



Appendix A

RF Test Data for 2.4G (Conducted Measurement)

Product Name: Light Controller

Test Model: YX-LS9-D

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng



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A.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	2.4G	2402	Ant1	0.652	≥ 0.5	Pass
NVNT	2.4G	2426	Ant1	0.653	≥ 0.5	Pass
NVNT	2.4G	2480	Ant1	0.65	≥ 0.5	Pass

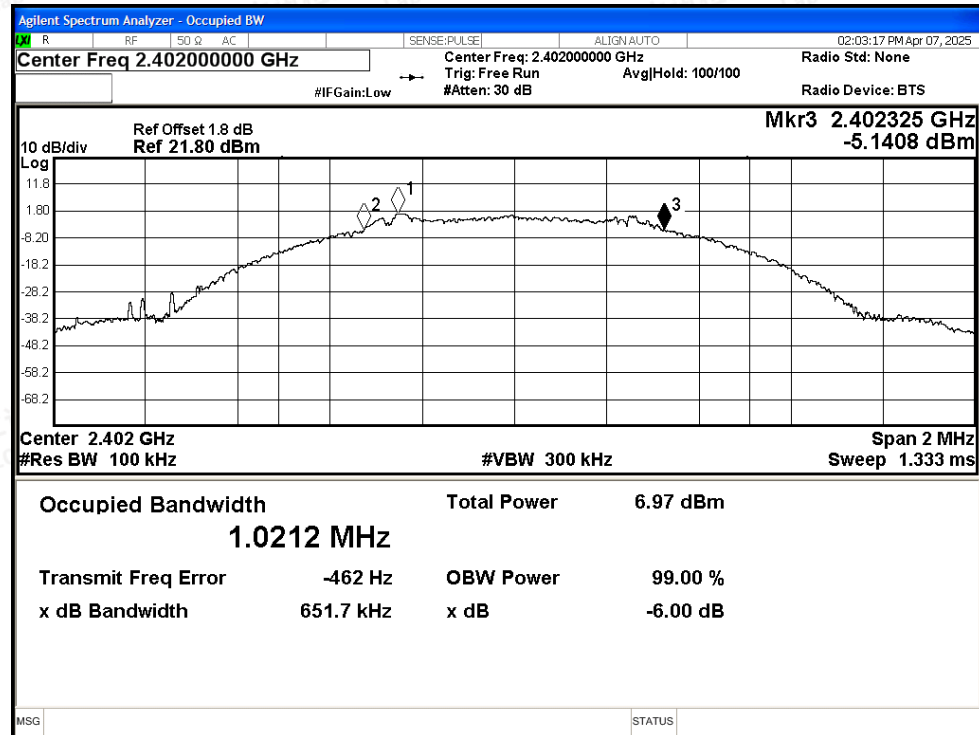


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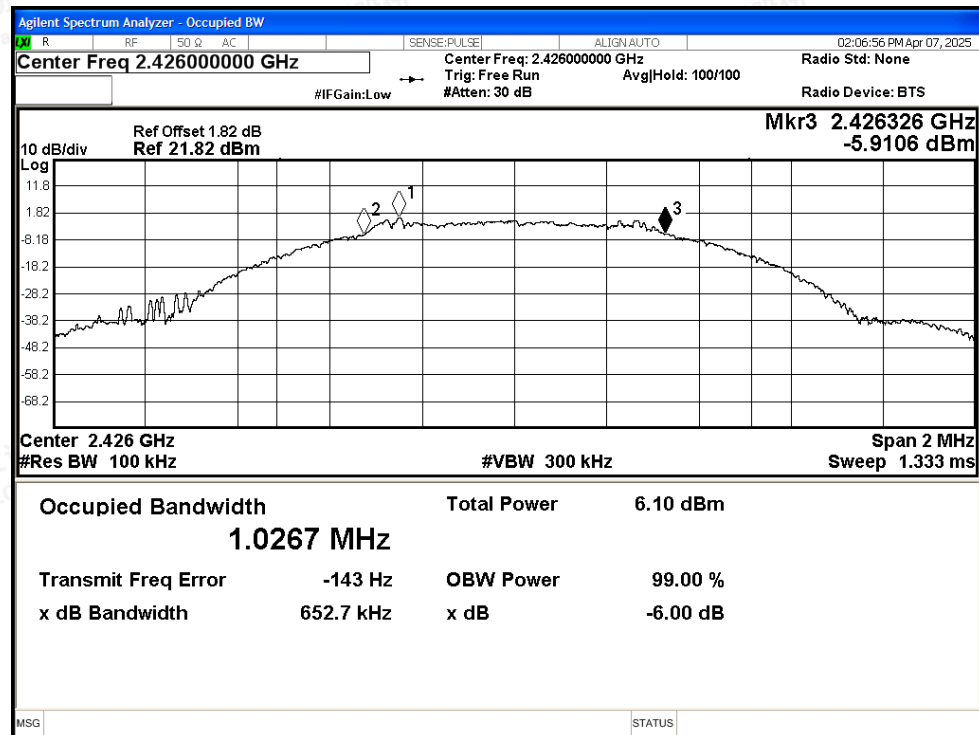


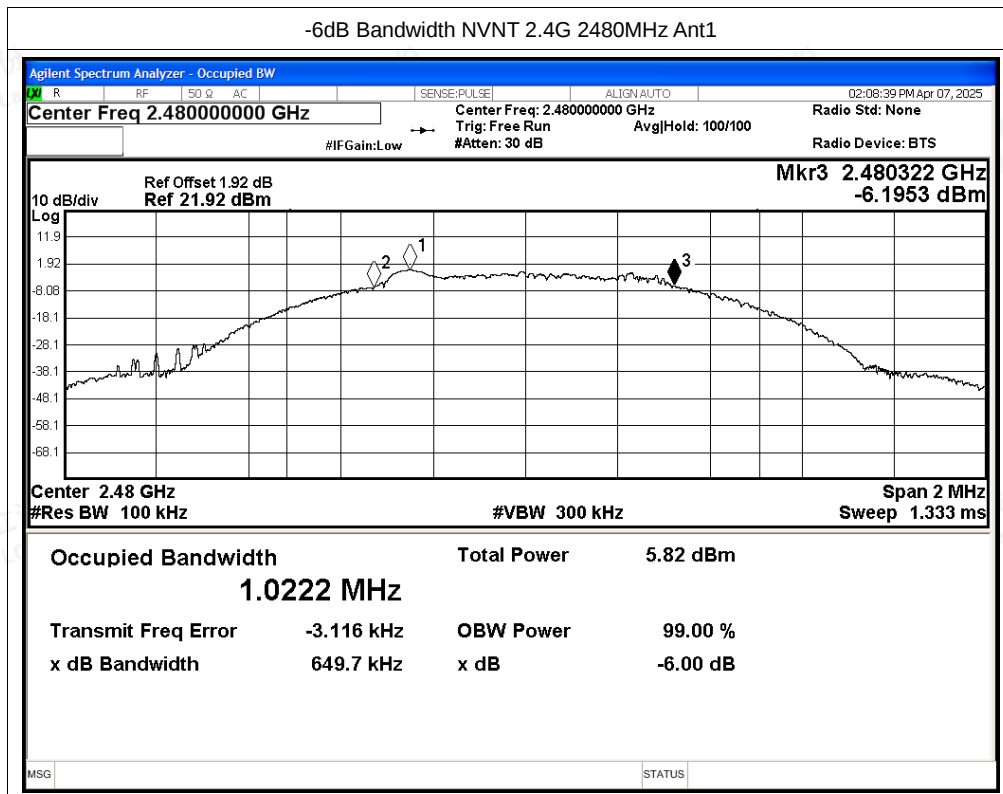
Test Graphs

-6dB Bandwidth NVNT 2.4G 2402MHz Ant1



-6dB Bandwidth NVNT 2.4G 2426MHz Ant1







A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	2.4G	2402	Ant1	1.25	30	Pass
NVNT	2.4G	2426	Ant1	0.46	30	Pass
NVNT	2.4G	2480	Ant1	0.04	30	Pass

