Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: SOUNDEXTREME SEDS33

Test Model: SEI-EXSE3301

Environmental Conditions

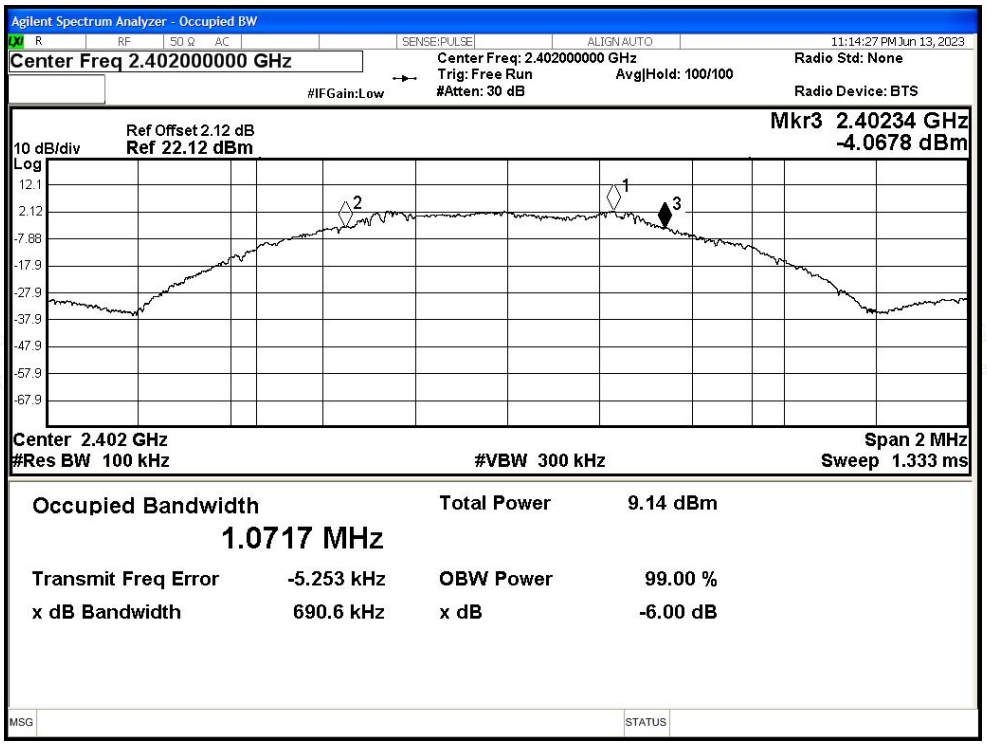
Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker.Hu Joker Hu
Supervised by:	Ling.Zhu Ling Zhu

B.1 -6dB Bandwidth

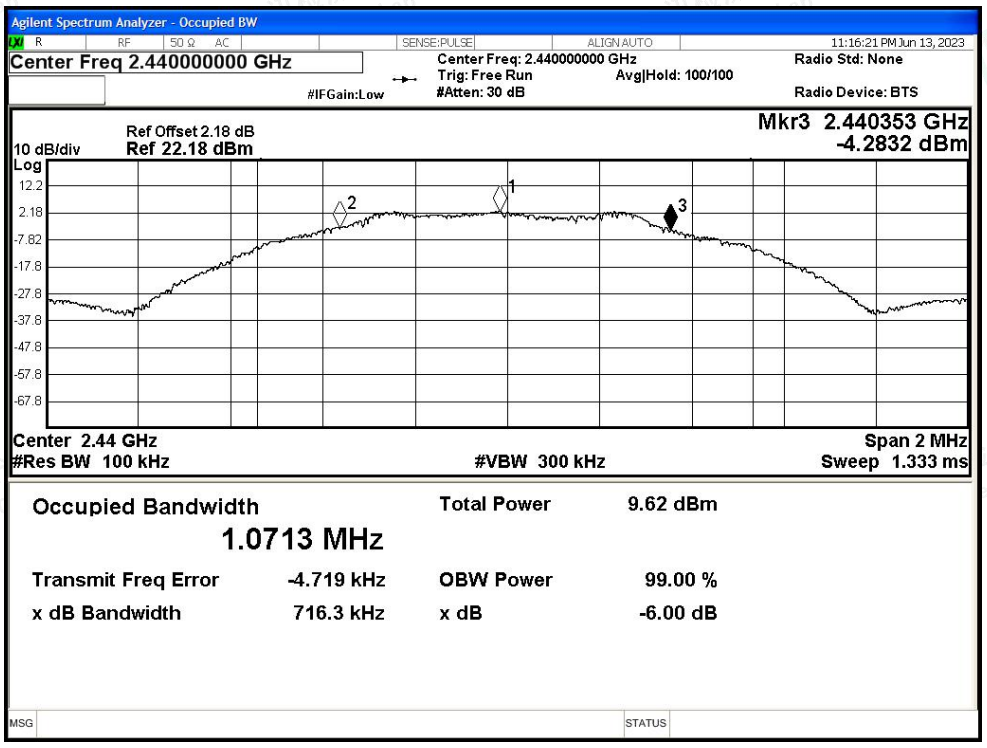
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant0	0.691	>=0.5	Pass
NVNT	BLE 1M	2440	Ant0	0.716	>=0.5	Pass
NVNT	BLE 1M	2480	Ant0	0.709	>=0.5	Pass

Test Graphs

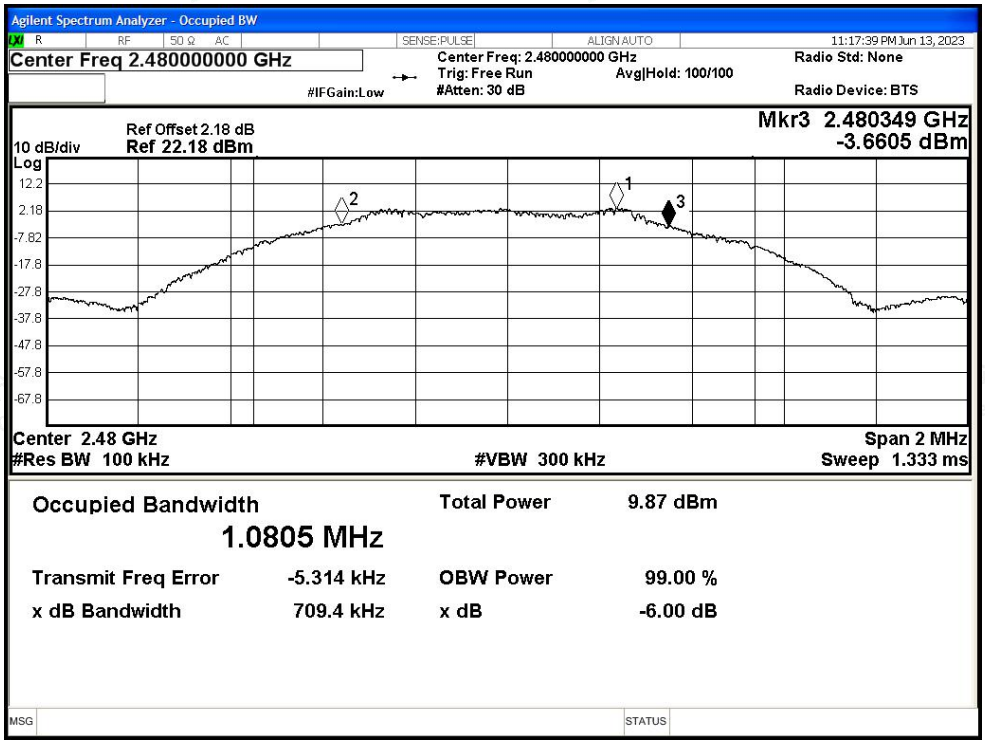
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant0



