



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Multi-function projector

Test Model: NeoPix 130

Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng





B.1 -6dB Bandwidth

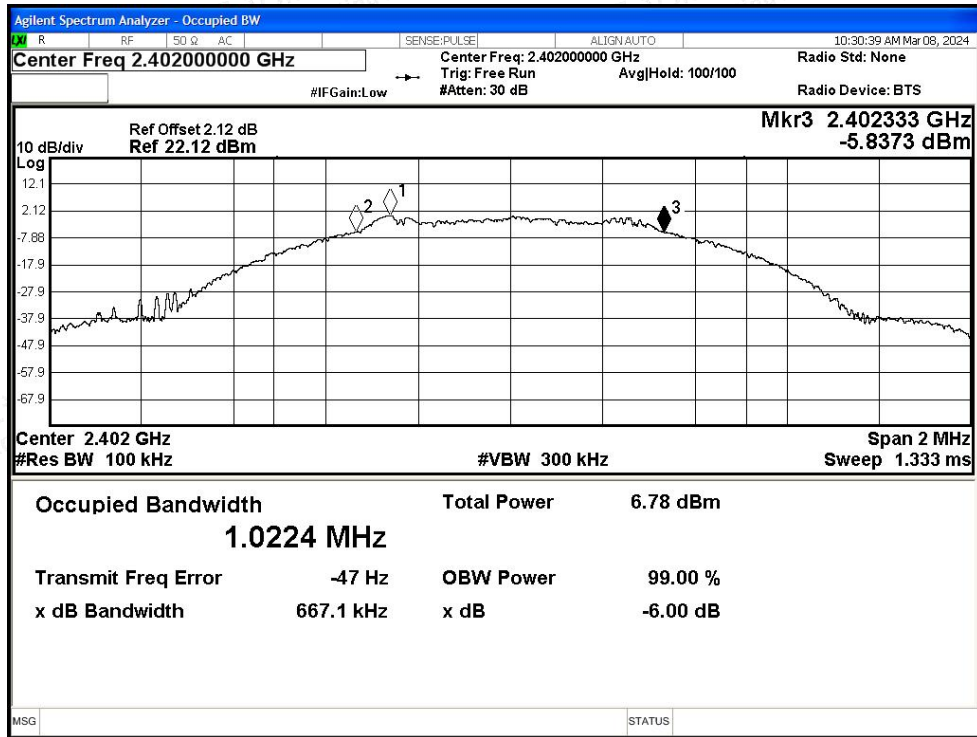
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant2	0.667	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant2	0.653	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant2	0.656	≥ 0.5	Pass



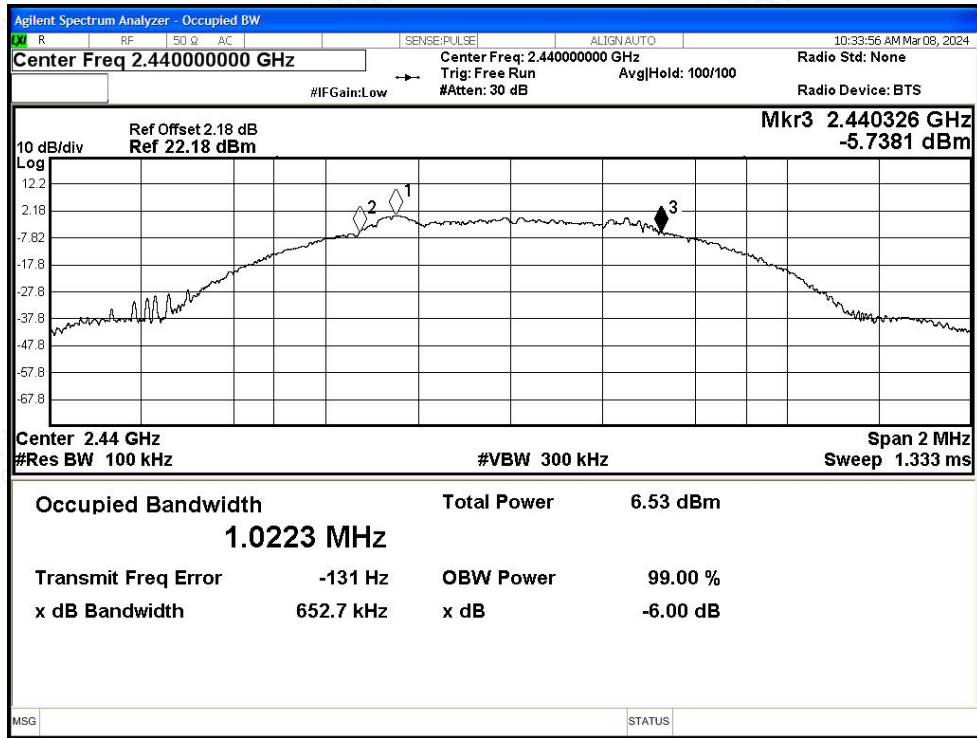


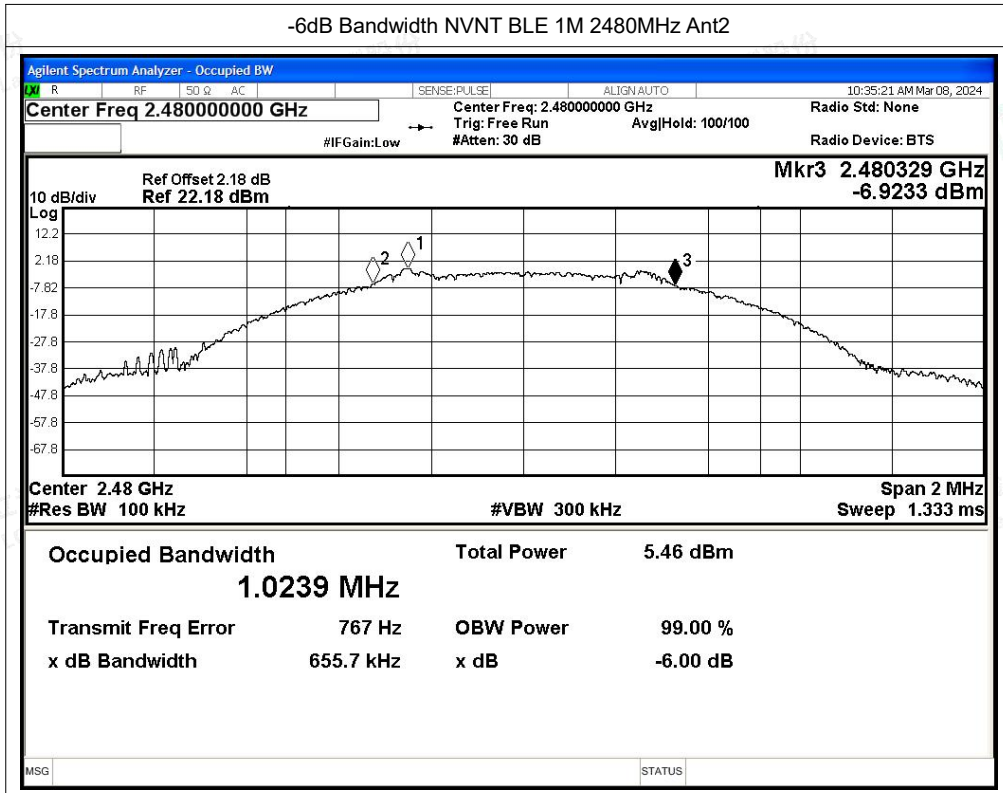
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant2



