



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: SwitchBot Cordless Vacuum Cleaner

Test Model: W3000010

Environmental Conditions

Temperature:	23.3°C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
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	2402	Ant1	0.659	≥ 0.5	Pass
NVNT	BLE	2440	Ant1	0.65	≥ 0.5	Pass
NVNT	BLE	2480	Ant1	0.652	≥ 0.5	Pass



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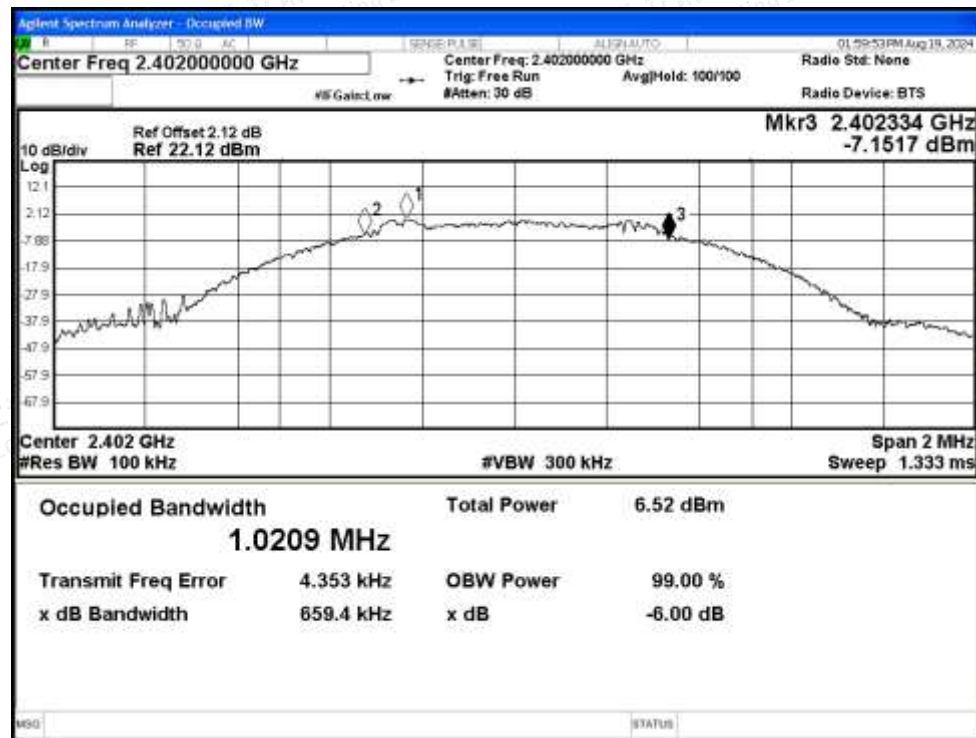
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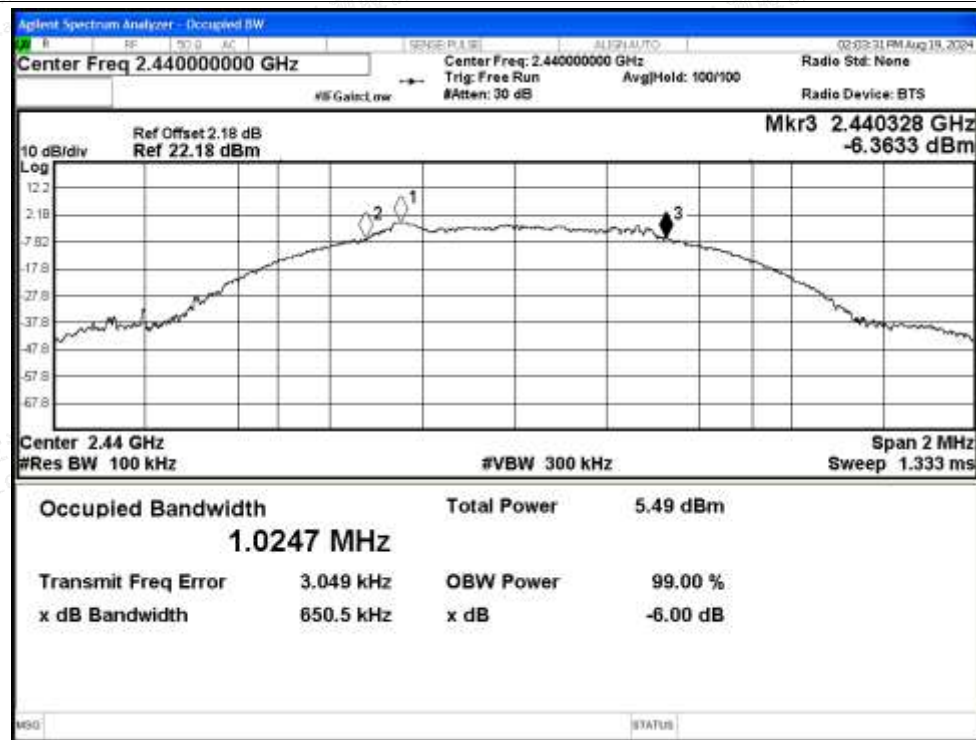


Test Graphs

-6dB Bandwidth NVNT BLE 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2440MHz Ant1



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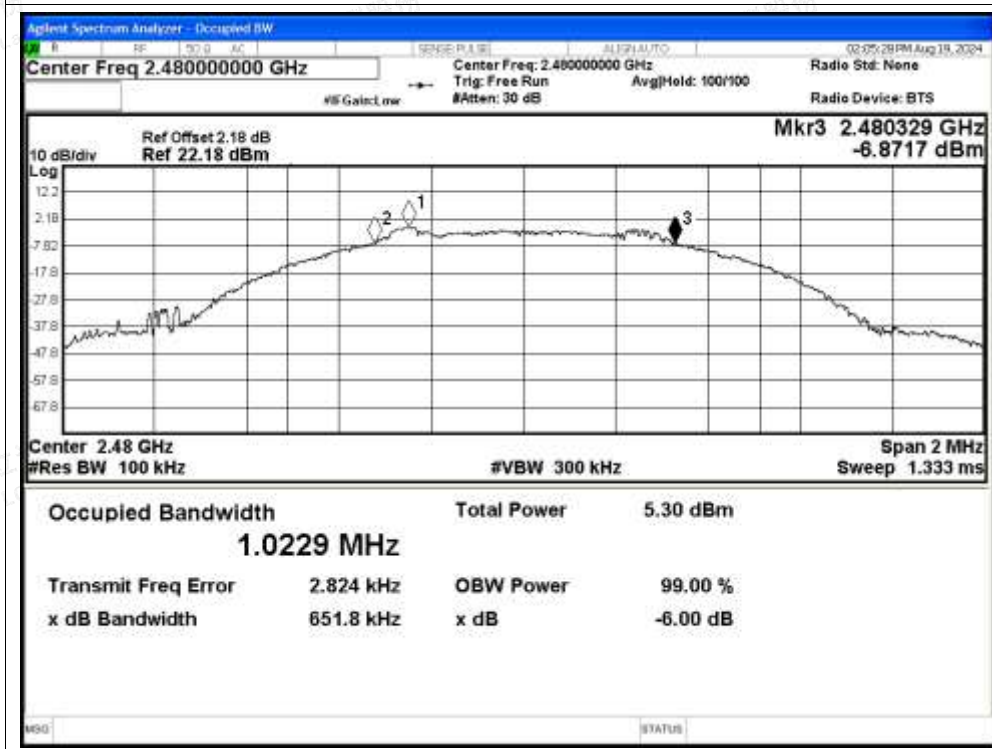
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-6dB Bandwidth NVNT BLE 2480MHz Ant1



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A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	0.67	30	Pass
NVNT	BLE	2440	Ant1	-0.15	30	Pass
NVNT	BLE	2480	Ant1	-0.27	30	Pass



