



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Smart Watch

Test Model: Cosmos

Environmental Conditions

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



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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 2M	2402	Ant1	1.135	0.5	Pass
NVNT	BLE 2M	2440	Ant1	1.136	0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.142	0.5	Pass



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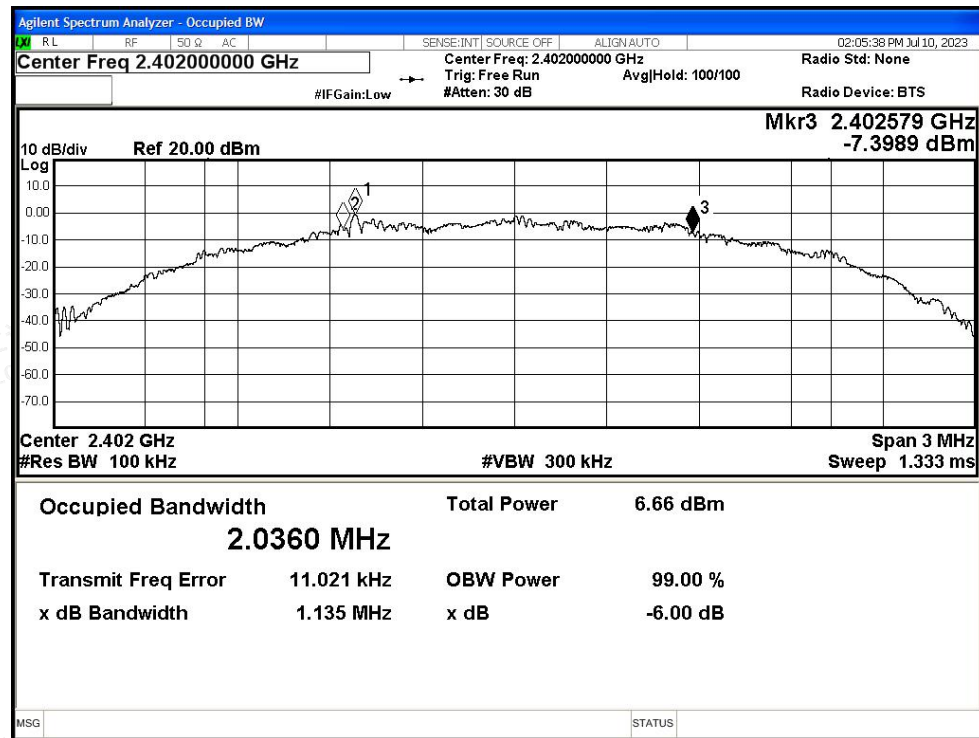
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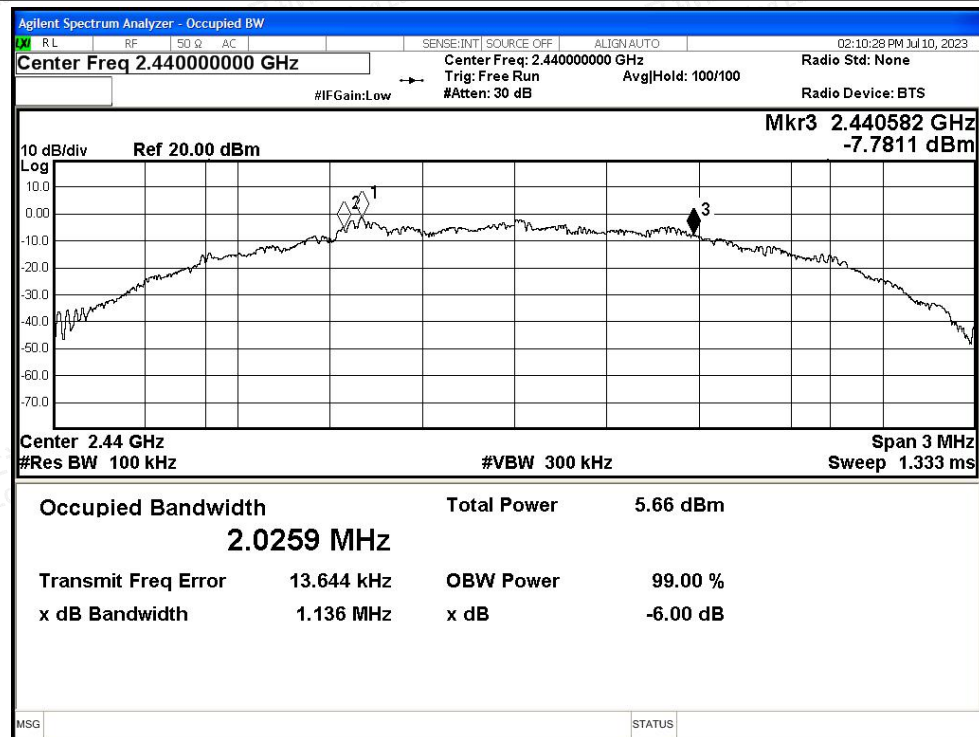


Test Graphs

-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1

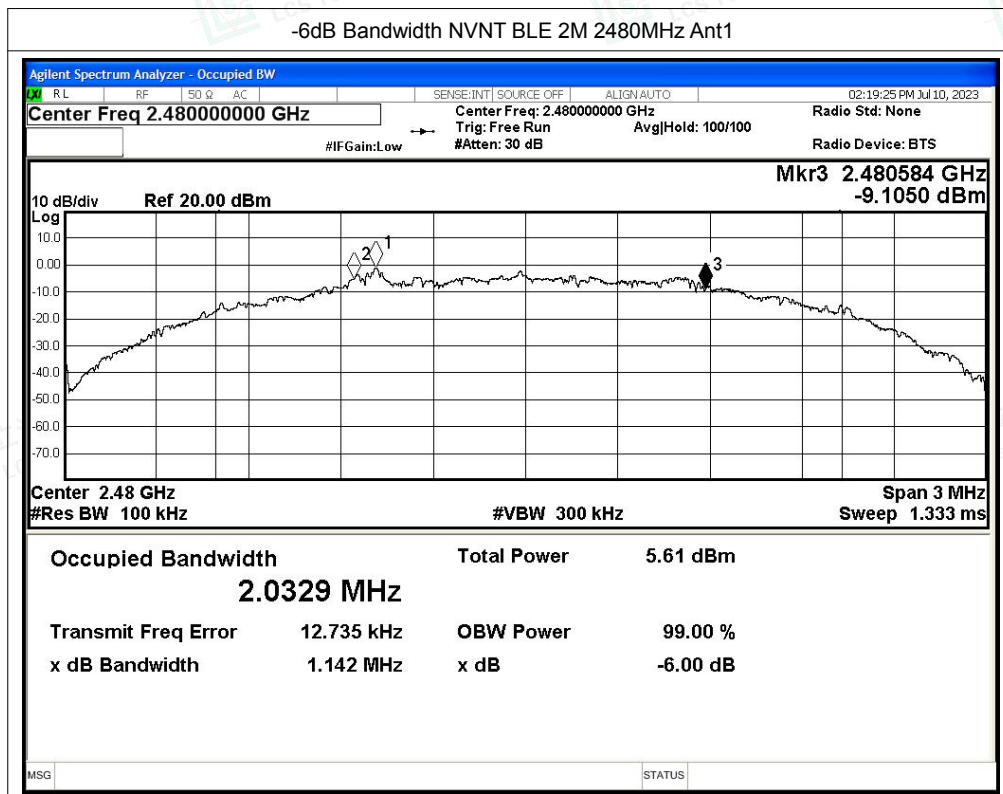


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A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 2M	2402	Ant1	0.53	30	Pass
NVNT	BLE 2M	2440	Ant1	-0.6	30	Pass
NVNT	BLE 2M	2480	Ant1	-0.4	30	Pass