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant2







B.2 Maximum Peak Conducted Output Power

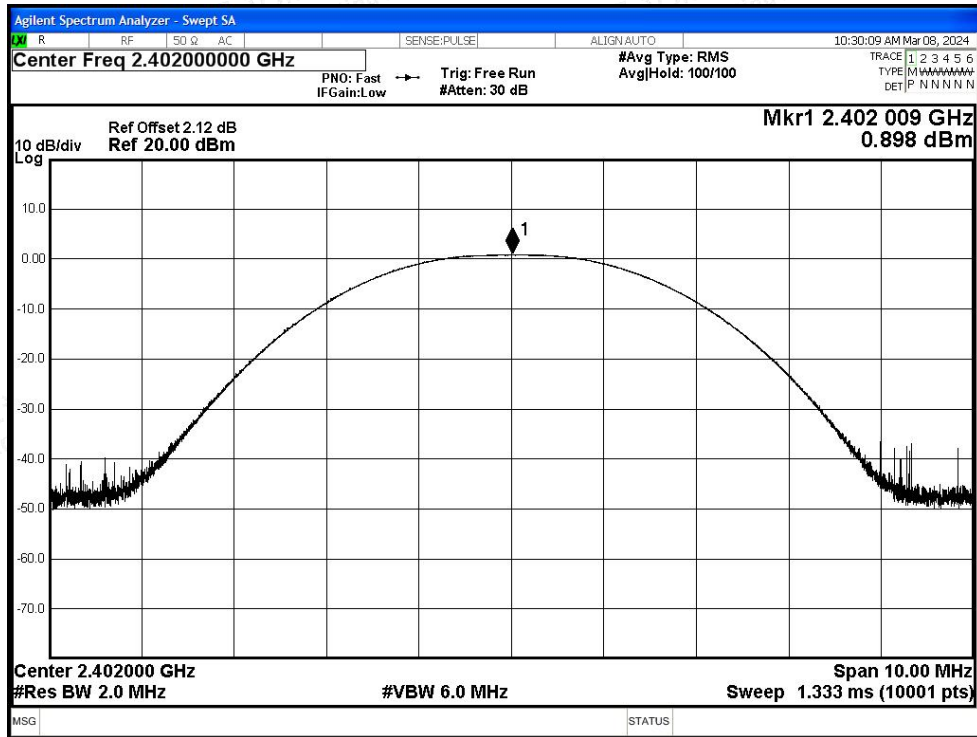
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant2	0.9	30	Pass
NVNT	BLE 1M	2440	Ant2	0.78	30	Pass
NVNT	BLE 1M	2480	Ant2	-0.29	30	Pass



