Appendix A BLE

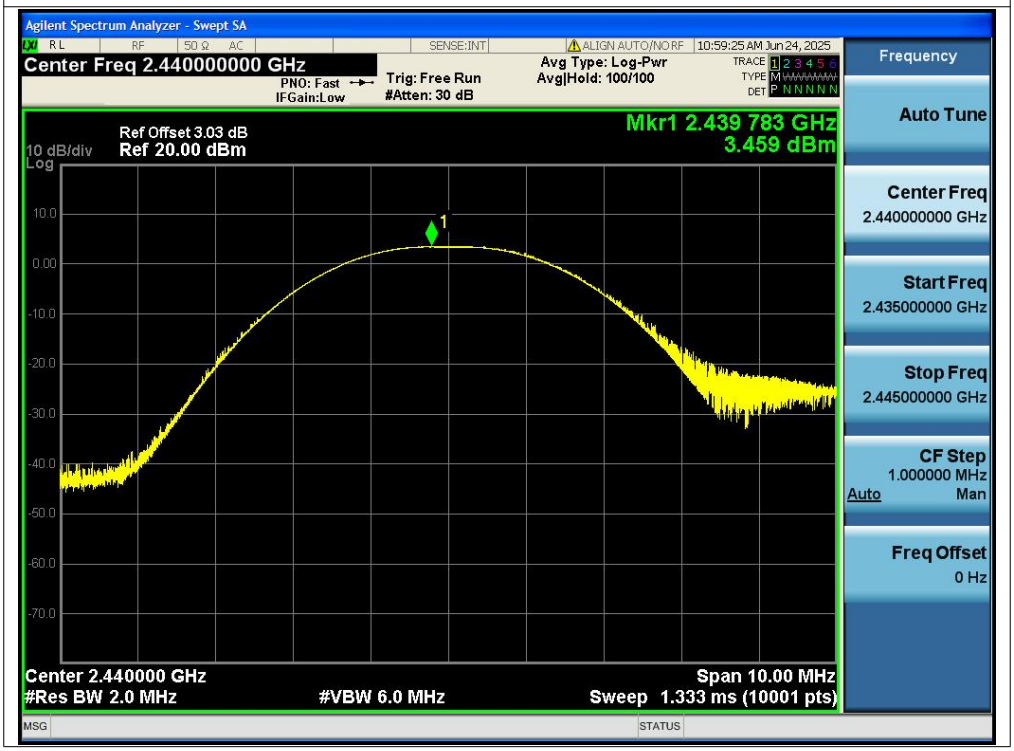
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	4.93	4.93	30	Pass
NVNT	BLE 1M	2440	Ant1	3.46	3.46	30	Pass
NVNT	BLE 1M	2480	Ant1	3.41	3.41	30	Pass
NVNT	BLE 2M	2402	Ant1	4.88	4.88	30	Pass
NVNT	BLE 2M	2440	Ant1	3.56	3.56	30	Pass
NVNT	BLE 2M	2480	Ant1	3.34	3.34	30	Pass

