



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Mini Karaoke Speaker with Microphones

Test Model: CQL2281-B

Environmental Conditions

Temperature:	23.6°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Nick Peng



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B.1 -6dB Bandwidth

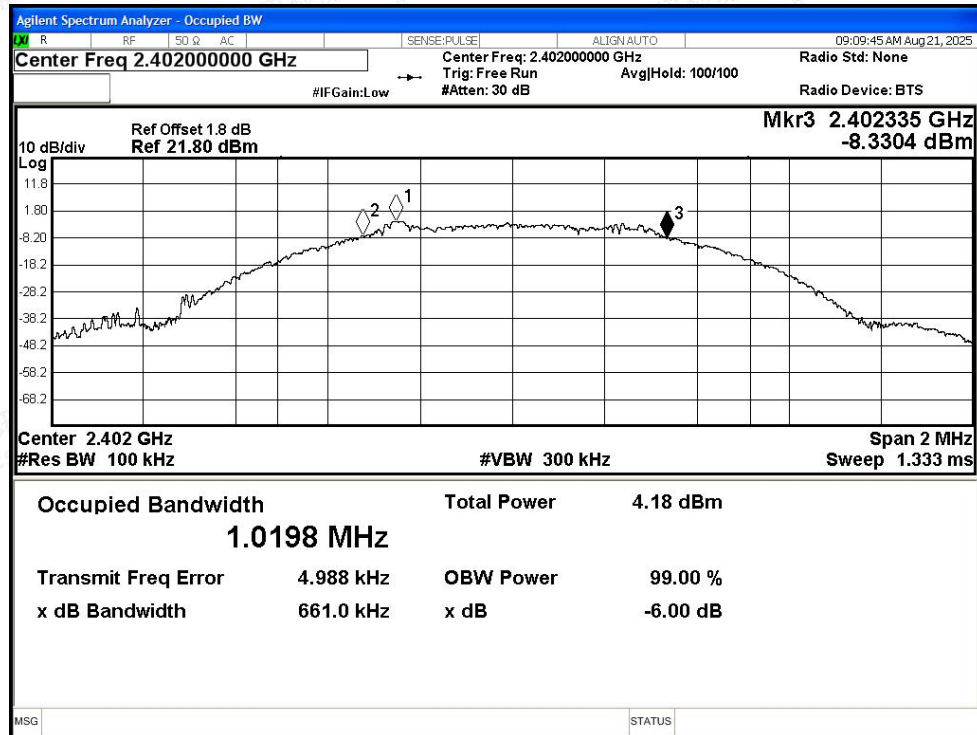
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.661	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.644	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.652	≥ 0.5	Pass



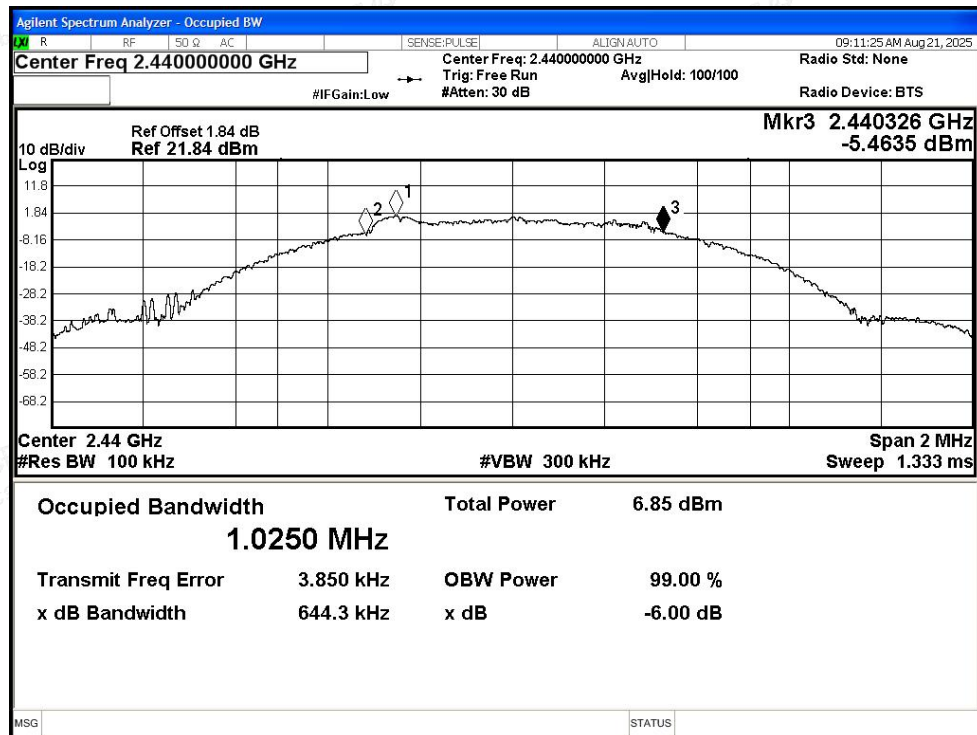


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



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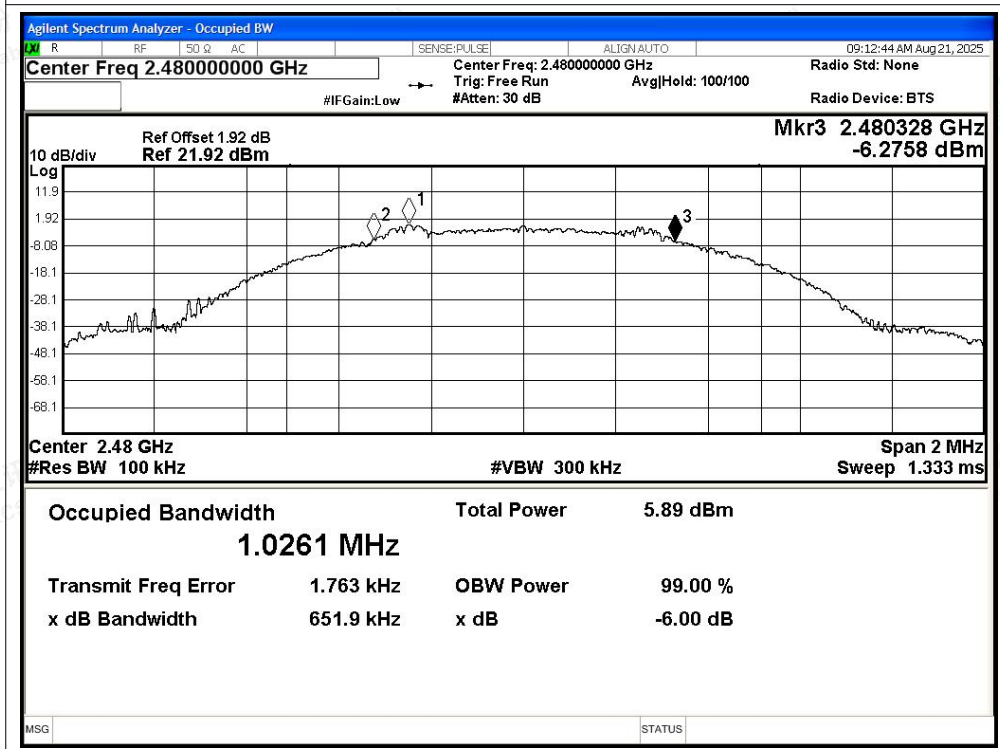
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-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



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B.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-1.52	30	Pass
NVNT	BLE 1M	2440	Ant1	1.1	30	Pass
NVNT	BLE 1M	2480	Ant1	0.21	30	Pass

