



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: WIRELESS REMOTE

Test Model: TP-RT-01

Environmental Conditions

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



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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	0.704	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.702	0.5	Pass



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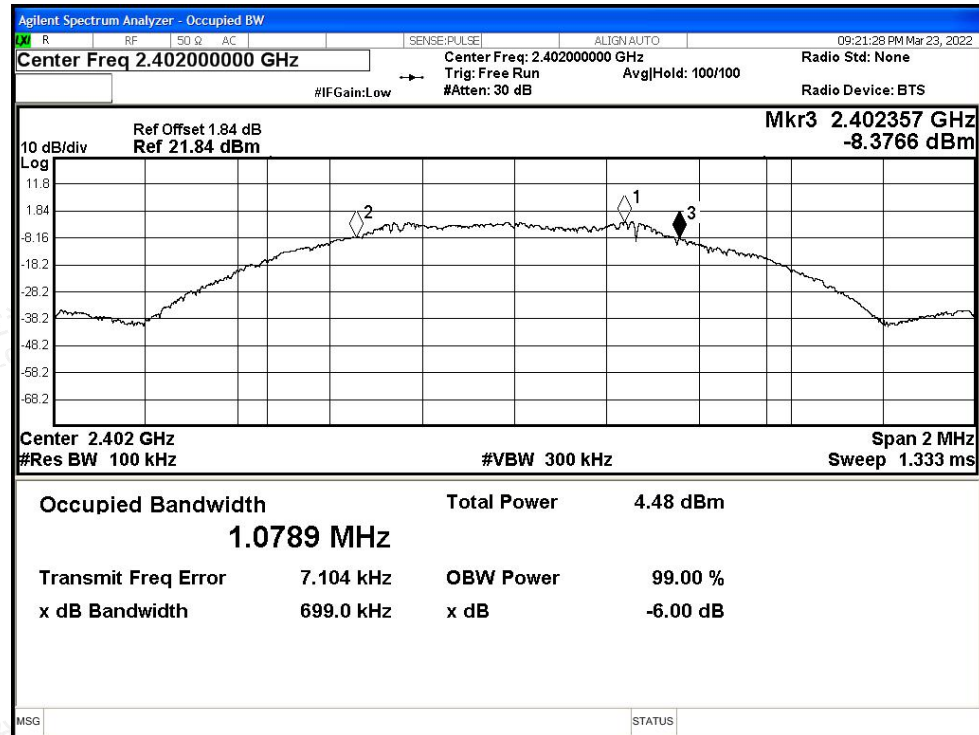
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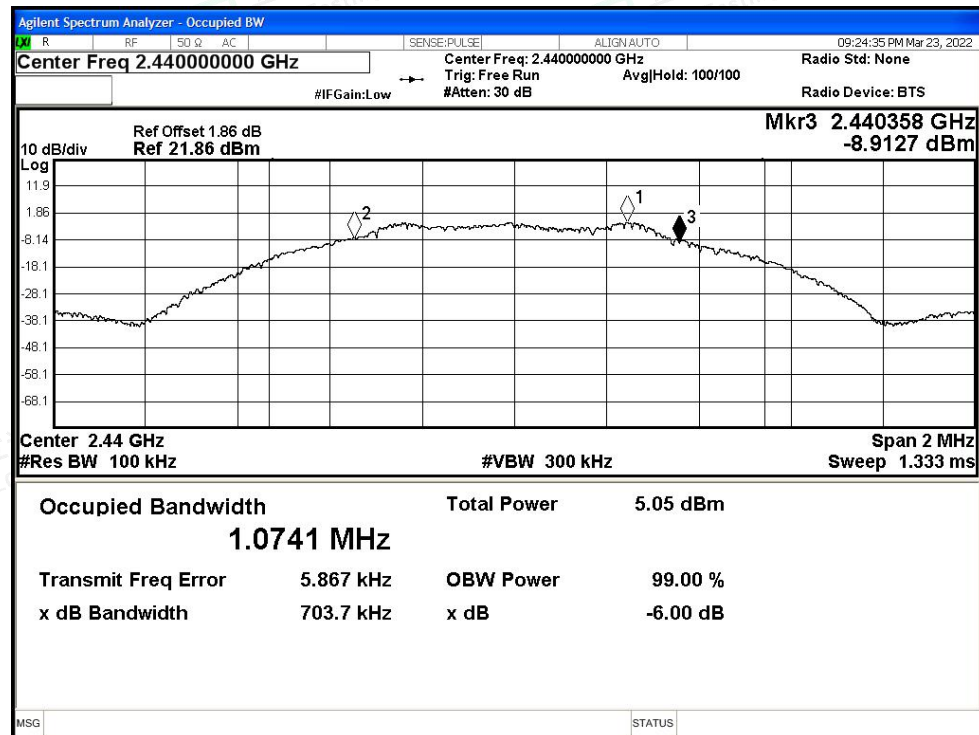


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

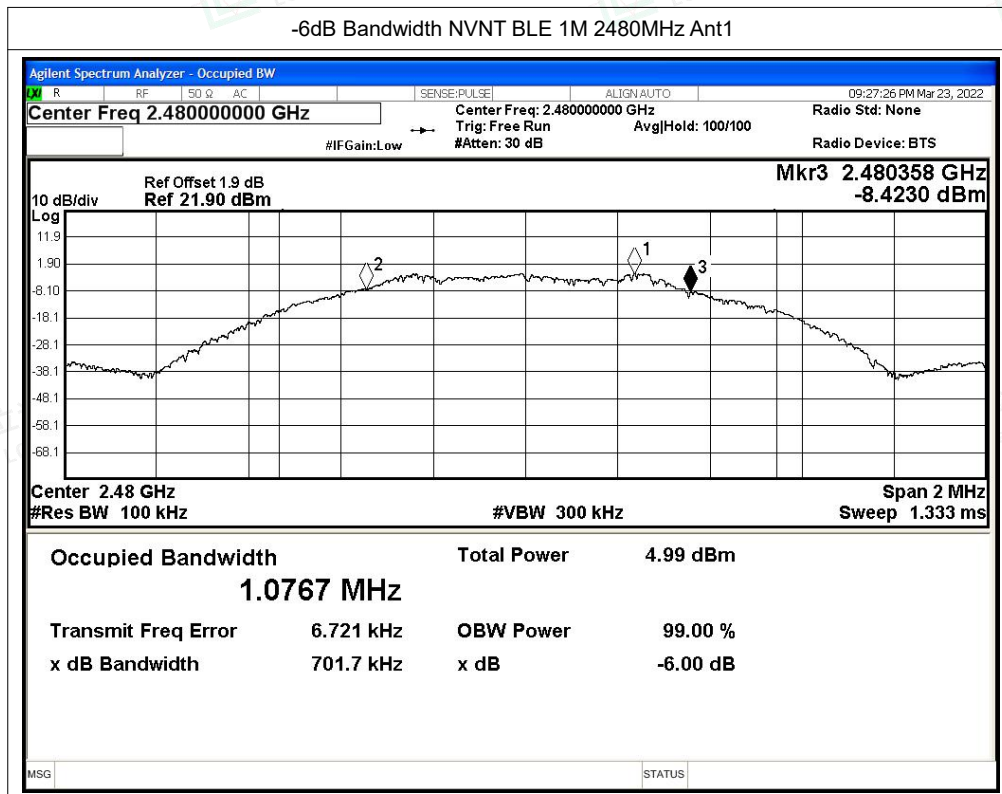


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A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-1.15	0	-1.15	30	Pass
NVNT	BLE 1M	2440	Ant1	-0.68	0	-0.68	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.68	0	-0.68	30	Pass



