



Appendix C

RF Test Data for Zigbee(Conducted Measurement)

Product Name: Smart Gateway

Test Model: GBZ01

Environmental Conditions

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



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C.1 -6dB Bandwidth

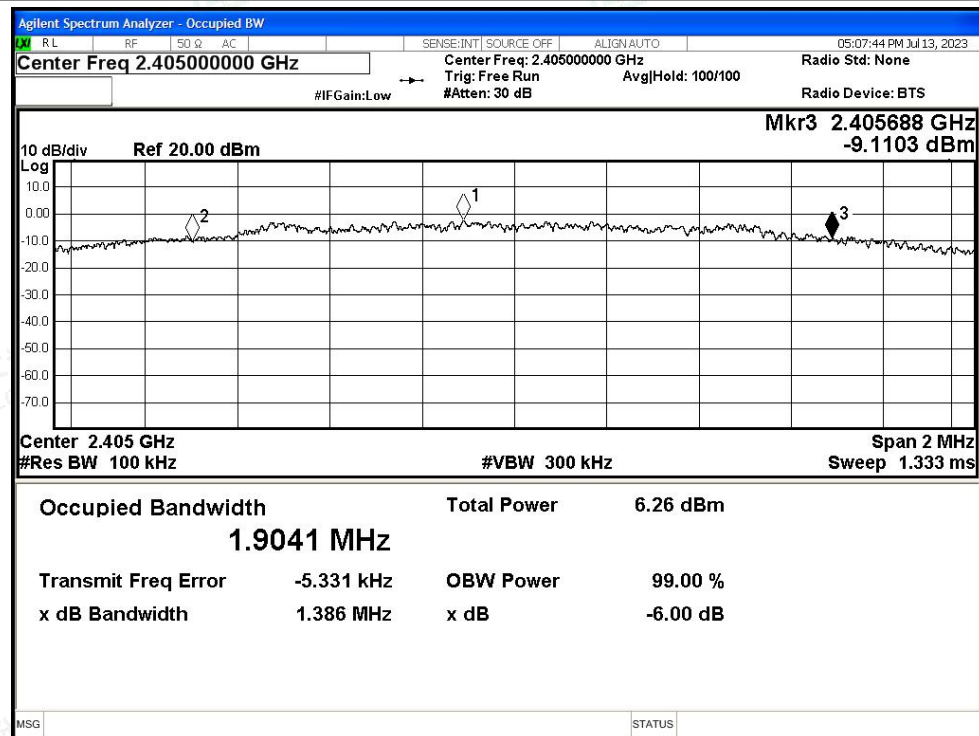
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	ZIGB	2405	Ant1	1.386	0.5	Pass
NVNT	ZIGB	2440	Ant1	1.467	0.5	Pass
NVNT	ZIGB	2480	Ant1	1.454	0.5	Pass



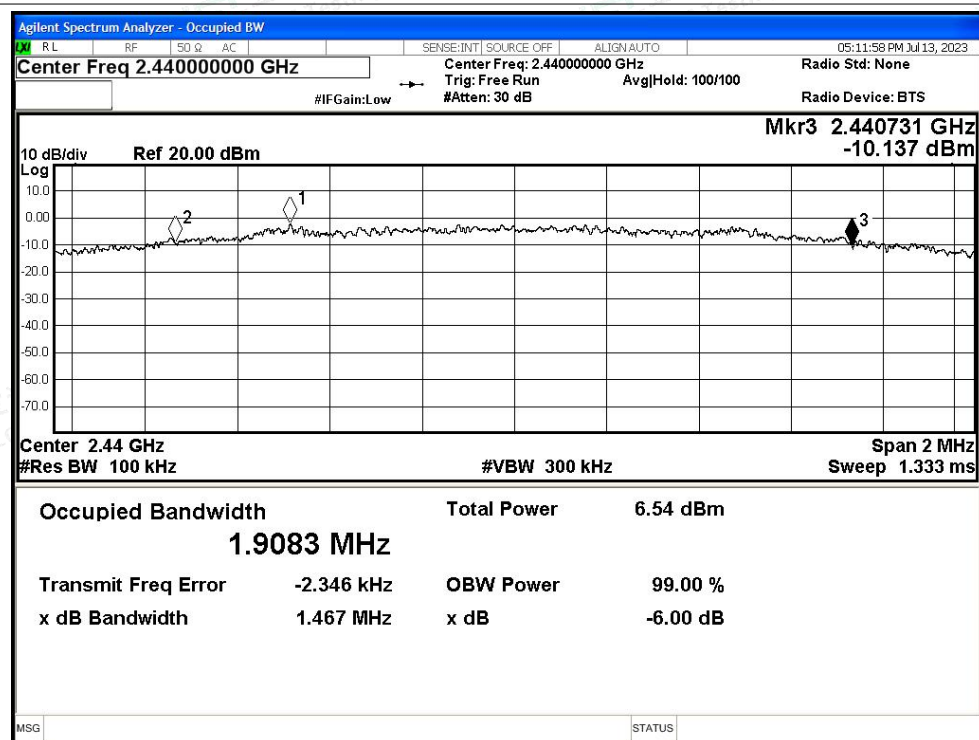


Test Graphs

-6dB Bandwidth NVNT ZIGB 2405MHz Ant1



-6dB Bandwidth NVNT ZIGB 2440MHz Ant1

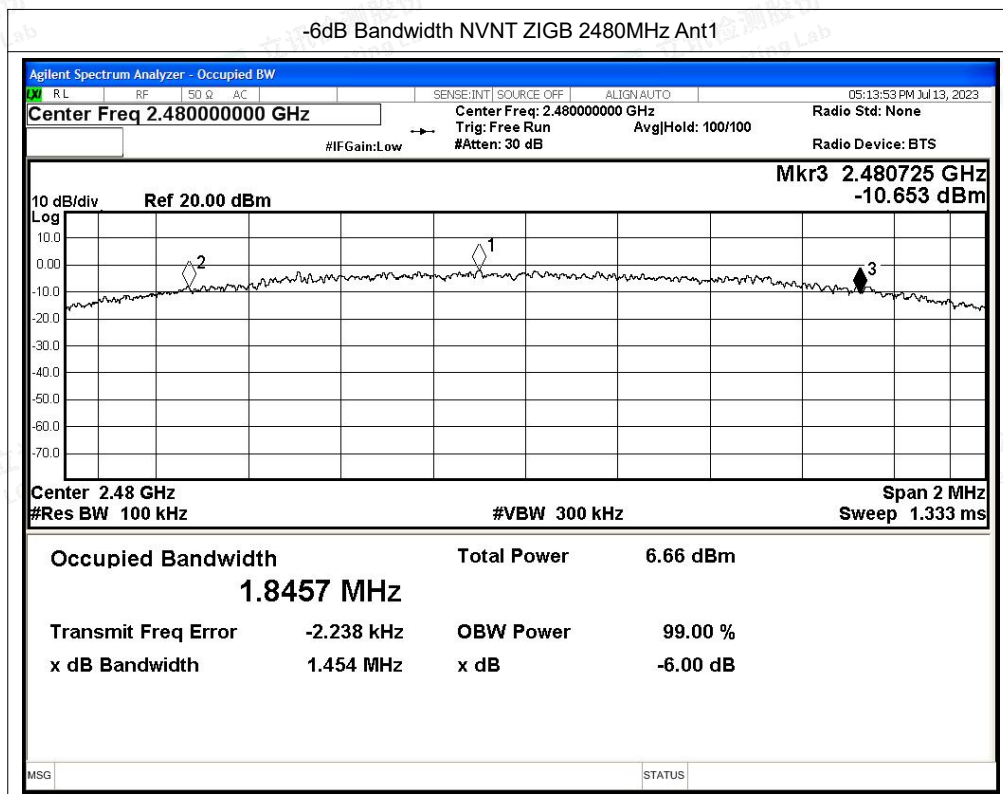


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C.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	ZIGB	2405	Ant1	-0.17	30	Pass
NVNT	ZIGB	2440	Ant1	0.07	30	Pass
NVNT	ZIGB	2480	Ant1	0.18	30	Pass

