



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: MixDimmer

Test Model: DM10X

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	<i>Nick Peng</i>
Supervised by:	Joker Hu
	<i>Joker.Hu</i>



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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	0.66	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.67	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.657	≥ 0.5	Pass



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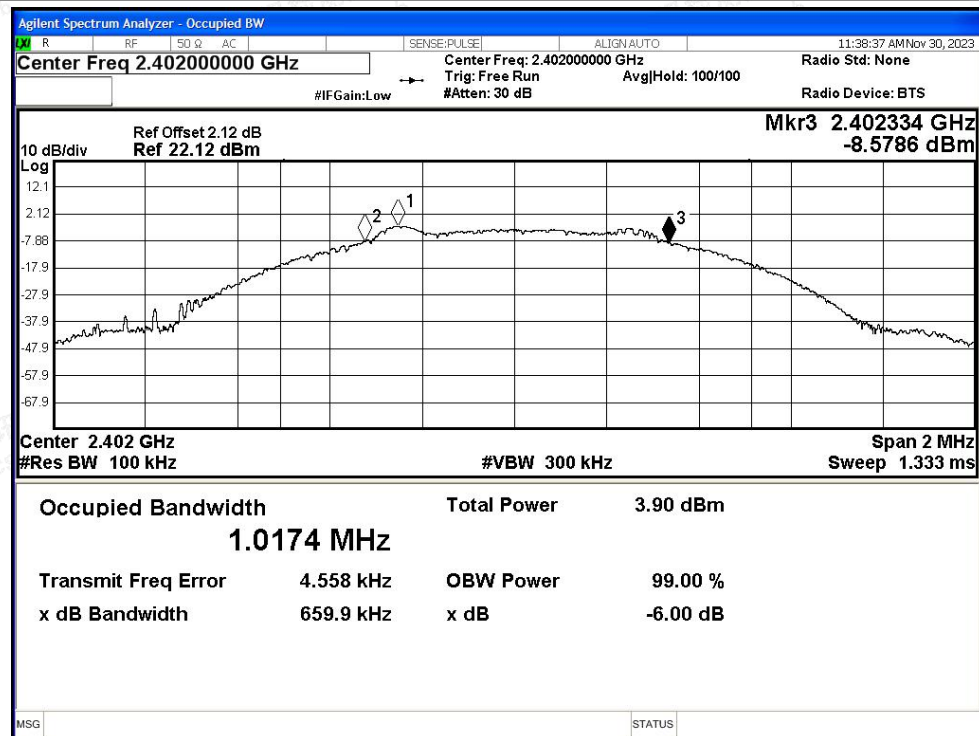
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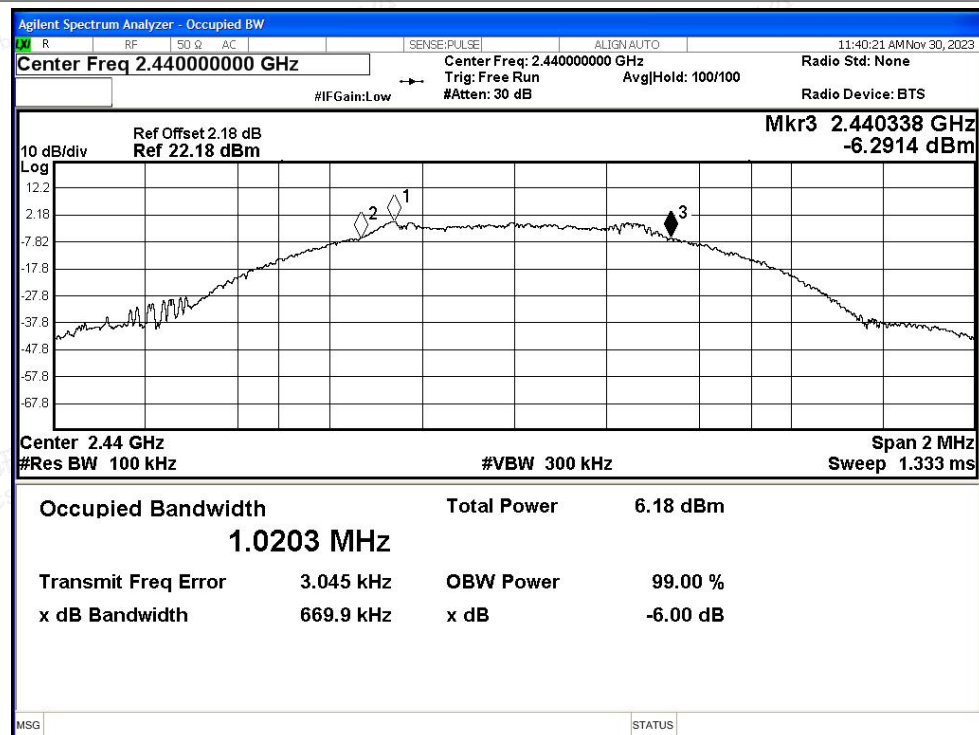


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

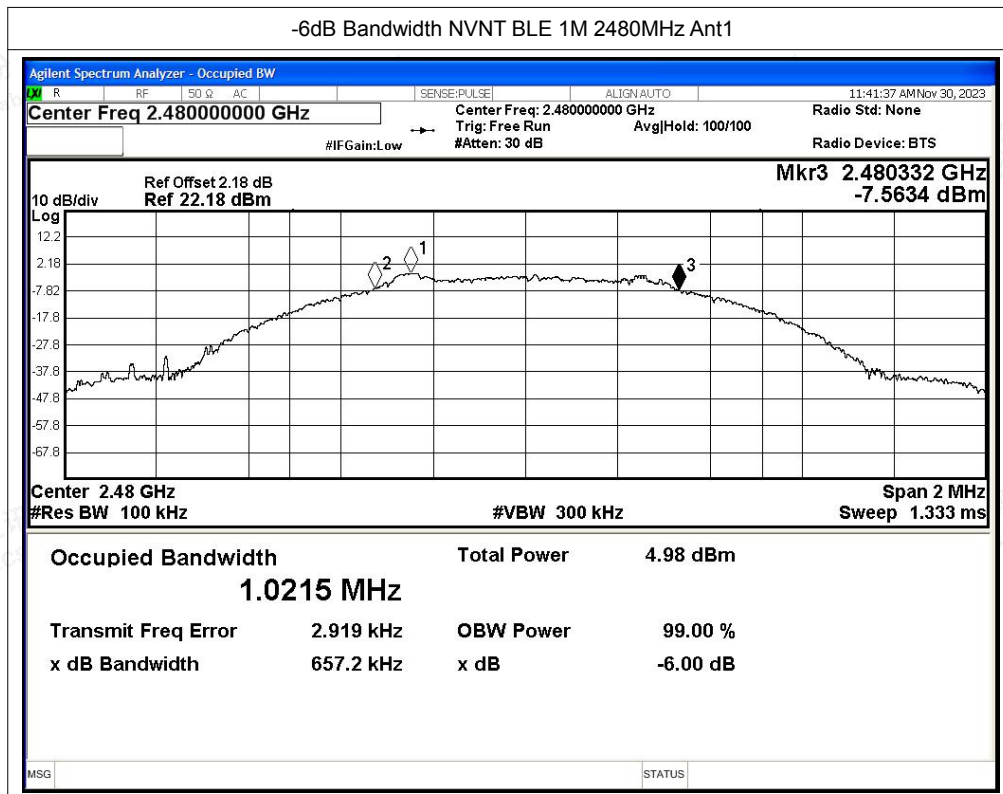


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A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-1.97	30	Pass
NVNT	BLE 1M	2440	Ant1	0.33	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.81	30	Pass



