



Appendix RF Test Data for BLE

Product Name: AI Translator Earbuds

Test Model: A9

Environmental Conditions

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

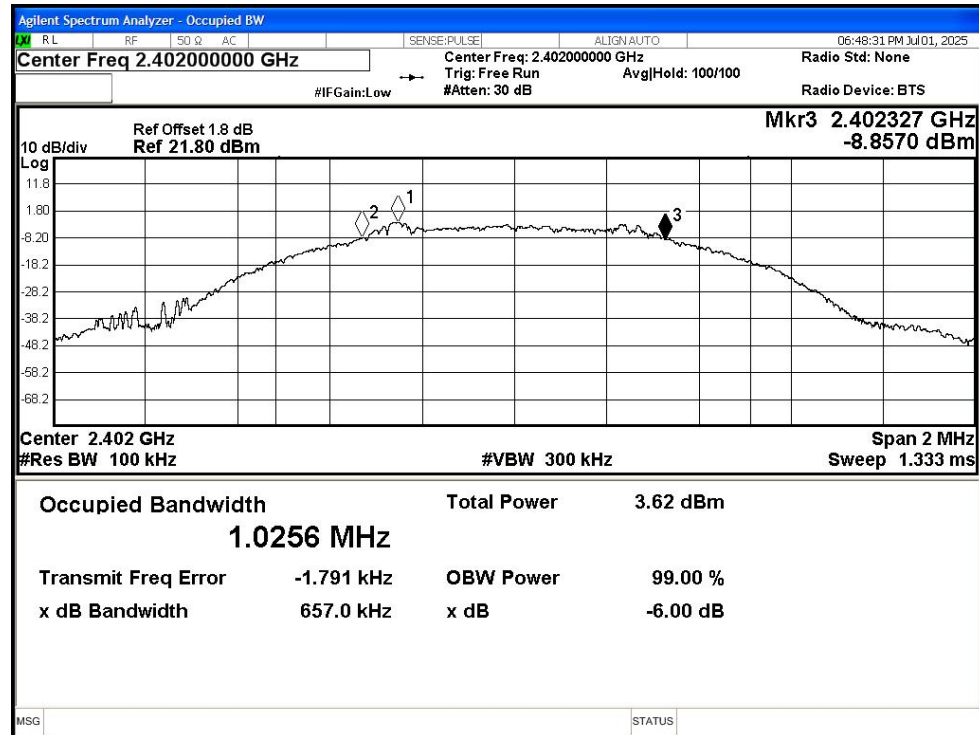


1. -6dB Bandwidth

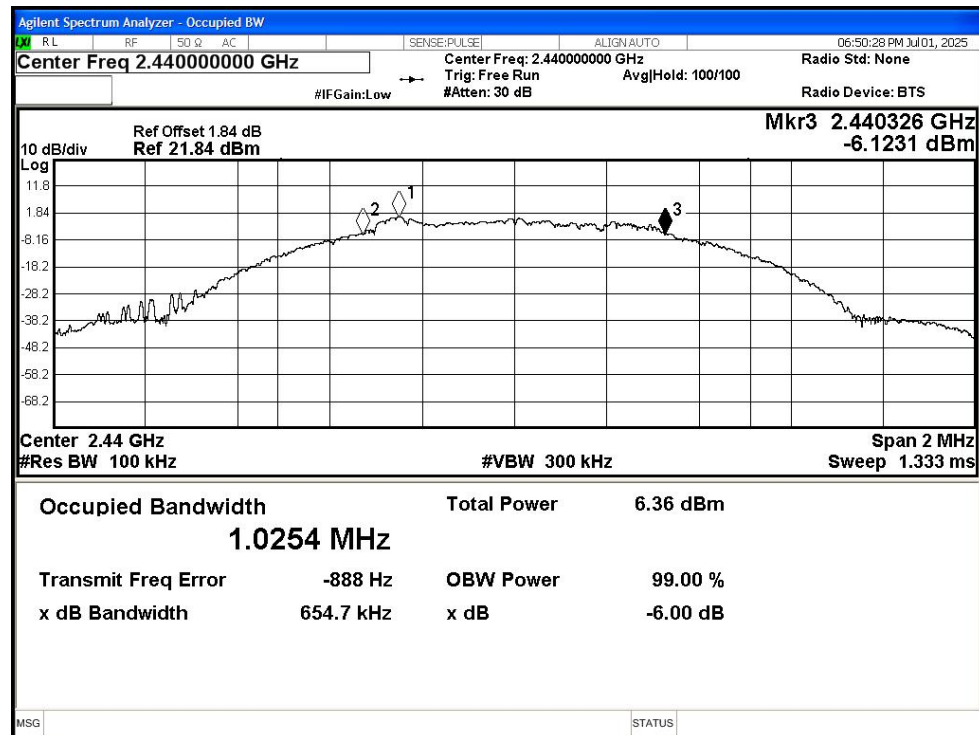
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.657	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.655	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.665	≥ 0.5	Pass

