



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: AUTOMATIC SWIMMING POOL CLEANER

Test Model: WY350

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu



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A.1 -6dB Bandwidth

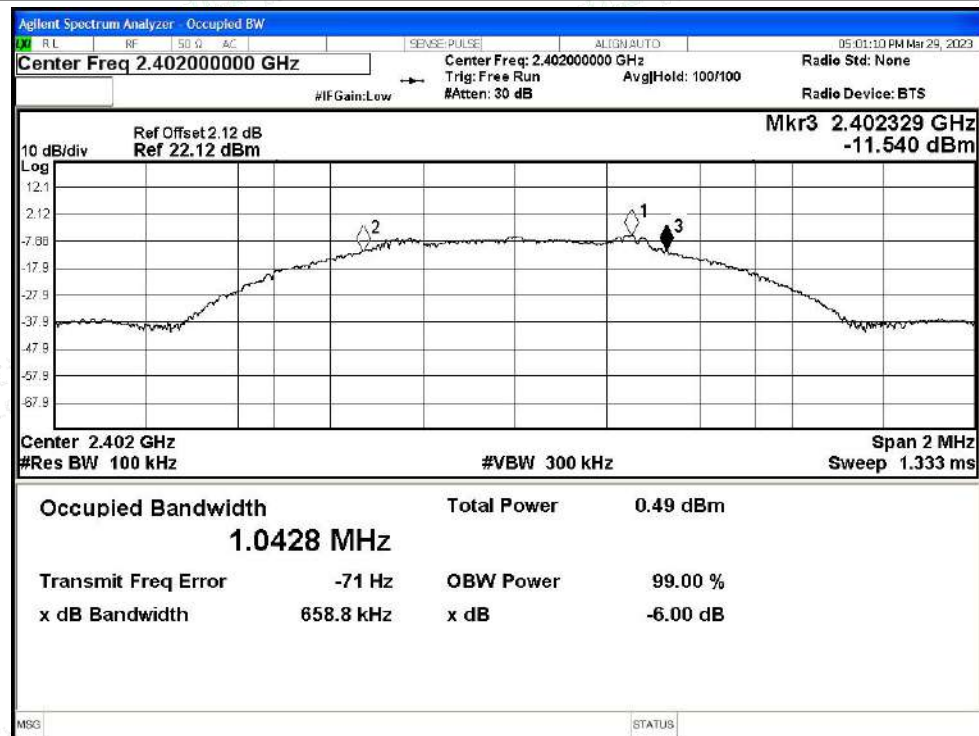
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.659	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.659	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.665	≥ 0.5	Pass
NVNT	BLE 2M	2402	Ant1	1.127	≥ 0.5	Pass
NVNT	BLE 2M	2440	Ant1	1.158	≥ 0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.147	≥ 0.5	Pass



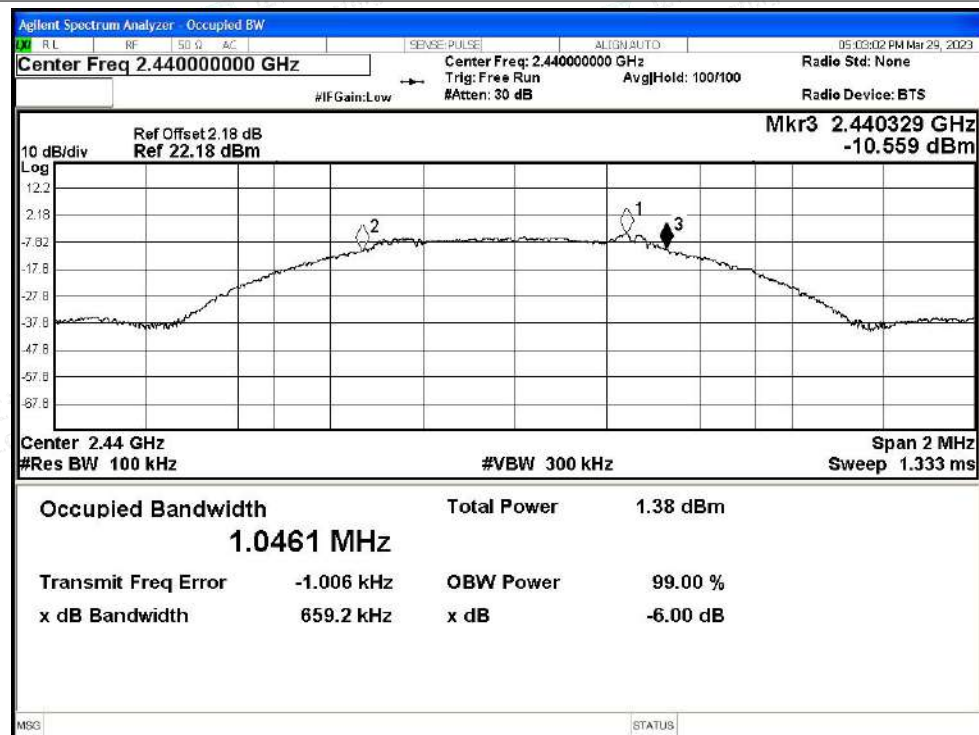


Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1

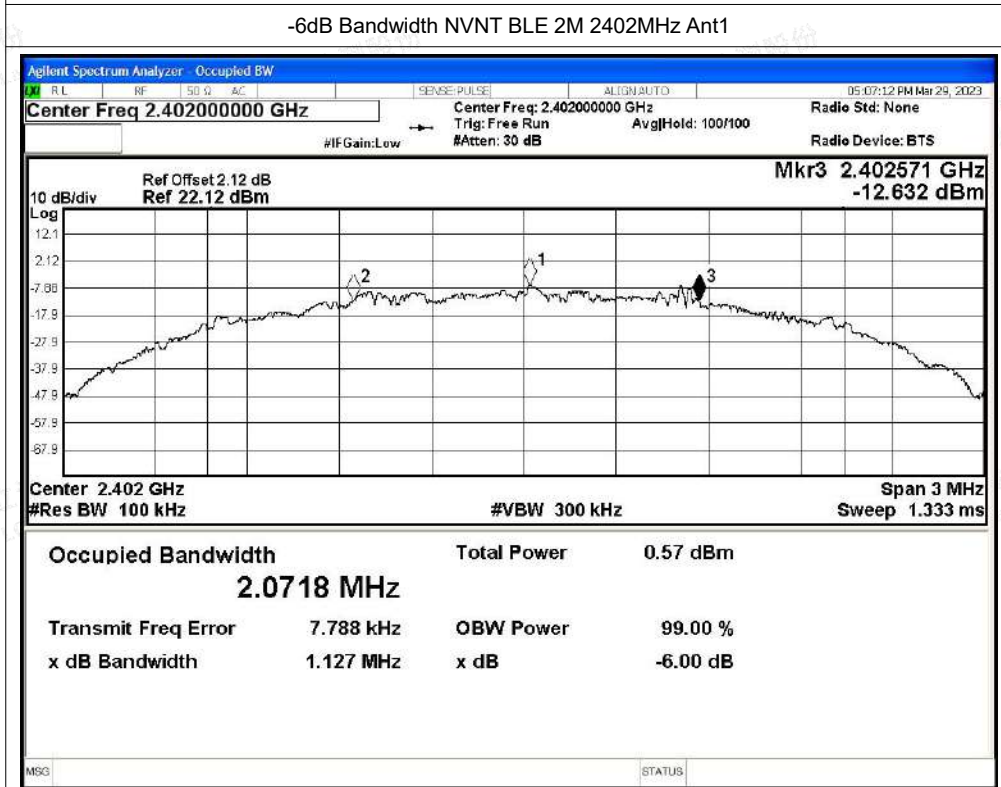
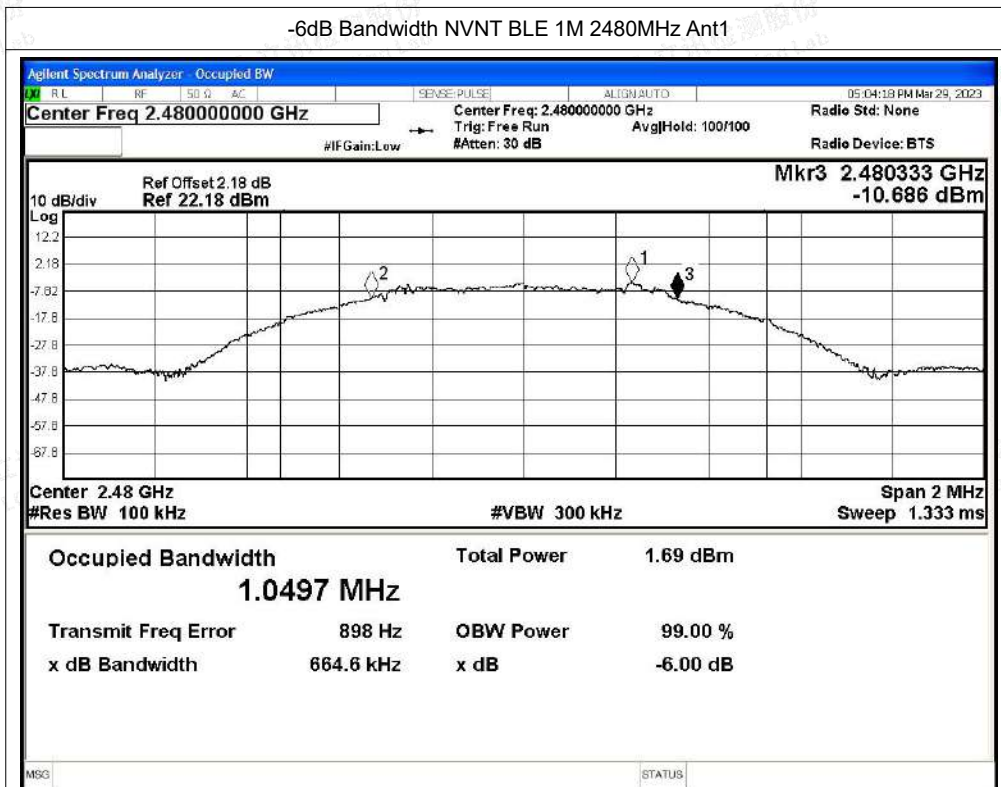


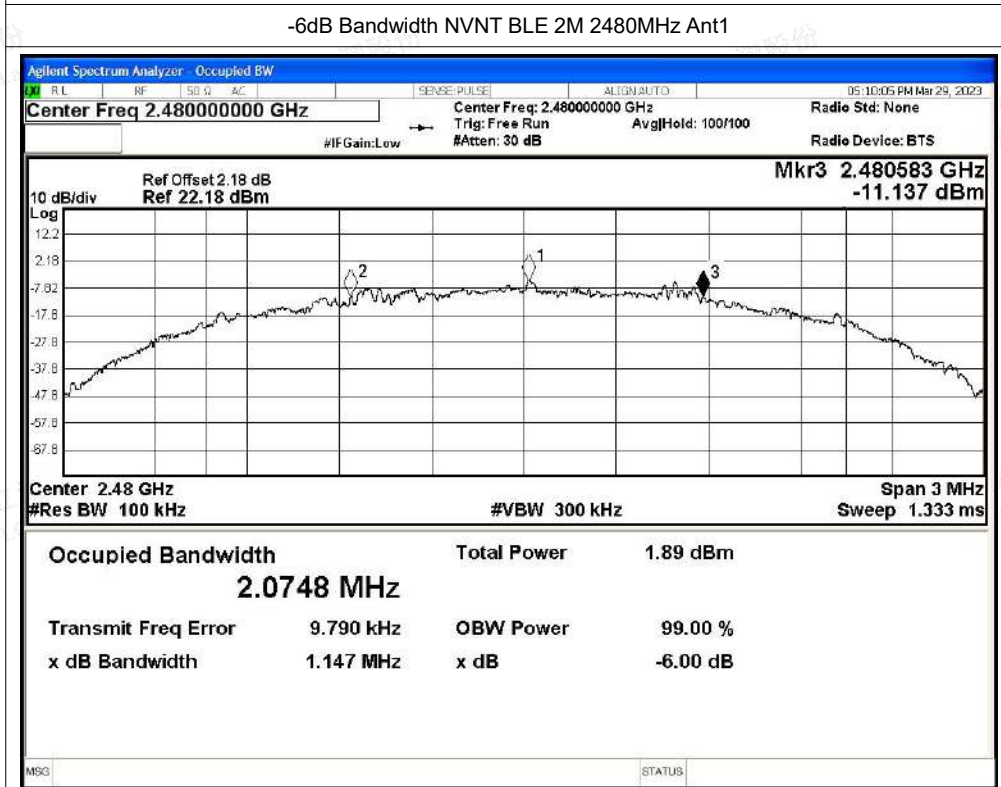
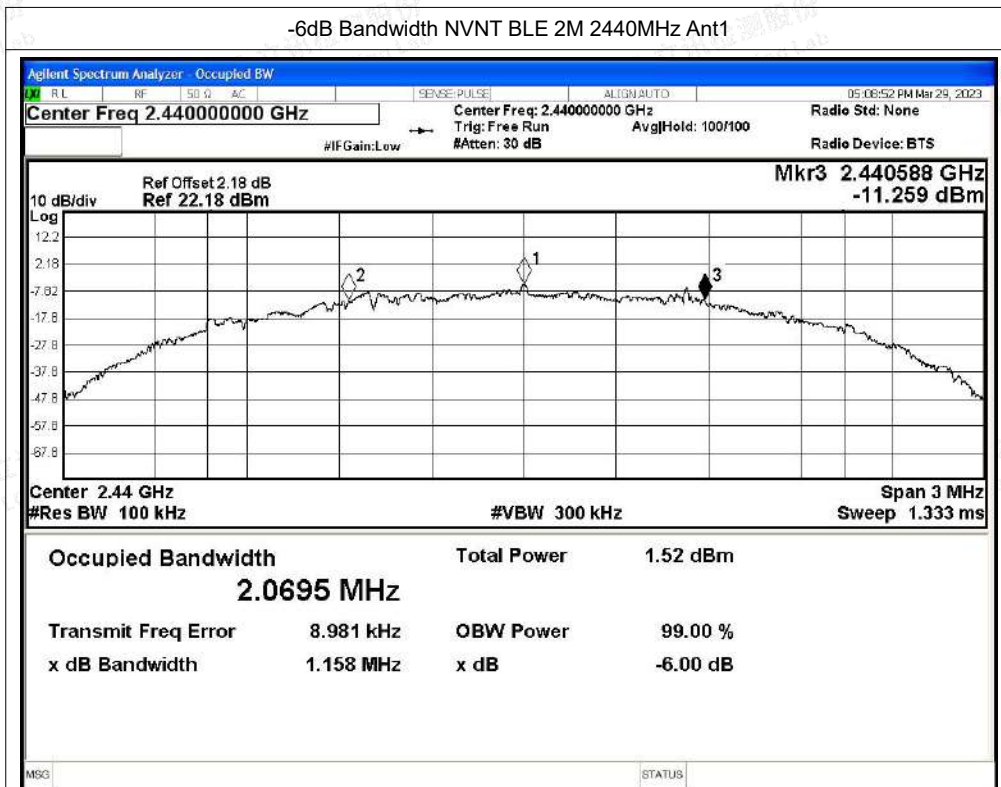
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A.2 Maximum Conducted Output Power

