



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: SPEAKER BOX

Test Model: EP23880

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Bill Zhu
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	0.659	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.66	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.664	0.5	Pass



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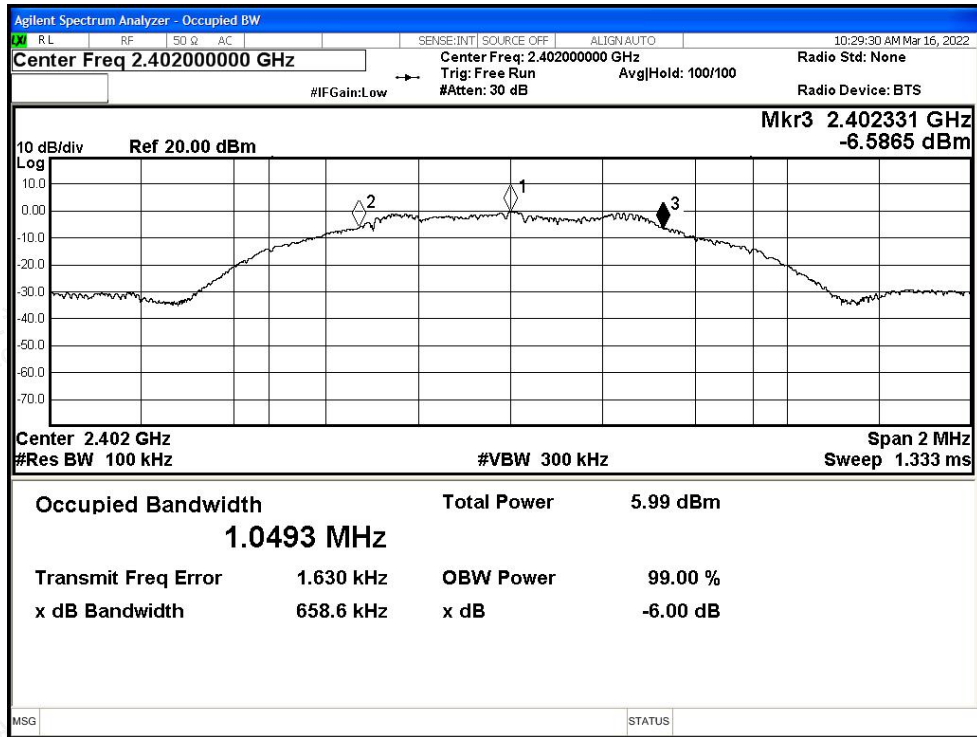
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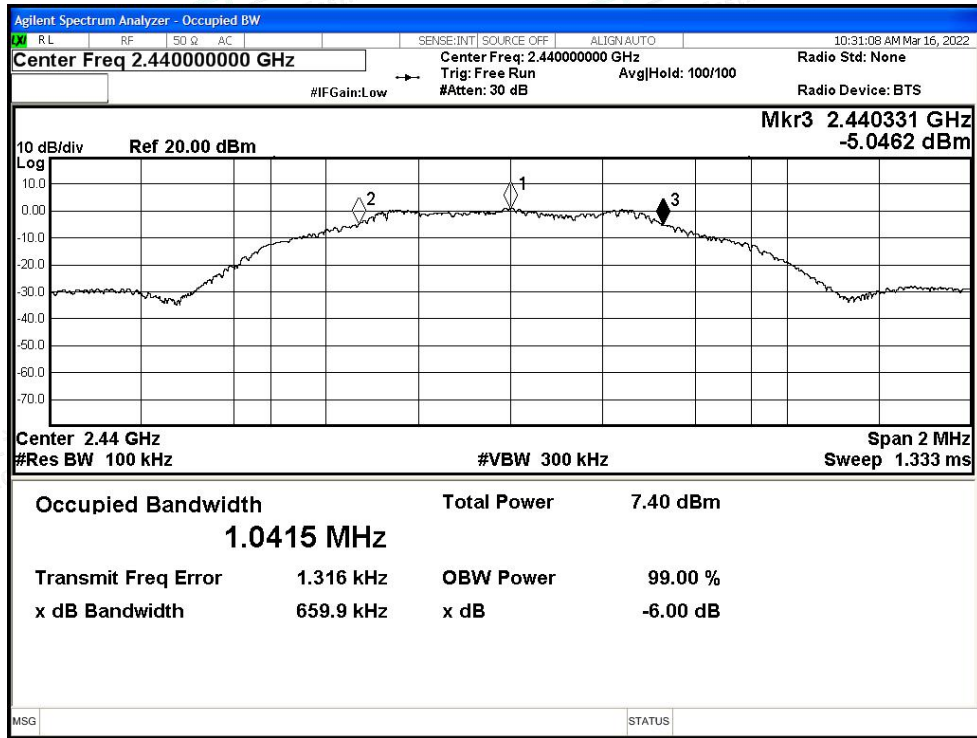


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

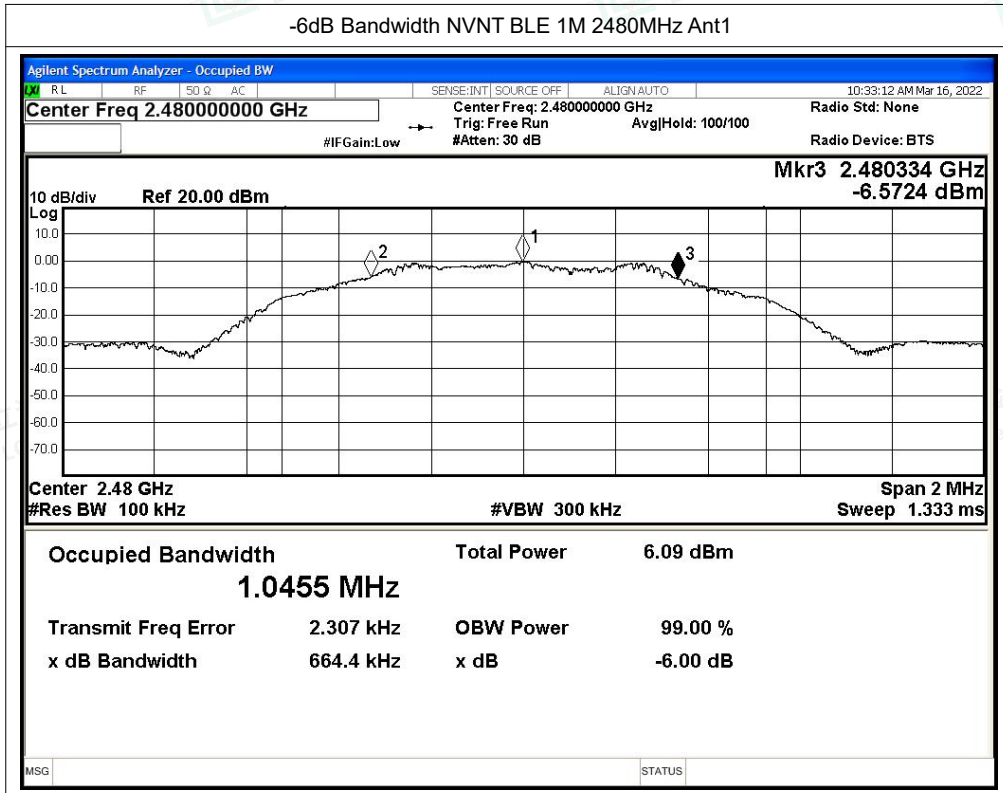


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B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.28	0	0.28	30	Pass
NVNT	BLE 1M	2440	Ant1	1.57	0	1.57	30	Pass
NVNT	BLE 1M	2480	Ant1	0.27	0	0.27	30	Pass