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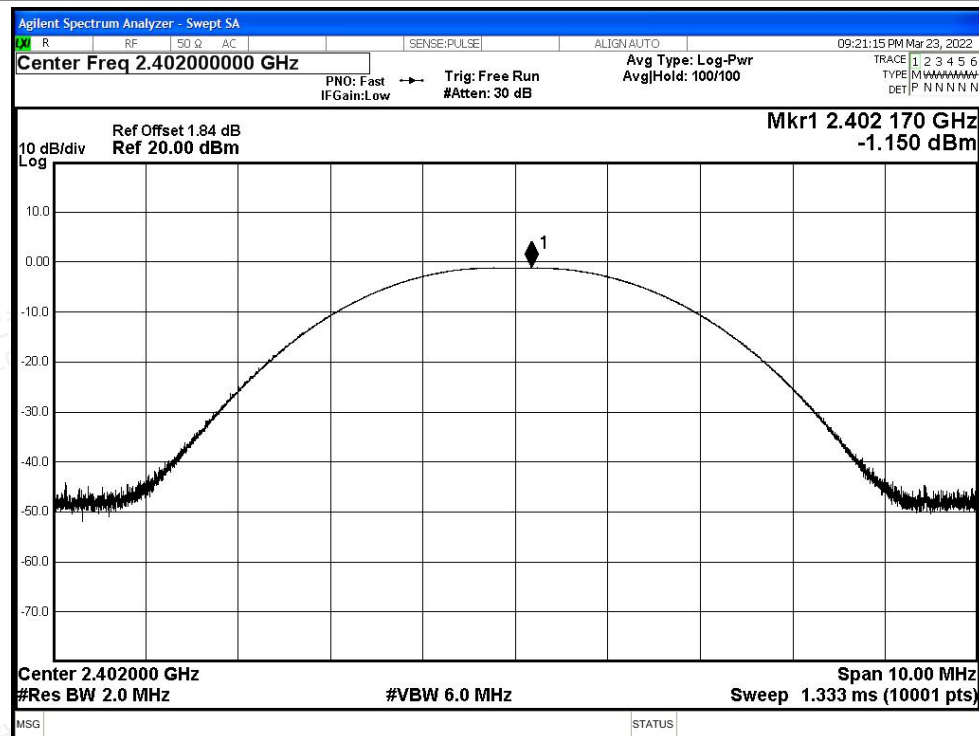
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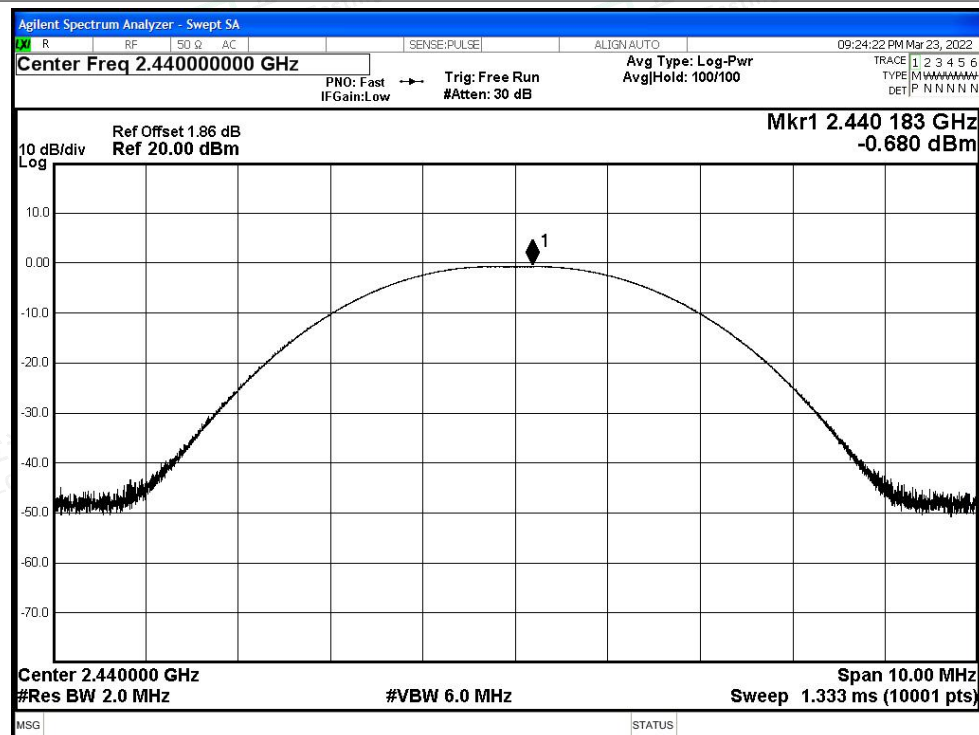


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

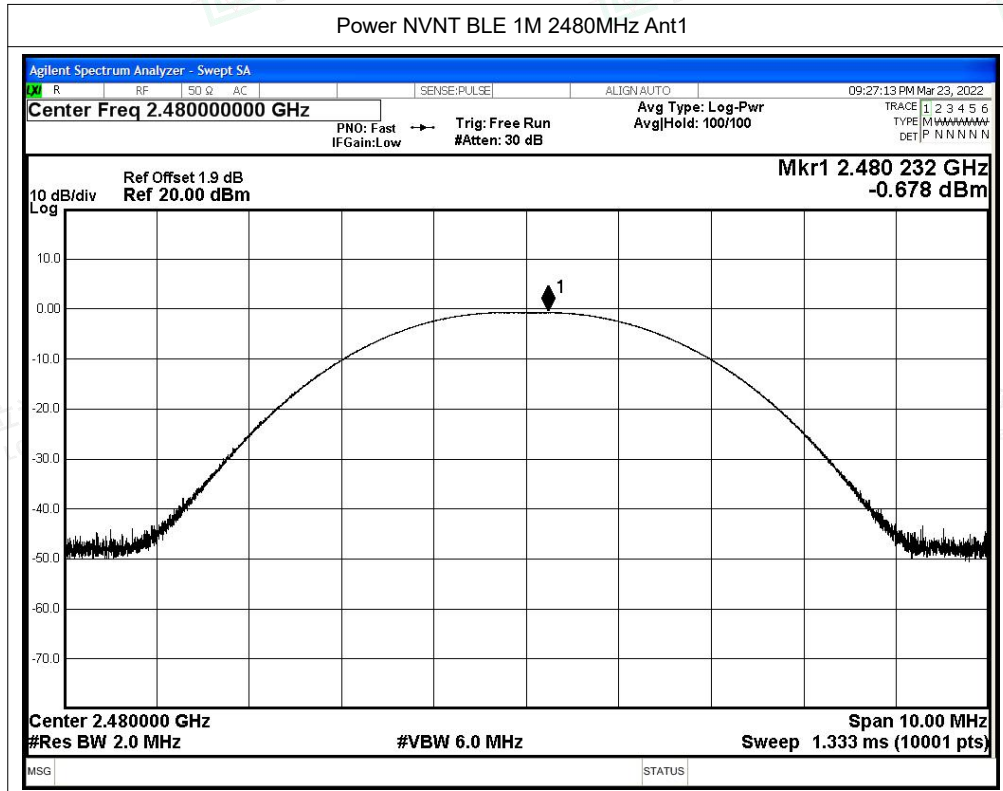


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-16.28	0	-16.28	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.9	0	-15.9	8	Pass
NVNT	BLE 1M	2480	Ant1	-15.8	0	-15.8	8	Pass



