

## **Certification Exhibit**

**FCC ID: QZC-ELIR1**

**FCC Rule Part: 47 CFR Part 2.1091**

**ACS Project Number: 16-3066**

Manufacturer: Elster Solutions, LLC  
Model: ELIR1

## **RF Exposure**

**General Information:**

Applicant: Elster Solutions, LLC  
 Device Category: Mobile  
 Environment: General Population/Uncontrolled Exposure

**Technical Information:**

Antenna Type: Integral omni-directional Inverted-F  
 Antenna Gain: 3.3 dBi  
 Maximum Transmitter Conducted Power: 22.51 dBm, 178.24 mW  
 Maximum System EIRP: 25.81 dBm, 381.07 mW  
 Exposure Conditions: 20 centimeters or greater

**MPE Calculation**

The Power Density (mW/cm<sup>2</sup>) is calculated as follows:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

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) |
|--------------------------|-------------------|------------------------------|------------------|--------------------|-----------------------|---------------|-------------------------|
| 902.4                    | 22.51             | 0.60                         | 178.24           | 3.3                | 2.138                 | 20            | 0.076                   |