Client:	GE MDS LLC	PR Number:	PR166351
Model:	Orbit SDM9 Module	T-Log Number:	TL166351-RA
		Project Manager:	Christine Krebill
Contact:	Jonathan Vilagy	Project Engineer:	David Bare
Standard:	FCC Parts 24, 90 and 101, RSS-119	Class:	-

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 Calculation: 1/16/2023
Test Engineer: David Bare

General Test Configuration

SAR exemption calculation formula is from FCC Rules §1.1307(b)(3)(i)(B) suitable for use between 300 MHz and 6 GHz:

Pth(mW) = $[ERP_{20cm} * (d/20)^{-log10(60/(ERP_{20cm} * \sqrt{f_{(GHz)}}))}]$ for d = 0.5 to 20 cm

Pth(mW) = ERP_{20cm} for d = 20 to 40 cm

Where: $f_{(GHz)}$ is the RF transmit channel frequency and d is the separation distance

Summary of Results

Device complies with ISEDC Power Density requirements at 20cm separation:	No
If not, required separation distance (in cm):	170

Deviations From The Standard

No deviations were made from the requirements of the standard.

Note:	Devices with less than 1 mW time-averaged output power are exempt from RF evaluation (SAR or MPE). (FCC §1.1307(b)(3)(i)(A)) for the frequency range 100 kHz to 100 GHz (Including transmitters implanted in the body of a user)

FCC MPE Calculation
Use: General
Antenna: 9.15 dBi

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 170 cm mW/cm^2	MPE Limit at 170 cm mW/cm^2
930	40.7	11749.0	0	9.15	40.7	96605.09	0.266	0.620
940	40.7	11749.0	0	9.15	40.7	96605.09	0.266	0.627
960	40.7	11749.0	0	9.15	40.7	96605.09	0.266	0.640

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 170 cm mW/cm^2	MPE Limit at 170 cm mW/cm^2	Distance where S <= MPE Limit cm
930	0.266	0.620	111.4
940	0.266	0.627	110.8
960	0.266	0.640	109.6

ISED Canada MPE Calculation
Use: General
Antenna: 9.15 dBi

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 170 cm mW/cm^2	MPE Limit at 170 cm mW/cm^2
930	40.7	11749.0	0	9.15	40.7	96605.09	0.266	0.280
940	40.7	11749.0	0	9.15	40.7	96605.09	0.266	0.282
960	40.7	11749.0	0	9.15	40.7	96605.09	0.003	0.286

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 170 cm mW/cm^2	MPE Limit at 170 cm mW/cm^2	Distance where S <= MPE Limit cm
930	0.266	0.280	165.8
940	0.266	0.282	165.2
960	0.003	0.286	164.0