



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.

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

Test Date: 17-Sep-24
Test Engineer: John Nantz
EUT: Vais Technology SEER ECU
EUT Mode: Worst Case
Meas. Distance: 3 meters

R0	SAR Exemption										
	Mode	Freq. MHz	Worst Case E3(Avg) dBuV/m	E20cm(Avg) dBuV/m	H20cm(Avg) dBuA/m	Canada ISED RSS-102 MPE			USA FCC 1.1310 MPE		
						SC6 Limit (E20cm) dBuV/m	SC6 Limit (H20cm) dBuA/m	Worst Case MPE Ratio	E20cm Limit dBuV/m	H20cm Limit dBuA/m	Worst Case MPE Ratio
R1	LF	0.125	113.2	160.2	108.9		135.3	0.047948	175.8	124.2	0.1718
R2											
R3											
R4								MPE Ratio		S Limit mW/cm2	MPE Ratio
R5											
R6								MPE Total (<1):		MPE Total (<1):	
R7								Complies?		Complies?	
#	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11

(ROW)	(COLUMN)	NOTE
R0	C3	As Measured / Computed from highest fundamental emission, see fundamental emission section of the respective radio reports.
R0	C4	Conversion from 3m to 0.2m: $E(3m) + 40 \cdot \log_{10}(3/0.2)$
R0	C5	Conversion from E(20cm) to H(20cm): $E(20cm) - 20 \cdot \log_{10}(377 \text{ohm})$
R0	C9/C10	Limits for uncontrolled environment according to FCC 1.1310, Table 1 are converted from V/m or A/m to dBuV/m or dBuA/m via $20 \cdot \log_{10}(A \text{ or } V/m \cdot 1000000)$
R0	C9/C10	For FCC MPE, use of 300 kHz limit at 125 kHz as previously allowed by FCC.

Summary:

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