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant0



-6dB Bandwidth NVNT BLE 1M 2480MHz Ant0

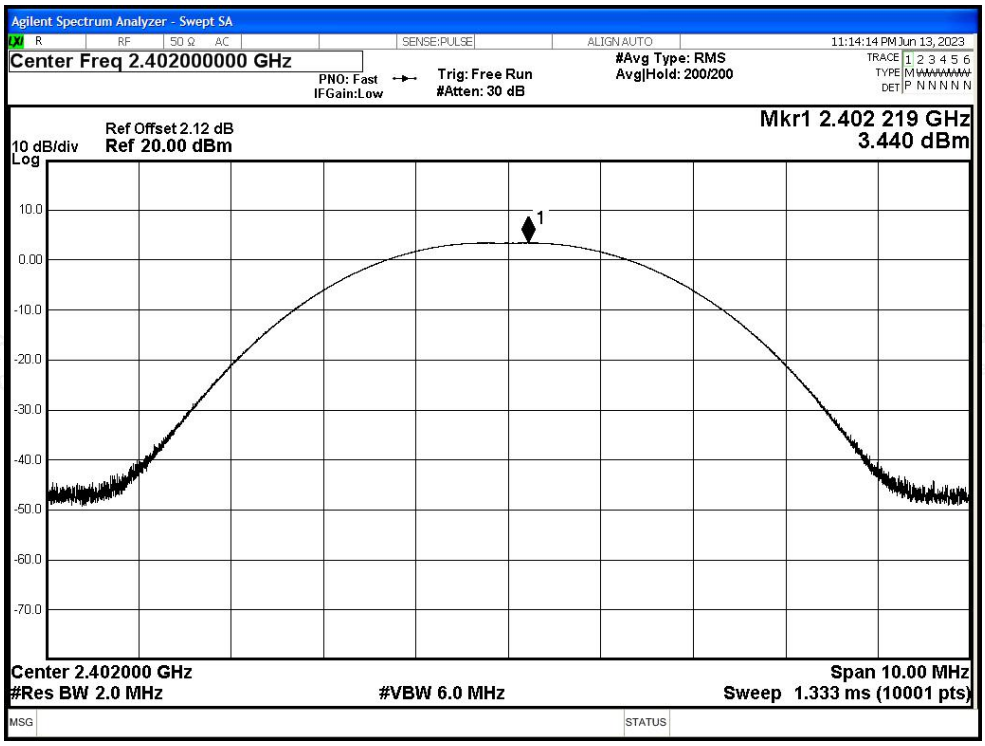


B.2 Maximum Conducted Output Power

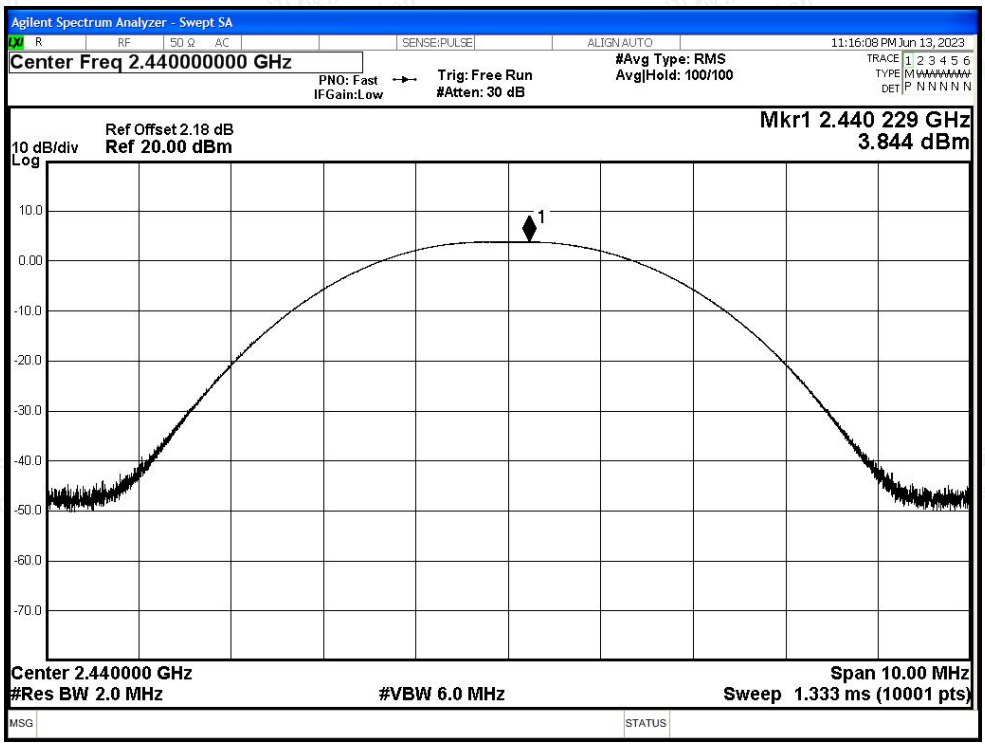
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant0	3.44	30	Pass
NVNT	BLE 1M	2440	Ant0	3.84	30	Pass
NVNT	BLE 1M	2480	Ant0	4.17	30	Pass

