



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Portable power station

Test Model: GRID DOCTOR 3300

Environmental Conditions

Temperature:	23.1°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng



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A.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.699	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.707	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.702	≥ 0.5	Pass



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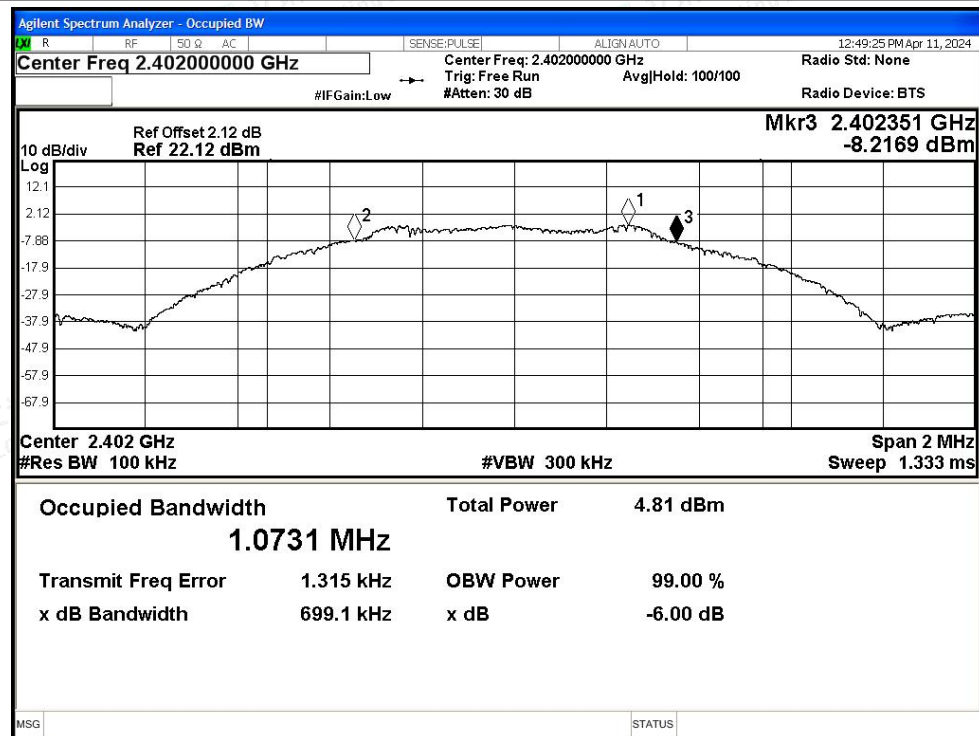
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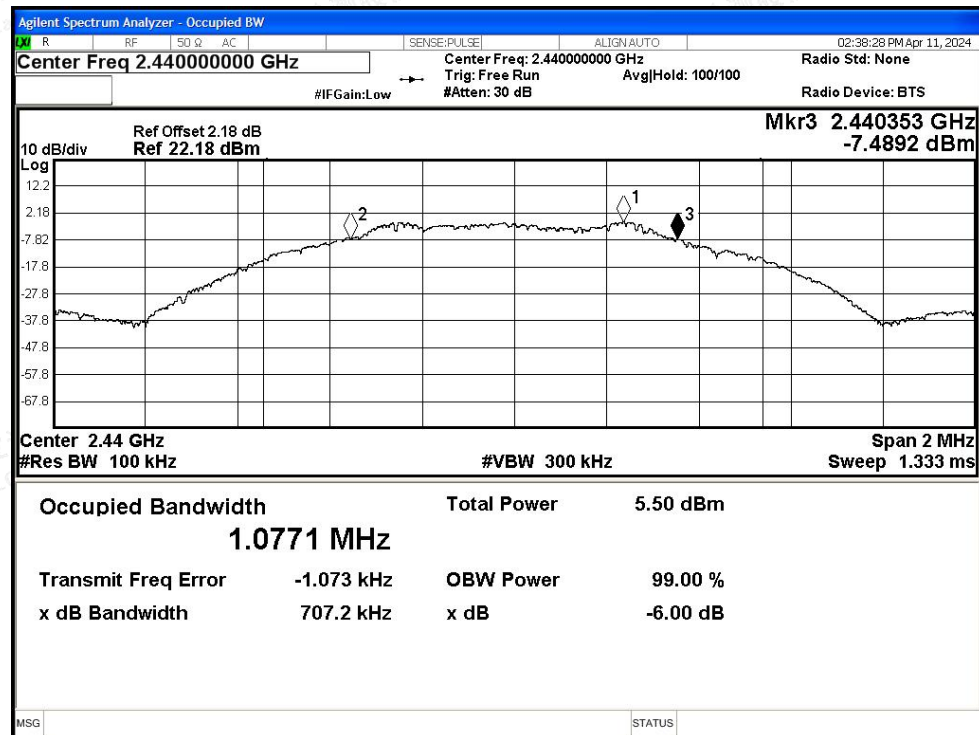


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

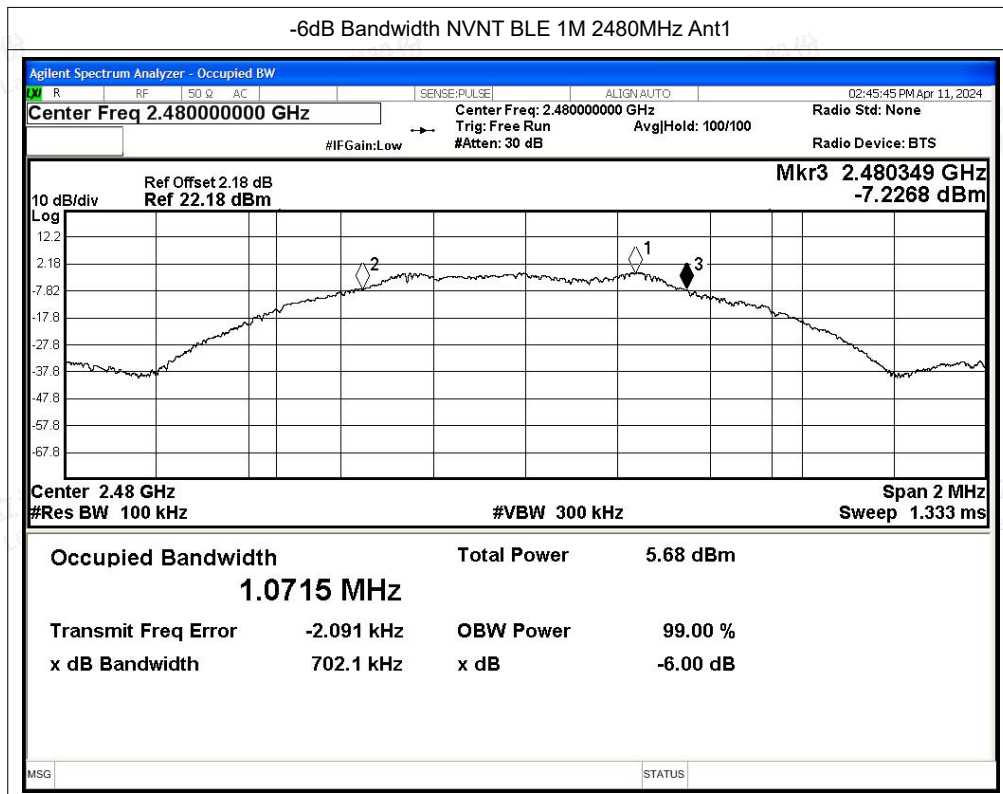


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A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-0.93	30	Pass
NVNT	BLE 1M	2440	Ant1	-0.55	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.08	30	Pass



