

Appendix: LORA FHSS

Contents

Contents 2

Duty Cycle 3

Maximum Peak Conducted Output Power 6

-20dB Bandwidth 9

Occupied Channel Bandwidth 12

Band Edge 15

Band Edge(Hopping) 19

Conducted RF Spurious Emission 22

Number of Hopping Channel 26

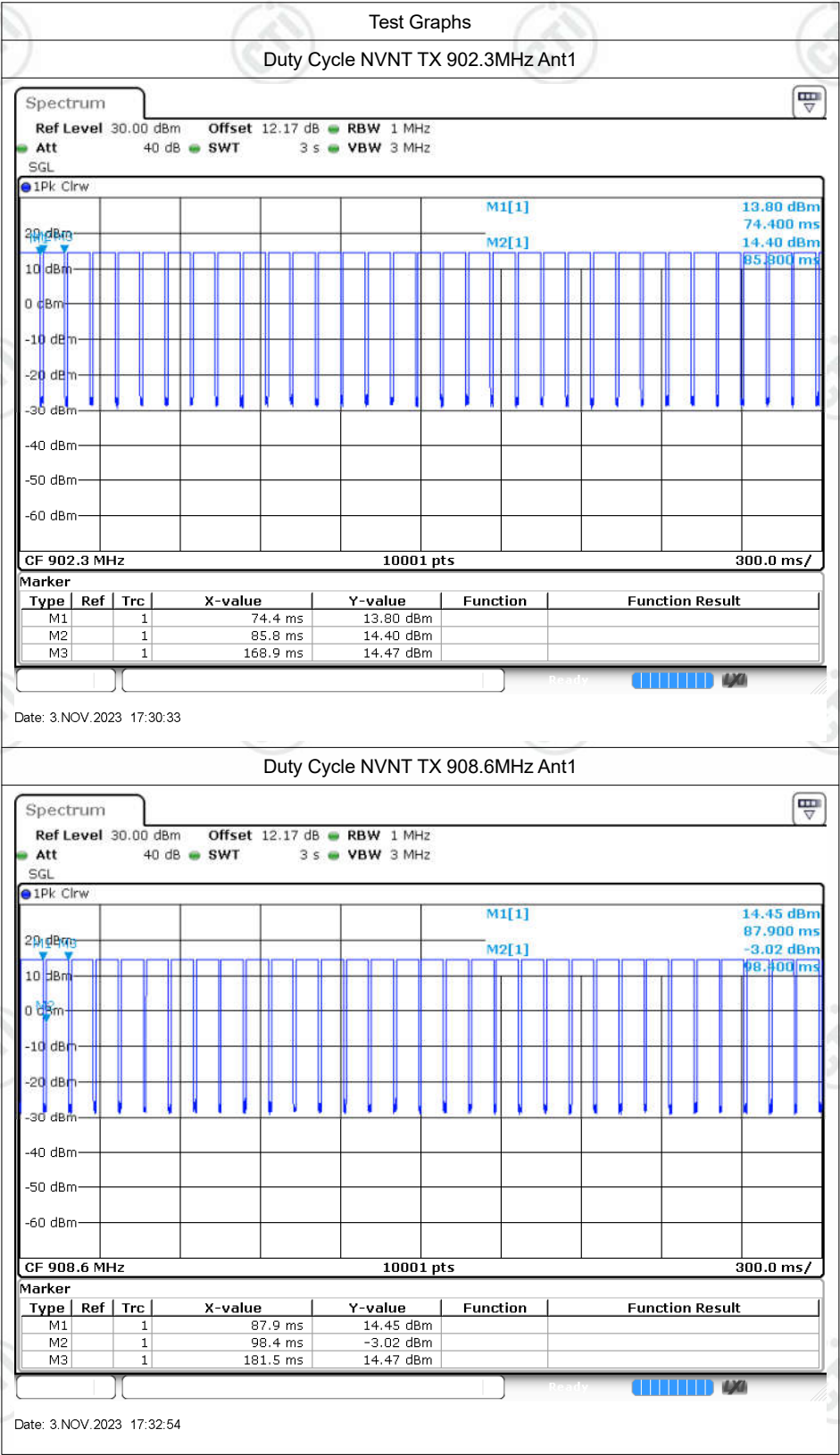
Dwell Time 28

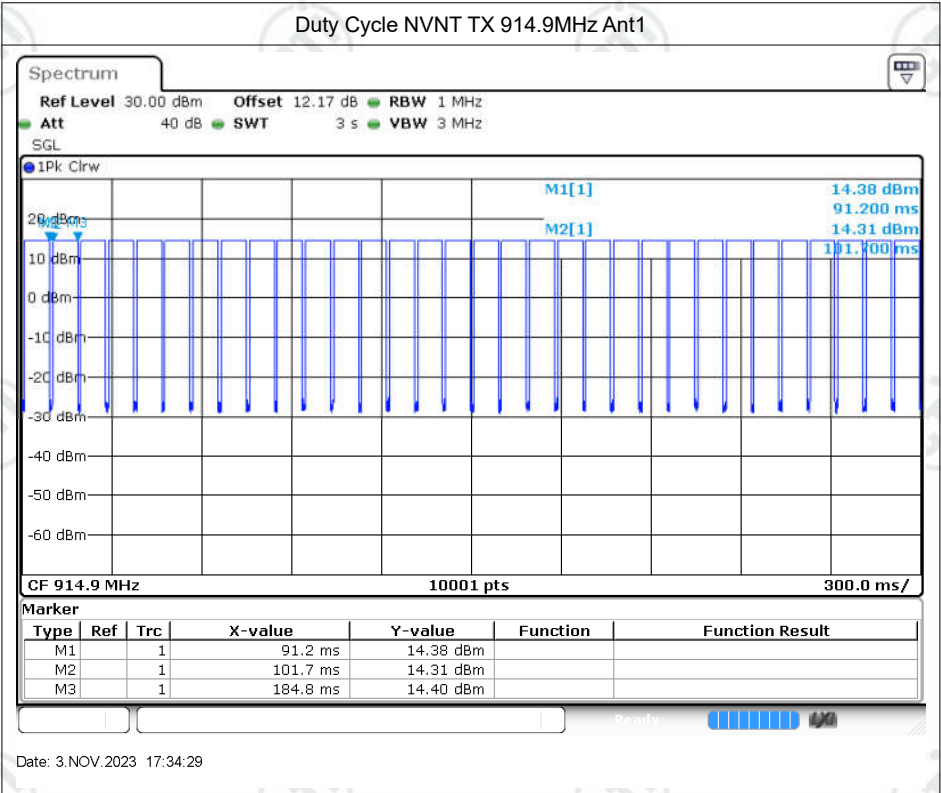
Carrier Frequencies Separation 30

Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	TX	902.3	Ant1	87.94	0.56	0.01
NVNT	TX	908.6	Ant1	88.78	0.52	0.01
NVNT	TX	914.9	Ant1	88.78	0.52	0.01

