Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Smart camping screen

Test Model: Portable S

Environmental Conditions

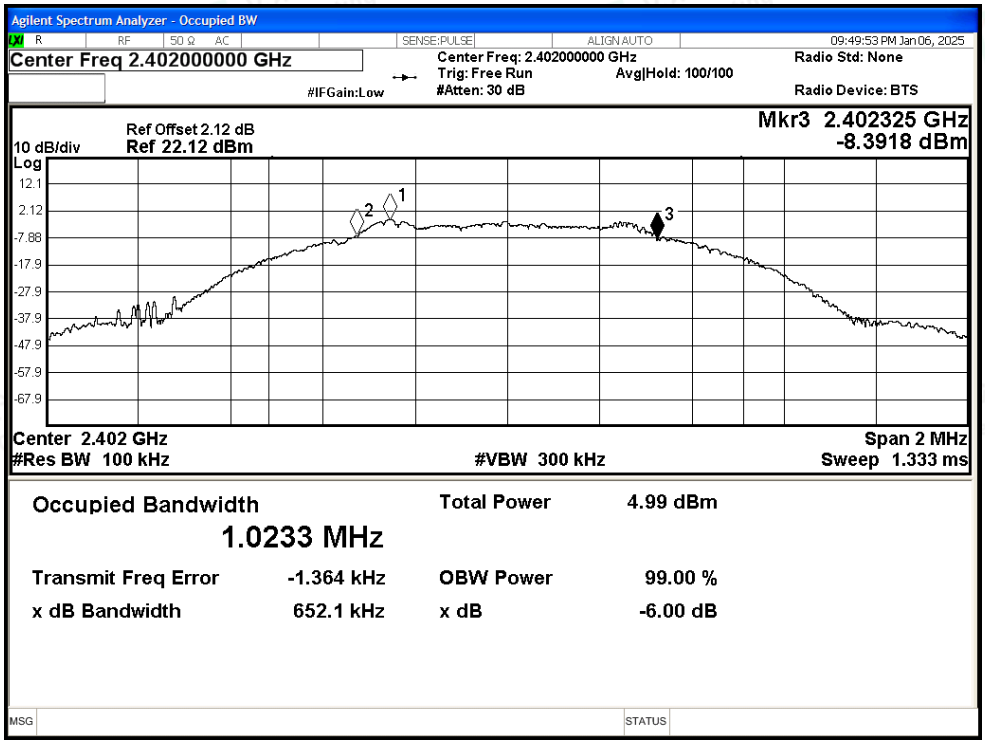
Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng

B.1 -6dB Bandwidth

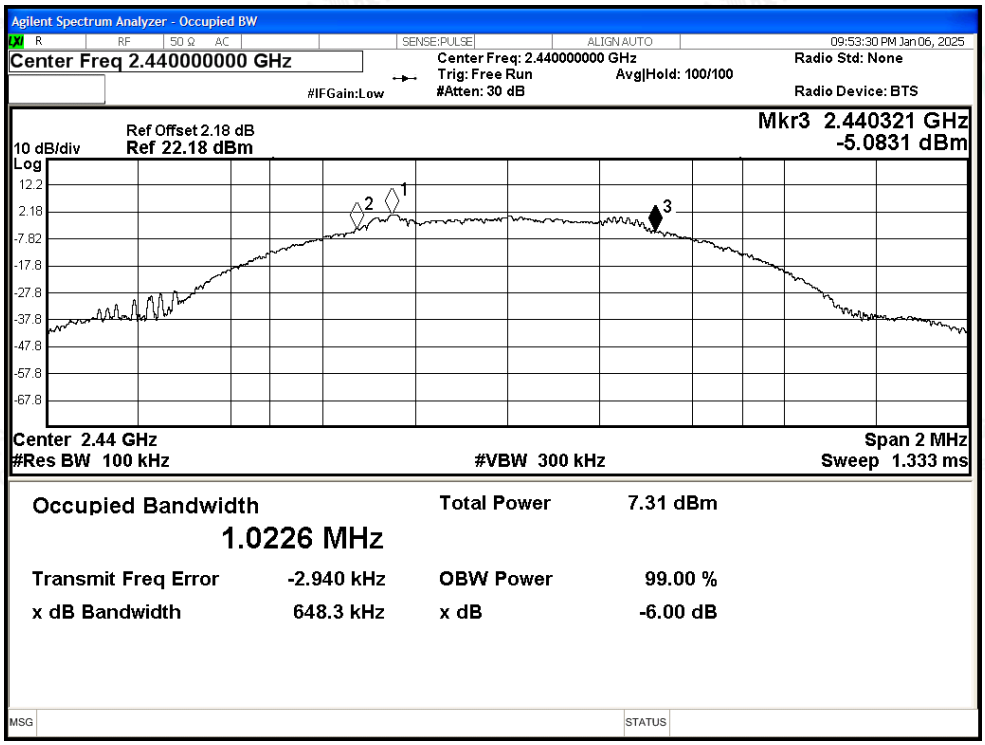
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant3	0.652	>=0.5	Pass
NVNT	BLE 1M	2440	Ant3	0.648	>=0.5	Pass
NVNT	BLE 1M	2480	Ant3	0.652	>=0.5	Pass
NVNT	BLE 2M	2402	Ant3	1.118	>=0.5	Pass
NVNT	BLE 2M	2440	Ant3	1.163	>=0.5	Pass
NVNT	BLE 2M	2480	Ant3	1.167	>=0.5	Pass

Test Graphs

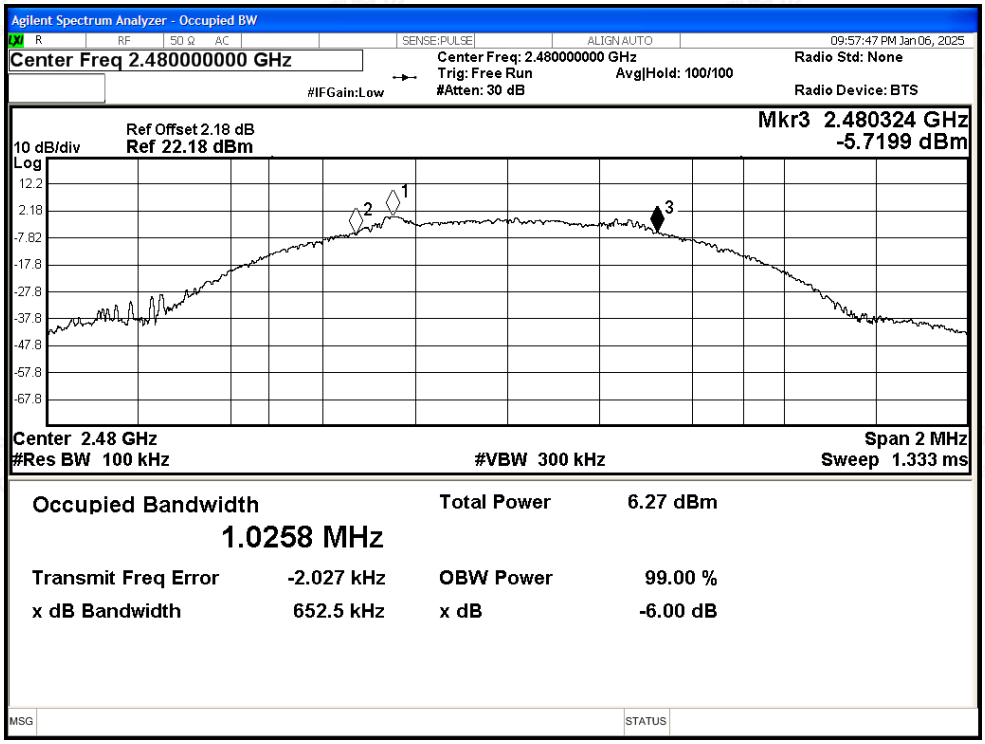
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant3



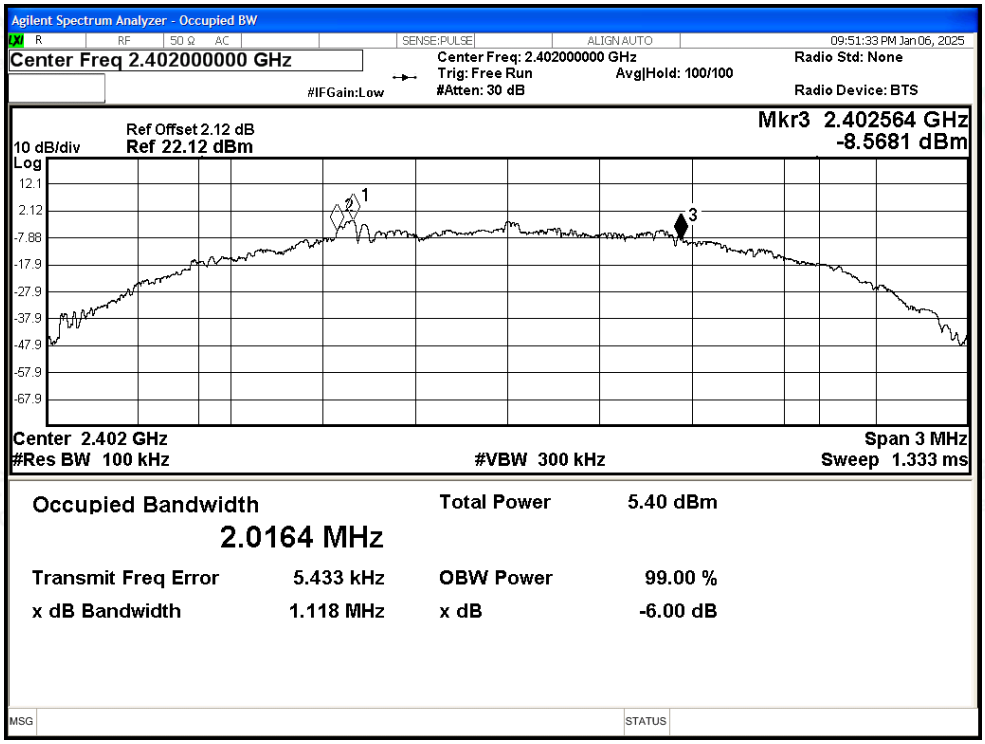
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant3



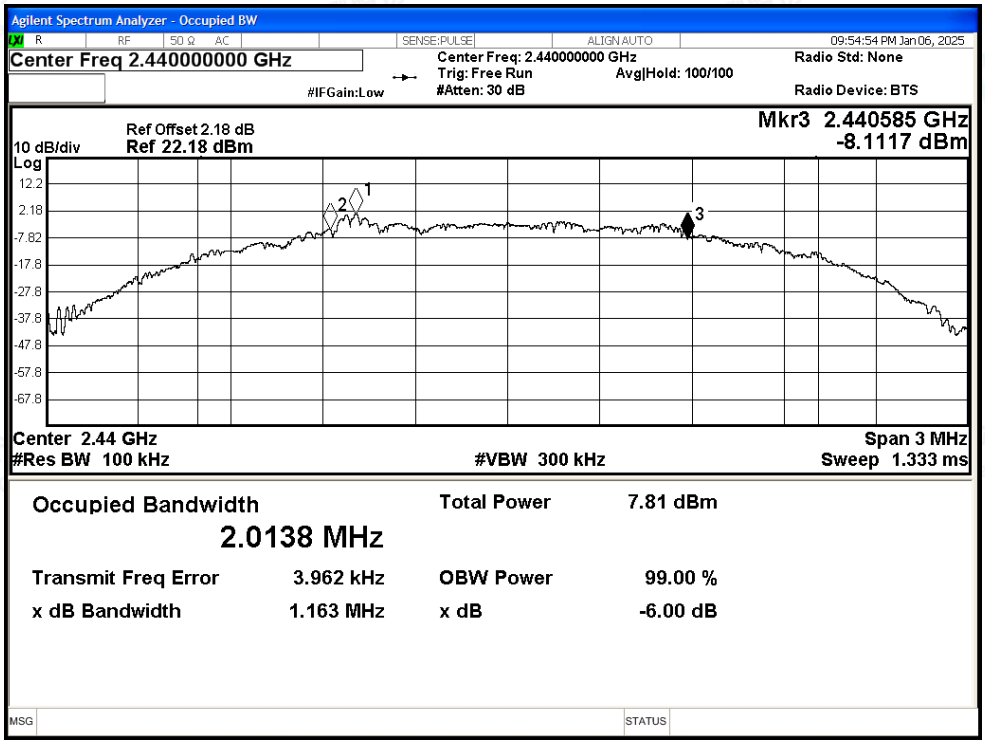
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant3



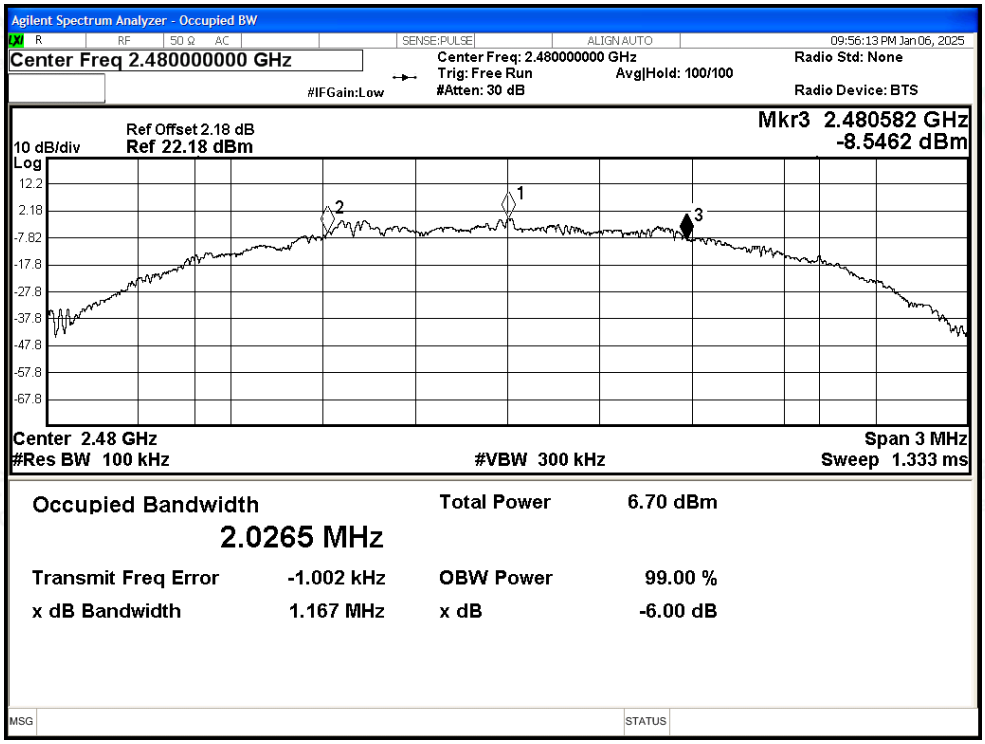
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant3



