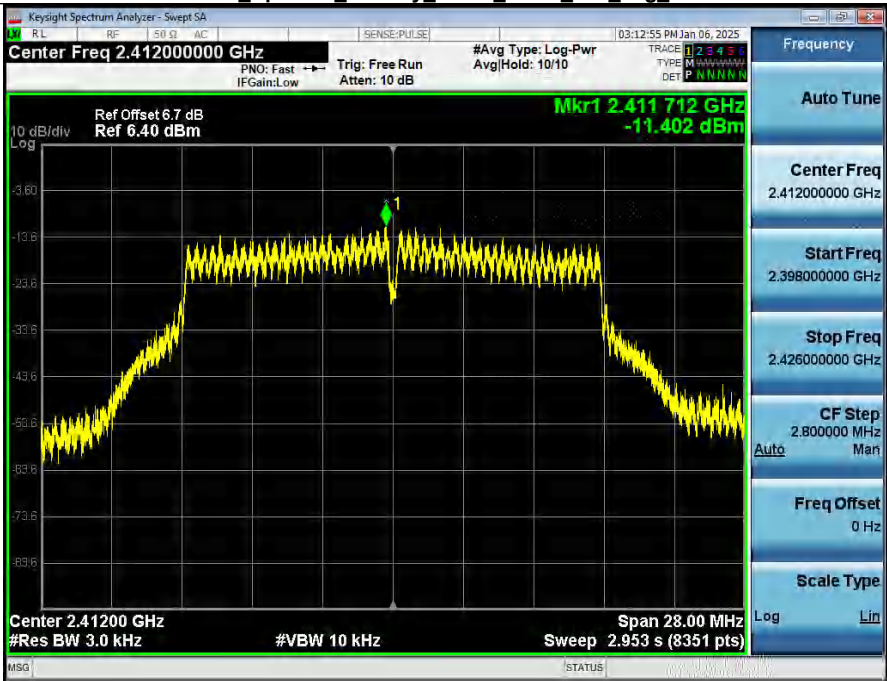


Power_Spectral_Density_NVNT_ANT1_802_11b_2462

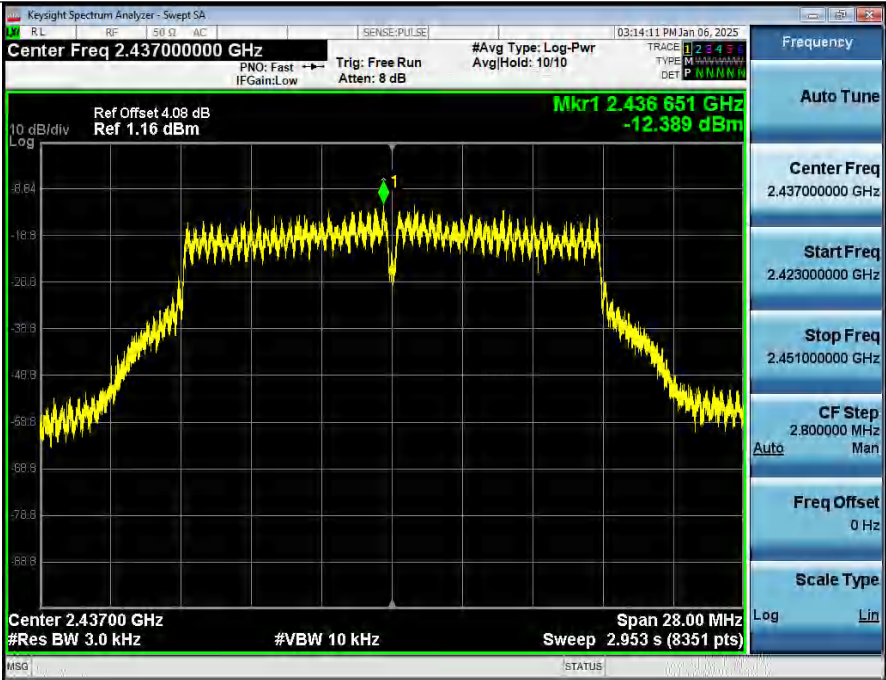




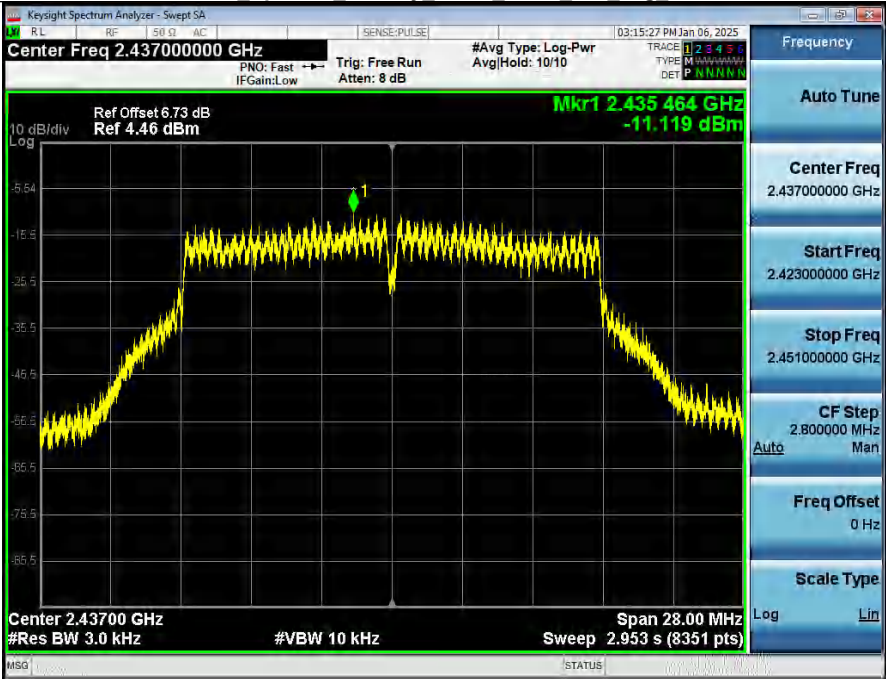
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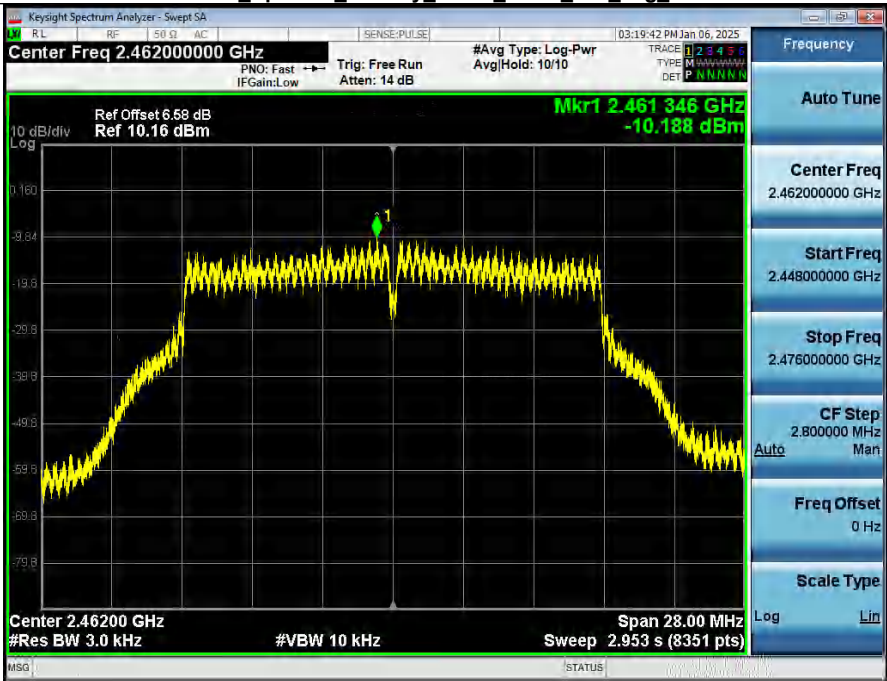
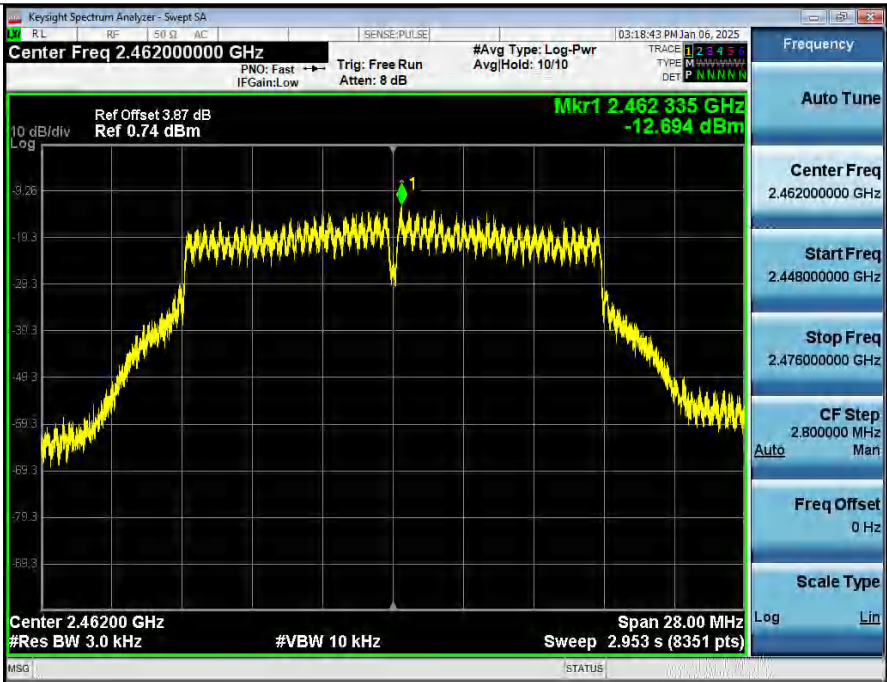
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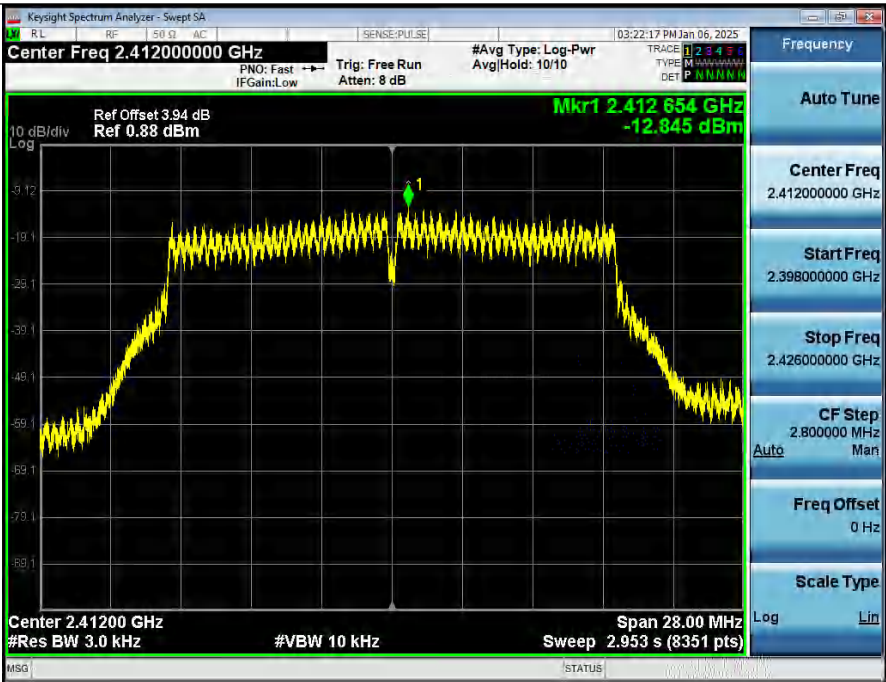


Power_Spectral_Density_NVNT_ANT2_802_11g_2437

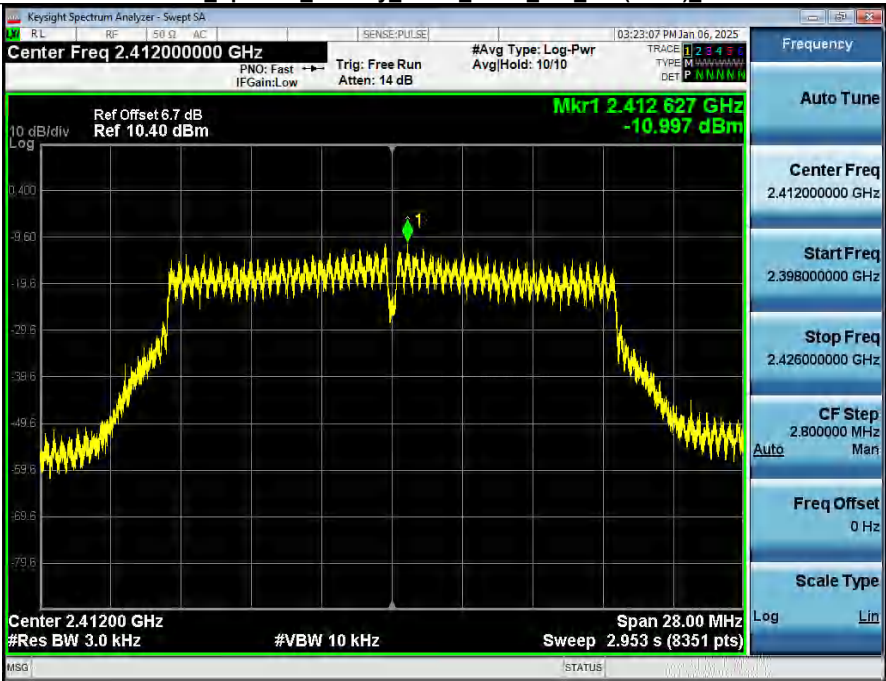


Power_Spectral_Density_NVNT_ANT1_802_11g_2462

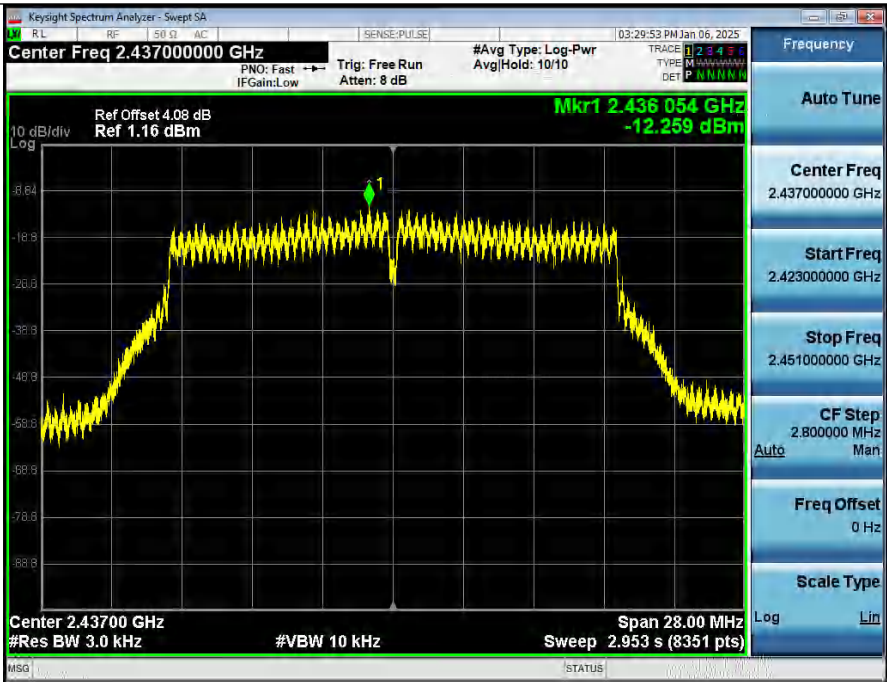




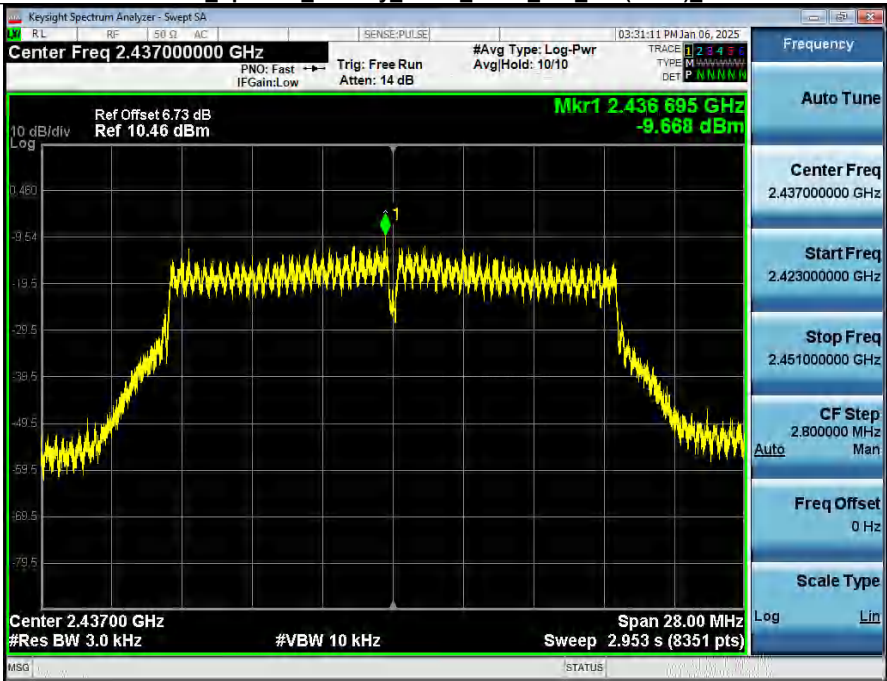
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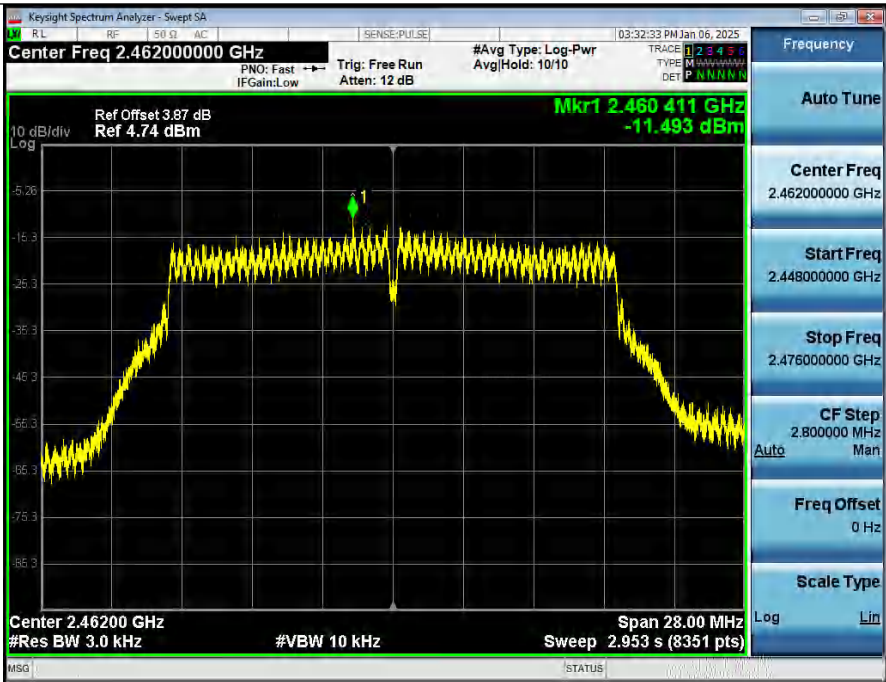
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2437