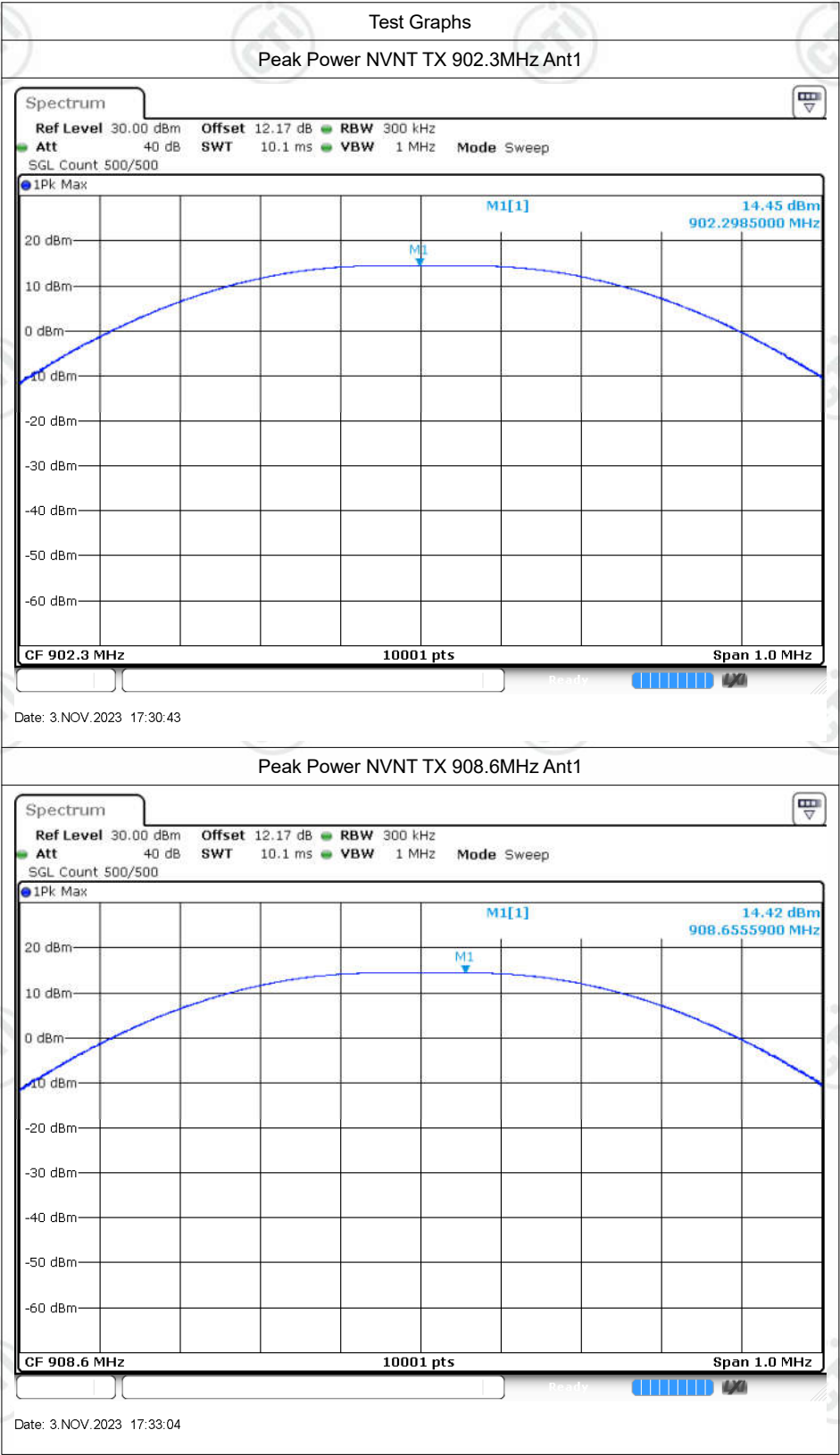
Note: Duty cycle Factor= $10 \times \lg(1/\text{Duty Cycle})$

