

FCC Part 24 Transmitter Certification

Test Report

FCC ID: DNY0B2SCCELL1900

FCC Rule Part: CFR 47 Part 24 Subpart E

ACS Report Number: 05-0272-24E

Manufacturer: EMS Wireless
Equipment Type: PCS Band Bi-Directional Amplifier
Model: SelectaCell-19-S

RF Exposure

General Information:

Applicant: EMS Wireless
 ACS Project: 05-0272
 FCC ID: DNY0B2SCCELL1900
 Device Category: Mobile
 Exposure Conditions: Uncontrolled/General Population

Technical Information:

Antenna Type: Microstrip Patch
 Antenna Gain Maximum: 13 dBi
 Max Transmitter Output Power: 13.2 dBm
 Max System EIRP: 26.2 dBm
 Operating Configuration: Mobile
 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 frequency with the highest output power as determined during testing.

MPE Calculator for Mobile Equipment Limits for General Population/Uncontrolled Exposure*							
Transmit Freq. (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)
1880	13.2	1.00	20.89	13	19.953	20	0.083

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)."

Conclusion

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