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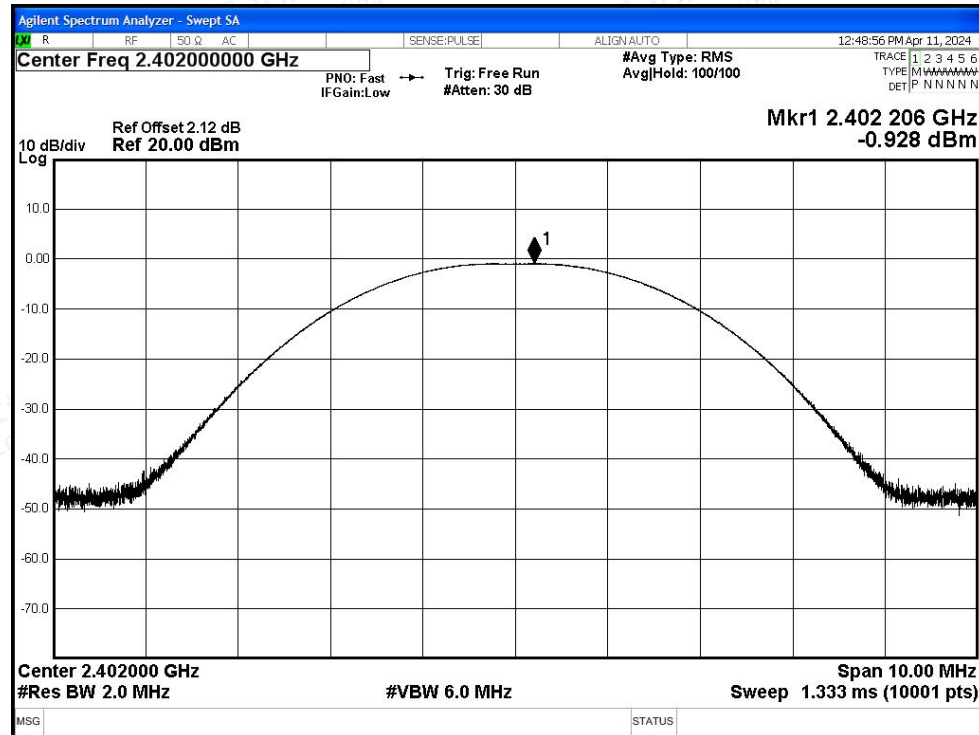
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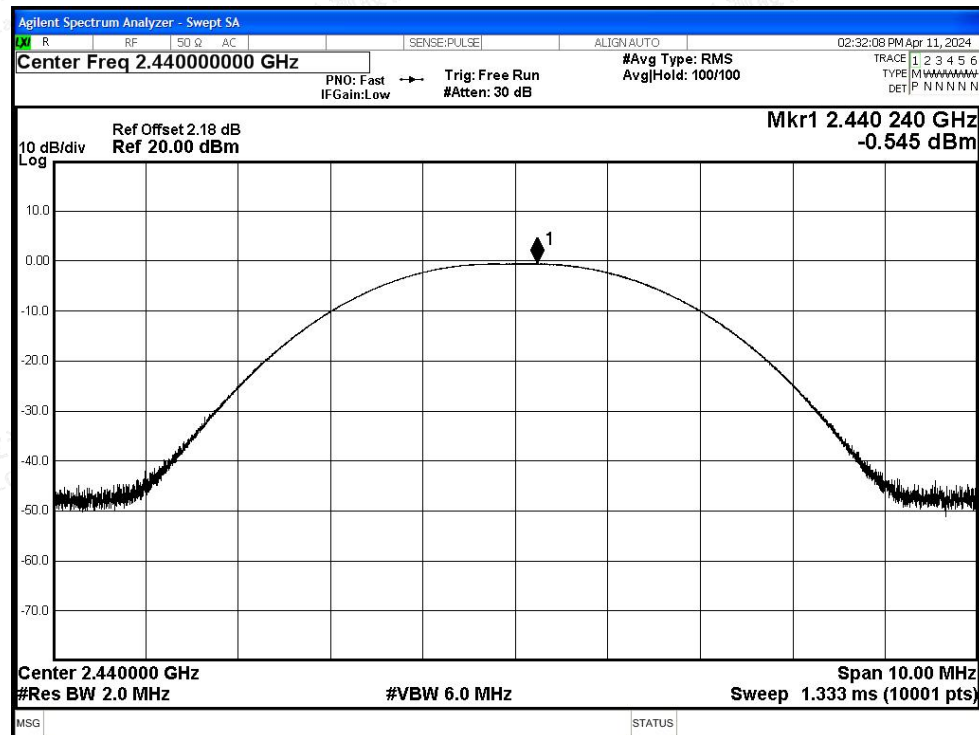


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

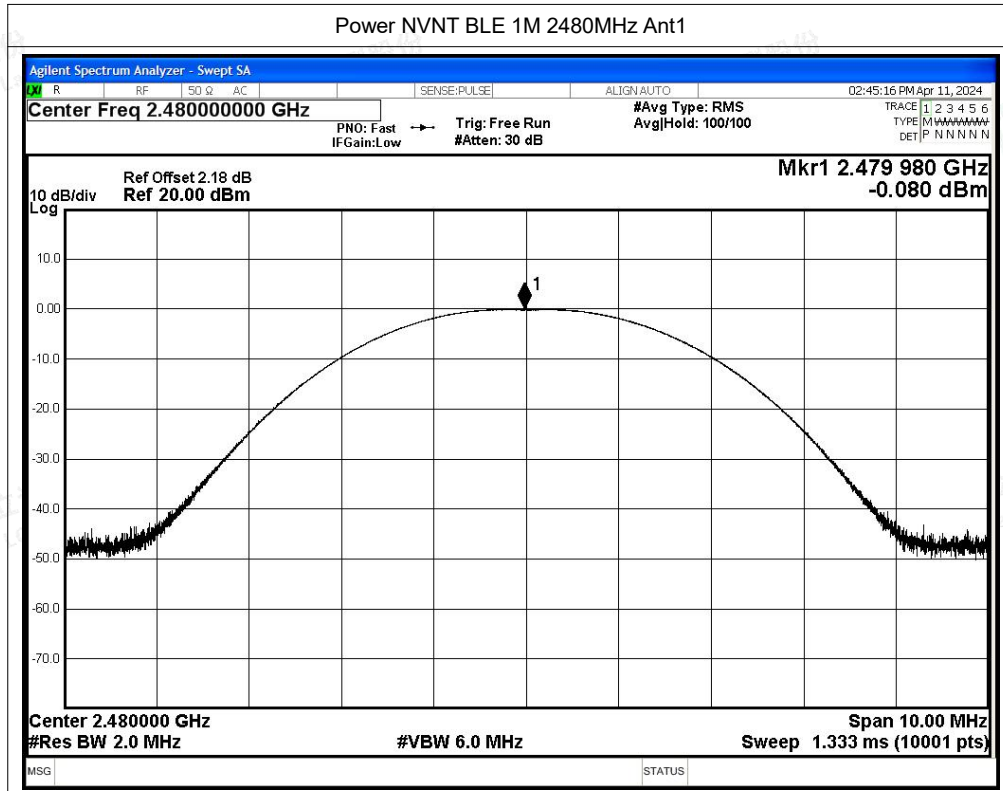


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-16.13	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.36	8	Pass
NVNT	BLE 1M	2480	Ant1	-15.23	8	Pass