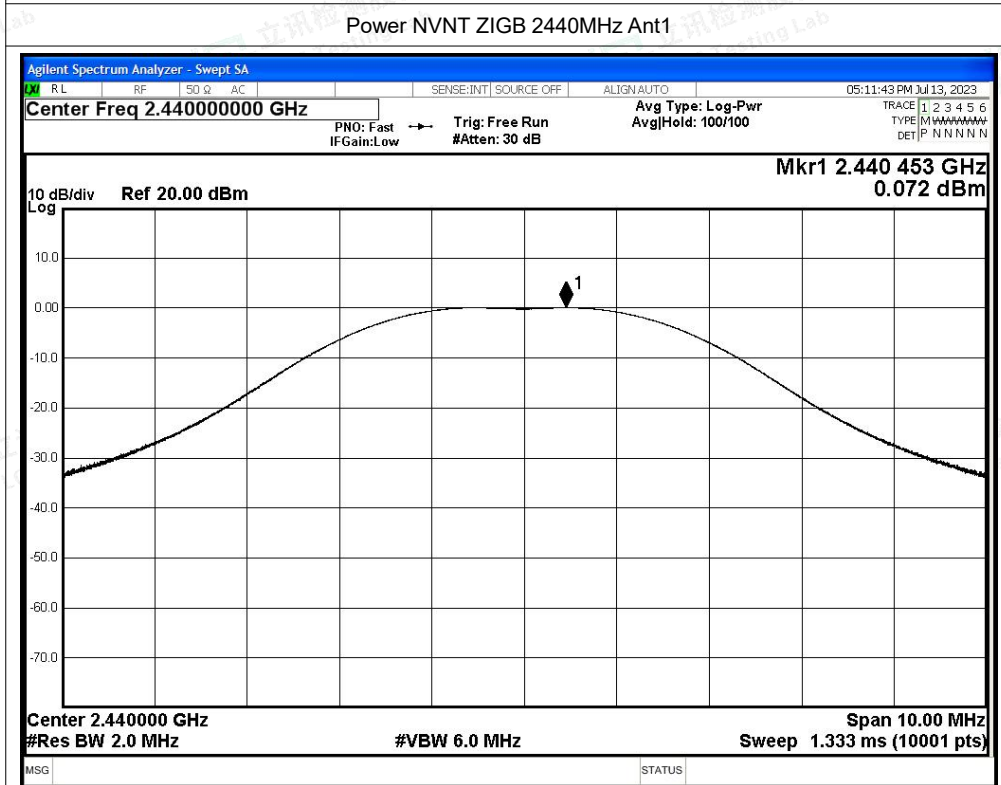
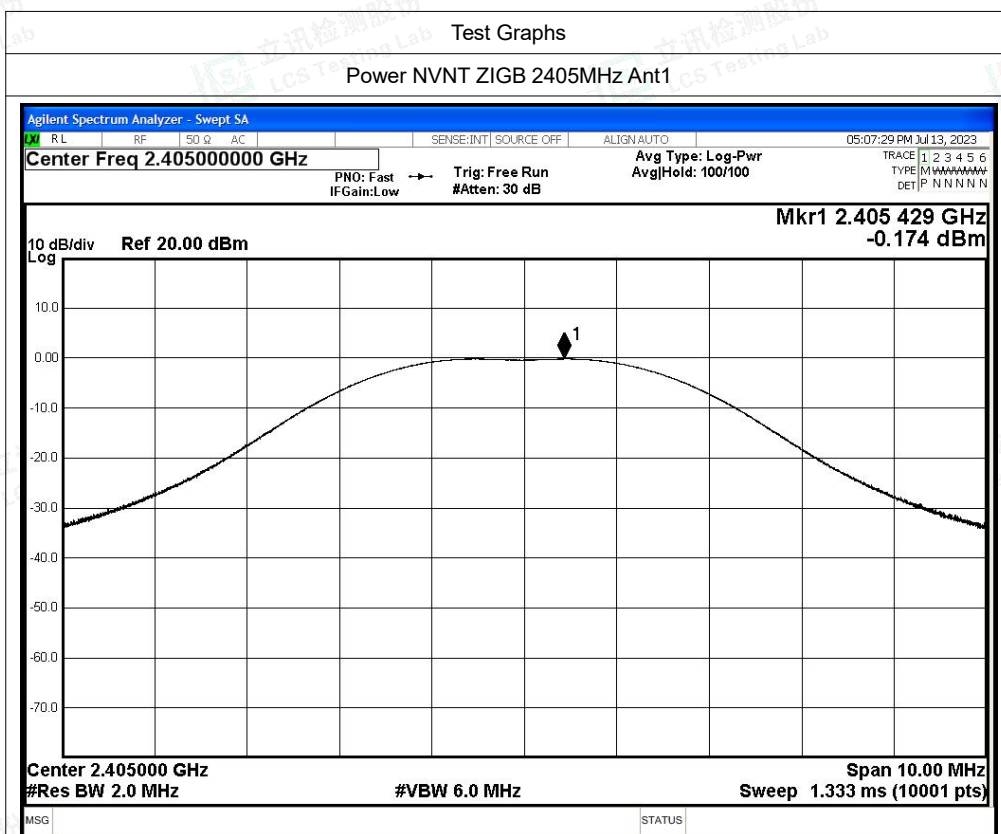


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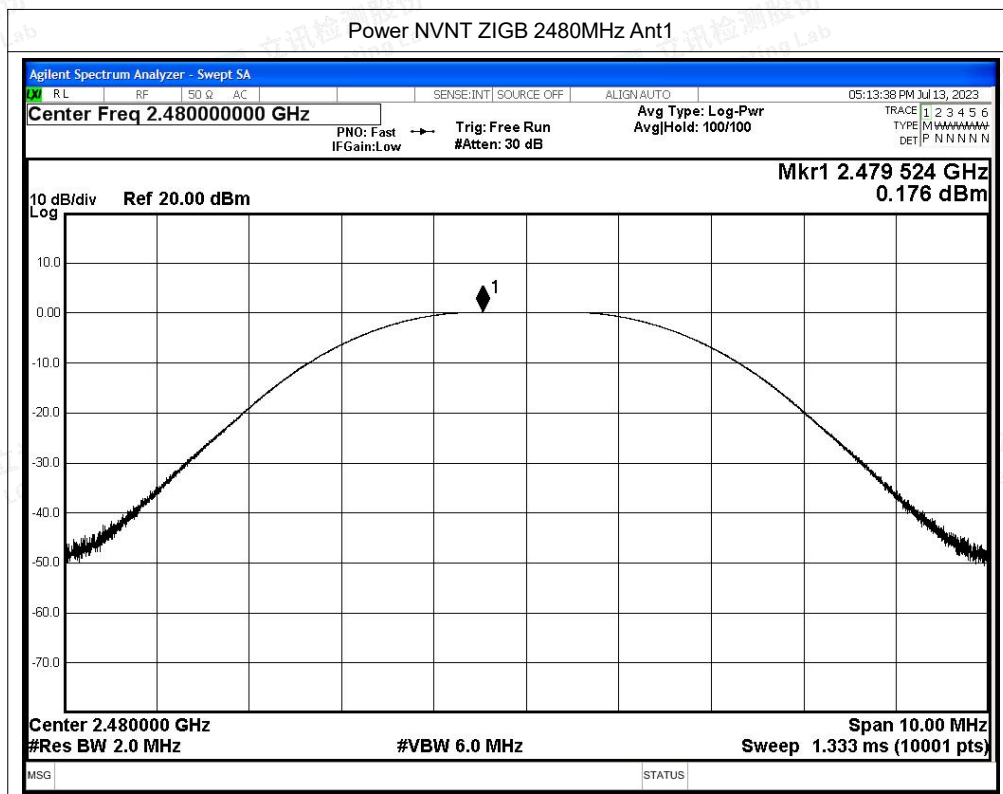


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C.3 Maximum Power Spectral Density Level

