



Appendix A

RF Test Data for 2.4G (Conducted Measurement)

Product Name: Rechargeable Wireless Mouse

Test Model: HM8011

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu





A.1 -6dB Bandwidth

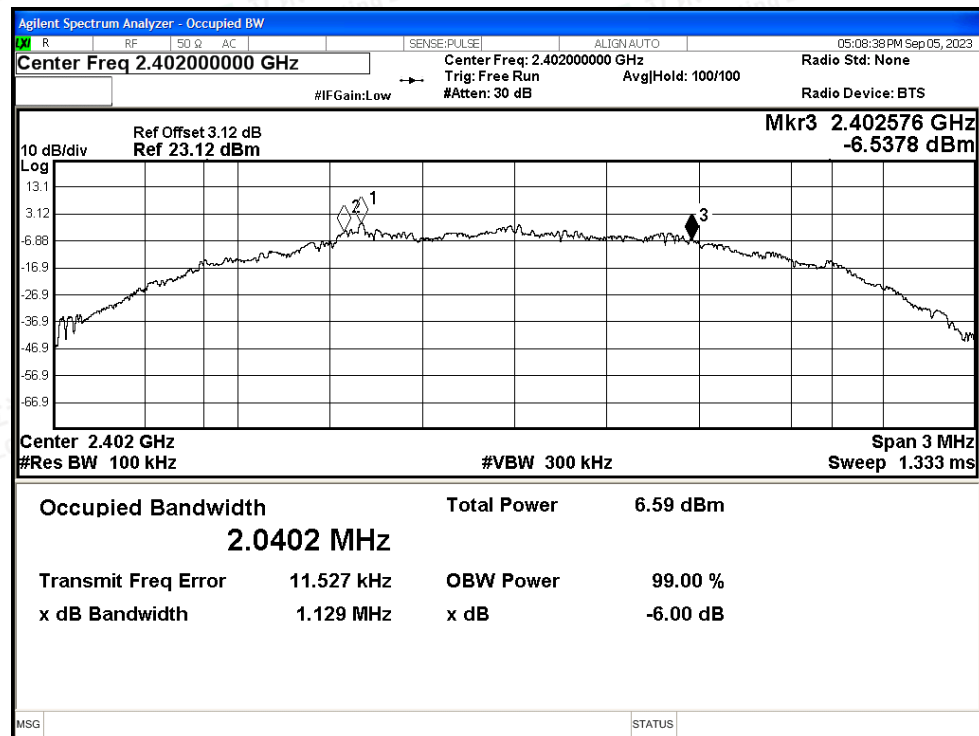
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	2.4G	2402	Ant	1.129	≥ 0.5	Pass
NVNT	2.4G	2440	Ant	1.133	≥ 0.5	Pass
NVNT	2.4G	2480	Ant	1.128	≥ 0.5	Pass



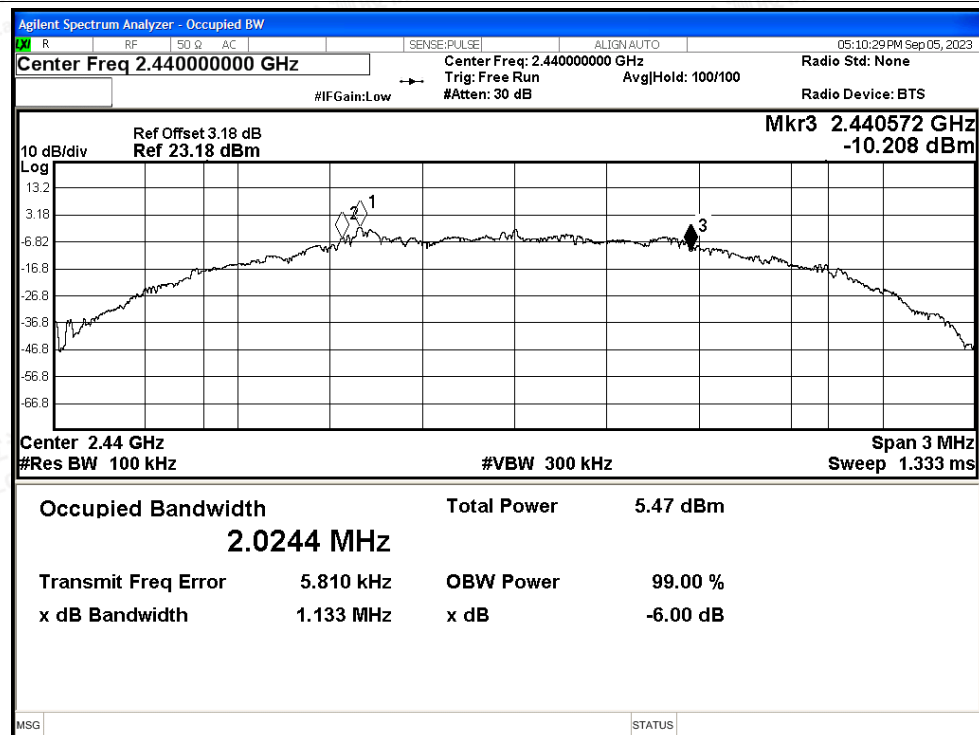


Test Graphs

-6dB Bandwidth NVNT 2.4G 2402MHz Ant



-6dB Bandwidth NVNT 2.4G 2440MHz Ant

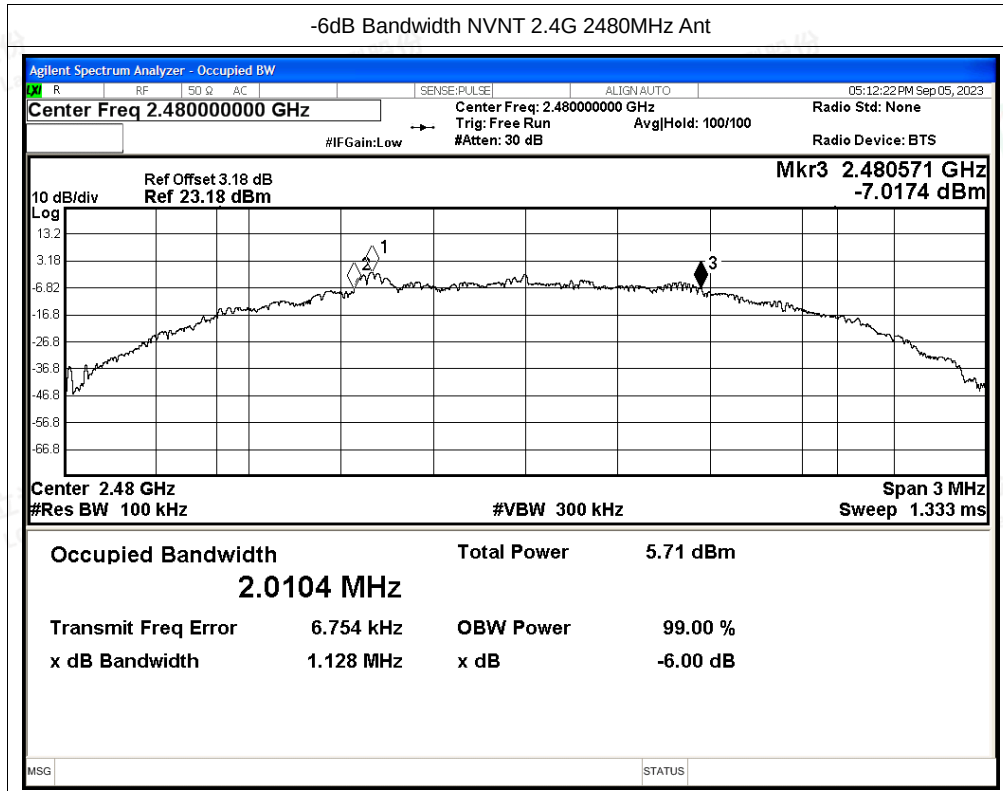


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A.2 Occupied Channel Bandwidth