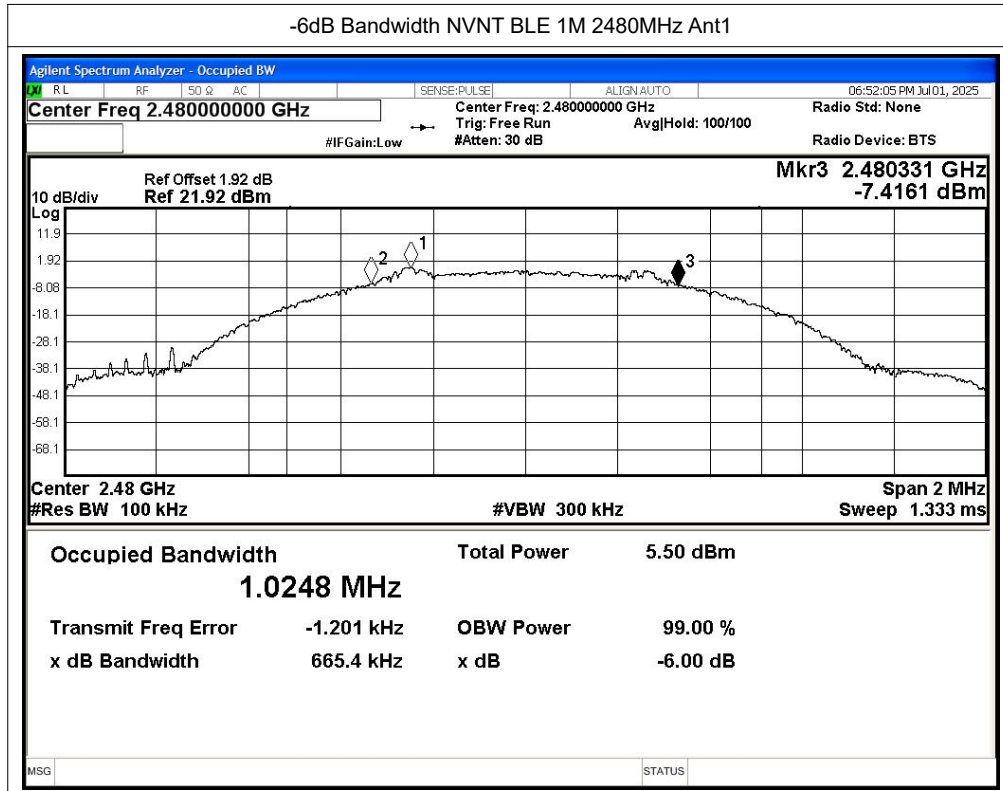
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1







2. Maximum Peak Conducted Output Power

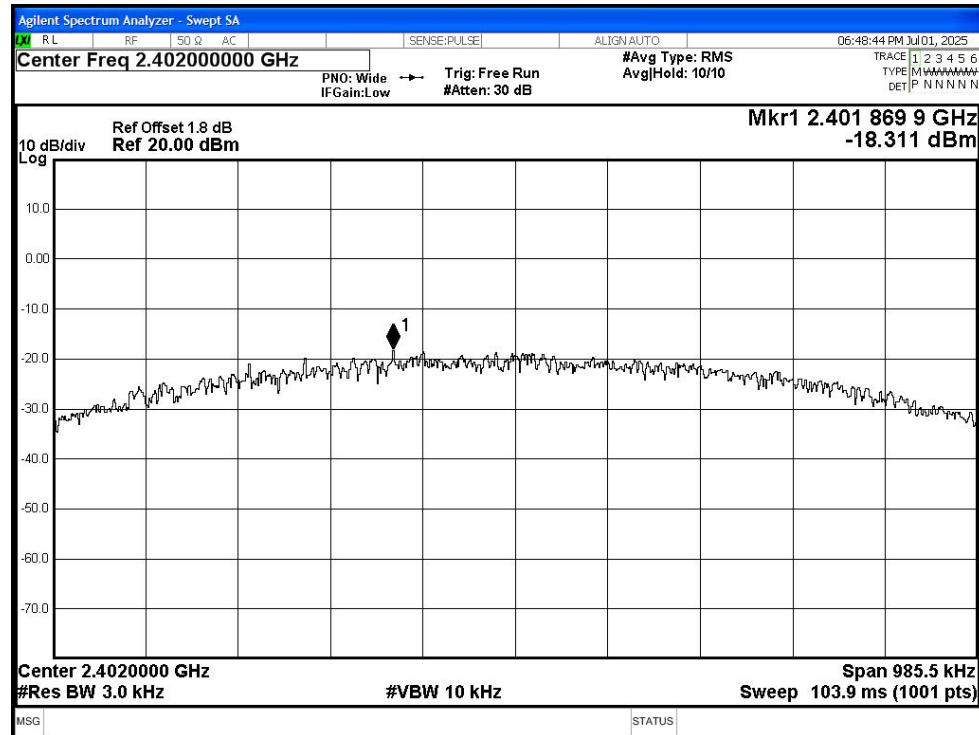
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-2.01	30	Pass
NVNT	BLE 1M	2440	Ant1	0.68	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.21	30	Pass