Test Graphs

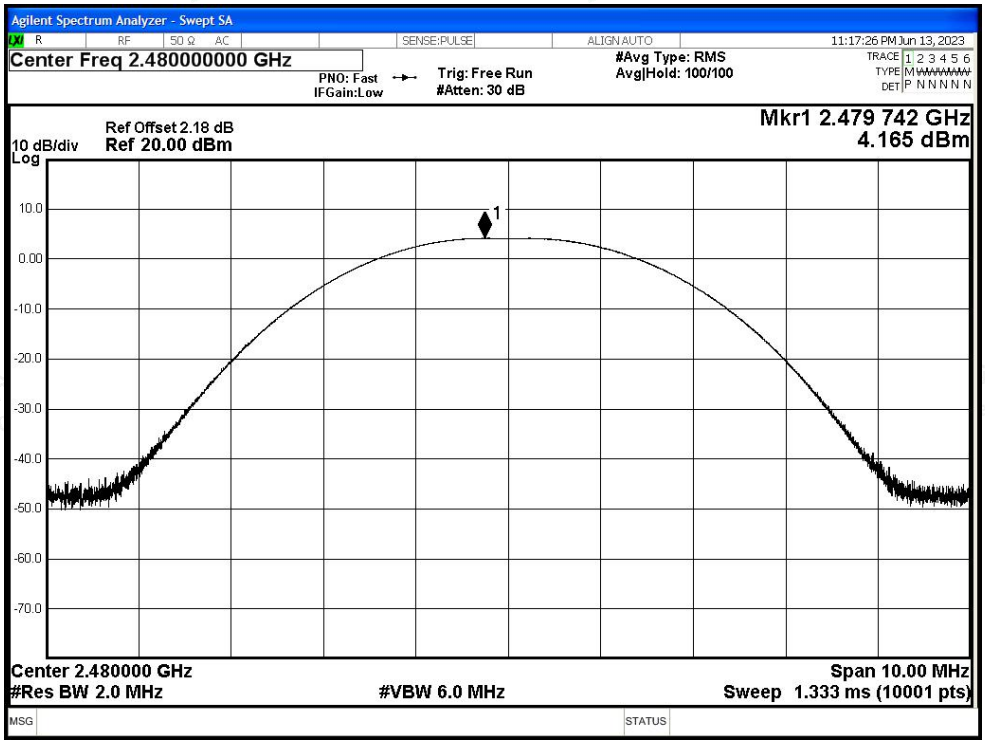
Power NVNT BLE 1M 2402MHz Ant0



Power NVNT BLE 1M 2440MHz Ant0



Power NVNT BLE 1M 2480MHz Ant0

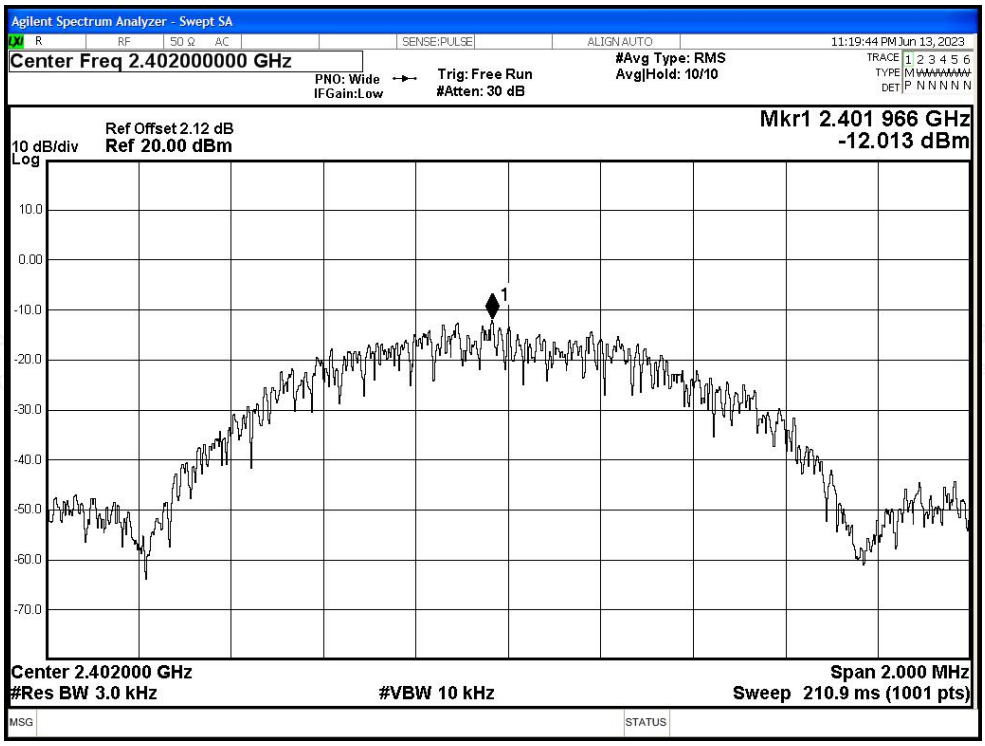


B.3 Maximum Power Spectral Density Level

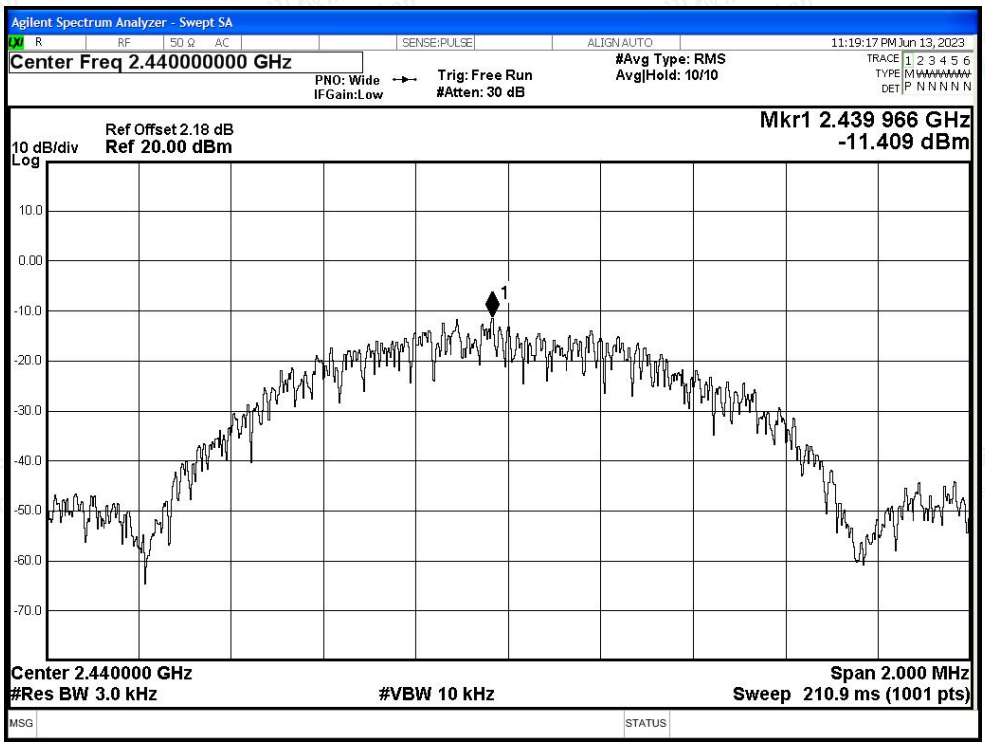
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant0	-12.01	8	Pass
NVNT	BLE 1M	2440	Ant0	-11.41	8	Pass
NVNT	BLE 1M	2480	Ant0	-11.02	8	Pass