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant3



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant3

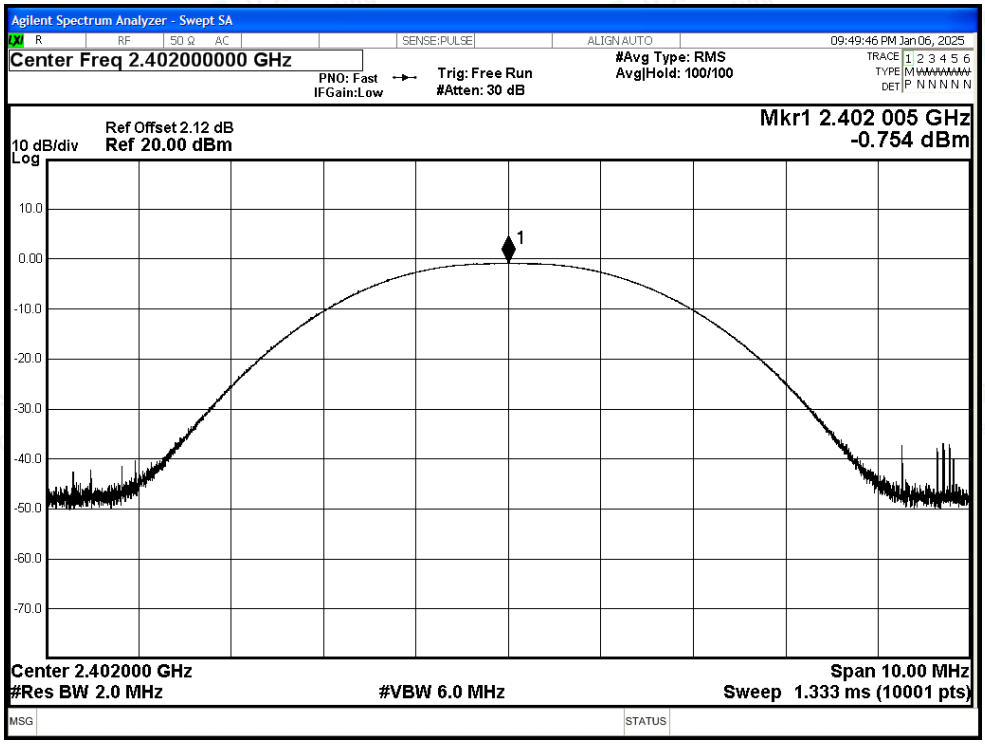


B.2 Maximum Peak Conducted Output Power

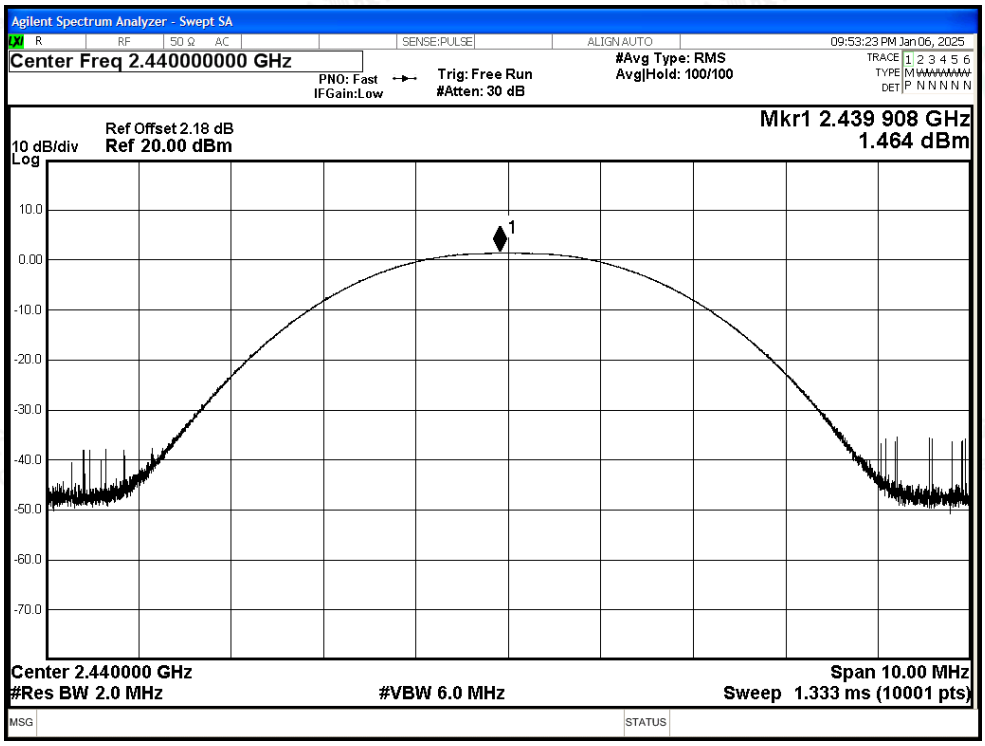
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant3	-0.75	30	Pass
NVNT	BLE 1M	2440	Ant3	1.46	30	Pass
NVNT	BLE 1M	2480	Ant3	0.5	30	Pass
NVNT	BLE 2M	2402	Ant3	-0.93	30	Pass
NVNT	BLE 2M	2440	Ant3	1.48	30	Pass
NVNT	BLE 2M	2480	Ant3	0.33	30	Pass

Test Graphs

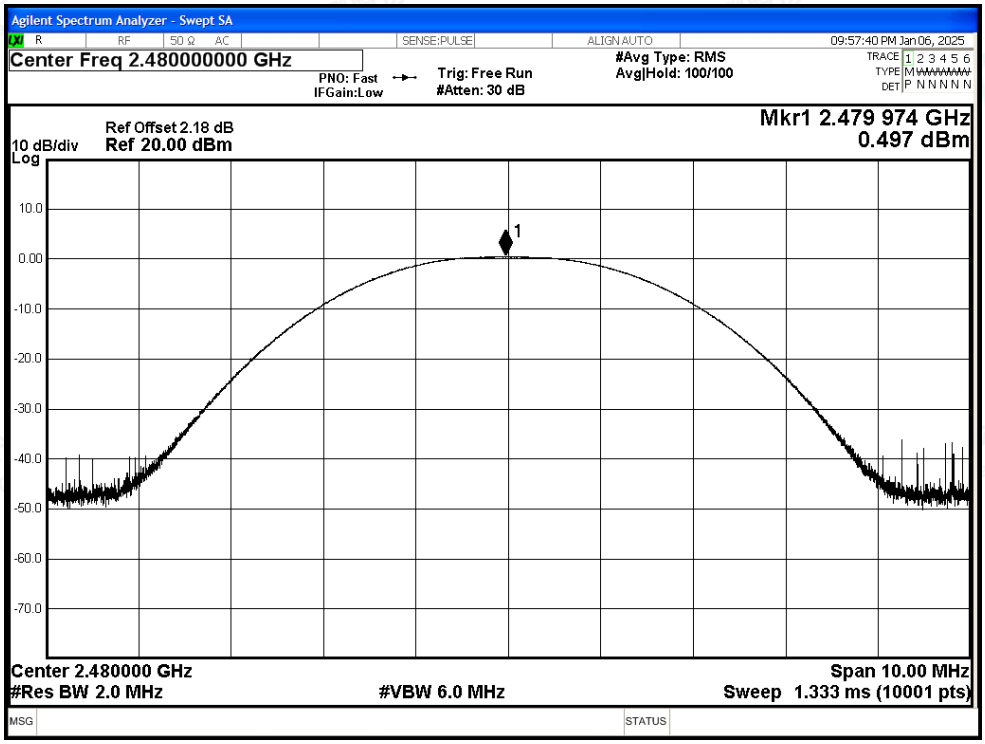
Power NVNT BLE 1M 2402MHz Ant3



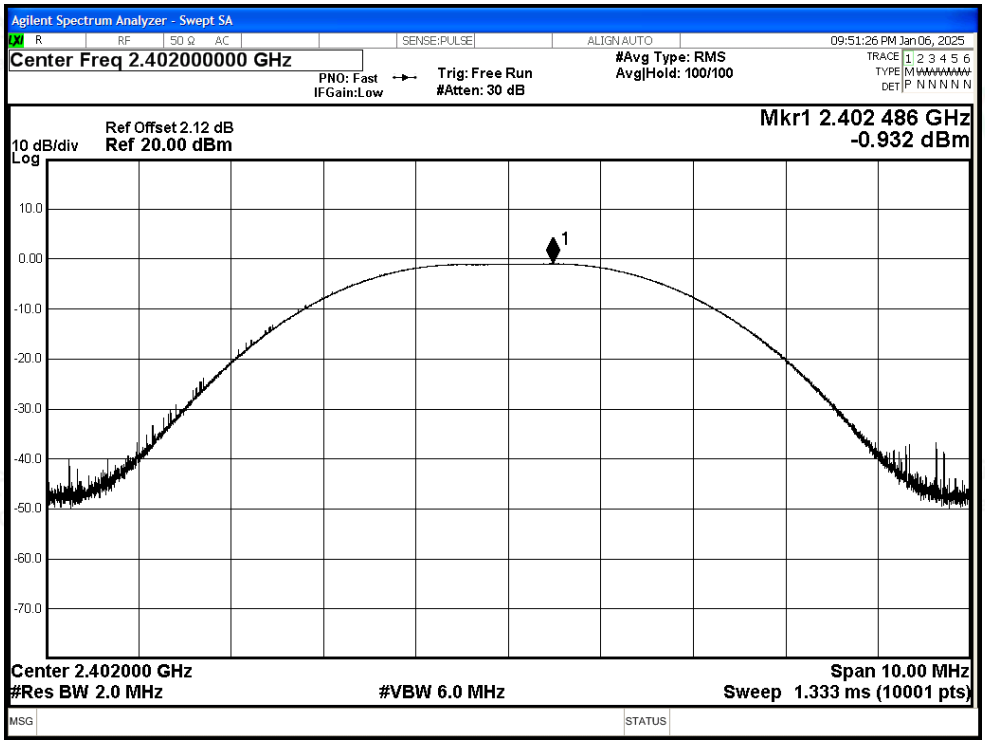
Power NVNT BLE 1M 2440MHz Ant3



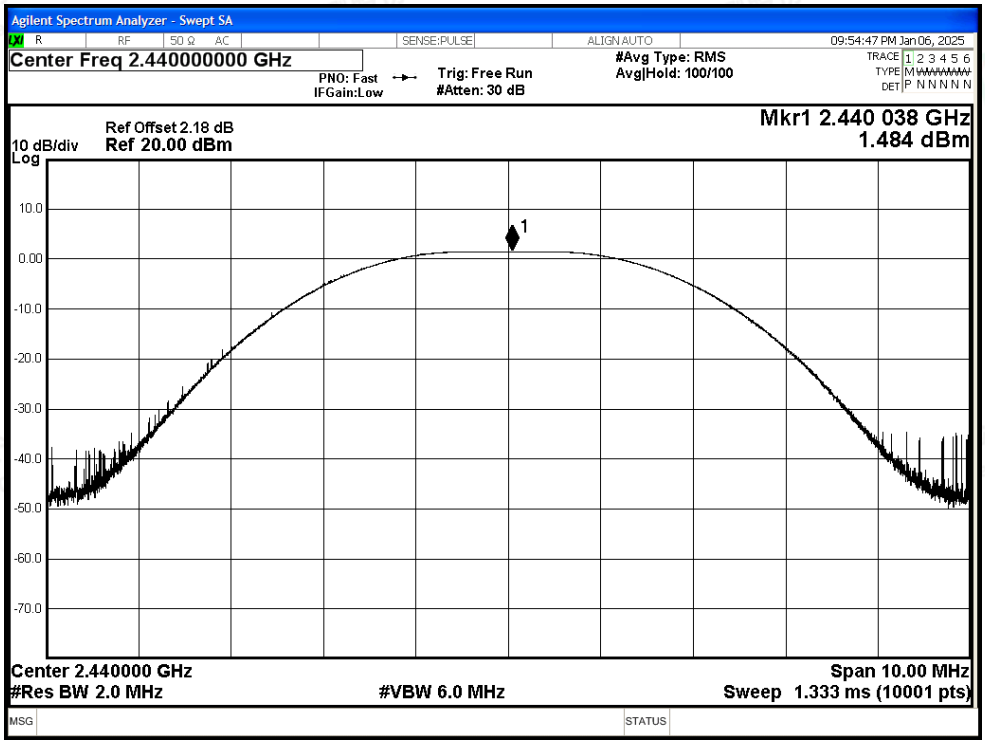
Power NVNT BLE 1M 2480MHz Ant3



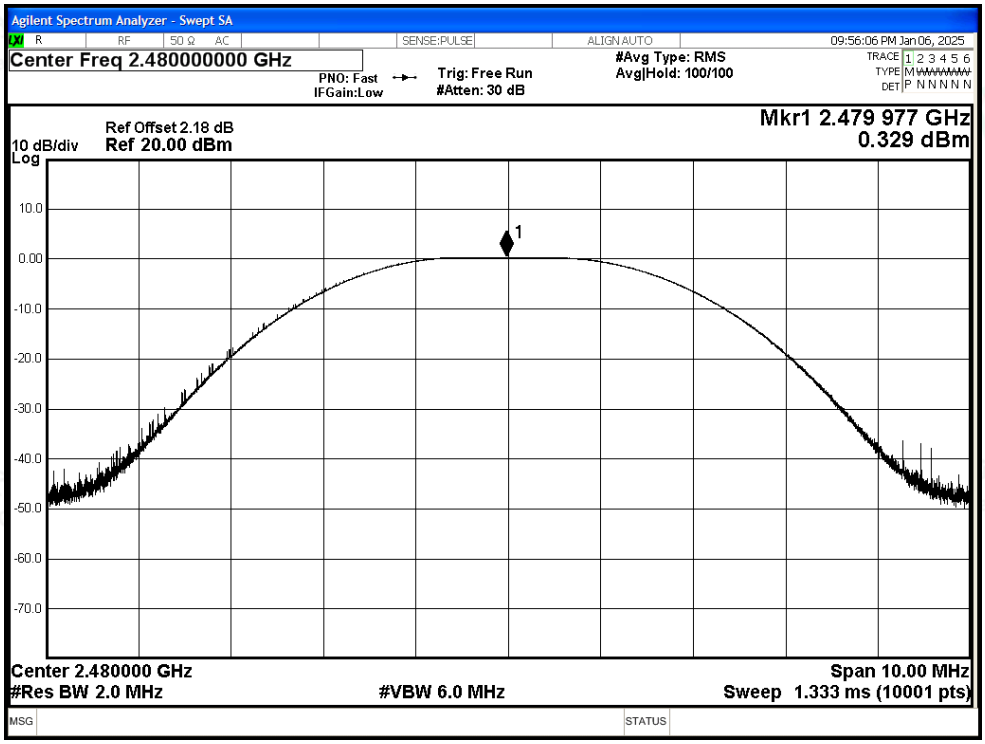
Power NVNT BLE 2M 2402MHz Ant3



Power NVNT BLE 2M 2440MHz Ant3



Power NVNT BLE 2M 2480MHz Ant3

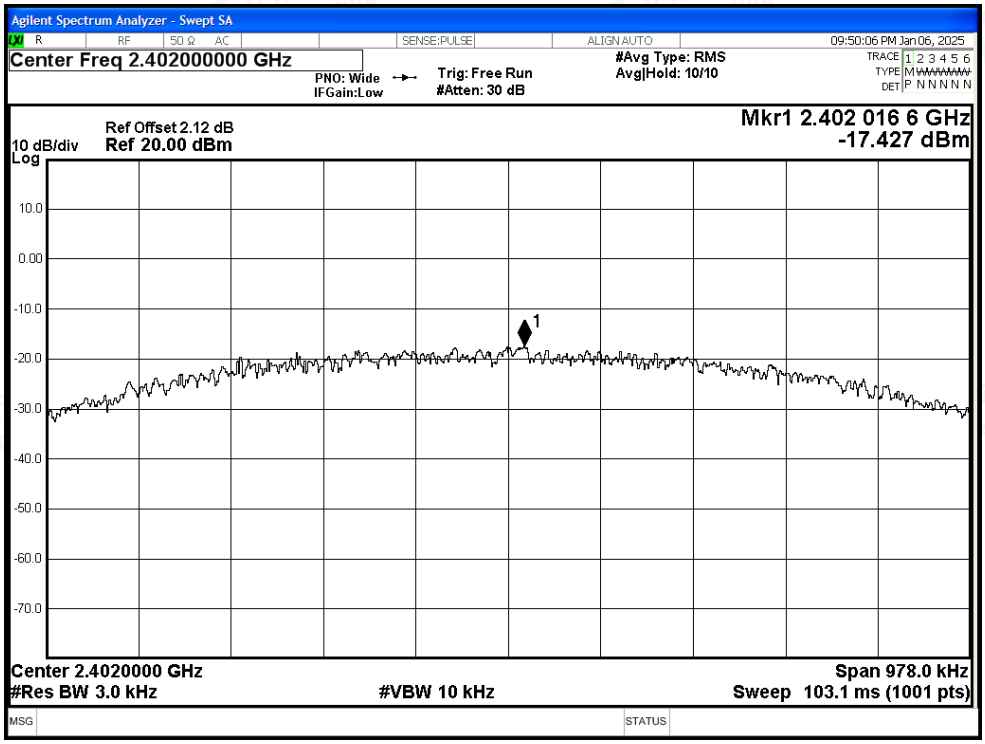


B.3 Maximum Power Spectral Density Level

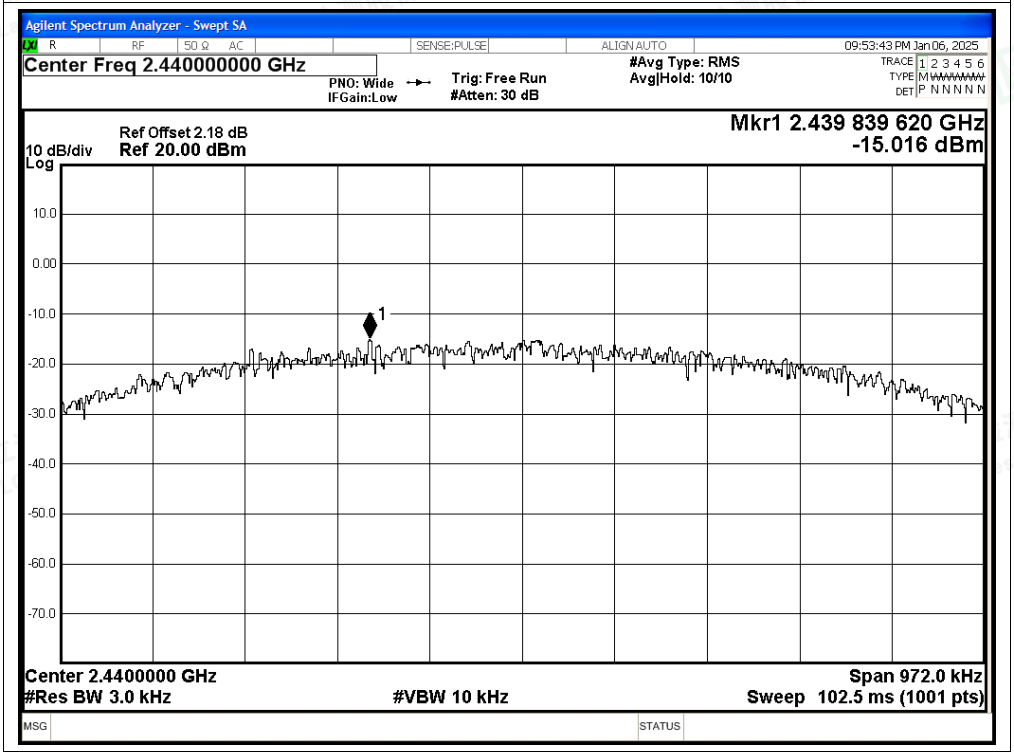
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant3	-17.43	8	Pass
NVNT	BLE 1M	2440	Ant3	-15.02	8	Pass
NVNT	BLE 1M	2480	Ant3	-16.15	8	Pass
NVNT	BLE 2M	2402	Ant3	-20.57	8	Pass
NVNT	BLE 2M	2440	Ant3	-17.93	8	Pass
NVNT	BLE 2M	2480	Ant3	-19.75	8	Pass