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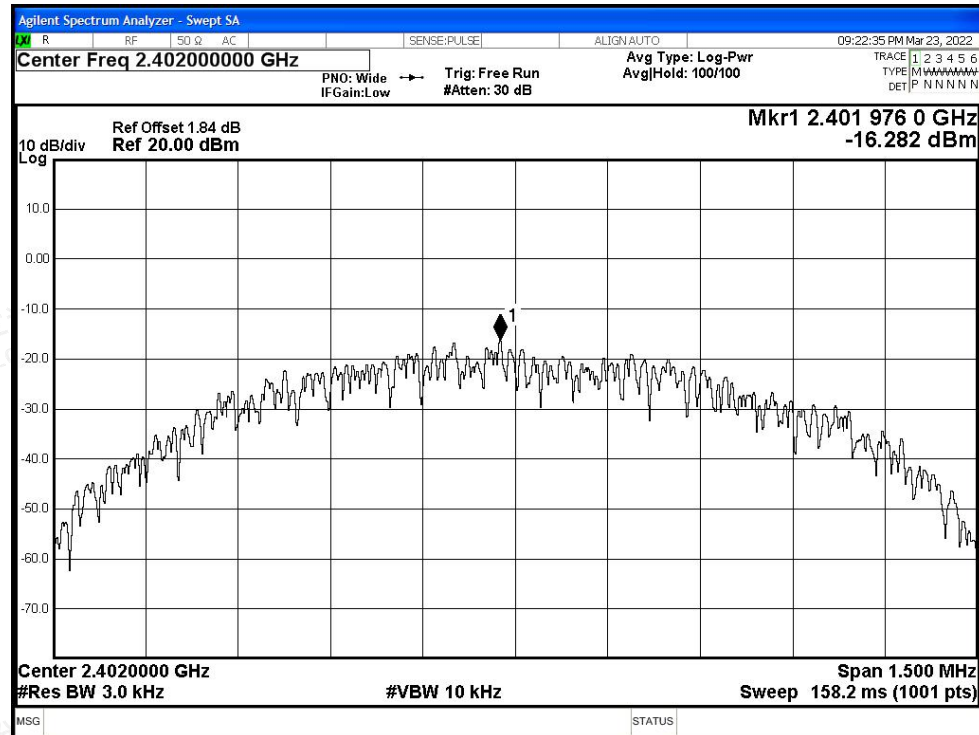
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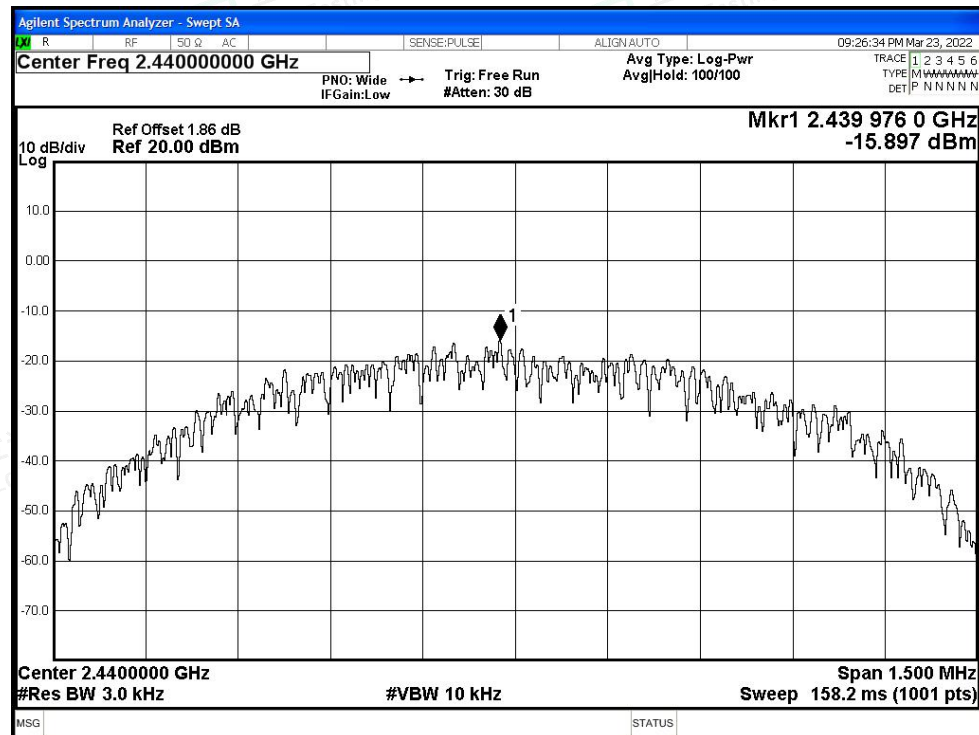


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

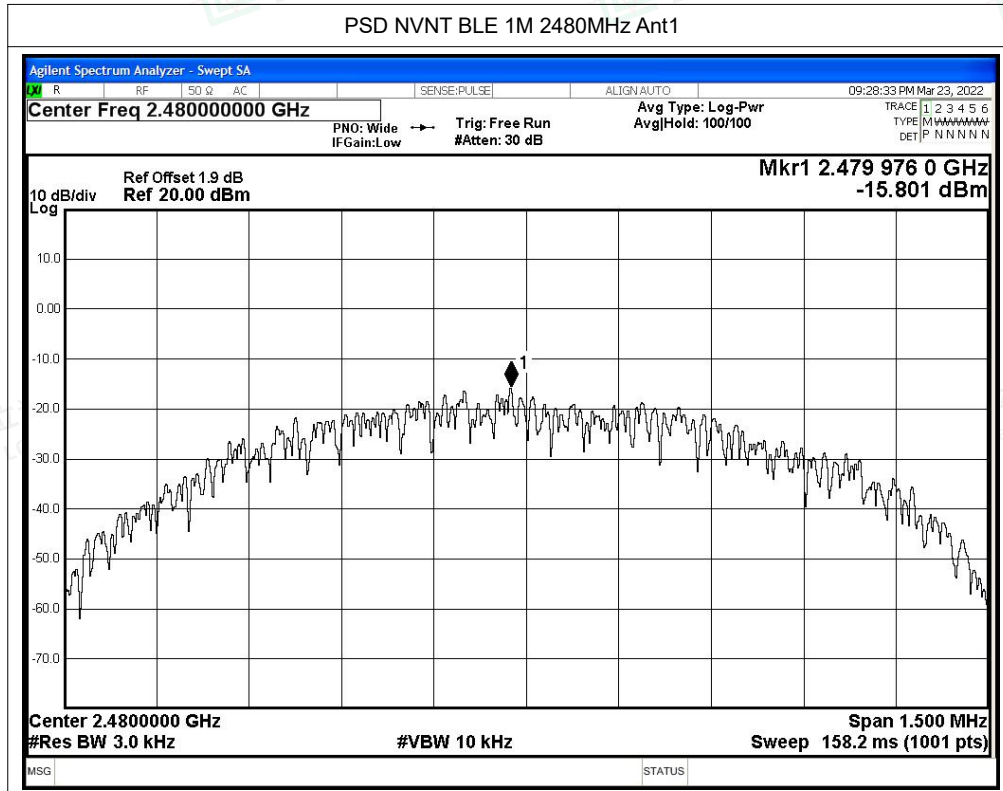


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A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-54.86	-20	Pass
NVNT	BLE 1M	2480	Ant1	-55.54	-20	Pass