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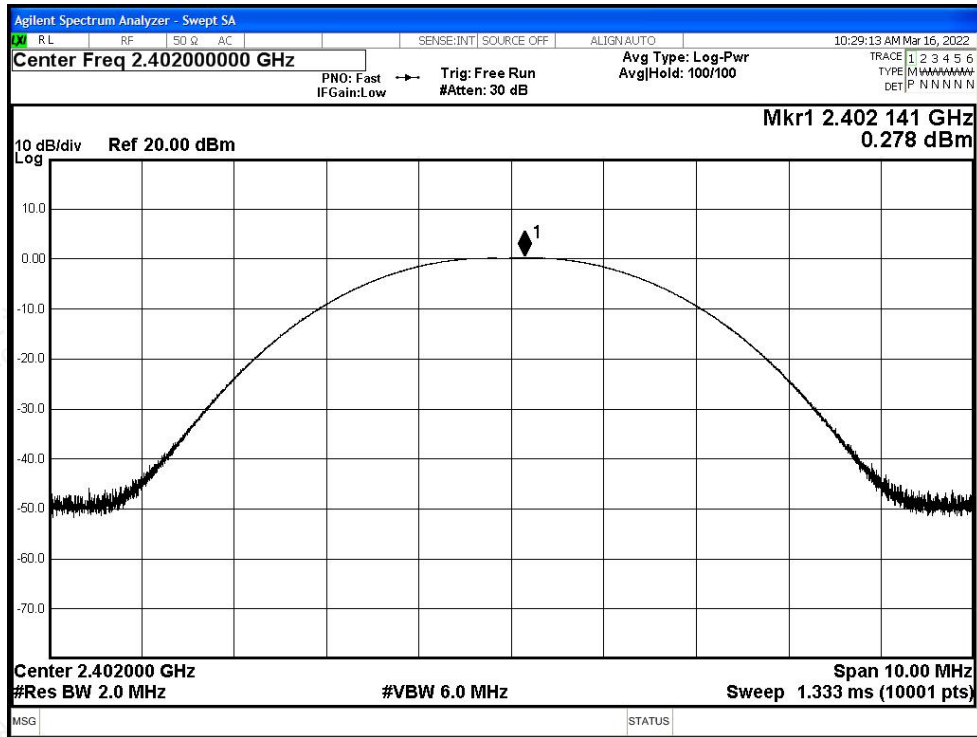
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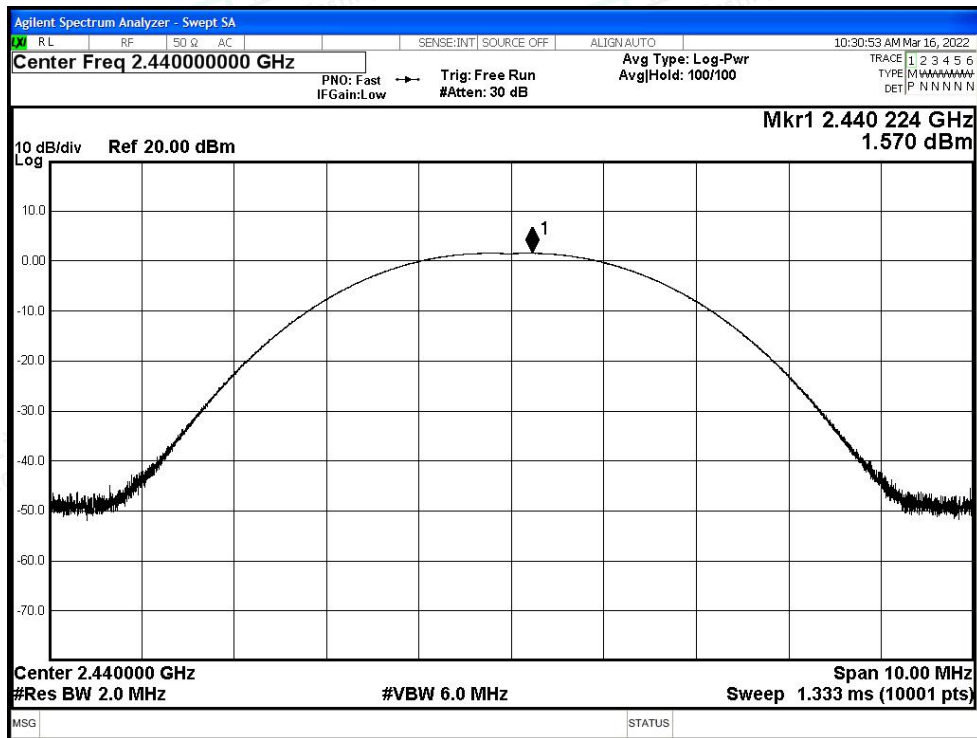


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

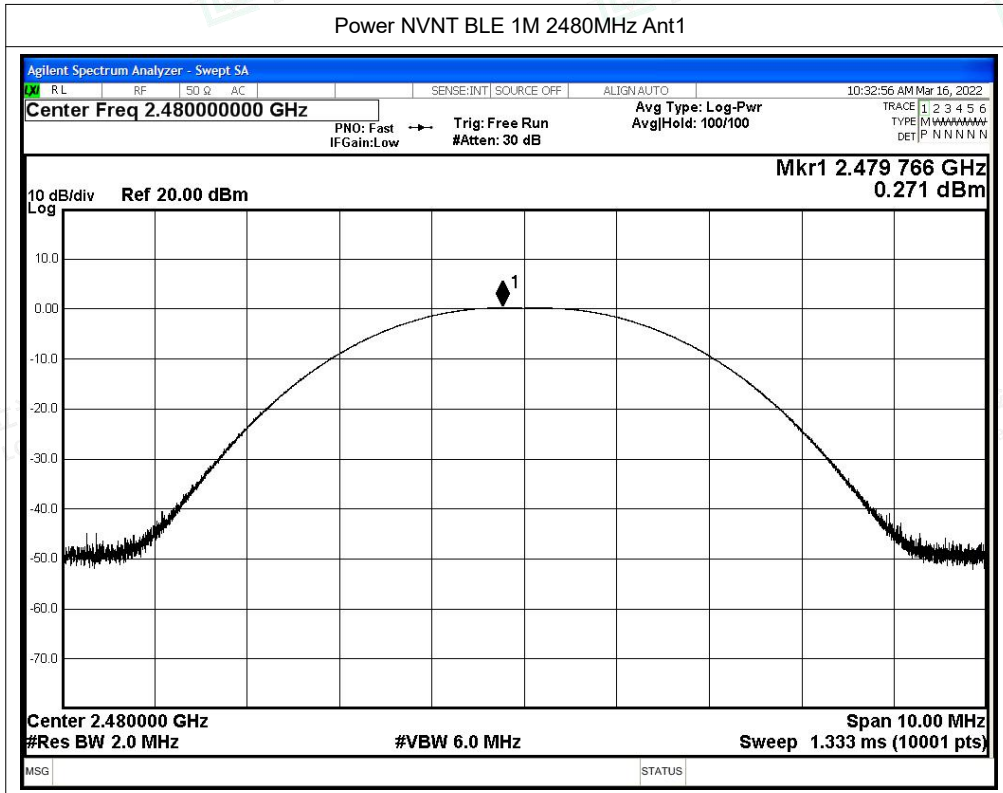


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B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-15.87	0	-15.87	8	Pass
NVNT	BLE 1M	2440	Ant1	-13.22	0	-13.22	8	Pass
NVNT	BLE 1M	2480	Ant1	-14.53	0	-14.53	8	Pass