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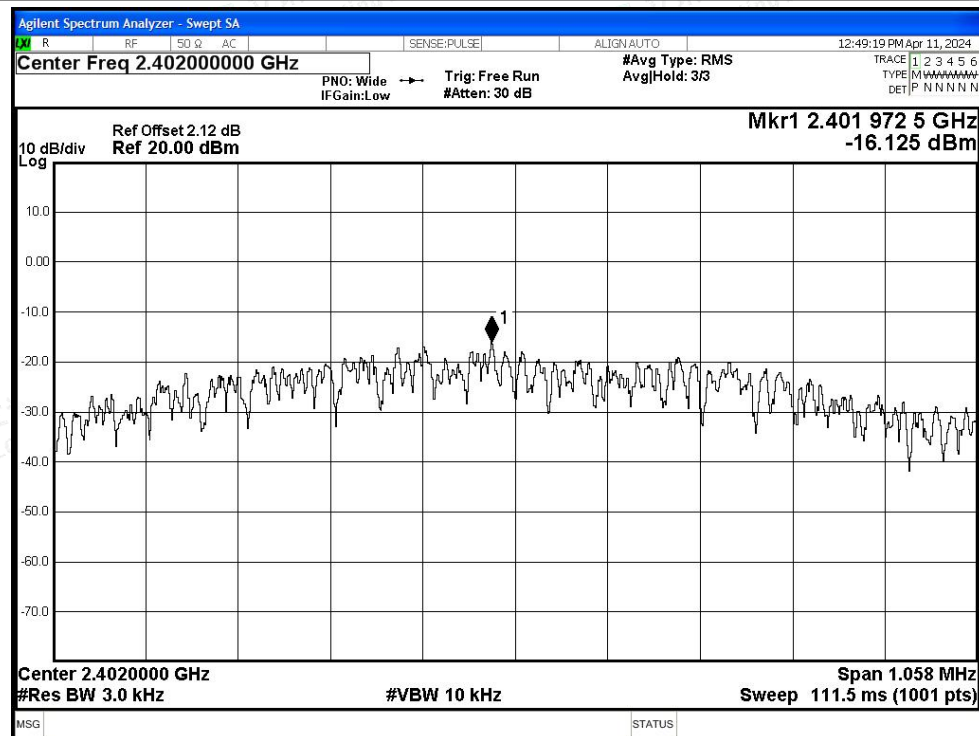
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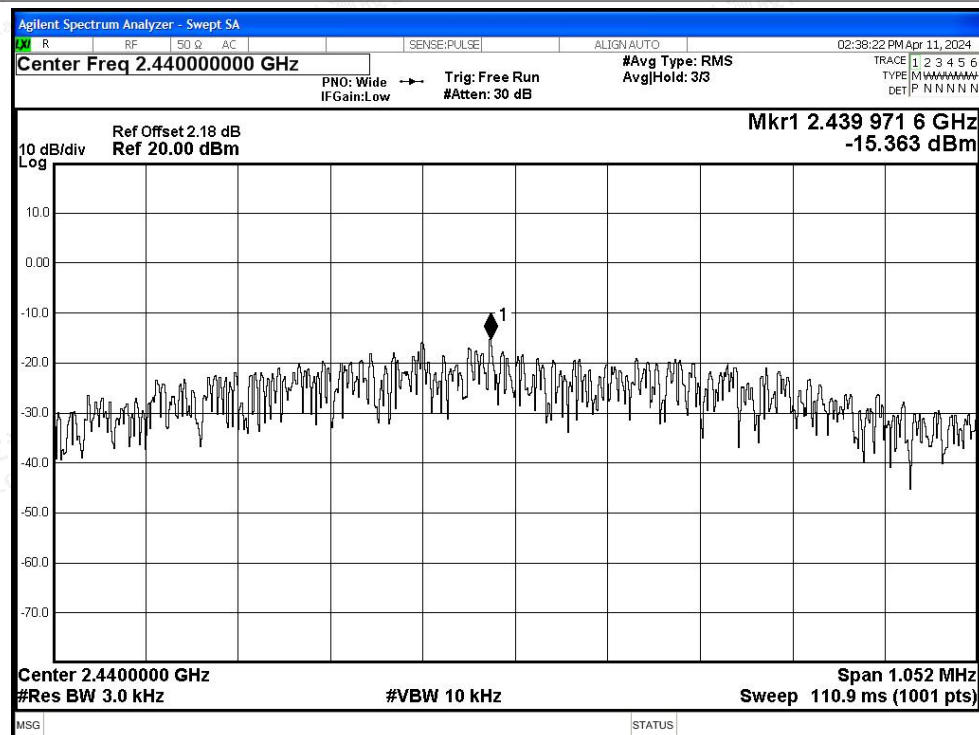


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

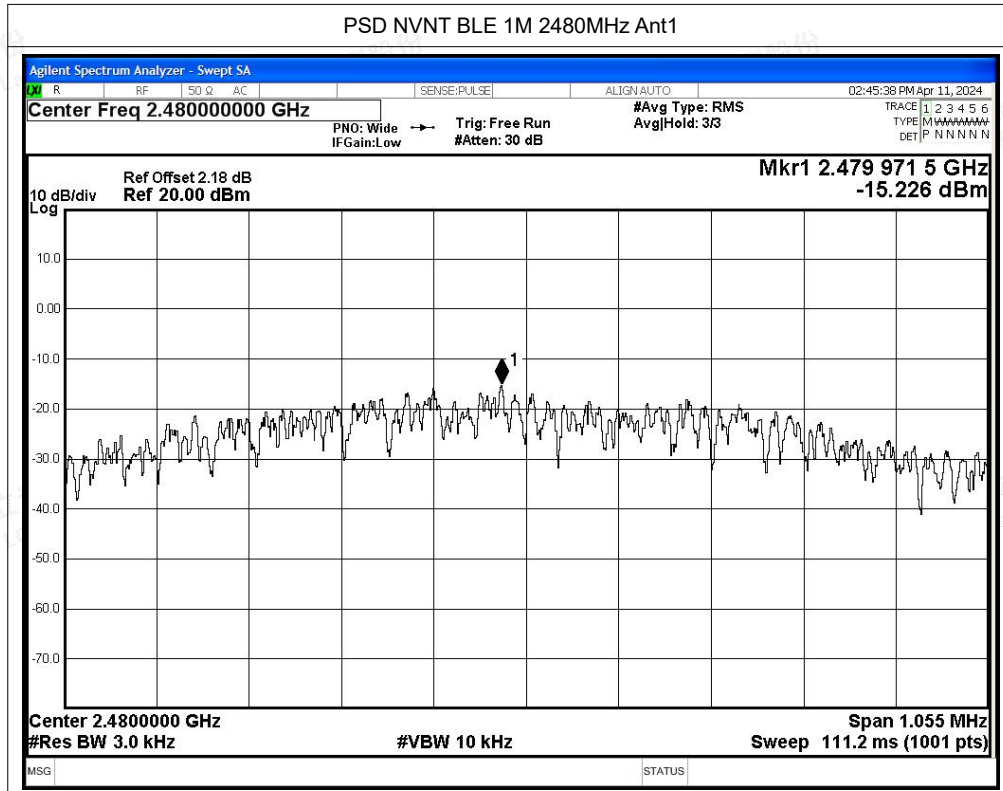


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A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-55.4	-20	Pass
NVNT	BLE 1M	2480	Ant1	-55.59	-20	Pass