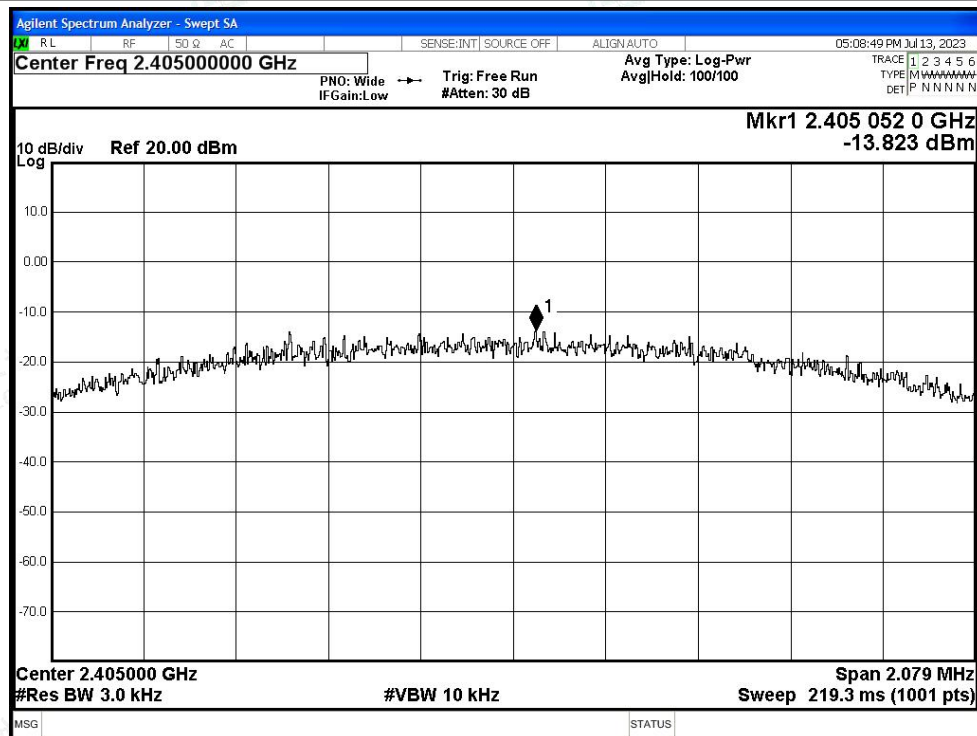
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	ZIGB	2405	Ant1	-13.82	8	Pass
NVNT	ZIGB	2440	Ant1	-12.91	8	Pass
NVNT	ZIGB	2480	Ant1	-11.71	8	Pass



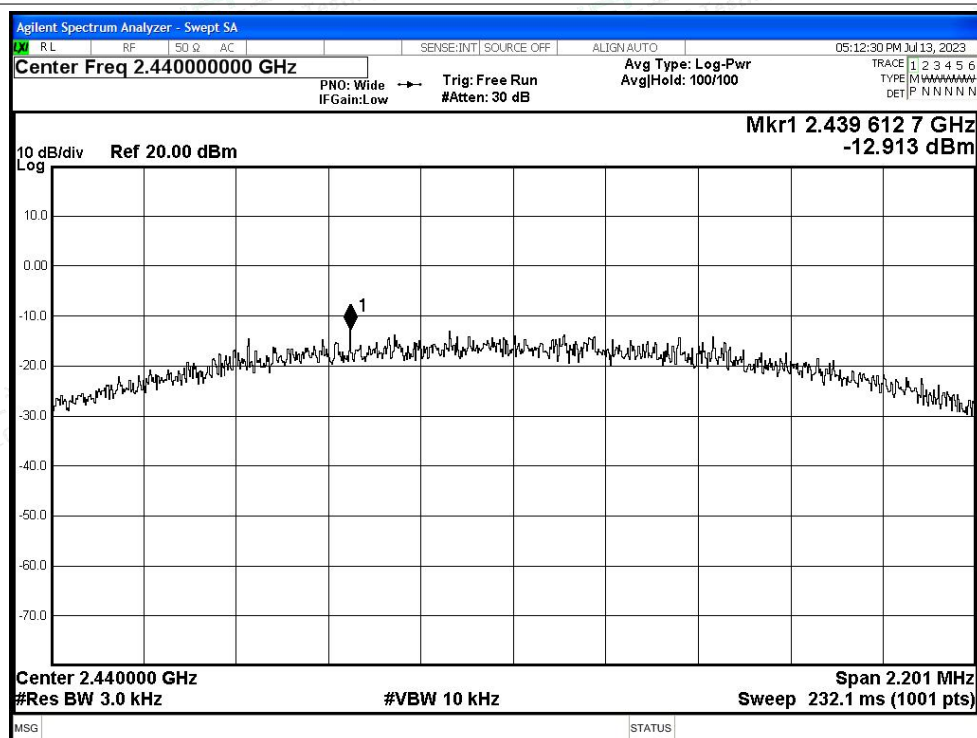


Test Graphs

PSD NVNT ZIGB 2405MHz Ant1



PSD NVNT ZIGB 2440MHz Ant1

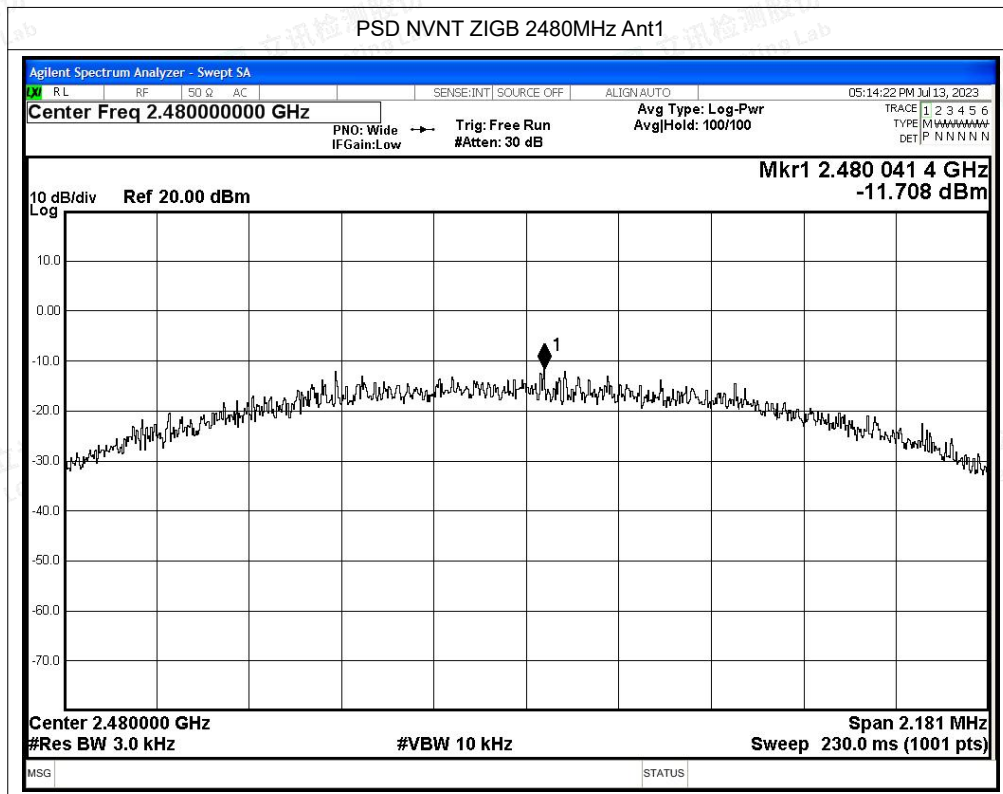


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C.4 Band Edge

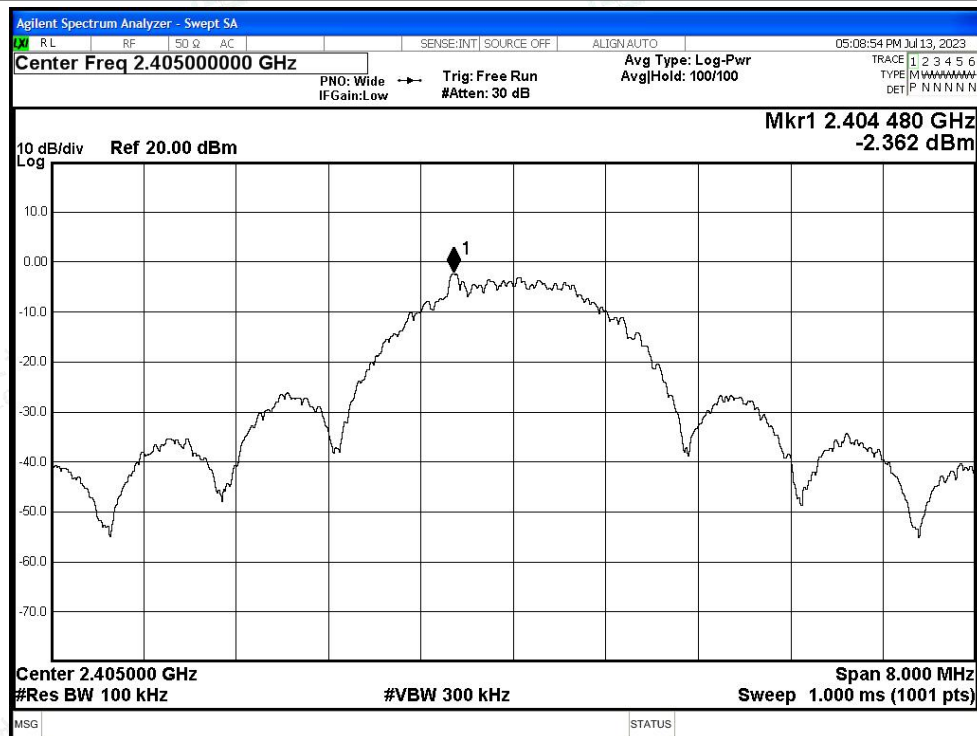
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	ZIGB	2405	Ant1	-43.37	-20	Pass
NVNT	ZIGB	2480	Ant1	-56.21	-20	Pass



