



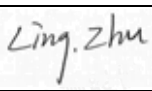
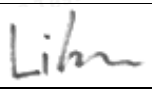
Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Lumi Chill LED ice bucket speaker

Test Model: Lumi-Chill

Environmental Conditions

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



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A.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.65	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.667	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.661	≥ 0.5	Pass



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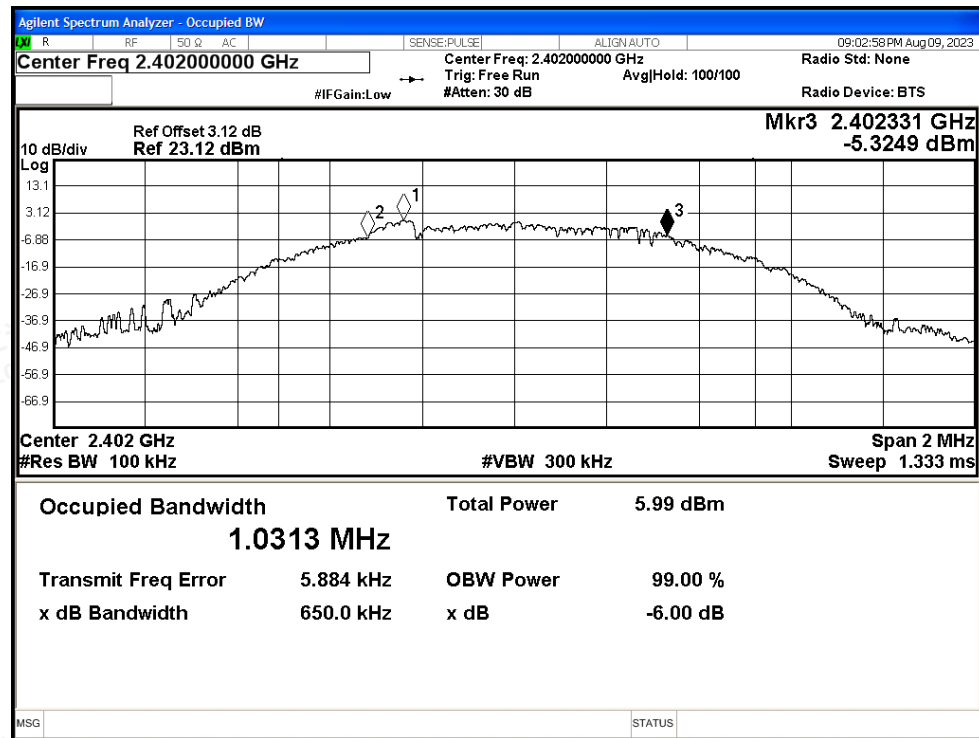
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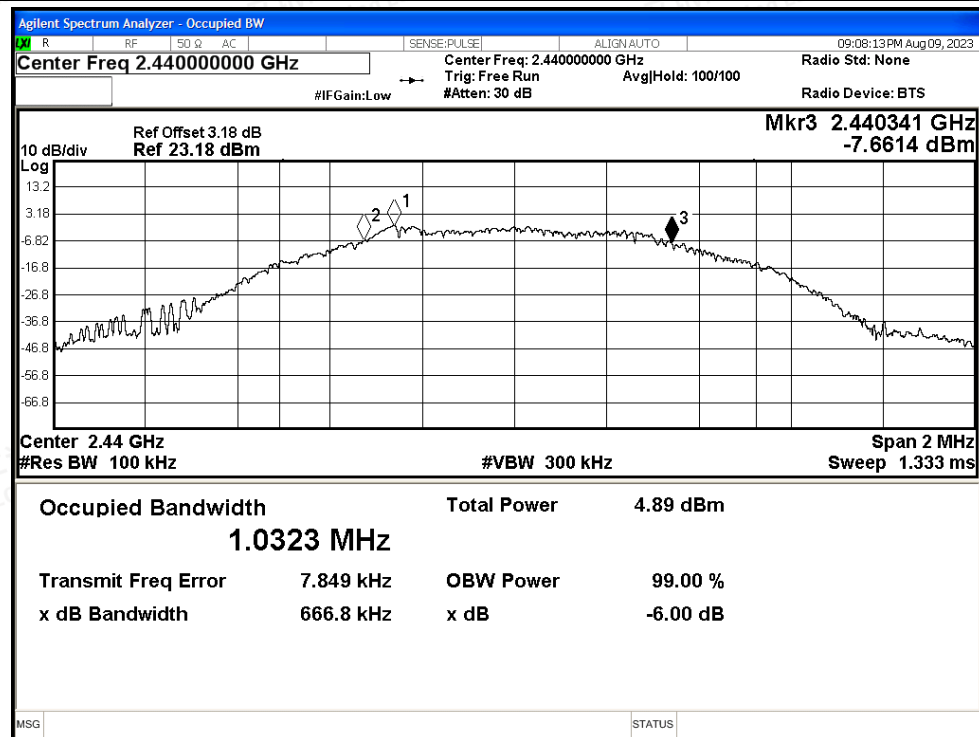


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

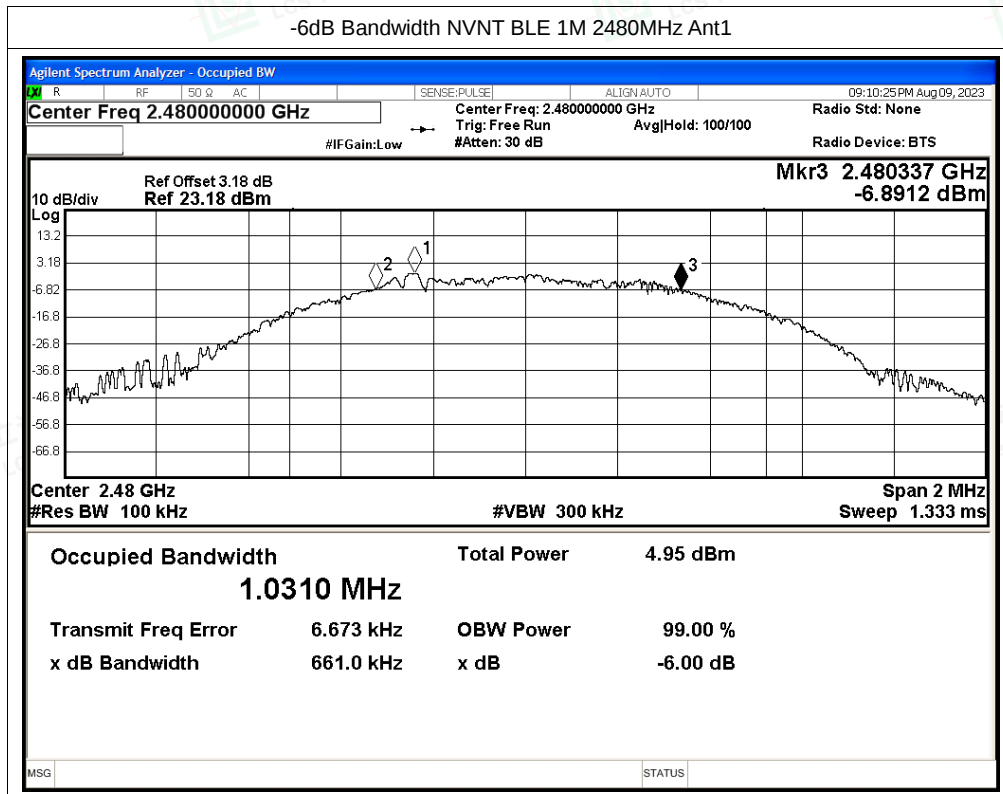


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A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.92	30	Pass
NVNT	BLE 1M	2440	Ant1	-0.3	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.13	30	Pass



