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)
2402	3.71	2.0	3.724
2440	3.72	2.0	3.733
2480	3.96	2.0	3.945
USB-C supply - Right antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2402	3.62	2.0	3.648
2440	3.88	2.0	3.873
2480	3.96	2.0	3.945
PoE supply - Left antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2402	3.73	2.0	3.741
2440	3.75	2.0	3.758
2480	4.00	2.0	3.981
PoE supply - Right antenna			
Frequency (MHz)	Maximum peak output power (dBm)	Antenna gain (dBi)	EIRP (mW)
2402	3.66	2.0	3.681
2440	3.92	2.0	3.908
2480	4.01	2.0	3.990

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 3.990 mW.

The maximum power density at 20 cm = 3.990 mW/4πr^2

= 0.01588 mWcm^{-2} < 1.0 mWcm^{-2}

Conclusion:
In the frequency range of 1,500 - 100,000MHz, the MPE limit is 1.0 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 $1.31 \times 10^{-2}\ 2480^{0.6834}$ W = 2.736 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.