



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: K-590S

Environmental Conditions

Temperature:	23.8°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

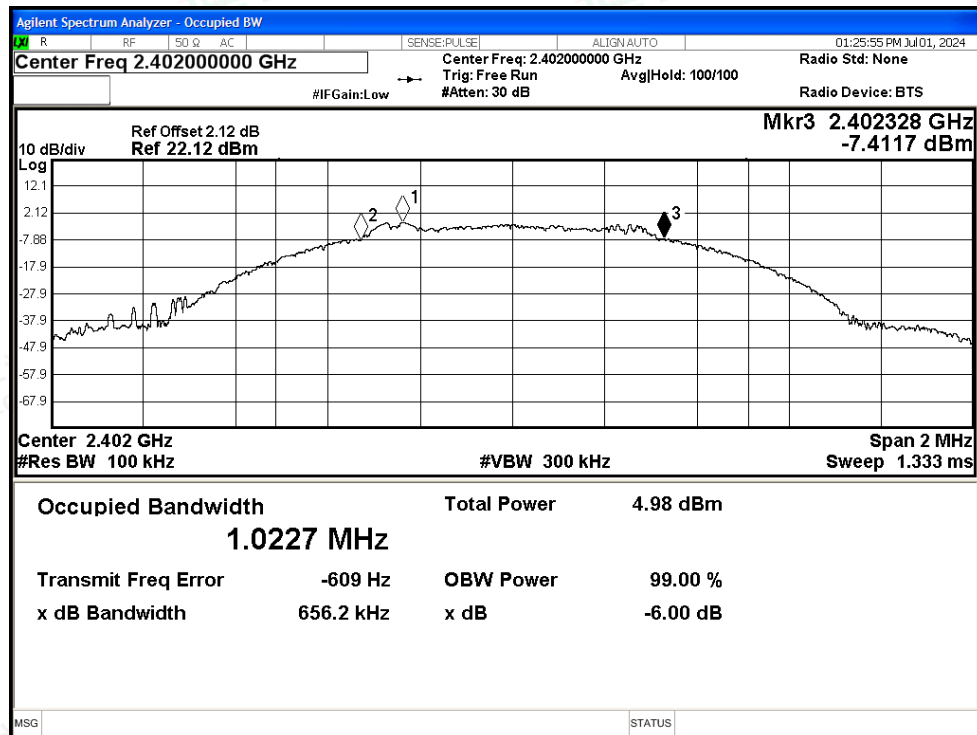
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.656	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.654	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.665	≥ 0.5	Pass



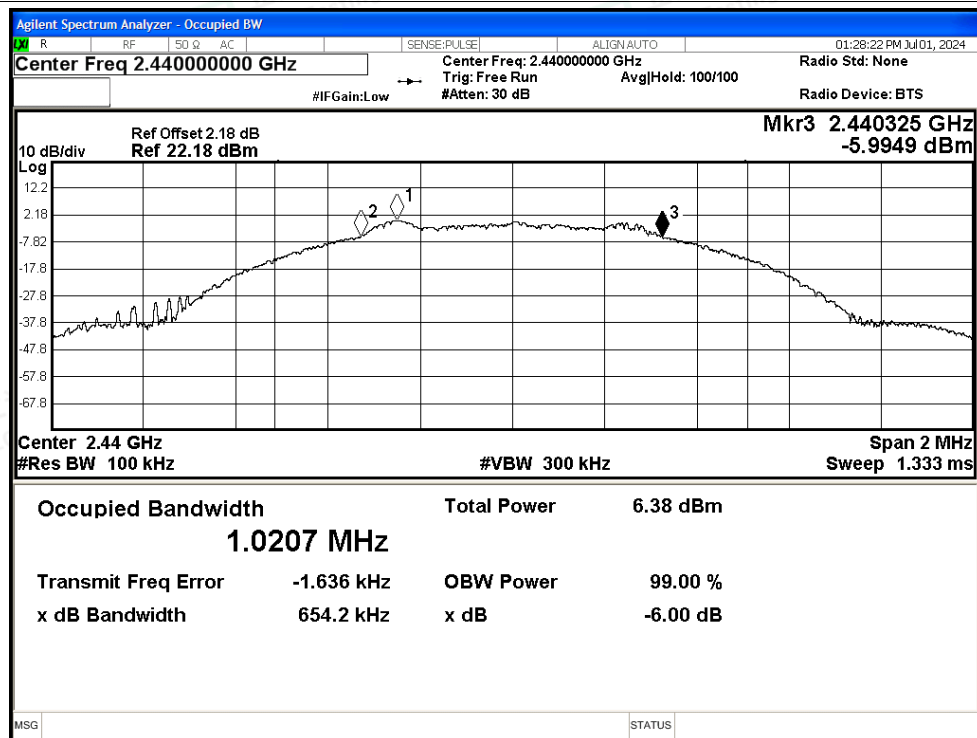


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

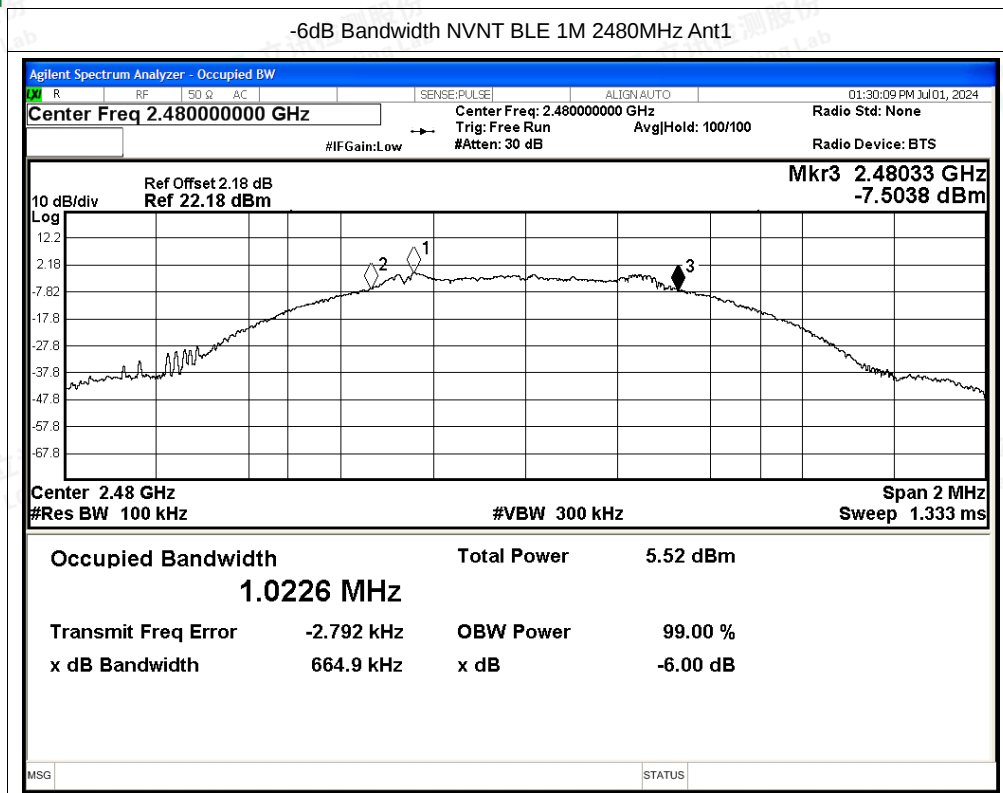


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B.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-0.75	30	Pass
NVNT	BLE 1M	2440	Ant1	0.47	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.26	30	Pass