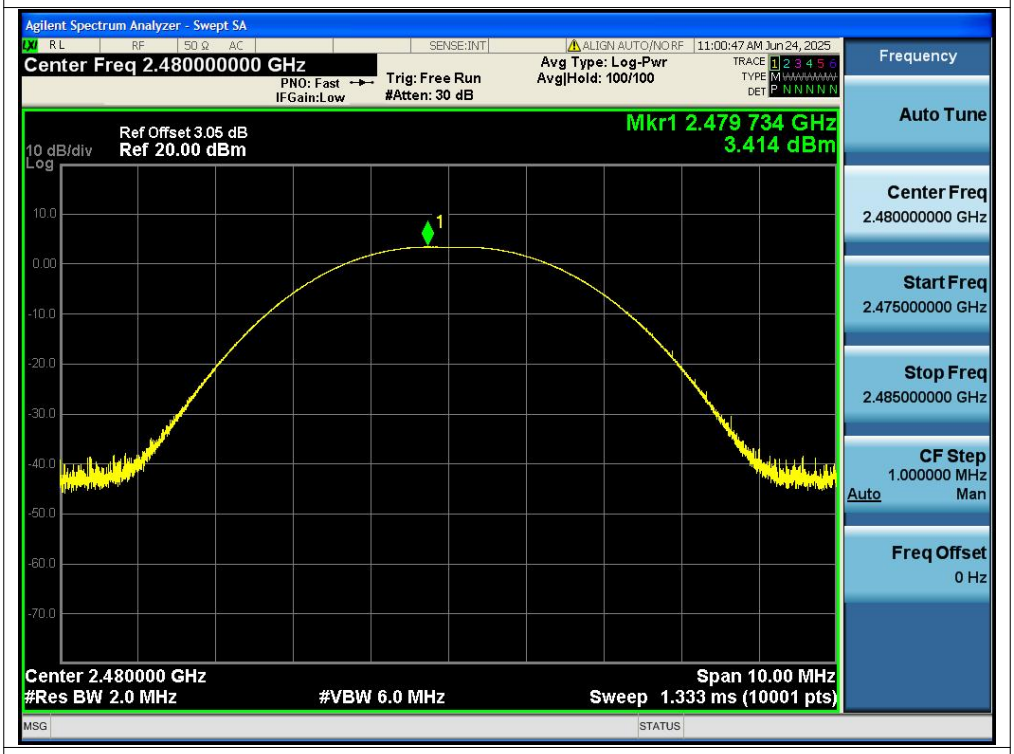
Test Graphs

Power NVNT BLE 1M 2402MHz Ant1

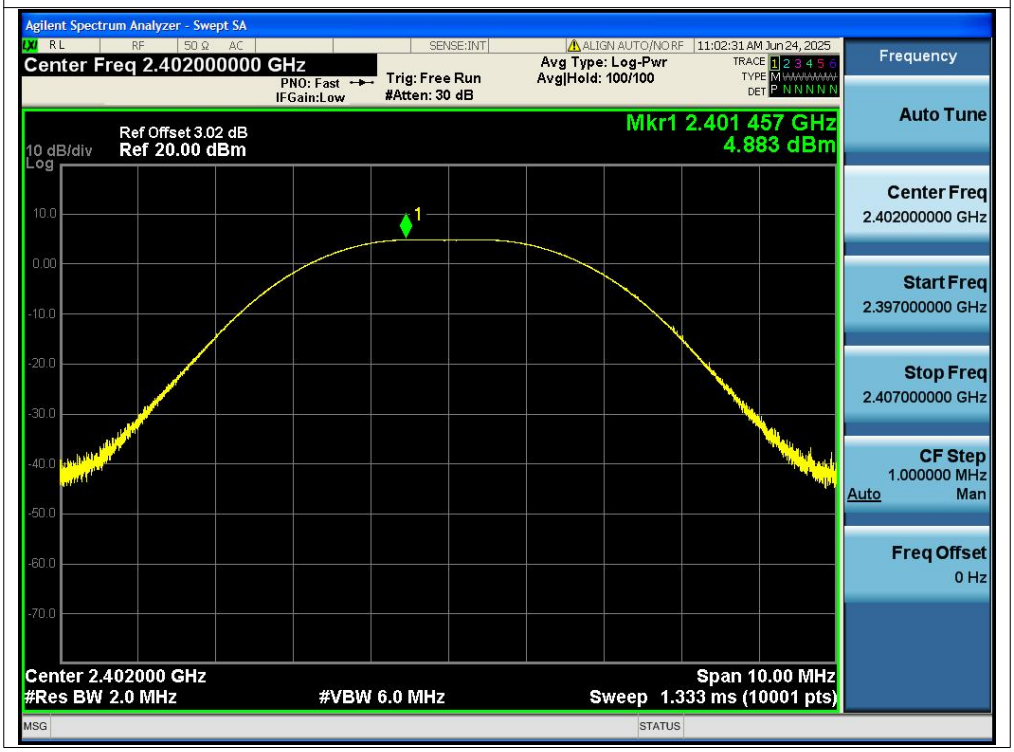
Power NVNT BLE 1M 2440MHz Ant1



Power NVNT BLE 1M 2480MHz Ant1

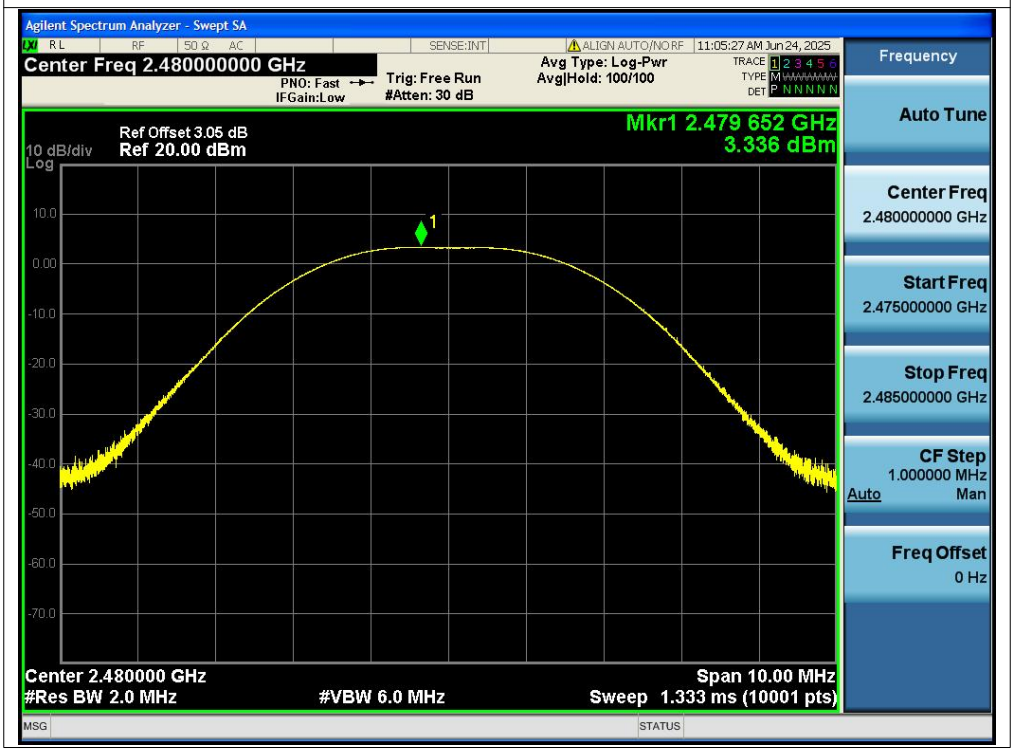


Power NVNT BLE 2M 2402MHz Ant1



Power NVNT BLE 2M 2440MHz Ant1

Power NVNT BLE 2M 2480MHz Ant1

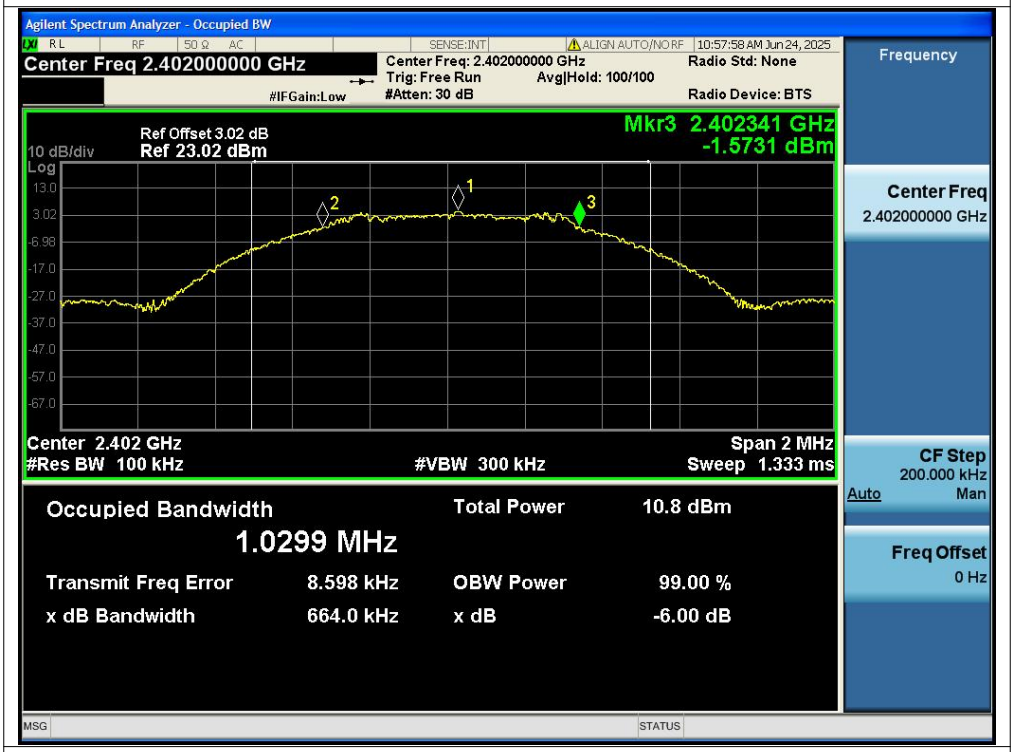


-6dB Bandwidth

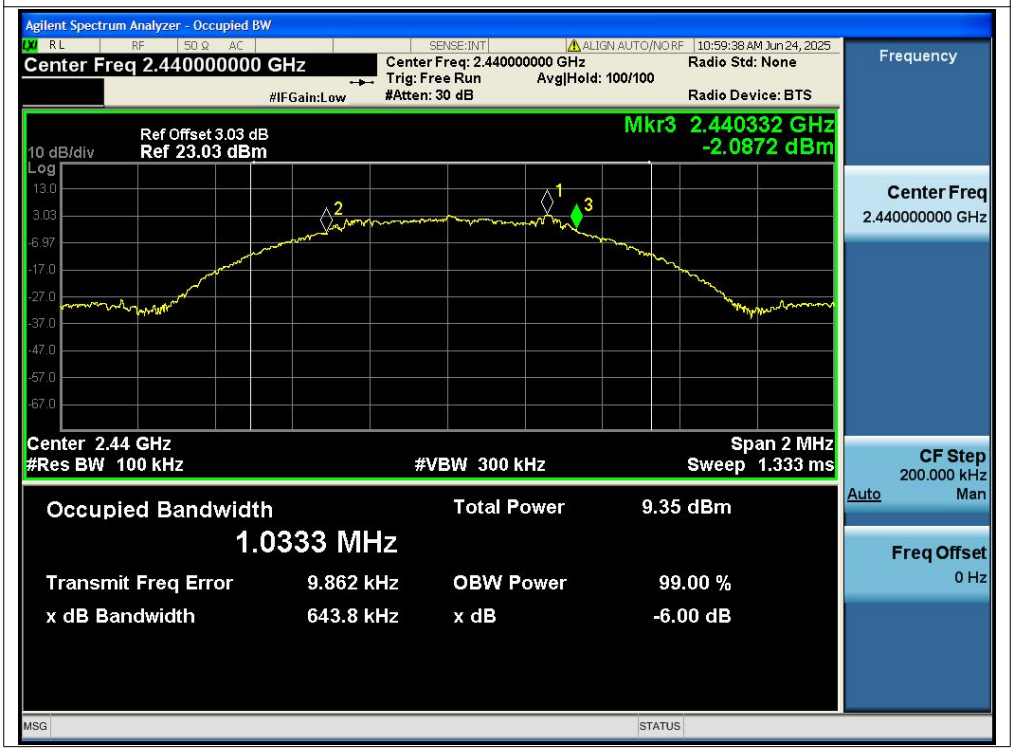
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.664	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.644	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.653	0.5	Pass
NVNT	BLE 2M	2402	Ant1	1.117	0.5	Pass
NVNT	BLE 2M	2440	Ant1	1.121	0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.11	0.5	Pass