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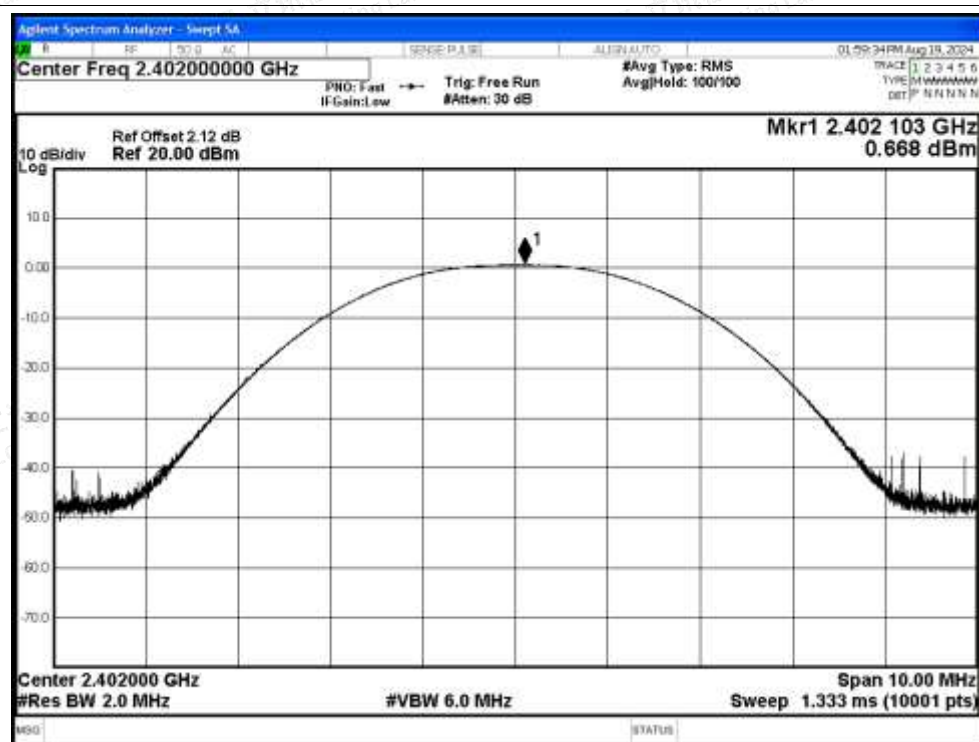
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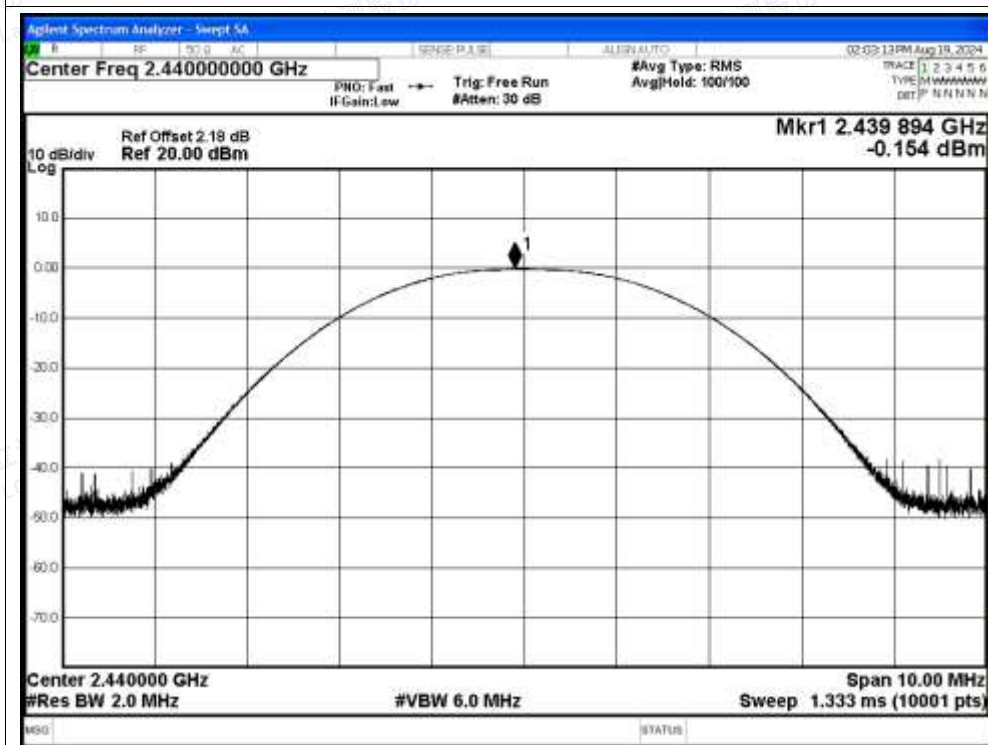


Test Graphs

Power NVNT BLE 2402MHz Ant1



Power NVNT BLE 2440MHz Ant1

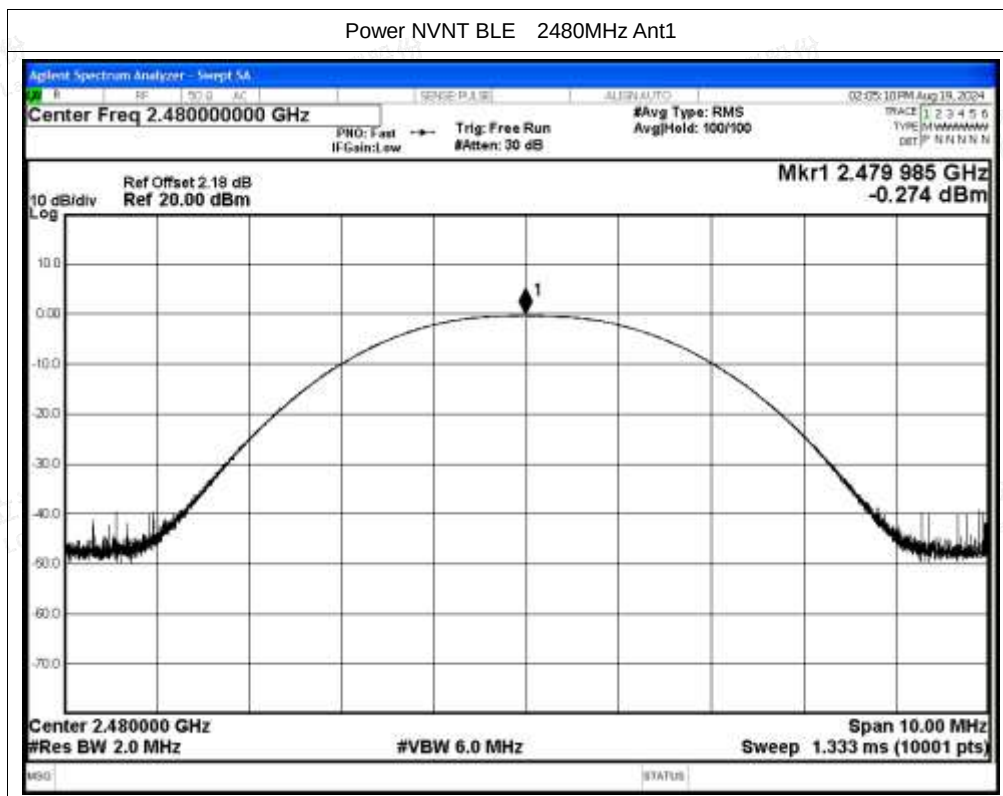


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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE	2402	Ant1	-16.01	8	Pass
NVNT	BLE	2440	Ant1	-17.09	8	Pass
NVNT	BLE	2480	Ant1	-17.32	8	Pass