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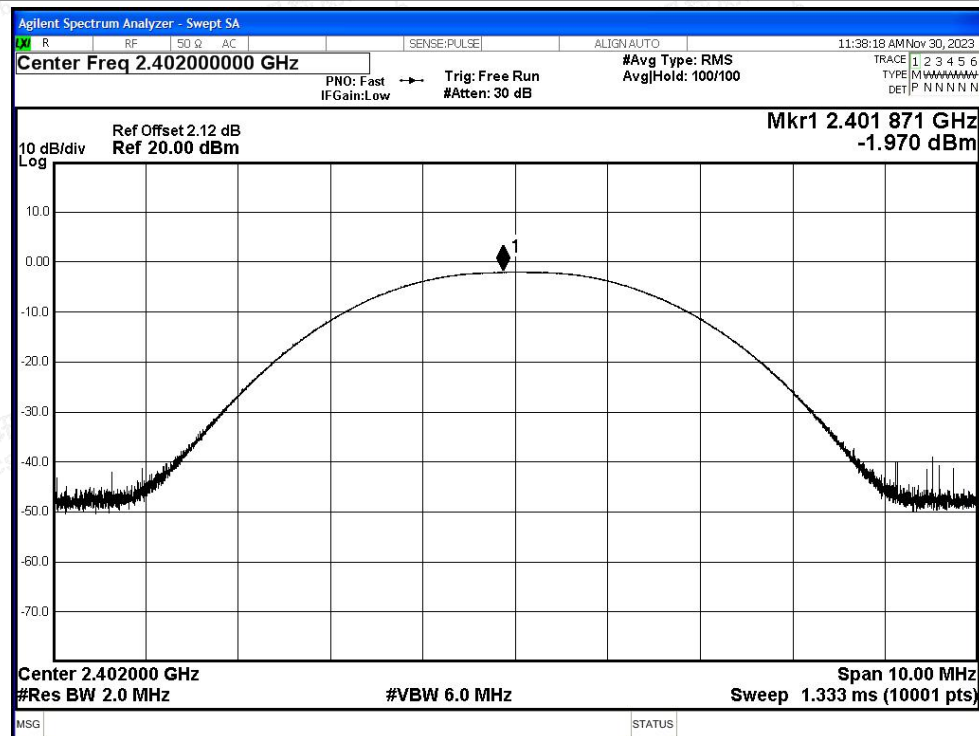
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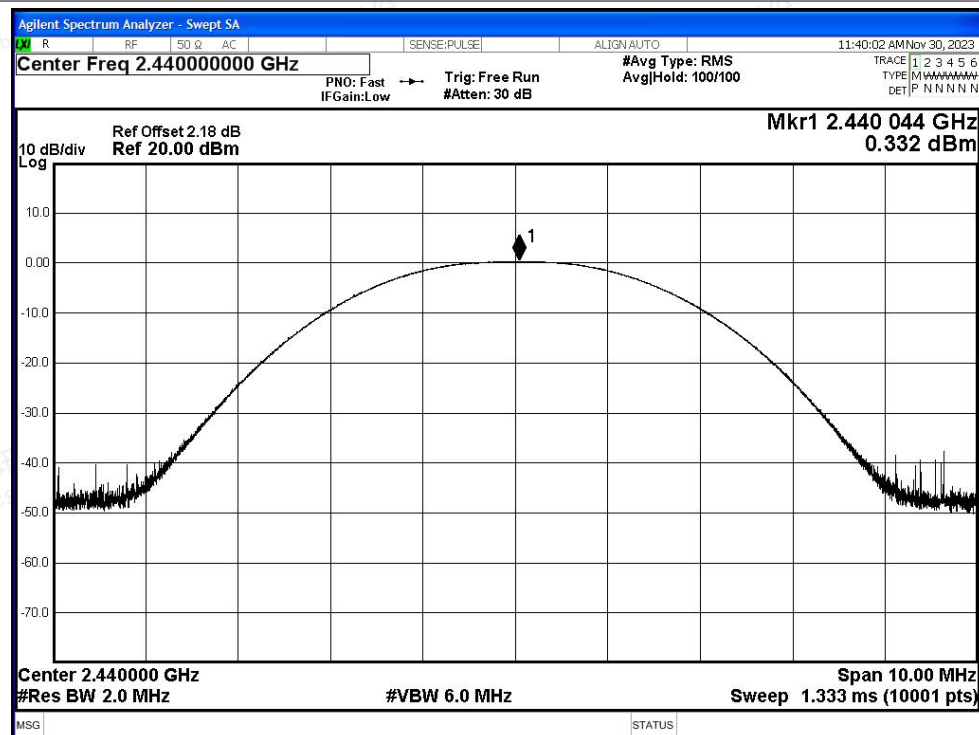


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

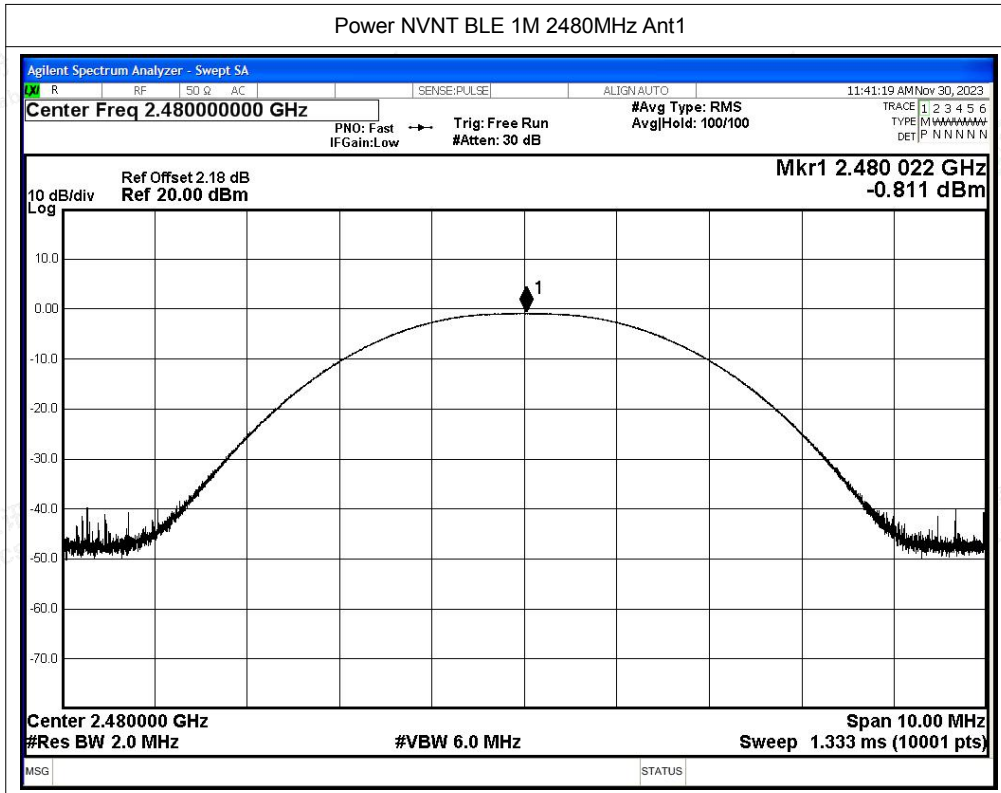


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-18.49	8	Pass
NVNT	BLE 1M	2440	Ant1	-16.46	8	Pass
NVNT	BLE 1M	2480	Ant1	-17.63	8	Pass