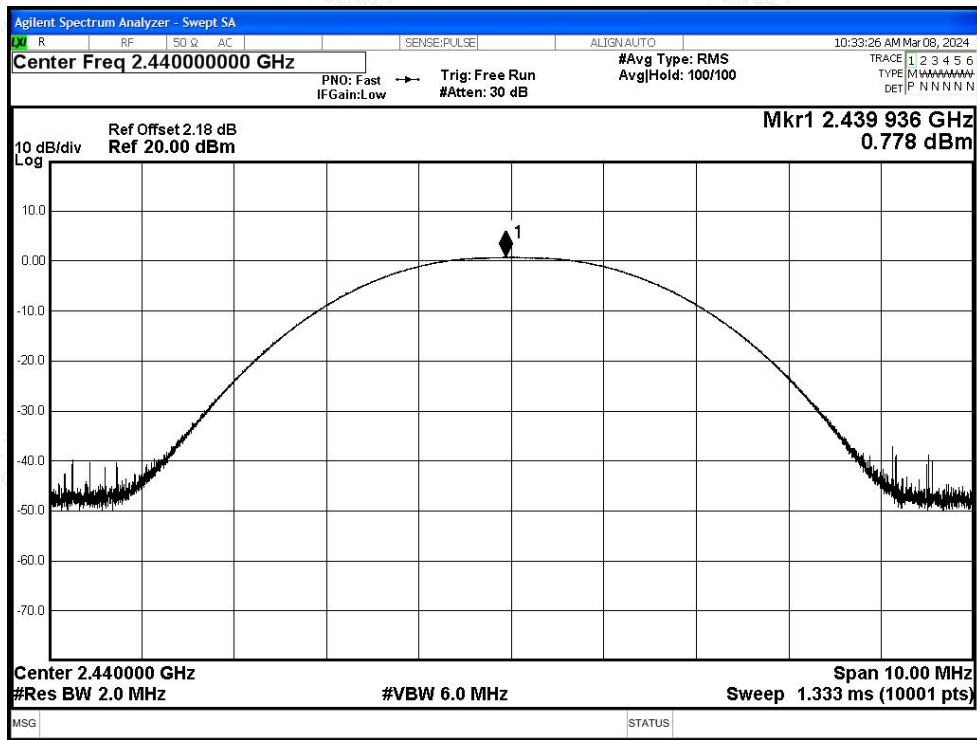


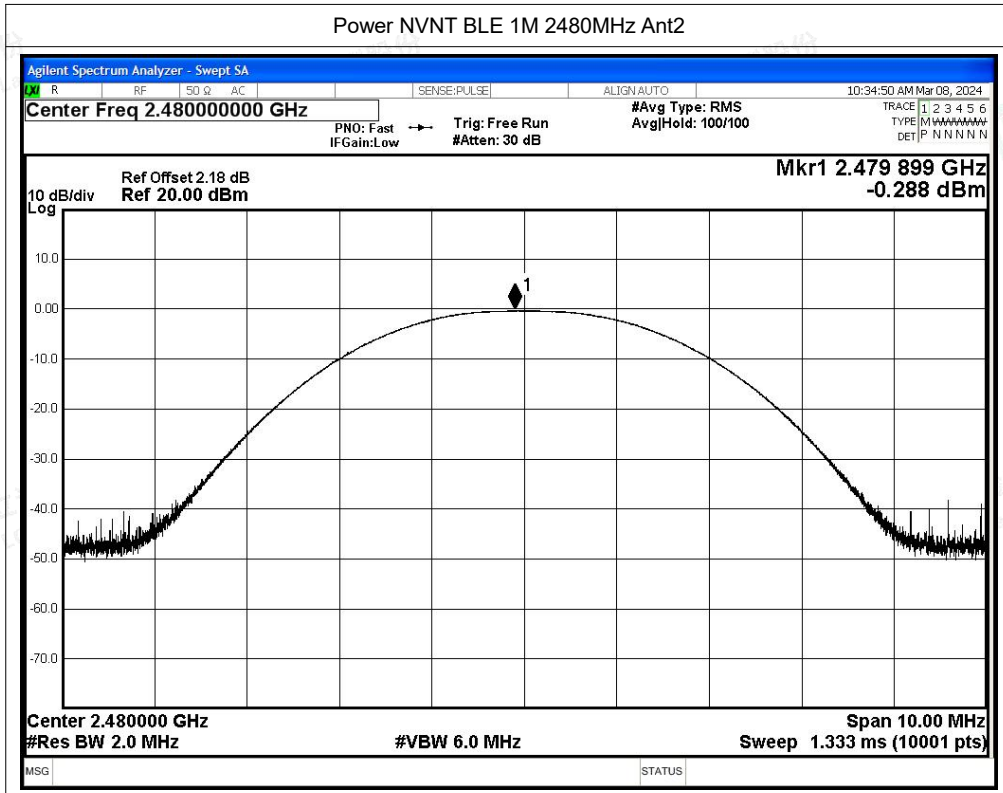
Test Graphs

Power NVNT BLE 1M 2402MHz Ant2



Power NVNT BLE 1M 2440MHz Ant2







B.3 Maximum Peak Power Spectral Density Level

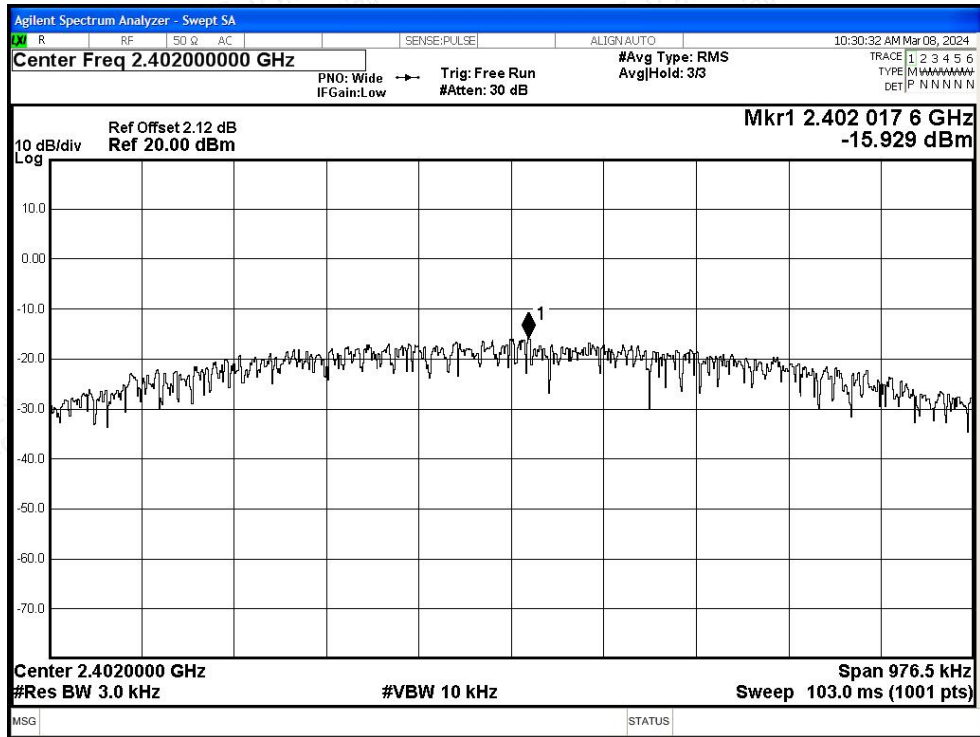
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant2	-15.93	8	Pass
NVNT	BLE 1M	2440	Ant2	-16.17	8	Pass
NVNT	BLE 1M	2480	Ant2	-17.13	8	Pass



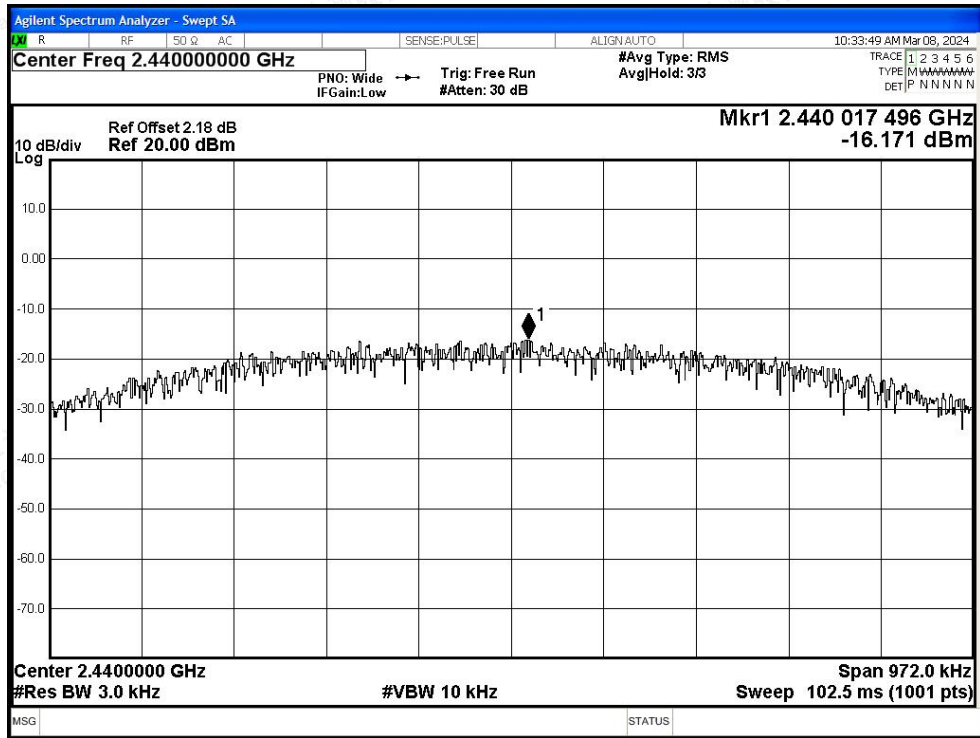


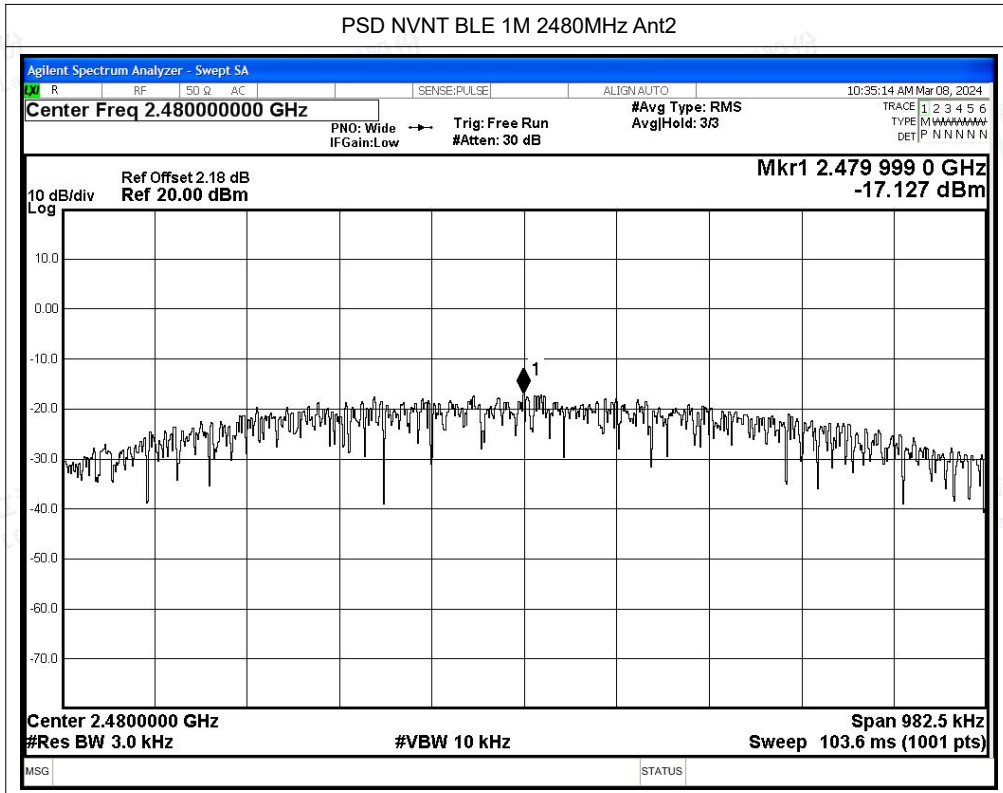
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant2



PSD NVNT BLE 1M 2440MHz Ant2







B.4 Band Edge

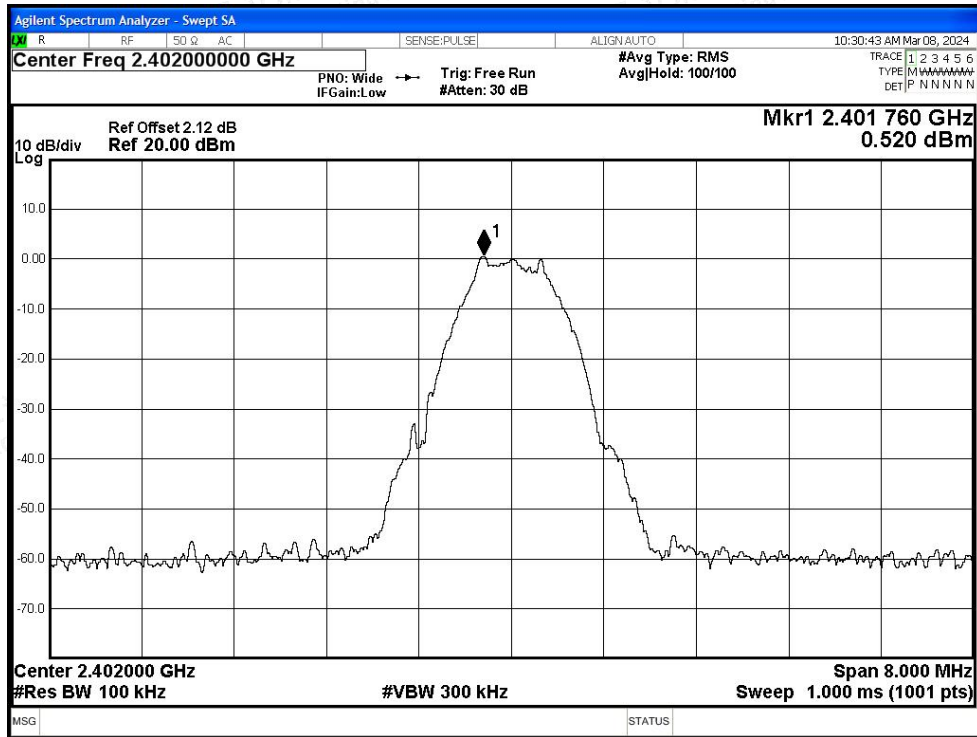
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant2	-57.04	-20	Pass
NVNT	BLE 1M	2480	Ant2	-56.46	-20	Pass



