



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: HI-FI STEREO DIGITAL BLUETOOTH AMPLIFIER

Test Model: LP-2020BT

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Joker Hu
Supervised by:	 Li huan



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B.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.694	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.704	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.713	≥ 0.5	Pass



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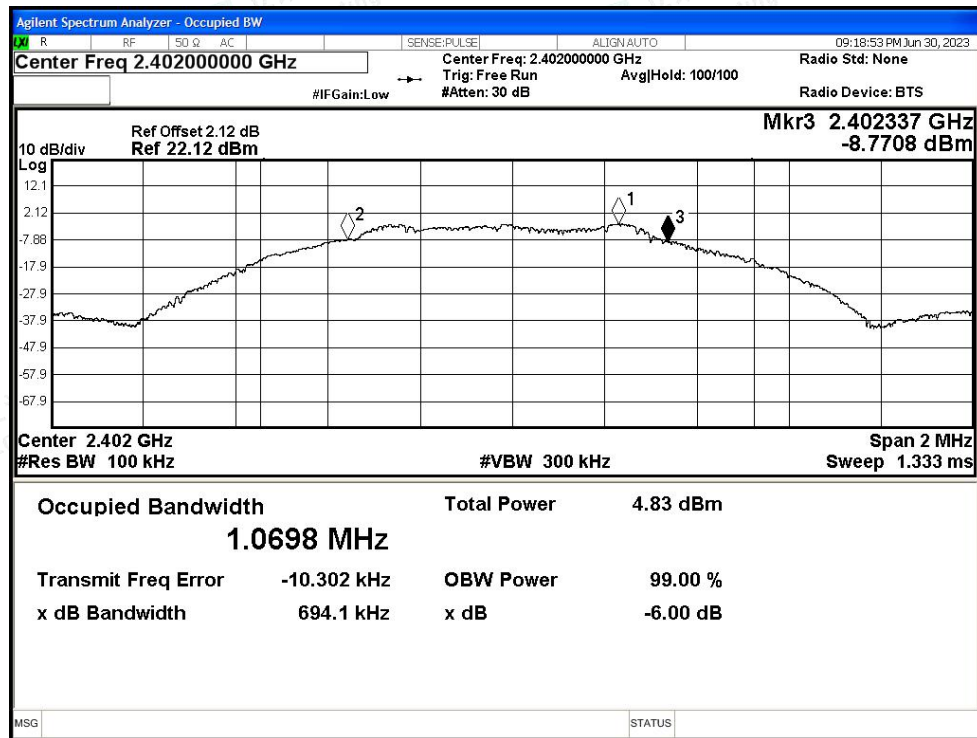
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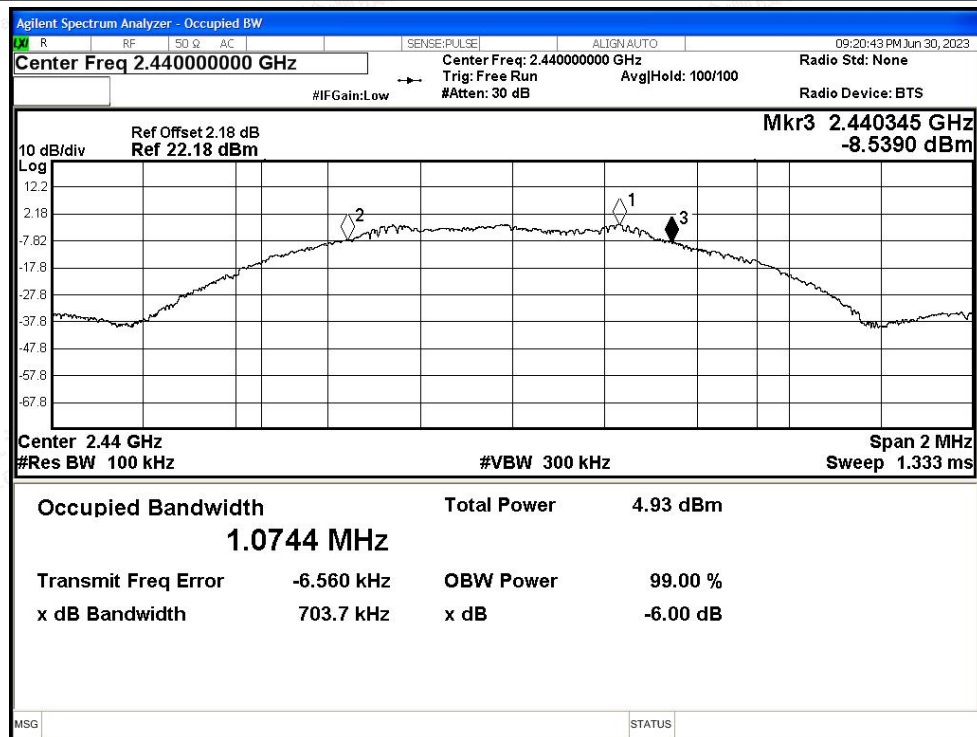


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

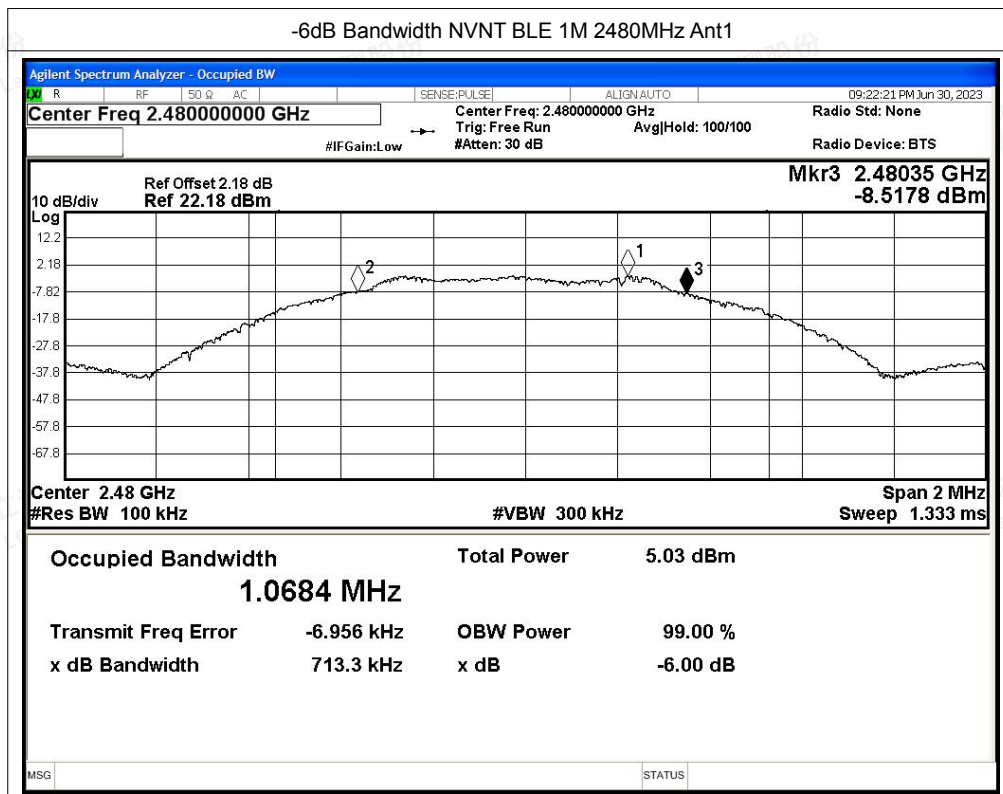


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B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-0.96	30	Pass
NVNT	BLE 1M	2440	Ant1	-0.77	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.78	30	Pass