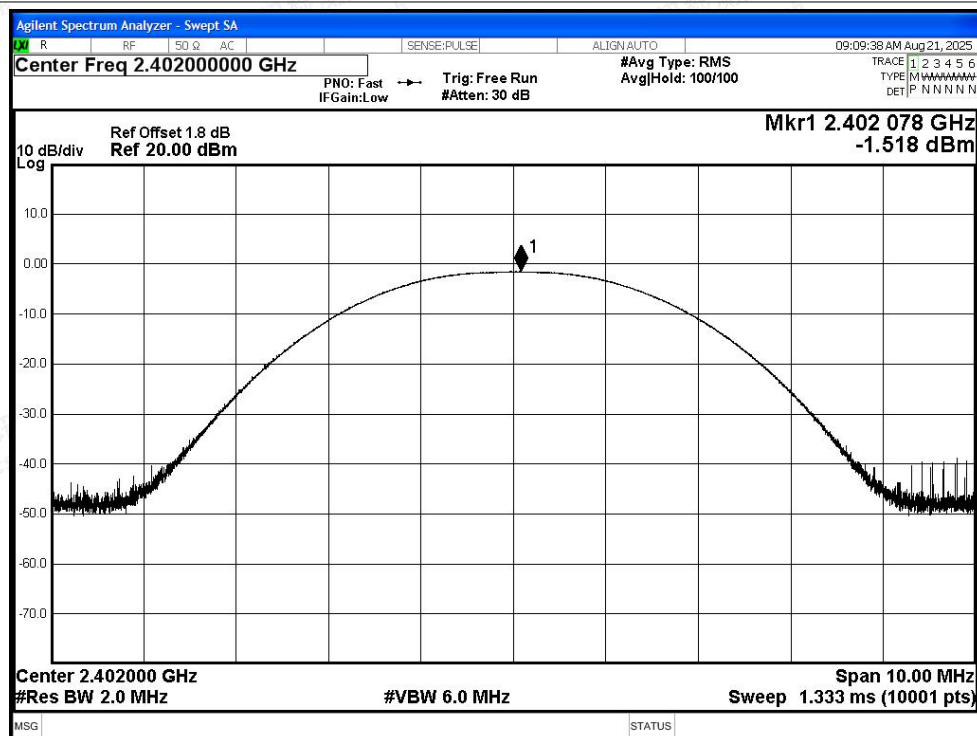


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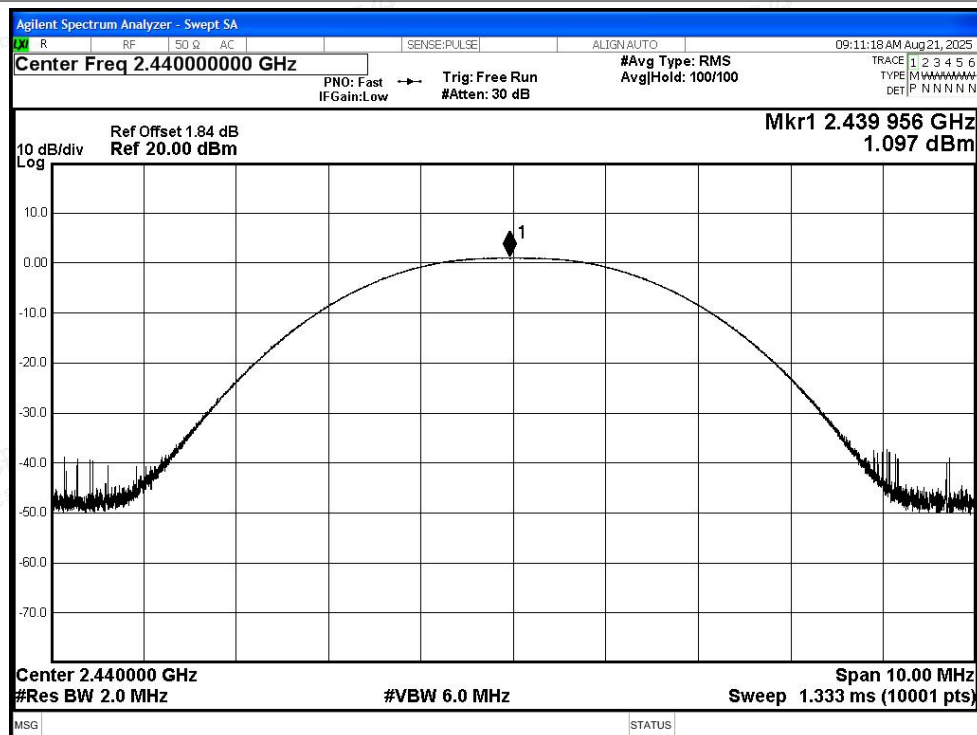


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

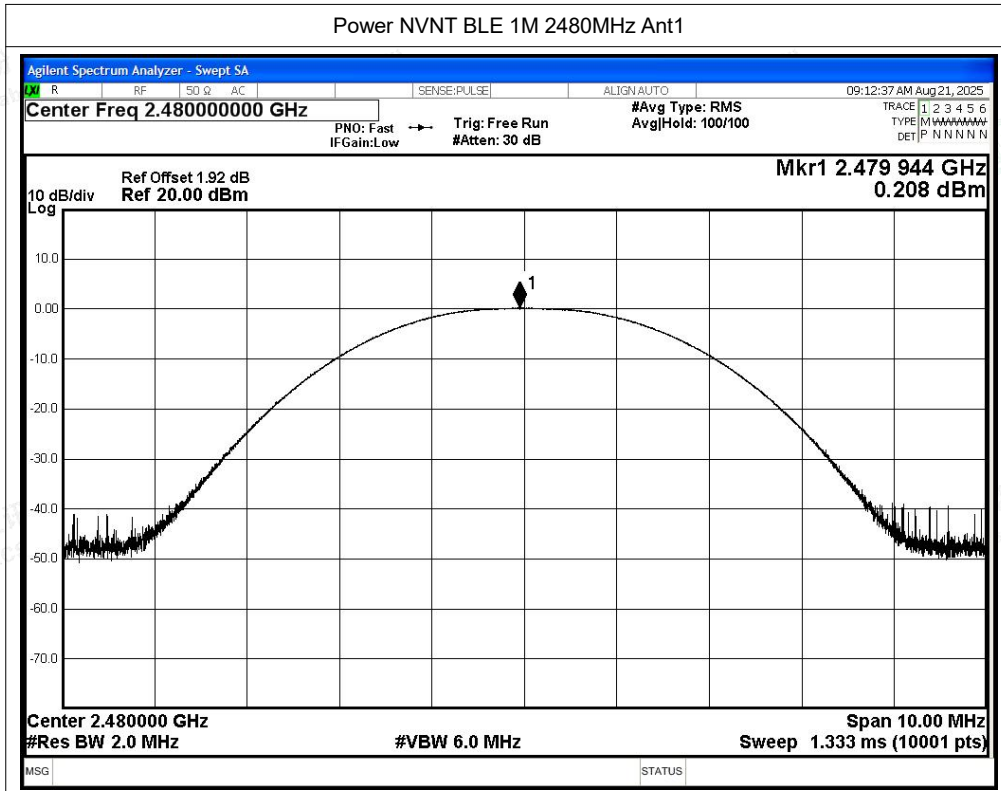


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B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-17.93	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.32	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.16	8	Pass