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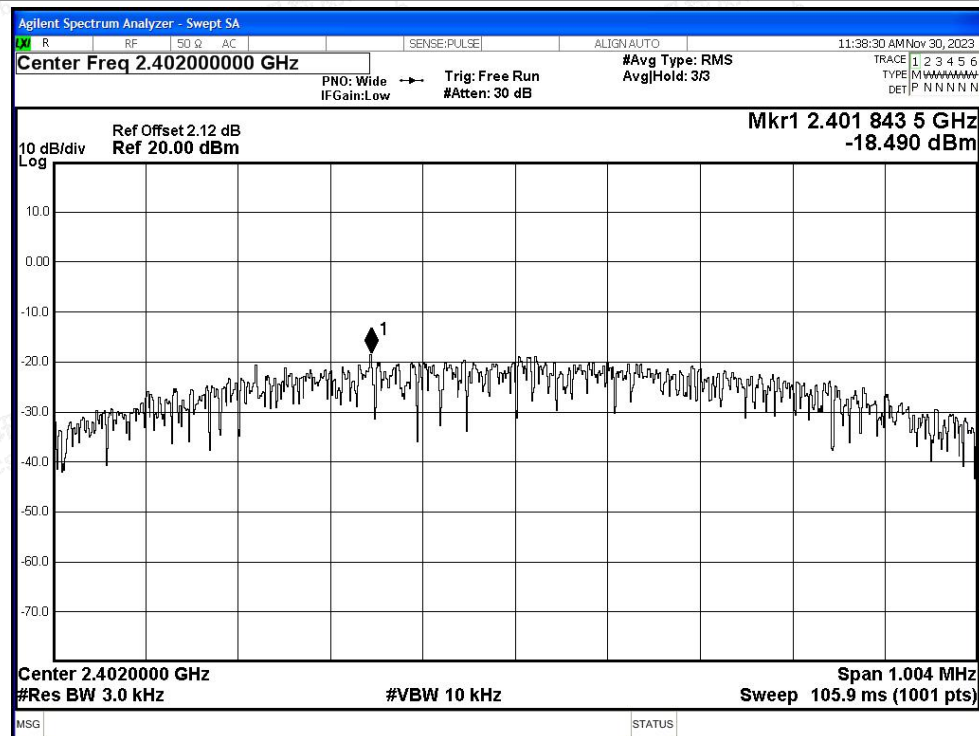
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

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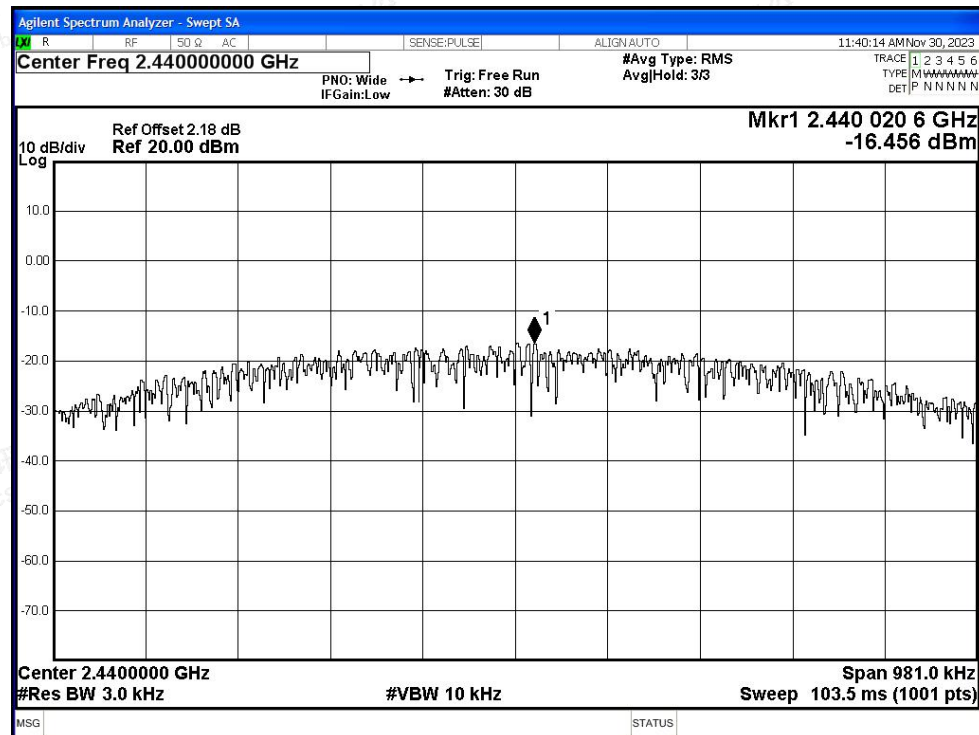


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

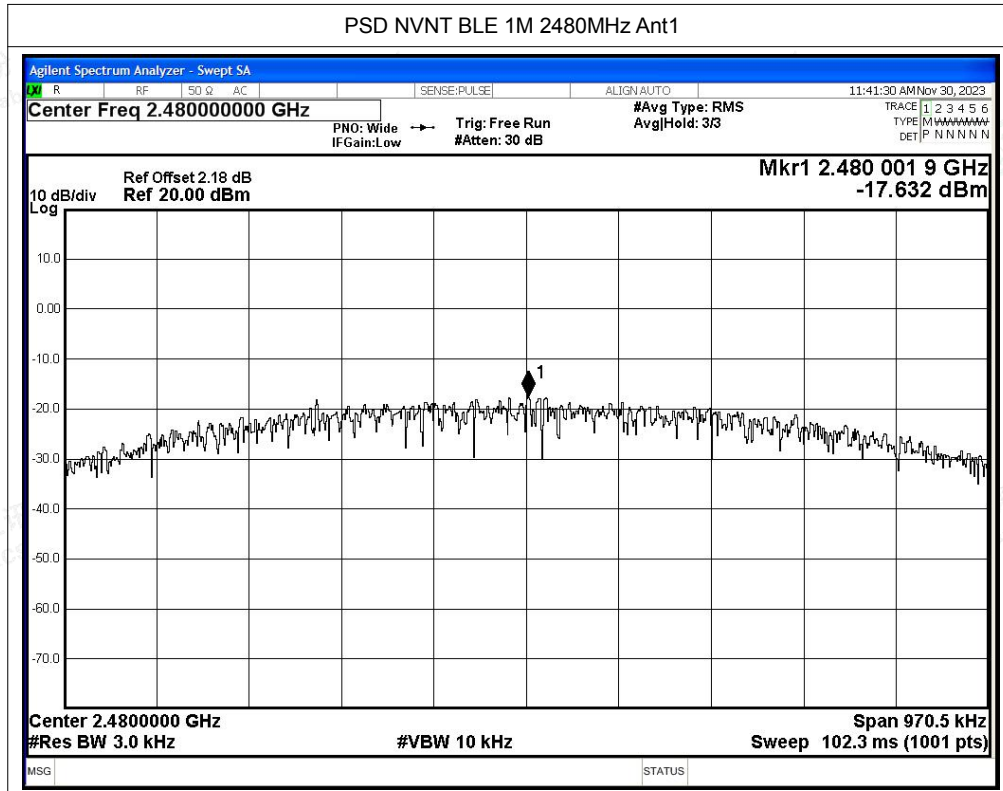


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A.4 Band Edge

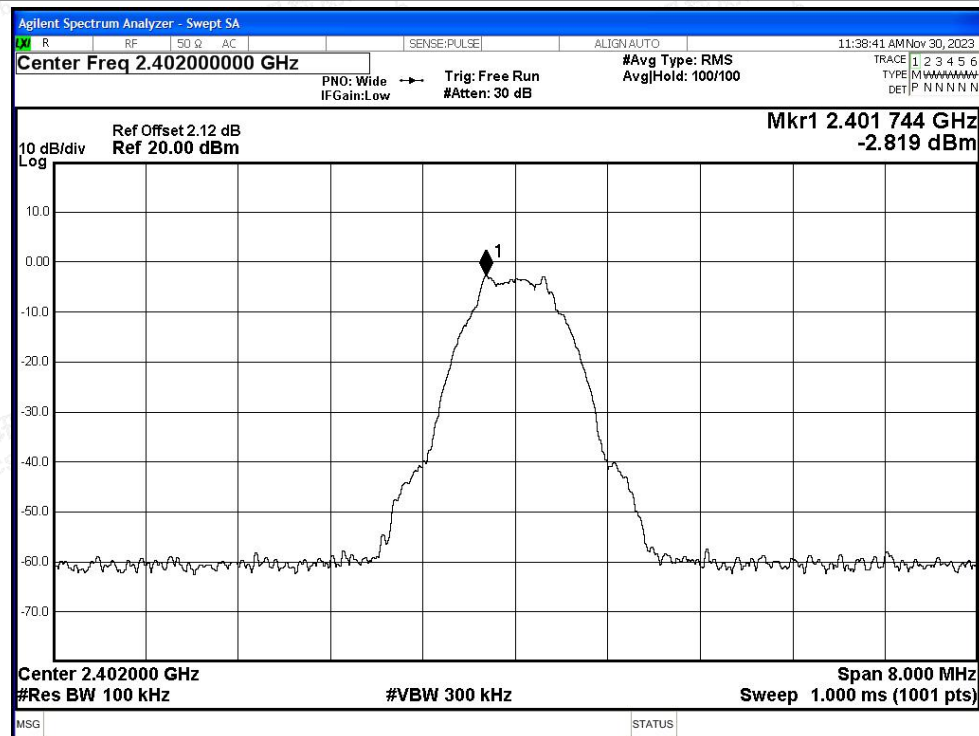
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-53.96	-20	Pass
NVNT	BLE 1M	2480	Ant1	-55.65	-20	Pass



