Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBSGW100

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 15-3018

Manufacturer: Sensus Metering Systems, Inc.
Model: SGW100

RF Exposure

General Information:

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

Technical Information:

Antenna Type: Monopole
Antenna Gain: 2 dBi dBi
Maximum Transmitter Conducted Power: 29.51 dBm, 893.31 mW
Maximum System EIRP: 31.51 dBm, 1415.79 mW
Exposure Conditions: 20 centimeters or greater

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)

Table 1: MPE Calculation

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	29.51	0.6	893.31	2	1.585	20	0.282

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 greater than 20 centimeters be maintained.

Conclusion

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