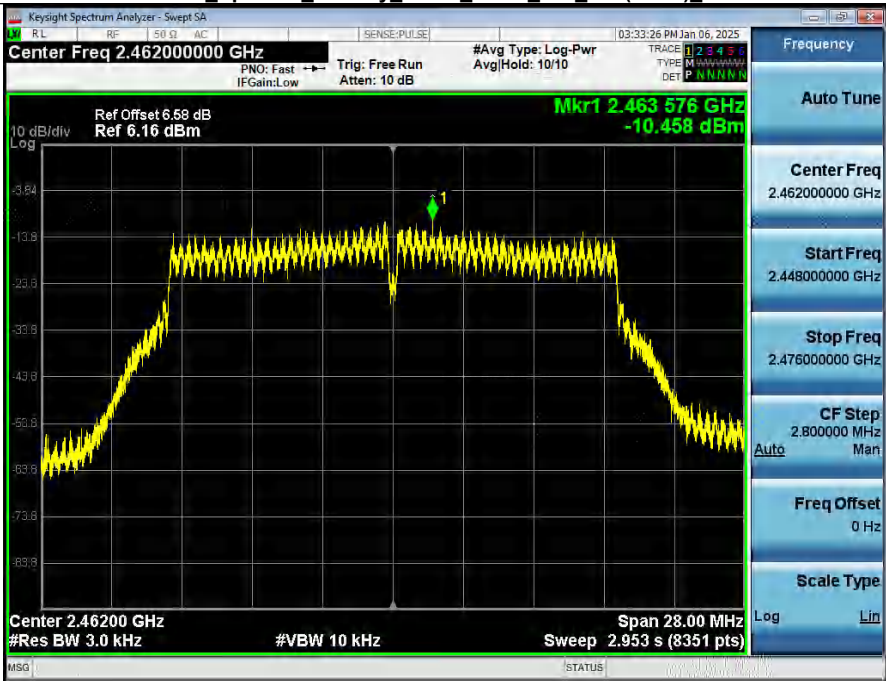
Power_Spectral_Density_NVNT_ANT2_802_11n(HT20)_2437



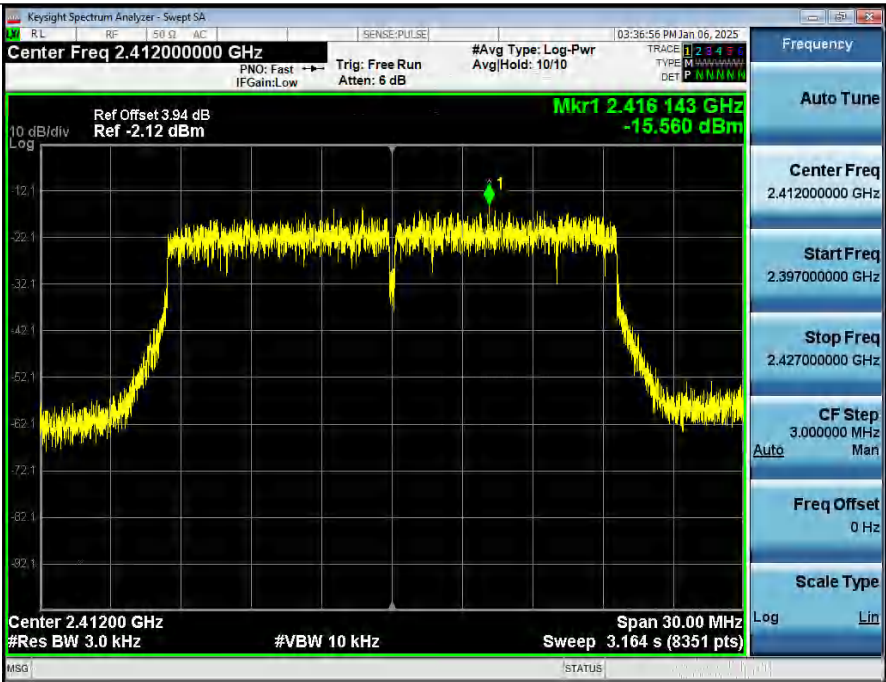
Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_2462



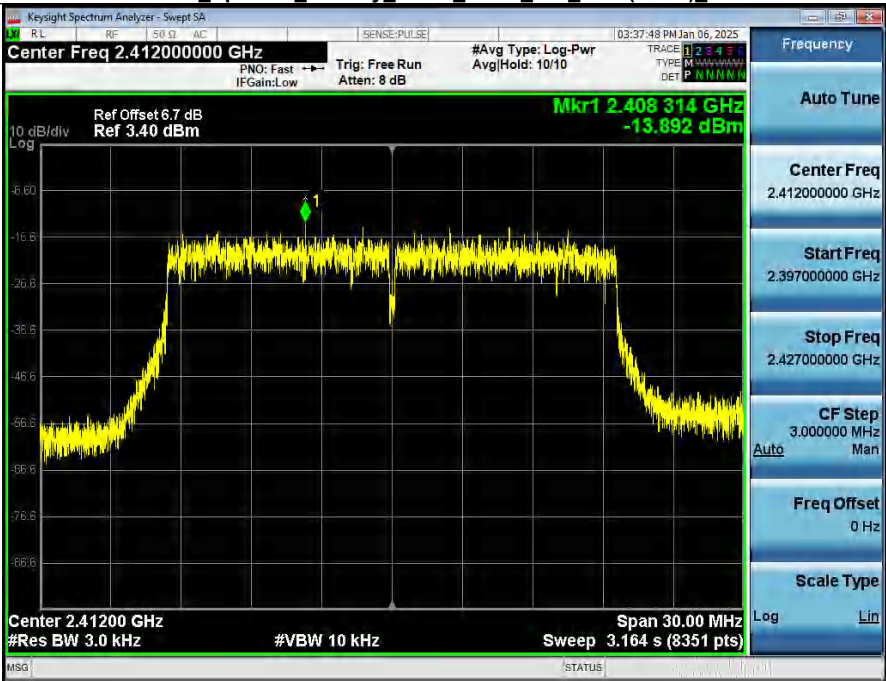
Power_Spectral_Density_NVNT_ANT2_802_11n(HT20)_2462



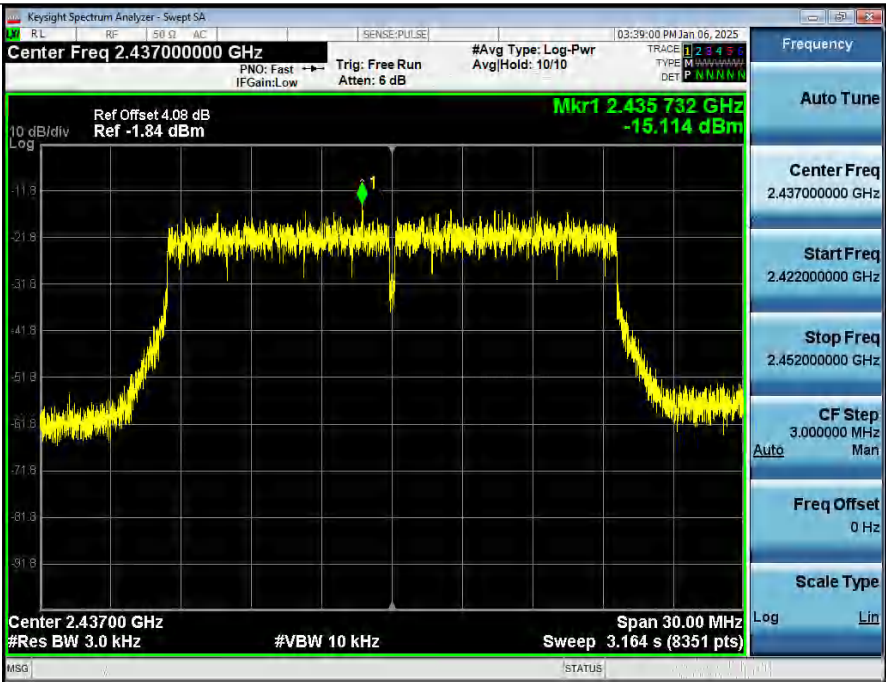
Power_Spectral_Density_NVNT_ANT1_802_11ax(HE20)_2412



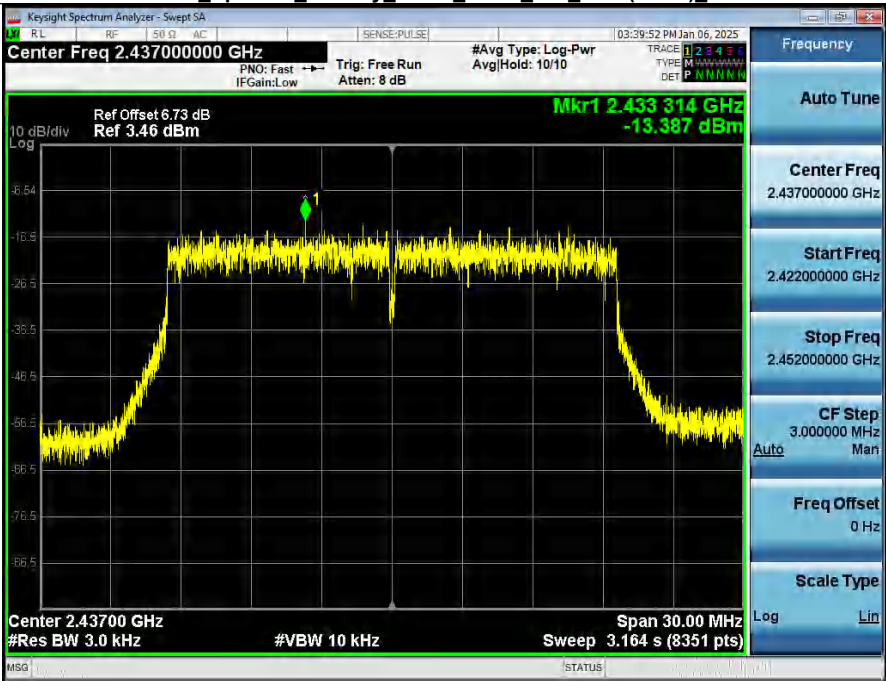
Power_Spectral_Density_NVNT_ANT2_802_11ax(HE20)_2412



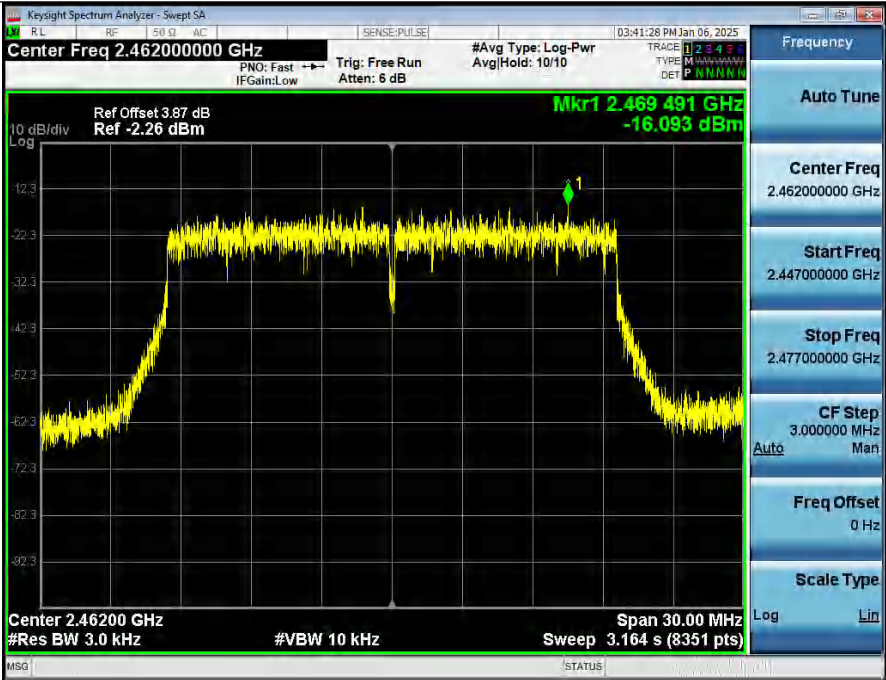
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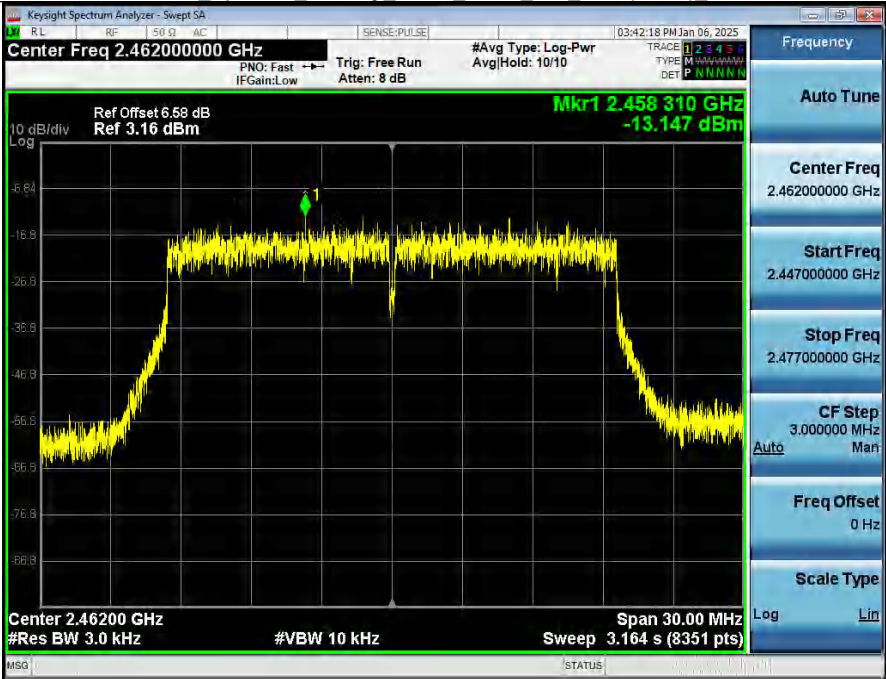
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Power_Spectral_Density_NVNT_ANT1_802_11ax(HE20)_2462



Power_Spectral_Density_NVNT_ANT2_802_11ax(HE20)_2462



Appendix B.3: Test Results of 6dB Bandwidth

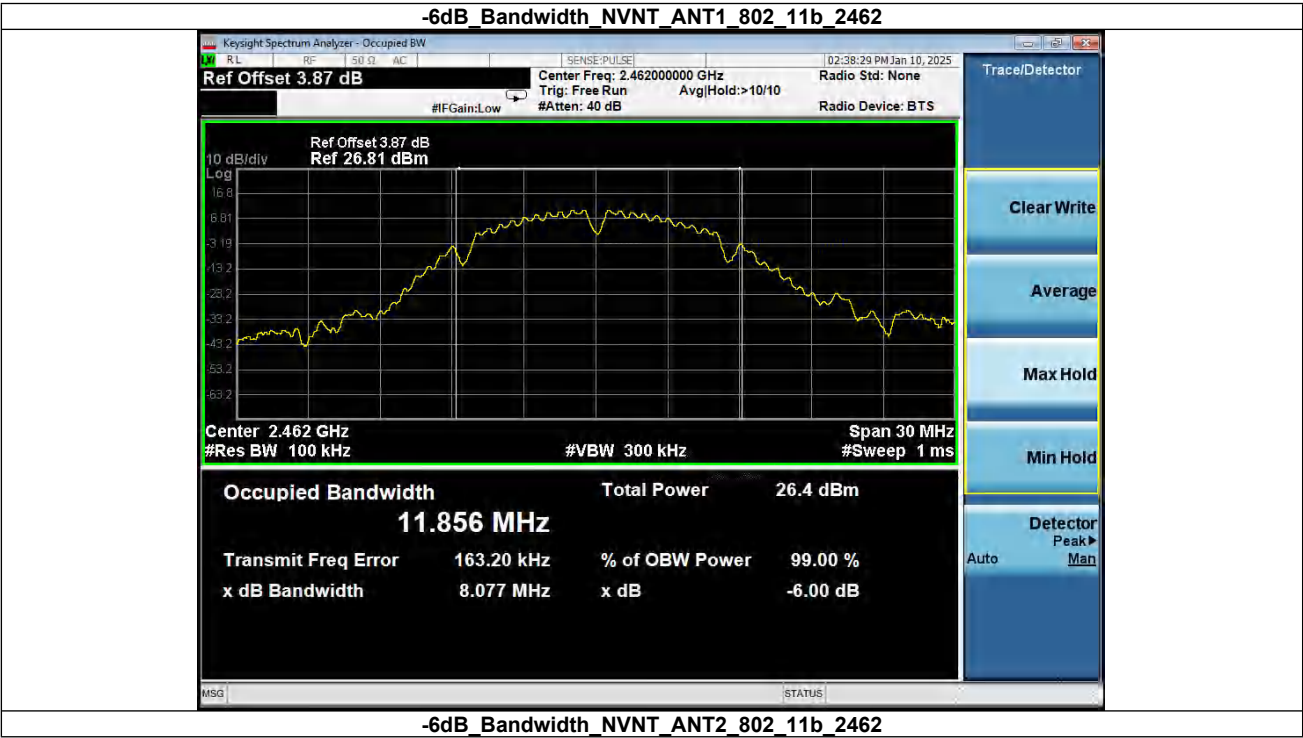
Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	8.58	500	Pass
NVNT	ANT2	802.11b	2412.00	8.10	500	Pass
NVNT	ANT1	802.11b	2437.00	8.12	500	Pass
NVNT	ANT2	802.11b	2437.00	8.10	500	Pass
NVNT	ANT1	802.11b	2462.00	8.08	500	Pass
NVNT	ANT2	802.11b	2462.00	8.08	500	Pass
NVNT	ANT1	802.11g	2412.00	16.38	500	Pass
NVNT	ANT1	802.11g	2437.00	16.20	500	Pass
NVNT	ANT1	802.11g	2462.00	16.15	500	Pass
NVNT	ANT2	802.11g	2412.00	16.22	500	Pass
NVNT	ANT2	802.11g	2437.00	16.25	500	Pass
NVNT	ANT2	802.11g	2462.00	16.26	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	17.68	500	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	17.40	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.37	500	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	17.36	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.57	500	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	17.37	500	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	19.12	500	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	19.13	500	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	18.77	500	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	18.55	500	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	18.63	500	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	18.30	500	Pass