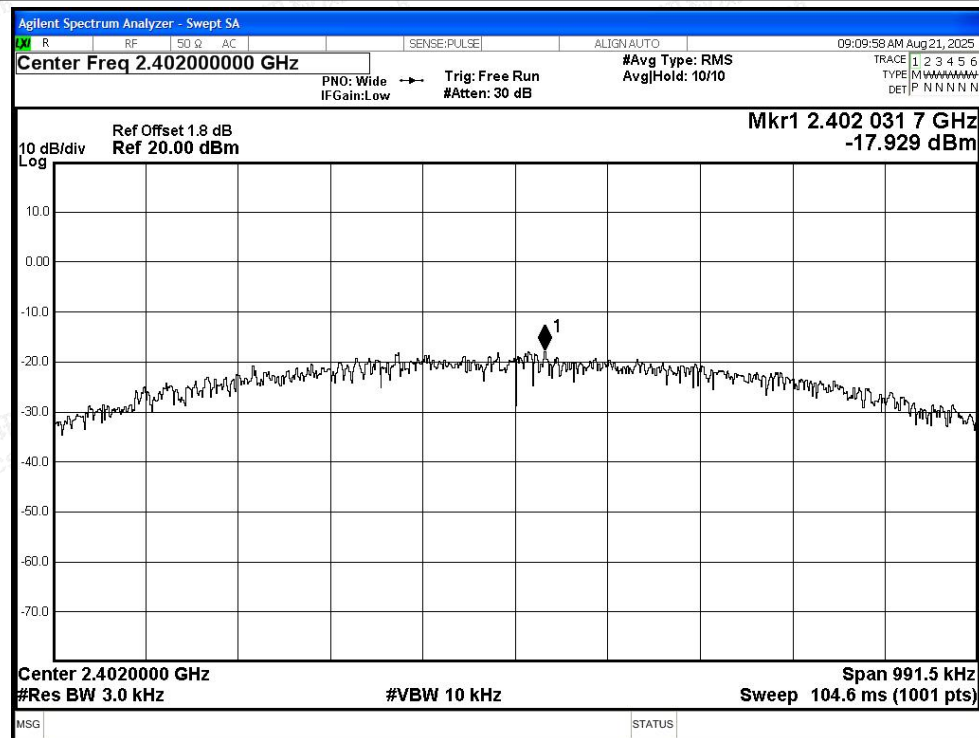


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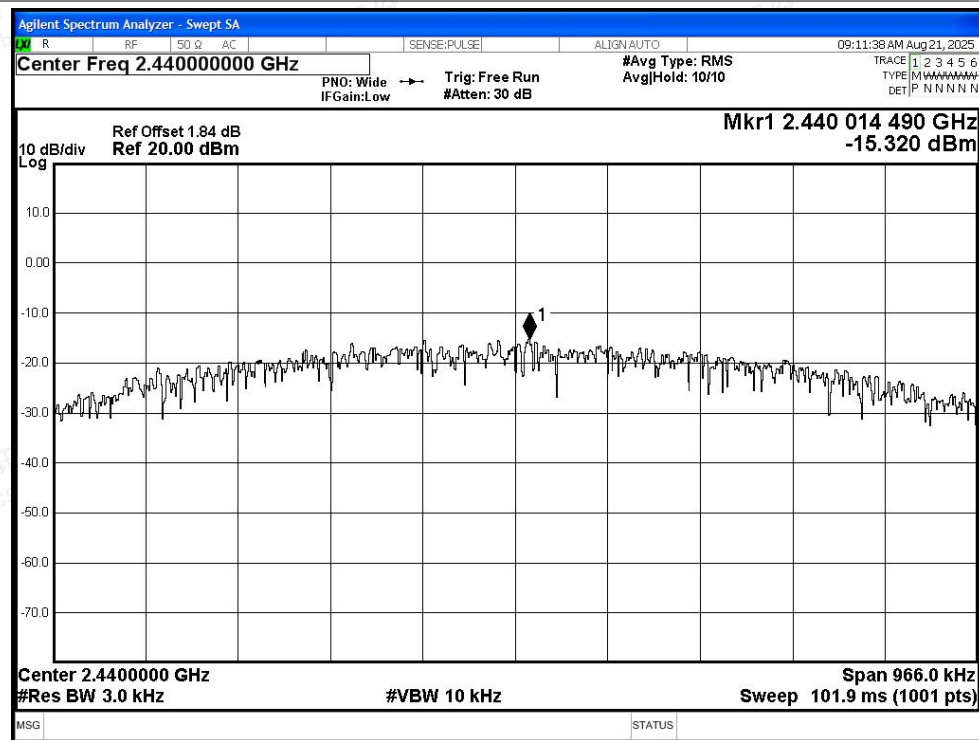


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

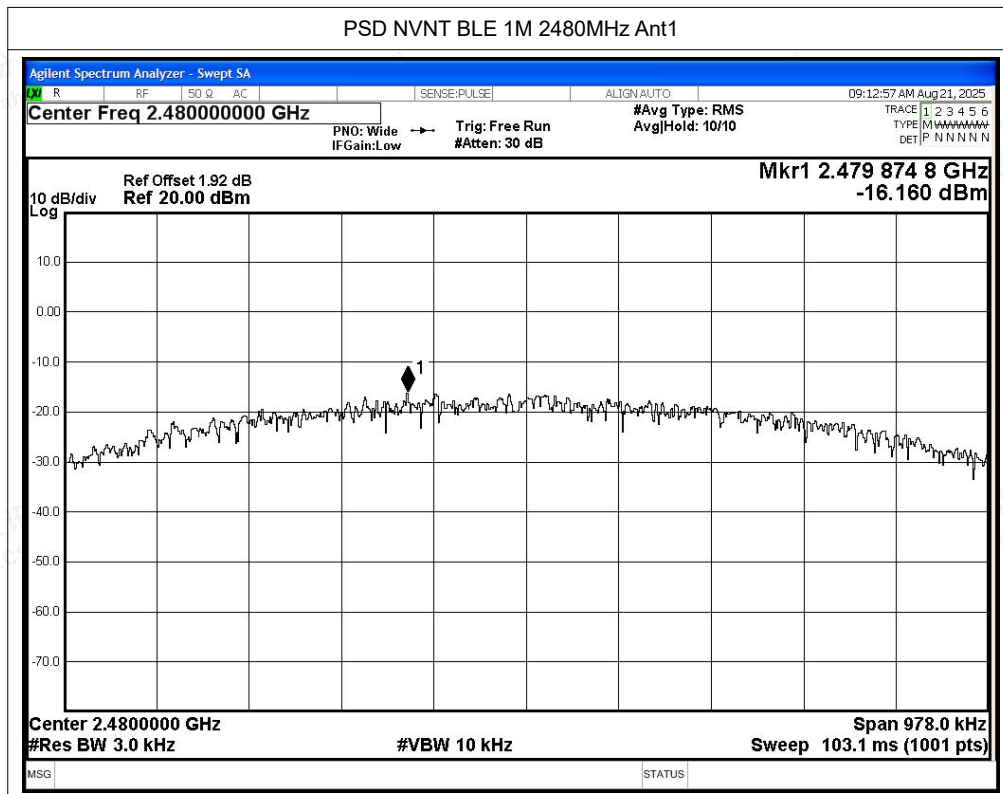


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B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-54.43	-20	Pass
NVNT	BLE 1M	2480	Ant1	-56.78	-20	Pass

