



Excellence in Compliance Testing

Certification Exhibit

FCC ID: SDBR100NA

FCC Rule Part: 47 CFR Part 2.1091

ACS Project Number: 16-3084

Applicant: Sensus Metering Systems, Inc.
Model: R100NA

General Information:

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

Technical Information:

Antenna Type: J-pole antenna
 Antenna Gain: 5.15 dBi
 Maximum Transmitter Conducted Power: 35.8 dBm, 3802 mW
 Maximum System EIRP: 40.95 dBm, 12445 mW
 Exposure Conditions: 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 Frequency (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)
901	35.8	0.60	3801.89	5.15	3.273	41	0.589

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 41 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.