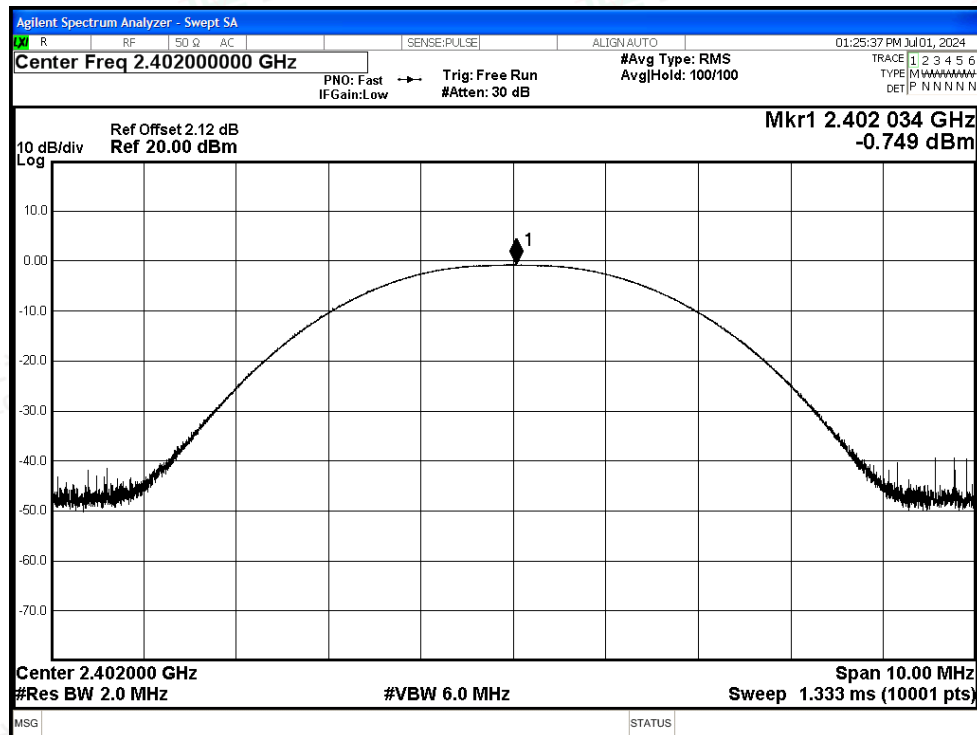


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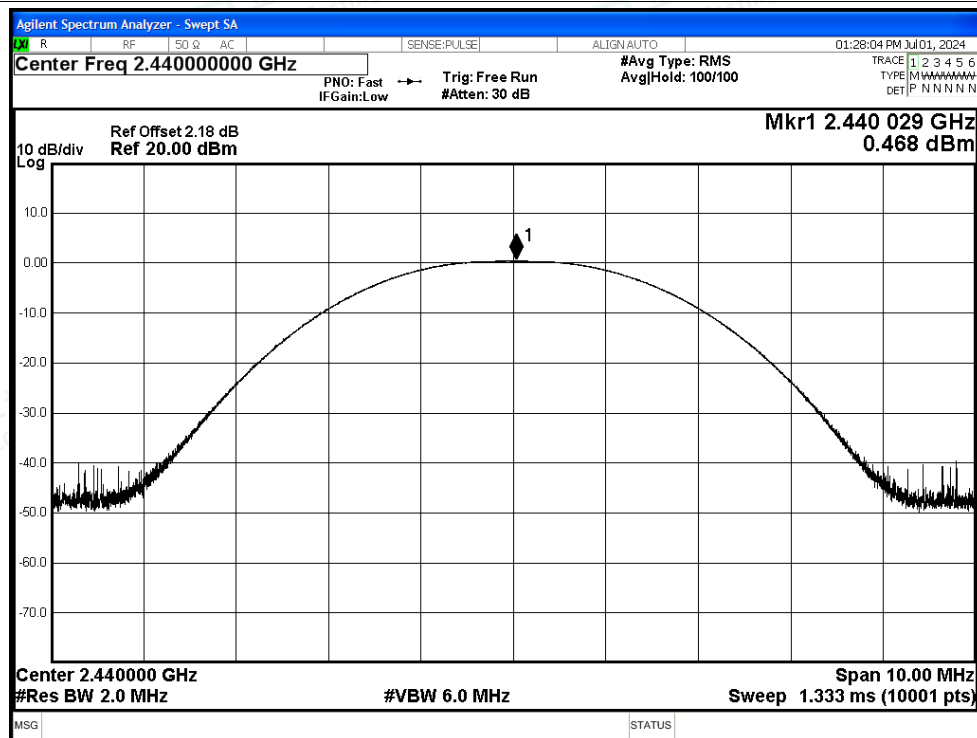


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1

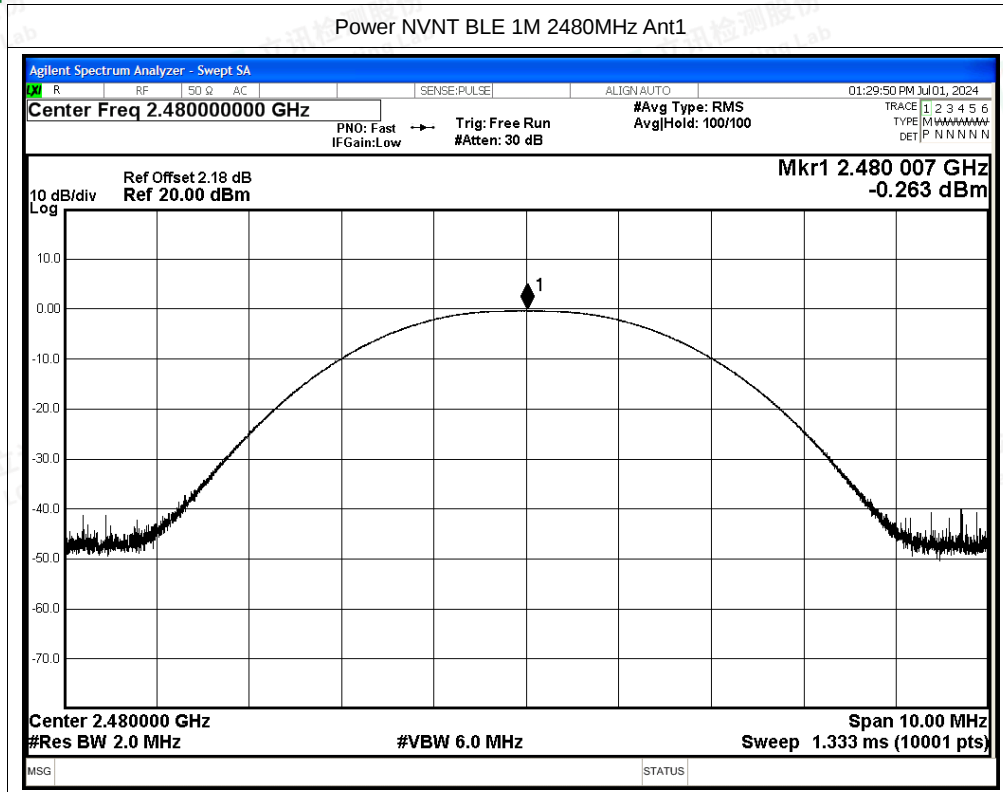


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B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-17.77	8	Pass
NVNT	BLE 1M	2440	Ant1	-16.22	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.76	8	Pass



