T-2300 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 Occupational Exposure in the frequency band 30–300 MHz is 1 mW/cm^2 (47 CFR 1.1310).

Antennas intended for use with this device have an approximate gain of 0 dBi. The maximum transmitter power is 250 mW.

For 0 dBi gain antenna case, transmitter power = 250 mW, and substituting S = 1 mW/cm^2 :

First convert the antenna gain from dB to numeric:

$$G = 10^{(0/10)} = 1$$

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

$r = \sqrt{((P*G)/(4*\Pi*S))}$
$r = \sqrt{((250 * 1)/(4*\Pi* 1))}$
r = 4.5 cm

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.

The limit for Maximum Permissible Exposure (MPE) for General Population/Uncontrolled Exposure in the frequency band 30–300 MHz is 0.2 mW/cm^2 (47 CFR 1.1310).

$r = \sqrt{((250 * 1)/(4*\Pi* 0.2))}$
r = 9.9 cm

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.