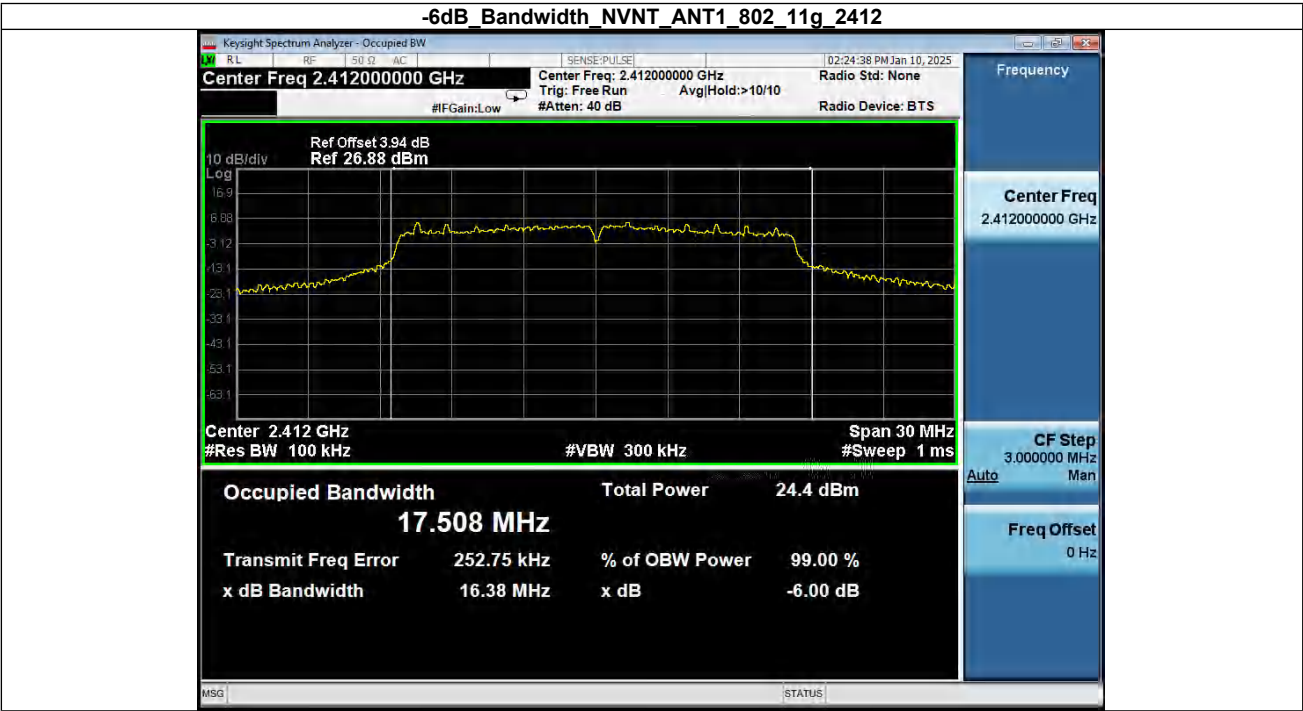
-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



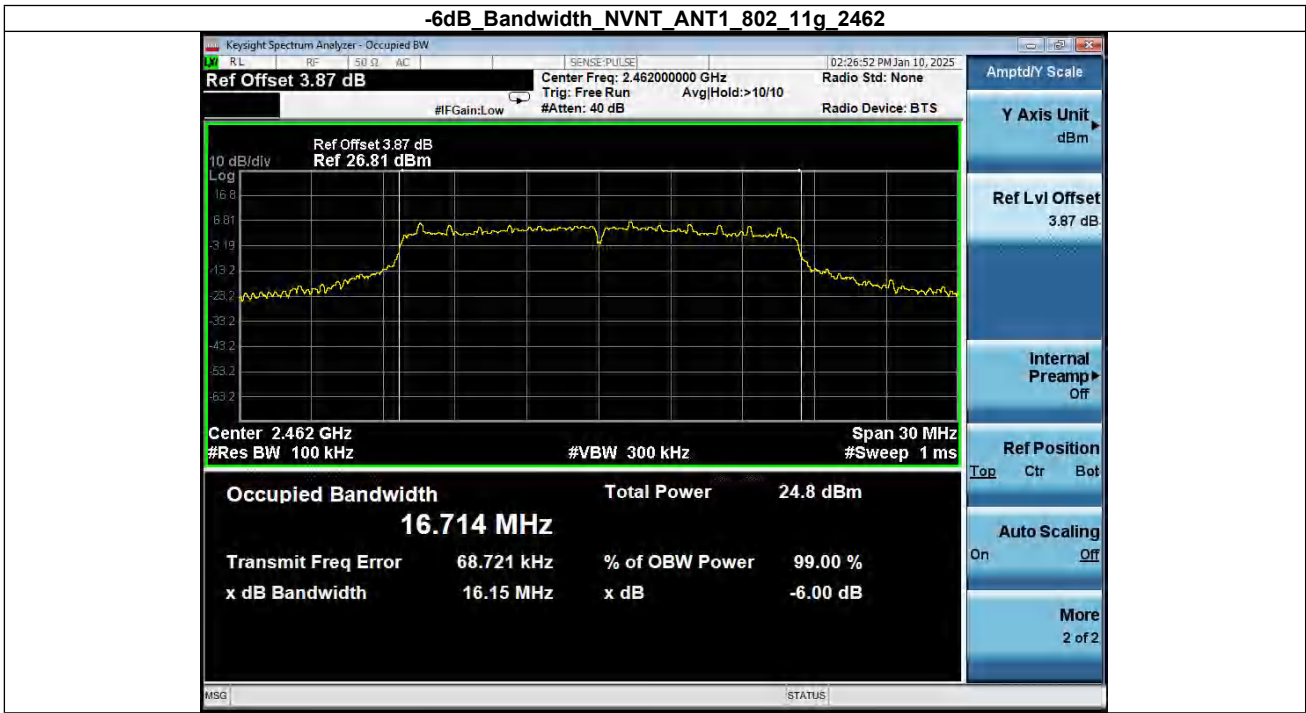
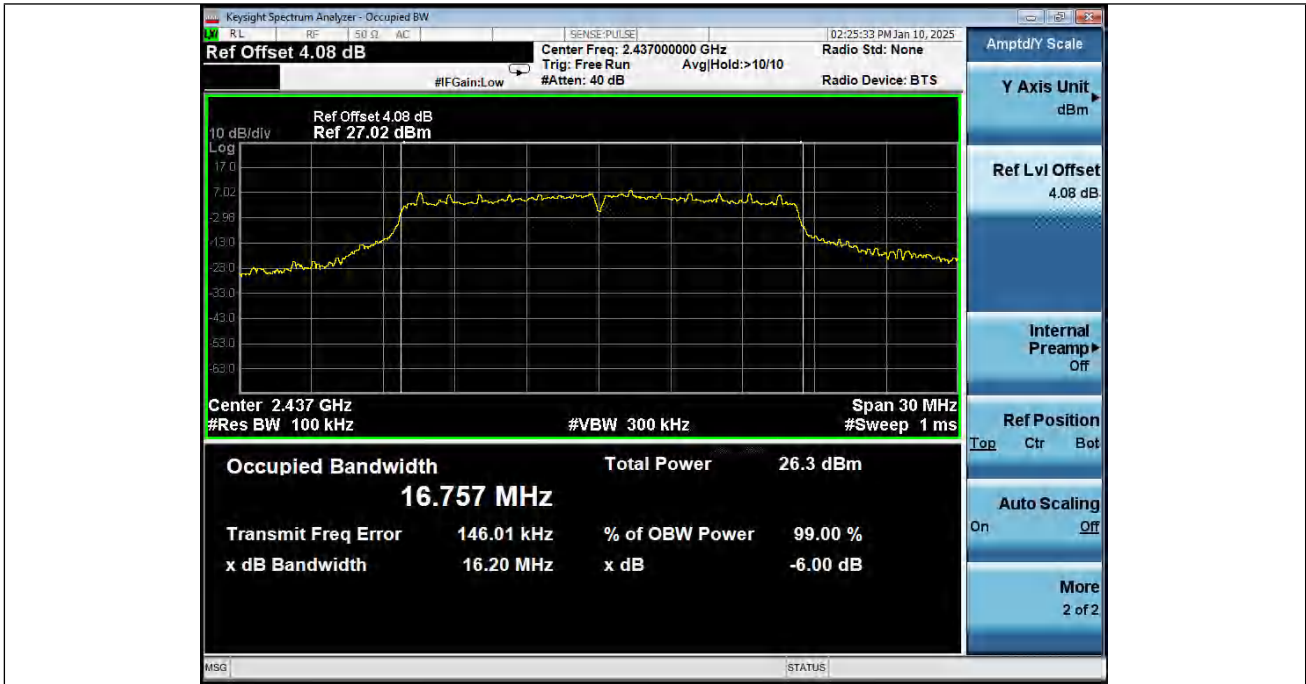
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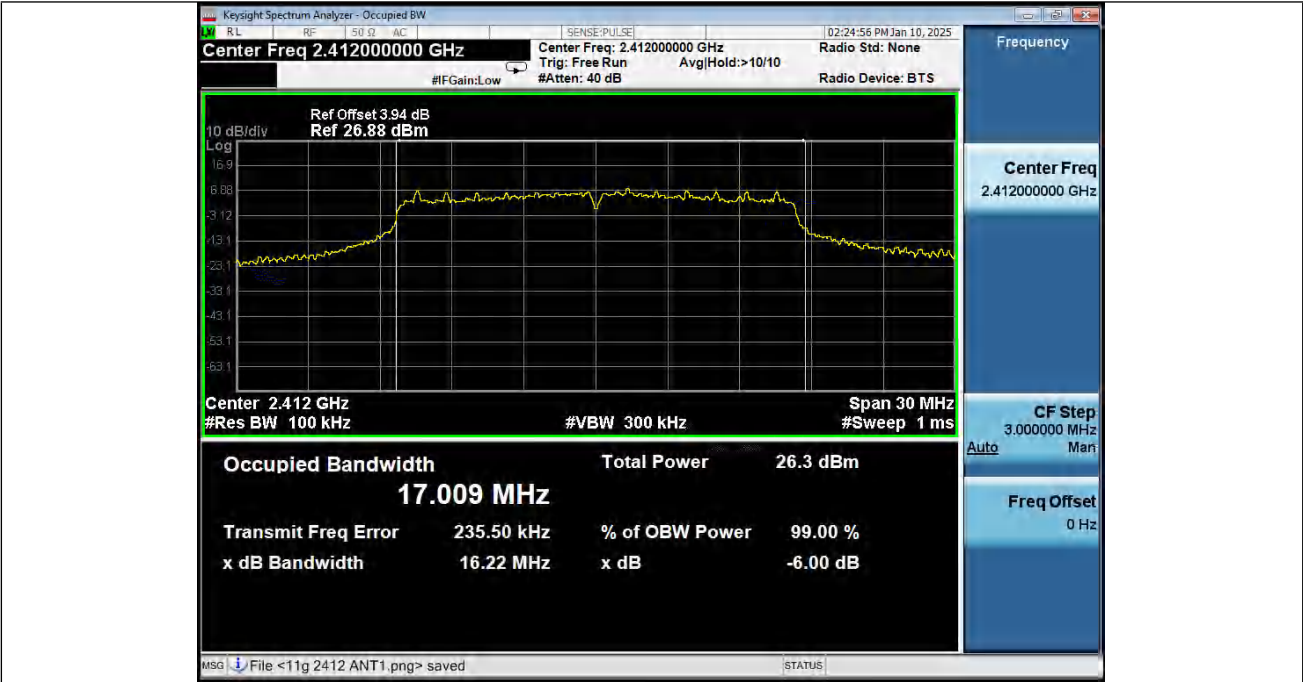


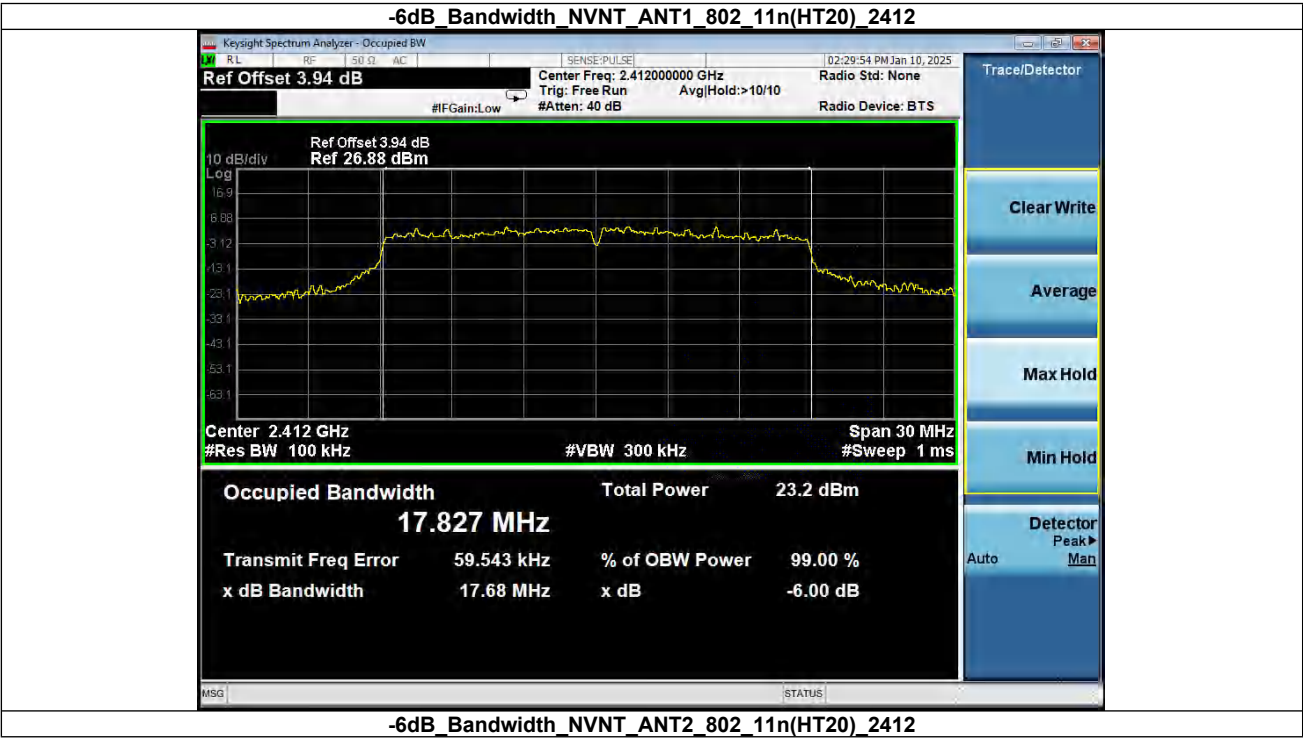
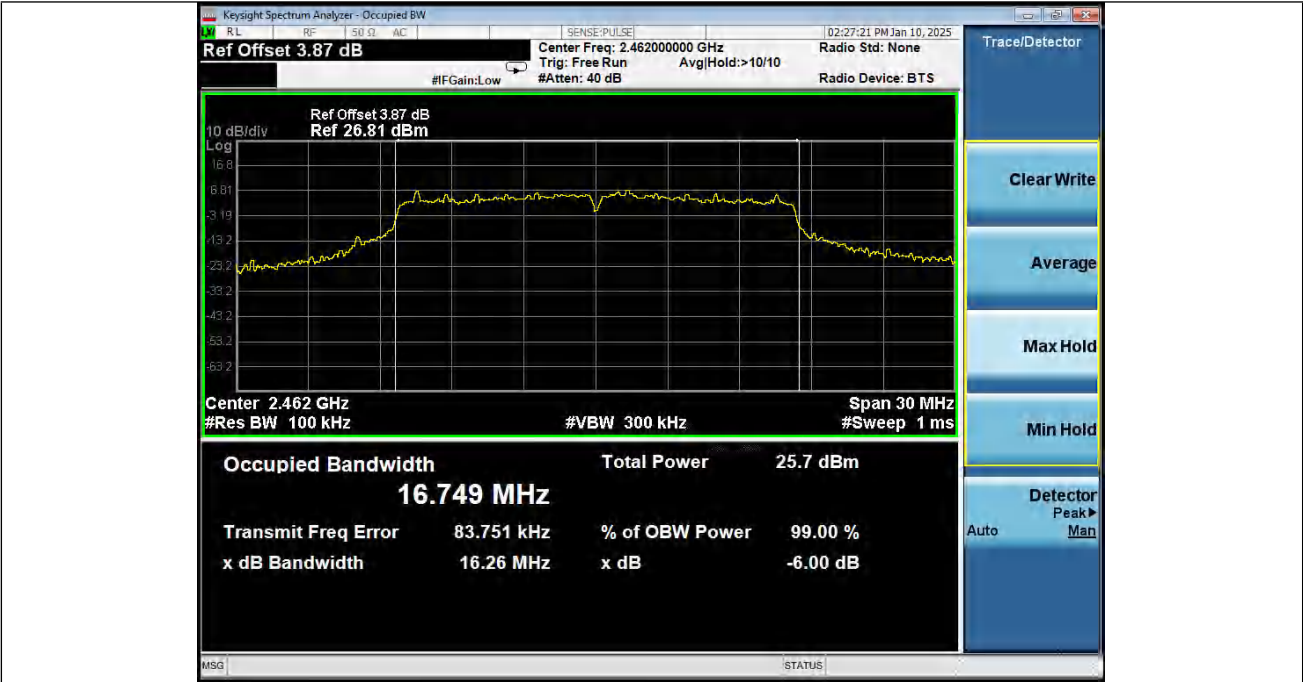