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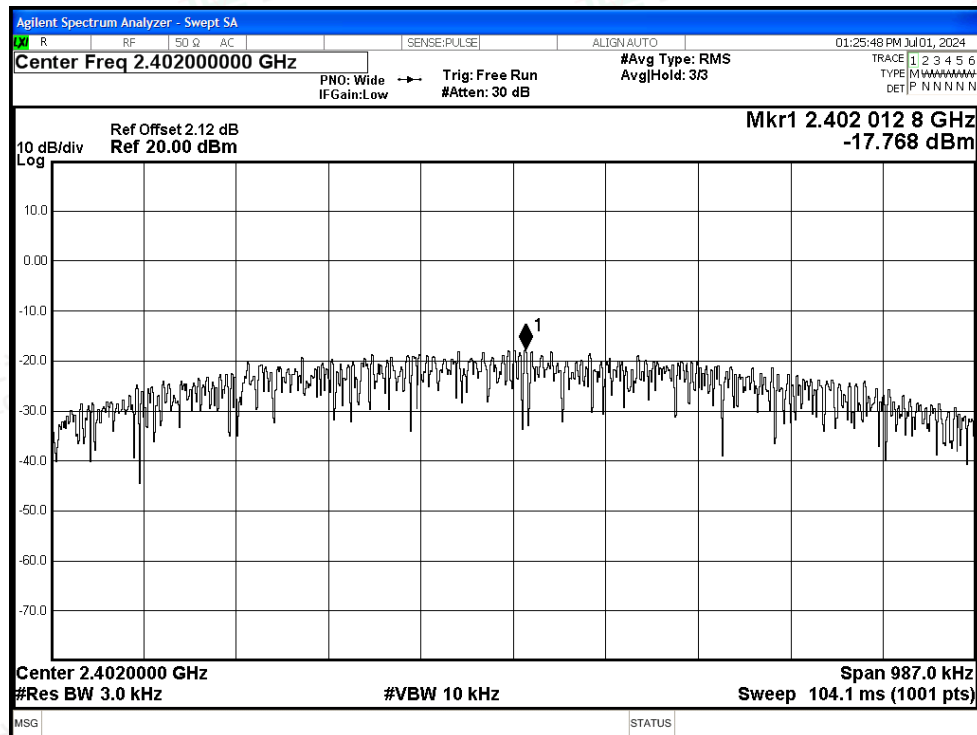
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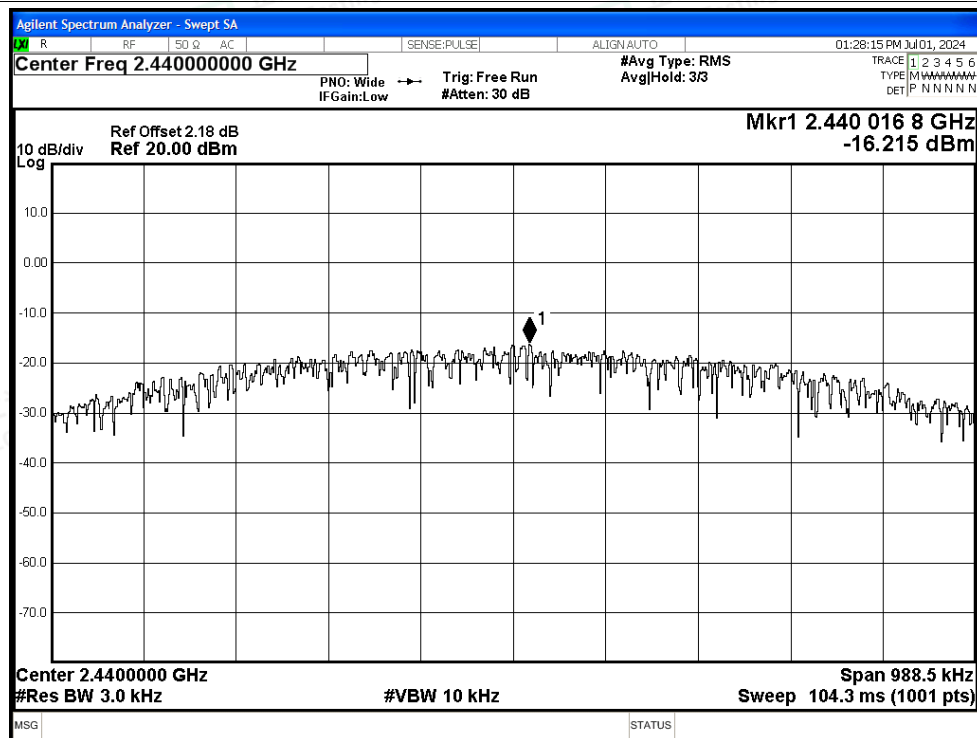


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1

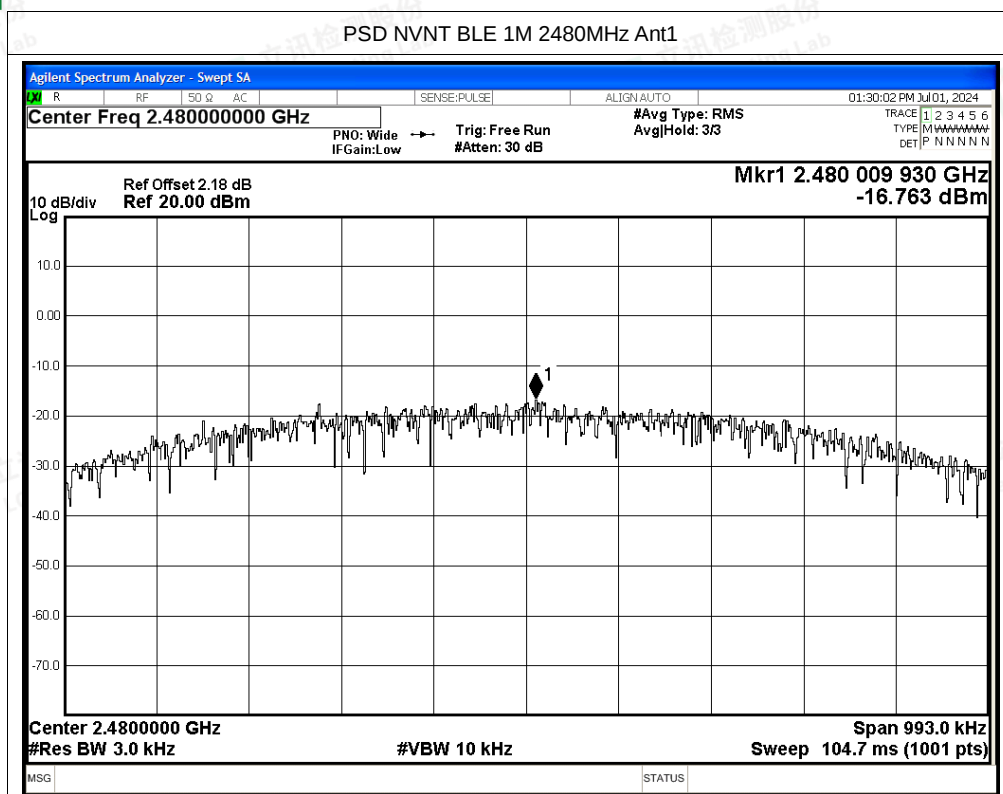


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B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-55.76	-20	Pass
NVNT	BLE 1M	2480	Ant1	-56.2	-20	Pass

