



Appendix B

RF Test Data for LoRa (Conducted Measurement)

Product Name: Badge

Test Model: CE-BDG-02

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu



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B.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	LoRa	902.3	Ant1	0.158	N/A	Pass
NVNT	LoRa	908.5	Ant1	0.16	N/A	Pass
NVNT	LoRa	914.9	Ant1	0.158	N/A	Pass

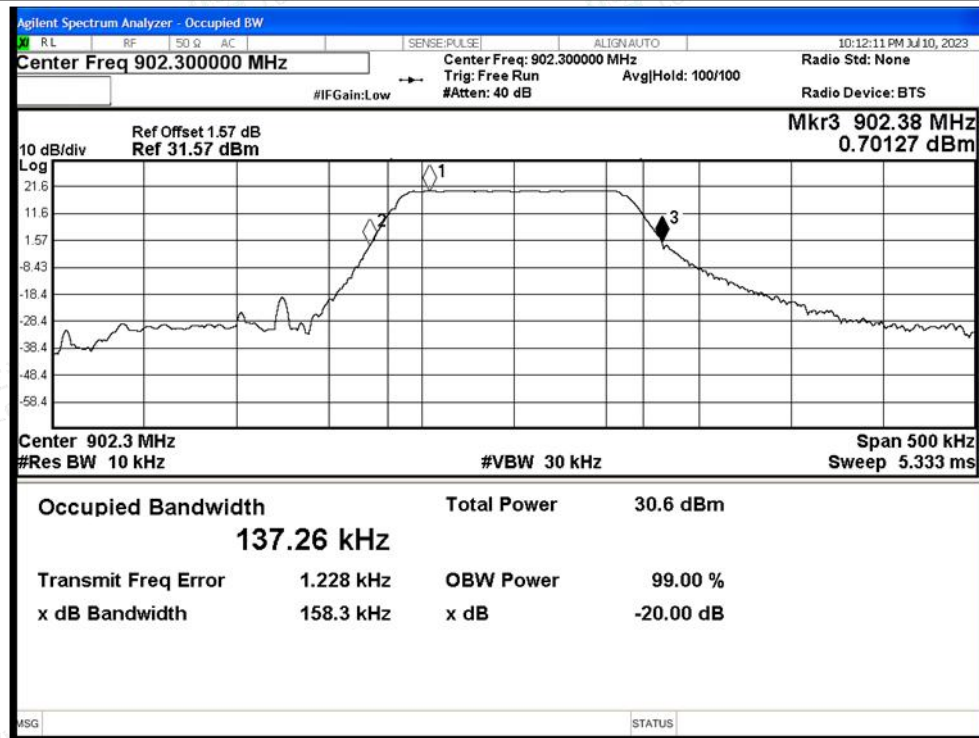


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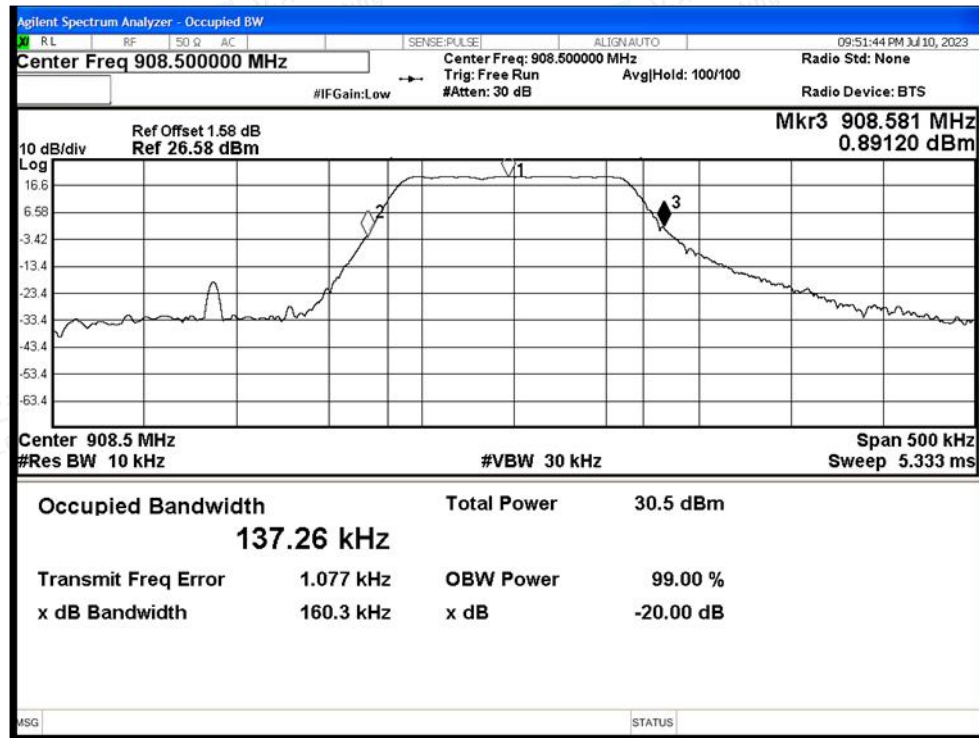