Test Graphs

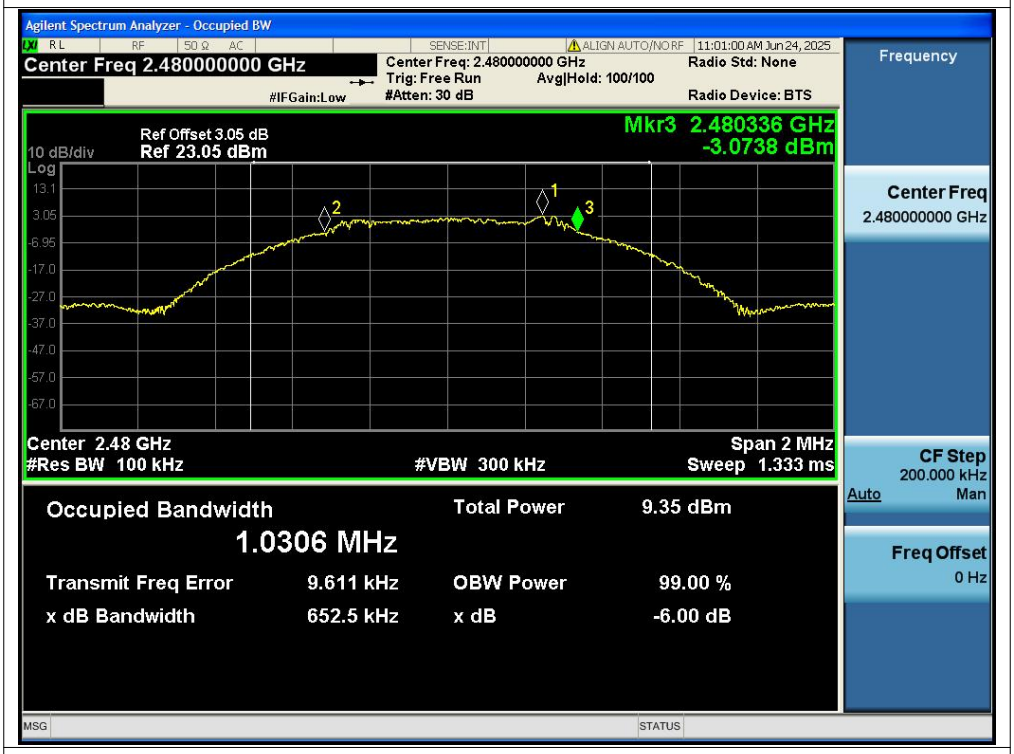
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



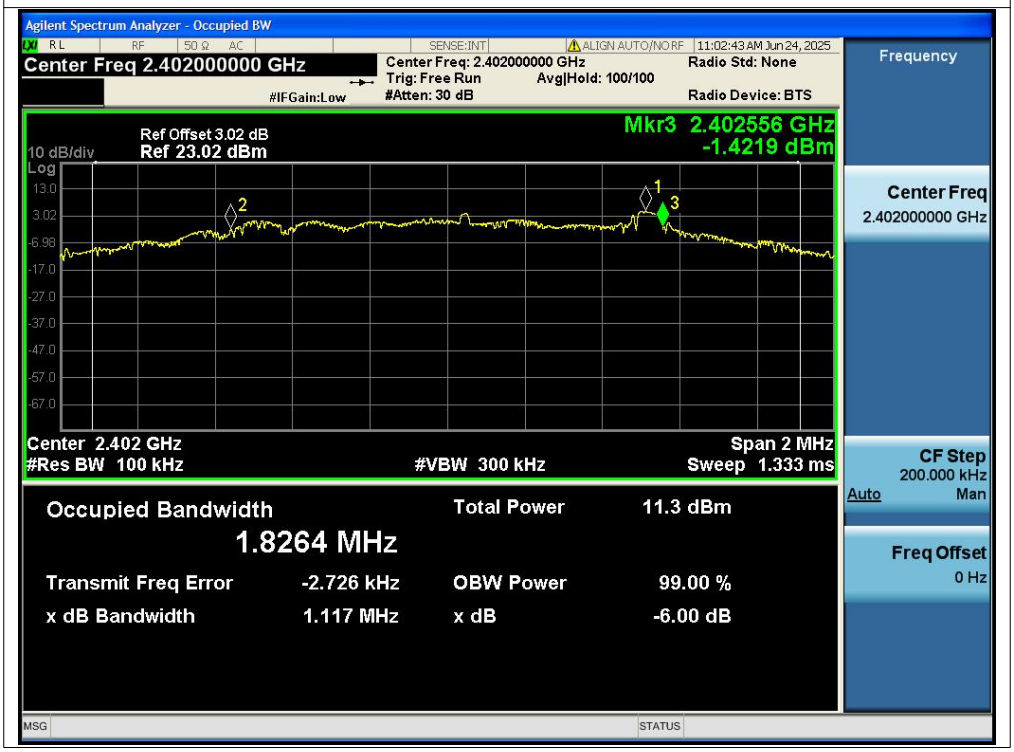
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



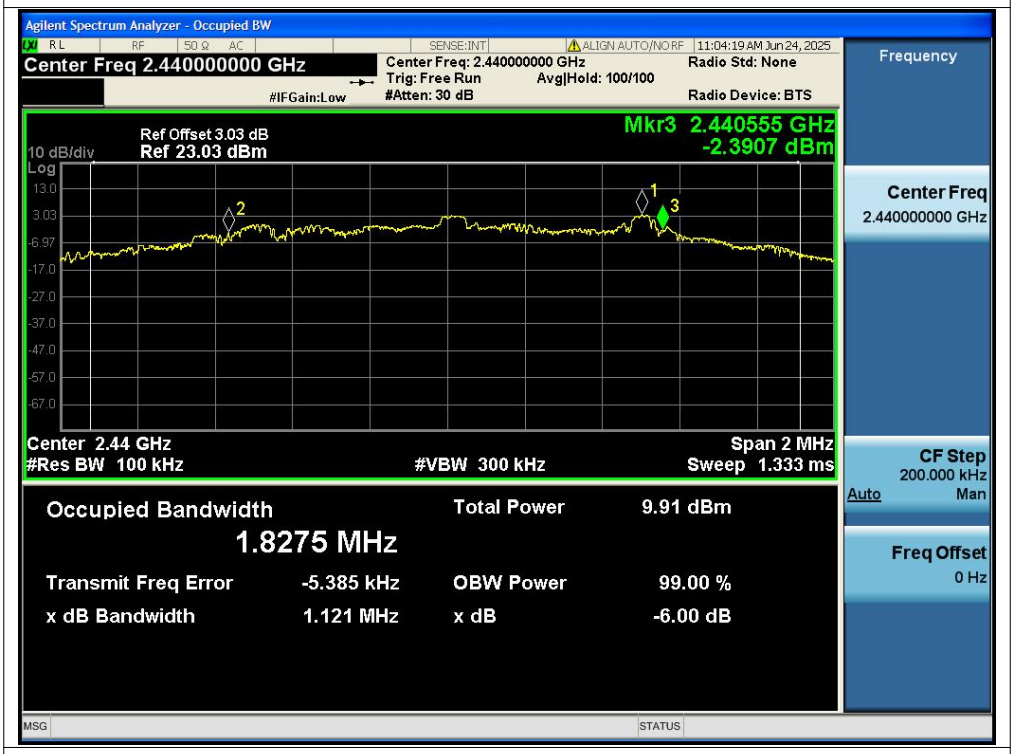
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



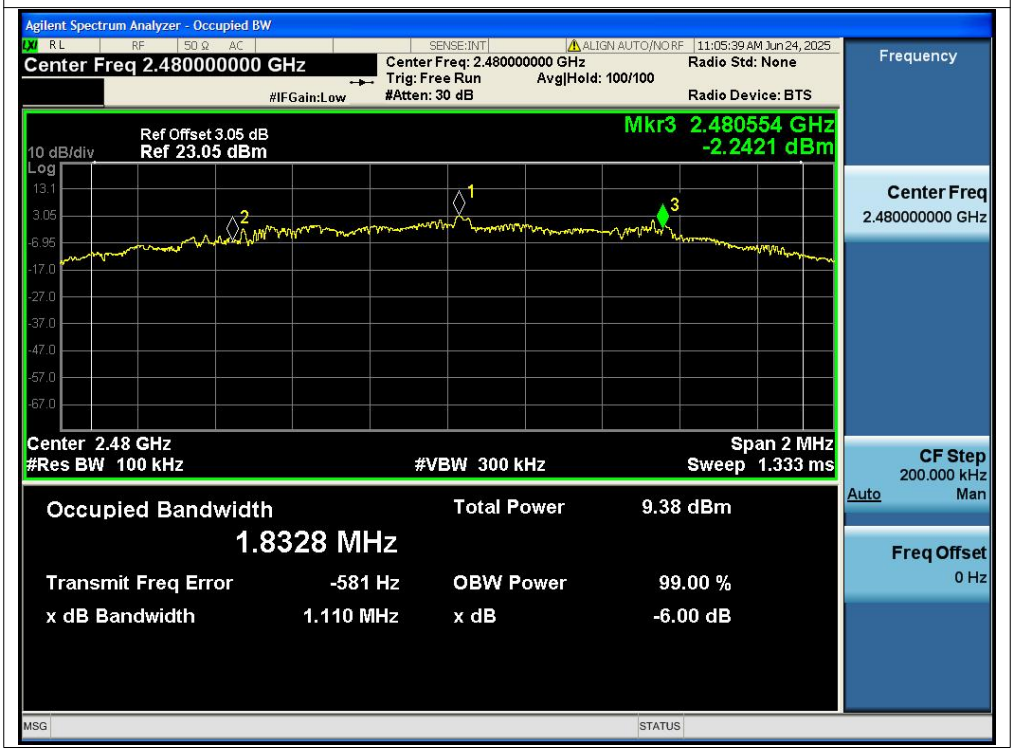
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1