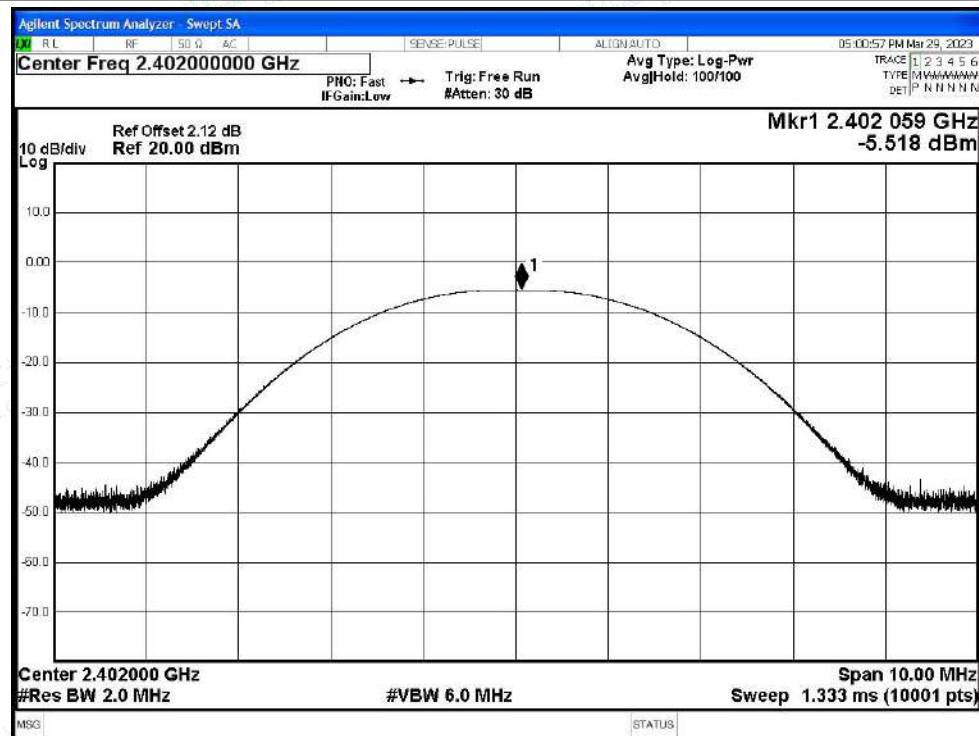
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-5.52	30	Pass
NVNT	BLE 1M	2440	Ant1	-4.52	30	Pass
NVNT	BLE 1M	2480	Ant1	-4.10	30	Pass
NVNT	BLE 2M	2402	Ant1	-5.51	30	Pass
NVNT	BLE 2M	2440	Ant1	-4.55	30	Pass
NVNT	BLE 2M	2480	Ant1	-4.11	30	Pass



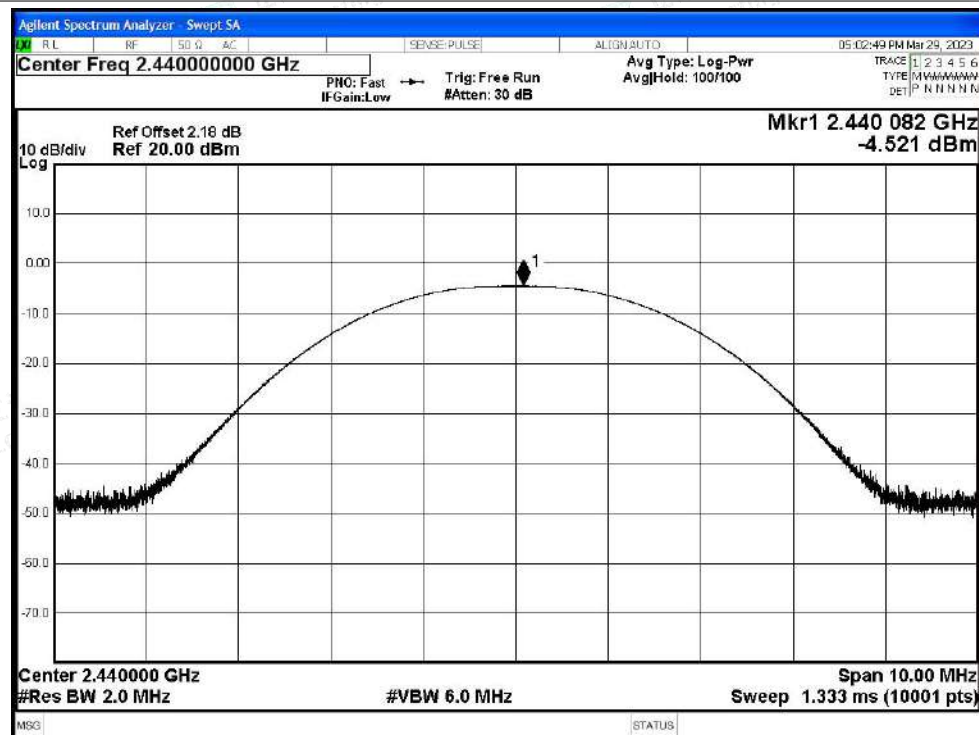


Test Graphs

Power NVNT BLE 1M 2402MHz Ant1



Power NVNT BLE 1M 2440MHz Ant1



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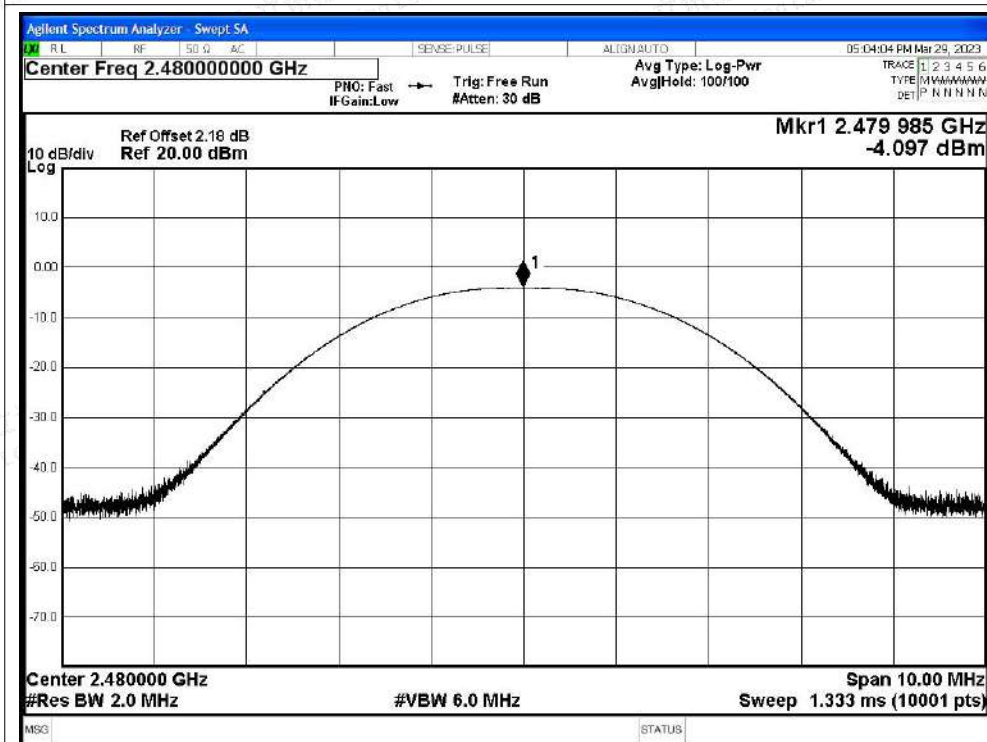
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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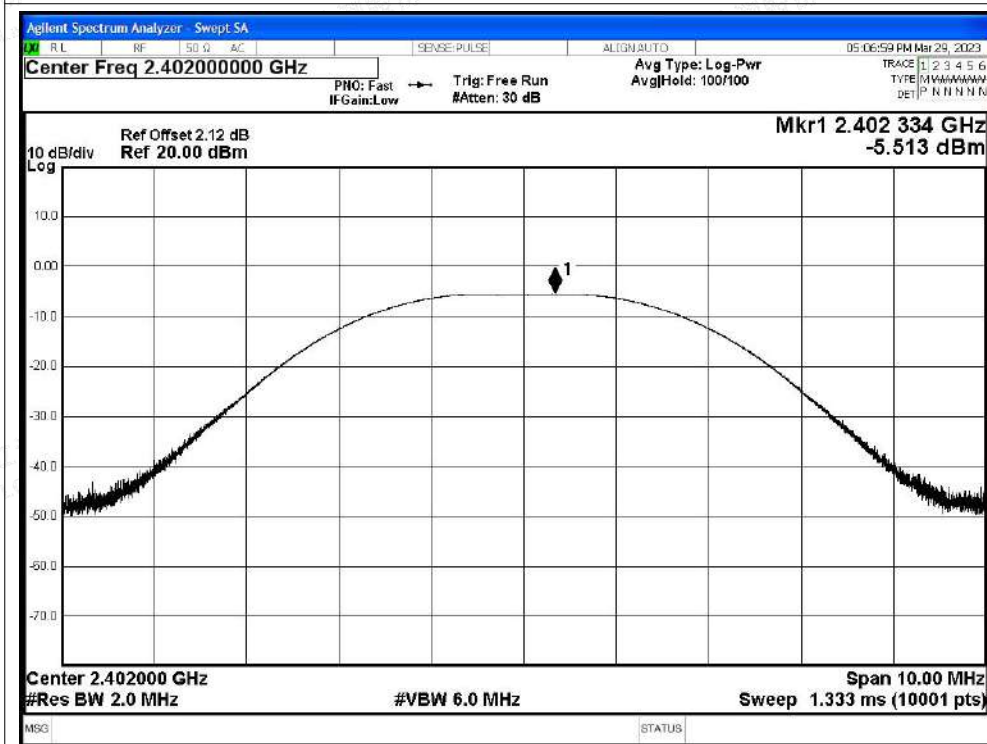
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Power NVNT BLE 1M 2480MHz Ant1



Power NVNT BLE 2M 2402MHz Ant1



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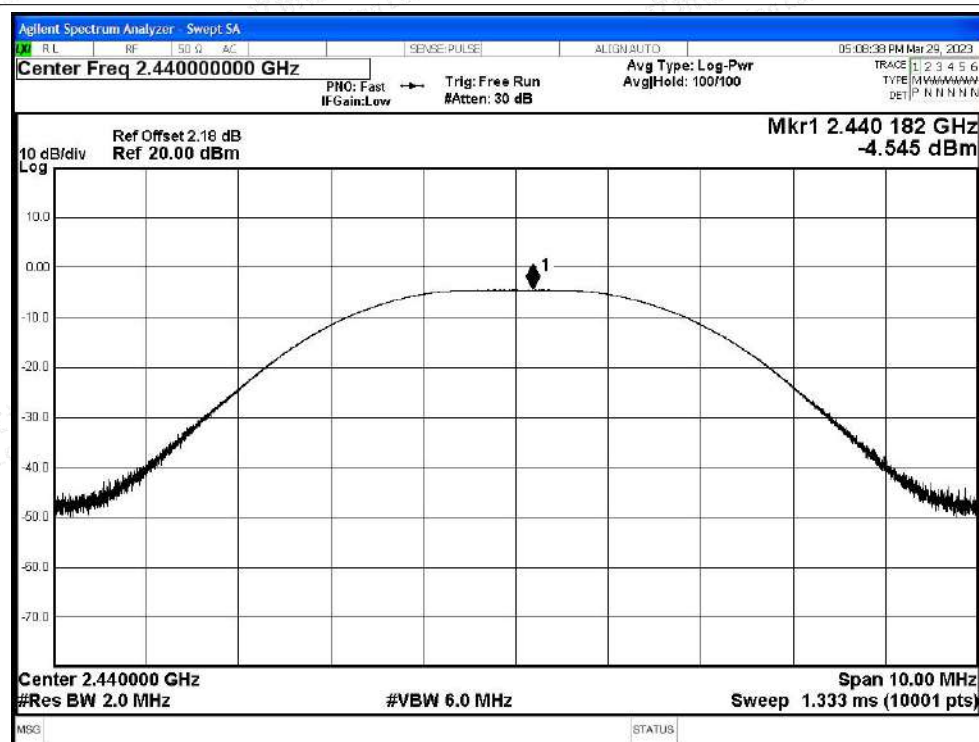
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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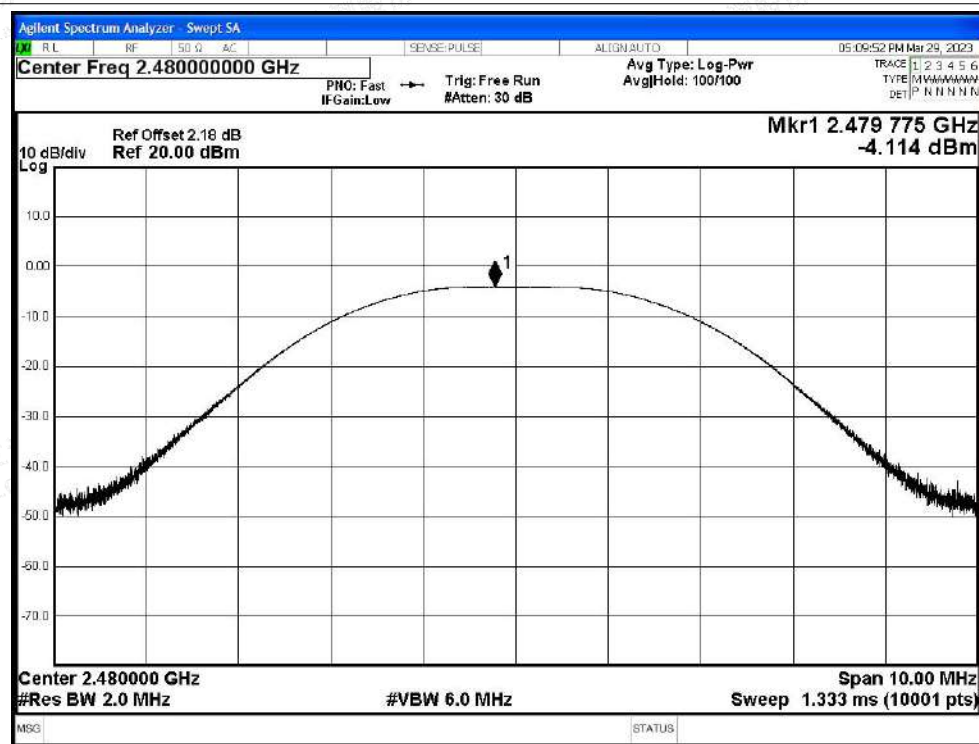
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Power NVNT BLE 2M 2440MHz Ant1