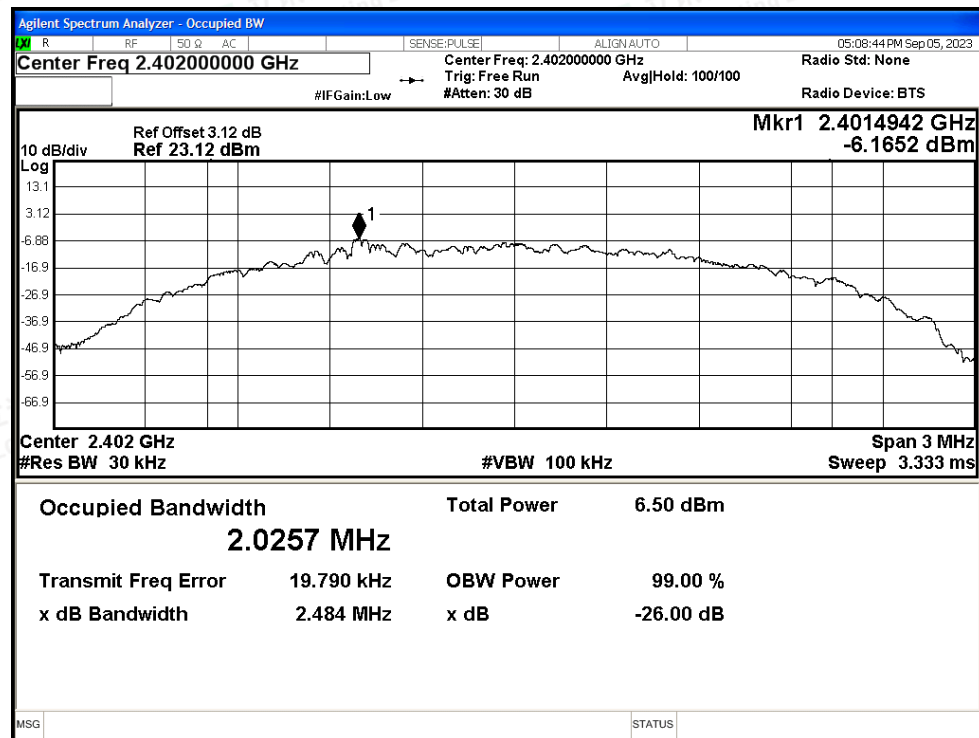
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	2.4G	2402	Ant	2.026
NVNT	2.4G	2440	Ant	2.028
NVNT	2.4G	2480	Ant	2.028



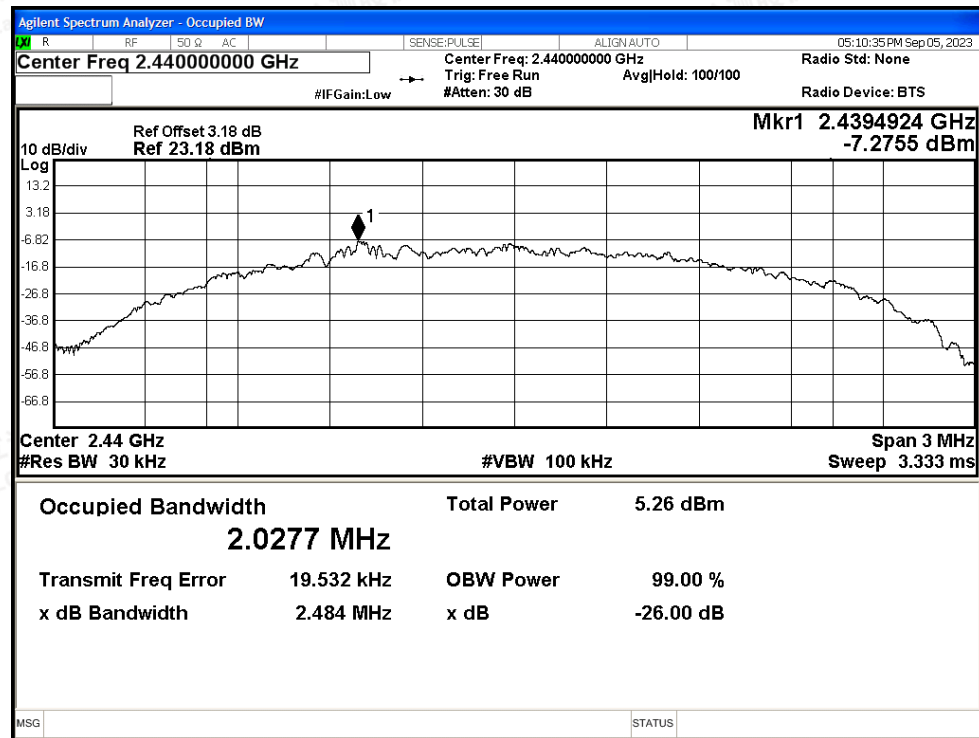


Test Graphs

OBW NVNT 2.4G 2402MHz Ant



OBW NVNT 2.4G 2440MHz Ant

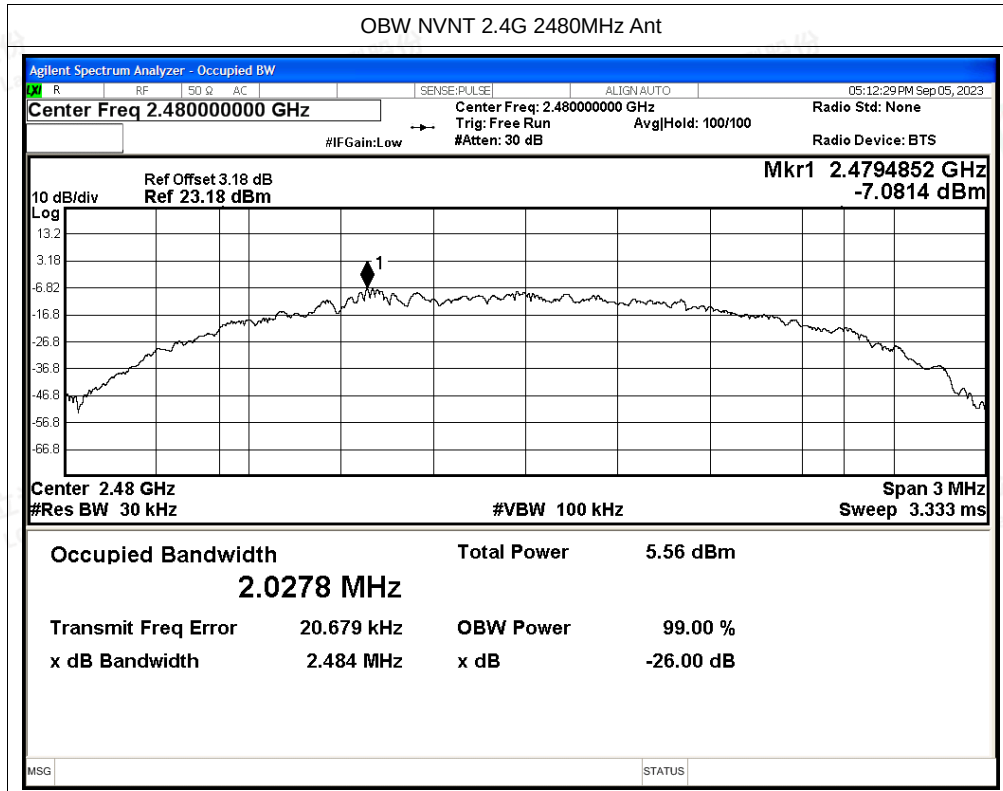


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A.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	2.4G	2402	Ant	0.3	30	Pass
NVNT	2.4G	2440	Ant	-0.82	30	Pass
NVNT	2.4G	2480	Ant	-0.56	30	Pass

EIRP

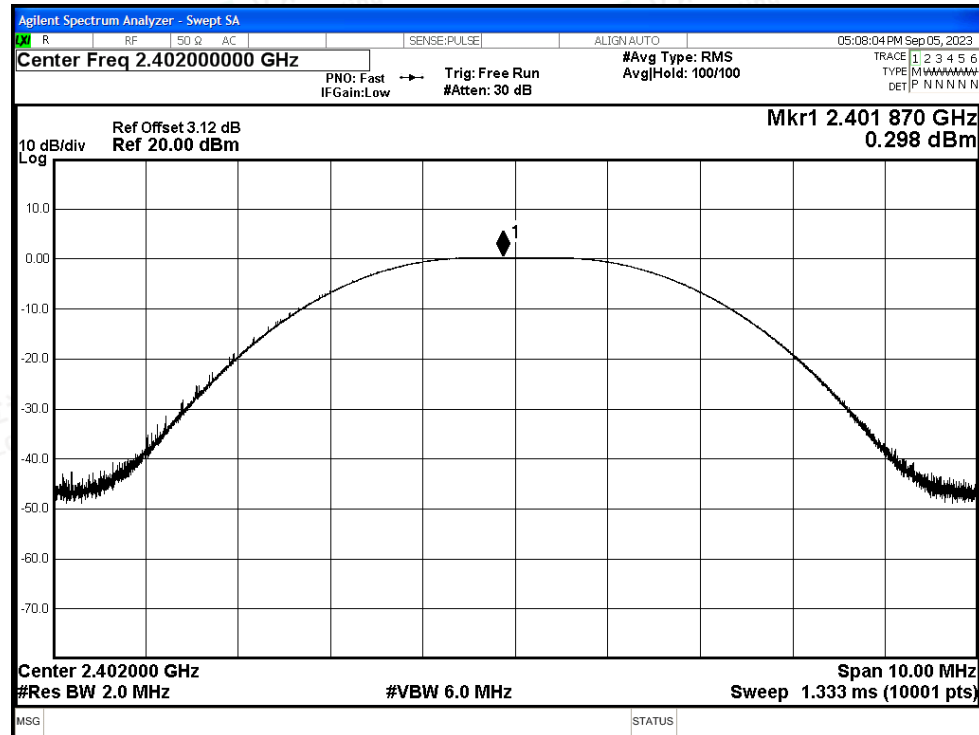
Test Mode	Frequency (MHz)	Total Power (dBm)	Antenna Gain	Report EIRP Power(dBm)	Limit[dBm]	Verdict
2.4G	2402	0.3	-1.52	-1.22	≤36	PASS
	2440	-0.82	-1.52	-2.34	≤36	PASS
	2480	-0.56	-1.52	-2.08	≤36	PASS