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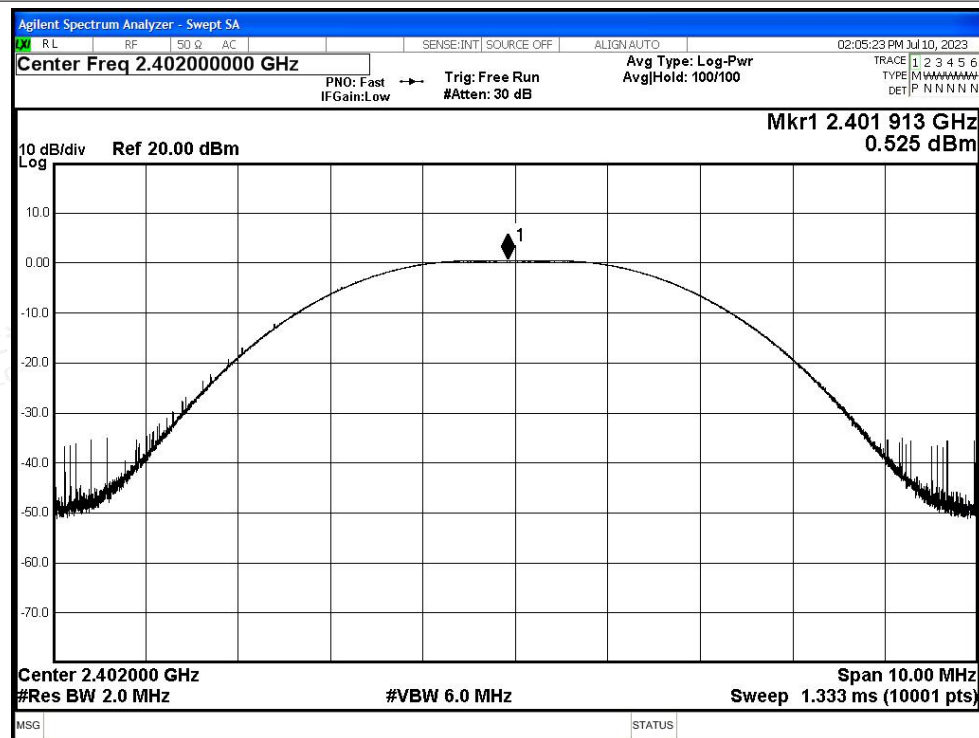
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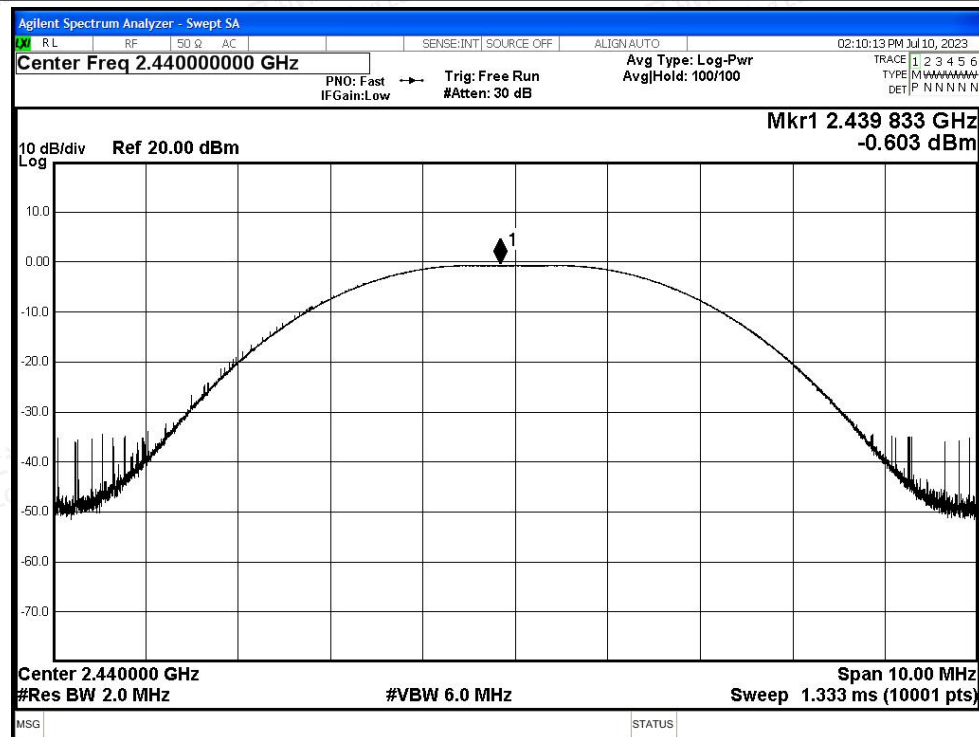


Test Graphs

Power NVNT BLE 2M 2402MHz Ant1



Power NVNT BLE 2M 2440MHz Ant1

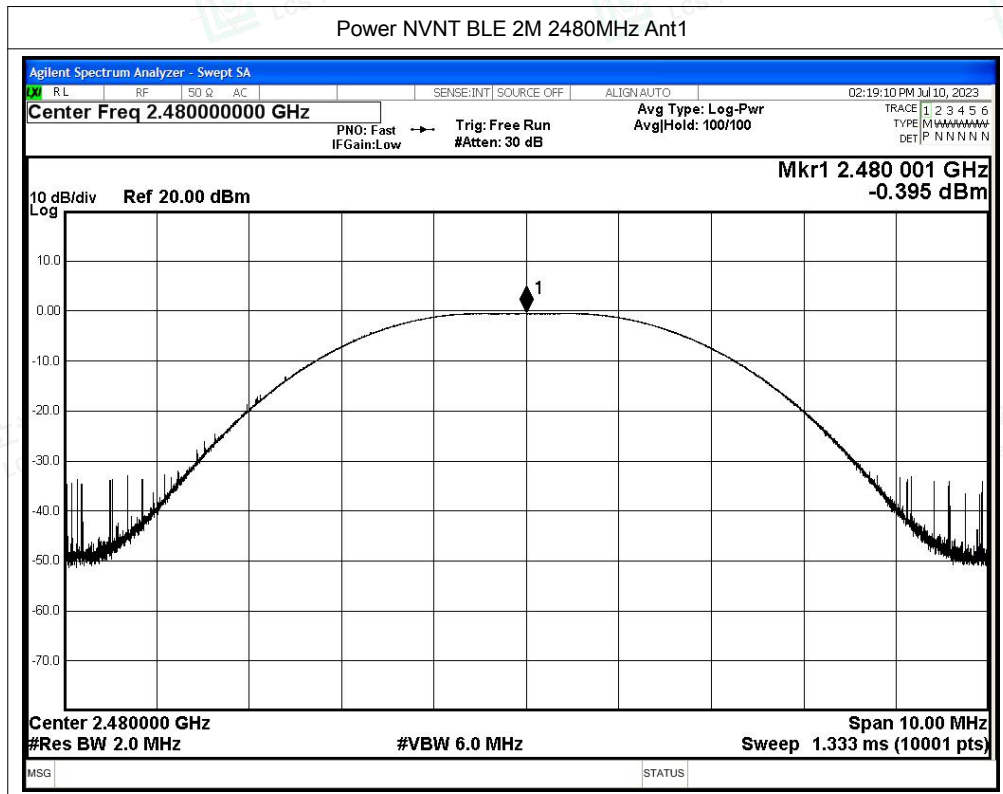


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 2M	2402	Ant1	-19.16	8	Pass
NVNT	BLE 2M	2440	Ant1	-20.32	8	Pass
NVNT	BLE 2M	2480	Ant1	-20.26	8	Pass