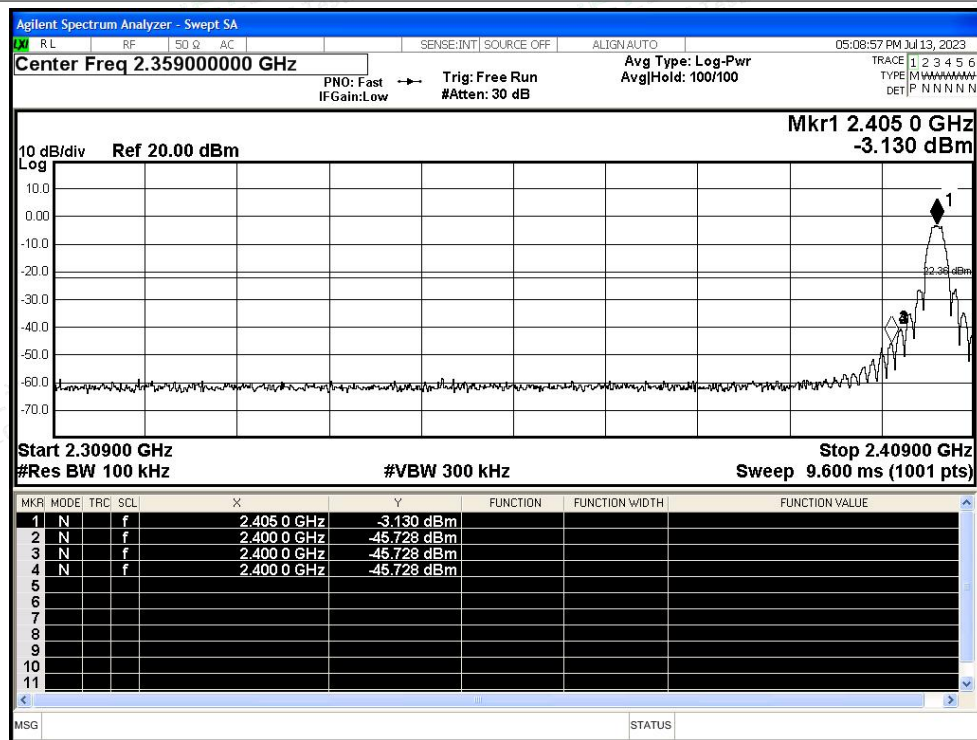


Test Graphs

Band Edge NVNT ZIGB 2405MHz Ant1 Ref



Band Edge NVNT ZIGB 2405MHz Ant1 Emission



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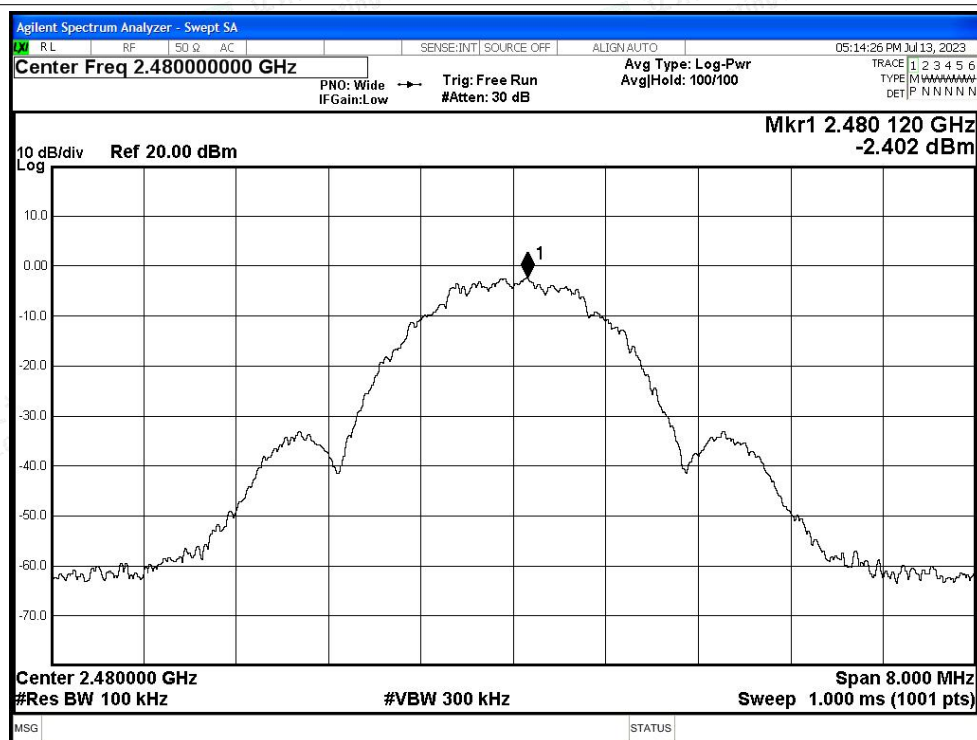
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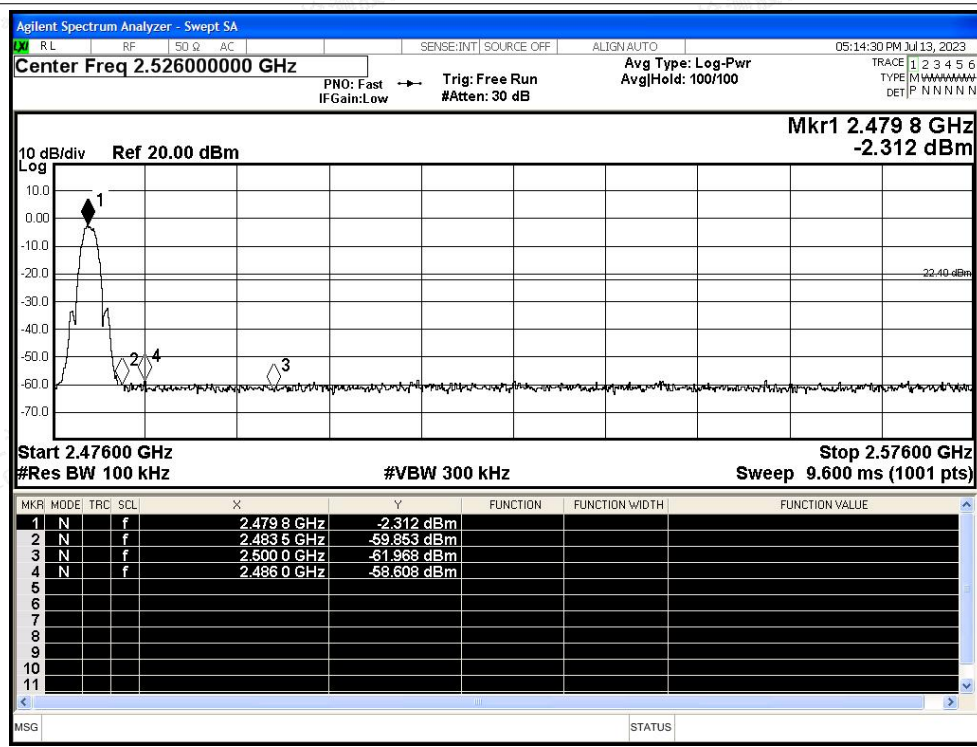
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Band Edge NVNT ZIGB 2480MHz Ant1 Ref