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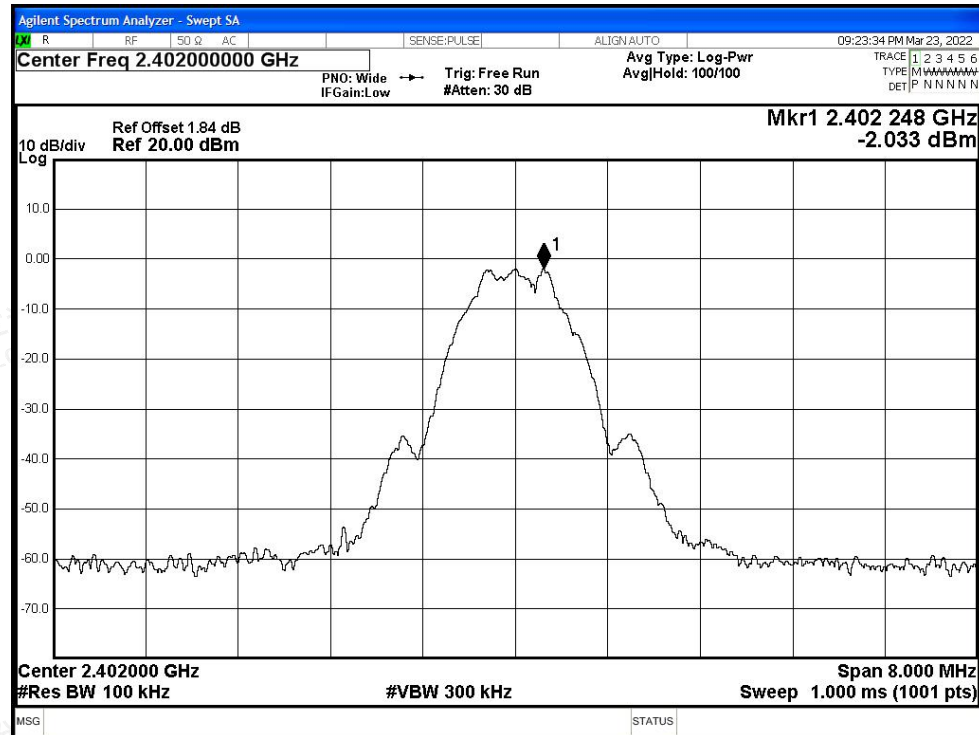
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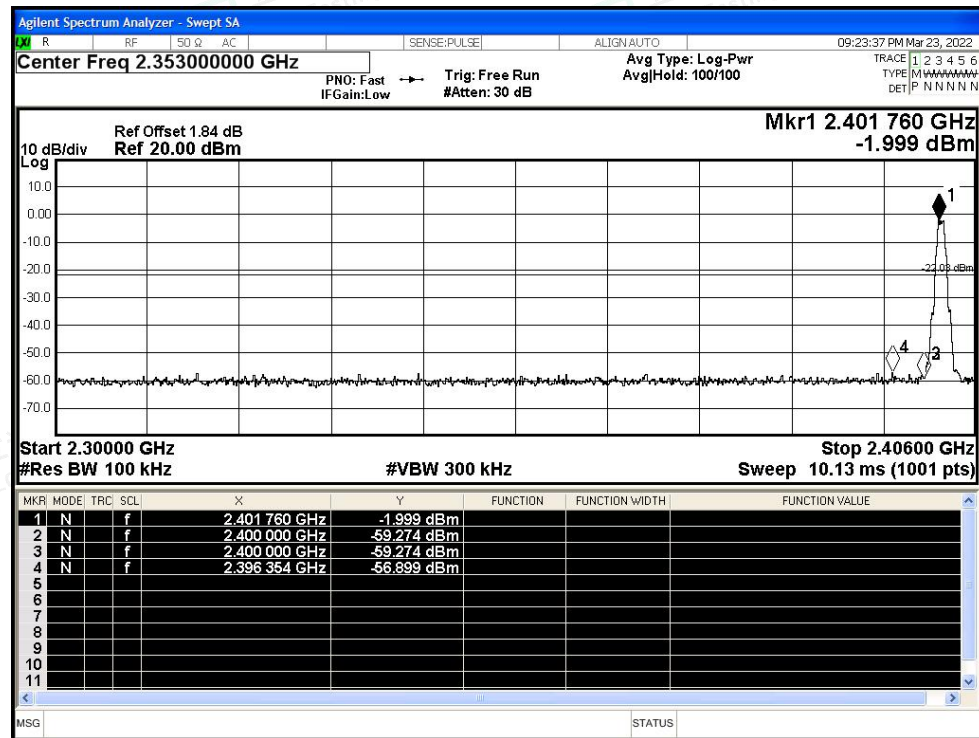


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

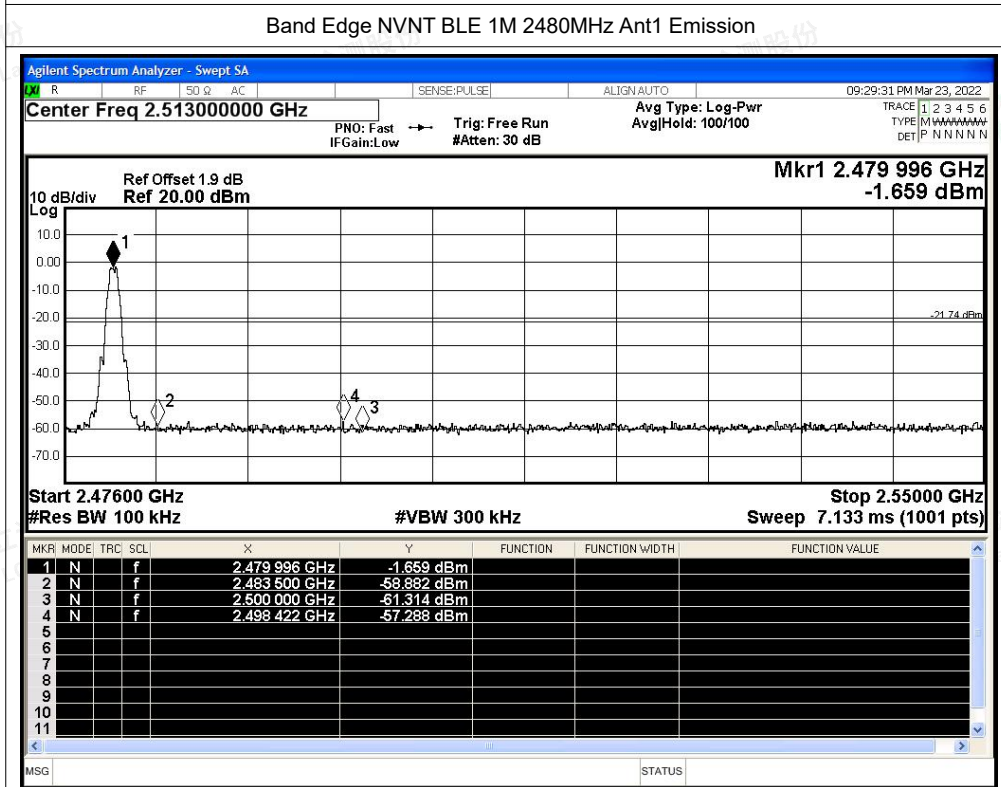
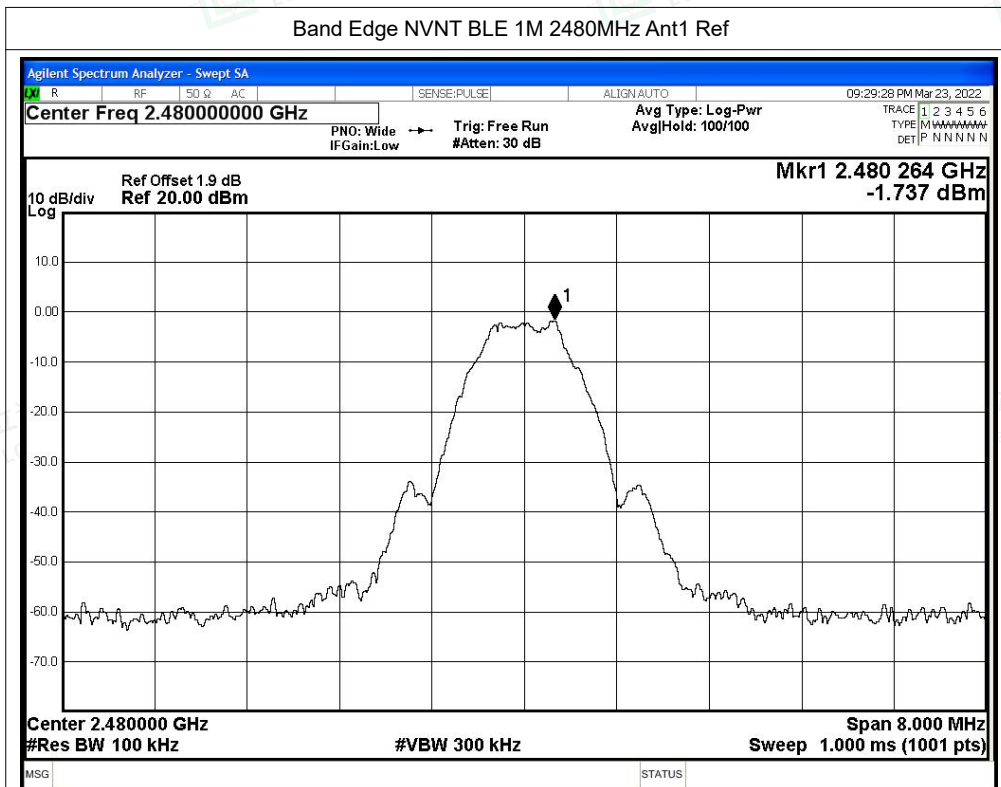