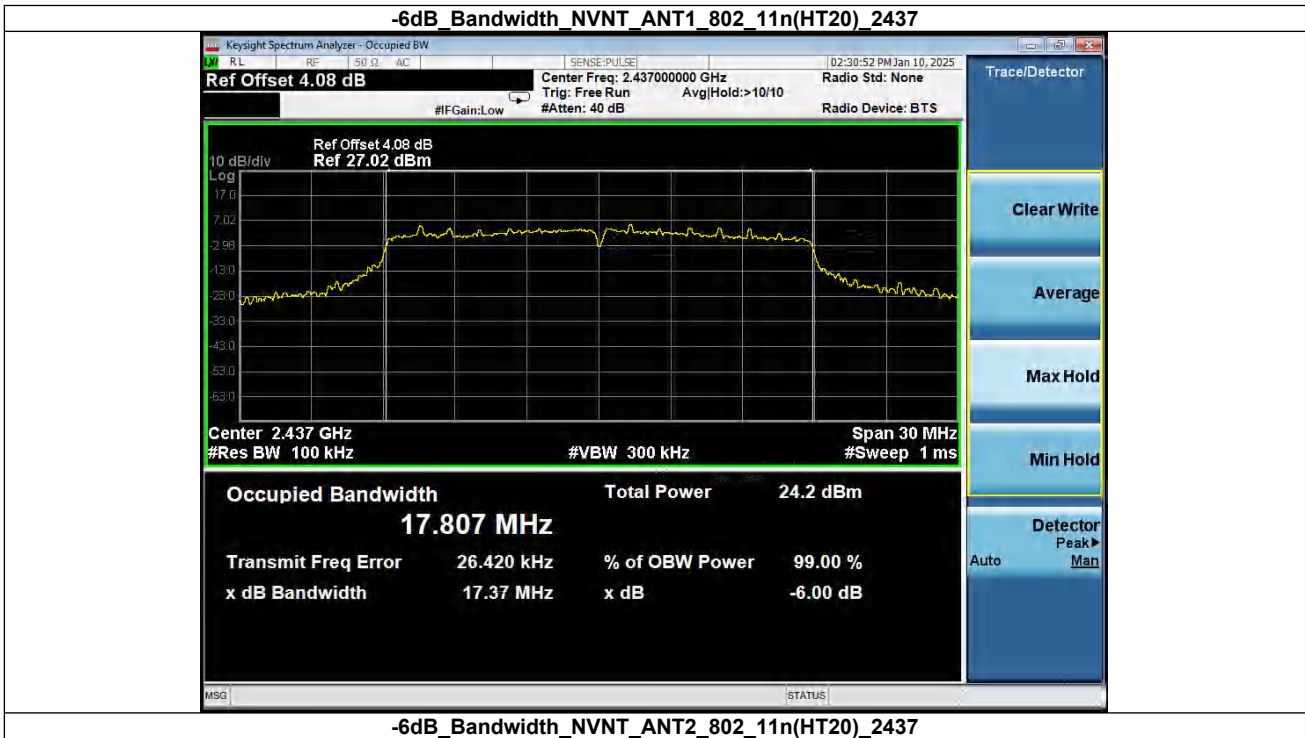
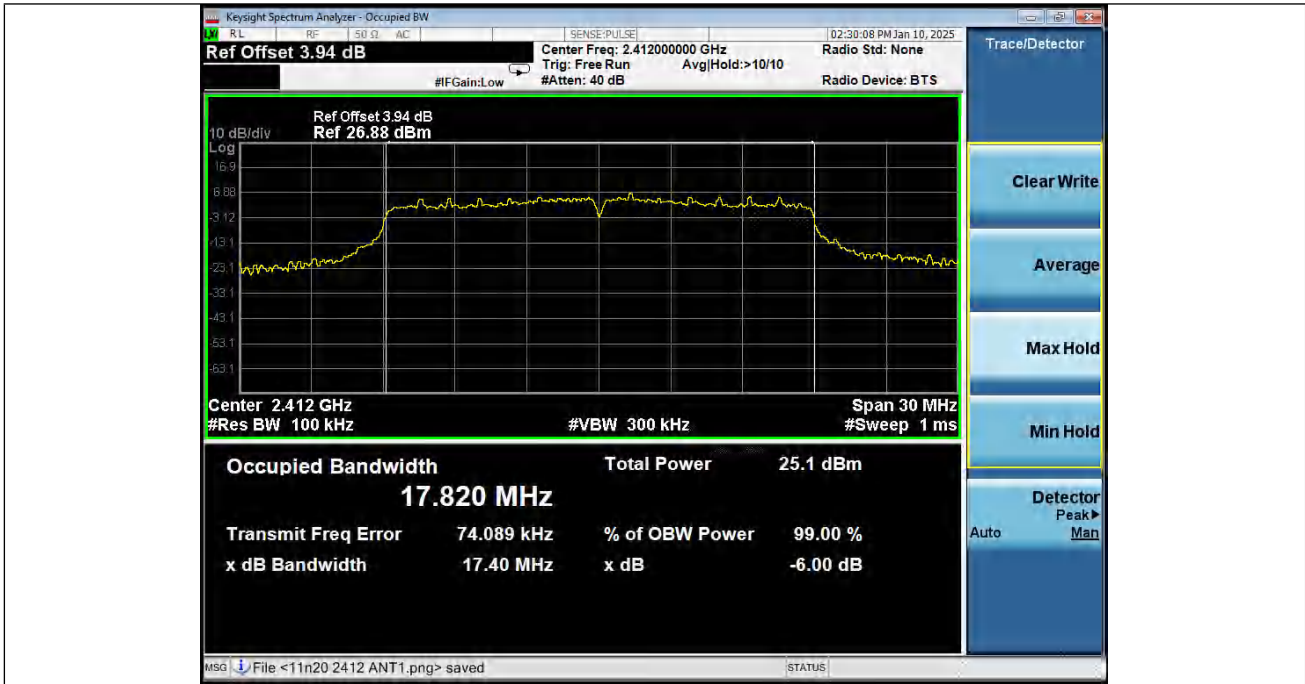


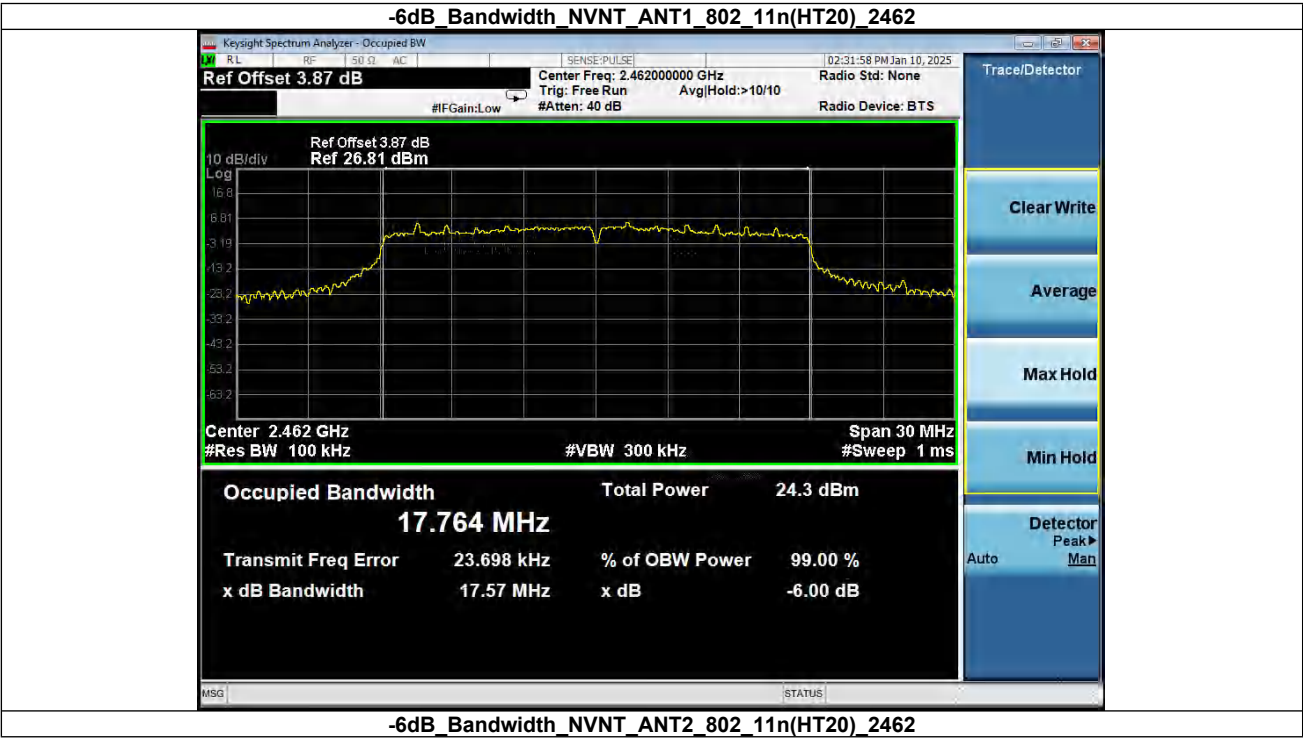
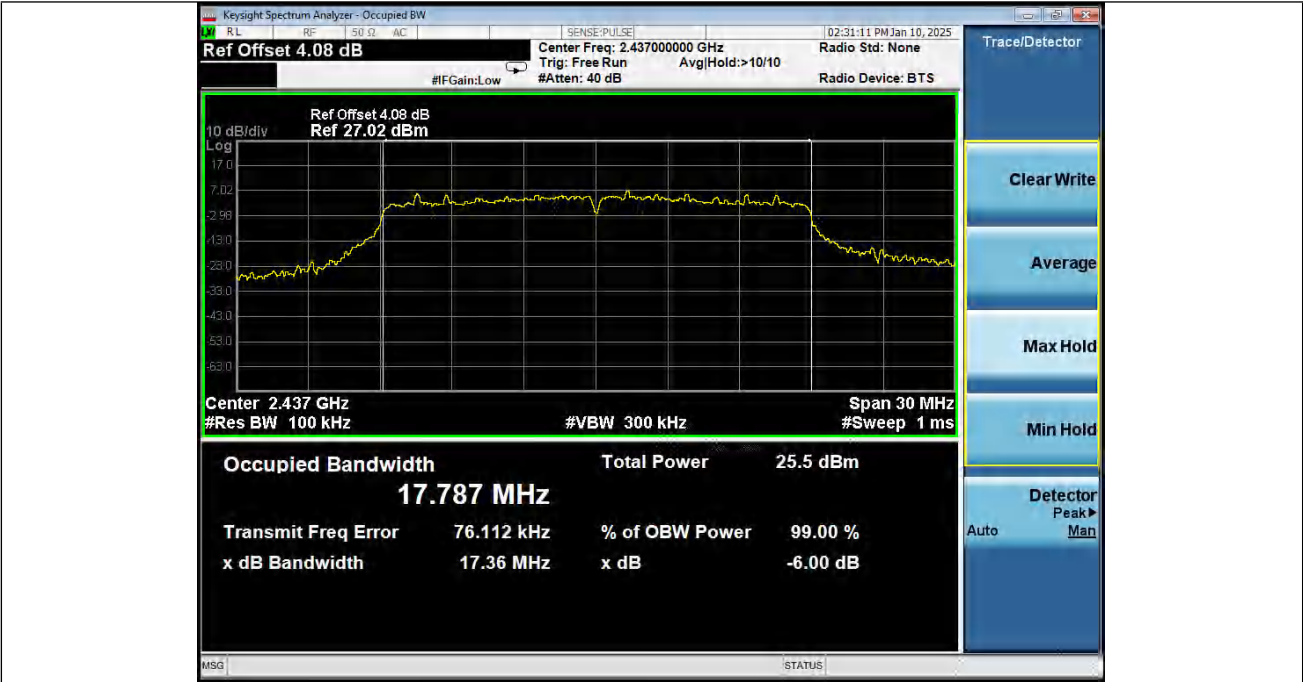
-6dB_Bandwidth_NVNT_ANT1_802_11g_2437