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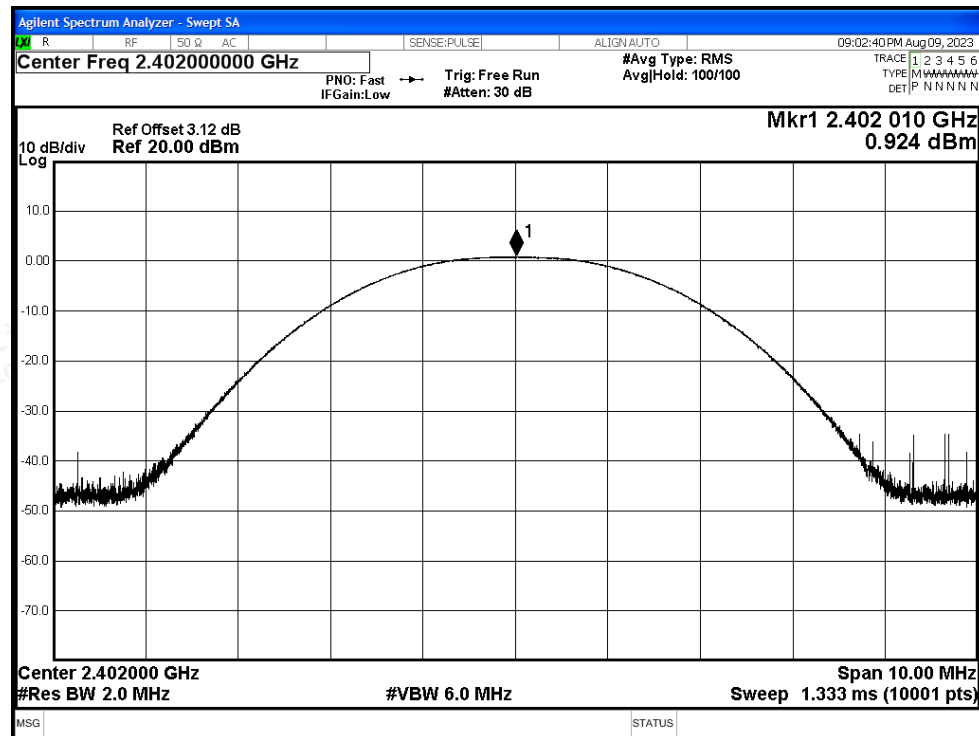
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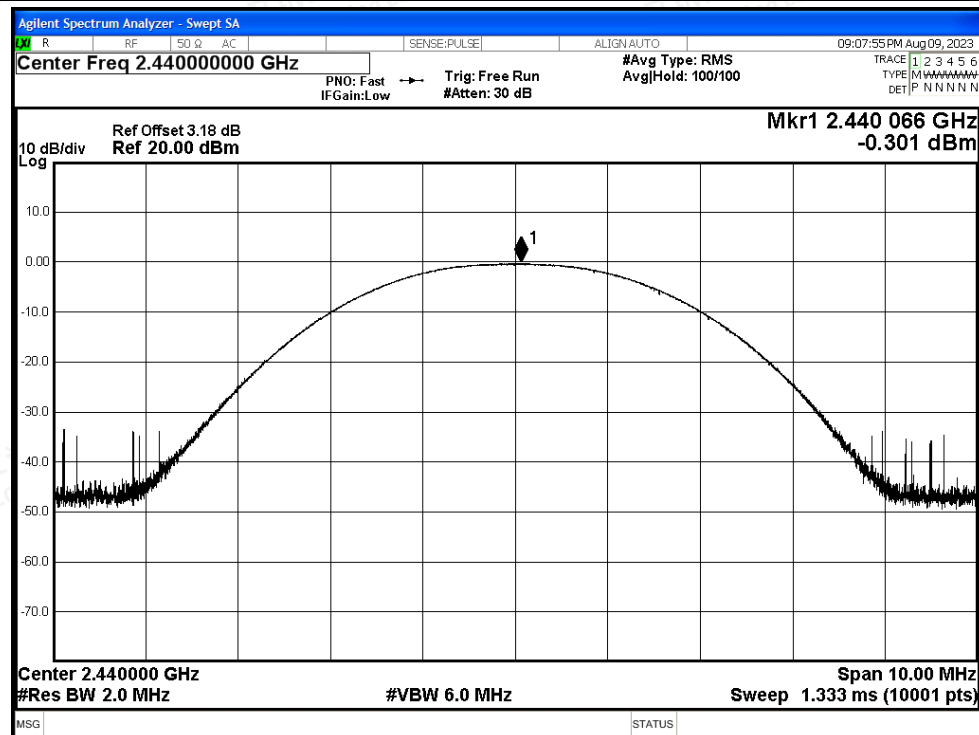


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

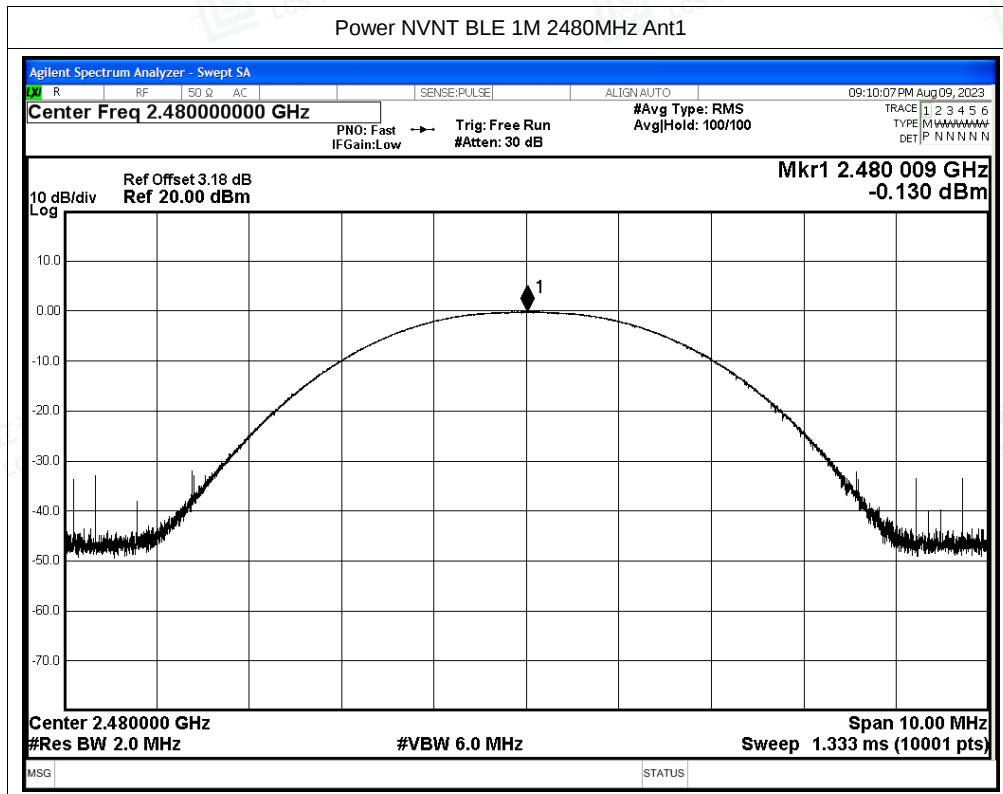


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-15.92	8	Pass
NVNT	BLE 1M	2440	Ant1	-17.42	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.96	8	Pass