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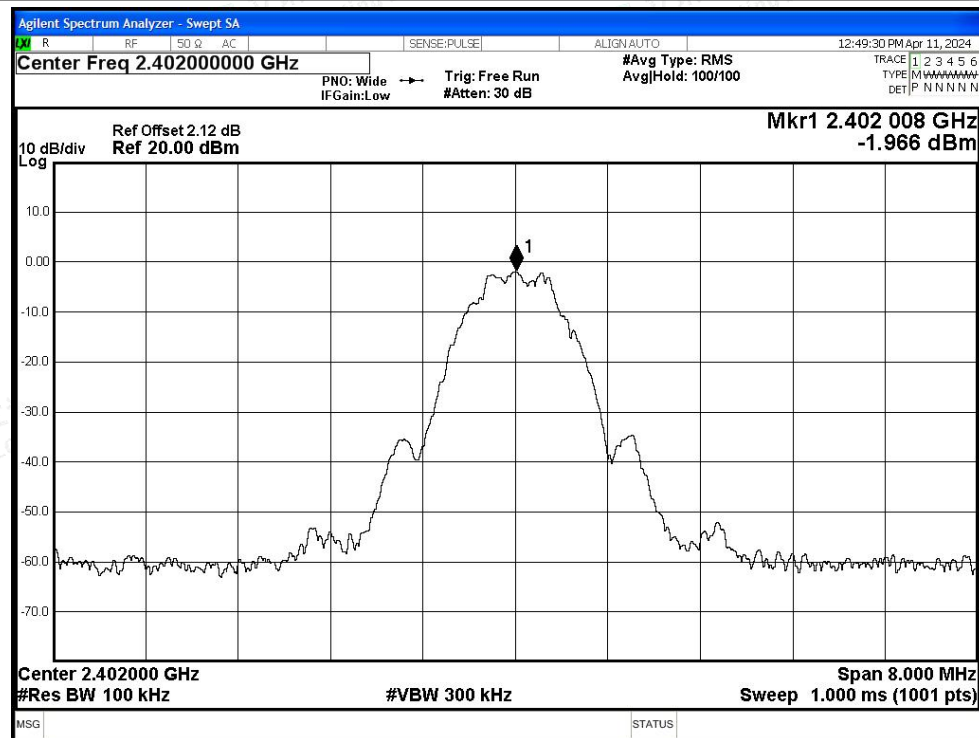
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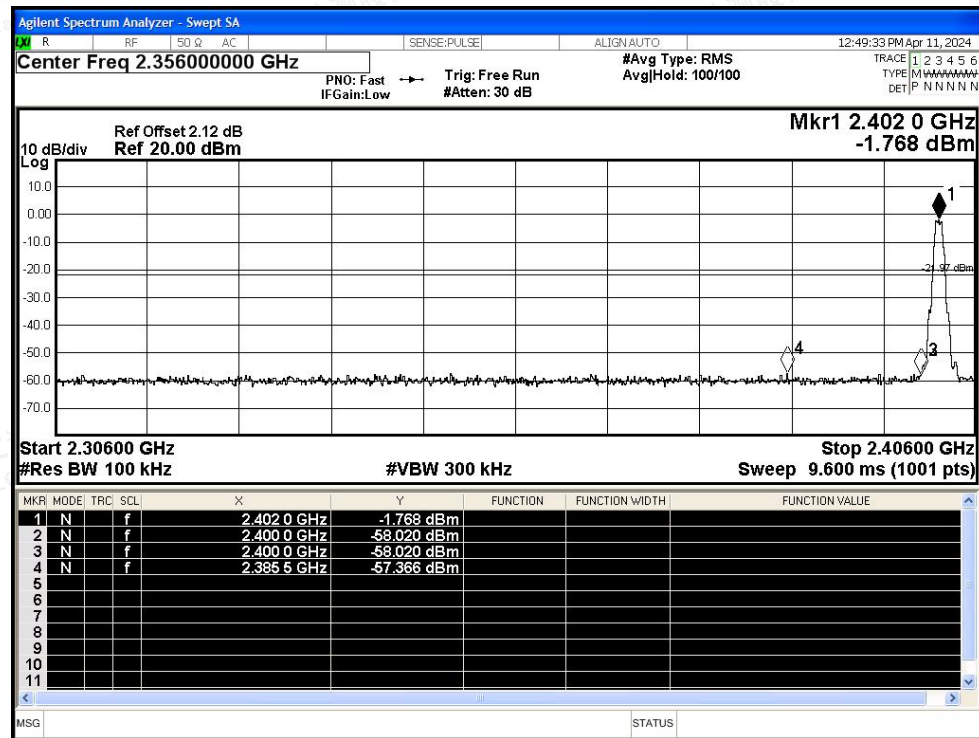


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



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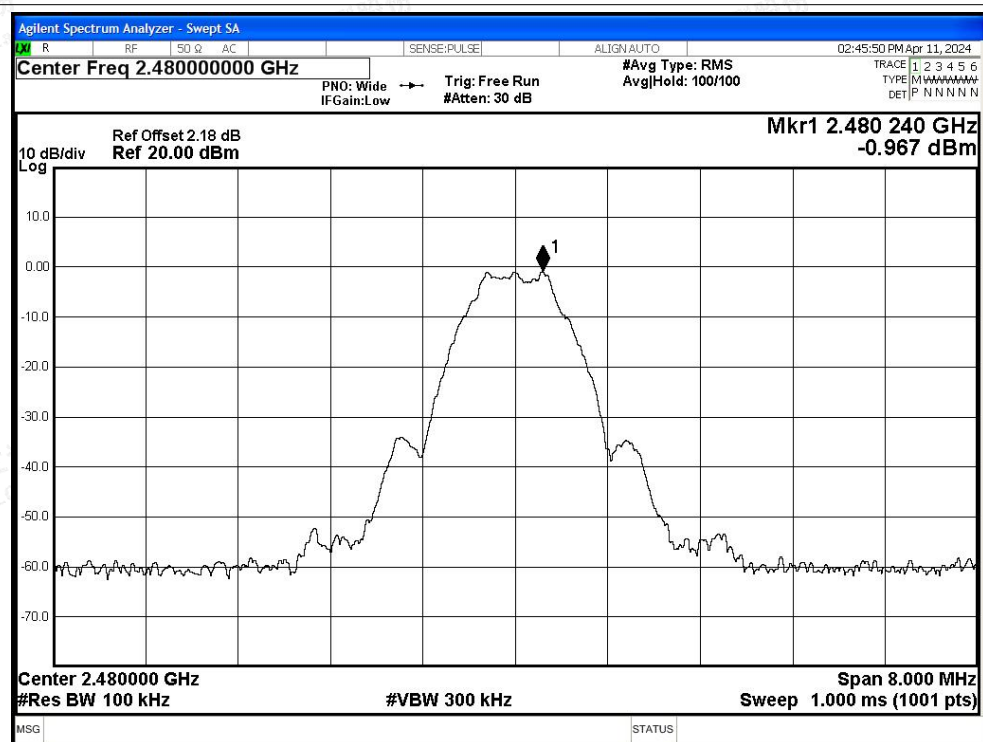
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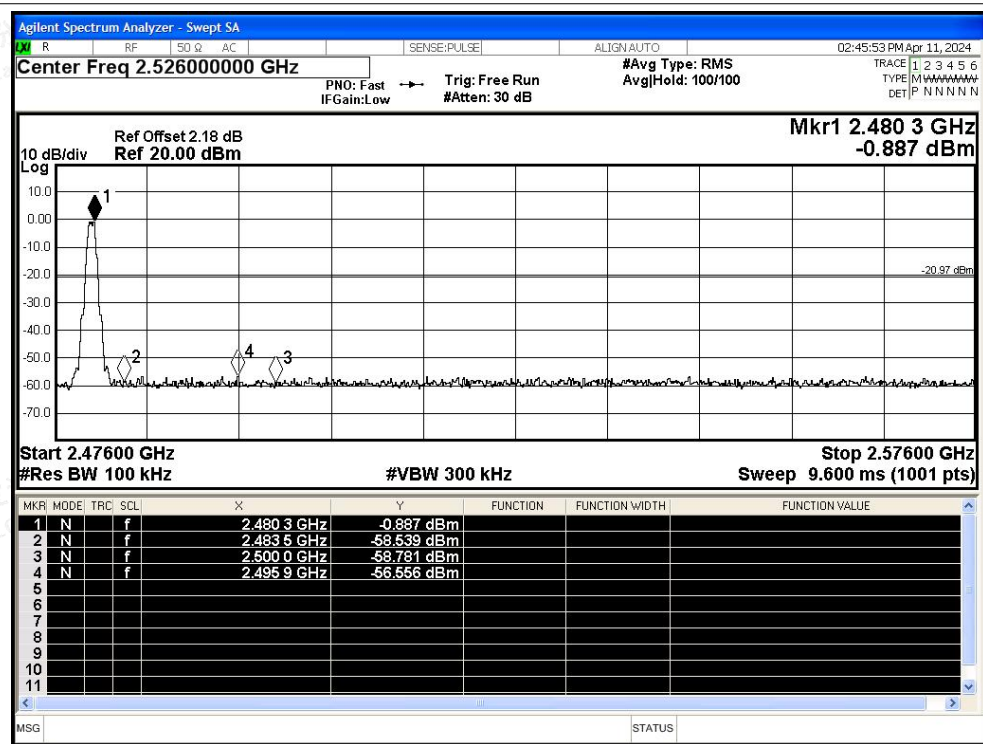
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Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