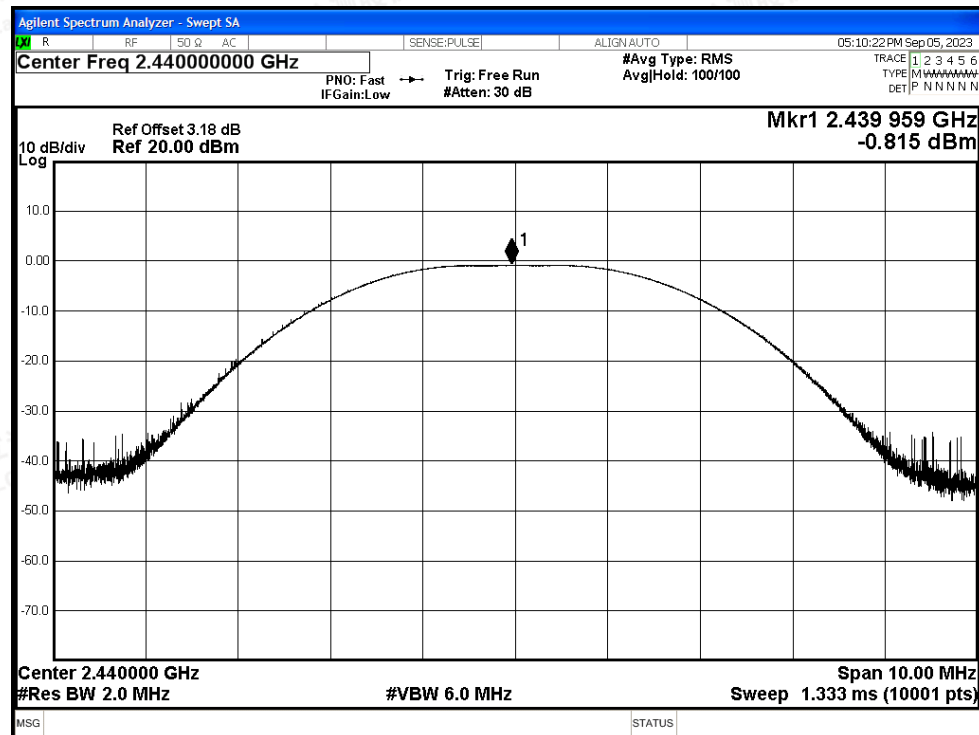


Test Graphs

Power NVNT 2.4G 2402MHz Ant



Power NVNT 2.4G 2440MHz Ant

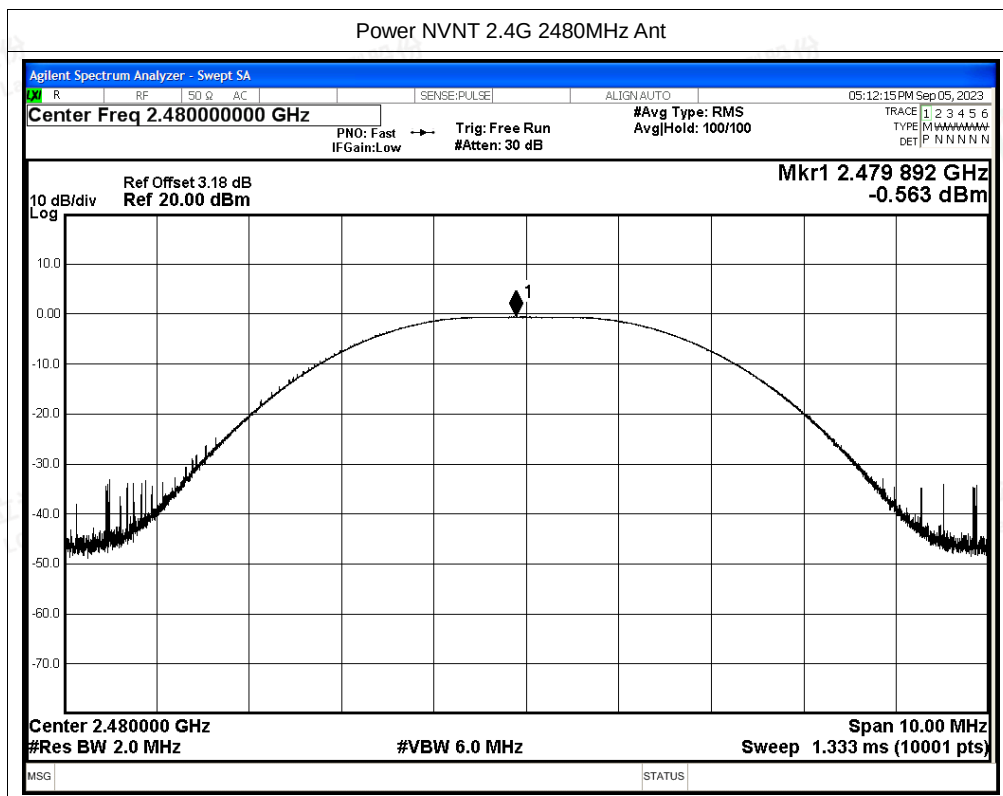


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A.4 Maximum Power Spectral Density Level

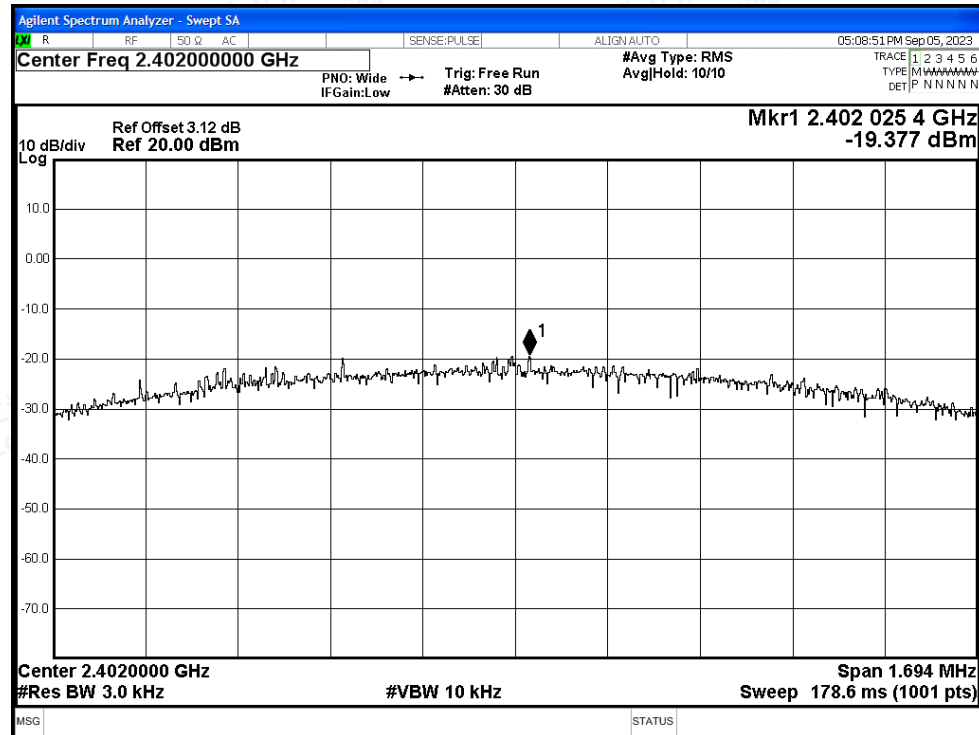
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	2.4G	2402	Ant	-19.38	8	Pass
NVNT	2.4G	2440	Ant	-20.53	8	Pass
NVNT	2.4G	2480	Ant	-20.37	8	Pass