Power NVNT BLE 2M 2480MHz Ant1



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A.3 Maximum Power Spectral Density Level

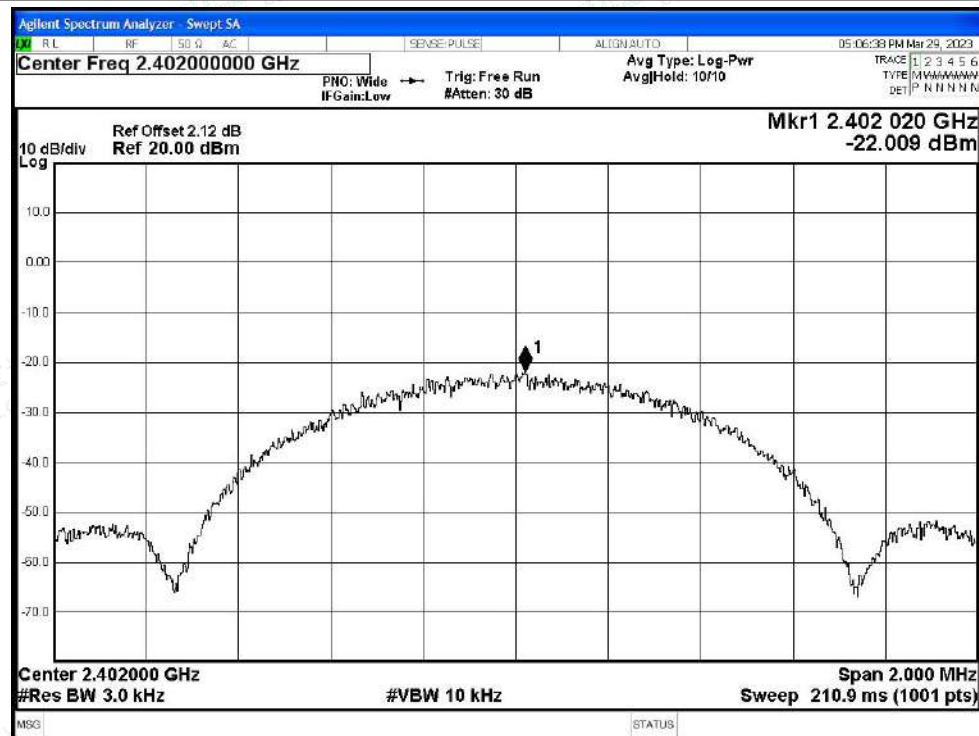
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-22.01	8	Pass
NVNT	BLE 1M	2440	Ant1	-20.78	8	Pass
NVNT	BLE 1M	2480	Ant1	-20.55	8	Pass
NVNT	BLE 2M	2402	Ant1	-25.32	8	Pass
NVNT	BLE 2M	2440	Ant1	-23.23	8	Pass
NVNT	BLE 2M	2480	Ant1	-22.94	8	Pass



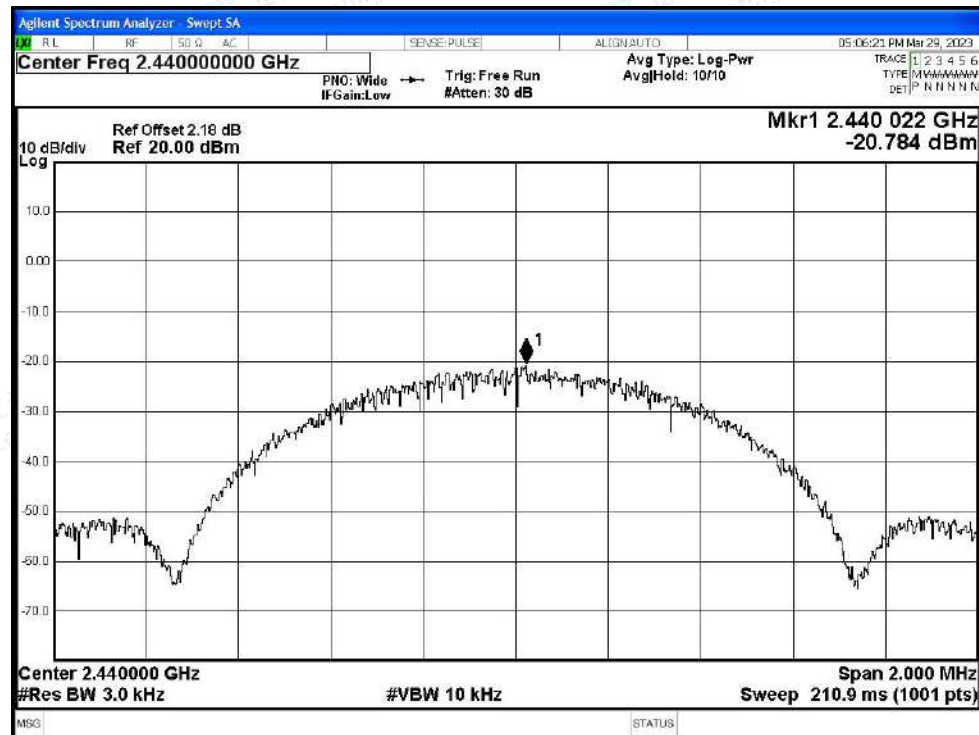


Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



PSD NVNT BLE 1M 2440MHz Ant1



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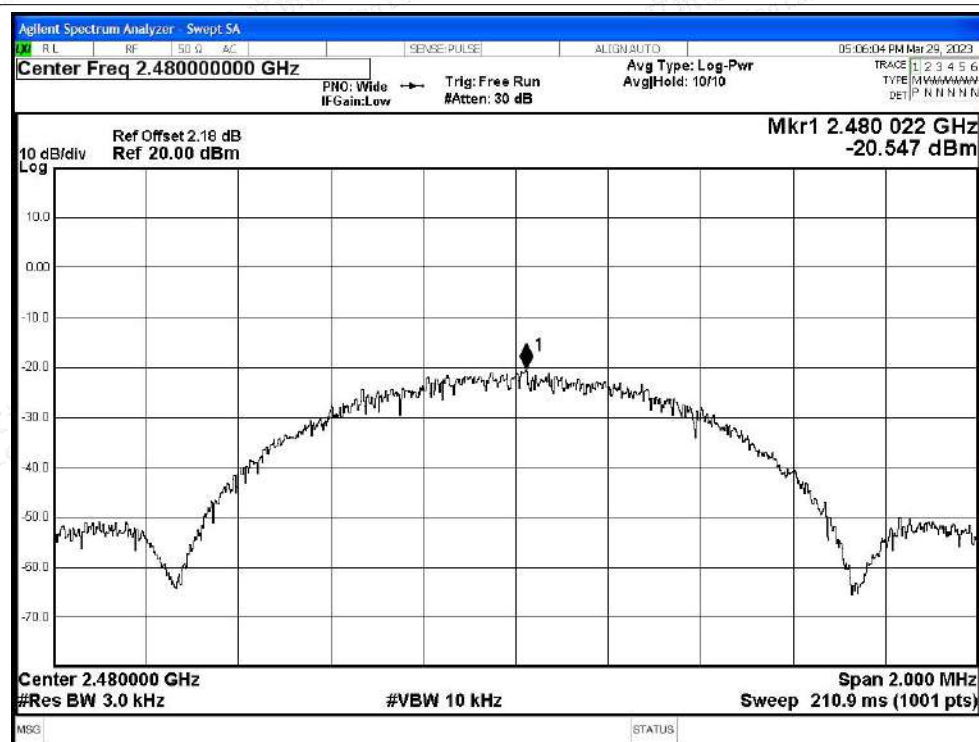
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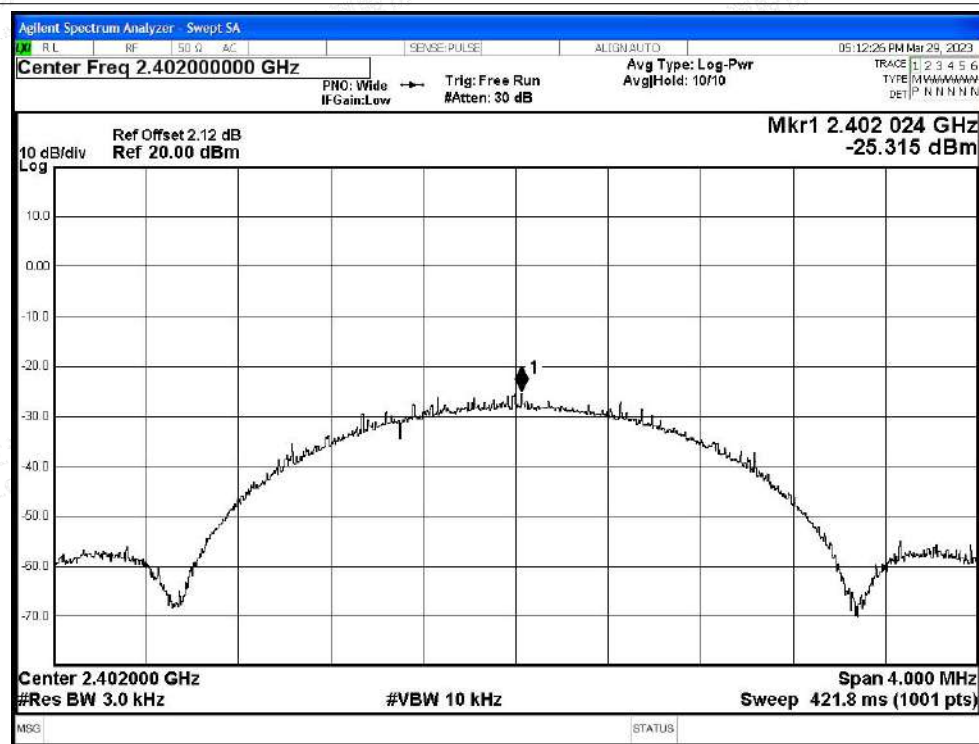
Scan code to check authenticity



PSD NVNT BLE 1M 2480MHz Ant1



PSD NVNT BLE 2M 2402MHz Ant1



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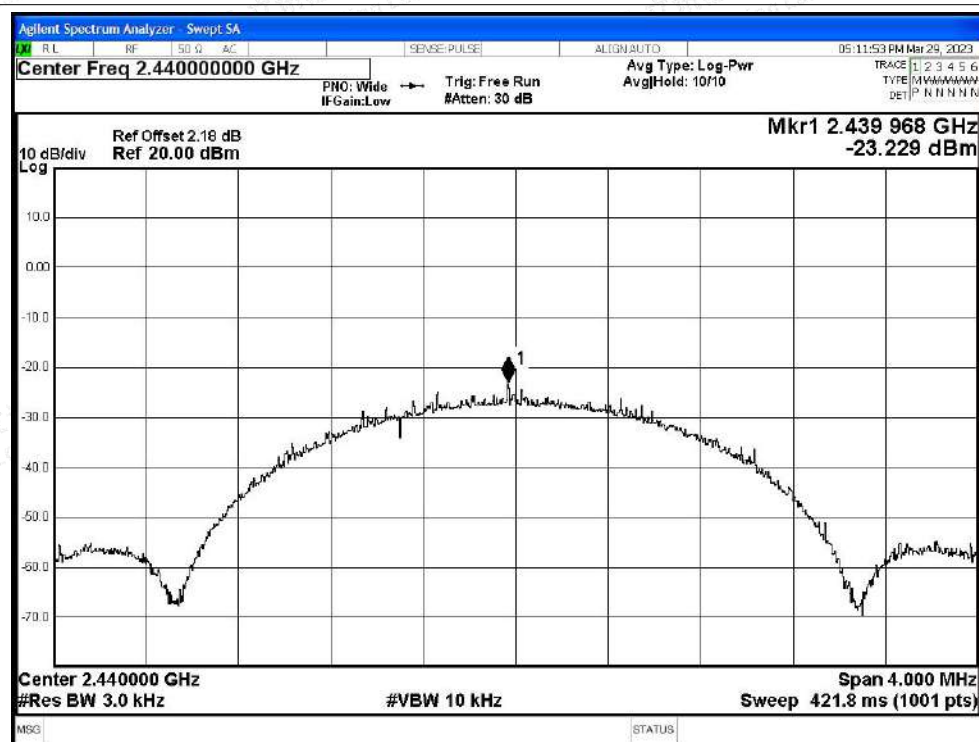
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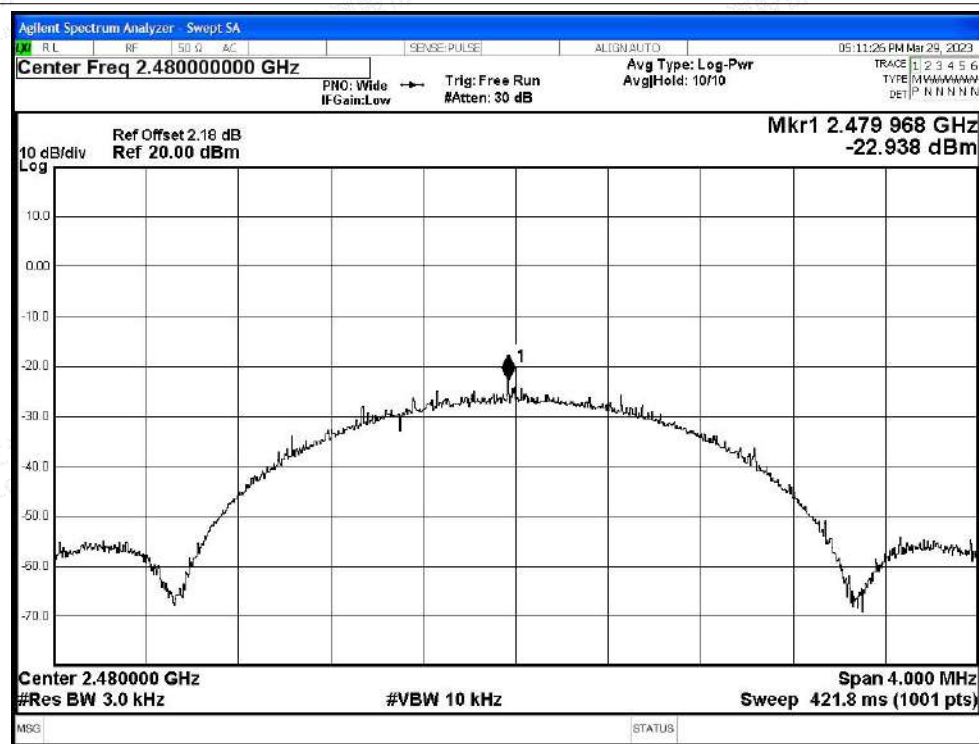
Scan code to check authenticity