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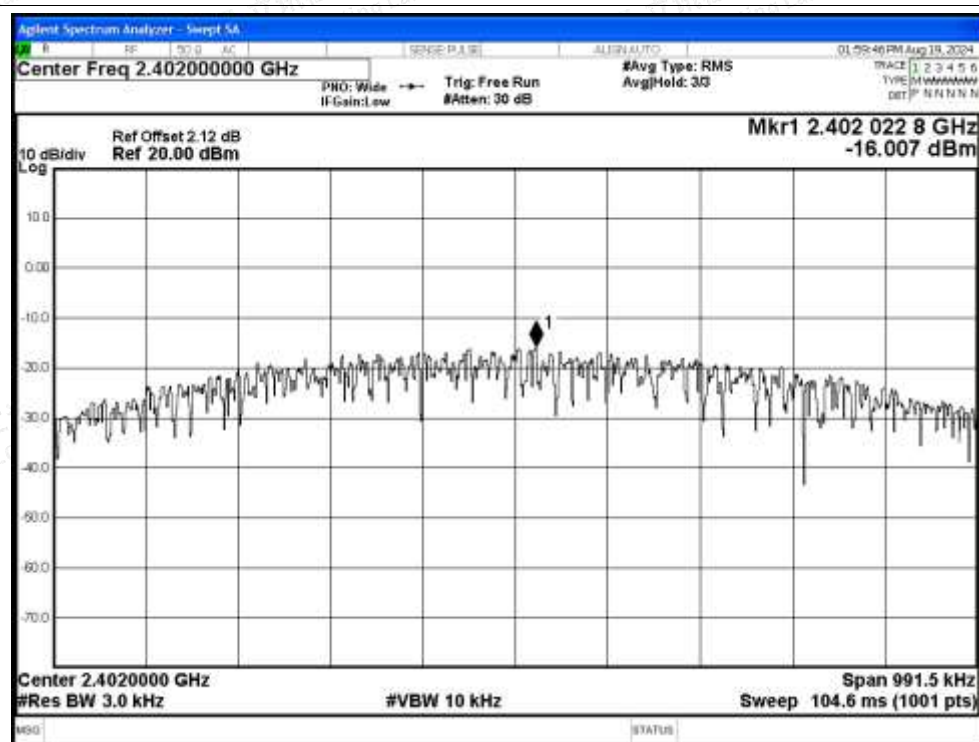
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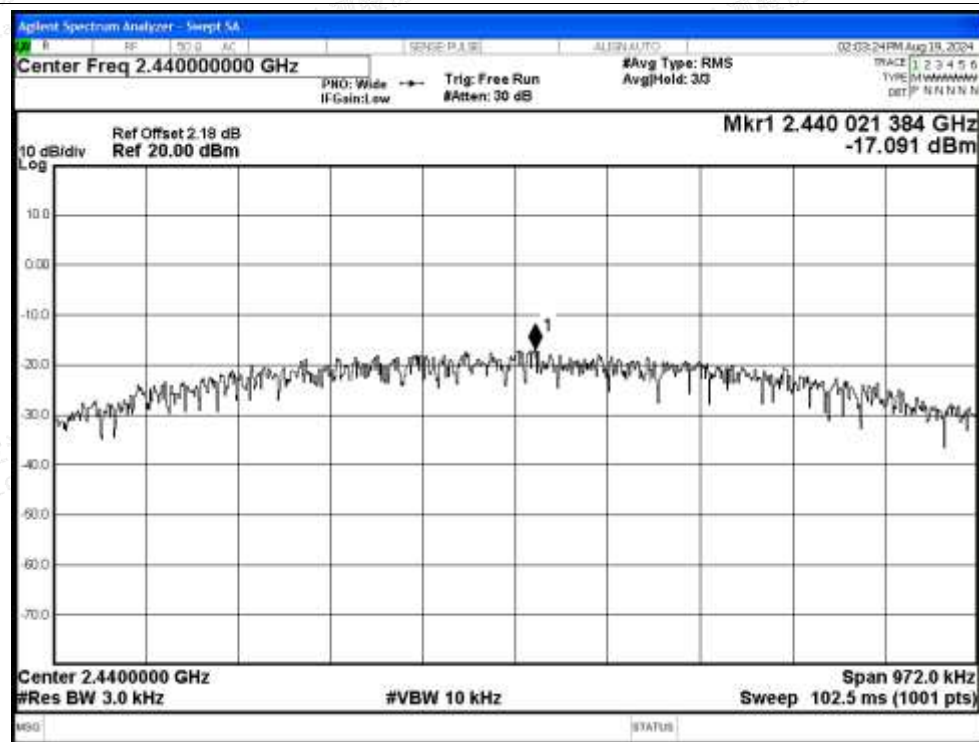


Test Graphs

PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2440MHz Ant1

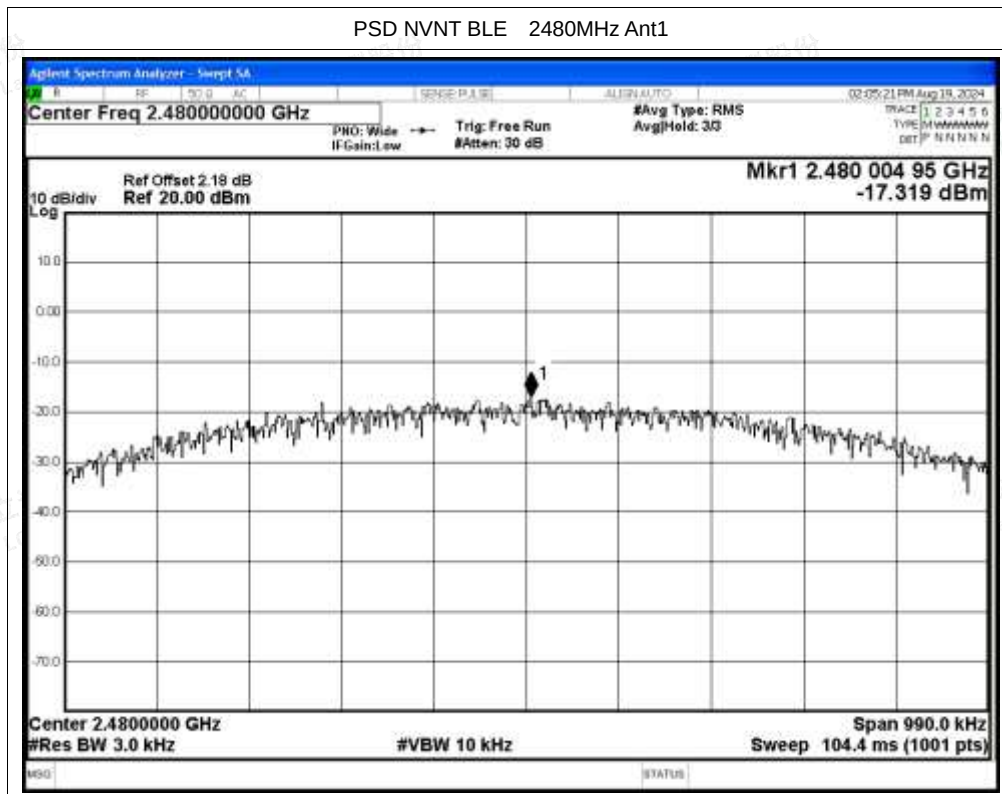


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A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-56.86	-20	Pass
NVNT	BLE	2480	Ant1	-56.25	-20	Pass