Test Graphs

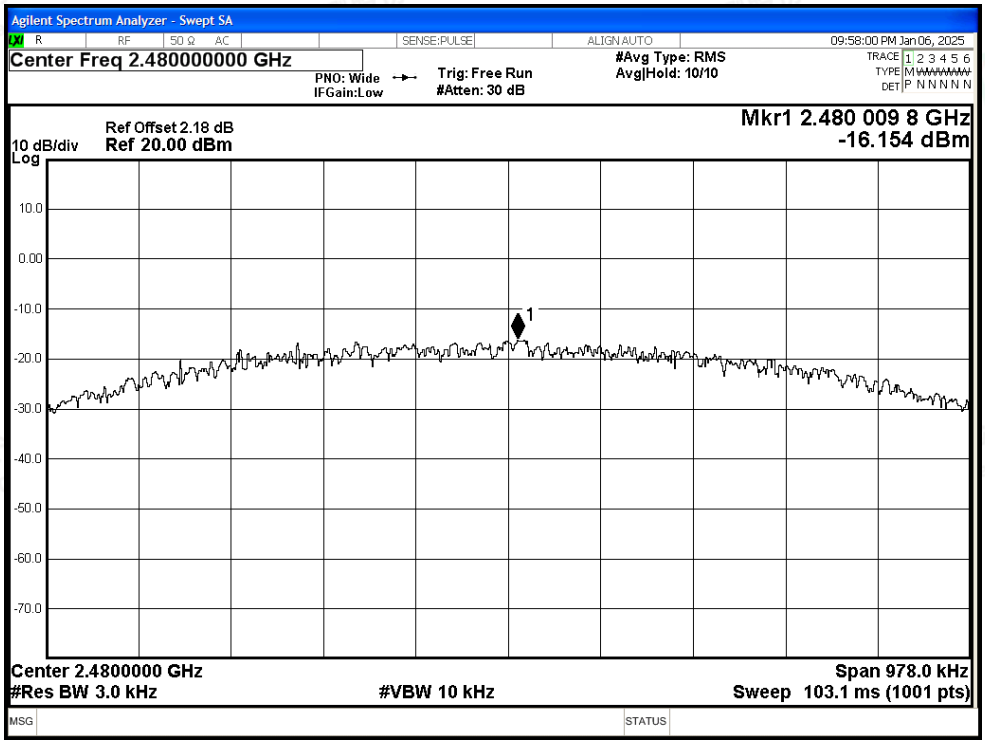
PSD NVNT BLE 1M 2402MHz Ant3



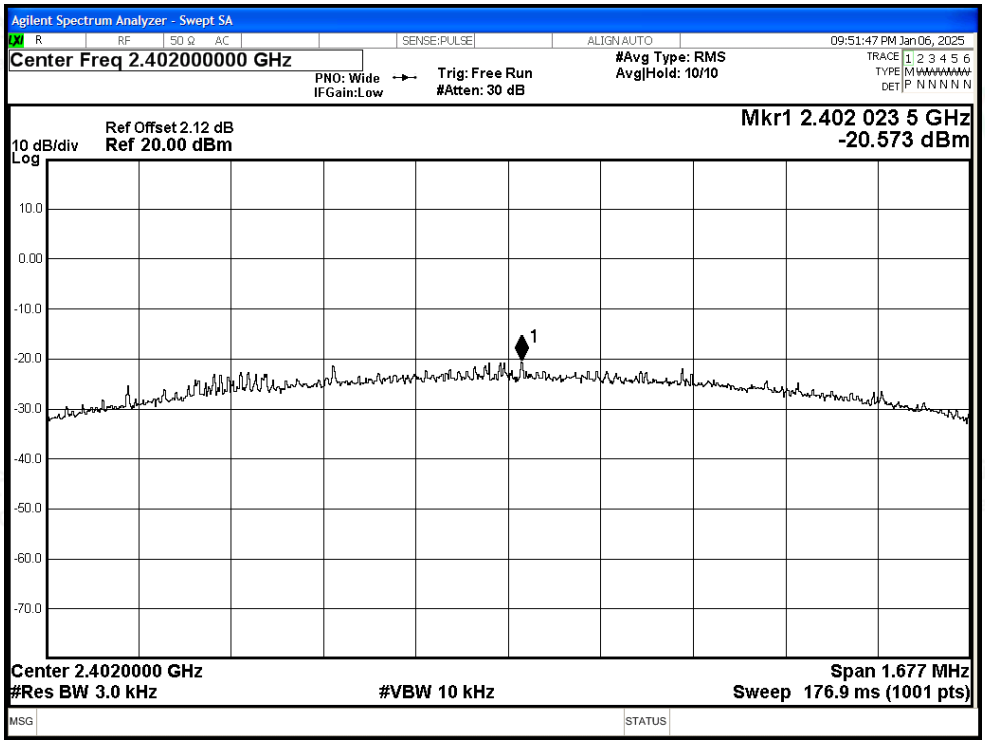
PSD NVNT BLE 1M 2440MHz Ant3



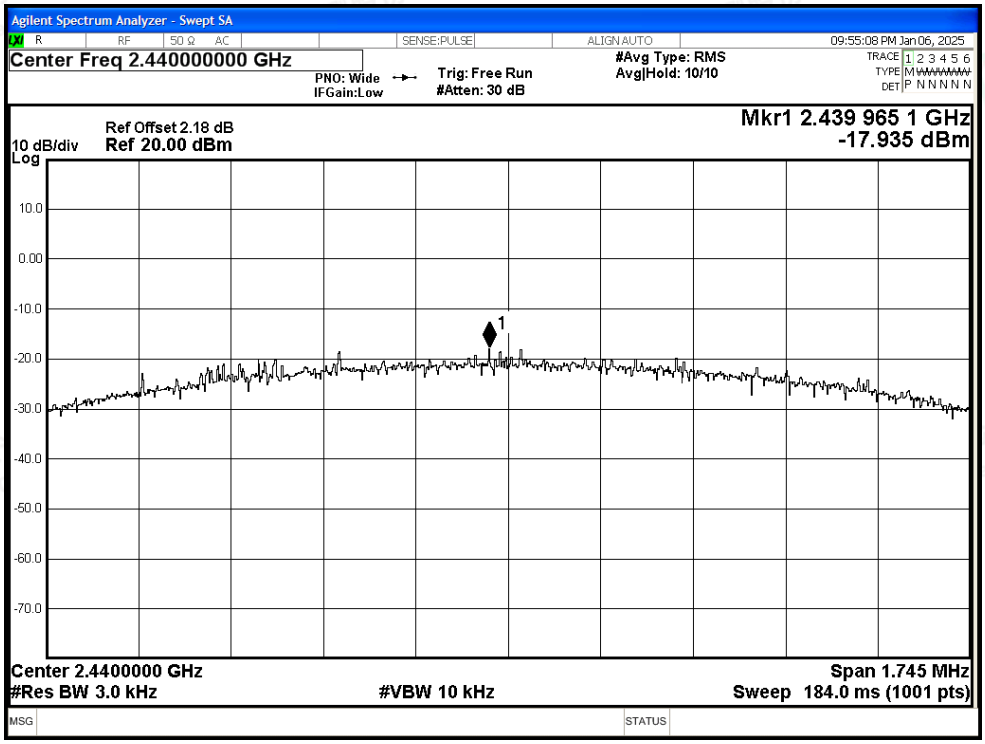
PSD NVNT BLE 1M 2480MHz Ant3



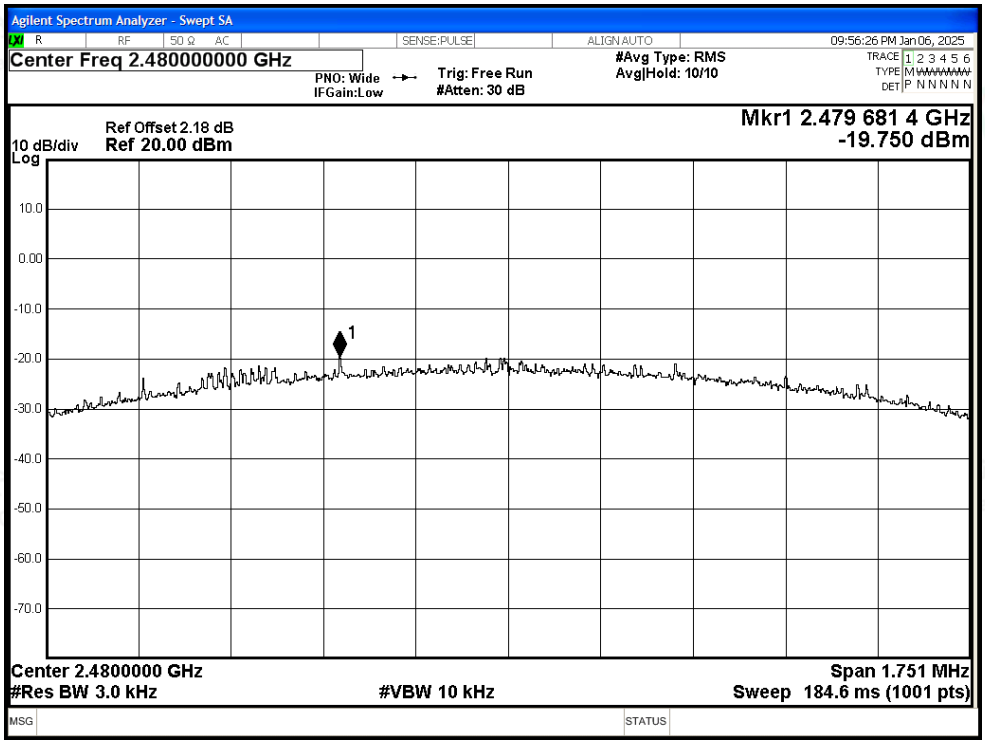
PSD NVNT BLE 2M 2402MHz Ant3



PSD NVNT BLE 2M 2440MHz Ant3



PSD NVNT BLE 2M 2480MHz Ant3

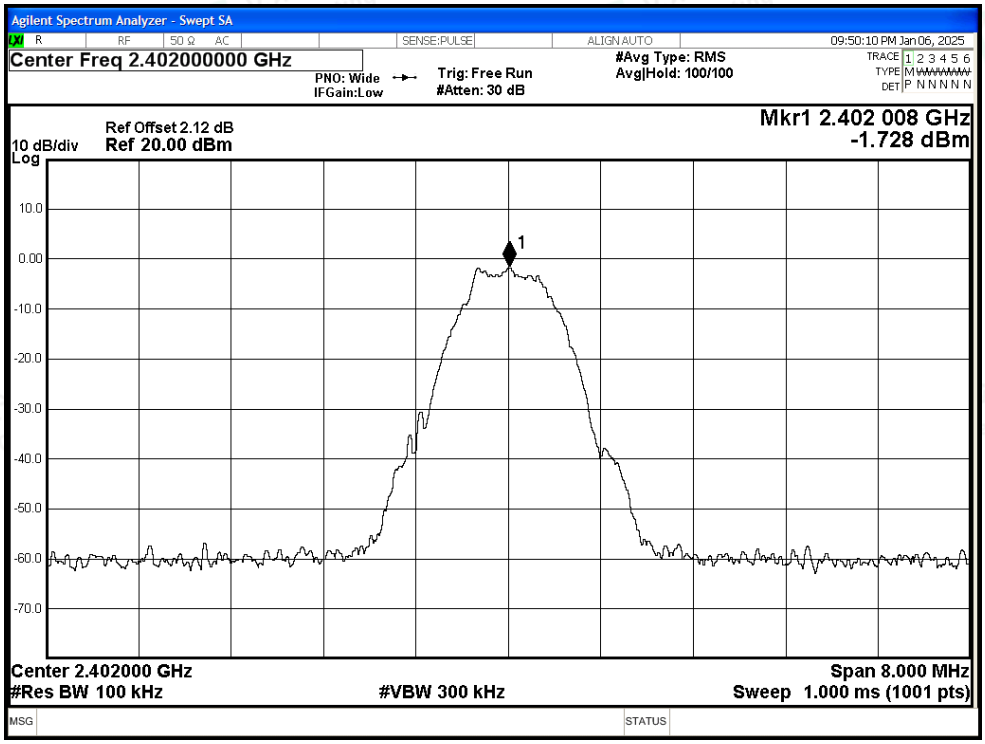


B.4 Band Edge

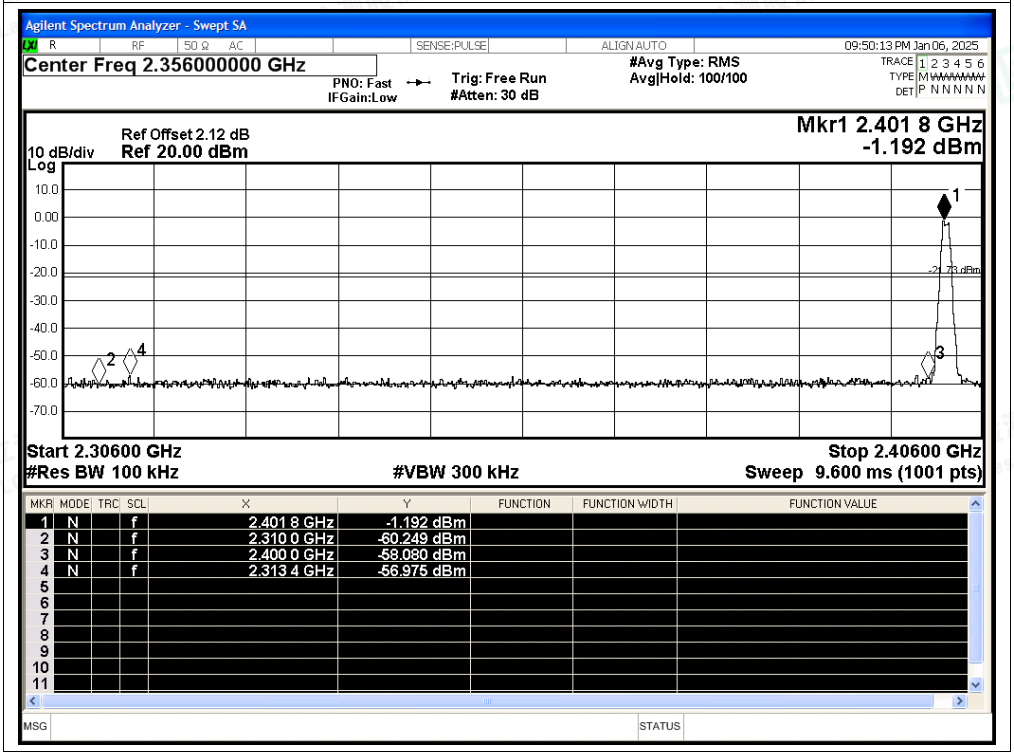
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant3	-55.25	-20	Pass
NVNT	BLE 1M	2480	Ant3	-56.12	-20	Pass
NVNT	BLE 2M	2402	Ant3	-43.86	-20	Pass
NVNT	BLE 2M	2480	Ant3	-55.77	-20	Pass