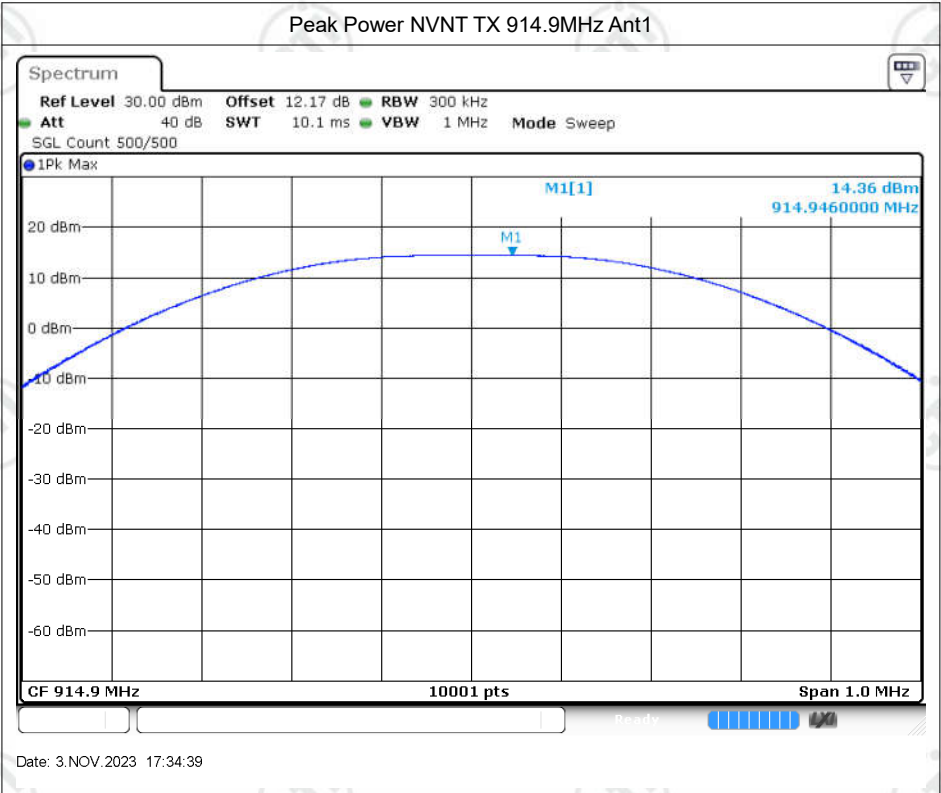




Maximum Peak Conducted Output Power

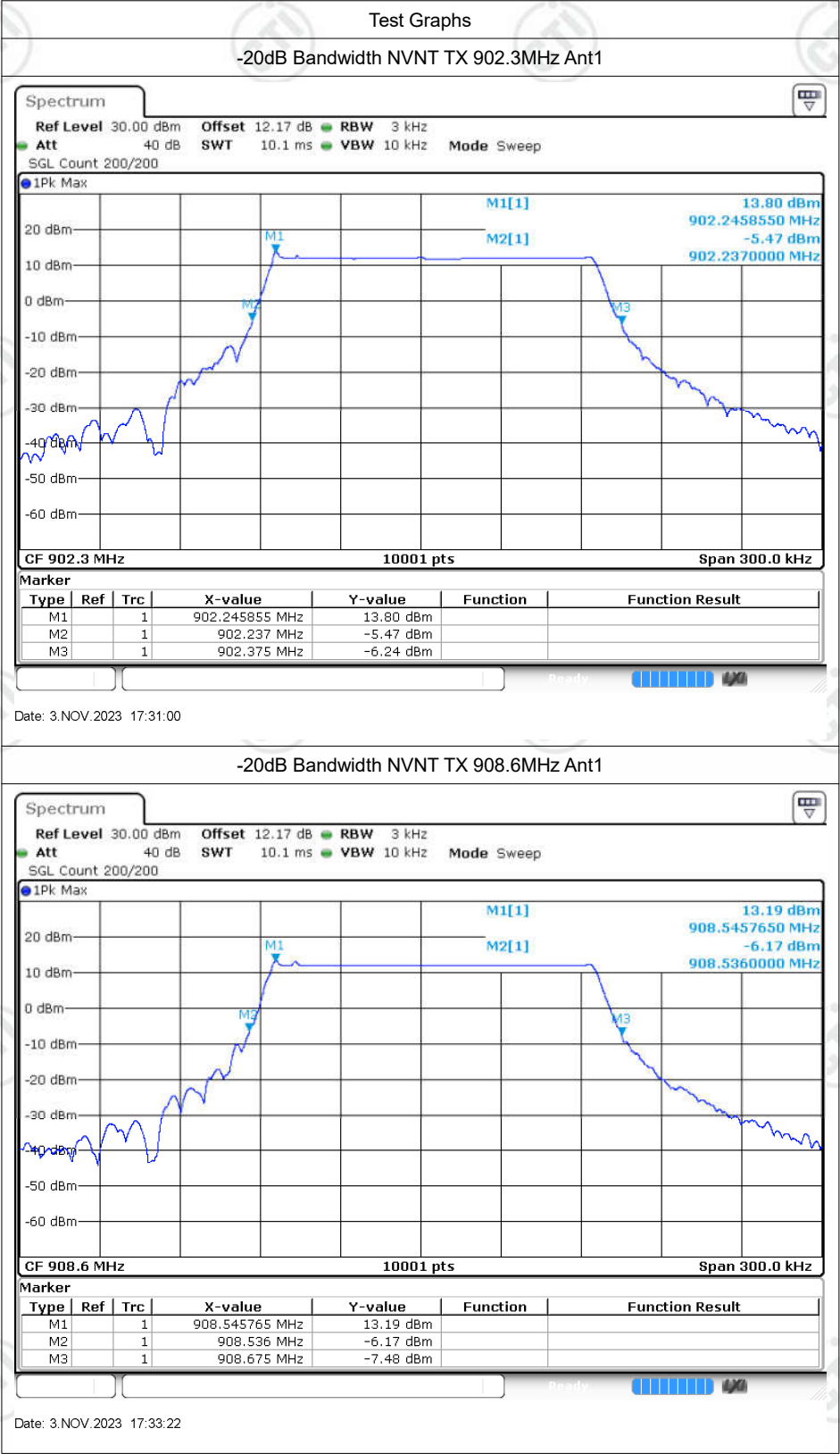
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	TX	902.3	Ant1	14.45	30	Pass
NVNT	TX	908.6	Ant1	14.42	30	Pass
NVNT	TX	914.9	Ant1	14.36	30	Pass

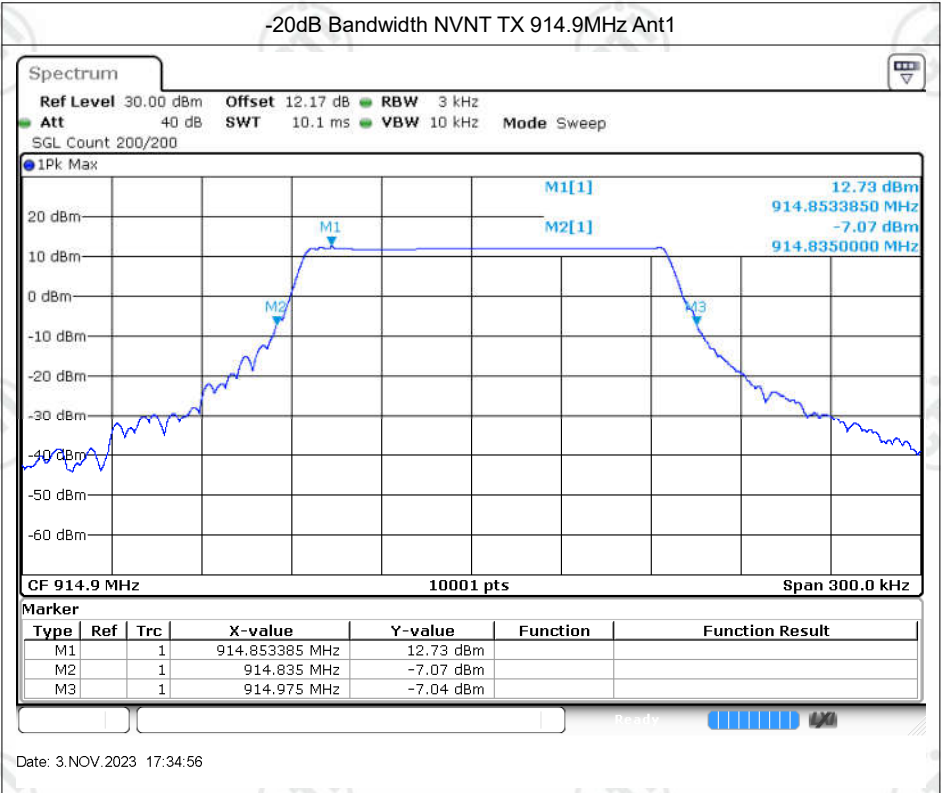




-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	TX	902.3	Ant1	0.138	0	Pass
NVNT	TX	908.6	Ant1	0.139	0	Pass
NVNT	TX	914.9	Ant1	0.14	0	Pass