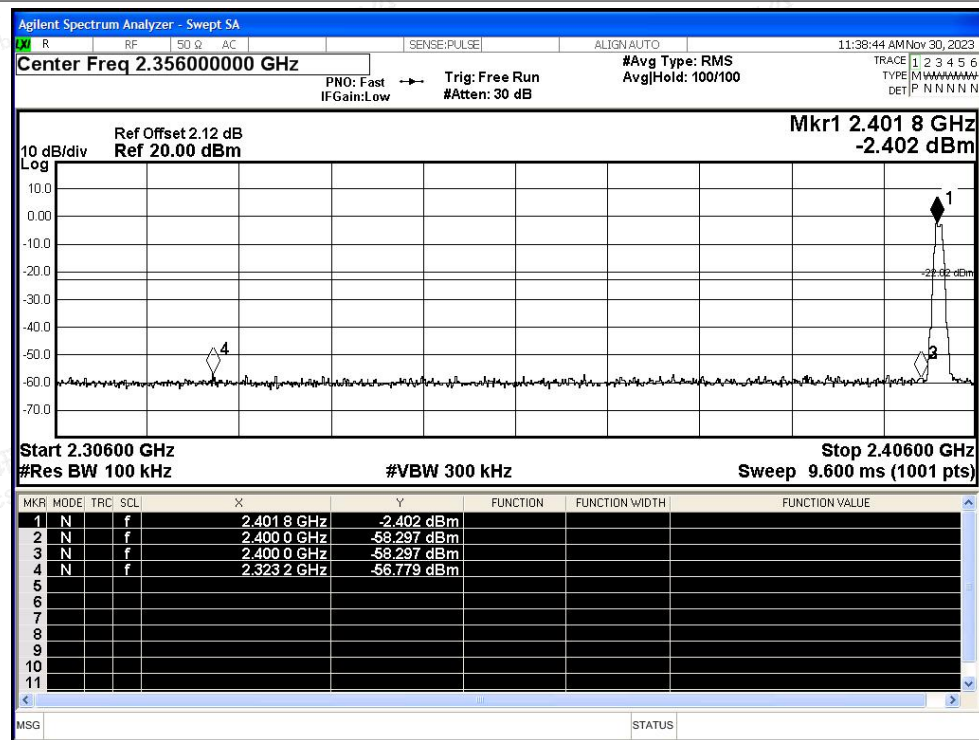


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



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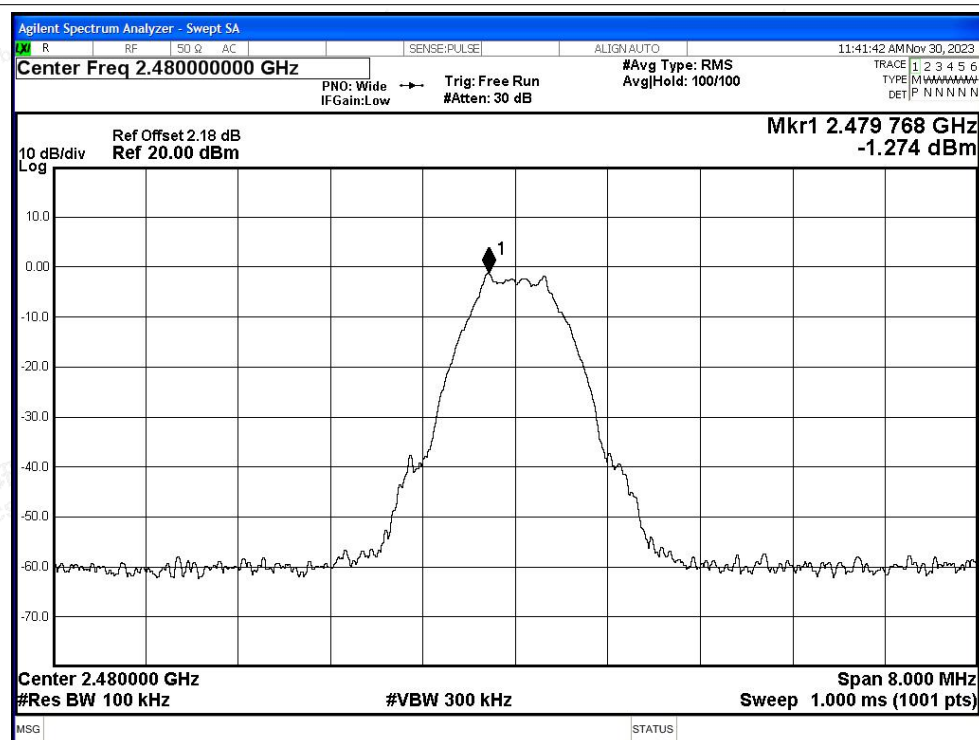
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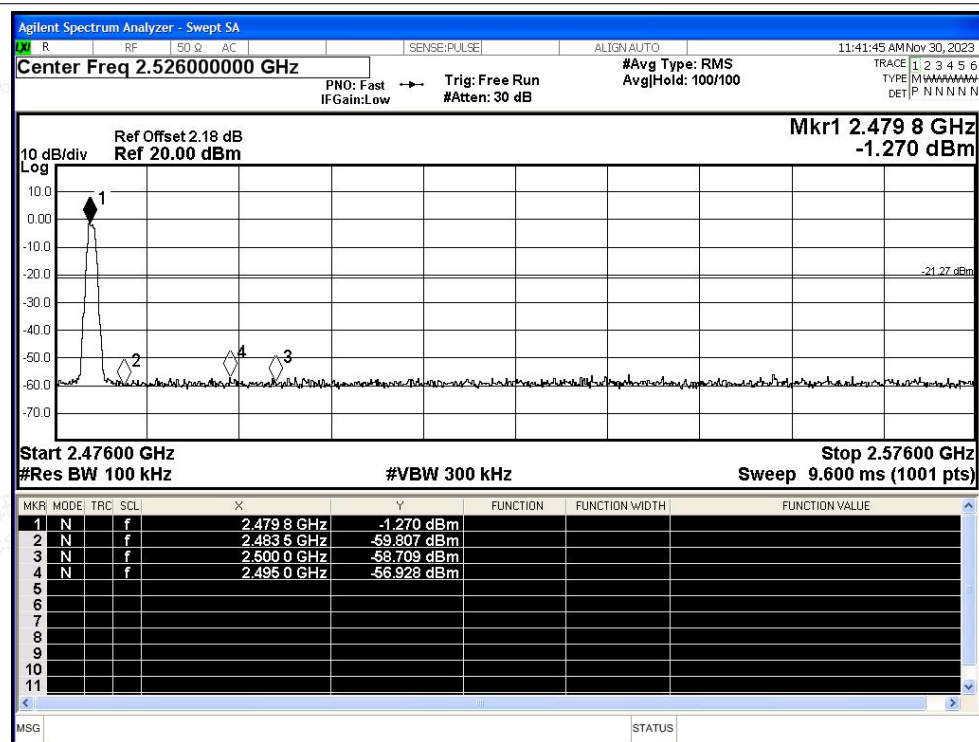
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Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