Test Graphs

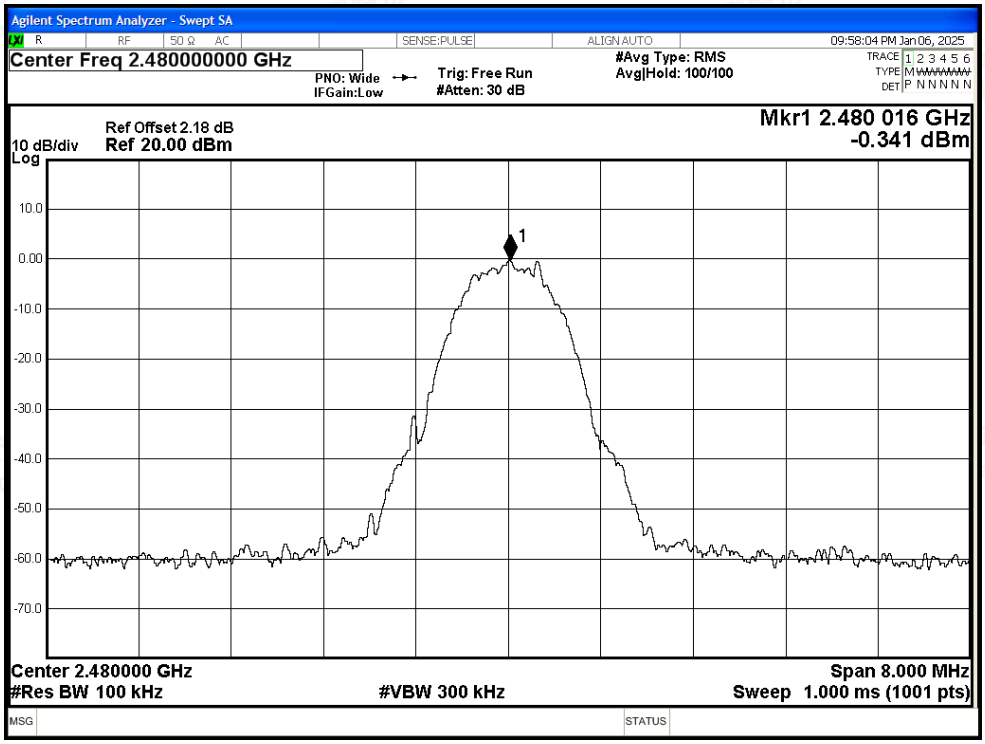
Band Edge NVNT BLE 1M 2402MHz Ant3 Ref



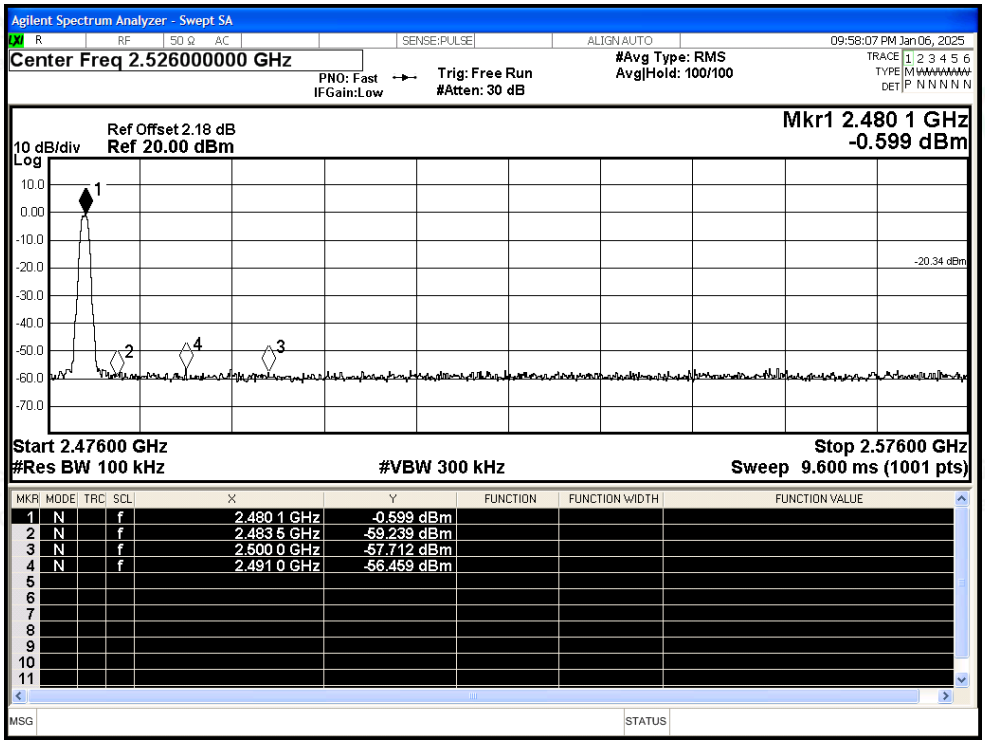
Band Edge NVNT BLE 1M 2402MHz Ant3 Emission



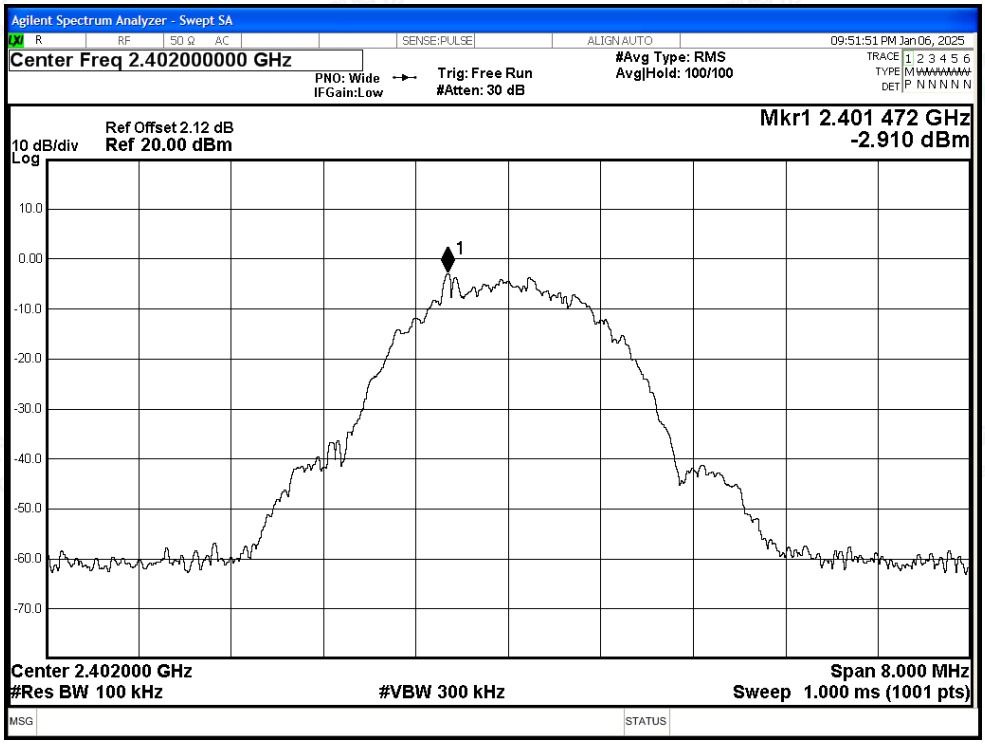
Band Edge NVNT BLE 1M 2480MHz Ant3 Ref



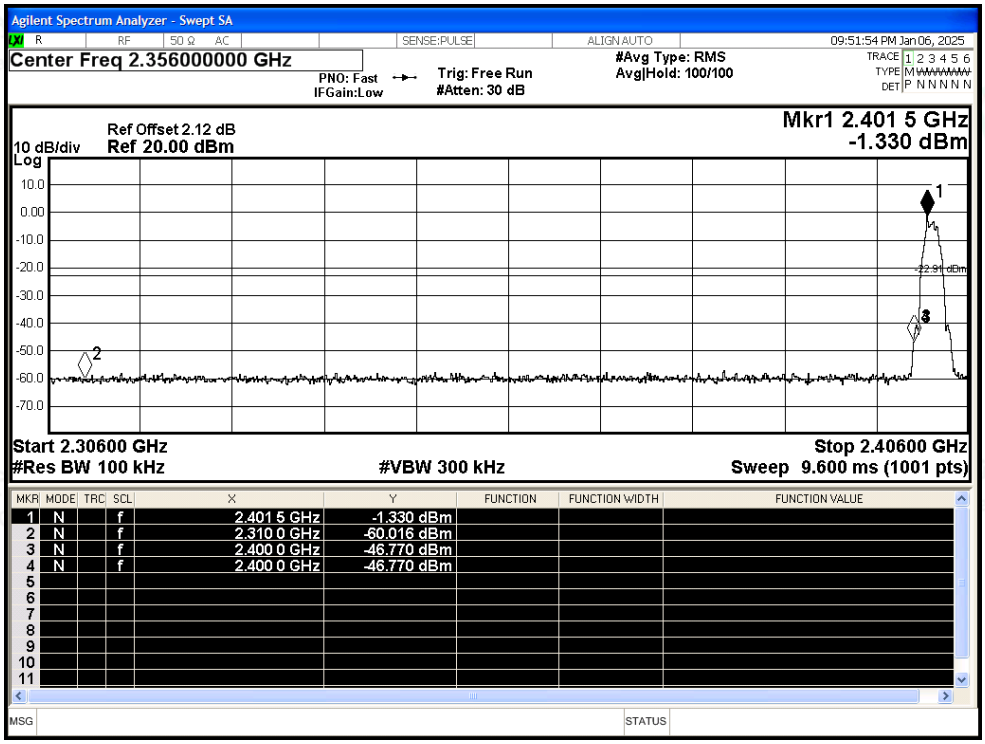
Band Edge NVNT BLE 1M 2480MHz Ant3 Emission



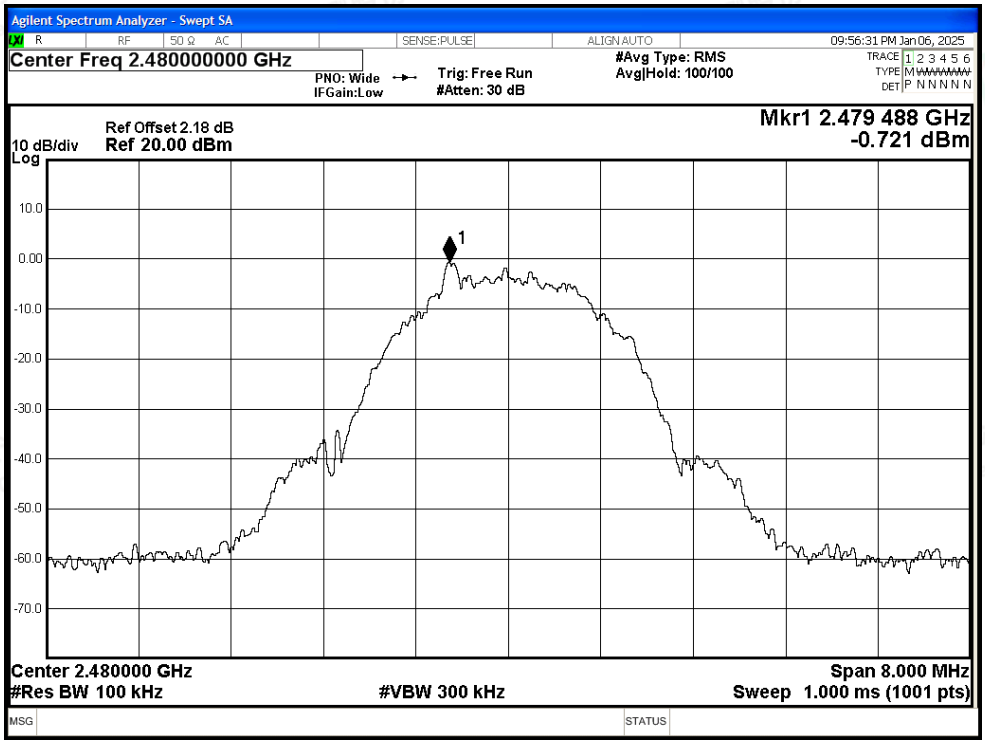
Band Edge NVNT BLE 2M 2402MHz Ant3 Ref



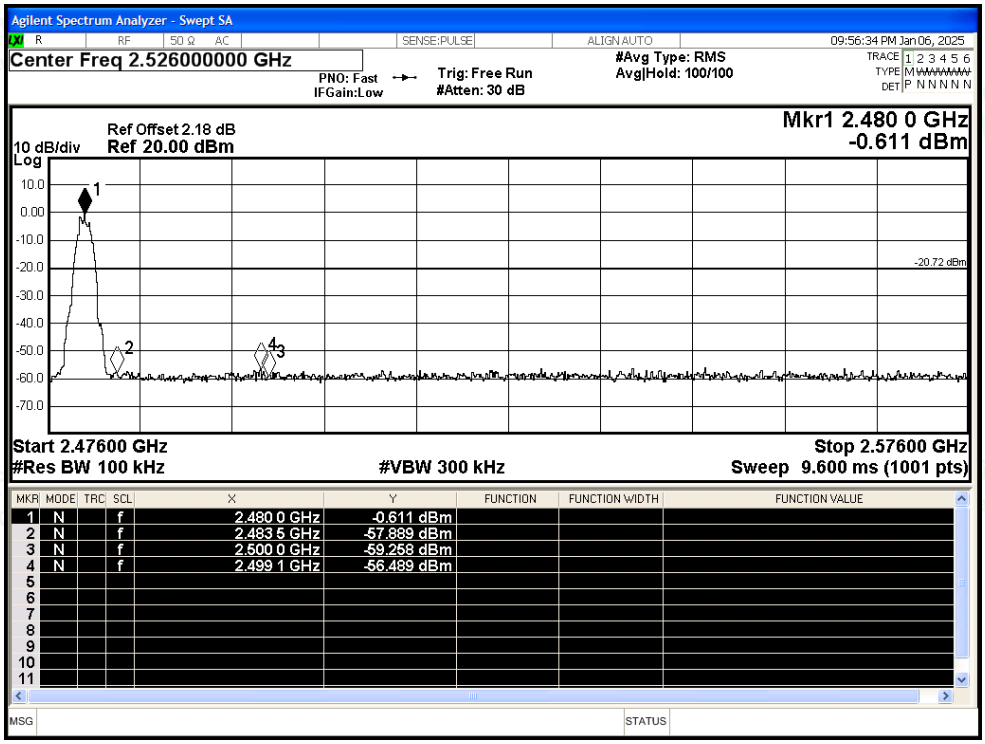
Band Edge NVNT BLE 2M 2402MHz Ant3 Emission