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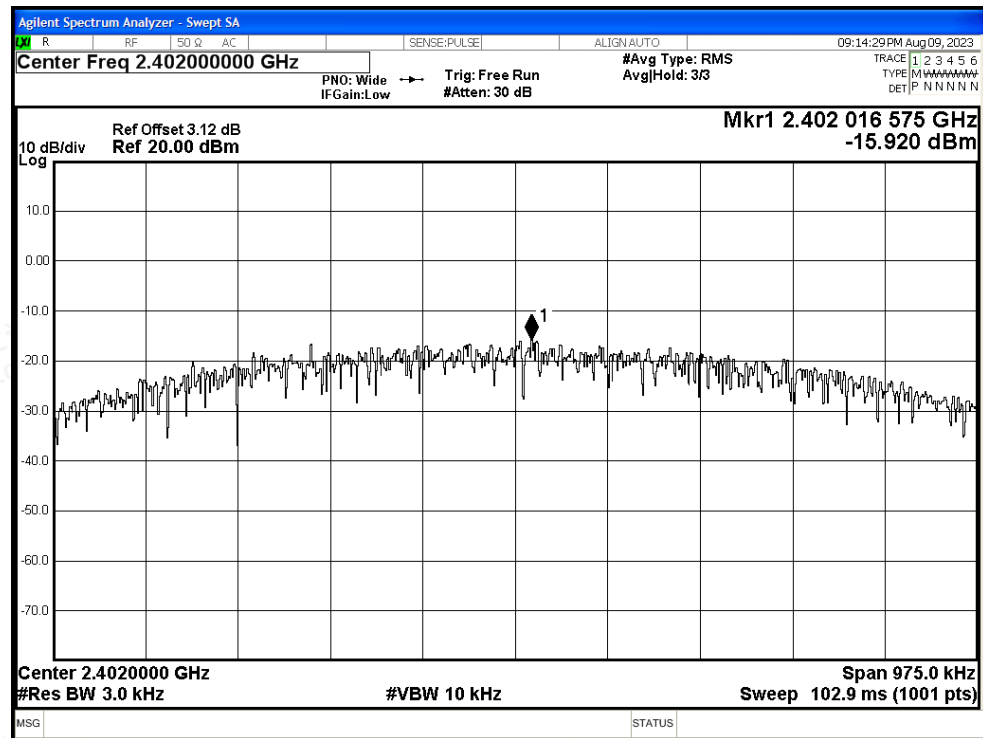
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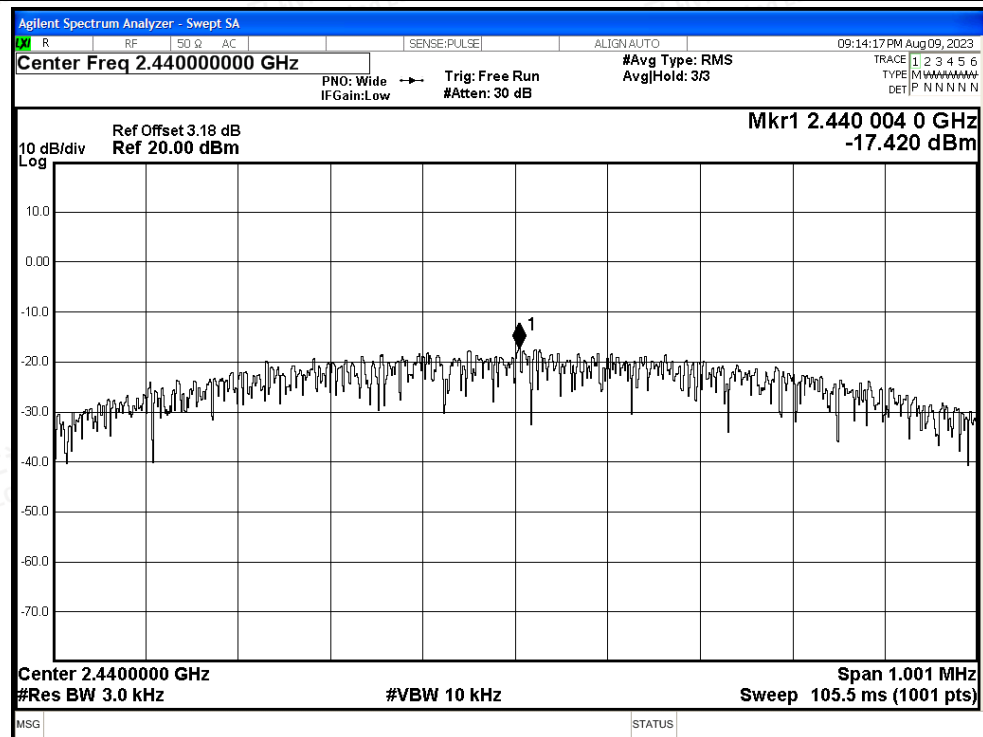


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

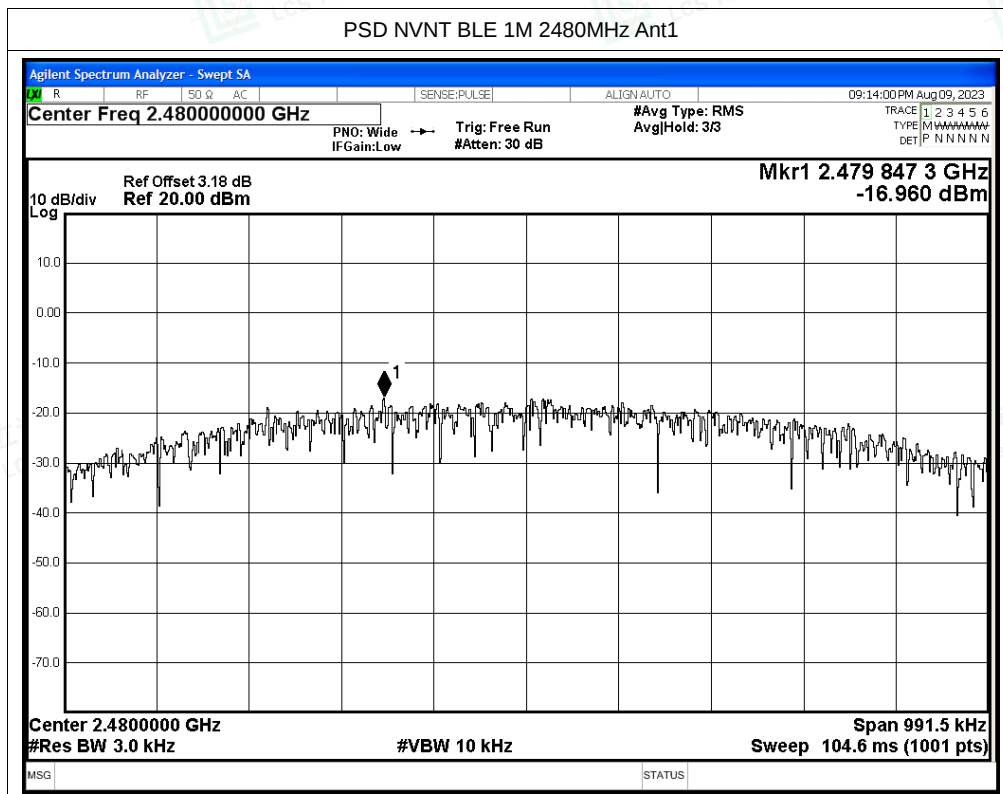


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A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-56.37	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.7	-20	Pass