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	-52.16	-20	Pass
NVNT	BLE 1M	2440	Ant1	-55.95	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.19	-20	Pass



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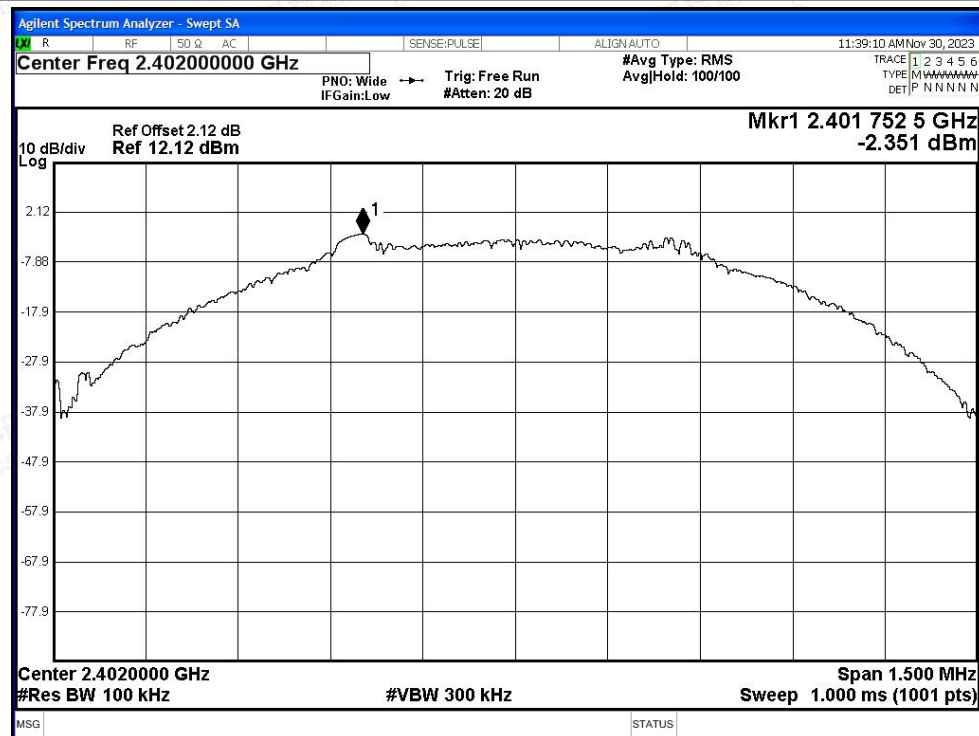
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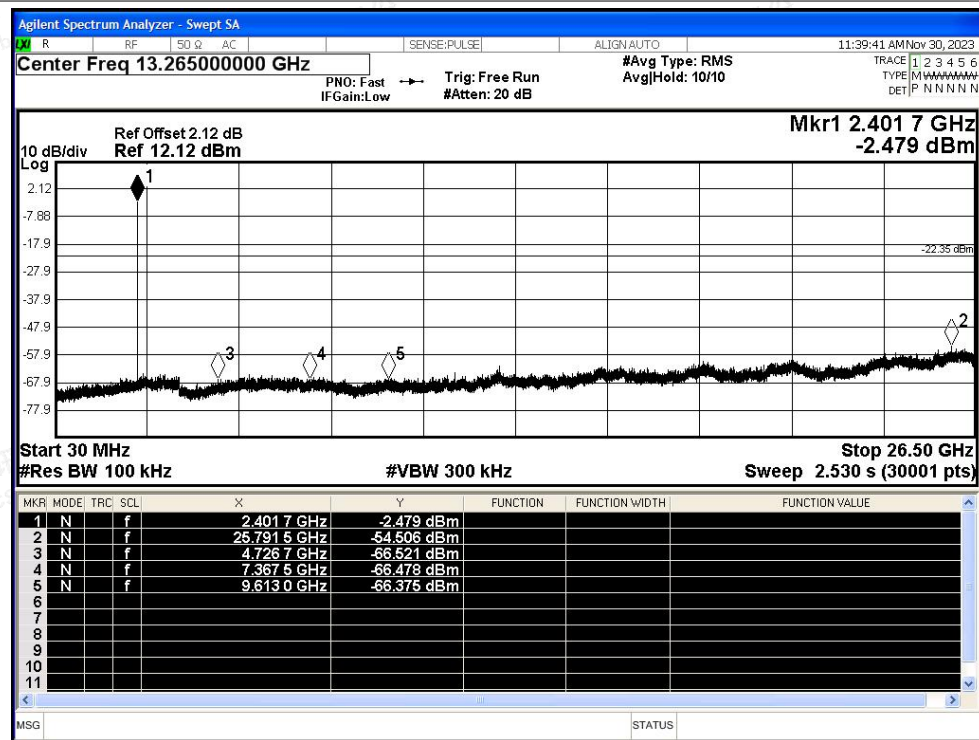