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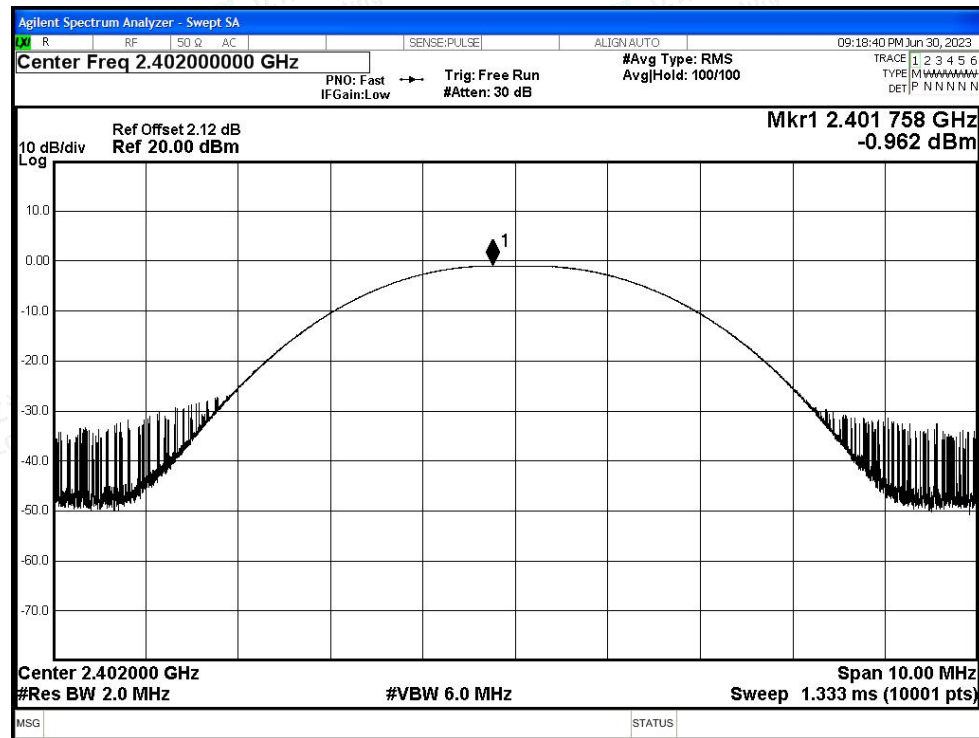
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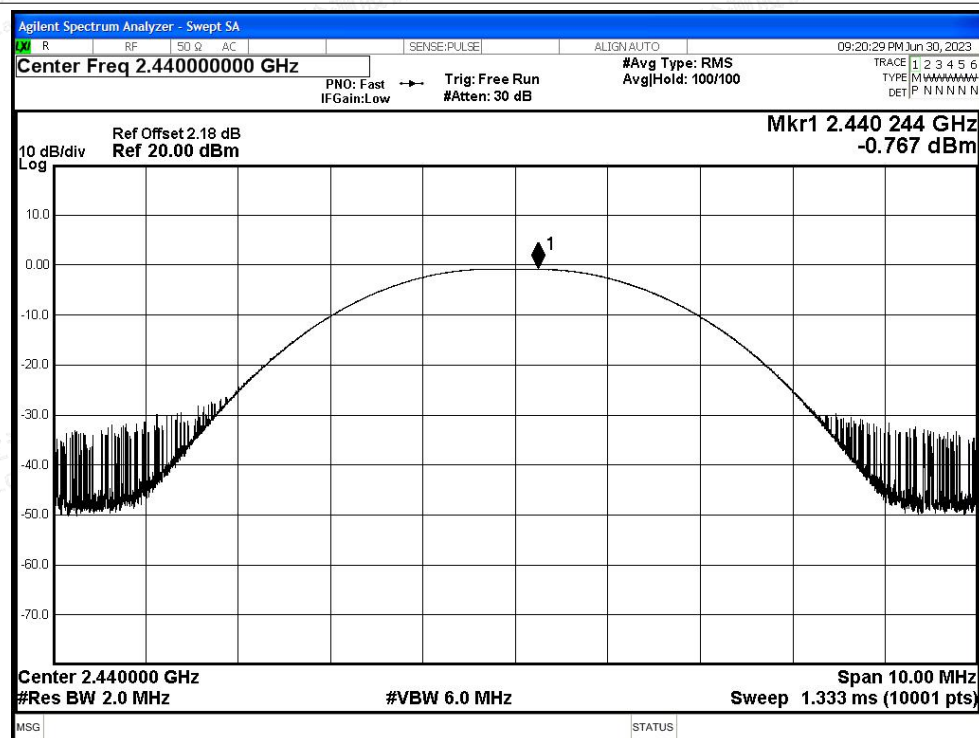


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

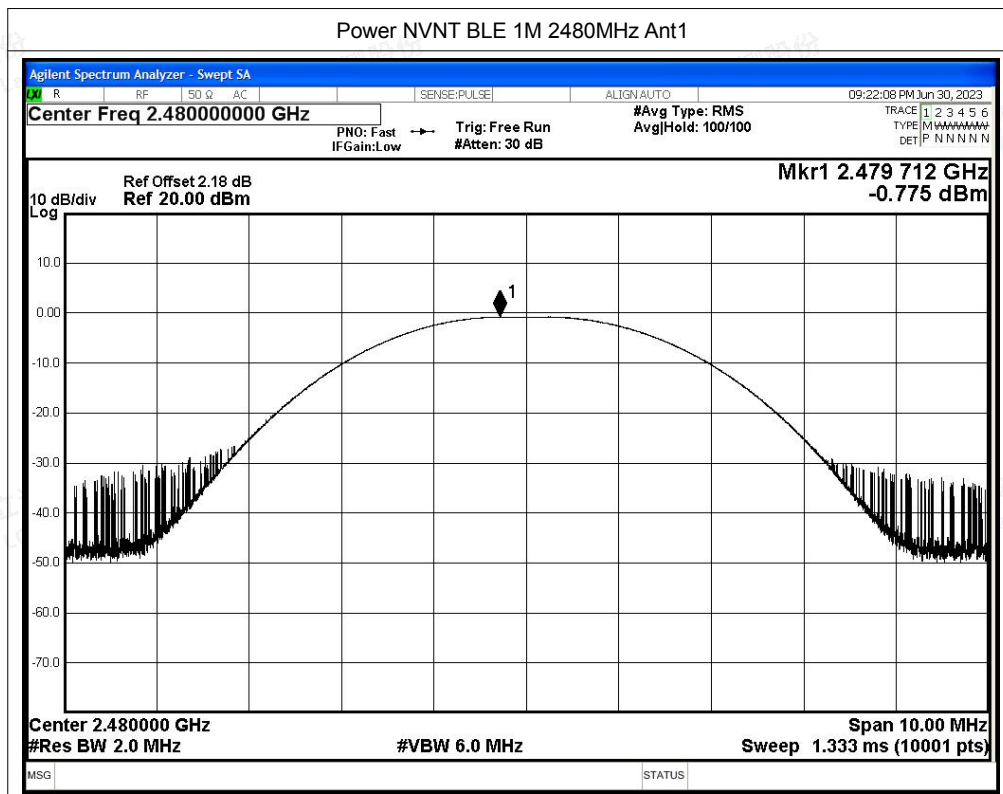


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B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-16.09	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.89	8	Pass
NVNT	BLE 1M	2480	Ant1	-15.92	8	Pass