3. Maximum Power Spectral Density Level

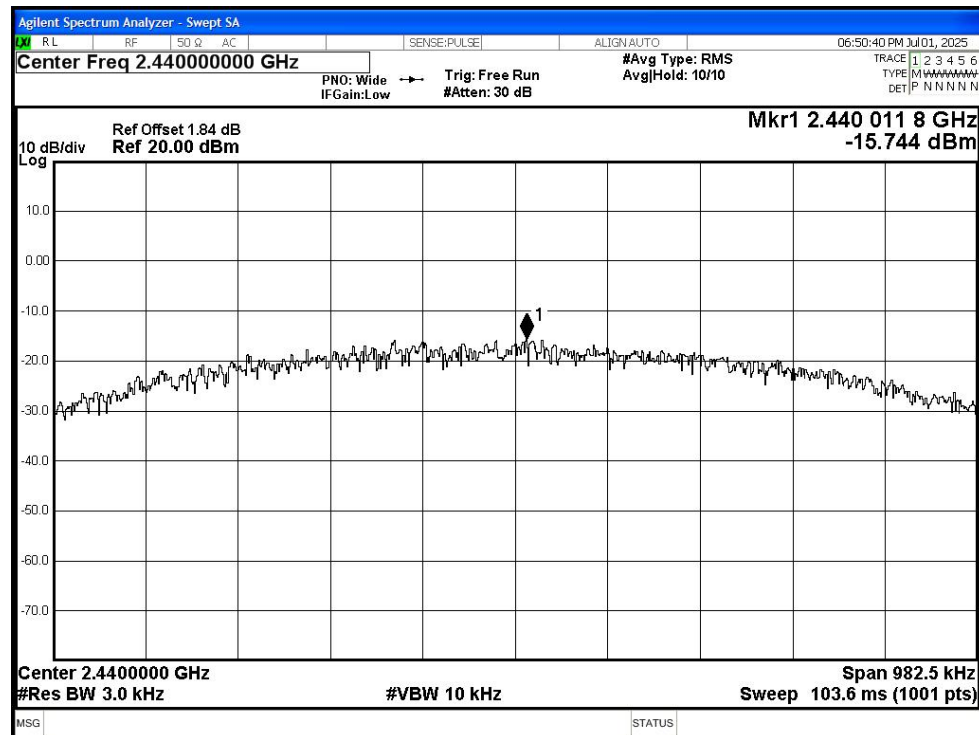
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-18.31	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.74	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.5	8	Pass