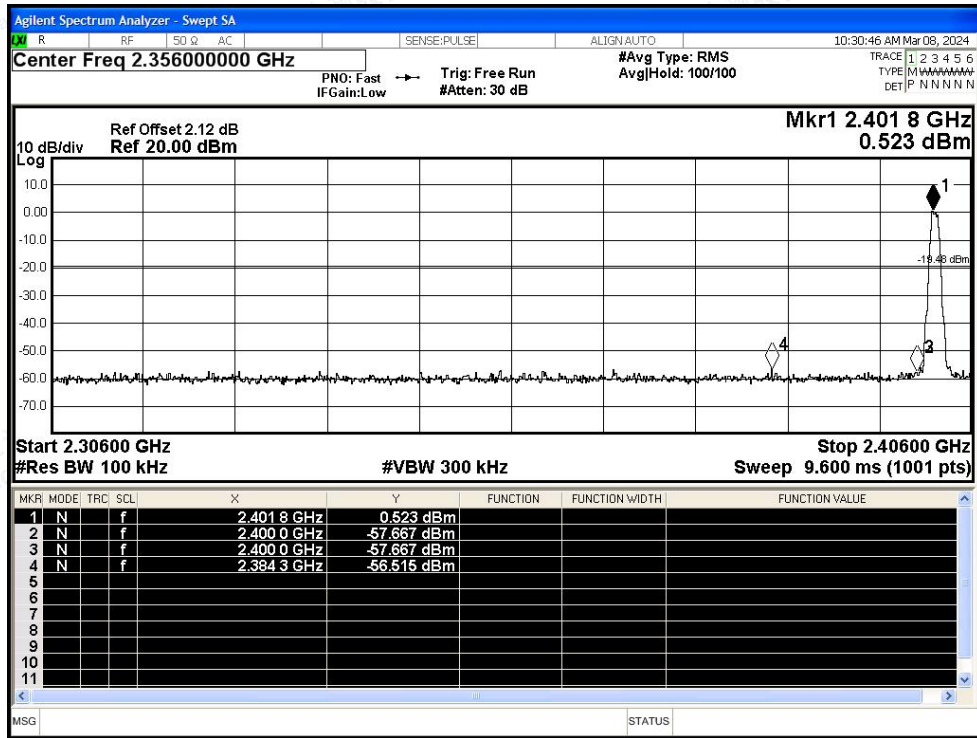


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant2 Ref

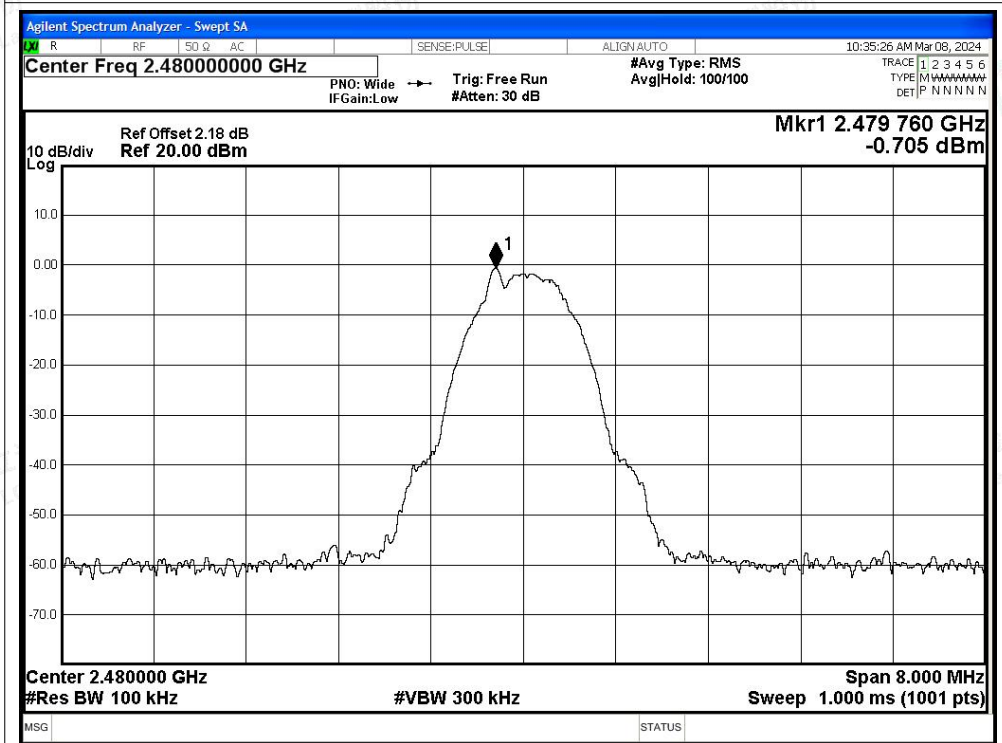


Band Edge NVNT BLE 1M 2402MHz Ant2 Emission

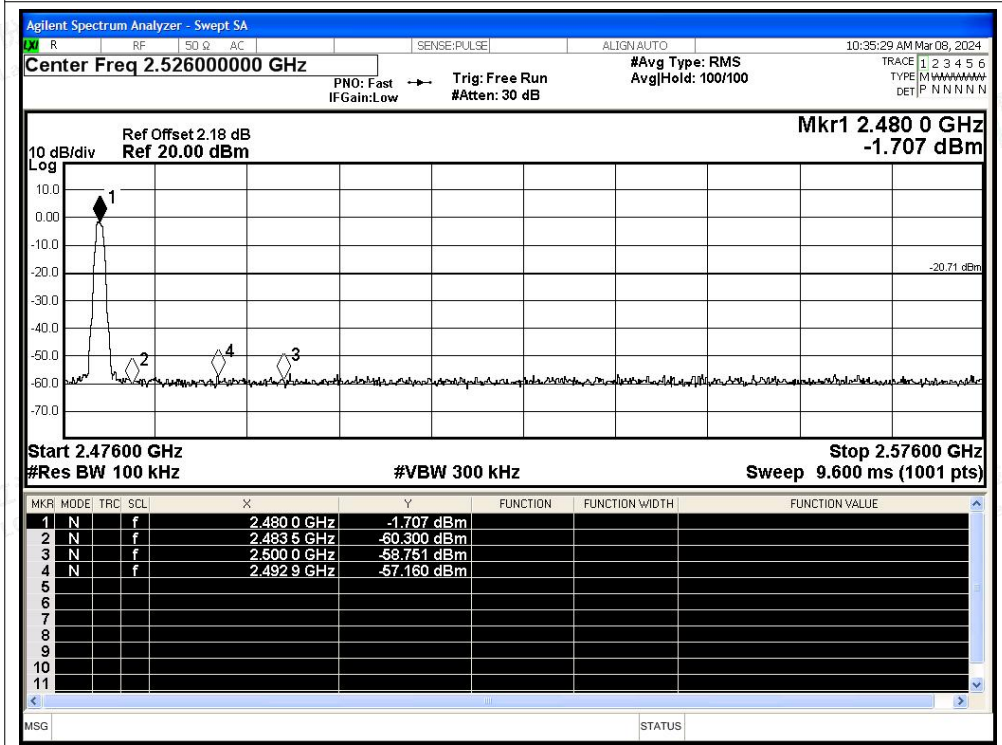




Band Edge NVNT BLE 1M 2480MHz Ant2 Ref



Band Edge NVNT BLE 1M 2480MHz Ant2 Emission



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B.5 Conducted RF Spurious Emission

