Client:	GE MDS LLC	PR Number:	PR171060
Model:	TransNEXT	T-Log Number:	TL171060-RA Single
		Project Manager:	Christine Krebill
Contact:	Jonathan Viligy	Project Engineer:	David Bare
Standard:	FCC §15.247, RSS-247	Class:	N/A

Maximum Permissible Exposure / SAR Exclusion

Specific Details

Objective: Evaluate the RF Exposure requirements per FCC 1.1310, 2.1091, 2.1093 and RSS-102.

Date of Test: 6/8/2023
Test Engineer: David Bare

General Test Configuration

Calculation uses the free space transmission formula:

$$S = (PG)/(4 \pi d^2)$$

Where: S is power density (W/m^2), P is output power (W), G is antenna gain relative to isotropic, d is separation distance from the transmitting antenna (m).

SAR exclusion calculation formula is from FCC KDB 447498 D01 section 4.3:

$$[\text{(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)}] \cdot [\sqrt{f_{(GHz)}}]$$

Where: $f_{(GHz)}$ is the RF trasnmit channel frequency

Summary of Results

Device complies with Power Density requirements at 20cm separation:	No
If not, required separation distance (in cm):	34

Deviations From The Standard

No deviations were made from the requirements of the standard.

EMC Test Data

Client:	GE MDS LLC	PR Number:	PR171060
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		Project Manager:	Christine Krebill
Contact:	Jonathan Viligy	Project Engineer:	David Bare
Standard:	FCC §15.247, RSS-247	Class:	N/A

FCC MPE Calculation

Use: General

Antenna: 12.15 dBi yagi

USE THIS FOR 300-1500 MHz single transmitters (General use)

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 34 cm mW/cm^2	MPE Limit at 34 cm mW/cm^2
902.2	30.0	1000.0	6.15	12.15	23.9	3981.07	0.274	0.601
915	30.0	1000.0	6.15	12.15	23.9	3981.07	0.274	0.610
927.6	30.0	1000.0	6.15	12.15	23.9	3981.07	0.274	0.618

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 34 cm mW/cm^2	MPE Limit at 34 cm mW/cm^2	Distance where S <= MPE Limit cm
902.2	0.274	0.601	23.0
915	0.274	0.610	22.8
927.6	0.274	0.618	22.6

ISED Canada MPE Calculation

Use: General

Antenna: 12.15 dBi yagi

For 300 - 6000 MHz single transmitters (General use)

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 34 cm W/m^2	MPE Limit at 34 cm W/m^2
902.2	30.0	1000.0	6.15	12.15	23.9	3981.07	2.740	2.740
915	30.0	1000.0	6.15	12.15	23.9	3981.07	2.740	2.767
927.6	30.0	1000.0	6.15	12.15	23.9	3981.07	2.740	2.793

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 34 cm W/m^2	MPE Limit at 34 cm W/m^2	Distance where S <= MPE Limit cm
902.2	2.740	2.740	34.0
915	2.740	2.767	33.8
927.6	2.740	2.793	33.7