



Excellence in Compliance Testing

Certification Exhibit

**FCC ID: SDBTXCVRBB02
IC: 2220A-TXCVRBB02**

**FCC Rule Part: CFR 47 Part 24 Subpart D, Part 101 Subpart C
IC Radio Standards Specification: RSS 119, RSS 134**

ACS Project Number: 11-2074

**Manufacturer: Sensus Metering Systems, Inc.
Model: TXCVRBB02**

RF Exposure

General Information:

Applicant: Sensus Metering Systems, Inc.
 ACS Project: 11-2074
 Device Category: Fixed
 Environment: General Population/Uncontrolled Exposure

Technical Information:

Antenna Type: Omni-Directional
 Antenna Gain: 5.15 dBi
 Maximum Transmitter Conducted Power: 29.83 dBm
 Maximum System EIRP: 34.98 dBm, 3147.75 mW
 Exposure Conditions: Greater than 21 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)

Calculations were performed at low, middle, and high channels within the total band of operation

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)
901.5	29.39	0.60	868.96	5.15	3.273	20	0.566
932.25	29.83	0.62	961.61	5.15	3.273	21	0.568
959.925	29.25	0.64	841.40	5.15	3.273	20	0.548

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 21 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.