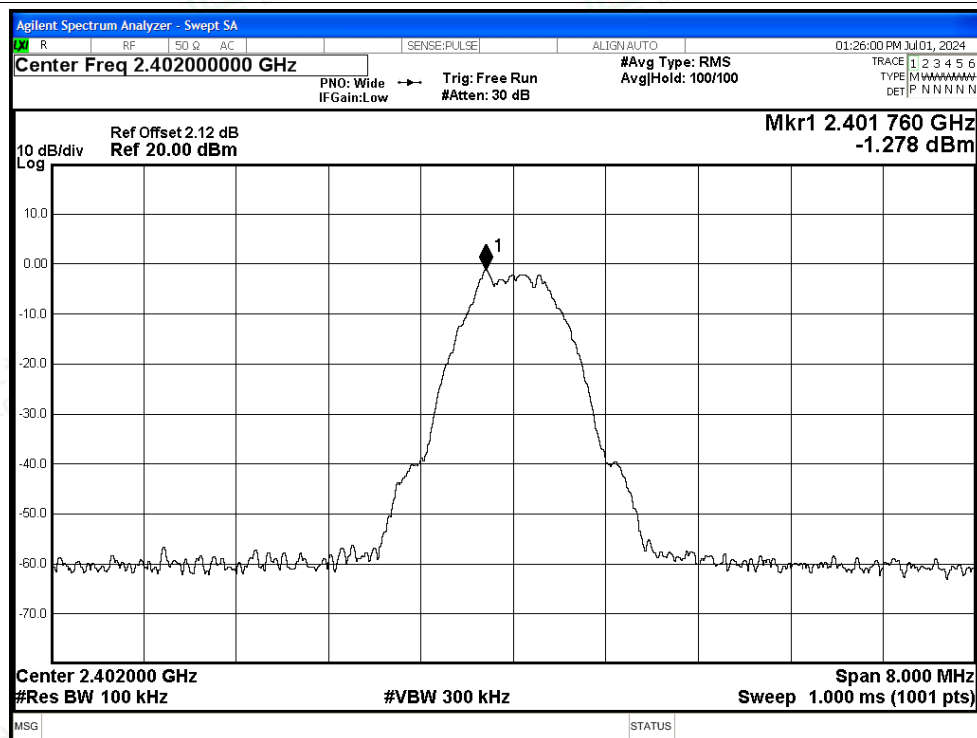


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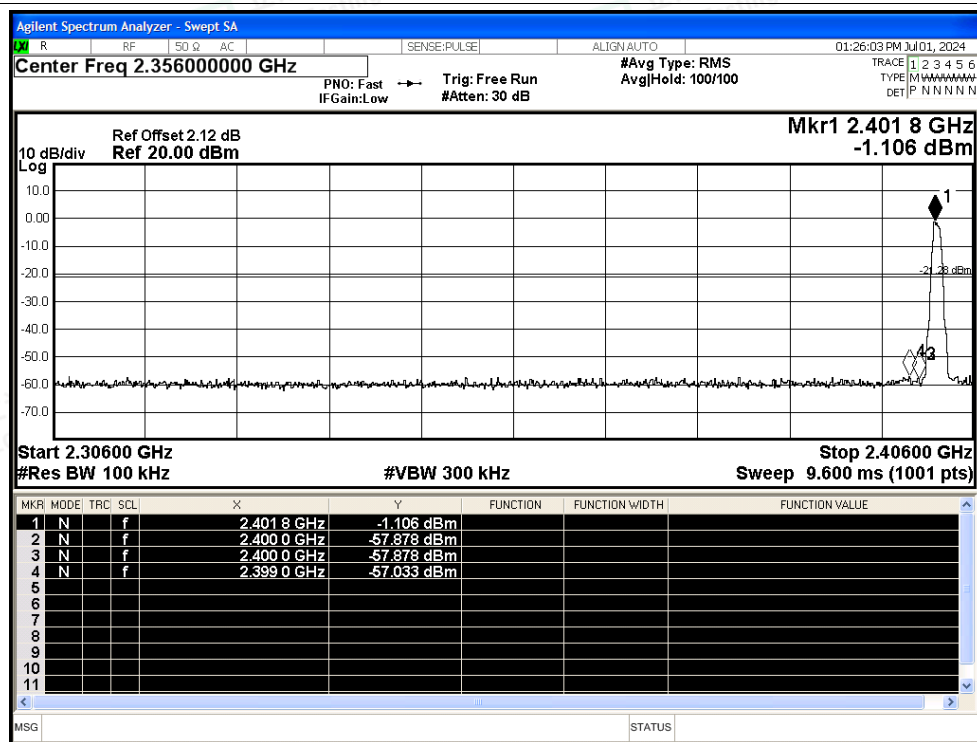


Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



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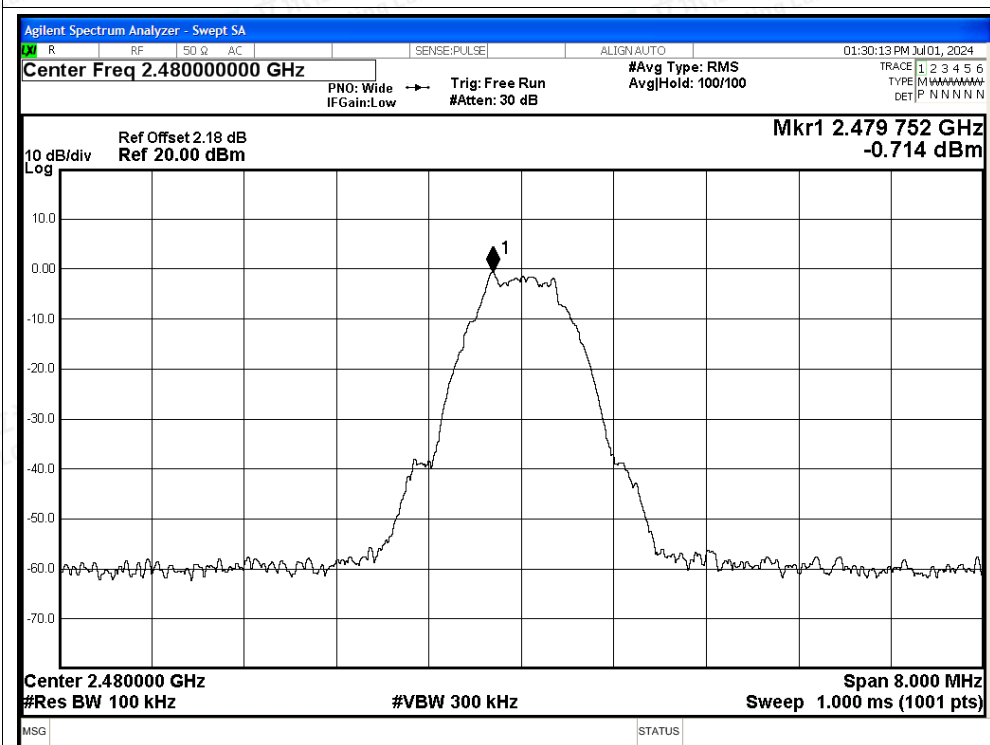
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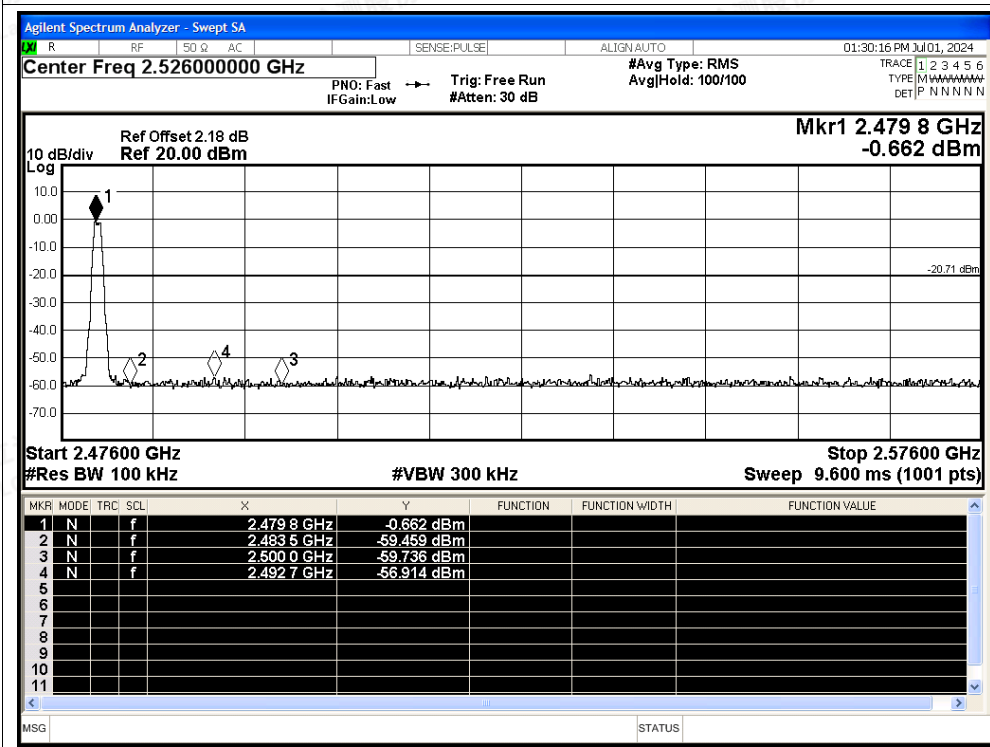
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Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