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A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-53.49	-20	Pass
NVNT	BLE 1M	2440	Ant1	-53.74	-20	Pass
NVNT	BLE 1M	2480	Ant1	-53.81	-20	Pass



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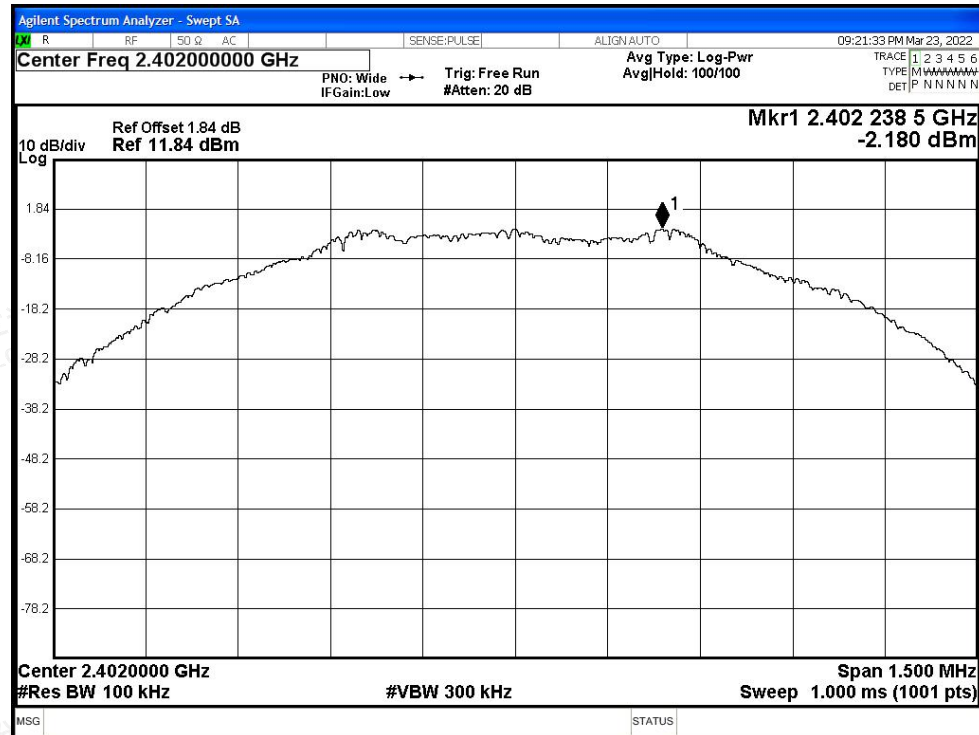
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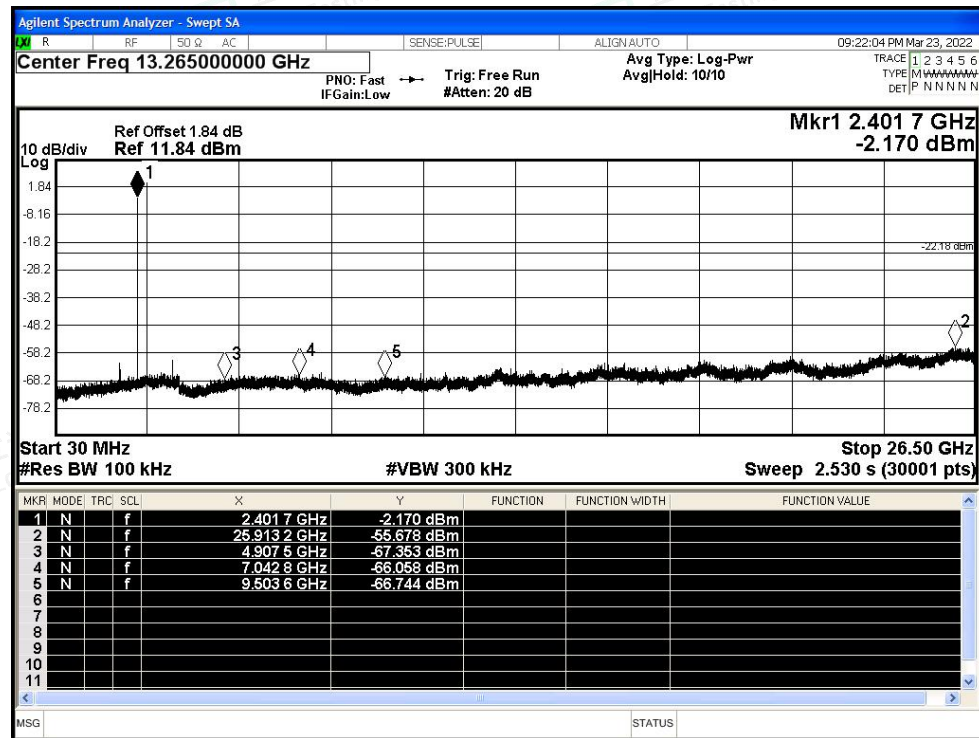