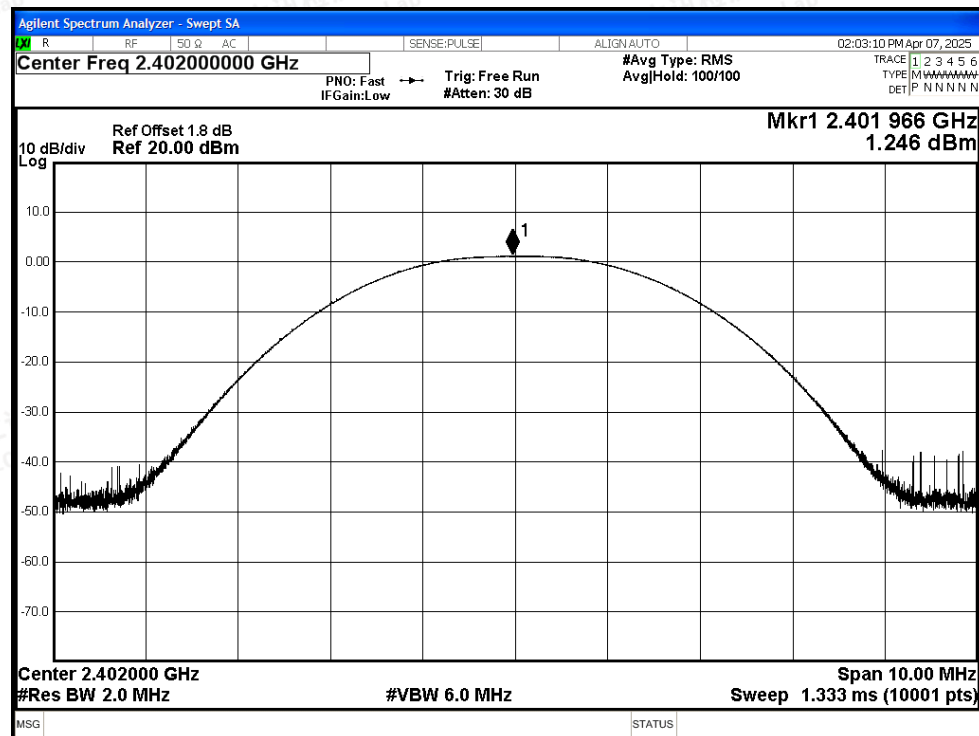


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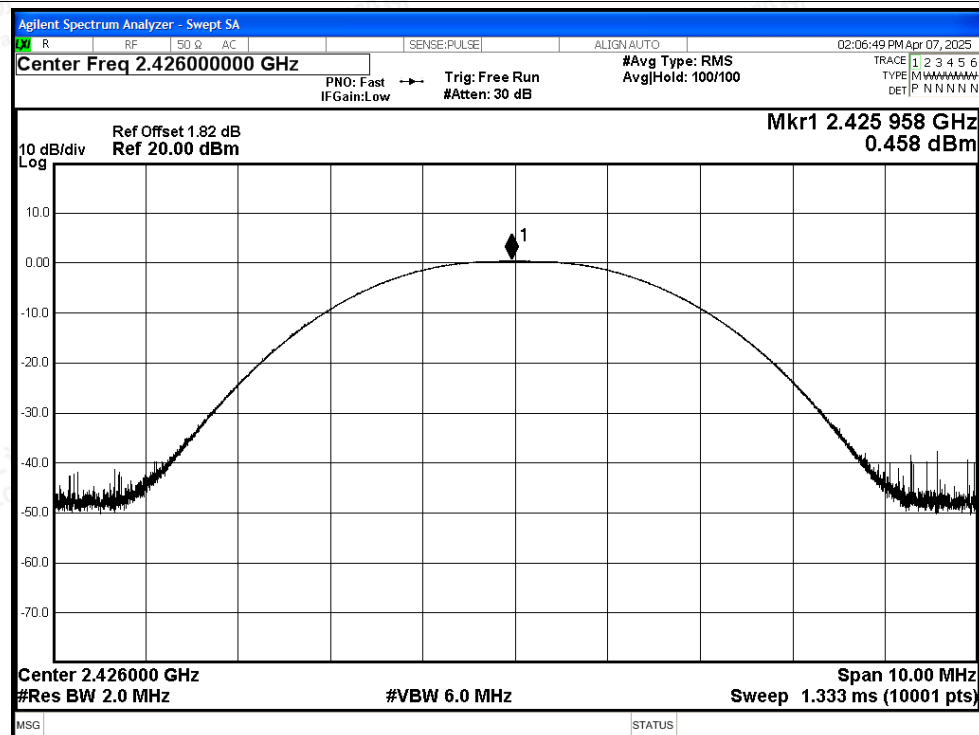


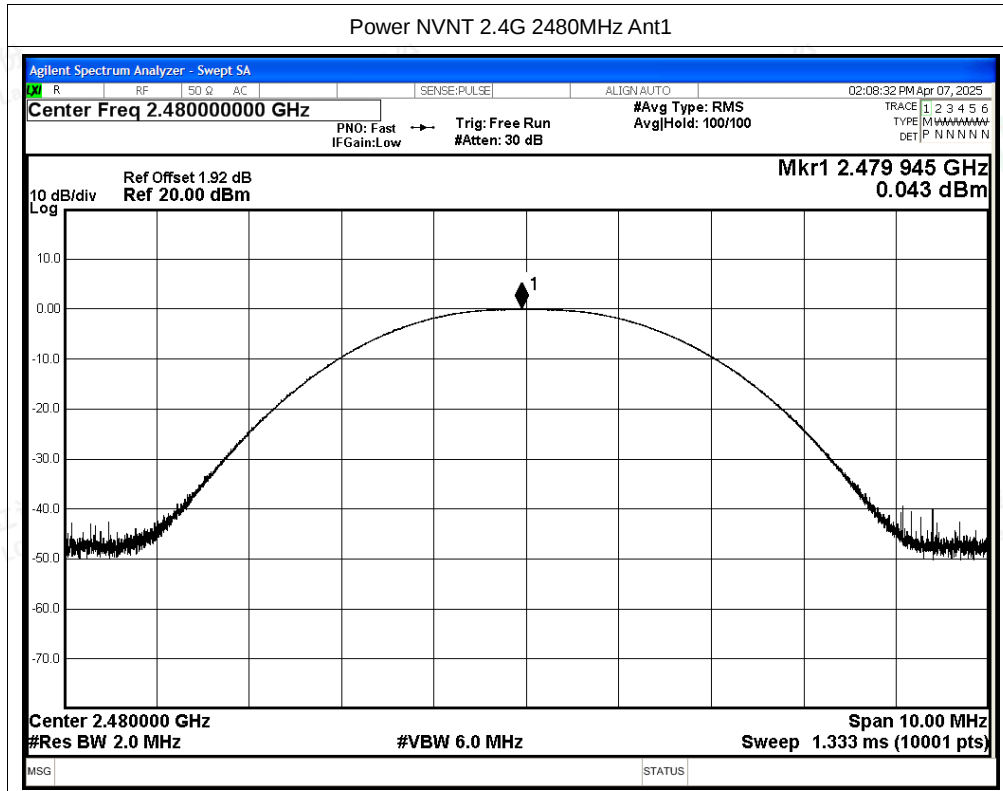
Test Graphs

Power NVNT 2.4G 2402MHz Ant1



Power NVNT 2.4G 2426MHz Ant1







A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	2.4G	2402	Ant1	-15.28	8	Pass
NVNT	2.4G	2426	Ant1	-16.31	8	Pass
NVNT	2.4G	2480	Ant1	-16.79	8	Pass