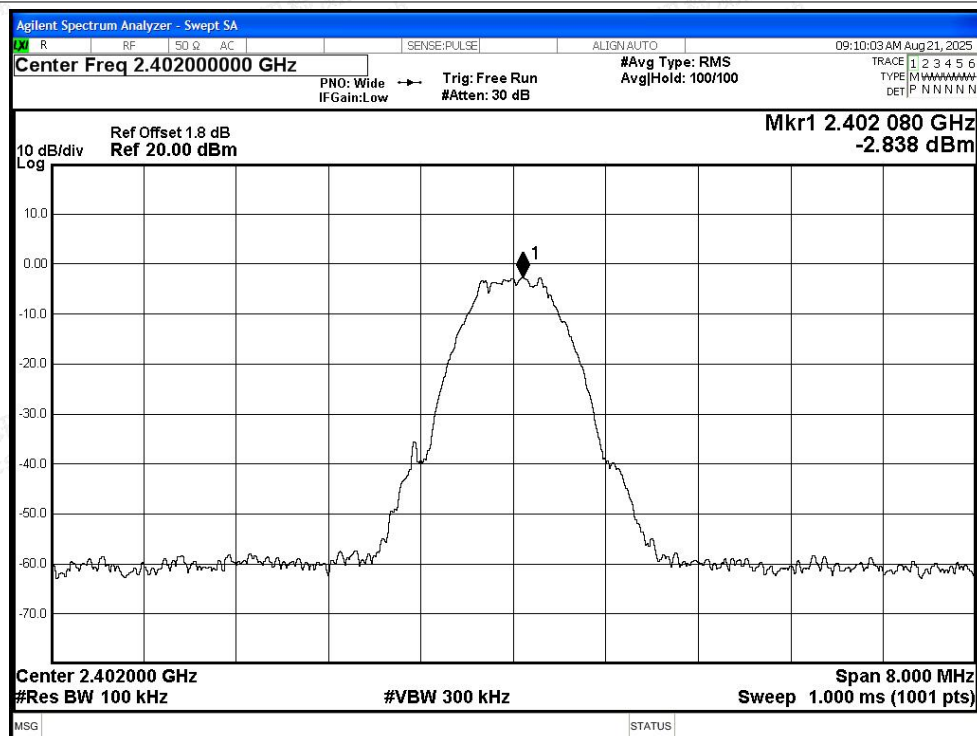


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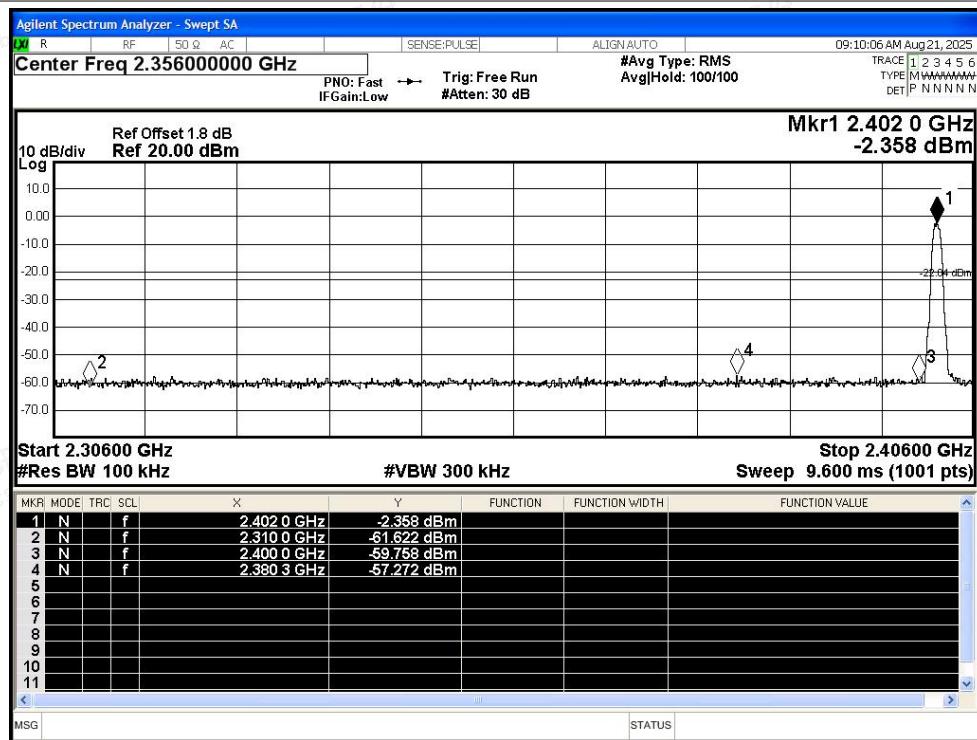


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

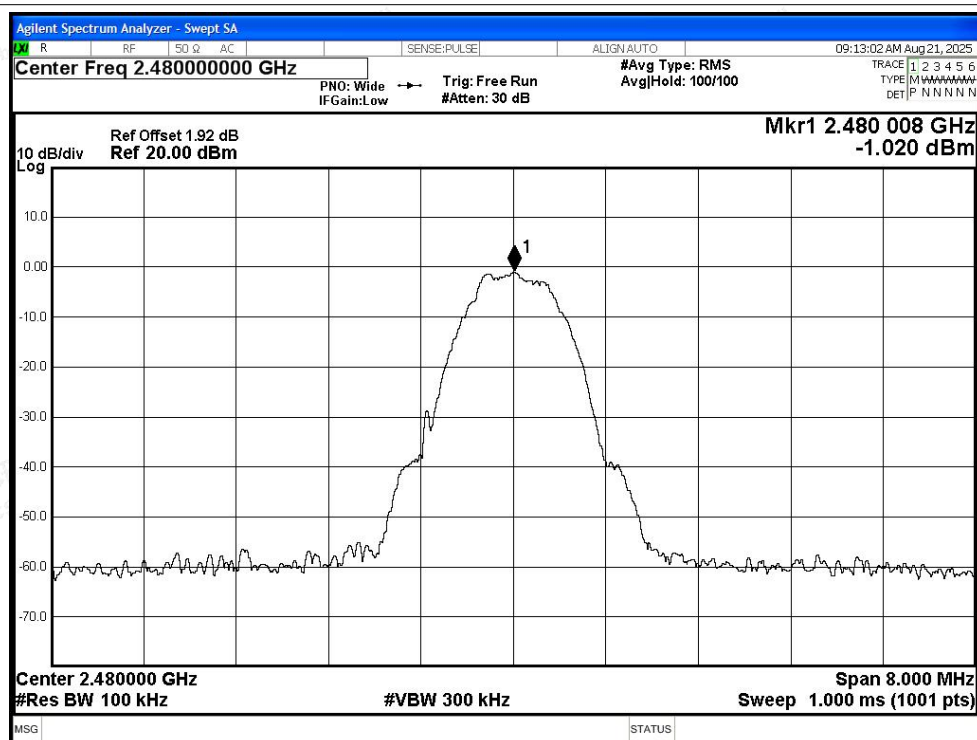
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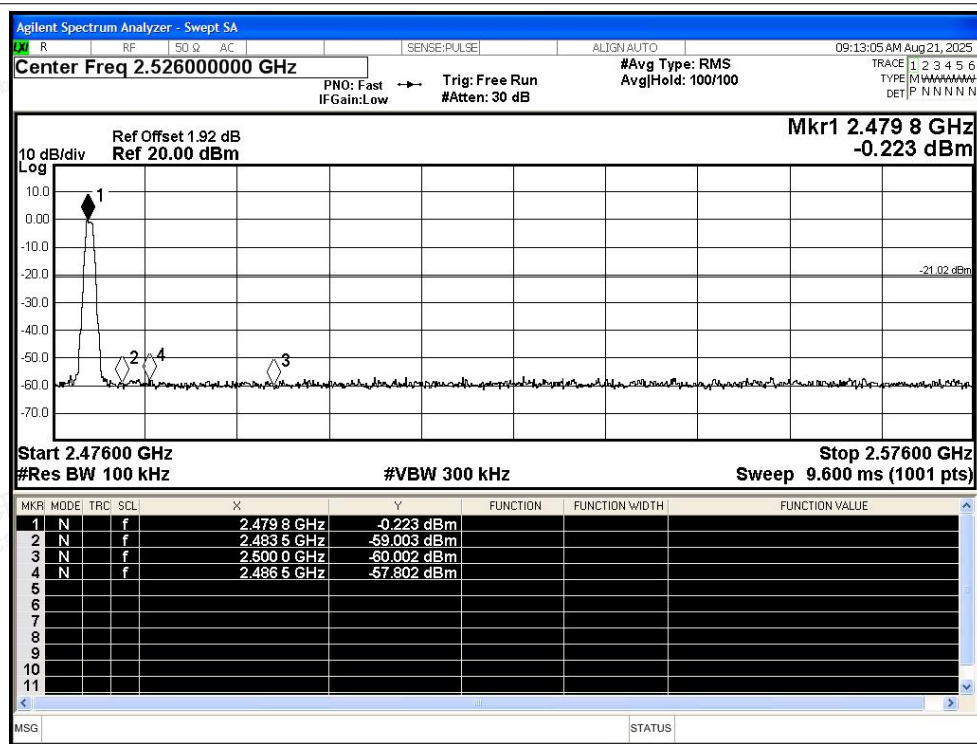
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Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