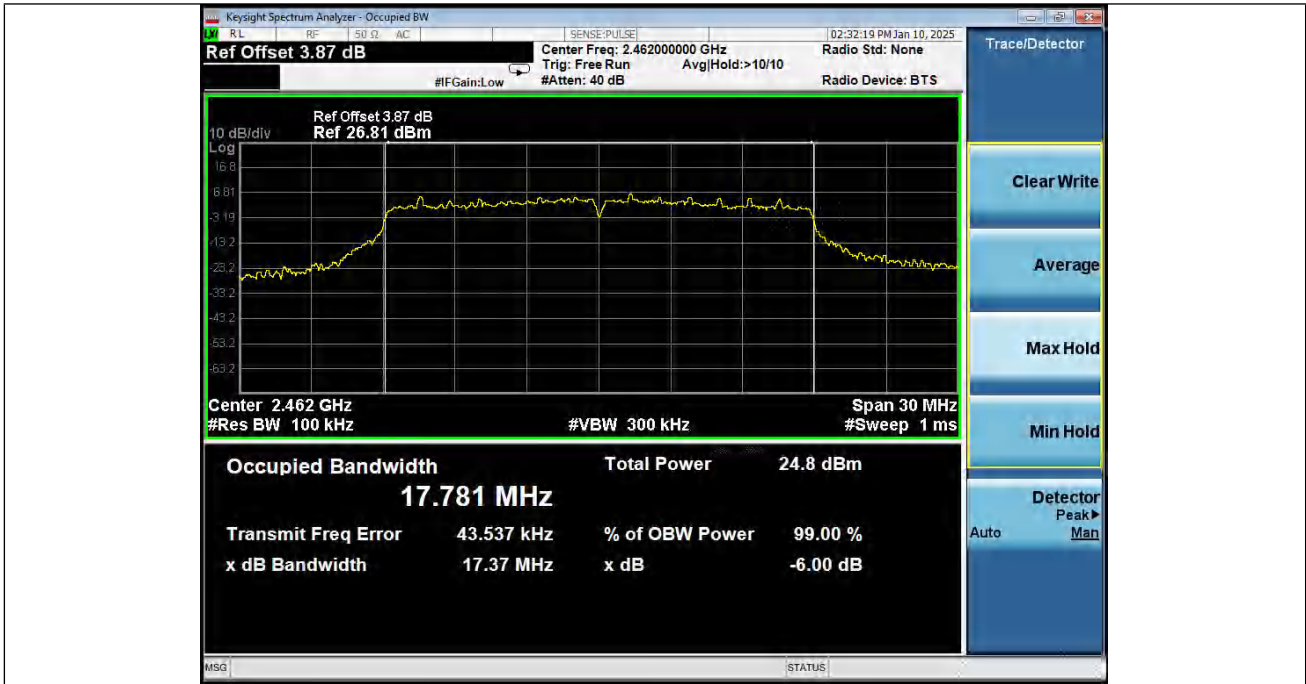




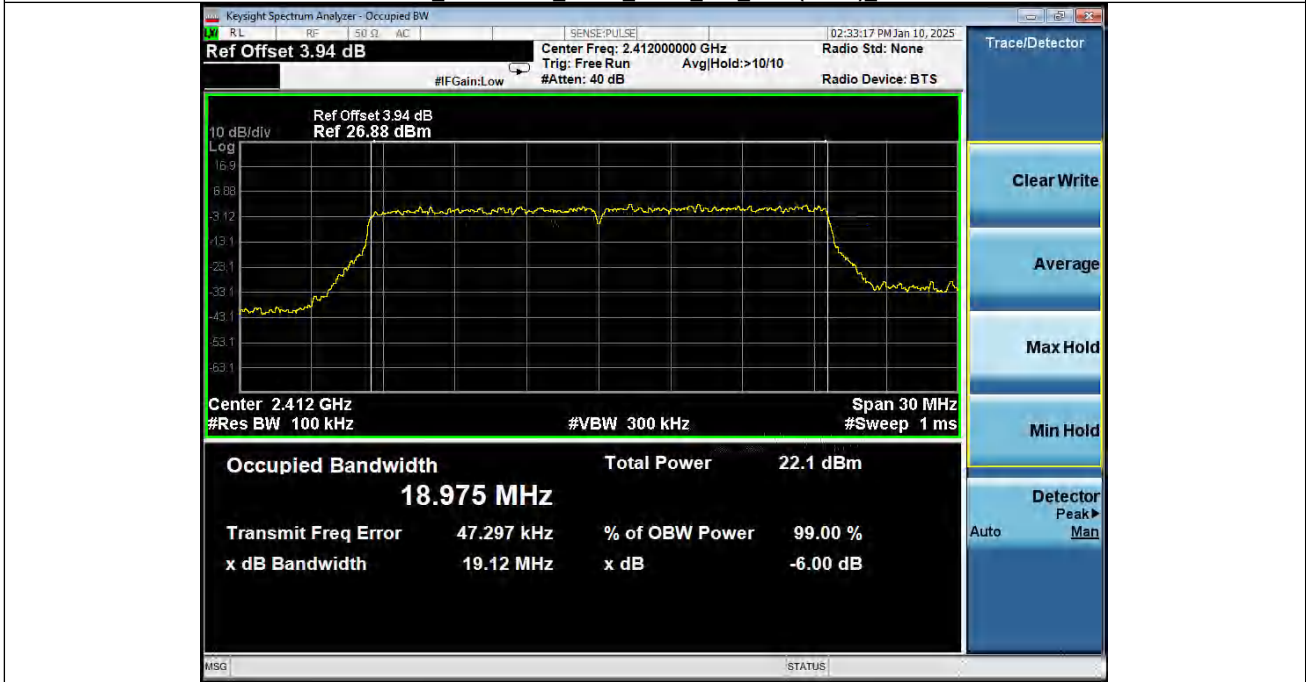




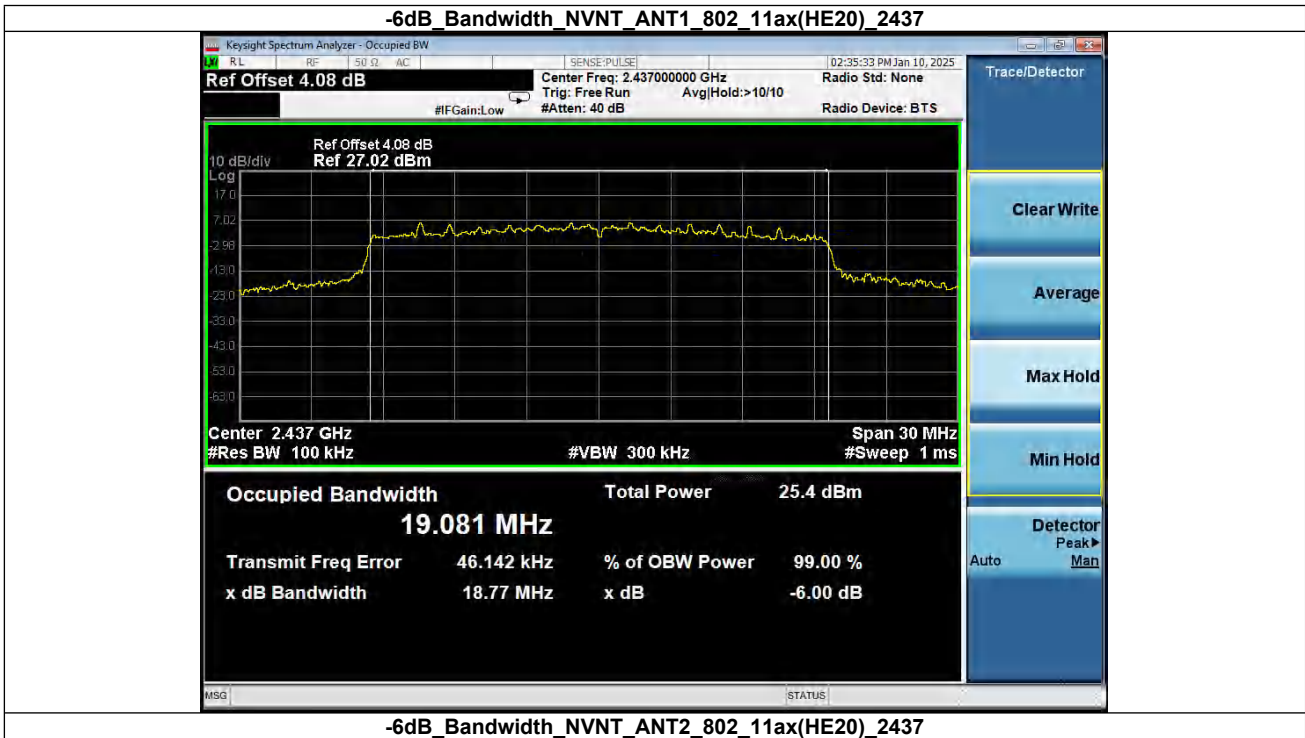
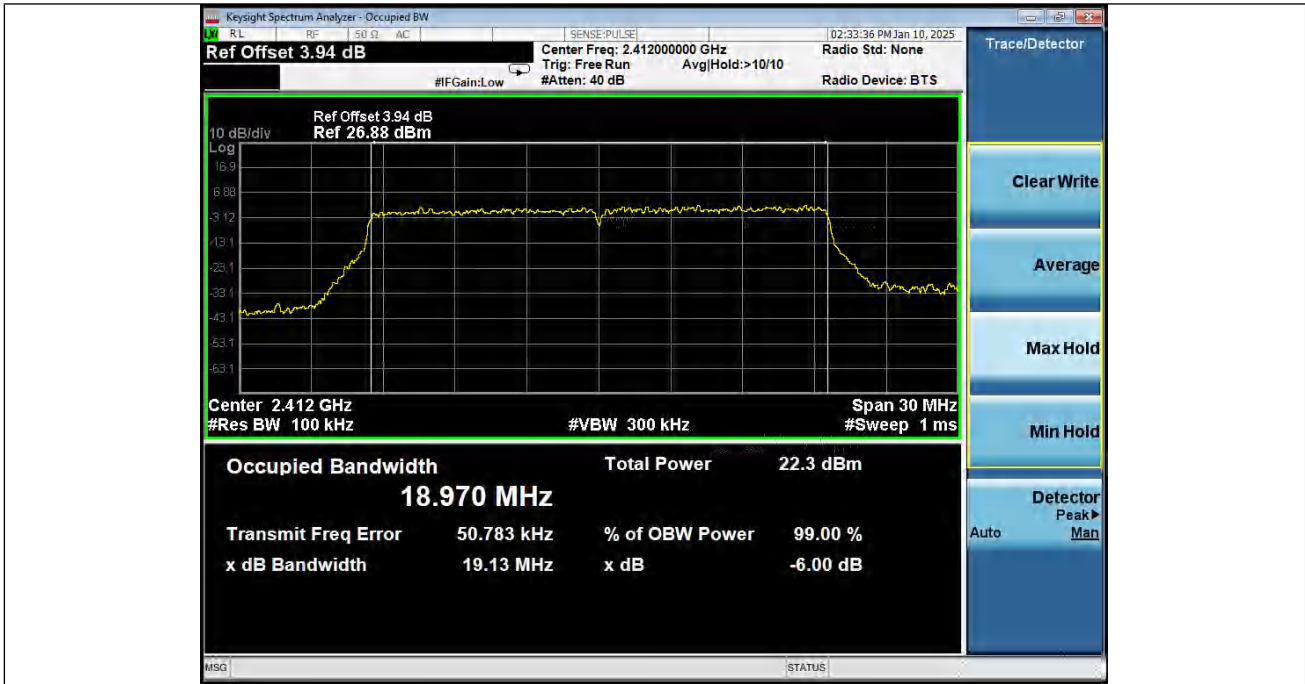




-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2412

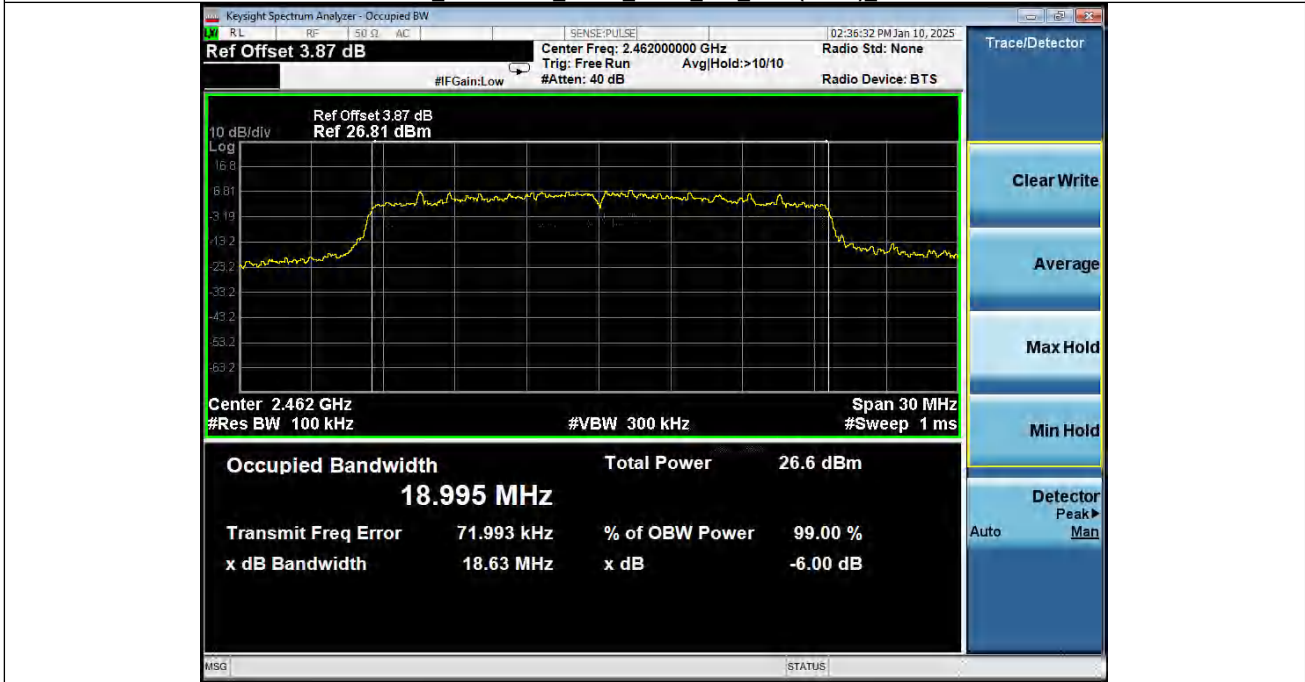


-6dB_Bandwidth_NVNT_ANT2_802_11ax(HE20)_2412

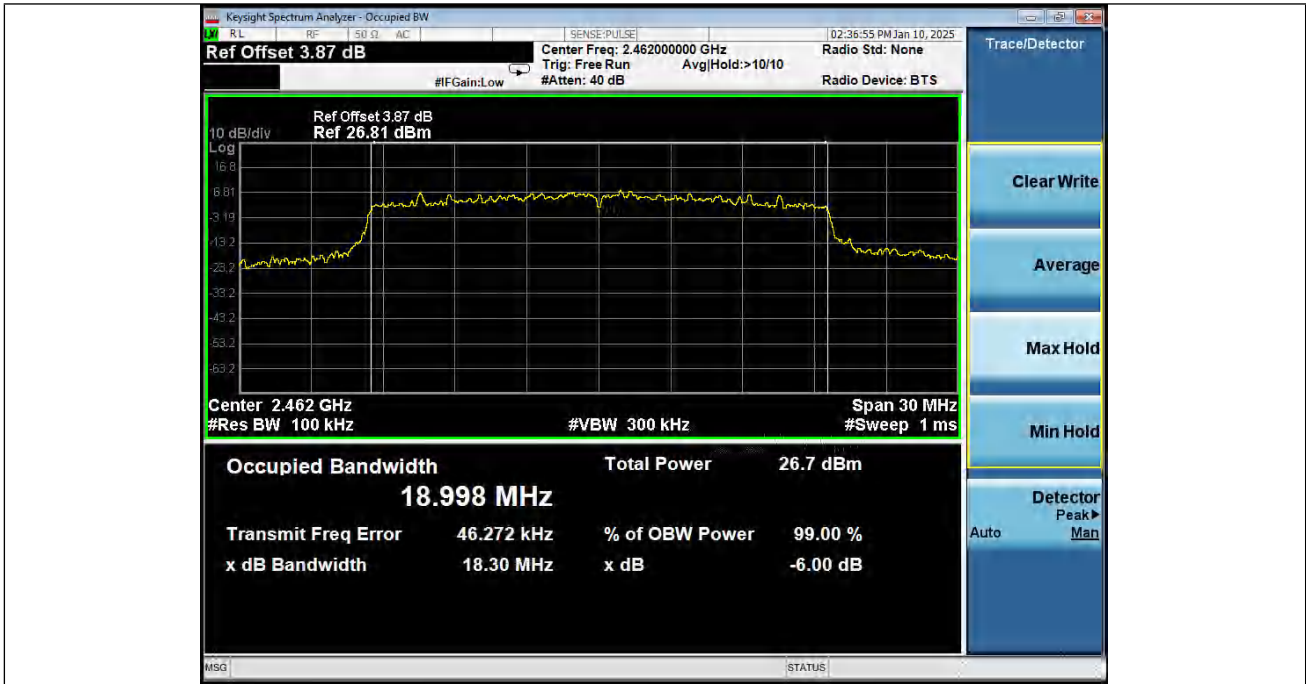




-6dB_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2462

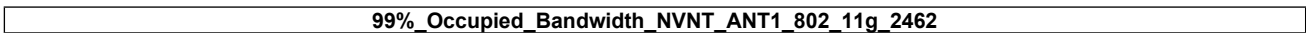
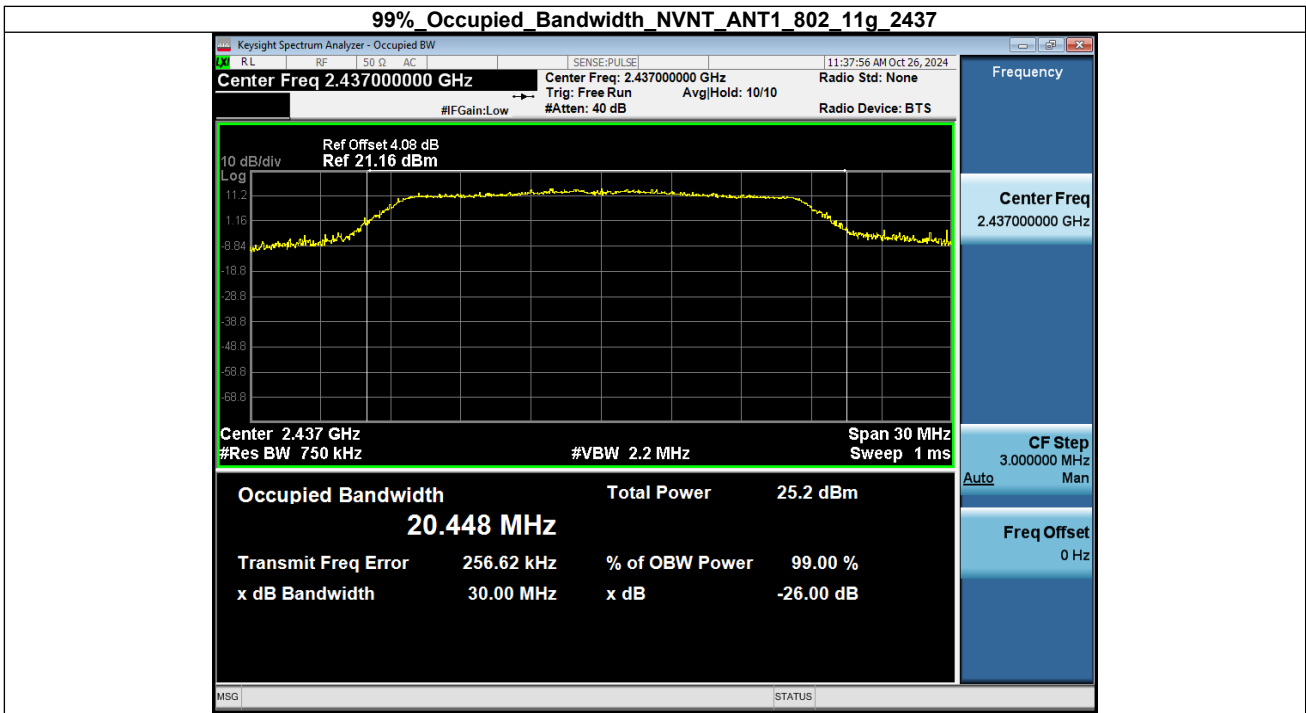
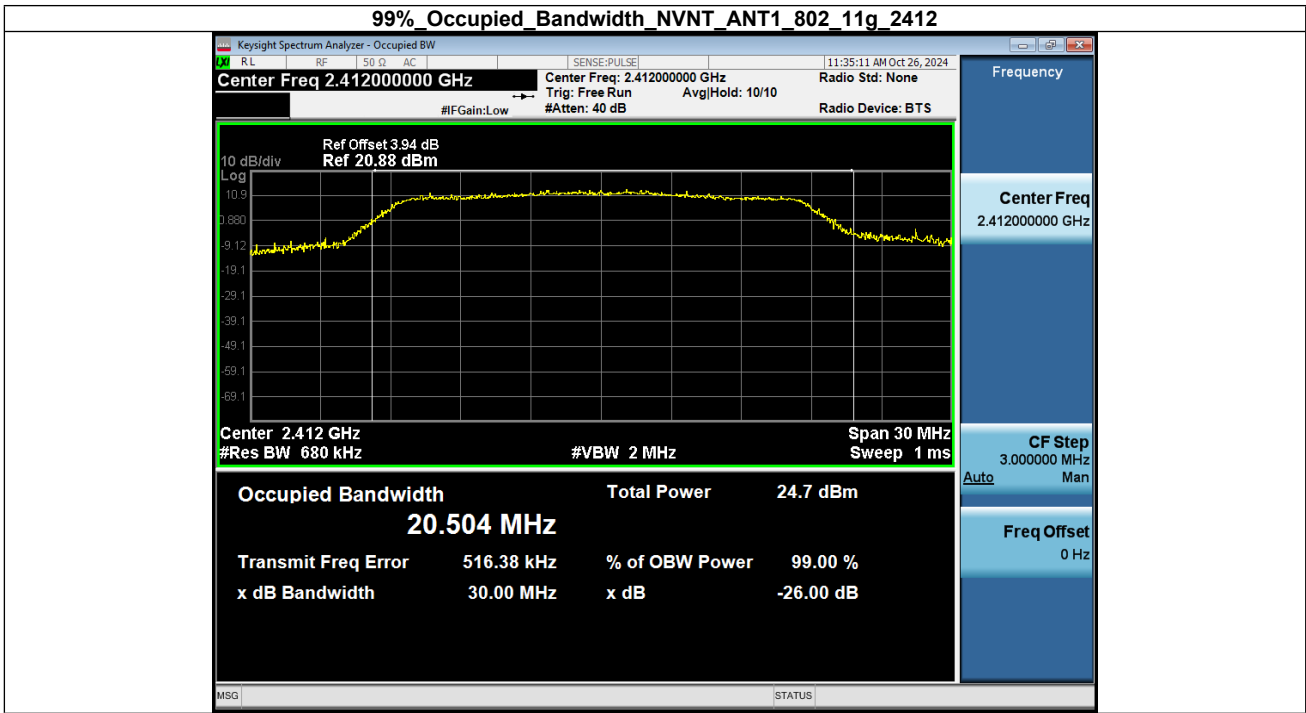


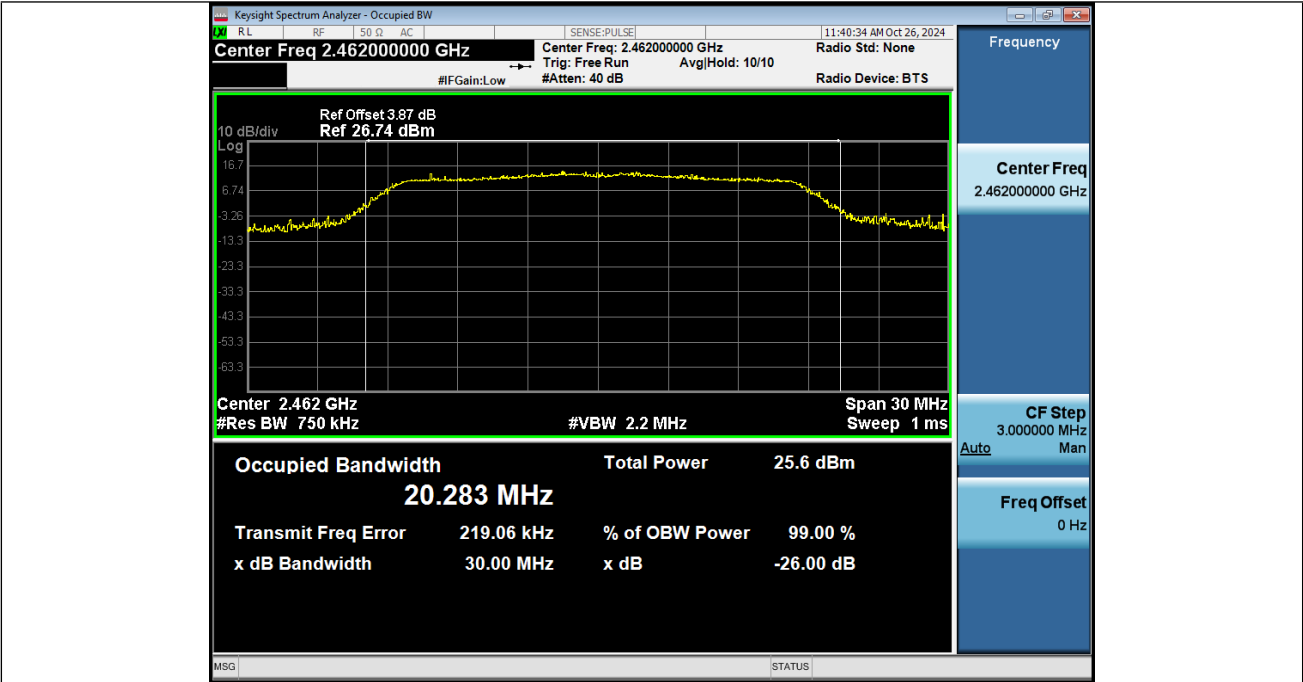
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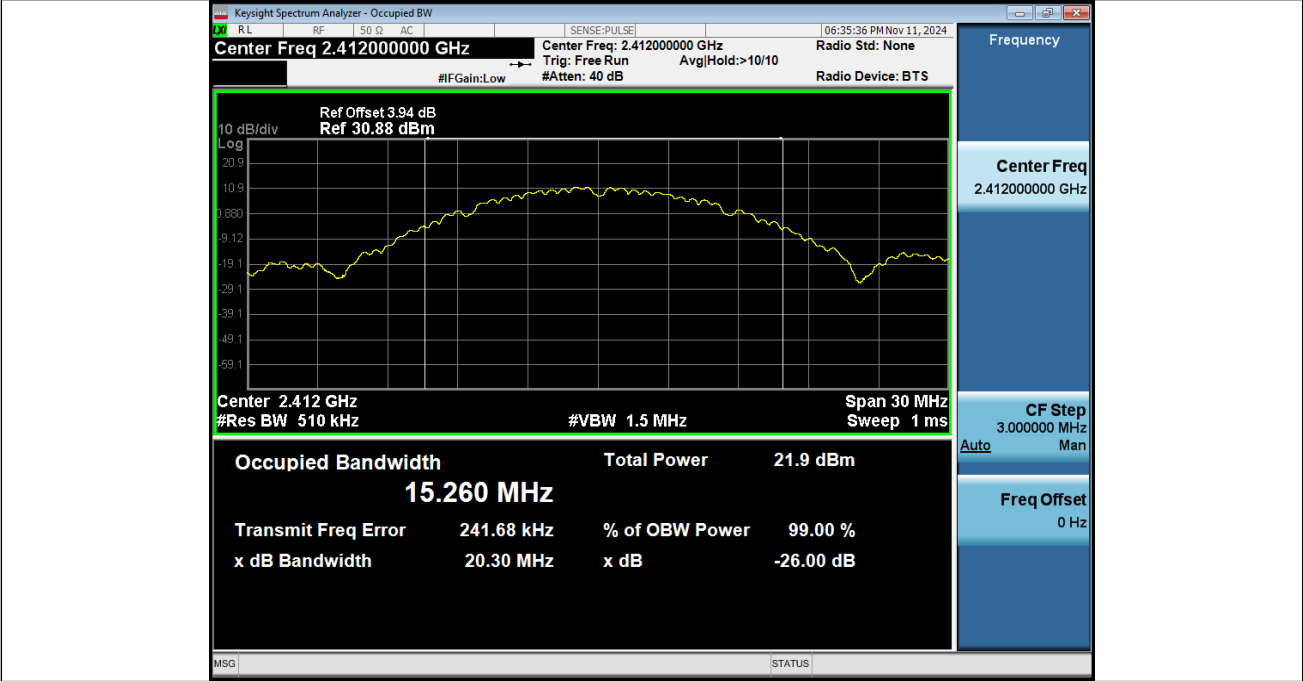
Appendix B.4: Test Results of 99% Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99% BW (MHz)
NVNT	ANT1	802.11b	2412.00	15.260
NVNT	ANT2	802.11b	2412.00	15.206
NVNT	ANT1	802.11b	2437.00	15.153
NVNT	ANT2	802.11b	2437.00	14.315
NVNT	ANT1	802.11b	2462.00	14.819
NVNT	ANT2	802.11b	2462.00	14.071
NVNT	ANT1	802.11g	2412.00	20.504
NVNT	ANT1	802.11g	2437.00	20.448
NVNT	ANT1	802.11g	2462.00	20.283
NVNT	ANT2	802.11g	2412.00	20.581
NVNT	ANT2	802.11g	2437.00	20.295
NVNT	ANT2	802.11g	2462.00	20.252
NVNT	ANT1	802.11n(HT20)	2412.00	20.834
NVNT	ANT2	802.11n(HT20)	2412.00	20.482
NVNT	ANT1	802.11n(HT20)	2437.00	20.930
NVNT	ANT2	802.11n(HT20)	2437.00	20.314
NVNT	ANT1	802.11n(HT20)	2462.00	20.585
NVNT	ANT2	802.11n(HT20)	2462.00	20.328
NVNT	ANT1	802.11ax(HE20)	2412.00	20.140
NVNT	ANT2	802.11ax(HE20)	2412.00	20.169
NVNT	ANT1	802.11ax(HE20)	2437.00	20.126
NVNT	ANT2	802.11ax(HE20)	2437.00	19.953
NVNT	ANT1	802.11ax(HE20)	2462.00	20.083
NVNT	ANT2	802.11ax(HE20)	2462.00	19.933

