

US Tech Test Report:
 FCC ID:
 IC:
 Test Report Number:
 Customer:
 Model:

FCC Part 15/IC RSS Certification
 2APA3-BOXLOCK001
 23723-BOXLOCK001
 18-0042
 BoxLock, Inc.
 BOXLOCK001

Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, d, of 20 cm (Mobile condition) from the EUT.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Therefore, for:

MPE for 2400 MHz – 2483.5 MHz for WiFi:

Limit: 1.0 mW/cm²

Peak Power (dBm) = 15.15 dBm

Peak Power (Watts) = 0.033 W

Gain of Transmit Antenna = -6.16 dB_i = 0.242 , numeric

d = Distance = 20 cm = 0.2 m

$$\begin{aligned}
 S &= (PG / 4\pi d^2) = \text{EIRP} / 4A = 0.033(0.242) / 4 * \pi * 0.2 * 0.2 \\
 &= 0.0079 / 0.5030 = 0.0157 \text{ W/m}^2 \\
 &= (0.0157 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\
 &= 0.00157 \text{ mW/cm}^2
 \end{aligned}$$

which is << less than S = 1.0 mW/cm²