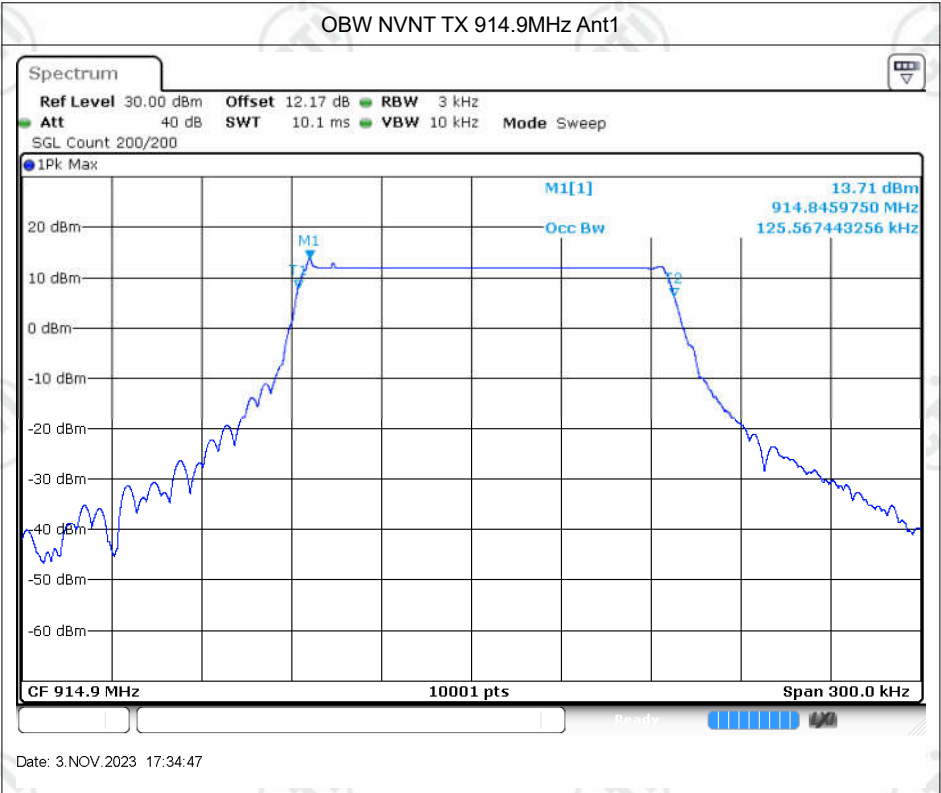




Occupied Channel Bandwidth

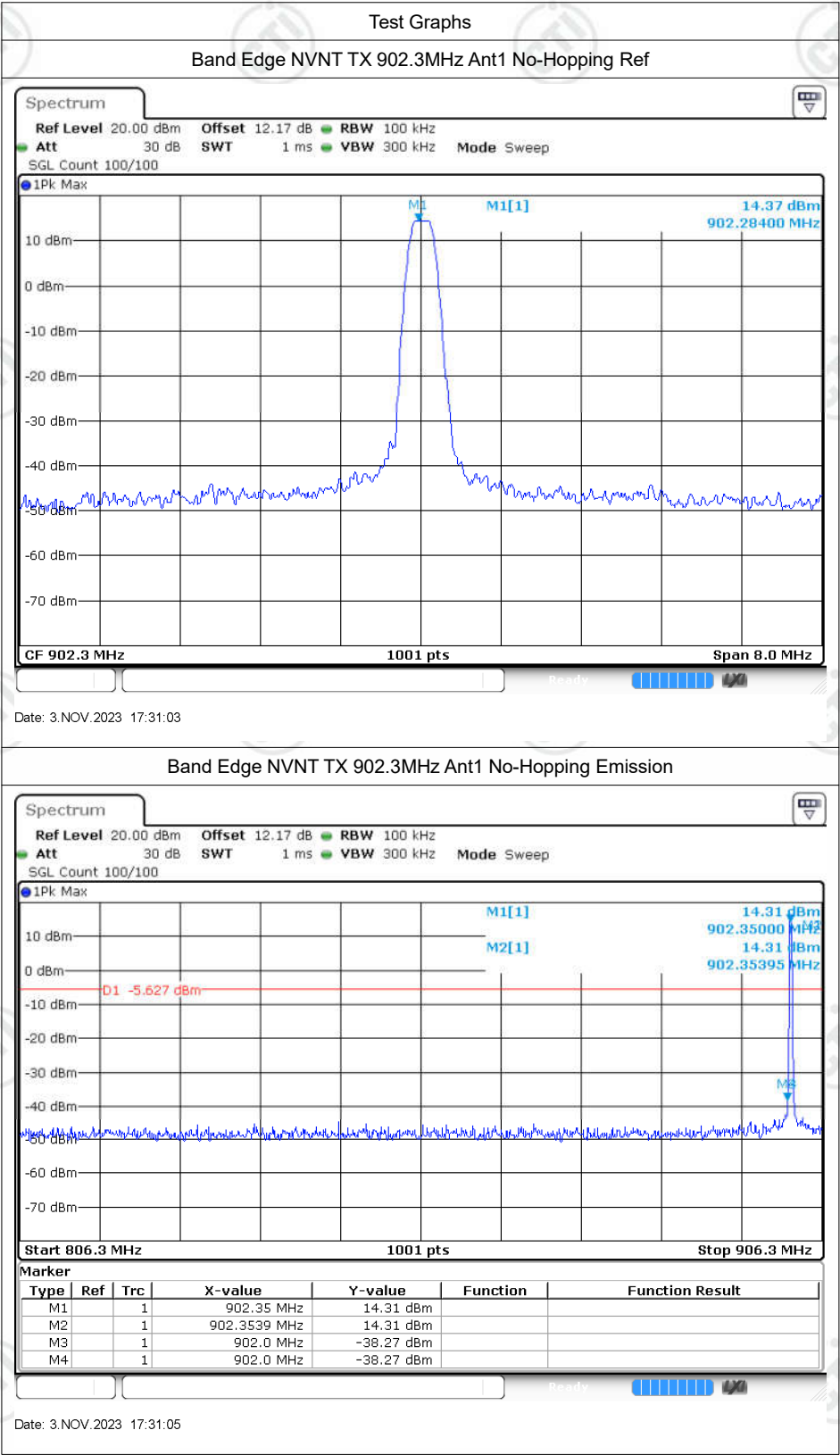
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	TX	902.3	Ant1	0.126
NVNT	TX	908.6	Ant1	0.126
NVNT	TX	914.9	Ant1	0.126