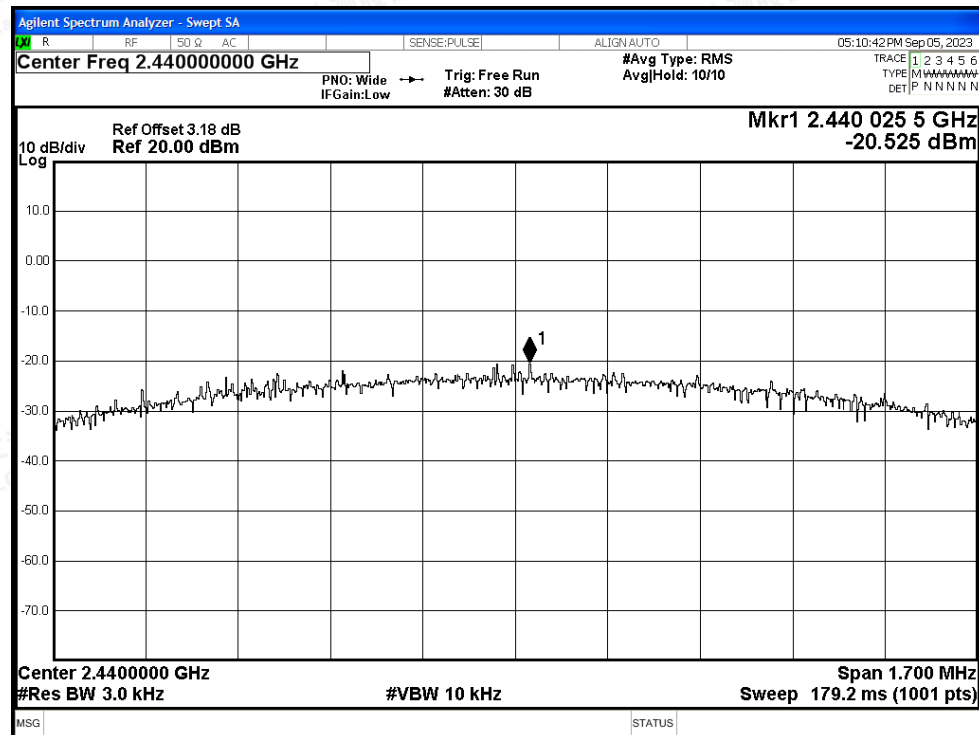


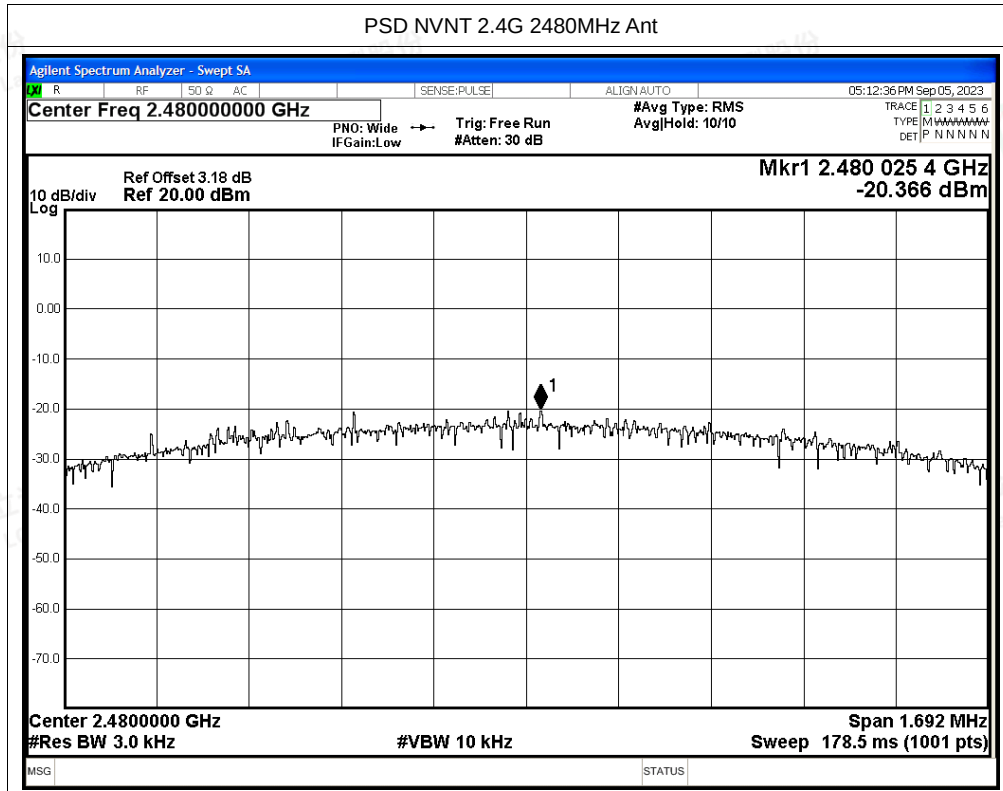
Test Graphs

PSD NVNT 2.4G 2402MHz Ant



PSD NVNT 2.4G 2440MHz Ant





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A.5 Band Edge

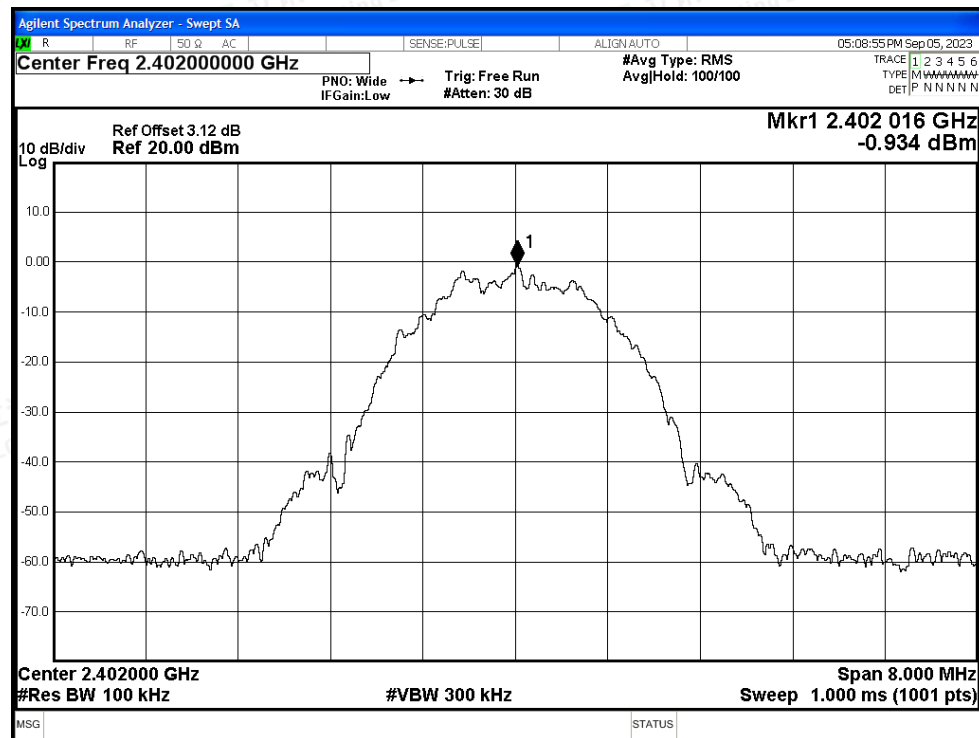
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant	-47.29	-20	Pass
NVNT	2.4G	2480	Ant	-51.95	-20	Pass