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A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-53.21	-20	Pass
NVNT	BLE 1M	2440	Ant1	-54.08	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.27	-20	Pass



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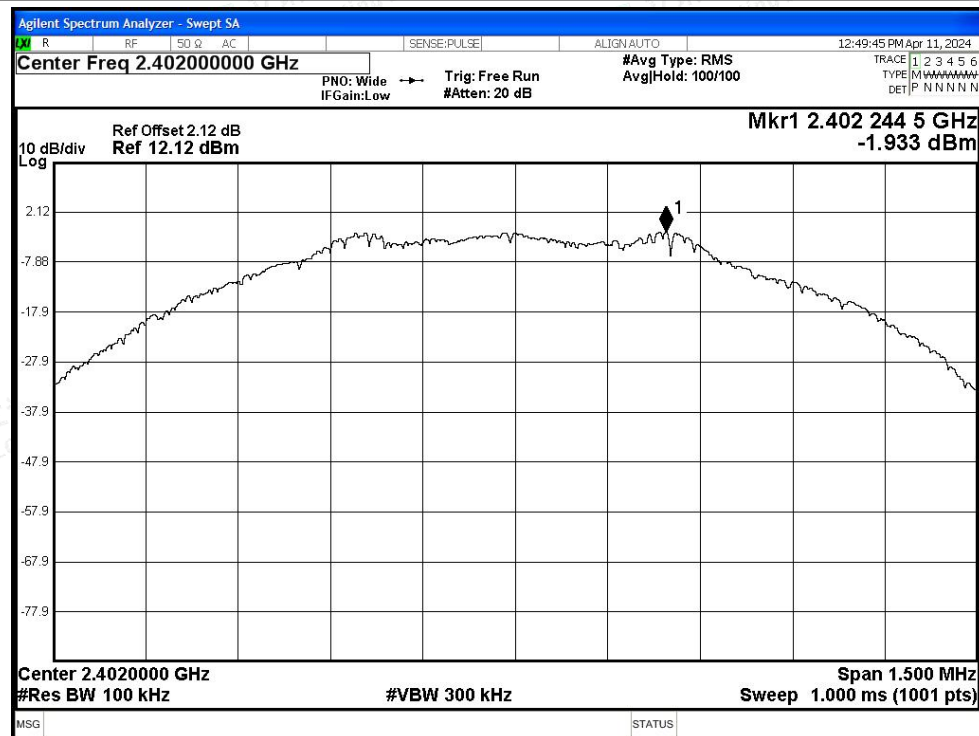
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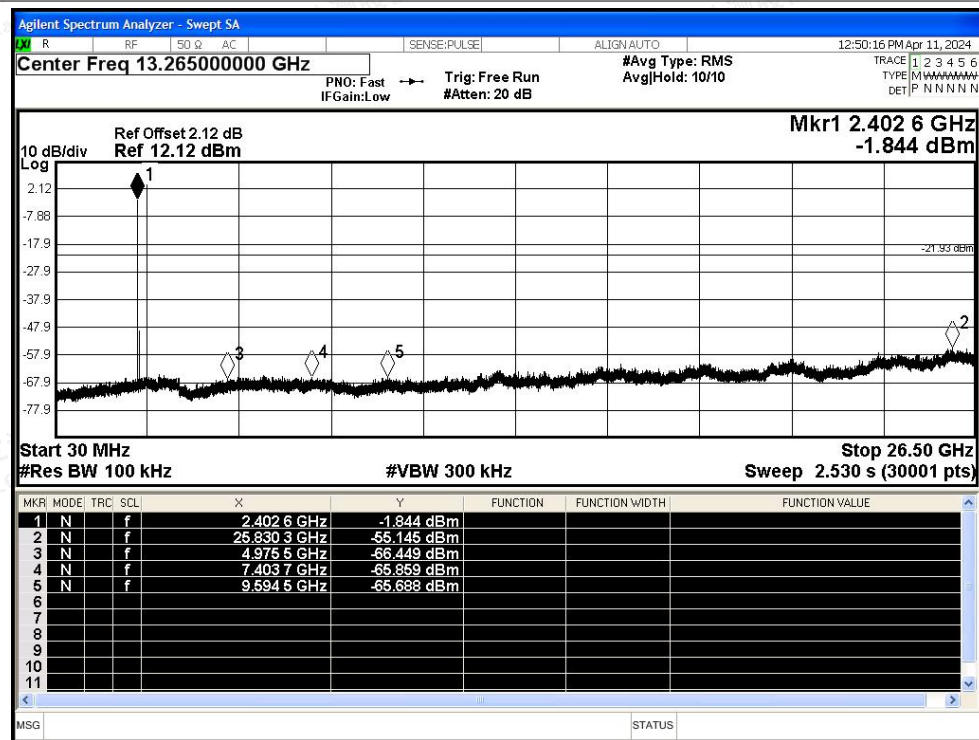