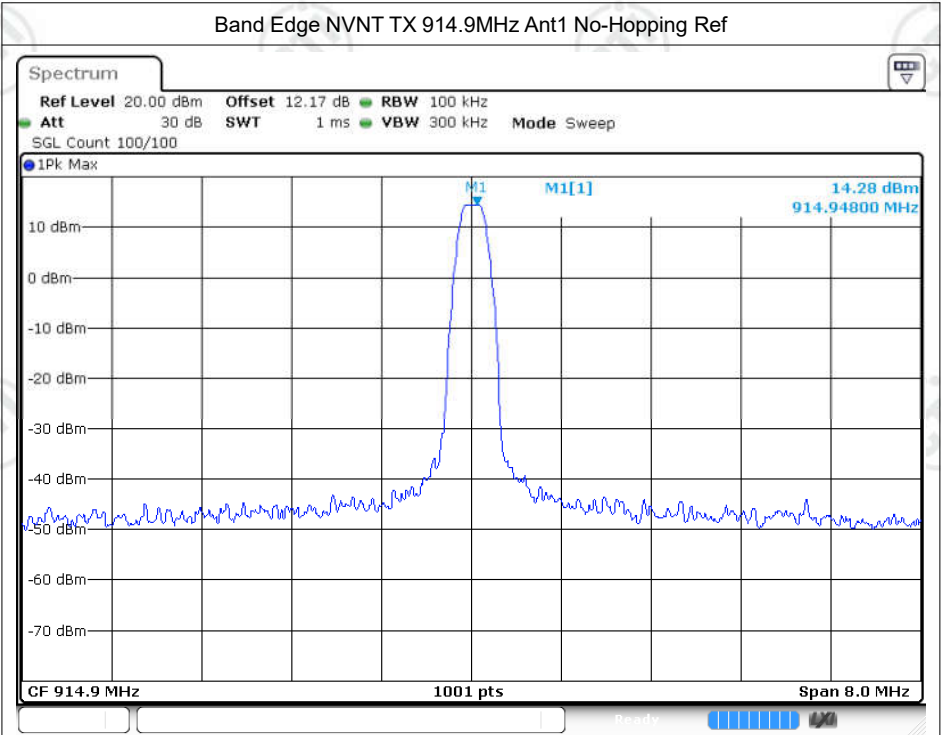




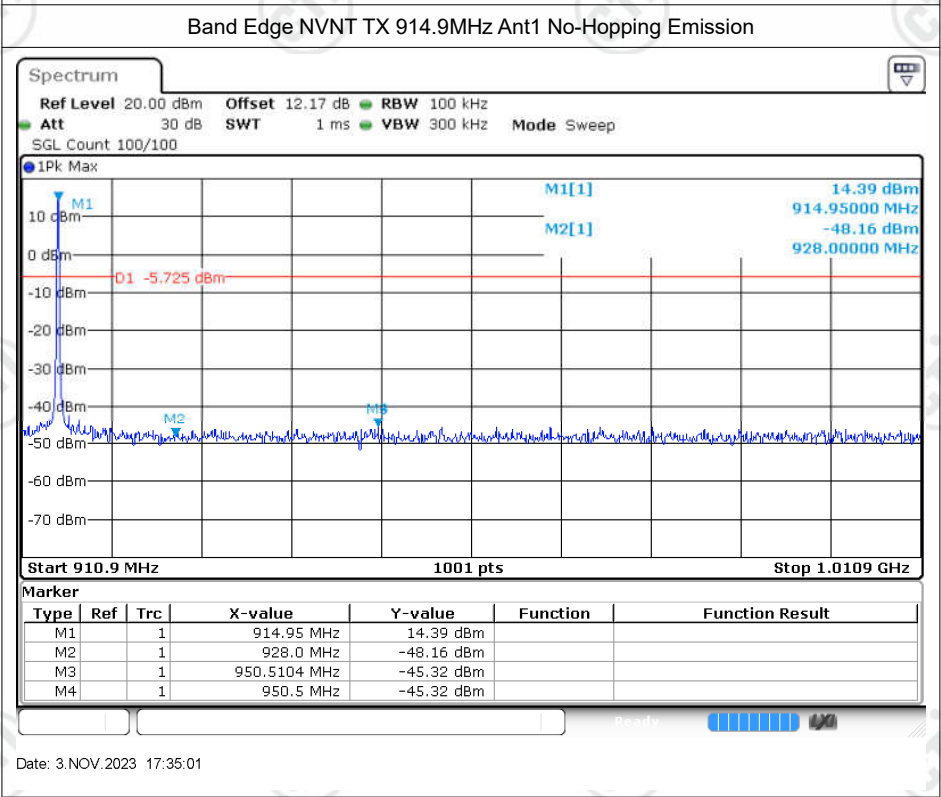
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	TX	902.3	Ant1	No-Hopping	-52.63	-20	Pass
NVNT	TX	914.9	Ant1	No-Hopping	-59.59	-20	Pass





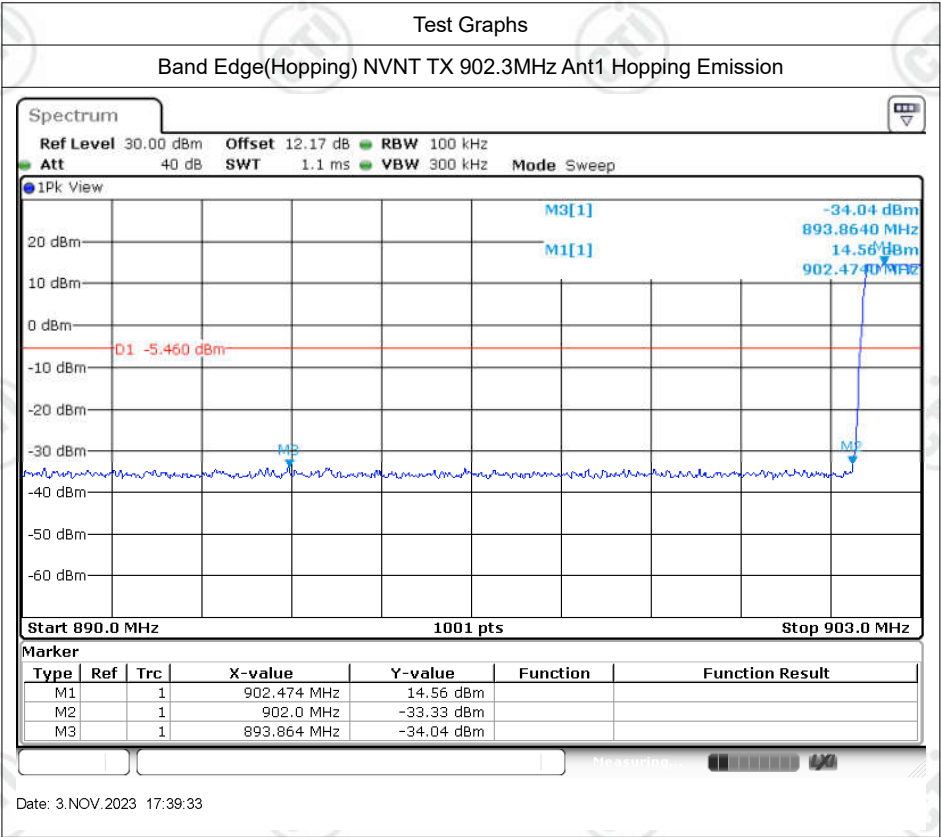
Date: 3.NOV.2023 17:34:59

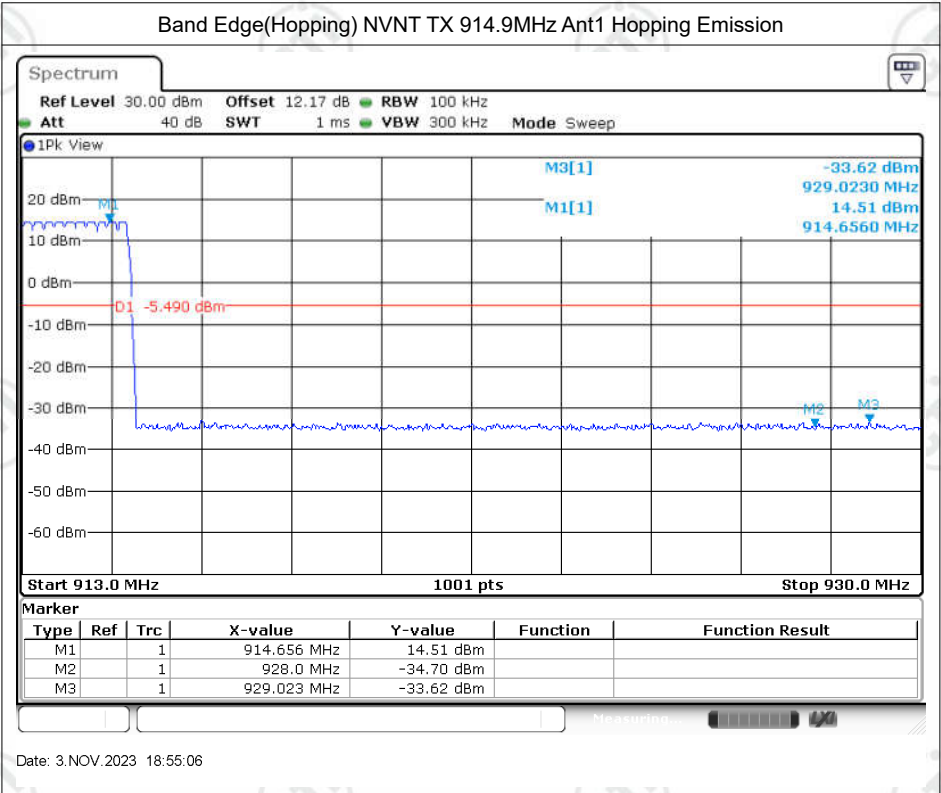


Date: 3.NOV.2023 17:35:01

Band Edge(Hopping)

