Shenzhen Accurate Technology Co., Ltd.

## FCC §15.247 (i) & §1.1307 (b) (3) & §2.1091- MPE-Based Exemption

## **Applicable Standard**

According to subpart 15.247 (i) and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § $1.1307(b)(3)(i)(C)$ - Single RF Sources Subject to Routine Environmental Evaluation					
RF Source frequency (MHz)	Threshold ERP (watts)				
0.3-1.34	1,920 R <sup>2</sup> .				
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .				
30-300	3.83 R <sup>2</sup> .				
300-1,500	0.0128 R <sup>2</sup> f.				
1,500-100,000	19.2R <sup>2</sup> .				

Ris the minimum separation distance in meters f = frequency in MHz

Simultaneous Transmission SAR Test Exemption:

$$\sum_{i=1}^{a} \frac{P_i}{P_{\text{th},i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{\text{th},j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \le 1$$
(C.1)

## Result

Mode	Frequency (MHz)	Tune up conducted power	Antenna Gain		ERP		Evaluation Distance	ERP Limit
		(dBm)	(dBi)	(dBd)	(dBm)	(mW)	(m)	(mW)
BLE	2402-2480	0	2.0	-0.15	-0.15	0.97	0.2	768
LoRa (Hybrid)	902.3-914.9	5	2.0	-0.15	4.85	3.05	0.2	462
LoRa (DTS)	903.0-914.2	14	2.0	-0.15	13.85	24.27	0.2	462

Note: 1.The tune up conducted power and antenna gain was declared by the applicant. 2. 0dBd=2.15dBi

3. The BLE can transmit with the LoRa at the same time.

Simultaneous Transmission SAR Test Exemption:

The ratio=0.97/768+24.27/462=0.054<1

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

## **Result:** Compliant.