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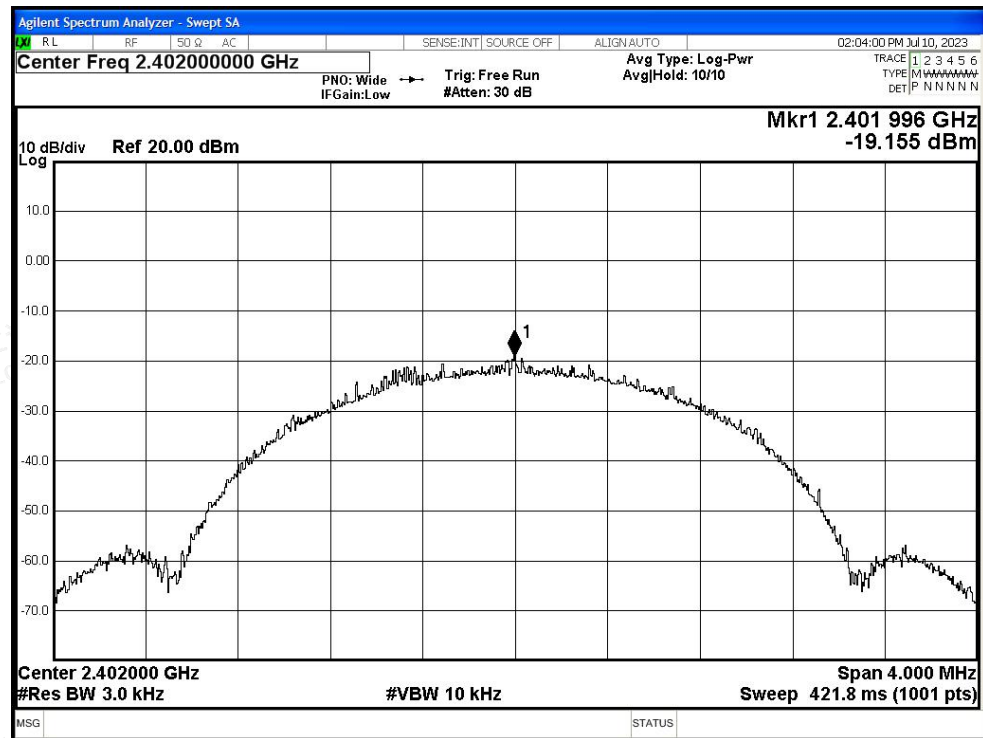
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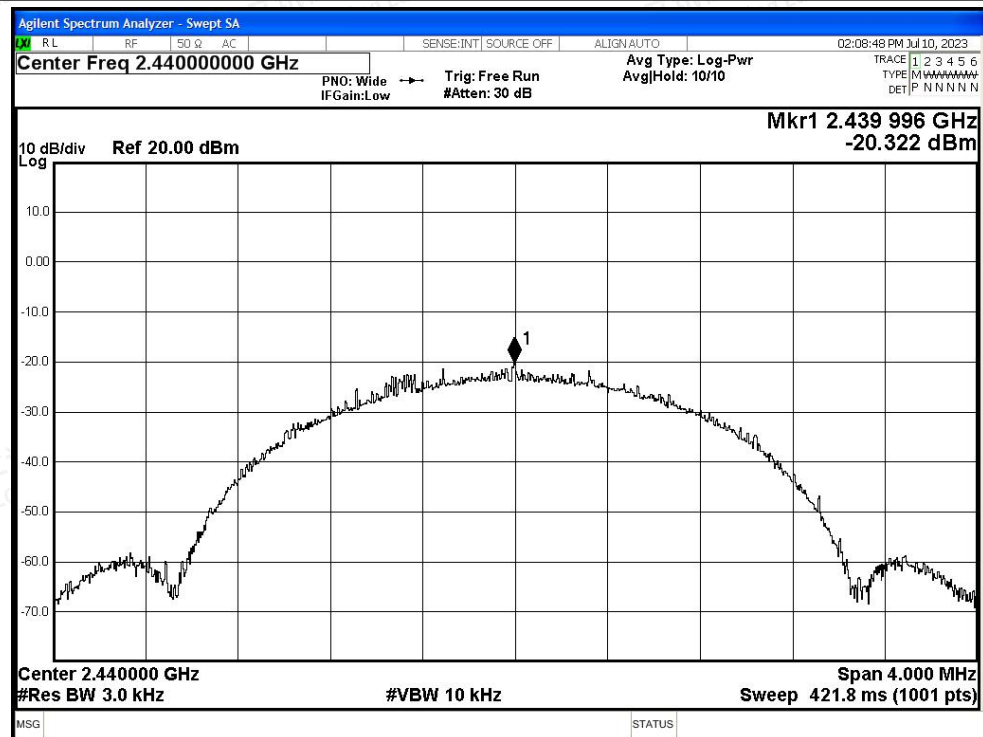


