

Appendix

Test Data

for BTEK250606024A01-T01

Start date	2025/7/9	Finish date	2025/7/18
Temperature	23.7℃	Humidity	54%
RF specifications	2.4G_WIFI	Test Engineer	Zora



Table of Contents

1. -6dB Bandwidth	3
2. 99% Occupied Bandwidth	16
3. Duty Cycle	29
4. MAX. Output Power	42
5. Power Spectral Density	55
6. Bandedge	71
7. Spurious Emission	87



1. -6dB Bandwidth

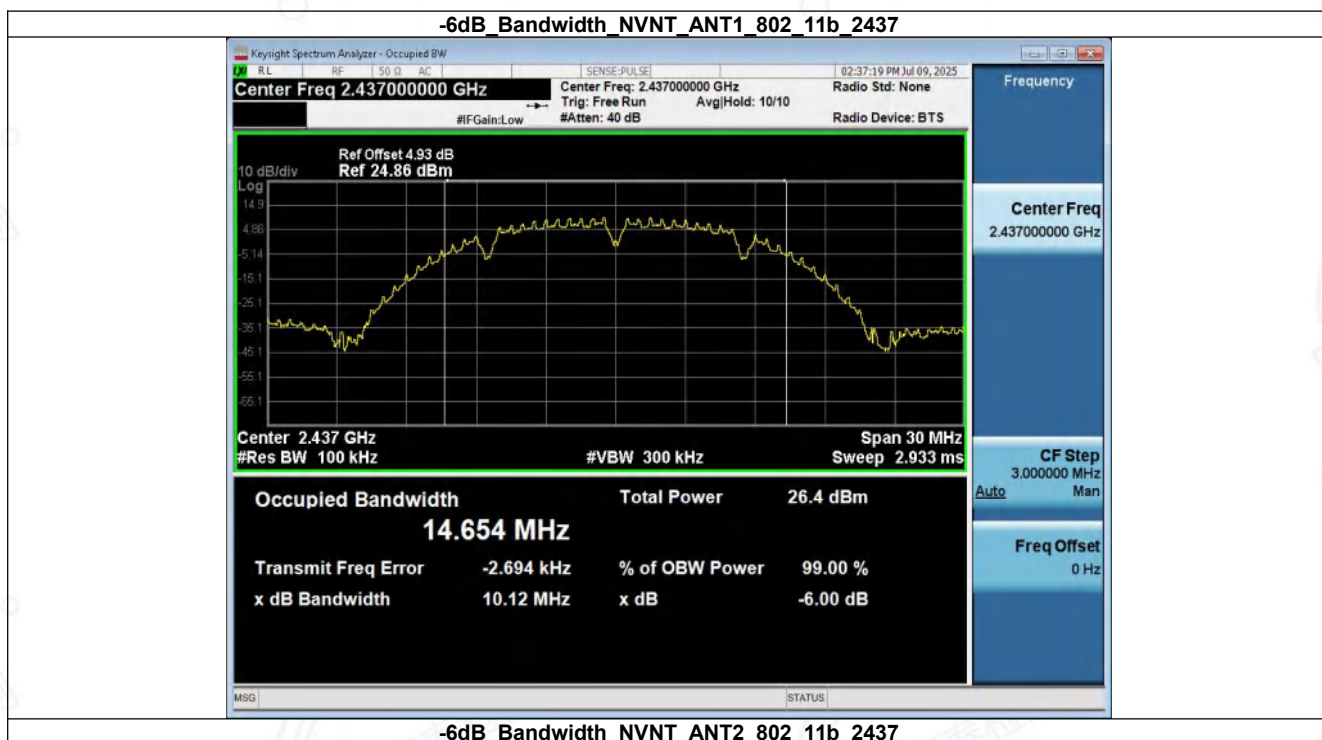
Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	10.15	500	Pass
NVNT	ANT2	802.11b	2412.00	10.14	500	Pass
NVNT	ANT1	802.11b	2437.00	10.12	500	Pass
NVNT	ANT2	802.11b	2437.00	10.12	500	Pass
NVNT	ANT1	802.11b	2462.00	10.13	500	Pass
NVNT	ANT2	802.11b	2462.00	10.13	500	Pass
NVNT	ANT1	802.11g	2412.00	15.73	500	Pass
NVNT	ANT2	802.11g	2412.00	16.32	500	Pass
NVNT	ANT1	802.11g	2437.00	15.45	500	Pass
NVNT	ANT2	802.11g	2437.00	16.33	500	Pass
NVNT	ANT1	802.11g	2462.00	15.63	500	Pass
NVNT	ANT2	802.11g	2462.00	15.73	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	16.33	500	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	16.34	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	15.93	500	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	16.19	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	15.33	500	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	16.92	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	35.21	500	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	35.21	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	35.15	500	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	35.17	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	35.24	500	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	35.11	500	Pass

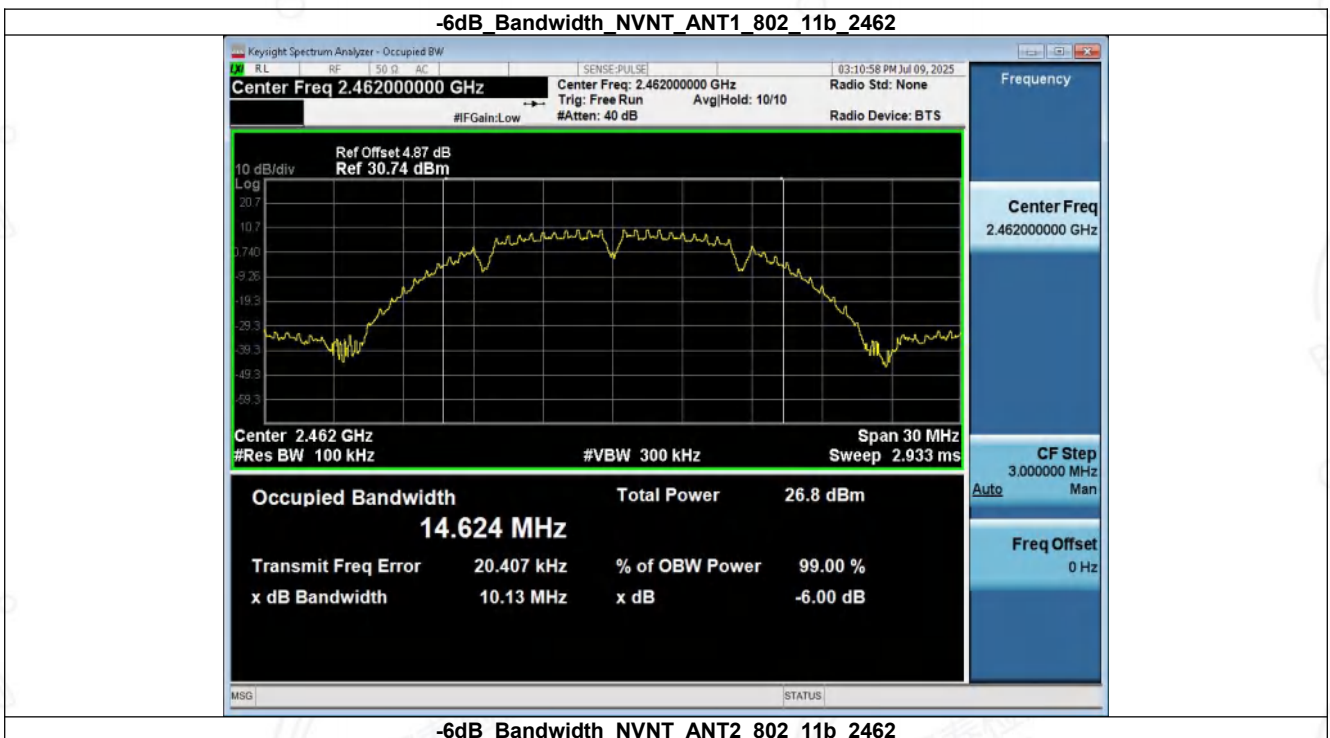
-6dB_Bandwidth_NVNT_ANT1_802_11b_2412

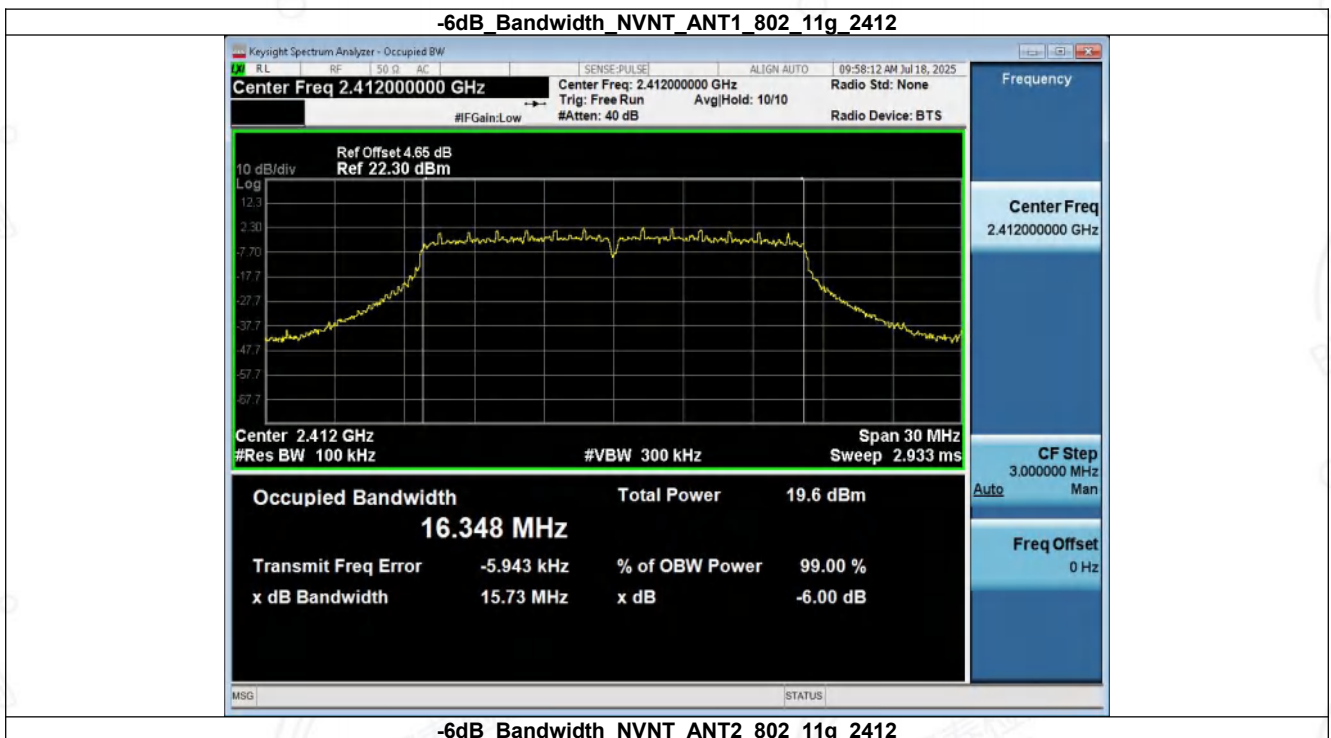


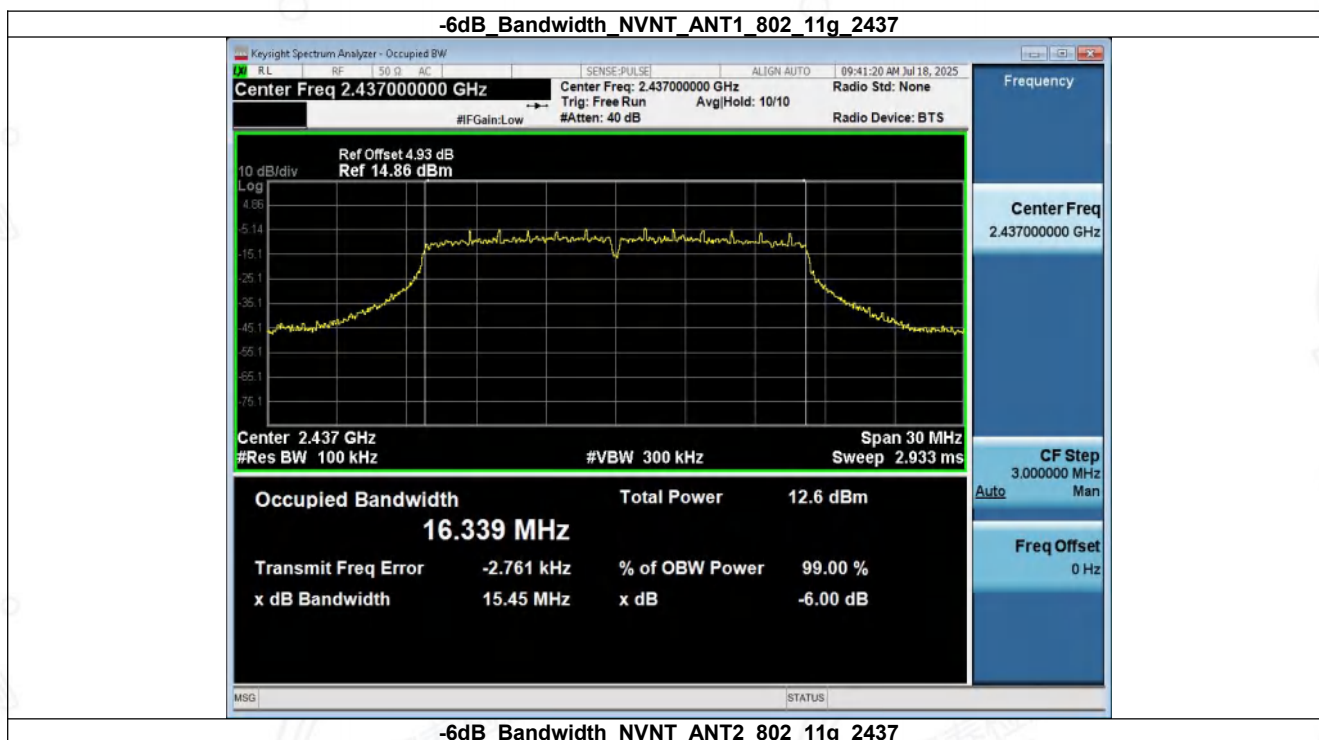
-6dB_Bandwidth_NVNT_ANT2_802_11b_2412

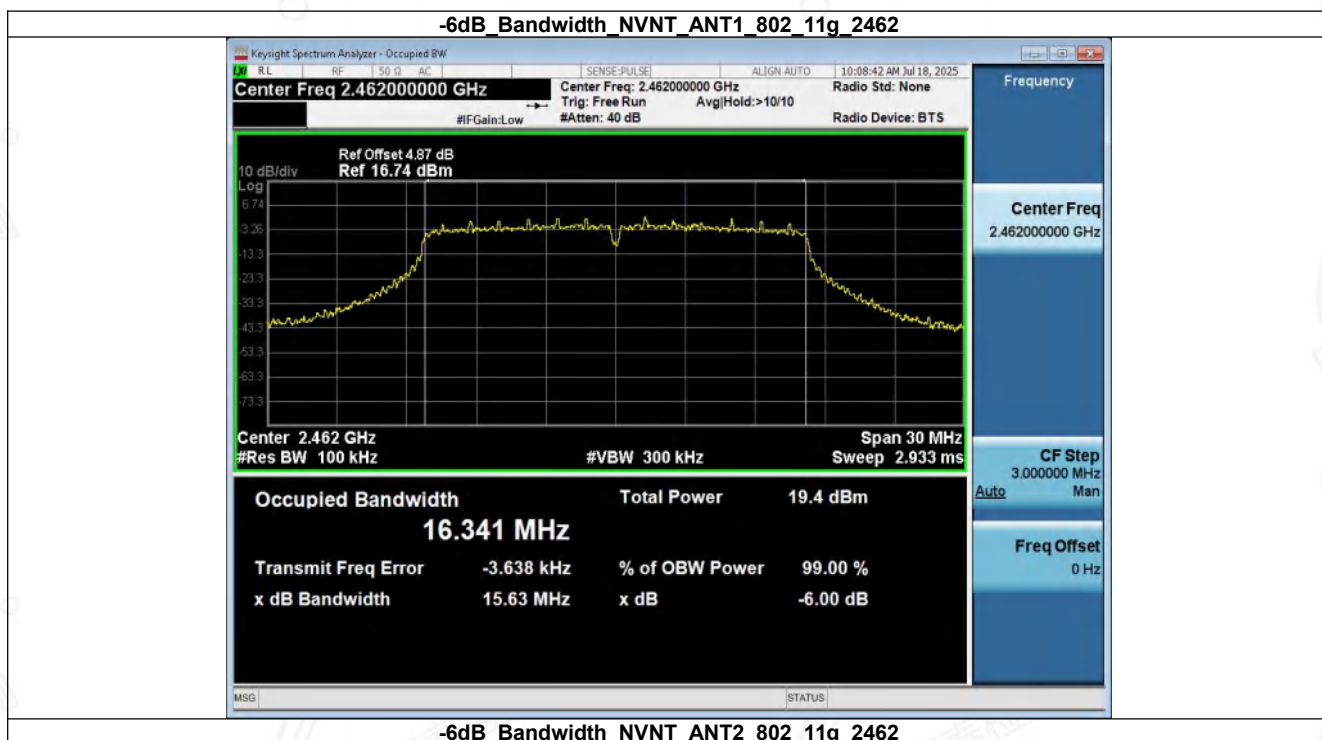


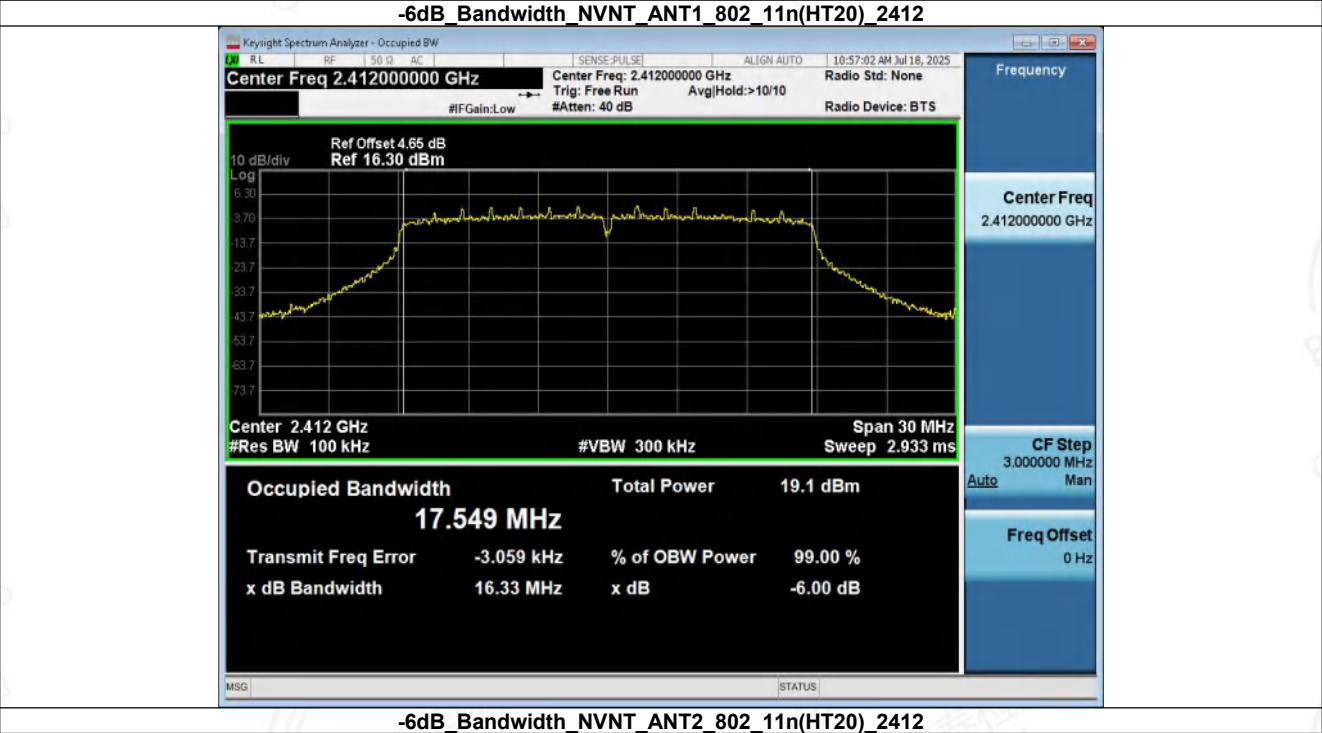
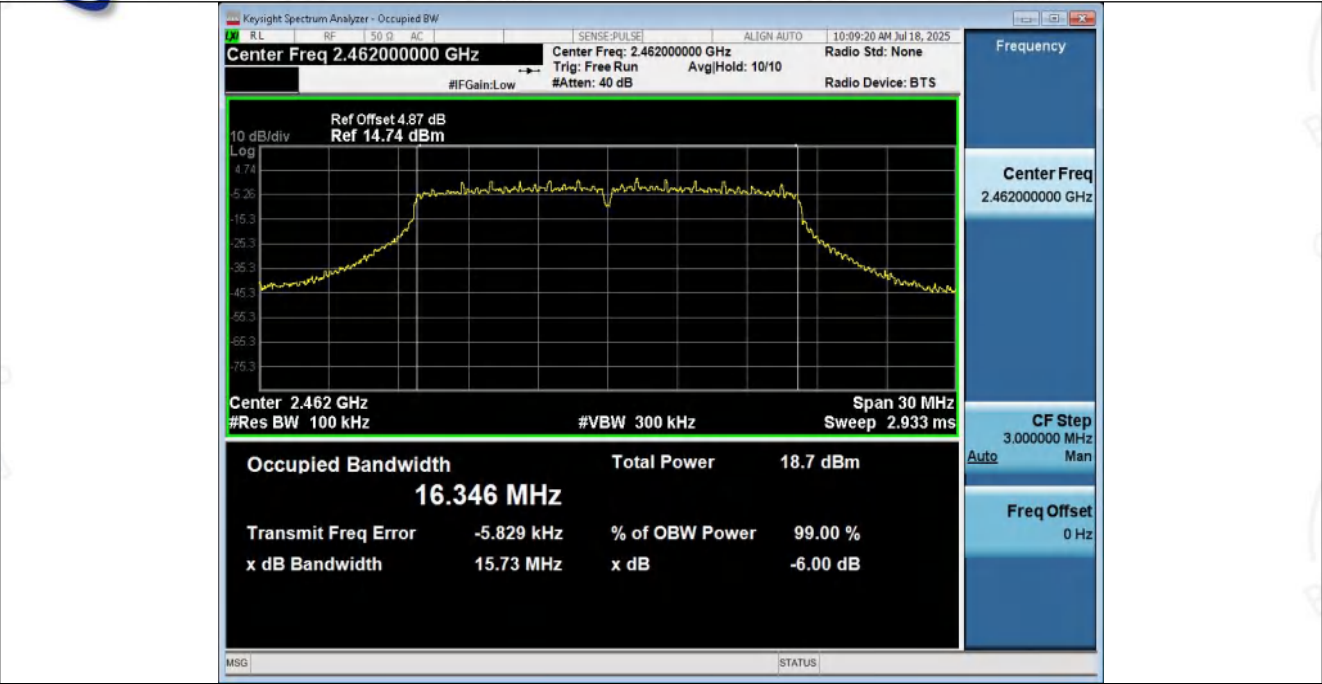


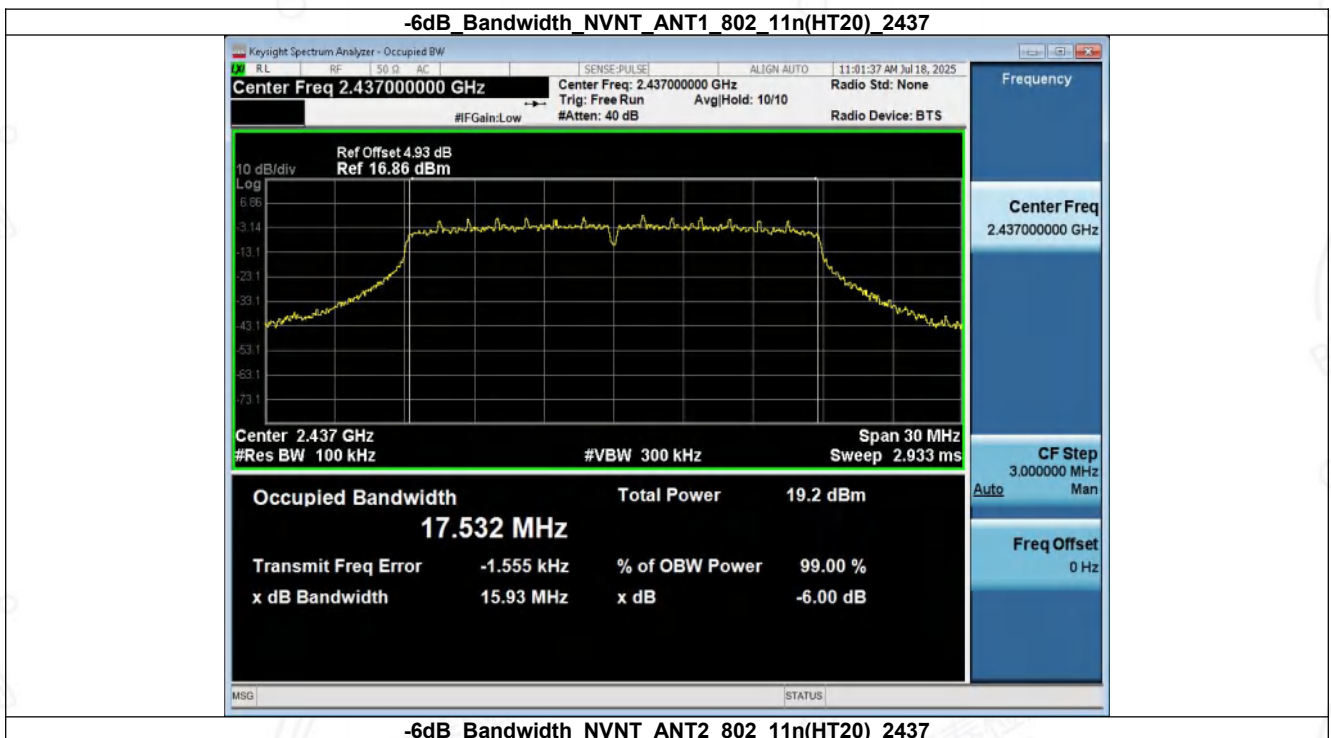


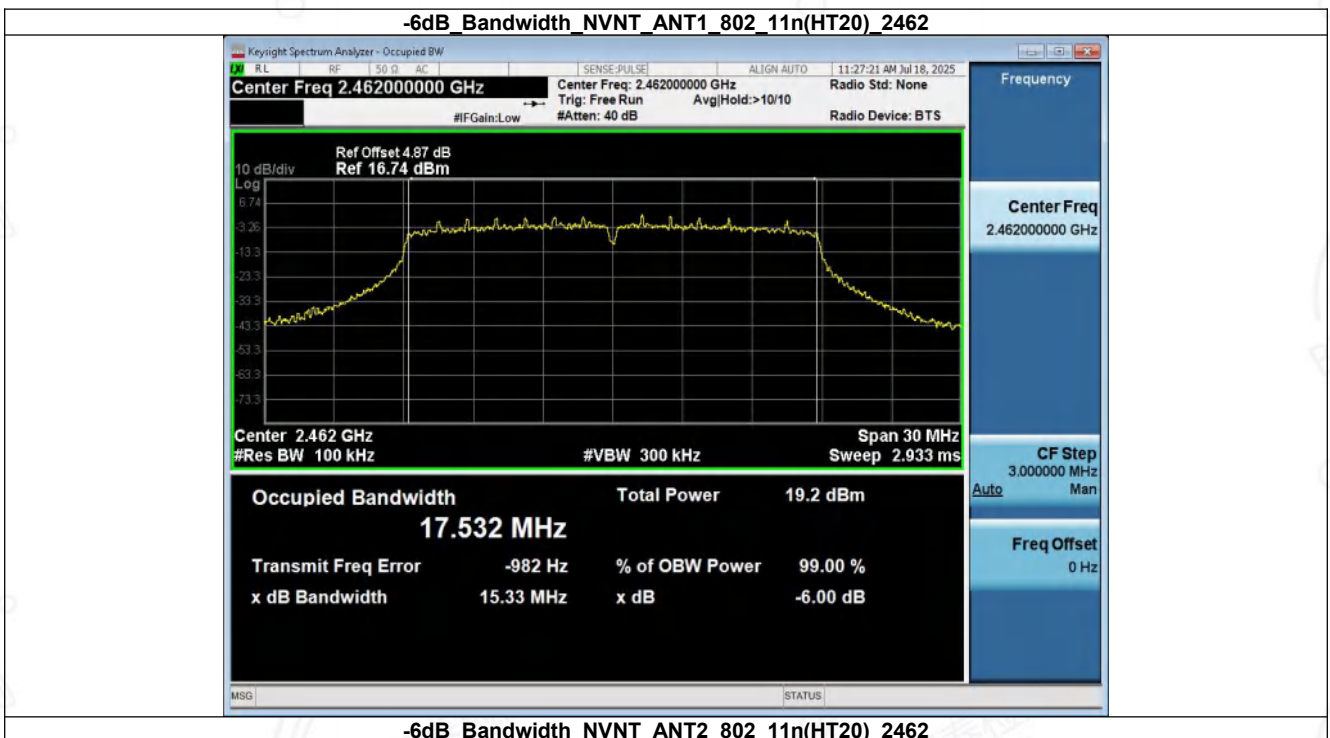
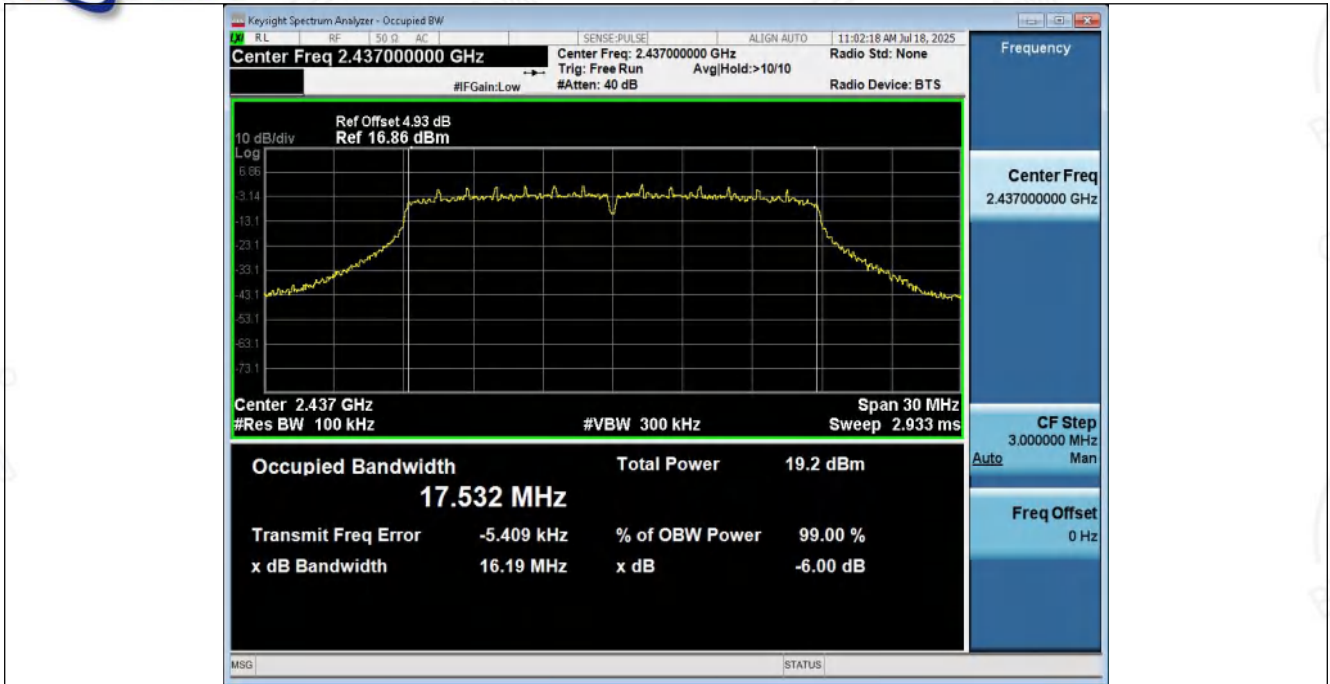