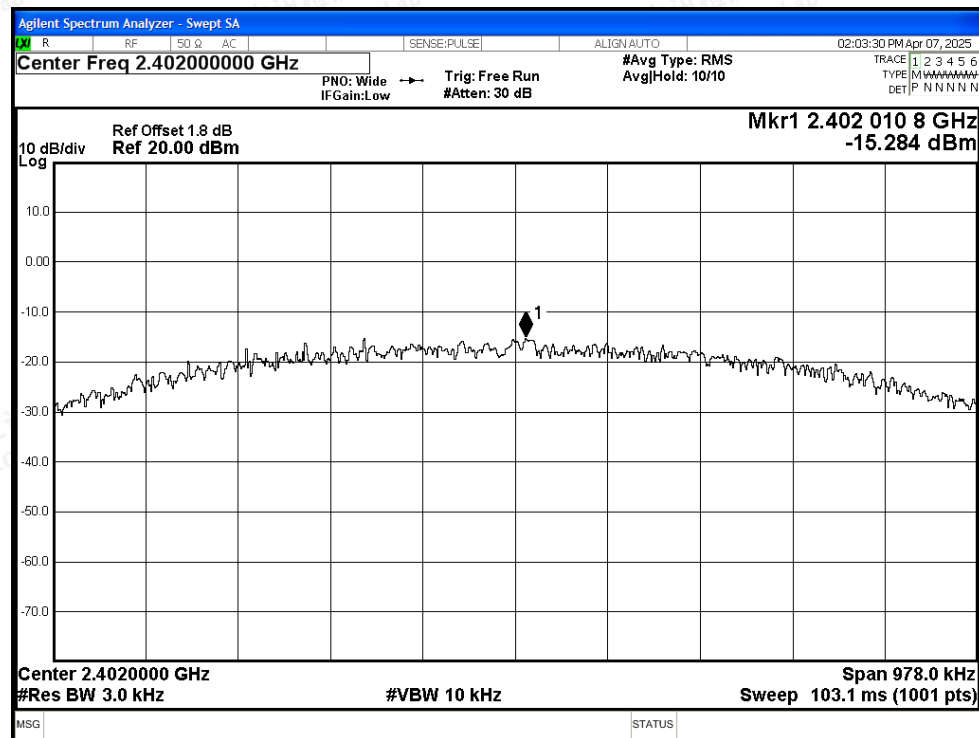


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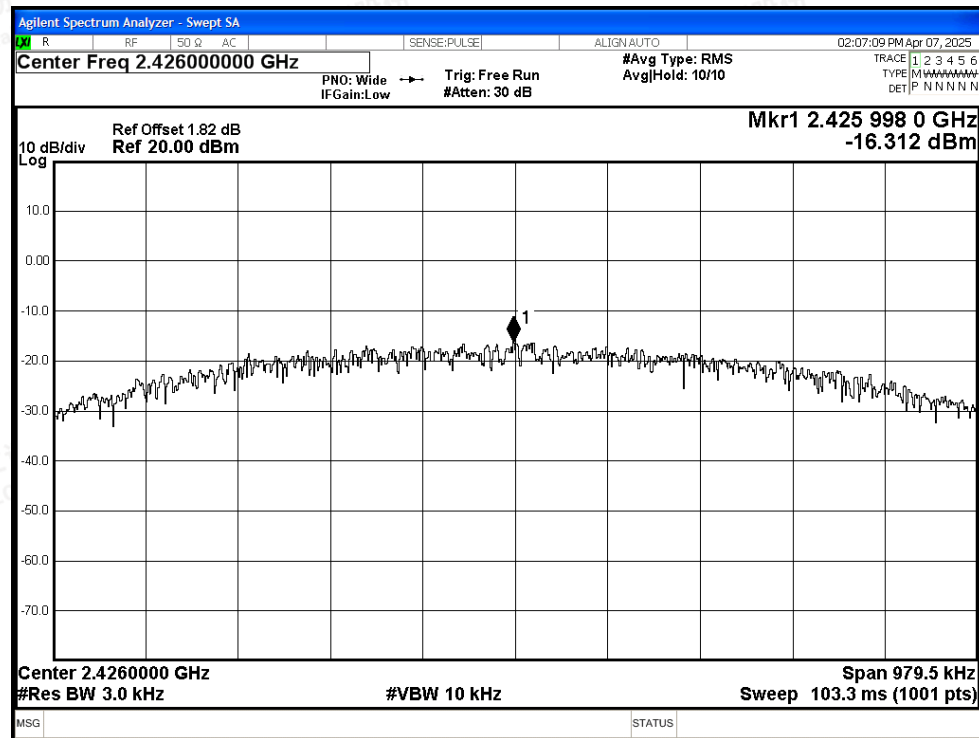


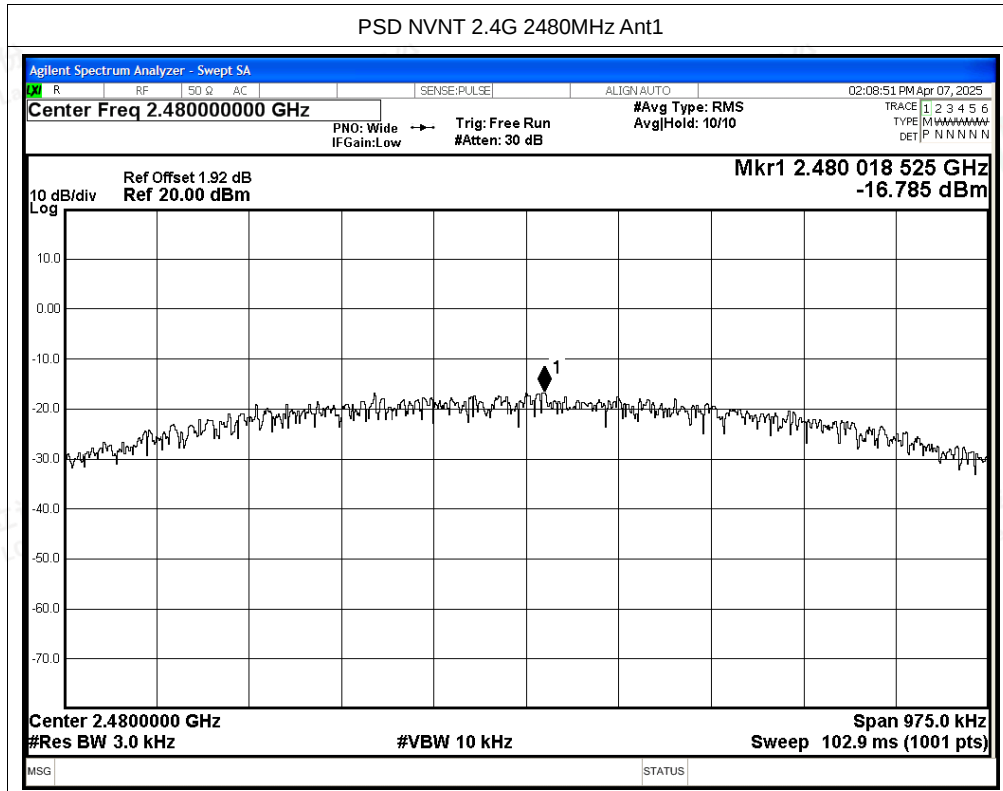
Test Graphs

PSD NVNT 2.4G 2402MHz Ant1



PSD NVNT 2.4G 2426MHz Ant1







A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-57.69	-20	Pass
NVNT	2.4G	2480	Ant1	-56.57	-20	Pass