Test Graphs

PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2440MHz Ant1

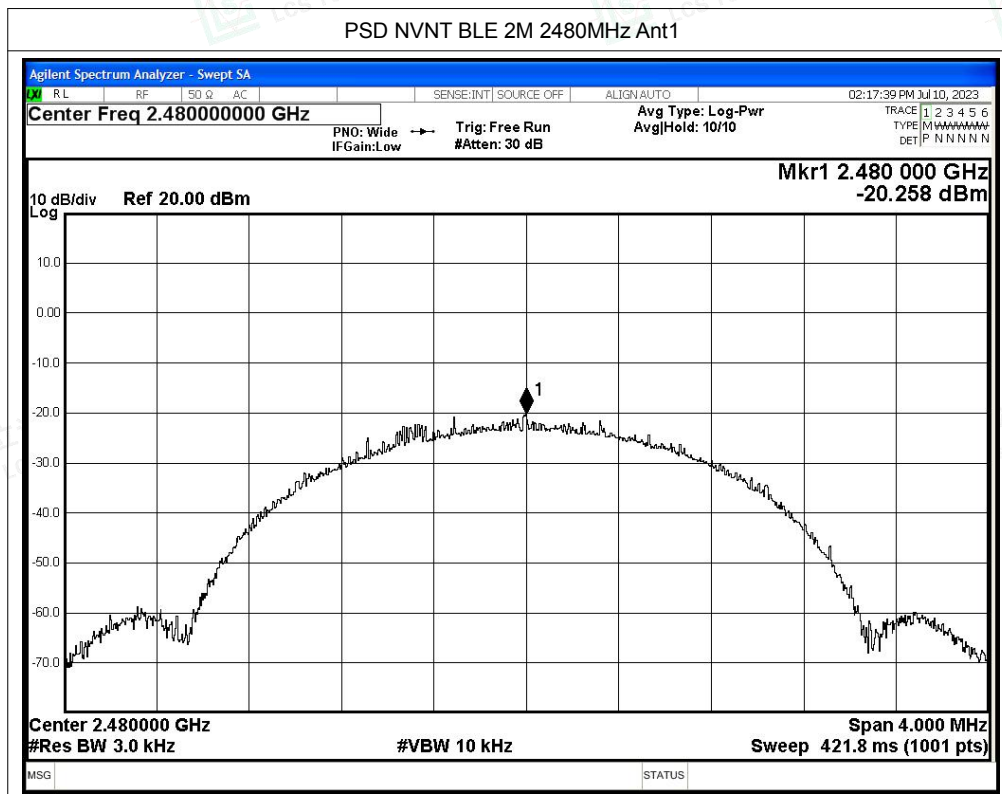


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A.4 Band Edge

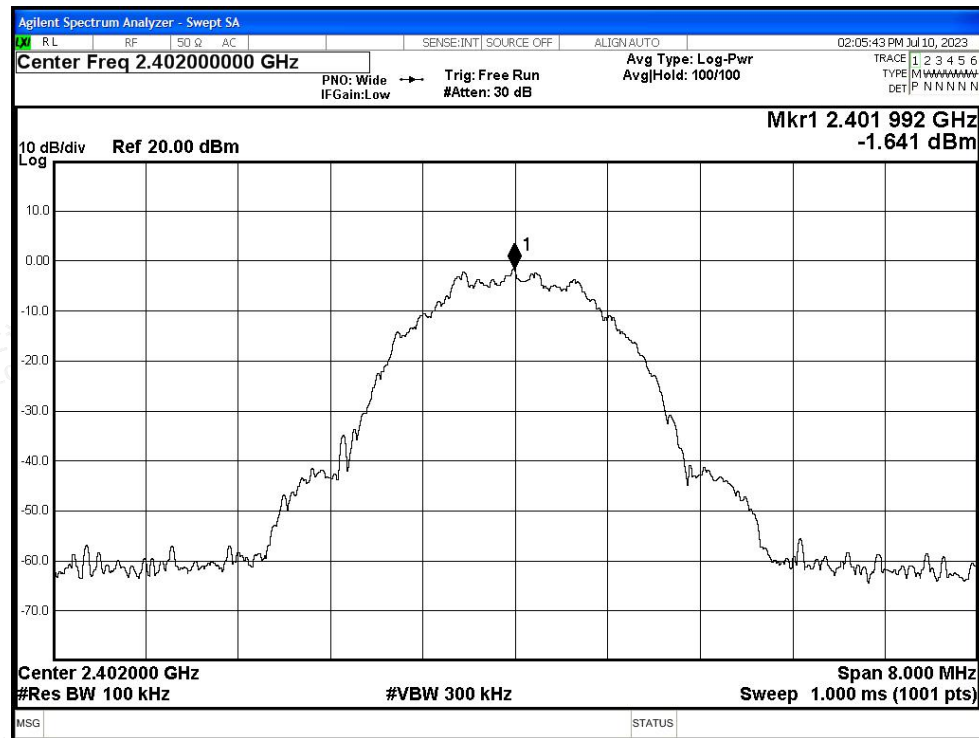
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 2M	2402	Ant1	-45.89	-20	Pass
NVNT	BLE 2M	2480	Ant1	-55.65	-20	Pass



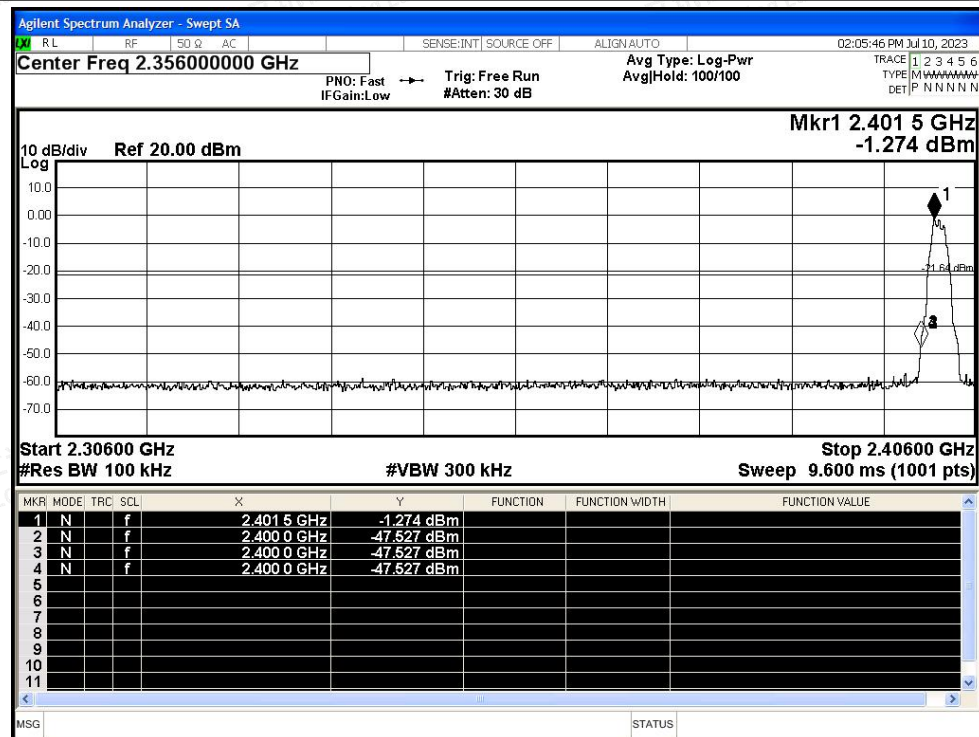


Test Graphs

Band Edge NVNT BLE 2M 2402MHz Ant1 Ref



Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



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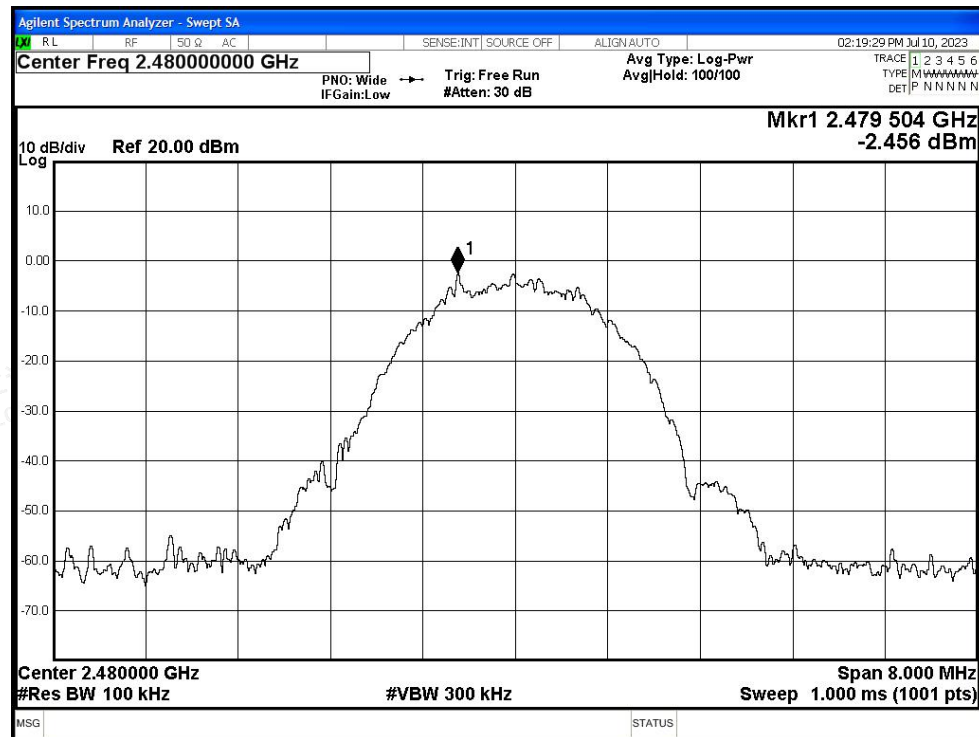
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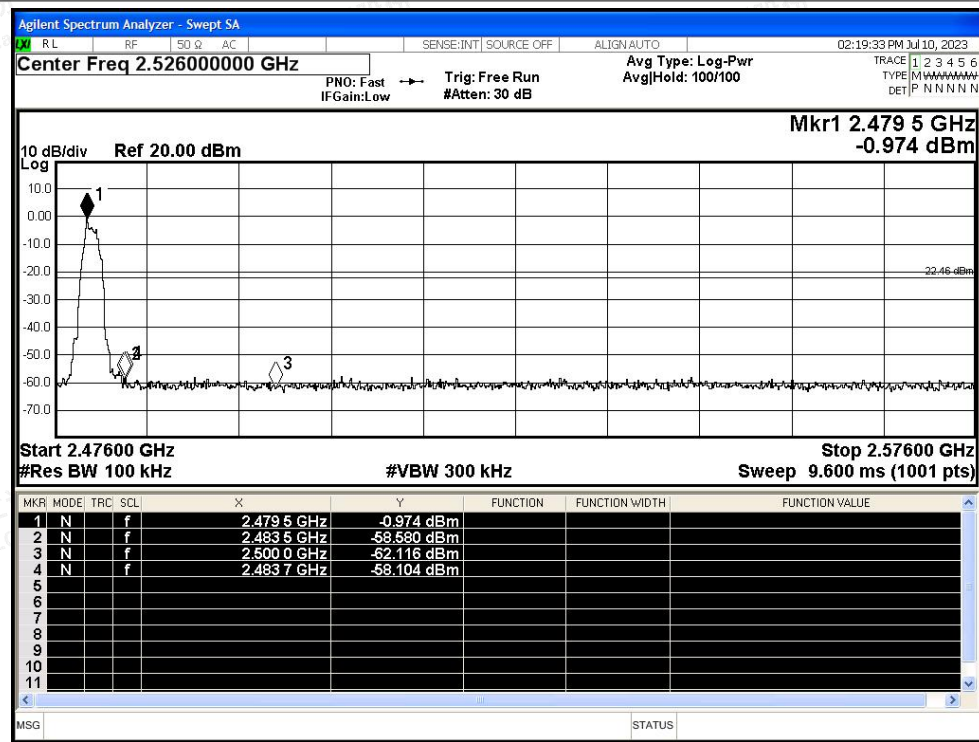
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Band Edge NVNT BLE 2M 2480MHz Ant1 Ref