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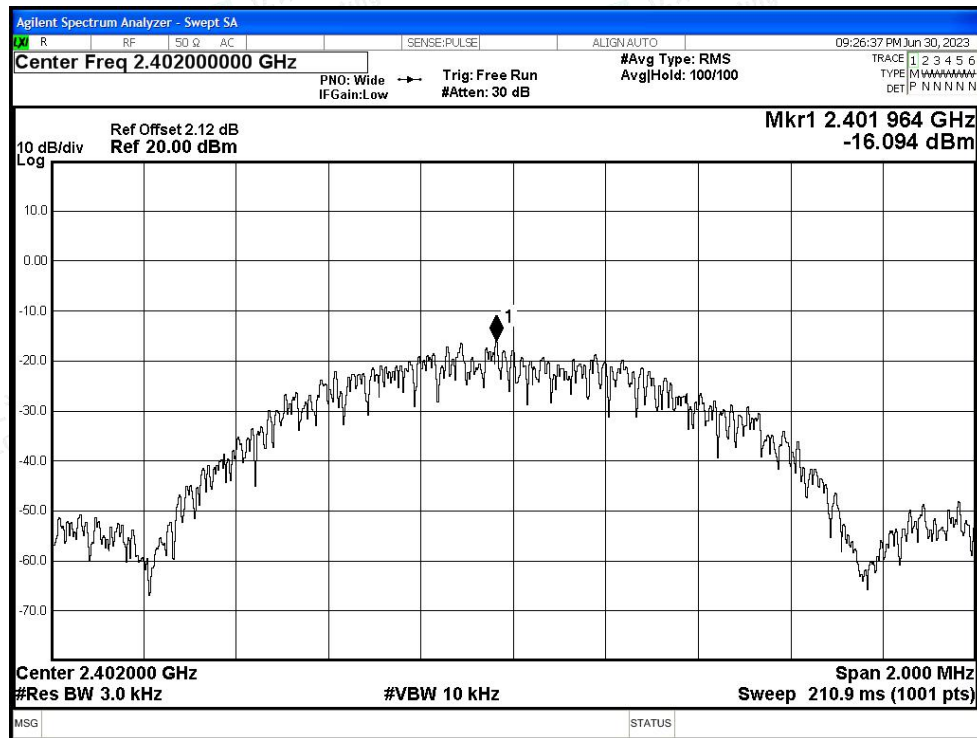
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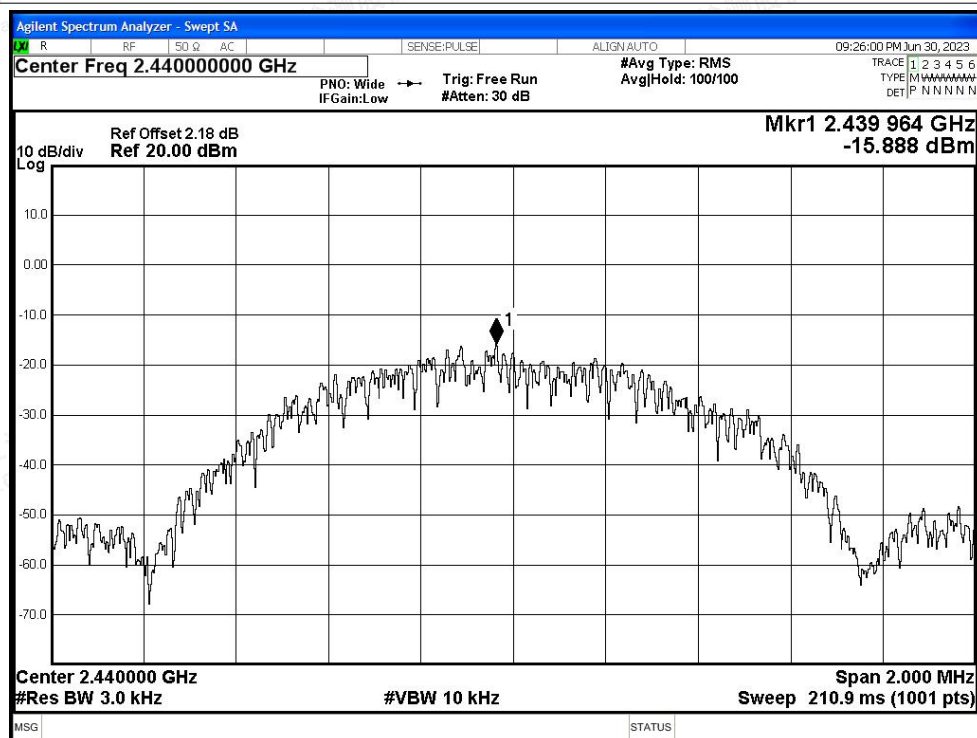


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

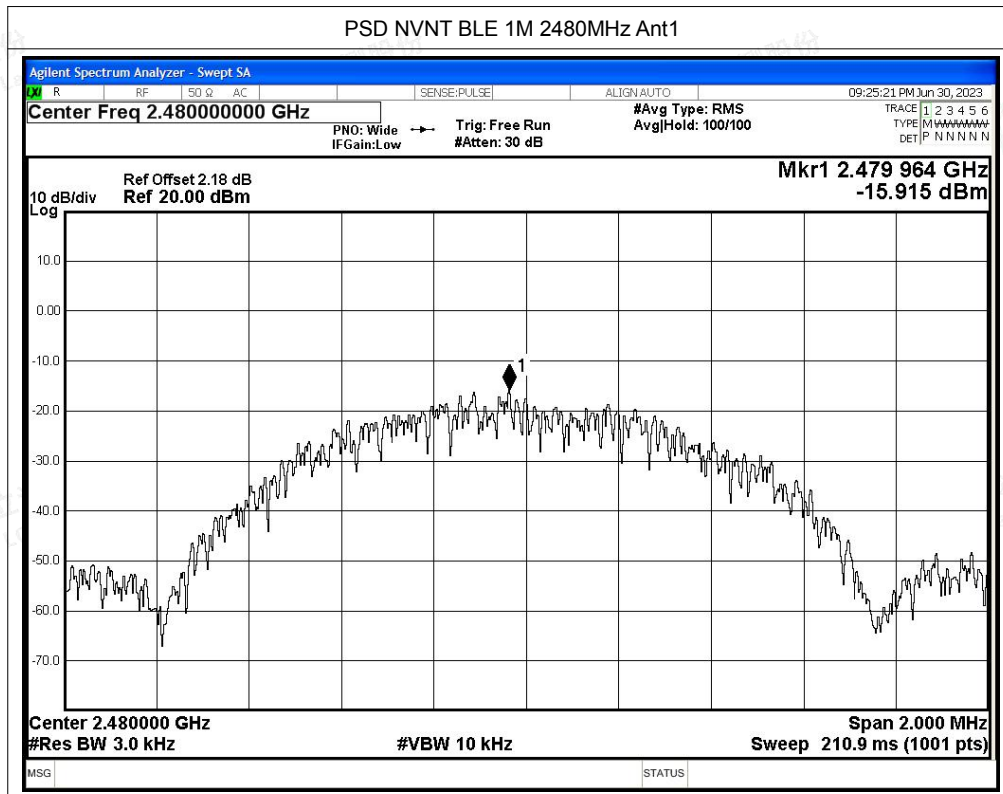


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B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-47.24	-20	Pass
NVNT	BLE 1M	2480	Ant1	-50.14	-20	Pass