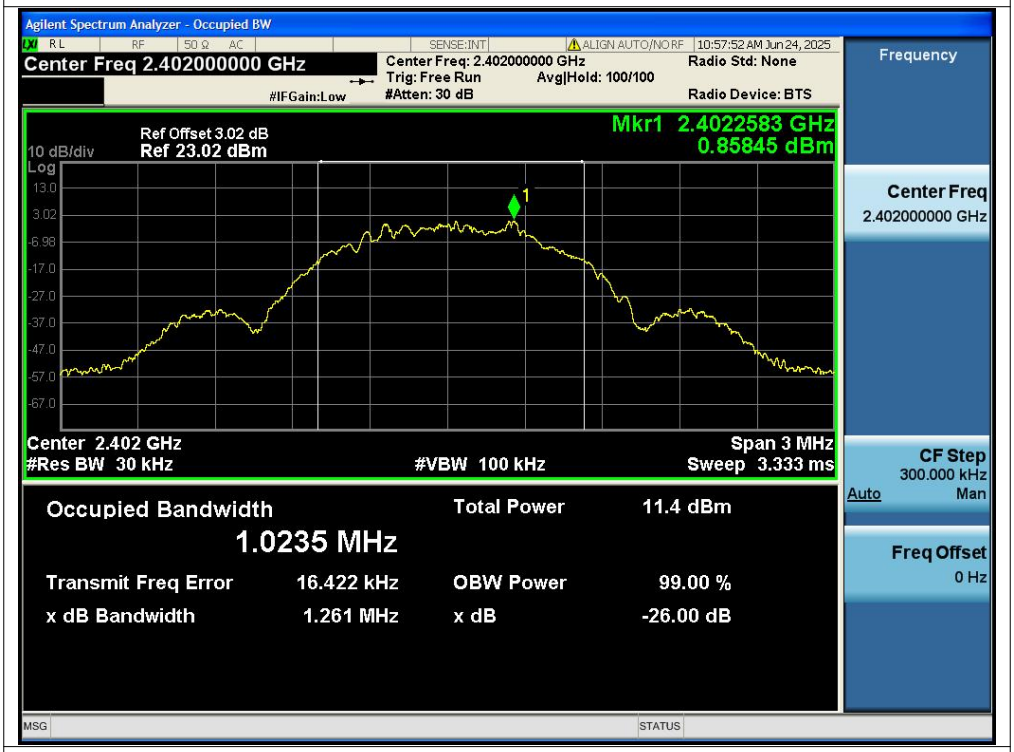


Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.023
NVNT	BLE 1M	2440	Ant1	1.024
NVNT	BLE 1M	2480	Ant1	1.021
NVNT	BLE 2M	2402	Ant1	2.019
NVNT	BLE 2M	2440	Ant1	2.012
NVNT	BLE 2M	2480	Ant1	2.02

