Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBCPTP100

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 15-3054

Manufacturer: Sensus Metering Systems, Inc.
Model: CPTP100

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
Device Category: Mobile
Environment: General Population/ Uncontrolled Exposure

Technical Information:

Antenna Type: PCB dipole
Antenna Gain: 0 dBi
Maximum Transmitter Conducted Power: 30.34 dBm, 1081 mW
Maximum System EIRP: 30.34 dBm, 1081 mW

Exposure Conditions: Greater than 20 centimeters

MPE Calculation

The Power Density (mW/cm^2) 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 Frequency (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)
901	30.34	0.60	1081.43	0	1.000	20	0.215

Installation Guidelines

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

RF Exposure

In accordance with FCC requirements of human exposure to radio frequency fields, the radiating element shall be installed such that a minimum separation distance of 20 centimeters will be maintained.

Conclusion

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