Band Edge NVNT ZIGB 2480MHz Ant1 Emission



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C.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	ZIGB	2405	Ant1	-53.42	-20	Pass
NVNT	ZIGB	2440	Ant1	-53.89	-20	Pass
NVNT	ZIGB	2480	Ant1	-56.31	-20	Pass

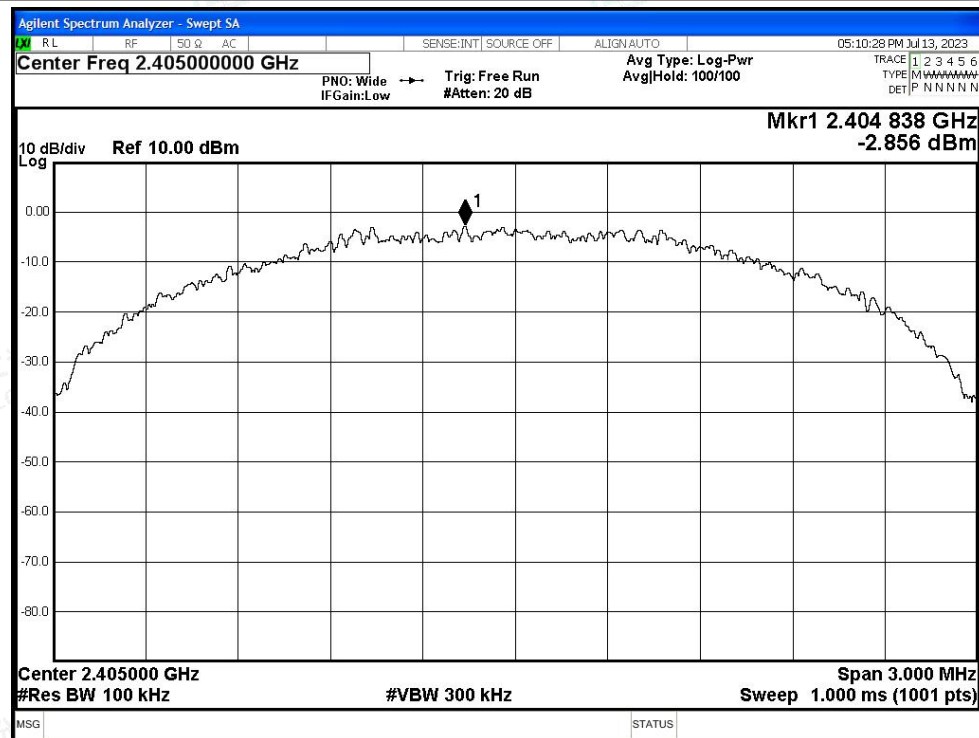


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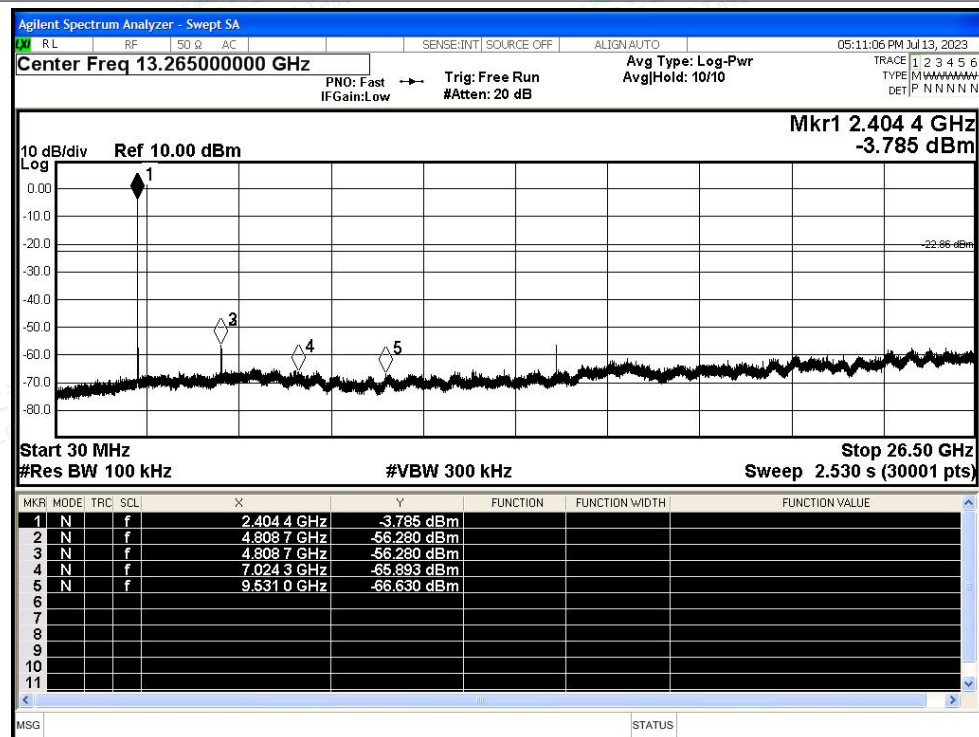


Test Graphs

Tx. Spurious NVNT ZIGB 2405MHz Ant1 Ref



Tx. Spurious NVNT ZIGB 2405MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

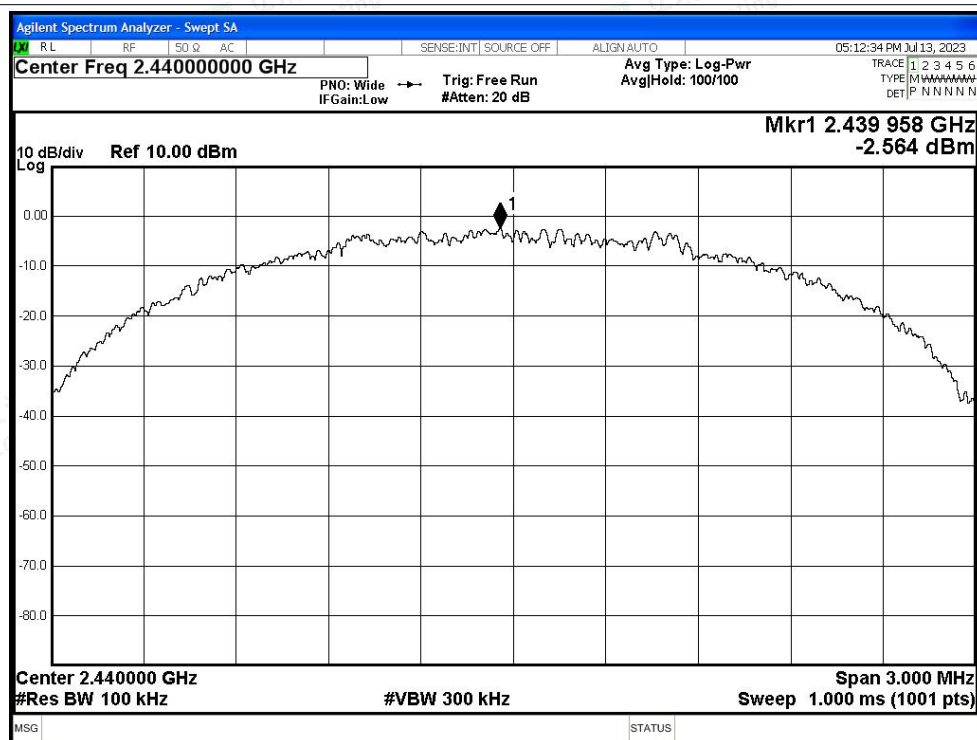
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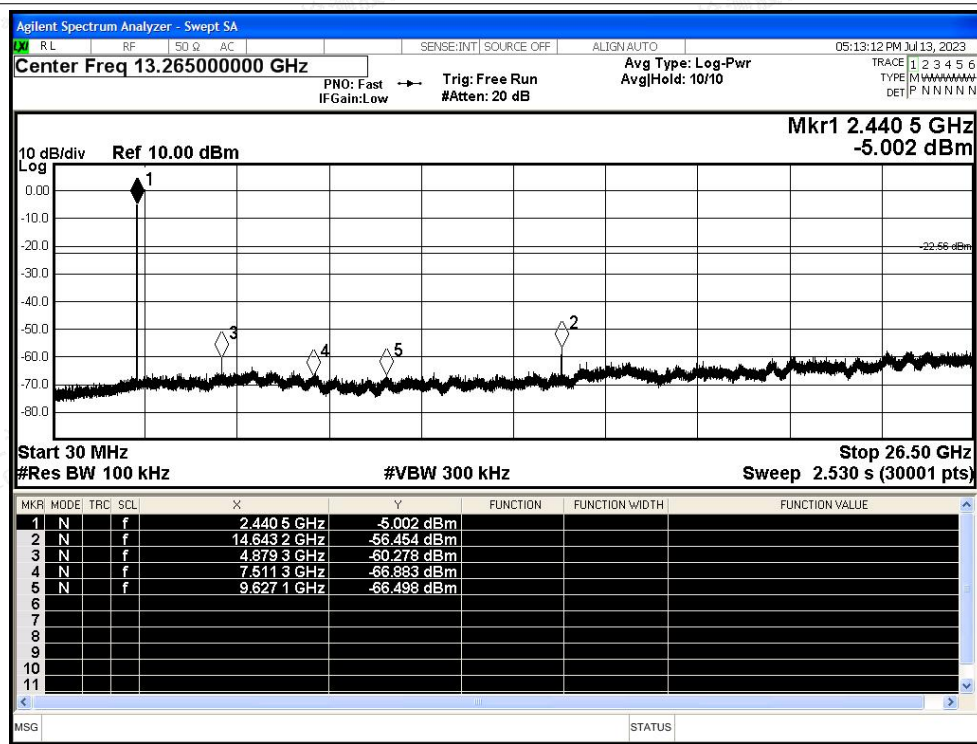
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Tx. Spurious NVNT ZIGB 2440MHz Ant1 Ref



