Willow Run (WR) Test Labs, Inc.
7117 Fieldcrest Drive
Brighton, MI 48116
Phone: (734) 252-9785, Fax (734) 926-9785
e-mail: info@wrtest.com

RF EXPOSURE CALCULATIONS

Requirement:
According to USA CFR 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. For Canada, RSS-102 sets out the requirements and measurement techniques used to evaluate radio frequency (RF) exposure compliance of radiocommunication apparatus designed to be used within the vicinity of the human body.

Maximum Permissible Exposure Calculations:

	Level	Units		
			Test Date:	1-Nov-19
			Test Engineer:	Joseph Brunett
MPE Field Strength Limit	61	V/m	**EUT Mode:**	CW, MAX ANT GAIN (A1)
MPE Power Density Limit	1.0	mW/cm2	**Meas. Distance:**	3m

Freq. MHz	Temp ºC	EIRP (Pk) dBm	Exposure Duty dB	EIRP (Avg) dBm	EUT Ant. Dim. cm	Far-field Distance m	S = 1mW/cm2 Dist.* cm	S @ 20 cm Distance mW/cm2	Comments
76005	20	28.0	-7.4	20.6	6.00	1.82	**3.0**	0.023	max all orientations, CW mode
76500	20	27.6	-7.4	20.2	6.00	1.84	2.9	0.021	max all orientations, CW mode
76970	20	26.5	-7.4	19.1	6.00	1.85	2.5	0.016	max all orientations, CW mode

S @ 20cm = EIRP – 10*log10(4 * PI * 20^2)
S = 1mW/cm2 Distance = sqrt(EIRPmW/(4*PI*1mW/cm2))

S = 1mW/cm2 Distance is an overestimated value when smaller than the EUT far field distance, and demonstrates compliance with FCC Part 1.1307, 1.1310, 2.1091, and 2.0193 requirements when the EUT is mounted into the motor vehicle. EUT is a Side Looking radar.

Summary:
The EUT with all transmitters is compliant with both the FCC power density limit and the ISED Exposure Evaluation limits.