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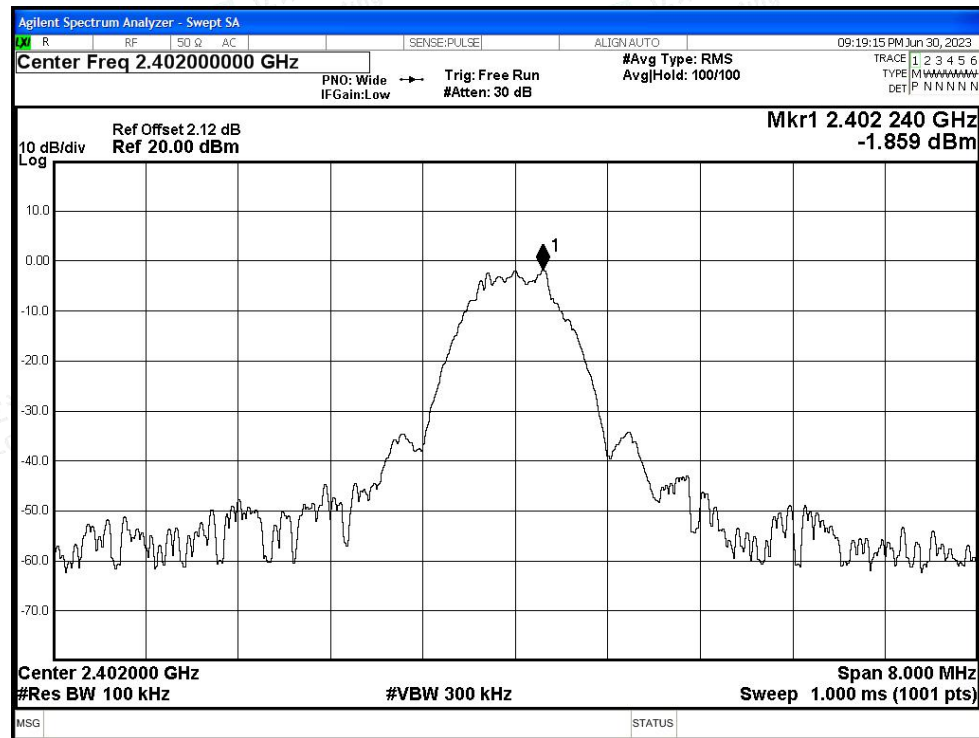
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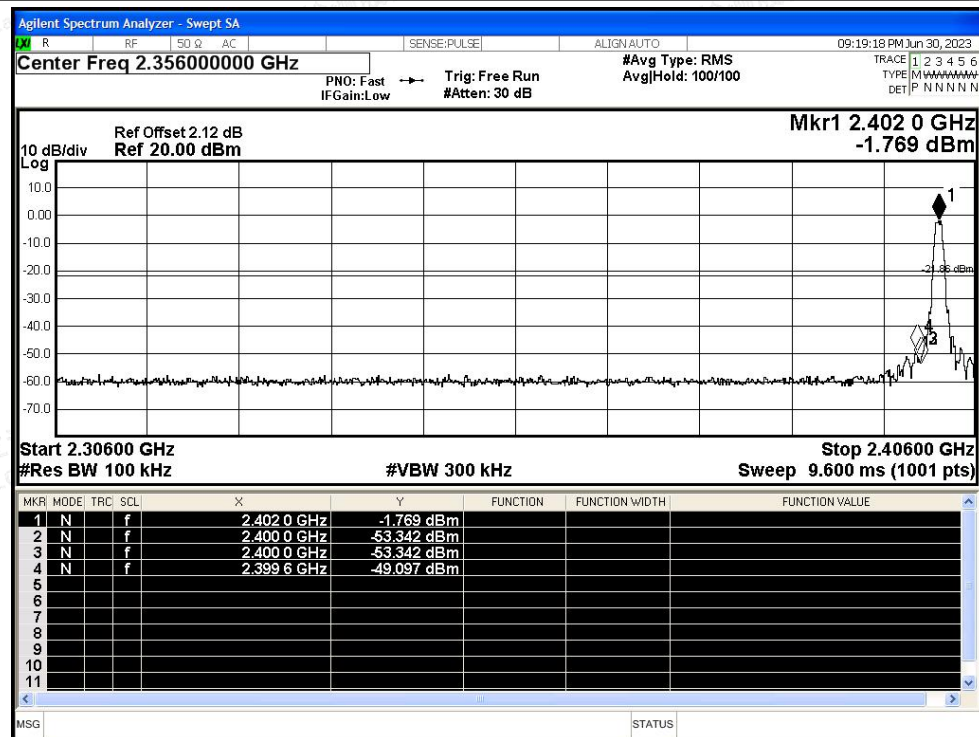


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

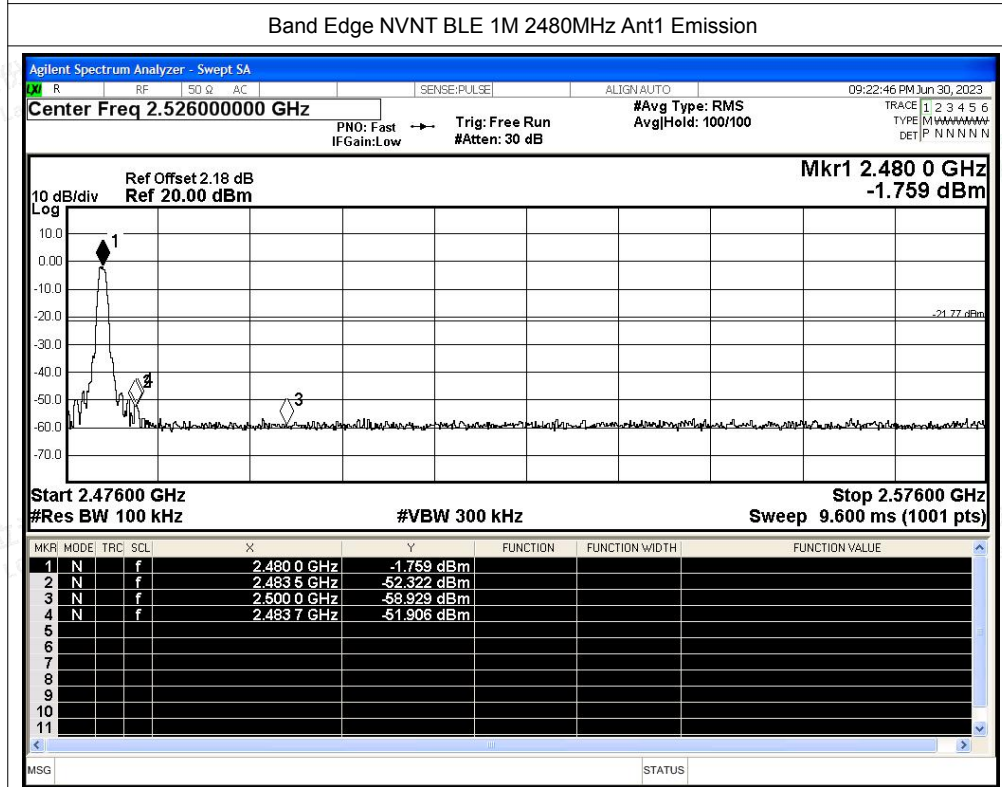
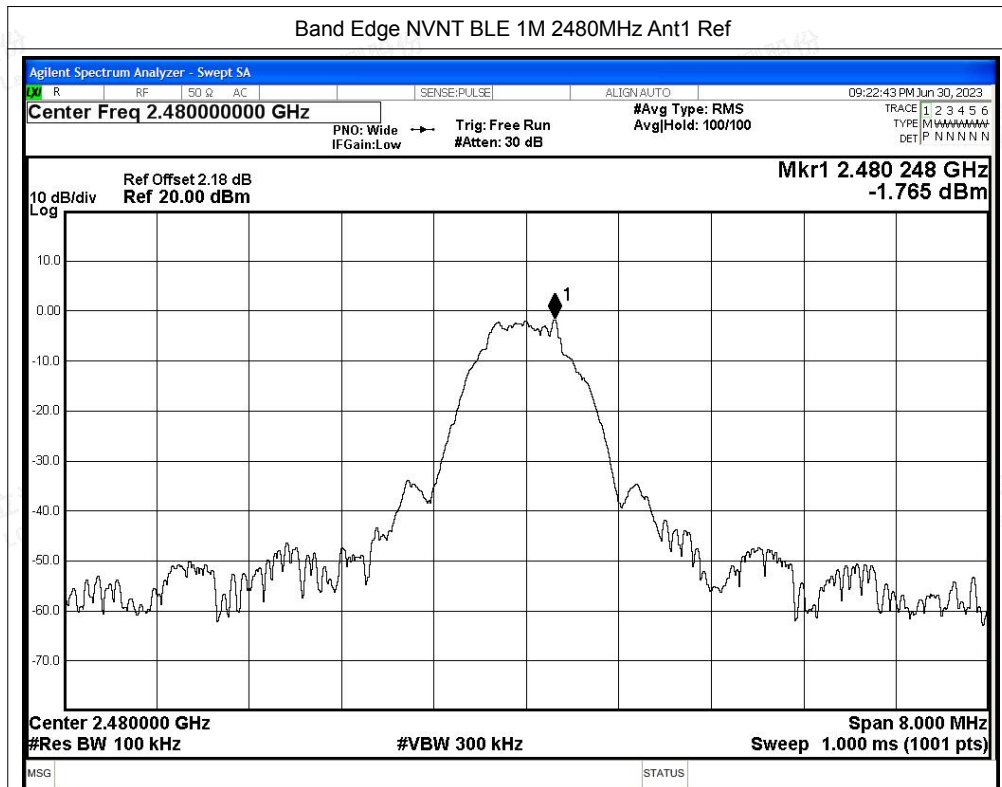