Band Edge NVNT BLE 2M 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 2M	2402	Ant1	-49.04	-20	Pass
NVNT	BLE 2M	2440	Ant1	-50.66	-20	Pass
NVNT	BLE 2M	2480	Ant1	-54.91	-20	Pass



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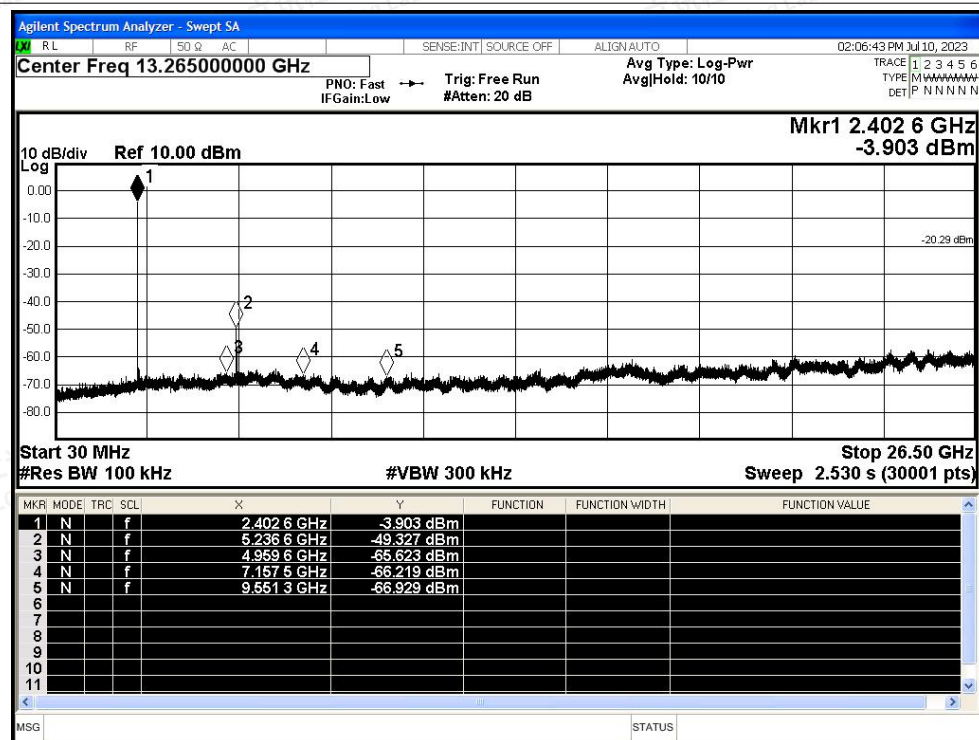


Test Graphs

Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission

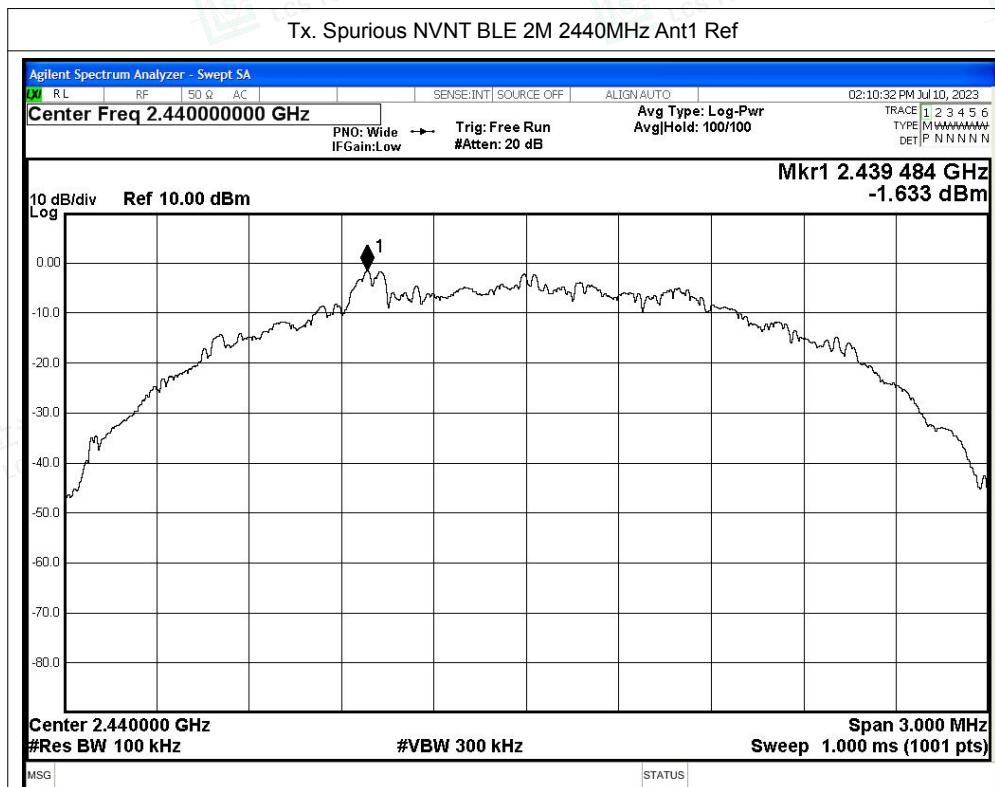


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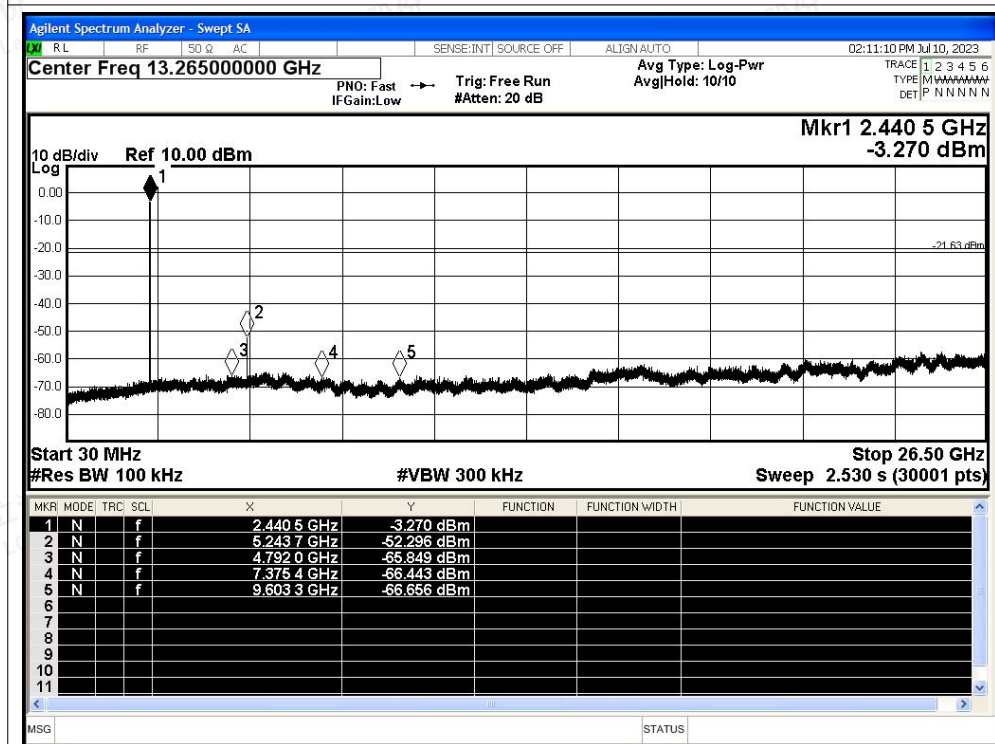
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Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission



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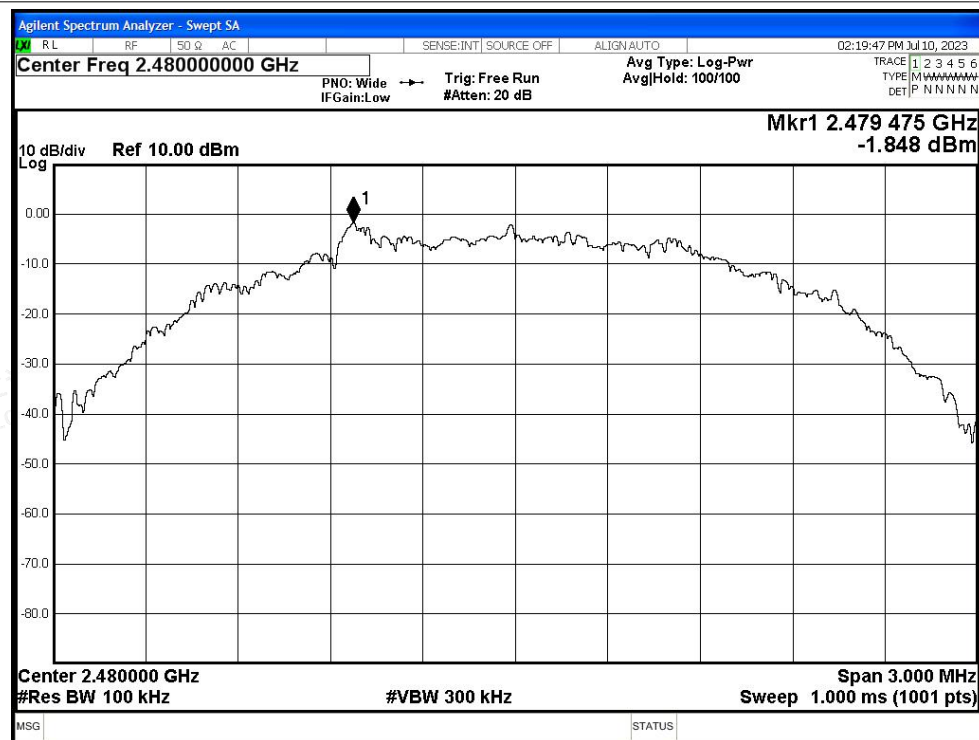
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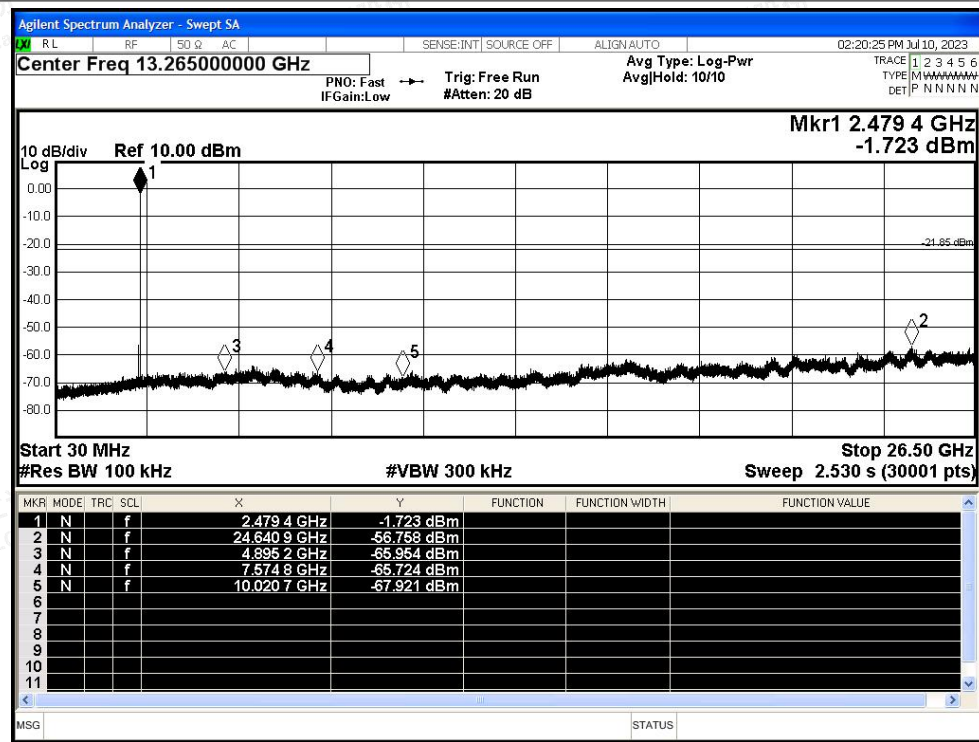
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Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 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 2M	2402	Ant1	65.92	1.81	1.21
NVNT	BLE 2M	2440	Ant1	98.1	0	1.21
NVNT	BLE 2M	2480	Ant1	65.92	1.81	1.21