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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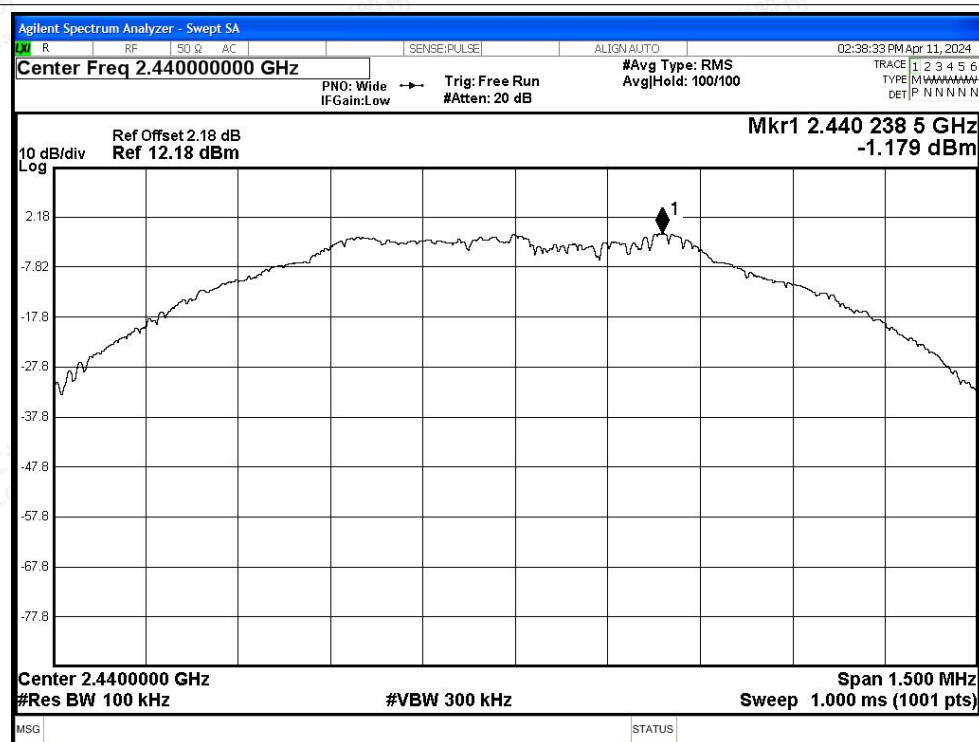
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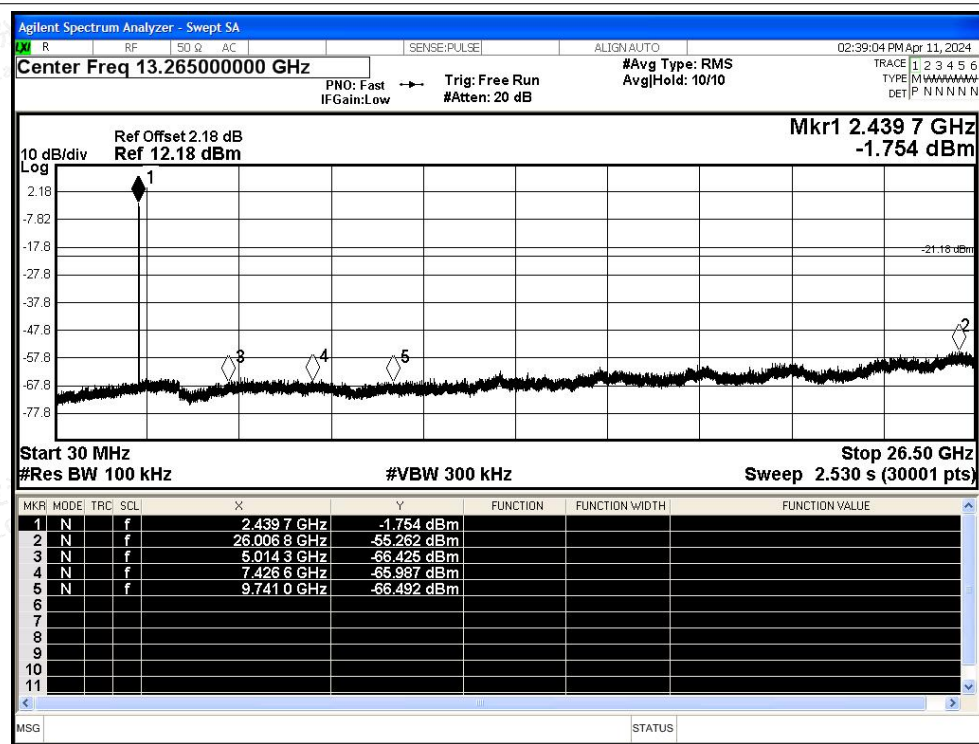
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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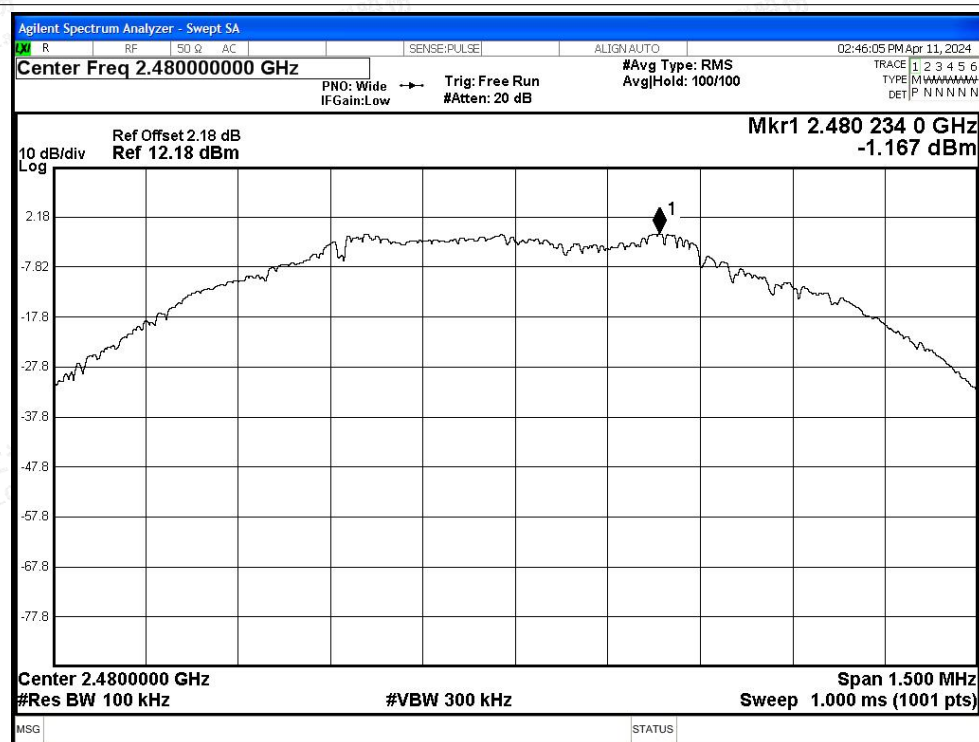
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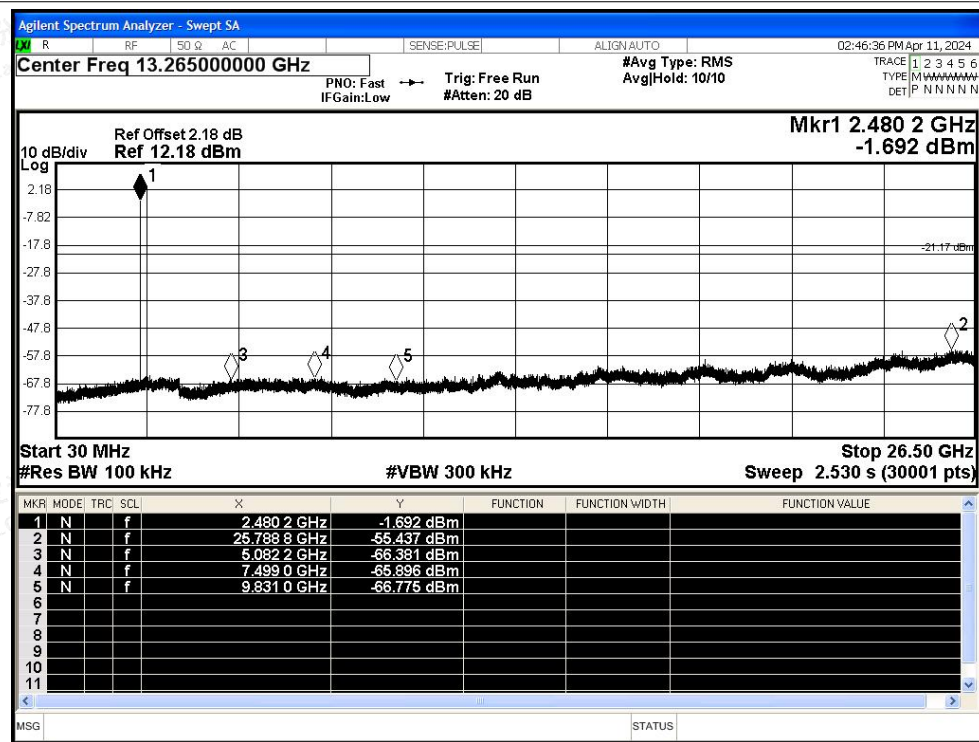
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



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A.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	61.36	2.12	2.61
NVNT	BLE 1M	2440	Ant1	61.36	2.12	2.61
NVNT	BLE 1M	2480	Ant1	61.39	2.12	2.6