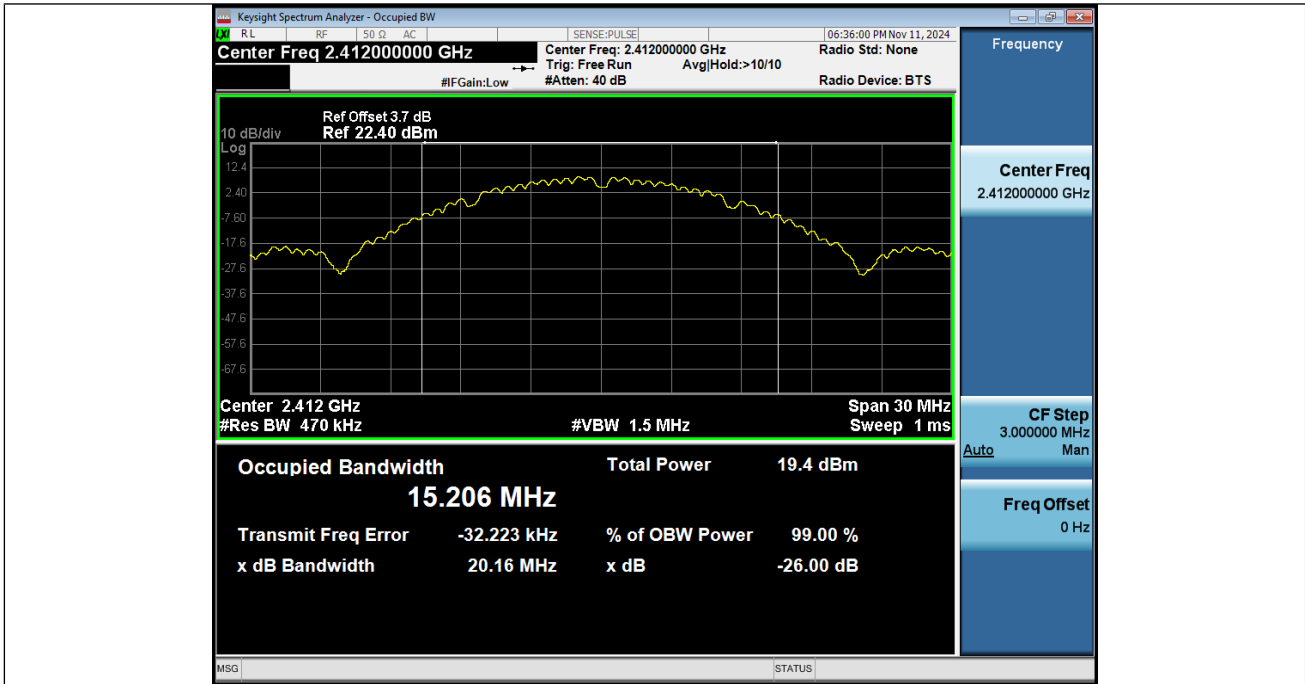




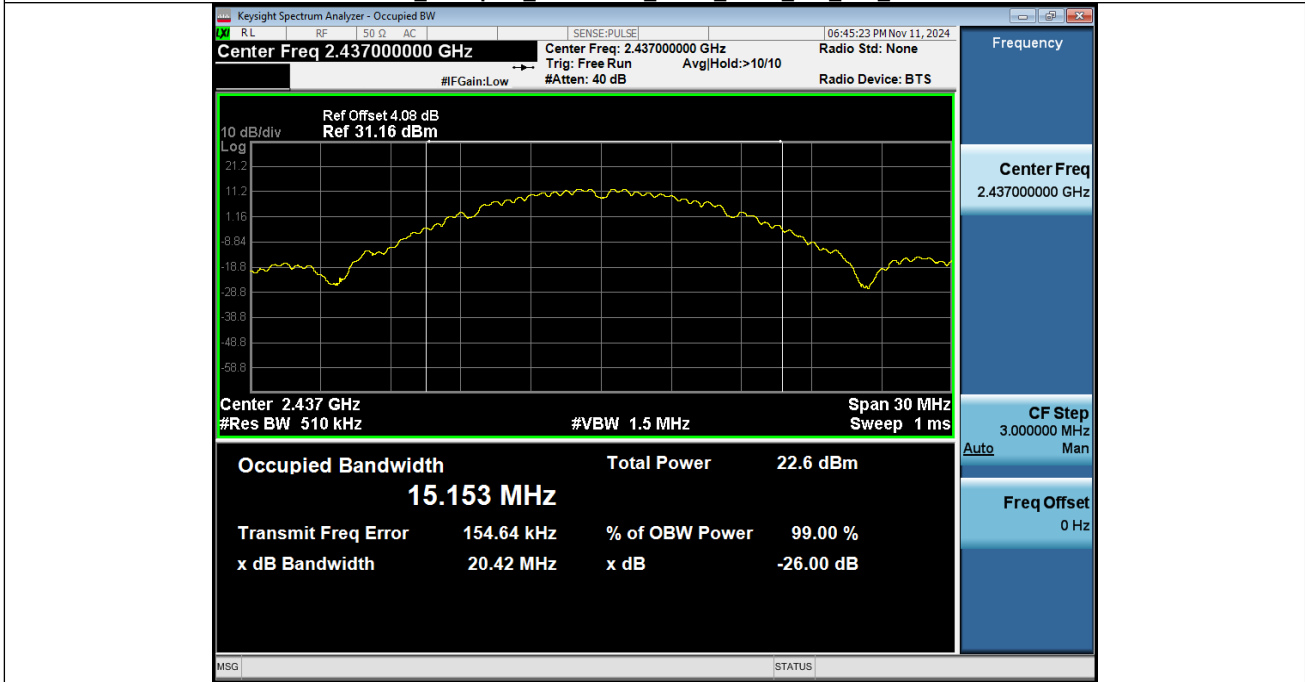
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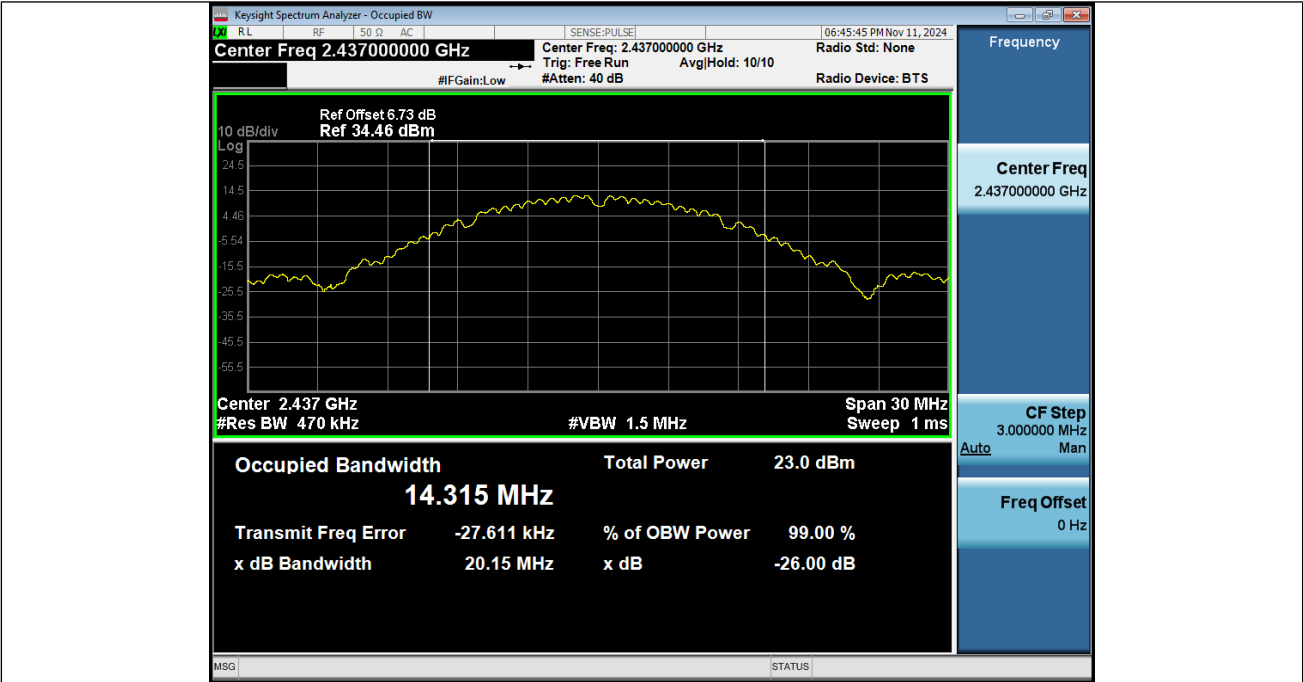
99%_Occupied_Bandwidth_NVNT_ANT2_802_11b_2412



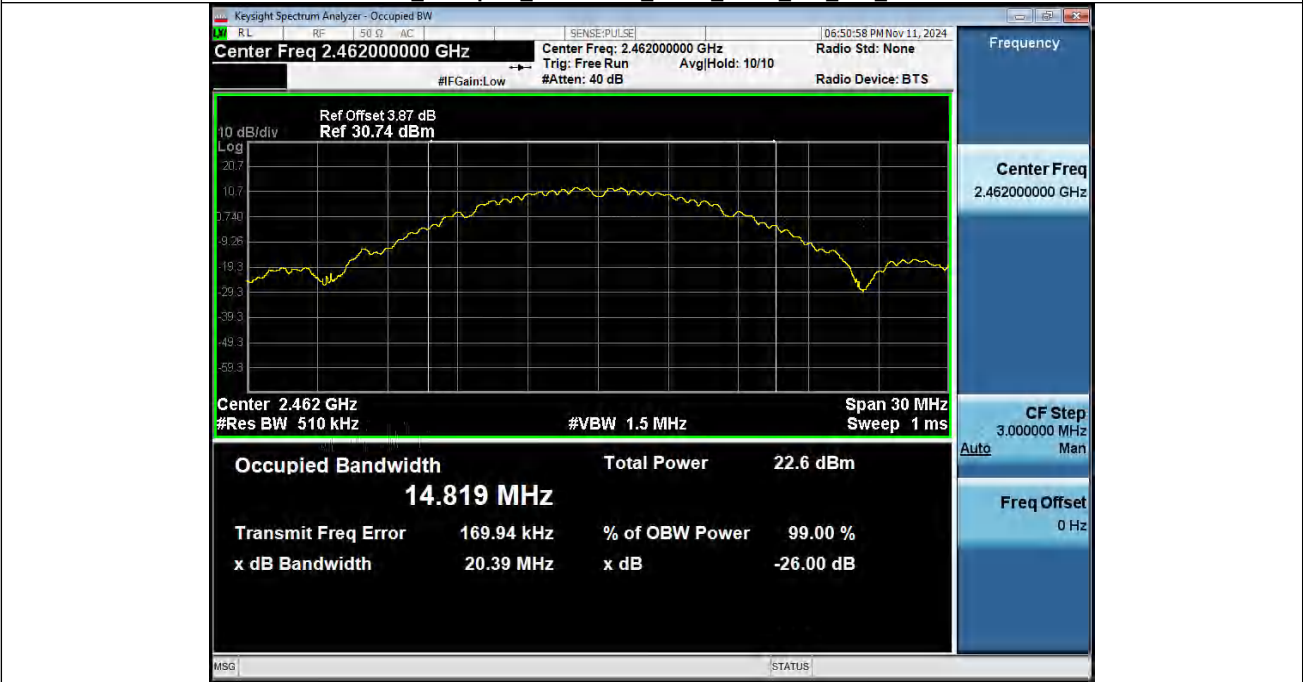
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99%_Occupied_Bandwidth_NVNT_ANT2_802_11b_2437



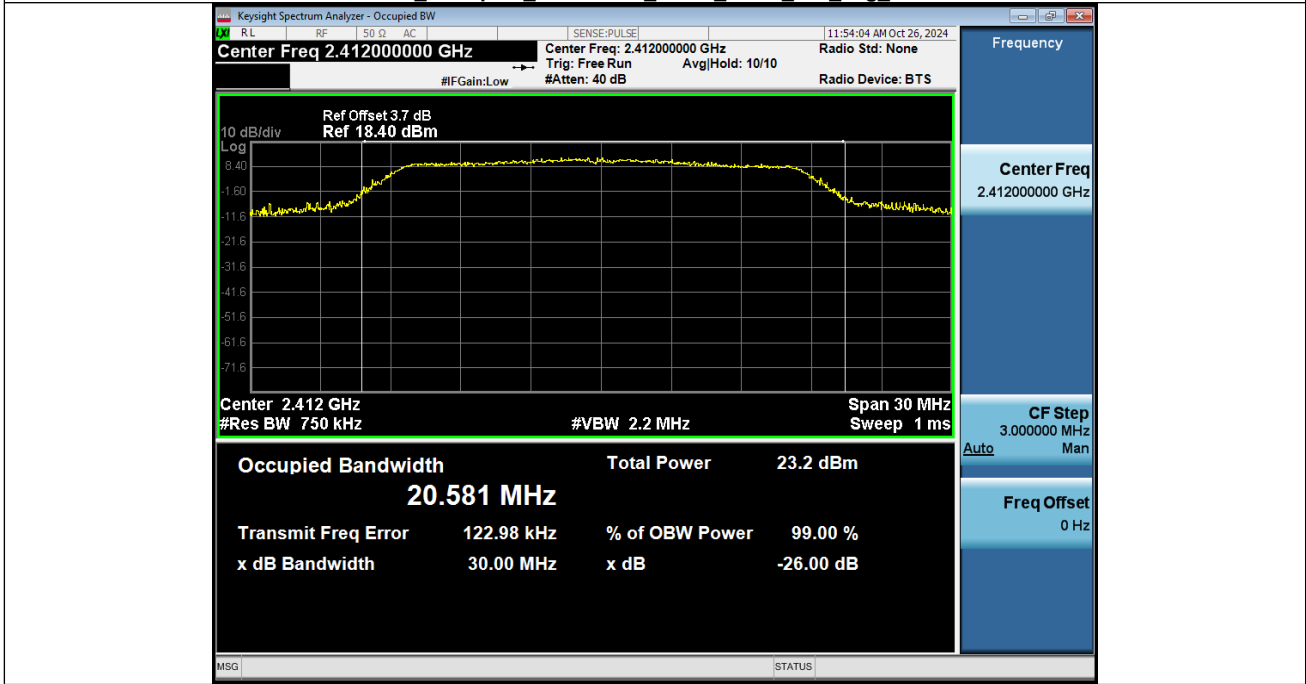
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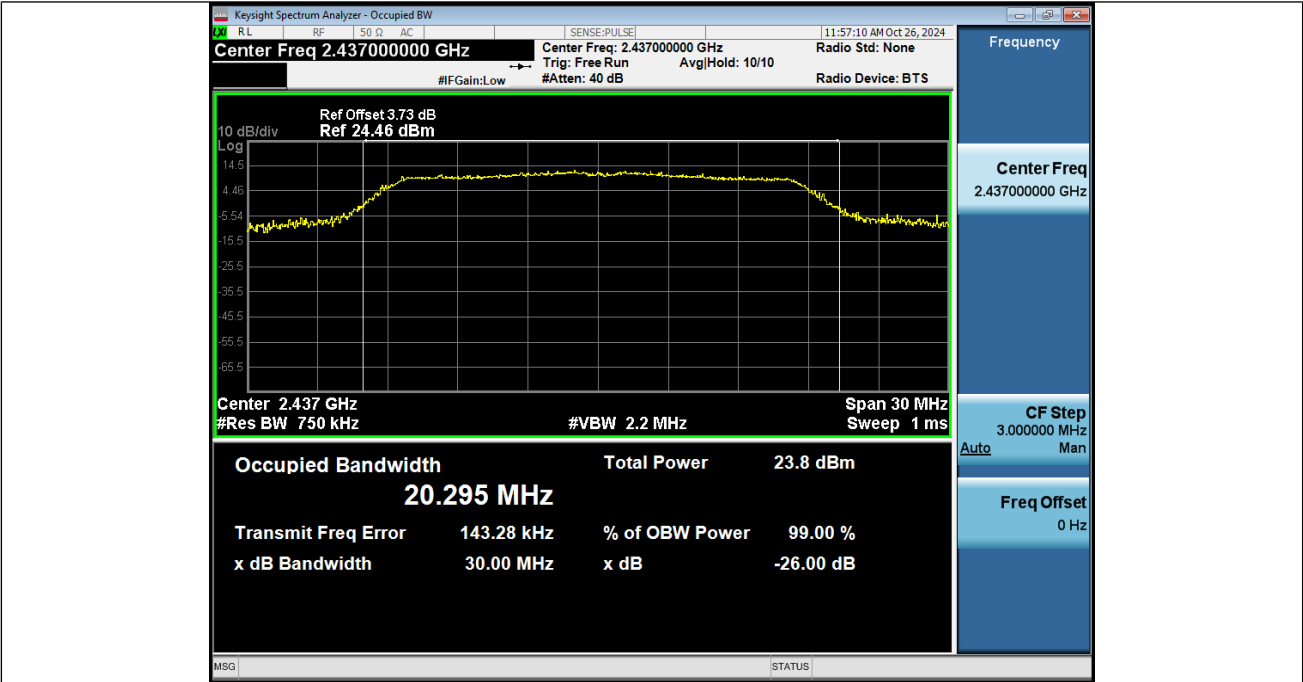
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99%_Occupied_Bandwidth_NVNT_ANT2_802_11g_2412