PSD NVNT BLE 2M 2440MHz Ant1



PSD NVNT BLE 2M 2480MHz Ant1



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A.4 Band Edge

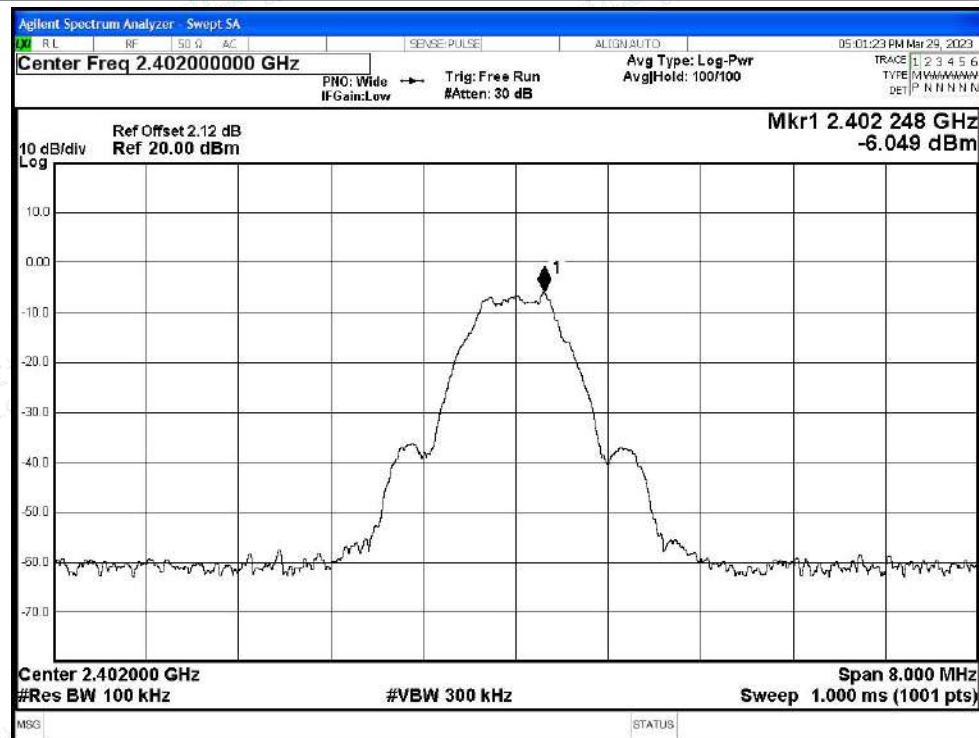
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-50.79	-20	Pass
NVNT	BLE 1M	2480	Ant1	-51.94	-20	Pass
NVNT	BLE 2M	2402	Ant1	-34.89	-20	Pass
NVNT	BLE 2M	2480	Ant1	-48.24	-20	Pass



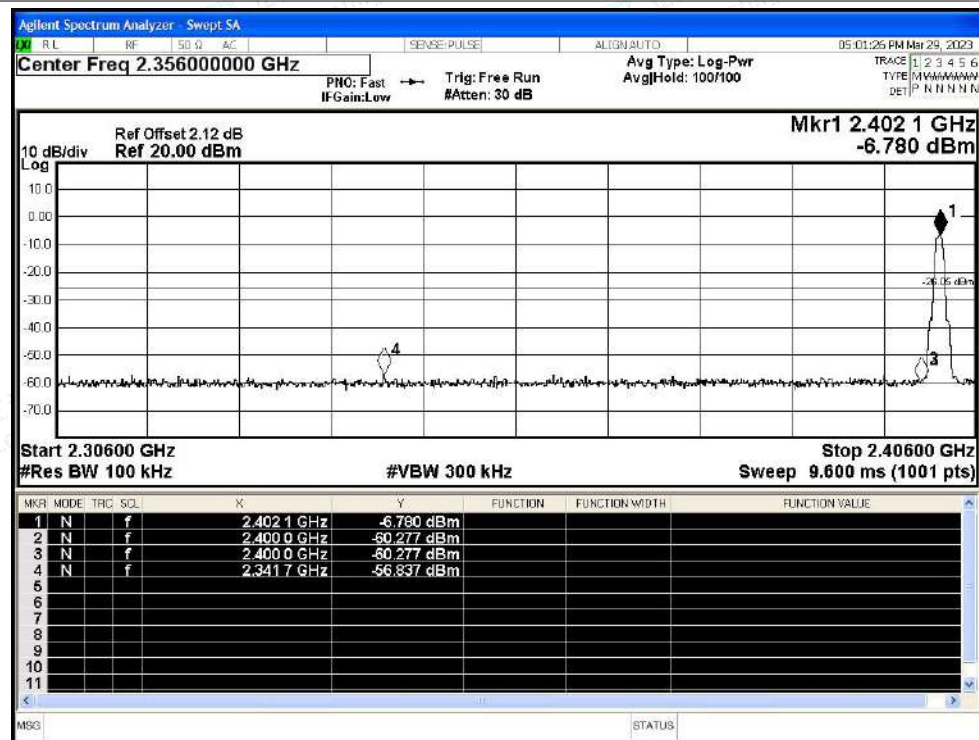


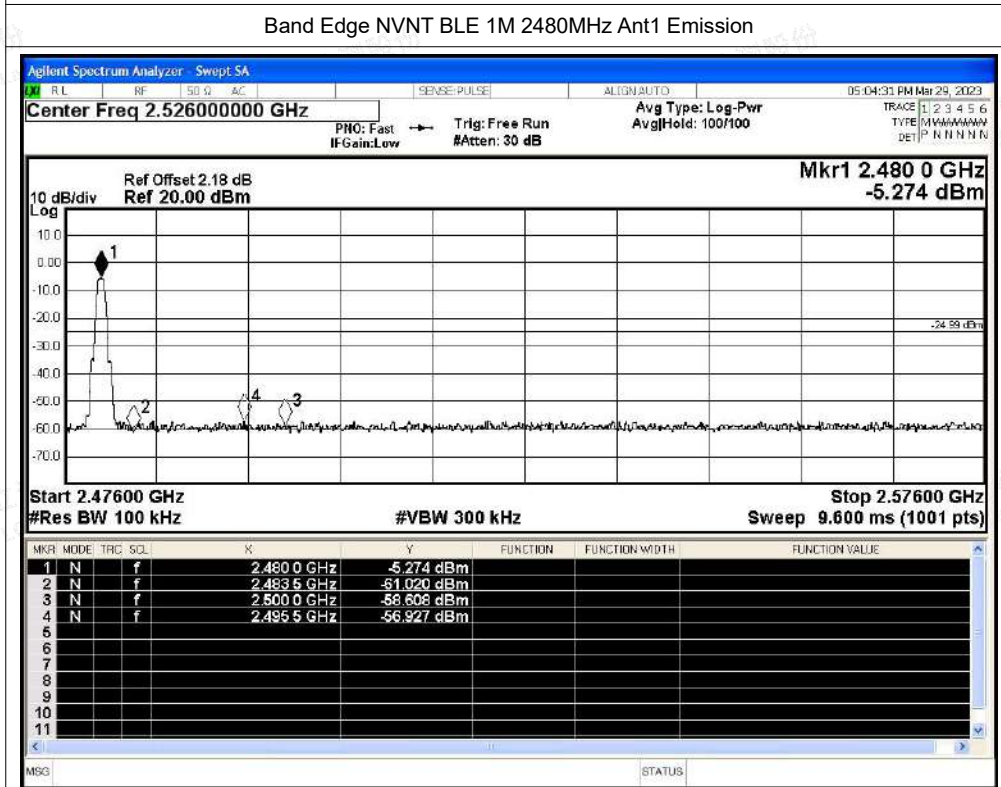
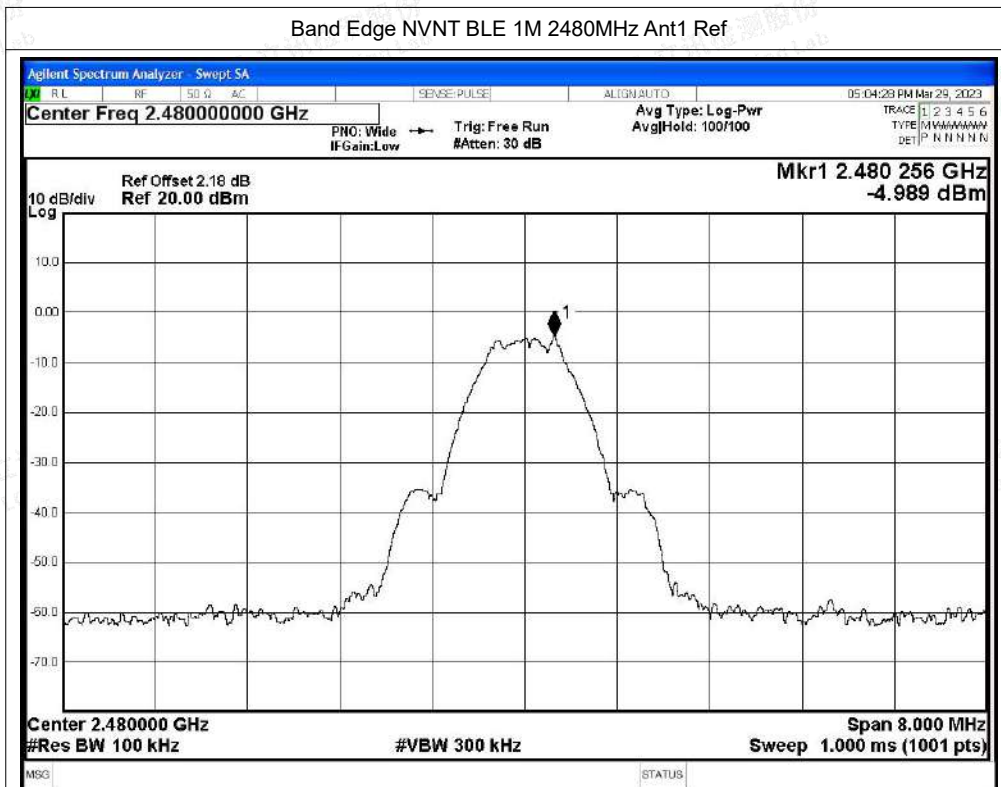
Test Graphs

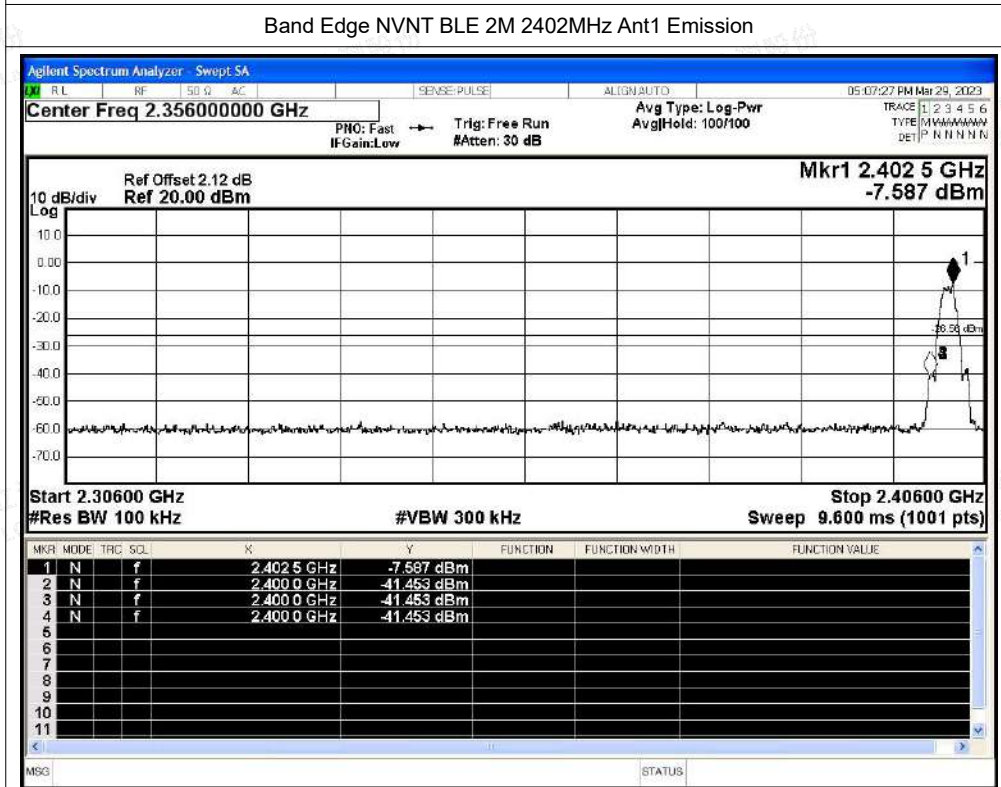
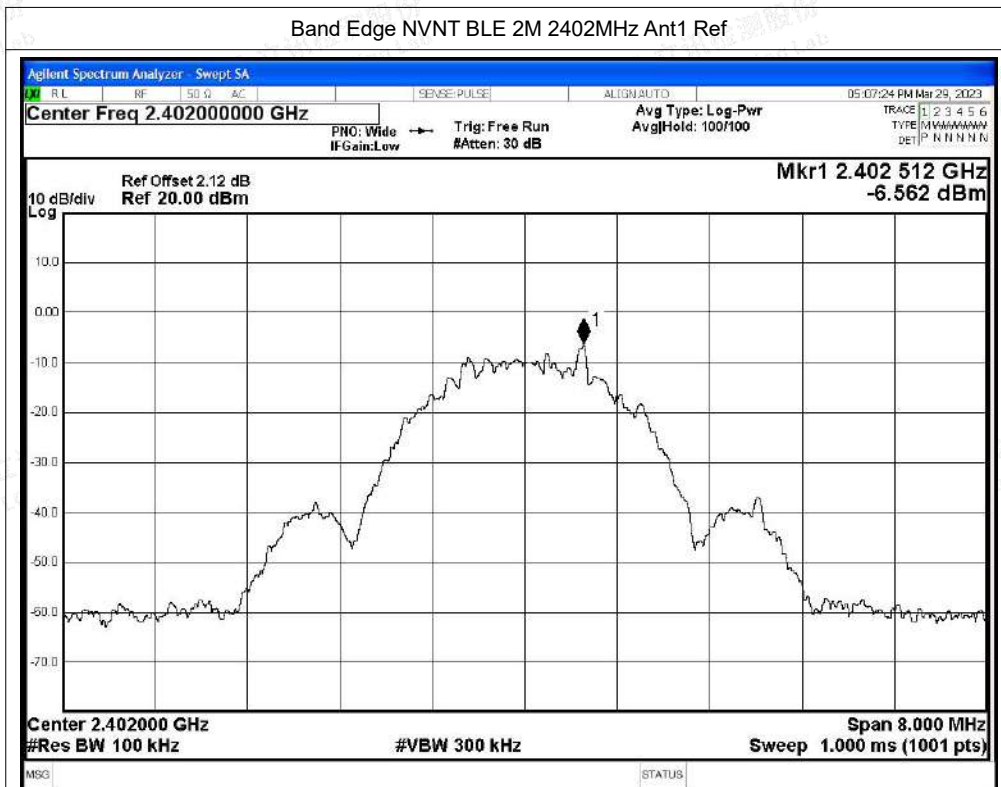
Band Edge NVNT BLE 1M 2402MHz Ant1 Ref