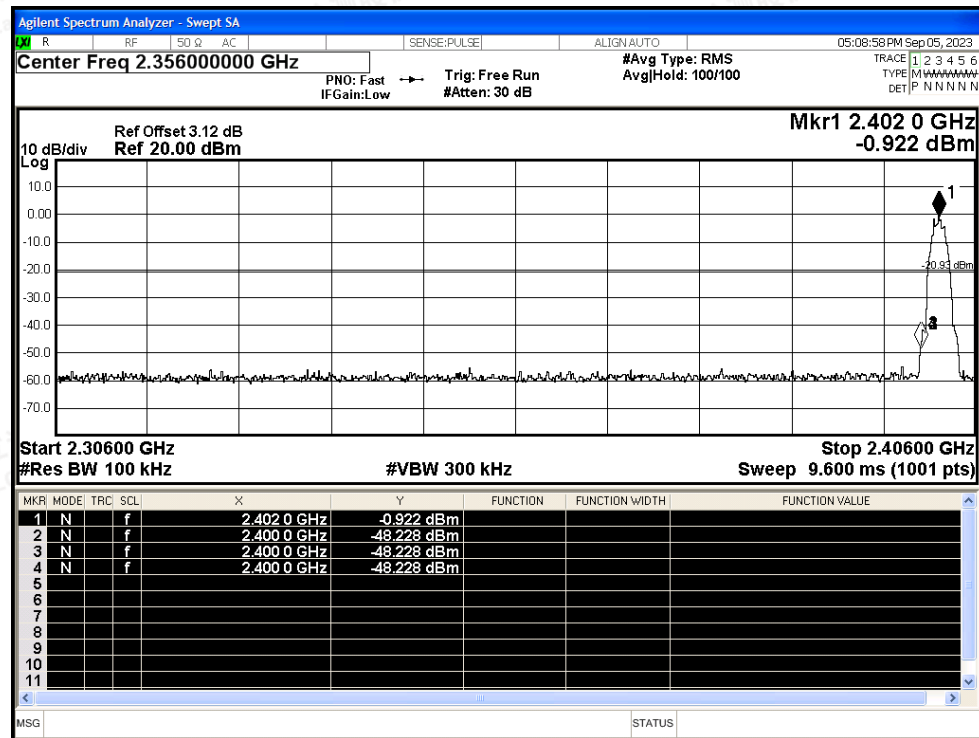


Test Graphs

Band Edge NVNT 2.4G 2402MHz Ant Ref



Band Edge NVNT 2.4G 2402MHz Ant Emission

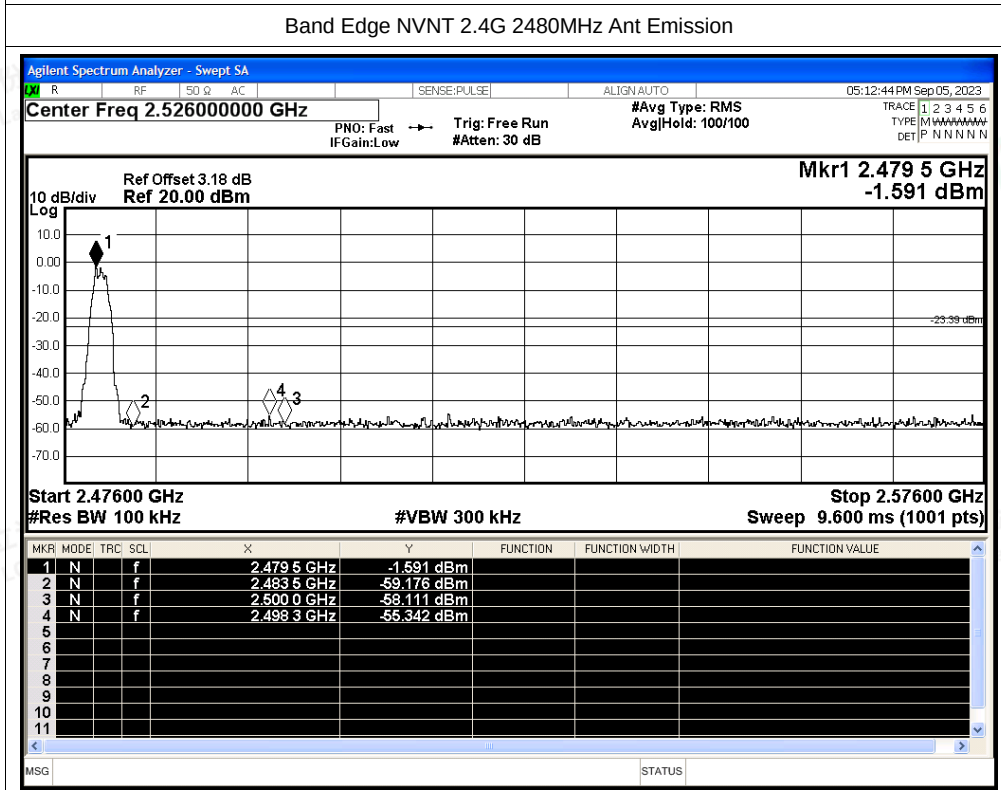
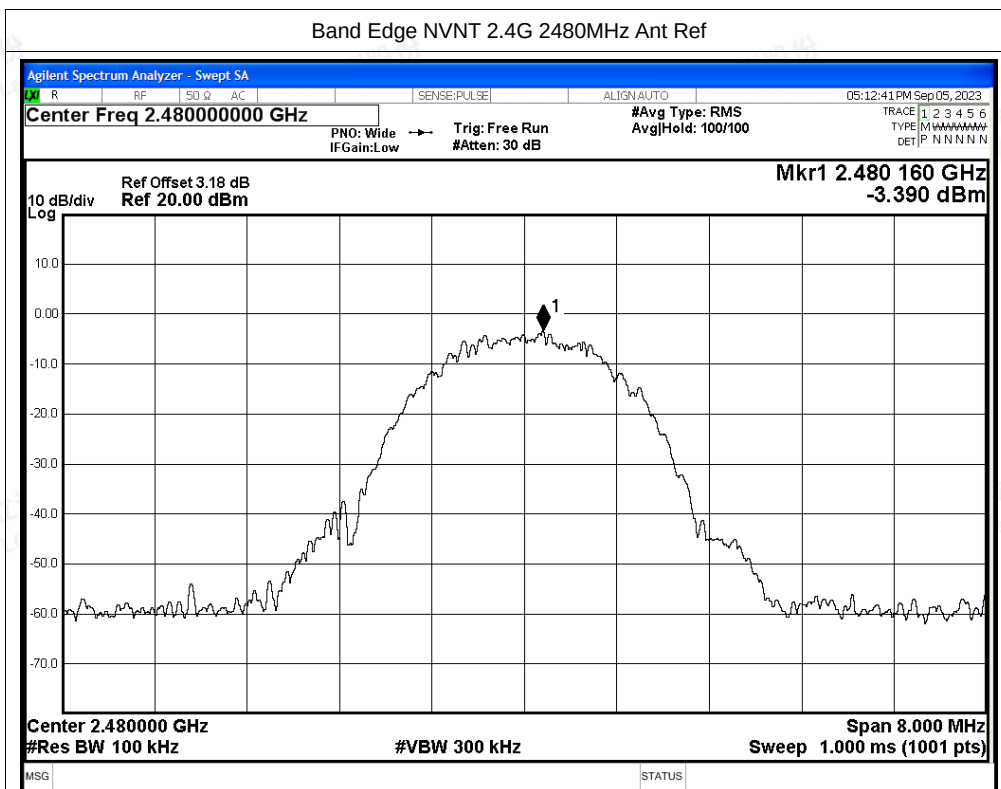


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A.6 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant	-47.56	-20	Pass
NVNT	2.4G	2440	Ant	-43.8	-20	Pass
NVNT	2.4G	2480	Ant	-52.67	-20	Pass