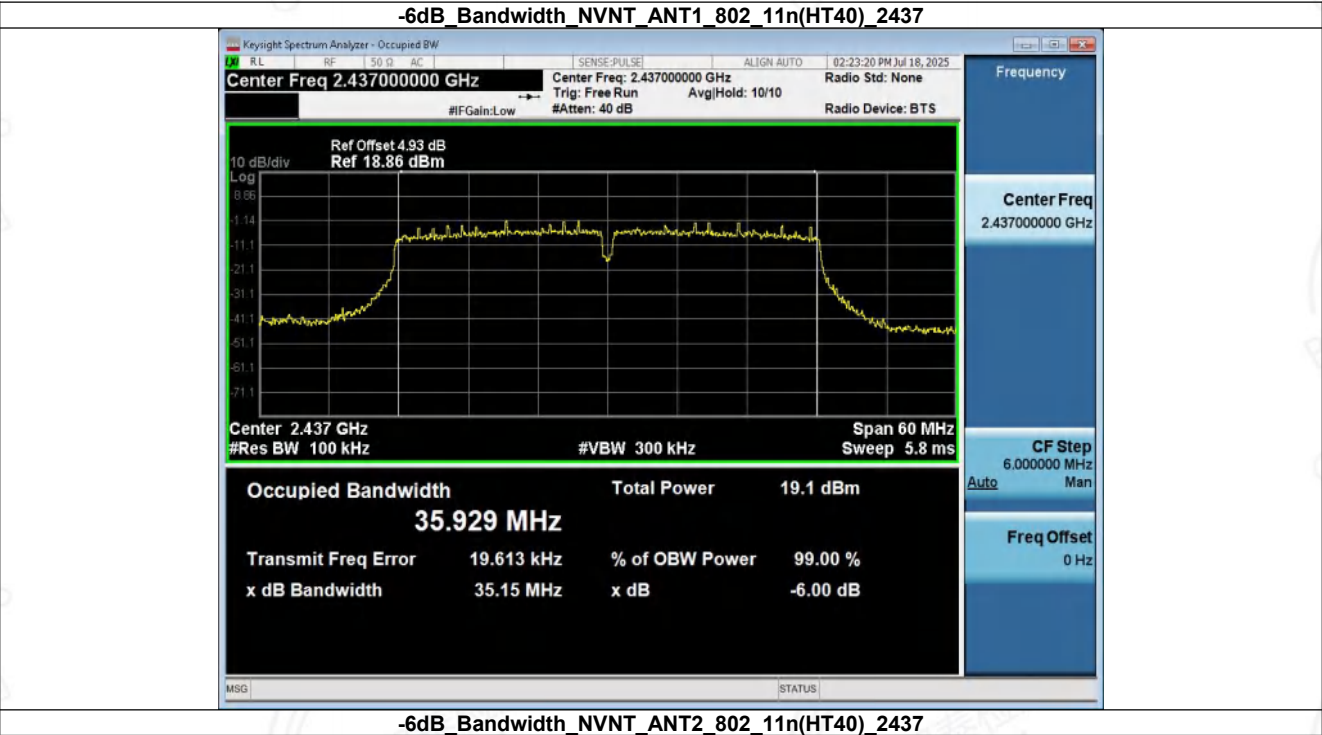


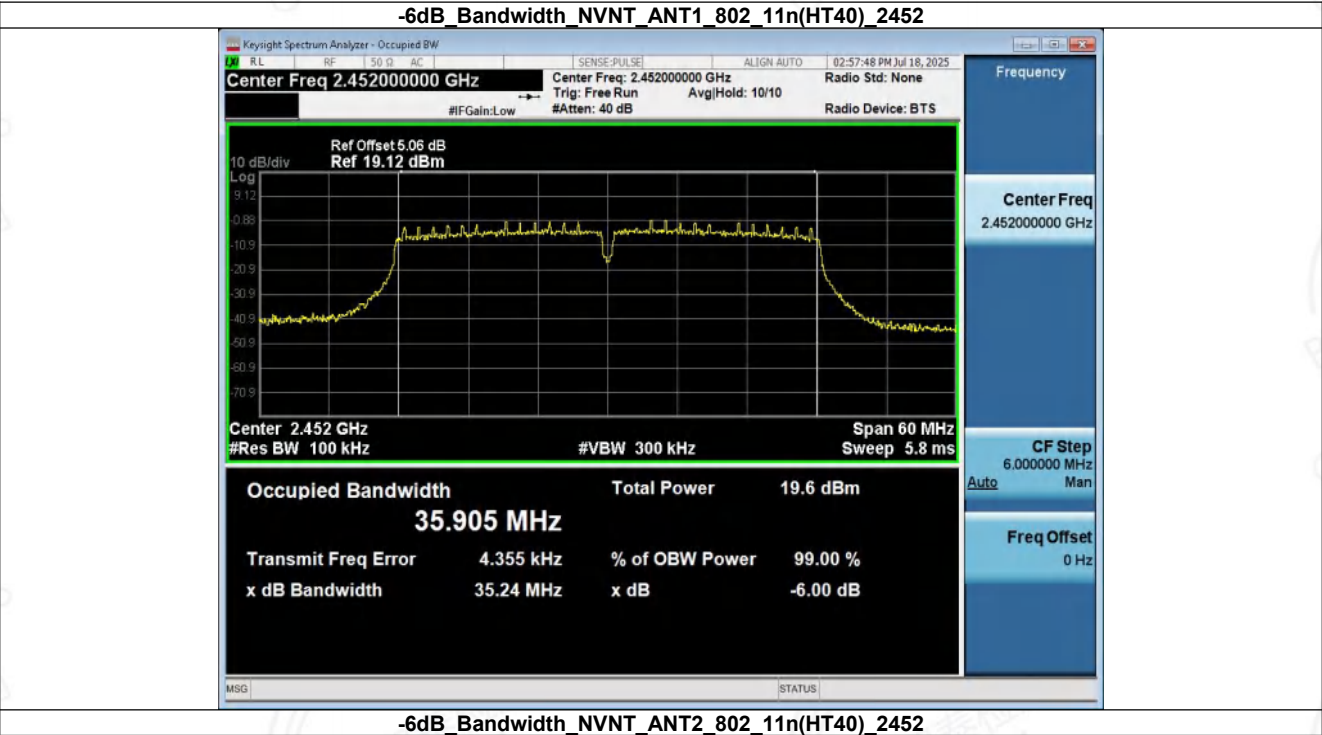
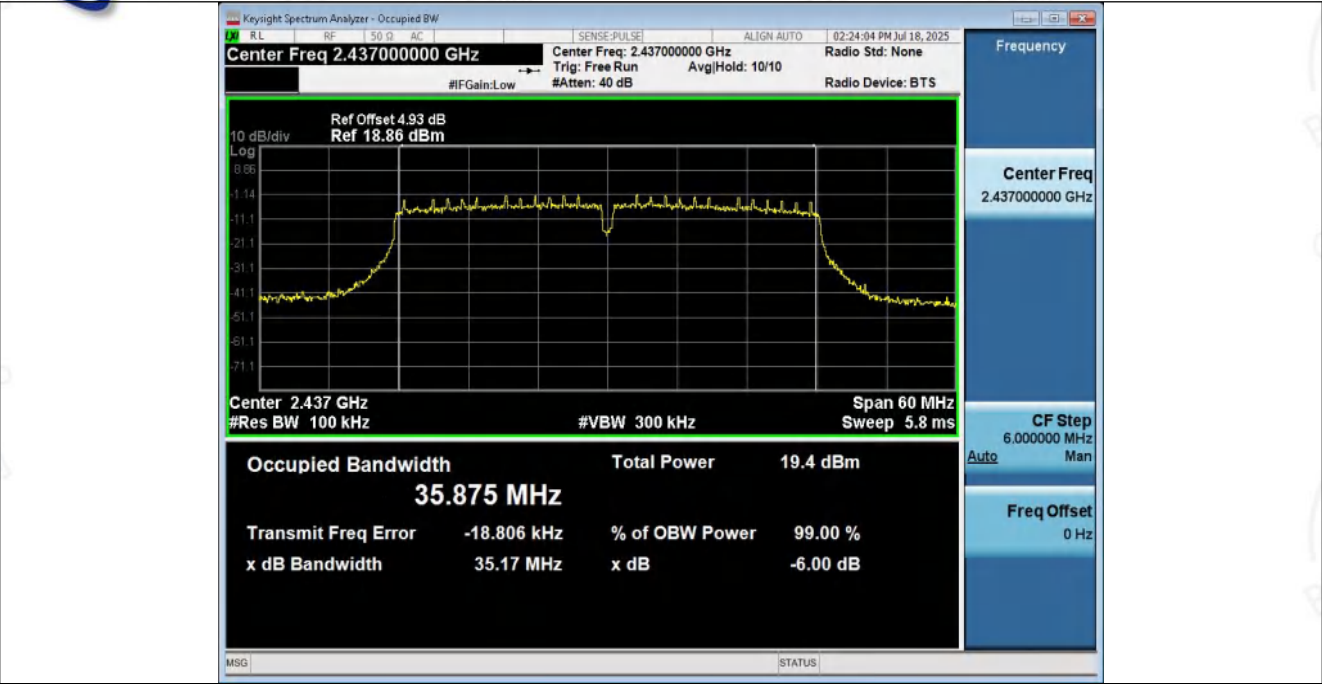














2. 99% Occupied Bandwidth

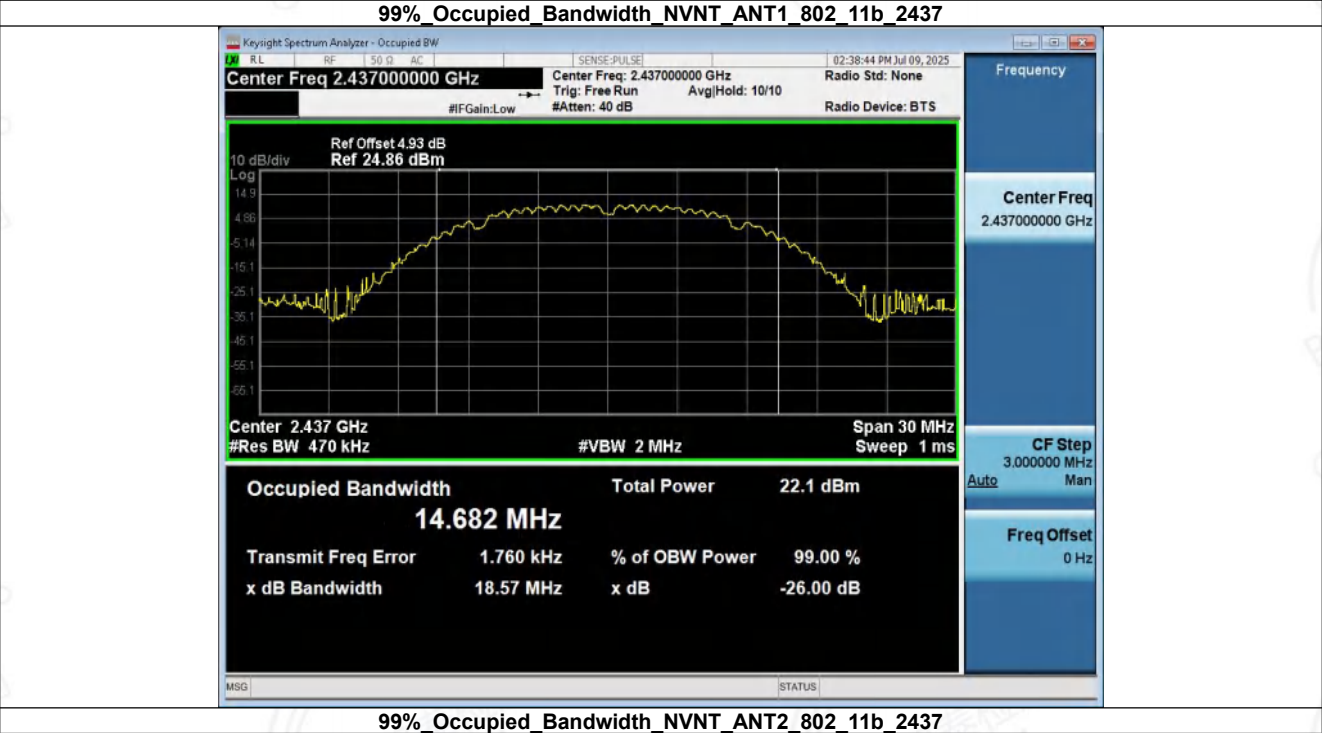
Condition	Antenna	Modulation	Frequency (MHz)	99% BW(MHz)
NVNT	ANT1	802.11b	2412.00	14.903
NVNT	ANT2	802.11b	2412.00	14.662
NVNT	ANT1	802.11b	2437.00	14.682
NVNT	ANT2	802.11b	2437.00	14.644
NVNT	ANT1	802.11b	2462.00	14.718
NVNT	ANT2	802.11b	2462.00	14.671
NVNT	ANT1	802.11g	2412.00	16.845
NVNT	ANT2	802.11g	2412.00	16.627
NVNT	ANT1	802.11g	2437.00	16.893
NVNT	ANT2	802.11g	2437.00	16.698
NVNT	ANT1	802.11g	2462.00	16.879
NVNT	ANT2	802.11g	2462.00	16.703
NVNT	ANT1	802.11n(HT20)	2412.00	18.219
NVNT	ANT2	802.11n(HT20)	2412.00	18.161
NVNT	ANT1	802.11n(HT20)	2437.00	18.126
NVNT	ANT2	802.11n(HT20)	2437.00	18.072
NVNT	ANT1	802.11n(HT20)	2462.00	18.037
NVNT	ANT2	802.11n(HT20)	2462.00	17.966
NVNT	ANT1	802.11n(HT40)	2422.00	36.289
NVNT	ANT2	802.11n(HT40)	2422.00	36.343
NVNT	ANT1	802.11n(HT40)	2437.00	36.395
NVNT	ANT2	802.11n(HT40)	2437.00	36.361
NVNT	ANT1	802.11n(HT40)	2452.00	36.351
NVNT	ANT2	802.11n(HT40)	2452.00	36.435

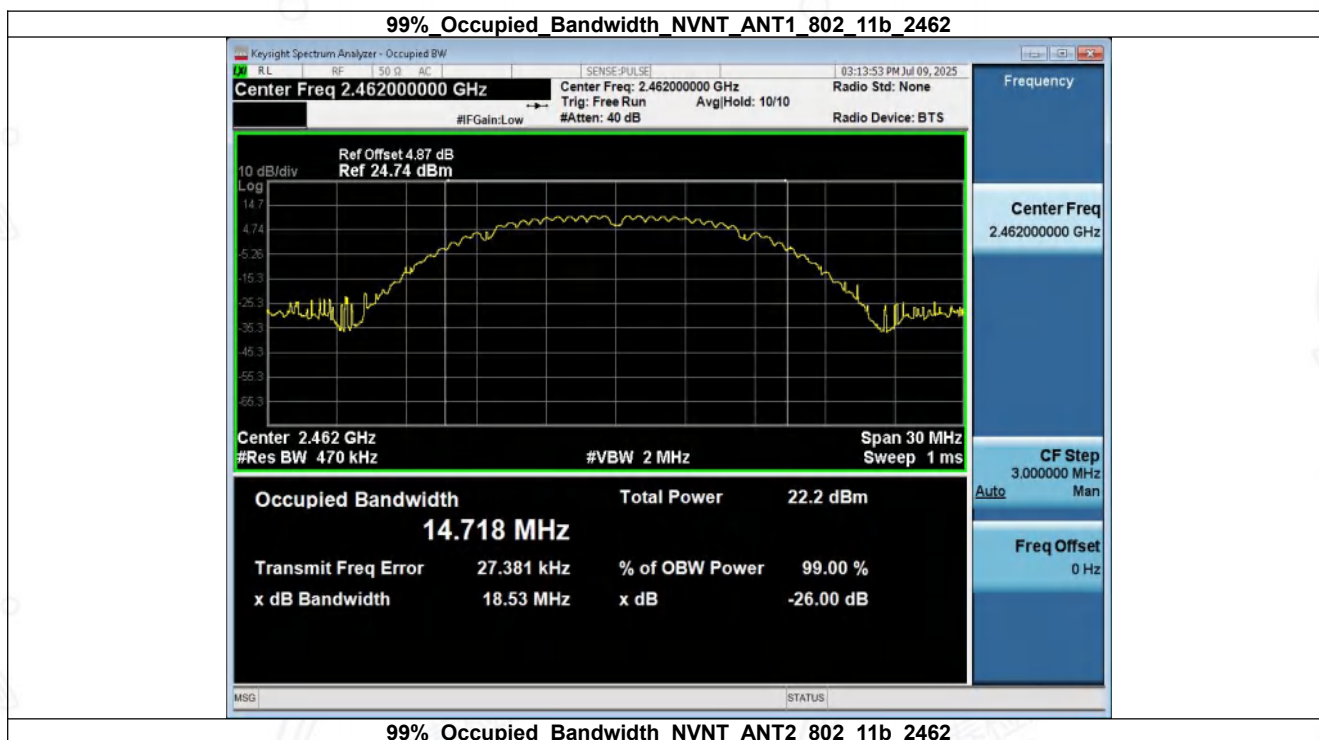
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2412

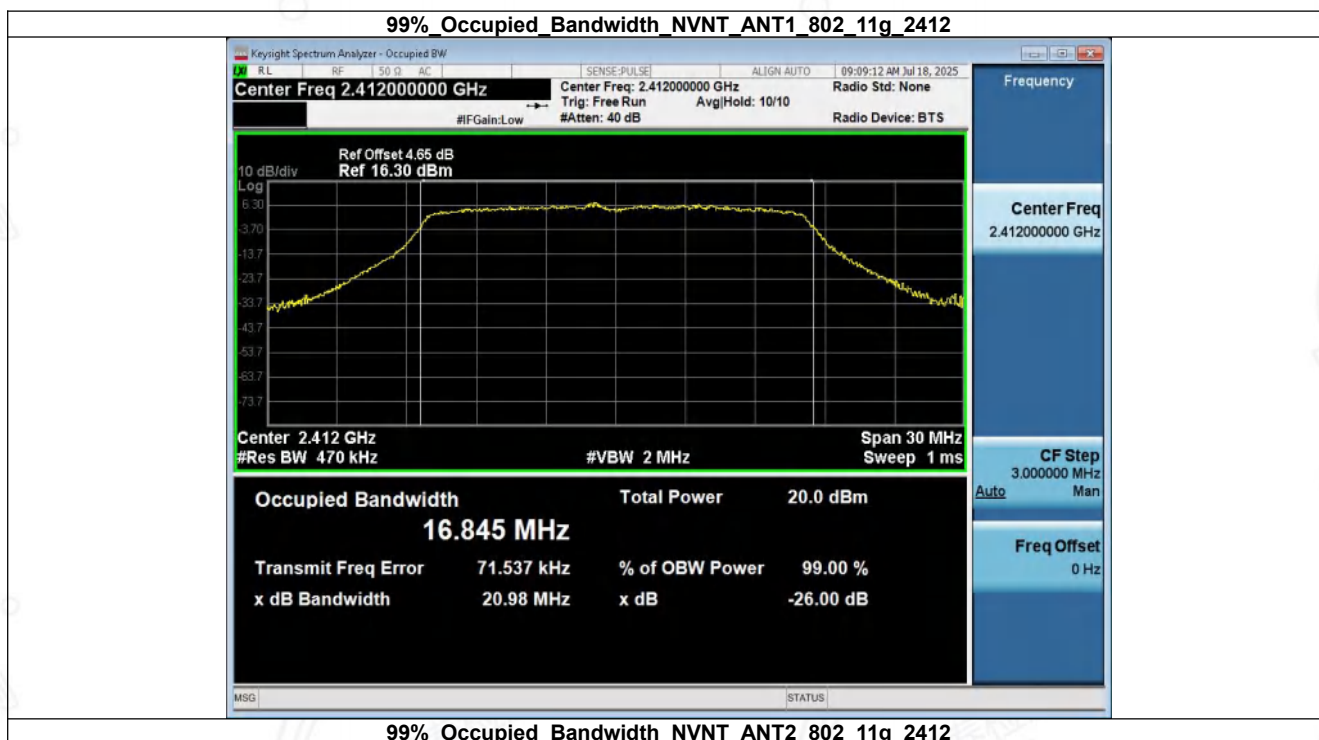


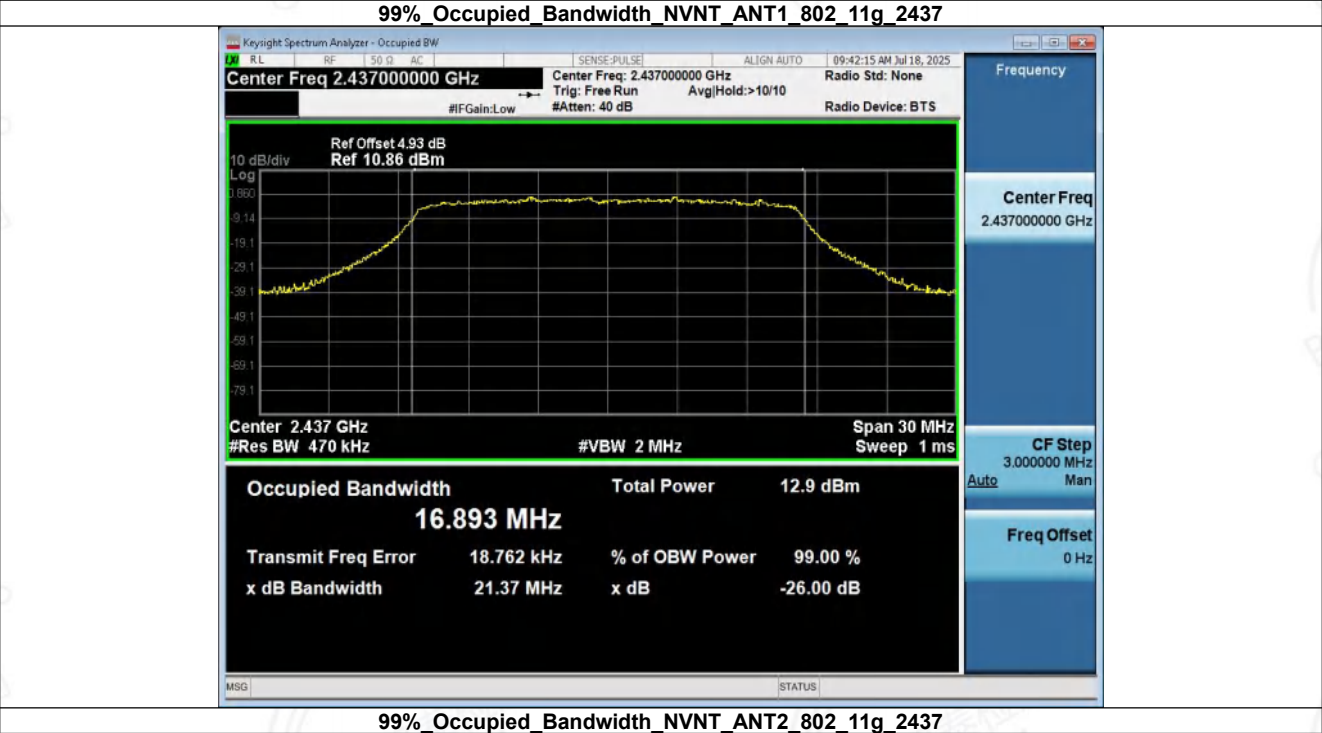
99%_Occupied_Bandwidth_NVNT_ANT2_802_11b_2412

