RF Exposure Statement:

Calculation Method of RF safety Distance:

The power density S, in mW/ cm^2 is:

$$S = (P*G)/(4*\Pi*r^{2)} \qquad \text{(Eq. 1)}$$

Rearranging and solving for distance yields:

$$r = \sqrt{((P*G)/(4*\Pi*S))} \qquad \text{(Eq. 2)}$$

Where:

P = power input into the antenna in mW
S = allowable power density in mW/cm^2
G = numeric gain of the antenna relative to an isotropic radiator
r = distance to center of radiation in cm

The limit for Maximum Permissible Exposure (MPE) for General Population/Uncontrolled Exposure in the frequency band 30 – 300 MHz is .2 mW/cm^2 (47 CFR 1.1310).

Antennas intended for use with this device have an approximate gain of 2 dBi. The maximum transmitter power is 100 mW.

For 2 dBi gain antenna case, transmitter power = 100 mW, and substituting S = .2 mW/cm^2 :

First convert the antenna gain from dB to numeric:

$G = 10^{(2/10)}$
G = 1.58

Then substitute P, G, and S into Eq. 2 to solve for the minimum safety distance:

$r = \sqrt{((P*G)/(4*\Pi*S))}$
$r = \sqrt{((100 * 1.58)/(4*\Pi* .2))}$
r = 7.9 cm **OR** 3.1 inches

So the safe minimum safe distance for a 2 dBi gain antenna is 3.1 inches.

Therefore, the localized specific absorption rate (SAR) limits as specified in ANSI/IEEE Std. C95.1-1992 are not exceeded when the device is used as described in the Operator Guide.