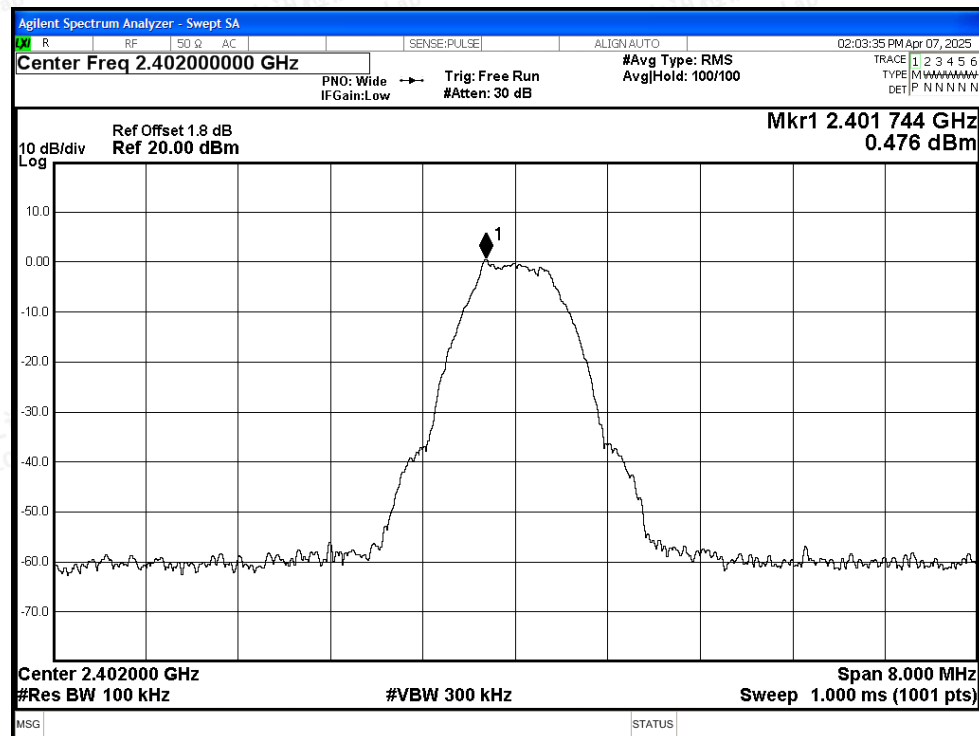


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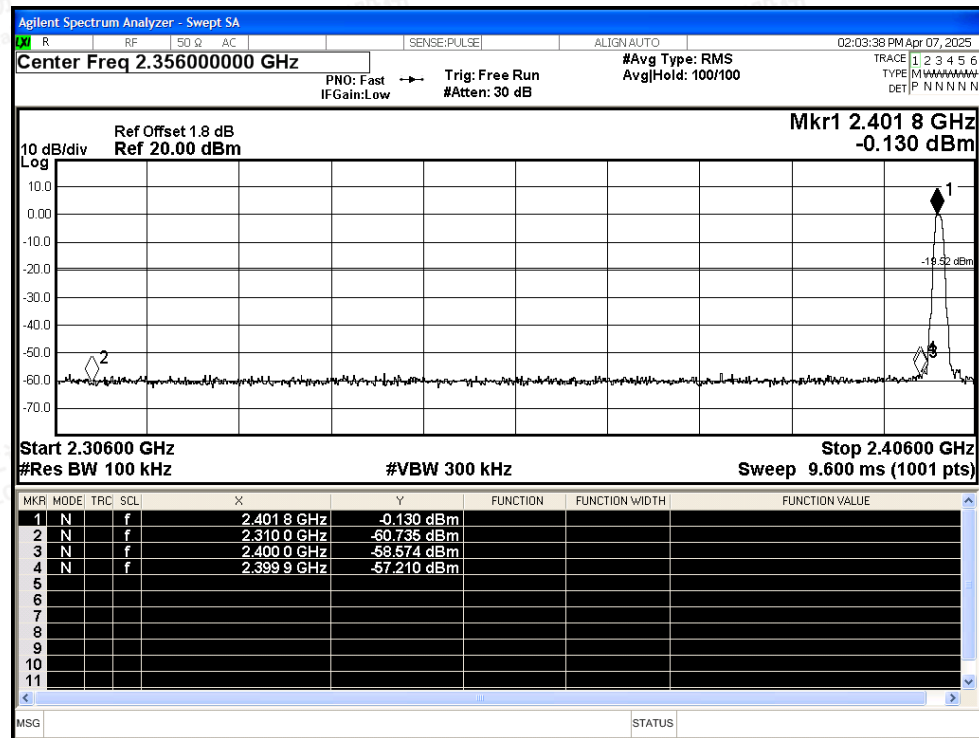


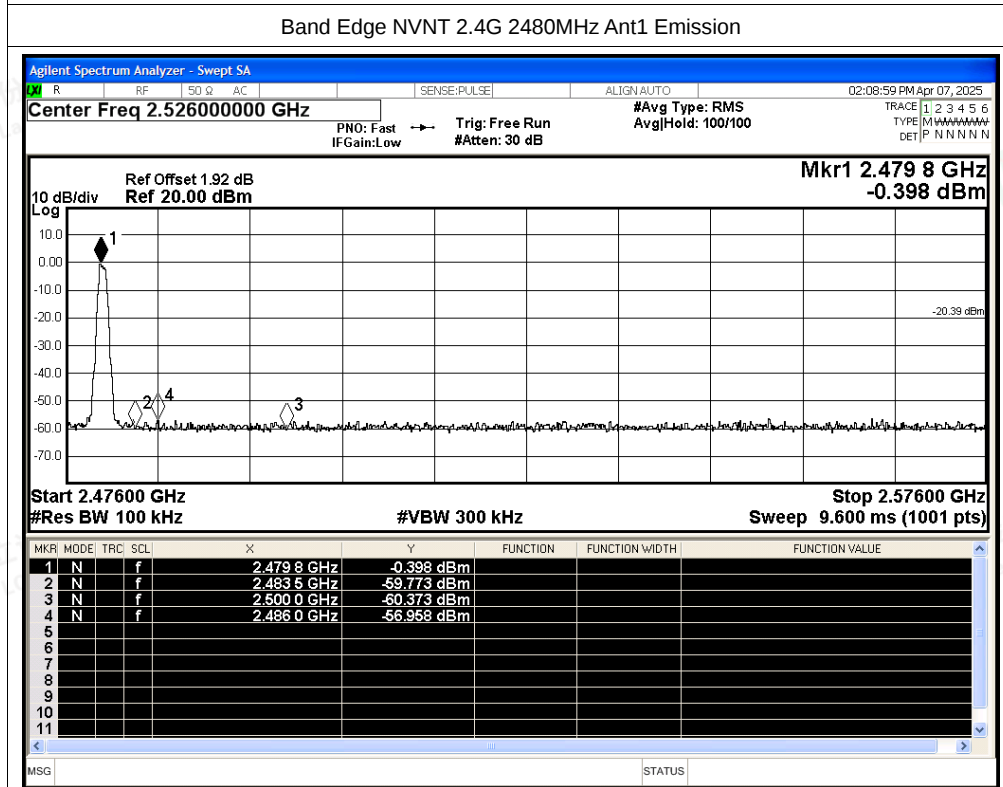
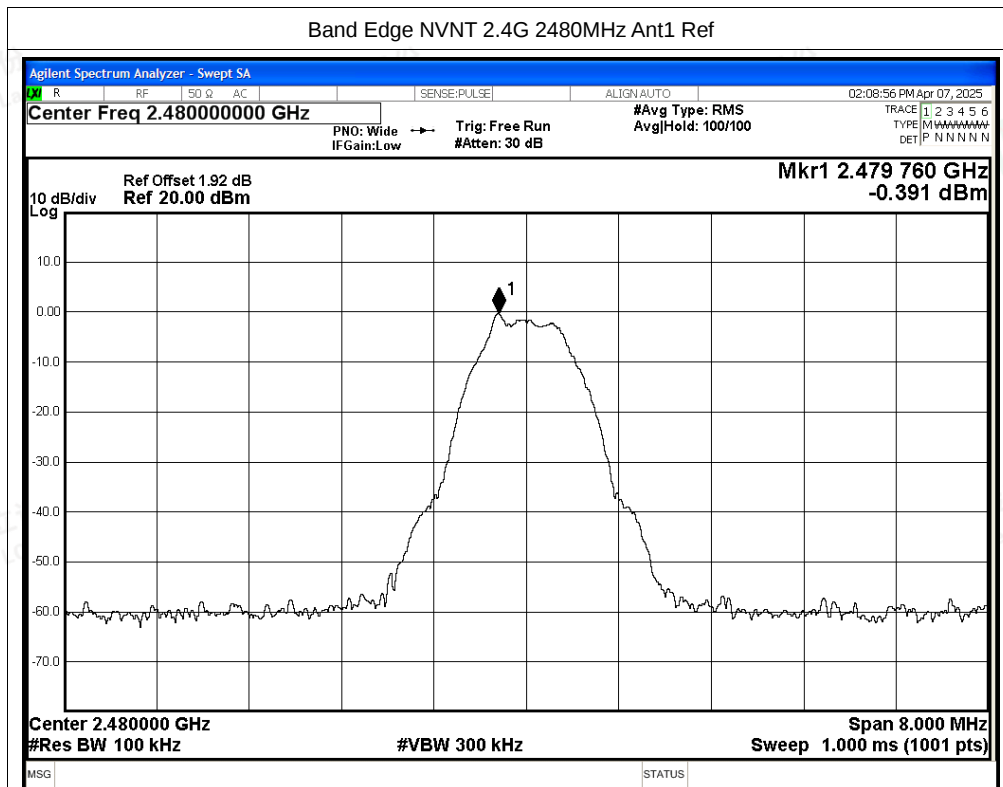
Test Graphs