Test Graphs

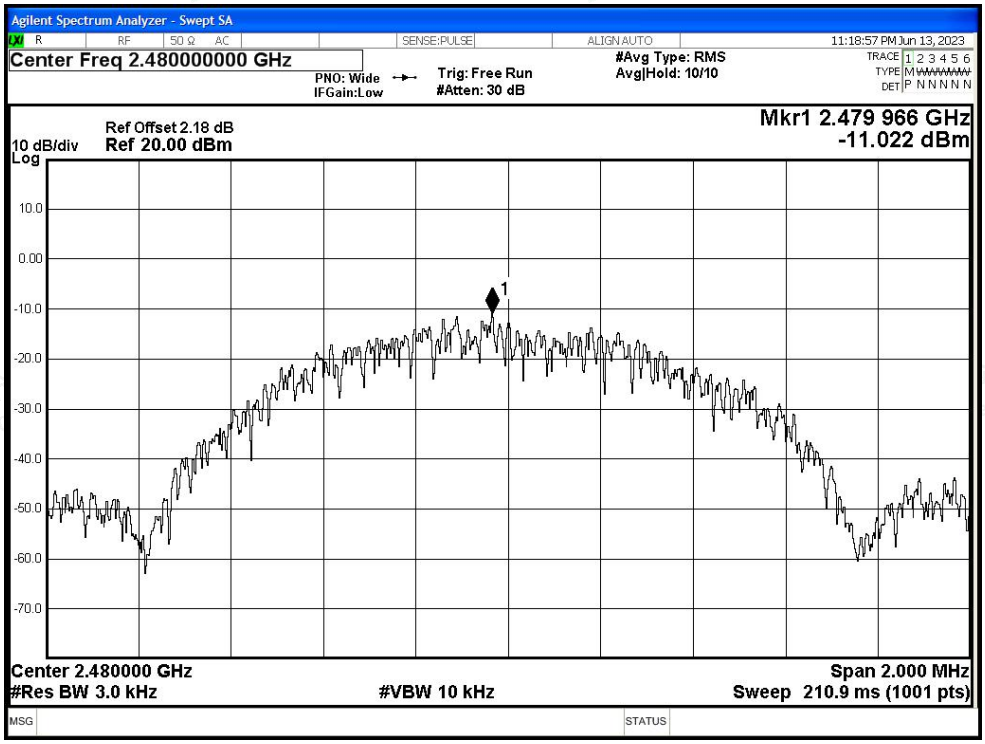
PSD NVNT BLE 1M 2402MHz Ant0



PSD NVNT BLE 1M 2440MHz Ant0



PSD NVNT BLE 1M 2480MHz Ant0

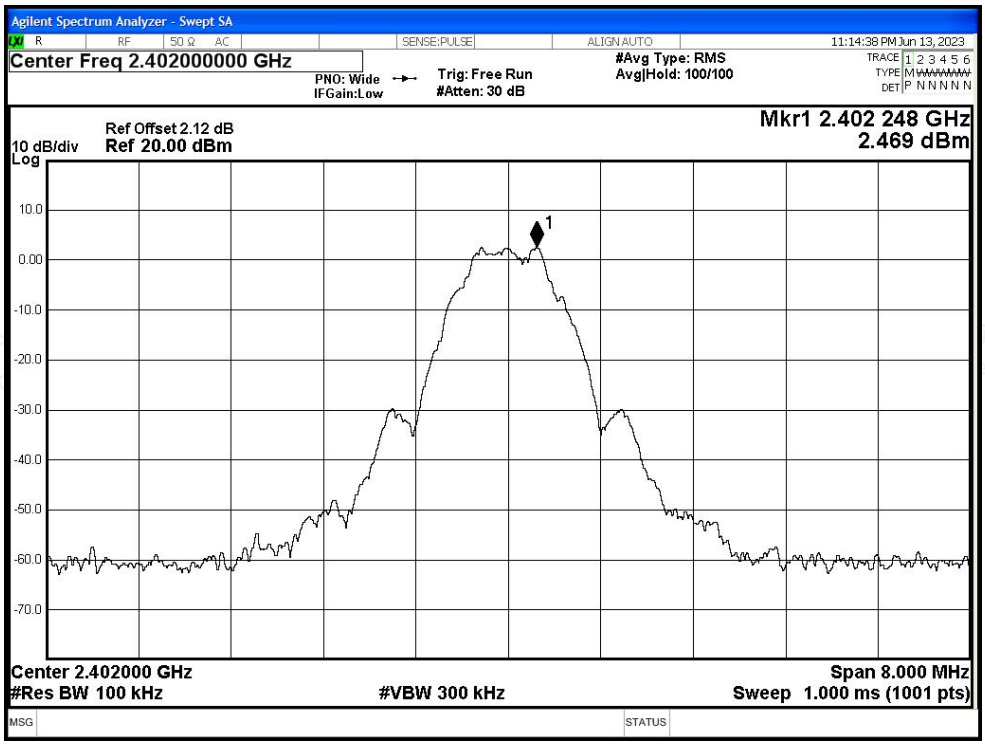


B.4 Band Edge

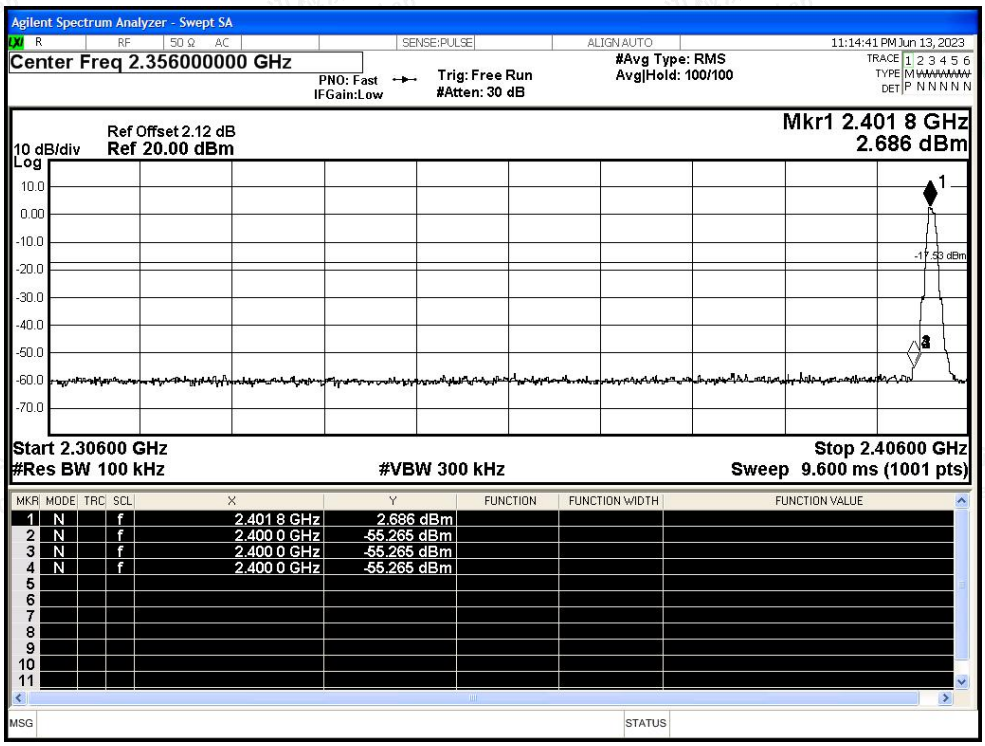
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant0	-57.73	-20	Pass
NVNT	BLE 1M	2480	Ant0	-59.21	-20	Pass

Test Graphs

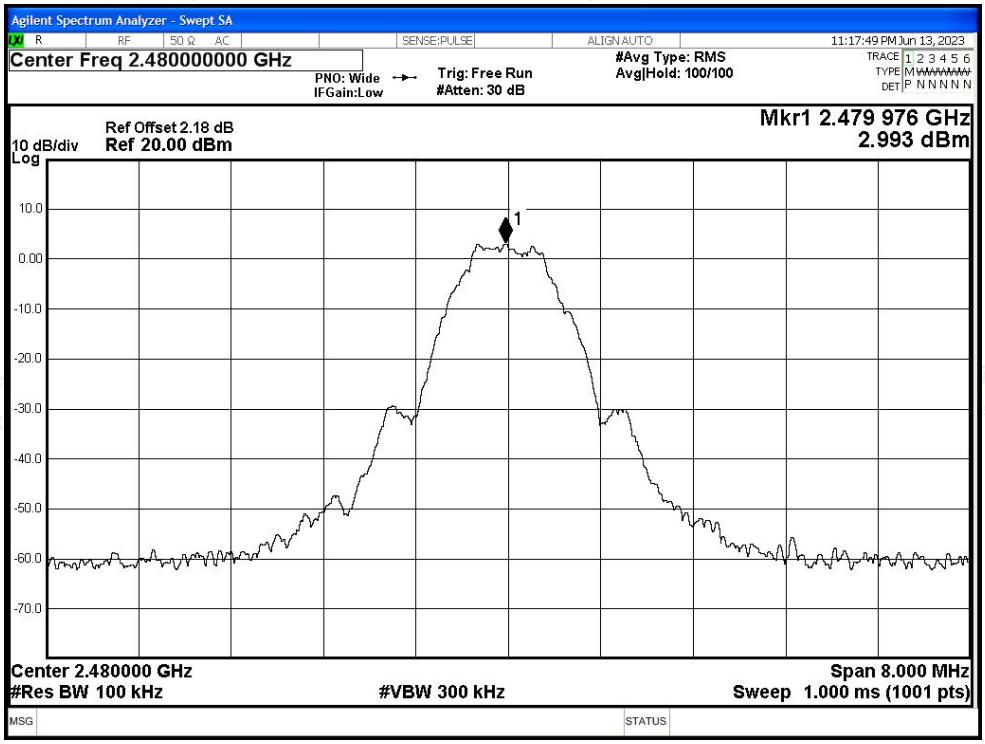
Band Edge NVNT BLE 1M 2402MHz Ant0 Ref



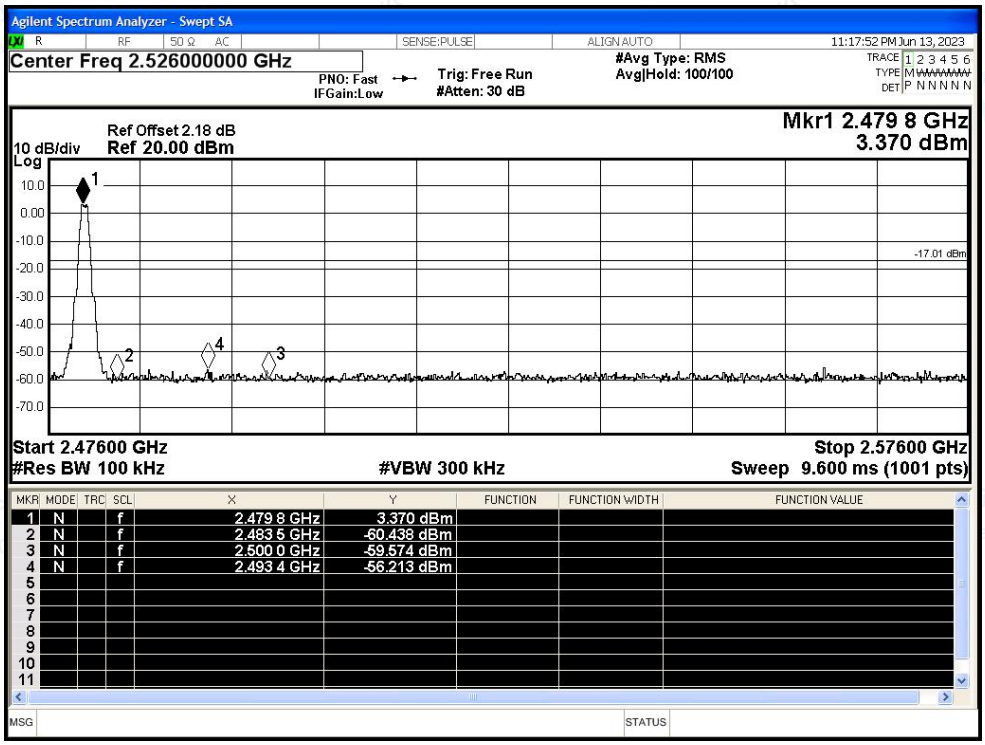
Band Edge NVNT BLE 1M 2402MHz Ant0 Emission



