

# 1 Safety Human Exposure

## 1.1 Radio Frequency Exposure Compliance

**1.1.1 Electromagnetic Fields RESULT:** Pass  
**Test Specification**

Test standard

: CFR47 FCC Part 2: Section 2.1091  
CFR47 FCC Part 1: Section 1.1310  
FCC KDB Publication 447498 v06, section 7  
RSS-102 Issue 5 March 2015, section 2.5.2

FCC ID: 2ACUF-HM7040

### ➤ 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:  $S_{(\text{mW/cm}^2)} = PG/4\pi R^2$  or  $EIRP/4\pi R^2$

Where:

$S$  = power density ( $\text{mW/cm}^2$ )

$P$  = 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:

$$S_{(\text{mW/cm}^2)} = PG/4\pi R^2$$

### a) EUT RF Exposure Evaluation operations, Worst Case mode

Test Mode	Measured Power (dBm)	Antenna Gain (dBi)	Measured e.i.r.p (dBm)	$S_{(\text{mW/cm}^2)} = PG/4\pi R^2$	Limit ( $\text{mW/cm}^2$ )
BLE	8.73	1.08	9.81	0.002	1.0