Band Edge NVNT 2.4G 2402MHz Ant1 Ref



Band Edge NVNT 2.4G 2402MHz Ant1 Emission







A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-56.12	-20	Pass
NVNT	2.4G	2426	Ant1	-53.87	-20	Pass
NVNT	2.4G	2480	Ant1	-54.42	-20	Pass

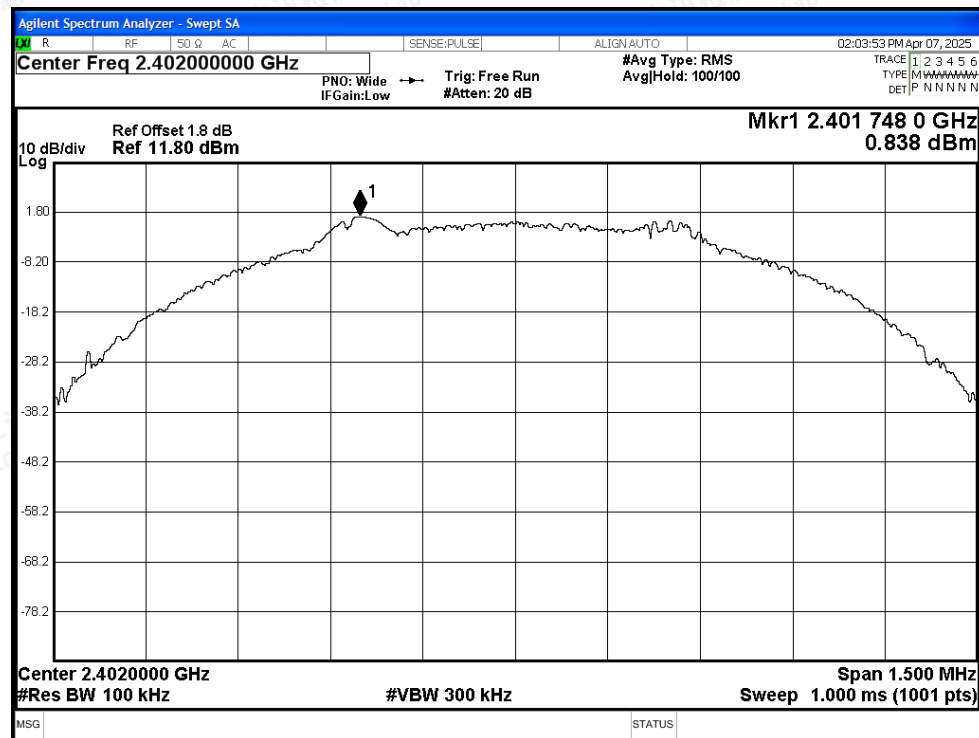


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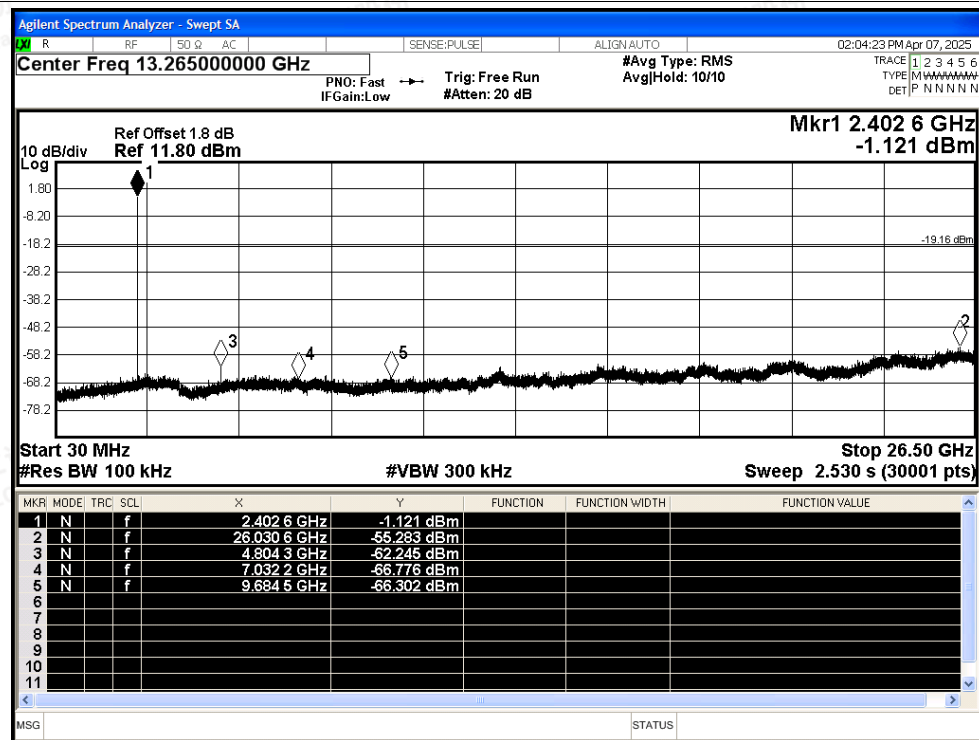