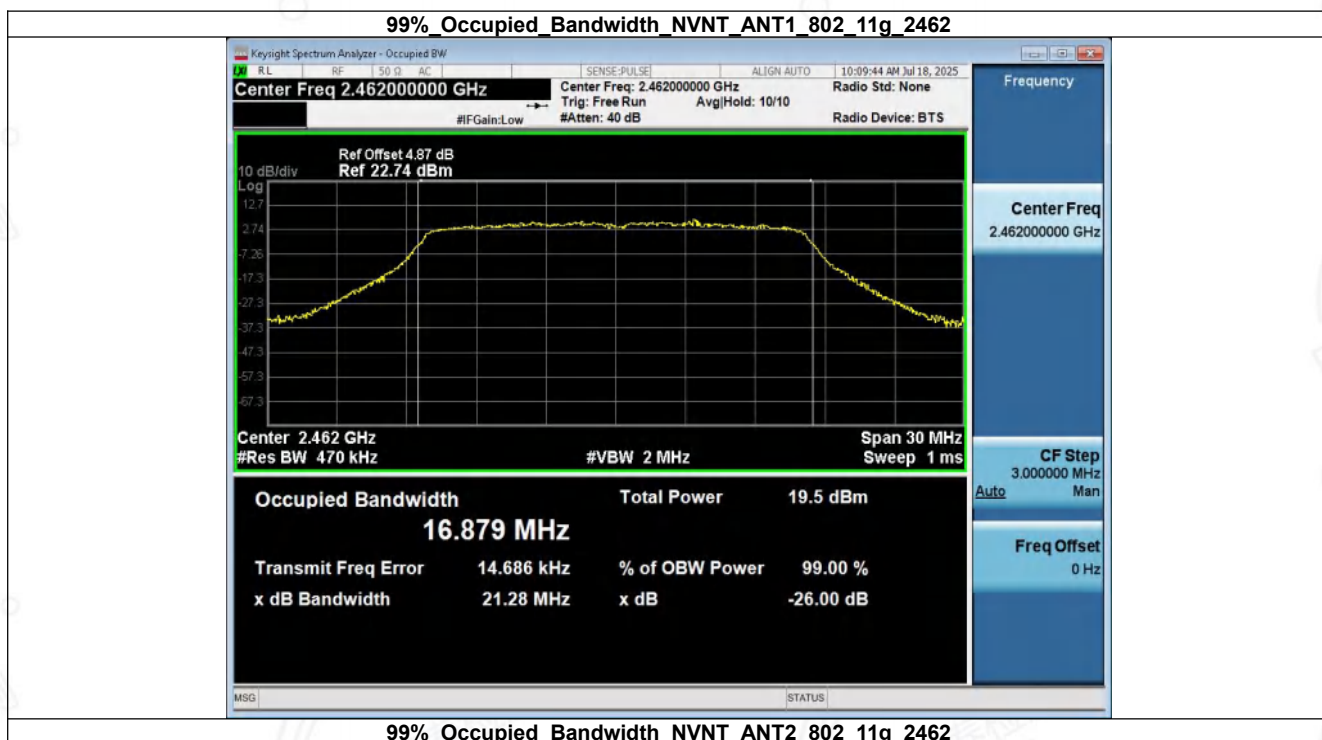


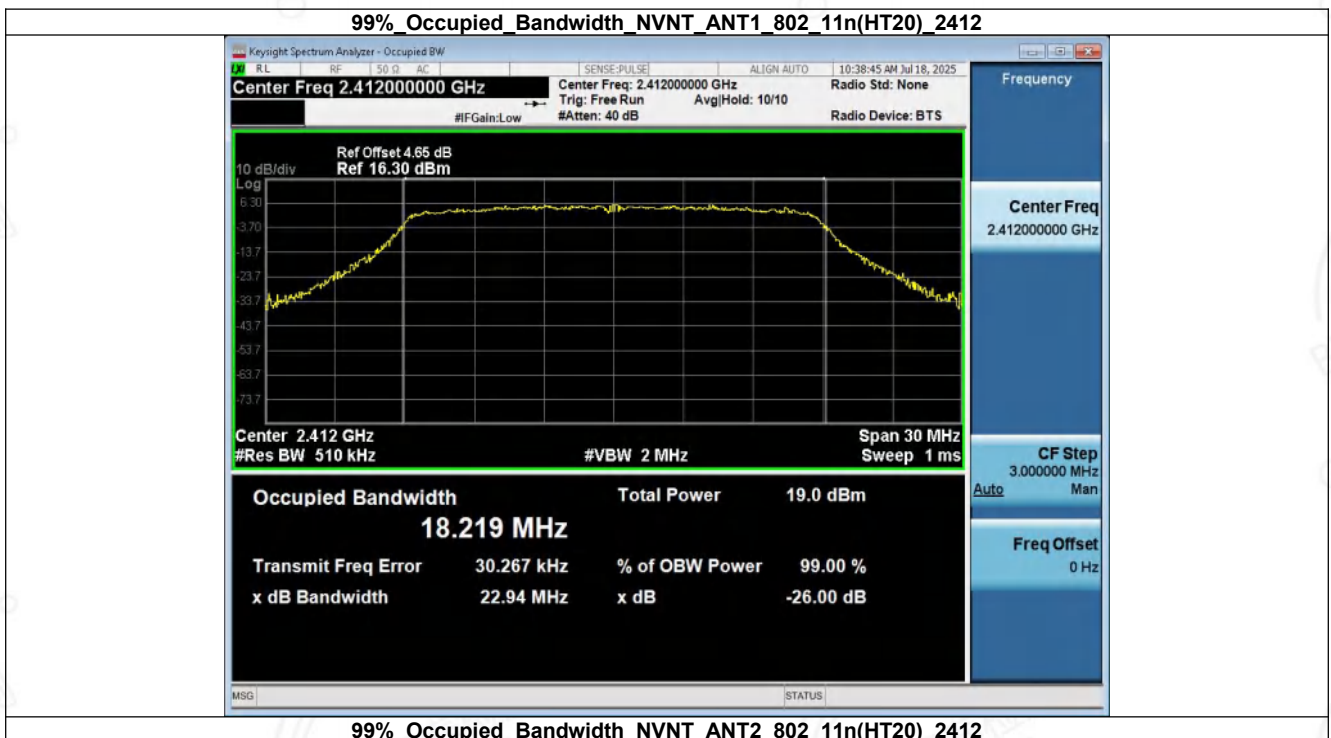


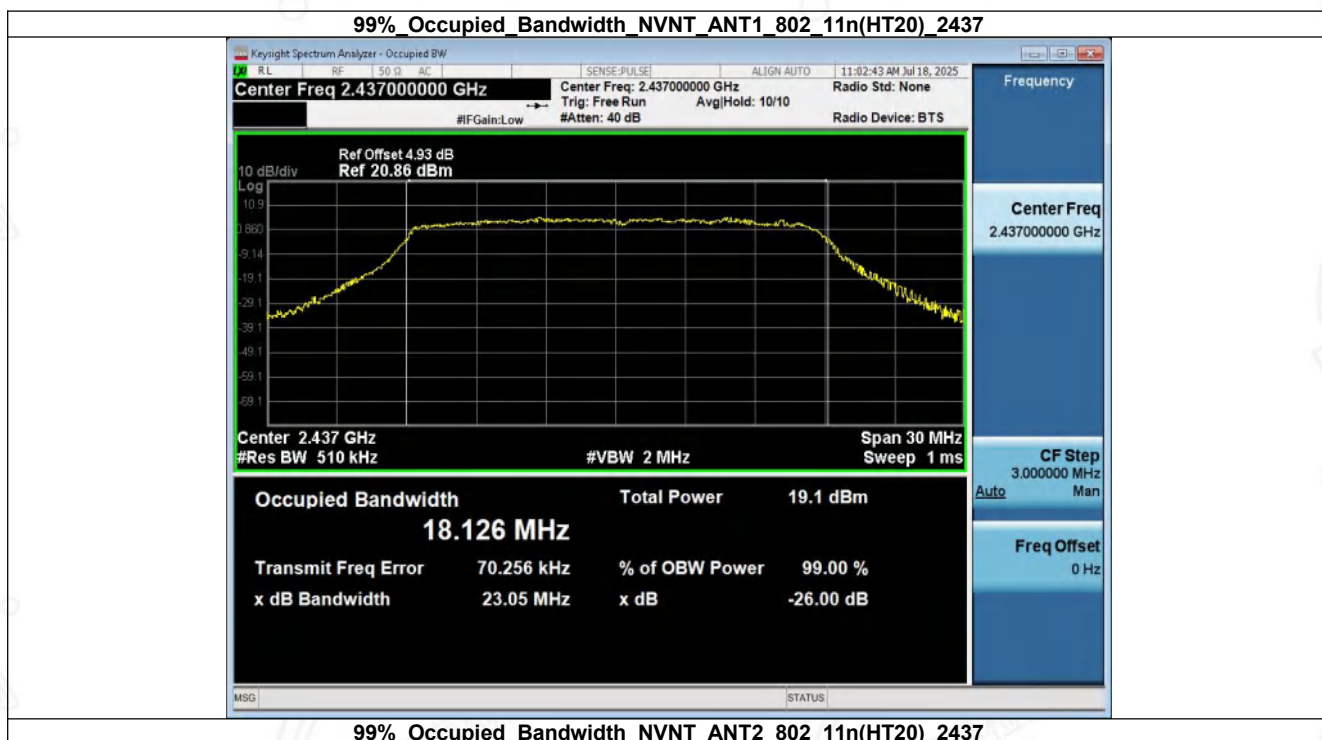


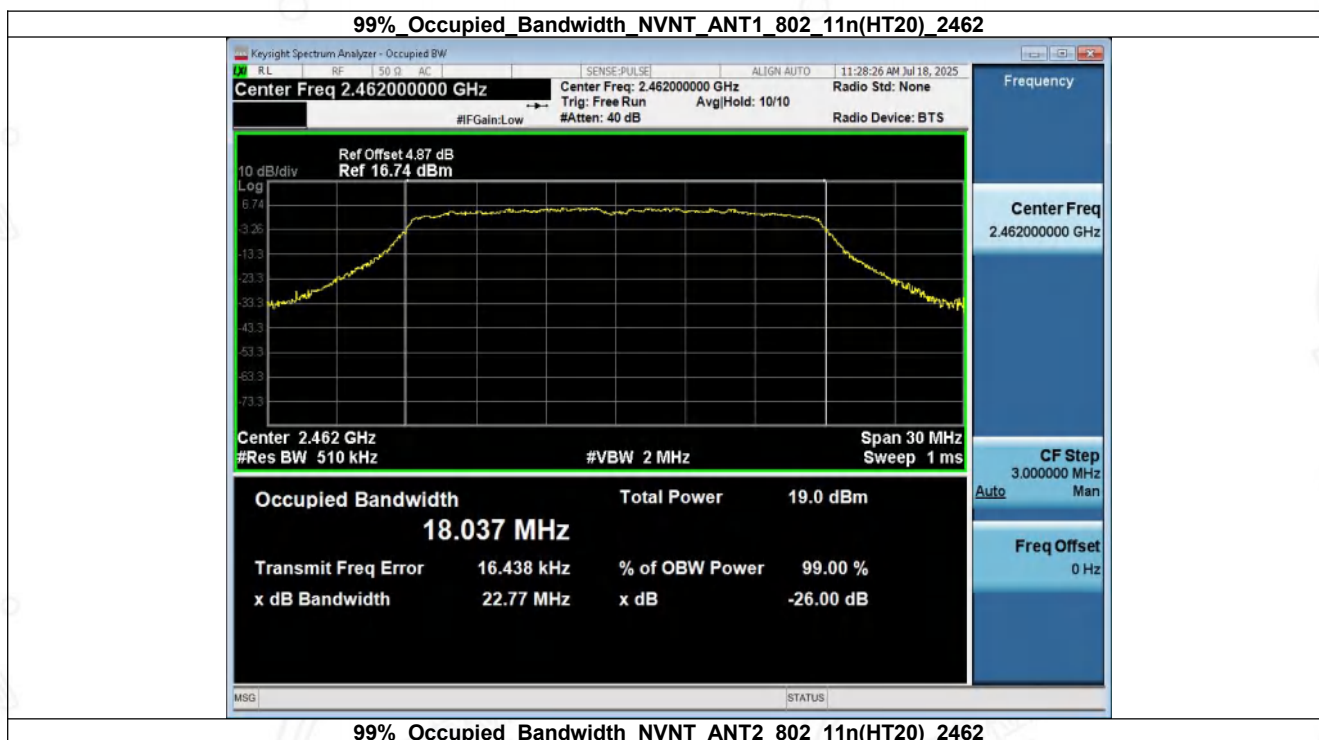


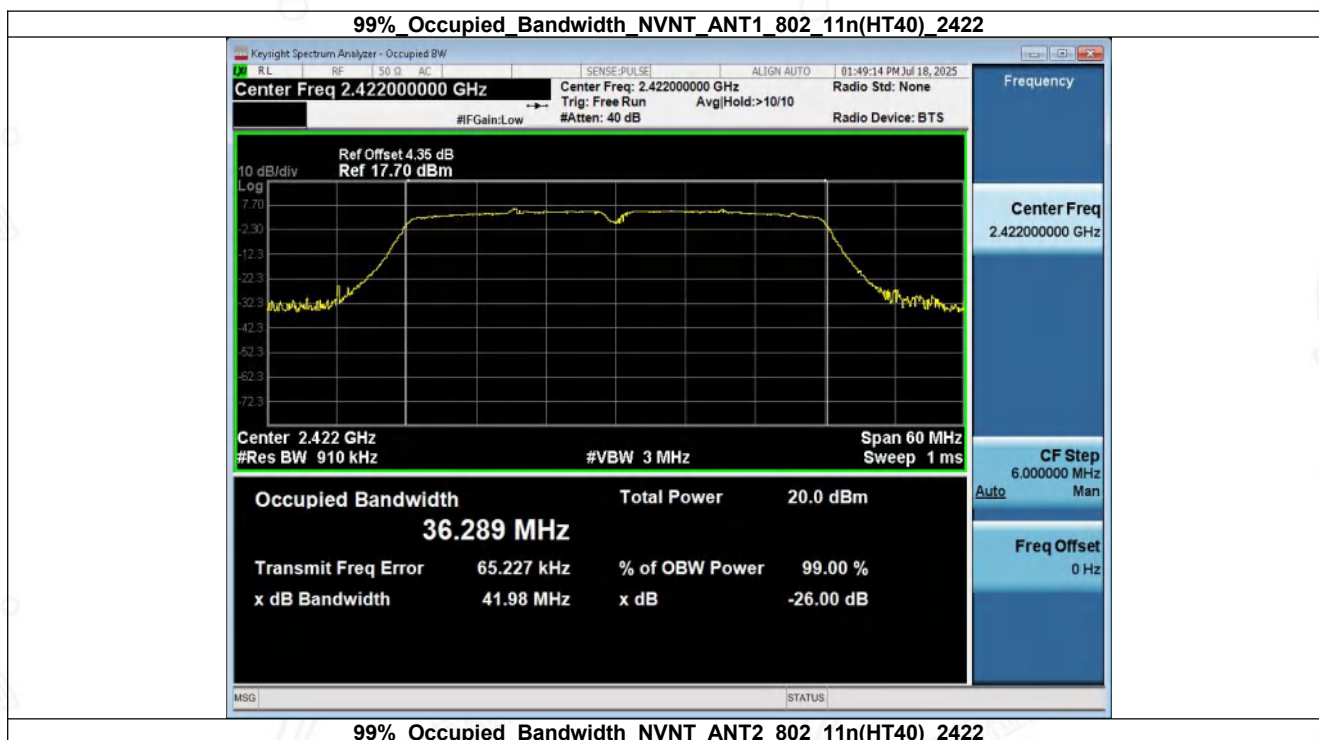


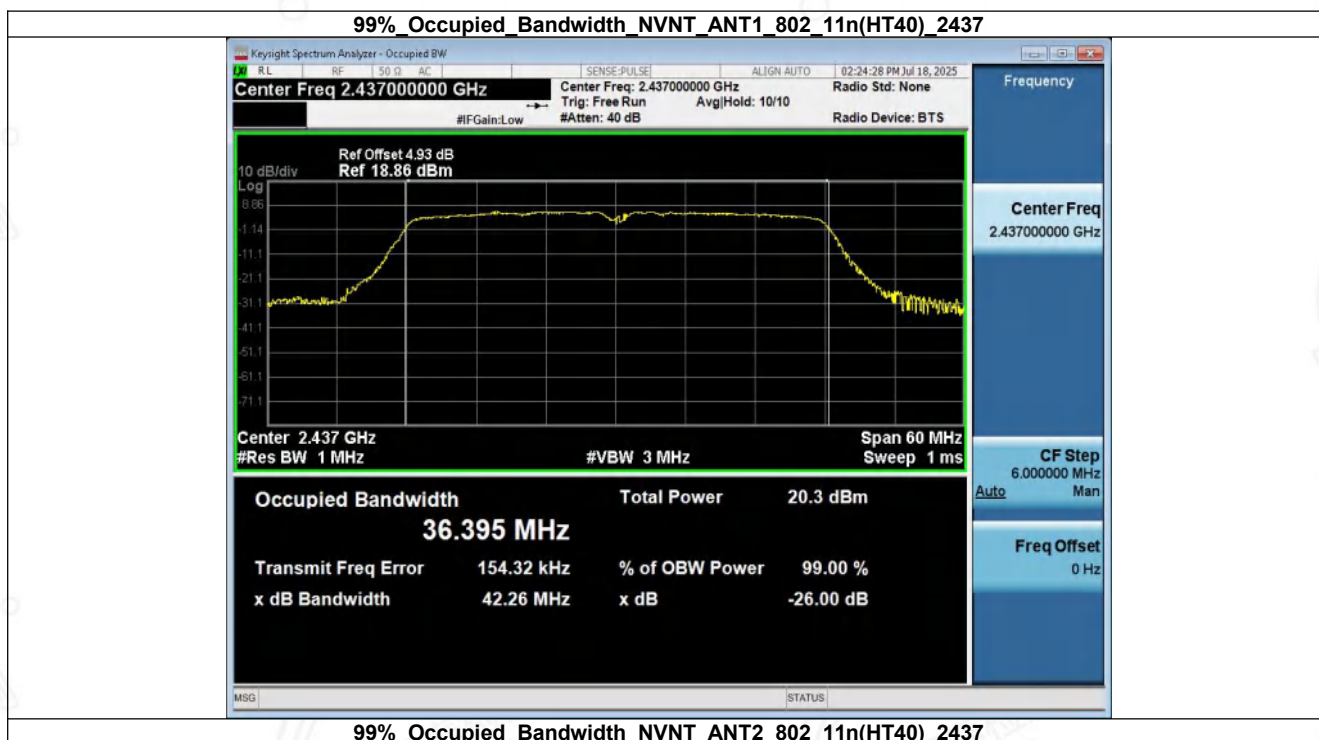


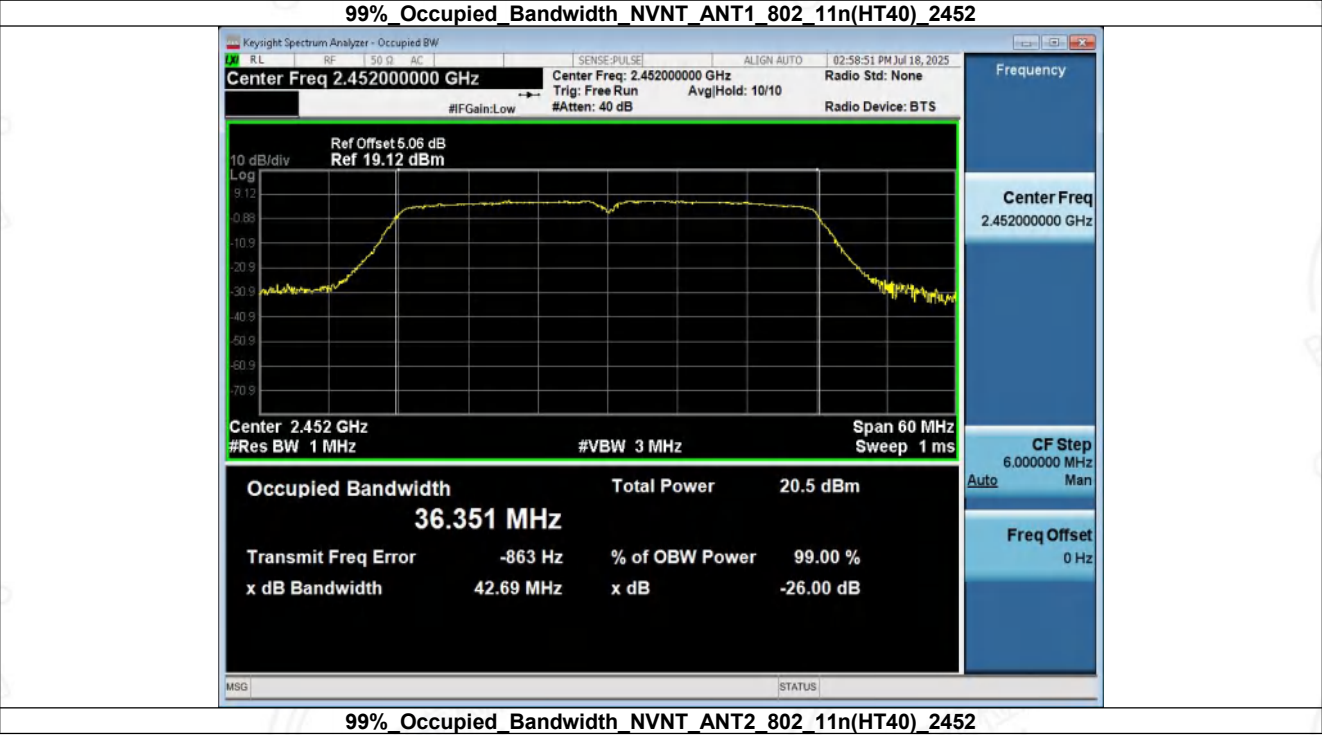








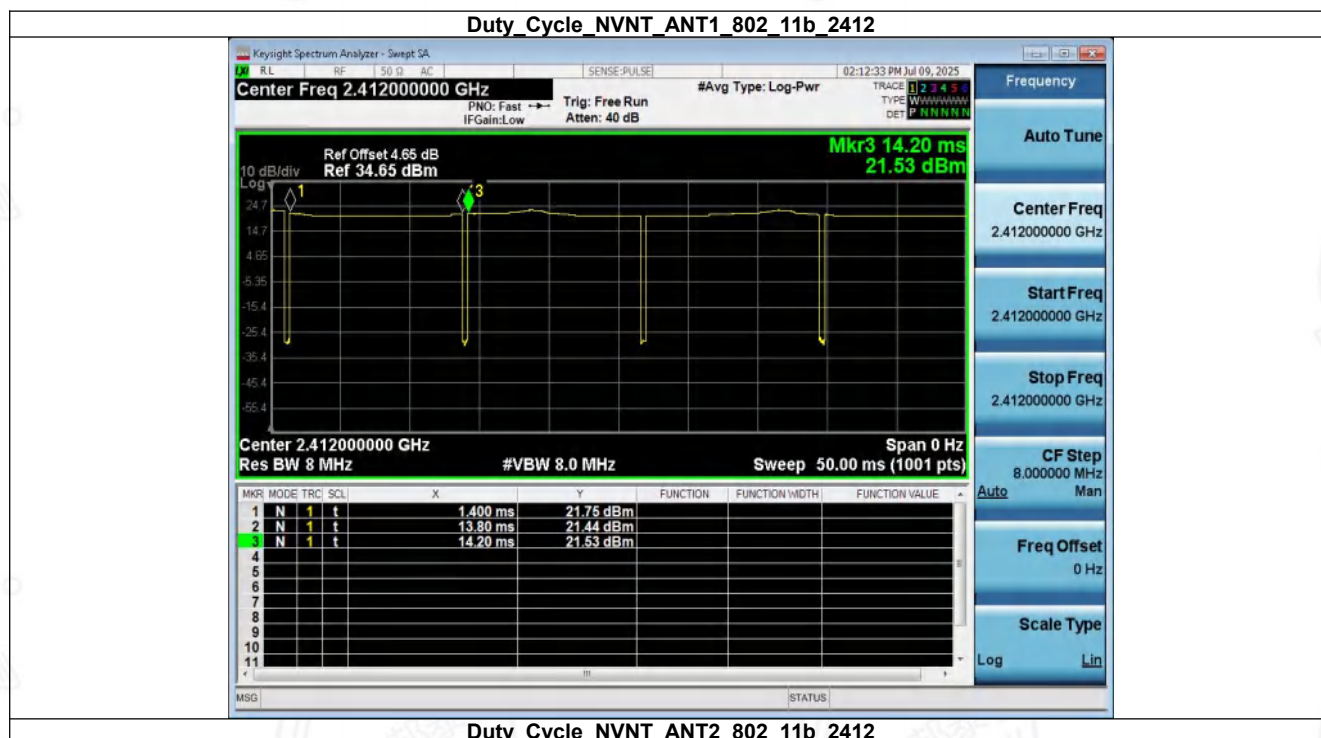


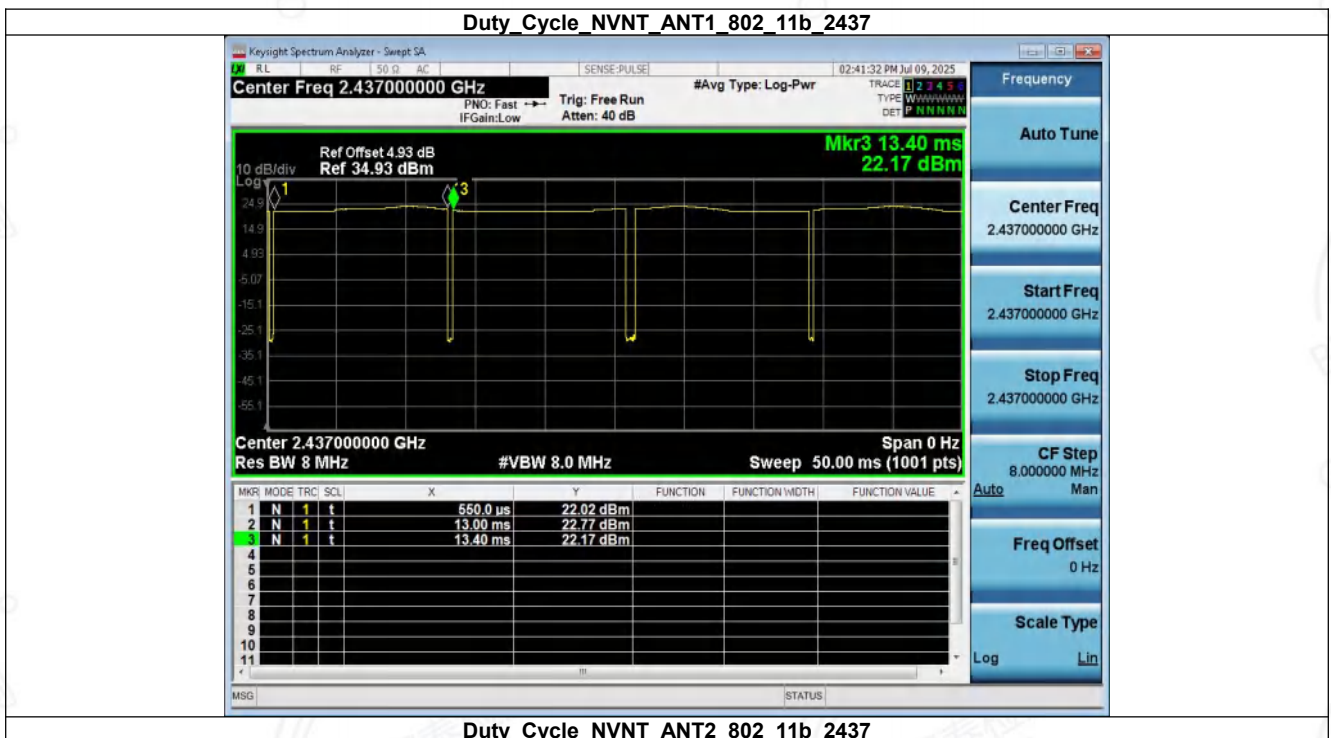
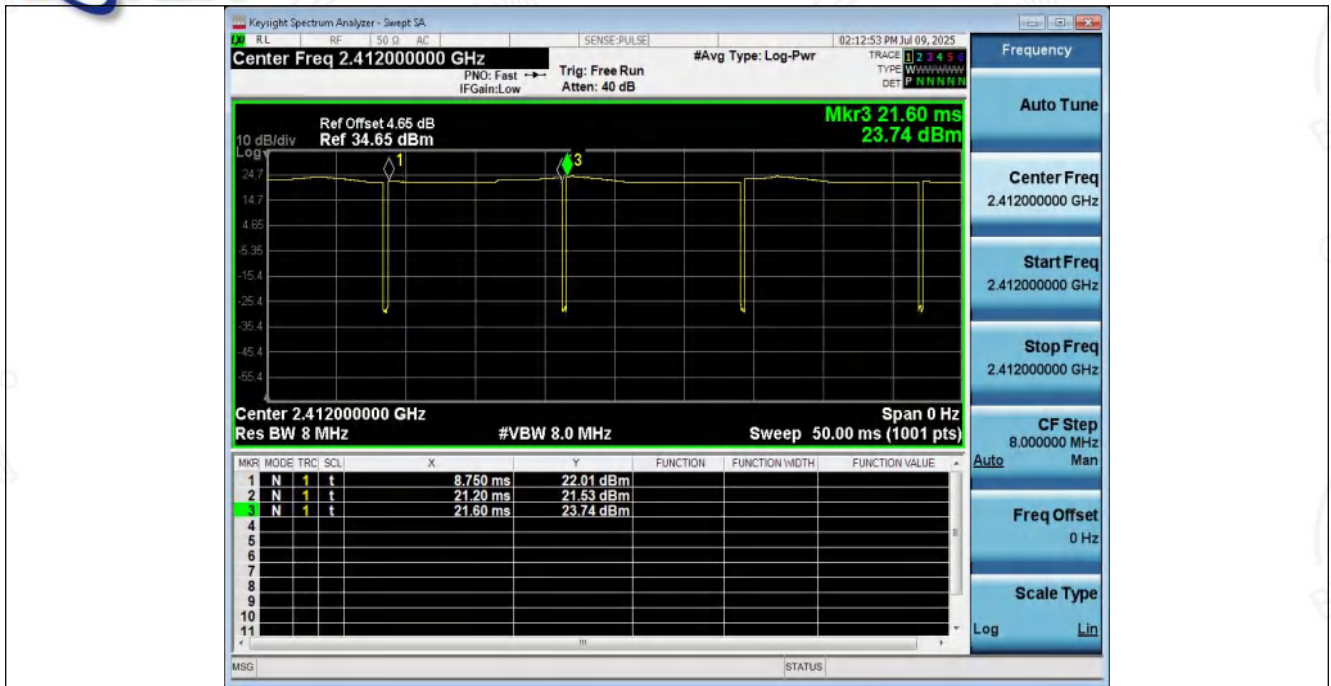


