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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

Test Date: 14-Jan-25
 Test Engineer: J. Nantz
 EUT: HFA31
 EUT Mode: Active
 Meas. Distance: 3m

R0	Mode	Frequency Band		EIRP+Duty (RMS) dBm	Tune Up dB	E20cm (Avg) dBuV/m	S20cm (Avg) mW/cm2	EIRP (Avg Total) W	Canada ISED Safety Code 6		USA FCC 1.1310 MPE		
		Start MHz	Stop MHz						FRL Section 6.6 W	FRL Ratio	MPE Limit Table 1 (mW/cm2)	MPE Ratio	
R1	CM	24050.00	24250.00	3.6	1.000	123.322	0.001	0.003	5.00000	0.00058	1.000		0.001
R2													
R3													
R6													
R7									Total MPE	0.00058		Total MPE	0.001
R8									MPE Ratio < 1	YES		MPE Ratio < 1	YES
#	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13

(ROW) (COLUMN) NOTE:

- R0 C4 As Measured / Computed from highest fundamental emission, see fundamental emission section of the test report. Peak EIRP is used to demonstrate compliance
- R0 C5 TUNE UP – The manufacturer declares +/- 1dB tune up
- R0 C6 $E20cm = EIRP + \text{Tune Up} + 95.2 + 20 \cdot \log(3/0.2)$
- R0 C7 $EIRP + \text{Tune up (mW)} = S \text{ (mW/cm}^2\text{)} \times 4 \times \pi \times 20cm^2$
- R0 C8 $EIRP + \text{Tune up (dBm)} \rightarrow EIRP \text{ (W)} = 0.001 \cdot 10^{((EIRP + \text{Tune up (dBm)})/10)}$

Summary:

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