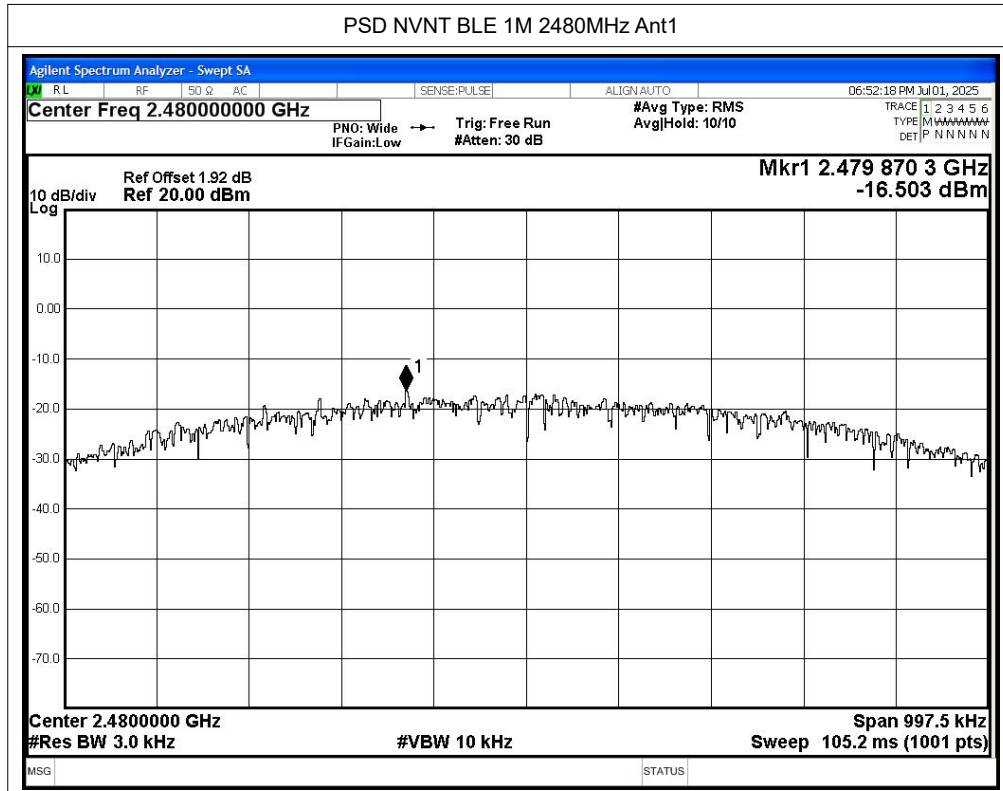
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1







4. Band Edge

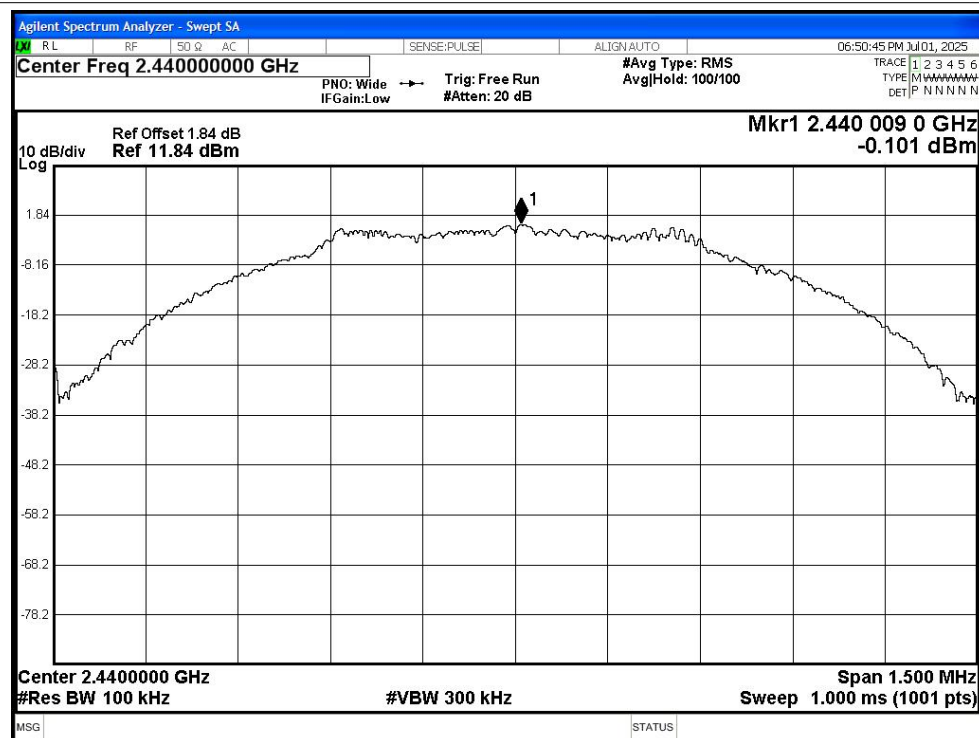
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-54.42	-20	Pass
NVNT	BLE 1M	2480	Ant1	-56.46	-20	Pass