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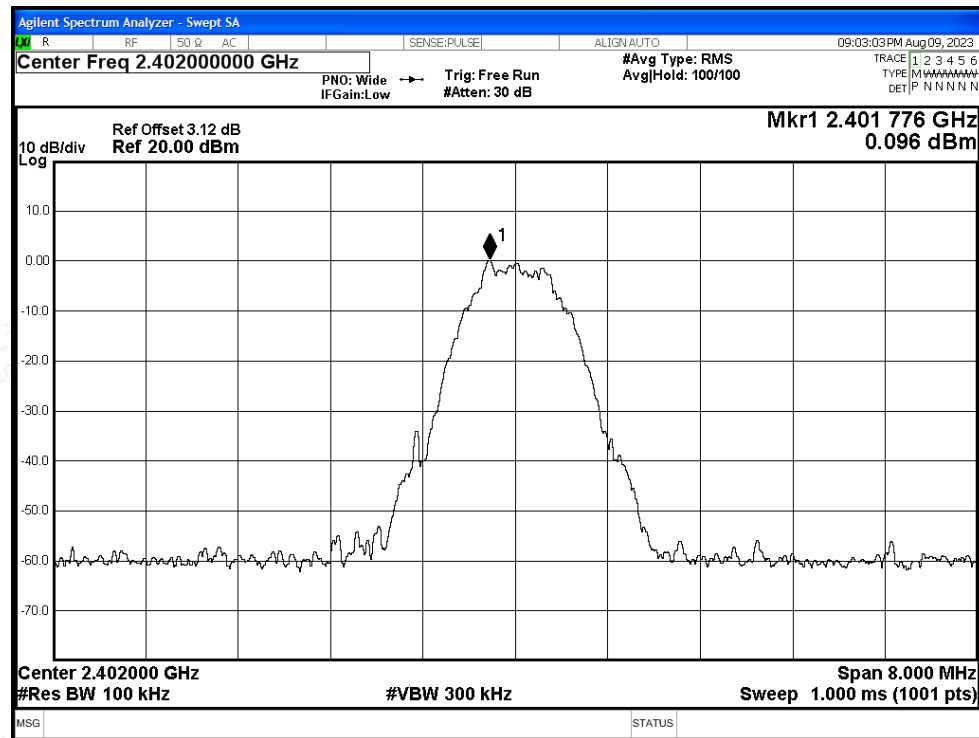
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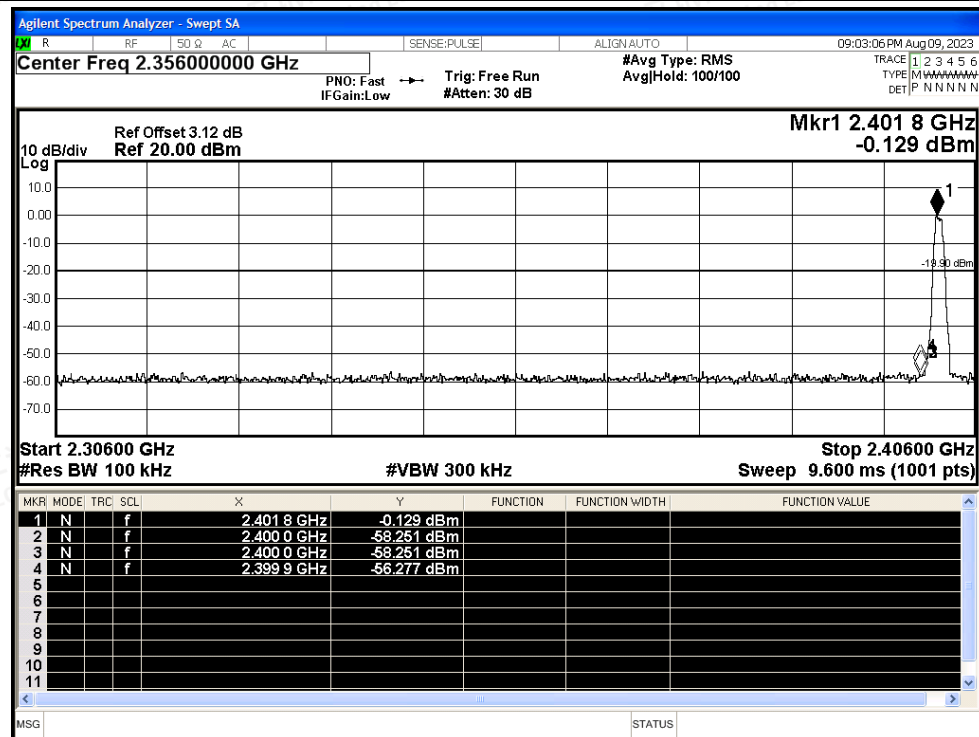


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

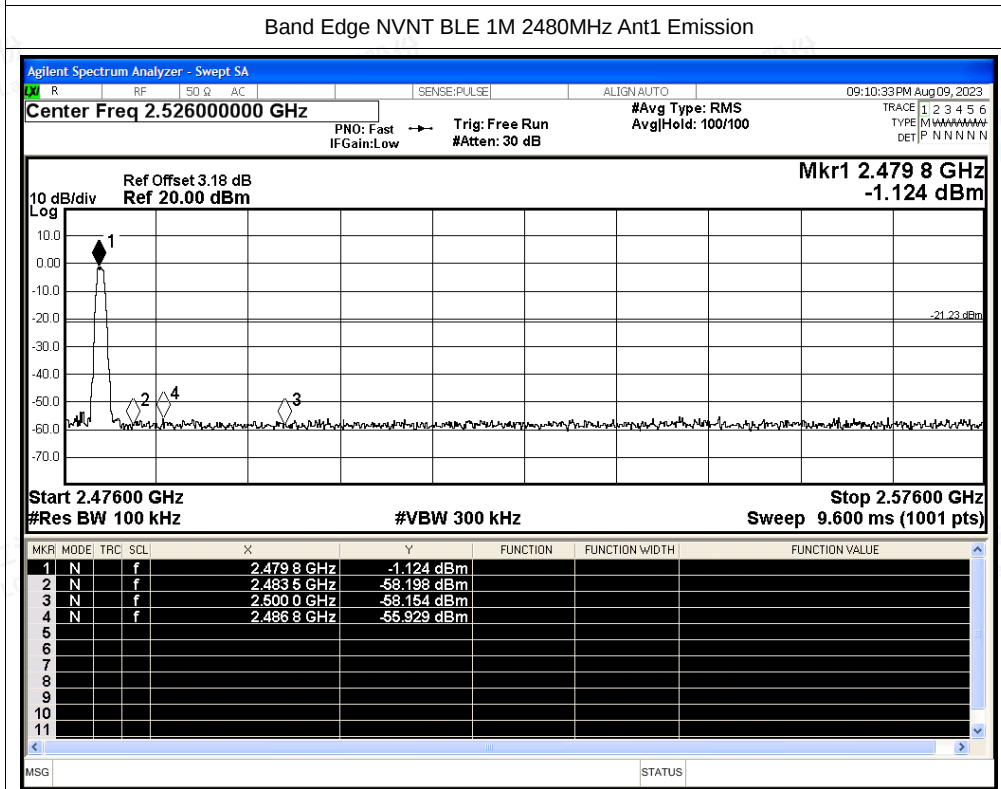
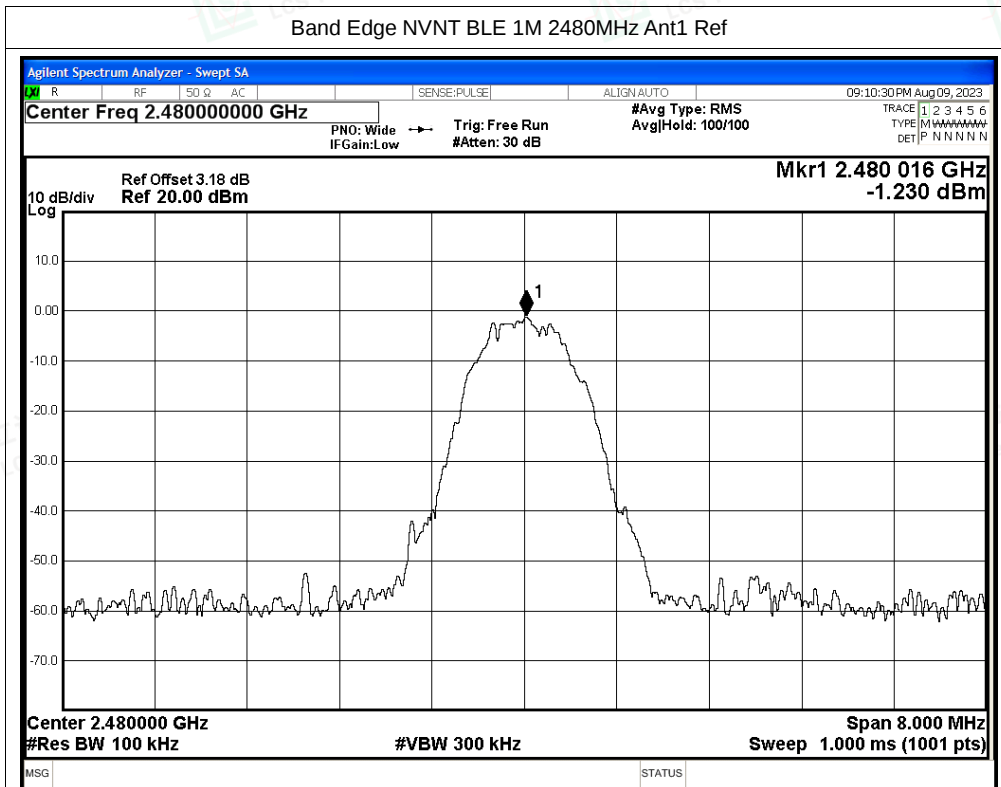