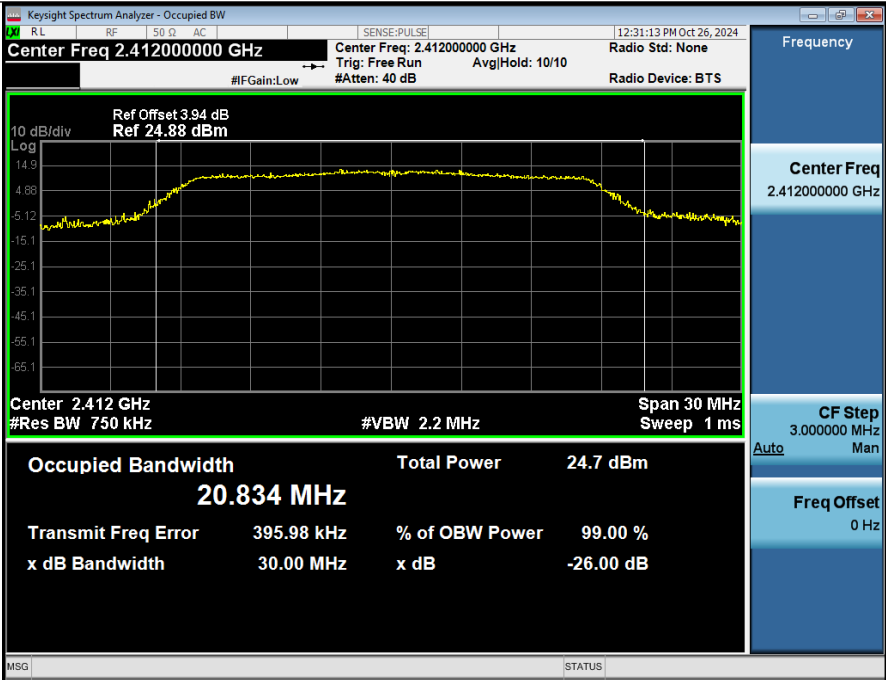
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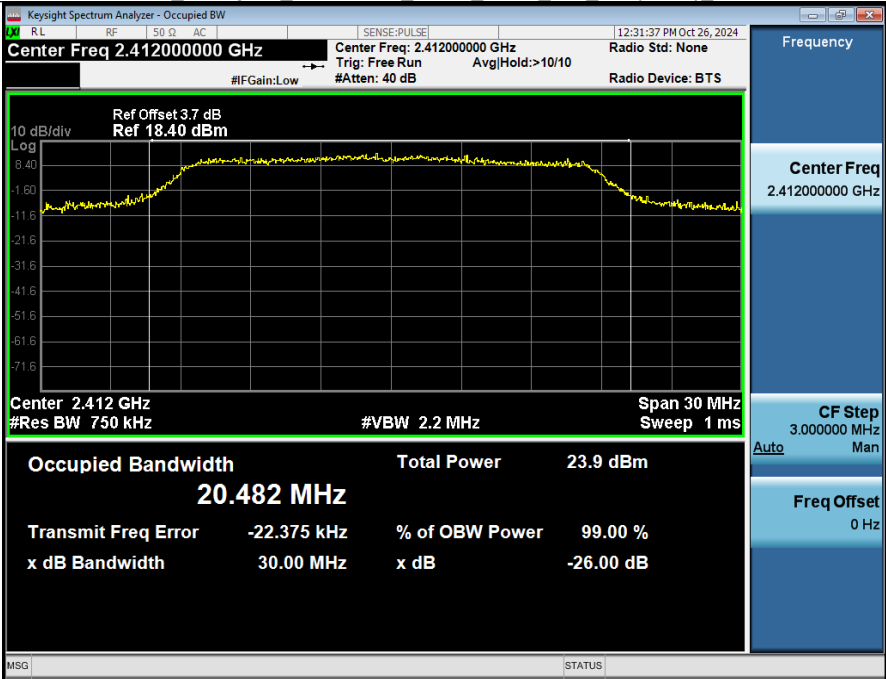
99% Occupied Bandwidth NVNT_ANT2_802_11g_2462



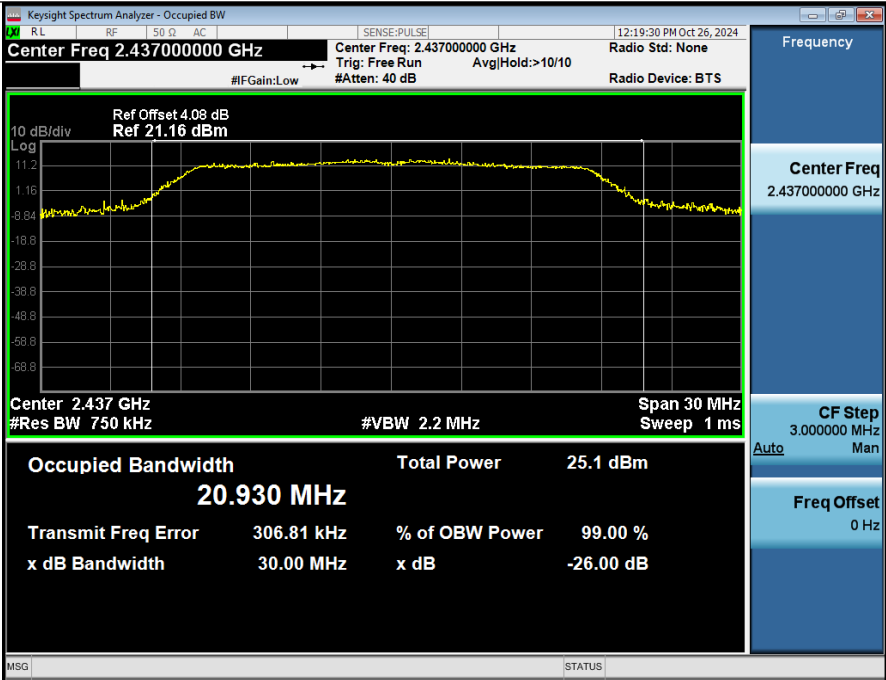
99% Occupied Bandwidth NVNT_ANT1_802_11n(HT20)_2412



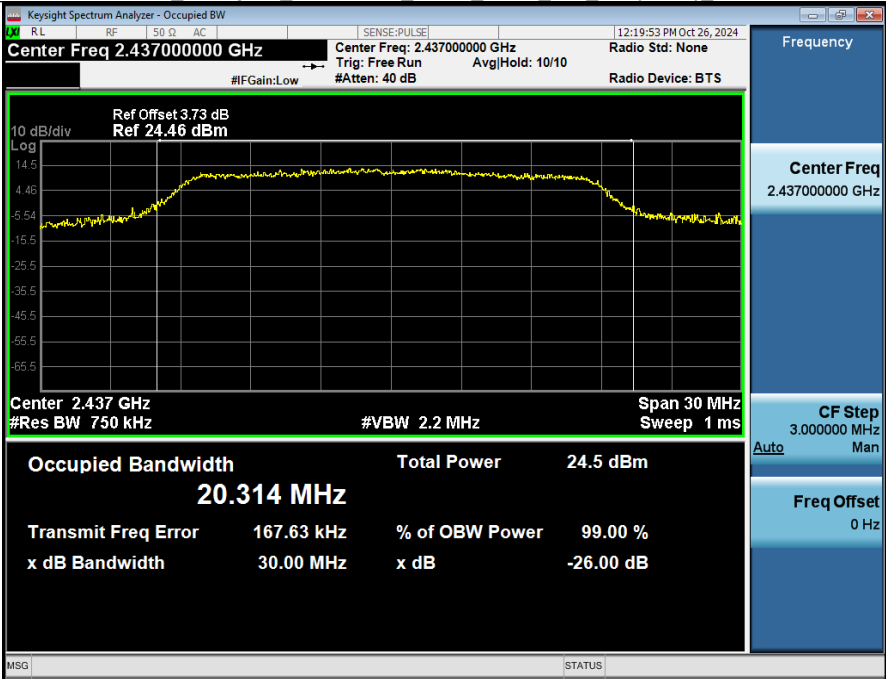
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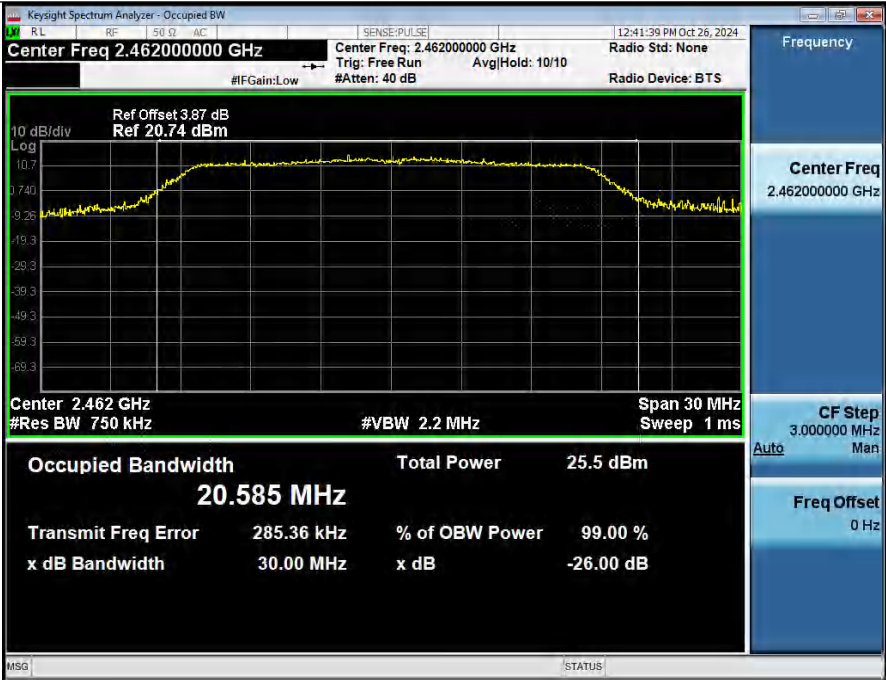
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99%_Occupied_Bandwidth_NVNT_ANT2_802_11n(HT20)_2437



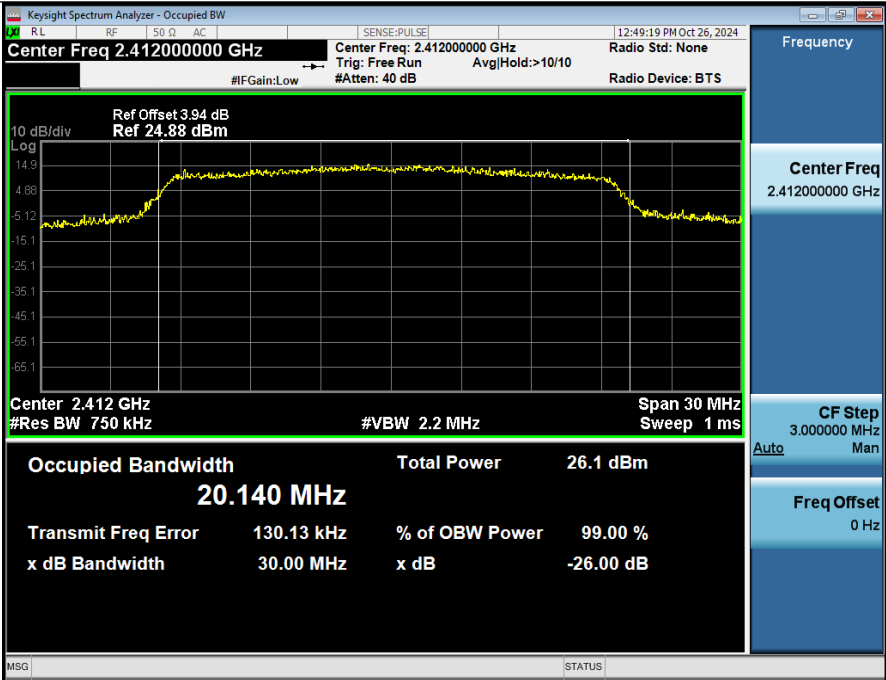
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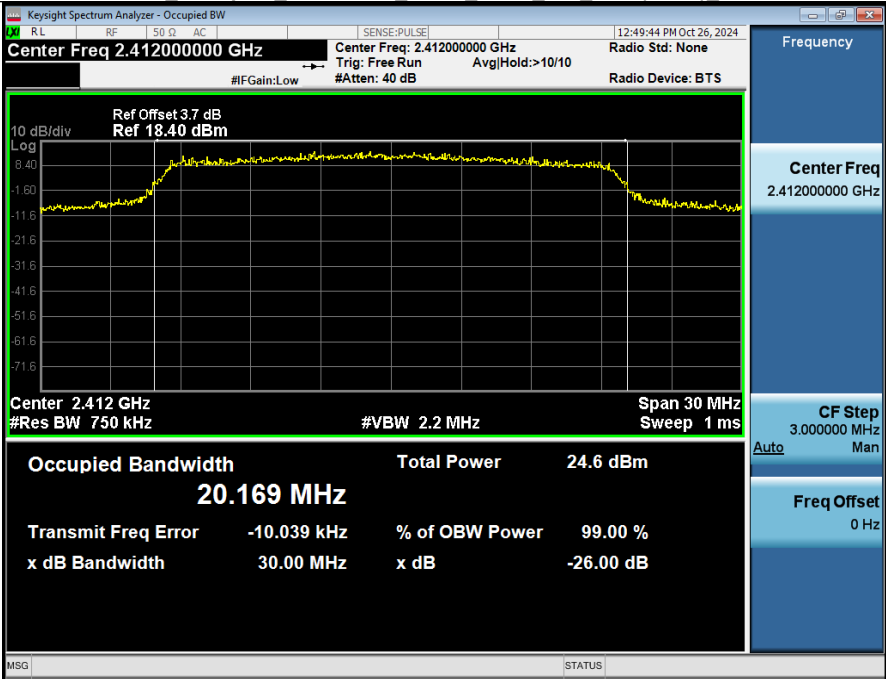
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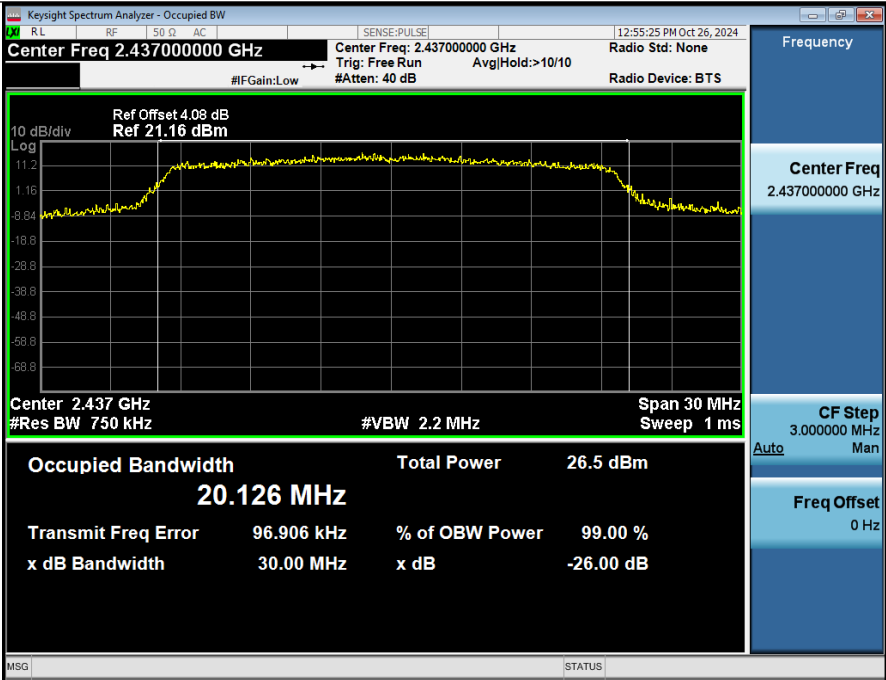
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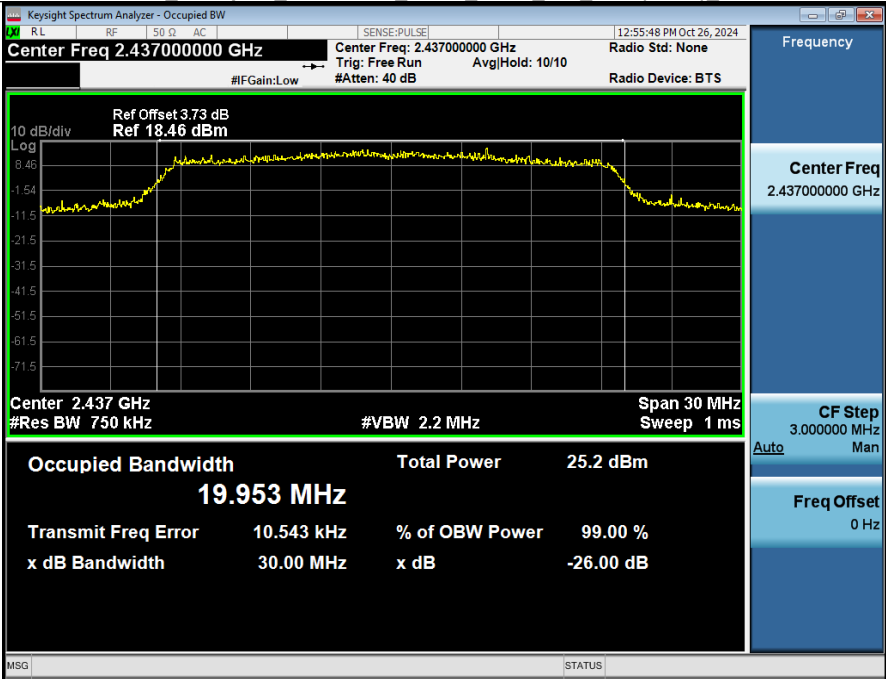
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99%_Occupied_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2437



