

1 Safety Human Exposure

1.1 Radio Frequency Exposure Compliance

1.1.1 Electromagnetic Fields RESULT: Test Specification

Pass

Test standard : CFR47 FCC Part 2: Section 2.1091
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 v06, section 7

FCC ID: 2A9R4-PF022

➤ FCC requirements

FCC requirement: 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 level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20cm normally can be maintained between the user and the device.

MPE Calculation Method according to KDB 447498 v06

Power Density: $S_{(Mw/cm^2)} = PG/4\pi r^2$ or $EIRP/4\pi r^2$

Where:

S = power density (mW/cm²)

P = power input to the antenna (mW)

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 (cm)

From the maximum conducted output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain, the RF power density can be calculated as below:

$S_{(Mw/cm^2)} = PG/4\pi r^2$

1) EUT RF Exposure Evaluation operations, Worst Case mode

Test Mode	Measured Power (dBm)	Antenna Gain (dBi)	Measured e.i.r.p (dBm)	$S_{(Mw/cm^2)} = PG/4\pi r^2$	Limit (Mw/cm ²)
2.4GHz band Wi-Fi	11.99	3.21	15.2	0.0066	1.0
BLE	2.59	3.21	5.8	0.0007	1.0
BR+EDR	5.1	3.21	8.31	0.0013	1.0

The EUT power density for transmit simultaneously is 0.0086 mW/cm² it is less than the limit 1.0 mW/cm²