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	-54.13	-20	Pass
NVNT	BLE 1M	2440	Ant1	-54.48	-20	Pass
NVNT	BLE 1M	2480	Ant1	-53.87	-20	Pass

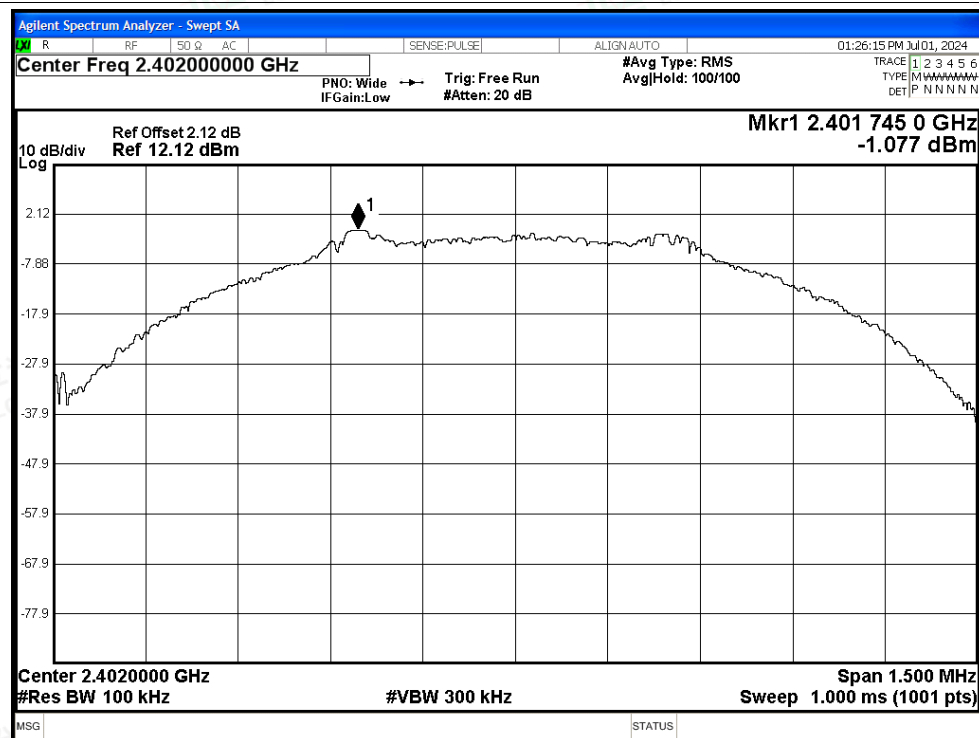


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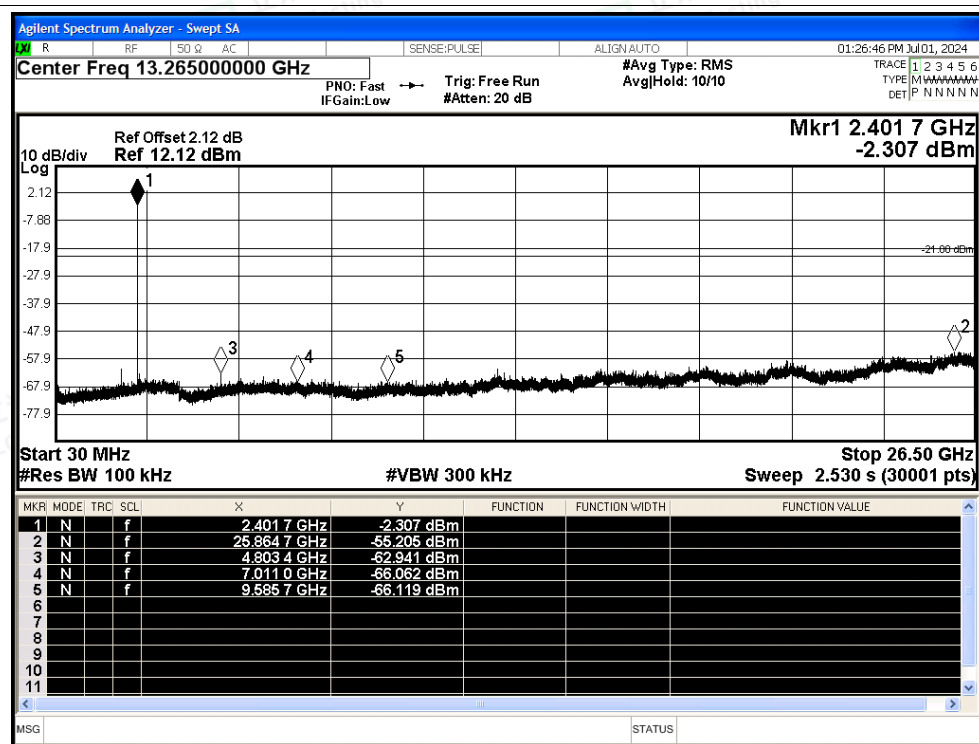


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

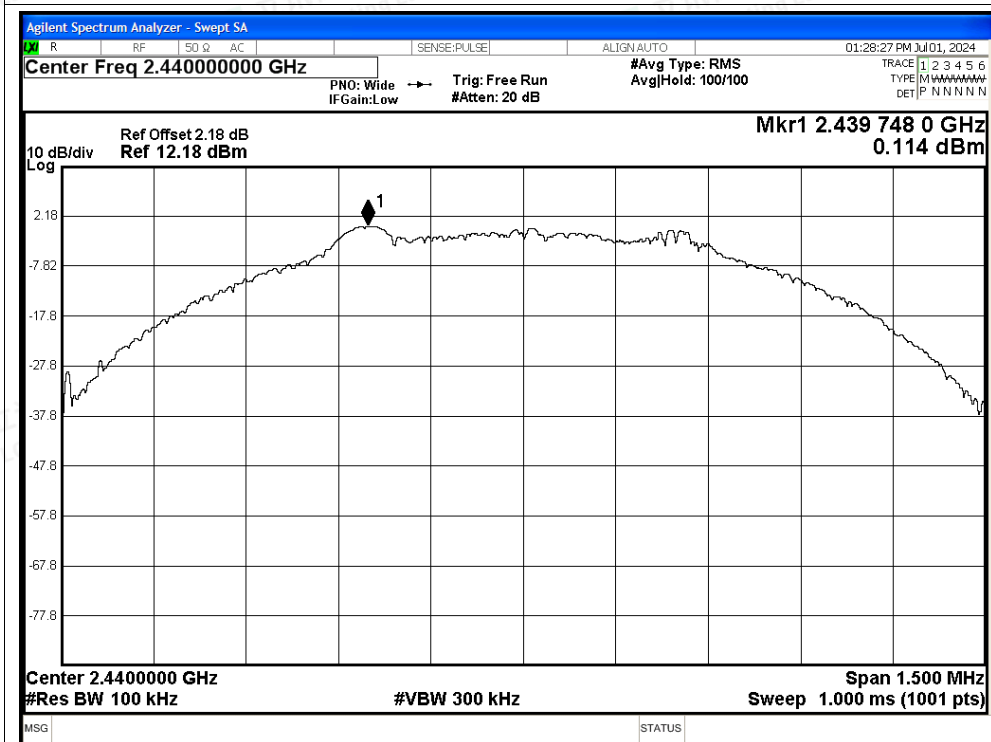
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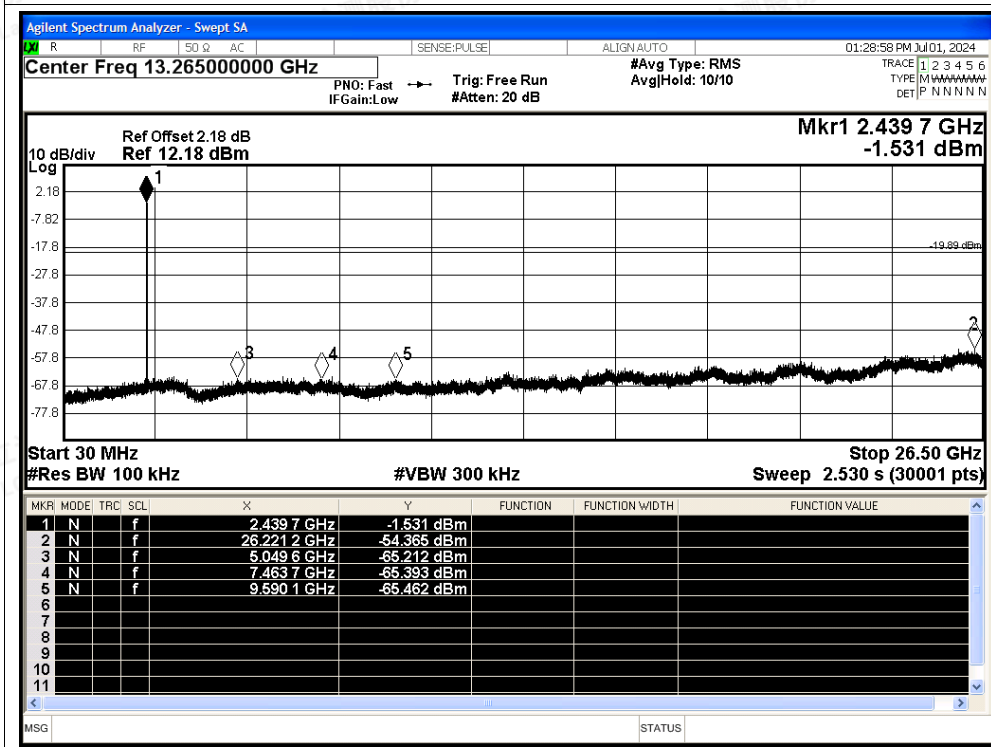
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