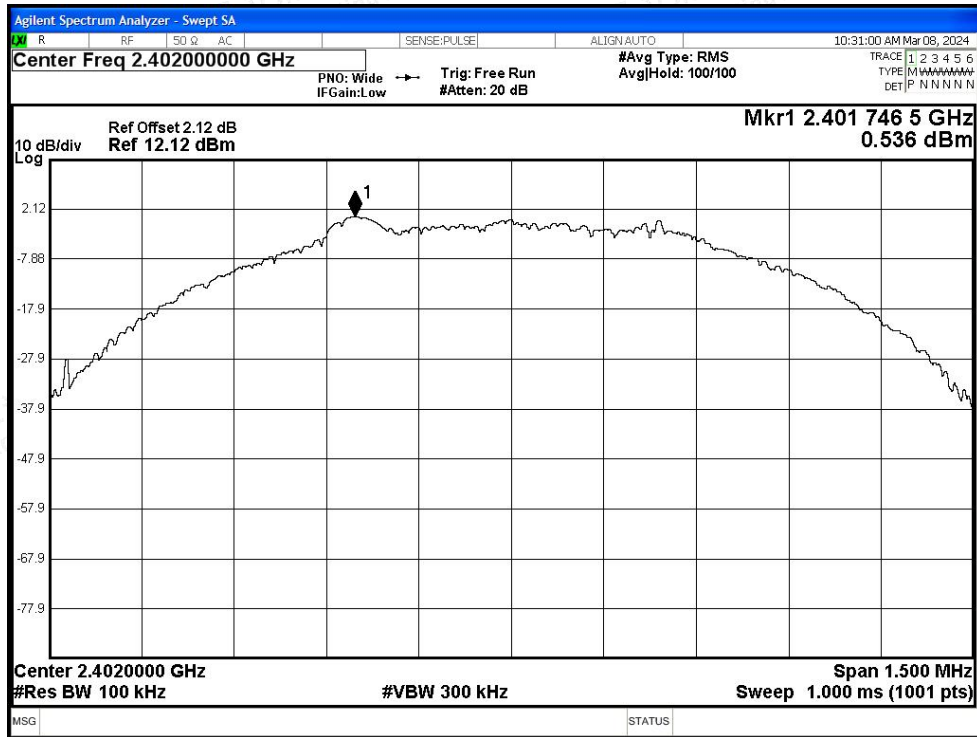
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant2	-56.53	-20	Pass
NVNT	BLE 1M	2440	Ant2	-55.72	-20	Pass
NVNT	BLE 1M	2480	Ant2	-53.21	-20	Pass