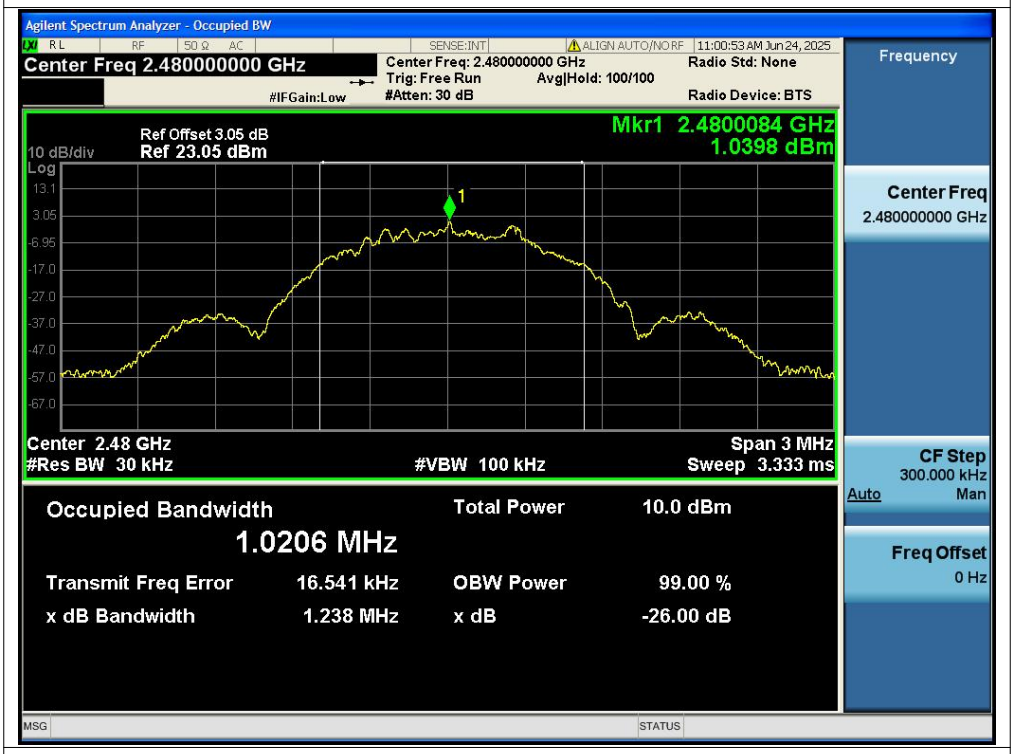
Test Graphs

OBW NVNT BLE 1M 2402MHz Ant1

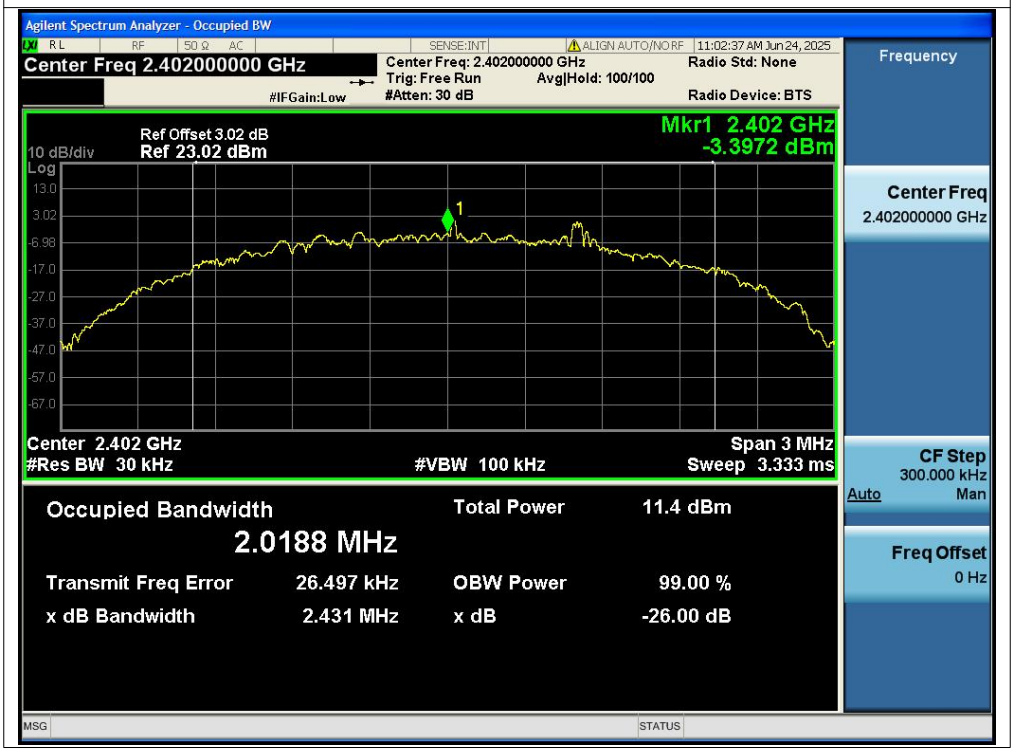


OBW NVNT BLE 1M 2440MHz Ant1

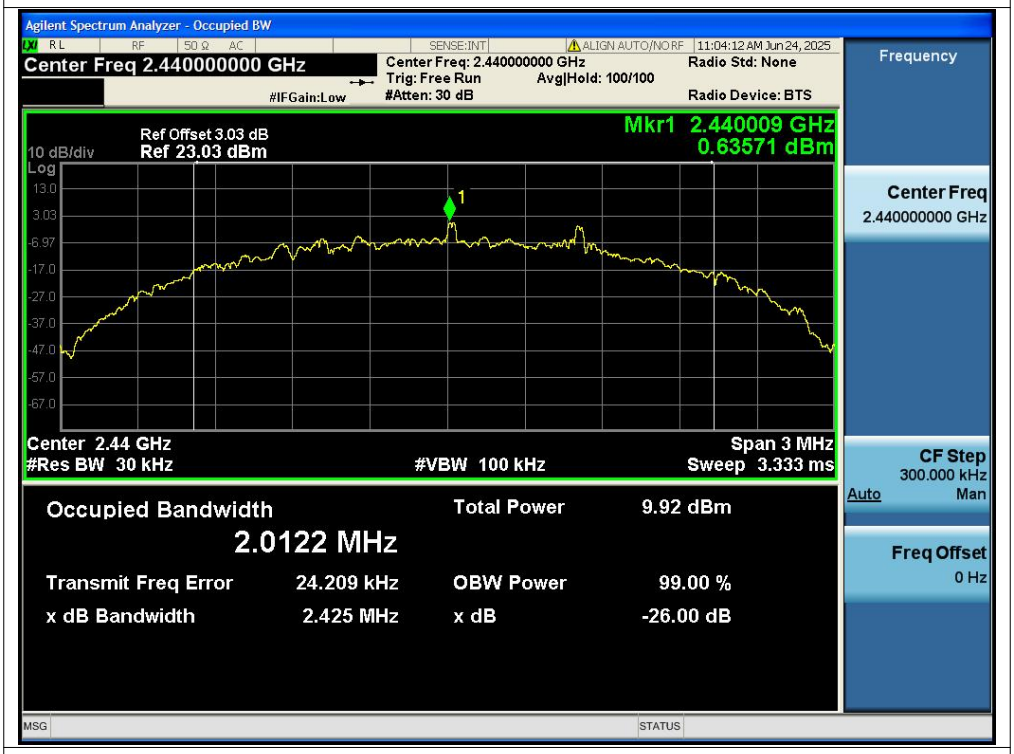
OBW NVNT BLE 1M 2480MHz Ant1



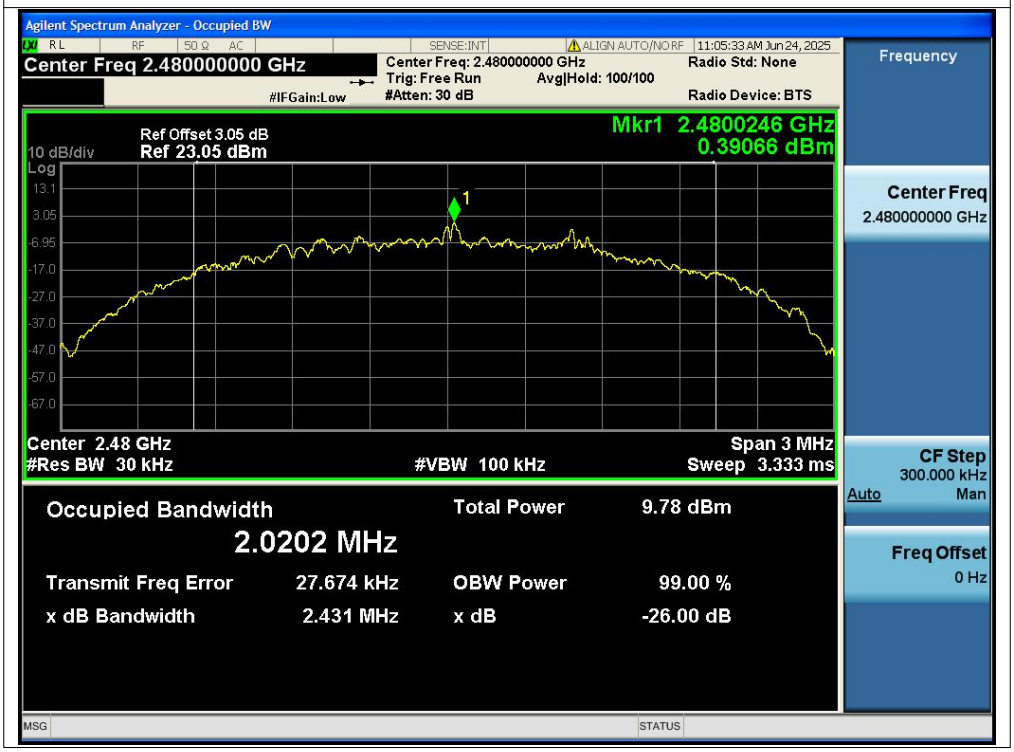
OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2440MHz Ant1



OBW NVNT BLE 2M 2480MHz Ant1



Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	4.74	0	4.74	8	Pass
NVNT	BLE 1M	2440	Ant1	3.17	0	3.17	8	Pass
NVNT	BLE 1M	2480	Ant1	3.13	0	3.13	8	Pass
NVNT	BLE 2M	2402	Ant1	3.79	0	3.79	8	Pass
NVNT	BLE 2M	2440	Ant1	3.01	0	3.01	8	Pass
NVNT	BLE 2M	2480	Ant1	3.12	0	3.12	8	Pass

Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1

PSD NVNT BLE 1M 2440MHz Ant1

PSD NVNT BLE 1M 2480MHz Ant1

PSD NVNT BLE 2M 2402MHz Ant1

PSD NVNT BLE 2M 2440MHz Ant1

PSD NVNT BLE 2M 2480MHz Ant1

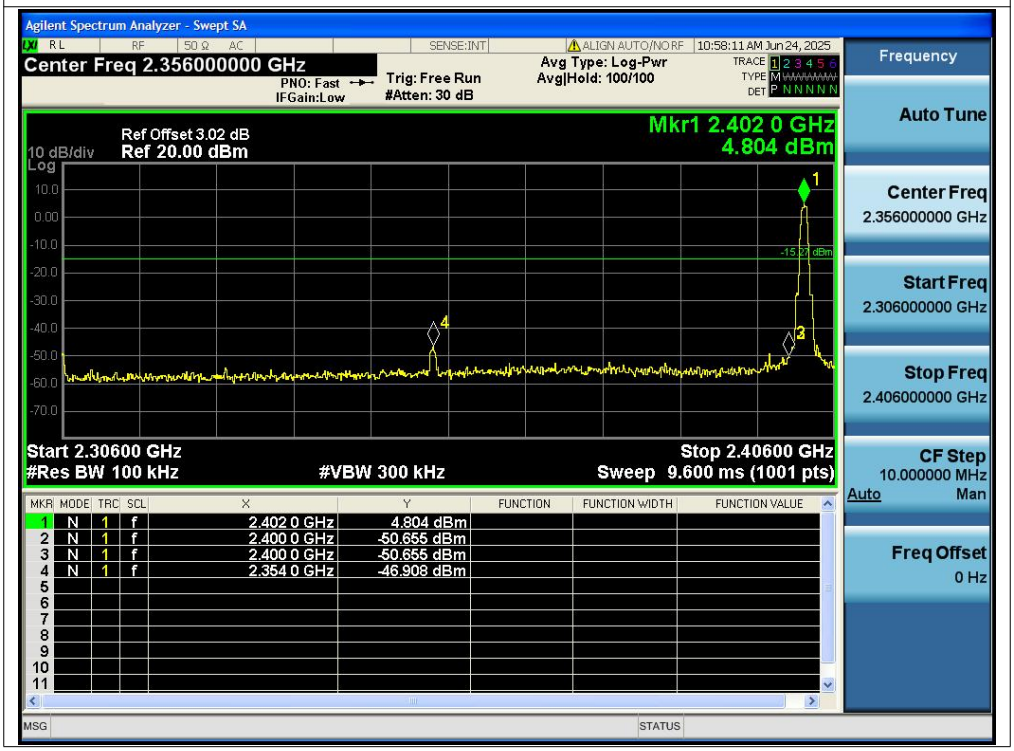
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-51.63	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.3	-20	Pass
NVNT	BLE 2M	2402	Ant1	-33.72	-20	Pass
NVNT	BLE 2M	2480	Ant1	-54.14	-20	Pass