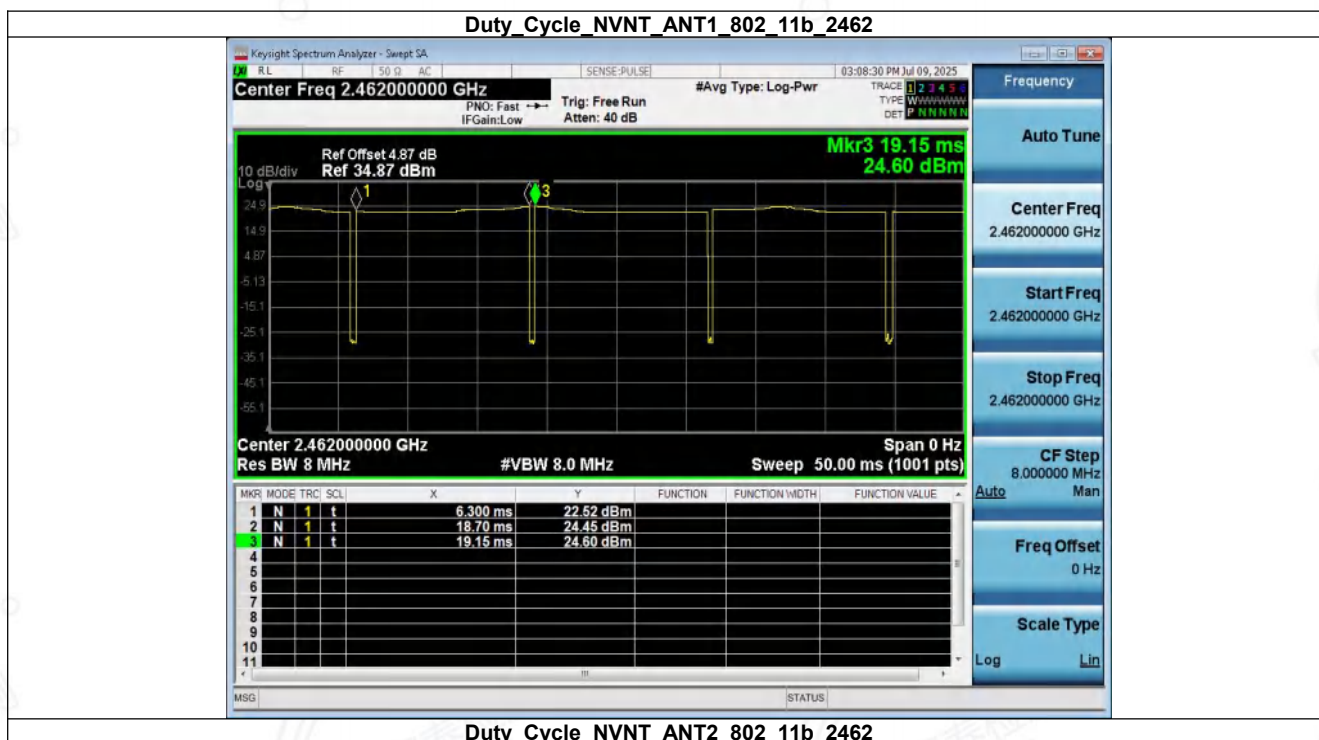
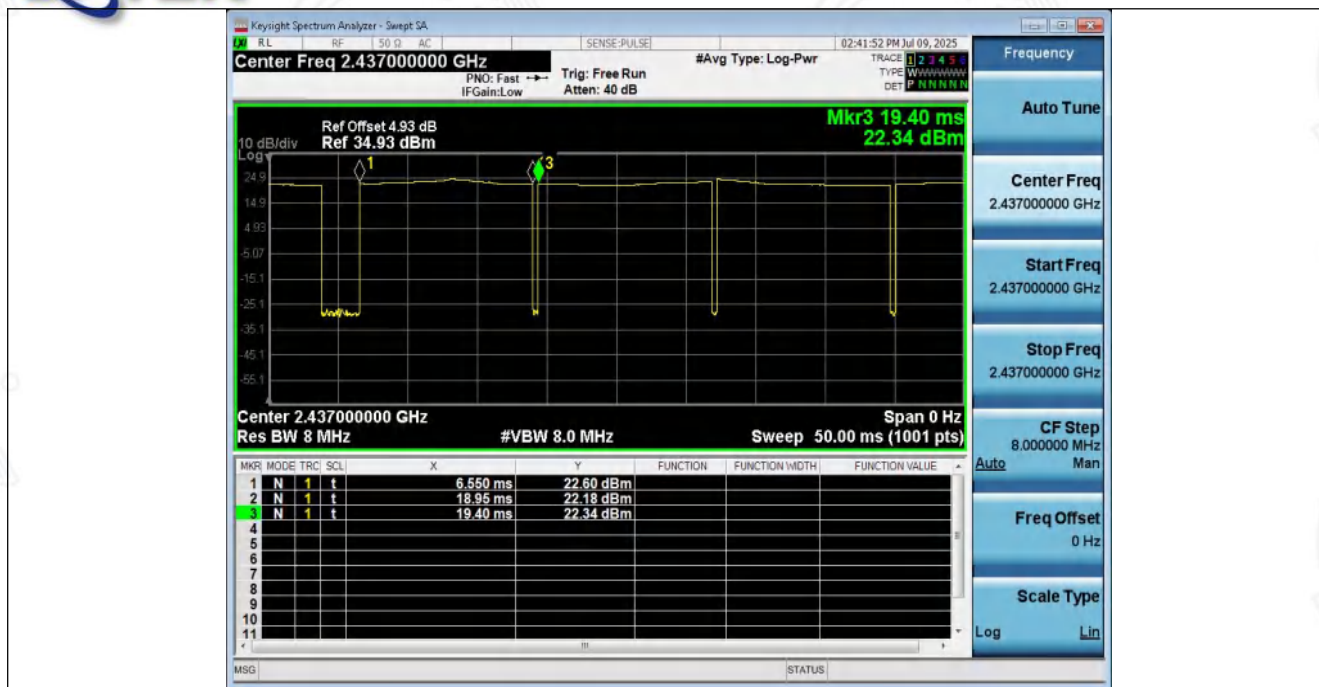


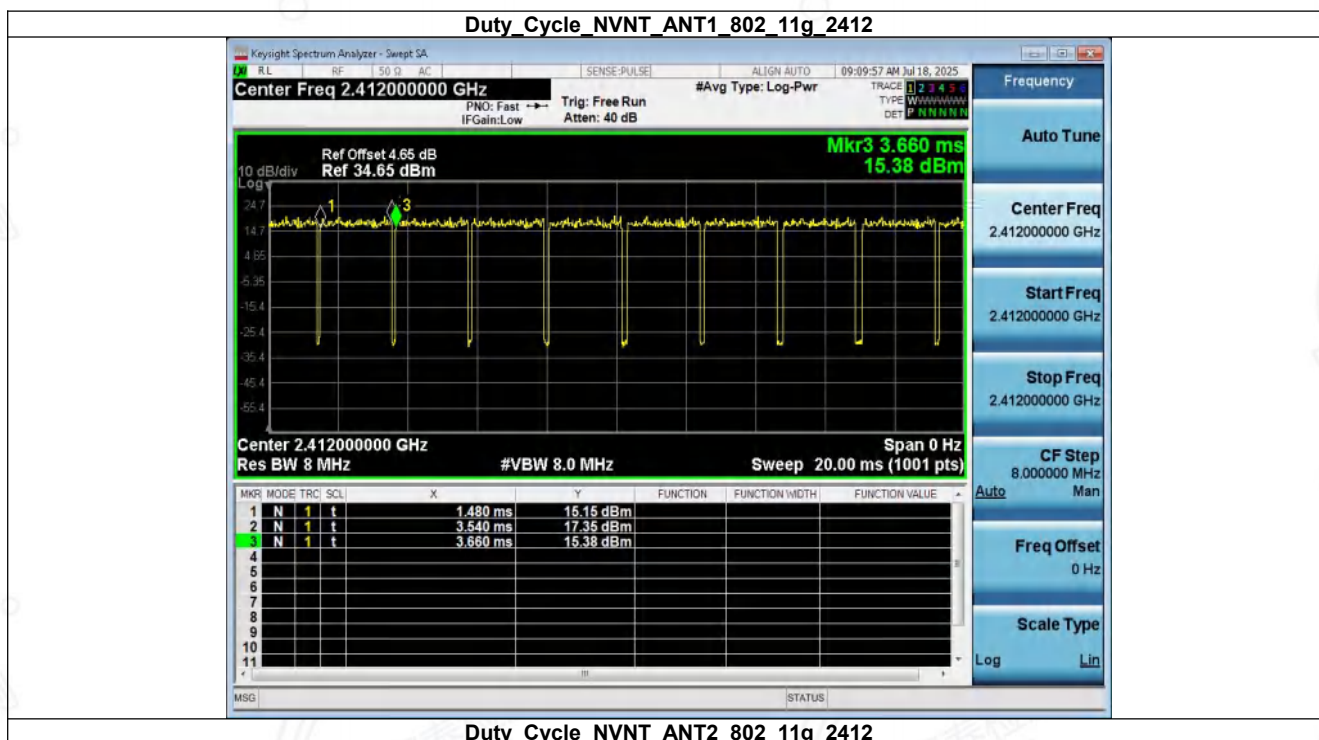
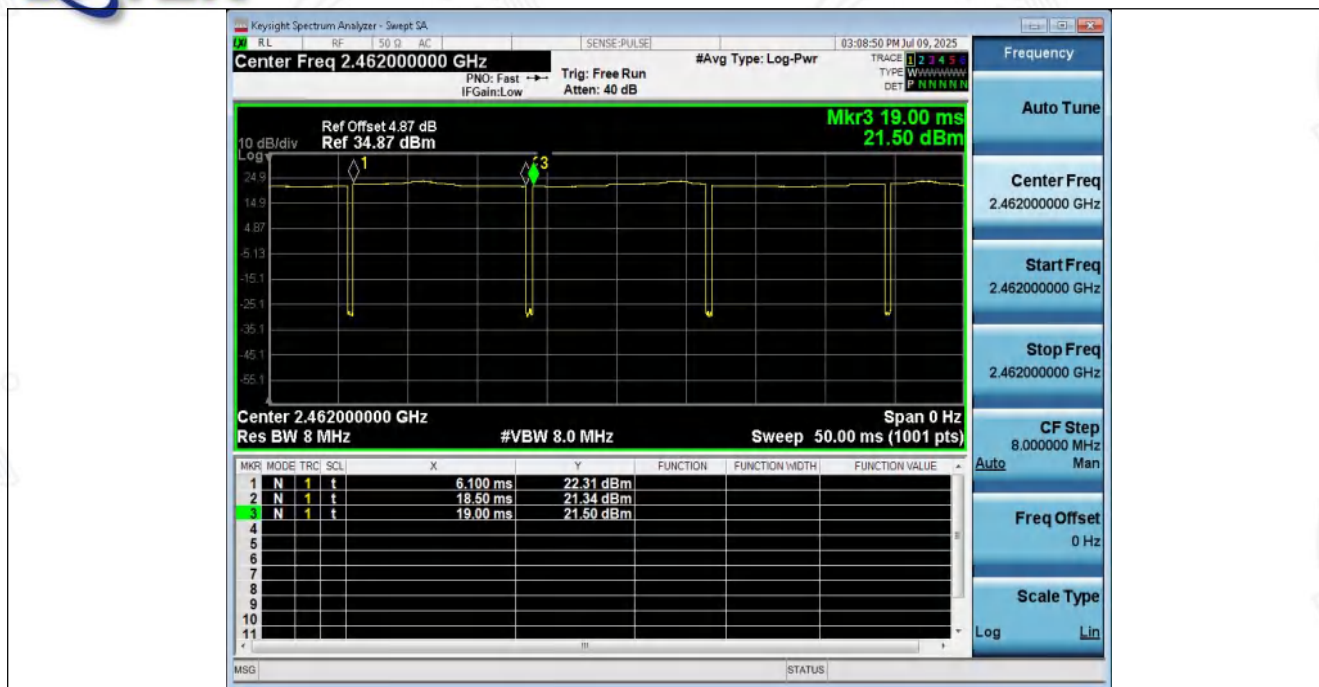
3. Duty Cycle

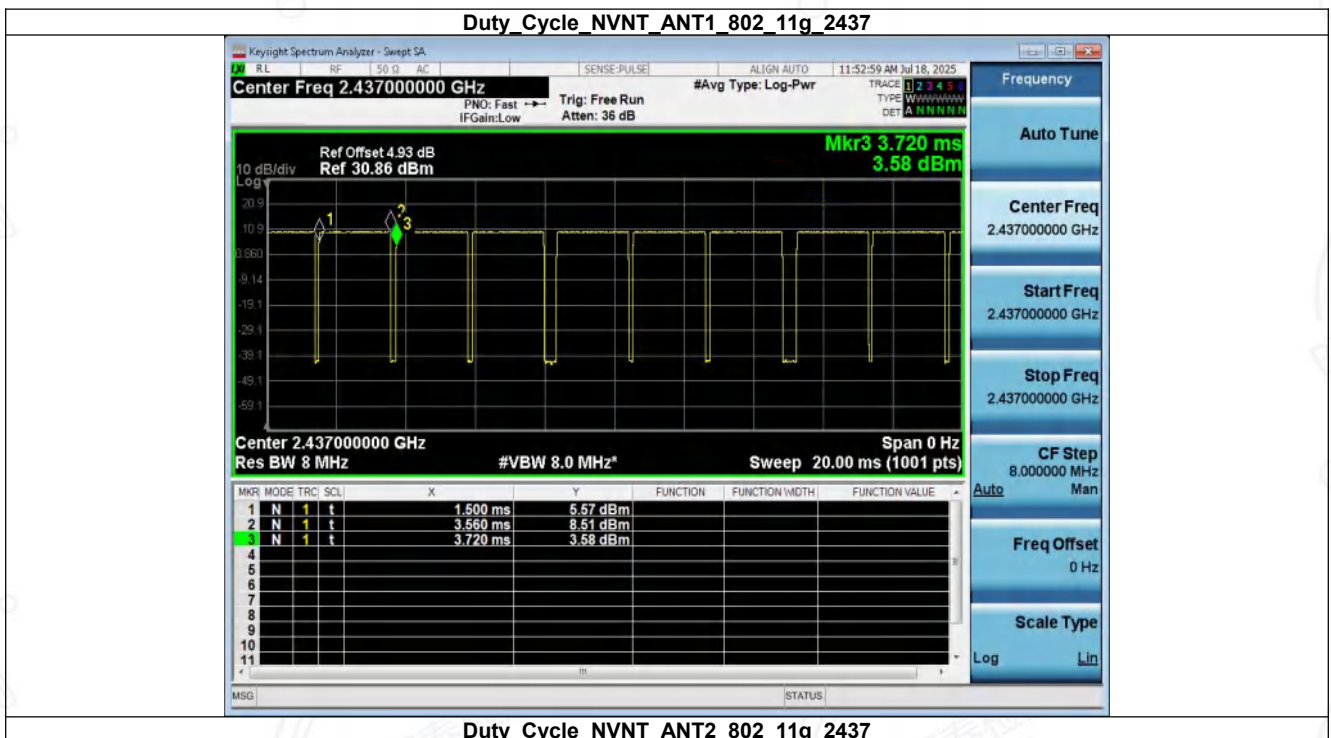
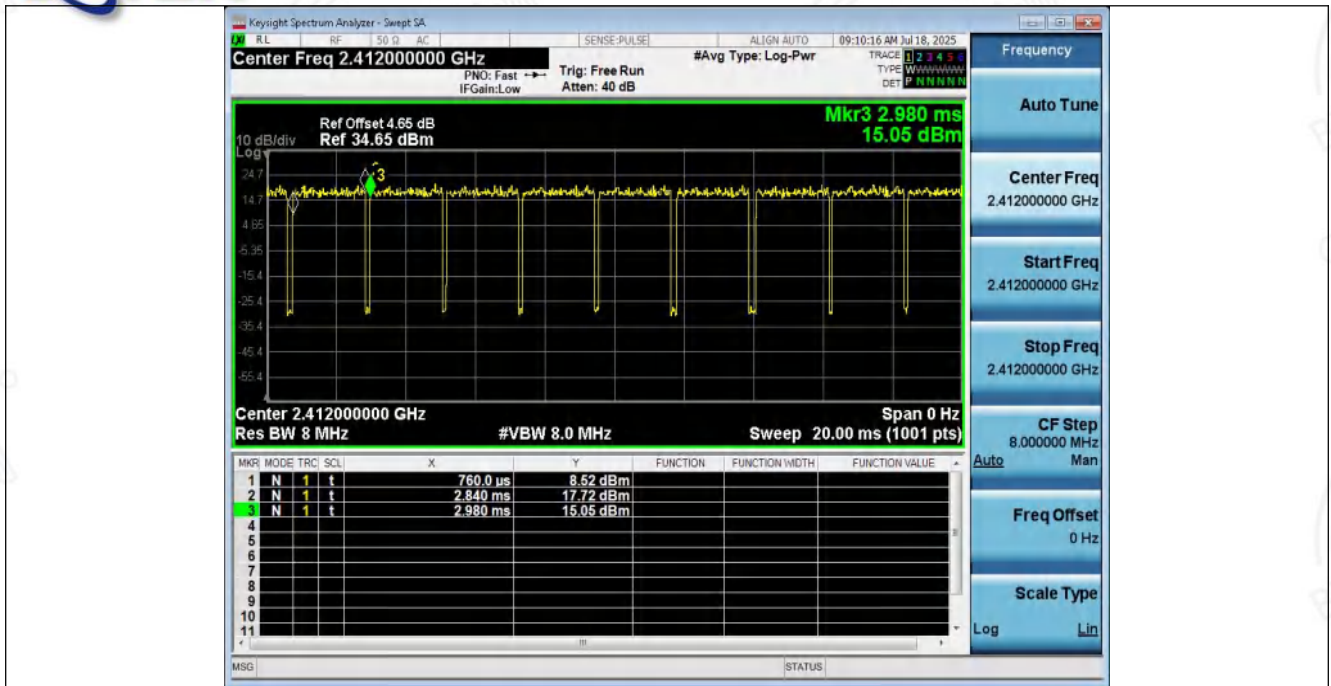
Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty factor(dB)
NVNT	ANT1	802.11b	2412.00	97.27	0.12
NVNT	ANT2	802.11b	2412.00	97.28	0.12
NVNT	ANT1	802.11b	2437.00	97.28	0.12
NVNT	ANT2	802.11b	2437.00	96.89	0.14
NVNT	ANT1	802.11b	2462.00	96.89	0.14
NVNT	ANT2	802.11b	2462.00	96.51	0.15
NVNT	ANT1	802.11g	2412.00	95.41	0.20
NVNT	ANT2	802.11g	2412.00	94.59	0.24
NVNT	ANT1	802.11g	2437.00	93.69	0.28
NVNT	ANT2	802.11g	2437.00	92.92	0.32
NVNT	ANT1	802.11g	2462.00	92.04	0.36
NVNT	ANT2	802.11g	2462.00	95.41	0.20
NVNT	ANT1	802.11n(HT20)	2412.00	91.51	0.39
NVNT	ANT2	802.11n(HT20)	2412.00	94.17	0.26
NVNT	ANT1	802.11n(HT20)	2437.00	92.38	0.34
NVNT	ANT2	802.11n(HT20)	2437.00	93.20	0.31
NVNT	ANT1	802.11n(HT20)	2462.00	94.17	0.26
NVNT	ANT2	802.11n(HT20)	2462.00	93.27	0.30
NVNT	ANT1	802.11n(HT40)	2422.00	90.74	0.42
NVNT	ANT2	802.11n(HT40)	2422.00	83.05	0.81
NVNT	ANT1	802.11n(HT40)	2437.00	82.76	0.82
NVNT	ANT2	802.11n(HT40)	2437.00	85.71	0.67
NVNT	ANT1	802.11n(HT40)	2452.00	87.27	0.59
NVNT	ANT2	802.11n(HT40)	2452.00	87.27	0.59

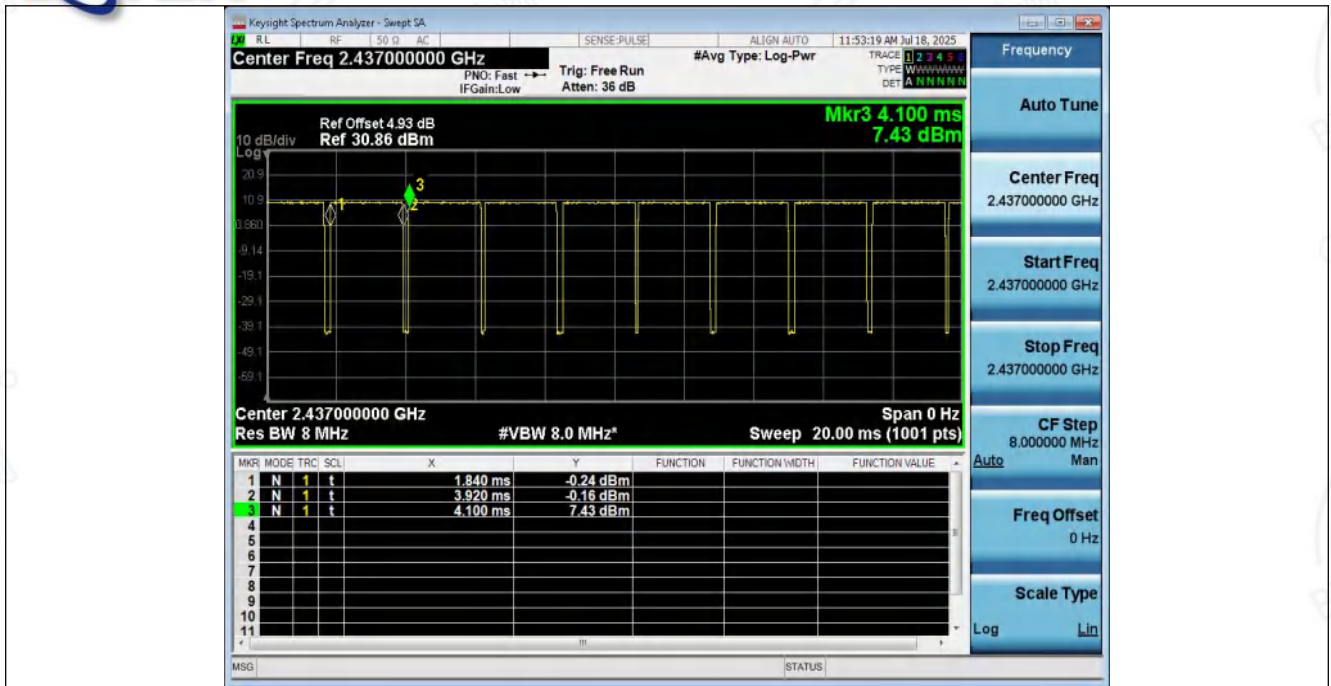




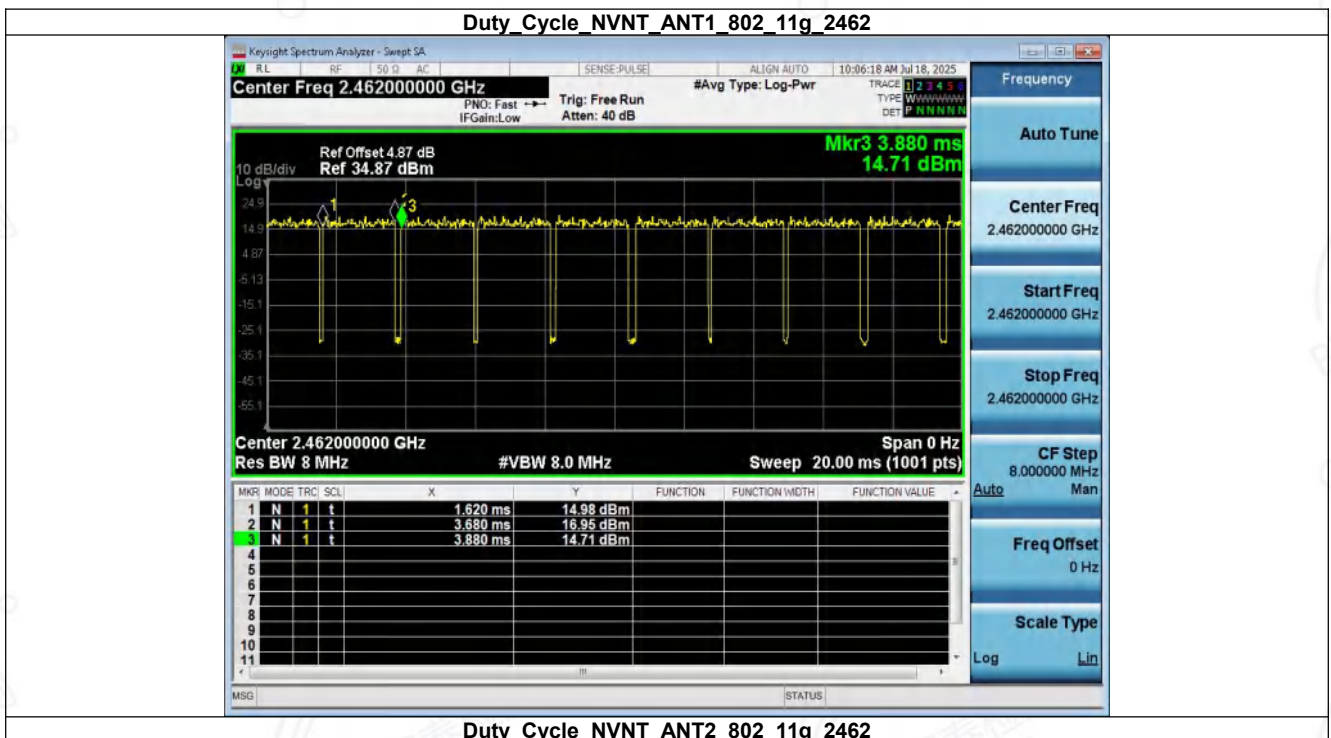


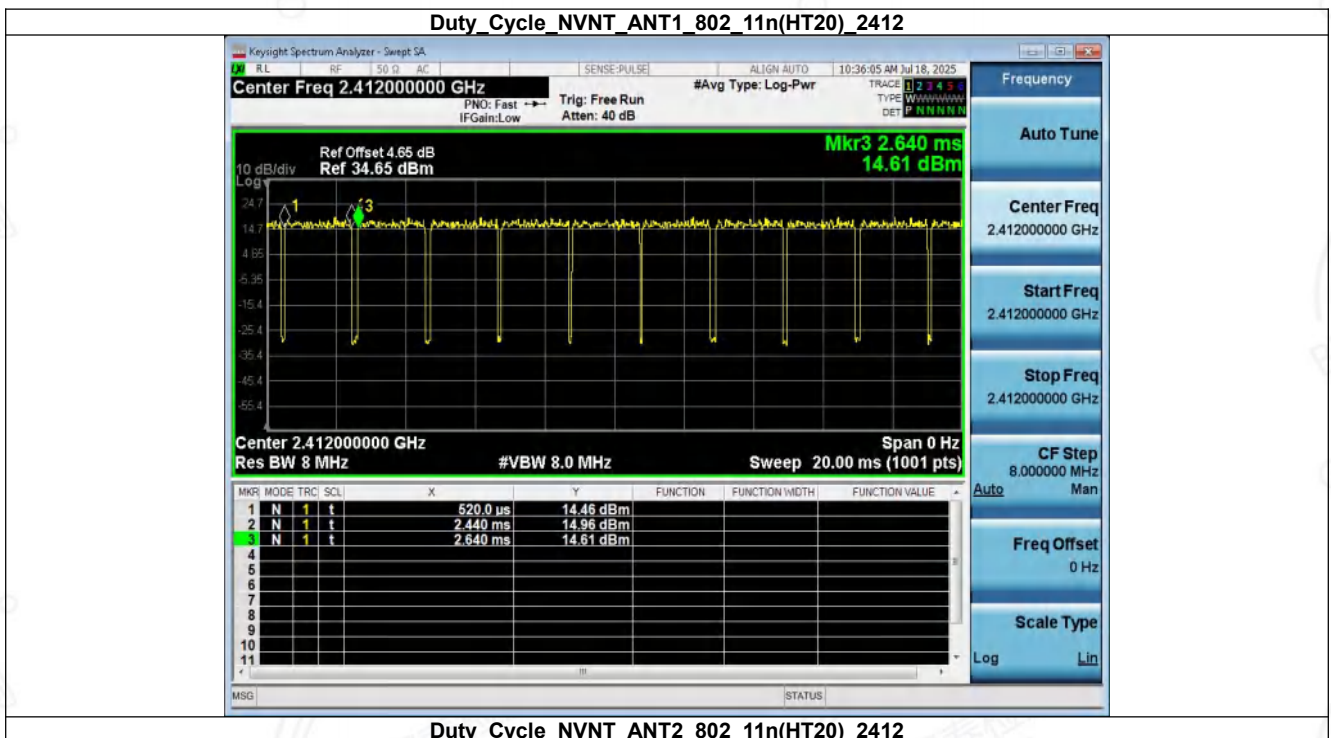
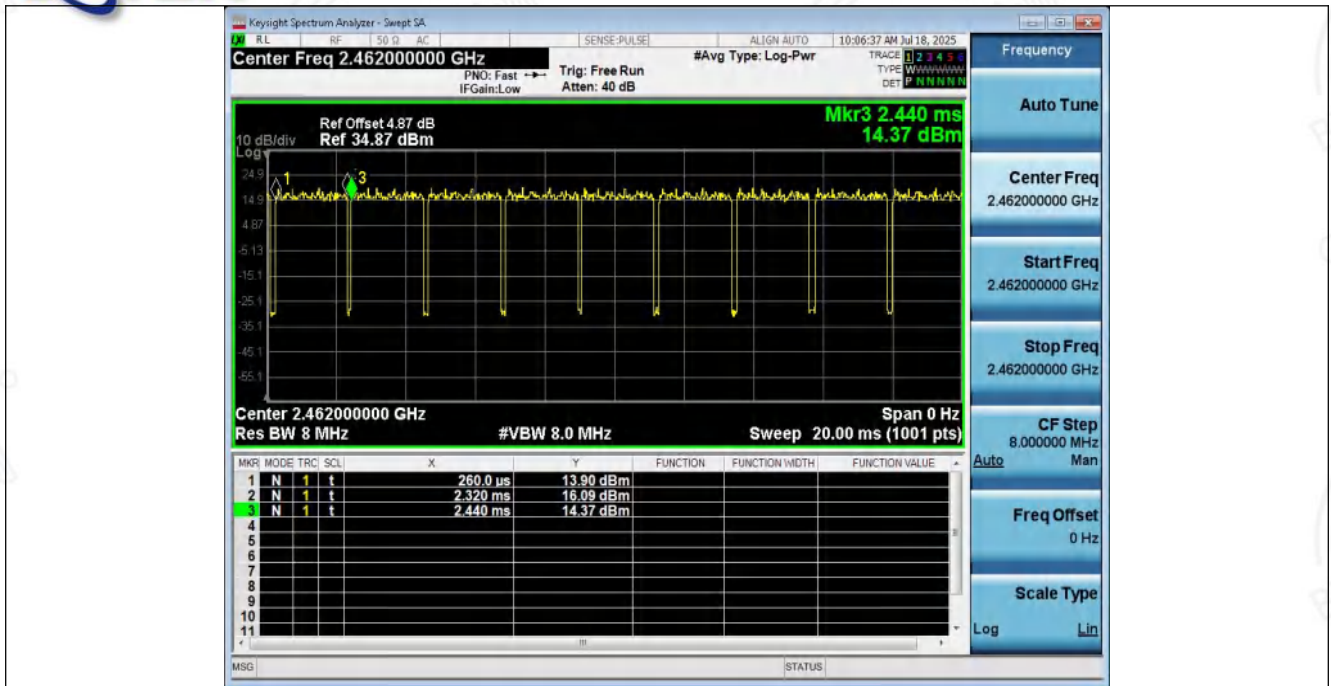