Test Graphs

Tx. Spurious NVNT 2.4G 2402MHz Ant1 Ref

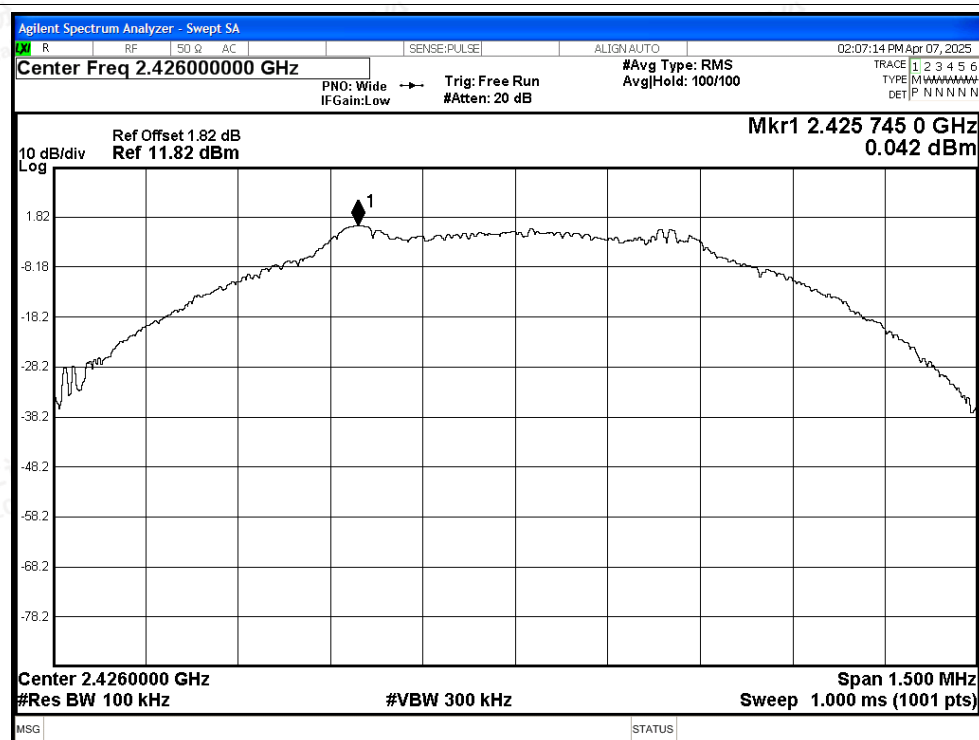


Tx. Spurious NVNT 2.4G 2402MHz Ant1 Emission

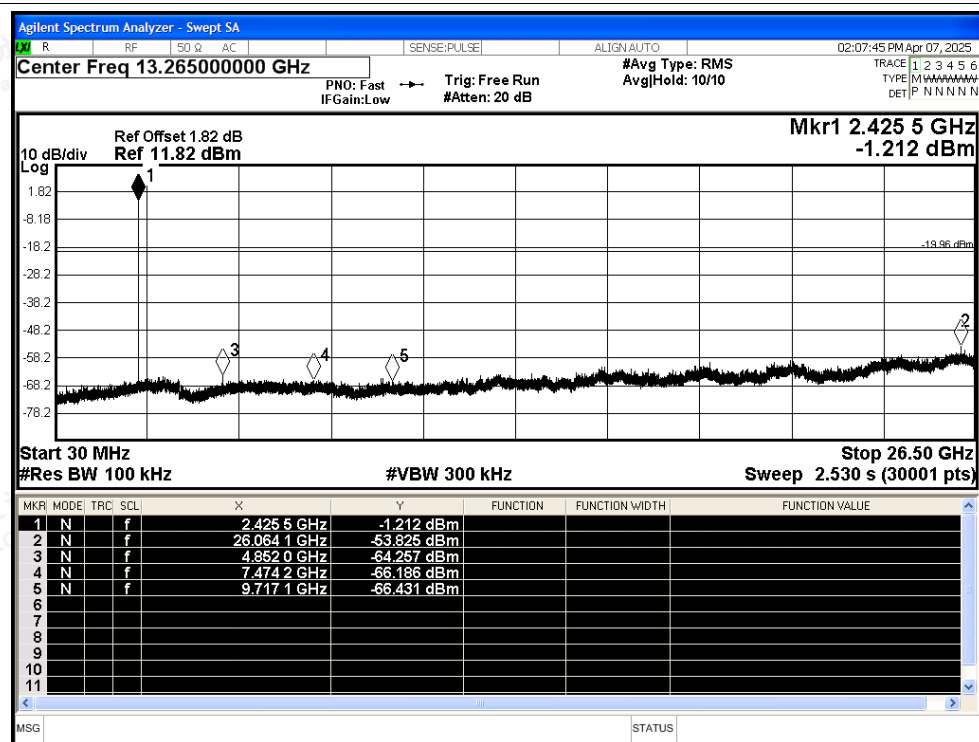




Tx. Spurious NVNT 2.4G 2426MHz Ant1 Ref

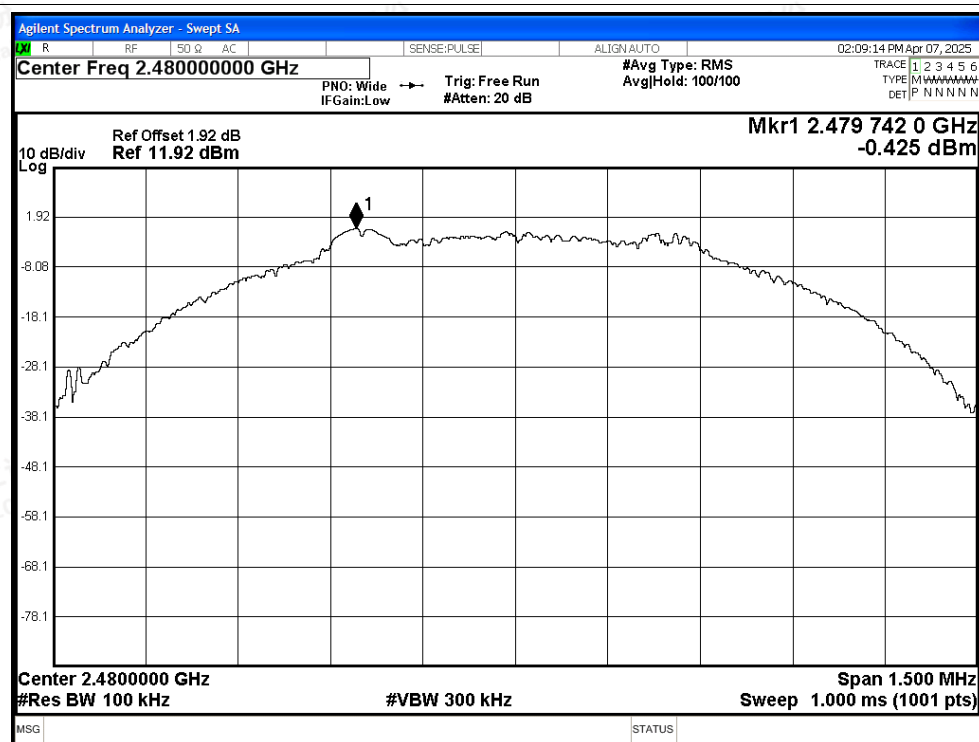


Tx. Spurious NVNT 2.4G 2426MHz Ant1 Emission

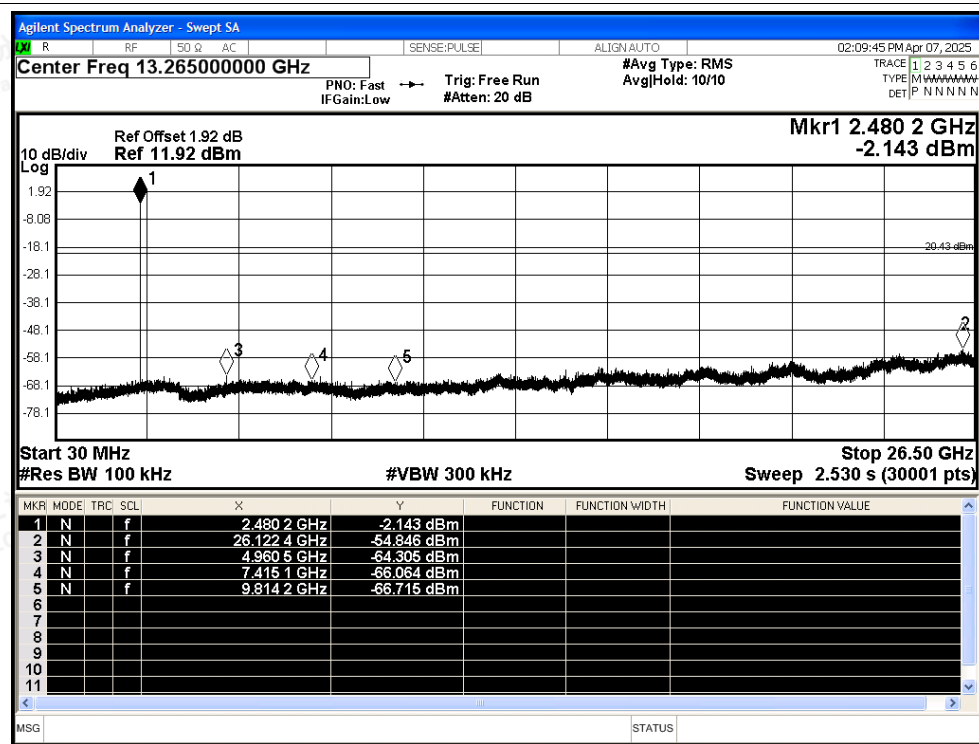




Tx. Spurious NVNT 2.4G 2480MHz Ant1 Ref



Tx. Spurious NVNT 2.4G 2480MHz Ant1 Emission





A.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	2.4G	2402	Ant1	87.39	0.59	0.61
NVNT	2.4G	2426	Ant1	87.39	0.59	0.61
NVNT	2.4G	2480	Ant1	87.39	0.59	0.61

