MAXIMUM PERMISSIBLE EXPOSURE

Calculations

Power density at the specific separation:

$S = PG/(4R^2\pi)$
$S = (263 * 8.85) / (4 * 20^2 * \pi)$
$S = 0.463159$ mW/cm^2 (at 20 cm)
Limit = 1 mW/cm^2

where

S = Maximum power density (mW/cm^2)
P = Power input to the antenna (mW) = 263
G = Numeric power gain of the antenna = 8.85
R = distance to the center of the radiation of the antenna (20 cm = limit for MPE)

S = 0.46 mW/cm^2

The maximum permissible exposure (MPE) for the general population is 1 mW/cm^2.

The power density at 20 cm does not exceed the 1 mW/cm^2. Therefore, the exposure condition is compliant with FCC rules.

The numeric gain (G) of the antenna with a gain specified in dB is determined by:

$G = Log^{-1}$ (dB antenna gain/10)
$G = Log^{-1}$ (9.47 dBi/10)
G = 8.85

MAXIMUM PERMISSIBLE EXPOSURE MEASUREMENTS

Antenna Array Controller MN: 32000721 XXXX REV X.X

POWER OUTPUT (mW)	**ANTENNA GAIN (dBi)**	**CALCULATED MPE @ 20cm (mW/cm^2)**	**Distance at which MPE exceeds FCC limit for Occupational/Controlled Exposure (limit = $3mW/cm^2$)**	**Distance at which MPE exceeds FCC limit for General Population/General Exposure (limit = $0.6mW/cm^2$)**
263	9.47	0.46	7.8	17.5