

## 7. Measurement Data (continued)

### 7.12. Public Exposure to Radio Frequency Energy Levels

Requirement: (FCC Part 15.247(i))

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. Devices are subject to the radio frequency radiation exposure requirements specified in 47CFR 1.1307(b), FCC 47 CFR 2.1091 and 47 CFR 2.1093, as appropriate. All equipment shall be considered to operate in a "general population/uncontrolled" environment.

#### RSS 102, Section 2.5.2

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- At or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834} \text{ W}$  (adjusted for tune-up tolerance), where  $f$  is in MHz.

Conclusion: (FCC Part 15.247(i))

The device under test meets the radio frequency radiation exposure requirements specified in 47CFR 1.1307(b), § 2.1091, § 2.1093.

#### RSS 102, Section 2.5.2

The device under test meets the radio frequency radiation exposure requirements specified in RSS 102, Section 2.5.2.

Measurement Results (Column references are on the following page)

Frequency (MHz)	MPE Distance (cm)	DUT Output Power (dBm)	DUT Antenna Gain (dBi)	Power Density		FCC Limit (mW/cm <sup>2</sup> )	ISED Limit (W/m <sup>2</sup> )	Result
				(mW/cm <sup>2</sup> )	(W/m <sup>2</sup> )			
				(4)		(5)	(6)	
2412	20	18.27	1.5	0.0133577	0.13357653	1.00	5.35	Compliant
2437	20	20.76	1.5	0.0236990	0.23699007	1.00	5.41	Compliant
2462	20	20.81	1.5	0.0239734	0.23973428	1.00	5.47	Compliant

## 7. Measurement Data (continued)

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1. Reference 47 CFR 2.1093(b): For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the installer. All other mobile and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, except as specified in sections 1.1307(c) and 1.1307(d) of 47 CFR, Chapter 1.
2. Section 7.4 of this test report.
3. Antenna gain data supplied by the client and factored into the EUT peak output power.
4. Peak power density is calculated from peak EIRP:

$$PD = \frac{OP + AG}{(4 \times \pi \times d^2)}$$

PD = Power Density	W/m <sup>2</sup>
OP = DUT Output Power	dBm
AG = Antenna Gain	dBi
d = MPE Distance	cm

5. Reference CFR 1.1310, Table 1: Limits for Maximum Permissible Exposure (MPE), Section (B): Limits for General Population/Uncontrolled Exposure.
6. Reference IC RSS-102 Section 4 Table 4 General Public (Uncontrolled Environment) for equipment operating from 300 to 6000 MHz, the W/m<sup>2</sup> limit is determined by the formula  $0.02619 \times F \text{ (MHz)}^{0.6834}$