

## 5. RF EXPOSURE EVALUATION

### 5.1 Applicable Standard

FCC §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. See §1.1307(b)(1) of this chapter.

### 5.2 Procedure

According to §1.1307(b)(3)(i)

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold  $P_{th}$  (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

$d$  = the separation distance (cm);

### 5.3 Measurement Result

Radio	Frequency (MHz)	Distance (mm)	P <sub>th</sub>		Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain (dBi)	ERP (dBm)	Exemption
			(mW)	(dBm)				
Lora-Hybrid	902.3-914.9	200	1841	<b>32.65</b>	21	2.44	<b>21.29</b>	Compliant
Lora-DTS	923.3-927.5	200	1884	<b>32.75</b>	28	2.44	<b>28.29</b>	Compliant

**Result: The device compliant the Exemption at 20cm distances.**

\*\*\*\*\* END OF REPORT \*\*\*\*\*