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B.5 Conducted RF Spurious Emission

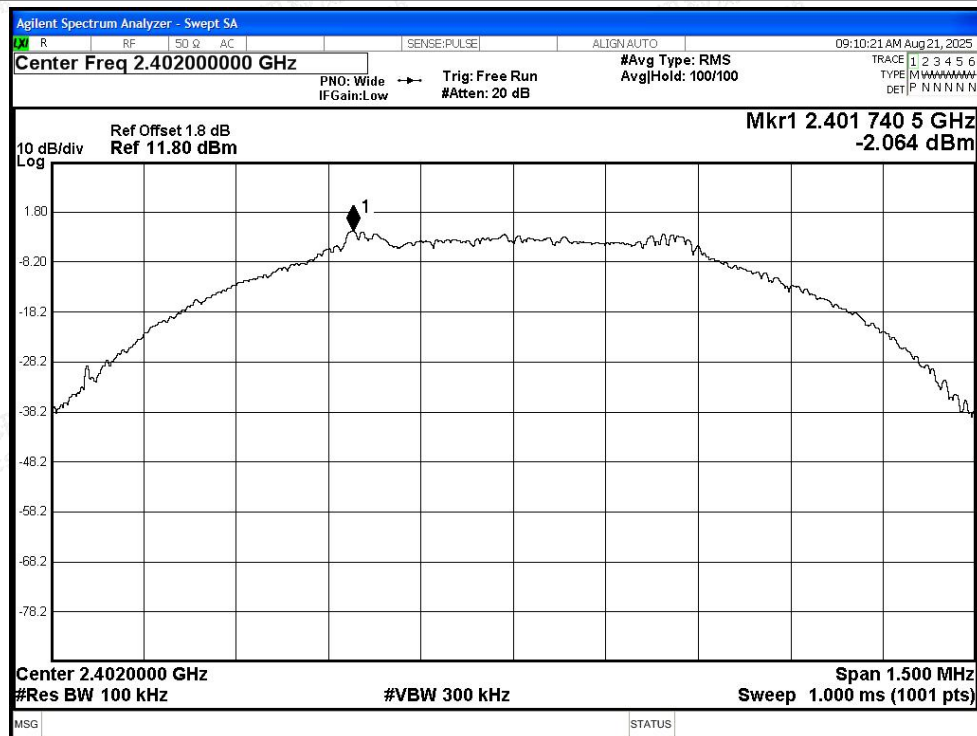
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-53.59	-20	Pass
NVNT	BLE 1M	2440	Ant1	-56.16	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.95	-20	Pass