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B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-53.28	-20	Pass
NVNT	BLE 1M	2440	Ant1	-53.32	-20	Pass
NVNT	BLE 1M	2480	Ant1	-53.43	-20	Pass



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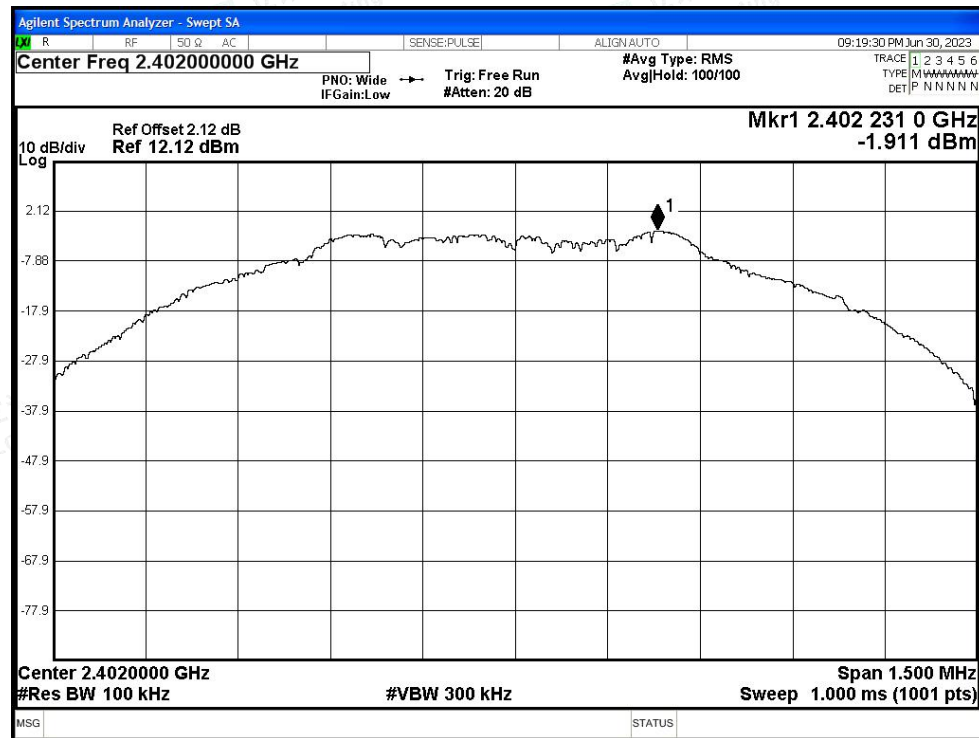
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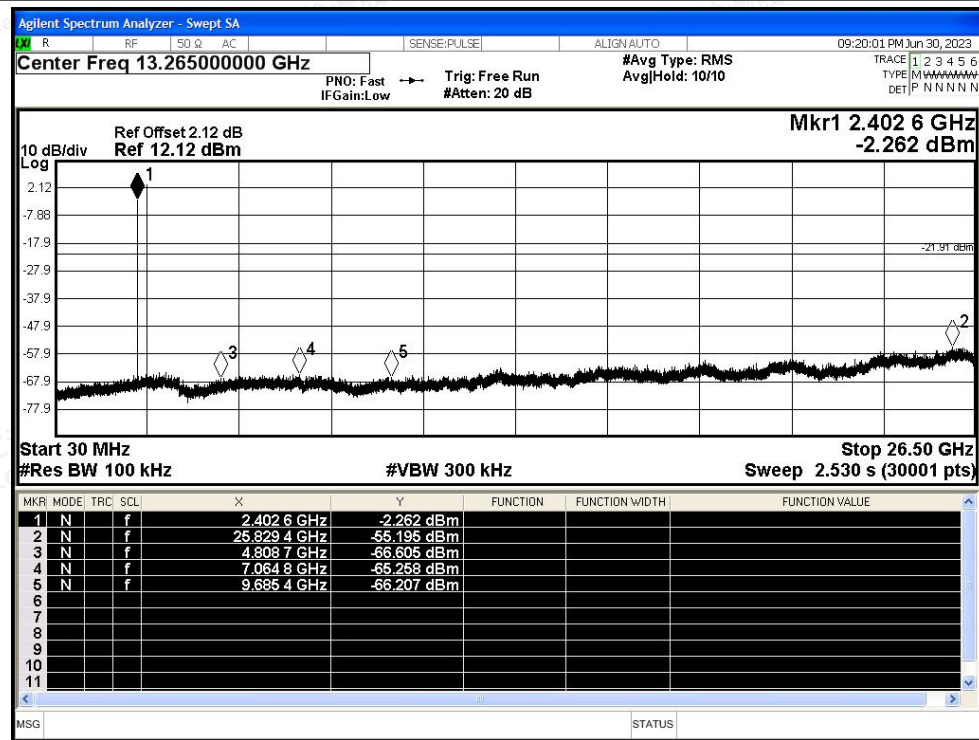