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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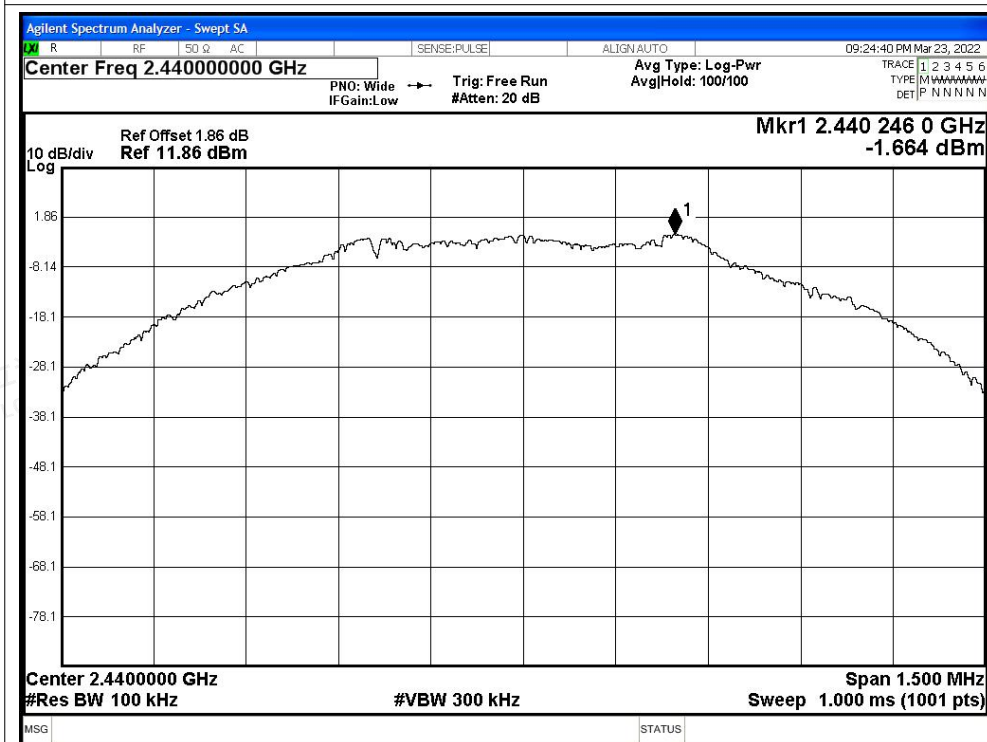
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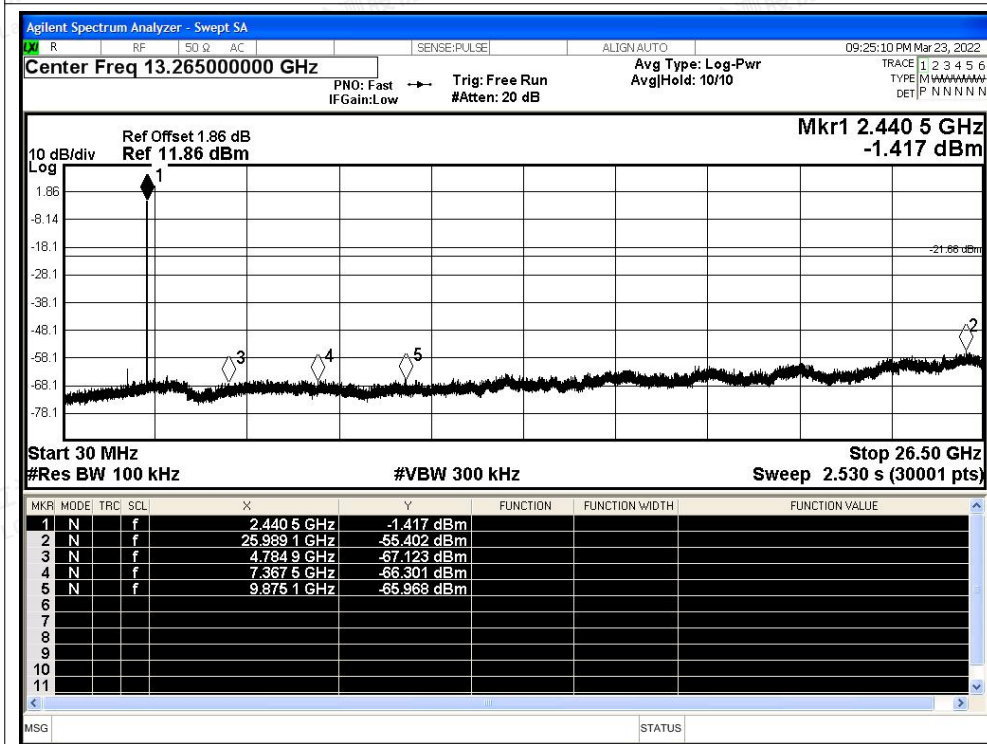
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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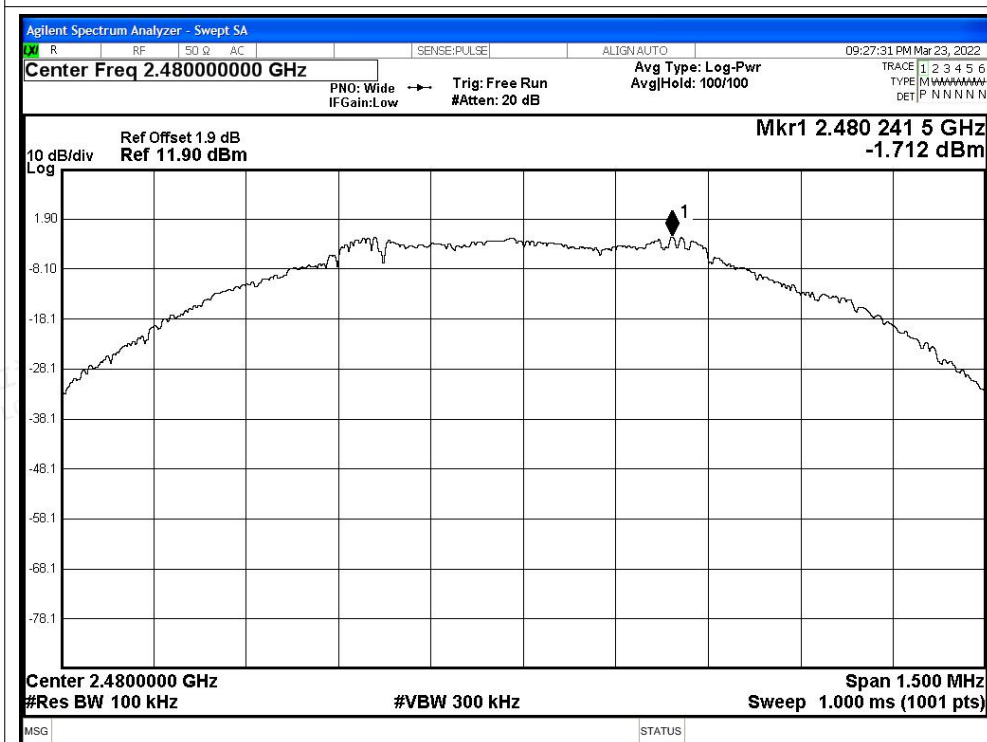
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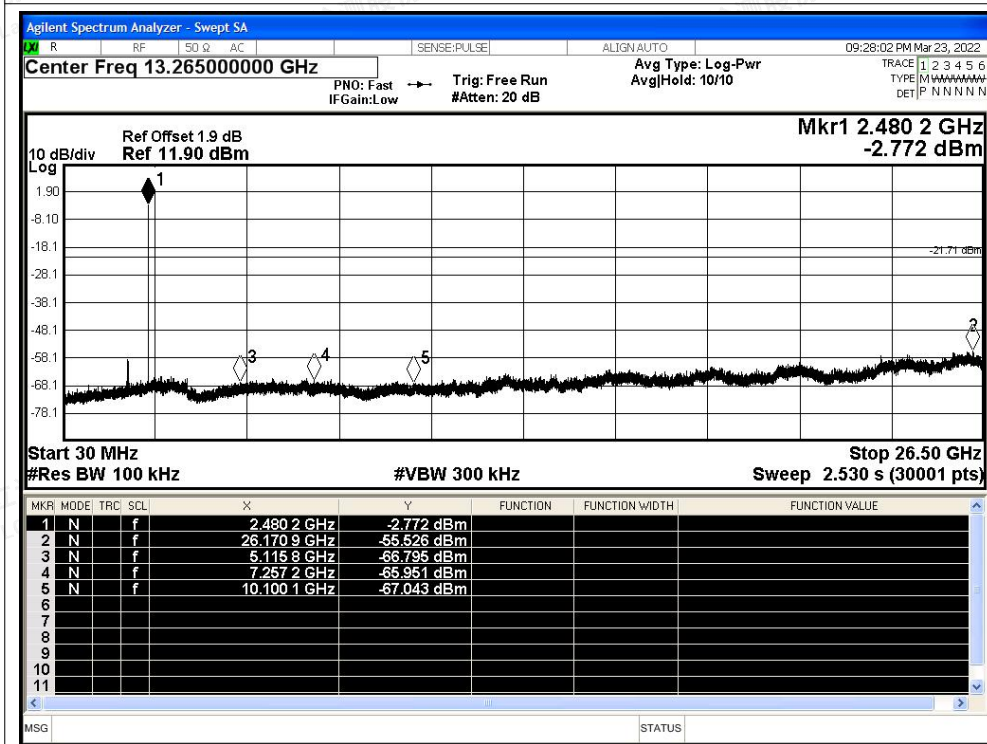
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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	61.44	2.12	2.6
NVNT	BLE 1M	2440	Ant1	61.44	2.12	2.6
NVNT	BLE 1M	2480	Ant1	61.44	2.12	2.6