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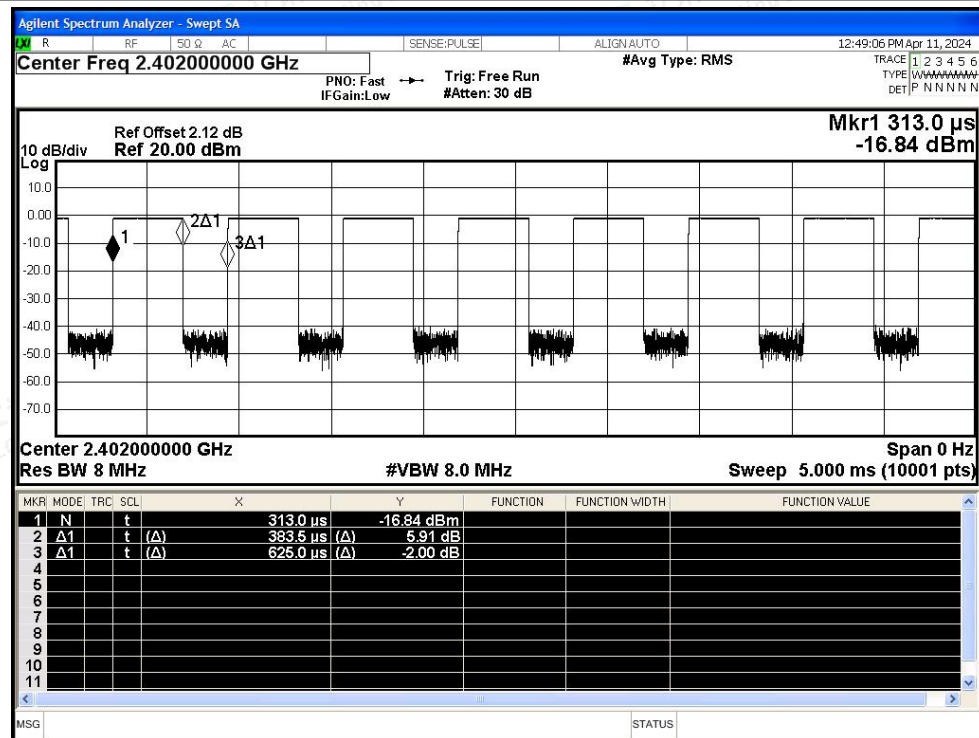
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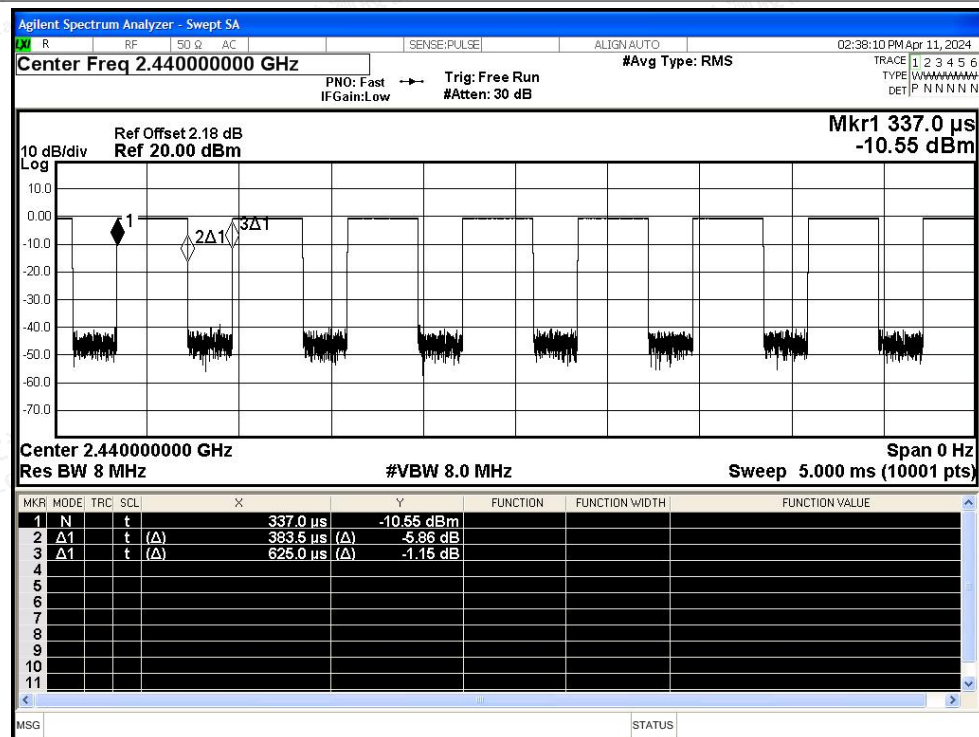


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

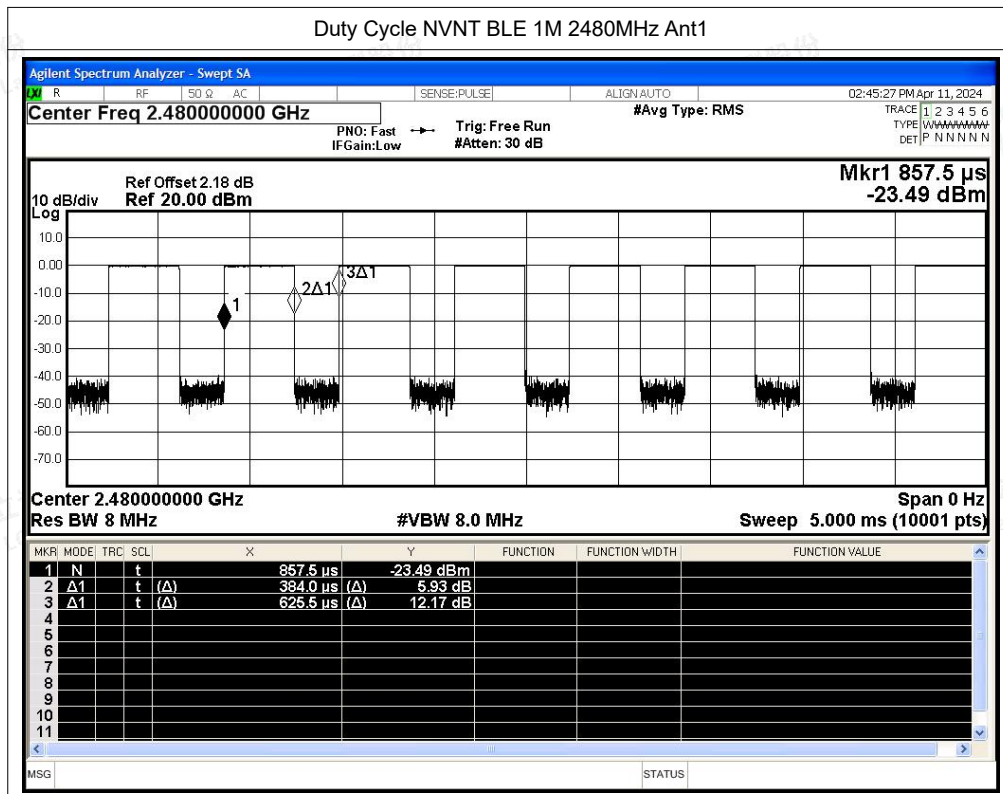


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A.7 Restrict Band

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	-51.43	2	-	45.83	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-58.43	2	2.12	40.95	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2322.384	-47.38	2	-	49.88	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2376.432	-57.58	2	2.12	41.8	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.3	2	-	46.96	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.23	2	2.12	41.15	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-50.12	2	-	47.14	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-57.81	2	2.12	41.57	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2488.648	-47.12	2	-	50.14	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2487.688	-57.05	2	2.12	42.33	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.23	2	-	47.03	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-57.97	2	2.12	41.41	Average	54	Pass