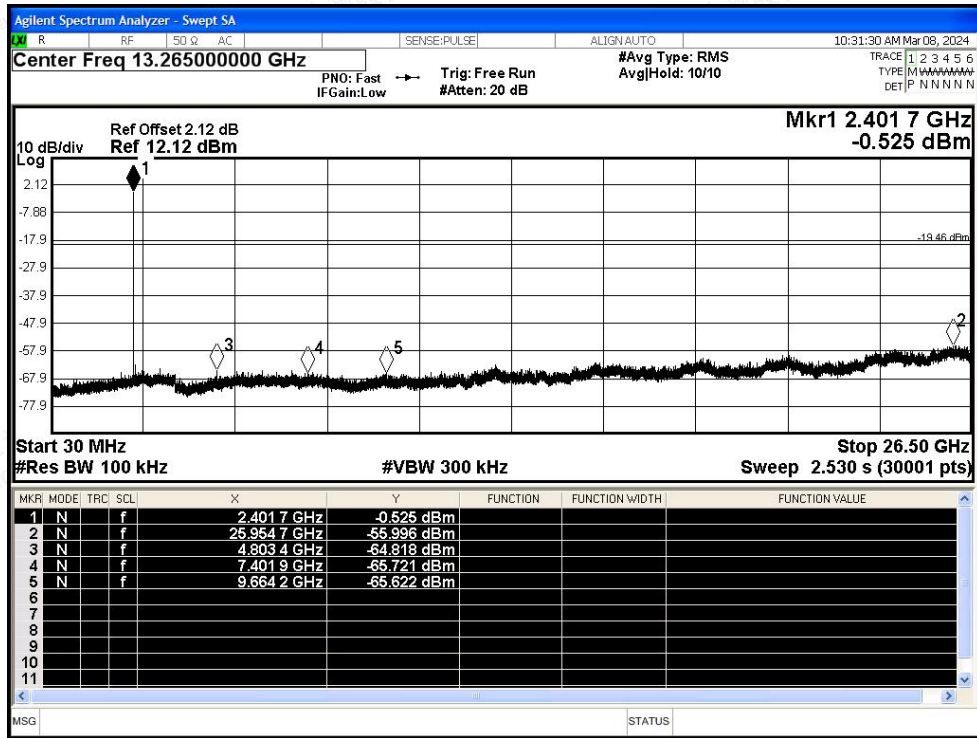


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant2 Ref

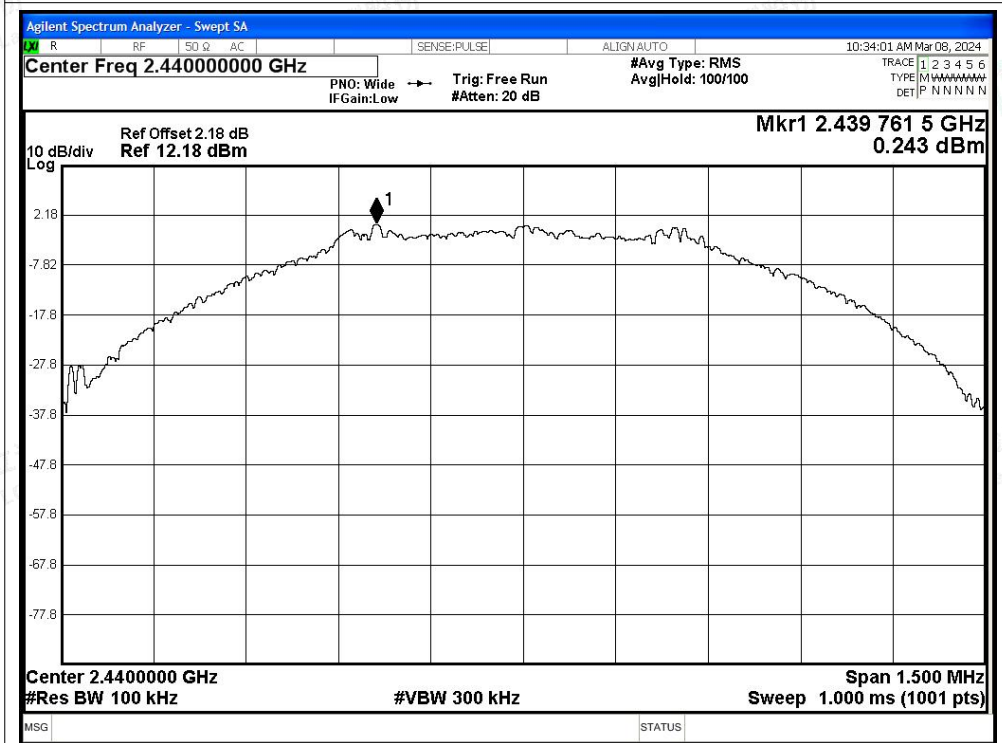


Tx. Spurious NVNT BLE 1M 2402MHz Ant2 Emission

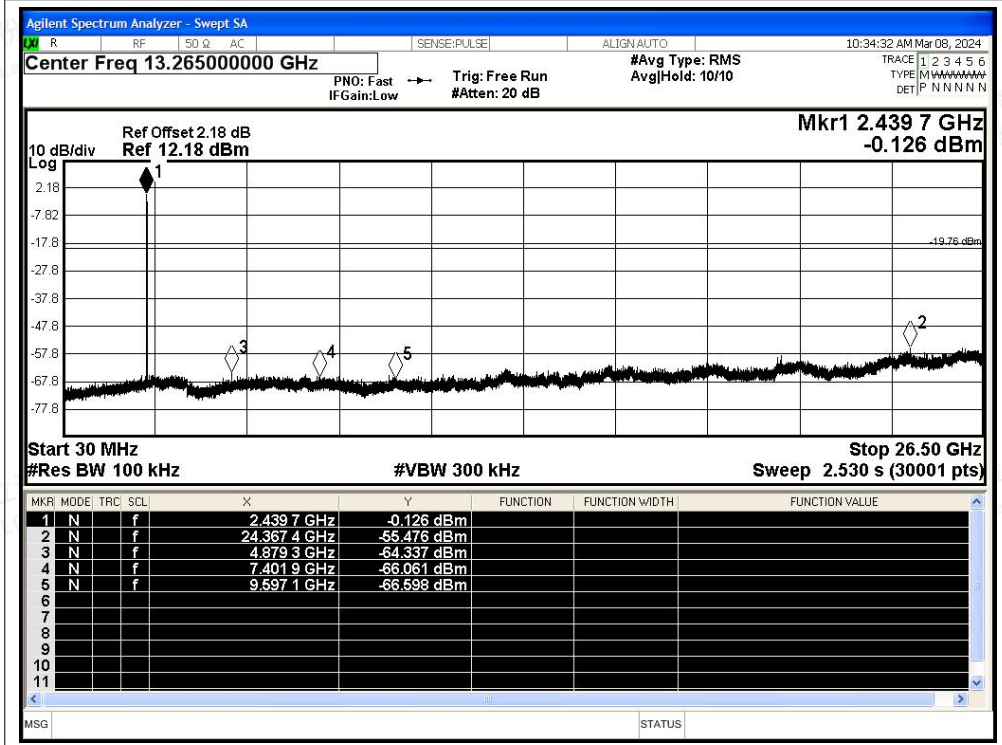




Tx. Spurious NVNT BLE 1M 2440MHz Ant2 Ref

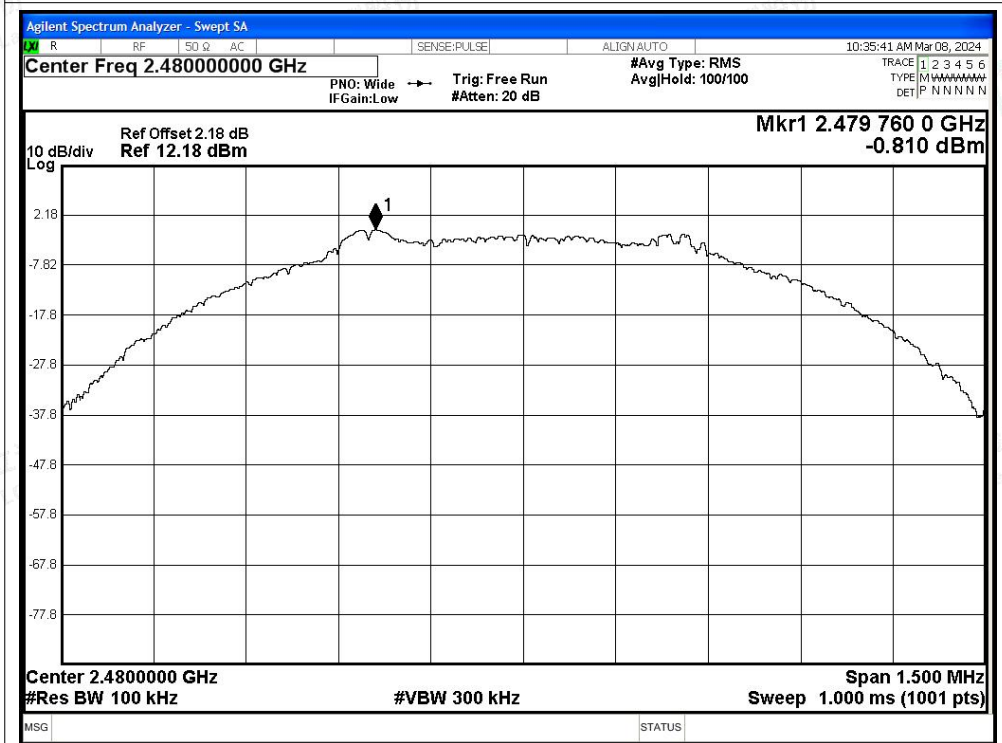


Tx. Spurious NVNT BLE 1M 2440MHz Ant2 Emission

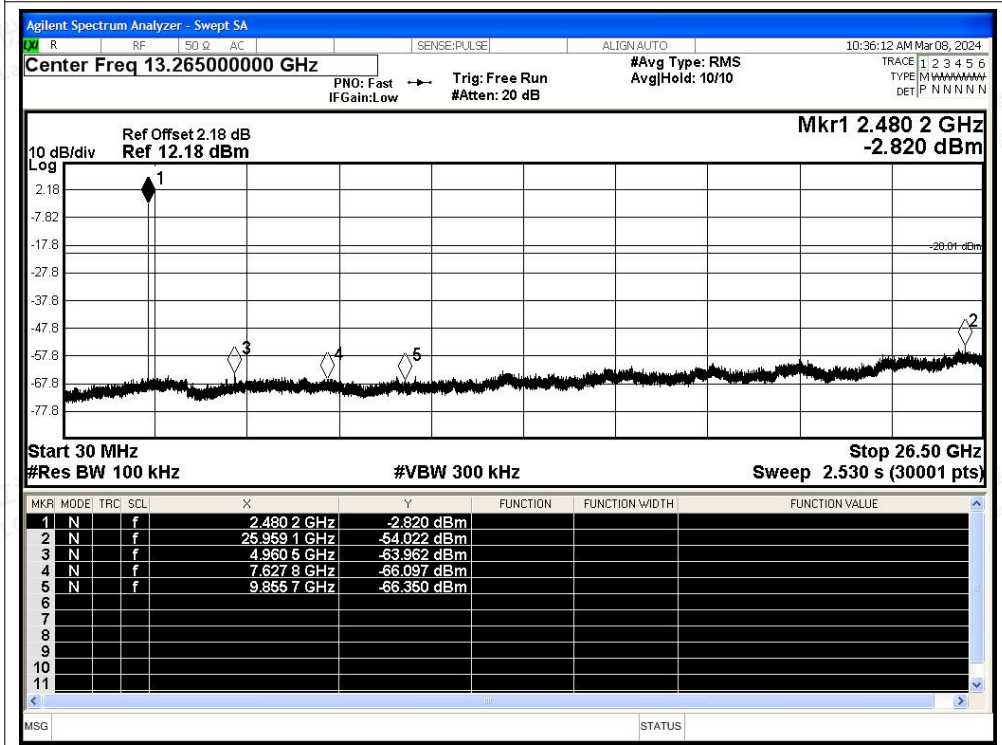




Tx. Spurious NVNT BLE 1M 2480MHz Ant2 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant2 Emission