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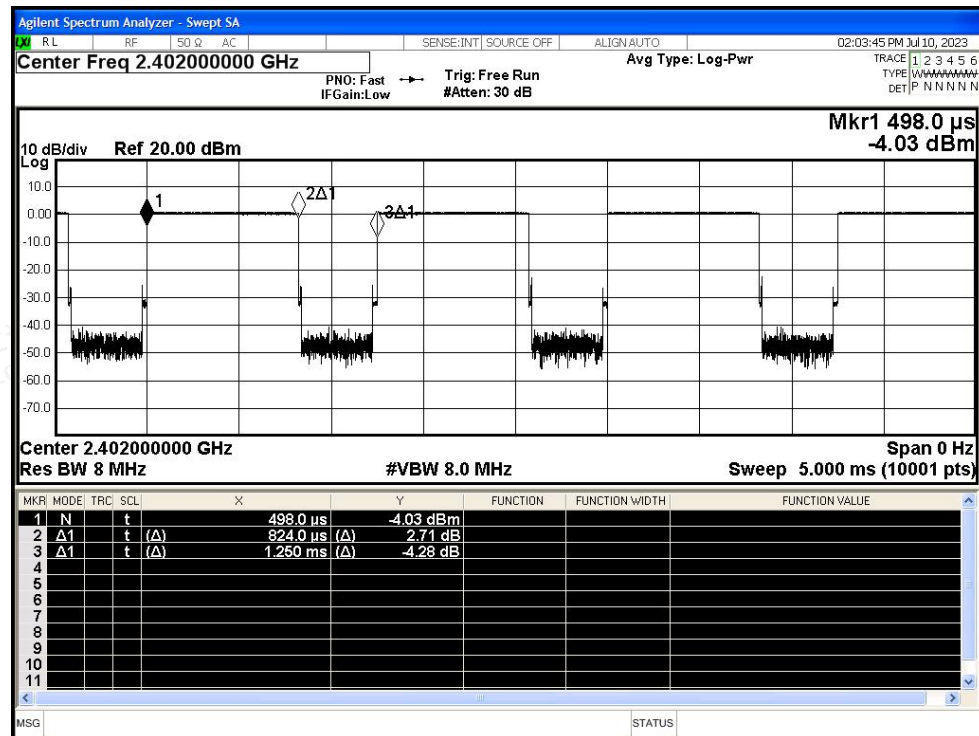
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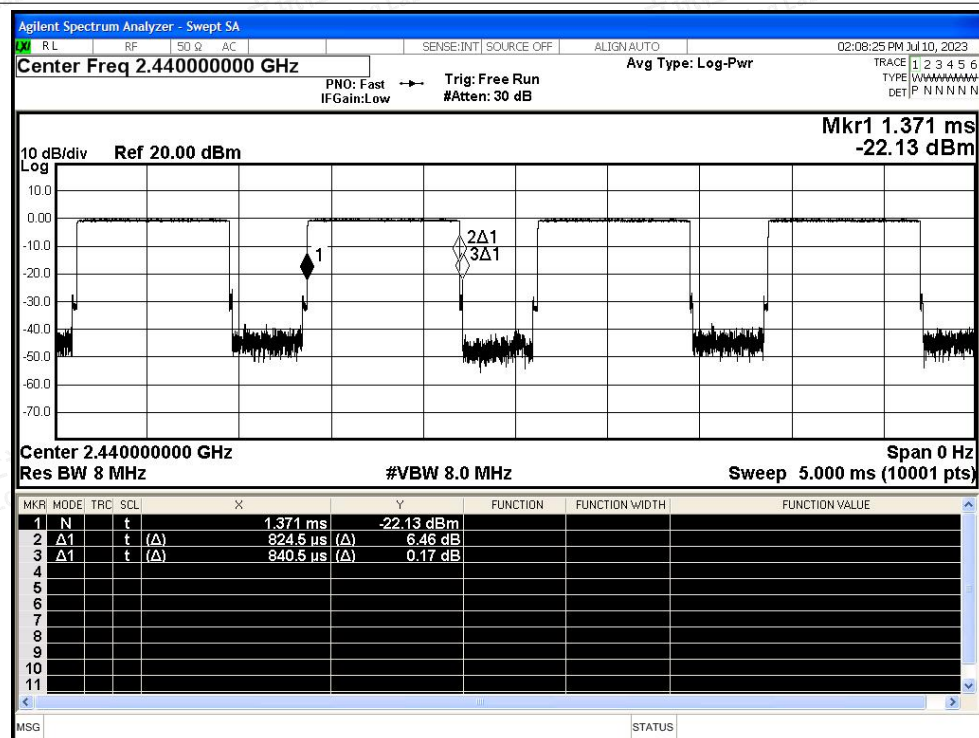


Test Graphs

Duty Cycle NVNT BLE 2M 2402MHz Ant1



Duty Cycle NVNT BLE 2M 2440MHz Ant1

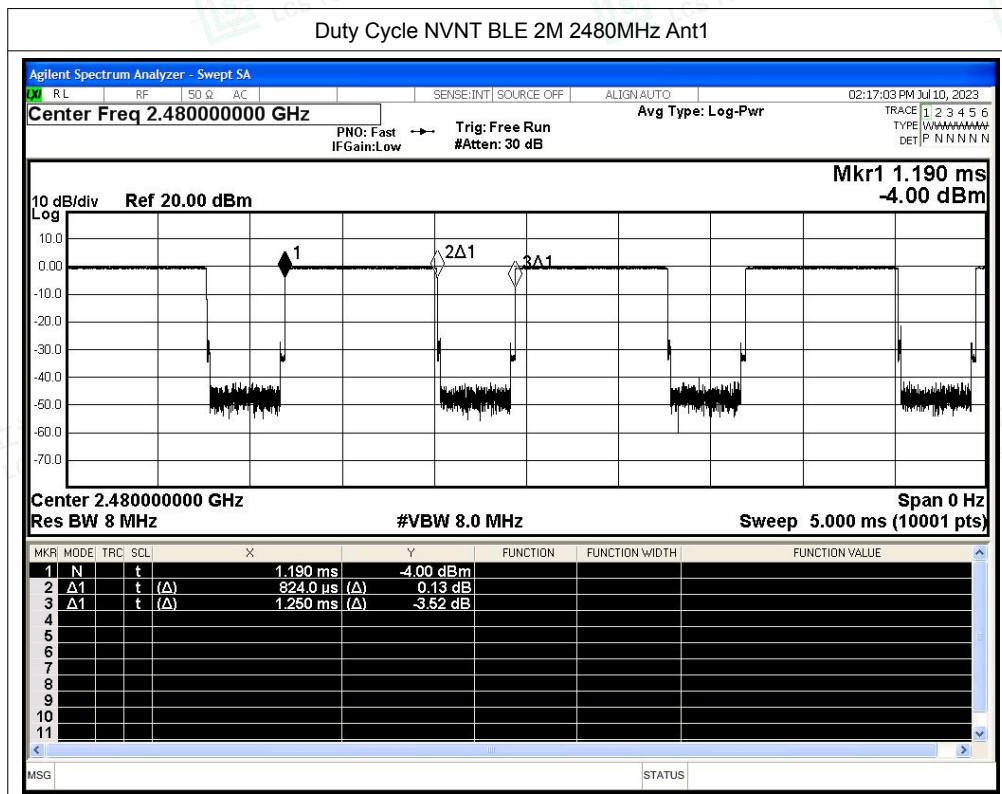


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A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 2M	2402	Ant1	2310	-53.03	2	44.23	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2310	-61.46	2	35.8	Average	54	Pass
NVNT	BLE 2M	2402	Ant1	2361.072	-48.64	2	48.62	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2386.704	-60.83	2	36.43	Average	54	Pass
NVNT	BLE 2M	2402	Ant1	2390	-51.41	2	45.85	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2390	-61.21	2	36.05	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2483.5	-52.16	2	45.1	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2483.5	-60.15	2	37.11	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2483.776	-39.52	2	57.74	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2483.512	-60.15	2	37.11	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2500	-52.07	2	45.19	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2500	-61.02	2	36.24	Average	54	Pass