Band Edge NVNT BLE 1M 2480MHz Ant0 Ref



Band Edge NVNT BLE 1M 2480MHz Ant0 Emission

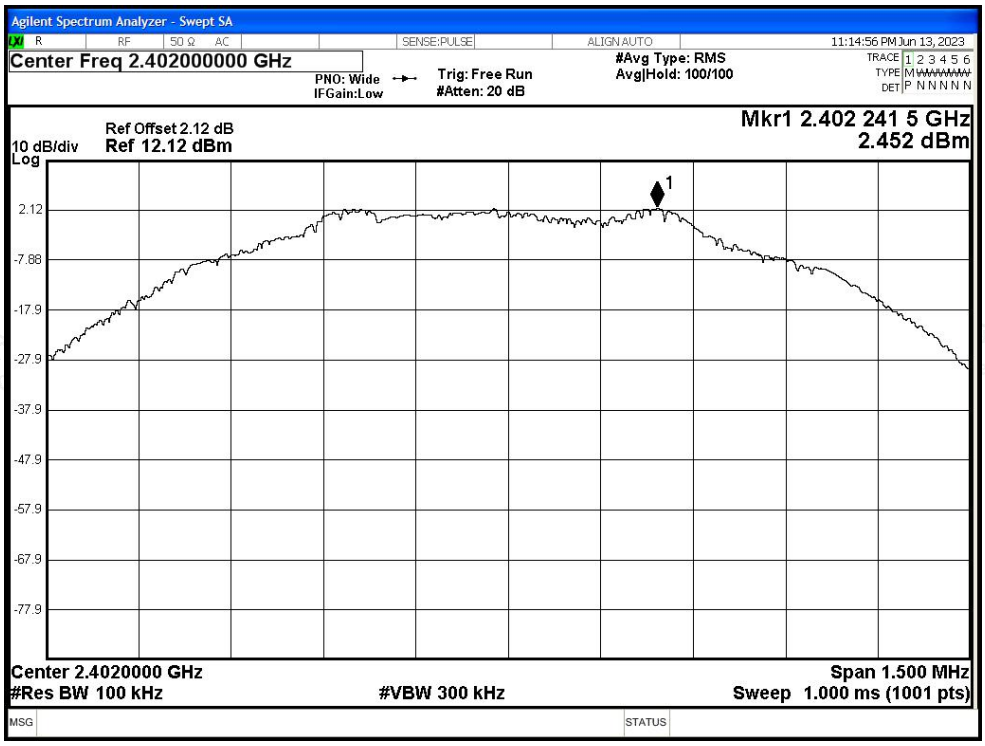


B.5 Conducted RF Spurious Emission

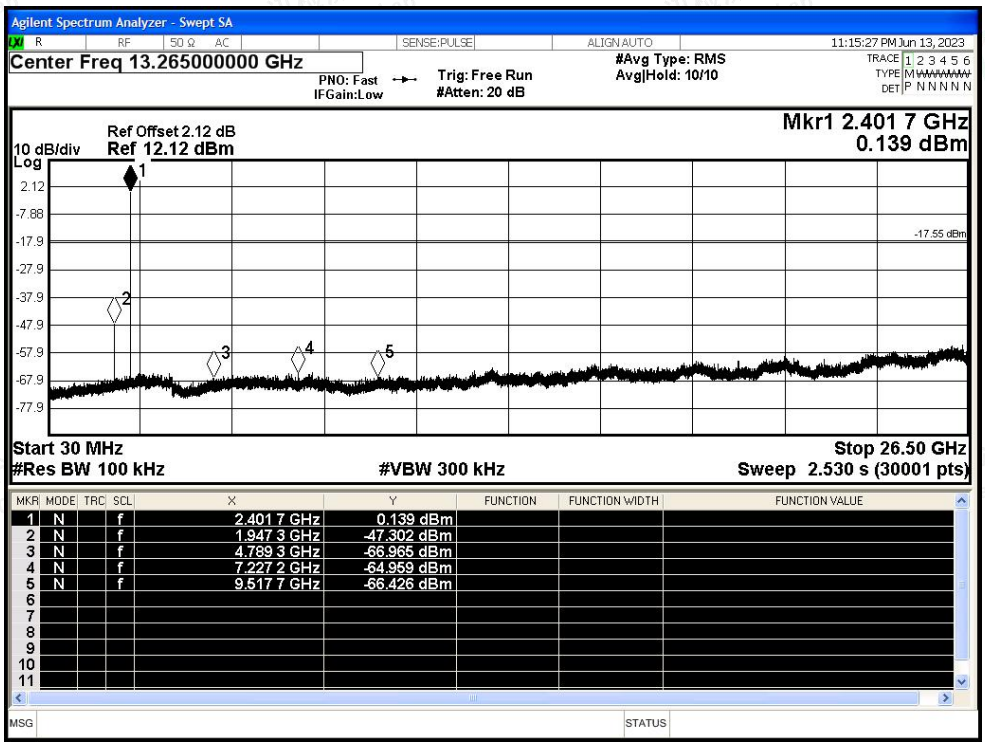
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant0	-49.75	-20	Pass
NVNT	BLE 1M	2440	Ant0	-58.29	-20	Pass
NVNT	BLE 1M	2480	Ant0	-58.1	-20	Pass

Test Graphs

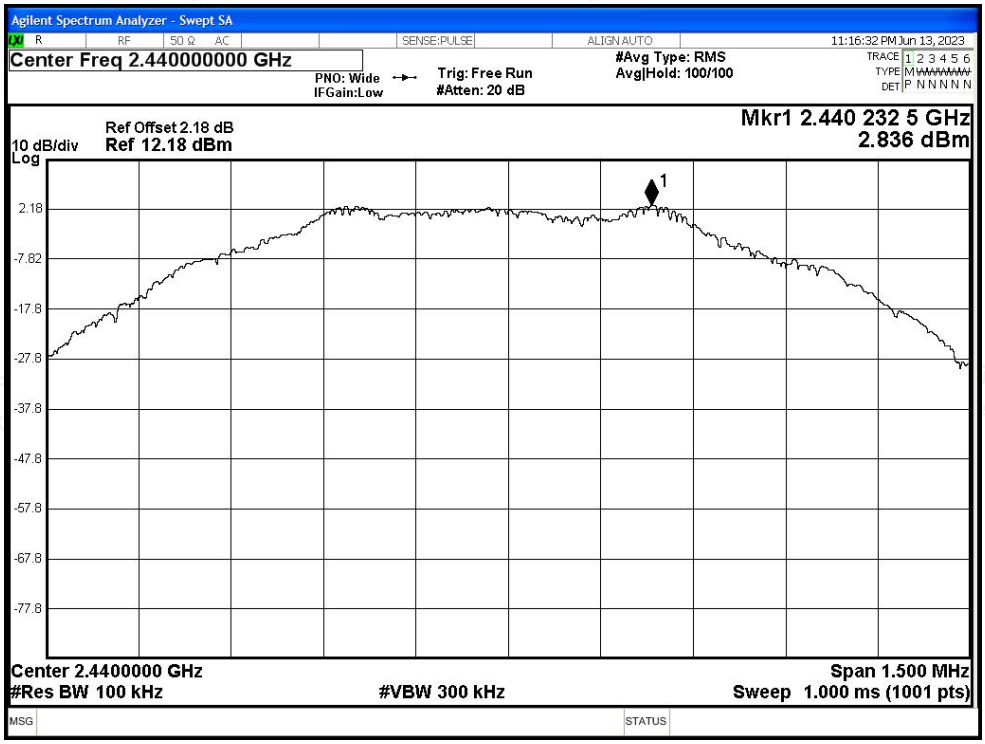
Tx. Spurious NVNT BLE 1M 2402MHz Ant0 Ref