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A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-54.81	-20	Pass
NVNT	BLE 1M	2440	Ant1	-42.75	-20	Pass
NVNT	BLE 1M	2480	Ant1	-47.31	-20	Pass



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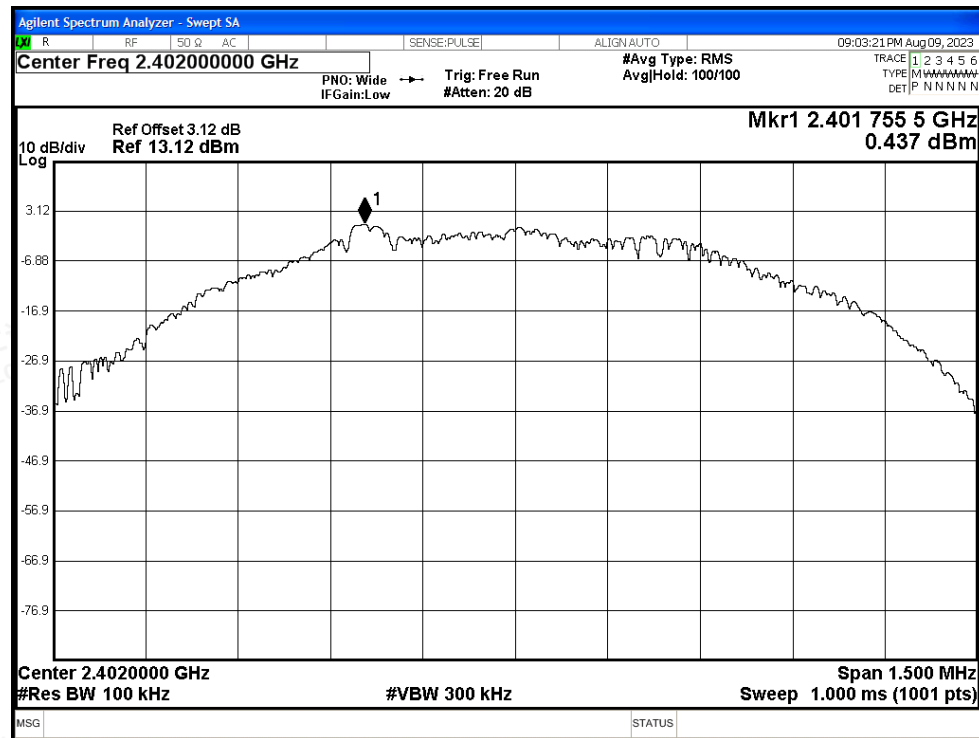
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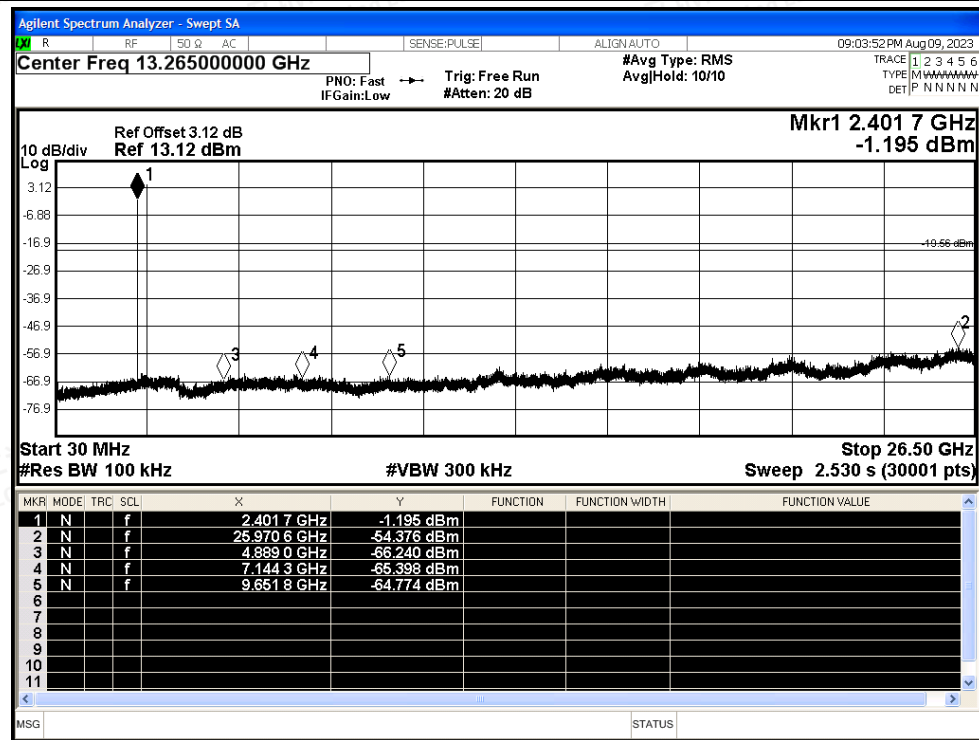