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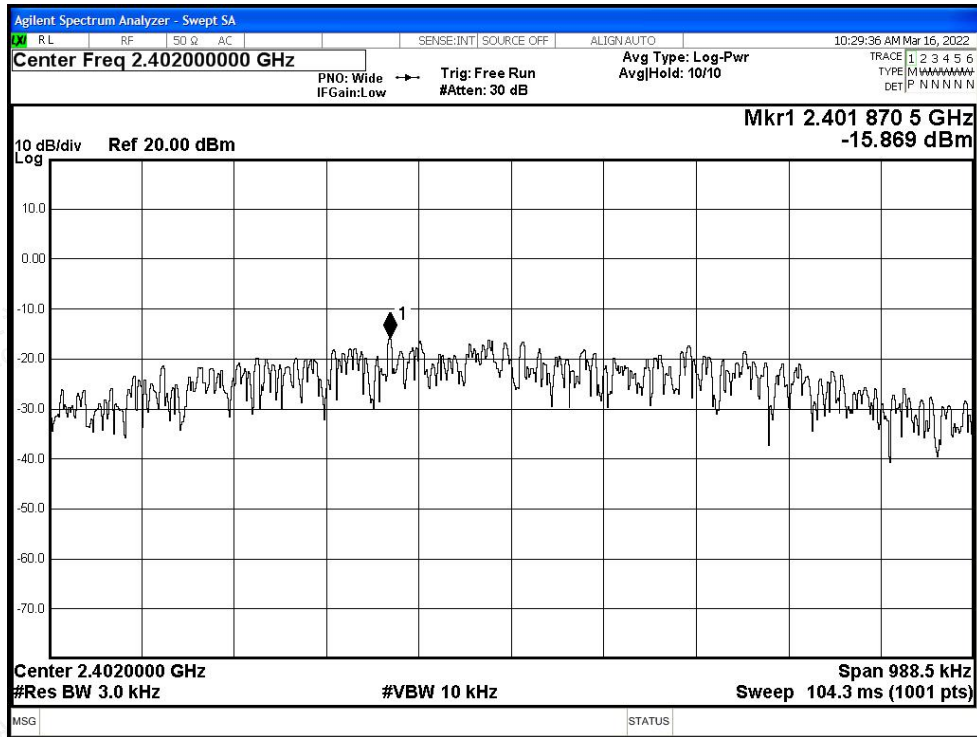
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

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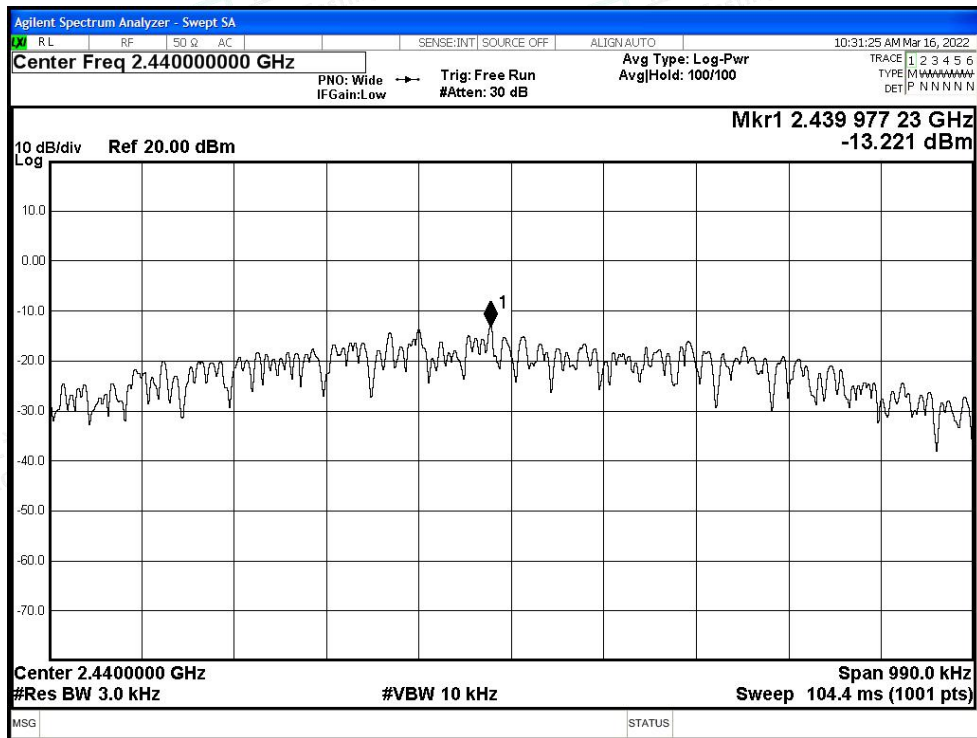


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

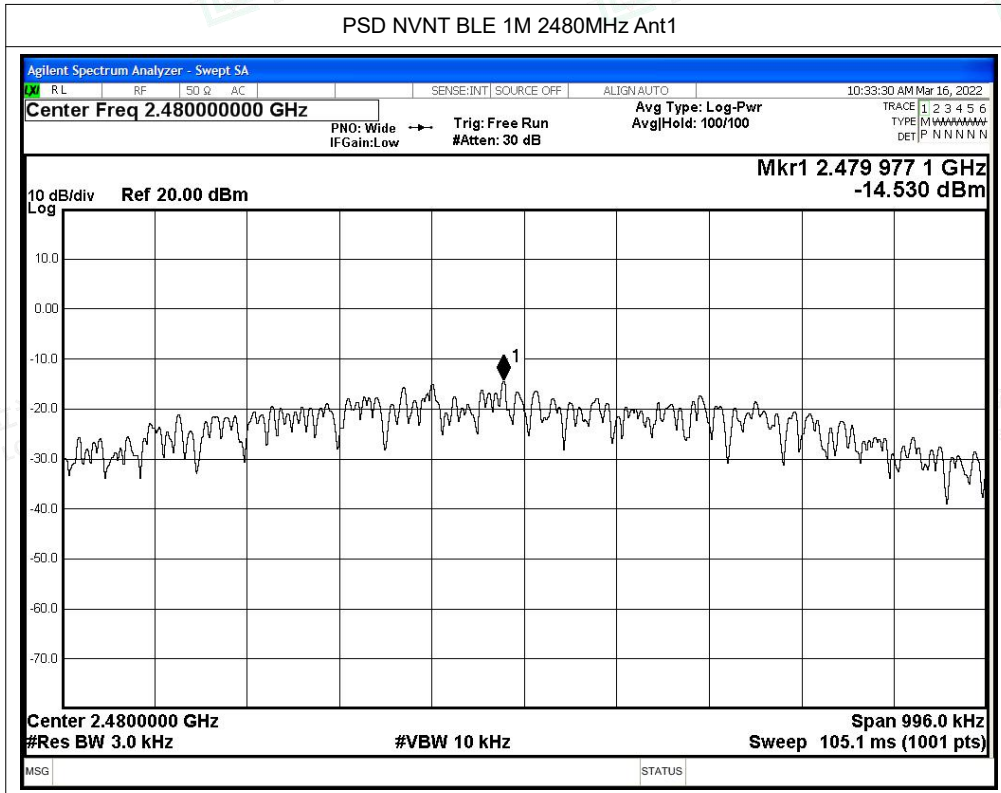


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B.4 Band Edge

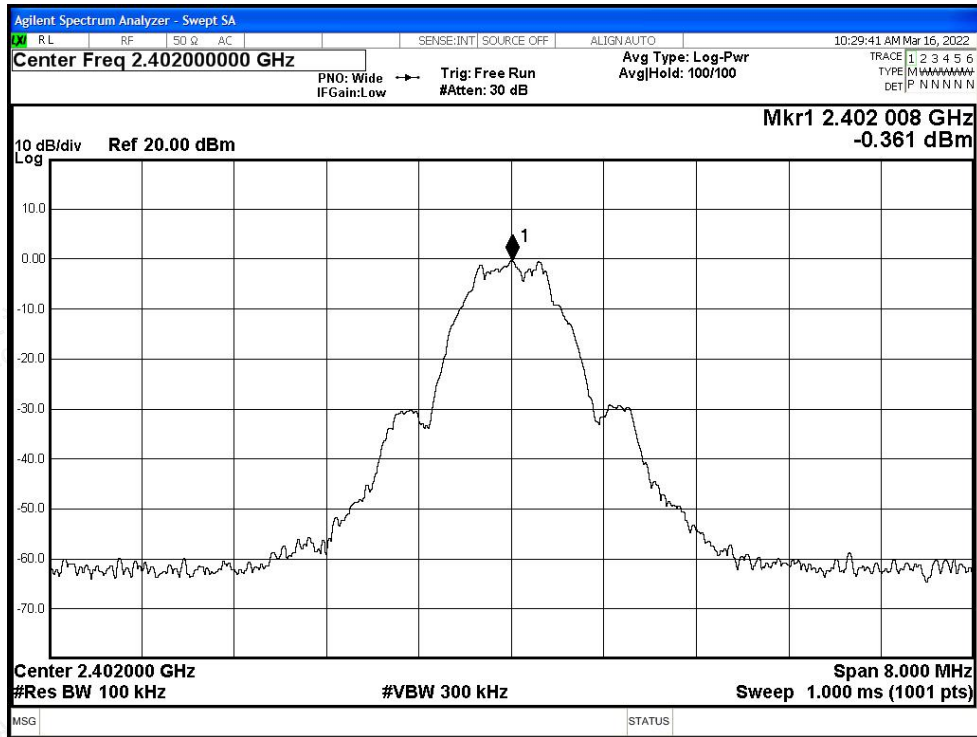
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-58.18	-20	Pass
NVNT	BLE 1M	2480	Ant1	-58.64	-20	Pass