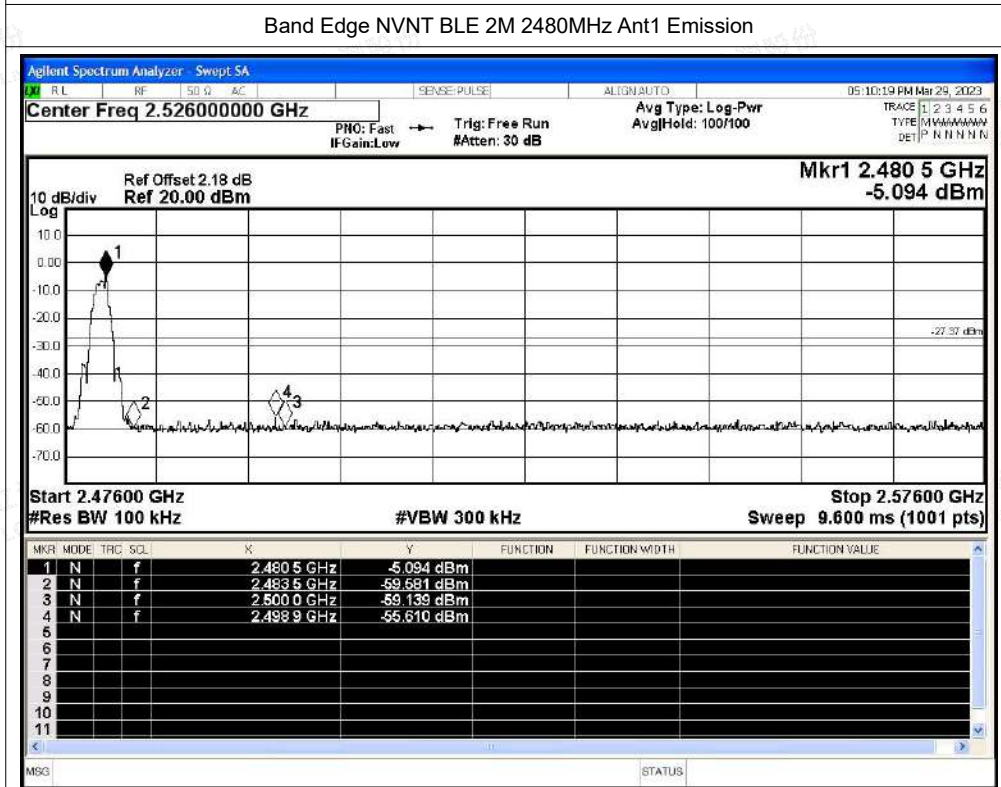
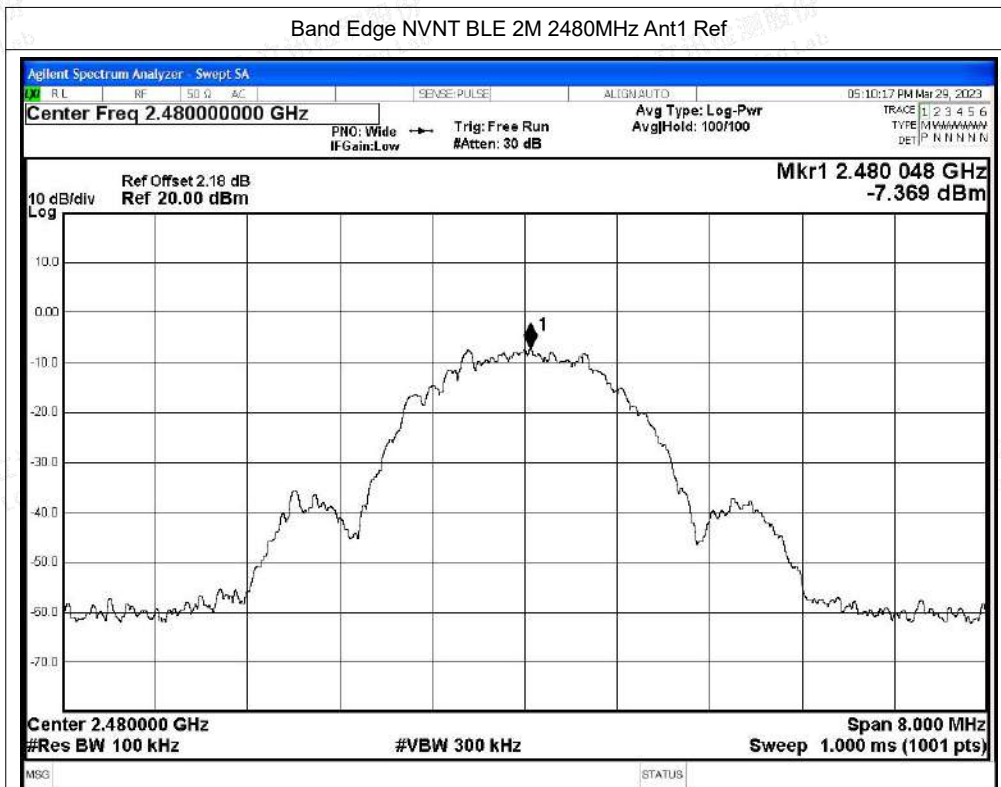


Band Edge NVNT BLE 1M 2402MHz Ant1 Emission











A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-49.88	-20	Pass
NVNT	BLE 1M	2440	Ant1	-49.31	-20	Pass
NVNT	BLE 1M	2480	Ant1	-50.36	-20	Pass
NVNT	BLE 2M	2402	Ant1	-49.09	-20	Pass
NVNT	BLE 2M	2440	Ant1	-49.29	-20	Pass
NVNT	BLE 2M	2480	Ant1	-49.33	-20	Pass

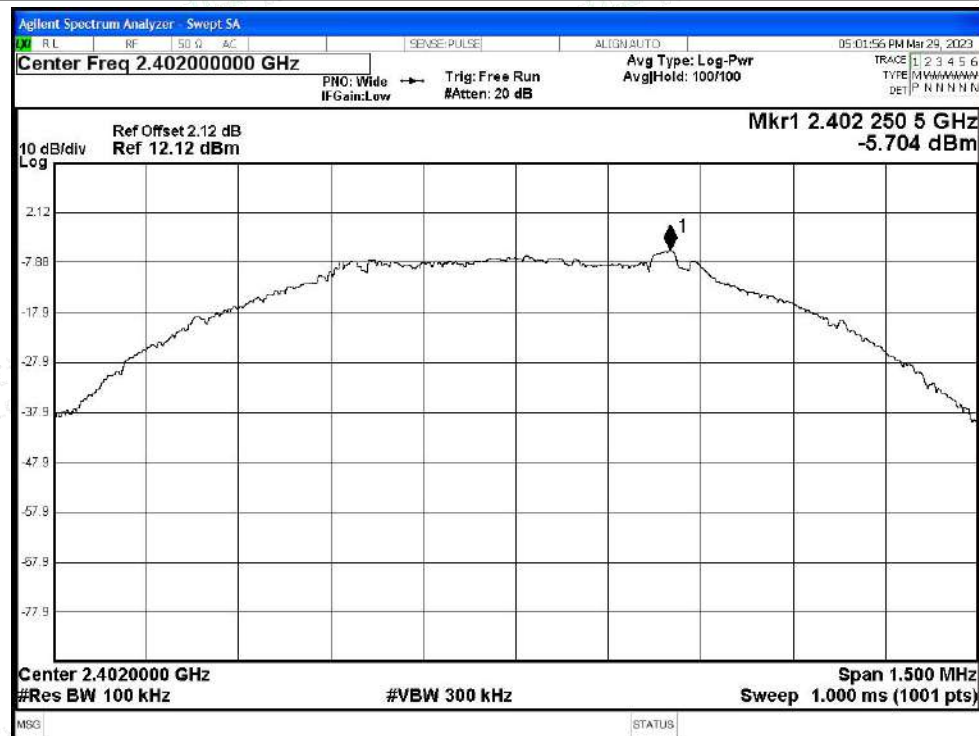


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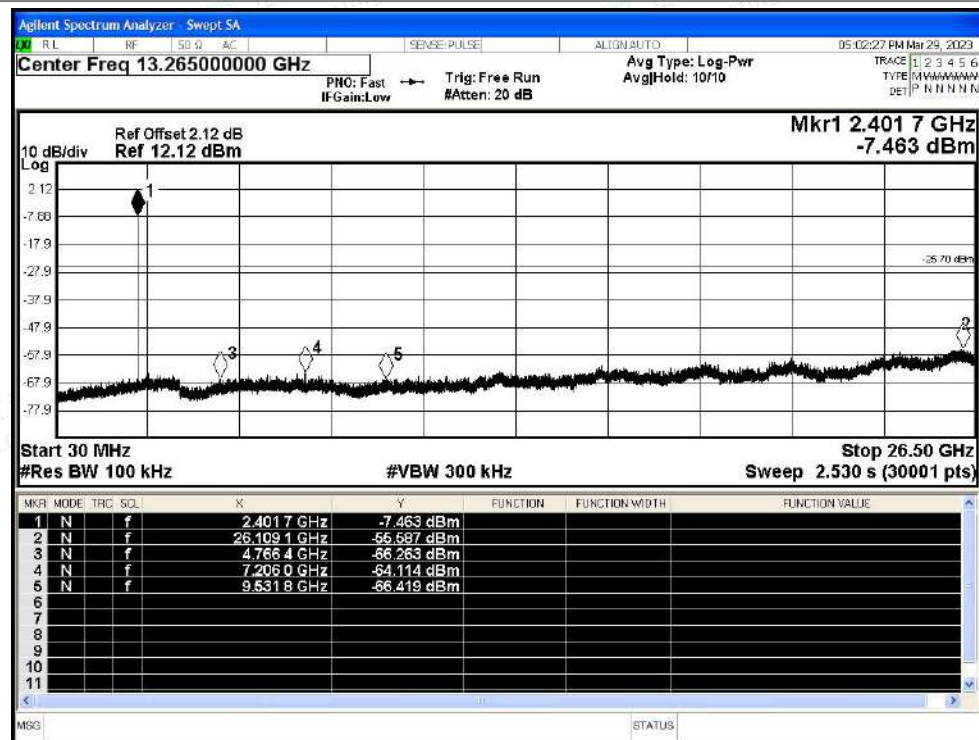


Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



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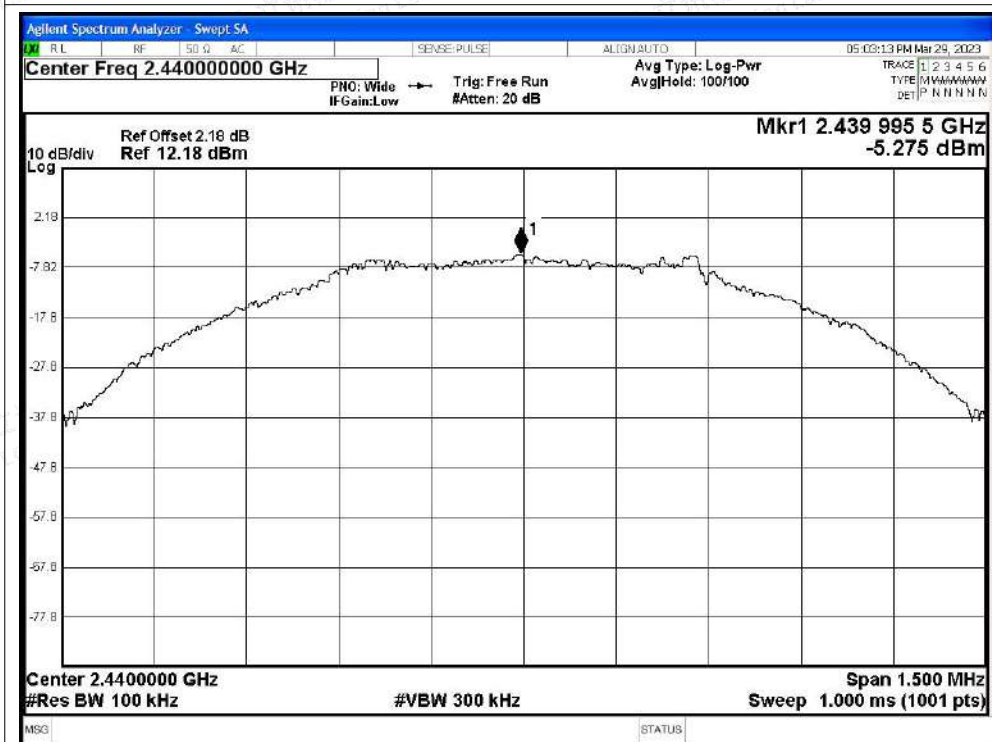
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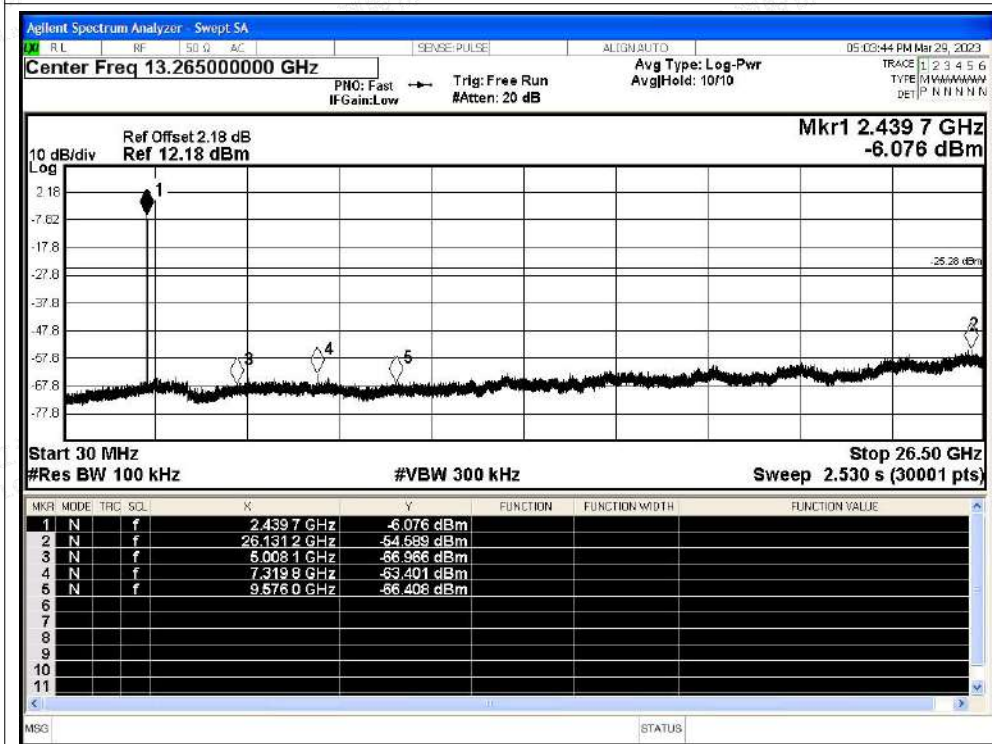
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Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref