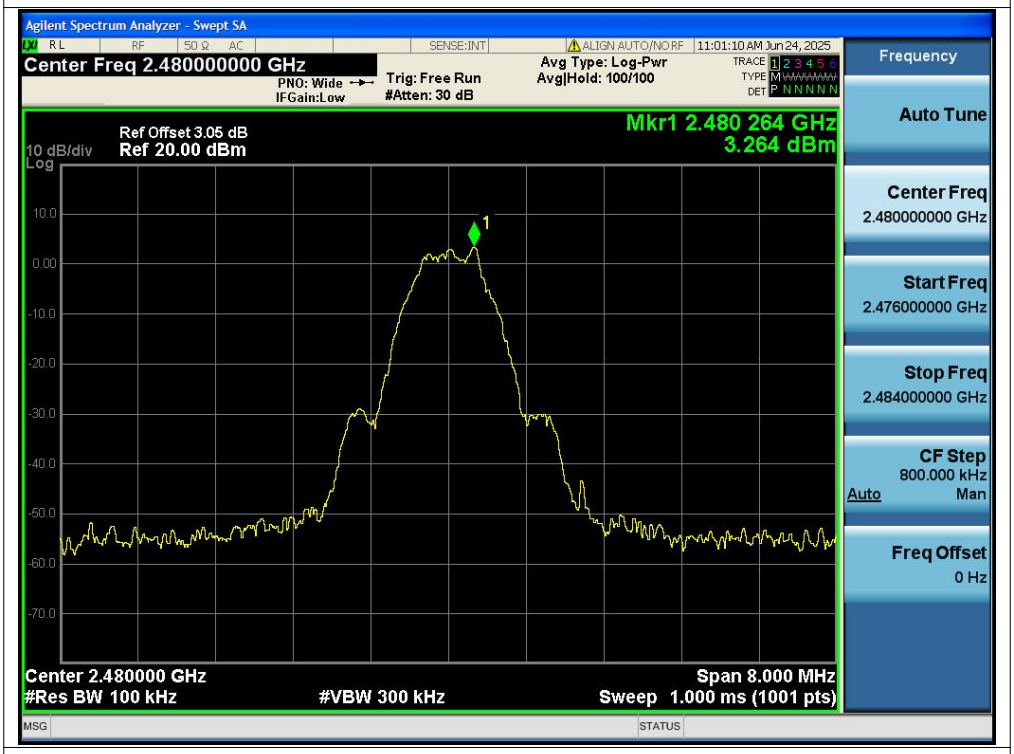
Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref

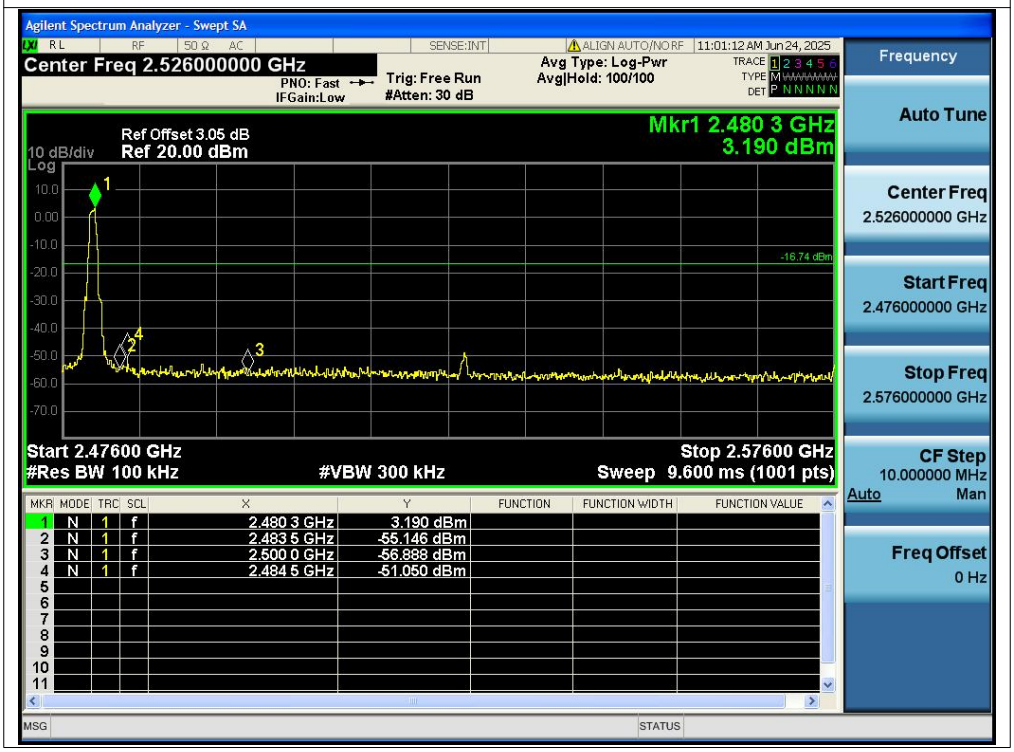
Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



