

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

FCC Part 15 Certification/ RSS 210  
WPEUWL02G  
8031A-UWL02G  
19-0170  
May 21, 2019  
PakSense, Inc.  
UWL02G

### 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 <sup>2</sup> )	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 <sup>2</sup>	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 902-928 MHz Radio Device

Limit: 0.61 mW/cm<sup>2</sup> @ 915 MHz

Peak Power (dBm) = 7.11 dBm

Peak Power (Watts) = 0.005 W

Gain of Transmit Antenna = 0 dB<sub>i</sub> = 1, numeric(Highest Gain Antenna)

d = Distance = 20 cm = 0.2 m

$$\begin{aligned} S &= (PG / 4\pi d^2) = \text{EIRP} / 4A = 0.005(1.0) / 4\pi * 0.2^2 \\ &= 0.005 / 0.5030 = 0.010 \text{ W/m}^2 \\ &= (0.010 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\ &= 0.0010 \text{ mW/cm}^2 \end{aligned}$$

which is << less than S = 0.61 mW/cm<sup>2</sup>

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## RF Exposure Evaluation – IC

According to RSS-102, 2.5.2 Exemption Limits for Routine Evaluation

At or above 300 MHz and below 6 GHz and the source based time averaged maximum EIRP of the device is equal to or less than  $1.31 \times 10^{-2} \times f^{0.6834}$  in Watts (adjusted for tune up tolerance where applicable), where  $f$ = frequency in MHz

For 902-928 MHz Band:

$$\text{Limit} = 1.31 \times 10^{-2} \times 915^{0.6834} = 1.4 \text{ Watts}$$

$$\text{Max EIRP for WiFi} = 7.11 \text{ dBm} + 0 \text{ dBi} = 7.11 \text{ dBm} = 5 \text{ mW} \ll 1400 \text{ mW}$$