Tx. Spurious NVNT ZIGB 2440MHz Ant1 Emission



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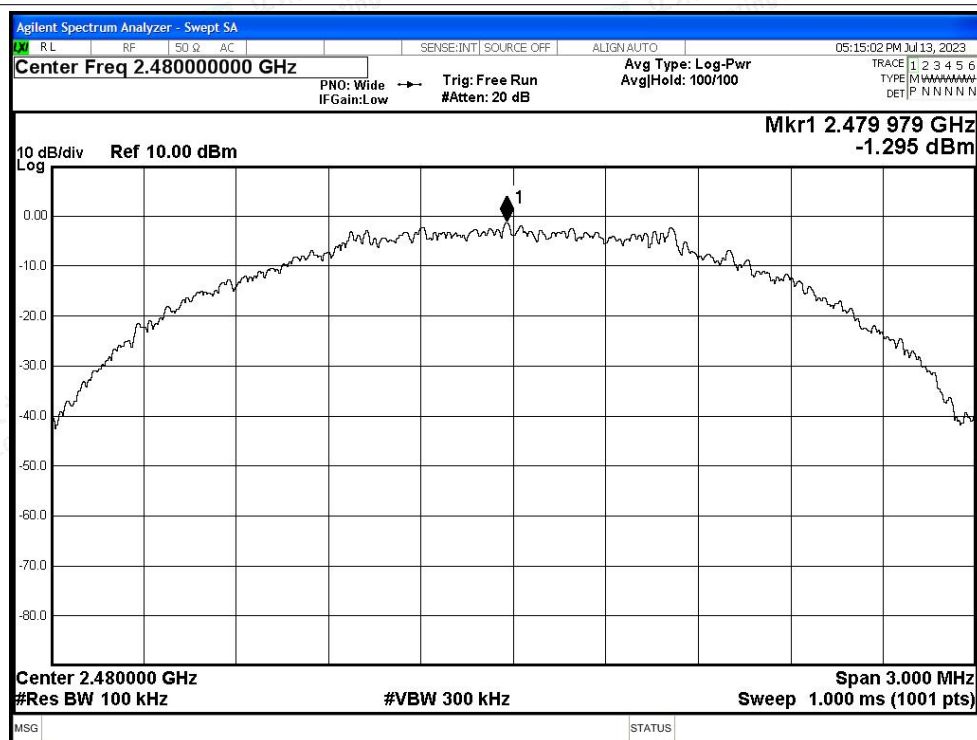
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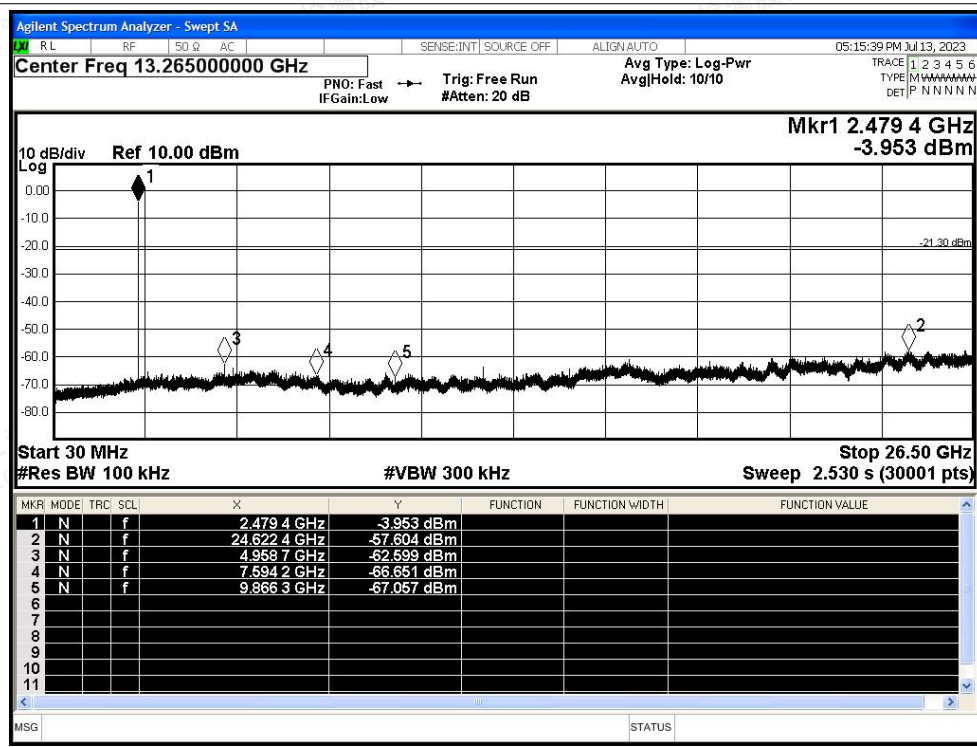
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Tx. Spurious NVNT ZIGB 2480MHz Ant1 Ref



Tx. Spurious NVNT ZIGB 2480MHz Ant1 Emission



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C.6 Duty Cycle

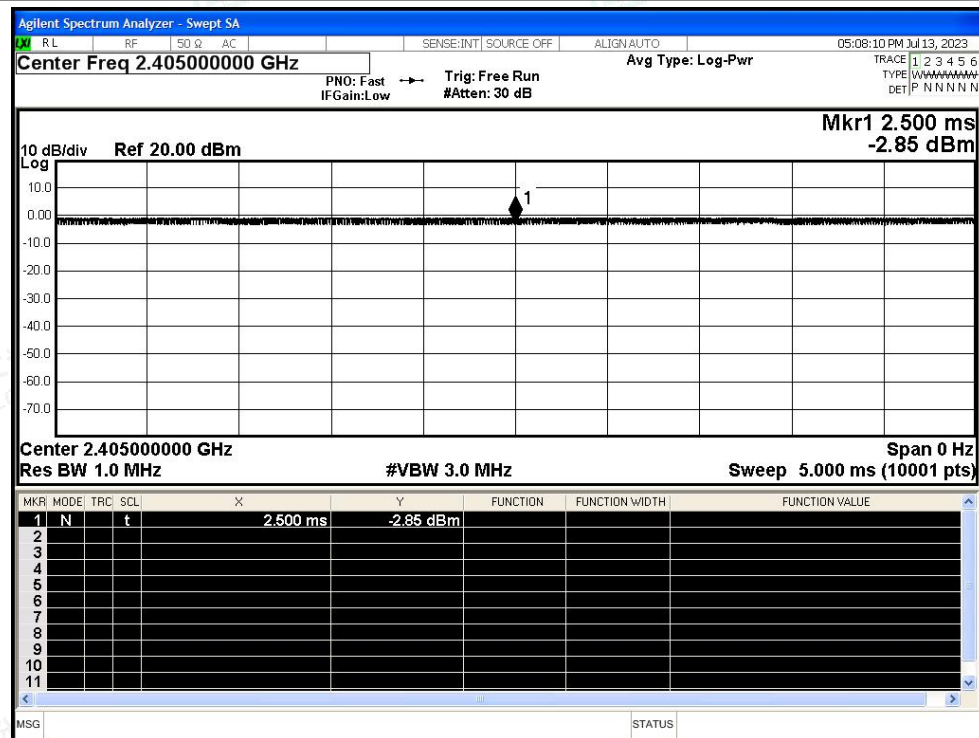
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ZIGB	2405	Ant1	100	0	0
NVNT	ZIGB	2440	Ant1	100	0	0
NVNT	ZIGB	2480	Ant1	100	0	0