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B.6 Duty Cycle

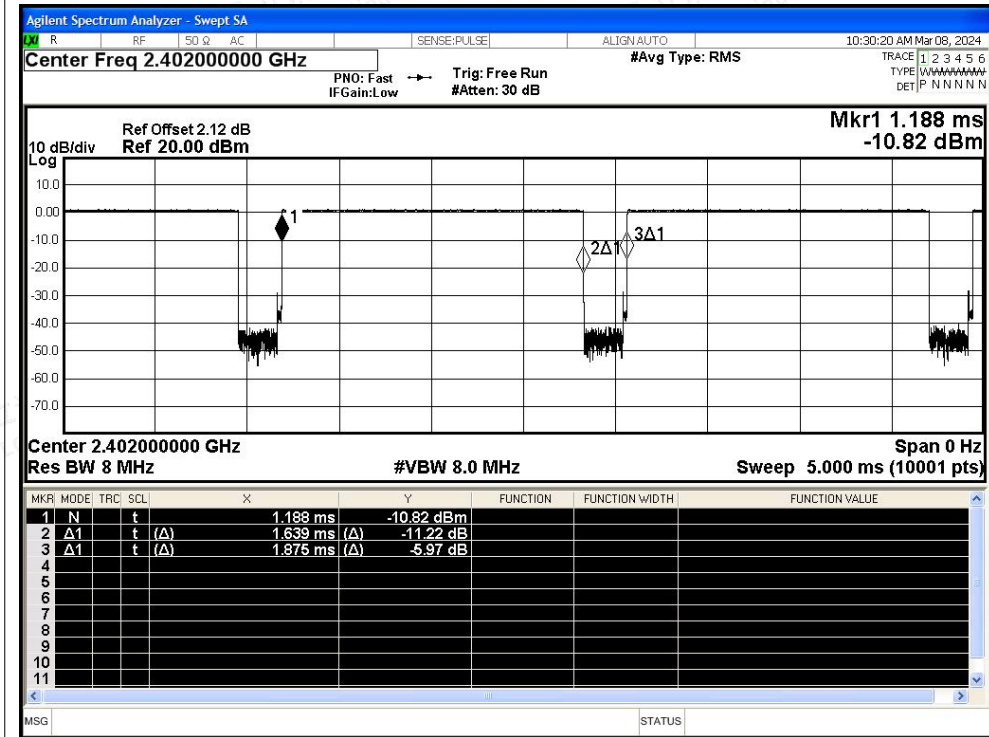
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant2	87.39	0.59	0.61
NVNT	BLE 1M	2440	Ant2	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant2	87.39	0.59	0.61



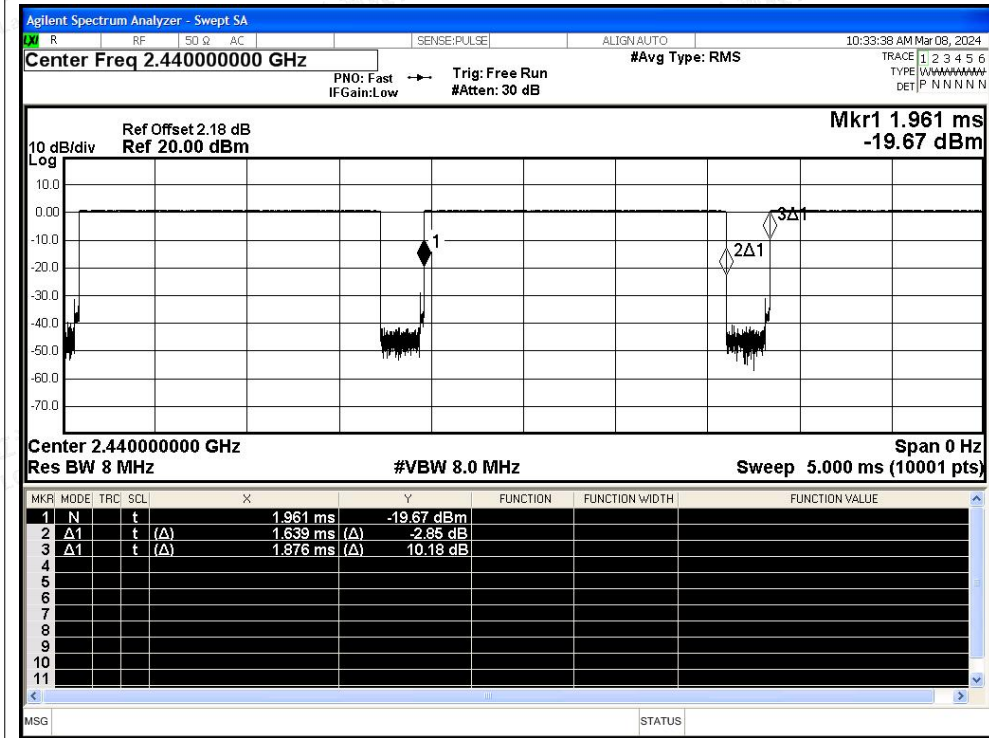


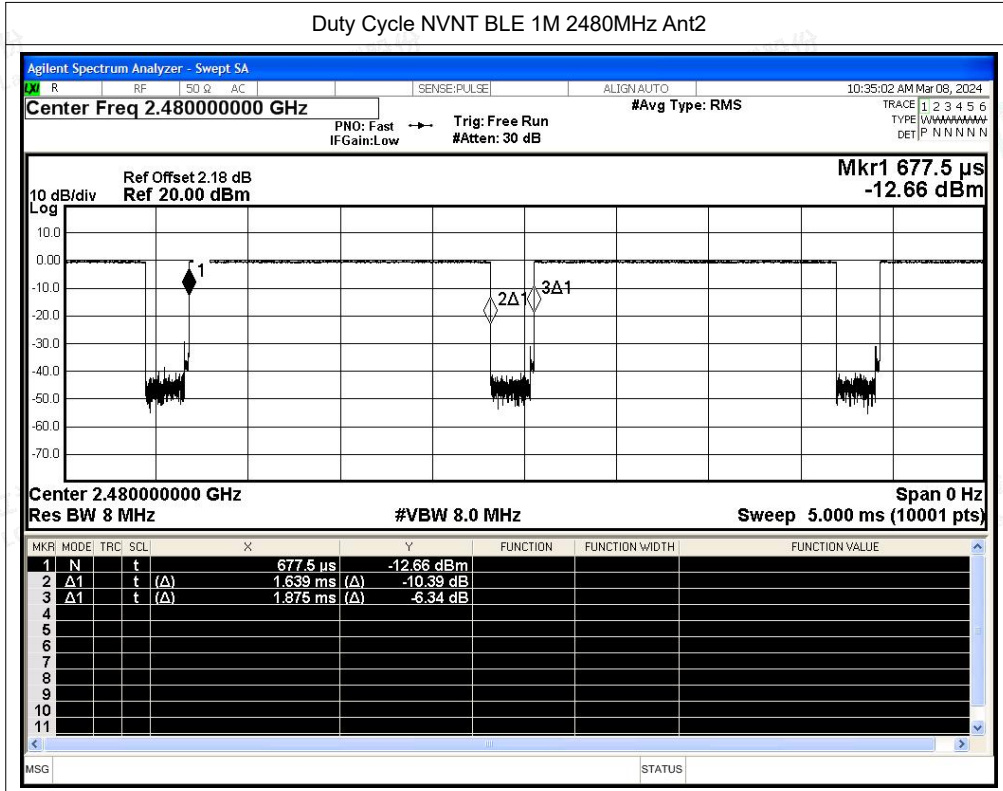
Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant2



Duty Cycle NVNT BLE 1M 2440MHz Ant2







B.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	BLE 1M	2402	Ant2	2310	-51.95	2	-	45.31	Peak	74	Pass
NVNT	BLE 1M	2402	Ant2	2310	-58.75	2	0.59	39.1	Average	54	Pass
NVNT	BLE 1M	2402	Ant2	2385.744	-46.99	2	-	50.27	Peak	74	Pass
NVNT	BLE 1M	2402	Ant2	2389.872	-57.81	2	0.59	40.04	Average	54	Pass
NVNT	BLE 1M	2402	Ant2	2390	-50.03	2	-	47.23	Peak	74	Pass
NVNT	BLE 1M	2402	Ant2	2390	-58.09	2	0.59	39.76	Average	54	Pass
NVNT	BLE 1M	2480	Ant2	2483.5	-48.95	2	-	48.31	Peak	74	Pass
NVNT	BLE 1M	2480	Ant2	2483.5	-57.53	2	0.59	40.32	Average	54	Pass
NVNT	BLE 1M	2480	Ant2	2485.648	-45.87	2	-	51.39	Peak	74	Pass
NVNT	BLE 1M	2480	Ant2	2485.648	-57.18	2	0.59	40.67	Average	54	Pass
NVNT	BLE 1M	2480	Ant2	2500	-50.05	2	-	47.21	Peak	74	Pass
NVNT	BLE 1M	2480	Ant2	2500	-58.15	2	0.59	39.7	Average	54	Pass