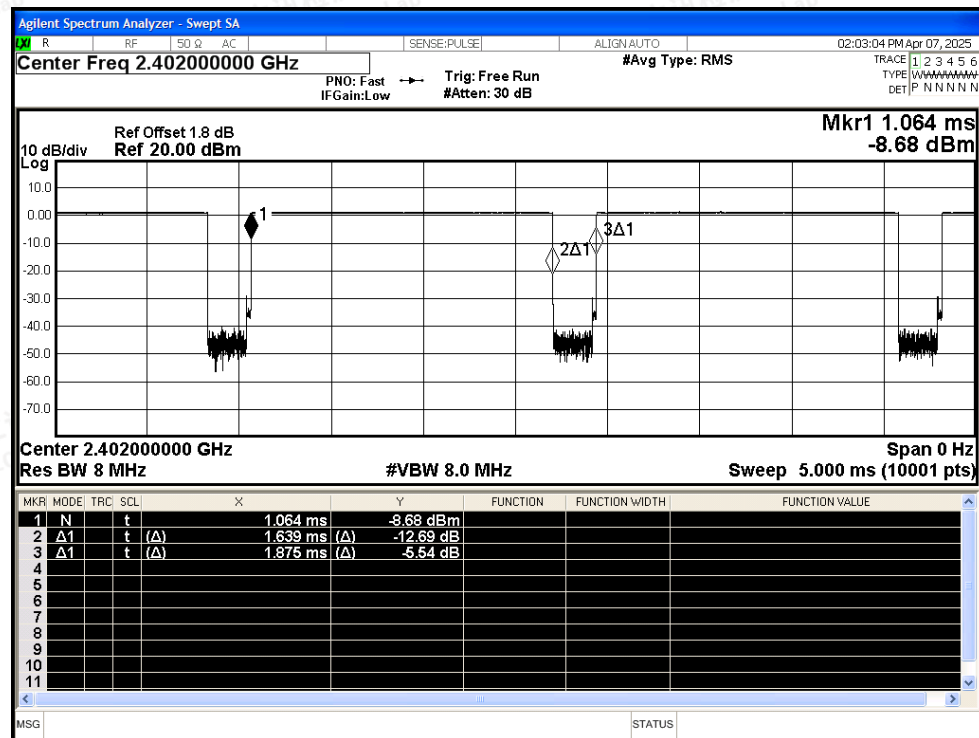


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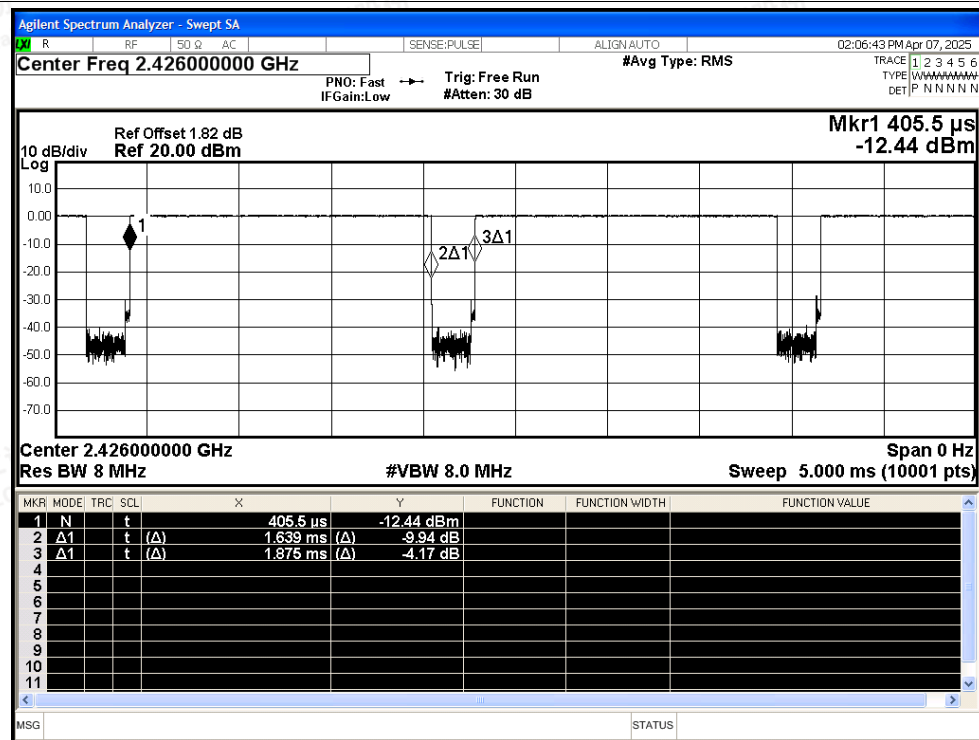


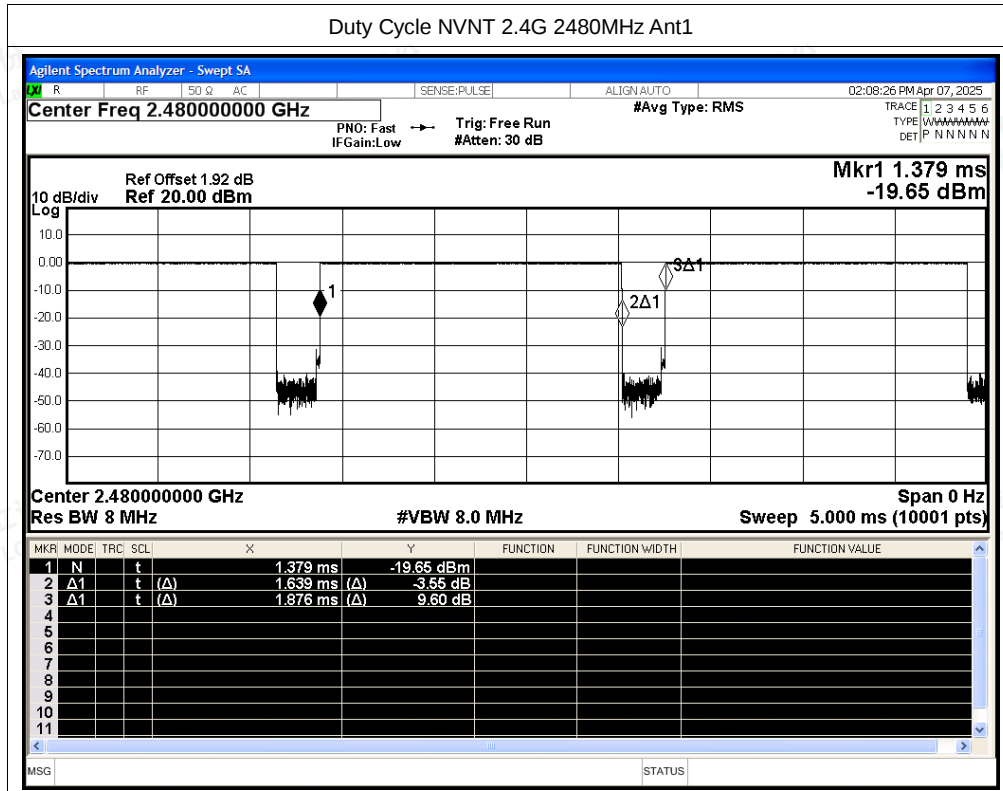
Test Graphs

Duty Cycle NVNT 2.4G 2402MHz Ant1



Duty Cycle NVNT 2.4G 2426MHz Ant1







A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	2.4G	2402	Ant1	2310	-52.25	2.42	-	45.43	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2310	-59.02	2.42	0.59	39.25	Average	54	Pass
NVNT	2.4G	2402	Ant1	2319.984	-47.47	2.42	-	50.21	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2389.392	-58.27	2.42	0.59	40.00	Average	54	Pass
NVNT	2.4G	2402	Ant1	2390	-50.36	2.42	-	47.32	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2390	-58.48	2.42	0.59	39.79	Average	54	Pass
NVNT	2.4G	2480	Ant1	2483.5	-51.09	2.42	-	46.59	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2483.5	-57.53	2.42	0.59	40.74	Average	54	Pass
NVNT	2.4G	2480	Ant1	2486.536	-44.88	2.42	-	52.80	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2483.512	-57.53	2.42	0.59	40.74	Average	54	Pass
NVNT	2.4G	2480	Ant1	2500	-50.73	2.42	-	46.95	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2500	-58.12	2.42	0.59	40.15	Average	54	Pass