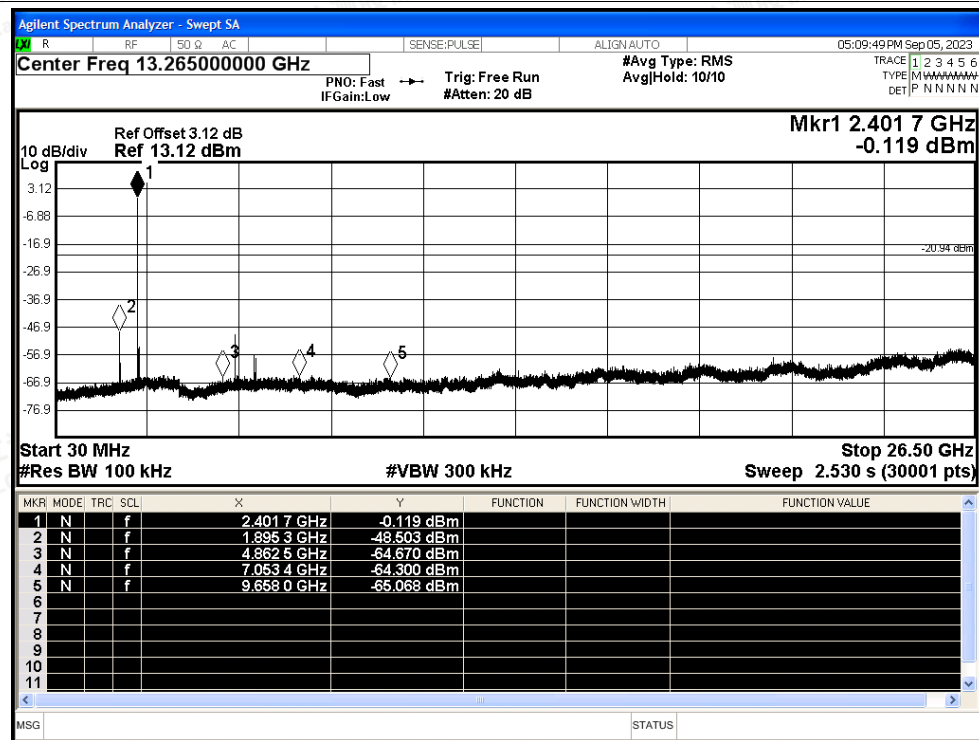


Test Graphs

Tx. Spurious NVNT 2.4G 2402MHz Ant Ref



Tx. Spurious NVNT 2.4G 2402MHz Ant Emission



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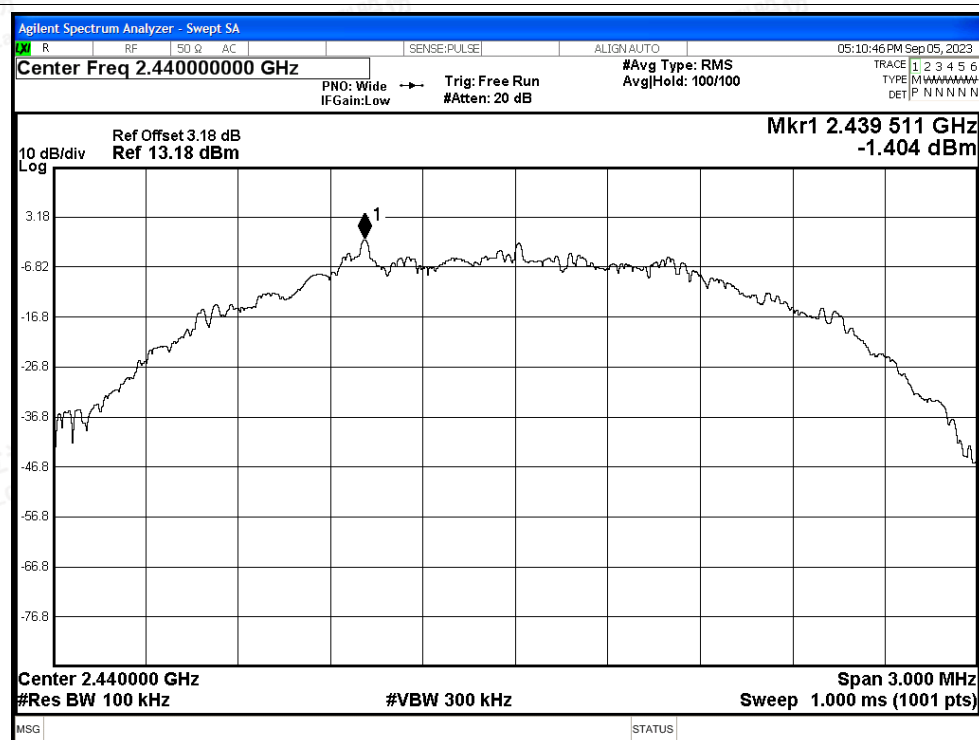
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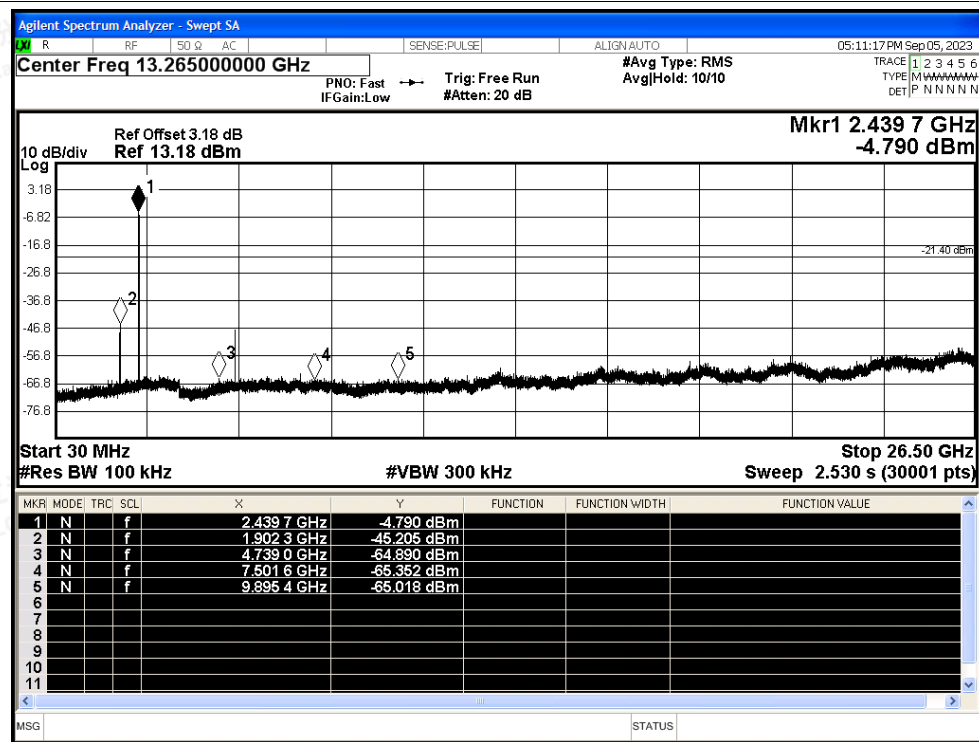
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Tx. Spurious NVNT 2.4G 2440MHz Ant Ref



Tx. Spurious NVNT 2.4G 2440MHz Ant Emission



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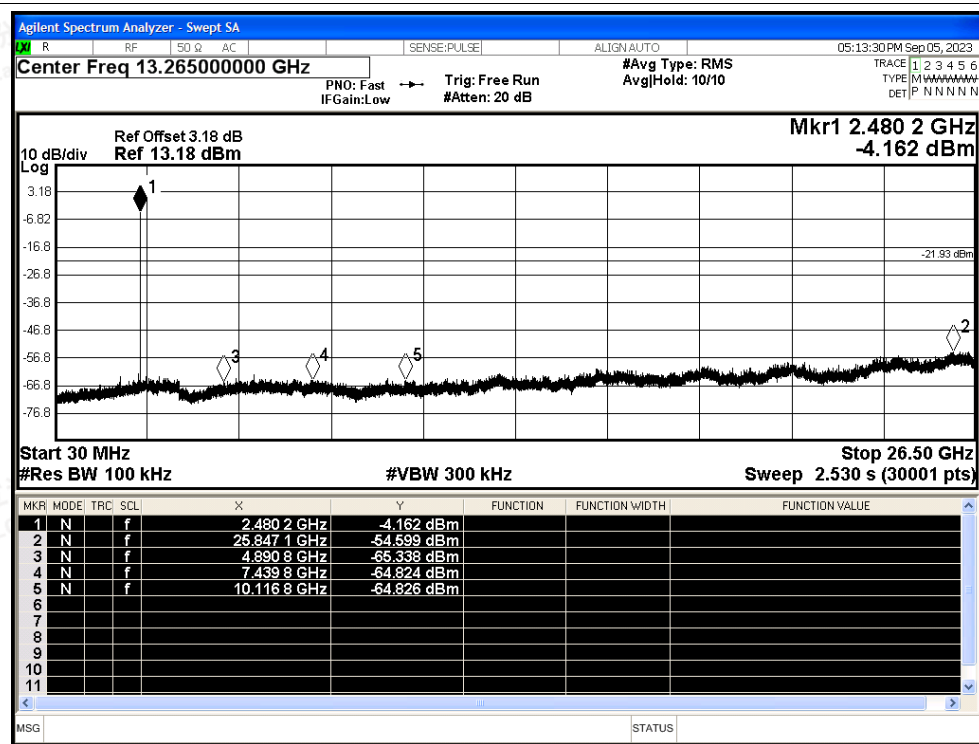
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Tx. Spurious NVNT 2.4G 2480MHz Ant Ref