Band Edge NVNT BLE 2M 2480MHz Ant3 Ref



Band Edge NVNT BLE 2M 2480MHz Ant3 Emission

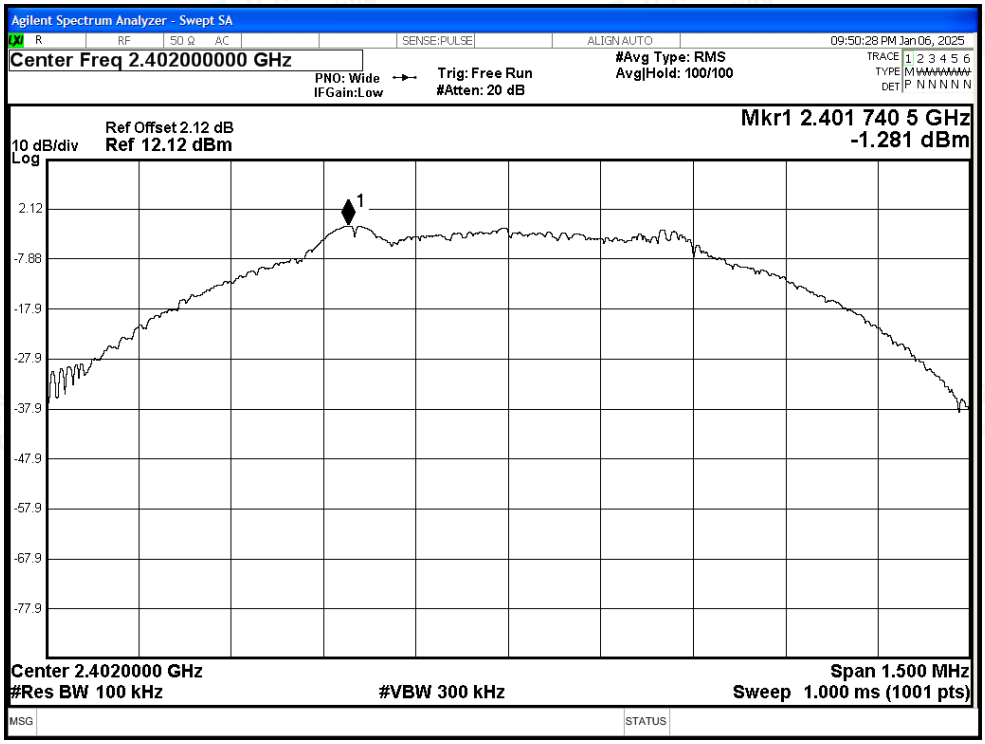


B.5 Conducted RF Spurious Emission

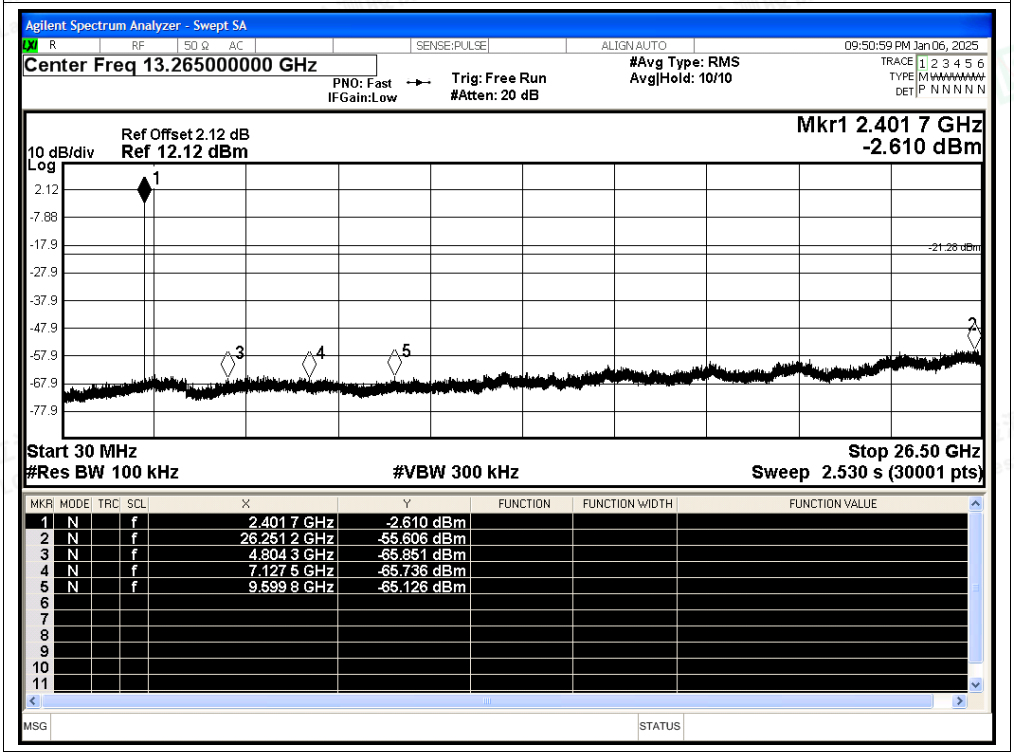
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant3	-54.33	-20	Pass
NVNT	BLE 1M	2440	Ant3	-55.67	-20	Pass
NVNT	BLE 1M	2480	Ant3	-54.82	-20	Pass
NVNT	BLE 2M	2402	Ant3	-53.37	-20	Pass
NVNT	BLE 2M	2440	Ant3	-56	-20	Pass
NVNT	BLE 2M	2480	Ant3	-54.98	-20	Pass

Test Graphs

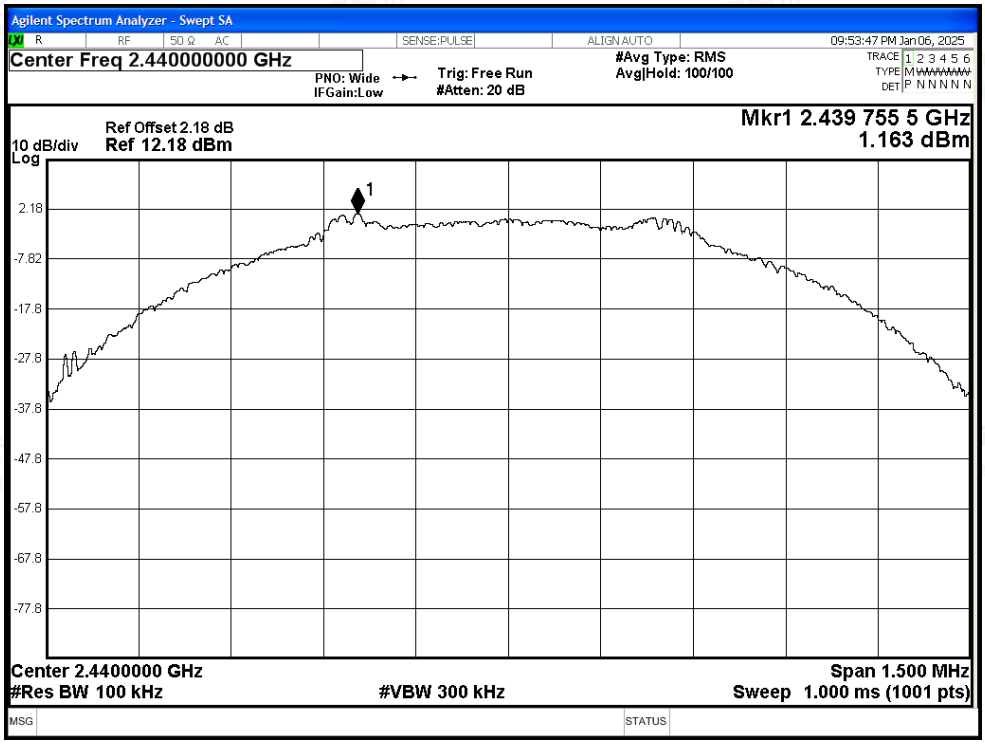
Tx. Spurious NVNT BLE 1M 2402MHz Ant3 Ref



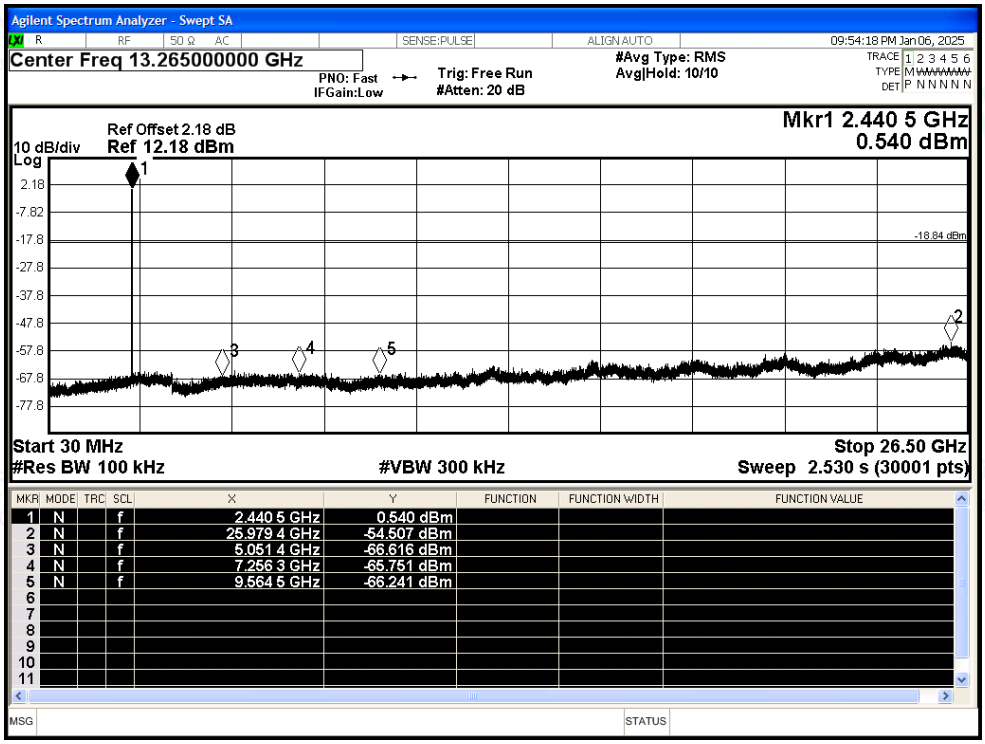
Tx. Spurious NVNT BLE 1M 2402MHz Ant3 Emission



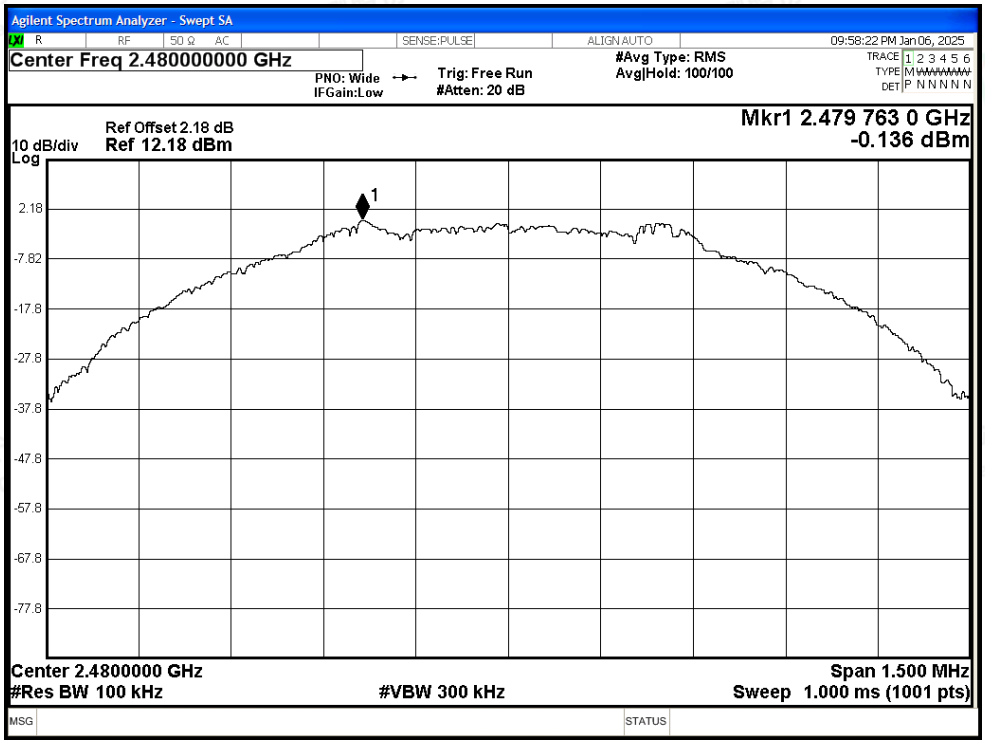
Tx. Spurious NVNT BLE 1M 2440MHz Ant3 Ref



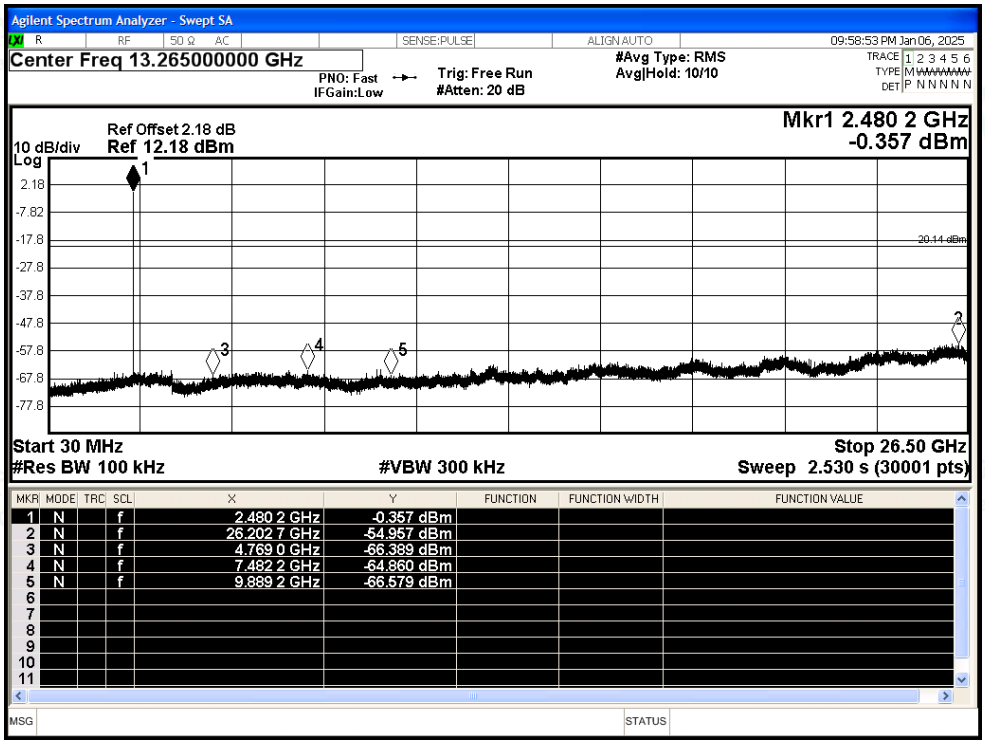
Tx. Spurious NVNT BLE 1M 2440MHz Ant3 Emission



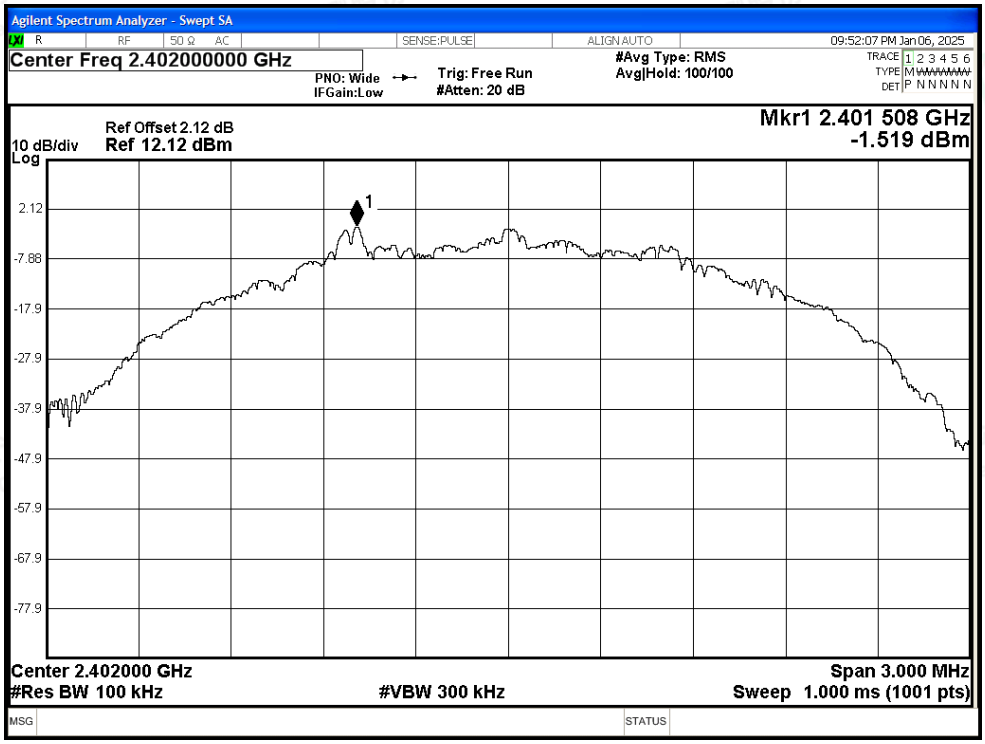
Tx. Spurious NVNT BLE 1M 2480MHz Ant3 Ref