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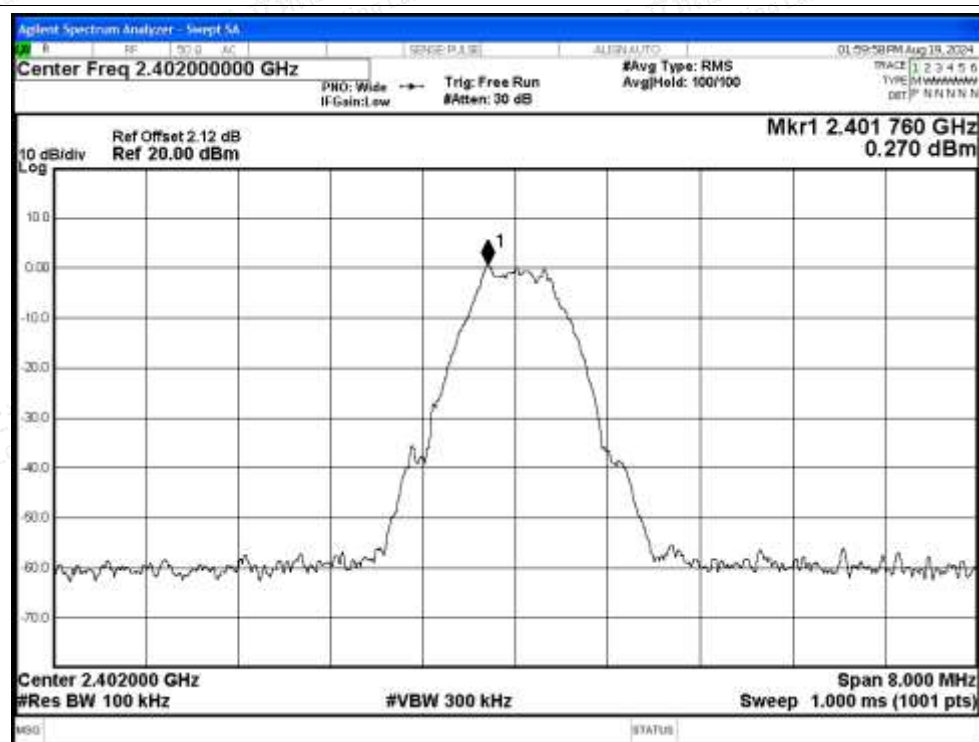
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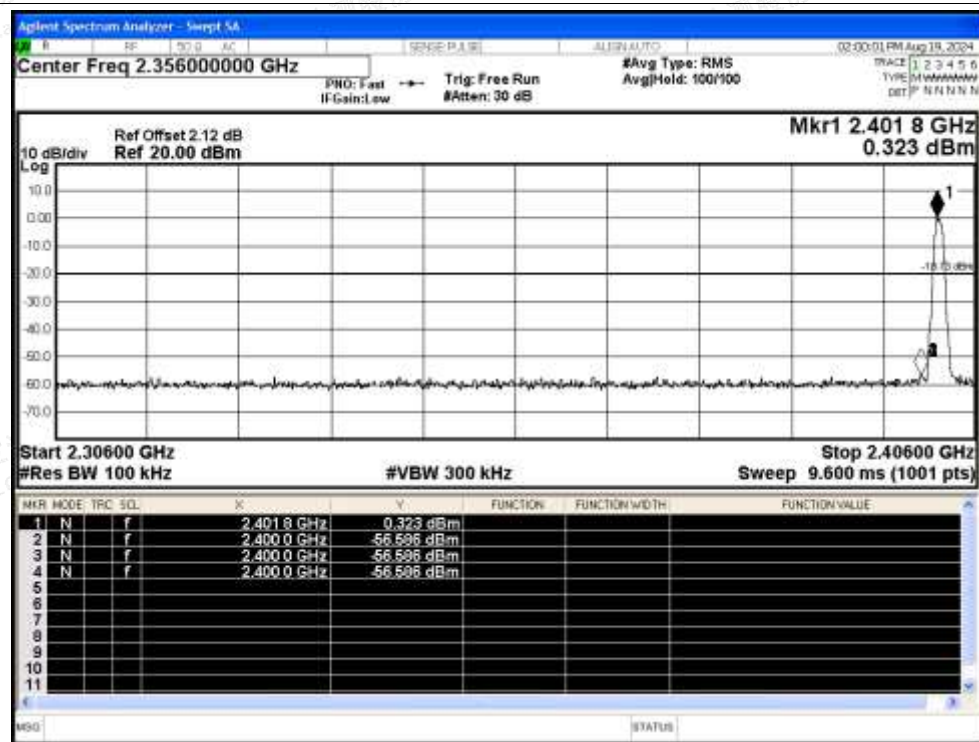


Test Graphs

Band Edge NVNT BLE 2402MHz Ant1 Ref



Band Edge NVNT BLE 2402MHz Ant1 Emission



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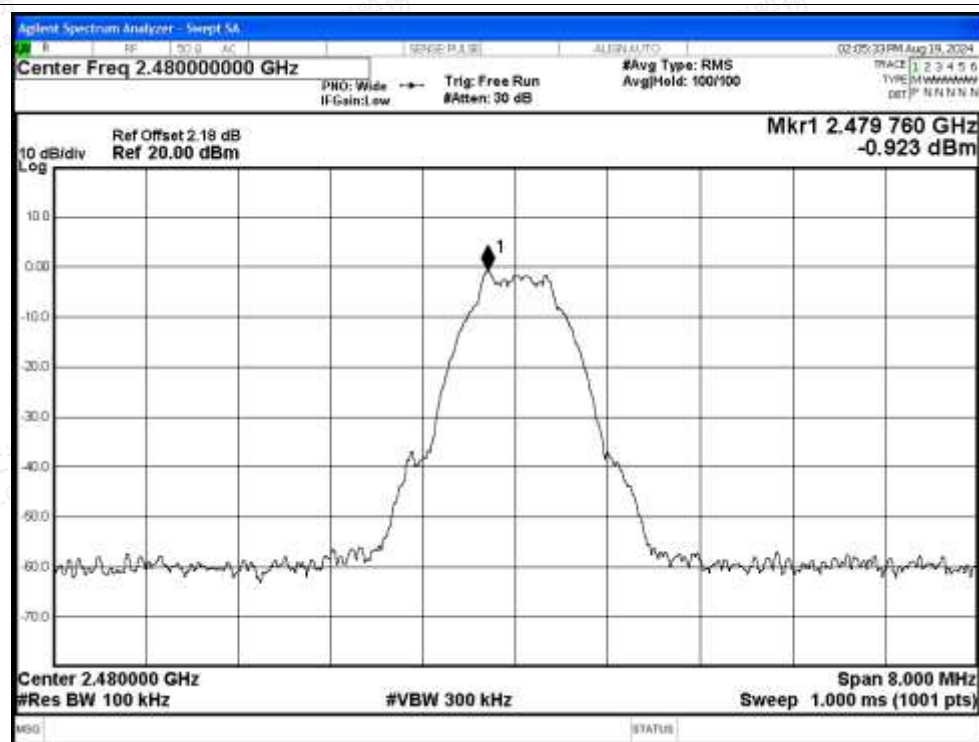
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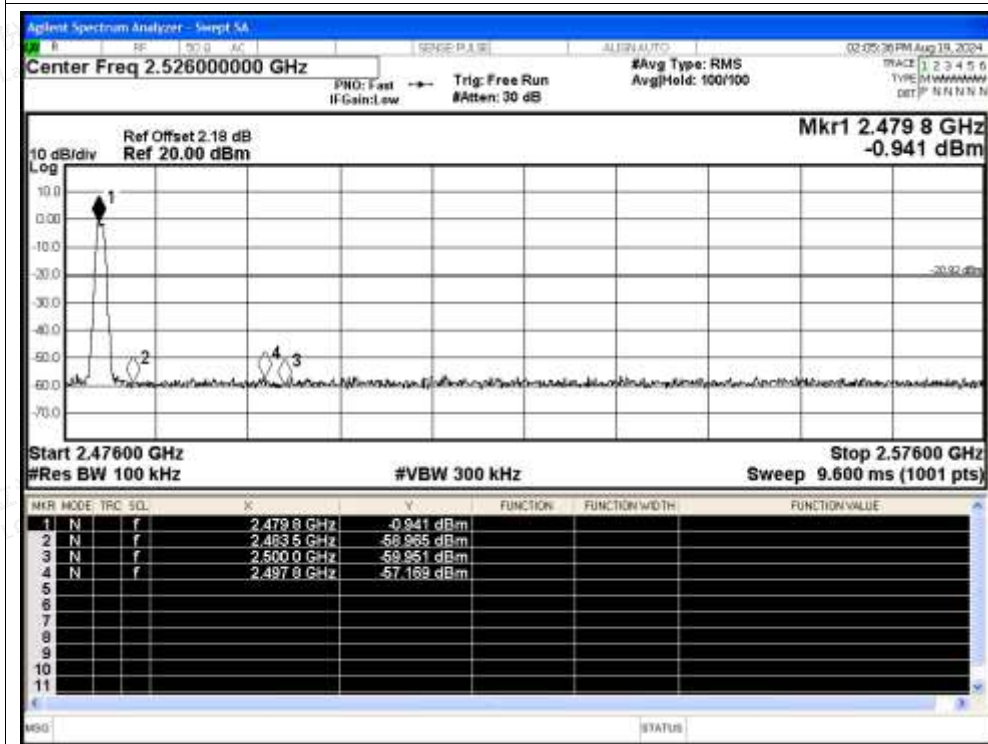
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Band Edge NVNT BLE 2480MHz Ant1 Ref