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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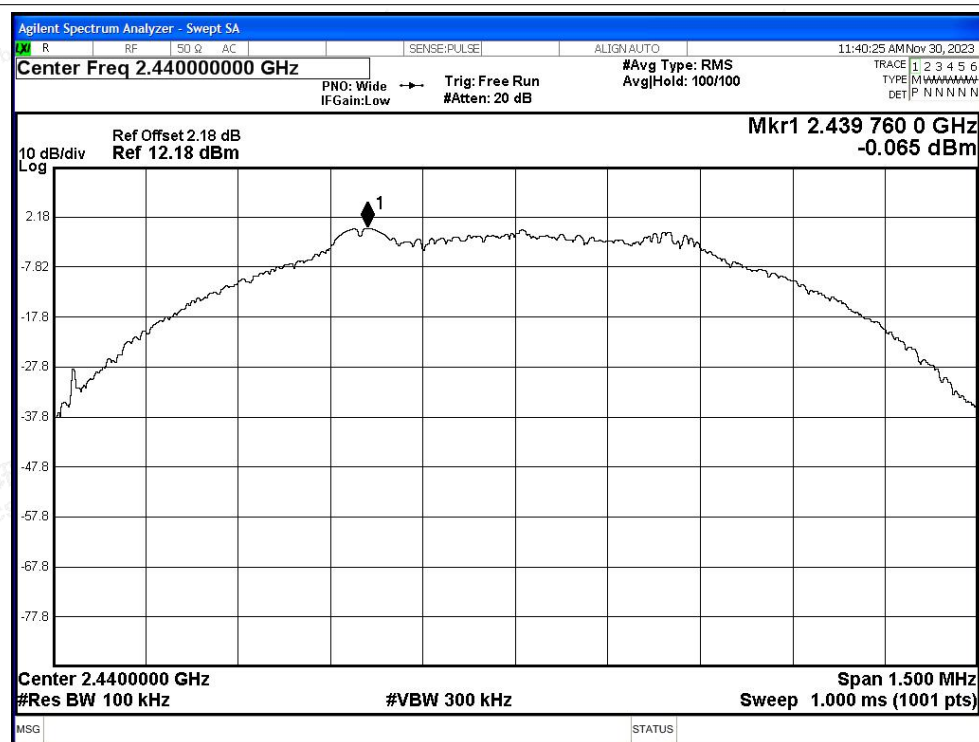
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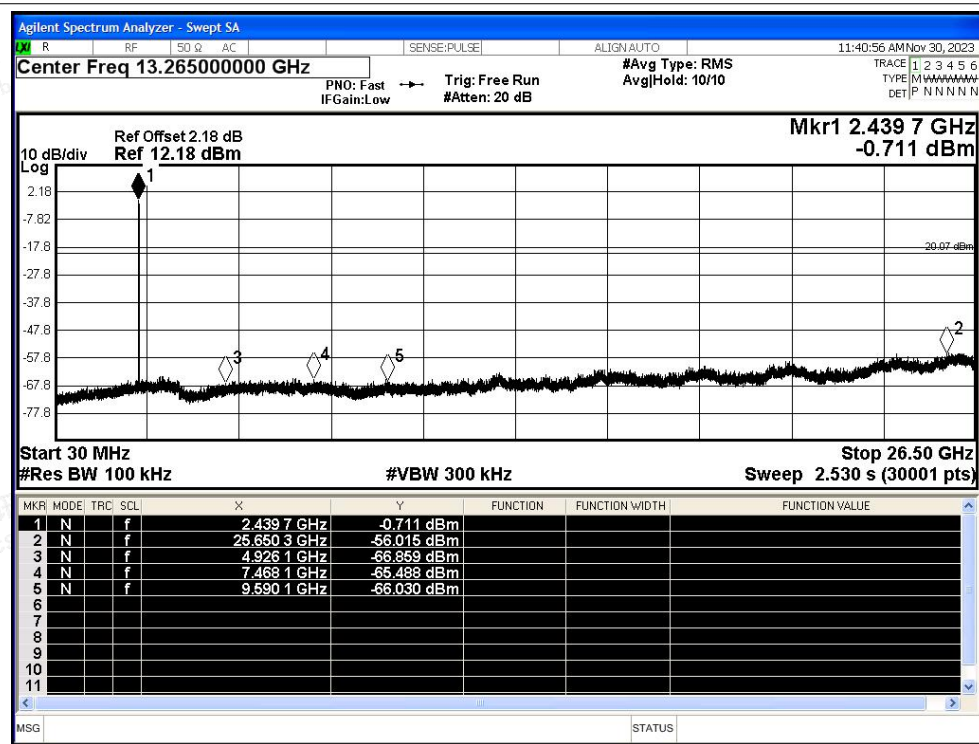
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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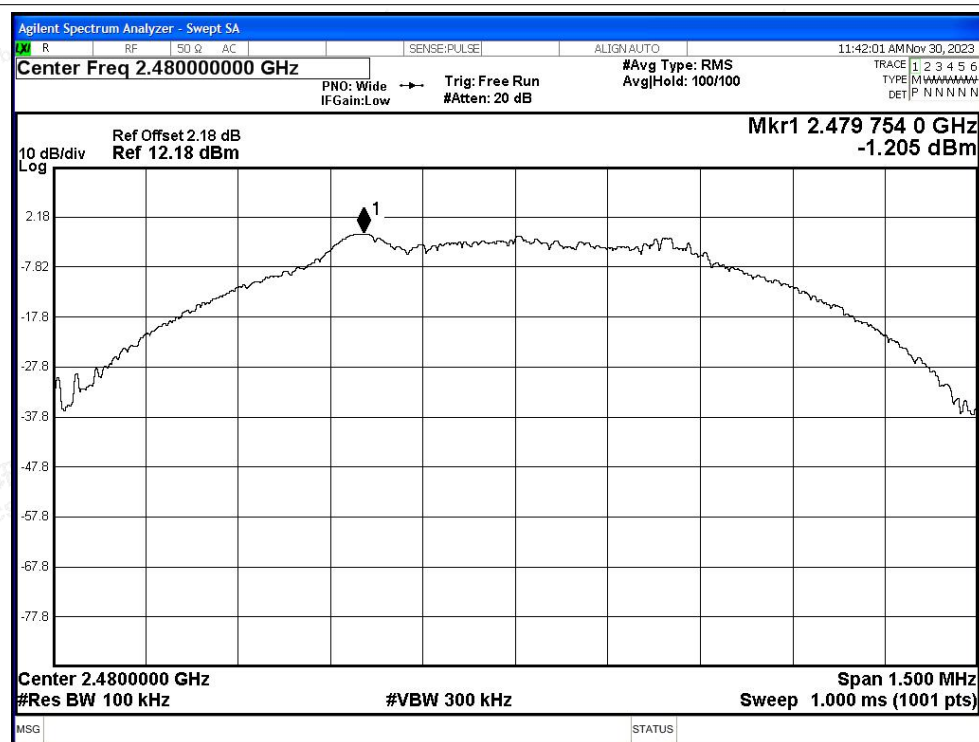
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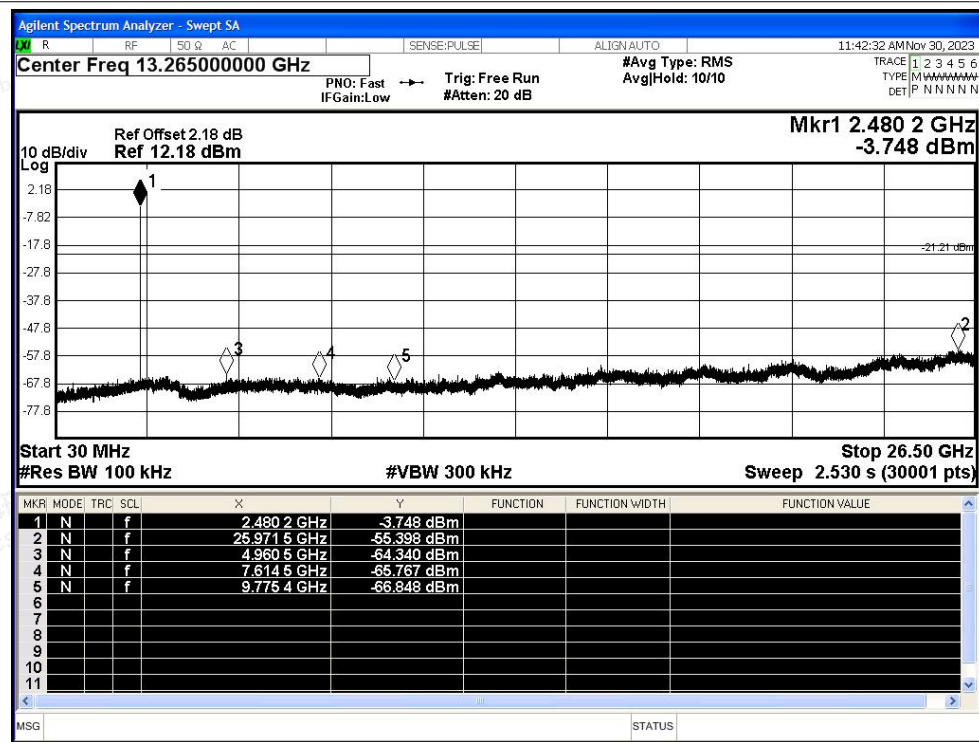
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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	87.36	0.59	0.61
NVNT	BLE 1M	2440	Ant1	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant1	87.39	0.59	0.61