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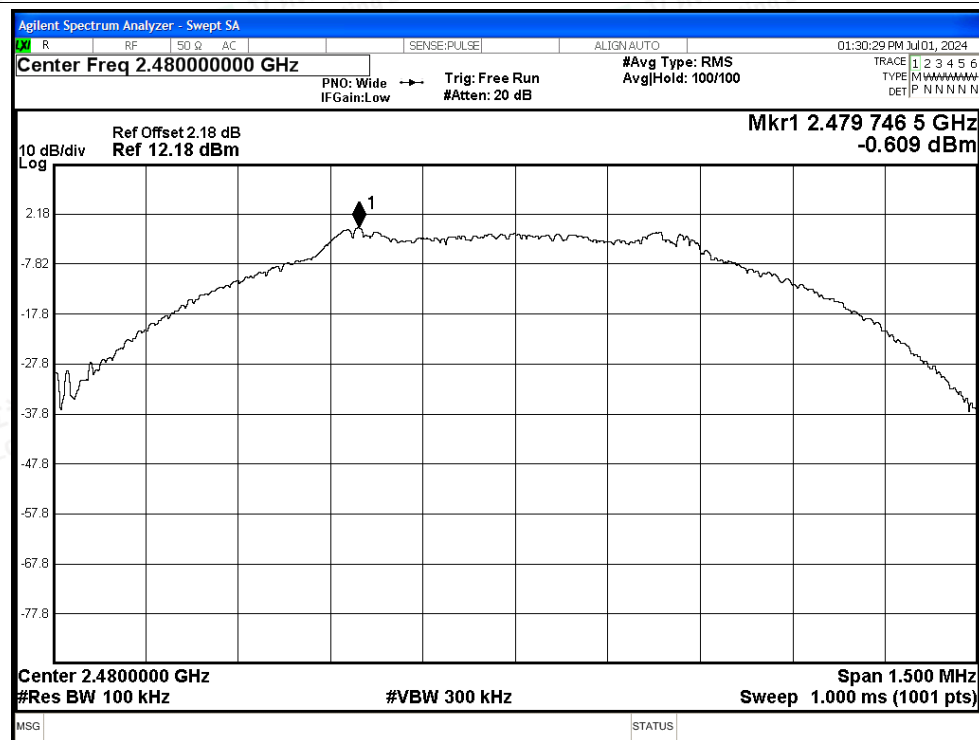
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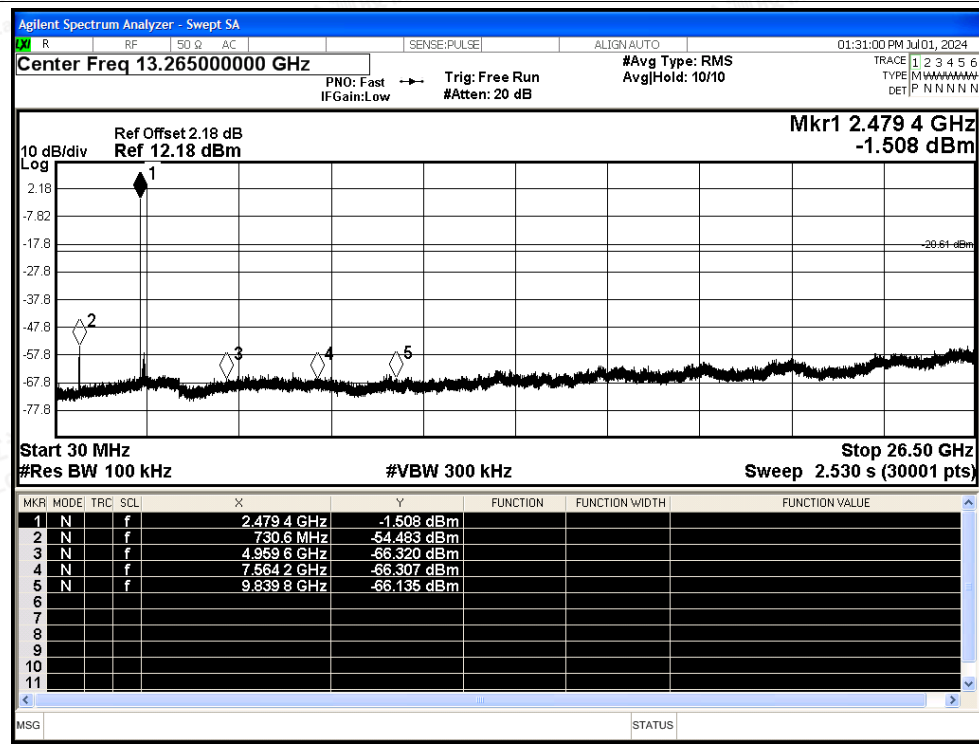
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Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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	87.39	0.59	0.61
NVNT	BLE 1M	2440	Ant1	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant1	87.39	0.59	0.61

