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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.

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: 31-Jan-25
Test Engineer: J. Brunett
EUT: GoJo Badge Locator
EUT Mode: CW
Meas. Distance: 3m

R0	Mode	Frequency Band		EIRP+Duty (RMS) dBm	Tune Up dB	EIRP (Avg) mW	S20cm (Avg) mW/cm2	Canada ISED Safety Code 6		USA FCC 1.1310 MPE		
		Start MHz	Stop MHz					FRL RSS-102 6.6 mW	SAR Ratio	MPE Limit Table 1 (mW/cm2)		MPE Ratio
R1	BLE (CW)	2402.00	2480.00	9.4	0.000	8.710	0.002	2676.424	0.003	1.000		0.002
R2												
R3												
R6												
R7								Total MPE	0.003		Total MPE	0.002
R8								MPE Ratio < 1	YES		MPE Ratio < 1	YES
#	C1	C2	C3	C4	C5	C6	C7	C9	C10	C11	C12	C13

(ROW) (COLUMN) NOTE:

R0 C4 No duty factor were applied to demonstrate compliance
R0 C5 TUNE UP – The manufacturer declares +/-0dB tune up.
R0 C6 $E_{20cm} = EIRP + \text{Tune Up} + 95.2 + 20 \cdot \log(3/0.2)$
R0 C7 $EIRP + \text{Tune up (mW)} = S \text{ (mW/cm}^2\text{)} / 4 \times \pi \times 20\text{cm}^2$
R0 C9 mW/cm2 limit = 0.1*W/m2

Summary:

The EUT with all transmitters is compliant with both the FCC power density limit.