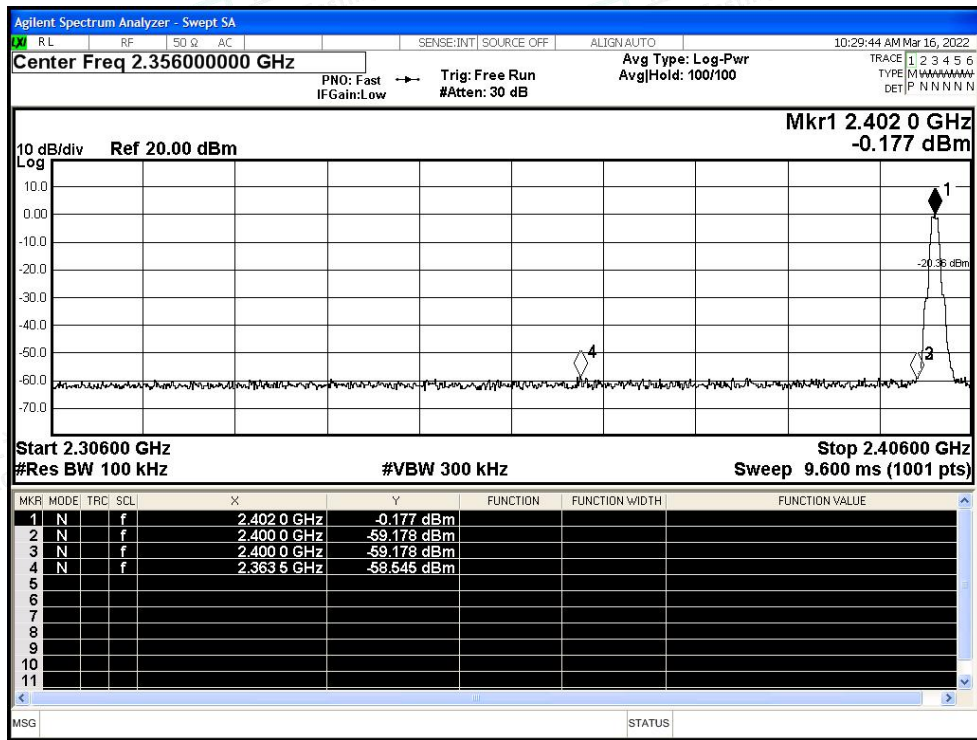


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



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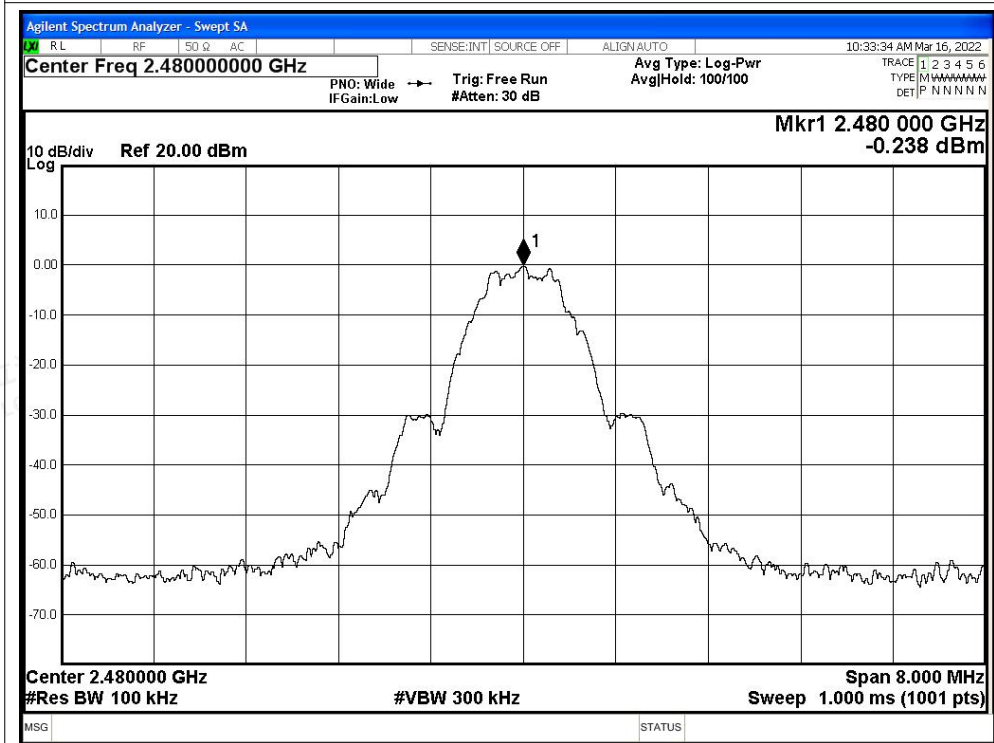
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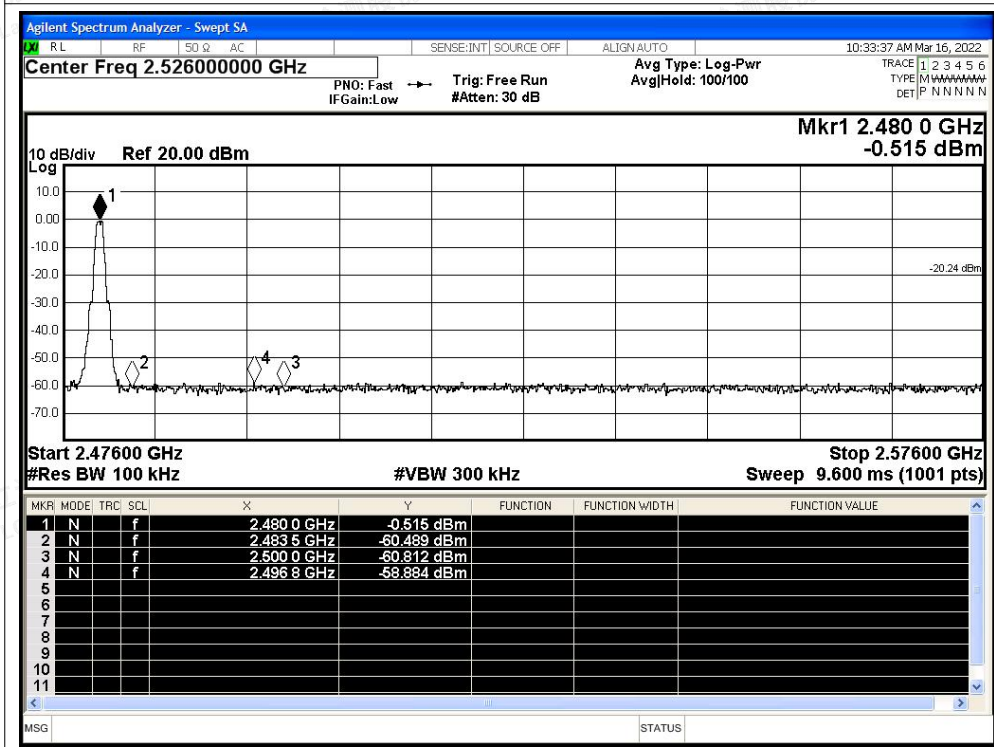
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Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