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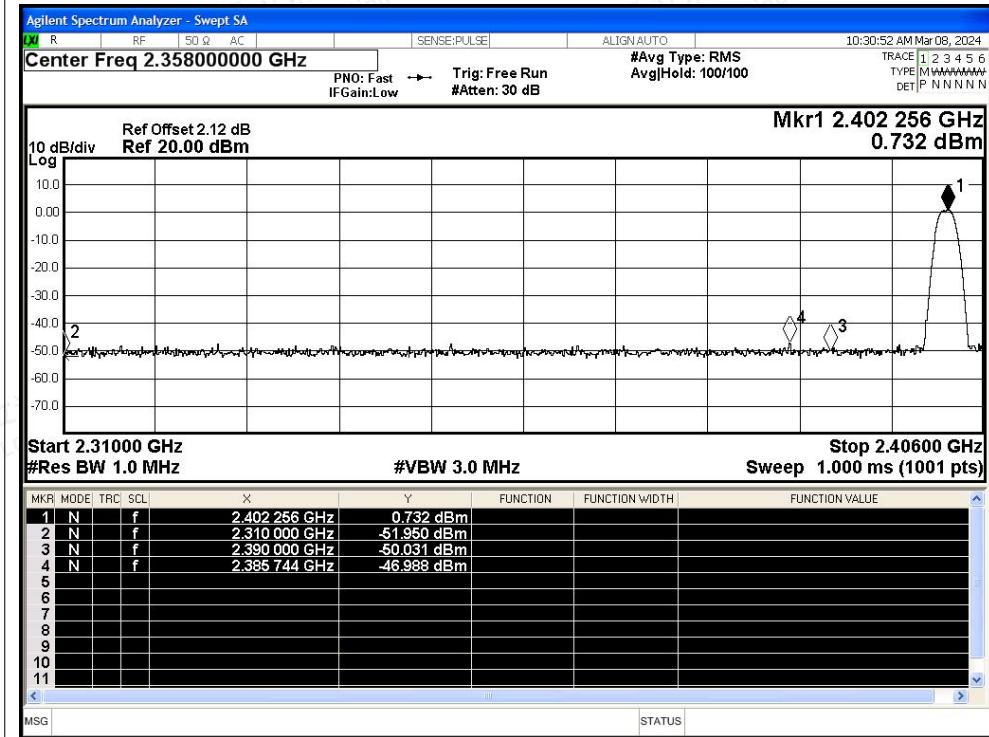
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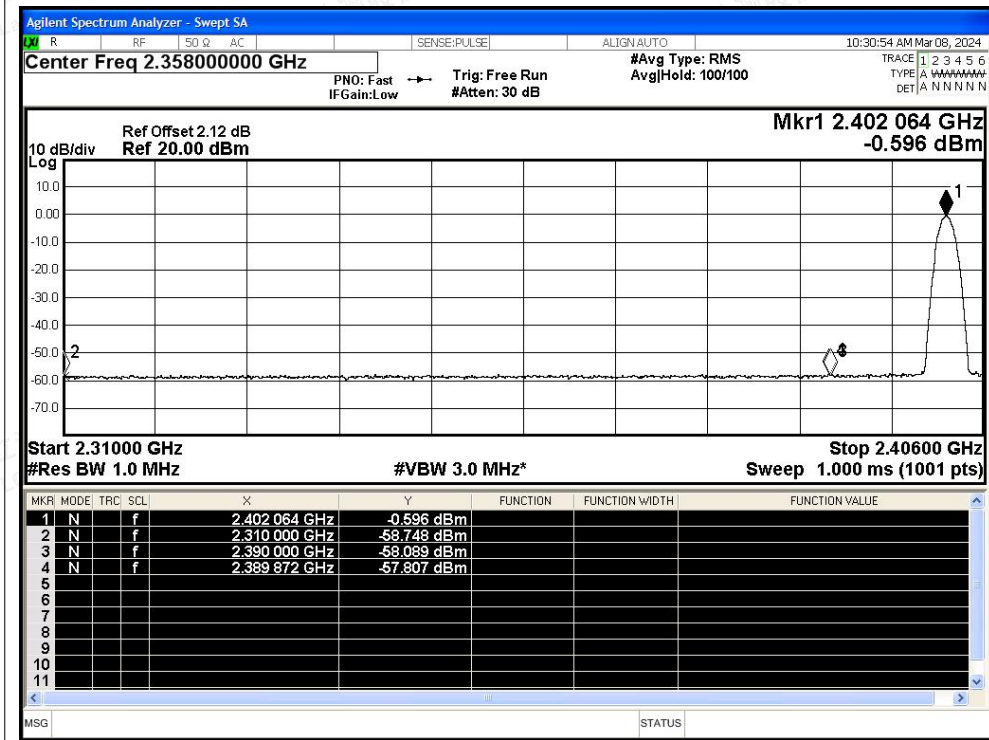


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant2 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant2 Average



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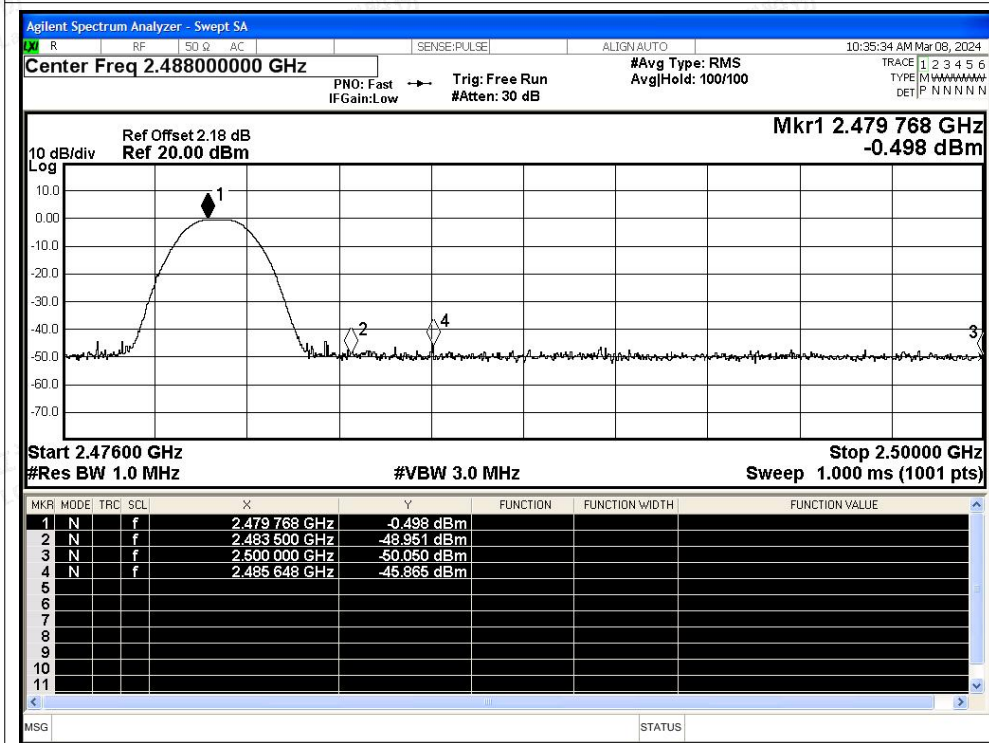
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Restrict Band NVNT BLE 1M 2480MHz Ant2 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant2 Average