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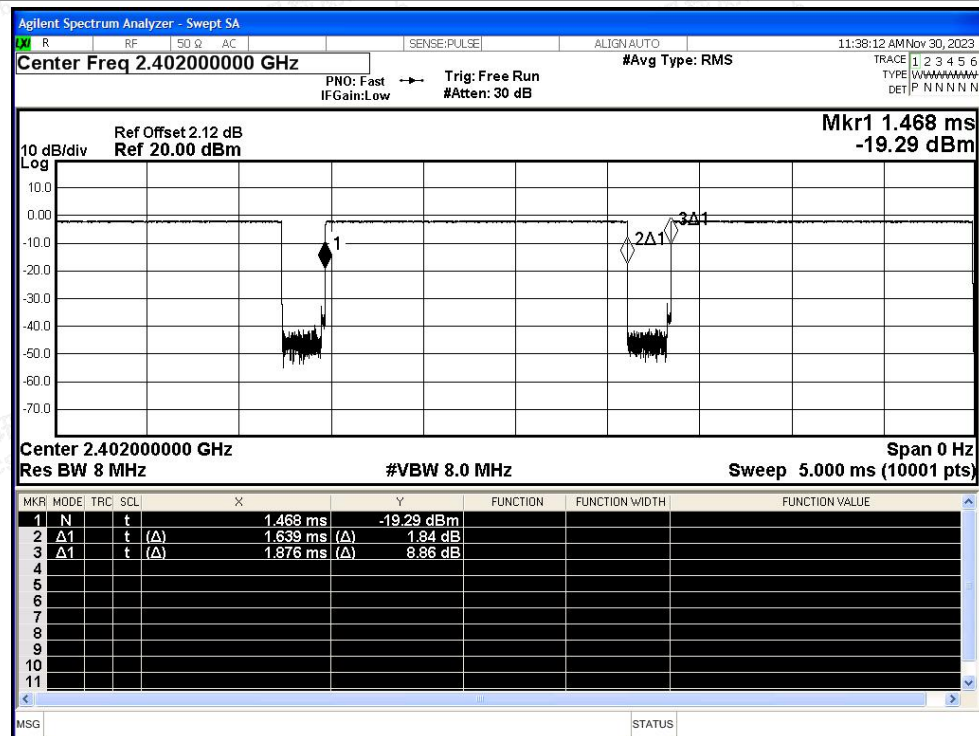
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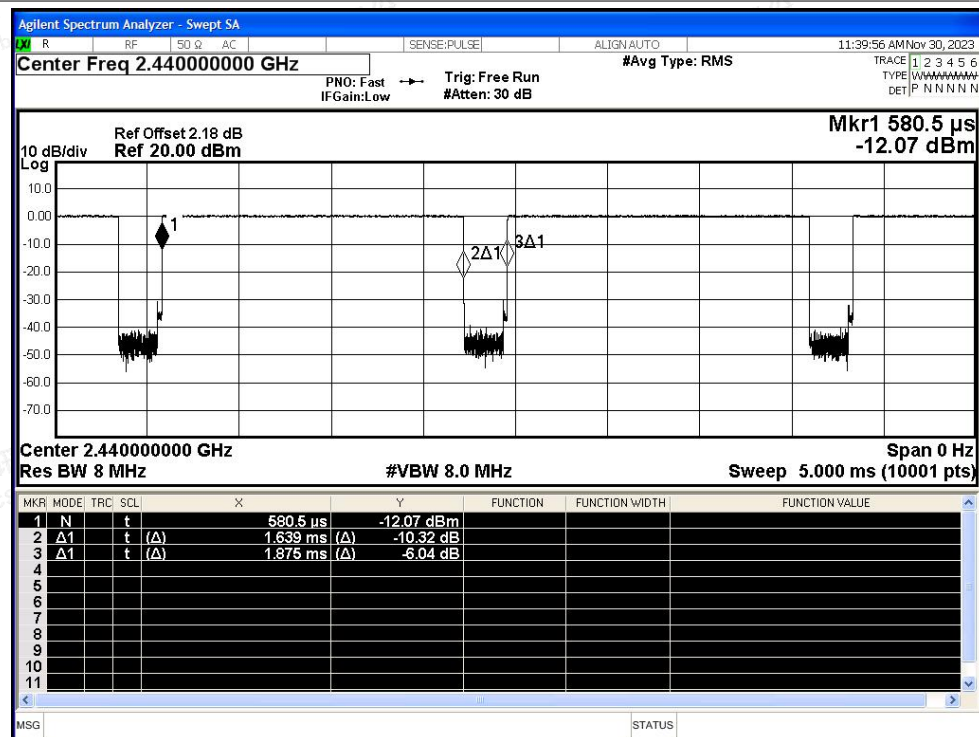


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

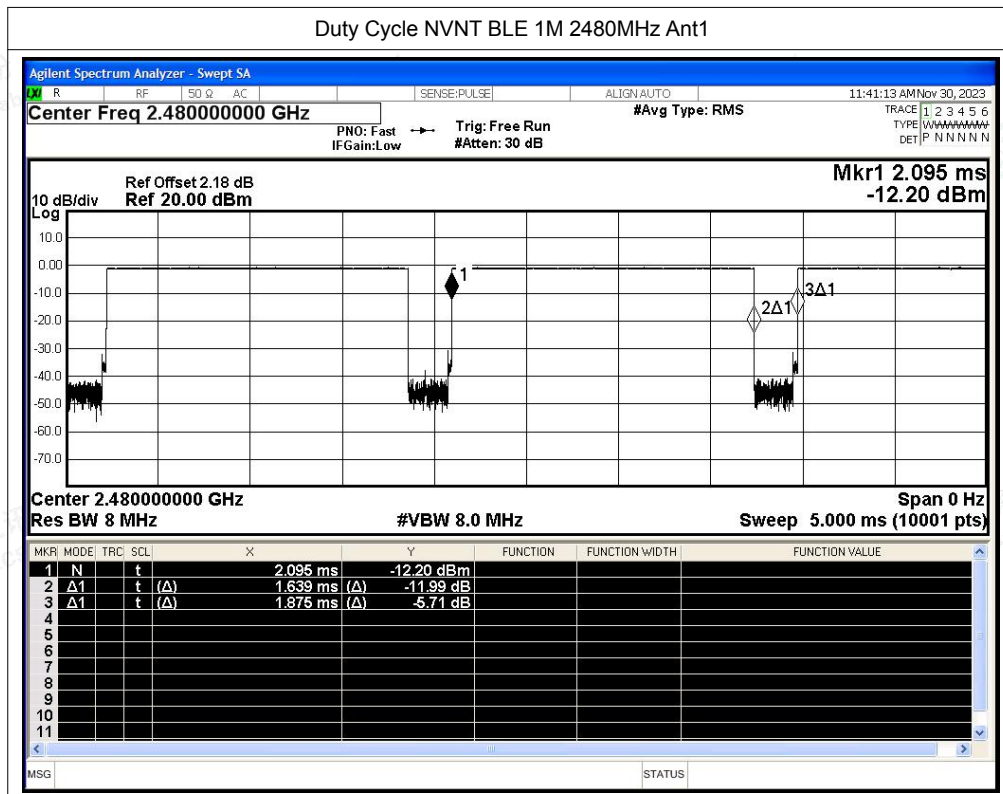


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A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-50.58	2	46.68	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-57.73	2	39.53	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2351.952	-47.32	2	49.94	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2388.336	-57.22	2	40.04	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.53	2	46.73	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-57.35	2	39.91	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.52	2	47.74	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-55.5	2	41.76	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2484.88	-44.14	2	53.12	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.512	-55.5	2	41.76	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.54	2	46.72	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-57.02	2	40.24	Average	54	Pass