Band Edge NVNT BLE 2480MHz Ant1 Emission



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A.5 Conducted RF Spurious Emission

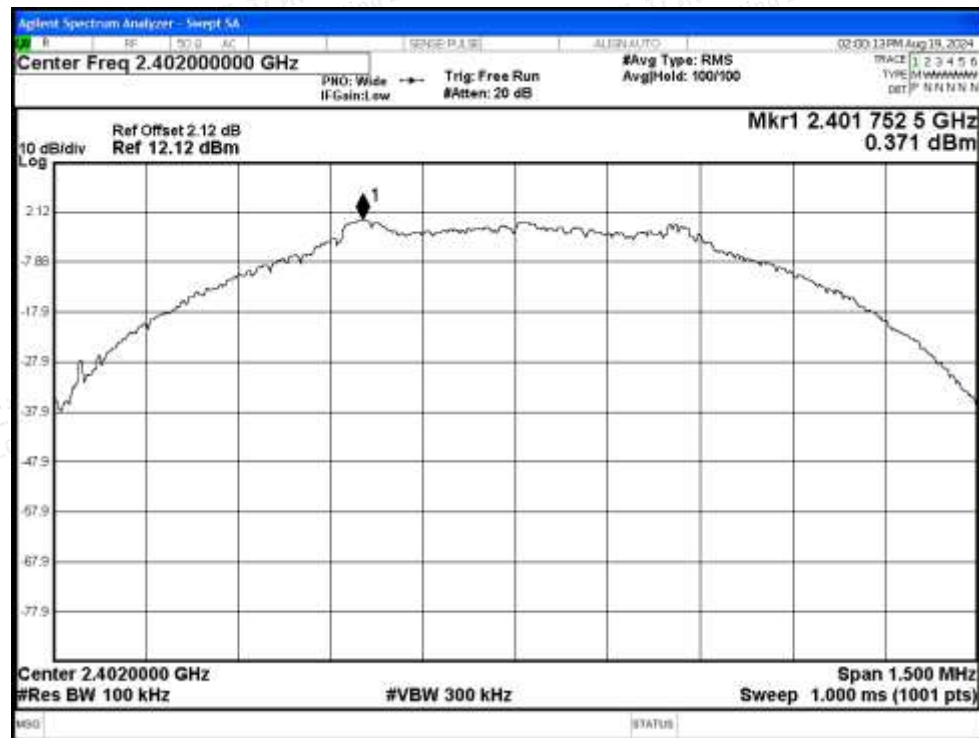
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-55.79	-20	Pass
NVNT	BLE	2440	Ant1	-54.91	-20	Pass
NVNT	BLE	2480	Ant1	-54.19	-20	Pass