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B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-57.19	-20	Pass
NVNT	BLE 1M	2440	Ant1	-58.78	-20	Pass
NVNT	BLE 1M	2480	Ant1	-56.85	-20	Pass



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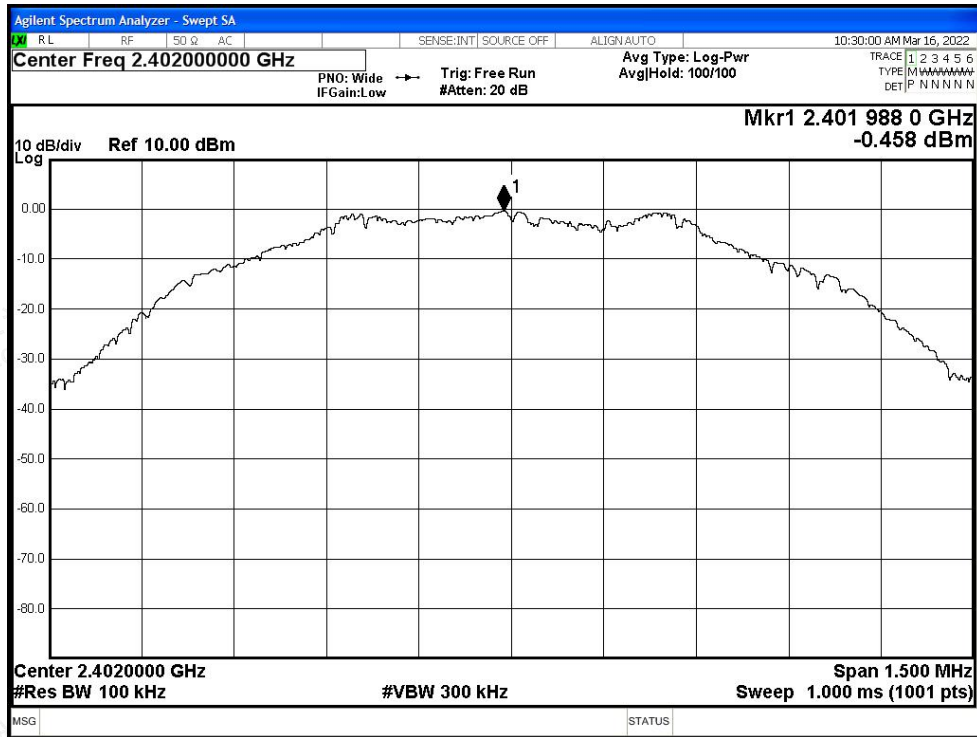
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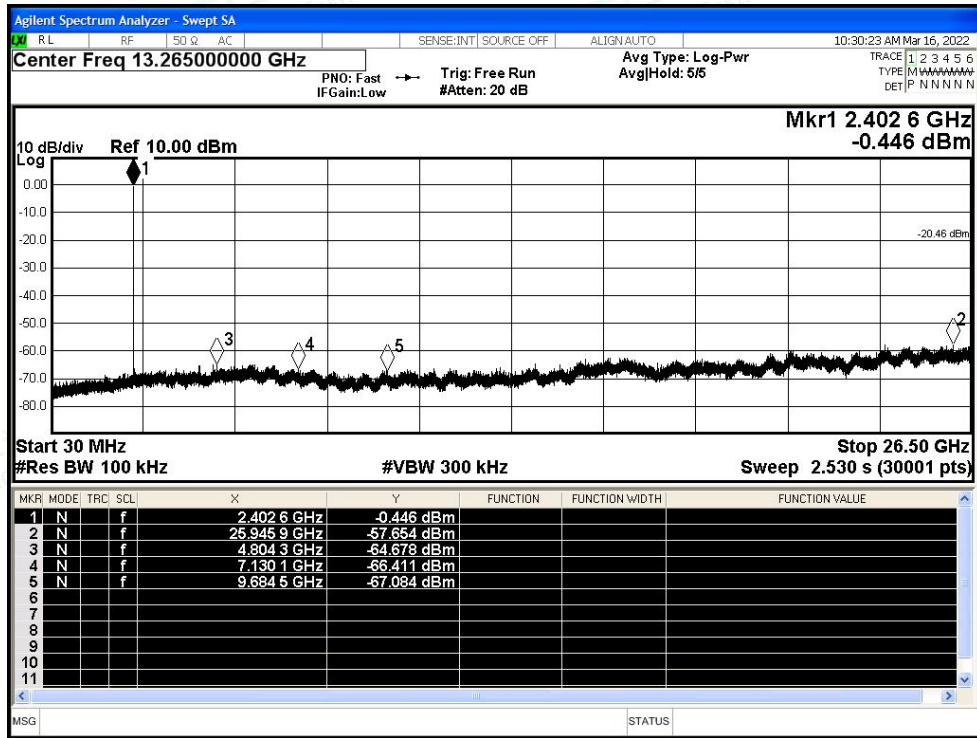