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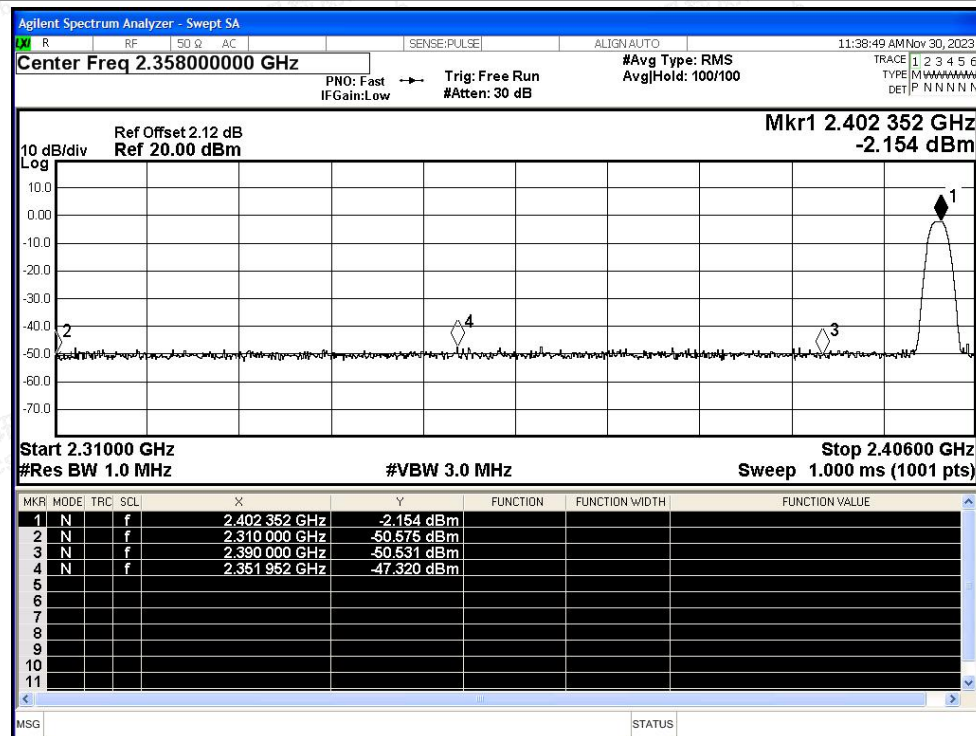
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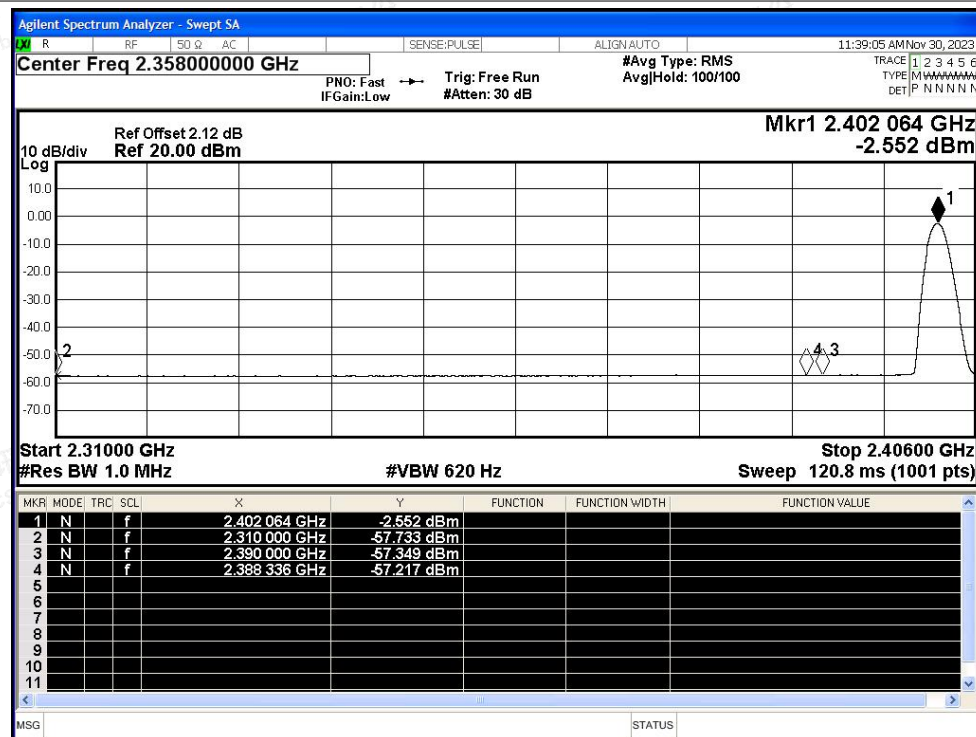


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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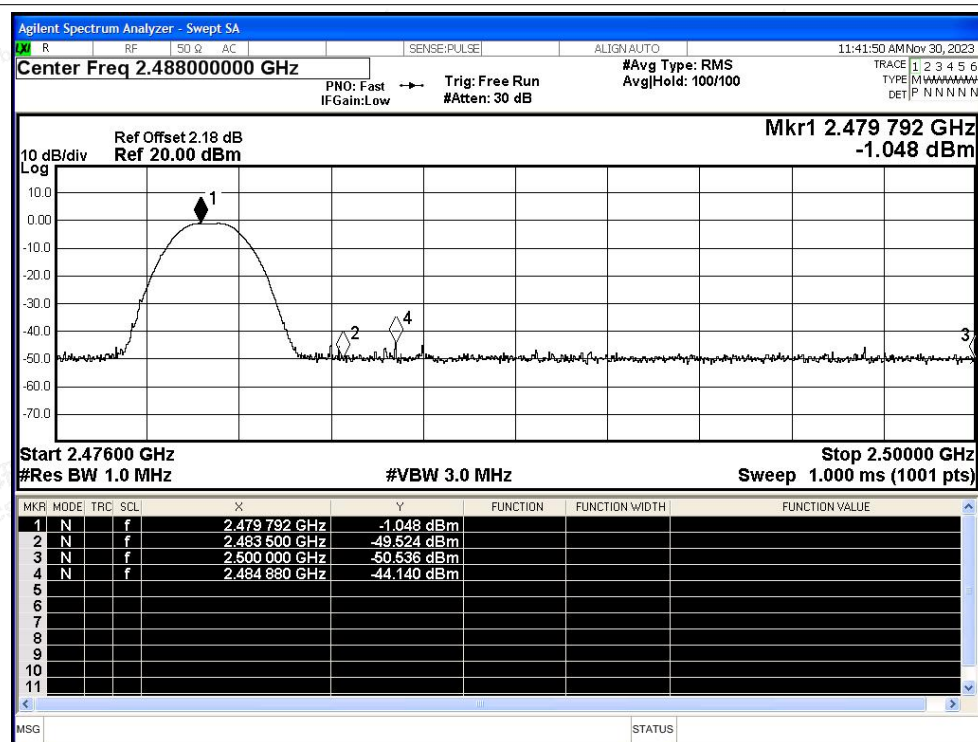
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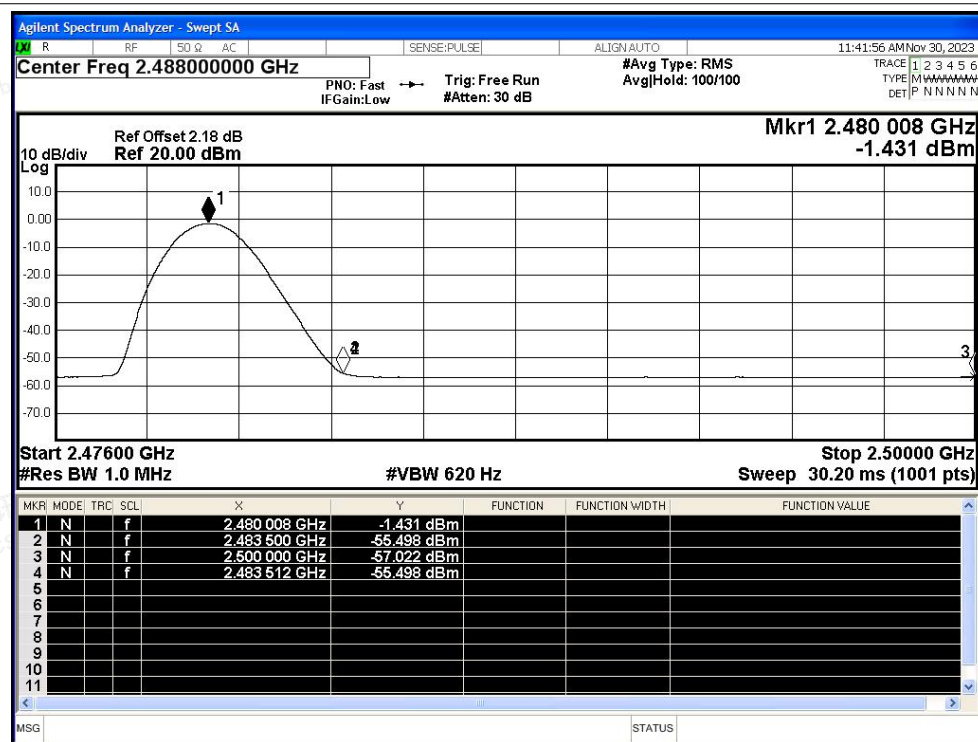
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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