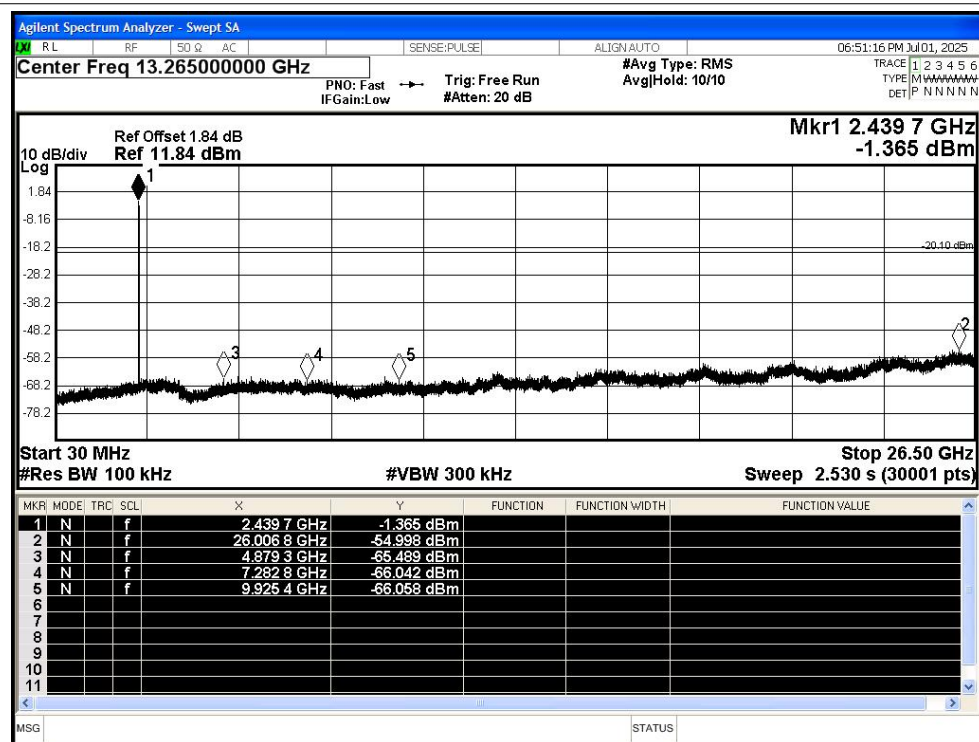
5. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-52.76	-20	Pass
NVNT	BLE 1M	2440	Ant1	-54.9	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.82	-20	Pass

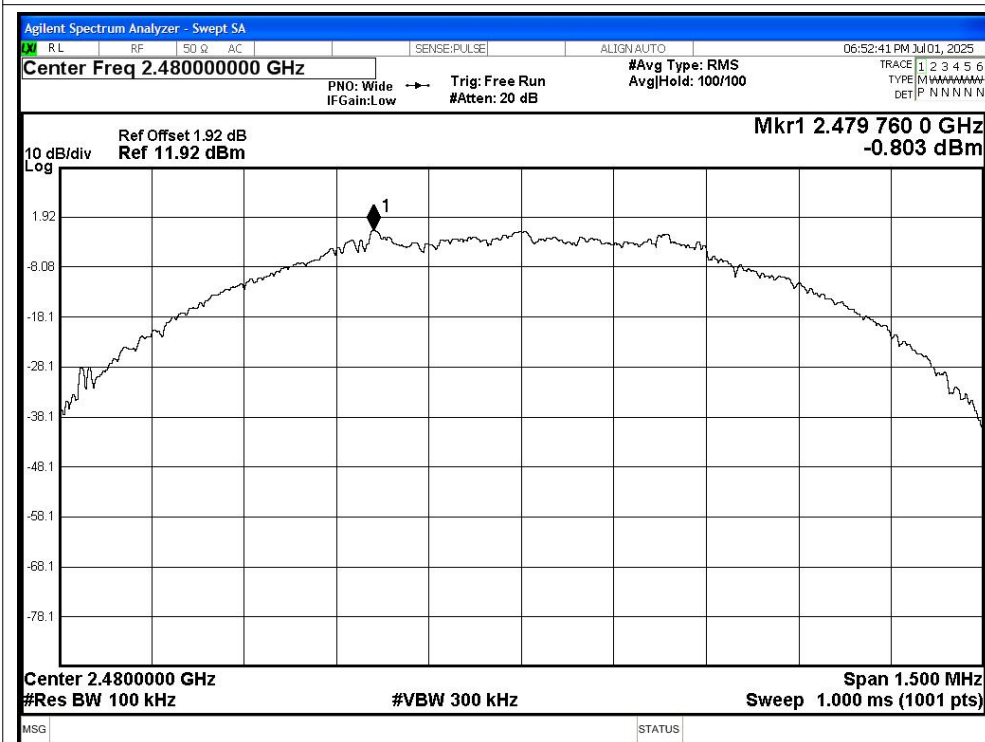
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