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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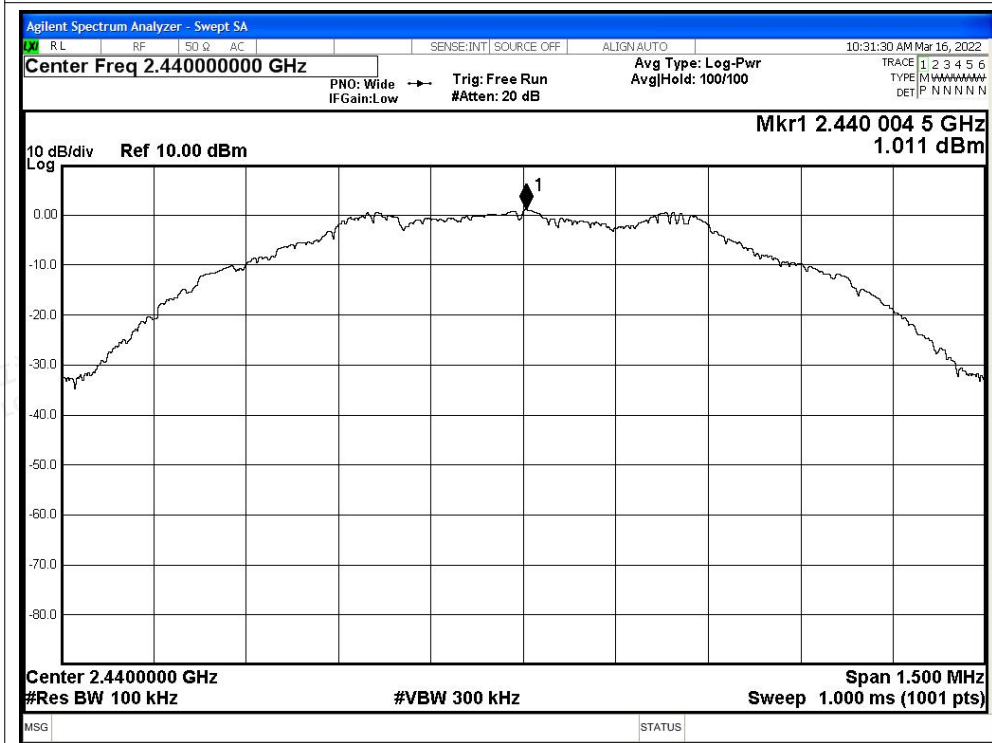
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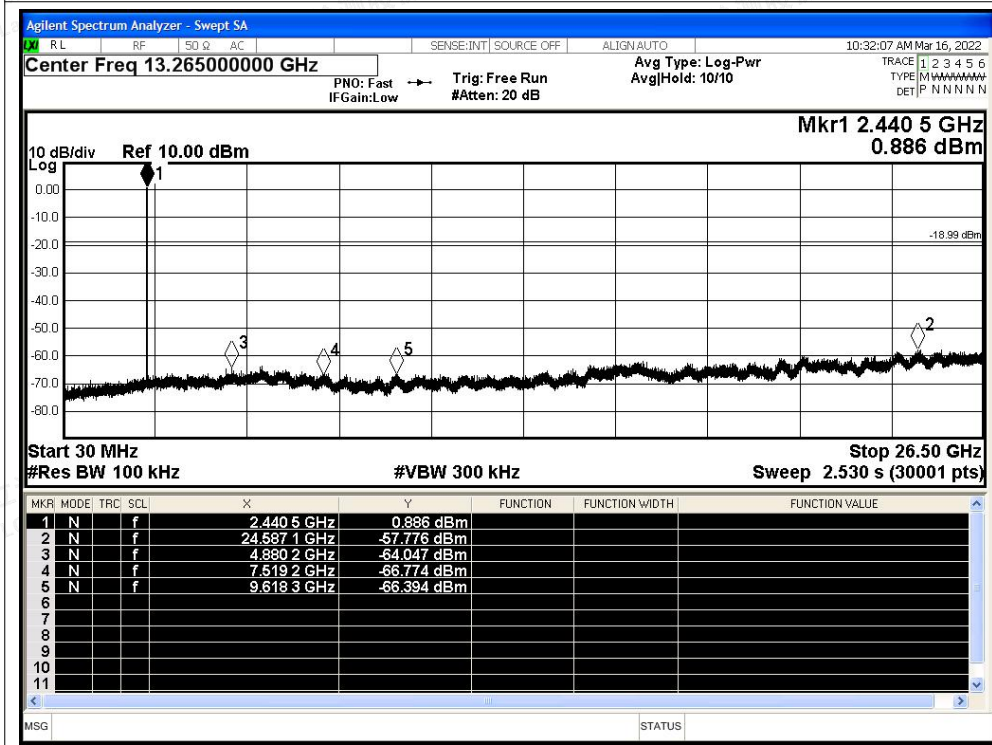
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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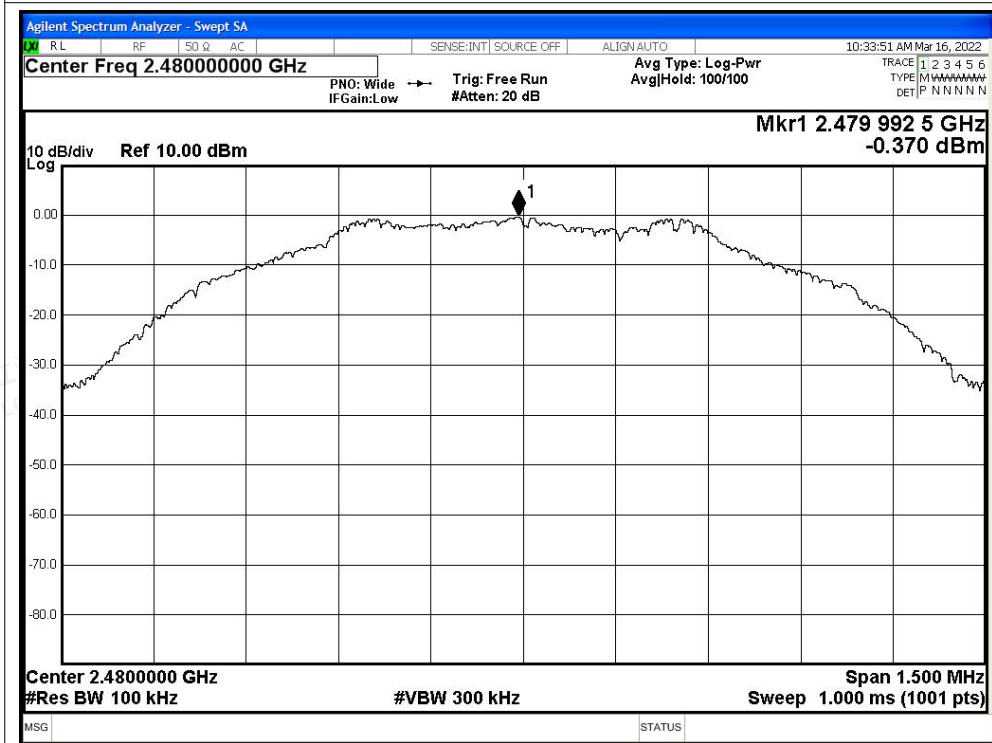
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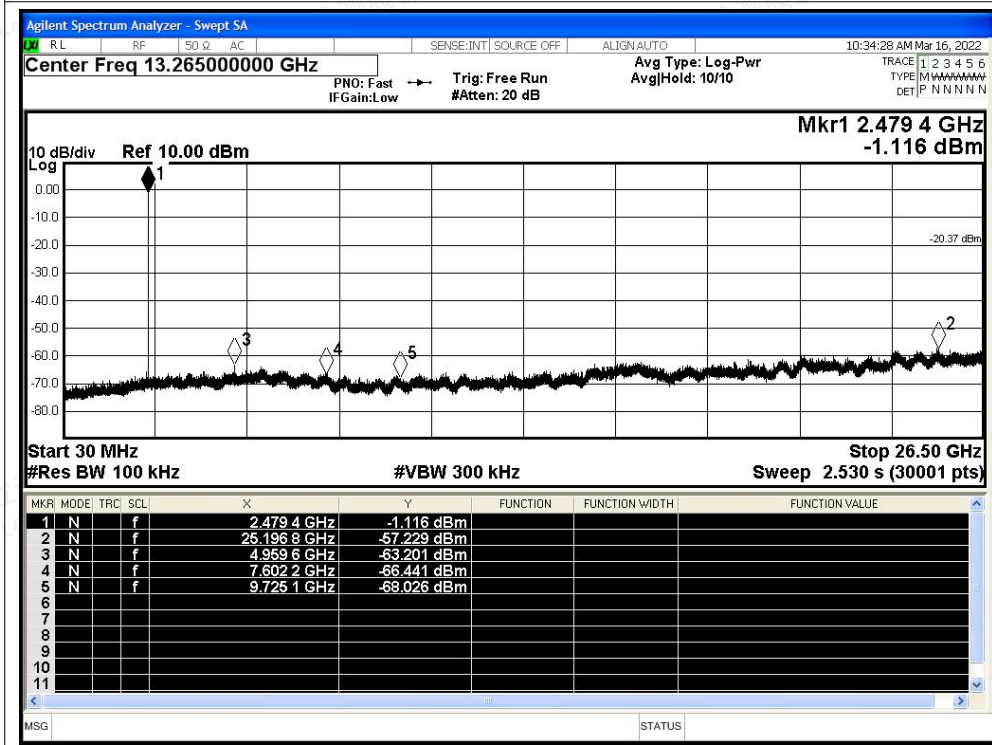
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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	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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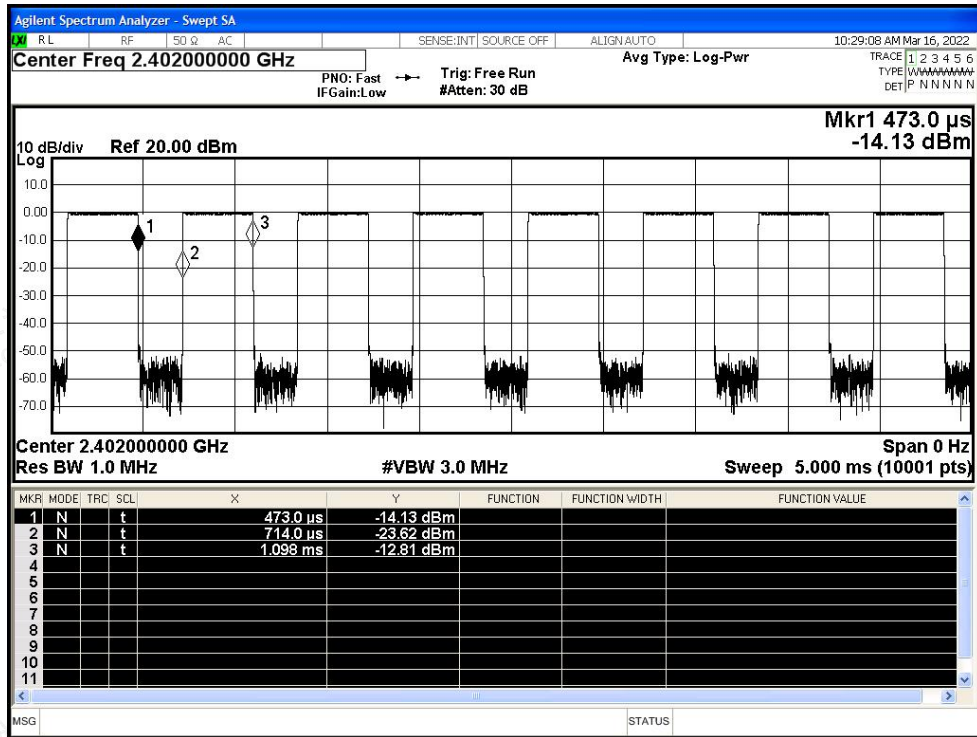
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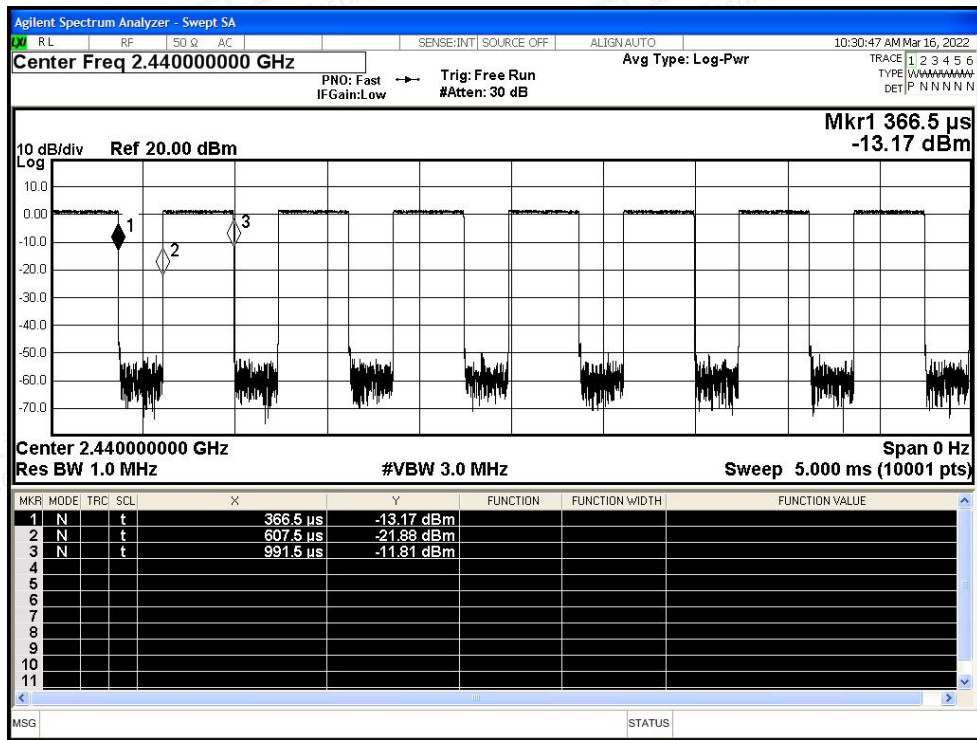