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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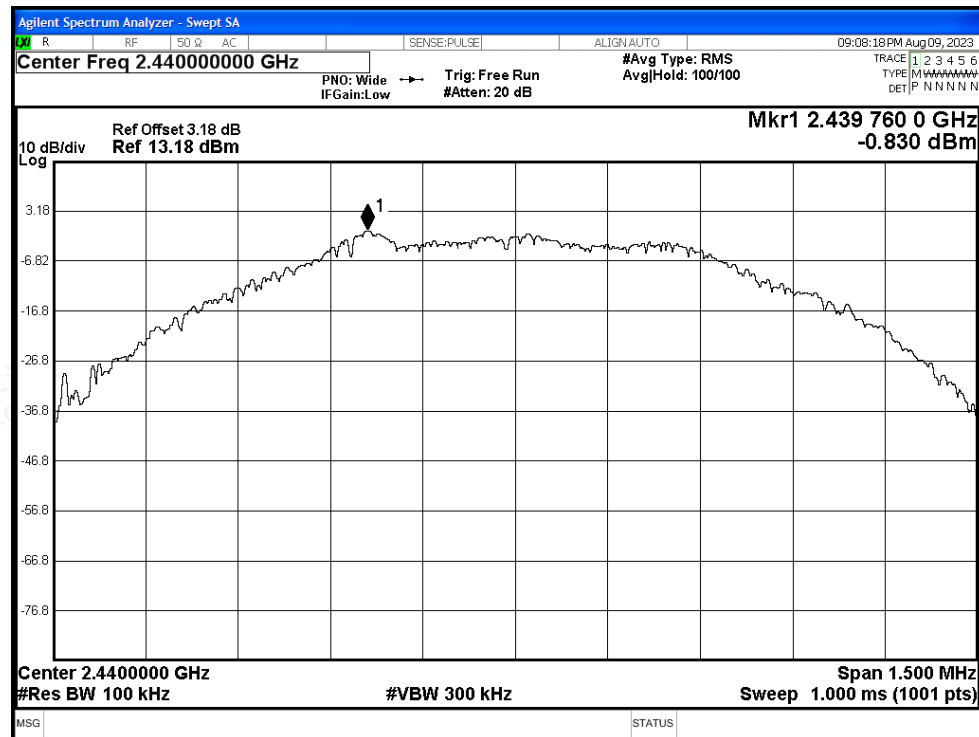
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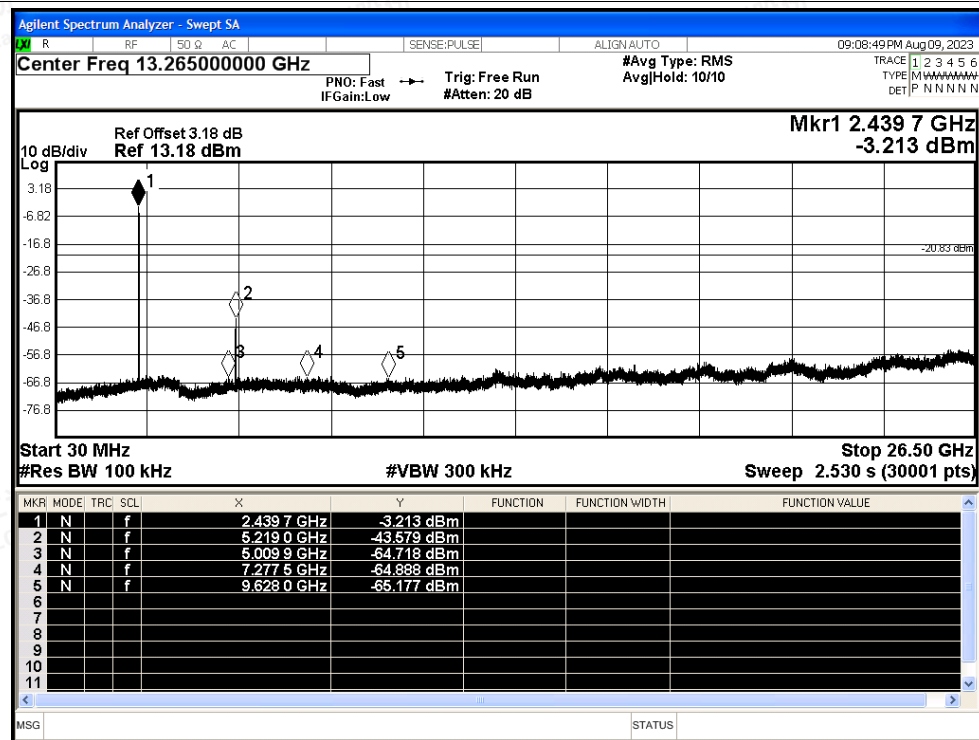
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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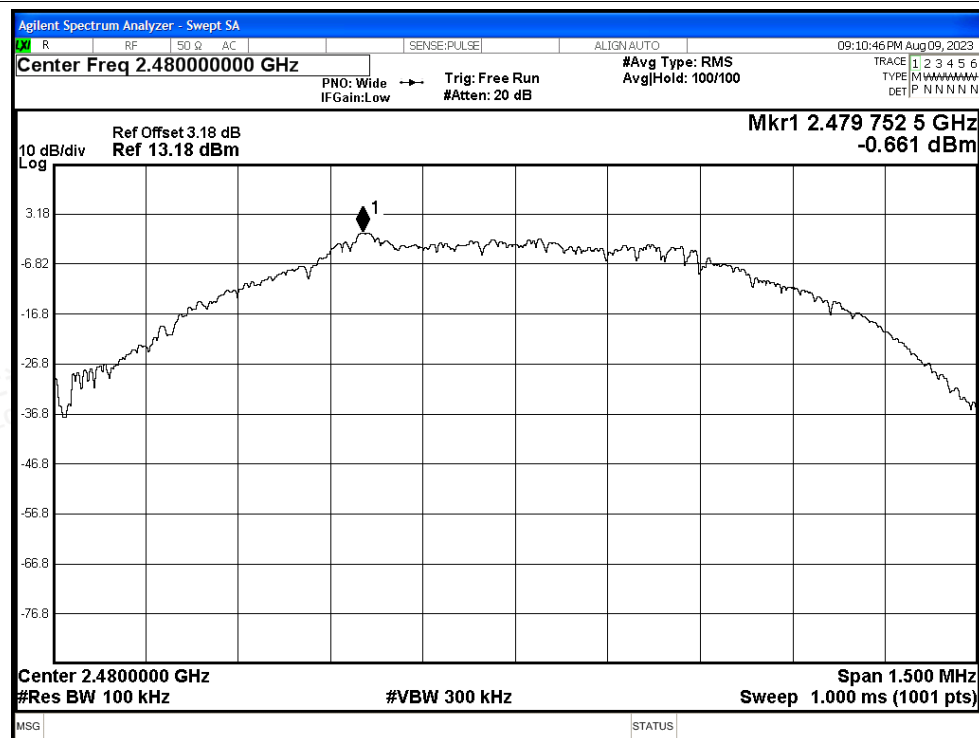
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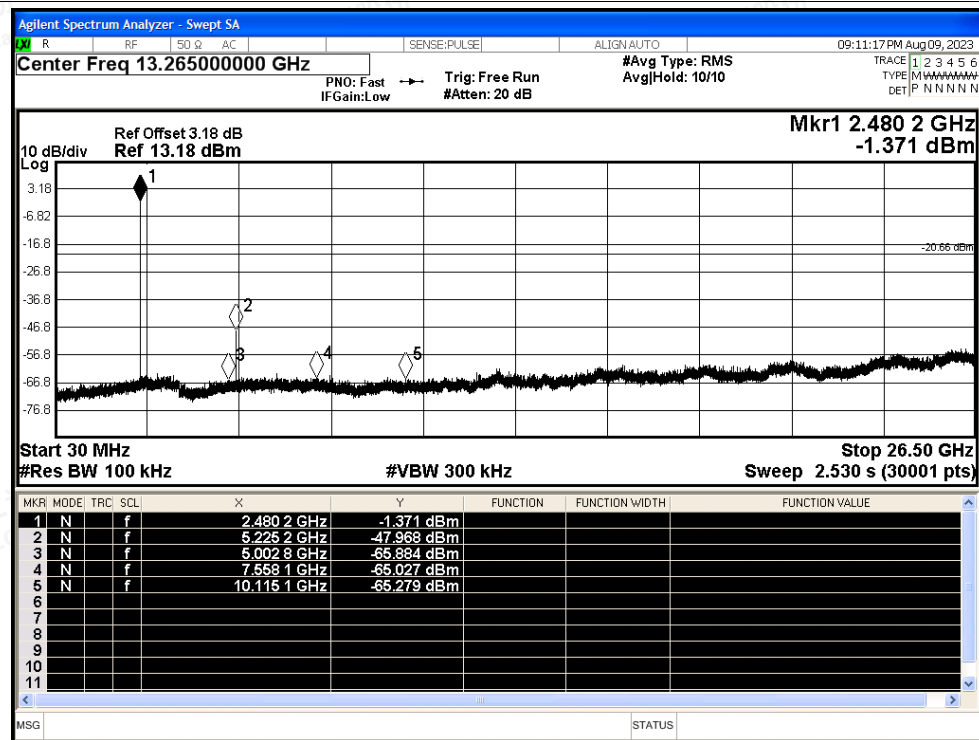
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



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A.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	33.16	4.79	2.41
NVNT	BLE 1M	2440	Ant1	0	0	∞
NVNT	BLE 1M	2480	Ant1	33.16	4.79	2.41