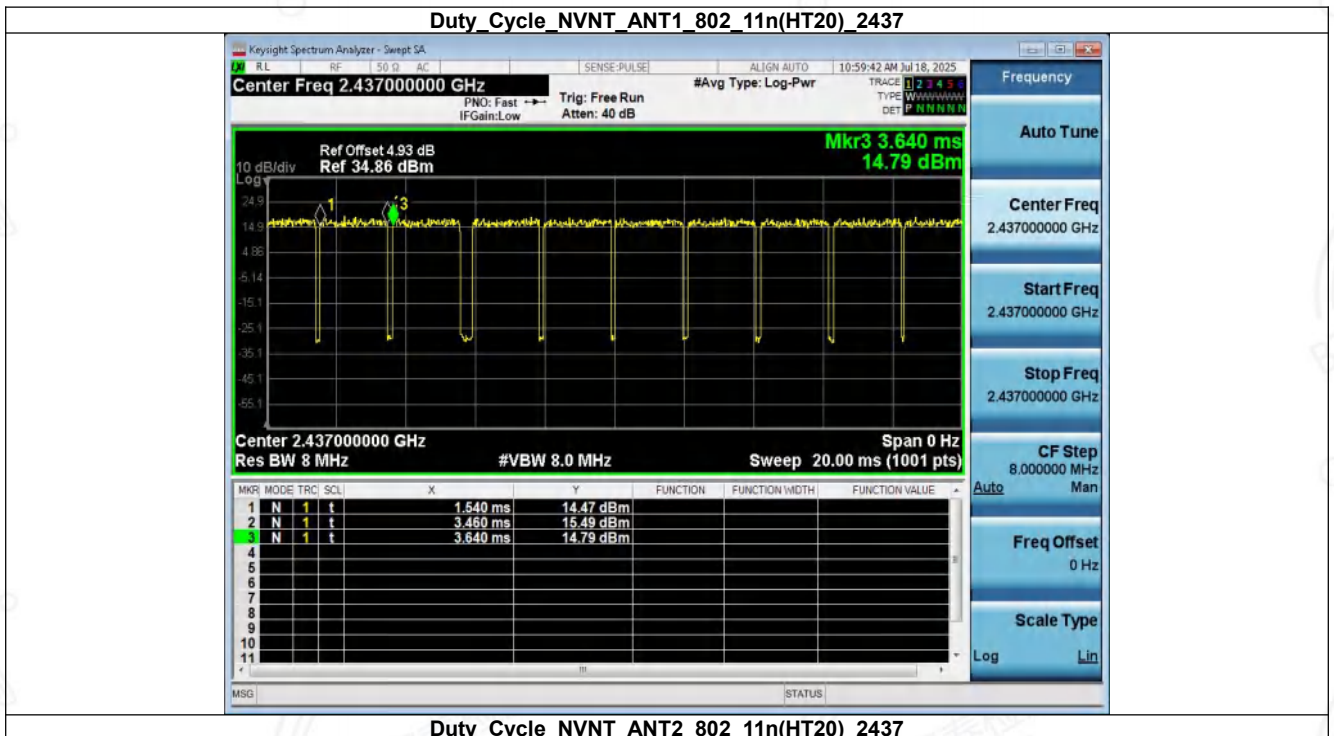
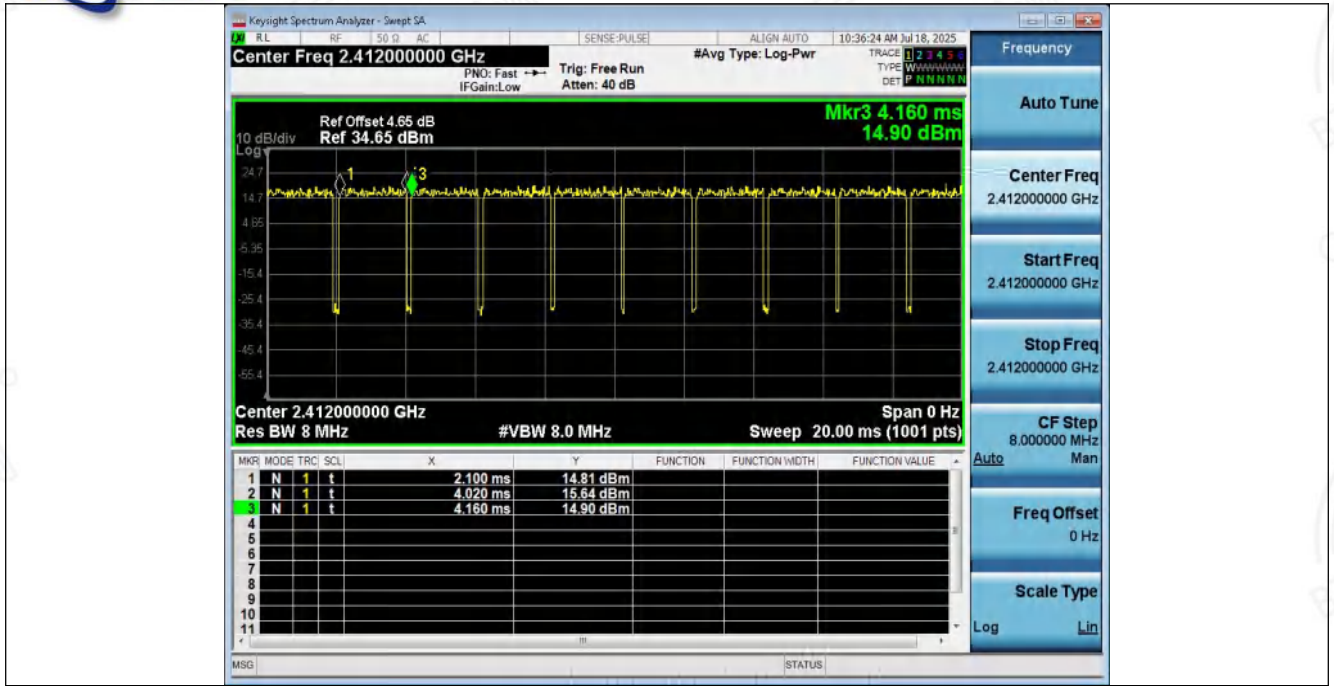


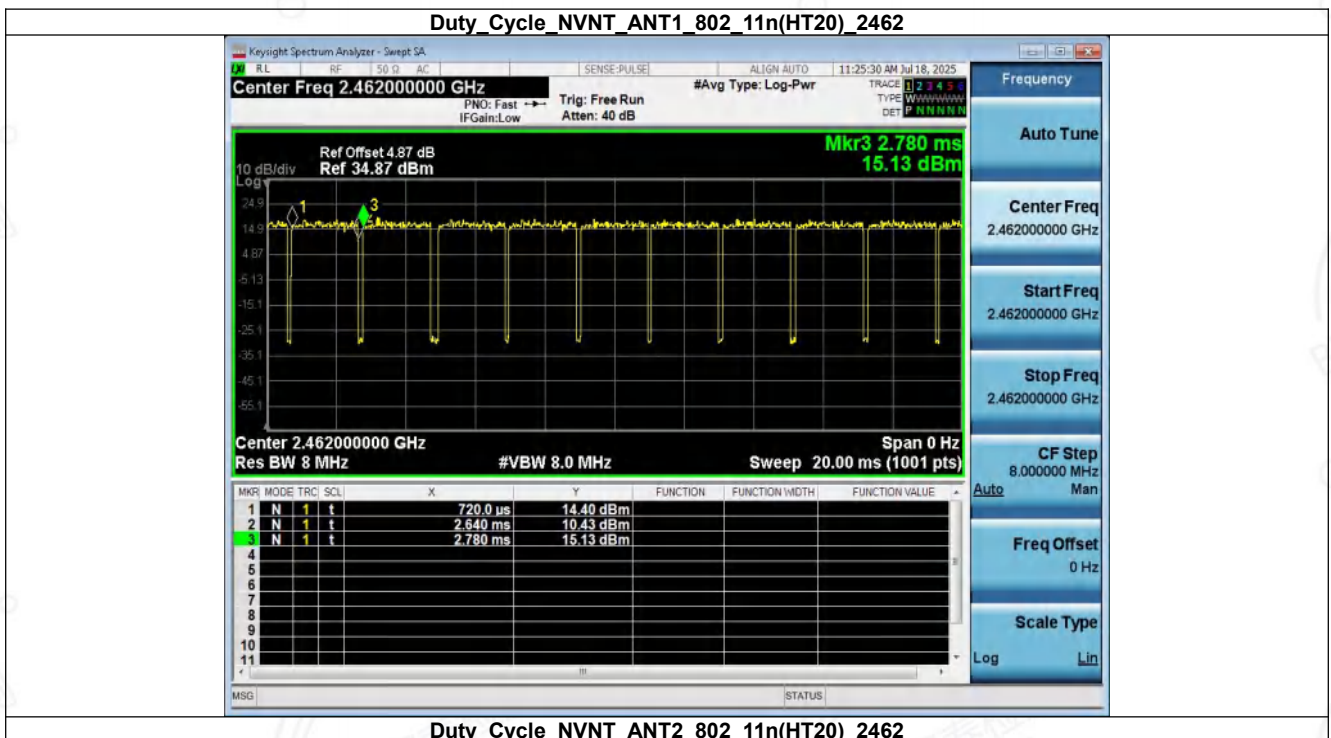
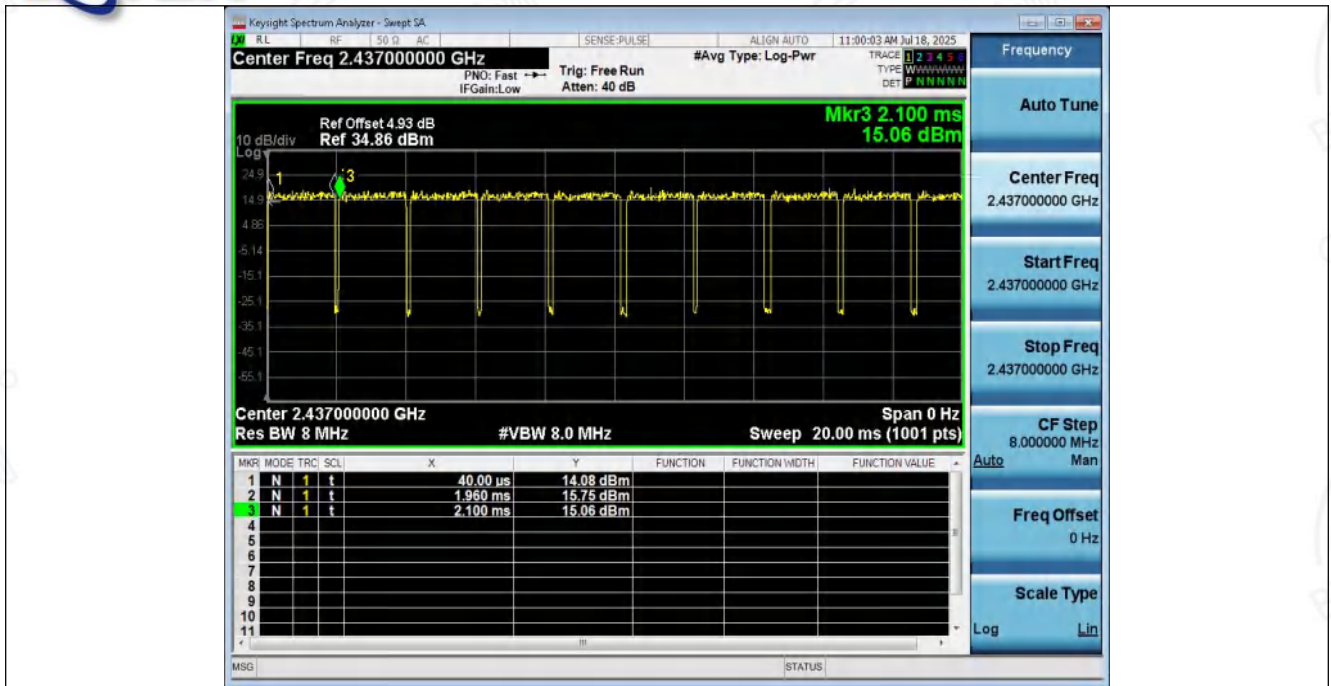


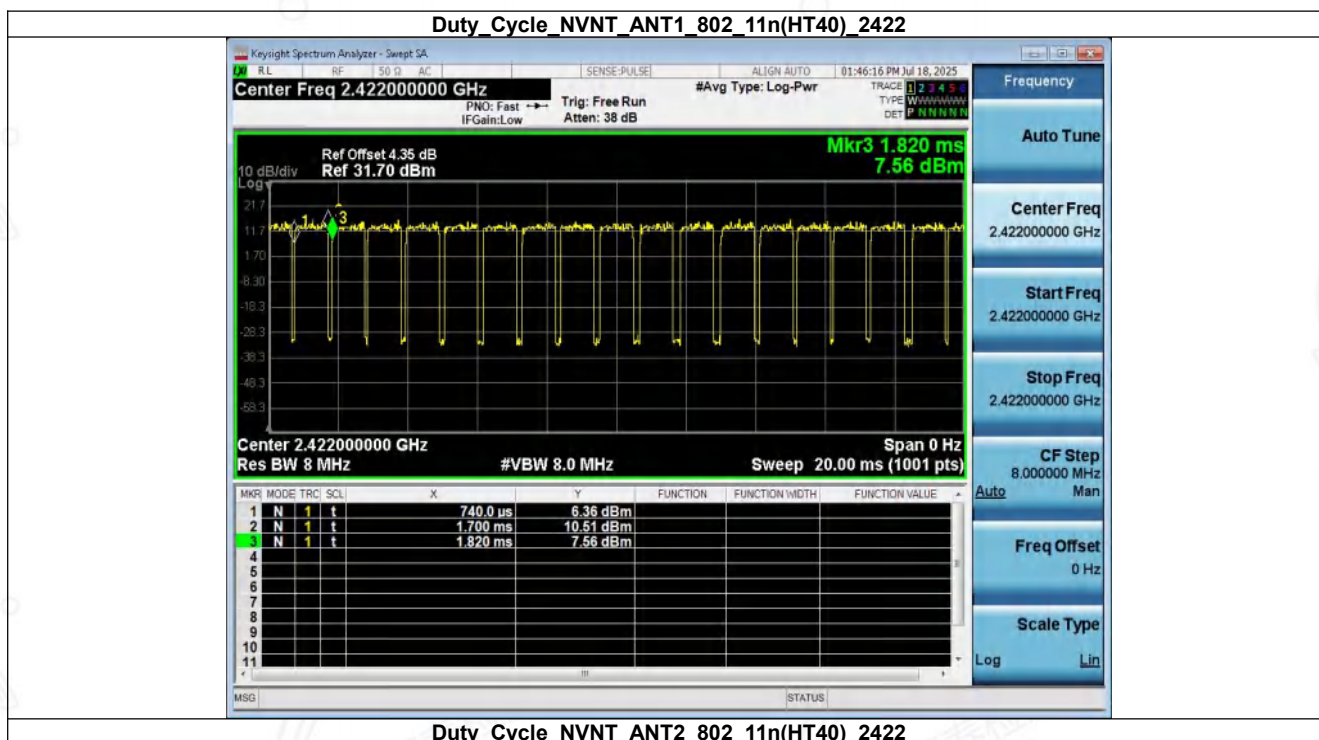
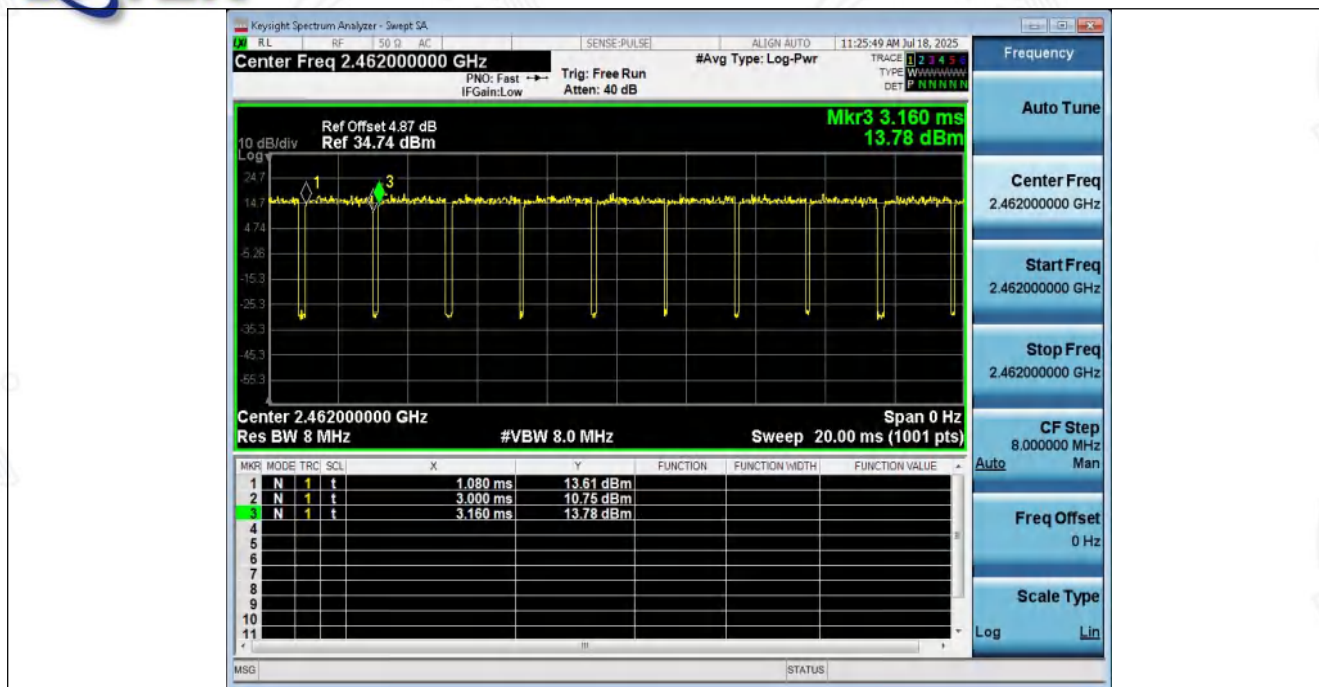
Duty Cycle_NVNT_ANT1_802_11g_2462

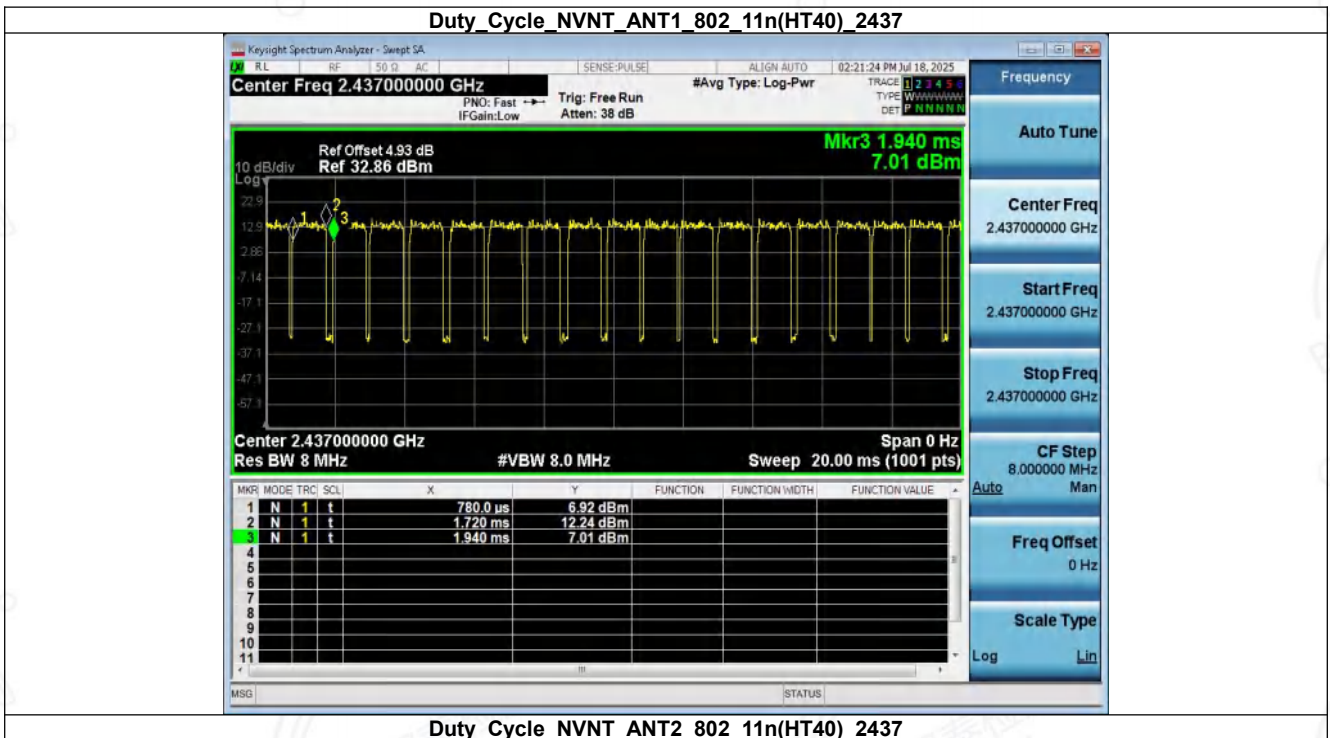
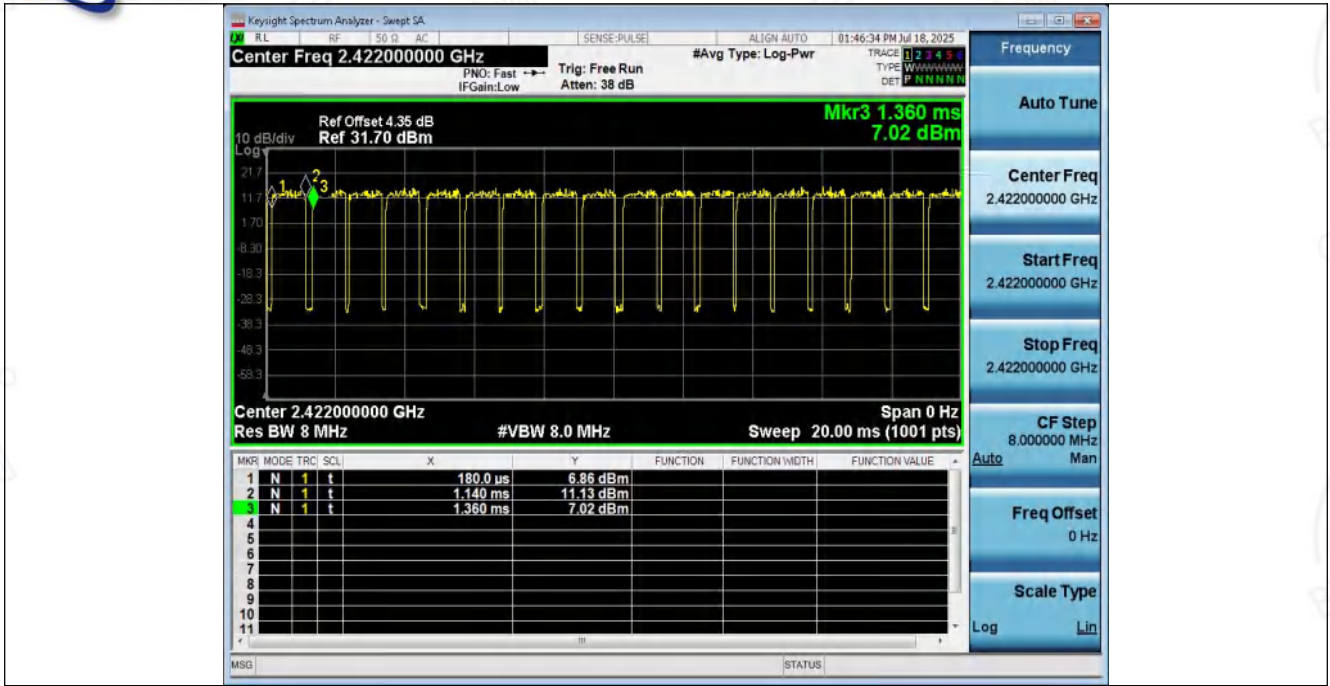