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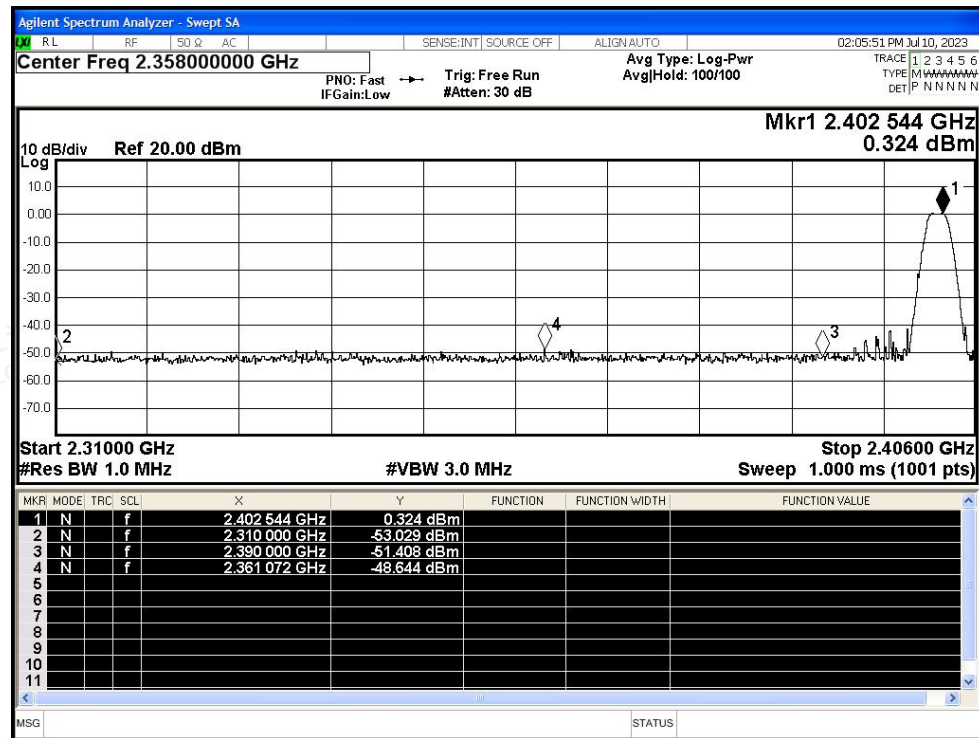
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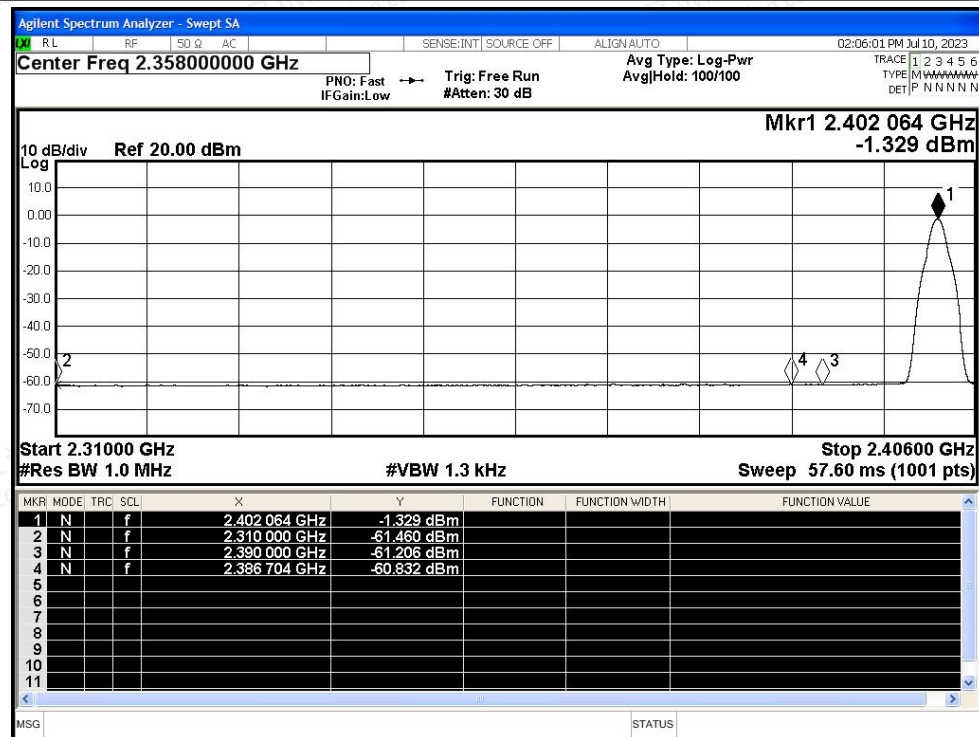


Test Graphs

Restrict Band NVNT BLE 2M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2402MHz Ant1 Average



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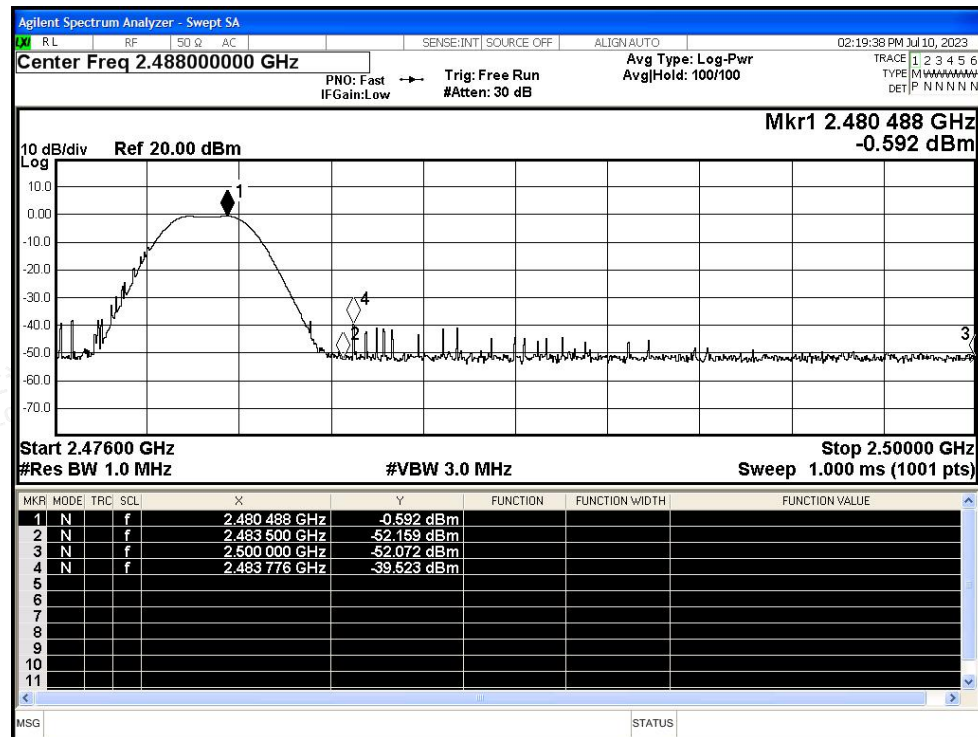
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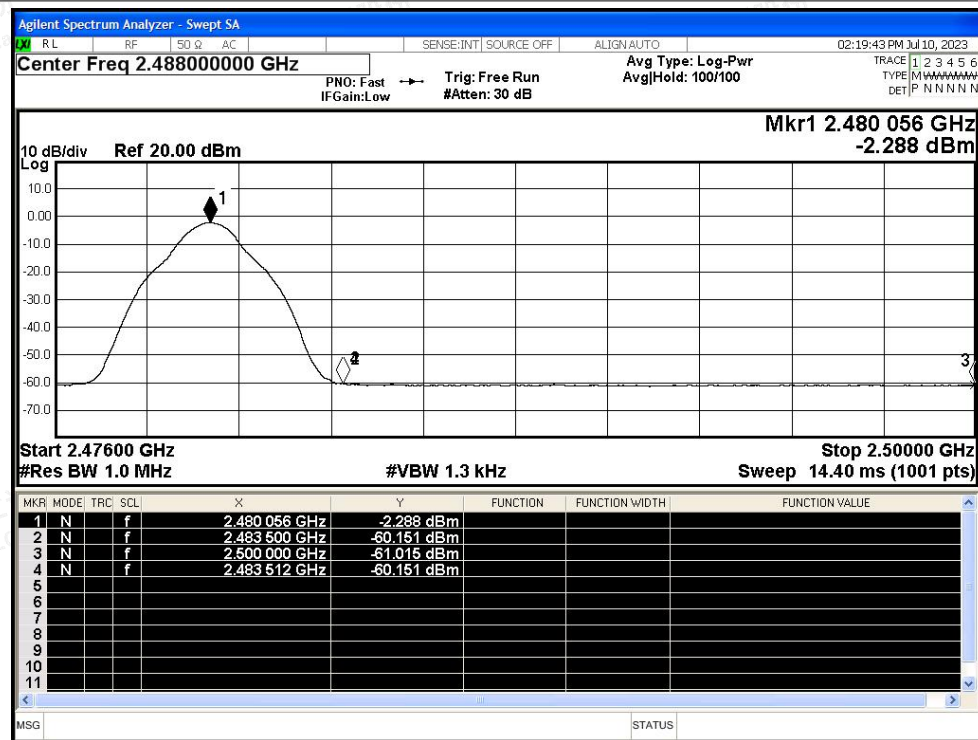
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Restrict Band NVNT BLE 2M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2480MHz Ant1 Average



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