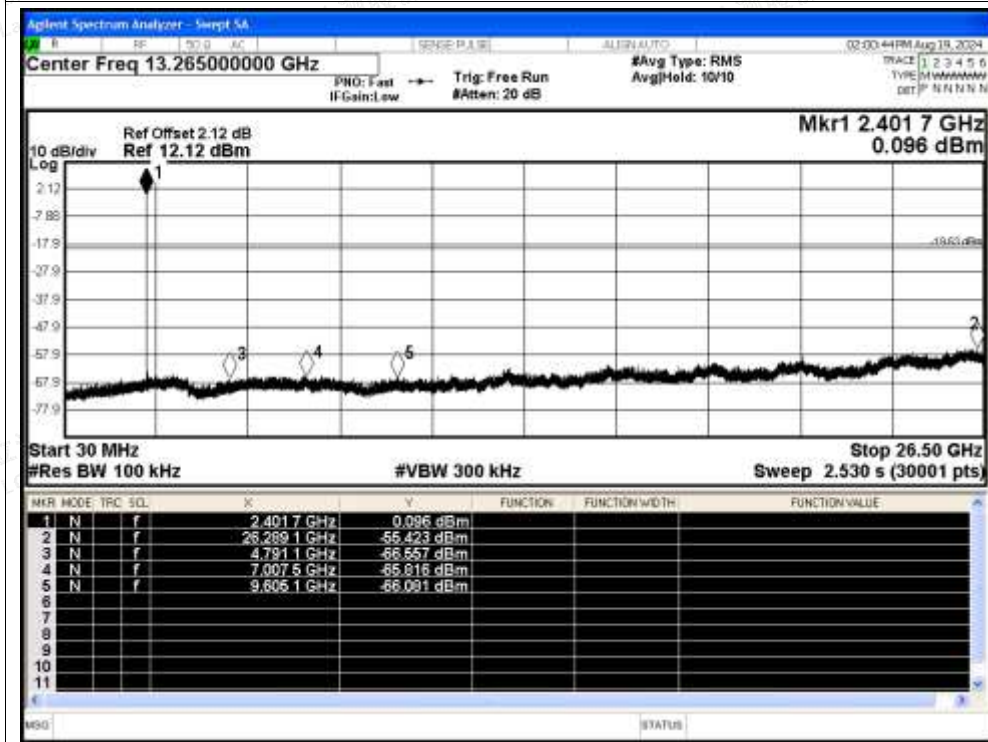


Test Graphs

Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 2402MHz Ant1 Emission



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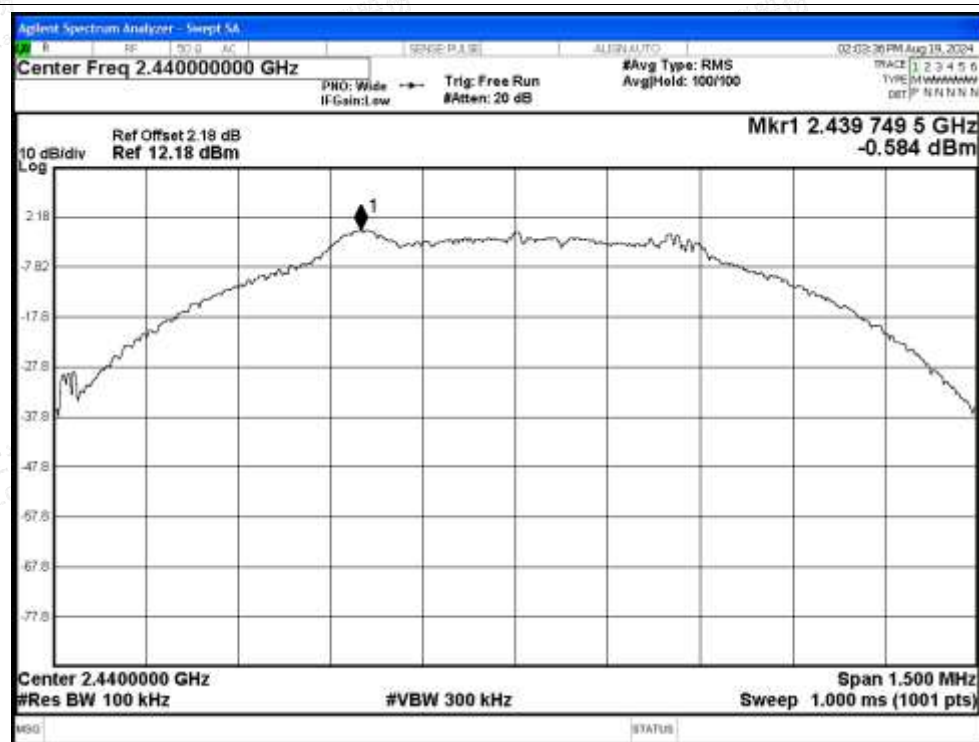
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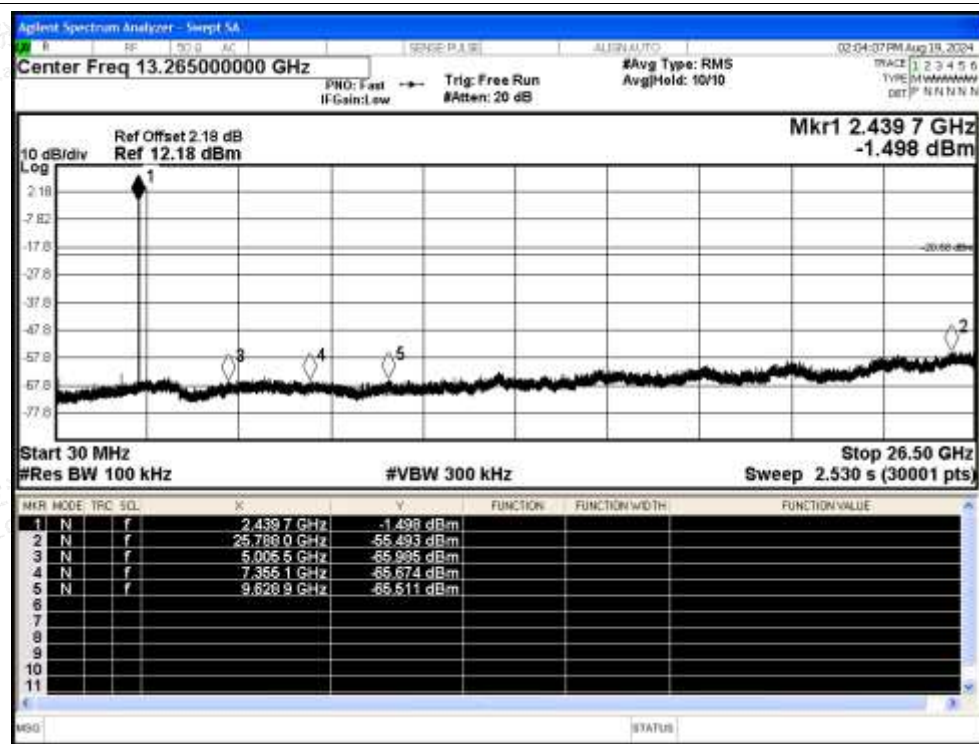
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Tx. Spurious NVNT BLE 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 2440MHz Ant1 Emission



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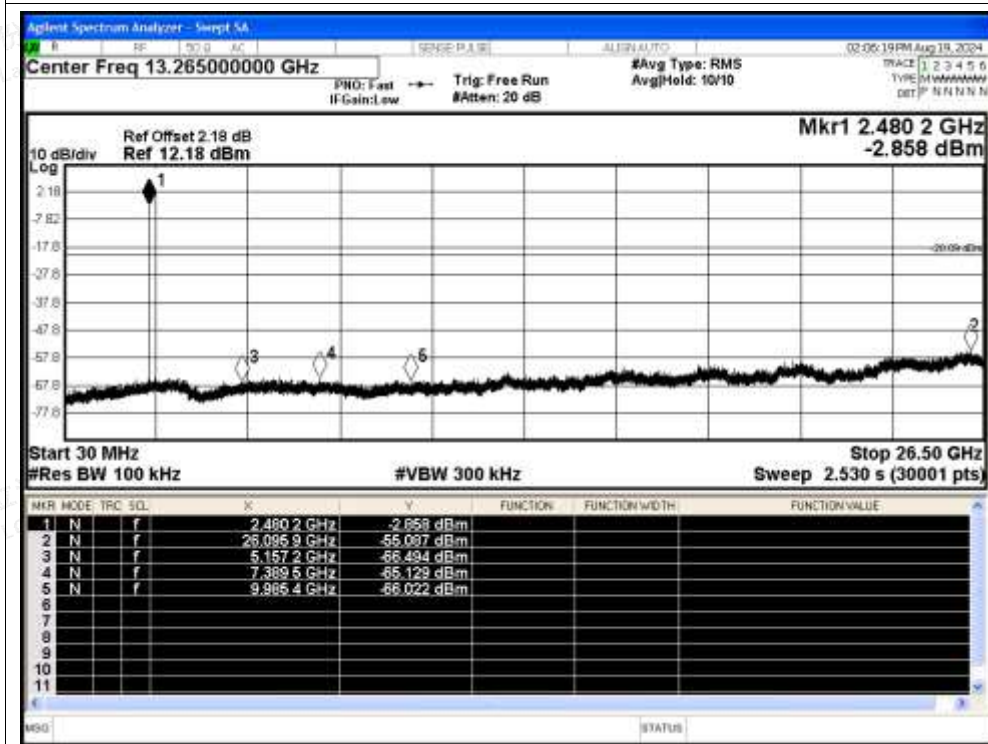
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Tx. Spurious NVNT BLE 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2480MHz Ant1 Emission



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A.6 Duty Cycle

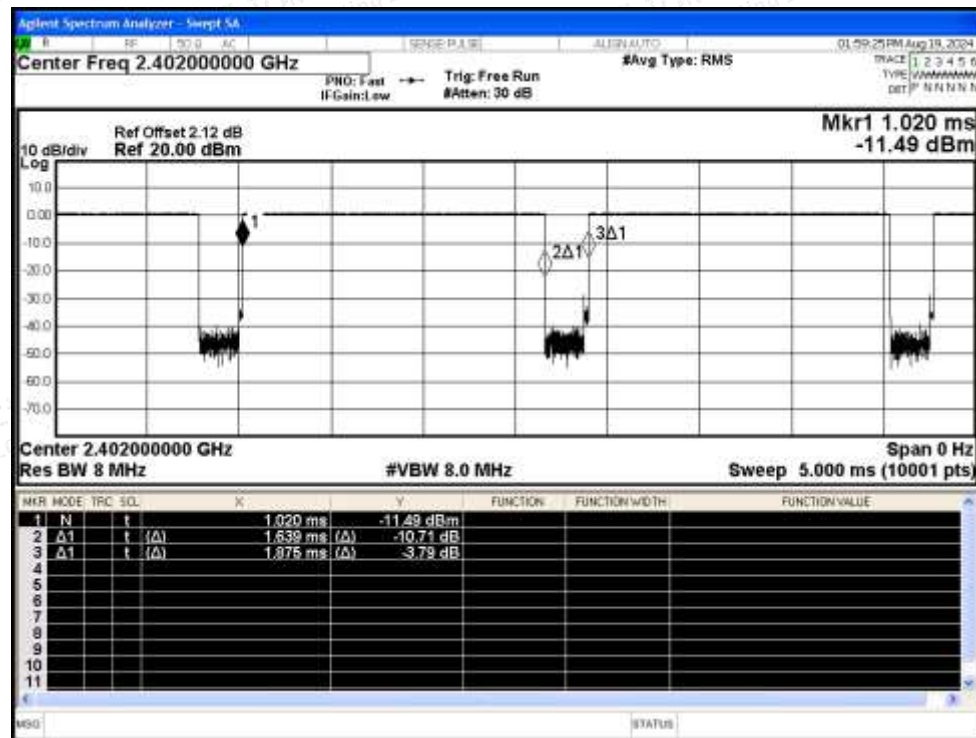
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE	2402	Ant1	87.39	0.59	0.61
NVNT	BLE	2440	Ant1	87.39	0.59	0.61
NVNT	BLE	2480	Ant1	87.39	0.59	0.61