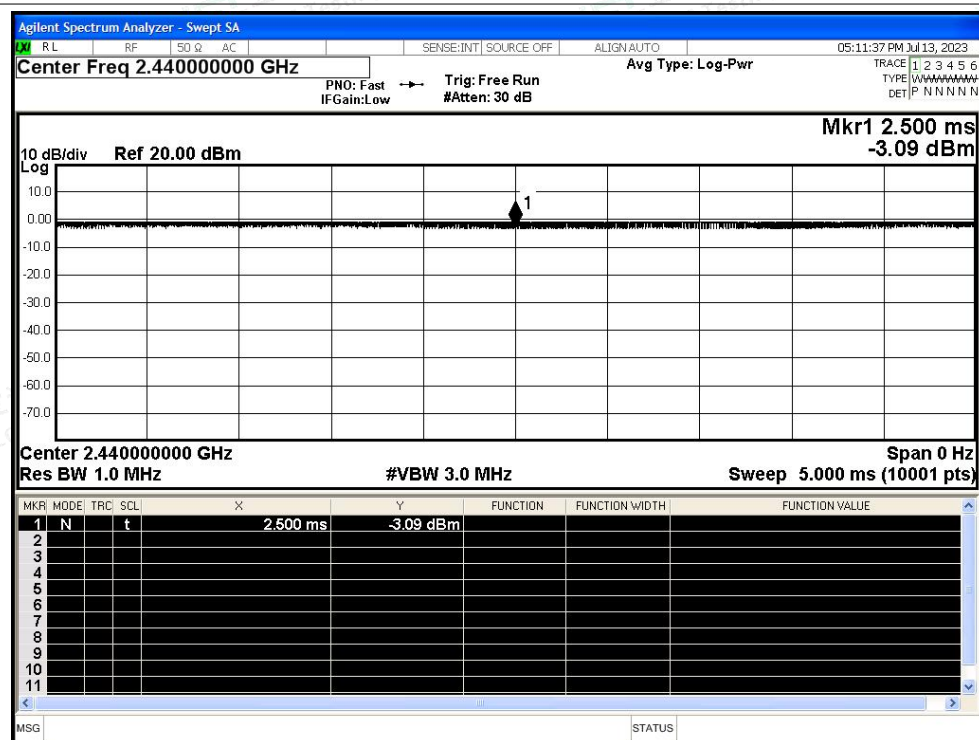


Test Graphs

Duty Cycle NVNT ZIGB 2405MHz Ant1



Duty Cycle NVNT ZIGB 2440MHz Ant1

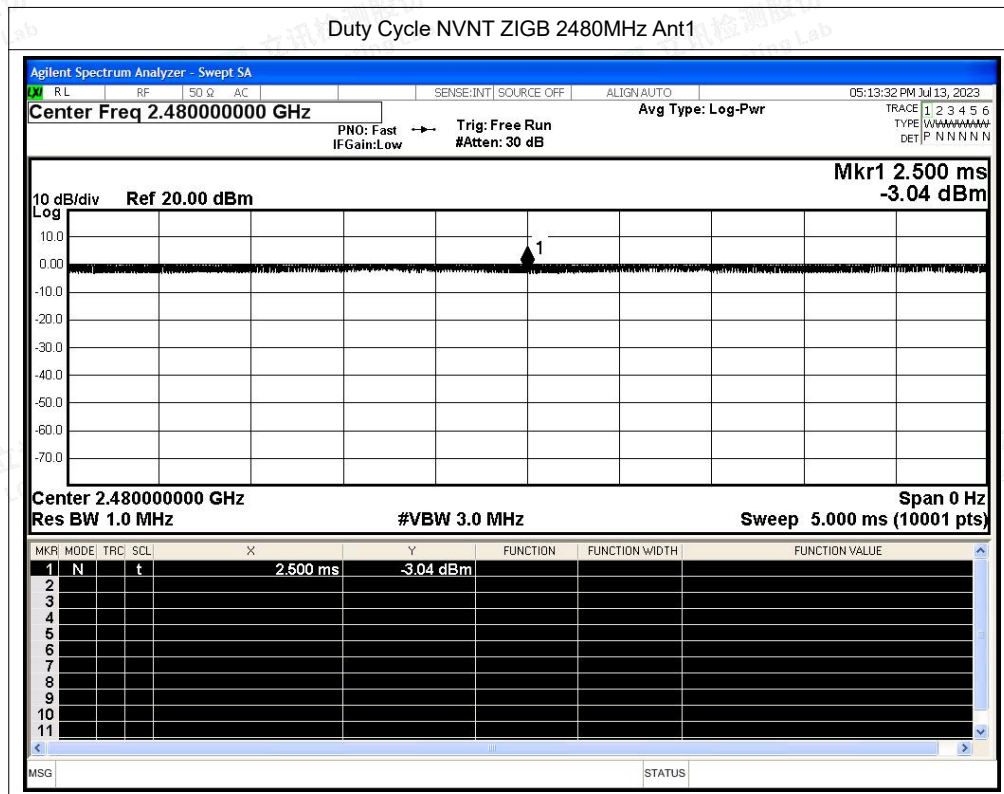


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C.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ZIGB	2405	Ant1	2310	-53.04	2	44.22	Peak	74	Pass
NVNT	ZIGB	2405	Ant1	2310	-62.3	2	34.96	Average	54	Pass
NVNT	ZIGB	2405	Ant1	2369.697	-49.11	2	48.15	Peak	74	Pass
NVNT	ZIGB	2405	Ant1	2389.992	-61.63	2	35.63	Average	54	Pass
NVNT	ZIGB	2405	Ant1	2390	-51.25	2	46.01	Peak	74	Pass
NVNT	ZIGB	2405	Ant1	2390	-61.63	2	35.63	Average	54	Pass
NVNT	ZIGB	2480	Ant1	2483.5	-49.22	2	48.04	Peak	74	Pass
NVNT	ZIGB	2480	Ant1	2483.5	-58.4	2	38.86	Average	54	Pass
NVNT	ZIGB	2480	Ant1	2483.872	-48.23	2	49.03	Peak	74	Pass
NVNT	ZIGB	2480	Ant1	2483.512	-58.4	2	38.86	Average	54	Pass
NVNT	ZIGB	2480	Ant1	2500	-50.44	2	46.82	Peak	74	Pass
NVNT	ZIGB	2480	Ant1	2500	-61.77	2	35.49	Average	54	Pass