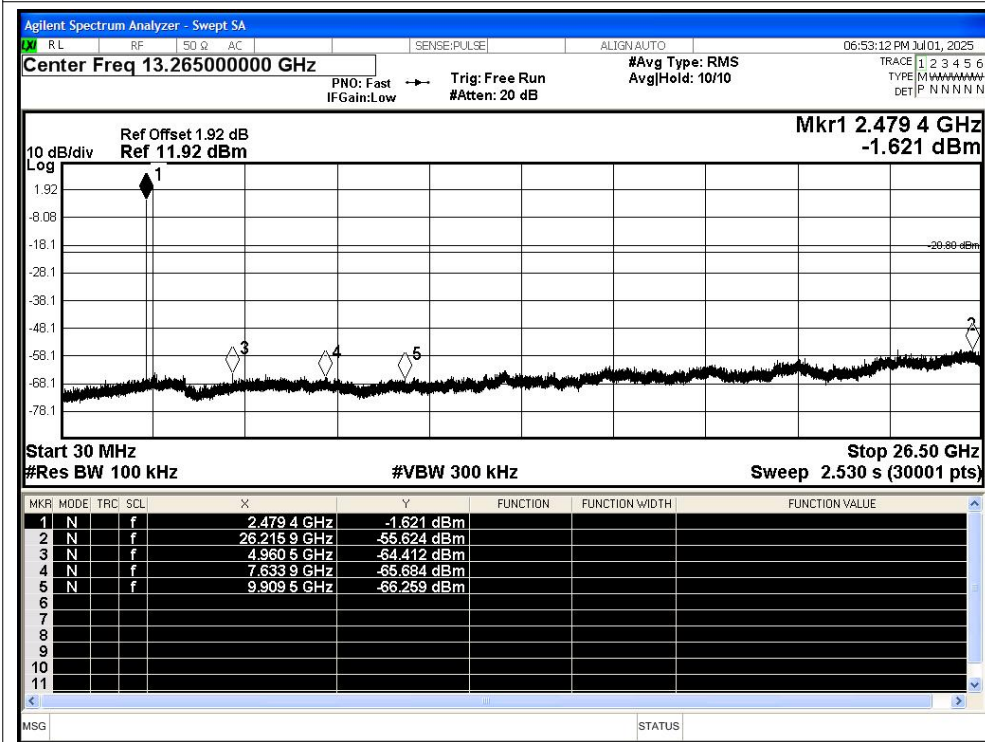
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



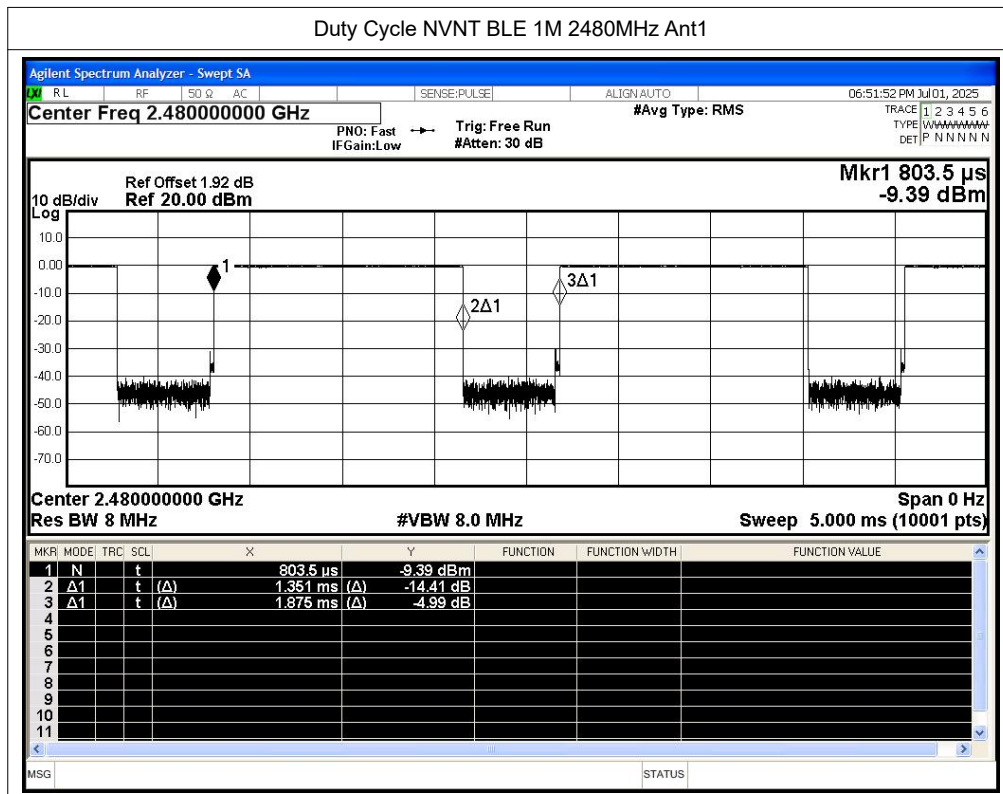
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission





6. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	72.03	1.42	0.74
NVNT	BLE 1M	2440	Ant1	72.03	1.42	0.74
NVNT	BLE 1M	2480	Ant1	72.03	1.42	0.74

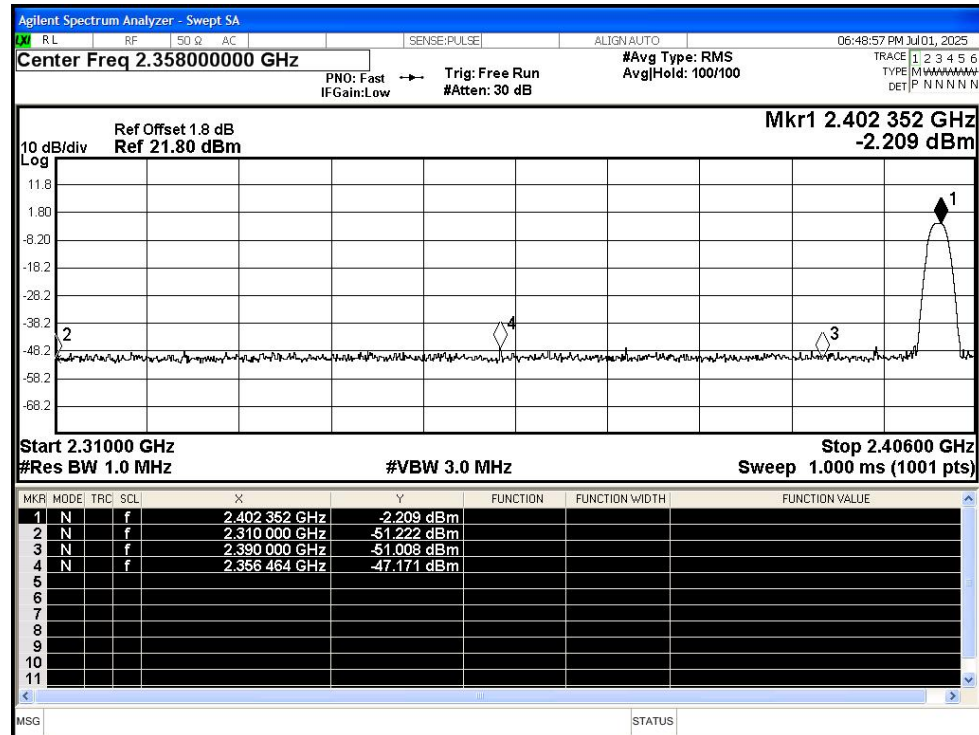


7. Restrict Band

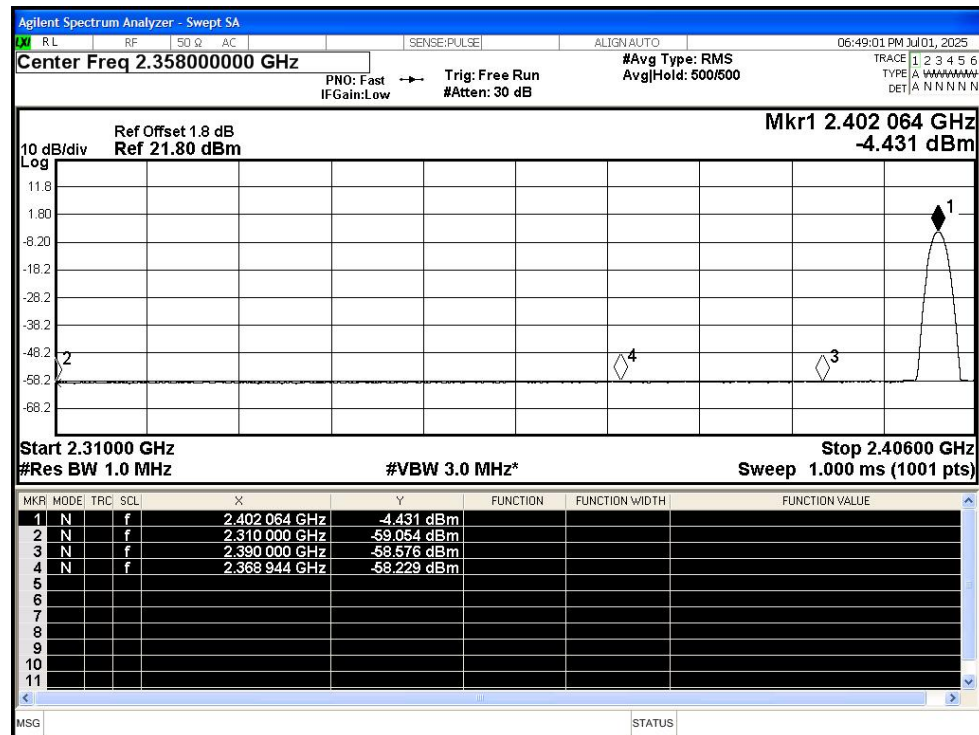
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-51.22	2	-	46.04	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-59.05	2	1.42	39.63	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2356.464	-47.17	2	-	50.09	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2368.944	-58.23	2	1.42	40.45	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-51.01	2	-	46.25	