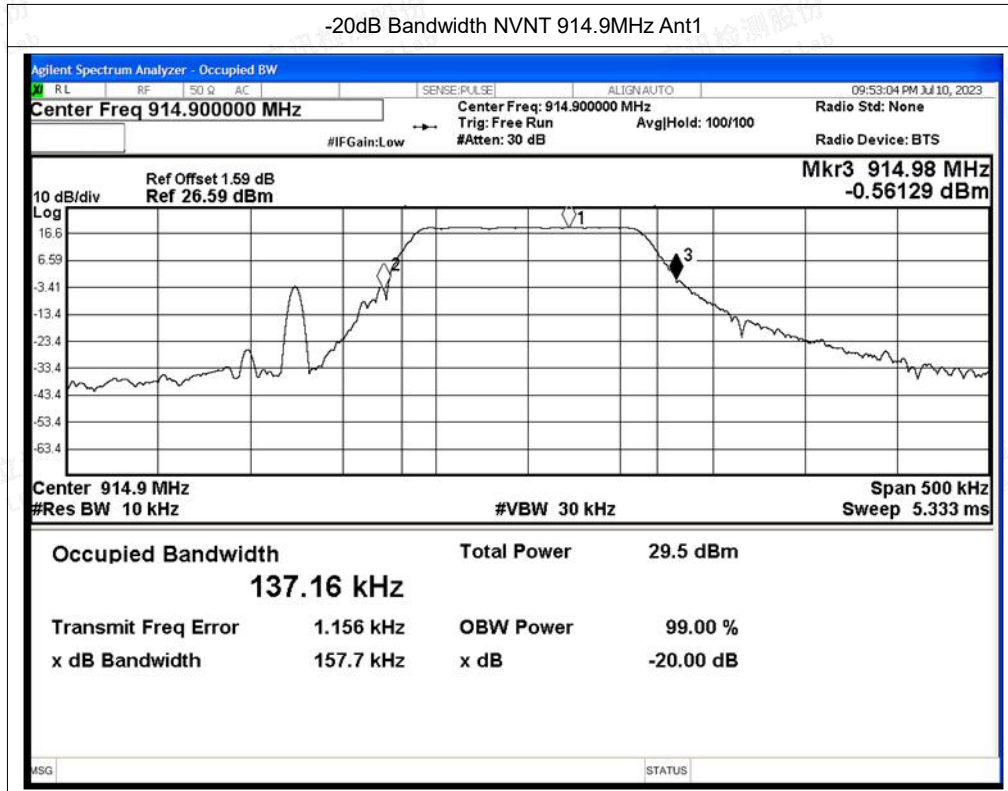
Test Graphs

-20dB Bandwidth NVNT 902.3MHz Ant1



-20dB Bandwidth NVNT 908.5MHz Ant1

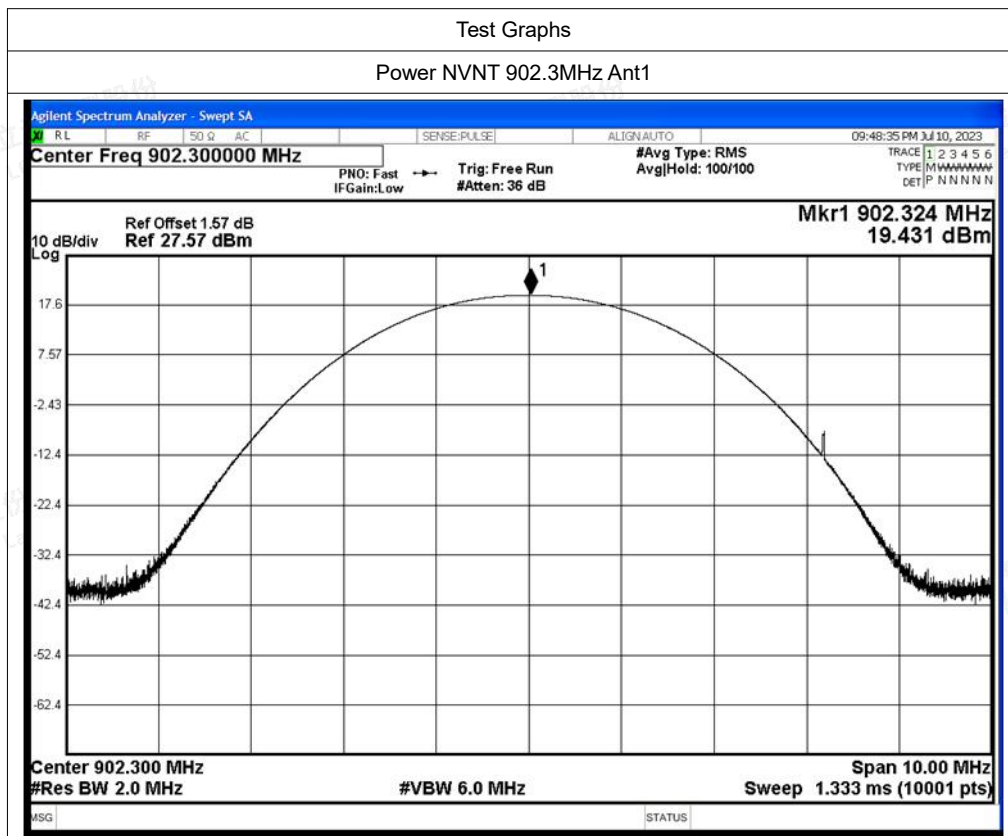






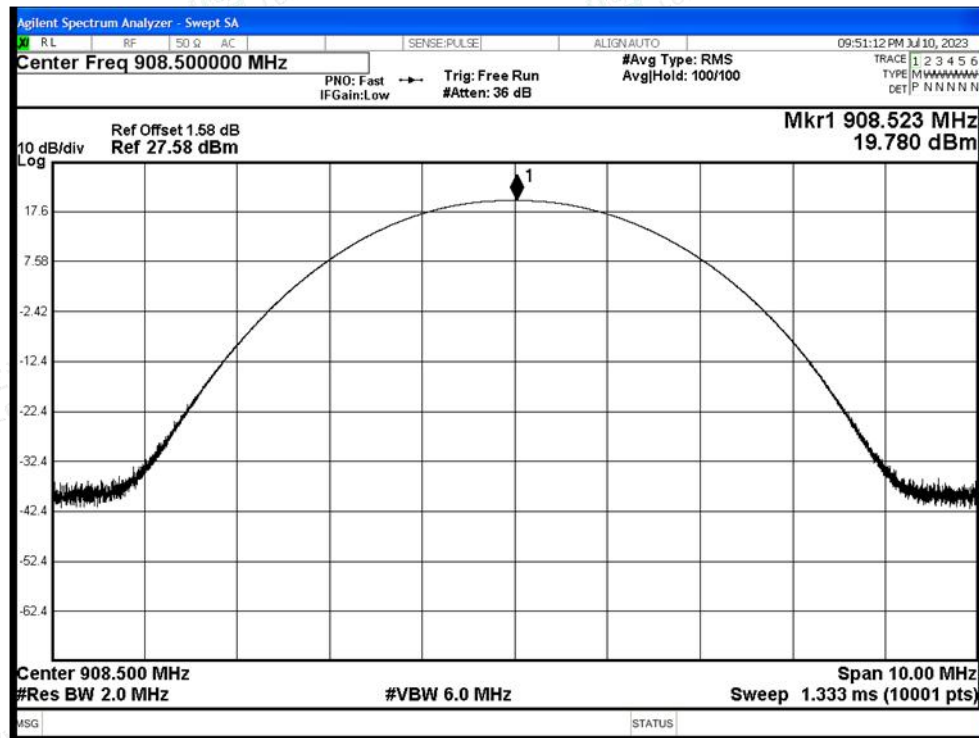
B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	LoRa	902.3	Ant1	19.43	21	Pass
NVNT	LoRa	908.5	Ant1	19.78	21	Pass
NVNT	LoRa	914.9	Ant1	19.2	21	Pass

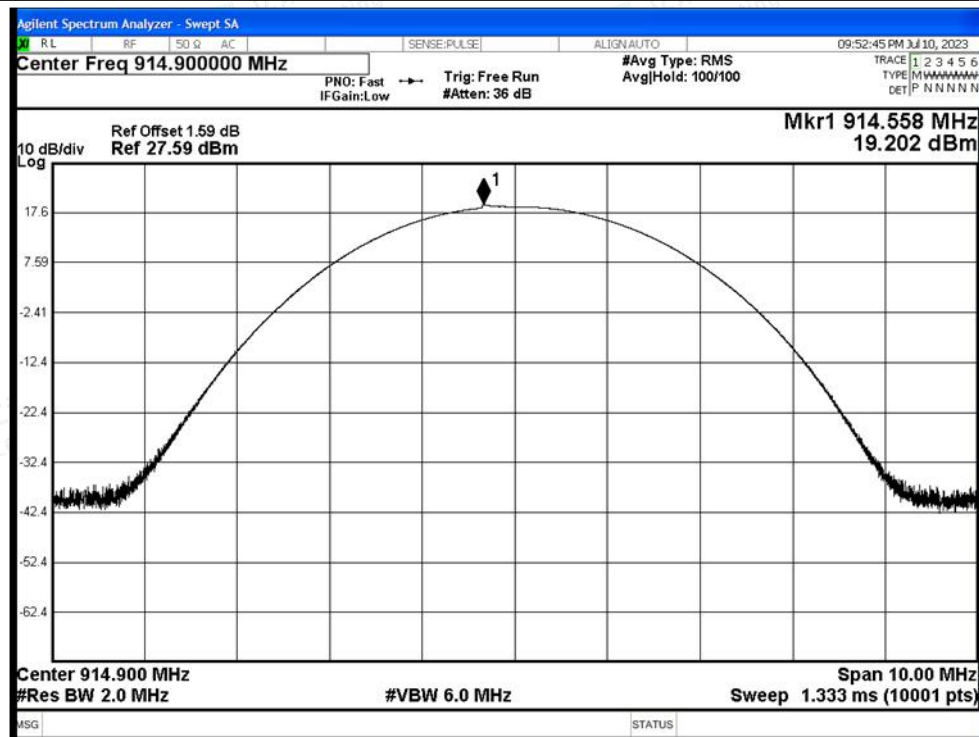




Power NVNT 908.5MHz Ant1



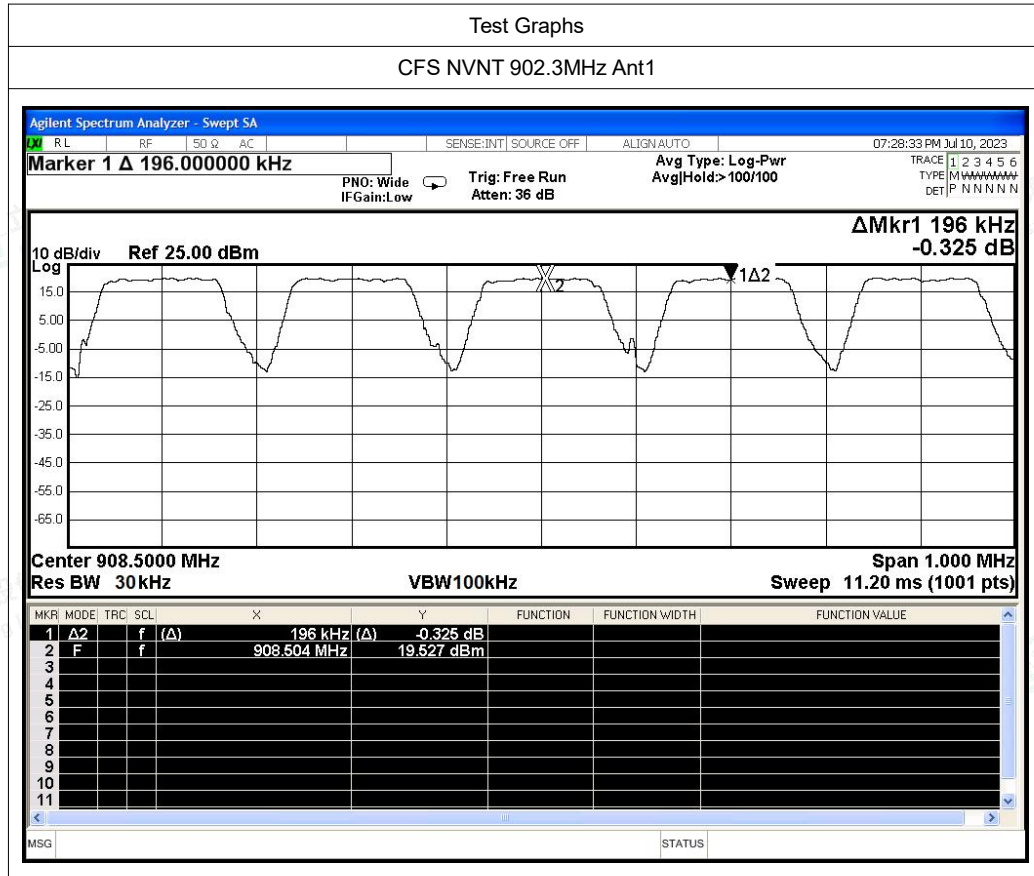
Power NVNT 914.9MHz Ant1





B.3 Carrier Frequencies Separation

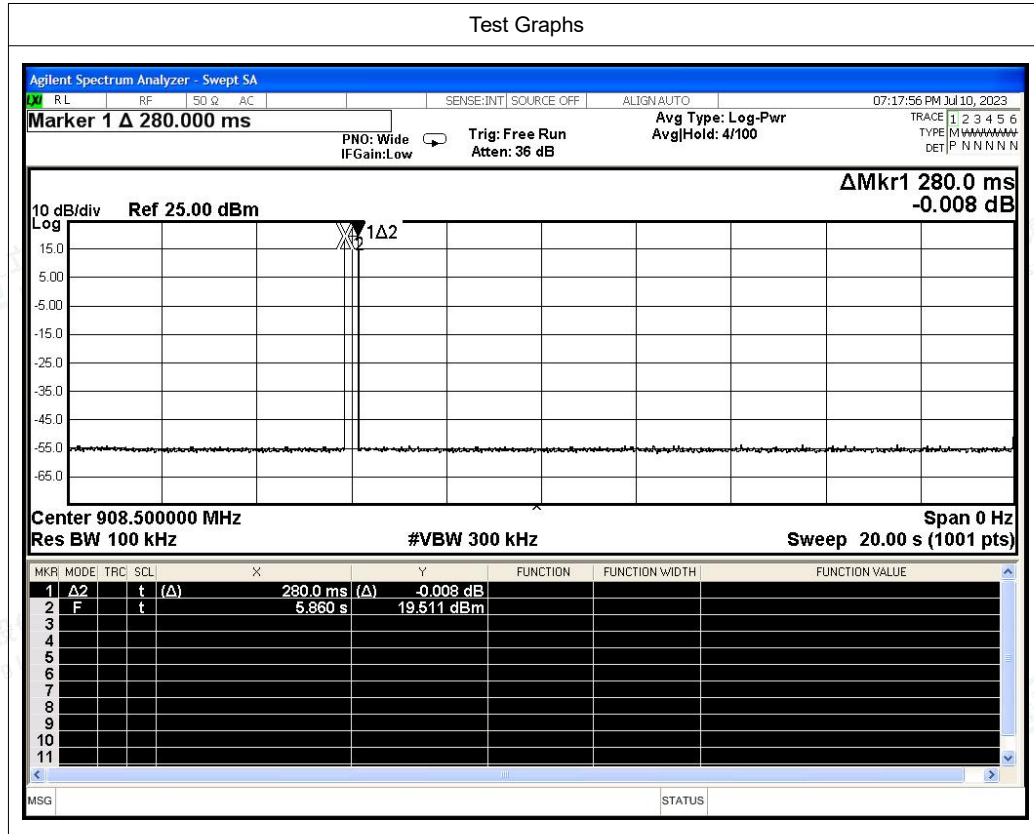
Condition	Mode	Antenna	HFS (kHz)	Limit (kHz)	Verdict
NVNT	LoRa	Ant1	199	160	Pass





B.4 Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Total Dwell Time (ms)	Limit (ms)	Verdict
NVNT	LoRa	902.3	Ant1	280.0	400	Pass

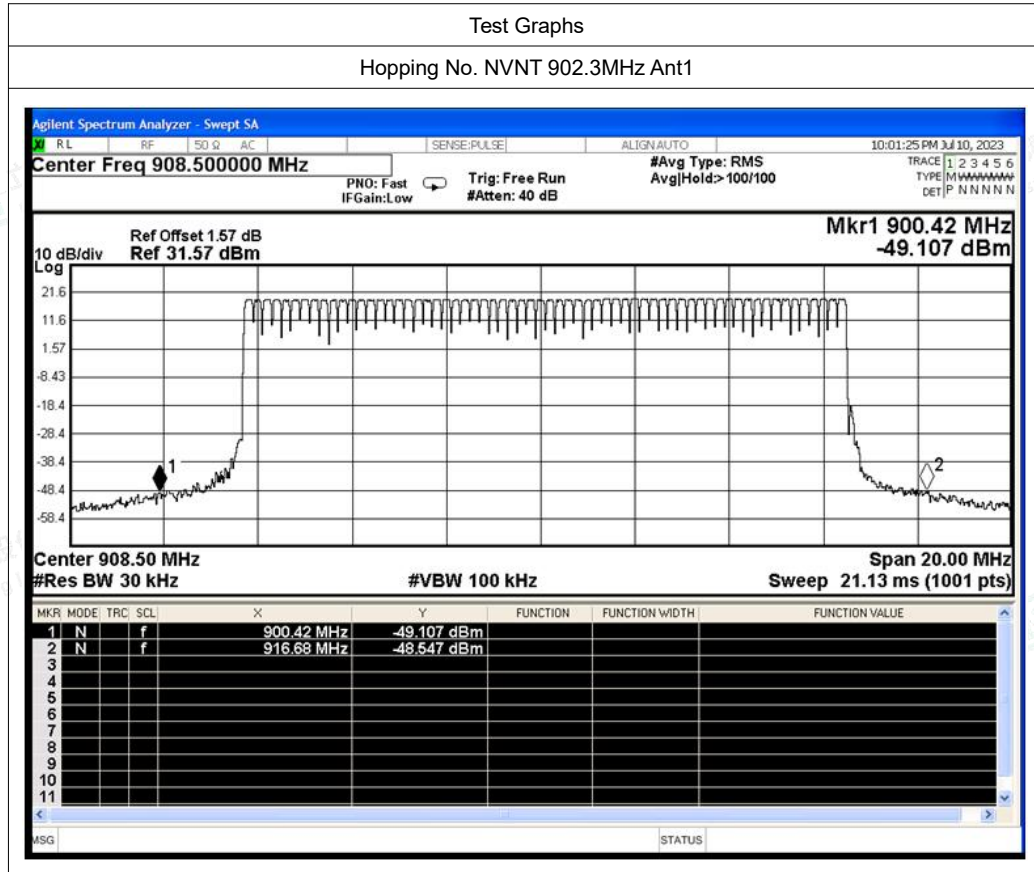


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B.5 Number of Hopping Channel

Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	LoRa	Ant1	64	50	Pass





B.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	LoRa	902.3	Ant1	No-Hopping	-40.44	-20	Pass
NVNT	LoRa	914.9	Ant1	No-Hopping	-71.23	-20	Pass

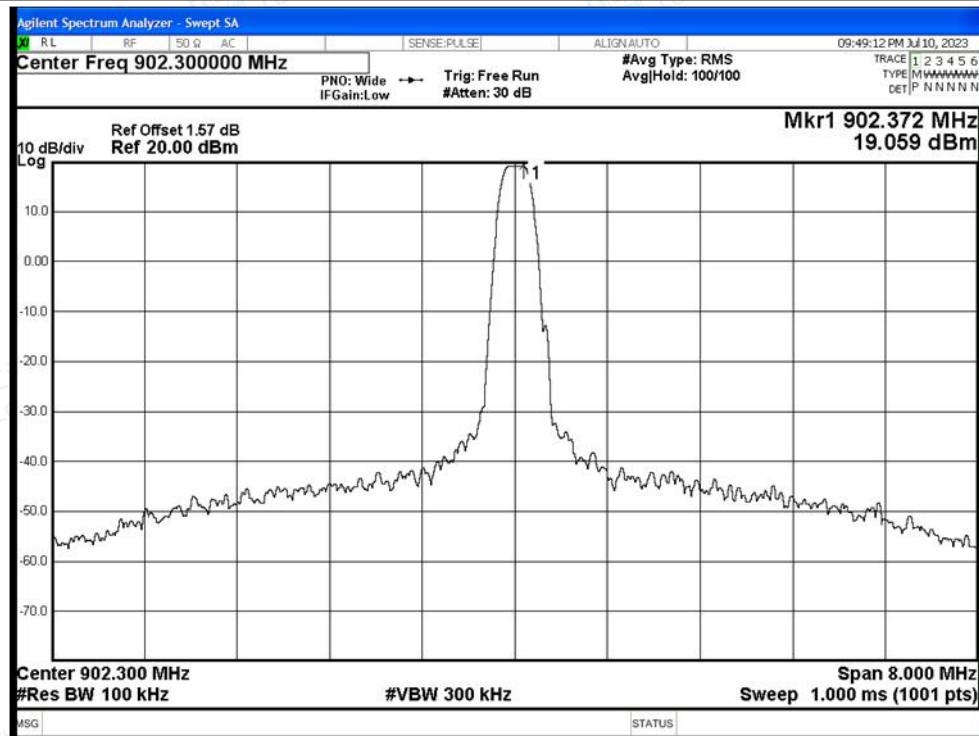


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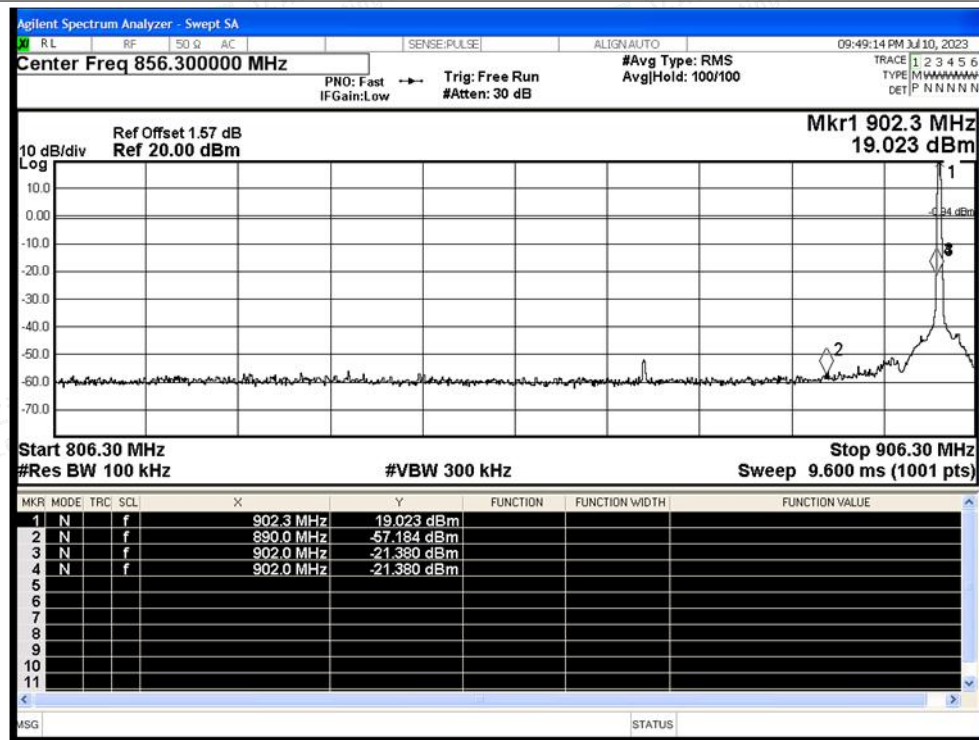


Test Graphs

Band Edge NVNT 902.3MHz Ant1 No-Hopping Ref

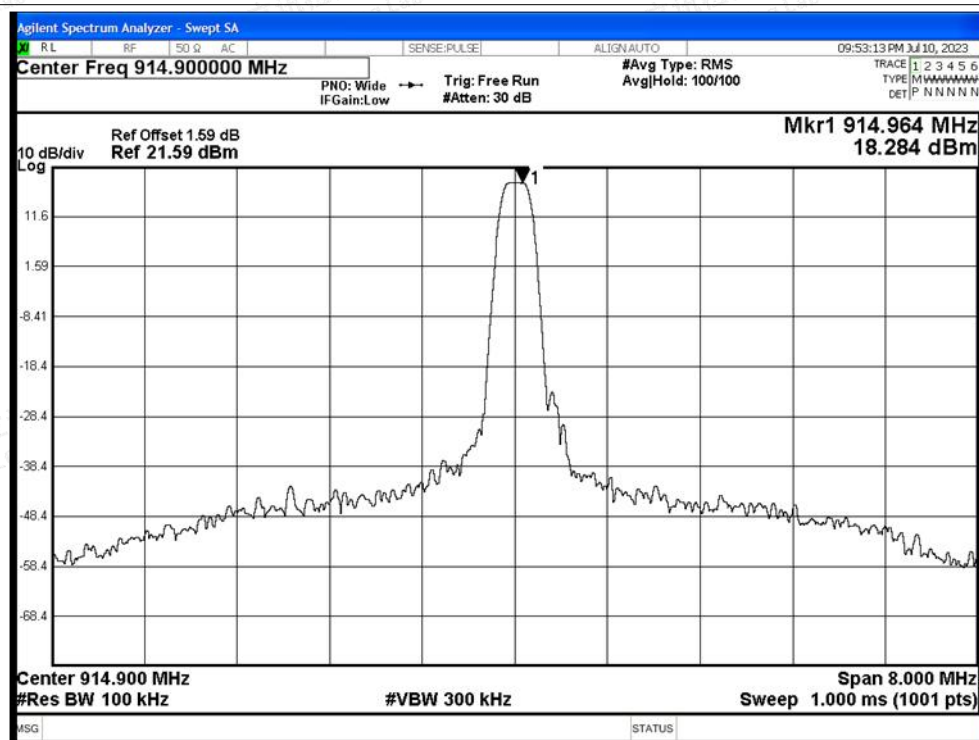


Band Edge NVNT 902.3MHz Ant1 No-Hopping Emission

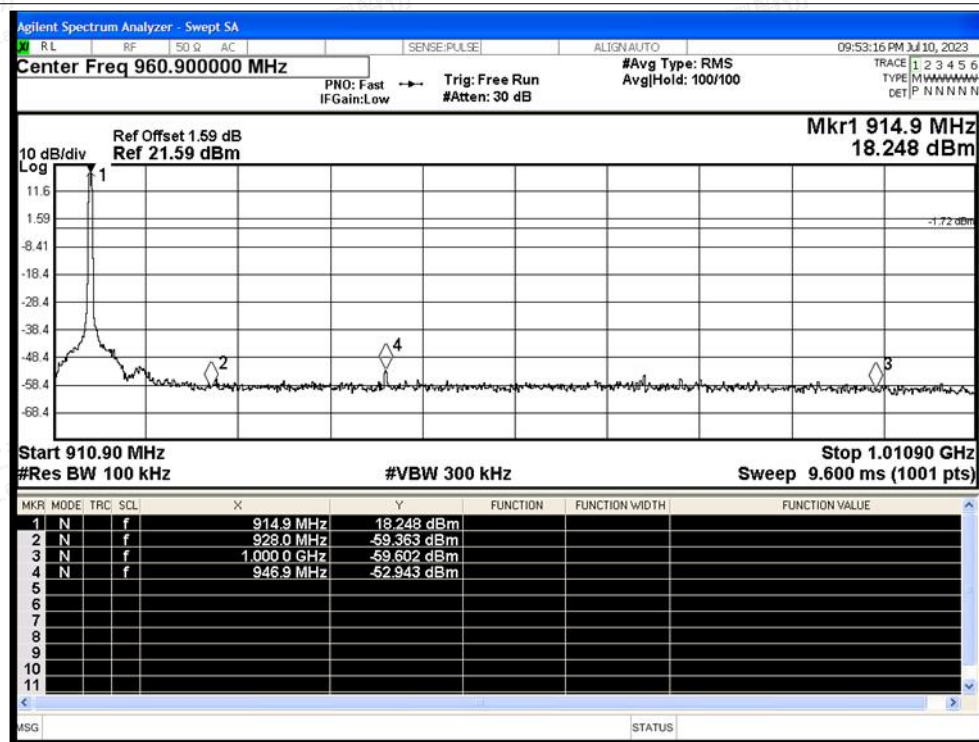




Band Edge NVNT 914.9MHz Ant1 No-Hopping Ref



Band Edge NVNT 914.9MHz Ant1 No-Hopping Emission





(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	LoRa	902.3	Ant1	Hopping	-70.1	-20	Pass
NVNT	LoRa	914.9	Ant1	Hopping	-66.05	-20	Pass

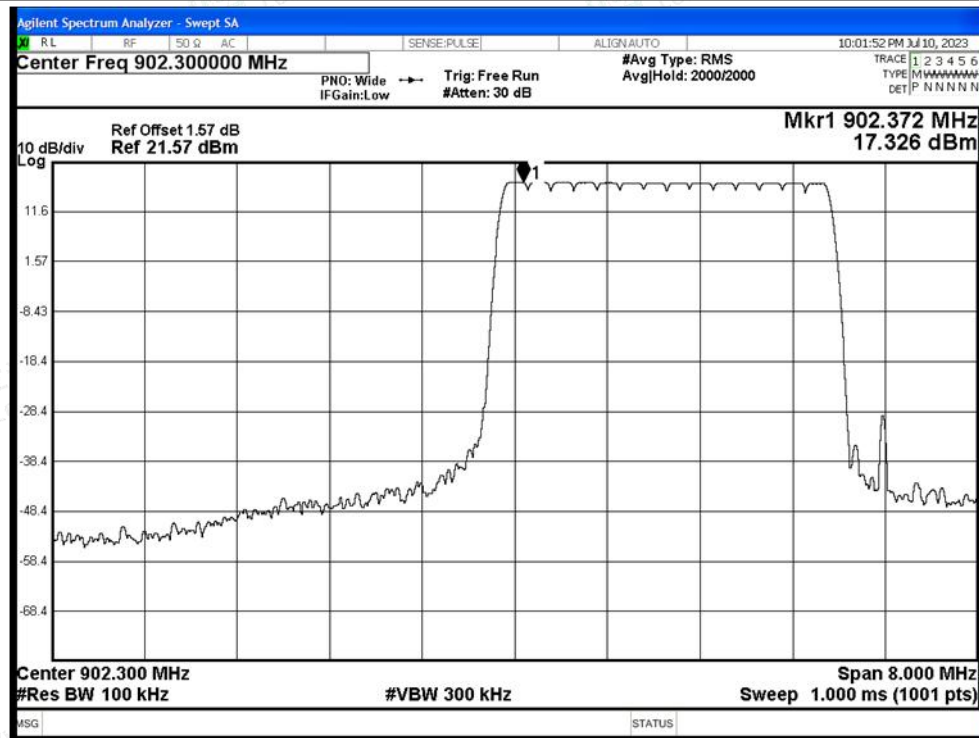


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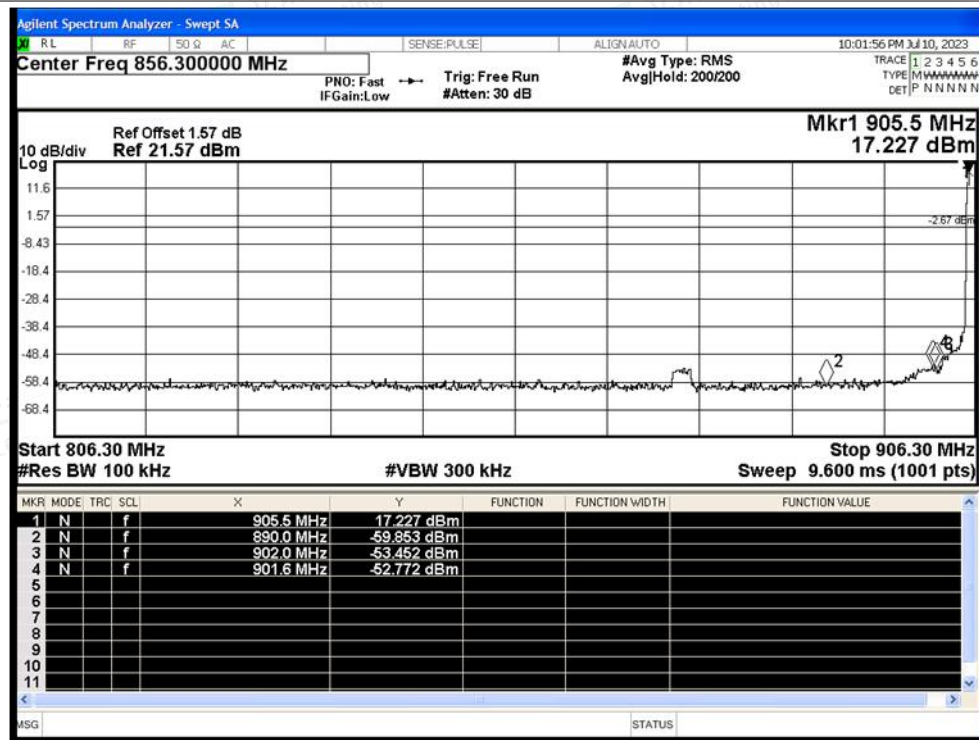


Test Graphs

Band Edge(Hopping) NVNT 902.3MHz Ant1 Hopping Ref

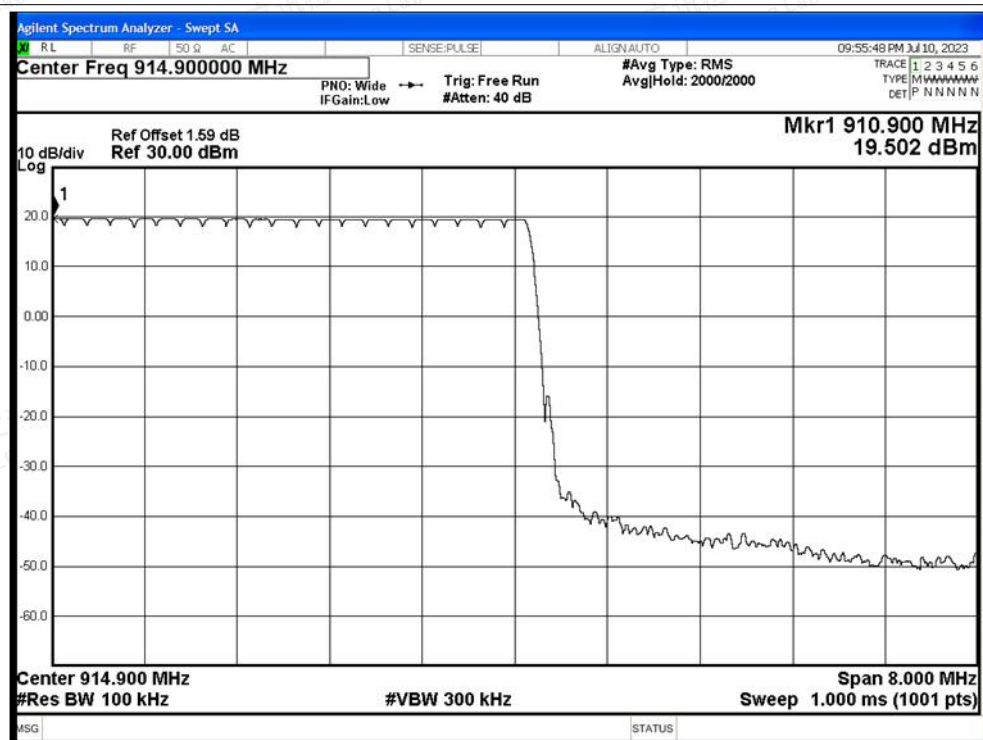


Band Edge(Hopping) NVNT 902.3MHz Ant1 Hopping Emission

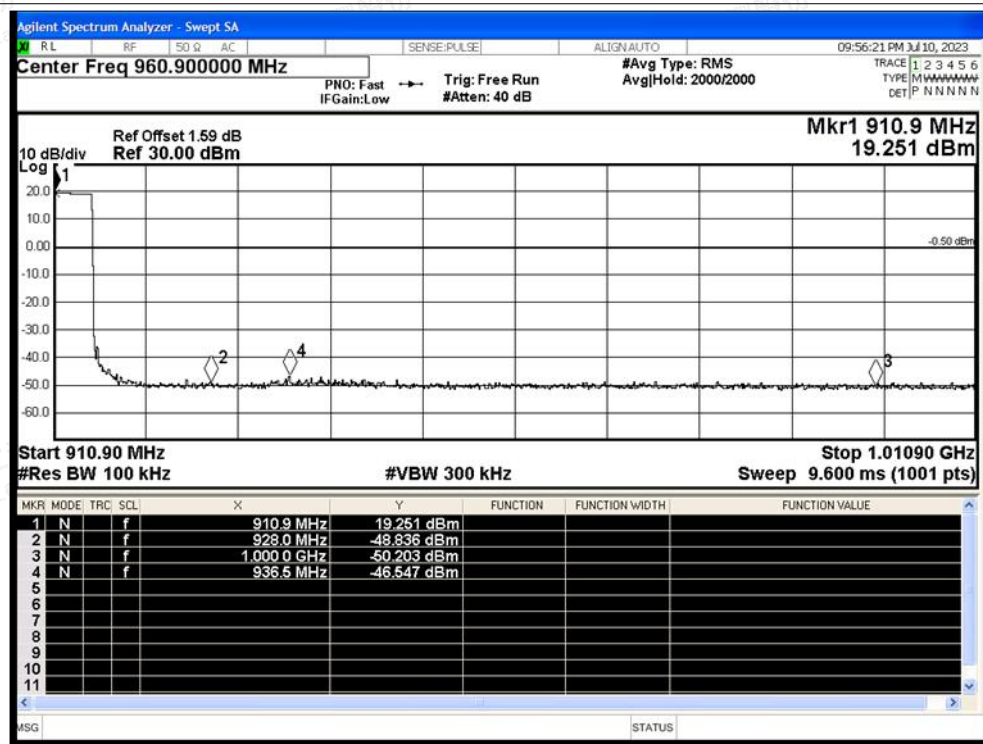




Band Edge(Hopping) NVNT 914.9MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 914.9MHz Ant1 Hopping Emission





B.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	LoRa	902.3	Ant1	-48.51	-20	Pass
NVNT	LoRa	908.5	Ant1	-49.37	-20	Pass
NVNT	LoRa	914.9	Ant1	-48.68	-20	Pass

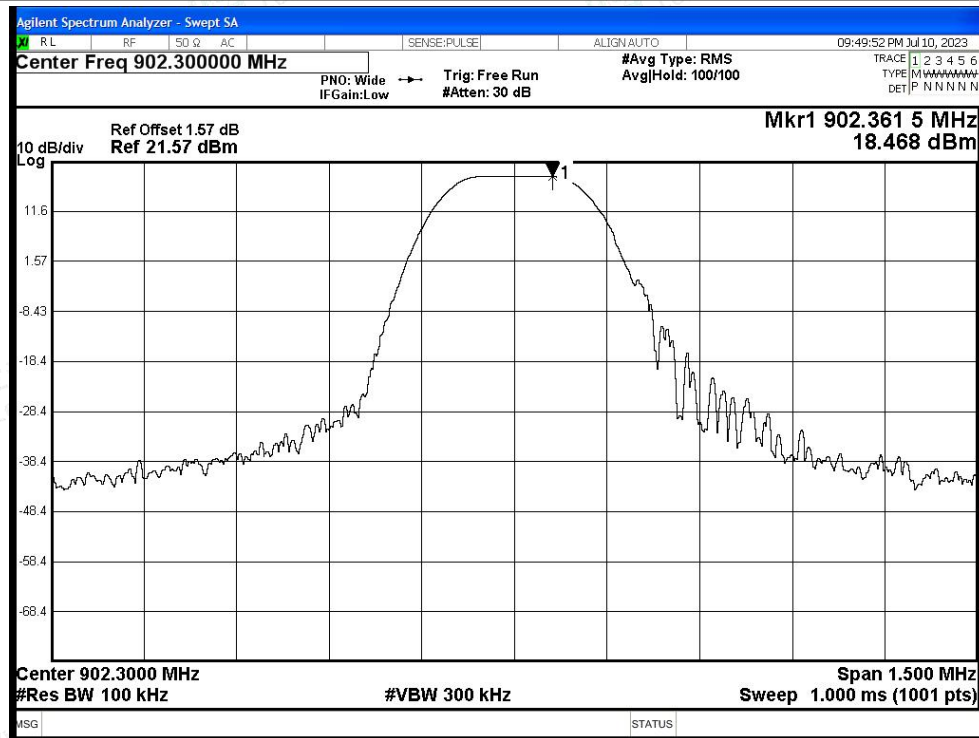


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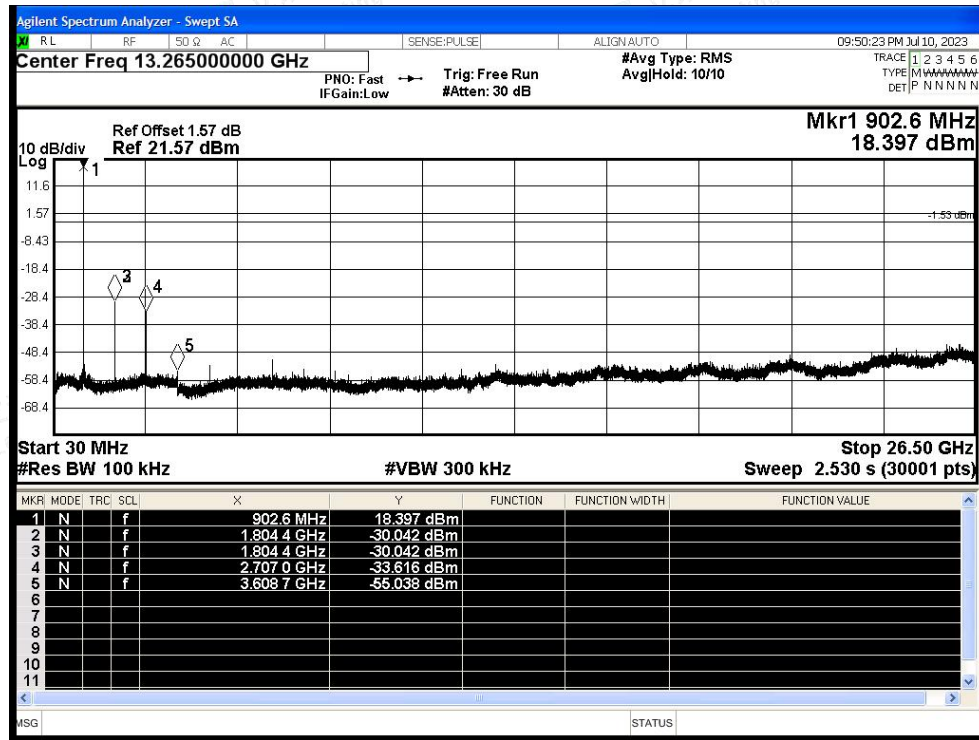


Test Graphs

Tx. Spurious NVNT user 902.3MHz Ant1 Ref

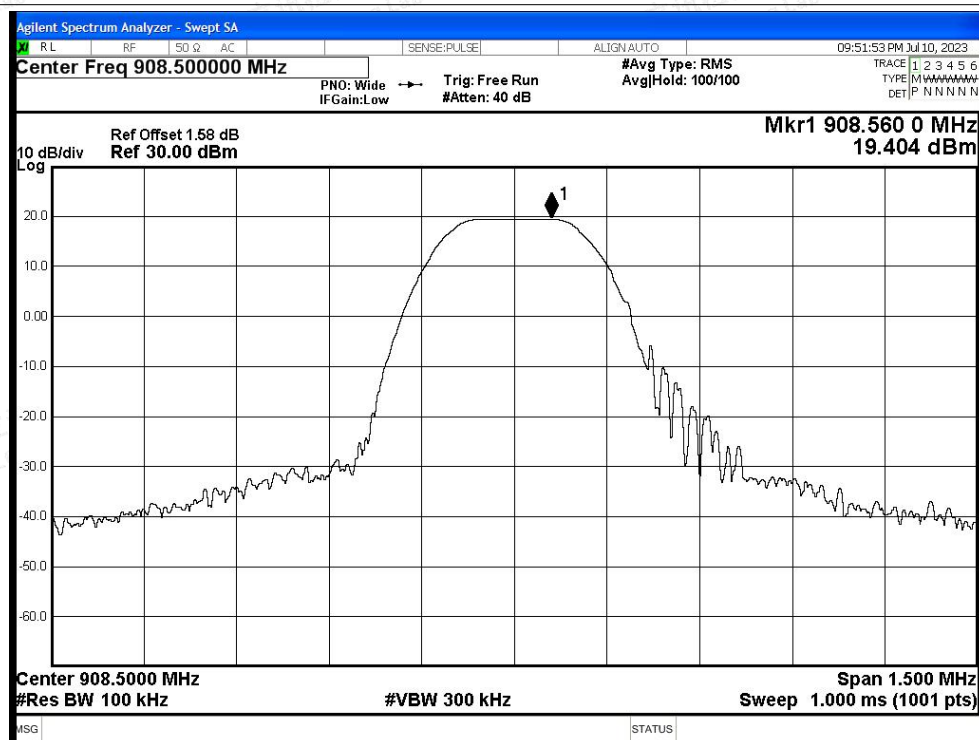


Tx. Spurious NVNT user 902.3MHz Ant1 Emission

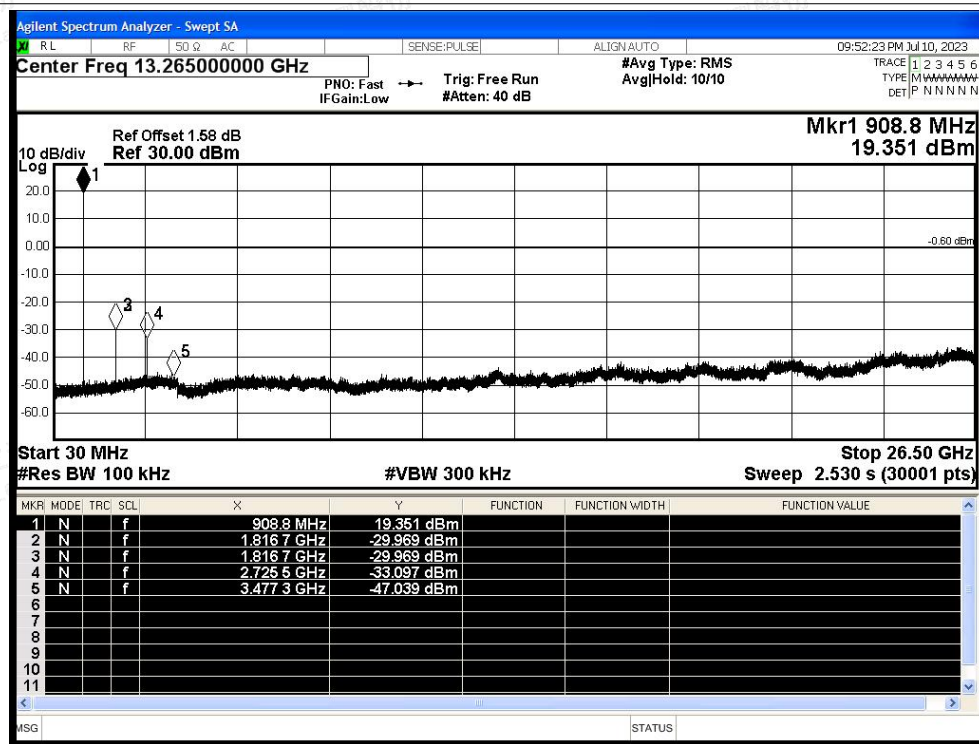




Tx. Spurious NVNT user 908.5MHz Ant1 Ref

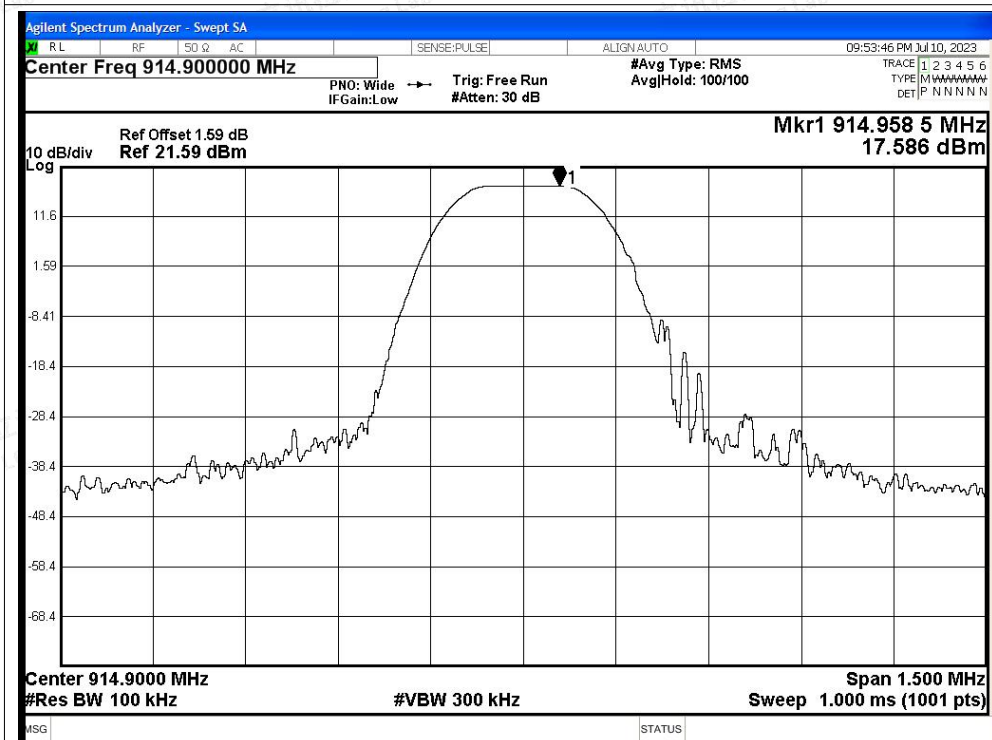


Tx. Spurious NVNT user 908.5MHz Ant1 Emission





Tx. Spurious NVNT user 914.9MHz Ant1 Ref



Tx. Spurious NVNT user 914.9MHz Ant1 Emission