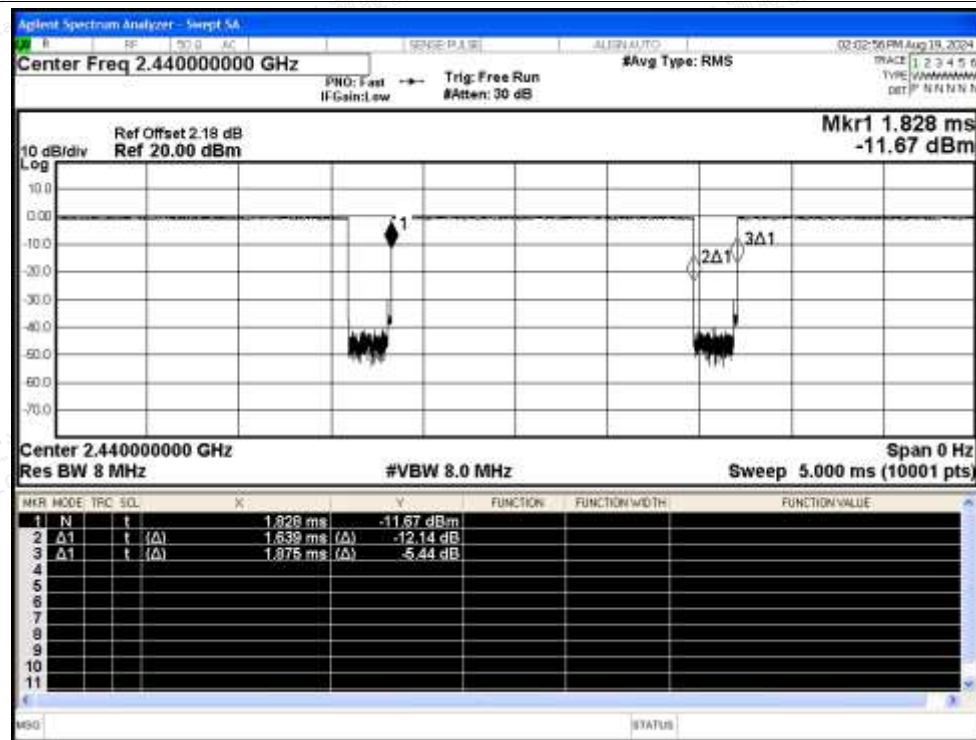


Test Graphs

Duty Cycle NVNT BLE 2402MHz Ant1



Duty Cycle NVNT BLE 2440MHz Ant1



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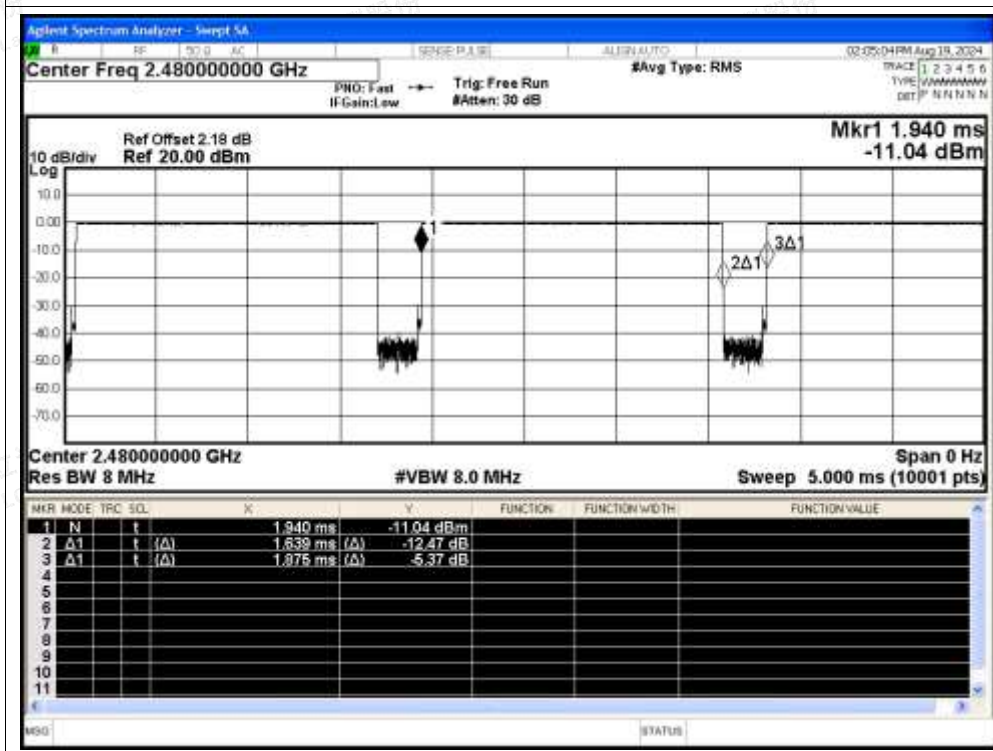
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Duty Cycle NVNT BLE 2480MHz Ant1



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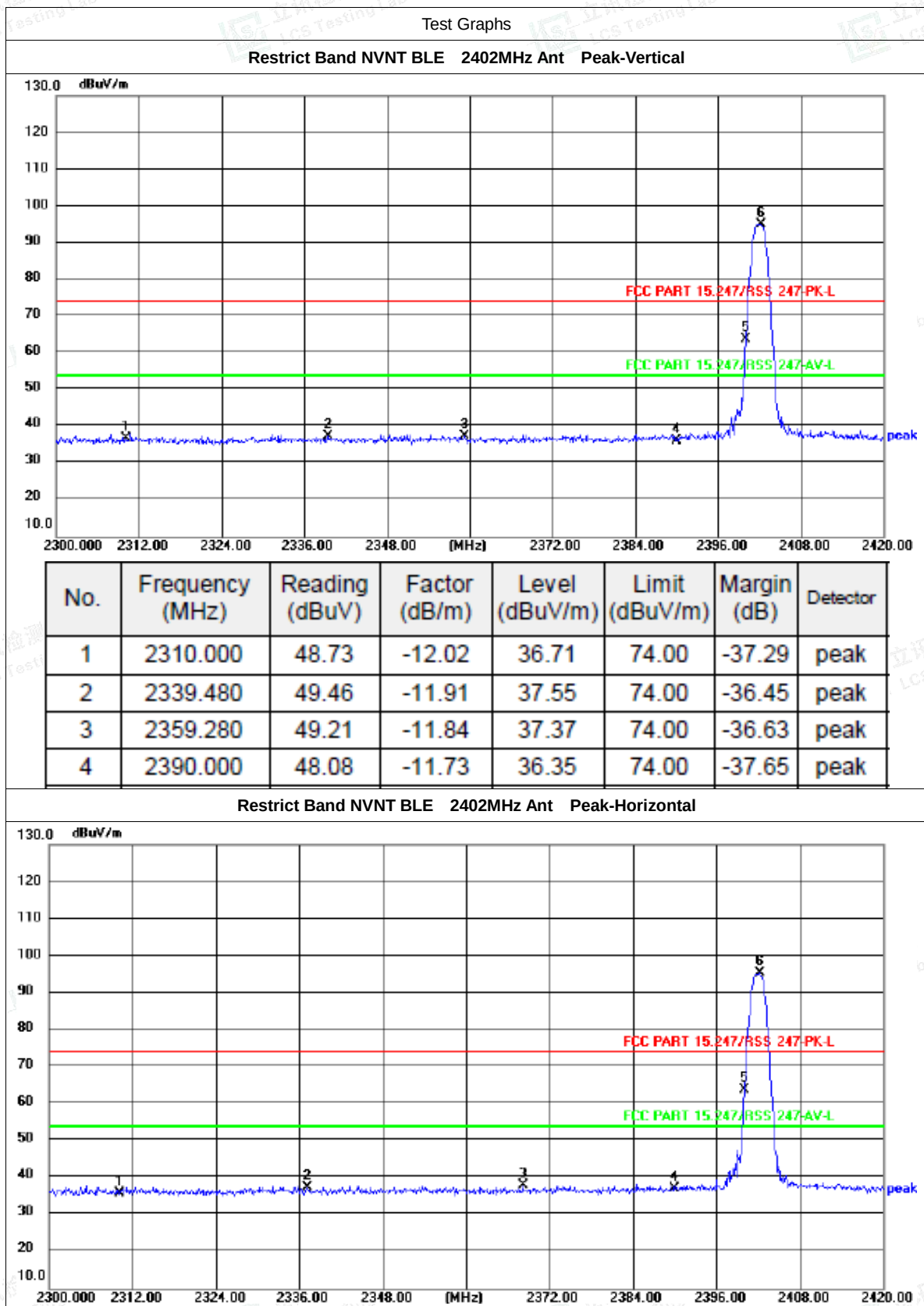
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A.7 Restrict Band