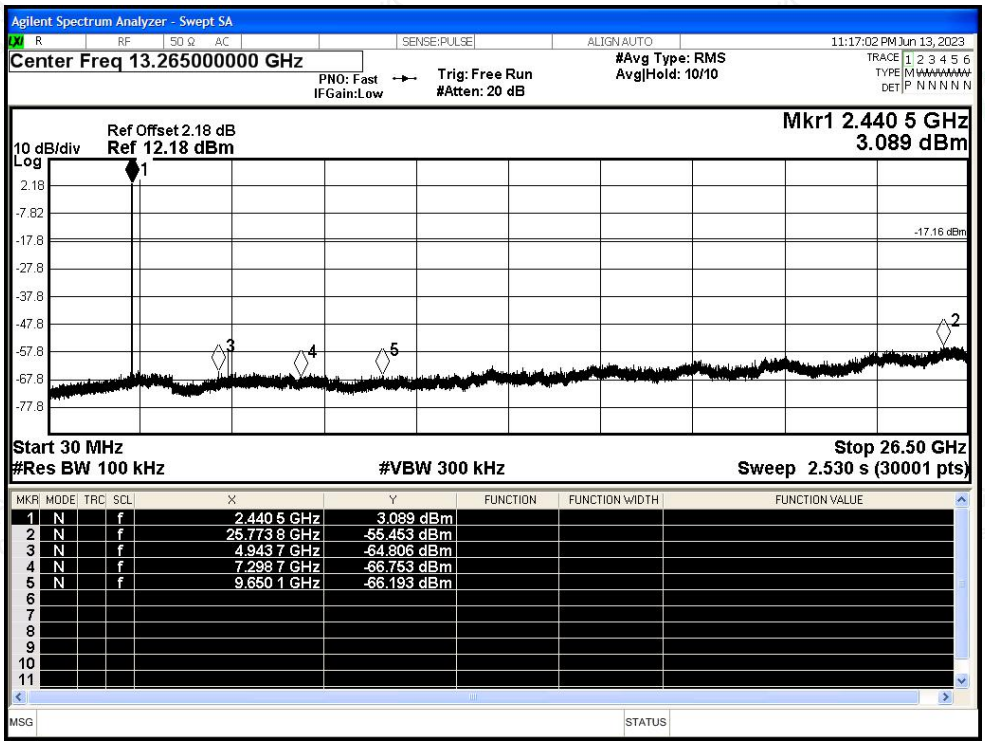
Tx. Spurious NVNT BLE 1M 2402MHz Ant0 Emission



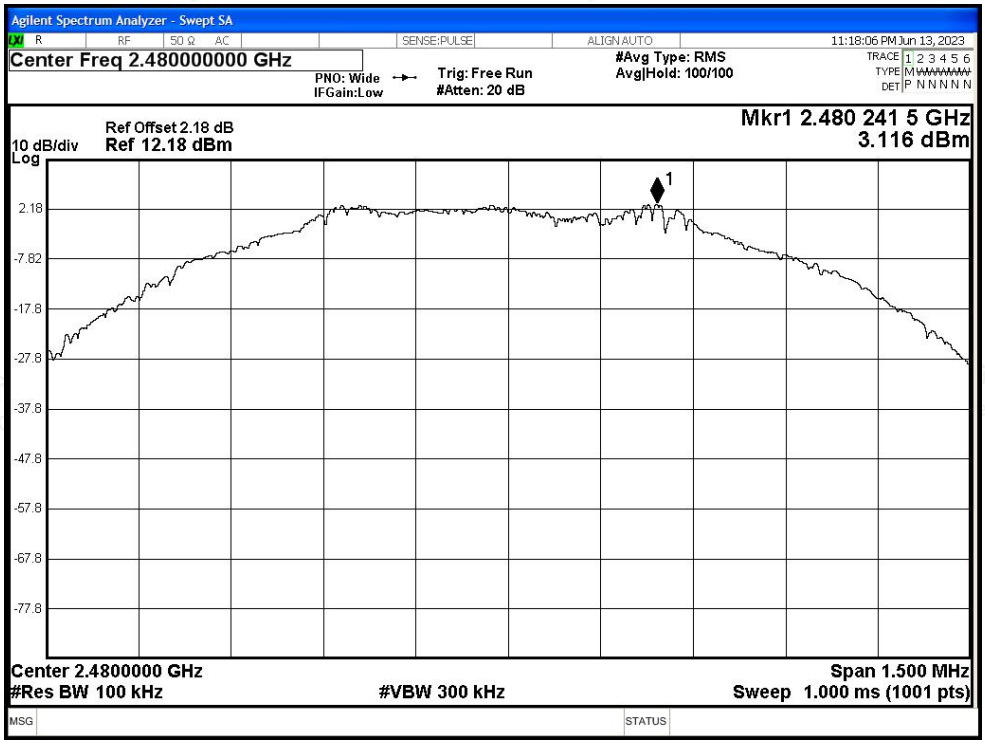
Tx. Spurious NVNT BLE 1M 2440MHz Ant0 Ref



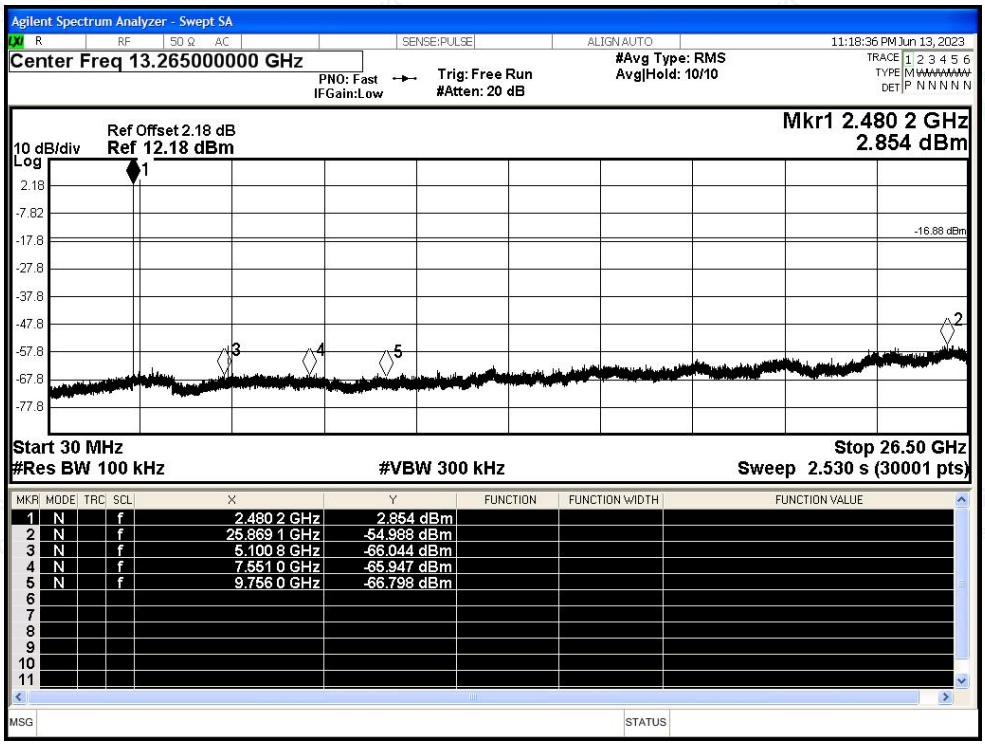
Tx. Spurious NVNT BLE 1M 2440MHz Ant0 Emission



Tx. Spurious NVNT BLE 1M 2480MHz Ant0 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant0 Emission

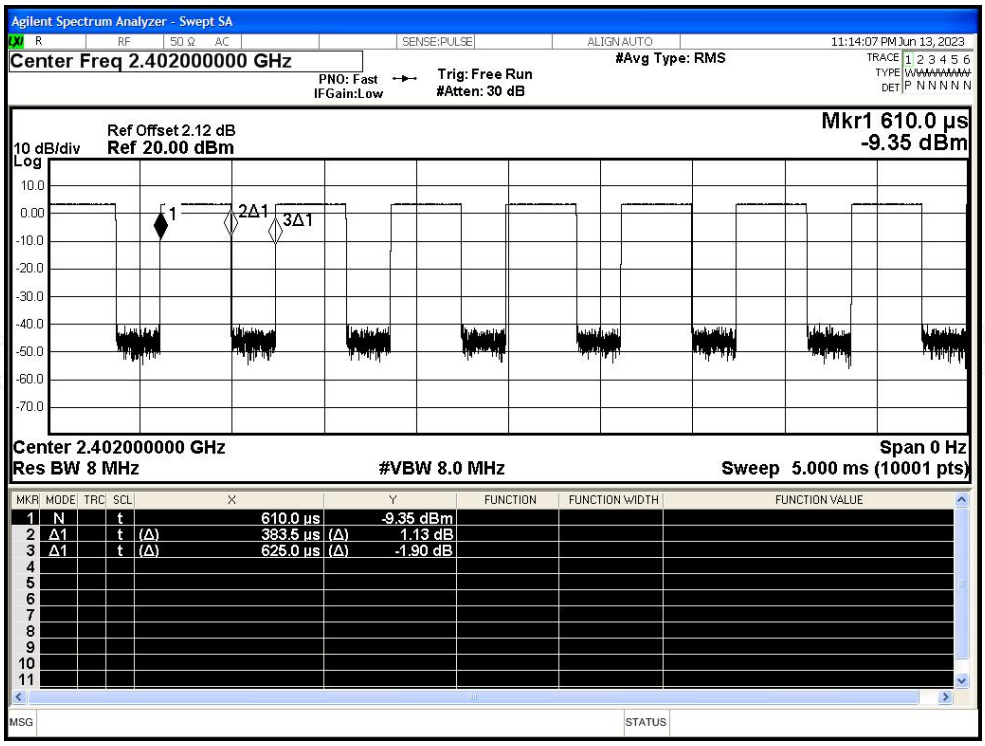


B.6 Duty Cycle

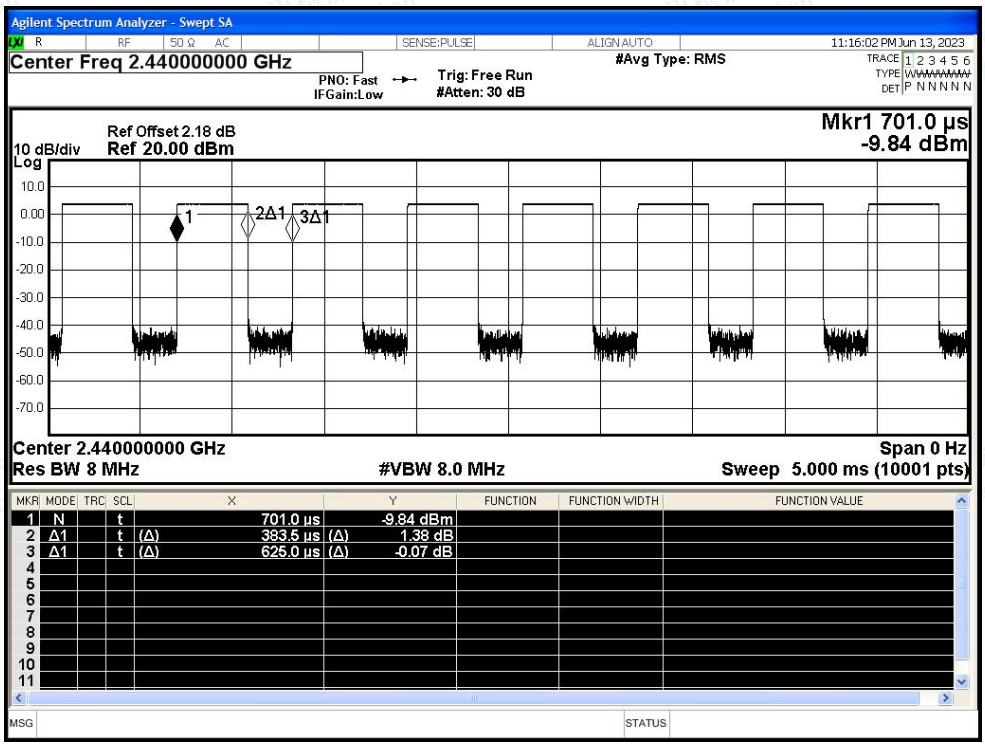
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant0	61.36	2.12	2.61
NVNT	BLE 1M	2440	Ant0	61.36	2.12	2.61
NVNT	BLE 1M	2480	Ant0	61.44	2.12	2.6

Test Graphs

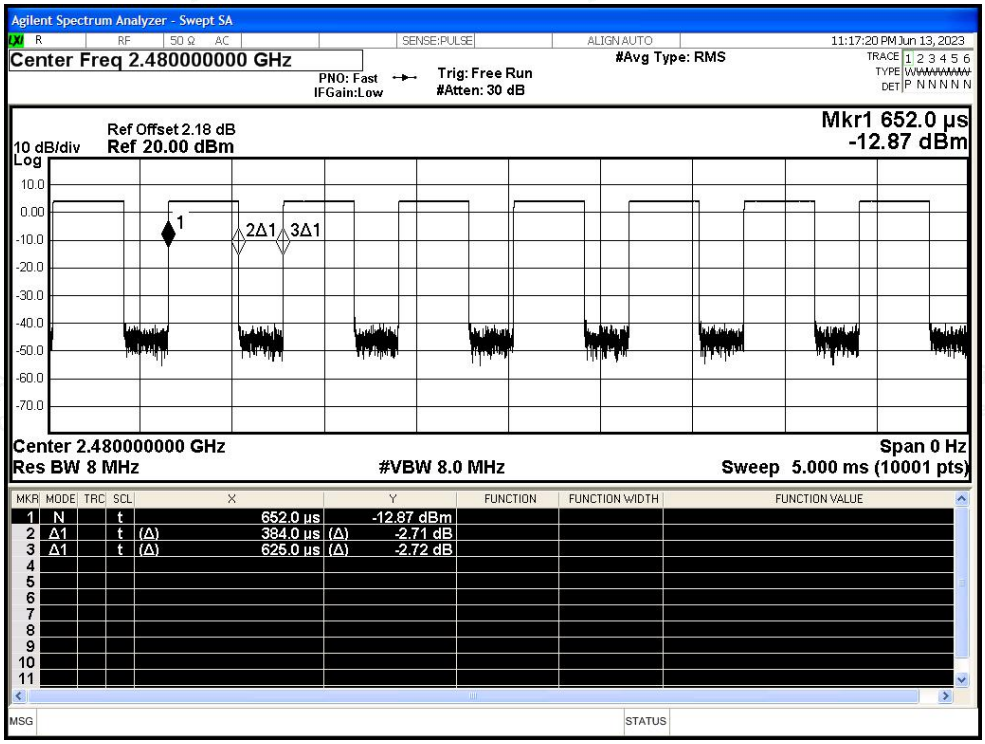
Duty Cycle NVNT BLE 1M 2402MHz Ant0



Duty Cycle NVNT BLE 1M 2440MHz Ant0



Duty Cycle NVNT BLE 1M 2480MHz Ant0

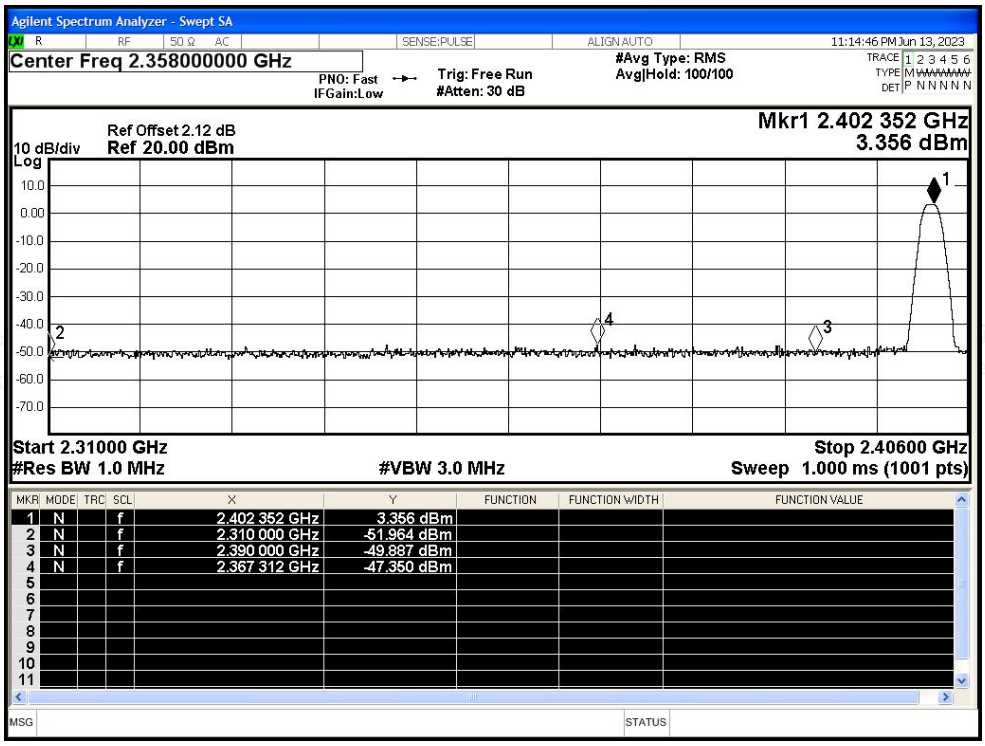


B.7 Restrict Band

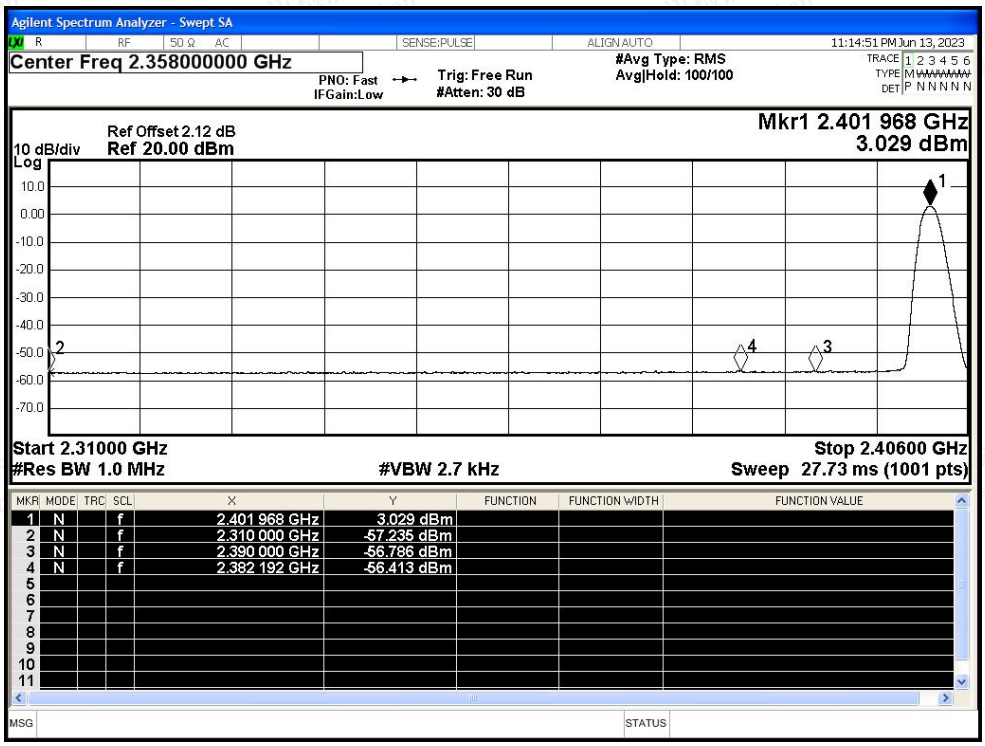
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant0	2310	-51.96	2	45.3	Peak	74	Pass
NVNT	BLE 1M	2402	Ant0	2310	-57.24	2	40.02	Average	54	Pass
NVNT	BLE 1M	2402	Ant0	2367.312	-47.35	2	49.91	Peak	74	Pass
NVNT	BLE 1M	2402	Ant0	2382.192	-56.41	2	40.85	Average	54	Pass
NVNT	BLE 1M	2402	Ant0	2390	-49.89	2	47.37	Peak	74	Pass
NVNT	BLE 1M	2402	Ant0	2390	-56.79	2	40.47	Average	54	Pass
NVNT	BLE 1M	2480	Ant0	2483.5	-49.87	2	47.39	Peak	74	Pass
NVNT	BLE 1M	2480	Ant0	2483.5	-52.52	2	44.74	Average	54	Pass
NVNT	BLE 1M	2480	Ant0	2498.44	-46.72	2	50.54	Peak	74	Pass
NVNT	BLE 1M	2480	Ant0	2483.512	-52.52	2	44.74	Average	54	Pass
NVNT	BLE 1M	2480	Ant0	2500	-49.58	2	47.68	Peak	74	Pass
NVNT	BLE 1M	2480	Ant0	2500	-56.73	2	40.53	Average	54	Pass

Test Graphs

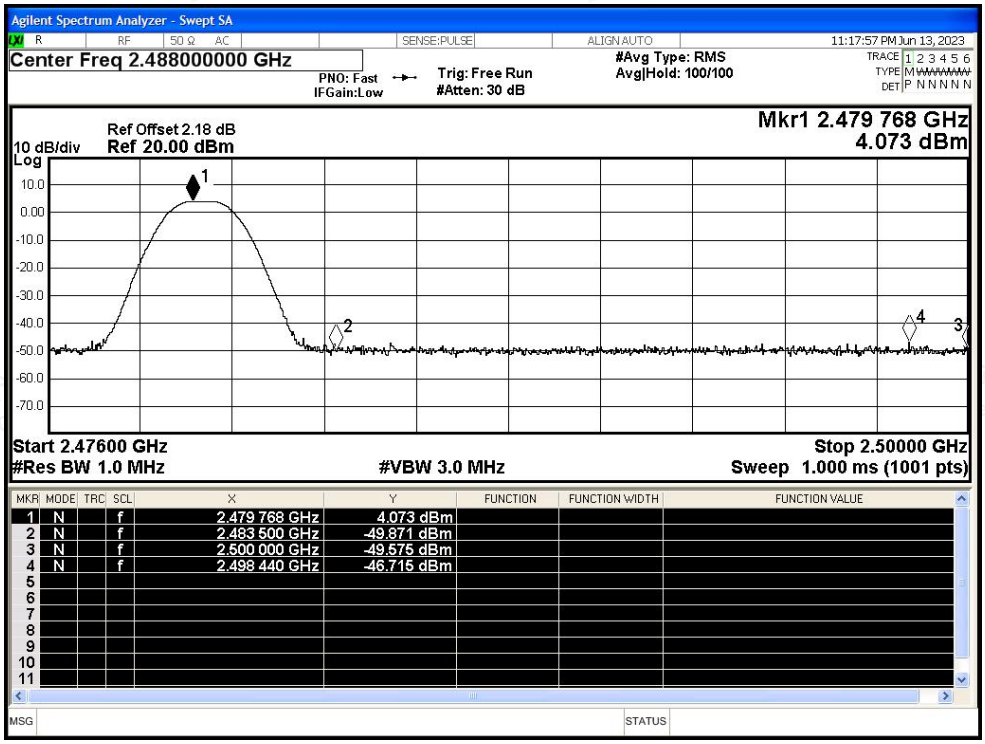
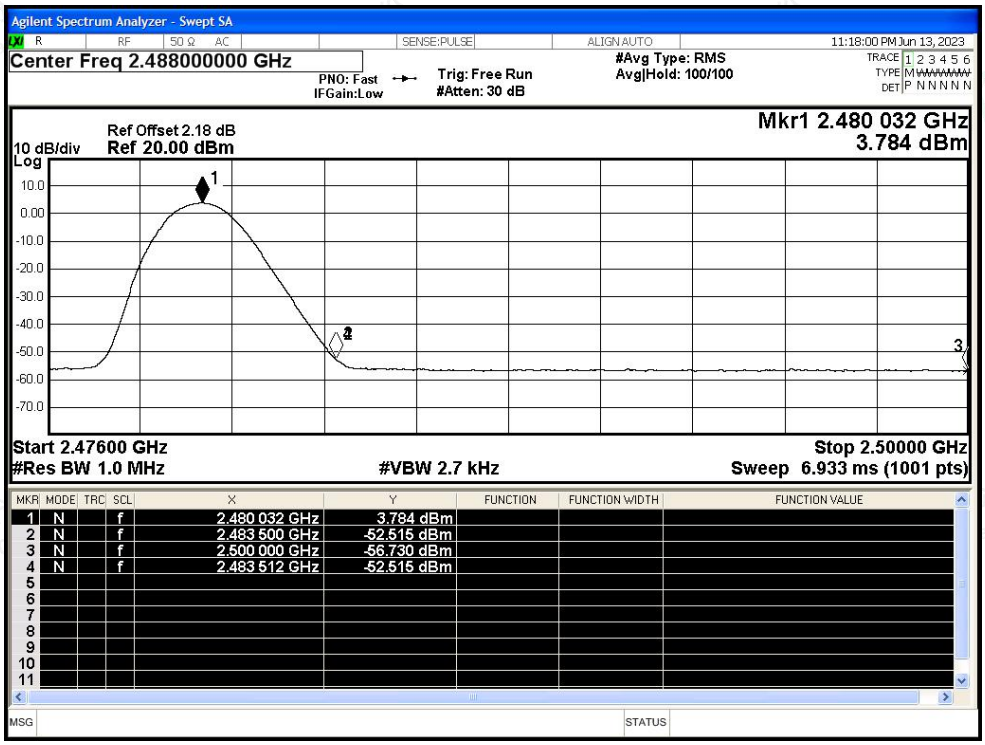
Restrict Band NVNT BLE 1M 2402MHz Ant0 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant0 Average



Restrict Band NVNT BLE 1M 2480MHz Ant0 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant0 Average