Band Edge NVNT BLE 1M 2480MHz Ant1 Ref

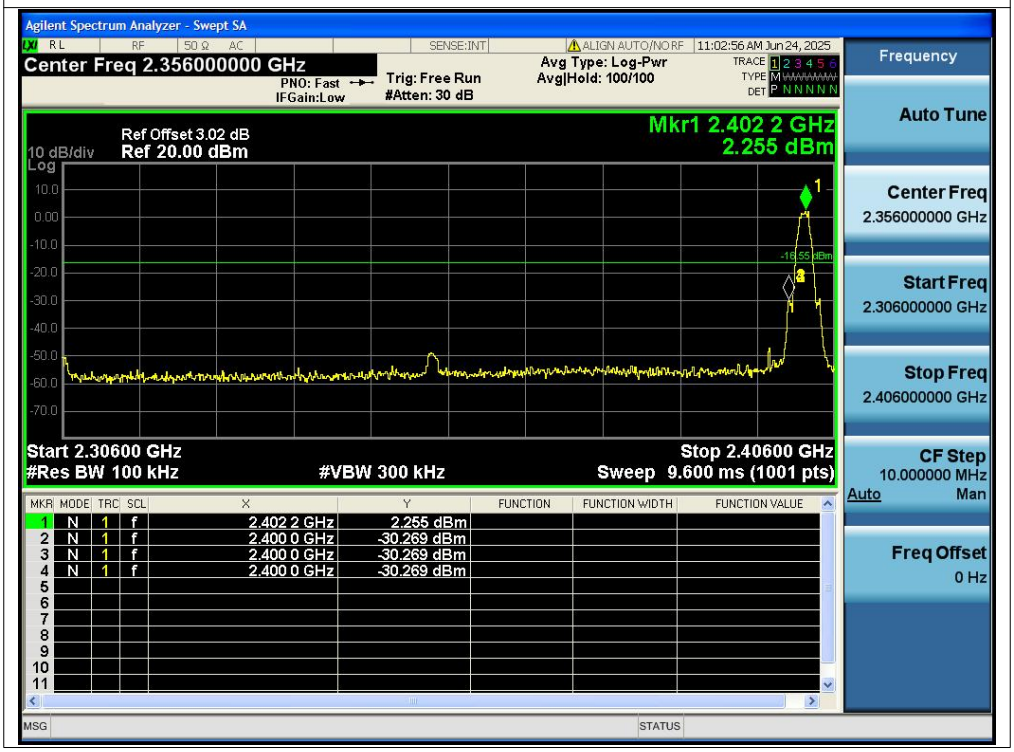


Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



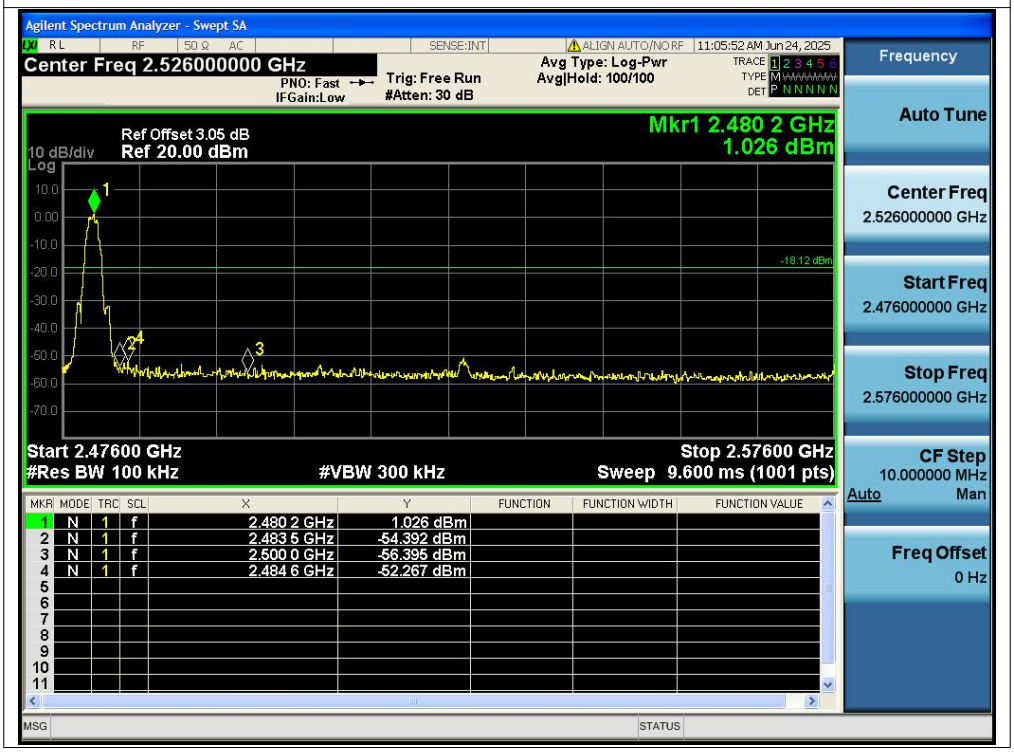
Band Edge NVNT BLE 2M 2402MHz Ant1 Ref

Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



Band Edge NVNT BLE 2M 2480MHz Ant1 Ref

Band Edge NVNT BLE 2M 2480MHz Ant1 Emission



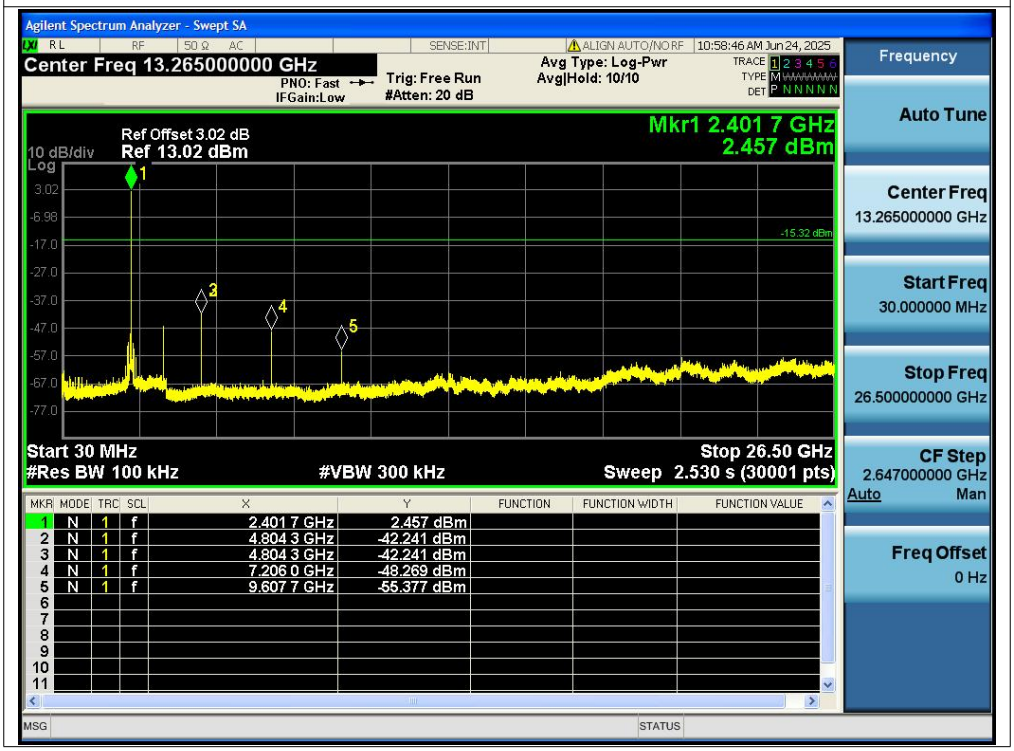
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-46.92	-20	Pass
NVNT	BLE 1M	2440	Ant1	-46.52	-20	Pass
NVNT	BLE 1M	2480	Ant1	-43.37	-20	Pass
NVNT	BLE 2M	2402	Ant1	-48.78	-20	Pass
NVNT	BLE 2M	2440	Ant1	-46.49	-20	Pass
NVNT	BLE 2M	2480	Ant1	-44.61	-20	Pass

Test Graphs

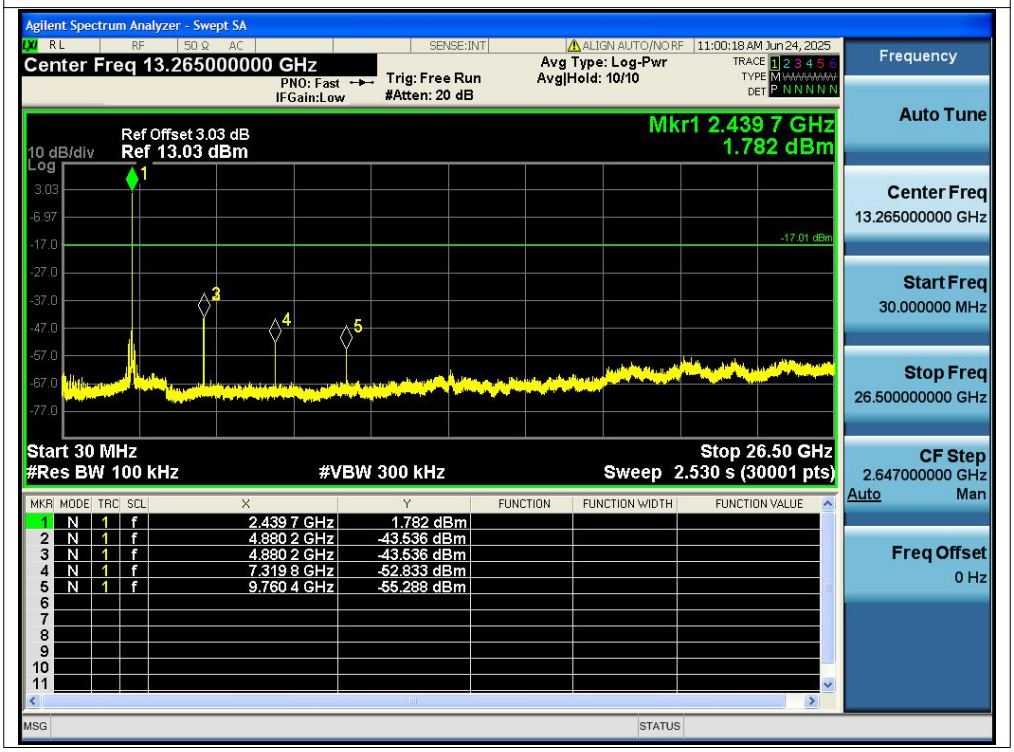
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



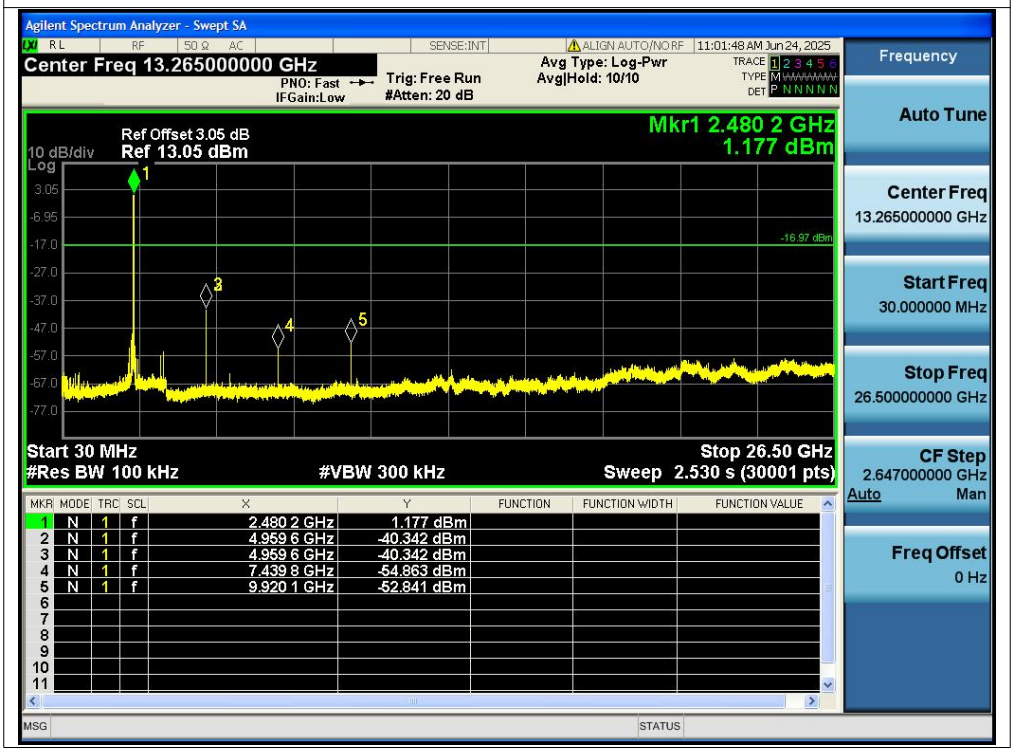
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