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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	2310.000	46.36	-10.42	35.94	74.00	-38.06
2	2337.200	48.08	-10.54	37.54	74.00	-36.46
3	2368.160	48.70	-10.74	37.96	74.00	-36.04
4	2390.000	48.09	-10.89	37.20	74.00	-36.80



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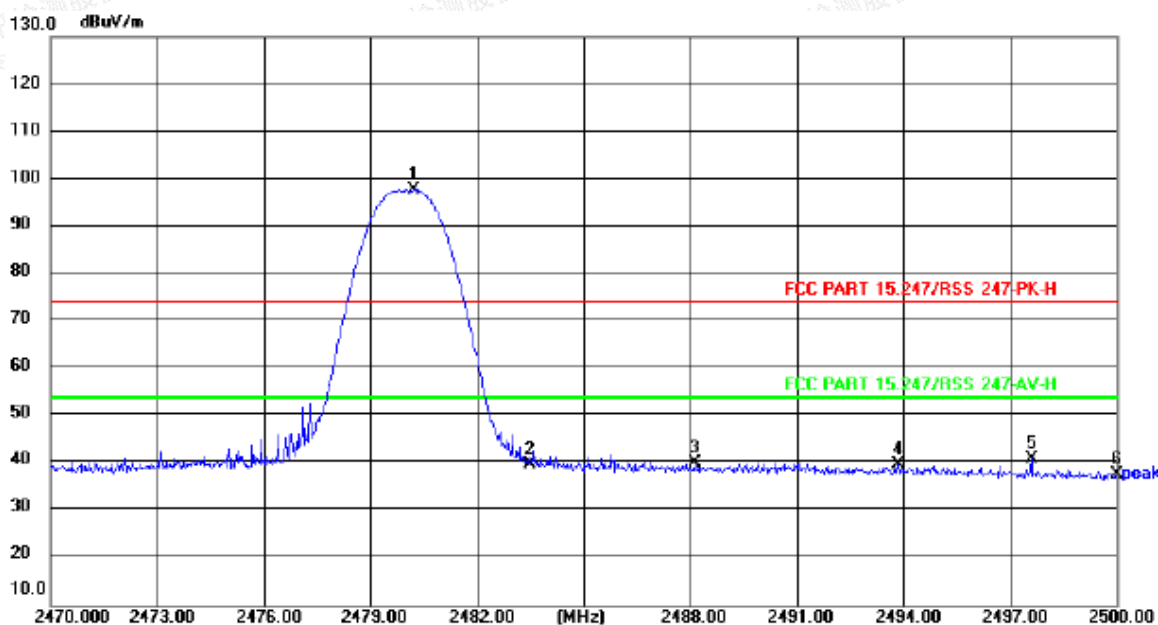
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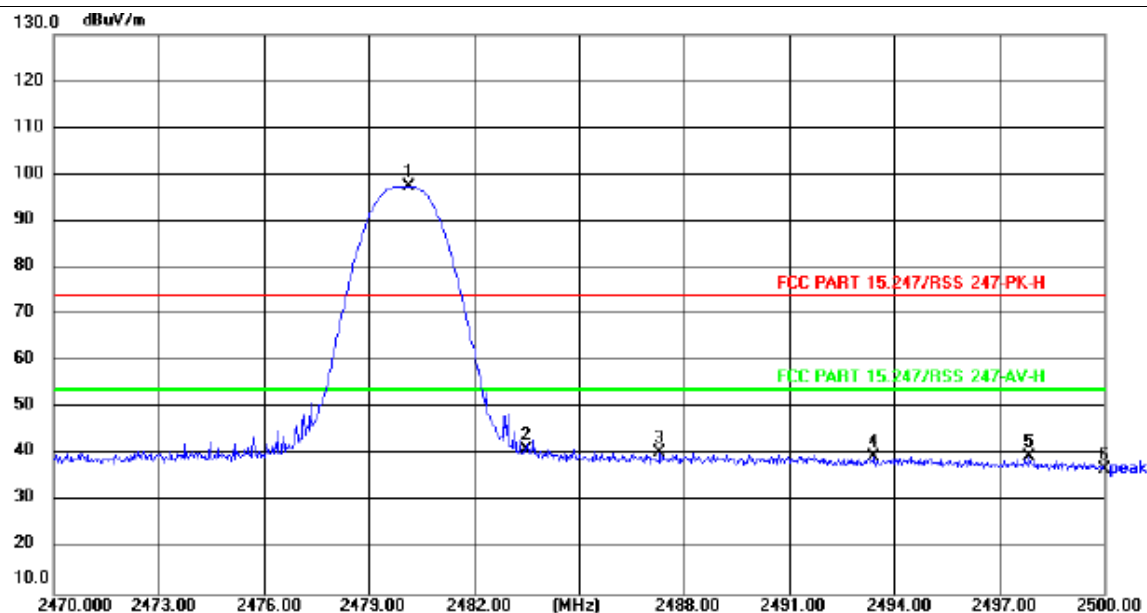


Restrict Band NVNT BLE 2480MHz Ant Peak-Vertical



2	2483.500	50.95	-10.96	39.99	74.00	-34.01	peak
3	2488.150	51.08	-11.02	40.06	74.00	-33.94	peak
4	2493.850	51.02	-11.08	39.94	74.00	-34.06	peak
5	2497.600	52.28	-11.11	41.17	74.00	-32.83	peak
6	2500.000	48.86	-11.14	37.72	74.00	-36.28	peak

Restrict Band NVNT BLE 2480MHz Ant Peak- Horizontal



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2	2483.500	52.37	-11.40	40.97	74.00	-33.03	peak	P
3	2487.310	51.75	-11.39	40.36	74.00	-33.64	peak	P
4	2493.430	50.98	-11.37	39.61	74.00	-34.39	peak	P
5	2497.870	50.97	-11.35	39.62	74.00	-34.38	peak	P
6	2500.000	48.32	-11.34	36.98	74.00	-37.02	peak	P



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