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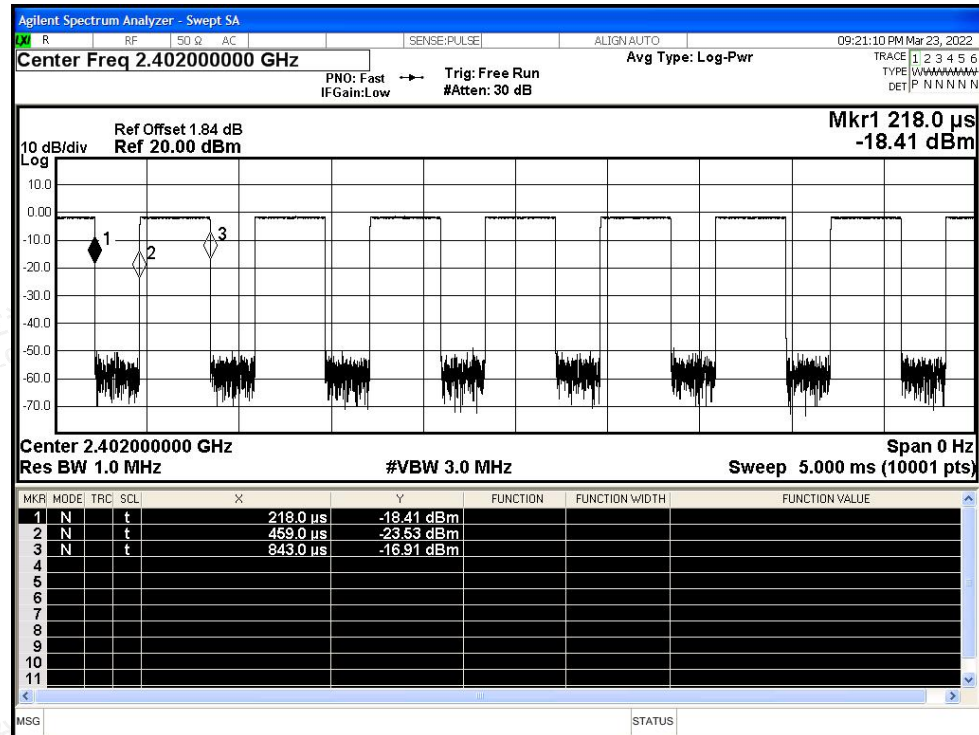
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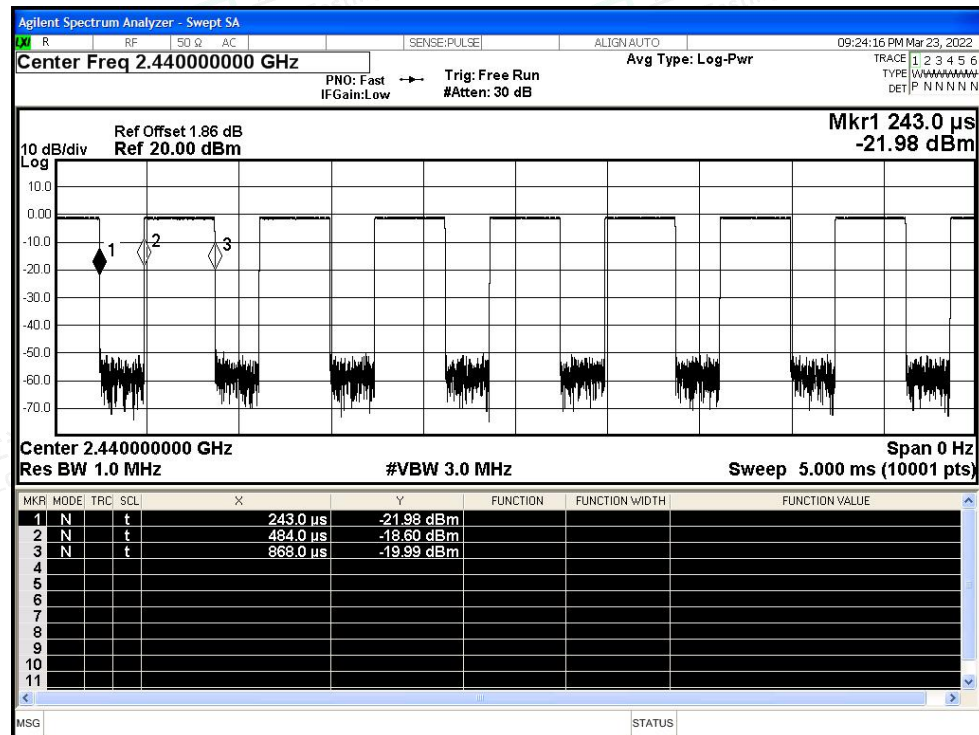


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

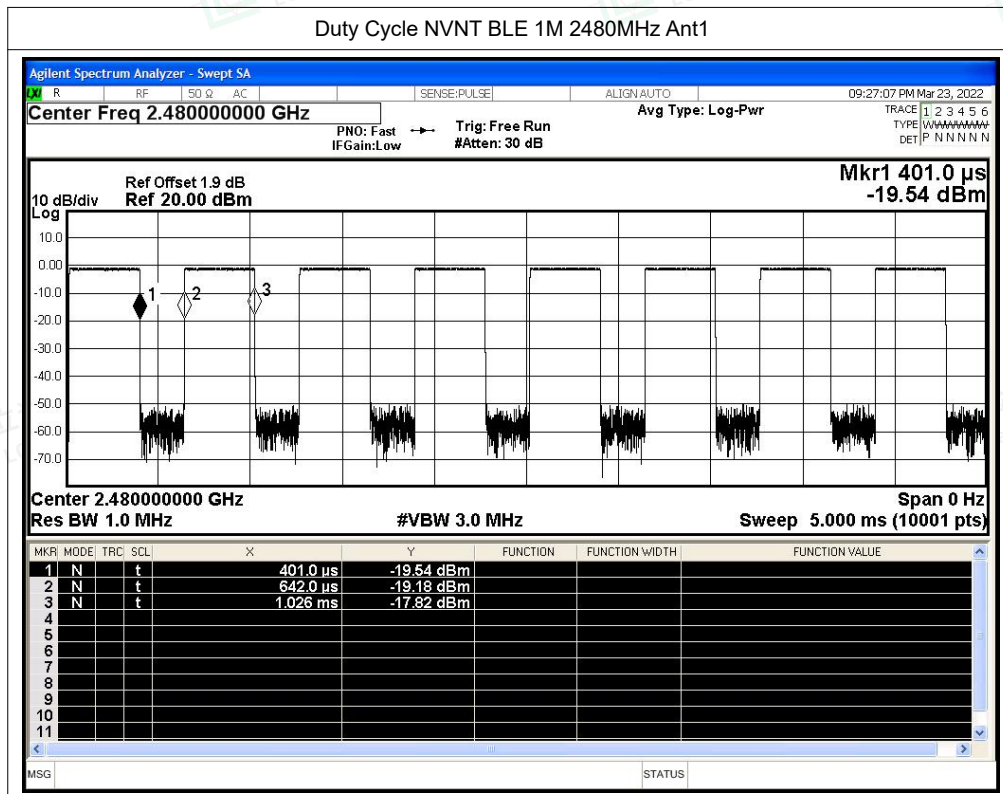


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A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-51.54	2	45.72	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-59.97	2	37.29	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2349.502	-47.63	2	49.63	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2384.482	-59.05	2	38.21	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-49.9	2	47.36	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-59.44	2	37.82	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.68	2	47.58	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-59.38	2	37.88	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2498.348	-47.25	2	50.01	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2486.73	-58.72	2	38.54	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-49.68	2	47.58	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-59.25	2	38.01	Average	54	Pass