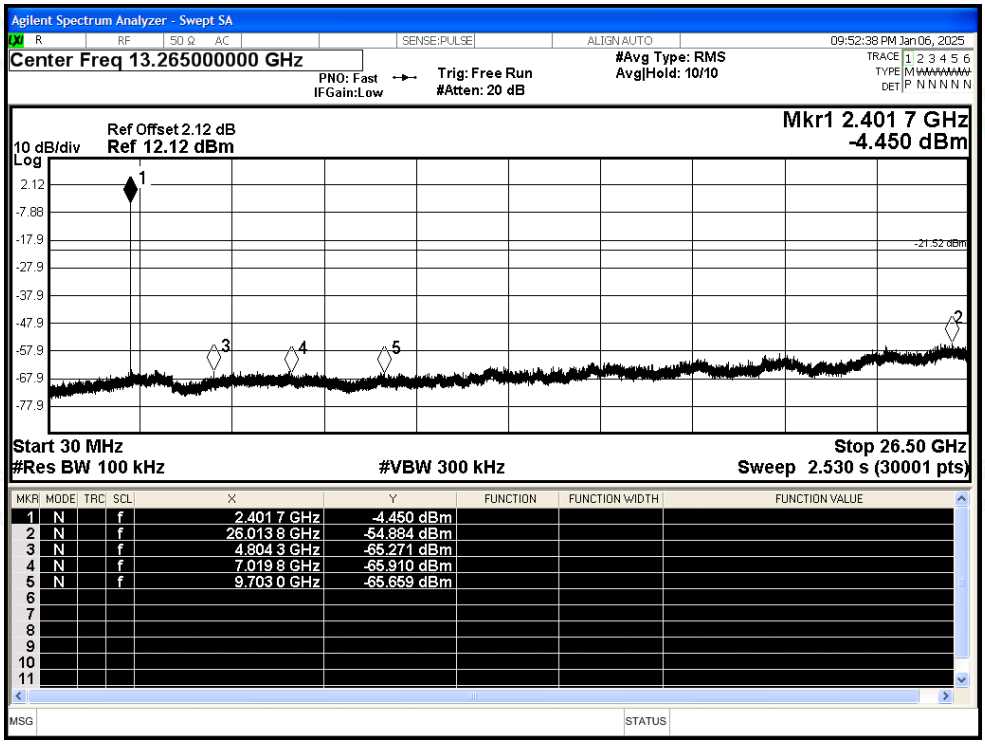
Tx. Spurious NVNT BLE 1M 2480MHz Ant3 Emission



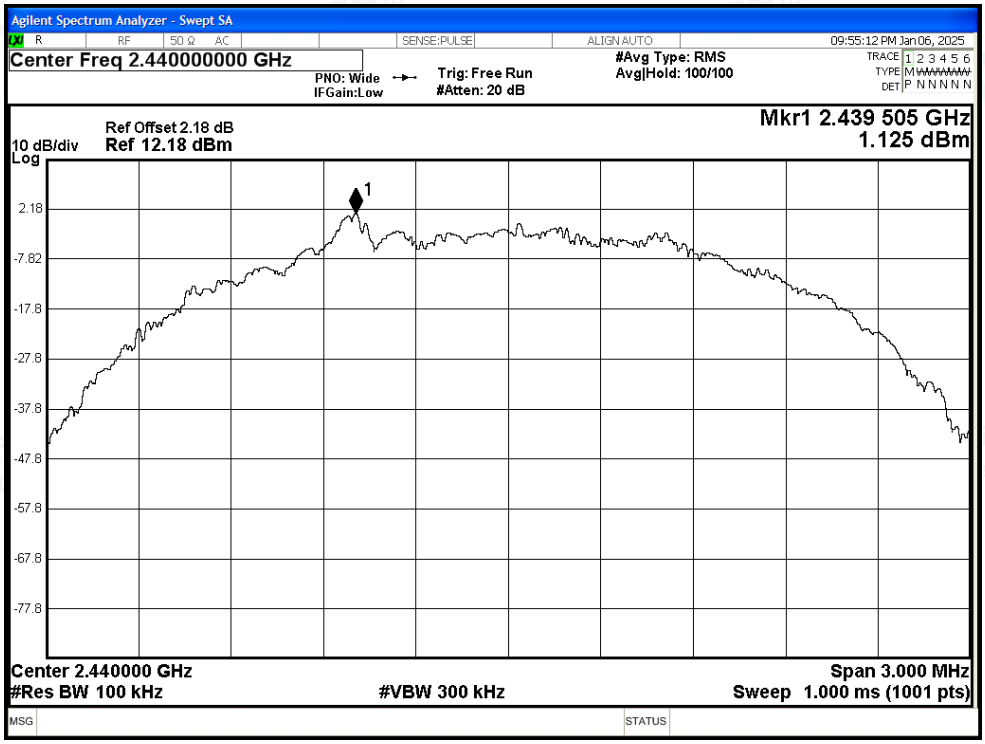
Tx. Spurious NVNT BLE 2M 2402MHz Ant3 Ref



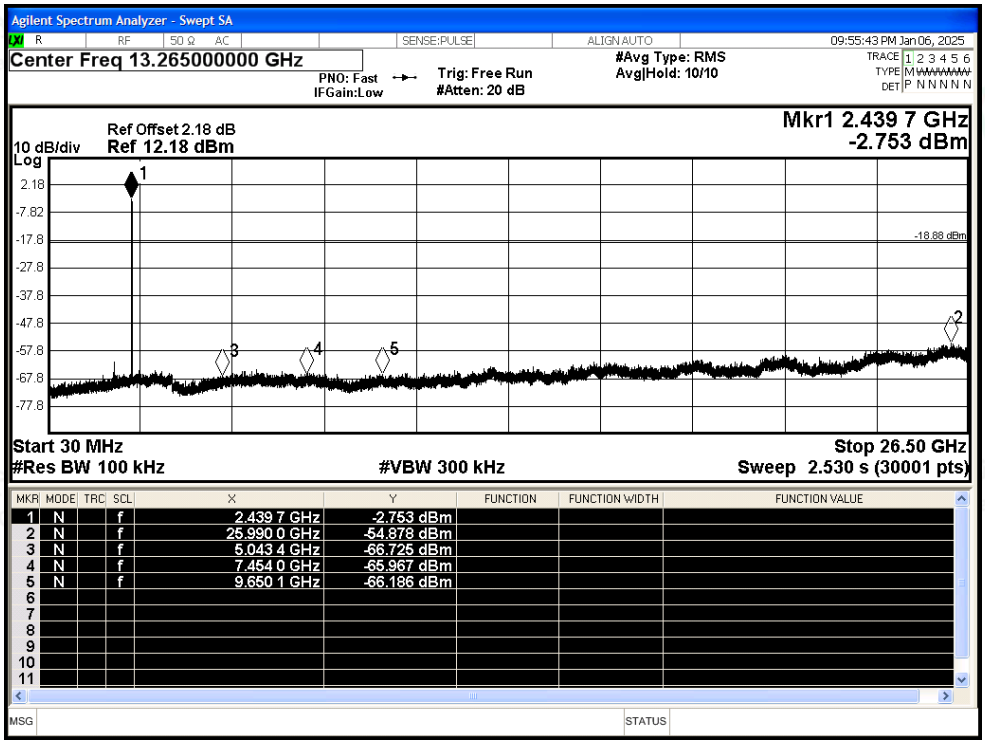
Tx. Spurious NVNT BLE 2M 2402MHz Ant3 Emission



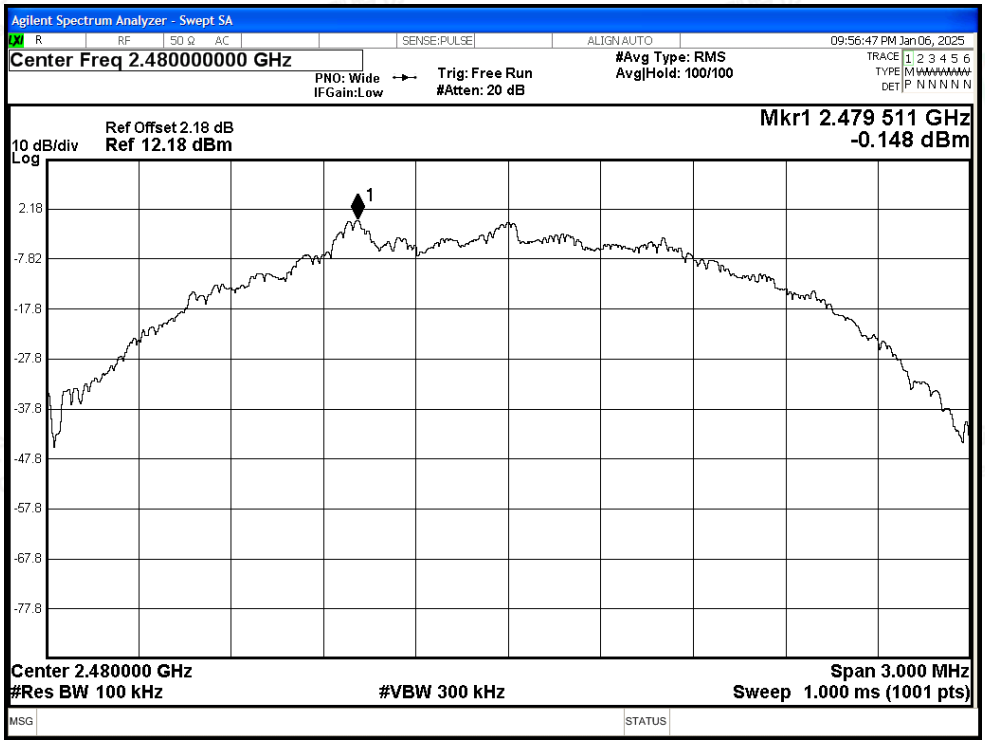
Tx. Spurious NVNT BLE 2M 2440MHz Ant3 Ref



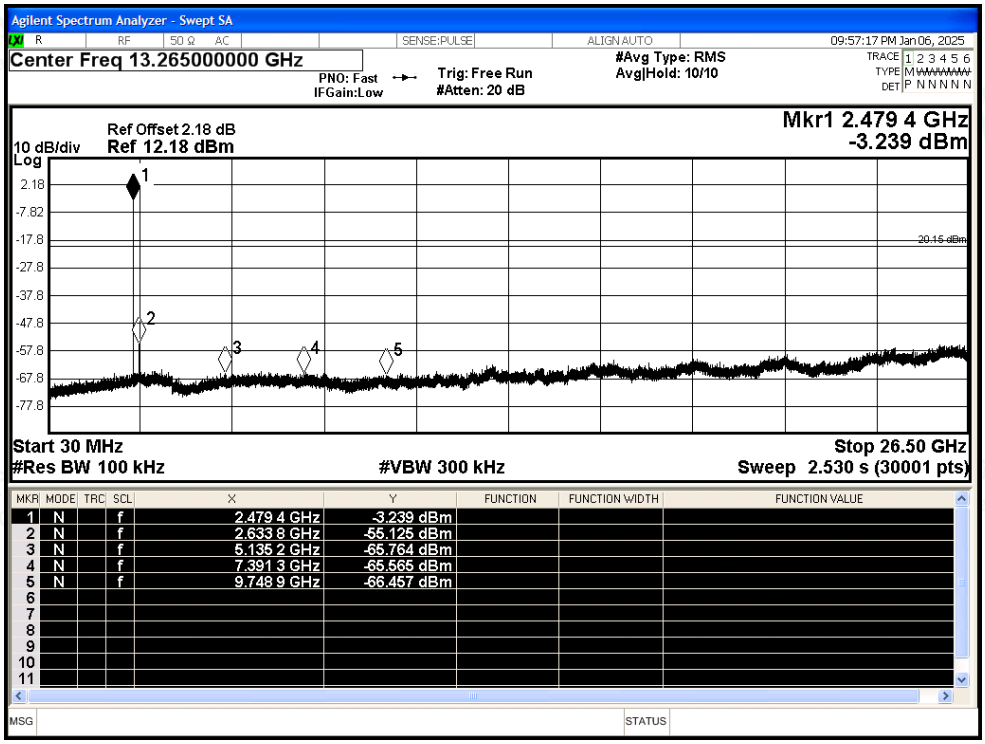
Tx. Spurious NVNT BLE 2M 2440MHz Ant3 Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ant3 Ref



Tx. Spurious NVNT BLE 2M 2480MHz Ant3 Emission

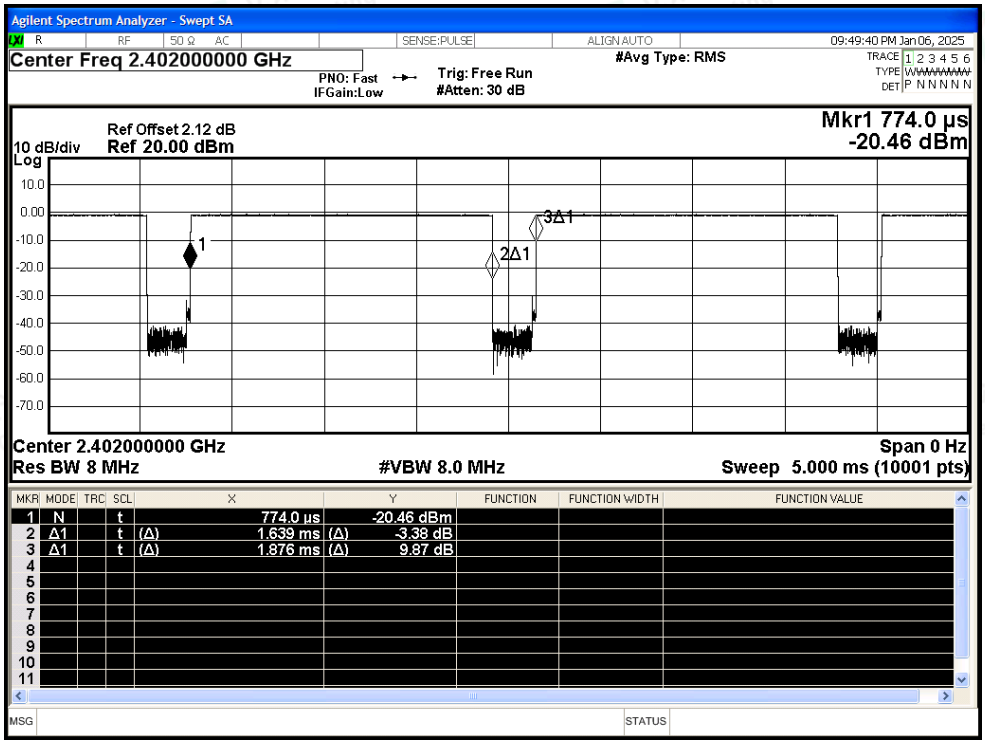


B.6 Duty Cycle

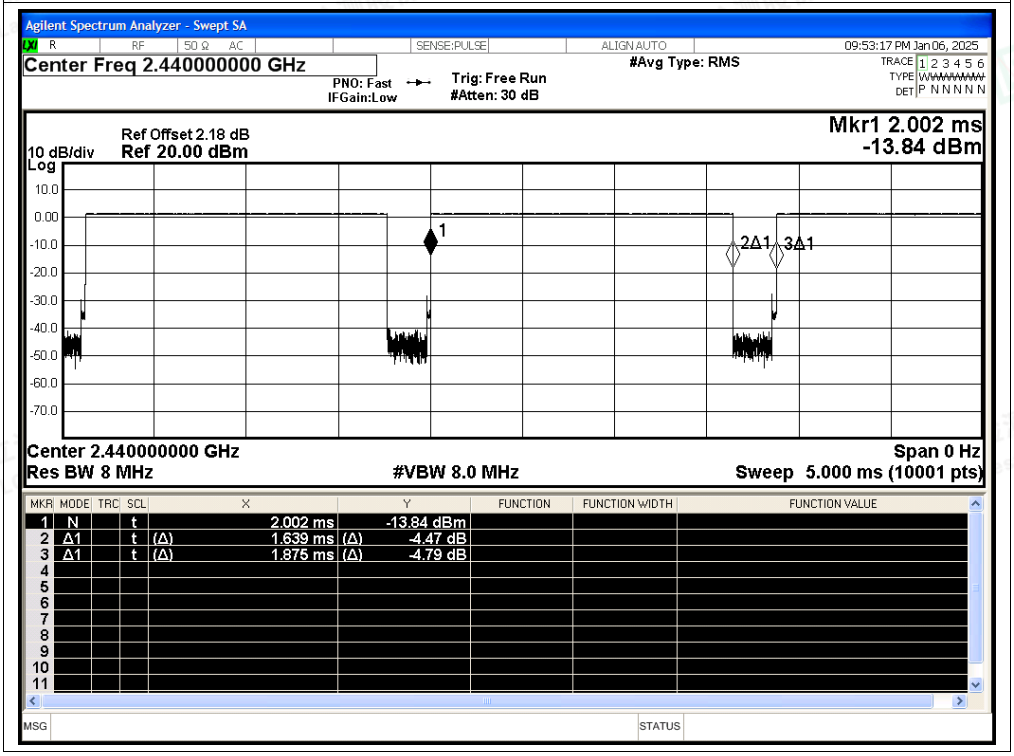
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant3	87.39	0.59	0.61
NVNT	BLE 1M	2440	Ant3	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant3	87.39	0.59	0.61
NVNT	BLE 2M	2402	Ant3	65.89	1.81	1.21
NVNT	BLE 2M	2440	Ant3	65.92	1.81	1.21
NVNT	BLE 2M	2480	Ant3	65.92	1.81	1.21