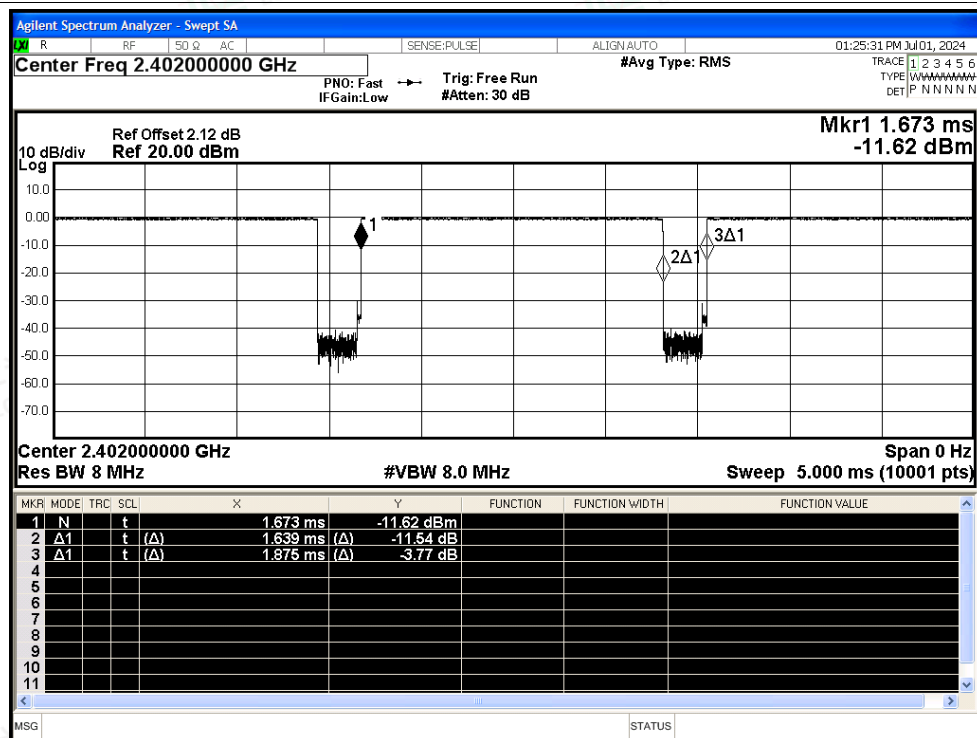


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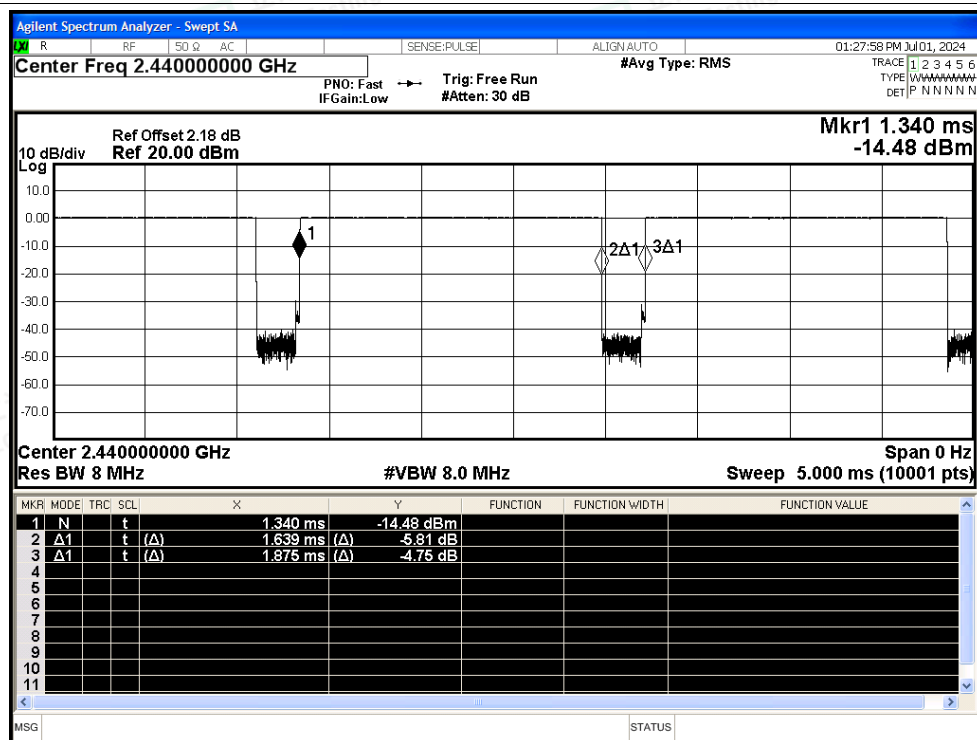


Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Duty Cycle NVNT BLE 1M 2440MHz Ant1

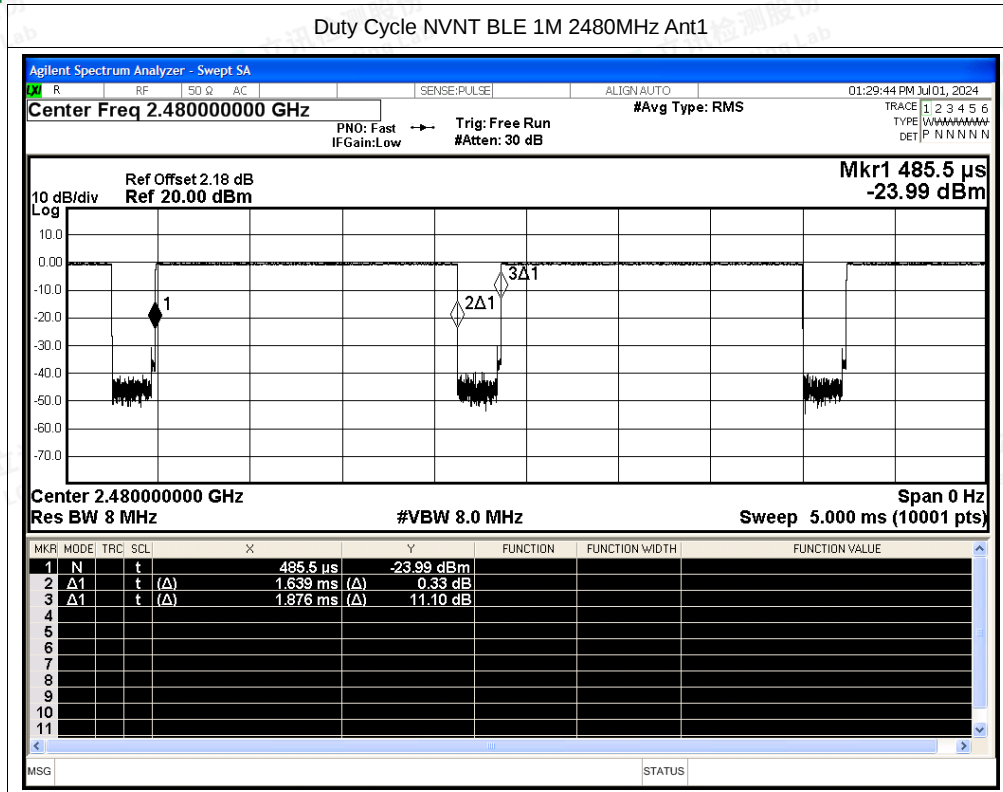


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B.7 Restrict Band

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	-50.13	2	-	47.13	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-58.68	2	0.59	39.17	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2313.456	-46.26	2	-	51.00	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2389.2	-57.5	2	0.59	40.35	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.77	2	-	46.49	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.16	2	0.59	39.69	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-49.51	2	-	47.75	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-57.45	2	0.59	40.40	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.8	-45.11	2	-	52.15	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.8	-57.04	2	0.59	40.81	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-50.02	2	-	47.24	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-57.81	2	0.59	40.04	Average	54	Pass



