Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBFMT450

FCC Rule Part: Part 90 Subpart I

ACS Project Number: 12-2073

Manufacturer: Sensus Metering Systems, Inc.
Model: FMT450

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
ACS Project: 12-2073
Device Category: Mobile
Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: PCB Dipole
Antenna Gain: -4 dBi
Maximum Transmitter Conducted Power: 20.49 dBm
Maximum System EIRP: 16.49 dBm, 44.566 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)

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)
451.0375	19.84	0.30	96.38	-4	0.398	20	0.008
457.4125	20.18	0.30	104.23	-4	0.398	20	0.008
463.7875	20.49	0.31	111.94	-4	0.398	20	0.009

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.