Tx. Spurious NVNT 2.4G 2480MHz Ant Emission



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A.7 Duty Cycle

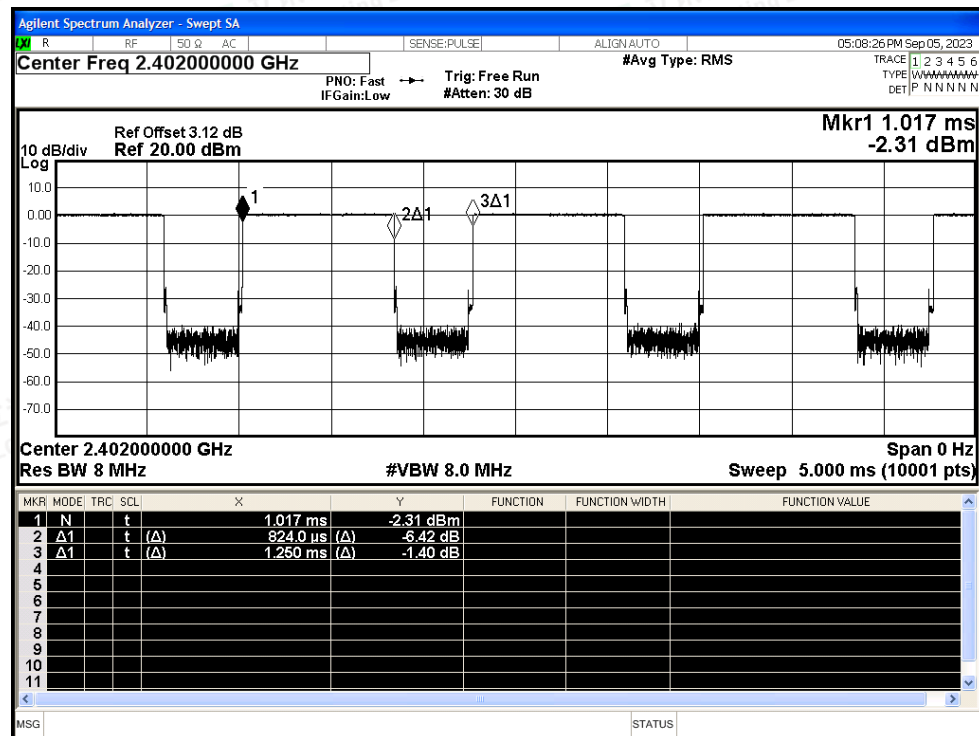
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	2.4G	2402	Ant	65.92	1.81	1.21
NVNT	2.4G	2440	Ant	65.84	1.81	1.21
NVNT	2.4G	2480	Ant	65.96	1.81	1.21



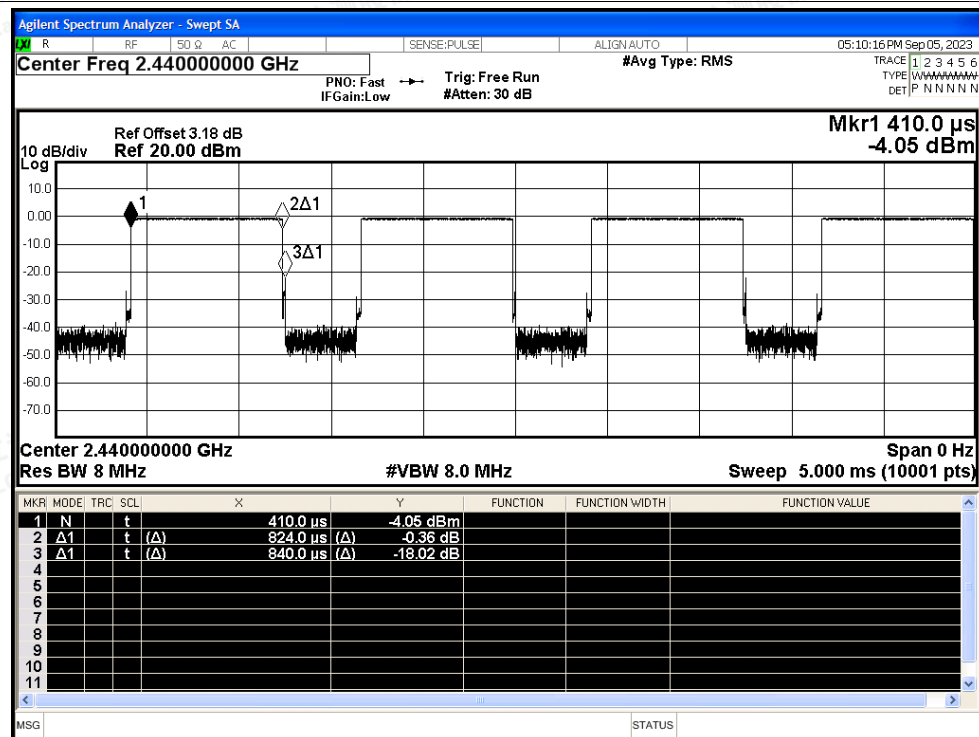


Test Graphs

Duty Cycle NVNT 2.4G 2402MHz Ant



Duty Cycle NVNT 2.4G 2440MHz Ant

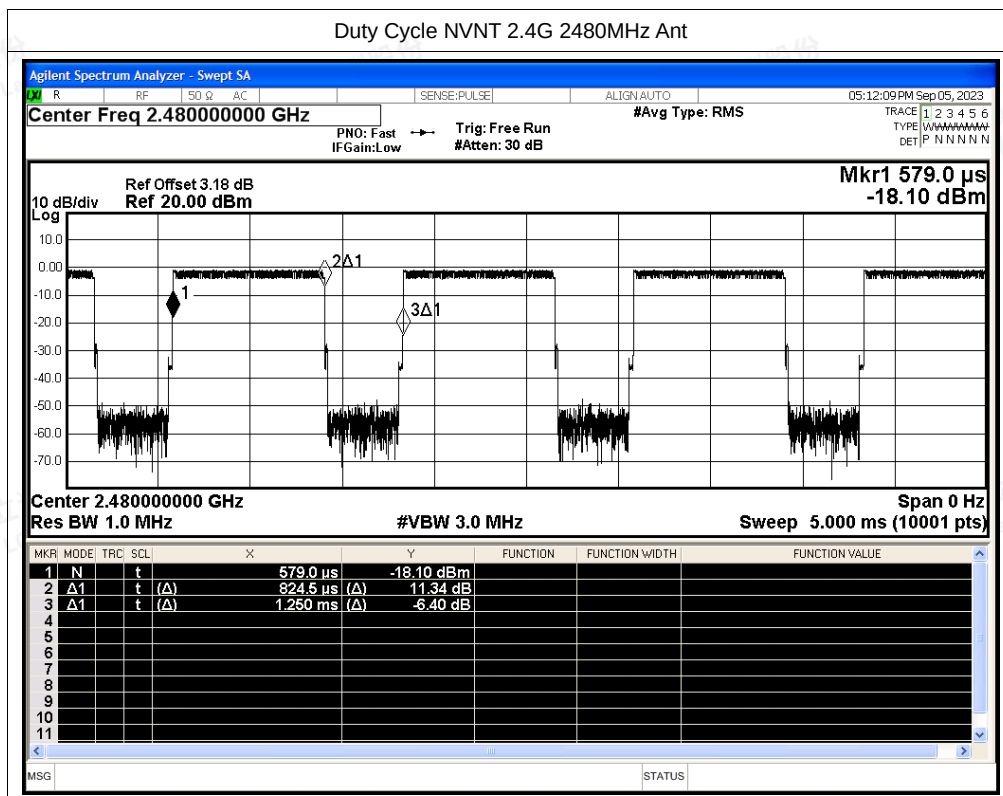


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A.8 Restrict Band

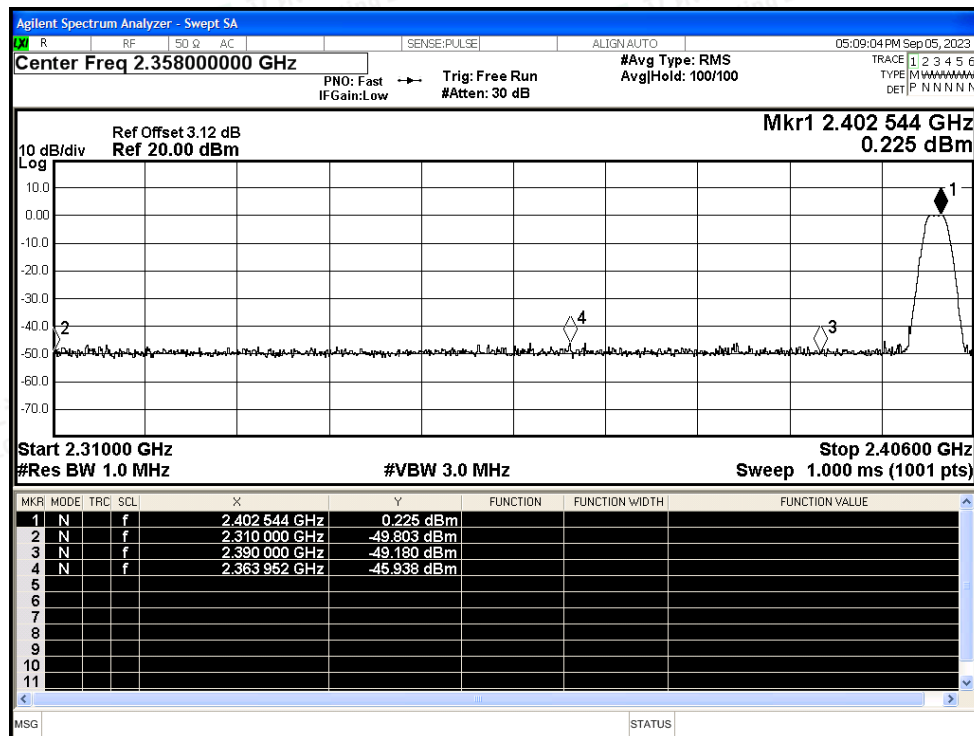
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	2.4G	2402	Ant	2310	-49.8	2	47.46	Peak	74	Pass
NVNT	2.4G	2402	Ant	2310	-56.41	2	40.85	Average	54	Pass
NVNT	2.4G	2402	Ant	2363.952	-45.94	2	51.32	Peak	74	Pass
NVNT	2.4G	2402	Ant	2388.624	-55.8	2	41.46	Average	54	Pass
NVNT	2.4G	2402	Ant	2390	-49.18	2	48.08	Peak	74	Pass
NVNT	2.4G	2402	Ant	2390	-56.21	2	41.05	Average	54	Pass
NVNT	2.4G	2480	Ant	2483.5	-41	2	56.26	Peak	74	Pass
NVNT	2.4G	2480	Ant	2483.5	-52.6	2	44.66	Average	54	Pass
NVNT	2.4G	2480	Ant	2483.584	-39.2	2	58.06	Peak	74	Pass
NVNT	2.4G	2480	Ant	2483.512	-52.6	2	44.66	Average	54	Pass
NVNT	2.4G	2480	Ant	2500	-48.9	2	48.36	Peak	74	Pass
NVNT	2.4G	2480	Ant	2500	-55.81	2	41.45	Average	54	Pass