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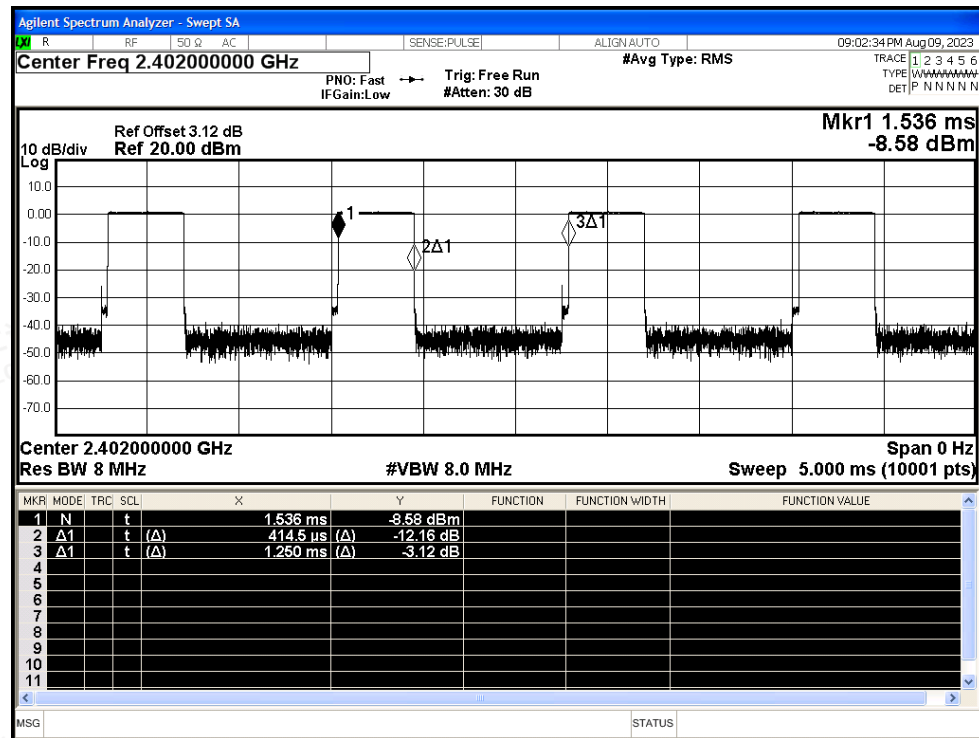
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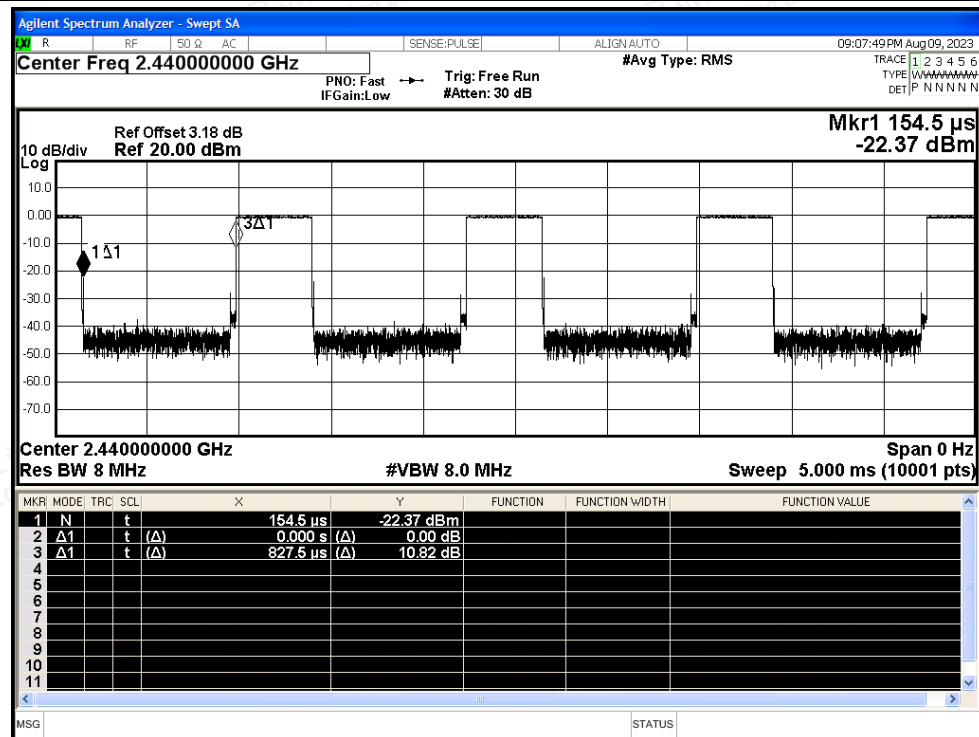


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

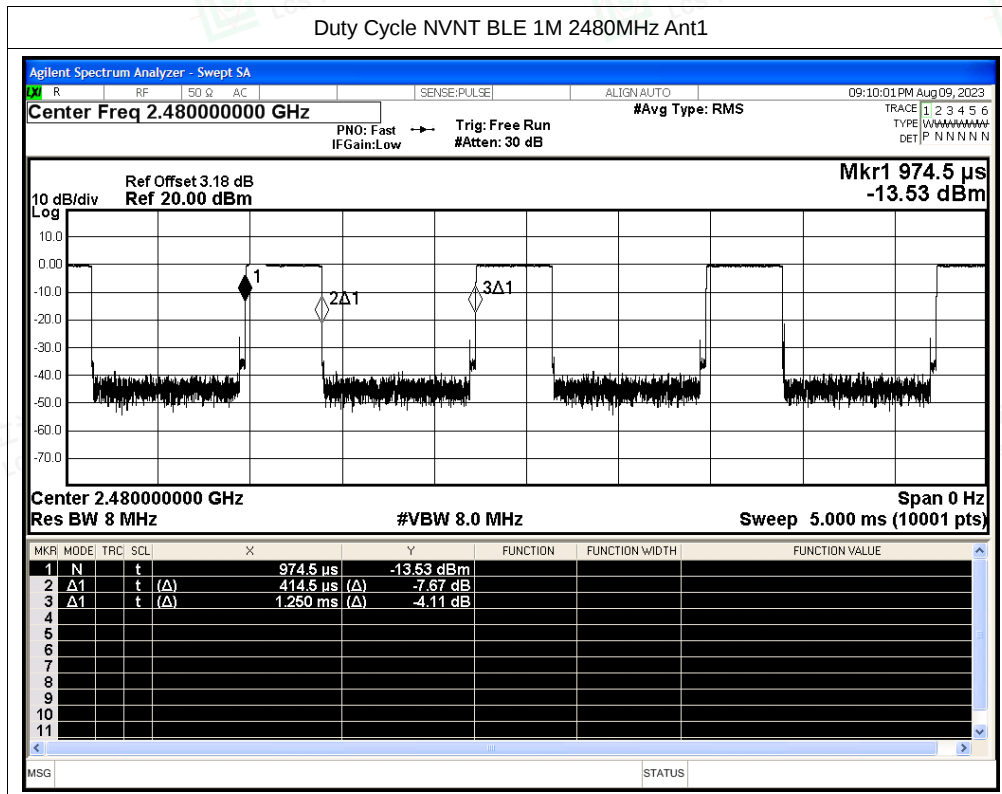


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A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-49.7	2	47.56	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-55.87	2	41.39	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2310.48	-46.21	2	51.05	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2386.608	-55.52	2	41.74	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-48.23	2	49.03	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-56.15	2	41.11	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-50.26	2	47	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-54.36	2	42.9	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2485.096	-39.17	2	58.09	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.512	-54.36	2	42.9	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-49.86	2	47.4	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-55.63	2	41.63	Average	54	Pass