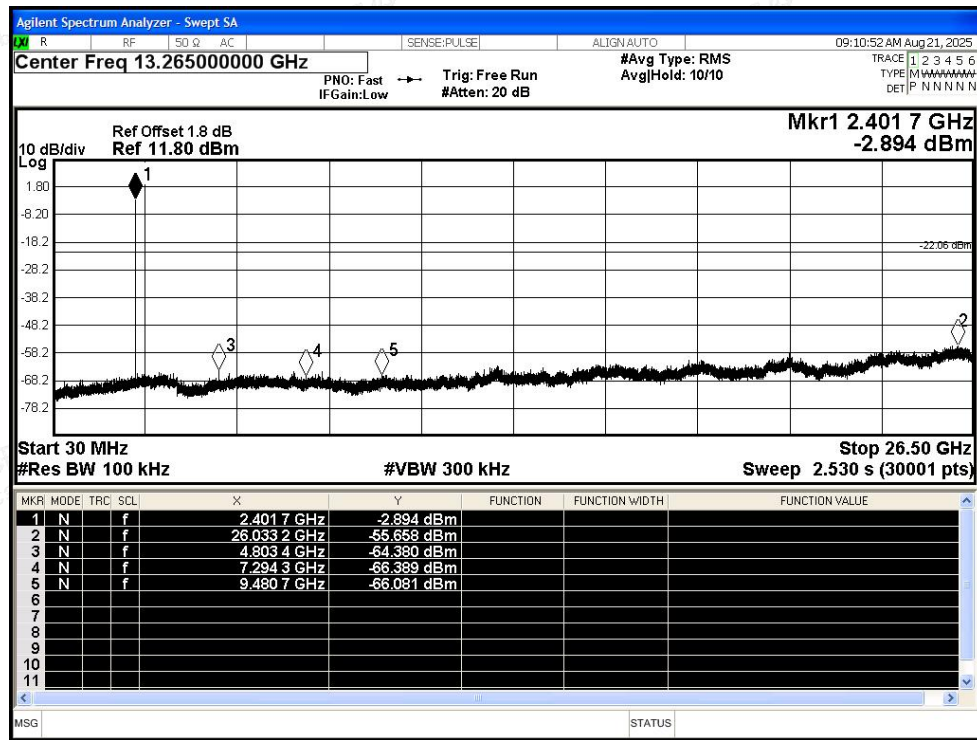


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

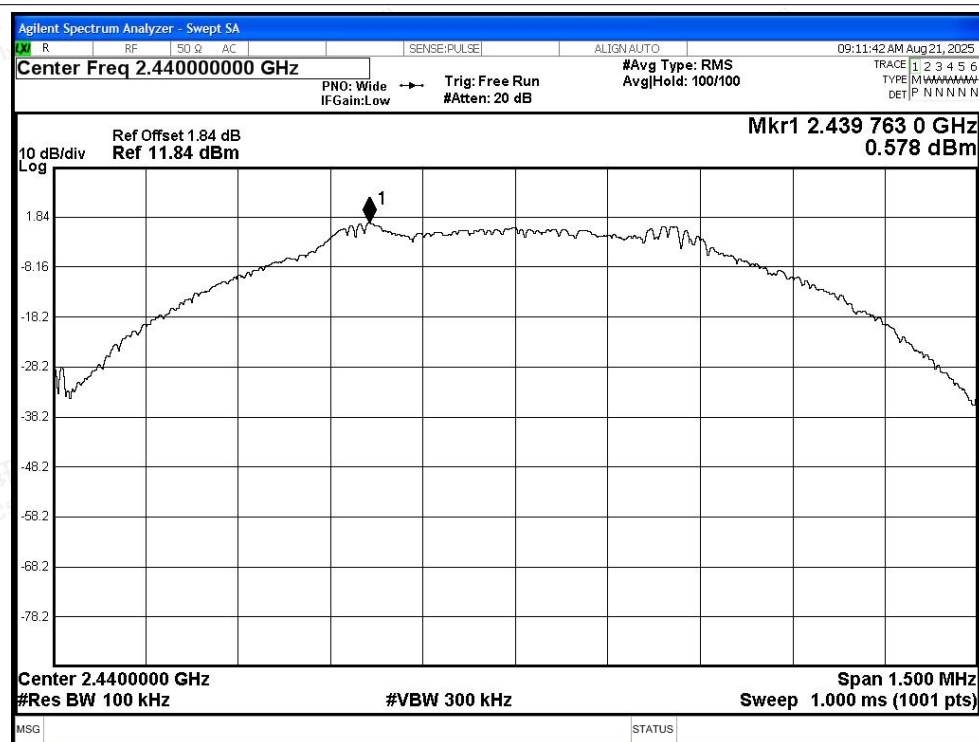
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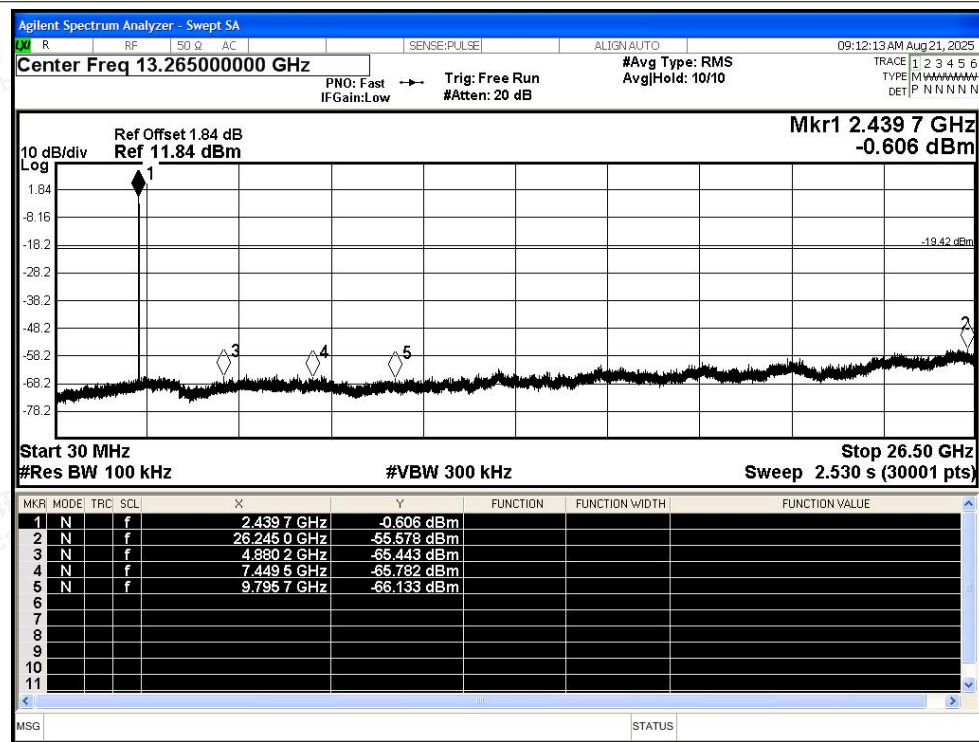
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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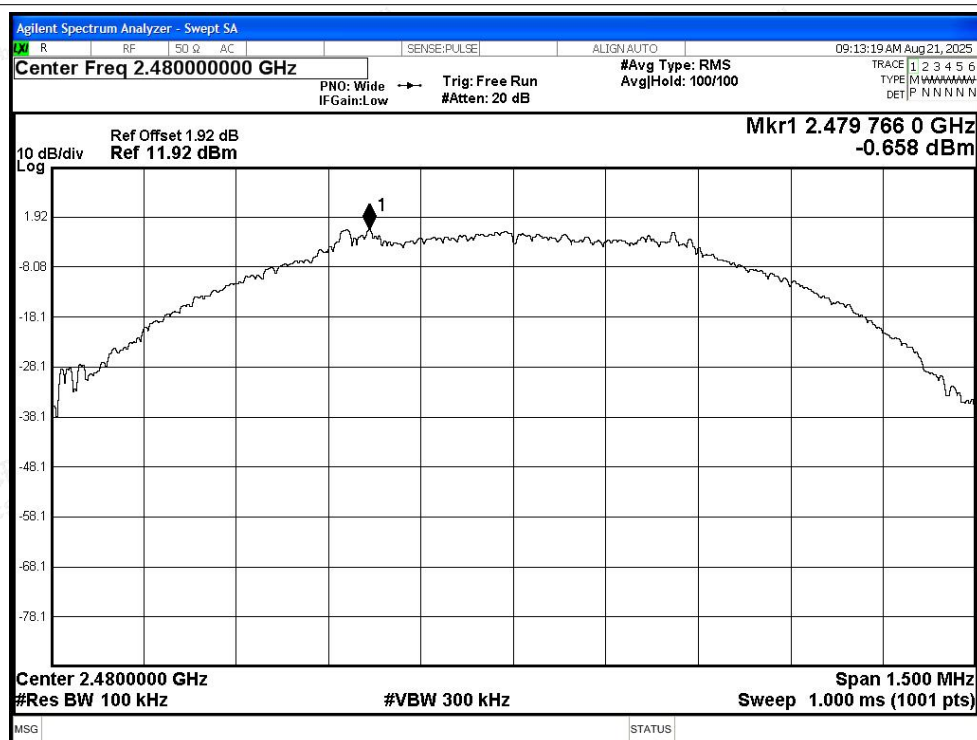
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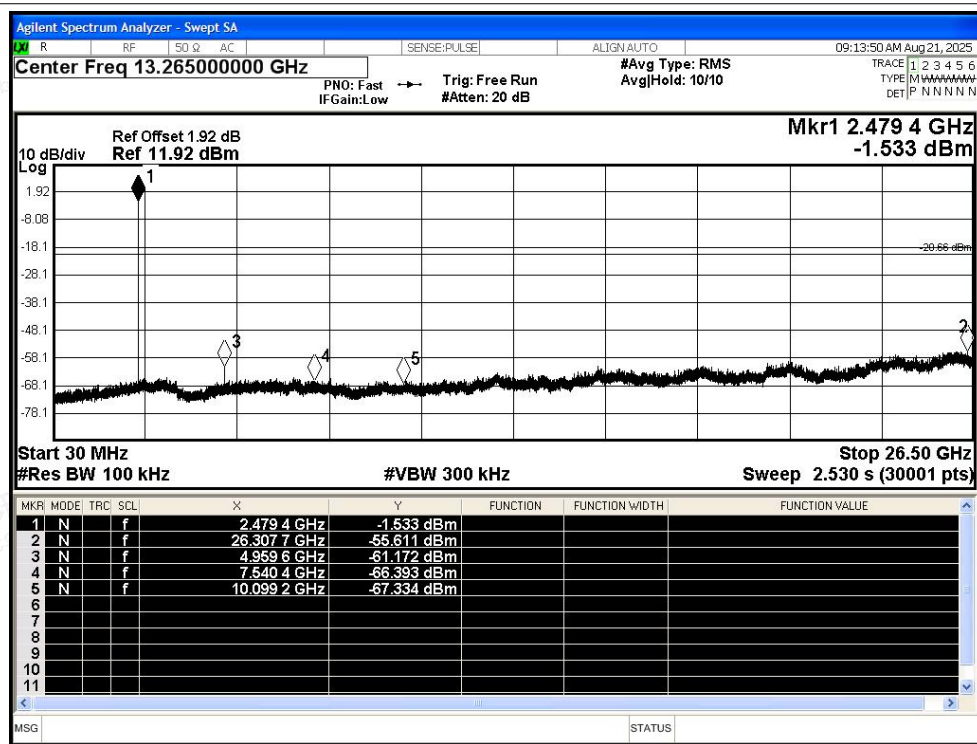
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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	72.03	1.42	0.74
NVNT	BLE 1M	2440	Ant1	72.03	1.42	0.74
NVNT	BLE 1M	2480	Ant1	72.03	1.42	0.74