Test Graphs

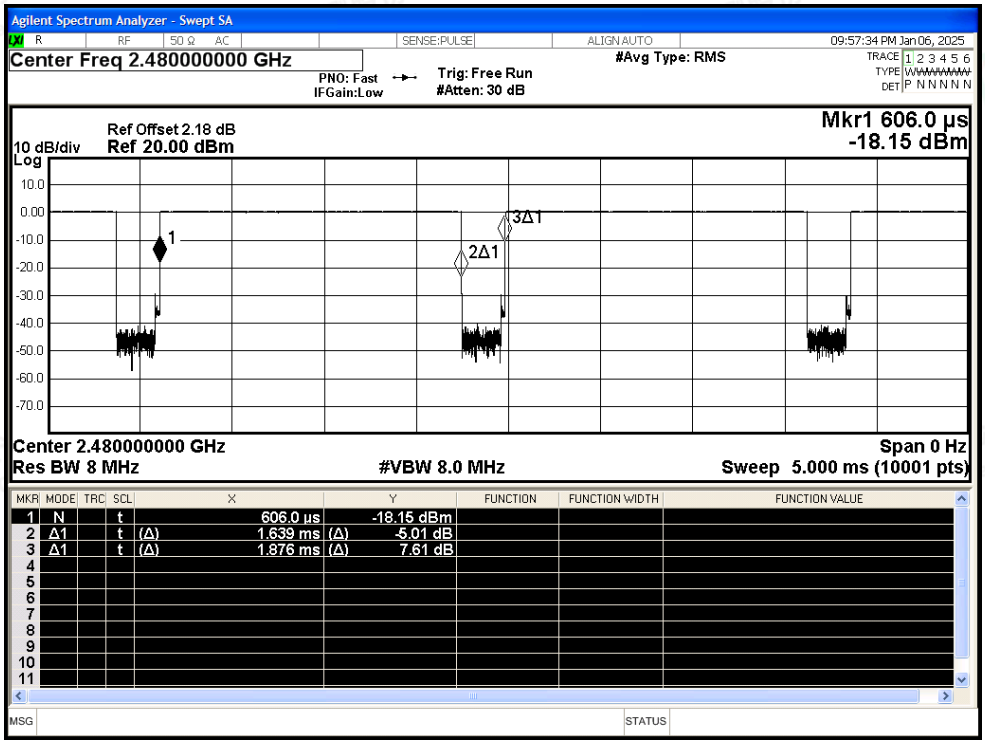
Duty Cycle NVNT BLE 1M 2402MHz Ant3



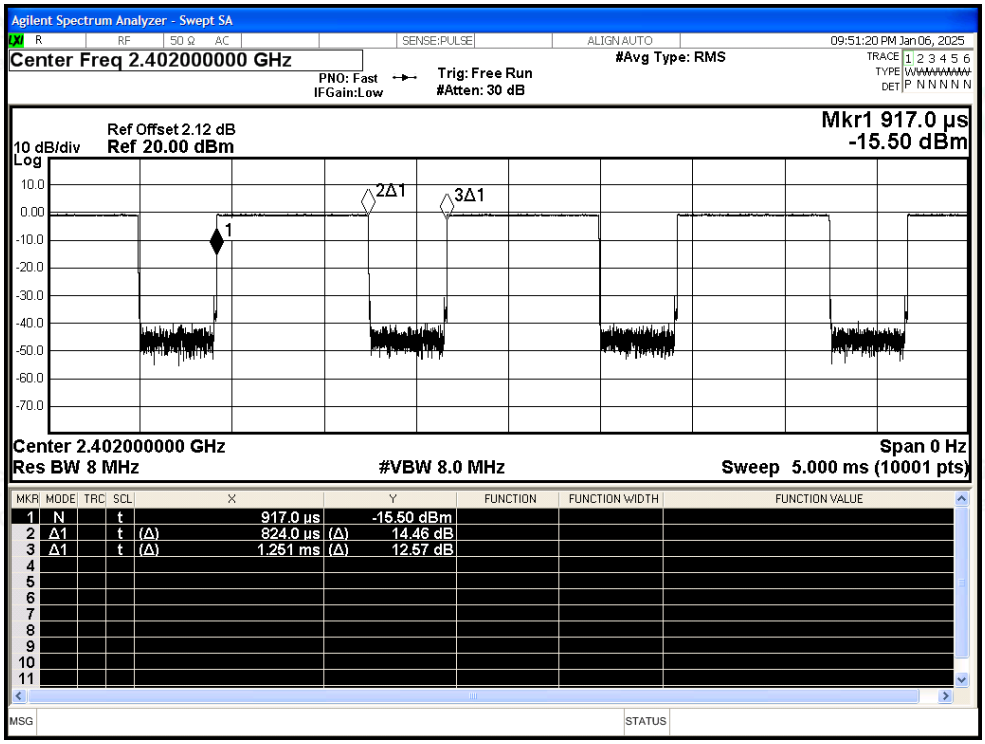
Duty Cycle NVNT BLE 1M 2440MHz Ant3



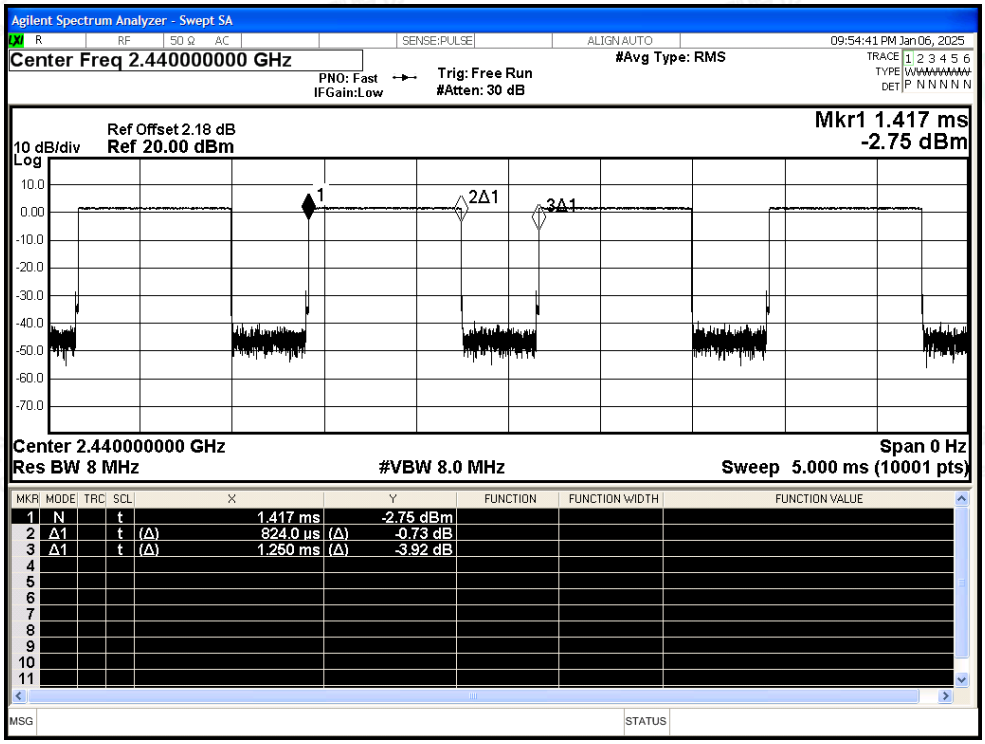
Duty Cycle NVNT BLE 1M 2480MHz Ant3



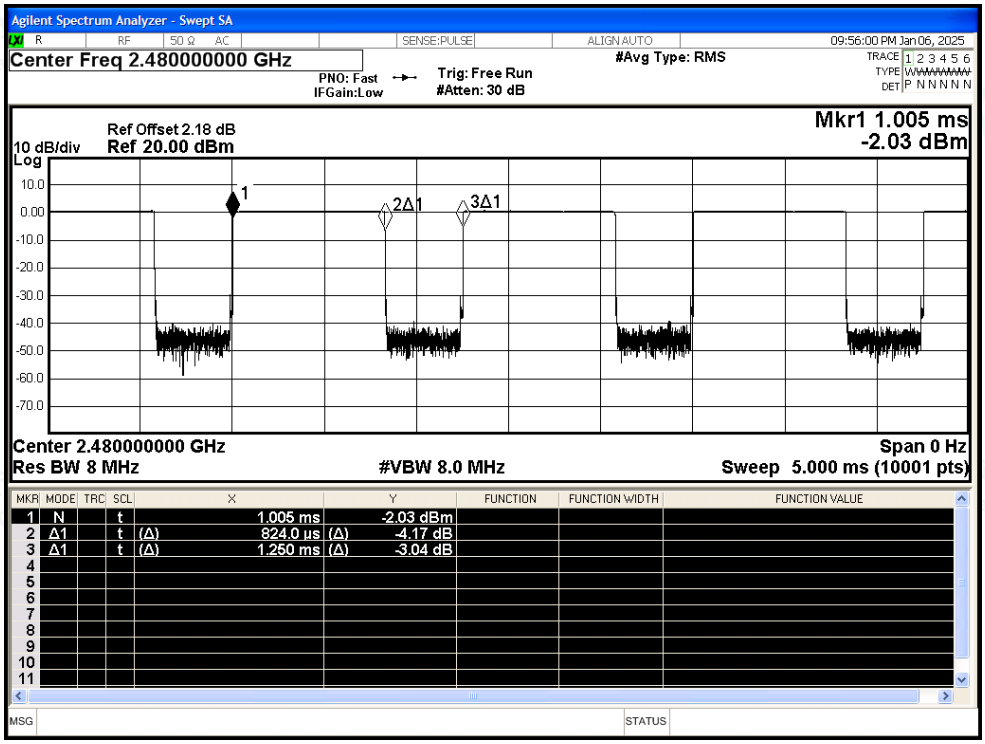
Duty Cycle NVNT BLE 2M 2402MHz Ant3



Duty Cycle NVNT BLE 2M 2440MHz Ant3



Duty Cycle NVNT BLE 2M 2480MHz Ant3

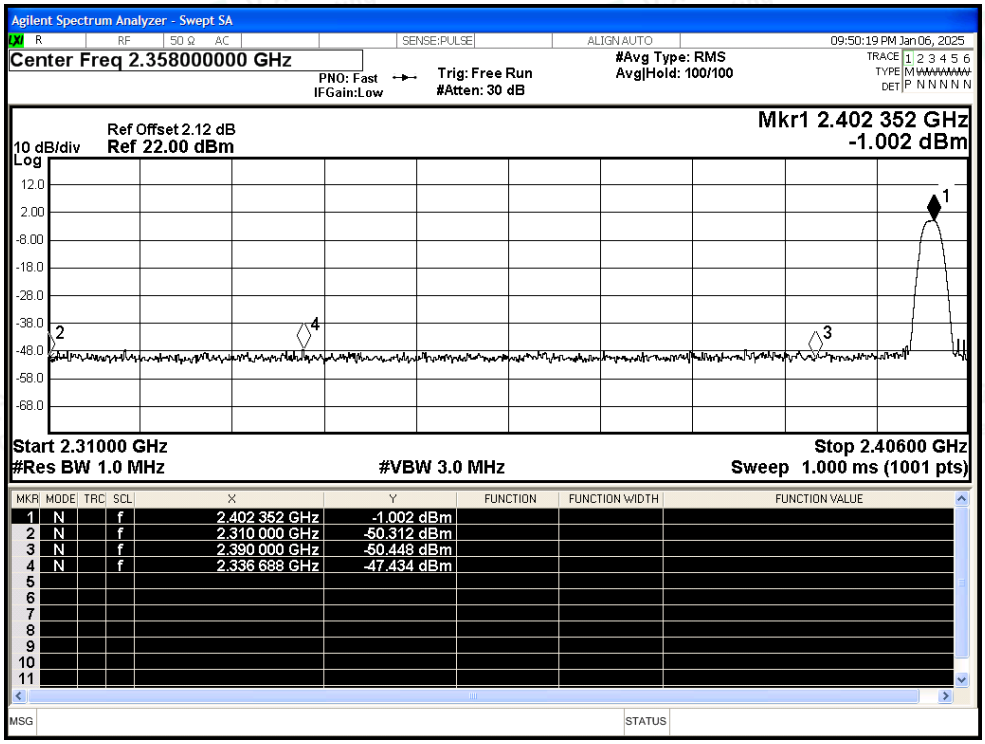


B.7 Restrict Band

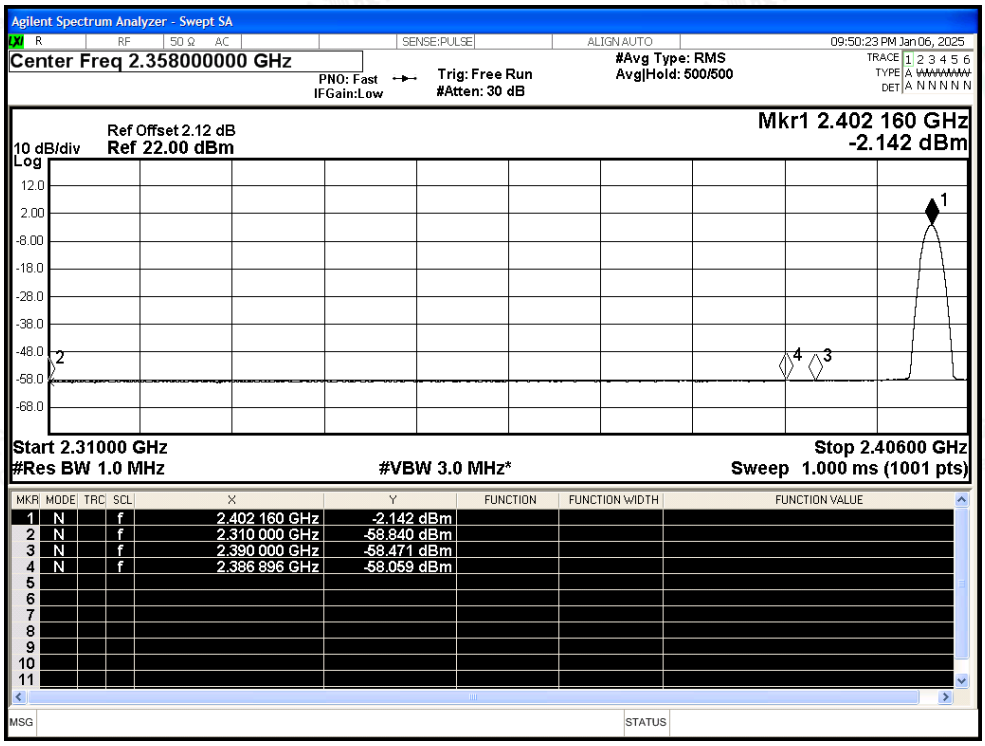
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant3	2310	-50.31	2.0	-	48.4	Peak	74	Pass
NVNT	BLE 1M	2402	Ant3	2310	-58.84	2.0	0.59	40.15	Average	54	Pass
NVNT	BLE 1M	2402	Ant3	2336.688	-47.43	2.0	-	54.12	Peak	74	Pass
NVNT	BLE 1M	2402	Ant3	2386.896	-58.06	2.0	0.59	40.39	Average	54	Pass
NVNT	BLE 1M	2402	Ant3	2390	-50.45	2.0	-	47.93	Peak	74	Pass
NVNT	BLE 1M	2402	Ant3	2390	-58.47	2.0	0.59	40.23	Average	54	Pass
NVNT	BLE 1M	2480	Ant3	2483.5	-48.86	2.0	-	46.59	Peak	74	Pass
NVNT	BLE 1M	2480	Ant3	2483.5	-57.7	2.0	0.59	39.94	Average	54	Pass
NVNT	BLE 1M	2480	Ant3	2484.808	-43.14	2.0	-	50.06	Peak	74	Pass
NVNT	BLE 1M	2480	Ant3	2483.8	-57.46	2.0	0.59	41.43	Average	54	Pass
NVNT	BLE 1M	2480	Ant3	2500	-49.33	2.0	-	47.79	Peak	74	Pass
NVNT	BLE 1M	2480	Ant3	2500	-57.62	2.0	0.59	40.57	Average	54	Pass
NVNT	BLE 2M	2402	Ant3	2310	-50.67	2.0	-	47.96	Peak	74	Pass
NVNT	BLE 2M	2402	Ant3	2310	-59.13	2.0	1.81	41.77	Average	54	Pass
NVNT	BLE 2M	2402	Ant3	2363.76	-47.2	2.0	-	52.17	Peak	74	Pass
NVNT	BLE 2M	2402	Ant3	2374.032	-57.64	2.0	1.81	41.92	Average	54	Pass
NVNT	BLE 2M	2402	Ant3	2390	-49.47	2.0	-	49.28	Peak	74	Pass
NVNT	BLE 2M	2402	Ant3	2390	-58.5	2.0	1.81	41.02	Average	54	Pass
NVNT	BLE 2M	2480	Ant3	2483.5	-49.3	2.0	-	48.4	Peak	74	Pass
NVNT	BLE 2M	2480	Ant3	2483.5	-57.3	2.0	1.81	40.15	Average	54	Pass
NVNT	BLE 2M	2480	Ant3	2486.68	-45.09	2.0	-	54.12	Peak	74	Pass
NVNT	BLE 2M	2480	Ant3	2484.448	-57.15	2.0	1.81	40.39	Average	54	Pass
NVNT	BLE 2M	2480	Ant3	2500	-47.98	2.0	-	47.93	Peak	74	Pass
NVNT	BLE 2M	2480	Ant3	2500	-58.05	2.0	1.81	40.23	Average	54	Pass

