

FCC Appendix RF Test Data for BLE

Product Name: Smart Diagnostic System
Test Model: P806

Environmental Conditions

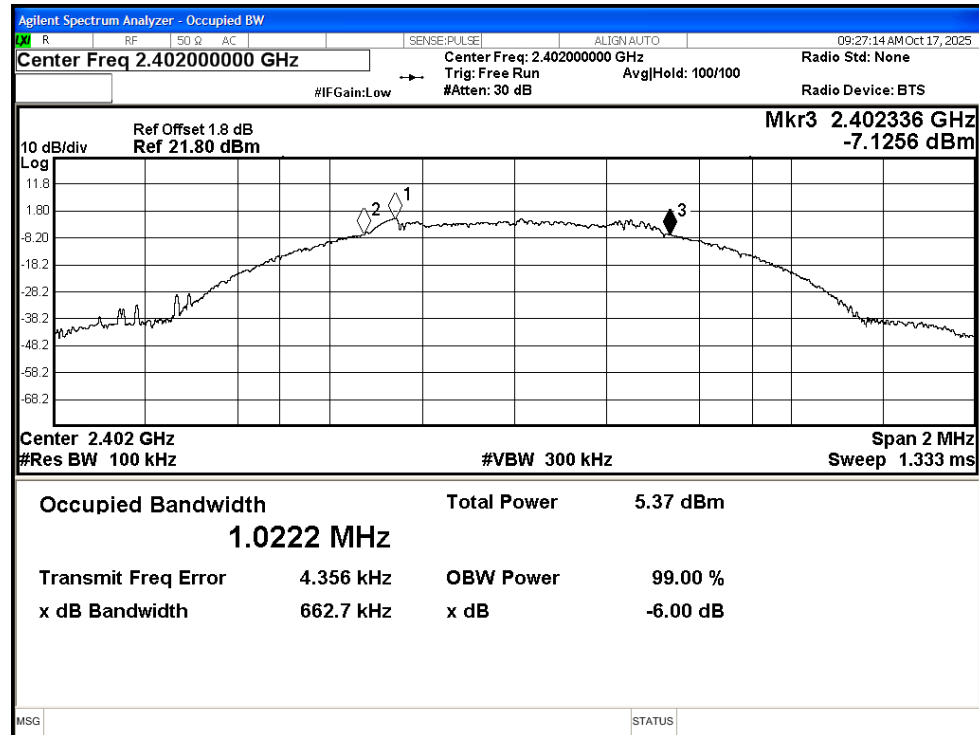
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -6dB Bandwidth

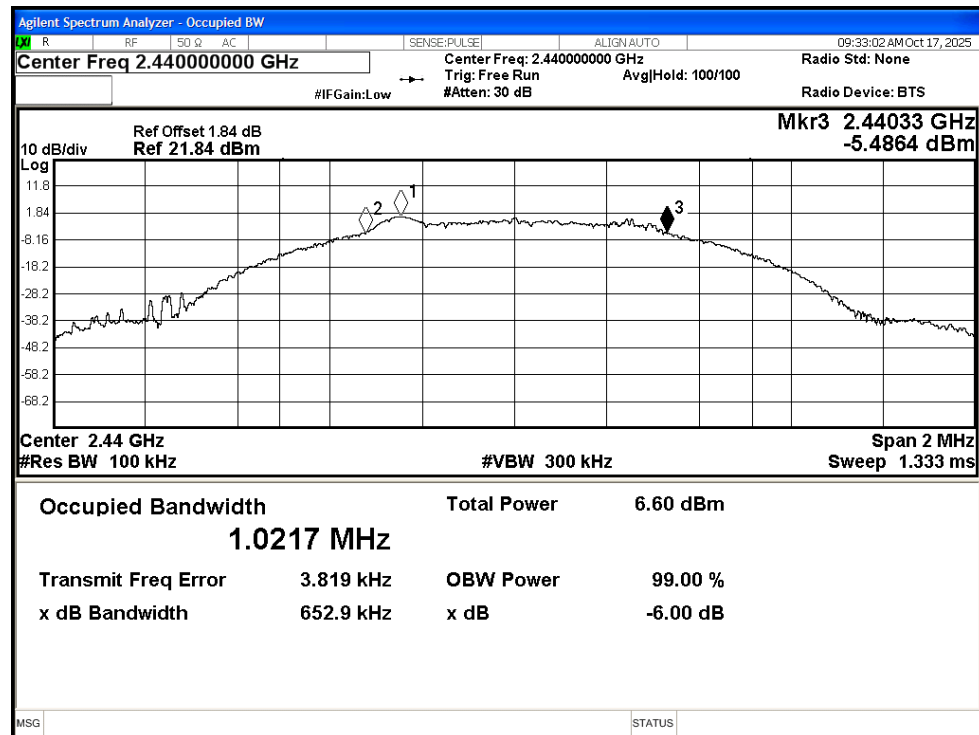
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant	0.663	>=0.5	Pass
NVNT	BLE 1M	2440	Ant	0.653	>=0.5	Pass
NVNT	BLE 1M	2480	Ant	0.65	>=0.5	Pass

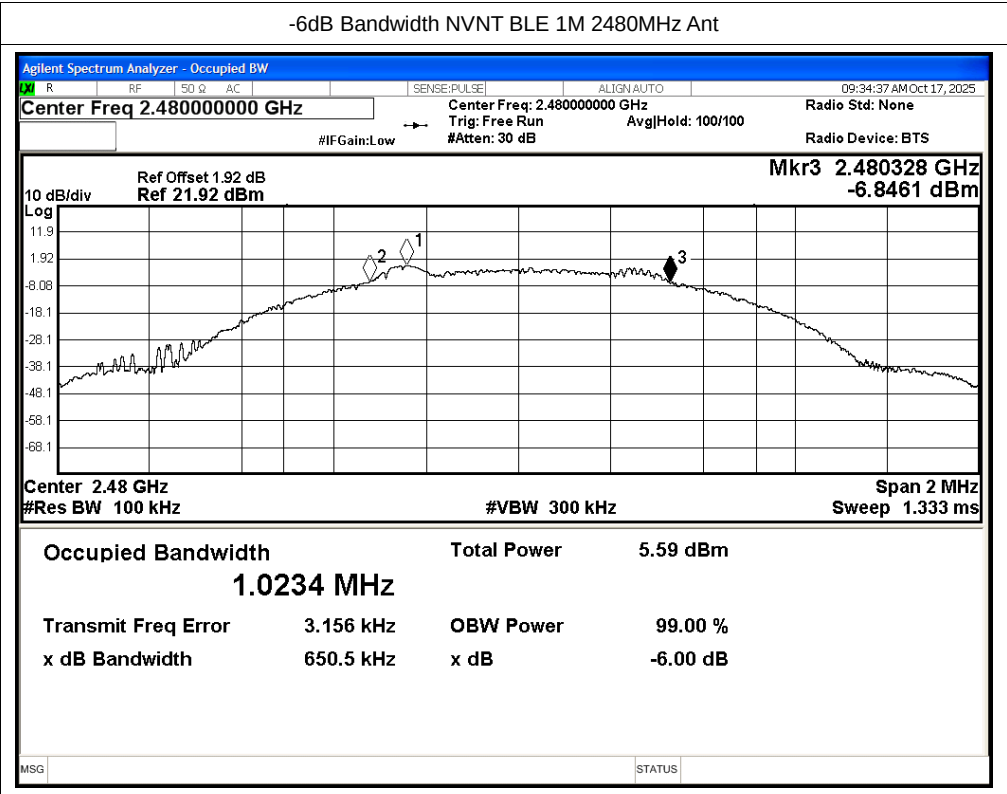
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant





2. Maximum Peak Conducted Output Power

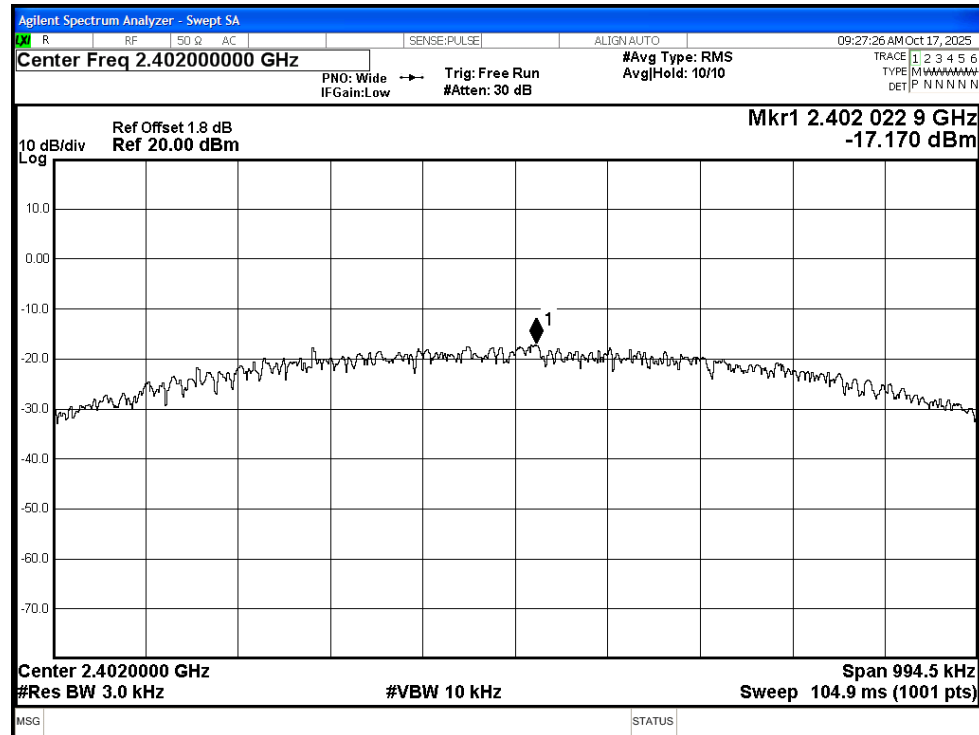
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant	-0.41	30	Pass
NVNT	BLE 1M	2440	Ant	0.79	30	Pass
NVNT	BLE 1M	2480	Ant	-0.14	30	Pass

3. Maximum Power Spectral Density Level

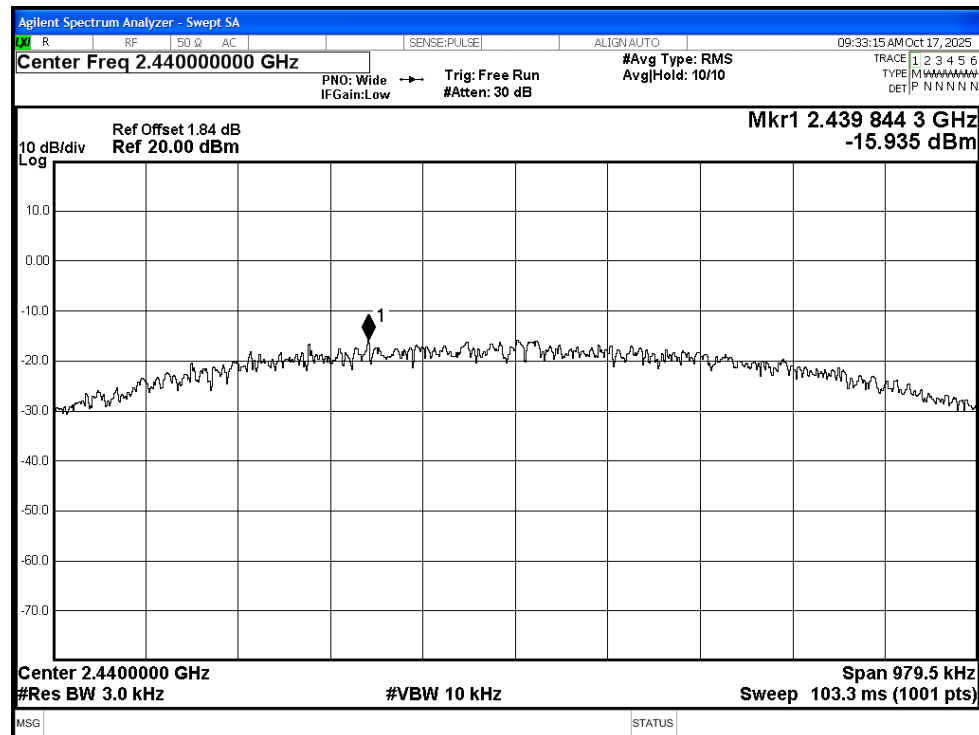
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant	-17.17	8	Pass
NVNT	BLE 1M	2440	Ant	-15.94	8	Pass
NVNT	BLE 1M	2480	Ant	-16.73	8	Pass

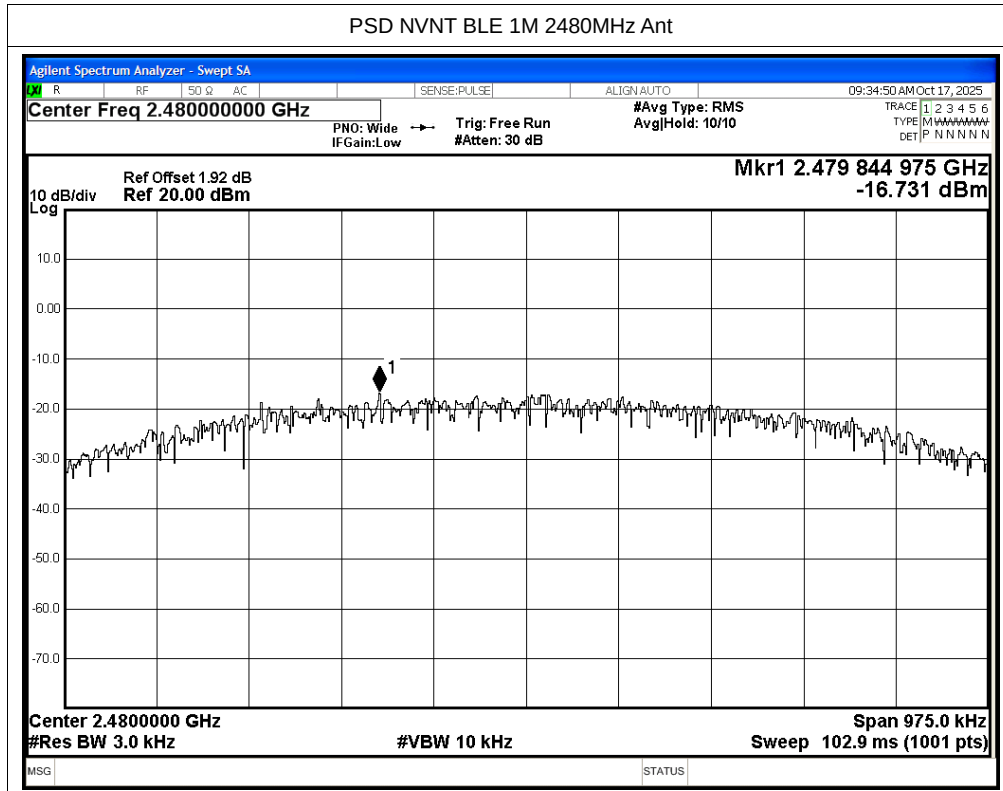
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant



PSD NVNT BLE 1M 2440MHz Ant



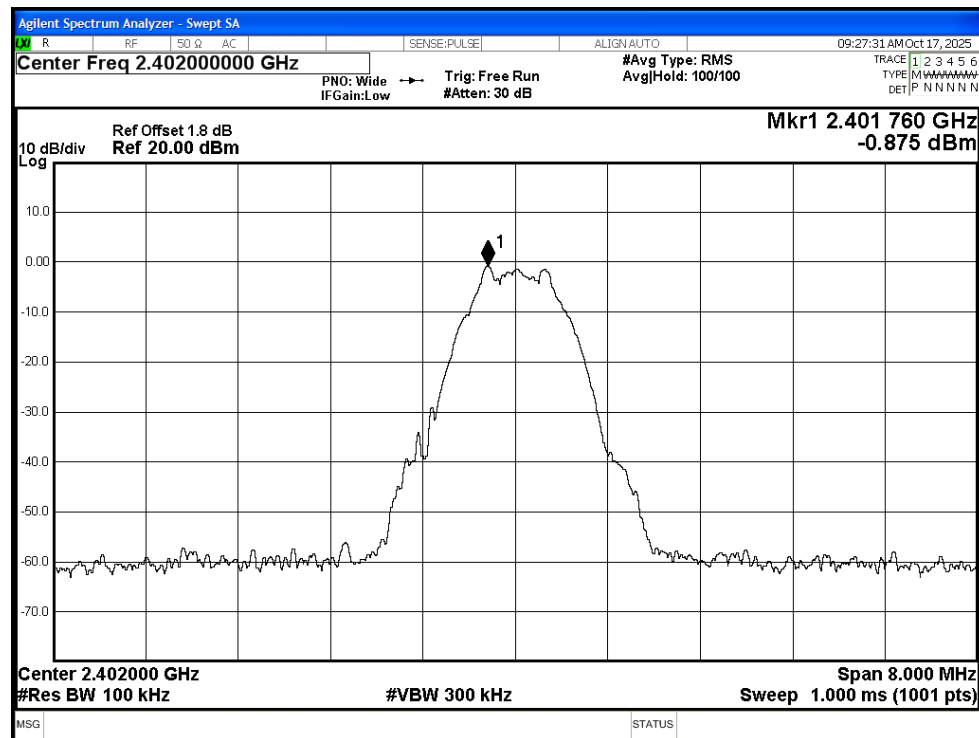


4. Band Edge

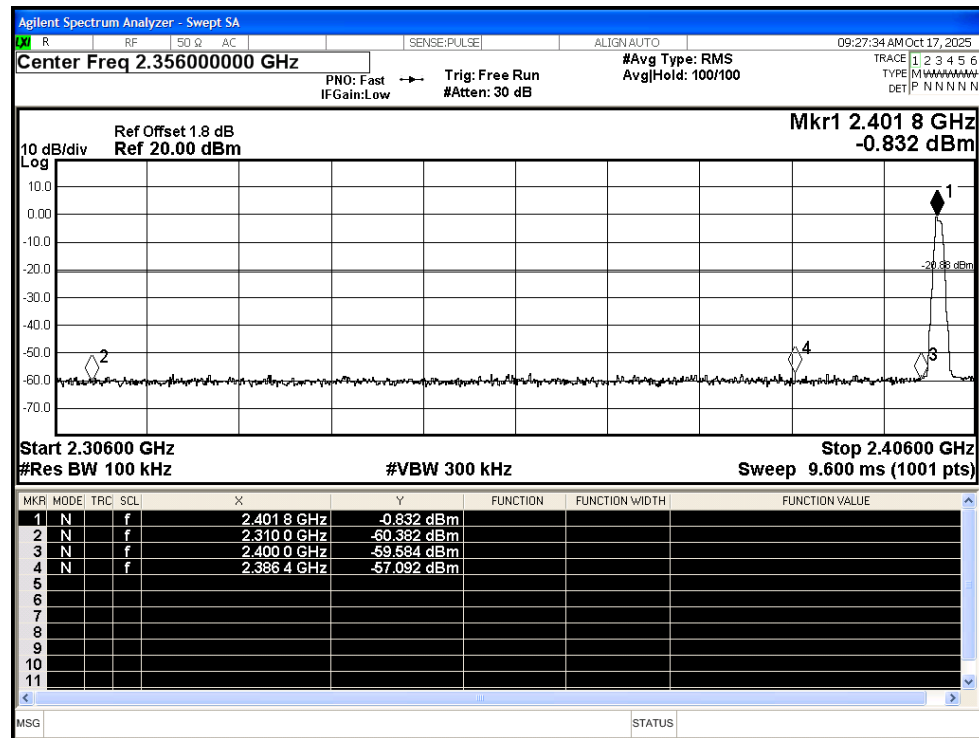
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant	-56.22	-20	Pass
NVNT	BLE 1M	2480	Ant	-56.56	-20	Pass

Test Graphs

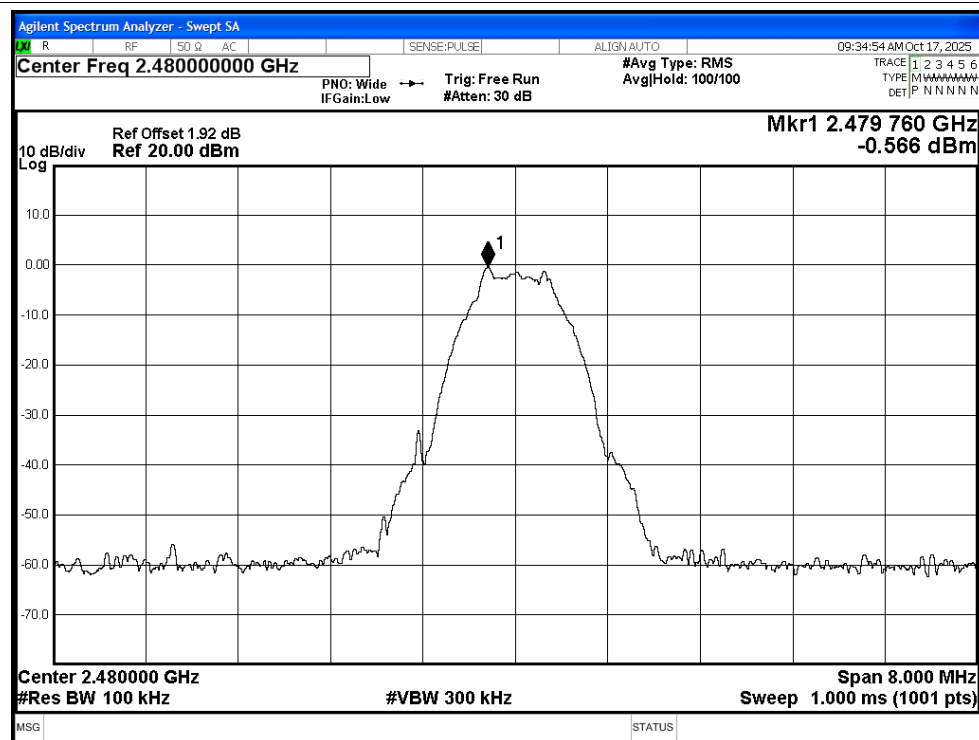
Band Edge NVNT BLE 1M 2402MHz Ant Ref



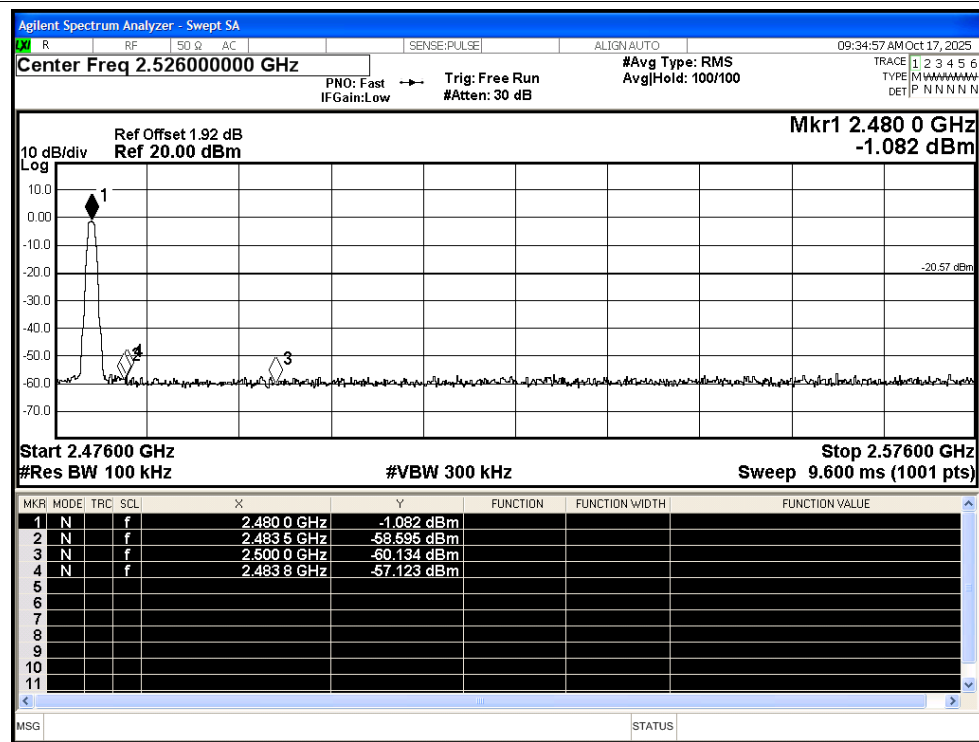
Band Edge NVNT BLE 1M 2402MHz Ant Emission



Band Edge NVNT BLE 1M 2480MHz Ant Ref



Band Edge NVNT BLE 1M 2480MHz Ant Emission



5. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant	-54.67	-20	Pass
NVNT	BLE 1M	2440	Ant	-55.41	-20	Pass
NVNT	BLE 1M	2480	Ant	-54.47	-20	Pass

6. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant	87.41	0.58	0.61
NVNT	BLE 1M	2440	Ant	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant	87.39	0.59	0.61

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	Ant	2310	-51.45	2	-	45.81	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2310	-59.07	2	0.58	38.77	Average	54	Pass
NVNT	BLE 1M	2402	Ant	2334.96	-47.89	2	-	49.37	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2372.976	-58.36	2	0.58	39.48	Average	54	Pass
NVNT	BLE 1M	2402	Ant	2390	-50.68	2	-	46.58	Peak	74	Pass
NVNT	BLE 1M	2402	Ant	2390	-58.67	2	0.58	39.17	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2483.5	-48.37	2	-	48.89	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2483.5	-57.91	2	0.59	39.94	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2483.944	-44.12	2	-	53.14	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2487.712	-57.7	2	0.59	40.15	Average	54	Pass
NVNT	BLE 1M	2480	Ant	2500	-50.68	2	-	46.58	Peak	74	Pass
NVNT	BLE 1M	2480	Ant	2500	-58.06	2	0.59	39.79	Average	54	Pass

