

FCC Part 15 Subpart C Transmitter Certification

Frequency Hopping Spread Spectrum Transmitter

FCC ID: R7PTOP04

FCC Rule Part: 15.247

ACS Report Number: 05-0327-15C

Manufacturer: Cellnet Technology, Inc.
Model: Take Out Point (TOP)

RF Exposure Information

General Information:

Applicant: Cellnet
 ACS Project: 05-0327
 FCC ID: R7PTOP04
 Device Category: Fixed
 Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: Whip
 Antenna Gain: 5dBi
 Transmitter Conducted Power: 29.75dBm
 Maximum System EIRP: 34.75dBm
 Operating Configuration: Fixed mounted
 Exposure Conditions: Greater than 20 centimeters
 Antenna Separation (Co-location): Greater than 20 centimeters

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)

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Freq. (MHz)	Radio Power (dBm)	Power Density Limit (mW/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
903	29.75	0.60	944.06	5.00	3.162	20	0.594

Installation Guidelines

The installation manual contains the following text advising how to install the equipment to maintain compliance with the FCC RF exposure requirements:

“RF Exposure (Intentional Radiators Only)

In accordance with FCC requirements of human exposure to radiofrequency fields, the radiating element shall be installed such that a minimum separation distance of 20cm is maintained from the general population.”

Conclusion

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