

# 1 Safety Human exposure

## 1.1 Radio Frequency Exposure Compliance

### 1.1.1 Electromagnetic Fields

**RESULT:**

**Passed**

#### Test Specification

Test standard : FCC Part 2 section 2.1091  
: KDB Publication 447498 D01v06  
: KDB Publication 447498 D03v01  
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#### MPE Calculation Method

$$E (V/m) = (30 \cdot P \cdot G)^{0.5} / d \quad \text{Power Density: } Pd(W/m^2) = E^2 / 377$$

E=Electric Field (V/m)

P=Peak RF output Power (W)

G=EUT Antenna numeric gain (numeric)

d= Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = (30 \cdot P \cdot G) / (377 \cdot d^2)$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Test Result
2412	-1.55	20.39	109.396	0.01523	1	Complies
2437	-1.55	20.78	119.674	0.01666	1	Complies
2462	-1.55	20.48	111.686	0.01555	1	Complies