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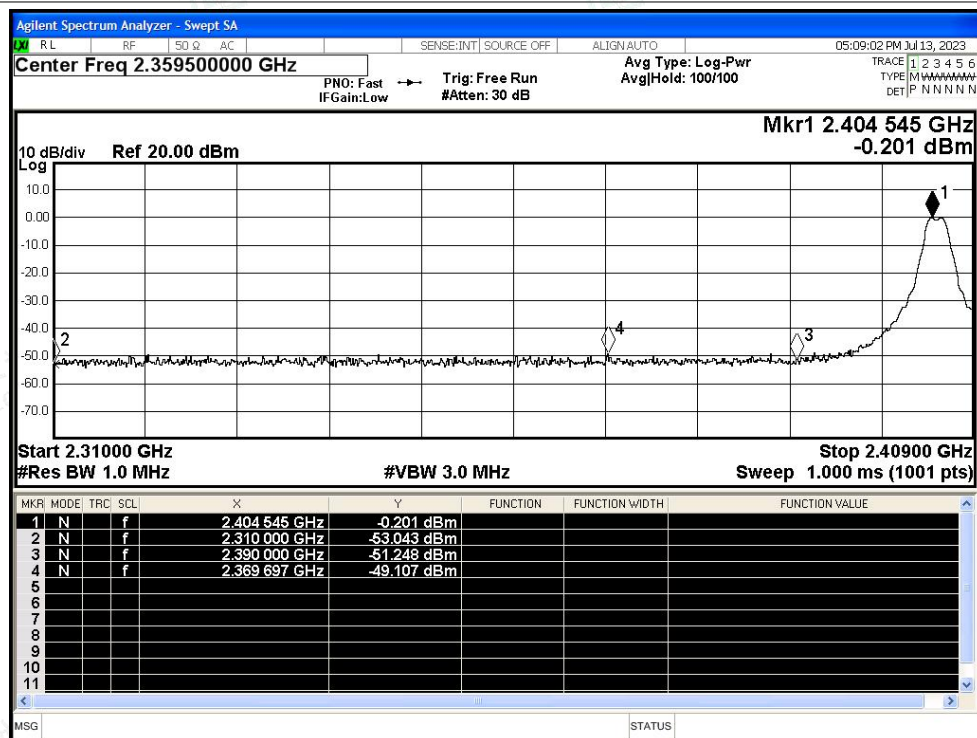
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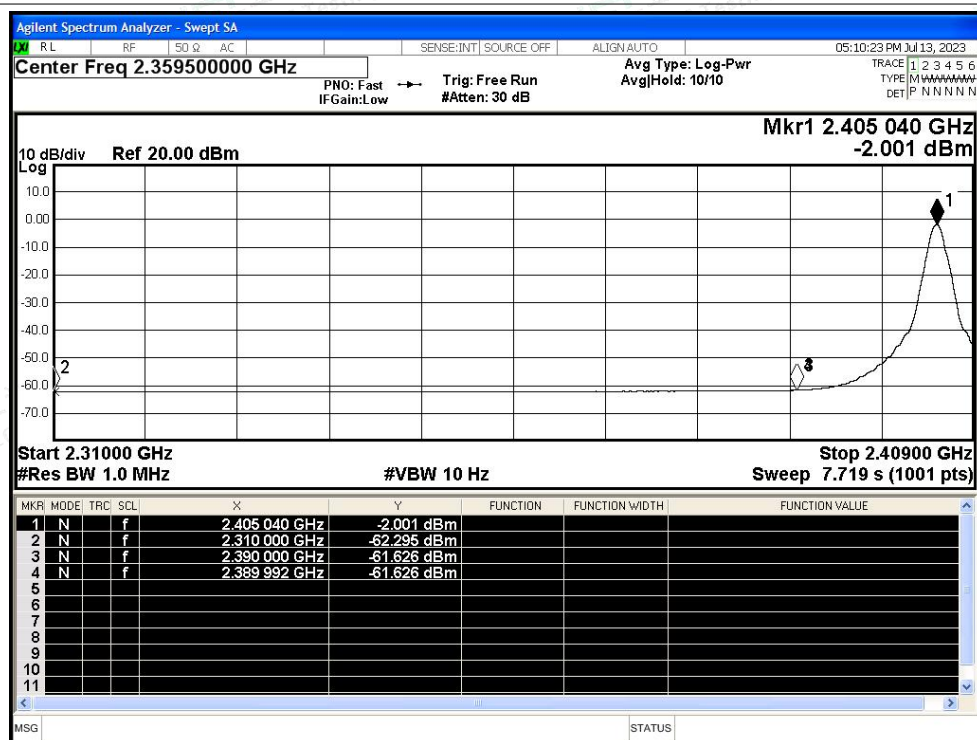


Test Graphs

Restrict Band NVNT ZIGB 2405MHz Ant1 Peak



Restrict Band NVNT ZIGB 2405MHz Ant1 Average



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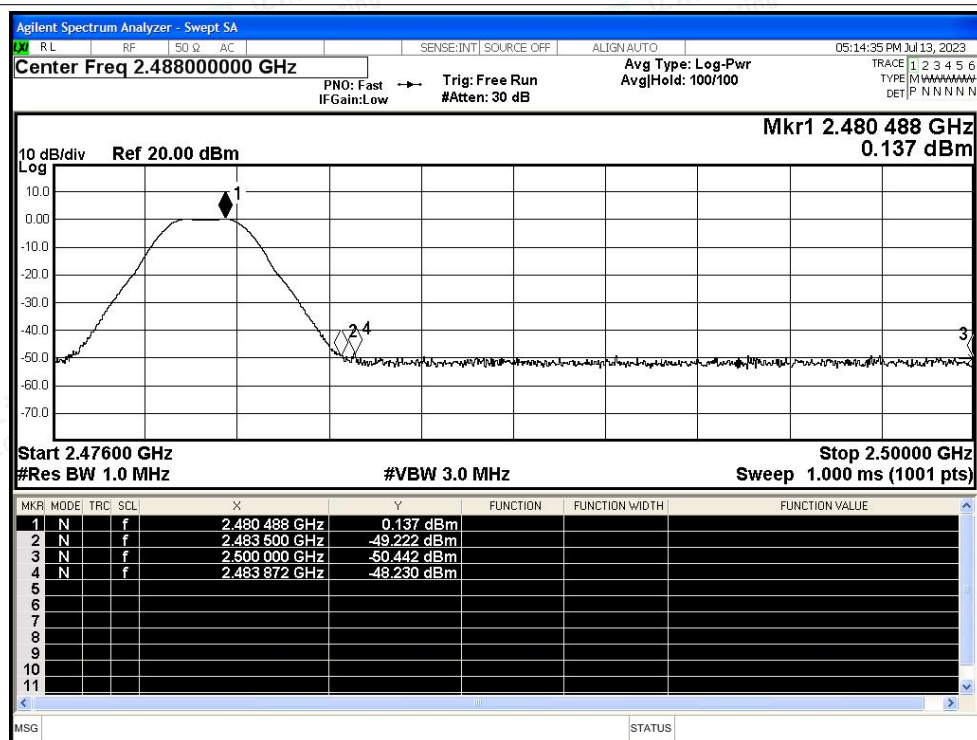
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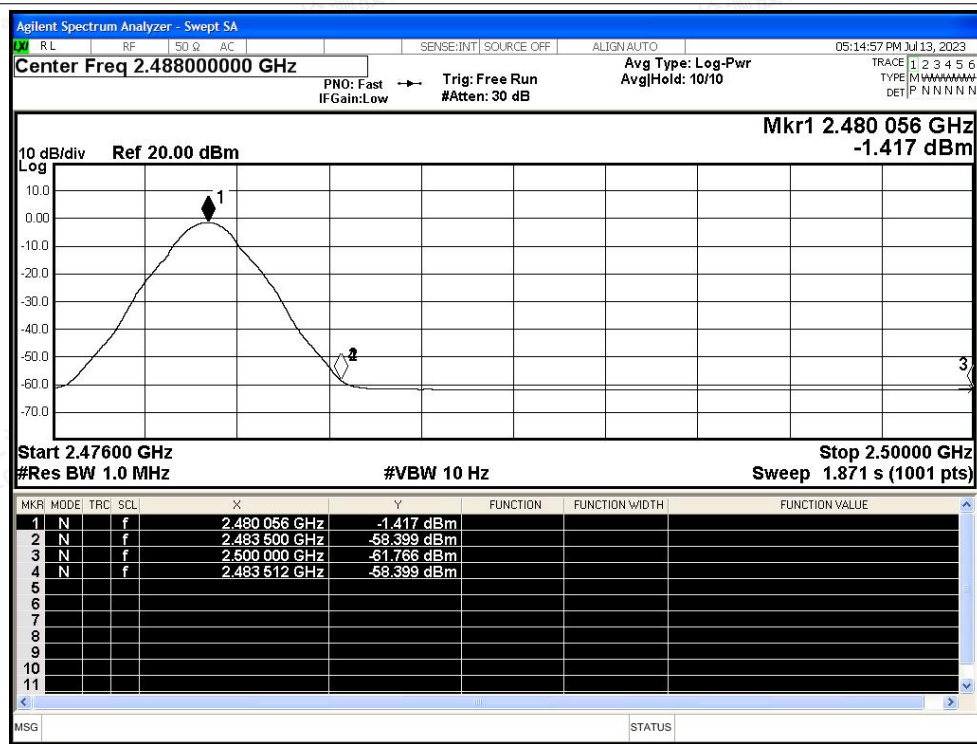
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Restrict Band NVNT ZIGB 2480MHz Ant1 Peak



Restrict Band NVNT ZIGB 2480MHz Ant1 Average



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