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

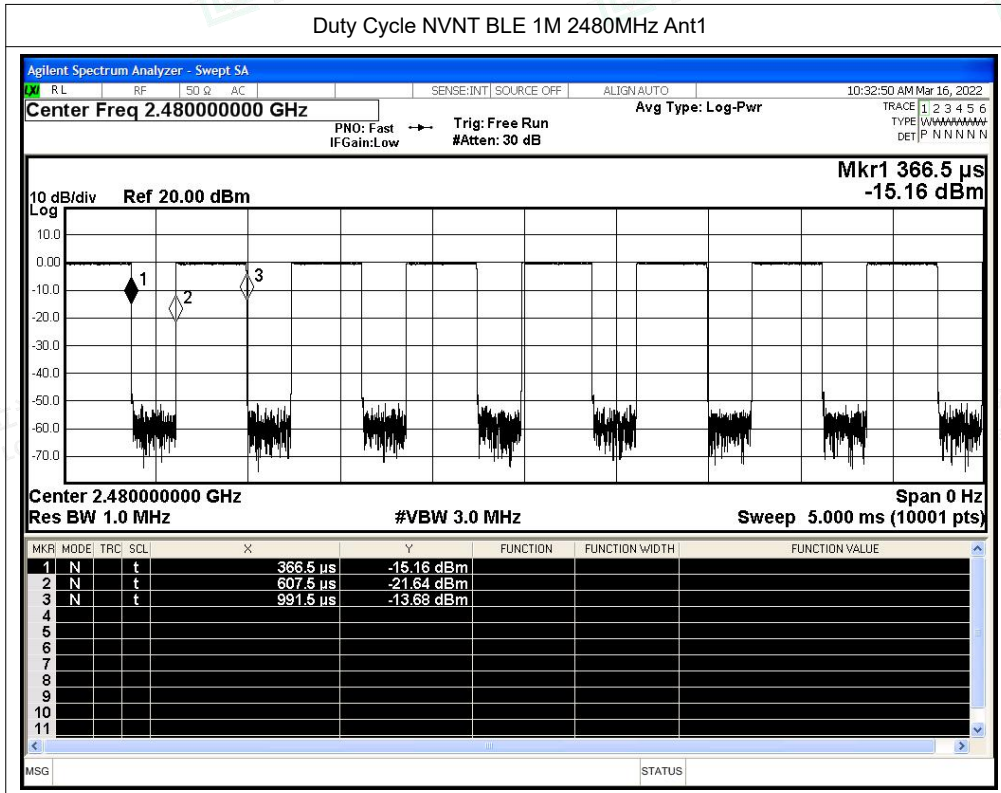


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B.7 Restrict Band

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	-53.76	2	43.5	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-61.45	2	35.81	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2385.168	-49.27	2	47.99	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2387.664	-60.35	2	36.91	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-51.52	2	45.74	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-61.09	2	36.17	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-51.14	2	46.12	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-60.49	2	36.77	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2489.344	-48.51	2	48.75	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2484.424	-60.13	2	37.13	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.97	2	46.29	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-60.86	2	36.4	Average	54	Pass



