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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 5, Safety Code 6

Min. Sep. Distance: 20 cm (Mobile)

Test Date: 9-Jun-23
 Test Engineer: J. Nantz
 EUT: Sensata HUBB
 EUT Mode: Worst Case
 Meas. Distance: 3 meters

Mode	Freq. MHz	Worst Case EIRP(Avg)** dBm	E20cm(Avg) dBuV/m	S20cm(Avg)****		SC6 Limit (S20cm) W/m2	MPE Ratio	S Limit mW/cm2	MPE Ratio
Thread	2400-2483.5	11.3	130.0	0.0027	0.02684	5.47	0.0049	1.00000	0.0027
WLAN	2400-2483.5	13.9	132.7	0.0049	0.04922	5.47	0.0090	1.00000	0.0049
MPE Total (<1):							.014	MPE Total (<1):	.008
Complies?							Yes	Complies?	Yes

*As Measured / Computed from highest fundamental emission, see fundamental emission section of the NFC report.
 **EIRP, as computed from either measured data reported in this application or the Modular Device RF Exposure Exhibits.
 *** For FCC MPE, use of 300 kHz limit at 125 kHz as previously allowed by FCC.
 **** 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 ISED Exposure Evaluation limits.