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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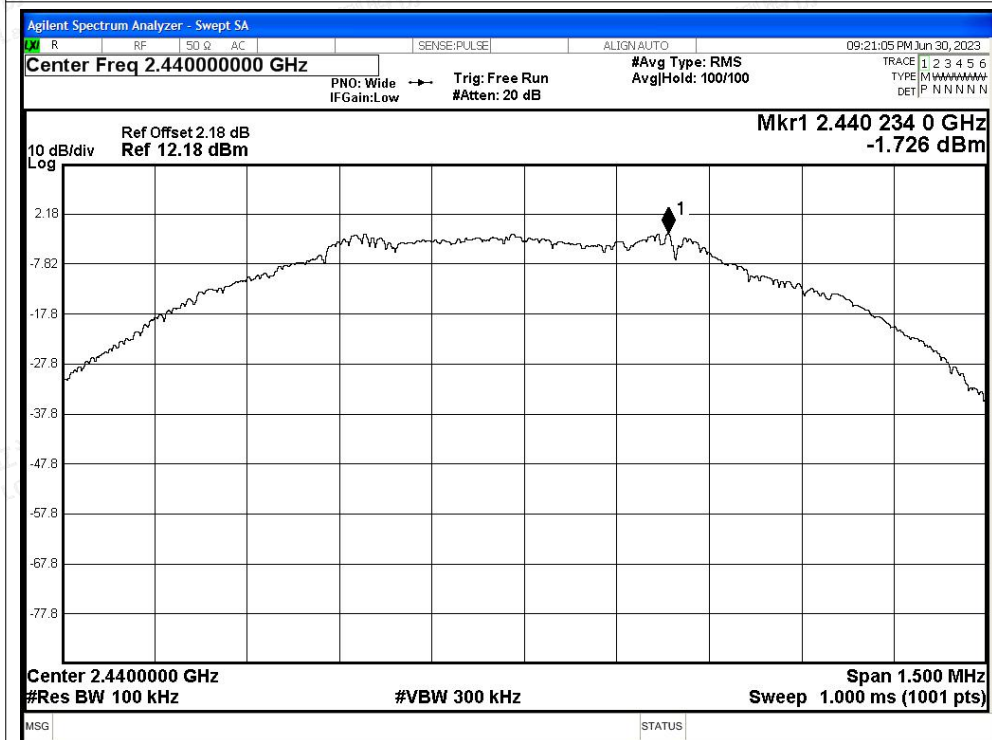
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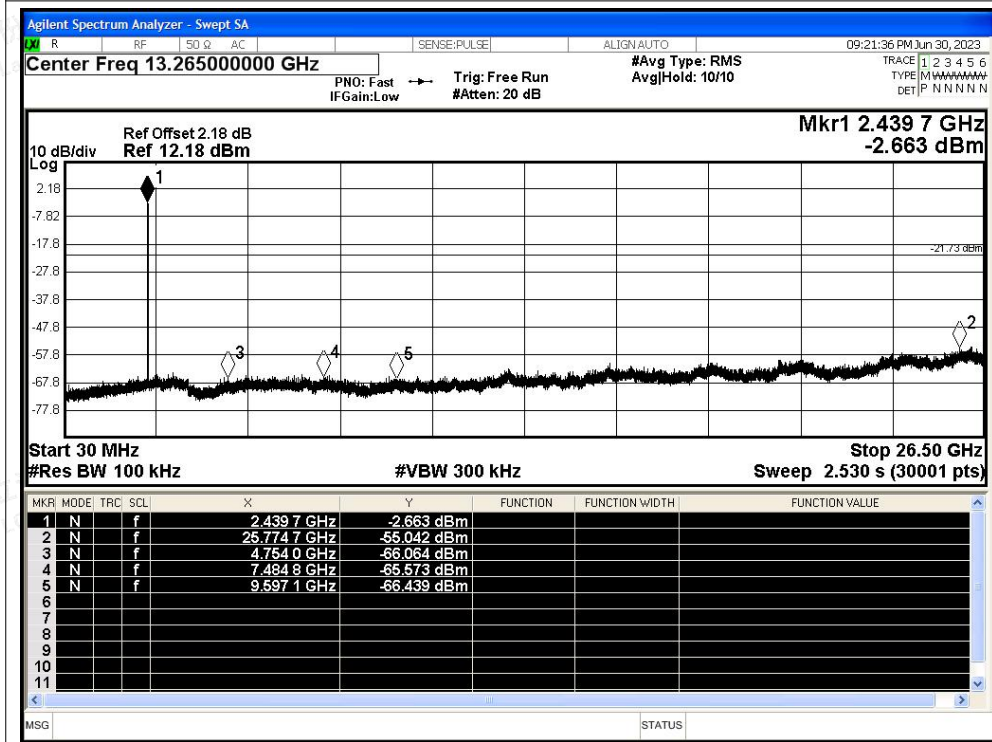
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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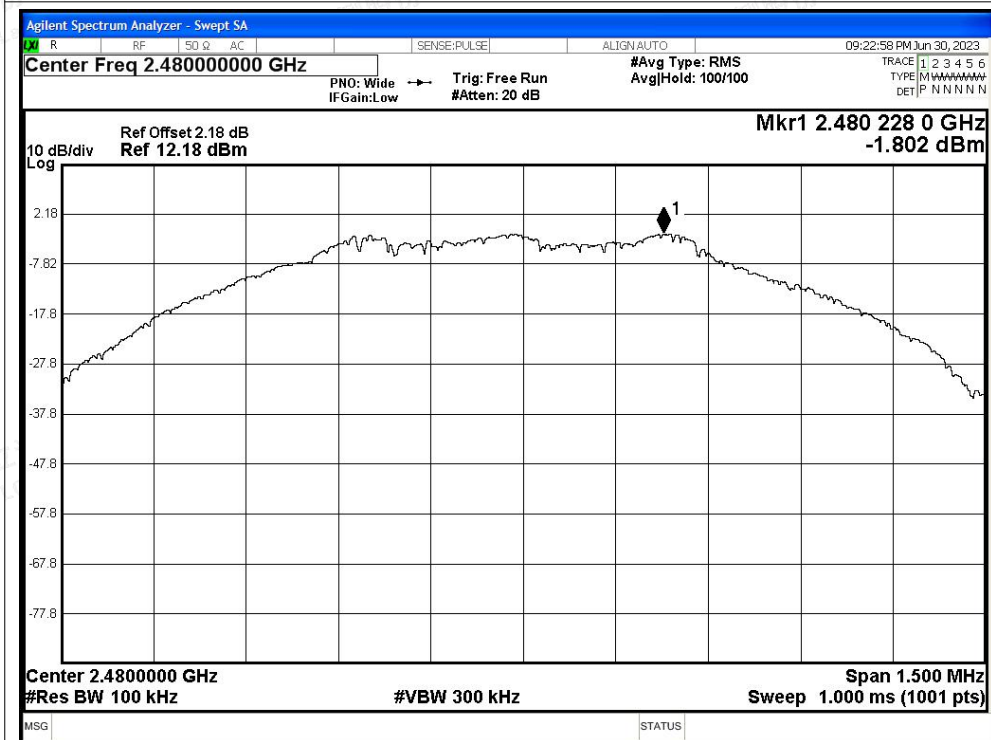
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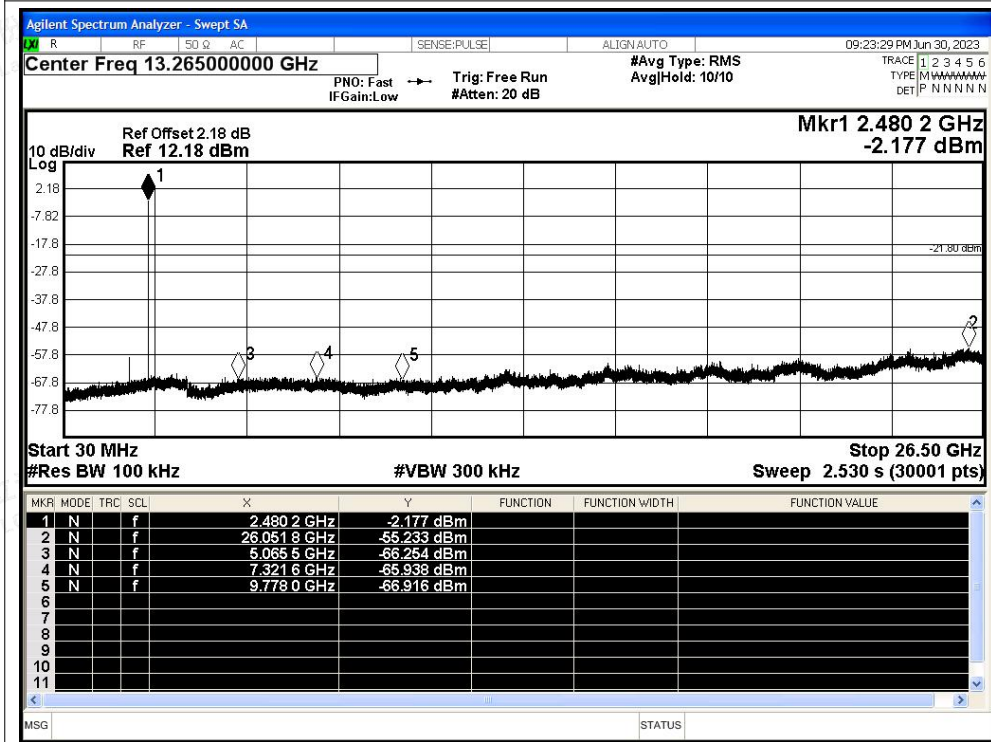
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



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B.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	50	3.01	1000
NVNT	BLE 1M	2440	Ant1	50	3.01	1000
NVNT	BLE 1M	2480	Ant1	50	3.01	1000