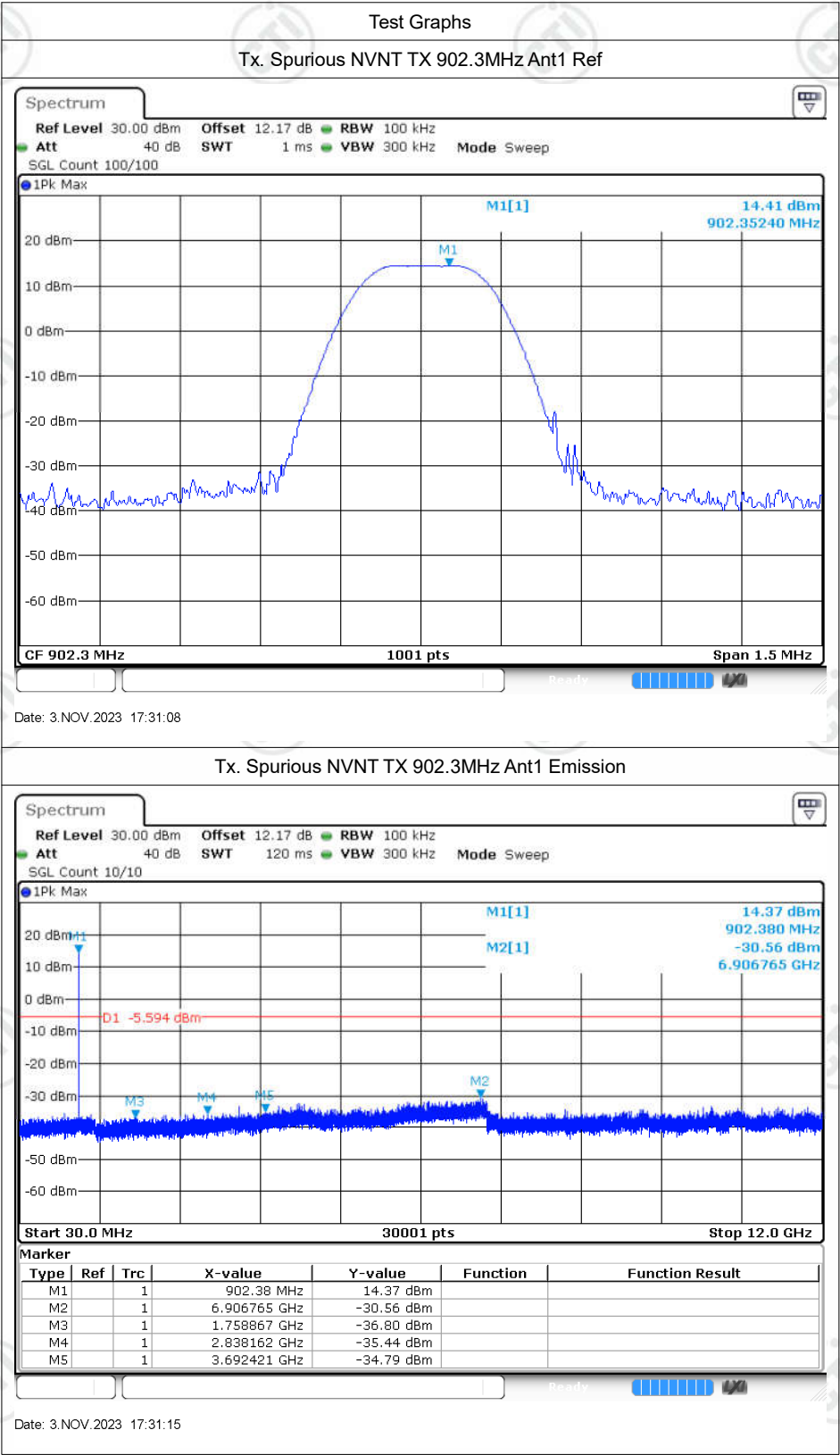
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	TX	902.3	Ant1	Hopping	-47.89	-20	Pass
NVNT	TX	914.9	Ant1	Hopping	-49.21	-20	Pass

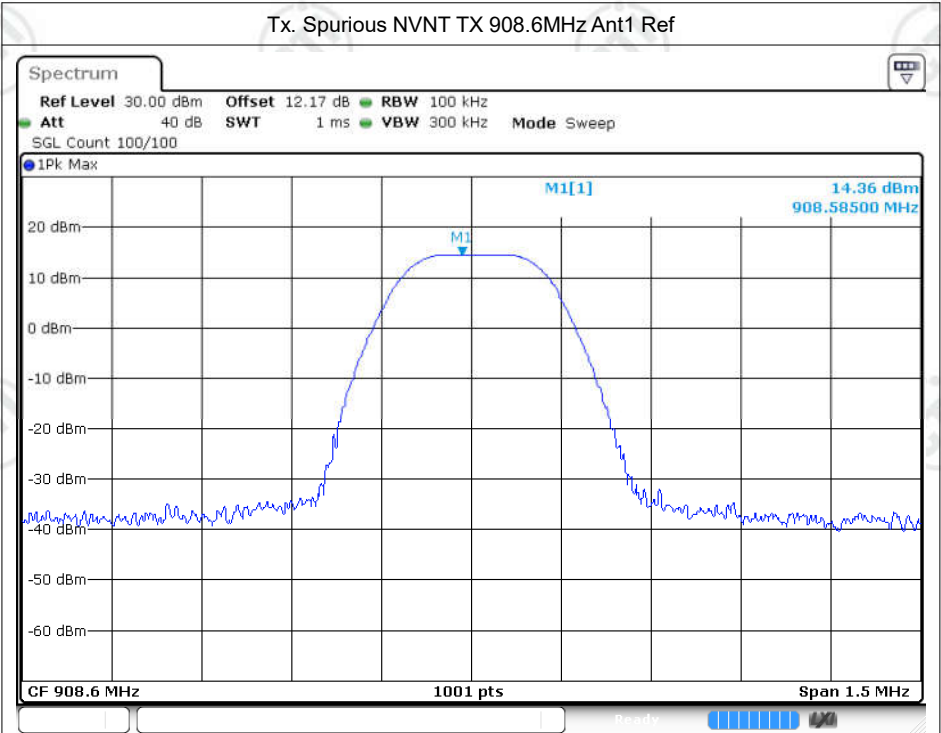




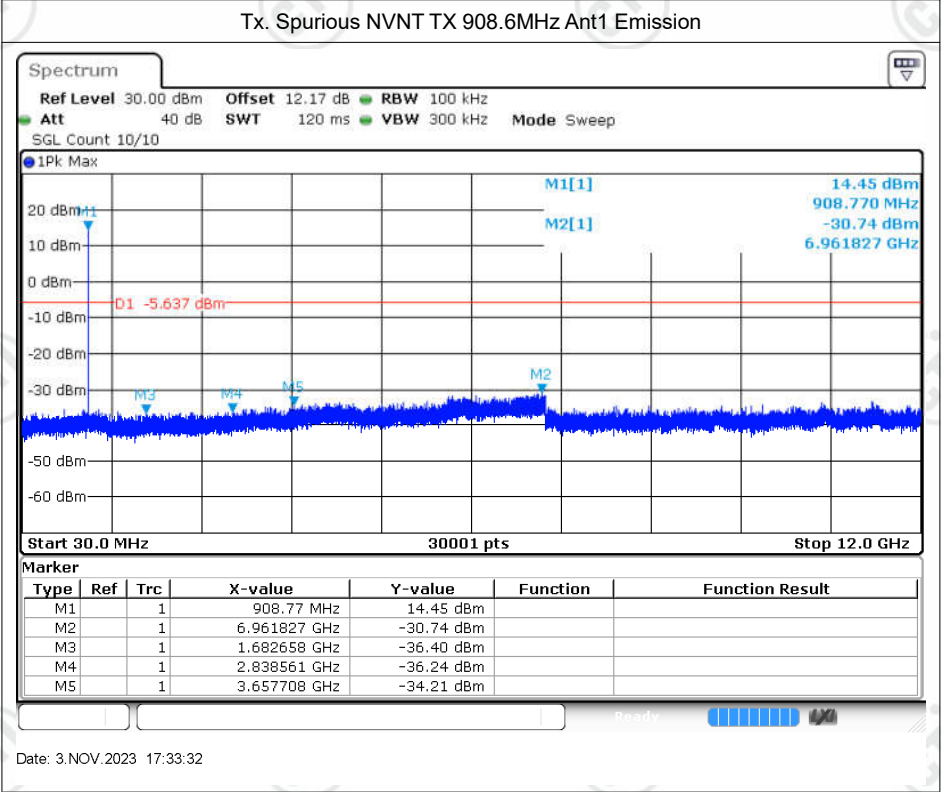
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	TX	902.3	Ant1	-44.96	-20	Pass
NVNT	TX	908.6	Ant1	-45.09	-20	Pass
NVNT	TX	914.9	Ant1	-47.93	-20	Pass