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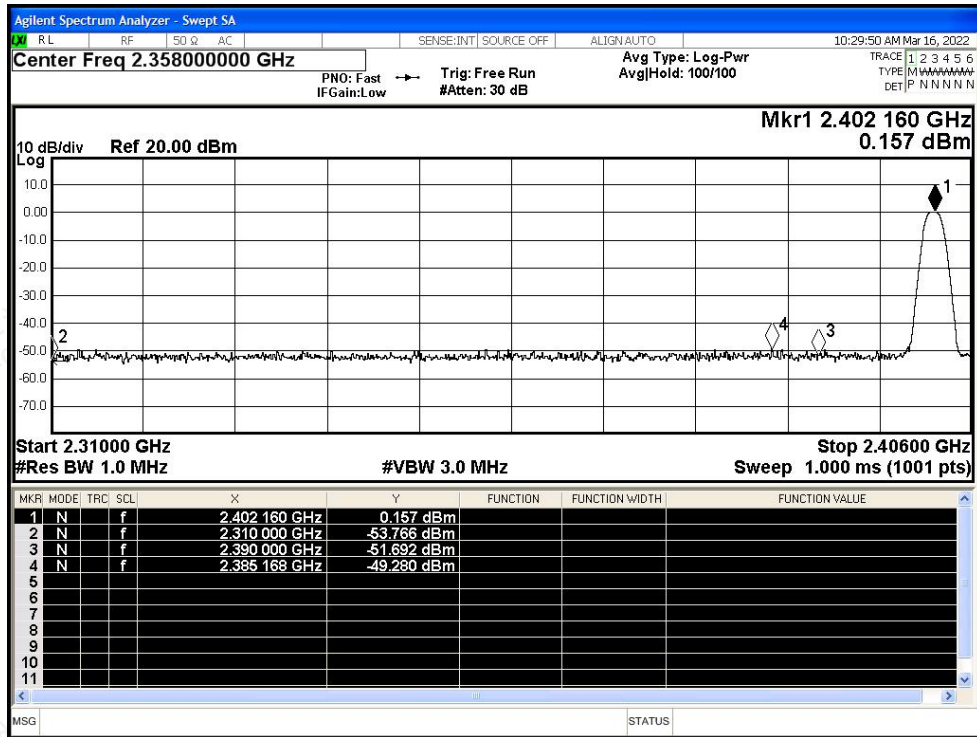
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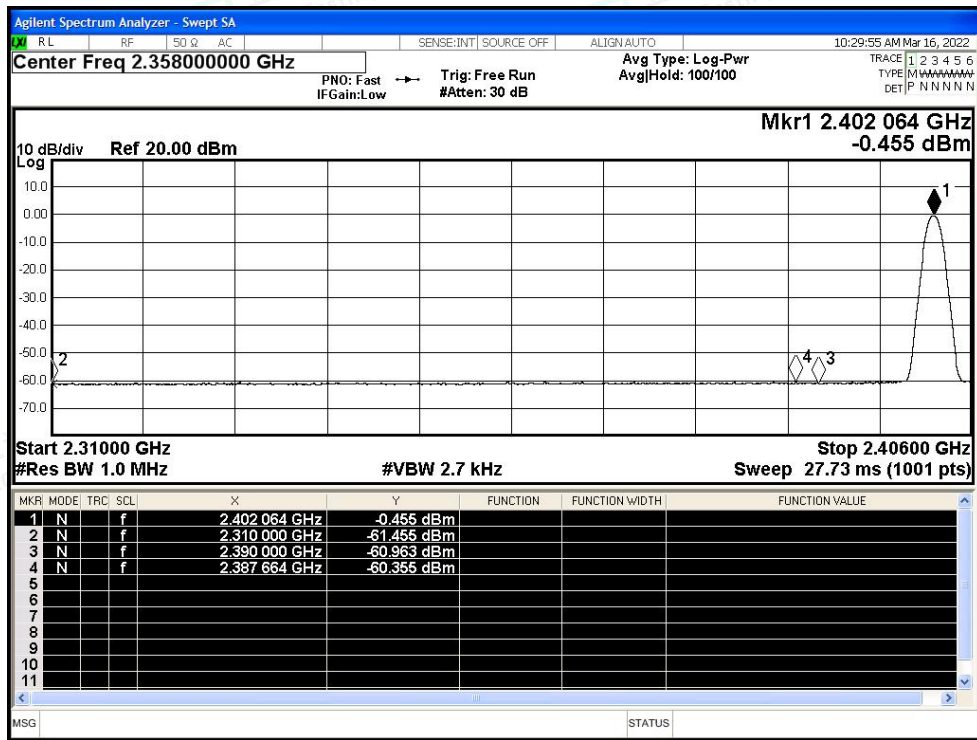


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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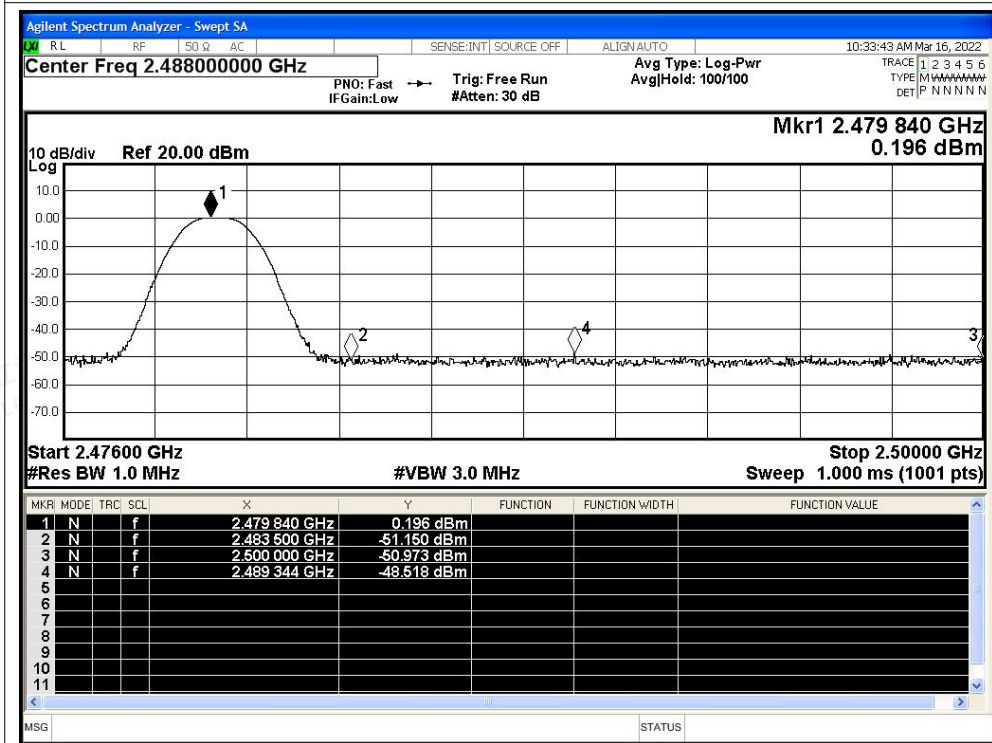
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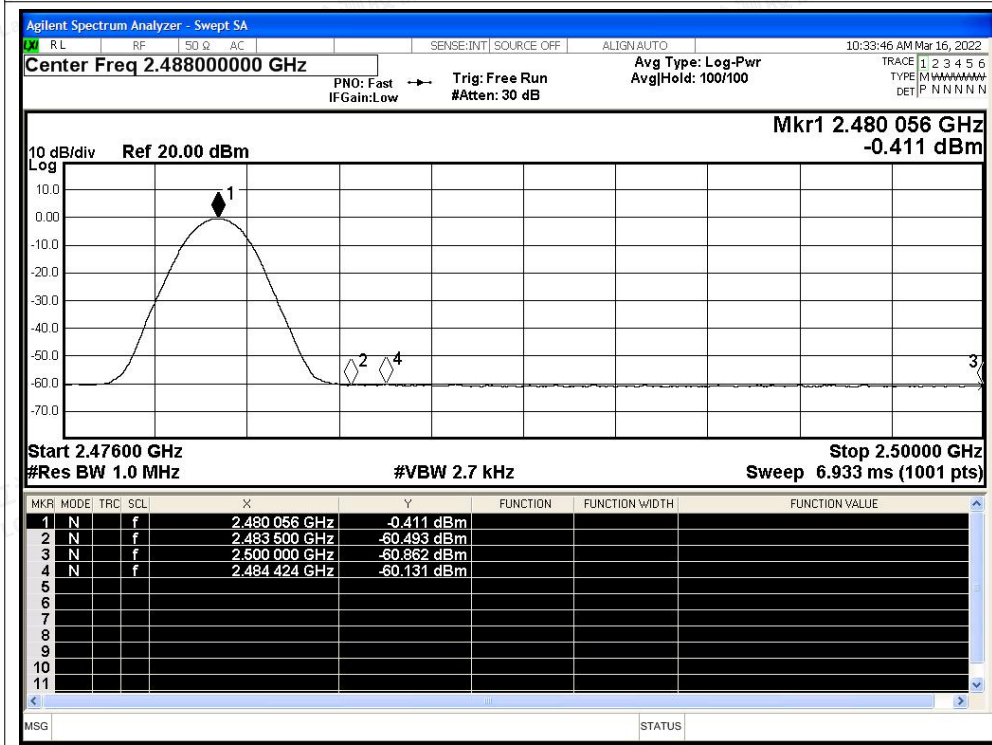
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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