

FCC Part 22 Transmitter Certification

Test Report

FCC ID: DNY0C5EKLIT0800

FCC Rule Part: CFR 47 Part 22 Subpart H

ACS Report Number: 05-0459-22H

Manufacturer: EMS Wireless
Equipment Type: Cellular Fiber-optic RF Distribution Remote Unit
Model: EkoLite II 800

RF Exposure

General Information:

Applicant: EMS Wireless
 ACS Project: 05-0459
 FCC ID: DNY0C5EKLIT0800
 Device Category: Fixed
 Exposure Conditions: Uncontrolled/General Population

Technical Information:

Antenna Type: Omni-Directional
 Antenna Gain Maximum: 3dBi
 Max Transmitter Output Power: 12.94dBm
 Max System EIRP: 15.94dBm / 0.0393W
 Operating Configuration: Fixed
 Exposure Conditions: > 20cm

MPE Calculation

The Power Density (mW/cm²) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Calculations were performed at the frequencies with the highest output power as determined during testing.

Maximum Permissible Exposure (MPE) General Population/Uncontrolled Exposure							
Transmit Frequency (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm ²)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm ²)
881.66	12.94	0.59	19.68	3	1.995	20	0.008

Installation Guidelines

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Conclusion

This device complies with the MPE requirements by providing adequate separation between the device, any radiating structure and the general population.