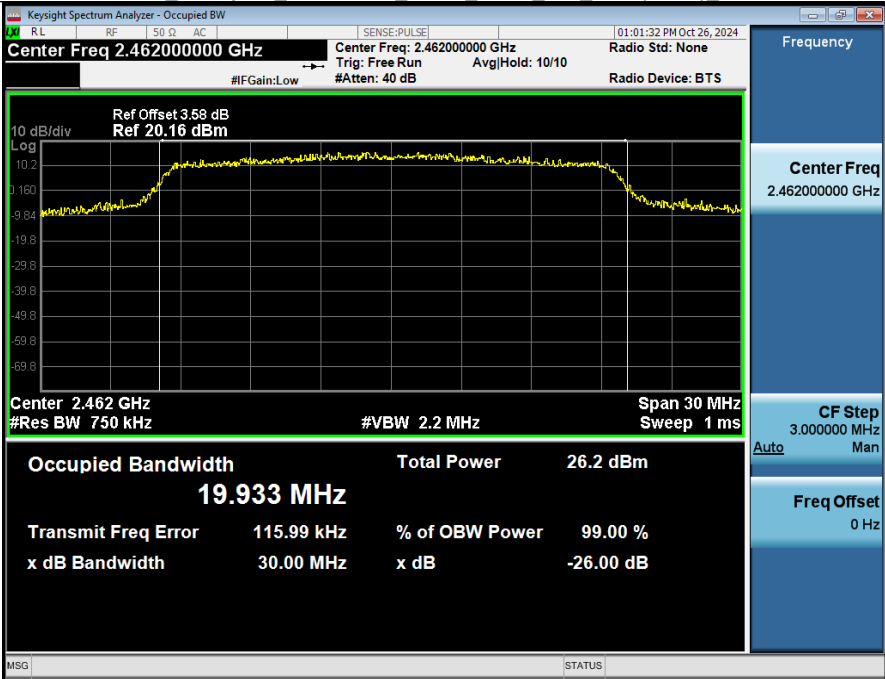
99%_Occupied_Bandwidth_NVNT_ANT2_802_11ax(HE20)_2437



99%_Occupied_Bandwidth_NVNT_ANT1_802_11ax(HE20)_2462



99% Occupied Bandwidth NVNT_ANT2_802_11ax(HE20)_2462



Appendix B.5: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_frequency(MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	23926.290	-47.007	-9.660	Pass
NVNT	ANT2	802.11b	2412.00	24400.720	-41.646	-9.660	Pass
NVNT	ANT1	802.11b	2437.00	2502.030	-46.189	-8.914	Pass
NVNT	ANT2	802.11b	2437.00	24722.833	-41.960	-8.914	Pass
NVNT	ANT1	802.11b	2462.00	2504.527	-39.572	-8.524	Pass
NVNT	ANT2	802.11b	2462.00	24418.199	-36.847	-8.524	Pass
NVNT	ANT1	802.11g	2412.00	24395.726	-48.870	-13.883	Pass
NVNT	ANT1	802.11g	2437.00	23953.757	-49.445	-13.338	Pass
NVNT	ANT1	802.11g	2462.00	2504.527	-44.852	-12.812	Pass
NVNT	ANT2	802.11g	2412.00	24388.235	-50.619	-15.262	Pass
NVNT	ANT2	802.11g	2437.00	24398.223	-44.481	-14.806	Pass
NVNT	ANT2	802.11g	2462.00	2504.527	-44.573	-13.504	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	24383.241	-51.327	-14.386	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	24667.899	-51.173	-14.386	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	24930.084	-44.926	-14.214	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	24373.253	-45.560	-14.214	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	2502.030	-41.033	-13.607	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	2502.030	-43.356	-13.607	Pass
NVNT	ANT1	802.11ax(HE20)	2412.00	24423.193	-49.092	-13.342	Pass
NVNT	ANT2	802.11ax(HE20)	2412.00	24388.235	-49.689	-13.342	Pass
NVNT	ANT1	802.11ax(HE20)	2437.00	23856.374	-44.968	-13.342	Pass
NVNT	ANT2	802.11ax(HE20)	2437.00	24375.750	-45.575	-13.342	Pass
NVNT	ANT1	802.11ax(HE20)	2462.00	2502.030	-40.461	-13.245	Pass
NVNT	ANT2	802.11ax(HE20)	2462.00	2504.527	-41.587	-13.245	Pass

All modes and ports tested, only the worst-case report

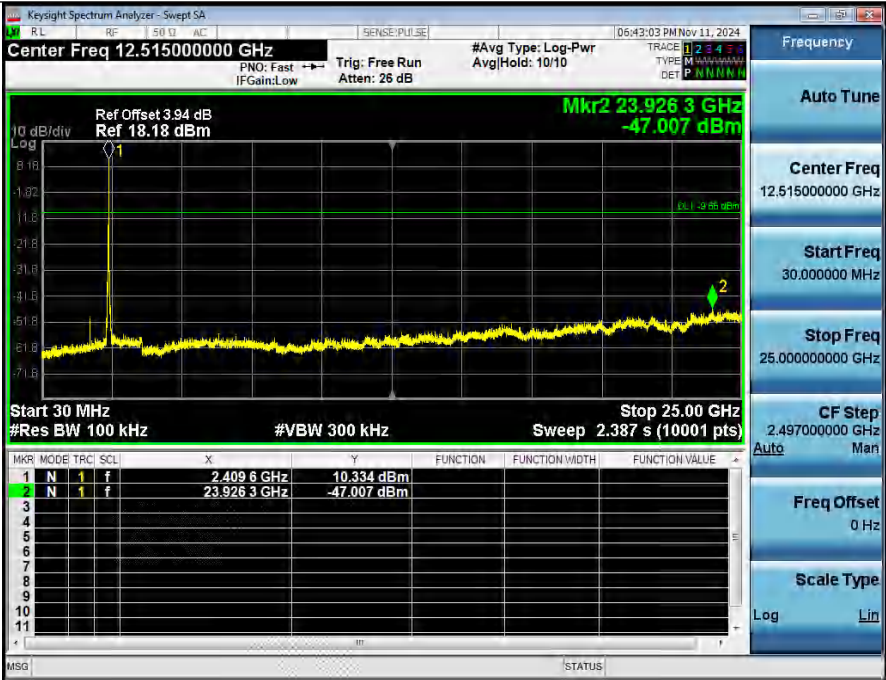
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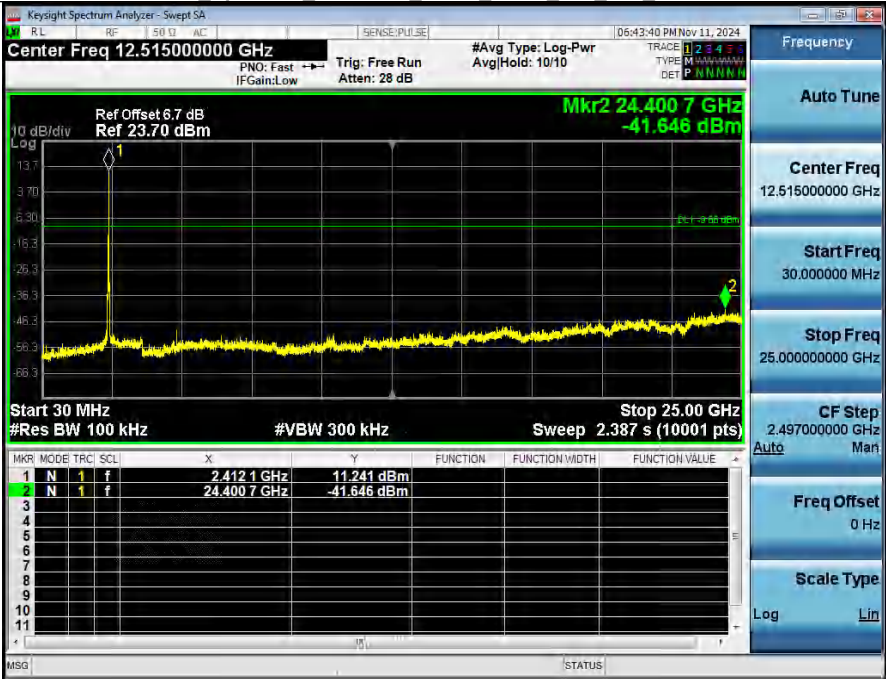
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2_Spurious_Emission_NVNT_ANT1_802_11b_2412



2_Spurious_Emission_NVNT_ANT2_802_11b_2412



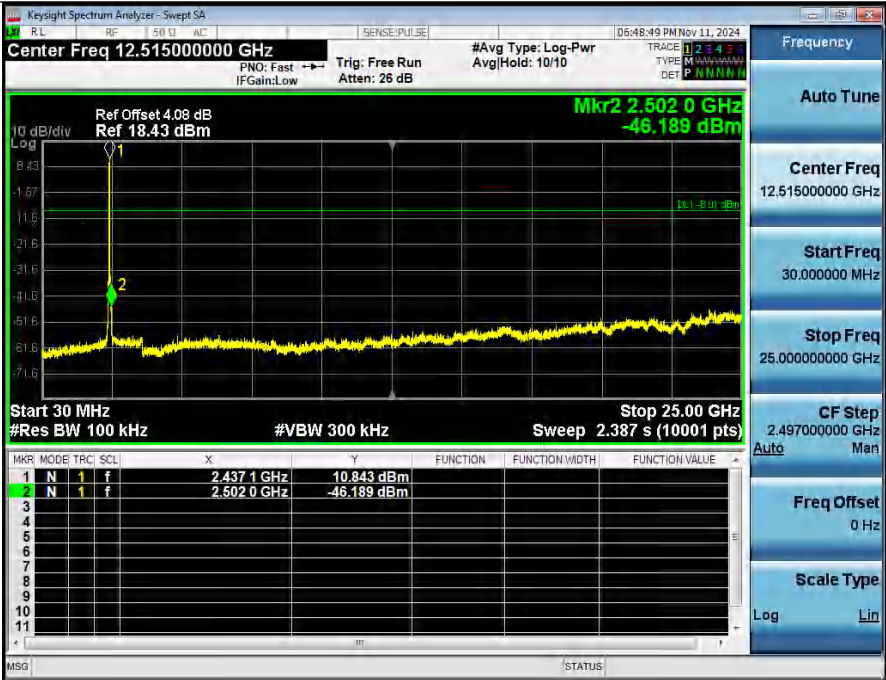
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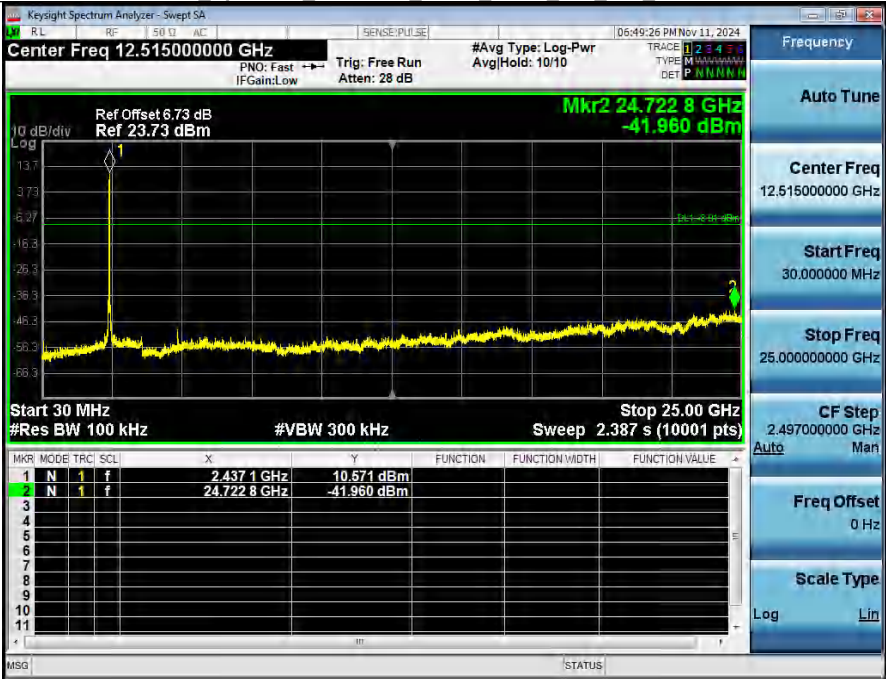
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2 Spurious_Emission_NVNT_ANT1_802_11b_2437



2_Spurious_Emission_NVNT_ANT2_802_11b_2437



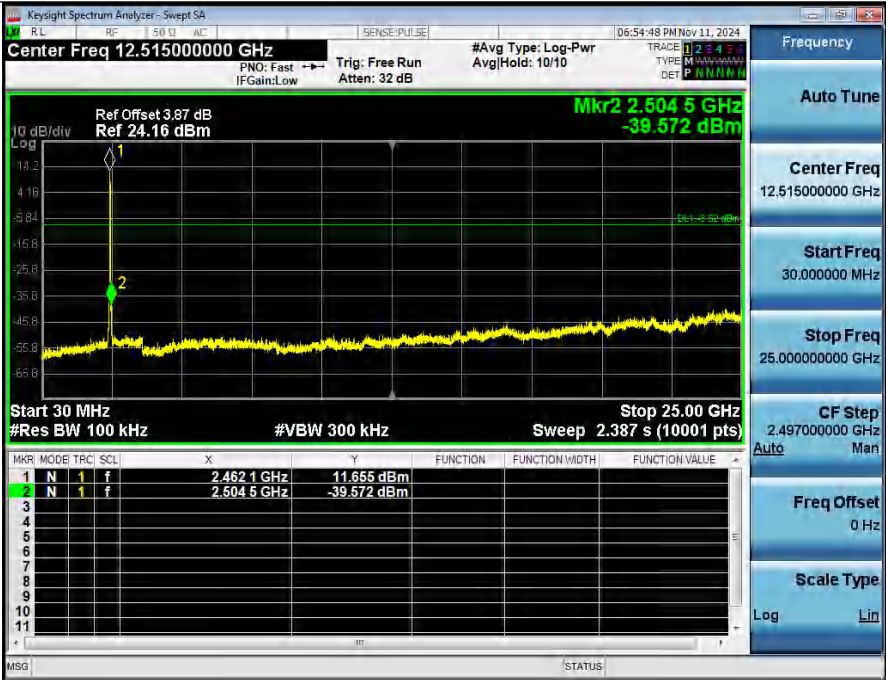
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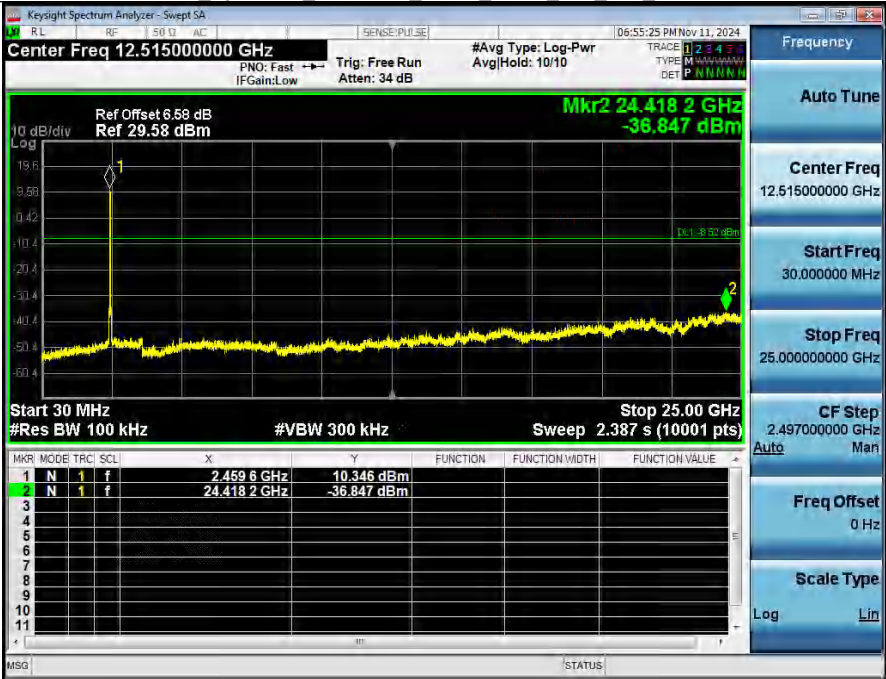
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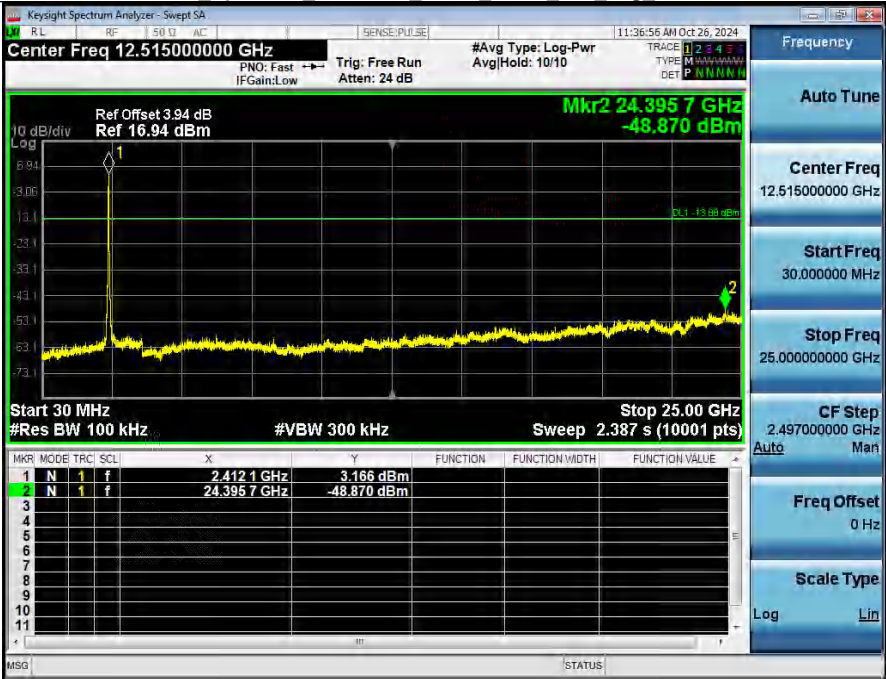
2 Spurious Emission_NVNT_ANT2_802_11b_2462



1 Reference_Level_NVNT_ANT1_802_11g_2412



2_Spurious_Emission_NVNT_ANT1_802_11g_2412



1_Reference_Level_NVNT_ANT1_802_11g_2437