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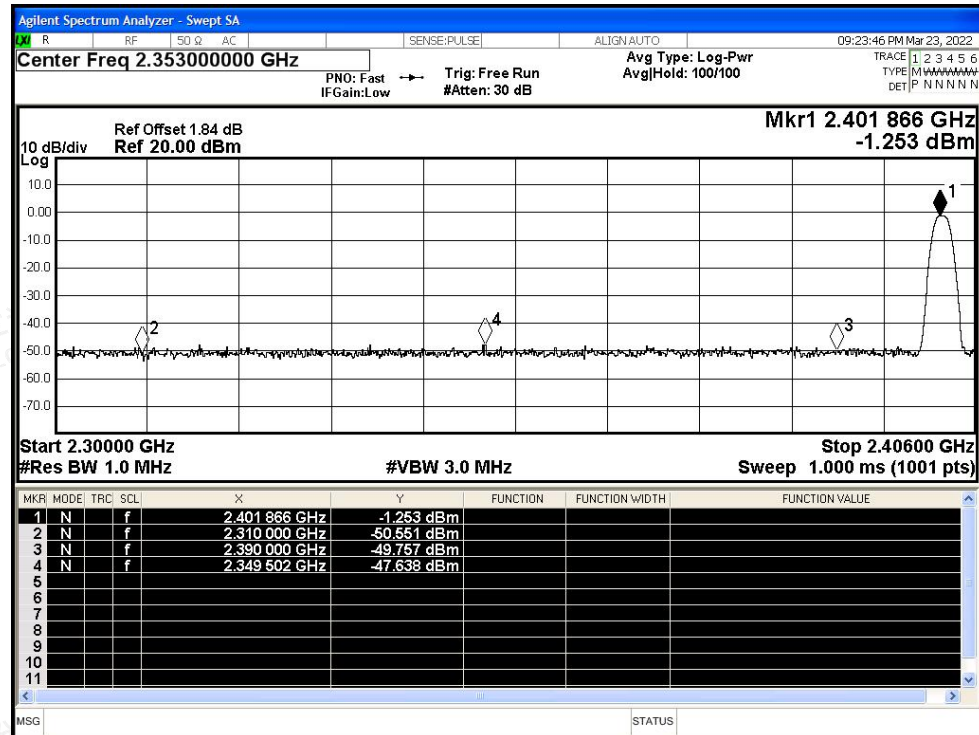
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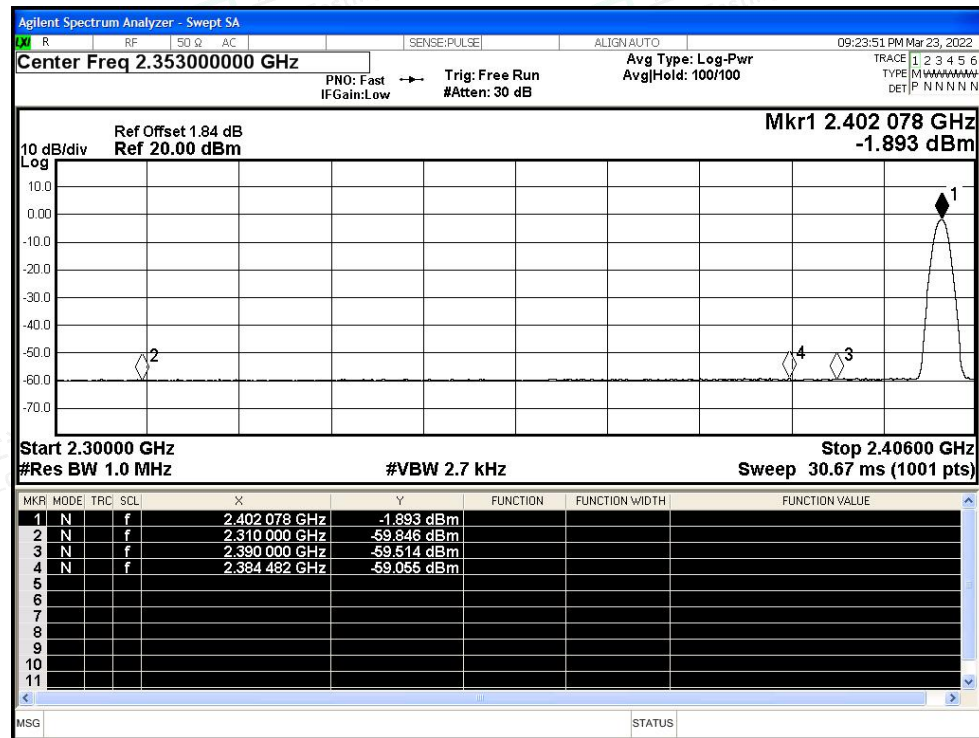


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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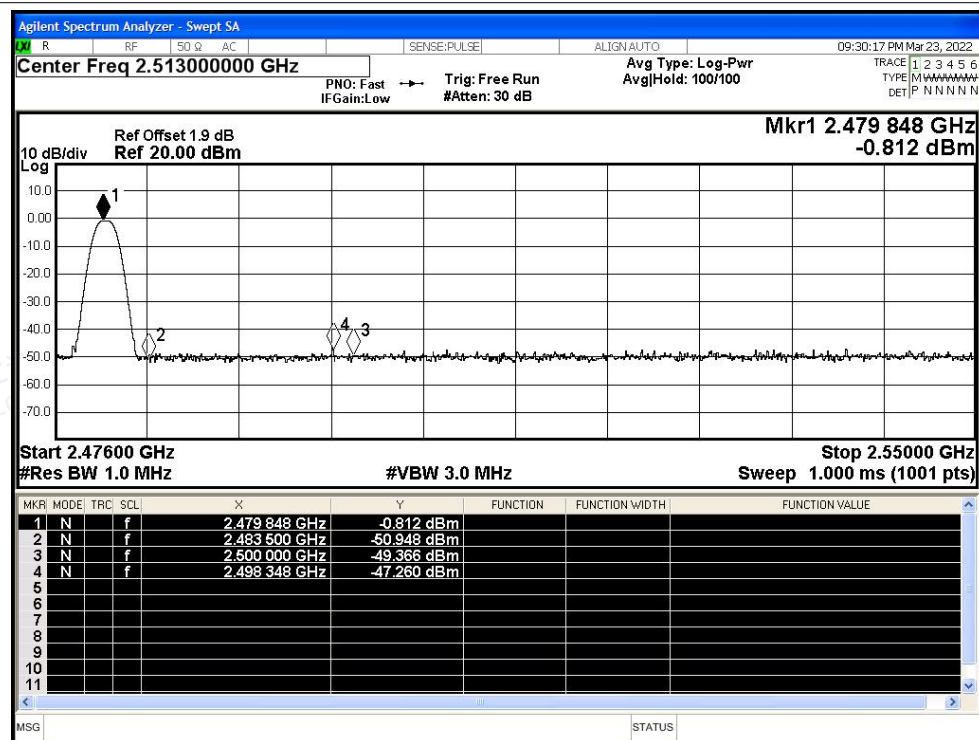
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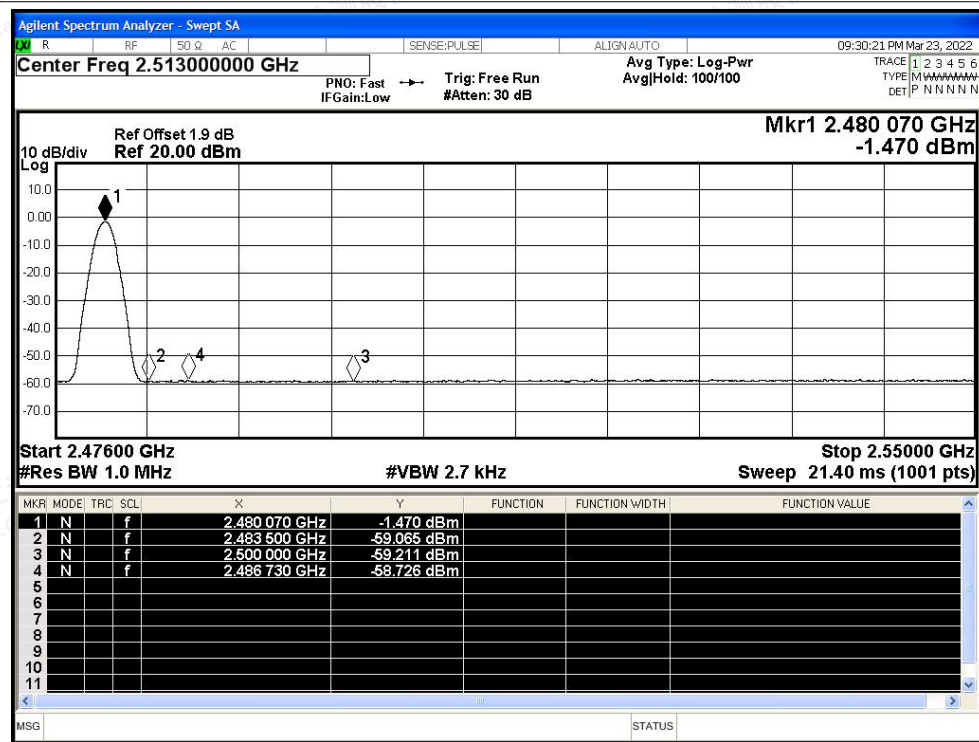
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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