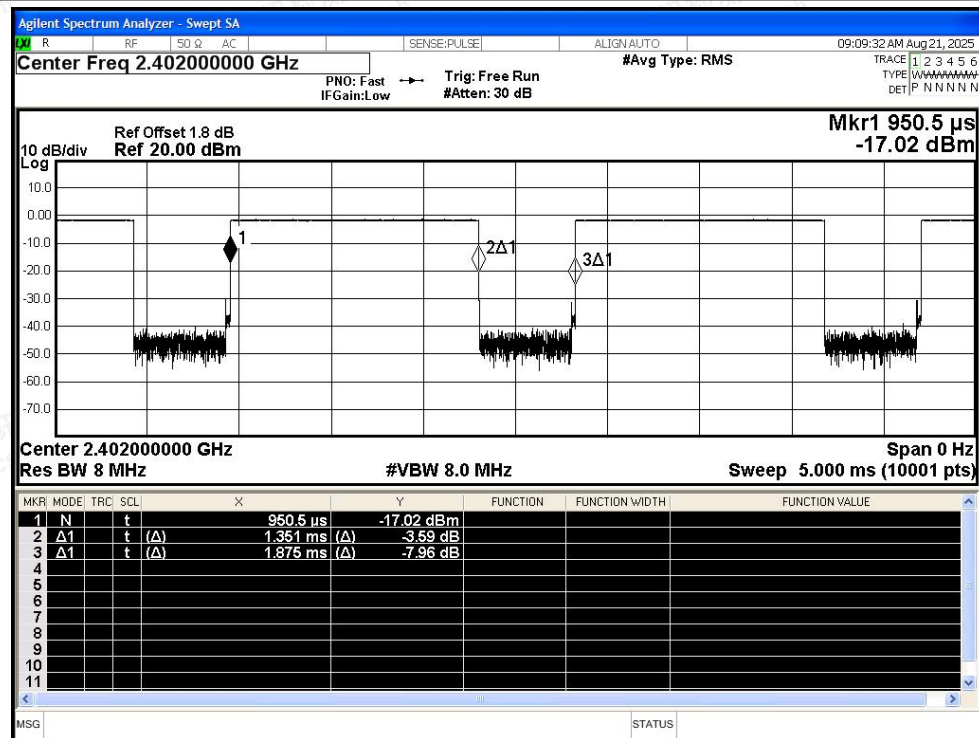


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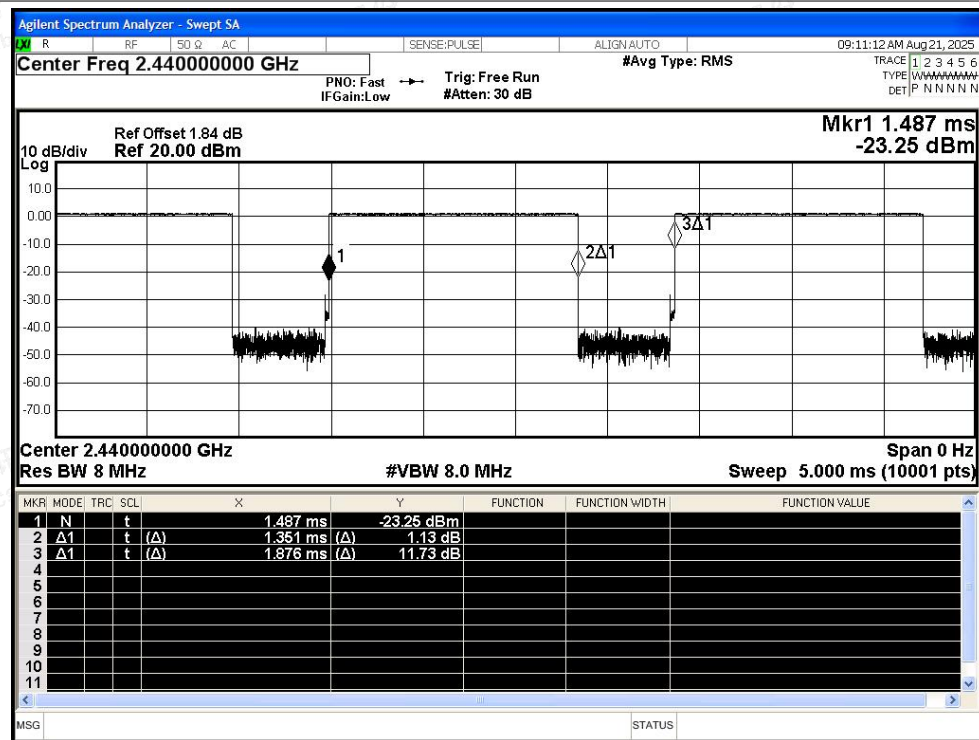


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

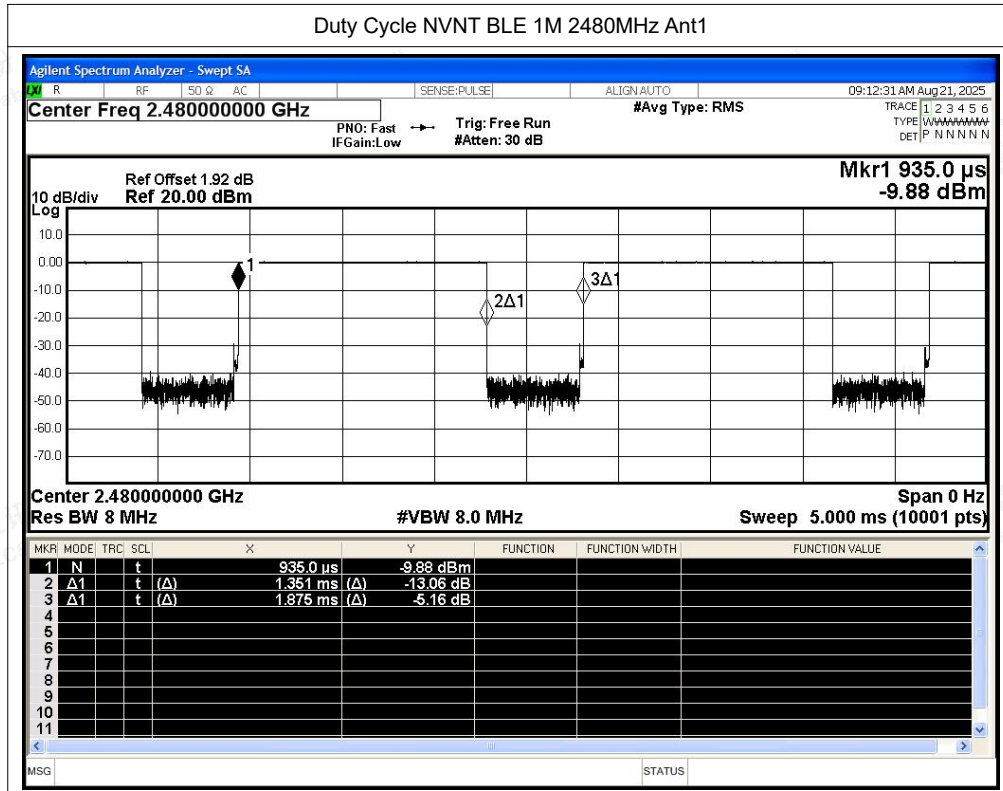


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B.7 Restrict Band

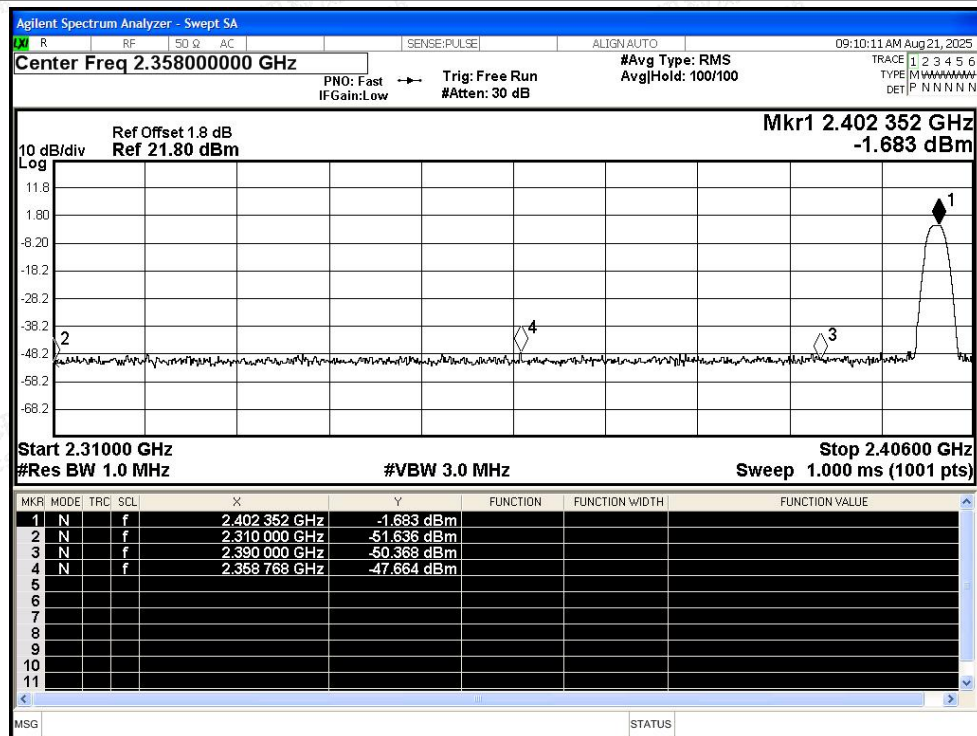
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-51.64	2	-	45.62	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-59.18	2	1.42	39.5	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2358.768	-47.66	2	-	49.6	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2372.496	-58.37	2	1.42	40.31	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.37	2	-	46.89	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.78	2	1.42	39.9	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.7	2	-	47.56	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-57.85	2	1.42	40.83	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2486.776	-44.37	2	-	52.89	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.752	-57.69	2	1.42	40.99	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.21	2	-	47.05	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-58.02	2	1.42	40.66	Average	54	Pass