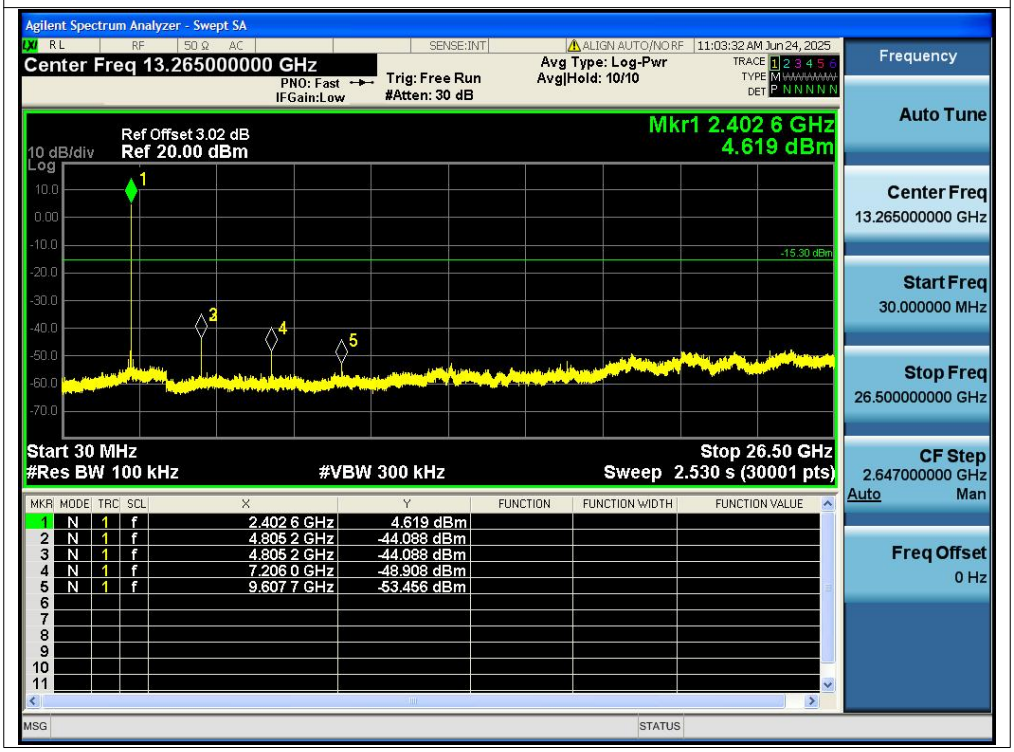
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



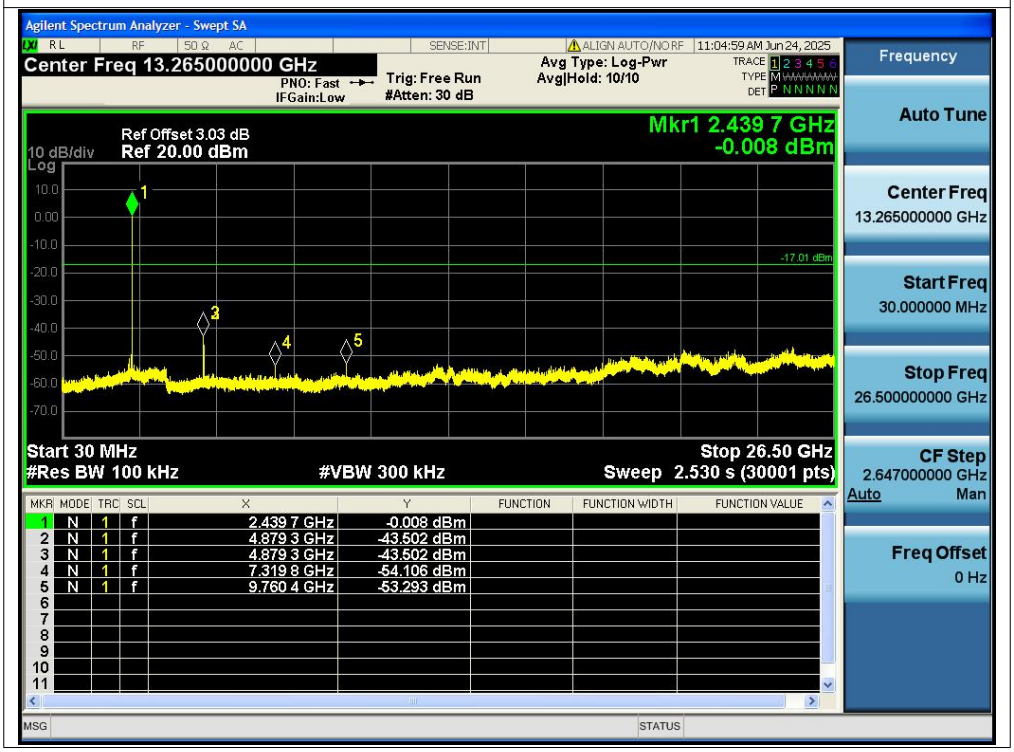
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref

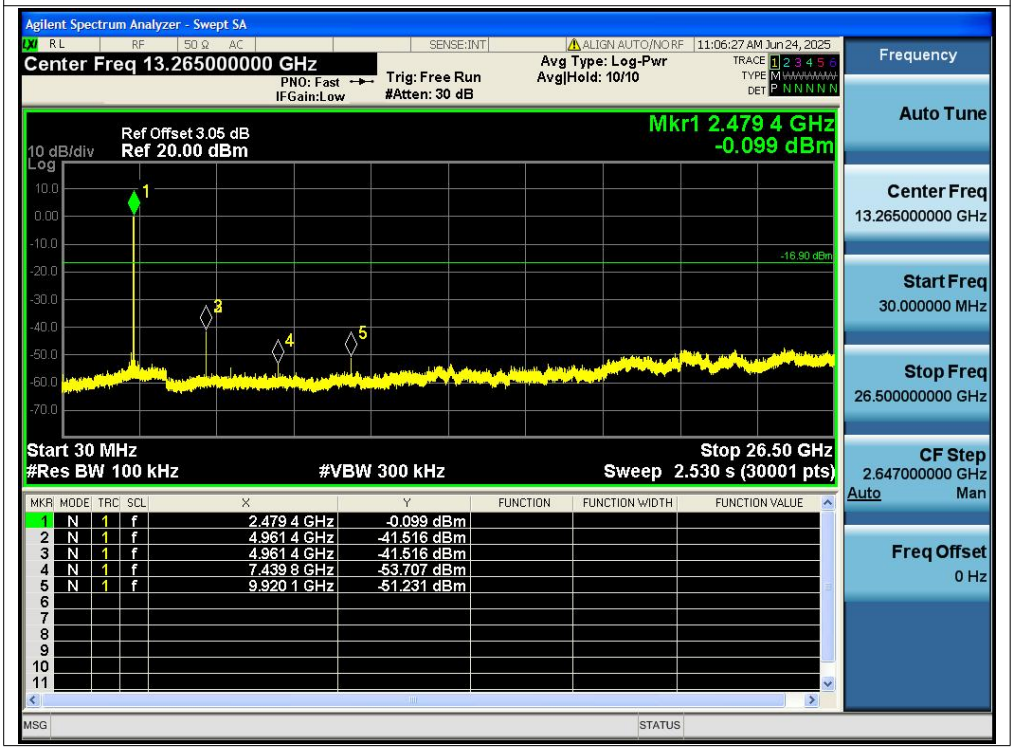
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref

Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref

Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission