Appendix B

RF Test Data for 903-914.2 (Conducted Measurement)

Product Name: MClimate Vicki LoRaWAN

Test Model: MC-LW-V02-BI

Environmental Conditions

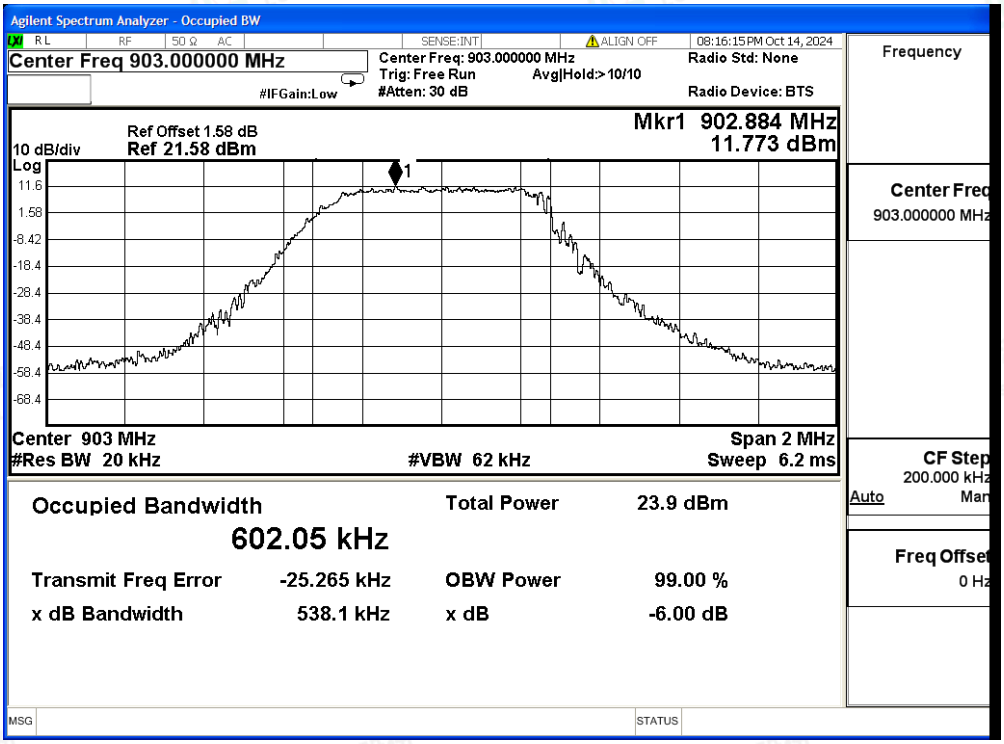
Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng

A.1 -6dB Bandwidth

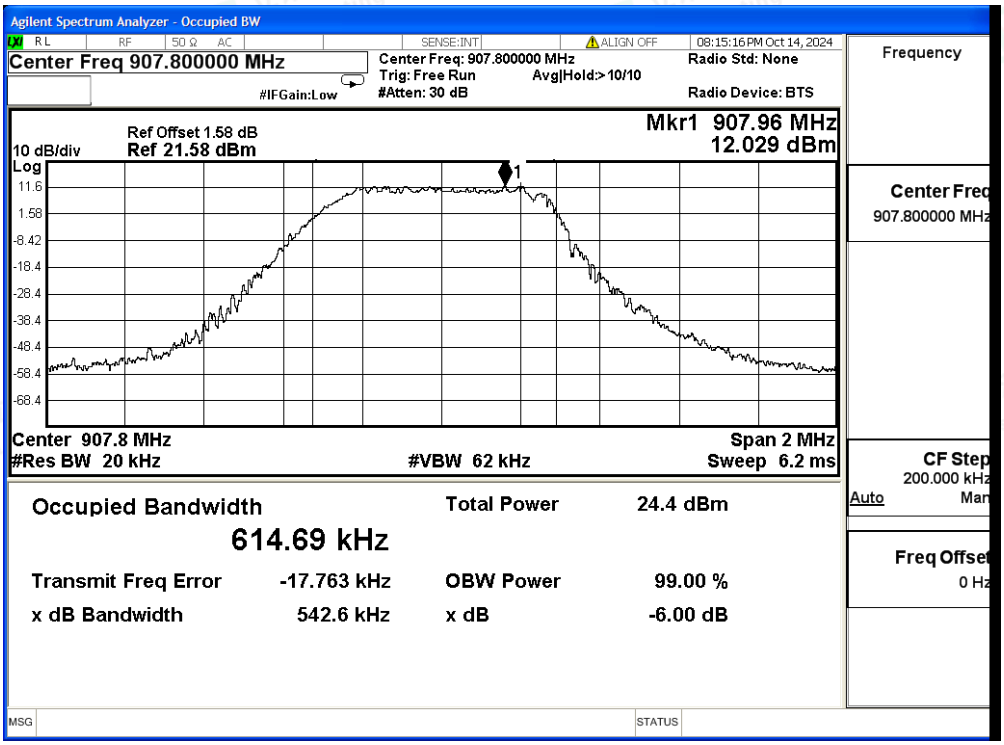
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	LoRa	903.0	Ant1	0.538	>=0.5	Pass
NVNT	LoRa	907.8	Ant1	0.543	>=0.5	Pass
NVNT	LoRa	914.2	Ant1	0.551	>=0.5	Pass

Test Graphs

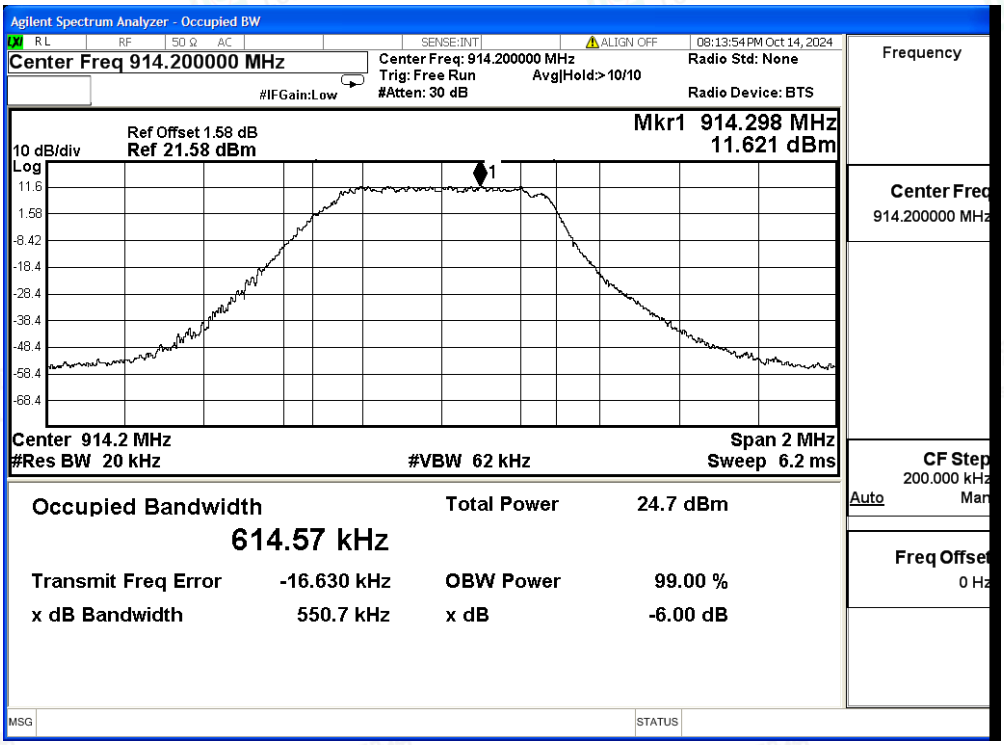
-6dB Bandwidth NVNT LoRa 903.0MHz Ant1



-6dB Bandwidth NVNT LoRa 907.8MHz Ant1



-6dB Bandwidth NVNT LoRa 914.2MHz Ant1



A.2 Maximum Conducted Output Power

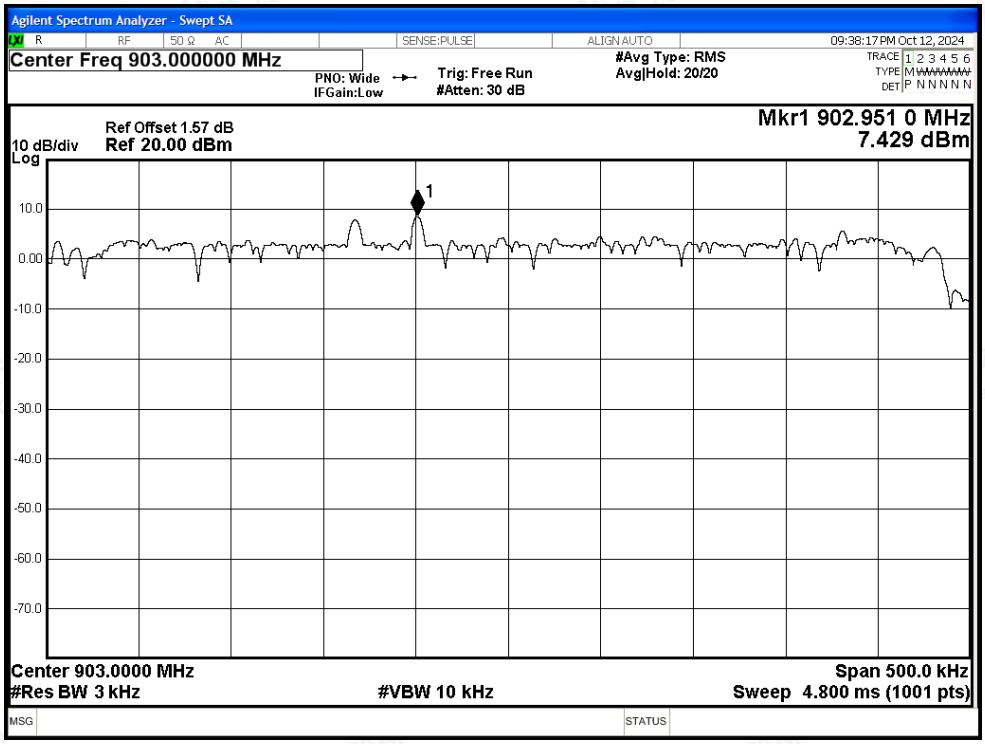
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	LoRa	903.0	Ant1	10.11	30	Pass
NVNT	LoRa	907.8	Ant1	10.14	30	Pass
NVNT	LoRa	914.2	Ant1	9.40	30	Pass

A.3 Maximum Power Spectral Density Level

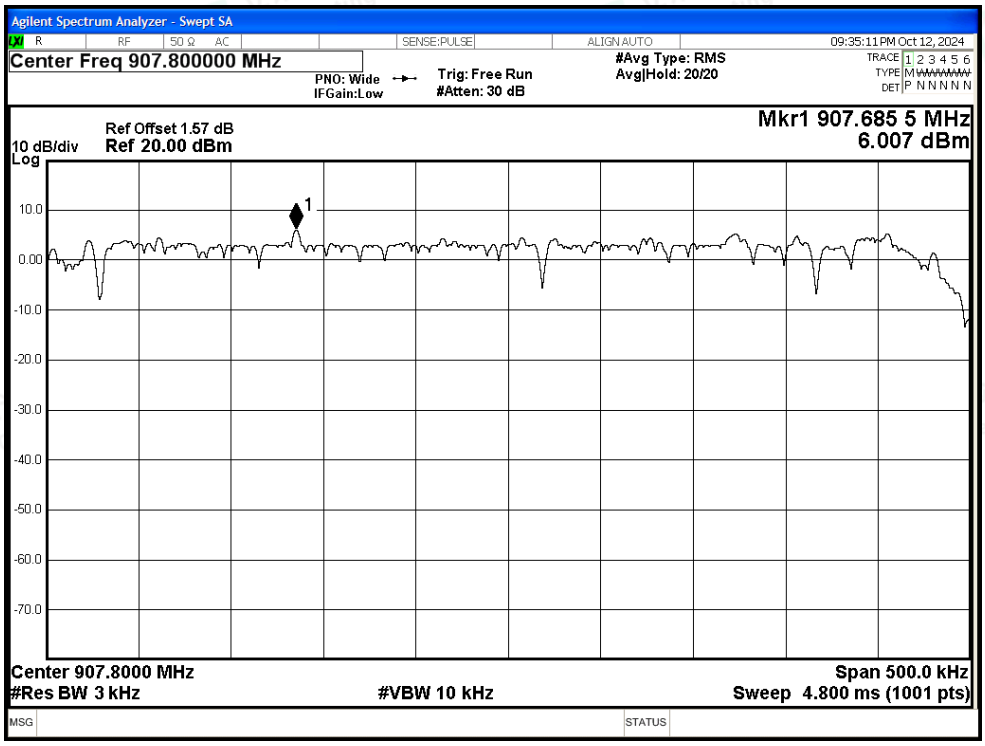
Condition	Mode	Frequency (MHz)	Antenna	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	LoRa	903.0	Ant1	7.429	8	Pass
NVNT	LoRa	907.8	Ant1	6.007	8	Pass
NVNT	LoRa	914.2	Ant1	4.836	8	Pass

Test Graphs

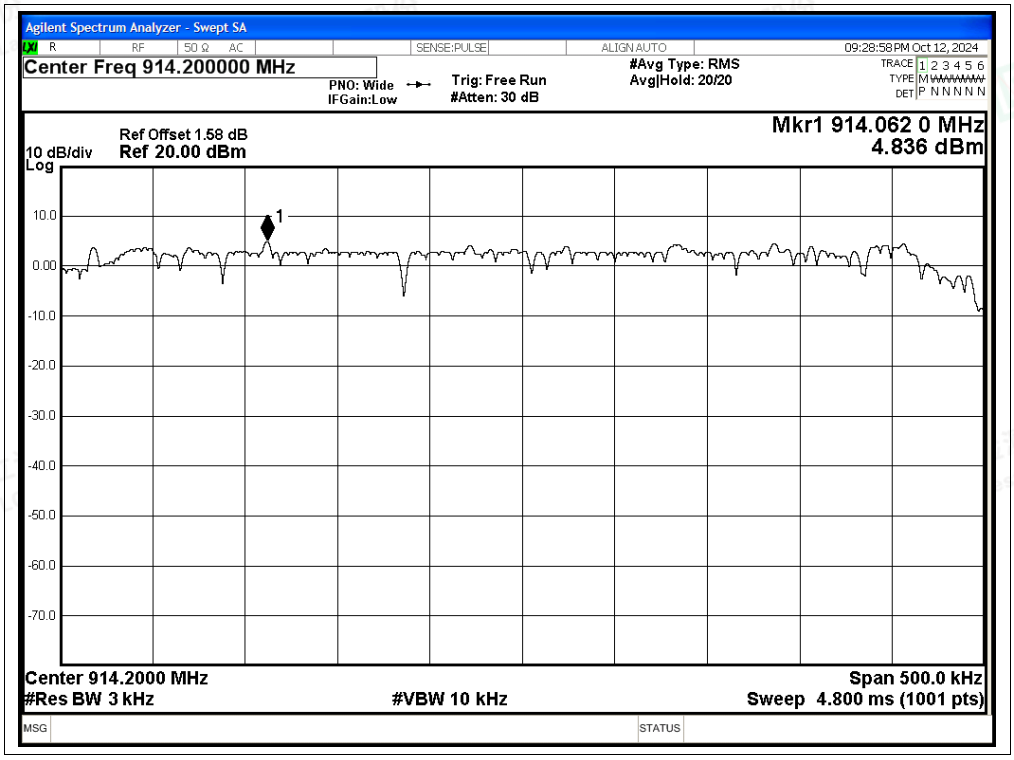
PSD NVNT LoRa 903.0MHz Ant1



PSD NVNT LoRa 907.8MHz Ant1



PSD NVNT LoRa 914.2MHz Ant1

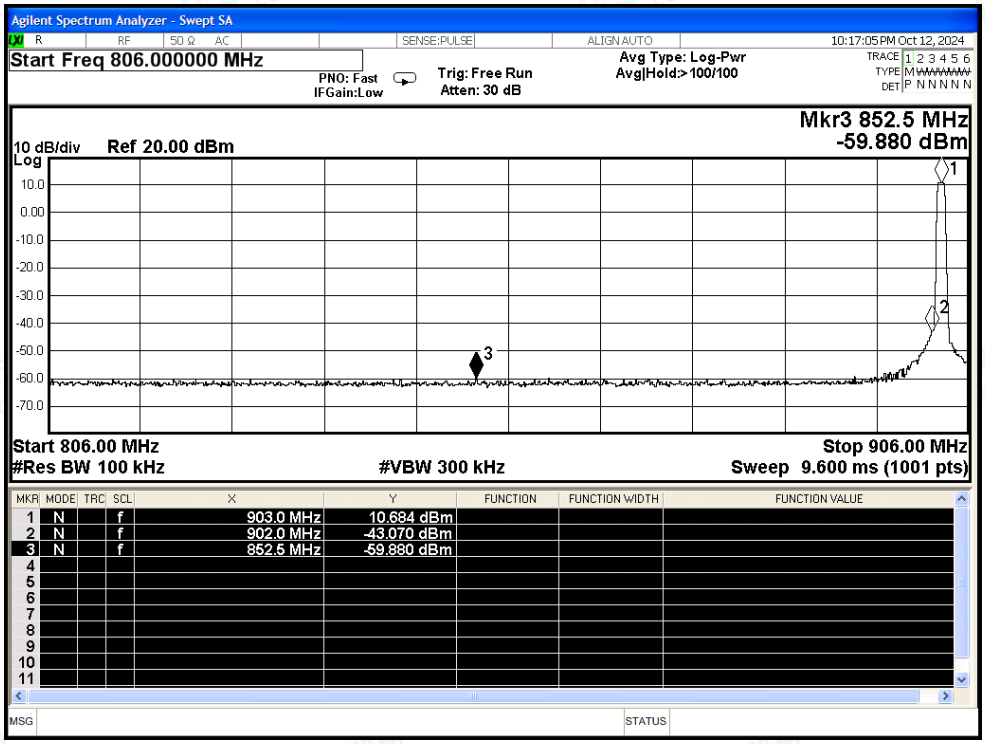

Agilent Spectrum Analyzer - Swept SA
Center Freq 914.200000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 20/20
09:28:58 PM Oct 12, 2024
Ref Offset 1.58 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 914.062 0 MHz
4.836 dBm
Center 914.2000 MHz
#Res BW 3 kHz
#VBW 10 kHz
Span 500.0 kHz
Sweep 4.800 ms (1001 pts)

A.4 Band Edge

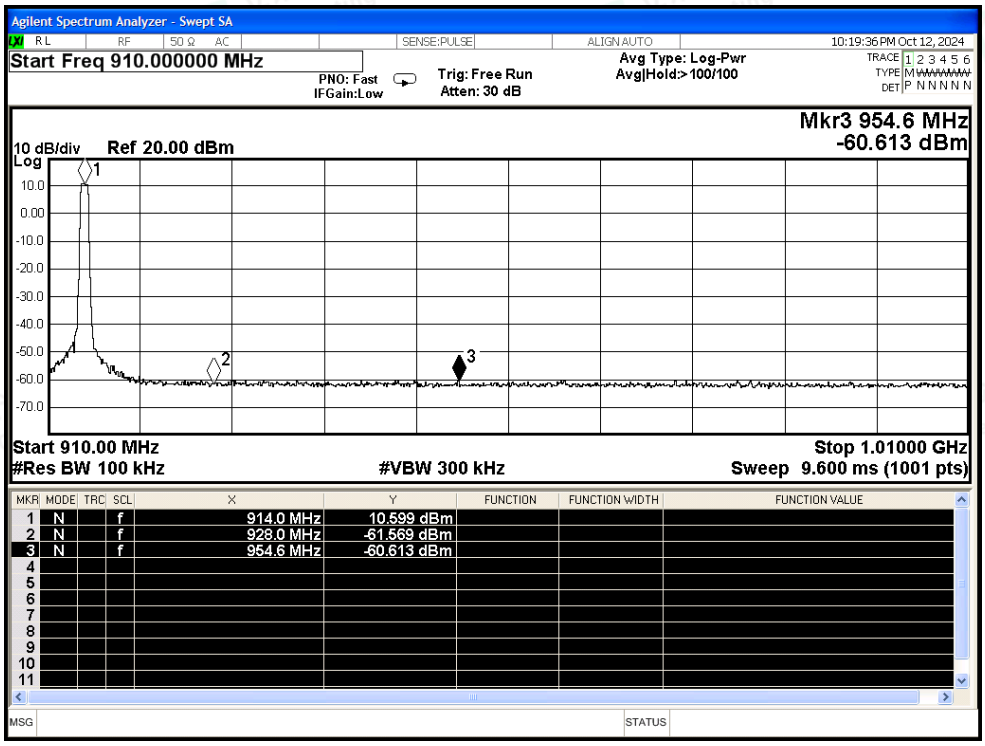
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	LoRa	903.0	Ant1	-53.75	-20	Pass
NVNT	LoRa	914.2	Ant1	-72.17	-20	Pass

Test Graphs

Band Edge NVNT LoRa 903.0MHz Ant1 Ref



Band Edge NVNT LoRa 914.2MHz Ant1 Emission

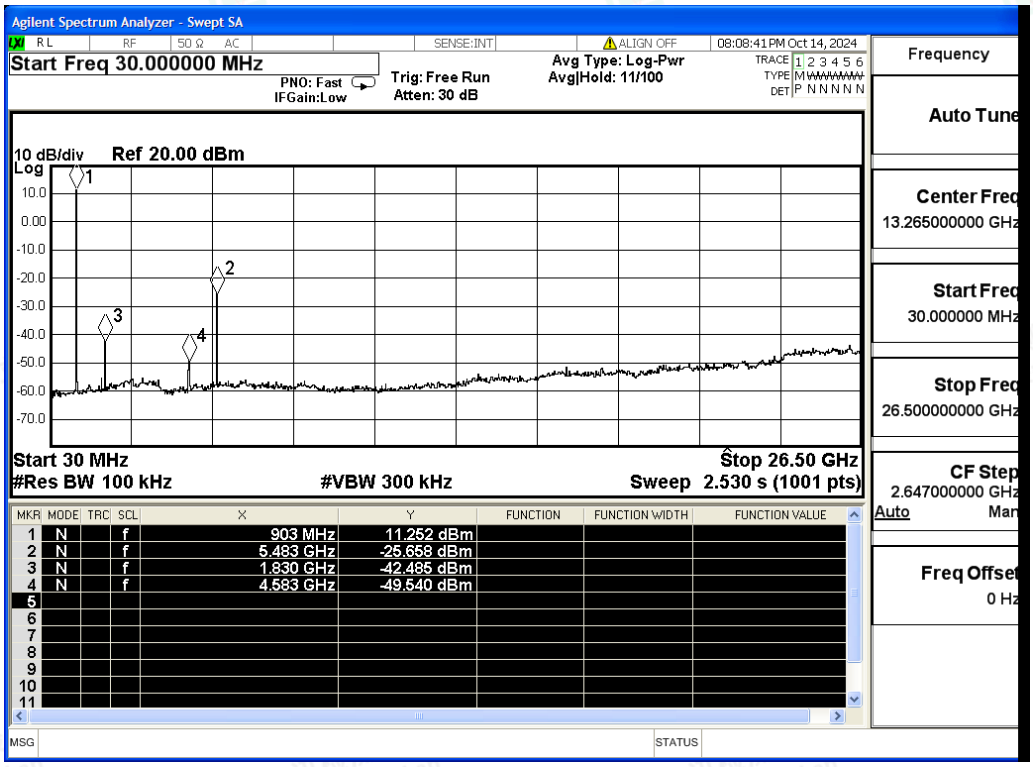


A.5 Conducted RF Spurious Emission

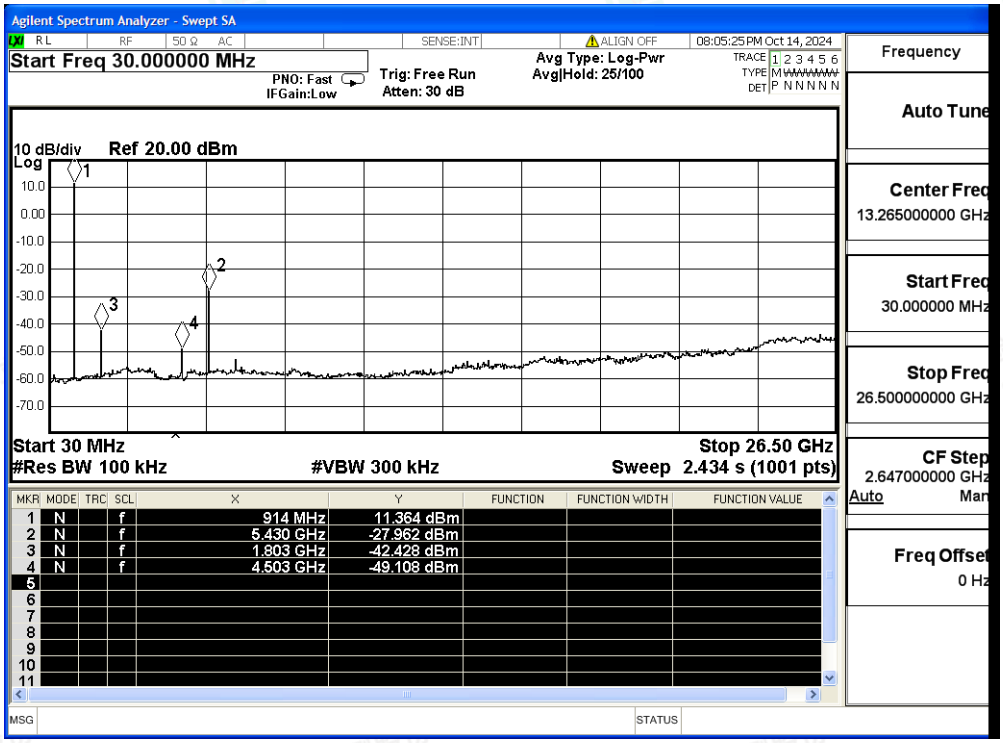
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	LoRa	903	Ant1	-36.91	-20	Pass
NVNT	LoRa	914.2	Ant1	-39.33	-20	Pass

Test Graphs

Tx. Spurious NVNT LoRa 903MHz Ant1



Tx. Spurious NVNT LoRa 914.2MHz Ant1

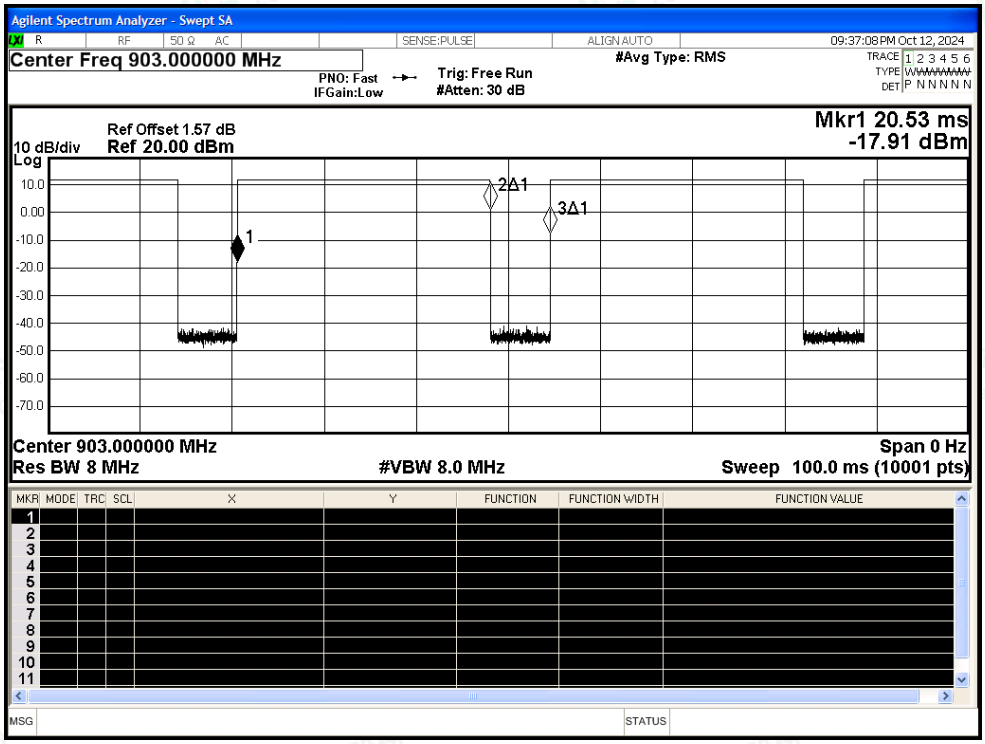


A.6 Duty Cycle

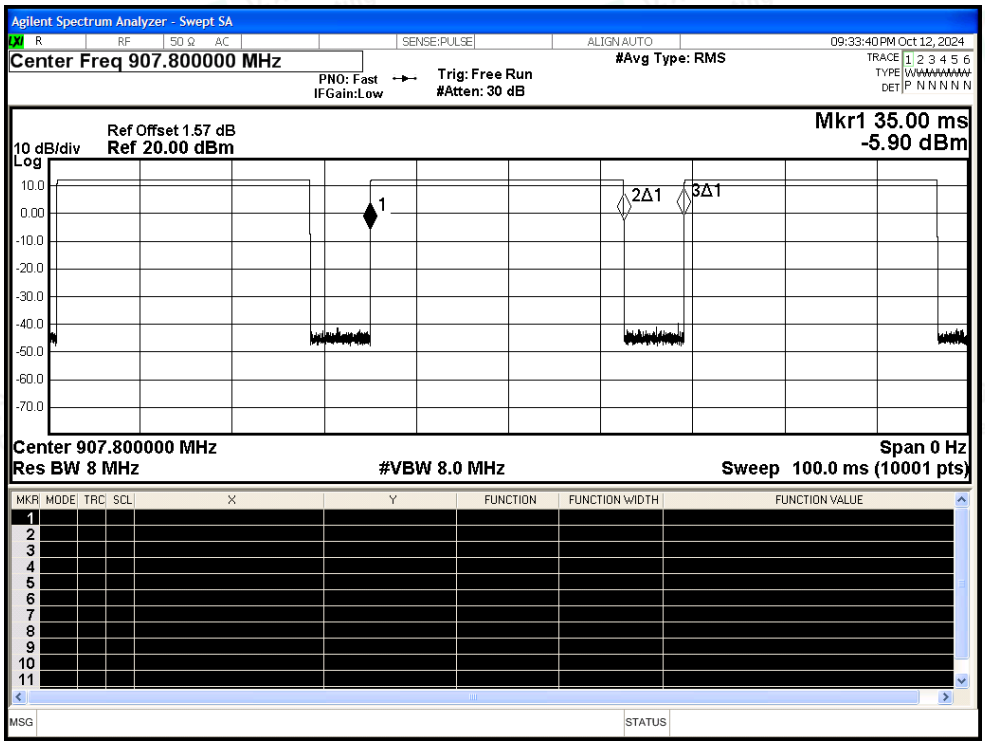
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	LoRa	903	Ant1	80.88	0.92	0.04
NVNT	LoRa	907.8	Ant1	80.74	0.93	0.04
NVNT	LoRa	914.2	Ant1	80.91	0.92	0.04

Test Graphs

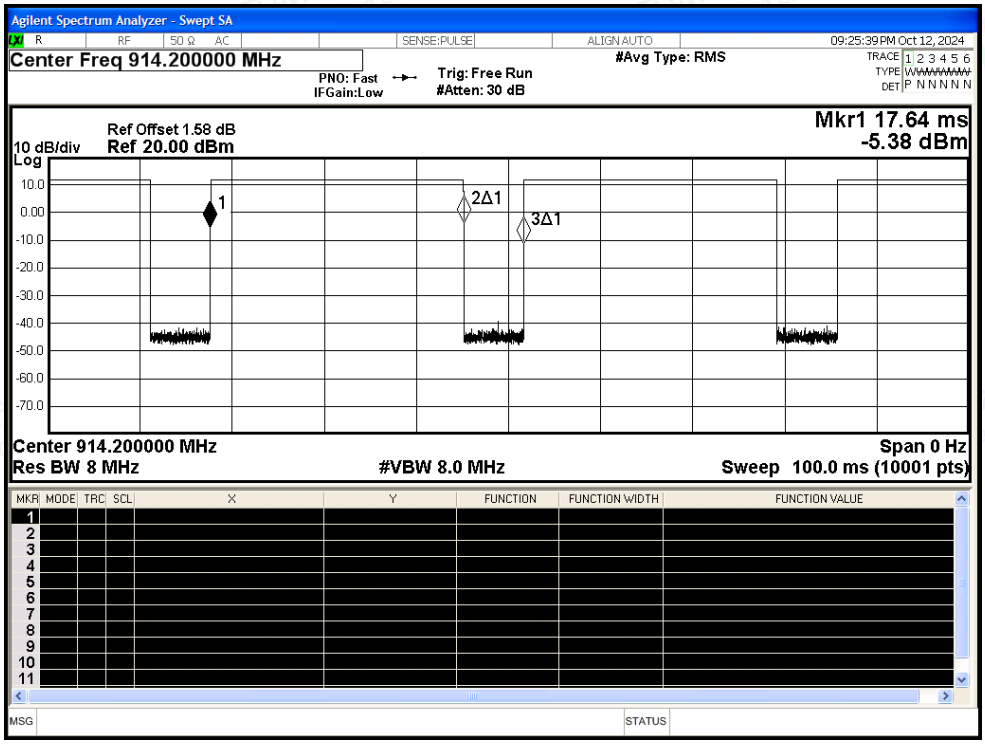
Duty Cycle NVNT LoRa 903MHz Ant1



Duty Cycle NVNT LoRa 907.8MHz Ant1



Duty Cycle NVNT LoRa 914.2MHz Ant1

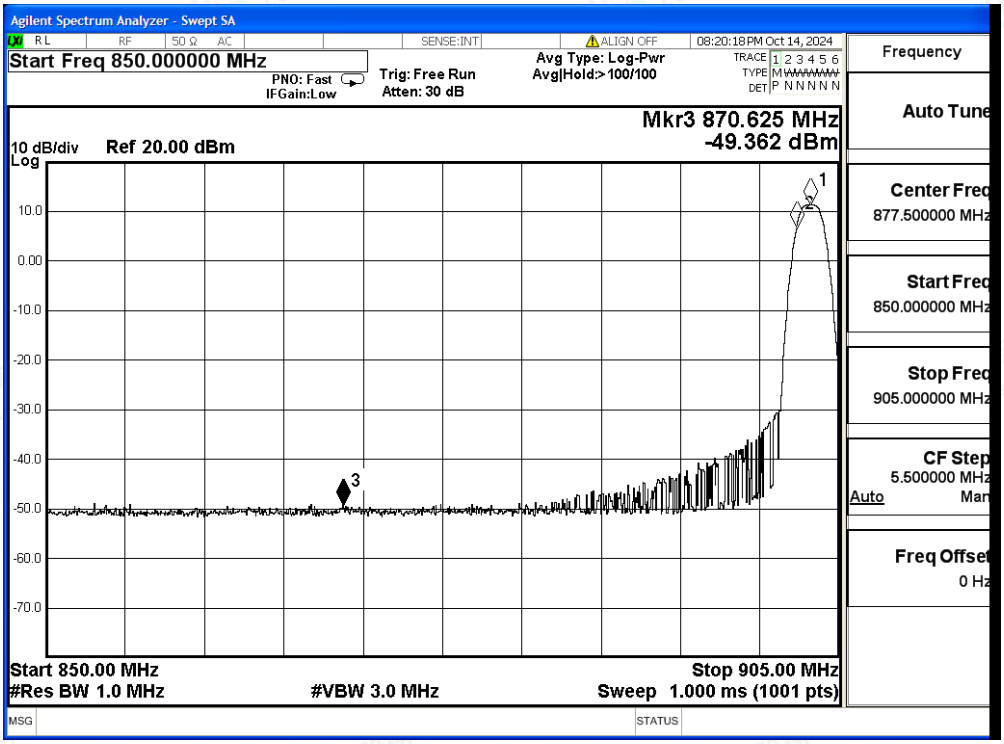
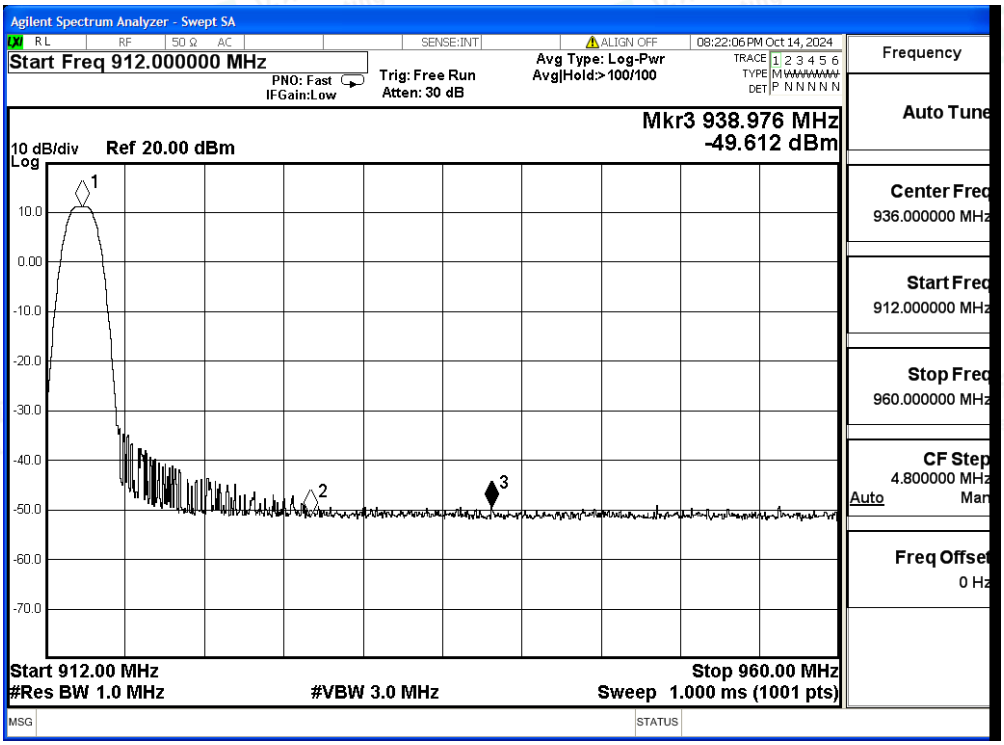


A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	LoRa	903	Ant1	870.625	-49.36	2	47.90	Peak	74	Pass
NVNT	LoRa	903	Ant1	885	-47.65	2	49.61	Peak	74	Pass
NVNT	LoRa	903	Ant1	896.5	-42.88	2	54.38	Peak	74	Pass
NVNT	LoRa	914.2	Ant1	928	49.89	2	147.15	Peak	74	Pass
NVNT	LoRa	914.2	Ant1	932.3	-49.72	2	47.54	Peak	74	Pass
NVNT	LoRa	914.2	Ant1	938.976	-49.61	2	47.65	Peak	74	Pass

Test Graphs

Restrict Band NVNT LoRa 903MHz Ant1



Restrict Band NVNT LoRa 914.2MHz Ant1