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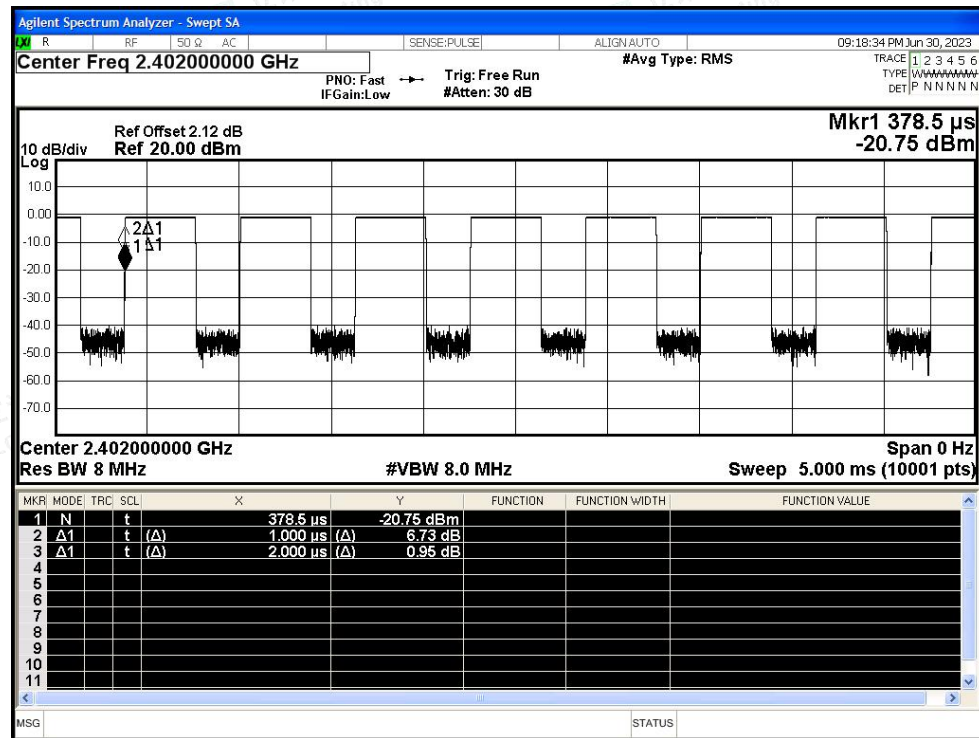
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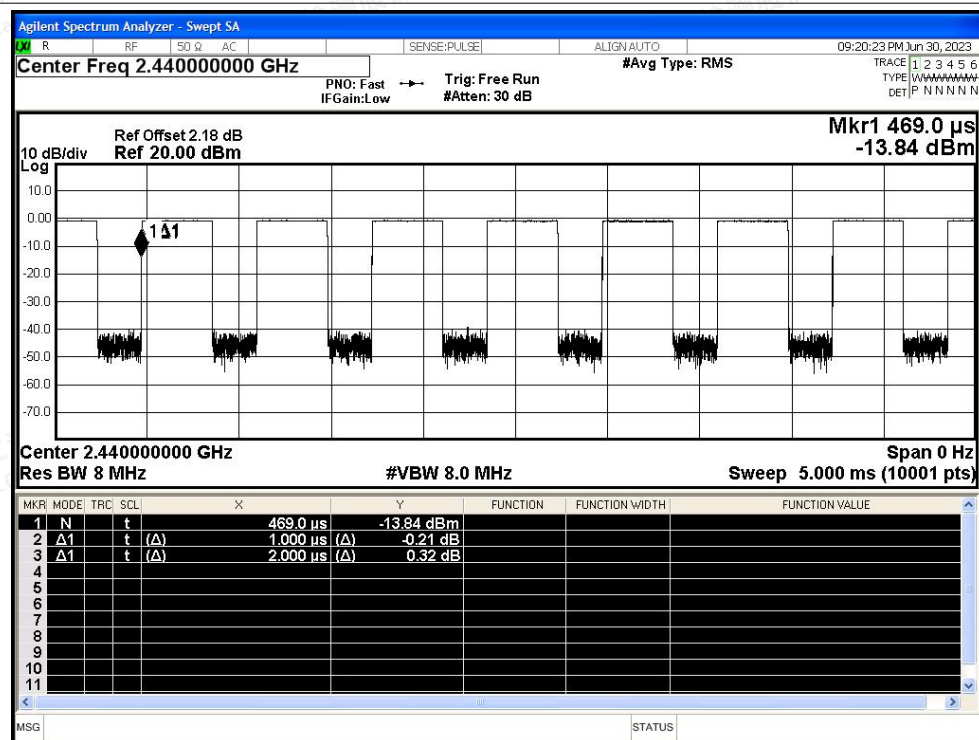


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

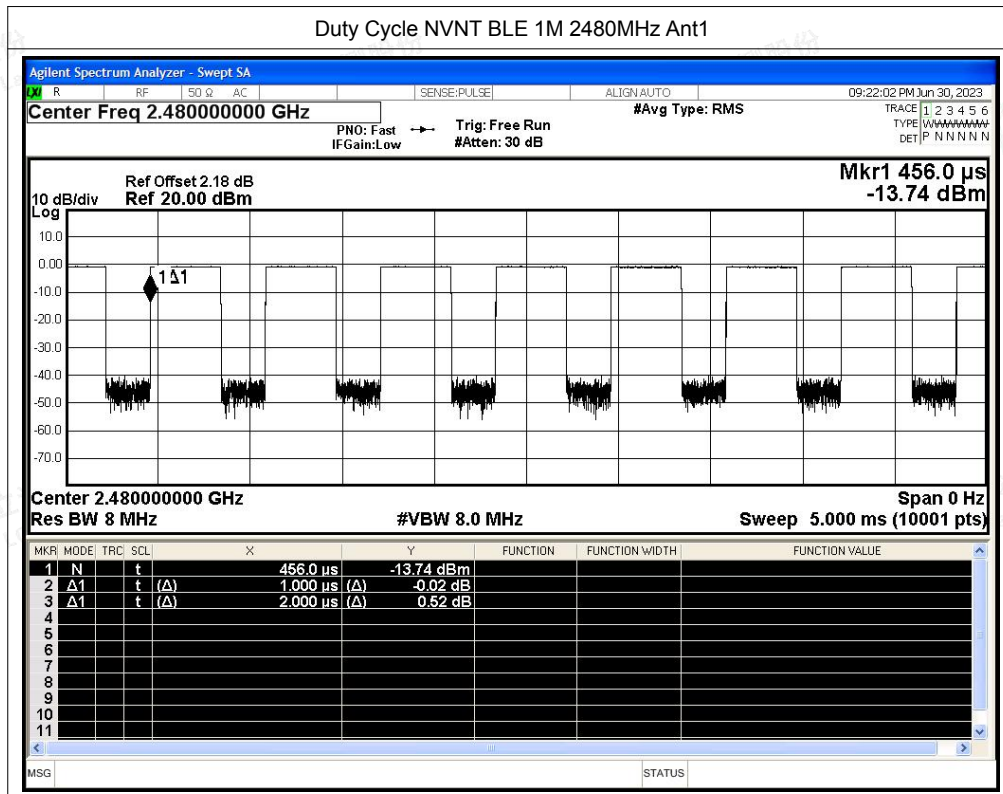


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B.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-50.59	2	46.67	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-50.68	2	46.58	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2358.384	-46.91	2	50.35	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2357.808	-47.8	2	49.46	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-49.78	2	47.48	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.24	2	47.02	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.16	2	48.1	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-51.41	2	45.85	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2494.408	-46.65	2	50.61	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2489.536	-47.86	2	49.4	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-48.29	2	48.97	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-51.29	2	45.97	Average	54	Pass