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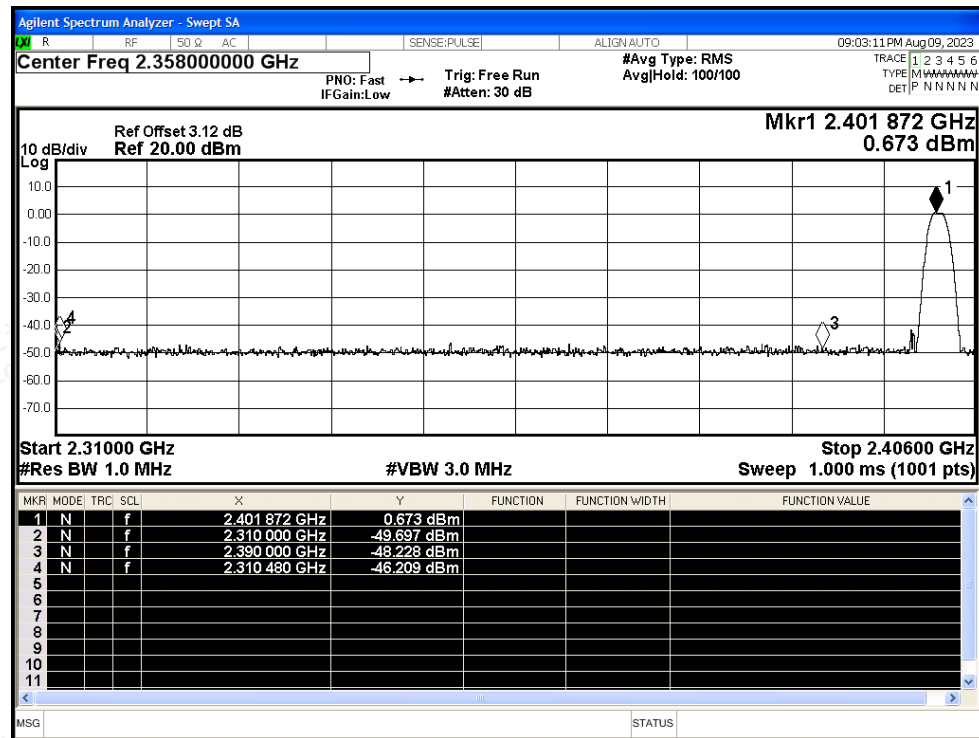
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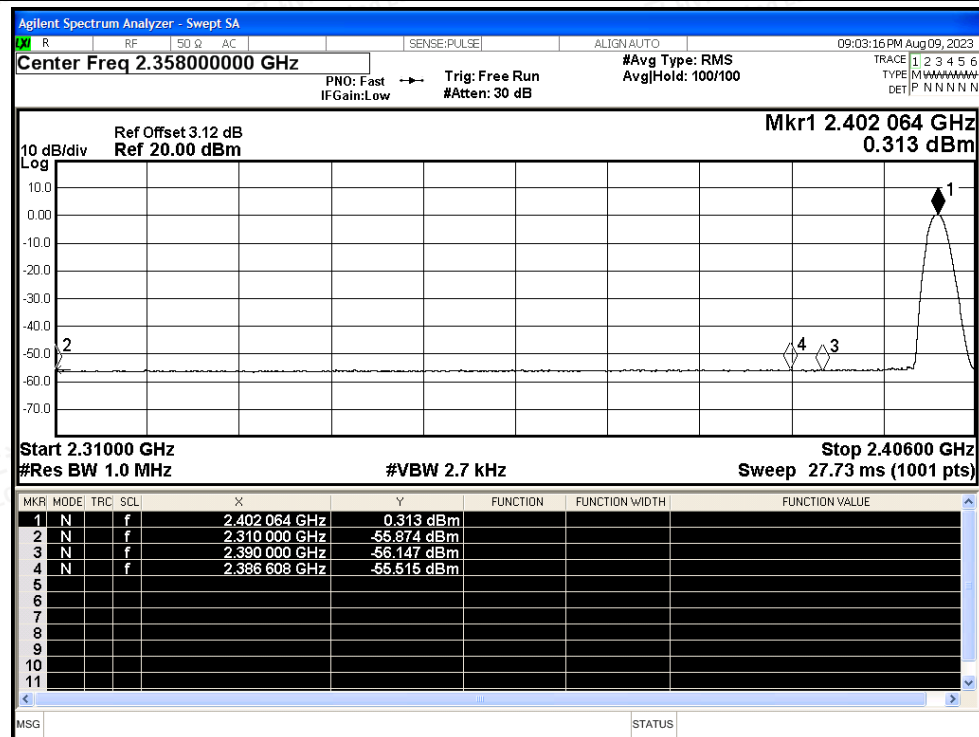


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average

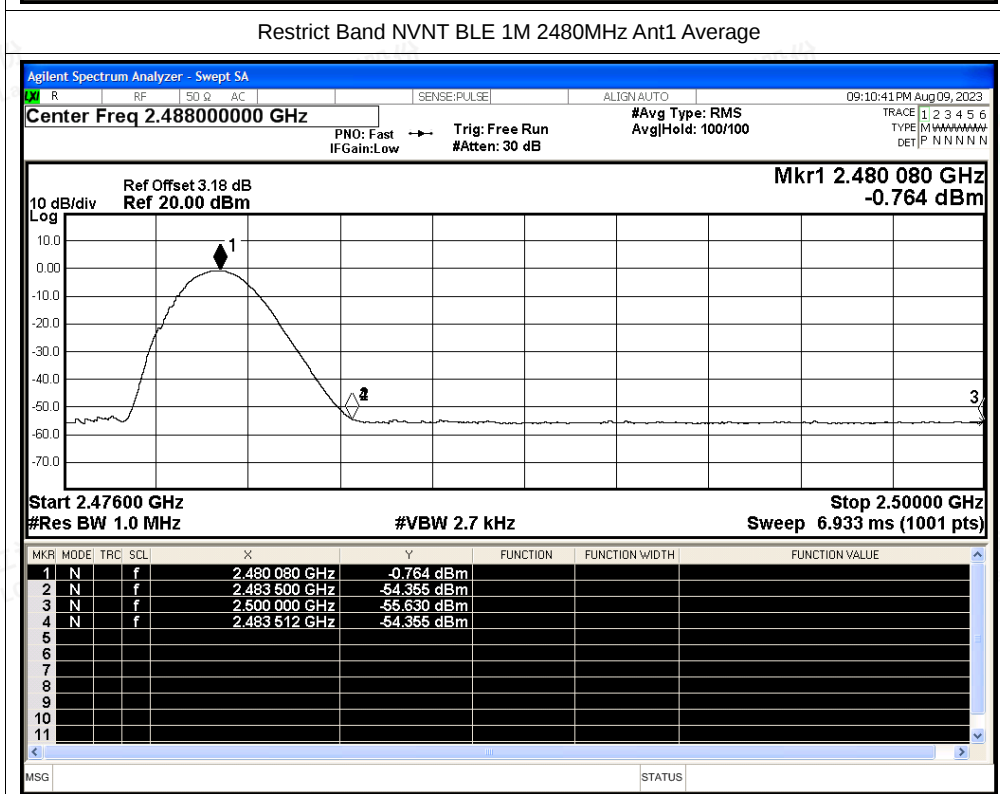
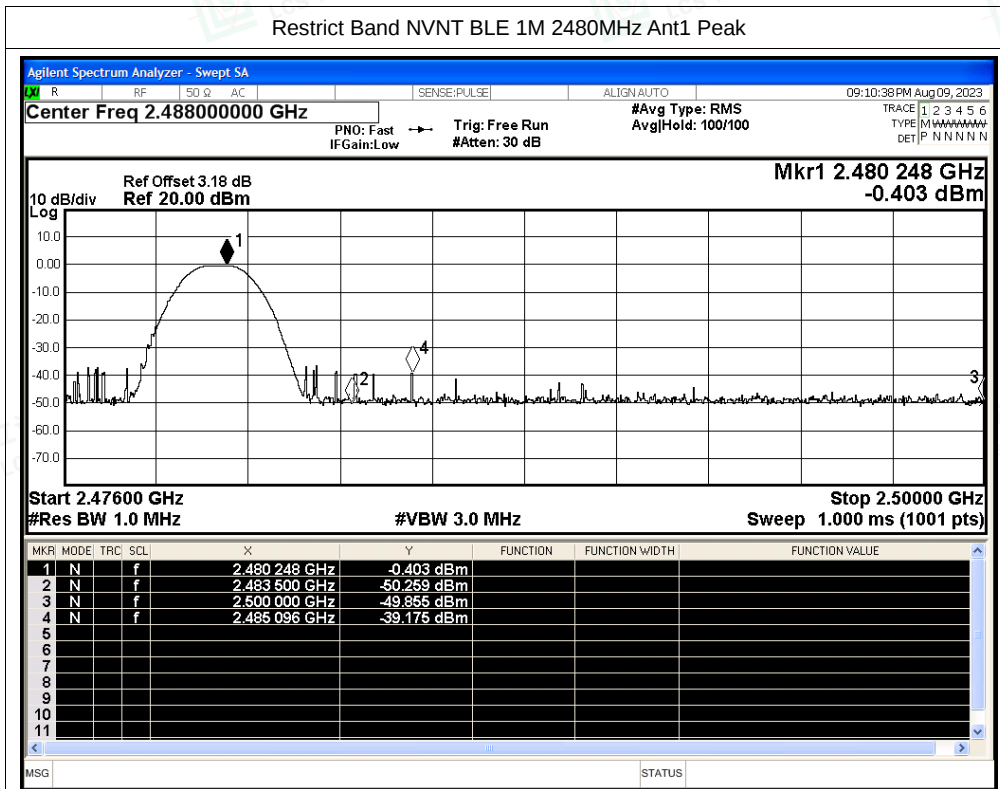


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