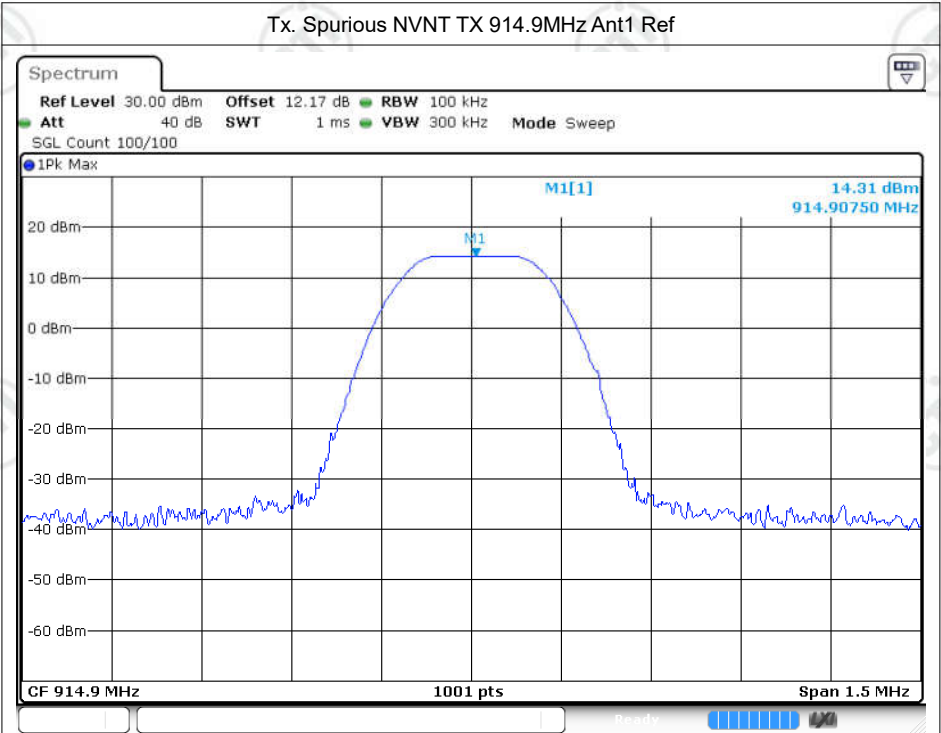




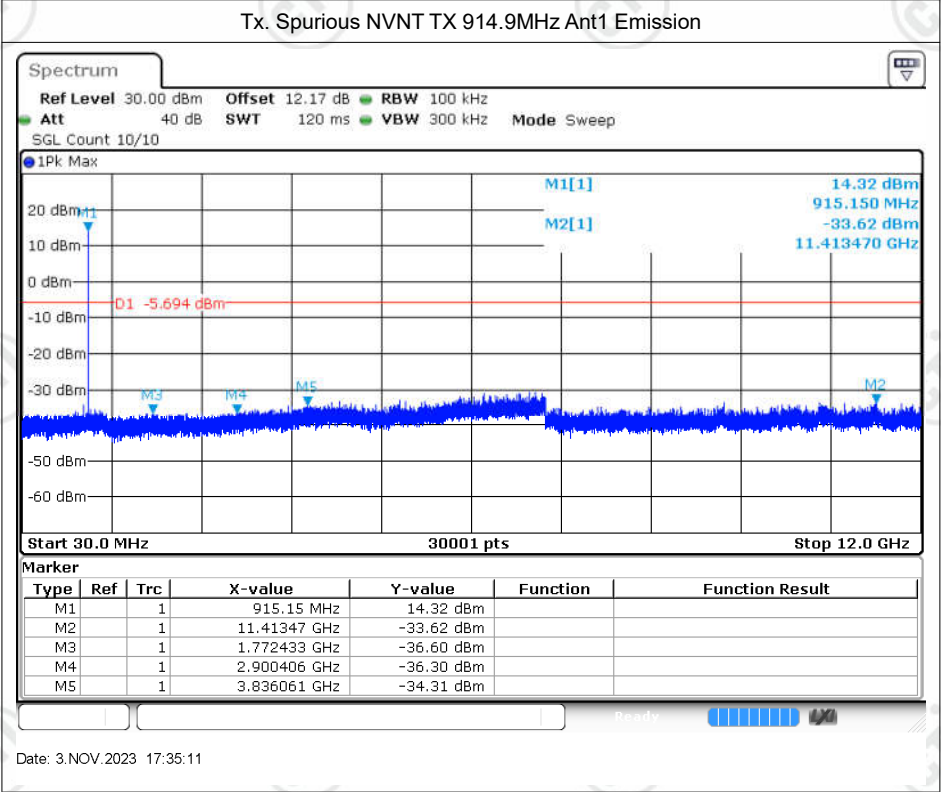
Date: 3.NOV.2023 17:33:25



Date: 3.NOV.2023 17:33:32



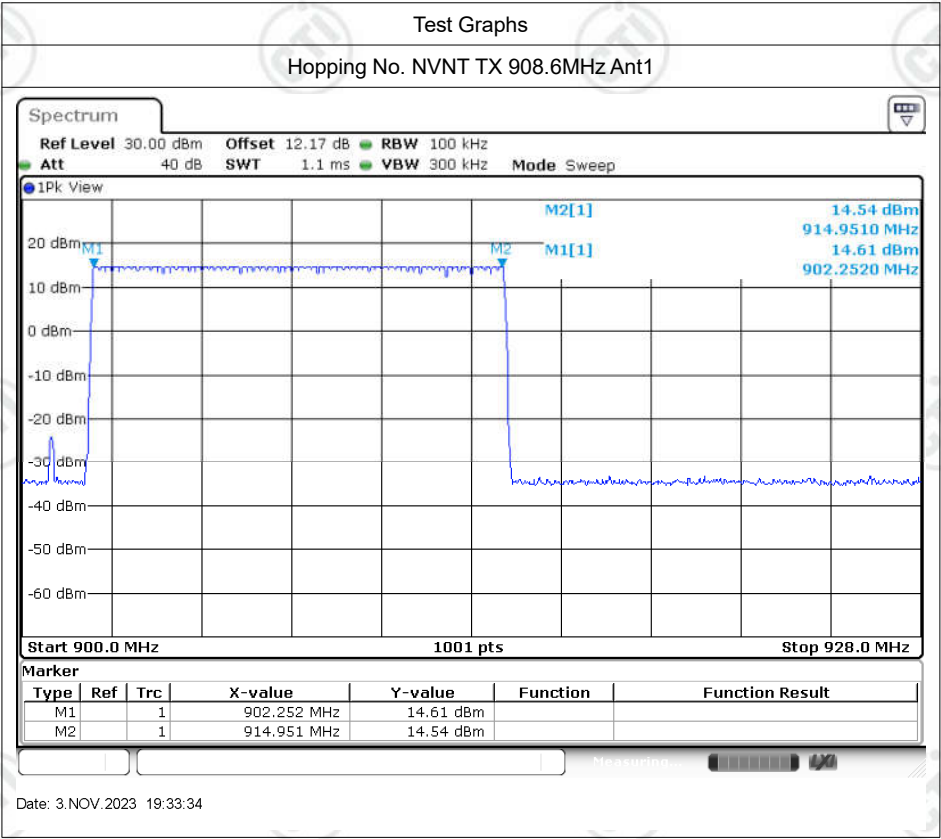
Date: 3.NOV.2023 17:35:04



Date: 3.NOV.2023 17:35:11

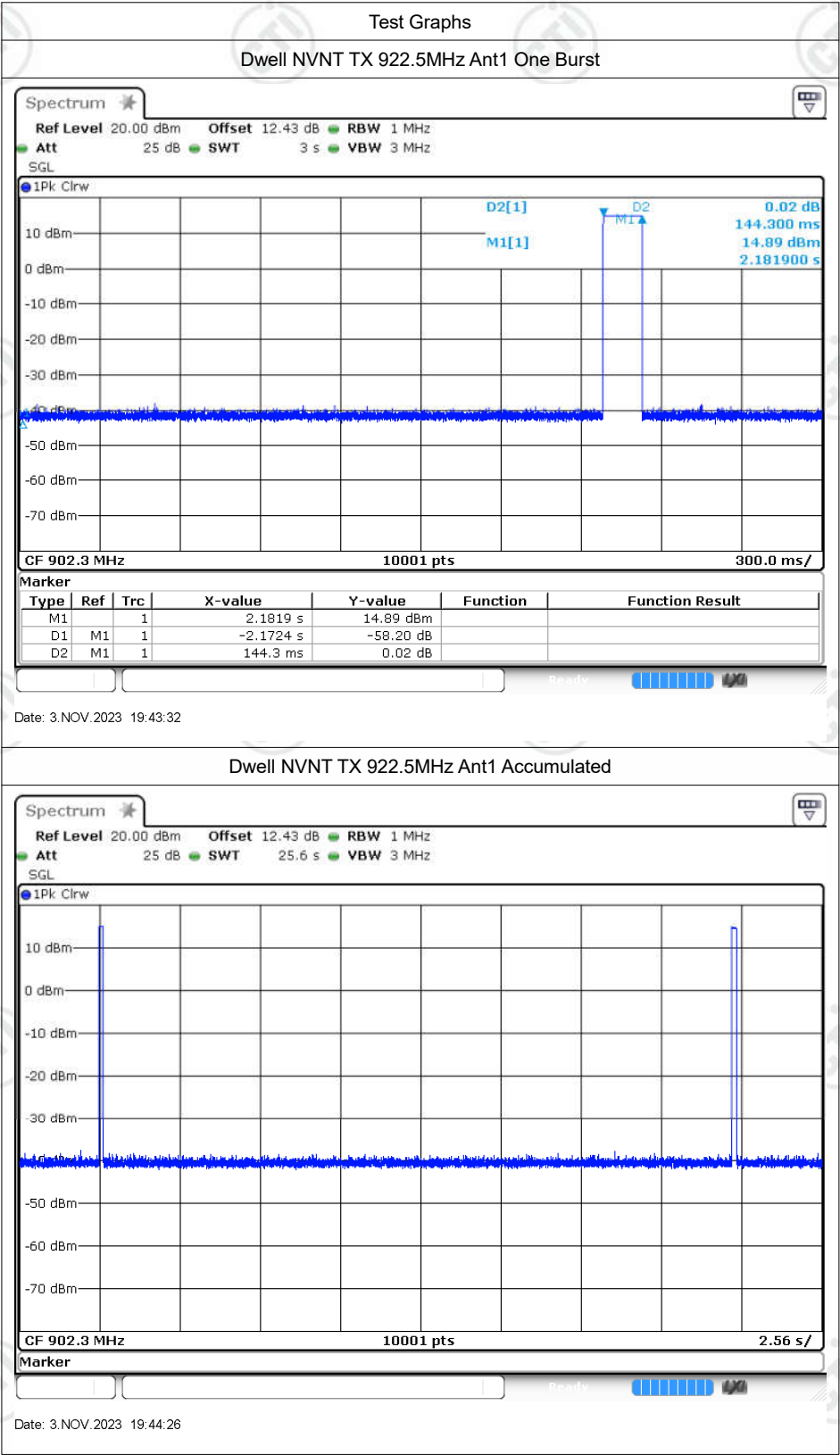
Number of Hopping Channel

Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	TX	Ant1	79	15	Pass



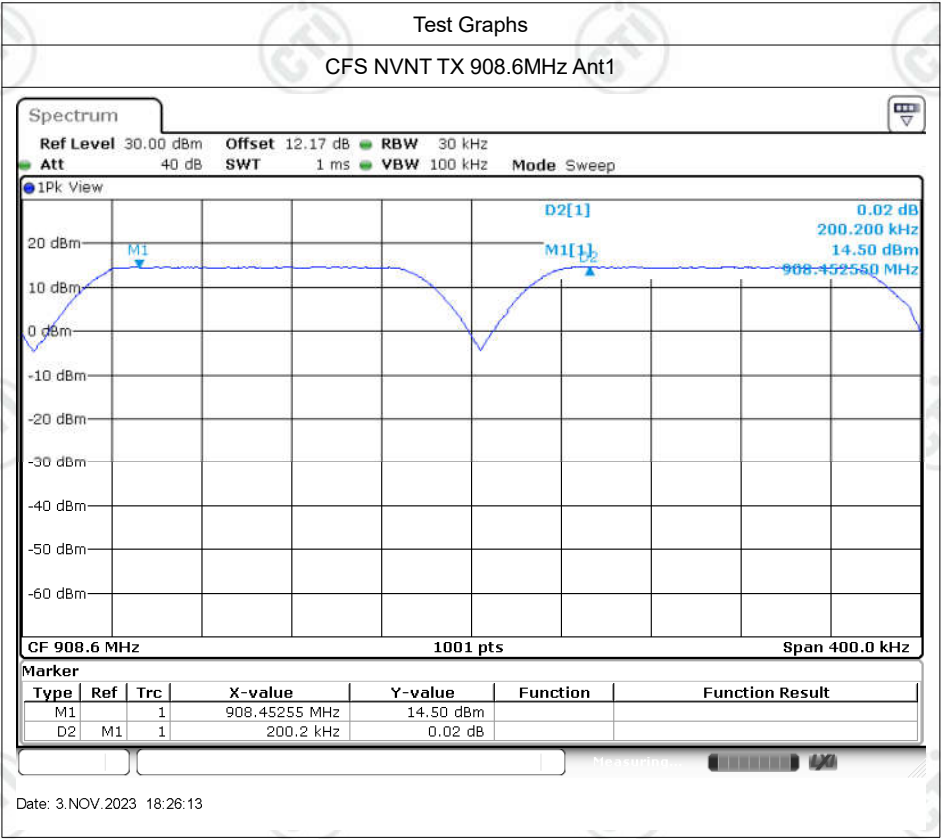
Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	TX	922.5	Ant1	144.3	288.6	2	25600	400	Pass



Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	TX	Ant1	908.4525	908.6525	0.2	0.139	Pass



END OF REPORT