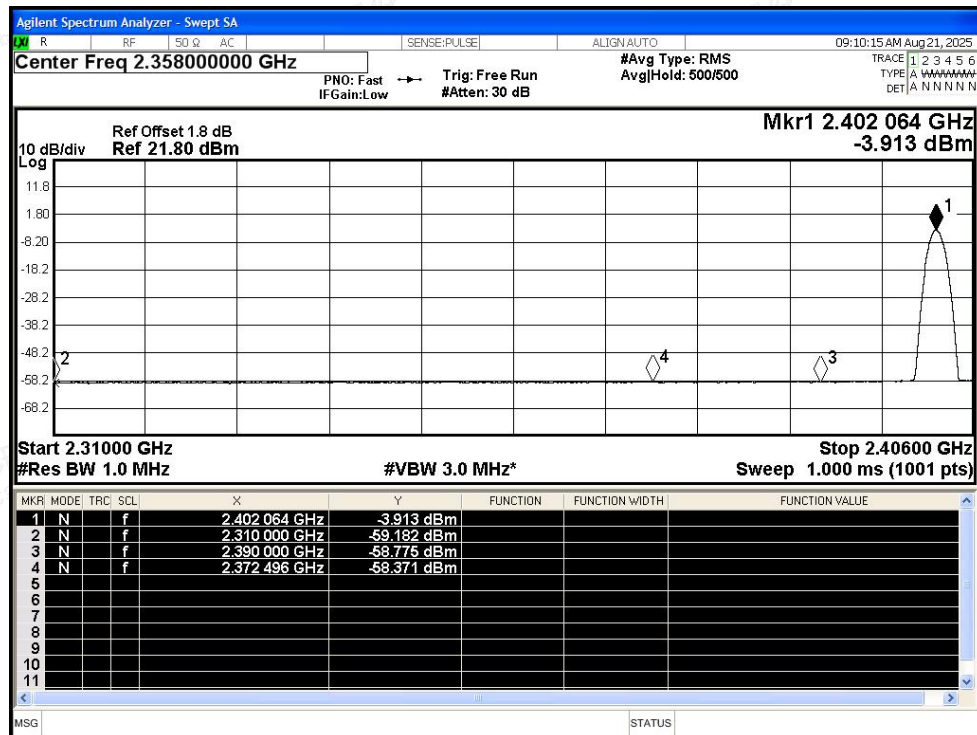


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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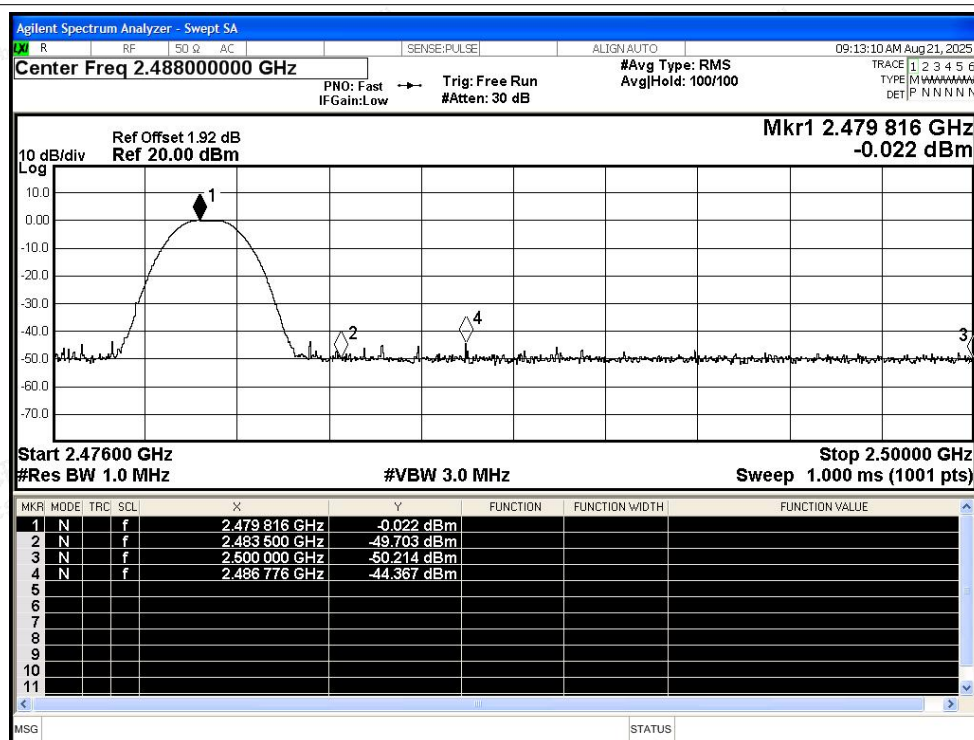
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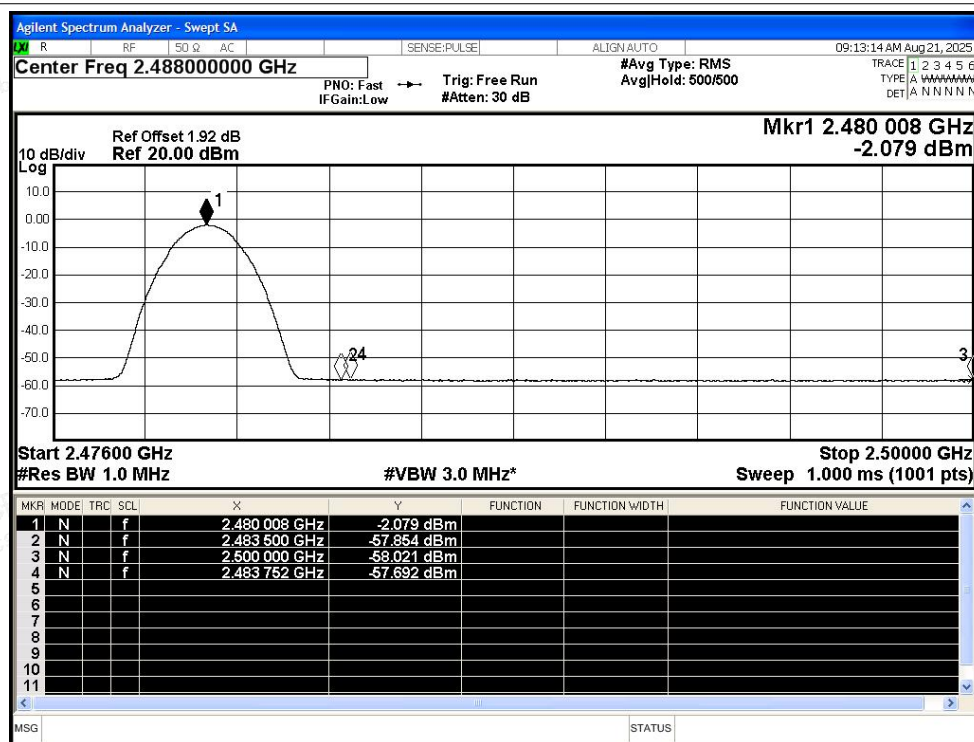
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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