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.58	2	1.42	40.1	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.92	2	-	47.34	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-58.02	2	1.42	40.66	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.776	-44.53	2	-	52.73	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2484.112	-57.56	2	1.42	41.12	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-49.68	2	-	47.58	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-58.34	2	1.42	40.34	Average	54	Pass

Test Graphs

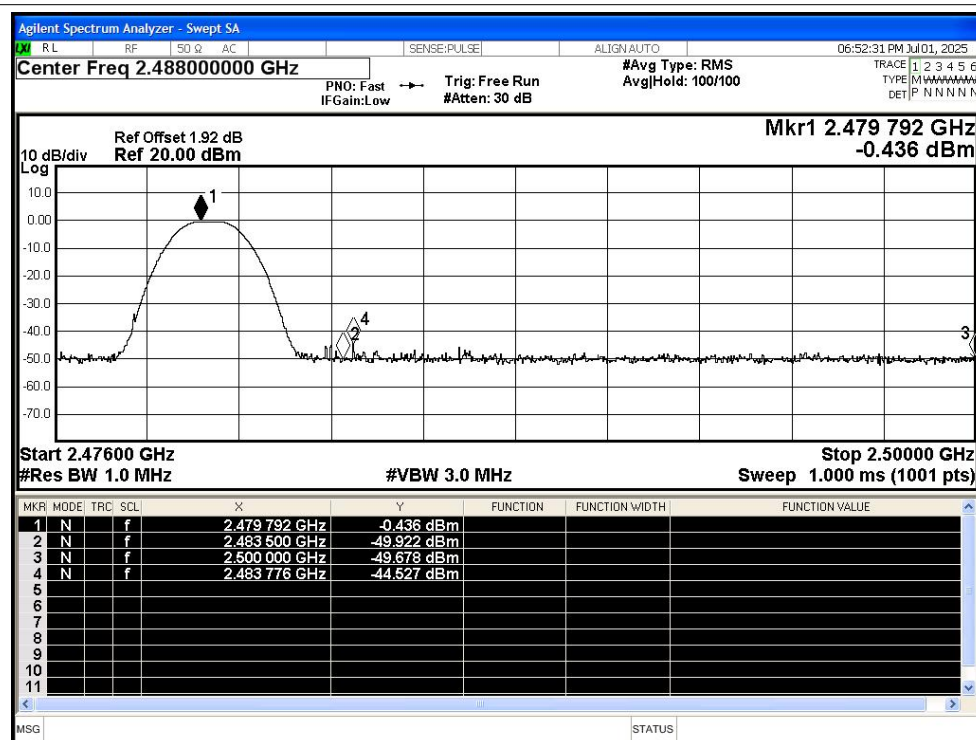
Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average

