

## **Appendix 5**

# **RF Exposure Information**

FCC ID: 2AKLX-28450  
IC ID: 22225-28450

## Maximum transmitter power

USB-C supply - Left antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2400.8	7.37	2.0	8.650
2440.8	7.10	2.0	8.128
2481.6	7.39	2.0	8.690
USB-C supply - Right antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2400.8	6.05	2.0	6.383
2440.8	5.56	2.0	5.702
2481.6	5.97	2.0	6.266
PoE supply - Left antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2400.8	6.19	2.0	6.592
2440.8	5.25	2.0	5.309
2481.6	6.09	2.0	6.442
PoE supply - Right antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2400.8	6.63	2.0	7.295
2440.8	5.68	2.0	5.861
2481.6	6.50	2.0	7.080

According to the manufacturer's installation instruction, the EUT operates in standalone mobile exposure conditions where the minimum test separation distance is 20 cm between the antenna and radiating structures of the device and nearby persons.

### For FCC

For Maximum Permissible Exposure (MPE) evaluation, the maximum power density at 20 cm from this mobile transmitter shall be less than the General Population / Uncontrolled MPE limit in OET Bulletin 65 and meet the requirement listed in KDB 447498.

Evaluation:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

The maximum EIRP is 8.650 mW.

The maximum power density at 20 cm =  $8.650 \text{ mW} / 4\pi r^2$

=  $0.001721 \text{ mWcm}^{-2} < 1.0 \text{ mWcm}^{-2}$

### **Conclusion:**

In the frequency range of 1,500 - 100,000MHz, the MPE limit is  $1.0 \text{ mWcm}^{-2}$  for general population and uncontrolled exposure. As the measured power density at 20 cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20 cm separation between the transmitter's radiating structures and body of the user or nearby persons.

**For ISED:**

According to section 6.6 of RSS-102 Issue 6, RF exposure evaluation is not required if the following condition is met:

“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  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;”

Therefore, the threshold is  $1.31 \times 10^{-2} 2440.8^{0.6834}$  W = 2.706 W

**Conclusion:**

The maximum e.i.r.p of the transmitter is less than the SAR evaluation exemption threshold and hence it complies with the RSS-102 RF exposure requirement without SAR evaluation.