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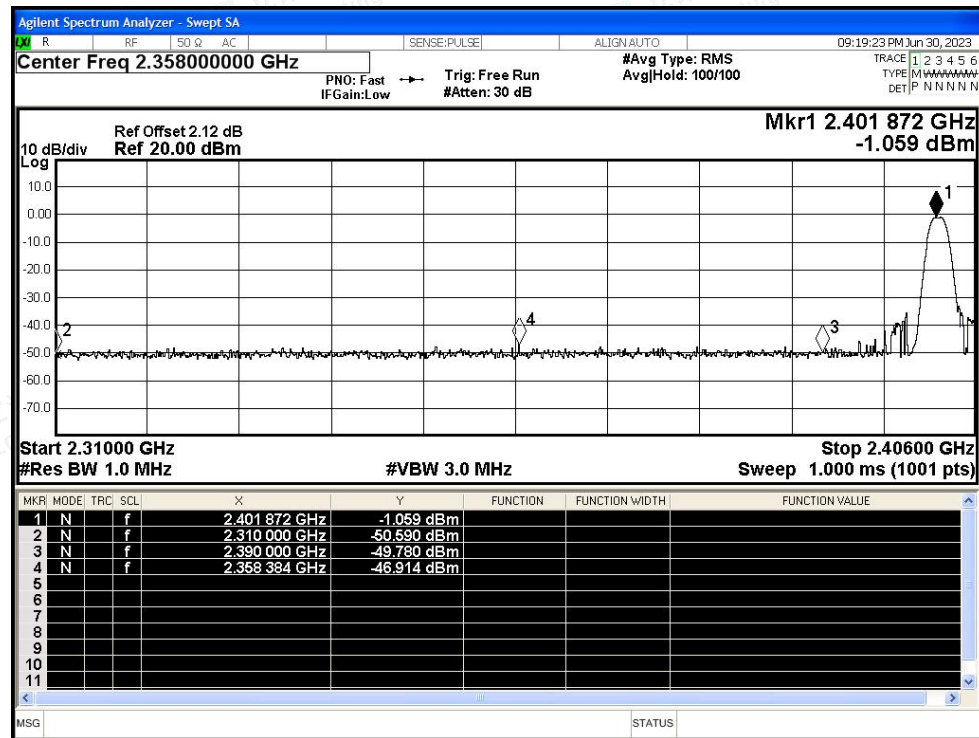
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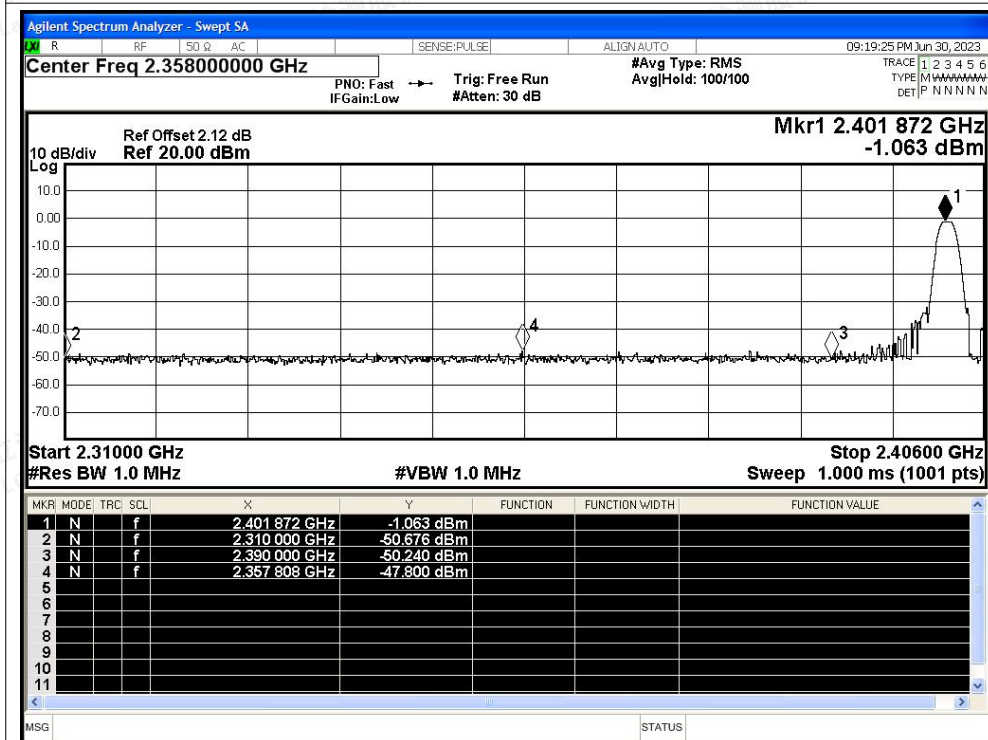


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average

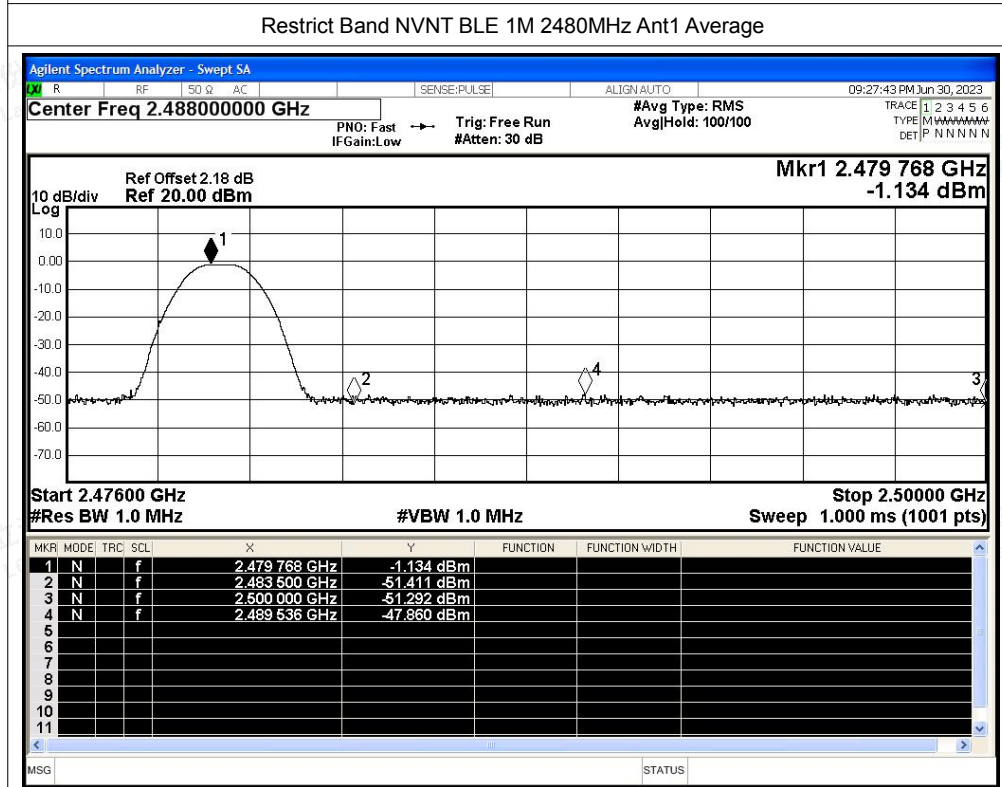
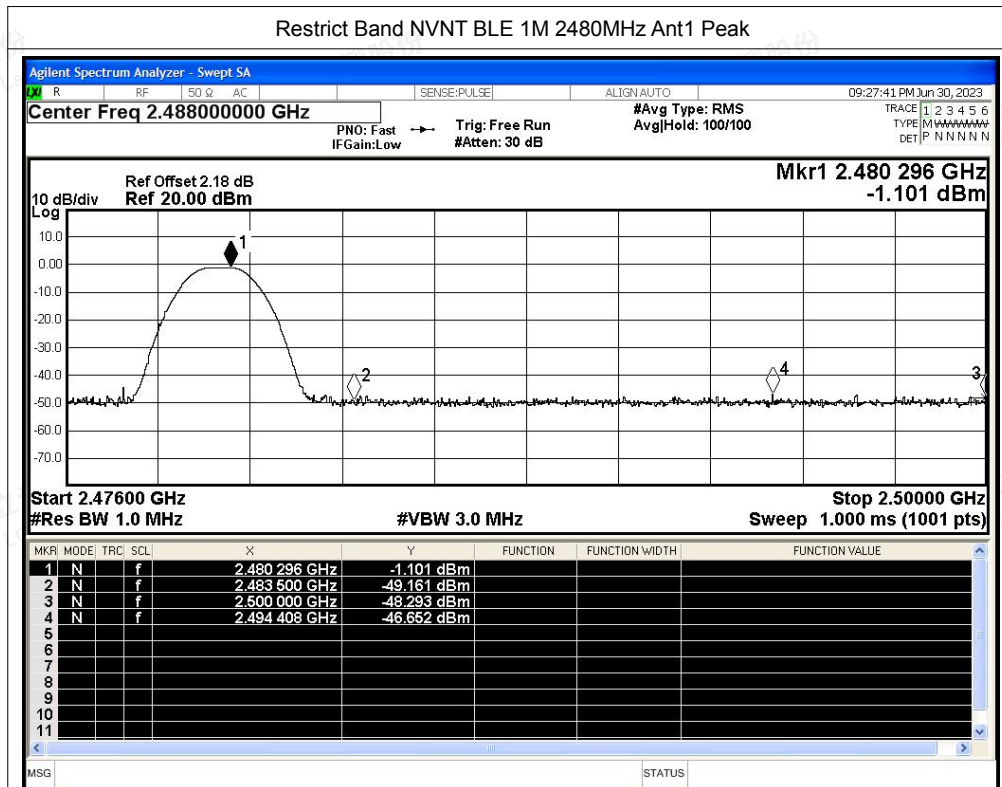


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