



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:

USA REF: 1.1310, 2.1091/1093, 447498 D01 General RF Exposure Guidance v06
IC REF: RSS-102 Issue 5, Safety Code 6
Min. Sep. Distance: 20 cm (Mobile)

Test Date: 13-Dec-22
Test Engineer: John Nantz
EUT: INTR1 RAD w/BMS
EUT Mode: Worst Case
Meas. Distance: Conducted

MPE / Exposure Calculations											
	Mode	Freq. MHz	Worst Case EIRP(Pk/Avg) dBm	E20cm(Avg) dBuV/m	S20cm(Avg) mW/cm2	Canada ISSED RSS-102 MPE			USA FCC 1.1310 MPE		
						SC6 Limit (S20cm) mW/cm2	MPE Ratio			S Limit mW/cm2	MPE Ratio
R0	RADIO 1 - CM	2405	4.9	123.6	0.00061	5.5	.00011			1.00000	0.00061
R2		2435	4.9	123.7	0.00062	5.5	.00011			1.00000	0.00062
R3		2475	4.8	123.6	0.00061	5.5	.00011			1.00000	0.00061
R4		2412	4.2	123.0	0.00053	5.5	.00010			1.00000	0.00053
R5		2437	4.4	123.1	0.00055	5.5	.00010			1.00000	0.00055
R6		2462	4.4	123.1	0.00055	5.5	.00010			1.00000	0.00055
R7						MPE Max (<1):	.00021			MPE Total (<1):	.001166
R8						Complies?	YES			Complies?	YES
#	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
(ROW)	(COLUMN) NOTE:										
R0	C2	As Measured / Computed from highest fundamental emission, see fundamental emission section of this report. Max value of all baud rates used for worst case calculation.									
R0	C2	Maximum of either EIRP or Pout as measured.									
R0	C5	EIRP (mW) = S (mW/cm²) x 4 x PI x 20cm²									

Summary:

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