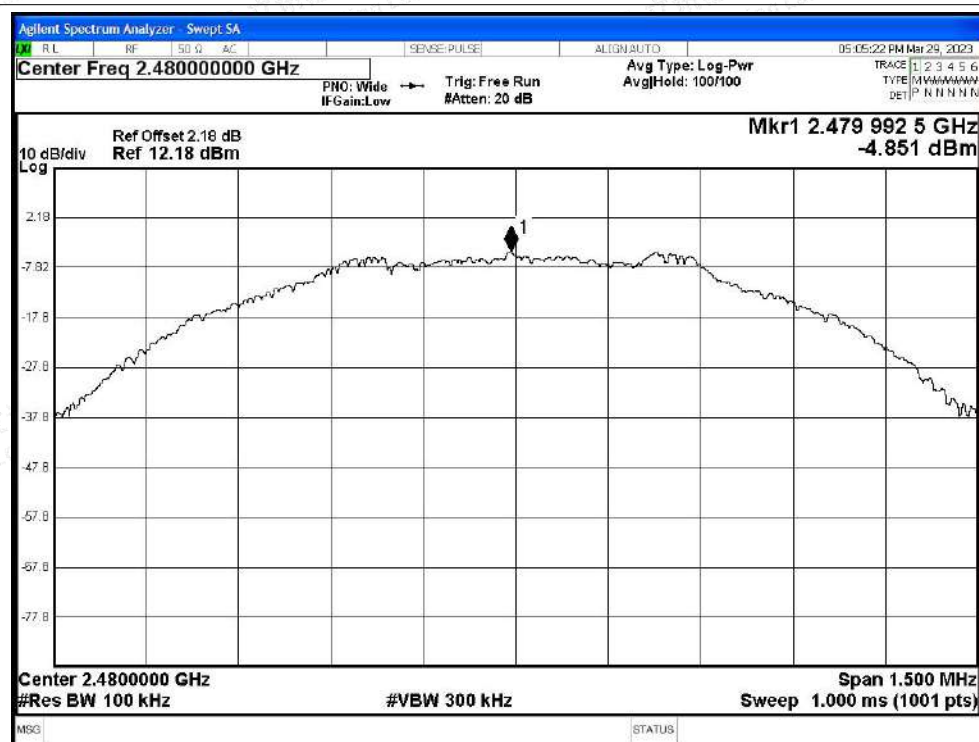


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

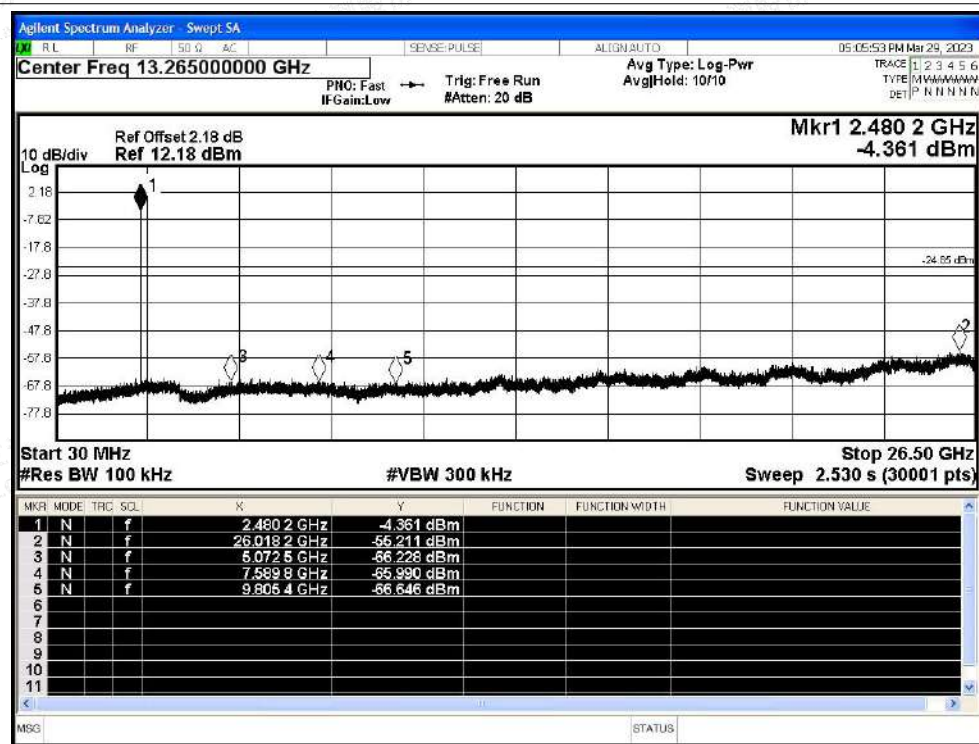




Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission

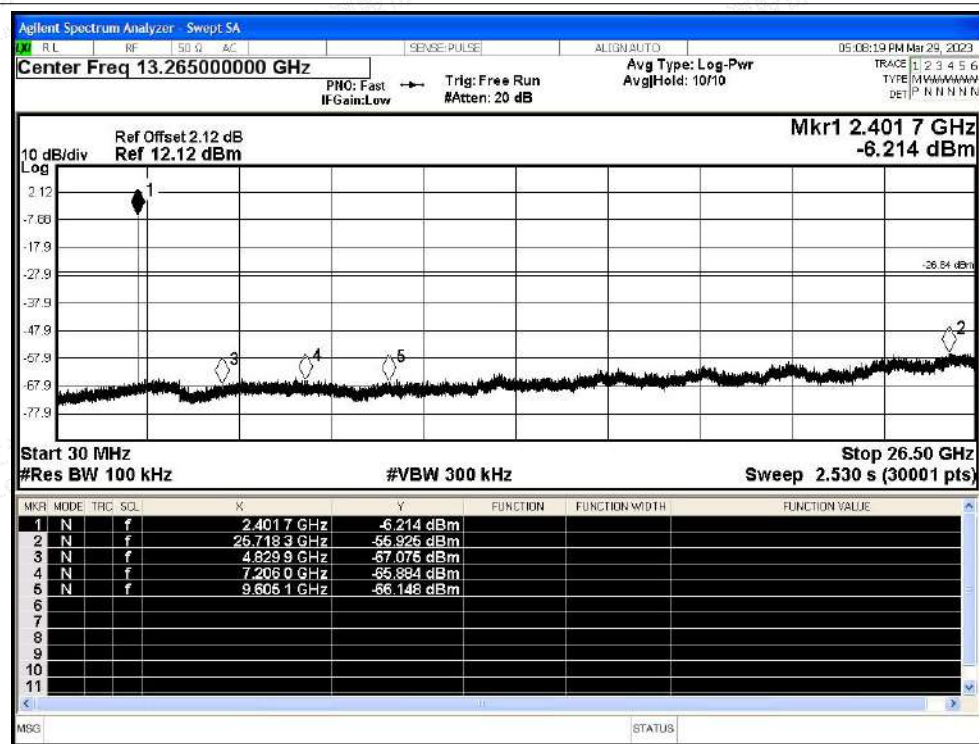




Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref

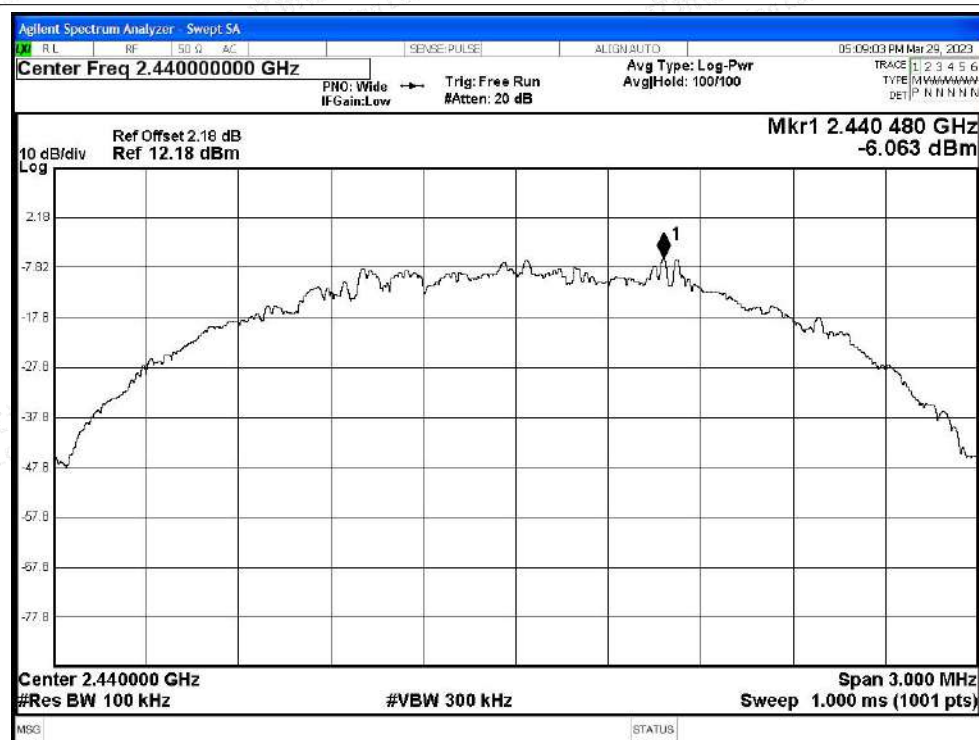


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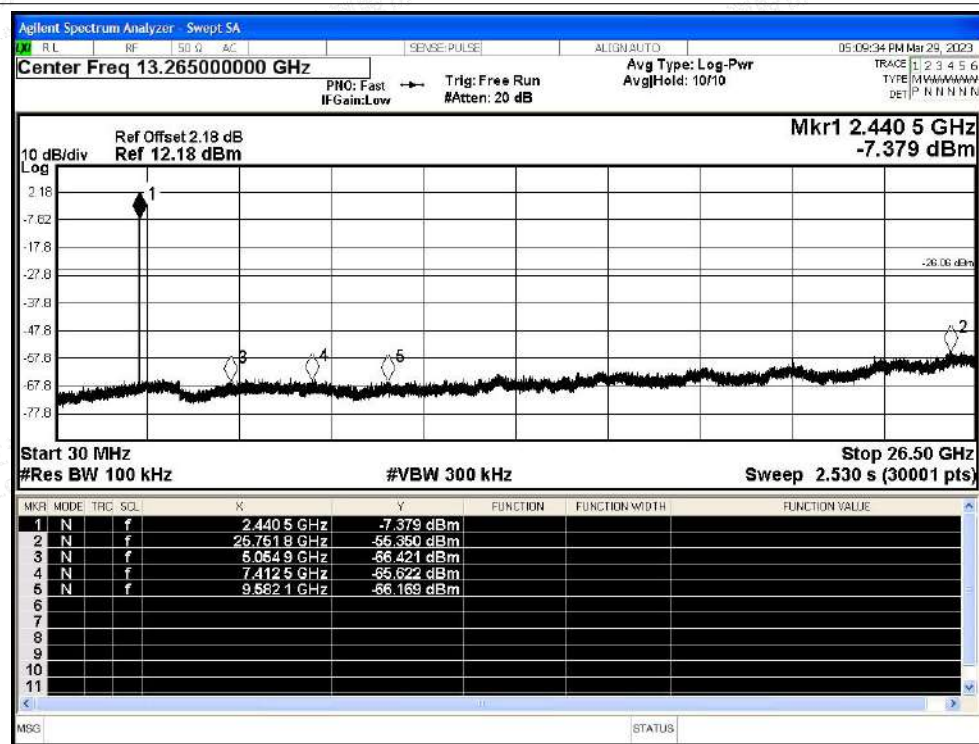




Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission

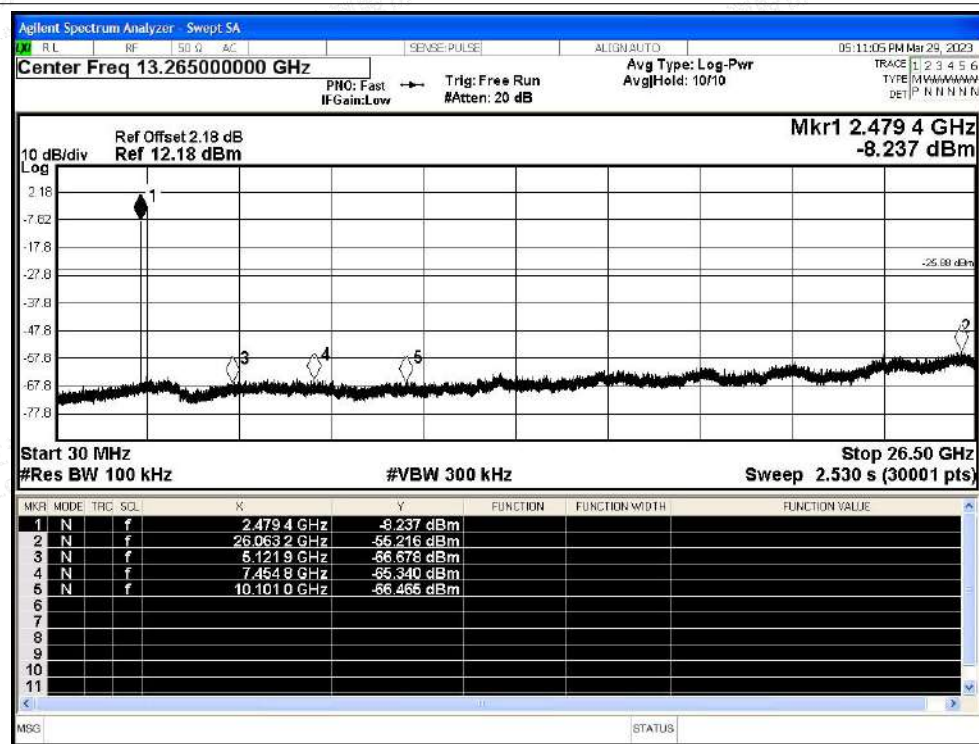




Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission





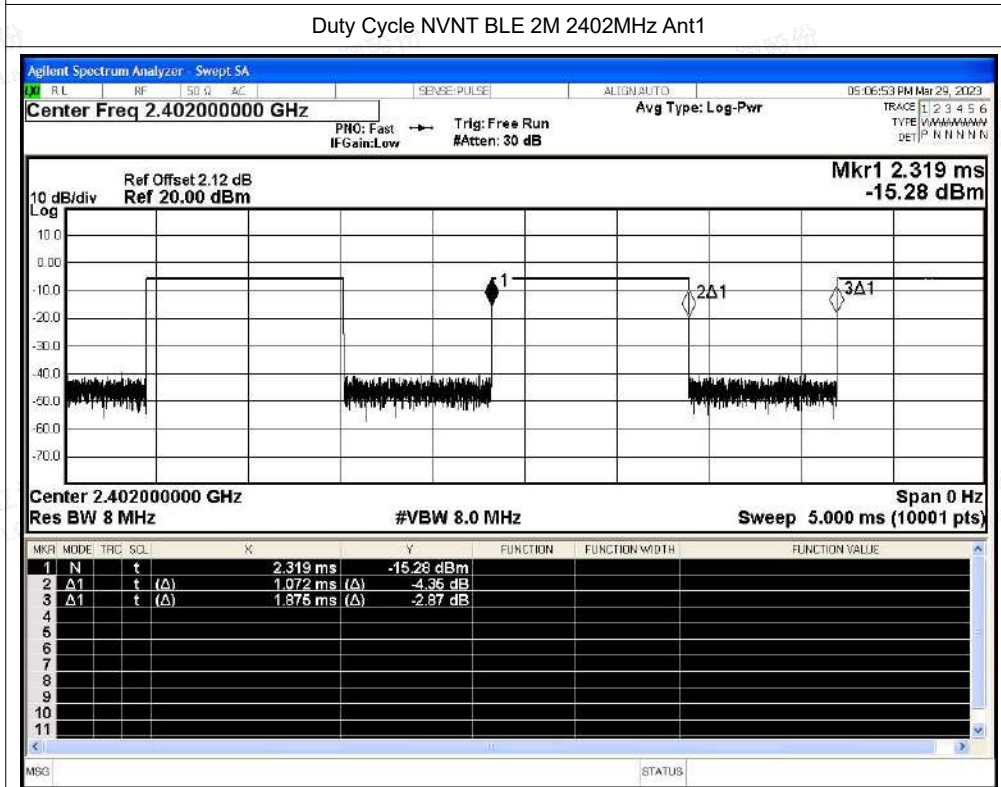
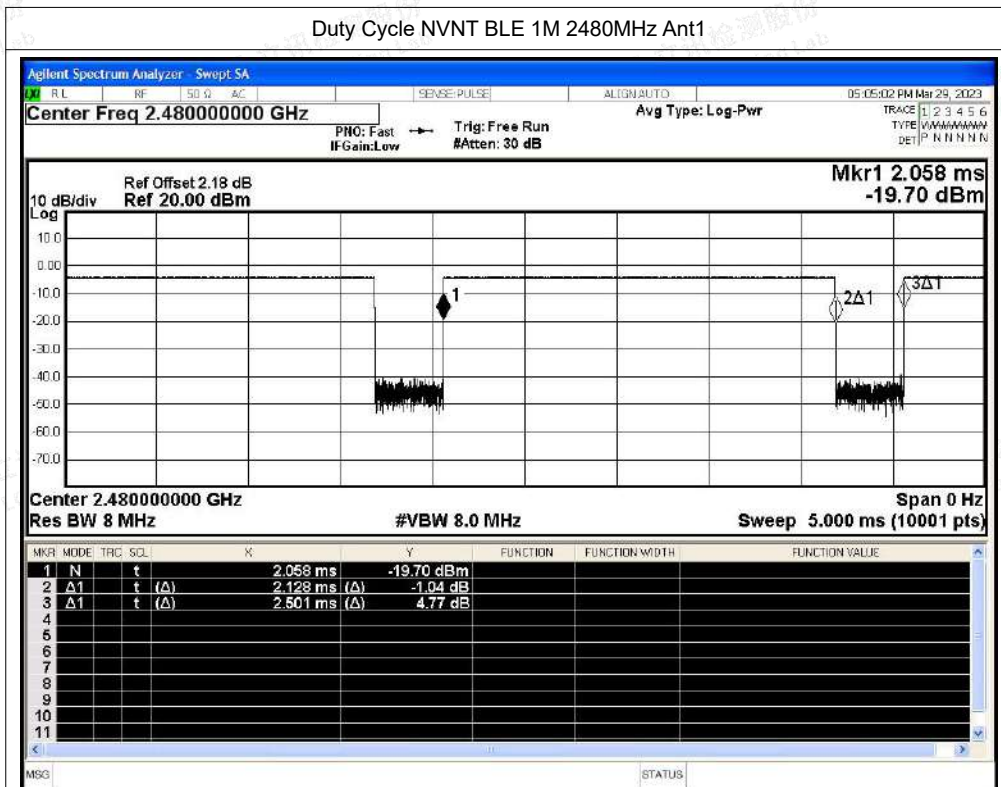
A.6 Duty Cycle

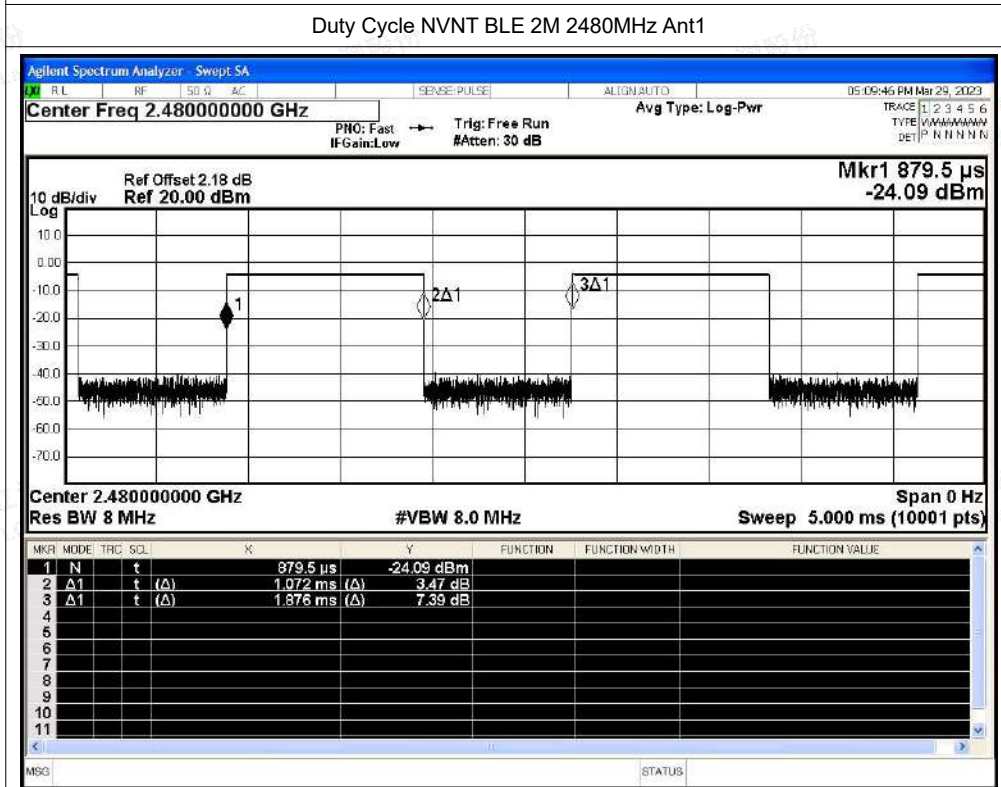
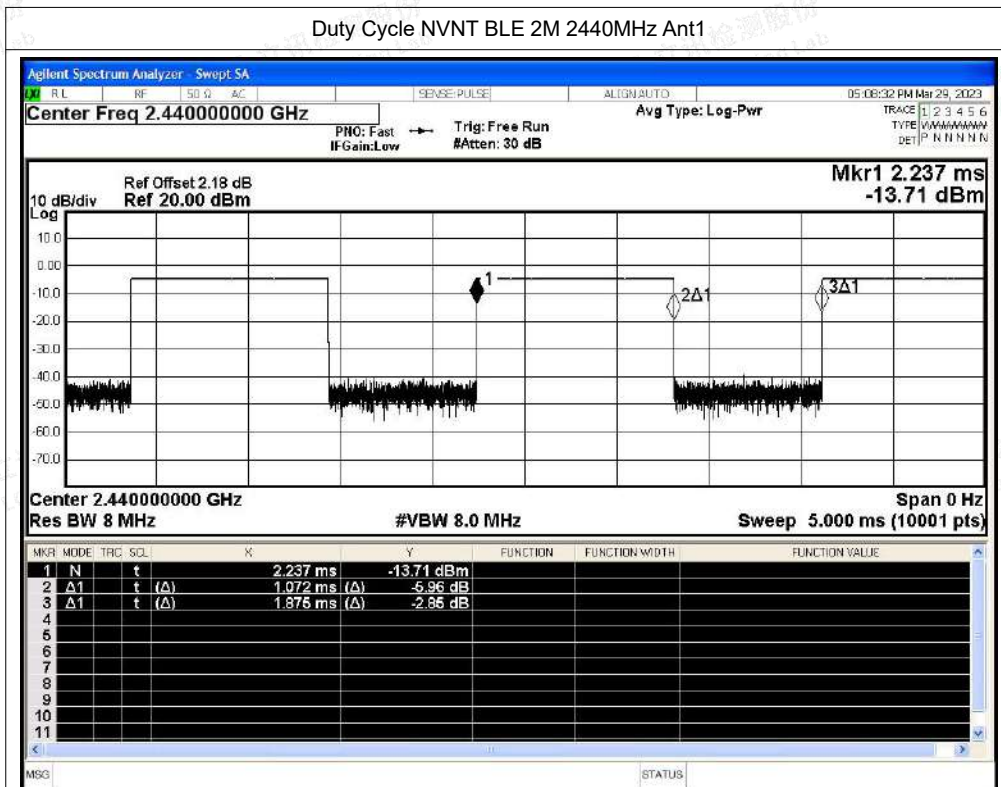
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	85.1	0.7	0.47
NVNT	BLE 1M	2440	Ant1	85.1	0.7	0.47
NVNT	BLE 1M	2480	Ant1	85.1	0.7	0.47
NVNT	BLE 2M	2402	Ant1	57.15	2.43	0.93
NVNT	BLE 2M	2440	Ant1	57.15	2.43	0.93
NVNT	BLE 2M	2480	Ant1	57.16	2.43	0.93



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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	-50.14	4.16	49.25	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-60.22	4.16	39.17	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2312.304	-48.11	4.16	51.28	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2385.456	-59.68	4.16	39.71	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.1	4.16	49.29	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-59.88	4.16	39.51	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-50.04	4.16	49.35	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-59.61	4.16	39.78	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2486.104	-47.24	4.16	52.15	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2490.16	-59.43	4.16	39.96	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-49.54	4.16	49.85	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-59.67	4.16	39.72	Average	54	Pass
NVNT	BLE 2M	2402	Ant1	2310	-50.73	4.16	48.66	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2310	-60.06	4.16	39.33	Average	54	Pass
NVNT	BLE 2M	2402	Ant1	2353.776	-46.9	4.16	52.49	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2388.528	-59.41	4.16	39.98	Average	54	Pass
NVNT	BLE 2M	2402	Ant1	2390	-51.24	4.16	48.15	Peak	74	Pass
NVNT	BLE 2M	2402	Ant1	2390	-59.7	4.16	39.69	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2483.5	-47.78	4.16	51.61	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2483.5	-57.87	4.16	41.52	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2490.304	-47.19	4.16	52.20	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2483.512	-57.87	4.16	41.52	Average	54	Pass
NVNT	BLE 2M	2480	Ant1	2500	-50.82	4.16	48.57	Peak	74	Pass
NVNT	BLE 2M	2480	Ant1	2500	-59.38	4.16	40.01	Average	54	Pass