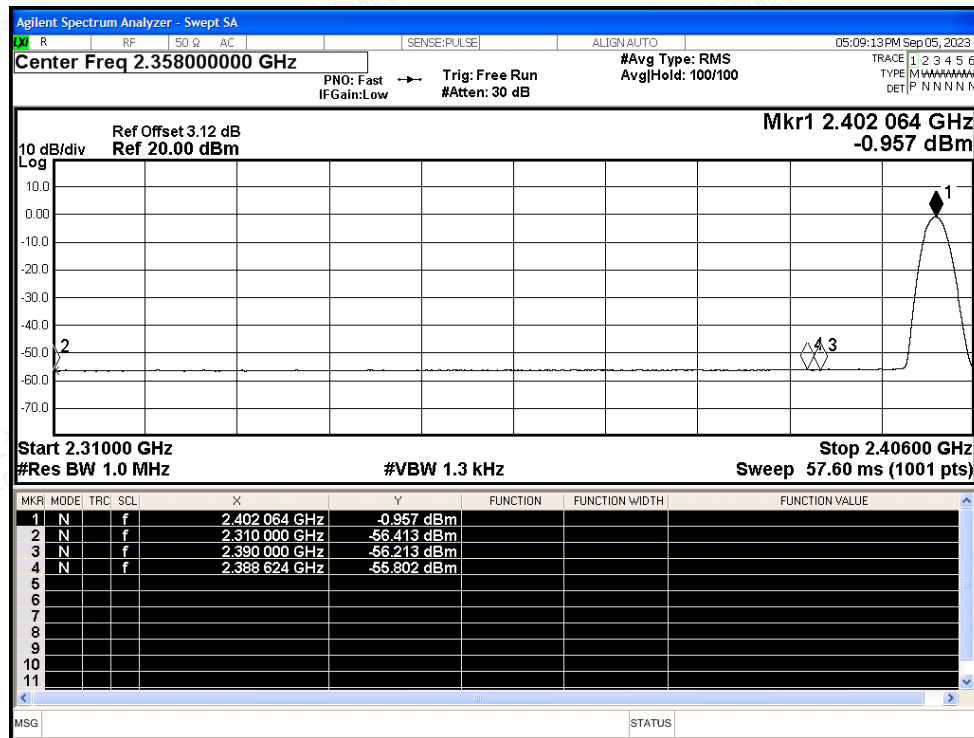


Test Graphs

Restrict Band NVNT 2.4G 2402MHz Ant Peak



Restrict Band NVNT 2.4G 2402MHz Ant Average



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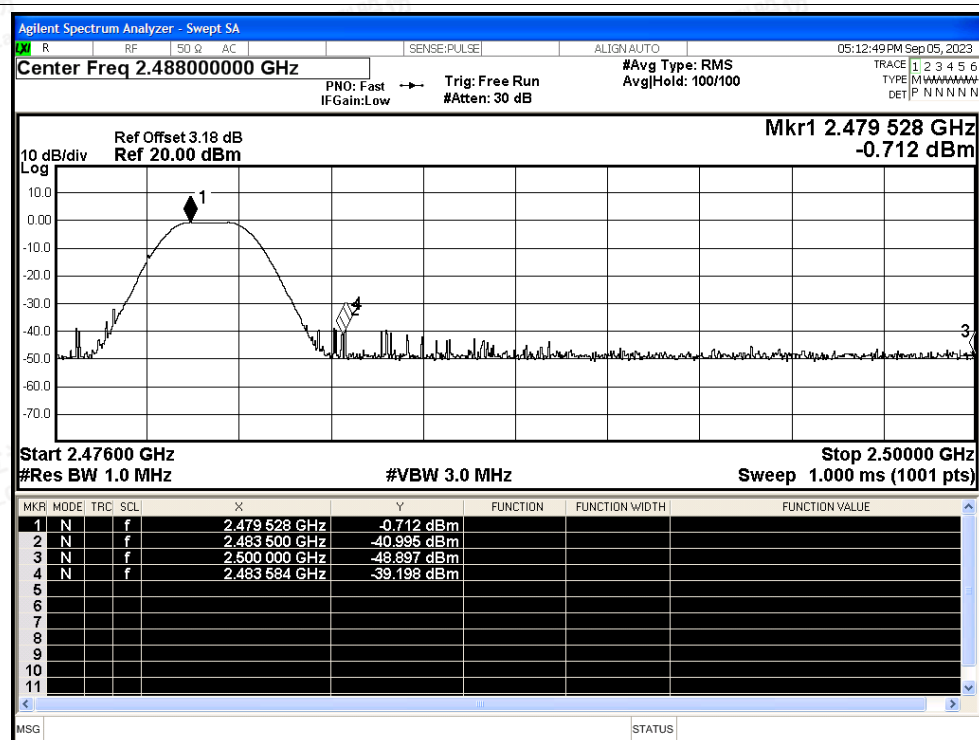
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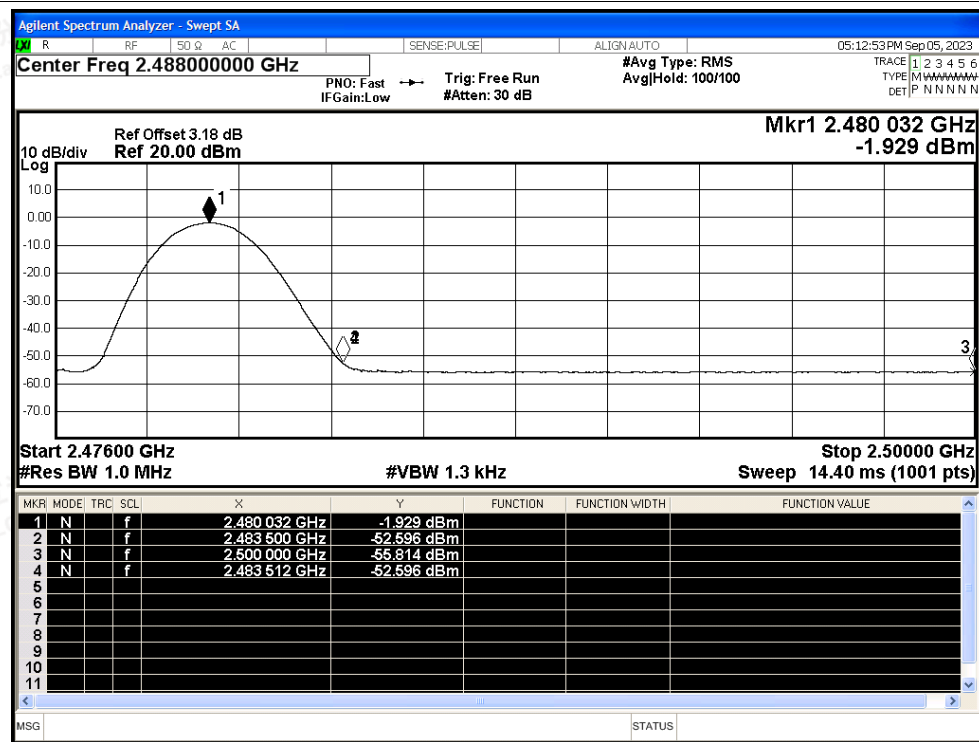
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Restrict Band NVNT 2.4G 2480MHz Ant Peak



Restrict Band NVNT 2.4G 2480MHz Ant Average



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