

6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:
Passed

Test standard : FCC KDB Publication 447498 D01 v06
 FCC CFR 47 Part 2 Subpart J Section 2.1091
 ISED RSS-102 issue 5, 2.5.2

Separation distance is more than 20 cm, thus mobile device exposure limits can be applied.

FCC Maximum Exposure:

Mode	Frequency (MHz)	Antenna Gain (dBi)	Antenna Gain (numeric)	Maximum Output Power (dBm)	Output Power (mW)	Power Density (S)(mW/cm ²)	Test Result
Thread	2405	3.80	2.3988	7.3000	5.3703	0.002564	Pass

Limit FCC: 1500-100,000 MHz 1.0 mW/cm²

ISED:
Exemption Limits for Routine Evaluation – RF Exposure Evaluation

At or above 300MHz 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, where f is in MHz;

f= 2405MHz

$$1.31 \times 10^{-2} \times 2405^{0.6834} = 2.67W$$

After evaluation the 2405MHz e.i.r.p 11.10dBm calculated result is closer to its limit.

11.10dBm = 0.01289W, it is well below the limit of Exemption Limits for Routine Evaluation, so RF exposure assessment meets its standards.