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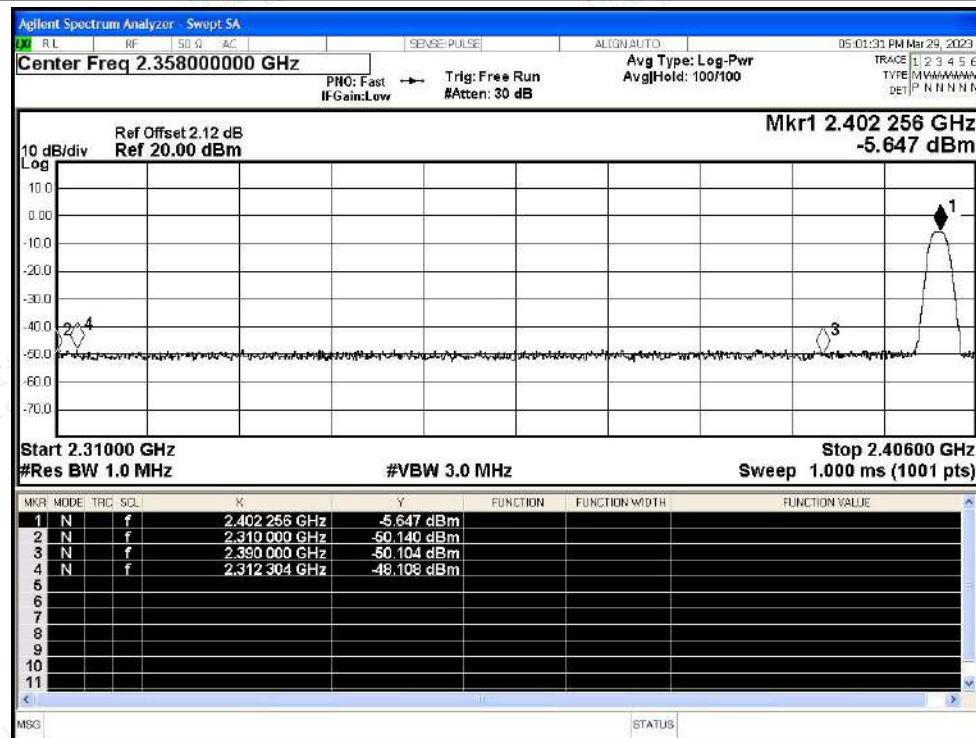
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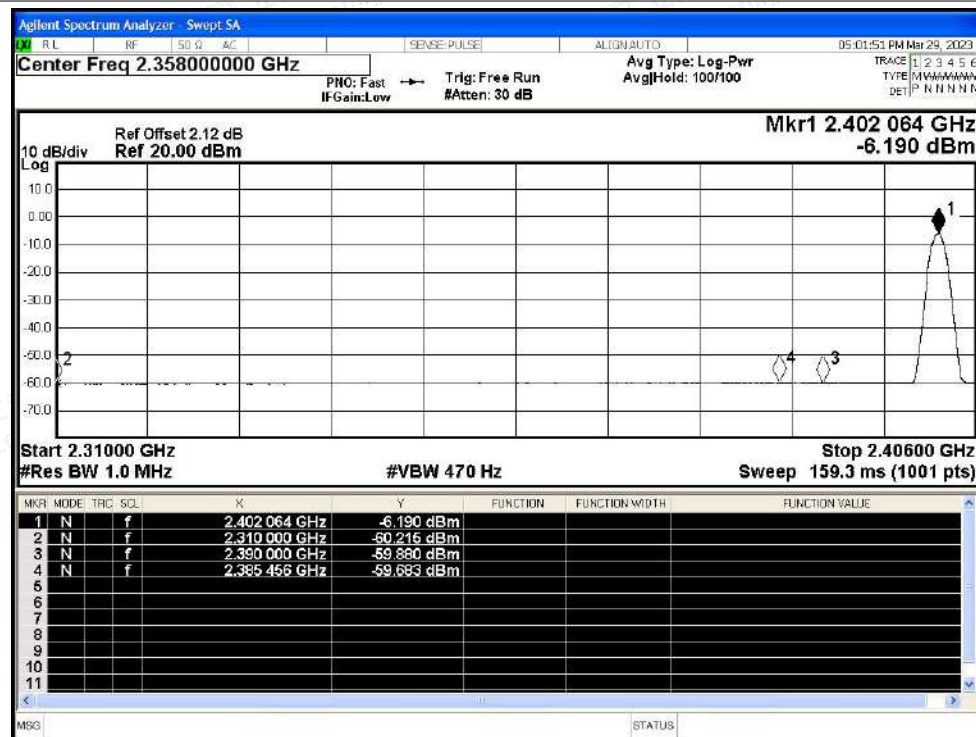


Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1M 2402MHz Ant1 Average

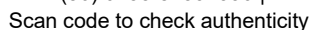
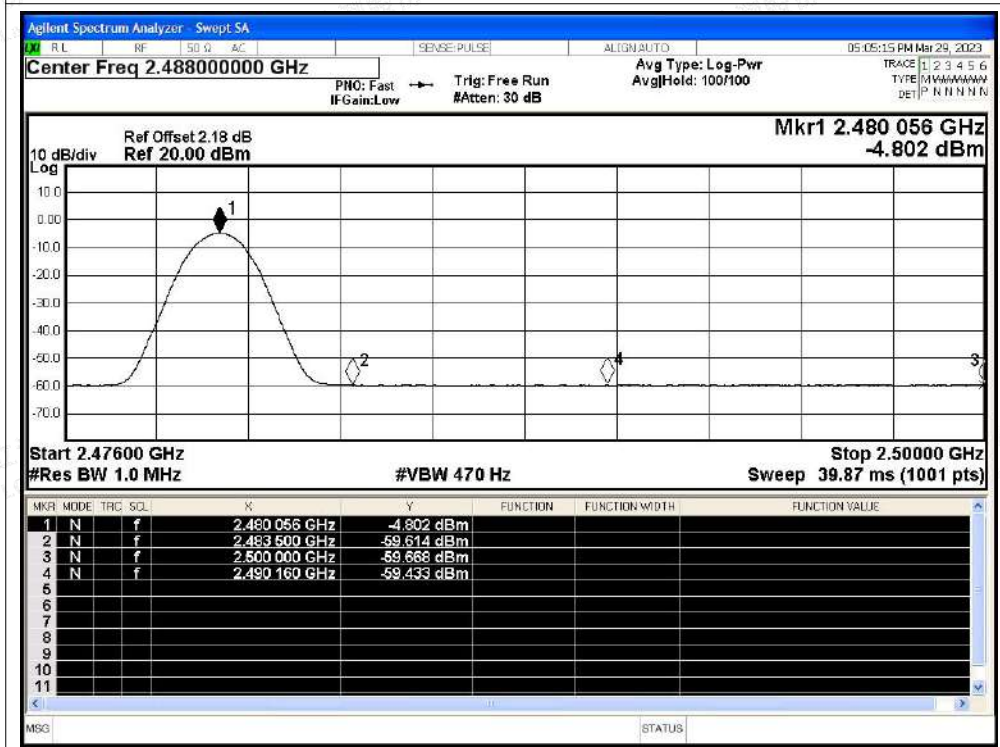
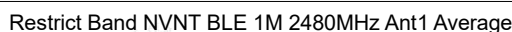


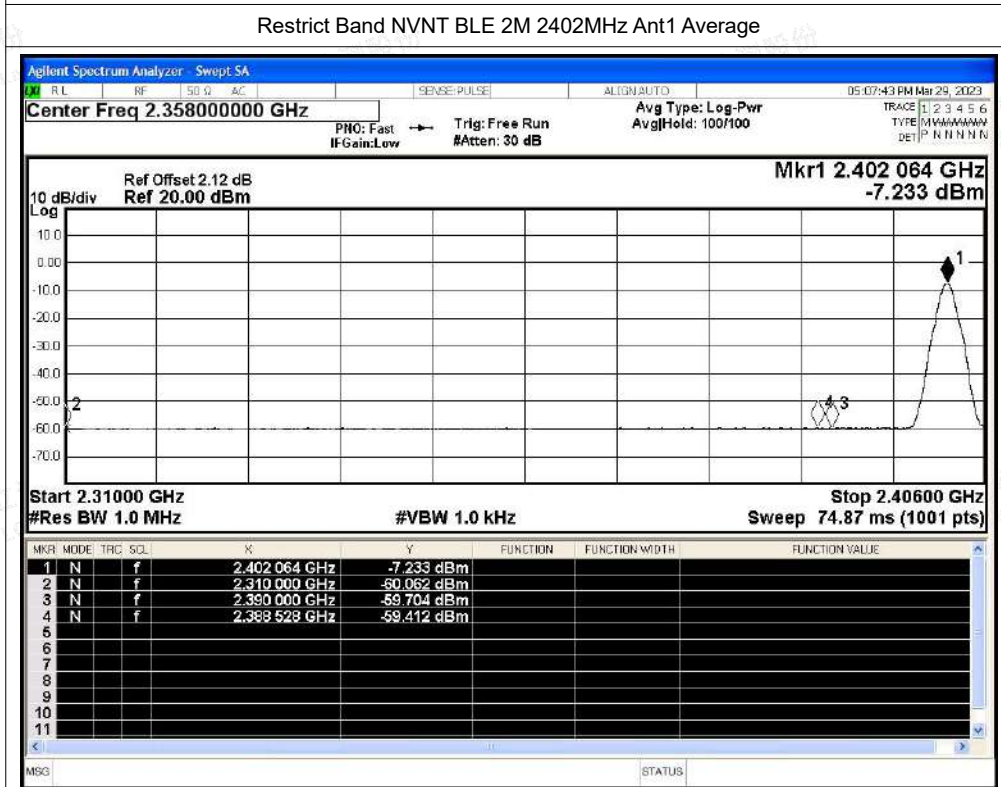
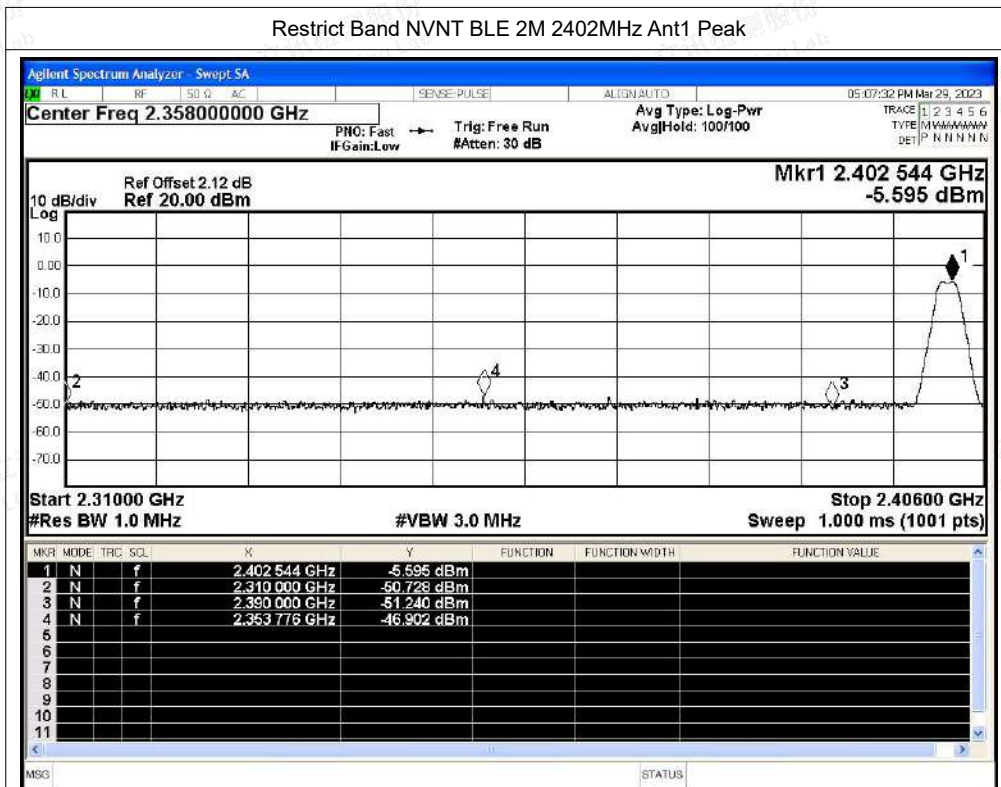
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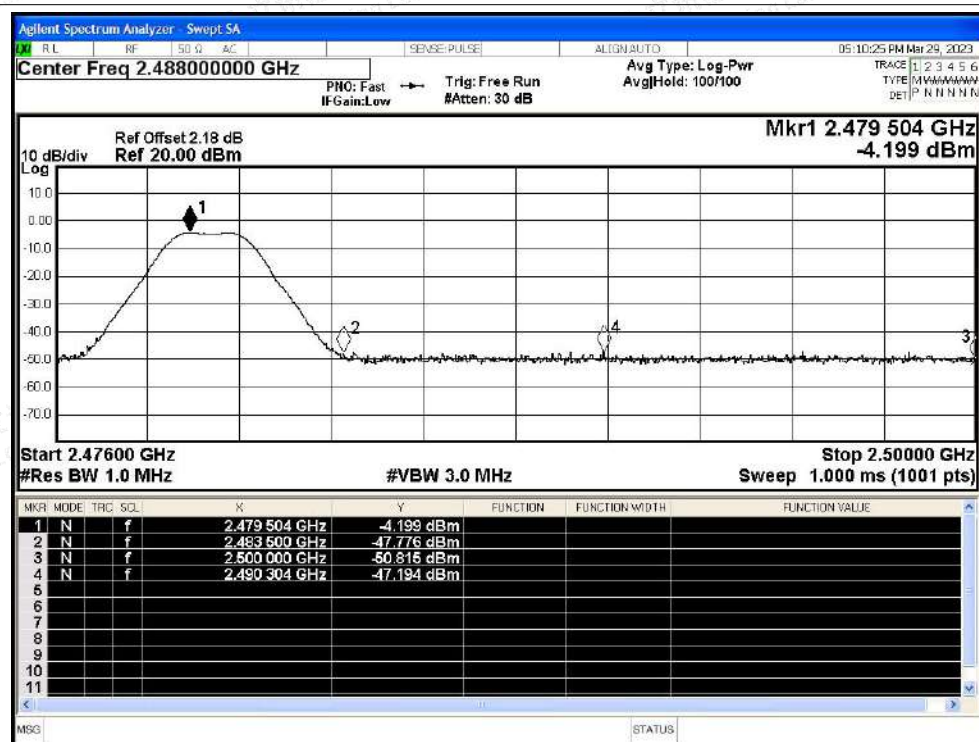
Scan code to check authenticity



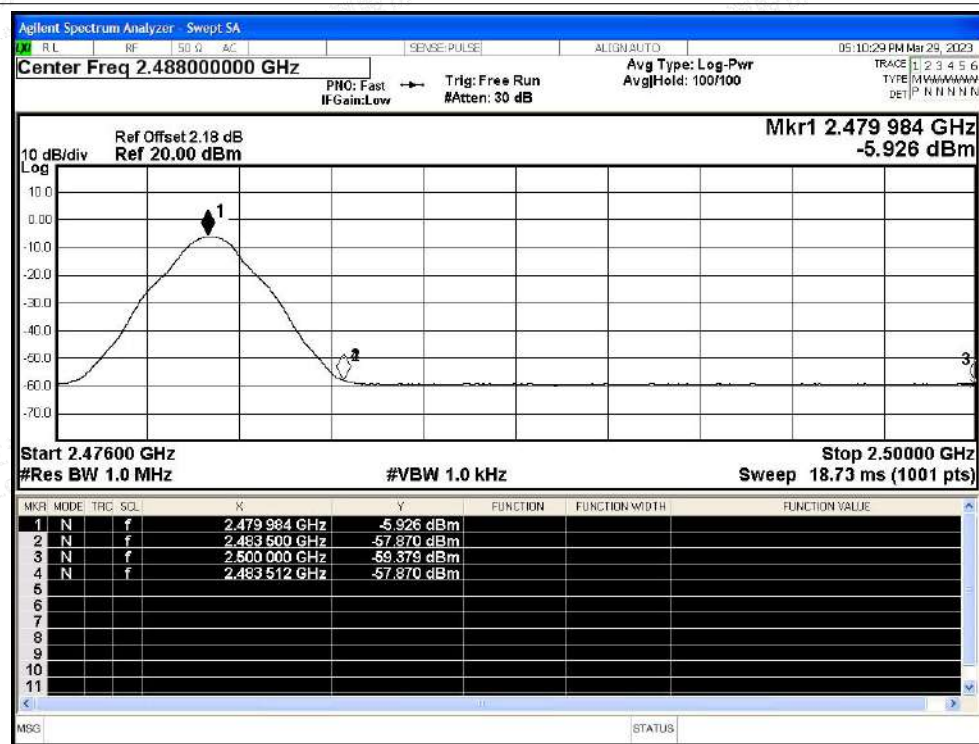




Restrict Band NVNT BLE 2M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2480MHz Ant1 Average



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