

Transceiver Certification Test Report

**FCC ID: SDBAPXCVRZIG01
IC: 2220A-APXCVRZIG01**

**FCC Rule Part: CFR 47 Part 15.247, Part 24 Subpart D, Part 90 Subpart
I, Part 101 Subpart C
IC Standards Specification: RSS-210, RSS-119, RSS-134**

ACS Report Number: 07-0352

**Manufacturer: Sensus Metering Systems
Model: APXCVRZIG01**

RF Exposure

General Information:

Applicant: Sensus Metering Systems
 ACS Project: 07-0352
 FCC ID: SDBAPXCVRZIG01
 Device Category: Mobile
 Environment: General Population/Uncontrolled Exposure

Technical Information SMS Radio:

Antenna Type: Printed Monopole
 Antenna Gain: 0dBi
 Transmitter Conducted Power: 29.99dBm
 Maximum System EIRP: 29.99dBm
 Exposure Conditions: Greater than 20 centimeters

Technical Information 2400 MHz Zigbee:

Antenna Type: Printed Monopole
 Antenna Gain: 0dBi
 Transmitter Conducted Power: 6.06dBm
 Maximum System EIRP: 6.06dBm
 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/Cm2)	Radio Power (mW)	Antenna Gain (dBi)	Antenna Gain (mW eq.)	Distance (cm)	Power Density (mW/cm^2)
896.0125	29.99	0.60	997.70	0	1.000	20	0.198
2480	6.06	1.00	4.04	0	1.000	20	0.001

Note: Summation of power densities is within the lower Power density limit of 0.60 mW/cm².

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.