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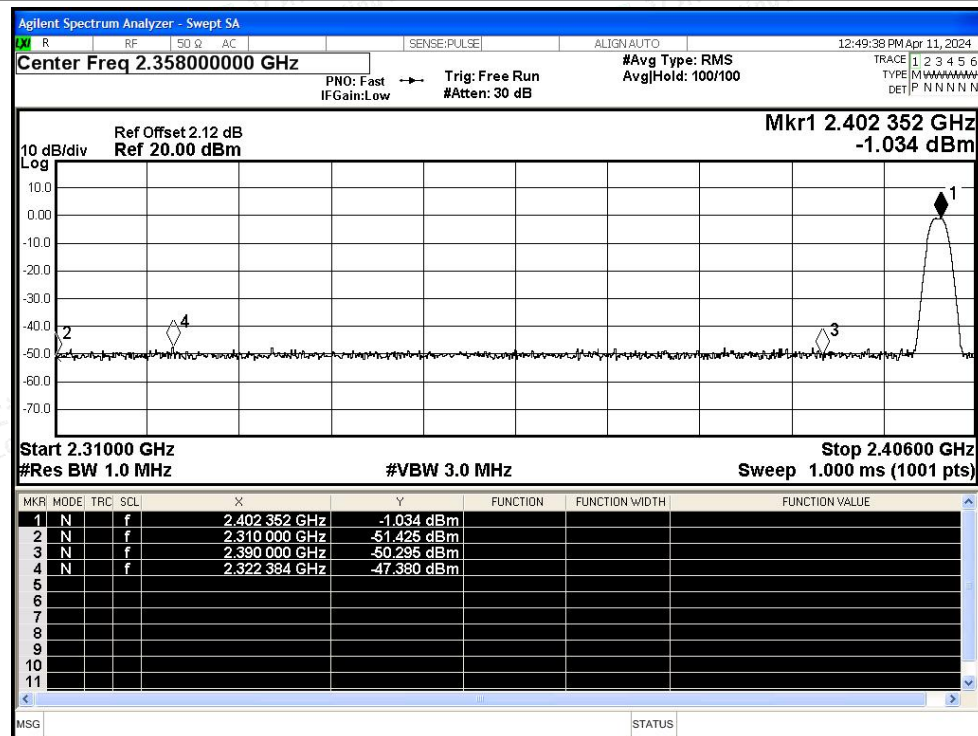
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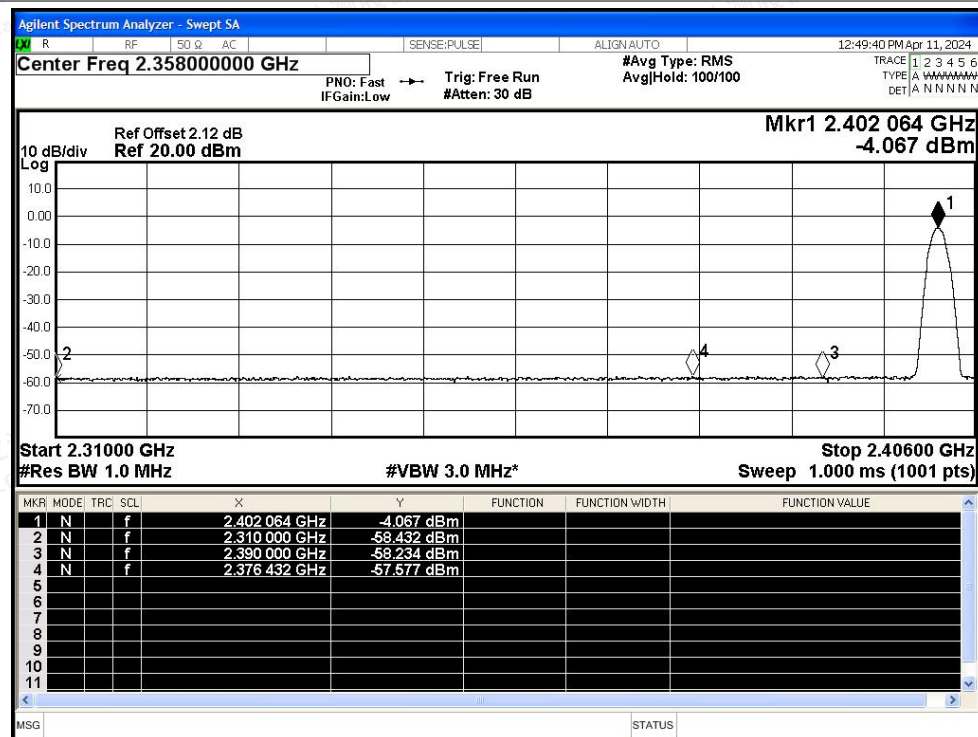


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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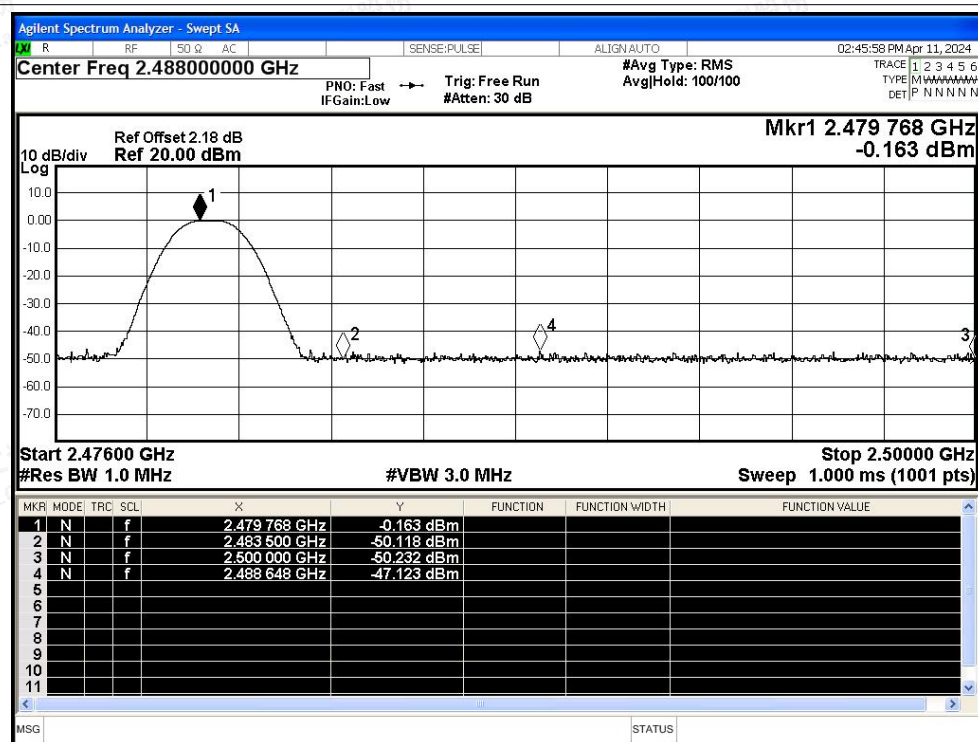
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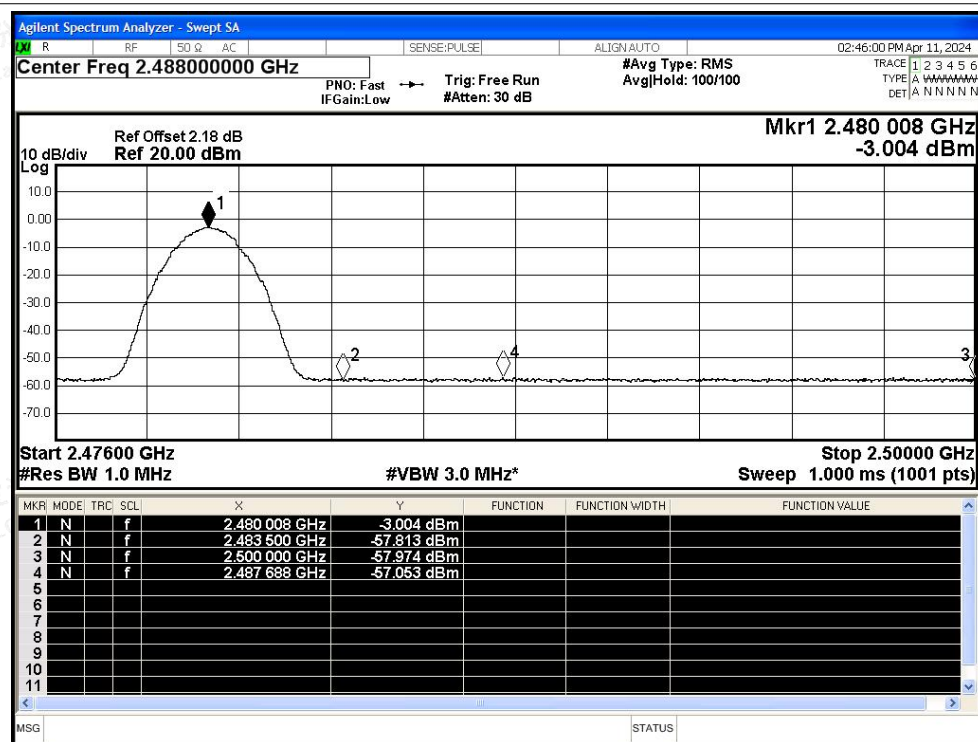
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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