Test Graphs

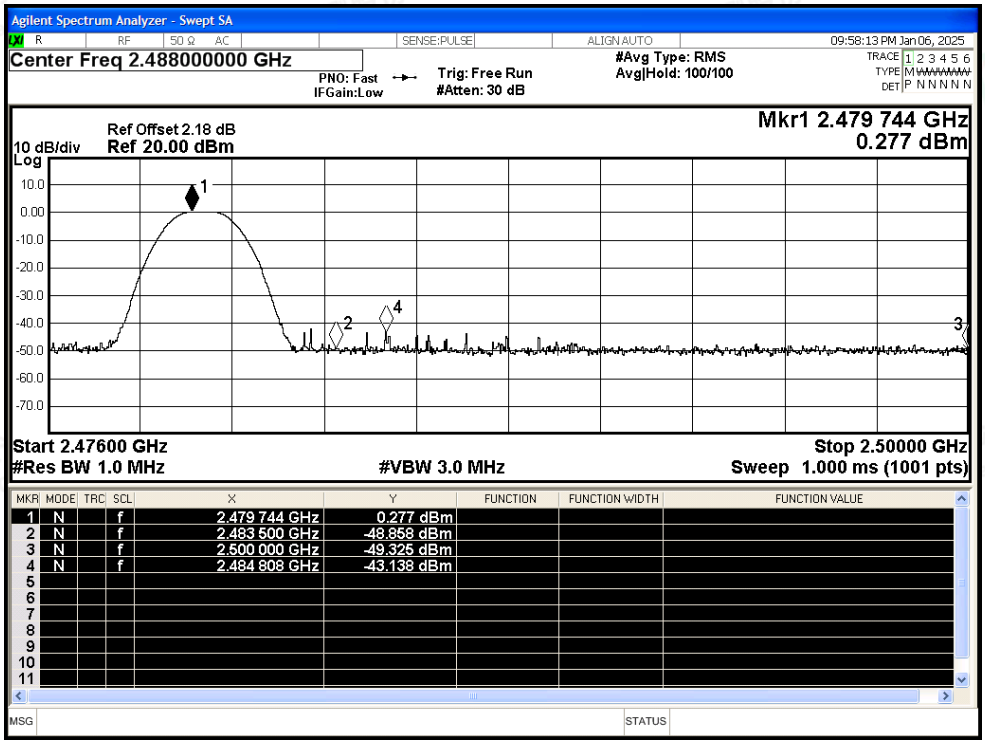
Restrict Band NVNT BLE 1M 2402MHz Ant3 Peak



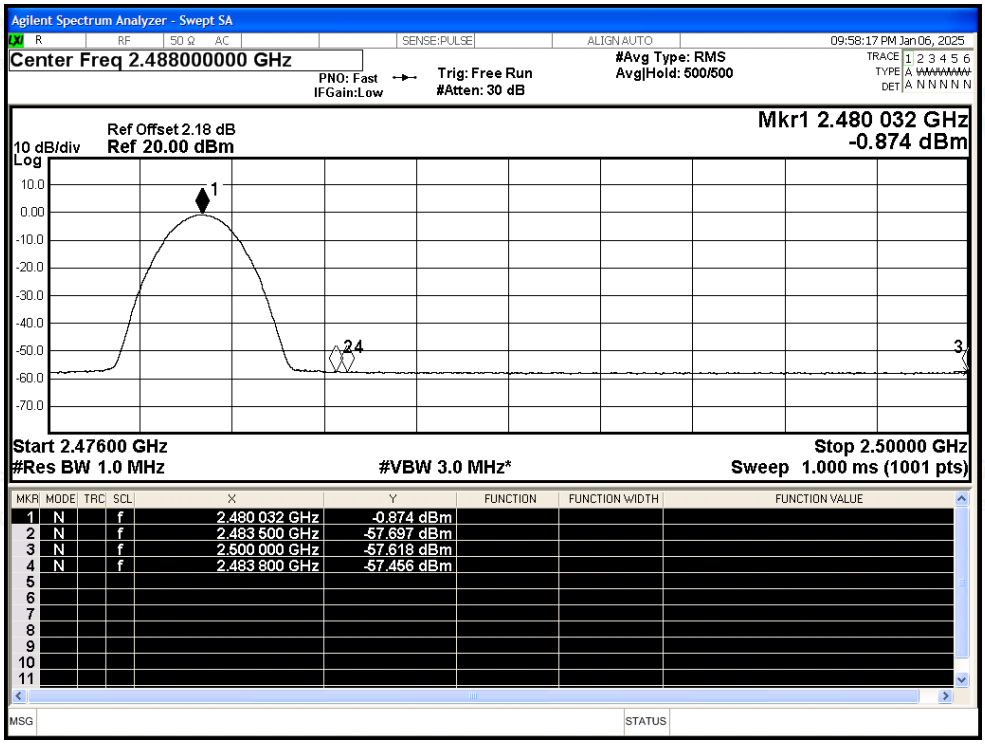
Restrict Band NVNT BLE 1M 2402MHz Ant3 Average



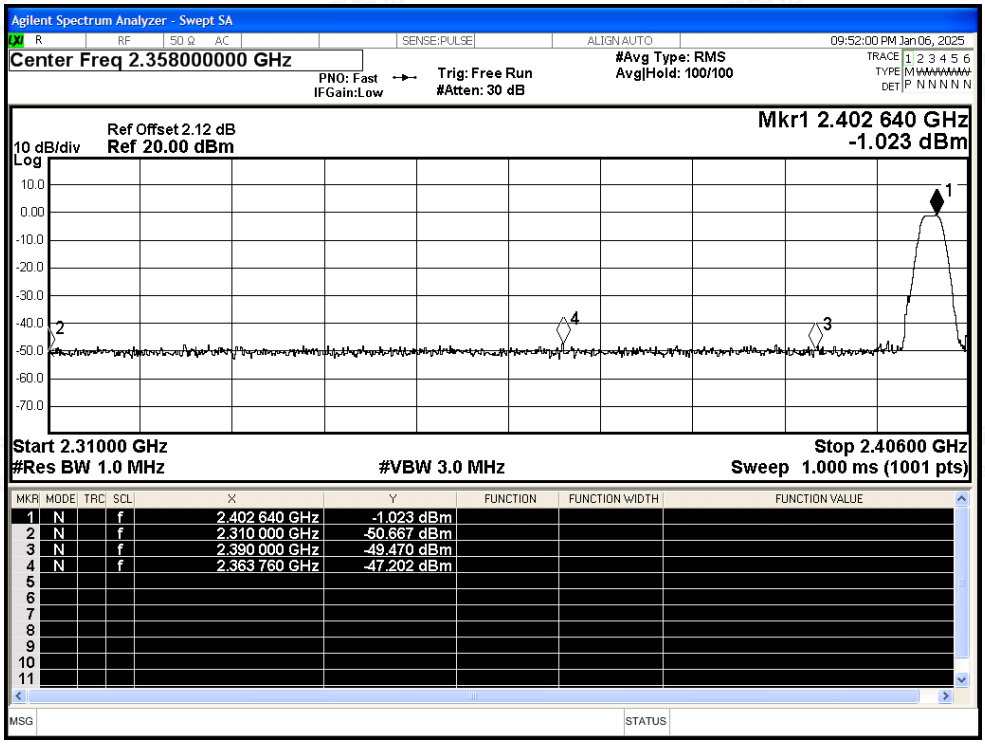
Restrict Band NVNT BLE 1M 2480MHz Ant3 Peak



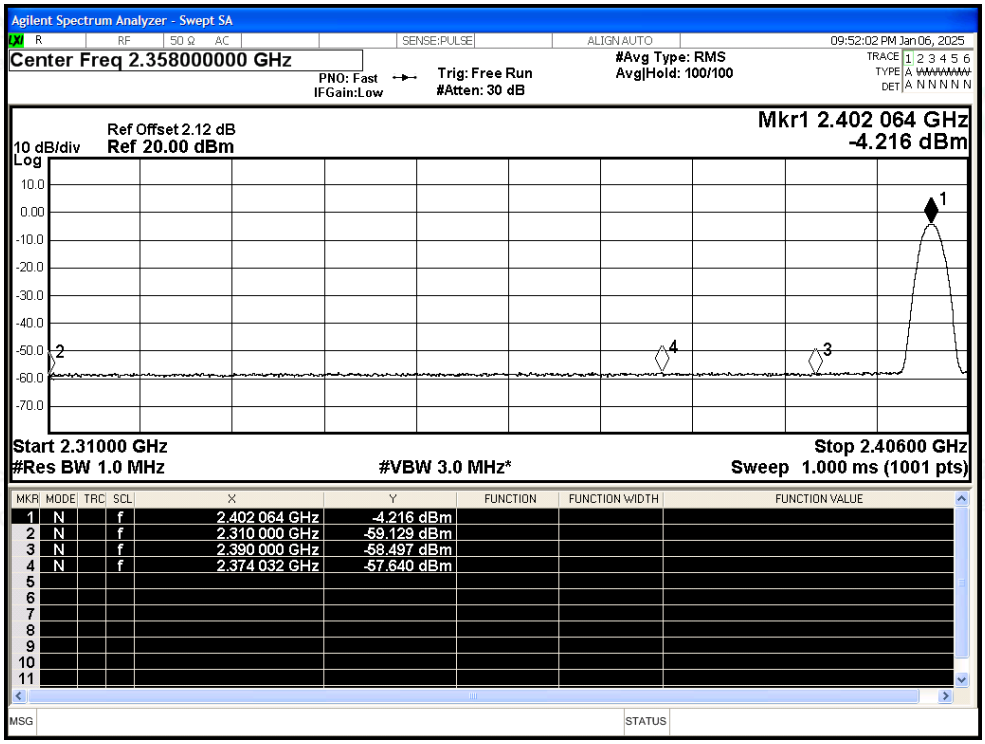
Restrict Band NVNT BLE 1M 2480MHz Ant3 Average



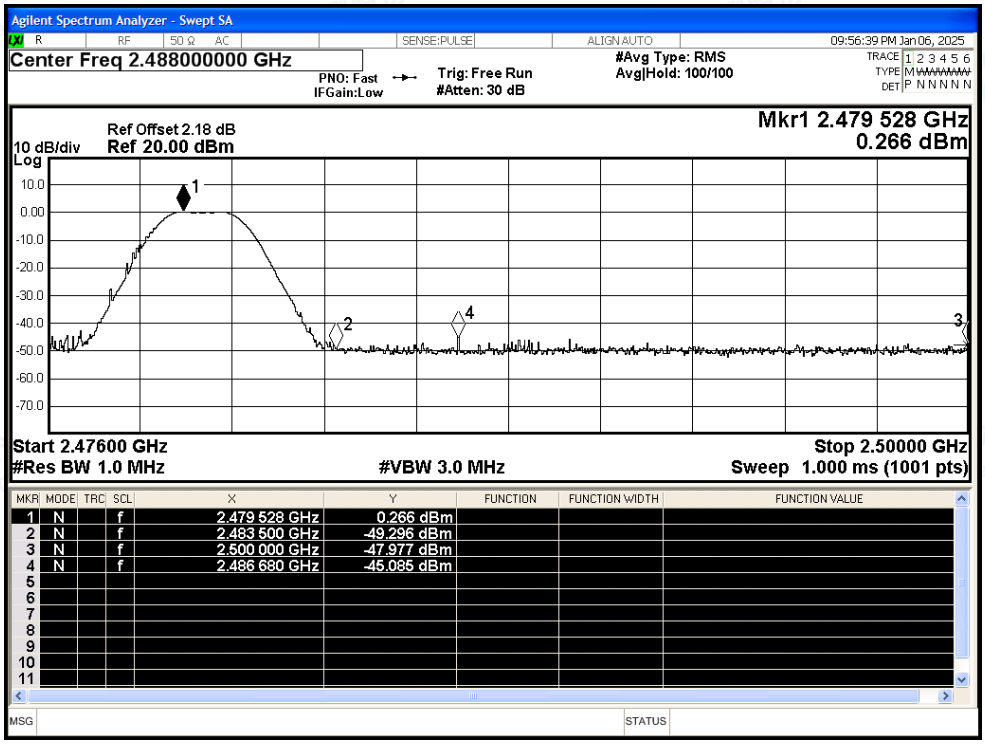
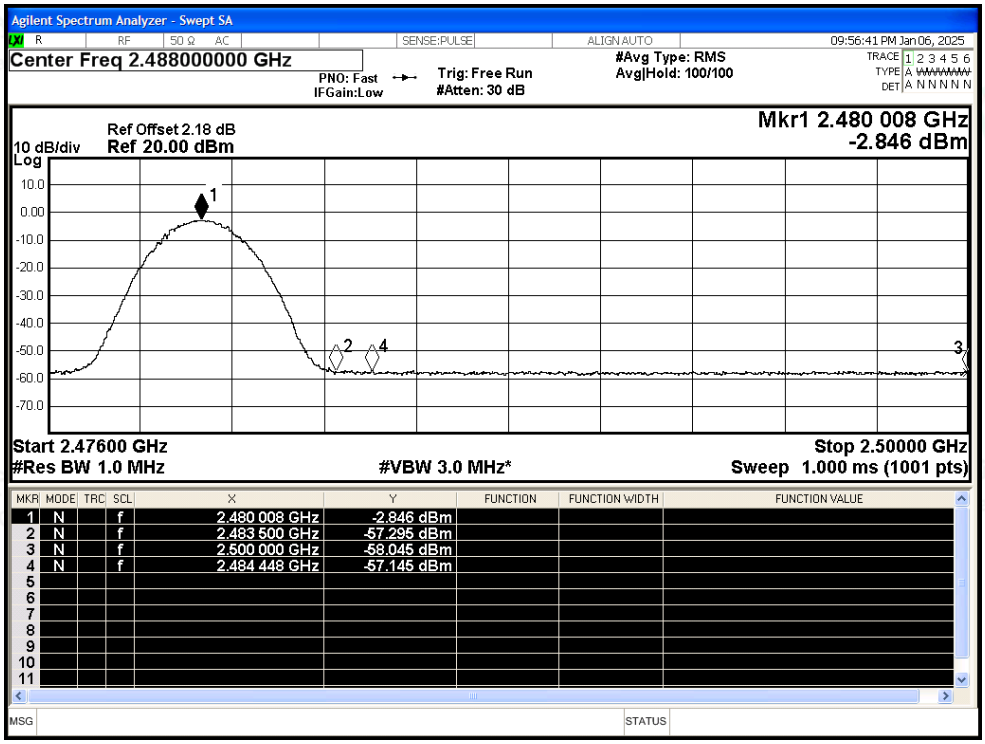
Restrict Band NVNT BLE 2M 2402MHz Ant3 Peak



Restrict Band NVNT BLE 2M 2402MHz Ant3 Average



Restrict Band NVNT BLE 2M 2480MHz Ant3 Peak



Restrict Band NVNT BLE 2M 2480MHz Ant3 Average