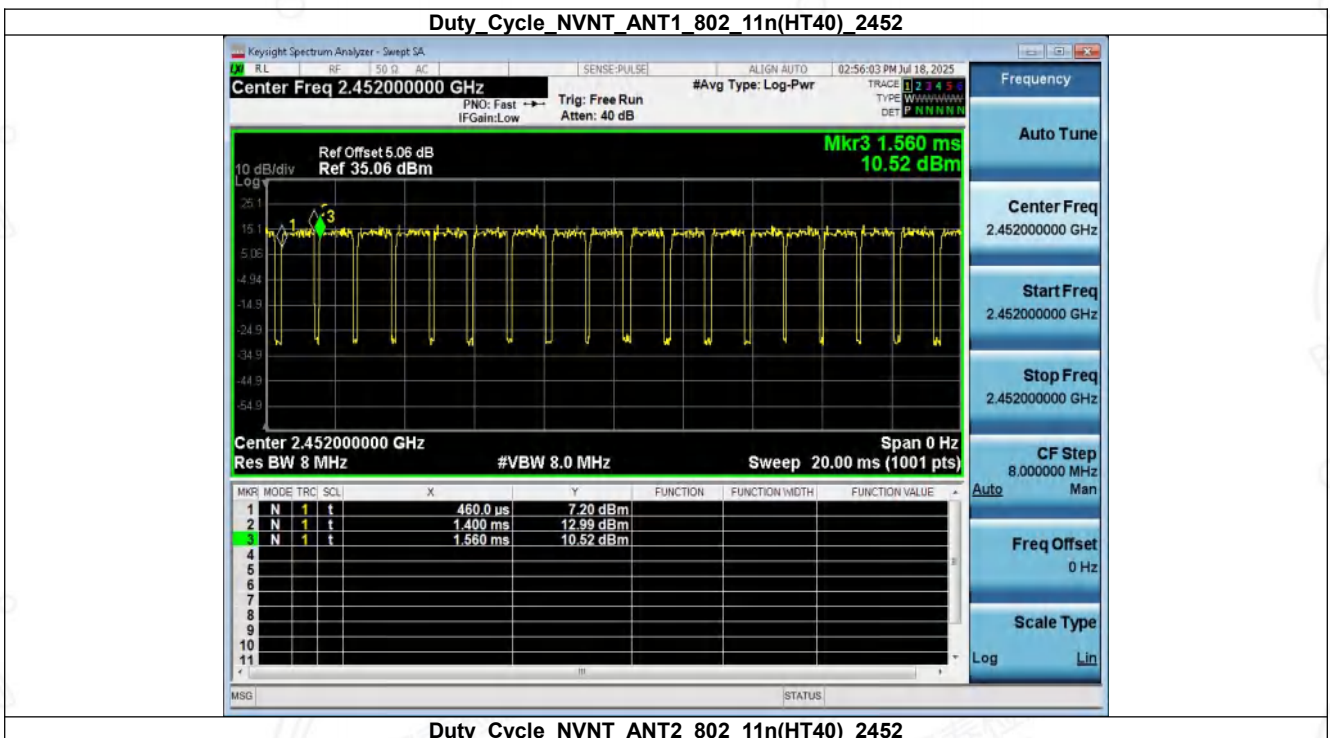
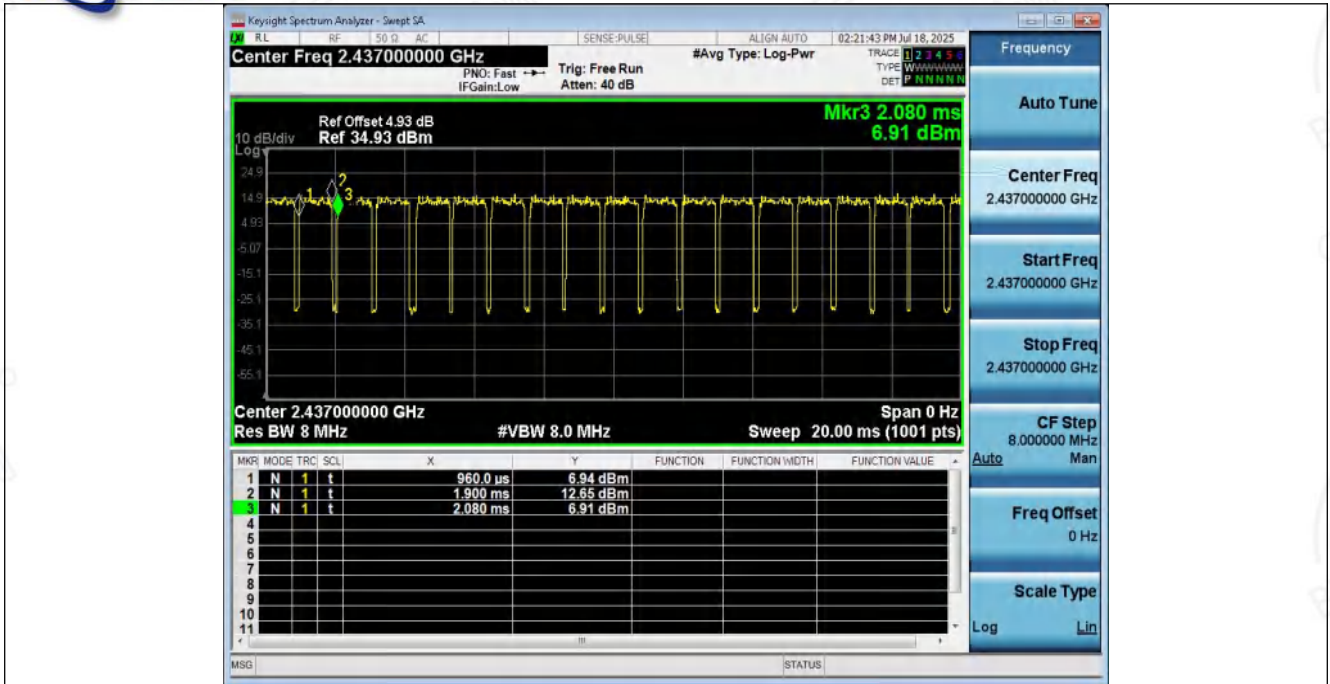


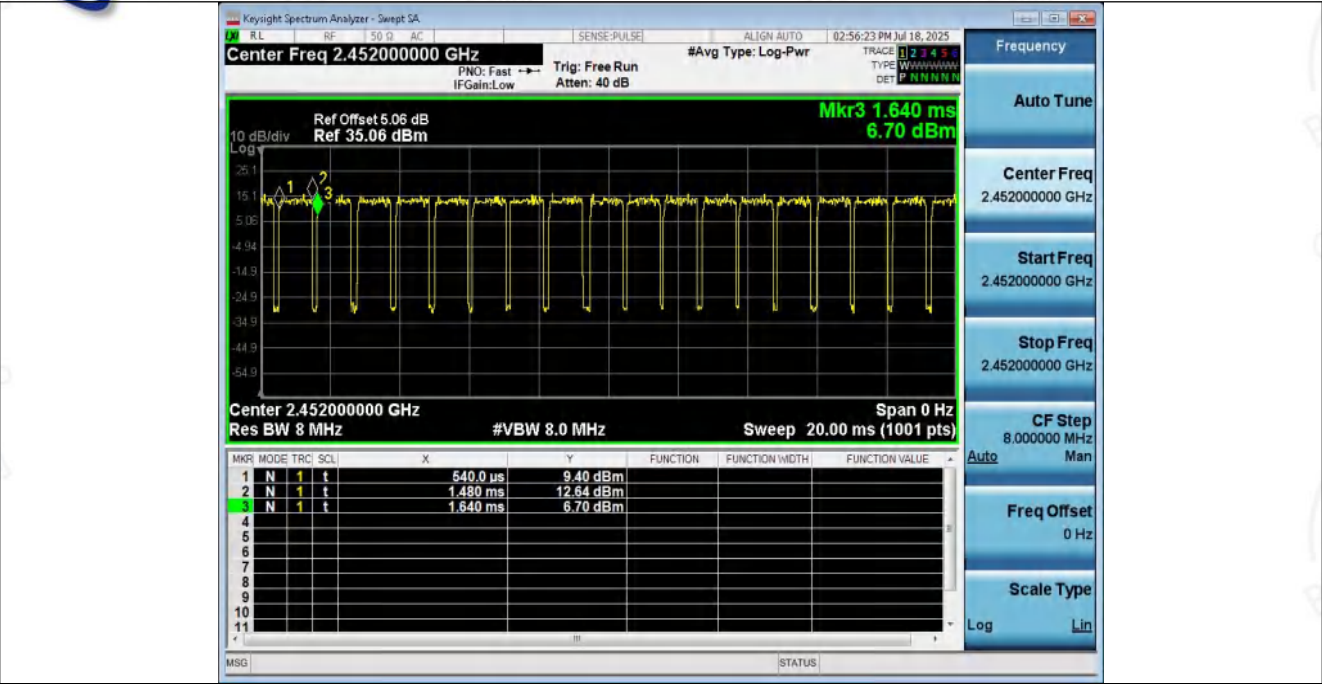












4. MAX. Output Power

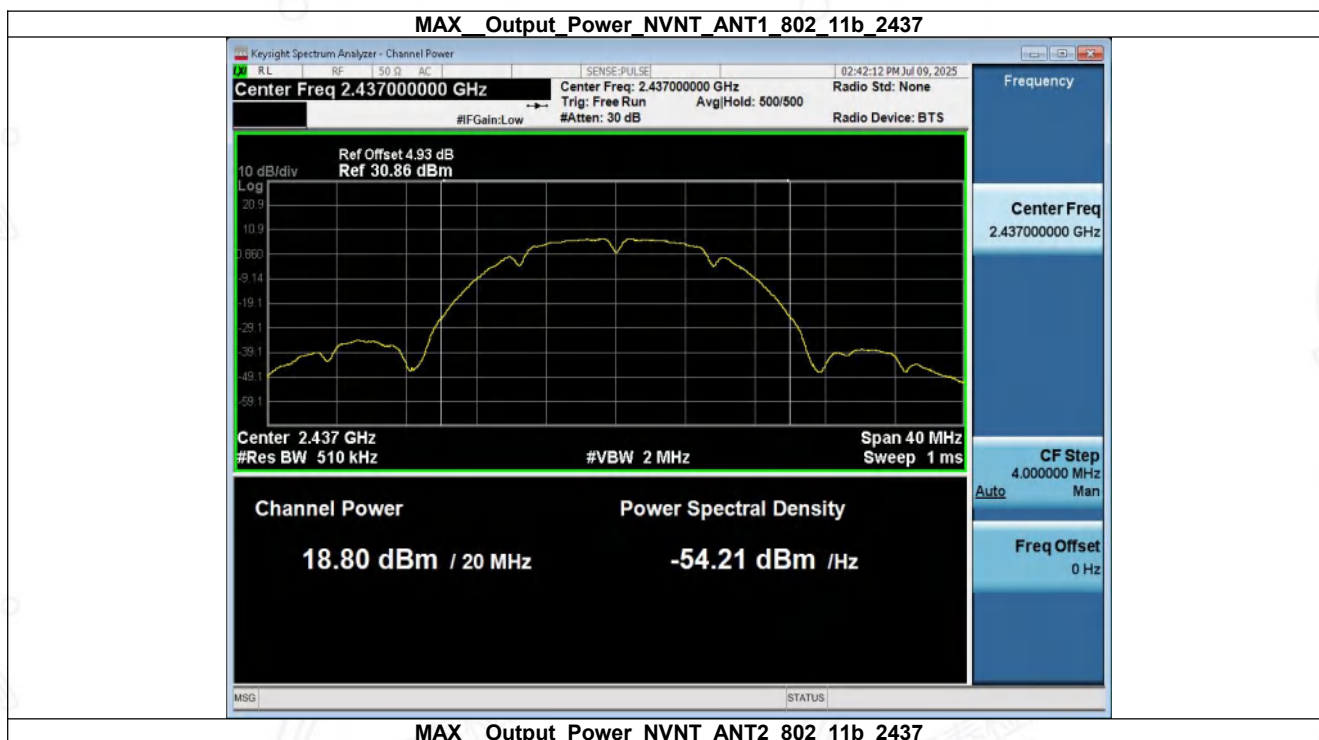
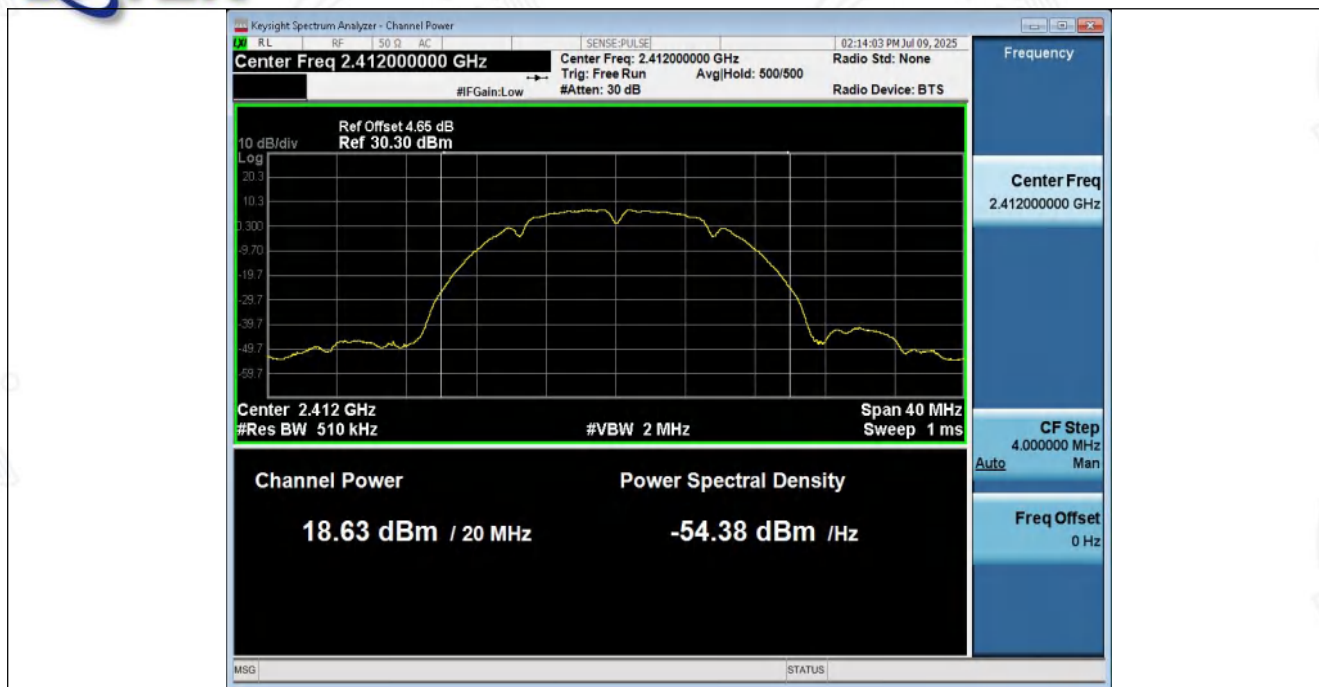
Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	RMS	17.57	0.12	17.69	30	Pass
NVNT	ANT2	802.11b	2412.00	RMS	18.63	0.12	18.75	30	Pass
NVNT	ANT1	802.11b	2437.00	RMS	18.80	0.12	18.92	30	Pass
NVNT	ANT2	802.11b	2437.00	RMS	18.92	0.14	19.06	30	Pass
NVNT	ANT1	802.11b	2462.00	RMS	19.31	0.14	19.45	30	Pass
NVNT	ANT2	802.11b	2462.00	RMS	18.37	0.15	18.52	30	Pass
NVNT	ANT1	802.11g	2412.00	RMS	12.64	0.20	12.84	30	Pass
NVNT	ANT2	802.11g	2412.00	RMS	12.64	0.24	12.88	30	Pass
NVNT	ANT1	802.11g	2437.00	RMS	12.29	0.28	12.57	30	Pass
NVNT	ANT2	802.11g	2437.00	RMS	12.49	0.32	12.81	30	Pass
NVNT	ANT1	802.11g	2462.00	RMS	12.36	0.36	12.72	30	Pass
NVNT	ANT2	802.11g	2462.00	RMS	11.47	0.20	11.67	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	RMS	11.78	0.39	12.17	30	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	RMS	12.05	0.26	12.31	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	RMS	11.55	0.34	11.89	30	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	RMS	11.51	0.31	11.82	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	RMS	11.84	0.26	12.10	30	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	RMS	10.98	0.30	11.28	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	RMS	11.61	0.42	12.03	30	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	RMS	11.52	0.81	12.33	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	RMS	11.72	0.82	12.54	30	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	RMS	11.64	0.67	12.31	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	RMS	11.87	0.59	12.46	30	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	RMS	11.48	0.59	12.07	30	Pass

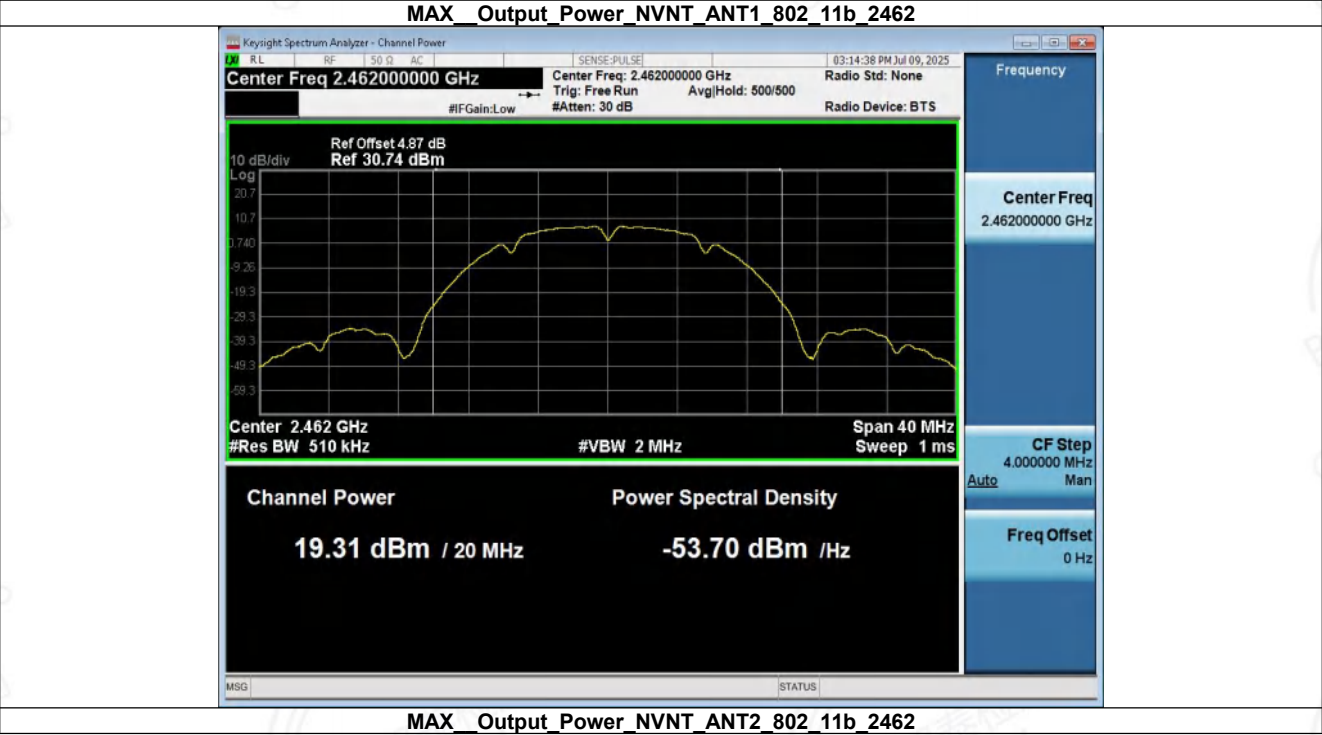
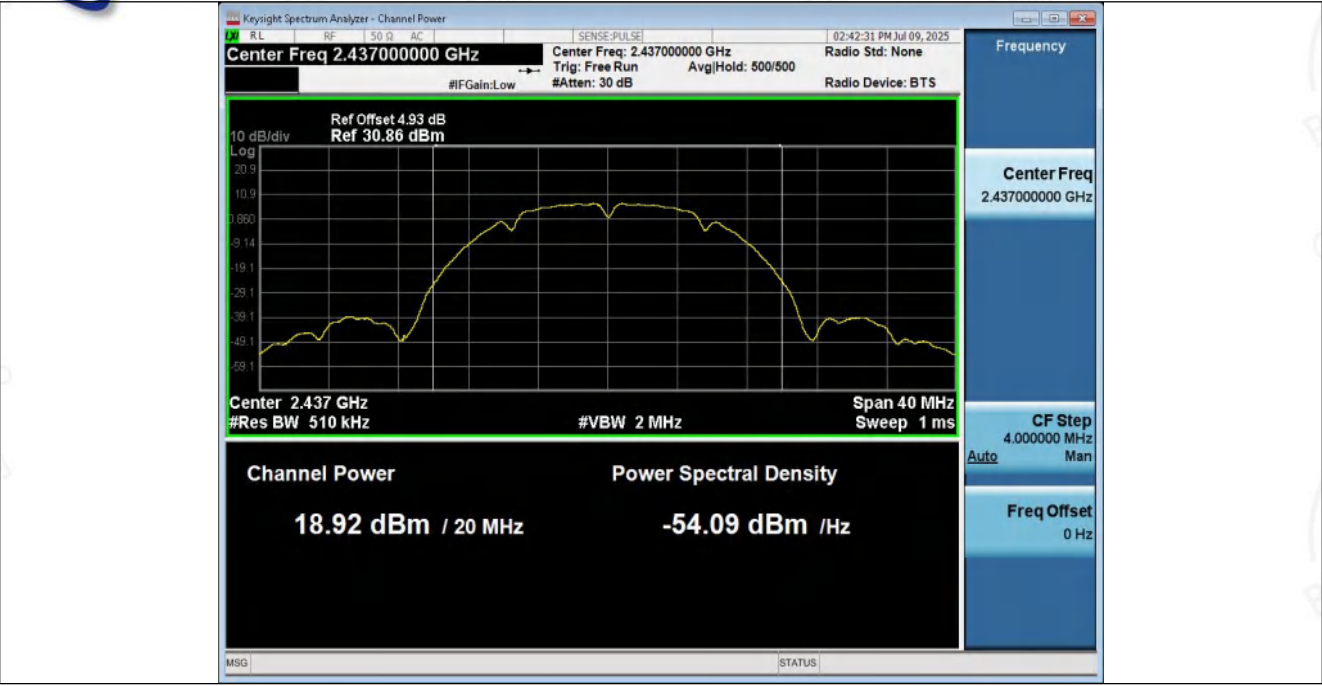
MAX Output Power NVNT ANT1 802.11b 2412

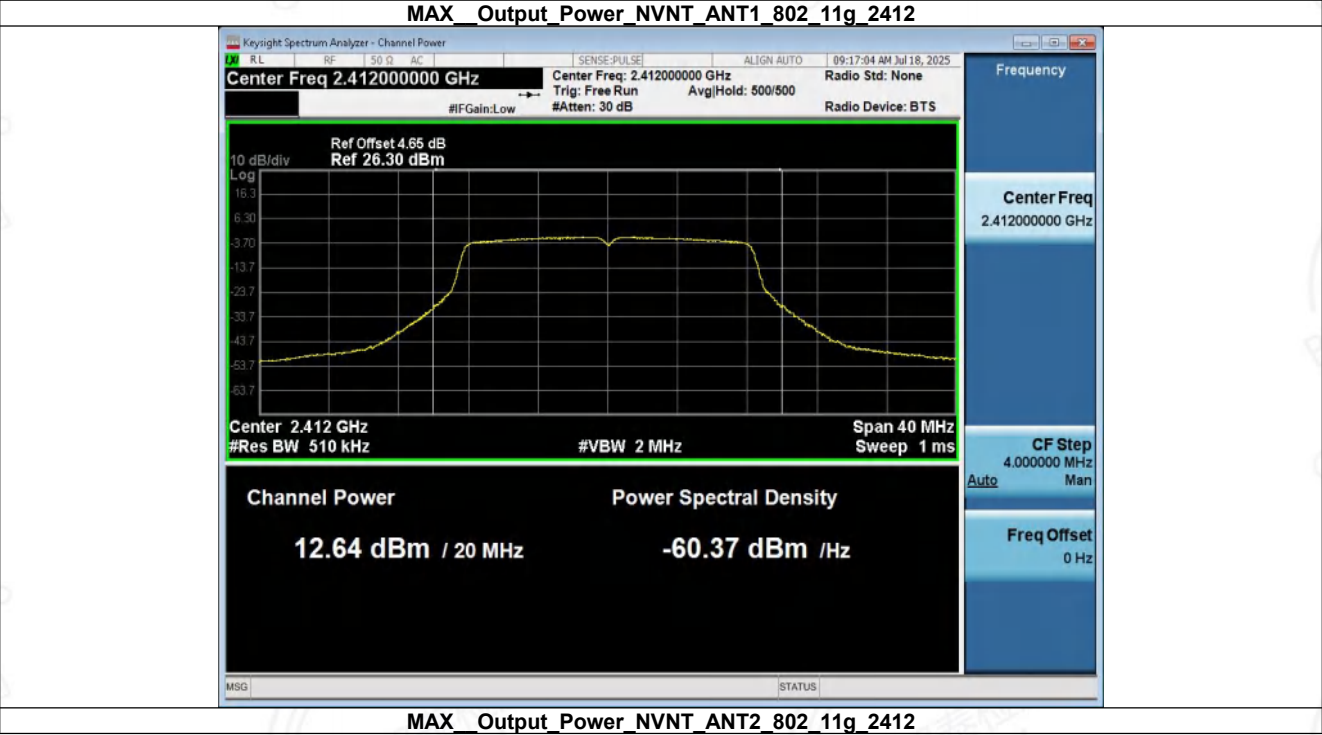
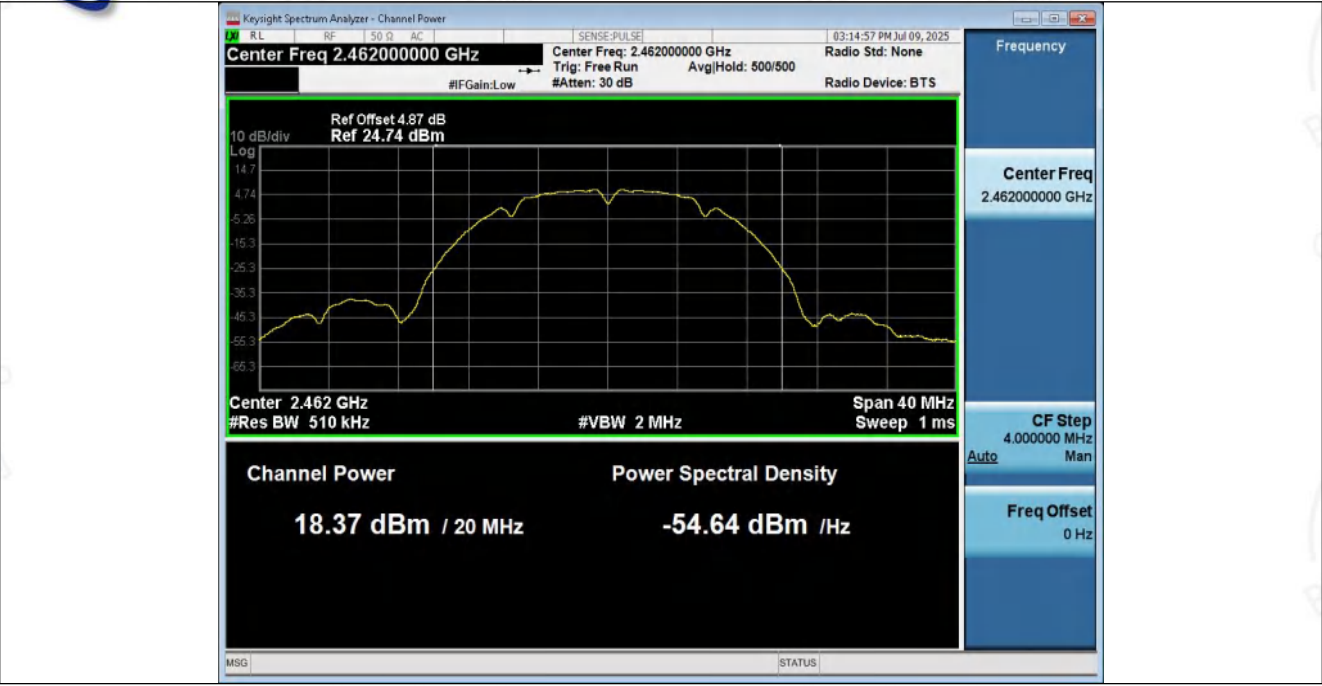


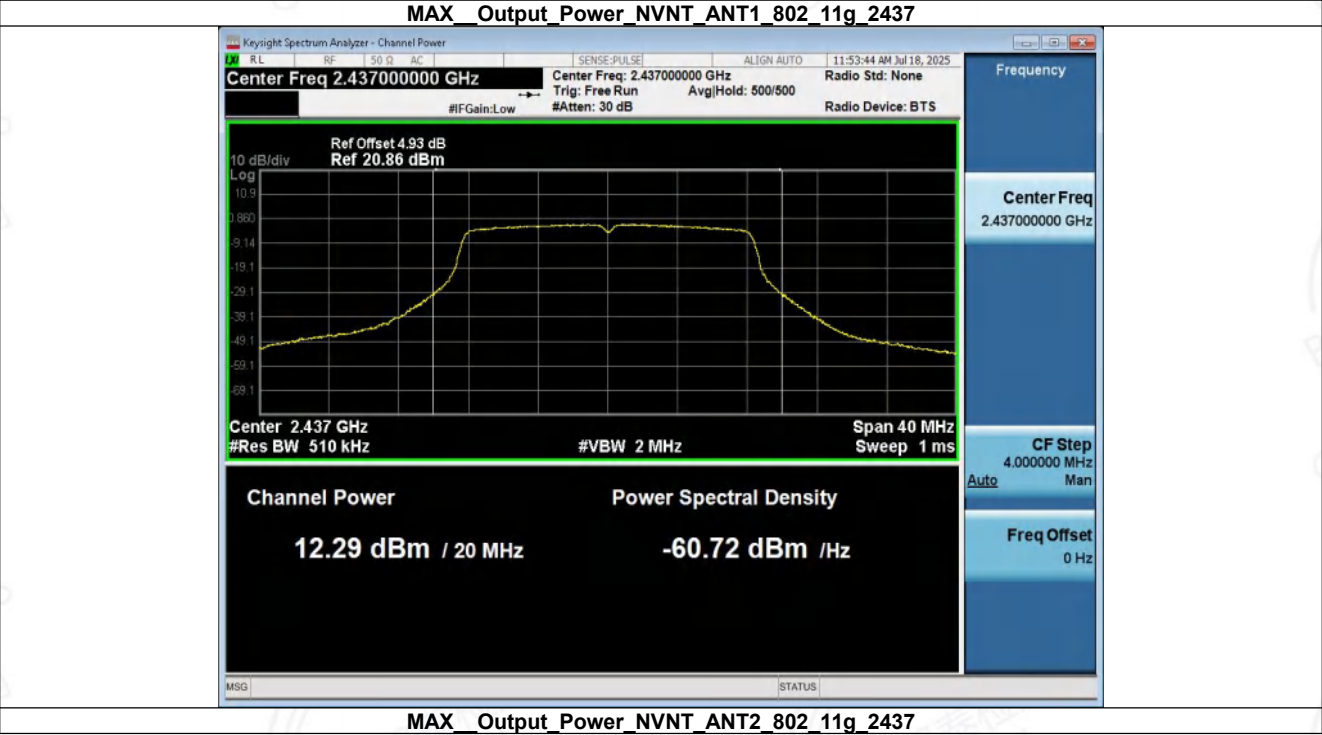
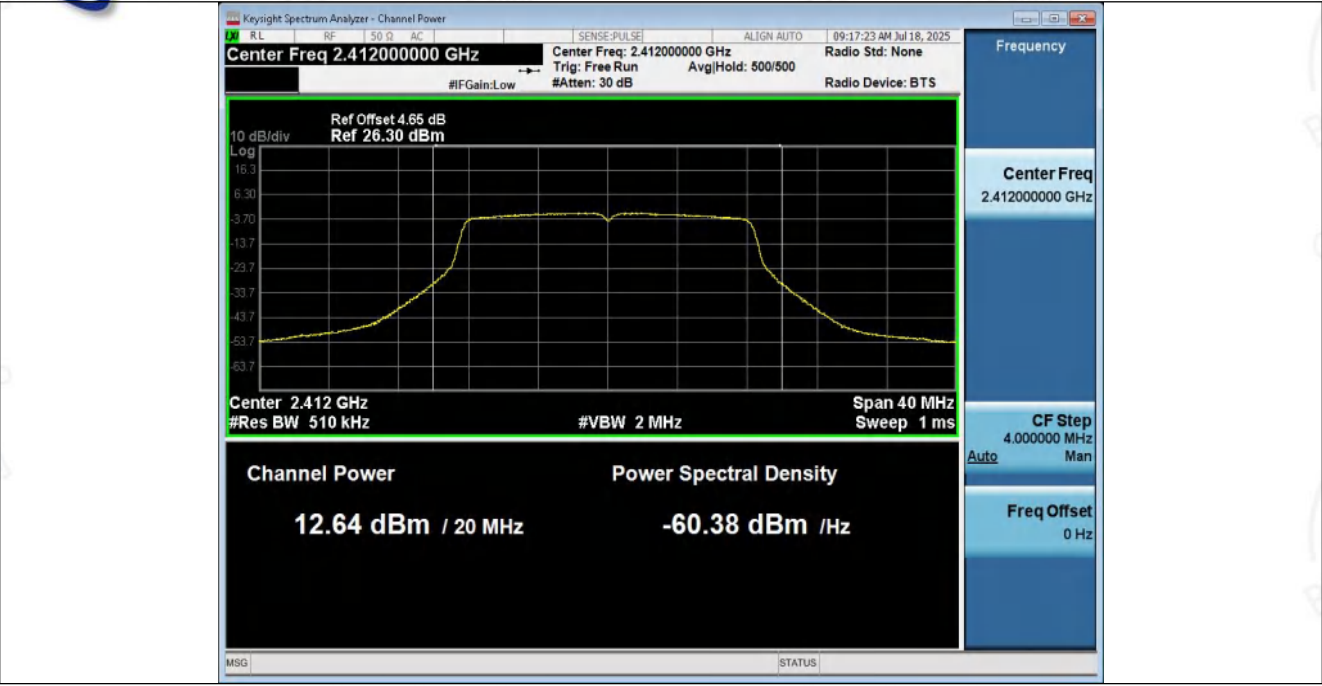
MAX Output Power NVNT ANT2 802.11b 2412

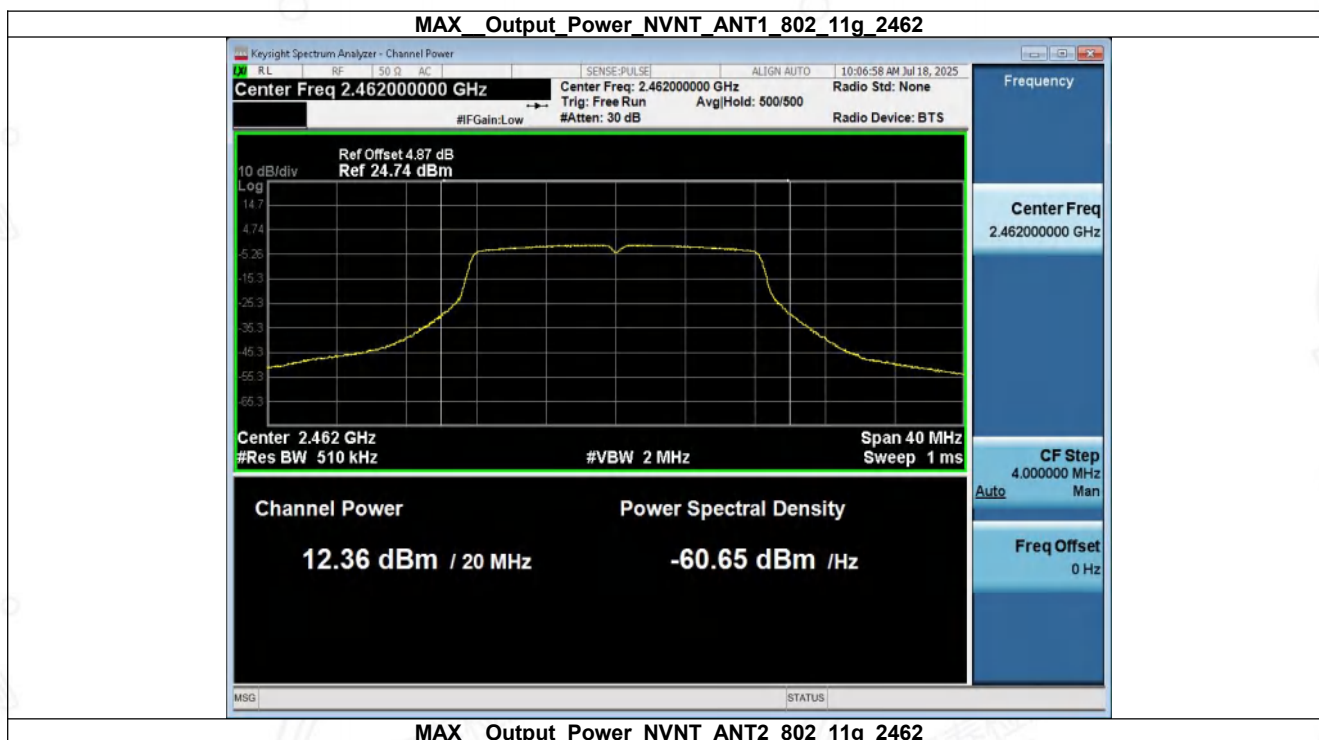
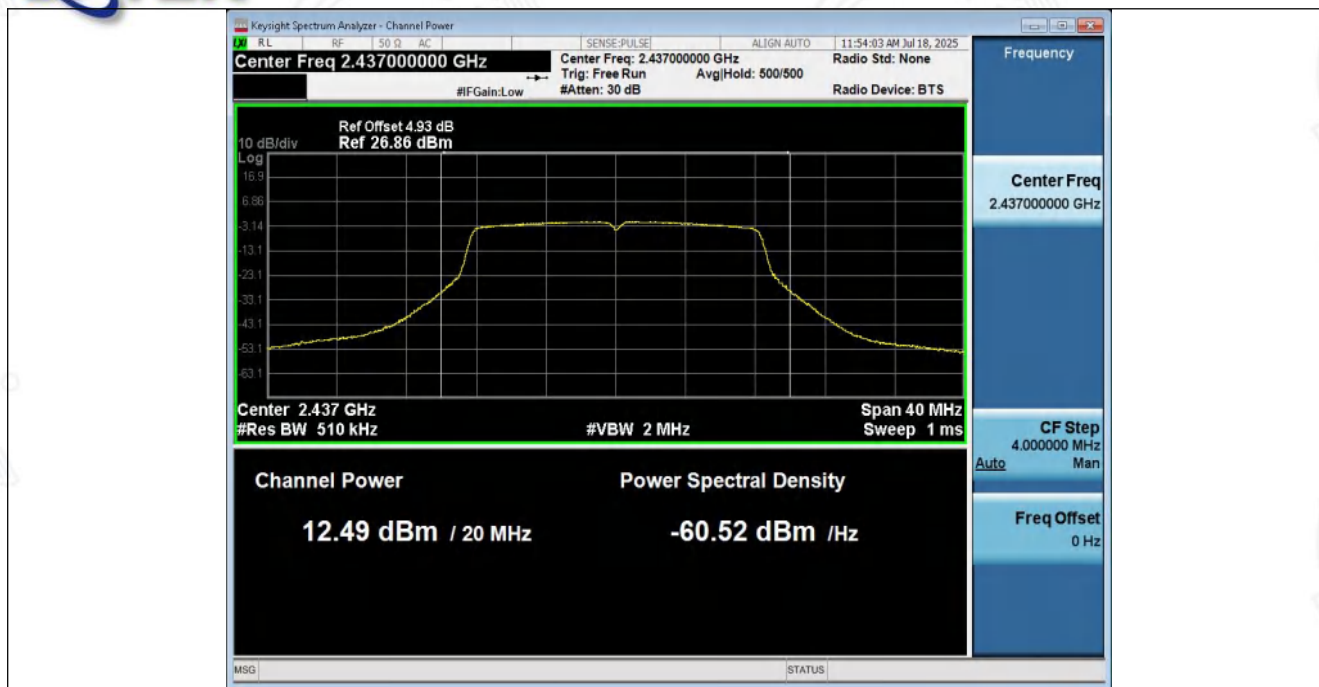


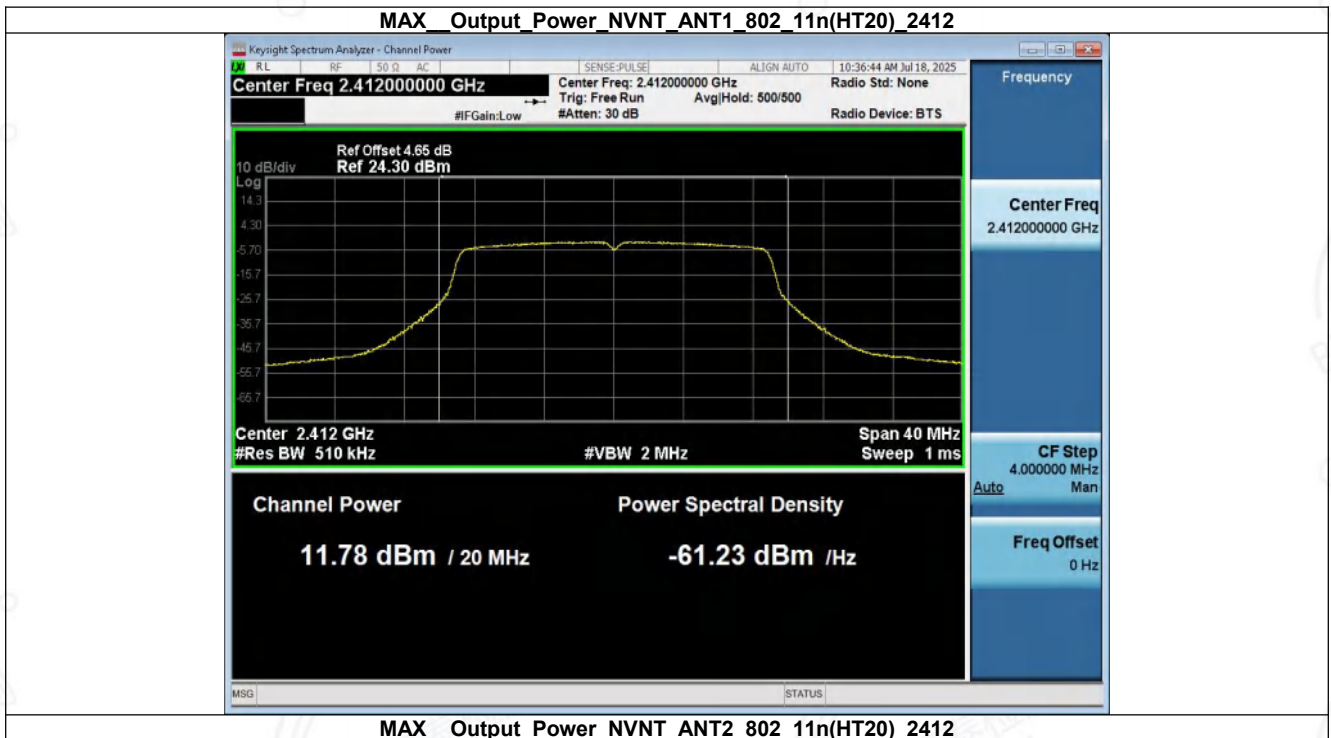
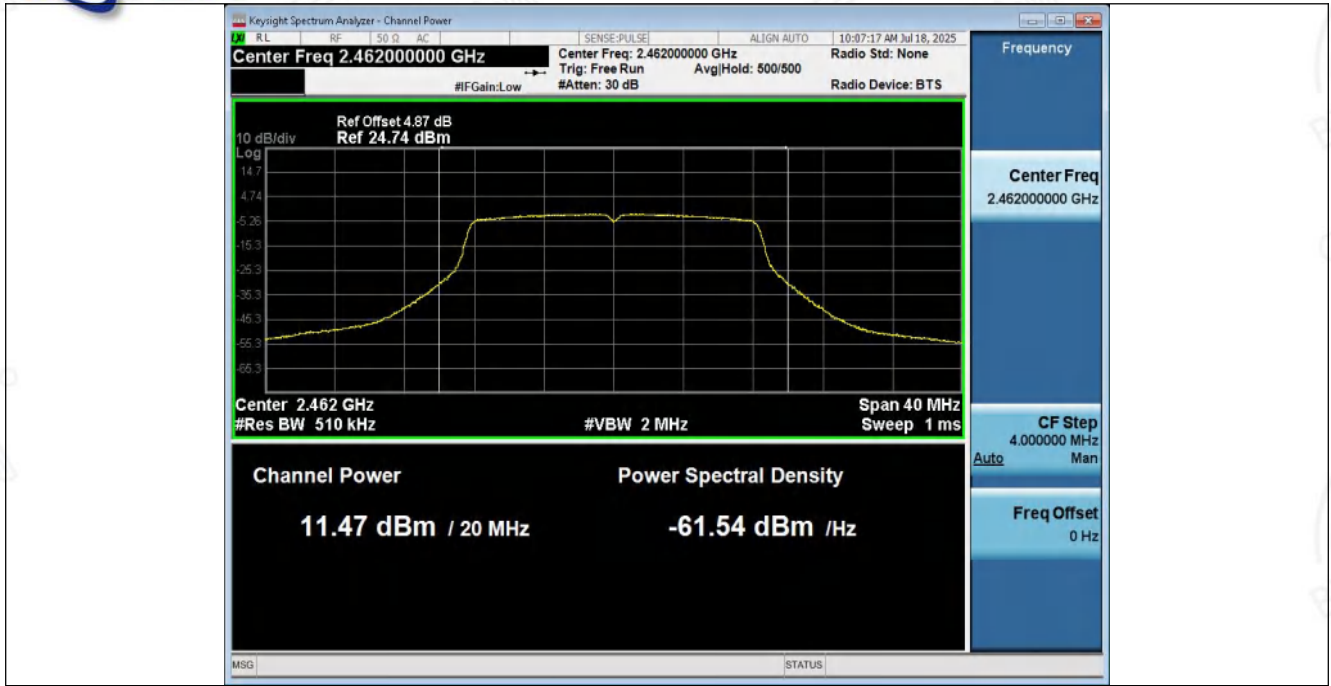


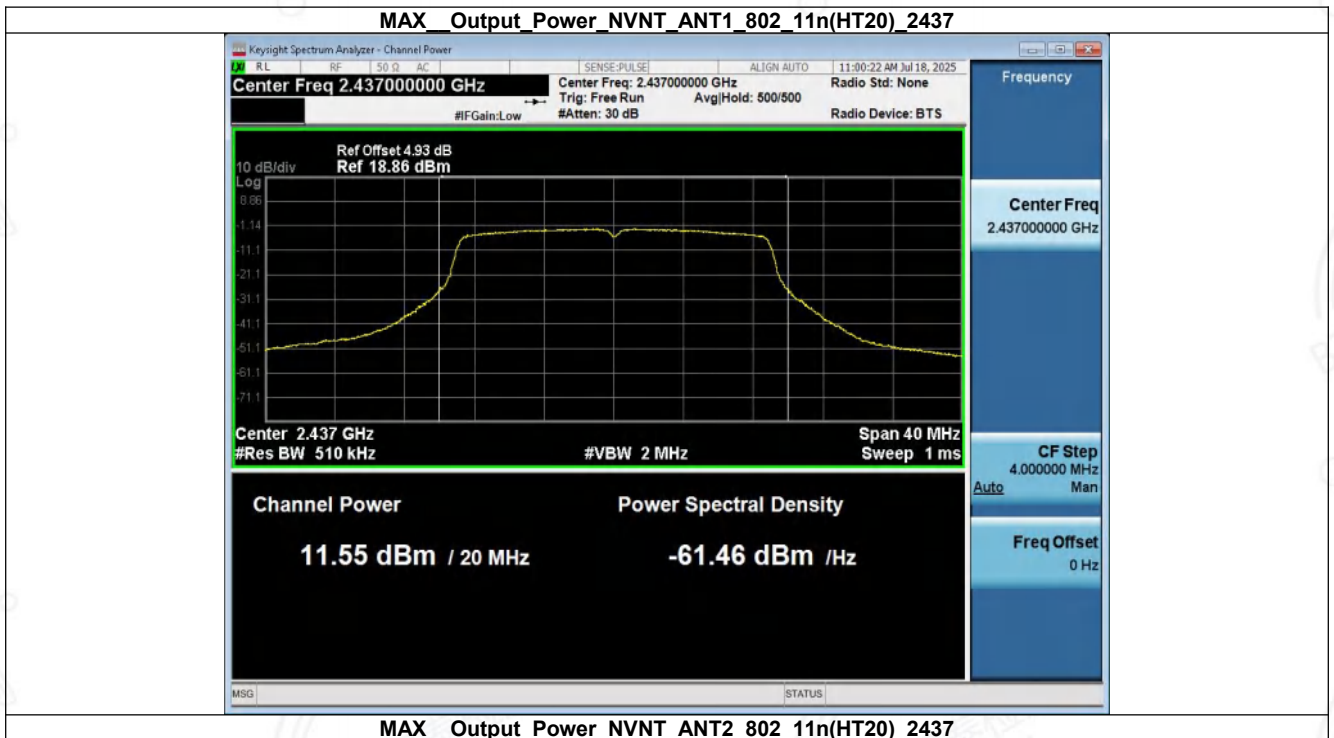
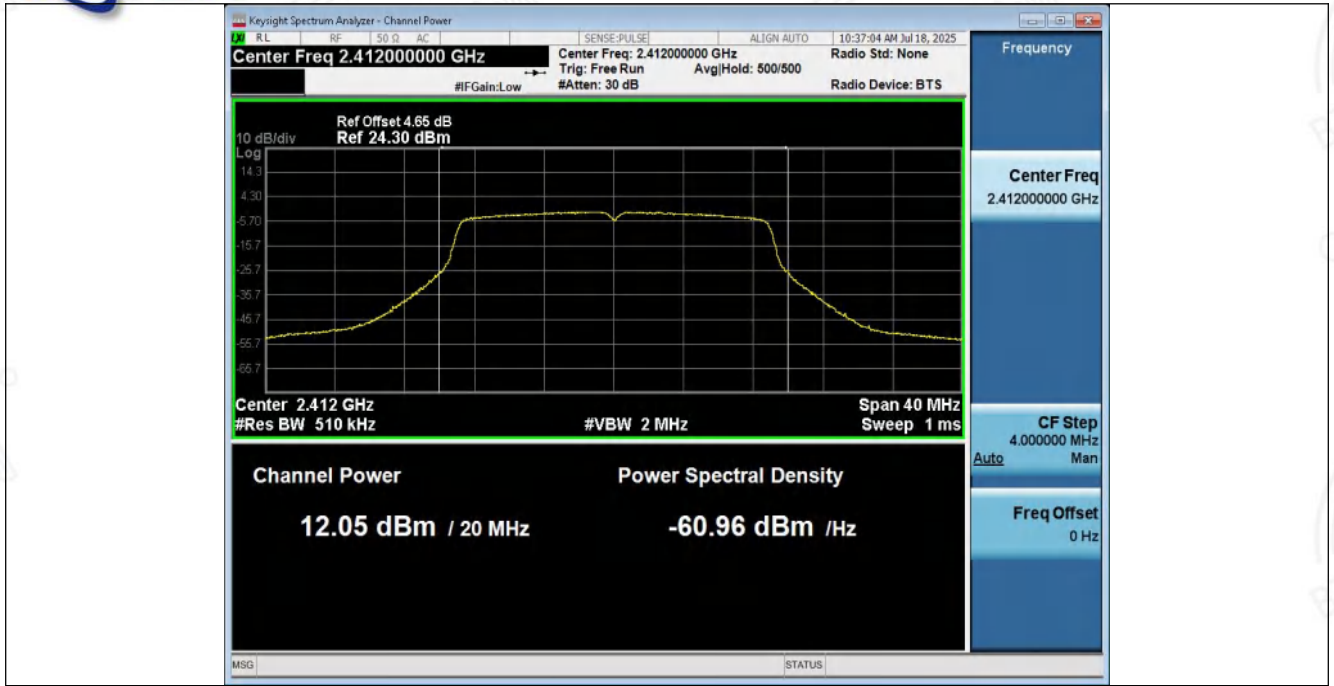


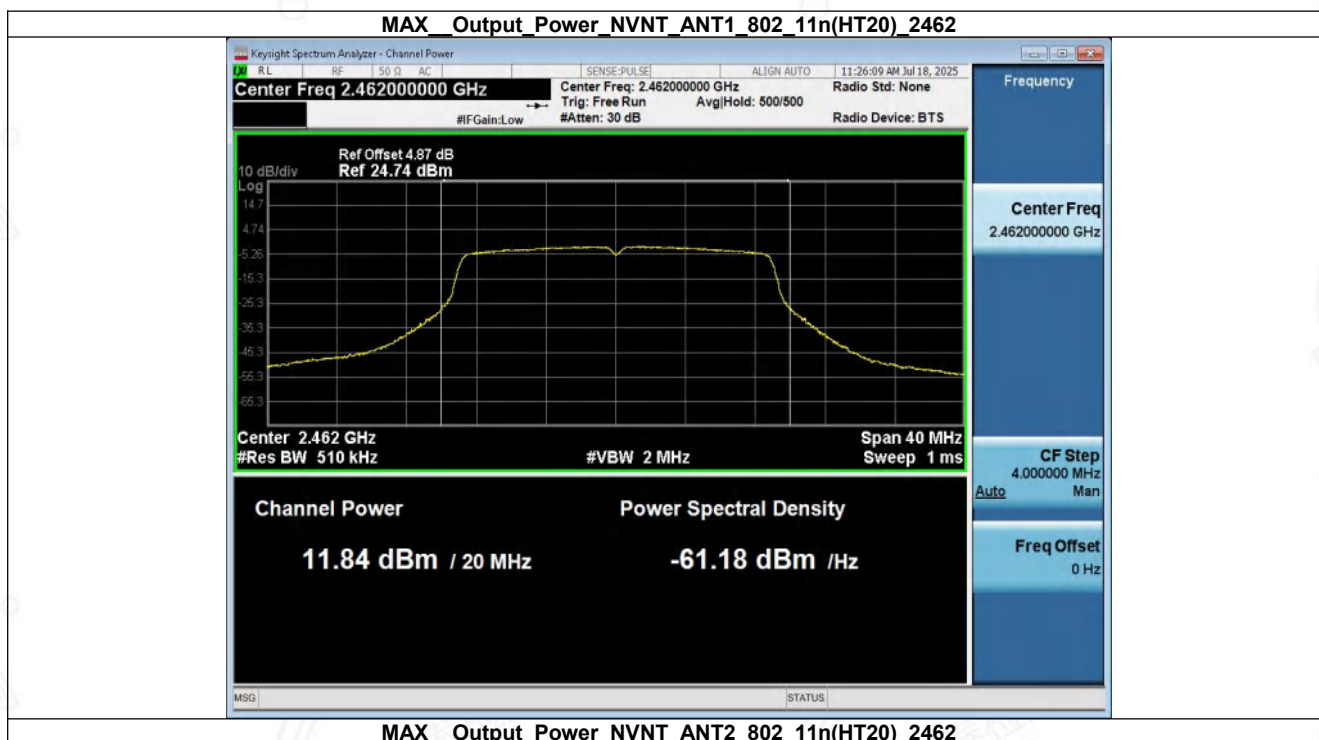
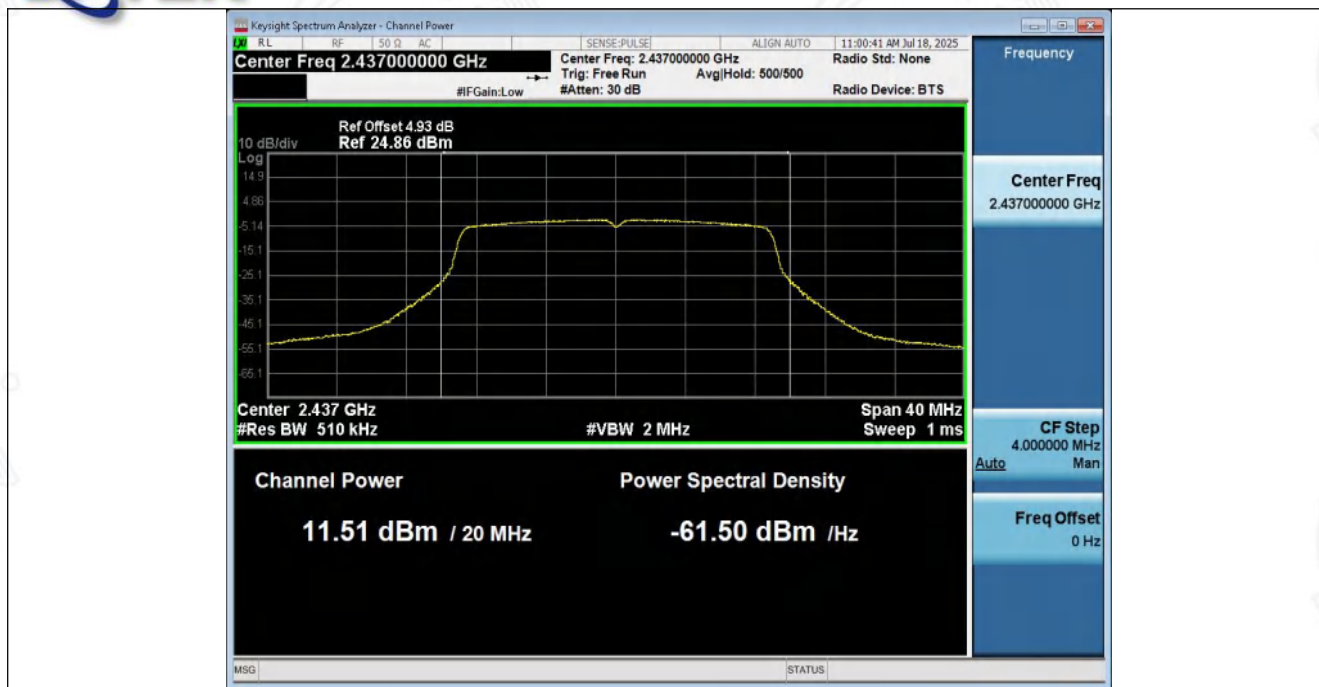


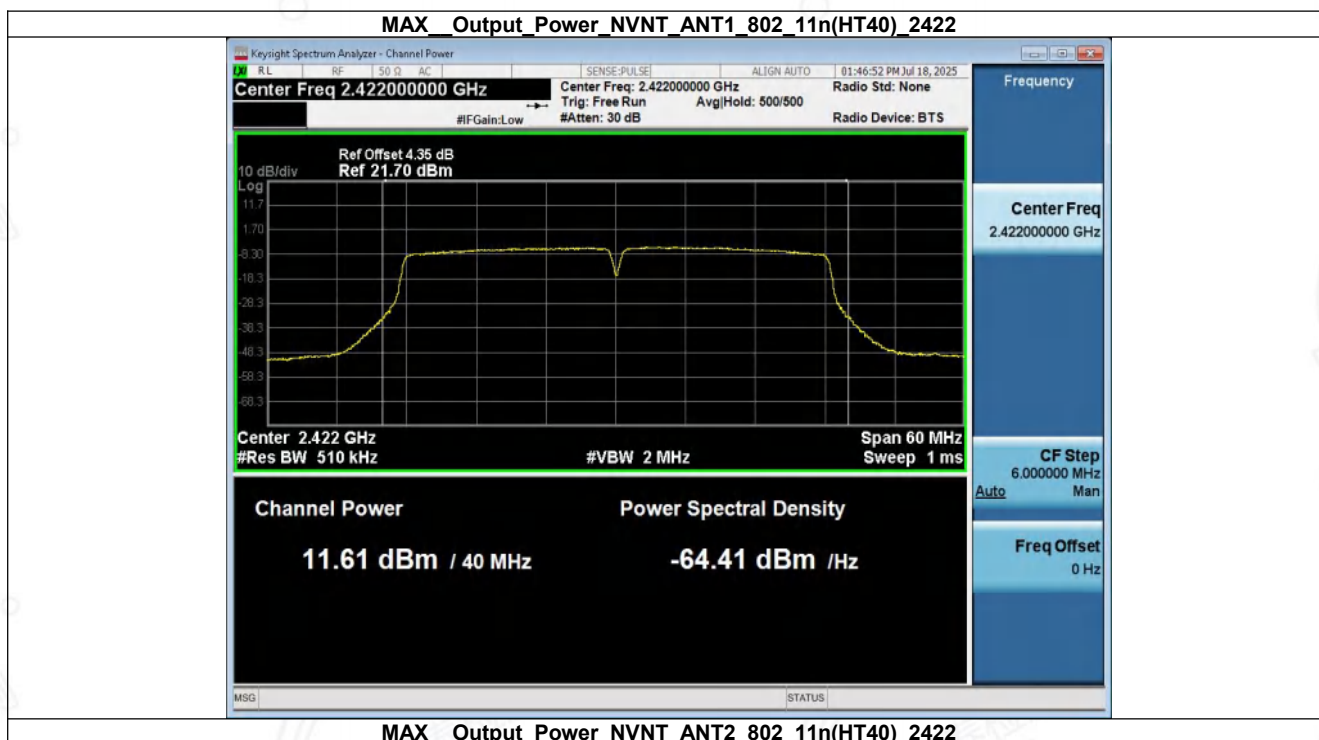
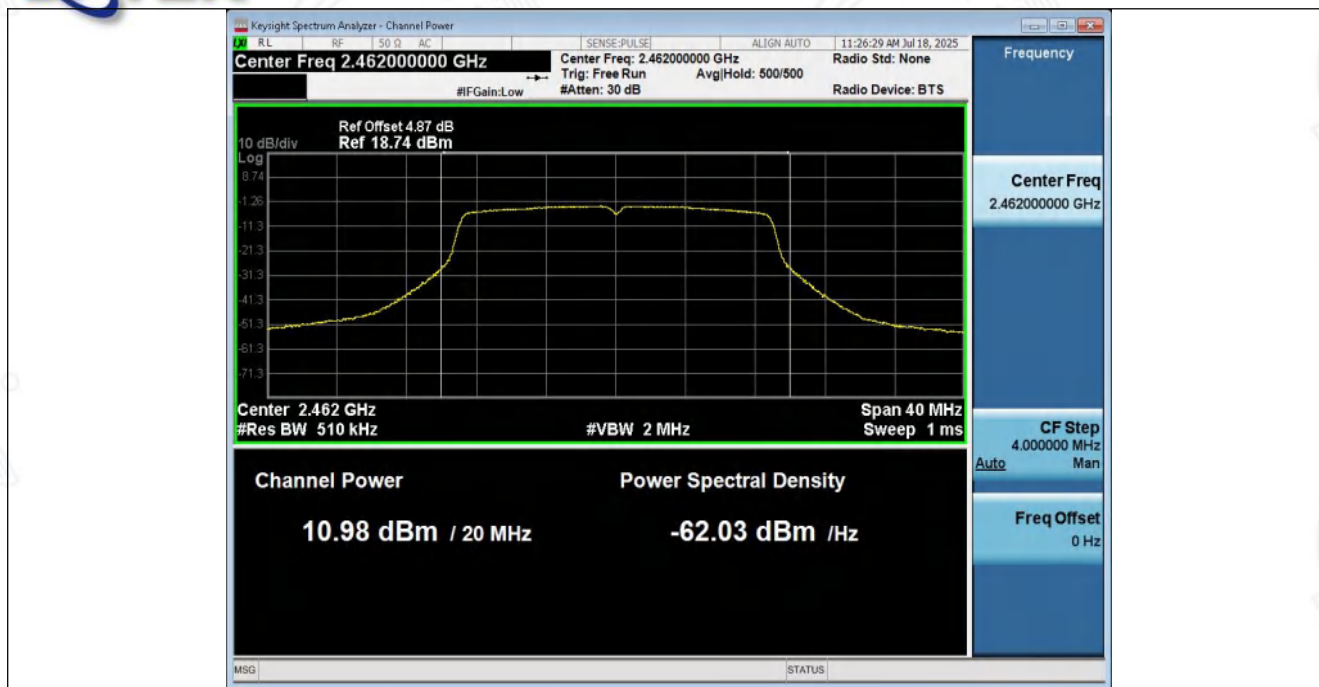


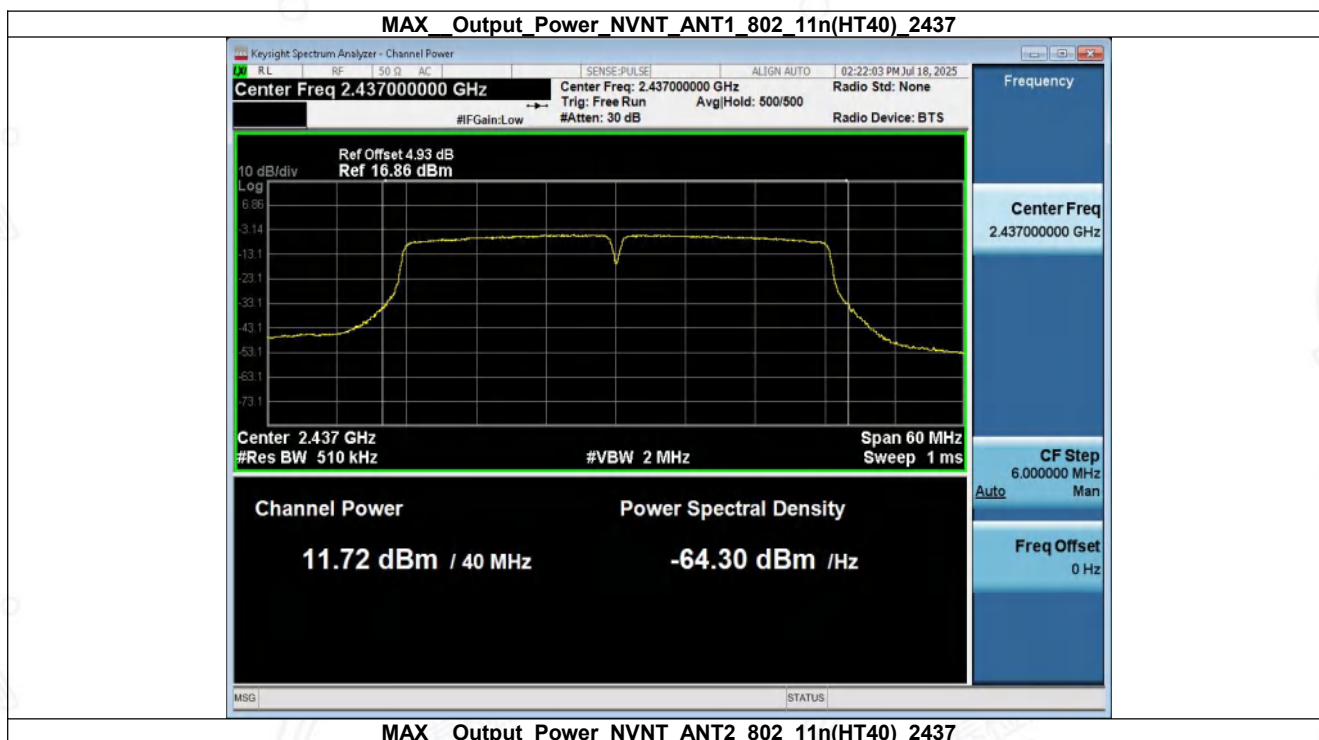
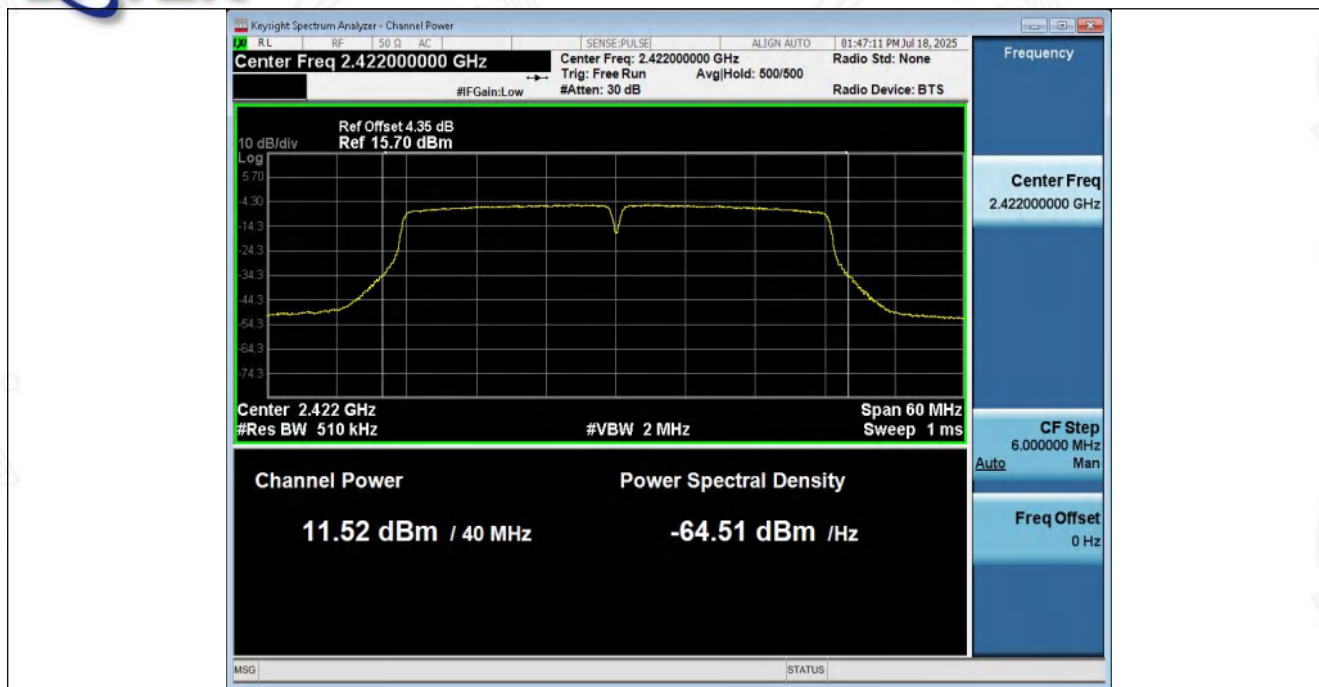


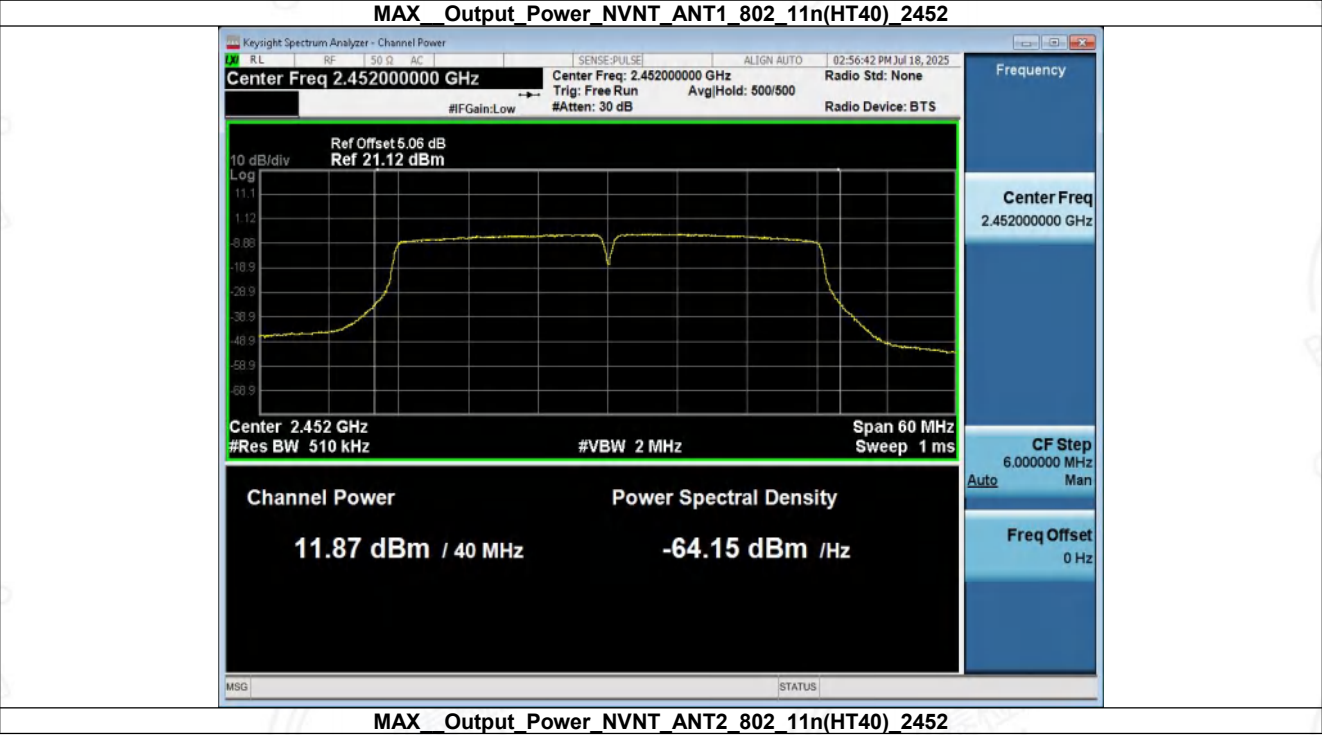
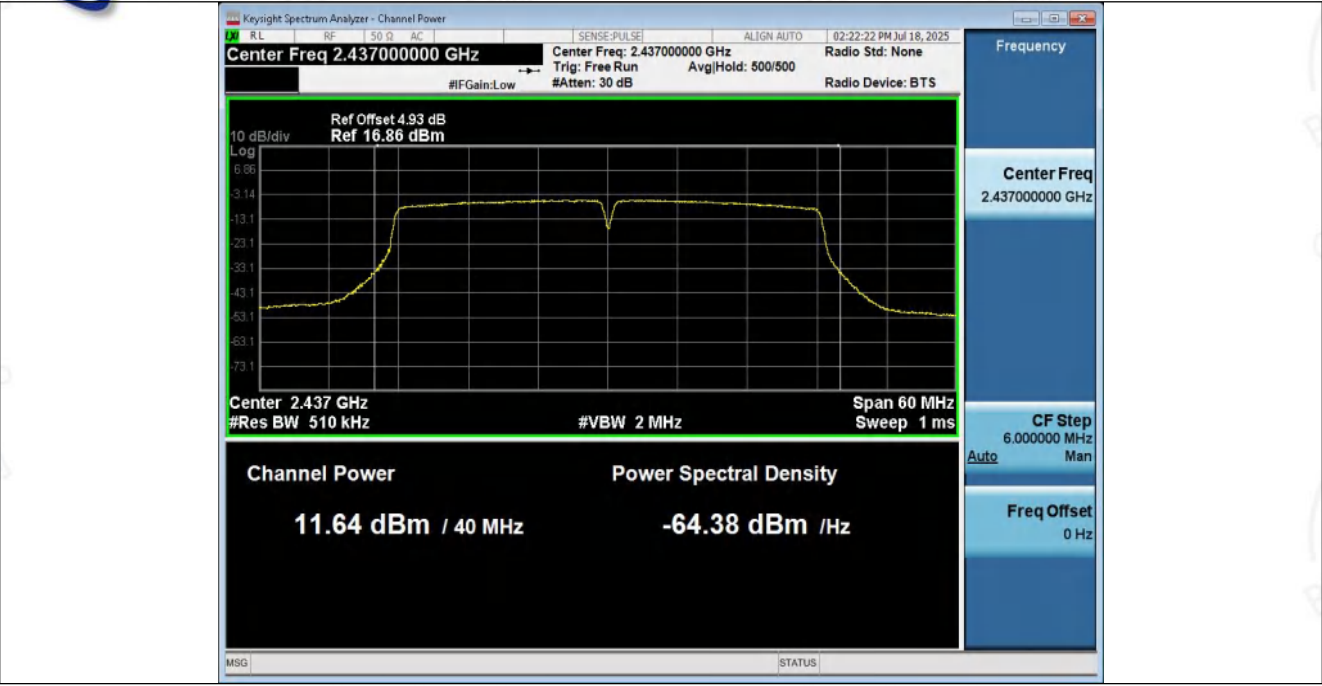


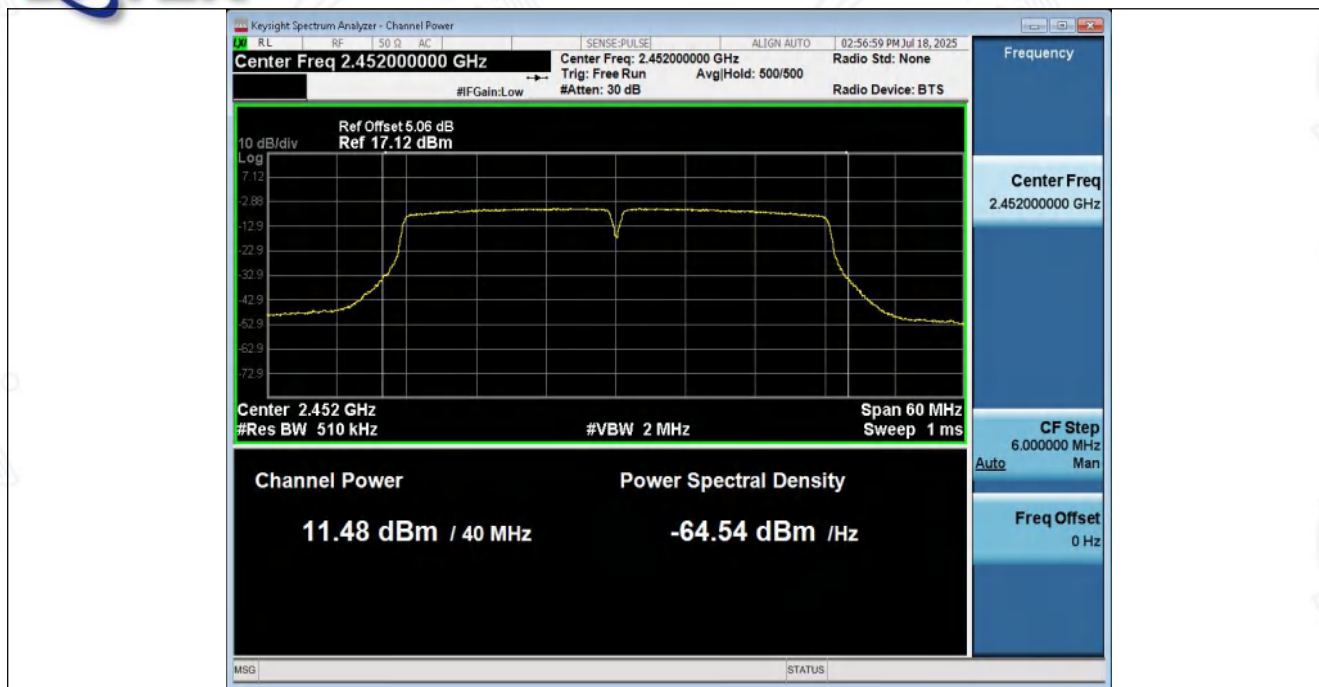












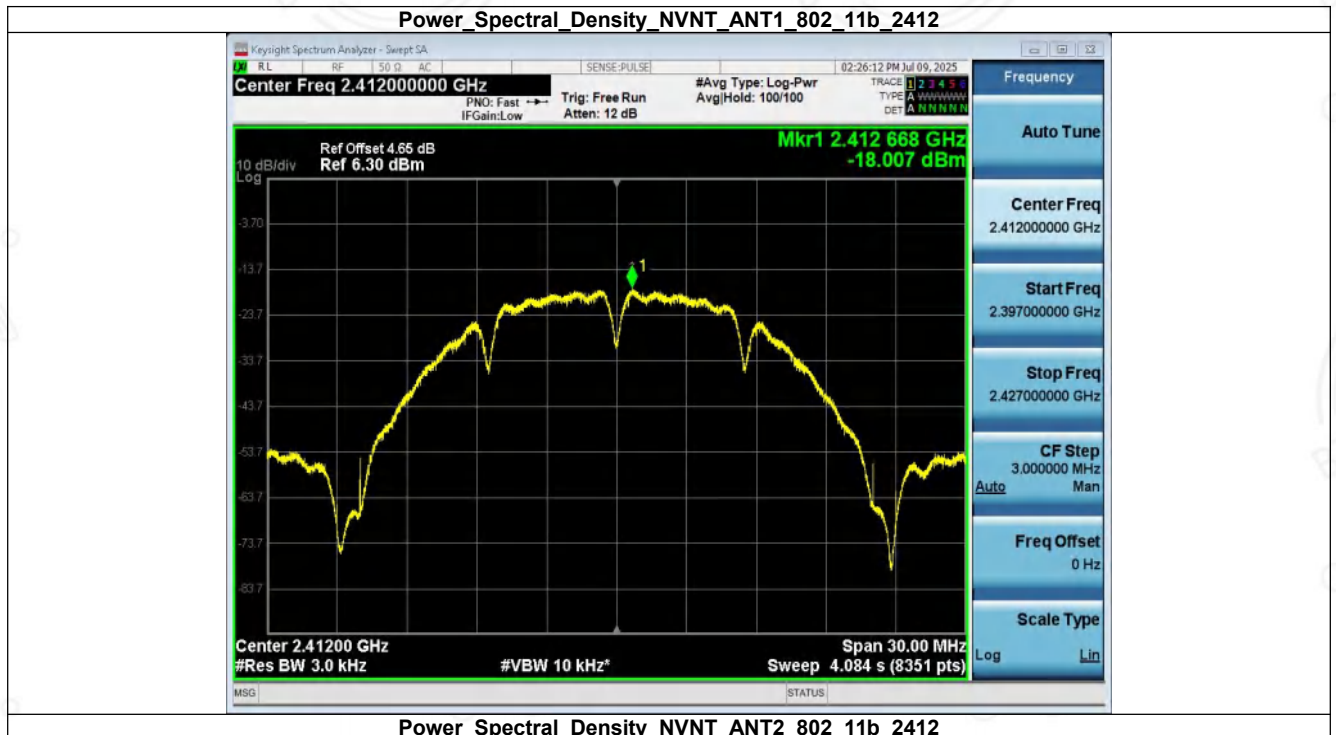
Condition	Antenna	Mode	Frequency(MHz)	MIMO_Conducted_Power(dBm)	Limit(dBm)	Result
NVNT	MIMO_TX	802.11n(HT20)	2412.00	15.25	30	Pass
NVNT	MIMO_TX	802.11n(HT20)	2437.00	14.86	30	Pass
NVNT	MIMO_TX	802.11n(HT20)	2462.00	14.72	30	Pass
NVNT	MIMO_TX	802.11n(HT40)	2422.00	15.19	30	Pass
NVNT	MIMO_TX	802.11n(HT40)	2437.00	15.44	30	Pass
NVNT	MIMO_TX	802.11n(HT40)	2452.00	15.28	30	Pass



5. Power Spectral Density

Condition	Antenna	Modulation	Frequency (MHz)	SA_PSD(dBm/3kHz)	Duty factor(dB)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	-18.01	0.12	0.00	-17.89	8	Pass
NVNT	ANT2	802.11b	2412.00	-16.79	0.12	0.00	-16.67	8	Pass
NVNT	ANT1	802.11b	2437.00	-17.39	0.12	0.00	-17.27	8	Pass
NVNT	ANT2	802.11b	2437.00	-16.71	0.14	0.00	-16.57	8	Pass
NVNT	ANT1	802.11b	2462.00	-15.79	0.14	0.00	-15.65	8	Pass
NVNT	ANT2	802.11b	2462.00	-17.30	0.15	0.00	-17.15	8	Pass
NVNT	ANT1	802.11g	2412.00	-21.71	0.20	0.00	-21.51	8	Pass
NVNT	ANT2	802.11g	2412.00	-21.44	0.24	0.00	-21.20	8	Pass
NVNT	ANT1	802.11g	2437.00	-21.75	0.28	0.00	-21.47	8	Pass
NVNT	ANT2	802.11g	2437.00	-22.32	0.32	0.00	-22.00	8	Pass
NVNT	ANT1	802.11g	2462.00	-22.27	0.36	0.00	-21.91	8	Pass
NVNT	ANT2	802.11g	2462.00	-23.03	0.20	0.00	-22.83	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-22.73	0.39	0.00	-22.34	8	Pass
NVNT	ANT2	802.11n(HT20)	2412.00	-22.02	0.26	0.00	-21.76	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-23.21	0.34	0.00	-22.87	8	Pass
NVNT	ANT2	802.11n(HT20)	2437.00	-23.16	0.31	0.00	-22.85	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-21.21	0.26	0.00	-20.95	8	Pass
NVNT	ANT2	802.11n(HT20)	2462.00	-23.40	0.30	0.00	-23.10	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-25.20	0.42	0.00	-24.78	8	Pass
NVNT	ANT2	802.11n(HT40)	2422.00	-26.60	0.81	0.00	-25.79	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-25.01	0.82	0.00	-24.19	8	Pass
NVNT	ANT2	802.11n(HT40)	2437.00	-25.17	0.67	0.00	-24.50	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-24.23	0.59	0.00	-23.64	8	Pass
NVNT	ANT2	802.11n(HT40)	2452.00	-26.99	0.59	0.00	-26.40	8	Pass

Power_Spectral_Density_NVNT_ANT1_802_11b_2412



Power_Spectral_Density_NVNT_ANT2_802_11b_2412