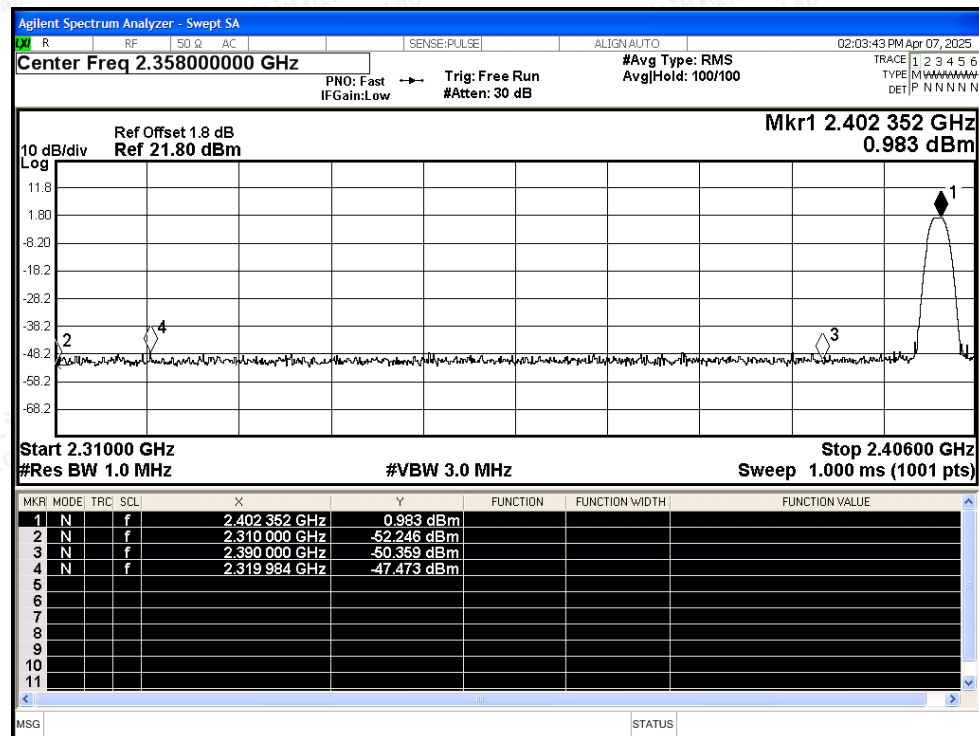


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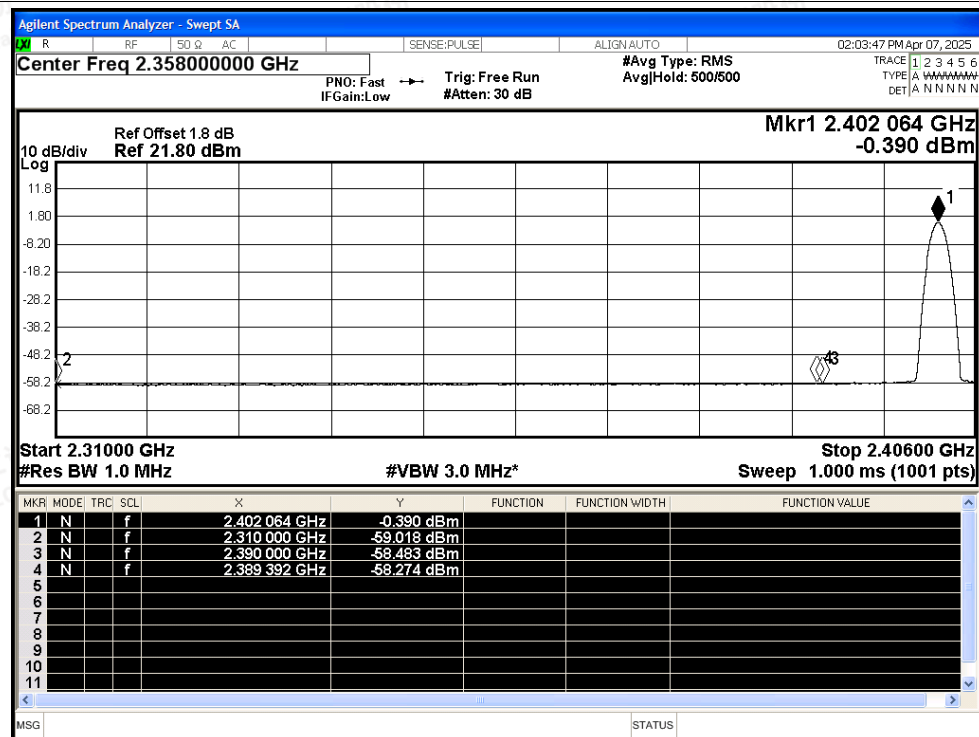


Test Graphs

Restrict Band NVNT 2.4G 2402MHz Ant1 Peak

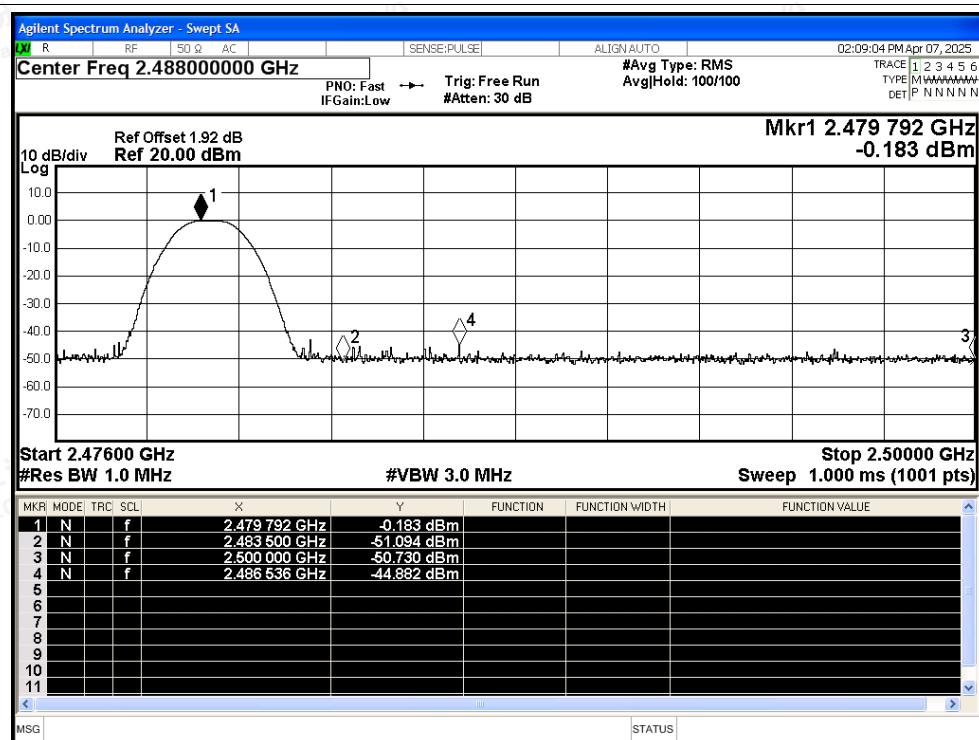


Restrict Band NVNT 2.4G 2402MHz Ant1 Average





Restrict Band NVNT 2.4G 2480MHz Ant1 Peak



Restrict Band NVNT 2.4G 2480MHz Ant1 Average