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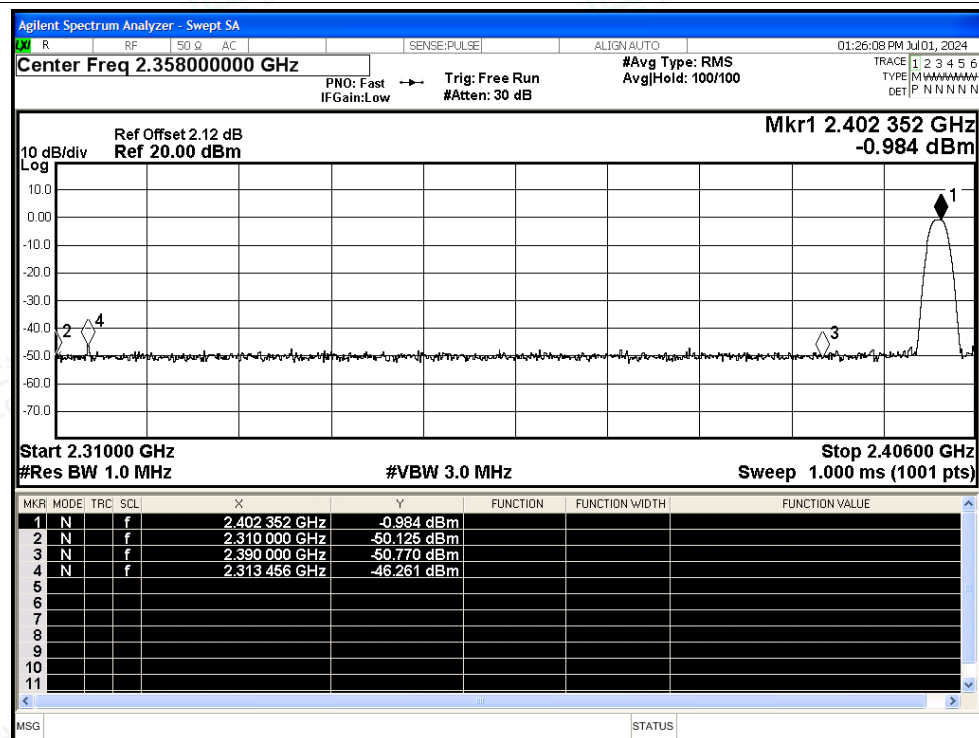
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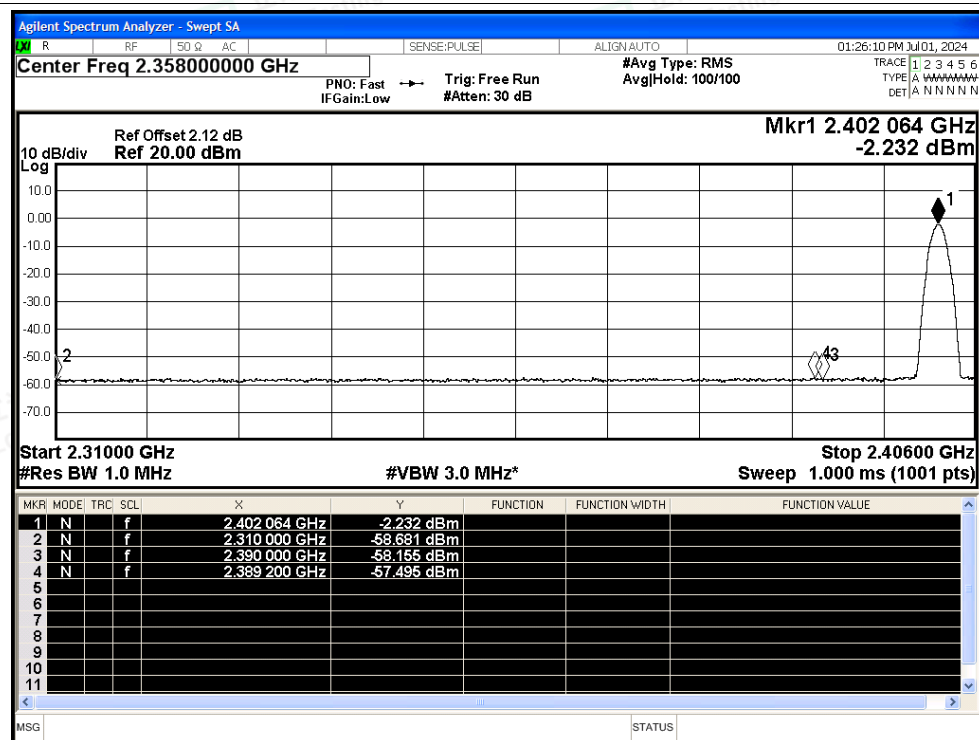


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



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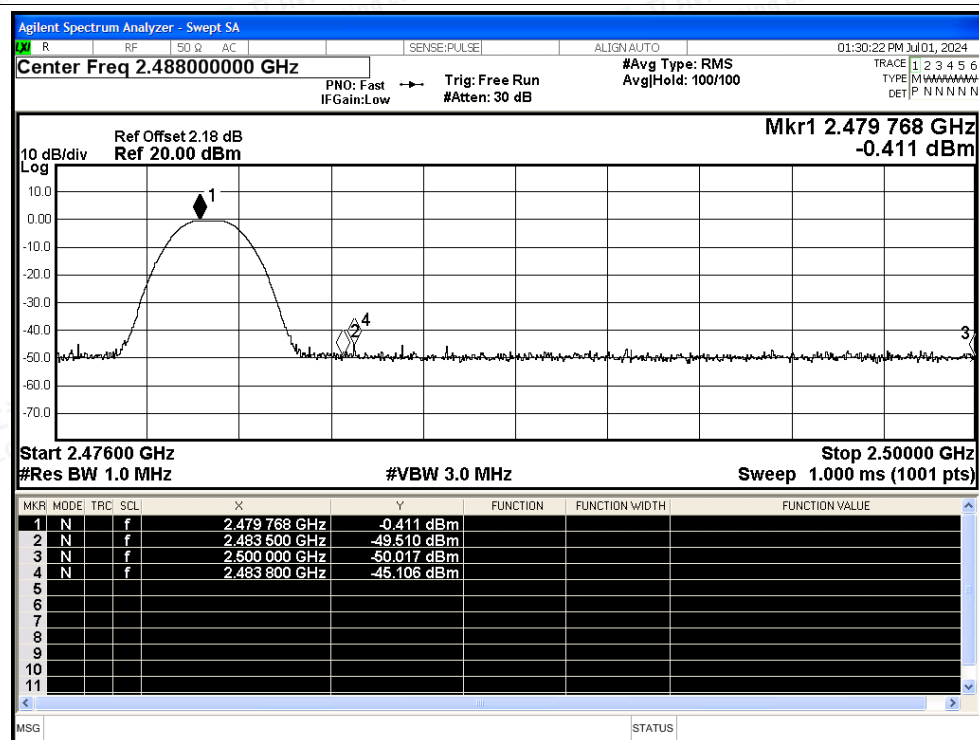
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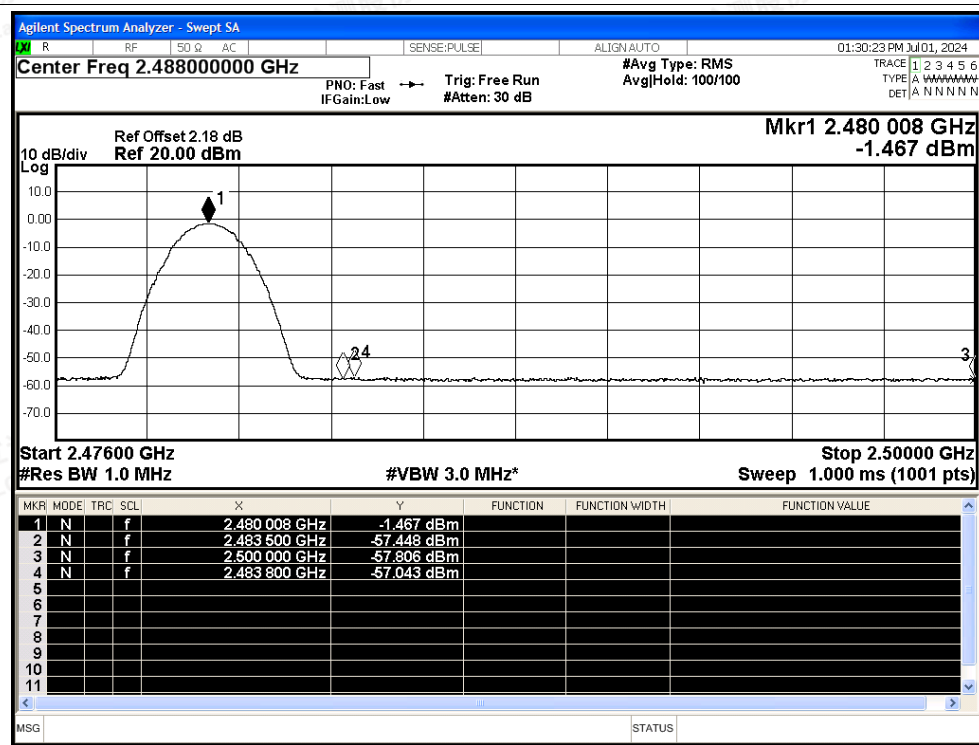
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Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2480MHz Ant1 Average



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